GENERAL NOTES

1. THE ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE 2021 WASHINGTON STATE FIRE CODE, 2021 UNIFORM PLUMBING CODE, 2021 WASHINGTON STATE BUILDING CODE AND ALL OTHER APPLICABLE CODES & REGULATIONS.

2. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL EQUIPMENT AND PLUMBING FIXTURES.

3. COORDINATE ALL LOCATIONS, SIZES AND ELEVATIONS OF ALL SLEEVES THROUGH STRUCTURES WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS.

4. COORDINATE AND VERIFY EXACT LOCATION, SIZE, POINT OF CONNECTIONS AND ELEVATIONS OF UTILITY SERVICE PIPING BEFORE TRENCHING OR INSTALLATION.

5. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR WALL AND PARTITION CONSTRUCTION AND THICKNESS WHERE PLUMBING PIPING, VALVES OR EQUIPMENT ARE INDICATED.

6. ALL VALVES SHALL BE LOCATED TO BE READILY ACCESSIBLE. ACCESS PANELS SHALL BE INSTALLED WHERE VALVES ARE INSTALLED WITHIN OR BEHIND WALLS OR NON-REMOVABLE CEILINGS.

7. COORDINATE ALL PIPING AND EQUIPMENT LOCATIONS WITH OTHER TRADES.

8. OFFSET ALL VERTICAL PIPES TO AVOID BEAMS & ANY OTHER STRUCTURAL OBSTRUCTIONS NOT SHOWN ON PLANS.

9. BECAUSE OF THE SMALL SCALE OF THE DRAWING, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, AND ACCESSORIES THAT MAY BE REQUIRED FOR A COMPLETE PLUMBING SYSTEM. THE CONTRACTOR WILL CAREFULLY INVESTIGATE THE STRUCTURAL, FINISH CONDITIONS, AS WELL AS WORKS OF OTHER SERVICES THAT AFFECTS ALL HIS WORK AND WILL COORDINATE AND ARRANGE SUCH WORK ACCORDINGLY, FURNISHING REQUIRED FITTINGS, TRAPS, VALVES AND ACCESSORIES TO MEET SUCH CONDITIONS THAT MAYBE REQUIRED FOR A COMPLETE PLUMBING SYSTEM.

10. DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE OF WORK AND TO INDICATE GENERAL ARRANGEMENT. THEY ARE NOT INTENDED TO SHOW EVERY DETAIL INCLUDING OFFSET OR FITTING OR EVERY STRUCTURAL DIFFICULTY THAT MAY BE ENCOUNTERED DURING THE WORK. EXCEPT AS OTHERWISE INDICATED, LOCATIONS OF ITEMS ARE APPROXIMATE ONLY. EXACT LOCATIONS NECESSARY TO SECURE PROPER CONDITIONS AND RESULTS MUST BE DETERMINED AT PROJECT SITE AND MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE.

11. EXCEPT AS OTHERWISE INDICATED, MAKE REASONABLE MODIFICATIONS IN LAYOUT AS NEEDED TO PREVENT CONFLICT WITH OTHER WORK OR FOR PROPER EXECUTION OF WORK.

12. INCLUDE WORK NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR PROPER INSTALLATION AND OPERATION OF A SYSTEM OR PIECE OF EQUIPMENT IN WORK.

13. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL DETAILS AND INFORMATION.

14. REFER TO CIVIL DRAWINGS FOR ADDITIONAL SITE UTILITY INFORMATION AND DETAILS.

15. CONTRACTOR SHALL OBTAIN APPROVAL FROM STRUCTURAL ENGINEER FOR PENETRATIONS THROUGH STRUCTURAL ELEMENTS PRIOR TO START OF WORK. INSTALL SLEEVES FOR ALL PIPES PENETRATING THROUGH STRUCTURAL ELEMENTS.

16. ALL HORIZONTAL WASTE PIPING SHALL SLOPE AT 2% MINIMUM.

17. ALL SANITARY SEWER VENTS TERMINATING THROUGH THE ROOF SHALL BE INSULATED TO PREVENT CONDENSATION FROM FORMING AND SHALL INCLUDE A VAPOR BARRIER JACKET ON THIS INSULATION. ALL COLD WATER AND STORM WATER PIPING EXPOSED IN PLENUMS OR ABOVE CEILINGS SHALL BE INSULATED TO PREVENT CONDENSATIONS.

18. WATER HAMMER ARRESTORS SHALL BE PROVIDED AT EVERY BRANCH TO MULTIPLE FIXTURES AND ON EVERY FLOOR FOR BOTH HOT AND COLD WATER.

19. PROVIDE TRAP PRIMERS TO ALL FLOOR SINK AND FLOOR DRAINS IN THE BUILDING INCLUDING SHOWER DRAINS. CONCEALED TRAP PRIMER VALVES SHALL BE PROVIDED WITH ACCESS PANELS. COORDINATE LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.

20. RAINWATER DRAINAGE SYSTEMS PIPE SIZING IS BASED ON 2.0 INCH RAINFALL PER HOUR AND 100 YEARS RETURN.

21. PROVIDE CONDENSATE DRAIN PIPING TO ALL FAN COIL UNITS AND MECHANICAL EQUIPMENT W/ TRAP, UNIONS & FLEXIBLE CONNECTIONS AND SPILL TO APPROVED RECEPTACLE OR CONNECT TO LAVATORY/SINK TAILPIECE. PROVIDE OVERFLOW CONDENSATE DRAIN AND TERMINATE AT FLOOR SINK OR OTHER APPROVED VISIBLE LOCATION. INSULATE ALL CONDENSATE AND OVERFLOW DRAIN PIPING INSIDE THE BUILDING. SLOPE ALL CONDENSATE DRAIN PIPING @ 1/8" PER FOOT.

22. SANITARY VENTS THRU ROOFS SHALL TERMINATE AT LEAST 10' AWAY FROM, OR 3' ABOVE ANY OPERABLE WINDOW AND 25' AWAY FROM COMBUSTION AIR OPENINGS AND FRESH AIR INTAKES. PROVIDE VENTS WITH VANDAL PROOF VENT CAPS.

23. COMPLIANCE TO ASSEMBLY BILL 1953 AND SECTION 116875 OF THE HEALTH & SAFETY CODE FOR LEAD CONTENT.
a. ALL PLUMBING PIPES, FITTINGS, FIXTURES, VALVES, SOLDER, FLUX OR INSTALLATION SHALL BE FURNISHED LEAD FREE.
b. ALL PLUMBING SUBMITTALS SHALL HAVE DOCUMENTATION INDICATING LEAD FREE MANUFACTURING AND CONTENT.

23. CONTRACTOR TO IMPLEMENT PRACTICES AND PROCEDURES TO MEET THE PROJECT'S ENVIRONMENTAL PERFORMANCE GOALS, WHICH INCLUDE ACHIEVING LEED SILVER CERTIFICATION. THE CONTRACTOR SHALL ENSURE THAT THE REQUIREMENTS RELATED TO WATER EFFICIENCY THROUGH WATER USE REDUCTION ARE IMPLEMENTED TO THE FULLEST EXTENT. SUBSTITUTIONS, OR OTHER CHANGES TO THE WORK OR MATERIAL PROPOSED BY THE CONTRACTOR OR THEIR SUBCONTRACTORS, SHALL NOT BE ALLOWED IF SUCH CHANGES COMPROMISE THE STATED LEED PERFORMANCE REQUIREMENT. MAXIMUM FLOW/FLUSH RATES FOR PLUMBING FIXTURES ARE LISTED BELOW:
a. WATER CLOSET : 1.28 GALLONS PER FLUSH
b. URINAL : 0.125 GALLONS PER FLUSH
c. LAVATORY : 0.5 GALLONS PER MINUTE OR 0.20 GALLONS PER CYCLE
d. SHOWER : 1.75 GALLONS PER MINUTE
e. SINKS : 1.5 GALLONS PER MINUTE

24. NOT USED.

25. NO SHARP OR ABRASIVE SURFACE ALLOWED UNDER LAVATORIES.

26. ALL FIXTURES, EQUIPMENT, PIPING, AND MATERIALS SHOULD BE LISTED.

27. ALL FAUCETS IN THE PUBLIC RESTROOMS SHALL BE SELF CLOSING OR SELF CLOSING METERING FAUCETS.

28. PUBLIC LAVATORIES SHALL HAVE CONTROLS TO LIMIT THE WATER TEMPERATURE TO 110ºF.

29. PLUMBING PIPES INSTALLED IN THE EXTERIOR WALLS, ATTIC, CRAWL SPACES OR OUTSIDE OF THE BUILDING SHALL BE PROTECTED FROM FREEZING.

30. SUSPENDED PIPING SHALL BE SUPPORTED AT INTERVALS NOT TO EXCEED THOSE SHOWN IN TABLE 313.3 2021 UPC WITH WASHINGTON STATE AMENDMENTS.

31. PRIOR TO UTILIZATION OF NEWLY CONSTRUCTED POTABLE WATER PIPING SYSTEMS, ALL AFFECTED POTABLE WATER PIPING SHALL BE DISINFECTED USING PROCEDURE PRESCRIBED IN SECTION 609.10 OF 2021 UPC .

32. PLUMBING FIXTURES SERVED FROM RECYCLED WATER SYSTEM SHALL HAVE A SIGNAGE THAT INDICATED THAT THE SYSTEM SERVING THE FIXTURE IS RECYCLED WATER SYSTEM.

SEISMIC NOTES

1. CONTRACTOR SHALL PROVIDE COMPLETE SEISMIC ANCHORAGE AND BRACING FOR ALL PLUMBING EQUIPMENT AND REQUIRED PIPING.

2. ALL EQUIPMENT SHALL BE ANCHORED OR BRACED TO MEET THE HORIZONTAL AND VERTICAL FORCES PRESCRIBED IN WASHINGTON STATE MECHANICAL AND BUILDING CODES, MEETING ASCE 7 REQUIREMENTS AS REFERENCED BY THE BUILDING CODE.

A. THE ATTACHMENT OF THE FOLLOWING ITEMS SHALL BE DESIGNED TO RESIST THE FORCES PRESCRIBED ABOVE, BUT NEED NOT BE DETAILED ON THE PLANS.

A.1. EQUIPMENT WEIGHING LESS THAN 400 POUNDS SUPPORTED DIRECTLY ON A FLOOR OR ROOF.

A.2. EQUIPMENT WEIGHING LESS THAN 20 POUNDS AND SUSPENDED FROM A ROOF, CEILING OR HUNG FROM A WALL.

A.3. EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUPPORTED BY VIRBRATION ISOLATORS.

A.4. TEMPORARY OR MOVEABLE EQUIPMENT THAT IS NOT HARDWIRED OR PLUMBED TO THE BUILDING.

A.5. THE CONTRACTOR SHALL SUBMIT THE ANCHORAGE DETAILS AND CALCULATIONS FOR ITEMS NOT SHOWN ON THE DRAWINGS AND FOR ALL SUBSTITUTED EQUIPMENT THAT IS GREATER IN WEIGHT OR VARIES MORE THAN 10% IN LENGTH, HEIGHT OR WIDTH FROM THE APPROVED DETAILS TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW (ALLOW 4-WEEK REVIEW PERIOD). FOLLOWING THE REVIEW BY THE STRUCTURAL ENGINEER OF RECORD, THE CONTRACTOR SHALL SUBMIT THE ANCHORAGE DETAILS AND CALCULATIONS TO THE ARCHITECT (THIS SHALL BE DONE AT LEAST 12 WEEKS PRIOR TO THE SCHEDULED EQUIPMENT INSTALLATION). THE CONTRACTOR'S STRUCTURAL ENGINEER SHALL PARTICIPATE IN ALL BACK CHECKING PROCEDURES.

3. PIPING SYSTEMS SHALL BE BRACED PER ASCE 7 REQUIREMENTS AS REFERENCED BY THE WASHINGTON STATE BUILDING CODE.

A. THE BRACING AND ATTACHMENT TO STRUCTURE SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS WITH AN OPA NUMBER SUCH AS MASON INDUSTRIES (OPA 349) OR ISAT (OPA 485) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D.

B. COPIES OF THE MANUAL SHALL BE ON THE JOBSITE PRIOR TO STARTING HANGING AND BRACING PIPING SYSTEMS.

C. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

4. THE CALCULATIONS AND DETAILS SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD SHALL BE SEALED AND SIGNED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON. THE CALCULATIONS SHALL DEMONSTRATE THE FOLLOWING:

A. THE ADEQUACY OF ANCHORAGE UNDER ALL APPLICABLE LOAD CONDITIONS PRESCRIBED BY THE WASHINGTON STATE BUILDING CODE.

B. THE STRUCTURAL ELEMENTS, WHICH ARE RESISTING THE ANCHORAGE LOADS; SUCH AS CONCRETE FILL ON METAL DECK AND STEEL BEAMS, ARE NOT STRESSED BEYOND ITS ACCEPTABLE VALUE.

5. FOR ALL VIBRATION ISOLATORS AND THEIR ANCHORAGES, THE CONTRACTOR SHALL PROVIDE CALCULATIONS, DETAILS AND TEST DATA TO SUBSTANTIATE THE ISOLATOR'S CAPACITY FOR VERTICAL AND LATERAL LOADS. CALCULATIONS MUST ALSO BE SUBMITTED TO SUBSTANTIATE THE SIZE, QUANTITY, LOCATION AND CONNECTION TO STRUCTURE. THE DRAWINGS MUST BE MADE CONSISTENT WITH THE CALCULATIONS. THE MANUFACTURER, EQUIPMENT AND STRUCTURAL ATTACHMENT PROCEDURE MUST BE CLEARLY SPECIFIED. ISOLATORS WHICH SUPPORT A COMPONENT INSIDE THE ACTUAL UNIT WILL NOT BE REVIEWED.

6. WHERE CONCRETE AND MASONRY EXPANSION OR ADHESIVE TYPE ANCHORS ARE USED, THE ANCHORAGE DETAILS AND CALCULATIONS SHALL INDICATE MANUFACTURER, ICBO REPORT NO., TYPE, DIAMETER, MINIMUM EMBEDMENT, CONCRETE TYPE AND STRENGTH.

7. WHEN INSTALLING DRILLED-IN ANCHORS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. LOCATE REINFORCEMENT BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.

8. NO POWDER DRIVEN FASTENERS AND/OR SHOT PINS ARE ALLOWED FOR HANGING PLUMBING SYSTEMS.

9. ALL EXPANSION ANCHORS SHALL HAVE 50% OF THE BOLTS TESTED. IF ANY ANCHOR FAILS TESTING, TEST ALL ANCHORS OF THE SAME CATEGORY NOT PREVIOUSLY TESTED UNTIL 20 CONSECUTIVE PASS, THEN RESUME THE INITIAL TESTING FREQUENCY. TESTING SHALL OCCUR 24 HOURS MINIMUM AFTER INSTALLATION OF THE SUBJECT ANCHORS, IN ACCORDANCE WITH IR19-1.

10. SEE STRUCTURAL DRAWINGS FOR CONCRETE EXPANSION ANCHOR MATERIAL AND TESTING REQUIREMENTS.

11. WHERE PLUMBING PIPING CROSSES BUILDING SEISMIC JOINTS, PROVIDE FLEXIBLE SEISMIC JOINT WITH A HORIZONTAL/VERTICAL MOVEMENT CAPACITY AS SPECIFIED BY THE STRUCTURAL ENGINEER. SUPPORT FLEXIBLE SEISMIC JOINT ASSEMBLY ON BUILDING STRUCTURE AT EACH END OF THE ASSEMBLY USING HANGERS WITH SEISMIC BRACING. GAS PIPING EXPANSION SEISMIC JOINT SHALL BE AGA APPROVED.

DEMO NOTES

1. NOT ALL EXISTING CONDITIONS HAVE BEEN SHOWN. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO DEMO.
2. CONTRACTOR SHALL PROTECT ALL WORK AND EXISTING CONDITIONS ASSOCIATED WITH THIS CONTRACT FROM DAMAGE, COVER ENDS OF PIPING AND DUCTWORK NOT ACTIVELY BEING WORKED ON. IT IS THE CONTRACTOR RESPONSIBILITY TO REPAIR OR REPLACE ANY DAMAGED ITEMS THAT OCCURS DURING THIS CONSTRUCTION PROJECT AT NO COST TO THE OWNER.
3. DEMOLISH ALL REQUIRED EQUIPMENT, DUCTWORK, PIPING, HANGERS, CONTROLS AND ALL ASSOCIATED EXISTING SYSTEMS AS REQUIRED. TO REPLACE EACH SYSTEM, CONTRACTOR SHALL COORDINATE DEMOLITION WITH EXISTING SYSTEMS AND COMPONENTS TO REMAIN PRIOR TO WORK COMMENCING.
4. IT IS THE CONTRACTOR RESPONSIBILITY TO CLEAN UP ALL DEBRIS FROM SITE AT THE END OF EACH WORK DAY AND DISPOSE OFF EITHER IN LAY DOWN RECYCLE BINS PROVIDED BY THE CONTRACTOR OR OFFSITE ALL TOGETHER.
5. ALL DEMOLISHED EQUIPMENT SHALL BE TURNED OVER TO THE OWNER UNLESS DIRECTED OTHERWISE. IF NOT REQUIRED BY OWNER, DISPOSE AS REQUIRED.

ABBREVIATIONS

A	ACCESSIBLE
ABC	ABOVE CEILING
ABV	ABOVE
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFR	ABOVE FINISHED ROOF
AP	ACCESS PANEL
ARCHL	ARCHITECTURAL
BFF	BELOW FINISHED FLOOR
BTU	BRITISH THERMAL UNIT
BFG	BELOW FINISHED GRADE
CD	CONDENSATE DRAIN
CDP	CONDENSATE PUMP
CFH	CUBIC FEET PER HOUR
CI	CAST IRON
CL	CLEAR
CLG	CEILING
CO	CLEANOUT
CONN	CONNECT (CONNECTION)
CONT	CONTINUATION
CWD(R)	COLD WATER DROP (RISER)
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DWGS	DRAWINGS
EA	EACH
EC	ELECTRICAL CONTRACTOR
EFF	EFFICIENCY
EL	ELEVATION
EWC	ELECTRIC WATER COOLER
(E)	EXISTING
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FIN FLR	FINISHED FLOOR
FPS	FIRE PROTECTION SYSTEM
FS(R)	FIRE SPRINKLER (RISER)
FS	FLOOR SINK
F.U.	FIXTURE UNITS
FUT	FUTURE
GA	GAUGE OR GAGE
GCO	GRADE CLEANOUT
GI	GALVANIZED IRON
GPF	GALLONS PER FLUSH
GPM	GALLONS PER MINUTE
GV	GATE VALVE
GWH	GAS WATER HEATER
HB	HOSE BIBB
HP	HORSEPOWER
HWD(R)	HOT WATER DROP (RISER)
I.E.	INVERT ELEVATION
IMB	ICE MAKER BOX
KW	KILOWATT
LAV	LAVATORY
LPG	LIQUIFIED PETROLUM GAS
MAX	MAXIMUM
MBH	THOUSANDS BTU's PER HR
MECH'L	MECHANICAL
MFGR	MANUFACTURER
MIN	MINIMUM
(N)	NEW
N(I)P(C	NOT IN (PLUMBING) CONTRACT
OH	OVERHEAD
OC	ON CENTER
OFD	OVERFLOW DRAIN
POC	POINT OF CONNECTION
PSI	POUNDS SQUARE INCH
P & TR	PRESSURE AND TEMPERATURE
RELIEF	
R	RISER
(R)	REMOVE
RC	ROOF-CEPTOR
RD	ROOF DRAIN
(REL)	RELOCATE
REQMTS	REQUIREMENTS
RI	ROUGH-IN
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RWL	RAIN WATER LEADER
S	SINK
SAN	SANITARY SEWER
SB	SERVICE BOX
SCD	SECONDARY CONDENSATE DRAIN
SH	SHOWER
SOV	SHUT OFF VALVE
SS	STAINLESS STEEL
STRUCT	STRUCTURAL
TOS	TOP OF SLAB
TOT.	TOTAL
TP	TRAP PRIMER
TV	TEMPERING VALVE
TWD(R)	TEMPERED WATER DROP (RISER)
TYP	TYPICAL
UF	UNDER FLOOR
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
US	UNDER SLAB
V	VENT/VOLTS
VAC BRKR	VACUUM BREAKER
VB	VALVE BOX
VH	VENT HEADER
VR	VENT RISER
VTR	VENT THRU ROOF
W	WASTE
W/	WITH
WB	WALL BOX
WC	WATER CLOSET (WATER COLUMN)
WCO	WALL CLEANOUT
WD	WASTE DROP
WFU	WATER FIXTURE UNITS
WHA	WATER HAMMER ARRESTOR

GENERAL SYMBOLS

- DEMOLITION
- EXISTING
- NEW WORK
- GTE — POINT OF CONNECTION OF NEW TO EXISTING SYSTEM
- POINT OF DISCONNECTION OF DEMOLITION FROM EXISTING
- CAP OFF EXISTING
- DETAIL NUMBER
- DETAIL CALLOUTS
- SHEET ON WHICH DETAIL IS SHOWN
- ELEVATION NUMBER
- EXTERIOR ELEVATIONS
- SHEET ON WHICH ELEVATION IS SHOWN
- ELEVATION NUMBER
- INTERIOR ELEVATIONS
- SHEET ON WHICH ELEVATION IS SHOWN
- SECTION NUMBER
- BUILDING SECTIONS
- SHEET ON WHICH SECTION IS SHOWN
- SECTION NUMBER
- WALL SECTIONS
- SHEET ON WHICH SECTION IS SHOWN
- FLOOR 0'-0" — FLOOR OR ROOF LEVEL NAME / VERTICAL ELEVATION
- N — NORTH ARROW
- DRAWING REVISION
- MATCH LINE
- GRAPHIC SCALES - ENGINEERING
- EL. 10000 — ELEVATION
- 0000 ELEVATION — ELEVATION - CEILING
- TOP OF 0000 — DATUM ELEVATION
- 0000 — ROOM TAG
- M01 — KEY NOTE TAG
- SLOPE — SLOPE ARROW
- CIRCULAR BREAK SYMBOL
- CIRCLE BREAK SYMBOL
- REFERENCE SYMBOL - DIAMOND
- REFERENCE SYMBOL - HEXAGON
- REFERENCE SYMBOL - TRIANGLE
- REFERENCE SYMBOL - CIRCLE
- REFERENCE SYMBOL - ROTATED HEXAGON
- CENTER LINE
- GRID BUBBLE AND LINE

PLUMBING

2 1/2"	PIPE SIZE
XX	PIPING ROUTED BELOW SLAB OR GRADE
AV	ACID VENT
AW	ACID WASTE ABOVE GRADE OR FLOOR
BBD	BOILER BLOWDOWN
CA(###)	COMPRESSED AIR (NOMINAL PRESSURE)
CD(P)	CONDENSATE DISCHARGE PUMPED
CD	CONDENSATE DRAIN
DI	DIONIZED WATER
DIR	DIONIZED WATER RECIRCULATING
DW	DISTILLED WATER
DCW	DOMESTIC COLD WATER
DCW(S)	DOMESTIC COLD WATER SOFTENED
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRCULATION
D	DRAIN
GW	GREASE WASTE
H	HUMIDIFICATION
LV	LABORATORY VENT
LW	LABORATORY WASTE
G	NATURAL GAS
GV	NATURAL GAS VENT
NPCW	NON-POTABLE COLD WATER
NPCW(S)	NON-POTABLE COLD WATER SOFTENED
NPHW	NON-POTABLE HOT WATER
NPHW(S)	NON-POTABLE HOT WATER SOFTENED
PTS	PNEUMATIC TRANSPORT
PG	PROPANE GAS
RW	RECYCLED WATER
RO	REVERSE OSMOSIS
ROR	REVERSE OSMOSIS RECIRCULATING
SL	SAMPLING LINE
SAN	SANITARY DRAIN
SAN(O)	SANITARY DRAIN (OIL)
SAN(P)	SANITARY PUMPED
SAN(RAD)	SANITARY RADIOACTIVE
ST	STORM DRAIN
ST(O)	STORM OVERFLOW
ST(P)	STORM PUMPED
TP	TRAP PRIMER
VAC	VACUUM (AIR)
VAC(EX)	VACUUM PUMP EXHAUST
V	VENT
V(O)	VENT (OIL)
V(SE)	VENT (SEWAGE EJECTOR)
	PIPE INSULATION
CB	FIXTURE TRAP
MH	CATCH BASIN
RD	MANHOLE
FD	ROOF DRAIN
FFD	FLOOR DRAIN
	FUNNEL FLOOR DRAIN
HB	TRAP PRIMER
	HOSE BIBB
TYPE / QUANTITY	PLUMBING FIXTURES
	PLUMBING FIXTURE TAG (REFER TO SCHEDULE)

REAL OBJECT	SYMBOL	
		ISOLATION VALVE (GENERIC)
		GATE VALVE
		GLOBE VALVE
		BUTTERFLY VALVE NPS 6 AND LESS
		BUTTERFLY VALVE NPS 8 AND MORE
		BALL VALVE
		PLUG VALVE
		NEEDLE VALVE
		CHECK VALVE (GENERIC)
		BALANCING VALVE
		FLOW LIMITING VALVE
		PRESSURE REDUCING VALVE
2-WAY		2-WAY CONTROL VALVE (GENERIC)
2-WAY		TWO-WAY ELECTRIC CONTROL VALVE, BUTTERFLY TYPE
3-WAY		3-WAY CONTROL VALVE (GENERIC)
3-WAY		THREE-WAY ELECTRIC CONTROL VALVE, BUTTERFLY TYPE
		SOLENOID 2-WAY CONTROL VALVE
		SOLENOID 3-WAY CONTROL VALVE
		FLOAT OPERATED VALVE ACTUATOR
		SAFETY OR RELIEF VALVE
		ANGLE VALVE
		BOILER STOP AND CHECK VALVE
GHD	BFP	BACKFLOW PREVENTER (GENERIC)
		MULTI-PURPOSE VALVE (SHUTOFF, BALANCING AND CHECK)
		SUCTION DIFFUSER
		PUMP (GENERIC)
		Y STRAINER (GENERIC)
		STEAM TRAP (GENERIC)
		AUTOMATIC AIR VENT
		MANUAL AIR VENT
		VACUUM BREAKER
		SHOCK ABSORBER
		TEMPERATURE GAUGE
		PRESSURE GAUGE
		TEMPERATURE AND PRESSURE TAP
		SIGHT FLOW GLASS
		FLEXIBLE CONNECTOR
		EXPANSION JOINT
		GUIDE
		ANCHOR
	1%	FLOW ARROW
	1%	PIPING SLOPE
		PIPE CAP
		PIPE BREAK
		PIPE CROSS
		PIPING ELBOW UP
		PIPING ELBOW DOWN
		PIPING TEE UP
		PIPING TEE DOWN
		UNION CONNECTION
		FLANGED CONNECTION
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
CO	CO	STANDARD CLEAN-OUT IN LINE END OF RUN
	CO	STANDARD CLEAN-OUT THROUGH FLOOR END OF RUN
	CO	STANDARD CLEAN-OUT THROUGH FLOOR IN LINE

PIPING COMPONENTS

PLUMBING SHEET LIST

City of Puyallup Building REVIEWED FOR COMPLIANCE
BSnowden
11/01/2024
2:08:16 PM

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.

NOTE: NOT ALL SYMBOLS, SYSTEMS, AND ABBREVIATIONS MAY BE USED ON THIS PROJECT

centeris
PRCTI20241387

Stantec
720 3rd Avenue Suite 1500
Seattle Washington 98104-1878
(206) 667-0555

MECHANICAL DRAWINGS

CENTERIS
FUTURE TENANT
1019 39th AVENUE SE
PUYALLUP, WA 98374

JEFFREY M. LYNCH — STATE OF WASHINGTON — 42570 — REGISTERED PROFESSIONAL ENGINEER
2024-10-01

Revision No.	Description	Date
1	FUTURE TENANT PERMIT	8/30/2024
2	FUTURE TENANT PERMIT COMMENTS	10/01/2024

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

Drawn By: JLV
Checked By: BO

Title: PLUMBING LEGEND, GENERAL NOTES AND ABBREVIATION

Sheet: P.FT.001

HOSE BIBB

MARK	NUMBER	CLIMATE	WALL BOX/REEL	VACCUM BREAKER	HOSE CONNECTION SIZE (")	HANDLE	MANUFACTURER	MODEL NUMBER	NOTES
HB	1	NON-FREEZE	STAINLESS STEEL	INTEGRAL	3/4	LOOSE KEY	JAY R SMITH	5618	1,2

NOTES:
1. PROVIDE WITH LOOSE "T" KEY.
2. INTEGRAL VACUUM BREAKER.

BACKFLOW PREVENTION

MARK	NUMBER	SERVICE	SIZE (")	FLOW(GPM)	PRESSURE DROP(PSI)	ACCESSORIES	MANUFACTURER	MODEL NUMBER	NOTES
RPBP	1	MAKEUP WATER	2	64	14	AIR GAP FITTING	WATTS	LF009-FS	1,2,3,4

NOTES:
1. PROVIDE WITH AIRGAP FITTING.
2. ROUTE AIRGAP DRAIN FULL LINE SIZE TO NEAREST INDIRECT RECEPTOR.
3. PROVIDE FLOOD PROTECTION BACKFLOW SYSTEM PVS-7000.
4. PRODUCT SHALL BE LEAD FREE.

PLUMBING MATERIAL STANDARDS MATRIX

SERVICE ID	SERVICE DESCRIPTION	DESIGN...	SIZE	MATERIAL	JOINTS & FITTINGS	LOCATION FOR USE	REMARKS
DOMESTIC WATER - BELOW GRADE							
DCW	DOMESTIC COLD WATER UNDERGROUND	125	2-1/2" AND SMALLER	HIGH DENSITY POLYETHYLINE (HDPE)	HEAT WELD	NO RESTRICTION	
				SOLID WALL SCH. 8O PVC SCH 80CPVC	SOLVENT WELD	NO RESTRICTION	5,6,12
		125	2-1/2" AND LARGER	DUCTILE IRON	MECHANICAL ANSI/AWWA C110/A21.51	NO RESTRICTION	
DOMESTIC WATER- ABOVE GRADE							
DCW	DOMESTIC COLD WATER	125	2" AND SMALLER	COPPER TUBING - TYPE L	SOLDERED, 95-5 SOLDER, LEAD-FREE OR COPPER SWEAT, COPPER PRO PRESS	NO RESTRICTION	1, 3, 5, 6, 7, 8, 9, 10, 12
				COPPER TUBING - TYPE L	PRESS-CONNECT JOINING, OR COPPER SWEAT, COPPER PRO PRESS	NO RESTRICTION	
				PEX TUBING ASTM F876 - ASTM F877	PIPE INSERT & EXPANSION COLLAR ASTM F1807,ASTM F1960	RUNOUT FROM MANIFOLD IN RESIDENCE	
			2 1/2" AND LARGER	COPPER TUBING - TYPE L	GROOVED OR COPPER VICTAULIC	NO RESTRICTION	
				COPPER TUBING - TYPE L	PRESS-CONNECT JOINING OR COPPER VICTAULIC	NO RESTRICTION	
				STAINLESS STEEL	GROOVED OR VICTAULIC FITTING	NO RESTRICTION	
		250	ALL	COPPER TUBING - TYPE L	SOLDERED, 95-5 SOLDER, LEAD-FREE OR COPPER SWEAT, COPPER PRO PRESS	NO RESTRICTION	
				COPPER TUBING - TYPE L	PRESS-CONNECT JOINING, OR COPPER SWEAT, COPPER PRO PRESS	NO RESTRICTION	
				STAINLESS STEEL	GROOVED OR VICTAULIC FITTING	NO RESTRICTION	
SANITARY WASTE & VENT - ABOVE GRADE							
SAN	SANITARY WASTE	5	ALL	CAST IRON NO HUB	NHCI FITTINGS	WASTE RISERS, FLOOR MOUNT FIXTURE TRAP ARMS & CLOSET BENDS, ABOVE UNIT CBUNGS, IN PLENUMS IN ALL COMMON AREAS	4, 5, 6, 7, 8
SV	SANITARY VENT	5	ALL	CAST IRON NO HUB (OFFICE ONLY)	NHCI FITTINGS	NO RESTRICTION	
SANITARY WASTE & VENT- BELOW GRADE							
SAN	SANITARY WASTE	5	ALL	CAST IRON NO HUB/SOLID CORE PVC	NHCI FITTINGS	NO RESTRICTION	4, 5, 6, 7, 8, 12
SV	SANITARY VENT	5	ALL	CAST IRON NO HUB	NHCI FITTINGS	NO RESTRICTION	

REMARKS
1. PER 2021 UPC WITH WASHINGTON AMENDMENTS, PEX TUBING SHALL NOT BE INSTALLED WITHIN THE FIRST 18 INCHES OF PIPING CONNECTED TO A WATER HEATER. (2)
2. NOT USED.
3. DOMESTIC COLD WATER SUPPLY PIPING SHALL NOT EXCEED 8 FPS. DOMESTIC HOT WATER PIPING SHALL NOT EXCEED 5 FPS.
4. ALL WASTE PIPES ARE TO BE ISOLATED FROM BUILDING STRUCTURE USING A CLOSED-CELL NEOPRENE SLEEVE.
5. EXPANSION COMPENSATION FOR PVC IS REQUIRED PER UPC 312.0 (2)
6. CAST IRON OR PLENUM-RATED CPVC PIPE IS REQUIRED IN ALL RETURN AIR PLENUMS. PVC & ABS ARE NOT ALLOWED IN RETURN AIR PLENUMS.
7. CEILING CAVITIES SURROUNDING WASTE PIPES OR ROOF DRAIN LINES ARE TO BE FILLED WITH BATT INSULATION.
8. FLOOR PENETRATIONS ARE TO BE PACKED WITH ROCK WOOL OR FIBERGLASS INSULATION AND SEALED WITH A RESILENT FIRE CAULK. PIPING SHALL BE PREVENTED FROM MAKING RIGID CONTACT WITH THE STRUCTURE AT THESE PENETRATIONS.
9. INSULATE ALL METALLIC COLD WATER LINES WITH 1/2" FIBERGLASS WRAP OR EQUIVALENT.
10. PIPE SHALL BE INSULATED PER WASHINGTON STATE ENERGY CODE 2021 REQUIREMENTS EXCEPT WHERE NOTED OTHERWISE. (2)
11. NOT USED.
12. ALL BURIED PLASTIC PIPING INCLUDING PVC AND CPVC SHALL BE INSTALLED IN ACCORDANCE WITH ASTM 02321 AND ASTM F 1668 STANDARDS.
13. NOT USED.
14. 8" AND LARGER NATURAL GAS PIPING: STANDARD WEIGHT PIPE SCH 40 ASTM A53 B AND BUTT WELD FITTINGS ALLOWED.
15. SOCKET WELD FOR IN SHAFT OR ENCLOSURES.
16. PEX PIPE ALLOWED FOR IN-WALL APPLICATIONS (EXCLUDES RISERS SPANNING MORE THAN ONE LEVEL).

PLUMBING DRAIN SCHEDULE

DRAIN TYPE : FLOOR DRAIN

UNIT IDENTIFICATION	LOCATION	BODY		SIZE (")	STRAINER		VARIATIONS	MODEL	MANUFACTURER	NOTES
		MATERIAL	STYLE		MATERIAL	STYLE				
FS-1	LEVEL1 GRIDLINE A7	STAINLESS STEEL	-	4	STAINLESS STEEL	3/4 GRATE	-	3100	JAY R SMITH	1,2

NOTES:
1. REFER TO 3/P.FT.501 FOR FLOOR SINK AND TRAP PRIMER DETAIL FOR INSTALLATION INFORMATION.
2. REFER TO ARCHITECTURAL DRAWING FOR EXACT LOCATION.

Project Plumbing Load & Utility Coordination Matrix

	# of Fixtures	WSFU/EACH	Total WSFU	HWFU/EACH	Total HWFU	DFU/ EACH (CHAPTER 7)	Total DFU (CHAPTER 7)
Misc							
HoseBibb-1st	1	2.5	2.5	0.0	0.0	0.0	0.0
Non-Residential Total			2.5		0.0		0.0

BUILDING TOTALS:

Residential - Flush Valves or Flush...	Valve
Total Residential Domestic WSFU:	0.0
Total Domestic Water GPM:	0.0
Total Non-Residential Domestic WSFU:	2.5
Total Non-Residential Domestic GPM:	2.0
HVAC makeup water GPM	64.0
Building Total Domestic Water GPM:	66.0
Total Non-Residential Drainage GPM	20

WSFU Notes:
Total GPM is obtained by converting the total WSFU to GPM. This value will be less than the sum of the individual GPM's due to diversity in the conversion from WSFU to GPM.

Domestic Water Utility Coordination

Domestic Water Meter Size	2"	66 GPM	connected to	100 GPM	Max GPM at selected meter size:
Domestic Water Main Size (Within Bldg)	2.0"				

Sanitary Sewer Utility Coordination

Pipe slope within garage	1/8"per ft	
Total DFU	0	
Sanitary Sewer Size (if 1 POC)	1¼"	
Total Estimated SS Flowrate	20 GPM	MINIMUM OF ASPE TABLE OR 90% OF SUPPLY
Sanitary Sewer Size (if multiple, evenly size connections)	1	SS CONNECTIONS REQUIRED FOR INSTANTANEOUS DUMP

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MECHANICAL DRAWINGS

CENTERIS
FUTURE TENANT
1019 39th AVENUE SE
PUYALLUP, WA 98374

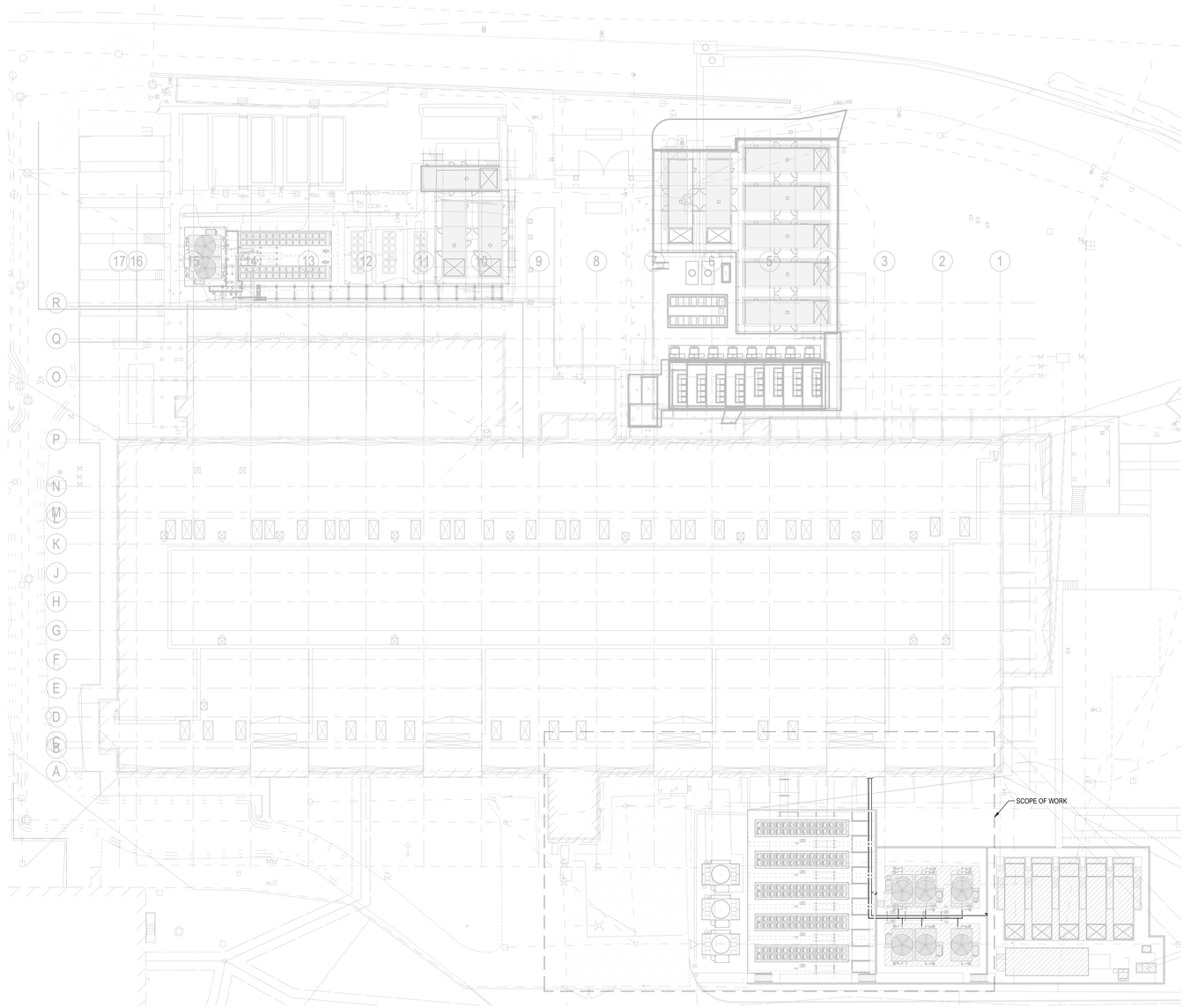
Revision No.	Description	Date
1	FUTURE TENANT PERMIT	8/30/2024
2	FUTURE TENANT PERMIT COMMENTS	10/01/2024

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

Drawn By: JLV
Checked By: BO

Title: PLUMBING SCHEDULES

Sheet: P.FT.010



1 PLUMBING SITE PLAN

P.FT.101 1" = 30'-0"

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MECHANICAL DRAWINGS

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JEFFREY M. LYNCH
STATE OF WASHINGTON
43570
REGISTERED
PROFESSIONAL ENGINEER

2024-10-01

Revision No.	Description	Date

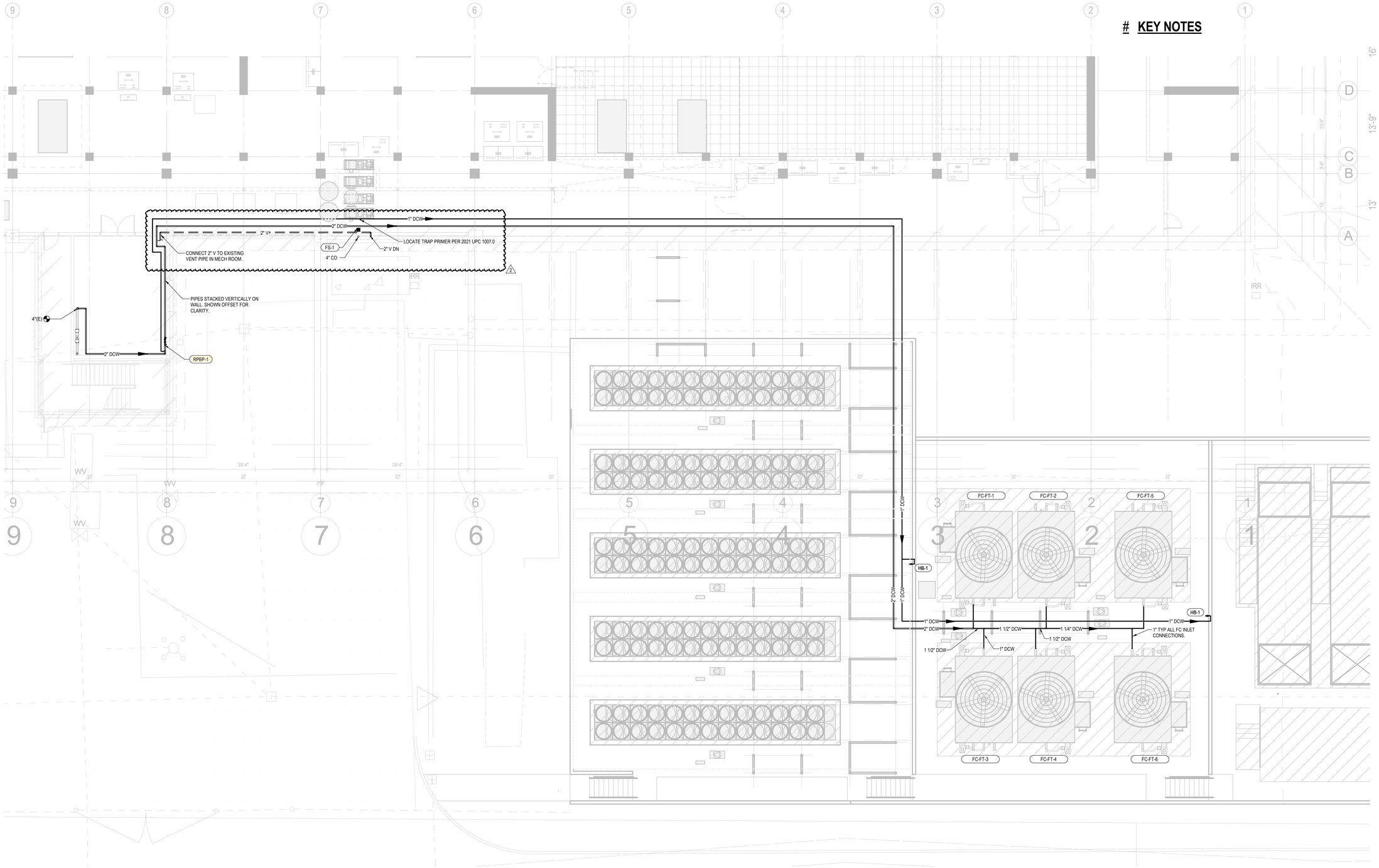
City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

Drawn By:	Checked By:
JLV	BO

Title PLUMBING SITE PLAN

Sheet **P.FT.101**



KEY NOTES

1 LEVEL 1 PLUMBING PLAN
P.FT.102 1/8" = 1'-0"

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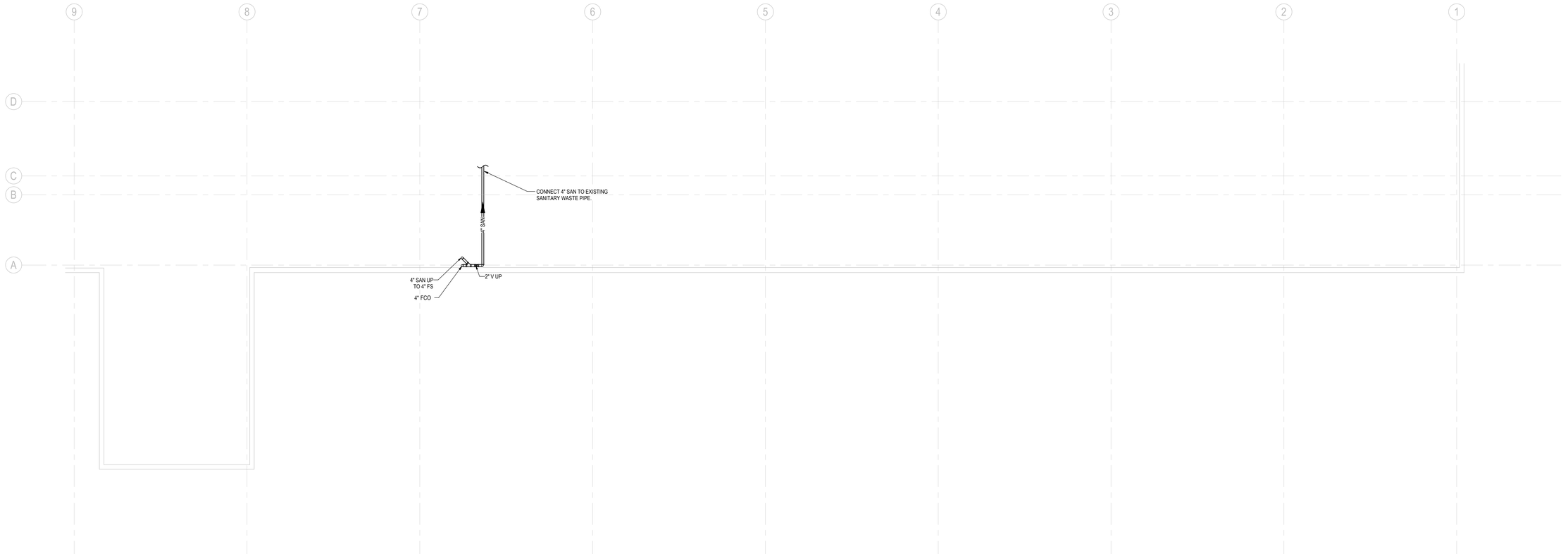
City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

Drawn By: JLV
Checked By: BO

Title: PLUMBING LEVEL 1 PLAN

Sheet: **P.FT.102**



1 PLUMBING - BELOW GRADE PLAN

P.FT.102U 1/8" = 1'-0"

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

Drawn By: JLV
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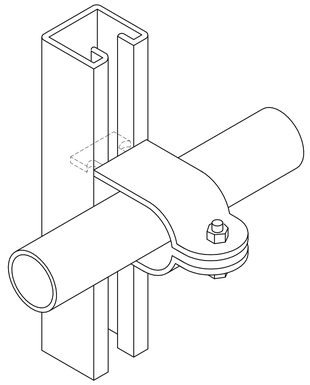
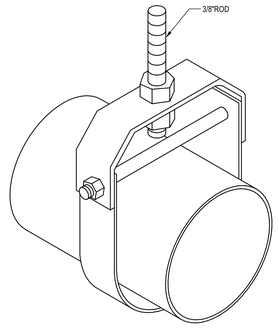
Title: PLUMBING LEVEL BELOW GRADE

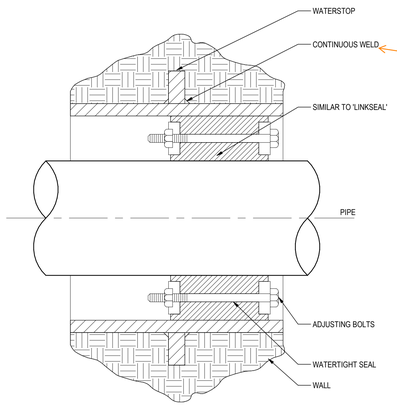
Sheet: 2 P.FT.102U



5 WALL BRACKET DETAIL
P.FT.501 NOT TO SCALE

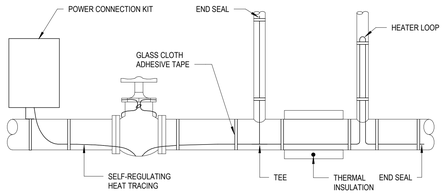


6 CEILING HANGER DETAIL
P.FT.501 NOT TO SCALE



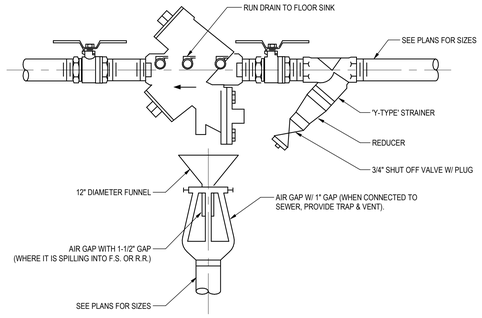
Welding to be done by an individual or fabricator who is WABO certified or approved by the Building Official to perform the work. All welds must be inspected and approved by a WABO certified special inspector.

7 TYPICAL EXTERIOR WALL PENETRATION WALL GRADE
P.FT.501 NOT TO SCALE

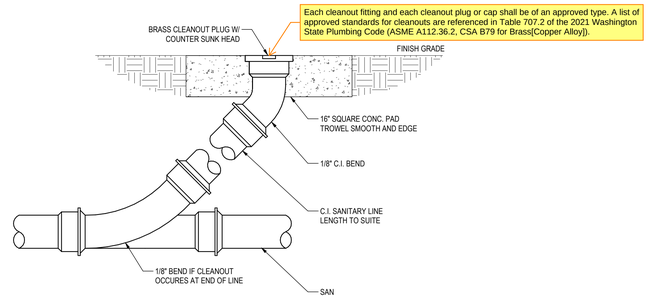


NOTES:
1. PROVIDE HEAT TRACE FOR ALL WATER PIPING LOCATED OUTDOORS
2. INSULATE THE PIPING.
3. REFER TO THE CONTRACT DOCUMENTS FOR PIPE MATERIAL AND INSULATION REQUIREMENTS.
4. FOLLOW MFRS INSTALLATION DETAILS FOR THE REQUIRED CABLE COVERAGE TO FULLY PROTECT THE SYSTEM.

8 HEAT TRACE DETAIL
P.FT.501 NTS

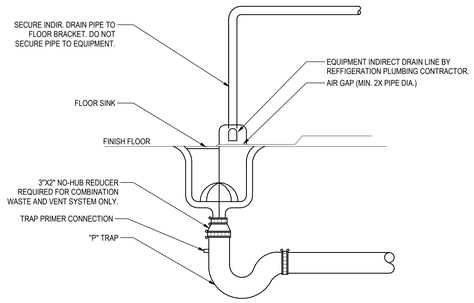


1 BACKFLOW PREVENTER DRAIN
P.FT.501 NOT TO SCALE

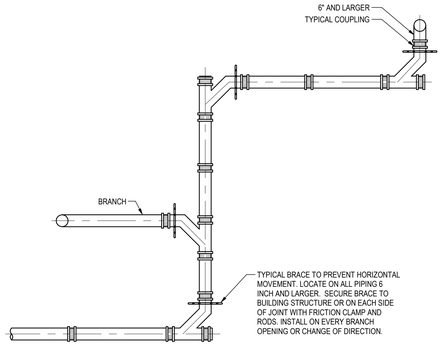


Each cleanout fitting and each cleanout plug or cap shall be of an approved type. A list of approved standards for cleanouts are referenced in Table 707.2 of the 2021 Washington State Plumbing Code (ASME A112.36.2, CSA B79 for Brass|Copper Alloy)).

2 CLEANOUT TO GRADE
P.FT.501 NOT TO SCALE



3 TYPICAL INDIRECT DRAIN DISCHARGE DETAIL
P.FT.501 NOT TO SCALE



4 HUBLESS PIPE BRACING FOR HORIZONTAL PIPING
P.FT.501 NOT TO SCALE

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2024-10-01

Revision No.	Description	Date
	UPS YARD EQUIPMENT PERMIT SET	2/8/2024
	UPS & BATTERY ROOM INTERIORS	2/16/2024
	UPS & BATTERY ROOM PERMIT	2/23/2024
1	FUTURE TENANT PERMIT	8/30/2024
2	FUTURE TENANT PERMIT COMMENTS	10/01/2024

City of Puyallup
Development & Permitting Services
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Drawn By: JLV
Checked By: BO

Title: PLUMBING DETAILS

Sheet: P.FT.501