

PLUMBING SYMBOLS table with various symbols and their corresponding descriptions: REDUCED PRESSURE BACKFLOW PREVENTER (RPBFP), FLOOR DRAIN, ROOF DRAIN, FLOOR SINK, REDUCER, UNION, FLEXIBLE CONNECTOR, STRAINER, WATER HAMMER ARRESTER, TRAP PRIMER, PRESSURE GAUGE, THERMOMETER, CHECK VALVE, SHUT-OFF VALVE, VALVE ON RISER, BALANCING VALVE, SOLENOID VALVE, GAS COCK, HOSE BIBB, PLUGGED OUTLET, PIPING BREAK, SQUARE FEET, FLOOR CLEANOUT.

PLUMBING ABBREVIATIONS table listing symbols and abbreviations: A - ABOVE, AV - AIR VENT, B - BEHIND, BEL - BELOW, BTUH - BRITISH THERMAL UNITS PER HOUR, C - CONDENSATE DRAIN, CFH - CUBIC FEET PER HOUR, CFM - CUBIC FEET PER MINUTE, CLG - CEILING CLEANOUT, CONT - CONTINUATION, COTG - CLEANOUT TO GRADE, CU FT - CUBIC FEET, CW - COLD WATER (DOMESTIC), D - DOWN, DNX - DUPLEX, DR - DROP, DS - DOWN SPOUT, DWG - DRAWING, E - EXISTING, EL - ELEVATION, EQIP - EQUIPMENT, ESEW - EMERGENCY SHOWER EYE WASH, EWC - ELECTRIC WATER COOLER, F - FIRE LINE, FCO - FLOOR CLEANOUT, FD - FLOOR DRAIN, FFE - FINISHED FLOOR ELEVATION, FLR - FLOOR, FT - FOOT, FEET, FU - FIXTURE UNIT, FV - FLUSH VALVE, G - GAS (LOW PRESSURE), GAL - GALLON, GC - GAS COCK, GPF - GALLONS PER FLUSH, GPH - GALLONS PER HOUR, GPM - GALLONS PER MINUTE, GPR - GAS PRESSURE REGULATOR, GWH - GAS WATER HEATER, GW - GREASE WASTE, H - HOSE BIBB, HP - HORSEPOWER, HW - HOT WATER (DOMESTIC), HWR - HOT WATER RETURN (DOMESTIC), I - INDUSTRIAL COLD WATER, ICW - INDIRECT WASTE, INT - INTEGRAL, K - KILOWATT, L - LAVATORY, M - MEDICAL AIR, MA - MEDIUM PRESSURE GAS, MTD - MOUNTED, MV - MEDICAL VACUUM, N - NITROGEN, NTS - NOT TO SCALE, NC - NORMALLY CLOSED, NO - NITROUS OXIDE, O - ON CENTER, OD - OVERFLOW DRAIN, O2 - OXYGEN, P - PHASE, PO - PLUGGED OUTLET, POC - POINT OF CONNECTION, PSI - POUNDS PER SQUARE INCH, Q - QUANTITY, QTY - QUANTITY, R - ROOF DRAIN, RD - ROOF DRAIN, S - SANITARY SEWER, SD - STORM DRAIN, SK - SINK, SOV - SHUT-OFF VALVE, T - TRAP PRIMER, TPL - TRAP PRIMER LINE, TYP - TYPICAL, TW - TEMPERED WATER, TWR - TEMPERED WATER RETURN, U - URINAL, UR - URINAL, V - VENT, VTR - VENT THROUGH ROOF, W - WASTE, WAAG - WASTE ANESTHESIA GAS, WI - WITH, WC - WATER CLOSET, WCD - WALL CLEANOUT, WH - WALL HYDRANT, WHA - WATER HAMMER ARRESTOR, Y - YARD BOX, YB - YARD BOX

GENERAL NOTES section with 18 numbered notes regarding work standards, coordination, safety, and equipment specifications. Includes a table for INSULATION THICKNESS vs PIPE SIZE.

DOMESTIC WATER PRESSURE ANALYSIS table with columns for parameter and value: TOTAL FIXTURE UNITS (132.5 F.V.), DEMAND FLOW (78 GPM), MAIN PRESSURE (62 PSI), P.D. OF METER (3.2 PSI), P.D. OF BACKFLOW PREVENTER (12 PSI), P.D. OF SITE PIPING (1.3 PSI), DIFFERENCE IN ELEVATION P.D. (6.51 PSI), RESIDUAL PRESSURE REQUIRED (30 PSI), PRESSURE AVAILABLE FOR PIPING SYSTEM (8.99 PSI), LONGEST DEVELOPED RUN OF PIPE + 30% (292.5 FT.), PRESSURE AVAILABLE FOR PIPE FRICTION LOSS (8.99 PSI / 292.5 FT.), MAXIMUM ALLOWABLE P.D. (3.07 PSI/100')

PIPE SIZE SCHEDULE table showing pipe sizes for COLD WATER and HOT WATER, with columns for GPM, FT, and Max FU. Includes a note: PIPE SIZING BASED ON 8 PSI/100' AND MAX. VELOCITY OF 8 FPS (CW) AND 5 FPS (HW).

EQUIPMENT ANCHORAGE NOTE: MECHANICAL COMPONENT ANCHORAGE NOTE. ALL MECHANICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26 AND 30. 1. ALL PERMANENT EQUIPMENT AND COMPONENTS 2. TEMPORARY OR MOVEABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER 3. MOVEABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS. THE FOLLOWING MECHANICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT. B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL. FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS. PIPING & DUCTWORK DISTRIBUTION SYSTEM BRACING NOTE. PIPING & DUCTWORK DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8, AND 2016 CBC, SECTIONS 1616A.1.23, 1616A.1.24, 1616A.1.25 AND 1616A.1.26. THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G. SMACNA OR OSHPD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS. MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E): MP MD PP E - OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. MP MD PP E - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM#) #0922-13 (BLINETS/LOC). - OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009), INCLUDING ANY ADDENDA, FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL AND CONNECTION LEVEL FOR THE PROJECT AND CONDITIONS.

ADA COMPLIANCE NOTES section with 5 numbered notes regarding accessible plumbing fixtures, including coverings, push types, and fixture controls.

PLUMBING SHEET INDEX table with columns for SHEET NO. and DESCRIPTION, listing sheets P001 through P3-1-1-B.

Building A Gas Load Schedule table with columns for MARK, Description, Qty, BTU, CFH, Total CFH, and Pipe Sizing Chart (CPC TABLE 1216.2(1)).

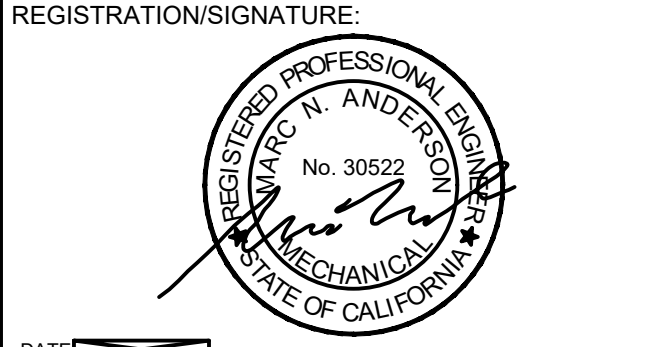
Building B Gas Load Schedule table with columns for MARK, Description, Qty, BTU, CFH, Total CFH, and Pipe Sizing Chart (CPC TABLE 1216.2(1)).



FILLMORE HIGH SCHOOL - NEW CTE BUILDINGS FILLMORE UNIFIED SCHOOL DISTRICT 555 Central Ave. Fillmore, CA. 93015

ISSUED FOR table with columns for description and date: SCHEMATIC DESIGN (11/06/2017), DESIGN DEVELOPMENT (08/21/2018), CONSTRUCTION DOCUMENTS (12/07/2018), 50% CD (11/09/2018), 90% CD (12/10/2018), DSA SUBMITTAL (12/21/2018), DSA BACKCHECK (06/08/2019).

REVISIONS:



PLUMBING GENERAL NOTES, SYMBOLS, ABBREVS., & CALCS SHEET NUMBER: P001

WD PROJ. # 18413 | DRAWN BY: WD | CHECKED: Checker | DATE: 12/21/18

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ISSUED FOR:	11/16/2017
SCHEMATIC DESIGN	11/16/2017
DESIGN DEVELOPMENT	09/21/2018
CONSTRUCTION DOCUMENTS	12/07/2018
90% CD	11/09/2018
95% CD	12/10/2018
DSA SUBMITTAL	12/21/2018
DSA BACKCHECK	05/08/2019

REVISIONS:

REGISTRATION/SIGNATURE:



DATE: SHEET TITLE:

PLUMBING DETAILS

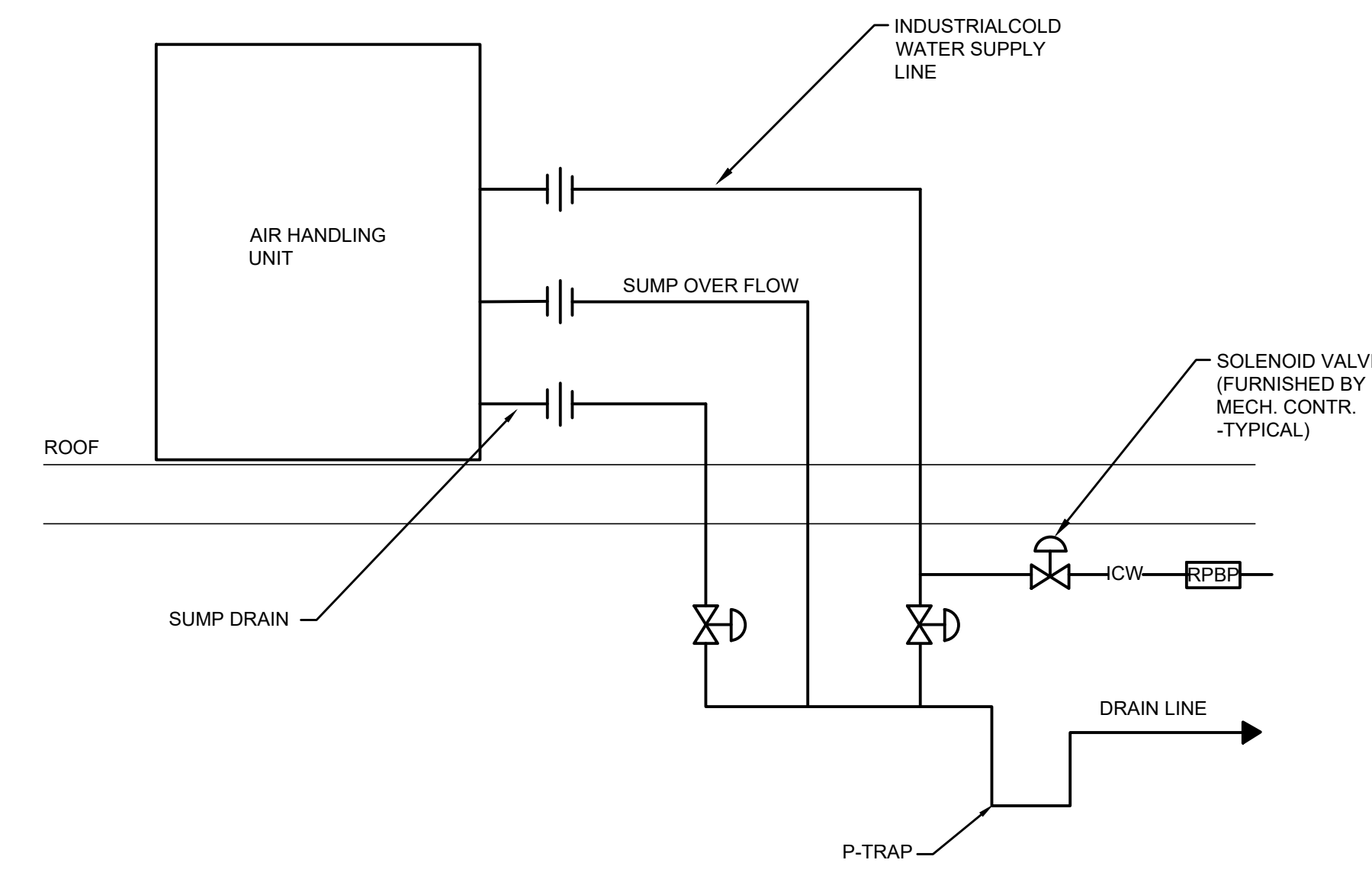
SHEET NUMBER:

P003

WD PROJ. # 18413 | DRAWN BY: WD | CHECKED: Checker | DATE: 12/21/18

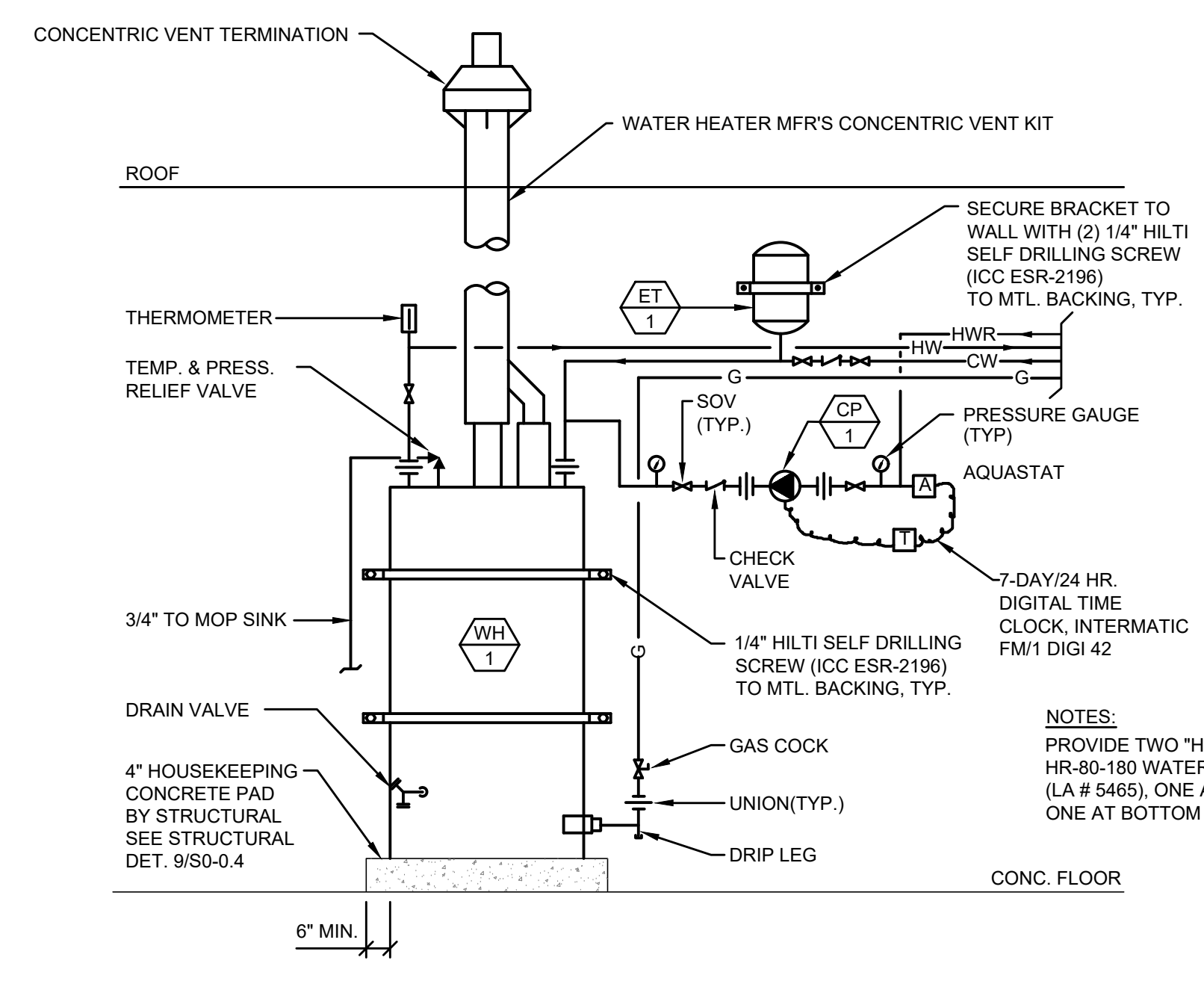
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NOT FOR CONSTRUCTION



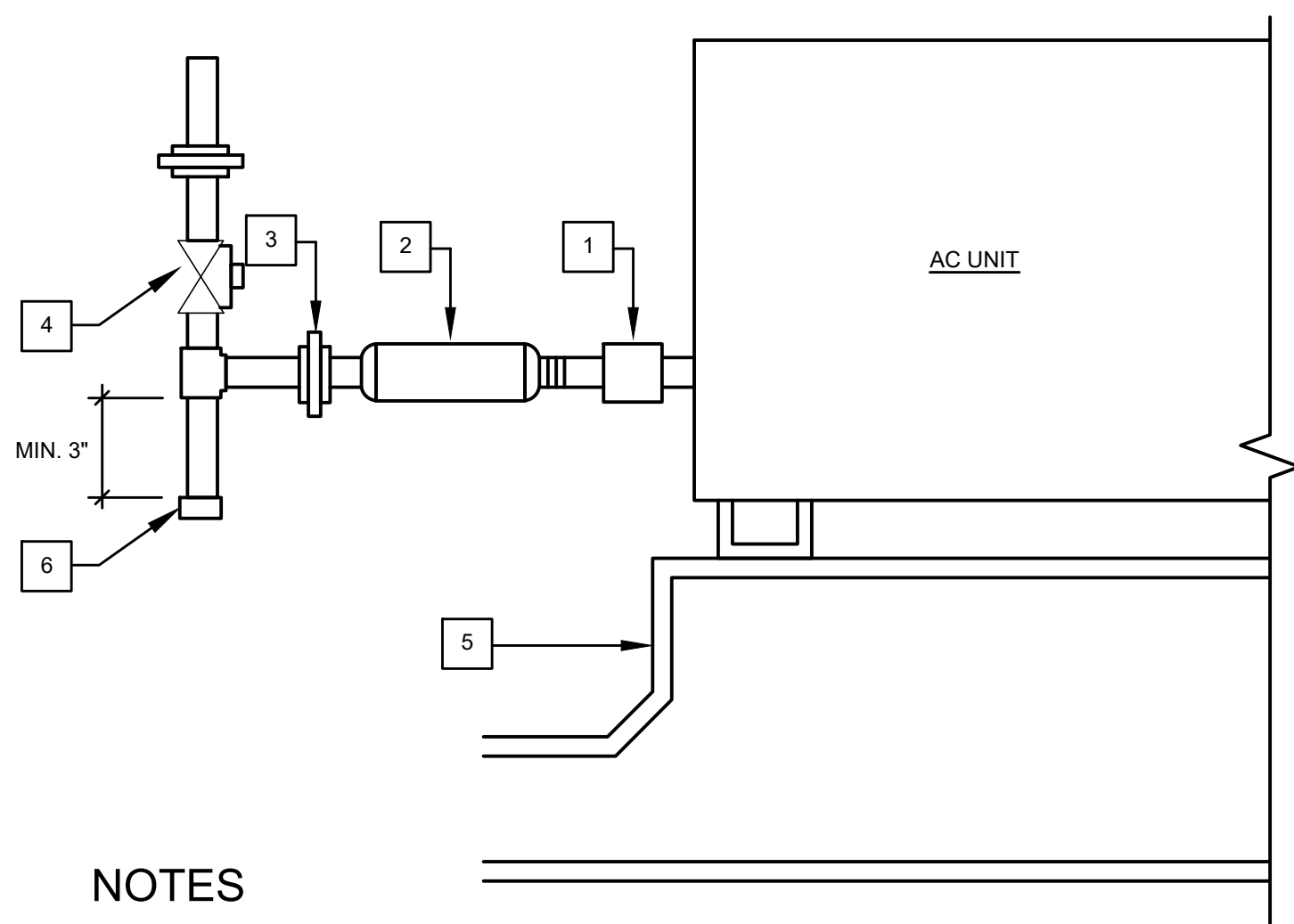
AIR HANDLING UNIT PIPING DIAGRAM

SCALE: NONE



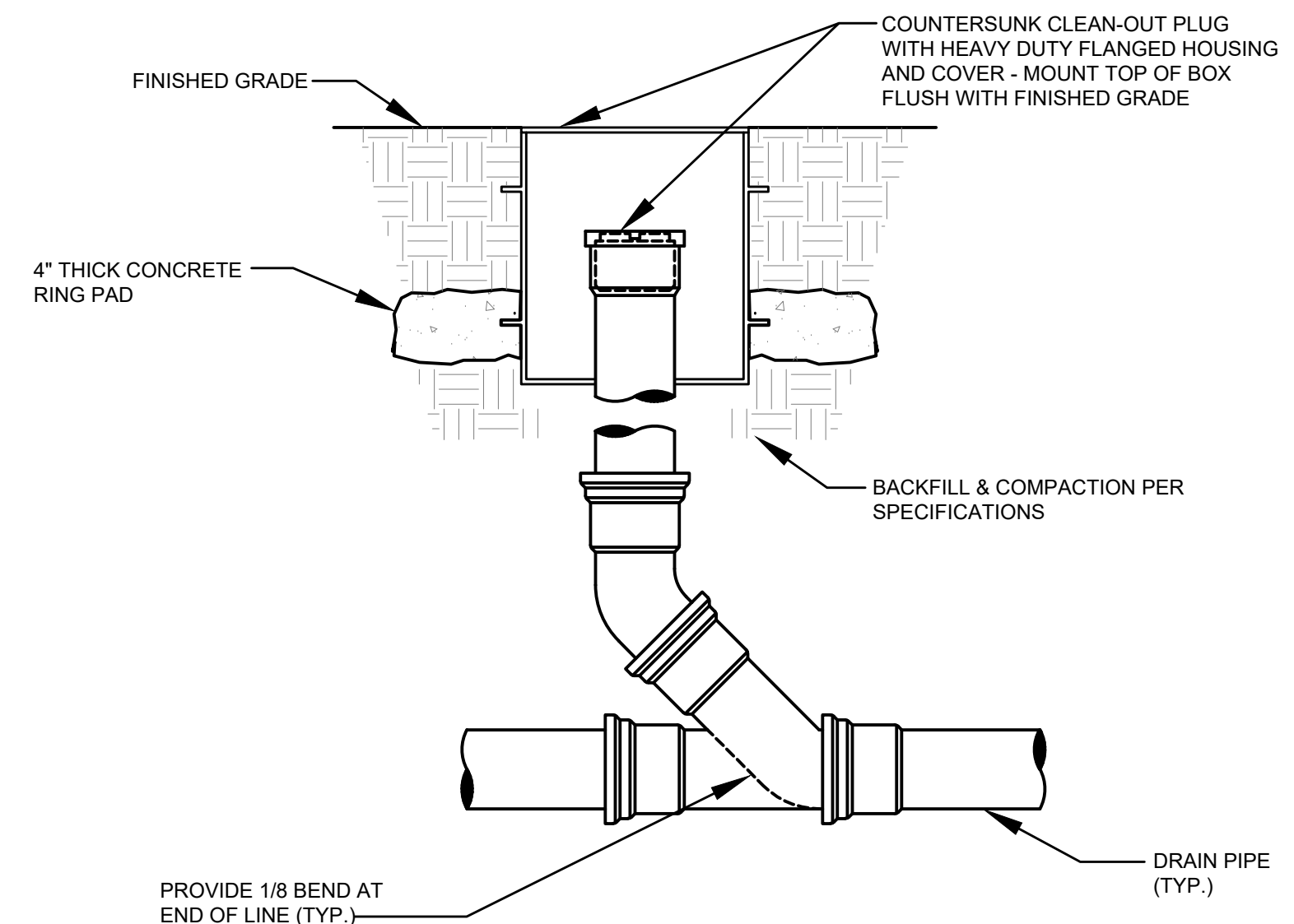
GAS WATER HEATER DETAIL

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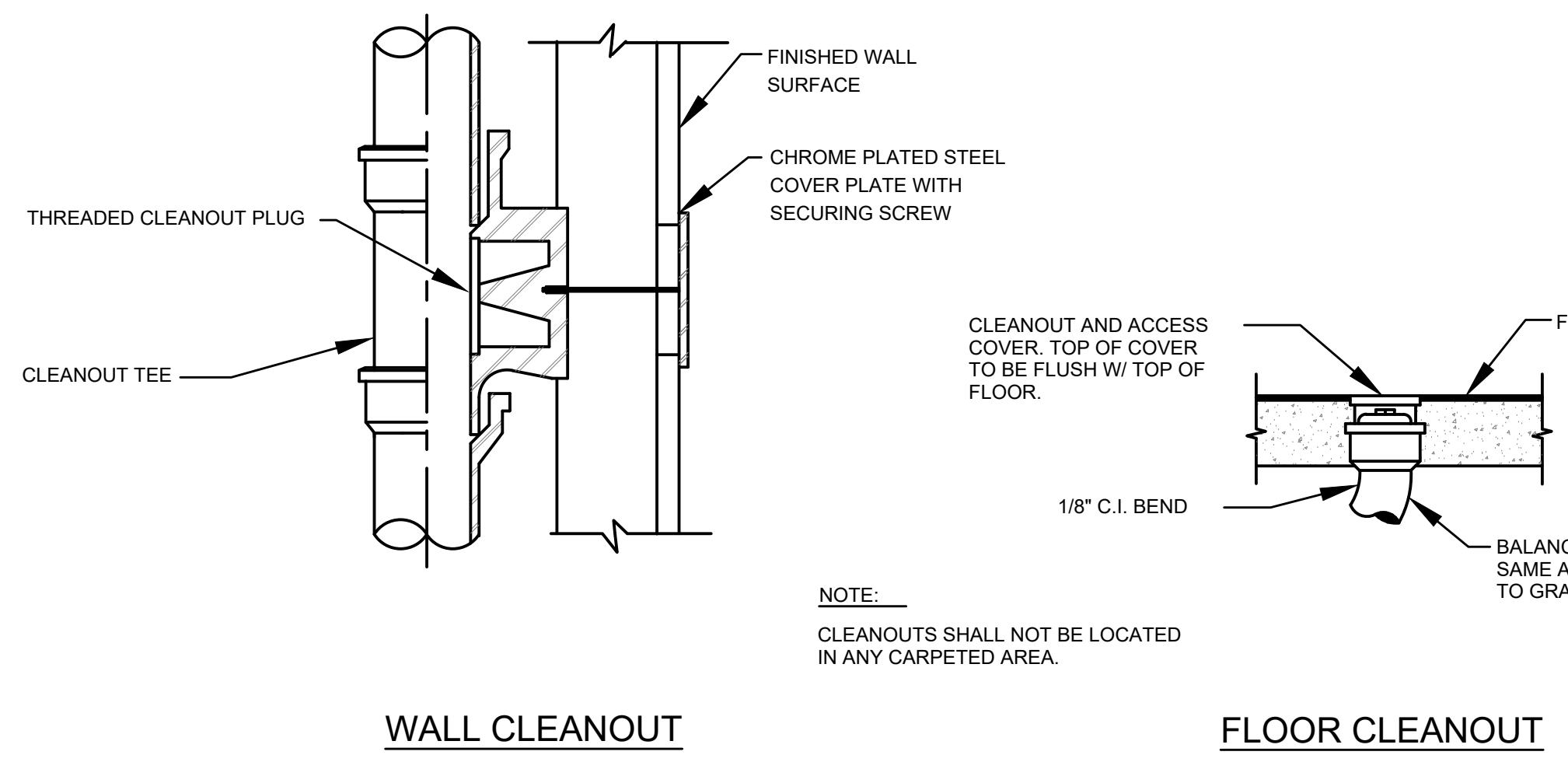
GAS CONNECTION TO A/C UNIT DETAIL

SCALE: NONE



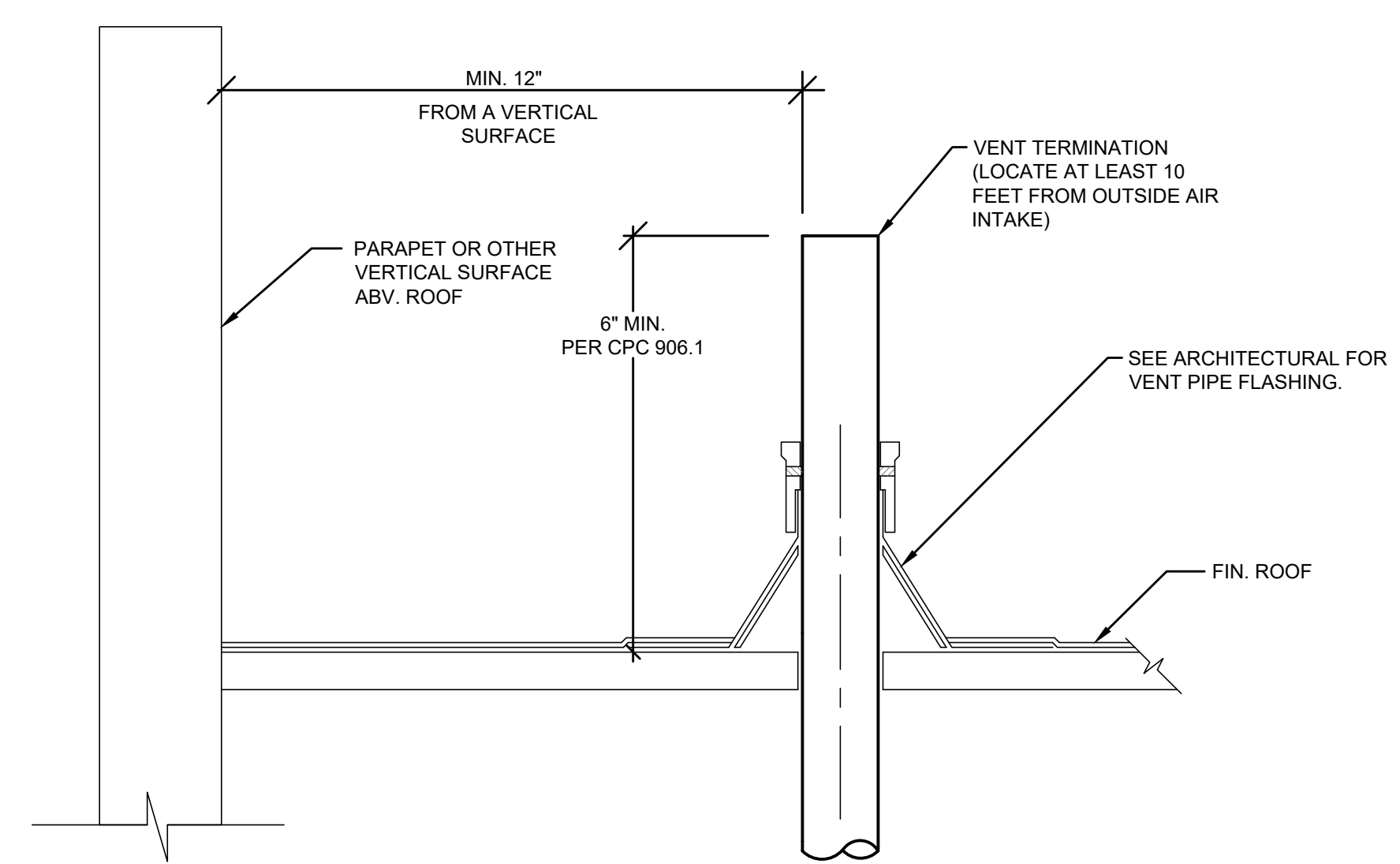
CLEANOUT TO GRADE DETAIL

SCALE: NONE



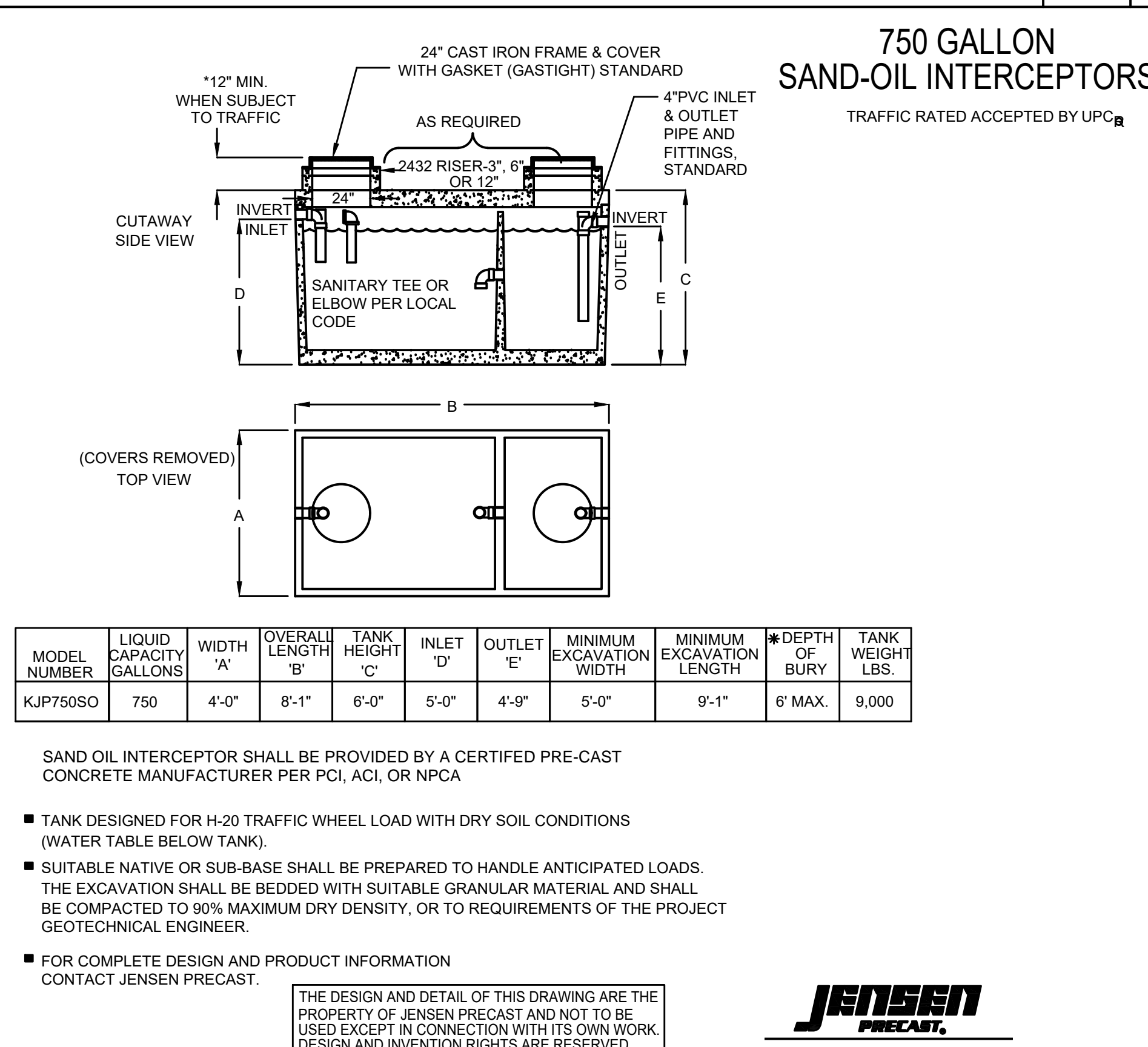
FLOOR / WALL CLEANOUT DETAILS

SCALE: NONE



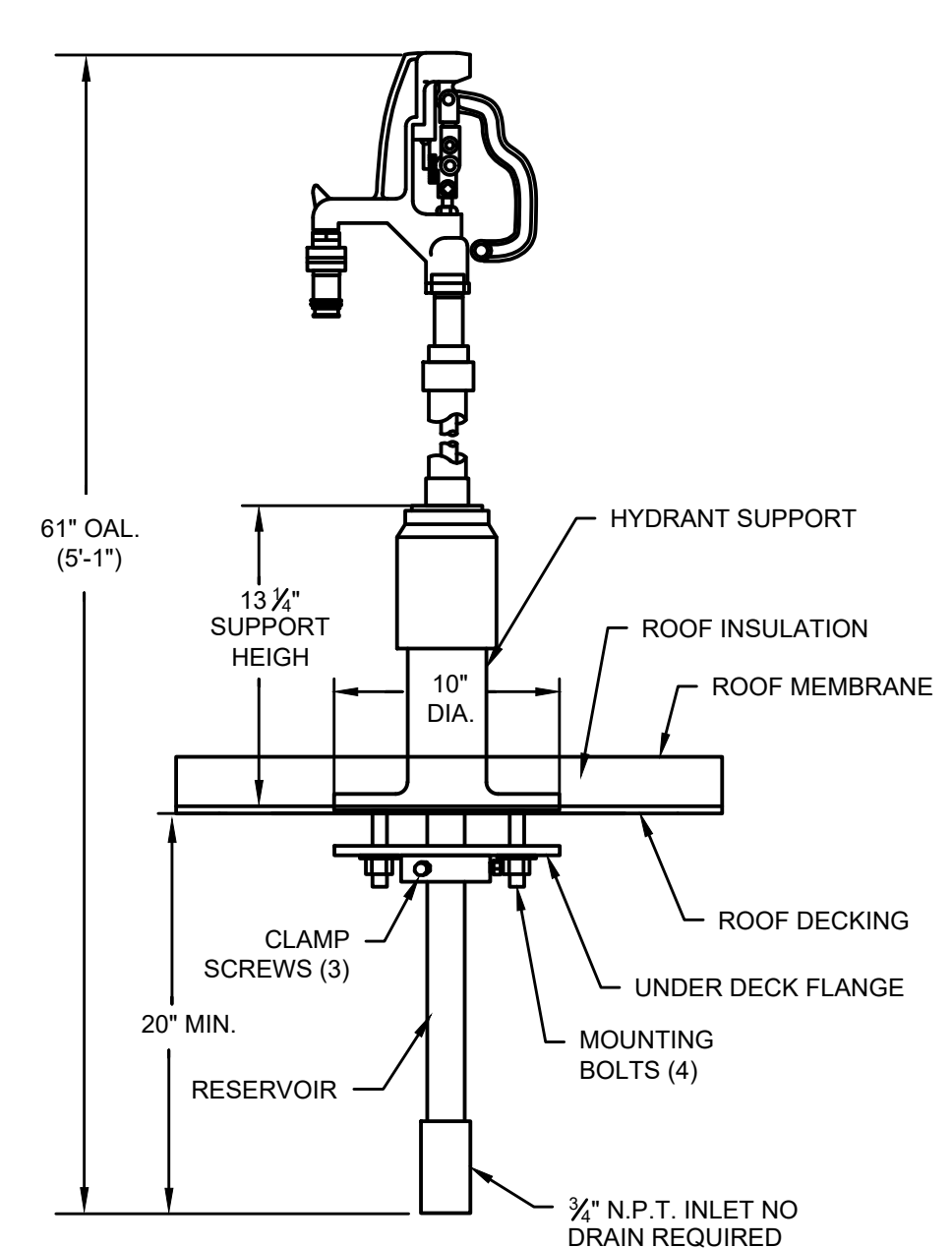
VENT THROUGH ROOF DETAIL

SCALE: NONE



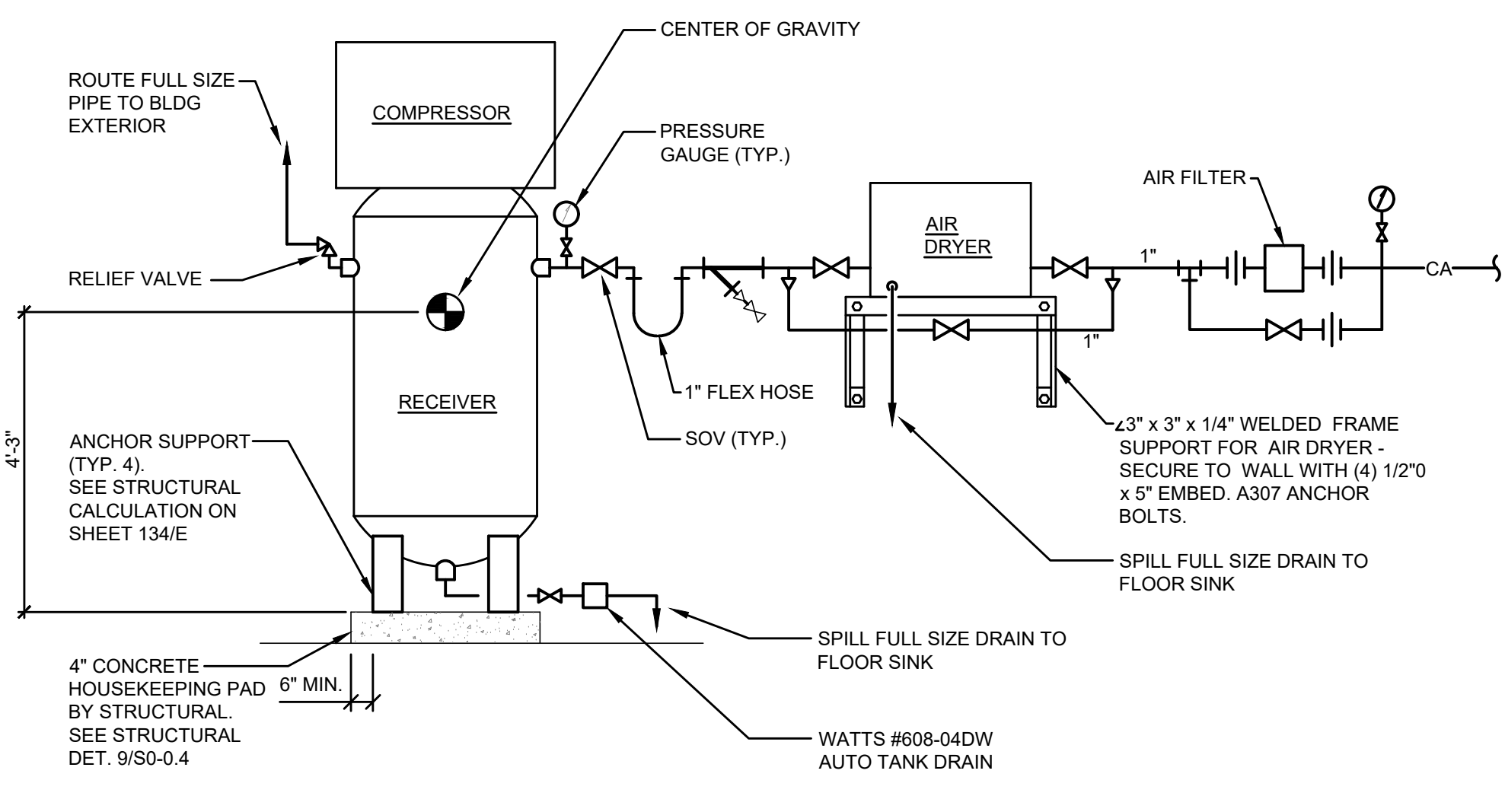
SAND-OIL INTERCEPTOR

SCALE: NONE



ROOFTOP HOSE BIB DETAIL

SCALE: NONE

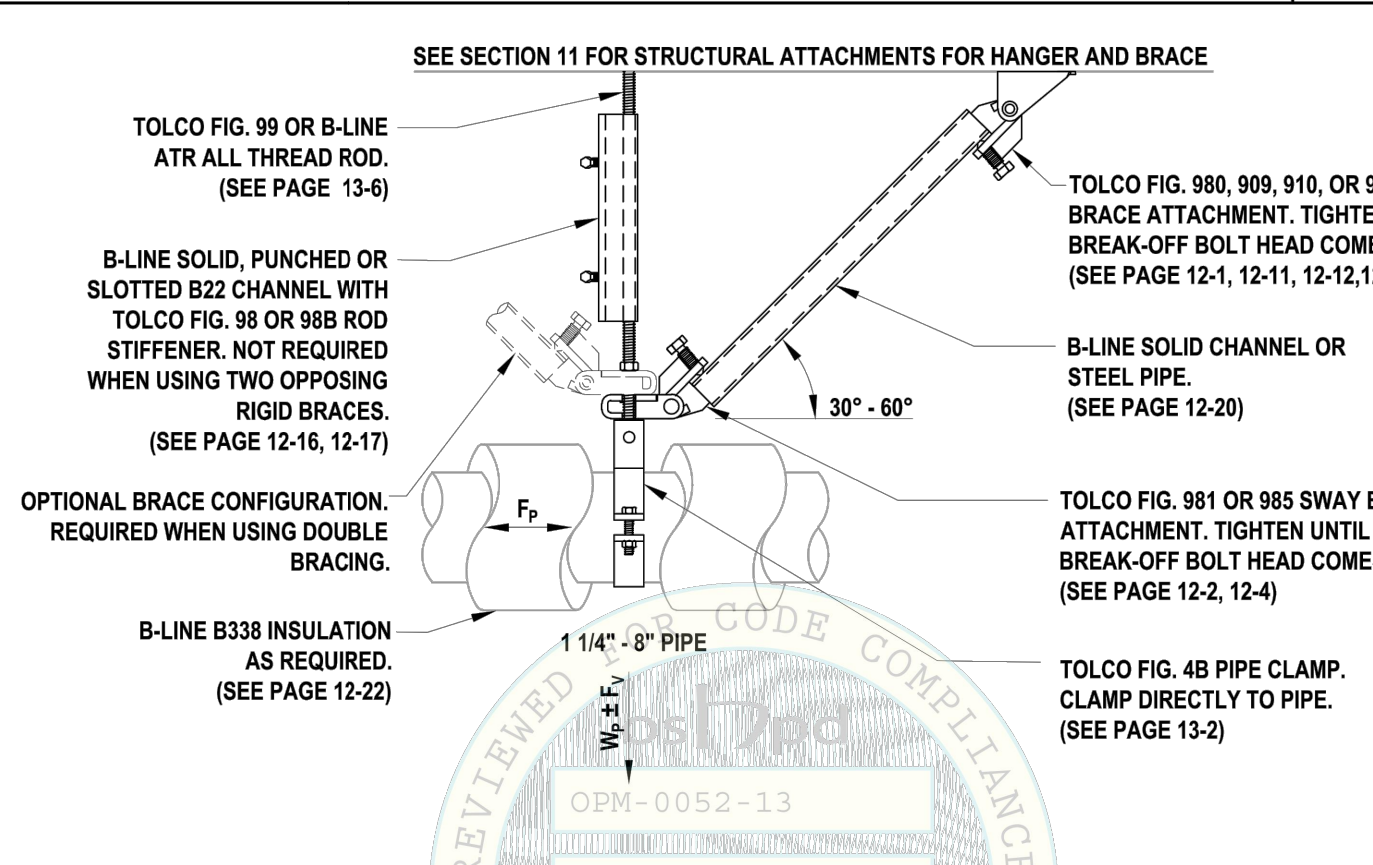


AIR COMPRESSOR DETAIL

SCALE: NONE

LONGITUDINAL RIGID BRACE FOR SINGLE HUNG PIPE OR CONDUIT WITH PIPE CLAMP **DETAIL 2B**

SEE SECTION 11 FOR STRUCTURAL ATTACHMENTS FOR HANGER AND BRACE



TOLCO FIG. 99 OR B-LINE ATR ALL THREAD ROD. (SEE PAGE 13-4)

B-LINE SOLID, PUNCHED OR SLOTTED B22 CHANNEL WITH TOLCO FIG. 98 OR 98B ROD STIFFENER. NOT REQUIRED WHEN USING TWO OPPOSING RIGID BRACES. (SEE PAGE 12-16, 12-17)

OPTIONAL BRACE CONFIGURATION. REQUIRED WHEN USING DOUBLE BRACING.

B-LINE B338 INSULATION AS REQUIRED. (SEE PAGE 12-22)

TOLCO FIG. 98B OR 910, OR 98B SWAY BRACE ATTACHMENT. TIGHTEN UNTIL BREAK-OFF BOLT HEAD COMES OFF. (SEE PAGE 12-1, 12-11, 12-12, 12-5)

B-LINE SOLID CHANNEL OR STEEL PIPE. (SEE PAGE 12-20)

TOLCO FIG. 981 OR 985 SWAY BRACE ATTACHMENT. TIGHTEN UNTIL BREAK-OFF BOLT HEAD COMES OFF. (SEE PAGE 12-2, 12-4)

TOLCO FIG. 48 PIPE CLAMP. CLAMP DIRECTLY TO PIPE. (SEE PAGE 13-2)

PIPE DIAMETER	LONGITUDINAL ASSEMBLY ALLOWABLE LOAD (ASD)		
	BRACE ANGLE MEASURED FROM HORIZ. [θ _h]		
	30°	31° - 45°	45° - 60°
1 1/4" - 2"	868	865	407
2 1/2" - 3 1/2"	866	865	407
4"	1113	990	659
6"	1089	930	595
8"	1089	930	595

GENERAL NOTES:
 1) LOADS LISTED ABOVE ARE FOR SCHEDULE 10 AND BETTER PIPING. THE FOLLOWING REDUCTIONS SHALL APPLY FOR OTHER PIPING AND SYSTEMS:
 a) PIPING WITH INSULATION - REDUCE LOADS BY 0%
 b) THIN WALL PIPING - REDUCE LOADS BY 0%
 c) CONDUITS EXCLUDING EMT - REDUCE LOADS BY 0%
 2) FIG. 986 MUST BE USED WITH 1/2" OR LARGER ALL THREAD ROD
 3) THE FIG 989 AND FIG 910 ARE FOR USE ONLY WITH STEEL PIPE BRACES, PER PAGES 12-11 AND 12-12.

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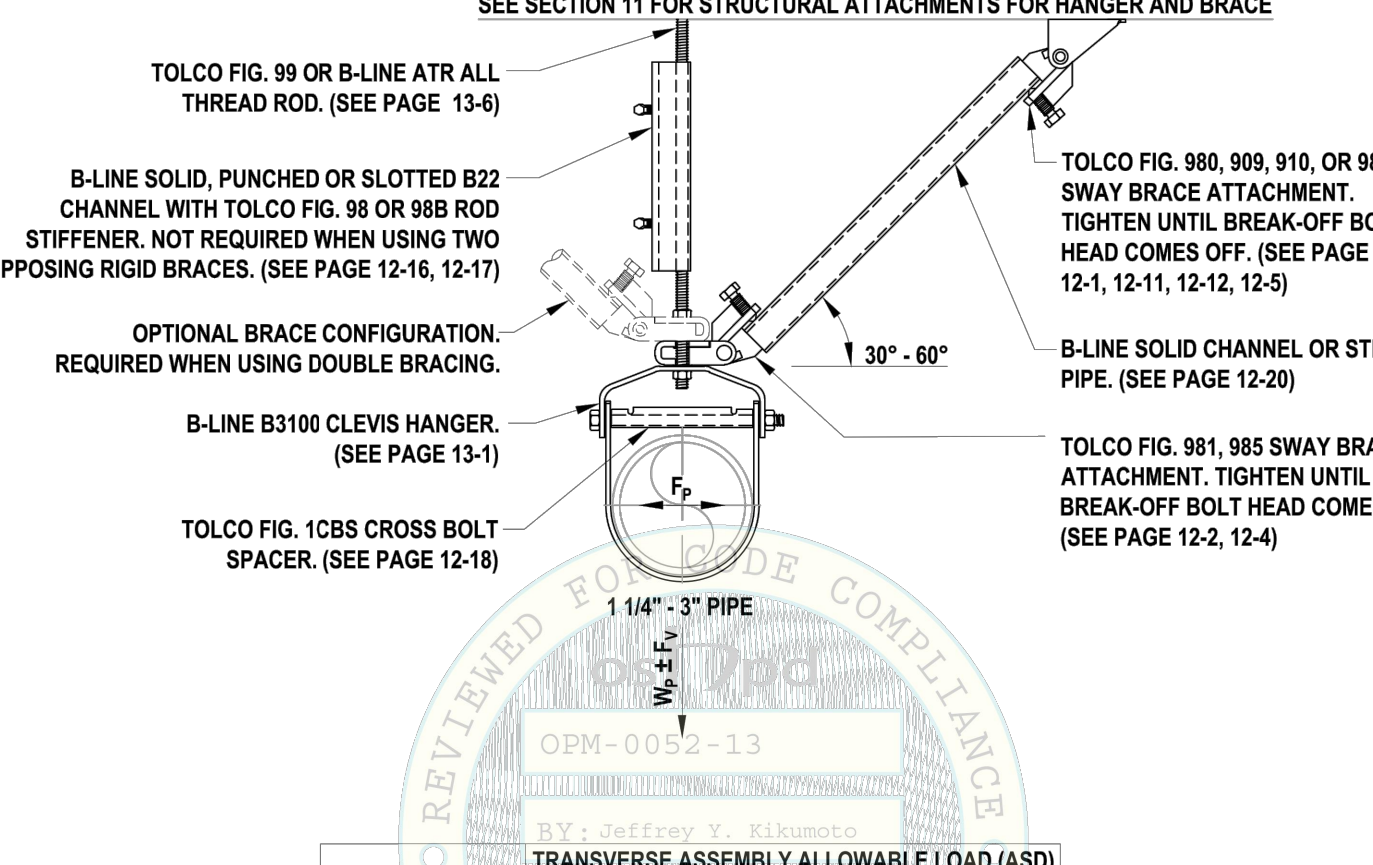
Structural Engineer: Mohammad Hariri
 California SE No. 53545

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 DATE: NOVEMBER 29, 2016

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TRANSVERSE RIGID BRACING FOR SINGLE HUNG PIPE OR CONDUIT WITH CLEVIS HANGER **DETAIL 1**

SEE SECTION 11 FOR STRUCTURAL ATTACHMENTS FOR HANGER AND BRACE



TOLCO FIG. 99 OR B-LINE ATR ALL THREAD ROD. (SEE PAGE 13-4)

B-LINE SOLID, PUNCHED OR SLOTTED B22 CHANNEL WITH TOLCO FIG. 98 OR 98B ROD STIFFENER. NOT REQUIRED WHEN USING TWO OPPOSING RIGID BRACES. (SEE PAGE 12-16, 12-17)

OPTIONAL BRACE CONFIGURATION. REQUIRED WHEN USING DOUBLE BRACING.

B-LINE B3100 CLEVIS HANGER. (SEE PAGE 13-1)

TOLCO FIG. 1C8S CROSS BOLT SPACER. (SEE PAGE 12-18)

TOLCO FIG. 98B OR 910, OR 98B SWAY BRACE ATTACHMENT. TIGHTEN UNTIL BREAK-OFF BOLT HEAD COMES OFF. (SEE PAGE 12-1, 12-11, 12-12, 12-5)

B-LINE SOLID CHANNEL OR STEEL PIPE. (SEE PAGE 12-20)

TOLCO FIG. 981 OR 985 SWAY BRACE ATTACHMENT. TIGHTEN UNTIL BREAK-OFF BOLT HEAD COMES OFF. (SEE PAGE 12-2, 12-4)

PIPE DIAMETER	TRANSVERSE ASSEMBLY ALLOWABLE LOAD (ASD)		
	BRACE ANGLE MEASURED FROM HORIZ. [θ _h]		
	30°	31° - 45°	45° - 60°
1 1/4" - 2 1/2"	93	97	96
3"	111	109	107

GENERAL NOTES:
 1) LOADS LISTED ABOVE ARE FOR SCHEDULE 10 AND BETTER PIPING. THE FOLLOWING REDUCTIONS SHALL APPLY FOR OTHER PIPING AND SYSTEMS:
 a) THIN WALL PIPING - REDUCE LOADS BY 0%
 b) CONDUITS EXCLUDING EMT - REDUCE LOADS BY 0%
 2) PIPES WITH INSULATION SHALL NOT BE USED.
 3) THE FIG 989 AND FIG 910 ARE FOR USE ONLY WITH STEEL PIPE BRACES, PER PAGES 12-11 AND 12-12.

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CYLINDER AND MANIFOLD AND ANCHORAGE DETAIL **SCALE: 3"=1'-0"**

PLAN AT TOP

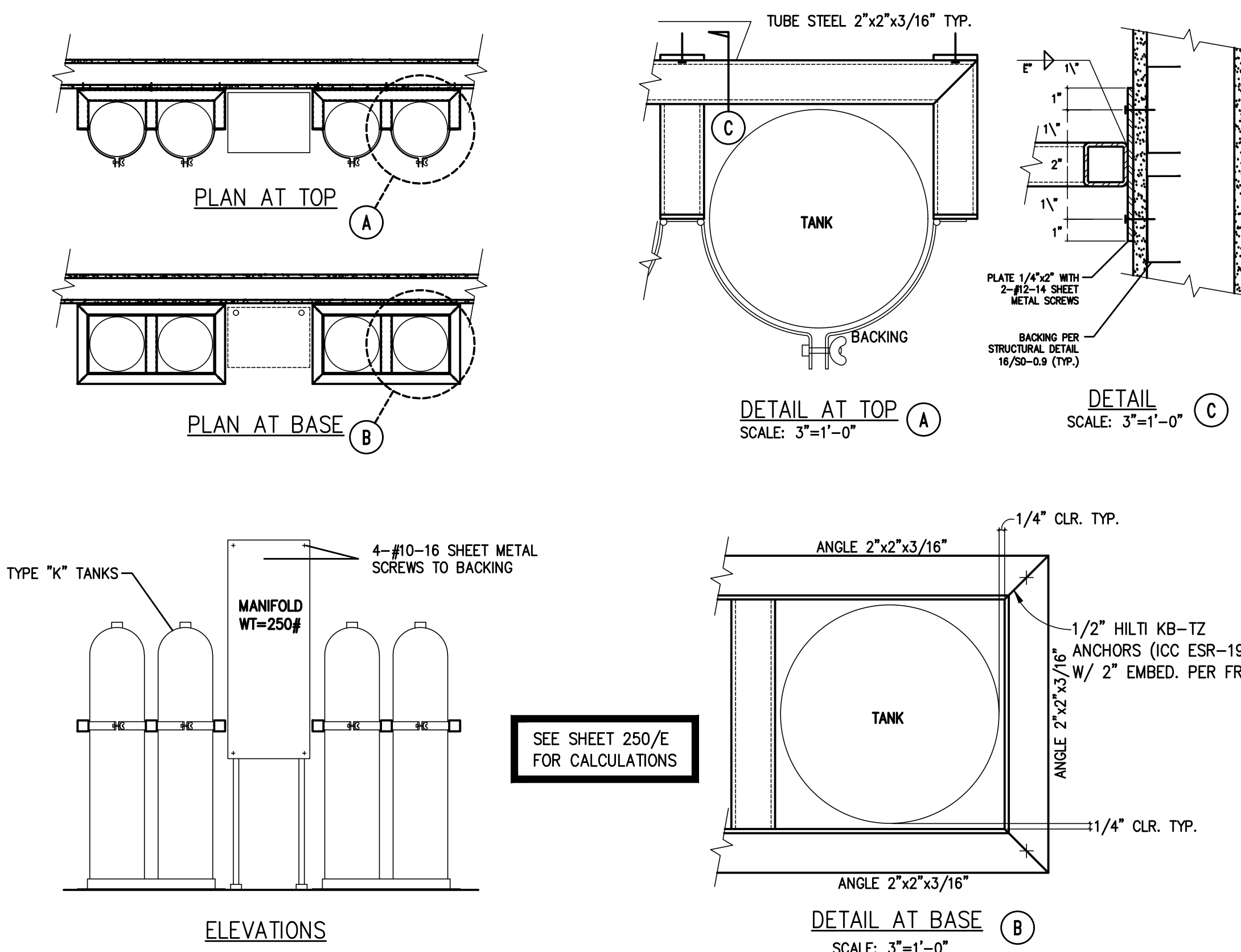
PLAN AT BASE

DETAIL AT TOP

DETAIL AT BASE

ELEVATIONS

SEE SHEET 250/E FOR CALCULATIONS



TUBE STEEL 2"x2"x3/16" TYP.

BACKING

PLATE 1/4"x2" WITH 2#x1/4" SHEET METAL SCREWS

BACKING PER STRUCTURAL DETAIL 12/06-04 (TYP.)

ANGLE 2"x2"x3/16"

1/4" CLR. TYP.

1/2" HILTI KB-TZ ANCHORS (ICC ESR-1917) W/ 2" EMBED. PER FRAME

ANGLE 2"x2"x3/16"

1/4" CLR. TYP.

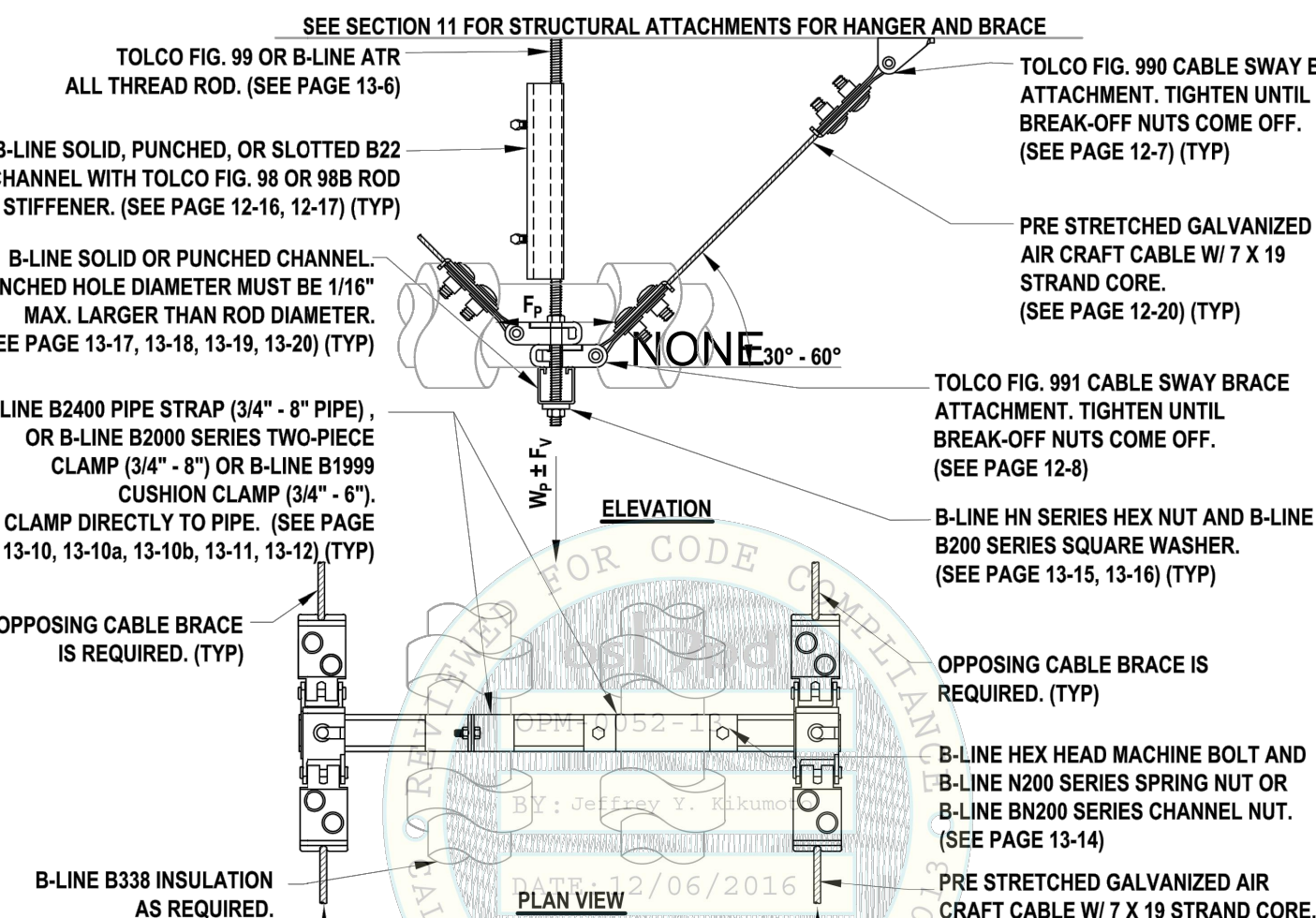
4-#10-16 SHEET METAL SCREWS TO BACKING

MANIFOLD Wt=250#

TYPE "K" TANKS

LONGITUDINAL CABLE BRACING FOR TRAPEZE SUPPORTED PIPE OR CONDUIT WITH SINGLE TRAPEZE STRUT **DETAIL 14**

SEE SECTION 11 FOR STRUCTURAL ATTACHMENTS FOR HANGER AND BRACE



TOLCO FIG. 99 OR B-LINE ATR ALL THREAD ROD. (SEE PAGE 13-4)

B-LINE SOLID, PUNCHED OR SLOTTED B22 CHANNEL WITH TOLCO FIG. 98 OR 98B ROD STIFFENER. (SEE PAGE 12-16, 12-17) (TYP)

B-LINE SOLID OR PUNCHED CHANNEL. PUNCHED HOLE DIAMETER MUST BE 1/16" MAX. LARGER THAN ROD DIAMETER. (SEE PAGE 13-17, 13-18, 13-19, 13-20) (TYP)

PRE STRETCHED GALVANIZED AIR CRAFT CABLE W/ 7 X 19 STRAND CORE. (SEE PAGE 12-20) (TYP)

TOLCO FIG. 991 CABLE SWAY BRACE ATTACHMENT. TIGHTEN UNTIL BREAK-OFF NUTS COME OFF. (SEE PAGE 12-8)

B-LINE B2400 PIPE STRAP (3/4" - 8" PIPE), OR B-LINE B2000 SERIES TWO-PIECE CLAMP (3/4" - 8") OR B-LINE B1999 CUSHION CLAMP (3/4" - 8"). (SEE PAGE 13-10, 13-10a, 13-11, 13-12) (TYP)

B-LINE HN SERIES HEX NUT AND B-LINE B200 SERIES SQUARE WASHER. (SEE PAGE 13-15, 13-16) (TYP)

B-LINE B338 INSULATION AS REQUIRED. (SEE PAGE 12-22)

PRE STRETCHED GALVANIZED AIR CRAFT CABLE W/ 7 X 19 STRAND CORE. (SEE PAGE 12-20) (TYP)

MINIMUM ROD SIZE	MINIMUM CABLE SIZE	LONGITUDINAL ASSEMBLY ALLOWABLE LOAD, F _t (ASD)		
		BRACE ANGLE MEASURED FROM HORIZ. [θ _h]		
		30°	31° - 45°	45° - 60°
3/8"	1/8"	419	438	408
1/2"	3/16"	422	424	437
3/4"	3/16"	458	470	447

GENERAL NOTES:
 1) LOADS LISTED ABOVE ARE FOR SCHEDULE 10 AND BETTER PIPING. THE FOLLOWING REDUCTIONS SHALL APPLY FOR OTHER PIPING AND SYSTEMS:
 a) PIPING WITH INSULATION - REDUCE LOADS BY 0%
 b) THIN WALL PIPING - REDUCE LOADS BY 0%
 c) CONDUITS INCLUDING EMT - REDUCE LOADS BY 0%
 2) SEE PAGE 8-21, 8-22, 8-23, 8-24 FOR OPTIONAL AND/OR ADDITIONAL BRACE CONFIGURATIONS.
 3) VERIFY THE ADEQUACY OF THE SYSTEM ATTACHMENT TO THE STRUT. THE ATTACHMENT MUST BE ADEQUATE TO TRANSFER TRANSVERSE, LONGITUDINAL AND VERTICAL SEISMIC LOADS TO STRUT AS PER SECTION 13.
 4) DESIGN PROFESSIONAL SHALL CONSIDER ECCENTRIC LOAD DISTRIBUTION WHEN DETERMINING THE F_t VALUE USED IN DESIGN.

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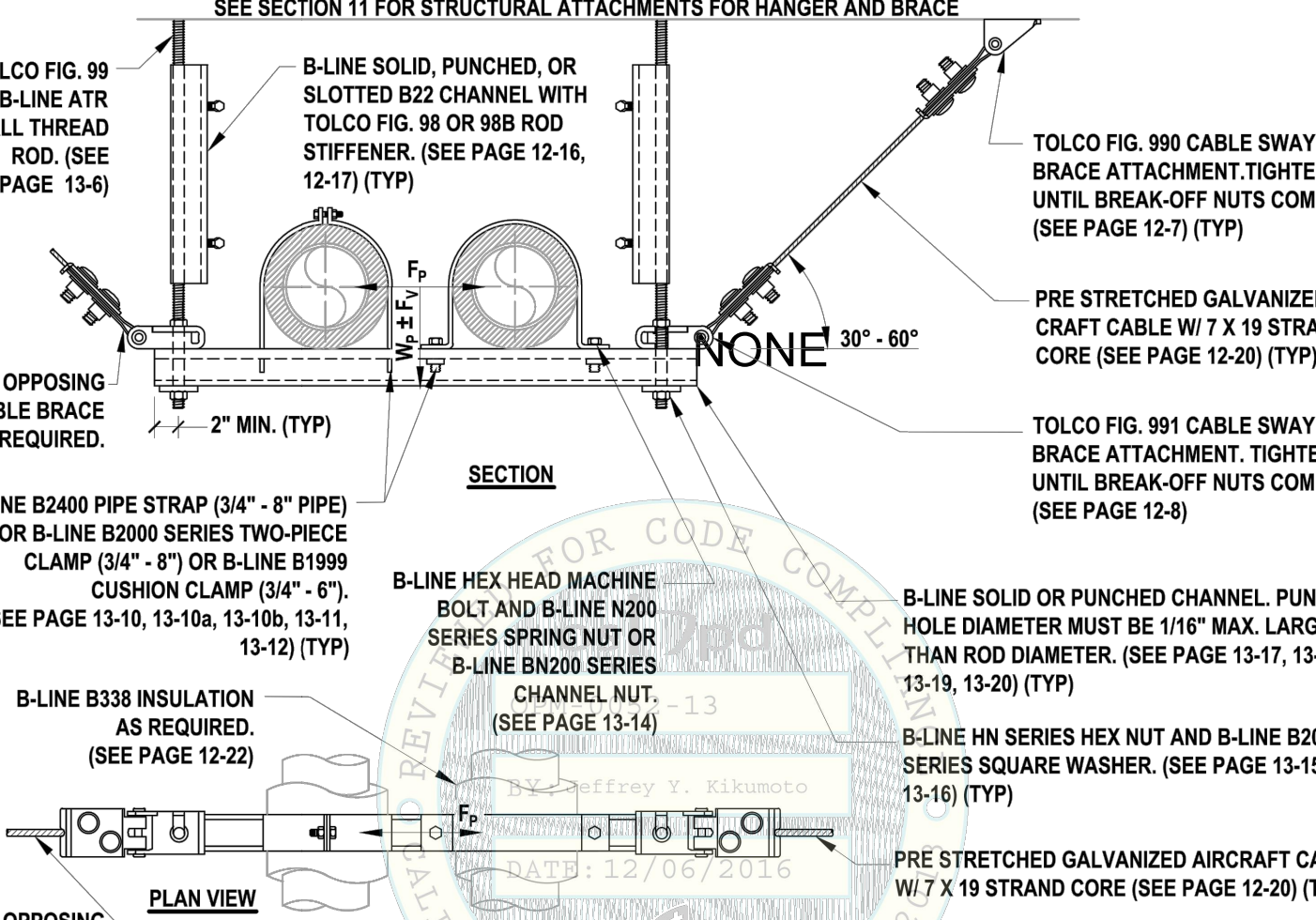
Structural Engineer: Mohammad Hariri
 California SE No. 53545

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TRANSVERSE CABLE BRACING FOR TRAPEZE SUPPORTED PIPE OR CONDUIT WITH SINGLE TRAPEZE STRUT **DETAIL 13**

SEE SECTION 11 FOR STRUCTURAL ATTACHMENTS FOR HANGER AND BRACE



TOLCO FIG. 99 OR B-LINE ATR ALL THREAD ROD. (SEE PAGE 13-4)

B-LINE SOLID, PUNCHED OR SLOTTED B22 CHANNEL WITH TOLCO FIG. 98 OR 98B ROD STIFFENER. (SEE PAGE 12-16, 12-17) (TYP)

PRE STRETCHED GALVANIZED AIR CRAFT CABLE W/ 7 X 19 STRAND CORE. (SEE PAGE 12-20) (TYP)

TOLCO FIG. 991 CABLE SWAY BRACE ATTACHMENT. TIGHTEN UNTIL BREAK-OFF NUTS COME OFF. (SEE PAGE 12-8)

B-LINE B2400 PIPE STRAP (3/4" - 8" PIPE), OR B-LINE B2000 SERIES TWO-PIECE CLAMP (3/4" - 8") OR B-LINE B1999 CUSHION CLAMP (3/4" - 8"). (SEE PAGE 13-10, 13-10a, 13-11, 13-12) (TYP)

B-LINE HN SERIES HEX NUT AND B-LINE B200 SERIES SQUARE WASHER. (SEE PAGE 13-15, 13-16) (TYP)

B-LINE B338 INSULATION AS REQUIRED. (SEE PAGE 12-22)

PRE STRETCHED GALVANIZED AIR CRAFT CABLE W/ 7 X 19 STRAND CORE. (SEE PAGE 12-20) (TYP)

MINIMUM ROD SIZE	MINIMUM CABLE SIZE	TRANSVERSE ASSEMBLY ALLOWABLE LOAD, F _t (ASD)		
		BRACE ANGLE MEASURED FROM HORIZ. [θ _h]		
		30°	31° - 45°	45° - 60°
3/8"	1/8"	876	480	435
1/2"	3/16"	1263	893	666
3/4"	3/16"	1492	786	758

GENERAL NOTES:
 1) LOADS LISTED ABOVE ARE FOR SCHEDULE 10 AND BETTER PIPING. THE FOLLOWING REDUCTIONS SHALL APPLY FOR OTHER PIPING AND SYSTEMS:
 a) PIPING WITH INSULATION - REDUCE LOADS BY 25% FOR 1"-2" PIPES, 32% FOR 2.5"-3.5" PIPES AND 43% FOR 4"-8" PIPES.
 b) THIN WALL PIPING - REDUCE LOADS BY 0%
 c) CONDUITS INCLUDING EMT - REDUCE LOADS BY 15%
 2) SEE PAGE 8-21, 8-22, 8-23, 8-24 FOR OPTIONAL AND/OR ADDITIONAL BRACE CONFIGURATIONS.
 3) VERIFY THE ADEQUACY OF THE SYSTEM ATTACHMENT TO THE STRUT. THE ATTACHMENT MUST BE ADEQUATE TO TRANSFER TRANSVERSE, LONGITUDINAL AND VERTICAL SEISMIC LOADS TO STRUT AS PER SECTION 13.

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ISSUED FOR:	11/16/2017
SCHEMATIC DESIGN	06/21/2018
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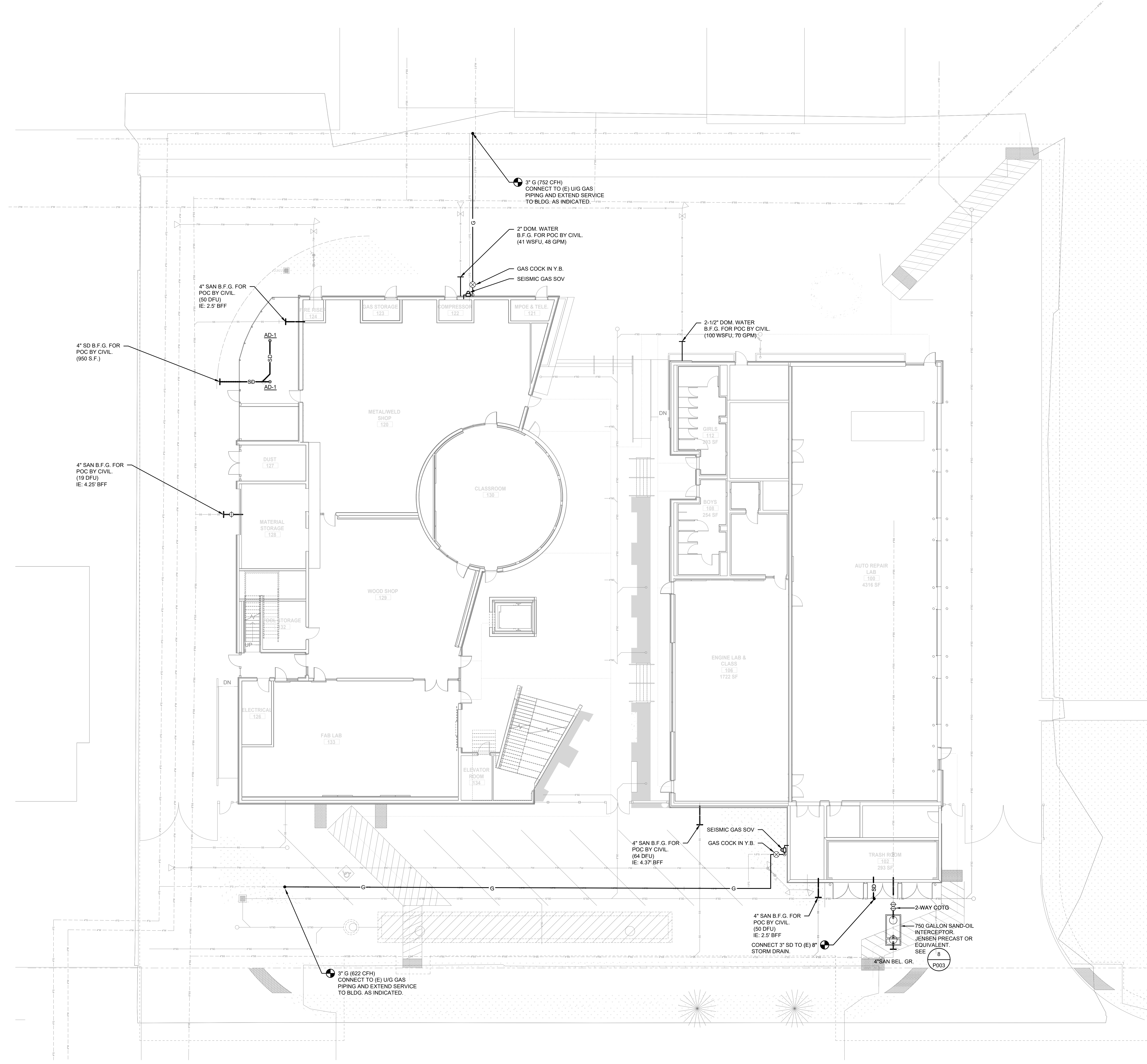
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PLUMBING SITE PLAN

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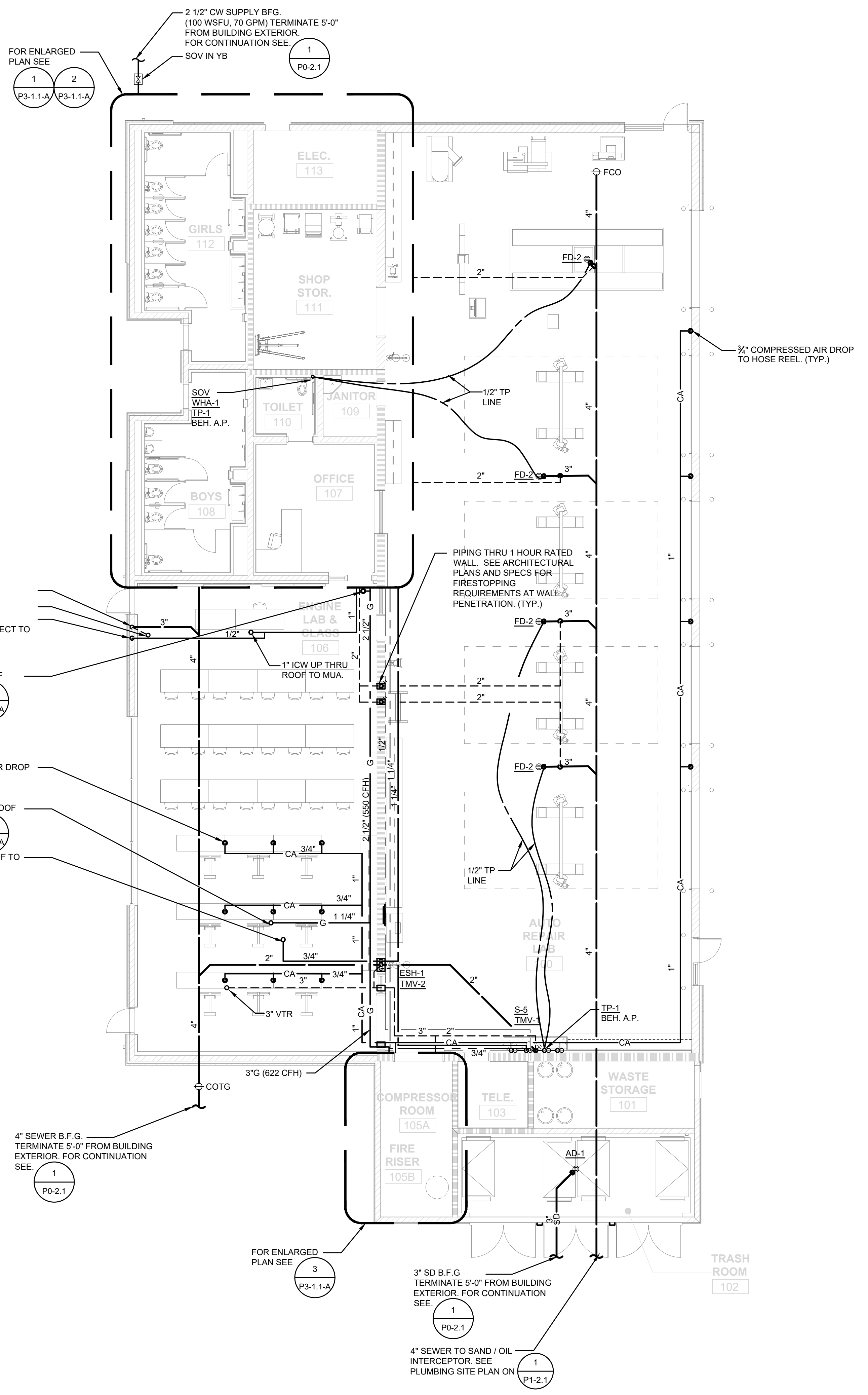
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PLUMBING FLOOR PLAN - BLDG. A

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P2-1.1-A

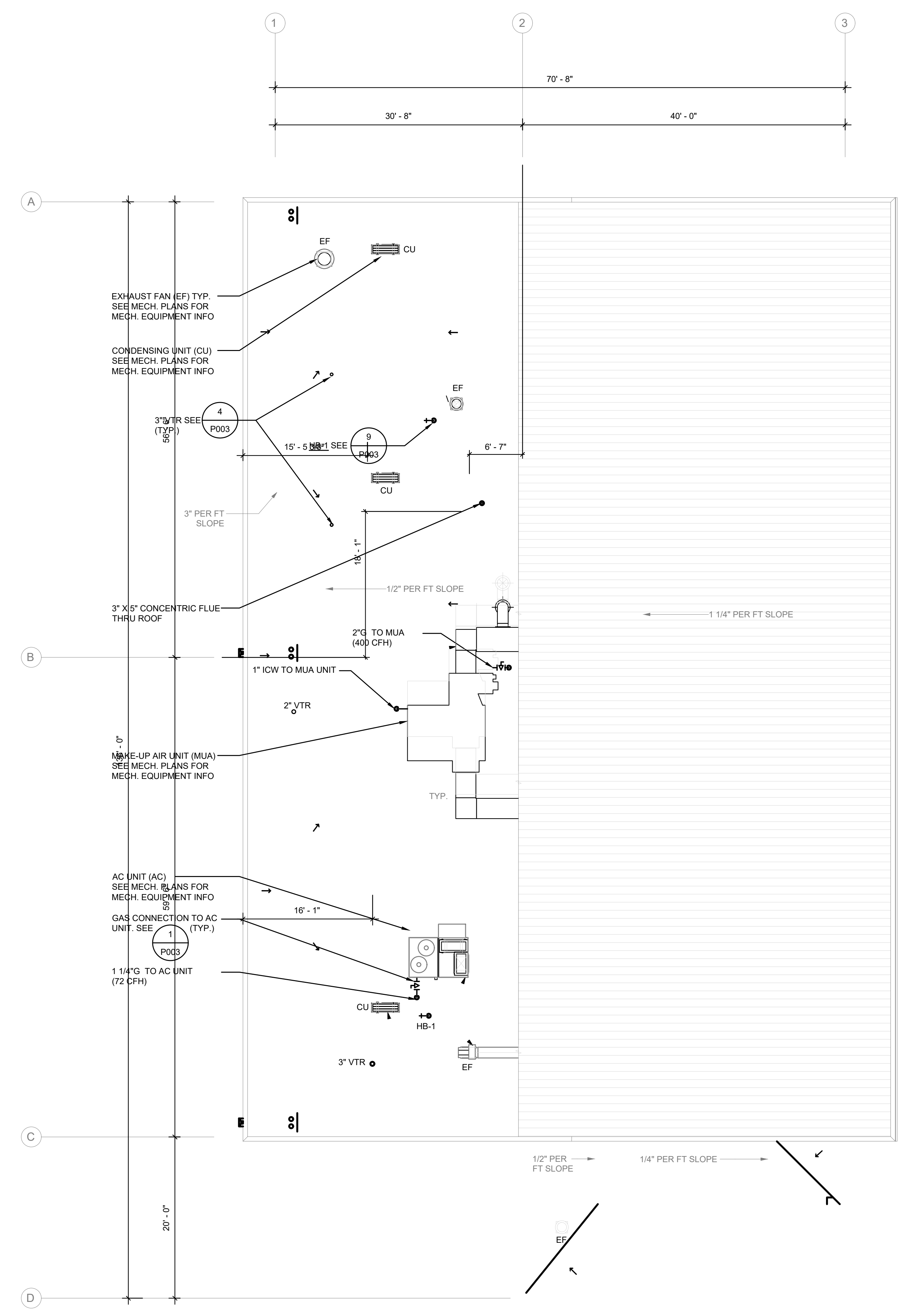
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**PLUMBING ROOF
PLAN - BLDG. A**

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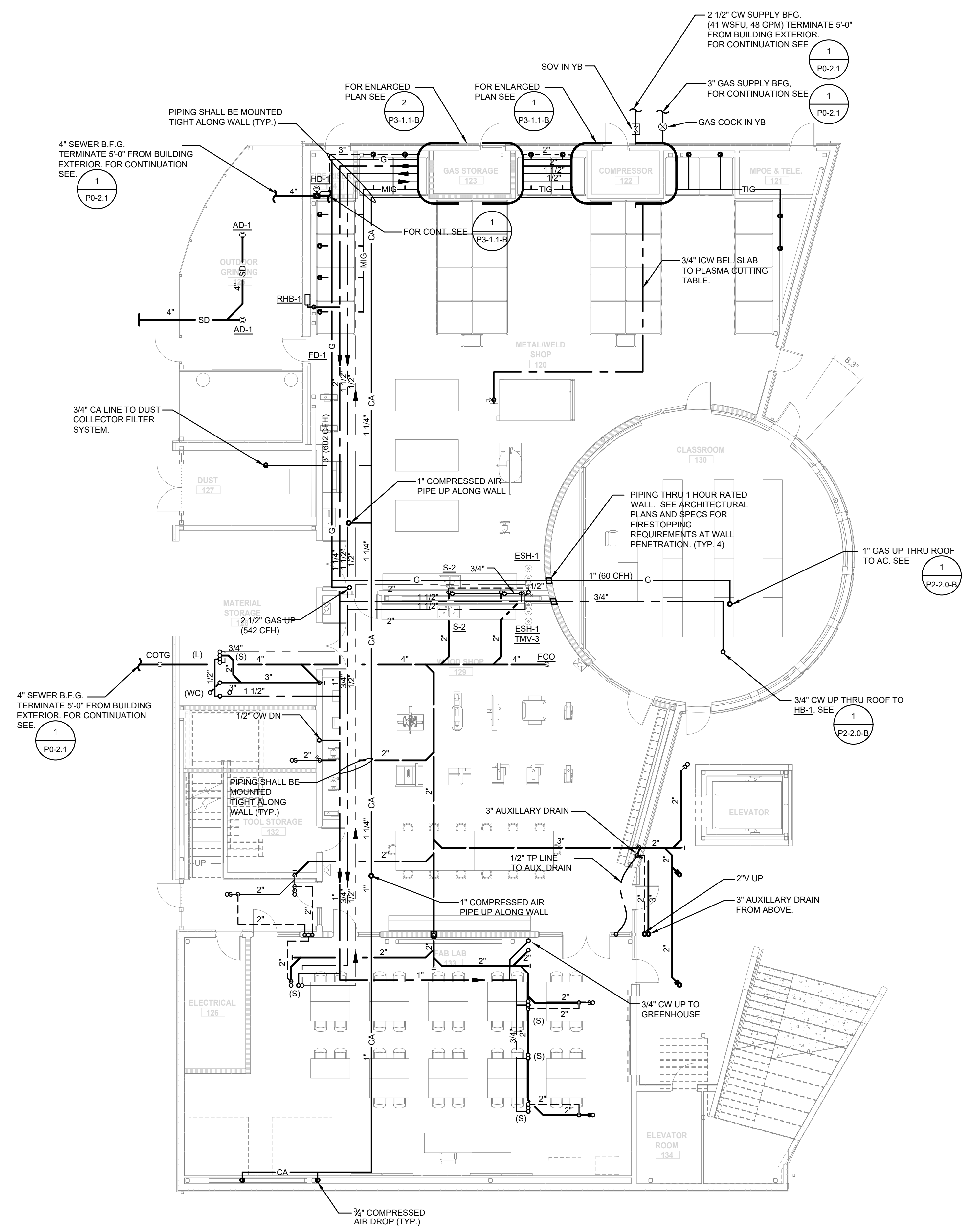
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PLUMBING FIRST FLOOR PLAN - BLDG. B
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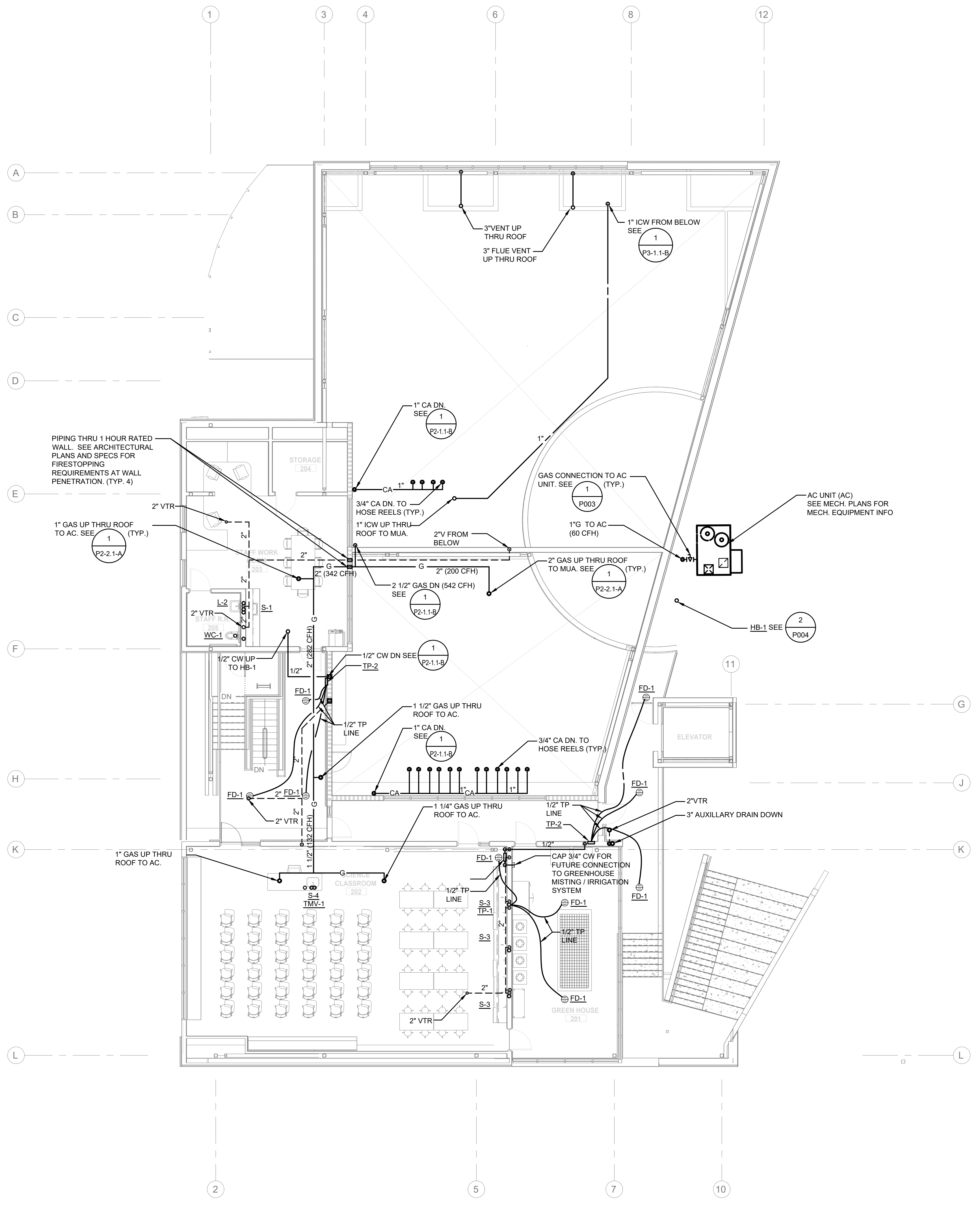


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PLUMBING SECOND FLOOR PLAN - BLDG. B
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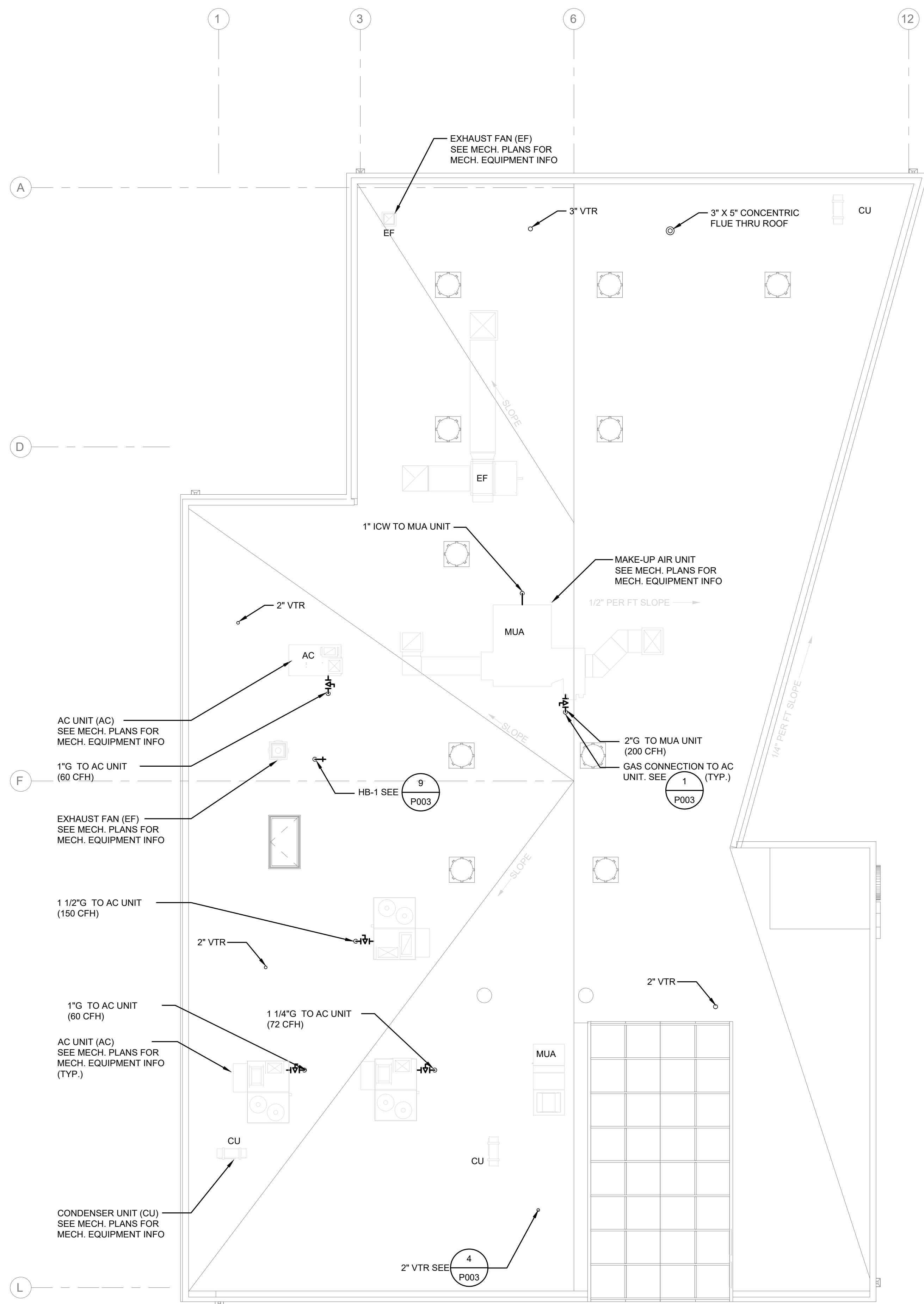
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PLUMBING ROOF PLAN - BLDG. B

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PLUMBING ROOF PLAN - BLDG. B

1

1/8" = 1'-0"



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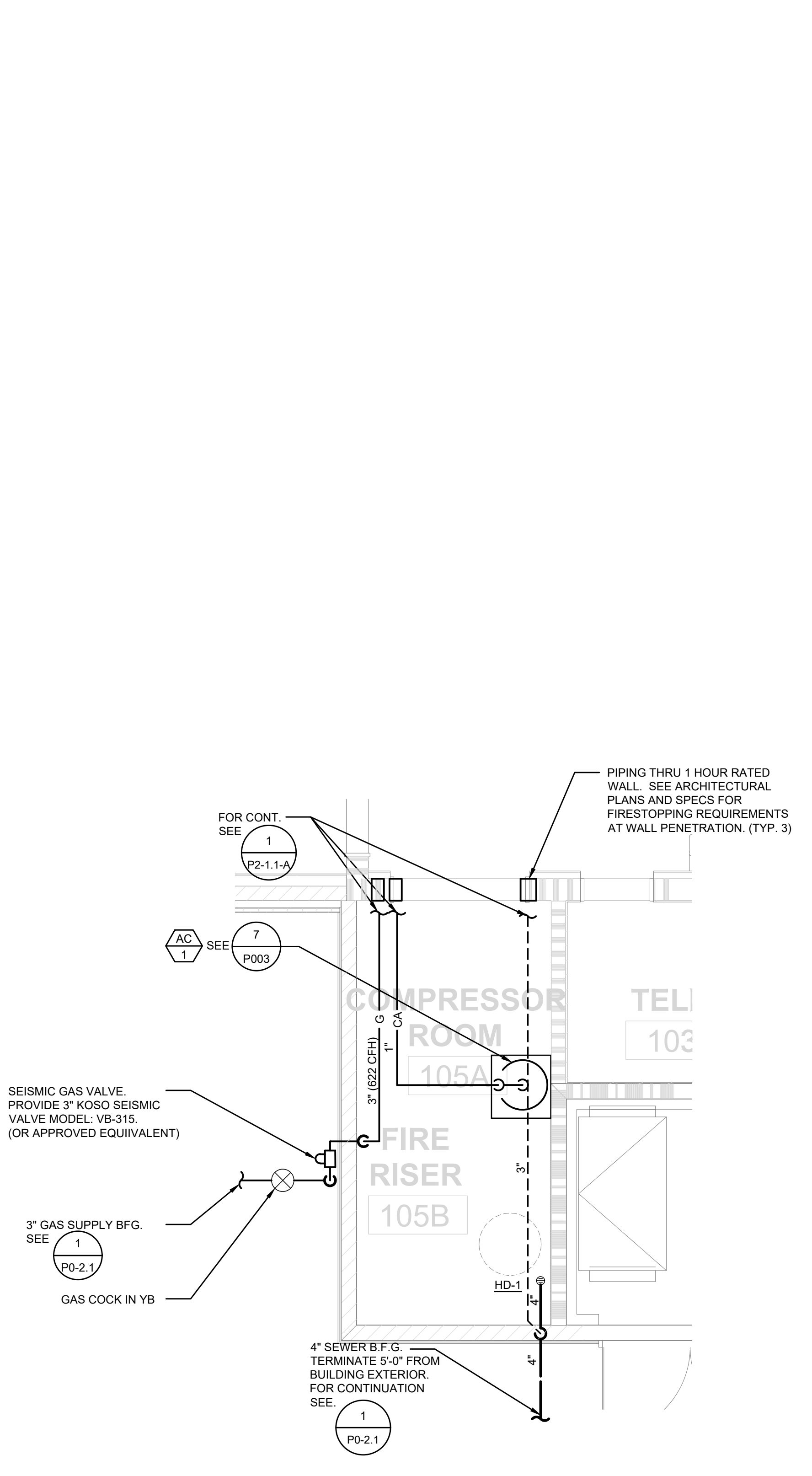
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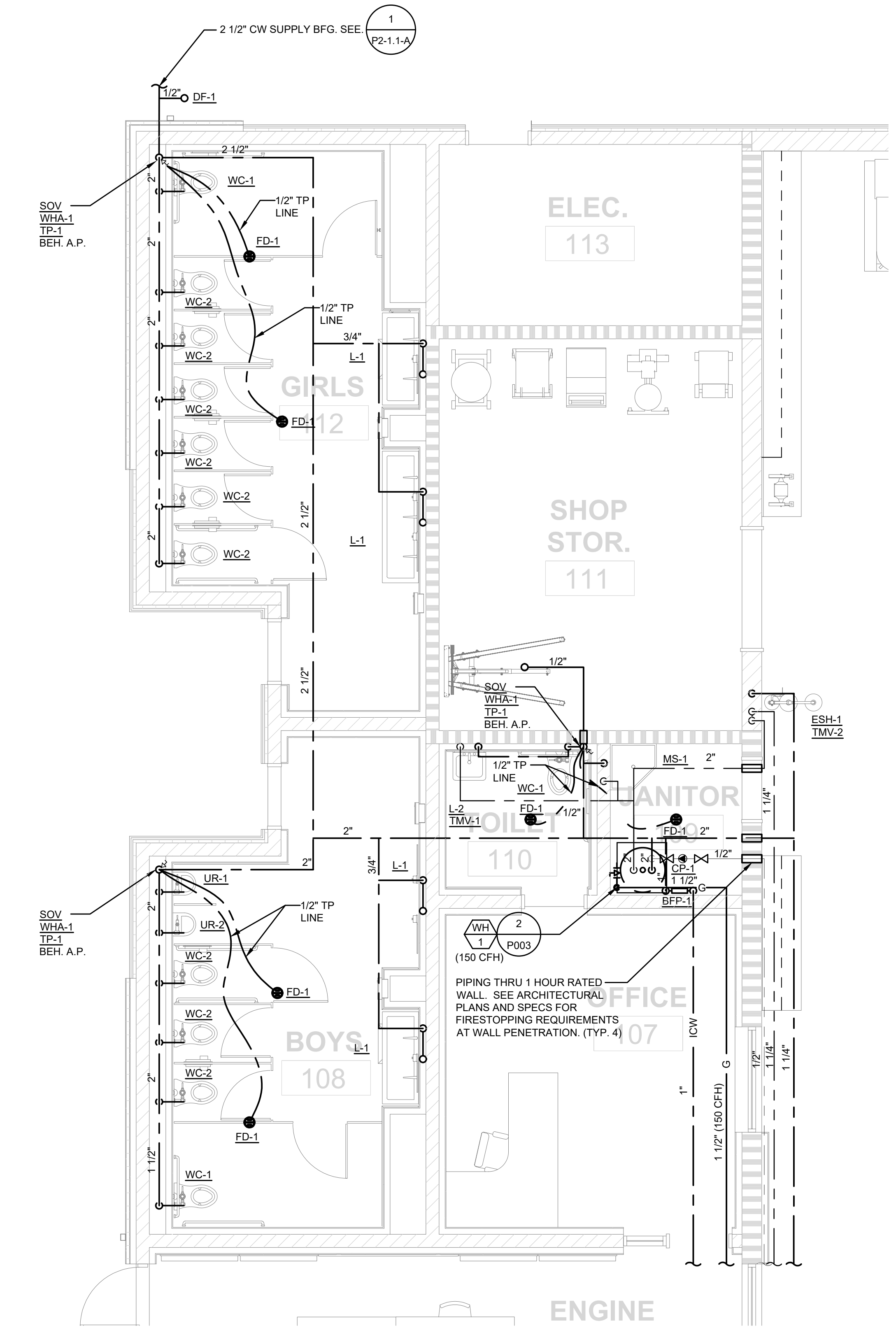
**ENLARGED
 PLUMBING PLANS -
 BLDG A**
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P3-1.1-A

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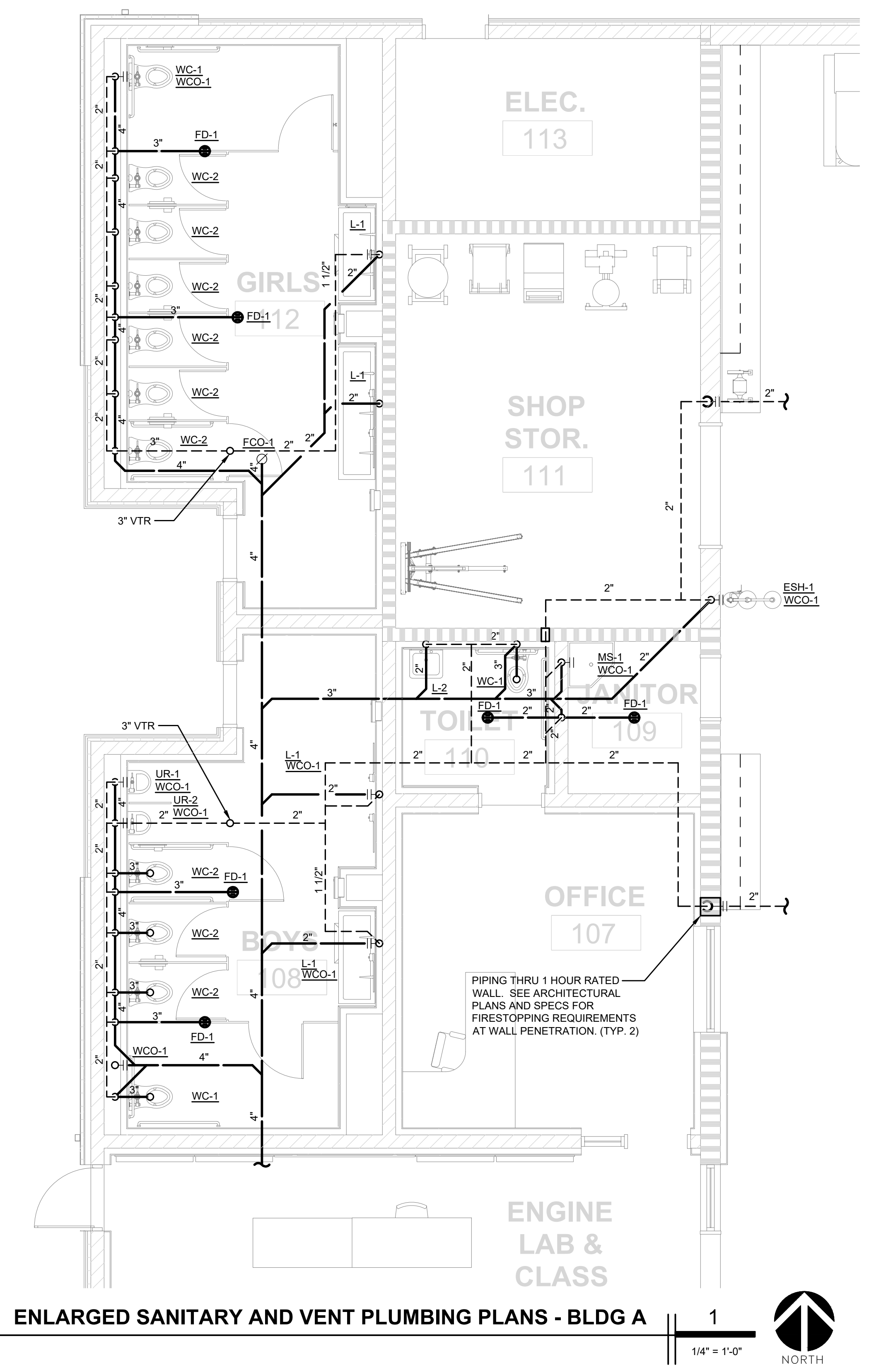
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ENLARGED COMPRESSOR ROOM - BLDG A 3
 1/4" = 1'-0" NORTH



ENLARGED DOMESTIC WATER PLUMBING PLANS - BLDG A 2
 1/4" = 1'-0" NORTH



ENLARGED SANITARY AND VENT PLUMBING PLANS - BLDG A 1
 1/4" = 1'-0" NORTH

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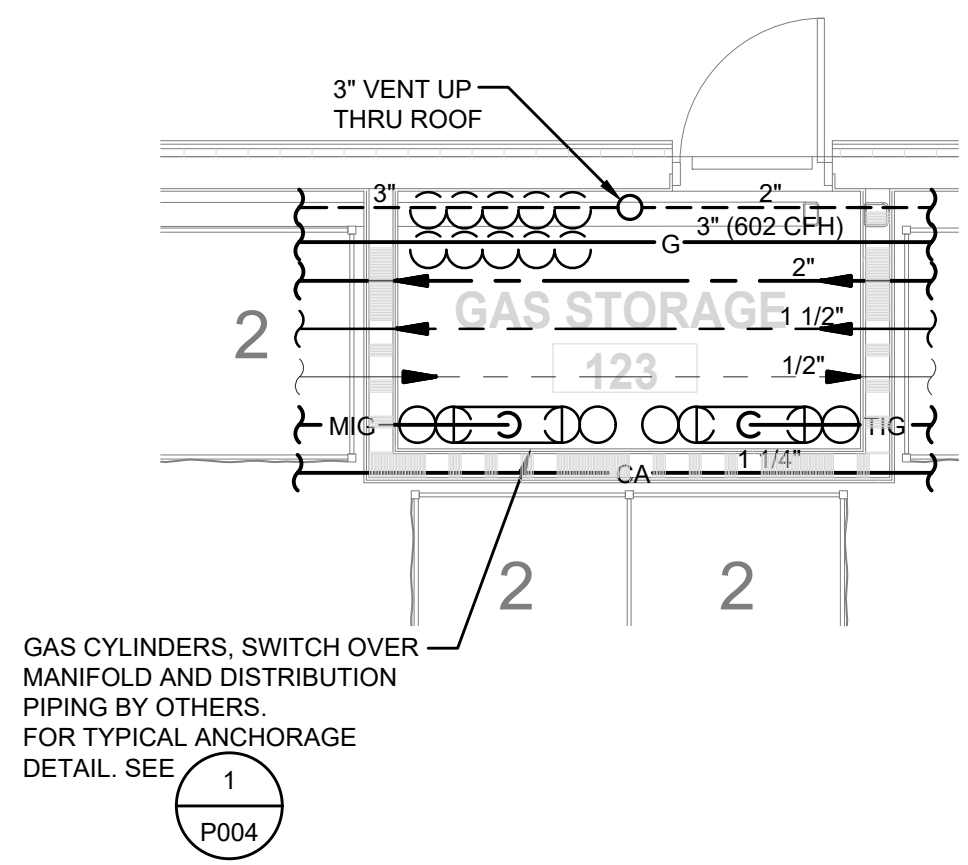


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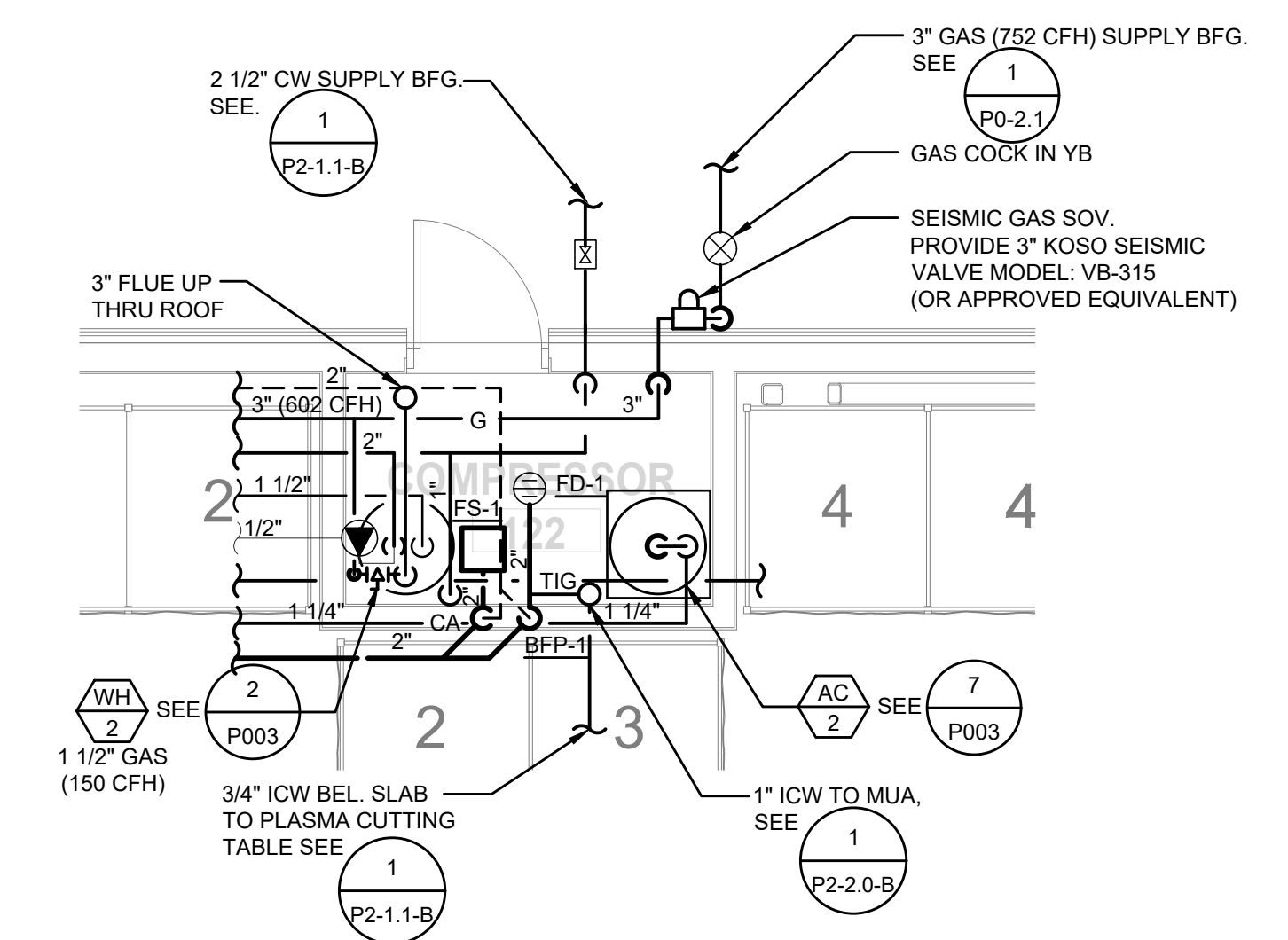
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ENLARGED COMPRESSOR ROOM - BLDG B 1
1/4" = 1'-0" NORTH



ENLARGED PLUMBING PLANS - BLDG B 1
1/4" = 1'-0" NORTH

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