

Consultants:

No.	Date	Description
1	03/07/2024	90% DESIGN REVIEW
2	04/24/2024	ISSUED FOR BIDDING

Revisions:

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Key Plan:

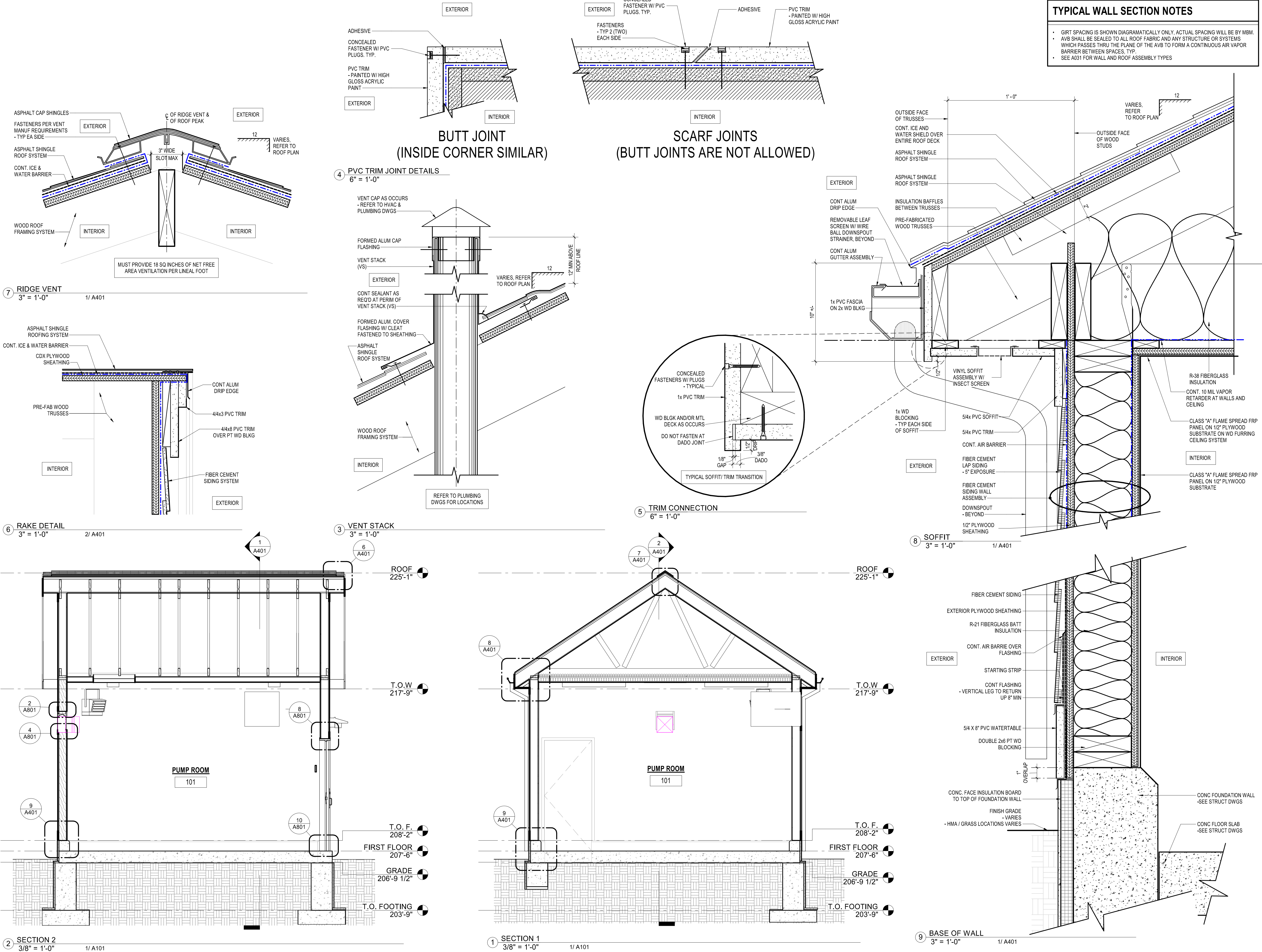
Date: 04/24/2024
Drawn By: DGG
Reviewed By: JC
Approved By: DT
W&S Project No.: ENG23-0367
W&S File No.:

Drawing Title:
**BUILDING SECTIONS,
WALL SECTIONS &
DETAILS**

Sheet Number:
A401

TYPICAL WALL SECTION NOTES


- GIRT SPACING IS SHOWN DIAGRAMMATICALLY ONLY. ACTUAL SPACING WILL BE BY MBM.
- AVB SHALL BE SEALED TO ALL ROOF FABRIC AND ANY STRUCTURE OR SYSTEMS WHICH PASSES THRU THE PLANE OF THE AVB TO FORM A CONTINUOUS AIR VAPOR BARRIER BETWEEN SPACES. TYP.
- SEE A031 FOR WALL AND ROOF ASSEMBLY TYPES



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LOUVER SCHEDULE					
TYPE	WIDTH	HEIGHT	COUNT	HEIGHT A.F.F.	COMMENTS
LV-1	1'-2"	1'-2"	1		
LV-2	2'-0"	2'-0"	1		

DOOR SCHEDULE													
DOOR #	DOORS			FRAMES			DETAILS			RATING	HWR SET	REMARKS	
	TYPE	MATERIAL	FINISH	WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	HEAD				JAMB
101	F	FG	PNT	6'-0"	7'-0"	1	FG/AL	PNT	8/A801	9/A801	10/A801	NA	DOUBLE DOOR
102	F	FG	PNT	3'-0"	7'-0"	1	FG/AL	PNT	8/A801	9/A801	10/A801	NA	SINGLE DOOR

Project:
CITY OF ROCHESTER, NH

LEDGEVIEW SEWER PUMP STATION
UPGRADE
54A LEDGEVIEW DRIVE
ROCHESTER, NH 03668

Weston & Sampson
Weston & Sampson Engineers, Inc.
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Reading, MA 01867
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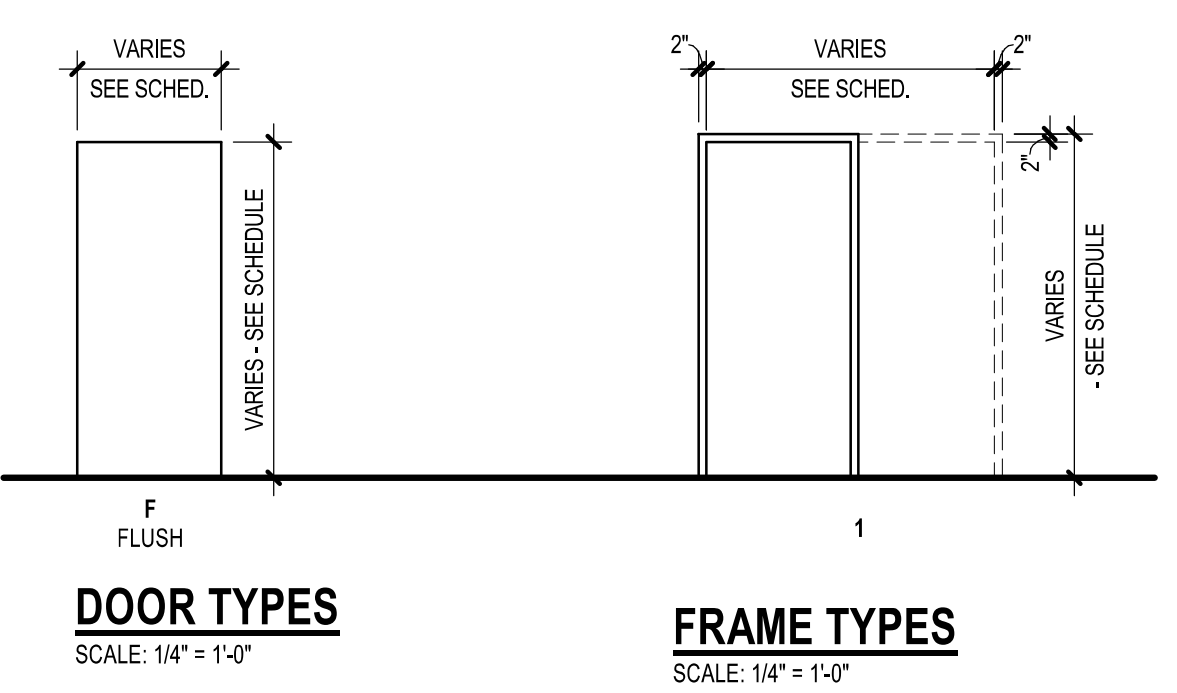
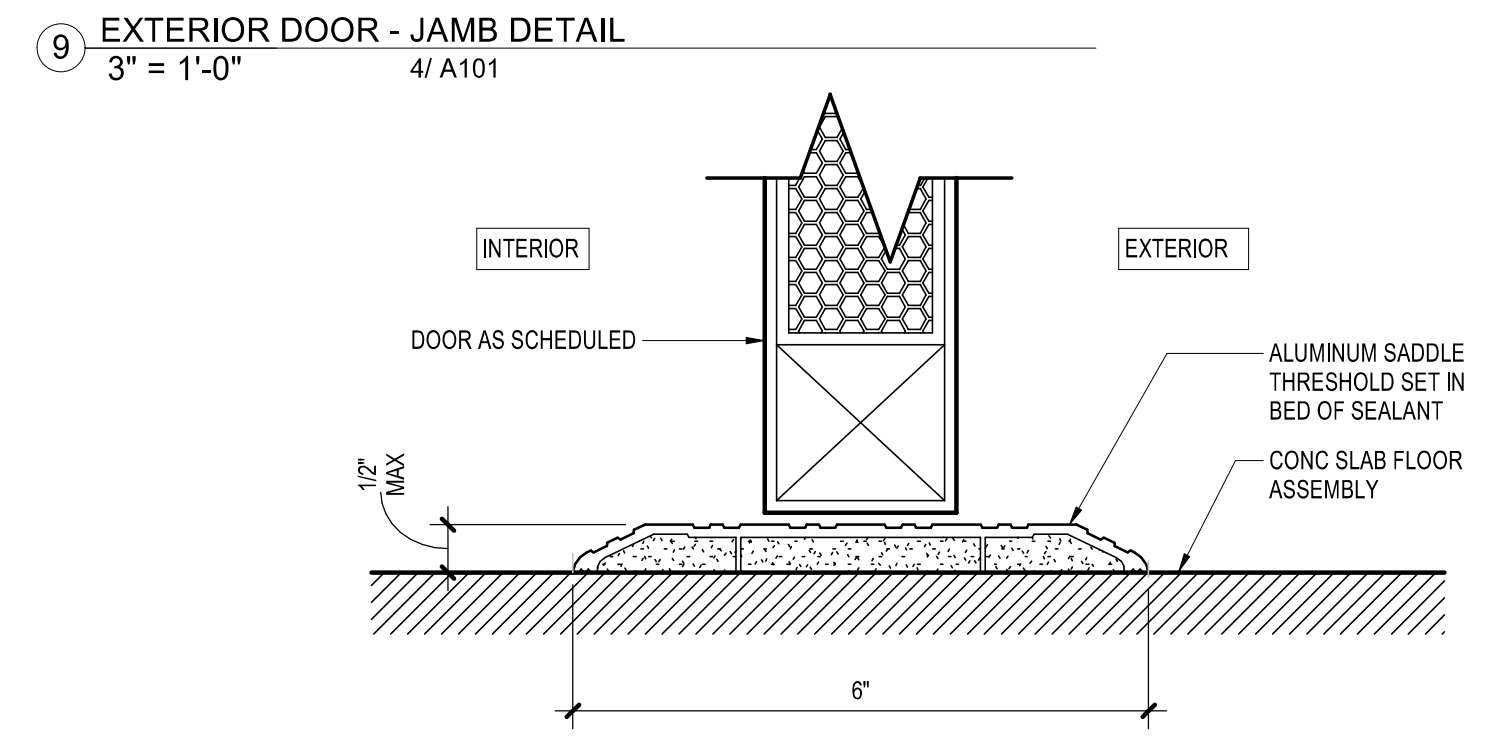
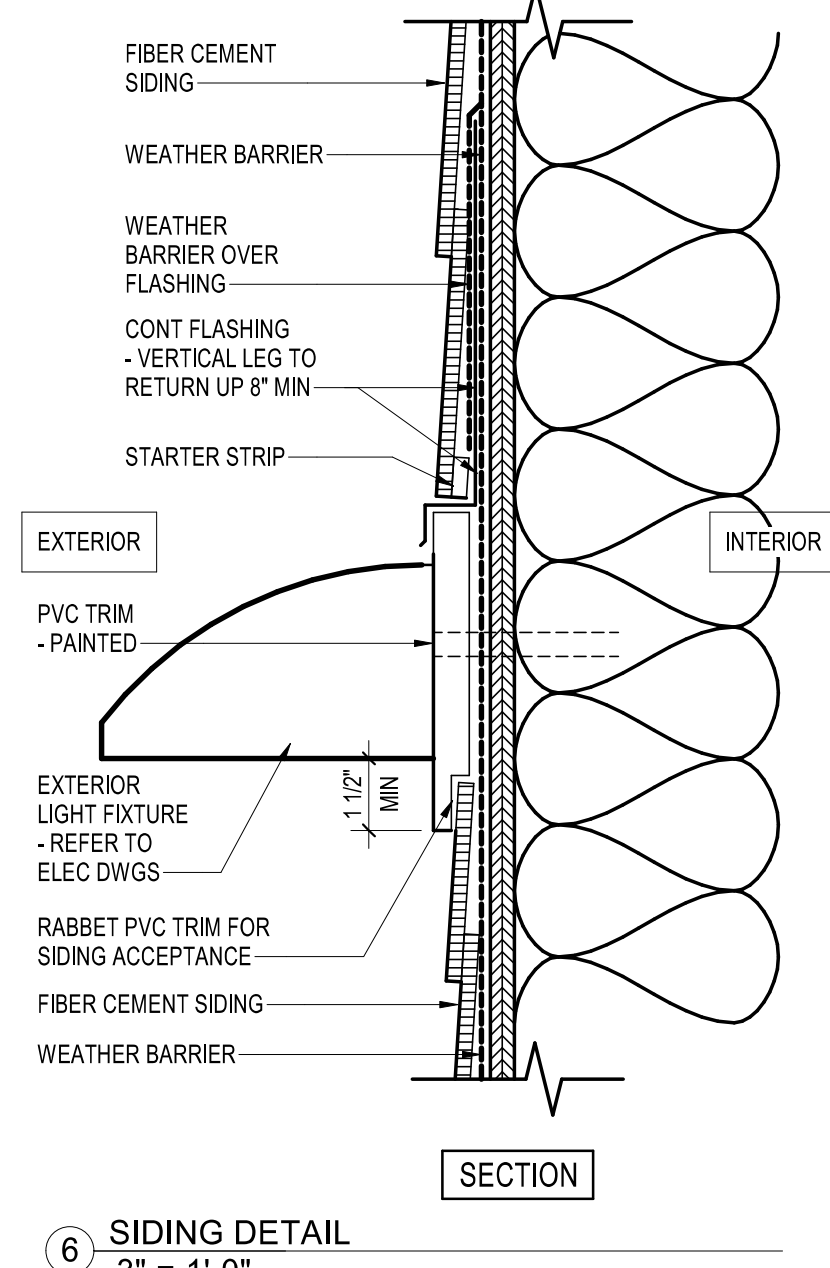
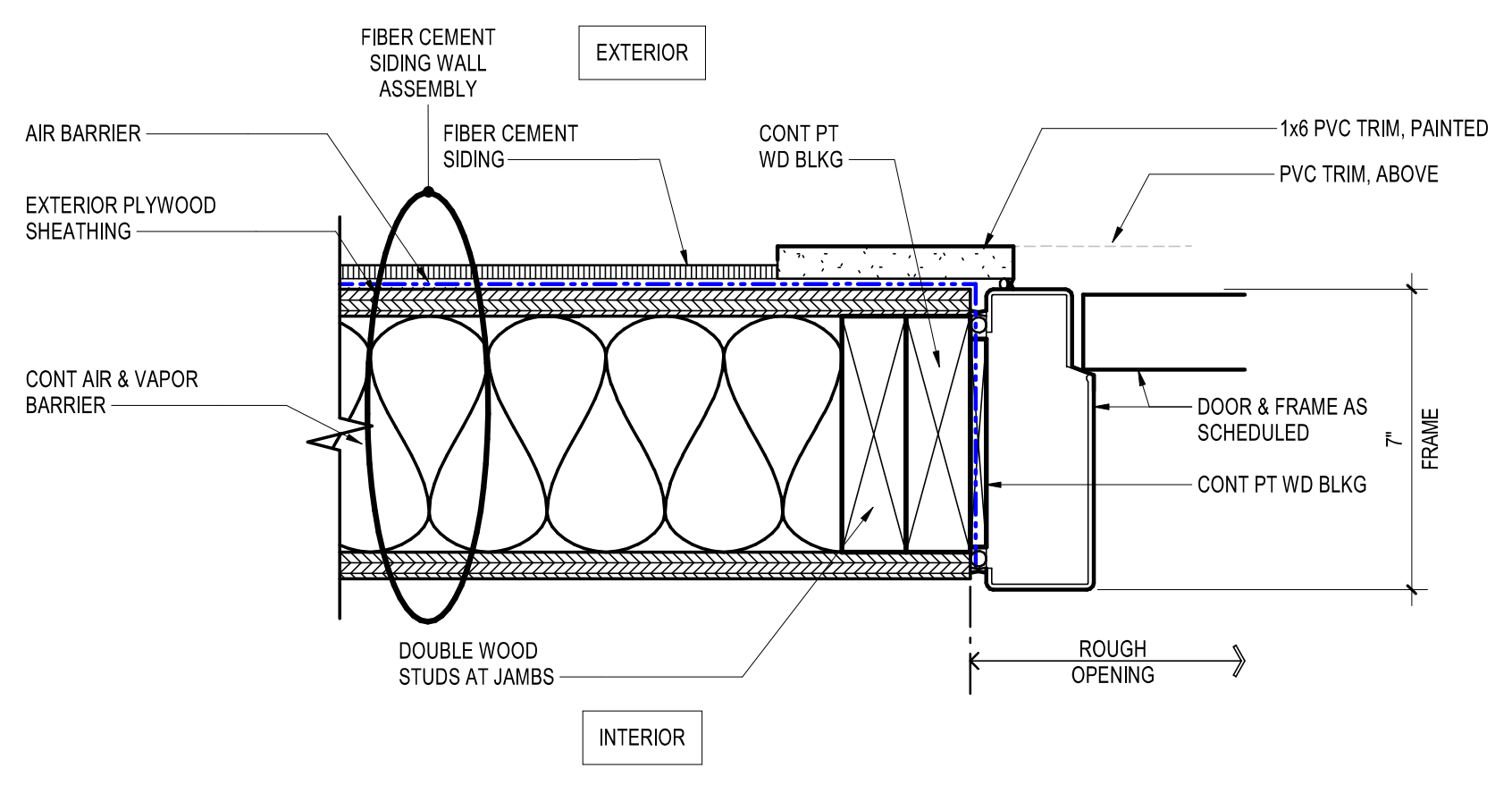
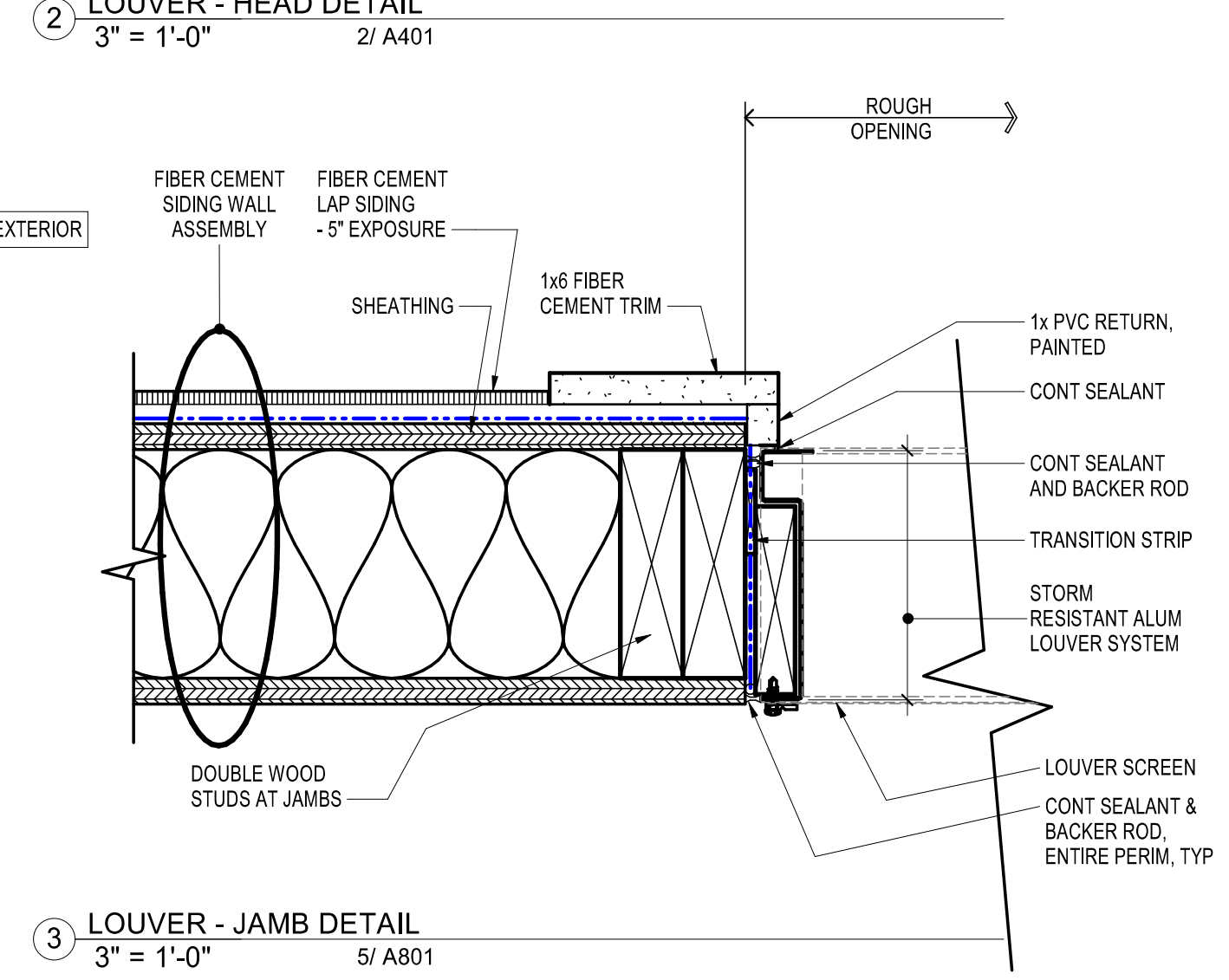
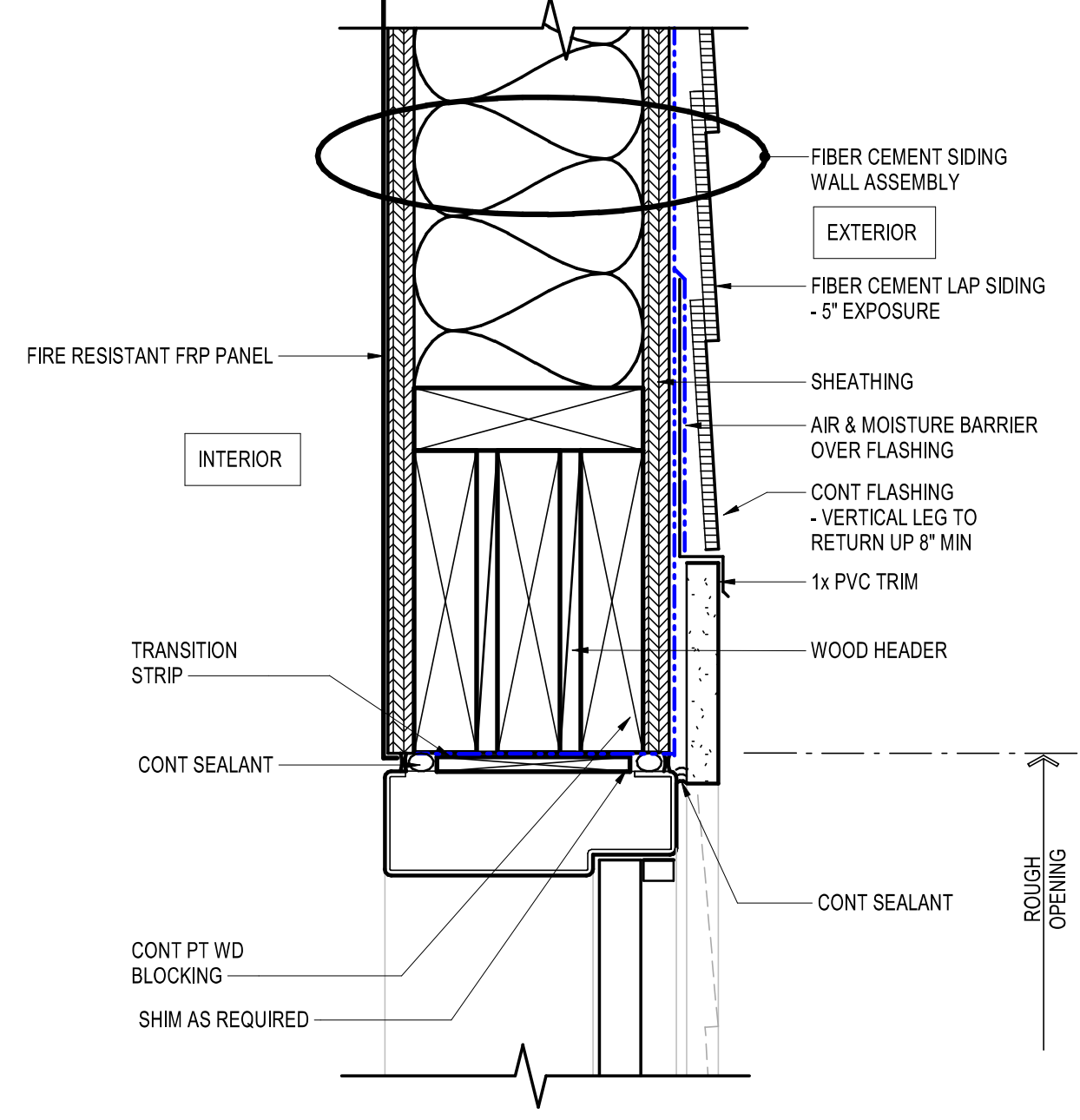
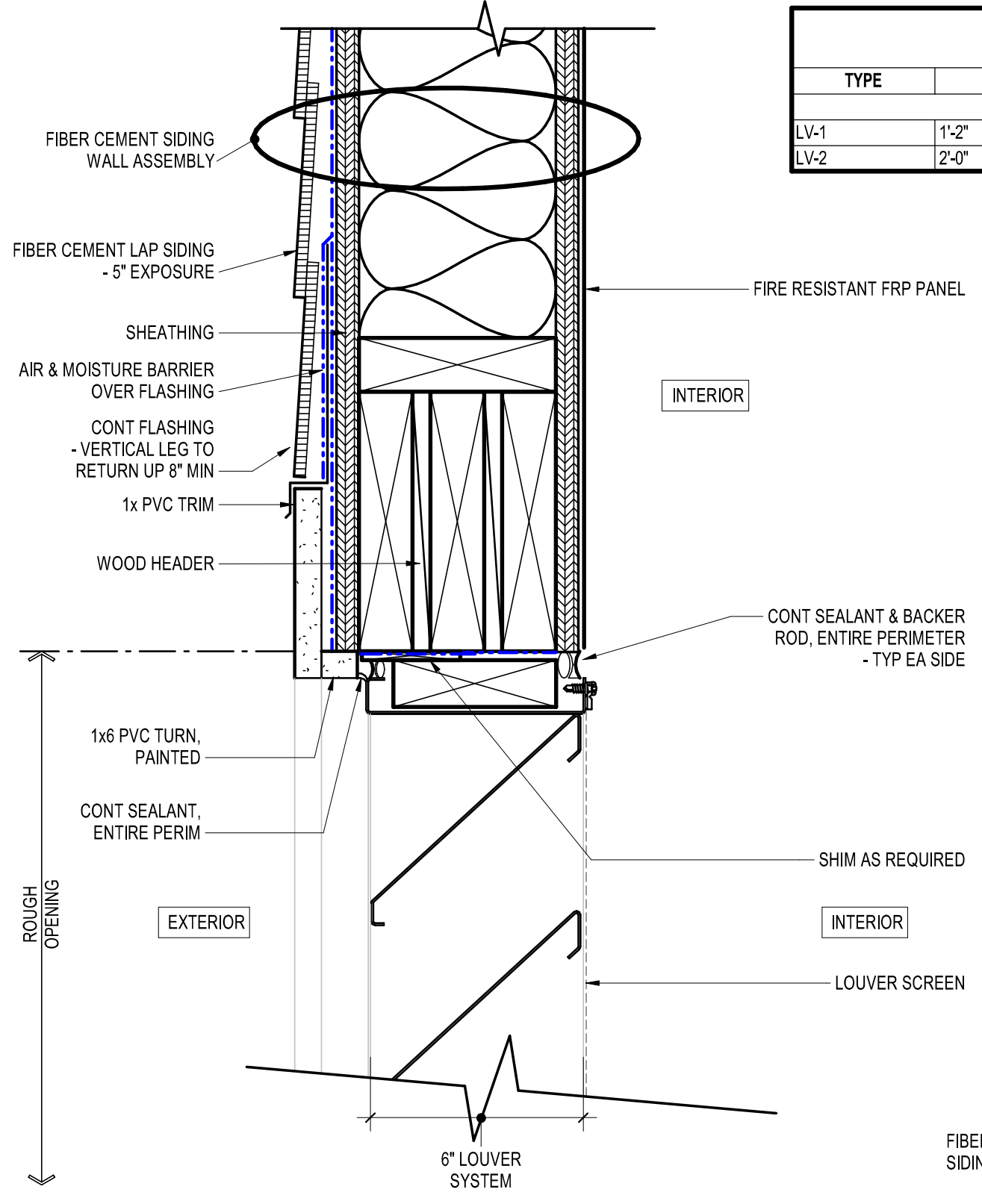


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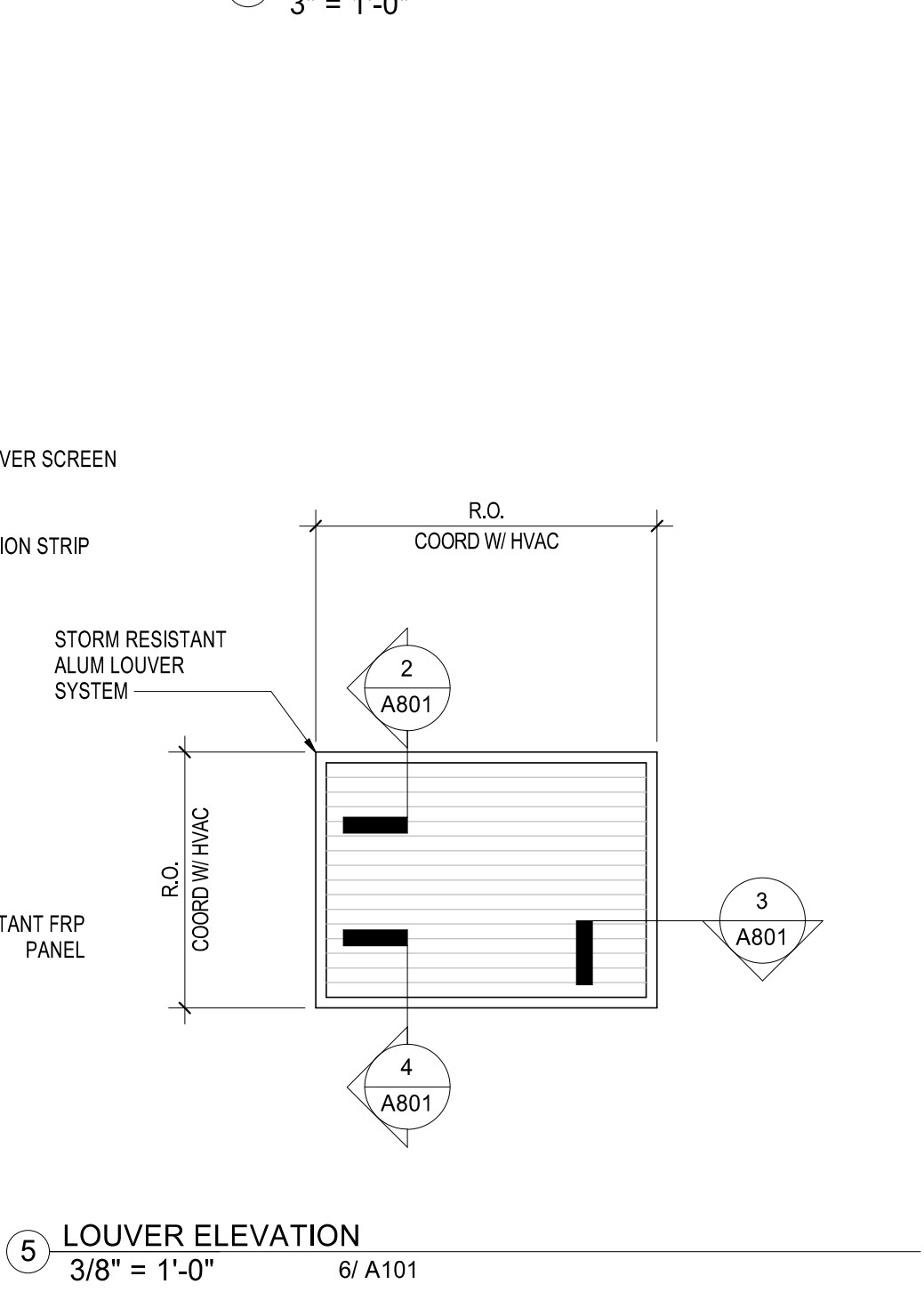
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Drawing Title:
LOUVER, DOOR AND FRAME TYPE DETAILS

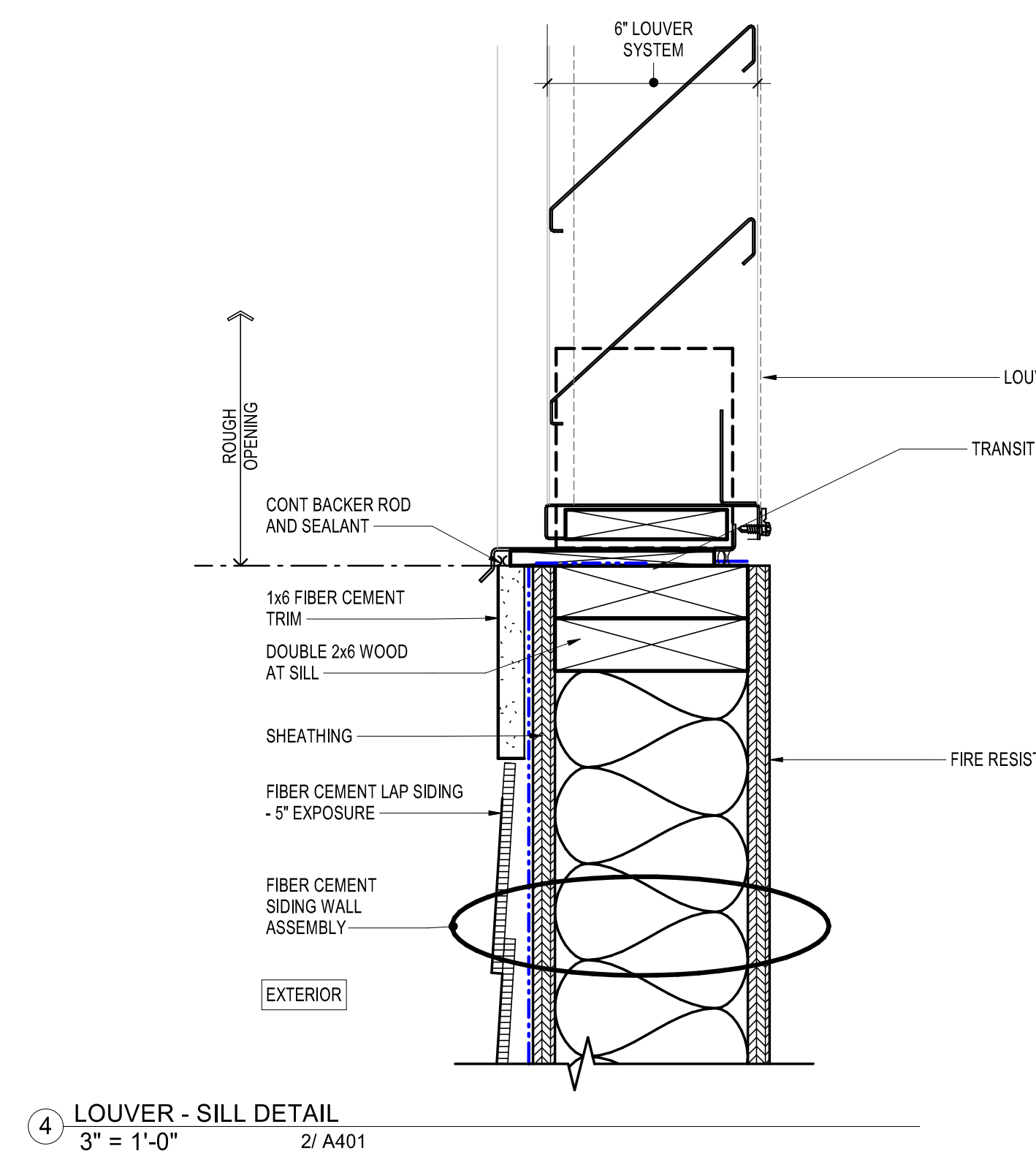
Sheet Number:
A801



1 DOOR & FRAMES TYPES & ELEVATIONS 1/4" = 1'-0"



5 LOUVER ELEVATION 3/8" = 1'-0" 6/ A101
LOUVER GENERAL NOTES:
CONTRACTOR MAY INCREASE SIZE OF LOUVER AS REQUIRED IN ORDER TO ACHIEVE THE REQUIRED FREE AREA OF SIZES LISTED ON HVAC DRAWINGS AT NO ADDITIONAL COST TO THE OWNER.



4 LOUVER - SILL DETAIL 3" = 1'-0" 2/ A401

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1.0 - GENERAL

- 1.01 THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS AND SPECIFICATIONS. REFER TO CIVIL, ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR LOCATION, DIMENSIONS, AND DETAILS OF OPENINGS, SLEEVES, EMBEDMENTS, INSERTS, PADS, CURBS, DEPRESSIONS, ANCHOR BOLTS, AND OTHER PROJECT REQUIREMENTS NOT SHOWN ON STRUCTURAL DRAWINGS.
1.02 THE CONTRACTOR IS RESPONSIBLE FOR CHECKING, COORDINATING AND VERIFYING ALL DIMENSIONS IN THE FIELD PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL IMMEDIATELY REPORT ANY DISCREPANCY TO THE ARCHITECT AND ENGINEER AS A REQUEST FOR INFORMATION (RFI) BEFORE PROCEEDING WITH WORK.
1.03 THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING IN THE FIELD THE EXISTENCE AND LOCATION OF OVERHEAD, BURIED AND/OR EMBEDDED UTILITIES, AND DETERMINING LOCATIONS OF ALL EMBEDDED MECHANICAL, ELECTRICAL AND PLUMBING SYSTEMS AFFECTED BY THE WORK OF THIS CONTRACT.
1.04 ALL WORK IS TO CONFORM WITH THE FOLLOWING CODES AND STANDARDS:
(A) "NEW HAMPSHIRE STATE BUILDING CODE"
(B) INTERNATIONAL BUILDING CODE (IBC 2018)
(C) "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" - AMERICAN CONCRETE INSTITUTE (ACI 318)
(D) "MANUAL OF STEEL CONSTRUCTION" - AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC 360)
(E) "SEISMIC PROVISION FOR STRUCTURAL STEEL BUILDINGS" - AMERICAN INSTITUTE OF STEEL CONSTRUCTION, (AISC)
(F) "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" - AMERICAN SOCIETY OF CIVIL ENGINEERS, (ASCE 7-10)
FOR ADDITIONAL CODES AND STANDARDS REFER TO SPECIFICATIONS.
1.05 THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER OF UNFORESEEN CONDITIONS THAT MAY BE UNCOVERED DURING DEMOLITION AND CONSTRUCTION AS A REQUEST FOR INFORMATION (RFI) BEFORE PROCEEDING WITH WORK.
1.06 PERMANENT STRUCTURAL ELEMENTS TO BE DESIGNED IN ACCORDANCE WITH PERFORMANCE SPECIFICATIONS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
(A) MISC. ARCH COMPONENT SEISMIC SUPPORTS
(B) MISC. MECHANICAL AND ELECTRICAL COMPONENT AND SYSTEM SEISMIC SUPPORTS
FOR PERFORMANCE DESIGN REQUIREMENTS OF ELEMENTS LISTED ABOVE, REFER TO ADDITIONAL NOTES ON THESE SHEETS AND IN THE TECHNICAL SPECIFICATIONS. ALL DESIGN SUBMITTAL DRAWINGS AND CALCULATIONS SHALL BE CERTIFIED, SIGNED AND SEALED BY A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE OF NEW HAMPSHIRE.
1.07 STRUCTURAL REQUIREMENTS TO ACCOMMODATE FIXED EQUIPMENT WHICH IS INCIDENTAL TO THE REQUIREMENTS OF A SPECIFIC EQUIPMENT MANUFACTURER. ALL WORK SHALL CONFORM TO APPROVED EQUIPMENT MANUFACTURER'S SHOP DRAWINGS AND INSTALLATION INSTRUCTIONS. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL ANY REQUIRED MODIFICATIONS TO ACCOMMODATE APPROVED EQUIPMENT DRAWINGS. SUCH MODIFICATIONS SHALL BE MADE AT NO COST TO THE OWNER.
1.08 DETAILS AND NOTES SHOWN ON STRUCTURAL DRAWINGS SHALL BE APPLICABLE TO ALL PARTS OF THE STRUCTURAL WORK EXCEPT WHERE SPECIFICALLY REQUIRED OTHERWISE BY CONTRACT DOCUMENTS. CONDITIONS NOT SPECIFICALLY SHOWN SHALL BE SIMILAR TO THOSE SHOWN FOR LIKE CONDITIONS AS DETERMINED BY THE ENGINEER.
1.09 IN ACCORDANCE WITH SPECIFICATION SECTION 01 45 23, TESTING AND INSPECTION OF STRUCTURAL WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COSTS FOR TESTING AND INSPECTIONS WILL BE PAID BY THE CONTRACTOR. PROVIDE TEST RESULTS TO THE ENGINEER IN A TIMELY MANNER.
1.10 THE CONTRACTOR SHALL DESIGN AND PROVIDE ALL REQUIRED SHORING AND TEMPORARY BRACING TO RESIST FORCES ON THE STRUCTURE THROUGHOUT THE CONSTRUCTION PERIOD.

2.0 - FOUNDATIONS

- 2.01 THE SUBSURFACE CONDITIONS DESCRIBED IN THE DRAWINGS, SPECIFICATIONS, TEST BORINGS AND TEST PITS ARE INCLUDED ONLY TO ASSIST THE CONTRACTOR DURING BIDDING AND SUBSEQUENT CONSTRUCTION AND REPRESENT CONDITIONS ONLY AT THESE SPECIFIC LOCATIONS AT THE TIME THEY ARE MADE.
2.02 THE CONTRACTOR SHALL DESIGN AND PROVIDE ALL TEMPORARY EARTH SUPPORT, SHORING AND BRACING REQUIRED TO PERFORM THE WORK IN ACCORDANCE WITH OSHA, STATE AND LOCAL REQUIREMENTS.
2.03 THE CONTRACTOR SHALL DESIGN AND PROVIDE SHEETING, SHORING, BRACING, AND/OR UNDERPINNING IN ORDER TO PROTECT EXISTING UTILITIES FROM EXCESSIVE MOVEMENTS DURING THE CONSTRUCTION PERIOD, IN ACCORDANCE WITH OSHA, STATE & LOCAL REQUIREMENTS.
2.04 THE CONTRACTOR SHALL CARRY OUT CONTINUOUS CONTROL OF SURFACE AND SUBSURFACE WATER. DEWATER ANY AREAS REQUIRING EXCAVATION IN ADVANCE OF PERFORMING EXCAVATION. MAINTAIN GROUNDWATER LEVELS AT LEAST 2 FEET BELOW PLANNED SUBGRADES.
2.05 ALL SUBGRADES TO RECEIVE FILL MATERIALS, FOUNDATIONS, SLABS OR OTHER CONSTRUCTION SHALL BE FREE OF RUNNING OR STANDING WATER PRIOR TO PLACEMENT.
2.06 SPREAD FOOTINGS AND PIERS AS SHOWN ARE DESIGNED FOR ESTIMATED METAL BUILDING REACTIONS AND ARE APPROXIMATE IN SIZE. THESE ELEMENTS ARE SUBJECT TO CHANGE IN DIMENSION (IF REQUIRED) WITH THE APPROVED METAL BUILDING SUBMITTAL. ANY CHANGES SHALL COME AT NO ADDITIONAL COST TO THE OWNER.
2.07 FOUNDATIONS SHALL BE INSTALLED IN THE GEOMETRY SHOWN IN THE PLANS, ANY ROCK ENCOUNTERED DURING EXCAVATION SHALL BE REMOVED TO CLEAR THE REQUIRED FOUNDATION GEOMETRY.
2.08 SPREAD FOOTING BEARING SURFACES SHALL BE EXCAVATED BY EQUIPMENT WITH A SMOOTH, TOOTHLESS CUTTING EDGE.
2.09 PILES SHALL BE DESIGNED FOR AN UNFACTORED LOAD OF 20 KIPS.
2.10 THE GEOTECHNICAL REPORT PREPARED BY WESTON & SAMPSON DATED MARCH 5, 2024 IS PROVIDED FOR INFORMATION PURPOSES ONLY.

3.0 - CAST IN PLACE CONCRETE

- 3.01 CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301).
3.02 CONCRETE SHALL BE CONTROLLED CONCRETE, PROPORTIONED, MIXED AND PLACED IN THE PRESENCE OF A REPRESENTATIVE OF AN APPROVED TESTING AGENCY.
3.03 UNLESS NOTED OTHERWISE, CONCRETE SHALL BE NORMAL WEIGHT AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH AS FOLLOWS:
(A) FOUNDATIONS: 4500 PSI
(B) INTERIOR SLABS-ON-GRADE, KNEEWALLS, CURBS, AND EQUIPMENT PADS: 4500 PSI
3.04 ALL PERMANENTLY EXPOSED VERTICAL AND HORIZONTAL CONCRETE SURFACES SHALL BE TREATED OR SEALED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
3.05 CONCRETE WORK SHALL BE COORDINATED WITH ALL ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL WORK, AND ALL EQUIPMENT. THE CONTRACTOR SHALL VERIFY INSTALLATION AND LOCATIONS OF ALL EMBEDDED ITEMS INCLUDING BUT NOT LIMITED TO INSERTS, ANCHOR BOLTS, DOWELS, BLOCKOUTS, SLEEVES, EMBEDDED PIPING, AND EMBEDDED CONDUIT PRIOR TO CONCRETE PLACEMENT.
3.06 FOR SLABS-ON-GRADE, LOCATE CONSTRUCTION OR CONTROL JOINTS ALONG COLUMN LINES OR AS SHOWN. PROVIDE JOINTS AT 20FT. MAX. SPACING. SUBMIT JOINT LOCATIONS AND DETAILS FOR APPROVAL.
3.07 SEALANT FOR CONTROL/CONTRACTION JOINTS AND SAW CUT JOINTS SHALL BE SIKADUR 51 MANUFACTURED BY SIKA OR AN APPROVED EQUAL.
3.08 CONCRETE EXPOSED TO WEATHER (FREEZE-THAW CONDITIONS) IN THE FINISHED PROJECT SHALL BE AIR ENTRAINED PER SPECIFICATIONS REQUIREMENTS.
3.09 A MINIMUM OF 72 HOURS SHALL ELAPSE BETWEEN ADJACENT CONCRETE PLACEMENTS.
3.10 CONCRETE SLABS SHALL BE PLACED SO THAT THE SLAB THICKNESS IS AT NO POINT LESS THAN THAT INDICATED ON THE DRAWINGS.
3.11 PROVIDE A 3/4" CHAMFER ON ALL VERTICAL AND HORIZONTAL CORNERS EXPOSED TO VIEW UNLESS NOTED OTHERWISE.
3.12 ALL CONCRETE SHALL BE WATER CURED UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
3.13 NON-SHRINK, NON-METALLIC, GROUT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 7,500 PSI (ASTM C942) AND A MINIMUM BOND STRENGTH OF 2,000 PSI AT 28-DAYS (ASTM C882). GROUT MAY BE EXTENDED WITH COARSE AGGREGATE PER THE MANUFACTURER'S RECOMMENDATIONS.
3.14 WHEN NEW CONCRETE IS CAST AGAINST EXISTING CONCRETE SURFACES, UNLESS NOTED OTHERWISE, THE EXISTING CONCRETE SHALL BE ROUGHENED TO 1/4" AMPLITUDE, THOROUGHLY CLEANED BY POWER WASHING OR OTHER MEANS, AND BE A SATURATED SURFACE DRY CONDITION IMMEDIATELY PRIOR TO PLACING CONCRETE.

4.0 - CAST IN PLACE CONCRETE REINFORCEMENT

- 4.01 REINFORCEMENT DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO "ACI DETAILING MANUAL" - SP-66, "CRSI MANUAL OF STANDARD PRACTICE".
4.02 STEEL REINFORCEMENT, UNLESS NOTED OTHERWISE, SHALL CONFORM TO THE FOLLOWING:
(A) BARS, TIES, AND STIRRUPS _____ASTM A615 GRADE 60
4.03 REINFORCING STEEL SHALL BE UNCOATED AND DEFORMED.
4.04 MINIMUM CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT, UNLESS REQUIRED FOR FIRE PROTECTION OR NOTED OTHERWISE, SHALL BE AS FOLLOWS:
(A) CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: _____3"
(B) CONCRETE EXPOSED TO EARTH OR WEATHER:
(1) NO. 6 THRU NO. 18 BARS: _____2"
(2) NO. 5 BAR, W31 OR D31 WIRE AND SMALLER: _____2"
(C) SURFACES NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
(1) SLABS, WALLS, JOISTS: _____2"
(a) NO. 14 AND NO 18 BARS: _____2"
(b) NO. 11 BARS AND SMALLER: _____2"
(2) BEAMS:
(a) PRIMARY REINFORCEMENT: _____2-1/2"
(b) TIES, STIRRUPS, SPIRALS: _____2"
4.05 REINFORCING STEEL SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS, CORNERS, AND INTERSECTIONS UNLESS OTHERWISE NOTED. REINFORCING SHALL BE LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS, UNLESS OTHERWISE NOTED.
4.06 FOR REINFORCING STEEL SPLICE LAP LENGTHS REFER TO THE TABLE PROVIDED UNLESS OTHERWISE INDICATED.
4.07 MECHANICAL SPLICES SHALL BE PERMITTED SUBJECT TO APPROVAL BY THE ENGINEER. MECHANICAL SPLICES SHALL DEVELOP AT LEAST 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE BAR. NO WELDED CONNECTIONS ARE PERMITTED.
4.08 REINFORCEMENT SHALL NOT BE TACK WELDED.
4.09 NOTIFY THE TESTING LAB AND ENGINEER A MINIMUM OF 48 HOURS PRIOR TO SCHEDULED CONCRETE PLACEMENT IN ORDER TO ACCOMMODATE INSPECTION OF REINFORCEMENT AND CONCRETE TESTING. NO CONCRETE SHALL BE PLACED WITHIN 48 HOURS OF SUCH NOTIFICATION.
4.10 WHERE REINFORCEMENT IS NOT SHOWN ON DRAWINGS, PROVIDE REINFORCEMENT IN ACCORDANCE WITH APPLICABLE DETAILS AS DETERMINED BY THE ARCHITECT AND ENGINEER. IN NO CASE SHALL REINFORCEMENT BE LESS THAN THE MINIMUM REINFORCEMENT PERMITTED BY THE CODES, NOR LESS THAN THE FOLLOWING:
(A) BEAM STIRRUPS: #3 @ 12"
(B) BEAM STIRRUP SUPPORTS: 1-#5 AT EACH STIRRUP BEND
(C) FACE REINFORCEMENT IN BEAMS OR PORTIONS OF BEAMS #4 @ 12" E.F.
(D) STRUCTURAL SLABS: 0.0020 X GROSS CONCRETE AREA IN EACH DIRECTION
(E) CONCRETE WALLS: 0.0025 X GROSS CONCRETE AREA IN EACH DIRECTION
4.11 WHERE REINFORCEMENT IS REQUIRED IN SECTION, REINFORCEMENT IS CONSIDERED TYPICAL WHEREVER THE SECTIONS APPLIES.
4.12 WHERE THERE IS CONFLICT BETWEEN LOCATIONS OF COLUMN VERTICAL BARS AND BEAM HORIZONTAL BARS, THE COLUMN BARS SHALL REMAIN IN THEIR DESIGNATED POSITIONS AND BEAM BAR LOCATIONS SHALL BE ADJUSTED.
4.13 DOWELS SHALL MATCH BAR SIZE, NUMBER AND SPACING, UNLESS NOTED OTHERWISE.

5.0 - CARPENTRY

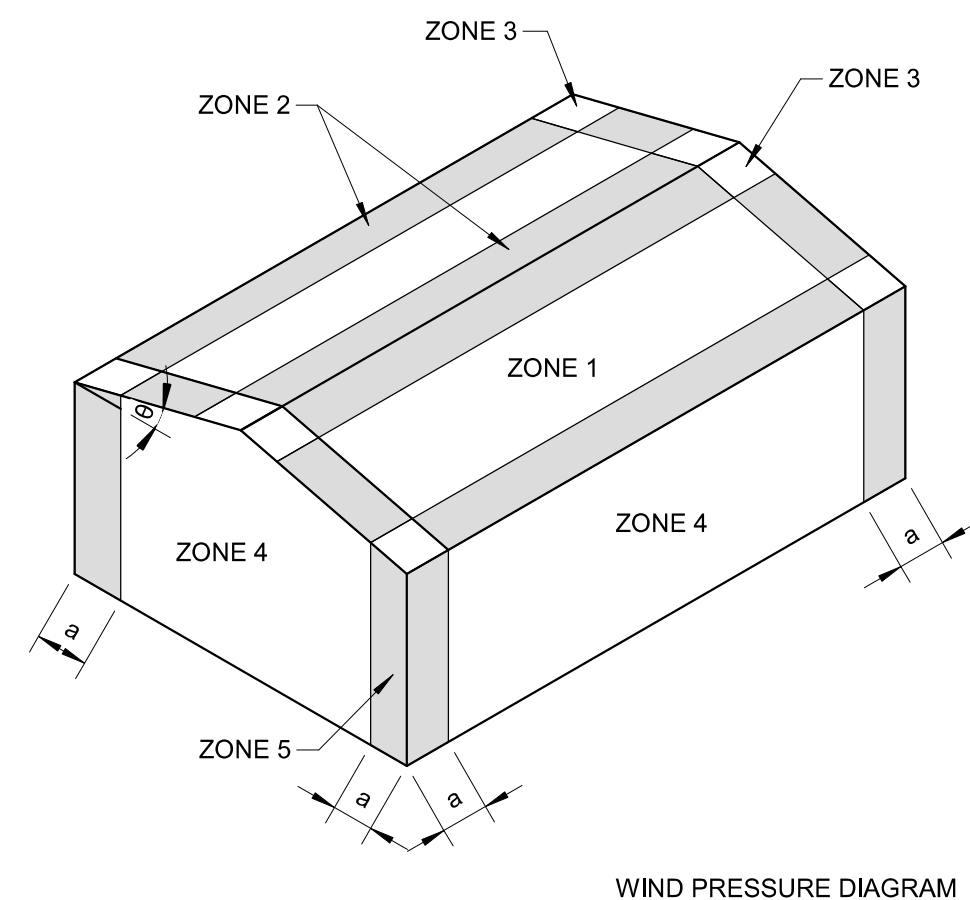
- 5.01 ALL WOOD CONSTRUCTION SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATIONS FOR STRESS GRADE LUMBER AND ALL STATE AND LOCAL CODES, AND AMERICAN INSTITUTE OF TIMBER FRAMING.
5.02 ALL 2x DIMENSIONAL LUMBER SHALL BE S-P-F- NO.1/NO.2 GRADE OR BETTER UNLESS NOTED OTHERWISE.
5.03 SAWN LUMBER AND TIMBER SHALL BE KILN DRIED TO A MOISTURE CONTENT OF 19%.
5.04 NAIL 2-PLY BEAMS WITH 1 ROW OF 16d NAILS AT 12" ON CENTER FOR EVERY 3" MEMBER WIDTH & 3-PLY BEAMS WITH 1 ROW OF 16d NAILS AT 12" ON CENTER ON BOTH SIDES FOR EVERY 3" MEMBER WIDTH.
5.05 MINIMUM NAILING SHALL MEET OR EXCEED THE FASTENING SCHEDULE PER THE IBC 2018 TABLE 2304.9.3.2.
5.06 TIMBER SILL PLATES ON CONCRETE SHALL BE PRESSURE TREATED SOUTHERN PINE NO. 1 GRADE IN ACCORDANCE WITH THE AMERICAN WOOD-PRESERVERS' ASSOCIATION.
5.07 ALL ROOF PANELS SHALL BE 5/8" APA RATED 32/16 PLYWOOD OR "ADVANTECH" SHEATHING. NAIL ALL PLYWOOD EDGES WITH 10d COMMON NAILS AT 6" ON CENTER UNLESS NOTED OTHERWISE. INTERMEDIATE NAILING SHALL BE 10d NAILS AT 12" ON CENTER.
5.08 BLOCKING OR "H" CLIPS SHALL BE PROVIDED AT ALL UNSUPPORTED PLYWOOD EDGES AND WHERE FRAMING IS SPACED GREATER THAN 2'-0" ON CENTER.
5.09 SUBMIT PRODUCT DATA FOR SAWN LUMBER/TIMBER, CONNECTION MATERIALS, AND OTHER ACCESSORIES FOR APPROVAL.

6.0 - TIMBER TRUSS

- 6.01 ALL TRUSSES ARE CONSTRUCTED OF WOOD AND MEMBER SPACING SHALL NOT EXCEED 2'-0" ON CENTER.
6.02 FOR WIND, SNOW AND SEISMIC LOADING, REFER TO "DESIGN LOADS".
6.03 TRUSS DESIGN SHALL ACCOUNT FOR UNBALANCED AND DRIFT SNOW LOADINGS.
6.04 TRUSS BOTTOM CHORDS SHALL BE DESIGNED FOR A MINIMUM CEILING DEAD LOAD OF 10 PSF AND A 20 PSF LIVE LOAD.
6.05 TRUSSES SHALL BE DESIGNED FOR 15 PSF MIN. NET WIND UPLIFT.
6.06 ALL MECHANICAL/ELECTRICAL/PLUMBING IMPOSED LOADS SHALL BE SUPPORTED FROM THE TOP OR BOTTOM CHORDS OF THE TRUSS.
6.07 MINIMUM TRUSS MEMBER SIZES FOR TOP AND BOTTOM CHORDS SHALL BE 2x6 UNLESS NOTED OTHERWISE.
6.08 ALL TRUSS SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR FINAL APPROVAL.
6.09 TRUSSES SHALL BEAR DIRECTLY ON (2) 2x6 TOP PLATE WHICH SHALL BE SECURED TO WALLS.
6.10 EACH TRUSS SHALL BE SECURED TO THE PLATE WITH A TIE DOWN. TIE DOWNS TO BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
6.11 PERMANENT BOTTOM CHORD LATERAL RESTRAINTS SHALL BE INSTALLED AT A MINIMUM 10 FT ON CENTER AND SHALL RUN THE ENTIRE LENGTH OF THE BUILDING. DIAGONAL BRACING SHALL BE INSTALLED FROM LATERAL RESTRAINT TO LATERAL RESTRAINT AT APPROXIMATELY 45 DEGREES FROM RESTRAINTS AND BE SPACED A MAXIMUM OF 20 FT APART, UNLESS NOTED OTHERWISE. BRACING AND RESTRAINTS SHALL BE SECURED AT EACH BOTTOM CHORD INTERSECT.

7.0 - DESIGN LOADS:

- 7.01 GENERAL DESIGN REQUIREMENTS (IBC 2018, SECTION 1604)
(A) RISK CATEGORY _____(IV) (ASCE 7-16, TABLE 1.5-1)
(B) MUNICIPALITY _____ROCHESTER, NH
7.02 DESIGN LOADS (IBC 2018, SECTION 1606)
(A) SELF-WEIGHT OF ALL ATTACHED AND SUSPENDED ELEMENTS _____
(B) MINIMUM FLAT ROOF SNOW LOAD, P_f _____58.8 PSF (ASCE 7-16, TABLE 7.3-1)
TRUSS TOP CHORD DEAD LOAD: SELF WEIGHT + 8 PSF COLLATERAL
TRUSS BOTTOM CHORD DEAD LOAD: 10 DEAD + 20 PSF LIVE
7.03 LIVE LOADS (IBC 2018, SECTION 1607)
(A) FLOOR LIVE LOADS _____100 PSF
(B) ROOF LIVE LOADS _____20 PSF, 300 LB
7.04 ROOF SNOW LOAD (IBC 2018, SECTION 1608)
(A) GROUND SNOW LOAD, P_g _____70 PSF (ASCE 7-16, TABLE 7.2-8)
(B) MINIMUM FLAT ROOF SNOW LOAD, P_f _____58.8 PSF (ASCE 7-16, TABLE 7.3-1)
(C) SNOW EXPOSURE FACTOR, C_e _____1.0 (ASCE 7-16, TABLE 7.3-1)
(D) THERMAL FACTOR, C_t _____1.0 (ASCE 7-16, TABLE 7.3-2)
(E) SNOW LOAD IMPORTANCE FACTOR, I_s _____1.2 (ASCE 7-16, TABLE 1.5-2)
(F) ROOF SLOPE FACTOR, C_s _____1.0 (ASCE 7-16, FIGURE 7.4-1)
7.05 WIND LOADS (IBC 2018, SECTION 1609)
(A) BASIC WIND SPEED, V (3-SECOND GUST WIND SPEED) _____126 MPH (ASCE 7 HAZARD TOOL)
(B) BUILDING ENCLOSURE CLASSIFICATION _____ENCLOSED (ASCE 7-16, SEC. 26.2)
(C) WIND EXPOSURE CATEGORY _____B (ASCE 7-16, SEC. 26.7.3)
(D) DESIGN BUILDING DIMENSIONS _____
(E) COMPONENTS AND CLADDING _____(ASCE 7-16, CHAPTER 30)
(1) ANALYSIS PROCEDURE _____LOW RISE BUILDINGS (ASCE 7-16, PART 1)
(a) WIND DIRECTIONALITY FACTOR, K_d _____0.85 (ASCE 7-16, TABLE 26.6-1)
(b) TOPOGRAPHIC FACTOR, K_zt _____1.0 (ASCE 7-16, FIGURE 26.8-1)
(c) VELOCITY PRESSURE COEFFICIENT, K_z & K_h _____0.70 (ASCE 7-16, TABLE 26.10-1)
(d) INTERNAL PRESSURE COEFFICIENT, G_cpi _____+0.18 (ASCE 7-16, TABLE 26.13-1)
(e) PERIMETER ZONE, a _____VARIES
COMPONENTS AND CLADDING WIND PRESSURE LOADS ON BUILDING



NOTE(S):

- 1. MINIMUM PRESSURE ON ANY SURFACE SHALL BE 16 PSF.
2. TABLE PRESSURES ARE FOR SQUARE FOOT (SF) TRIBUTARY AREA. FOR OTHER AREAS LINEAR INTERPOLATION BETWEEN AREAS ABOVE.
3. POSITIVE PRESSURES ACT TOWARDS THE BUILDING, NEGATIVE ACT AWAY FROM THE BUILDING.
4. ADJUSTMENT FACTOR FOR BUILDING HEIGHT AND EXPOSURE = 1.00
5. a = 3.0 FT.
6. DETAIL IS APPLICABLE FOR ROOF SLOPES 27 <= theta <= 45 <=

Table with 3 columns: ZONE, TRIBUTARY AREA [SF], ADJUSTED PRESSURE [PSF]. Rows include 1 ROOF, 2 ROOF, 3 ROOF, 4 WALL, and 5 WALL with sub-rows for different tributary areas (10, 50, 100 SF).

- 7.06 EARTHQUAKE LOADS (IBC 2018, SECTION 1613)
(A) SITE CLASS _____E (GEOTECH REPORT)
(B) SPECTRAL RESPONSE ACCELERATIONS
(1) S_s _____0.335 (ASCE 7 HAZARD TOOL)
(2) S_1 _____0.077 (ASCE 7 HAZARD TOOL)
(C) SPECTRAL RESPONSE COEFFICIENTS
(1) S_ds _____0.342 (ASCE 7 HAZARD TOOL)
(2) S_d1 _____0.123 (ASCE 7 HAZARD TOOL)
(D) SEISMIC DESIGN CATEGORY _____D (ASCE 7-16, SEC 11.8)
(E) SEISMIC IMPORTANCE FACTOR, I_e _____1.5 (ASCE 7-16, TABLE 11.5-1)
(F) SEISMIC FORCE RESISTING SYSTEM _____(ASCE 7-16, TABLE 12.2-1)
(1) LIGHT FRAME (WOOD) WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE
(a) RESPONSE MODIFICATION COEFFICIENT, R _____6.5
(b) SYSTEM OVERSTRENGTH PARAMETER, O_o _____3
(c) DEFLECTION AMPLIFICATION FACTOR, C_d _____4
(G) ANALYSIS PROCEDURE _____EQUIVALENT LATERAL FORCE ANALYSIS (ASCE 7-16, SEC. 12.8)

8.0 - BUILDING DEFLECTION LIMITS

Table with 4 columns: CONSTRUCTION, LIVE, SNOW OR WIND (c), DEAD+LIVE. Rows include ROOF MEMBER (d), FLOOR MEMBERS, and EXTERIOR WALLS AND INTERIOR PARTITIONS WITH MASONRY VENEER ALL OTHER CASES.

- (a) TOTAL ROOF SNOW LOAD DEFLECTION SHALL NOT EXCEED 1 1/4".
(b) TOTAL FLOOR LIVE LOAD DEFLECTION SHALL NOT EXCEED 1".
(c) WIND DEFLECTIONS MAY BE BASED ON A 10-YEAR WIND.
(d) DEFLECTIONS OF MEMBERS SUPPORTING CRANES SHALL MEET DEFLECTION CRITERIA REQUIRED BY THE CRANE MANUFACTURER OR AS SPECIFIED IN THE ABOVE, WHICHEVER IS MORE STRINGENT.

Project: CITY OF ROCHESTER, NH. Logo for City of Rochester, NH. Ledgeview Sewer Pump Station Upgrades, Ledgeview Drive, Rochester, NH 03868.

Weston & Sampson logo. Weston & Sampson Engineers, Inc. 100 International Drive, Suite 152 Portsmouth, NH 03801 978.532.1900 800.SAMPSON

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COA table with columns: No., Date, Description. Row 1: 03/07/2024, 90% DESIGN REVIEW. Row 2: 04/24/2024, ISSUED FOR BIDDING.

COA: [Blank]

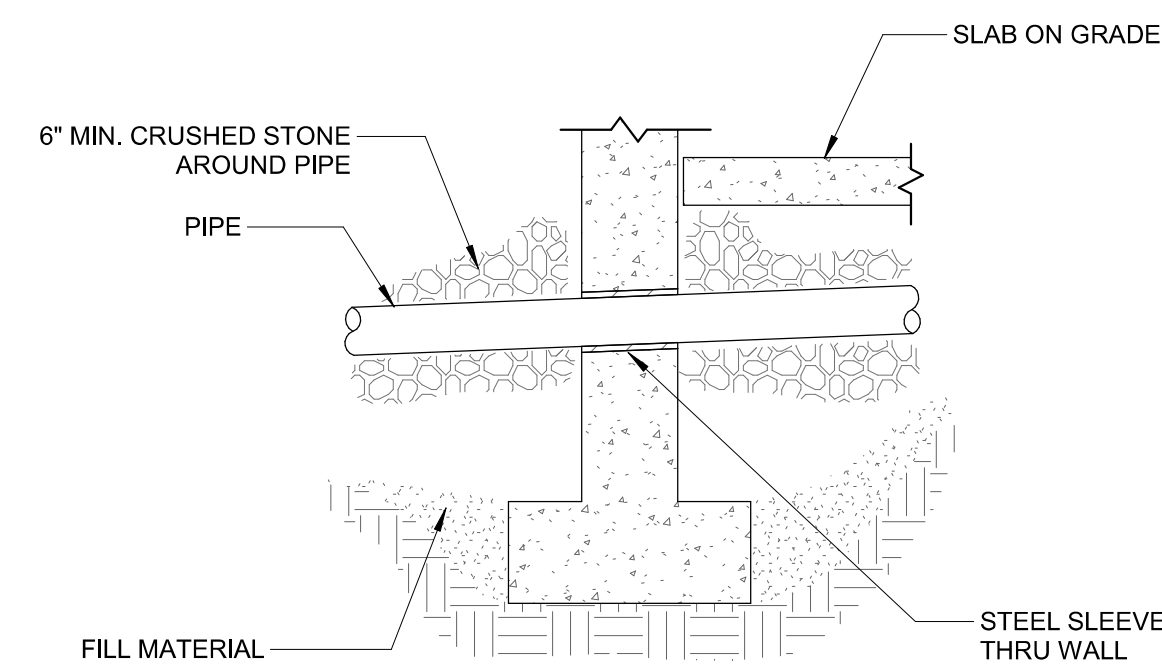
Professional Engineer Seal for Nathan M. Seifert, No. 16201, State of New Hampshire.

Issued For: ISSUED FOR BIDDING. Scale: As indicated. Key Plan: [Blank].

Date: 4/24/24. Drawn By: TSM. Reviewed By: SAC. Approved By: NMS. W&S Project No.: ENG23-0367. W&S File No.: [Blank].

Drawing Title: GENERAL NOTES. Sheet Number: S001.

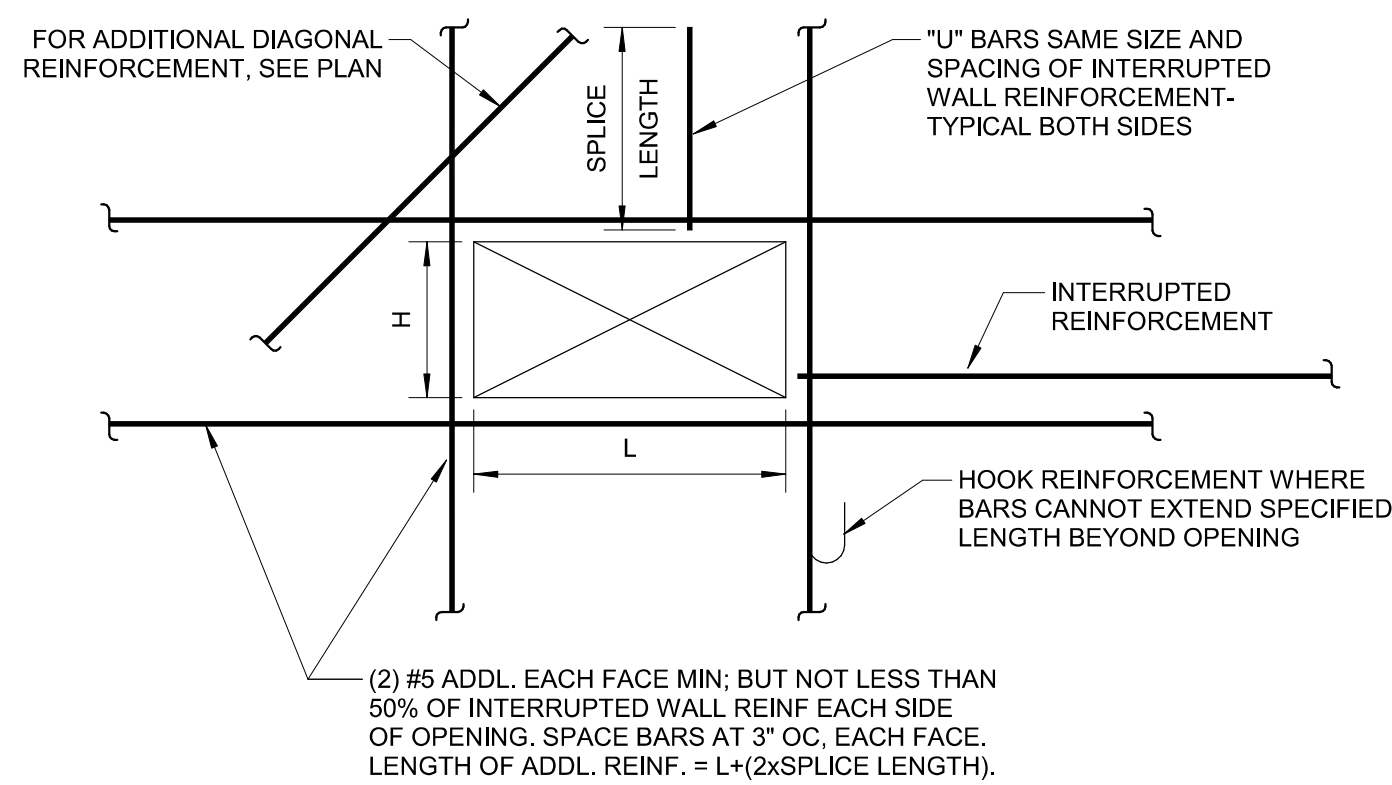
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- NOTE(S):**
- PIPE SHALL NOT PASS UNDER OR THRU WALL FOOTING. LOWER FOOTING BY STEPPING TO AVOID INTERFERENCE.

1 PIPE THROUGH FOUNDATION WALL

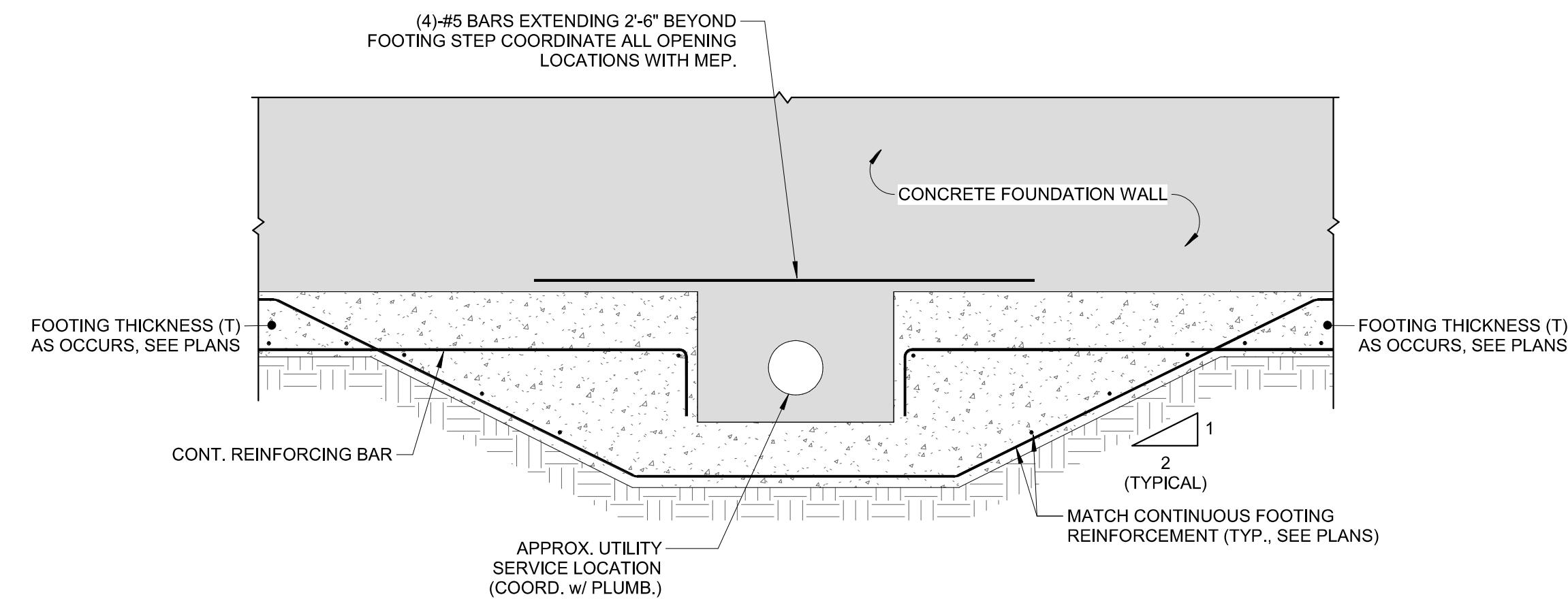
N.T.S.



- NOTES:**
- WALL OPENINGS SHALL BE COORDINATED AND DETAILED ON THE REINFORCEMENT SHOP DRAWINGS.

2 REINFORCEMENT AT OPENINGS IN REINFORCED CONCRETE WALLS

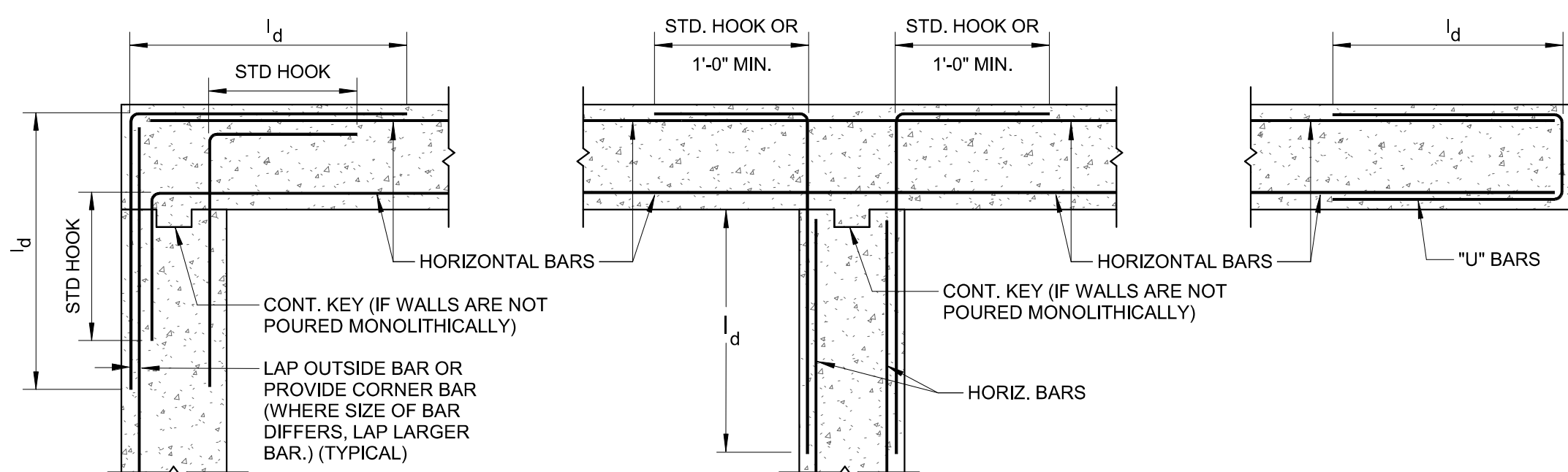
N.T.S.



- NOTE(S):**
- REFER TO ARCH./CIVIL/GEOTECHNICAL DETAILS FOR ADDITIONAL UNDER SLAB & FOUNDATION REQUIREMENTS NOT SHOWN ON THESE DRAWINGS. REQUIREMENTS MAY INCLUDE BUT ARE NOT LIMITED TO: PERIMETER DRAINS, INSULATION, WEEP HOLES, & SITE PREPARATION. REPORT ANY DISCREPANCIES BETWEEN DISCIPLINES TO A/E FOR CLARIFICATION PRIOR TO PROCEEDING WITH WORK.

3 UTILITY OPENING

N.T.S.



- NOTE(S):**
- VERTICAL BARS NOT SHOWN FOR CLARITY. (TYP.)
 - FOR LENGTH OF l_d , REFER TO SPLICE AND DEVELOPMENT LENGTH TABLE.

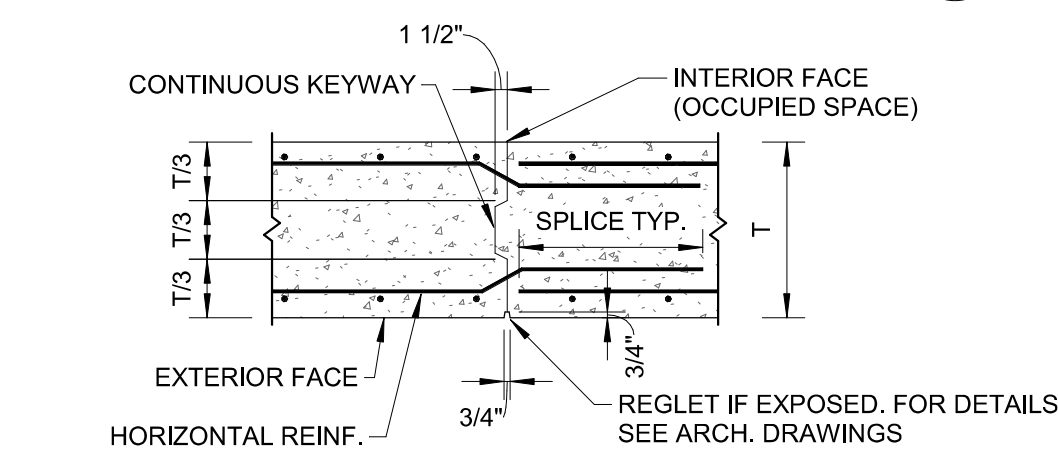
4 HORIZONTAL WALL REINFORCING PLAN

N.T.S.

TENSION DEVELOPMENT & SPLICE LENGTHS FOR BARS				
BAR SIZE	F _c = 4,000 PSI		F _c = 5,000 PSI	
	TOP BARS (IN.)	OTHER BARS (IN.)	TOP BARS (IN.)	OTHER BARS (IN.)
#3	24	19	22	17
#4	32	25	29	22
#5	40	31	36	28
#6	48	37	43	33
#7	70	54	63	49
#8	80	62	72	55
#9	91	70	81	63
#10	102	79	91	70
#11	113	87	101	78

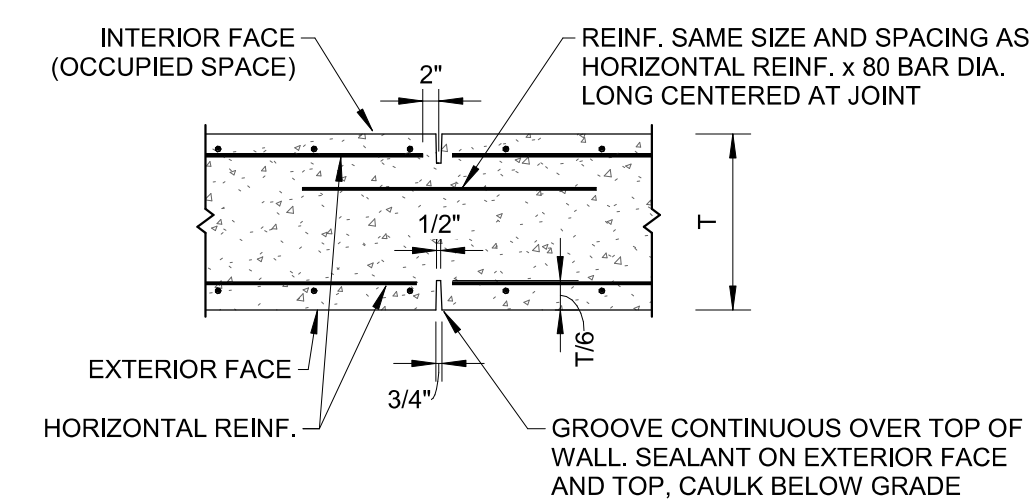
9 MINIMUM SPLICE DEVELOPEMENT LENGTHS

N.T.S.



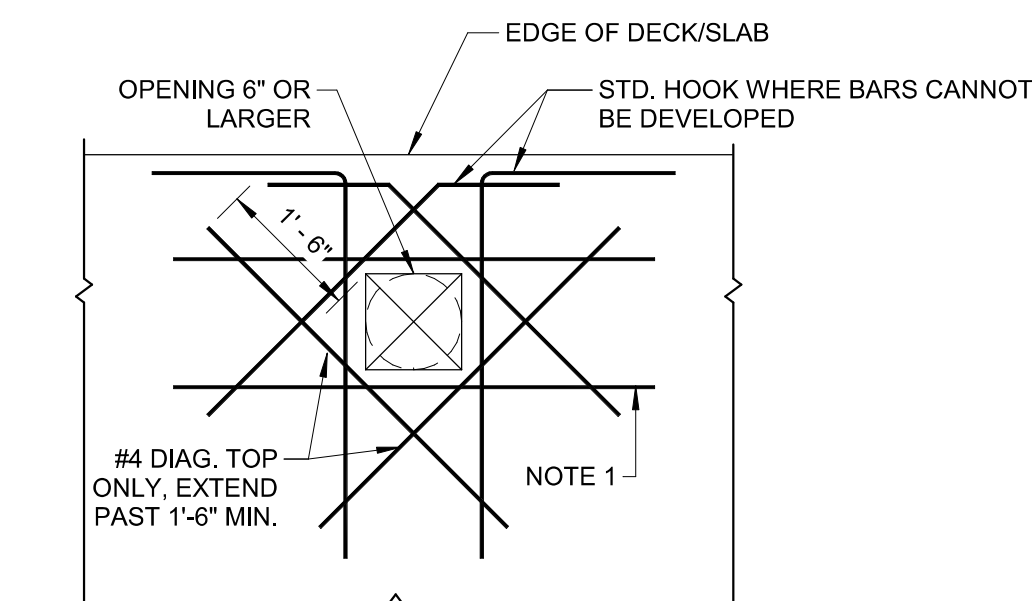
5 VERTICAL CONSTRUCTION JOINT

SCALE: 1/2" = 1'-0"



6 VERTICAL CONTROL JOINT

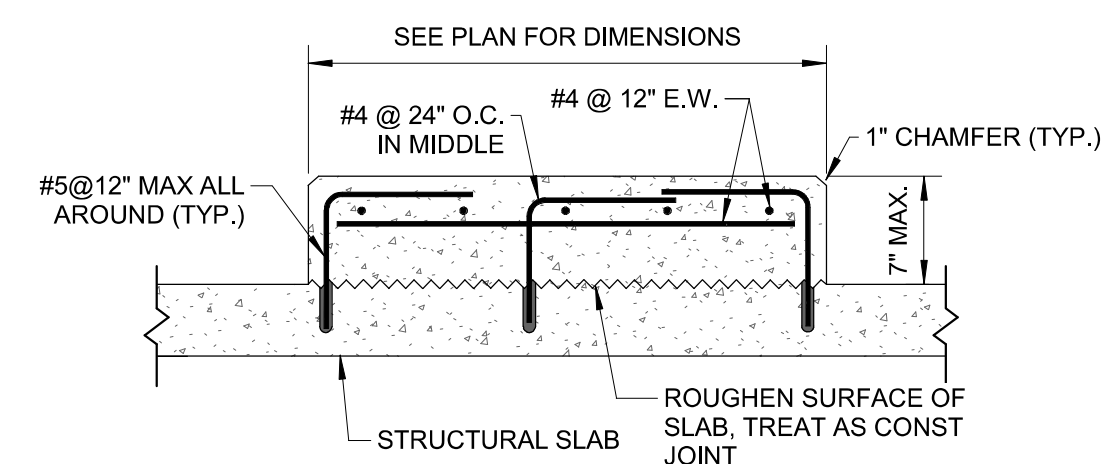
N.T.S.



- NOTE(S):**
- #5 ADDL EACH FACE MIN. BUT NOT LESS THAN 50% OF INTERRUPTED WALL REINF EACH SIDE OF OPENING. SPACE BARS AT 3" O.C. EACH FACE. PROVIDE AT TOP AND BOTTOM MAT AS APPLICABLE. LENGTH OF ADDL REINF = L OR H+(2xSPLICE LENGTH).
 - SEE TABLE FOR MINIMUM SPLICE LENGTH.

7 SUPPLEMENTAL SLAB REINFORCING

N.T.S.

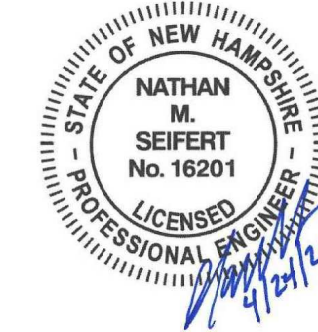


- NOTE:**
THE EXACT SIZE, SHAPE AND LOCATION OF EQUIPMENT (HOUSEKEEPING) PAD(S) SHALL BE DETERMINED BY THE CONTRACTOR AFTER APPROVAL OF SHOP DRAWINGS FOR EQUIPMENT. ANCHOR BOLTS WHERE REQUIRED SHALL BE SIZED AND LOCATED ACCORDING TO MANUFACTURER'S REQUIREMENTS.

8 CONCRETE EQUIPMENT PAD

N.T.S.

No.	Date	Description



ISSUED FOR BIDDING

Date: 4/24/24
Drawn By: TSM
Reviewed By: SAC
Approved By: NMS

W&S Project No.: ENG23-0367

W&S File No.:

TYPICAL DETAILS

S002

Consultants:

No.	Date	Description

Revisions:

No.	Date	Description

COA:

Seal:

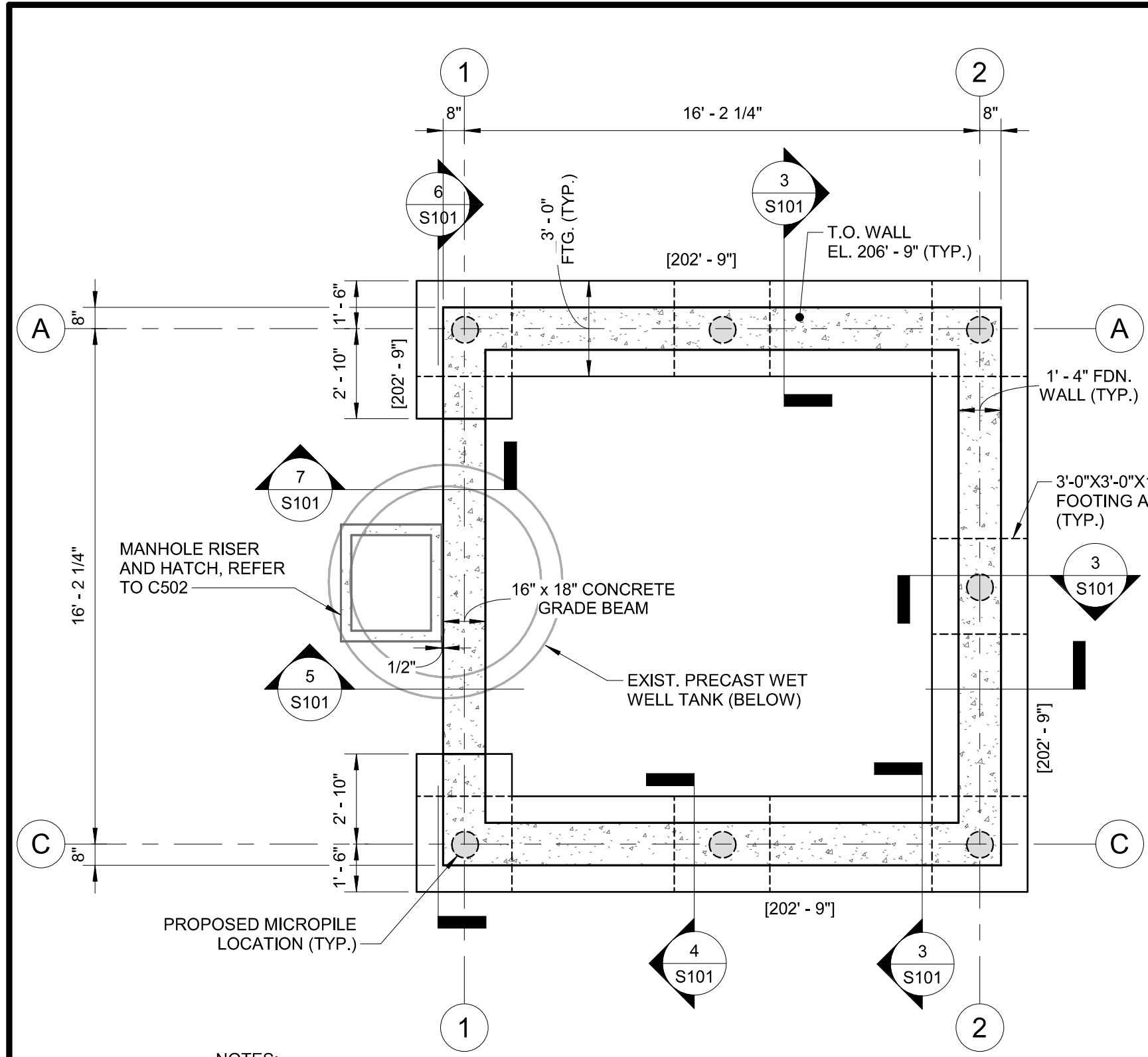

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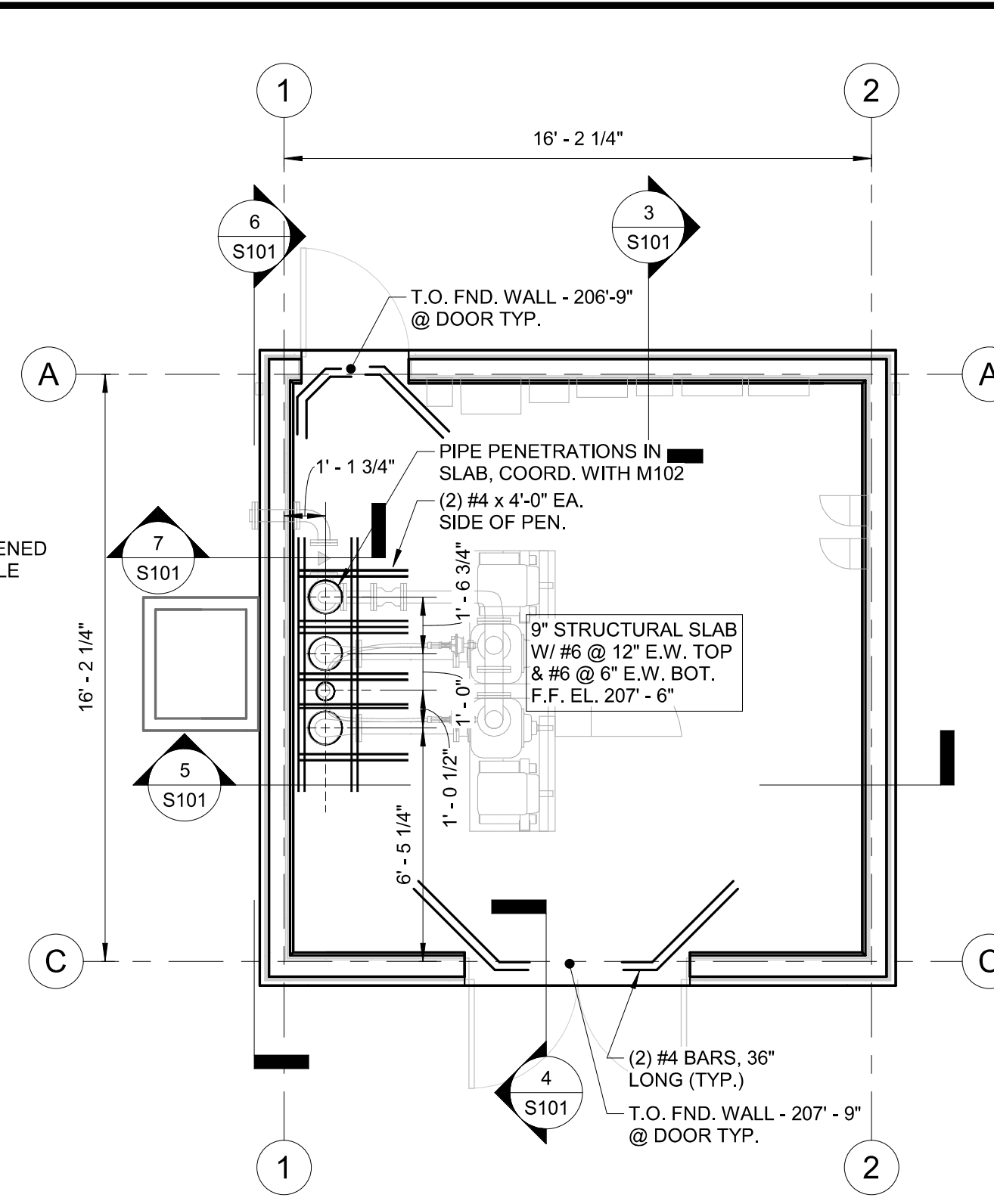
Date: 4/24/24
 Drawn By: TSM
 Reviewed By: SAC
 Approved By: NMS
 W&S Project No.: ENG23-0367
 W&S File No.:

Drawing Title:
FOUNDATION & SLAB PLAN & SECTIONS

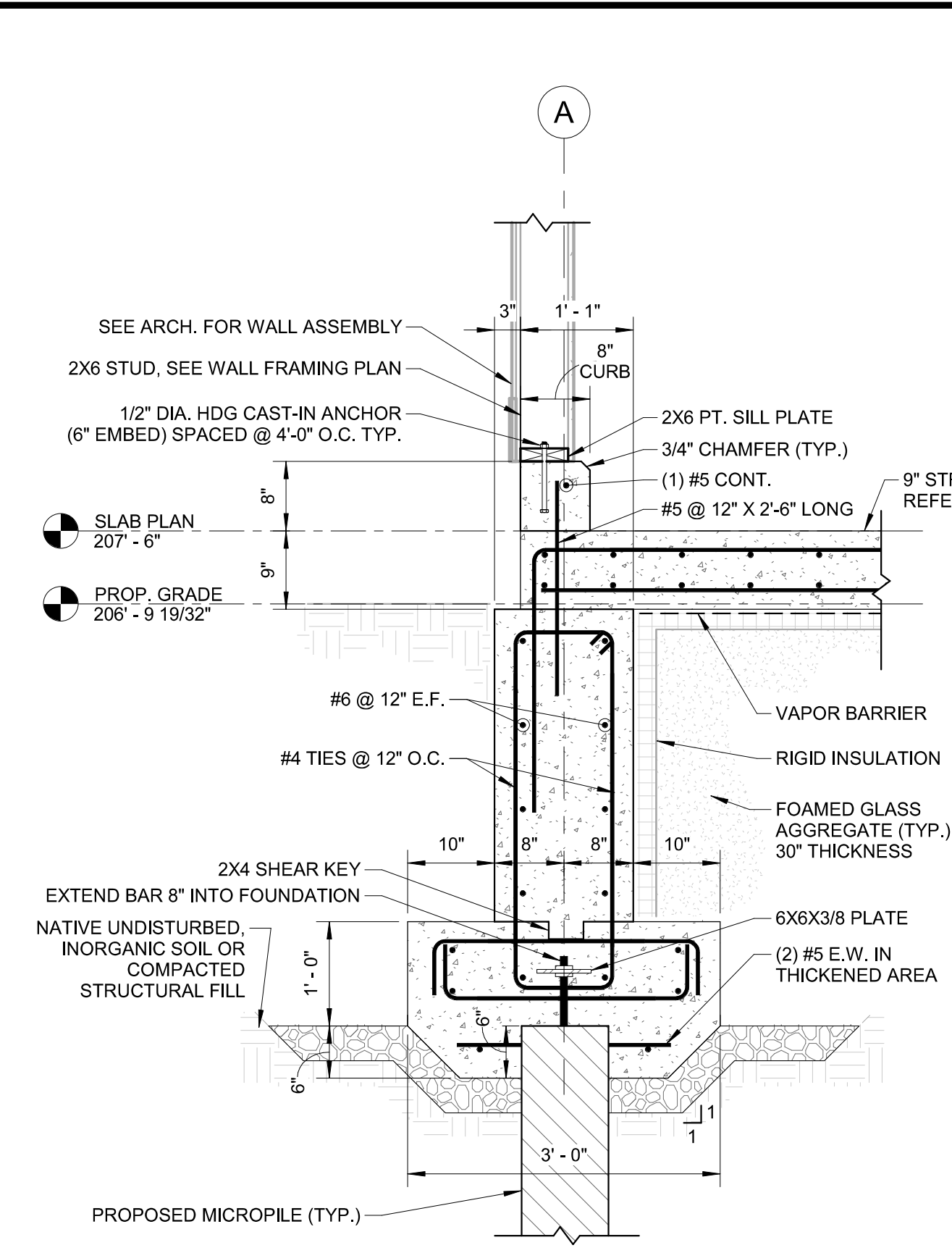
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S101



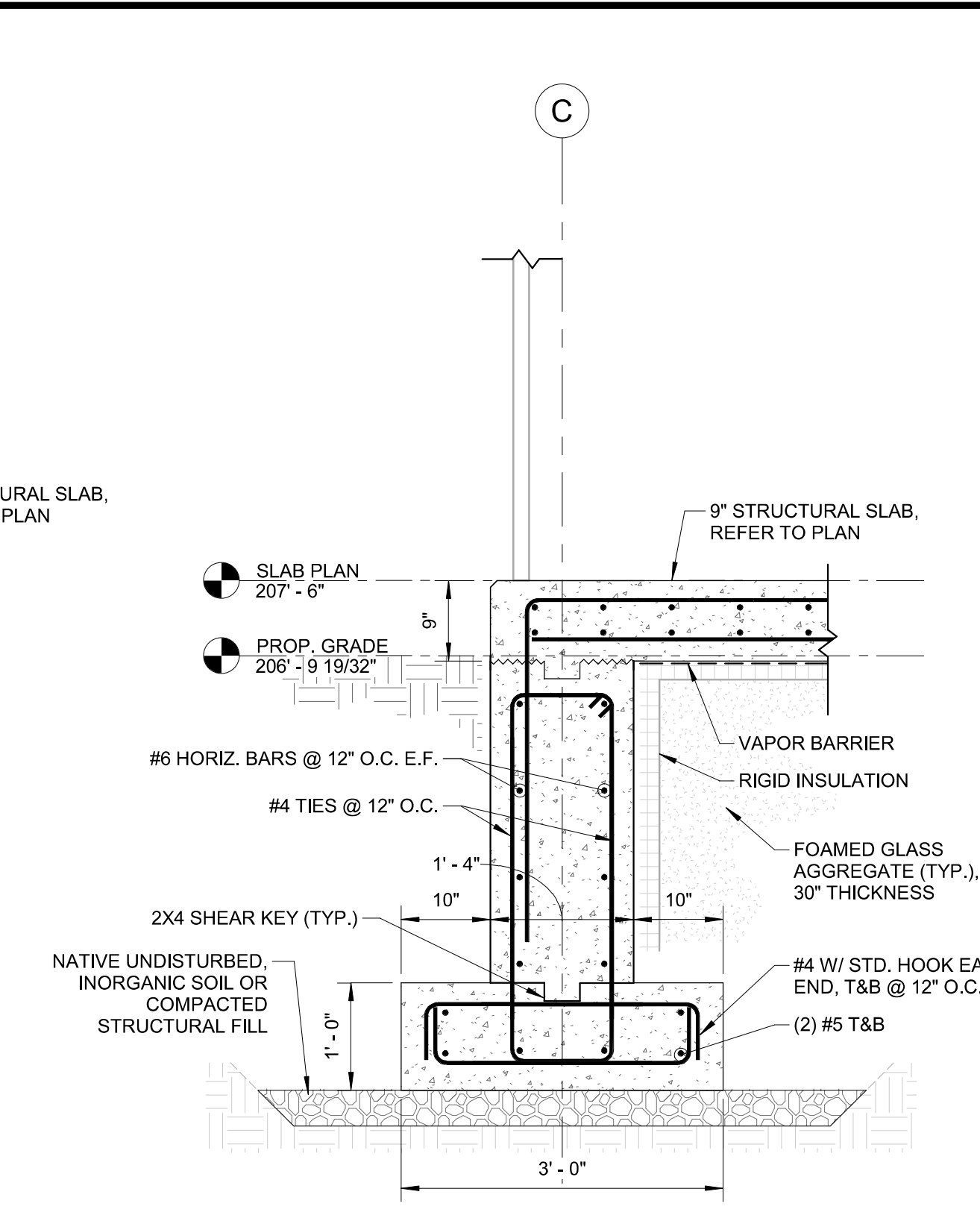
1 FOUNDATION PLAN
 SCALE: 1/4" = 1'-0"



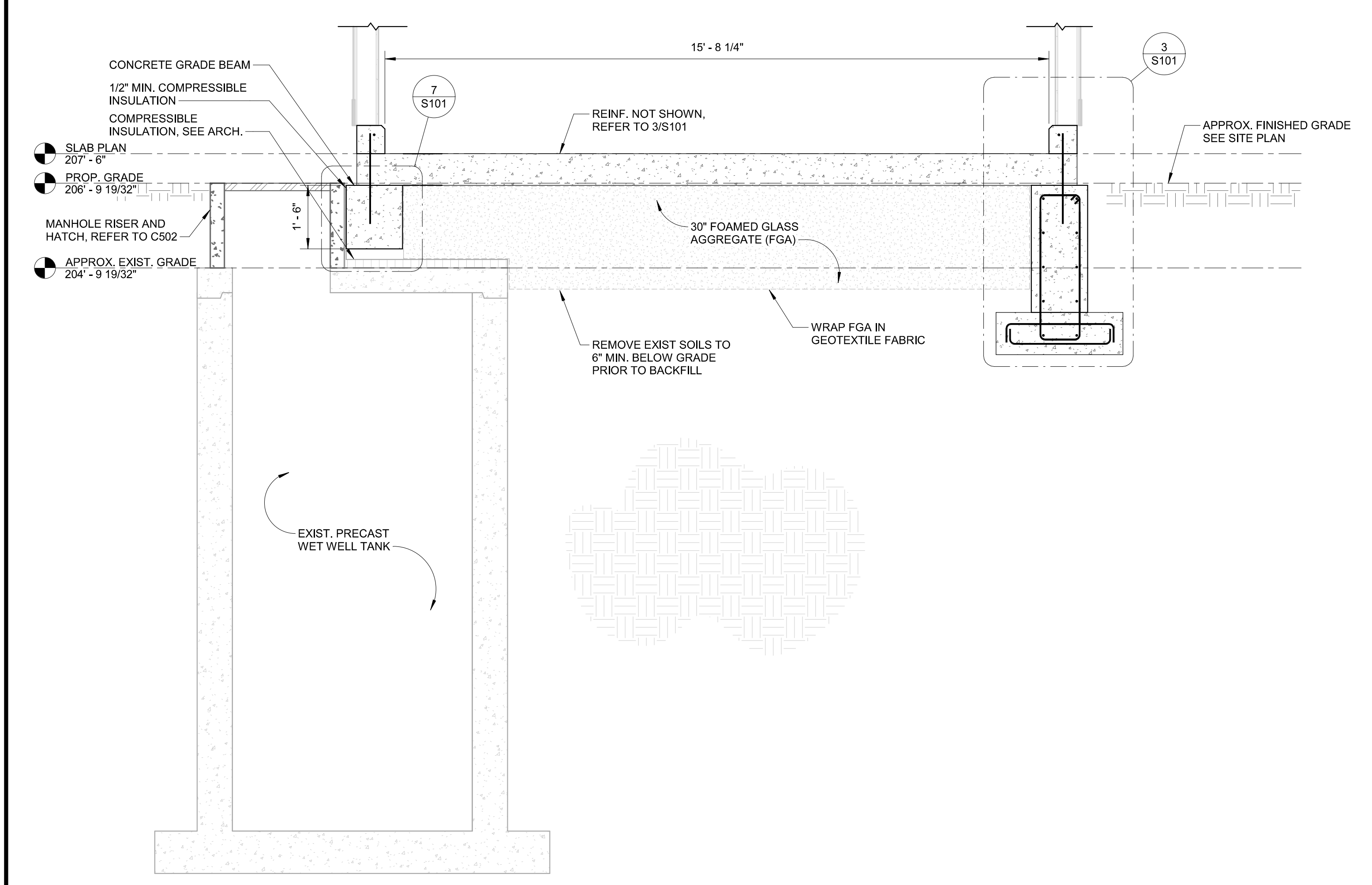
2 SLAB PLAN
 SCALE: 1/4" = 1'-0"



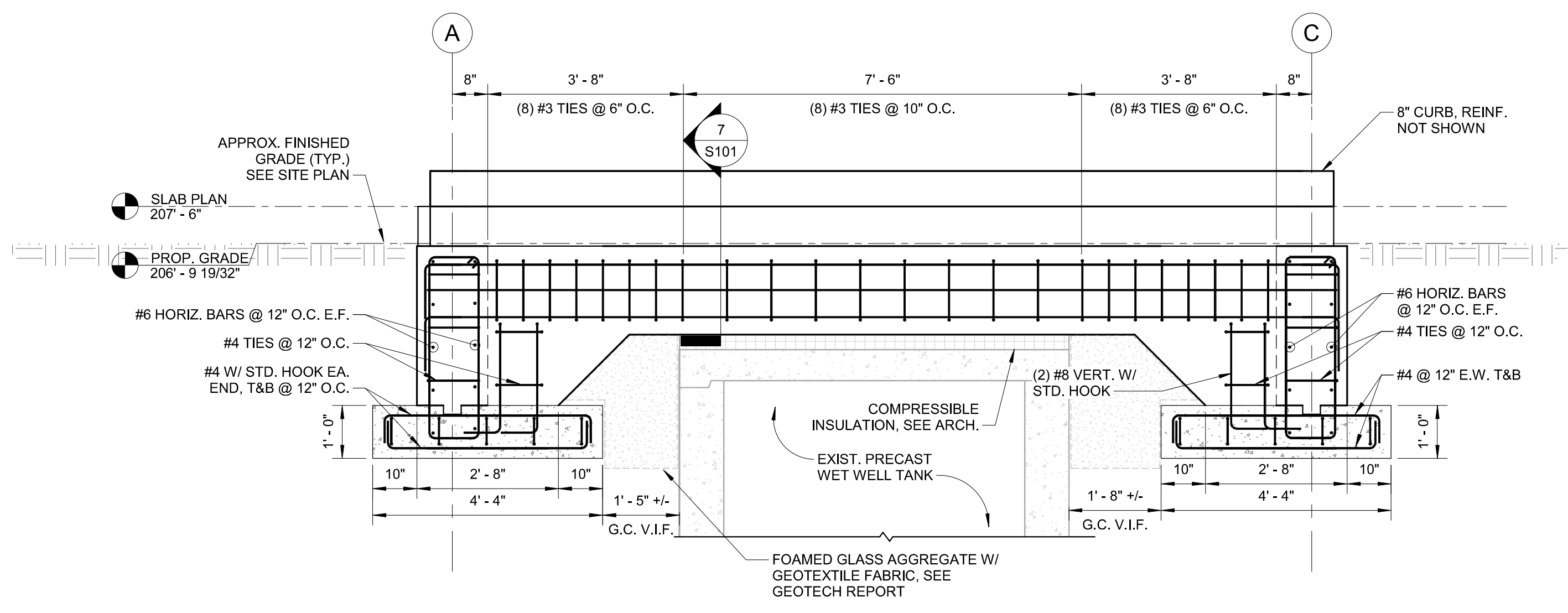
3 TYPICAL FOUNDATION SECTION
 SCALE: 3/4" = 1'-0"



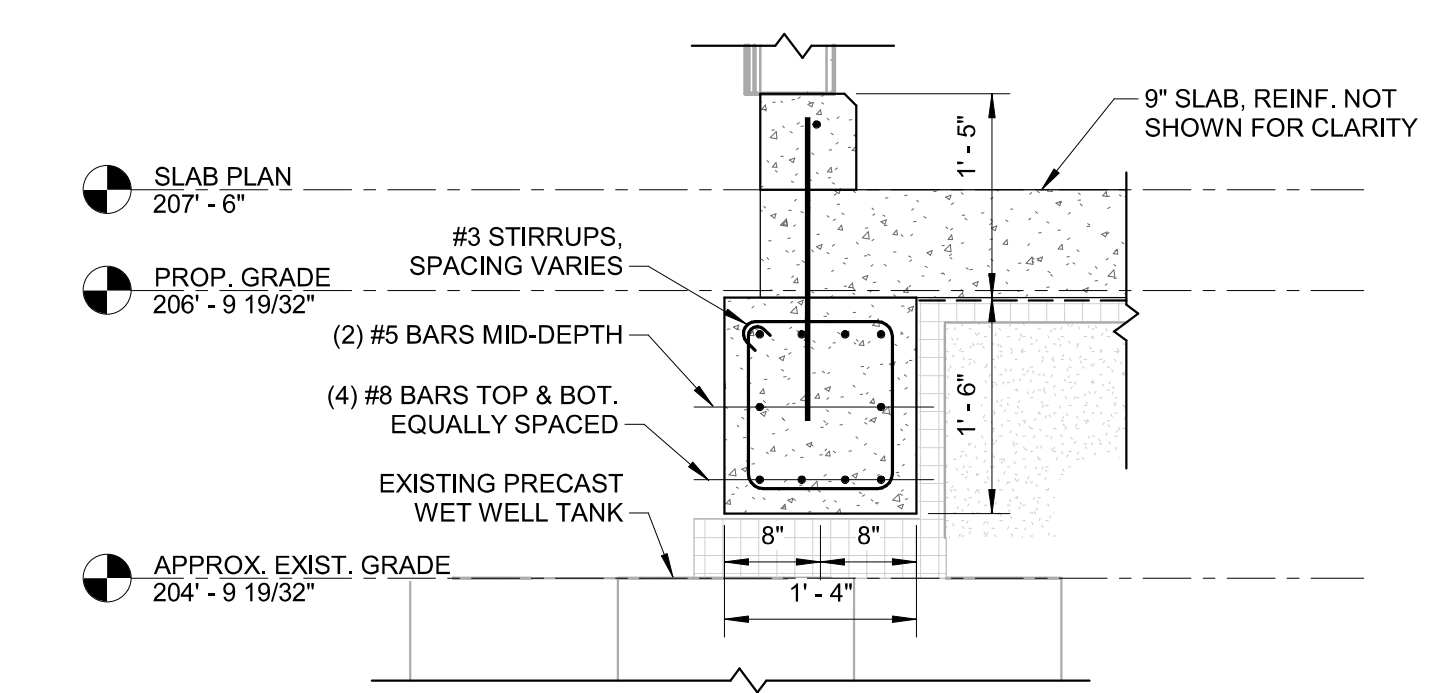
4 FOUNDATION SECTION THROUGH DOOR
 SCALE: 3/4" = 1'-0"



5 SECTION THROUGH WET WELL
 SCALE: 1/2" = 1'-0"



6 CONCRETE GRADE BEAM ELEVATION
 SCALE: 1/2" = 1'-0"



7 SECTION THROUGH GRADE BEAM
 SCALE: 3/4" = 1'-0"

Consultants:

Revisions:

No.	Date	Description

COA:

Seal:

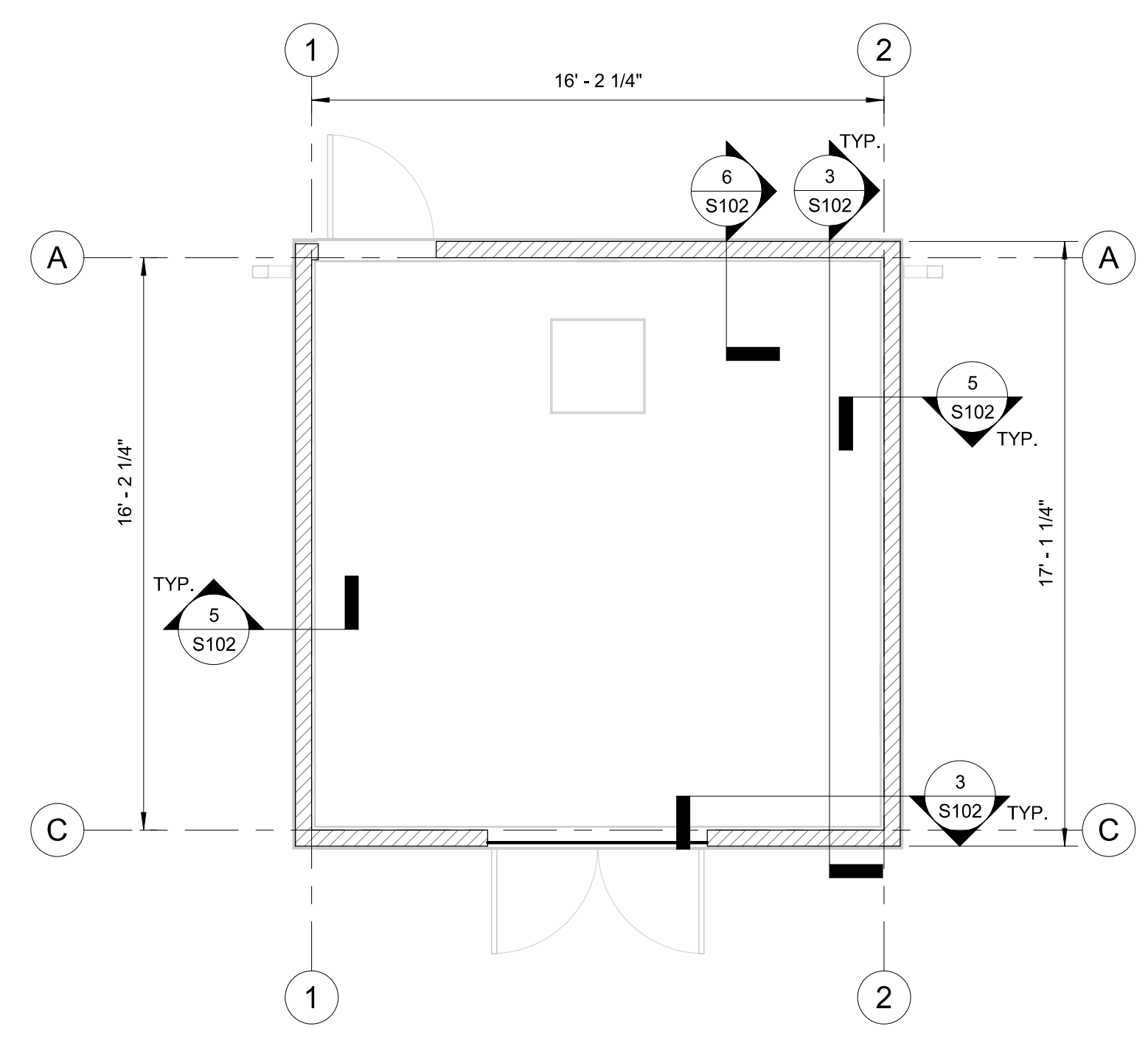

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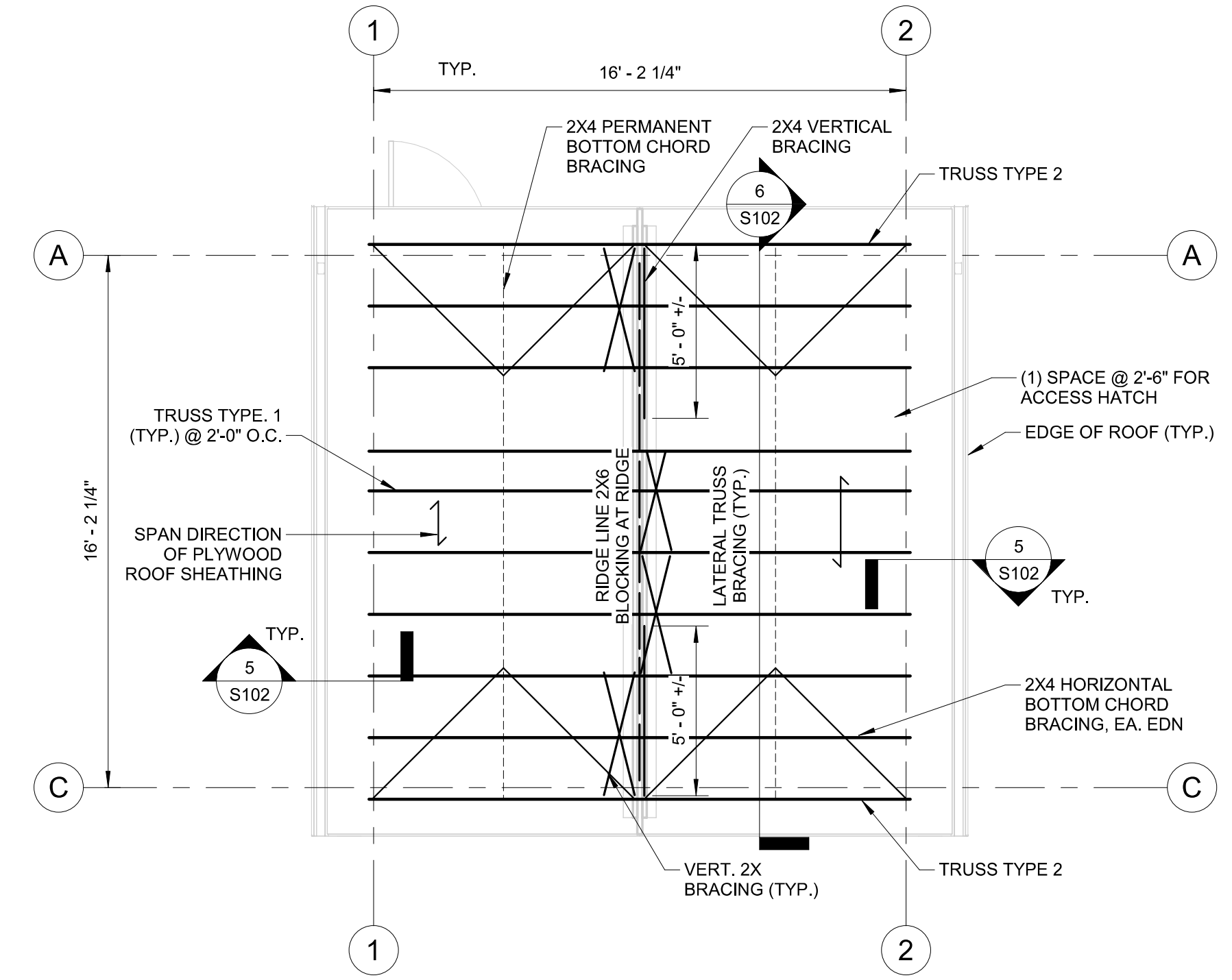
Drawing Title:
ROOF FRAMING PLAN AND SECTIONS

Sheet Number:
S102



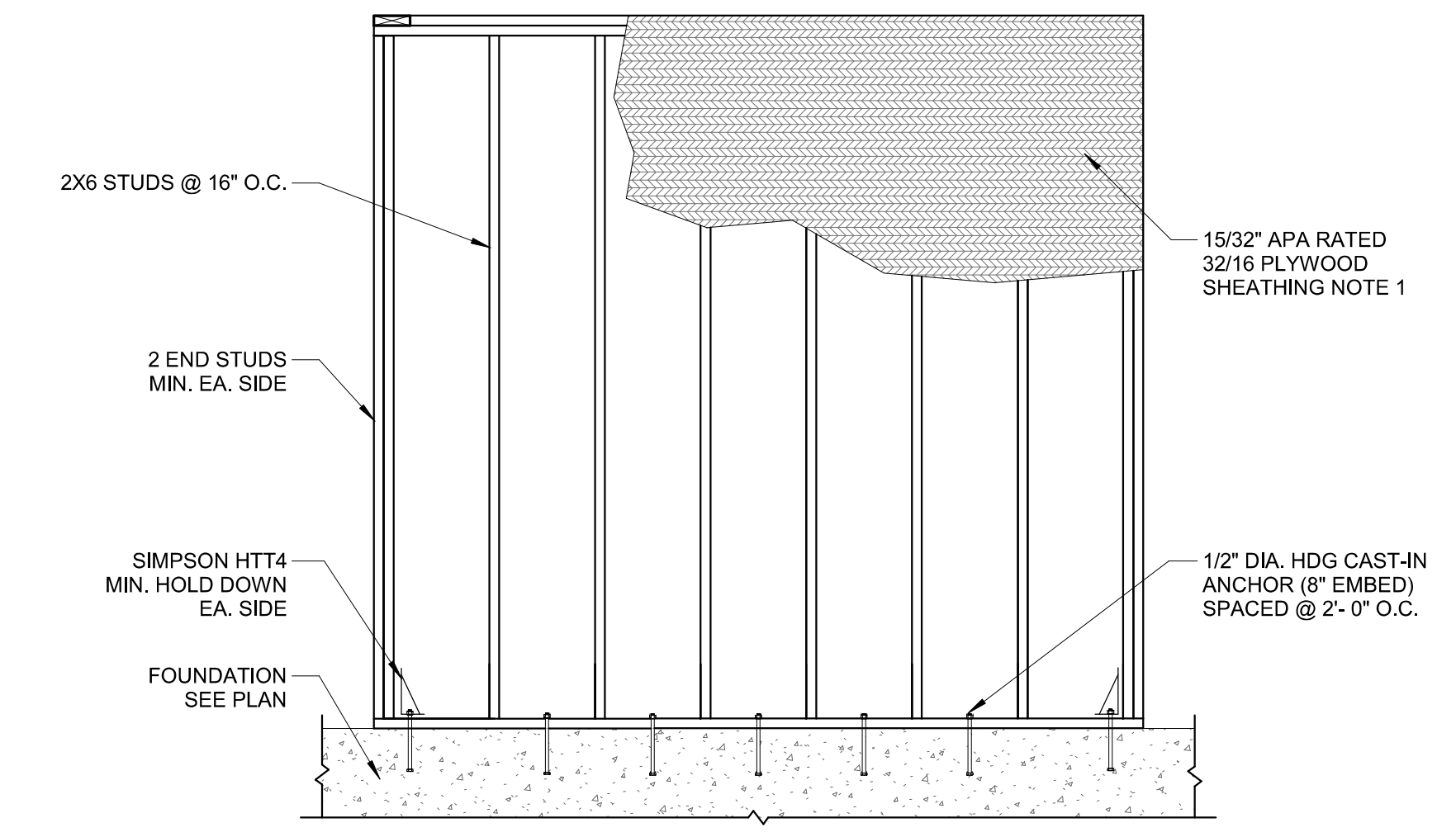
NOTES:
1. COORDINATE ALL WORK (INCLUDING WALL ELEVATIONS, DIMENSIONS, PENETRATIONS, OPENING, ETC.) WITH THE ARCHITECTURAL, HVAC PROCESS, PLUMBING AND CIVIL DRAWINGS.
2. COORDINATE WITH ARCHITECTURAL FOR WALL TYPES AND LOCATIONS.

1 WALL FRAMING PLAN
SCALE: 1/4" = 1'-0"



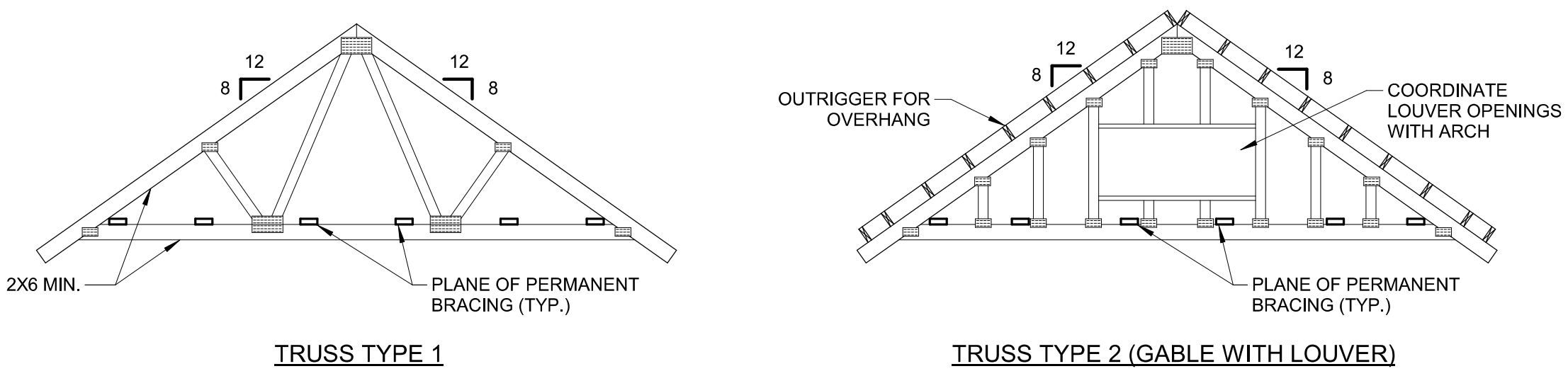
NOTE:
1. PROVIDE PERMANENT AND TEMPORARY BRACING AS REQUIRED BY PREFABRICATED TIMBER TRUSS DESIGNER.

2 ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"

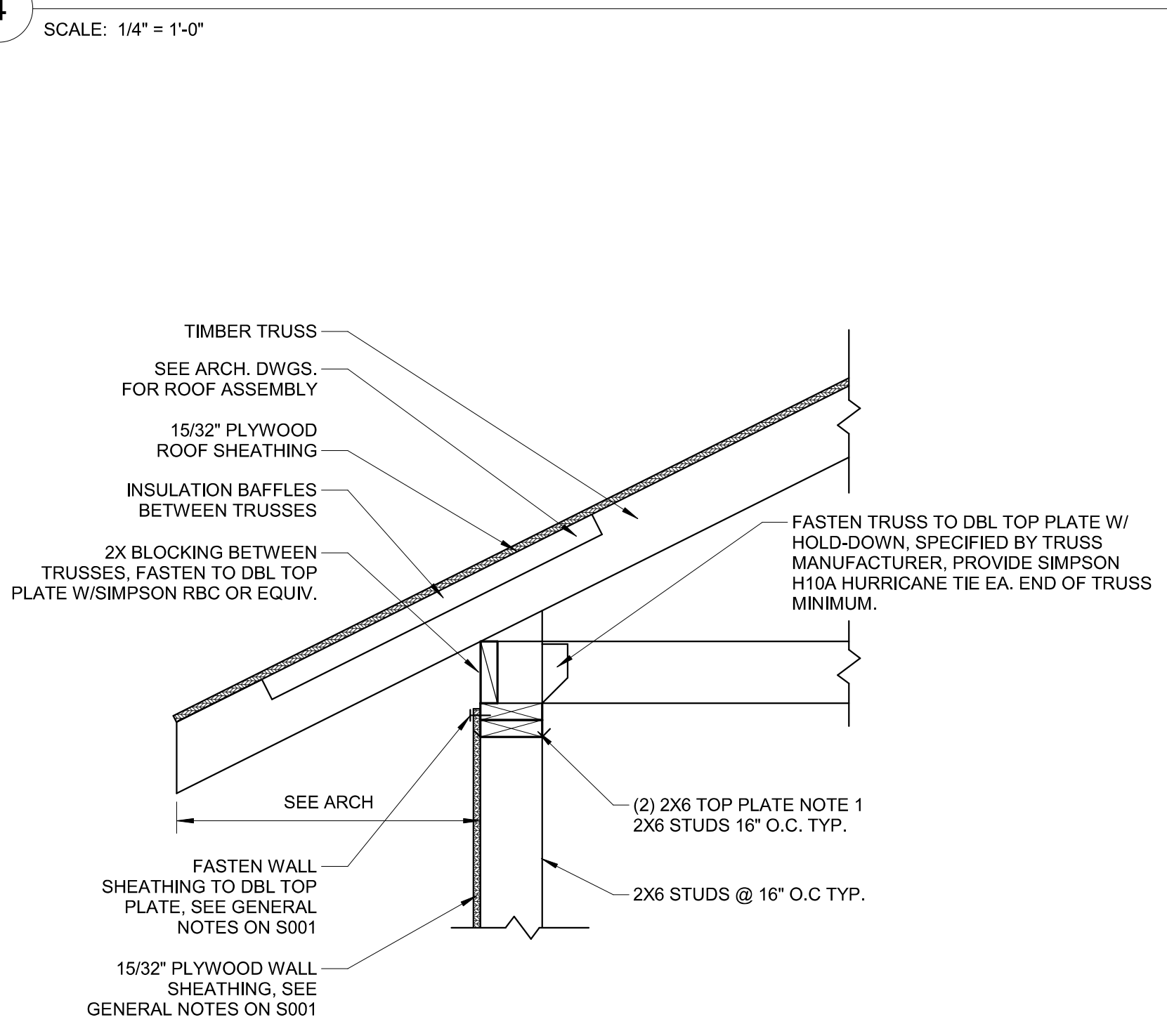


NOTES:
1. NAIL ALL SHEARWALL PLYWOOD EDGES WITH 10d COMMON NAILS AT 3" ON CENTER. INTERMEDIATE NAILING SHALL BE 10d NAILS AT 12" ON CENTER.
2. KING STUDS AT OPENINGS MAY BE INCLUSIVE OF SHEAR WALL END STUD COUNT
3. FASTEN TO STUD GROUP W/ (18) 0.162 X 1/2" NAILS AND TO FOUNDATION WALL W/ 1/2" DIA. CAST-IN ANCHOR BOLT (8" EMBED)
4. PROVIDE SIMPSON RSP4 TIES (OR APPROVED EQUAL) AT TOP AND BOTTOM OF EACH STUD (TYP.). LOCATE ON INTERIOR FACE OF STUD.

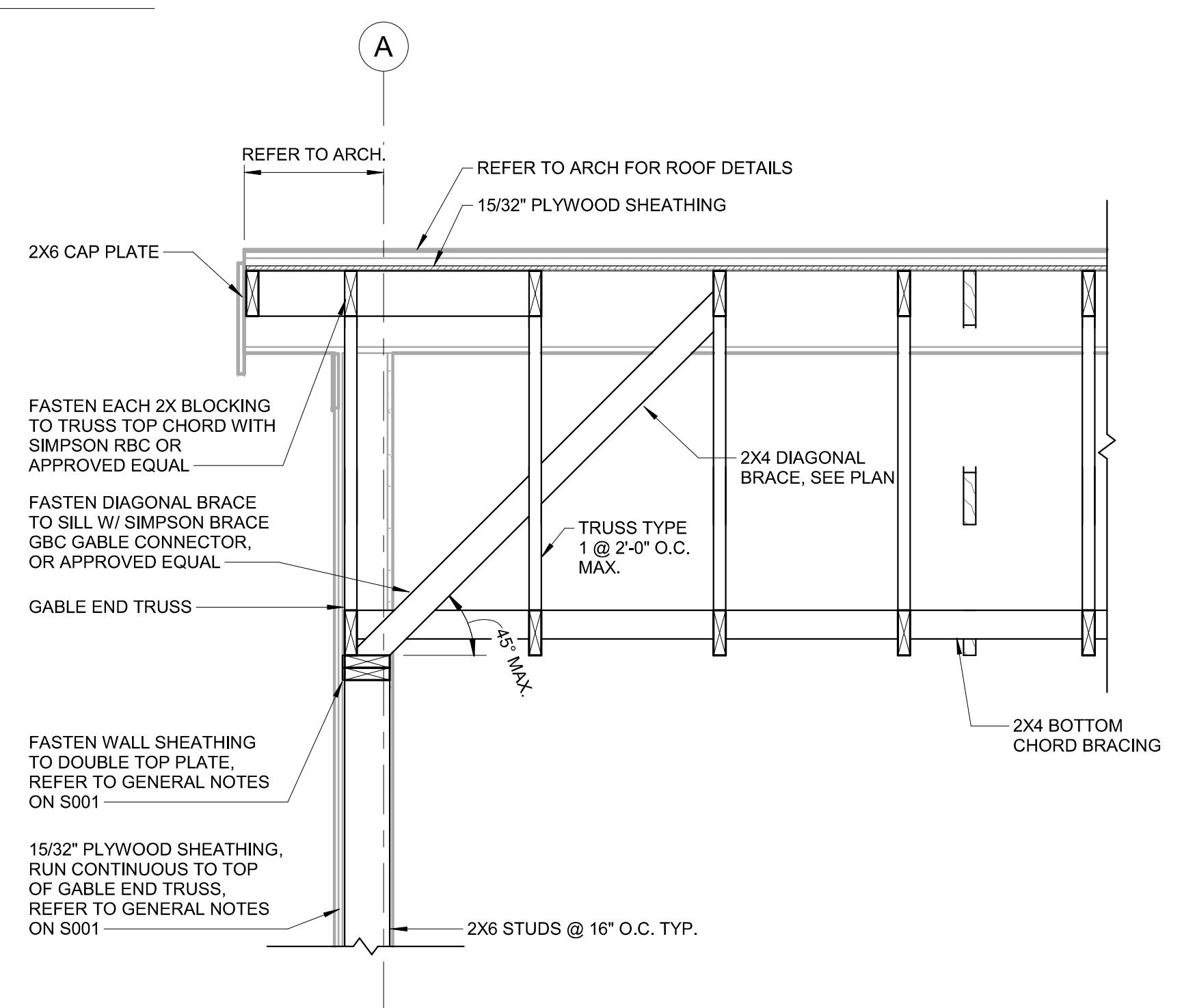
3 TYPICAL EXTERIOR/SHEAR WALL DETAIL
SCALE: 1/2" = 1'-0"



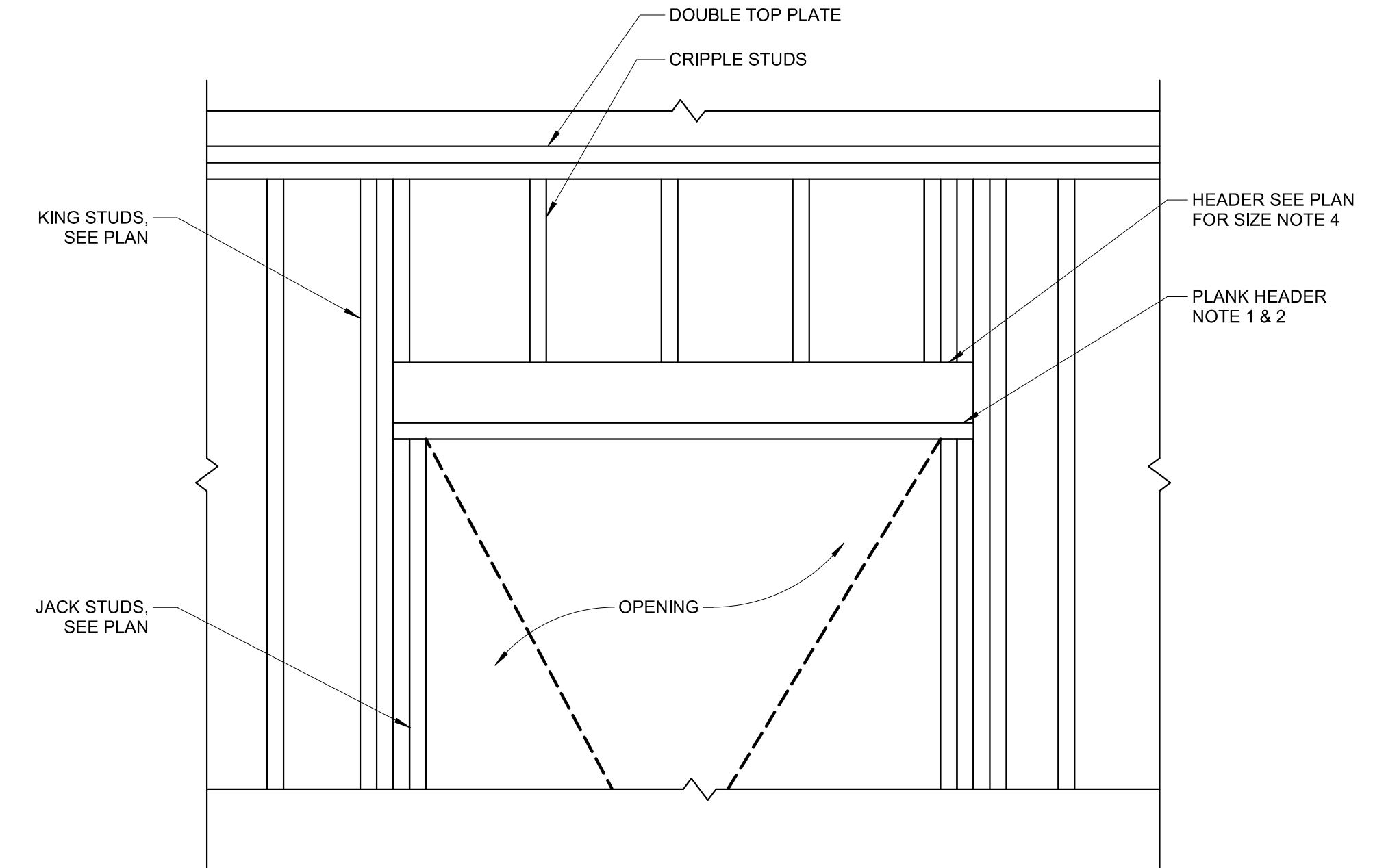
4 TRUSS BRACING DIAGRAMS
SCALE: 1/4" = 1'-0"



5 TYPICAL TRUSS AT EXTERIOR WOOD WALL DETAIL
SCALE: 1" = 1'-0"



6 GABLE END FRAMING
SCALE: 3/4" = 1'-0"



NOTES:
1. FOR OPENINGS EQUAL TO OR GREATER THAN 4'-0" PROVIDES (2) 2X6 PLANK ORIENTATED HEADER. A SINGLE 2X6 PLATE IS SUFFICIENT FOR OPENINGS LESS THAN 4'-0"
2. FASTEN PLANK HEADER TO STUD GROUP W/ (6) 10d TOE-NAILS ON EACH SIDE
3. SEE PLAN FOR ADDITIONAL STRAPPING AND HOLD DOWN REQUIREMENTS
4. MINIMUM (3) 2X6 HEADER AT OPENINGS. FASTEN HEADERS TO KING STUDS W/ (3) 8d TOE NAILS EACH SIDE
5. NAIL EACH KING JACK STUD GROUPS TOGETHER W/ (2) ROWS 10d @ 8" O.C. STAGGERED

7 TYPICAL HEADER DETAIL
SCALE: 1" = 1'-0"

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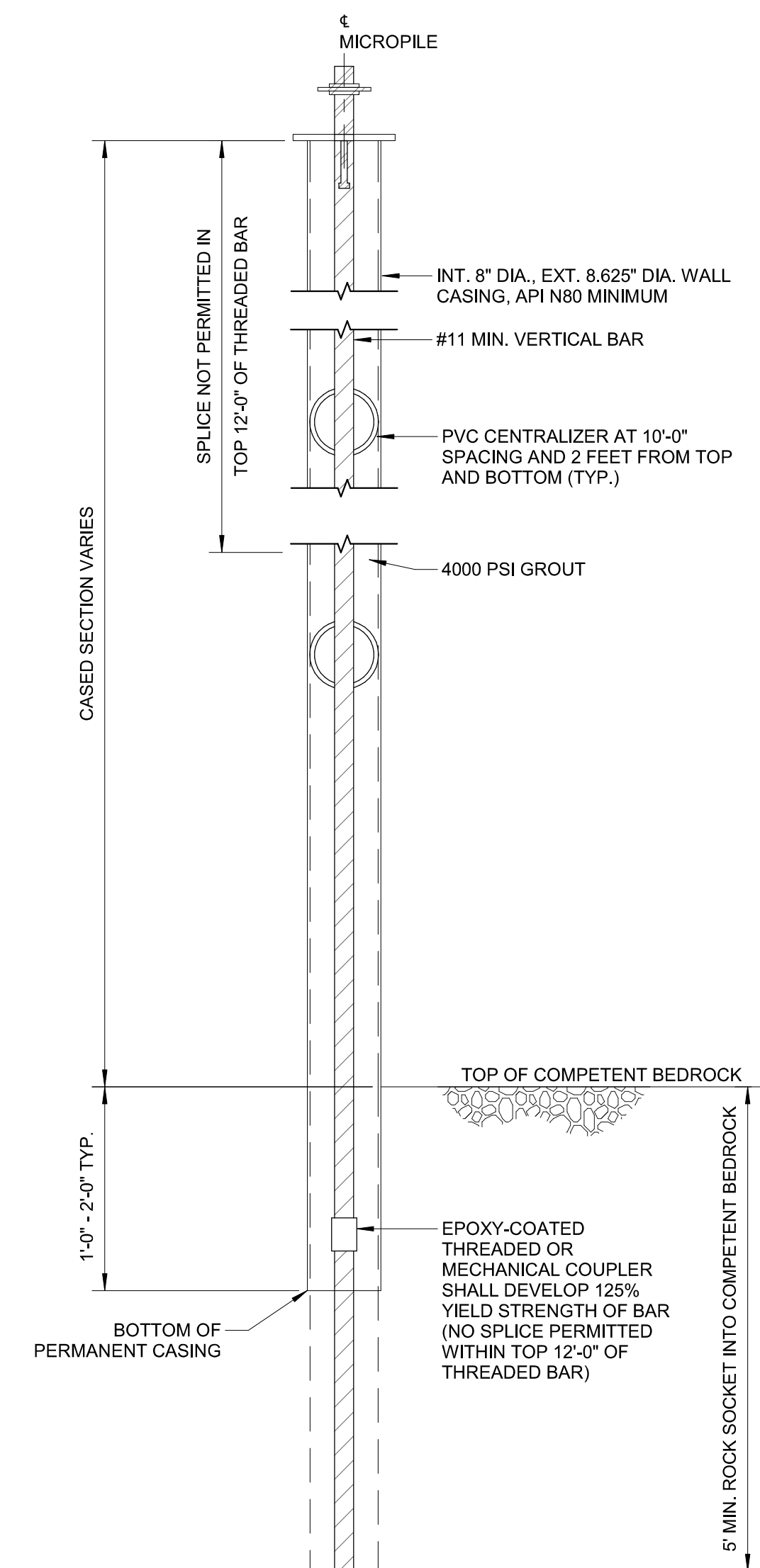
Scale: As indicated

Key Plan:

Date: 4/24/24
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Reviewed By: SAC
Approved By: NMS
W&S Project No.: ENG23-0367
W&S File No.:

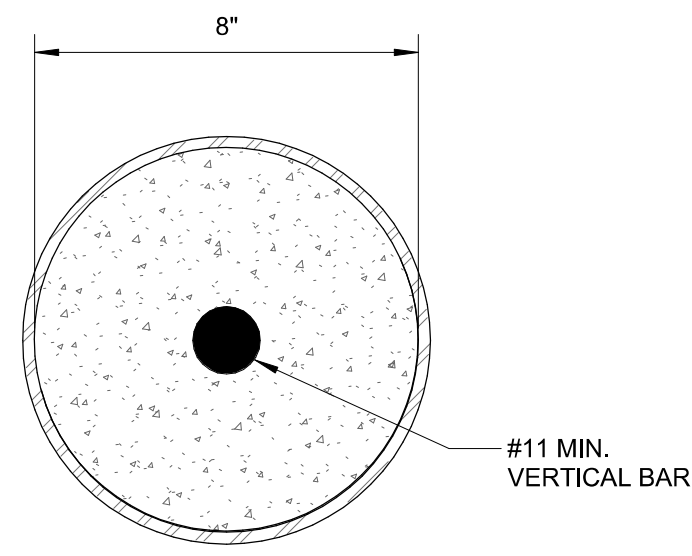
Drawing Title:
PILE DETAILS

Sheet Number:
S301



NOTE:
1. PILE CONTRACTOR TO CONFIRM IF CASING SPLICE IS APPLICABLE WITH PILE LOADING SHOWN ON S301.
2. FINAL PILE DESIGN BY PILE CONTRACTOR, DETAIL SHOWN HERE FOR BIDDING PURPOSES ONLY.

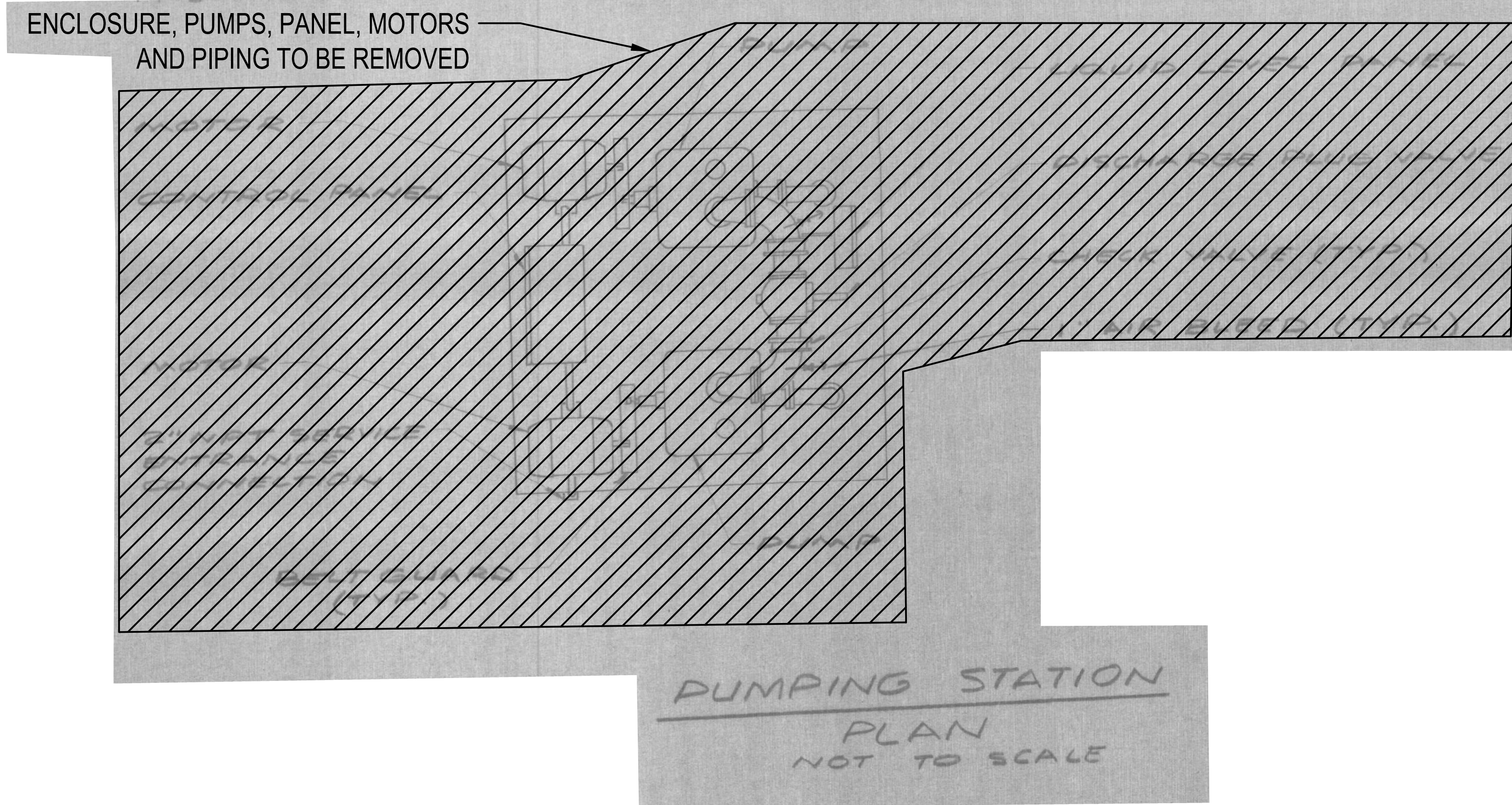
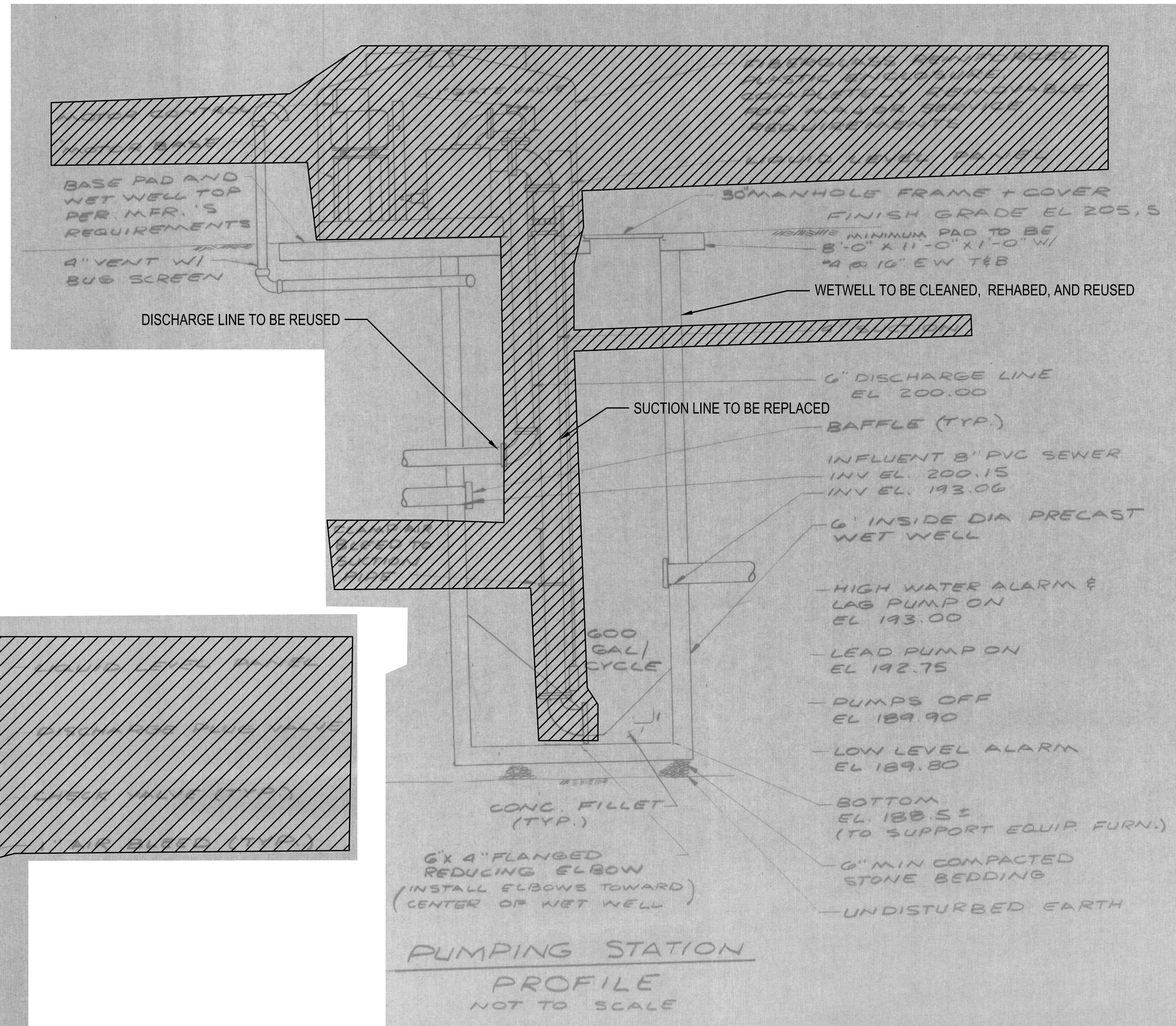
1 DRILLED MICROPILE DETAIL
SCALE: 3/4" = 1'-0"



2 PILE REINFORCING PLAN
SCALE: 3" = 1'-0"

NOTES:

1. LOCATIONS AND DIMENSIONS OF EXISTING UNDERGROUND UTILITIES, STRUCTURES AND EQUIPMENT BASED UPON BEST AVAILABLE RECORDS. CONTRACTOR TO FIELD LOCATE AND VERIFY ALL DIMENSIONS PRIOR TO PROPOSED WORK.
2. CONTRACTOR TO VERIFY ELEVATION OF WETWELL, GRAVITY INVERTS AND WETWELL FLOOR, AND NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
3. HATCHING DENOTES EXTENTS OF DEMOLITION. EXACT LIMITS OF DEMOLITION SHALL BE FIELD COORDINATED BY THE CONTRACTOR IN ACCORDANCE WITH PROPOSED WORK.
4. CONTRACTOR RESPONSIBLE FOR PROPER DISPOSAL OF ALL DEMOLITION ITEMS INDICATED IN NOTES AND ON DRAWINGS.




Consultants:

No.	Date	Description
1	03/07/2024	90% DESIGN REVIEW
2	04/24/2024	ISSUED FOR BIDDING

Revisions:

No.	Date	Description
1	03/07/2024	90% DESIGN REVIEW
2	04/24/2024	ISSUED FOR BIDDING

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Seal:

CHRISTOPHER M. PERKINS
No. 12004
LICENSED PROFESSIONAL ENGINEER
C.M.P.

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Drawn By: AJB
Reviewed By: JMS
Approved By: CMP
W&S Project No.: ENG23-0367
W&S File No.:

Drawing Title:
PROCESS DEMOLITION PLAN

Sheet Number:
M101

ABBREVIATIONS

ABV ABOVE	ID INSIDE DIAMETER
ACD AUTOMATIC CONTROL DAMPER	IEER INTEGRATED EER
ACT ACOUSTICAL CEILING TILE	IN INCH
AD ACCESS DOOR	IN WC INCHES WATER COLUMN
ADD ADDENDUM	IN WG INCHES WATER GAUGE
ADDL ADDITIONAL	INV INVERT
AF AIR FOIL	KW KILOWATT
AFB ABOVE FINISHED FLOOR	L LENGTH
AFMS AIR FLOW MONITORING STATION	LAT LEAVING AIR TEMPERATURE
AFR ABOVE FINISHED ROOF	LB POUND
AFUE ANNUAL FUEL UTILIZATION EFFICIENCY	LP LOW POINT
ALT ALTERNATE	LP LOW PRESSURE
AMB AMBIENT	LVG LEAVING
AMP AMPERE	LVR LOUVER
AP ACCESS PANEL	M/A MIXED AIR
APD AIR PRESSURE DROP	MAX MAXIMUM
ARCH ARCHITECT/ARCHITECTURAL	MBH ONE THOUSAND BTU PER HOUR
AS AIR STREAM	MCA MINIMUM CIRCUIT AMPACITY
ATC AUTOMATIC TEMPERATURE CONTROL	MCF ONE THOUSAND CUBIC FEET
ATM ATMOSPHERE	MD MOTORIZED DAMPER
AVG AVERAGE	MECH MECHANICAL
BDD BACKDRAFT DAMPER	MFR MANUFACTURER
BFC BELOW FINISHED CEILING	MIN MINIMUM
BFF BELOW FINISHED FLOOR	MISC MISCELLANEOUS
BHP BRAKE HORSEPOWER	MOCOP MAXIMUM OVER CURRENT PROTECTION
BI BACKWARD INCLINED	MTR MOTOR
BLDG BUILDING	N/A NOT APPLICABLE
BOD BOTTOM OF DUCT	NC NOISE CRITERIA
BOP BOTTOM OF PIPE	NC NORMALLY CLOSED
BOS BOTTOM OF STEEL	NIC NOT IN CONTRACT
BSMT BASEMENT	NO NUMBER
BTU BRITISH THERMAL UNITS	NO NORMALLY OPEN
BTUH BRITISH THERMAL UNITS PER HOUR	NTS NOT TO SCALE
CAP CAPACITY	O OXYGEN
CAV CONSTANT AIR VOLUME	O/A OUTSIDE AIR
CENT CENTRIFUGAL	OAI OUTDOOR AIR INTAKE
CF CUBIC FEET	OBD OPPOSED BLADE DAMPER
CFM CUBIC FEET PER MINUTE	OC ON CENTER
CL CENTERLINE	OCC OCCUPIED
CLG CEILING	OD OUTSIDE DIAMETER
CO CLEAN OUT	ODP OPEN DRIP PROOF
CO CARBON MONOXIDE	OED OPEN END DUCT
CO2 CARBON DIOXIDE	OEV OUTLET VELOCITY
CCL COLUMN	PAD PRIMARY AIR DAMPER
CONC CONCRETE	PD PRESSURE DROP
CONN CONNECTION	PD PRESSURE DIFFERENCE
CV CONSTANT VOLUME TERMINAL UNIT	PH PHASE
CW COLD WATER	POS PROVIDED BY OTHER SECTION
D DRAIN	PRESS PRESSURE
D DEPTH	PSI POUNDS PER SQUARE INCH
DB DRY BULB	PSIA PSI ABSOLUTE
DC DRY COOLER	PSID PSI DIFFERENTIAL
DDC DIRECT DIGITAL CONTROLS	PSIG PSI GAUGE
DEG DEGREE	PWR POWER
DIA DIAMETER	QTY QUANTITY
DIM DIMENSION	REC RECESSED
DN DOWN	RED REDUCER
DP DIFFERENTIAL PRESSURE	RLA RUNNING LOAD AMPS
DX DIRECT EXPANSION	RM ROOM
EA EACH	RPM REVOLUTIONS PER MINUTE
E EXHAUST AIR	SIA SUPPLY AIR
EAT ENTERING AIR TEMPERATURE	SA SOUND ATTENUATOR
ECM ELECTRONICALLY COMMUTATED MOTOR	SCR SCREEN
EER ENERGY EFFICIENCY RATIO	SEER SEASONAL ENERGY EFFICIENCY RATING
EF EXHAUST FAN	SENS SENSIBLE
EFF EFFICIENCY	SF SQUARE FOOT
EHC ELECTRIC HEATING COIL	SF SUPPLY FAN
ELEC ELECTRICAL	SFD COMBINATION SMOKE FIRE DAMPER
ELEV ELEVATION	SHC SENSIBLE HEAT CAPACITY
EQUIP EQUIPMENT	SHR SENSIBLE HEAT RATIO
ESP EXTERNAL STATIC PRESSURE	SM SURFACE MOUNT
EJH ELECTRIC UNIT HEATER	SP STATIC PRESSURE
EXH EXHAUST	SPECS SPECIFICATIONS
EXP EXPANSION	SS STAINLESS STEEL
EXT EXTERNAL	SUP SUPPLY
EXIST EXISTING	T THERMOSTAT
F DEGREES FAHRENHEIT	TAV THERMOSTATIC AIR VENT
FA FREE AREA	TAV TEMPERATURE DROP
FC FLEXIBLE CONNECTION	TEFC TOTALLY ENCLOSED FAN COOLED
FD FIRE DAMPER	TEMP TEMPERATURE
FL FLOOR	TOD TOP OF DUCT
FLA FULL LOAD AMPS	TOP TOP OF PIPE
FPM FEET PER MINUTE	TOS TOP OF STEEL
FPS FEET PER SECOND	TOT TOTAL
FS FLOW SWITCH	TR TRANSFER
FT FOOT/FEET	TSP TOTAL STATIC PRESSURE
G GAS	TYP TYPICAL
GA GAUGE	UNO UNLESS NOTED OTHERWISE
GAL GALLON	UNOCC UNOCCUPIED
GALV GALVANIZED	V VOLTS
GC GENERAL CONTRACTOR	VAR VARIABLE
GPH GALLONS PER HOUR	VB VACUUM BREAKER
GPM GALLONS PER MINUTE	VD VOLUME DAMPER
GRD GRADE	VEL VELOCITY
GV GRAVITY VENTILATOR	VENT VENTILATION
GWB GYPSUM WALL BOARD	VFD VARIABLE FREQUENCY DRIVE
HB HOSE BIB	W WATT
HD HEAD	W WIDTH
HP HORSE POWER	WJ WITH
HP HIGH POINT	WO WITHOUT
HR HOUR	WB WET BULB
HT HEIGHT	WC WATER COLUMN
HTG HEATING	WG WATER GAUGE
HTR HEATER	WMS WIRE MESH SCREEN
HZ HERTZ	ΔP CHANGE IN PRESSURE
	ΔT CHANGE IN TEMPERATURE
	°F DEGREES FAHRENHEIT

SCOPE OF WORK (INCLUDING BUT NOT LIMITED TO)

1. PROVIDE ELECTRIC UNIT HEATER IN THE PUMP ROOM.
2. PROVIDE EXHAUST FAN FOR THE PUMP ROOM.
3. PROVIDE INTAKE LOUVER FOR THE EXHAUST FAN IN THE PUMP ROOM

HVAC GENERAL NOTES

1. MECHANICAL GENERAL NOTES APPLY TO ALL MECHANICAL DRAWINGS. THE WORD "CONTRACTOR" USED IN "HVAC" OR "MECHANICAL" WORK SHALL MEAN THE HVAC FILED SUB-BIDDER OR MECHANICAL CONTRACTOR.
2. FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM INCLUDING ALL INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE HVAC WORK COMPLETE AND READY FOR OPERATION. FINAL PRODUCT SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
3. CARE SHALL BE TAKEN DURING THE INSTALLATION TO NOT DAMAGE OR INTERRUPT BUILDING SYSTEMS AND SERVICES THAT ARE ALREADY INSTALLED. DAMAGE TO SUCH SYSTEMS OR EQUIPMENT CAUSED BY THIS CONTRACTOR DURING INSTALLATION SHALL BE REPAIRED AND/OR REPLACED AT THIS CONTRACTOR'S EXPENSE TO THE COMPLETE SATISFACTION OF THE BUILDING OWNER.
4. LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
5. ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED, INCLUDING BUT NOT LIMITED TO DIV 21, 22, AND 26. OFFSETS IN PIPING AND DUCTS (INCLUDING DIVIDED DUCTS) AND TRANSITIONS AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
6. VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. VERIFY AND PROVIDE DUCT AND/OR PIPE TRANSITIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DIMENSIONS BEFORE FABRICATION.
7. ALL MATERIALS AND EQUIPMENT UNLESS SPECIFICALLY INDICATED AS REUSED, SHALL BE NEW.
8. INSTALL NEW THERMOSTATS AND SENSORS 4 FEET AFF OR AS DIRECTED OTHERWISE BY ARCHITECT.
9. WHEN SECTION OF DUCTWORK IS NOT LABELED FOR SIZE, THE LARGER SIZE INDICATED ON THE CONNECTED DUCT SHALL PREVAIL. SIZE OF DUCT RUN-OUTS TO DIFFUSER SHALL EQUAL DIFFUSER NECK SIZE.
10. THE FIRE PROOFING OF THE BUILDING STRUCTURE IS NOT TO BE REMOVED FOR THE INSTALLATION OF HANGERS, SUPPORTS, DUCTWORK, ETC. IF FIRE PROOFING IS DAMAGED, IT SHALL BE REPAIRED AT THE EXPENSE OF THE TRADE.
11. THE CONTRACTOR SHALL TEST AND CALIBRATE ALL CONTROLS AND VERIFY ALL ARE FULLY FUNCTIONAL AND SUBMIT DOCUMENTATION. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
12. THE CONTRACTOR SHALL COORDINATE ALL FRESH AIR INTAKE, FLUE TERMINATION, AND EXHAUST TERMINATION LOCATIONS WITH ALL OTHER TRADES BASED ON CLEARANCE REQUIREMENTS INDICATED IN THE 2015 IMC AND ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL CODES.
13. REFER TO THE PROJECT SPECIFICATIONS FOR FURTHER REQUIREMENTS.
14. IN ACCORDANCE WITH SPECIFICATION FOR DIVISION 23, THE CONTRACTOR SHALL COORDINATE WITH ALL TRADES AND PREPARE COORDINATION DRAWINGS PRIOR TO INSTALLATION. COORDINATION DRAWINGS SHALL BE SUBMITTED TO THE OWNERS REPRESENTATIVE FOR REVIEW PRIOR TO INSTALLATION.
15. MINIMAL CONTROL POWER HAS BEEN IDENTIFIED ON THE ATC DRAWINGS. IF ANY ADDITIONAL POWER IS REQUIRED BASED ON SYSTEMS DESIGN BY THE CONTROLS CONTRACTOR THE ATC/BAS CONTRACTOR SHALL BE RESPONSIBLE TO SUPPLY THAT POWER. COORDINATE ALL POWER REQUIREMENTS WITH DIV 26.

CALLOUT SYMBOLS

	REVISION NUMBER
	THERMOSTAT, WALL MOUNTED
	EQUIPMENT TAG (REFER TO SCHEDULES FOR DETAILS)

DUCTWORK/RGD SYMBOLS

	MOTORIZED DAMPER - AUTOMATIC W/ ACCESS DOOR
	RETURN OR EXHAUST AIRFLOW
	SUPPLY AIRFLOW

DESIGN CONDITIONS

CODES/STANDARDS

2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
2018 INTERNATIONAL BUILDING CODE

OUTDOOR AIR TEMPERATURE

ASHRAE - ROCHESTER SKYHAVEN, NH
WINTER 0°F DB/ 2°F WB
SUMMER 90°F DB/ 72°F WB

INDOOR CONDITIONS (°F)

SPACE	WINTER	SUMMER
PUMP ROOM	55	--

MINIMUM VENTILATION

SPACE	CFM/PERSON	CFM/SF	CFM
PUMP ROOM	0	0.06	

DUCTWORK

SINGLE LINE	ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE	DOUBLE LINE
	RECTANGULAR DUCT W = WIDTH, D = DEPTH	
	ROUND DUCT (DIA = INSIDE DIAMETER)	
	ROUND DUCT UP	
	RECTANGULAR SUPPLY DUCT UP	
	RECTANGULAR RETURN/EXHAUST DUCT UP	
	RECTANGULAR SUPPLY DUCT DN	
	RECTANGULAR RETURN/EXHAUST DUCT DN	
	STANDARD RADIUS ELBOW (R = W) SUPPLY/RETURN/EXHAUST	
	FULL LENGTH SPLITTER VANES (R < W) SUPPLY/RETURN/EXHAUST	
	HORIZONTAL OFFSET SUPPLY/RETURN/EXHAUST	
	CHANGE OF ELEVATION (R) RISE OR (D) DROP SUPPLY/RETURN/EXHAUST	
	45° TAP TAKE-OFF	
	90° TAP TAKE-OFF (45° SQUARE TO ROUND, 45° TAKE-OFF TRANSITION TO ROUND, AND BELLMOUTH, RESPECTIVELY)	
	SPLIT TAKE-OFF	
	RECTANGULAR WYE W/ RADIUS ELBOWS	
	RECTANGULAR WYE W/ 45° TAKE-OFFS	
	RECTANGULAR TO ROUND TRANSITION	
	ACOUSTICALLY LINED DUCTWORK	
	FLEXIBLE DUCTWORK	
	OPEN END DUCT W/ 1/2"x1/2" WMS	

NOTE: SOME OR ALL SYMBOLS MAY BE USED ON THIS PROJECT



LEDGEVIEW SEWER PUMP STATION UPGRADE

54A LEDGEVIEW DRIVE
ROCHESTER, NH 03868



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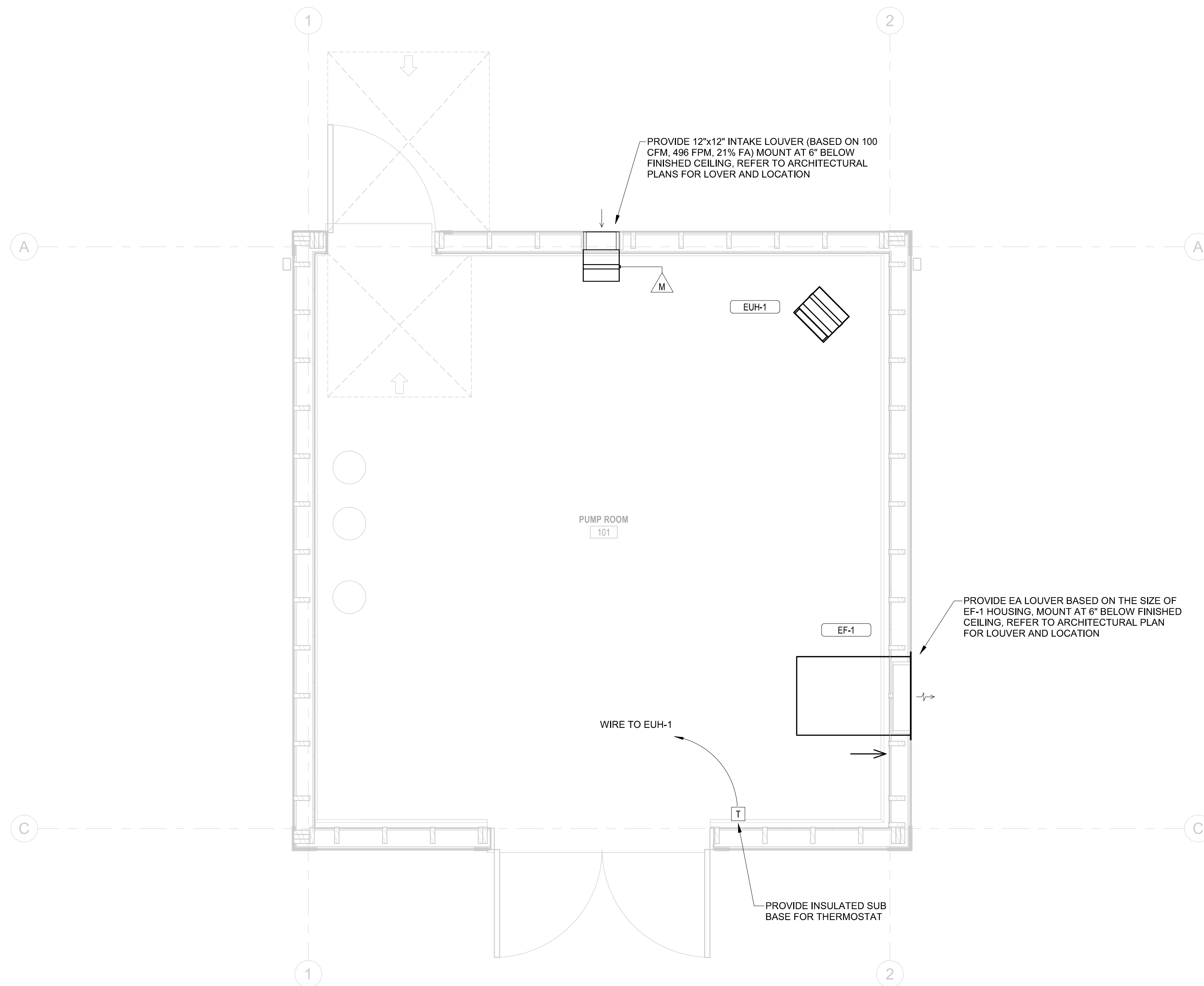
Key Plan:

Date: 4/24/2024
Draw By: JCG
Reviewed By: HJH
Approved By: SEH
W&S Project No.: ENG23-0367
W&S File No.:

Drawing Title:
**LEGENDS, NOTES,
AND ABBREVIATIONS**

Sheet Number:
H001

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① FIRST FLOOR NEW WORK DUCT PLAN
1/2" = 1'-0"

HVAC NEW WORK NOTES

1. NEW WORK NOTES SHALL APPLY TO ALL HVAC NEW WORK DRAWINGS.
2. REFER TO HVAC GENERAL NOTES ON H001 FOR SCOPE OF WORK.
3. CONSTRUCT AND INSTALL ALL DUCTWORK IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA STANDARDS.
4. LOCATE DUCTWORK AND MECHANICAL EQUIPMENT OUTSIDE OF THE REQUIRED ELECTRICAL CLEARANCES ABOVE/AROUND ELECTRICAL PANELS, TRANSFORMERS, AND OTHER ELECTRICAL EQUIPMENT.
5. FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.
6. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
7. INSTALL ALL SENSORS AND CONTROLS AT LOCATIONS AWAY FROM ANY DEVICE OR EQUIPMENT THAT CAN ADVERSELY IMPACT OPERATION, FUNCTION, OR LONGEVITY OF THE SENSOR AND/OR CONTROL.
8. INSTALL EXPOSED DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.
9. ADJUST DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT. PROVIDE MANUAL VOLUME DAMPERS AT POINTS ON ALL DUCTED SYSTEMS WHERE BRANCHES EXTEND FROM LARGER DUCTS.
10. PROVIDE LOW-VOLTAGE WIRING FROM ELECTRICAL SOURCE TO MISCELLANEOUS ATC DEVICES. REFER TO AND COORDINATE WITH DIVISION 26.
11. COORDINATE WITH THE GENERAL CONTRACTOR FOR ALL REQUIRED CUTTING AND PATCHING FOR WORK INDICATED.

Project:

CITY OF ROCHESTER, NH



LEDGEVIEW SEWER PUMP STATION UPGRADE

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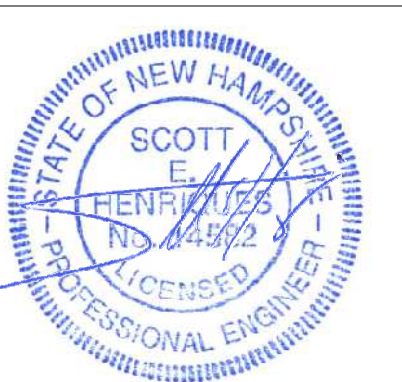
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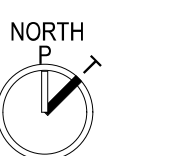


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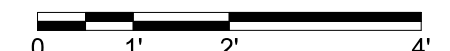
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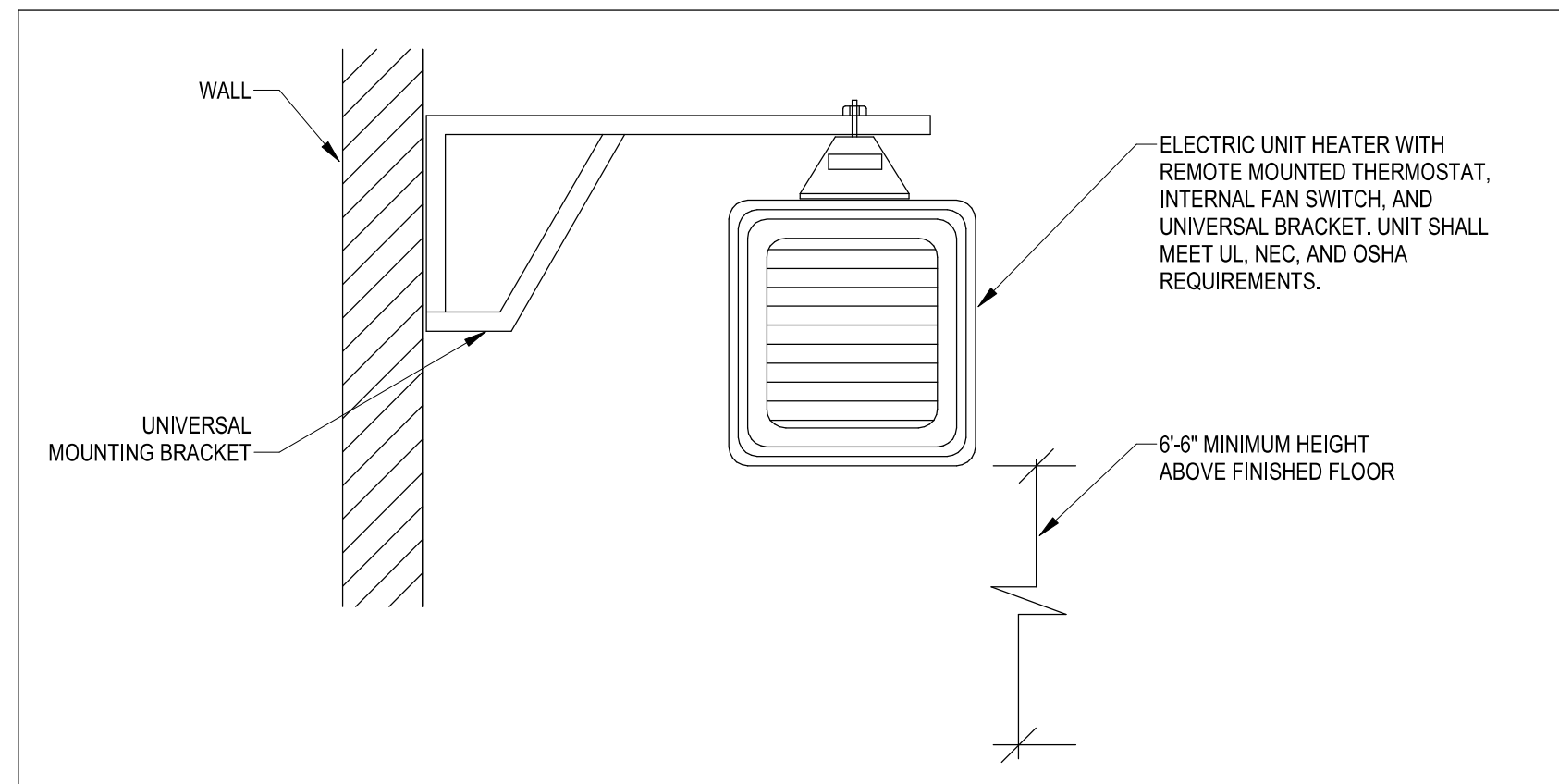
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FIRST FLOOR NEW WORK DUCT PLAN

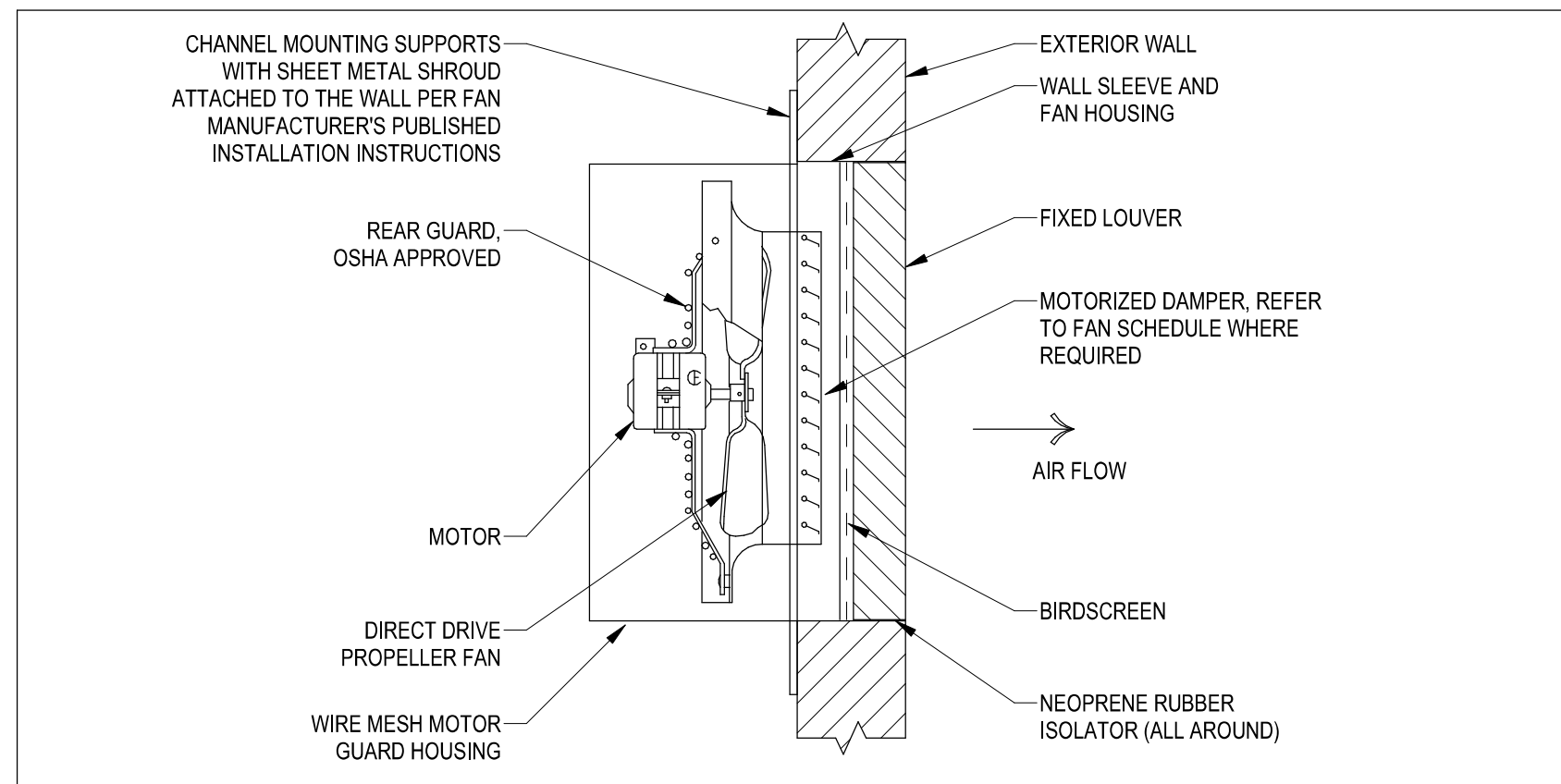
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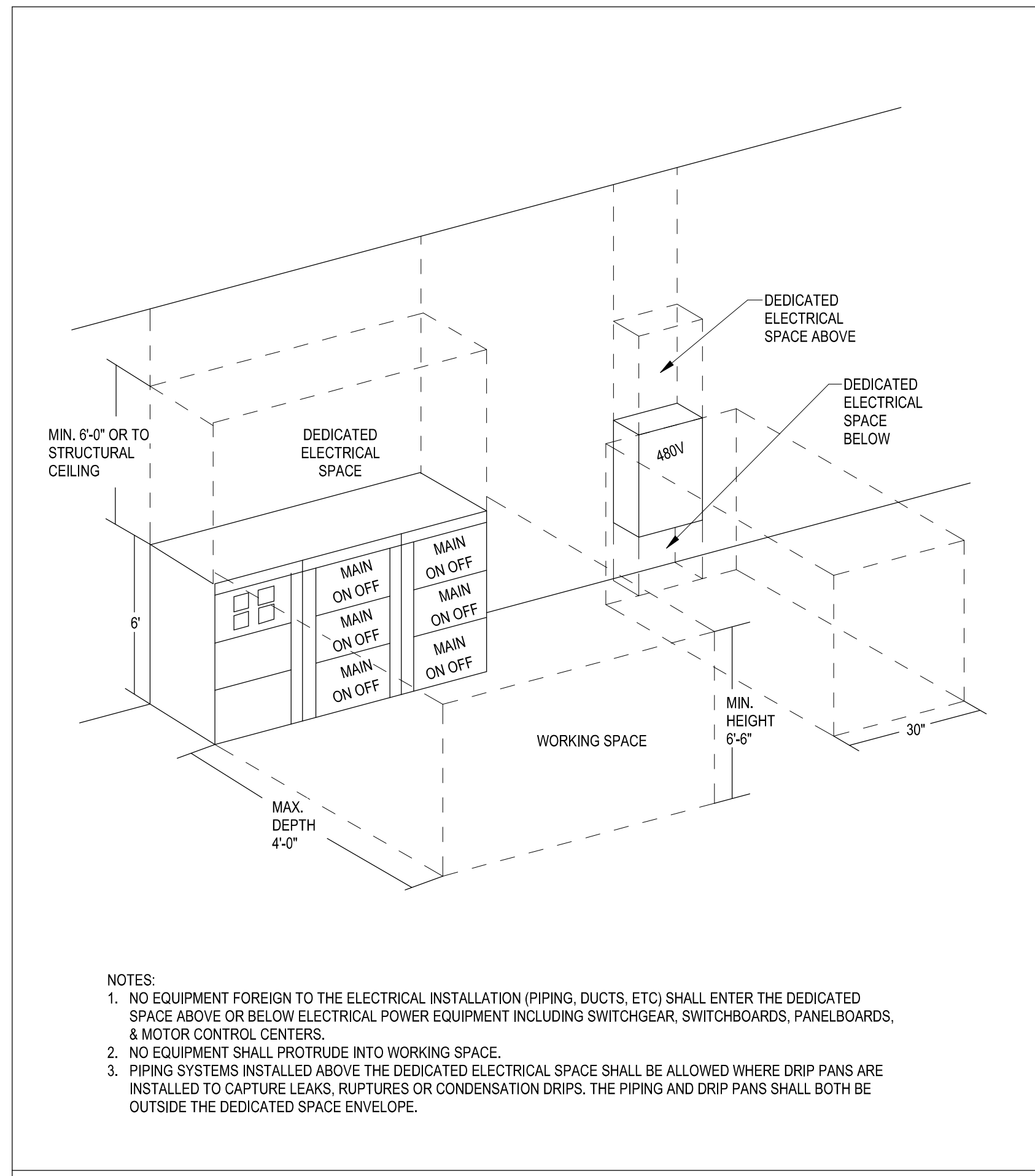




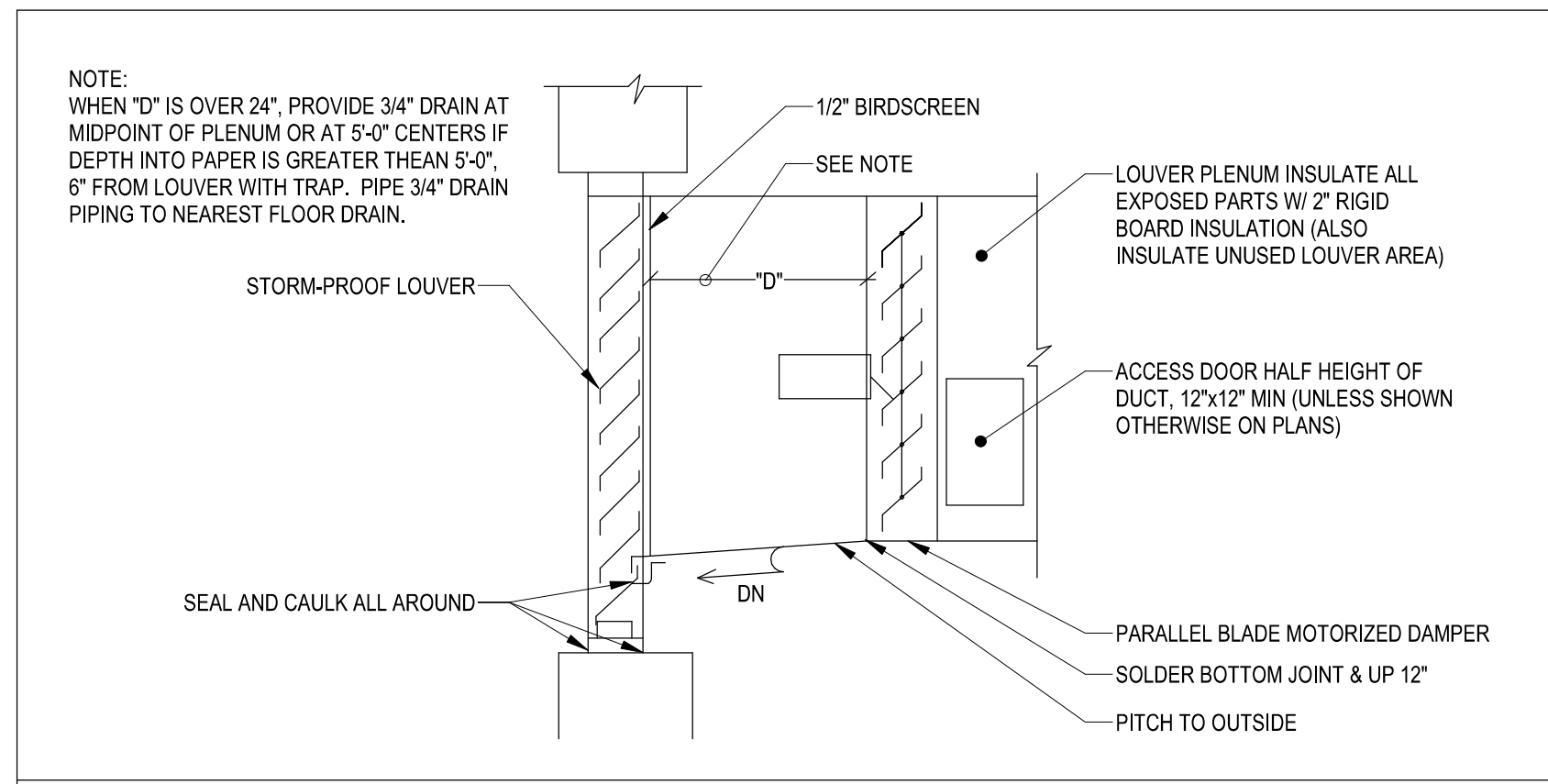
1 ELECTRIC UNIT HEATER MOUNTING
H501 NOT TO SCALE



3 WALL MOUNTED PROPELLER FAN
H501 NOT TO SCALE



2 ELECTRICAL WORK AND DEDICATED SPACE
H501 NOT TO SCALE



4 LOUVER CONNECTION
H501 NOT TO SCALE

- ### GENERAL ATC NOTES
- REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS AND REQUIREMENTS.
 - ALL ATC CONTROLS SHALL BE HARDWIRED. NO WIRELESS TECHNOLOGY SHALL BE ALLOWED UNLESS CONFIRMED WITH THE OWNER. ALL EXPOSED WIRING SHALL BE INSTALLED IN MINIMUM 1/2\"/>

CONTROL POINT DESCRIPTOR LEGEND

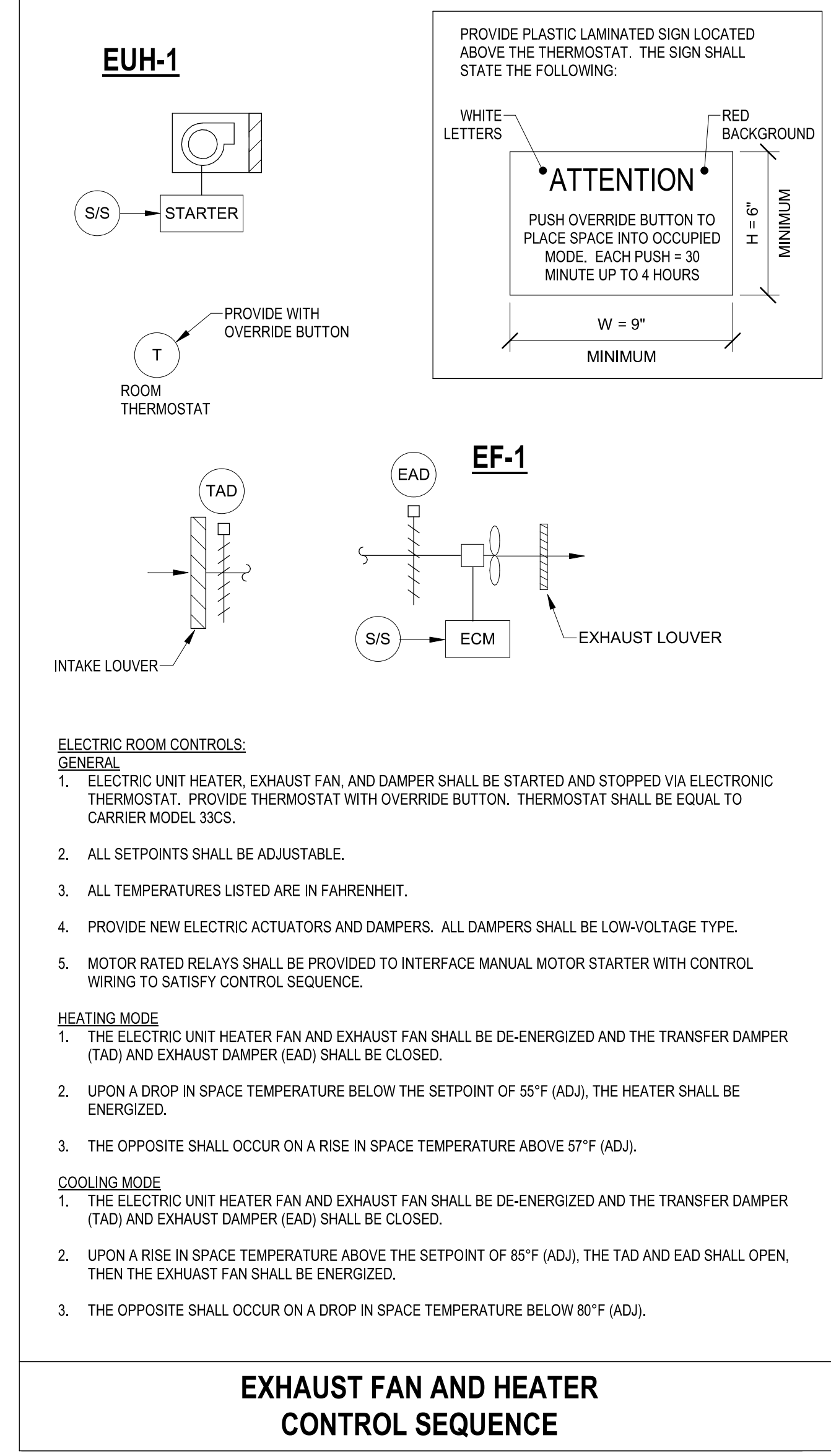
- ATC CONTRACTOR PROVIDED DDC POINT AND HARDWARE
- CONTROL DEVICE FURNISHED BY ELECTRICAL OR PLUMBING CONTRACTOR BUT INTERFACED TO DDC SYSTEM BY ATC CONTRACTOR (ELEC SHOWN)
- ATC CONTRACTOR INTERFACE TO EQUIPMENT MANUFACTURER'S HARDWARE
- ATC CONTRACTOR PROVIDED LOCAL CONTROL POINT

CONTROL ABBREVIATIONS

ACD	AUTOMATIC CONTROL DAMPER	LAT	LEAVING AIR TEMP SENSOR
ACV	AUTOMATIC CONTROL VALVE	LEL	LOW EXPLOSIVE LIMIT
ALM	ALARM	MAT	MIXED AIR TEMP SENSOR
ATC	AUTOMATIC TEMPERATURE CONTROL	MD	MOTION DETECTOR
CT	CURRENT TRANSFORMER (STATUS FEEDBACK)	NC	NORMALLY CLOSED (ON LOSS OF POWER)
DDC	DIRECT DIGITAL CONTROL	NO	NORMALLY OPEN (ON LOSS OF POWER)
EAD	EXHAUST AIR DAMPER	OAD	OUTSIDE AIR DAMPER
EAT	ENTERING AIR TEMPERATURE	OAT	OUTSIDE AIR TEMPERATURE SENSOR (DB)
ECM	ELECTRONICALLY COMMUTATED MOTOR	RH	RELATIVE HUMIDITY
FA	FAULT ALARM	S	SWITCH
HE	HIGH EFFICIENCY	SAD	SUPPLY AIR DAMPER
HOA	HANDS-OFF AUTOMATIC SWITCH	SIS	START/STOP THERMOSTAT
HS	HAND SWITCH	T	THERMOSTAT
		TS	TEMPERATURE SENSOR
		VFD	VARIABLE FREQUENCY DRIVE
		VFDS	VFD SPEED
		VFDO	VFD OUTPUT (FEEDBACK)

DIAGRAM EQUIPMENT SYMBOLS

	UNIT HEATER		PROPELLOR FAN
	PARALLEL BLADE DAMPER (MODULATING)		



EXHAUST FAN SCHEDULE

ID	LOCATION	NAME	NO.	MANUFACTURER	MODEL NO.	TYPE	FAN						SOUND PRESS LEVEL (dBA)	WEIGHT (lb)	ELECTRICAL DATA			REMARKS				
							DESIGN	VELOCITY	PRESS	WHEEL	MOTOR	DRIVE TYPE			FLA	V	PH					
EF-1	PUMP ROOM		101	Greenheck	AER-20	SIWELL	100	44	0.38	1045	PROPELLER	20 1/8"	DIRECT	0.05	0.25	Yes	60	63	1.7	208	1	1 THRU 7

NOTES:
1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DIAGRAMS FOR ADDITIONAL INFORMATION.
2. PROVIDE WITH BIRD SCREEN.
3. PROVIDE FAN HOUSING WITH GALVANIZED STEEL FAN PANEL.
4. PROVIDE FAN GUARDS.
5. PROVIDE ULTRA LOW LEAKAGE MOTORIZED DAMPER WITH LOW VOLTAGE DAMPER ACTUATOR.
6. PROVIDE WITH ECM TYPE MOTOR WITH MOTOR MOUNTED SPEED CONTROL DIAL.
7. PROVIDE WITH SINGLE POINT POWER AND FACTORY TOGGLE TYPE DISCONNECT SWITCH.

ELECTRIC UNIT HEATER SCHEDULE

ID	LOCATION	NAME	NO.	MANUFACTURER	MODEL NO.	TYPE	FAN			HEATING COIL		HEATING ELEMENT		WEIGHT (lb)	ELECTRICAL DATA			REMARKS			
							DESIGN	DRIVE TYPE	MOTOR	EAT DB	LAT DB	QTY	POWER		SCR	FLA	V		PH		
EUH-1	PUMP ROOM		101	Marley Engineered Products	IUH - Industrial	ELECTRIC	270	DIRECT	1	6.00	1400	0.0	80.0	1	5.0	Yes	25	13.8	208	3	1 THRU 4

NOTES:
1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DIAGRAMS FOR ADDITIONAL INFORMATION.
2. PROVIDE ALL FRACTIONAL HP MOTORS WITH INTEGRAL DISCONNECT PREWIRED TO THE UNIT. DISCONNECTING MEANS SHALL BE NEMA RATED AND SUITABLE FOR LOCKING IN THE OFF POSITION.
3. PROVIDE ALL FRACTIONAL HP MOTORS WITH INTEGRAL RESETTABLE THERMAL OVERLOAD.
4. PROVIDE WIRE CAGE FAN GUARD.

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DETAILS, SCHEDULES, AND AUTOMATIC TEMPERATURE CONTROLS
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H501

ELECTRICAL ABBREVIATIONS LIST

1P	1 POLE (2P, 3P, 4P, ETC.)	AS	AMP SWITCH	CMFR	COMPRESSOR CONNECTION	DS	SAFETY DISCONNECT SWITCH	FXT	FIXTURE	HTG	HEATING	LTO	LIGHTING	MSP	MOTOR STARTER PANELBOARD	PA	PUBLIC ADDRESS	RM	ROOM	SYM	SYMMETRICAL	V	VOLT	∠	ANGLE		
A	AMPERE	AT	AMP TRIP	CONV	CONVERSION	DT	DOUBLE THROW	FLR	FLOOR	HTR	HEATER	LTNG	LIGHTING	MSO	MAIN SWITCHBOARD	PB	PULL BOX OR PUSHBUTTON	RSC	RIGID STEEL CONDUIT	SYS	SYSTEM	VA	VOLT-AMPERES	@	AT		
AC	ABOVE COUNTER OR AIR CONDITIONER	ATS	AUTOMATIC TRANSFER SWITCH	CONST	CONSTRUCTION	DWG	DRAWING	FLUR	FLUORESCENT	HV	HIGH VOLTAGE	LV	LOW VOLTAGE	MT	MOUNT	PE	PNEUMATIC ELECTRIC	RTU	ROOF TOP UNIT	TEL	TELEPHONE	VDT	VIDEO DISPLAY TERMINAL	Δ	DELTA		
ACLG	ABOVE CEILING	AUX	AUXILIARY	CONT	CONTINUATION OR CONTINUOUS	ELEC	ELECTRICAL CONTRACTOR	FU	FUSE	HVAC	HEATING, VENTILATING AND AIR CONDITIONING	MAX	MAXIMUM	MT.C	EMPTY CONDUIT	PEF	PEDESTAL	SC	SURFACE CONDUIT	TEL/DATA	TELEPHONE/DATA	VERT	VERTICAL	'	FEET		
ADD	AUTOMATIC DOOR OPENER	AV	AUDIO VISUAL	CONTR	CONTRACTOR	ELEV	ELEVATOR	FUSDS	FUSED SAFETY DISCONNECT SWITCH	HWP	HYDRONIC WATER PUMP	MAG.S	MAGNETIC STARTER	MTR	MOTOR, MOTORIZED	PF	POWER FACTOR	SEC	SECONDARY	SH	SHIELD	TERM	TERMINAL	VFD	VARIABLE FREQUENCY DRIVE	•	INCHES
AF	AMP FRAME	AWG	AMERICAN WIRE GAUGE	CONV	CONVERTOR	EM	EMERGENCY	GA	GAUGE	IC	INTERRUPTING CAPACITY	MCB	MOMENTARY CONTACT	N.C.	NORMALLY CLOSED	PH	PHASE	SHT	SHEET	TL	TWIST LOCK	VOL	VOLUME	#	NUMBER		
AFF	ABOVE FINISHED FLOOR	BATT	BATTERY	CP	CIRCULATING PUMP	EN	ENERGY	GAL	GALLON	IG	ISOLATED GROUND	MC	MECHANICAL CONTRACTOR	NTS	NOT TO SCALE	PV	POST INDICATING VALVE	SM	SIMILAR	TR	TAPPER RESISTANT	W	WATT	Ø	PHASE		
AFG	ABOVE FINISHED GRADE	BD	BOARD	CRT	CATHODE-RAY TUBE	EMS	ENERGY MANAGEMENT SYSTEM	GALV	GALVANIZED	MCB	MAIN CIRCUIT BREAKER	NEC	NATIONAL ELECTRICAL CODE	NFDS	NON-FUSED SAFETY DISCONNECT SWITCH	NEL	NATIONAL ELECTRICAL CODE	PNL	PANEL	S/N	SOLID NEUTRAL	T-STAT	THERMOSTAT	W	WITH		
AFI	ARC FAULT CIRCUIT INTERRUPTER	BLDG	BUILDING	CT	CURRENT TRANSFORMER	EMT	ELECTRICAL METALLIC TUBING	GEN	GENERATOR	GC	GENERAL CONTRACTOR	IMC	INTERMEDIATE METAL CONDUIT	MCC	MOTOR CONTROL CENTER	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION	PP	POWER POLE	PP	POWER POLE	SN	SOLID NEUTRAL	W	WITH		
AHU	AIR HANDLING UNIT	BMS	BUILDING MANAGEMENT SYSTEM	CTR	CENTER	EP	ELECTRIC PNEUMATIC	GEN	GENERATOR	INCAND	INCANDESCENT	MCC	MOTOR CONTROL CENTER	PR	PAIR	SPKR	SPEAKER	PR	PAIR	SPKR	SPEAKER	WG	WIRE GUARD	W	WATER HEATER		
AL	ALUMINUM	C	CONDUIT	CU	COPPER	EQUIP	EQUIPMENT	GFI	GROUND FAULT CIRCUIT INTERRUPTER	IR	INFRARED	MDP	MAIN DISTRIBUTION PANEL	NFDS	NON-FUSED SAFETY DISCONNECT SWITCH	PRI	PRIMARY	SP	SPARE	SPKR	SPEAKER	WH	WATER HEATER	W/O	WITHOUT		
ALT	ALTERNATE	CAB	CABINET	DOP	DOMESTIC WATER CIRCULATING	EWC	ELECTRIC WATER COOLER	GFP	GROUND FAULT PROTECTOR	IR	INFRARED	MFR	MANUFACTURER	NTS	NOT TO SCALE	PROJ	PROJECTION	SR	SURFACE RACEWAY	TYP	TYPICAL	WP	WEATHERPROOF	XPR	TRANSFER		
AMP	AMPERE	CAT	CATALOG	EXIST	EXISTING	EXST	EXISTING	GND	GROUND	J-BOX	JUNCTION BOX	MFS	MAIN FUSED DISCONNECT SWITCH	NC	NOT IN CONTRACT	PRV	POWER ROOF VENTILATOR	SS	STAINLESS STEEL	UC	UNDER COUNTER	W	WITH	XPR	TRANSFER		
AMPL	AMPLIFIER	CB	CABLE TELEVISION	DEPT	DEPARTMENT	EXP	EXPLOSION PROOF	GRS	GALVANIZED RIGID STEEL (CONDUIT)	KV	KILOVOLT	MH	MANHOLE	NL	NIGHT LIGHT	PT	POTENTIAL TRANSFORMER	SSW	SELECTOR SWITCH	UG	UNDERGROUND ELECTRICAL	XPR	TRANSFER	P	PLATE		
ANUN	ANNUNCIATOR	CB	CABLE TELEVISION	DET	DETAIL	FA	FIRE ALARM	GYP BD	GYP SUM BOARD	KVA	KILOVOLT-AMPERE	MIC	MICROPHONE	N.O.	NORMALLY OPEN	PVC	POLYVINYL CHLORIDE (CONDUIT)	S/S	STOP/START PUSHBUTTONS	UG	UNDERGROUND	XPR	TRANSFER				
APPROX	APPROXIMATELY	CB	CABLE TELEVISION	DIA	DIAMETER	FABP	FIRE ALARM BOOSTER POWER SUPPLY PANEL	HOA	HANDS-OFF-AUTOMATIC SWITCH	KVAR	KILOVOLT-AMPERE REACTIVE	MIN	MINIMUM	N.F.	NORMALLY CLOSED	PWR	POWER	STA	STATION	UG	UNDERGROUND	XPR	TRANSFER				
AQSTAT	AQUASTAT	CB	CABLE TELEVISION	DISC	DISCONNECT	HP	HORISONTAL	HORIZ	HORIZONTAL	KW	KILOWATT	MISC	MISCELLANEOUS	N.F.	NORMALLY CLOSED	QUAN	QUANTITY	STD	STANDARD	UG	UNDERGROUND	XPR	TRANSFER				
ARCH	ARCHITECT, ARCHITECTURAL	COMB	COMBINATION	DIST	DISTRIBUTION	HP	HORISONTAL	HP	HORISONTAL	KWH	KILOWATT HOUR	MLO	MAIN LUGS ONLY	OH	OVERHEAD	RPT	RECEPTACLE	SURF	SURFACE MOUNTED	UG	UNDERGROUND	XPR	TRANSFER				
				DN	DOWN	FACP	FIRE ALARM CONTROL PANEL	HPF	HIGH POWER FACTOR	LOC	LOCATE OR LOCATION	MMS	MANUAL MOTOR STARTER	OH	OVERHEAD	REQD	REQUIRED	SW	SWITCH	UG	UNDERGROUND	XPR	TRANSFER				
				DPR	DAMPER	FCU	FAN COOL UNIT	HT	HEIGHT	LT	LIGHT	MOA	MULTI-OUTLET ASSEMBLY	OL	OVERLOADS	RM	ROOM	SWB	SWITCHBOARD	UL	ULTRAVIOLET	XPR	TRANSFER				

POWER LEGEND

	DISTRIBUTION PANEL
	PANELBOARD-SURFACE MOUNTED
	DRY TYPE TRANSFORMER
	GROUND BUS WALL MOUNTED CHATSWORTH MODEL NO. 10822-020 EXTEND A 1/2", 1-4# INSULATED GROUND TO THE BUILDING GROUND SYSTEM
	SAFETY SWITCH - RATING AND TYPE AS NOTED ON THE DRAWING.
	FUSIBLE SAFETY SWITCH - RATING AND TYPE AS NOTED ON THE DRAWING. (30 AMP, 20 AMP FUSE 3 POLE)
	MAGNETIC STARTER OR CONTACTOR - RATING AND SIZE AS NOTED ON THE DRAWING
	ENCLOSED CIRCUIT BREAKER - SIZE AS INDICATED (100 AMP FRAME, 70 AMP TRIP, 3 POLE)
	MOTOR, NUMERAL DENOTES HORSE POWER
	PULL BOX
	FLUSH WALL MOUNTED JUNCTION BOX WITH BLANK COVERPLATE, SIZE AS REQUIRED BY N.E.C.
	CEILING MOUNTED JUNCTION BOX
	EMERGENCY GENERATOR
	AUTOMATIC TRANSFER SWITCH
	MANUAL TRANSFER SWITCH
	WATTHOUR METER
	AUTOMATIC TRANSFER SWITCH
	EMERGENCY PUSH BUTTON
	FLOAT SWITCH
	PRESSURE TRANSDUCER
	MOTORIZED DAMPER

RACEWAY AND WIRING

	HOMERUN TO PANELBOARD WITH 3/4", 2 #12 & 1#12CND UNLESS NOTED OTHERWISE. NUMERALS 1 AND 3 INDICATE CIRCUITS IN PANELBOARD. RACEWAYS LARGER THAN 3/4" AND CONDUCTORS LARGER THAN #12 AWG SHALL BE INDICATED ON THE DRAWINGS. PROVIDE AN INSULATED GREEN GROUND WIRE IN ALL RACEWAYS MINIMUM SIZE TO BE #12AWG.
	RACEWAY RUN UNDERGROUND OR CONCEALED IN SLAB
	RACEWAY RUN EXPOSED

LIGHTING/LIGHTING CONTROL LEGEND

	WALL MOUNTED LED FIXTURE, "W" DENOTES FIXTURE TYPE, NUMERAL DENOTES CIRCUIT NUMBER, "c" SUBSCRIPT DENOTES SWITCH CONTROL WHERE SHOWN.
	WALL MOUNTED EMERGENCY LED FIXTURE WITH EMERGENCY BATTERY BACKUP BALLAST, PROVIDE THIRD WIRE FOR EMERGENCY MODE BYPASS IF SWITCHED (TYPICAL), "WE" DENOTES FIXTURE TYPE, NUMERAL DENOTES CIRCUIT NUMBER, "c" SUBSCRIPT DENOTES SWITCH CONTROL WHERE SHOWN
	1' X 4' PENDANT OR SURFACE MOUNTED LED FIXTURE "A" DENOTES FIXTURE TYPE, NUMERAL DENOTES CIRCUIT NUMBER, "a" SUBSCRIPT DENOTES SWITCH CONTROL WHERE SHOWN
	1' X 4' PENDANT OR SURFACE MOUNTED EMERGENCY LED FIXTURE WITH EMERGENCY BATTERY BACKUP BALLAST, PROVIDE THIRD WIRE FOR EMERGENCY MODE BYPASS IF SWITCHED (TYPICAL), "AE" DENOTES FIXTURE TYPE, NUMERAL DENOTES CIRCUIT NUMBER, "a" SUBSCRIPT DENOTES SWITCH CONTROL WHERE SHOWN
	POLE MOUNTED LED SITE LIGHTING FIXTURE
	EXIT SIGN CEILING OR PENDANT MOUNTED, ARROWS DENOTE DIRECTION OF EGRESS, NUMERAL DENOTES CIRCUIT NUMBER, SHADED CHEVRONS DENOTE EXIT FACES.
	WALL MOUNTED EXIT SIGN, ARROWS DENOTE DIRECTION OF EGRESS, NUMERAL DENOTES CIRCUIT NUMBER, SHADED CHEVRONS DENOTE EXIT FACES.
	LIGHTING CONTROL SWITCHES (MOUNT 4"-0" AFF UNLESS NOTED OTHERWISE.) SINGLE POLE SWITCH, "a" SUBSCRIPT DENOTES CIRCUITS CONTROLLED.

RECEPTACLE LEGEND

	DUPLEX CONVENIENCE OUTLET RATED 20A, 125V, U-SLOT GROUNDED TYPE MOUNTED 18" ABOVE FINISHED FLOOR TO CENTER LINE. ALL OTHER MOUNTING HEIGHTS SHALL BE AS NOTED ADJACENT TO THE SYMBOL. REFER TO RECEPTACLE ABBREVIATIONS FOR SPECIAL PURPOSE RECEPTACLES.
	DOUBLE DUPLEX CONVENIENCE OUTLET RATED 20A, 125V, U-SLOT GROUNDED TYPE MOUNTED 18" ABOVE FINISHED FLOOR TO CENTER LINE. ALL OTHER MOUNTING HEIGHTS SHALL BE AS NOTED ADJACENT TO THE SYMBOL.
	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER CONVENIENCE OUTLET - 20A, 125V, U-SLOT GROUNDED TYPE MOUNTED 18" ABOVE FINISHED FLOOR TO CENTER LINE. ALL OTHER MOUNTING HEIGHTS SHALL BE AS NOTED ADJACENT TO THE SYMBOL.

GENERAL ELECTRICAL NOTES

- DRAWINGS ARE DIAGRAMMATIC ONLY. THE EXACT LOCATION AND ROUTING OF RACEWAYS SHALL BE COORDINATED AND DETERMINED IN THE FIELD.
- ALL STRAIGHT FEEDERS, BRANCH CIRCUITS AND AUXILIARY SYSTEM CONDUIT RUNS SHALL BE PROVIDED WITH SUFFICIENT HANDHOLES/PULL BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 200 FEET OR NO MORE THAN (3) 90 DEGREE BENDS. EXACT SIZES OF HANDHOLES/PULL BOXES AND LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ELECTRICAL CONTRACTOR.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AS APPLICABLE AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT; THE POWER WIRING, CONTROL WIRING AND ALL ELECTRICAL CONNECTIONS AND CONDUIT TURN-UPS SHALL BE COORDINATED WITH THE RESPECTIVE CONTRACTORS BEFORE THE START OF CONSTRUCTION IN THE FIELD.
- WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE WITH MASSACHUSETTS AMENDMENTS, MASSACHUSETTS BUILDING CODE, NFPA AND REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION.
- THE WORD "CONTRACTOR" AS USED IN THE "ELECTRICAL WORK" SHALL MEAN THE ELECTRICAL SUBCONTRACTOR.
- CONTRACTOR SHALL PAY FOR ALL PERMITS, INSURANCE AND TESTS, AND SHALL PROVIDE LABOR AND MATERIAL TO COMPLETE THE ELECTRICAL WORK SHOWN.
- CONTRACTOR SHALL PAY ELECTRIC UTILITY COMPANY BACK CHARGES
- CONTRACTOR SHALL PROVIDE ALL REQUIRED COORDINATION WITH EVERSOURCE AND OTHER UTILITIES AS REQUIRED.
- EXCEPT AS OTHERWISE NOTED, THE ELECTRICAL WORK SHALL INCLUDE PANELBOARDS, CIRCUIT BREAKERS, FEEDERS, WIRING, RACEWAYS, LIGHTING FIXTURES, OUTLETS AND TRANSFORMERS.
- THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY LIGHTING AND POWER AND THE GENERAL CONTRACTOR SHALL PAY ALL ENERGY CHARGES FOR TEMPORARY POWER AND LIGHTING.
- DURING CONSTRUCTION, THE ELECTRICAL CONTRACTOR SHALL KEEP HIS PORTION OF THE WORK NEAT, CLEAN AND ORDERLY.
- ALL SYSTEMS SHALL BE TESTED FOR SHORT CIRCUIT AND GROUNDS PRIOR TO ENERGIZING AND ANY DEFECTS SHALL BE CORRECTED.
- ALL CUTTING AND PATCHING REQUIRED FOR ELECTRICAL WORK SHALL BE INCLUDED AS PART OF THIS SECTION.
- COMPLETE SHOP DRAWINGS SHALL BE SUBMITTED FOR ELECTRICAL EQUIPMENT. WHERE SPECIFIED ELECTRICAL EQUIPMENT IS SUBSTITUTED, THE ELECTRICAL CONTRACTOR SHALL SUBMIT COMPLETE SPECIFICATIONS ON THE SUBSTITUTE AS WELL AS THE ITEM ORIGINALLY SPECIFIED.
- MATERIALS SHALL BE SPECIFICATION GRADE AND UL LISTED.
- WHERE MATERIAL IS CALLED OUT IN THE LEGEND BY MANUFACTURER, TYPE OR CATALOG NUMBER, SUCH DESIGNATIONS ARE TO ESTABLISH STANDARDS OR DESIRED QUALITY. ACCEPTANCE OR REJECTIONS OF PROPOSED SUBSTITUTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
- WORK SHALL BE COORDINATED WITH THAT OF OTHER TRADES TO ELIMINATE INTERFERENCES.
- ELECTRICAL CONTRACTOR SHALL OBTAIN SHOP DRAWINGS/SPECIFICATIONS OF ALL EQUIPMENT FROM THE GENERAL CONTRACTOR PRIOR TO PURCHASING AND INSTALLING ELECTRICAL EQUIPMENT FOR SAME. NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN ACTUAL EQUIPMENT INSTALLED AND CONTRACT DOCUMENTS.
- ELECTRICAL WORK SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL COMPLETION UNLESS A LONGER WARRANTY IS SPECIFIED ELSEWHERE.
- WORK SHALL BE GROUNDED IN ACCORDANCE WITH CODE REQUIREMENTS. COMPLETE EQUIPMENT (INSULATED GREEN WIRE) GROUNDING SYSTEM SHALL BE INSTALLED.
- WIRE SHALL BE TYPE "XLP" INSULATED FOR 600 VOLTS, MINIMUM SIZE #12 AWG COPPER UNLESS SPECIFICALLY NOTED OTHERWISE.
- WIRING METHODS:
 - EXTERIOR UNDERGROUND FEEDERS SHALL BE PVC SCHEDULE 80 FOR DIRECT BURIED AND PVC SCHEDULE 40 FOR CONCRETE ENCASED.
 - EXTERIOR ABOVE GRADE FEEDERS SHALL BE RGS CONDUIT.
 - INTERIOR CABINET FEEDERS SHALL BE RGS CONDUIT.
- CONNECTORS FOR RIGID CONDUIT SHALL BE MADE WITH THREADED COUPLINGS.
- BOXES SHALL BE GALVANIZED STEEL AND SHALL BE SIZED TO ACCOMMODATE THE EQUIPMENT OR APPARATUS TO BE INSTALLED. WHERE BOXES OF A STANDARD MAKE ARE NOT AVAILABLE, SPECIAL BOXES SHALL BE MANUFACTURED. FIXTURES SUPPORTED ON THE CEILING OR ON THE WALL SHALL HAVE SUITABLE FIXTURE SUPPORT FOR THE SPECIFIC FIXTURE.
- PANELBOARDS SHALL BE DEAD FRONT, THERMAL MAGNETIC BOLT-ON CIRCUIT BREAKER TYPE, DESIGNED FOR SURFACE OR FLUSH MOUNTINGS AS INDICATED ON PLAN, AND HAVING CONNECTIONS TO 120/208 OR 277/480 VOLT, 3 PHASE, 4 WIRE SERVICE. ALL BUS BARS SHALL BE COPPER. CABINETS SHALL BE MADE OF CODE GAUGE GALVANIZED SHEET STEEL, WITH A MINIMUM OF 4 INCH GUTTERS, DOOR IN DOOR CONSTRUCTION, LOCKED DOOR, AND FLUSH HINGES. TYPEWRITTEN INDEX SHALL BE MOUNTED ON DOOR INSIDE TRANSPARENT COVER INDICATING LOAD SERVED. PANELS SHALL INCLUDE SEPARATE EQUIPMENT GROUND BUS.
- PANELBOARDS, DISCONNECT SWITCHES, AND CONTROLLERS SHALL HAVE NAMEPLATES OF BLACK LAMINATED PLASTIC WITH ENGRAVED WHITE LETTERS, SECURED WITH SELF-TAPPING SCREWS.
- CONTRACTOR SHALL PHASE BALANCE PANELBOARDS IN THE FIELD. LOAD ON EACH PHASE SHALL BE BALANCED WITHIN 10% OF EACH OTHER.
- WALL PLATES SHALL BE PROVIDED FOR EACH SWITCH AND RECEPTACLE OUTLET. PROVIDE CAST IRON OR ALLOY OF SUITABLE TYPE TO MATCH OUTLET BOXES SPECIFIED.
- TOGGLE SWITCHES SHALL BE OF THE SINGLE POLE A.C. QUIET TOGGLE TYPE FOR MOUNTING IN A SINGLE-GANG SPACING. TOGGLE SWITCHES SHALL BE FULLY RATED 20 AMPERES AT 120/277 VOLT.
- DUPLEX RECEPTACLES SHALL BE 2 POLE, 3 WIRE, GROUNDING TYPE 20 AMPERE, 125 VOLT WITH METAL PLASTER EARS. RECEPTACLES SHALL BE NEMA STANDARD CONFIGURATION 5-20R.
- CONTRACTOR SHALL CHECK EXISTING CONDITIONS TO DETERMINE EXACT EXTENT OF WORK TO BE PERFORMED PRIOR TO BIDDING. DIMENSIONS RELEVANT TO EXISTING WORK SHALL BE VERIFIED IN THE FIELD.
- PROVIDE AS-BUILT "CADD" DRAWINGS AT THE COMPLETION OF THE PROJECT.
- ELECTRICAL CONTRACTOR SHALL LABEL ALL ELECTRICAL DEVICES INCLUDING BUT NOT LIMITED TO RECEPTACLES, TEL/DATA OUTLETS, DISCONNECT SWITCHES, PANELBOARDS, THERMAL MOTOR SWITCHES, CONTROL PANELS, JUNCTION BOXES, ETC.
 - RECEPTACLES - PANEL NAME AND CIRCUIT DESIGNATION
 - MUSCO PANEL - PANEL NAME, VOLTAGE, AMPERAGE, PHASE AS WELL AS PANEL AND CIRCUIT IT IS FED FROM.
 - CONTROL PANEL - PANEL NAME AND CIRCUIT DESIGNATION
 - JUNCTION BOXES - PANEL NAME AND CIRCUIT DESIGNATION
 - DISCONNECT SWITCHES - PANEL NAME AND CIRCUIT DESIGNATION
- ADDRESS QUESTIONS TO THE ENGINEER IN WRITING BEFORE AWARD OF CONTRACT, OTHERWISE ENGINEERS INTERPRETATION OF MEANING AND INTENT OF DRAWINGS SHALL BE FINAL.

Project:
CITY OF ROCHESTER, NH

LEDGEVIEW SEWER PUMP STATION UPGRADE

54A LEDGEVIEW DRIVE
ROCHESTER, NH 03868

Weston & Sampson

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Consultants:

No.	Date	Description
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2	04/24/2024	ISSUED FOR BIDDING

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Scale: NOT TO SCALE

Date: 4 / 24 / 2024

Drawn By: JHW

Reviewed By: DNM

Approved By: RFM

W&S Project No.: ENG23-0367

W&S File No.:

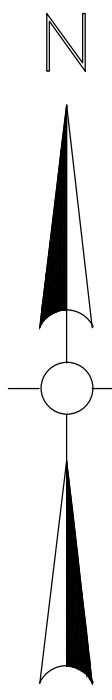
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ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES

Sheet Number:

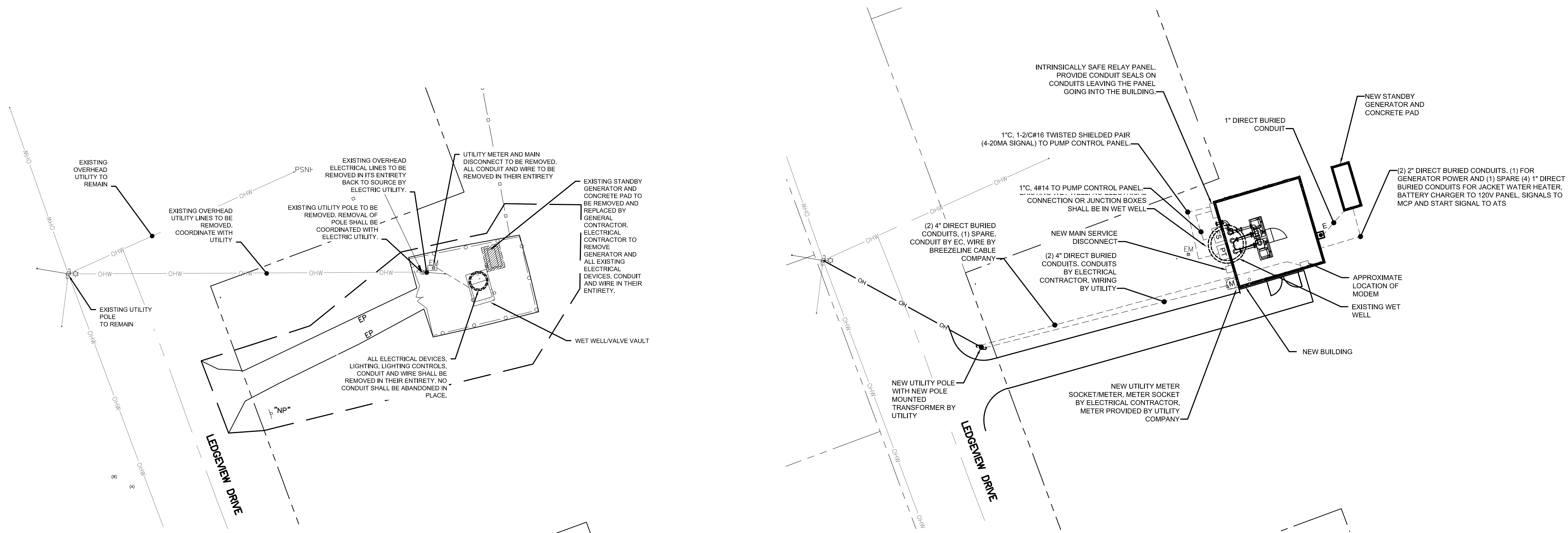
E001

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NOTES:

1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES FOR ADDITIONAL INFORMATION

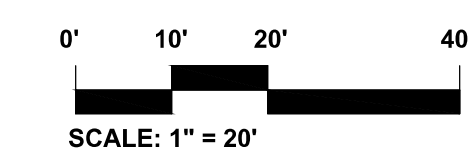


ELECTRICAL DEMOLITION SITE PLAN

SCALE: 1"=20'-0"

ELECTRICAL NEW WORK SITE PLAN

SCALE: 1"=20'-0"



Project:
CITY OF ROCHESTER, NH

LEDGEVIEW SEWER PUMP STATION
UPGRADE

54A LEDGEVIEW DRIVE
ROCHESTER, NH 03868

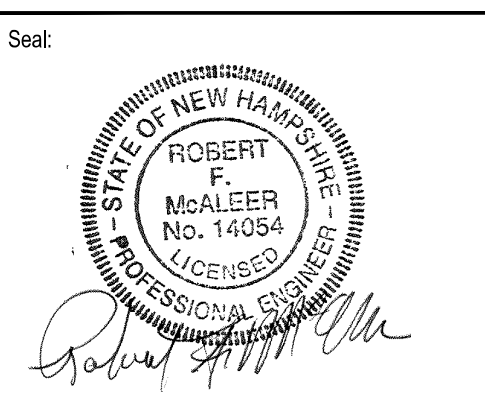
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Reviewed By: DNM
Approved By: RFM
W&S Project No.: ENG23-0367
W&S File No.:

Drawing Title:
ELECTRICAL SITE PLAN

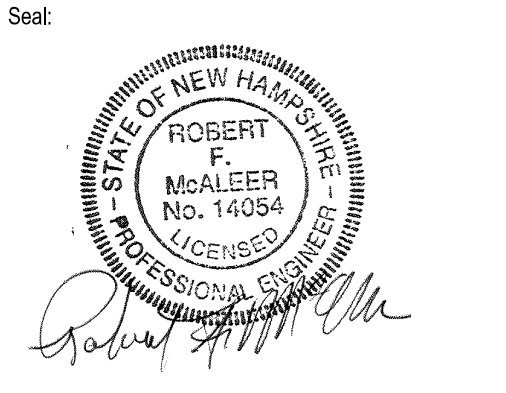
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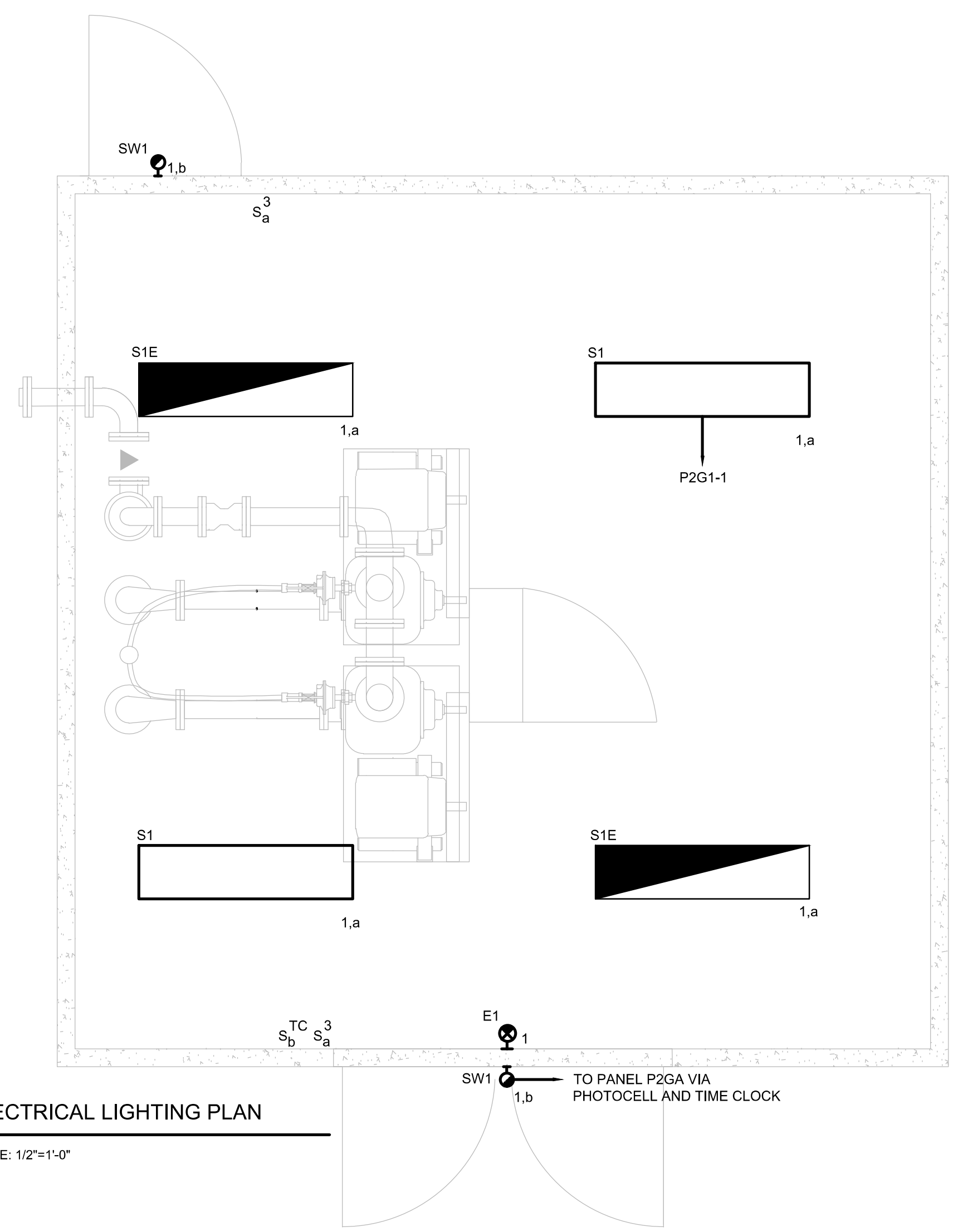


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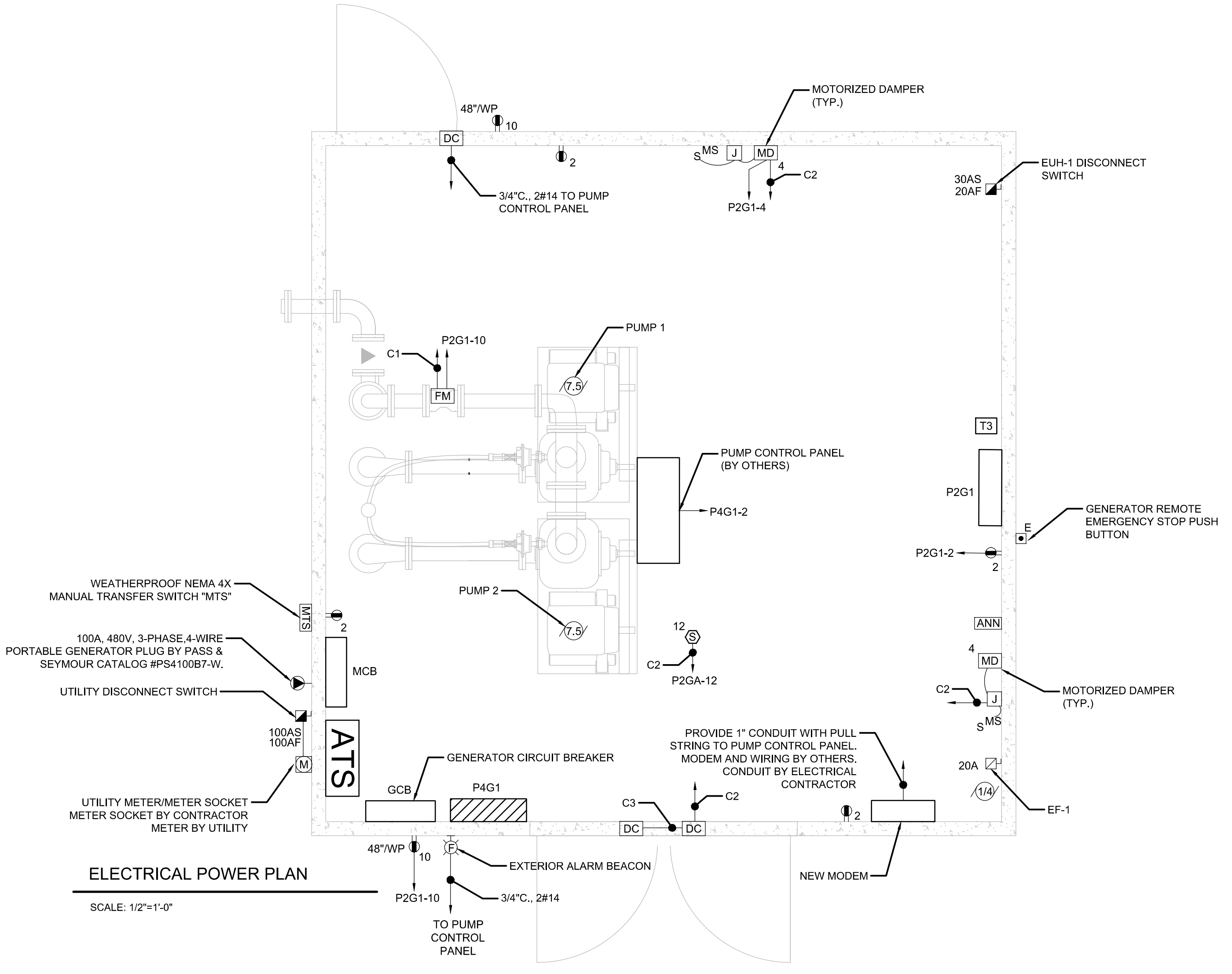
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Sheet Number:
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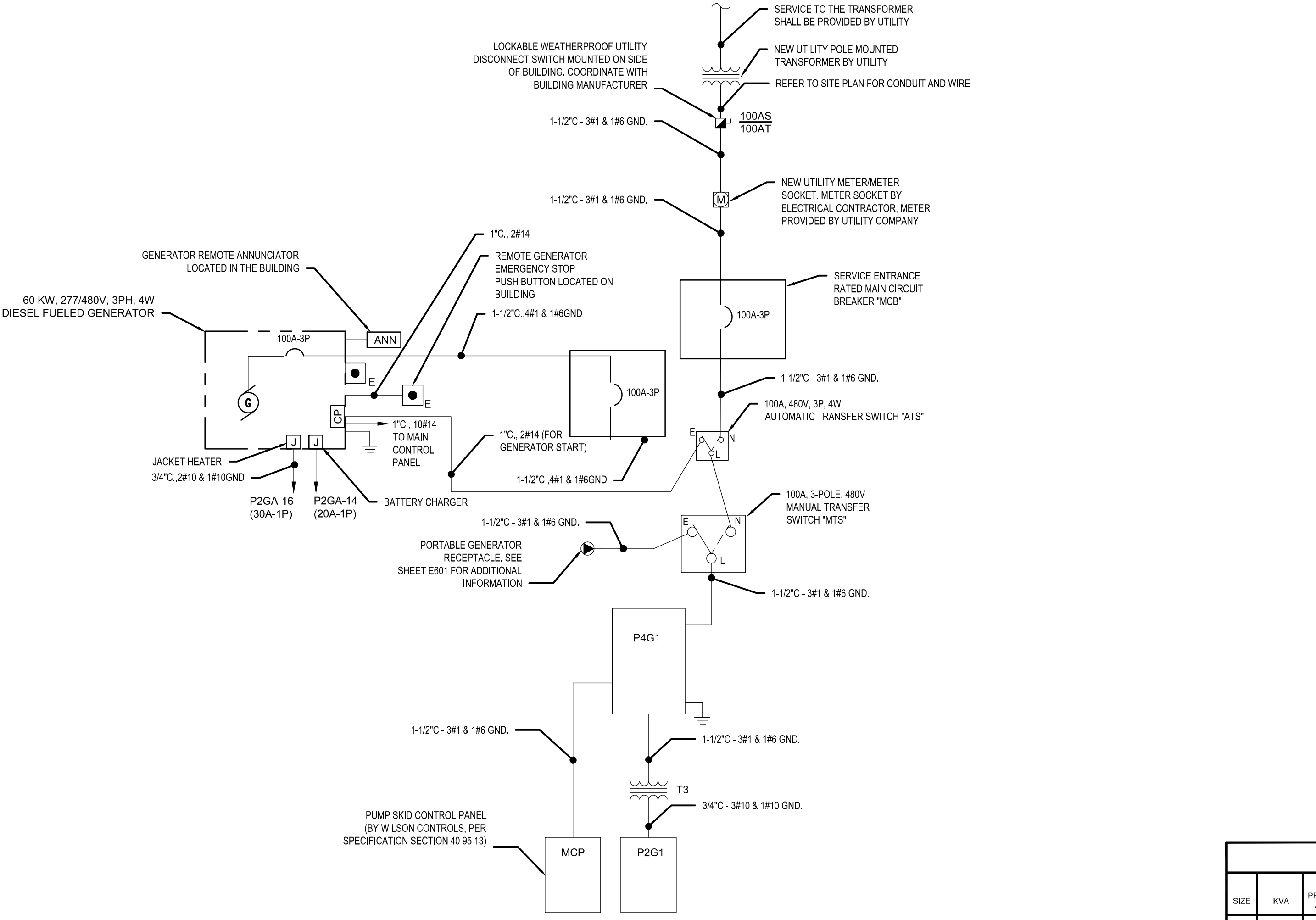


ELECTRICAL LIGHTING PLAN
SCALE: 1/2"=1'-0"

- NOTES:
- REFER TO DRAWING E001 FOR LEGEND, SYMBOLS ABBREVIATIONS AND GENERAL NOTES FOR ADDITIONAL INFORMATION
 - REFER TO DRAWING E601 FOR ASSOCIATED SCHEDULES AND DIAGRAMS.



ELECTRICAL POWER PLAN
SCALE: 1/2"=1'-0"



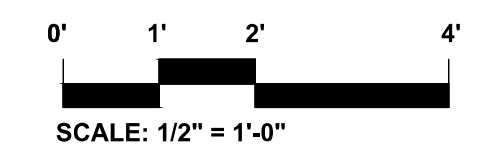
ELECTRICAL ONE LINE DIAGRAM
NOT TO SCALE

CONDUIT AND WIRE SCHEDULE

CONDUIT	FEEDER	TO
C1	3/4" C., 1-2/C#16 TWISTED SHIELDED PAIR	PUMP CONTROL PANEL
C2	3/4" C., 2#14	PUMP CONTROL PANEL
C3	1" C., VENDOR FURNISHED CABLE	FLOW METER

DRY TYPE TRANSFORMER SCHEDULE 480-120/208V

SIZE	KVA	PRIMARY AMPS	SECONDARY AMPS	480 VOLT OVERCURRENT	208 VOLT OVERCURRENT	480V FEEDER CODE	120/208V FEEDER CODE	GROUND SIZE
T3	30	36	83	50A, 3P	100A, 3P	3/4" C., 3#10 & 1#10GND	1 1/4" C., 4#3 & 1#6GND	#8-3/4" C



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LIGHTING FIXTURE SCHEDULE

TYPE	TYPE	MANUFACTURER	CATALOG NUMBER	LAMP		MOUNTING	VOLTAGE	LOAD	REMARKS
				NO.	TYPE				
S1	1'X4' ENCLOSED AND GASKETED, VAPORTIGHT LED FIXTURE	COOPER LIGHTING	4VTL-LD5-4-DR-UNV-L835-CD1-WL-U	-	4000 LUMEN 3500K LED	PENDANT	120	56	
S1E	1'X4' ENCLOSED AND GASKETED, VAPORTIGHT EMERGENCY LED FIXTURE	COOPER LIGHTING	4VTL-LD5-4-DR-UNV-EL10W-L835-CD1-WL-U	-	4000 LUMEN 3500K LED	PENDANT	120	56	
SW1	WALL MOUNTED EXTERIOR LED LIGHT FIXTURE	COOPER LIGHTING	GLEON-SA1-B-740-U-T3-WM-BZ	-	4883 LUMEN 3500K LED	WALL	120	0.3	MOUNT 8'-6" AFG
E1	LED EXIT SIGN REFER TO PLANS FOR NUMBER OF FACES AND ARROWS	COOPER LIGHTING	RL-EM-R-WW	-	LED	UNIVERSAL	120	2.4	

MECHANICAL EQUIPMENT SCHEDULE

EQUIP. TAG	EQUIPMENT	CHARACTERISTICS	VOLTS	PH.	PANEL	CKT. BRK.	FEEDER	CONNECTION						REMARKS	
								Ø	VFD	□	⊔	~	WP		
EUH-1	ELECTRIC UNIT HEATER	5 KVA	208	3	P2G1-7,9,11	20A 3P	3/4"C., 3#12 & 1#12G								
EF-1	EXHAUST FAN	0.5 KVA	208	1	P2G1-3,5	15A 2P	3/4"C., 2#12 & 1#12G					20A			

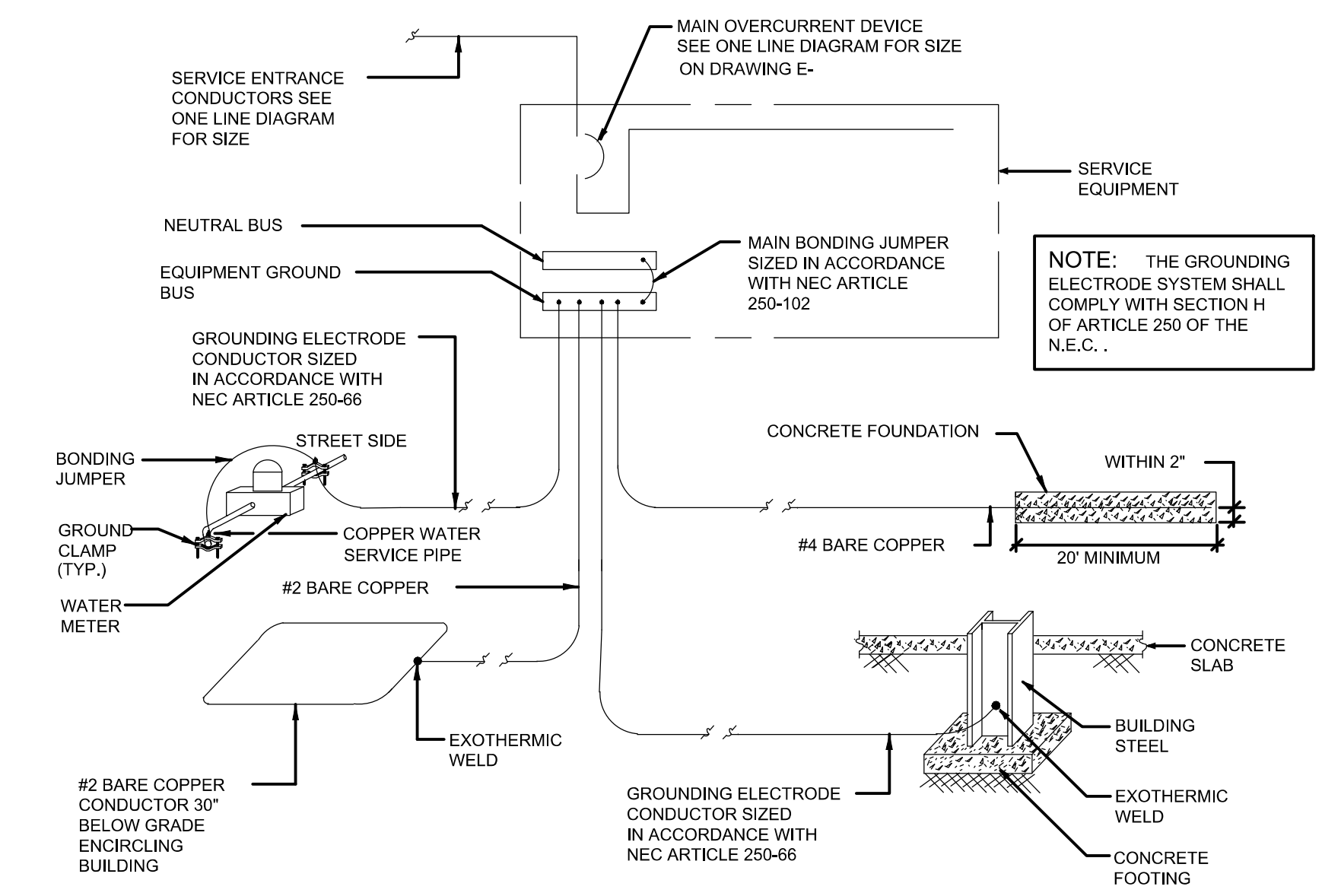
MECHANICAL EQUIPMENT SCHEDULE NOTES:
 1. STARTERS (FVNR, VFD, RVNR, ETC.) SHALL BE FURNISHED BY MECHANICAL CONTRACTORS AND INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR. FOR EXACT LOCATIONS REFER TO MECHANICAL DRAWINGS.
 2. E.C. SHALL COORDINATE FUSE SIZE AND OVERCURRENT PROTECTION FOR ALL MECHANICAL EQUIPMENT W/ MANUFACTURER'S RECOMMENDATION

PANELBOARD - P4G1

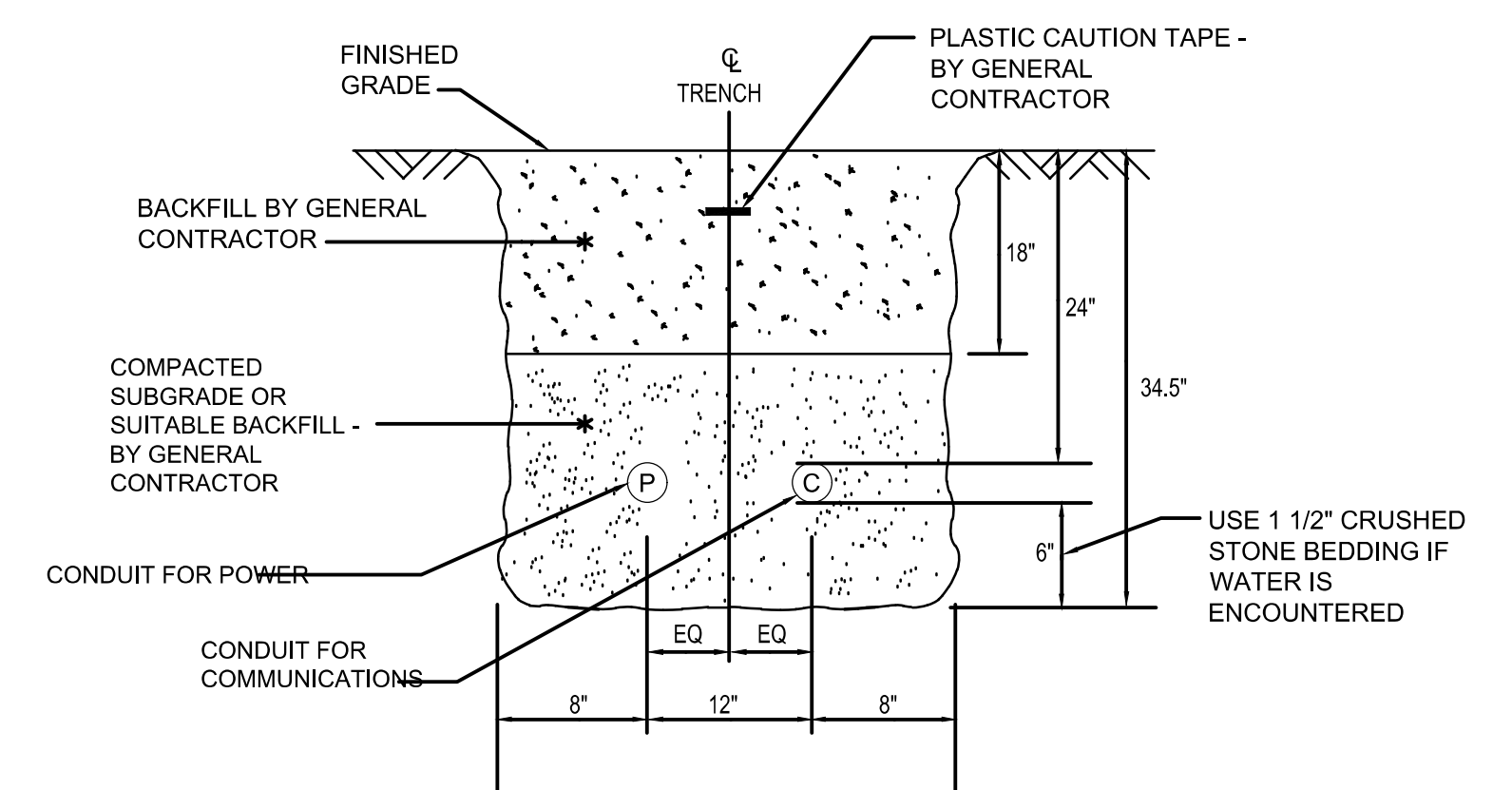
ROLE	CIRCUIT DESCRIPTION	GF/BREAKER	CIRCUIT BREAKER	LOAD-WATTS	LTG	SCPT	HP	HVAC	MISC	ROLE	CIRCUIT DESCRIPTION	GF/BREAKER	CIRCUIT BREAKER	LOAD-WATTS	LTG	SCPT	HP	HVAC	MISC																				
1	PANEL P2G1A		SWAP							2	PUMP CONTROL PANEL		SWAP								15.25																		
SUBTOTAL CONNECTION																				0.00	0.00		0.00	0.00					0.00	0.00		0.00	0.00				15.25		
DEMAND FACTOR																				-	-		0.70						-	-		-	-						10.68
TOTAL																				0.00	0.00		0.00	0.00					0.00	0.00		0.00	0.00						12.85
TOTAL KVA		24.00		DIVIDED BY		80%		AMPS		30.0A		AMPS		1.25		38.25																							

PANELBOARD - P2G1

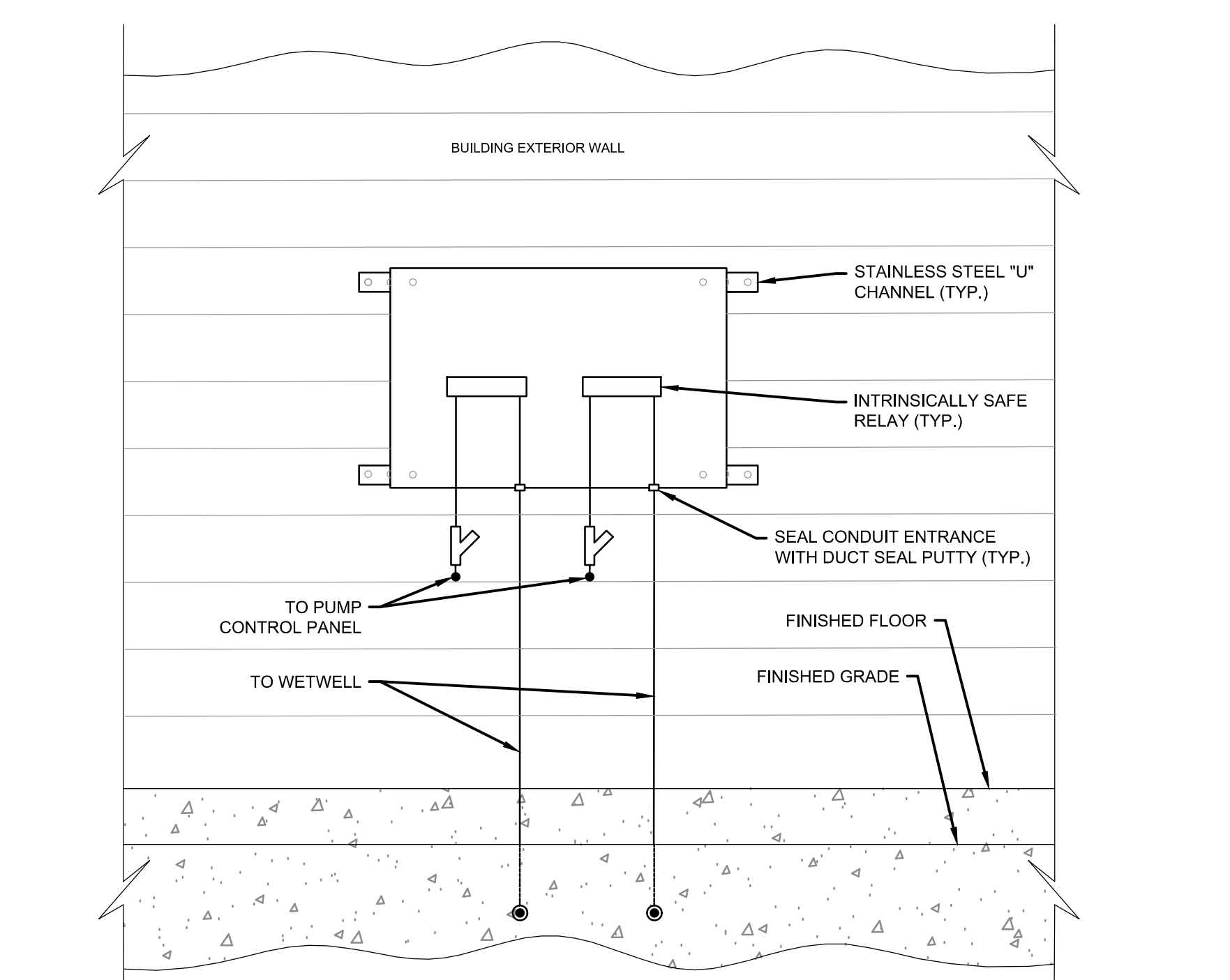
ROLE	CIRCUIT DESCRIPTION	GF/BREAKER	CIRCUIT BREAKER	LOAD-WATTS	LTG	SCPT	HP	HVAC	MISC	ROLE	CIRCUIT DESCRIPTION	GF/BREAKER	CIRCUIT BREAKER	LOAD-WATTS	LTG	SCPT	HP	HVAC	MISC			
1	L15 - PUMP ROOM		20A1P	0.00						2	REC-PUMP BUILDING		20A1P	0.72							0.10	
3	EF-1		15A2P					0.50		4	METRETED DAMPERS		20A1P								0.50	
5										6	FLOW METER		20A1P									1.00
7										8	JATC CONTROL PANEL		20A1P									0.36
9	EUH-1		20A3P					5.00		10	REC- EXTERIOR		20A1P									0.10
11										12	SMOKE DETECTOR		20A1P									0.10
13	SPARE		20A1P							14	BATTERY CHARGER		20A1P									1.20
15	SPARE		20A1P							16	WATER HEATER (GENERATOR)		20A1P									2.00
17	SPARE		20A1P							18	SPARE		20A1P									
19	SPARE		20A1P							20	SPARE		20A1P									
21	SPARE		20A1P							22	SPARE		20A1P									
23	SPARE		20A1P							24	SPARE		20A1P									
25	SPARE		20A1P							26	SPARE		20A1P									
27	SPARE		20A1P							28	SPARE		20A1P									
29	SPARE		20A1P							30	SPARE		20A1P									
SUBTOTAL CONNECTION				0.50		0.00		5.50		0.00				0.00		1.08		0.00		4.98		
DEMAND FACTOR				-		-		0.70						-		-		-		0.70		
TOTAL				0.50		0.00		5.50		0.00				0.00		1.08		0.00		3.48		
TOTAL KVA		11.17		DIVIDED BY		300		AMPS		37.02		AMPS		1.25		46.27						



1 SERVICE GROUNDING DETAIL
NOT TO SCALE

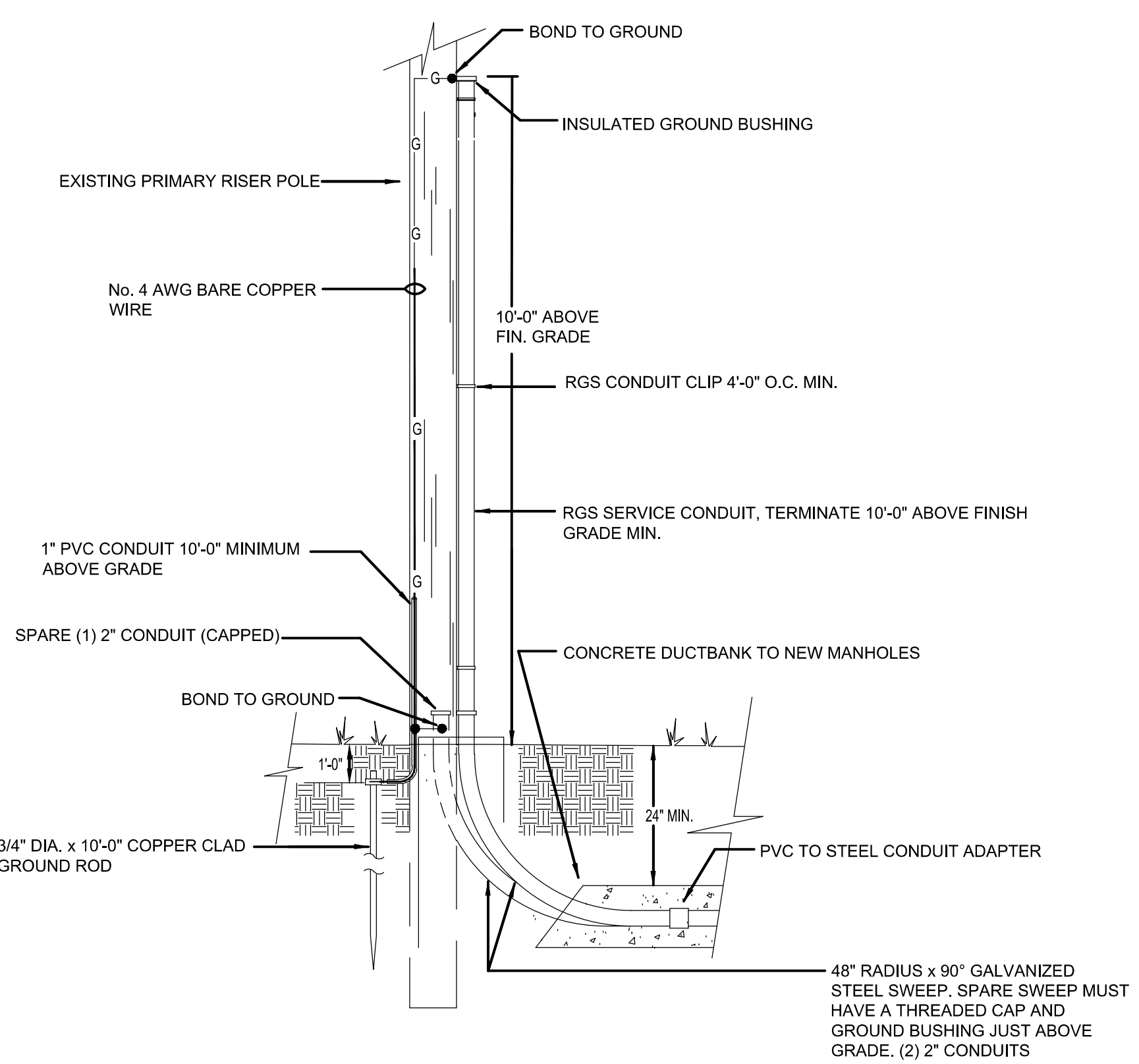


2 TYPICAL DIRECT BURIED CONDUIT DETAIL
NOT TO SCALE



NOTES:
 1. EC SHALL INSTALL NEMA "4X" TERMINAL PANEL WITH HINGED LOCKABLE COVER. PANEL SHALL BE SIZED APPROPRIATELY TO CONTAIN INTRINSICALLY SAFE RELAYS FOR LEVEL SWITCH AND LEVEL SENSOR WIRING. TERMINAL PANEL AND RELAYS TO BE SUPPLIED BY WILSON CONTROLS.
 2. TERMINAL PANEL SHALL BE MOUNTED TO BUILDING EXTERIOR WALL.
 3. EC SHALL FURNISH/INSTALL PVC COATED ALUMINUM CONDUIT, "EYS" SEALING FITTINGS AND WIRING. FOR SIZES, REFER TO THE ELECTRICAL SITE PLAN AND ONE LINE DIAGRAM.
 4. EC SHALL CORE DRILL THE WALL (OR COORDINATE PENETRATIONS WITH BUILDING MANUFACTURER) AND FURNISH/INSTALL CONDUIT WALL SEAL (WSS HARDWARE), 4" PVC COATED ALUM CONDUIT, INSULATED BUSHINGS AND CONDUIT/CABLES SEAL (WSS HARDWARE). EC SHALL FURNISH/INSTALL SS CABLES SUPPORTS IN THE WETWELL PLUS SS CABLE "KELLUM" TYPE SUPPORTS.
 5. REFER TO MECHANICAL DETAILS FOR LEVEL SWITCH AND LEVEL SENSOR WETWELL MOUNTING DETAIL.

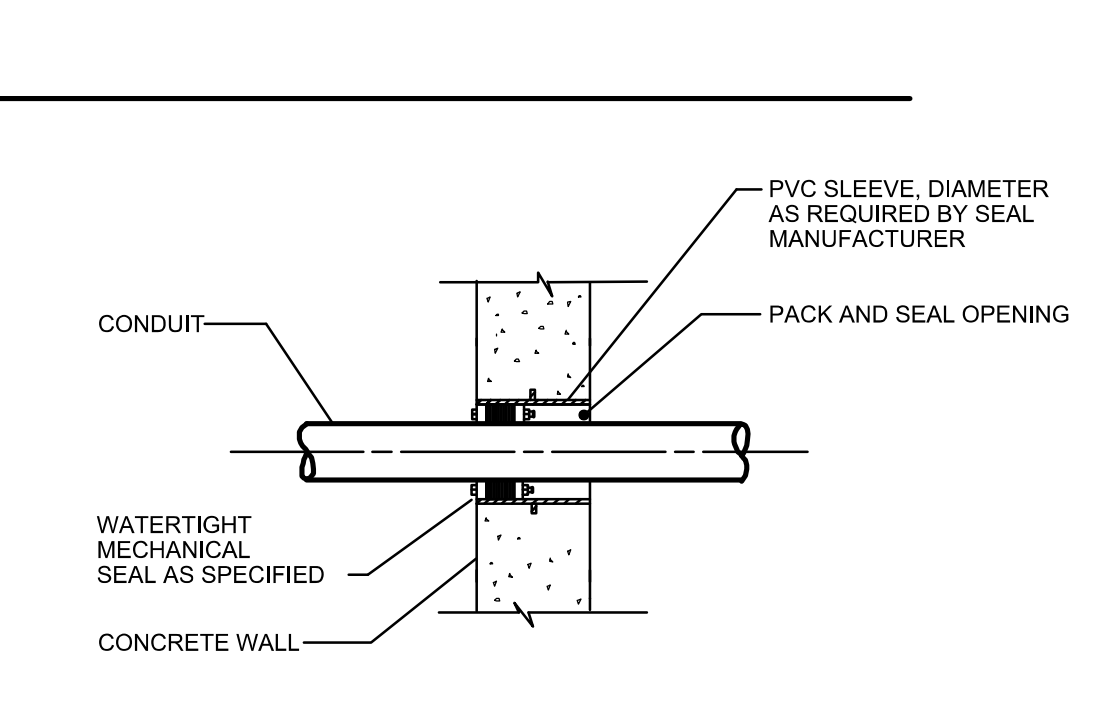
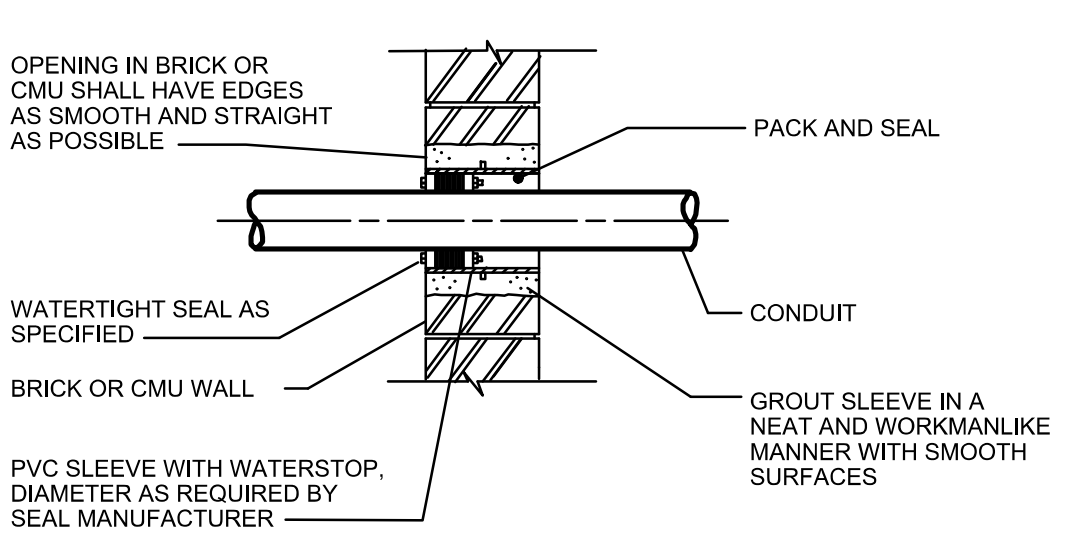
3 WETWELL LEVEL SENSORS WIRING DETAIL
NOT TO SCALE



4 TYPICAL RISER POLE DETAIL
NOT TO SCALE



CITY STANDARD PORTABLE GENERATOR PLUG
SCALE: 1/4" = 1'-0"



5 WATERTIGHT CONDUIT PENETRATIONS
NOT TO SCALE

Project:
CITY OF ROCHESTER, NH

LEDGEVIEW SEWER PUMP STATION UPGRADE
 54A LEDGEVIEW DRIVE
 ROCHESTER, NH 03868

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 W&S Project No.: ENG23-0367
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Drawing Title:
ELECTRICAL DIAGRAMS, DETAILS & SCHEDULES
 Sheet Number:
E601
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