PRCNC20250094

EAST TOWN CROSSING LOT 1 COMMERCIAL

TABLE OF CONTENTS

SEPARATE SUBMITTALS

FIRE SPRINKLER
FIRE ALARM SYSTEM

DEFERRED SUBMITTALS

PRE-MANUFACTURED ROOF TRUSSES

Trusses cannot be deferred for this scope of work. [Reference the marked-up document: CONSTRUCTION PLAN SET, sheet AG1.0]

PROJECT TEAM

OWNER'S:
ASH DEVELOPMENT, LLC
PUYALLUP, WA
c/io: GREG HELLE
253-318-5711
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ARCHITECT :
SYNTHESIS 9, LLC
TACOMA, WA
c/o: BRETT LINDSAY
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blindsay@synthesis9.com

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c/o:TODD SAWIN
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tsawin@ahbl.com

STRUCTURAL ENGINEER:
PIERUCCIONI E&C,, LLC
TACOMA, WA
c/o: CHON PIERUCCINI
206-949-7866
pieruccioniengineering@gmail.com

LANDSCAPE ARCHITECT:
LYON LANDSCAPE ARCHITECTS
c/: ERIC J. WILLIAMS
TACOMA, WA
253-678-4173
eric@lyonla.com

PLUMBING & MECHANICAL & LIGHTING
ROBISON ENGINEERING INC.
LYNNWOOD, WA 98036
c/o: JON ROBISON
206-364-3343
jrobison@robisonengineering.com

FIRE SPRINKLERS
SPRINX FIRE PROTECTION, INC.
c/o: JOE FAULKNER
253-853-7780
joe@sprinxfire.com

PROJECT SCOPE

THE OVERALL ARCHITECTURAL SCOPE OF THIS PROJECT IS CONSTRUCT ONE COMMERCIAL SHELL BUILDING WITH 2 FUTURE TENANTS AND RELATED SITE DEVELOPMENT.

REFER TO THE FOLLOWING APPLICATION NUMBER:
SITE DEVELOPMENT: **PRCCP20230970**

This project doesn't fall within the scope of the International Residential Code. [Reference the marked-up document: CONSTRUCTION PLAN SET, sheet AG1.0]

GENERAL PROJECT NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH THE CONTENT OF THESE DRAWINGS PRIOR TO PROCEEDING WITH THE WORK. DO NOT SCALE THE DRAWINGS.
2. IN THE EVENT THE CONTRACTOR FINDS A CONFLICT OR DISCREPANCY WITH THESE DRAWINGS, THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY IN WRITING. SHOULD THE CONTRACTOR PROCEED WITHOUT NOTIFYING THE ARCHITECT OF SUCH CONFLICT, THE CONTRACTOR SHALL BE PROCEEDING AT HIS OWN RISK & ASSOCIATED LIABILITY.
3. THESE DRAWINGS SERVE TO REPRESENT DESIGN INTENT AS DIRECTED BY THE OWNER & COMPLIANT WITH GOVERNING JURISDICTIONAL LAW. IN NO WAY SHALL THESE DRAWINGS SERVE TO DICTATE METHODS OF CONSTRUCTION RELATIVE TO ADHERENCE TO EITHER. IT IS THE CONTRACTOR'S & OWNER'S RESPONSIBILITY TO WORK WITHIN THE PARAMETERS OF THE AGENCY APPROVED DOCUMENTS TO MAINTAIN THE INTEGRITY OF THE DESIGN INTENT AND AGENCY COMPLIANCE. ANY ERRORS, OMISSIONS OR NONCOMPLIANCE WITH GOVERNING CODES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IMMEDIATELY.
4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY. CHANGES, OMISSIONS OR SUBSTITUTIONS ARE NOT PERMITTED WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
5. THE DESIGN, ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC., IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, AND HAS NOT BEEN CONSIDERED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE PRIOR TO THE COMPLETION OF ALL SHEAR WALLS, ROOF AND FLOOR DIAPHRAGMS AND FINISHED MATERIALS. THE CONTRACTOR SHALL PROVIDE THE NECESSARY BRACING TO PROVIDE STABILITY PRIOR TO THE APPLICATION OF THE ABOVE MENTIONED COMPONENTS.
6. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST EDITION OF THE INTERNATIONAL RESIDENTIAL CODE (IRC).
7. SPECIAL INSPECTION SHALL BE PROVIDED BY AND INDEPENDENT TESTING LABORATORY PER THE REQUIREMENTS OF IBC CHAPTER 17 AND THE LOCAL BUILDING OFFICIAL OR APPLICABLE JURISDICTION AND CONTRACT DOCUMENTS. THE SPECIAL INSPECTOR SHALL SUBMIT INSPECTION REPORTS AND A FINAL SIGNED REPORT TO THE BUILDING OFFICIAL FOR THE ITEMS LISTED IN THE QUALITY ASSURANCE/SPECIAL INSPECTION SECTION:
8. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS REQUIRED FOR ALL EQUIPMENT, APPLIANCES, FIXTURES, CABINETS, DUCTWORK AND OPENINGS BEFORE FRAMING BEGINS. THE CONTRACTOR SHALL COORDINATE WITH THE SUBCONTRACTORS OF ALL TRADES TO VERIFY THE SIZES ABD LOCATIONS OF OPENINGS THROUGH THE FLOORS, WALLS, CEILINGS AND ROOFS FOR DUCTS, PIPES, CONDUITS AND EQUIPMENT. THE CONTRACTOR SHALL COORDINATE THE LOCATION AND INSTALLATION OF WOOD BACKING, BLOCKING, FURRING AND STRIPPING AS REQUIRED FOR THE INSTALLATION AND ATTACHMENT OF WORK OF ALL TRADES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SYSTEMS, INCLUDING, BUT NOT LIMITED TO, MECHANICAL, PLUMBING, ELECTRICAL WORK. WORK SHOWN IN THE DRAWINGS IS INTENDED TO ILLUSTRATE THE GENERAL DESIGN INTENT, SCOPE AND LOCATION OF WORK. ALL WORK NOT SPECIFICALLY DRAWN, BUT REQUIRED FOR A COMPLETE,LEGAL AND FUNCTIONING SYSTEM, SHALL BE PROVIDED AS PART OF THE WORK.
10. SAFEGUARDS DURING CONSTRUCTION SHALL COMPLY WITH CHAPTER 33 OF THE INTERNATIONAL BUILDING CODE.

SYMBOL LEGEND

DETAIL SYMBOL
1 / A2.0 — DETAIL NO. OR LETTER / SHEET

SECTION SYMBOL
1 / A2.0 — DETAIL NO. OR LETTER / SHEET

INTERIOR ELEVATION SYMBOL
2 — DRAWING NUMBER
A4.0 — SHEET
3 / 4

DOOR I.D. SYMBOL
100A — DOOR NUMBER, REFER TO SHEET A4.0.

ROOM I.D. SYMBOL
ROOM 100 — ROOM NAME / ROOM NUMBER

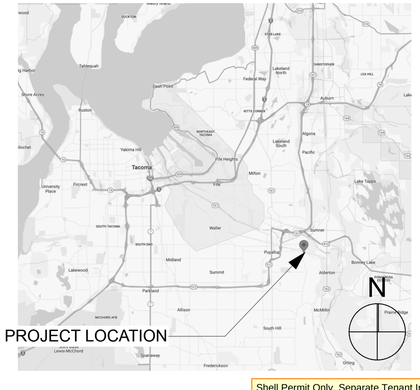
WALL TYPE SYMBOL
1A — WALL TYPE NO., REFER TO SHEET A2.0

FLOOR - CEILING ASSEMBLY TYPE SYMBOL
Z-# — ASSEMBLY TYPE NO., REFER TO SHEET AG.03

EXTERIOR WINDOW TYPE SYMBOL
— WINDOW TYPE NUMBER

BUILDING REFERENCE NOTE SYMBOL
— REFERENCE TYPE NUMBER

VICINITY MAP (NOT TO SCALE)



Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

SYNTHESIS 9, LLC
523 N. D ST.
TACOMA, WA 98403

REGISTERED ARCHITECT
BRETT A. LINDSAY
STATE OF WASHINGTON
9251

EAST TOWN CROSSING
LOT 1 COMMERCIAL
PIONEER & SHAW PUYALLUP

AGENCY REVIEW | 2025.01.17

REVISIONS

REVISIONS

DRAWN BY:	CM / BL
CHECKED BY:	BL
DATE:	2025.01.17
TITLE:	COVER SHEET
PROJECT # :	2016-L1
SHEET:	AG1.0

PRCNC20250094

W.S.E.C. ENVELOPE COMPLIANCE SUMMARY

ENVELOPE COMPLIANCE SUMMARY

2021 WSEC Compliance Forms for Commercial Buildings including Group R2, R3 & R4 over 3 stories and all R1 — Administered by: ©2024 NEEA, All rights reserved

Project & Applicant Information	**Project Title**	East Town Crossing - Lot One - 2021 WSEC	For Building Department Use: **Date: Dec 19, 2024**
	Project Address	Pioneer & Shaw Puyallup, WA 98372	
	Applicant Name	Brett Lindsay	
	Applicant Phone	253-468-4117	
	Applicant Email	blindsay@synthesis9.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)**	Office, Other	**Building Cond. Floor Area**	4,721
Project Scope	New Building	**Space Conditioning Categories**	Fully Conditioned	**Project Cond. Floor Area**	4,721
				Floors Above Grade	1
				Compliance Method	General Prescriptive
Envelope Project Description	A 4,889SF, single-story building, for tenant improvement to retail or office space.				

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	26.38% / 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	**East Town Crossing - Lot One - 2021 WSEC**	**Date**	**Dec 19, 2024**

Scope & Space Conditioning	**NEW BUILDING - FULLY CONDITIONED**			**Compliance Verification**	**COMPLIES**
Window-to-wall Ratio	26.38%	**Skylight-to-roof-ratio**	0%	**Vertical Fenestration Alternate**	No alternates selected

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)**
Attic and other	A3.0	A	Exterior	R-49	R-18 (< 0.04%)		U-0.021	4,889
	U-Factor Source:			U-Factor Source Description:				
	Roof Framing Type: Standard			Roof Framing Depth (Inches):				
	Roof Framing Spacing (OC):			Roof Framing Material: Wood-framed				
	Ceiling/Attic Venting:							
Walls	**Location in Documents**	**Assembly ID**	**Assembly Location**	**Cavity**	**Continuous (% penetration)**	**Insulated Wall Furring**	**U-Factor**	**Net Area (SF)**
Wood-framed and other - Commercial	A1.2	A	Exterior	R-20	R-3.8 (< 0.04%)		U-0.051	3,507
	Which code target does wall comply with?: R-20 Cavity + R-3.8 CI			U-Factor Source:				
	U-Factor Source Description:			Wall Framing Type: Standard				
	Framing Depth: 2x6			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	A3.0	Z	At grade level	R-10			F-0.54	321
	Slab Insulation Method: 2 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	A4.0	B	Exterior				U-0.37	63
	What percentage of this opaque door is glazing?: 50% or less			U-Factor Source:				
	U-Factor Source Description:			Is this a public entrance door?: Yes				
	Door enclosed within a vestibule?: No vestibule							
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	A4.0	01	Exterior		PF < 0.2	SHGC-0.38	U-0.34	50
	U-Factor & SHGC Source:			U-Factor Source Description:				
Fixed - Class AW or site built	A4.0	02	Exterior		PF < 0.2	SHGC-0.38	U-0.34	130
	U-Factor & SHGC Source:			U-Factor Source Description:				
Fixed - Class AW or site built	A4.0	03	Exterior		PF < 0.2	SHGC-0.38	U-0.34	145
	U-Factor & SHGC Source:			U-Factor Source Description:				
Fixed - Class AW or site built	A4.0	04	Exterior		PF < 0.2	SHGC-0.38	U-0.34	608
	U-Factor & SHGC Source:			U-Factor Source Description:				
Fixed - Class AW or site built	A4.0	05	Exterior		PF < 0.2	SHGC-0.38	U-0.34	87
	U-Factor & SHGC Source:			U-Factor Source Description:				
Fixed - Class AW or site built	A4.0	06	Exterior		PF < 0.2	SHGC-0.38	U-0.34	115
	U-Factor & SHGC Source:			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	A4.0	A	Exterior		PF < 0.2	SHGC-0.33	U-0.60	144
	U-Factor & SHGC Source:			U-Factor Source Description:				
	Is this a public entrance door?: Yes			Door enclosed within a vestibule?: No vestibule				

W.S.E.C. BUILDING ENVELOPE SUMMARY

ZONE	4C - MARINE
PATH	PRESCRIPTIVE
ROOFS - ATTIC AND OTHER	R-49 BATTS + R-18 CONTINUOUS INSULATION
FENESTRATION	OPAQUE DOORS U-VALUE = 0.38 GLAZED DOORS U-VALUE = 0.60 WINDOWS U-VALUE = 0.34
FENESTRATION SHGC	GLAZED DOORS U-VALUE = 0.33 WINDOWS U-VALUE = 0.37
SKYLIGHTS	N/A
WOOD FRAMED WALLS	R-20 BATTS IN CAVITY + R-3.8 CONTINUOUS INSULATION
MASS WALL R-VALUE	N/A
FLOOR	R-VALUE: 30
SLAB, R-VALUE & DEPTH	R-10, TOP OF SLAB TO TOP OF FOOTING

APPLICABLE 2021 WSEC BUILDING ENVELOPE NOTES :

1. AN IDENTIFICATION MARK SHALL BE APPLIED TO ALL INSULATION MATERIALS PER C303.1.
2. ALL FENESTRATION PRODUCTS SHALL BE LABELED WITH RATED U-FACTOR, SHGC, VT, LEAKAGE RATING PER C303.1.3 AND C402.4.3.
3. PROJECT CLOSE OUT DOCUMENTATION IS REQUIRED INCLUDING APPLICABLE CALCULATIONS, WSEC ENVELOPE COMPLIANCE REPORTS, AND FENESTRATION NFRC RATING CERTIFICATES PER C103.6.3.

Per the 2021 Washington State Building Code, section 429.4, additional EV charging infrastructure is required at the accessible parking spaces:
"Ten percent of the accessible parking spaces, rounded to the next whole number, shall be EV Charging Stations. Additional 10 percent of the accessible parking spaces, rounded to the next whole number, shall be EV Ready. Not fewer than one for each type of EV charging system shall be accessible.
The electric vehicle charging infrastructure may also serve adjacent parking spaces not designated as accessible parking. A maximum of 10 percent of the accessible parking spaces, rounded to the next whole number, are allowed to be included in the total number of electric vehicle parking spaces required under Section 429.2."
[Reference the marked-up document: CONSTRUCTION PLAN SET, sheet AG1.1]

Please verify that the correct number of EV charging infrastructure is provided. This note says 4 ready and 4 future are provided, but no mention of EV Charging Stations is included. The site plan only shows six (6) parking spaces noted as "EV" or "Future EV". [Reference the marked-up document: CONSTRUCTION PLAN SET, sheet AG1.1]

LAND USE SUMMARY

P/N: 0420264021, LOT 2

JURISDICTION: CITY OF PUYALLUP

ZONING DESIGNATION:
CG - GENERAL COMMERCIAL
SHAW-EAST PIONEER OVERLAY

PARCEL AREA: 50,886 sq ft

SURROUNDING PARCELS: CG TO THE SOUTH AND EAST, CB ACROSS SHAW TO THE WEST, CMX ACROSS PIONEER TO THE NORTH

USE: RESTAURANT & BUSINESS (ALLOWED)
MINIMUM LOT AREA: NONE
MINIMUM LOT WIDTH: 50 FT
MINIMUM LOT DEPTH: 100 FT
MINIMUM SETBACKS: 12 FT STREET, 0 FT SIDE, 0 FT REAR
MAXIMUM SETBACK: 20 FT WITH PLAZA
MAXIMUM HEIGHT: 50 FT (FOUR STORIES)
MAXIMUM FLOOR AREA: F.A.R. 4.0
MAXIMUM LOT COVERAGE: 75%

VEHICLE PARKING ANALYSIS (ASSUMED)
STALL DIMENSIONS:
STANDARD: ~~9' x 20'~~ 8' x 18'
COMPACT: ~~8' x 17'~~ 7' x 15'

REQUIRED:
1 STALL PER 300 sq ft GROSS RETAIL
1 STALL PER 100 sq ft GROSS RESTAURANT

LOT 1:
2,000 sq ft/ 300 = 7 (business)
3,000 sq ft/ 100 = 30 (restaurant)

TOTAL REQUIRED: 37
ON-SITE VEHICLE STALLS PROVIDED: 37

COMPACT MIN.: 30% (37 x 0.3 = 11)
COMPACT MAX.: 50% (37 x 0.5 = 19)
COMPACT STALLS PROVIDED: 11

ACCESSIBLE STALLS REQ'D: 2
ACCESSIBLE STALLS PROVIDED: 2

ELECTRIC VEHICLE CHARGING INFRASTRUCTURE PER 429 (2021 IBC):
EV CHARGING REQUIRED: 10% = 4
EV READY = 10% = 4
EV CAPABLE = 10% = 4
PROVIDED: 4 READY & 4 FUTURE

BICYCLE PARKING ANALYSIS
SHORT-TERM BICYCLE PARKING:
REQUIRED: 4 STALLS
PROVIDED: 4

BUILDING SUMMARY

OCCUPANCY: A2: ASSEMBLY / B: OFFICE
TYPE OF CONSTRUCTION: VB
SEPARATED OCCUPANCIES: NO
FIRE SPRINKLERS: YES
FIRE ALARM SYSTEM AND SMOKE ALARM: YES
ELEVATOR: NO
NUMBER OF TENANT SPACES: 2
NONSEPARATED USES: YES

'A2' OCCUPANCY (NYD)
BASE ALLOWABLE BUILDING AREAS, HEIGHT AND STORIES:
('A2' OCCUPANCY MOST RESTRICTIVE)

ALLOWABLE AREA PER FLOOR: 24,000 sq ft
ALLOWABLE MAXIMUM HEIGHT: 60 ft
ALLOWABLE STORIES: 2

'B' OCCUPANCY (NYD)
BASE ALLOWABLE BUILDING AREAS, HEIGHT AND STORIES:

ALLOWABLE AREA PER FLOOR: 36,000 sq ft
ALLOWABLE MAXIMUM HEIGHT: 60 ft
ALLOWABLE STORIES: 3

PROPOSED BUILDING AREAS, HEIGHT AND STORIES:

PROPOSED AREA PER FLOOR:
LEVEL 1: 5,086 sq ft
PROPOSED HEIGHT: 25.5 ft
PROPOSED STORIES: 1

CONDITIONED AREAS:
SUITE 1: 2,900 sq ft
SUITE 2: 1,921 sq ft

GROSS AREAS:
SUITE 1: 3,000 sq ft
SUITE 2: 2,000 sq ft
RISER ROOM: 86 sq ft

TOTAL:
LEVEL 1: 5,086 sq ft

OCCUPANT LOAD
*****BASED ON ASSUMPTION. EACH TENANT WILL PROVIDE SEPARATE PERMIT DOCUMENTS.**

SUITE 1 (A2):
OCCUPANT LOAD FACTOR: 15 NET (UNCONCENTRATED TABLE & CHAIRS)
OCCUPANT LOAD: 193 (2900/15)

SUITE 2 (B):
OCCUPANT LOAD FACTOR: 150 GROSS (BUSINESS)
OCCUPANT LOAD: 13 (1921 sq ft/150)

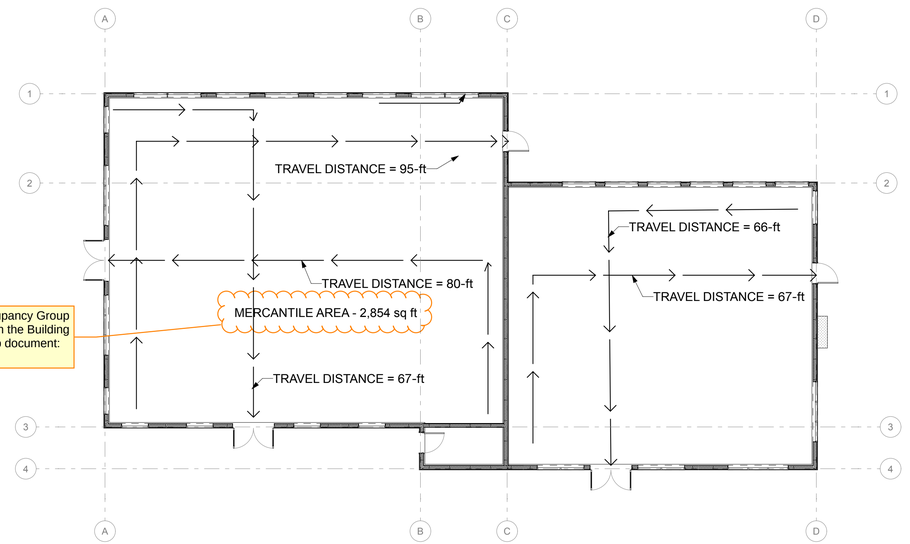
EGRESS
SUITE 1 (A2):
NUMBER OF EXITS REQUIRED: 2
MAXIMUM EXIT ACCESS TRAVEL DISTANCE with SPRINKLERS: 250-ft
MAXIMUM COMMON PATH OF TRAVEL: 75-ft

SUITE 2 (B):
NUMBER OF EXITS REQUIRED: 1
MAXIMUM EXIT ACCESS TRAVEL DISTANCE with SPRINKLERS: 100-ft
MAXIMUM COMMON PATH OF TRAVEL: 100-ft

FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS PER IBC (2021) TABLES 601 AND 602:

PRIMARY STRUCTURAL FRAME:
EXTERIOR BEARING WALLS: 0-HR

INTERIOR BEARING WALLS: 0-HR
NONBEARING EXTERIOR WALL AND PARTITIONS: 0-HR
NONBEARING INTERIOR WALL AND PARTITIONS: 0-HR
FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS: 0-HR
ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS: 0-HR



Please confirm if this area will be Mercantile (Occupancy Group M) or Assembly (Occupancy Group A2) as noted in the Building Summary on this sheet. [Reference the marked-up document: CONSTRUCTION PLAN SET, sheet AG1.1]

1 OCCUPANCY & EGRESS DIAGRAMS
SCALE: 3/32" = 1'-0"

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

S9
SYNTHESIS 9, LLC
523 N. D ST.
TACOMA, WA 98403

REGISTERED ARCHITECT 9251 BRETT A. LINDSAY STATE OF WASHINGTON

EAST TOWN CROSSING
LOT 1 COMMERCIAL
PIONEER & SHAW PUYALLUP

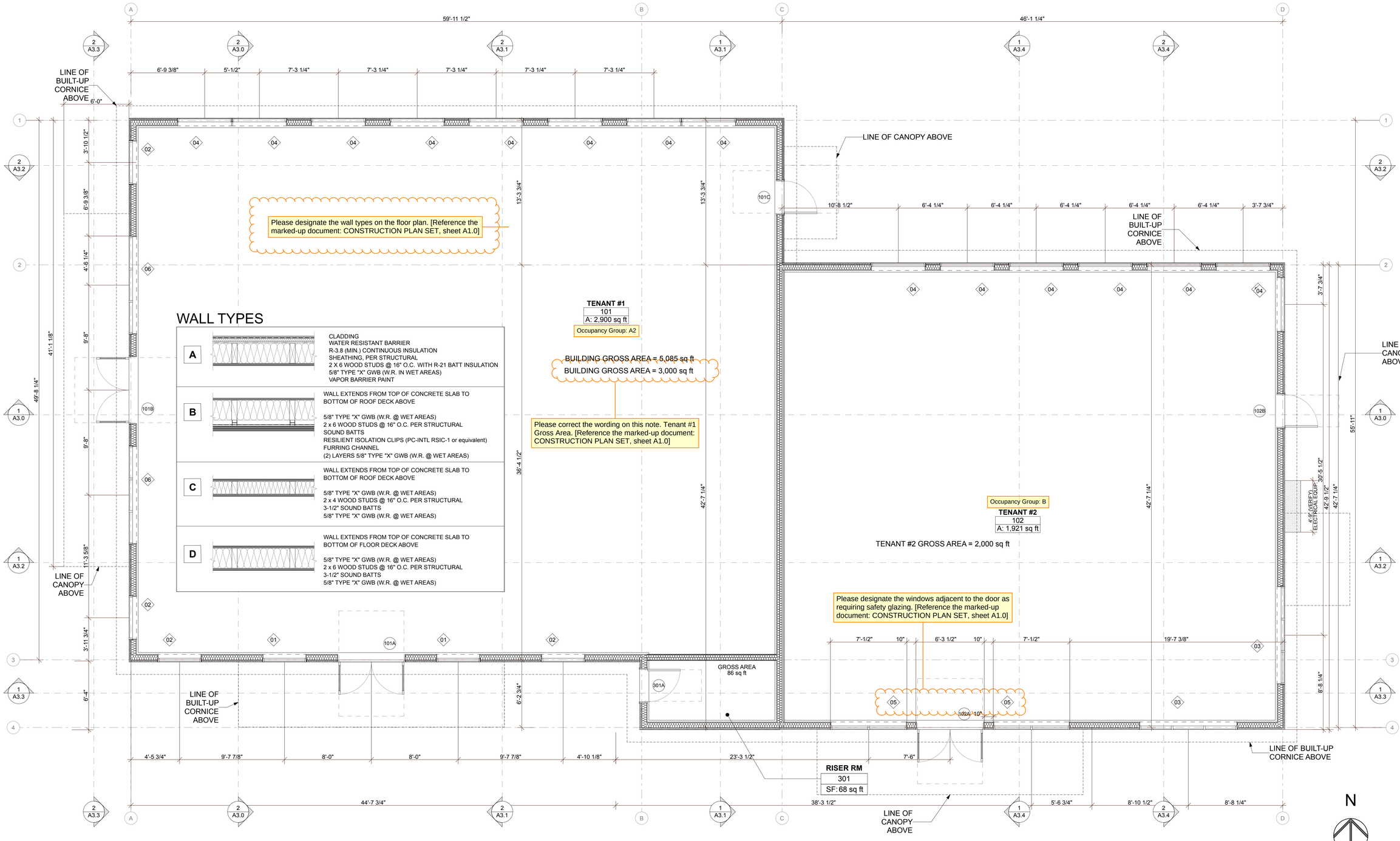
REVISIONS

REVISIONS

DRAWN BY:	CM / BL
CHECKED BY:	BL
DATE:	2025.01.17
TITLE:	PROJECT INFORMATION
PROJECT # :	2016-L1
SHEET:	AG1.1

AGENCY REVIEW | 2025.01.17

PRCNC20250094



WALL TYPES

A		CLADDING WATER RESISTANT BARRIER R-3.8 (MIN.) CONTINUOUS INSULATION SHEATHING, PER STRUCTURAL 2 X 6 WOOD STUDS @ 16" O.C. WITH R-21 BATT INSULATION 5/8" TYPE "X" GWB (W.R. IN WET AREAS) VAPOR BARRIER PAINT
B		WALL EXTENDS FROM TOP OF CONCRETE SLAB TO BOTTOM OF ROOF DECK ABOVE 5/8" TYPE "X" GWB (W.R. @ WET AREAS) 2 x 6 WOOD STUDS @ 16" O.C. PER STRUCTURAL SOUND BATTS RESILIENT ISOLATION CLIPS (PC-INTL RSIC-1 or equivalent) FURRING CHANNEL (2) LAYERS 5/8" TYPE "X" GWB (W.R. @ WET AREAS)
C		WALL EXTENDS FROM TOP OF CONCRETE SLAB TO BOTTOM OF ROOF DECK ABOVE 5/8" TYPE "X" GWB (W.R. @ WET AREAS) 2 x 4 WOOD STUDS @ 16" O.C. PER STRUCTURAL 3-1/2" SOUND BATTS 5/8" TYPE "X" GWB (W.R. @ WET AREAS)
D		WALL EXTENDS FROM TOP OF CONCRETE SLAB TO BOTTOM OF FLOOR DECK ABOVE 5/8" TYPE "X" GWB (W.R. @ WET AREAS) 2 x 6 WOOD STUDS @ 16" O.C. PER STRUCTURAL 3-1/2" SOUND BATTS 5/8" TYPE "X" GWB (W.R. @ WET AREAS)

1 FLOOR PLAN

SCALE: 1/4" = 1'-0"

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523 N. D ST.
TACOMA, WA 98403

REGISTERED ARCHITECT
JOSEPH A. LEVANDOWSKI
STATE OF WASHINGTON
9251

EAST TOWN CROSSING
LOT 1 COMMERCIAL
PIONEER & SHAW PUYALLUP

REVISIONS

REVISIONS

DRAWN BY:	CM / BL
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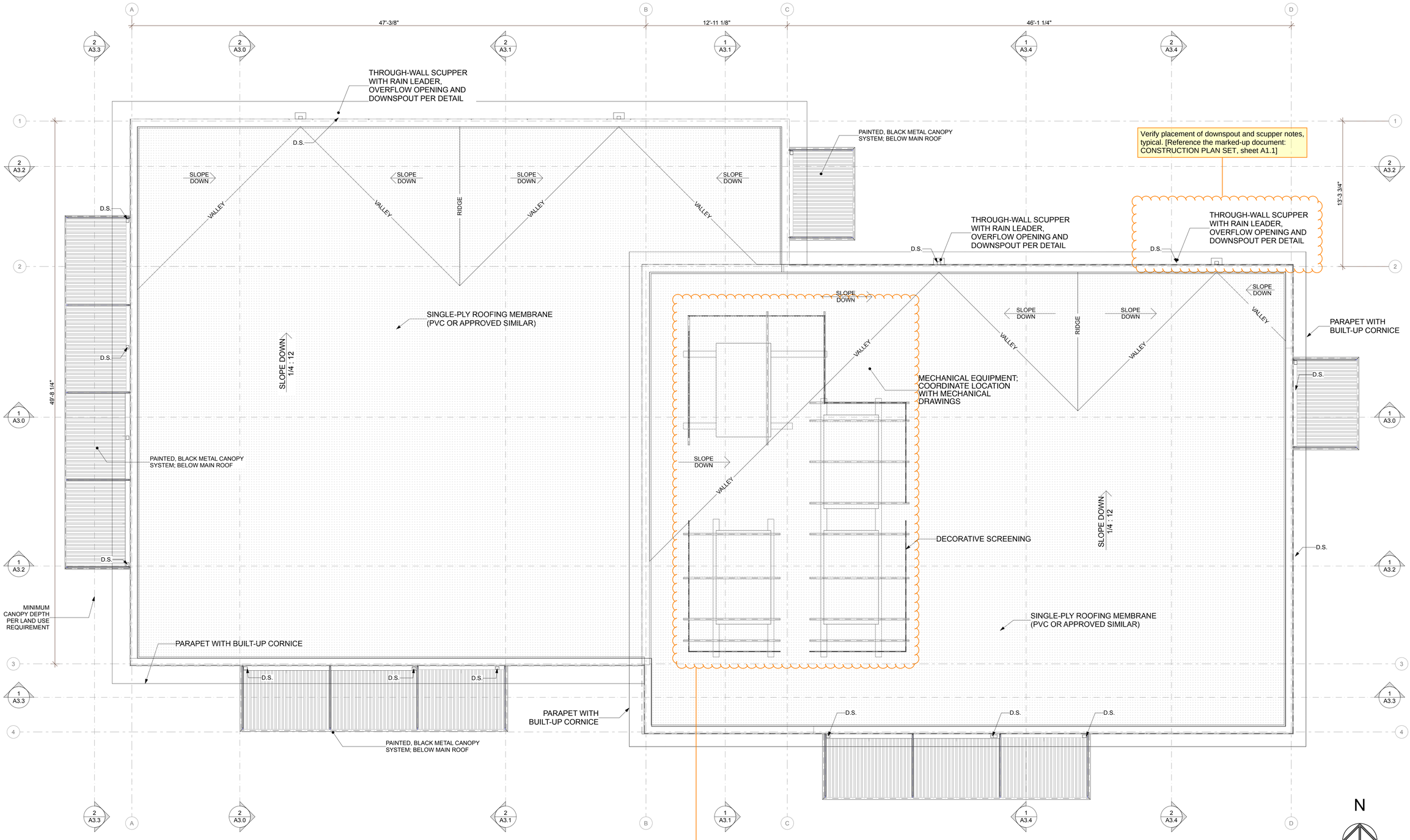
DATE:	2025.01.17
TITLE:	LEVEL 1 PLAN
PROJECT #:	2016-L1
SHEET:	A1.0

AGENCY REVIEW | 2025.01.17

PRCNC20250094



1 ROOF PLAN

SCALE: 1/4" = 1'-0"

The placement of the rooftop units differ between this sheet and the mechanical sheets (M2.1 and P2.02). [Reference the marked-up document: CONSTRUCTION PLAN SET, sheet A1.1]

Please clarify how access to the roof, and mechanical units, provided. Please locate the roof access hatch or ladder on the plan. [Reference the marked-up document: CONSTRUCTION PLAN SET, sheet A1.1]

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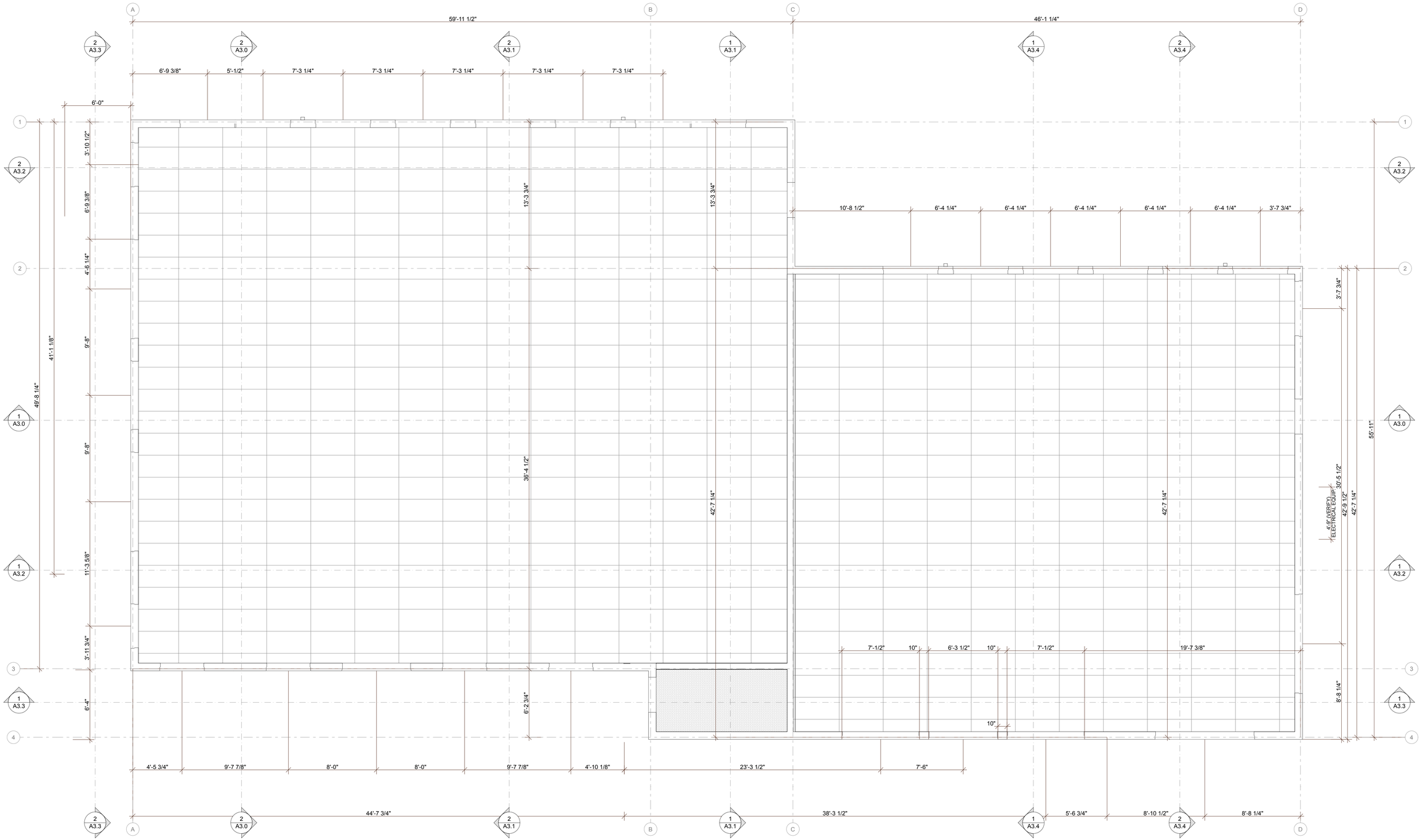

1 REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"

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REVISIONS

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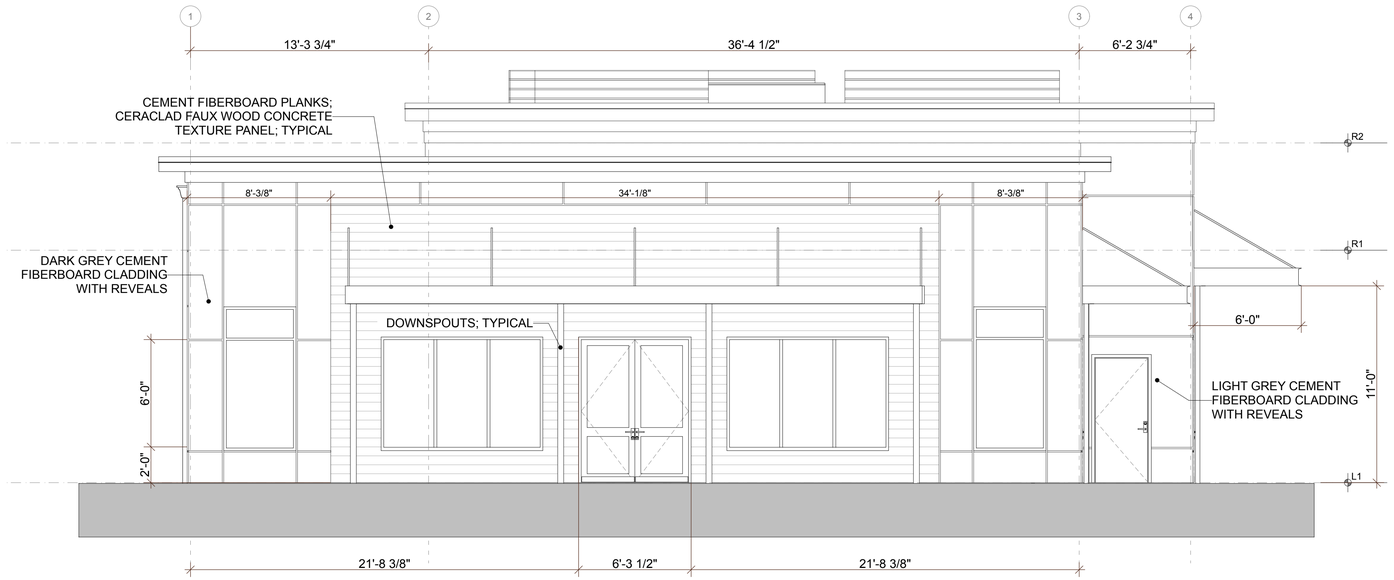
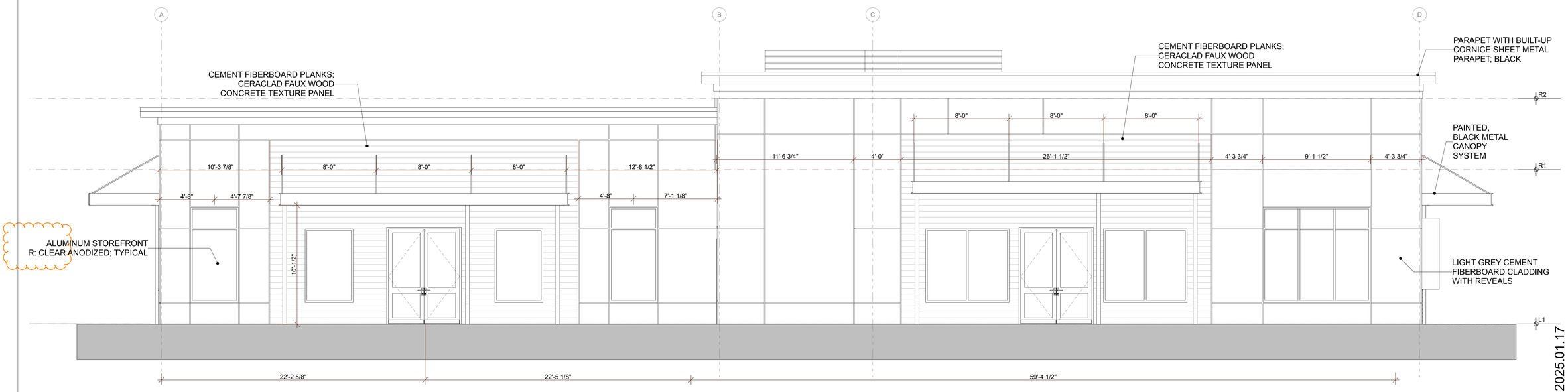
TITLE:	REFLECTED CEILING PLAN
PROJECT # :	2016-L1
SHEET:	A1.2

PRCNC20250094



2 WEST ELEVATION

SCALE: 1/4" = 1'-0"



1 SOUTH ELEVATION

SCALE: 1/4" = 1'-0"

Please correct the cut-off text. [Reference the marked-up document: CONSTRUCTION PLAN SET, sheet A2.0]

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

S9

SYNTHESIS 9, LLC
523 N. D ST.
TACOMA, WA 98403

9251 REGISTERED ARCHITECT BRETT L. LAWSON STATE OF WASHINGTON

EAST TOWN CROSSING

LOT 1 COMMERCIAL
PIONEER & SHAW PUYALLUP

REVISIONS

REVISIONS

DRAWN BY:	CM / BL
CHECKED BY:	BL
DATE:	2025.01.17
TITLE:	ELEVATIONS
PROJECT # :	2016-L1
SHEET:	A2.0

AGENCY REVIEW | 2025.01.17

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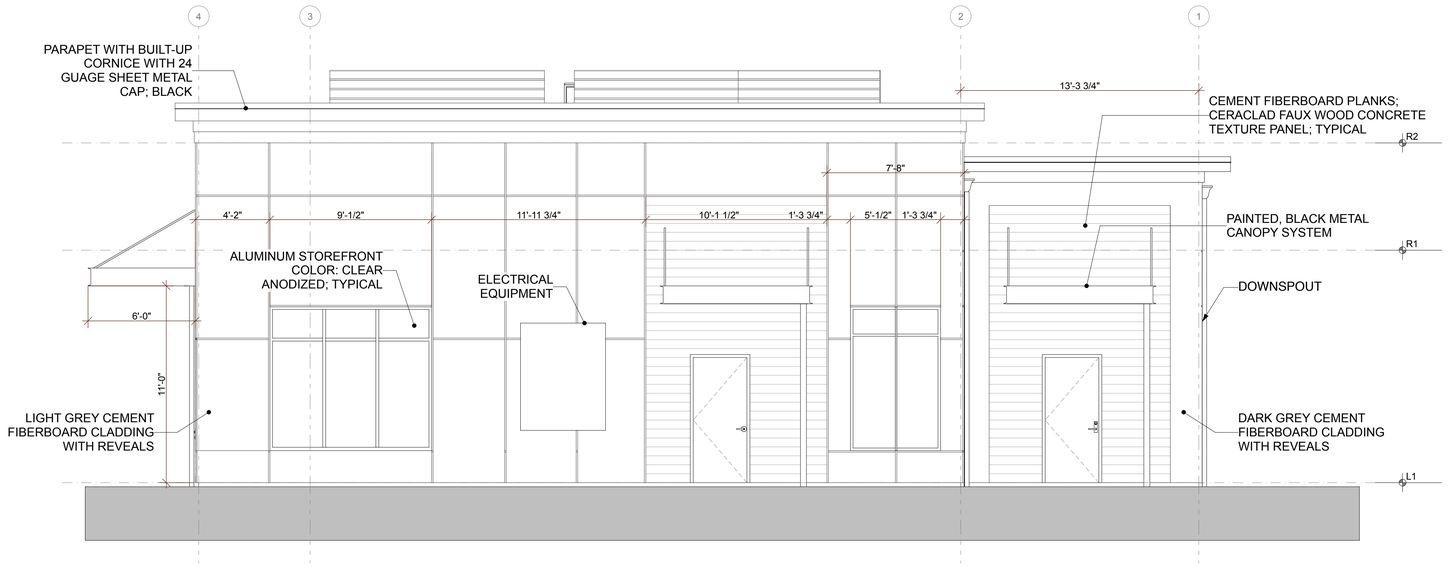
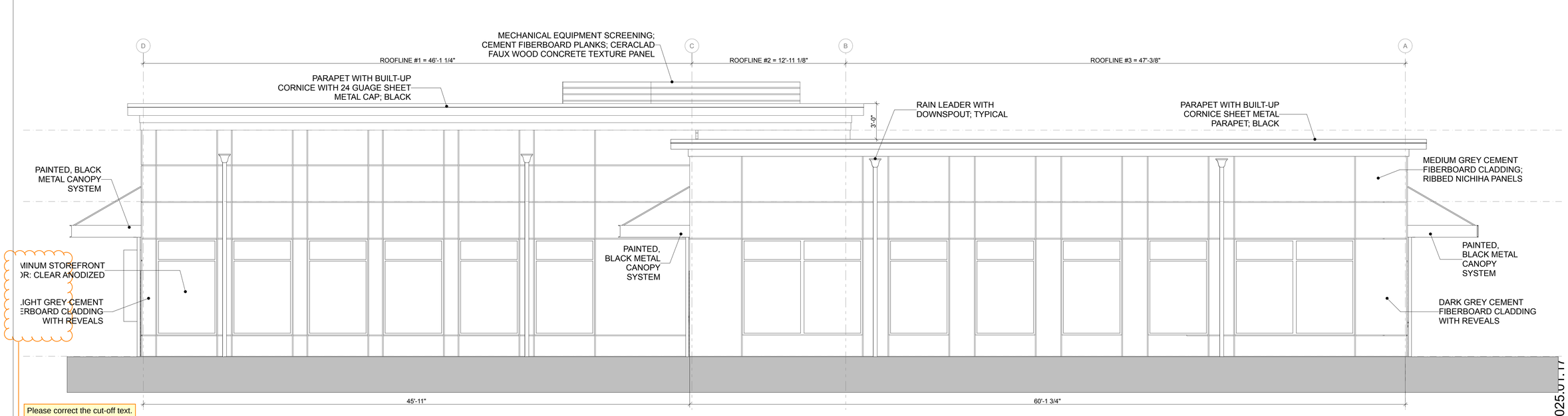


2 EAST ELEVATION

SCALE: 1/4" = 1'-0"



Please correct the cut-off text. [Reference the marked-up document: CONSTRUCTION PLAN SET, sheet A2.1]

1 NORTH ELEVATION

SCALE: 1/4" = 1'-0"

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SYNTHESIS 9, LLC
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REGISTERED ARCHITECT
BRENT L. HAWKINS
STATE OF WASHINGTON
9251

EAST TOWN CROSSING

LOT 1 COMMERCIAL
PIONEER & SHAW PUYALLUP

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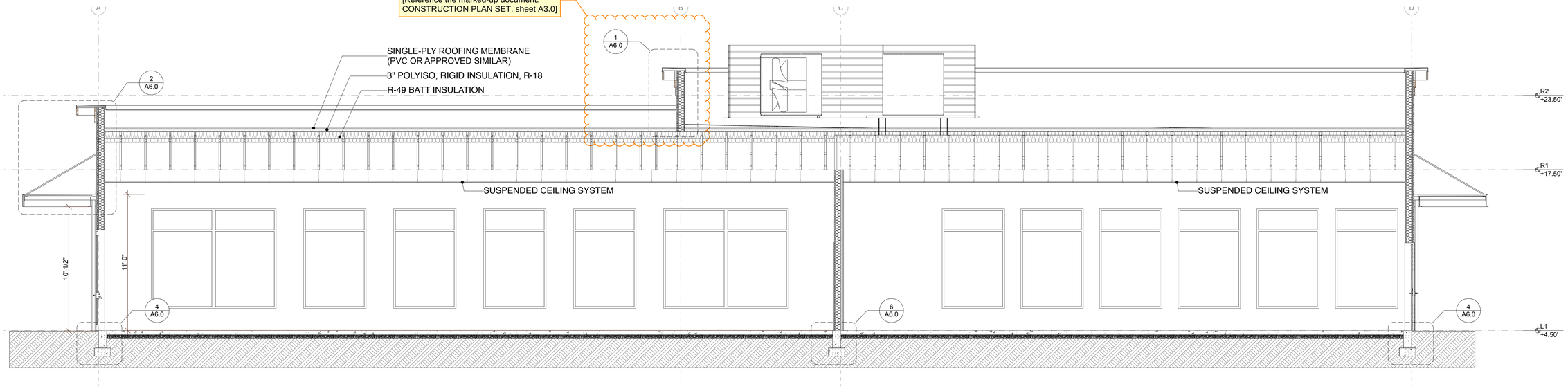
PROJECT # :	2016-L1
SHEET:	A2.1

PRCNC20250094

Detail 1 was not provided on sheet A6.0.
[Reference the marked-up document:
CONSTRUCTION PLAN SET, sheet A3.0]



1 BUILDING SECTION 01

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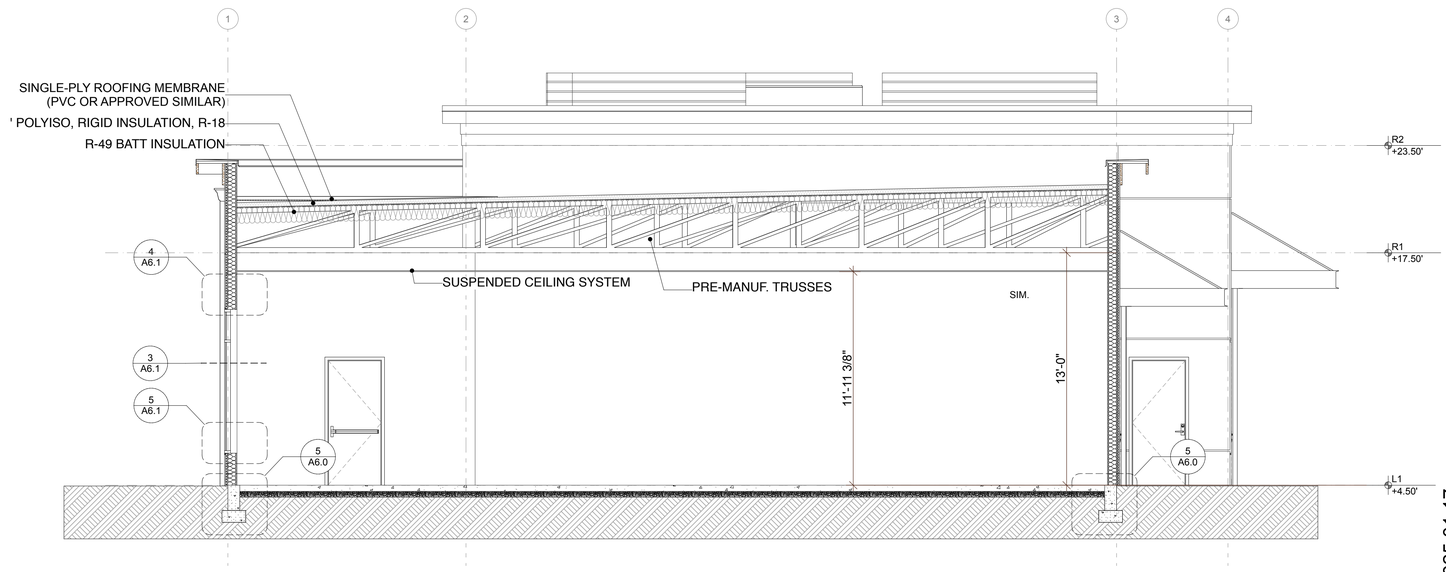

2 BUILDING SECTION 02

SCALE: 1/4" = 1'-0"

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BRIAN LEWIS LOWDEN
STATE OF WASHINGTON

EAST TOWN CROSSING

LOT 1 COMMERCIAL
PIONEER & SHAW PUYALLUP

AGENCY REVIEW | 2025.01.17

REVISIONS

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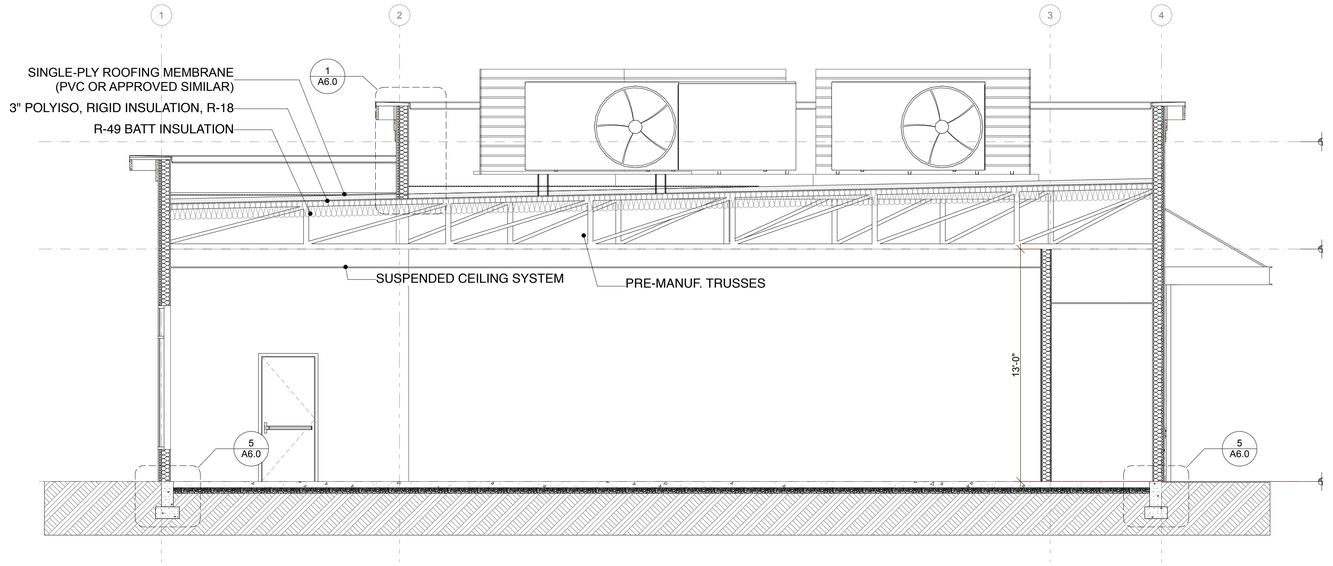
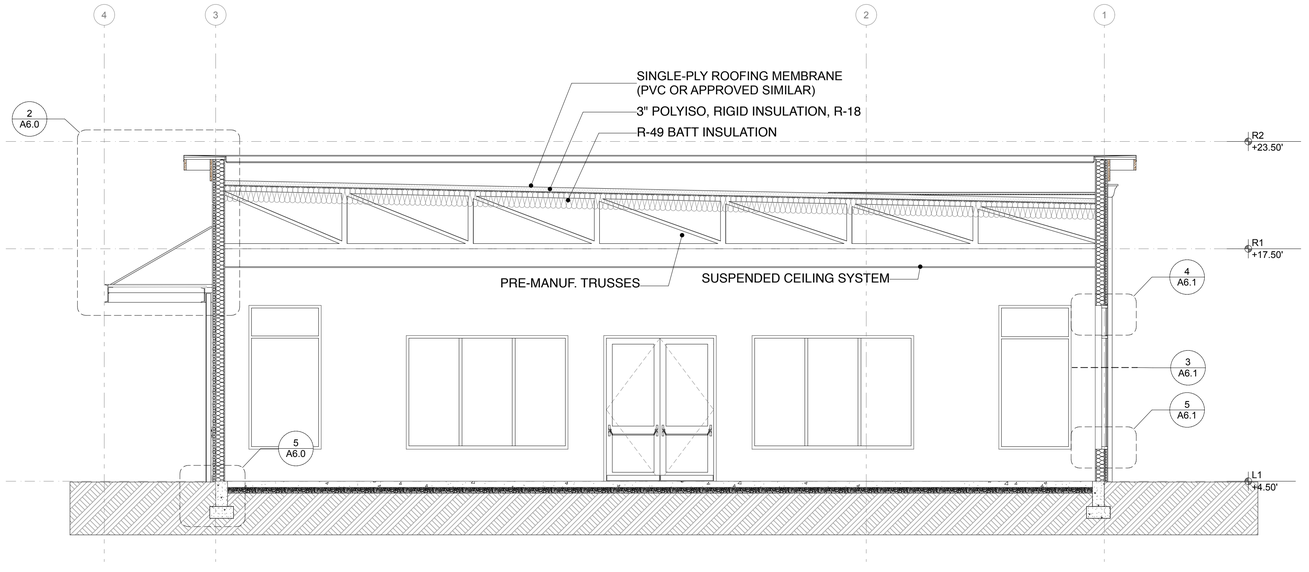
CHECKED BY:	BL
DATE:	2025.01.17
TITLE:	BUILDING SECTIONS
PROJECT # :	2016-L1
SHEET:	A3.0

PRCNC20250094



1 BUILDING SECTION 03

SCALE: 1/4" = 1'-0"



2 BUILDING SECTION 04

SCALE: 1/4" = 1'-0"

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EAST TOWN CROSSING
LOT 1 COMMERCIAL
PIONEER & SHAW PUYALLUP

SYNTHESIS 9, LLC
523 N. D ST.
TACOMA, WA 98403

REGISTERED ARCHITECT
MARK LEVY LUNDIN
STATE OF WASHINGTON
9251

REVISIONS

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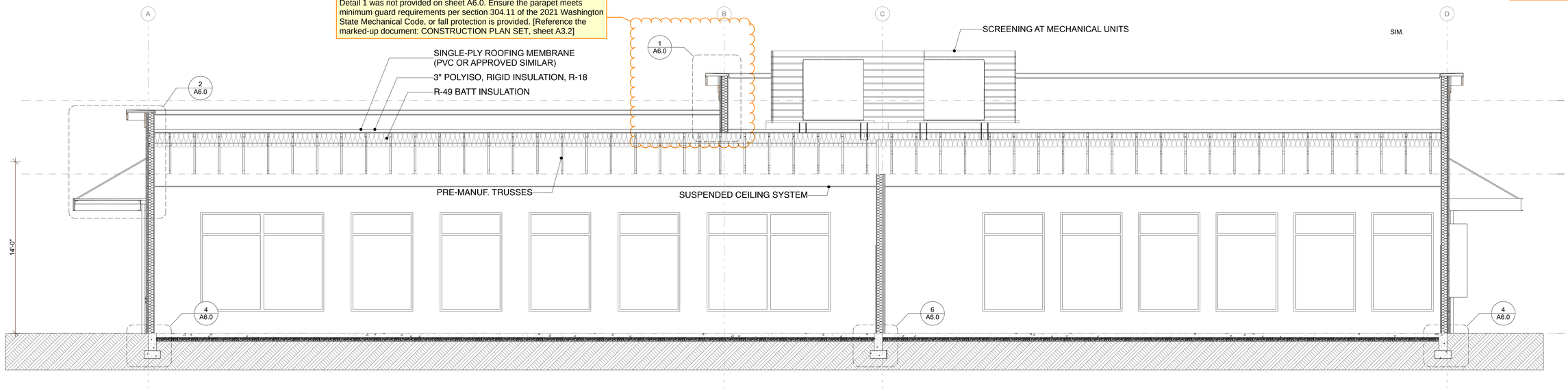
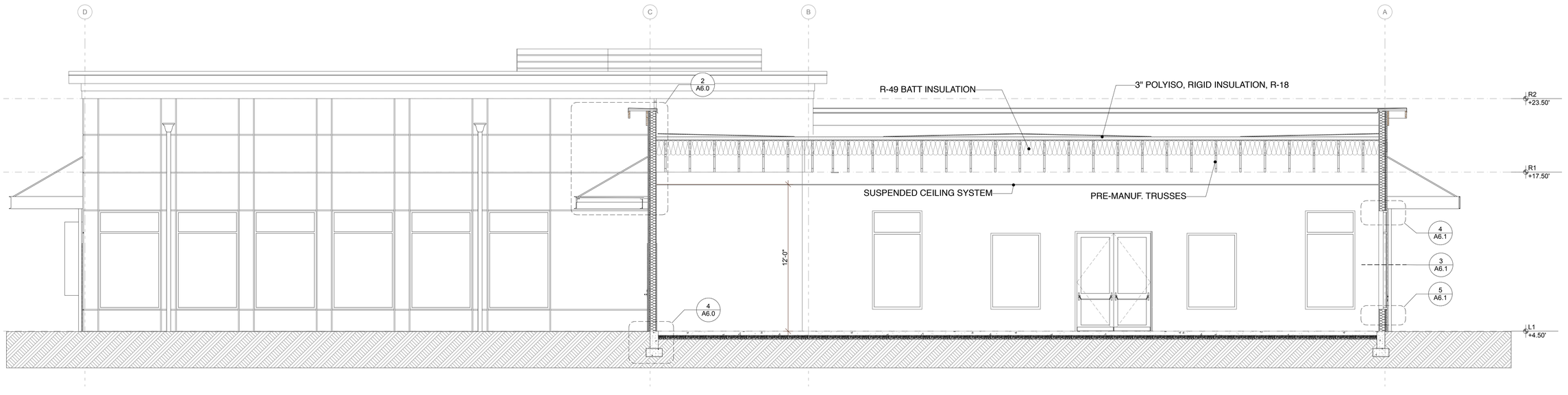
DATE:	2025.01.17
TITLE:	BUILDING SECTIONS
PROJECT # :	2016-L1
SHEET:	A3.1

PRCNC20250094

Detail 1 was not provided on sheet A6.0. Ensure the parapet meets minimum guard requirements per section 304.11 of the 2021 Washington State Mechanical Code, or fall protection is provided. [Reference the marked-up document: CONSTRUCTION PLAN SET, sheet A3.2]



1 BUILDING SECTION 05
SCALE: 1/4" = 1'-0"



2 BUILDING SECTION 06
SCALE: 1/4" = 1'-0"

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TACOMA, WA 98403

REGISTERED ARCHITECT
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BRIAN LEE LEWIS
STATE OF WASHINGTON

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LOT 1 COMMERCIAL
PIONEER & SHAW PUYALLUP

AGENCY REVIEW | 2025.01.17

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DATE:	2025.01.17
TITLE:	BUILDING SECTIONS
PROJECT # :	2016-L1
SHEET:	A3.2

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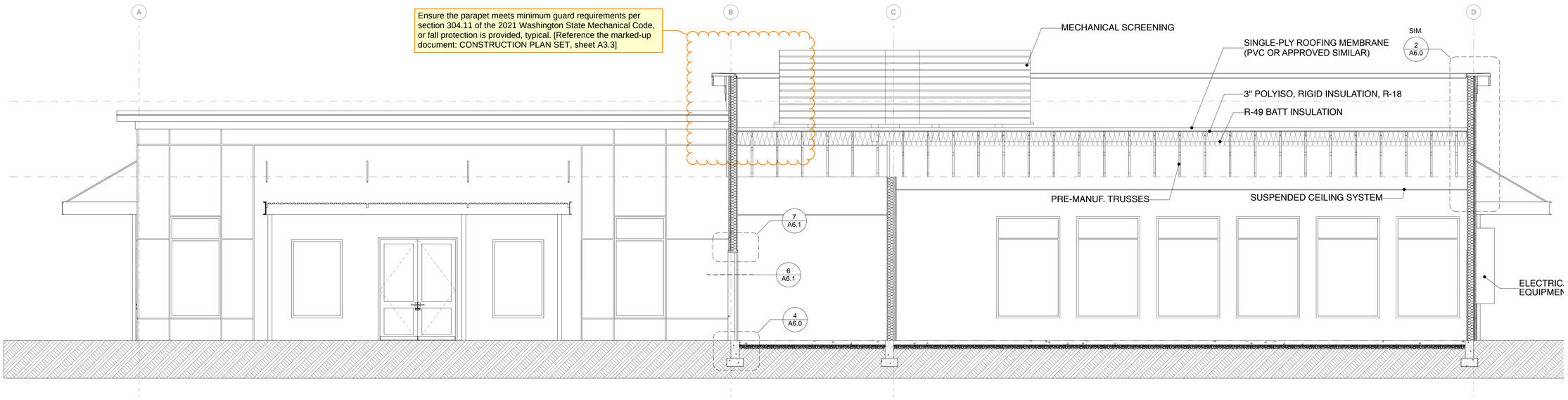

1 BUILDING SECTION 07

SCALE: 1/4" = 1'-0"

2 BUILDING SECTION 08

SCALE: 1/4" = 1'-0"

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TACOMA, WA 98403

REGISTERED ARCHITECT
9251
MATTHEW LYNN MORROW
STATE OF WASHINGTON

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DATE:	2025.01.17
TITLE:	BUILDING SECTIONS
PROJECT # :	2016-L1
SHEET:	A3.3

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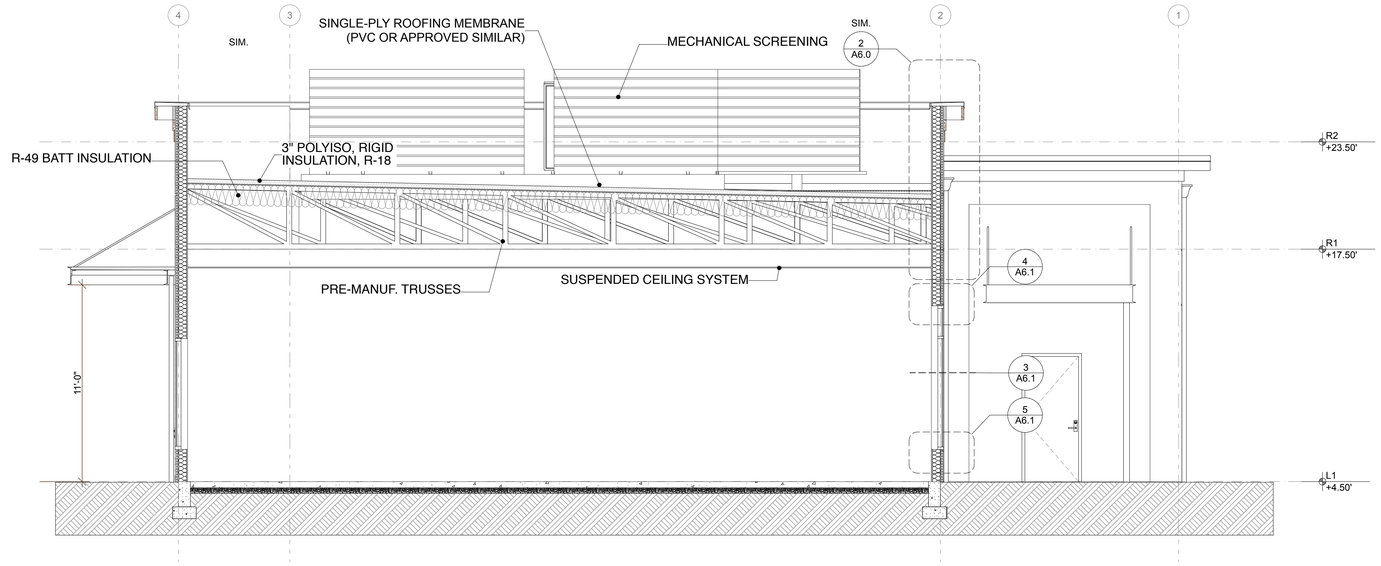
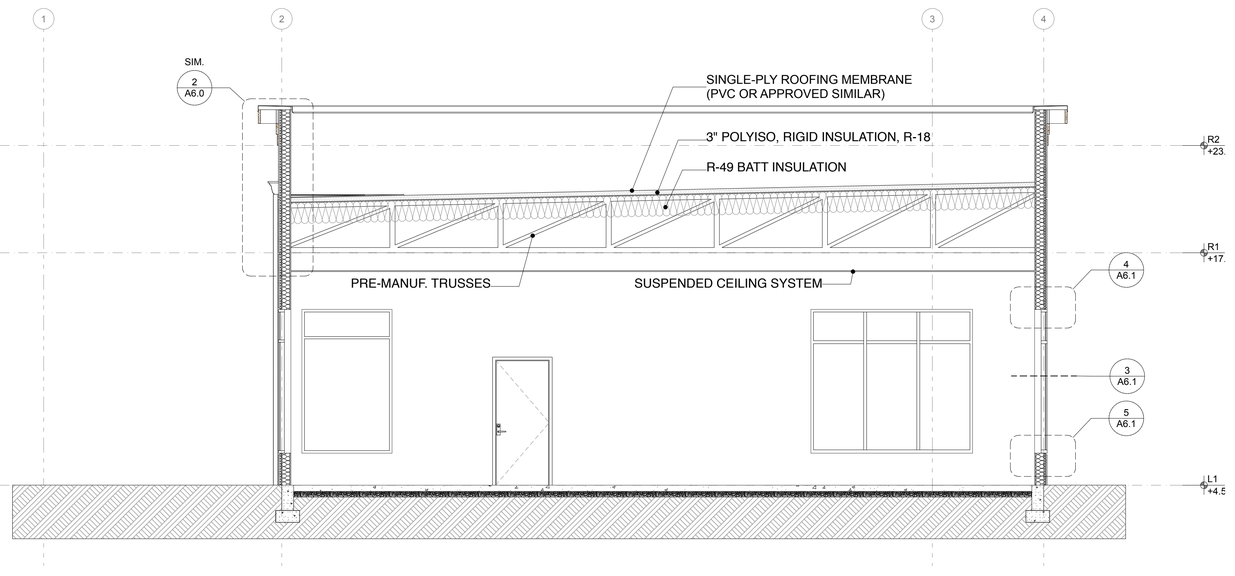


1 BUILDING SECTION 09
SCALE: 1/4" = 1'-0"



2 BUILDING SECTION 10
SCALE: 1/4" = 1'-0"

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523 N. D ST.
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REGISTERED ARCHITECT
BRETT LAWSON
STATE OF WASHINGTON
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PIONEER & SHAW PUYALLUP

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CHECKED BY:	BL
DATE:	2025.01.17
TITLE:	BUILDING SECTIONS
PROJECT # :	2016-L1
SHEET:	A3.4

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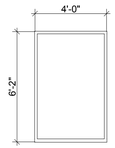
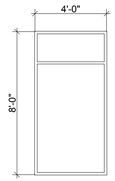
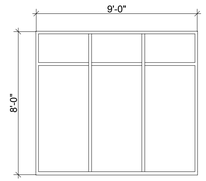
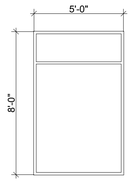
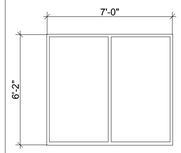
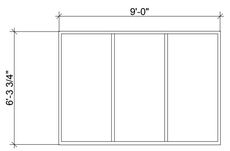
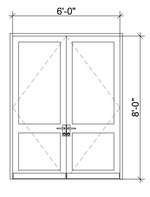
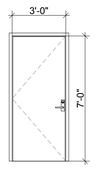
WINDOW TYPES

ELEVATION						
TYPE	01	02	03	04	05	06
SIZE (W x H)	4'-0"×6'-2"	4'-0"×8'-0"	9'-0"×8'-0"	5'-0"×8'-0"	7'-0"×6'-2"	9'-0"×6'-3 3/4"
QUANTITY	2	4	2	15	2	2
U-VALUE	0.34	0.34	0.34	0.34	0.34	0.34
SHGC	0.38	0.38	0.38	0.38	0.38	0.38
NOTES						

DOOR TYPES

ELEVATION		
TYPE	A	B
QUANTITY	3	3
FRAME	BLACK ANODIZED ALUM. STOREFRONT	HOLLOW METAL
PANEL	SAFETY GLAZED	INSULATED METAL
U-VALUE	0.60	0.37
SHGC	0.33	N/A
NOTES		

DOOR SCHEDULE

DOOR NUMBER	TYPE	ROOM	DOOR W x HT	NOTES
101A	A	SUITE 101	6'-0"×8'-0"	PANIC HARDWARE
101B	A	SUITE 101	6'-0"×8'-0"	PANIC HARDWARE
101C	B	SUITE 101	3'-0"×7'-0"	PANIC HARDWARE
102A	A	SUITE 102	6'-0"×8'-0"	PANIC HARDWARE (NOT REQUIRED WITH 'B' OCCUPANCY
102B	B	SUITE 102	3'-0"×7'-0"	PANIC HARDWARE (NOT REQUIRED WITH 'B' OCCUPANCY
301A	B	RISER ROOM	3'-0"×7'-0"	

Please revise the accessibility notes to conform to the 2017 edition of the Washington State Accessibility Code (ICC A117.1-2017). [Reference the marked-up document: CONSTRUCTION PLAN SET, sheet A4.0]

DOOR SCHEDULE NOTES:

DOOR OPERATIONS PER 1010.1.9 - EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

DOOR HARDWARE PER 1010.1.9.1 - DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES ON DOORS REQUIRED TO BE ACCESSIBLE BY CHAPTER 11 SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE.

HARDWARE HEIGHT PER 1010.1.9.2 - DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES SHALL BE INSTALLED 34 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE THE FINISHED FLOOR. LOCKS USED ONLY FOR SECURITY PURPOSES AND NOT USED FOR NORMAL OPERATION ARE PERMITTED AT ANY HEIGHT.

ACCESSIBLE THRESHOLDS PER ICC A117.1-2009 SECTION 303 - THRESHOLDS AT DOORWAYS SHALL BE 1/2" MAXIMUM IN HEIGHT.

DOOR CLOSERS PER ICC A117.1-2009 - DOOR CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THROUGH THE DOOR TO AN OPEN POSITION OF 12 DEGREES SHALL BE 5 SECONDS.

DOOR-OPENING FORCE PER ICC A117.1-2009 - THE FORCE FOR PUSHING OR PULLING OPEN DOORS SHALL BE 10.0 POUNDS MAXIMUM PER WASHINGTON STATE AMMENDMENT.

DOOR HARDWARE LOCKSETS and DEFINITIONS

SECURITY LOCKSET - THE LATCHBOLT IS RETRACTED BY THE GRIP ON EITHER SIDE UNLESS THE OUTSIDE GRIP IS LOCKED BY THE OUTSIDE KEY. OPERATING THE INSIDE GRIP ALWAYS RETRACTS THE LATCHBOLT.

ACCESSIBLE SECURITY LOCKSET - THE LATCHBOLT IS RETRACTED BY THE GRIP ON EITHER SIDE UNLESS THE OUTSIDE GRIP IS LOCKED BY EITHER THE INSIDE KEY OR THE OUTSIDE KEY. OPERATING THE INSIDE GRIP ALWAYS RETRACTS THE LATCHBOLT. ALL COMPONENTS OF THE DOOR HARDWARE TO MEET ACCESSIBILITY REQUIREMENTS OF SECTION 1010.1.9 OF THE 2015 IBC.

OFFICE LOCKSET - THE LATCHBOLT IS RETRACTED BY THE GRIP ON EITHER SIDE UNLESS THE OUTSIDE GRIP IS LOCKED BY THE TOGGLE OR OUTSIDE KEY. OPERATING THE INSIDE GRIP DOES NOT UNLOCK THE OUTSIDE GRIP.

PASSAGE LOCKSET - THE LATCHBOLT IS ALWAYS RETRACTED BY THE GRIP ON EITHER SIDE. BOTH GRIPS ARE ALWAYS FREE.

PRIVACY LOCKSET - THE LATCHBOLT IS RETRACTED BY THE GRIP ON EITHER SIDE UNLESS THE OUTSIDE GRIP IS LOCKED BY THE INSIDE THUMB-TURN, BUTTON OR KEY. OPERATING THE INSIDE GRIP UNLOCKS THE OUTSIDE GRIP. AN EMERGENCY RELEASE TOOL UNLOCKS THE OUTSIDE GRIP. THE OUTSIDE GRIP IS ALSO UNLOCKED WHEN THE DOOR IS CLOSED. DOOR CAN ONLY BE LOCKED FROM THE INSIDE WHEN THE DOOR IS CLOSED.

PUBLIC RESTROOM LOCKSET - THE LATCHBOLT IS RETRACTED BY THE INSIDE GRIP OR AN OUTSIDE KEY. THE LATCHBOLT IS RETRACTED BY THE OUTSIDE GRIP INLESS THE GRIP IS LOCKED BY A KEY FROM THE INSIDE. THE LATCHBOLT / OUSIDE GRIP CANNOT BE LOCKET BY A KEY FROM THE OUTSIDE. ALL COMPONENTS OF THE DOOR HARDWARE GROUP TO MEET ACCESSIBILITY REQUIREMENTS OF SECTION 1010.1.9 OF THE 2015 IBC.

STOREROOM LOCKSET - THE LATCHBOLT IS RETRACTED BY THE INSIDE GRIP OR OUTSIDE KEY.

CLOSET LOCKSET - THE LATCHBOLT IS RETRACTED BY THE OUTSIDE AND THE INSIDE GRIP AND THE GRIP CANNOT BE LOCKED.

GLAZING NOTES:

1. GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BIFOLD DOORS SHALL BE CONSIDERED HAZARDOUS LOCATIONS.

2. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE OF THE GLAZING IS WITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EDGE OF THE GLAZING IS LESS THAT 60 INCHES ABOVE THE WALKING SURFACE SHALL BE CONSIDERED A HAZARDOUS LOCATION.

3. GLAZING IN INDIVIDUAL FIXED OR OPERABLE PANEL OF A WINDOW THAT MEETS ALL OF THE FOLLOWING FOUR CONDITIONS SHALL BE CONSIDERED A HAZARDOUS LOCATION: 1. THE EXPOSED AREA OF AN INDIVIDUAL PANE IS GREATER THAN 9 SQAURE FEET; 2. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18 INCHES ABOVE THE FLOOR; 3. THE TOP EDGE OF THE GLAZING IS GREATER THAN 36 INCHES ABOVE THE FLOOR; AND 4. ONE OR MORE WALKING SURFACE(S) ARE WITHIN 36 INCHES, MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE PLANE OF THE GLAZING

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

SYNTHESIS 9, LLC
523 N. D ST.
TACOMA, WA 98403

REGISTERED ARCHITECT
BRETT LAWSON
STATE OF WASHINGTON
9251

EAST TOWN CROSSING
LOT 1 COMMERCIAL
PIONEER & SHAW PUYALLUP

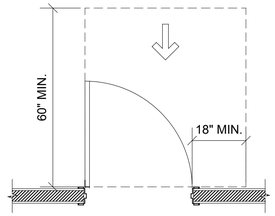
AGENCY REVIEW | 2025.01.17

REVISIONS

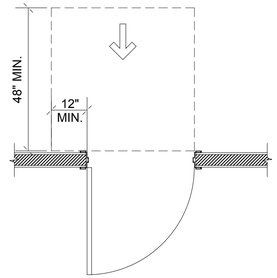
REVISIONS

DRAWN BY:	CM / BL
CHECKED BY:	BL
DATE:	2025.01.17
TITLE:	DOORS & WINDOWS
PROJECT # :	2016-L1
SHEET:	A4.0

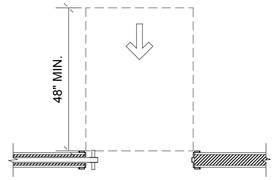
PRCNC20250094



FRONT APPROACH, PULL SIDE



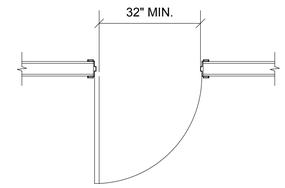
FRONT APPROACH, PUSH SIDE



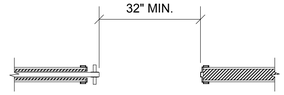
FRONT APPROACH, POCKET

402.2.2 CLEAR WIDTH
DOORWAYS SHALL HAVE A CLEAR OPENING WIDTH OF 32 INCHES MINIMUM. CLEAR OPENING WIDTH OF DOORWAYS WITH SWINGING DOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND STOP, WITH THE DOOR OPEN 90 DEGREES. OPENINGS MORE THAN 24 INCHES IN DEPTH AT DOORS AND DOORWAYS WITHOUT DOORS SHALL PROVIDE A CLEAR OPENING WIDTH OF 36 INCHES MINIMUM. THERE SHALL BE NO PROJECTIONS INTO THE CLEAR OPENING WIDTH LOWER THAN 34 INCHES ABOVE THE FLOOR. PROJECTIONS INTO THE CLEAR OPENING WIDTH BETWEEN 34 INCHES AND 80 INCHES ABOVE THE FLOOR SHALL NOT EXCEED 4 INCHES.

EXCEPTIONS:
1. DOOR CLOSERS AND DOOR STOPS SHALL BE PERMITTED TO BE 78 INCHES MINIMUM ABOVE THE FLOOR.
2. IN ALTERATIONS, A PROJECTION OF 5/8" MAXIMUM INTO THE REQUIRED CLEAR OPENING WIDTH SHALL BE PERMITTED FROM THE LATCH SIDE STOP.

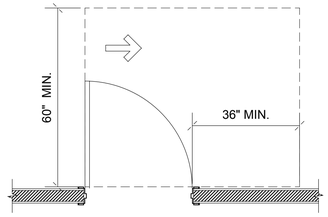


(A) HINGE DOOR

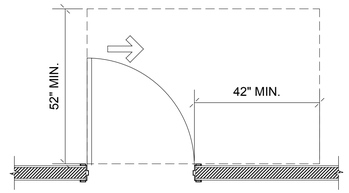


(B) SLIDING DOOR

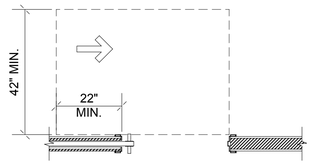
CLEAR WIDTH OF OPENINGS



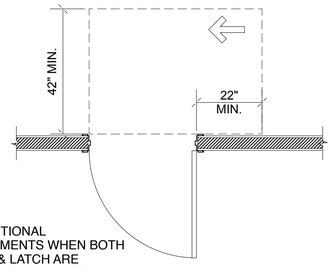
HINGE APPROACH, PULL SIDE



HINGE APPROACH, PULL SIDE

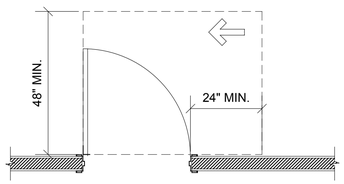


POCKET OR HINGE APPROACH



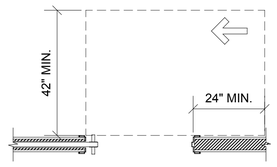
SEE ADDITIONAL REQUIREMENTS WHEN BOTH CLOSER & LATCH ARE PROVIDED PER FIGURE 404.2.3.2 (ON THIS SHEET)

HINGE APPROACH, PUSH SIDE

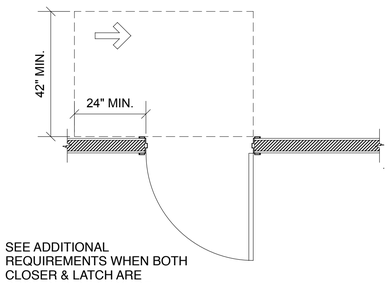


SEE ADDITIONAL REQUIREMENTS WHEN BOTH CLOSER & LATCH ARE PROVIDED PER FIGURE 404.2.3.2 (ON THIS SHEET)

LATCH APPROACH, PULL SIDE

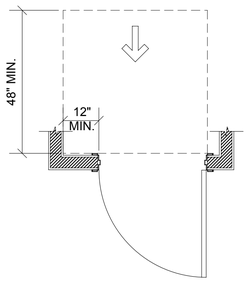


STOP OR LATCH APPROACH



SEE ADDITIONAL REQUIREMENTS WHEN BOTH CLOSER & LATCH ARE PROVIDED PER FIGURE 404.2.3.2 (ON THIS SHEET)

LATCH APPROACH, PUSH SIDE



PUSH SIDE, W/ CLOSER & LATCH

1 ACCESSIBLE DOOR CLEARANCE
SCALE: 1/2" = 1'-0"

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S9
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TACOMA, WA 98403

REGISTERED ARCHITECT
BRETT LEVI LINDOM
STATE OF WASHINGTON
9251

EAST TOWN CROSSING
LOT 1 COMMERCIAL
PIONEER & SHAW PUYALLUP

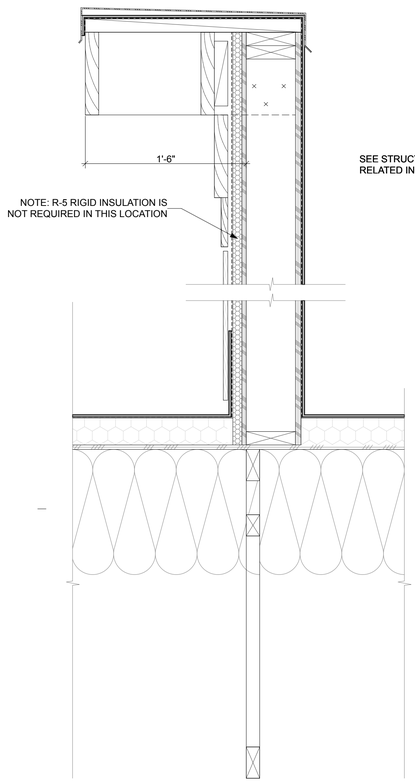
AGENCY REVIEW | 2025.01.17

REVISIONS

REVISIONS

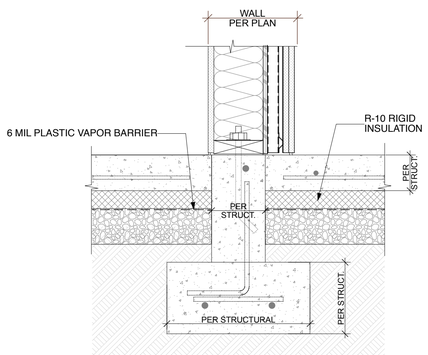
DRAWN BY:	CM / BL
CHECKED BY:	BL
DATE:	2025.01.17
TITLE:	ACCESSIBLE DOORS
PROJECT # :	2016-L1
SHEET:	A4.1

PRCNC20250094

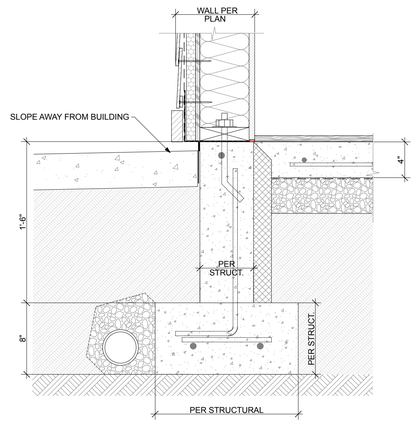


1 ROOF DETAIL - 02
SCALE: 1 1/2"= 1'-0"

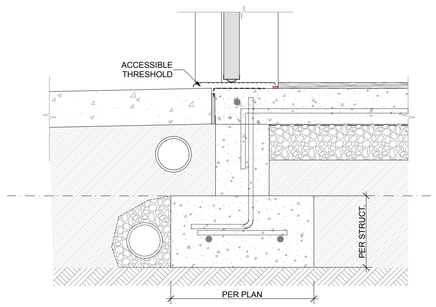
2 ROOF DETAIL - 01
SCALE: 1 1/2"= 1'-0"



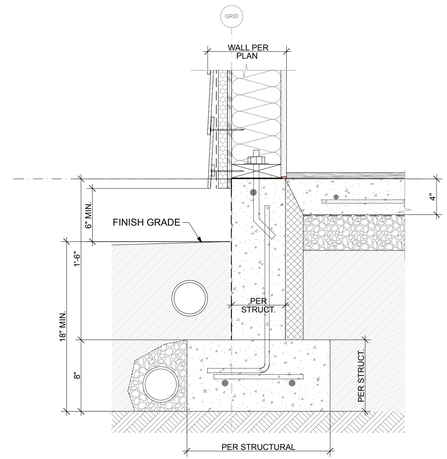
6 FOUNDATION DETAIL - 04
SCALE: 1 1/2"= 1'-0"



5 FOUNDATION DETAIL - 03
SCALE: 1 1/2"= 1'-0"



4 FOUNDATION DETAIL - 02
SCALE: 1 1/2"= 1'-0"



3 FOUNDATION DETAIL - 01
SCALE: 1 1/2"= 1'-0"

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AGENCY REVIEW | 2025.01.17

S9
SYNTHESIS 9, LLC
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TACOMA, WA 98403

9251 REGISTERED ARCHITECT BRIAN LEE MORROW STATE OF WASHINGTON

EAST TOWN CROSSING
LOT 1 COMMERCIAL
PIONEER & SHAW PUYALLUP

REVISIONS

REVISIONS

DRAWN BY:	CM / BL
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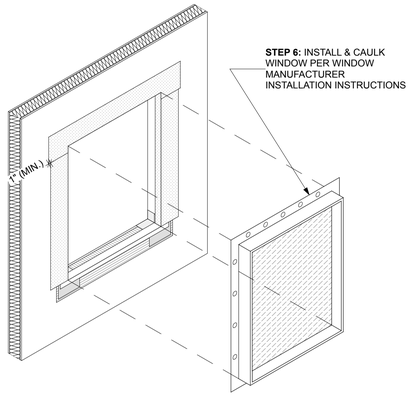
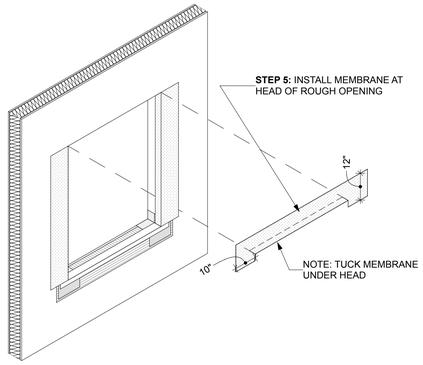
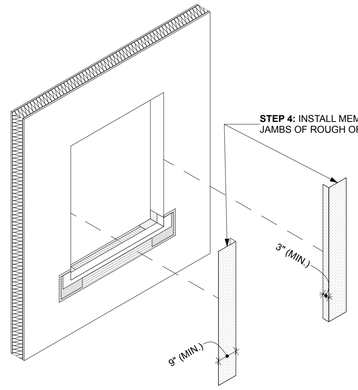
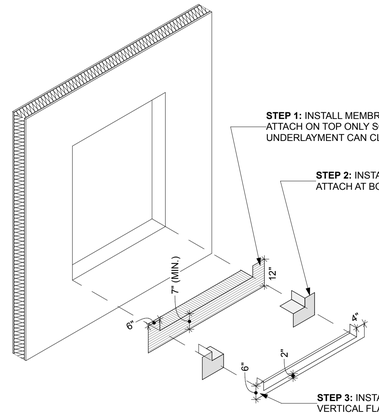
DATE:	2025.01.17
TITLE:	DETAILS
PROJECT #:	2016-L1
SHEET:	A6.0

PRCNC20250094



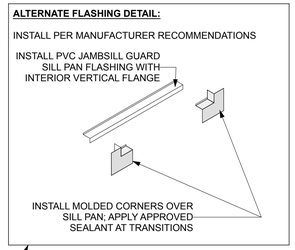


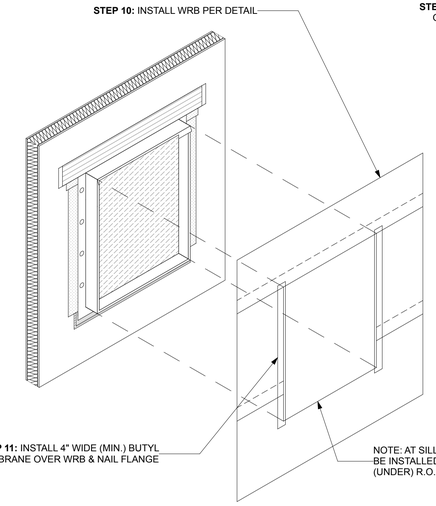


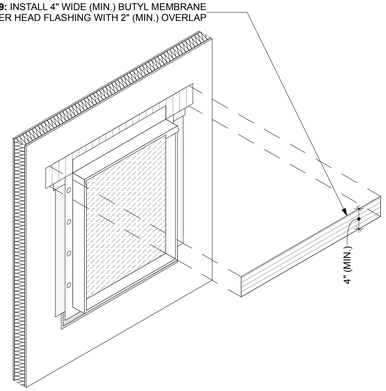


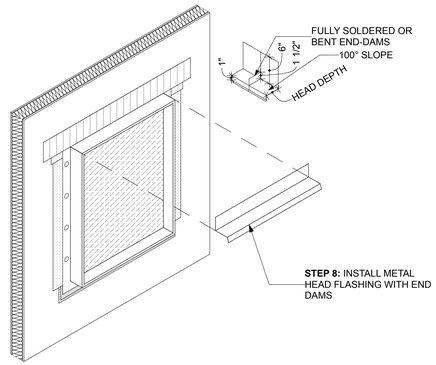
ALTERNATE FLASHING DETAIL:

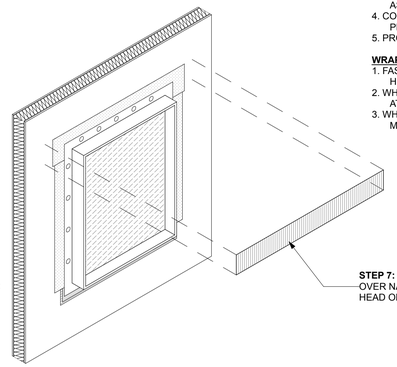
INSTALL PER MANUFACTURER RECOMMENDATIONS







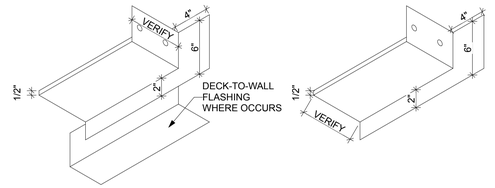




SILL PLAN NOTES:
1. ALL PANS AT MASONRY TO BE STAINLESS STEEL OR 24 GA GALV. PRE-FINISHED.
2. RESIDENTIAL WINDOW WALL SYSTEMS TO HAVE ALUMINUM PANS & FLASHINGS PER DETAILS TO MATCH WINDOW FRAME COLORS.
3. SEAL OR SOLDER JOINTS AT END- & BACK DAMS TO FORM A WATERTIGHT PAN ASSEMBLY; SEAL BACK TO END DAM TRANSITIONS.
4. COORDINATE BACK DAM HEIGHT WITH THRESHOLD AND/OR INTERIOR FINISHES PER ARCH. PLANS.
5. PROVIDE HEMMED EDGE AT ALL EXPOSED EDGES.

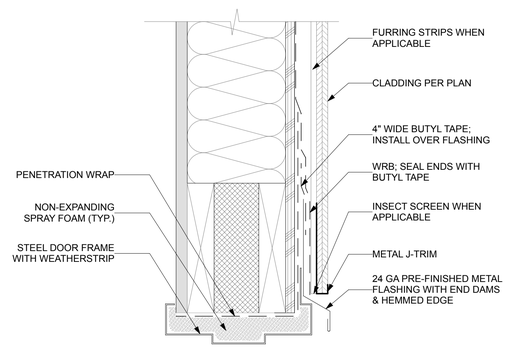
WRAP & WRB NOTE:
1. FASTEN WINDOW / DOOR WRAP & WRB PER WATERPROOFING DETAILS PROVIDED HEREIN WITH STAINLESS STEEL STAPLES WITH 7/16" CROWNS.
2. WHERE STEEL STUD FRAMING OCCURS, USE APPROVED ADHESIVE TO PROPERLY ATTACHED WINDOW / DOOR WRAP THERETO.
3. WHERE CONCRETE SURFACES OCCUR, USE VAPROSHIELD SELF-ADHERING MEMBRANE FOR WINDOW / DOOR WRAPS AND WRB.

1 FLANGED WINDOW WRAP
SCALE: 3/8" = 1'-0"

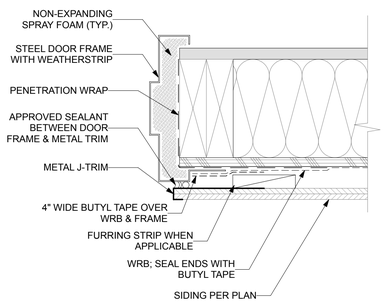


AT SLIDING GLASS DOOR AT WINDOW

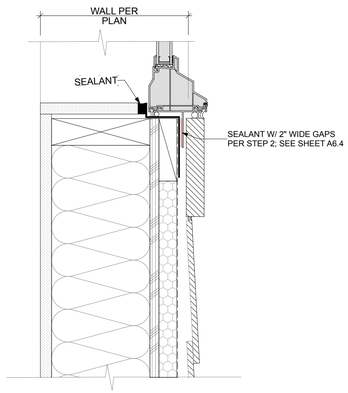
2 SILL PAN DETAIL
SCALE: 1 1/2"= 1'-0"



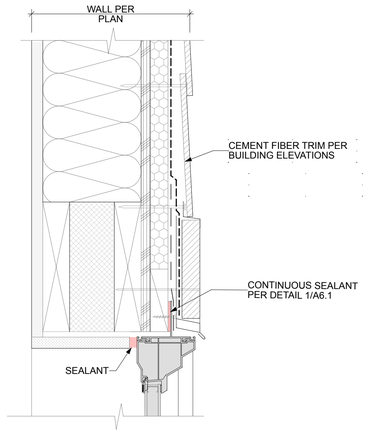
7 DOOR HEAD AT EXTERIOR WALL
SCALE: 3" = 1'-0"



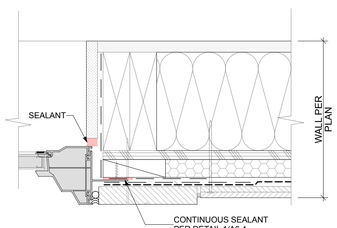
6 DOOR JAMB AT EXTERIOR WALL
SCALE: 3" = 1'-0"



5 WINDOW SILL DETAIL
SCALE: 3" = 1'-0"



4 WINDOW HEAD DETAIL
SCALE: 3" = 1'-0"



3 WINDOW JAMB DETAIL
SCALE: 3" = 1'-0"

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EAST TOWN CROSSING
LOT 1 COMMERCIAL
PIONEER & SHAW PUYALLUP

AGENCY REVIEW | 2025.01.17

REVISIONS

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CHECKED BY:	BL
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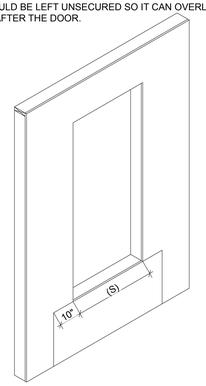
TITLE:	DETAILS
PROJECT # :	2016-L1
SHEET:	A6.1

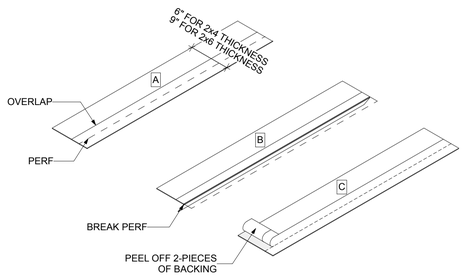
PRCNC20250094

NON-FLANGED DOOR BEFORE WATER-RESISTIVE BARRIER (WRB) IS INSTALLED

STEP 1
ATTACH APRON WRB UNDER SILL (S). APRON SHOULD EXTEND AT LEAST 10" BEYOND SIDES OF ROUGH OPENING JAMBS (OR TO FIRST STUD IN OPEN STUD CONSTRUCTION), AND FAR ENOUGH BELOW THE ROUGH OPENING TO OVERLAP THE SILL PLAN OR THE WRB BELOW. THE TOP OF THE APRON SHOULD BE SECURELY ATTACHED TO THE WALL AND THE BOTTOM OF THE APRON SHOULD BE LEFT UNSECURED SO IT CAN OVERLAP THE WRB WHICH WILL BE INSTALLED AFTER THE DOOR.

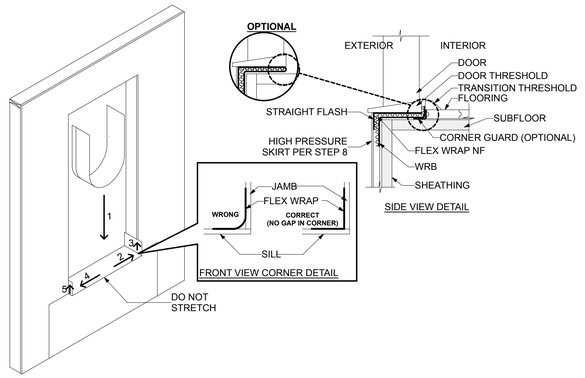


STEP 2
A. CUT PIECE OF FLEX WRAP NF AT LEAST 12" LONGER THAN THE WIDTH OF THE SILL (S).
B. FLEX WRAP NF HAS PERFORATED RELEASE PAPER TO HELP WITH THE FORMATION OF THE BACK DAM. TO ENSURE THAT THE PERFORATION TEARS CLEANLY, FOLD THE PERFORATION 180 DEGREES AND CREASE THE FLASHING.
C. REMOVE THE TWO WIDEST PIECES OF RELEASE PAPER LEAVING THE NARROWEST RELEASE PAPER ON THE FLASHING. WHEN THE FINISHED FLOOR IS APPLIED, THE RELEASE PAPER CAN BE REMOVED AND THE BACK DAM CAN BE COMPLETED.

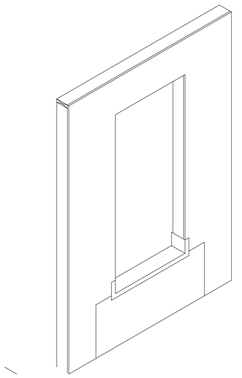


STEP 3 (OPTIONAL BACK DAM)
INSTALL THE SILL FLASHING AS INDICATED LEAVING 1" OF FLEX WRAP NF WITH RELEASE PAPER EXTENDING IT PAS THE DOOR THRESHOLD ON THE INSIDE. WHEN THE 1" OF RELEASE PAPER IS REMOVED, THERE SHOULD BE 3/4" OF FLASHING TO FORM THE BACK DAM.

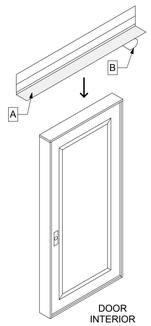
OPTION 2: SOME FLOORING CANNOT ACCOMMODATE A BACK DAM. IN THAT CASE FOLD THE 1" BACK DAM ON TOP OF FLEX WRAP NF IN THE SILL. DOOR WILL BE INSTALLED ON TOP OF THE 1" FOLD TO CREATE A BACK DAM.



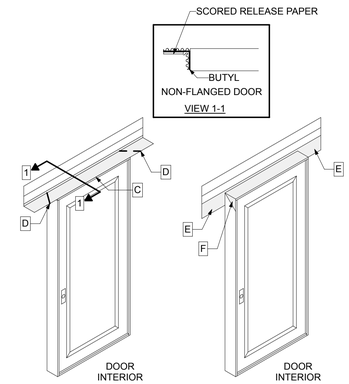
STEP 4
FAN OUT FLEX WRAP NF AT BOTTOM CORNERS ONTO THE FACE OF THE WALL. COVERAGE OF FLEX WRAP NF SHOULD BE 2" TO 3" ONTO THE FACE OF THE WALL.



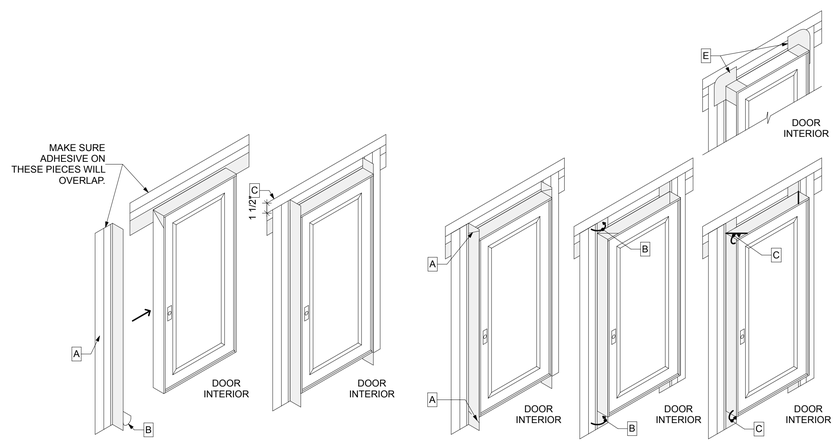
STEP 5 FOR NON-FLANGED DOORS
A. PREPARE HEAD FLASHING BY CUTTING A PIECE OF STRAIGHT FLASH VF AT LEAST 12" LONGER THAN THE HEAD LENGTH.
B. REMOVE THE RELEASE PAPER FROM ONE SIDE OF STRAIGHT FLASH VF.
C. CENTER THE STRAIGHT FLASH VF ALONG THE LENGTH OF THE DOOR AND POSITION SO THAT IT CONTACTS THE DOOR FRAME.
D. BEGINNING AT THE JUNCTION OF THE JAMB AND HEAD AND AWAY FROM THE CORNERS CUT THE STRAIGHT FLASH VF ALONG THE CORNER AT A 45 DEGREE ANGLE.
E. FOLD THE NEWLY CREATED FLASHING FLAPS DOWN PARALLEL TO THE DOOR FRAME.
F. FOLD REMAINING HEAD FLASHING ONTO THE JAMB.



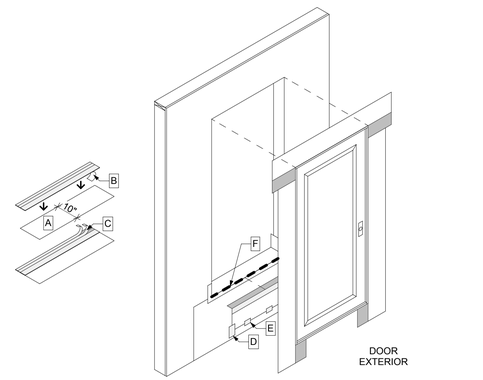
STEP 6
A. PREPARE JAMB FLASHING BY CUTTING A PIECE OF STRAIGHT FLASH VF AT LEAST 6" LONGER THAN THE JAMB LENGTH.
B. REMOVE THE RELEASE PAPER FROM ONE SIDE OF STRAIGHT FLASH VF.
C. POSITION SO THAT THE STRAIGHT FLASH VF CONTACTS THE DOOR FRAME UP TO THE EXTERIOR FACE OF THE DOOR. ENSURE THAT THE JAMB FLASHING IS POSITIONED 1 1/2" BELOW TOP OF HEAD FLASHING. JAMB FLASHING ADHESIVE MUST COME IN CONTACT WITH HEAD FLASHING ADHESIVE AND OVERLAP BY ONE INCH.
D. REPEAT ON OPPOSITE JAMB.



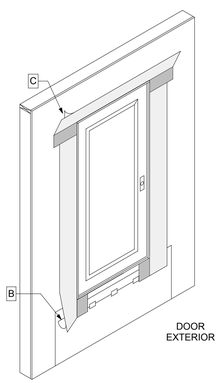
STEP 7
A. BEGINNING AT THE JUNCTION OF THE JAMB AND HEAD AND AT THE SILL AND JAMB AND AWAY FROM THE CORNERS, CUT THE STRAIGHT FLASH VF ALONG THE CORNERS AT A 45 DEGREE ANGLE AND FOLD IT OVER FLAT TO ADHERE IT AGAINST THE HEAD FLASHING.
B. FOLD NEWLY CREATED FLAP DOWN PARALLEL TO THE DOOR FRAME.
C. FOLD FLASHING FLAPS TO THE DOOR FRAME AND ADHERE.
D. REPEAT ON OPPOSITE JAMB.
E. CUT TWO 3" x 3 FLEX WRAP NF SQUARES AND ADD PATCHES TO CORNER OF THE DOOR. STAPLE PATCHES IN CORNERS TO SECURE THE WOODEN HEAD AND JAMBS.



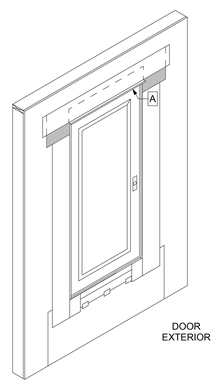
STEP 8 (OPTIONAL - HIGH PRESSURE SKIRT)
A. CREATE THE HIGH PRESSURE SKIRT BY CUTTING A PIECE OF WRB 1" WIDER THAN THE WIDTH OF THE DOOR OPENING AND APPROXIMATELY 10" IN HEIGHT.
B. CUT A PIECE OF STRAIGHT FLASH VF TO THE SAME WIDTH OF SKIRT. REMOVE RELEASE PAPER FROM ONE SIDE OF STRAIGHT FLASH VF AND ADHERE TO WRB. THE SKIRT MAY BE MADE WITH STRAIGHT FLASH VF OR FLASHING TAPE.
C. REMOVE THE RELEASE PAPER FROM THE OTHER SIDE OF STRAIGHT FLASH VF AND ADHERE TO BUTYL ADHESIVE AT THE SILL SKIRT TO THE UNDERSIDE OF THE DOOR THRESHOLD BEHIND THE JAMB FLASHING.
D. SECURE EDGES OF THE OPTIONAL SKIRT WITH TWO 4" PIECES OF STRAIGHT FLASH OR FLASHING TAPE.
E. TAPE THE BOTTOM OF THE OPTIONAL SKIRT TO ALLOW FOR DRAINAGE AND TO MINIMIZE WIND DAMAGE DURING CONSTRUCTION.
F. IF SEALANT IS APPLIED TO THE SILL, INSURE (2) 2" GAPS TO ALLOW FOR DRAINAGE FOR EVERY 4' OF DOOR USING RECOMMENDED SEALANT.



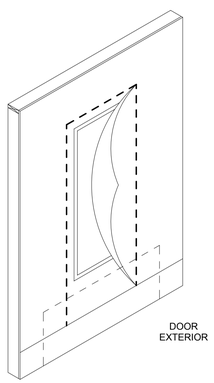
STEP 9
A. INSTALL DOOR ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
B. REMOVE THE REMAINING RELEASE PAPER FROM THE STRAIGHT FLASH VF JAMB FLASHING AND PRESS FIRMLY TO ADHERE TO THE WRB.
C. REMOVE THE RELEASE PAPER AT THE HEAD AND ADHERE IT TO THE EXTERIOR SHEATHING OR FRAMING MEMBERS.
OPTIONAL: COVER EXPOSED BUTYL WITH STRAIGHT FLASH, FLASHING TAPE, OR TYVEK TAPE.



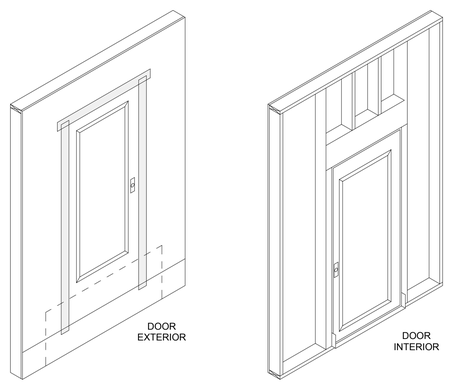
STEP 10 (OPTIONAL - RECOMMENDED BEST PRACTICE)
A. CUT A PIECE OF METAL OR VINYL DRIP CAP SLIGHTLY LONGER THAN THE WIDTH OF THE DOOR AND PLACE A BEAD OF RECOMMENDED SEALANT ON THE REAR SIDE. INSTALL THE DRIP CAP TIGHT AGAINST THE DOOR HEAD AND COVER THE TOP EDGE WITH FLASHING TAPE.



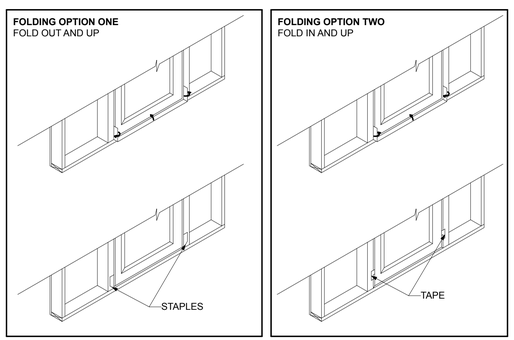
STEP 11
AFTER INSTALLING WRB, CUT AS SHOWN TO EXPOSE DOOR AND APRON. **DO NOT CUT THROUGH THE FLASHING SYSTEMS PRODUCTS OR APRON.**



STEP 12
A. TAPE SEAMS AS SHOWN. **DO NOT TAPE AT BOTTOM OF OPENING**. AT THE HEAD, CONTINUOUS TAPE SEAMS AS SHOWN WITH TYVEK TAPE. SKIP-TAPING AT THE HEAD IS ACCEPTABLE IF AN AIR BARRIER IS NOT REQUIRED OR IF ADDITIONAL DRAINAGE IS DESIRED.
B. LAP BOTTOM OF APRON AND THE WRB OVER BUILDING MATERIALS FOR PROPER SHINGLING.



STEP 13
A. WHEN THE INTERIOR FLORING IS READY TO INSTALL, REMOVE RELEASE PAPER AND USE FOLDING OPTION ONE OR TWO TO FORM THE BACK DAM.
B. INSTALL RECOMMENDED SEALAND (AND BACKER ROD AS NECESSARY) AROUND THE OPENING AT THE INTERIOR. IT IS ALSO ACCEPTABLE TO USE RECOMMENDED FOAM. THE SEAL CREATED BY THE SEALANT (AND BACKER ROD AS NECESSARY) OR FOAM WILL ALSO SERVE AS A BACK DAM. SEALANT SHOULD BE TOOLED FLAT TO ALLOW THE NATURAL URING PROCESS TO CREATE A CONCAVE SHAPE. BE SURE THAT HTE SEALANT PENETRATES THE GROVES OF THE FLEX WRAP NF AROUND THE SILL



1 DOOR INSTALLATION DETAILS
SCALE: 3/8" = 1'-0"

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

AGENCY REVIEW | 2025.01.17

S9
SYNTHESIS 9, LLC
523 N. D ST.
TACOMA, WA 98403

REGISTERED ARCHITECT
9251
MATTHEW J. LEWIS
STATE OF WASHINGTON

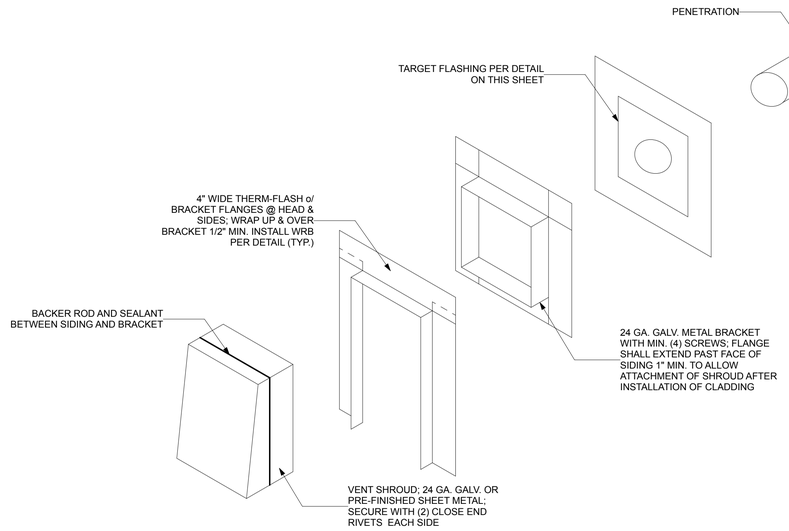
EAST TOWN CROSSING
LOT 1 COMMERCIAL
PIONEER & SHAW PUYALLUP

REVISIONS

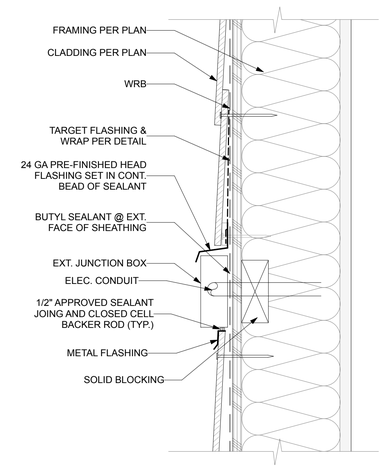
REVISIONS

DRAWN BY:	CM / BL
CHECKED BY:	BL
DATE:	2025.01.17
TITLE:	DETAILS
PROJECT # :	2016-L1
SHEET:	A6.2

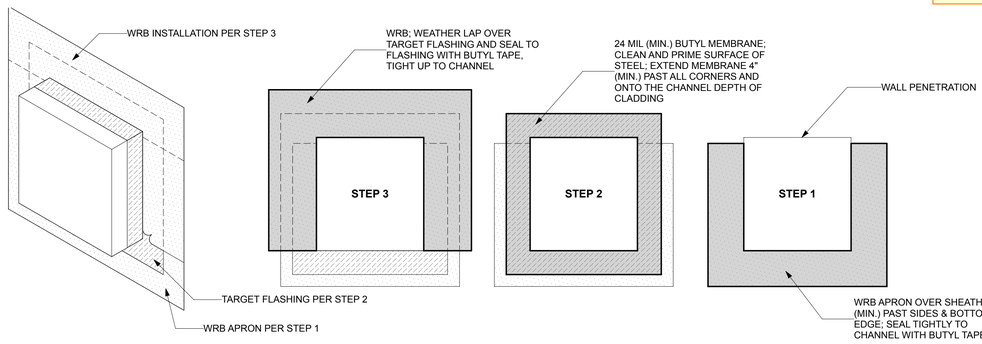
PRCNC20250094



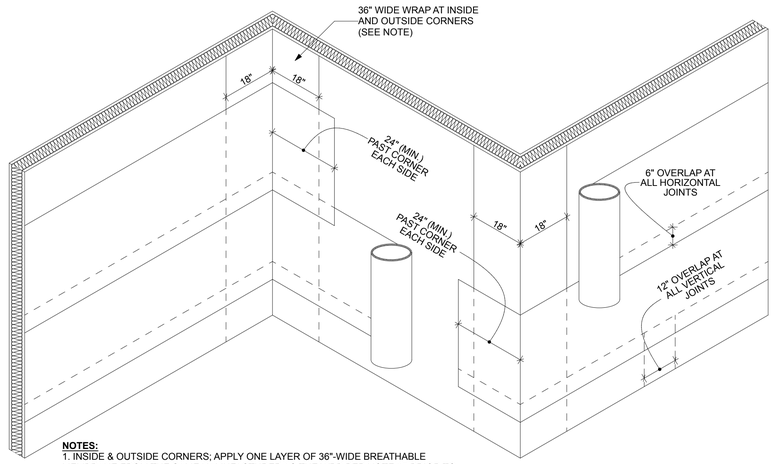
4 VENT PENETRATIONS
SCALE: 3/8" = 1'-0"



5 JUNCTION BOX PENETRATION
SCALE: 3" = 1'-0"

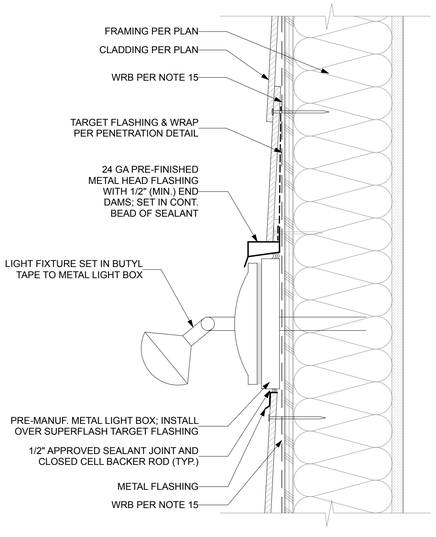


1 TARGET FLASHING INSTALLATION FOR PENETRATIONS > 6"
SCALE: 1" = 1'-0"

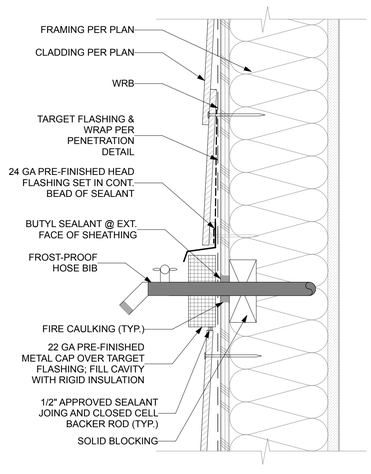


NOTES:
1. INSIDE & OUTSIDE CORNERS; APPLY ONE LAYER OF 36"-WIDE BREATHABLE MEMBRANE FROM THE SAME NAMUFACTURER AS THE WRB PER NOTE 15 PRIOR TO INSTALLATION OF FIELD WRB.
2. INSTALL WEATHER RESISTIVE BARRIER PER NOTE 15 IN WEATHERBOARD FASHION STARTING FROM THE BOTTOM OF THE WALL. ENSURE THAT THE EDGES OF THE LAYERS OF WRB ARE STAGGERED AT LEAST 6".
3. WHERE CONCRETE SURFACES OCCUR, INSTALL VAPROSHIELD S.A.M. THROUGHOUT.

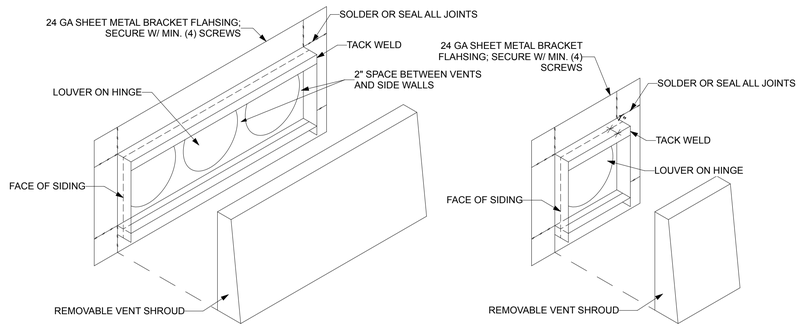
2 WRB INSTALLATION
SCALE: 1/2" = 1'-0"



7 FLASHING @ LIGHT FIXTURE
SCALE: 3" = 1'-0"



6 FLASHING AT HOSE BIB
SCALE: 3" = 1'-0"



3 VENT SHROUDS
SCALE: 1 1/2"= 1'-0"

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AGENCY REVIEW | 2025.01.17

REVISIONS

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PROJECT # :	2016-L1
SHEET:	A6.3

DESIGN CRITERIA

BUILDING CODE: 2021 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY THE LOCAL JURISDICTION.
VERTICAL LOADS

ROOF LIVE LOAD:	25 PSF (SNOW)
ROOF DEAD LOAD:	20 PSF
FLOOR LIVE LOAD:	100 PSF
FLOOR DEAD LOAD:	15 PSF

SNOW DESIGN DATA (ASCE 7-16)	WIND DESIGN DATA (ASCE 7-16)
FLAT SNOW LOAD: 25 PSF	BASIC WIND SPEED (ASD) V= 85MPH
SNOW EXPOSURE FACTOR, Ce=1.0,	ULTIMATE WIND SPEED V= 110MPH
SNOW IMPORTANCE FACTOR, Is=1.0,	RISK CATEGORY: II EXPOSURE: B
THERMAL FACTOR, Ct=1.1	IMPORTANCE FACTOR, Iw= 1.0
	TOPOGRAPHIC FACTOR, Kzt= 1.0

SEISMIC DESIGN DATA (ASCE7-16)
SEISMIC RESPONSE SYSTEM: WOOD SHEARWALLS
EQUIVALENT LATERAL FORCE PROCEDURE (ASCE 7-16)
RISK CATEGORY: II SEISMIC IMPORTANCE FACTOR, Ie= 1.0
MAPPED SPECTRAL RESPONSE ACCELERATION: Ss=1.42, S1=1.43
DESIGN SPECTRAL RESPONSE ACCELERATION: Sds=1.03, Sd1=0.61
SITE CLASS: D SEISMIC DESIGN CATEGORY: D
SEISMIC RESPONSE COEFFICIENT: Cs= 0.113
DESIGN BASE SHEAR: 19,208#
SOIL PROPERTIES:
BEARING CAPACITY: 2,000 PSF
LATERAL CAPACITY: 250 PSF/FT

GENERAL REQUIREMENTS

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER PROJECT DRAWINGS BY OTHER DISCIPLINES. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CODES LISTED ABOVE.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS RELATING TO EXISTING CONDITIONS BY MAKING FIELD SURVEYS AND MEASUREMENTS PRIOR TO COMMENCING FABRICATION OR CONSTRUCTION.
3. THE GENERAL CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION METHODS USED WILL NOT CAUSE DAMAGE TO ADJACENT BUILDINGS, UTILITIES, OR OTHER PROPERTY. THIS REQUIREMENT IS PARTICULARLY IMPORTANT DURING FOUNDATION INSTALLATION.
4. THE GENERAL CONTRACTOR IS ADVISED TO CONSIDER PERFORMING PHOTOGRAPHIC SURVEYS AND OTHER DOCUMENTATION OF THE CONDITION OF ADJACENT BUILDINGS AND OTHER STRUCTURES BEFORE THE START OF CONSTRUCTION.
5. THE GENERAL CONTRACTOR SHALL OBTAIN COPIES OF THE LATEST CONTRACT DOCUMENTS, INCLUDING ALL ADDENDA, AND PROVIDE THE RELEVANT PORTIONS TO ALL SUB-CONTRACTORS AND SUPPLIERS PRIOR TO SUBMITTAL OF SHOP DRAWINGS AND FABRICATION AND ERECTION OF STRUCTURAL MEMBERS.
6. THE GENERAL CONTRACTOR SHALL COMPARE AND COORDINATE THE DRAWINGS OF ALL DISCIPLINES AND REPORT ANY DISCREPANCIES BETWEEN THE DRAWINGS TO THE ARCHITECT AND ENGINEER.
7. DETAILS LABELED "TYPICAL" SHALL APPLY TO ALL SITUATIONS THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SEE DETAIL TITLES FOR APPLICABILITY OF A PARTICULAR DETAIL. TYPICAL DETAILS SHALL APPLY WHETHER OR NOT THEY ARE SPECIFICALLY KEYED AT EACH LOCATION. THE ENGINEER SHALL HAVE FINAL AUTHORITY TO DETERMINE APPLICABILITY OF TYPICAL DETAILS.
8. WHERE CONFLICTS EXIST BETWEEN STRUCTURAL DOCUMENTS THE STRICTEST REQUIREMENTS, AS INDICATED BY THE STRUCTURAL ENGINEER SHALL GOVERN.
9. THE GENERAL CONTRACTOR SHALL REVIEW AND DETERMINE THAT DIMENSIONS ARE COORDINATED BETWEEN ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO FABRICATION OR START OF CONSTRUCTION.
10. NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED OR OTHERWISE REDUCED IN STRENGTH UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
11. THE GENERAL CONTRACTOR SHALL COORDINATE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ANCHORED, EMBEDDED OR SUPPORTED ITEMS. NOTIFY THE ARCHITECT / ENGINEER OF ANY DISCREPANCIES.

CONSTRUCTION RESPONSIBILITY

1. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE COMPLETED STRUCTURE, AND ARE NOT INTENDED TO INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, SEQUENCES, AND FOR JOB SAFETY.
2. THE ENGINEER DOES NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
3. PERIODIC SITE OBSERVATION VISITS MAY BE PROVIDED BY THE STRUCTURAL ENGINEER. THE SOLE PURPOSE OF THESE OBSERVATIONS IS TO REVIEW THE GENERAL CONFORMANCE OF THE CONSTRUCTION WITH THE STRUCTURAL CONTRACT DOCUMENTS. THESE LIMITED OBSERVATIONS SHOULD NOT BE CONSTRUED AS CONTINUOUS OR EXHAUSTIVE TO VERIFY THAT ALL CONSTRUCTION IS IN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL WORK IN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS.

ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR		
CLR.	CLEAR	N.T.S.	NOT TO SCALE
℄	CENTERLINE	O.C.	ON CENTER
CONC.	CONCRETE	PT	PRESSURE TREATED
CONT.	CONTINUOUS	REINF.	REINFORCEMENT
C.J.	CONTROL JOINT	SIM	SIMILAR
E.W.	EACH WAY	SF	SQUARE FEET
GLB	GLULAM BEAM	S.O.G.	SLAB ON GRADE
LBW	LOAD BEARING WALL	STL.	STEEL
HD	HOLD DOWN	T&G	TONGUE AND GROOVE
MFR.	MANUFACTURER	TYP.	TYPICAL
MIN.	MINIMUM	U.N.O.	UNLESS NOTED OTHERWISE
MTL.	METAL	W/	WITH
N.T.S.	NOT TO SCALE		

DEFERRED SUBMITTALS

THE FOLLOWING IS A LIST OF ITEMS THAT ARE NOT INCLUDED IN THIS PLAN AND SHOULD BE PROVIDED BY THE BUILDER AT TIME OF APPLICATION FOR PERMIT OR AS A DEFERRED SUBMITTAL ITEM:

- ALTERNATIVE I-JOIST/BEAM MANUFACTURER PLANS
- PRE-ENGINEERED TRUSS DESIGNS AND LAYOUTS
- METAL AWNING FABRICATION DRAWINGS

SITE WORK

PER KRAZAN & ASSOCIATES, INC. REPORT DATED APRIL 11, 2019, FOUNDATION DESIGN IS BASED ON AN ASSUMED AVERAGE SOIL BEARING OF 2,000 PSF. EXTERIOR FOOTINGS SHALL BEAR 18" & INTERIOR FOOTINGS SHALL BEAR 12" (MINIMUM) BELOW FINISHED GRADE. STRIP FOOTINGS SHALL BE A MINIMUM OF 16" WIDE AND COLUMNS 24" WIDE. ALL FOOTINGS TO BEAR ON FIRM UNDISTURBED EARTH BELOW ORGANIC SURFACE SOILS OR ON STRUCTURAL FILL PER THE GEOTECHS RECOMMENDATIONS.

CONCRETE

ITEM	DESIGN f'c (PSI)	MAX. W/C RATIO	MAX. AGGREGATE SIZE	MIN. CEMENT (SACKS/YARD)
FOUNDATIONS	2,500 @28 DAYS	0.45	$\frac{3}{4}$"	5 1/2
STEM WALLS	3,000 @28 DAYS	0.45	$\frac{3}{4}$"	5 1/2
SLAB ON GRADE	3,000 @28 DAYS	0.45	$\frac{3}{4}$"	5 1/2

- REINFORCING STEEL SHALL BE ASTM A615 GRADE 40 FOR #4 BARS AND SMALLER AND GRADE 60 FOR #5 BARS AND LARGER.
- MINIMUM SPLICE LENGTHS SHALL BE: 24" FOR #4, 30" FOR #5, 42" FOR #6
- CONCRETE COVER SHALL BE: 3" CAST AGAINST EARTH, 2" EXPOSED TO EARTH/WEATHER, $\frac{3}{4}$" NOT EXPOSED TO EARTH/WEATHER.
- CORNER BARS ARE REQUIRED FOR ALL HORIZONTAL BARS IN FOOTINGS AND WALLS.
- All CONCRETE HAS BEEN DESIGNED FOR 2,500 PSI CONCRETE SO NO SPECIAL INSPECTION IS REQUIRED.

FRAMING

- ALL NAILING TO COMPLY WITH REQUIREMENTS OF IBC 2303.6 AND FASTENED PER TABLE 2304.10.1.
- ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED. FIELD CUT ENDS, NOTCHES, AND DRILLED HOLES OF PRESSURE TREATED LUMBER SHALL BE RETREATED IN THE FIELD IN ACCORDANCE WITH AWPA M4.
- FASTENERS FOR PRESSURE PRESERVATIVE AND FIRE RETARDANT TREATED WOOD SHALL BE OF HOT-DIPPED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER.
- MAINTAIN 8" MINIMUM CLEARANCE BETWEEN WOOD AND EARTH.
- MAINTAIN 12" MINIMUM CLEARANCE BETWEEN FLOOR BEAMS AND EARTH.
- MAINTAIN 18" MINIMUM CLEARANCE BETWEEN FLOOR JOISTS AND EARTH.

LUMBER GRADES

FRAMING LUMBER SHALL COMPLY WITH THE LATEST EDITION OF THE GRADING RULES OF THE WESTERN PRODUCTS ASSOCIATION OR THE WEST COAST LUMBER INSPECTION BUREAU. ALL SAWN LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED LUMBER GRADING AGENCY AND SHALL HAVE THE FOLLOWING UNADJUSTED DESIGN MINIMUM PROPERTIES:

JOISTS:	WOOD TYPE:
2X4	HF #2 - Fb=850 PSI, FV=75 PSI, Fc=1300 PSI, E=1200000 PSI
2X6 OR LARGER	HF #2 - Fb=850 PSI, Fv=75 PSI, Fc=1300 PSI, E=1200000 PSI
BEAMS:	WOOD TYPE:
4X	DF-L#2 - Fb=900 PSI, FV=95 PSI, Fc=1350 PSI, E=1600000 PSI
6X OR LARGER	DF-L #2 - Fb=875 PSI, Fv=85 PSI, Fc=600 PSI, E=1300000 PSI
STUDS:	WOOD TYPE:
2X4	HF #2 - Fb=850 PSI, FV=75 PSI, Fc=1300 PSI, E=1200000 PSI
2X6 OR LARGER	HF #2 - Fb=850 PSI, Fv=75 PSI, Fc=1300 PSI, E=1200000 PSI
POSTS:	WOOD TYPE:
4X4	HF #2 - Fb=900 PSI, FV=95 PSI, Fc=1350 PSI, E=1600000 PSI
4X6 OR LARGER	HF #2 - FB=900 PSI, FV=95 PSI, FC=1350 PSI, E=1600000 PSI
6X6 OR LARGER	DF-L #1 - FB=700 PSI, FV=85 PSI, FC=475 PSI, E=1300000 PSI
6X6 OR LARGER	DF-L #2 - FB=700 PSI, FV=85 PSI, FC=475 PSI, E=1300000 PSI

FASTENERS

ALL NAILS SPECIFIED ON THIS PLAN SHALL BE COMMON OR GALVANIZED BOX (UNLESS NOTED OTHERWISE) OF THE DIAMETER AND LENGTH LISTED BELOW OR AS PER APPENDIX L OF THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS). ALL FASTENERS PLACE IN PRESSURE TREATED OR FIRE TREATED LUMBER/SHEATHING SHALL BE GALVANIZED.

- 8D COMMON (0.131" DIA., 2-1/2" LENGTH
- 8D BOX (0.113" DIA., 2-1/2" LENGTH
- 10D COMMON (0.148" DIA., 3" LENGTH
- 10D BOX (0.128" DIA., 3" LENGTH
- 16D COMMON (0.162" DIA., 3-1/2" LENGTH
- 16D SINKER (0.148" DIA., 3-1/4" LENGTH
- 5D COOLER (0.086" DIA., 1-5/8" LENGTH
- 6D COOLER (0.092" DIA., 1-7/8" LENGTH

SYMBOL LEGEND

X'-X" / WX — SHEAR WALL LENGTH / SHEAR WALL TYPE
MST37 / 2 STUDS — HOLD DOWN/STRAP # OF BUILT-UP STUDS
X / SX — SECTION REFERENCE
HANGER
BEAM/HEADER

SHEATHING

Manufactured joists, beams, and trusses cannot be deferred. [Reference the marked-up document: CONSTRUCTION PLAN SET, sheet S1.0]

TYPICAL ROOF SHEATHING SHALL BE APA RATED $\frac{7}{16}$" SHEATHING WITH A SPAN INDEX OF 24/16. FLOOR SHEATHING SHALL BE APA RATED $\frac{3}{4}$" T&G SHEATHING WITH A SPAN INDEX OF 48/24 UNLESS NOTED OTHERWISE. STAGGER END LAPS AT ROOF AND FLOOR SHEATHING. WALL SHEATHING SHALL BE APA RATED $\frac{7}{16}$" SHEATHING WITH A SPAN INDEX OF 24/0 UNLESS NOTED OTHERWISE.

GLULAM BEAMS (GLB)

GLULAM BEAMS SHALL BE 24F-V4 FOR SINGLE SPANS AND 24F-V8 FOR CONTINUOUS OR CANTILEVER SPANS WITH THE FOLLOWING MINIMUM PROPERTIES:
Fb=2400 PSI, Fv=240 PSI, Fc=650 PSI (PERPENDICULAR), E=1,800,000 PSI.

ENGINEERED WOOD BEAMS AND I-JOIST

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND SPECIFICATIONS FOR APPROVAL BY BUILDING OFFICIAL. DESIGN, FABRICATION AND ERECTION IN ACCORDANCE WITH THE LATEST ICC EVALUATION REPORT.
BEAMS DESIGNATED AS "PSL" SHALL HAVE THE MINIMUM PROPERTIES:
Fb=2900 PSI, Fv=290 PSI, Fc=750 PSI (PERPENDICULAR), E=2,000,000 PSI.
BEAMS DESIGNATED AS "LVL" SHALL HAVE THE MINIMUM PROPERTIES:
Fb=2600 PSI, Fv=285 PSI, Fc=750 PSI (PERPENDICULAR), E=1,900,000 PSI.
BEAMS DESIGNATED AS "LSL" SHALL HAVE THE MINIMUM PROPERTIES:
Fb=1700 PSI, Fv=400 PSI, Fc=680 PSI (PERPENDICULAR), E=1,300,000 PSI.

PRE-ENGINEERED ROOF TRUSSES

PRE-ENGINEERED ROOF TRUSSES IS A DEFERRED SUBMITTAL ITEM AND IS TO BE DESIGNED, FABRICATED AND INSTALLED PER THE LATEST TRUSS PLATE INSTITUTE STANDARDS, AND IBC SECTION 2303.4. PREFABRICATED ITEMS TO BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER. THE FABRICATOR SHALL PROVIDE ALL CONNECTION DESIGN, DETAILS AND INSTALLATION INSTRUCTIONS, WHICH SHALL BE AVAILABLE ON SITE FOR INSPECTION. WHERE TRUSSES ARE NOT PROVIDED TO COMPLETE THE ROOF SYSTEM, OVERFRAMING MEMBERS AND CONNECTIONS SHALL BE PROVIDED. OVERFRAMING DETAILS SHALL BE INCLUDED IN THE TRUSS SHOP DRAWINGS IN ORDER TO PROVIDE LOADING CONDITIONS CONSISTENT WITH THE MODELING OF THE TRUSSES. THE OVERFRAMING AND RELATED DETAILS SHALL BE DESIGNED BY THE TRUSS ENGINEER. TRUSSES (OR DRAG TRUSSES) ALIGNING WITH SHEAR WALLS SHALL BE SPECIAL TRUSSES THAT HAS BEEN DESIGNED TO TRANSFER THE SPECIFIC WIND AND SEISMIC LOADS SHOWN ON THE PLANS.THE TRUSS SHALL BE DESIGNED TO TRANSFER THE LOAD BETWEEN THE ROOF SHEATHING AND THE SHEAR WALL BELOW. THE TRUSS SHALL BE DESIGNED TO TRANSFER A MINIMUM OF 100 PLF ALONG THE LENGTH OF THE TRUSS. TEMPORARY AND PERMANENT BRACING REQUIRED FOR THE STABILITY OF THE TRUSS ELEMENTS UNDER GRAVITY LOADS AND IN-PLANE WIND OR SEISMIC LOADS SHALL BE DESIGNED BY THE TRUSS ENGINEER WHERE THE TOP CHORD IS NOT DIRECTLY ATTACHED TO THE ROOF SHEATHING. THE TRUSS ENGINEER SHALL DESIGN AND SHOW THE PLACEMENT OF ALL REQUIRED TOP CHORD BRACING AND CONNECTIONS ON THE TRUSS SHOP DRAWINGS. ANY BRACING LOADS TRANSFERRED TO THE MAIN BUILDING SYSTEM SHALL BE IDENTIFIED AND SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW. DESIGN CALCULATIONS AND SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW BY THE ENGINEER OF RECORD PRIOR TO SUBMITTING TO THE BUILDING OFFICIAL FOR APPROVAL. ROOF TRUSS TOP CORD MUST BE HF#2 OR BETTER.

STRUCTURAL STEEL

1. SEE NOTES ON PRIMARY CODES AND SPECIFICATIONS.
2. MATERIALS:
   W-SHAPES & WT-SHAPES..... ASTM A992
   S-SHAPES, M-SHAPES, HP-SHAPES..... ASTM A36
   ST-SHAPES & MT-SHAPES..... ASTM A36
   C-SHAPES & MC-SHAPES..... ASTM A36
   ANGLES & PLATES..... ASTM A36
   HSS SHAPES..... ASTM A500, GRADE B
   STEEL PIPE..... ASTM A53 (TYPE E OR S), GRADE B
   HIGH STRENGTH BOLTS..... ASTM A325
   MACHINE BOLTS..... ASTM A307
   ANCHOR RODS.....ASTM F1554, GRADE 55 TYPE S1(UNO)
   WELDED HEADED STUDS..... ASTM A108
   DEFORMED BAR ANCHORS..... ASTM A496
   WELDING ELECTRODES..... AWS D1.1, E70 SERIES
3. NON-SHRINK, NON-METALLIC GROUT WITH A 28 DAY STRENGTH OF 5000 PSI SHALL BE USED UNDER BASE PLATES AND SHALL CONFORM TO CORPS OF ENGINEERS CRD-C621, FACTORY PREMIX GROUT. SEE SPECIFICATIONS FOR TESTING REQUIREMENTS.
4. ENGINEER SHALL BE CONTACTED FOR APPROVAL OF ANY FIELD MODIFICATIONS OF ANCHOR BOLTS OR RODS AND COLUMN BASE PLATES (PER OSHA).
5. TEMPORARY BRACING OF STRUCTURAL STEEL ELEMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR. STRUCTURAL STABILITY SHALL BE MAINTAINED AT ALL TIMES DURING THE ERECTION PROCESS.
   CONTRACTOR MUST PROVIDE NOTIFICATION TO THE ERECTOR THAT, BY TESTING, THE FOUNDATION AND SUPPORTING WALLS HAVE ATTAINED SUFFICIENT STRENGTH TO SUPPORT THE STEEL TO BE ERECTED BEFORE ERECTING STRUCTURAL STEEL.
6. PROVIDE ONE SHOP COAT OF PRIMER (TT-P-636) ON ALL STEEL EXCEPT FOR ITEMS TO BE HOT DIPPED GALVANIZED OR SPRAY FIREPROOFED. DO NOT PAINT PORTIONS EMBEDDED IN CONCRETE.
7. FRAMING CONNECTIONS NOT DETAILED, OR CONNECTIONS THAT ARE MODIFIED FROM THOSE DETAILED, SHALL BE DESIGNED BY SUPPLIER FOR THE END REACTION SHOWN ON THE PLAN. IF NO REACTION IS PROVIDED, DESIGN FOR 1/2 THE BEAM MAXIMUM UNIFORM LOAD PER AISC MANUAL FOR STEEL CONSTRUCTION. SUBMIT SIGNED AND SEALED CALCULATIONS.
8. ALL WELD OPERATORS SHALL BE CURRENTLY AWS QUALIFIED.
9. SHOP CONNECTIONS SHALL BE WELDED OR HIGH STRENGTH BOLTED. USE 3/16" FILLET WELD MINIMUM.
10. FIELD CONNECTIONS SHALL BE WELDED OR HIGH STRENGTH BOLTED AS DETAILED. NO FIELD WELDING OF HOT DIPPED GALVANIZED MEMBERS WILL BE ALLOWED. USE 3/16" FILLET WELD MINIMUM.
11. DURING THE ERECTION OF STEEL BEAMS AND DIAGONAL BRACING, ALL BOLTING AND FIELD WELDING SHALL BE COMPLETE BEFORE RELEASING HOISTING CABLES.
12. SUBMIT FOR REVIEW SHOP DRAWINGS OF STEEL DETAILS PRIOR TO FABRICATING STRUCTURAL STEEL.
13. ALL EXTERIOR ELEMENTS AND THOSE ELEMENTS NOTED TO BE GALVANIZED SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123 AFTER SANDBLAST CLEANING PER SSPC-SP10. USE ASTM A325 BOLTS HOT DIPPED GALVANIZED WITH GALVANIZED HARDENED WASHERS AND GALVANIZED HEAVY HEX NUTS FOR BOLTING OF GALVANIZED ITEMS.
14. STEEL COLUMNS, BASE PLATES AND ALL STEEL BELOW GRADE SHALL HAVE A MINIMUM 3" CONCRETE COVER PROTECTION.
15. MEMBERS NOTED AS "CONTINUOUS" SHALL BE FULLY WELDED AT ALL BUTT SPLICES OR CONNECTIONS SHALL BE DETAILED TO PROVIDE CONTINUITY.

STATEMENT OF SPECIAL INSPECTIONS:

STRUCTURAL INSPECTION	VERIFICATION/INSPECTION	CONTINUOUS	PERIODIC	COMMENTS	REFERENCES
SOILS	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY		X		IBC 1505.6
	VERIFY EXCAVATIONS ARE PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X		
	PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS		X		
	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF FILL MATERIAL	X			
	PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X		
WOOD CONSTRUCTION	INSPECTION IS REQUIRED TO VERIFY NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF ELEMENTS OF SHEAR WALLS WITH NAIL SPACING 4" AND LESS, DRAG STRUTS, BRACES AND HOLD DOWNS.		X		IBC 1705.5 IBC 1705.12.1 IBC 1705.12.3
STEEL CONSTRUCTION	MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS		X		AISC 360 N5
	HIGH STRENGTH BOLTING A. SNUG TIGHT CONNECTIONS		X		AISC 360 N5
	MATERIAL VERIFICATION OF STRUCTURAL STEEL A. FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM WITH AISC 360 B. MANUFACTURERS CERTIFIED MILL TEST REPORTS		X X	MANUFACTURE'S TO PROVIDE CERTIFIED MILL TEST REPORTS	AISC 360 N5 AISC 341 J6
	MATERIAL VERIFICATION OF WELD FILLER MATERIALS A. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATIONS LISTED IN GENERAL NOTES. B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE		X X	MANUFACTURE'S TO PROVIDE CERTIFICATE OF COMPLIANCE	AISC 360 N5
	INSPECTION OF WELDING A. COMPLETE AND PARTIAL JOINT PENETRATION B. MULTI-PASS FILLET WELDS C. SINGLE-PASS FILLET WELDS > $\frac{5}{16}$" D. PLUG AND SLOT WELDS E. SINGLE-PASS FILLET WELDS < $\frac{5}{16}$" F. FIELD INSTALLED WELDED STUDS G. WELDING OF STAIRS AND RAILING SYSTEM.	X X X X	X X X	SPECIAL INSPECTIONS IN THIS SECTION ARE WAIVED WHERE FABRICATION IS PERFORMED ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED IN ACCORDANCE WITH IBC SECTION 1704.2.5	AISC 360 N5 AISC 341 J6 AWS D1.1

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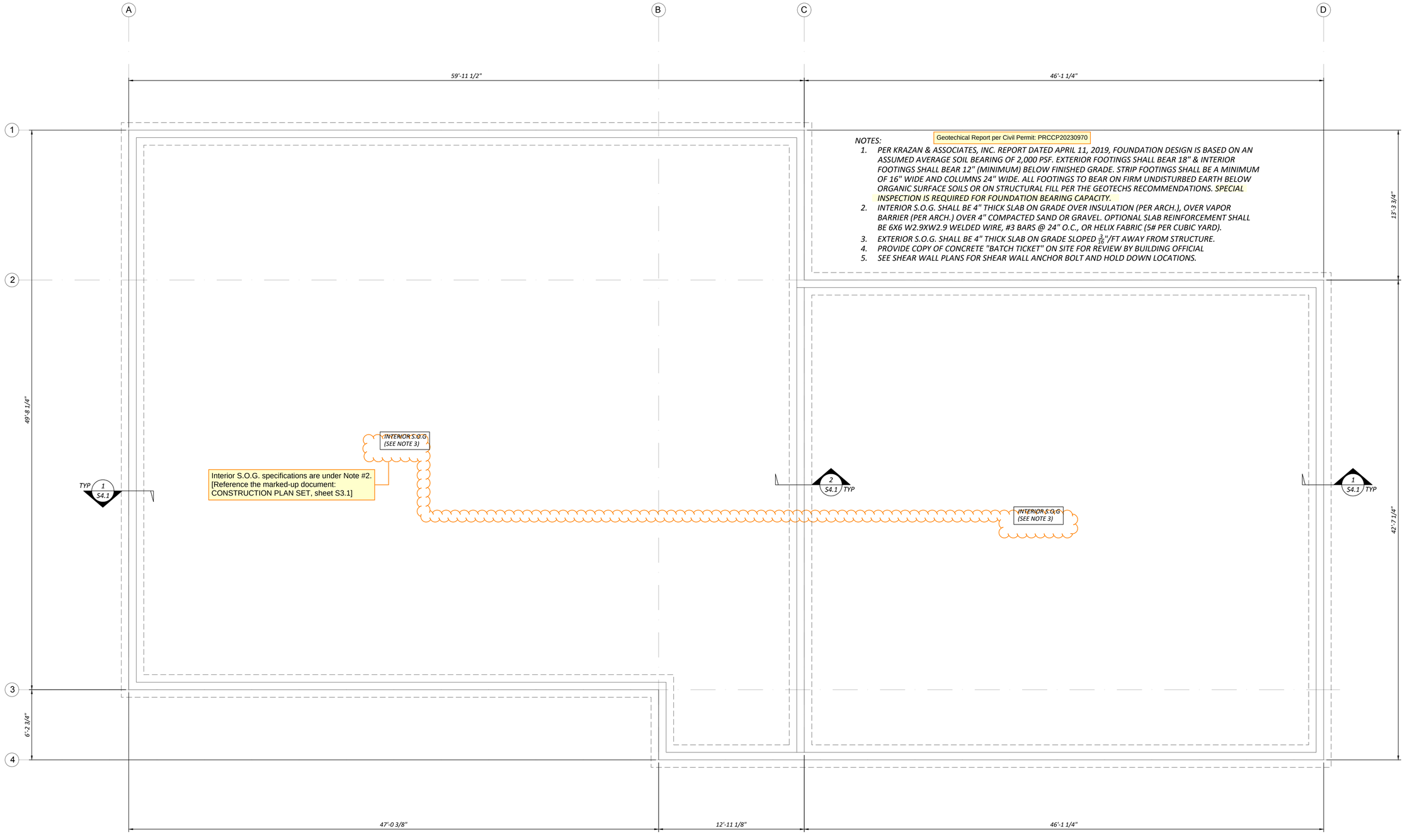
PROJECT # : ----
SHEET: S1.0



Geotechical Report per Civil Permit: PRCCP20230970

NOTES:

1. *PER KRAZAN & ASSOCIATES, INC. REPORT DATED APRIL 11, 2019, FOUNDATION DESIGN IS BASED ON AN ASSUMED AVERAGE SOIL BEARING OF 2,000 PSF. EXTERIOR FOOTINGS SHALL BEAR 18" & INTERIOR FOOTINGS SHALL BEAR 12" (MINIMUM) BELOW FINISHED GRADE. STRIP FOOTINGS SHALL BE A MINIMUM OF 16" WIDE AND COLUMNS 24" WIDE. ALL FOOTINGS TO BEAR ON FIRM UNDISTURBED EARTH BELOW ORGANIC SURFACE SOILS OR ON STRUCTURAL FILL PER THE GEOTECHS RECOMMENDATIONS. SPECIAL INSPECTION IS REQUIRED FOR FOUNDATION BEARING CAPACITY.*
2. *INTERIOR S.O.G. SHALL BE 4" THICK SLAB ON GRADE OVER INSULATION (PER ARCH.), OVER VAPOR BARRIER (PER ARCH.) OVER 4" COMPACTED SAND OR GRAVEL. OPTIONAL SLAB REINFORCEMENT SHALL BE 6X6 W2.9XW2.9 WELDED WIRE, #3 BARS @ 24" O.C., OR HELIX FABRIC (5# PER CUBIC YARD).*
3. *EXTERIOR S.O.G. SHALL BE 4" THICK SLAB ON GRADE SLOPED $\frac{3}{16}$"/FT AWAY FROM STRUCTURE.*
4. *PROVIDE COPY OF CONCRETE "BATCH TICKET" ON SITE FOR REVIEW BY BUILDING OFFICIAL*
5. *SEE SHEAR WALL PLANS FOR SHEAR WALL ANCHOR BOLT AND HOLD DOWN LOCATIONS.*

FOUNDATION PLAN

1/4" = 1'-0"

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PROJECT # :	----
SHEET:	S3.1

NOTES:

1. ALL COLUMNS NOT SPECIFIED OR OTHERWISE NOTED ON THE PLANS ARE LAMINATED TOGETHER PER "TYPICAL BUILT-COLUMN DETAIL" ON SHEET S4.1. SOLID WOOD COLUMNS MAY BE SUBSTITUTED FOR BUILT-UP COLUMNS BY PROVIDING AN EQUIVALENT CROSS SECTIONAL AREA.
2. ALL HEADERS UNLESS SPECIFIED ON THE PLANS ARE TO BE 4X10 DF-L #2 WITH AT LEAST ONE CRIPPLE AND ONE STUD FOR EACH END FOR OPENINGS LESS THAN OR EQUAL TO 5'-0" WIDE AND TWO CRIPPLES AND ONE KING STUD FOR ALL OTHERS. 14' TALL WALL SECTIONS SHALL HAVE DOUBLE KING STUDS.
3. ROOF SHEATHING SHALL BE $\frac{15}{32}$" APA RATED SHEATHING NAILED WITH 8d @6" O.C. ALONG PANEL EDGES, AND 12" O.C. FIELD. SPAN INDEX SHALL BE 32/16. STAGGER END LAPS. NAILS SHALL MINIMUM 1 $\frac{1}{2}$" EMBED INTO ROOF STRUCTURE BELOW.
4. BEARING WALLS ARE INDICATED AS SHADED WALLS
5. PROVIDE VENTED BLOCKING AT REQUIRED TRUSS/RAFTER BAYS
6. IF AN ENGINEERED ROOF FRAMING LAYOUT IS PROVIDED BY THE TRUSS SUPPLIER, THAT TRUSS LAYOUT SHALL SUPERCEDE THE TRUSS LAYOUT INDICATED IN THE PLANS.PROVIDE TRUSS LAYOUT AND SPECS ON SITE FOR INSPECTION.
7. PROVIDE SOLID FRAMING EQUAL TO THE WIDTH OF THE MEMBER BEING SUPPORTED (U.N.O.)
8. ALL MANUFACTURED TRUSSES:
   * SHALL NOT BE FIELD ALTERED WITHOUT ENGINEER'S APPROVAL
   * SHALL HAVE DESIGN DETAILS AND DRAWINGS ON SITE FOR FRAMING INSPECTION
   * SHALL BE INSTALLED AND BRACED TO MANUFACTURER'S SPECIFICATION
   * SHALL CARRY MANUFACTURER'S STAMP ON EACH TRUSS

3 $\frac{1}{2}$"X12" GLB HEADER (2 TRIMMER & 2 KING STUDS)
4X10 DF#2 HEADER (1 TRIMMER & 2 KING STUDS)
STL. AWNING (SEE DETAILS ON SHEET S4.3)
2'-9 7/8"
7'-8"
STL. AWNING SUPPORT (SEE DTL 1/S4.3) TYP
9'-0 1/8"
6'-2 1/4"
6X8 DF#2 POST (SILL PLATE TO T/PLATE FOR AWNING SUPPORT, TYP) SEE DTL. 1/S4.4
11'-8 1/4"
8'-3 1/2"
TRUSS BLOCKING BELOW PARAPET
APPLY 45 PSF SNOW DRIFT LOAD TO OUTER 4' OF ROOF UP AGAINST PARAPET
APPLY 45 PSF SNOW DRIFT LOAD 4' EACH SIDE OF PARAPET
DRAG TRUSS OVER SHEAR WALL (300 PLF ASD)
VERIFY ROOF TOP MECHANICAL EQUIPEMENT WEIGHTS AND ADD TO FINAL TRUSS DESIGN
MFR. SLOPING FLAT BOTTOM PARAPET TRUSSES @ 24" O.C.
4X12 DF#2 HEADER (1 TRIMMER & 2 KING STUDS)
5 $\frac{1}{2}$"X9" GLB HEADER (2 TRIMMER & 2 KING STUDS)
3 $\frac{1}{2}$"X9" GLB HEADER (2 TRIMMER & 2 KING STUDS)
3 $\frac{1}{2}$"X10 $\frac{1}{2}$" GLB HEADER (2 TRIMMER & 2 KING STUDS)
6'-2 1/4"
9'-10 5/8"
7'-3 1/4"
9'-1 1/2"
5"
7'-0 1/2"
10"
11'-10"
6X8 DF#2 POST (HEADER TO T/PLATE FOR AWNING SUPPORT) ADD A34 EA. SIDE OF POST TO HEADER

ROOF FRAMING PLAN

1/4" = 1'-0"

Please provide the truss manufacturer's roof truss calculations (stamped and signed) and layout. Truss engineer to include the required structural elements noted on this sheet. Truss engineering and layout must be reviewed and approved by the structural engineer of record prior to permit issuance. [Reference the marked-up document: CONSTRUCTION PLAN SET, sheet S3.2]

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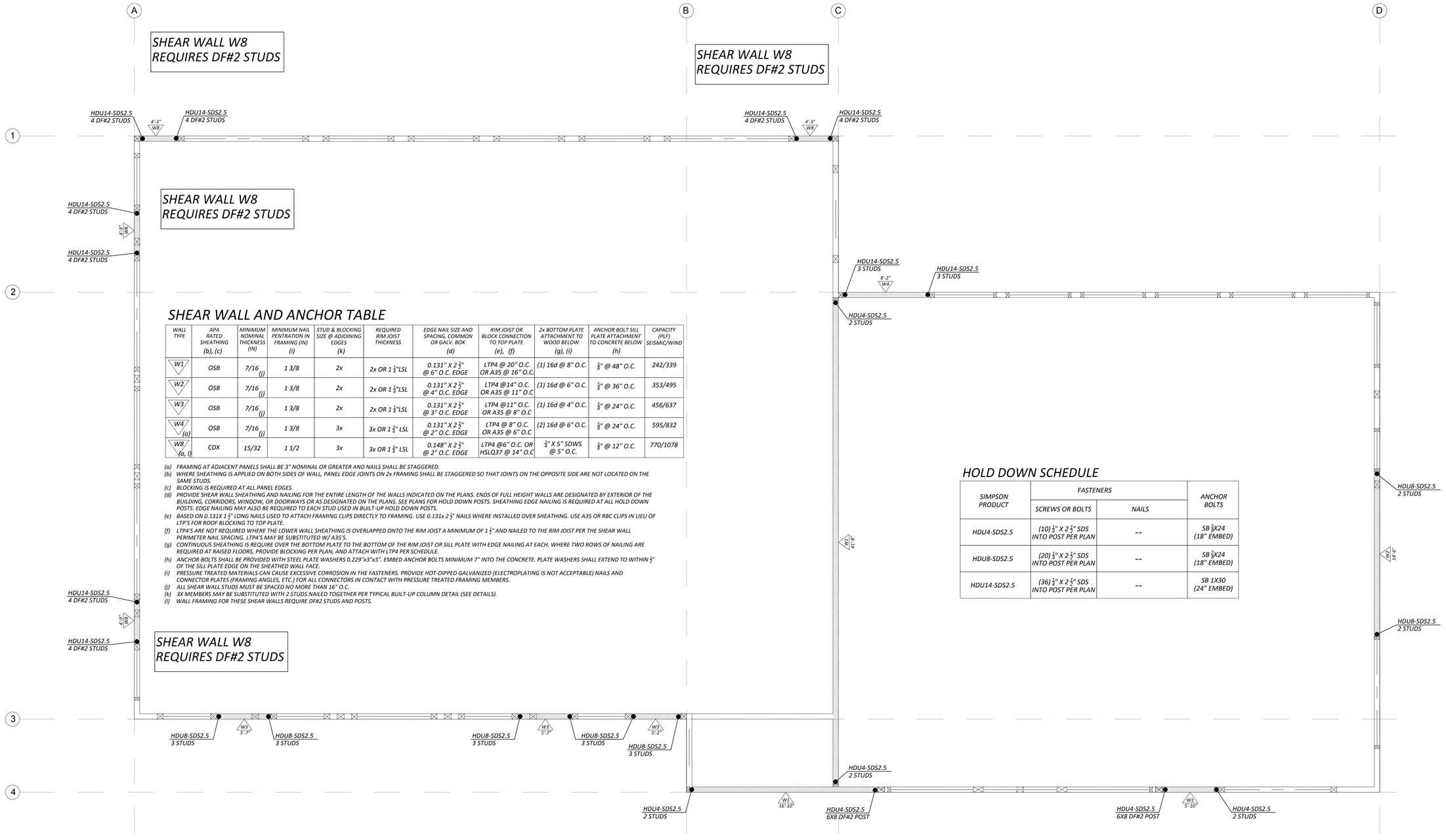

SHEAR WALL AND ANCHOR TABLE

WALL TYPE	APA RATED SHEATHING (b), (c)	MINIMUM NOMINAL THICKNESS (IN)	MINIMUM NAIL PENTRATION IN FRAMING (IN) (i)	STUD & BLOCKING SIZE @ ADJOINING EDGES (k)	REQUIRED RIM JOIST THICKNESS	EDGE NAIL SIZE AND SPACING, COMMON OR GALV. BOX (d)	RIM JOIST OR BLOCK CONNECTION TO TOP PLATE (e), (f)	2x BOTTOM PLATE ATTACHMENT TO WOOD BELOW (g), (i)	ANCHOR BOLT SILL PLATE ATTACHMENT TO CONCRETE BELOW (h)	CAPACITY (PLF) SEISMIC/WIND
W1	OSB	7/16 (j)	1 3/8	2x	2x OR 1 1/4"LSL	0.131" X 2 1/2" @ 6" O.C. EDGE	LTP4 @ 20" O.C. OR A35 @ 16" O.C.	(1) 16d @ 8" O.C.	5/8" @ 48" O.C.	242/339
W2	OSB	7/16 (j)	1 3/8	2x	2x OR 1 1/4"LSL	0.131" X 2 1/2" @ 4" O.C. EDGE	LTP4 @14" O.C. OR A35 @ 11" O.C	(1) 16d @ 6" O.C.	5/8" @ 36" O.C.	353/495
W3	OSB	7/16 (j)	1 3/8	2x	2x OR 1 1/4"LSL	0.131" X 2 1/2" @ 3" O.C. EDGE	LTP4 @11" O.C. OR A35 @ 8" O.C	(1) 16d @ 4" O.C.	5/8" @ 24" O.C.	456/637
W4 (a)	OSB	7/16 (j)	1 3/8	3x	3x OR 1 3/4" LSL	0.131" X 2 1/2" @ 2" O.C. EDGE	LTP4 @ 8" O.C. OR A35 @ 6" O.C	(2) 16d @ 6" O.C.	5/8" @ 24" O.C.	595/832
W8 (a, l)	CDX	15/32	1 1/2	3x	3x OR 1 3/4" LSL	0.148" X 2 1/2" @ 2" O.C. EDGE	LTP4 @6" O.C. OR HSLQ37 @ 14" O.C	1/4" X 5" SDWS @ 5" O.C.	5/8" @ 12" O.C.	770/1078

(a) FRAMING AT ADJACENT PANELS SHALL BE 3" NOMINAL OR GREATER AND NAILS SHALL BE STAGGERED.
(b) WHERE SHEATHING IS APPLIED ON BOTH SIDES OF WALL, PANEL EDGE JOINTS ON 2x FRAMING SHALL BE STAGGERED SO THAT JOINTS ON THE OPPOSITE SIDE ARE NOT LOCATED ON THE SAME STUDS.
(c) BLOCKING IS REQUIRED AT ALL PANEL EDGES
(d) PROVIDE SHEAR WALL SHEATHING AND NAILING FOR THE ENTIRE LENGTH OF THE WALLS INDICATED ON THE PLANS. ENDS OF FULL HEIGHT WALLS ARE DESIGNATED BY EXTERIOR OF THE BUILDING, CORRIDORS, WINDOW, OR DOORWAYS OR AS DESIGNATED ON THE PLANS. SEE PLANS FOR HOLD DOWN POSTS. SHEATHING EDGE NAILING IS REQUIRED AT ALL HOLD DOWN POSTS. EDGE NAILING MAY ALSO BE REQUIRED TO EACH STUD USED IN BUILT-UP HOLD DOWN POSTS.
(e) BASED ON 0.131X 1 1/2" LONG NAILS USED TO ATTACH FRAMING CLIPS DIRECTLY TO FRAMING. USE 0.131x 2 1/2" NAILS WHERE INSTALLED OVER SHEATHING. USE A35 OR RBC CLIPS IN LIEU OF LTP'S FOR ROOF BLOCKING TO TOP PLATE.
(f) LTP4'S ARE NOT REQUIRED WHERE THE LOWER WALL SHEATHING IS OVERLAPPED ONTO THE RIM JOIST A MINIMUM OF 1 1/2" AND NAILED TO THE RIM JOIST PER THE SHEAR WALL PERIMETER NAIL SPACING. LTP4'S MAY BE SUBSTITUTED W/ A35'S.
(g) CONTINUOUS SHEATHING IS REQUIRE OVER THE BOTTOM PLATE TO THE BOTTOM OF THE RIM JOIST OR SILL PLATE WITH EDGE NAILING AT EACH. WHERE TWO ROWS OF NAILING ARE REQUIRED AT RAISED FLOORS, PROVIDE BLOCKING PER PLAN, AND ATTACH WITH LTP4 PER SCHEDULE.
(h) ANCHOR BOLTS SHALL BE PROVIDED WITH STEEL PLATE WASHERS 0.229"x3"x3". EMBED ANCHOR BOLTS MINIMUM 7" INTO THE CONCRETE. PLATE WASHERS SHALL EXTEND TO WITHIN 1/2" OF THE SILL PLATE EDGE ON THE SHEATHED WALL FACE.
(i) PRESSURE TREATED MATERIALS CAN CAUSE EXCESSIVE CORROSION IN THE FASTENERS. PROVIDE HOT-DIPPED GALVANIZED (ELECTROPLATING IS NOT ACCEPTABLE) NAILS AND CONNECTOR PLATES (FRAMING ANGLES, ETC.) FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED FRAMING MEMBERS.
(j) ALL SHEAR WALL STUDS MUST BE SPACED NO MORE THAN 16" O.C.
(k) 3X MEMBERS MAY BE SUBSTITUTED WITH 2 STUDS NAILED TOGETHER PER TYPICAL BUILT-UP COLUMN DETAIL (SEE DETAILS).
(l) WALL FRAMING FOR THESE SHEAR WALLS REQUIRE DF#2 STUDS AND POSTS.

HOLD DOWN SCHEDULE

SIMPSON PRODUCT	FASTENERS		ANCHOR BOLTS
	SCREWS OR BOLTS	NAILS	
HDU4-SDS2.5	(10) 1/4" X 2 1/2" SDS INTO POST PER PLAN	--	SB 5/8X24 (18" EMBED)
HDU8-SDS2.5	(20) 1/4" X 2 1/2" SDS INTO POST PER PLAN	--	SB 5/8X24 (18" EMBED)
HDU14-SDS2.5	(36) 1/4" X 2 1/2" SDS INTO POST PER PLAN	--	SB 1X30 (24" EMBED)

SPECIAL INSPECTIONS ARE REQUIRED FOR SHEAR WALLS: W2 W3 W4

SHEAR WALL PLAN

1/4" = 1'-0"

NOTES:
1. UNLESS SPECIFIED ON PLANS, ALL EXTERIOR WALL SHALL BE SHEAR WALL W1, SEE SHEAR WALL TABLE ON THIS SHEET.

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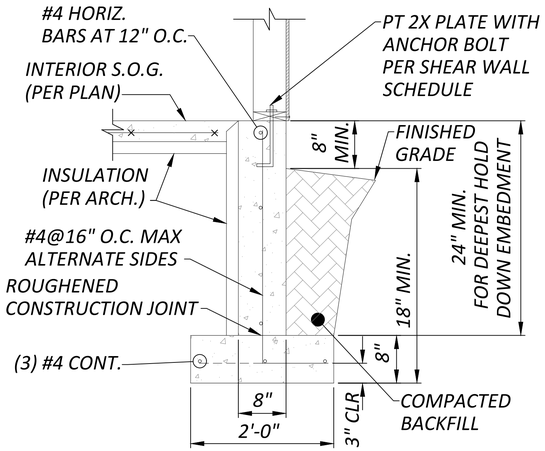

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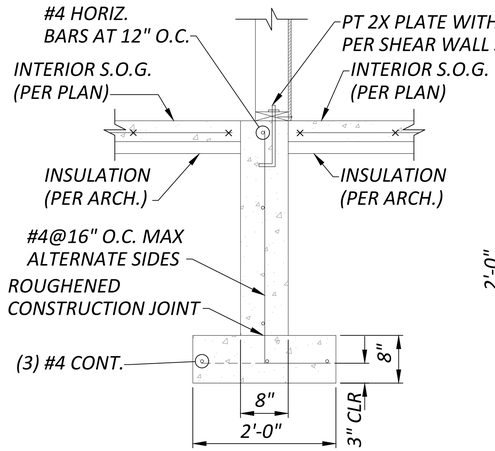

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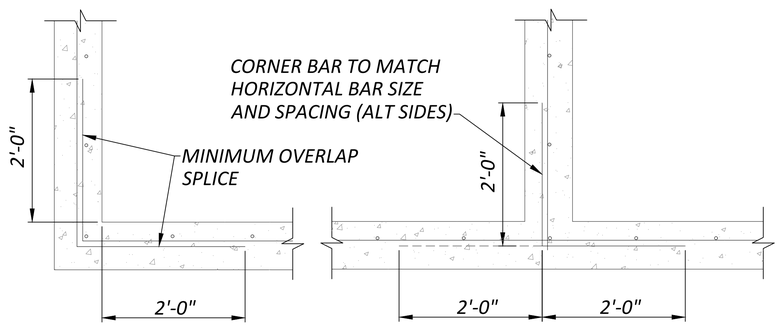

3 TYPICAL FOUNDATION CORNER & INTERSECTION DETAIL
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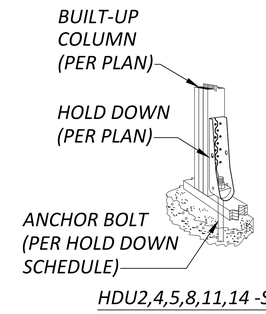

4 TYPICAL FOUNDATION HOLDDOWN DETAIL
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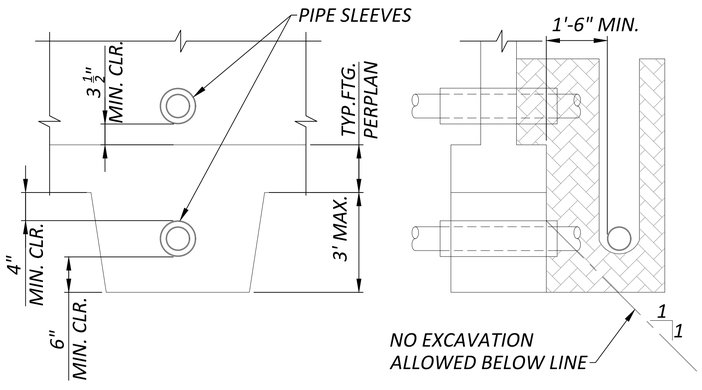

5 TYPICAL PIPER TRENCH DETAIL
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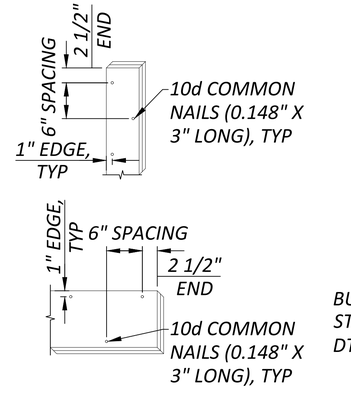

6 TYPICAL BUILT-UP COLUMN/BEAM DETAIL
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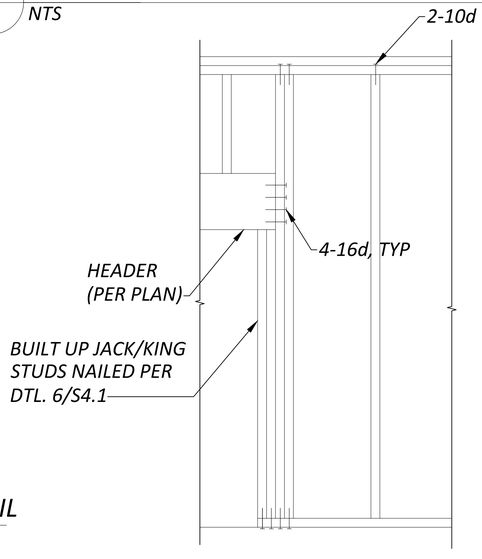

7 TYPICAL HEADER TRIMMER DETAIL
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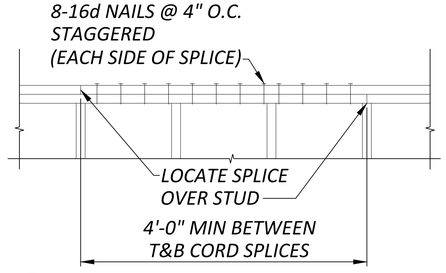

10 TYPICAL TOP PLATE SPLICE DETAIL
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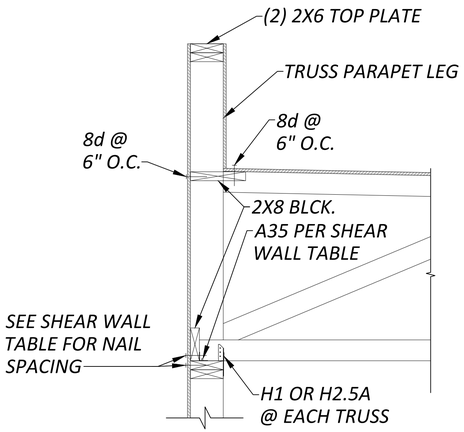

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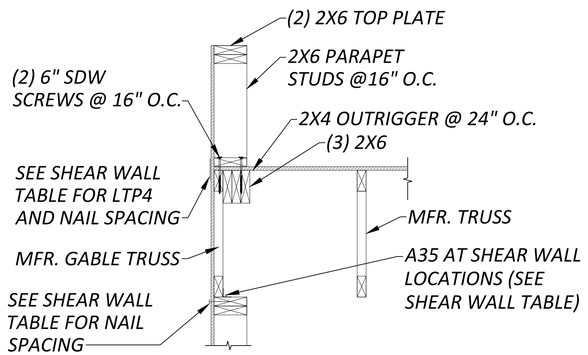

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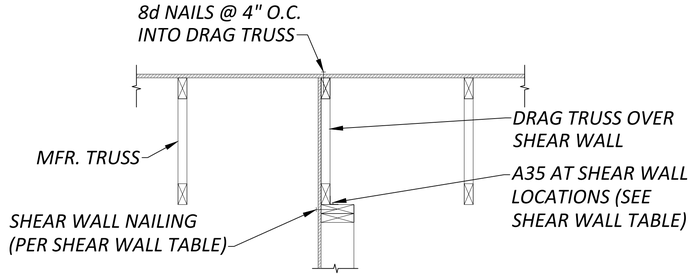

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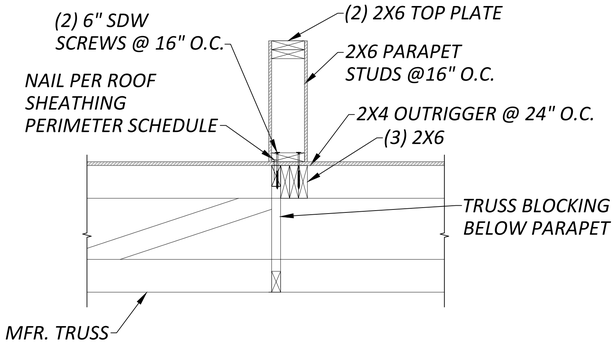

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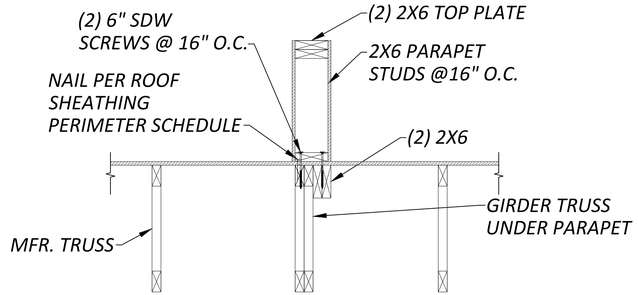

5 SECTION
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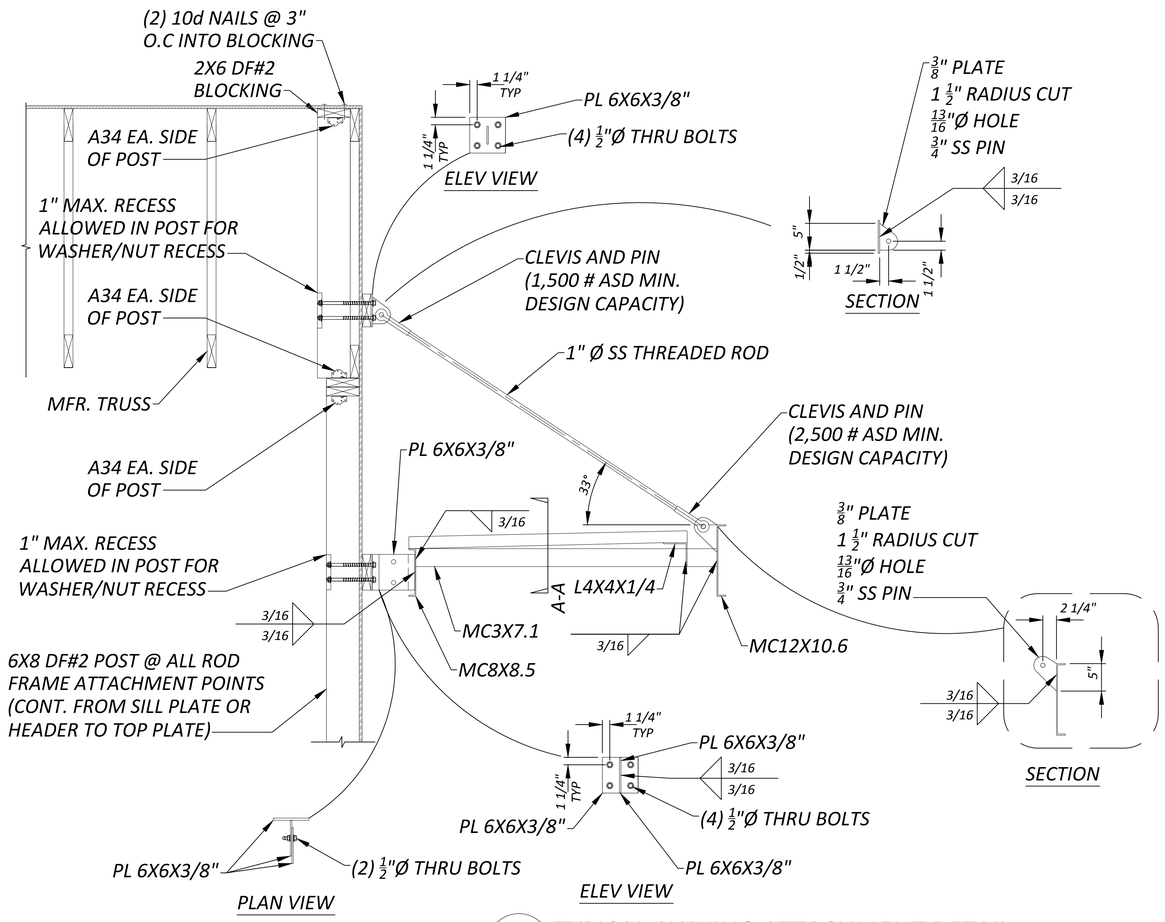
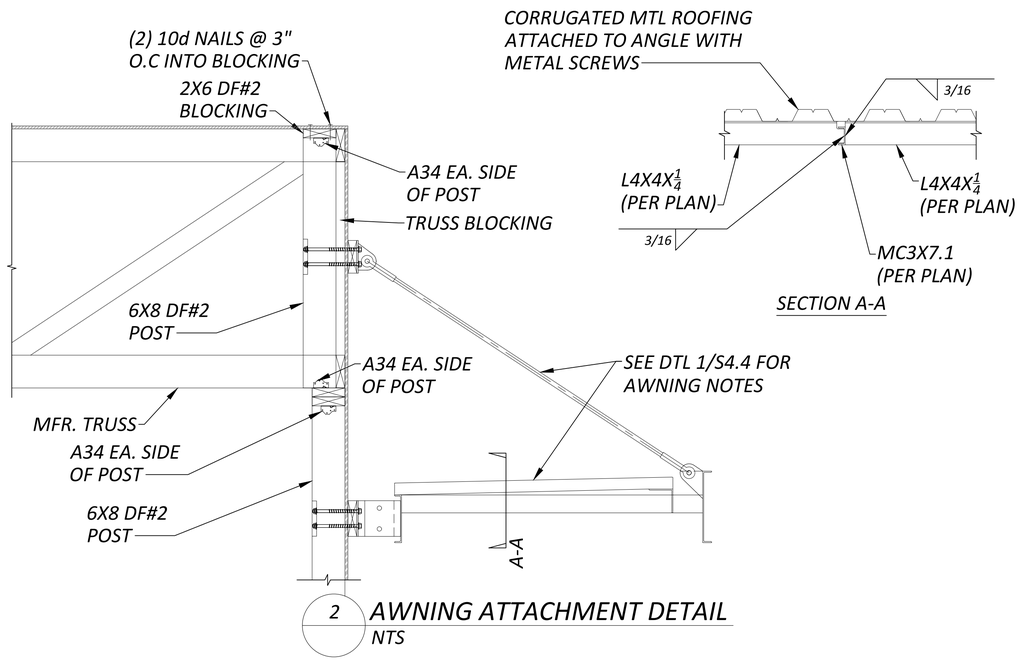
PROJECT # :	----
SHEET:	S4.2



1 TYPICAL AWNING ATTACHMENT DETAIL
NTS



2 AWNING ATTACHMENT DETAIL
NTS

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

PIERUCCIONI E&C, LLC
CHON PIERUCCIONI, PE
3128 N. BENNETT ST. TACOMA, WA 98407
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206.949.7886

PRCNC20250094

EAST TOWN CROSSING
LOT 1 COMMERCIAL
PIONEER & SHAW PUYALLUP

REVISIONS	
01	----

REVISIONS

DRAWN BY:	CP
CHECKED BY:	CP
DATE:	2024.12.18
TITLE:	FRAMING DETAILS
PROJECT # :	----
SHEET:	S4.3

GENERAL NOTES

GENERAL NOTES – MECHANICAL

1. REFERENCE TO RELATED WORK: "REF" INDICATIONS DENOTE WORK COVERED ELSEWHERE (ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL, LANDSCAPE, OR KITCHEN), OR ITEM BASED ON A SPECIFIC MANUFACTURER'S DIMENSIONS (VERIFY).

2. ELECTRICAL CHARACTERISTICS: REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL CHARACTERISTICS (VOLTAGES, ETC. OF MECHANICAL EQUIPMENT, UNLESS OTHERWISE INDICATED.

3. CODES: COMPLETE INSTALLATION OF THE MECHANICAL SYSTEM SHALL BE PER THE APPLICABLE BUILDING, MECHANICAL, ENERGY, PLUMBING, FIRE, AND HEALTH CODES AND REGULATIONS AS ADOPTED BY THE LOCAL AHJ.

4. PREPARE AND SUBMIT FOR REVIEW A SHOP DRAWING BASED ON FINAL STRUCTURAL SHOP DRAWINGS FOR LOCATING AND ROUTING ALL DUCTWORK, DAMPERS, EQUIPMENT, PIPING, ETC.
   A. COORDINATE FLOOR AND BEAM PENETRATIONS WITH STRUCTURAL.
   B. COORDINATE FINAL LOCATION AND ROUTING WITH CEILING, LIGHTS, WALLS, FIRE SPRINKLER PIPING, AND OTHER TRADES WORK.
   C. INCLUDE ADDITIONAL OFFSETS, ELBOWS, ROUTING, EQUIVALENT DUCT SIZING EXCHANGE, RELOCATING, ETC. AS REQUIRED FOR A COMPLETE OPERATING MECHANICAL SYSTEM.
   D. PROVIDE SHOP DRAWINGS AT NO ADDITIONAL COST TO THE OWNER.

5. MECHANICAL CONTRACTOR SHALL LOCATE AND COORDINATE EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITHIN THE STRUCTURE.

6. ACCESS DOORS: COORDINATE WITH ARCHITECT AND LOCATE ALL ACCESS DOORS ON SHOP DRAWINGS PRIOR TO BEGINNING OF CONSTRUCTION. ACCESS DOORS IN FIRE RATED STRUCTURE SHALL BE FIRE RATED. VERIFY ACCESS DOOR LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO BIDDING.

7. RATED PENETRATION: DUCT PENETRATIONS THROUGH RATED ENCLOSURES SHALL BE FIRE/SMOKE DAMPERED PER THE LATEST EDITION OF THE UNDERWRITERS LABORATORIES(UL) FIRE RESISTANCE WITH HOURLY RATINGS FOR THROUGH–PENETRATION FIRE STOPS SYSTEM VOLUME #2, OR SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S UL LISTINGS (3M OR EQUIVALENT). DETERMINE REQUIREMENTS WITH GENERAL CONTRACTOR PRIOR TO BID.

8. EXHAUST OUTLETS: SOURCE–SPECIFIC FANS SHALL BE VENTED TO OUTDOORS WITH A MINIMUM 3' CLEARANCE BETWEEN VENT OUTLETS AND BUILDING OPENINGS, AND 10' MINIMUM BETWEEN VENT OUTLETS AND MECHANICAL AIR INTAKES.

9. ROOF PENETRATIONS: SEE ARCHITECTURAL DRAWINGS FOR ROOF CAP, ROOF CURB, ROOF DRAIN, AND VTR DETAILS.

10. EXPOSED PIPING: PROVIDE CHROME PLATING FOR EXPOSED PIPING IN FINISHED ROOMS.

11. PENETRATIONS: PROVIDE ESCUTCHEON PLATES FOR EXPOSED PIPING PENETRATIONS AND SHEET METAL FLASHING FOR EXPOSED DUCTWORK PENETRATIONS.

12. SHAFT AND PLENUM CONNECTIONS: SEAL CONNECTIONS TO AIR SHAFTS AIRTIGHT. PROVIDE AIRTIGHT SEAL AROUND PENETRATIONS IN AIR PLENUMS.

13. LIGHT FIXTURE CLEARANCE: COORDINATE LOCATIONS OF MECHANICAL WORK TO PROVIDE CLEARANCES OVER LIGHTING FIXTURES FOR REMOVAL AND REPLACEMENT.

14. MOTORS: COMPLY WITH ENERGY CODE ENFORCED BY AHJ FOR MINIMUM EFFICIENCIES UNDER FULL LOAD.

15. ACCESS CLEARANCES FOR MAINTENANCE AND REPLACEMENT: VERIFY PHYSICAL DIMENSIONS OF EQUIPMENT TO ENSURE THAT ACCESS CLEARANCES CAN BE MET. COORDINATE LOCATIONS OF MECHANICAL WORK AND WORK OF OTHER TRADES TO PROVIDE ACCESS CLEARANCES FOR SERVICE AND MAINTENANCE.

COORDINATION REQUIREMENTS

1. PIPING: COORDINATE WITH STRUCTURAL FOR EXACT LOCATION OF ALL STRUCTURAL FRAMING AND FOOTINGS AND FINALIZE THE EXACT ROUTING OF ALL PIPES WITH STRUCTURAL AND AT THE SITE PRIOR AND DURING THE CONSTRUCTION.

2. DUCTWORK: LOCATE AND COORDINATE THE EXACT LOCATION OF DUCTWORK WITH STRUCTURAL PLANS AND WITH THE GENERAL CONTRACTOR PRIOR TO INSTALLATION OF ANY STRUCTURE OR EQUIPMENT. COORDINATE WITH FRAMING CONTRACTOR TO ASSURE JOIST SPACES LINE UP WHEN DUCTWORK MUST PASS THROUGH DIFFERENT JOIST SPACES.

3. ADJUSTMENTS: ALL EQUIPMENT, MOTORS, FANS GAS BURNERS, IGNITION DEVICES, DRIVES, ETC. SHALL BE ADJUSTED AND BALANCED TO OPERATE AT SPECIFIED RATINGS AS REQUIRED FOR THIS PROJECT SITE AND ACCOUNTING FOR ELEVATION ABOVE SEA LEVEL.

4. APPROVALS: MECHANICAL AND PLUMBING EQUIPMENT SHALL BE APPROVED FOR INSTALLATION IN THE PROJECT LOCATION AND SHALL HAVE ALL CERTIFICATIONS AND RATINGS TO MEET ALL ENERGY, POLLUTION, ENVIRONMENTAL, SEISMIC, ETC. CODES AND REGULATIONS. THE CONTRACTOR SHALL COORDINATE WITH HIS MANUFACTURE SUPPLIERS AND SHALL INCLUDE ALL COSTS REQUIRED TO MEET THESE REQUIREMENTS IN HIS BID.

5. FIRE PROTECTION: CONTRACTOR SHALL PROVIDE A FULLY DESIGNED FIRE PROTECTION SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA AND LOCAL CODES. PROVIDE DESIGN, PERMITS, MATERIALS, INSTALLATION, TESTING AND ALL OTHER FOR A FULLY OPERATIONAL SYSTEM. LOCATION OF ALL PIPING TO BE COORDINATED WITH OTHER TRADES.

PIPING NOTES

1. DISASSEMBLY PROVISIONS: PROVIDE UNIONS OR FLANGES AT PIPING CONNECTIONS TO EQUIPMENT, COILS, TRAPS, CONTROL VALVES, AND OTHER COMPONENTS TO ALLOW DISASSEMBLY FOR MAINTENANCE.

2. REDUCERS: PROVIDE AS REQUIRED FROM LINE PIPE SIZE TO EQUIPMENT, TRAP, COIL, AND CONTROL VALVE CONNECTION SIZES.

3. OFFSETS: PROVIDE FOR BRANCH LINES TO EQUIPMENT.

4. DIELECTRIC UNIONS: PROVIDE AT CONNECTIONS OF DISSIMILAR PIPE.

5. REFRIGERANT PIPING: PROVIDE SIZING & INSTALLATION IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

6. CONDENSATE DRAIN: PROVIDE A P–TRAP FOR EACH HVAC UNIT CONDENSATE PAN WITH PLUG TEES FOR CLEANING. CONDENSATE DRAINS SHALL BE DISCHARGED TO AN INDIRECT WASTE OR OUTSIDE.

INSULATION/LINING NOTES

1. ENERGY CODE: AS A MINIMUM, COMPLY WITH THICKNESSES AND TYPES LISTED IN ENERGY CODE ENFORCED BY AHJ.

2. EXTENT OF INTERNAL DUCT LINING:
   A. GRILLE AND DIFFUSER BOXES AND BOOTS.
   B. TRANSFER DUCTS.
   C. THE FIRST 10 FEET OF SUPPLY AND RETURN DUCTWORK FROM THE AIR HANDLER.

3. EXTENT OF EXTERNAL DUCT INSULATION:
   A. SUPPLY AND RETURN AIR IN UNCONDITIONED SPACES, MECHANICAL ROOMS, ELECTRICAL ROOMS, AND EQUIPMENT ROOMS NOT SPECIFIED TO BE INTERNALLY LINED.
   B. SUPPLY AIR ABOVE CEILINGS OR EXPOSED NOT SPECIFIED TO BE INTERNALLY LINED.
   C. OUTDOOR AIR INTAKE.

4. MISCELLANEOUS DUCT FITTINGS (CONICAL TAKEOFFS, ETC.): WRAP WITH INSULATION FOR CONDENSATION CONTROL.

PLAN NOTES

1. DUCTWORK SHALL BE METALLIC DUCTWORK

2. TEST AND BALANCE WORK SHALL BE PERFORMED BY AN INDEPENDENT TEST AND BALANCE AGENCY. PROVIDE (3) COPIES OF TEST AND BALANCE REPORT TO OWNER.

3. COORDINATE DUCTWORK WITH MISCELLANEOUS OBSTRUCTIONS IN CEILING SPACE.

4. RESTROOM EXHAUST SHALL BE A MINIMUM OF 10' FROM ANY MECHANICAL OUTSIDE AIR INTAKES.

5. ROUTE DUCTWORK UNDERNEATH JOISTS UON.

6. TRANSITION DUCT UNDER BEAMS AND DUCTS. FIELD VERIFY AVAILABLE CEILING CAVITY DIMENSIONS.

7. COORDINATE MOUNTING HEIGHT OF DIFFUSERS WITH ARCHITECTURAL PLANS.

SHEET METAL NOTES

1. REFERENCE: SMACNA HVAC DUCT CONSTRUCTION STANDARDS, METAL AND FLEXIBLE, CURRENT EDITION.

2. CLEARANCE: COORDINATE DUCTWORK WITH MISCELLANEOUS OBSTRUCTIONS IN CEILING SPACE.

3. ROUND ELBOWS AND OFFSETS: FULL RADIUS (R/D = 1.5), 5–PIECE SEGMENTED OR STAMPED. REFER TO SMACNA HVAC FIG 2–7, 3–3. DO NOT USE ANGLED OFFSET (TYPE 1). MITERED OFFSET (TYPE 2) MAY BE USED UP TO 30 DEGREE OFFSET ANGLE.

4. ROUND TEES AND LATERALS: CONICAL TEE PER SMACNA HVAC FIG 3–5; DO NOT USE STRAIGHT TEE; DO NOT USE CONICAL SADDLE TAP FOR EXPOSED DUCTWORK IN FINISHED SPACES. 90–DEGREE TEE WITH OVAL TO ROUND TAP, LATERAL, AND 45–DEGREE RECTANGULAR LEAD–IN PER SMACNA HVAC FIG 3–4.

5. RECTANGULAR ELBOWS AND OFFSETS: FULL RADIUS WHERE SPACE PERMITS, R/W = 1.5; OTHERWISE USE SQUARE CORNER ELBOW WITH TURNING VANES.

6. RECTANGULAR DIVIDED FLOW FITTINGS: USE GENERALLY, EXCEPT BRANCHES TO TERMINALS; SMACNA HVAC FIG 2–5, TYPES 1, 2, 4A, AND 4B. DO NOT USE TYPE 3.

7. TURNING VANES: H.E.P. MANUFACTURER OR APPROVED HIGH EFFICIENCY PROFILE AIRFOIL TYPE FOR RECTANGULAR SQUARE THROAT ELBOWS. ACOUSTICAL TYPE FOR RETURN AIR MITERED ELBOWS.

8. TAKEOFFS TO OPENINGS: CONICAL TYPE WITH VOLUME DAMPER FOR ROUND DUCT BRANCHES PER SMACNA HVAC FIG 2–6, MINIMUM DIAMETER 2 INCHES LARGER THAN DUCT SIZE. 45 DEGREE ENTRY FITTING FOR RECTANGULAR DUCT BRANCHES PER SMACNA HVAC FIG 2–6.

9. FLEXIBLE CONNECTIONS: PROVIDE AT EACH DUCT CONNECTION TO FANS, PACKAGED HVAC EQUIPMENT, EXTERNALLY ISOLATED AIR HANDLING UNITS, FAN COIL UNITS, AND SIMILAR EQUIPMENT. EXCEPTION: EQUIPMENT IN CORRIDOR CEILING SPACES WHERE FIRE RATING IS REQUIRED.

10. ALL DUCT WORK SHALL BE CLASSIFIED FOR LOW PRESSURE SYSTEMS PER IMC SECTION 603.

11. ALL DUCTS AND JOINTS SHALL BE SEALED PER IMC SECTION 603.

HVAC NOTES

1. ATTACHMENTS: AIR DISTRIBUTION OUTLETS AND LOUVERS SHALL HAVE ALL REQUIRED ACCESSORIES AND ATTACHMENTS FOR A COMPLETE CONNECTION TO THE SPECIFIC TYPE OF STRUCTURE THAT THEY ARE BEING ATTACHED TO. THIS INCLUDES, BUT IS NOT LIMITED TO, EXTERIOR BRICKS, GWB WALLS, GWB CEILING, ETC.

2. DUCTWORK: DUCTWORK SHALL BE SMOOTH SHEET METAL (CLASS–1). DUCTWORK THROUGH FIRE RATED STRUCTURE AND FLOOR SHALL BE MIN. 26 GA. STEEL. MAXIMUM LENGTH OF FLEXIBLE DUCTS SHALL BE 5'–0", UNLESS OTHERWISE NOTED ON DRAWINGS. DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS.

3. SEISMIC: PROVIDE SEISMIC RESTRAINTS FOR MECHANICAL EQUIPMENT, PIPING, AND DUCTWORK PER SMACNA AND LOCAL REGULATIONS.

4. FILTER CLEARANCE: PROVIDE ADEQUATE CLEARANCE FOR CHANGING AIR FILTERS.

5. DUCTWORK AND PIPING OUTSIDE OF MECHANICAL ROOMS SHALL BE CONCEALED, COORDINATE WITH THE GENERAL CONTRACTOR TO FUR–OUT AS REQUIRED.

6. FIRE RATINGS: RATED FLOOR/CEILING JOINT SPACES HAVING DUCTWORK INSIDE THEM SHALL BE FIRE/SMOKE PROTECTED TO MAINTAIN THE 1–HOUR FLOOR/CEILING RATING PER LOCAL JURISDICTIONS. EXHAUST DUCTWORK PENETRATING THE 1–HOUR ROOF/CEILING OR FLOOR/CEILING ASSEMBLY SHALL HAVE ACCESSIBLE CEILING FIRE DAMPERS. ALTERNATIVELY, THE EXHAUST DUCTWORK SHALL BE ROUTED INSIDE A RATED SHAFT TO PROTECT THE CEILING/ROOF RATING PER THE LOCAL JURISDICTIONS.

7. FIRESTOP: PIPE, DUCT AND CONDUIT PENETRATIONS THROUGH RATED ASSEMBLIES SHALL BE FIRE AND SMOKE STOPPED PER CODE.

8. DUCTWORK: DUCTWORK SHALL BE SMOOTH SHEET METAL (CLASS–1). DUCTWORK THROUGH FIRE RATED STRUCTURE AND FLOOR SHALL BE MIN. 26 GA. STEEL. MAXIMUM LENGTH OF FLEXIBLE DUCTS SHALL BE 5'–0" UNLESS OTHERWISE NOTED ON DRAWINGS. DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS.

9. VOLUME DAMPERS: PROVIDE AN ACCESSIBLE MANUAL VOLUME DAMPER FOR EACH SUPPLY, RETURN, OSA AND EXHAUST OPENING, LOCATED AS FAR UPSTREAM AS POSSIBLE FROM THE OPENING. PROVIDE A MANUAL VOLUME DAMPER FOR BRANCH MAINS SERVING MORE THAN ONE OPENING. VOLUME DAMPERS IN NON–ACCESSIBLE CEILING SHALL HAVE A CONTROL ARM EXTENDED TO AN ACCESSIBLE LOCATION. PROVIDE "YOUNG" REGULATOR OR EQUAL. EXACT LOCATION OF CONTROL DEVICES VISIBLE IN FINISHED SPACES SHALL BE COORDINATED WITH THE ARCHITECT.

10. CORRIDOR THERMOSTAT: PROVIDE TAMPERPROOF THERMOSTATS IN CORRIDORS. DO NOT PROVIDE PLASTIC GUARDS TO MAKE THE THERMOSTATS TAMPERPROOF. PROVIDE BLANK SECURABLE THERMOSTAT COVERS.

APPLICABLE CODE

BUILDING CODE:

2021 WASHINGTON STATE ENERGY CODE–COMMERCIAL PROVISIONS

2021 WASHINGTON STATE MECHANICAL CODE

DRAWINGS ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.

PRE-CON MEETING NOTES

CONTRACTORS SHALL ATTEND A PRE–CONSTRUCTION MEETING WITH THE ENGINEER FOR THE PURPOSE OF REVIEWING THE WORK PRIOR TO ORDERING ANY EQUIPMENT OR PERFORMING ANY WORK. THE MEETING SHALL BE LOCATED AT THE PROJECT SITE ON A DATE AND TIME TO BE MUTUALLY AGREED. THE MEETING WILL BE A WORKING SESSION. THE MEETING WILL BE FACILITATED BY THE ENGINEER AND THE AGENDA WILL INCLUDE A DETAILED REVIEW OF THE PLANS AND SPECIFICATIONS, CROSS CHECK WITH OTHER TRADES FOR COORDINATION ISSUES, REVIEW OF PROPOSED PRODUCTS, REVIEW OF PLANNED MEANS AND METHODS,AND ON–SITE INVESTIGATION OF FIELD CONDITIONS RELATIVE TO EXISTING CONDITIONS THAT COULD AFFECT THE WORK. PERSONS ATTENDING THE MEETING SHALL BE KNOWLEDGEABLE OF THE PROJECT AND SHALL BE THE SPECIFIC PERSONS INTENDED TO CONTINUE WITH THE PROJECT THROUGH TO COMPLETION. IF REQUIRED, REVISED PLANS WILL BE ISSUED THROUGH OFFICIAL CHANNELS. CHANGES IN THE BID PRICE WILL BE DISCUSSED, BUT NO CHANGE ORDERS WILL BE ISSUED UNLESS PROCESSED THOUGH OFFICIAL CHANNELS. IT SHALL BE UNDERSTOOD THAT THE ENGINEER HAS NO AUTHORITY TO ISSUE CHANGE ORDERS.

THE FOLLOWING TRADES SHALL BE REPRESENTED FOR THE MINIMUM TIME INDICATED:

MECHANICAL SHEET METAL	4 HOURS
PLUMBING/PIPING	4 HOURS
ELECTRICAL	4 HOURS
SPRINKLER	2 HOURS
GENERAL CONTRACTOR	ALL SESSIONS

ANNOTATIONS

ACU	AIR CONDITIONING UNIT
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
BDD	BACKDRAFT DAMPER
BHP	BRAKE HORSEPOWER
BTUH	BRITISH THERMAL UNIT PER HOUR
C	COMMON
CAP	CAPACITY
CC	COOLING COIL
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CLG	CEILING, COOLING
CO	CLEANOUT
COMB	COMBUSTION
CONT	CONTINUE, CONTROL
CONTR	CONTRACTOR
COP	COEFFICIENT OF PERFORMANCE
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
D	DIAMETER
DB	DRY BULB, DECIBEL
DEG	DEGREE
DIM	DIMENSION
DISCH	DISCHARGE
DN	DOWN
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFF	EFFICIENCY
EG	EXHAUST GRILLE, ENGINE GENERATOR
ELEC	ELECTRIC
EQUIV	EQUIVALENT
ESP	EXTERNAL STATIC PRESSURE
EXH	EXHAUST
EXT	EXTERIOR, EXTERNAL
F	FAHRENHEIT
FD	FIRE DAMPER
FCU	FAN COIL UNIT
FLR	FLOOR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FSD	FIRE/SMOKE DAMPER
G	GAS
GRD	GRILLES, REGISTERS, AND DIFFUSERS
GWB	GYPSUM WALLBOARD
HORIZ	HORIZONTAL
HP	HORSEPOWER, HEAT PUMP
HRU	HEAT RECOVERY UNIT
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
HVU	HEATING AND VENTILATION UNIT
HWR	HIGH WALL RETURN, HOT WATER RETURN
HWS	HIGH WALL SUPPLY, HOT WATER SUPPLY
HX	HEAT EXCHANGER
ID	INDIRECT DRAIN, INSIDE DIAMETER
IN	INCH
KW	KILOWATT
L	LONG, LENGTH
LB	POUND
LWR	LOW WALL RETURN
LWS	LOW WALL SUPPLY
MBH	THOUSAND BTU PER HOUR
MECH	MECHANICAL
MCA	MINIMUM CIRCUIT AMPACITY
MOCP	MAXIMUM OVER CURRENT PROTECTION
MTD	MOUNTED
OSA	OUTDOOR AIR
OBD	OPPOSED BLADE DAMPER
OD	OUTSIDE DIMENSION OR DIAMETER
OPNG	OPENING
P	PUMP
PD	PRESSURE DROP
POC	POINT OF CONNECTION
PRV	PRESSURE REDUCING VALVE
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
REF	REFERENCE
RF	RELIEF FAN
RG	RETURN GRILLE
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SCH	SCHEDULE
SF	SUPPLY FAN, SQUARE FOOT
SENS	SENSIBLE
SG	SUPPLY GRILLE
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
SO	SCREENED OPENING
SP	STATIC PRESSURE
SS	STAINLESS STEEL, SANITARY SEWER
SQ	SQUARE
TG	TRANSFER GRILLE
TYP	TYPICAL
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
V	VENT
VENT	VENTILATION, VENTILATOR
VTR	VENT THRU ROOF
W	WASTE, WATT, WIDE
WB	WET BULB (TEMPERATURE)

SYMBOLS

DUCTWORK

- 18x12 — DUCT (1ST FIGURE = SIDE SHOWN, 2ND FIGURE = SIDE NOT SHOWN)
- UP / DOWN — DUCT SECTION, POSITIVE PRESSURE
- UP / DOWN — DUCT SECTION, NEGATIVE PRESSURE
- UP / DOWN — ROUND DUCT SECTION
- UP / UP / UP — DUCT PENETRATION THRU FLOOR OR ROOF
- f — VOLUME DAMPER
- FSD / FSD — FIRE/SMOKE DAMPER (–––◀ = HORIZ DUCT, –––◆ = VERT DUCT), 2–HR RATED, UON
- FD / FD — FIRE DAMPER (–––◀ = HORIZ DUCT, –––◆ = VERT DUCT), 2–HR RATED, UON
- 90° ELBOW, R/D OR R/W=1.5
- SQUARE CORNER ELBOW WITH TURNING VANES
- 90° TAKE–OFF OR TEE
- 90° CONICAL TAKE–OFF
- 45° LATERAL TAKE–OFF
- TRANSITION OR REDUCER (FOT = FLAT ON TOP, FOB = FLAT ON BOTTOM)
- WYE FITTING
- 90° RECTANGULAR TAKE–OFF WITH 45° TAPER
- 90° DIVERGING RECTANGULAR TEE, EITHER RADIUS OR TURNING VANES
- PARALLEL FLOW BRANCH CONNECTION, EITHER RADIUS OR TURNING VANES
- FLEXIBLE DUCT
- ø — ROUND DUCT INDICATOR

EQUIPMENT

- EF–1 — TYPICAL EQUIPMENT DESIGNATION (EXHAUST FAN SHOWN)
- DSD — DUCT SMOKE DETECTOR
- T — ROOM THERMOSTAT OR TEMPERATURE TRANSMITTER
- H — ROOM HUMIDISTAT OR HUMIDITY TRANSMITTER
- CO — CARBON MONOXIDE SENSOR
- SD — SMOKE DETECTOR

TERMINALS

- CD–12x12 OR 400 / CD–1 400 — DIFFUSER/GRILLE TYPE, AND NUMBER OR SIZE; DESIGN CFM (WHERE APPLICABLE) CEILING DIFFUSER (FLOW ARROWS SHOWN FOR NON SYMMETRICAL AIRFLOW)
- CEILING RETURN/EXHAUST GRILLE
- LINEAR DIFFUSER, CEILING OR WALL MOUNTED (FLOW ARROWS SHOWN FOR NON SYMMETRICAL AIRFLOW)
- WALL SUPPLY GRILLE (SG)
- WALL RETURN/EXHAUST GRILLE (RG, EG)
- 50 — TRANSFER GRILLE (TG), DUCT CONNECTED, WALL MOUNTED W/ OPTIONAL CFM SHOWN TRANSFER GRILLE, CEILING MOUNTED WITH FULL–SIZED LINED DUCT CONNECTION

DRAWING INDEX

Sheet Number	Sheet Title	PERMIT SET 12/31/2024					
M0.1	LEGEND, GENERAL NOTES, & DRAWING INDEX	X					
M0.1	MECHANICAL SCHEDULES & WSEC FORMS	X					
M2.0	HVAC PLAN FLOOR PLAN	X					
M2.1	HVAC PLAN ROOF PLAN	X					

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

PRCNC20250094

REVISIONS

NO.	DATE	DESCRIPTION

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LYNNWOOD, WA 98036
PHONE(206)364-3343

JACOB J. OBRIEN — STATE OF WASHINGTON — 23810 — REGISTERED PROFESSIONAL ENGINEER — 12/31/24

DRAWN: OP | DESIGNED: ABE | CHECKED: PR | APPROVED: JMR

PROJECT: EAST TOWN CROSSING COMMERCIAL LOT 1
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
19401 40TH AVE W. SUITE 302
LYNNWOOD, WA 98036
PHONE(206)364-3343
REI PROJECT NO.: 810010
CONTACT: ARIK ESPINELI

DATE: 12/31/2024

SHEET TITLE: LEGEND, GENERAL NOTES, & DRAWING INDEX

SHEET NO. **M0.0**

WNELSON F:\810–010 EAST TOWN CROSSING\DWG\M000 COVER SHEET.DWG 01–02–2021 13:59

PRCNC20250094

SCHEDULES

ROOFTOP HVAC UNIT SCHEDULE

EQUIP NO.	SERVICE	DISCHARGE	SUPPLY FAN			PROVIDE 100% OSA ECONOMIZER?	COOLING		HEATING			ELECTRICAL			WEIGHT, LBS	BASIS OF DESIGN (1)
			AIRFLOW, CFM	ESP, IN WG	MOTOR HP		CAPACITY, MBH	IEER/ EER	CAPACITY @ 47F MBH	CAPACITY @ 17F MBH	COP	VOLTAGE	MCA	MOCP		
RTU-1	TENANT 1	VERTICAL	3477	0.6	3.5	YES	101.6	14.1/11.0	100	61	3.4	208V/3P	129	150	1237	DAIKIN DFH1023W000043C
RTU-2	TENANT 1	VERTICAL	3477	0.6	3.5	YES	101.6	14.1/11.0	100	61	3.4	208V/3P	129	150	1237	DAIKIN DFH1023W000043C
RTU-3	TENANT 2	VERTICAL	2464	0.6	2.3	YES	69.78	17.0/11.5	62	33	3.4	208V/3P	70.7	80	708	DAIKIN DRH0723W000114C
RTU-4	TENANT 2	VERTICAL	2464	0.6	2.3	YES	69.78	17.0/11.5	62	33	3.4	208V/3P	70.7	80	708	DAIKIN DRH0723W000114C

NOTES:
(1) PROVIDE FACTORY INSTALLED TWO STAGE COOLING MODES
(2) PROVIDE FACTORY INSTALLED ELECTRO-MECHANICAL CONTROLS
(3) PROVIDE FACTORY INSTALLED RETURN AIR SMOKE DETECTOR
(4) PROVIDE FACTORY INSTALLED ULTRA LOW-LEAK DOWNFLOW ECONOMIZER W/ DRY BULB SENSOR
(5) PROVIDE FACTORY INSTALLED NON FUSED DISCONNECT SWITCH
(6) PROVIDE FACTORY INSTALLED HINGED PANELS
(7) PROVIDE FIELD INSTALLED 14" ROOF CURB
(8) PROVIDE FIELD INSTALLED OVERFLOW SWITCH
(9) PROVIDE FIELD INSTALLED LOW AMBIENT CONTROL
(10) PROVIDE FIELD INSTALLED FILTRATION-MERV13
(11) PROVIDE FIELD INSTALLED 4H/2C COMMERCIAL 7DAY PROGRAMMABLE WI-FI CAPABLE HUM/DEHUM THERMOSTAT
(12) REFRIGERANT TO BE R-410A.
(13) FOR PRICING, CALL KATE HOWE, 425-213-1178, OR EMAIL <KATEH@AIRREPS.COM>.

ELECTRIC HEATERS

EQUIP NO.	SERVICE	MOUNTING/ DISCHARGE	HEATING	ELECTRICAL	BASIS OF DESIGN (3)
			KW	VOLTAGE	
EWH-1.0	RISER ROOM	WALL	1.0	208V/1P	(1)(2)

NOTES:(1) BROAN, KING, CADET OR EQUIVALENT.
(2) PROVIDE INTEGRAL THERMOSTAT.
(3) ALL ELECTRIC HEATERS TO BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

REVISIONS

NO.	DATE	DESCRIPTION

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
(206) 364-3943 FX

JACOB J. OBERLIN — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 12/31/24

DRAWN: OP | DESIGNED: ABE | CHECKED: PR | APPROVED: JMR

PROJECT: EAST TOWN CROSSING COMMERCIAL LOT 1
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

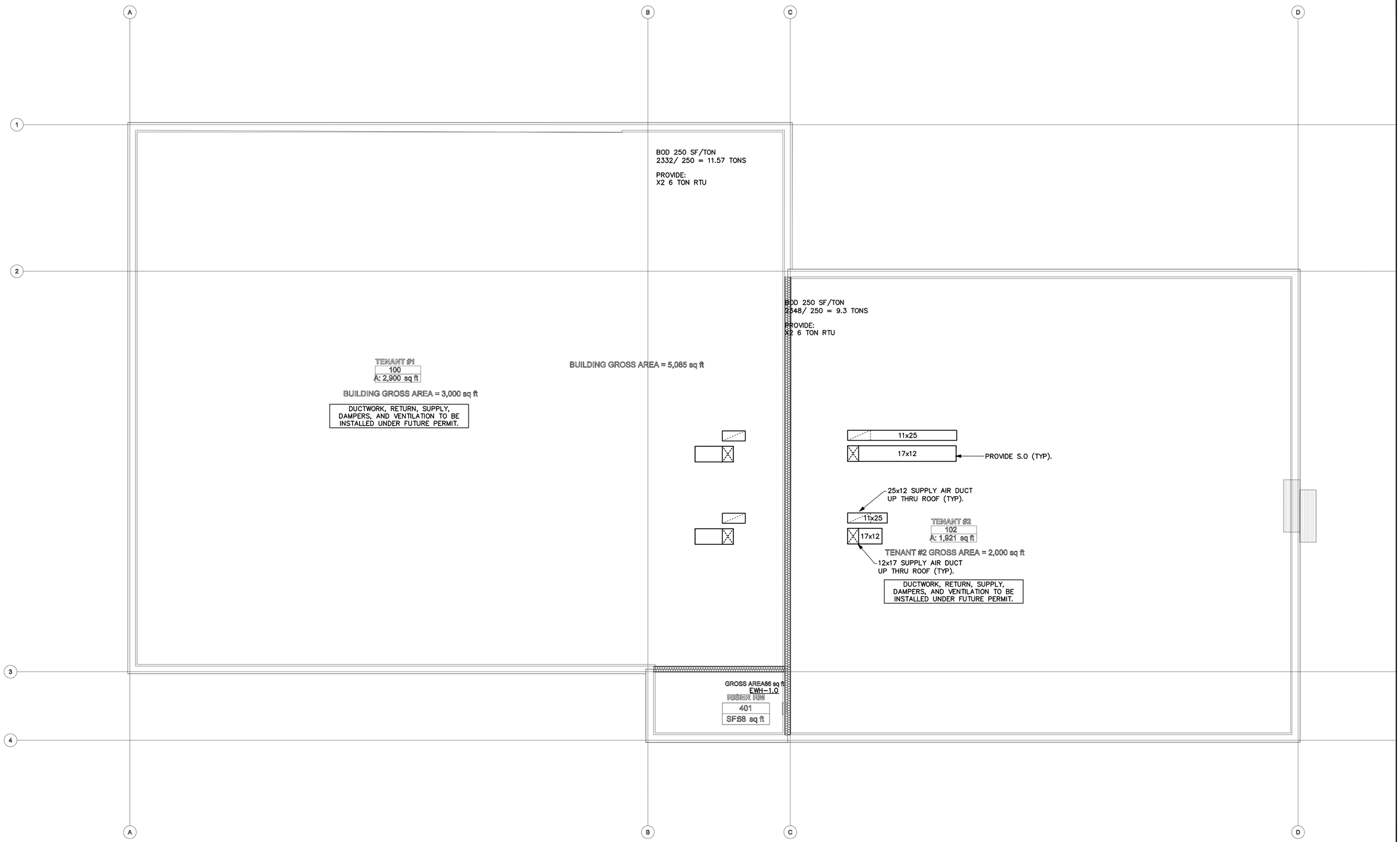
ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
PHONE:(206)364-3943
REI PROJECT NO.: 810010
CONTACT: ARIK ESPINELI

DATE: 12/31/2024

SHEET TITLE: MECHANICAL SCHEDULES

SHEET NO. **M0.1**

PRCNC20250094



HVAC FLOOR PLAN

SCALE: 1/4" = 1'-0"

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

NO.	DATE	DESCRIPTION

REVISIONS

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
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JACOB J. OBRIEN
STATE OF WASHINGTON
JJOBRIEN
REGISTERED
PROFESSIONAL ENGINEER
12/31/24

DRAWN: OP
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APPROVED: JMR

PROJECT: EAST TOWN CROSSING COMMERCIAL LOT 1
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

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LYNNWOOD, WA 98036
PHONE:(206)364-3343
REI PROJECT NO.: 810010
CONTACT: ARIK ESPINELI

DATE: 12/31/2024

SHEET TITLE: HVAC PLAN FLOOR PLAN

SHEET NO. **M2.0**

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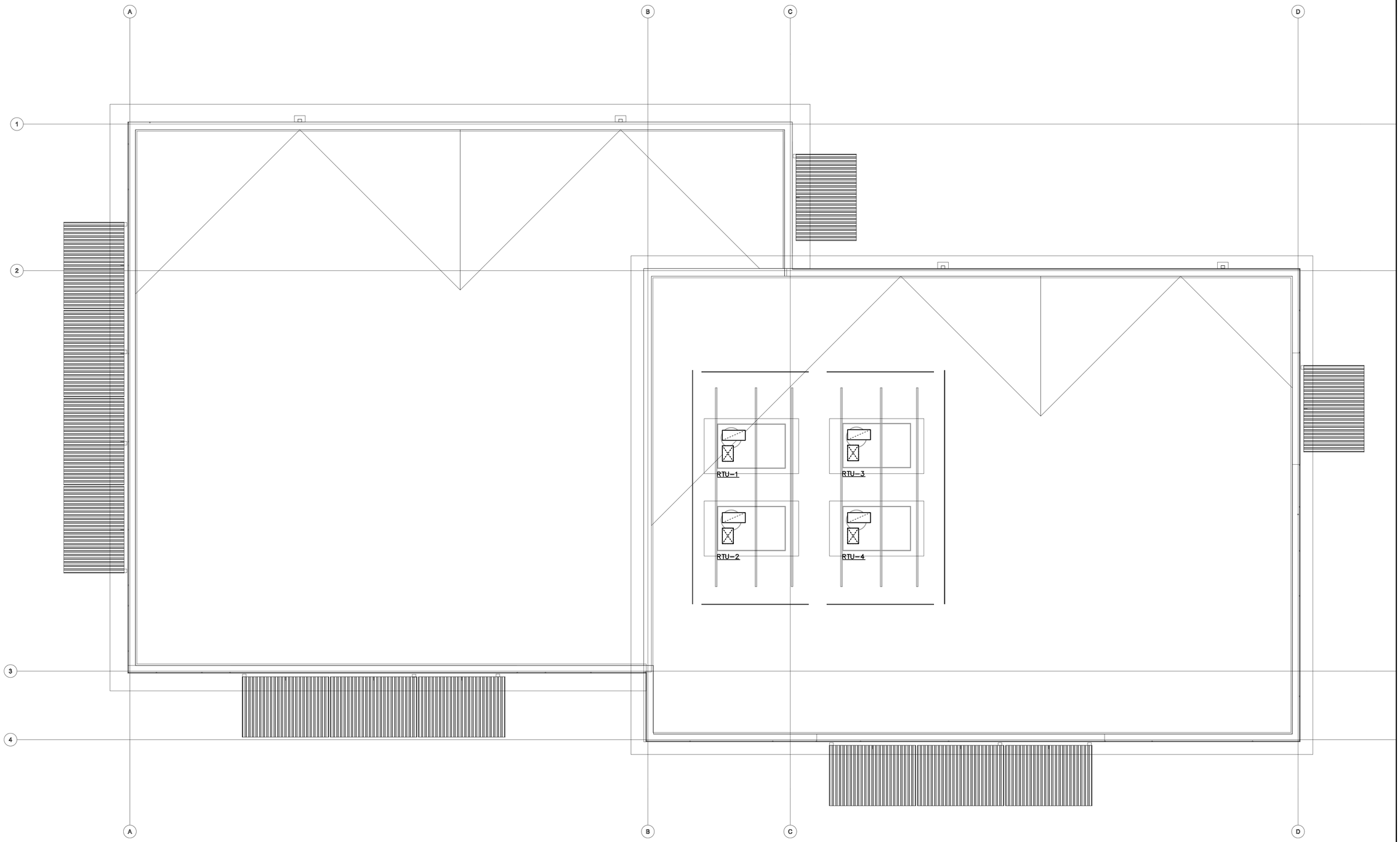
PRCNC20250094



HVAC ROOF PLAN

SCALE: 1/4" = 1'-0"

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

NO.	DATE	DESCRIPTION
		REVISIONS

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
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206.364.5343 FX.

JACOB J. OBRIEN — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 12/31/24

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PROJECT: EAST TOWN CROSSING COMMERCIAL LOT 1
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
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PHONE:(206)364-3343
REI PROJECT NO.: 810010
CONTACT: ARIK ESPINELI

DATE:
12/31/2024

SHEET TITLE:
HVAC PLAN ROOF PLAN

SHEET NO.
M2.1

MNELSON F:\810-010 EAST TOWN CROSSING\DWG\M200 FLOOR PLANS.DWG 01-02-2021 14:16

GENERAL NOTES

1. REFERENCE TO RELATED WORK: "REF" INDICATIONS DENOTE WORK COVERED ELSEWHERE (ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL, LANDSCAPE, OR KITCHEN), OR ITEM BASED ON A SPECIFIC MANUFACTURER'S DIMENSIONS (VERIFY).
2. ELECTRICAL CHARACTERISTICS: REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL CHARACTERISTICS (VOLTAGES, ETC. OF MECHANICAL EQUIPMENT, UNLESS OTHERWISE INDICATED.
3. CODES: COMPLETE INSTALLATION OF THE PLUMBING SYSTEM SHALL BE PER THE APPLICABLE BUILDING, MECHANICAL, ENERGY, PLUMBING, FIRE, AND HEALTH CODES AND REGULATIONS AS ADOPTED BY THE LOCAL AHJ.
4. PREPARE AND SUBMIT FOR REVIEW A SHOP DRAWING BASED ON FINAL STRUCTURAL SHOP DRAWINGS FOR LOCATING AND ROUTING ALL EQUIPMENT, PIPING, ETC.
   A. COORDINATE FLOOR AND BEAM PENETRATIONS WITH STRUCTURAL.
   B. COORDINATE FINAL LOCATION AND ROUTING WITH CEILING, LIGHTS, WALLS, FIRE SPRINKLER PIPING, AND OTHER TRADES WORK.
   C. INCLUDE ADDITIONAL OFFSETS, ELBOWS, ROUTING, EQUIVALENT DUCT SIZING EXCHANGE, RELOCATING, ETC. AS REQUIRED FOR A COMPLETE OPERATING MECHANICAL SYSTEM.
   D. PROVIDE SHOP DRAWINGS AT NO ADDITIONAL COST TO THE OWNER.
5. PLUMBING CONTRACTOR SHALL LOCATE AND COORDINATE EXACT LOCATION OF ALL PLUMBING EQUIPMENT WITHIN THE STRUCTURE.
6. ACCESS DOORS: COORDINATE WITH ARCHITECT AND LOCATE ALL ACCESS DOORS ON SHOP DRAWINGS PRIOR TO BEGINNING OF CONSTRUCTION. ACCESS DOORS IN FIRE RATED STRUCTURE SHALL BE FIRE RATED. VERIFY ACCESS DOOR LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO BIDDING.
7. ROOF PENETRATIONS: SEE ARCHITECTURAL DRAWINGS FOR ROOF CAP, ROOF CURB, ROOF DRAIN, OVERFLOW DRAINS AND VTR DETAILS.
8. EXPOSED PIPING: PROVIDE CHROME PLATING FOR EXPOSED PIPING IN FINISHED ROOMS.
9. PENETRATIONS; PROVIDE ESCUTCHEON PLATES FOR EXPOSED PIPING PENETRATIONS AND SHEET METAL FLASHING FOR EXPOSED DUCTWORK PENETRATIONS.
10. SHAFT AND PLENUM CONNECTIONS: SEAL CONNECTIONS TO AIR SHAFTS AIRTIGHT. PROVIDE AIRTIGHT SEAL AROUND PENETRATIONS IN AIR PLENUMS.
11. LIGHT FIXTURE CLEARANCE: COORDINATE LOCATIONS OF MECHANICAL WORK TO PROVIDE CLEARANCES OVER LIGHTING FIXTURES FOR REMOVAL AND REPLACEMENT.
12. CABLE TRAYS: PIPING INSTALLED ADJACENT TO ELECTRICAL CABLE TRAYS SHALL ALLOW MINIMUM ACCESS OF 6" ABOVE AND TO THE SIDE OF CABLE TRAYS.
13. MOTORS: COMPLY WITH ENERGY CODE ENFORCED BY AHJ FOR MINIMUM EFFICIENCIES UNDER FULL LOAD.
14. ACCESS CLEARANCES FOR MAINTENANCE AND REPLACEMENT: VERIFY PHYSICAL DIMENSIONS OF EQUIPMENT TO ENSURE THAT ACCESS CLEARANCES CAN BE MET. COORDINATE LOCATIONS OF MECHANICAL WORK AND WORK OF OTHER TRADES TO PROVIDE ACCESS CLEARANCES FOR SERVICE AND MAINTENANCE.

COORDINATION REQUIREMENTS

1. IRRIGATION SYSTEM: COORDINATE IRRIGATION WATER DEMAND, MINIMUM WATER PRESSURE REQUIREMENTS & CONTROL CABINET LOCATIONS WITH IRRIGATION CONTRACTOR.
2. GAS: CONTRACTOR/GAS COMPANY SHALL FINALIZE GAS METER AND GAS SERVICE LOCATIONS. INSTALL SEISMIC GAS SHUT OFF VALVE PER GAS COMPANY REGULATIONS.
3. UTILITIES: COORDINATE WITH SITE UTILITY CONTRACTOR AND CIVIL DRAWINGS FOR UTILITY CONNECTIONS AND EXTENSIONS.
4. ROOF DRAINAGE: COORDINATE WITH GENERAL CONTRACTOR FOR ROOF DRAIN AND OVERFLOWS, SCUPPER DRAINS, AND CONDENSATE DRAINS.
5. PLUMBING FIXTURES & EQUIPMENT: COORDINATE EXACT LOCATION OF ALL PLUMBING FIXTURES & EQUIPMENT WITH ARCHITECTURAL AND OTHER TRADES DOCUMENTS.
6. PIPING: COORDINATE EXACT LOCATION OF ALL STRUCTURAL FRAMING & FOOTINGS AND FINALIZE THE EXACT ROUTING OF ALL PIPES WITH STRUCTURAL ENGINEER AT THE SITE PRIOR TO AND DURING THE CONSTRUCTION. COORDINATE UNDER GRADE PIPING & FOUNDATION DRAINAGE PIPING WITH CIVIL ENGINEER.
7. ADJUSTMENTS: ALL EQUIPMENT, MOTORS, FANS GAS BURNERS, IGNITION DEVICES, DRIVES, ETC. SHALL BE ADJUSTED AND BALANCED TO OPERATE AT SPECIFIED RATINGS AS REQUIRED FOR THIS PROJECT SITE AND ACCOUNTING FOR ELEVATION ABOVE SEA LEVEL.
8. APPROVALS: MECHANICAL AND PLUMBING EQUIPMENT SHALL BE APPROVED FOR INSTALLATION IN THE PROJECT LOCATION AND SHALL HAVE ALL CERTIFICATIONS AND RATINGS TO MEET ALL ENERGY, POLLUTION, ENVIRONMENTAL, SEISMIC, APPLICABLE CODES AND REGULATIONS. THE CONTRACTOR SHALL COORDINATE WITH MANUFACTURE SUPPLIERS AND SHALL INCLUDE ALL COSTS REQUIRED TO MEET THE BID DOCUMENTS.
9. FIRE PROTECTION: CONTRACTOR SHALL PROVIDE A FULLY DESIGNED FIRE PROTECTION SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA AND LOCAL CODES. PROVIDE DESIGN, PERMITS, MATERIALS, INSTALLATION, TESTING AND ALL OTHER FOR A FULLY OPERATIONAL SYSTEM. LOCATION OF ALL PIPING TO BE COORDINATED WITH OTHER TRADES.
10. PRIOR TO PIPING INSTALLATION: PLUMBING CONTRACTOR TO COORDINATE PIPING LAYOUT WITH ALL OTHER TRADES.
11. ACCESS: COORDINATE ALL ACCESS LOCATIONS WITH GENERAL CONTRACTOR AND ARCHITECT TO ENSURE ALL REQUIRED ACCESS HATCHES, ACCESS PANELS & ACCESS COVERS ARE PROVIDED.
12. PROVIDE WATER TIGHT SEALS FOR ANY PIPING PENETRATING THE EXTERIOR FOUNDATION WALLS OR SLABS.
13. ANY DISCREPANCIES SHOULD BE REPORTED TO THE ARCHITECT IMMEDIATELY.
14. PROVIDE FIRE PROOFING FOR ALL PIPING PENETRATING FIRE BARRIER WALLS OR FLOOR SLABS.

DISINFECTION OF POTABLE WATER SYSTEM REQUIREMENTS

1. NEW OR REPAIRED POTABLE WATER SUPPLY SYSTEMS SHALL BE DISINFECTED PRIOR TO USE.
2. INITIAL COLIFORM SAMPLE IS REQUIRED PRIOR TO ADMINISTERING WATER-CHLORINE SOLUTION.
3. SECTION 609.9 ITEMS #2 OR #3 CAN BE USED PRECEDED BY AND FOLLOWED BY ITEM #1.
   3.1. NOTE FILL PORT TO ADD CHLORINE MUST BE WHERE WATER SUPPLY ENTERS BUILDING AND A FLOW METER TO MEASURE SOLUTION.
4. AFTER WATERCHLORINE SOLUTION IS INCORPORATED INTO THE NEW OR REPAIRED WATER SUPPLY SYSTEM A 48 HOUR WAITING PERIOD MUST BE OBSERVED PRIOR TO BACTERIOLOGICAL TEST.
5. BACTERIOLOGICAL TEST SHALL BE CONDUCTED BY A LABORATORY CERTIFIED FOR DRINKING WATER IN WASHINGTON STATE AFFIRMING WATER QUALITY CONTAINS NO COLIFORM BY SAMPLE TESTING THE FURTHEST FIXTURE FROM PUBLIC WATER SOURCE AND NOT LESS THAN TWO OTHER LOCATIONS PART OF THE WATER SUPPLY SYSTEM.
6. CHLORINE LEVEL IN THE NEW OR REPAIRED WATER SUPPLY SYSTEM SHALL NOT BE LESS THAN THE MEAN AVERAGE OF THE AREA IN RELATIONSHIP FROM THE WATER PURVEYOR SOURCE.
7. WARNING: IN CASE A WATER SOFTENER IS PART OF THE COLD WATER SYSTEM, CONTRACTOR TO ENSURE THE WATER SOFTENER IS CONNECTED AND OPERATIONAL BEFORE STARTING THE DISINFECTION PROCESS. FAILURE TO FOLLOW THE INSTRUCTIONS WILL VOID THE WATER HEATER OR HEAT PUMP WARRANTY.

SYMBOLS

GENERAL

- ARCHITECTURAL BACKGROUND (THIN LINE)
- NEW PIPING (HEAVY LINE)
- EXISTING PIPING (THIN LINE)
- EXISTING WORK TO BE REMOVED
- MATCHLINE OR PROPERTY LINE
- CONNECTION TO EXISTING

SECTION IDENTIFICATION

- INDICATES DIRECTION OF CUTTING PLANE
- LETTER INDICATES SECTION (NO. INDICATES DETAIL)
- SHEET NUMBER WHERE SECTION IS DRAWN
- SHEET NUMBER WHERE SECTION IS TAKEN

DETAIL IDENTIFICATION

- DETAIL NUMBER
- DRAWING/SHEET NUMBER

EQUIPMENT

- HWCP-1 — TYPICAL EQUIPMENT DESIGNATION

PIPING

- W — WASTE BELOW GRADE
- W — WASTE ABOVE GRADE
- PW — PUMPED WASTE
- IW — INDIRECT WASTE
- SS — SANITARY SEWER BELOW GRADE
- SS — SANITARY SEWER ABOVE GRADE
- PSS — PUMPED SANITARY SEWER
- V — VENT
- SD — STORM DRAIN
- OD — OVERFLOW STORM DRAIN
- PSD — PUMPED STORM DRAIN
- CD — CONDENSATE DRAIN
- PCD — PUMPED CONDENSATE DRAIN
- \- — COLD WATER (CW)
- — HOT WATER (HW), POTABLE, 120°F
- 140 — HOT WATER, POTABLE, TEMPERATURE OTHER THAN 120°F
- HOT WATER CIRCULATING (HWC), POTABLE, 120°F
- 140 — HOT WATER CIRCULATING, POTABLE, TEMPERATURE OTHER THAN 120°F
- FOF — FUEL OIL FILL
- FOS — FUEL OIL SUPPLY
- FOR — FUEL OIL RETURN
- FOV — FUEL OIL VENT
- RV — RELIEF VENT
- G — ~~LOW PRE~~SSURE NATURAL GAS
- MPG — ~~MEDIUM~~ PRESSURE NATURAL GAS
- IRR — IRRIGATION (NON POTABLE)
- F — FIRE MAIN

PIPE SYMBOLS

- TOP PIPE CONNECTION
- BOTTOM PIPE CONNECTION
- PIPE TURNING UP
- PIPE TURNING DOWN/DROP
- PIPE CAP
- PIPE PLUG
- UNION
- FLANGE
- WYE STRAINER
- WYE STRAINER WITH CAPPED HOSE END BLOWDOWN VALVE
- BALL VALVE
- BALL VALVE
- GLOBE VALVE
- CHECK VALVE
- BALANCING OR PLUG VALVE
- BUTTERFLY VALVE
- FLEXIBLE CONNECTION IN PIPING
- PRV — PRESSURE REDUCING VALVE (PRV)
- AUTOMATIC CONTROL VALVE, 2-WAY
- AUTOMATIC CONTROL VALVE, 3-WAY
- ID — RELIEF VALVE
- BV — BALANCING/METERING VALVE
- REDUCER

DIRECTION OF FLOW

- A — PIPE ANCHOR
- PIPE ALIGNMENT GUIDE
- PS — PIPE SUPPORT
- VALVE STATION OR ASSEMBLY
- ID — INDIRECT DRAIN, PIPE TO DRAIN
- POINT OF CONNECTION
- RD OD — ROOF DRAIN, OVERFLOW DRAIN
- FLOOR DRAIN
- HOSE BIBB
- BREAK IN PIPING OR DUCTWORK
- GM — GAS METER
- M — INLINE WATER METER
- PUMP
- PRESSURE GAUGE
- THERMOMETER
- P/T — PRESSURE/TEMPERATURE TEST PORT
- RPBP — REDUCED PRESSURE BACKFLOW PREVENTER
- DCVA — DOUBLE CHECK VALVE ASSEMBLY
- CATCH BASIN - SAND/OIL INTERCEPTOR
- TRENCH DRAIN
- EMERGENCY GAS SHUT-OFF VALVE
- SEISMIC GAS SHUT-OFF VALVE
- WASHER BOX
- GREASE INTERCEPTOR

ABBREVIATIONS

ABV	ABOVE
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
BFF	BELOW FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BOH	BACK OF HOUSE
BP	BOOSTER PUMP
BT	BATHTUB
BTUH	BRITISH THERMAL UNIT PER HOUR
BV	BALANCING VALVE
C	COMMON
CAP	CAPACITY
CB	CATCH BASIN
CD	CONDENSATE DRAIN
CFF	CAPPED FOR FUTURE
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CLG	CEILING, COOLING
CLW	CLOTHES WASHER
CO	CLEANOUTS
COMB	COMBUSTION
CONT	CONTINUE, CONTROL
CONTR	CONTRACTOR
COTG	CLEANOUTS TO GRADE
CP	CIRCULATING PUMP
CV	CHECK VALVE
CW	COLD WATER
D	DIAMETER
DB	DRY BULB, DECIBEL
DF	DRINKING FOUNTAIN
DFU	DRAIN FIXTURE UNITS
DI	DUCTILE IRON
DIM	DIMENSION
DN	DOWN
DS	DOWN SPOUT
DWG	DRAWING
(E)	EXISTING
EFF	EFFICIENCY
ELEC	ELECTRIC
EQUIV	EQUIVALENT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXT	EXTERIOR, EXTERNAL
F	FAHRENHEIT
FCO	FLOOR CLEANOUTS
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR
FLR	FLOOR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOOR SINK
FT	FEET
FU	FIXTURE UNITS
G	GAS (LOW PRESSURE)
GAL	GALLONS
GD	GARAGE DRAIN
GM	GAS METER
GPG	GRAINS PER GALLON
GPM	GALLONS PER MINUTE
GV	GATE VALVE
GWB	GYPSUM WALLBOARD
GWH	GAS WATER HEATER
HB	HOSE BIBB
HD	HEAD
HDR	HUB DRAIN
HEDV	HOSE END DRAIN VALVE
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPCW	HIGH PRESSURE COLD WATER
HW	HOT WATER
HWC	HOT WATER RE-CIRCULATION
HWCP	HOT WATER CIRCULATION PUMP
HWR	HOT WATER RETURN
HWST	HOT WATER STORAGE TANK
HX	HEAT EXCHANGER
ICW	INDUSTRIAL COLD WATER
ID	INDIRECT DRAIN, INSIDE DIAMETER
IE	INVERT ELEVATION
IHW	INDUSTRIAL HOT WATER
IN	INCH
KS	KITCHEN SINK
KW	KILOWATT
L	LONG, LENGTH
LAV	LAVATORY
LB	POUND
M	WATER METER
MBH	THOUSAND BTU PER HOUR
MECH	MECHANICAL
MCA	MIN. CIRCUIT AMPACITY
MOCP	MAX. OVER CURRENT PROTECTION
MPG	MEDIUM PRESSURE GAS
MTD	MOUNTED
(N)	NEW
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OD	OUTSIDE DIMENSION/DIAMETER
	OVERFLOW DRAIN/DECK DRAIN
OPD	OVER PRESSURE DEVICE
OPNG	OPENING
P	PUMP
PD	PRESSURE DROP, PLANTER DRAIN
POC	POINT OF CONNECTION
PRV	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
PS	PUMPED STORM DRAINAGE
PSIG	POUNDS PER SQUARE INCH GAUGE
PSD	PUMPED STORM DRAINAGE
PSS	PUMPED SANITARY SEWER
PSW	PUMPED SANITARY WASTE
PW	PUMPED WASTE
RD	ROOF DRAIN
REF	REFERENCE
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
S	SINK
SCH	SCHEDULE
SCW	SOFTENED COLD WATER
SD	STORM DRAIN
SEP	SEWAGE EJECTOR PUMP
SF	SQUARE FOOT
SGSV	SEISMIC GAS SHUT-OFF VALVE
SH	SHOWER
SO	STORM OVERFLOW
SP	STATIC PRESSURE/SUMP PUMP
SR	SUDS RELIEF
SS	STAINLESS STEEL/SANITARY SEWER
SSS	SIDE SANITARY SEWER
STD	STANDARD
SQ	SQUARE
TD	TRENCH DRAIN
TMV	THERMOSTATIC MIXING VALVE
TP	TRAP PRIMER
TYP	TYPICAL
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UR	URINAL
V	VENT
VTR	VENT THRU ROOF
W	WASTE, WATT, WIDE
WC	WATER CLOSET
WCO	WALL CLEANOUTS
WHD	WALL HYDRANT
WM	WASHING MACHINE
WSFU	WATER SUPPLY FIXTURE UNITS

CONTRACTOR SUBSTITUTIONS & REVISIONS

PLEASE SUBMIT PROPOSALS FOR SUBSTITUTIONS OR REVISIONS FOR REVIEW AND APPROVAL PRIOR TO ORDERING MATERIAL OR DOING WORK. FOR EQUIPMENT THAT IS SCHEDULED BY MANUFACTURER'S NAME AND CATALOG DESIGNATIONS, THE MANUFACTURER'S PUBLISHED DATA AND/OR SPECIFICATION FOR THAT ITEM ARE CONSIDERED PART OF SPECIFICATION. ENGINEERING COSTS FOR REVISING MEP PLANS SHALL BE ADDRESSED IN THE COST ANALYSIS OF THE SUBSTITUTION PROPOSAL. CONTRACTOR TO COORDINATE WITH ENGINEER AND DETERMINE ASSOCIATED DESIGN AND PERMITTING COSTS. CONTRACTOR SHALL BE RESPONSIBLE FOR OTHER COSTS ASSOCIATED WITH UNFORESEEN ISSUES RESULTING FROM SUBSTITUTIONS OR REVISIONS.

PRCNC20250094

APPLICABLE CODES

THE FOLLOWING PROJECT DESIGN IS BASED ON THE FOLLOWING CODES:

-2018 INTERNATIONAL STATE BUILDING CODE (IBC) WITH WASHINGTON STATE AMENDMENTS
-2018 INTERNATIONAL MECHANICAL CODE (CMC) WITH WASHINGTON STATE AMENDMENTS
-2018 UNIFORM PLUMBING CODE (UPC) WITH WASHINGTON STATE AMENDMENTS
-2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)

NOTE TO CONTRACTOR

DRAWINGS ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.

Please revise the plumbing plans to conform to the 2021 editions of the Washington State Codes. [Reference the marked-up document: CONSTRUCTION PLAN SET, sheet P0.00]

DRAWING INDEX

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

NO.	DATE	REVISIONS DESCRIPTION

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206-364-3343 TEL
CONTACT: JEFF MacGILLIVRAY

REED JACKSON — STATE OF WASHINGTON — 24927 — REGISTERED PROFESSIONAL ENGINEER — 10/11/2024

DRAWN: JM | DESIGNED: JM | CHECKED: RJ | APPROVED: RJ

PROJECT: **EAST TOWN CROSSING**
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
19401 40TH AVE W. SUITE 302
LYNNWOOD, WA 98036
PHONE:(206)364-3343

PERMIT PLANS

12/31/2024

SHEET TITLE:
LEGEND, GENERAL NOTES, AND DRAWING INDEX

SHEET NO.
P0.00

PLUMBING TABLES

PIPE MATERIALS

PIPE TYPE	MATERIAL	JOINT	NOTES
UNDERGROUND WATER SERVICE ENTRANCE PIPING	STAINLESS	THREADED, WELDED OR PROPRESS	2
WATER DISTRIBUTION PIPING - MAIN DISTRIBUTION PIPING	SCHEDULE 80 CPVC	SOLVENT CEMENT	4
UNDERGROUND WASTE AND VENT PIPING	SCHEDULE 40 SOLID WALL PVC	SOLVENT CEMENT	
ABOVE GROUND WASTE AND VENT PIPING	SCHEDULE 40 ABS OR PVC	SOLVENT CEMENT	
CONDENSATE DRAIN PIPING	COPPER, TYPE M	SOLDERED	3

NOTES:

1. ALL SANITARY SYSTEM MATERIALS SHALL BE LISTED BY AN APPROVED LISTING AGENCY.
2. PLASTIC WRAP UNDERGROUND WATER SUPPLY PIPING TO PREVENT CORROSION.
3. CPVC IS ACCEPTABLE FOR CONDENSATE PIPING IN LIEU OF COPPER IF APPROVED BY AHJ.
4. PROVIDE THERMAL EXPANSION LOOPS FOR ALL WATER PIPING PER MANUFACTURER REQUIREMENTS.

PIPE INSULATION SCHEDULE

SERVICE	INSULATION		VAPOR RETARDER REQUIRED	NOTES
	CONDUCTIVITY (Btu*in./(h*ft²*°F)	THICKNESS		
DOMESTIC COLD WATER, IRRIGATION WATER, CONDENSATE DRAINS, STORM DRAIN (IN CONDITIONED SPACE)	0.21-0.27	<1" PIPE: 0.5" ALL OTHER SIZES: 1"	YES	12,13
DOMESTIC COLD WATER, IRRIGATION WATER, CONDENSATE DRAINS, WASTE (OUTSIDE THE CONDITIONED SPACE)	0.21-0.27	<1½" PIPE: 1" ALL OTHER SIZES: 1.5"	YES	1,7,8,10
DOMESTIC HOT WATER AND RECIRCULATED HOT WATER (OUTSIDE THE CONDITIONED SPACE)	0.21-0.28	<1½" PIPE: 1" ALL OTHER SIZES: 1.5"	NO	1,2
EXPOSED SANITARY DRAINS AND DOMESTIC WATER SUPPLIES AND STOPS FOR ADA FIXTURES.	TRUEBRO LAV-GUARD	N/A	NO	11

Note #2 references the residential edition of the 2021 WSEC, which does not apply to this project. Please revise this note to conform to the commercial edition of the 2021 Washington State Energy Code. [Reference the marked-up document: CONSTRUCTION PLAN SET, sheet P0.01]

NOTES:

1. PIPING INSULATION EXPOSED TO THE WEATHER SHALL BE PROTECTED FROM DAMAGE. CONTRACTOR SHALL PROVIDE ALUMINUM JACKET SHIELDING FROM SOLAR RADIATION THAT CAN CAUSE DEGRADATION OF THE MATERIAL. ADHESIVE TAPE SHALL NOT BE PERMITTED.
2. PER 2021 WSEC SECTION R403.5.3 (RESIDENTIAL) INSULATION FOR HOT WATER PIPE SHALL HAVE A MINIMUM R-VALUE OF R-3.
3. PIPING FROM WATER HEATER TO THE TERMINATION OF HEATED WATER SUPPLY PIPE SHALL BE INSULATED IN ACCORDANCE WITH TABLE C403.2.9.
4. ON BOTH THE INLET AND OUTLET PIPING OF A STORAGE HOT WATER HEATER, THE FIRST 8 FEET OF PIPING OR PIPING FROM WATER HEATER TO HEAT TRAP SHALL BE INSULATED.
5. HEAT TRACED PIPING SHALL BE INSULATED IN THE SAME MANNER AS NON HEAT TRACED PIPING OR PER THE HEAT TRACE MANUFACTURER'S INSTRUCTIONS.
6. TUBULAR PIPING INSULATION SHALL NOT BE REQUIRED FOR THE FOLLOWING:
   - 6.1. THE TUBING FROM THE CONNECTION AT THE TERMINATION OF THE FIXTURE SUPPLY PIPING TO A PLUMBING FIXTURE OR PLUMBING APPLIANCE.
   - 6.2. VALVES, PUMPS, STRAINERS, AND THREADED UNIONS IN PIPING THAT IS 1 INCH OR LESS IN NOMINAL DIAMETER.
   - 6.3. PIPING FROM USER-CONTROLLED SHOWER AND BATH MIXING VALVES TO THE WATER OUTLETS.
   - 6.4. COLD WATER PIPING OF A DEMAND RECIRCULATION WATER SYSTEM.
   - 6.5. TUBING FROM A HOT DRINKING-WATER HEATING UNIT TO THE WATER OUTLET.
   - 6.6. PIPING AT LOCATIONS WHERE A VERTICAL SUPPORT OF THE PIPING IS INSTALLED.
   - 6.7. PIPING SURROUNDED BY BUILDING INSULATION WITH A THERMAL RESISTANCE (R-VALUE) OF NOT LESS THAN R-3.
   - 6.8. HOT WATER PIPING THAT IS PART OF THE FINAL PIPE RUN TO THE PLUMBING FIXTURE AND IS NOT PART OF THE HEATED-WATER CIRCULATION SYSTEM CIRCULATION PATH IS NOT REQUIRED TO MEET THE MINIMUM INSULATION REQUIREMENTS OF C404.6.
7. PER 2021 UPC SECTION 312.6 NO WATER, SOIL, OR WASTE PIPE SHALL BE INSTALLED OR PERMITTED OUTSIDE OF A BUILDING, IN ATTICS OR CRAWL SPACES, OR IN AN EXTERIOR WALL UNLESS, WHERE NECESSARY, ADEQUATE PROVISION IS MADE TO PROTECT SUCH PIPE FROM FREEZING. ALL HOT AND COLD WATER PIPES OUTSIDE THE CONDITIONED SPACE SHALL BE PROVIDED WITH INSULATION WITH A MINIMUM R-VALUE OF R-3.
8. HEAT TRACING SHALL BE PROVIDED FOR COLD WATER AND IRRIGATION WATER IN UNCONDITIONED SPACES. CONTACT ENGINEERING IF NECESSARY. PER 2021 WSEC SECTION C403.12.3 FREEZE PROTECTION SYSTEMS, SUCH AS HEAT TRACING OF OUTDOOR PIPING, SHALL INCLUDE AUTOMATIC CONTROLS CONFIGURED TO SHUT OFF THE SYSTEMS WHEN OUTDOOR AIR TEMPERATURES ARE ABOVE 40°F.
9. PER 2021 WSEC TABLE C403.2.9 INSULATION FOR HOT WATER AND HOT WATER RECIRCULATION SHALL HAVE A THERMAL CONDUCTIVITY OF 0.21-0.28 (BTU INCH.FT².°F) AT OPERATING TEMPERATURE.
10. INSULATION R-VALUE SHALL MEET THE MINIMUM REQUIREMENT. THICKNESS IS BASED ON GRAINGER SAMPLE DATA FOR K-FLEX(PVC/NBR) AND OWENS CORNING(FIBER GLASS).
11. ALL ADA P-TRAPS, HOT WATER SUPPLY TUBING, AND SHUT-OFF COCKS SHALL BE PROTECTED WITH APPROVED COVERS TO PREVENT SCALDING.
12. REQUIRED BY ENGINEERING BASED ON BEST PRACTICE.
13. INSULATION IS NOT REQUIRED ON PLASTIC COLD WATER PIPING.

HANGER SPACING FOR WATER PIPING

ALL SUSPENDED WATER SUPPLY PIPE SHALL BE SUPPORTED AS FOLLOWS PER 2021 UPC TABLE 313.3:

	MAX. HORIZONTAL SPACING	MAX. VERTICAL SPACING
CPVC PIPE <1"	3 FT.	10 FT.
CPVC PIPE ≥1¼"	4 FT.	10 FT.
STEEL GAS ½"	6 FT.	6 FT.
STEEL GAS ¾"-1"	8 FT.	8 FT.
STEEL GAS > 1½"	10 FT.	10 FT.
PEX < 1"	32 IN.	10 FT.
PEX ≥ 1½"	4 FT.	10 FT.

HANGER SPACING FOR WASTE AND VENT PIPING

ALL SUSPENDED SANITARY AND VENT PIPE SHALL BE SUPPORTED AS FOLLOWS PER 2021 UPC TABLE 313.3:

	MAX. HORIZ. SPACING	MAX. VERT. SPACING
ABS	4 FT.	10 FT.
PVC (TYPE DWV)	4 FT.	10 FT.
CAST-IRON HUBLESS*	EVERY OTHER JOINT	15 FT.

*CAST-IRON OVER 4' SHALL BE SUPPORTED AT EVERY JOINT

PLUMBING FIXTURE FLOW RATES PER 2021 UPC CH. 4

FIXTURE TYPE	FLOW RATE	NOTES
SHOWERHEADS	1.8 GPM @ 80 PSI	
LAVATORY FAUCETS, RESIDENTIAL	1.2 GPM @ 60 PSI	1
LAVATORY FAUCETS, NON-RESIDENTIAL	0.5 GPM @ 60 PSI	2
KITCHEN FAUCETS	1.8 GPM @ 60 PSI	3
GRAVITY TANK-TYPE WATER CLOSETS	1.28 GALLONS/FLUSH	4
FLUSHOMETER TANK WATER CLOSETS	1.28 GALLONS/FLUSH	4
FLUSHOMETER VALVE WATER CLOSETS	1.28 GALLONS/FLUSH	4
ELECTROMECHANICAL HYDRAULIC WATER CLOSETS	1.28 GALLONS/FLUSH	4
URINALS	0.125 GALLONS/FLUSH	

NOTES:

1. LAVATORY FAUCETS SHALL NOT HAVE A FLOW RATE LESS THAN 0.8 GPM AT 20 PSI.
2. WHERE COMPLYING FAUCETS ARE UNAVAILABLE, AERATORS RATED AT 0.35 GPM OR OTHER MEANS MAY BE USED TO ACHIEVE REDUCTION.
3. KITCHEN FAUCETS MAY TEMPORARILY INCREASE FLOW ABOVE THE MAXIMUM RATE, BUT NOT ABOVE 2.2 GPM @ 60 PSI AND MUST DEFAULT TO A MAXIMUM FLOW RATE OF 1.8 GPM @ 60 PSI.
4. INCLUDES SINGLE AND DUAL FLUSH WATER CLOSETS WITH AN EFFECTIVE FLUSH OF 1.6 GALLONS OR LESS. SINGLE FLUSH TOILETS – THE EFFECTIVE FLUSH VOLUME SHALL NOT EXCEED 1.6 GALLONS. THE EFFECTIVE FLUSH VOLUME IS THE AVERAGE FLUSH VOLUME WHEN TESTED IN ACCORDANCE WITH ASME A112.19.2 DUAL FLUSH TOILETS – THE EFFECTIVE FLUSH VOLUME SHALL NOT EXCEED 1.6 GALLONS. THE EFFECTIVE FLUSH VOLUME IS DEFINED AS THE COMPOSITE, AVERAGE FLUSH VOLUME OF TWO REDUCED FLUSHES AND ONE FULL FLUSH. FLUSH VOLUMES WILL BE TESTED IN ACCORDANCE WITH ASME A112.19.2 AND ASME A112.19.14.

PLUMBING NOTES

PRCNC20250094

1. CONNECTIONS: PROVIDE PLUMBING FIXTURE CONNECTIONS TO BUILDING WASTE, VENT, COLD WATER, AND HOT WATER SYSTEM IN ACCORDANCE WITH DRAWINGS, MANUFACTURER'S RECOMMENDATIONS, AND LOCAL CODES. CONNECT TO EACH FIXTURE, EQUIPMENT, ETC. WITH ALL ACCESSORIES, VALVES, VACUUM BREAKERS, REGULATORS, UNIONS, ETC. AS REQUIRED AND AS RECOMMENDED BY THE MANUFACTURERS. REFER TO PLUMBING FIXTURE CONNECTION SCHEDULE ON PLANS.
2. HOT AND COLD: WATER PIPING CONNECTION TO EACH FIXTURE SHALL BE COLD WATER ON THE RIGHT HAND SIDE AND HOT WATER ON THE LEFT HAND SIDE.
3. HOT WATER: NON-CIRCULATING HOT WATER PIPE SHALL NOT EXCEED 10' UNLESS OTHERWISE SHOWN ON DRAWINGS.
4. VENT STACKS: COORDINATE VENT STACK WITH HVAC EQUIPMENT TO MAINTAIN MINIMUM 10' CLEARANCE FROM OUTSIDE AIR INTAKES.
5. CLEANOUTS: PROVIDE CLEANOUTS PER CURRENT UPC AND AS REQUIRED BY LOCAL JURISDICTIONS. CLEANOUTS SHALL BE LOCATED IN WALLS/FLOORS WHERE THEY ARE NOT HIGHLY VISIBLE. FLOOR CLEANOUTS IN CARPETED AREAS TO BE FITTED WITH CARPET INSERTS. LOCATIONS SHALL BE SUBMITTED TO ARCHITECT FOR APPROVAL. NOTE: NOT ALL CLEANOUTS ARE SHOWN ON THE PLUMBING DRAWINGS.
6. SUDS RELIEF: PROVIDE SUDS RELIEF IN ACCORDANCE WITH 2021 UPC SECTION 711.0, STATE AND LOCAL CODES.
7. SHUT-OFFS: PROVIDE 1/4 TURN BALL VALVE ANGLE STOP SHUT-OFF VALVES AND BRAIDED STAINLESS STEEL FLEX CONNECTORS AT HOT AND COLD WATER SUPPLY TO EACH FIXTURE. EXCEPTION: PROVIDE SCREWDRIVER STOPS AT BATH/SHOWERS.
8. TUB SPOUTS SHALL BE THREADED (NO PUSH-ON FITTINGS).
9. TRAP ARMS: PROVIDE TRAP ARMS SUCH THAT THE MAXIMUM LENGTH WILL NOT EXCEED CODE REQUIREMENTS.
10. ADA INSULATION: AT PLUMBING PIPING EXPOSED UNDER LAVATORIES, INSULATE THE EXPOSED PIPING AND TRAPS WITH PRODUCT SPECIFICALLY DESIGNED FOR THIS APPLICATION MEETING ADA REQUIREMENTS. PROVIDE HANDI-LAV GUARD OR EQUIVALENT. OFFSET P-TRAPS TO CLEAR WHEELCHAIR ACCESS.
11. GAS EQUIPMENT: GAS EQUIPMENT SHALL BE INSTALLED PER EQUIPMENT LISTINGS, APPLICABLE SFGC, SPC, LOCAL CODES & NFPA STANDARDS.
12. GAS CONNECTIONS: INSTALL FLEXIBLE QUICK DISCONNECT ASSEMBLIES FOR ALL GAS FIRED KITCHEN EQUIPMENT PER APPLICABLE SFGC, SPC, LOCAL CODES & NFPA STANDARDS. PROVIDE LOCKABLE GAS SHUT-OFF VALVES FOR FIREPLACES & BBQS IN UNATTENDED PUBLIC LOCATIONS IN THE BUILDING.
13. GAS PIPING CONNECTIONS TO WATER HEATERS, BOILERS AND FURNACES SHALL HAVE DIRT LEGS AND UNIONS PROVIDED ON APPLIANCE SIDE OF SHUTOFF VALVE.
14. GAS PIPING INSTALLATION: STEEL OR MALLEABLE IRON FUEL LINES 2" OR SMALLER SHALL BE ASSEMBLED USING THREAD SEALANT SUITABLE FOR NATURAL GAS. GAS PIPING LARGER THAN 2" SHALL HAVE WELDED FITTINGS.
15. GAS PIPING UNDERGROUND: WHERE INSTALLED BELOW GRADE THROUGH THE OUTER FOUNDATION OR BASEMENT WALL OF A BUILDING, SHALL BE ENCASED IN A PROTECTIVE PIPE SLEEVE. THE ANNULAR SPACE BETWEEN THE GAS PIPING AND THE SLEEVE SHALL BE SEALED.
16. GAS PIPING ABOVE GROUND: WHERE PASSING THROUGH AN OUTSIDE WALL, GAS PIPING SHALL BE PROTECTED AGAINST CORROSION BY COATING OR WRAPPING WITH AN INERT MATERIAL. WHERE PIPING IS ENCASED IN A PROTECTIVE PIPE SLEEVE, THE ANNULAR SPACE BETWEEN THE PIPING AND THE SLEEVE SHALL BE SEALED.
17. GAS PIPE SUPPORT: FUEL LINES SHALL BE SUPPORTED OR STRAPPED, AND SHALL BE PLUMB AND SQUARE.
18. GAS PIPING ON ROOFTOPS SHALL BE SUPPORTED AND ANCHORED TO THE ROOF.
19. GAS PIPING SHALL NOT BE BURIED UNDER A BUILDING, SLAB OR OTHER STRUCTURE.
20. GAS PIPING PROTECTIVE COATING: PAINT ALL EXTERIOR EXPOSED GAS PIPING WITH TWO COATS OF RUST INHIBITIVE PAINT. COLOR: GRAY.
21. WATER HAMMER ARRESTORS: PROVIDE AT THE END OF HOT AND COLD WATER LINES SERVING TWO OR MORE FIXTURES; SIZE IN ACCORDANCE WITH PLUMBING AND DRAINAGE INSTITUTE (PDI) REQUIREMENTS. WATER HAMMER ARRESTORS ARE REQUIRED FOR QUICK CLOSING VALVES, SUCH AS LAUNDRY WASHERS, FLUSH VALVES (PUBLIC TOILETS), ETC.
22. TRAP PRIMERS AS SPECIFIED: PROVIDE TRAP PRIMERS AND PIPING FOR FLOOR DRAINS, FLOOR SINKS, AREA DRAINS & HUB DRAINS. ARRANGE PIPING TO ACHIEVE EQUAL FLOW TO EACH DRAIN AND FLOOR SINK FOR TRAP PRIMERS SERVING MULTIPLE DRAINS AND FLOOR SINKS. COORDINATE EXACT LOCATIONS WITH ARCHITECT & ELECTRICAL ENGINEER.
23. P-TRAPS: ALL EXPOSED P-TRAPS SHALL BE CHROME-PLATED BRASS. P-TRAPS SERVING HANDICAPPED COUNTER TOP LAVATORIES SHALL BE INSULATED.
24. THROUGHOUT THE PROJECT PROVIDE BALL VALVES. GATE VALVES SHALL NOT BE USED. NO EXCEPTIONS.
25. HOT WATER RECIRCULATING BALANCING VALVES SHOULD BE BELL & GOSSETT CIRCUIT SETTER (WATTS OR EQUAL) WITH INTEGRAL READOUT PORTS, ADJUSTMENT KNOB, DRAIN CONNECTION, AND POSITIVE SHUTOFF.
26. DISASSEMBLY PROVISIONS: PROVIDE UNIONS OR FLANGES AT PIPING CONNECTIONS TO EQUIPMENT, COILS, TRAPS, CONTROL VALVES, AND OTHER COMPONENTS TO ALLOW DISASSEMBLY FOR MAINTENANCE.
27. REDUCERS: PROVIDE AS REQUIRED FROM LINE PIPE SIZE TO EQUIPMENT, TRAP, COIL, AND CONTROL VALVE CONNECTION SIZES.
28. VALVE TAGS: PROVIDE VALVE TAGS PER SPECIFICATIONS TO IDENTIFY VALVE AND THE AREA IT SERVES.
29. OFFSETS: PROVIDE FOR BRANCH LINES TO EQUIPMENT.
30. ALL TEMPERATURE MIXING VALVES SHALL COMPLY WITH ASSE-1070 SAFETY STANDARDS.
31. PROVIDE PIPE MARKER WITH DIRECTION OF FLOW. LABEL "NON-POTABLE WATER DO NOT DRINK" CLEARLY ON NON-POTABLE WATER PIPING.
32. PROVIDE EXPANSION LOOPS/EXPANSION JOINTS IN PIPING PER 2021 UPC TABLE 313.3 AND MANUFACTURER INSTALLATION INSTRUCTIONS.
33. PROVIDE APPROVED PIPE HANGERS & PIPE SUPPORTS IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND 2021 UPC TABLES 313.3 & 313.6. SUBMIT FOR APPROVAL.
34. DIELECTRIC UNIONS: PROVIDE AT CONNECTIONS OF DISSIMILAR PIPE.
35. REFRIGERANT PIPING: PROVIDE SIZING & INSTALLATION IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
36. CONDENSATE DRAIN: PROVIDE A P-TRAP FOR EACH HVAC UNIT CONDENSATE PAN WITH PLUG TEES FOR CLEANING. CONDENSATE DRAINS SHALL BE DISCHARGED TO AN INDIRECT WASTE OR OUTSIDE.
37. PIPING & EQUIPMENT SUPPORTS/HANGERS & SEISMIC RESTRAINTS TO BE DESIGNED BY DESIGN BUILT CONTRACTOR.
38. IF NEEDED, PROVIDE VACUUM BREAKERS AT ALL HOSE BIBBS.
39. FLOOR DRAINS OR SIMILAR TRAPS DIRECTLY CONNECTED TO THE DRAINAGE AND SUBJECT TO INFREQUENT USE SHALL BE PROVIDED WITH AN APPROVED AUTOMATIC MEANS OF MAINTAINING THEIR WATER SEALS IN ACCORDANCE WITH 2021 UPC 1007.0.
40. INSULATION MATERIAL SHALL MEET CITY OF PUYALLUP QUALITY STANDARDS.
41. ALL PIPING AND DUCTWORK SHALL BE INSULATED CONSISTENT WITH THE 2021 WASHINGTON STATE ENERGY CODE.
42. BUILDING DRAIN AND VENT PIPING MATERIALS SHALL COMPLY WITH 2021 UPC 701.0 AND 903.0.
43. ALL SANITARY SYSTEM MATERIAL SHALL BE LISTED BY AN APPROVED LISTING AGENCY.
44. ALL STORAGE WATER HEATING EQUIPMENT SHALL BE PROVIDED WITH AN APPROVED, LISTED EXPANSION TANK OR OTHER DEVICE DESIGNED FOR INTERMITTENT OPERATION FOR THERMAL EXPANSION CONTROL PER 2021 UPC 608.3.
45. WATER HEATERS SHALL BE ANCHORED OR STRAPPED TO RESIST HORIZONTAL DISPLACEMENTS DUE TO SEISMIC MOTION PER 2021 UMC 507.2.
46. MATERIAL EXPOSED WITHIN A DUCT OR PLENUM SHALL COMPLY WITH 2021 IMC 602.2.1.
47. HVAC EQUIPMENT AND WATER HEATERS SHALL COMPLY WITH 2021 IMC CHAPTER 3.
48. BOILERS SHALL COMPLY WITH ALL THE REQUIREMENTS OF 2021 UPC 505.4.
49. PROVIDE EXPANSION TANKS FOR BOILERS PER 2021 UPC SECTION 608.3.
50. SHOWERS AND TUB/SHOWER COMBINATIONS SHALL BE PROVIDED WITH MIXING VALVES PER 2021 UPC 408.0.
51. PLUMBING FIXTURES AND FITTINGS SHALL COMPLY WITH CITY OF PUYALLUP WATER CONSERVATION STANDARDS.
52. CONTRACTOR SHALL PROVIDE FIRESTOPPING AT PENETRATIONS AS NECESSARY TO RETAIN THE FIRE RATING OF ALL ASSEMBLIES. ALL WORK SHALL BE IN COMPLIANCE WITH CODE REQUIREMENTS FOR THE BUILDING CONSTRUCTION TYPE.
53. ALL GARAGE DRAINS, TRASH ROOMS DRAINS & GARAGE TRENCH DRAINS SHALL BE TAKEN TO SAND/OIL INTERCEPTOR(S) BEFORE CONNECTING TO THE SANITARY SEWER SYSTEM.
54. PLUMBING CONTRACTOR SHALL PROVIDE REDUCED PRESSURE BACKFLOW PREVENTERS OR OTHER APPROVED BACKFLOW PREVENTION DEVICE WHERE REQUIRED BY HEALTH AUTHORITIES, FOOD SERVICE DRAWINGS, APPLIANCE MANUFACTURER INSTRUCTIONS AND BY CODE.

PROVIDE REQUIRED & PROPER BACK FLOW PREVENTERS AS SPECIFIED FOR THE APPLIANCES INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:

a. ICE MACHINES AND ICE MAKERS
b. CARBONATED BEVERAGE DISPENSING SYSTEMS
c. COFFEE BREWERS
d. ESPRESSO MACHINES
e. WATER FILTERS
f. STEAM OR HOT WATER BOILERS
g. IRRIGATION SYSTEM
h. FIRE PROTECTION SYSTEM
i. CHEMICAL TREATMENT SYSTEM
j. SOAP/CHEMICAL DISPENSER SYSTEM
k. COMMERCIAL WASHER

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

NO.	DATE	REVISIONS DESCRIPTION

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
206-364-3343 TEL
CONTACT: JEFF MacGILLIVRAY

REED JACKSON — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 10/11/2024

DRAWN:	DESIGNED:	CHECKED:	APPROVED:
JM	JM	RJ	RJ

PROJECT: EAST TOWN CROSSING
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
PHONE:(206)364-3343

PERMIT PLANS
12/31/2024

SHEET TITLE:
PLUMBING NOTES AND TABLES

SHEET NO.
P0.01

PLUMBING CALCULATIONS

PRCNC20250094

DOMESTIC WATER PRESSURE CALCULATIONS *BASED ON 2021 UPC APPENDIX A*		PRESSURE CHANGE (PSI)	RESIDUAL PRESSURE (PSI)
(PVC) WATER ENTRY TO BOOSTER PUMP			
STREET PRESSURE, PSI,			**55**
PER CALL WITH PUYALLUP WATER DIVISION, PRESSURE RANGE IS 55-60 PSI.			
HIGH-FLOW PRESSURE LOSS ALLOWANCE		**-4**	**51**
EQUIPMENT LOSSES, PSI			
CIVIL WATER METER		**-5**	**46**
CIVIL BACKFLOW PREVENTER		**-12**	**34**
SITE SERVICE LINE FRICTION LOSSES(ESTIMATE)			
PIPING SYSTEM LENGTH, FEET	60		
FITTING ALLOWANCE, FEET	20		
AVERAGE FRICTION LOSS FACTOR, PSI/100'	**7.0**		
TOTAL PIPING FRICTION LOSS		**-5.6**	**28.4**
STATIC HEAD, PSI			
TOTAL ELEVATION GAIN, FEET	3	**-1.299**	**27.1**
FROM UNDERGROUND WATER SERVICE TO BUILDING WATER ENTRY POINT			
MIN. PRESSURE AT BOOSTER PUMP INLET			**27.1**
(CPVC) BOOSTER PUMP TO FURTHEST TENANT SUB-METER			
BOOSTER PUMP GAIN			
MINIMUM PRESSURE AT BOOSTER PUMP INLET, PSI			**27.1**
BOOSTER PUMP PRESSURE GAIN, PSI			**52.9**
BOOSTER PUMP DISCHARGE PRESSURE, PSI			**80.0**
STATIC HEAD, PSI			
TOTAL ELEVATION GAIN, FEET	8	**-3.464**	**76.5**
PIPING FRICTION LOSSES			
PIPING SYSTEM LENGTH, FEET	110		
FITTING ALLOWANCE, FEET	27.5		
AVERAGE FRICTION LOSS FACTOR, PSI/100'	**7.0**		
PIPING FRICTION LOSS		**-9.625**	**66.9**
MIN. PRESSURE AT FURTHERST UNIT SUB-METER			**66.9**
(CPVC) FURTHEST ANTICIPATED FIXTURE IN TI			
EQUIPMENT LOSSES PSI			
TENANT SUB-METER		**-5**	**61.9**
PEX PIPING FRICTION LOSSES			
PIPING SYSTEM LENGTH, FEET	100		
FITTING ALLOWANCE, FEET	25		
ZONE FRICTION LOSS FACTOR, PSI/100'	**7.0**		
PIPING FRICTION LOSS		**-8.75**	**53.2**
MINIMUM PRESSURE AT FURTHEST FIXTURE, PSI			**53.2**

FIXTURE UNIT CALCULATIONS - LOT 1

CALCULATIONS BASED ON 2021 UPC TABLES A103.1 AND 702.1.

PUBLIC SPACES / MISC.

FIXTURE	FIXTURE UNITS				FLOOR		TOTAL QTY OF FIXTURES	TOTAL FIXTURE UNITS			
	TOTAL	CW	HW	W/V	1	R		SERVICE	CW ONLY	HW ONLY	W/V ONLY
SUITE 1 COMMERCIAL	30	30	0	40	1	0	1	30	30	0	40
SUITE 2 COMMERCIAL	30	30	0	40	1	0	1	30	30	0	40
HUB DRAIN - 4"	0	0	0	8	1	0	1	0	0	0	8
FLOOR DRAIN - 4"	0	0	0	8	1	0	1	0	0	0	8
HOSE BIB	2.5/1	2.5/1	0	0	2	0	2	3.5	3.5	0	0
								63.5	63.5	0	96

	TOTAL	CW	HW	W/V
TOTAL FIXTURE UNITS:	63.5	63.5	0	96
DOEMSTIC WATER PEAK FLOW:	34.2 GPM			

REQUIRED SERVICE SIZES IN BUILDING:	**DOMESTIC WATER**	**SEWER SIZE**
	SERVICE SIZE: 2"	4"
		1/4" PER FT

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

REVISIONS		
NO.	DATE	DESCRIPTION

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
206-364-3343 TEL
CONTACT: JEFF MacGILLIVRAY

REED JACKSON — STATE OF WASHINGTON — 22771 — REGISTERED PROFESSIONAL ENGINEER — 10/17/2024

DRAWN:	DESIGNED:	CHECKED:	APPROVED:
JM	JM	RJ	RJ

PROJECT:
EAST TOWN CROSSING
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
PHONE:(206)364-3343

PERMIT PLANS

12/31/2024

SHEET TITLE:
PLUMBING CALCULATIONS

SHEET NO.
P0.02

PLUMBING SCHEDULES

PRCNC20250094

SUPPLY PIPE SIZING SCHEDULE - CPVC

									FRICTION LOSS FACTOR:		7.0 PSI/100 FT
PIPE SIZE	COLD WATER, FLUSH TANK			COLD WATER, FLUSH VALVE			HOT WATER			HOT WATER RECIRCULATION	
	FIXTURE UNITS	FLOW, GPM	VELOCITY, FPS	FIXTURE UNITS	FLOW, GPM	VELOCITY, FPS	FIXTURE UNITS	FLOW, GPM	VELOCITY, FPS	FLOW, GPM	VELOCITY, FPS
1/2"	1.8	2.80	3.90	---	---	---	3.2	3.20	4.40	1.50	2.00
3/4"	7.5	6.50	4.80	---	---	---	7.7	6.70	5.00	2.70	2.00
1"	15.2	11.20	5.00	---	---	---	15.2	11.20	5.00	4.50	2.00
1-1/4"	30.0	20.00	5.00	---	---	---	30.0	20.00	5.00	8.00	2.00
1-1/2"	46.3	27.50	5.00	10.5	27.50	5.00	46.3	27.50	5.00	11.00	2.00
2"	108.1	46.00	5.00	38.4	46.00	5.00	108.1	46.00	5.00	18.40	2.00
2-1/2"	205.3	66.10	5.00	93.5	66.10	5.00	205.3	66.10	5.00	26.40	2.00
3"	389.7	102.90	5.00	264.7	102.90	5.00	389.7	102.90	5.00	41.20	2.00
4"	807.3	179.20	5.00	779.8	179.20	5.00	807.3	179.20	5.00	71.7	2.0
6"	2738.5	406.20	5.00	2738.5	406.20	5.00	2738.5	406.20	5.00	162.5	2.0

EXPANSION TANK

EQUIP NO.	SERVICE	CAPACITY (GAL)	TANK SIZE		OPERATING WEIGHT (LBS)	BASIS OF DESIGN	NOTES
			DIAMETER (INCHES)	HEIGHT (INCHES)			
ET-1	BOOSTER PUMP	53	24	45	734	AMTROL WX-447C	1,2

NOTES:
1. INSTALL IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS.
2. ALL DOMESTIC WATER EQUIPMENT SHALL BE NSF-61 LISTED.

PACKAGED BOOSTER PUMP

EQUIP NO.	SERVICE	TYPE	FLOW PER PUMP, GPM	TOTAL FLOW, GPM	SUCTION PRESSURE / DISCHARGE PRESSURE (PSI)	MOTOR HP (PER PUMP)	ELECTRICAL	WEIGHT, LBS	BASIS OF DESIGN	NOTES
BP-1	DOMESTIC WATER	TRIPLEX	25.6	76.8	27 / 80	2	208V/15.3A	860	FLOWTHERM FMV3-1 NW	1,2,3,4,5

NOTES:
1. SINGLE POINT CONNECTION.
2. PROVIDE ALL REQUIRED VALVES, PIPING, CONTROLS, ETC. FOR A COMPLETE SYSTEM.
3. PROVIDE VFD'S FOR EACH PUMP.
4. ALL CLEAR WATER PUMPS OVER 2 HORSEPOWER SHALL COMPLY WITH US DEPARTMENT OF ENERGY (DOE) PUMP EFFICIENCY REQUIREMENTS. APPLICABLE PUMPS SHALL BEAR A PUMP EFFICIENCY INDEX (PEI) LABEL.
5. INSTALL PER MANUFACTURER'S RECOMMENDATION AND STATE AND LOCAL AHJ REQUIREMENTS.

GREASE INTERCEPTOR

EQUIP NO.	SERVICE	LIQUID CAPACITY (GAL)	BASIS OF DESIGN	NOTES
GI-1	COMMERCIAL SPACES	1,588	SCHIER GB-1000	1,2

NOTES:
1. PROVIDE TRAFFIC RATED COVER AND CLEAN OUT OUTSIDE OF INTERCEPTOR.
2. PROVIDE HEAT TRACE FOR ALL EXPOSED GREASE WASTE PIPING.

The gravity grease interceptor sizing shall comply with UPC Section and Table 1014.3.6. If each tenant has 20 DFUs as labeled on sheet P2.00, a minimum 1,250 gallon grease interceptor is required, so the 1,588 gallon interceptor listed herein would be adequately sized.

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

REVISIONS

NO.	DATE	DESCRIPTION

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
206-364-3343 TEL
CONTACT: JEFF MacGILLIVRAY

REED JACKSON — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 10/11/2024

DRAWN:	DESIGNED:	CHECKED:	APPROVED:
JM	JM	RJ	RJ

PROJECT: **EAST TOWN CROSSING**
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
19401 40TH AVE W. SUITE 302
LYNNWOOD, WA 98036
PHONE:(206)364-3343

PERMIT PLANS

12/31/2024

SHEET TITLE:
PLUMBING
SCHEDULES

SHEET NO.
P0.03

PRCNC20250094

SCOPE OF WORK

FENCE
STOP LINE
PROPERTY LINE (NEW)
GATE
USE PATH

TYPICAL AT EACH APARTMENT BUILDING
A stand of trees with a canopy of 1,000 square feet (as measured in frontal view rather than top view) located no farther than 20 feet from a facade of the building, consisting of either existing trees, or planted trees.
(Per PMC 20.26.200 (4) (b) (v))

BLD'G 'H'
3-STORY / 24 UNITS
12-(1) BEDRMS
12-(2) BEDRMS
FF = 77.10'
TELECOM ROOM
ELECT. PANEL
RISER ROOM

BLD'G 'G'
3-STORY / 24 UNITS
12-(1) BEDRMS
12-(2) BEDRMS
FF = 77.10'
TELECOM ROOM
ELECT. PANEL
RISER ROOM

CHAINLINK 6-FT FENCE
EXERCISE EQUIP., TYP.
SCULPTURE, TYP.
P.I.V.
PLAY AREA 2,642 sq ft
CARPORT #4
BIKE PARKING
76,565 sq ft
D CONNECTION WITH NEIGHBOR
CARPORT #5
TRASH ENCLOSURE WITH COMPACTOR
CARPORT #6
HYDRANT W/ FDC
CARPORT #3
CARPORT #2
CARPORT #1

BLD'G 'D'
3-STORY / 24 UNITS
12-(2) BEDRMS
12-(3) BEDRMS
ELECT. PANEL
RISER ROOM
TELECOM ROOM
FF = 77.10'
ROOF AREA = 11,387 sq ft
CARPORT #8
CARPORT #7

BLD'G 'C'
3-STORY / 24 UNITS
12-(2) BEDRMS
12-(3) BEDRMS
ELECT. PANEL
RISER ROOM
TELECOM ROOM
FF = 77.10'
ROOF AREA = 11,391 sq ft

BLD'G 'B'
3-STORY / 24 UNITS
12-(2) BEDRMS
12-(3) BEDRMS
ROOF AREA = 11,434 sq ft
RISER ROOM
ELECT. PANEL
TELECOM ROOM
FF = 77.10'

SCULPTURE, TYP.
PICNIC TABLE, TYP.
BENCH, TYP.
EXERCISE EQUIP., TYP.
41,339 sq ft

SP1
2'-6"
5'-7"

CHAINLINK 6-FT FENCE

ORNAMENTAL 6-FT FENCE

LOT 2 COMMERCIAL BUILDING
FF = 73.70'
SUITE 101 & 102
SUITE 103
NET AREA = 2,500 sq ft
COVERED OUTDOOR AREA
ELECTRICAL EQUIPMENT
RISER57 sq ft
(2) BIKE RACK
GREASE INTERCEPTOR
TRASH ENCLOSURE ONLY

LOT 1 COMMERCIAL BUILDING
FF = 73.60
BIKE RACK
GREASE INTERCEPTOR
TRASH ENCLOSURE ONLY
PHASE 1 10-ft BUILDING STREAM BUFFER SETBCK
PHASE 1 50-ft STREAM BUFFER
PIONEER

CARPORT #21
CARPORT #10 (5)
CARPORT #9
PHASE 1 50-ft STREAM BUFFER
PHASE 1 10-ft BUILDING STREAM BUFFER SETBCK
(EX) PROPERTY LINE
PROPERTY LINE (NEW)

COURT A-1468 sq ft
COURT A-2856 sq ft
RELOCATE EXISTING UTILITY POLE; SHIFT 15-FT TO THE SOUTH
GUY WIRE
PIONEER
(EX) UTILITY POLE
PROPERTY LINE
(EX) R.O.W.
N

(EX) STORM DISCHARGE PIPE
WILLIAMS GAS PIPELINE EASEMENT

SITE PLAN – LOT 1 PLUMBING

SCALE: 1" = 30'

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

NO.	DESCRIPTION	DATE
	REVISIONS	

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206-364-3343 TEL
CONTACT: JEFF MacGILLIVRAY

REED JACKSON — STATE OF WASHINGTON — 21809 — REGISTERED PROFESSIONAL ENGINEER — 10/17/2024

DRAWN:	DESIGNED:	CHECKED:	APPROVED:
JM	JM	RJ	RJ

PROJECT:
EAST TOWN CROSSING
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

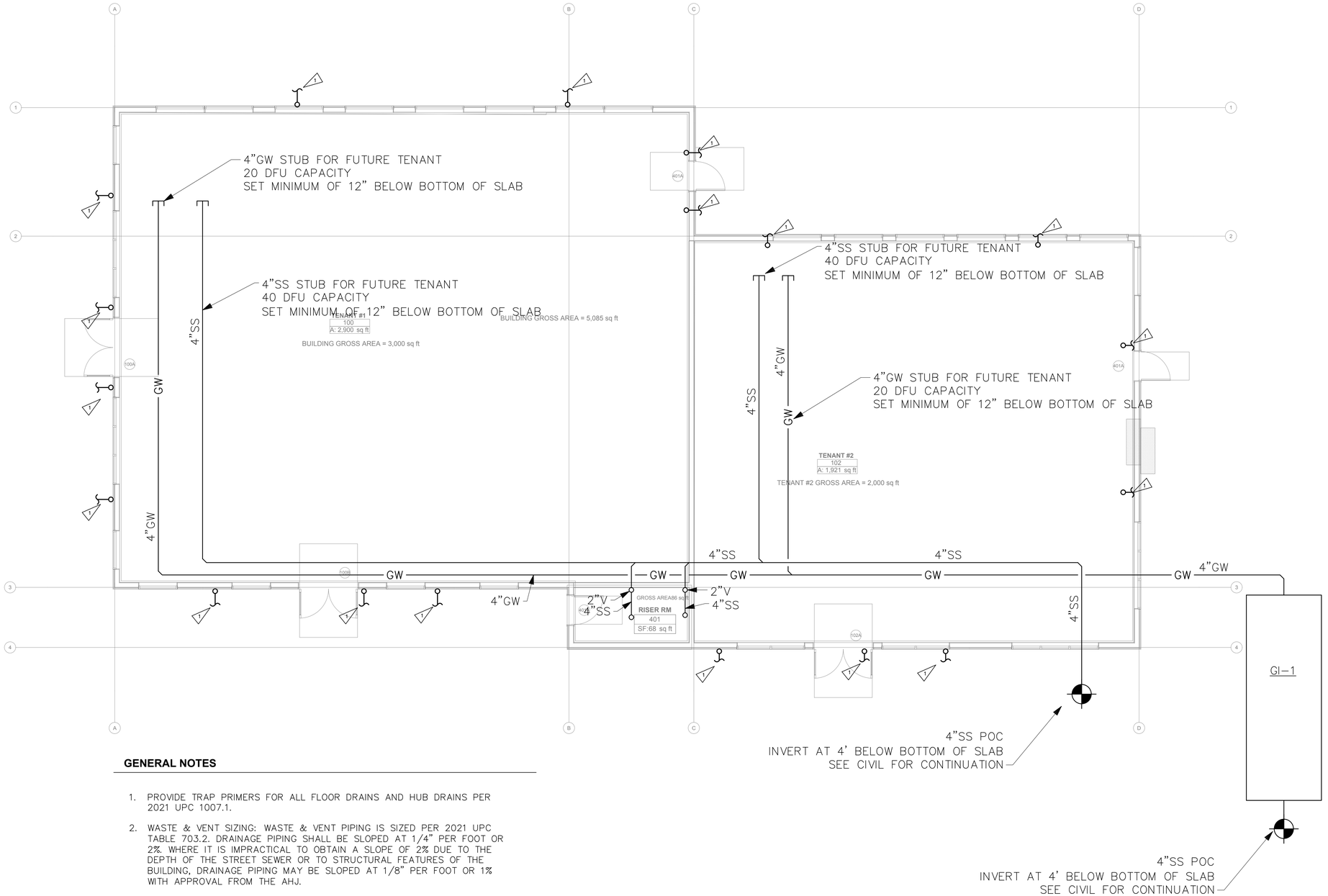
ROBISON ENGINEERING, INC
19401 40TH AVE W. SUITE 302
LYNNWOOD, WA 98036
PHONE:(206)364.3343

PERMIT PLANS
12/31/2024

SHEET TITLE:
SITE PLAN – PLUMBING

SHEET NO.
P1.00

PRCNC20250094



GENERAL NOTES

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS AND HUB DRAINS PER 2021 UPC 1007.1.
2. WASTE & VENT SIZING: WASTE & VENT PIPING IS SIZED PER 2021 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1½"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

FLAG NOTES

1. 3"DOWNSPOUT – SEE CIVIL FOR CONTINUATION.

UNDERSLAB WASTE & VENT PLAN

SCALE: 3/16" = 1'-0"

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

REVISIONS		
NO.	DATE	DESCRIPTION

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
206-364-3343 TEL
CONTACT: JEFF MacGILLIVRAY

REED JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
10/11/2024

DRAWN: JM
DESIGNED: JM
CHECKED: RJ
APPROVED: RJ

PROJECT: **EAST TOWN CROSSING**
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
19401 40TH AVE W. SUITE 302
LYNNWOOD, WA 98036
PHONE:(206)364-3343

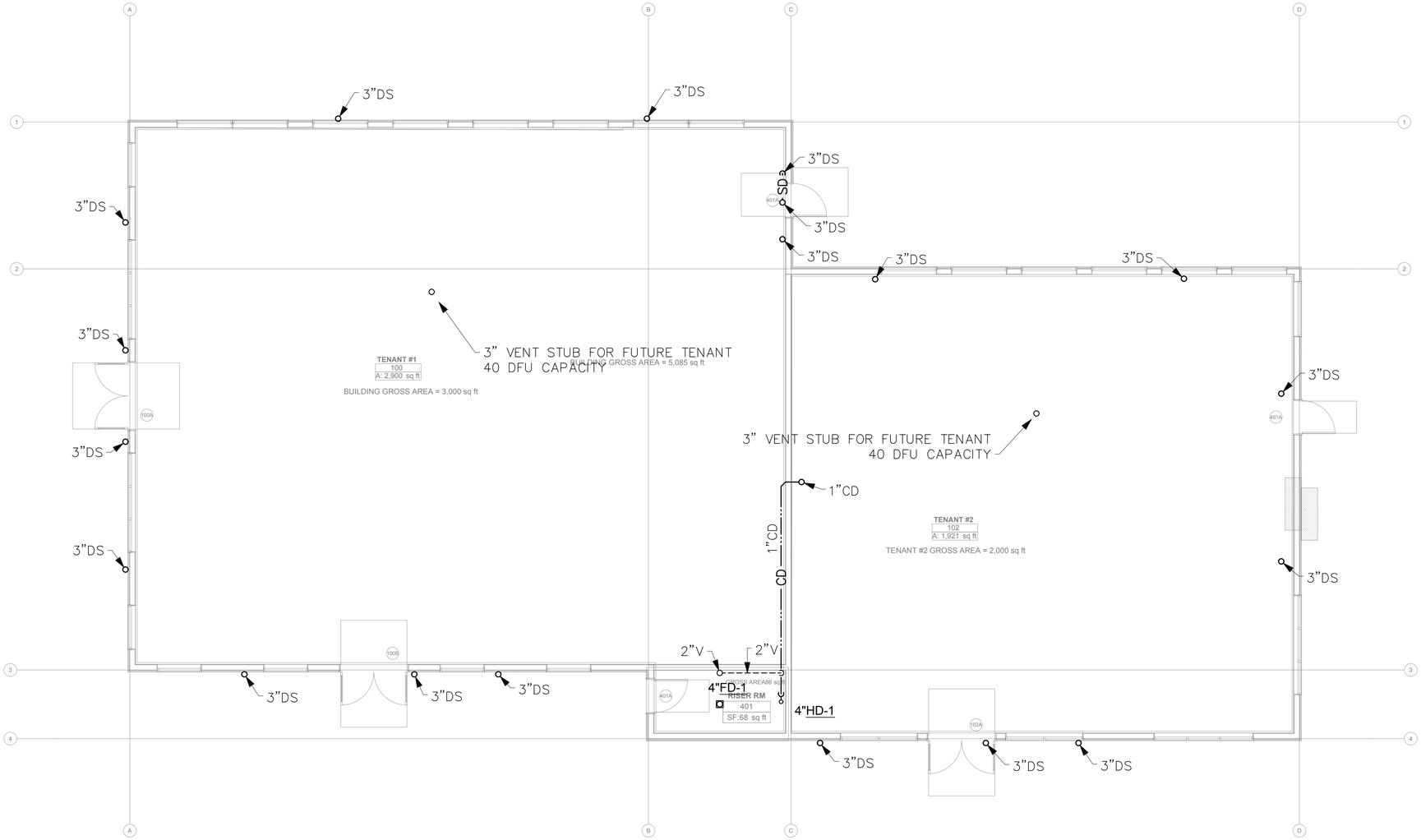
PERMIT PLANS

12/31/2024

SHEET TITLE:
LOT 1 – UNDERSLAB WASTE & VENT PLAN

SHEET NO.
P2.00

PRCNC20250094



GENERAL NOTES

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS AND HUB DRAINS PER 2021 UPC 1007.1.
2. WASTE & VENT SIZING: WASTE & VENT PIPING IS SIZED PER 2021 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

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1½"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

LEVEL 1 WASTE & VENT PLAN
SCALE: 3/16" = 1'-0"

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

NO.	DATE	REVISIONS DESCRIPTION

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
206-364-3343 TEL
CONTACT: JEFF MacGILLIVRAY

REED JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
10/17/2024

DRAWN: JM
DESIGNED: JM
CHECKED: RJ
APPROVED: RJ

PROJECT: **EAST TOWN CROSSING**
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

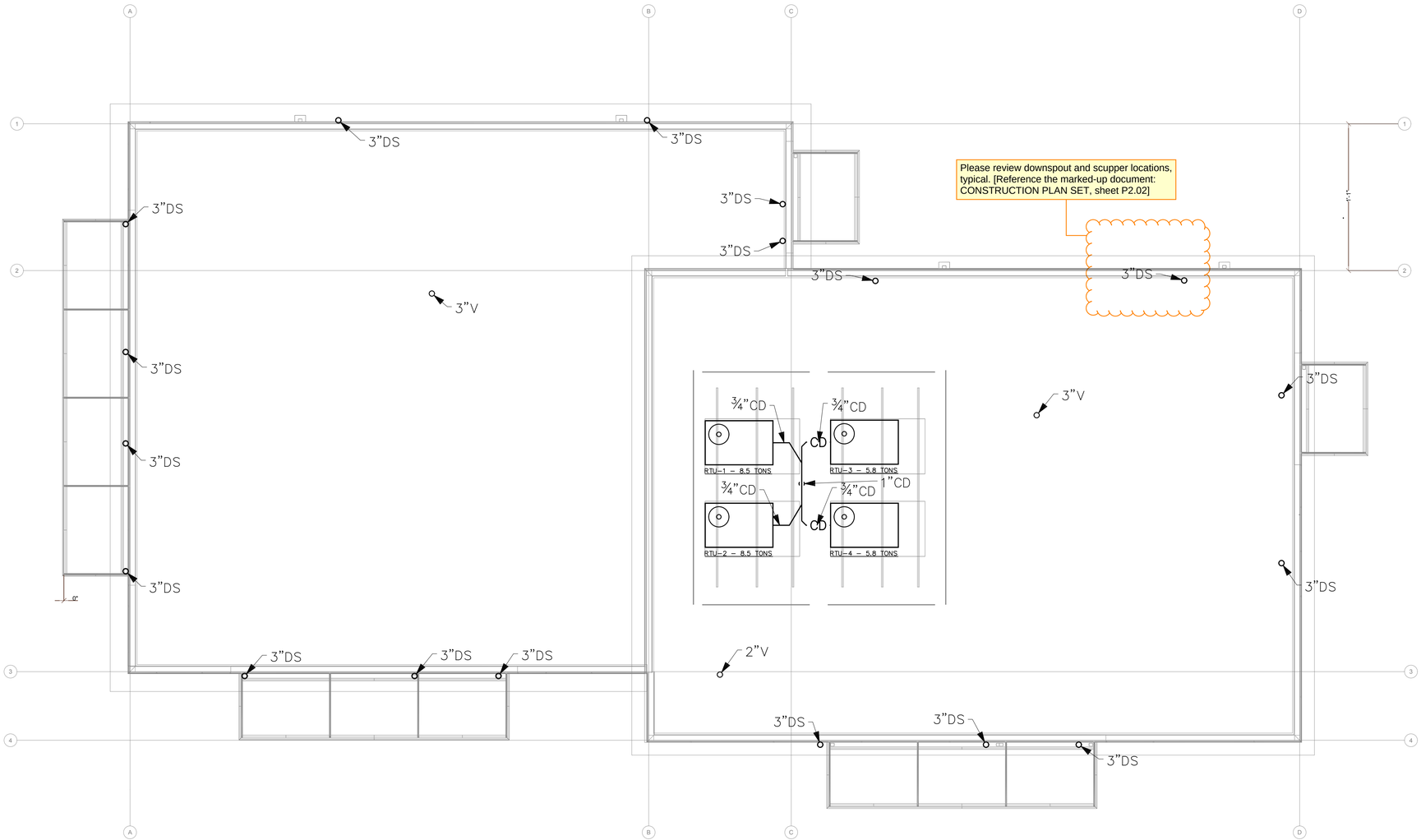
ROBISON ENGINEERING, INC
19401 40TH AVE W. SUITE 302
LYNNWOOD, WA 98036
PHONE:(206)364-3343

PERMIT PLANS
12/31/2024

SHEET TITLE:
LOT 1 – LEVEL 1 WASTE & VENT PLAN

SHEET NO.
P2.01

PRCNC20250094



GENERAL NOTES

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS AND HUB DRAINS PER 2021 UPC 1007.1.
2. WASTE & VENT SIZING: WASTE & VENT PIPING IS SIZED PER 2021 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1½"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

ROOF WASTE & VENT PLAN
SCALE: 3/16" = 1'-0"

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

NO.	DATE	REVISIONS DESCRIPTION

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: JEFF MacGILLIVRAY

REED JACKSON — STATE OF WASHINGTON — 24007 — REGISTERED PROFESSIONAL ENGINEER — 10/11/2024

DRAWN: JM | DESIGNED: JM | CHECKED: RJ | APPROVED: RJ

PROJECT: EAST TOWN CROSSING
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

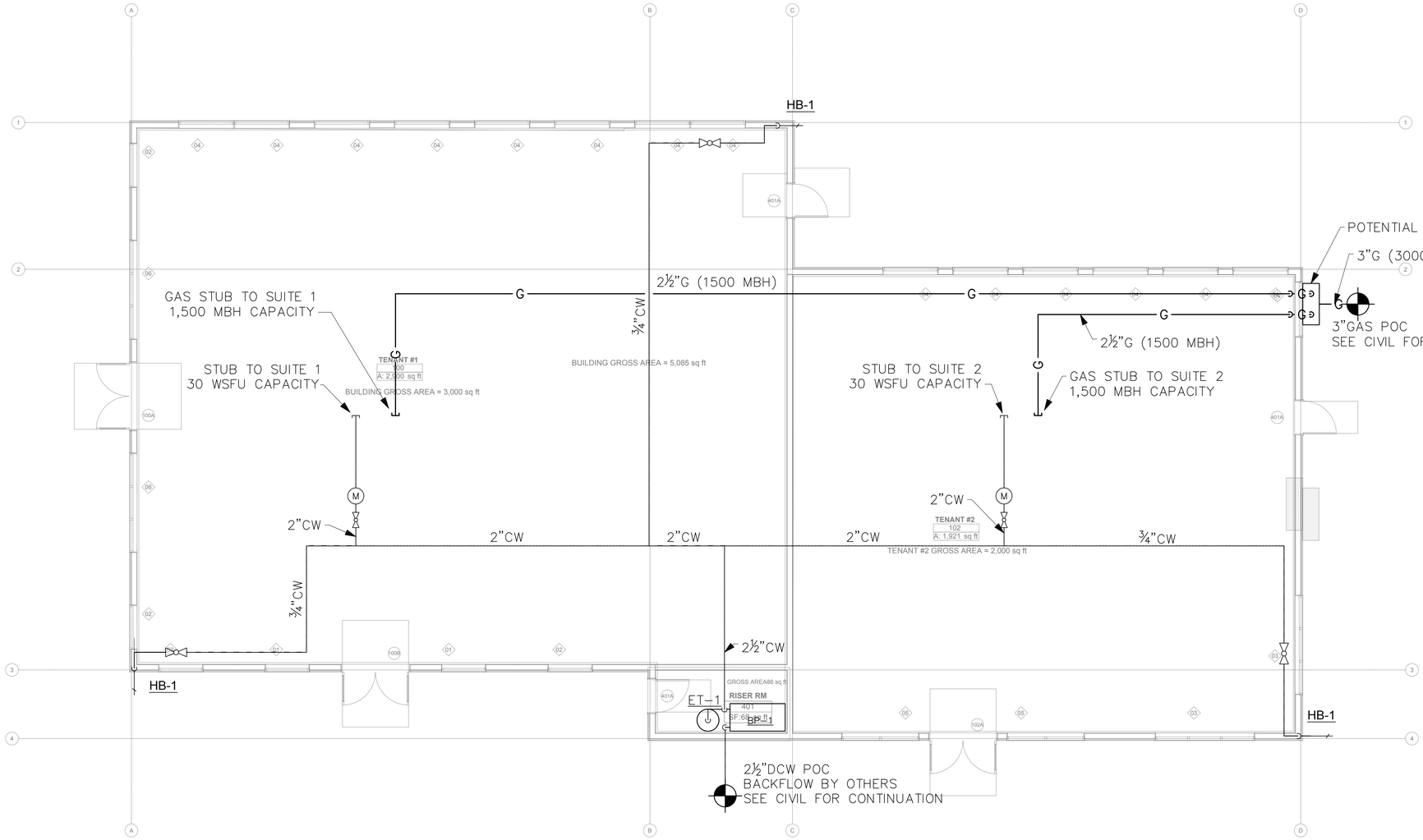
ROBISON ENGINEERING, INC
19401 40TH AVE W. SUITE 302
LYNNWOOD, WA 98036
PHONE:(206)364.3343

PERMIT PLANS
12/31/2024

SHEET TITLE: LOT 1 – ROOF WASTE & VENT PLAN

SHEET NO. P2.02

PRCNC20250094



GENERAL NOTES

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS AND HUB DRAINS PER 2021 UPC 1007.1.
2. PROVIDE EXPANSION LOOPS FOR ALL SUPPLY PIPING AND INSTALL PER MANUFACTURES RECOMMENDATIONS.

SUPPLY PLAN
SCALE: 3/16" = 1'-0"

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

REVISIONS		
NO.	DATE	DESCRIPTION

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206-364-3343 ttb.
CONTACT: JEFF MacGILLIVRAY

REED JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
10/11/2024

DRAWN:	JM
DESIGNED:	JM
CHECKED:	RJ
APPROVED:	RJ

PROJECT:
EAST TOWN CROSSING
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
19401 40TH AVE W. SUITE 302
LYNNWOOD, WA 98036
PHONE:(206)364-3343

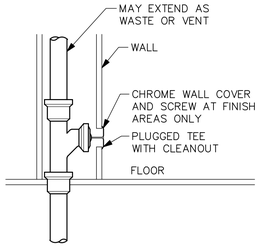
PERMIT PLANS

12/31/2024

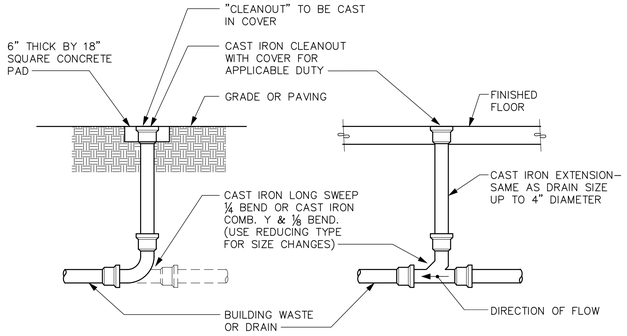
SHEET TITLE:
LOT 1 – FLOOR 1
SUPPLY PLAN

SHEET NO.
P3.01

PRCNC20250094



INTERIOR WALL CLEANOUT (WCO)



EXTERIOR CLEANOUT TO GRADE (COTG)
(LIGHT TRAFFIC AREA)

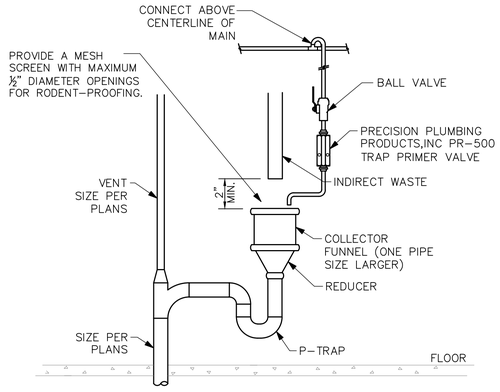
INTERIOR FLOOR CLEANOUT (FCO)

CLEANOUTS

DETAIL

SCALE: NONE

6
P4.00

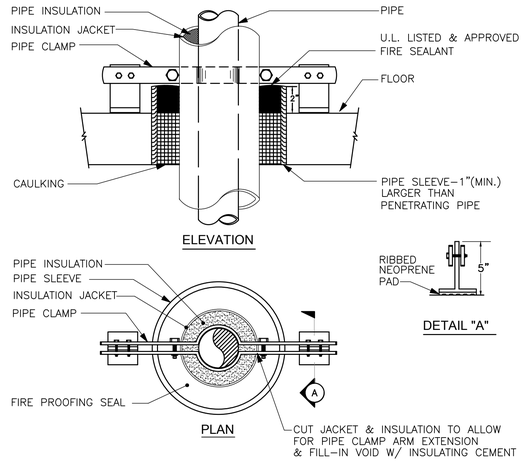


HUB DRAIN

DETAIL

SCALE: NONE

5
P4.00

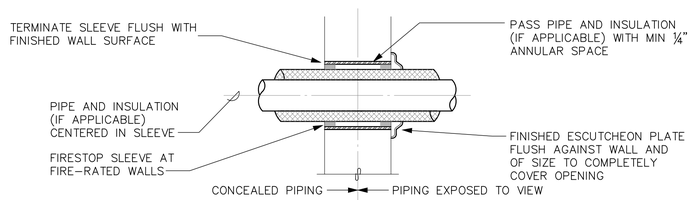


RISER PIPE SUPPORT

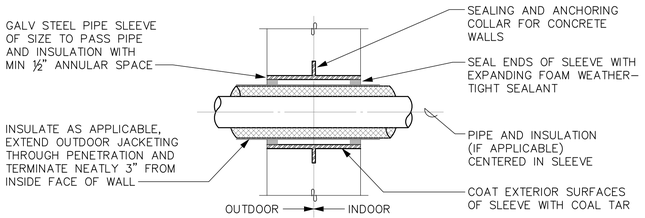
DETAIL

SCALE: NONE

4
P4.00



INTERIOR WALLS



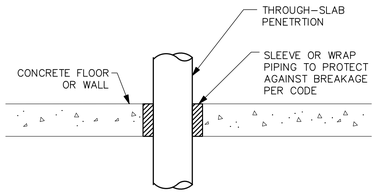
EXTERIOR WALLS ABOVE GRADE

PIPE SLEEVES THROUGH WALLS

DETAIL

SCALE: NONE

3
P4.00

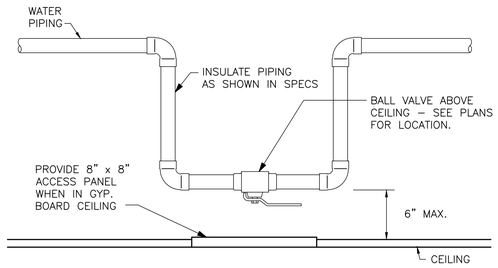


PIPE SLAB PENETRATION

DETAIL

SCALE: NONE

2
P4.00



TYPICAL VALVE PLACEMENT

DETAIL

SCALE: NONE

1
P4.00

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

REVISIONS		
NO.	DATE	DESCRIPTION

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
206-364-3343 TEL
CONTACT: JEFF MacGILLIVRAY

REED JACKSON — STATE OF WASHINGTON — 21605 — REGISTERED PROFESSIONAL ENGINEER — 10/17/2024

DRAWN:	JM
DESIGNED:	JM
CHECKED:	RJ
APPROVED:	RJ

PROJECT:
EAST TOWN CROSSING
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
PHONE:(206)364-3343

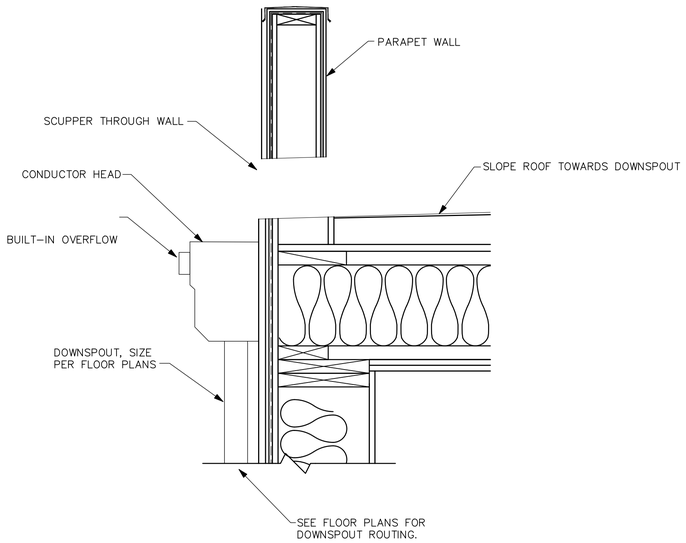
PERMIT PLANS

12/31/2024

SHEET TITLE:
DETAILS

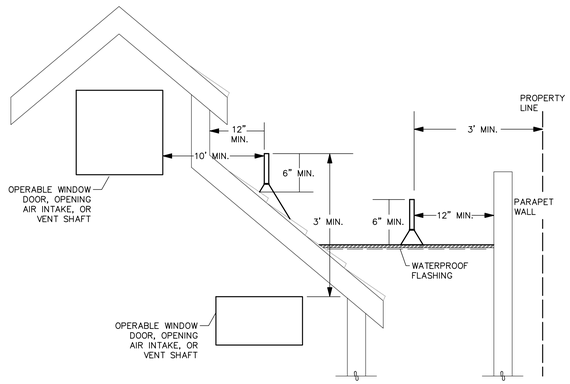
SHEET NO.
P4.00

PRCNC20250094



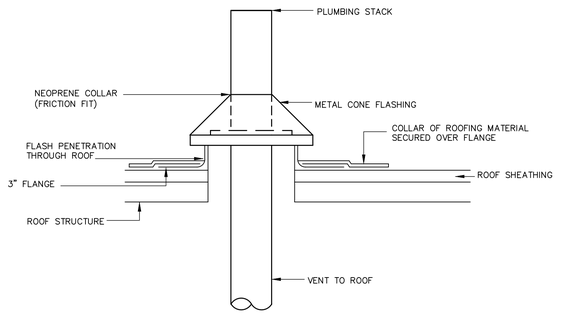
VENT TERMINATION
DETAIL
SCALE: NONE

3
P4.01



VENT TERMINATION
DETAIL
SCALE: NONE

2
P4.01



VENT THROUGH ROOF
DETAIL
SCALE: NONE

1
P4.01

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

REVISIONS		
NO.	DATE	DESCRIPTION

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
206-364-3343 TEL
CONTACT: JEFF MacGILLIVRAY

REED JACKSON
STATE OF WASHINGTON
21625
REGISTERED
PROFESSIONAL ENGINEER
10/17/2024

DRAWN:	DESIGNED:	CHECKED:	APPROVED:
JM	JM	RJ	RJ

PROJECT:
EAST TOWN CROSSING
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
PHONE:(206)364-3343

PERMIT PLANS
12/31/2024

SHEET TITLE:
DETAILS

SHEET NO.
P4.01

SYMBOLS

GENERAL

LIGHT LINE INDICATES NON–ELECTRICAL OR BACKGROUND (THIS IS NOT CONTRACTUAL DEFINITION OF WORK)

HEAVY LINE INDICATES NEW WORK (THIS IS NOT CONTRACTUAL DEFINITION OF WORK)

DETAIL IDENTIFICATION

SYMBOL	NAME
1	FLAG NOTE
△	REVISION NOTE
	REVISION DEFINITION, AREA ENCIRCLED CONTAINS DRAWING CHANGES MADE SUBSEQUENT TO PREVIOUS ISSUE

SWITCHES

$D	SWITCH, SINGLE POLE; WITH SWITCHING SUBSCRIPT
$OS	OCCUPANCY SENSOR SWITCH
$D	SWITCH, SINGLE POLE; WITH SWITCHING SUBSCRIPT "D" INDICATES WALLBOX DIMMER
OS	CEILING MOUNTED OCCUPANCY SENSOR
$T	SWITCH, TIMER.
$3	SWITCH, THREE WAY.

RECEPTACLES

	SINGLE RECEPTACLE
	DUPLEX RECEPTACLE: WALL MOUNTED, +18" AFF
D	CONTROLLED AND NON CONTROLLED DUPLEX RECEPTACLE (SPLIT WIRED RECEPTACLE)
	DUPLEX RECEPTACLE – ABOVE COUNTER
GFCI	DUPLEX GFCI ABOVE COUNTER
GFCI	DUPLEX GFCI
+42"	DUPLEX RECEPTACLE, WITH HEIGHT ABOVE FINISHED FLOOR INDICATED
	CEILING MOUNTED DUPLEX RECEPTACLE
	DOUBLE DUPLEX RECEPTACLE: WALL MOUNTED, +18" AFF
	FLOOR BOX ONE DUPLEX RECEPTACLE
D	FLOOR BOX ONE DUPLEX RECEPTACLE + ONE DATA
D	FLOOR BOX ONE DUPLEX RECEPTACLE + ONE DATA + ONE VOICE
V	SPECIAL PURPOSE RECEPTACLE, AS NOTED

MISCELLANEOUS

J	JUNCTION BOX: 4SQ MOUNTED
J	JUNCTION BOX: 4SQ WALL MOUNTED
J	JUNCTION BOX: 4SQ TRACK
L	CONNECTION FOR LIGHTED MIRROR COORDINATE LOCATION AND ELEVATION WITH ARCHITECT PRIOR TO ROUGH–IN
T	THERMOSTAT

SIGNAL/COMMUNICATION

▽	DATA OUTLET: WALL MOUNTED @ +18" AFF U.O.N.
▼	TELEPHONE/DATA OUTLET: WALL MOUNTED @ +18" AFF U.O.N.
TV	TELEVISION OUTLET: WALL MOUNTED @ +18" AFF U.O.N.

POWER

	PANELBOARD
WP	NON–FUSED DISCONNECT SWITCH (WP = NEMA 3R WHERE APPROPRIATE)
	FUSED DISCONNECT SWITCH
MAU–1,5HP,480,3	MOTOR CONNECTION (EQUIPMENT NAME, HORSEPOWER, VOLTAGE, AND PHASE INDICATED)
EF–1,12KVA,208,1	EQUIPMENT CONNECTION (EQUIPMENT NAME, LOAD, VOLTAGE, AND PHASE INDICATED)
T	TRANSFORMER, DRY TYPE, SHOWN TO SCALE
M	KW METER AND BASE

PART OF THE DESIGN/BUILD FIRE ALARM SYSTEM

FACP	FIRE ALARM SYSTEM CONTROL PANEL
P	FIRE ALARM SYSTEM PULL STATION
	FIRE ALARM SYSTEM STROBE/SPEAKER
SD	FIRE ALARM PHOTOELECTRIC SMOKE DETECTOR AND SPEAKER.
	FIRE ALARM COMBINATION PHOTOELECTRIC SMOKE DETECTOR, CARBON MONOXIDE DETECTOR, AND SPEAKER, GUESTROOM.
CO	CARBON MONOXIDE DETECTOR.
	ELECTRO–MAGNETIC DOOR HOLDER
DSD	DUCT SMOKE DETECTOR

APPLICABLE CODES

2021 BUILDING CODE
2021 WSEC

ABBREVIATIONS

A	AMPERE
AC	ALTERNATING CURRENT, ABOVE COUNTER
AFF	ABOVE FINISHED FLOOR
AIC	AMPS INTERRUPTING CAPACITY
AL	ALUMINUM
AMP	AMPERE
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
BLDG	BUILDING
C	COIL or CONDUIT
CKT	CIRCUIT
CO	CONDUIT/RACEWAY ONLY
CT	CURRENT TRANSFORMER
Cu	COPPER
CW	COOL WHITE
D	DIMMER
DED	DEDICATED
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
ELEC	ELECTRICAL
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
EXIST	EXISTING
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FLUOR	FLUORESCENT
GC	GENERAL CONRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
IG	ISOLATED GROUND
KCMIL	THOUSAND CIRCULAR MILLS
KVA	KILOVOLT AMPERES
KW	KILOWATT
LTG	LIGHTING
LV	LOW VOLTAGE
MFR	MANUFACTURER
MIN	MINIMUM
MLO	MAIN LUGS ONLY
N	NEUTRAL
NEC	NATIONAL ELECTRICAL CODE (NFPA–70)
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NTS	NOT TO SCALE
PNL	PANEL
POC	POINT OF CONNECTION
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CLORIDE
PWR	POWER
QTY	QUANTITY
RECEPT	RECEPTACLE
REF	REFERENCE
RI	ROUGH–IN
RM	ROOM
RO	RACEWAY ONLY
SHT	SHEET
SPEC	SPECIFICATIONS
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UON	UNLESS OTHERWISE NOTED
V	VOLTS
W	WATTS
WW	WARM WHITE
WP	WEATHERPROOF
W/	WITH
W/O	WITHOUT
XFMR	TRANSFORMER
XFR	TRANSFER
Z	IMPEDANCE OR ZONE

GENERAL NOTES

PRCNC20250094

GENERAL

1. PROVIDE ELECTRICAL INSTALLATION IN ACCORDANCE WITH THE GOVERNING ELECTRICAL CODE, LOCAL CODES, ORDINANCES AND REQUIREMENTS OF UTILITY COMPANIES FURNISHING SERVICES TO INSTALLATION.
2. PROVIDE ALL WORK AND ITEMS NECESSARY FOR COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEMS. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY SHOW EVERY CONDUIT, BOX, CONDUCTOR OR SIMILAR ITEMS FOR A COMPLETE INSTALLATION.
3. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND DETERMINE CONDITIONS WHICH MAY AFFECT BID. ANY ITEMS NOT FULLY UNDERSTOOD SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING.
4. "REF" INDICATIONS DENOTE WORK COVERED ELSEWHERE (ARCHITECTURAL, STRUCTURAL, OR MECHANICAL).
5. REFERENCE ARCHITECTURAL DRAWING FOR EXACT LOCATION OF DEVICES. QUESTIONS CONCERNING THE LOCATION OF DEVICES AND EQUIPMENT SHALL BE DIRECTED TO THE ARCHITECT. FAILURE TO COORDINATE REQUIREMENTS SHALL IN NO WAY RESULT IN ADDITIONAL COMPENSATION BEING PROVIDED TO THE CONTRACTOR.
6. WHEREVER THE WORD "PROVIDE" IS USED, IT MEANS, "FURNISH AND INSTALL COMPLETE AND READY FOR USE."
7. COORDINATE LOCATION OF ELECTRICAL WITH OTHER TRADES.
8. REFER TO EQUIPMENT DRAWINGS FOR MECHANICAL CHARACTERISTICS (SIZE, LOCATION, ETC.) OF MECHANICAL EQUIPMENT, UNLESS OTHERWISE INDICATED. COORDINATE INSTALLATION AND LOCATION OF ALL EQUIPMENT WITH MECHANICAL CONTRACTOR. VERIFY ALL FUSE RATINGS, WIRE SIZES AND DISCONNECT SIZES PRIOR TO INSTALLATION.

MATERIALS AND METHODS

1. PROVIDE RACEWAY AND WIRING ROUTED CONCEALED WITHIN BUILDING STRUCTURE WHERE POSSIBLE. WHERE RACEWAY CANNOT BE CONCEALED, IT SHALL BE INSTALLED PER PROJECT MANAGER'S DIRECTION. ALL CONDUIT SHALL BE INSTALLED IN NEAT SYMMETRICAL LINES HORIZONTAL OR PERPENDICULAR TO BUILDING COLUMNS AND ROOF LINES. CONDUITS SHALL BE GROUPED ON COMMON SUPPORTS WHEREVER POSSIBLE.
2. EXPOSED CONDUIT ROUTING: CONDUITS MAY BE ROUTED EXPOSED IN MECHANICAL AND ELECTRICAL ROOMS ONLY. EXPOSED CONDUITS SHALL BE SECURED A MINIMUM OF 6" ABOVE FLOOR.
3. OUTDOOR EXPOSED CONDUIT ROUTING: CONDUITS ROUTED ON ROOF OR EXPOSED TO WEATHER SHALL BE GRC, PVC OR LIQUID–TIGHT FLEX. PROVIDE WATER–TIGHT CONNECTIONS AND FITTINGS.
4. CLEARANCES: VERIFY PHYSICAL DIMENSIONS OF EQUIPMENT TO ENSURE THAT ACCESS CLEARANCES CAN BE MET.
5. CONNECTIONS: PROVIDE GRS, METALLIC FLEX, OR LIQUIDTITE FLEX CONDUITS FOR CONNECTIONS TO MOTORS OR MOTORIZED EQUIPMENT.
6. WIRING: PROVIDE MINIMUM #12 AWG WIRE SIZE. IF CONDUIT IS TO BE USED MINIMUM IS TO BE 1/2". FLEXIBLE CONDUIT AND FLEXIBLE CABLE IS PERMISSIBLE THROUGHOUT THE BUILDING.
7. WIRING: PROVIDE MINIMUM #10 AWG COPPER CONDUCTOR SIZE IN 120V BRANCH CIRCUIT RUNS OVER 75' IN LENGTH.

SITE ELECTRICAL

1. TRENCHING: COORDINATE ALL TRENCHING WORK WITH OTHER UTILITY LOCATIONS AND DRAINAGE TRENCHES.
2. UNDERGROUND CONDUITS: PROVIDE PVC, SCHEDULE 40, 3/4" MINIMUM. PROVIDE GRC CONDUIT TRANSITION ELBOW WHEN TURNING UP TO ABOVE GRADE.
3. DIRECT–BURIED CONDUITS: CONDUIT FOR BRANCH CIRCUITS OUTSIDE BUILDINGS NOT BENEATH DRIVEWAYS OR PARKING AREAS SHALL BE DIRECTLY BURIED WITHOUT CONCRETE ENCASEMENT. THE DEPTH TO THE TOP OF BURIED CONDUITS SHALL BE 36". PROVIDE MARKER TAPE 12" BELOW GRADE.
4. BELOW SLAB: CONDUIT ROUTED BELOW ON–GRADE FLOOR SLABS SHALL BE INSTALLED PRIOR TO FLOOR SLAB POUR. ROUTE CONDUITS BELOW SLAB AS STRAIGHT AS POSSIBLE TO MINIMIZE BENDS.
5. ALL CONDUITS PENETRATING THE BUILDING ENVELOPE BELOW GRADE SHALL FOLLOW WATERPROOFING REQUIREMENTS IN THE ARCHITECTURAL DRAWINGS.

NEUTRALS

1. AT CONTRACTORS OPTION, NEUTRALS MAY BE SHARED ON COMBINED HOMERUNS UNLESS THE CIRCUIT HAS A GFCI BREAKER, AN ISOLATED GROUND, OR IS FROM A PANEL WITH TVSS PROTECTION. ANY NEUTRAL DOWNSTREAM FROM A DIMMER SHALL BE DEDICATED TO THE DIMMED LOAD.
2. NEUTRAL WIRES SHOWN FOR TWO AND THREE POLE MECHANICAL AND KITCHEN EQUIPMENT MAY BE OMITTED UPON VERIFICATION THAT THEY ARE NOT REQUIRED EITHER FOR OPERATION OR CONTROL CIRCUITS PER MANUFACTURER'S SPECIFICATIONS.

LIGHTING

1. PROVIDE LIGHT FIXTURES WITH PROPER FITTING FLANGES, MOUNTING SUPPORTS, AND ACCESSORY ITEMS, UL LISTED FOR CONDITIONS OF USE.

LOW VOLTAGE LIGHTING

1. PROVIDE LOW VOLTAGE TRANSFORMERS IN NEARBY ACCESSIBLE CEILING SPACE.
2. PROVIDE LOW VOLTAGE CONDUCTORS SIZED PER MANUFACTURER'S GUIDELINES TO MINIMIZE VOLTAGE DROP.

LIGHTING CONTROL

1. THE MAXIMUM LIGHTING POWER THAT MAY BE CONTROLLED FROM A SINGLE SWITCH OR AUTOMATIC CONTROL SHALL NOT EXCEED THAT WHICH IS PROVIDED BY A TWENTY AMPERE CIRCUIT LOADED TO NOT MORE THAN EIGHTY PERCENT. A MASTER CONTROL MAY BE INSTALLED PROVIDED THE INDIVIDUAL SWITCHES RETAIN THEIR CAPABILITY TO FUNCTION INDEPENDENTLY.
2. EMERGENCY FIXTURES: EMERGENCY BATTERY/CHARGER SHALL BE CONNECTED TO AN UNSWITCHED LEG OF THE DESIGNATED CIRCUIT.

GENERAL REQUIREMENTS

1. DRAWINGS ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED.
2. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT.
3. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
4. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS.
5. PROVIDE CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.

CONTRACTOR SUBSTITUTIONS & REVISIONS

1. PLEASE SUBMIT PROPOSALS FOR SUBSTITUTIONS OR REVISIONS FOR REVIEW AND APPROVAL PRIOR TO ORDERING MATERIAL OR DOING WORK.
2. FOR EQUIPMENT THAT IS SCHEDULED BY MANUFACTURER'S NAME AND CATALOG DESIGNATIONS, THE MANUFACTURER'S PUBLISHED DATA AND/OR SPECIFICATION FOR THAT ITEM ARE CONSIDERED PART OF SPECIFICATION.
3. ENGINEERING COSTS FOR REVISING MEP PLANS SHALL BE ADDRESSED IN THE COST ANALYSIS OF THE SUBSTITUTION PROPOSAL.
4. CONTRACTOR TO COORDINATE WITH ENGINEER AND DETERMINE ASSOCIATED DESIGN AND PERMITTING COSTS. CONTRACTOR SHALL BE RESPONSIBLE FOR OTHER COSTS ASSOCIATED WITH UNFORESEEN ISSUES RESULTING FROM SUBSTITUTIONS OR REVISIONS.

PRE-CON MEETING NOTES

CONTRACTORS SHALL ATTEND A PRE–CONSTRUCTION MEETING WITH THE ENGINEER FOR THE PURPOSE OF REVIEWING THE WORK PRIOR TO ORDERING ANY EQUIPMENT OR PERFORMING ANY WORK. THE MEETING SHALL BE LOCATED AT THE PROJECT SITE ON A DATE AND TIME TO BE MUTUALLY AGREED. THE MEETING WILL BE A WORKING SESSION. THE MEETING WILL BE FACILITATED BY THE ENGINEER AND THE AGENDA WILL INCLUDE A DETAILED REVIEW OF THE PLANS AND SPECIFICATIONS, CROSS CHECK WITH OTHER TRADES FOR COORDINATION ISSUES, REVIEW OF PROPOSED PRODUCTS, REVIEW OF PLANNED MEANS AND METHODS,AND ON–SITE INVESTIGATION OF FIELD CONDITIONS RELATIVE TO EXISTING CONDITIONS THAT COULD AFFECT THE WORK. PERSONS ATTENDING THE MEETING SHALL BE KNOWLEDGEABLE OF THE PROJECT AND SHALL BE THE SPECIFIC PERSONS INTENDED TO CONTINUE WITH THE PROJECT THROUGH TO COMPLETION. IF REQUIRED, REVISED PLANS WILL BE ISSUED THROUGH OFFICIAL CHANNELS. CHANGES IN THE BID PRICE WILL BE DISCUSSED, BUT NO CHANGE ORDERS WILL BE ISSUED UNLESS PROCESSED THOUGH OFFICIAL CHANNELS. IT SHALL BE UNDERSTOOD THAT THE ENGINEER HAS NO AUTHORITY TO ISSUE CHANGE ORDERS.

THE FOLLOWING TRADES SHALL BE REPRESENTED FOR THE MINIMUM TIME INDICATED:

MECHANICAL SHEET METAL	4 HOURS
PLUMBING/PIPING	4 HOURS
ELECTRICAL	4 HOURS
SPRINKLER	2 HOURS
GENERAL CONTRACTOR	ALL SESSIONS

DRAWING INDEX

		INCLUDED IN SET
		PERMIT SET 12/31/24
DWG	DESCRIPTION	
E0.0	LEGEND, GENERAL NOTES, DRAWING INDEX	X
E0.1	ONE–LINE DIAGRAM, FEEDER & FAULT SCHEDULES	X
E0.2	PANEL SCHEDULES	X
E0.4	LIGHTING NOTES & SCHEDULE	X
E1.0	SITE PLAN – ELECTRICAL	X
E3.0	LEVEL 1 POWER	X
E3.1	LEVEL 2/ROOF POWER	X

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

REVISIONS		
NO.	DATE	DESCRIPTION
	12/31/24	PERMIT SET

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
206-364-3343 TEL

MARK STEINKE — STATE OF WASHINGTON — 20183 — REGISTERED PROFESSIONAL ENGINEER — 12/31/2024

DRAWN: AJS | DESIGNED: AJS | CHECKED: STEINKE M. | APPROVED: STEINKE M.

PROJECT: EAST TOWN CROSSING
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
19401 40TH AVE W. SUITE 302
LYNNWOOD, WA 98036
PHONE:(206)364-3343

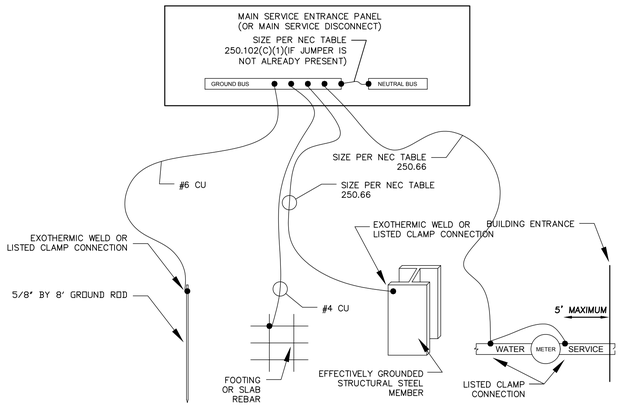
DATE: 12-31-2024

SHEET TITLE: LEGEND,GENERAL NOTES & DRAWING INDEX

SHEET NO. E0.0

Separate Electrical Permit is required with the Washington State Department of Labor & Industries.
https://lni.wa.gov/licensing-permits/electrical/electrical-permits/fees-and-inspections or call for Licensing Information: 1-800-647-0982

PRCNC20250094



GEC DIAGRAM

FEEDER SCHEDULE

ID	FEEDER AMPS	CONDUIT AND FEEDER	FEEDING THESE DEVICES
1	200	2–1/2"C,3#250kcmil AL,#250kcmil AL N,#4 AL G	LOT1–HOUSE, S3B
2	400	(2)2–1/2"C,3#250kcmil AL,#250kcmil AL N,#1 AL G	LOT2–HOUSE, S1, S2A, S3A, TI1, TI2
9	800	(3)3"C,3#400kcmil AL,#400kcmil AL N	LOT1–PULL
10	1200	(4)3"C,3#500kcmil AL,#500kcmil AL N	LOT2–PULL

SIZING METHOD: COPPER, 60°C #12 THROUGH #1, 75°C 1/0 AND ABOVE

FAULT CURRENT SCHEDULE

DEVICE	FAULT	AIC RATING	L–N VOLTS	UTILITY FAULT	FED FROM DEVICE	FED FROM FAULT	FEEDER SIZE	FEEDER LENGTH	TOTAL MOTOR FAULT
TI XFMR	40,907	42,000	120V	39,700					1,207
LOT2–PULL	28,472	42,000	120V	27,390	TI XFMR	39,700	(4)#500kcmil AL	108'	1,082
LOT2–MTR–1	28,463	42,000	120V	27,390	LOT2–PULL	27,390		13'	1,073
S1	11,210	22,000	120V	10,840	LOT2–MTR–1	27,390	(2)#250kcmil AL	139'	370
LOT2–MTR–2	28,463	42,000	120V	27,390	LOT2–PULL	27,390		16'	1,073
S2A	11,737	22,000	120V	11,355	LOT2–MTR–2	27,390	(2)#250kcmil AL	129'	382
LOT2–MTR–3	28,462	42,000	120V	27,390	LOT2–PULL	27,390		19'	1,072
S3A	15,431	22,000	120V	14,940	LOT2–MTR–3	27,390	(2)#250kcmil AL	79'	491
S3B	13,470	22,000	120V	13,121	S3A	14,940	#250kcmil AL	12'	349
LOT2–MTR–H	28,462	42,000	120V	27,390	LOT2–PULL	27,390		22'	1,072
LOT2–HOUSE	24,864	42,000	120V	23,993	LOT2–MTR–H	27,390	(2)#250kcmil AL	15'	871

ONE–LINE DIAGRAM

SCALE: NONE

FLAG NOTES

1. PROVISIONAL BREAKER SPACE AND CONDUIT FOR FUTURE PV SYSTEM. LOCATE BREAKER SPACE AT OPPOSITE END OF BUS AS MAIN POWER SOURCE.
2. CONTRACTOR SHALL VERIFY AVAILABLE FAULT CURRENT WITH PSE SERVICE LETTER PRIOR TO ORDERING EQUIPMENT.
3. ALL GEAR SHALL BE REVIEWED AND APPROVED BY PSE PRIOR TO ORDERING

GROUNDING NOTES AND REQUIREMENTS:

THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR, POWER COMPANY, PHONE COMPANY, INTERNET COMPANY, CABLE TV COMPANY, AND THE SATELLITE TV COMPANY TO ENSURE REQUIRED GROUNDING IS INSTALLED FOR EACH SYSTEM.

THIS SHALL BE DONE PRIOR TO AND DURING INSTALLATION OF FOUNDATION RE–BAR AND CONTINUE DURING THE CONSTRUCTION PHASES, TO ENSURE EACH SYSTEM HAS IT'S REQUIRED GROUNDING INSTALLED FOR PROPER OPERATION OF THE SYSTEM.

1. THE ELECTRICAL CONTRACTOR SHALL COORDINATE AND PROVIDE WHAT IS REQUIRED TO DO THE FOLLOWING:
2. FOOTING GROUND RE–BAR COMES UP IN THE ELECTRICAL ROOM AND THE RE–BAR IS SNUGLY SECURED TO THE FOOTING RE–BAR PER OWNER DETAIL.
3. THE MC GROUNDING TIES TO THE FOOTING RE–BAR, COUNTERPOISE, BUILDING STEEL, AND WATER PIPING.
4. THE GROUND WIRE FOR THE COUNTERPOISE SHALL BE STRANDED, INSULATED WIRE IN CONDUIT UNTIL IT REACHES THE FIRST BAR OF THE COUNTERPOISE. BETWEEN THE COUNTERPOISE BARS IT SHALL BE A STRANDED BARE COPPER WIRE.

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

REVISIONS

NO.	DATE	DESCRIPTION
	12/31/24	PERMIT SET

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
206-364-3343 TEL

MARK STEINKE STATE OF WASHINGTON 20183 REGISTERED PROFESSIONAL ENGINEER 12/31/2024

DRAWN: AJS
DESIGNED: AJS
CHECKED: STEINKE M.
APPROVED: STEINKE M.

PROJECT: **EAST TOWN CROSSING**
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
PHONE:(206)364-3343

DATE: 12-31-2024

SHEET TITLE: ONE-LINE DIAGRAM, FEEDER & FAULT SCHEDULES

SHEET NO. E0.1

MLEAVENS F:\810-010 EAST TOWN CROSSING\DWG\ELECTRICAL\PRESENTATION SHEETS\A-E4.0.DWG 05-03-2021 11:47

PRCNC20250094

L1S1

ROOM
MOUNTING **FLUSH**
FED FROM **LOT1–MTR–1**
NOTE

VOLTS **208Y/120V 3P 4W**
BUS AMPS **400**
NEUTRAL **100%**

AIC **22,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	125/3	37.5	RTU–1	a	2	20/1	1.2	SIGN
3	|			b	4	20/1	1.2	SIGN
5	|			c	6	20/1	0.18	RECEPTACLE
7	125/3	37.5	RTU–2	a	8	20/1	0.18	RECEPTACLE
9	|			b	10	20/1	0.19	LIGHTING
11	|			c	12	–/1	0	SPACE
13	–/1	0	SPACE	a	14	–/1	0	SPACE
15	–/1	0	SPACE	b	16	–/1	0	SPACE
17	–/1	0	SPACE	c	18	–/1	0	SPACE
19	–/1	0	SPACE	a	20	–/1	0	SPACE
21	–/1	0	SPACE	b	22	–/1	0	SPACE
23	–/1	0	SPACE	c	24	–/1	0	SPACE
25	–/1	0	SPACE	a	26	–/1	0	SPACE
27	–/1	0	SPACE	b	28	–/1	0	SPACE
29	–/1	0	SPACE	c	30	–/1	0	SPACE
31	–/1	0	SPACE	a	32	–/1	0	SPACE
33	–/1	0	SPACE	b	34	–/1	0	SPACE
35	–/1	0	SPACE	c	36	–/1	0	SPACE
37	–/1	0	SPACE	a	38	–/1	0	SPACE
39	–/1	0	SPACE	b	40	–/1	0	SPACE
41	–/1	0	SPACE	c	42	–/1	0	SPACE

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	0.19	0.238	(125%)	RECEPTACLES	0.36	0.36	(50%>10)
LARGEST MOTOR	37.5	9.37	(25%)	CONTINUOUS	2.4	3	(125%)
				HEATING	74.9	74.9	(100%)
				COOLING	74.9	0	(0%)
				TOTAL LOAD		87.9	
				BALANCED 3–PHASE LOAD		244 A	
				PHASE A		102%	
				PHASE B		102%	
				PHASE C		96.9%	

L1S2

ROOM
MOUNTING **FLUSH**
FED FROM **LOT1–MTR–2**
NOTE

VOLTS **208Y/120V 3P 4W**
BUS AMPS **400**
NEUTRAL **100%**

AIC **22,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	80/3	20.4	RTU–3	a	2	20/1	1.2	SIGN
3	|			b	4	20/1	0.18	RECEPTACLE
5	|			c	6	20/1	0.209	LIGHTING
7	80/3	20.4	RTU–4	a	8	–/1	0	SPACE
9	|			b	10	–/1	0	SPACE
11	|			c	12	–/1	0	SPACE
13	–/1	0	SPACE	a	14	–/1	0	SPACE
15	–/1	0	SPACE	b	16	–/1	0	SPACE
17	–/1	0	SPACE	c	18	–/1	0	SPACE
19	–/1	0	SPACE	a	20	–/1	0	SPACE
21	–/1	0	SPACE	b	22	–/1	0	SPACE
23	–/1	0	SPACE	c	24	–/1	0	SPACE
25	–/1	0	SPACE	a	26	–/1	0	SPACE
27	–/1	0	SPACE	b	28	–/1	0	SPACE
29	–/1	0	SPACE	c	30	–/1	0	SPACE
31	–/1	0	SPACE	a	32	–/1	0	SPACE
33	–/1	0	SPACE	b	34	–/1	0	SPACE
35	–/1	0	SPACE	c	36	–/1	0	SPACE
37	–/1	0	SPACE	a	38	–/1	0	SPACE
39	–/1	0	SPACE	b	40	–/1	0	SPACE
41	–/1	0	SPACE	c	42	–/1	0	SPACE

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	0.209	0.261	(125%)	RECEPTACLES	0.18	0.18	(50%>10)
LARGEST MOTOR	20.4	5.09	(25%)	CONTINUOUS	1.2	1.5	(125%)
				HEATING	40.8	40.8	(100%)
				COOLING	40.8	0	(0%)
				TOTAL LOAD		47.8	
				BALANCED 3–PHASE LOAD		133 A	
				PHASE A		105%	
				PHASE B		97.5%	
				PHASE C		97.7%	

LOT1–MTR–1

ROOM
MOUNTING **SURFACE**
FED FROM **LOT1–PULL**
NOTE

VOLTS **208Y/120V 3P 4W**
BUS AMPS **400**
NEUTRAL **100%**

AIC **42,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	400/3	PANEL L1S1	26.4	26.4	25.2	(2)2–1/2"C,3#250kcmil AL,#250kcmil AL N,#1 AL G
		TOTAL CONNECTED KVA BY PHASE	26.4	26.4	25.2	

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	0.19	0.238	(125%)	CONTINUOUS	2.4	3	(125%)
LARGEST MOTOR	37.5	9.37	(25%)	HEATING	74.9	74.9	(100%)
RECEPTACLES	0.36	0.36	(50%>10)	COOLING	74.9	0	(0%)
				TOTAL LOAD		87.9	
				BALANCED 3–PHASE LOAD		244 A	

LOT1–MTR–2

ROOM
MOUNTING **SURFACE**
FED FROM **LOT1–PULL**
NOTE

VOLTS **208Y/120V 3P 4W**
BUS AMPS **400**
NEUTRAL **100%**

AIC **42,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	400/3	PANEL L1S2	14.8	13.8	13.8	(2)2–1/2"C,3#250kcmil AL,#250kcmil AL N,#1 AL G
		TOTAL CONNECTED KVA BY PHASE	14.8	13.8	13.8	

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	0.209	0.261	(125%)	CONTINUOUS	1.2	1.5	(125%)
LARGEST MOTOR	20.4	5.09	(25%)	HEATING	40.8	40.8	(100%)
RECEPTACLES	0.18	0.18	(50%>10)	COOLING	40.8	0	(0%)
				TOTAL LOAD		47.8	
				BALANCED 3–PHASE LOAD		133 A	

LOT1–MTR–H

ROOM
MOUNTING **SURFACE**
FED FROM **LOT1–PULL**
NOTE

VOLTS **208Y/120V 3P 4W**
BUS AMPS **200**
NEUTRAL **100%**

AIC **42,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	200/3	PANEL LOT1–HOUSE	6	5.36	0.86	2–1/2"C,3#250kcmil AL,#250kcmil AL N,#4 AL G
		TOTAL CONNECTED KVA BY PHASE	6	5.36	0.86	

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	1.04	1.3	(125%)	MOTORS	8.64	8.64	(100%)
LARGEST MOTOR	2.88	0.72	(25%)	RECEPTACLES	1.54	1.54	(50%>10)
				HEATING	1	1	(100%)
				TOTAL LOAD		13.2	
				BALANCED 3–PHASE LOAD		36.6 A	

LOT1–PULL

ROOM
MOUNTING **FLOOR**
FED FROM **TI XFMR**
NOTE

VOLTS **208Y/120V 3P 4W**
BUS AMPS **800**
NEUTRAL **100%**

AIC **42,000**
MAIN BKR **800**
LUGS **STANDARD**
ISO GND BUS

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	–/3	METER CENTER LOT1–MTR–1	26.4	26.4	25.2	N/A
2	–/3	METER CENTER LOT1–MTR–2	13.8	14.8	13.8	N/A
3	–/3	METER CENTER LOT1–MTR–H	5.36	0.86	6	N/A
		TOTAL CONNECTED KVA BY PHASE	45.5	42	44.9	

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	1.44	1.79	(125%)	RECEPTACLES	2.08	2.08	(50%>10)
LARGEST MOTOR	37.5	9.37	(25%)	CONTINUOUS	3.6	4.5	(125%)
MOTORS	8.64	8.64	(100%)	HEATING	117	117	(100%)
				COOLING	116	0	(0%)
				TOTAL LOAD		143	
				BALANCED 3–PHASE LOAD		397 A	

LOT1–HOUSE

ROOM
MOUNTING **FLUSH**
FED FROM **LOT1–MTR–H**
NOTE

VOLTS **208Y/120V 3P 4W**
BUS AMPS **200**
NEUTRAL **100%**

AIC **22,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.5	SITE LIGHTING	a	2	20/1	0.18	RECEPTACLE
3	20/1	0.5	SITE LIGHTING	b	4	20/1	0.5	FACP
5	20/1	0.18	RECEPTACLE	c	6	20/1	0.18	RECEPTACLE
7	20/1	0.5	FACP	a	8	60/2	8.64	BP–1
9	20/1	0.017	LIGHTING	b	10	|		
11	20/2	1	EWH–1.0	c	12	–/1	0	SPACE
13	|			a	14	–/1	0	SPACE
15	20/1	0.019	LIGHTING	b	16	–/1	0	SPACE
17	–/1	0	SPACE	c	18	–/1	0	SPACE
19	–/1	0	SPACE	a	20	–/1	0	SPACE
21	–/1	0	SPACE	b	22	–/1	0	SPACE
23	–/1	0	SPACE	c	24	–/1	0	SPACE

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	1.04	1.3	(125%)	MOTORS	8.64	8.64	(100%)
LARGEST MOTOR	2.88	0.72	(25%)	RECEPTACLES	1.54	1.54	(50%>10)
				HEATING	1	1	(100%)
				TOTAL LOAD		13.2	
				BALANCED 3–PHASE LOAD		36.6 A	
				PHASE A		145%	
				PHASE B		134%	
				PHASE C		20.6%	

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

MLEAVENS F:\810–010 EAST TOWN CROSSING\DWG\ELECTRICAL\PRESENTATION SHEETS\A–E4.0.DWG 05–03–2021 11:47

REVISIONS

NO.	DATE	DESCRIPTION
	12/31/24	PERMIT SET

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
206-364-3343 TEL

MARK STEINKE — STATE OF WASHINGTON — 20183 — REGISTERED PROFESSIONAL ENGINEER — 12/31/2024

DRAWN: AJS
DESIGNED: AJS
CHECKED: STEINKE M.
APPROVED: STEINKE M.

PROJECT: **EAST TOWN CROSSING**
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
PHONE:(206)364-3343

DATE: 12-31-2024

SHEET TITLE: PANEL SCHEDULES

SHEET NO. E0.2

PRCNC20250094

RETAIL INTERIOR LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	LAMP	DESCRIPTION	BALLAST	MOUNTING	MODEL	INPUT VA	VOLTS
C1E	●	(1) 17W LED	8" SURFACE DOWNLIGHT – CORRIDORS – EMERGENCY DRIVER BACKUP	0–10V DIMMING	SURFACE	DMF: DRDHNJ015OSEMS / DRD5S8R159300A	17	120V 1P 2W
S1	▬	(1) 19W LED	4' LED LINEAR STRIP	0–10V DIMMING	SURFACE	LITHONIA: CLX L48 3000LM HEF RDL 120 GZ10 35K 80CRI WH	19	120V 1P 2W
X1	⊗	(1) 5W EM	EXIT SIGN – EMERGENCY BATTERY BACKUP – HATCH INDICATES LIT FACE	EM	SURFACE	LSI: EMS WB SERIES (OR EQUAL)	5	MULTIPLE

GENERAL LIGHTING NOTES

1. LIGHTING CONTROLS SHALL BE INSTALLED WHICH MEET ALL REQUIREMENTS OF LOCAL ENERGY CODES.
2. EMERGENCY LIGHT FIXTURES: PROVIDE UNSWITCHED HOT.
3. LOCATIONS OF OCCUPANCY SENSORS, PHOTO SENSORS, DIMMERS (FOR COMMON AREA INTERIOR LUMINAIRES ONLY), AND SWITCHES ARE DIAGRAMMATIC. CONTRACTOR TO FIELD–IDENTIFY OPTIMAL LOCATIONS AND QUANTITIES.
4. ASSURE COMPATIBILITY OF DIMMERS WITH CONTROLLED LUMINAIRES PRIOR TO PURCHASING.
5. AUTOMATIC LIGHTING SHUT–OFF CONTROLS SHALL BE PROVIDED BY LOCAL OCCUPANCY SENSORS UNLESS OTHERWISE NOTED. PUBLIC SPACES ARE ACTIVE 24/7 AND THEREFORE EXEMPT FROM AUTOMATIC LIGHTING SHUT–OFF REQUIREMENTS.
6. DAYLIGHT ZONES ARE REFERRED TO AS 'PRIMARY' AND 'SECONDARY' ON PLANS AND DENOTED BY DASHED LINES.
7. FOR CUSTOM FF&E FIXTURES, IT IS THE MANUFACTURER'S RESPONSIBILITY TO FURNISH PRODUCTS WHICH ARE COMPLIANT WITH ALL REQUIREMENTS OF LOCAL ENERGY CODES, AS WELL AS MATCH THE ELECTRICAL SPECIFICATIONS PROVIDED IN THE LUMINAIRE SCHEDULES. PROVIDE SUBMITTAL SHOP DRAWINGS WITHIN 30 DAYS OF RECEIVING FIXTURE ORDER. SUBMITTALS SHALL CLEARLY INDICATE LAMPING AND MAXIMUM WATTAGE RATING OF LAMP SOCKETS. NON–COMPLIANT FIXTURES REJECTED BY ELECTRICAL INSPECTOR SHALL BE RETURNED TO THE MANUFACTURER FOR REWORKING AND/OR RE–LABELING.
8. ALL FIXTURES SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
9. CONTRACTOR SHALL BE RESPONSIBLE TO ORDER ALL NECESSARY HARDWARE, ELECTRICAL CABLE, TIMERS, TRANSFORMERS, ETC., AS REQUIRED FOR COMPLETION OF INSTALLATION OF A FULLY FUNCTIONING SYSTEM.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR EQUIPPING ALL FIXTURES WITH THE EXACT LAMPS SPECIFIED IN THE FIXTURE SCHEDULE.
11. WHERE FIXTURES REQUIRE REMOTE TRANSFORMERS OR BALLASTS, THE CONTRACTOR SHALL DETERMINE LOCATIONS AS REQUIRED FOR EVEN LOAD DISTRIBUTION, SERVICE ACCESS, AND VENTILATION.
12. THE CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL ENGINEER FOR EXACT LOCATIONS OF TIMERS AND/OR PHOTO CELLS, IF ANY.
13. (FOR COMMON AREA INTERIOR LUMINAIRES ONLY) THE CONTRACTOR SHALL VERIFY THE COMPATIBILITY OF DIMMING AND CONTROL MODULES WITH THE FIXTURE TYPES PRIOR TO INSTALLATION.
14. WHERE APPLICABLE, THE CONTRACTOR SHALL AIM AND ADJUST LIGHTING FIXTURES AS DIRECTED BY THE LIGHTING DESIGNER UPON COMPLETION OF THE INSTALLATION.

SPECIAL NOTE TO THE CONTRACTOR:

1. FIXTURE SUBMITTALS THAT DO NOT INCLUDE LAMP SPECIFICATIONS WILL BE CONSIDERED INCOMPLETE AND WILL NOT BE REVIEWED.

EXTERIOR & SITE LIGHTING CONTROL SYSTEM REQUIREMENTS

1. CONTRACTOR TO PROVIDE A FULLY OPERATIONAL LIGHTING CONTROL SYSTEM.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH A LIGHTING CONTROLS VENDOR TO OBTAIN LIGHTING CONTROL SYSTEM PACKAGE COMPLETE WITH DEVICES, WIRING DIAGRAMS, ANNOTATED PLANS INDICATING WHICH DEVICE TO BE USED IN EACH LOCATION, CONNECTION REQUIREMENTS, SET UP INSTRUCTIONS, COMMISSIONING AND CHECK–OUT FOLLOWING COMPLETION. PROVIDE ALL LOW VOLTAGE WIRING AS REQUIRED FOR CONTROL DEVICE INTERCONNECTIONS.
3. INSTALLER QUALIFICATIONS: TECHNICIAN INSTALLING AND WIRING THE LIGHTING CONTROL SYSTEM SHALL HAVE INSTALLED THIS SAME SYSTEM AT LEAST ONCE PREVIOUSLY. TECHNICIAN SHALL HAVE RECEIVED TRAINING BY FACTORY REPRESENTATIVE ON THE SYSTEM BEING INSTALLED.
4. PROVIDE LIGHTING CONTROL SYSTEM TO PERFORM THE FUNCTIONS DESCRIBED BELOW:

4.1. CONTROL EXTERIOR LIGHTING BASED ON ASTRONOMIC TIME–CLOCK SCHEDULING OR PHOTOCELL DETECTION.

5. DURING EMERGENCY CONDITIONS EMERGENCY LIGHTING CIRCUITS SHALL BYPASS ALL LIGHTING CONTROLS IN ORDER TO ENERGIZE ALL CONNECTED LUMINAIRES AT FULL CAPACITY. PROVIDE UL924 RELAYS AS REQUIRED TO BYPASS AREA CONTROLS.
6. CONTRACTOR SHALL VERIFY THE COMPATIBILITY OF CONTROL MODULES WITH FIXTURE TYPES PRIOR TO INSTALLATION.

Shell Permit Only. Separate Tenant Improvement Permit will be required prior to Occupancy.

REVISIONS

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ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
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206-364-3343 TEL

MARK STEINKE — STATE OF WASHINGTON — 20183 — REGISTERED PROFESSIONAL ENGINEER — 12/31/2024

DRAWN: AJS | DESIGNED: AJS | CHECKED: STEINKE M. | APPROVED: STEINKE M.

PROJECT: EAST TOWN CROSSING
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
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PHONE:(206)364-3343

DATE: 12-31-2024

SHEET TITLE: LIGHTING NOTES & SCHEDULE

SHEET NO. E0.4

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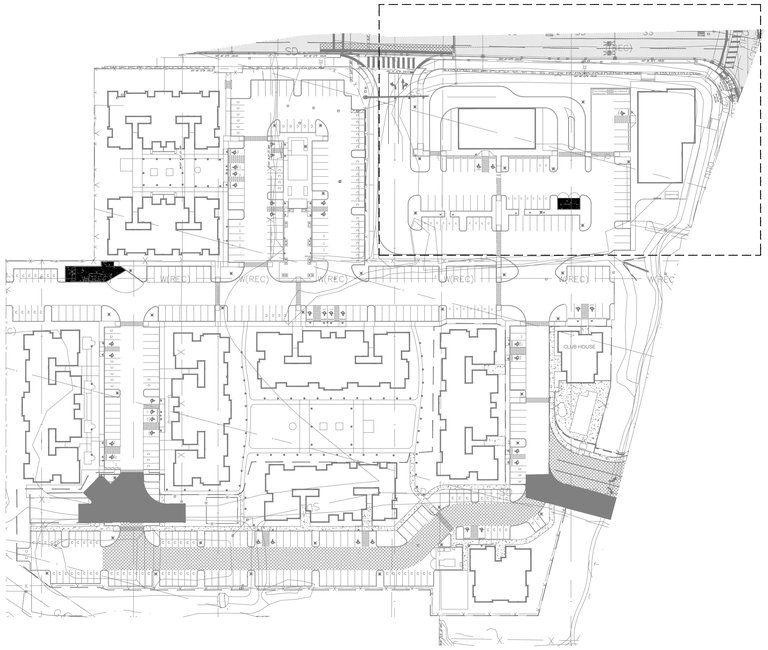
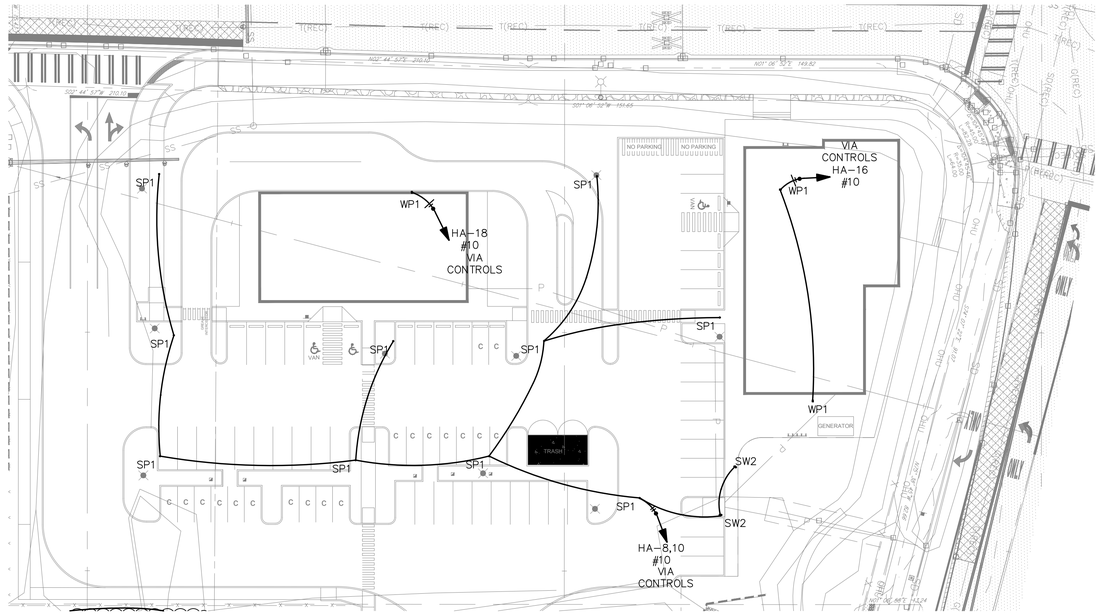
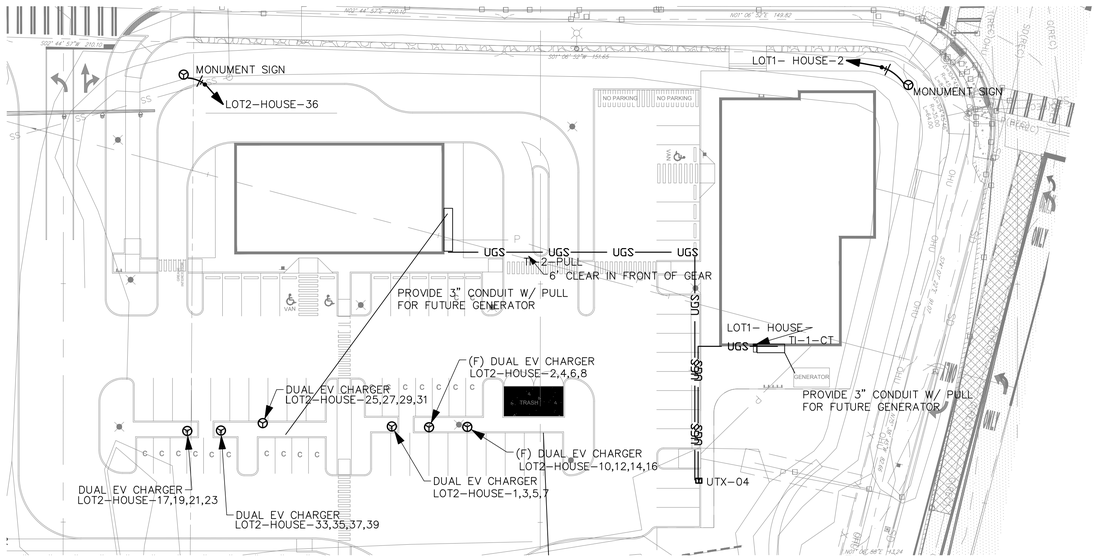


VICINITY MAP



TI SITE LIGHTING PLAN

SCALE: 1" = 30'



TI SITE POWER PLAN

SCALE: 1" = 30'

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ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
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MARK STEINKE
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PROFESSIONAL ENGINEER
12/31/2024

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AJS	AJS	STEINKE M.	STEINKE M.

PROJECT:
EAST TOWN CROSSING
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
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PHONE:(206)364-3343

DATE:
12-31-2024

SHEET TITLE:
TI SITE LIGHTING AND POWER PLAN

SHEET NO.
E1.0

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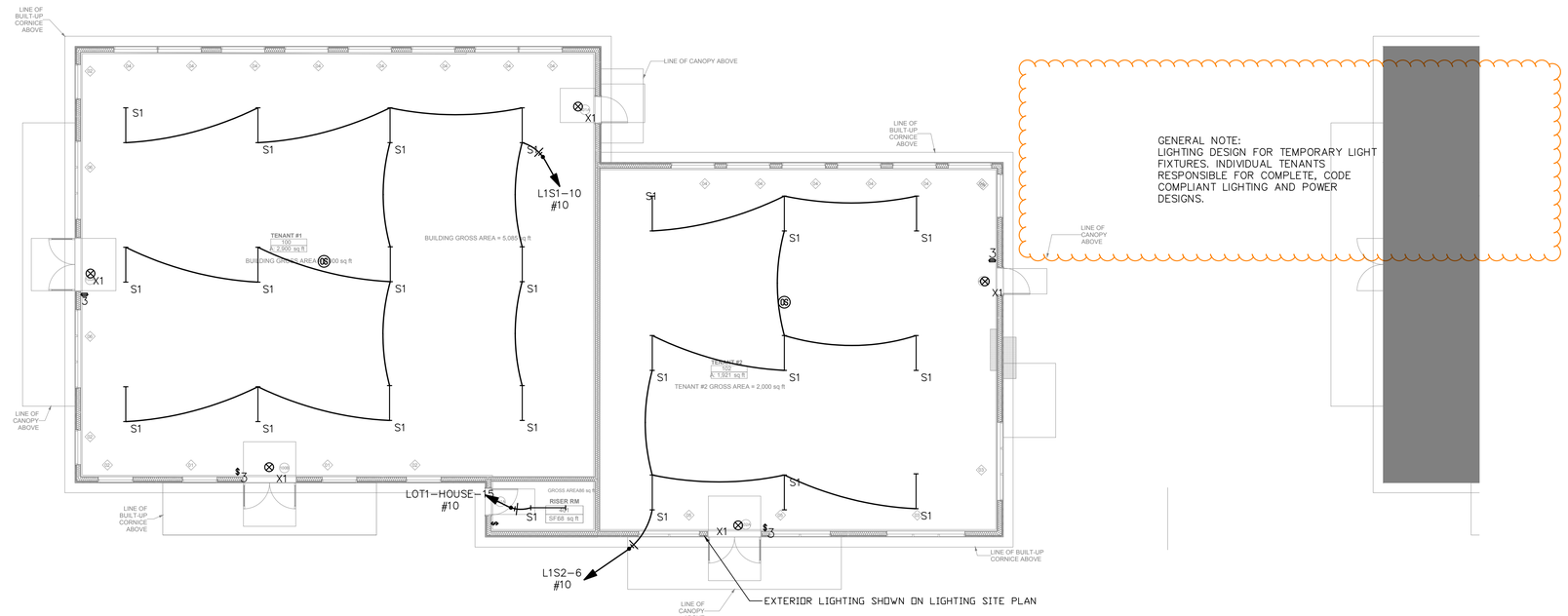
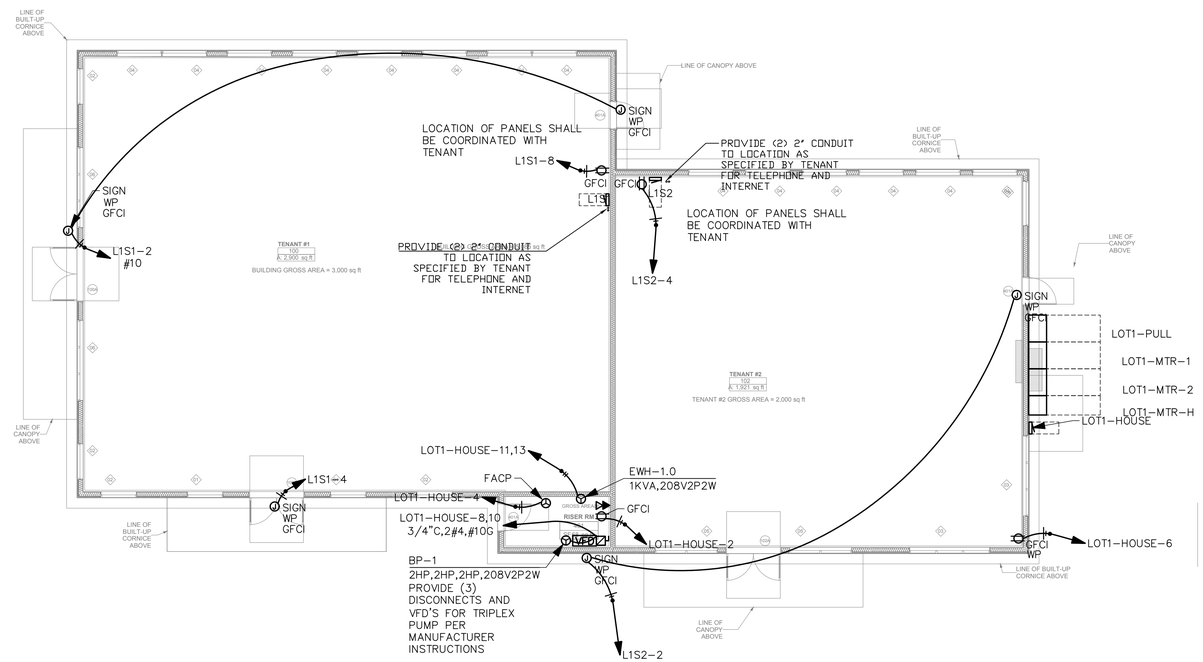
PRCNC20250094



LEVEL 1 POWER & LIGHTING PLAN

SCALE: 1/8" = 1'-0"



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ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
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PROFESSIONAL ENGINEER
12/31/2024

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PROJECT:
EAST TOWN CROSSING
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
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PHONE:(206)364-3343

DATE:
12-31-2024

SHEET TITLE:
LEVEL 1 LIGHTING AND POWER

SHEET NO.
E3.0

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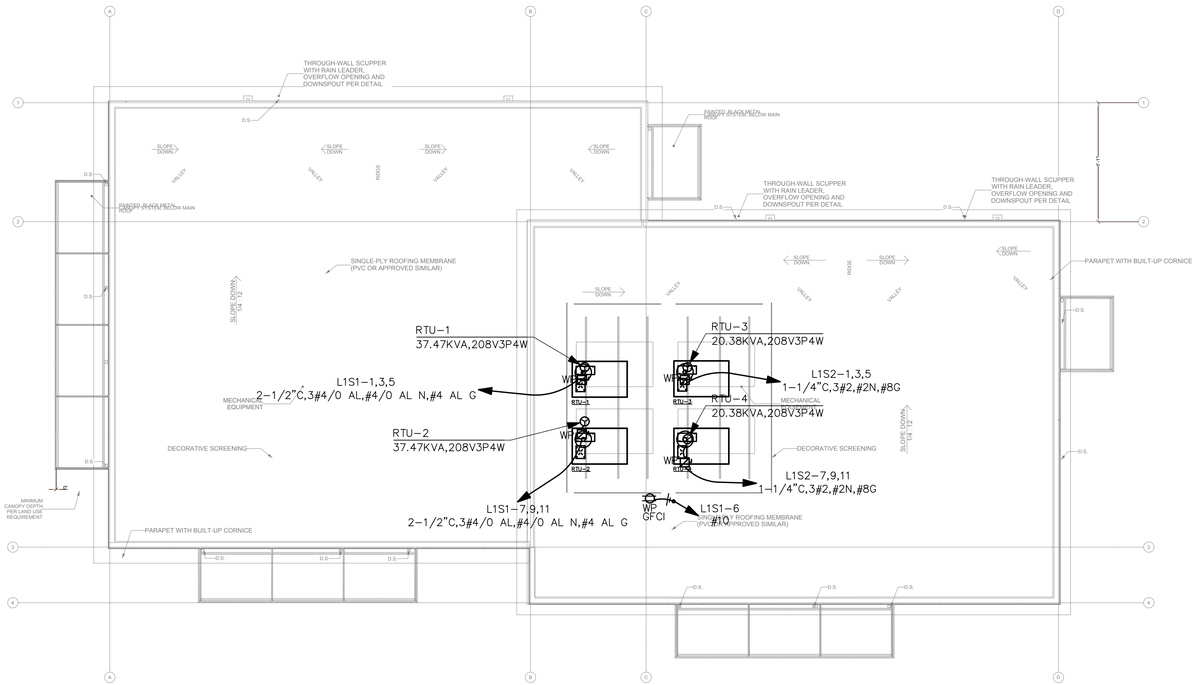
PRCNC20250094



ROOF POWER PLAN

SCALE: 1/8" = 1'-0"

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ROBISON ENGINEERING, INC
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MARK STEINKE
STATE OF WASHINGTON
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DESIGNED: AJS
CHECKED: STEINKE M.
APPROVED: STEINKE M.

PROJECT: EAST TOWN CROSSING
MULTIFAMILY DEVELOPMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
19401 40TH AVE W. SUITE 302
LYNNWOOD, WA 98036
PHONE:(206)364.3343

DATE:
12-31-2024

SHEET TITLE:
LEVEL 2/ ROOF POWER AND LIGHTING

SHEET NO.
E3.1

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