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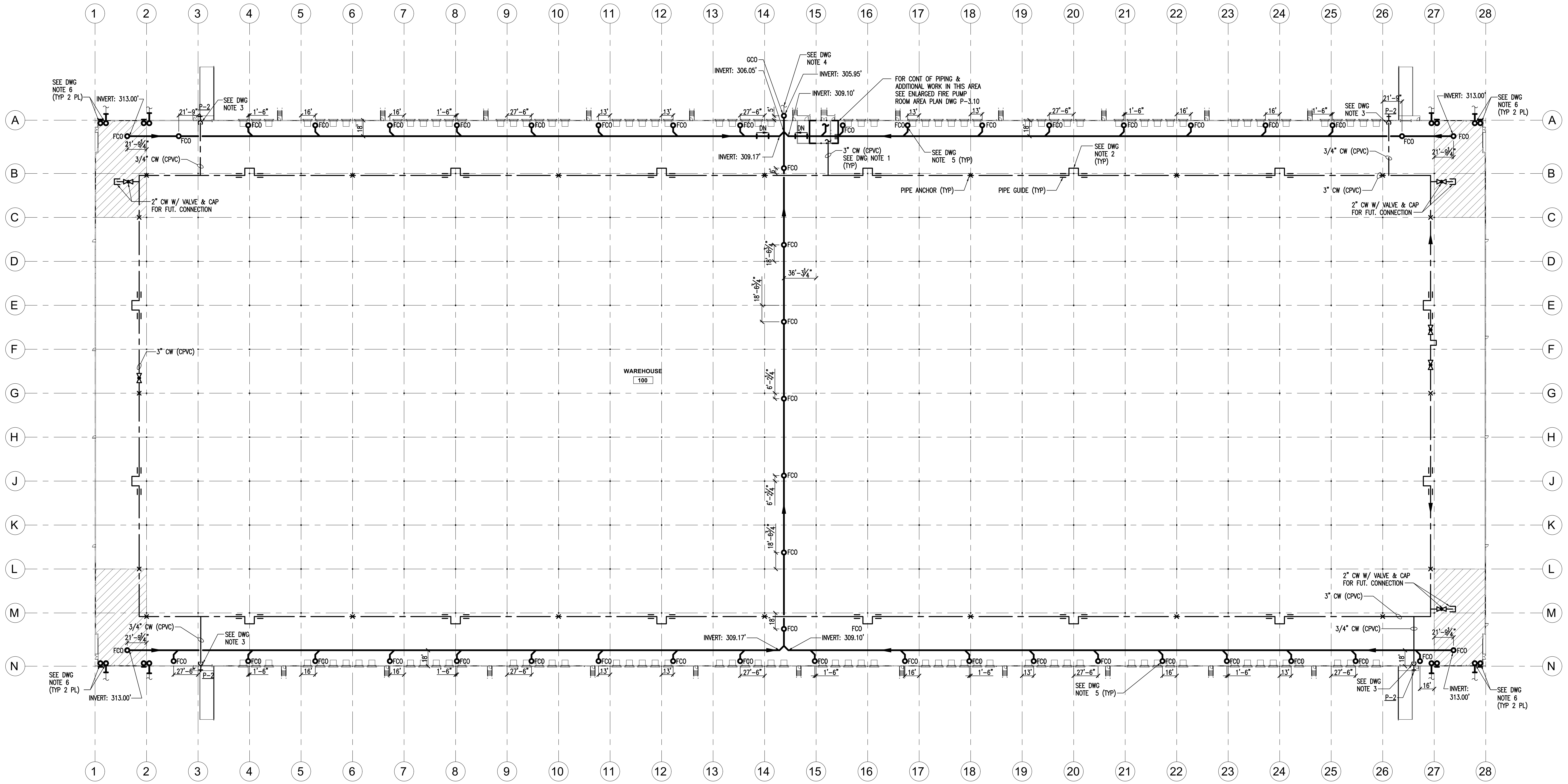
Project No.
231107



PLUMBING – BUILDING OVERALL FLOOR PLAN – WATER & DRAINAGE PIPING

SCALE: 1" = 50'-0"

FIN FLR 315.50'

LEGEND AND ABBREVIATIONS

———	SANITARY PIPING (SAN)
— — — — —	SANITARY VENT PIPING (SV)
—— · ——	STORM WATER CONDUCTOR
——— - ———	COLD WATER PIPING (CW)
———o	PIPE TURNING UP
———Ↄ	PIPE TURNING DOWN
——×——	PIPE ANCHOR
——=——	PIPE GUIDE
⋈	BALL VALVE
+	WALL HYDRANT
P–	FIXTURE REFERENCE NUMBER

CONT	CONTINUATION
DFU	DRAINAGE FIXTURE UNIT
DWG	DRAWING
EQUIP	EQUIPMENT
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FF. EL.	FINISHED FLOOR ELEVATION
GCO	GRADE CLEANOUT
INV. EL.	INVERT ELEVATION
OD	OVERFLOW DRAIN
RD	ROOF DRAIN
TYP	TYPICAL
VTR	VENT THRU ROOF
WTR	WATER
#	NUMBER

GENERAL NOTES:

1. ALL PLUMBING WORK SHALL CONFORM TO THE NEW YORK UNIFORM CONSTRUCTION CODES, 2020 NEW YORK PLUMBING CODE (2018 INTERNATIONAL PLUMBING CODE) AND SUBSEQUENT AMENDMENTS THERETO AS ADOPTED BY THE TOWN OF SUFFERN, NEW YORK AND SUBSEQUENT AMENDMENTS THERETO.
2. DRAWINGS ARE DIAGRAMMATIC. COORDINATE ALL EQUIPMENT LOCATIONS AND PIPE ROUTING WITH OTHER TRADES AND ARCHITECTURAL DETAILS PRIOR TO INSTALLATION.
3. VERIFY LOCATIONS, MOUNTING HEIGHTS, TRIM LOCATIONS, ETC. FOR ALL PLUMBING FIXTURES WITH THE ARCHITECT PRIOR TO INSTALLATION. P-__ DESIGNATES FIXTURE AND FIXTURE TRIM. MOUNTING OF ALL ADA FIXTURES AND RELATED TRIM TO MEET THE AMERICAN DISABILITIES ACT GUIDELINES AND ANSI REQUIREMENTS FOR PEOPLE WITH DISABILITIES.
4. INTENT IS TO CONCEAL ALL PIPING IN WALLS/CHASE SPACE, BELOW FLOORS, AND ABOVE CEILINGS UNLESS OTHERWISE NOTED. INSTALL ALL WATER SUPPLY PIPING AT EXTERIOR WALLS ON THE INSIDE (WARM SIDE) OF THE BUILDING INSULATION. SEAL ALL PIPING PENETRATIONS THROUGH RATED ASSEMBLIES ACCORDINGLY. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE AND SOUND RATED PARTITIONS, CEILINGS, AND FLOORS.
5. THE PLUMBING CONTRACTORS UTILITY WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

   DOMESTIC WATER SYSTEM – NEW DOMESTIC WATER SYSTEM. CONNECT NEW WATER PIPING AS SHOW TO THE NEW WATER SERVICE.

   SANITARY DRAINAGE SYSTEM – CONNECTS OF THE TWO (2) SANITARY BUILDING DRAINS PIPING AS SHOWN TO THE SANITARY BUILDING SEWERS.

   STORM WATER DRAINAGE SYSTEM – CONNECT NEW ROOF DRAINAGE DOWNSPOUTS AND ROOF DRAIN CONDUCTORS TO THE STORM WATER BUILDING SEWER.

DRAWING NOTES:

1. THE INSTALLATION OF ALL BUILDING WATER SUPPLY DISTRIBUTION PIPING SHALL BE ABOVE BOTTOM CHORD OF ROOF JOISTS.
2. FIELD FABRICATED EXPANSION LOOP, SEE "EXPANSION LOOP DIAGRAM" ON DRAWING P-3.10. INSTALL AND ANCHOR IN ACCORDANCE WITH THE PIPING MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS.
3. COORDINATE FINAL LOCATION OF WALL HYDRANT DROPS IN THE FIELD. INSTALL HYDRANT AT 18 INCHES ABOVE FINISH FLOOR AND PROVIDE BALL VALVE IN DROP TO WALL HYDRANT AT 5'-0" A.F.F. ALL PIPING DROPS TO HYDRANTS TO BE TYPE 'L' COPPER.
4. CONNECT SANITARY BUILDING DRAINAGE PIPING AS SHOWN TO SANITARY BUILDING SEWER. REFER TO SITE UTILITY PLANS FOR LOCATION. PRIOR TO THE START OF ANY NEW SANITARY DRAINAGE SYSTEM WORK THIS CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF INVERT ELEVATION AT TIE-IN POINT AND ROUTING WITH BUILDING FOOTINGS.
5. THE INSTALLATION OF FLOOR CLEANOUTS ALONG LOADING DOCK WALL SHALL BE OUT OF PATH OF FORK LIFT TRAFFIC. SEE "OFF-SET FLOOR CLEANOUT LOCATIONS DIAGRAM" ON DRAWING P-3.10.
6. PRIMARY AND SECONDARY ROOF DRAIN STORM WATER CONDUCTORS SEE " PLUMBING – BUILDING OVERALL ROOF PLAN – ROOF DRAINAGE" ON DRAWING P-2.10 FOR PIPE SIZES AND ADDITIONAL INFORMATION.

PRINTED ARCH E1 30" x 42"

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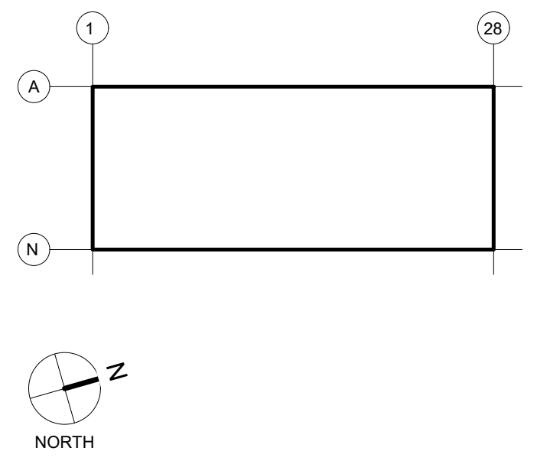
KEY PLAN



SUBMITTALS

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AS397-22 | NY154	ZPC

SHEET TITLE

PLUMBING OVERALL FLOOR PLAN

SHEET NO.

P-1.10

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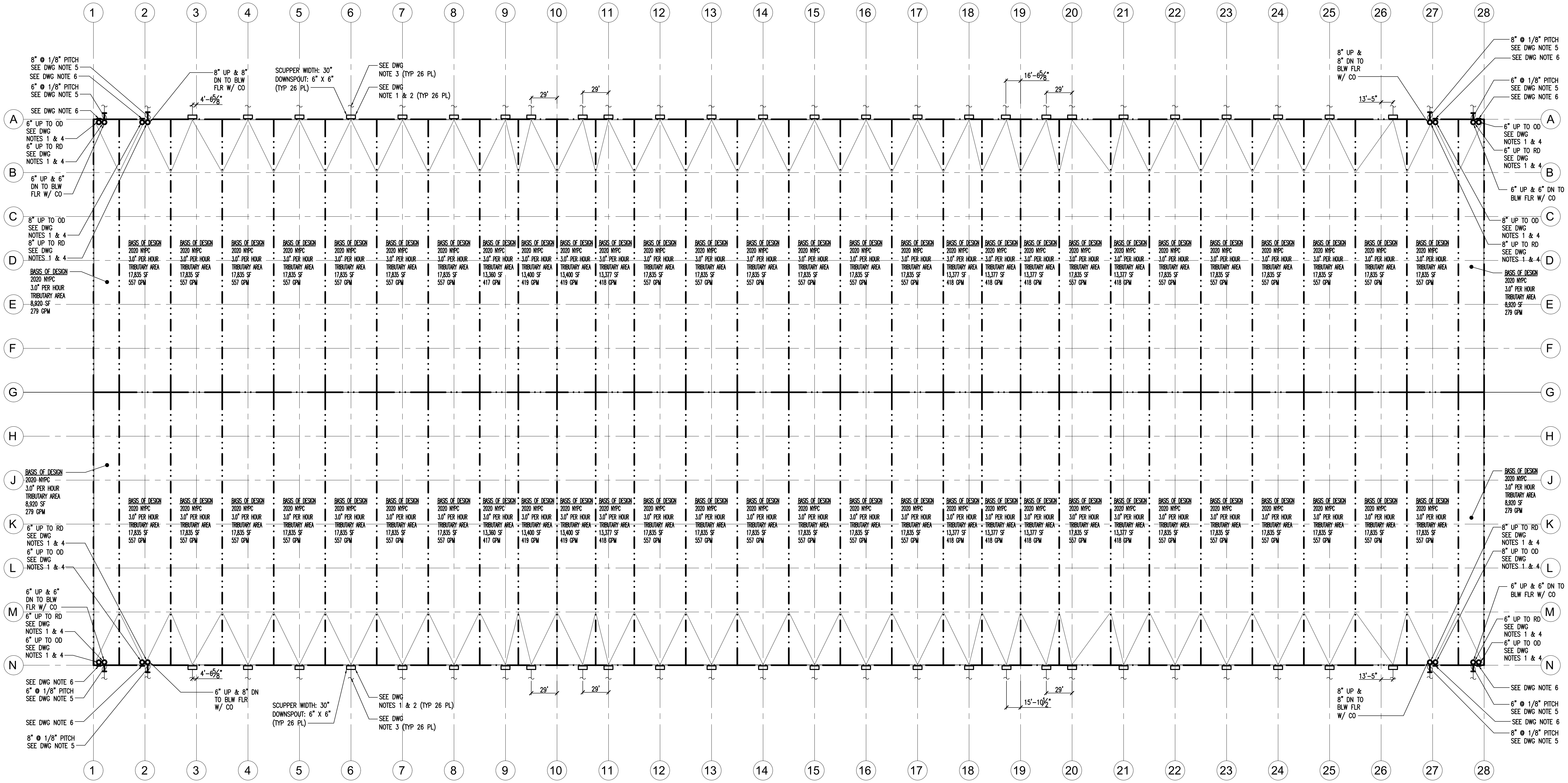

PLUMBING – BUILDING OVERALL ROOF PLAN – ROOF DRAINAGE

SCALE: 1" = 50'-0"

DRAWING NOTES:

1. DRAWING SHOWS ROOF DRAINAGE TRIBUTARY AREAS, BASIS OF DESIGN AND SIZING INFORMATION. PRIMARY AND SECONDARY ROOF DRAINAGE DESIGN IS BASED ON 100 YEAR 60 MINUTE RAINFALL RATE OF (3.0) THREE INCHES, INFORMATION GIVEN IN PLUMBING CODE FROM NATIONAL WEATHER SERVICE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION. ALL SCUPPER OPENING WIDTHS ARE BASED ON FOUR (4) INCHES OF HEAD, ROOF STRUCTURE DESIGN CAPABLE OF SUPPORTING UP TO EIGHT (8) INCHES OF STANDING WATER.
2. WALL SCUPPER BOX FOR PRIMARY ROOF DRAINAGE WITH SECONDARY (EMERGENCY) OVERFLOW SCUPPER OPENING DIRECTLY ABOVE, SEE "ROOF SCUPPER BOX DIAGRAM" ON DRAWING P-2.11 FOR SCUPPER BOX OPENING WIDTHS AND DOWNSPOUT SIZES, REFER TO THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FINAL SCUPPER BOX DIMENSIONS, MATERIALS AND INSTALLATION DETAILS.
3. CONNECT STORM WATER DOWNSPOUT PIPING AS SHOWN TO STORM WATER BUILDING SEWER. REFER TO SITE UTILITY PLANS FOR LOCATION. PRIOR TO THE START OF ANY NEW DRAINAGE SYSTEM WORK THIS CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF INVERT ELEVATION AT TIE-IN POINT AND ROUTING WITH BUILDING FOOTINGS.
4. ROOF DRAINS SEE "ROOF DRAIN & OVERFLOW DIAGRAM" ON DRAWING P-2.11 REFER TO ROOF PLANS ON ARCHITECTURAL DRAWINGS FOR FINAL LOCATIONS AND INSTALLATION DETAILS OF ALL ROOF DRAINS.
5. CONNECT STORM WATER BUILDING DRAINAGE PIPING AS SHOWN TO STORM WATER BUILDING SEWER. REFER TO SITE UTILITY PLANS FOR LOCATION. SEE "STORM WATER CONDUCTOR BASE DIAGRAM" ON DRAWING P-2.11. COORDINATE ALL RAINWATER CONDUCTOR CLEANOUT LOCATIONS IN THE FIELD WITH THE ARCHITECT PRIOR TO INSTALLATION. PRIOR TO THE START OF ANY NEW DRAINAGE SYSTEM WORK THIS CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF INVERT ELEVATION AT TIE-IN POINT AND ROUTING WITH BUILDING FOOTINGS.
6. TERMINATE OVERFLOW DISCHARGE WITH DOWNSPOUT NOZZLE, DISCHARGE SHALL BE ABOVE GRADE, IN A LOCATION THAT NORMALLY BE OBSERVED BY THE BUILDING OCCUPANTS OR MAINTENANCE PERSONNEL. SEE "OVERFLOW DISCHARGE NOZZLE DIAGRAM" ON DRAWING P-2.11.
7. SEE DRAWING P-1.10 FOR GENERAL NOTES, LEGEND AND ABBREVIATIONS.

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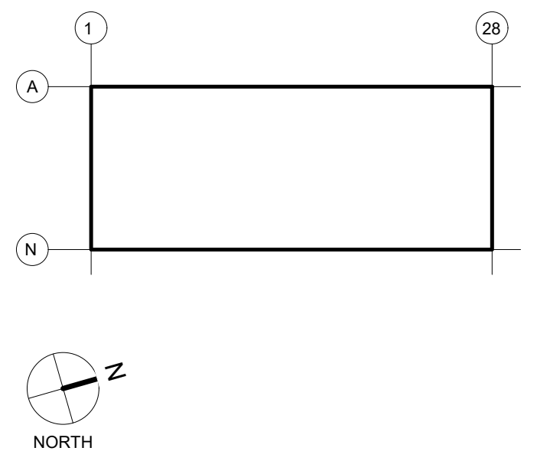

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SHEET TITLE
PLUMBING OVERALL ROOF PLAN

SHEET NO.
P-2.10

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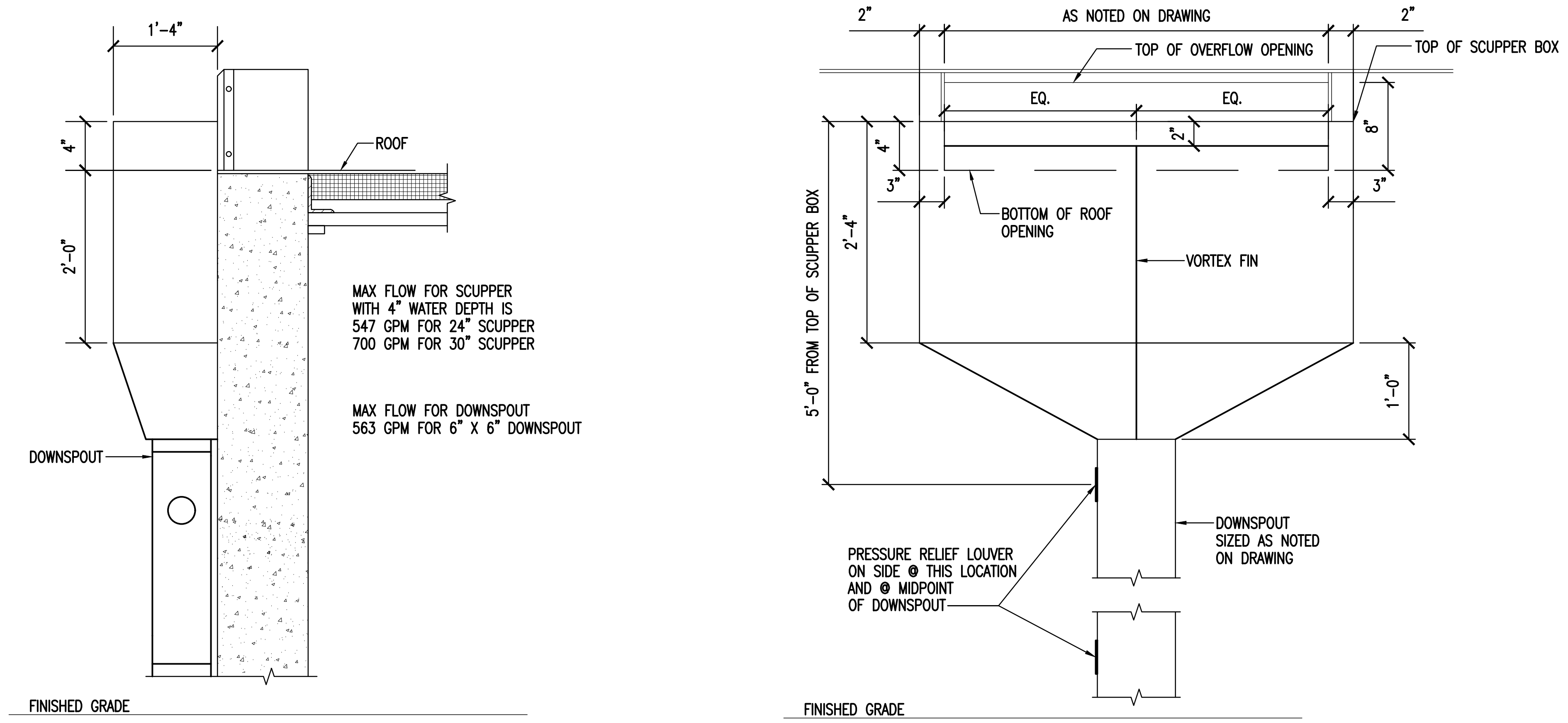
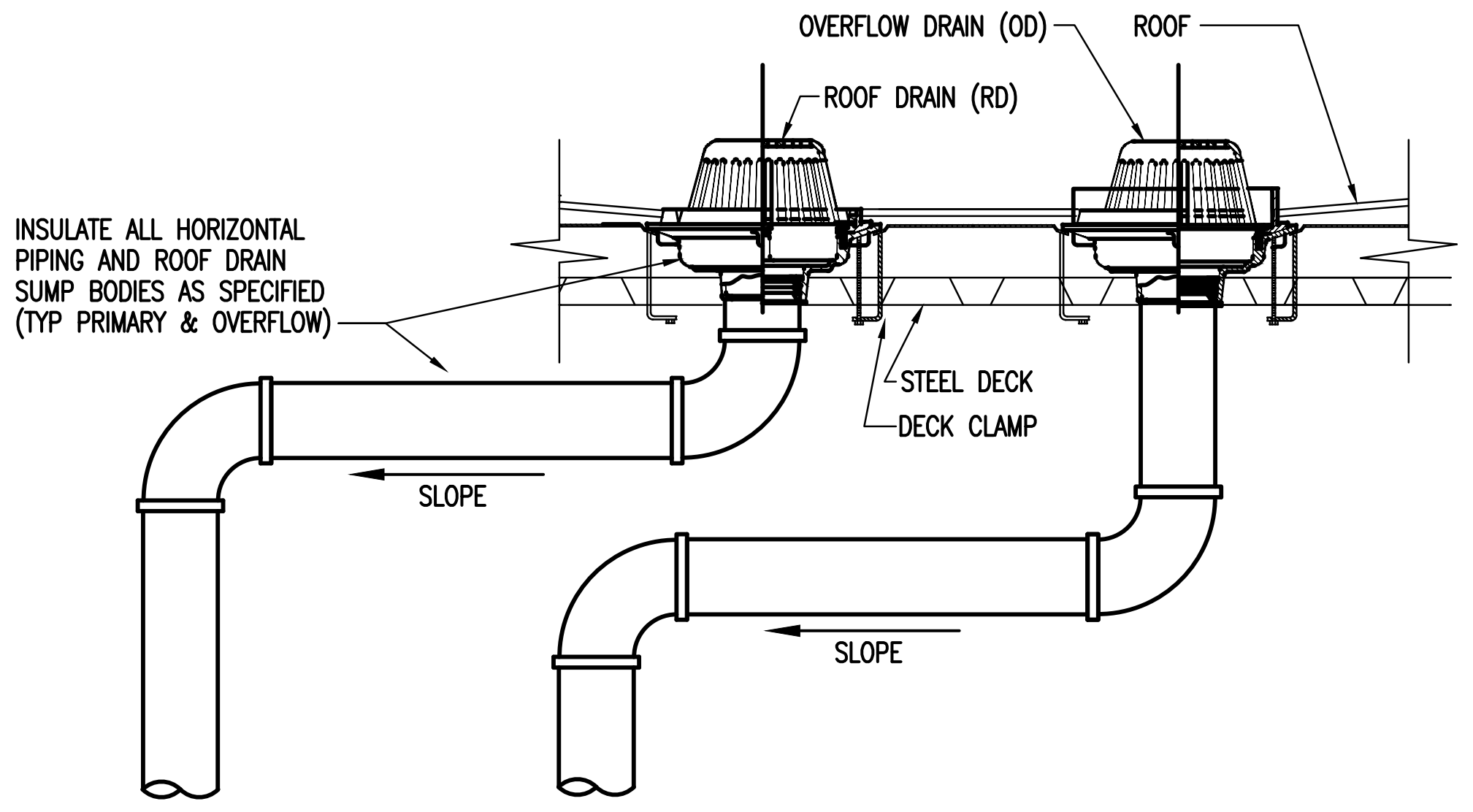


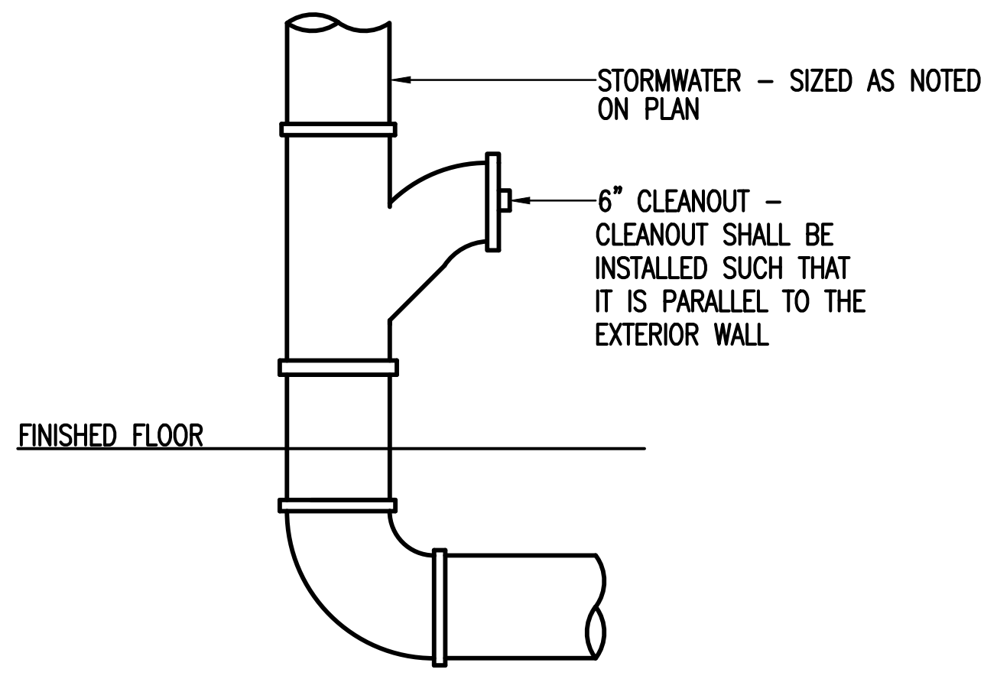
SIDE VIEW

FRONT VIEW

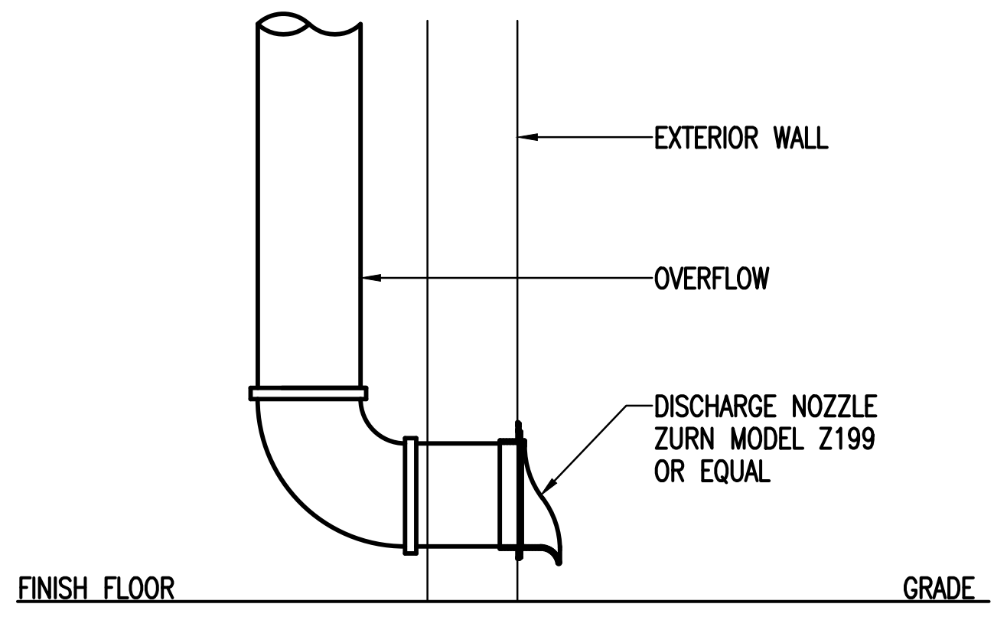
ROOF SCUPPER BOX DIAGRAM
NO SCALE



ROOF DRAIN & OVERFLOW DRAIN DIAGRAM
NO SCALE



STORM WATER CONDUCTOR BASE DIAGRAM
NO SCALE



OVERFLOW DISCHARGE NOZZLE DETAIL
NO SCALE

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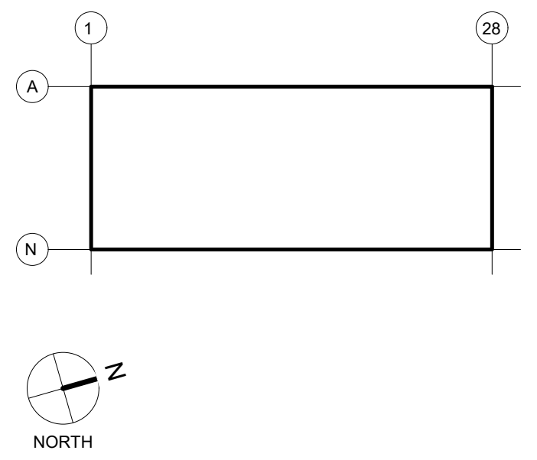

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PLUMBING ROOF DRAINAGE DIAGRAMS

SHEET NO.

P-2.11

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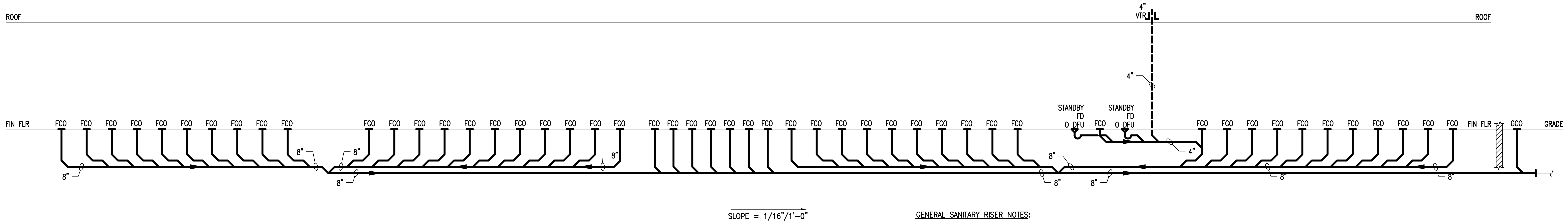
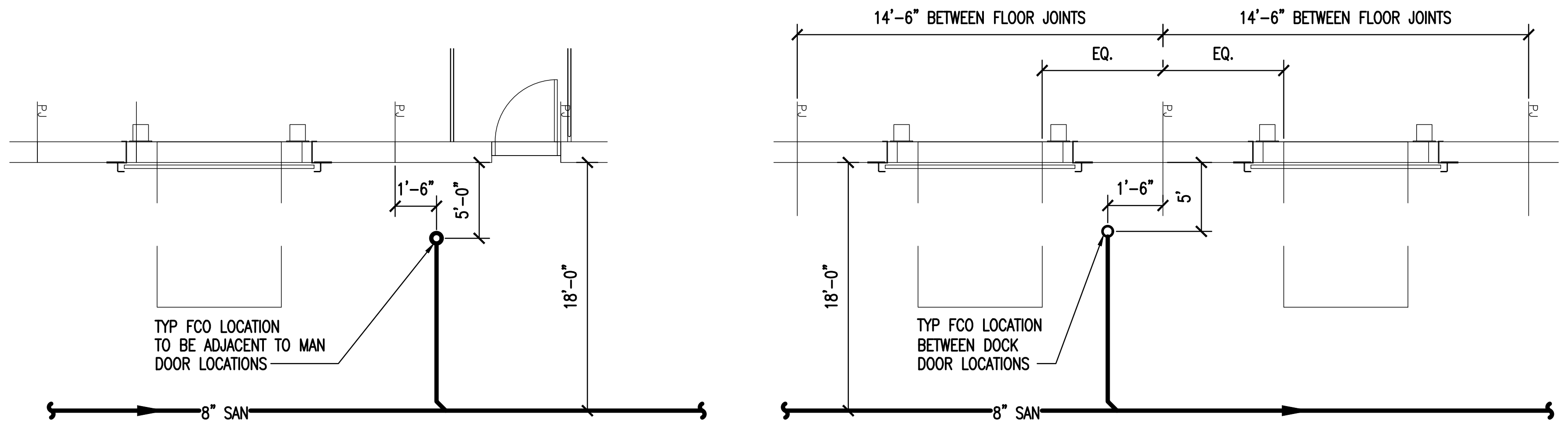


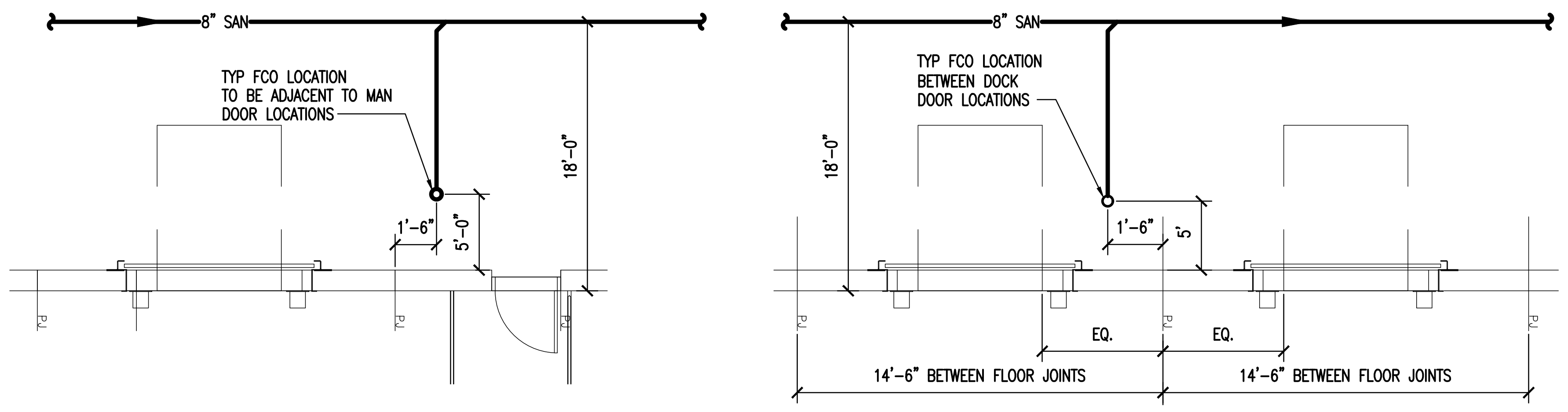
SANITARY RISER DIAGRAM
NO SCALE

GENERAL SANITARY RISER NOTES:

1. ALL SANITARY PIPING LESS THAN 3"ø SHALL BE SLOPED AT 1/4"/1'-0". ALL SANITARY PIPING LARGER THAN 3"ø BUT LESS THAN 8"ø SHALL BE AT 1/8"/1'-0". ALL SANITARY PIPING 8"ø OR LARGER SHALL BE SLOPED AT 1/16"/1'-0" (IN ACCORDANCE WITH THE PLUMBING CODE AND ALL LOCAL REQUIREMENTS).
2. ALL SANITARY PIPING LOCATED BELOW THE FLOOR SLAB SHALL BE NO LESS THAN 2"ø.
3. ALL VENT THROUGH THE ROOF PENETRATIONS (VTR'S) SHALL BE LOCATED NO LESS THEN 30'-0" FROM ALL EXISTING OR NEW OUTSIDE AIR INTAKES. COORDINATE WITH MECHANICAL CONTRACTOR IN THE FIELD.

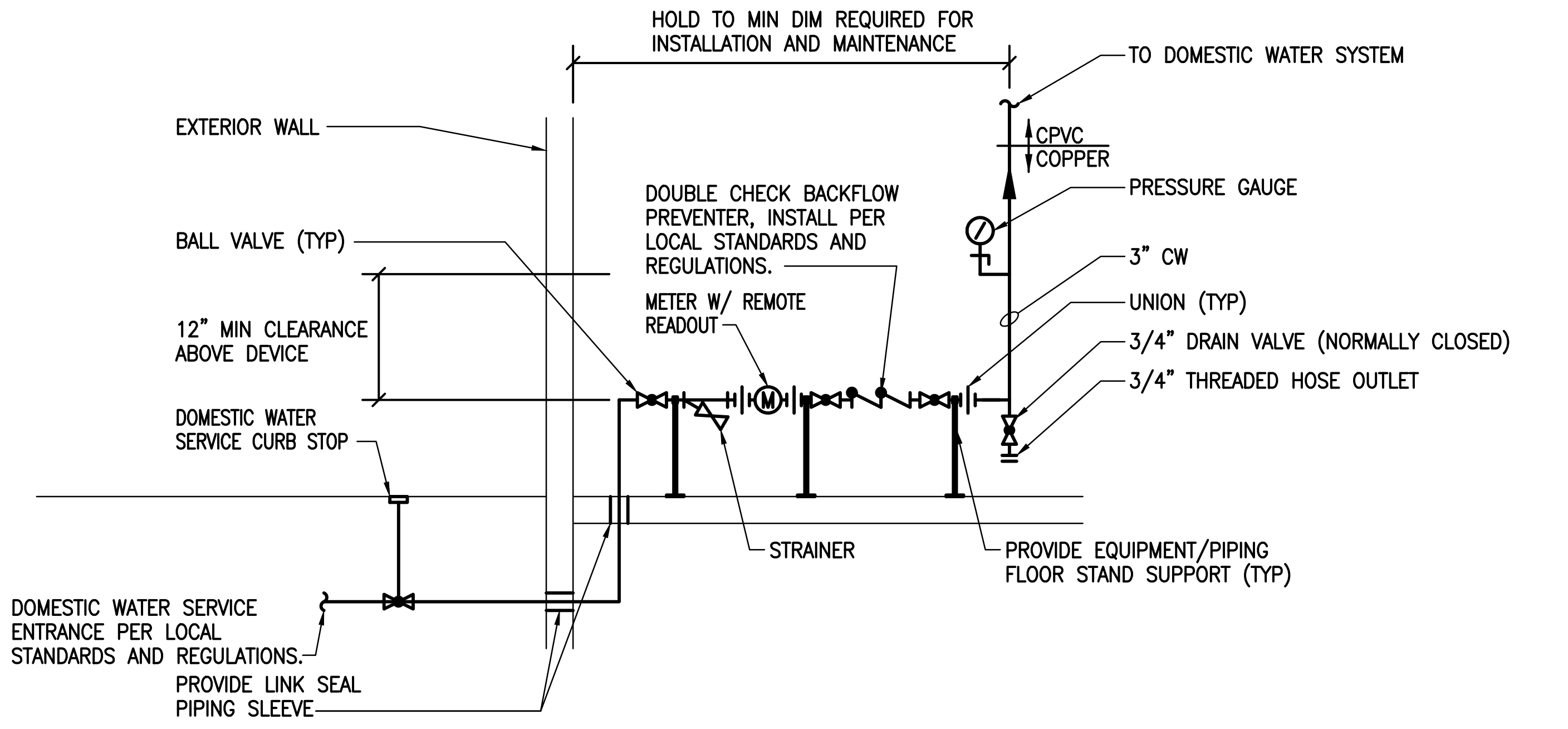


PLAN-NORTH DOCK WALL



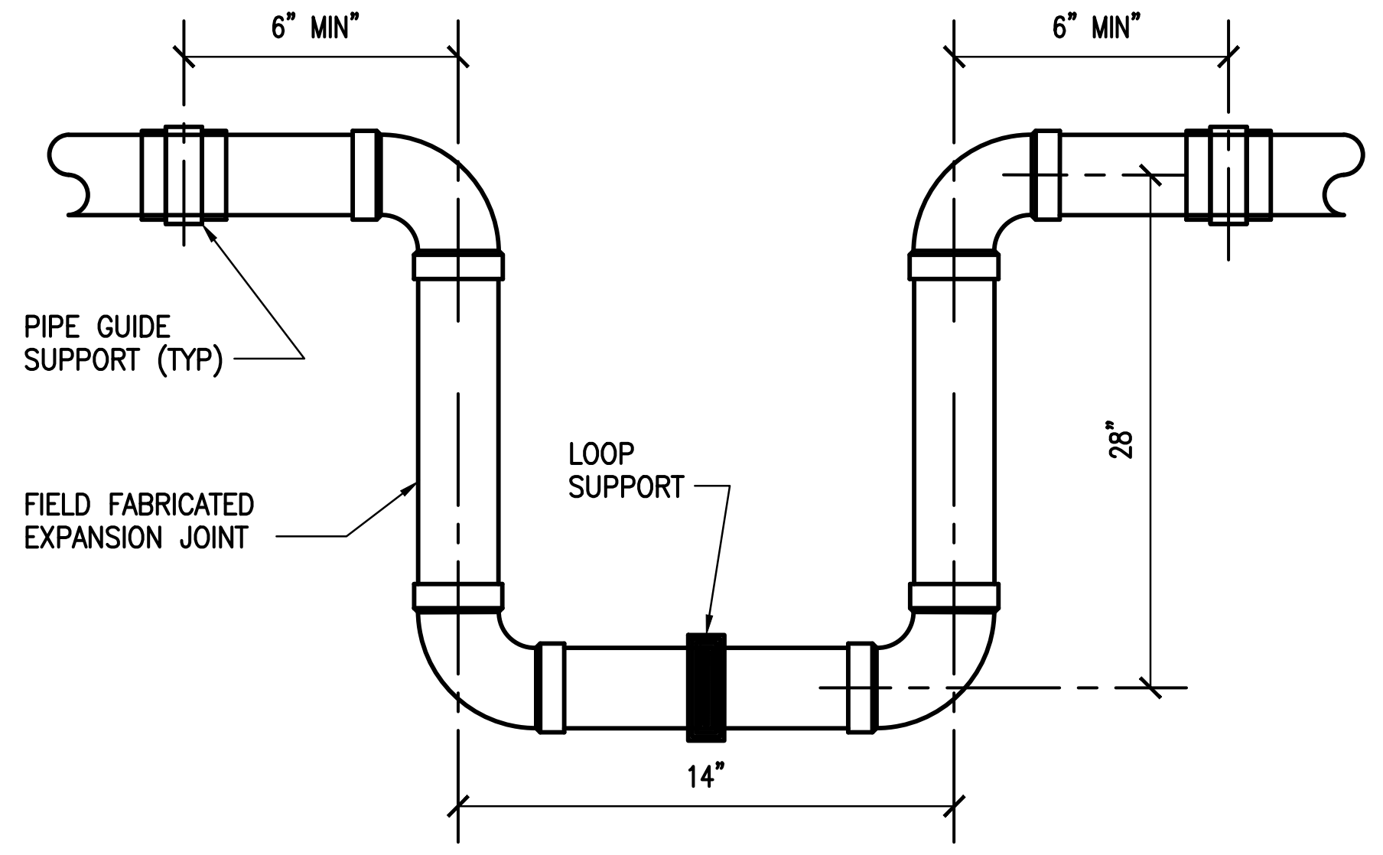
PLAN-SOUTH DOCK WALL

OFF-SET FLOOR CLEANOUT LOCATIONS DIAGRAM
NO SCALE



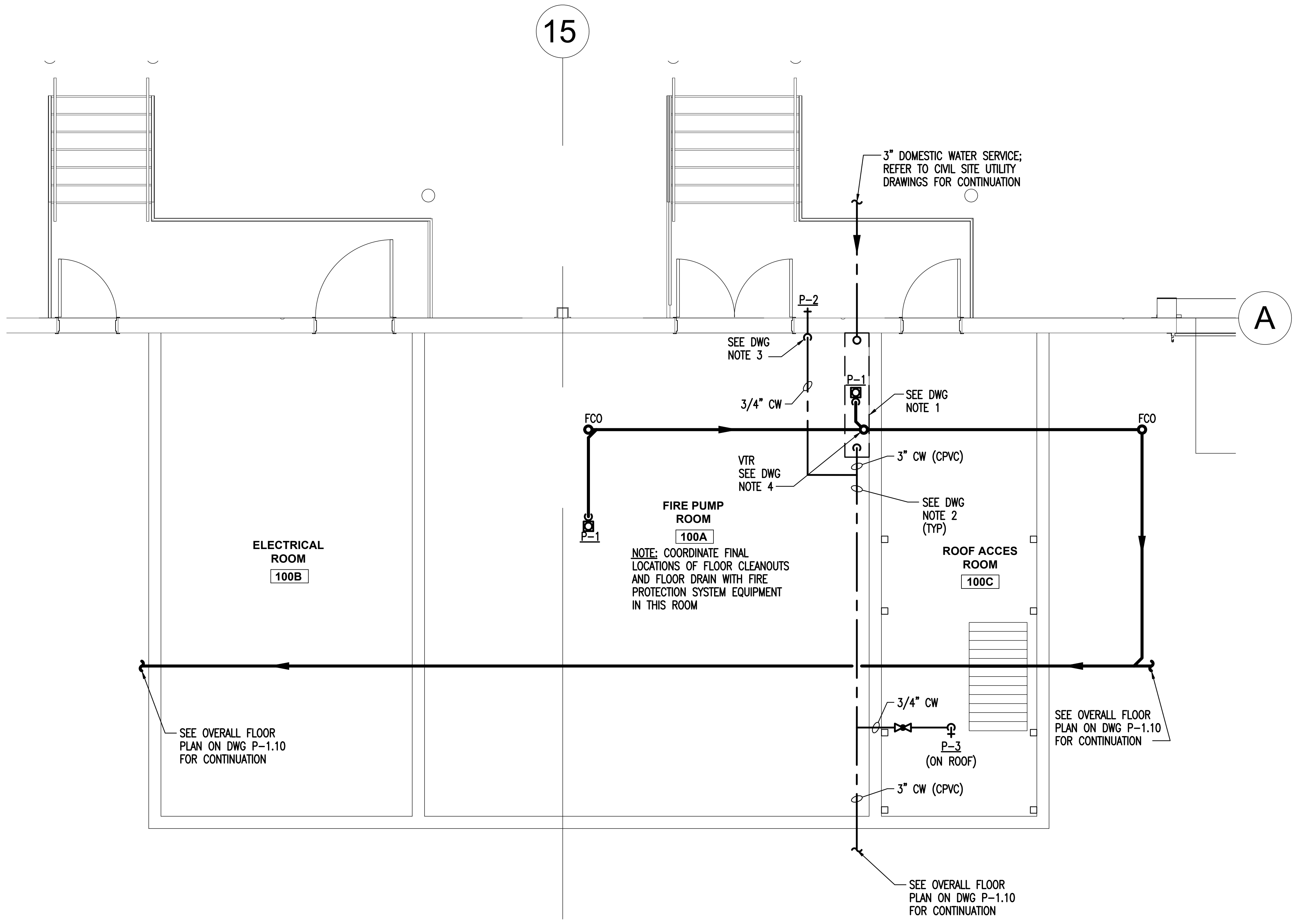
NOTES:
1. WATER METER SHALL BE AS REQUIRED BY THE LOCAL WATER AUTHORITY.
2. PROVIDE COPPER PIPING FOR SERVICE ENTRANCE SUPPLY LINE AND ALL PIPING TO POINT INDICATED.
3. THE BOTTOM OF BACKFLOW PREVENTION ASSEMBLY SHALL BE LOCATED BETWEEN 12 AND 30 INCHES FROM THE FINISH FLOOR, AND A MINIMUM OF 18 INCHES FROM ANY WALL.

WATER SERVICE ENTRANCE PIPING DIAGRAM
NO SCALE



NOTES:
1. EXPANSION LOOP DIMENSIONS, BASIS OF DESIGN IS THREE (3) INCH CPVC PIPE, 50 DEGREE FAHRENHEIT TEMPERATURE CHANGE FOR A LENGTH OF PIPE BETWEEN ANCHORS 220 +/- FEET.
2. INSTALL EXPANSION LOOP AS CLOSELY AS POSSIBLE TO MID-POINT BETWEEN ANCHORS.
3. DO NOT INSTALL RIGID OR RESTRAINING SUPPORTS WITHIN LEG LENGTH OF LOOPS.
4. ALL PIPE AND FITTING CONNECTIONS SHALL BE SOLVENT CEMENT, DO NOT USE THREAD CONNECTIONS.
5. PIPE GUIDE SUPPORTS SHOULD RESTRICT LATERAL MOVEMENT AND DIRECT AXIAL MOVEMENT INTO THE LOOP.

EXPANSION LOOP DIAGRAM
NO SCALE



PLUMBING – ENLARGED FIRE PUMP ROOM AREA PLAN
SCALE: 1/4" = 1'-0"

DRAWING NOTES:

1. PROVIDE BUILDING DOMESTIC WATER SUPPLY DISTRIBUTION PIPING AND SERVICE ENTRANCE EQUIPMENT AND CONNECTION TO BUILDING WATER SUPPLY AS SHOWN. SEE "DOMESTIC WATER SERVICE ENTRANCE PIPING DIAGRAM" ON THIS DRAWING. PRIOR TO THE START OF ANY NEW WATER SUPPLY SYSTEM WORK THIS CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF TIE-IN POINT.
2. THE INSTALLATION OF ALL BUILDING WATER SUPPLY DISTRIBUTION PIPING SHALL BE ABOVE BOTTOM CHORD OF ROOF JOISTS.
3. COORDINATE FINAL LOCATION OF WALL HYDRANT DROPS IN THE FIELD. INSTALL HYDRANT AT 18 INCHES ABOVE FINISH FLOOR AND PROVIDE BALL VALVE IN DROP TO WALL HYDRANT AT 5'-0" A.F.F. ALL PIPING DROPS TO HYDRANTS TO BE TYPE 'L' COPPER.
4. ROUTE VENT PIPING EXPOSED ON WALL AND CONNECT TO VENT THROUGH ROOF AS SHOWN ON SANITARY RISER DIAGRAM.
5. SEE DRAWING P-1.10 FOR GENERAL NOTES, LEGEND AND ABBREVIATIONS.

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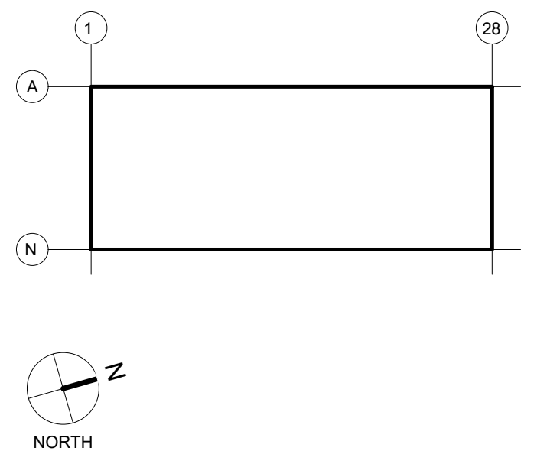

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SHEET TITLE
PLUMBING DIAGRAMS & ENLARGED PLAN

SHEET NO.
P-3.10

PLUMBING SPECIFICATIONS

PLUMBING SPECIFICATIONS

1.1 THE ARCHITECTURAL GENERAL CONDITIONS SHALL APPLY TO AND FORM A PART OF THIS SECTION OF THESE SPECIFICATION.

1.2 PROVIDE ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND SUPERVISION AND PERFORM ALL OPERATIONS NECESSARY FOR THE PROPER AND COMPLETE EXECUTION OF ALL PLUMBING WORK IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND DRAWINGS.

1.3 ALL WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF THE NEW YORK BUILDING AND PLUMBING CODES, NATIONAL FIRE PROTECTION ASSOCIATION, NATIONAL ELECTRIC CODE, OSHA, ALL OTHER STATE AND LOCAL AUTHORITIES HAVING JURISDICTION AND APPLICABLE MANUFACTURER'S RECOMMENDATIONS.

1.4 THE CONTRACTOR SHALL VISIT THE SITE, EXAMINE ALL CONDITIONS, AND MAKE ALLOWANCES FOR DIFFICULTIES AND CONTINGENCIES AFFECTING THE PROPER EXECUTION OF THIS CONTRACT.

1.5 THE CONTRACTOR SHALL OBTAIN AND PAY ALL FEES NECESSARY FOR PERMITS AND INSPECTIONS REQUIRED WITH THIS WORK.

1.6 THE CONTRACTOR SHALL VERIFY ALL UTILITY SERVICE INFORMATION SHOWN ON THE DRAWINGS WITH THE LOCAL UTILITY COMPANY PRIOR TO SUBMITTING A BID. ANY CHANGES OR SERVICE CHARGES IMPOSED BY THE UTILITY COMPANY SHALL BE QUALIFIED AND INCLUDED IN THE BID.

1.7 ALL EQUIPMENT SHALL BE TESTED, LISTED AND LABELED BY AN APPROVED AUTHORITY (UL, AGA, ETL) AND SHALL BE INSTALLED IN ACCORDANCE WITH ITS LISTING.

1.8 ALL EQUIPMENT, MATERIALS, AND WORKMANSHIP SHALL BE GUARANTEED FOR A MINIMUM OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER.

1.9 WHERE PRODUCTS ARE SPECIFIED BY BRAND NAME, CATALOG NUMBERS OR BY NAMES OF MANUFACTURERS, THE REFERENCE IS INTENDED TO BE DESCRIPTIVE AND NOT RESTRICTIVE AND IS SOLELY FOR THE PURPOSE OF INDICATING THE TYPE OF QUALITY OF ITEM THAT WILL BE ACCEPTABLE. AN APPROVED EQUAL WILL BE CONSIDERED UNLESS INDICATED OTHERWISE.

1.10 SUBMIT SHOP DRAWINGS REVIEW AND APPROVAL PRIOR TO ORDERING ANY MATERIALS OR EQUIPMENT.

1.11 THE CONTRACTOR RESPONSIBLE FOR WORK COVERED BY THESE SPECIFICATIONS SHALL COORDINATE AND COOPERATE WITH ALL OTHER TRADES. TRADES THAT HAVE WORK CONNECTED WITH THE PLUMBING WORK SHALL BE NOTIFIED FOR INSTALLATION REQUIREMENTS AND SCHEDULING. THE CONTRACTOR SHALL SCHEDULE HIS WORK TO AVOID ANY INTERRUPTION OF ANY UTILITY SERVICES TO THE OPERATION AREAS OF THE BUILDING DURING NORMAL WORKING HOURS. INTERRUPTION OF SERVICES SHALL BE DONE DURING OFF HOURS AT NO ADDITIONAL COST TO THE OWNER.

1.12 ALL CUTTING AND PATCHING OF EVERY NATURE REQUIRED IN CONNECTION WITH THIS CONTRACT SHALL BE DONE BY THIS CONTRACTOR WITH MECHANICS EXPERIENCED IN THEIR RESPECTIVE TRADES. ALL PATCHING SHALL MATCH ADJACENT FINISHES. ALL WORK SHALL BE COORDINATED TO AVOID CUTTING OF WORK IN PLACE AND INTERFERING WITH OTHER OPERATIONS.

1.13 IN COMPLIANCE WITH ACT 38, CONTACT INDIVIDUAL COMPANIES TO HAVE UTILITY LOCATIONS MARKED IN THE FIELD AND TO OTHERWISE LOCATE UNDERGROUND OBJECTS AS MAY BE NECESSARY PRIOR TO THE START OF CONSTRUCTION. CALL DIG SAFELY NEW YORK, INC. ONE CALL (1-800-962-7962, AS OF THIS WRITING).

1.14 PLUMBING EARTHWORK, EXCAVATION AND BACKFILL

A. UNLESS OTHERWISE NOTED, ALL EARTHWORK, EXCAVATION AND BACKFILL REQUIRED TO INSTALL THE RESPECTIVE CONTRACT WORK SHALL BE PROVIDED BY THE RESPECTIVE CONTRACTOR.

B. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, EQUIPMENT AND TOOLS NECESSARY TO COMPLETE ALL EARTHWORK, EXCAVATION AND BACKFILL.

C. EACH CONTRACTOR SHALL COORDINATE THIS WORK WITH THE WORK OF OTHER CONTRACTORS TO ENSURE PROPER INCORPORATION AND PROVISION FOR ALL ITEMS TO BE FURNISHED AND PLACED BY OTHERS. SCHEDULING OF THIS WORK SHALL BE ADJUSTED AND TIMED TO AVOID UNNECESSARY DELAYS TO OTHERS.

D. FURNISH AND INSTALL ALL SHORING AND BRACING NECESSARY TO PREVENT CAVE-INS UNTIL THE BACKFILLING IS COMPLETED. ALSO FURNISH, ERECT AND MAINTAIN GUARDRAILS, LIGHTS AND SUCH OTHER PROTECTION AS MAY BE NECESSARY FOR SAFETY AND FOR THE PROTECTION OF OTHERS. SHEET PILING OF WOOD OR STEEL, INCLUDING BRACING, SHORING AND SHEETING AS REQUIRED OR NECESSARY TO CONDUCT THE WORK IN A SAFE MANNER, RETAIN THE BANKS, AND COMPLETE THE WORK, SHALL BE FURNISHED, AND INSTALLED BY THE CONTRACTOR WHO SHALL ASSUME FULL AND COMPLETE RESPONSIBILITY FOR THIS WORK OR ANY DAMAGE CAUSED THEREBY.

E. ALL EXCAVATIONS REQUIRED FOR INSTALLATION OF PIPE SHALL HAVE SOLID, UNDISTURBED BOTTOMS, AND SHALL BE SUBJECT TO APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO PIPING PLACEMENT. SHOULD BOTTOMS BECOME SOFT OR WET BEFORE PIPING IS PLACED, ALL SUCH UNSUITABLE BOTTOMS SHALL BE REMOVED AT NO COST TO THE OWNER AND FILLED WITH CONCRETE.

F. SUPPORT ALL BURIED PIPING THROUGHOUT ITS ENTIRE LENGTH. DO NOT PLACE ANY PIPING ON ROCK. WHERE ROCK IS ENCOUNTERED, THE TRENCH SHALL BE OVER-EXCAVATED SIX (6) INCHES AND BACKFILLED TO THE INSTALLATION LEVEL OF THE OF THE BOTTOM OF PIPE WITH SAND OR FINE OR FINE GRAVEL PLACED IN LAYERS NOT GREATER THAN SIX (6) INCHES IN DEPTH AND SUCH BACKFILL SHALL BE COMPACTED AFTER EACH PLACEMENT.

G. ALL EXCAVATION SHALL BE DONE WITH SUFFICIENT WORKING SPACE TO PERMIT PLACING, INSPECTION AND COMPLETION OF ALL WORK, INCLUDED IN THE CONTRACT. ALL EXCAVATIONS MUST HAVE SOLID, LEVEL, UNDISTURBED BOTTOMS, SUBJECT TO APPROVAL BY THE OWNER'S REPRESENTATIVE BEFORE THE PIPING IS PLACED. SHOULD BOTTOMS BECOME SOFT OR WET BEFORE PIPING IS PLACED, ALL SUCH UNSUITABLE BOTTOMS MUST BE REMOVED AT NO ADDITIONAL COST TO THE OWNER AND BACKFILLED ACCORDINGLY. NO SLOPING BEARING WILL BE PERMITTED.

H. PLUMBING CONTRACTOR IS RESPONSIBLE FOR PUMPING AS REQUIRED TO KEEP EXCAVATIONS FREE OF WATER. THE WATER SHALL BE CONVEYED IN PIPING OR WATERTIGHT TROUGHS A SUFFICIENT DISTANCE SO THAT IT WILL FLOW FROM THE SITE AND NOT AFFECT OTHER WORK BEING PERFORMED.

I. ALL BACKFILLING AND FILLING OPERATIONS OCCURRING IN AREAS THAT HAVE BEEN FILLED PREVIOUSLY BY THE GENERAL CONTRACTOR SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS FOR THE GENERAL CONSTRUCTION IF THESE REQUIREMENTS ARE MORE STRINGENT THAN THOSE FOR BACKFILLING UNDER THIS CONTRACT. IN AREAS ON THE INTERIOR OF THE BUILDING WHERE TEST CONTROLLED COMPACTION MUST BE PERFORMED UNDER THE GENERAL CONSTRUCTION SPECIFICATIONS, BACKFILLING BY THIS CONTRACTOR SHALL FOLLOW TEST CONTROLLED COMPACTION METHODS. THIS CONTRACTOR SHALL REVIEW THE GENERAL CONSTRUCTION SPECIFICATIONS TO DETERMINE RESPONSIBILITY FOR WORK WITHIN AREAS FILLED BY THE GENERAL CONTRACTOR. ALL COSTS OF LABOR, MATERIALS, EQUIPMENT AND TESTING TO MEET THIS RESPONSIBILITY SHALL BE BORNE BY THIS CONTRACTOR.

J. THE CONTRACTOR SHALL BACKFILL ALL EXCAVATIONS PERFORMED UNDER THIS CONTRACT AS REQUIRED TO SATISFY FINISH FLOOR-GRADE REQUIREMENTS.

NO BACKFILLING SHALL BE DONE UNTIL DIRECTED BY THE OWNER'S REPRESENTATIVE. ANY CAVE-IN OF EXCAVATING THAT MAY OCCUR OR ANY BACKFILL PLACED BEFORE INSPECTIONS ARE COMPLETED SHALL BE REMOVED AS DIRECTED BY THE OWNER'S REPRESENTATIVE. DO NOT USE TOPSOIL AS EARTH FILL MATERIAL IN THIS CONTRACT. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE SETTLEMENT OF EARTH FILLS AND ALL BUILDING DAMAGES RESULTING FROM FAULTY COMPACTION OF THESE EARTH FILLS. ALL EARTH USED FOR EARTH FILLS SHALL BE FREE OF DEBRIS, LARGE STONES AND ORGANIC MATTER. IF SITE EARTH IS USED, IT SHALL BE THAT MATERIAL OBTAINED FROM THE DEEPER EXCAVATIONS. EARTH FILL BROUGHT TO THE SITE MUST BE APPROVED MATERIAL AND NONE SHALL BE TRANSPORTED TO THE SITE UNTIL APPROVAL IS GIVEN BY THE OWNER'S REPRESENTATIVE AND THE GENERAL CONTRACTOR AGREES TO ITS USE AS FILL. EARTH FILLS SHALL BE SPREAD IN SIX (6) INCH LAYER THICKNESSES MAXIMUM, DRY MATERIAL SHALL BE SPRAYED AS REQUIRED TO A MOISTURE CONTENT OF APPROXIMATELY 12 PERCENT BY WEIGHT AND EACH LAYER SHALL BE COMPACTED TO A DENSITY OF 95 PERCENT OR THE MAXIMUM DENSITY AT THE OPTIMUM MOISTURE CONTENT. THE CONTRACTOR SHALL CLOSELY SUPERVISE ALL EARTH FILLING AND COMPACTION WORK AS IT OCCURS TO ASSURE CORRECT AND RELIABLE EARTH FILLS FREE OF SETTLEMENT

1.15 FURNISH AND INSTALL ALL NECESSARY HANGERS, INSERTS, SUPPORTS SUPPLEMENTARY STEEL, ETC., TO PROPERLY SUPPORT ALL EQUIPMENT AND PIPING IN AN APPROVED MANNER AND IN FULL ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

1.16 ALL DOMESTIC COLD WATER PIPING WITHIN THE BUILDING SHALL BE HARD DRAWN TYPE "L" COPPER TUBING IN ACCORDANCE WITH ASTM-B88. FITTINGS SHALL BE WROUGHT COPPER OR CAST BRASS. VALVES SHALL BE CAST BRASS UNLESS NOTED OTHERWISE. HANGERS FOR SUPPORTING COPPER TUBING SHALL BE COPPERIZED. HANGER SPACING SHALL BE MAXIMUM OF 6 FEET HORIZONTAL FOR SIZES 1-1/4" AND LESS, 10 FEET HORIZONTAL FOR SIZES 1-1/2" AND GREATER AND 10 FEET VERTICAL FOR ALL SIZES IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION INSTRUCTIONS AND PLUMBING CODE.

A. WHERE INDICATED ON THE DRAWINGS, ALTERNATIVE MATERIAL OF CONSTRUCTION FOR DOMESTIC WATER PIPING SHALL BE SCHEDULE 40 OR SCHEDULE 80, CHLORINATED POLYVINYL CHLORIDE (CPVC*) PIPE CONFORMING TO NSF61, IN ACCORDANCE WITH ASTM F441. FITTINGS SHALL BE APPROVED FOR INSTALLATION WITH THE PIPING MATERIAL IN ACCORDANCE WITH ASTM F437, F438, F439 OR F441. JOINTS SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION INSTRUCTIONS, ASTM D2846, ASTM F493. CPVC PIPE SHALL NOT BE USED WITHOUT WRITTEN AUTHORIZATION FROM THE AUTHORITY HAVING JURISDICTION AND THE LOCAL FIRE MARSHAL. PIPING SHALL MEET UL 84E SMOKE AND FLAME SPREAD RATINGS FOR USE IN RETURN AIR PLENUM CEILINGS OR FIRE-RATED CEILING ASSEMBLIES. INSTALLATION OF THE CPVC PIPING MATERIAL SHALL INCLUDE APPROPRIATE PIPING SUPPORTS AND HANGER SPACING (MAXIMUM OF 6 FEET) IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION INSTRUCTIONS AND PLUMBING CODE.

1. CPVC SHALL ONLY BE ALLOWED FOR MAINS. ALL DROPS AND PIPING OUTSIDE OF THE ROOF JOISTS ARE TO BE TYPE "L" COPPER

1.17 PROVIDE PIPE GUIDES, ANCHORS AND EXPANSION LOOPS WHERE INDICATED ON THE DRAWINGS AND WHERE REQUIRED TO MINIMIZE STRESS IN PIPING SYSTEM. EXPANSION LOOPS SHALL BE FIELD FABRICATED. PIPE GUIDES SHALL BE METRAFLEX STYLE IV SIZE 25. APPROVED FITTINGS AND JOINTS SHALL BE UTILIZED FOR PIPING LOOP CONSTRUCTION FROM PIPING SYSTEM MATERIALS. INSTALLATION SHALL BE IN ACCORDANCE WITH THE PIPE AND FITTING MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS.

1.18 ALL STORM WATER, SANITARY AND VENT PIPING ABOVE THE FINISHED FLOOR SHALL BE NO-HUB SERVICE WEIGHT CAST IRON IN ACCORDANCE WITH ASTM A74; JOINTS SHALL BE A NEOPRENE GASKET WITH STAINLESS STEEL CLAMP AND SHIELD ASSEMBLY, INSTALL IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. STORM WATER, SANITARY AND VENT PIPING LOCATED BELOW THE FLOOR SHALL BE SERVICE WEIGHT CAST IRON WITH HUB AND SPIGOT ENDS. JOINTS SHALL BE CONNECTED WITH NEOPRENE PUSH-ON COMPRESSION GASKETS, INSTALL IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. HANGER AND SUPPORT SPACING SHALL BE MAXIMUM OF 5 FEET HORIZONTAL FOR PIPE SECTIONS LESS THAN 10 FEET IN LENGTH, 10 FEET WHERE PIPE SECTIONS 10 FEET IN LENGTH ARE INSTALLED AND 15 FEET VERTICAL IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION INSTRUCTIONS AND PLUMBING CODE.

A. WHERE PERMITTED BY THE LOCAL AUTHORITY ALL SANITARY AND VENT PIPING SHALL BE SCHEDULE 40 PVC, ASTM D2665, D2949, WITH PVC FITTINGS (DWV TYPE) AND SOLVENT WELD JOINTS. PVC PIPING SHALL NOT BE USED IN RETURN AIR PLENUM TYPE CEILINGS OR IN FIRE-RATED CEILING ASSEMBLIES (CONTRACTOR TO VERIFY THESE AREAS WITH ARCHITECT). PVC PIPING SHALL NOT BE USED WITHOUT WRITTEN AUTHORIZATION FROM THE LOCAL AUTHORITY HAVING JURISDICTION AND THE LOCAL FIRE MARSHALL.

1.19 WHERE PIPING PASSES THROUGH FIRE RESISTING PORTIONS OF THE STRUCTURE, AN APPROVED FIRE-STOPPING DEVICE SHALL BE INSTALLED TO MAINTAIN THE FIRE RATING OF THAT PORTION OF THE STRUCTURE. ALL FIRE STOPPING DEVICES USED SHALL BE LISTED INTUMESCENT MATERIALS SUCH AS A CAULK, SEALANT, PUTTY, WRAP STRIPS, ETC. AS REQUIRED TO PROPERLY FIRE STOP ALL VOIDS. FIRE STOPPING MATERIAL SHALL BE AS MANUFACTURED BY 3M, HILTI, PRO-SET SYSTEMS OR EQUAL.

1.20 INSTALL CLEANOUT FITTINGS WHERE INDICATED AND AS REQUIRED. CLEANOUTS SHALL BE MADE BY MEANS OF LONG SWEEP ELL OR Y AND BEND. CLEANOUTS SHALL BE THE SAME SIZE AS PIPING UP TO AND INCLUDING 4-INCH LINE SIZE, AND IN 6 INCH LINE SIZE OR ABOVE CLEANOUTS SHALL BE 6 INCH. CLEANOUTS IN FLOORS FOR CONCEALED PIPING SHALL BE ADJUSTABLE GALVANIZED CAST IRON BODY WITH ABS PLUG (GASKET SEAL), EXTRA HEAVY-DUTY SCORIATED CAST IRON TOP WITH VANDALPROOF SCREWS AND FLANGE WITH FLASHING CLAMP. FLOOR CLEANOUTS SHALL BE JAY R. SMITH SERIES 4220S OR 4223S, RATED FOR HEAVY LOAD TRAFFIC. CLEANOUTS IN WALLS FOR CONCEALED PIPING SHALL BE CAST IRON T BRANCH CLEANOUT WITH BRONZE RAISED HEAD PLUG, LEAD SEAL AND VANDALPROOF POLISHED STAINLESS-STEEL ROUND ACCESS COVER.

1.21 ROOF DRAINS

A. PRIMARY ROOF DRAINS (RD): ANSI A112.21.2, ASME A112.6.9; DURA-COATED CAST IRON BODY WITH SUMP RECEIVER, COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARD TO PREVENT DEBRIS FROM ENTERING THE DRAIN WHILE ALLOWING WATER TO IMMEDIATELY PASS-THROUGH AT ZERO HEAD LEVEL, ADJUSTABLE UNDERDECK CLAMP, ADJUSTABLE EXTENSION SLEEVE FOR INSULATION AND LOW SILHOUETTE POLY-DOME DESIGNED TO MAXIMIZE EFFECTIVE OPEN AREA AND PROMOTE EFFICIENT FLOW. ROOF DRAIN ENGINEERED TO EVACUATE WATER OFF OF ROOF STRUCTURE BY INCORPORATING A SMOOTH FUNNEL SHAPED INTERIOR SURFACE, PROVIDING A SEAMLESS TRANSITION TO OUTLET CONNECTION, AND ELIMINATING INTERNAL OBSTRUCTIONS. ZURN Z100F FLOFORCE™ HIGH-EFFICIENT FLOW PERFORMING ROOF DRAIN WITH OUTLET SIZE TO MATCH PIPE SIZE INDICATED ON THE DRAWINGS.

B. SECONDARY (EMERGENCY) OVERFLOW ROOF DRAINS (OFD): ANSI A112.21.2, ASME A112.6.9; DURA-COATED CAST IRON BODY WITH SUMP RECEIVER, COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARD TO PREVENT DEBRIS FROM ENTERING THE DRAIN WHILE ALLOWING WATER TO IMMEDIATELY PASS-THROUGH AT ZERO HEAD LEVEL, ADJUSTABLE UNDERDECK CLAMP, ADJUSTABLE EXTENSION SLEEVE FOR INSULATION, FOUR (4) INCH HIGH OVERFLOW DAM AND LOW SILHOUETTE POLY-DOME DESIGNED TO MAXIMIZE EFFECTIVE OPEN AREA AND PROMOTE EFFICIENT FLOW. ROOF DRAIN ENGINEERED TO EVACUATE WATER OFF OF ROOF STRUCTURE BY INCORPORATING A SMOOTH FUNNEL SHAPED INTERIOR SURFACE, PROVIDING A SEAMLESS TRANSITION TO OUTLET CONNECTION, AND ELIMINATING INTERNAL OBSTRUCTIONS. ZURN Z100F FLOFORCE™ HIGH-EFFICIENT FLOW PERFORMING ROOF DRAIN WITH OUTLET SIZE TO MATCH PIPE SIZE INDICATED ON THE DRAWINGS.

C. THE SECONDARY (EMERGENCY) OVERFLOW DRAIN PIPING SHALL BE INDEPENDENT OF THE PRIMARY DRAIN PIPING SYSTEM AND SHALL TERMINATE AT GRADE IN A LOCATION THAT NORMALLY BE OBSERVED BY THE BUILDING OCCUPANTS OR MAINTENANCE PERSONNEL.

1.22 ALL SHUTOFF VALVES SHALL BE BALL VALVES. ALL BALL AND CHECK VALVES SHALL BE ALL BRONZE, SWEATED PATTERN SUITABLE FOR 125-PSI WORKING PRESSURE.

1.23 ALL BACKFLOW PREVENTERS SHALL BE AS REQUIRED BY THE LOCAL AUTHORITY.

A. REDUCED PRESSURE BACKFLOW PREVENTERS: ANSI/ASSE 1013; BRONZE BODY WITH BRONZE AND PLASTIC INTERNAL PARTS AND STAINLESS STEEL SPRINGS; TWO INDEPENDENTLY OPERATING, SPRING LOADED CHECK VALVES; DIAPHRAGM TYPE DIFFERENTIAL PRESSURE RELIEF VALVE LOCATED BETWEEN CHECK VALVES; THIRD CHECK VALVE WHICH OPENS UNDER BACK PRESSURE IN CASE OF DIAPHRAGM FAILURE; NON-THREADED VENT OUTLET; ASSEMBLED WITH TWO GATE VALVES, STRAINER AND FOUR TEST COCKS; MODEL 909, MANUFACTURED BY WATTS. BACKFLOW PREVENTER SHALL BE INSTALLED WITH AN AIR GAP DRAIN ASSEMBLY, WATTS MODEL 909AG. EXTEND DRAIN LINE TO NEAREST FLOOR DRAIN.

1.24 INSULATION

A. INSTALL INSULATION ON ALL DOMESTIC WATER PIPING, FITTINGS, VALVES AND STRAINERS, ROOF DRAIN BODIES (SUMPS) INCLUDING FIRST EIGHTEEN (18) INCHES OF VERTICAL PIPE BELOW BODY AND ALL HORIZONTAL STORM WATER PIPING WITH MATERIALS HAVING A "K" FACTOR OF 0.27 AT 75 DEGREES F MEAN TEMPERATURE, A FLAME SPREAD RATING OF 25 OR LESS AND SMOKE DEVELOPED RATING OF 50 OR LESS. ALL INSULATION SHALL COMPLY WITH THE REQUIREMENTS OF ASTM E-84. ALL INSULATION SHALL BE CONTINUOUS AT HANGERS AND SUPPORTS (THE PIPE SHALL NOT CONTACT THE HANGER OR SUPPORT) EXCEPT WHERE PIPE ANCHORS AND GUIDES ARE INSTALLED. AT THESE LOCATIONS, COMPLETELY INSULATE THE ANCHOR AND/OR GUIDE BACK TO A DISTANCE THAT IS AT LEAST FOUR PIPE DIAMETERS OF THE PIPE.

1. THICKNESS:

- COLD WATER AND HOT WATER RUNOUTS UP TO TWO INCHES = 1/2-INCH THICK
- COLD WATER MAINS UP TO ONE INCH = 1/2-INCH THICK
- COLD WATER MAINS 1-1/4 TO TWO INCHES = 3/4-INCH THICK
- COLD WATER MAINS 2-1/2 INCHES AND LARGER = ONE INCH THICK
- HORIZONTAL STORM WATER = 1/2 INCH THICK
- ROOF DRAIN BODIES (SUMPS) = 1/2 INCH THICK

2. MATERIALS:

- VAPOR BARRIER ALL SERVICE JACKETED FIBERGLASS WITH FITTINGS COVERED WITH PRE-SHAPED PLASTIC COVERS.

3. MANUFACTURERS – CERTAINTEED, MANVILLE, OWENS CORNING, KNAUF, ARMSTRONG OR APPROVED EQUAL.

1.25 TRAP SEALING COMPONENT

A. PROVIDE TRAP SEALING COMPONENT AT ALL FLOOR DRAINS AND FUNNEL DRAINS. THE INSTALLATION OF A SEALING COMPONENT ON THE FIXTURE DRAIN OUTLET TO REDUCE TRAP SEAL LOSS SHALL BE PERMITTED IN LIEU OF A TRAP PRIMER WHERE APPROVED BY THE LOCAL AUTHORITY.

B. TRAP SEALING COMPONENT SHALL BE PROSET TRAP GUARD, MANUFACTURED BY PROSET SYSTEMS. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

1.26 FIXTURES AND FIXTURE TRIMMINGS SHALL BE FURNISHED AND INSTALLED AS SPECIFIED HEREIN. FIXTURES SHALL BE COMPLETE WITH ALL NECESSARY WALL HANGERS AND SUPPORTS, SUPPLY STOP VALVES (LOOSE-KEY STOPS FOR EXPOSED PIPING IN PUBLIC TOILET ROOMS), 17-GAUGE CHROME-PLATED BRASS DRAINAGE FITTINGS/P-TRAPS AND ONE-PIECE CHROME-PLATED ESCUTCHEONS. ALL PIPING EXPOSED TO VIEW SHALL BE CHROME-PLATED BRASS. THE FOLLOWING ITEM NUMBERS CORRESPOND WITH THE "P" NUMBERS NOTED ON THE PLUMBING FIXTURE SCHEDULE AND ON THE DRAWINGS.

P-1 FLOOR DRAIN, ASME A112.6.3. – TWELVE INCH ROUND STRAINER HEAVY DUTY DRAIN WITH CAST IRON TRACTOR GRATE, DUCO CAST IRON DEEP BODY AND A FOUR INCH BOTTOM OUTLET; MODEL 2141Y, MANUFACTURED BY JAY R. SMITH MFG. CO.

P-2 WALL HYDRANT – SHALL BE ZURN MODEL Z-1310; EXPOSED, NON-FREEZE HYDRANT WITH STAINLESS STEEL FACE AND LOOSE KEY OPERATOR.

P-3 ROOF HYDRANT, ASSE 1052 & 1057 – EXPOSED UPRIGHT, NON-FREEZE HYDRANT WITH MOUNTING SYSTEM. EXPOSED UPRIGHT WITH LIFT HANDLE, 3/4 INCH HOSE CONNECTION WITH FIELD TESTABLE DUAL CHECK BACKFLOW PREVENTER AND DRAIN, 3/4 INCH NPT FEMALE INLET CONNECTION: MODEL SRH-MS, AS MANUFACTURED BY WOODFORD.

1.27 GENERAL PIPE INSTALLATION

A. IN GENERAL, INSTALL ALL PIPING SO AS TO PRESERVE ACCESS TO ALL VALVES, TRAPS, EQUIPMENT, ETC. ALL PIPING, VALVES, FITTINGS, ETC., SHALL BE KEPT A SUFFICIENT DISTANCE FROM THE OTHER WORK TO PERMIT A CLEARANCE OF NOT LESS THAN 1 INCH BETWEEN THE FINISHED COVERING ON SUCH PIPING AND ALL ADJACENT WORK, WEATHER UNDER THIS OR OTHER TRADES. ALL PIPING SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO WALLS, CEILINGS, COLUMNS (CONSISTENT WITH PROPER SPACE FOR COVERING, REMOVAL OF PIPE, ETC SO AS TO OCCUPY THE MINIMUM OF SPACE. HORIZONTAL RUNS OF PIPING SHALL BE SUBSTANTIALLY SUPPORTED FROM THE BUILDING STRUCTURE TO MAINTAIN THE REQUIRED PITCH AND GRADE OF THE PIPELINES. HANGER RODS SHALL BE CONNECTED TO THE BEAM CLAMPS, INSERTS OR HANGER CLIPS WELDED TO THE STRUCTURAL STEEL. THE HANGING OF ONE PIPE FROM ANOTHER SHALL NOT BE PERMITTED. PROPER CARE SHALL BE EXERCISED IN THE ERECTION OF ALL PIPING TO ENSURE PROPER DRAINAGE AND CIRCULATION, INCLUDING PROPER PROVISION FOR EXPANSION AND CONTRACTION OF PIPING. POCKETS OR TRAPS WHEREIN AIR CAN COLLECT SHALL NOT BE PERMITTED. ALL PIPING SHALL BE REAMED TO REMOVE CUTTING BURRS AND SHARP EDGES. ALL COPPER TUBING SHALL BE CUT WITH SQUARE ENDS AND ALL BURRS AND FINS REMOVED. TUBING SHALL BE CAREFULLY HANDLED AND PROTECTED TO AVOID DAMAGE. REDUCING FITTINGS SHALL BE USED WHEREVER POSSIBLE. THE USE OF BUSHINGS SHALL BE PROHIBITED. ECCENTRIC REDUCERS SHALL BE USED. THREADS FOR SCREW FITTINGS SHALL BE AMERICAN STANDARD TAPER PIPE THREADS. ALL PIPING SHALL BE CAPPED DURING INSTALLATION TO KEEP THE SYSTEM CLEAN. LOCATE ALL WATER PIPING WITHIN HEATED SPACES WITH PROVISIONS FOR DRAINING ALL LINES.

1.28 DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN A RECORD SET OF INSTALLATION PRINTS. RECORD THESE PRINTS, ALL DEVIATIONS FROM THE CONTRACT DRAWINGS, INCLUDING BUT NOT LIMITED TO, PIPE ROUTING, SYSTEM CONNECTION POINTS, PIPE SIZES AND EQUIPMENT LOCATION CHANGES. AT THE COMPLETION OF THE WORK, THE CONTRACTOR SHALL TRANSFER THIS NEATLY ONTO THREE SETS OF PRINTS AND FORWARD THESE PRINTS AND THE AS-BUILT PRINTS TO THE OWNER.

1.29 STERILIZATION OF DOMESTIC WATER SYSTEM

A. BEFORE BEING PLACED IN SERVICE, ALL DOMESTIC WATER LINES SHALL BE CHLORINATED USING A METHOD THAT IS SATISFACTORY TO THE WATER AUTHORITY OR THE AUTHORITY HAVING JURISDICTION. IN THE ABSENCE OF A PRESCRIBED METHOD, THE PROCEDURE LISTED IN AWWA C651 OR AWWA C652 OR AS DESCRIBED BELOW SHALL BE USED.

B. PRIOR TO CHLORINATION, ALL DIRT AND FOREIGN MATTER SHALL BE REMOVED BY A THOROUGH FLUSHING. THIS SHALL BE DONE AFTER THE PRESSURE TEST AND LEAKAGE TEST.

C. A CHLORINE HYPOCHLORITE SOLUTION SHALL BE APPLIED BY MEANS OF A SOLUTION FEED DEVICE OR THE GAS SHALL BE FED DIRECTLY FROM A CHLORINE CYLINDER EQUIPPED WITH PROPER DEVICES FOR REGULATING THE RATE OF FLOW AND THE EFFECTIVE DIFFUSE OF GAS WITHIN THE PIPE.

D. WATER SHALL BE CONTROLLED TO FLOW SLOWLY INTO THE SYSTEM DURING THE APPLICATION OF CHLORINE IN SUCH PROPORTIONS THAT THE CHLORINE DOSE APPLIED TO THE WATER ENTERING THE PIPE SHALL BE AT LEAST 50 PARTS PER MILLION.

E. TREATED WATER SHALL BE RETAINED IN THE SYSTEM LONG ENOUGH TO DESTROY ALL NON-SPORE FORMING BACTERIA. THIS PERIOD SHALL BE AT LEAST TWENTY-FOUR HOURS. A LONGER CHLORINE CONTACT TIME MAY BE REQUESTED BY THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER.

F. AFTER THE CHLORINE TREATED WATER HAS BEEN RETAINED FOR THE REQUIRED TIME, THE CHLORINE RESIDUAL AT THE PIPE EXTREMITIES AND AT OTHER REPRESENTATIVE POINTS SHALL BE AT LEAST FIVE PARTS PER MILLIONS.

G. FOLLOWING CHLORINATION, ALL TREATED WATER SHALL BE THOROUGHLY FLUSHED FROM THE SYSTEM AT ITS EXTREMITIES UNTIL THE REPLACEMENT WATER THROUGHOUT ITS LENGTH SHALL, UPON TEST, BE EQUAL TO THE WATER QUALITY SERVED FROM THE WATER SUPPLY SYSTEM.

H. SHOULD THE INITIAL TREATMENT IN THE OPINION OF THE OWNER'S REPRESENTATIVE PROVE INEFFECTIVE, THE CHLORINATION PROCEDURE SHALL BE REPEATED UNTIL CONFIRMED TESTS SHOW THAT WATER SAMPLED FROM THE SYSTEM CONFORMS TO THE REQUIREMENTS.

1.30 TEST OF DRAINAGE SYSTEMS

A. ALL SANITARY AND STORM WATER DRAINAGE PIPING SHALL BE TESTED BY PLUGGING ALL OPENINGS AND FILLING SYSTEM WITH WATER TO NO LESS THAN TEN (10) FOOT HEAD OF WATER. THE WATER SHALL STAND FOR 30 MINUTES BEFORE INSPECTION STARTS; THE SYSTEM SHALL BE TIGHT AT ALL POINTS. ANY ADDITIONAL TESTING BY AIR, SMOKE OR PEPPERMINT SHALLCOMPLY WITH LOCAL AUTHORITYREQUIREMENTS.

1.31 TEST OF DOMESTIC WATER PIPING

A. ALL WATER LINES SHALL BE TESTED TO A HYDROSTATIC PRESSURE EQUAL TO 1-1/2 TIMES THE MAXIMUM OPERATING PRESSURE. THE SYSTEM SHALL BE LEAK-FREE FOR 24 HOURS AT THIS PRESSURE.

1.32 TESTING OF BACKFLOW PREVENTION ASSEMBLIES

A. PROVIDE TEST AT THE TIME OF INSTALLATION AND IMMEDIATELY AFTER REPAIRS AND OR RELOCATION FOR THE FOLLOWING: REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER ASSEMBLIES, DOUBLE CHECK-VALVE ASSEMBLIES, PRESSURE VACUUM BREAKER ASSEMBLIES, REDUCED PRESSURE DETECTOR FIRE PROTECTION BACKFLOW PREVENTION ASSEMBLIES, DOUBLE CHECK DETECTOR FIRE PROTECTION BACKFLOW PREVENTION ASSEMBLIES, HOSE CONNECTION BACKFLOW PREVENTERS AND SPILLPROOF VACUUM BREAKERS.

1. CERTIFIED INDIVIDUALS APPROVED BY AN AGENCY ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION SHALL PERFORM TESTING AND REPAIR OF DEVICES. TESTER QUALIFICATIONS SHALL BE IN ACCORDANCE WITH ASSE 5000 SERIES STANDARDS OR EQUIVALENT. CERTIFICATION FOR REPAIR SHALL BE IN ACCORDANCE WITH ASSE 5030 OR EQUIVALENT. CERTIFICATION SHALL INCLUDE NOT LESS THAN 32 HOURS OF COMBINED CLASSROOM AND PRACTICE TRAINING AND SUCCESSFUL COMPLETION OF A WRITTEN AND PRACTICAL EXAMINATION.
2. PERFORM TESTING PROCEDURES IN ACCORDANCE WITH ONE OF THE FOLLOWING STANDARDS: ASSE 5013, ASSE 5015, ASSE 5020, ASSE 5013, ASSE 5047, ASSE 5048, ASSE 5052, ASSE 5056, CSA B64.10 OR CSA B64.10.1.

B. WHERE TESTS INDICATE THAT THE DEVICE IS NOT FUNCTIONING PROPERLY, IT SHALL BE SERVICED OR REPAIRED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND BE RETESTED.

C. COPIES OF TEST REPORTS FOR THE INITIAL INSTALLATION SHALL BE SENT TO THE OWNER, AUTHORITY HAVING JURISDICTION AND TO THE WATER SUPPLIER.

D. THE OWNER IS RESPONSIBLE FOR ANNUAL INSPECTIONS OF ALL BACKFLOW PREVENTION ASSEMBLIES TO VERIFY STILL OPERABLE.

1.33 THE CONTRACTOR SHALL FURNISH THREE SETS OF INSTRUCTION MANUALS TO THE OWNER AT COMPLETION OF CONSTRUCTION.

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PLUMBING FIXTURE SCHEDULE

REF NO	FIXTURE	CW (IN)	HW (IN)	SAN (IN)	TRAP (IN)	VENT (IN)	REMARKS
P-1	FLOOR DRAIN			4	4	2	WITH TRAP SEAL PROTECTION, SEE NOTE 1
P-2	WALL HYDRANT	3/4					WALL MOUNT, EXPOSED, NON-FREEZE, ANTI-SIPHON, AUTOMATIC DRAINING. SEE NOTE 2
P-3	ROOF HYDRANT	3/4					EXPOSED UPRIGHT, NON-FREEZE, ANTI-SIPHON, AUTOMATIC DRAINING. SEE NOTE 3

NOTES:
1. PROVIDE WITH BARRIER TYPE FLOOR DRAIN TRAP SEAL PROTECTION DEVICE COMPLYING WITH ASSE 1072.
2. COORDINATE WALL THICKNESS FOR EACH LOCATION WITH THE GENERAL CONTRACTOR.
3. NO DRAIN LINE REQUIRED

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Project No.
231107

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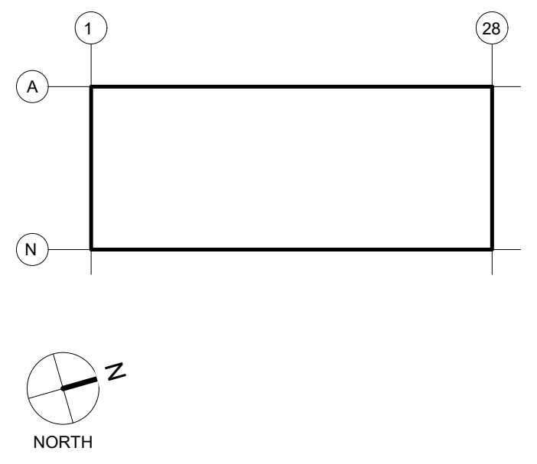
SEAL

NORMAN EDWARD COFFEY
101292

KEY PLAN



SUBMITTALS

NO.	DATE	DESCRIPTION
	02/09/2024	PERMIT ISSUE

PROJECT NO.	DRAWN BY
AS397-22 | NY154	ZPC

SHEET TITLE
PLUMBING SPECIFICATIONS & SCHEDULE

SHEET NO.
P-4.10