

BERNARDON

ARCHITECTURE
INTERIOR DESIGN
LANDSCAPE ARCHITECTURE

ADDENDUM NO. 3

Project Name: Building Renovation for Haverford Township Free Library
Project No.: 7010.03-22
Date of Issue: October 10, 2023
Notice 1: Attach this addendum to the Project Manual for this project. It modifies and becomes part of the Bidding Documents. Work or material not specifically mentioned herein is to be as described in the main body of the Project Manual, and as shown on the drawings.

Table of Contents: This Addendum includes the following:

- A. Written addendum (six pages total)
- B. Revised drawing sheets **S1.0, S1.1, S1.2, S1.3**, revision dated 10/10/23, and **DMPE1.0, DMPE1.1, DMPE1.2, DMPE1.3, M1.2, M2.0, M2.2, M2.3, P1.0, P1.1, P1.3, P2.0, E1.3, E1.5** and **E1.6**, revision dated 10/4/23 (19 pages total)

CHANGES TO DRAWINGS

1. On Sheet **A0.0**, at Keynote W04.03, change "...with painted 6" CMU..." to "...6" CMU with epoxy paint both sides...".
2. On Sheet **A3.1**, at detail 2/A3.1 see clarification of the extent of WT-4. The revised sheet is attached as part of this addendum.
3. On Sheet **S1.0**, add extent of existing floor slab in basement to be removed as part of the lowering of the basement floor, add Note 13, and add elevation of footing at column F/11. The revised sheet is attached as part of this addendum.
4. On Sheet **S1.1**, add CMU infill in openings at Mechanical Room areaway and add Note 8. The revised sheet is attached as part of this addendum.
5. On Sheet **S1.2**, add Note 10. The revised sheet is attached as part of this addendum.
6. On Sheet **S1.3**, add Note 21. The revised sheet is attached as part of this addendum.
7. On Sheet **DMPE1.0**, revise Mechanical Demolition Notes, Plumbing Demolition Keynotes, Electrical Demolition Keynotes, and Electrical Demolition Notes as indicated. The revised sheet is attached as part of this addendum.
8. On Sheet **DMPE1.1**, revise Mechanical Demolition Notes and Plumbing Demolition Keynotes, as indicated. The revised sheet is attached as part of this addendum.
9. On Sheet **DMPE1.2**, revise Mechanical Demolition Notes and Plumbing Demolition Keynotes, as indicated. The revised sheet is attached as part of this addendum.
10. On Sheet **DMPE1.3**, revise Mechanical Demolition Notes, as indicated. The revised sheet is attached as part of this addendum.
11. On Sheet **M1.2**, revise references to Rad-2 in Meeting Room (Room 220). The revised sheet



- is attached as part of this addendum.
12. On Sheet **M2.0**, revise Air Handling Unit Schedule as indicated. The revised sheet is attached as part of this addendum.
 13. On Sheet **M2.2**, revise Air Device Schedule as indicated. The revised sheet is attached as part of this addendum.
 14. On Sheet **M2.3**, revise Hot & Chilled Water Piping Diagram and add Hot Water Sequence Notes as indicated. The revised sheet is attached as part of this addendum.
 15. On Sheet **P1.0**, add note regarding perforated PVC pipe as indicated. The revised sheet is attached as part of this addendum.
 16. On Sheet **P1.1**, revise note pointing to Fire line at Mechanical Room areaway as indicated. The revised sheet is attached as part of this addendum.
 17. On Sheet **P1.3**, revise note pointing to Fire line at Mechanical Room areaway as indicated. The revised sheet is attached as part of this addendum.
 18. On Sheet **P2.0**, at Fire Service Detail 9, delete backflow preventer as indicated. A back flow preventer is provided in the meter pit provided by the GC. The revised sheet is attached as part of this addendum.
 19. On Sheet **E1.3**, revise Electrical Keynotes E1 and E5, as indicated. The revised sheet is attached as part of this addendum.
 20. On Sheet **E1.3**, at conduit along column line 7 between column lines C and D, move the two conduits referenced by Keynote E2 exposed to Storage (Room 007A).
 21. On Sheet **E1.4**, at conduit enclosure along column line 7 between column lines C and D, delete the conduit enclosure. Move the two conduits referenced by Keynote E3 exposed to Storage (Room 105B).
 22. On Sheet **E1.5**, revise note regarding Innovation Zone exhaust system, as indicated. The revised sheet is attached as part of this addendum.
 23. On Sheet **E1.5**, at conduit enclosure along column line 7 between column lines C and D, delete the conduit enclosure. Move the two conduits referenced by Keynote E3 exposed to Storage (Room 204A).
 24. On Sheet **E1.6**, add note regarding Innovation Zone exhaust system, as indicated. The revised sheet is attached as part of this addendum.

CHANGES TO SPECIFICATIONS

1. Section 093000 *Tiling*: At subparagraph 3.7.A.1, replace "...TCNA F101..." with "...TCNA F102..."

RESPONSES (R) TO BIDDER QUESTIONS (Q):

- Q1: Based on the time frame between the site visit and bid due date we respectfully request a two-week extension.
- R1: See Addendum 2, dated October 9, 2023



- Q2: Will the Owner provide testing of Fluid-Applied Membrane Air Barriers as part of Section 2.2.7 of A201?
- R2: Yes, Owner will provide testing of Fluid Applied Membrane Air Barriers.
- Q3: Is the Water Based Intumescent coatings required at all locations tagged G07.01? It appears that all of these locations have a separation from ambient spaces with either acoustic, gwb, or metal panel and the intumescent coating may not be necessary.
- R3: Yes, the Water Based Intumescent coating is required at all locations tagged G07.01.
- Q4: Please confirm the GC is not responsible to saw cut for raceways, plumbing lines, floor boxes, etc and is to be completed by their respective trades.
- R4: Correct, each Prime Contractor is to sawcut for their own work; including patching those cuts.
- Q5: Please advise on locations of FM-2, unable to locate on the drawings.
- R5: FM-2 is a Glass Film identified on the Finishes Schedule on sheet I0.0. Location for FM-2 is as noted on I1.2 Second Floor Finish Plan at Sensory Room (Room 201A).
- Q6: The specified grout for all wall tiles on this project is cement grout based on specifications on I-0.0. However, the tiling specs section 093000-9 specify we should use epoxy grout for all wall tiles. Can you please confirm whether the grout for all wall tile should be epoxy or cement based?
- R6: Grout type for wall tiles shall be cement-based as noted on I0.0. Epoxy grout is not required for this project. Revisions to Specification Section 093000 *Tiling*, will be issued in next addendum that includes cement-based grout.
- Q7: The specified floor method for the exterior tile (PV-1) is TCNA F101. This method calls for a 3/4" minimum to 2" maximum bonded mortar bed. Additionally, the specified material PV-1 is 2 CM thick. We didn't see any notes about a depressed slab in the structural drawings. Can you please confirm whether a mortar bed (wet bed) will be required for the PV-1 installation and please specify the mortar bed thickness required?
- R7: TCNA number for PV-1 to be F102, thinset mortar on waterproof membrane on new lightweight concrete topping. The PV-1 installation is to utilize the corrugated polyethylene waterproofing specified in 093000, paragraph 2.4.C, which is an uncoupling/waterproof membrane. See revision to Specification Section 093000 *Tiling*, subparagraph 3.7.A.1.



- Q8: Could you please confirm floor finish PV-1 is only required at the small exterior space outside Vestibule 100? Please confirm the exterior floor finish is not required going down the ramp shown next to it.
- R8: Extent of Paver PV-1 finish as shown on 1/I1.1, First Floor Finish Plan. Adjacent ramp shall be new poured concrete as per 6/A5.0.
- Q9: Base finish TB-1 is specified as a 4" x 24" cut tile. Does this finish need to be capped with Schluter at walls without wall tile above it? If so, can you specify a Schluter product line and finish?
- R9: TB-1 occurs only at base of walls with WT-1. Wherever WT-1 is indicated in Finish Plans provide TB-1 at its base. All other walls within Restroom that don't have wall tile shall receive VB-1 as noted in Finish Plans.
- Q10: Wall finish WT-4 is specified at living room 115 on I1.1. However, elevations of this space on sheet 3.1 elevation 2 don't show the location of WT-4. Could you please clarify the location of WT-4?
- R10: This will be clarified in the next addendum.
- Q11: Existing Ceiling Tiles Responsibility – Please clarify the need to remove, store and re-install the existing ceiling tiles? Spec Section 011200-A.2 Requires the M.C. to remove and store ceiling tiles for work access. Drawings A1.4, A1.5 & A1.6 show new ceiling systems.
- R11: Ceiling finishes throughout the building are new, as indicated. The statement in Section 011200, subparagraph 1.9.A.2, refers to any new ceiling tiles and grid that are installed but have to be temporarily removed/replaced by the Mechanical Contractor during the course of construction.
- Q12: Existing Rooftop Dunnage Modifications – Please clarify who is responsible for the existing rooftop dunnage modifications? The specs and plans are not clear. Mechanical and structural drawings both say to check each other without clear responsibility assignment.
- R12: General Contractor is to provide modifications to existing dunnage and new steel as indicated. Mechanical Contractor is to provide curbs. Structural drawing notes refer to the MEP drawings only to coordinate the exact locations of the curb supports with the unit curbs.
- Q13: HVAC Rooftop Structural Steel Supports - Please clarify who is to provide the structural steel supports for the HVAC rooftop equipment?
- R13: General Contractor is to provide structural steel supports. Mechanical Contractor is to provide curbs. Structural drawing notes refer to the MEP drawings only to coordinate the exact locations of the curb supports with the unit curbs.



- Q14: Refrigerant Piping Layouts - The plans do not show the piping layouts between the AC & CU units? Will updated drawings be issued to show layouts?
- R14: The mechanical engineer does not typically show the routing of refrigerant piping. Updated drawings will not be provided.
- Q15: Radiators Schedule - The radiators schedule identifies RAD-3 & RAD-6 as "Not Used". On M.12, two RAD-3s and one RAD-6 are shown. Will an updated schedule be provided?
- R15: Refer to drawing M1.5 for the correct numbering. See revision to Sheet M1.2 in this addendum.
- Q16: CV-8 & -10 Locations - Unable to locate these control valves on the drawings. Please clarify locations?
- R16: CV-10 is to be furnished with CUH-2, CV-8 is to be furnished with AHU-1. They are to be integral to the equipment and therefore are not located on the plans.
- Q17: Existing Casework Demolition - Please clarify who is responsible for removing the existing casework covering the radiators on site?
- R17: General Contractor is responsible for removing the existing casework covering the radiators on site.
- Q18: Hot Water Heater Intake & Venting - Please clarify who is responsible for the HW heater intake & vent systems?
- R18: Mechanical Contractor, as per mechanical plans.
- Q19: I was going over the counts for this print and noticed that there is a track Lighting (TR3) listed on the print, however it is not listed on the Light Schedule (Print E2.2) . Please advise when you get this. I appreciate your help and look forward to hearing from you.
- R19: The TR3 in question is found on Sheet E1.2 in northwest corner of Children (Room 206). TR3 is a 3'-0" length of track similar to TR6, TR9, RT10, and TR12. "TR" indicates a track, and the number corresponds to the length. They are all to be provided with the same accessories. The number of heads for all TR's are shown in plan.
- Q20: For the new louvers in the basement areaway I don't see any new lintels shown on any of the plans, structural, arch, or HVAC. Assuming they should be provided and installed by the GC, louvers by HVAC. Please clarify.
- R20: Louver openings at the areaway at Mechanical Room (Room 006) are saw cut into reinforced concrete. Lintels are not required.



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October 10, 2023
 Page 6

- Q21: Ref. Dwgs. LP-100 and 4/LP-200
 Good morning, our fence contractor contacted me questioning the perimeter property fence he wanted to confirm the type of fence you wanted there.
 Drawing Detail 4/LP-200 is showing 6' High Aluminum Screen Fence is this what you are looking for around the property, same as the Dumpster Enclosure Gates.
 I do see a 6' Chain Link Fence Detail on Sheet 5 of 10 of the Civil Drawing is this what you are looking for?
 Can you please provide a detail of the trash enclosure, Drawing A1.1 references the Civil Drawing that is showing a different layout with the (2)5' gates.
- R21: The chain link fence detail is intended for temporary fencing during construction. The permanent property fence and trash enclosure fence should follow the aluminum fence details on the landscape plans/specs. Permanent fence is to be 6'-0" high. The size of the enclosure is to follow that shown on sheet A1.1 at 5'-0"x14'-0", and the gate is to have two (2) 5 foot wide leaves. Gate details are on the landscape plan.
- Q22: Verifying that the Owner of the project is Haverford Township and NOT Haverford Township Free Library as stated on the cover sheet?
- R22: Correct. All the Prime Contracts will be with Haverford Township, not the Library. Haverford Township owns the building/property.
- Q23: To clarify, there is no "Owner provided RCO form." This information is required in the Qualification Statement number 5?
- R23: The "Bidder Qualification Statement", identified in the Project Manual Table of Contents as 004500E *Bidder Qualification Statement*, and which is the same form identified in the Bid Form as Attachment E is the "Owner provided RCO form". By filling out the Bidder Qualification Statement the bidder will have completed the RCO form.
- Q:24: The Instructions to Bidders and Bid Form state that an AIA A305 Qualification Form is to be submitted upon award. Later on in the Bid Form, it lists that an AIA A305 Qualification Form is to be submitted with the bid. Please clarify if an AIA A305 Qualification Form is to be submitted at all, since the Spec contains a separate "Bidder Qualification Statement."
- R24: The Project Manual references two qualification statement forms, the AIA A305 and the "Bidder Qualification Statement" identified in the Project Manual Table of Contents as 004500E *Bidder Qualification Statement*, and which is the same form identified in the Bid Form as Attachment E. Bidders are not required to provide an executed AIA A305 unless requested by the Owner at a later date. Bidders are required to attach an executed Attachment E Bidder Qualification Statement to their Bid Form as indicated.

End of Addendum No. 3

Consultant:

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Project:
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FREE LIBRARY**
1601 Darby Road
Haverford Township
Havertown, PA 19083

Owner:
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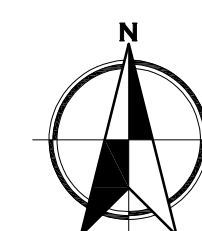
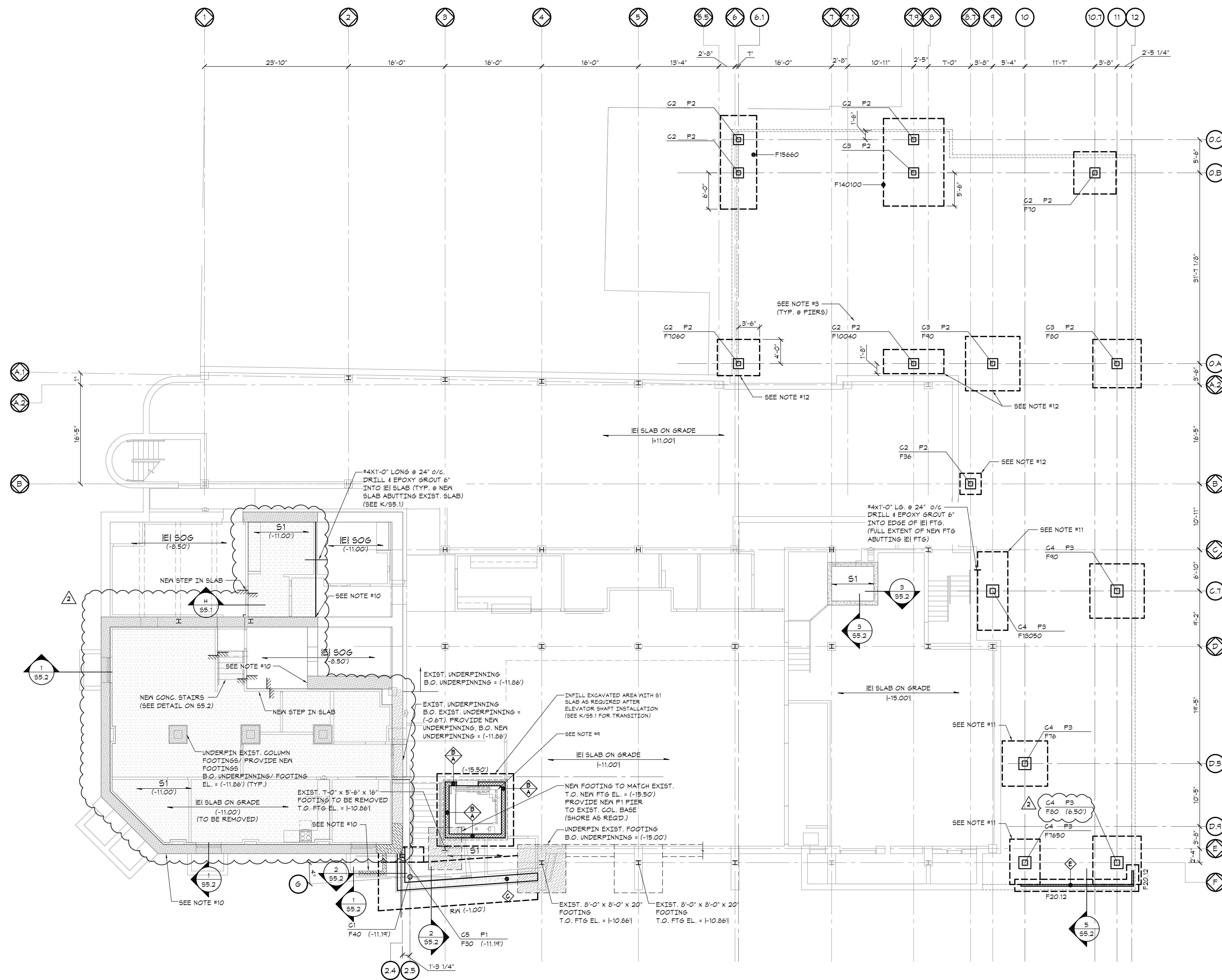
Revision/Issue:
0 05/31/2023 - Issued for Permit
1 09/30/2023 - Issued for Bidding
2 10/10/2023 - Addendum 3

Drawn: CAD
Reviewed: HVB
Contact: H. Bands
Project Number: 7010.03-22

Sheet Title:
FOUNDATION PLAN

Sheet Number:

S1.0



FOUNDATION PLAN

- NOTES:
- SEE PLAN FOR TOP OF SLAB EL. RELATIVE TO 289.36' DATUM.
 - TOP OF FOOTING EL. = (2.5') BELOW GRADE UNLESS NOTED OTHERWISE THIS (...)
 - TOP OF PIER EL. = (0.6') BELOW GRADE UNLESS NOTED OTHERWISE THIS (...)
 - S/D INDICATES FLOOR/ ROOF CONSTRUCTION. SEE FLOOR/ ROOF CONSTRUCTION SCHEDULE ON THIS SHEET FOR ADDITIONAL INFORMATION.
 - COORDINATE ALL UNDER SLAB PIPING WITH ARCHITECTURAL/MECHANICAL DRAWINGS.
 - COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO BUILDING LAYOUT.
 - (*) INDICATES DIMENSION TO BE VERIFIED W/ ELEVATOR MANUFACTURER PRIOR TO BUILDING LAYOUT.
 - R/W INDICATES RETAINING WALL. SEE SECTIONS INDICATED FOR ADDITIONAL INFORMATION.
 - PROVIDE 2'-0" X 2'-0" X 2'-0" DEEP SUMP PIT. COORDINATE DIMENSIONS W/ ARCHITECTURAL AND MECHANICAL DIMENSIONS.
 - NEW UNDERPINNING AT EXISTING STONE FOUNDATION WALL. B.O. UNDERPINNING = (-11.86') (UNDERPINNING SCOPE IS DELEGATED).
 - B.O. NEW FOOTING TO MATCH B.O. ADJACENT EXISTING FOOTING (+ APPROX. -15.14' TO BE VERIFIED IN FIELD).
 - B.O. NEW FOOTING TO MATCH B.O. ADJACENT EXISTING FOOTING (+ APPROX. -2.41' TO BE VERIFIED IN FIELD).
 - INDICATES EXISTING S.O.G. TO BE REMOVED.

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

WALL SCHEDULE

MARK	DESCRIPTION	WIDTH
A	12" REINF. CONC.	12"
B	8" CMU	7-5/8"
C	15" REINF. CONC.	15"
D	6" CMF WALL	6"
E	4" CMU	3-5/8"

FLOOR/ ROOF CONSTRUCTION SCHEDULE

MARK	SECTION	DESCRIPTION
S1		4" NORMAL WEIGHT CONCRETE SLAB ON GRADE W/ 8x6-M1 4X1.4 WWF OVER 4" CRUSHED STONE
S1A		4" NORMAL WEIGHT CONCRETE (w/ 8% AIR ENTRAINMENT) SLAB ON GRADE W/ 8x6-M1 4X1.4 WWF OVER 4" CRUSHED STONE
S2		2 1/2" NORMAL WEIGHT CONCRETE ON 1 1/2" 20GA. LOK-FLOOR COMPOSITE DECK W/ 8x6-M1 4X1.4 WWF (4" TOTAL THICKNESS)
S3		2 1/2" NORMAL WEIGHT CONCRETE ON 1 1/2" 20GA. LOK-FLOOR COMPOSITE DECK W/ 8x6-M1 4X1.4 WWF + 2" LX CONCRETE TOPPING (6" TOTAL THICKNESS)
D1		1 1/2" 20GA. WIDE RIB METAL ROOF DECK (PAINTED)
D2		3/4" STRUCTURE-CONCRETE DECKING FLOOR
D3		5/8" T&G PLYWOOD ROOF SHEATHING

PRICING NOTE: THESE DOCUMENTS REPRESENT THE CURRENT STATE OF A DEVELOPING DESIGN AND AS SUCH, NOT ALL CONDITIONS ARE CURRENTLY SHOWN. ALL STRUCTURAL DETAILS AND CONNECTIONS SHOULD BE ACCOUNTED FOR IN THE GENERAL CONTRACTOR PRICE AND SCOPE OF SERVICES, WHETHER THE SPECIFICS OF THESE CONDITIONS ARE SHOWN OR NOT SHOWN ON THESE DOCUMENTS

Consultant:

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JOB NUMBER: 22191-0254
JOB CONTACT: S. KRUMENACKER

Project:

**HAVERFORD TOWNSHIP
FREE LIBRARY**
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Havertown, PA 19083

Owner:

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Revision/Issue:

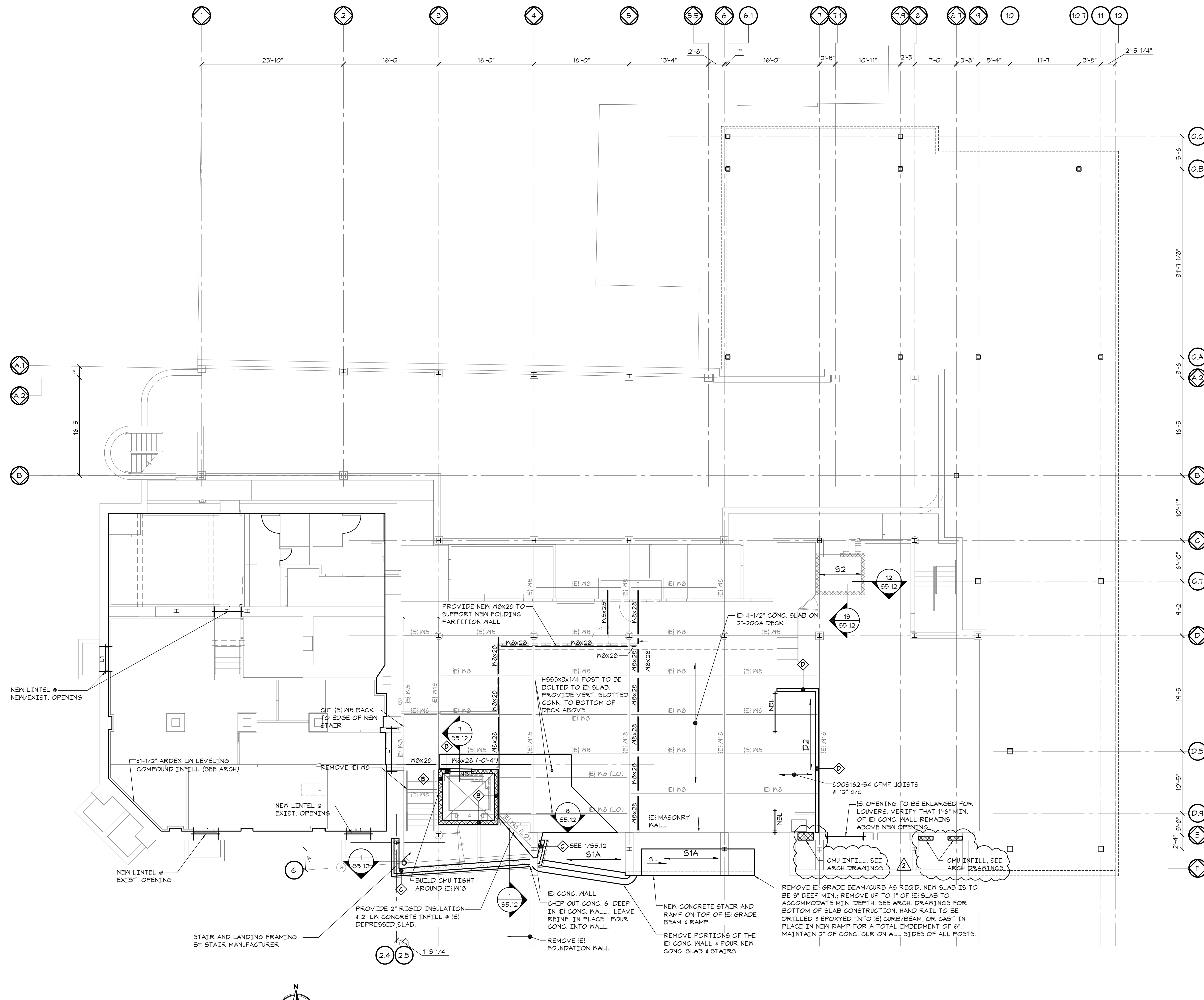
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2	10/10/2023 - Addendum 3

Drawn: CAD
Reviewed: HVB
Contact: H. Bands
Project Number: 7010.03-22

Sheet Title:
**FIRST FLOOR
FRAMING PLAN**

Sheet Number:

S1.1



FIRST FLOOR FRAMING PLAN SCALE: 1/8" = 1'-0"

NOTES:
 1. TOP OF SLAB EL. = (288.36) ± DATUM EL. = (0.00) UNLESS NOTED OTHERWISE THUS (...)
 2. TOP OF STEEL EL. = TO MATCH EXISTING EL.
 3. S / D _ INDICATES FLOOR / ROOF CONSTRUCTION. SEE FLOOR / ROOF CONSTRUCTION SCHEDULE ON THIS SHEET FOR ADDITIONAL INFORMATION.
 4. L _ INDICATES LINTEL. SEE SCHEDULE ON DRAWING S0.4 FOR ADDITIONAL INFORMATION.
 5. NBL INDICATES NON-BEARING LINTEL. SEE SCHEDULE ON DRAWING S0.4 FOR ADDITIONAL INFORMATION.
 6. ALL STEEL FOR MF MEMBERS SHALL BE ASTM A992.
 7. P _ INDICATES POST/UP. SEE POST UP SCHEDULE ON S0.4 FOR ADDITIONAL INFORMATION.
 8. AT ALL NEW CONNECTIONS TO EXISTING CMU, CONTRACTOR TO VERIFY EXISTING MASONRY IS GROUTED. CONTRACTOR TO GROUT ANY HOLLOW CELLS BEFORE INSTALLING FASTENERS.

WALL SCHEDULE

MARK	DESCRIPTION	WIDTH
A	12" REINF. CONC.	12"
B	8" CMU	7'-5/8"
C	15" REINF. CONC.	15"
D	6" CFMF WALL	6"
E	4" CMU	9'-5/8"

FLOOR / ROOF CONSTRUCTION SCHEDULE

MARK	SECTION	DESCRIPTION
S1		4" NORMAL WEIGHT CONCRETE SLAB ON GRADE w/ 8x8-M14x1.4 WWF OVER 4" CRUSHED STONE
S1A		4" NORMAL WEIGHT CONCRETE (w/ 6% AIR ENTRAINMENT) SLAB ON GRADE w/ 8x8-M14x1.4 WWF OVER 4" CRUSHED STONE
S2		2 1/2" NORMAL WEIGHT CONCRETE ON 1 1/2" 20GA. LOK-FLOOR COMPOSITE DECK w/ 8x8-M14x1.4 WWF (4" TOTAL THICKNESS)
S3		2 1/2" NORMAL WEIGHT CONCRETE ON 1 1/2" 20GA. LOK-FLOOR COMPOSITE DECK w/ 8x8-M14x1.4 WWF + 2" LX CONCRETE TOPPING (6" TOTAL THICKNESS)
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ROOF FRAMING PLAN

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

- NOTES**
- TOP OF STEEL EL. VARIES. APPROXIMATE ELEVATIONS NOTED ON PLAN; SEE ARCHITECTURAL DRAWINGS FOR EXACT ELEVATIONS.
 - SEE PLAN FOR TOP OF STEEL (DECK BEARING) ELEVATION.
 - S / D: INDICATES FLOOR/ ROOF CONSTRUCTION. SEE FLOOR/ ROOF CONSTRUCTION SCHEDULE ON THIS SHEET FOR ADDITIONAL INFORMATION.
 - L: INDICATES L'INTEL. SEE SCHEDULE ON DRAWING 80.4 FOR ADDITIONAL INFORMATION.
 - L: INDICATES STEEL ANGLES AT PERIMETER OF ROOF OPENINGS, ROOF INFILL, OR ROOF TOP UNIT. SEE EHF/SS.11 FOR ADDITIONAL INFORMATION.
 - COORDINATE ROOF TOP UNIT LOCATIONS AND DUCT PENETRATIONS WITH ARCHITECTURAL/MECHANICAL DRAWINGS.
 - YSLJ: INDICATES SLOPED JOIST/BEAM.
 - BP: INDICATES BEARING PLATE. SEE SCHEDULE ON DRAWING 80.4.
 - CANT LE INDICATES CANTILEVER LEFT END.
 - CANT RE INDICATES CANTILEVER RIGHT END.
 - CANT BE INDICATES CANTILEVER BOTH ENDS.
 - PUL: INDICATES POST-UP. SEE POST UP SCHEDULE ON 80.4 FOR ADDITIONAL INFORMATION.
 - ALL STEEL FOR ROOF SCREEN FRAMING SHALL BE HOT-DIPPED GALVANIZED.
 - ALL STEEL FOR MF MEMBERS SHALL BE ASTM A992.
 - H.B: INDICATES ELEVATOR HOIST BEAM.
 - BUILD UP (B) SIDES OF UNIT ENCLOSURE WITH FULLY GROUTED 8" CMU + BRICK. DRILL 4 EPOXY 4x41-0" LONG DONNELS INTO TOP OF EXISTING 3-WYTHE BRICK WALL @ 2'-0" ON CENTER. REINFORCE CMU WITH #4@16" ON CENTER. SEE ARCH DRAWINGS FOR WALL EXTENSION HEIGHT.
 - PROVIDE TOE-DOWN L8x4x7/16 x1'-0" (LLH) CUT INTO IEI MORTAR JOINT W/ (2) 3/4"Ø HIT-SC BOLTS INTO FACE OF IEI MASONRY W/ HLTZ HY 210. WELD TOE-UP L8x4x3/8 SEAT TO LB.
 - REPAIR CRACKS IN IEI TRIPLE-WYTHE BRICK WALL PER I/SS.11. REPOINT MORTAR AS REQUIRED PER J/SS.11.
 - TEMPORARILY REMOVE IEI MASONRY TO EXPOSE IEI DUNNAGE BEAM ENDS. CLEAN AND REPAINT STEEL, THEN REPLACE MASONRY. (TYP. ALL IEI DUNNAGE BEAMS; SEE ARCH DRAWINGS FOR PAINT TYPE)
 - PROVIDE HSS BRACES HIGH AND LOW ON (4) SIDES OF ENCLOSURE. SEE 6/SS.13 FOR DETAIL ON NORTH, EAST, AND SOUTH SIDES. REST BRACES TO BE REMOVABLE; AT EACH END, FASTEN TO ADJACENT BRACES WITH 3/4" PLATE SADDLE AND 1/2" (L) TURN-BOLTS.
 - AT ALL NEW CONNECTIONS TO EXISTING CMU, CONTRACTOR TO VERIFY EXISTING MASONRY IS GROUTED. CONTRACTOR TO GROUT ANY HOLLOW CELLS BEFORE INSTALLING FASTENERS.

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JOB NUMBER: 22191-0254
JOB CONTACT: S. KRUMHACKER

Project:
**HAVERFORD TOWNSHIP
FREE LIBRARY**
1601 Darby Road
Haverford Township
Havertown, PA 19083

Owner:
**HAVERFORD TOWNSHIP
FREE LIBRARY**
1601 Darby Road
Haverford Township
Havertown, PA 19083

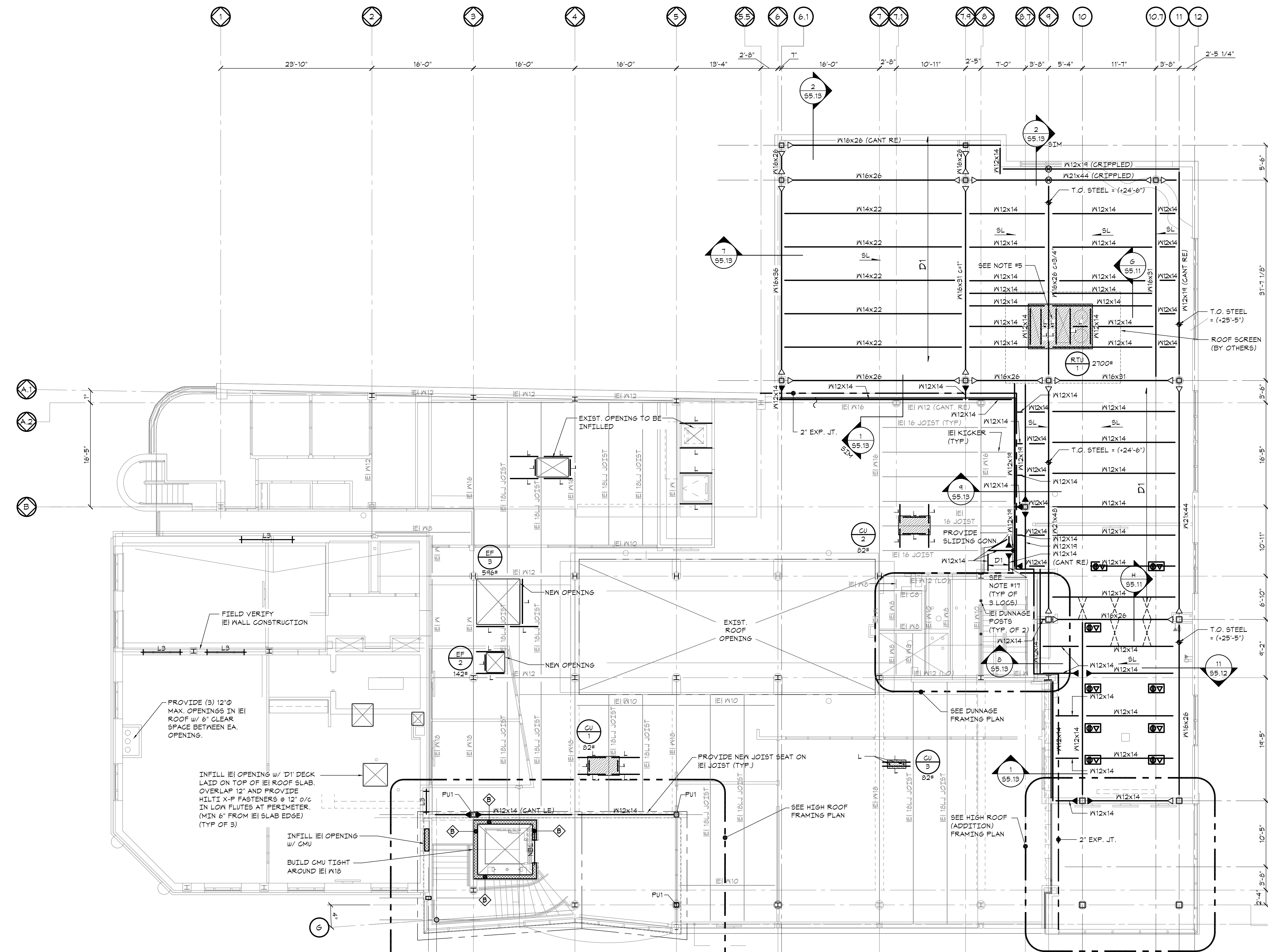
Revision/Issue:
0 05/31/2023 - Issued for Permit
1 09/30/2023 - Issued for Bidding
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Reviewed: HVB
Contact: H. Bands
Project Number: 7010.03-22

Sheet Title:
**ROOF & HIGH ROOF
FRAMING PLAN**

Sheet Number:
S1.3

PRICING NOTE: THESE DOCUMENTS REPRESENT THE CURRENT STATE OF A DEVELOPING DESIGN AND AS SUCH, NOT ALL CONDITIONS ARE CURRENTLY SHOWN. ALL STRUCTURAL DETAILS AND CONNECTIONS SHOULD BE ACCOUNTED FOR IN THE GENERAL CONTRACTOR PRICE AND SCOPE OF SERVICES, WHETHER THE SPECIFICS OF THESE CONDITIONS ARE SHOWN OR NOT SHOWN ON THESE DOCUMENTS

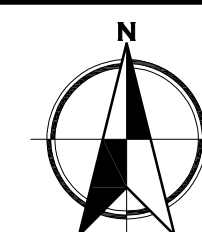
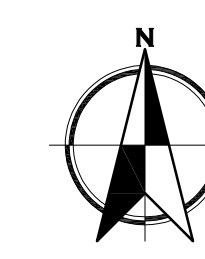
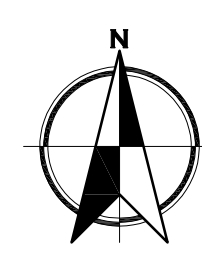
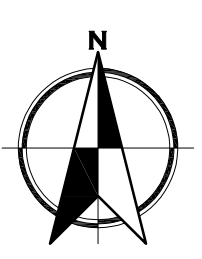
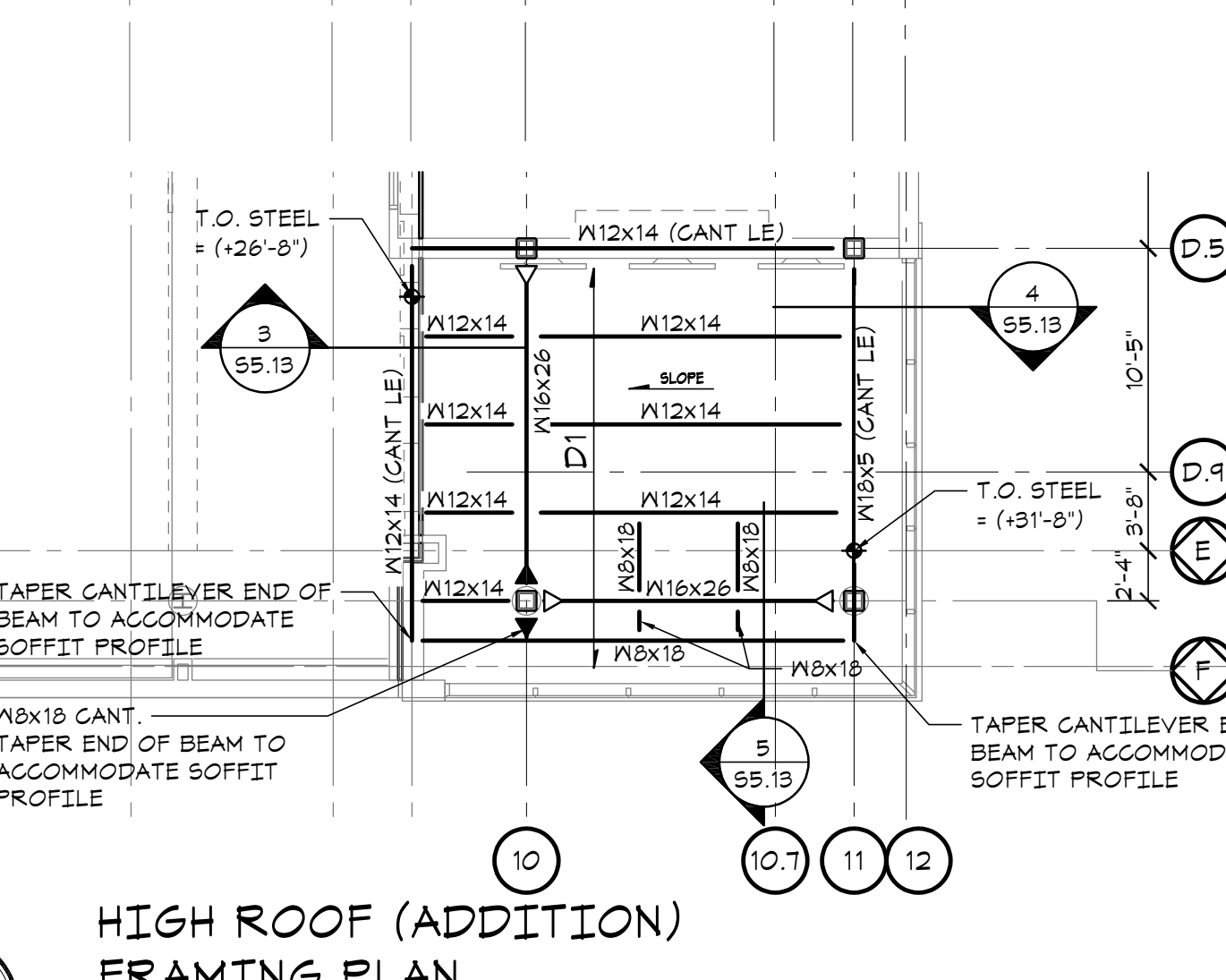
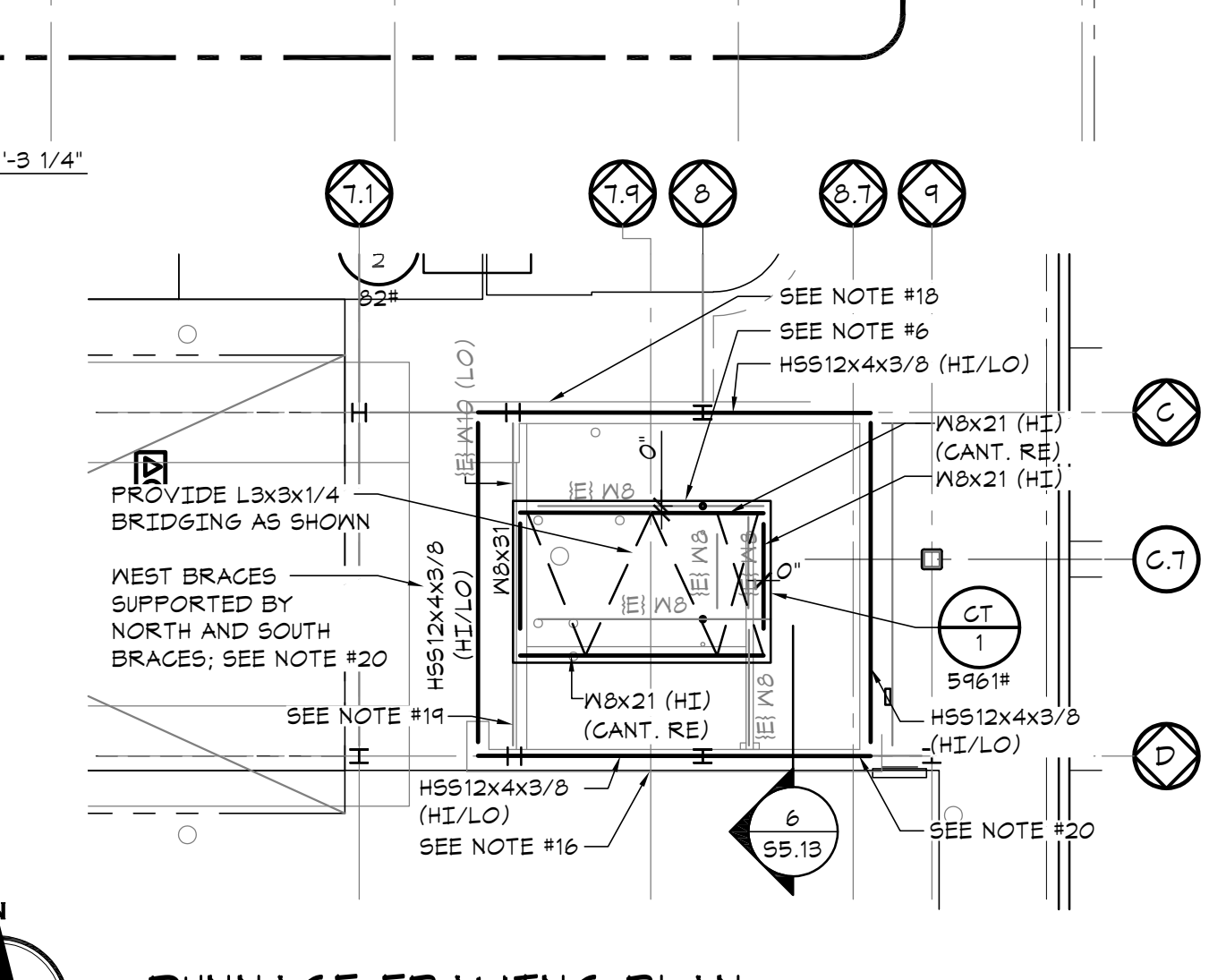
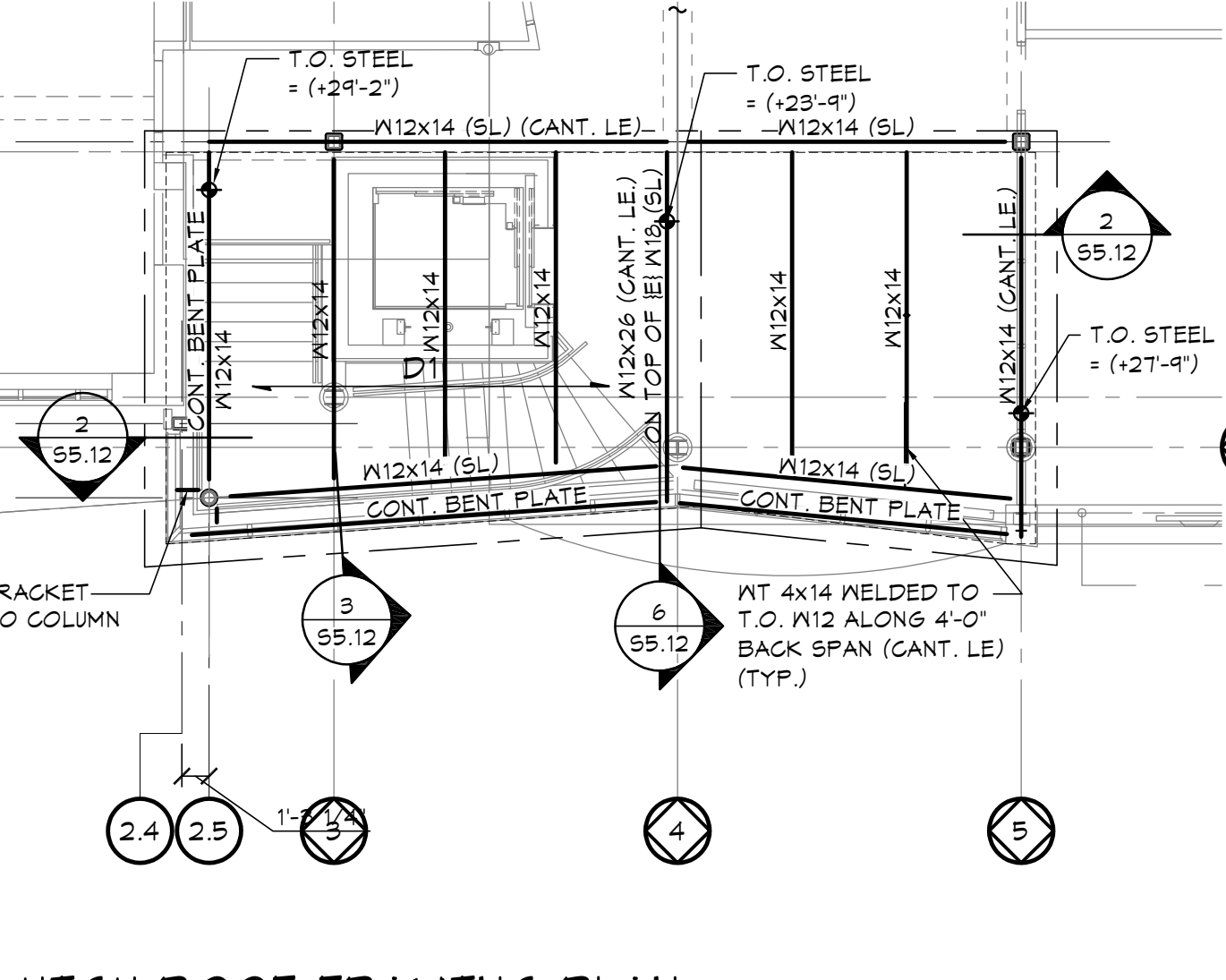


WALL SCHEDULE

MARK	DESCRIPTION	WIDTH
A	12" REINF. CONC.	12"
B	8" CMU	7'-5/8"
C	15" REINF. CONC.	15"
D	6" CMF WALL	6"
E	4" CMU	9'-5/8"

FLOOR/ ROOF CONSTRUCTION SCHEDULE

MARK	SECTION	DESCRIPTION
S1		4" NORMAL WEIGHT CONCRETE SLAB ON GRADE W/ 8x8-M14x1.4 MNF OVER 4" CRUSHED STONE
S1A		4" NORMAL WEIGHT CONCRETE (W/ 6% AIR ENTRAINMENT) SLAB ON GRADE W/ 8x8-M14x1.4 MNF OVER 4" CRUSHED STONE
S2		3 1/2" NORMAL WEIGHT CONCRETE ON 1 1/2" 20GA. LOK-FLOOR COMPOSITE DECK W/ 8x8-M14x1.4 MNF (4" TOTAL THICKNESS)
S3		3 1/2" NORMAL WEIGHT CONCRETE ON 1 1/2" 20GA. LOK-FLOOR COMPOSITE DECK W/ 8x8-M14x1.4 MNF + 2" LX CONCRETE TOPPING (6" TOTAL THICKNESS)
D1		1 1/2" 20GA. WIDE RIB METAL ROOF DECK (PAINTED)
D2		3/4" STRUCTO-CRETE DECKING FLOOR
D3		5/8" T&G PLYWOOD ROOF SHEATHING



MECHANICAL DEMO NOTES:

- IT SHALL BE THE RESPONSIBILITY OF THE DEMOLITION CONTRACTOR TO VISIT THE SITE IN ORDER TO BEST UNDERSTAND THE SCOPE OF THE DEMOLITION WORK.
- ALL DEMOLISHED MATERIALS SHALL BE RECYCLED WHEREVER POSSIBLE. ANY HAZARDOUS MATERIALS SHALL BE HANDLED ACCORDING TO GOVERNMENT REGULATION AND DISPOSED OF IN A SAFE MANNER.
- GENERAL CONTRACTOR TO PATCH/REPAIR EXISTING WALL/CEILING AS REQUIRED BY THE ARCHITECT.
- THE SCOPE OF MECHANICAL DEMOLITION SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
 - THE EXISTING AIR HANDLING UNITS, INCLUDING ALL EXISTING DUCTWORK, AIR DEVICES, PIPING, HANGERS, WIRING AND CONTROLS.
 - ALL EXISTING DUCTWORK SYSTEMS, INCLUDING ALL HANGERS, AIR DEVICES AND ACCESSORIES.
 - ALL EXISTING CHILLED AND HOT WATER PIPING SYSTEMS, INCLUDING ALL HANGERS, INSULATION, VALVES, AND ACCESSORIES.
 - ALL EXISTING EXHAUST AND SUPPLY FANS WITH ALL ITS ASSOCIATED CONTROLS AND ACCESSORIES.
 - ALL EXISTING FUEL OIL PIPING SYSTEMS WITH ALL ITS ASSOCIATED PIPING, TANKS, HANGERS, ETC.
 - ALL EXISTING PNEUMATIC CONTROLS AND ASSOCIATED TUBING, COMPRESSORS, FILTER-DRIERS, THERMOSTATS, ACTUATORS, SENSORS, ETC.

MECHANICAL DEMOLITION NOTES:

- (DM1)** CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING AIR HANDLERS AND ASSOCIATED DUCT MAINS TO POINT WHERE INDICATED ON THE DRAWINGS ALONG WITH ALL ASSOCIATED EXISTING DUCTWORK, HOUSEKEEPING PADS, AIR DEVICES, PIPING, CONTROL WIRING, AND POWER.
- (DM2)** CONTRACTOR SHALL DISCONNECT AND REMOVE THE EXISTING OUTSIDE AIR INTAKE LOUVER, DAMPER AND CONTROLS. CONTRACTOR TO PATCH/REPAIR EXISTING (WALL, CEILING) TO MATCH EXISTING CONDITIONS. CONTRACTOR TO COORDINATE ALL WORK WITH ARCHITECT AND GENERAL CONTRACTOR.
- (DM3)** CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING PUMP AND ASSOCIATED PIPING, CONTROL WIRING, CONCRETE HOUSING PAD, AND POWER.
- (DM4)** CONTRACTOR SHALL DEMOLISH ALL EXISTING DUCTWORK. GENERAL CONTRACTOR TO PATCH/REPAIR EXISTING WALL/CEILING TO MATCH EXISTING CONDITIONS. CONTRACTOR TO COORDINATE ALL WORK WITH ARCHITECT AND GENERAL CONTRACTOR.
- (DM7)** CONTRACTOR SHALL DEMOLISH THE EXISTING SUPPLY AND RETURN AIR DEVICES AND REPLACE WITH NEW. ALL NEW AIR DEVICES SHALL MATCH EXISTING TYPE, SIZE, MATERIAL AND COMPONENTS (OPPOSED BLADE DAMPER, ETC.). COORDINATE FINAL FINISH WITH ARCHITECT. CONTRACTOR TO FURNISH AND INSTALL NEW BRANCH DUCTWORK AND ASSOCIATED VOLUME DAMPERS.
- (DM8)** CONTRACTOR SHALL REMOVE/DEMOLISH EXISTING WATER COOLED CHILLER ALONG WITH ALL ASSOCIATED CONTROLS, ELECTRICAL, CONCRETE PAD, AND PIPING CONNECTIONS. EXISTING PIPING MAINS TO THE COOLING TOWER SHALL REMAIN AND BE INSULATED AND RE-PURPOSED TO SERVE CHILLED WATER TO THE NEW ROOFTOP AIR COOLED CHILLER.
- (DM9)** CONTRACTOR SHALL REMOVE/DEMOLISH EXISTING AIR COMPRESSOR AND ALL ASSOCIATED PNEUMATIC CONTROLS.
- (DM10)** CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING HOT WATER (BASEBOARD, SILL TYPE, EXTENDED FIN, CABINET UNIT HEATERS INCLUDING PIPING, ASSOCIATED CONTROL VALVE, PIPE INSULATION), POWER, CONTROL WIRING AND ACCESSORIES. GENERAL CONTRACTOR TO PATCH/REPAIR EXISTING WALL/CEILING TO MATCH EXISTING CONDITIONS. CONTRACTOR TO COORDINATE ALL WORK WITH ARCHITECT AND GENERAL CONTRACTOR.

GENERAL PLUMBING DEMOLITION NOTES:

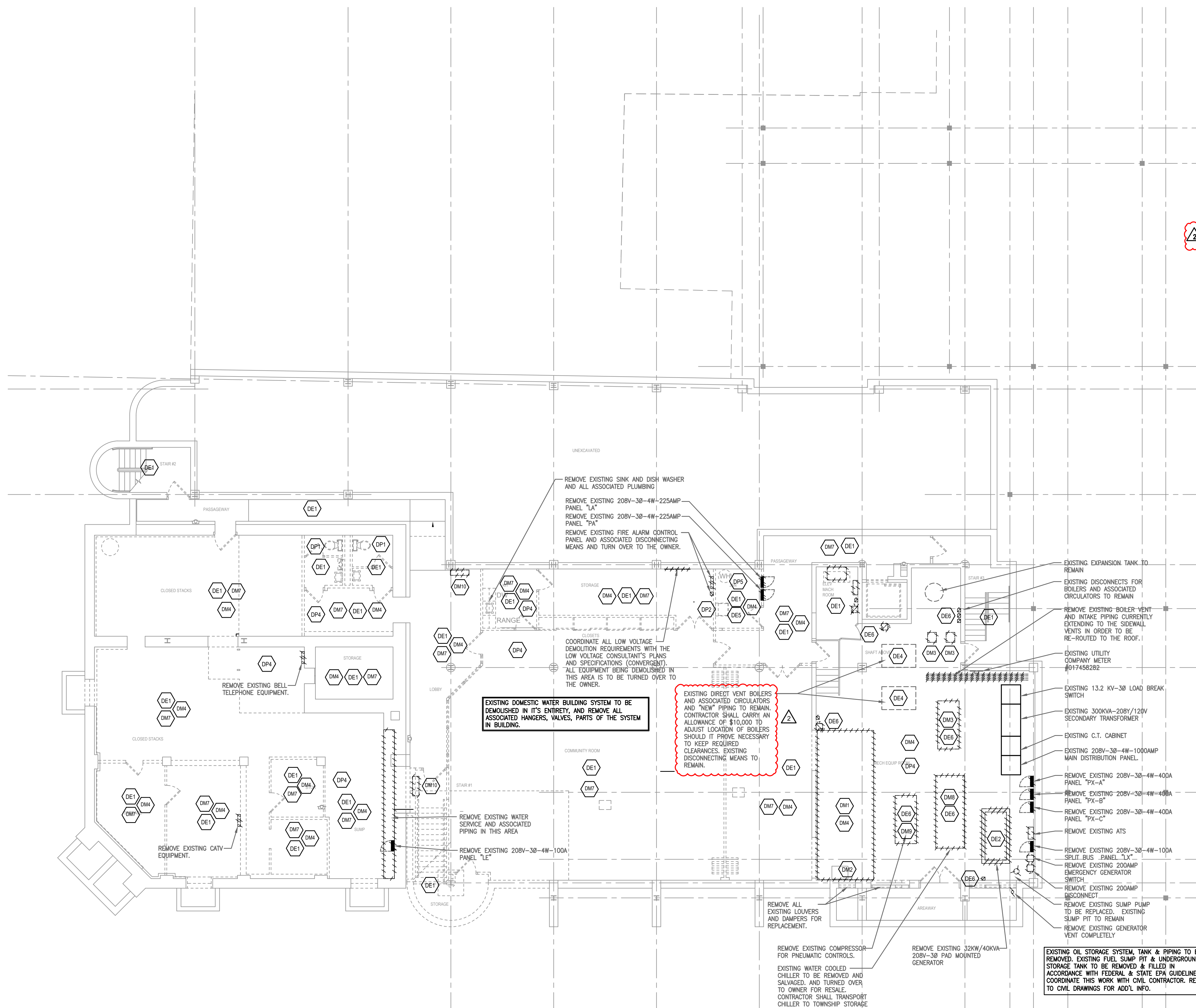
- IT SHALL BE THE RESPONSIBILITY OF THE DEMOLITION CONTRACTOR TO VISIT THE SITE IN ORDER TO BEST UNDERSTAND THE SCOPE OF THE DEMOLITION WORK.
- ALL DEMOLISHED MATERIALS SHALL BE RECYCLED WHEREVER POSSIBLE. ANY HAZARDOUS MATERIALS SHALL BE HANDLED ACCORDING TO GOVERNMENT REGULATION AND DISPOSED OF IN A SAFE MANNER.

PLUMBING DEMOLITION KEYNOTES:

- (DP1)** REMOVE EXISTING WATER CLOSET, URINAL AND LAVATORY AND ALL ASSOCIATED DOMESTIC WATER AND SANITARY AND VENT PIPING BACK TO MAINS AND CAP.
- (DP2)** REMOVE EXISTING SERVICE SINK AND ALL ASSOCIATED DOMESTIC WATER AND SANITARY AND VENT PIPING BACK TO MAINS AND CAP.
- (DP3)** REMOVE EXISTING ELECTRIC WATER COOLER AND ALL ASSOCIATED DOMESTIC WATER AND SANITARY AND VENT PIPING BACK TO MAINS AND CAP.
- (DP4)** REMOVE EXISTING DOMESTIC HOT WATER, HOT WATER RETURN AND COLD WATER PIPING SYSTEM IN ITS ENTIRETY, AND ALL ASSOCIATED FITTINGS, HANGERS, VALVES, SLEEVES AND ETC.
- (DP5)** REMOVE EXISTING DOMESTIC HOT WATER HEATER AND ALL ASSOCIATED DOMESTIC WATER AND SANITARY AND VENT PIPING BACK TO MAINS AND CAP.
- (DP6)** REMOVE EXISTING SINK AND ALL ASSOCIATED DOMESTIC WATER AND SANITARY AND VENT PIPING BACK TO MAINS AND CAP.

PLUMBING DEMOLITION NOTES:

- IT SHALL BE THE RESPONSIBILITY OF THE DEMOLITION CONTRACTOR TO VISIT THE SITE IN ORDER TO BEST UNDERSTAND THE SCOPE OF THE DEMOLITION WORK.
- ALL DEMOLISHED MATERIALS SHALL BE RECYCLED WHEREVER POSSIBLE. ANY HAZARDOUS MATERIALS SHALL BE HANDLED ACCORDING TO GOVERNMENT REGULATION AND DISPOSED OF IN A SAFE MANNER.
- THE SCOPE OF PLUMBING DEMOLITION SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING WHERE INDICATED NOT TO REMAIN:
 - THE EXISTING SANITARY AND VENT SYSTEM INCLUDING PIPING, HANGERS, FITTINGS, SLEEVES, PUMPS, CONTROLS, WIRING, ETC.
 - THE EXISTING DOMESTIC WATER SYSTEM INCLUDING ALL COLD WATER, HOT WATER SUPPLY AND HOT WATER RETURN PIPING, HANGERS, FITTINGS, VALVES, WATER HEATERS, TANKS, PUMPS, CONTROLS, WIRING, SLEEVES, BACKFLOW PREVENTERS, METERS, ETC.
 - ALL EXISTING FIXTURES, FAUCETS, FLUSH VALVES, TRAPS, HANGERS, STOPS, ETC.



BASEMENT DEMO FLOOR PLAN - MECH/PLUMB/ELECT
SCALE: 1/8"=1'-0"

ELECTRICAL DEMOLITION KEYNOTES:

- (DE1)** UNLESS OTHERWISE NOTED, ALL EXISTING ELECTRICAL DEVICES, EQUIPMENT, LUMINAIRES, CONTROLS, FIRE ALARM DEVICES AND EQUIPMENT, ETC. IN THIS AREA ARE TO BE REMOVED. ALL ASSOCIATED WIRING METHODS (CONDUIT AND WIRE) ARE TO BE REMOVED TO THEIR POINT OF ORIGIN. ALL DEMOLISHED EQUIPMENT IS TO BE TURNED OVER TO THE OWNER FOR SALVAGE.
- (DE2)** INDICATES EXISTING GENERATOR TO BE REMOVED. REMOVE ALL ASSOCIATED ATS EQUIPMENT, WIRING METHODS, DISCONNECT EQUIPMENT, PANELBOARDS, ETC. COORDINATE ALL GENERATOR DEMOLITION WORK WITH ALL OTHER TRADES.
- (DE3)** UNLESS OTHERWISE NOTED, ALL EXISTING ELECTRICAL DEVICES, EQUIPMENT, LUMINAIRES, CONTROLS, FIRE ALARM DEVICES AND EQUIPMENT, ETC. IN THIS AREA ARE TO BE EXISTING TO REMAIN.
- (DE4)** INDICATES EXISTING MECHANICAL EQUIPMENT TO REMAIN. UNLESS OTHERWISE NOTED, ALL EXISTING DISCONNECT EQUIPMENT IS TO REMAIN. WIRING METHODS ARE TO REMAIN OR BE REFD VIA NEW PANELBOARD EQUIPMENT.
- (DE5)** INDICATES EXISTING HOT WATER HEATER TO BE REMOVED. REMOVE ALL WIRING METHODS TO POINT OF ORIGIN.
- (DE6)** INDICATES EXISTING DISCONNECTING MEANS ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE REMOVED. REMOVE ALL WIRING METHODS TO POINT OF ORIGIN.

ELECTRICAL DEMOLITION NOTES:

- UNLESS OTHERWISE NOTED, THE ENTIRE ELECTRICAL SYSTEM IS TO BE REMOVED. ELECTRICAL CONTRACTOR IS TO VERIFY ALL EXISTING CONDITIONS IN FIELD PRIOR ANY WORK.
- REMOVE BRANCH CIRCUIT WIRING METHODS BACK TO POWER SOURCE OR TO ITS NEAREST ACTIVE DEVICE. ALL CIRCUITS SERVING THE EXISTING AREAS THAT ARE INTERRUPTED BY DEMOLITION WORK ARE TO BE RE-ENERGIZED TO MAINTAIN BRANCH CIRCUIT CONTINUITY.
- TAG ALL OVERCURRENT PROTECTION DEVICES THAT BECOME "SPARE" AS A RESULT OF DEMOLITION WORK. PROVIDE NEW, TYPED PANELBOARD DIRECTORIES FOR ALL DISTRIBUTION AND BRANCH CIRCUIT EQUIPMENT IMPACTED BY THE RENOVATION WORK.
- REMOVE CONDUCTORS AND PROVIDE PULL-STRINGS AND CAP OPENINGS AND CONDUITS THAT ARE NOT TO BE REUSED.
- ALL POWER SHUTDOWNS ARE TO BE SCHEDULED AND COORDINATED WITH OWNER.
- IT IS THE INTENT FOR POWER TO REMAIN ACTIVE IN THE EXISTING TO REMAIN AREAS DURING CONSTRUCTION. CONTRACTOR IS TO MODIFY EXISTING WIRING ARRANGEMENT TO COMPLY.
- IT IS THE INTENT TO REMOVE ALL ELECTRICAL DEVICES WHICH INTERFERE WITH THE NEW CONSTRUCTION WORK OR DEMOLITION WORK WHETHER SPECIFICALLY IDENTIFIED OR NOT.
- ALL EXISTING INCOMING SERVICE WIRING METHODS, TRANSFORMER, C.T. AND METERING, AND MAIN DISTRIBUTION PANEL EQUIPMENT ARE TO REMAIN. EXISTING OVERCURRENT PROTECTION DEVICES ARE TO BE REUSED TO SERVE NEW PANELBOARD EQUIPMENT AS INDICATED ON THE NEW WORK PLANS. PROVIDE NEW FEEDER WIRING METHODS AS REQUIRED.
- REFER TO NEW WORK PLANS FOR ADDITIONAL INFORMATION.
- COORDINATE ALL DEMOLISHED EQUIPMENT THAT IS TO BE TURNED OVER TO THE OWNER.

THE DELIVERY OF THIS DRAWING SHOULD NOT BE CONSIDERED TO PROVIDE AN EXPRESS WARRANTY OR GUARANTEE TO ANYONE THAT ALL THE DIMENSIONS AND DETAILS ARE EXACT OR TO INDICATE THAT THE USE OF THIS DRAWING IMPLIES THE REVIEW AND APPROVAL BY THE DESIGN PROFESSIONAL OF ANY FUTURE USE. ANY USE OF THIS INFORMATION WITHOUT THE WRITTEN APPROVAL BY THE DESIGN PROFESSIONAL IS AT THE SOLE RISK AND LIABILITY OF THE USER. THE DESIGN PROFESSIONAL RESERVES THE RIGHT TO REMOVE OUR PROFESSIONAL SEAL AND/OR TITLE BLOCK.

NOTICE

THE SCHEDULES AND DRAWINGS REPRESENT ONLY CERTAIN REQUIREMENTS OF THE PROJECT. THERE ARE ADDITIONAL REQUIREMENTS IN THE SPECIFICATIONS BOOKLET WHICH THE CONTRACTOR IS BOUND TO PROVIDE. A SUPPLIER OR CONTRACTOR'S PRICING, WHICH IS BASED ONLY ON DRAWINGS OR SCHEDULES, MAY LEAVE IMPORTANT COSTS UNACCOUNTED FOR WHICH WILL ULTIMATELY BE THE CONTRACTOR OR SUPPLIER'S RESPONSIBILITY TO PROVIDE.

MECHANICAL DEMO NOTES

- IT SHALL BE THE RESPONSIBILITY OF THE DEMOLITION CONTRACTOR TO VISIT THE SITE IN ORDER TO BEST UNDERSTAND THE SCOPE OF THE DEMOLITION WORK.
- ALL DEMOLISHED MATERIALS SHALL BE RECYCLED WHEREVER POSSIBLE. ANY HAZARDOUS MATERIALS SHALL BE HANDLED ACCORDING TO GOVERNMENT REGULATION AND DISPOSED OF IN A SAFE MANNER.
- GENERAL CONTRACTOR TO PATCH/REPAIR EXISTING WALL/CEILING AS REQUIRED BY THE ARCHITECT.
- THE SCOPE OF MECHANICAL DEMOLITION SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
 - A. THE EXISTING AIR HANDLING UNITS, INCLUDING ALL EXISTING DUCTWORK, AIR DEVICES, PIPING, HANGERS, WIRING AND CONTROLS.
 - B. ALL EXISTING DUCTWORK SYSTEMS, INCLUDING ALL HANGERS, AIR DEVICES AND ACCESSORIES.
 - C. ALL EXISTING CHILLED AND HOT WATER PIPING SYSTEMS, INCLUDING ALL HANGERS, INSULATION, VALVES, AND ACCESSORIES.
 - D. ALL EXISTING EXHAUST AND SUPPLY FANS WITH ALL ITS ASSOCIATED CONTROLS AND ACCESSORIES.
 - E. ALL EXISTING FUEL OIL PIPING SYSTEMS WITH ALL ITS ASSOCIATED PIPING, TANKS, HANGERS, ETC.
 - F. ALL EXISTING PNEUMATIC CONTROLS AND ASSOCIATED TUBING, COMPRESSORS, FILTER-DRIERS, THERMOSTATS, ACTUATORS, SENSORS, ETC.

MECHANICAL DEMOLITION NOTES

- DM1** CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING AIR HANDLERS AND ASSOCIATED DUCT MAINS TO POINT WHERE INDICATED ON THE DRAWINGS ALONG WITH ALL EXISTING DUCTWORK, AIR DEVICES, PIPING, CONTROL WIRING, HOUSEKEEPING PAD, AND POWER.
- DM2** CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING EXHAUST FANS, ASSOCIATED DUCTWORK, CONTROLS, POWER AND ACCESSORIES TO BE REMOVED. CONTRACTOR TO PATCH/REPAIR EXISTING WALL, CEILING TO MATCH EXISTING CONDITIONS. CONTRACTOR TO COORDINATE ALL WORK WITH ARCHITECT AND GENERAL CONTRACTOR.
- DM3** CONTRACTOR SHALL DISCONNECT AND REMOVE THE EXISTING OUTSIDE AIR INTAKE LOUVER, DAMPER AND CONTROLS. CONTRACTOR TO PATCH/REPAIR EXISTING WALL, CEILING TO MATCH EXISTING CONDITIONS. CONTRACTOR TO COORDINATE ALL WORK WITH ARCHITECT AND GENERAL CONTRACTOR.
- DM4** CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING PUMP AND ASSOCIATED PIPING, CONTROL WIRING, CONCRETE HOUSING PAD, AND POWER.
- DM5** CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING HOT WATER BASEBOARD, SILL TYPE, EXTENDED FIN, CABINET UNIT HEATERS INCLUDING PIPING, ASSOCIATED CONTROL VALVE, PIPE INSULATION, POWER, CONTROL WIRING AND ACCESSORIES. GENERAL CONTRACTOR TO PATCH/REPAIR EXISTING WALL/CEILING TO MATCH EXISTING CONDITIONS. CONTRACTOR TO COORDINATE ALL WORK WITH ARCHITECT AND GENERAL CONTRACTOR.
- DM6** CONTRACTOR SHALL DEMOLISH ALL EXISTING DUCTWORK. GENERAL CONTRACTOR TO PATCH/REPAIR EXISTING WALL/CEILING TO MATCH EXISTING CONDITIONS. CONTRACTOR TO COORDINATE ALL WORK WITH ARCHITECT AND GENERAL CONTRACTOR.
- DM7** CONTRACTOR SHALL DEMOLISH THE EXISTING SUPPLY AND RETURN AIR DEVICES AND REPLACE WITH NEW. ALL NEW AIR DEVICES SHALL MATCH EXISTING TYPE, SIZES, MATERIAL AND COMPONENTS (OPPOSED BLADE DAMPER, ETC.). COORDINATE FINAL FINISH WITH ARCHITECT. CONTRACTOR TO FURNISH AND INSTALL NEW BRANCH DUCTWORK AND ASSOCIATED VOLUME DAMPERS.

PLUMBING DEMOLITION NOTES

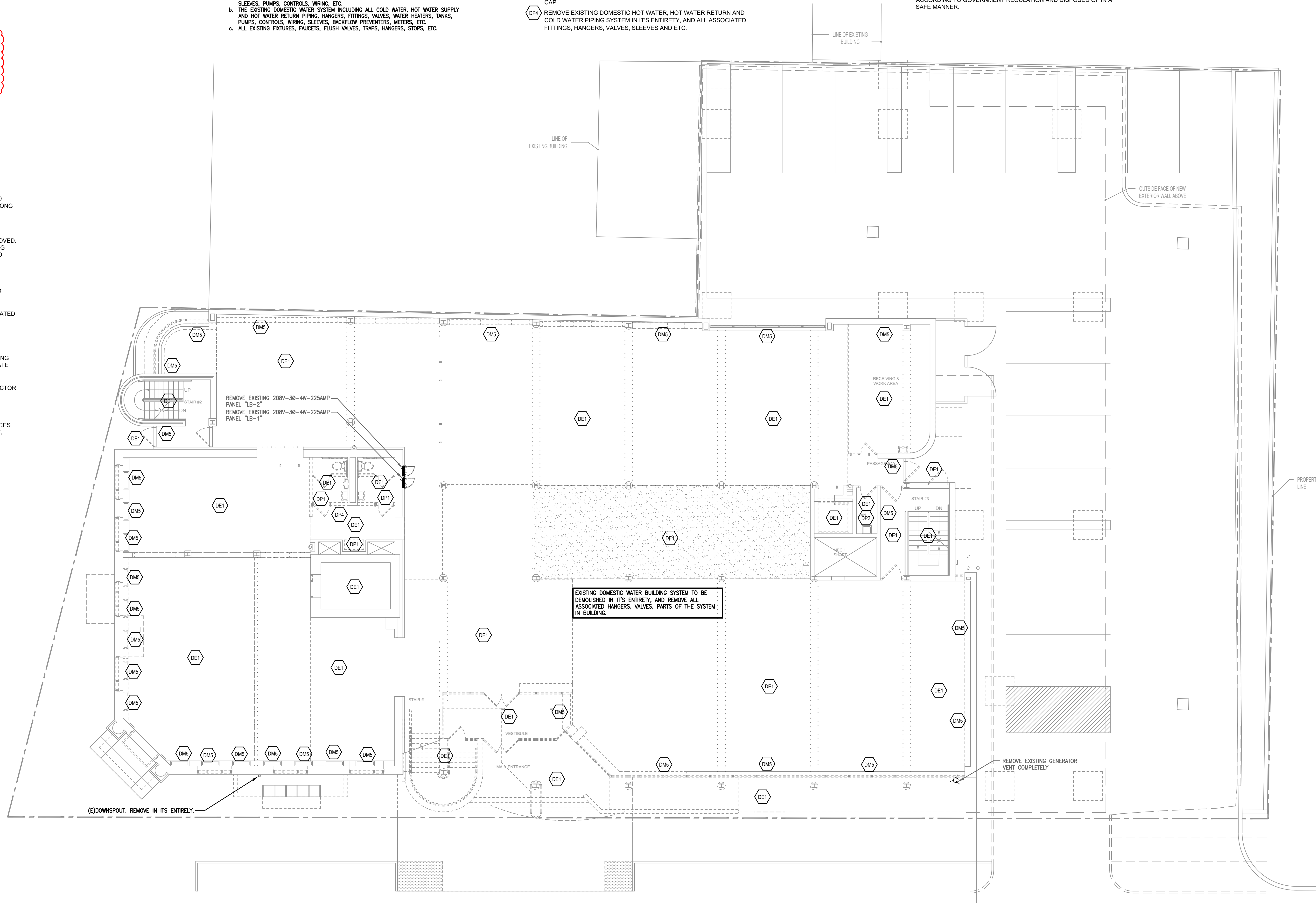
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- THE SCOPE OF PLUMBING DEMOLITION SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING WHERE INDICATED NOT TO REMAIN:
 - a. THE EXISTING SANITARY AND VENT SYSTEM INCLUDING PIPING, HANGERS FITTINGS, SLEEVES, PUMPS, CONTROLS, WIRING, ETC.
 - b. THE EXISTING DOMESTIC WATER SYSTEM INCLUDING ALL COLD WATER, HOT WATER SUPPLY AND HOT WATER RETURN PIPING, HANGERS, FITTINGS, VALVES, WATER HEATERS, TANKS, PUMPS, CONTROLS, WIRING, SLEEVES, BACKFLOW PREVENTERS, METERS, ETC.
 - c. ALL EXISTING FIXTURES, FAUCETS, FLUSH VALVES, TRAPS, HANGERS, STOPS, ETC.

PLUMBING DEMOLITION KEYNOTES

- DP1** REMOVE EXISTING WATER CLOSET, URINAL AND LAVATORY AND ALL ASSOCIATED DOMESTIC WATER AND SANITARY AND VENT PIPING BACK TO MAINS AND CAP.
- DP2** REMOVE EXISTING SERVICE SINK AND ALL ASSOCIATED DOMESTIC WATER AND SANITARY AND VENT PIPING BACK TO MAINS AND CAP.
- DP3** REMOVE EXISTING ELECTRIC WATER COOLER AND ALL ASSOCIATED DOMESTIC WATER AND SANITARY AND VENT PIPING BACK TO MAINS AND CAP.
- DP4** REMOVE EXISTING DOMESTIC HOT WATER, HOT WATER RETURN AND COLD WATER PIPING SYSTEM IN ITS ENTIRETY, AND ALL ASSOCIATED FITTINGS, HANGERS, VALVES, SLEEVES AND ETC.

GENERAL PLUMBING DEMOLITION NOTES

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FIRST FLOOR DEMO PLAN - MECH/PLUMB/ELECT
SCALE: 1/8"=1'-0"

ELECTRICAL DEMOLITION KEYNOTES

- DE1** UNLESS OTHERWISE NOTED, ALL EXISTING ELECTRICAL DEVICES, EQUIPMENT, LUMINAIRES, CONTROLS, FIRE ALARM DEVICES AND EQUIPMENT, ETC. IN THIS AREA ARE TO BE REMOVED. ALL ASSOCIATED WIRING METHODS ARE TO BE REMOVED TO THEIR POINT OF ORIGIN.
- DE2** INDICATES EXISTING GENERATOR TO BE REMOVED. REMOVE ALL ASSOCIATED ATS EQUIPMENT, WIRING METHODS, DISCONNECT EQUIPMENT, PANELBOARDS, ETC. COORDINATE ALL GENERATOR DEMOLITION WORK WITH ALL OTHER TRADES. ALL DEMOLISHED EQUIPMENT IS TO BE TURNED OVER TO THE OWNER FOR SALVAGE.
- DE3** UNLESS OTHERWISE NOTED, ALL EXISTING ELECTRICAL DEVICES, EQUIPMENT, LUMINAIRES, CONTROLS, FIRE ALARM DEVICES AND EQUIPMENT, ETC. IN THIS AREA ARE TO BE EXISTING TO REMAIN.
- DE4** INDICATES EXISTING MECHANICAL EQUIPMENT TO REMAIN. UNLESS OTHERWISE NOTED, ALL EXISTING DISCONNECT EQUIPMENT AND WIRING METHODS ARE TO REMAIN.
- DE5** INDICATES EXISTING HOT WATER HEATER TO BE REMOVED. REMOVE ALL WIRING METHODS TO POINT OF ORIGIN.
- DE6** INDICATES EXISTING DISCONNECTING MEANS ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE REMOVED. REMOVE ALL WIRING METHODS TO POINT OF ORIGIN.

ELECTRICAL DEMOLITION NOTES

- ELECTRICAL CONTRACTOR IS TO VERIFY ALL EXISTING CONDITIONS IN FIELD PRIOR ANY WORK.
- REMOVE BRANCH CIRCUIT WIRING METHODS BACK TO POWER SOURCE OR TO ITS NEAREST ACTIVE DEVICE. ALL CIRCUITS SERVING THE EXISTING AREAS THAT ARE INTERRUPTED BY DEMOLITION WORK ARE TO BE RE-ENERGIZED TO MAINTAIN BRANCH CIRCUIT CONTINUITY.
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- COORDINATE ALL DEMOLISHED EQUIPMENT THAT IS TO BE TURNED OVER TO THE OWNER.

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 - ALL EXISTING DUCTWORK SYSTEMS, INCLUDING ALL HANGERS, AIR DEVICES AND ACCESSORIES.
 - ALL EXISTING CHILLED AND HOT WATER PIPING SYSTEMS, INCLUDING ALL HANGERS, INSULATION, VALVES, AND ACCESSORIES.
 - ALL EXISTING EXHAUST AND SUPPLY FANS WITH ALL ITS ASSOCIATED CONTROLS AND ACCESSORIES.
 - ALL EXISTING FUEL OIL PIPING SYSTEMS WITH ALL ITS ASSOCIATED PIPING, TANKS, HANGERS, ETC.
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MECHANICAL DEMOLITION NOTES:

- CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING AIR HANDLERS AND ASSOCIATED DUCT MAINS TO POINT WHERE INDICATED ON THE DRAWINGS ALONG WITH ALL EXISTING DUCTWORK, AIR DEVICES, PIPING, CONTROL WIRING, AND POWER.
- CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING EXHAUST FANS, ASSOCIATED DUCTWORK, CONTROLS, POWER AND ACCESSORIES TO BE REMOVED. CONTRACTOR TO PATCH/REPAIR EXISTING WALL, CEILING TO MATCH EXISTING CONDITIONS. CONTRACTOR TO COORDINATE ALL WORK WITH ARCHITECT AND GENERAL CONTRACTOR.
- CONTRACTOR SHALL DISCONNECT AND REMOVE THE EXISTING OUTSIDE AIR INTAKE LOUVER, DAMPER AND CONTROLS. CONTRACTOR TO PATCH/REPAIR EXISTING WALL, CEILING TO MATCH EXISTING CONDITIONS. CONTRACTOR TO COORDINATE ALL WORK WITH ARCHITECT AND GENERAL CONTRACTOR.
- CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING PUMP AND ASSOCIATED PIPING, CONTROL WIRING, CONCRETE HOUSING PAD, AND POWER.
- CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING HOT WATER (BASEBOARD, SILL TYPE, EXTENDED FIN, CABINET UNIT HEATERS INCLUDING PIPING, ASSOCIATED CONTROL VALVE, PIPE INSULATION), POWER, CONTROL WIRING AND ACCESSORIES. GENERAL CONTRACTOR TO PATCH/REPAIR EXISTING WALL/CEILING TO MATCH EXISTING CONDITIONS. CONTRACTOR TO COORDINATE ALL WORK WITH ARCHITECT AND GENERAL CONTRACTOR.
- CONTRACTOR SHALL DEMOLISH ALL EXISTING DUCTWORK. GENERAL CONTRACTOR TO PATCH/REPAIR EXISTING WALL/CEILING TO MATCH EXISTING CONDITIONS. CONTRACTOR TO COORDINATE ALL WORK WITH ARCHITECT AND GENERAL CONTRACTOR.
- CONTRACTOR SHALL DEMOLISH THE EXISTING SUPPLY AND RETURN AIR DEVICES AND REPLACE WITH NEW. ALL NEW AIR DEVICES SHALL MATCH EXISTING TYPE, SIZES, MATERIAL AND COMPONENTS (OPPOSED BLADE DAMPER, ETC.). COORDINATE FINAL FINISH WITH ARCHITECT. CONTRACTOR TO FURNISH AND INSTALL NEW BRANCH DUCTWORK AND ASSOCIATED VOLUME DAMPERS.

GENERAL PLUMBING DEMOLITION NOTES:

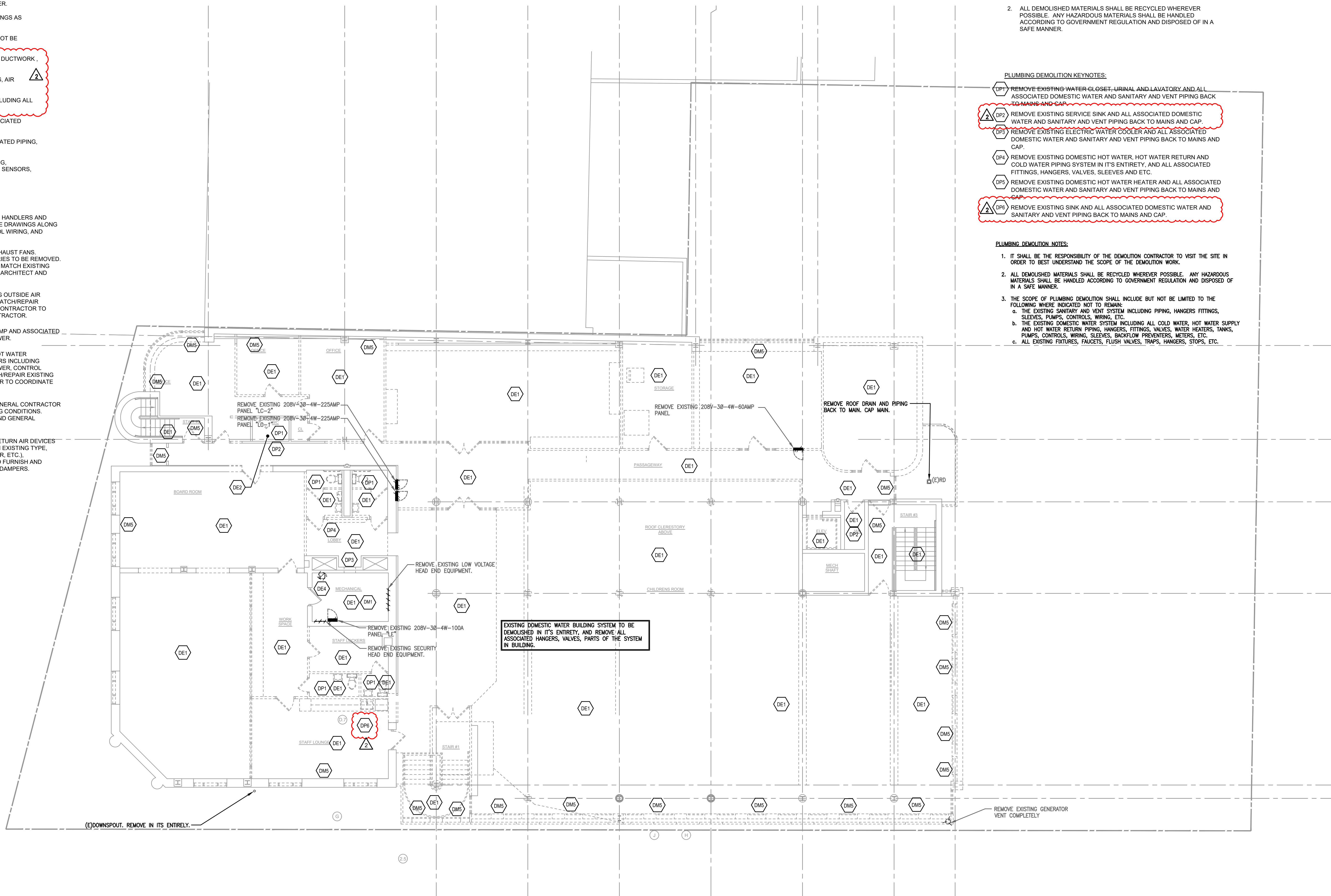
- IT SHALL BE THE RESPONSIBILITY OF THE DEMOLITION CONTRACTOR TO VISIT THE SITE IN ORDER TO BEST UNDERSTAND THE SCOPE OF THE DEMOLITION WORK.
- ALL DEMOLISHED MATERIALS SHALL BE RECYCLED WHEREVER POSSIBLE. ANY HAZARDOUS MATERIALS SHALL BE HANDLED ACCORDING TO GOVERNMENT REGULATION AND DISPOSED OF IN A SAFE MANNER.

PLUMBING DEMOLITION KEYNOTES:

- REMOVE EXISTING WATER-CLOSET-URINAL AND LAVATORY AND ALL ASSOCIATED DOMESTIC WATER AND SANITARY AND VENT PIPING BACK TO MAINS AND CAP.
- REMOVE EXISTING SERVICE SINK AND ALL ASSOCIATED DOMESTIC WATER AND SANITARY AND VENT PIPING BACK TO MAINS AND CAP.
- REMOVE EXISTING ELECTRIC WATER COOLER AND ALL ASSOCIATED DOMESTIC WATER AND SANITARY AND VENT PIPING BACK TO MAINS AND CAP.
- REMOVE EXISTING DOMESTIC HOT WATER, HOT WATER RETURN AND COLD WATER PIPING SYSTEM IN ITS ENTIRETY, AND ALL ASSOCIATED FITTINGS, HANGERS, VALVES, SLEEVES AND ETC.
- REMOVE EXISTING DOMESTIC HOT WATER HEATER AND ALL ASSOCIATED DOMESTIC WATER AND SANITARY AND VENT PIPING BACK TO MAINS AND CAP.
- REMOVE EXISTING SINK AND ALL ASSOCIATED DOMESTIC WATER AND SANITARY AND VENT PIPING BACK TO MAINS AND CAP.

PLUMBING DEMOLITION NOTES:

- IT SHALL BE THE RESPONSIBILITY OF THE DEMOLITION CONTRACTOR TO VISIT THE SITE IN ORDER TO BEST UNDERSTAND THE SCOPE OF THE DEMOLITION WORK.
- ALL DEMOLISHED MATERIALS SHALL BE RECYCLED WHEREVER POSSIBLE. ANY HAZARDOUS MATERIALS SHALL BE HANDLED ACCORDING TO GOVERNMENT REGULATION AND DISPOSED OF IN A SAFE MANNER.
- THE SCOPE OF PLUMBING DEMOLITION SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING WHERE INDICATED NOT TO REMAIN:
 - THE EXISTING SANITARY AND VENT SYSTEM INCLUDING PIPING, HANGERS, FITTINGS, SLEEVES, PUMPS, CONTROLS, WIRING, ETC.
 - THE EXISTING DOMESTIC WATER SYSTEM INCLUDING ALL COLD WATER, HOT WATER SUPPLY AND HOT WATER RETURN PIPING, HANGERS, FITTINGS, VALVES, WATER HEATERS, TANKS, PUMPS, CONTROLS, WIRING, SLEEVES, BACKFLOW PREVENTERS, METERS, ETC.
 - ALL EXISTING FIXTURES, FAUCETS, FLUSH VALVES, TRAPS, HANGERS, STOPS, ETC.



SECOND FLOOR DEMO PLAN - MECH/PLUMB/ELECT
SCALE: 1/8"=1'-0"

ELECTRICAL DEMOLITION KEYNOTES:

- UNLESS OTHERWISE NOTED, ALL EXISTING ELECTRICAL DEVICES, EQUIPMENT, LUMINAIRES, CONTROLS, FIRE ALARM DEVICES AND EQUIPMENT, ETC. IN THIS AREA ARE TO BE REMOVED. ALL ASSOCIATED WIRING METHODS ARE TO BE REMOVED TO THEIR POINT OF ORIGIN.
- UNLESS OTHERWISE NOTED, ALL EXISTING ELECTRICAL DEVICES, EQUIPMENT, LUMINAIRES, CONTROLS, FIRE ALARM DEVICES AND EQUIPMENT, ETC. IN THIS AREA ARE TO BE EXISTING TO REMAIN.
- INDICATES EXISTING MECHANICAL EQUIPMENT TO REMAIN. UNLESS OTHERWISE NOTED, ALL EXISTING DISCONNECT EQUIPMENT AND WIRING METHODS ARE TO REMAIN.
- INDICATES EXISTING DISCONNECTING MEANS ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE REMOVED. REMOVE ALL WIRING METHODS TO POINT OF ORIGIN.

ELECTRICAL DEMOLITION NOTES:

- ELECTRICAL CONTRACTOR IS TO VERIFY ALL EXISTING CONDITIONS IN FIELD PRIOR ANY WORK.
- REMOVE BRANCH CIRCUIT WIRING METHODS BACK TO POWER SOURCE OR TO ITS NEAREST ACTIVE DEVICE. ALL CIRCUITS SERVING THE EXISTING AREAS THAT ARE INTERRUPTED BY DEMOLITION WORK ARE TO BE RE-ENERGIZED TO MAINTAIN BRANCH CIRCUIT CONTINUITY.
- TAG ALL OVERCURRENT PROTECTION DEVICES THAT BECOME "SPARE" AS A RESULT OF DEMOLITION WORK. PROVIDE NEW TYPED PANELBOARD DIRECTORIES FOR ALL DISTRIBUTION AND BRANCH CIRCUIT EQUIPMENT IMPACTED BY THE RENOVATION WORK.
- REMOVE CONDUCTORS AND PROVIDE PULL-STRINGS AND CAP OPENINGS AND CONDUITS THAT ARE NOT TO BE REUSED.
- ALL POWER SHUTDOWNS ARE TO BE SCHEDULED AND COORDINATED WITH OWNER.
- IT IS THE INTENT FOR POWER TO REMAIN ACTIVE IN THE EXISTING TO REMAIN AREAS DURING CONSTRUCTION. CONTRACTOR IS TO MODIFY EXISTING WIRING ARRANGEMENT TO COMPLY.
- IT IS THE INTENT TO REMOVE ALL ELECTRICAL DEVICES WHICH INTERFERE WITH THE NEW CONSTRUCTION WORK OR DEMOLITION WORK WHETHER SPECIFICALLY IDENTIFIED OR NOT.
- ALL EXISTING INCOMING SERVICE WIRING METHODS, TRANSFORMER, C.T. AND METERING, AND MAIN DISTRIBUTION PANEL EQUIPMENT IS TO REMAIN. EXISTING OVERCURRENT PROTECTION DEVICES ARE TO BE REUSED TO SERVE NEW PANELBOARD EQUIPMENT AS INDICATED ON THE NEW WORK PLANS. PROVIDE NEW FEEDER WIRING METHODS AS REQUIRED.
- COORDINATE ALL DEMOLISHED EQUIPMENT THAT IS TO BE TURNED OVER TO THE OWNER.

THE DELIVERY OF THIS DRAWING SHOULD NOT BE CONSTRUED TO PROVIDE AN EXPRESS WARRANTY OR GUARANTEE TO ANYONE THAT ALL THE DIMENSIONS AND DETAILS ARE EXACT OR TO INDICATE THAT THE USE OF THIS DRAWING IMPLIES THE REVIEW AND APPROVAL BY THE DESIGN PROFESSIONAL OF ANY FUTURE USE. ANY USE OF THIS INFORMATION WITHOUT THE WRITER'S APPROVAL BY THE DESIGN PROFESSIONAL IS AT THE SOLE RISK AND LIABILITY OF THE USER. THE DESIGN PROFESSIONAL RESERVES THE RIGHT TO REMOVE OUR PROFESSIONAL SEAL AND/OR TITLE BLOCK.

NOTICE
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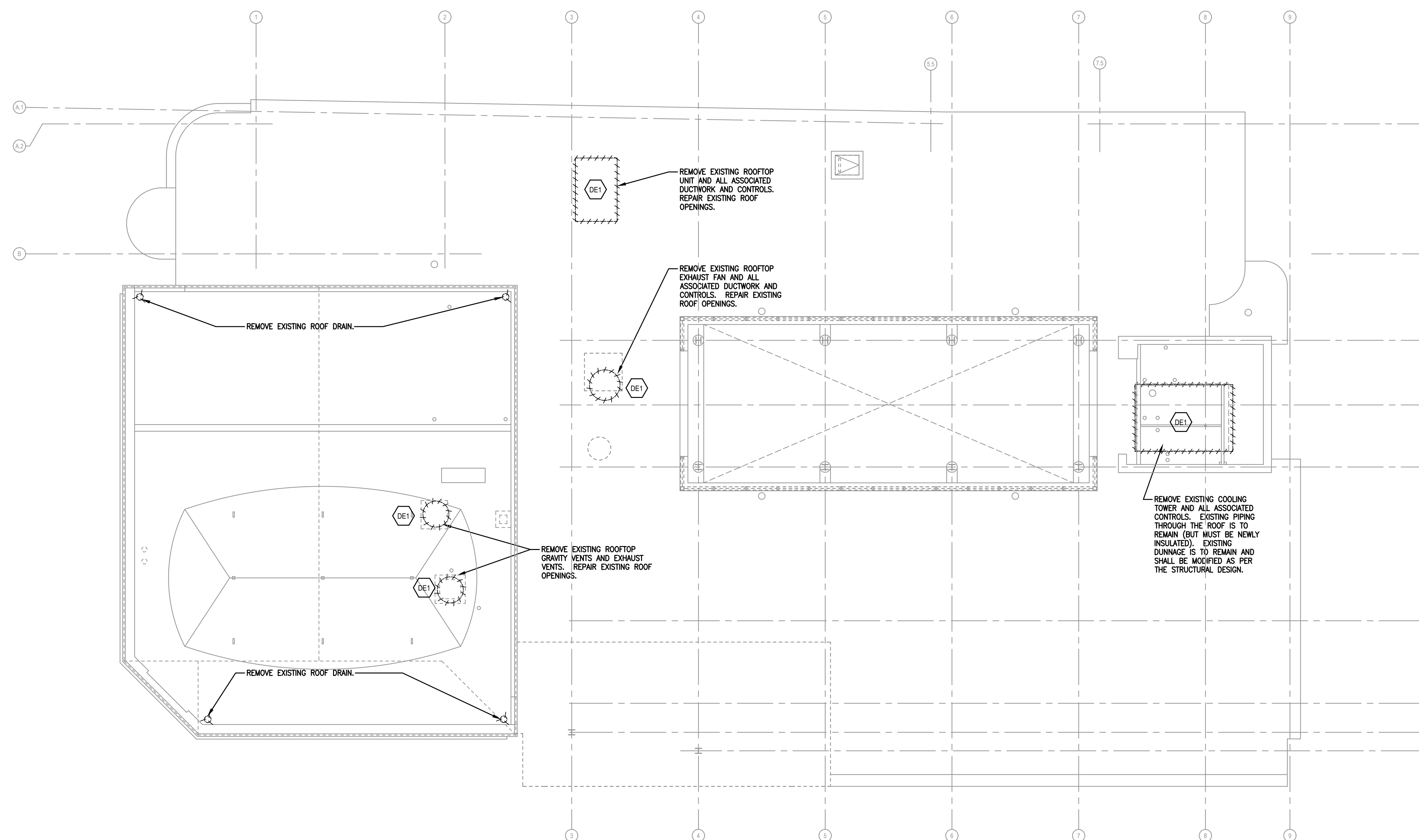
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Revision/Issue:
05/31/23 Issued for Permit
1 09/20/23 Issued for Bidding
2 10/04/23 Addendum 3

Drawn: CK/MW/DE/KG
Reviewed:
Contact: Chris Keenan
Project Number: 7010.03-22

Sheet Title:
**ROOF DEMO PLAN -
M/P/E**

Sheet Number:
DMPE1.3



ROOF DEMO PLAN - MECH/PLUMB/ELECT
SCALE: 1/8"=1'-0"

ELECTRICAL DEMOLITION KEYNOTES:

(DE) UNLESS OTHERWISE NOTED, ALL EXISTING ELECTRICAL DEVICES, AND EQUIPMENT, ETC. ASSOCIATED WITH DEMOLISHED EQUIPMENT ARE TO BE REMOVED. ALL ASSOCIATED WIRING METHODS ARE TO BE REMOVED TO THEIR POINT OF ORIGIN.

ELECTRICAL DEMOLITION NOTES:

- ELECTRICAL CONTRACTOR IS TO VERIFY ALL EXISTING CONDITIONS IN FIELD PRIOR ANY WORK.
- REMOVE BRANCH CIRCUIT WIRING METHODS BACK TO POWER SOURCE OR TO ITS NEAREST ACTIVE DEVICE. ALL CIRCUITS SERVING THE EXISTING AREAS THAT ARE INTERRUPTED BY DEMOLITION WORK ARE TO BE RE-ENERGIZED TO MAINTAIN BRANCH CIRCUIT CONTINUITY.
- TAG ALL OVERCURRENT PROTECTION DEVICES THAT BECOME "SPARE" AS A RESULT OF DEMOLITION WORK. PROVIDE NEW, TYPED PANELBOARD DIRECTORIES FOR ALL DISTRIBUTION AND BRANCH CIRCUIT EQUIPMENT IMPACTED BY THE RENOVATION WORK.
- REMOVE CONDUCTORS AND PROVIDE PULL-STRINGS AND CAP OPENINGS AND CONDUITS THAT ARE NOT TO BE REUSED.
- ALL POWER SHUTDOWNS ARE TO BE SCHEDULED AND COORDINATED WITH OWNER.
- IT IS THE INTENT FOR POWER TO REMAIN ACTIVE IN THE EXISTING TO REMAIN AREAS DURING CONSTRUCTION. CONTRACTOR IS TO MODIFY EXISTING WIRING ARRANGEMENT TO COMPLY.
- IT IS THE INTENT TO REMOVE ALL ELECTRICAL DEVICES WHICH INTERFERE WITH THE NEW CONSTRUCTION WORK OR DEMOLITION WORK WHETHER SPECIFICALLY IDENTIFIED OR NOT.
- COORDINATE ALL DEMOLISHED EQUIPMENT THAT IS TO BE TURNED OVER TO THE OWNER.

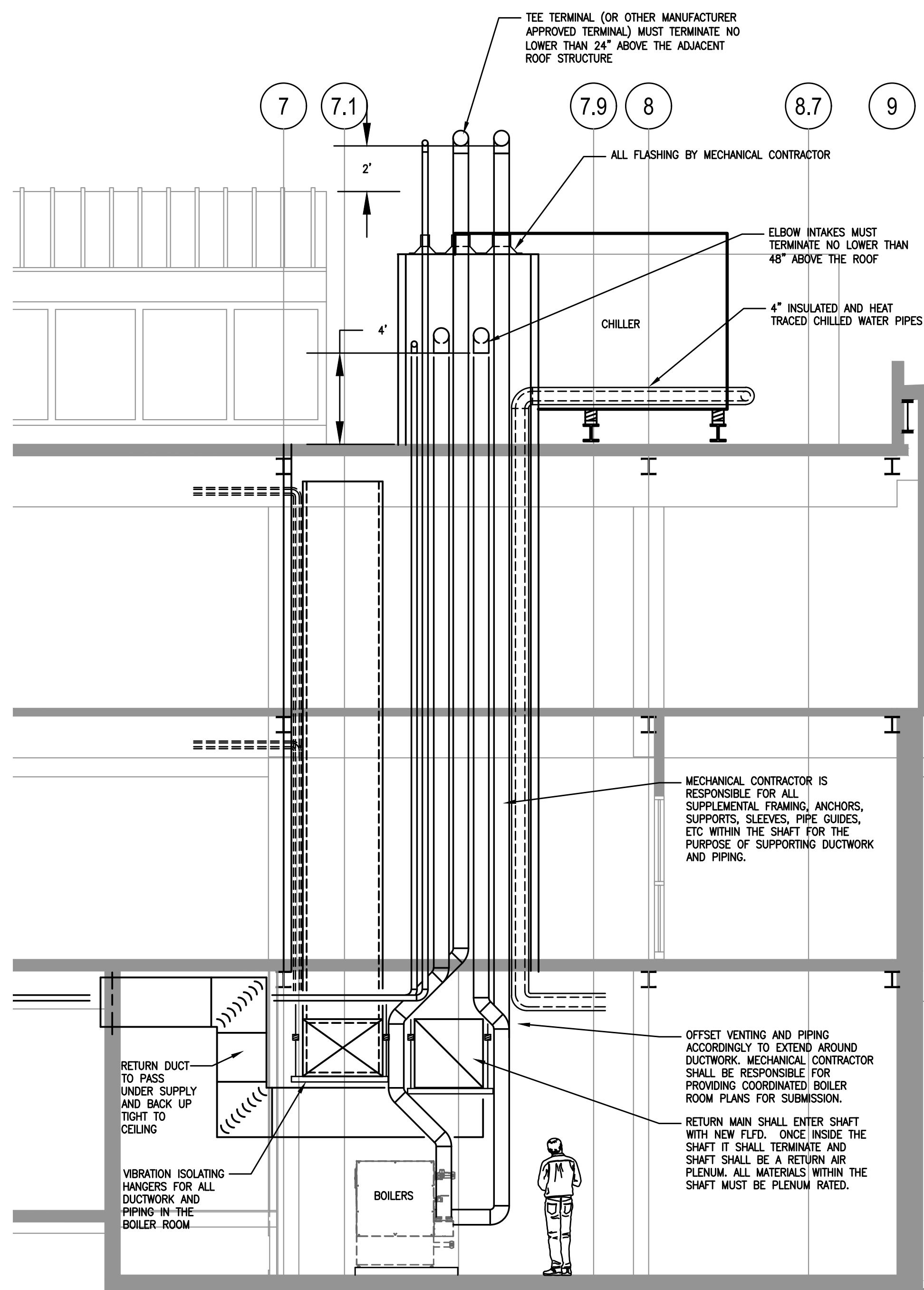
MECHANICAL DEMO NOTES

- IT SHALL BE THE RESPONSIBILITY OF THE DEMOLITION CONTRACTOR TO VISIT THE SITE IN ORDER TO BEST UNDERSTAND THE SCOPE OF THE DEMOLITION WORK.
- ALL DEMOLISHED MATERIALS SHALL BE RECYCLED WHEREVER POSSIBLE. ANY HAZARDOUS MATERIALS SHALL BE HANDLED ACCORDING TO GOVERNMENT REGULATION AND DISPOSED OF IN A SAFE MANNER.
- GENERAL CONTRACTOR TO PATCH/REPAIR EXISTING WALL/CEILINGS AS REQUIRED BY THE ARCHITECT.
- THE SCOPE OF MECHANICAL DEMOLITION SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
 - A. THE EXISTING AIR HANDLING UNITS, INCLUDING ALL EXISTING DUCTWORK, AIR DEVICES, PIPING, HANGERS, WIRING AND CONTROLS.
 - B. ALL EXISTING DUCTWORK SYSTEMS, INCLUDING ALL HANGERS, AIR DEVICES AND ACCESSORIES.
 - C. ALL EXISTING CHILLED AND HOT WATER PIPING SYSTEMS, INCLUDING ALL HANGERS, INSULATION, VALVES, AND ACCESSORIES.
 - D. ALL EXISTING EXHAUST AND SUPPLY FANS WITH ALL ITS ASSOCIATED CONTROLS AND ACCESSORIES.
 - E. ALL EXISTING FUEL OIL PIPING SYSTEMS WITH ALL ITS ASSOCIATED PIPING, TANKS, HANGERS, ETC.
 - F. ALL EXISTING PNEUMATIC CONTROLS AND ASSOCIATED TUBING, COMPRESSORS, FILTER-DRIERS, THERMOSTATS, ACTUATORS, SENSORS, ETC.

NOTICE

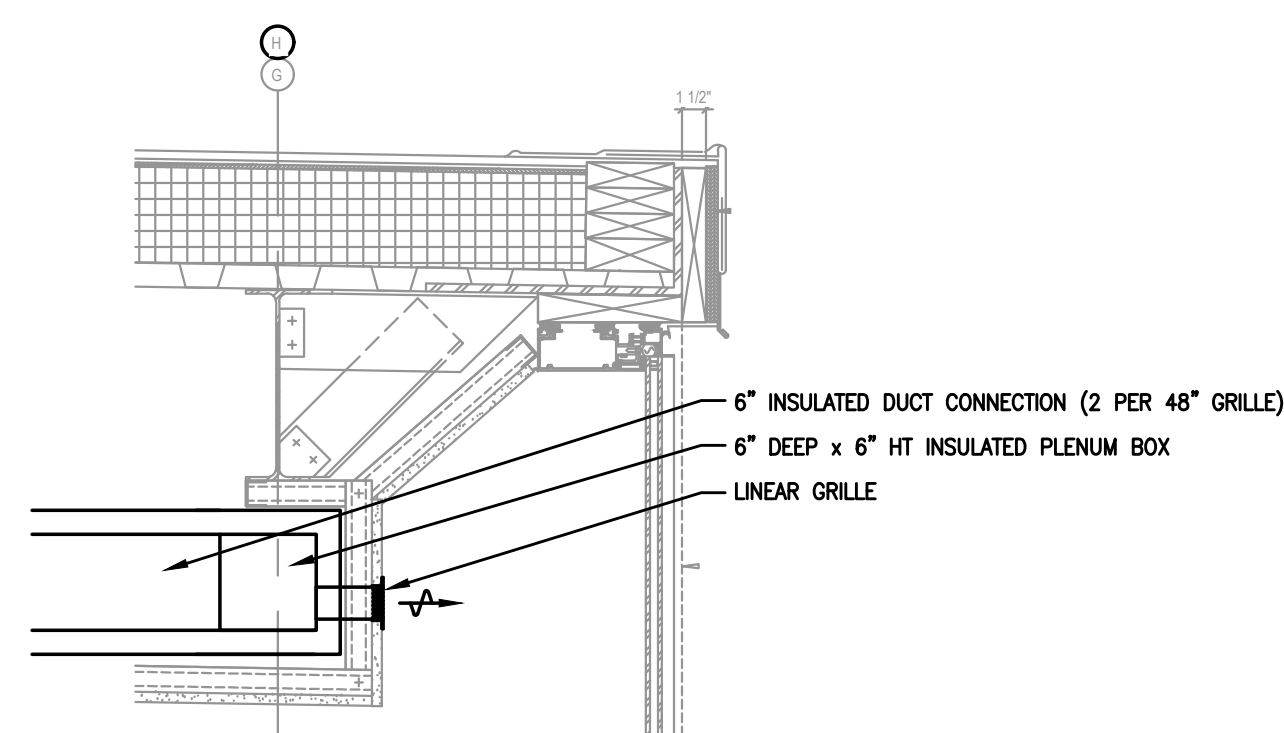
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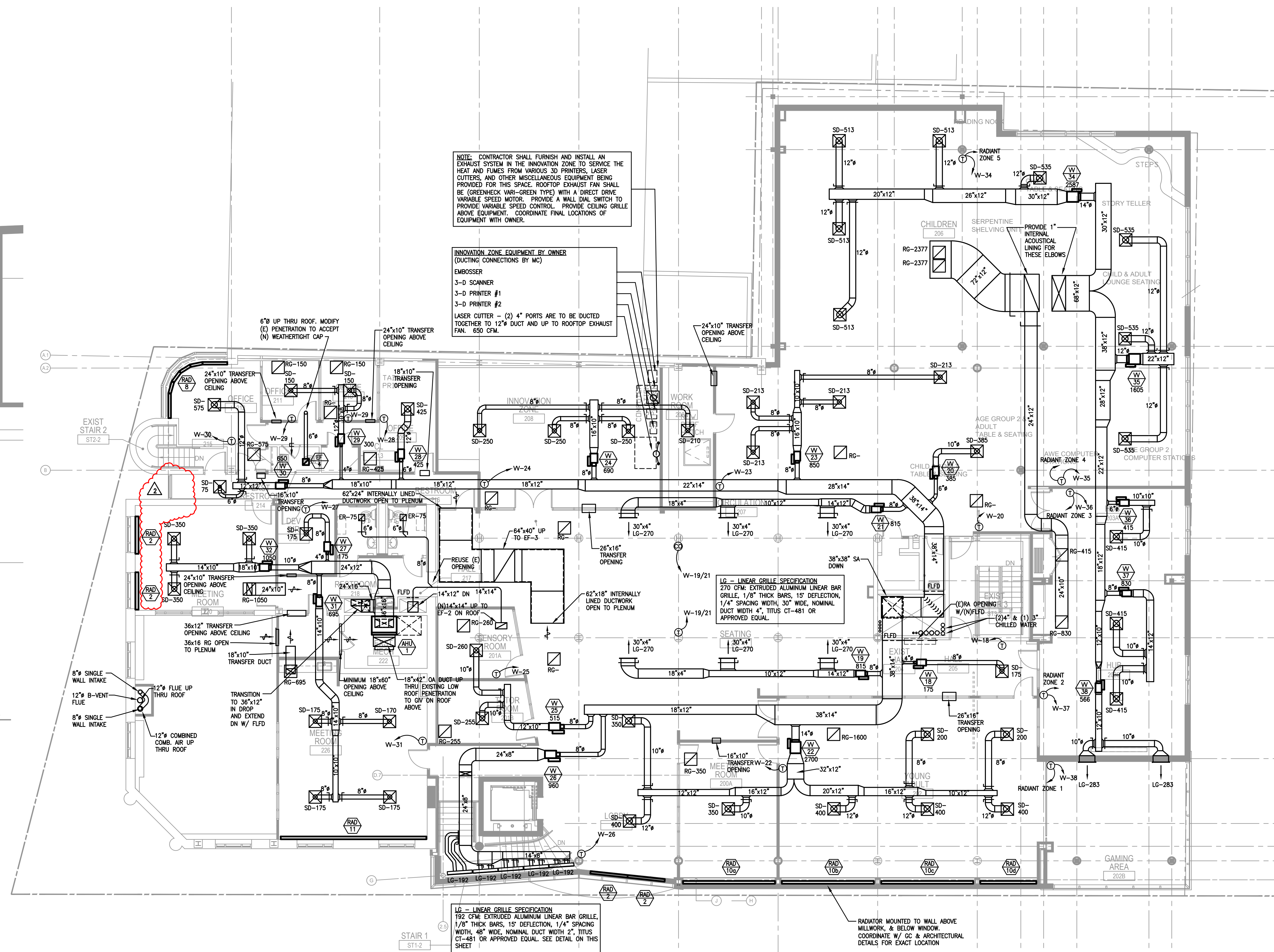
SECTION THROUGH SHAFT - MECHANICAL

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



SECTION AT LOBBY GRILLES- MECHANICAL

SCALE: 1"=1'-0"



SECOND FLOOR PLAN - MECHANICAL

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

NOTE: CONTRACTOR SHALL FURNISH AND INSTALL AN EXHAUST SYSTEM IN THE INNOVATION ZONE TO SERVICE THE HEAT AND FUMES FROM VARIOUS 3D PRINTERS, LASER CUTTERS AND OTHER MISCELLANEOUS EQUIPMENT BEING PROVIDED FOR THIS SPACE. ROOFTOP EXHAUST FAN SHALL BE (GREENHECK VARI-GREEN TYPE) WITH A DIRECT DRIVE VARIABLE SPEED MOTOR. PROVIDE A WALL DIAL SWITCH TO PROVIDE VARIABLE SPEED CONTROL. PROVIDE CEILING GRILLE ABOVE EQUIPMENT. COORDINATE FINAL LOCATIONS OF EQUIPMENT WITH OWNER.

INNOVATION ZONE EQUIPMENT BY OWNER (DUCTING CONNECTIONS BY MC)
EMBOSSER
3-D SCANNER #1
3-D PRINTER #2
LASER CUTTER - (2) 4" PORTS ARE TO BE DUCTED TOGETHER TO 12" DUCT AND UP TO ROOFTOP EXHAUST FAN. 650 CFM.

THE DELIVERY OF THIS DRAWING SHOULD NOT BE CONSIDERED TO PROVIDE AN EXPRESS WARRANTY OR GUARANTEE TO ANYONE THAT ALL THE DIMENSIONS AND DETAILS ARE EXACT OR TO INDICATE THAT THE USE OF THIS DRAWING IMPLIES THE REVIEW AND APPROVAL BY THE DESIGN PROFESSIONAL OF ANY FUTURE USE. ANY USE OF THIS INFORMATION WITHOUT THE WRITTEN APPROVAL BY THE DESIGN PROFESSIONAL IS AT THE SOLE RISK AND LIABILITY OF THE USER. THE DESIGN PROFESSIONAL RESERVES THE RIGHT TO REMOVE OUR PROFESSIONAL SEAL AND/OR TITLE BLOCK.

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CONTROL VALVE SCHEDULE				
NO.	SERVICE	TYPE	GPM	REMARKS
1 & 6	HW RAD.	2-WAY MODULATING	1.0	①
2	HW RAD.	2-WAY MODULATING	2.2	①
3	HW RAD.	2-WAY MODULATING	3.0	①
5	HW RAD.	2-WAY MODULATING	0.8	①
7	HW RAD.	2-WAY MODULATING	1.4	①
4	HW RAD.	2-WAY MODULATING	0.6	①
9	HW RAD.	2-WAY MODULATING	1.7	①
11	HW RAD.	2-WAY MODULATING	3.6	①
8	AHU	2-WAY MODULATING	5.0	INTEGRATE INTO AHU CONTROLS
10	CUH	2-WAY MODULATING	4.0	②
12	HW RAD.	2-WAY MODULATING	1.5	①
13	HW RAD.	2-WAY MODULATING	1.2	①

- ① INTEGRATE CONTROL VALVE WITH ASSOCIATED VAV CONTROLLER ② WALL MOUNTED THERMOSTAT WITH +/- 3 DEGREE ADJUSTMENT

EXHAUST FAN SCHEDULE (EF)													
Tag	Serves	Configuration	CFM	External Static (in.)	Fan HP	RPM	Sones	Inlet dBA	Volts	Phase	Basis of Design	Comments	
1	MECHANICAL ROOM	SIDEMALL PROPELLER	950	0.25	1	1282	11.4	63	120	1	THERMOSTAT & REFRIGERANT MONITORING STATION	GREENHECK SE1-20-420-VG	1, 2, 5, 6
2	RESTROOMS	CENTRIFUGAL DOWNBLAST	1300	0.5	1/3	1009	7.5	55	208	3	BAS - TIMECLOCK	GREENHECK GB-141	1, 2, 4, 5
3	BUILDING RELIEF	ROOF MOUNTED FABRA HOOD	19400	0.50	5	290	14.2	64	208	3	BUILDING DIFFERENTIAL PRESSURE SENSOR	GREENHECK LB-54-50	1, 2, 3, 5
4	OFFICE RESTROOM	CEILING MOUNTED	100	0.20	23 Watts	290	0.3	-	120	1	BAS - TIMECLOCK	GREENHECK SP-110-VG	2, 4, 5
5	LASER CUTTER	CENTRIFUGAL DOWNBLAST	650	0.50	1/6	1577	9.4	58	120	1	DRY CONTACT INTERLOCK WITH LASER CUTTER	GREENHECK G-095-VG	1, 2
6	INNOVATION ZONE	CENTRIFUGAL DOWNBLAST	400	0.50	1/10	1474	6.8	53	120	1	WALL MOUNTED DIAL SPEED CONTROL SWITCH	GREENHECK G-090-VG	1, 2

- Comments**
- Motor operated damper with end switch to prove damper operation. Interlock with fan via BAS. Provide BAS alarm
 - Equal by Acme, Penn Vent, Fantech, Cook
 - Sequence: Start-up - Upon a rise in space pressure above space pressure setpoint (0.05" wg, adjustable) as sensed by differential pressure sensor; motor operated damper shall open, then fan shall enable. Pressure Control - Fan shall modulate to maintain space pressure setpoint (0.05" wg, adjustable). Shut-down - Upon a fall in space pressure below space pressure setpoint (0.05" wg, adjustable) as sensed by differential pressure sensor, fan shall disable, then motor operated damper shall close
 - Sequence: Start-up - Fan shall enable during occupied hours (06:00 - 21:00, adjustable) as scheduled by BAS. Shut-down - Fan shall disable during unoccupied hours (21:00 - 06:00, adjustable) as scheduled by BAS
 - Fan motor with current transducer to prove motor operation. Provide BAS alarm
 - Sequence: Start-up - Upon a rise in space temperature above the space temperature setpoint (80°F, adjustable) as sensed by reverse acting thermostat fan shall enable. Shut-down - Upon a fall in space temperature below the space temperature setpoint (80°F, adjustable) as sensed by reverse acting thermostat fan shall disable. Refrigerant Monitoring Mode - Upon receiving a signal from the RMS, the fan shall enable.

UNIT HEATER SCHEDULE (CUH / UH)												
Tag	Type	KW	MBH	GPM	Size L x W x H	Voltage / Phase	Amps	MOC	Basis of Design	Comments		
CUH-1	FAN-FORCED RECESSED WALL HEATER	4.8	16.4	-	16 x 4 x 20	208 / 1	23.1	30	QMARK S5A4808	1, 2, 3, 6, 7		
CUH-2	FAN-FORCED RECESSED WALL HEATER	-	40	4	47 x 9 x 25	120 / 1	0.65	20	STERLING RW-04	3, 8, 9		
CUH-3	FAN-FORCED RECESSED CEILING HEATER	4	13.6	-	24 x 24 x 7	208 / 1	19.2	25	QMARK CDF548	3, 4		
CUH-4	FAN-FORCED RECESSED CEILING HEATER	-	40	4	47 x 9 x 25	120 / 1	0.65	20	STERLING RW-04	3, 8, 9, 10		
UH-1	CEILING HUNG VERTICAL UNIT HEATER	-	44	7.5	19 x 8.5 x 22	120 / 1	2.2	15	STERLING HS 10B	1, 7		
UH-2	CEILING HUNG VERTICAL UNIT HEATER	-	8.3	1.3	19 x 8.5 x 22	120 / 1	0.8	15	STERLING HS 1B	1, 7		

- Comments**
- Provide proportional heating element and fan control
 - Provide digital touchscreen thermostat with 5/2 programmability, 4 periods per day, lockout control, and dry contact connection to BAS
 - Finish selected by architect from standard colors
 - Integral thermostat
 - Provide 2-stage heating element and thermostat
 - Provide fully recessed mounting of box in order to provide flush mounting of grille. Coordinate with masonry contractor and electrical contractor in order to provide flush mounting of grille and fully recessed mounting of box in masonry walls.
 - Provide manufacturer provided integration option in order to integrate with BAS for ENABLE/DISABLE based on OA temperature
 - Provide 3-speed ECM motor, 3-way hot water control valve, wall mounted digital thermostat. Integrate into BAS.
 - Provide high capacity 2-row heating coil
 - Provide flush face, supply duct collar, and return duct collar

RADIATOR SCHEDULE												
NO	QTY	TYPE	BTU/HR/LF	BTU/HR	GPM EACH	DIMENSIONS			WATER IN OUT	BASIS OF DESIGN	REMARKS	
						L	W	H				
1	1	WALL MOUNTED	940	18220	1.7	18"	2"	17'-1/4"	160	140	RUNAL RF-6	① ② ③ ④ ⑤ ⑥ ⑦ ⑧
2	4	FLOOR MOUNTED	1100	6600	0.7	6'	2"	17'-1/4"	160	140	RUNAL RF-6	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
3	0	NOT USED										
4	1	WALL MOUNTED	2022	5055	0.6	2.5'	5"	17'-1/4"	160	140	RUNAL RF-6	① ② ③ ④ ⑤ ⑥ ⑦ ⑧
5	14	BARE ELEMENT	720	2160	.2	3'	4"	4"	160	140	STERLING VERSA-LINE STYLE "B" BARE ELEMENT	③ ④ ⑤ ⑥ ⑦ ⑧
6	0	NOT USED										
7	1	WALL MOUNTED	570	7980	0.8	12"	5"	11'-1/4"	160	140	STERLING DURA-VANE II JDPV31 PEDESTAL MOUNT	④ ⑤ ⑥ ⑦ ⑧ ⑩
8	1	FLOOR MOUNTED	570	9120	1.0	16"	5"	11'-1/4"	160	140	STERLING DURA-VANE II JDPV31 PEDESTAL MOUNT	④ ⑤ ⑥ ⑦ ⑧ ⑩
9a	1	WALL MOUNTED	625	24375	2.5	39"	2"	11'-1/2"	160	140	RUNAL RF-3	① ② ③ ④ ⑤ ⑥ ⑦ ⑧
9b	1	WALL MOUNTED	625	4687	0.5	7.5"	2"	11'-1/2"	160	140	RUNAL RF-3	① ② ③ ④ ⑤ ⑥ ⑦ ⑧
10a,b,c	3	WALL MOUNTED	625	8750	1.0	14"	2"	11'-1/2"	160	140	RUNAL RF-3	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑩
10d	1	WALL MOUNTED	625	5625	0.6	9"	2"	11'-1/2"	160	140	RUNAL RF-3	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑩
11	1	WALL MOUNTED	625	14375	1.5	23"	2"	11'-1/2"	160	140	RUNAL RF-3	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑩

- FACTORY PROVIDED 12" FULL END CAP TRIM W/ 5" DOUBLE PANEL RETURN. PIPING SHALL BE COMPLETELY CONCEALED
- REFER TO CONTROL VALVE SCHEDULE FOR ADDITIONAL INFORMATION
- PROVIDE VERTICAL PIPE TRIM FROM FINISHED FLOOR TO END CAP TRIM. PIPING SHALL BE COMPLETELY CONCEALED
- PROVIDE ALL FACTORY PROVIDED RETAINING CLIPS, WALL BRACKETS, AND OFFSET BOLTS REQUIRED FOR MANUFACTURER'S INSTALLATION REQUIREMENTS
- FINISH BY ARCHITECT FROM STD. COLORS. CONCEALED UNITS SHALL BE MFG STD GREY BROWN COLOR 8019
- PROVIDE MITERED CORNERS IN ORDER TO PROVIDE RAISED ENCLOSURE. DESIGN INTENT: (3) 2FT SECTIONS, (2) 4FT SECTIONS, & 4 MITERED CORNERS
- COORDINATE RIGHTHAND, LEFTHAND, AND SERVIC PIPING CONNECTIONS WITH MASONRY CONTRACTOR CHASING EXISTING EXTERIOR WALL
- SUPPLY & RETURN BALL VALVES
- MANUFACTURERS: RUNAL, VELOCAN, STERLING OR PRIOR APPROVED EQUAL.
- MOUNT UNIT ON WALL ABOVE MILLWORK AND BELOW WINDOW. PROVIDE CONNECTORS, TRIM PIECES, AND HARDWARE REQUIRED TO CONCEAL ALL PIPING.

PUMP SCHEDULE (P)												
Tag	Serves	Configuration	GPM	FT. HD.	RPM	HP	Voltage / Phase	Basis of Design		Comments		
								Manufacturer	Model			
1	CHILLED WATER	SENSORLESS CLOSE COUPLED VERTICAL INLINE TANGO PUMP	210	50	2521	3	208 / 3	Armstrong	4372	* 1 2 3 4 5 6 8		
2	CHILLED WATER	SENSORLESS CLOSE COUPLED VERTICAL INLINE TANGO PUMP	210	50	2521	3	208 / 3	Armstrong	4372	* 1 2 3 4 5 6 8		
3	HOT WATER	SENSORLESS CLOSE COUPLED VERTICAL INLINE TANGO PUMP	129.8	50	2826	3	208 / 3	Armstrong	4372	1 2 3 4 7 8		
4	HOT WATER	SENSORLESS CLOSE COUPLED VERTICAL INLINE TANGO PUMP	129.8	50	2826	3	208 / 3	Armstrong	4372	1 2 3 4 7 8		
5	RADIANT FLOOR	SENSORLESS CLOSE COUPLED VERTICAL INLINE TANGO PUMP	16	15	2383	1/3	208 / 3	Armstrong	4372	2 3 4 8		
6	RADIANT FLOOR	SENSORLESS CLOSE COUPLED VERTICAL INLINE TANGO PUMP	16	15	2383	1/3	208 / 3	Armstrong	4372	2 3 4 8		

*Provide algorithmic controls to maintain 120 gpm minimum flow for proper operation of new chiller

- Comments**
- Vibration isolators
 - Flexible connections
 - Pressure gauge discharge/fuction
 - Inlet strainer
 - Provide air/dirt separator equal to SPIROTHERM VDT400
 - Provide ASME expansion tank equal to ARMSTRONG AX-60V
 - Provide air/dirt and hydraulic separator equal to SPIROTHERM VDX300
 - Provide Factory Furnished Fused Disconnect accessory

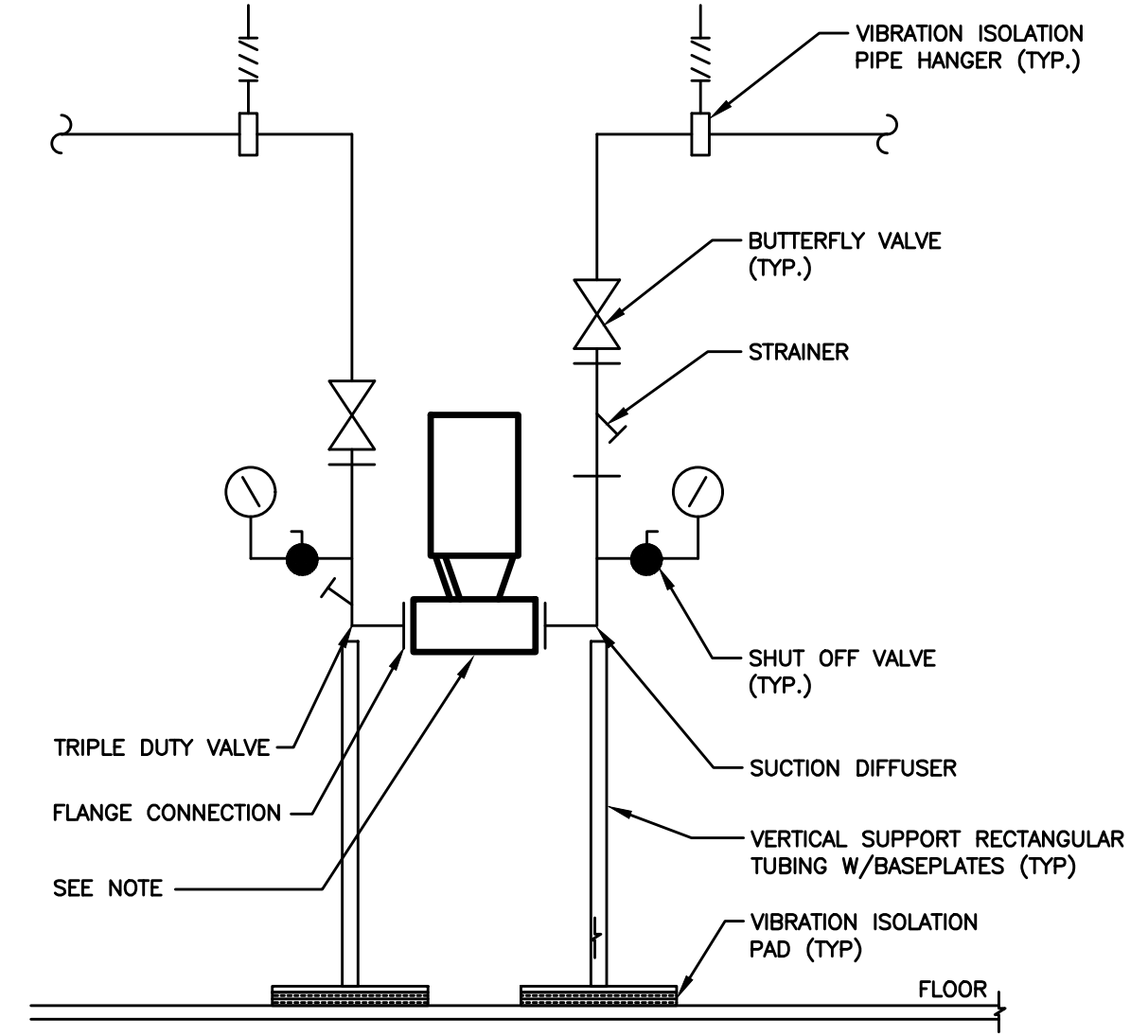
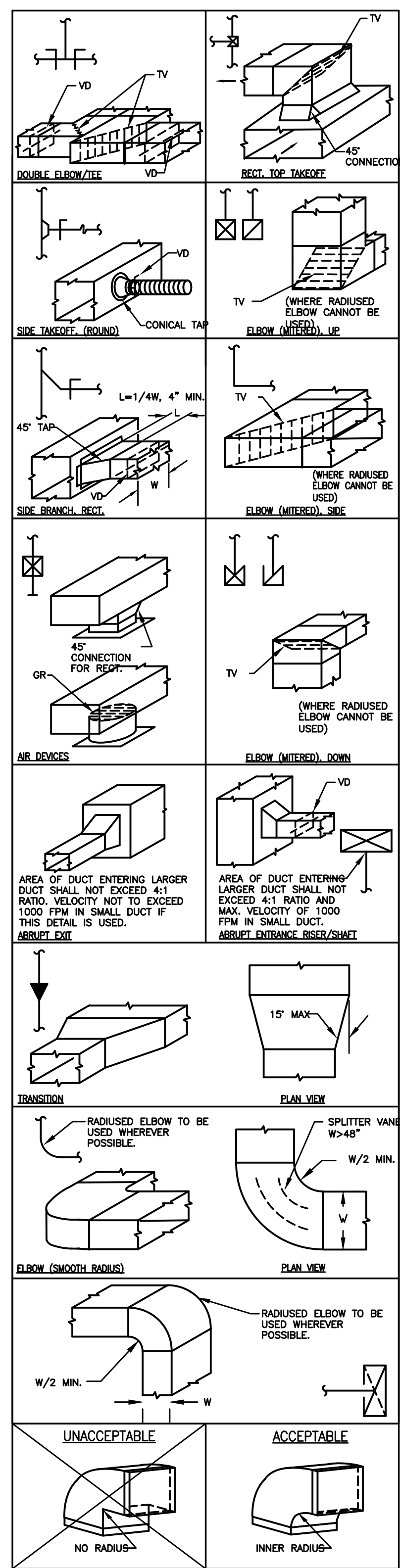
CH 1 AIR COOLED CHILLER SPECIFICATION	
•	90 TONS, HIGH EFFICIENCY, AIR COOLED CHILLER WITH "SUPER QUIET" FACTORY SOUND PACKAGE
•	10.21 EER, 15.98 EER (PLV/P)
•	208V, 3PH, 60HZ, 395 MCA, 90 MOC
•	(4) COMPRESSORS, (2) CIRCUITS, (4) CAPACITY STEPS
•	BASIS OF DESIGN TRANE Y20 (SUBSTITUTIONS REQUIRE ACOUSTICAL AND WEIGHT ANALYSIS AND ENGINEER APPROVAL)
•	210 GPM, 5475 ENT, 447 LWT, 117 GPM MBH FLOW, 8.11FT HD MAX WATER TD
•	FREEZE PROTECTION, HIGH AMBIENT CAPABILITY
•	6200 LBS WEIGHT
•	PROVIDE VIBRATION ISOLATION SPRINGS ON DUNNAGE PROVIDED UNDER STRUCTURAL CONTRACT
•	OCTAVE BAND SOUND PRESSURE (dB), A WEIGHTED
•	AIRFLOW FACTOR (L/S): 63 HZ 125 HZ 250 HZ 500 HZ 1000 HZ 2000 HZ 4000 HZ 8000 HZ OVERALL SOUND PRESSURE LEVEL, LP, DBA @ 1 M (3.3 FT)
•	75 61 67 63 52 56 56 51 49 63 62
•	50 63 59 56 45 50 54 52 51 59 59
•	25 61 67 62 52 51 51 47 45 59 59

RTU 1 ROOFTOP UNIT SPECIFICATION	
•	15 TON PACKAGED VARIABLE AIR VOLUME (VAV) ROOFTOP GAS/ELECTRIC, DOWNFLOW
•	11.90 EER, 12.20 EER
•	208V, 3PH, 60HZ, 68 MCA, 90 MOC
•	(2) COMPRESSOR CIRCUITS
•	BASIS OF DESIGN TRANE Y20 (SUBSTITUTIONS REQUIRE ACOUSTICAL AND WEIGHT ANALYSIS AND ENGINEER APPROVAL)
•	GAS HEAT: 350 MBH INPUT (250 MBH 1ST STAGE), 280 MBH OUTPUT (200 MBH 1ST STAGE), 707 EAT, 1137 LAT
•	194 MBH TOTAL, 149 MBH SENSIBLE
•	2,800 LBS WEIGHT
•	PROVIDE VIBRATION ISOLATION ROOF CURB
•	ACOUSTICS
•	SOUND PATH: 63 HZ 125 HZ 250 HZ 500 HZ 1 KHZ 2 KHZ 4 KHZ 8 KHZ
•	DUCTED DISCHARGE: 67 DB 82 DB 79 DB 79 DB 69 DB 69 DB 60 DB 60 DB 53 DB 62
•	DUCTED INLET: 51 DB 62 DB 74 DB 70 DB 65 DB 65 DB 60 DB 60 DB 53 DB 62
•	OUTDOOR NOISE: 89 DB 97 DB 94 DB 92 DB 89 DB 83 DB 79 DB 75 DB

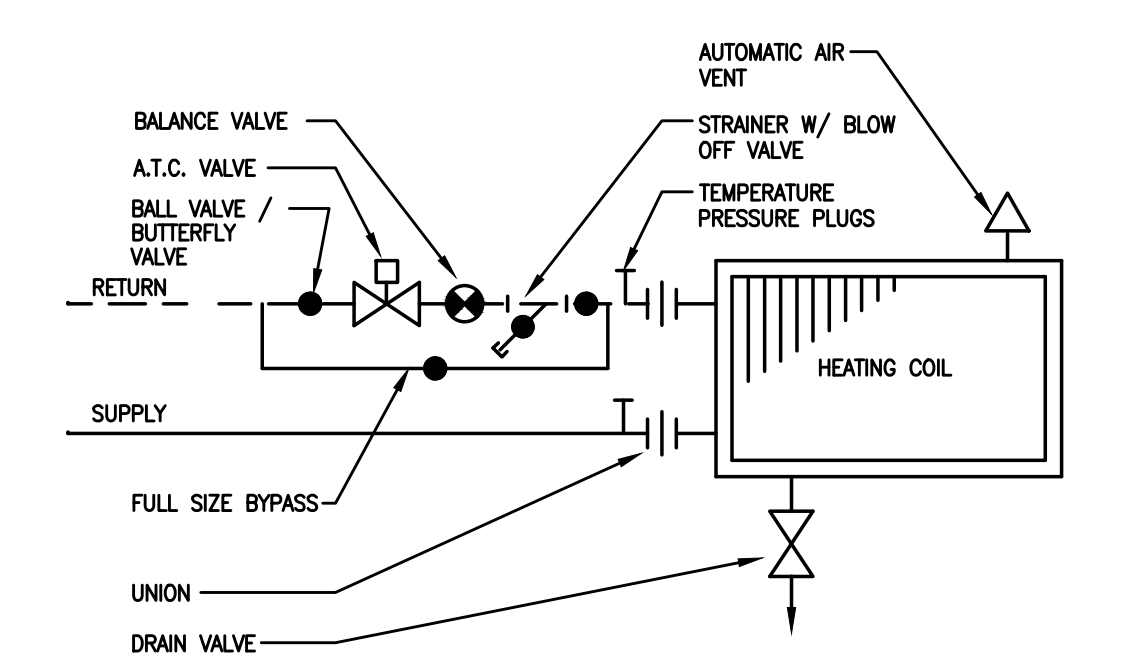
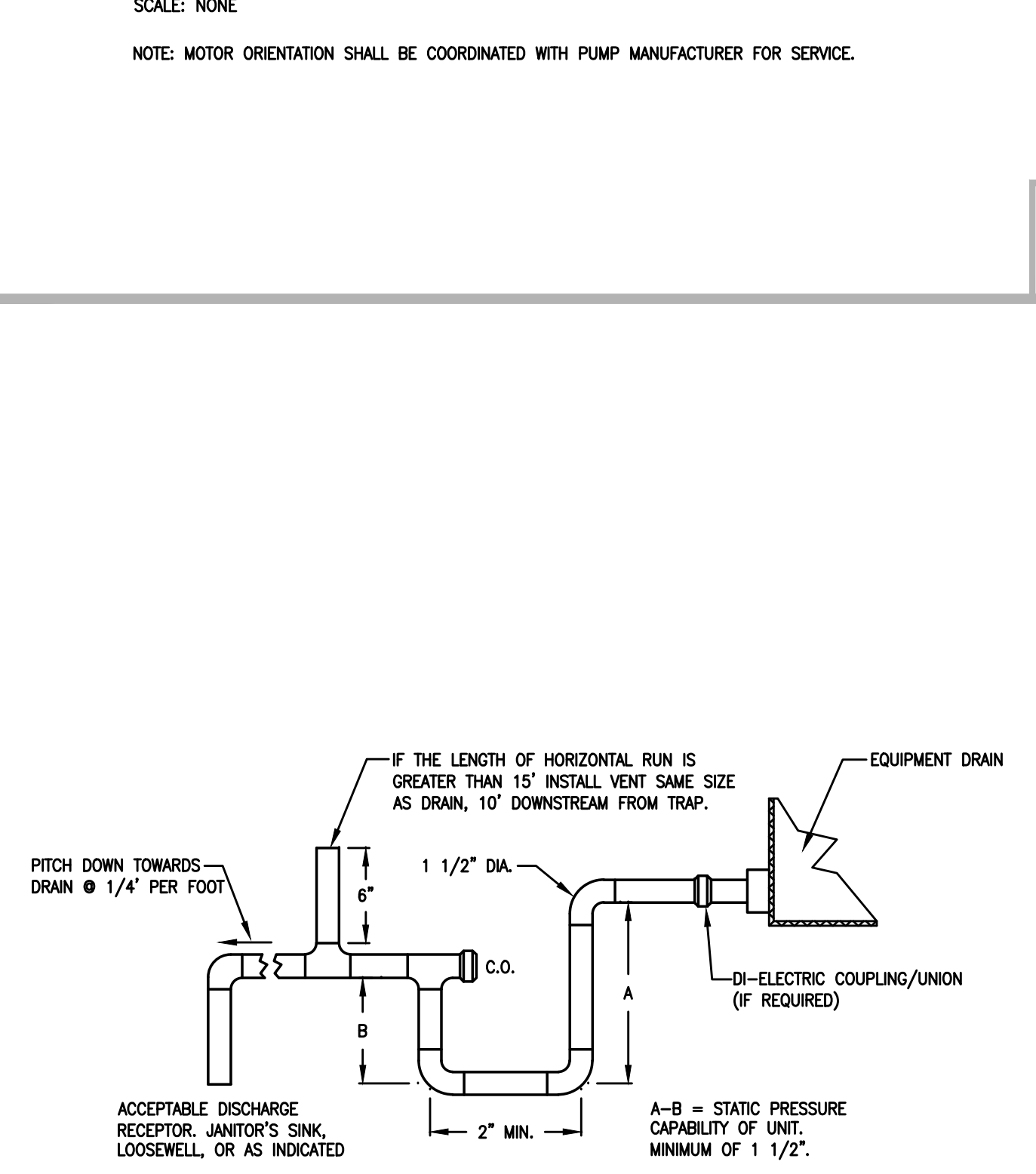
VAV BOX SCHEDULE (VV)																
Tag	Box Size	Max CFM	Min CFM	DCV Min CFM	CO2	OCC*	Inlet Size	Outlet Size	Heating Coil					Control Valve	Basis of Design	
									EAT (°F)	LAT (°F)	MBH	GPM	HD LOSS (FT)			EWTT (°F)
VV-01	8	570	171	-	-	-	8	12x10	55	106	10	1.0	0.8	160	2-WAY	ENVIRO-TEC SDR
VV-02	12	1800	540	0	-	-	12	16x15	55	95	25	2.5	0.8	160	2-WAY	ENVIRO-TEC SDR
VV-03	12	1435	431	0	-	-	12	16x15	55	95	20	2.0	0.5	160	2-WAY	ENVIRO-TEC SDR
VV-04	8	735	221	-	-	-	8	12x10	55	98	11	1.1	0.6	160	2-WAY	ENVIRO-TEC SDR
VV-05	10	895	269	-	-	-	10	14x12	55	97	13	1.3	0.8	160	2-WAY	ENVIRO-TEC SDR
VV-06A	8	660	198	-	-	-	8	12x10	55	99	10	1.0	0.6	160	2-WAY	ENVIRO-TEC SDR
VV-06B	10	1020	306	-	-	-	10	14x12	55	95	14	1.4	0.8	160	3-WAY	ENVIRO-TEC SDR
VV-07	4	225	68	-	-	-	4	12x8	55	94	10	1.0	0.5	160	2-WAY	ENVIRO-TEC SDR
VV-08A	8	595	180	-	-	-	8	12x10	55	103	10	1.0	0.6	160	2-WAY	ENVIRO-TEC SDR
VV-08B	8	595	180	-	-	-	8	12x10	55	103	10	1.0	0.6	160	2-WAY	ENVIRO-TEC SDR
VV-08C	8	595	180	-	-	-	8	12x10	55	103	10	1.0	0.6	160	2-WAY	ENVIRO-TEC SDR
VV-09	8	865	260	-	-	-	8	12x10	55	95	12	1.2	0.6	160	2-WAY	ENVIRO-TEC SDR
VV-10	8	900	270	-	-	-	8	12x10	55	95	41	4.1	4.2	160	2-WAY	ENVIRO-TEC SDR
VV-11	4	250	75	-	-	-	4	12x8	55	97	12	1.2	0.5	160	2-WAY	ENVIRO-TEC SDR
VV-12	4	225	68	-	-	-	4	12x8	55	94	10	1.0	0.5	160	2-WAY	ENVIRO-TEC SDR
VV-13	8	675	203	-	-	-	8	12x10	55	98	10	1.0	0.6	160	2-WAY	ENVIRO-TEC SDR
VV-14	6	450	135	-	-	-	6	12x8	55	119	10	1.0	0.5	160	3-WAY	ENVIRO-TEC SDR
VV-15	4	200	60	-	-	-	4	12x8	55	98	10	1.0	0.5	160	2-WAY	ENVIRO-TEC SDR
VV-16	8	630	189	-	-	-	8	12x10	55	101	10	1.0	0.6	160	2-WAY	ENVIRO-TEC SDR
VV-17	12	1960	588	-	-	-	12	16x15	55	99	30	3.0	1.6	160	3-WAY	ENVIRO-TEC SDR
VV-18	4	200	60	-	-	-	4	12x8	55	98	10	1.0	0.5	160	2-WAY	ENVIRO-TEC SDR
VV-19	8	815	245	0	-	-	8	12x10	55	94	11	1.1	0.8	160	2-WAY	ENVIRO-TEC SDR
VV-20	6	385	116	-	-	-	6	12x8	55	96	18	1.8	0.7	160	2-WAY	ENVIRO-TEC SDR
VV-21	8	815	245	0	-	-	8	12x10	55	94	11	1.1	0.8	160	2-WAY	ENVIRO-TEC SDR
VV-22	14	2700	810	-	-	-	14	20x18	55	96	38	3.8	2.1	160	2-WAY	ENVIRO-TEC SDR
VV-23	8	850	255	-	-	-	8	12x10	55	96	12	1.2	0.6	160	2-WAY	ENVIRO-TEC SDR
VV-24	6	465	140	-	-</											

HEATING, VENTILATING, AND AIR CONDITIONING GENERAL NOTES

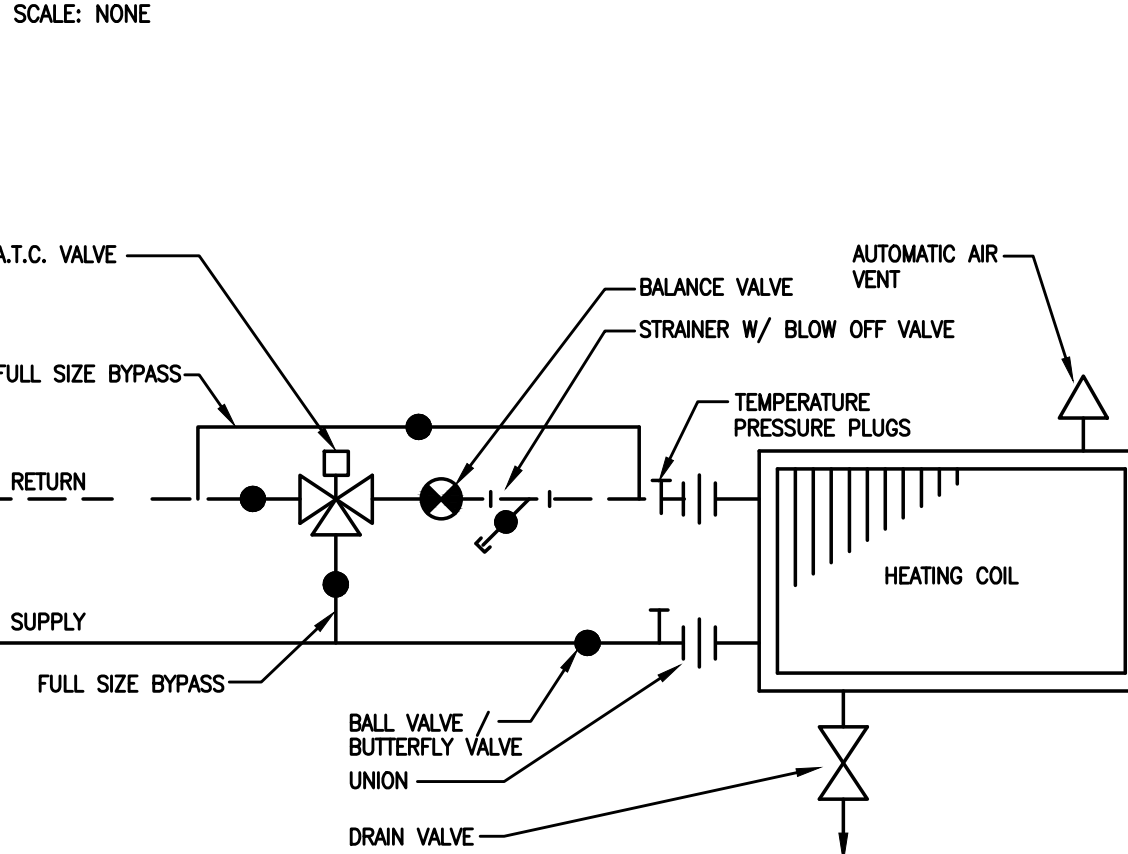
- ALL INTERIOR RECTANGULAR DUCTWORK TO BE GALVANIZED SHEET METAL IN ACCORDANCE WITH SMACNA LOW PRESSURE CONSTRUCTION STANDARD. ALL DUCTMATE INTERIOR RECTANGULAR DUCTWORK TO BE G-60 OR BETTER GALVANIZED STEEL AND ALL EXTERIOR TO BE G-90 OR BETTER GALVANIZED STEEL. ALL DUCTWORK IN MOST AREAS (KITCHEN, SHOWERS, TOILET ROOMS, POOLS, ETC.) SHALL BE ALUMINUM CONSTRUCTION. ALL DUCTWORK SIZES INDICATED ARE INSIDE DIMENSIONS.
- ALL SUPPLY AND OUTSIDE AIR DUCTWORK SHALL BE INSULATED WITH 2" FIBERGLASS DUCTWRAP WITH FOIL VAPOR BARRIER. ALL SUPPLY, OUTSIDE, AND RETURN AIR DUCTWORK IN UNCONDITIONED AREAS/ATTICS SHALL HAVE 3" FIBERGLASS INSULATION WITH VAPOR BARRIER.
- ALL DUCTWORK TO COMPLY WITH NFPA PAMPHLET 90-A. ALL DUCTWORK SEAMS SHALL BE SEALED WITH DUCT SEALANT. ALL NEW DUCTWORK SECTIONS AND FITTINGS TO BE INSTALLED ON THE PROJECT SHALL BE COVERED AND SEALED FROM DUST, DIRT, DEBRIS.
- FURNISH AND INSTALL ALL CONTROL WIRING FOR OPERATION OF THE EQUIPMENT. ALL CONCEALED CONTROL WIRING SHALL BE PLENUM RATED. ALL EXPOSED/UNFINISHED AREAS SHALL BE IN EMT CONDUIT. ALL CONTROL WIRING IS BY THE MECHANICAL CONTRACTOR/ATC CONTRACTOR REGARDLESS IF IT IS LINE OR LOW VOLTAGE WIRING, AS LONG AS IT PERFORMS A CONTROL FUNCTION. THE MECHANICAL CONTRACTOR SHALL MAKE AN ALLOWANCE TO COMPENSATE THE ELECTRICAL CONTRACTOR FOR ALL ASSOCIATED COSTS.
- INSULATE REFRIGERANT PIPING WITH 1" ARMAFLEX II INSULATION.
- PROVIDE TEST, BALANCE, AND ADJUST REPORT (ALL AIR & HYDRONIC SYSTEMS) AT THE COMPLETION OF THE WORK. BALANCE AIR QUANTITIES AND FLOW RATES TO VALUES ON THE DRAWINGS. SET DAMPER AND VALVE POSITIONS. ALLOW FOR ONE SHAFT CHANGE PER EACH OF THE HVAC SYSTEMS. PROVIDE TOTAL AND STATIC PRESSURE READINGS, TRAVERSE AT FAN INLETS AND OUTLETS. READ PUMP PRESSURE, AMPS, GPMs, RPMs AND IDENTIFY OPERATING POINT ON THE IMPELLER CURVE. TBA CONTRACTOR TO BE INDEPENDENT AND AHIC/NEBB CERTIFIED.
- OBTAIN AND PAY FOR BUILDING PERMITS, INSPECTIONS, CONNECTION CHARGES, AND FEES.
- PROVIDE FOR FLEXIBLE CONNECTIONS AT EQUIPMENT.
- PROVIDE SHOP DRAWINGS OF ALL EQUIPMENT FOR REVIEW PRIOR TO ORDERING. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR AND PHYSICAL DIMENSIONS PRIOR TO SHOP DRAWING SUBMISSION.
- SUSPENDED HVAC EQUIPMENT TO BE MOUNTED ON VIBRATION ISOLATION HANGERS. PROVIDE ANY ADDITIONAL SUPPLEMENTAL STEEL NECESSARY TO SUPPORT THE UNITS FROM THE BUILDING STRUCTURAL STEEL OR FRAMING MEMBERS. SUBMIT SHOP DRAWINGS FOR APPROVAL.
- CONTRACTOR MAY USE INSULATED FLEXIBLE DUCT RUNOUTS NOT TO EXCEED 10 FEET FOR SUPPLY DUCTWORK ONLY. ALL RETURN AND EXHAUST AIR DUCTWORK TO BE RIGID DUCTWORK.
- PROVIDE CONDENSATE DRAIN TO ACCEPTABLE CODE APPROVED DISCHARGE POINT. 1-1/2" PVC(COPPER). ALL CONDENSATE PIPING SHALL HAVE 1/2" FIBERGLASS INSULATION WITH VAPOR BARRIER, FURNISH AND INSTALL CONDENSATE PUMP WITH DISCHARGE CHECK VALVE IF GRAVITY FLOW IS NOT OBTAINABLE. SUBMIT SHOP DRAWING FOR REVIEW AND APPROVAL AND COORDINATE ELECTRICAL WORK WITH THE ELECTRICAL CONTRACTOR.
- DIFFUSERS SHALL BE SQUARE FACE, STEEL, PLAQUE TYPE, WITH ROUND NECK AND VOLUME CONTROL DEVICE. CARNES, TITUS, ANEMOSTAT, TUTTLE AND BAILEY, METAL-ARE. FACE OF DIFFUSER TO BE FLUSH WITH CEILING.
- REGISTERS SHALL BE STEEL CONSTRUCTION, EXTRUDED STEEL BARS, 45 DEGREE ANGLE, 3/4" BLADE SPACING, MITERED FRAME WITH ADJUSTABLE DAMPER. GRILLES SHALL BE THE SAME WITHOUT DAMPER. LOW REGISTERS TO BE HEAVY DUTY STEEL/EXTRUDED ALUMINUM CONSTRUCTION. AIR DEVICES IN MOIST AREAS (KITCHEN, TOILET ROOMS, SHOWERS, POOLS, ETC) TO BE ALUMINUM.
- FURNISH AND INSTALL FIRE DAMPERS IN RATED WALL/FLOOR/SHAFT ASSEMBLIES WHERE INDICATED ON THE MECHANICAL PLANS. FIRE DAMPERS SHALL BE INSTALLED IN ACCORDANCE WITH THE UL LISTING FOR THE DAMPER AND AS DETAILED AS ON THE DRAWING. THE DAMPERS SHALL BE SET IN A STEEL SLEEVE AND PROVIDED WITH BREAKAWAY CONNECTIONS. DAMPERS SHALL BE 1-1/2 HR RATED. FURNISH AND INSTALL SMOKE DAMPERS IN ALL SMOKE RATED WALLS/PARTITIONS AS PER ARCHITECTURAL PLANS. COORDINATE LOCATIONS AND POWER REQUIREMENTS WITH ELECTRICAL/FIRE ALARM CONTRACTORS.
- PROVIDE INSULATED PREFABRICATED ROOF CURBS FOR ROOF MOUNTED EQUIPMENT, DUCTWORK, AND PIPING AS MANUFACTURED BY THE ROOF MOUNTED EQUIPMENT MANUFACTURER, RATE, OR APPROVED EQUIPMENT. ALL PIPING ROOF PENETRATIONS SHALL HAVE ROOF CURBS. ALL ROOF CURBS SHALL BE SECURED TO THE ROOF AND COORDINATED WITH THE OWNER'S ROOFING CONTRACTOR.
- THREE (3) PHASE STARTERS TO BE PROVIDED BY MECHANICAL CONTRACTOR. MAGNETIC ACROSS THE LINE. AUXILIARY CONTACTS. SINGLE PHASE STARTERS BY ELECTRICAL CONTRACTOR. ALL STARTERS ARE TO BE INSTALLED BY THE ELECTRICAL CONTRACTOR.
- ALL WORK TO BE CONCEALED UNLESS OTHERWISE INDICATED.
- SUBMIT SHOP DRAWINGS OF ALL SHEET METAL FOR REVIEW. DRAWINGS SHALL BE NOT LESS THAN 1/4" SCALE AND SHOW ALL STEEL, PIPING, CONDUIT, LIGHTING, SPRINKLER, EQUIPMENT AND ARCHITECTURAL FEATURES. DUCTWORK IS TO BE SHOWN DOUBLE LINE. SHOW DETAIL OF FIRE DAMPER, SHEET METAL SHOP DRAWING SHALL BE UTILIZED FOR CONTRACTORS COORDINATION DRAWINGS AND SUBMIT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. IF SHEET METAL SHOP DRAWINGS ARE NOT SUBMITTED OR IF THE CONTRACTOR INSTALLS THE DUCTWORK WITHOUT APPROVALS, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITIES AND FIELD COORDINATION AND PAY ANY ASSOCIATED COSTS ASSOCIATED WITH DUCTWORK INSTALLATION DEFICIENCIES AND FIELD COORDINATION ISSUES.
- PROPERLY INSTRUCT OWNERS PERSONNEL IN THE OPERATION AND MAINTENANCE OF ALL SYSTEMS AND EQUIPMENT. PROVIDE THREE INSTRUCTIONS AND MAINTENANCE MANUALS. SUBMIT MANUALS FOR REVIEW TO OPERATING PERIOD.
- COORDINATE LOCATIONS AND ROUGH-IN REQUIREMENTS WITH OTHER TRADES PRIOR TO INSTALLATION.
- COORDINATE ELECTRICAL REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR PRIOR TO PURCHASING EQUIPMENT. VERIFY VOLTAGES AND AMPERAGES FOR FEEDERS.
- IF THE CONTRACTOR ELECTS TO SUBMIT ALTERNATE EQUIPMENT, MANUFACTURERS, SYSTEMS, METHODS, OR MATERIALS, NOT SPECIALLY IDENTIFIED IN THE DRAWINGS AND SPECIFICATIONS, IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE THE WORK WITH OTHER TRADES AND PAY FOR ANY ADDITIONAL COSTS WITH THE SUBSTITUTION OR CHANGE.
- PROVIDE RECORD AS-BUILT DRAWINGS AT COMPLETION OF WORK. SUBMIT TO OWNER AND ENGINEER FOR REVIEW AND APPROVAL.
- COORDINATE FINISHES RELATED TO MECHANICAL EQUIPMENT, TERMINAL EQUIPMENT, AIR DEVICES, PERIMETER HEATERS, LOUVERS, ACCESS PANELS, EXPOSED WIREMOLD/RACEWAYS, ETC. SHALL BE COORDINATED AND SELECTED BY THE ARCHITECT/OWNER/ENGINEER PRIOR TO SHOP DRAWING SUBMISSION, ORDERING, AND INSTALLATION.
- FINAL LOCATIONS OF ALL THERMOSTATS, ACCESS PANELS, SPACE SENSORS, DETECTION DEVICES, ETC. IN FINISHED SPACES SHALL BE COORDINATED AND APPROVED BY THE ARCHITECT/OWNER PRIOR TO ROUGH-IN AND INSTALLATION.
- ALL HEATING HOT WATER SUPPLY/RETURN PIPING AND CHILLED WATER SUPPLY/RETURN PIPING SHALL BE SCHEDULE 40 STEEL PIPING (2" AND BELOW WITH THREADED FITTINGS, 2 1/2" AND ABOVE WITH WELDED FLANGE FITTINGS OR GROOVED JOINTS FOR VICTALIC FITTINGS). FURNISH AND INSTALL DIELECTRIC UNIONS AT DISSIMILAR PIPING MATERIAL CONNECTIONS. ALL PIPING TO BE SUPPORTED ON ADJUSTABLE CLEVIS TYPE HANGERS AND GALVANIZED PIPE SHIELDS. PIPING SUPPORTS SHALL BE SPACED AS PER PIPING MANUFACTURERS/SUPPORT MANUFACTURERS REQUIREMENTS. PIPING INSULATION SHALL BE CONTINUOUS AND SEALED AT THE JOINTS PER MANUFACTURER REQUIREMENTS AND SHALL NOT BE BROKEN AT THE HANGERS OR FITTINGS. PIPE SHIELD SHALL BE INSTALLED BETWEEN THE PIPING INSULATION AND HANGERS. NO PIPING SHALL RUN OVER ELECTRICAL SWITCHGEAR, ELECTRICAL PANELS, OR SUBSTATIONS. CONTRACTOR TO FURNISH AND INSTALL PIPING IDENTIFICATIONS (STENCIL OR SNAP-ON LABELS) FLOW DIRECTION, AT 25 FT INTERVALS. FURNISH AND INSTALL VALVE TAGS (METAL TAG CHAINED TO VALVE WITH VALVE NUMBER) AND PIPING DIAGRAMS WITH VALVE LOCATIONS AND VALVE TAG NUMBERS IDENTIFIED.
- CONTRACTOR TO PROVIDE MANUFACTURER'S START-UP OF ALL HVAC EQUIPMENT/SYSTEM.
- WATER SYSTEMS START-UP: FILL SYSTEM AND THOROUGHLY FLUSH ALL SEDIMENT, DIRT, PARTICLES, AND ANY OTHER MATERIAL FROM THE SYSTEM. REMOVE ALL AIR FROM THE SYSTEM. THIS WILL REQUIRE SEVERAL BLEEDING SEQUENCES. PROVIDE AIR VENTS AS REQUIRED. CLEAN ALL STRAINERS AFTER A THOROUGH FLUSHING. PROVIDE CHEMICAL TREATMENTS FOR THE FIRST YEAR OF OPERATION INCLUDING ALL NECESSARY TASKS, CHEMICALS, ADDITIVES, AND SERVICE VISITS.
- ALL HEATING HOT WATER SUPPLY/RETURN PIPING AND CHILLED WATER SUPPLY/RETURN PIPING SHALL BE INSULATED WITH FIBERGLASS INSULATION WITH AN ALL SERVICE JACKET (FLAME SPREAD OF 25, SMOKE DEVELOPED RATING OF 50, THERMAL CONDUCTIVITY OF 0.27 AT 90 DEGREE FAHRENHEIT, AND THICKNESS PER ASHRAE STANDARDS) MANUFACTURER: JOHNS MANVILLE MICRO-LOK HP OR PRIOR APPROVED EQUAL.
 - HEATING HOT WATER S&R: 1 1/2" & BELOW PIPING- 1 1/2" INSULATION, 2" & ABOVE PIPING-2" INSULATION
 - CHILLED WATER S&R: 1 1/2" & BELOW PIPING-1 1/2" INSULATION, 2" TO 8" PIPING-2" INSULATION
 - PIPING OUTSIDE OF THE BUILDING ENVELOPE SHALL HAVE AN ADDITIONAL 1/2" INSULATION, WEATHERPROOF UV RESISTANT JACKETING, AND ELECTRICAL HEAT TRACING.
- NO PVC PIPING IS PERMITTED IN RETURN AIR PLENUMS. ALL PVC PIPING LOCATED IN PLENUMS SHALL BE INSULATED WITH 1" PLENUM RATED FIBERGLASS INSULATION WITH VAPOR BARRIER AND COMPLIES WITH THE FLAME SPREAD OF 25 AND SMOKE DEVELOPED RATING OF 50.
- CONTRACTOR SHALL VISIT SITE PRIOR TO BID SUBMISSION AND BECOME AWARE OF ALL CONDITIONS WHICH MAY AFFECT THE WORK. SUBMISSION OF BID WILL BE DEEMED EVIDENCE OF HAVING COMPLETED WITH THE REQUIREMENTS. CONTRACTOR TO INCLUDE ALL ASSOCIATED COSTS (MATERIALS/LABOR) AS A RESULT OF THE SITE VISIT INSPECTION.
- DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE TAKEN AS A WHOLE. IF A CONFLICT OR CONTRADICTION EXISTS BETWEEN THE DRAWINGS AND SPECIFICATIONS, THE MORE STRINGENT SHALL APPLY. THE ARCHITECT'S AND ENGINEER'S INTERPRETATION OF THE DOCUMENTS SHALL BE BINDING UPON THE CONTRACTOR.
- ALL EXTERIOR WALL/ROOF PENETRATIONS SHALL BE SEALED AIR/WATER TIGHT. ALL PIPING PASSING THROUGH WALL OR FLOOR PENETRATIONS SHALL HAVE SLEEVES. ALL WALL OR FLOOR RATED PENETRATIONS SHALL BE SEALED WITH FIRE RATED SEALANT FORMED IN PLACE BY 3M OR HILTI.
- FURNISH AND INSTALL ACCESS DOORS FOR ALL VALVES, DAMPERS, DEVICES, CONTROLLERS, ETC WHICH MAY NEED SERVICE AND ACCESS. ACCESS PANELS SHALL BE 16 GAUGE STEEL FRAME, 20 GAUGE HINGED DOOR, LOCKABLE AND FIRE RATED (WHEN IN RATED WALLS, FLOORS, "B" LABEL, 1 1/2 HRS). FINISH AS SELECTED BY THE ARCHITECT.



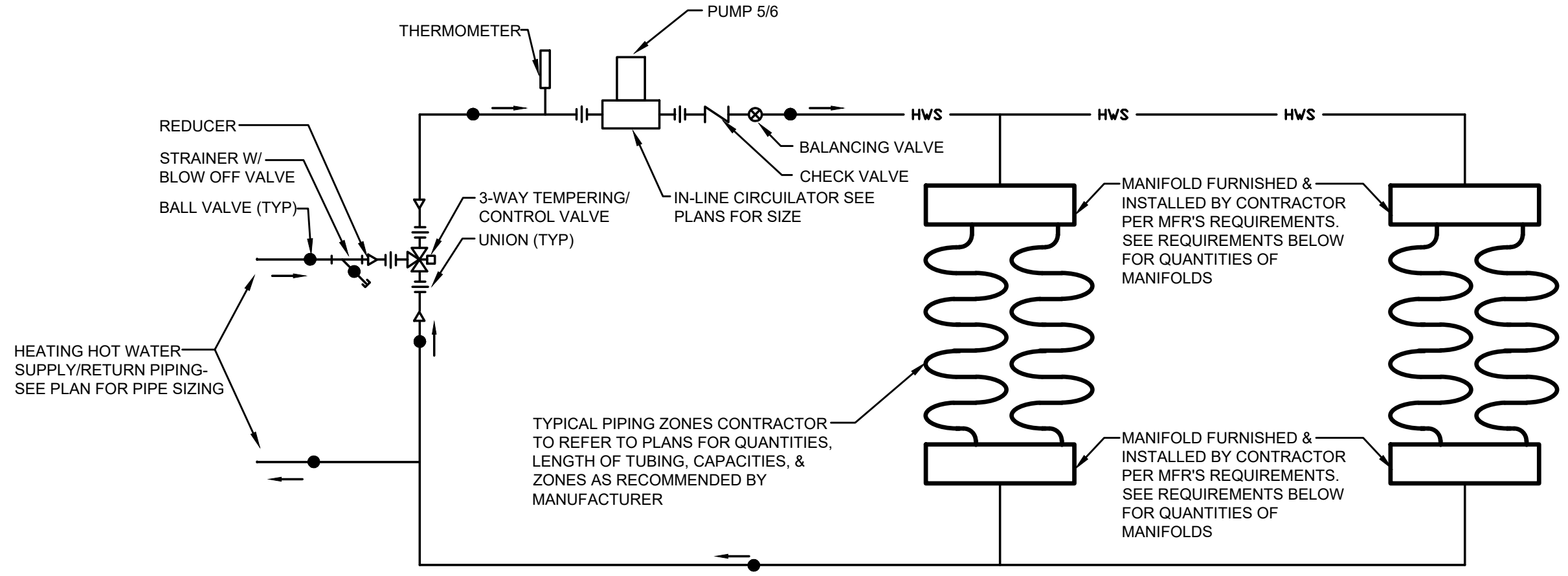
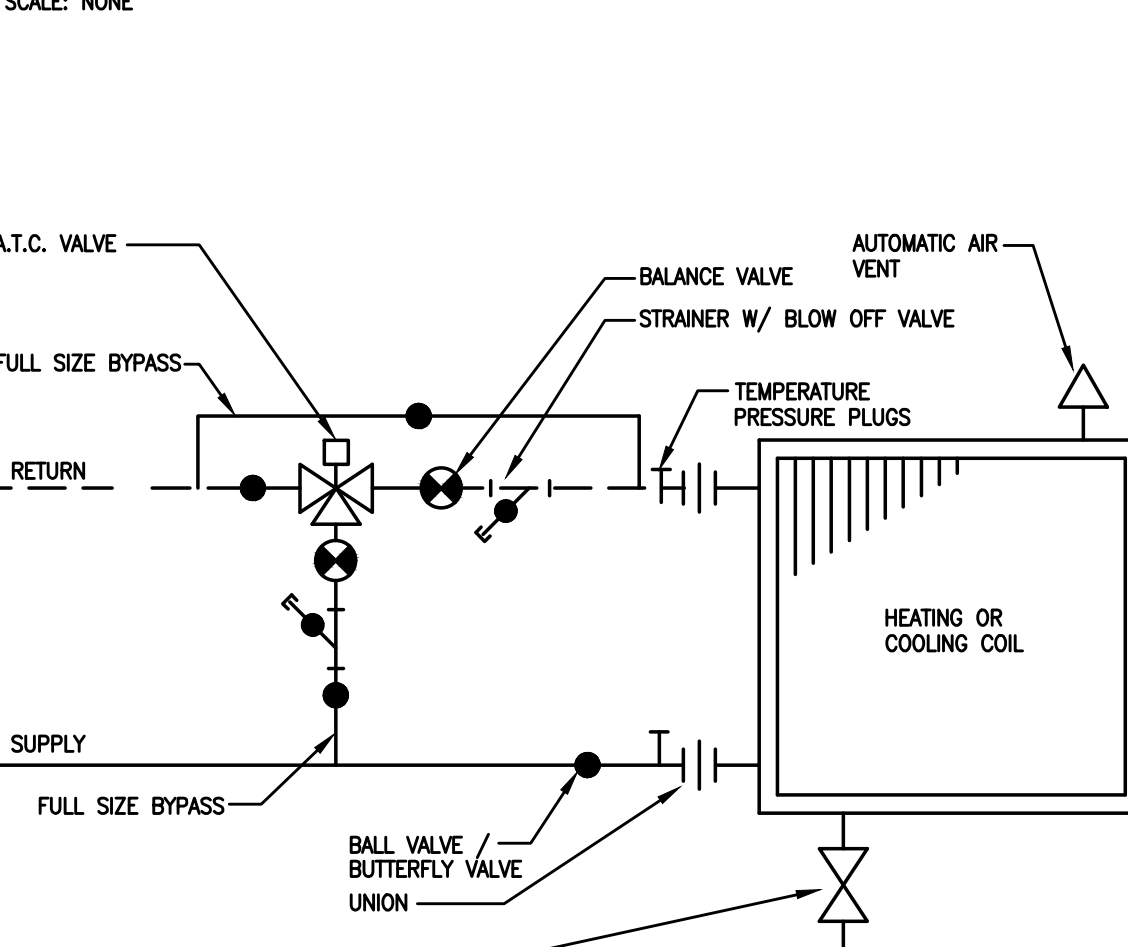
CONDENSATE TRAP



PIPING TO HEATING COILS (3-WAY VALVE)



PIPING TO AHU-1 COOLING COIL (3-WAY VALVE)



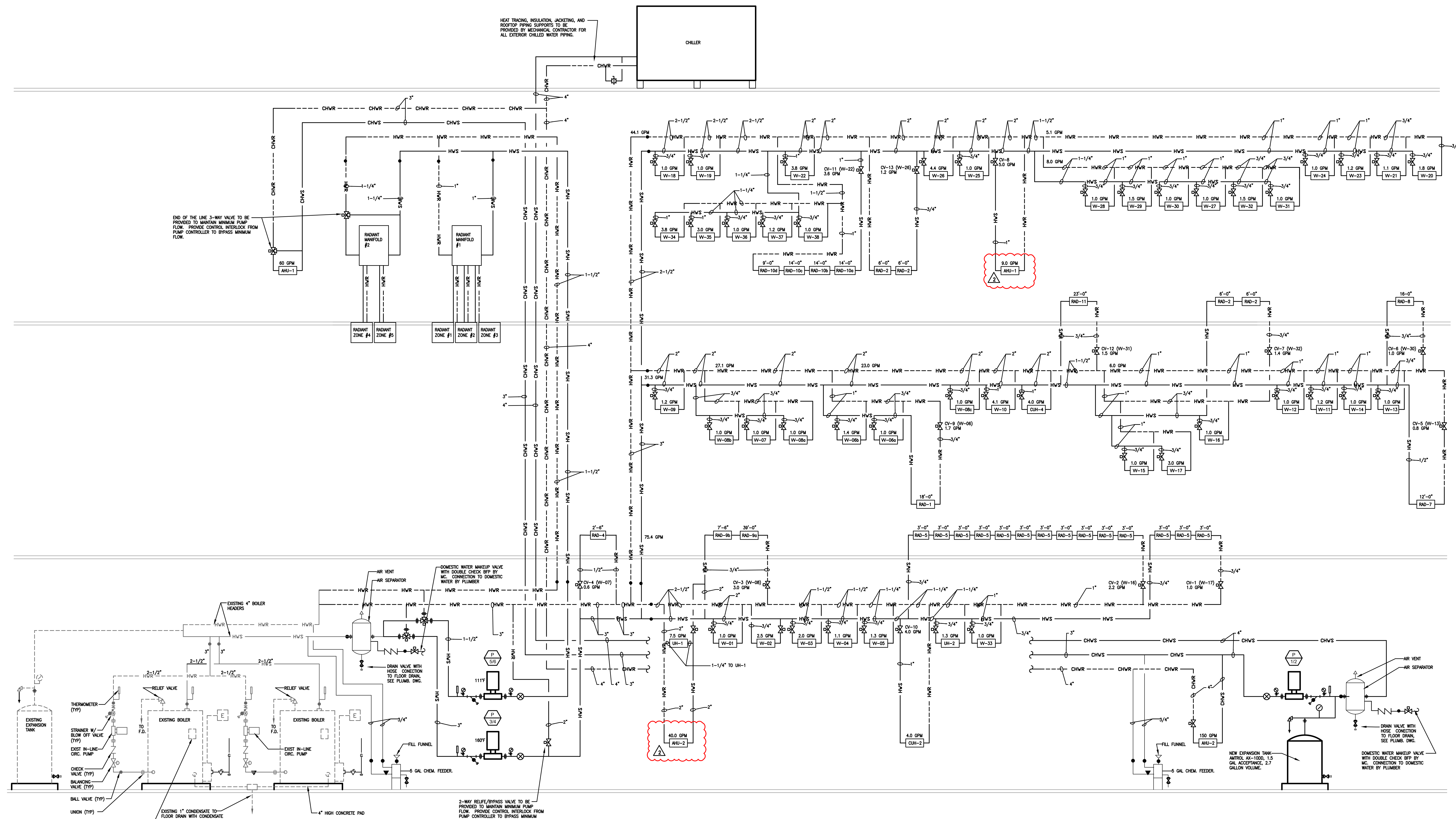
AIR DEVICE SCHEDULE

TAG	MIN CFM	MAX CFM	TYPE	NECK DIAMETER	CONNECTION SIZE	DEVICE SIZE (LxW)	MAX DEPTH FROM CEILING	TOTAL STATIC PRESSURE (IN. W.C.)	NC	VEL FPM	DAMPER	MATERIAL	FINISH	MANUFACTURER	SERIES
SD	0	61	SQUARE DIFFUSER PLAQUE STYLE	4"	6"	12" x 12"	1/4"	0.1	21	700	YES	STEEL	WHITE	TITUS / PRICE	OMINI / SPD
SD	61	175	SQUARE DIFFUSER PLAQUE STYLE	8"	10"	12" x 12"	1/4"	0.1	21	500	YES	STEEL	WHITE	TITUS / PRICE	OMINI / SPD
SD	176	280	SQUARE DIFFUSER PLAQUE STYLE	8"	10"	24" x 24"	1/4"	0.072	17	800	YES	STEEL	WHITE	TITUS / PRICE	OMINI / SPD
SD	281	380	SQUARE DIFFUSER PLAQUE STYLE	10"	12"	24" x 24"	1/4"	0.08	15	700	YES	STEEL	WHITE	TITUS / PRICE	OMINI / SPD
SD	381	550	SQUARE DIFFUSER PLAQUE STYLE	12"	14"	24" x 24"	1/4"	0.12	18	700	YES	STEEL	WHITE	TITUS / PRICE	OMINI / SPD
SD	551	640	SQUARE DIFFUSER PLAQUE STYLE	14"	16"	24" x 24"	1/4"	0.12	14	600	YES	STEEL	WHITE	TITUS / PRICE	OMINI / SPD
SD	641	735	SQUARE DIFFUSER PLAQUE STYLE	15"	16"	24" x 24"	1/4"	0.13	26	600	YES	STEEL	WHITE	TITUS / PRICE	OMINI / SPD
SR	0	150	SUPPLY REGISTER	-	-	8"x6"	1/4"	0.06	11	580	YES	STEEL	WHITE	TITUS / PRICE	300 / 301.520 / 510
SR	151	300	SUPPLY REGISTER	-	-	10"x8"	1/4"	0.075	15	650	YES	STEEL	WHITE	TITUS / PRICE	300 / 301.520 / 510
SR	301	600	SUPPLY REGISTER	-	-	18"x8"	1/4"	0.075	20	670	YES	STEEL	WHITE	TITUS / PRICE	300 / 301.520 / 510
SR	601	900	SUPPLY REGISTER	-	-	22"x10"	1/4"	0.08	22	670	YES	STEEL	WHITE	TITUS / PRICE	300 / 301.520 / 510
SR	901	1400	SUPPLY REGISTER	-	-	36"x10"	1/4"	0.08	22	670	YES	STEEL	WHITE	TITUS / PRICE	300 / 301.520 / 510
EXH/RET REG/ GRILLE	0	100	EXH / RET REG / GRILLE	-	-	8"x6"	1/4"	0.1	25	400	YES	STEEL	WHITE	TITUS / PRICE	350 / 530
EXH/RET REG/ GRILLE	101	185	EXH / RET REG / GRILLE	-	-	10"x8"	1/4"	0.1	27	400	YES	STEEL	WHITE	TITUS / PRICE	350 / 530
EXH/RET REG/ GRILLE	186	360	EXH / RET REG / GRILLE	-	-	12"x12"	1/4"	0.06	24	300	YES	STEEL	WHITE	TITUS / PRICE	350 / 530
EXH/RET REG/ GRILLE	361	520	EXH / RET REG / GRILLE	-	-	12"x18"	1/4"	0.06	25	300	YES	STEEL	WHITE	TITUS / PRICE	350 / 530
EXH/RET REG/ GRILLE	521	700	EXH / RET REG / GRILLE	-	-	18"x18"	1/4"	0.06	27	300	YES	STEEL	WHITE	TITUS / PRICE	350 / 530
RETURN	701	900	EXH / RET REG / GRILLE	-	-	24"x18"	1/4"	0.06	24	300	YES	STEEL	WHITE	TITUS / PRICE	350 / 530
RETURN	901	1200	EXH / RET REG / GRILLE	-	-	24"x24"	1/4"	0.06	25	300	YES	STEEL	WHITE	TITUS / PRICE	350 / 530
RETURN NON DUCTED	1201	1700	EXH / RET REG / GRILLE	-	-	24"x36"	1/4"	0.06	27	300	YES	STEEL	WHITE	TITUS / PRICE	350 / 530

- COMMENTS:**
- USE SCHEDULE SIZE UNLESS OTHERWISE NOTED.
 - USE ALTERNATE SIZE WHEN APPROVED BY ENGINEER.
 - PROVIDE VOLUME DAMPER AT TRUNK DUCT CONNECTION.
 - ALL SUPPLY REGISTERS TO BE DOUBLE DEFLECTION TYPE.
 - ALUMINUM DEVICES ARE TO BE PROVIDED IN MOST AREAS, I.E. TOILET ROOMS.
 - FOR LAY-IN CEILING PROVIDE A 2x2" PAN FOR A 12"x12" FACE SIZE DIFFUSERS.
 - BRANCH DUCT DIAMETER SHALL BE REDUCED AT COLLAR CONNECTIONS TO DIFFUSER.
 - EACH AIR DEVICE SHALL HAVE A MOUNTING FLANGE SPECIFICALLY SELECTED FOR THE PARTICULAR TYPE OF CEILING FINISH.

NOTICE:
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HOT WATER SEQUENCE NOTES:

- MAXIMUM HEATING CAPACITY FOR COILS IS SET AT 180°F, BUT BOILERS ARE TO RUN AT 140°F MAXIMUM UNLESS OUTDOOR AIR IS UNDER 20°F OR ADDITIONAL CAPACITY IS REQUIRED.
- ALL VALVES ARE TO BE MODULATING 2-WAY, EXCEPT 3-WAY BYPASS AT END OF CIRCUIT TO BYPASS MINIMUM PUMP FLOW.
- MORNING WARM-UP SHALL INITIATE AT 140°F. ALL VALVES ARE TO CYCLE WIDE OPEN UNTIL SETPOINT IS MET AND VALVES SHALL THROTTLE DOWN WHEN SETPOINT OF EACH ZONE IS MET. IF SETPOINT IS NOT MET WITHIN DESIRED AMOUNT OF TIME, THE HOT WATER TEMPERATURE SETPOINT SHALL INCREASE (MAXIMUM OF 180°F).

HOT & CHILLED WATER PIPING RISER DIAGRAM
SCALE: NONE

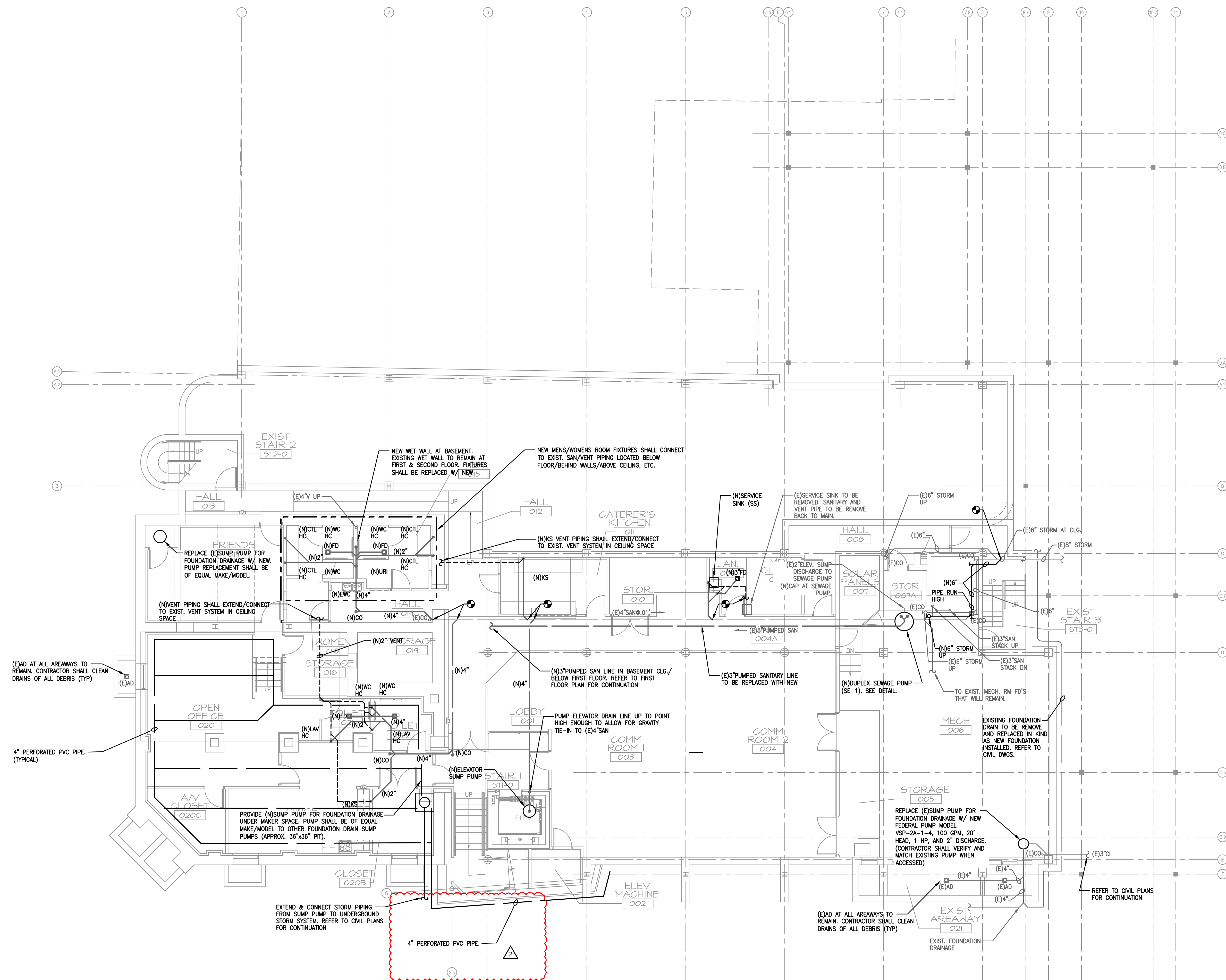
NOTES:

- REFER TO PIPING DIAGRAMS ON M-2.2 FOR ADDITIONAL ITEMS.
- ALTHOUGH NOT SHOWN HERE, ALL PIPED ITEMS (COILS, AIR HANDLERS, HEATERS, ETC.) ARE TO HAVE BALL VALVES FOR ISOLATION ON SUPPLY AND RETURN, AS WELL AS BALANCING VALVES, INDICATORS, STRAINERS, ETC.
- BOTH HOT AND CHILLED WATER SYSTEMS ARE TO BE VARIABLE VOLUME.
- PRESSURE LOSS THROUGH ANY COIL SHALL NOT EXCEED 9 FT HD.
- CONTROL WIRING AND LOW VOLTAGE POWER WIRING FOR ACTUATORS, SOLENOIDS, CONTROL VALVES, ETC. SHALL BE OF THE MECHANICAL CONTRACTOR.

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NOTICE

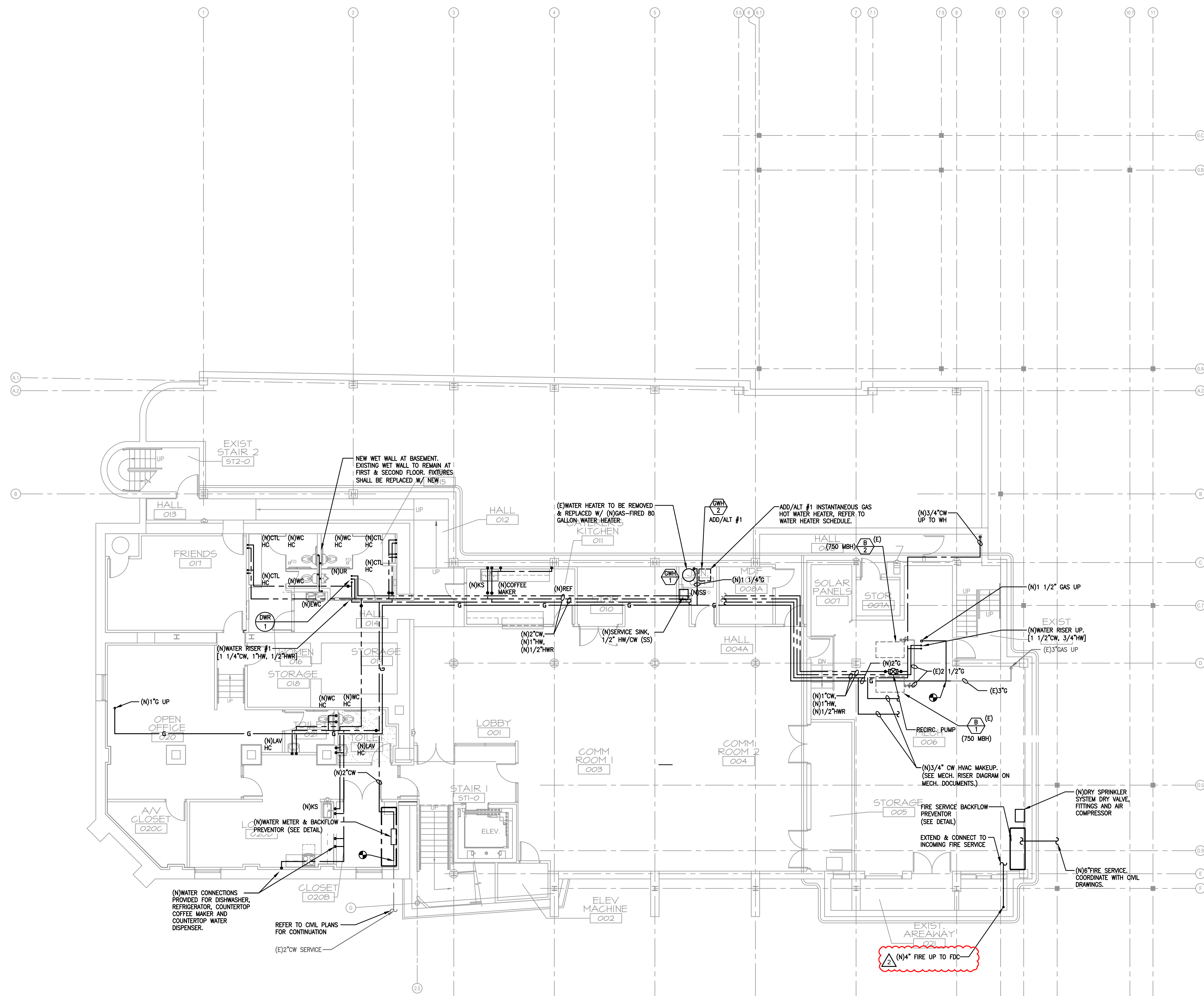
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BASEMENT FLOOR PLAN - SANITARY
SCALE: 1/8"=1'-0"

NOTICE
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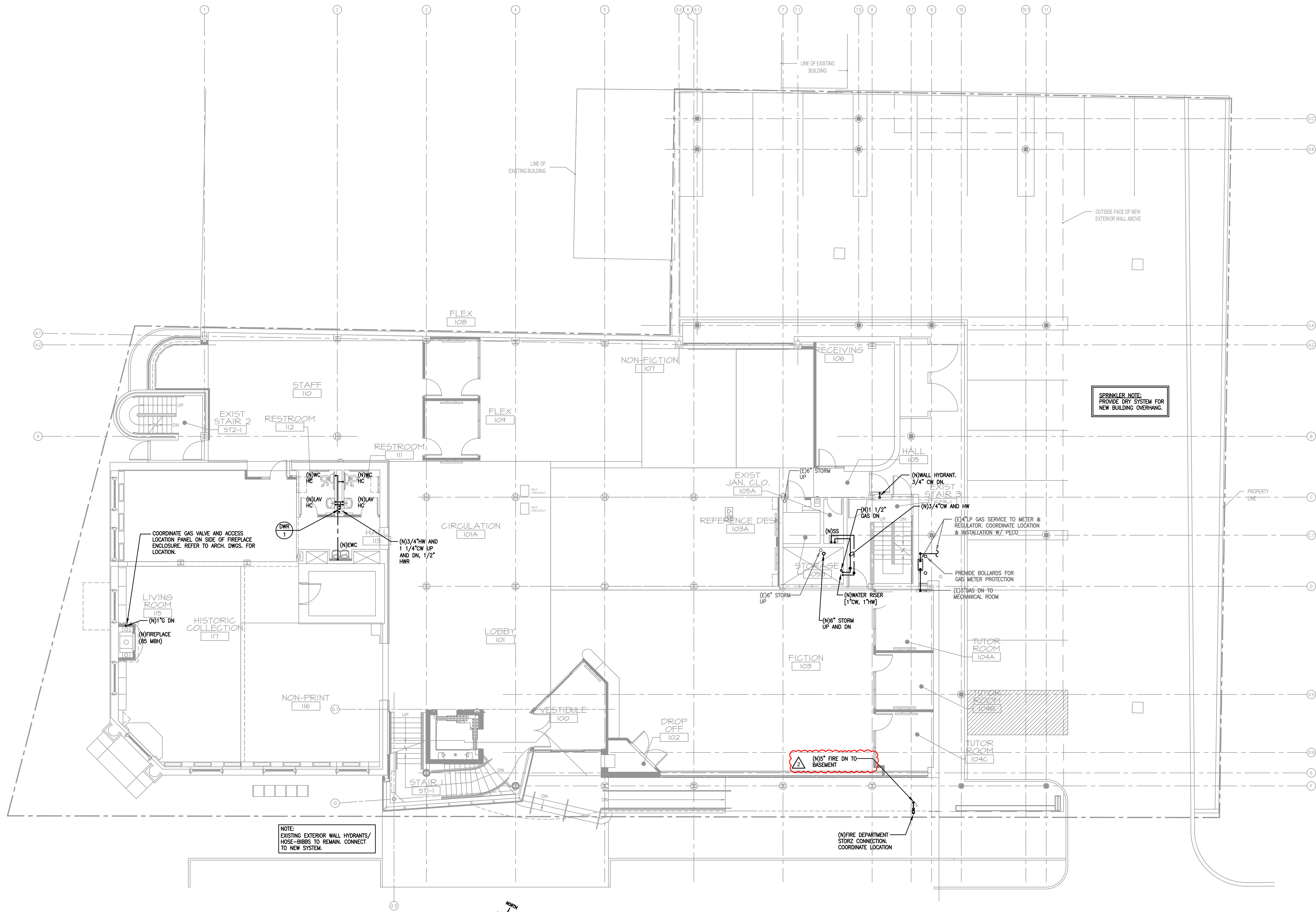


BASEMENT FLOOR PLAN - SERVICE PIPING
SCALE: 1/8"=1'-0"

SPRINKLER NOTE:
SPRINKLER CONTRACTOR SHALL DESIGN, FURNISH, AND INSTALL A SPRINKLER SYSTEM THROUGHOUT THE BUILDING IN ACCORDANCE WITH NFPA-13. SPRINKLER SYSTEM SHALL BE DESIGNED PER NFPA-13 LIGHT HAZARD OCCUPANCY EXCEPT WHERE DICTATED BY NFPA-13 TO BE ORDINARY HAZARD. PROVIDE DRY SPRINKLER HEADS IN AREAS SUBJECT TO FREEZING. ALL WET SPRINKLER PIPING SHALL BE LOCATED WITHIN BUILDING ENVELOPE. SPRINKLER SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE SUBMITTED FOR APPROVAL TO THE LOCAL FIRE MARSHALL (AUTHORITY HAVING JURISDICTION). SPRINKLER HEADS IN AREAS WITH UNFINISHED CEILINGS SHALL BE CHROME PLATED UPRIGHT TYPE WITH CAGES IN AREAS SUBJECT TO ACCIDENTAL CONTACT OR LOW CEILING HEIGHTS. SPRINKLER HEADS IN FINISHED AREAS SHALL BE CONCEALED. SPRINKLER HEADS IN AREAS WITHOUT A CEILING SHALL BE SEMI-RECESSED PENDANT TYPE. PROVIDE DRY SYSTEM FOR BUILDING OVERHANGS.

NOTICE:
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FIRST FLOOR PLAN - SERVICE PIPING
SCALE: 1/8"=1'-0"

SPRINKLER NOTE:
SPRINKLER CONTRACTOR SHALL DESIGN, FURNISH, AND INSTALL A SPRINKLER SYSTEM THROUGHOUT THE BUILDING IN ACCORDANCE WITH NFPA-13. SPRINKLER SYSTEM SHALL BE DESIGNED PER NFPA-13 LIGHT HAZARD OCCUPANCY EXCEPT WHERE DICTATED BY NFPA-13 TO BE ORDINARY HAZARD. PROVIDE DRY SPRINKLER HEADS IN AREAS SUBJECT TO FREEZING. ALL WET SPRINKLER PIPING SHALL BE LOCATED WITHIN BUILDING ENVELOPE. SPRINKLER SHOP DRAWINGS AND HYDRULIC CALCULATIONS SHALL BE SUBMITTED FOR APPROVAL TO THE LOCAL FIRE MARSHALL (AUTHORITY HAVING JURISDICTION). SPRINKLER HEADS IN AREAS WITH UNFINISHED CEILINGS SHALL BE CHROME PLATED UPRIGHT TYPE WITH CAGES IN AREAS SUBJECT TO ACCIDENTAL CONTACT OR LOW CEILING HEIGHTS. SPRINKLER HEADS IN FINISHED AREAS SHALL BE CONCEALED. SPRINKLER HEADS IN AREAS WITHOUT A CEILING SHALL BE SEMI-RECESSED PENDANT TYPE. PROVIDE DRY SYSTEM FOR BUILDING OVERHANGS.

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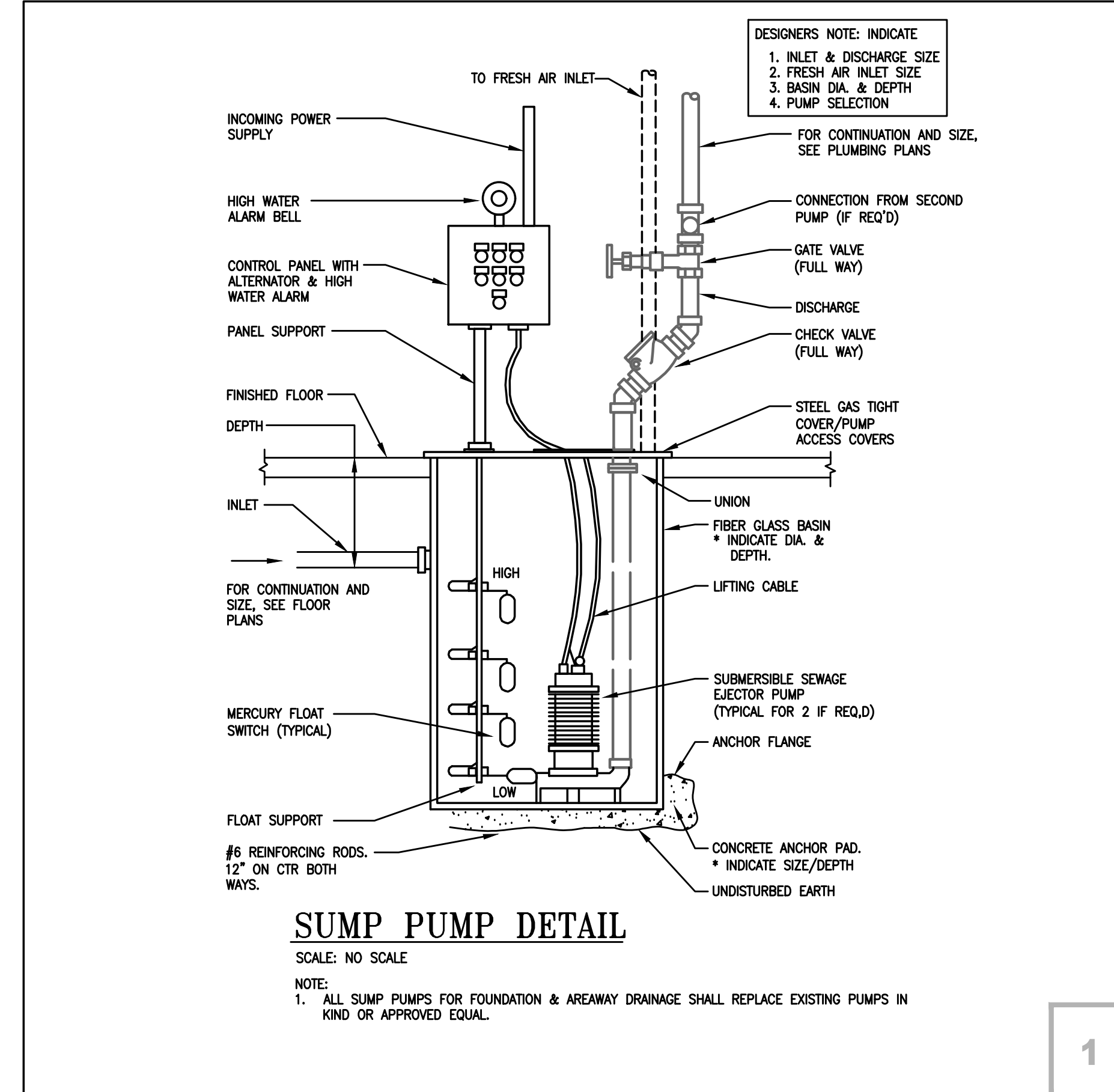
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1 09/20/23 Issued for Bidding
2 10/04/23 Addendum 3

Drawn: CK/MW/DE/KG
Reviewed:
Contact: Chris Keenan
Project Number: 7010.03-22

Sheet Title:
**FIRST FLOOR
PLAN - SERVICE
PIPING**

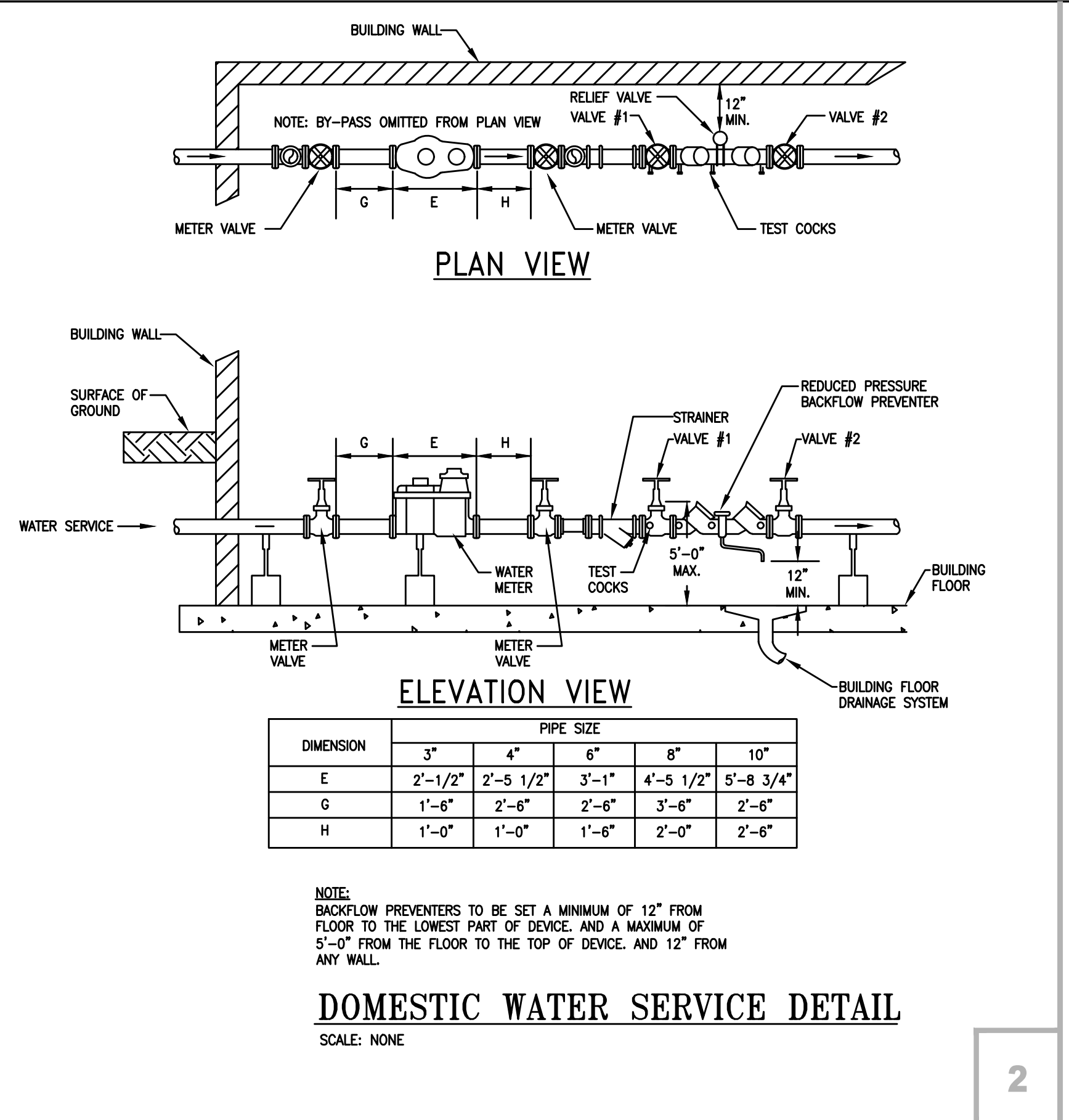
Sheet Number:
P1.3



SUMP PUMP DETAIL

SCALE: NO SCALE
 NOTE:
 1. ALL SUMP PUMPS FOR FOUNDATION & AREAWAY DRAINAGE SHALL REPLACE EXISTING PUMPS IN KIND OR APPROVED EQUAL.

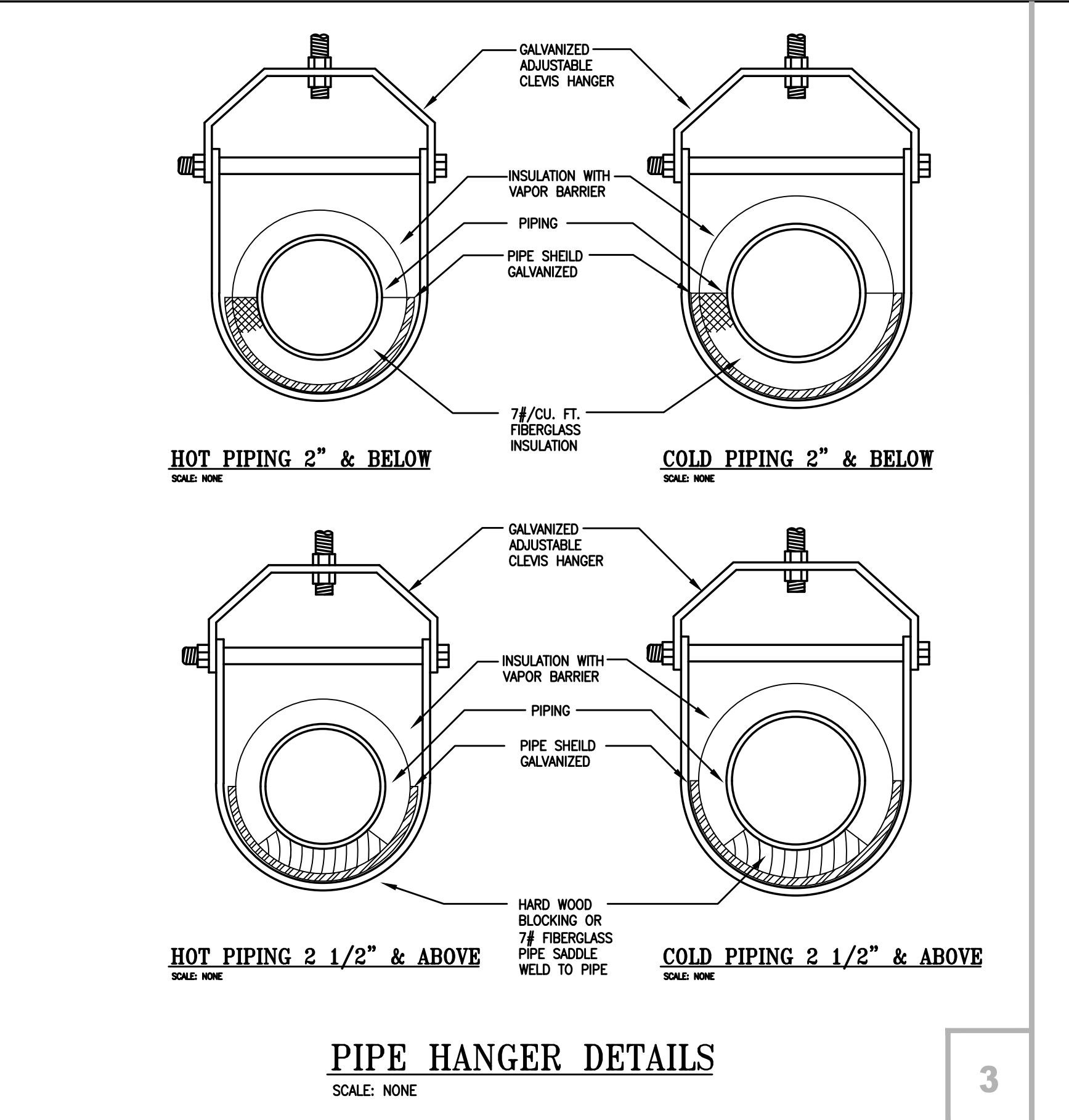
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DOMESTIC WATER SERVICE DETAIL

SCALE: NONE

2



PIPE HANGER DETAILS

SCALE: NONE

3

PLUMBING SYMBOLS AND ABBREVIATIONS

W	WATER SERVICE	CONTINUATION/BREAK	
DOM. COLD WATER		INLINE PUMP	
DOM. HOT WATER		THERMOMETER	
DOM. HOT WATER RETURN			
T	TEMP. WATER	PIPE DOWN	
140	140°F LAUNDRY HOT WATER	PIPE UP	
---	SOIL WASTE	RELIEF VALVE	
---	VENT	CHECK VALVE	
---	STORM	STRAINER W/ BLOW OFF VALVE	
A	COMPRESSED AIR	BALANCING VALVE	
G	GAS	UNION	
F	SPRINKLER SERVICE	PIPE REDUCER	
SP	WET SANDPIPE	PIPE INCREASER	
DSP	DRY SANDPIPE	PIPE FLEXIBLE CONNECTION	
FHC	FIRE HOSE CABINET	GATE VALVE	
FHV	HOSE VALVE CABINET	BALL VALVE	
BFP	BACK FLOW PREVENTER	GAS COOK/GAS RATED BALL VALVE	
PRV	PRESS REDUCING VALVE	WH	WALL HYDRANT
VTR	VENT THRU ROOF	HB	HOSE BIBB
CO	CLEAN OUT	FD	FLOOR DRAIN
DWR	DOMESTIC WATER RISERS	RD	ROOF DRAIN
GWH	GAS WATER HEATER	RWC	RAIN WATER CONDUCTOR
EMH	ELECT. WATER HEATER	DS	DOWNSPOUT
FU	FIXTURE UNIT	MH	MAN HOLE
S & VST	SOIL & VENT STACK	(N)	NEW
W & VST	WASTE & VENT STACK	(E)	EXISTING
I.E.	INVERT ELEVATION	⊕	NEW CONNECTION TO EXISTING
SF	SQUARE FEET		
BWV	BACKWATER VALVE		

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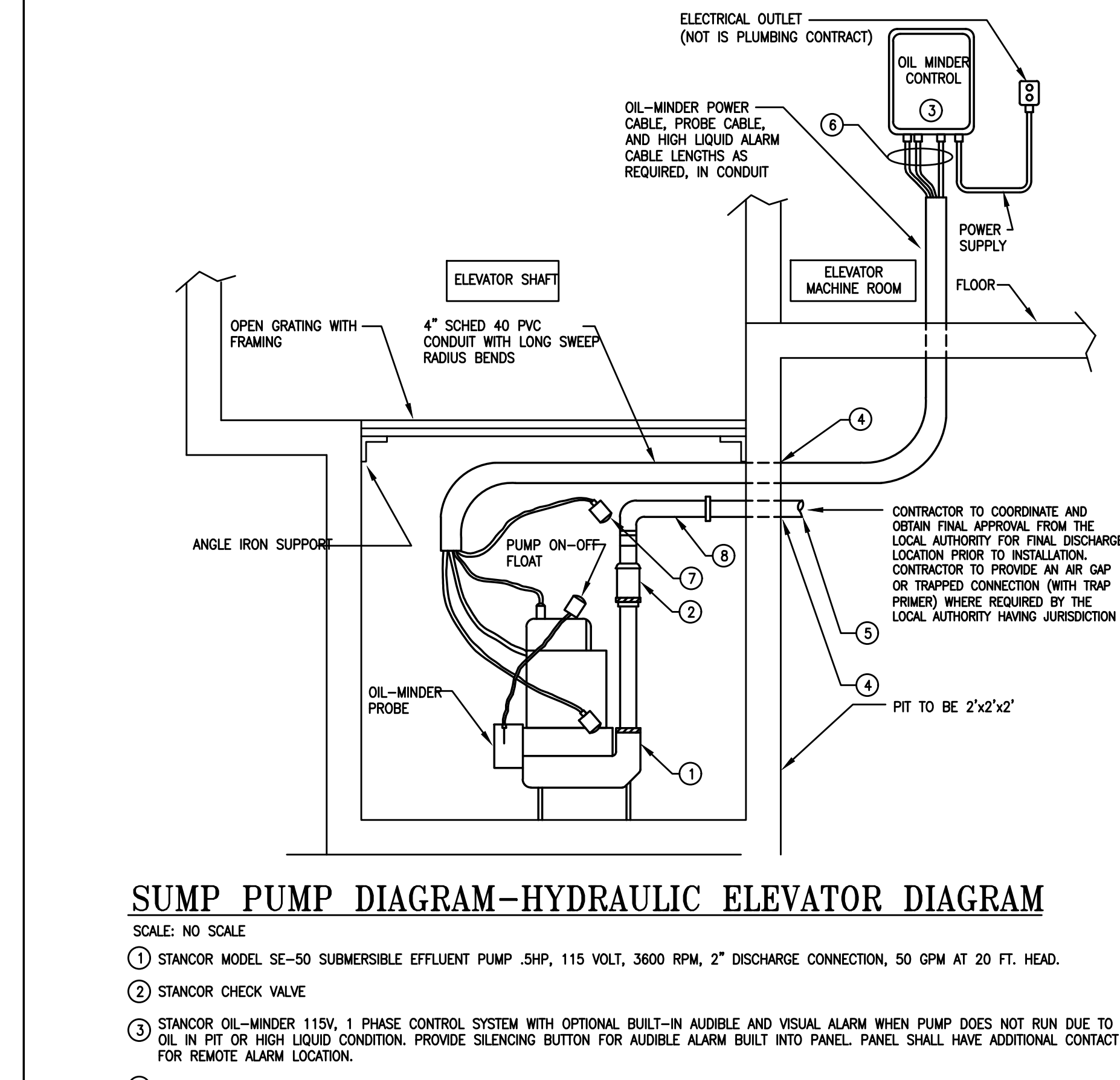
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Drawn: CK/MW/DE/KG
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 Contact: Chris Keenan
 Project Number: 7010.03-22

Sheet Title:
**DETAILS &
 SCHEDULES -
 PLUMBING**

Sheet Number:
P2.0

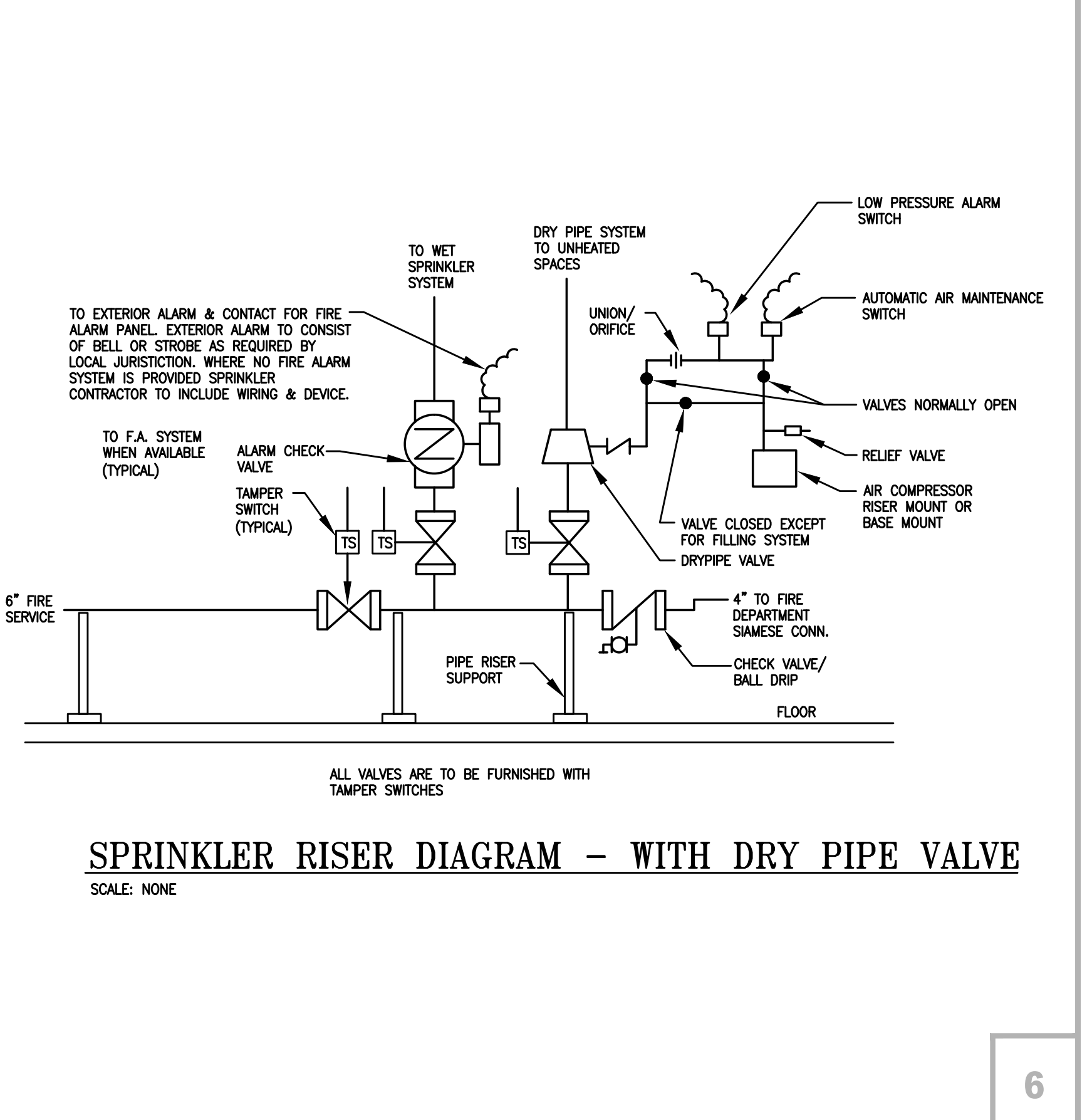
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SUMP PUMP DIAGRAM-HYDRAULIC ELEVATOR DIAGRAM

SCALE: NO SCALE
 1 STANCOR MODEL SE-50 SUBMERSIBLE EFFLUENT PUMP .5HP, 115 VOLT, 3600 RPM, 2\"/>

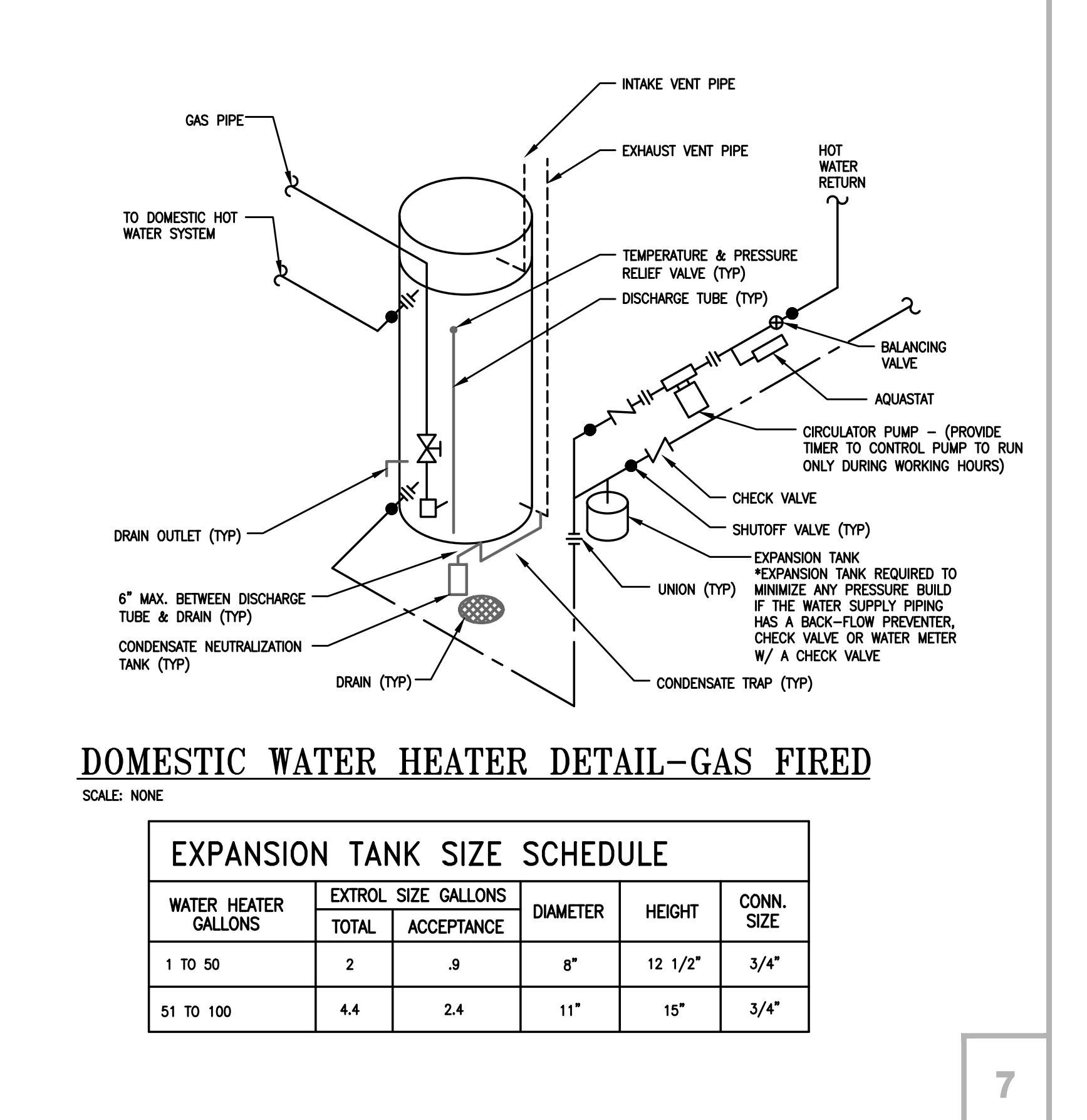
5



SPRINKLER RISER DIAGRAM - WITH DRY PIPE VALVE

SCALE: NONE

6



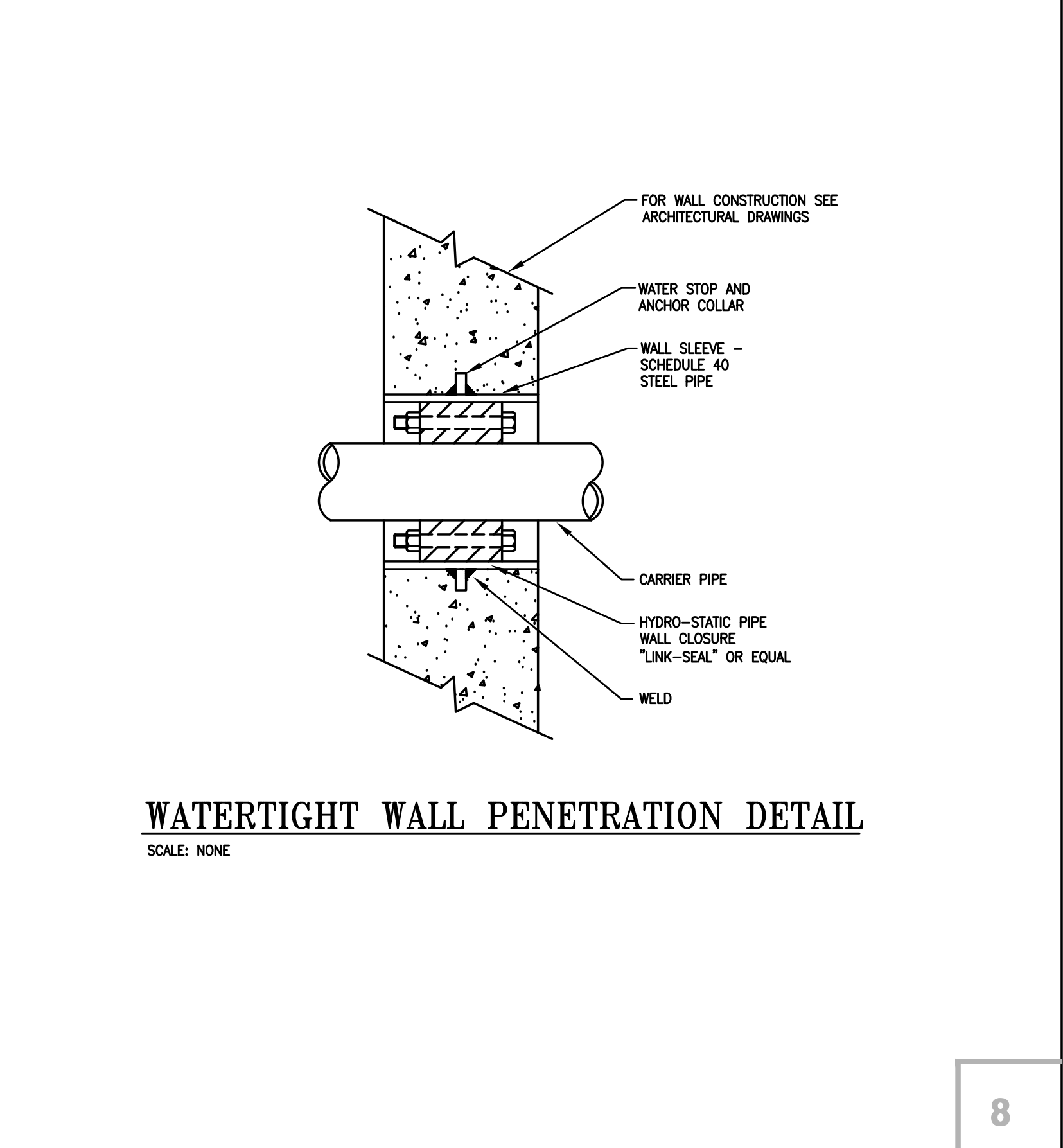
DOMESTIC WATER HEATER DETAIL-GAS FIRED

SCALE: NONE

7

EXPANSION TANK SIZE SCHEDULE

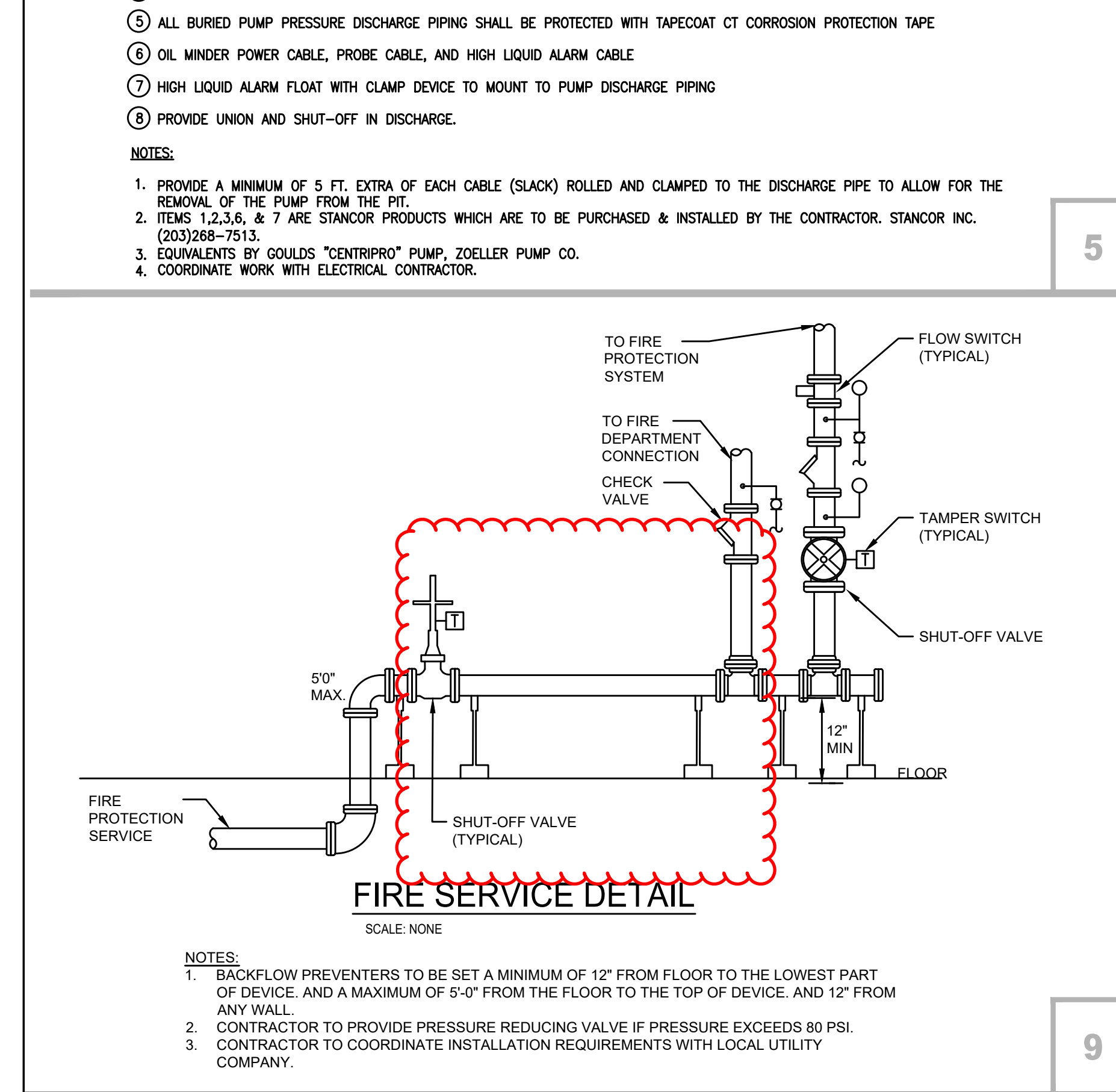
WATER HEATER GALLONS	EXTROL SIZE GALLONS		DIAMETER	HEIGHT	CONN. SIZE
	TOTAL	ACCEPTANCE			
1 TO 50	2	.9	8"	12 1/2"	3/4"
51 TO 100	4.4	2.4	11"	15"	3/4"



WATERTIGHT WALL PENETRATION DETAIL

SCALE: NONE

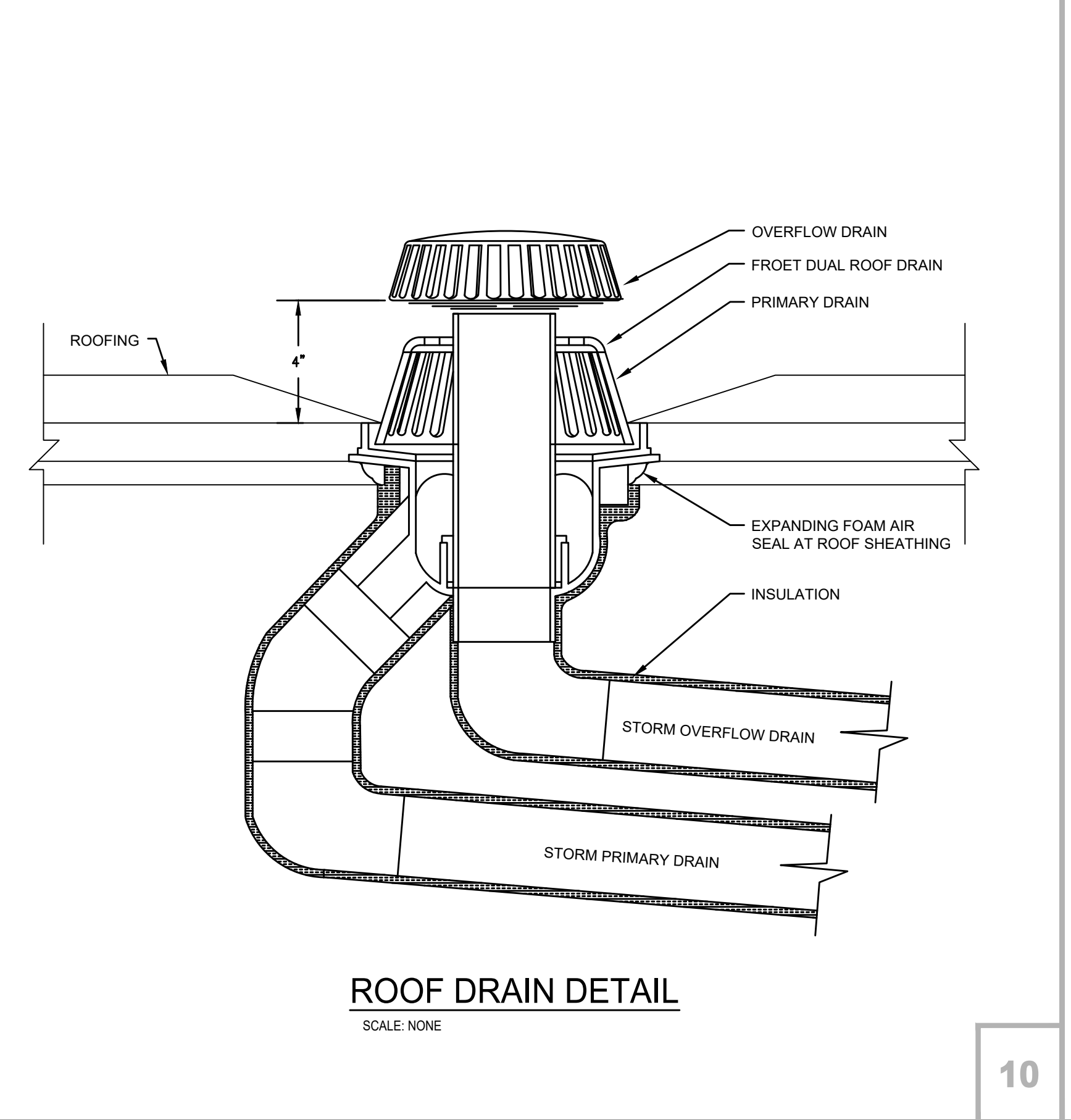
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FIRE SERVICE DETAIL

SCALE: NONE

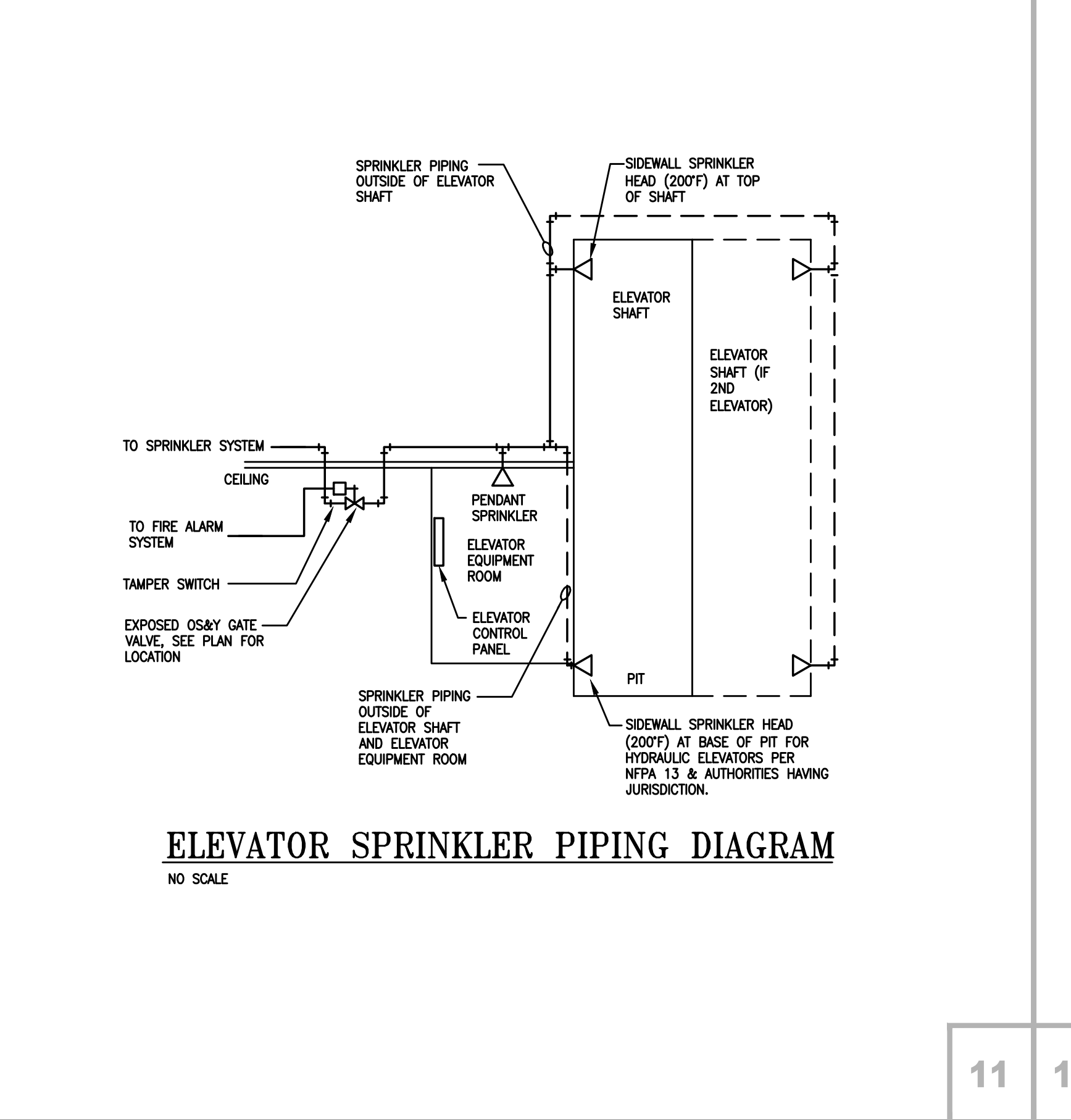
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ROOF DRAIN DETAIL

SCALE: NONE

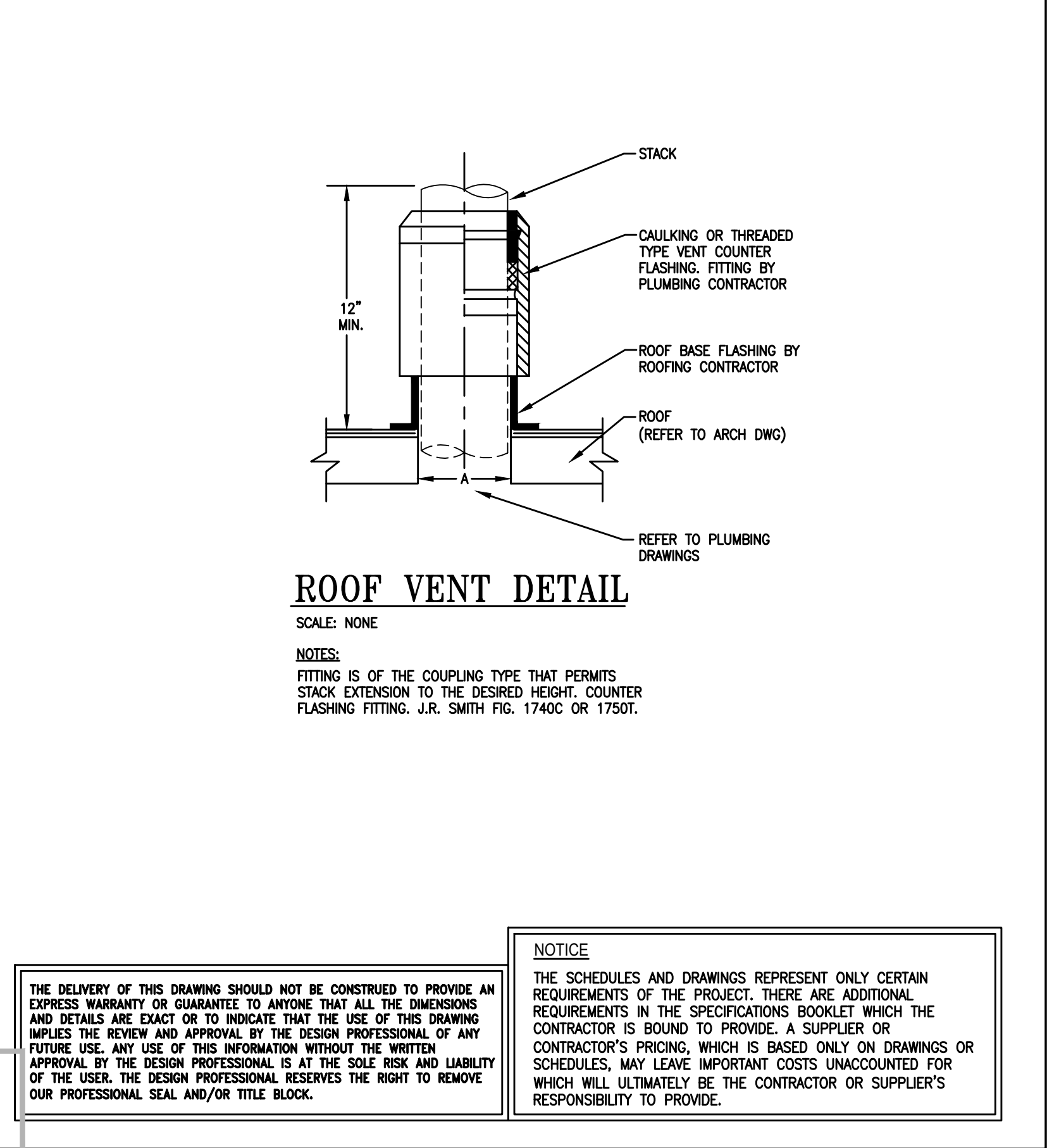
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ELEVATOR SPRINKLER PIPING DIAGRAM

NO SCALE

11



ROOF VENT DETAIL

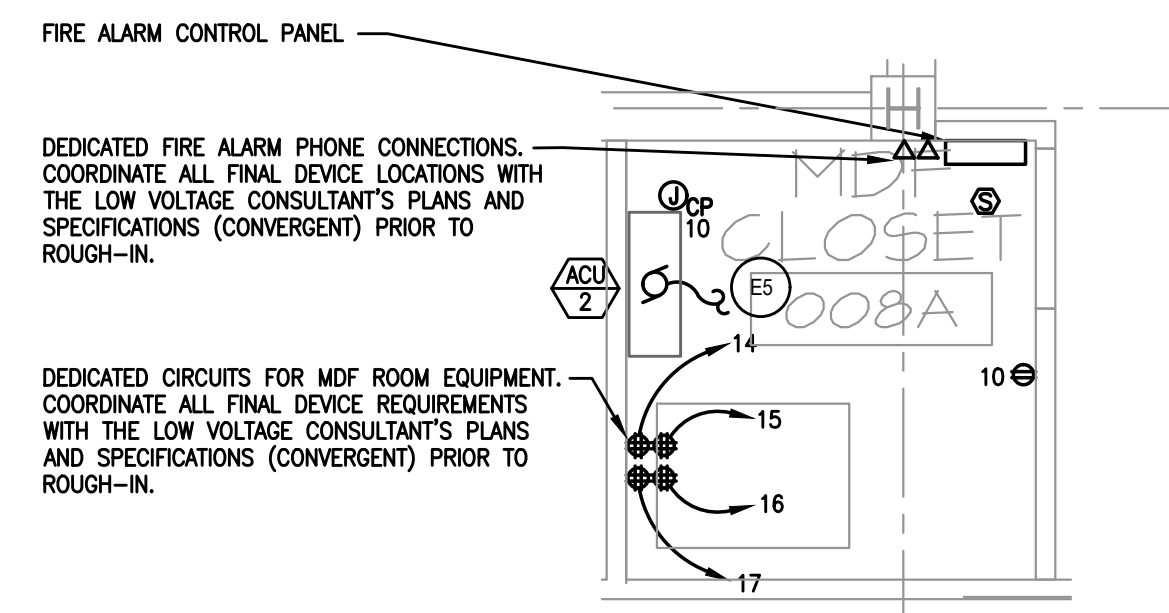
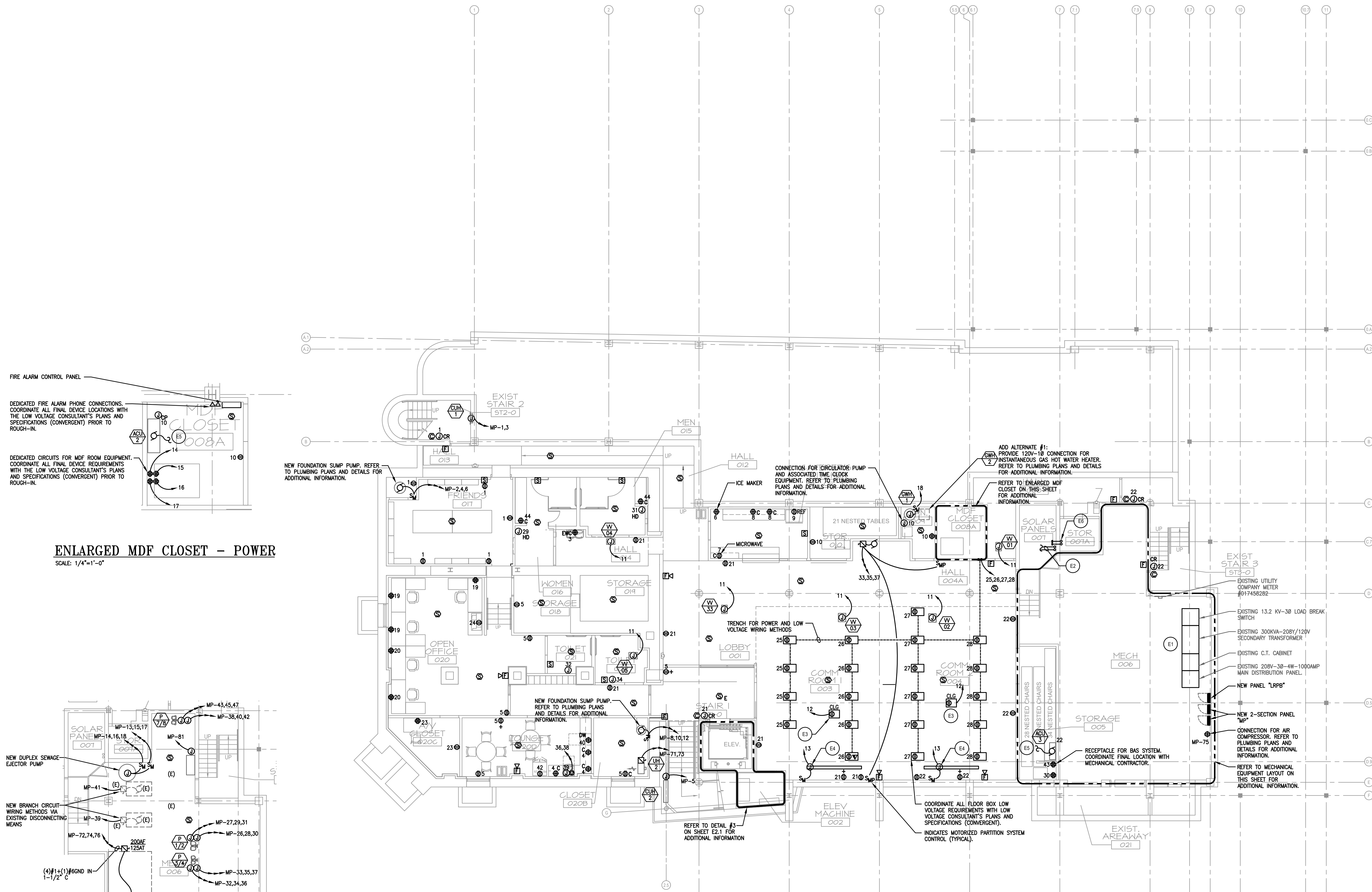
SCALE: NONE

NOTES:
 FITTING IS OF THE COUPLING TYPE THAT PERMITS STACK EXTENSION TO THE DESIRED HEIGHT; COUNTER FLASHING FITTING, J.S. SMITH FIG. 1740C OR 1750C.

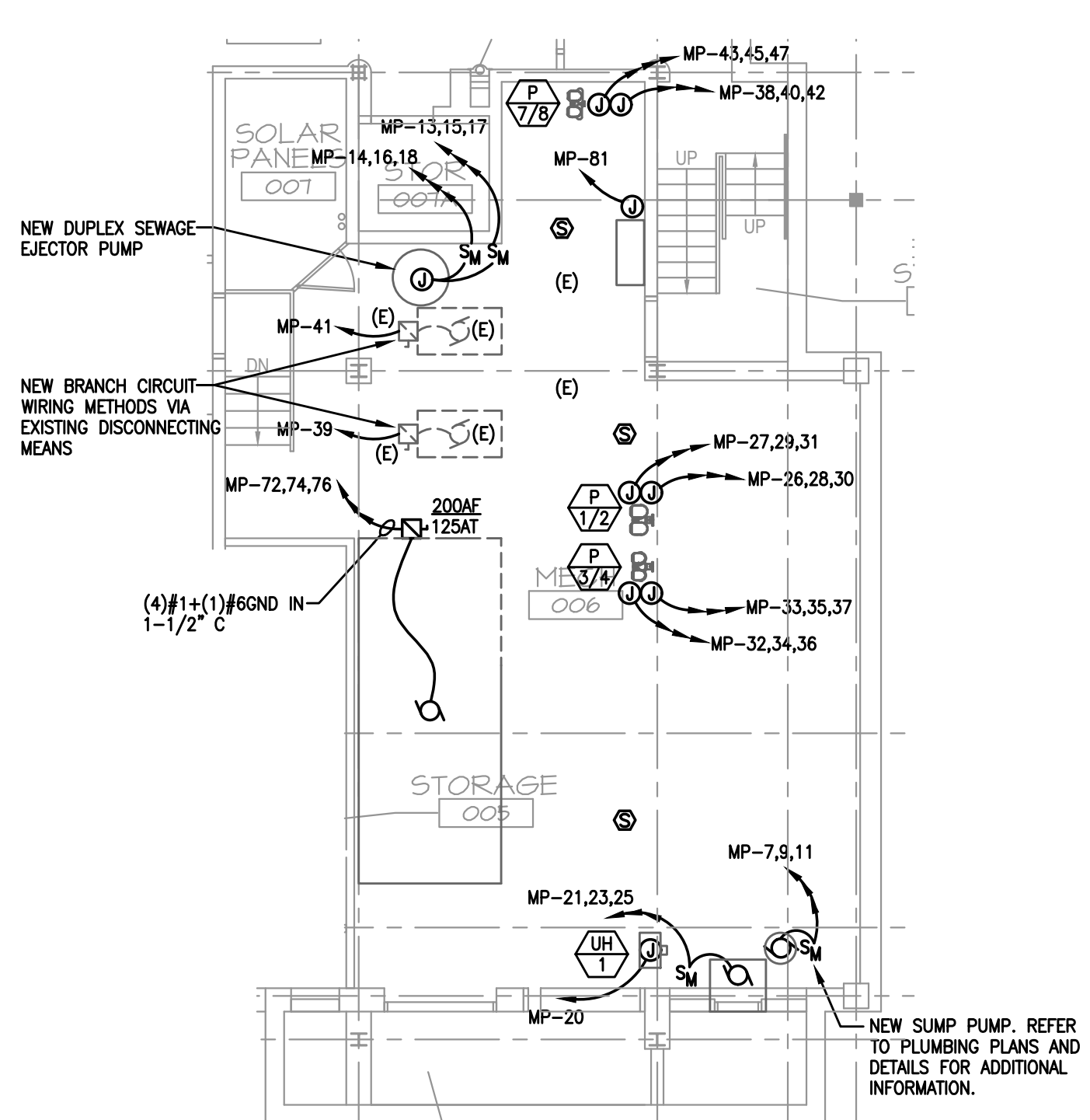
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ENLARGED MDF CLOSET - POWER
SCALE: 1/4"=1'-0"



MECHANICAL ROOM EQUIPMENT LAYOUT - POWER
SCALE: 1/8"=1'-0"

BASEMENT FLOOR PLAN - POWER
SCALE: 1/8"=1'-0"

ELECTRICAL NOTES:

- COORDINATE LOCATIONS AND MOUNTING HEIGHTS OF ALL WIRING DEVICES WITH OWNER/ TENANT ARCHITECT PRIOR TO ROUGH-IN. REFER TO DETAILS AND SPECIFICATIONS FOR TYPICAL MOUNTING HEIGHTS.
- REMOVE ALL EXISTING BRANCH CIRCUIT PANELBOARDS AND PROVIDE NEW AS INDICATED ON PLANS. FURNISH AND INSTALL NEW FEEDERS AND ASSOCIATED DISCONNECTING MEANS.
- UNLESS OTHERWISE NOTED, BRANCH CIRCUIT NUMBERS ARE VIA PANEL "LRPB".
- CONTRACTOR IS TO CONCEAL WIRING WHENEVER POSSIBLE. CUT AND PATCH ALL EXISTING PLASTER AND DRYWALL AS REQUIRED, AND REFINISH TO MATCH ADJACENT. ALL EXPOSED WIRING IS TO BE INSTALLED IN EMT. CONTRACTOR IS TO PAINT AS DIRECTED BY THE ARCHITECT. CONDUIT PATH IS TO BE AS INCONSPICUOUS AS POSSIBLE. COORDINATE CONDUIT ROUTE WITH ARCHITECT/ OWNER PRIOR TO ROUGH-IN AND INSTALLATION.

ELECTRICAL KEYNOTES:

- (E1) PERFORM MANUFACTURER RECOMMENDED UPGRADES AND, OR MAINTENANCE AND PROVIDE DEVICES WHERE REQUIRED BY ALL APPLICABLE CODES WITH THE OWNER AND ARCHITECT.
- (E2) (2) 4" CONDUITS TO ACCESSIBLE CEILING ABOVE FOR LOW VOLTAGE PATHWAY. COORDINATE ALL REQUIREMENTS WITH THE LOW VOLTAGE CONSULTANT'S PLANS AND SPECIFICATIONS (CONVERGENT).
- (E3) 120V-1Ø POWER FOR CEILING MOUNTED PROJECTOR EQUIPMENT. COORDINATE ALL FINAL LOCATIONS WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. COORDINATE ALL FINAL POWER REQUIREMENTS WITH THE LOW VOLTAGE CONSULTANT'S PLANS AND SPECIFICATIONS (CONVERGENT).
- (E4) 120V-1Ø POWER AND CONTROL FOR MOTORIZED DROP-DOWN SCREEN EQUIPMENT. COORDINATE ALL FINAL LOCATIONS WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. COORDINATE ALL FINAL POWER REQUIREMENTS WITH THE CONSULTANT'S PLANS AND SPECIFICATIONS (CONVERGENT).
- (E5) POWER FOR ACU IS DERIVED FROM CU LOCATED ON THE ROOF. ALL LOW VOLTAGE WIRING METHODS ARE TO BE PROVIDED BY THE MECHANICAL CONTRACTOR.
- (E6) (2) 4" CAPPED CONDUITS WITH FULL-STRINGS UP TO ROOF FOR FUTURE SOLAR PATHWAY.

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SECOND FLOOR PLAN - POWER
SCALE: 1/8"=1'-0"

ELECTRICAL NOTES:

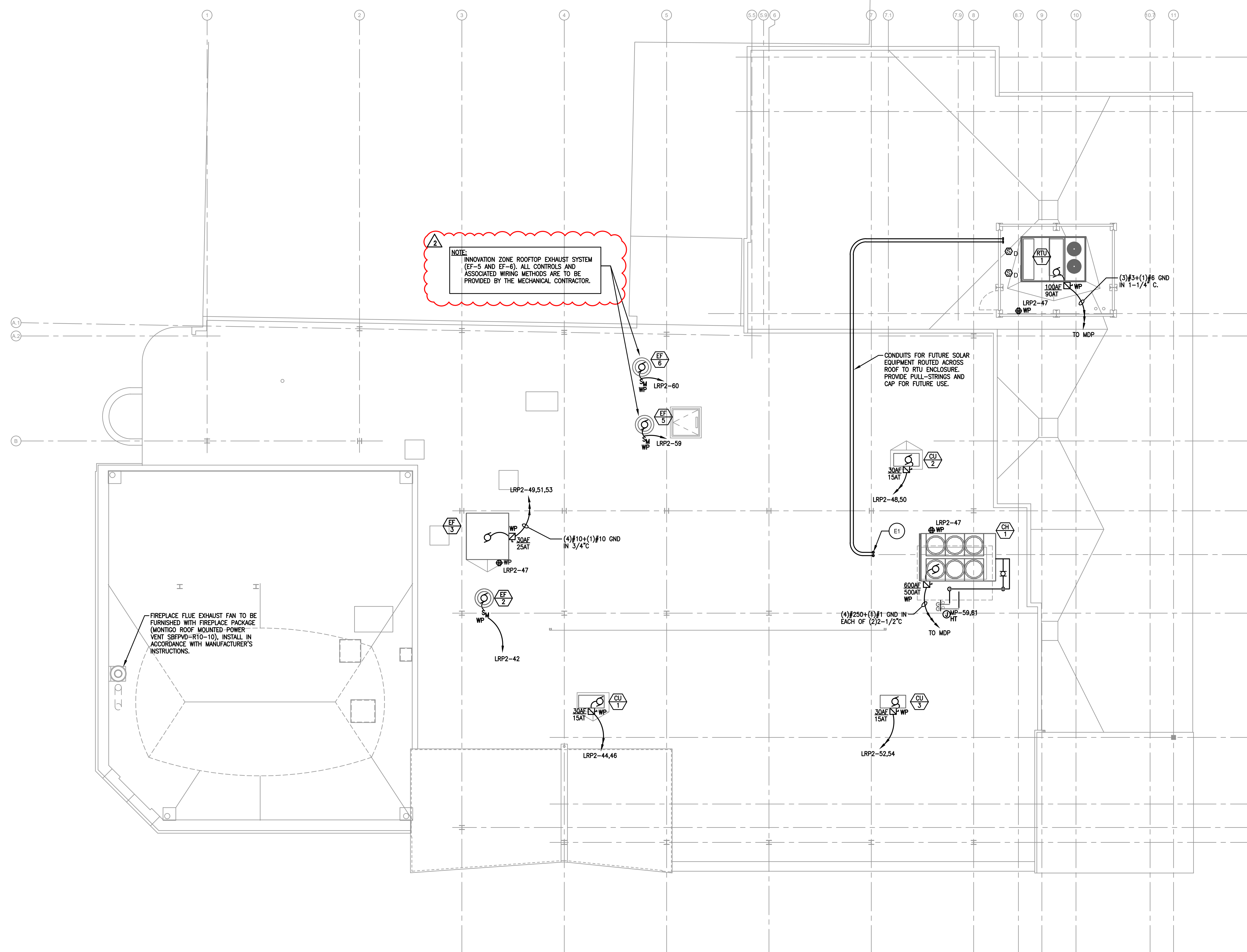
- COORDINATE LOCATIONS AND MOUNTING HEIGHTS OF ALL WIRING DEVICES WITH OWNER/TEENANT ARCHITECT PRIOR TO ROUGH-IN. REFER TO DETAILS AND SPECIFICATIONS FOR TYPICAL MOUNTING HEIGHTS.
- REMOVE ALL EXISTING BRANCH CIRCUIT PANELBOARDS AND PROVIDE NEW AS INDICATED ON PLANS. FURNISH AND INSTALL NEW FEEDERS AND ASSOCIATED DISCONNECTING MEANS.
- UNLESS OTHERWISE NOTED, BRANCH CIRCUIT NUMBERS ARE VIA PANEL "LRP2".
- CONTRACTOR IS TO CONCEAL WIRING WHENEVER POSSIBLE. CUT AND PATCH ALL EXISTING PLASTER AND DRYWALL AS REQUIRED, AND REFINISH TO MATCH ADJACENT. ALL EXPOSED WIRING IS TO BE INSTALLED IN EMT. CONTRACTOR IS TO PAINT AS DIRECTED BY THE ARCHITECT. CONDUIT PATH IS TO BE AS INCONSPICUOUS AS POSSIBLE. COORDINATE CONDUIT ROUTE WITH ARCHITECT/OWNER PRIOR TO ROUGH-IN AND INSTALLATION.
- UNLESS OTHERWISE NOTED, ALL MOTORIZED SHADE EQUIPMENT AND ASSOCIATED CONTROLS INDICATED ON THIS SHEET ARE TO BE ADD ALTERNATE

ELECTRICAL KEYNOTES:

- (E1) PROVIDE TWO-GANG FLOOR BOX POKE THRU DEVICE WITH INSTALLED DUPLEX RECEPTACLE. COORDINATE ALL FINAL LOCATIONS WITH THE ARCHITECT AND OWNER. COORDINATE ALL FINAL LOW VOLTAGE REQUIREMENTS WITH THE LOW VOLTAGE CONSULTANT'S PLANS AND SPECIFICATIONS (CONVERGENT).
- (E2) PROVIDE SINGLE-GANG FLOOR BOX POKE THRU DEVICE WITH INSTALLED DUPLEX RECEPTACLE. COORDINATE ALL FINAL LOCATIONS WITH THE ARCHITECT AND OWNER.
- (E3) (2) 4" CONDUITS TO ACCESSIBLE CEILING DOWN THE BELOW.
- (E4) 120V-1Ø POWER AND LOW VOLTAGE FOR CEILING MOUNTED PROJECTOR EQUIPMENT. COORDINATE ALL FINAL LOCATIONS WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. COORDINATE ALL FINAL POWER REQUIREMENTS WITH THE LOW VOLTAGE VENDOR.
- (E5) 120V-1Ø POWER FOR MOTORIZED DROP-DOWN SCREEN EQUIPMENT. COORDINATE ALL FINAL LOCATIONS WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. COORDINATE ALL FINAL POWER REQUIREMENTS WITH THE LOW VOLTAGE VENDOR.
- (E6) (2) 4" CAPPED CONDUITS WITH PULL-STRINGS FROM LOWER LEVEL MECHANICAL ROOM UP TO ROOF FOR FUTURE SOLAR PATHWAY. CONDUIT TO TERMINATE IN STU ENCLOSURE.
- (E7) PROVIDE NEW WALL MOUNTED SYSTEM FURNITURE WHIP DEVICE FOR POWER, AND LOW VOLTAGE WIRING METHODS. COORDINATE ALL FINAL LOW VOLTAGE REQUIREMENTS WITH THE LOW VOLTAGE CONSULTANT'S PLANS AND SPECIFICATIONS (CONVERGENT).
- (E8) INDICATES BASE BID MOTORIZED SHADE EQUIPMENT AND ASSOCIATED CONTROLS.

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ROOF PLAN - ELECTRICAL
SCALE: 1/8"=1'-0"

- ELECTRICAL NOTES:**
- COORDINATE LOCATIONS AND MOUNTING HEIGHTS OF ALL WIRING DEVICES WITH OWNER/ TENANT ARCHITECT PRIOR TO ROUGH-IN. REFER TO DETAILS AND SPECIFICATIONS FOR TYPICAL MOUNTING HEIGHTS.

- ELECTRICAL KEYNOTES:**
- (E1) (2) 4" CAPPED CONDUITS WITH PULL-STRINGS FROM ABANDONED LOWER LEVEL ELEVATOR MACHINE ROOM UP TO ROOF VIA ABANDONED ELEVATOR SHAFT FOR FUTURE SOLAR PATHWAY. CONDUIT IS TO TERMINATE IN RTU ENCLOSURE.

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