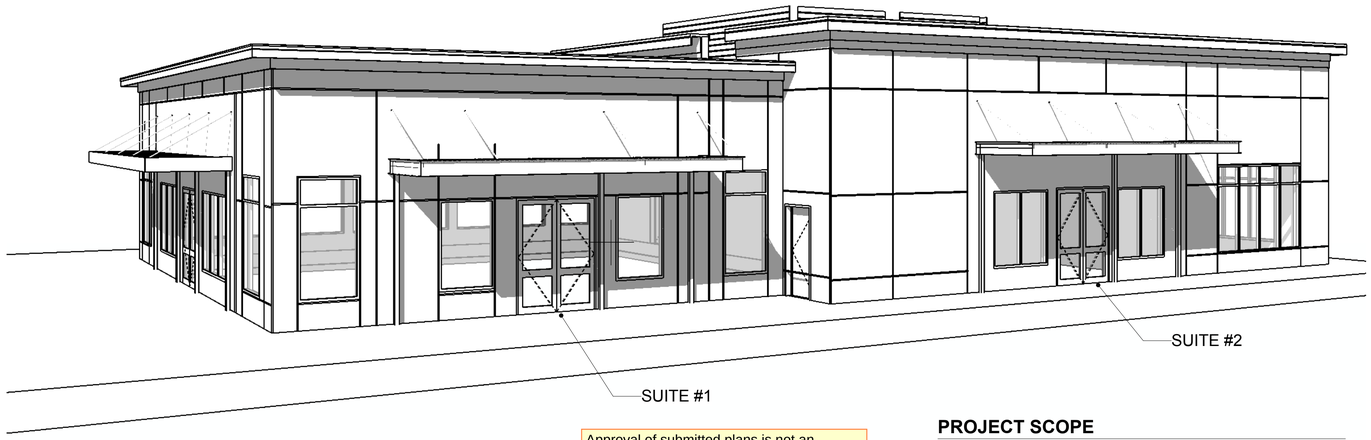
EAST TOWN CROSSING
COMMERCIAL LOT 1 - SUITE 2 T.I.



Approval of submitted plans is not an approval of omissions or oversights by this office or non compliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable codes and regulations of the local government.

The approved construction plans, documents, and all engineering must be posted on the job at all inspections in a visible and readily accessible location.

Full sized legible color plans are required to be provided by the permitee on site for inspection.

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

City of Puyallup Planning Division APPROVED
See permit conditions.
JHulseLew
12/19/2025
4:06:09 PM

City of Puyallup Building REVIEWED FOR COMPLIANCE
SKinnear
01/30/2026
8:39:38 AM

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

PROJECT SCOPE

THE OVERALL ARCHITECTURAL SCOPE OF THIS PROJECT IS THE TENANT IMPROVEMENT FOR SUITE 2.

PROJECT INFORMATION

01

P/N: ~~0420264021~~, LOT 1 APN 0420264071

ADDRESS: 727 SHAW RD, Unit B, PUYALLUP, WA 98372

JURISDICTION: CITY OF PUYALLUP

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

TABLE OF CONTENTS

PROJECT TEAM

OWNER:
ASH DEVELOPMENT, LLC
PUYALLUP, WA
c/io: GREG HELLE
253-318-5711
greg.helle@absherco.com

ARCHITECT :
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TACOMA, WA
c/o: BRETT LINDSAY
253-468-4117
blindsay@synthesis9.com

CIVIL ENGINEER:
AHBL, INC.
TACOMA, WA
c/o:TODD SAWIN
253-383-2422
tsawin@ahbl.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

TENANT #2 FRANCHISE OWNER
SIERRA TANGO 1, LLC
HOTWORX AUBURN WA
AUBURN WA
c/o: WIL JOHNSTON
253-330-8468
william.johnston@hotworx.net

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 BUILDING CODE (IBC).
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 / 3 — SHEET
4

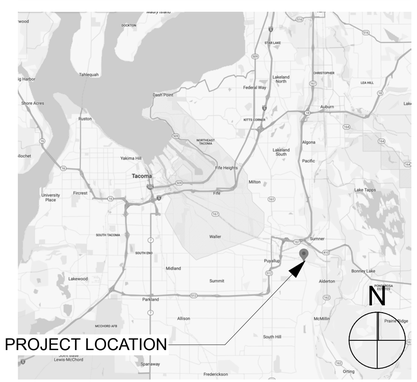
DOOR I.D. SYMBOL
100A — DOOR NUMBER REFER TO SHEET A4.0.

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

WALL TYPE SYMBOL
1A — WALL TYPE NO. REFER TO SHEET A1.0

EXTERIOR WINDOW TYPE SYMBOL
— WINDOW TYPE NUMBER

VICINITY MAP (NOT TO SCALE)



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

9251 REGISTERED ARCHITECT BRETT A. LINDSAY STATE OF WASHINGTON

PRCTI20251445

EAST TOWN CROSSING
COMMERCIAL LOT 1 - SUITE 2 T.I.
727 SHAW ROAD PUYALLUP WA

AGENCY REVIEW - REVISION #1 | 26.01.28

REVISIONS

REVISIONS

DRAWN BY:	CM / BL
CHECKED BY:	BL
DATE:	26.01.28
TITLE:	COVER SHEET
PROJECT # :	2016-L1
SHEET:	AG1.1

PLUMBING FIXTURE REQUIREMENTS

SUITE	OCCUPANCY	OCCUPANT LOAD	MALE WC	FEMALE WC	MALE LAV
1	A-2	~~100~~ BASED ON ASSUMED NET AREA	1 PER 100		1 PER 100
			1	1	1
2	B	14	1 per 25 for first 50 and 1 per 50 for the remainder exceeding 50		1 per 40 for first 80 and 1 per 80 for remainder exceeding 80
			1	1	1

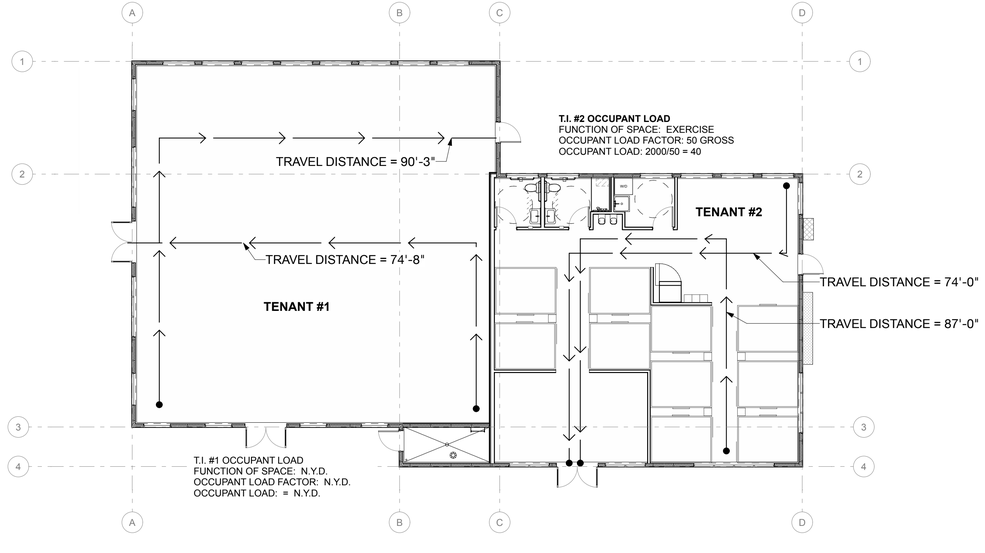
PLUMBING FIXTURE SUMMARY

2902.5.1 Drinking fountain number. Occupant loads over 30 shall have one drinking fountain for the first 150 occupants, then one per each additional 500 occupants.
** NONE REQUIRED.

EXCEPTION: A drinking fountain need not be provided in a drinking or dining establishment.

2902.2 Separate facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex.
EXCEPTIONS: 1. Separate facilities shall not be required for dwelling units and sleeping units.
2. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 15 or less.
3. Separate facilities shall not be required in mercantile occupancies in which the maximum occupant load is 100 or less.
4. Separate facilities shall not be required in spaces primarily used for drinking or dining with a total occupant load, including both employees and customers, of 30 or fewer.
5. Separate facilities shall not be required when gender-neutral facilities are provided in accordance with Section 2902.2.2.

2902.2.2 Gender-neutral facilities. Gender-neutral toilet facilities, when provided, shall be in accordance with the following:
1. There is no reduction in the number of fixtures required to be provided for male and female in the type of occupancy and in the minimum number shown in Table 2902.1.
2. Gender-neutral multiuser toilet rooms shall have water closets and urinals located in toilet compartments in accordance with ICC A117.1.
3. Gender-neutral multiuser toilet room water closet and urinal compartments shall have full-height walls and a door enclosing the fixture to ensure privacy.
4. Gender-neutral toilet room water closet and urinal compartment doors shall be securable from within the compartment.
5. Gender-neutral toilet rooms provided for the use of multiple occupants, the egress door from the room shall not be lockable from the inside of the room.
6. Compartments shall not be required in a single-occupant toilet room with a lockable door.



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

BUILDING SUMMARY

OCCUPANCY:
TENANT #1: A2: ASSEMBLY OPTION (NYD)
TENANT #1: M: MERCANTILE OPTION (NYD)
TENANT #2: B: OFFICE (EXERCISE WITH LESS THAN 50 OCCUPANTS)

TYPE OF CONSTRUCTION: VB
SEPARATED OCCUPANCIES: NO
FIRE SPRINKLERS: YES, PER NFPA 13
FIRE ALARM SYSTEM AND SMOKE ALARM: YES
ELEVATOR: NO
NUMBER OF TENANT SPACES: 2

'A2' OCCUPANCY (TENANT #1 OPTION - 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

'M' OCCUPANCY (TENANT #1 OPTION - NYD)
BASE ALLOWABLE BUILDING AREAS, HEIGHT AND STORIES:

ALLOWABLE AREA PER FLOOR: 36,000 sq ft
ALLOWABLE MAXIMUM HEIGHT: 60 ft
ALLOWABLE STORIES: 2

'B' OCCUPANCY (TENANT #2)
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: 5103 sq ft
PROPOSED HEIGHT: 22 ft
PROPOSED STORIES: 1

CONDITIONED AREAS:

TENANT 1:	2,914 sq ft
TENANT 2:	1,922 sq ft
RISER ROOM:	74 sq ft

GROSS AREAS:

TENANT 1:	2,972 sq ft
TENANT 2:	2,043 sq ft
RISER ROOM:	88 sq ft
TOTAL:	5,103 sq ft

OCCUPANT LOAD & EGRESS ANALYSIS

TENANT #1 (A2 - OPTION)
USE: ASSEMBLY - UNCONCENTRATED TABLES & CHAIRS (ASSUMED)
OCCUPANT LOAD FACTOR: 15 NET
OCCUPANT LOAD: 2914/15 = 194
NUMBER OF EXITS REQUIRED: 2
MAXIMUM EXIT ACCESS TRAVEL DISTANCE with SPRINKLERS: 250-ft
MAXIMUM COMMON PATH OF TRAVEL: 75-ft

TENANT #1 (M - OPTION)
USE: MERCANTILE
OCCUPANT LOAD FACTOR: 60 GROSS
OCCUPANT LOAD: 2914/60 = 49
NUMBER OF EXITS REQUIRED: 2
MAXIMUM EXIT ACCESS TRAVEL DISTANCE with SPRINKLERS: 250-ft
MAXIMUM COMMON PATH OF TRAVEL: 75-ft

TENANT #2
USE: EXERCISE
OCCUPANT LOAD FACTOR: 50 GROSS
OCCUPANT LOAD: 12043/50 = 41
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

LAND USE SUMMARY

P/N: 0420264021, LOT 1

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 & RETAIL (PERMITTED)
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 FOR BOTH COMMERCIAL LOTS

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:
TENANT #1: 2972 sq ft/ 100 = 30
TENANT #2: 2043 sq ft/ 300 = 7

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

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

ACCESSIBLE STALLS REQ'D: 2 (1 MUST BE A VAN STALL)
ACCESSIBLE STALLS PROVIDED: 2, WITH 1 VAN

ELECTRIC VEHICLE CHARGING INFRASTRUCTURE
(PER SECTION 429 OF 2021 WABC)

REQUIREMENTS:
EV CHARGING: 10% = 4 (10% MUST BE ADA)
EV READY = 10% = 4 (10% MUST BE ADA)
EV CAPABLE = 10% = 4

PROVIDED:
EV CHARGING: 4 (1 PER ADA)
EV READY: 4 (1 PER ADA)
EV CAPABLE: 4

BICYCLE PARKING ANALYSIS
SHORT-TERM BICYCLE PARKING:
REQUIRED: 5 STALLS
PROVIDED: 5

City of Puyallup
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SYNTHESIS 9, LLC
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TACOMA, WA 98403

REGISTERED ARCHITECT
9251
STATE OF WASHINGTON

PRCTI20251445

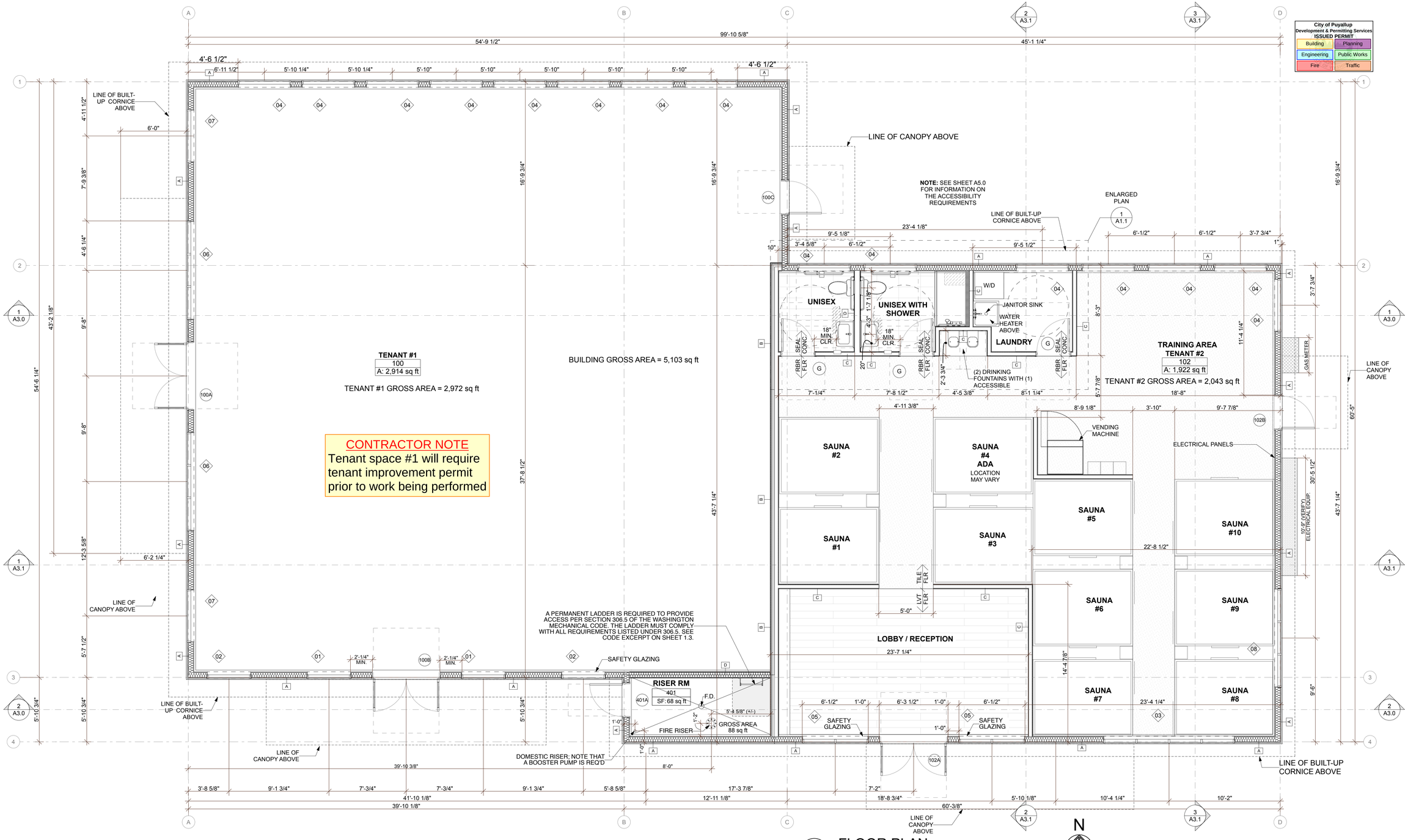
EAST TOWN CROSSING
COMMERCIAL LOT 1 - SUITE 2 T.I.
727 SHAW ROAD PUYALLUP WA

AGENCY REVIEW - REVISION #1 | 26.01.28

REVISIONS

REVISIONS

DRAWN BY:	CM / BL
CHECKED BY:	BL
DATE:	26.01.28
TITLE:	PROJECT INFORMATION
PROJECT #:	2016-L1
SHEET:	AG1.2



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

N

WALL TYPES

A

CLADDING
WATER RESISTANT BARRIER
1/2" 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 ROOF 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)

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STATE OF WASHINGTON
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EAST TOWN CROSSING
COMMERCIAL LOT 1 - SUITE 2 T.I.
727 SHAW ROAD PUYALLUP WA

REVISIONS

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DRAWN BY:	CM / BL
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DATE:	26.01.28
TITLE:	LEVEL 1 PLAN
PROJECT # :	2016-L1
SHEET:	A1.0

AGENCY REVIEW - REVISION #1 | 26.01.28

T.I. #2 - WATER HEATER WALL MOUNT PLATFORM

DESCRIPTION

Product Description

The HoldRite 50-SWHP-W is a wall mounted water heater platform designed to support water heaters up to 50 gallons or 600 pounds. This pre-assembled and galvanized steel platform features a diameter of 26.5 inches and includes necessary installation components.

- Durable construction of cold rolled steel
- Includes hanger rods and hardware for easy installation
- Compatible with standard one-inch PVC drain fittings

Product Highlights

This platform is suitable for both residential and commercial applications, providing stable support for water heaters while ensuring safety and ease of maintenance.

Product Information

Standard Information

- **Brand:** HoldRite
- **MPN:** 50-SWHP-W

Technical Specifications

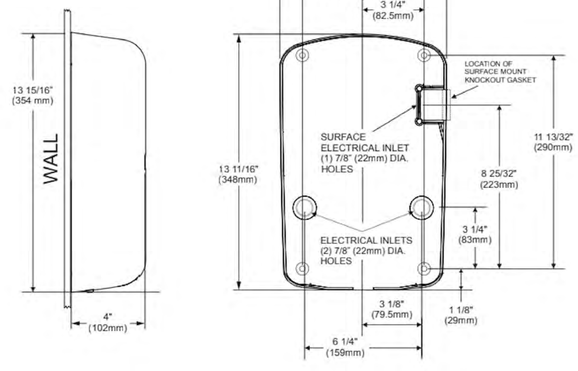
- **Material:** Cold Rolled Steel
- **Finish:** Galvanized
- **Size:** 26.5 inches width x 26.5 inches depth x 2.5 inches height
- **Load Capacity:** 50 gallons or 600 pounds
- **Applicable Standard:** BAA
- **Type:** Wall Mount, Suspended, Pre-Assembled, Square
- **Used On Item:** Water Heater

T.I. #2 - HAND DRYER

ThinAir® HAND DRYER

MODELS: **TA** - **ABS** **SB** -**VOLTAGE** (See Chart)

EXCEL



COVER (Side View)

BASE PLATE (Front View)

SECTION 612
SAUNAS AND STEAM ROOMS

612.1 General.

Saunas and steam rooms shall comply with Section 612.

612.2 Bench. INSIGHTS

Where seating is provided in saunas and steam rooms, at least one bench shall comply with Section 903. Doors shall not swing into the clear floor space required by Section 903.2.

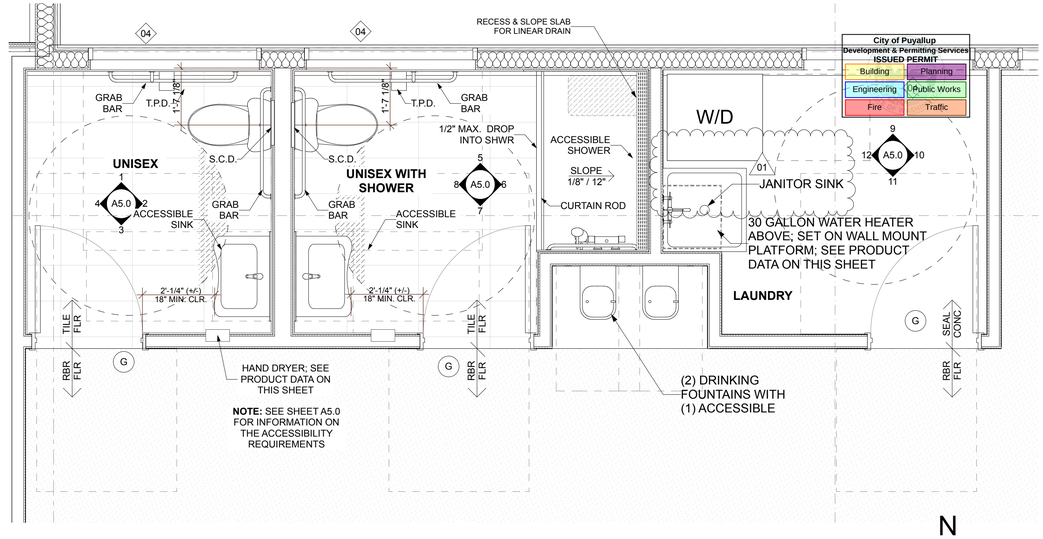
Exception: Where the room is for individual use and a clear floor space complying with Section 305.3 is provided within the room beyond the arc of the door swing, the door shall not be required to comply with this section.

INSIGHTS (1)

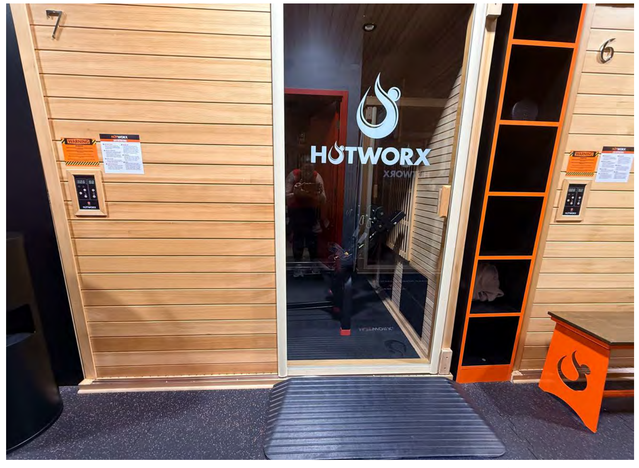
Key Changes

612.3 Turning space.

A turning space shall be provided within saunas and steam rooms.



1 ENLARGED FLOOR PLAN
SCALE: 1/2" = 1'-0"



2 ADA RAMP IMAGE
SCALE: 1:133.33
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9251

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EAST TOWN CROSSING
COMMERCIAL LOT 1 - SUITE 2 T.I.
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AGENCY REVIEW - REVISION #1 | 26.01.28

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DRAWN BY:	CM / BL
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DATE:	26.01.28
TITLE:	ENLARGED FLOOR PLAN
PROJECT # :	2016-L1
SHEET:	A1.1

OVERFLOW SCUPPER & DOWNSPOUT; LOCATE OUTLET 2" HIGHER THAN MAIN SCUPPER OUTLET PER ROOF PLAN; DISCHARGE SHALL BE ABOVE GRADE WHERE IT CAN BE OBSERVED; TYPICAL

THROUGH-WALL SCUPPER WITH RAIN LEADER, OVERFLOW OPENING AND DOWNSPOUT PER DETAIL

THROUGH-WALL SCUPPER WITH RAIN LEADER, OVERFLOW OPENING AND DOWNSPOUT PER DETAIL

D.S.

SLOPE DOWN

VALLEY

RIDGE

OVERFLOW SCUPPER & DOWNSPOUT; LOCATE OUTLET 2" HIGHER THAN MAIN SCUPPER OUTLET PER ROOF PLAN; DISCHARGE SHALL BE ABOVE GRADE WHERE IT CAN BE OBSERVED; TYPICAL

PAINTED, BLACK METAL CANOPY SYSTEM; BELOW MAIN ROOF

THROUGH-WALL SCUPPER WITH RAIN LEADER, OVERFLOW OPENING AND DOWNSPOUT PER DETAIL

THROUGH-WALL SCUPPER WITH RAIN LEADER, OVERFLOW OPENING AND DOWNSPOUT PER DETAIL

PAINTED, BLACK METAL CANOPY SYSTEM; BELOW MAIN ROOF

SINGLE-PLY ROOFING MEMBRANE (PVC OR APPROVED SIMILAR)

SLOPE DOWN 1/4 : 12

CONTRACTOR NOTE

Tenant space #1 will require tenant improvement permit prior to work being performed

MECHANICAL EQUIPMENT

PARAPET WITH BUILT-UP CORNICE

MINIMUM CANOPY DEPTH PER LAND USE REQUIREMENT

42" x 42" ROOF ACCESS HATCH; SET ON 8" (MIN. CURB); 1-HR RATED

PARAPET HEIGHT NOTE:
DUE TO PROXIMITY OF ROOF ACCESS HATCH TO ROOF EDGE, THE PARAPET SHALL ACT AS A GUARDRAIL, WITH TOP AT MINIMUM OF 42" ABOVE TOP OF ADJACENT WALKING SURFACE.

N

1 ROOF PLAN

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

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

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

REGISTERED ARCHITECT
BRETT L. LAWSON
STATE OF WASHINGTON
9251

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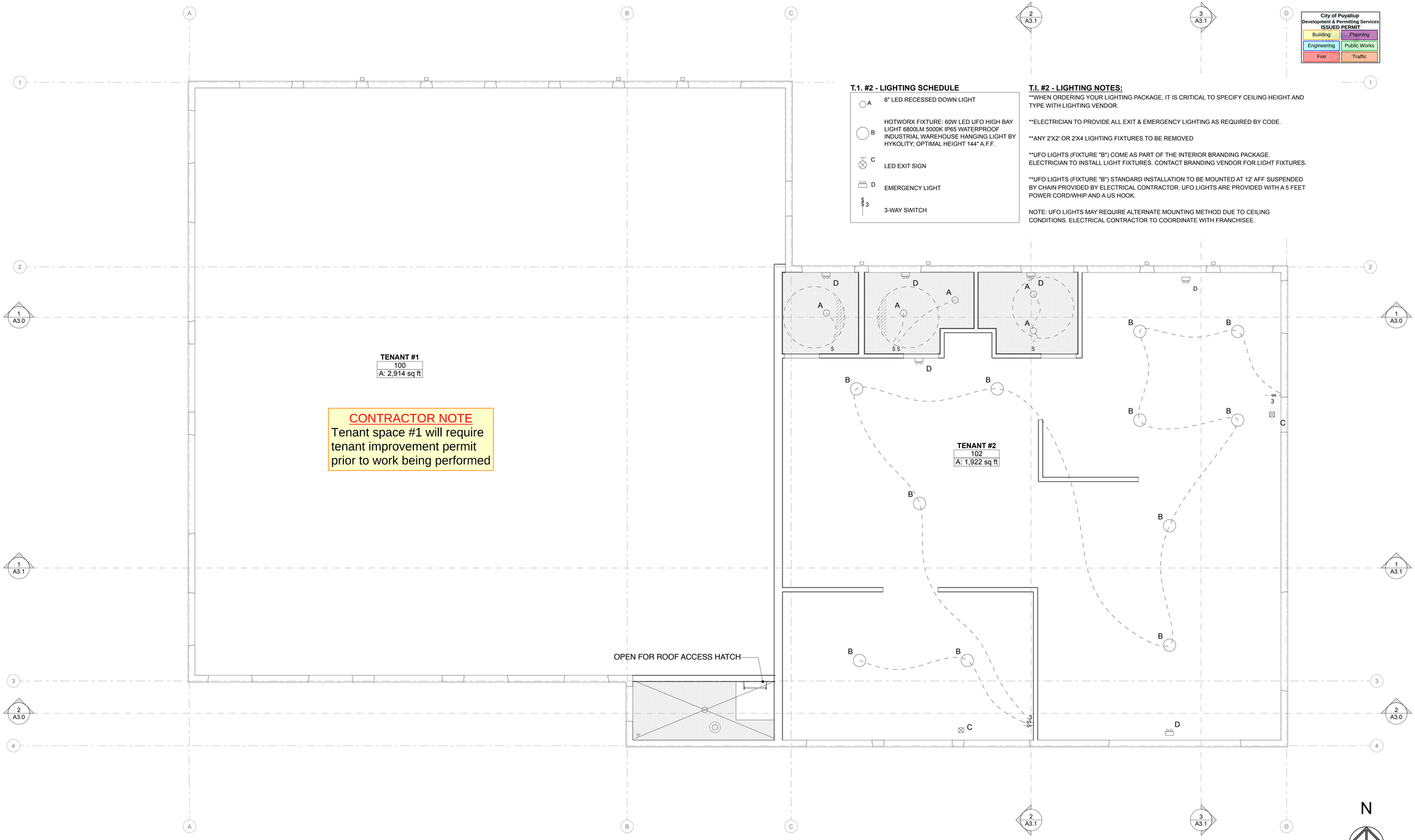
EAST TOWN CROSSING
COMMERCIAL LOT 1 - SUITE 2 T.I.
727 SHAW ROAD PUYALLUP WA

REVISIONS

REVISIONS

DRAWN BY:	CM / BL
CHECKED BY:	BL
DATE:	26.01.28
TITLE:	ROOF PLAN
PROJECT # :	2016-L1
SHEET:	A1.2

AGENCY REVIEW - REVISION #1 | 26.01.28



T.1. #2 - LIGHTING SCHEDULE

A	6" LED RECESSED DOWN LIGHT
B	HOTWORX FIXTURE: 60W LED UFO HIGH BAY LIGHT 6800LM 5000K IP65 WATERPROOF INDUSTRIAL WAREHOUSE HANGING LIGHT BY HYKOLITY; OPTIMAL HEIGHT 144" A.F.F.
C	LED EXIT SIGN
D	EMERGENCY LIGHT
S 3	3-WAY SWITCH

T.I. #2 - LIGHTING NOTES:

**WHEN ORDERING YOUR LIGHTING PACKAGE, IT IS CRITICAL TO SPECIFY CEILING HEIGHT AND TYPE WITH LIGHTING VENDOR.

**ELECTRICIAN TO PROVIDE ALL EXIT & EMERGENCY LIGHTING AS REQUIRED BY CODE.

**ANY 2'X2' OR 2'X4 LIGHTING FIXTURES TO BE REMOVED

**UFO LIGHTS (FIXTURE "B") COME AS PART OF THE INTERIOR BRANDING PACKAGE. ELECTRICIAN TO INSTALL LIGHT FIXTURES. CONTACT BRANDING VENDOR FOR LIGHT FIXTURES.

**UFO LIGHTS (FIXTURE "B") STANDARD INSTALLATION TO BE MOUNTED AT 12' AFF SUSPENDED BY CHAIN PROVIDED BY ELECTRICAL CONTRACTOR. UFO LIGHTS ARE PROVIDED WITH A 5 FEET POWER CORD/WHIP AND A US HOOK.

NOTE: UFO LIGHTS MAY REQUIRE ALTERNATE MOUNTING METHOD DUE TO CEILING CONDITIONS. ELECTRICAL CONTRACTOR TO COORDINATE WITH FRANCHISEE.

City of Puyallup
Development & Permitting Services
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Building	Planning
Engineering	Public Works
Fire	Traffic

1 REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

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

REGISTERED ARCHITECT
CHRISTOPHER MARK MOORE
STATE OF WASHINGTON
9251

PRCTI20251445

EAST TOWN CROSSING
COMMERCIAL LOT 1 - SUITE 2 T.I.
727 SHAW ROAD PUYALLUP WA

AGENCY REVIEW - REVISION #1 | 26.01.28

REVISIONS

REVISIONS

DRAWN BY:	CM / BL
CHECKED BY:	BL
DATE:	26.01.28
TITLE:	REFLECTED CEILING PLAN
PROJECT #:	2016-L1
SHEET:	A1.3

1 EXISTING SOUTH ELEVATION

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

City of Puyallup
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9251
STATE OF WASHINGTON

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EAST TOWN CROSSING
COMMERCIAL LOT 1 - SUITE 2 T.I.
727 SHAW ROAD PUYALLUP WA

AGENCY REVIEW - REVISION #1 | 26.01.28

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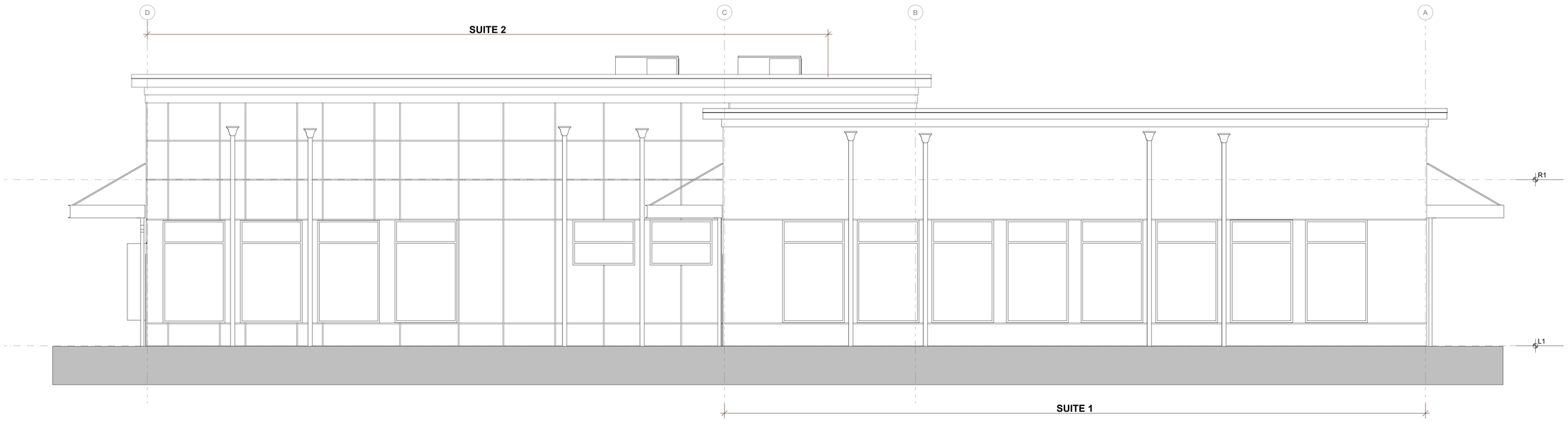
DATE:	26.01.28
TITLE:	ELEVATIONS
PROJECT # :	2016-L1
SHEET:	A2.0

2 EXISTING EAST ELEVATION
SCALE: 1/4" = 1'-0"



1 EXISTING NORTH ELEVATION
SCALE: 1/4" = 1'-0"

City of Puyallup
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Building	Planning
Engineering	Public Works
Fire	Traffic

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

REGISTERED ARCHITECT
9251
BRETT LEE MARTIN
STATE OF WASHINGTON

PRCTI20251445

EAST TOWN CROSSING
COMMERCIAL LOT 1 - SUITE 2 T.I.
727 SHAW ROAD PUYALLUP WA

AGENCY REVIEW - REVISION #1 | 26.01.28

REVISIONS

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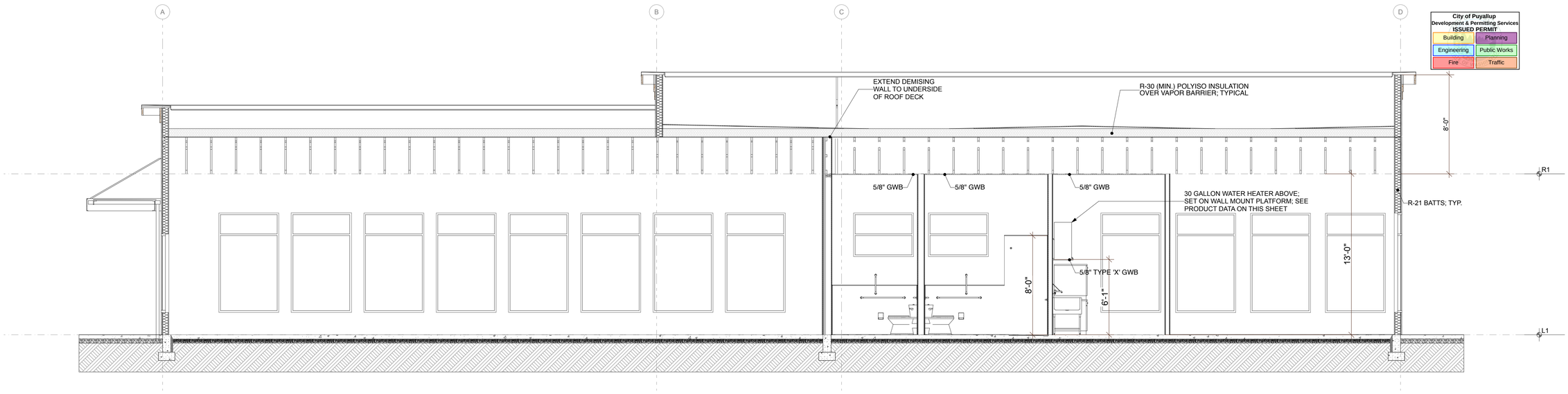
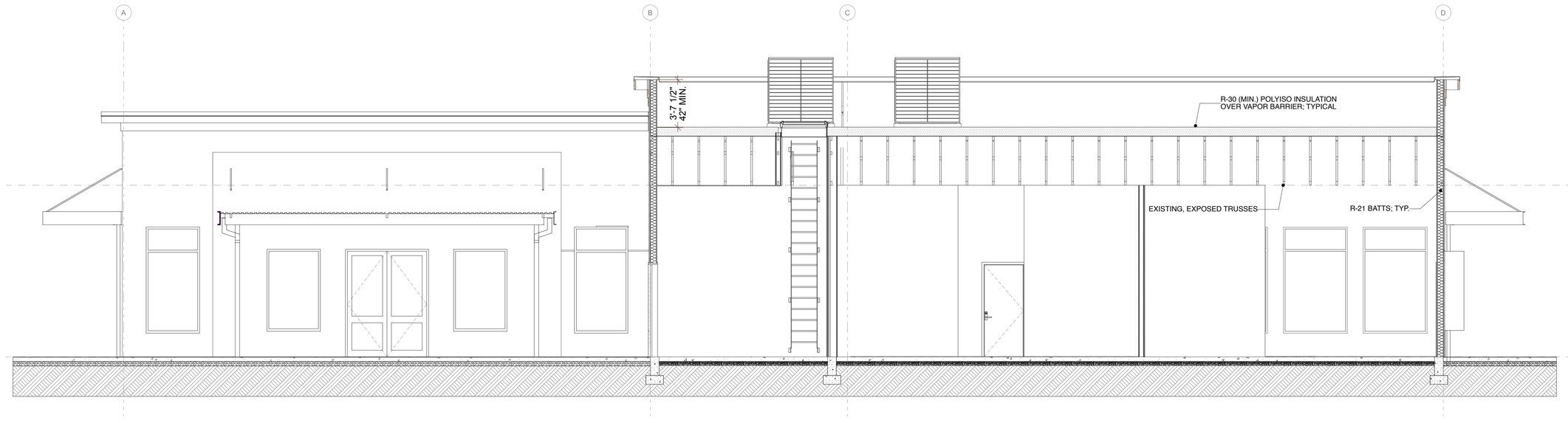
DRAWN BY:	CM / BL
CHECKED BY:	BL
DATE:	26.01.28
TITLE:	ELEVATIONS
PROJECT # :	2016-L1
SHEET:	A2.1



1 BUILDING SECTION 01

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



2 BUILDING SECTION 07

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

City of Puyallup
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Engineering	Public Works
Fire	Traffic

S9

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

REGISTERED ARCHITECT
BRETT LEVI LINDOW
STATE OF WASHINGTON
9251

PRCTI20251445

EAST TOWN CROSSING
COMMERCIAL LOT 1 - SUITE 2 T.I.
727 SHAW ROAD PUYALLUP WA

AGENCY REVIEW - REVISION #1 | 26.01.28

REVISIONS

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DRAWN BY:	CM / BL
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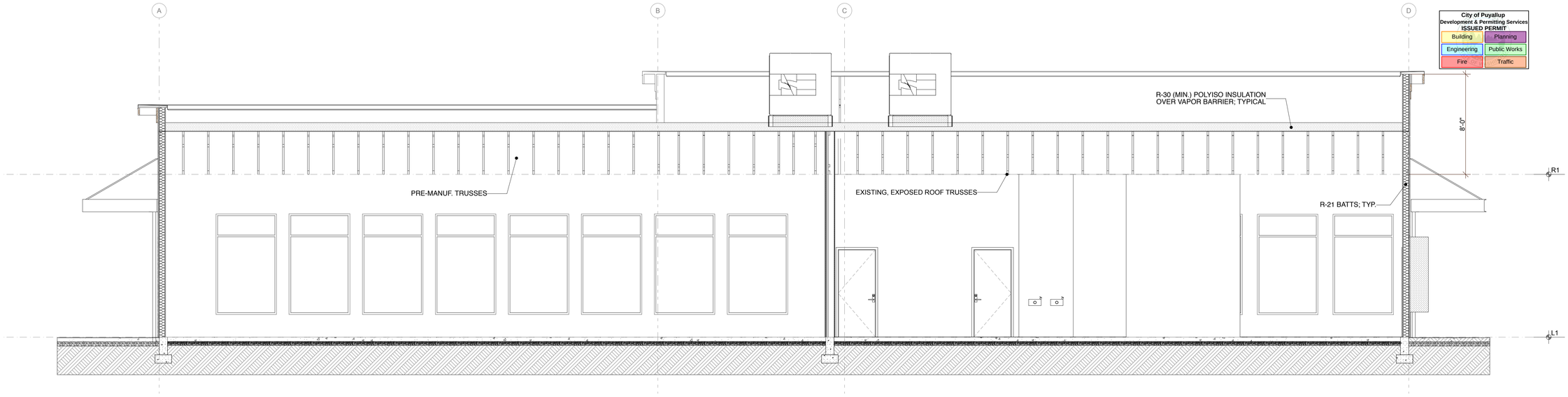
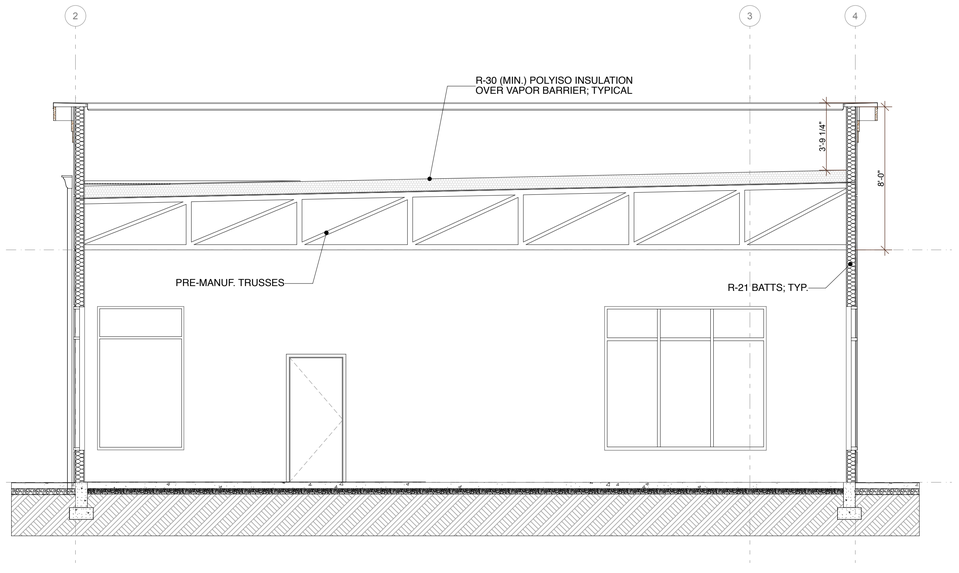
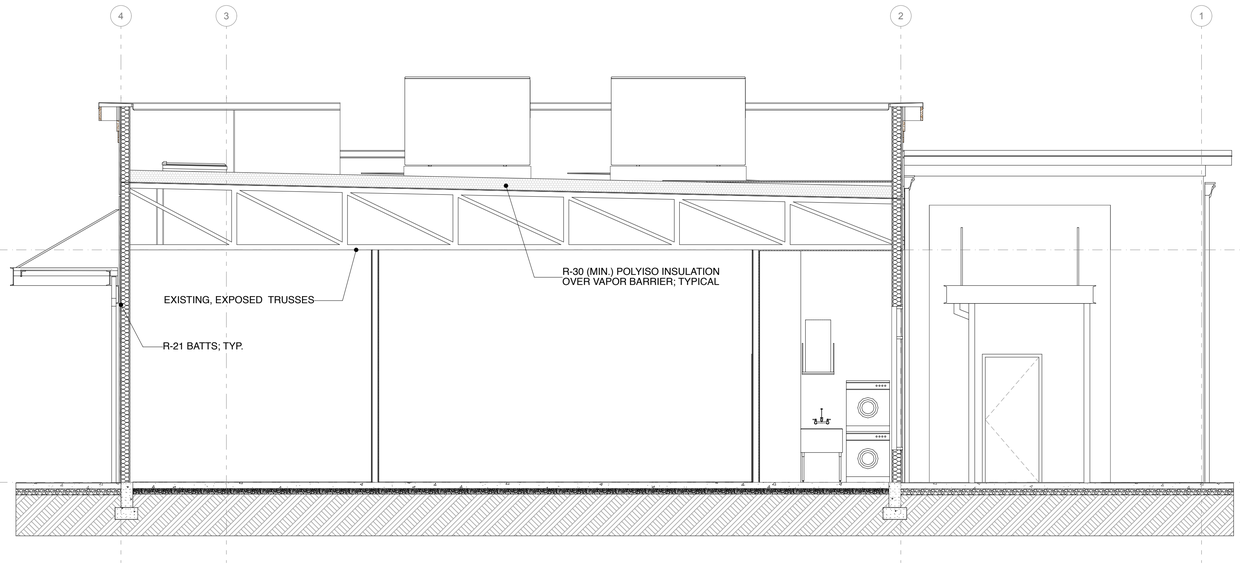
TITLE:	BUILDING SECTIONS
PROJECT # :	2016-L1
SHEET:	A3.0



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



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



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

City of Puyallup
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Building	Planning
Engineering	Public Works
Fire	Traffic

SYNTHESIS 9, LLC
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TACOMA, WA 98403

REGISTERED ARCHITECT
BRETT LEVI LINDAHL
STATE OF WASHINGTON
9251

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EAST TOWN CROSSING
COMMERCIAL LOT 1 - SUITE 2 T.I.
727 SHAW ROAD PUYALLUP WA

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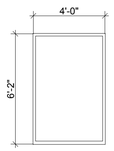
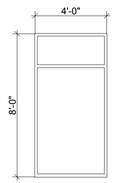
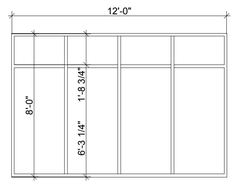
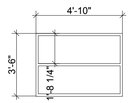
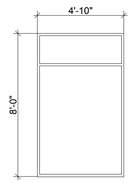
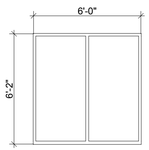
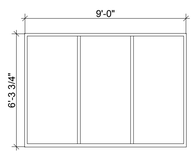
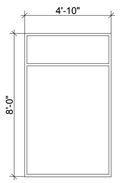
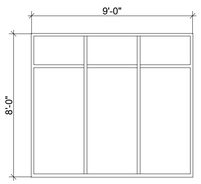
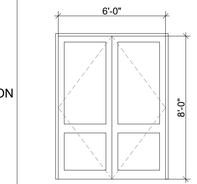
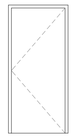
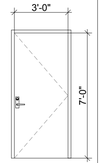
PROJECT # :	2016-L1
SHEET:	A3.1

WINDOW TYPES

ELEVATION									
TYPE	01	02	03	04	04	05	06	07	08
SIZE (W x H)	4'-0"×6'-2"	4'-0"×8'-0"	12'-0"×8'-0"	4'-10"×3'-6"	4'-10"×8'-0"	6'-0"×6'-2"	9'-0"×6'-3 3/4"	4'-10"×8'-0"	9'-0"×8'-0"
QUANTITY	2	2	1	2	13	2	2	2	1
U-VALUE	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
SHGC	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
NOTES						SAFETY GLAZING			

DOOR TYPES

ELEVATION			
TYPE	A	B	C
QUANTITY	3	3	3
FRAME	BLACK ANODIZED ALUM. STOREFRONT	HM	WOOD
PANEL	SAFETY GLAZED	INSULATED METAL	HCW
U-VALUE	0.60	0.37	N/A
SHGC	0.38	N/A	N/A
NOTES			PRIVACY LOCKS; PANIC HARDWARE

DOOR SCHEDULE

DOOR NUMBER	TYPE	ROOM	DOOR W x HT	NOTES
100A	A	SUITE 100	6'-0"×8'-0"	PANIC HARDWARE
100B	A	SUITE 100	6'-0"×8'-0"	PANIC HARDWARE
100C	B	SUITE 100	3'-0"×7'-0"	PANIC HARDWARE
102A	A	SUITE 102	6'-0"×8'-0"	PANIC HARDWARE
102B	B	SUITE 102	3'-0"×7'-0"	PANIC HARDWARE
401A	B	RISER ROOM	3'-0"×7'-0"	PANIC HARDWARE
G	C	BATHROOMS	3'-0"×7'-0"	PRIVACY LOCK; PANIC HARDWARE

DOOR SCHEDULE NOTES:

DOOR OPERATIONS PER IBC 1010.2.10 - EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

DOOR HARDWARE PER IBC 1010.2.2 - 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 IBC 1010.2.3 - 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 A117.1-2017 SECTION 303 - THRESHOLDS AT DOORWAYS SHALL BE 1/2" MAXIMUM IN HEIGHT.

DOOR CLOSERS PER ICC A117.1-2017 - 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 A117.1-2017 - 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

City of Puyallup
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REGISTERED ARCHITECT
BRETT L. LAWSON
STATE OF WASHINGTON
9251

PRCTI20251445

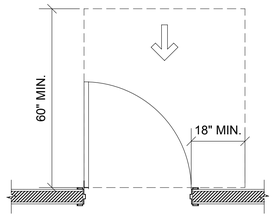
EAST TOWN CROSSING
COMMERCIAL LOT 1 - SUITE 2 T.I.
727 SHAW ROAD PUYALLUP WA

AGENCY REVIEW - REVISION #1 | 26.01.28

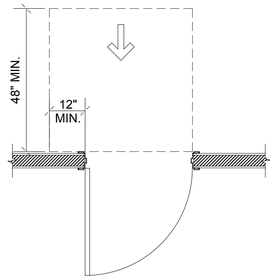
REVISIONS

REVISIONS

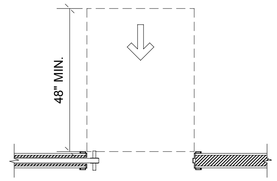
DRAWN BY:	CM / BL
CHECKED BY:	BL
DATE:	26.01.28
TITLE:	DOORS & WINDOWS
PROJECT # :	2016-L1
SHEET:	A4.0



FRONT APPROACH, PULL SIDE



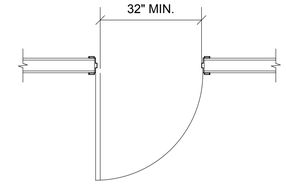
FRONT APPROACH, PUSH SIDE



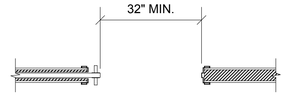
FRONT APPROACH, POCKET

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.

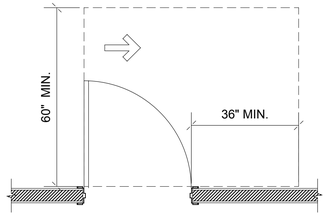


(A) HINGE DOOR

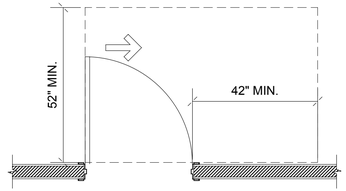


(B) SLIDING DOOR

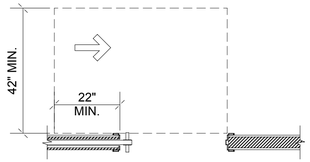
CLEAR WIDTH OF OPENINGS



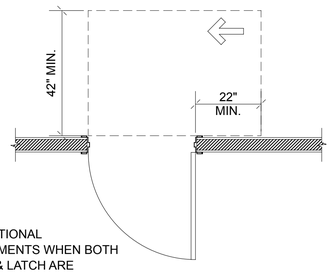
HINGE APPROACH, PULL SIDE



HINGE APPROACH, PULL SIDE

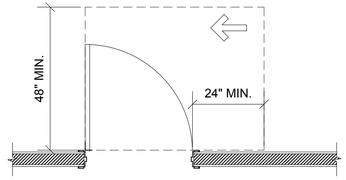


POCKET OR HINGE APPROACH



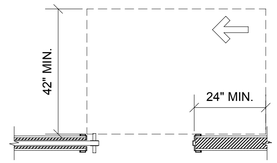
SEE ADDITIONAL REQUIREMENTS WHEN BOTH CLOSER & LATCH ARE PROVIDED PER FIGURE 404.2.3.2 (ON THIS SHEET)

HINGE APPROACH, PUSH SIDE

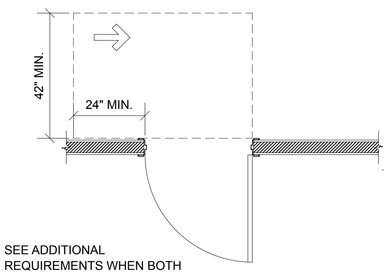


SEE ADDITIONAL REQUIREMENTS WHEN BOTH CLOSER & LATCH ARE PROVIDED PER FIGURE 404.2.3.2 (ON THIS SHEET)

LATCH APPROACH, PULL SIDE

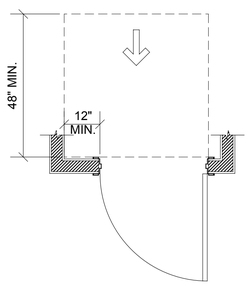


STOP OR LATCH APPROACH



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

TABLE 404.2.3.2—MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS

TYPE OF USE		MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS	
Approach Direction	Door Side	Perpendicular to Doorway	Parallel to Doorway (beyond latch unless noted)
From front	Pull	60 inches (1525 mm)	18 inches (455 mm)
From front	Push	48 inches (1220 mm)	0 inches (0 mm)[3]
From hinge side	Pull	60 inches (1525 mm)	36 inches (915 mm)
From hinge side	Pull	54 inches (1370 mm)	42 inches (1065 mm)
From hinge side	Push	42 inches (1065 mm)[1]	22 inches (560 mm)[3 & 4]
From latch side	Pull	48 inches (1220 mm)[2]	24 inches (610 mm)
From latch side	Push	42 inches (1065 mm)[2]	24 inches (610 mm)

[1]Add 6 inches (150 mm) if closer and latch provided.
[2]Add 6 inches (150 mm) if closer provided.
[3]Add 12 inches (305 mm) beyond latch if closer and latch provided.
[4]Beyond hinge side.

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

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

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

REGISTERED ARCHITECT
TIMOTHY L. MCMAHON
STATE OF WASHINGTON
9251

PRCTI20251445

EAST TOWN CROSSING
COMMERCIAL LOT 1 - SUITE 2 T.I.
727 SHAW ROAD PUYALLUP WA

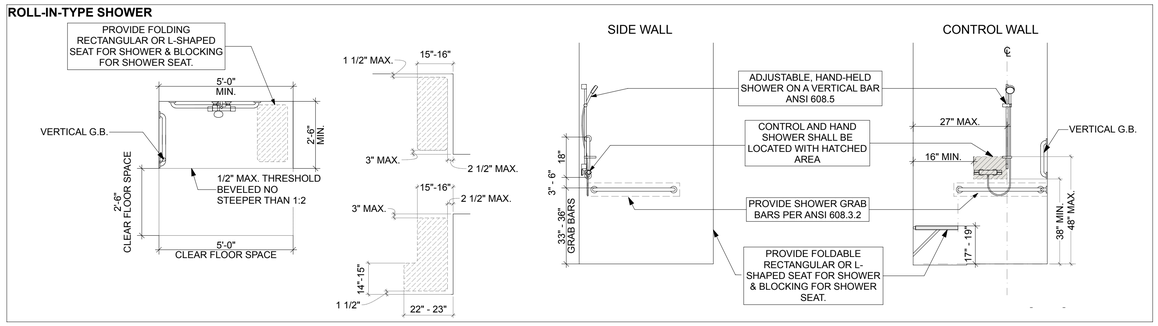
REVISIONS

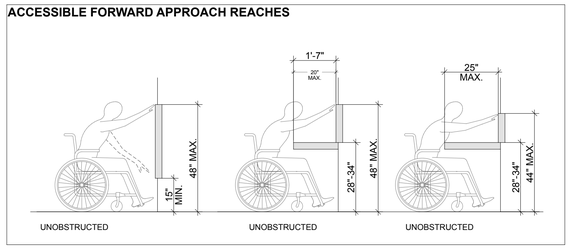
REVISIONS

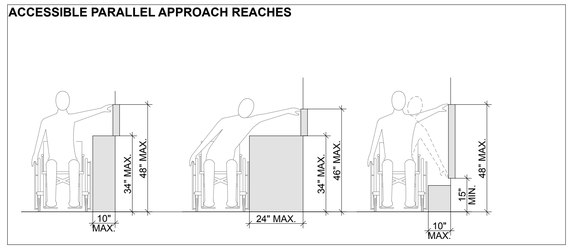
DRAWN BY: CM / BL
CHECKED BY: BL
DATE: 26.01.28
TITLE: ACCESSIBLE DOORS
PROJECT # : 2016-L1
SHEET:

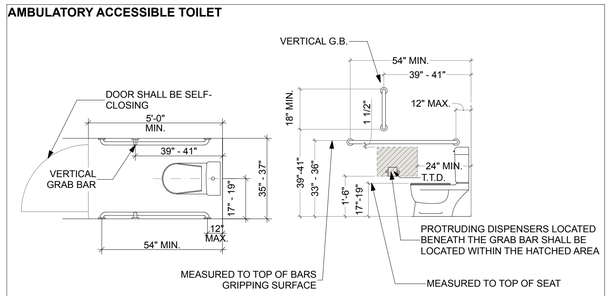
A4.1

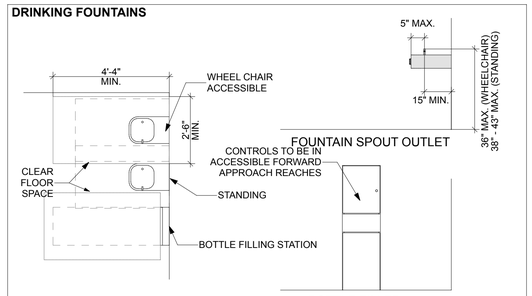
AGENCY REVIEW - REVISION #1 | 26.01.28

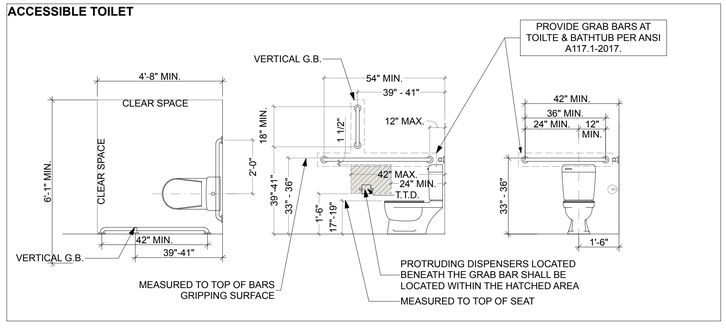


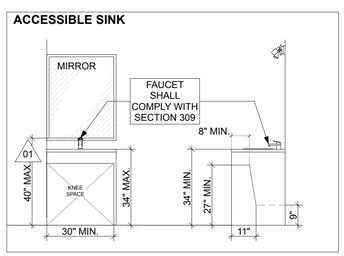


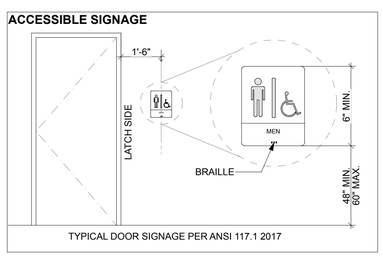




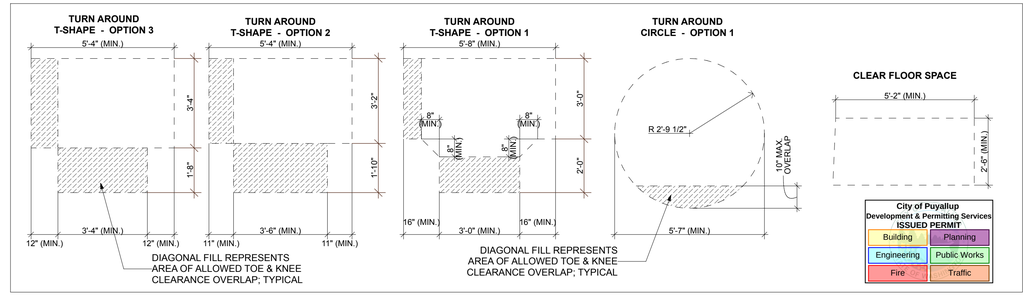




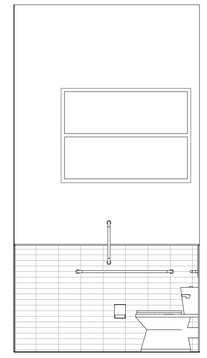




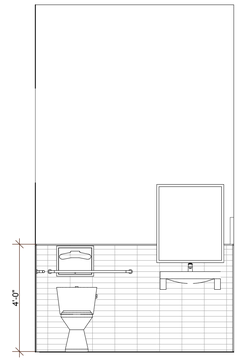
13 ACCESSIBLE FIXTURES
SCALE: 3/8" = 1'-0"



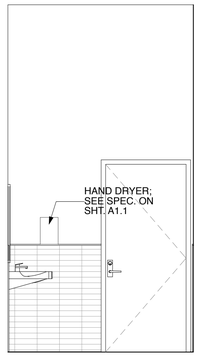
14 ACCESSIBLE CLEAR FLOOR SPACE & TURNING SPACE DIMENSIONS
SCALE: 3/8" = 1'-0"



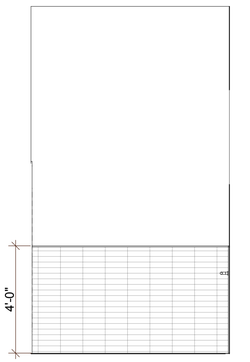
1 UNISEX - NORTH
SCALE: 3/8" = 1'-0"



2 UNISEX - EAST
SCALE: 3/8" = 1'-0"



3 UNISEX - SOUTH
SCALE: 3/8" = 1'-0"



4 UNISEX - WEST
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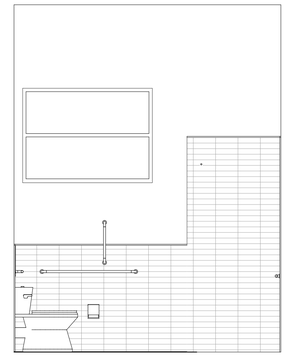

5 UNISEX/SHWR - NORTH
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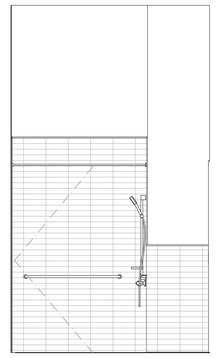
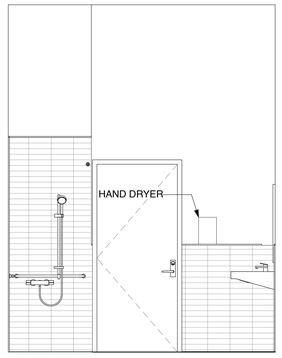


6 UNISEX/SHWR - EAST
SCALE: 3/8" = 1'-0"



7 UNISEX/SHWR - SOUTH
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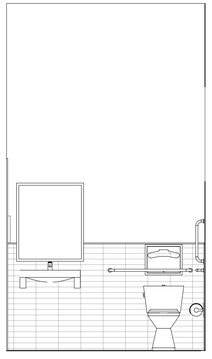
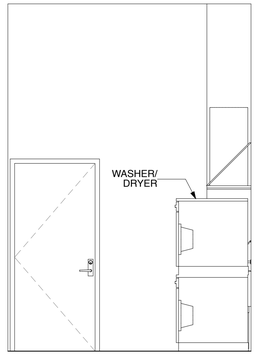
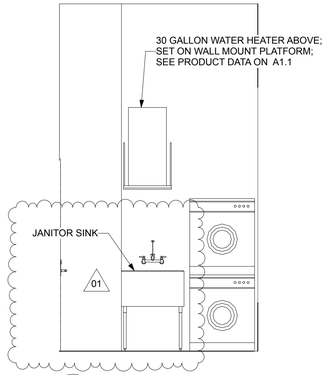


8 UNISEX/SHWR - WEST
SCALE: 3/8" = 1'-0"



9 LAUNDRY - NORTH
SCALE: 3/8" = 1'-0"



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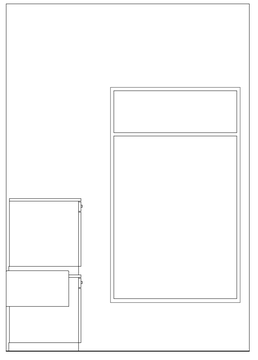

11 LAUNDRY - SOUTH
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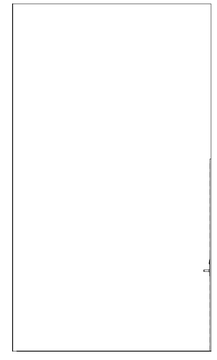

12 LAUNDRY - EAST
SCALE: 3/8" = 1'-0"

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

REGISTERED ARCHITECT
9251
STATE OF WASHINGTON

PRCTI20251445

EAST TOWN CROSSING
COMMERCIAL LOT 1 - SUITE 2 T.I.
727 SHAW ROAD PUYALLUP WA

AGENCY REVIEW - REVISION #1 | 26.01.28

REVISIONS

REVISIONS

DRAWN BY:	CM / BL
CHECKED BY:	BL
DATE:	26.01.28
TITLE:	INTERIOR ELEVATIONS
PROJECT # :	2016-L1
SHEET:	A5.0

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 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

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning | Engineering | Public Works | Fire | Traffic

PRCTI20251445

NO.	DATE	DESCRIPTION
		REVISIONS

ROBISON ENGINEERING, INC
15400 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
(206) 364-3343

JOSHUA J. OBRIEN — STATE OF WASHINGTON — 24011 — REGISTERED PROFESSIONAL ENGINEER — 06/25/2025

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

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

ROBISON ENGINEERING, INC
15400 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
PHONE(206)364-3343
REI PROJECT NO.: 810010
CONTACT: ARIK ESPINELI

DATE: 06/25/2025

SHEET TITLE: LEGEND, GENERAL NOTES, & DRAWING INDEX

SHEET NO. **M0.0**

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

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>.

FAN SCHEDULE

EQUIP NO.	SERVICE	TYPE	AIRFLOW, CFM	ESP. IN WG	ELECTRICAL		OPERATION	WEIGHT, LBS	BASIS OF DESIGN (1)
					VOLTAGE	HP			
EF-1	BATHROOM	ROOFTOP	350	0.5	115V/1P	1/10	CONTINIOUS	30	GREENHECK CUE-090-VG

NOTES: (1) PROVIDE BACKDRAFT DAMPERS ON EXHAUST FANS.

PUBLIC SPACES OUTSIDE AIR VENTILATION CALCULATIONS (1)

ROOM	ROOM SQUARE FOOTAGE	ROOM OCCUPANTS	MINIMUM CFM PER SQUARE FOOT	MINIMUM CFM PER PERSON	MINIMUM REQUIRED CFM BY AREA	MINIMUM REQUIRED CFM BY PERSON	TOTAL REQUIRED OSA CFM (AREA + PEOPLE)	TOTAL OSA CFM PROVIDED
LOBBY/ RECEPTION	308	10	0.06	5	18	50	68	100
TRAINING AREA	378	10	0.06	20	23	200	223	250

NOTES: (1) VENTILATION RATES ARE PER THE 2018 IMC, TABLE 403.4.2.
(2) OUTSIDE AIR TO ROOM PROVIDED VIA ENERGY RECOVERY VENTILATOR (ERV-4).
(3) OUTSIDE AIR TO ROOM PROVIDED VIA ENERGY RECOVERY VENTILATOR (ERV-5).

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.

REVISIONS

NO.	DATE	DESCRIPTION

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 PH.

JACOB J. OBERLIN
STATE OF WASHINGTON
21913
REGISTERED
PROFESSIONAL ENGINEER
06/25/2025

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: 06/25/2025

SHEET TITLE: MECHANICAL SCHEDULES

SHEET NO. **M0.1**

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

PRCTI20251445

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

BOD 250 SF/TON
2332/ 250 = 11.57 TONS

PROVIDE:
X2 6 TON RTU

TENANT #1
100
A: 2,914 sq ft

DUCTWORK, RETURN, SUPPLY, DAMPERS, AND VENTILATION TO BE INSTALLED UNDER FUTURE PERMIT.

CONTRACTOR NOTE
Tenant space #1 will require tenant improvement permit prior to work being performed

ENLARGED PLAN

6' RND DRYER EXHAUST DUCT UP THRU ROOF

UNISEX
UNISEX WITH SHOWER
LAUNDRY
W/D
HEG-1 75
HEG-1 100
6ø
8ø
12ø
CD-2 400
RG-1 2400
22ø
25x12 RETURN AIR DUCT PROVIDE S.O
TO RTU-3
TRAINING AREA
TENANT #2
102
A: 1,922 sq ft
14ø
SAUNA #4
SAUNA #5
SAUNA #10
SAUNA #3
SAUNA #6
SAUNA #9
SAUNA #7
SAUNA #8
SAUNA #1
20ø
12x17 SUPPLY AIR DUCT UP THRU ROOF (TYP).
TO RTU-4
CD-2 480
LOBBY / RECEPTION
16ø
RISER RM
401
SF:74 sq ft
EWH-1.0

NO.	DATE	DESCRIPTION
		REVISIONS

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LYNNWOOD, WA 98036
206.364.3343 PH.

JACOB J. OBERLIN
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
06/25/2025

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
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LYNNWOOD, WA 98036
PHONE:(206)364.3343
REI PROJECT NO. 810010
CONTACT: ARIK ESPINELI

DATE:
06/25/2025

SHEET TITLE:
HVAC PLAN FLOOR PLAN

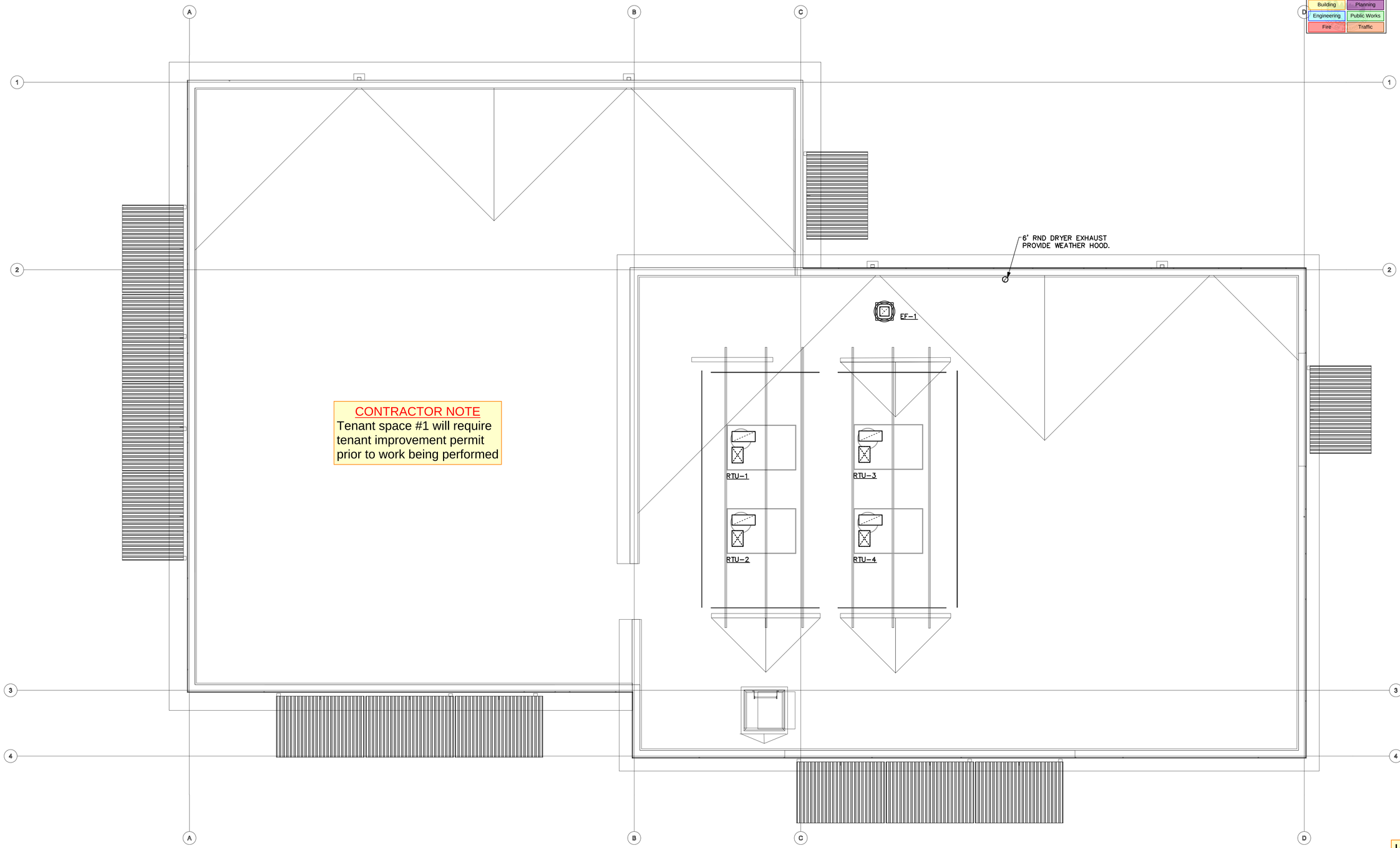
SHEET NO.
M2.0

PRCTI20251445

HVAC FLOOR PLAN

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

ASPINELI F:\810 SYNTHESIS 8\810-010 EAST TOWN CROSSING\DWG\LOT 1\M200 FLOOR PLANS.DWG 05-31-2024 09:06



CONTRACTOR NOTE
Tenant space #1 will require tenant improvement permit prior to work being performed

HVAC ROOF PLAN
SCALE: 1/4" = 1'-0"

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

NO.	DATE	DESCRIPTION

REVISIONS

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 PH.

JACOB J. OBERLIN
STATE OF WASHINGTON
EXPIRES 1/31/2026
REGISTERED PROFESSIONAL ENGINEER
06/25/2025

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

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

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

DATE: 06/25/2025

SHEET TITLE: HVAC PLAN ROOF PLAN

SHEET NO.
M2.1

PRCTI20251445

WHELSON P:\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.

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning | Engineering | Public Works | Fire | Traffic

APPLICABLE CODES

THE FOLLOWING PROJECT DESIGN IS BASED ON THE FOLLOWING CODES:

-2021 INTERNATIONAL STATE BUILDING CODE (IBC) WITH WASHINGTON STATE AMENDMENTS
-2021 INTERNATIONAL MECHANICAL CODE (CMC) WITH WASHINGTON STATE AMENDMENTS
-2021 UNIFORM PLUMBING CODE (UPC) WITH WASHINGTON STATE AMENDMENTS
-2021 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.

DRAWING INDEX

NO.	DATE	REVISIONS DESCRIPTION
1.	6/20/25	PERMIT RESUBMITTAL
2.	7/17/25	PLAN CHECK COMMENTS

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

REED JACKSON — STATE OF WASHINGTON — JEFFREY A. MacGILLIVRAY — REGISTERED PROFESSIONAL ENGINEER — 06/20/2025

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
08/11/2025

SHEET TITLE:
LEGEND, GENERAL NOTES, AND DRAWING INDEX

SHEET NO.
P0.00

PRCT20251445

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

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 C404.6 (COMMERCIAL) 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

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

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
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NO.	DATE	REVISIONS
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2.	7/17/25	PLAN CHECK COMMENTS

ROBISON ENGINEERING, INC
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LYNNWOOD, WA 98036
206-364-3343 TEL
CONTACT: JEFF MacGILLIVRAY

REED JACKSON — STATE OF WASHINGTON — 22007 — REGISTERED PROFESSIONAL ENGINEER
06/27/2025

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
08/11/2025

SHEET TITLE:
PLUMBING NOTES AND TABLES

SHEET NO.
P0.01

PRCT20251445

PLUMBING CALCULATIONS

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 PROVIDED	30	30	0	40	1	0	1	30	30	0	40
- DRINKING FOUNTAIN	*0.5*	*0.5*	*0*	*1*	*2*	*0*	*2*	*1*	*1*	*0*	*2*
- WATER CLOSET (FLUSH VALVE)	*5*	*5*	*0*	*4*	*2*	*0*	*2*	*10*	*10*	*0*	*8*
- LAVATOARY	*1*	*0.75*	*0.75*	*1*	*2*	*0*	*2*	*2*	*1.5*	*1.5*	*2*
- MOP SINK	*3*	*2.25*	*2.25*	*3*	*1*	*0*	*1*	*3*	*2.25*	*2.25*	*3*
- ACTUAL SUITE 2 USE								*16*	*14.75*	*3.75*	*15*
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	93	7.5	96

	TOTAL	CW	HW	W/V
TOTAL FIXTURE UNITS:	63.5	93	7.5	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

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PIONEER WAY & SHAW RD. PUYALLUP, WA

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PERMIT PLANS

08/11/2025

SHEET TITLE:
PLUMBING CALCULATIONS

SHEET NO.
P0.02

PRCTI20251445

PLUMBING SCHEDULES

SUPPLY PIPE SIZING SCHEDULE - CPVC

PIPE SIZE	COLD WATER, FLUSH TANK			COLD WATER, FLUSH VALVE			HOT WATER			FRICTION LOSS FACTOR: 7.0 PSI/100 FT 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

FIXTURE SCHEDULE

PLAN MARK	FIXTURE TYPE	SERVICE SIZE - INCHES CW	HW	W	V	LOCATION	FINISH	MANUFACTURER	BASIS OF DESIGN MODEL	FLOW RATE, GPM	NOTES
SH-1	SHOWER	1/2	1/2	2	1-1/2	PER DWGS.	TBD	TBD	TBD	1.8 GPM	1-5,7
	IN-WALL VALVE						TBD	TBD	TBD		
	TRIM KIT						TBD	TBD	TBD		
LV-1	LAVATORY	1/2	1/2	1-1/2	1-1/2	PER DWGS.	TBD	TBD	TBD	0.5 GPM	1-5
	FAUCET						TBD	TBD	TBD		
WC-1	WATER CLOSET (VALVE)	1 1/4"	---	3	2	PER DWGS.	TBD	TBD	TBD	1.28 GPF	1-6
	SEAT						TBD	TBD	TBD		
WB-1	WASHER BOX	3/4	3/4	2	1-1/2	PER DWGS.	TBD	TBD	TBD	N/A	1-5
HB-1	WALL HYDRANT	3/4	---	---	---	PER DWGS.	N/A	WOODFORD	B65	N/A	1-3,5,8

NOTES:

1. REFER TO ARCH PLANS FOR MOUNTING HEIGHT.
2. CONTRACTOR SHALL CONFIRM MAKE, MODEL, AND FINISH OF ALL FIXTURES WITH OWNER, ARCHITECT, AND INTERIOR DESIGNER PRIOR TO ORDERING.
3. PROVIDE RED/HOT AND BLUE/COLD WATER INDICATORS TO ALL FIXTURES.
4. ALL FIXTURE P-TRAPS SHALL BE CHROME-PLATED BRASS.
5. PROVIDE DAHL 1/4-TURN BALL VALVE ANGLE STOPS WITH BRAIDED STAINLESS STEEL FLEX CONNECTORS AT HOT AND COLD WATER SUPPLY TO EACH FIXTURE EXCEPT SHOWERS AND BATHS. PROVIDE SCREWDRIVER STOPS AT SHOWERS AND BATHS.
6. FLUSH TRIGGER SHALL BE ON WIDE SIDE OF ROOM.
7. SHOWERS AND TUB-SHOWER COMBINATIONS SHALL BE PROVIDED WITH MIXING VALVES PER UPC SECTION 408.3.
8. PROVIDE LOCKABLE BOX.

EXPANSION TANK

EQUIP NO.	SERVICE	CAPACITY (GAL)	TANK SIZE DIAMETER (INCHES)	TANK SIZE HEIGHT (INCHES)	OPERATING WEIGHT (LBS)	BASIS OF DESIGN	NOTES
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.

ELECTRIC WATER HEATER

EQUIP NO.	SERVICE	GPH RECOVERY AT 100°F TR	STORAGE (GAL)	INLET/OUTLET CONNECTION	OPERATING WEIGHT (LBS)	ELECTRICAL VOLTAGE	ELECTRICAL HEATER KW	BASIS OF DESIGN	NOTES
WH-1	HOT WATER	49	30	¾"	470	208V/3P	12	A.O. SMITH LAC-30-208-12	1,2

NOTES:

1. ELECTRICAL REQUIREMENTS ARE BASED ON NON-SIMULTANEOUS OPERATION.
2. FOR WATER HEATER PIPING DIAGRAM SEE DETAIL 1/P4.0.

HOT WATER CIRCULATION PUMP

EQUIP NO.	SERVICE	TYPE	FLOW, GPM	HEAD, FT	PUMP RPM	ELECTRICAL VOLTAGE	ELECTRICAL HP	WEIGHT, LBS	BASIS OF DESIGN	NOTES
HWCP-1	HOT WATER	INLINE	0.5	2	VARIABLE	208/1P	0.1	40	ECOCIRC 20-18	1,2

NOTES:

1. STAINLESS STEEL, SUITABLE FOR POTABLE WATER APPLICATION.
2. ALL DOMESTIC WATER EQUIPMENT SHALL BE NSF-61 LISTED.

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REED JACKSON — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 06/27/2025

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

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PERMIT PLANS
08/11/2025

SHEET TITLE:
PLUMBING SCHEDULES

SHEET NO.
P0.03

PRCT120251445

SCOPE OF WORK

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'
ROOF AREA = 8,618 sq ft

BLD'G 'G'
3-STORY / 24 UNITS
12-(1) BEDRMS
12-(2) BEDRMS
FF = 77.10'
ROOF AREA = 8,496 sq ft

BLD'G 'D'
3-STORY / 24 UNITS
12-(2) BEDRMS
12-(3) BEDRMS
FF = 77.10'
ROOF AREA = 11,486 sq ft

BLD'G 'C'
3-STORY / 24 UNITS
12-(2) BEDRMS
12-(3) BEDRMS
FF = 77.10'
ROOF AREA = 11,394 sq ft

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

LOT 1 COMMERCIAL BUILDING
FF = 73.60'
5,366 sq ft

LOT 2 COMMERCIAL BUILDING
FF = 73.70'
3,885 sq ft

74,470 sq ft

PLAY AREA 2,642 sq ft

COVERED MAILBOXES, ADA BUS STOP & RECYCLE

COURT A-11,441 sq ft

COURT B-11,340 sq ft

PROPERTY LINE (NEW)

USE PATH

GATE

OUTLINE OF BUILDING OVERHANG ABOVE

ORNAMENTAL 6-FT FENCE

CHAINLINK 6-FT FENCE

EXERCISE EQUIP., TYP.

SCULPTURE, TYP.

PICNIC TABLE, TYP.

BENCH, TYP.

GREASE INTERCEPTOR

(2) BIKE RACK

BIKE PARKING

TRASH ENCLOSURE WITH COMPACTOR

TRASH ENCLOSURE

GAS EQUIPMENT WITH BOLLARDS

ELECTRICAL EQUIPMENT

GAS EQUIPMENT

BIKE RACKS

RESTROOM

PHASE 1 10-ft BUILDING STREAM BUFFER SETBCK

PHASE 1 50-ft STREAM BUFFER

PIONEER

HYDRANT W/ FDC

D CONNECTION WITH NEIGHBOR

ELECT. PANEL

RISER ROOM

TELECOM ROOM

FIRERISER

DOMESTICRISER

P.I.V.

SP1

SP2

SP3

SP4

SP5

SP6

SP7

SP8

SP9

SP10

SP11

SP12

SP13

SP14

SP15

SP16

SP17

SP18

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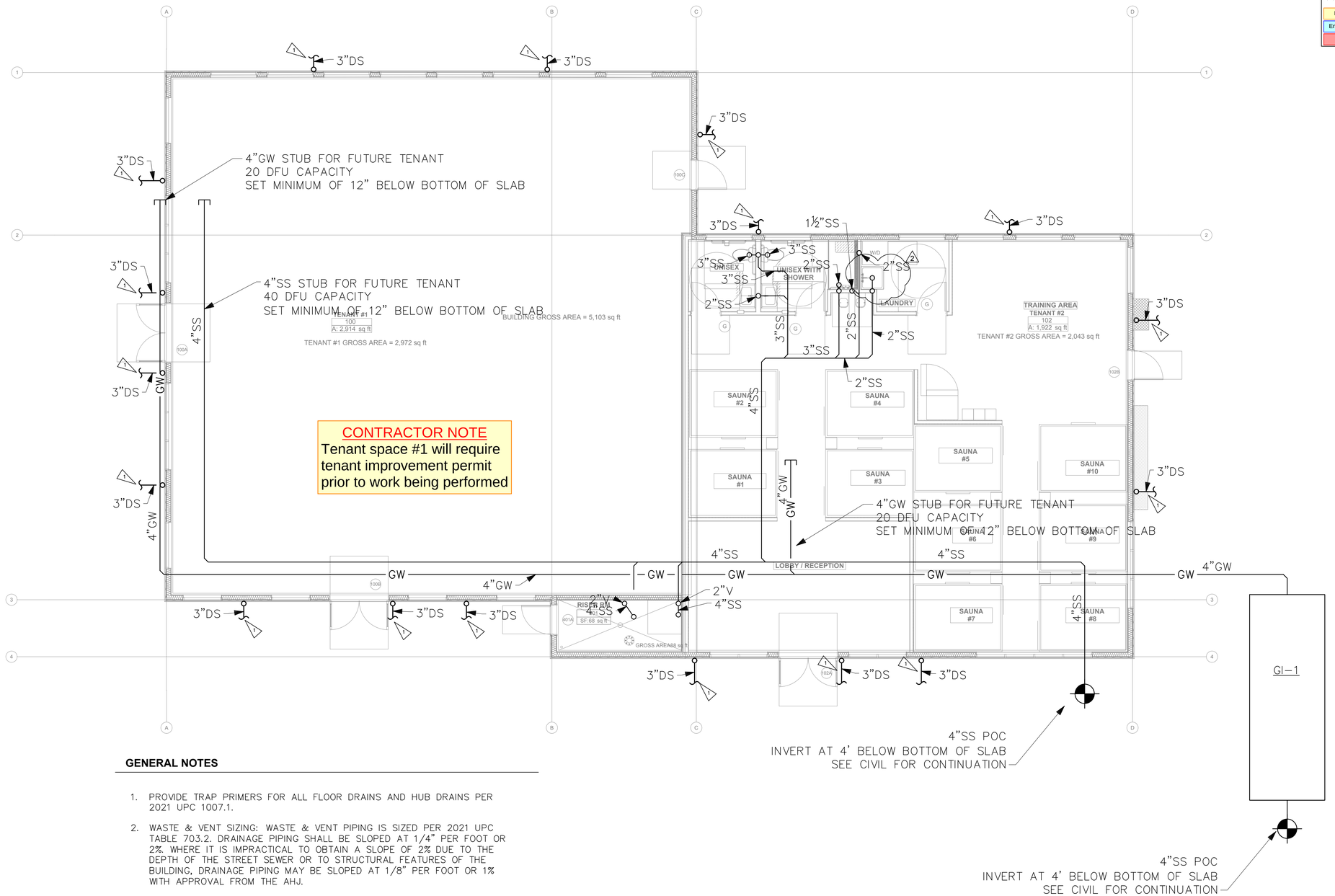
SP36

SP37

SP38

SP39

SP40



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"

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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
08/11/2025

SHEET TITLE:
LOT 1 – UNDERSLAB WASTE & VENT PLAN

SHEET NO.
P2.00

PRCTI20251445

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

CONTRACTOR NOTE
Tenant space #1 will require tenant improvement permit prior to work being performed

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

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

REVISIONS			
NO.	DATE	DESCRIPTION	
1.	6/26/25	PERMIT RESUBMITTAL	
2.	7/17/25	PLAN CHECK COMMENTS	

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

REED JACKSON
STATE OF WASHINGTON
21027
REGISTERED
PROFESSIONAL ENGINEER
06/27/2025

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

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

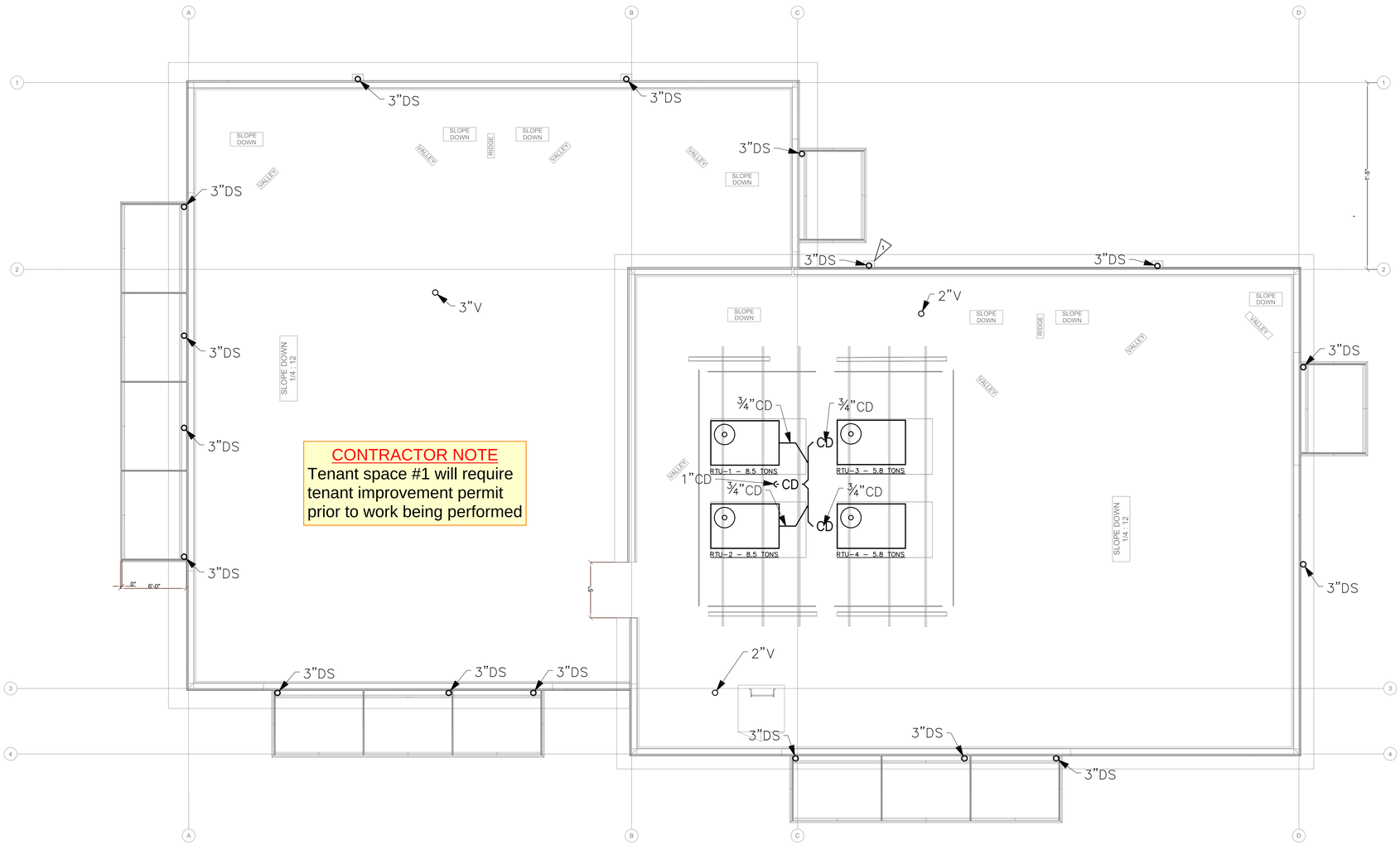
ROBISON ENGINEERING, INC
19401 40TH AVE W. SUITE 302
LYNNWOOD, WA 98036
PHONE:(206)364-3343

PERMIT PLANS
08/11/2025

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

SHEET NO.
P2.01

PRCTI20251445



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8"	3,600 DFU	2,112 DFU	3,600 DFU

⚠1 DOWNSPOUTS LOCATIONS COORDINATED WITH ARCH.

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

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

NO.	DATE	REVISIONS DESCRIPTION
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2.	7/17/25	PLAN CHECK COMMENTS

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LYNNWOOD, WA 98036
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CONTACT: JEFF MacGILLIVRAY

REED JACKSON — STATE OF WASHINGTON — 24202 — REGISTERED PROFESSIONAL ENGINEER — 06/27/2025

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

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

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PERMIT PLANS
08/11/2025

SHEET TITLE:
LOT 1 – ROOF WASTE & VENT PLAN

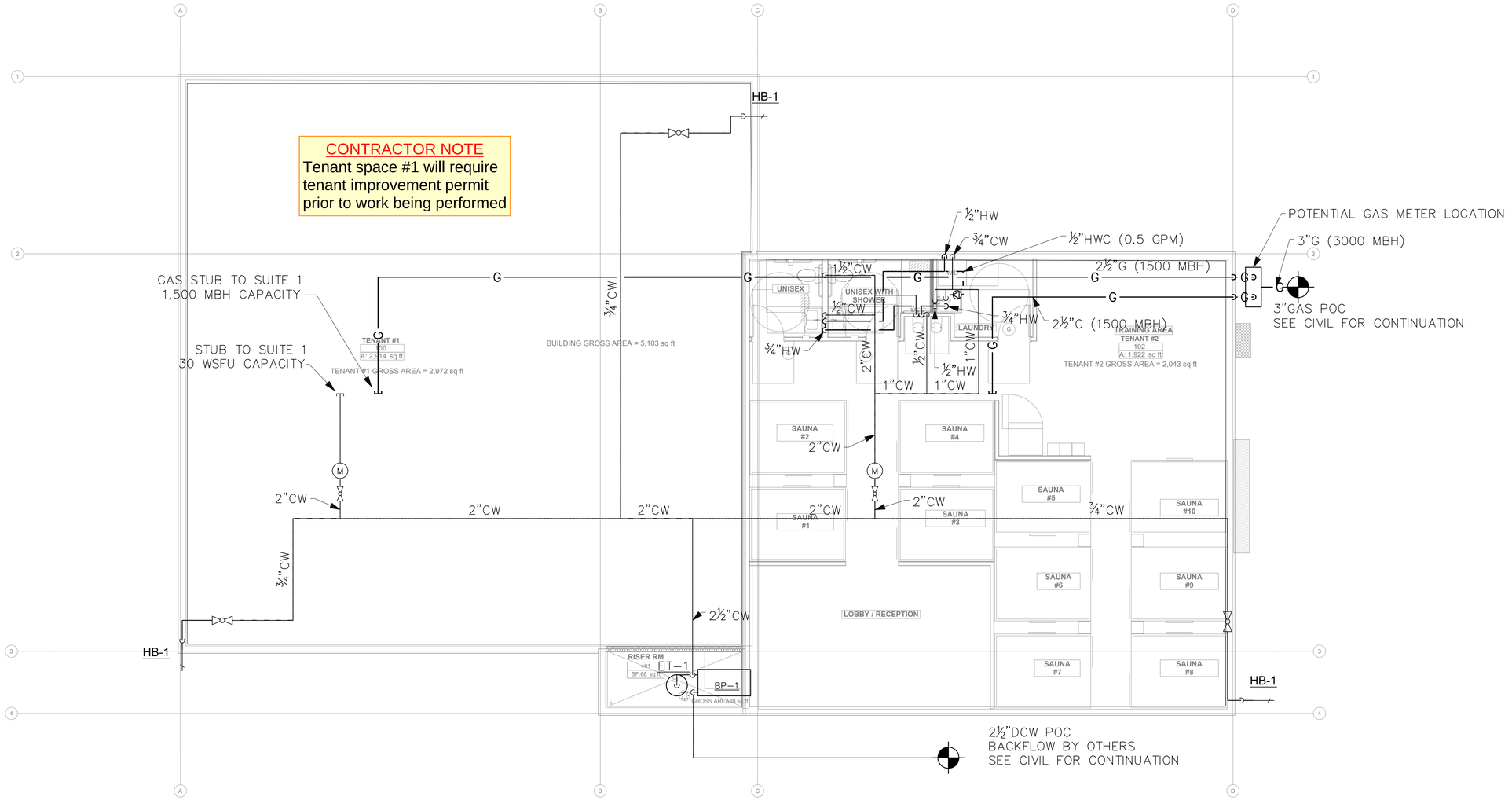
SHEET NO.
P2.02

PRCTI20251445

J:\MACGILLIVRAY F_BIG SYNTHESIS 9_BIG-DIG EAST TOWN CROSSING\DWG\LOT 1\P200 – WASTE.DWG 01-13-2026 11:26

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic



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"

REVISIONS			
NO.	DATE	DESCRIPTION	
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19401 40TH AVE W., SUITE 302
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STATE OF WASHINGTON
REGISTERED
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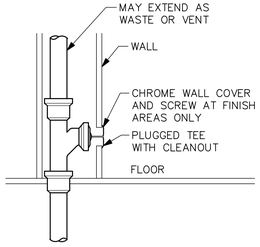
PERMIT PLANS
08/11/2025

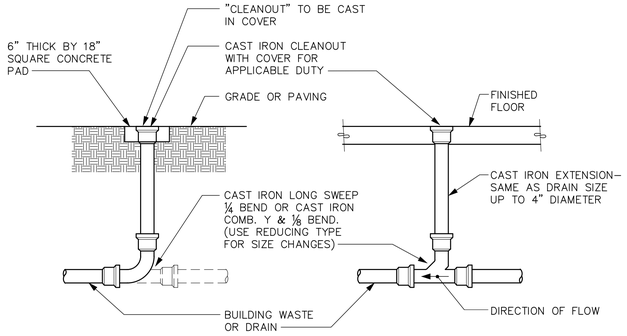
SHEET TITLE:
LOT 1 – FLOOR 1
SUPPLY PLAN

SHEET NO.
P3.01

PRCTI20251445



INTERIOR WALL CLEANOUT (WCO)



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

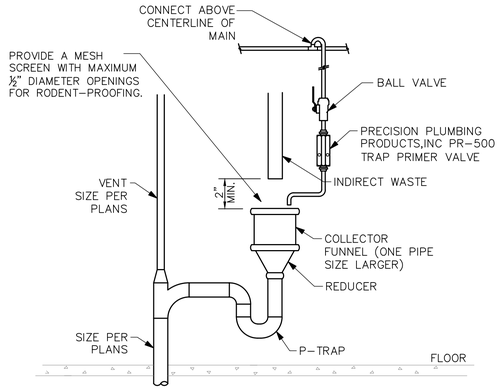
INTERIOR FLOOR CLEANOUT (FCO)

CLEANOUTS

DETAIL

SCALE: NONE

6 / P4.00

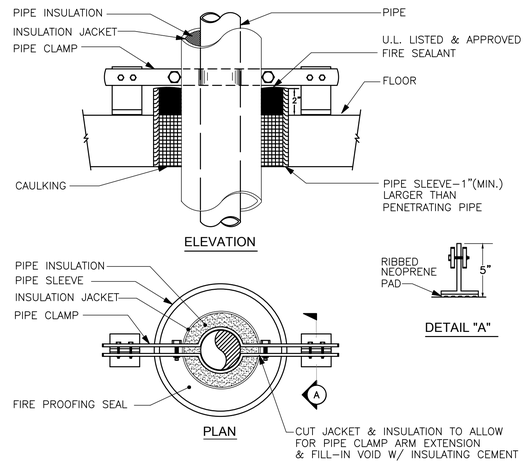


HUB DRAIN

DETAIL

SCALE: NONE

5 / P4.00

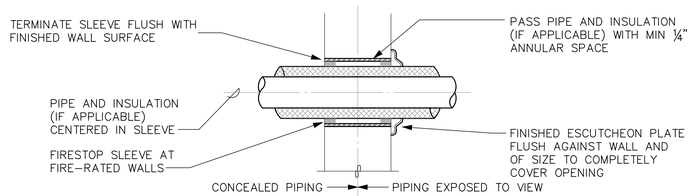


RISER PIPE SUPPORT

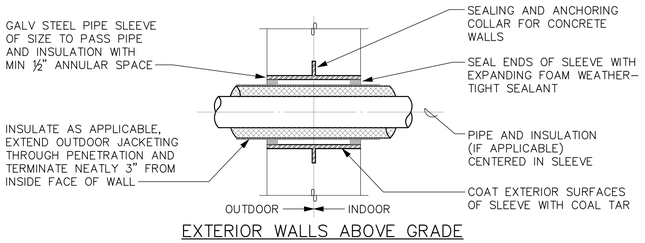
DETAIL

SCALE: NONE

4 / P4.00



INTERIOR WALLS



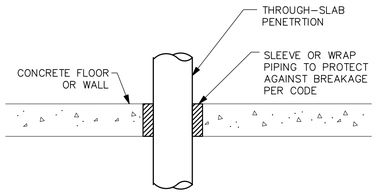
EXTERIOR WALLS ABOVE GRADE

PIPE SLEEVES THROUGH WALLS

DETAIL

SCALE: NONE

3 / P4.00

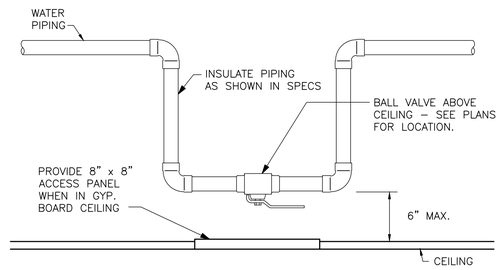


PIPE SLAB PENETRATION

DETAIL

SCALE: NONE

2 / P4.00



TYPICAL VALVE PLACEMENT

DETAIL

SCALE: NONE

1 / P4.00

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

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CONTACT: JEFF MacGILLIVRAY

REED JACKSON — STATE OF WASHINGTON — 21009 — REGISTERED — PROFESSIONAL ENGINEER — 06/27/2025

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

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PERMIT PLANS
08/11/2025

SHEET TITLE:
DETAILS

SHEET NO.
P4.00

PRCTI20251445

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Development & Permitting Services
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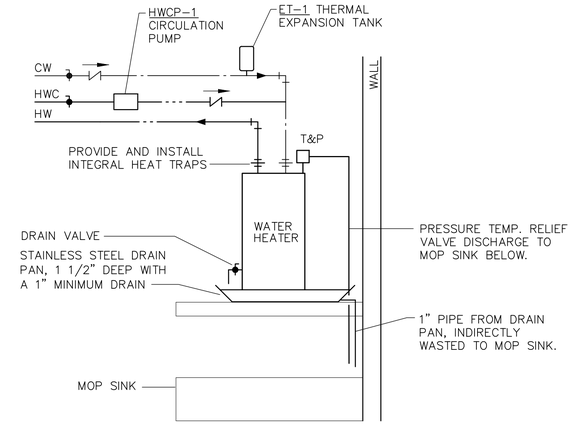
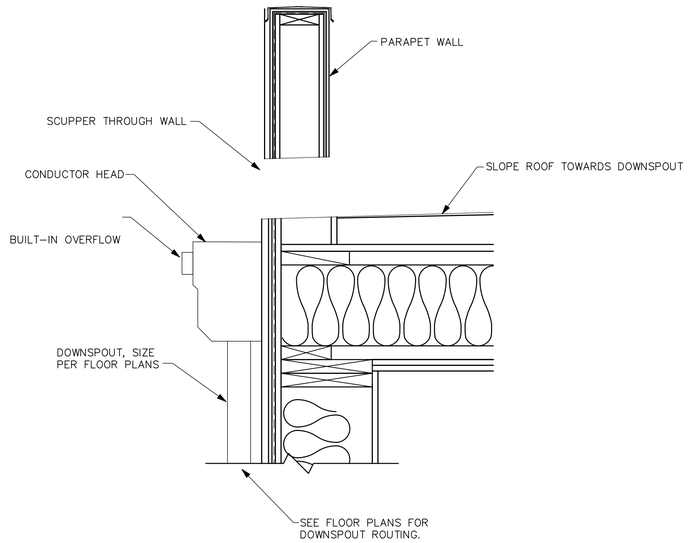


WATER HEATER INSTALLATION

DETAIL

SCALE: NONE

4
P4.01

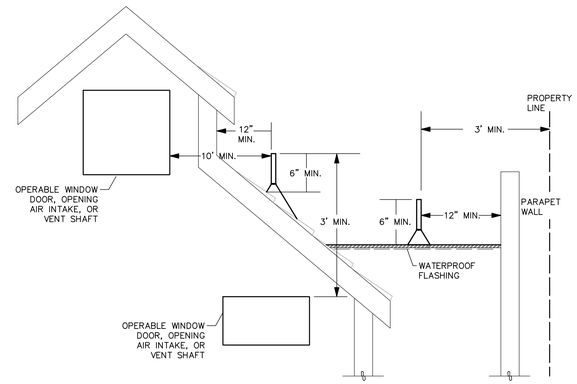


VENT TERMINATION

DETAIL

SCALE: NONE

3
P4.01

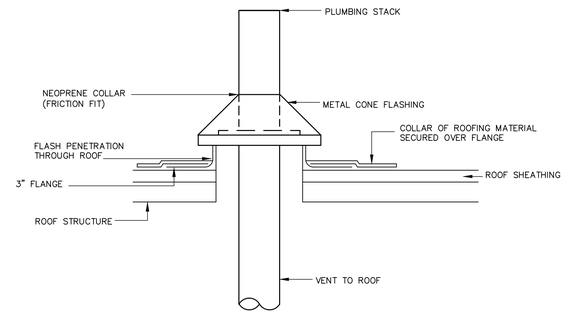


VENT TERMINATION

DETAIL

SCALE: NONE

2
P4.01



VENT THROUGH ROOF

DETAIL

SCALE: NONE

1
P4.01

PRCTI20251445

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CONTACT: JEFF MacGILLIVRAY

REED JACKSON
STATE OF WASHINGTON
21809
REGISTERED
PROFESSIONAL ENGINEER
06/27/2025

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

PROJECT:
EAST TOWN CROSSING
MULTIFAMILY DEVELOPMENT
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PERMIT PLANS

08/11/2025

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

LIGHTING

L10 , A 2–32 — FIXTURE IDENTIFICATION SYMBOL (TYPE A, (2) 32 WATT LAMPS SHOWN) SEE SCHEDULE SEE LUMINAIRE SCHEDULE FOR FIXTURE SYMBOLS

SWITCHES

S_a	SWITCH, SINGLE POLE; WITH SWITCHING SUBSCRIPT
S_{OS}	OCCUPANCY SENSOR SWITCH, PROXIMITY INFRARED
S_D	SWITCH, SINGLE POLE; WITH SWITCHING SUBSCRIPT "D" INDICATES WALLBOX DIMMER
S_{OS}	CEILING MOUNTED OCCUPANCY SENSOR
S_{AL}	CEILING MOUNTED AMBIENT LIGHT SENSOR
S_{DT}	WALL MOUNTED DUAL TECHNOLOGY OCCUPANT SENSOR
S_T	SWITCH, TIMER.
S_2	SWITCH, TWO POLE.

RECEPTACLES

	SINGLE RECEPTACLE
	DUPLEX RECEPTACLE: WALL MOUNTED, +18" AFF
$_a$	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
	FLOOR BOX ONE DUPLEX RECEPTACLE + ONE DATA
	FLOOR BOX ONE DUPLEX RECEPTACLE + ONE DATA + ONE VOICE
	SPECIAL PURPOSE RECEPTACLE, AS NOTED

MISCELLANEOUS

	JUNCTION BOX: 4SQ MOUNTED JUNCTION BOX: 4SQ WALL MOUNTED JUNCTION BOX: 4SQ TRACK
	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
	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

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

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

DWG	DESCRIPTION	INCLUDED IN SET: PERMIT SET 06/30/25
E0.0	LEGEND, GENERAL NOTES, DRAWING INDEX	X
E0.1	PROJECT NOTES	X
E0.2	ONE–LINE DIAGRAM, FEEDER, & FAULT SCHEDULES	X
E0.3	PANEL SCHEDULES	X
E0.4	LIGHTING NOTES & SCHEDULE	X
E0.5	LIGHTING NOTES	X
E1.0	SITE PLAN – ELECTRICAL	X
E3.0	LEVEL 1 LIGHTING AND POWER	X
E3.1	LEVEL 2/ROOF LIGHTING AND POWER	X
E4.0	ENERGY COMPLIANCE FORMS	X

NO.	DATE	REVISIONS
	12/31/24	PERMIT SET
	02/20/25	STREET LIGHTING REVISIONS
	04/22/25	PERMIT SET 3
	07/03/25	PERMIT SET 4

ROBISON ENGINEERING, INC
19401 40TH AVE W. SUITE 302
LYNNWOOD, WA 98036
206.364.3343 tel

MARK STEINKE — STATE OF WASHINGTON — 25 — REGISTERED PROFESSIONAL ENGINEER
07/03/2025

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

PROJECT: EAST TOWN CROSSING LOT 1
TENANT IMPROVEMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

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

DATE: 07-03-2025

SHEET TITLE: LEGEND,GENERAL NOTES & DRAWING INDEX

SHEET NO. E0.0

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning | Engineering | Public Works | Fire | Traffic

PRCT20251445

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APPLICABLE CODES

THE FOLLOWING PROJECT DESIGN IS BASED ON THE FOLLOWING CODES:

- 2021 INTERNATIONAL ENERGY CONSERVATION CODE, COMMERCIAL AND WA AMENDMENT (WSEC)
- 2021 INTERNATIONAL ENERGY CONSERVATION CODE, RESIDENTIAL AND WA AMENDMENT (WSEC)
- 2021 INTERNATIONAL BUILDING CODE AND WA AMENDMENT (IBC)
- 2021 INTERNATIONAL MECHANICAL CODE AND WA AMENDMENT (IMC)
- 2021 INTERNATIONAL FIRE CODE AND WA AMENDMENT (IFC)
- 2021 UNIFORM PLUMBING CODE AND WA AMENDMENT (UPC)
- 2023 NEC (NEC)

VIBRATION AND ACOUSTICAL ISOLATION

THE FOLLOWING MEASURES SHALL BE TAKEN TO MINIMIZE VIBRATION AND NOISE TRANSMISSION FROM MECHANICAL AND ELECTRICAL EQUIPMENT TO THE INTERIOR SPACES:

TRANSFORMERS:

A) PROVIDE FLEXIBLE CONDUIT OR MC CABLE AT EQUIPMENT CONNECTION.
B) MOUNT TRANSFORMERS ON NEOPRENE GROMMET ISOLATORS.

SUBDUCT EXHAUST FANS:

A) PROVIDE FLEXIBLE CONDUIT OR MC CABLE AT EQUIPMENT CONNECTION.

ENCLOSED GARAGE EXHAUST FANS:

A) PROVIDE FLEXIBLE CONDUIT OR MC CABLE AT EQUIPMENT CONNECTION.

ROOFTOP AIR HANDLERS:

A) PROVIDE FLEXIBLE CONDUIT OR MC CABLE AT EQUIPMENT CONNECTION.

FAN COIL UNITS:

A) PROVIDE FLEXIBLE CONDUIT OR MC CABLE AT EQUIPMENT CONNECTION.

ROOF MOUNTED CONDENSERS:

A) PROVIDE FLEXIBLE CONDUIT OR MC CABLE AT EQUIPMENT CONNECTION.

FLEXIBLE CONDUIT OR MC CABLE CONNECTIONS FOR VIBRATION ISOLATION SHALL BE A MINIMUM OF TWO FEET LONG.

STRUCTURAL PENETRATIONS

THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL COORDINATION OF EDGE OF SLAB DRAWINGS AND OTHER PENETRATIONS OF STRUCTURAL SLABS AND SHEAR WALLS FOR ALL ITEMS RELATED TO THE ELECTRICAL SCOPE OF WORK.

IRRIGATION NOTES

COORDINATE WITH LANDSCAPE CONTRACTOR FOR CONDUIT PATHWAY WITHIN THE BUILDING FOR ANY IRRIGATION CONTROLS FOR UPPER FLOORS.

CONDUIT & CONDUCTOR FIRE RATING

1. CONDUIT FOR ELECTRICAL CONDUCTORS BY THE FACP OR FIRE ALARM SYSTEM SHALL BE IN 2 HOUR RATED ENCLOSURES OR ENCASED IN 2–INCH OF CONCRETE AND RATED CABLE ASSEMBLIES, OR BE CONDUCTORS IN 2 HOUR–RATED RACEWAYS PER NFPA 72.
2. THE EQUIPMENT AND CONTROL WIRING SHALL BE ENCLOSED BY FIRE BARRIERS CONSTRUCTED IN ACCORDANCE WITH IBC SECTION 707 OR HORIZONTAL ASSEMBLIES CONSTRUCTED IN ACCORDANCE WITH IBC SECTION 711, OR USING A 2 HR RATED CABLE SYSTEM OR ENCLOSED WITHIN 2" OF CONCRETE.
3. FIRE ALARM WIRING SHALL COMPLY WITH IBC 907.6.1. WIRING SHALL COMPLY WITH THE REQUIREMENTS OF NFPA 70.
4. RACEWAYS FOR THE DEDICATED BRANCH CIRCUIT(S) REQUIRED FOR PRIMARY POWER TO THE FIRE ALARM CONTROL PANEL (FACP) SHALL BE IN 2 HOUR RATED ENCLOSURES OR ENCASED IN 2–INCH OF CONCRETE AND RATED CABLE ASSEMBLIES, OR BE CONDUCTORS IN 2 HOUR–RATED RACEWAYS PER IBC 907 AND NFPA 72 SECTION 10.6.11.3.1.3
5. ALL WIRING USED FOR SMOKE CONTROL, REGARDLESS OF THE VOLTAGE SHALL HAVE FIRE–RESISTANCE RATED PROTECTION OF AT LEAST 2 HOURS OR AS REQUIRED IN RULES PROMULGATED BY THE BUILDING OFFICIAL. IFC 909.11.2

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

PRCTI20251445

NO.	DATE	REVISIONS DESCRIPTION
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	02/20/25	STREET LIGHTING REVISIONS
	04/22/25	PERMIT SET 3
	07/03/25	PERMIT SET 4

ROBISON ENGINEERING, INC
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LYNNWOOD, WA 98036
206-364-3343 tel

MARK STEINKE — STATE OF WASHINGTON — 23 — REGISTERED PROFESSIONAL ENGINEER
07/03/2025

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

PROJECT: **EAST TOWN CROSSING LOT 1**
TENANT IMPROVEMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

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

DATE: 07-03-2025

SHEET TITLE: PROJECT NOTES

SHEET NO. E0.1

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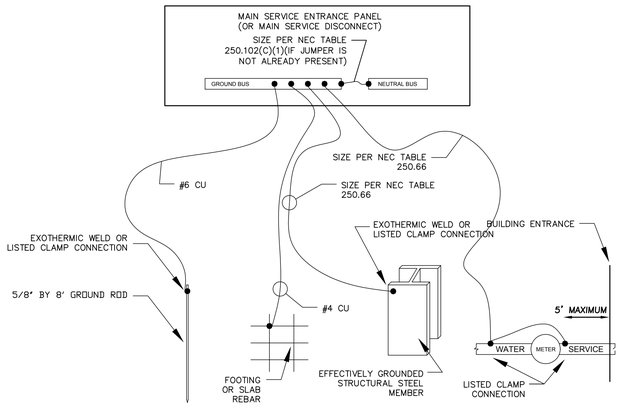


GEC DIAGRAM

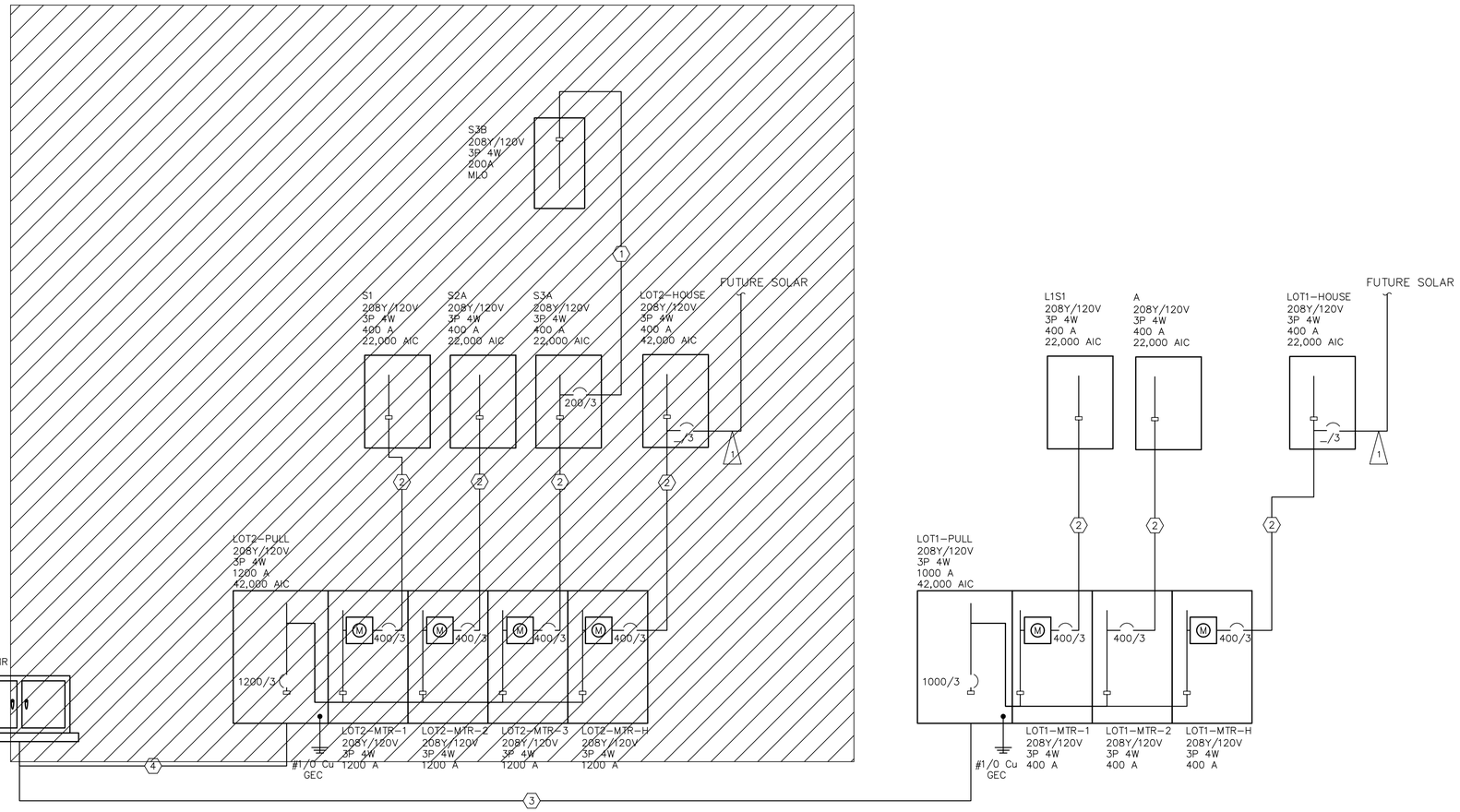
FEEDER SCHEDULE

ID	FEEDER AMPS	CONDUIT AND FEEDER	FEEDING THESE DEVICES
1	200	2-1/2"C,3#250kcmil AL,#250kcmil AL N,#4 AL G	S3B
2	400	(2)2-1/2"C,3#250kcmil AL,#250kcmil AL N,#1 AL G	A, L1S1, LOT1-HOUSE, LOT2-HOUSE, S1, S2A, S3A
3	1000	(4)3"C,3#350kcmil AL,#350kcmil AL N	LOT1-PULL
4	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

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

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.

PRCTI2025144S

REVISIONS

NO.	DATE	DESCRIPTION
	12/31/24	PERMIT SET
	02/20/25	STREET LIGHTING REVISIONS
	04/22/25	PERMIT SET 3
	07/03/25	PERMIT SET 4

ROBISON ENGINEERING, INC
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LYNNWOOD, WA 98036
206-364-3343 tel

MARK STEINKE
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
07/03/2025

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

PROJECT: EAST TOWN CROSSING LOT 1
TENANT IMPROVEMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
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LYNNWOOD, WA 98036
PHONE:(206)364-3343

DATE: 07-03-2025

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

SHEET NO. E0.2

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LOT1–PULL

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

VOLTS **208Y/120V 3P 4W**
BUS AMPS **1000**
NEUTRAL **100%**

AIC **42,000**
MAIN BKR **1000**
LUGS **STANDARD**
ISO GND BUS

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	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	31.8	27.3	32.4	N/A
		TOTAL CONNECTED KVA BY PHASE	71.9	68.4	71.3	

	CONN KVA	CALC KVA	
LIGHTING	1.44	1.79	(125%)
LARGEST MOTOR	37.5	9.37	(25%)
MOTORS	8.64	8.64	(100%)
RECEPTACLES	2.08	2.08	(50%>10)

	CONN KVA	CALC KVA	
EV	79.2	99	(125%)
CONTINUOUS	3.6	4.5	(125%)
HEATING	117	117	(100%)
COOLING	116	0	(0%)
TOTAL LOAD		242	
BALANCED 3–PHASE LOAD		672 A	

LOT1–HOUSE

ROOM
MOUNTING **FLUSH**
FED FROM **LOT1–MTR–H**
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	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	40/2	6.6	DUAL EV READY
13	|			a	14	|		
15	20/1	0.019	LIGHTING	b	16	40/2	6.6	DUAL EV READY
17	40/2	6.6	DUAL EV CHARGER	c	18	|		
19	|			a	20	–/2	6.6	DUAL EV CAPABLE
21	40/2	6.6	DUAL EV CHARGER	b	22	|		
23	|			c	24	–/2	6.6	DUAL EV CAPABLE
25	40/2	6.6	DUAL EV CHARGER	a	26	|		
27	|			b	28	–/2	6.6	DUAL EV CAPABLE
29	40/2	6.6	DUAL EV CHARGER	c	30	|		
31	|			a	32	–/2	6.6	DUAL EV CAPABLE
33	40/2	6.6	DUAL EV READY	b	34	|		
35	|			c	36	–/2	0	SPACE
37	40/2	6.6	DUAL EV READY	a	38	|		
39	|			b	40	–/2	0	SPACE
				c	42	|		

	CONN KVA	CALC KVA	
LIGHTING	1.04	1.3	(125%)
LARGEST MOTOR	2.88	0.72	(25%)

	CONN KVA	CALC KVA	
MOTORS	8.64	8.64	(100%)
RECEPTACLES	1.54	1.54	(50%>10)
EV	79.2	99	(125%)
HEATING	1	1	(100%)
TOTAL LOAD		112	
BALANCED 3–PHASE LOAD		311 A	
PHASE A		106%	
PHASE B		104%	
PHASE C		89.3%	

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	
LIGHTING	0.19	0.238	(125%)
LARGEST MOTOR	37.5	9.37	(25%)

	CONN KVA	CALC KVA	
RECEPTACLES	0.36	0.36	(50%>10)
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%	

A

ROOM
MOUNTING **FLUSH**
FED FROM **UTILITY**
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	30/1	2.4	SIGN
3	|			b	4	20/1	0.18	RECEPTACLE
5	|			c	6	20/1	0.18	RECEPTACLE
7	80/3	20.4	RTU–4	a	8	20/1	0.18	TV
9	|			b	10	60/1	5	WATER HEATER
11	|			c	12	20/1	0.54	RECEPTACLE
13	40/2	5.26	SAUNA	a	14	20/1	0.18	RECEPTACLE
15	|			b	16	20/1	0.18	RECEPTACLE
17	40/2	5.26	SAUNA	c	18	20/1	0.36	RECEPTACLE
19	|			a	20	20/1	1.85	HAND DRYER
21	40/2	5.26	SAUNA	b	22	20/1	1	DRINKING FOUNTAIN
23	|			c	24	20/1	1.5	WASHER
25	40/2	5.26	SAUNA	a	26	40/2	5	DRYER
27	|			b	28	|		
29	40/2	5.26	SAUNA	c	30	20/1	0.25	ILLUMINATED SIGN
31	|			a	32	20/1	0.72	RECEPTACLE
33	40/2	5.26	SAUNA	b	34	20/1	0.9	TELECOM BOARD
35	|			c	36	40/2	5.26	SAUNA
37	40/2	5.26	SAUNA	a	38	|		
39	|			b	40	40/2	5.26	SAUNA
41	40/2	5.26	SAUNA	c	42	|		
43	|			a	44	20/1	0.18	TV
45	20/1	0.5	RECEPTACLE	b	46	–/1	0	SPACE
47	–/1	0	SPACE	c	48	–/1	0	SPACE
49	–/1	0	SPACE	a	50	–/1	0	SPACE
51	–/1	0	SPACE	b	52	–/1	0	SPACE
53	–/1	0	SPACE	c	54	–/1	0	SPACE
55	–/1	0	SPACE	a	56	–/1	0	SPACE
57	–/1	0	SPACE	b	58	–/1	0	SPACE
59	–/1	0	SPACE	c	60	–/1	0	SPACE
61	–/1	0	SPACE	a	62	–/1	0	SPACE
63	–/1	0	SPACE	b	64	–/1	0	SPACE

	CONN KVA	CALC KVA	
LIGHTING	0.25	0.313	(125%)
LARGEST MOTOR	20.4	5.09	(25%)
RECEPTACLES	4.1	4.1	(50%>10)

	CONN KVA	CALC KVA	
CONTINUOUS	2.4	3	(125%)
NONCONTINUOUS	12.5	12.5	(100%)
HEATING	95.2	95.2	(100%)
COOLING	40.8	0	(0%)
TOTAL LOAD		120	
BALANCED 3–PHASE LOAD		334 A	
PHASE A		105%	
PHASE B		104%	
PHASE C		91.3%	

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**

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CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	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	
LIGHTING	0.19	0.238	(125%)
LARGEST MOTOR	37.5	9.37	(25%)
RECEPTACLES	0.36	0.36	(50%>10)

	CONN KVA	CALC KVA	
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	

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	B	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	
LIGHTING	0.209	0.261	(125%)
LARGEST MOTOR	20.4	5.09	(25%)
RECEPTACLES	0.18	0.18	(50%>10)

	CONN KVA	CALC KVA	
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	

LOT1–MTR–H

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	B	C	FEEDER RACEWAY AND CONDUCTORS
1	400/3	PANEL LOT1–HOUSE	32.4	31.8	27.3	(2)2–1/2"C,3#250kcmil AL,#250kcmil AL N,#1 AL G
		TOTAL CONNECTED KVA BY PHASE	32.4	31.8	27.3	

	CONN KVA	CALC KVA	
LIGHTING	1.04	1.3	(125%)
LARGEST MOTOR	2.88	0.72	(25%)
MOTORS	8.64	8.64	(100%)

	CONN KVA	CALC KVA	
RECEPTACLES	1.54	1.54	(50%>10)
EV	79.2	99	(125%)
HEATING	1	1	(100%)
TOTAL LOAD		112	
BALANCED 3–PHASE LOAD		311 A	

FLAG NOTES

1 HOTWORX TO PROVIDE BUCKBOOSTER FOR SAUNAS MOUNTED TO THE WALL.

EV CHARGING INFRASTRUCTURE CALCS (2021):

TOTAL PARKING SPACES PROVIDED: 37

PER WAC 51–50–0429 TABLE 429.2, 10% OF TOTAL PARKING SPACES SHALL BE PROVIDED WITH EV CHARGING STATIONS:

37 x 10% = 4 EV CHARGING SPACES

PER WAC 51–50–0429 TABLE 429.2, 25% OF TOTAL PARKING SPACES SHALL BE EV READY PARKING SPACES:

4 x 10% = 4 EV READY PARKING SPACES

PER WAC 51–50–0429 TABLE 429.2, 10% OF TOTAL PARKING SPACES SHALL BE EV CAPABLE PARKING SPACES:

4 x 10% = 4 EV CAPABLE PARKING SPACES

TOTAL EV SPACES:
12

AUTOMATIC LOAD MANAGEMENT SYSTEM (ALMS) WILL BE UTILIZED TO ADJUST THE MAXIMUM ELECTRICAL CAPACITY REQUIRED FOR EV–READY AND EV–CAPABLE SPACES. THE ALMS SHALL BE DESIGNED TO ALLOCATE CHARGING CAPCITY AMONG MULTIPLE FUTURE EV CHARGING STATIONS AT MINIMUM OF 16 AMPERES PER EV CHARGER, PER WAC 51–50–0429.3 EXCEPTION.

ALL EV CHARGING STATIONS, EV READY, EV CAPABLE WILL BE PROVIDED WITH A DEDICATED 40AMP BRANCH CIRCUIT.

EV LOAD CALCS WITH ALMS:

4 EV CHARGING STATIONS x 40A EACH
\+ 4 EV READY x 20A EACH
\+ 4 EV CAPABLE x 20A EACH
= 320A @208V/2P

= 67KVA

MINIMUM ELECTRICAL CAPACITY FOR EV WITH ALMS IS 67KVA.

PRCTI20251445

NO.	DATE	REVISIONS DESCRIPTION
	12/31/24	PERMIT SET
	02/20/25	STREET LIGHTING REVISIONS
	04/22/25	PERMIT SET 3
	07/03/25	PERMIT SET 4

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

MARK STEINKE — STATE OF WASHINGTON — 21627 — REGISTERED PROFESSIONAL ENGINEER
07/03/2025

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

PROJECT:
EAST TOWN CROSSING LOT 1
TENANT IMPROVEMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

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

DATE:
07-03-2025

SHEET TITLE:
PANEL SCHEDULES

SHEET NO.
E0.3

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RETAIL INTERIOR LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	LAMP	DESCRIPTION	BALLAST	MOUNTING	MODEL	INPUT VA	VOLTS
A	○	(1) 12W LED	6" DOWNLIGHT	0–10V DIMMING	RECESSED	LITELINE: SLMB6 12 C [FINISH]	12	120V 1P 2W
B	◯	(1) 60W LED	UFO HIGH BAY LIGHT	0–10V DIMMING	CEILING	HYKOLITY: HBB–0072 ELITE PLUS SERIES	60	120V 1P 2W
C	⊗	(1) 5W EM	EXIT SIGN – EMERGENCY BATTERY BACKUP – HATCH INDICATES LIT FACE	EM	SURFACE	LSI: EMS WB SERIES (OR EQUAL)	5	120V 1P 2W
CE1	●	(1) 17W LED	8" SURFACE DOWNLIGHT – CORRIDORS – EMERGENCY DRIVER BACKUP	0–10V DIMMING	SURFACE	DMF: DRDHNJ015OSEMS / DRD5S8R159300A	17	MULTIPLE
D	▯	(1) 5W EM	EMERGENCY LIGHT – WET LISTED – EMERGENCY BATTERY BACKUP	EM	SURFACE	LSI: CWL SERIES (OR EQUAL)	5	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

LIGHTING CONTROLS LEGEND

SYMBOL	CONTROL TYPE	CONTROL FUNCTION
$_a $_k	TOGGLE SWITCH	MANUAL ON/OFF LIGHTING CONTROL. SUBSCRIPT INDICATES WHICH FIXTURES ARE TO BE CONTROLLED BY WHICH SWITCH (WSEC C405.2.3). SUBSCRIPT 'k' INDICATES TAMPER RESISTANT KEYED SWITCH FOR USE BY AUTHORIZED PERSONNEL ONLY.
▯_a	DIMMER SWITCH	MANUAL LIGHT REDUCTION CONTROLS. CONTROL SHALL ALSO HAVE MANUAL ON/OFF FUNCTIONALITY. SUBSCRIPT INDICATES WHICH FIXTURES ARE TO BE CONTROLLED BY WHICH DIMMER. (C405.2.3, C405.2.4)
VS VS OS OS $ ▯	TOGGLE/DIMMER SWITCH WITH OCCUPANCY SENSOR	SWITCHES LABELED 'os' OR 'vs' SHALL TURN OFF ALL CONNECTED LUMINAIRES WITHIN 20 MINUTES OF SPACE BEING VACANT. (C405.2.1, C405.2.3)
OS	SURFACE MOUNTED OCCUPANCY SENSOR	AUTOMATIC LIGHTING CONTROL SHALL TURN OFF ALL CONNECTED LUMINAIRES WITHIN 20 MINUTES OF SPACE BEING VACANT. (C404.2.1)
PS	MULTIZONE PHOTOSENSOR	AUTOMATIC LIGHTING CONTROL SHALL AUTOMATICALLY ADJUST THE LIGHT OUTPUT OF ALL CONNECTED LUMINAIRES BASED ON AVAILABLE DAYLIGHT (C405.2.5).

EXIT SIGN NOTES

DURING CONSTRUCTION UPON COMPLETION OF A TYPICAL FLOOR FRAMING AND BEFORE WALL COVER, ELECTRICAL CONTRACTOR SHALL WALK THE EGRESS PATHS WITH THE LOCAL INSPECTOR (AHJ) TO CONFIRM THAT ALL THE EXIT SIGNS ARE LOCATED PER THE AHJ'S SATISFACTION AND IDENTIFY ANY ADDITIONAL EXIT SIGNS THAT THE AHJ WISHES TO BE INSTALLED (IBC 1013.1). CONTRACTOR SHALL PROVIDE UP TO 10% ADDITIONAL EXIT SIGNS AT NO ADDITIONAL COST.

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.

City of Puyallup
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REVISIONS

NO.	DATE	DESCRIPTION
	12/31/24	PERMIT SET
	02/20/25	STREET LIGHTING REVISIONS
	04/22/25	PERMIT SET 3
	07/03/25	PERMIT SET 4

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
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MARK STEINKE — STATE OF WASHINGTON — 22607 — REGISTERED PROFESSIONAL ENGINEER
07/03/2025

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

PROJECT: EAST TOWN CROSSING LOT 1
TENANT IMPROVEMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

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

DATE: 07-03-2025

SHEET TITLE: LIGHTING NOTES & SCHEDULE

SHEET NO. E0.4

PRCTI20251445

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LIGHTING CONTROL SYSTEM REQUIREMENTS

1. CONTRACTOR TO PROVIDE FULLY OPERATIONAL LIGHTING CONTROL SYSTEM(S).

2. LIGHTING CONTROLS SHALL BE INSTALLED WHICH MEET ALL REQUIREMENTS OF LOCAL ENERGY CODES.

3. CONTRACTOR SHALL VERIFY THE COMPATIBILITY OF DIMMING AND CONTROL MODULES WITH FIXTURE TYPES PRIOR TO INSTALLATION.

4. LOCATIONS OF OCCUPANCY SENSORS, PHOTO SENSORS, AND MANUAL LIGHTING CONTROLS ARE DIAGRAMMATIC. CONTRACTOR TO COORDINATE QUANTITIES AND OPTIMAL LOCATIONS WITH LIGHTING CONTROL MANUFACTURER AND ARCH/OWNER.

5. THE CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL ENGINEER FOR EXACT LOCATIONS OF EXTERIOR PHOTO CELLS, IF ANY.

AUTOMATIC LIGHTING CONTROLS

6. OCCUPANCY SENSORS (WSEC C405.2.1) SHALL BE CONFIGURED PER THE FOLLOWING (UON):
   - 6.1. AUTOMATICALLY TURN OFF LIGHT WITHIN 20 MINUTES OF ALL OCCUPANTS LEAVING THE SPACE.
   - 6.2. AUTOMATICALLY TURN ON LIGHTING TO NOT MORE THAN 50 PERCENT POWER WHEN OCCUPANT ENTERS THE SPACE
   - 6.3. SHALL INCORPORATE A MANUAL CONTROL TO ALLOW OCCUPANTS TO TURN LIGHTS ON/OFF.

7. DAYLIGHT ZONES ARE SHOWN ON PLANS AS DEFINED BY C405.2.5.2–C405.2.5.4. DAYLIGHT ZONES ARE REFERRED TO AS 'PRIMARY', 'SECONDARY', AND 'TOPLIT' ON PLANS AND DENOTED BY DASHED 'DZ' LINES.
   - 7.1. DAYLIGHT RESPONSIVE CONTROLS SHALL PROVIDE CONTINUOUS AUTOMATIC DIMMING BASED ON DAYLIGHT CONTRIBUTION OF THE GENERAL LIGHTING WITHIN DAYLIGHT ZONES. CONTROLS SHALL BE CONFIGURED PER THE FOLLOWING (UON):
     - 7.1.1. LIGHTS IN PRIMARY, SECONDARY, AND TOPLIGHT DAYLIGHT ZONES SHALL EACH BE CONTROLLED INDEPENDENTLY OF EACH OTHER.
     - 7.1.2. CALIBRATION MECHANISMS SHALL BE IN A LOCATION WITH READY ACCESS AND SHALL BE CALIBRATED BY AUTHORIZED PERSONNEL ONLY.
     - 7.1.3. DAYLIGHT RESPONSIVE CONTROLS SHALL DIM LIGHTS CONTINUOUSLY FROM FULL LIGHT OUTPUT TO 15 PERCENT OF FULL LIGHT OR LOWER; TIME DELAY CIRCUITS SHALL BE INCORPORATED TO PREVENT CYCLING OF LIGHT LEVEL CHANGES LESS THAN THREE MINUTES.

8. EXTERIOR LIGHTING SHALL BE CONFIGURED PER THE FOLLOWING (UON):
   - 8.1. LIGHTS SHALL BE CONFIGURED TO AUTOMATICALLY TURN OFF WHEN DAYLIGHT IS PRESENT AND SATISFIES THE LIGHTING NEEDS. (C405.2.9.1)
   - 8.2. BUILDING FACADE AND LANDSCAPE LIGHTING SHALL BE CONFIGURED TO AUTOMATICALLY SHUT OFF FOR A MINIMUM OF 6 HOURS OR FROM ONE HOUR AFTER BUSINESS CLOSING TO NOT EARLIER THAN ONE HOUR BEFORE BUSINESS OPENING PER NIGHT EXCEPT WHERE AUTOMATIC SHUTOFF WOULD ENDANGER SAFETY OR SECURITY. (C405.2.9.2)
   - 8.3. LIGHTING SETBACK (C405.2.9.3) SHALL COMPLY WITH THE FOLLOWING:
     - 8.3.1. LUMINIARES SERVING OUTDOOR PARKING AREAS WITH A WATTAGE GREATER THAN 40 WATTS AND A MOUNTING HEIGHT OF LESS THAN 24 FEET ABOVE GROUND SHALL BE CONTROLLED SO THE TOTAL WATTAGE IS REDUCED BY NOT LESS THAN 50 PERCENT DURING ANY TIME WHERE ACTIVITY HAS NOT BE DETECTED FOR 15 MINUTES OR MORE.
     - 8.3.2. ALL OTHER LIGHTING SHALL BE CONTROLLED SO THAT THE TOTAL WATTAGE IS AUTOMATICALLY REDUCED BY NOT LESS THAN 50 PERCENT FROM NOT LATER THAN 12 MIDNIGHT TO 6AM, FROM NOT LATER THAN ONE HOUR AFTER BUSINESS CLOSING TO NOT EARLIER THAN ON HOUR BEFORE BUSINESS OPEN, OR DURING ANY PERIOD WHEN NO ACTIVITY HAS BEEN DETECTED FOR 15 MINUTES OR MORE.

NETWORKED LIGHTING CONTROLS

9. 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, AND SET UP INSTRUCTIONS.
   - 9.1. PROVIDE ALL LOW VOLTAGE WIRING AS REQUIRED FOR CONTROL DEVICE INTERCONNECTIONS.

10. 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.

11. SEQUENCE OF OPERATIONS SHALL BE CODE MINIMUM UON ON PLANS.

GENERAL LIGHTING NOTES

LUMINAIRES:

1. ALL FIXTURES SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.

2. 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.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR EQUIPPING ALL FIXTURES WITH THE EXACT LAMPS SPECIFIED IN THE FIXTURE SCHEDULE OR AN EQUIVALENT APPROVED BY ELECTRICAL DESIGNER.

4. WHERE FIXTURES REQUIRE REMOTE TRANSFORMERS OR BALLASTS, THE CONTRACTOR SHALL DETERMINE LOCATIONS AS REQUIRED FOR EVEN LOAD DISTRIBUTION, SERVICE ACCESS, AND VENTILATION.

5. WHERE APPLICABLE, THE CONTRACTOR SHALL AIM AND ADJUST LIGHTING FIXTURES AS DIRECTED BY THE LIGHTING DESIGNER UPON COMPLETION OF THE INSTALLATION.

6. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC. REFERENCE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF FIXTURES AND DEVICES. QUESTIONS CONCERNING THE LOCATION OF FIXTURES AND DEVICES SHALL BE DIRECTED TO THE ARCHITECT.

DECORATIVE LIGHTING:

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.

EXIT SIGNS, EGRESS, AND EMERGENCY LIGHTING:

8. EXIT SIGNS: PROVIDE UNSWITCHED HOT. EXIT SIGN LETTERS SHALL NOT BE DIMMED OR RESPOND TO AUTOMATIC LIGHTING CONTROLS.

9. EMERGENCY LIGHTING FIXTURES: IN ADDITION TO SWITCH–LEG, PROVIDE UNSWITCHED HOT TO SERVE INTERNAL BATTERY AND CHARGER.

10. MEANS OF EGRESS ILLUMINATION DURING NORMAL OPERATION SHALL COMPLY WITH IBC 1008.2.1:
    - 10.1. AT ANY TIME THE BUILDING IS OCCUPIED, THE MEANS OF EGRESS SHALL BE ILLUMINATED AT AN INTENSITY OF NOT LESS THAN 1 FOOTCANDLE AT THE WALKING SURFACE.
    - 10.2. ALONG EXIT ACCESS STAIRWAYS, EXIT STAIRWAYS AND AT THEIR REQUIRED LANDINGS, THE ILLUMINATION SHALL NOT BE LESS THAN 10 FOOTCANDLES AT THE WALKING SURFACE WHEN THE STAIRWAY IS IN USE.

11. MEANS OF EGRESS ILLUMINATION DURING EMERGENCY OPERATION SHALL COMPLY WITH IBC 1008.3:
    - 11.1. EMERGENCY LIGHTING FACILITIES SHALL BE ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS NOT LESS THAN AN AVERAGE OF 1 FOOTCANDLE AND A MINIMUM AT ANY POINT OF 0.1 FOOTCANDLE.
    - 11.2. THE EMERGENCY POWER SYSTEM SHALL PROVIDE POWER FOR A DURATION OF NOT LESS THAN 90 MINUTES.

12. DURING EMERGENCY CONDITIONS EMERGENCY LIGHTING CIRCUITS/UNIT EQUIPMENT SHALL BYPASS ALL LIGHTING CONTROLS AND ENERGIZE ALL CONNECTED LUMINAIRES TO PROVIDE ILLUMINATION AT FULL POWER OR TO A PRESET LOAD SHEDDING DIMMED OUTPUT. PROVIDE UL924 RELAYS/DEVICES AS REQUIRED TO BYPASS AREA CONTROLS. WHEN NORMAL POWER IS RESTORED, CONTROLS SHALL AUTOMATICALLY RESUME NORMAL OPERATION.

13. EMERGENCY LIGHTING POWER SHALL BE PROVIDED BY CONTRACTOR.

SPECIAL NOTE TO THE CONTRACTOR

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

City of Puyallup
Development & Permitting Services
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Building	Planning
Engineering	Public Works
Fire	Traffic

NO.	DATE	DESCRIPTION
	12/31/24	PERMIT SET
	02/20/25	STREET LIGHTING REVISIONS
	04/22/25	PERMIT SET 3
	07/03/25	PERMIT SET 4

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MARK STEINKE — STATE OF WASHINGTON — 25 — REGISTERED PROFESSIONAL ENGINEER
07/03/2025

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

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PIONEER WAY & SHAW RD. PUYALLUP, WA

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

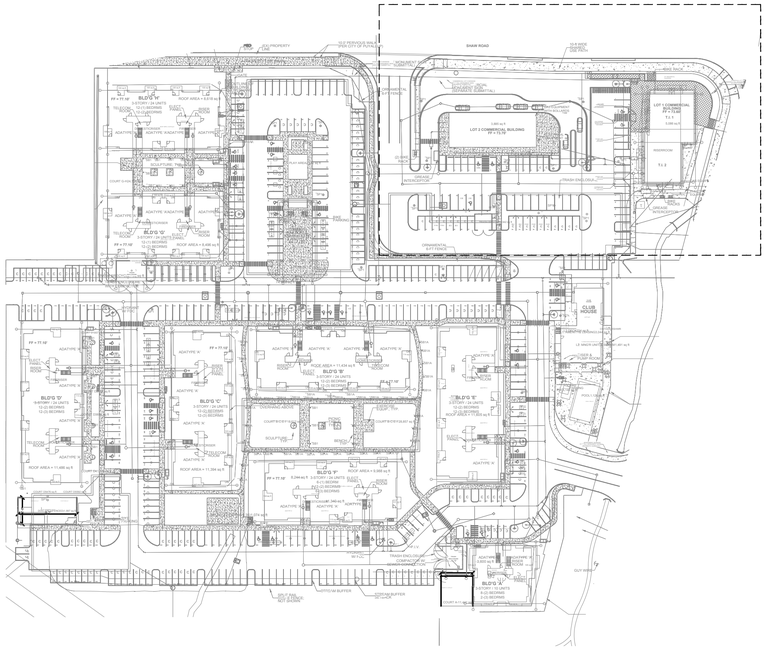
DATE: 07-03-2025

SHEET TITLE: LIGHTING NOTES

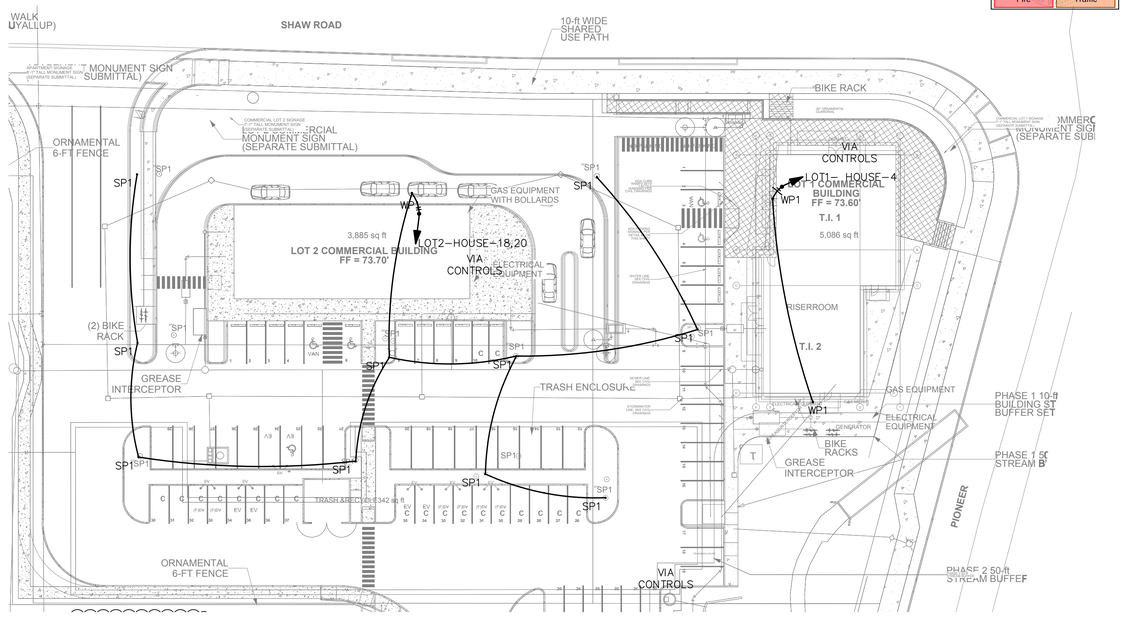
SHEET NO. E0.5

PRCTI20251445

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

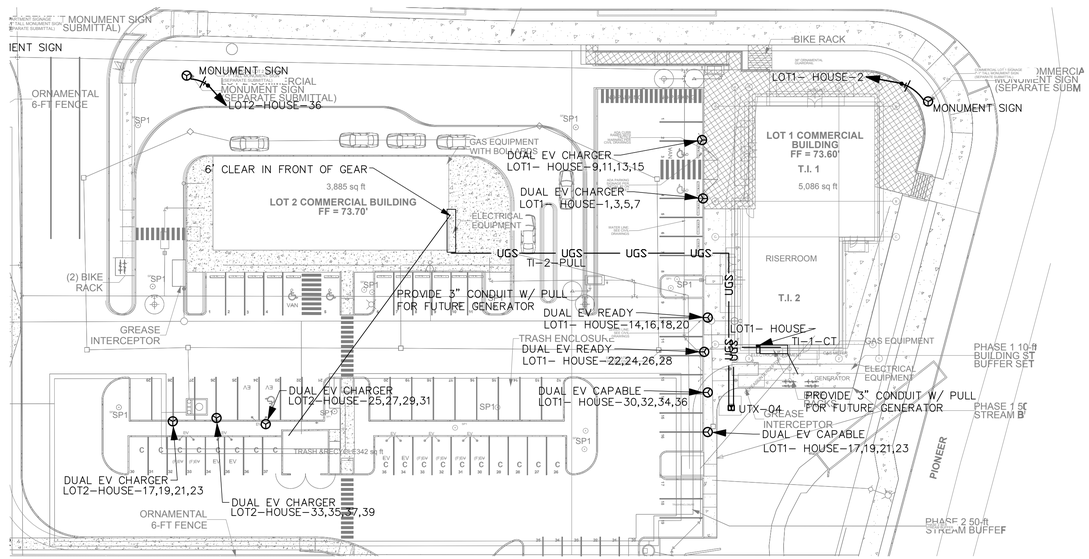


VICINITY MAP



TI SITE LIGHTING PLAN

SCALE: 1" = 30'



TI SITE POWER PLAN

SCALE: 1" = 30'

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

REVISIONS

NO.	DATE	DESCRIPTION
	12/31/24	PERMIT SET
	02/20/25	STREET LIGHTING REVISIONS
	04/22/25	PERMIT SET 3
	07/03/25	PERMIT SET 4

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

MARK STEINKE — STATE OF WASHINGTON — 25 — REGISTERED PROFESSIONAL ENGINEER
07/03/2025

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

PROJECT:
EAST TOWN CROSSING LOT 1
TENANT IMPROVEMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

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

DATE:
07-03-2025

SHEET TITLE:
TI SITE LIGHTING AND POWER PLAN

SHEET NO.
E1.0

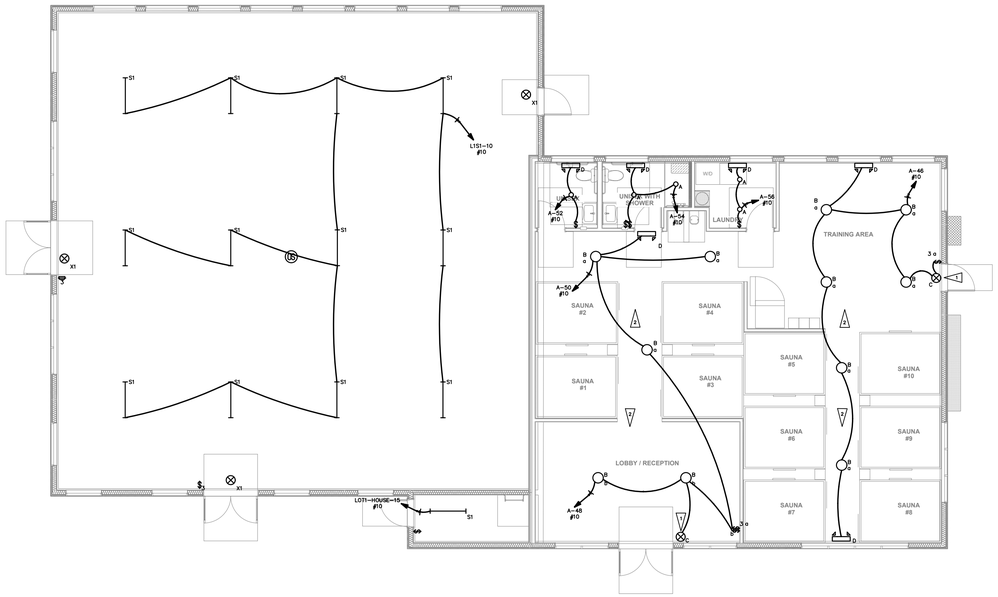
PRCTI20251445

M:\EAVENS F:\2021-010 EAST TOWN CROSSING\DWG\ELECTRICAL\PRESENTATION SHEETS\A-E1.0.DWG 05-05-2021 00:45

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

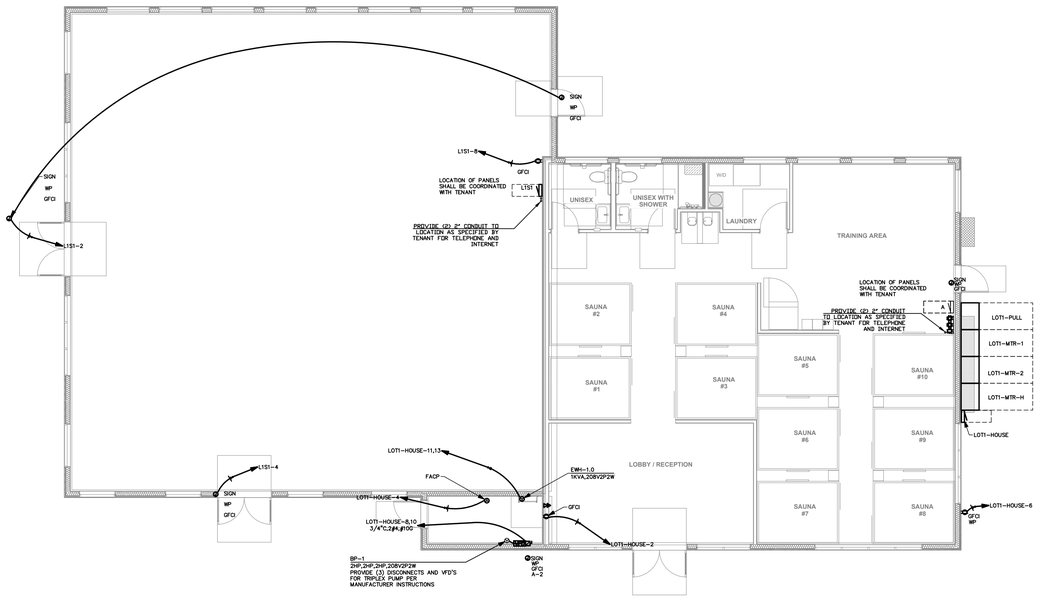
Building	Planning
Engineering	Public Works
Fire	Traffic

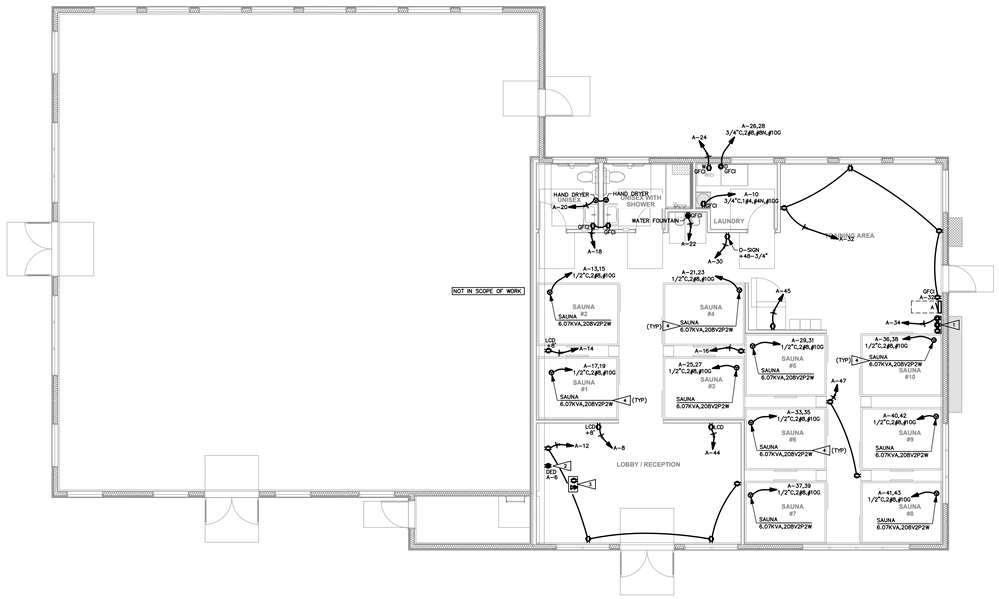
CONTRACTOR NOTE
Tenant space #1 will require tenant improvement permit prior to work being performed



LEVEL 1 POWER & LIGHTING PLAN

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





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MARK STEINKE
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
07/03/2025

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	04/22/25	PERMIT SET 3
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DRAWN: KAS	DESIGNED: KAS	CHECKED: STEINKE M.	APPROVED: STEINKE M.

PROJECT: **EAST TOWN CROSSING LOT 1**
TENANT IMPROVEMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

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

DATE:
07-03-2025

SHEET TITLE:
LEVEL 1 LIGHTING AND POWER

SHEET NO.
E3.0

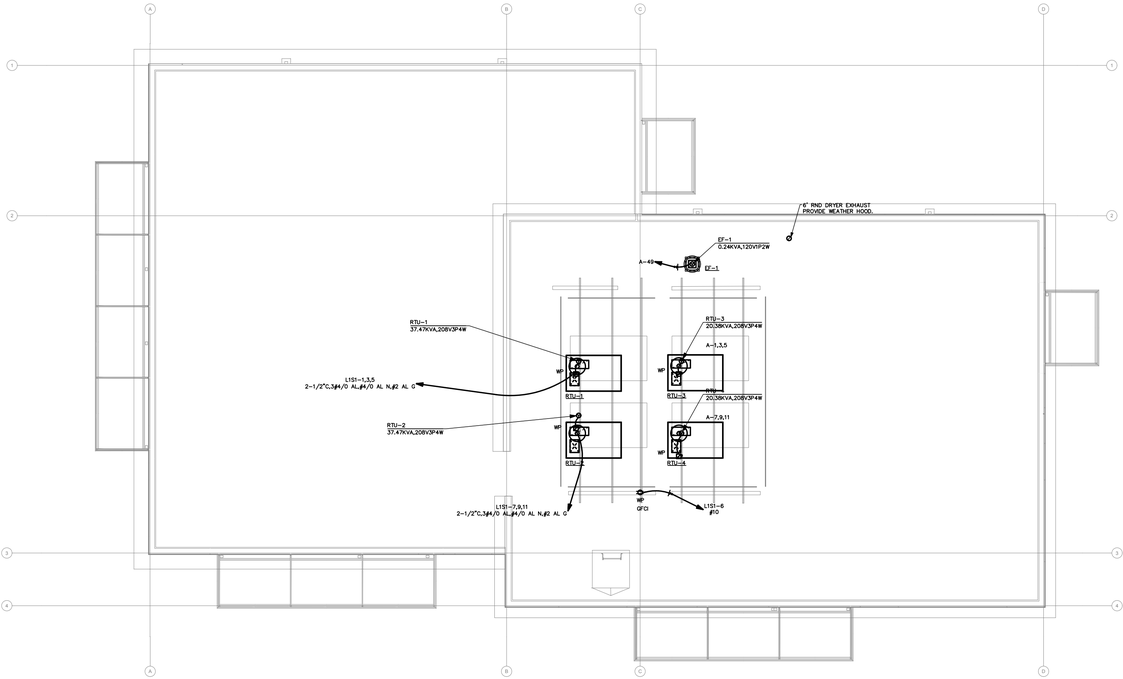
PRCTI20251445

MYSTEINKE G:_RESOURCE FOLDER\STEINKE LEAVENS TEMPLATES\APARTMENT 30X42'\E1.00 LIGHTING.DWG 09-26-2022 11:30

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

CONTRACTOR NOTE
Tenant space #1 will require tenant improvement permit prior to work being performed



ROOF POWER PLAN

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

REVISIONS		
NO.	DATE	DESCRIPTION
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MARK STEINKE — STATE OF WASHINGTON — 25 — REGISTERED PROFESSIONAL ENGINEER
07/03/2025

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

PROJECT: **EAST TOWN CROSSING LOT 1**
TENANT IMPROVEMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

ROBISON ENGINEERING, INC
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LYNNWOOD, WA 98036
PHONE:(206)364-3343

DATE: 07-03-2025

SHEET TITLE: LEVEL 2/ ROOF LIGHTING AND POWER

SHEET NO. E3.1

PRCTI20251445

LIGHTING COMPLIANCE SUMMARY

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

Project & Applicant Information		
	Project Title	East Town Crossing - TI Lot 1 - 2021 WSEC
	Project Address	Pioneer Way & Shaw Rd. Puyallup, WA 98372
	Applicant Name	Nick Nagy
	Applicant Phone	206-364-3343
	Applicant Email	nnagy@robisonengineering.com

For Building Department Use: **Date: May 31, 2024**

For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

General Occupancy	All Commercial		**General Building Use Type**		Retail, General Sales	**Building Cond. Floor Area**	4,715
General Project Types	Shell & Core	**New Building or Addition Lighting Scope**	Interior Lighting	**Alteration Lighting Scope**		**Project Cond. Floor Area**	4,715
						Floors Above Grade	1
						Compliance Method	General Prescriptive
Lighting Project Description							

Lighting Compliance Scope and Method	Project Type	Interior / Exterior (Interior includes both interior & parking)	Luminaire Replacement Scope	Compliance Method	LPA Calculation Adjustment	Compliance Verification
	Shell & Core	Interior Lighting		Space by space	Reduced lighting power density option - 20%	**COMPLIES**
Additional Energy Efficiency (AEC) Measures Included	Reduced lighting power density - 10% lower than LPA Reduced lighting power density - 20% lower than LPA		**Load Management (LDM) Measures Included**		No lighting or electrical load management measures included in project	

Project Title	East Town Crossing - TI Lot 1 - 2021 WSEC	Date	May 31, 2024
Lighting Power Calculation	**SHELL & CORE - INTERIOR LIGHTING**	**Compliance Verification**	**COMPLIES**
Compliance Method	**Space by space**	**LPA Calculation Adjustment**	**LPA x 0.8**

Interior Lighting Power Allowance - Space by Space

General Space Type	Specific Space Type	Gross Interior Area (SF)	LPA (Watts/SF)	Total Watts Allowed (SF x LPA x 0.8)	Total Proposed Watts (LPD + Display LPD)	Compliance Status
Electrical/mechanical		51	0.43	22		
Retail	General sales	4,664	1.05	4,897		
			Proposed Total LPD		**399**	
	Totals	**Calculation Adjustment Applied - LPA x 0.8**		**3,935**	**399**	**COMPLIES**

Proposed Lighting Power Density

Fixture Type	Fixture ID	Quantity of Fixtures (#F)	Watts or Wattage Limit per Fixture (WpF)	Total Linear Feet (LF)	Watts per Linear Foot (WpLF)	Total Watts Proposed (#F x WpF) or (LF x WpLF)
Individual Fixtures						
Horizontal surface-mount	S1	21	19			399
					Proposed Total LPD	**399**

Project Title	East Town Crossing - TI Lot 1 - 2021 WSEC	Date	May 31, 2024
Proposed Fixtures Details	**SHELL & CORE - INTERIOR LIGHTING**		

Fixture Type/Application	Fixture ID	Location in Documents	Lamp Type	New or Existing-to-Remain
Individual Fixtures				

Horizontal surface-mount	S1	E3.0	LED		New
	Fixture Description: 4' LED LINEAR STRIP			Are these fixtures located within a daylight zone?: Yes, controls provided	
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required	

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

LIGHTING COMPLIANCE SUMMARY

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

Project & Applicant Information		
	Project Title	Hotworx - 2021 WSEC
	Project Address	PIONEER WAY AND SHAW RD. Puyallup, WA 98372
	Applicant Name	Kaneez Sheikh
	Applicant Phone	206-364-3343
	Applicant Email	ksheikh@robisonengineering.com

For Building Department Use: **Date: Jun 26, 2025**

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**		Retail, Lifestyle Center	**Building Cond. Floor Area**	2,046
General Project Types	New Building	**New Building or Addition Lighting Scope**	Interior Lighting	**Alteration Lighting Scope**		**Project Cond. Floor Area**	2,046
						Floors Above Grade	1
						Compliance Method	General Prescriptive
Lighting Project Description							

Lighting Compliance Scope and Method	Project Type	Interior / Exterior (Interior includes both interior & parking)	Luminaire Replacement Scope	Compliance Method	LPA Calculation Adjustment	Compliance Verification
	New Building	Interior Lighting		Building area	No Calculation Adjustments selected	**COMPLIES**
Additional Energy Efficiency (AEC) Measures Included	No lighting or electrical additional energy efficiency measures included in project		**Load Management (LDM) Measures Included**		No lighting or electrical load management measures included in project	

Project Title	Hotworx - 2021 WSEC	Date	Jun 26, 2025
Lighting Power Calculation	**NEW BUILDING - INTERIOR LIGHTING**	**Compliance Verification**	**COMPLIES**
Compliance Method	**Building area**	**LPA Calculation Adjustment**	**none**

Interior Lighting Power Allowance - Building Area

Building Areas	Gross Interior Area (SF)	LPA (Watts/SF)	Total Watts Allowed (SF x LPA x 1)	Total Proposed Watts By Building Area	Compliance Status by Building Area
Exercise center	2,046	0.67	1,371	720	COMPLIES

Proposed Lighting Power Density

Fixture Type/Application	Fixture ID	Building Area	New or Existing-to-Remain	Quantity of Fixtures, CLDs or Luminaires (#F)	Watts per Fixture, CLD or Luminaire (WpF)	Total Linear Feet (LF)	Watts per Linear Foot (WpLF)	Total Watts Proposed (#F x WpF) or (LF x WpLF)
Individual Fixtures								
Recessed downlight	A	Exercise center	New	5	12			60
Suspended	B	Exercise center	New	11	60			660

Project Title	Hotworx - 2021 WSEC	Date	Jun 26, 2025
Proposed Fixtures Details	**NEW BUILDING - INTERIOR LIGHTING**		

Fixture Type/Application	Fixture ID	Location in Documents	Lamp Type	Building Area	New or Existing-to-Remain
Individual Fixtures					
Recessed downlight	A	E1.00	LED	Exercise center	New
	Fixture Description: 6" DOWNLIGHT			Are these fixtures located within a daylight zone?: No	
	Do these fixtures require specific application lighting controls?: None required				

Suspended	B	E1.00	LED	Exercise center	New
	Fixture Description: UFO HIGH BAY LIGHT			Are these fixtures located within a daylight zone?: No	
	Do these fixtures require specific application lighting controls?: None required				

PRCTI20251445

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PROJECT: **EAST TOWN CROSSING LOT 1**
TENANT IMPROVEMENT
PIONEER WAY & SHAW RD. PUYALLUP, WA

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DATE: 07-03-2025

SHEET TITLE: ENERGY FORMS

SHEET NO. E4.0