PLUMBING FIXTURE SIZING SCHEDULE								
P-#	PLUMBING FIXTURE	SAN	VENT	CW	HW			
P-1	TANK TYPE WATER CLOSET	3"	2"	1-1/4"				
P-1A	TANK TYPE WATER CLOSET - ADA	3"	2"	1-1/4"				
P-2	COUNTER TOP LAVATORY - SENSOR - ADA	1-1/2"	1-1/2"	1/2"	1/2"			
P-3	URINAL - SENSOR BATTERY	2"	1-1/2"	3/4"				
P-3A	URINAL - SENSOR BATTERY - ADA	2"	1-1/2"	3/4"				
P-4	1 COMPARTMENT SINK - UNDERMOUNT - BREAK ROOM	1-1/2"	1-1/2"	1/2"	1/2"			
P-4A	1 COMPARTMENT SINK - UNDERMOUNT - CONFERENCE ROOM 101	1-1/2"	1-1/2"	1/2"	1/2"			
P-5	ELECTRIC WATER COOLER - 2 STATION - BOTTLE FILLER	2"	1-1/2"	1/2"				
P-6	COLD WATER CONNECTION BOX			1/2"				
FD-1	FLOOR DRAIN - TOILET ROOM - TRAP GUARD	4"	2"					
FD-2	FLOOR DRAIN - MECHANICAL ROOM - TRAP GUARD	3"	1-1/2"					
RD-1	ROOF DRAIN - 4"	4"						
RD-2	ROOF DRAIN - 6"	6"						
ORD-1	OVERFLOW ROOF DRAIN - 4"	4"						
ORD-2	OVERFLOW ROOF DRAIN - 6"	6"						
OSD-1	OVERFLOW SPOUT NOZZLE - 6"	6"						
DBC-1	DOWNSPOUT BOOT CONNECTOR - 6"	6"						
DC-1	DOWNSPOUT CONNECTOR - 6"	6"						

MINIMUM 2" SANITARY WASTE UNDERSLAB. ALL PIPING TO BE SIZED ACCORDING TO CHART UNLESS OTHERWISE NOTED ON FLOOR PLANS.

PLUMBING GENERAL NOTES:

- A. COORDINATE THE LOCATION OF DRAINS, THERMOSTATS, GAS OUTLETS, ETC., WITH ALL CASEWORK EQUIPMENT, MECHANICAL ROOM EQUIPMENT, ETC., PRIOR TO COMMENCING INSTALLATION. WORK NOT SO COORDINATED SHALL BE REMOVED AND PROPERLY INSTALLED AT THE EXPENSE OF THE
- CONTRACTOR.

 B. THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO INSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. VERIFY THE LOCATION, SIZE, TYPE, ETC., OF EACH UNDERGROUND OR OVERHEAD UTILITY. ALL WORK SHALL BE PERFORMED IN ACCORD WITH ALL FEDERAL, STATE AND/OR LOCAL RULES, REGULATIONS, STANDARD AND SAFETY REQUIREMENTS. UTILITIES SHALL BE INSTALLED IN ACCORD WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL
- C. WHERE WORK IS REQUIRED ABOVE EXISTING LAY-IN, PLASTER OR GYPSUM BOARD CEILINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REINSTALLATION (OR REPLACEMENT, IF DAMAGED) OF ALL CEILING OR TILE AND GRID MEMBERS NECESSARY TO PERFORM HIS WORK. NEW
- TILE AND GRID SHALL MATCH THE SURROUNDING AREAS. ALL PATCHING WORK SHALL MATCH ADJACENT SURFACES.

 D. ALL NEW WORK SHALL BE HUNG FROM STRUCTURE, NOT FROM THE WORK OF OTHER TRADES, WHETHER EXISTING OR NEW.

 E. COORDINATE ALL WORK WITH PROJECT PHASING REQUIREMENTS.

F. PATCH, REPAIR AND PAINT OR PROVIDE WALL COVERING FOR

(TO OWNER'S STANDARDS) EXISTING WALLS, CEILINGS, ETC., THAT ARE TO REMAIN IF DAMAGED DURING CONSTRUCTION. REPAIRS SHALL MATCH ADJACENT SURFACES TO THE SATISFACTION OF THE ARCHITECT AND OWNER.
G. OBSERVE ALL APPLICABLE CODES, RULES AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT. (CITY, COUNTY, LOCAL, FEDERAL, MUNICIPALITY, UTILITY

COMPANY, COMMONWEALTH OF KENTUCKY, ETC.)

- H. CONTRACTOR SHALL BE AWARE OF UNSEEN PLUMBING WORK DURING DEMOLITION. IF ITEMS ARE UNCOVERED DURING DEMOLITION THEN FIELD VERIFY THE USE OF THE ITEMS AND PLAN AN ALTERNATE ROUTE TO RUN THESE ITEMS. THEN CONTACT THE ENGINEERS TO REVIEW THE ROUTING.
 I. IF AREA OF CONSTRUCTION HAS A POST TENSION FLOOR SLAB. CONTRACTOR SHALL USE ULTRA SOUND OR OTHER APPROVED METHODS TO SURVEY THE EXISTING FLOOR STRUCTURE
- BEFORE MAKING ANY AND ALL FLOOR PENETRATIONS.

 J. WHERE FIRE PROOFING IS SPRAYED ON EXISTING STRUCTURE ALL EXISTING CONDUITS, WATER, HYDRONIC, STEAM, CHILLED WATER, FIRE PROTECTION LINES, MED GAS, ETC. SHALL BE LOWERED TO BE BELOW FULL THICKNESS OF FIRE PROOFING WITH NO INTERFERENCE.

 K. ALL PENETRATIONS OF FIRE AND SMOKE RATED ASSEMBLIES
- SHALL BE APPROPRIATELY FIRE STOPPED PER AN APPROVED U.L. LISTED STANDARD. CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO INSULATED PIPING PENETRATIONS.

 L. ALL WORK REQUIRING DOWNTIME OF ANY AREA IN THE BUILDING SHALL BE SCHEDULED 2 WEEKS IN ADVANCE, AND
- SHALL COMPLY WITH INTERIM LIFE SAFETY MEASURES.

 M. ALL PIPING IN ROOMS WITH CEILINGS SHALL BE ABOVE CEILING EXCEPT AS NOTED.

 N. IN ACCORDANCE WITH K.R.S. ALL PLUMBING WORK SHALL BE CONSTRUCTED IN COMPLIANCE WITH PLANS APPROVED BY
- DIVISION OF PLUMBING AND/OR THE DIVISION OF WATER. THE CONTRACTOR SHALL NOT BEGIN WORK UNTIL HE HAS RECEIVED SUCH APPROVED PLANS.

 O. LOCATIONS OF PIPING AND EQUIPMENT ARE APPROXIMATE AND

AND BEARING THE APPROVAL STAMP OF THE KENTUCKY

- SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. DO NOT SCALE THE DRAWINGS.

 P. ALL OFFSETS IN PIPING ARE NOT NECESSARILY SHOWN.
- PROVIDE ADDITIONAL OFFSETS WHERE NECESSARY.

 Q. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY COMPANY FEES OR OTHER COSTS THAT ANY UTILITY COMPANY MAY REQUIRE TO COMPLETE THEIR WORK. (GAS, SEWER, WATER,
- R. WHERE MOUNTING HEIGHTS ARE NOT INDICATED OR ARE IN CONFLICT WITH ANY OTHER BUILDING SYSTEM, CONTACT THE ENGINEERS BEFORE INSTALLATION. REFER ALSO TO ARCHITECTURAL WALL INTERIOR AND EXTERIOR WALL ELEVATIONS, CEILING HEIGHTS AND OTHER DETAIL OF THESE DOCUMENTS. S. DOUBLE WIDTH TURNING VANES SHALL BE INSTALLED IN ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK ELBOWS. TURNING VANES NOT REQUIRED FOR KITCHEN EXHAUSTS. T. ANY VIBRATING, OSCILLATING OR OTHER NOISE OR MOTION PRODUCING EQUIPMENT SHALL BE ISOLATED FROM SURROUNDING SYSTEMS IN AN APPROVED MANNER. NOISY OR STRUCTURALLY DAMAGING INSTALLATIONS SHALL BE SATISFACTORILY REPLACED OR REPAIRED AT THE INSTALLING CONTRACTOR'S EXPENSE. THE FINAL DECISION ON THE SUITABILITY OF A PARTICULAR INSTALLATION'S ACCEPTABILITY
- SHALL BE THAT OF THE ENGINEER.

 U. DEVIATIONS IN SIZE, CAPACITIES, FIT, FINISH, ETC. FOR EQUIPMENT FROM THAT USED AS BASIS OF DESIGN SHALL BE THE RESPONSIBILITY OF THE PURCHASER OF THAT EQUIPMENT. ANY PROVISIONS REQUIRED TO ACCOMMODATE A DEVIATION, WHETHER APPROVED BY THE ENGINEERS OR NOT, SHALL BE THE RESPONSIBILITY OF THE PURCHASER.
- V. VALVES, BALANCING DAMPERS OR ANY
 MECHANICAL/ELECTRICAL ITEM REQUIRING ACCESS SHALL NOT
 BE LOCATED ABOVE A HARD CEILING. IF THIS IS NOT POSSIBLE,
 THEN AN APPROPRIATELY SIZED ACCESS DOOR SHALL BE
 PLACED UNDER THE ITEM TO ALLOW EASY MAINTENANCE AND
 ADJUSTMENT. ADDITIONALLY ALL SUCH ITEMS SHALL NOT BE
 LOCATED AN UNREASONABLE DISTANCE ABOVE THE CEILINGS.
 IN GENERAL ALL SUCH ITEMS UNLESS INDICATED OTHERWISE
 SHALL BE MOUNTED SIX TO TWELVE INCHES ABOVE THE
 CEILING. IF IN DOUBT, CONTACT ENGINEER PRIOR TO
- V. ALL MANHOLES, VAULTS AND SIMILAR UNDERGROUND STRUCTURES SHALL HAVE THE TOP ELEVATION SET FLUSH WITH FINISHED GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.
- X. WHEN RUNNING ANY TYPE OF PIPING BELOW A FOOTER, OR IN THE ZONE OF INFLUENCE THE PIPING SHALL BE BACKFILLED WITH CEMENTITIOUS FLOWABLE FILL PER SPECIFICATIONS. WHENEVER POSSIBLE, LOCATE PIPING OUTSIDE OF THE ZONE OF INFLUENCE. THE ZONE OF INFLUENCE IS THE AREA UNDER THE FOOTER WITHIN A 45 DEGREE ANGLE PROJECTING DOWN FROM THE BOTTOM EDGE OF THE FOOTER OF ALL SIDES OF THE FOOTER. ADDITIONALLY, GREASE TRAPS, MANHOLES, VAULTS AND OTHER UNDERGROUND STRUCTURES SHALL BE HELD AWAY FROM BUILDING WALLS FAR ENOUGH TO BE OUTSIDE OF THE ZONE OF INFLUENCE.
- Y. WORK IN CONFINED AREAS SHALL BE IN ACCORDANCE WITH THE OWNER'S SAFETY POLICY REQUIREMENTS.
- Z. THE DOCUMENTS COMPLY WITH 2006 IMC, 2007 KBC, AND 2009 IECC.
 AA. THE DOCUMENTS COMPLY WITH 2006 IMC, 2007 KBC, AND ASHRAE 90.1-2007.

SYMBOLS & ABBREVIATIONS

STIMBO	LS & ABBREVIATIONS		
AFF	ABOVE FINISHED FLOOR	•	POINT OF CONNECTION
AFR	ABOVE FINISHED ROOF	— о — э	PIPE ELBOW TURNING UP/TURNING DOWN
BFF	BELOW FINISHED FLOOR	<u> </u>	PIPE TEE TURNING UP/TURNING DOWN
BFP	BACK FLOW PREVENTER	—— FP ——	FIRE PROTECTION LINE
C.I.	CAST IRON	ORL	OVERFLOW ROOF LEADER PIPING
СО	CLEAN OUT	—— PD ——	PUMPED DISCHARGE PIPING
CW	DOMESTIC COLD WATER	RL	ROOF LEADER PIPING
DN	DOWN	SAN	SANITARY WASTE PIPING
ECO	EXTERIOR CLEAN OUT	ss	STORM SEWER PIPING
FFE	FINISHED FLOOR ELEVATION	VT	VENT PIPING
FPWH	FREEZE PROOF WALL HYDRANT	—— E(NAME) ——	EXISTING PIPING (THIN LINE)
НВ	HOSE BIBB		DOMESTIC COLD WATER PIPING
HW	DOMESTIC HOT WATER		DOMESTIC HOT WATER SUPPLY
HWR	DOMESTIC RECIRCULATING HOT WATER		DOMESTIC RECIRCULATING HOT WATER
IAW	IN ACCORDANCE WITH	_{CO}	CLEANOUT IN CEILING SPACE
ID	INSIDE DIMENSION	o o o	FLOOR CLEANOUT
IE	INVERT ELEVATION	O O 	EXTERIOR CLEANOUT
Kw	KILOWATT	———— <u>——</u>	BALANCING VALVE
MH	MANHOLE		BALL VALVE
NTS	NOT TO SCALE	──	SAFETY RELIEF VALVE
NIC	NOT IN CONTRACT	<u>\</u>	SAFETY RELIEF VALVE
NO	NORMALLY OPEN	_	OS&Y (GATE) VALVE
NC	NORMALLY CLOSED	>	PRESSURE REDUCING VALVE (STEAM, GAS, WATER, ETC.)
OD	OUTSIDE DIMENSION		STRAINER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED	— 	CHECK VALVE
OFOI	OWNER FURNISHED, OWNER INSTALLED	— — ——————————————————————————————————	DOUBLE CHECK VALVE ASSEMBLY
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	 	PIPING UNION
OR	OPEN RECEPTACLE	FS	FLOW SWITCH
ORL	OVERFLOW ROOF LEADER	Ps	PRESSURE SWTICH
OSD	OVERFLOW SPOUT NOZZLE	□ □	TAMPER SWITCH
PD	PUMPED DISCHARGE	<u> </u>	THERMOMETER
PRV	PRESSURE REDUCING VALVE (STEAM, WATER, OR GAS)	V	VACUUM BREAKER
PSI	POUNDS PER SQUARE INCH	•	LIMITED AREA SPRINKLER HEAD
RL	ROOF LEADER	T	PETE'S PLUG
SAN	SANITARY PIPING	DC-#	DOWNSPOUT ONNECTOR DESIGNATOR
SR	SANITARY RISER	DBC-#	DOWNSPOUT BOOT CONNECTOR DESIGNATOR
T&P	TEMPERATURE & PRESSURE	FD-#	FLOOR DRAIN DESIGNATOR
SS	STORM SEWER	OSD-#	OVERFLOW ROOF DRAIN SPOUT NOZZLE DESIGNATOR
ТВ	THRUST BLOCK	<u>FD-#</u>	FLOOR DRAIN DESIGNATOR
TE	TOP ELEVATION	ORD-#	OVERFLOW ROOF DRAIN DESIGNATOR
TP	TRAP PRIMER	OSD-#	OVERFLOW ROOF DRAIN SPOUT NOZZLE DESIGNATOR
TYP	TYPICAL	RD#	ROOF DRAIN DESIGNATOR
UON	UNLESS OTHERWISE NOTED	(<u>**</u> *	PLUMBING FIXTURE DESIGNATOR
VTR	VENT THRU ROOF		EQUIPMENT TAG DESIGNATOR
W/	WITH	$\stackrel{\langle \mathbf{x} \rangle}{}$	TAGGED NOTE DESIGNATOR
		$\stackrel{\frown}{\mathbf{x}}$	REVISION DESIGNATOR
		$\mathbb{T}_{\mathbb{S}}$	TEMPERATURE SENSOR DESIGNATOR
		т -	

HOSE BIB DESIGNATOR



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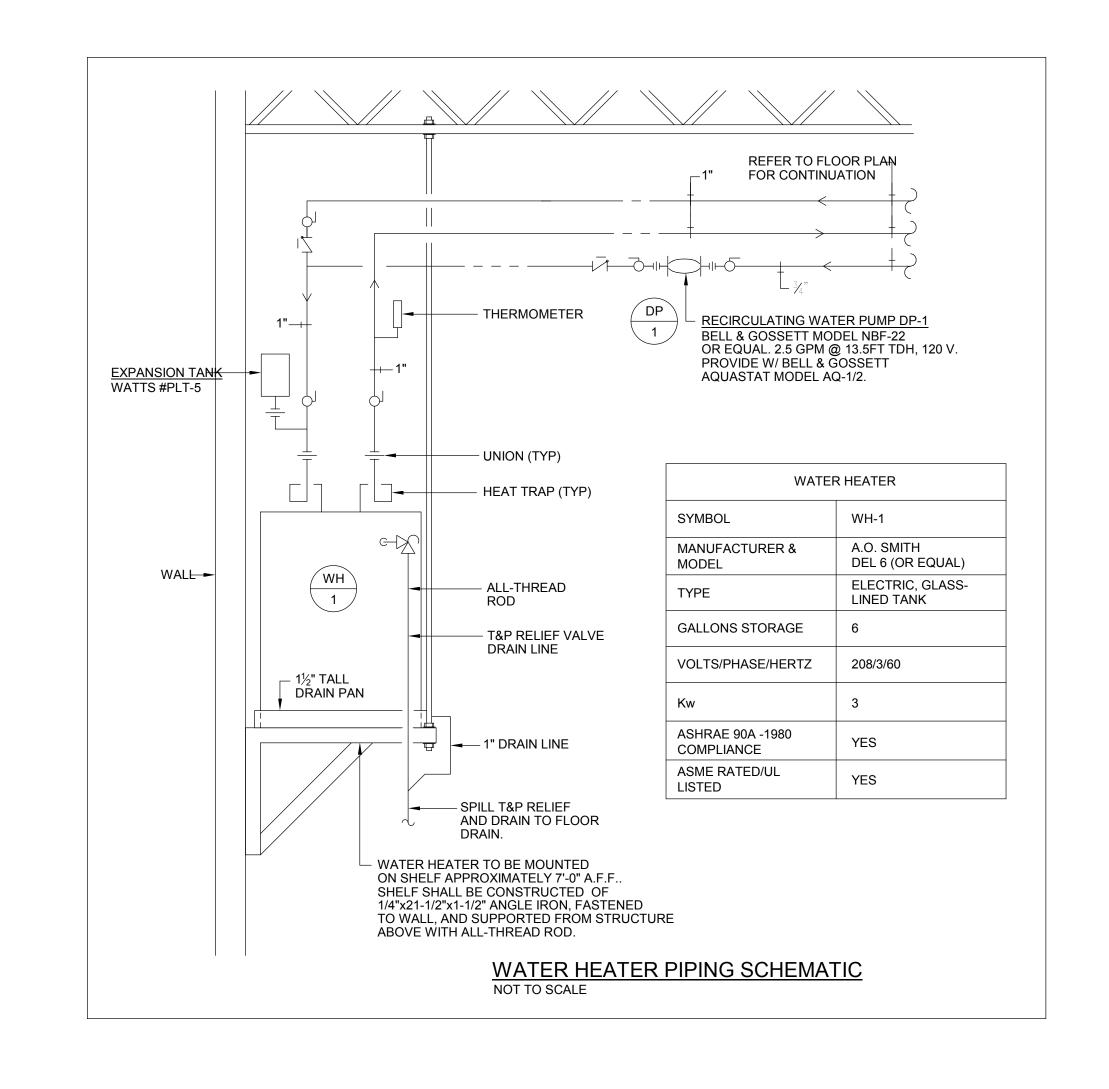
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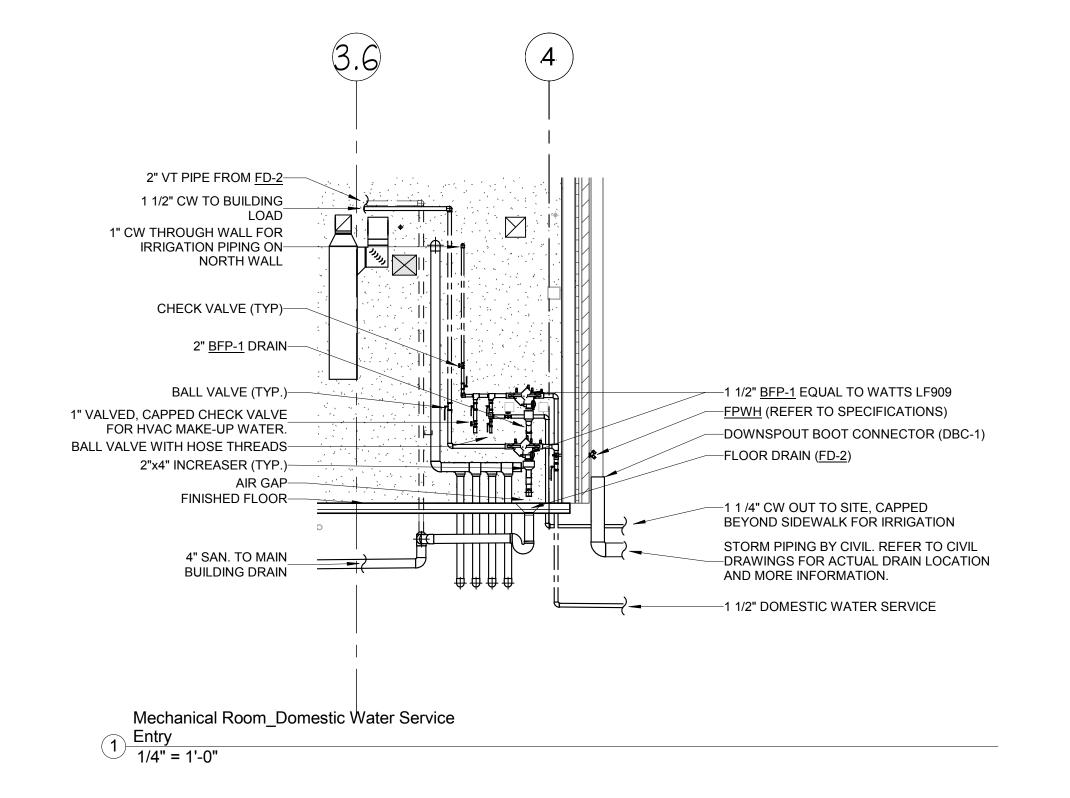
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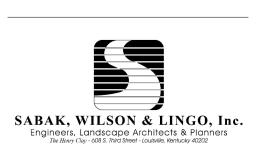
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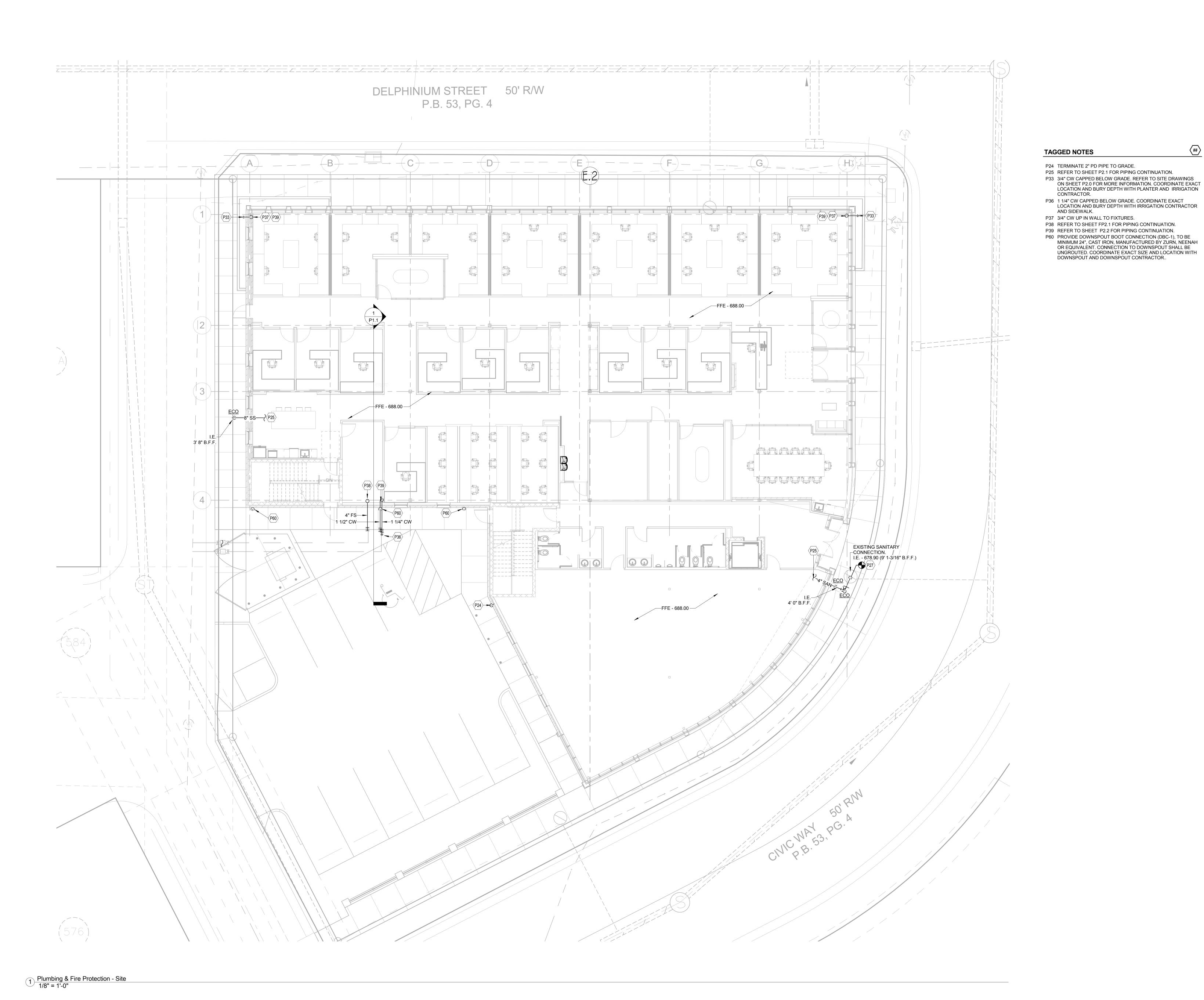
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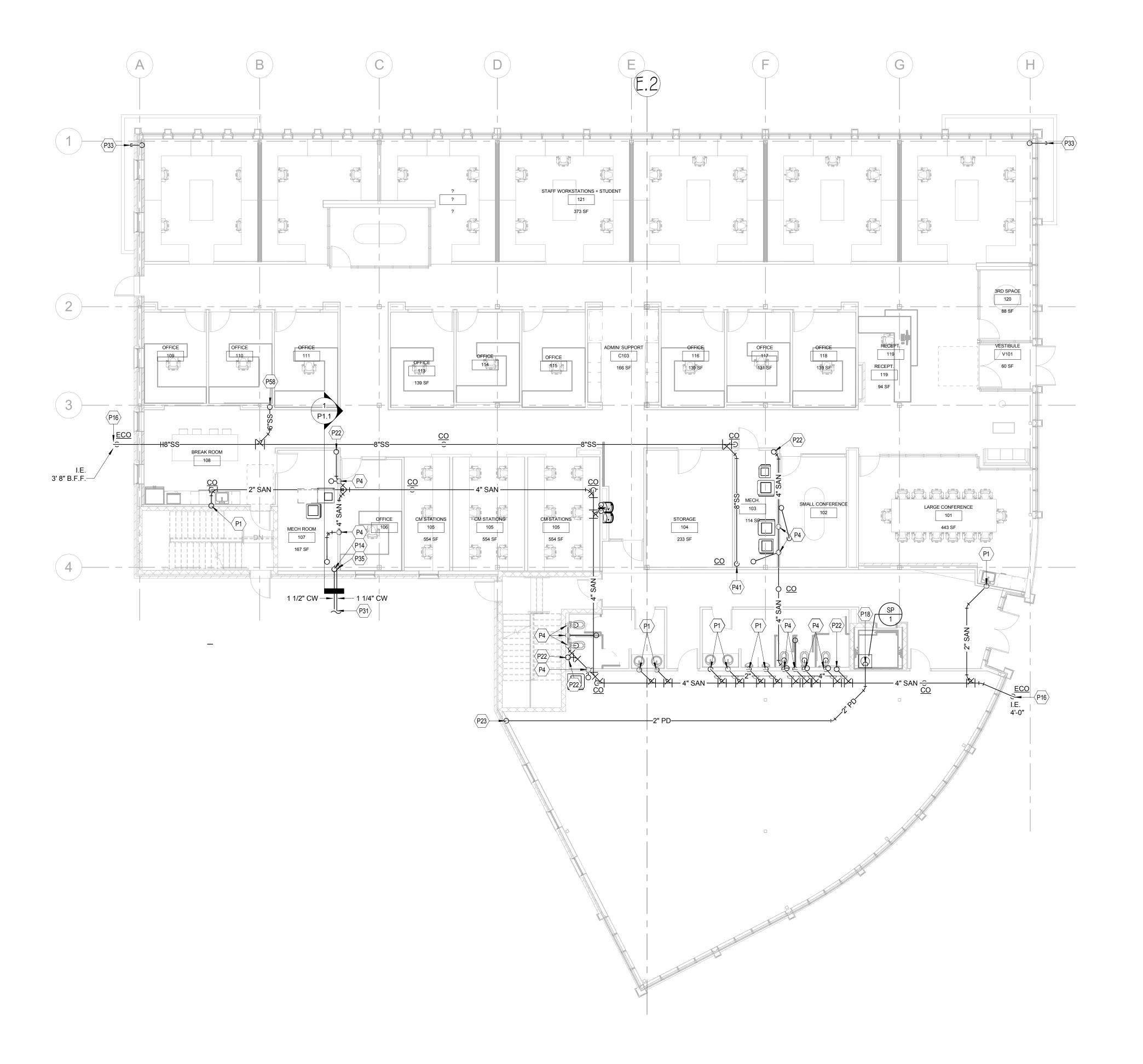




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Plumbing - Underslab
1/8" = 1'-0"

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TAGGED NOTES

P1 2" SAN UP. P4 2" VT UP.

P14 2" CW UP. P16 REFER TO SITE DRAWINGS ON SHEET P2.0 FOR CONTINUATION OF PIPING.

P18 2" PD PIPE DOWN TO ELEVATOR SUMP PUMP. COORDINATE EXACT LOCATION WITH STRUCTURAL MEMBERS AND ELECTRICAL CONTRACTOR.

P22 4" SAN UP. P23 2" PD UP.

P31 1 1/4" CW OUT TO IRRIGATION PIPING. CAP PIPE BEYOND SIDEWALK FOR IRRIGATION CONTRACTROR. REFER TO SITE PIPING DRAWINGS ON SHEET P2.0 FOR MORE INFORMATION.

P33 3/4" CW CAPPED BELOW GRADE. REFER TO SITE DRAWINGS ON SHEET P2.0 FOR MORE INFORMATION. COORDINATE EXACT LOCATION AND BURY DEPTH WITH PLANTER AND IRRIGATION

CONTRACTOR. P35 1 1/4" CW UP ON WALL.

P41 8" RL UP. P58 6" RL UP.

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First Floor Plan -Underslab Plumbing

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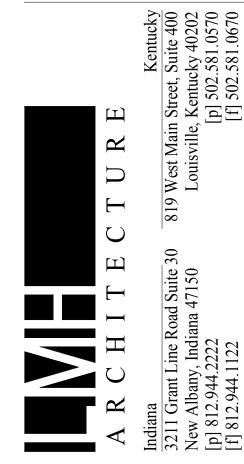
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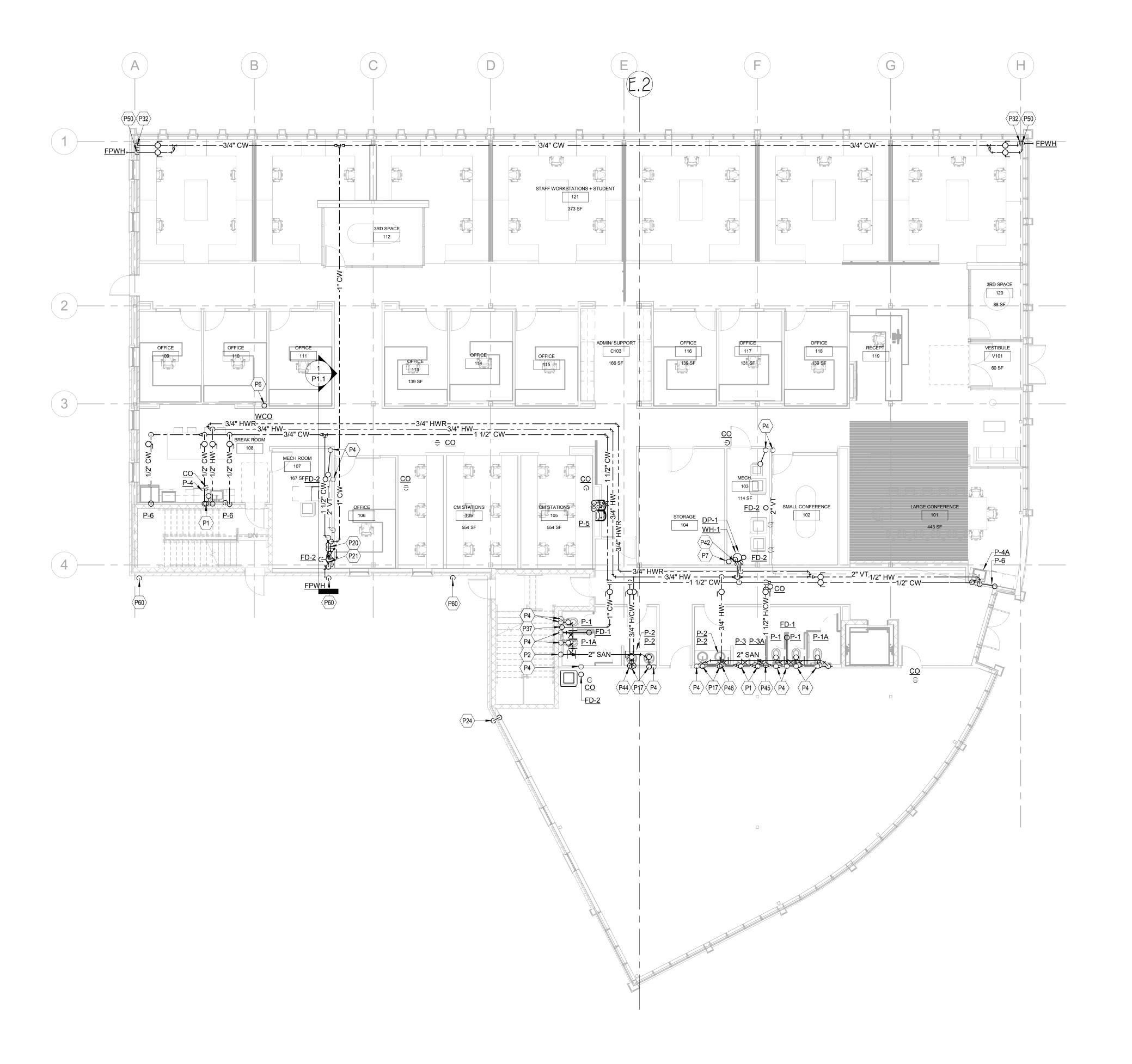




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July 27, 2017 Sheet Number



Plumbing - First Floor 1/8" = 1'-0" **TAGGED NOTES**

ES

P1 2" SAN UP.

P2 4" SAN DN, 4" VT UP.

P4 2" VT UP.

P6 6" RL UP/DN.
P7 8" RL DOWN, 6" RL UP.
P17 1-1/2" SAN UP.

P20 CONTRACTOR TO PROVIDE 1" CHECK VALVE FOR HVAC MAKE-UP WATER AND 1 1/4" CHECK VALVE FOR IRRIGATION PIPING. CONTRACTOR SHALL PROVIDE 1 1/2" BACKFLOW PREVENTER (BFP) EQUAL WATTS LF909 REDUCED PRESSURE BACKFLOW PREVENTER. REFER TO MECHANICAL SHEET M4.0 FOR MORE INFORMATION. REFER TO DOMESTIC WATER SERVICE ENTRY DETAIL ON SHEET P1.0 FOR MORE INFORMATION.

P21 1 1/2" BFP-1 ON DOMESTIC WATER SERVICE ENTRY EQUAL TO WATTS LF909QT REDUCED PRESSURE BACKFLOW PREVENTER. REFER TO DOMESTIC WATER SERVICE ENTRY DETAIL ON SHEET P1.0 FOR MORE INFORMATION.

P24 TERMINATE 2" PD PIPE TO GRADE.

P24 TERMINATE 2" PD PIPE TO GRADE.
P32 3/4" CW DN IN WALL TO BELOW SLAB. REFER TO SHEET P2.1

FOR PIPING CONTINUATION.
P37 3/4" CW UP IN WALL TO FIXTURES.

P42 3/4" HW, CW & HWR PIPING TO WH-1 & DP-1 ON SHELF SUPPORTED FROM STRUCTURE APPROXIMATELY 7' A.F.F. TO BASE OF WATER HEATER. REFER TO DETAIL ON SHEET P1.0 FOR MORE INFORMATION.

P44 1/2" H/CW UP IN WALL, DOWN IN WALL TO FIXTURES.

P45 1 1/2" CW UP IN WALL, DOWN IN WALL TO FIXTURES
P46 1/2" HW UP IN WALL, DOWN IN WALL TO FIXTURES.

P50 3/4" CW DN IN WALL TO FPWH.

P60 PROVIDE DOWNSPOUT BOOT CONNECTION (DBC-1), TO BE MINIMUM 24", CAST IRON, MANUFACTURED BY ZURN, NEENAH OR EQUIVALENT. CONNECTION TO DOWNSPOUT SHALL BE UNGROUTED. COORDINATE EXACT SIZE AND LOCATION WITH DOWNSPOUT AND DOWNSPOUT CONTRACTOR..

contra

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First Floor Plan -

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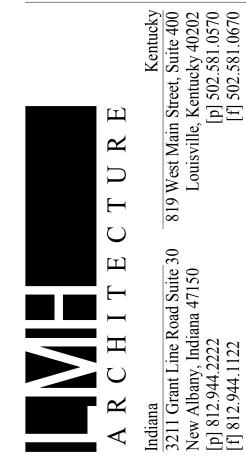
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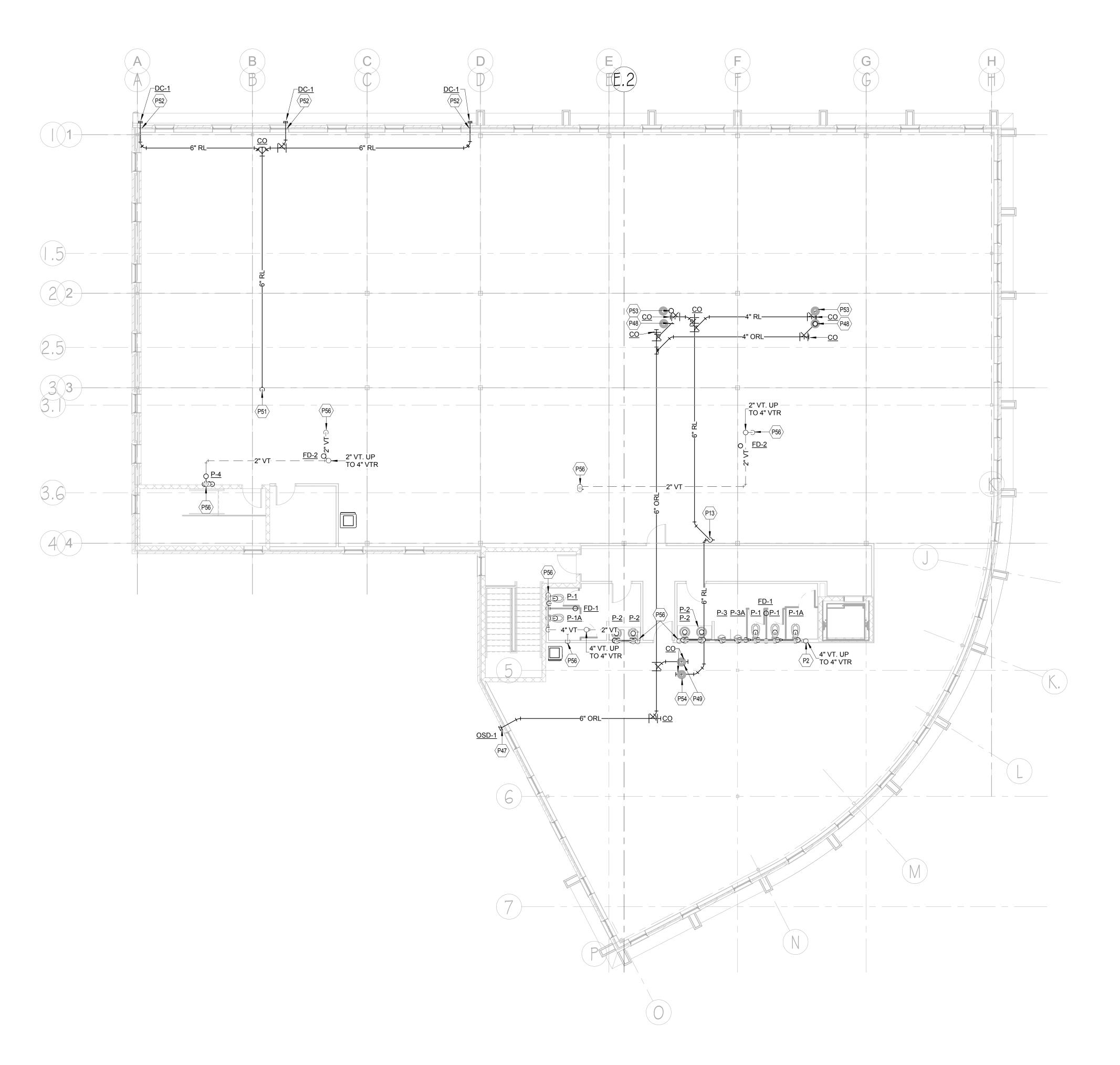


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1 Plumbing - Second Floor 1/8" = 1'-0"



TAGGED NOTES

P2 4" SAN DN, 4" VT UP.
P49 6" ORL UP TO ORD-2.
P52 CONTRACTOR SHALL STUB 6" RL PIPE HIGH THROUGH EXTERIOR WALL FOR CONNECTION TO DOWNSPOUT CONNECTOR (DC-1). COORDINATE FINAL LOCATION OF DC-1 WITH ARCHITECT, ARCHITECTURAL FEATURES, STRUCTURAL MEMBERS, GUTTER/DOWNSPOUT LOCATIONS AND DOWNSPOUT CONTRACTOR.

P53 4" RL UP TO RD-1.
P54 6" RL UP TO RD-2.
P56 2" VT FROM BELOW.

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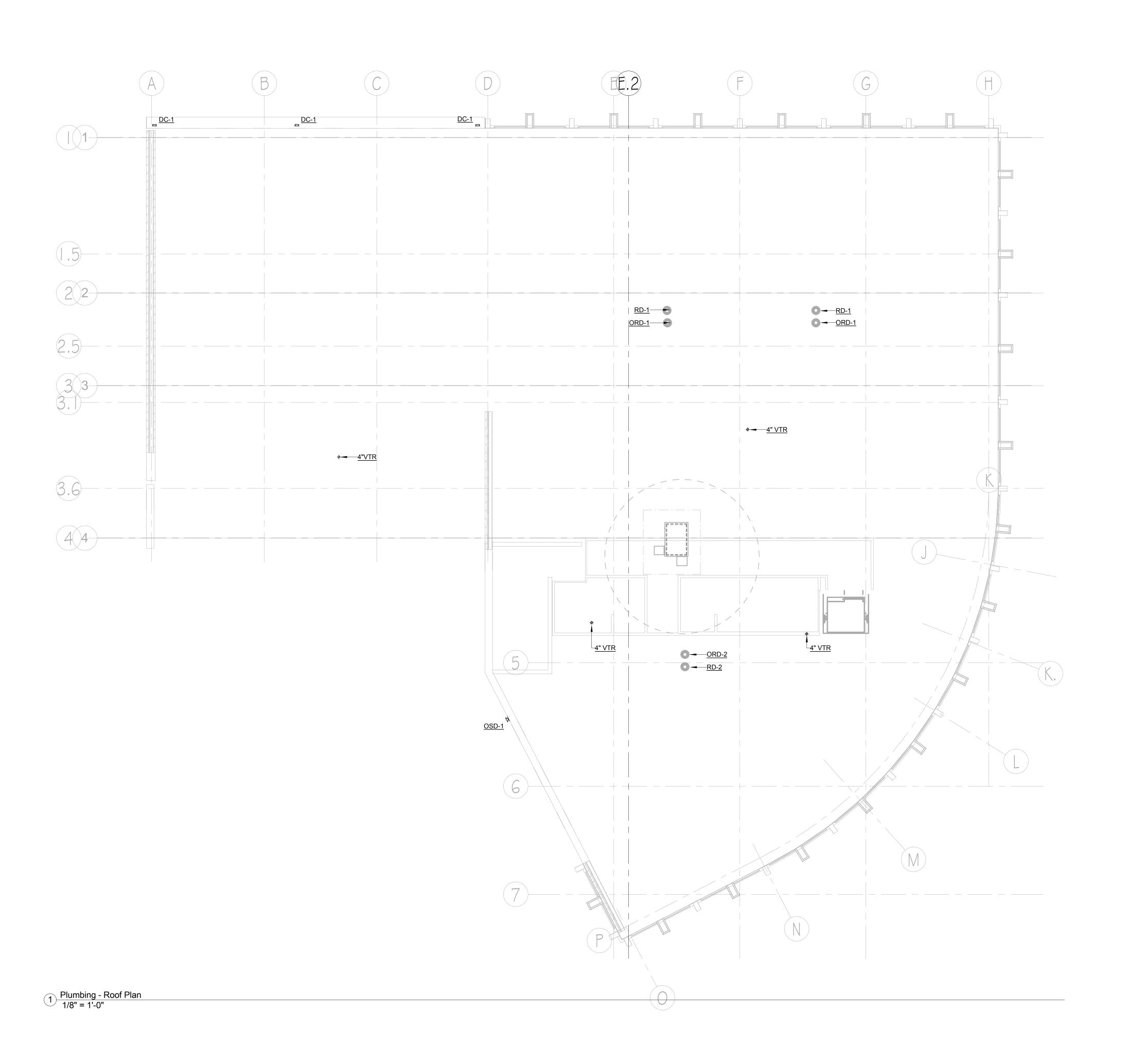




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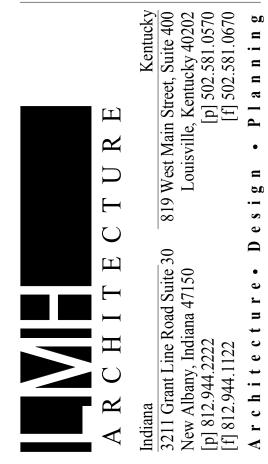
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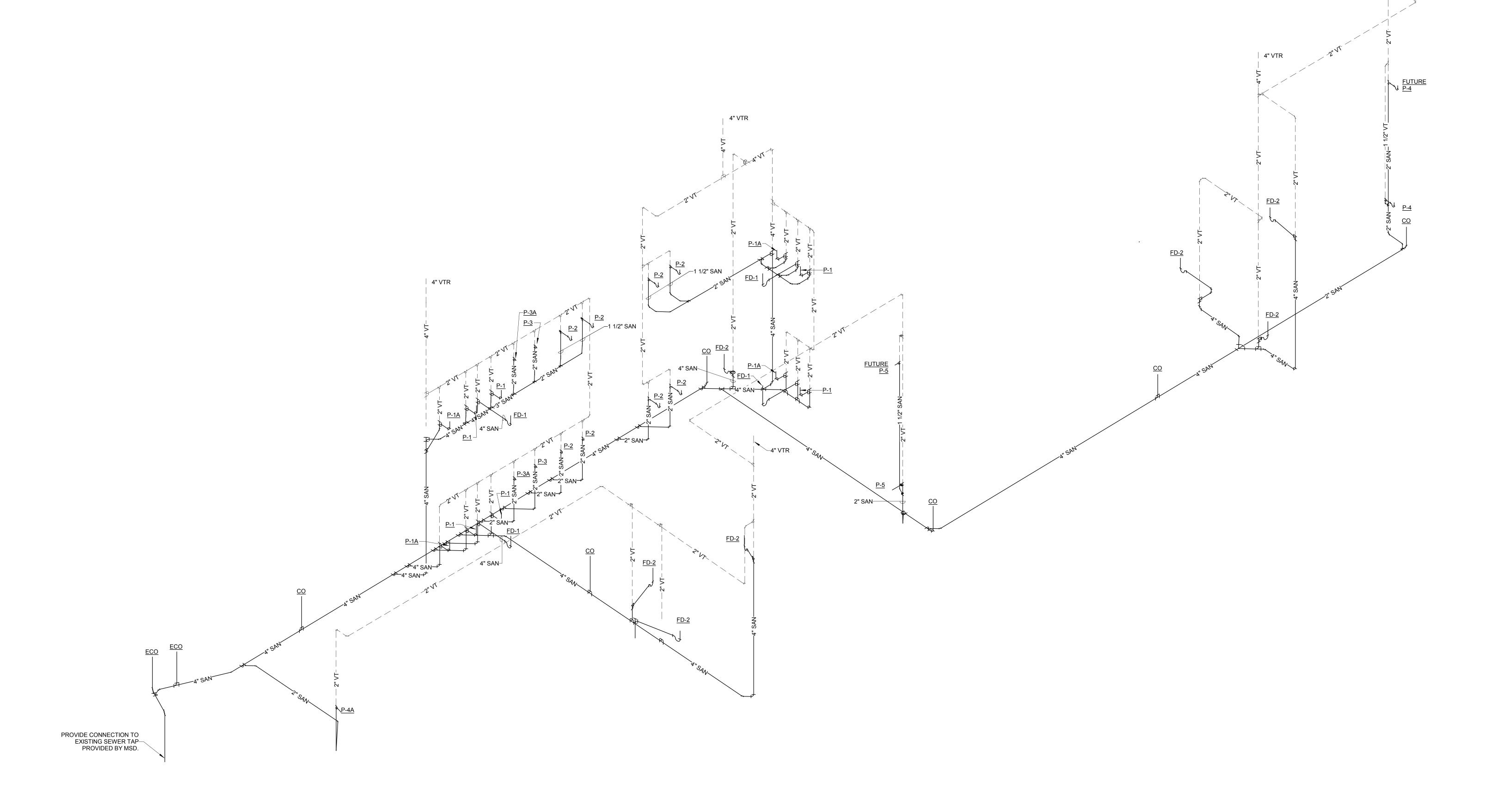
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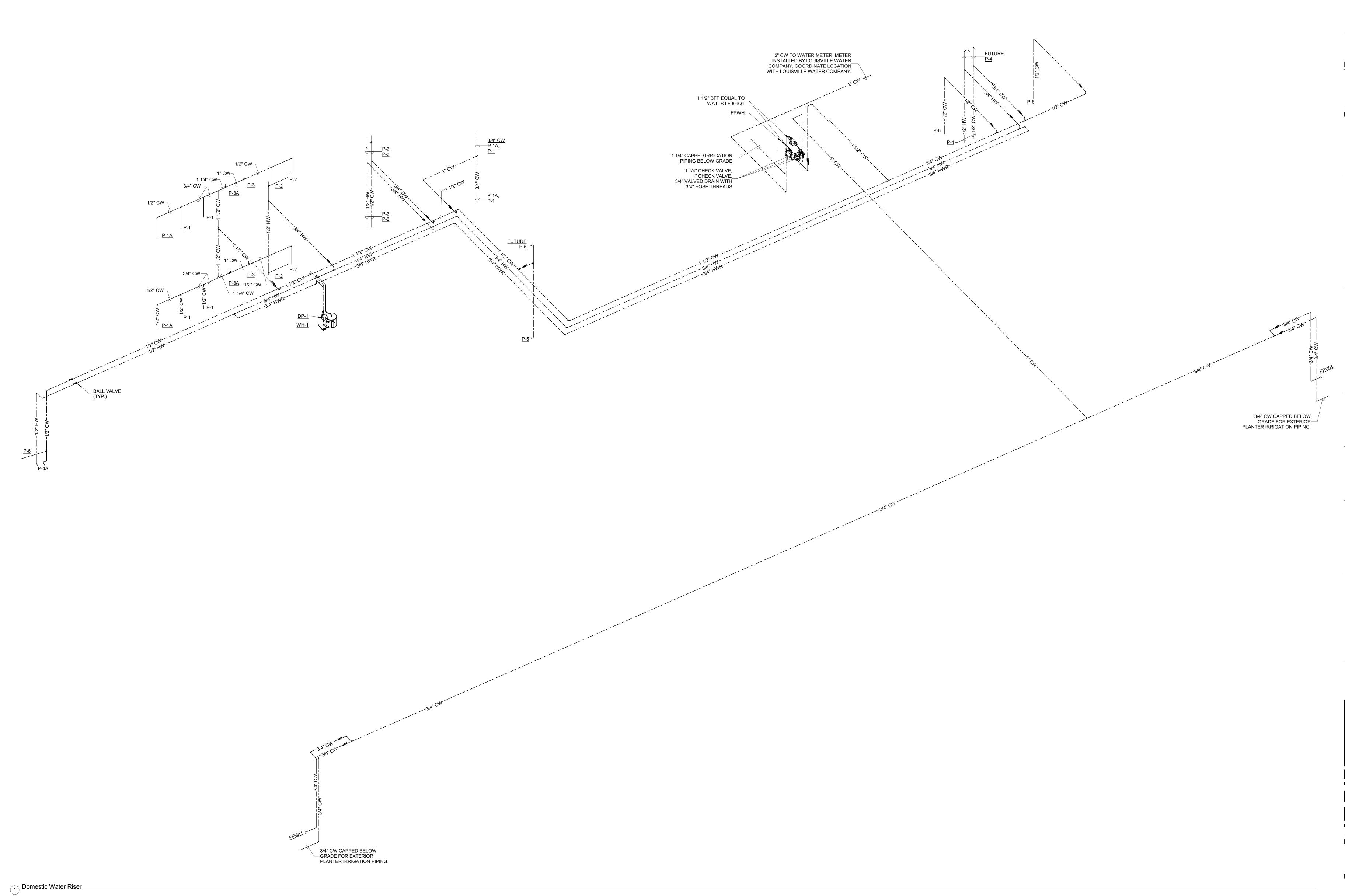


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DIVISION 22: PLUMBING

220500 - COMMON WORK RESULTS FOR PLUMBING

- A. SLEEVES AND SLEEVE SEALS PROVIDE GALVANIZED PIPE SLEEVE, WITH 1" ANNULAR CLEAR SPACE FOR PIPE PENETRATIONS ON INTERIOR WALLS. USING APPROPRIATE GROUT, SEAL THE SPACE OUTSIDE OF THE SLEEVE. INSTALL SLEEVE SEALS AS SHOWN IN MANUFACTURER INSTRUCTIONS.
- B. ESCUTCHEONS PROVIDE ONE PIECE, STAMPED STEEL TYPE WITH CHROME PLATED FINISH AND SPRING CLIPS. INSTALL AT ALL EXPOSED PIPE PENETRATIONS.
- C. RATED PENETRATIONS CONTRACTOR SHALL MAINTAIN THE RATING OF FIRE- AND/OR SMOKE-RATED CONSTRUCTION AT ALL PIPE AND DUCTWORK PENETRATIONS. USE APPROPRIATE UL RATED FIRE PROOF SLEEVE SEALS AT FIRE RATED WALLS.
- D. PROVIDE ALL EXCAVATION, CUTTING, PATCHING, REPAIRING, FIRE STOPPING, SLEEVING, CONCRETE WORK, ETC. REQUIRED TO CONSTRUCT THE MECHANICAL SYSTEMS

201300 - PLUMBING PIPING, PIPE FITTINGS AND PIPE SUPPORTS

SOIL, WASTE AND VENT PIPING (BELOW SLAB)

A. SERVICE WEIGHT CAST IRON HUB AND SPIGOT PIPING WITH COMPRESSION GASKET JOINTS

B. SCHEDULE 40 PVC WITH SOLVENT WELDED DRAINAGE FITTINGS, CELLULAR CORE PPING SHALL NOT BE ALLOWED.

C. PIPING BELOW SLAB SHALL BE A MINIMUM OF 2" IN SIZE.

SOIL, WASTE AND VENT PIPING (ABOVE SLAB)

A. SERVICE WEIGHT HUBLESS CAST IRON PIPE WITH MANUFACTURER'S APPROVED BANDS.

B. SCHEDULE 40 PVC WITH SOLVENT WELDED DRAINAGE FITTINGS, CELLULAR CORE PPING SHALL NOT BE ALLOWED.

C. SERVICE WEIGHT CAST IRON HUB AND SPIGOT PIPING WITH COMPRESSION GASKET JOINTS.

DOMESTIC COLD, HOT AND RECIRCULATING HOT WATER PIPING (ABOVE SLAB)

TYPE "L" HARD COPPER TUBING WITH WROUGHT COPPER FITTINGS WITH LEAD FREE SOLDER EQUIVALENT IN PERFORMANCE TO 95/5. (MAXIMUM LEAD CONTENT OF SOLDER AND FLUX IS 2%).

CONDENSATE DRAIN LINES: TYPE "M" COPPER TUBING WITH SWEAT FITTINGS AND 95/5 SOLDER. SCHEDULE 40 PVC WITH SOLVENT WELDED FITTINGS.

202100 - VALVES FOR PLUMBING PIPING

A. <u>CHECK VALVE (2" AND UNDER):</u> CHECK VALVE SHALL HAVE BRONZE BODY, DISC AND HINGE. CHECK VALVE SHALL BE Y-PATTERN TYPE, HORIZONTAL SWING, RENEWABLE DISC AND RATED FOR 150 PSI WORKING PRESSURE. CHECK VALVE SHALL BE NIBCO T-413 FOR THREADED ENDS OR NIBCO S-413 FOR SOLDER ENDS.

B. TWO PIECE BALL VALVE (2" AND UNDER): BALL VALVE SHALL HAVE BRONZE BODY, BALL AND REINFORCED, WATER TIGHT SEAT. VALVE SHALL BE TWO PIECE CONSTRUCTION. VALVE SHALL BE "FULL-PORT" TYPE. VALVE HANDLE SHALL ONLY REQUIRE QUARTER TURN TO GO FROM FULL OPEN TO FULL CLOSE. THE HANDLE SHALL BE REMOVABLE WITH VINYL GRIP. VALVE SHALL BE RATED FOR 180 DEGREES F WATER TEMPERATURE AND 150 PSI WORKING PRESSURE. BALL VALVE SHALL BE NIBCO T-585 FOR THREADED ENDS AND NIBCO S-585 FOR SOLDER ENDS.

220553 - IDENTIFICATION FOR PLUMBING PIPING

A. IDENTIFICATION - PIPING SHALL BE MARKED ON 12FT CENTER TO INDICATE SERVICE AND DIRECTION OF FLOW WITH ANSI A13.1-81 SELF-ADHESIVE, SNAP-ON, OR STRAP-ON MARKERS. VALVE TAGS SHALL BE METAL OR PLASTIC WITH 1/4" HIGH BLACK-FILLED LETTERING. SCHEDULED EQUIPMENT SHALL BE TAGGED PROVIDED WITH A PERMANENTLY ATTACHED METAL NAMEPLATE WITH STAMPED OR ENGRAVED LETTERING. NAMEPLATE SHALL CONTAIN ALL ESSENTIAL DATA INCLUDING MANUFACTURER, PRODUCT NAME, MODEL NUMBER, SERIAL NUMBER, CAPACITY, OPERATING CHARACTERISTICS, ELECTRICAL CHARACTERISTICS, AND LABELS OF TESTED COMPLIANCE.

220529 - HANGERS AND SUPPORTS FOR PLUMBING PIPING

A. ALL PIPING SHALL BE PROPERLY SUPPORTED AND PROVIDED WITH ALL NECESSARY HANGERS AND ACCESSORIES FOR SUPPORT OF HORIZONTAL AND VERTICAL PIPING IN ACCORDANCE WITH MSS, ANSI, AND ASTM STANDARDS AND MANUFACTURER'S RECOMMENDATIONS. INSULATED PIPING SHALL BE PROVIDED WITH PIPE SHIELDS OR SADDLES AS APPROPRIATE WITH PROPERLY SIZED CLEVIS TYPE HANGERS.

B. CARBON STEEL PIPE HANGERS AND SUPPORTS - MSS SP-58, TYPES 1 THROUGH 58, FACTORY-FABRICATED COMPONENTS

A. HANGERS AND SUPPORTS SHALL BE PLACED AS NEAR AS POSSIBLE TO JOINTS, TURNS AND BRANCHES.

B. SUPPORT ALL CEILING HUNG EQUIPMENT WITH APPROVED VIBRATION ISOLATORS.

C. WHERE COPPER TUBING IS SPECIFIED, HANGERS SHALL BE OF COPPER CLAD TYPE WHEN PIPING IS UNINSULATED.

D. UNINSULATED PIPING HUNG FROM ABOVE SHALL BE SUPPORTED WITH RING AND CLEVIS TYPE PIPE HANGERS. UNINSULATED PIPING MOUNTED ON TRAPEZE (WHEN ALLOWED) AND WALL BRACKET TYPE SUPPORT SHALL BE HELD IN PLACE WITH U-BOLTS. U-BOLTS SHALL ALLOW FOR AXIAL MOVEMENT IN THE PIPING.

E. ALL INSULATED PIPING SHALL BE SUPPORTED WITH CLEVIS TYPE AND PIPE ROLL HANGERS. HANGERS SHALL BE SIZED TO ALLOW THE PIPE INSULATION TO PASS THROUGH THE HANGERS. INSTALL INSULATION PROTECTION SADDLES AT ALL HANGER LOCATIONS. WELDED PIPE SADDLES SHALL BE INSTALLED AT ALL HANGERS ON PIPING 5" AND LARGER. THE PIPE SADDLES SHALL BE SIZED FOR THE THICKNESS OF INSULATION USED. HANGERS SHALL FIT SNUGLY AROUND OUTSIDE OF INSULATION SADDLES.

F. SUPPORT STEEL AND COPPER PIPING AT A MINIMUM OF EIGHT (8) FOOT INTERVALS FOR PIPING 3" AND SMALLER AND TEN (10) FOOT INTERVALS FOR LARGER PIPING. PROVIDE ADDITIONAL SUPPORT AT END OF THE BRANCHES AND CHANGE OF DIRECTION.

G. WHERE FIREPROOFING IS DISLODGED/DAMAGED FROM THE BUILDING STRUCTURE DUE TO CONTRACTOR'S INSTALLATION OF HANGERS, CLAMPS, ETC., IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR ALL DISLODGED/DAMAGED FIREPROOFING TO ORIGINAL FIREPROOFING RATING. THIS SHALL ALSO INCLUDE ALL WORK PERFORMED BY THEIR CONTRACTORS SUB-CONTRACTORS.

220700 - PLUMBING INSULATION

A. APPLICATION OF INSULATION MATERIALS SHALL BE PERFORMED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS. WHERE THICKNESS OF INSULATION IS NOT SPECIFIED, USE APPLICABLE THICKNESS RECOMMENDED BY MANUFACTURER FOR SPECIFIC USE.

B. INSULATION THICKNESSES SHALL COMPLY WITH THE LATEST VERSION OF ASHRAE 90.1 AND IECC AT A MINIMUM.

C. ALL INSULATION SHALL BE CONTINUOUS THROUGH WALLS, CEILING OPENINGS AND SLEEVES. HOWEVER, INSULATION SHALL BE BROKEN THROUGH FIRE WALLS. ALL COVERED PIPE AND DUCTWORK IS TO BE LOCATED A SUFFICIENT DISTANCE FROM WALLS, OTHER PIPE, DUCTWORK AND OTHER OBSTACLES TO PERMIT THE APPLICATION OF THE FULL THICKNESS OF INSULATION SPECIFIED. IF NECESSARY, EXTRA FITTINGS AND PIPE ARE TO BE USED. NO NOTICEABLE DEFORMATION OF INSULATION OR DISCONTINUITY OF VAPOR SEAL, WHERE REQUIRED, WILL BE ACCEPTED. COORDINATE WORK WITH PLUMBERS, PIPE FITTERS, ETC. TO ASSURE HANGER LOCATIONS AGREE WITH

D. EXISTING AND/OR NEW INSULATION REMOVED AND/OR DAMAGED DURING COURSE OF CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THEIR EXPENSE.

E. FIBER GLASS AND MINERAL FIBER PRE-FORMED PIPE INSULATION - TYPE I, 850 DEG F MATERIALS: GLASS FIBERS BONDED WITH A THERMOSETTING RESIN. COMPLY WITH ASTM C 547, TYPE I, GRADE A, WITH FACTORY-APPLIED ASJ-SSL WITH SELF-SEALING, PRESSURE-SENSITIVE, ACRYLIC-BASED ADHESIVE COVERED BY A REMOVABLE PROTECTIVE STRIP; COMPLYING WITH ASTM C 1136, TYPE I F. PIPE INSULATION SCHEDULE:

DOMESTIC WATER - INSULATION SHALL BE ½" THICK FOR PIPING UP TO 1-1/4", AND 1" THICK FOR PIPING 1-1/2" AND LARGER AND 1" THICK FOR HOT WATER CIRCULATING PIPING.
 ADA-ACCESSIBLE LAVATORIES, EXPOSED PIPING - PROVIDE VANDAL-RESISTANT, MOLDED, FLEXIBLE, CLOSED CELL VINYL INSULATION SYSTEM, INCLUDING INSULATION FOR TAILPIECE, P-TRAP, WASTE ARM, 3/8" SUPPLY TUBING, AND QUARTER-TURN BALL VALVE, SUCH AS MCGUIRE PROWRAP SEAMLESS PRE-WRAPPED CAST P-TRAP INSULATION KIT, MODEL PWV8902.

G. PIPE JACKETING SCHEDULE:

INDOOR CONCEALED - 30MIL PVC
 INDOOR EXPOSED - 30MIL PVC

FLOOR DRAINS: PROVIDE FLOOR DRAINS AT LOCATIONS INDICATED AND/OR AS REQUIRED BY STATE PLUMBING/BUILDING CODES. INSTALL IN A NEAT AND WORKMANLIKE MANNER. INSTALL FLOOR DRAINS IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND THE STATE PLUMBING AND BUILDING CODES. COORDINATE LOCATIONS WITH GENERAL CONTRACTOR TO INSURE FLOOR PITCH TO DRAIN WHERE BEOLURED.

3. CONDENSATE DRAIN - INSULATION SHALL BE 1/2" THICK. PROVIDE WITH HEAT TAPE BETWEEN PIPE AND INSULATION.

A. INSURE BY COORDINATION WITH THE GENERAL CONTRACTOR THAT SPACES SERVED WITH FLOOR DRAINS ON ALL FLOORS ABOVE THE LOWEST LEVEL HAVE A WATER SEAL EXTENDING AT LEAST THREE (3) INCHES FROM THE FLOOR. ALSO, FOR THESE LOCATIONS, PROVIDE A 36"X36", FOUR (4) POUND SHEET LEAD FLASHING SHEET AND CLAMPING COLLAR OR A 30 MIL CHLORINATED POLYETHYLENE SHOWER PAN LINER. LEAD PANS SHALL BE GIVEN A HEAVY COAT OF ASPHALTUM ON BOTTOM AND SIDES BEFORE INSTALLATION AND A HEAVY COAT ON ANY EXPOSED SURFACES. AFTER INSTALLATION, PROVIDE ONE PLY OF FIFTEEN (15) POUND ROOFING FELT BENEATH EACH PAN.

B.THE FLOOR DRAINS SHALL BE ZURN, JOSAM, SMITH, WADE, WATTS DRAINAGE, ANCON, SIMILAR TO THE FOLLOWING:

<u>FD-1</u> - ZURN, ZN-415 FLOOR DRAIN WITH 6"DIA. NICKEL BRONZE STRAINER, TYPE "B", DURA-COATED CAST IRON BODY WITH BOTTOM 4" OUTLET.

<u>FD-2</u> - ZURN, ZN-511 FLOOR DRAIN WITH 9"DIA. NICKEL BRONZE STRAINER, DURA-COATED CAST IRON DEEP SUMP WITH 4" BOTTOM OUTLET, SEEPAGE PAN AND SEDIMENT BUCKET.

C.THE ROOF DRAINS SHALL BE ZURN, JOSAM, SMITH, WADE, WATTS DRAINAGE, ANCON, SIMILAR TO THE FOLLOWING:

RD-1 - ZURN ZC-100-DP 4" OUTLET ROOF DRAIN, SUMP RECEIVER, DECK PLATE, CAST IRON DOME STRAINER

RD-2 - ZURN ZC-100-DP 6" OUTLET ROOF DRAIN, SUMP RECEIVER, DECK PLATE, CAST IRON DOME STRAINER

ORD-1 - ZURN, ZC-100-AW-DP 4" OUTLET WITH CAST IRON DOME, ADJUSTABLE WATER LEVEL REGULATOR, DECK PLATE, CAST IRON BODY ORD-2 - ZURN, ZC-100-AW-DP 6" OUTLET WITH CAST IRON DOME, ADJUSTABLE WATER LEVEL REGULATOR, DECK PLATE, CAST IRON BODY

OSD-1 ZURN, ZARB-199-SS 6" OUTLET DOWNSPOUT NOZZLE. ALL ROUGH BRONZE BODY, THREADED INLET AND DECORATIVE FACE OF WALL FLANGE AND OUTLET NOZZLE, WITH REMOVABLE STAINLESS STEEL SCREEN

DBC-1 - ZURN Z191=RD DOWNSPOUT BOOT.

PLUMBING FIXTURES, FITTINGS AND TRIM

A. ALL FIXTURES AND TRIM SHALL BE NEW. ALL FIXTURES AND TRIM SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER. ALL FIXTURES SHALL BE SET LEVEL AND TRUE AND SHALL BE GROUTED INTO FINISHED WALLS, FLOORS, ETC. IN A NEAT AND WORKMANLIKE MANNER WITH AN APPROVED WATERPROOF NON-YELLOWING GROUT FOR SUCH SERVICE. ALL FIXTURES AND TRIM HALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. UNACCEPTABLE WORKMANSHIP SHALL BE REMOVED AND REPLACED AT THE INSTALLING CONTRACTOR'S COST. PAY PARTICULAR ATTENTION TO FLUSH VALVES AND BRACKET CONCEALED PORTION TO BUILDING STRUCTURE DURING ROUGH-IN. LOOSE, SHAKY FLUSH VALVES, LAVATORIES, ETC. SHALL NOT BE ACCEPTABLE.

B. ALL EXPOSED PIPING, STOPS, TRAPS, TAILPIECES, ETC. SHALL BE CODE APPROVED CHROME PLATED BRASS UNLESS OTHERWISE INDICATED OR SPECIFIED. WHERE ACID RESISTANT PIPING IS INDICATED ON THE DRAWING OR THE SPECIFICATIONS, ALL PIPING AND ANCILLARY COMPONENTS SHALL BE ACID RESISTANT AS SPECIFIED AND REQUIRED BY CODE.

C. WATER SUPPLIES SHALL CONNECT THROUGH WALLS WITH STOPS AND CHROME PLATED ESCUTCHEONS WITH SET SCREWS. IN GENERAL, FURNISH DRINKING FOUNTAINS, WALL-HUNG LAVATORIES AND HOSE BIBBS WITH MANUAL LOOSE KEY STOP VALVES. FOR ALL OTHER FIXTURES, FURNISH WITH MANUAL PERMANENT-KEY STOP VALVES (I.E. SINKS IN CASEWORK, ETC.). WHEN IN DOUBT, CONTACT ENGINEER PRIOR TO INSTALLATION.

P-1 WATER CLOSET - PRESSURE ASSISTED FLUSH TANK, FLOOR MOUNTED - STANDARD HEIGHT

ZURN MODEL Z5561, VITREOUS CHINA, SIPHON JET, CLOSE COUPLED, TWO PIECE, ELONGATED BOWL, BOLT CAPS AND
WHITE OPEN FRONT PLASTIC SEAT WITH CHECK HINGE. INSTALL FLUSH HANDLE ON "OPEN" SIDE OF WATER

P-1A WATER CLOSET - PRESSURE ASSISTED FLUSH TANK, FLOOR MOUNTED - ADA COMPLIANT
ZURN MODEL Z5561, VITREOUS CHINA, 18" HIGH, SIPHON JET, CLOSE COUPLED, TWO PIECE, ELONGATED BOWL,
BOLT CAPS AND WHITE OPEN FRONT PLASTIC SEAT WITH CHECK HINGE. INSTALL FLUSH HANDLE ON "OPEN"
SIDE OF WATER CLOSET.

P-2 LAVATORY - UNDERMOUNT - ADA COMPLIANT

ZURN MODEL Z5220, 19"X16" VITREOUS CHINA, UNDERMOUNT LAVATORY, OVAL BASIN, FRONT OVERFLOW.

PROVIDE LAVATORY DRAIN WITH INTEGRAL PERFORATED STRAINER, 3/8" ANGLE RIGID SUPPLIES WITH STOPS
AND P-TRAP. LAVATORY TRIM SHALL BE AS FOLLOWS: BATTERY POWERED SENSOR FAUCET SHALL BE ZURN
MODEL Z6930-XL WITH POLISHED CHROME PLATED CAST BRASS FAUCET BODY. FURNISH WITH 0.5 GPM

P-3 <u>URINAL - STANDARD HEIGHT</u>
ZURN MODEL 5798.235.00 VITREOUS CHINA, WASHOUT ACTION, ¾" TOP SPUD, 2" I.P.S. OUTLET FLANGE AND GASKET.
PROVIDE URINAL WITH ZURN MODEL ZER6003AV-ULF ULTRA HIGH EFFICIENCY BATTERY POWERED FLUSH

P-3A <u>URINAL - ADA COMPLIANT</u>
ZURN MODEL 5798.235.00 VITREOUS CHINA, WASHOUT ACTION, ¾" TOP SPUD, 2" I.P.S. OUTLET FLANGE AND GASKET. PROVIDE URINAL WITH ZURN MODEL ZER6003AV-ULF ULTRA HIGH EFFICIENCY BATTERY POWERED FLUSH VALVE, CHROME PLATED.

P-4 SINK - UNDERMOUNT COUNTERTOP BOWL

MODEL RECTANGULAR 19" X 16" UNDERMOUNT BOWL, SINK COLOR SHALL BE IVORY WHITE, PROVIDE SINK
DRAIN WITH GRID STRAINER, 3/8" CHROME SUPPLIES STOPS, TAILPIECE, P-TRAP, DRAIN AND
GOOSENECK FAUCET WITH WRIST BLADE HANDLES SHALL BE ZURN MODEL Z812B4-3F WITH POLISHED
ESCUTCHEONS. PROVIDE SINK DRAIN WITH DISHWASHER WYE, TAILPIECE, AIRGAP, AND 58" RUBBER
HOSE, COORDINATE AIRGAP COLOR WITH OWNER. SINK TRIM SHALL BE AS FOLLOWS:
CHROME-PLATED CAST BRASS FAUCET BODY ON 4" CENTERS WITH QUARTER TURN CERAMIC DISC
CARTRIDGES AND 5-3/8" SWING GOOSENECK SPOUT. FURNISH WITH 0.5 GPM VANDAL-RESISTANT AERATOR
AND 4" COLOR-CODED METAL WRIST BLADE HANDLES. PROVIDE VALVED WATER LINE THROUGH CABINET FOR

P-4A SINK - UNDERMOUNT COUNTERTOP BOWL - CONFERENCE ROOM

VANDAL-RESISTANT AERATOR.

VALVE, CHROME PLATED.

MODEL RECTANGULAR 19" X 16" UNDERMOUNT BOWL, SINK COLOR SHALL BE IVORY WHITE, PROVIDE SINK DRAIN WITH WITH GRID STRAINER, 3/8" CHROME SUPPLIES STOPS, TAILPIECE, P-TRAP, DRAIN AND ESCUTCHEONS. SINK TRIM SHALL BE AS FOLLOWS:
GOOSENECK FAUCET WITH WRIST BLADE HANDLES SHALL BE ZURN MODEL Z812B4-3F WITH POLISHED CHROME-PLATED CAST BRASS FAUCET BODY ON 4" CENTERS WITH QUARTER TURN CERAMIC DISC CARTRIDGES AND 5-3/8" SWING GOOSENECK SPOUT. FURNISH WITH 0.5 GPM VANDAL-RESISTANT AERATOR AND 4" COLOR-CODED METAL WRIST BLADE HANDLES.

DISHWASHER, PROVIDE BRASS MIPTXCOMPRESSION ELBOW AT DISHWASHER WATER INLET.

P-5 BI-LEVEL ELECTRIC WATER COOLER - BOTTLE FILLER - ADA

ELKAY MODEL #VRCTL8SC ELECTRIC WATER COOLER; 7.8 GPH OF 50°F WATER AT 90°F ROOM TEMPERATURE AND 80°F ENTERING WATER; VANDAL RESISTANT 14 GAUGE SATIN FINISH STAINLESS STEEL BASIN AND HOUSING, 1/5 HP COMPRESSOR; 115/1PHASE/60 HZ. MOUNTING HEIGHT SHALL BE PER ADA GUIDELINES FOR CHILDREN UNDER THE AGE OF 12. PROVIDE WITH LOOSE KEY MANUAL SHUT-OFF AT WALL. FURNISH AND INSTALL WITH PLASTIC P-TRAP. WHERE WATER COOLERS ARE NOT INSTALLED IN AN ALCOVE, FURNISH AND INSTALL AN ELKAY MODEL 98234C CANE APRON ACCESSORY. REFERENCE FLOOR PLANS FOR EXACT NUMBER OF WATER COOLERS NOT INSTALLED IN AN ALCOVE. PROVIDE UNIT WITH BOTTLE FILLER.

Contra

CMTA Office Building

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Plumbing Specifications

Revisions

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