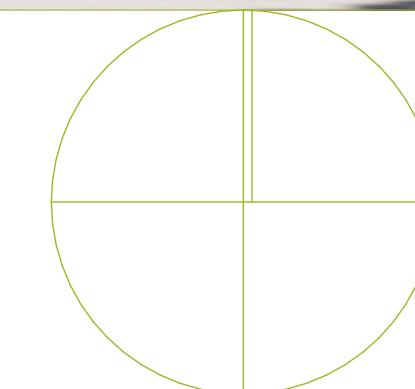


STUDIO 333 ARCHITECTS
 333 24TH STREET
 OGDEN, UT 84401
 801.394.3033

WEST FIELD SR SEMINARY
 2200 S STREET, TAYLOR, UT

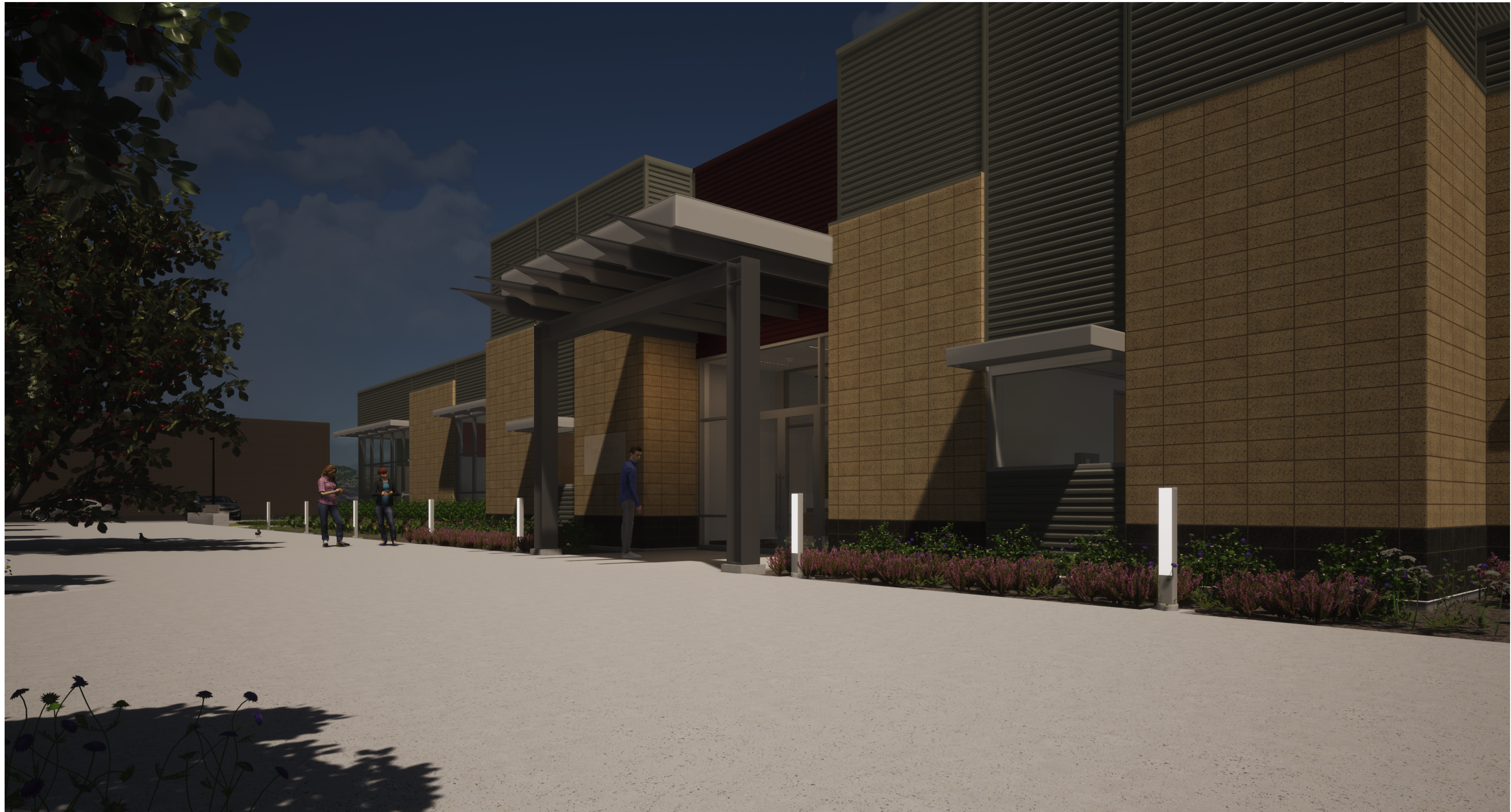
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PERMIT SET
 DATE: 01.25.23
 PROJECT NUMBER: 2154



RENDERINGS

A10.3

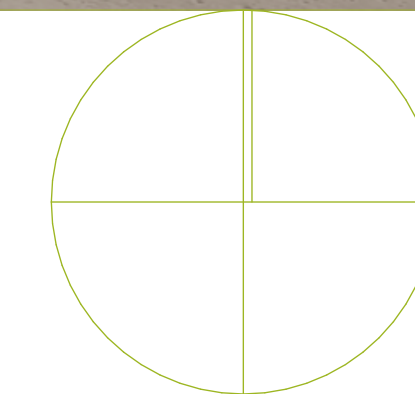


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STRUCTURAL NOTES :

A. GENERAL

1. THE STRUCTURAL NOTES ARE INTENDED TO COMPLEMENT THE PROJECT SPECIFICATIONS WHICH ARE PART OF THE CONSTRUCTION DOCUMENTS. SPECIFIC NOTES AND DETAILS ON THE DRAWINGS SHALL GOVERN OVER THE STRUCTURAL NOTES AND TYPICAL DETAILS.
2. THESE DRAWINGS (AND, WHERE APPLICABLE, ACCOMPANYING WRITTEN SPECIFICATIONS) ARE THE ONLY CONTRACT DOCUMENTS PROVIDED BY ARW ENGINEERS FOR THE PROJECT REPRESENTED HEREIN. NOTHING IN ANY DIGITAL MODEL OR DIGITAL FILE RELATED TO THIS PROJECT SHALL BE TAKEN TO SUPERSEDE ANY INFORMATION SHOWN IN THESE DRAWINGS (INCLUDING, BUT NOT LIMITED TO, DIMENSIONS, SIZES, ETC).
3. THE ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. THE STRUCTURAL DRAWINGS ARE SUPPLEMENTARY TO AND MUST BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND OTHER CONTRACT DOCUMENTS. DISCREPANCIES OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN CASE OF CONFLICT, FOLLOW THE MOST STRINGENT REQUIREMENT AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
4. SEE SPECIFICATIONS FOR REQUIRED SUBMITTALS. SUBMITTALS SHALL BE MADE IN A TIMELY MANNER AS INDICATED IN SPECIFICATIONS. REVIEW OF SUBMITTALS BY ARW ENGINEERS IS FOR GENERAL COMPLIANCE ONLY AND IS NOT INTENDED AS APPROVAL. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SIZES, DIMENSIONS, AND ELEVATIONS ON SUBMITTALS AS RELATED TO DESIGN DOCUMENTS. PREPARATION OF SHOP DRAWINGS FOR STRUCTURAL ELEMENTS WILL REQUIRE INFORMATION (I.E. DIMENSIONS, ETC.) FOUND IN THE ARCHITECTURAL, STRUCTURAL, AND OTHER CONSULTANTS DRAWINGS.
5. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE. IF ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN ON CONTRACT DOCUMENTS, CONTRACTOR SHALL NOTIFY ARCHITECT PRIOR TO FABRICATION OR CONSTRUCTION OF ANY AFFECTED ELEMENTS.
6. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL LOCATIONS AND SIZES OF MECHANICAL EQUIPMENT AND OTHER EQUIPMENT BEFORE FABRICATING AND ERECTING STRUCTURAL ELEMENTS. SIZES AND LOCATIONS THAT DIFFER FROM THOSE SHOWN ON THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT.
7. THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE ARCHITECT FOR ARCHITECT AND/OR ENGINEER APPROVAL BEFORE PROCEEDING WITH ANY CHANGES, MODIFICATIONS, OR SUBSTITUTIONS.
8. OBSERVATION VISITS TO THE SITE BY ARW ENGINEERS FIELD REPRESENTATIVES SHALL NEITHER BE CONSTRUED AS INSPECTION NOR APPROVAL OF CONSTRUCTION.
9. DURING AND AFTER CONSTRUCTION, BUILDER AND/OR OWNER SHALL KEEP LOADS ON STRUCTURE WITHIN THE LIMITS OF DESIGN LOADS AS NOTED IN THESE DOCUMENTS.
10. TYPICAL OR SIMILAR DETAILS AND SECTIONS SHALL APPLY WHERE SPECIFIC DETAILS ARE NOT SHOWN. TYPICAL OR SIMILAR DETAILS REFER TO THE CONDITION ADDRESSED AND ARE NOT NECESSARILY DETAILS LABELED "TYPICAL" OR "SIMILAR" IN THE PLANS AND DOCUMENTS.
11. DRAWINGS AND DETAILS HAVE BEEN PREPARED WITH THE INTENT TO VISUALLY REPRESENT INFORMATION PROVIDED IN SCALED FORM; HOWEVER CONTRACTORS/SUPPLIERS SHOULD NOT SCALE PLANS OR DETAILS FOR DIMENSIONAL INFORMATION.
12. THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY SHORING AND BRACING FOR ALL STRUCTURAL ELEMENTS UNTIL THE ENTIRE STRUCTURAL SYSTEM IS COMPLETED. DESIGN OF ALL SHORING AND BRACING IS BY OTHERS AT NO ADDITIONAL COST TO THE OWNER.
13. ENGINEER SHALL NOT BE RESPONSIBLE FOR ACTIVITIES UNDER CONTROL OF THE CONTRACTOR SUCH AS CONSTRUCTION METHODS, MEANS, METHODS AND SEQUENCING OF CONSTRUCTION. ENGINEER SHALL NOT BE RESPONSIBLE FOR FABRICATION, ERECTION AND CONSTRUCTION REQUIREMENTS AS PRESCRIBED BY OSHA OR OTHER REGULATORY AGENCIES REGARDLESS OF INDICATIONS IN THESE DOCUMENTS.
14. NOTICE OF COPYRIGHT: THESE STRUCTURAL DRAWINGS ARE HEREBY COPYRIGHTED BY ARW ENGINEERS. ALL RIGHTS RESERVED. THESE DOCUMENTS DEFINE A STRUCTURE AND ARE INSTRUMENTS OF SERVICE, FOR ONE USE ONLY. REPRODUCTION AND DISTRIBUTION OF THESE DRAWINGS IS ONLY ALLOWED AS REQUIRED FOR REGULATORY AGENCIES AND FOR CONVEYANCE OF INFORMATION TO PARTIES INVOLVED IN THE CONSTRUCTION OF THIS PROJECT. THESE DOCUMENTS SHALL NOT BE REPRODUCED OR COPIED, IN PART OR WHOLE BY ANY PARTY FOR USE IN PREPARATION OF SHOP DRAWINGS OR OTHER SUBMITTALS.
15. WHERE THE WORD "SHALL" OCCURS IN THESE DRAWINGS AND ANY ACCOMPANYING SPECIFICATIONS, IT IS CONSIDERED A MANDATORY OBLIGATION AND SYNONYMOUS WITH THE PHRASE "HAS DUTY TO".

B. STATEMENT OF SPECIAL INSPECTIONS AND SPECIAL INSPECTIONS

1. THE DESIGNATED SEISMIC/WIND SYSTEMS AND SEISMIC/WIND-FORCE-RESISTING SYSTEMS THAT ARE SUBJECT TO SPECIAL INSPECTIONS IN ACCORDANCE WITH IBC SECTION 1705.11 AND 1705.12 ARE IDENTIFIED ON THESE DOCUMENTS WITH A CIRCLE "L". ALL OTHER ITEMS REQUIRING SPECIAL INSPECTION ARE IDENTIFIED IN THE SPECIAL INSPECTION SCHEDULE ON SHEET X.XX.
2. SPECIAL INSPECTIONS AND TESTING ARE TO BE PROVIDED AS REQUIRED BY IBC SECTIONS 1704 THROUGH 1705 AND OTHER APPLICABLE SECTIONS OF THE IBC. THE TYPE AND FREQUENCY OF TESTING AND SPECIAL INSPECTIONS SHALL BE AS NOTED IN THE SPECIAL INSPECTION SCHEDULE. JOB SPECIFICATIONS, AND ACCORDANCE WITH IBC SECTION 110 AND CHAPTER 17, CONTRACTOR SHALL COORDINATE AND COOPERATE WITH REQUIRED INSPECTIONS.
3. ALL TESTING AND SPECIAL INSPECTION SHALL BE PROVIDED BY A QUALIFIED INDEPENDENT SPECIAL INSPECTION AGENCY IN ACCORDANCE WITH IBC 1704 AND AS OUTLINED IN THE JOB SPECIFICATIONS. REPORTS OF FINDINGS OR DISCREPANCIES SHALL BE NOTED AND FORWARDED TO THE CONTRACTOR, ARCHITECT, ENGINEERS, AND BUILDING OFFICIAL IN A TIMELY MANNER.
4. STRUCTURAL OBSERVATION VISITS SHALL BE PERFORMED BY A REPRESENTATIVE FROM ARW ENGINEERS IN ACCORDANCE WITH THE CONTRACT AS NEEDED TO OBSERVE THE CONSTRUCTION OF CRITICAL BUILDING ELEMENTS (I.E. FOOTINGS, BRACED FRAMES, MOMENT FRAMES, DRAG STRUTS AND THEIR CONNECTIONS, COLLECTORS, AND ROOF AND FLOOR DIAPHRAGMS). STRUCTURAL OBSERVATION REPORTS FOR EACH VISIT SHALL BE SENT DIRECTLY TO THE ARCHITECT FOR DISTRIBUTION TO THE CONTRACTOR AND BUILDING OFFICIAL. STRUCTURAL OBSERVATION VISITS SHALL NEITHER BE CONSTRUED AS SPECIAL INSPECTION NOR APPROVAL OF COMPLETED CONSTRUCTION.
5. IN ACCORDANCE WITH IBC 1704.4, THE CONTRACTOR SHALL SUBMIT A WRITTEN CONTRACTOR'S STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER. THE STATEMENT SHALL BE SUBMITTED PRIOR TO THE CONSTRUCTION OF ANY SEISMIC/WIND-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC/WIND SYSTEM, OR COMPONENT IDENTIFIED IN THESE DOCUMENTS WITH A CIRCLE "L".

C. BASIS OF DESIGN

1. GOVERNING BUILDING CODE : INTERNATIONAL BUILDING CODE (IBC) 2018
2. RISK CATEGORY : III
3. MEZZANINE LOADS
 - a. LIVE LOAD = 40 PSF UNREDUCED
 - b. DEAD LOAD = 20 PSF
3. ROOF LOADS
 - a. FLAT-ROOF SNOW LOAD, P_s : 27 PSF
 1. GROUND SNOW LOAD, P_g : 34 PSF
 2. SNOW EXPOSURE FACTOR, C_e : 1.0
 3. SNOW LOAD IMPORTANCE FACTOR, I_s : 1.1
 4. THERMAL FACTOR, C_t : 1.0
 5. SLOPE FACTOR, C_s : 1.0
 6. SNOW DRIFT : SHOWN ON PLANS WHERE APPLICABLE.
 - b. LIVE LOAD = 20 PSF
 - c. DEAD LOAD = 20 PSF
4. WIND DESIGN
 - a. BASIC WIND SPEED (3 SECOND GUST) : 109 MPH
 - b. ALLOWABLE STRESS DESIGN WIND SPEED, V_{ASD} : 85 MPH
 - c. WIND EXPOSURE : C
 - d. INTERNAL PRESSURE COEFFICIENT, G_{pr} : ±0.18
 - e. COMPONENT AND CLADDING DESIGN WIND PRESSURE SHALL BE AS REQUIRED PER ASCE 7-16.
5. SEISMIC DESIGN :
 - a. SEISMIC IMPORTANCE FACTOR, I_e : 1.25
 - b. SITE CLASS : D
 - c. MAPPED SPECTRAL RESPONSE ACCELERATIONS : S_s = 1.135, S₁ = 0.405
 - d. SPECTRAL RESPONSE COEFFICIENTS : S_{D5} = 0.908, S_{D1} = 0.512
 - e. SEISMIC DESIGN CATEGORY : D
 - f. BASIC SEISMIC-FORCE-RESISTING SYSTEM : LIGHT FRAMED WOOD SHEAR WALLS
 - g. DESIGN BASE SHEAR : V_{UB} = 106 K, V_{UB} = 106 K
 - h. SEISMIC RESPONSE COEFFICIENT, C_s : 0.175
 - i. RESPONSE MODIFICATION FACTOR, R : 6.5
 - j. ANALYSIS PROCEDURE : EQUIVALENT LATERAL FORCE

D. FOUNDATION

1. GENERAL
 - a. DESIGN SOIL PRESSURE : 1500 PSF
 - b. SOILS REPORT BY : AGEC
REPORT # : 1220210
DATED : MAY 04, 2022
 - c. SOIL PREPARATION UNDER FOUNDATIONS AND SLABS-ON-GRADE SHALL BE IN ACCORDANCE WITH THE SOILS REPORT
 - d. TOP OF FOOTING ELEVATIONS SHOWN ON THE FOOTING AND FOUNDATION PLAN ARE BASED ON PRELIMINARY GRADING INFORMATION AND SHALL BE VERIFIED PRIOR TO CONSTRUCTION. STEPS WHERE SHOWN ARE AT APPROXIMATE LOCATIONS. ACTUAL STEP LOCATIONS SHALL BE AT THE CONTRACTOR'S DISCRETION BASED UPON FIELD CONDITIONS. ALL EXTERIOR FOUNDATIONS SHALL BEATER A MINIMUM OF 30 INCHES BELOW LOWEST ADJACENT FINAL GRADE.
 - e. ALL WALLS (EXCEPT CANTILEVERED RETAINING WALLS) SHALL BE ADEQUATELY BRACED AGAINST LATERAL MOVEMENT PRIOR TO BACKFILLING. DESIGN AND ERECTION OF BRACING/SHORING SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. BRACING SHALL REMAIN IN PLACE UNTIL SUPPORTING STRUCTURAL ELEMENTS ARE IN PLACE AND HAVE ATTAINED FULL STRENGTH.
 - f. UNLESS NOTED OTHERWISE, ALL FOOTINGS AT COLUMNS SHALL BE CENTERED BELOW COLUMNS.
 - g. UNLESS NOTED OTHERWISE, ALL FOOTINGS SHALL HAVE VERTICAL FACES FORMED WITH STANDARD FORMING MATERIALS (WOOD, METAL, ETC.) WITH PRIOR APPROVAL OF ARCHITECT AND ENGINEER. CONCRETE FOR FOOTINGS CAN BE PLACED IN EXCAVATED SOIL "FORMS" PROVIDED THAT THE DIMENSIONS ARE INCREASED 3" ON ALL SIDE.

E. CONCRETE

1. ALL CONCRETE MIX DESIGNS SHALL COMPLY WITH THE PROJECT SPECIFICATIONS AND THE REQUIREMENTS LISTED BELOW :
 - a. FOOTINGS, GRADE BEAMS, FOUNDATION WALLS :
 1. WHERE THE TOP OF THE ELEMENT IS EXPOSED OR IS LOCATED WITHIN 30" OF THE LOWEST ADJACENT GRADE (EXPOSURE CATEGORY F2) :
 - a. 28 DAY COMPRESSIVE STRENGTH : 4500 PSI
 - b. MAXIMUM W/C RATIO : 0.45
 - c. MAXIMUM AGGREGATE SIZE : 1"
 - d. AIR CONTENT : SEE SCHEDULE BELOW
 2. WHERE THE TOP OF THE ELEMENT IS NOT EXPOSED OR IS NOT LOCATED WITHIN 30" OF THE LOWEST ADJACENT GRADE (EXPOSURE CATEGORY F0) :
 - a. 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
 - b. INTERIOR SLABS ON GRADE (EXPOSURE CATEGORY F0) :
 1. 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
 - c. EXTERIOR SLABS (DOCKS, ETC.) (EXPOSURE CATEGORY F2) :
 1. 28 DAY COMPRESSIVE STRENGTH : 4500 PSI
 2. MAXIMUM W/C RATIO : 0.45
 3. MAXIMUM AGGREGATE SIZE : 1"
 4. MINIMUM AIR CONTENT : SEE SCHEDULE BELOW
 - d. TOTAL AIR CONTENT FOR CONCRETE EXPOSED TO CYCLES OF FREEZING AND THAWING SHALL BE DETERMINED IN ACCORDANCE WITH THIS SCHEDULE. TOLERANCE ON AIR CONTENT AS DELIVERED SHALL BE +/- 1.5 PERCENT.

NOMINAL MAXIMUM AGGREGATE SIZE, IN.	TARGET AIR CONTENT, PERCENT	F1	F2 AND F3
3/8	6	7.5	6
1/2	5.5	7	6
3/4	5	7	6
1	4.5	6	6
1-1/2	4.5	5.5	6
2	4	5	6
3	3.5	4.5	6
2. WATER USED IN MIXING CONCRETE SHALL CONFORM TO ASTM C1602.
3. NO PIPES, DUCTS, SLEEVES, ETC. SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER. NO ALUMINUM PRODUCTS SHALL BE EMBEDDED IN CONCRETE. PENETRATIONS THRU STRUCTURAL CONCRETE ELEMENTS MUST BE APPROVED BY THE ENGINEER AND SHALL BE BUILT INTO THE ELEMENT PRIOR TO CONCRETE PLACEMENT.
4. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, ETC. TO BE CAST IN TO CONCRETE, AND FOR EXTENT AND LOCATION OF DEPRESSIONS, CURBS, RAMPS, ETC.
5. UNLESS NOTED OTHERWISE, MINIMUM REINFORCING IN ALL CONCRETE FOUNDATION WALLS SHALL BE AS FOLLOWS:

THICKNESS	TOP & BOTTOM BARS	VERTICAL	HORIZONTAL
6"	(1) #5	#4 AT 18" O.C.	#4 AT 16" O.C.
8"	(2) #5	#4 AT 18" O.C.	#4 AT 12" O.C.
10"	(2) #5	#4 AT 12" O.C.	#5 AT 12" O.C.
12"	(2) #5	#4 AT 18" O.C. EA FACE	#4 AT 16" O.C. EA FACE
6. UNLESS NOTED OTHERWISE, CONCRETE SLABS ON EARTH SHALL BE REINFORCED AS FOLLOWS:
 - 4" THICK - #3 AT 18" O.C. EACH WAY
 - 6" THICK - #4 AT 18" O.C. EACH WAY
 - 8" THICK - #4 AT 12" O.C. EACH WAY
7. REINFORCING SHALL BE CONTINUOUSLY SUPPORTED AT 36" O.C. MAXIMUM SPACING. UNLESS NOTED OTHERWISE, FOR NON-DETAILED OPENINGS IN CONCRETE WALLS LARGER THAN 12" AND SMALLER THAN 24" IN ANY DIRECTION ADD (2) #5 BARS ON ALL SIDES IN ADDITION TO REGULAR WALL REINFORCING AND EXTEND 24" EACH WAY BEYOND OPENING. IF 24" IS NOT AVAILABLE ON EVERY SIDE, NOTIFY STRUCTURAL ENGINEER FOR FURTHER DIRECTION. OPENINGS SHALL HAVE A MINIMUM OF 12" OF CONCRETE ABOVE THE OPENING. TYP.
8. CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE MADE AND LOCATED SO AS TO NOT IMPAIR THE STRENGTH OF THE STRUCTURE AND AS APPROVED BY THE STRUCTURAL ENGINEER. PROVIDE 2 X 4 (SHAPED) KEYPWAY IN ALL VERTICAL AND HORIZONTAL JOINTS UNLESS NOTED OR DETAILED OTHERWISE. ALL STEEL REINFORCING SHALL BE CONTINUOUS THROUGH COLD JOINTS UNLESS NOTED OTHERWISE. SEE TYPICAL DETAILS FOR COLD/CONSTRUCTION JOINTS FOR SLABS ON GRADE.

F. ANCHOR BOLTS/EMBEDDED BOLTS

1. ALL ANCHOR BOLTS SHALL HAVE ASTM A-563 HEAVY HEX NUT AND ASTM F-436 WASHERS AT STANDARD OR OVERSIZED HOLES PER AISC SPECIFICATION TABLE J3.3. WHERE HOLE SIZES DO NOT COMPLY WITH THE LIMITATIONS FOR OVERSIZED HOLES THE STRUCTURAL ENGINEER SHALL BE NOTIFIED TO DETERMINE STEEL PLATE WASHER REQUIREMENTS. ANCHOR BOLTS SHALL COMPLY WITH THE FOLLOWING :
 - a. AT BRACED FRAMES & MOMENT RESISTING FRAMES - ASTM F1554 GRADE 105 HEADED BOLTS (ASTM A449 THREADED ROD MAY BE USED WITH DOUBLE NUT AND WASHER)
 - b. AT WOOD STUD WALLS - ASTM A-307 GRADE HEADED BOLTS. ANCHOR BOLTS IN TREATED LUMBER SHALL BE GALVANIZED OR STAINLESS STEEL. SEE TIMBER NOTES FOR MORE INFORMATION.
 - c. AT ALL OTHER ANCHOR BOLTS (UNLESS NOTED OTHERWISE) - ASTM F1554 GRADE 36 HEADED BOLTS. (ASTM A36 THREADED ROD MAY BE USED WITH DOUBLE NUT AND WASHER)
2. EMBEDDED BOLTS IN MASONRY SHALL BE (UNLESS NOTED OTHERWISE) ASTM A-307 GRADE HEADED BOLTS.
3. SEE TYPICAL ANCHOR BOLT DETAIL FOR DEFINITIONS OF EMBEDMENT LENGTH, ETC.
4. FURNISH TEMPLATES AND OTHER DEVICES AS NECESSARY FOR PRESETTING ALL BOLTS PRIOR TO PLACING CONCRETE AND/OR GROUT.
5. IF THREADED RODS ARE USED AS PERMITTED ABOVE, THEY SHALL BE CLEAR OF SOIL AND DIRT.
6. WHERE REQUIRED FOR ERECTION, HOLES LARGER THAN OVERSIZED MAY BE PERMITTED WITH THE USE OF STEEL PLATE WASHERS AT THE DISCRETION OF THE STRUCTURAL ENGINEER.

G. ADHESIVE/MECHANICAL ANCHORS

1. WITHOUT WRITTEN APPROVAL OF THE ENGINEER, CONTRACTOR SHALL NOT SUBSTITUTE POST-INSTALLED ANCHORS WHERE CAST-IN-PLACE ANCHORS ARE SPECIFIED IN THE DRAWINGS.
2. WHERE STRUCTURAL DETAILS SPECIFY SPECIFIC BRANDS AND/OR TYPES OF ADHESIVES OR ANCHORS, SUBSTITUTIONS OF OTHER BRANDS AND/OR TYPES IS NOT ALLOWED, WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
3. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS SHALL BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. SUBSTITUTION REQUESTS SHALL INCLUDE AN ICC ESR OR IAPMO REPORT AND SUPPORTING CALCULATIONS INDICATING COMPLIANCE WITH DESIGN INTENT.
4. ALL ADHESIVE/MECHANICAL ANCHORS SHALL BE INSTALLED, INCLUDING HOLE DRILLING AND PREPARATION, IN ACCORDANCE WITH AN APPROVED INDEPENDENT EVALUATION REPORT (ICC-ES, IAPMO, OR APPROVED EQUAL), AS INDICATED BELOW, AND IN ACCORDANCE WITH ALL MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPI).
5. INSTALLERS SHALL BE, AT A MINIMUM, TRAINED FOR THE SPECIFIC APPLICATION INSTALLATION TECHNIQUE FOR THE SPECIFIC PRODUCT BY THE PRODUCT MANUFACTURERS FIELD EMPLOYEE OR SHALL POSSESS A TRAINING CARD OBTAINED BY THE MANUFACTURERS ONLINE TRAINING PROGRAM.
6. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME OF ANCHOR INSTALLATION. ADHESIVE ANCHORS SHALL NOT BE FULLY LOADED UNTIL CONCRETE HAS REACHED DESIGN STRENGTH.
7. ADHESIVE ANCHORS SHALL CONSIST OF REINFORCING BAR OR THREADED RODS AS INDICATED IN THESE DOCUMENTS.
8. UNLESS APPROVED BY THE ENGINEER OF RECORD, CONCRETE AND DRILLED ANCHOR HOLES SHALL BE DRY AND FREE OF WATER FOR 14 DAYS PRIOR TO ADHESIVE INSTALLATION. CONTACT THE ENGINEER OF RECORD FOR GUIDANCE IF THE CONTRACTOR CHOOSES TO INSTALL IN DAMP, WATER-SATURATED, OR WATER-FILLED HOLES.
9. CONCRETE TEMPERATURE AT THE TIME OF INSTALLATION SHALL BE MONITORED BY THE CONTRACTOR. CONTRACTOR SHALL COMPLY WITH ALL MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPI) RELATIVE TO SUBSTRATE TEMPERATURE.
10. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPLICABLE CERTIFICATION PROGRAM. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRS ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR EQUIVALENT IN ACCORDANCE WITH ACI 308-11 D.9.2.2. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION. CONTINUOUS SPECIAL INSPECTION SHALL BE PROVIDED FOR THESE ANCHORS.
11. UNLESS NOTED OTHERWISE, ALL ADHESIVE ANCHORS INTO CONCRETE SHALL BE:
 - a. HILTI HIT-HY 500V3 (ESR-3814), OR HILTI HIT-HY 200-A (ESR-3187),
 - b. SIMPSON SET-3G (ESR-4057), OR AT-X2 (ESR-0263).
 - c. DEWALT PURE 110+ (ESR-3268), OR AC208+ GOLD (ESR-4027-COLD WEATHER).
12. UNLESS NOTED OTHERWISE, ALL MECHANICAL ANCHORS INTO CONCRETE SHALL BE:
 - a. HILTI KWIK BOLT-TZ2 (ESR-4266),
 - b. SIMPSON STRONG-BOLT 2 (ESR-3037).
13. UNLESS NOTED OTHERWISE, ALL SCREW ANCHORS INTO CONCRETE SHALL BE:
 - a. SIMPSON STRONG-BOLT (ESR-2713),
 - b. DEWALT SCREWBOLT+ (ESR-3889),
 - c. HILTI KWIK HUS-EZ (ESR-3027).
14. THE TESTING LABORATORY WILL PERFORM VISUAL INSPECTION OF ANCHORS AND DOWELS AS SPECIFIED IN THE SPECIAL INSPECTION SCHEDULE AND THE APPROVED INDEPENDENT EVALUATION REPORT. TENSION TESTING CAN BE REQUIRED AT THE DIRECTION OF THE STRUCTURAL ENGINEER OF RECORD OR THE SPECIAL INSPECTOR.
15. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON THAT HOLE AND SHIFT THE ANCHOR LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM SPACE OF (2) ANCHOR HOLE DIAMETERS OR 2 INCHES, WHICH EVER IS LARGER, OF SOUND CONCRETE/MASONRY BETWEEN THE ANCHOR AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT OR APPROVED ANCHORING ADHESIVE. AT CONTRACTORS OPTION, LOCATE EXISTING REINFORCEMENT PRIOR TO DRILLING/CORING. IF THE ANCHOR OR DOWEL CANNOT BE SHIFTED AS NOTED ABOVE, THE ENGINEER WILL DETERMINE A NEW LOCATION.
16. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS.

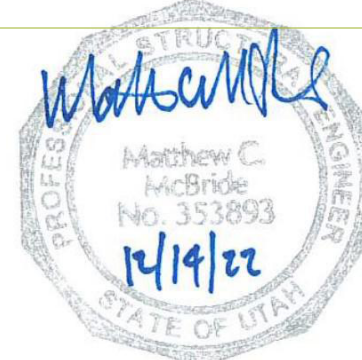
H. REINFORCING STEEL

1. REINFORCING BAR STRENGTH REQUIREMENTS:
 - a. ALL REINFORCING AS INDICATED IN NOTE b, SHALL CONFORM TO ASTM STANDARD A-615 GRADE 60 AND ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM STANDARD A-1064 AND SHALL BE SUPPLIED IN FLAT SHEETS. ADEQUATELY TIE AND SUPPORT ALL REINFORCING STEEL AS SPECIFIED BY ACI 117, TO MAINTAIN EXACT REQUIRED POSITION.
2. HEADED SHEAR STUD ASSEMBLIES SHALL CONFORM TO ASTM A1044.
3. STEEL DISCOBENDING OF REINFORCEMENT SHALL BE DEFORMED AND CONFORM TO ASTM A820 AND SHALL HAVE A LENGTH TO DIAMETER RATIO NOT SMALLER THAN 60 AND NOT GREATER THAN 100.
4. HEADED DEFORMED BARS SHALL CONFORM TO ASTM A970, OBSTRUCTIONS OR INTERRUPTIONS OF THE BAR DEFORMATIONS, IF ANY, SHALL NOT EXTEND MORE THAN 2 BAR DIAMETERS FROM THE BEARING FACE OF THE HEAD.
5. ALL REINFORCING STEEL SHALL BE TIED IN PLACE AND ADEQUATELY SUPPORTED PRIOR TO PLACING CONCRETE. WET STABBING OF ANY REINFORCING STEEL IS NOT PERMITTED, UNLESS SPECIFICALLY DETAILED OTHERWISE OR APPROVED BY THE ENGINEER.
6. ALL FIELD BENT DOWELS SHALL BE GRADE 40 WITH SPACING INDICATED REDUCED BY 1/3.
7. UNLESS NOTED OTHERWISE, REINFORCEMENT SHALL HAVE THE FOLLOWING CONCRETE COVERAGE :
 - a. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
 - b. EXPOSED TO EARTH OR WEATHER :
 1. #6 & LARGER 2"
 2. #5 & SMALLER 1-1/2"
 - c. NOT EXPOSED TO WEATHER OR EARTH :
 1. SLABS, WALLS, JOISTS, #1 & SMALLER 3/4"
 2. BEAMS, COLUMNS: MAIN REINFORCING OR TIES 1-1/2"
 - d. SLAB ON GRADE :
 1. PLACE REINFORCING AT CENTER OF SLAB UNLESS INDICATED OTHERWISE.
8. EXCEPT WHERE NOTED ON PLANS OR DETAILS CONTINUOUS REINFORCEMENT SHALL BE SPLICED AT POINTS OF MINIMUM STRESS BY LAPPING PER THE REBAR LAP SCHEDULE.
9. REINFORCING STEEL MAY BE SPLICED WITH MECHANICAL COUPLERS THAT HAVE A TENSION CAPACITY OF AT LEAST 125% OF THE STRENGTH OF THE BAR. MECHANICAL COUPLERS SHALL BE A POSITIVE CONNECTING TYPE COUPLER, AND SHALL BE INSTALLED IN ACCORDANCE WITH AN APPROVED ICC RESEARCH REPORT, WHERE THESE ARE USED, SPLICES ON ADJACENT BARS SHALL BE STAGGERED AT LEAST 24 INCHES ALONG THE LENGTH OF THE BARS.
10. ALL VERTICAL REINFORCING IN STRUCTURAL ELEMENTS ABOVE SHALL BE SPLICED WITH MATCHING DOWELS EMBEDDED WITHIN THE FOOTINGS OR STRUCTURE BELOW. SPLICE LENGTHS SHALL COMPLY WITH REBAR LAP SCHEDULE. DOWELS INTO FOOTINGS SHALL TERMINATE WITH A STANDARD HOOK, AND SHALL EXTEND TO WITHIN 4" OF THE BOTTOM OF THE FOOTING, BUT NEED NOT EXTEND MORE THAN 20" INTO FOOTING. FOR MASONRY CONSTRUCTION SEE STRUCTURAL NOTE P.6.A.
11. DO NOT WELD REINFORCING EXCEPT AS NOTED ON PLANS, WHERE REINFORCING IS WELDED, USE ASTM A-706 REINFORCING.
12. REINFORCING BARS, TIES, AND TENDONS SHALL BE SUPPORTED BY NYLON CONES, PLASTIC-COATED TIE-WIRES, OR PLASTIC-COATED CHAIRS. REINFORCING IN FOOTINGS IS PERMITTED TO BE SUPPORTED ON CONCRETE DOBIES.
13. UNLESS NOTED OTHERWISE, HOOKS, STIRRUPS, TIES, AND OTHER BENDS IN REINFORCING STEEL SHALL MEET THE STANDARDS SET FORTH IN ACI 318/318R-14. UNLESS OTHERWISE PERMITTED BY THE ENGINEER, ALL REINFORCEMENT SHALL BE BENT COLD. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, EXCEPT AS SHOWN ON THESE DRAWINGS OR OTHERWISE PERMITTED BY THE ENGINEER.
14. UNLESS SPECIFICALLY NOTED AND/OR DETAILED IN THE STRUCTURAL DRAWINGS CONDUIT SHALL NOT BE IN CONTACT WITH REINFORCING STEEL.

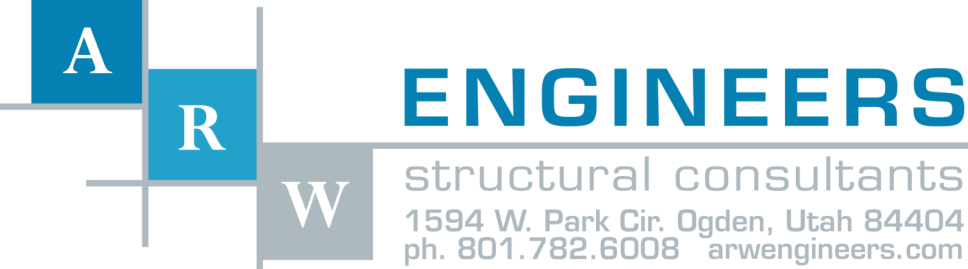
STRUCTURAL NOTES CONTINUED ON NEXT PAGE

Structural Sheet Index	
SHEET NUMBER	SHEET NAME
S0.01	STRUCTURAL NOTES
S0.02	STRUCTURAL NOTES
S0.03	SCHEDULES
S0.04	SCHEDULES
S1.10	FOOTING AND FOUNDATION PLAN
S1.11	SOIL IMPROVEMENT PLAN
S1.20	MEZZANINE FRAMING PLAN
S1.30	ROOF FRAMING PLAN
S2.01	TYPICAL DETAILS
S2.02	TYPICAL DETAILS
S2.10	FOUNDATION DETAILS
S2.20	FLOOR & ROOF FRAMING DETAILS
S2.21	FLOOR & ROOF FRAMING DETAILS
S2.22	FLOOR & ROOF FRAMING DETAILS
S3.01	TRUSS PROFILES
S4.01	SCHEMATIC REFERENCE

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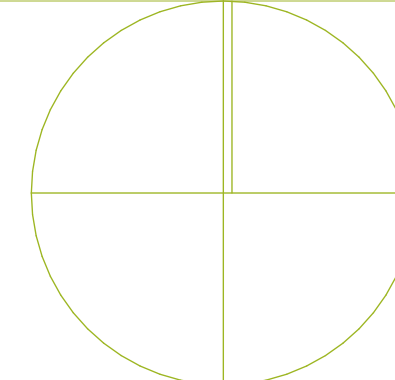


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STRUCTURAL NOTES CONTINUED

O. TIMBER

1. WOOD GRADES (UNLESS NOTED OTHERWISE)
 - a. ALL FRAMING LUMBER SHALL BE DOUGLAS FIR/LARCH CLEARLY MARKED WITH A STAMP BY WWFA APPROVED AGENCY AND SHALL BE GRADED AS FOLLOWS:
 1. HORIZONTAL MEMBERS: JOISTS & RAFTERS: NO. 2, BEAMS & STRINGERS: NO. 2.
 2. VERTICAL MEMBERS: POST & TRIMMERS: NO. 1, STUDS: NO. 2.
 - b. ALL FRAMING IN CONTACT WITH FOOTINGS, FOUNDATIONS OR SLABS ON GRADE SHALL BE PRESSURE TREATED OR TIMBERSTRAND LSL TREATED LUMBER WITH EQUIVALENT STRESS GRADES TO TYPICAL FRAMING MEMBERS.
 - c. UNLESS NOTED OTHERWISE, ALL ENGINEERED LUMBER SHALL BE FURNISHED BY TRUS-JOIST CORPORATION OR APPROVED EQUAL AND SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

	MODULUS OF ELASTICITY	FLEXURAL STRESS RATING
LVL :	2,000,000 PSI	2,600 PSI
PSL :	2,000,000 PSI	2,900 PSI
LSL :	1,500,000 PSI	2,250 PSI
 - d. ALL WOOD "T" JOISTS AND BRIDGING SHALL BE FURNISHED BY TRUS-JOIST CORPORATION OR APPROVED EQUAL.
2. SHEATHING SHALL BE APA RATED SHEATHING, EXPOSURE I, EXTERIOR GLUE AND PANEL INDEX RATING AS NOTED BELOW UNLESS NOTED OTHERWISE:

LOCATION	THICKNESS	PANEL INDEX
WALLS :	7/16"	24/0
FLOORS :	23/32"	48/24
ROOFS :	19/32"	32/16
3. INDIVIDUAL PIECES OF SHEATHING AT ROOF, FLOOR, AND SHEAR WALLS SHALL NOT BE SMALLER THAN 24" IN EITHER DIRECTION AND SHALL SPAN A MINIMUM OF TWO FRAMING SPACES, UNO.
4. ALL 23/32" FLOOR SHEATHING SHALL BE TONGUE AND GROOVE UNLESS NOTED OTHERWISE.
5. CONNECTIONS, FASTENERS, AND ADHESIVE
 - a. ALL BOLTS THRU WOOD SHALL BE ASTM A307 AND SHALL HAVE HARDENED WASHERS UNDER ASTM A563 HEAVY HEX NUT AND BOLT HEADS.
 - b. UNLESS NOTED OTHERWISE, 10d COMMON (0.148) NAILS SHALL BE USED TO FASTEN ALL PLYWOOD FLOOR AND ROOF SHEATHING TO SUPPORTING TRUSSES, JOISTS, LEDGERS OR BLOCKING AS FOLLOWS:
 1. BOUNDARY NAILING "BN": 4" O.C. AT ALL BEARING WALLS, SHEAR WALLS, BLOCKING, AND WHERE OTHERWISE INDICATED IN THE STRUCTURAL DRAWINGS.
 2. PANEL EDGE NAILING "EN": 6" O.C. AT ALL OTHER PLYWOOD PANEL EDGES.
 3. PANEL FIELD NAILING "FN": 12" O.C. AT INTERIOR SUPPORTS IN FIELD OF PANEL.
 - c. UNLESS NOTED OTHERWISE IN THE WOOD SHEAR WALL SCHEDULE ON SHEET 50.03, 10d COMMON (0.131) NAILS SHALL BE USED TO FASTEN ALL PLYWOOD SHEAR WALL SHEATHING TO STUDS AND BLOCKING AS FOLLOWS:
 1. PANEL EDGE NAILING "EN": 6" O.C.
 2. PANEL FIELD NAILING "FN": 12" O.C. AT INTERIOR SUPPORTS IN FIELD OF PANEL.
 - d. NAILS SHALL BE GALVANIZED OR STAINLESS STEEL AT EXPOSED LOCATIONS OR IN TREATED WOOD (SEE NOTE BELOW FOR FASTENERS CONNECTED TO OR IN CONTACT WITH TREATED WOOD). THE HEAD OF ALL NAILS SHALL BE DRIVEN FLUSH WITH THE SURFACE OF THE SHEATHING.
 - e. UNLESS NOTED OTHERWISE, ALL NAILS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

COMMON NAIL SIZE	SHANK DIAMETER	HEAD DIAMETER	HEAD LENGTH	MIN. PENETRATION INTO SUPPORT MEMBER
6d	0.113"	0.266"	2"	1.25"
8d	0.131"	0.281"	2-1/2"	1.375"
10d	0.148"	0.312"	3"	1.50"
12d	0.148"	0.312"	3-1/4"	1.50"
16d	0.162"	0.344"	3-1/2"	1.62"
 - f. A CONTINUOUS BEAD OF PERMANENT BOND TIMBER/WOOD ADHESIVE COMPOUND SHALL BE USED TO FASTEN ALL PLYWOOD FLOOR SHEATHING TO FLOOR JOISTS IN ACCORDANCE WITH MANUFACTURERS' SPECIFICATIONS.
 - g. ALL FRAMING ANCHORS, POST CAPS, HOLD DOWNS, COLUMN BASES ETC. TO BE PROVIDED BY SIMPSON OR APPROVED EQUAL AND SHALL BE ATTACHED IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED DATA, UNLESS NOTED OTHERWISE.
 - h. UNLESS NOTED OTHERWISE, ALL WALL BOTTOM PLATES TO BE ANCHORED TO FOUNDATIONS OR FOOTINGS WITH 5/8" DIAMETER ANCHOR BOLTS AT 24" O.C. WITH 8" MINIMUM EMBEDMENT. THERE SHALL BE A MINIMUM OF (2) ANCHOR BOLTS PER PLATE WITH ONE BOLT LOCATED NOT MORE THAN 12" AND NOT LESS THAN 4" FROM EACH END OF EACH PIECE.
 - i. WALL BOTTOM PLATES AT SHEAR WALLS SHALL INCLUDE 1/4" x 3" x 3" STEEL PLATE WASHERS BETWEEN THE SILL PLATE AND NUT OF THE ANCHOR BOLT. THE HOLE IN THE PLATE WASHER IS PERMITTED TO BE DIAGONALLY SLOTTED WITH A WIDTH UP TO 3/16" LARGER THAN THE BOLT DIAMETER AND SLOT LENGTH NOT TO EXCEED 1-3/4", PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT. THE PLATE WASHER SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SHEATHED SIDE.
 - j. FASTENERS CONNECTED TO OR IN CONTACT WITH PRESERVATIVE-TREATED AND/OR FIRE-RETARDANT-TREATED WOOD (EXCEPT FOR TIMBERSTRAND LSL TREATED LUMBER AND BORATE BASED TREATMENTS) SHALL BE OF G-185 HOT-DIP GALVANIZED STEEL OR 304 OR 316 STAINLESS STEEL. STAINLESS STEEL AND GALVANIZED STEEL SHALL NEVER BE USED IN CONTACT WITH EACH OTHER.
 - k. EXCEPT WHERE NOTED OTHERWISE, THE NUMBER AND SIZE OF NAILS CONNECTING WOOD MEMBERS SHALL NOT BE LESS THAN THAT SET FORTH IN IBC TABLE 2304.10.1. CONNECTIONS FOR MULTIPLE PIECES OF ENGINEERED LUMBER PIECES SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS' SPECIFICATIONS.
6. ALL METAL-PLATE-CONNECTED WOOD TRUSSED RAFTERS SHALL BE FABRICATED IN COMPLIANCE WITH THE RESEARCH COMMITTEE RECOMMENDATIONS OF THE ICC FOR THE CONNECTOR PLATES USED. SUBMIT DESIGN CALCULATIONS WITH ENGINEERS SEAL FOR REVIEW WITH SHOP DRAWINGS. PROVIDE CALCULATIONS AND DETAILS FOR ALL TRUSS TO TRUSS CONNECTIONS INCLUDING CONNECTION HARDWARE. ALL NECESSARY TRUSS BRIDGING AND CONNECTION DESIGN OF TRUSS BRIDGING SHALL BE PROVIDED BY THE TRUSS DESIGNER AND SHALL BE INCLUDED IN THE DESIGN CALCULATIONS FOR REVIEW.
7. INSTALLATION OF ALL METAL-PLATE-CONNECTED WOOD TRUSSES SHALL COMPLY WITH THE FOLLOWING STANDARDS:
 - a. ANSIT/PI 1 "NATIONAL DESIGN STANDARD FOR METAL-PLATE-CONNECTED WOOD TRUSSES".
 - b. TPI HIB "COMMENTARY AND RECOMMENDATIONS FOR HANDLING INSTALLING & BRACING METAL-PLATE-CONNECTED WOOD TRUSSES".
 - c. TPI DSB "RECOMMENDED DESIGN SPECIFICATION FOR TEMPORARY BRACING OF METAL-PLATE-CONNECTED WOOD TRUSSES".
8. UNLESS NOTED OTHERWISE, ALL ROOF SHEATHING AND WALL SHEATHING AT SHEAR WALLS SHALL HAVE SOLID BLOCKING AT ALL PANEL EDGES.
9. PROVIDE DOUBLE JOIST UNDER PARALLEL NONBEARING WALLS AND SOLID BLOCKING UNDER PERPENDICULAR NONBEARING WALLS.
10. AT ALL OVERBUILD LOCATIONS, ROOF SHEATHING SHALL BE COMPLETE BELOW OVERBUILDS PRIOR TO OVERBUILD CONSTRUCTION.
11. PROVIDE SOLID 2" (NOMINAL) FULL DEPTH BLOCKING AT ENDS AND SUPPORT LOCATIONS FOR ALL JOISTS AND RAFTERS. BLOCKING SHALL BE ATTACHED TO SUPPORT FRAMING WITH A MINIMUM OF (1) SIMPSON A35 FRAMING ANCHOR BETWEEN JOISTS UNLESS NOTED OTHERWISE.
12. UNLESS NOTED OTHERWISE, ALL BEARING WALLS SHALL BE 1.75x5.5 LVL STUDS SPACED AT 16" O.C. BLOCK ALL NON-SHEATHED BEARING WALLS AT 4'-0" O.C.
13. VERIFY THE STUD SPACING WITH THE ANCHOR BOLT LAY-OUT. WHERE STUDS INTERFERE WITH ANCHOR BOLTS, PROVIDE AN ADDITIONAL FULL-HEIGHT STUD TO ENSURE THAT THE FULL CROSS-SECTIONAL AREA OF THE STUD IS IN CONTACT WITH THE SILL PLATE.
14. UNLESS NOTED OTHERWISE, ALL EXTERIOR WALLS AND SHEAR WALLS SHALL HAVE DOUBLE 2X TOP PLATES THAT ARE SPLICED TOGETHER WITH A MINIMUM OF 36" OF OVERLAP AND SHALL BE CONNECTED TOGETHER WITH A MINIMUM OF (2) 10d COMMON NAILS EACH SIDE OF THE SPLICE. OUTSIDE OF THESE SPLICE LOCATIONS, TOP PLATES SHALL BE NAILED TOGETHER WITH 10d NAILS AT 12" O.C.
15. UNLESS NOTED OTHERWISE, ALL HORIZONTAL FRAMING MEMBERS SHALL BE INSTALLED WITH THE NATURAL CROWN UP.
16. GLULAM MEMBERS
 - a. GLULAM MEMBERS SHALL BE PROTECTED FROM EXTREMES IN TEMPERATURE AND HUMIDITY DURING TRANSPORTATION, STORAGE AND INSTALLATION WITH GOOD STORAGE AND INSTALLATION PRACTICES THAT MINIMIZE DIRECT EXPOSURE TO THE ELEMENTS.
 - b. DURING AND AFTER INSTALLATION, GLULAM MEMBERS SHALL NOT BE EXPOSED TO RAPID MOVEMENT OF AIR OR TO CONCENTRATED HEATING AND COOLING SOURCES.
 - c. GLULAM MEMBERS SHALL BE ALLOWED TO ADJUST SLOWLY TO THE AMBIENT TEMPERATURE AND HUMIDITY OF THE BUILDING BY AVOIDING RAPID LOWERING OF THE HUMIDITY AND/OR EXPOSURE TO HIGH TEMPERATURES.
 - d. GLULAM MEMBERS SHALL BE PROTECTED AS INDICATED IN THESE NOTES UNLESS OTHERWISE NOTED BY THE GLULAM MANUFACTURER.

P. TIEDOWN SYSTEM

1. THE CONTINUOUS ROD TIEDOWN SYSTEM FOR THIS PROJECT SHALL BE THE SIMPSON STRONG-TIE STRONG-ROD ANCHOR TIEDOWN SYSTEM (ATS) FOR SHEARWALL OVERTURNING RESTRAINT OR APPROVED EQUAL (SEE NOTE 2 BELOW).
2. THE MANUFACTURER OF THE CONTINUOUS ROD TIEDOWN SYSTEM SHALL SUBMIT STAMPED DRAWINGS AND CALCULATIONS TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW. THE SUBMITTAL SHALL INCLUDE THE FOLLOWING:
 - a. EVALUATION REPORTS INDICATING COMPLIANCE WITH GOVERNING BUILDING CODES AND TEST DATA PERFORMED IN ACCORDANCE WITH ICC-ES ACCEPTANCE CRITERIA FOR SHRINKAGE COMPENSATING DEVICES (AC316).
 - b. CERTIFICATION BY THE MANUFACTURER OF COMPLIANCE WITH THE CONTINUOUS ROD TIE-DOWN SYSTEM SPECIFICATIONS AND THE STRUCTURAL DRAWINGS.
 - c. RUN START/TERMINATIONS/LOCATIONS.
3. THE CONTINUOUS ROD TIE-DOWN SYSTEM SHALL MEET THE DESIGN FORCES, TOTAL VERTICAL DISPLACEMENT LIMIT, AND SHRINKAGE REQUIREMENTS AS SET FORTH IN THE STRUCTURAL DRAWINGS. THE CONTINUOUS TIE-DOWN SYSTEM CALCULATIONS AND INSTALLATION DETAILS SHALL BE PROVIDED TO THE DESIGNER OR ENGINEER OF RECORD FOR REVIEW.
4. ALLOWABLE ROD CAPACITIES SHALL BE CALCULATED PER AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
 - a. AISC 360 - 16
5. BEARING PLATE, WOOD STUD AND FASTENER CAPACITIES SHALL BE CALCULATED PER THE NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION.
 - a. NDS - 18
6. SHRINKAGE COMPENSATING DEVICES SHALL BE PROVIDED AT EACH RESTRAINT LOCATION AND ACCOUNT FOR THE SHRINKAGE AMOUNT AT EACH STORY AS SET FORTH ON THE STRUCTURAL DRAWINGS.
7. THE TOTAL VERTICAL DISPLACEMENT BETWEEN RESTRAINT LOCATIONS, INCLUDING STEEL ROD ELONGATION AND SHRINKAGE COMPENSATING DEVICE DEFLECTION, SHALL BE LESS THAN 0.20 INCHES OR AS SET FORTH IN THE STRUCTURAL DRAWINGS, USING ALLOWABLE STRESS DESIGN (ASD). STEEL ROD ELONGATION SHALL BE COMPUTED AS THE PRODUCT P/AE , WHERE P IS THE AXIAL LOAD (LB.), L IS THE INITIAL ROD LENGTH BETWEEN RESTRAINT LOCATIONS AT THE STORY UNDER CONSIDERATION (INCHES), E IS 29,000,000 (PSI) AND A IS THE NET TENSILE AREA OF THE ROD (IN²). SHRINKAGE COMPENSATING DEVICES DEFLECTION SHALL INCLUDE $\Delta_e + \Delta_f$ (P_o/P_a).
8. THE CONTINUOUS ROD TIE-DOWN SYSTEM SHALL BE RESTRAINED BY A BEARING PLATE AND TAKE-UP DEVICE ASSEMBLY AT EACH STORY OF THE MULTI-STORY SHEARWALLS. NOTE: SKIPPING STORIES, WHERE BEARING PLATES ARE OMITTED AT INTERMEDIATE FLOORS THAT RESULT IN MULTIPLE STORIES BEING TIED TOGETHER, IS PROHIBITED.
9. DO NOT WELD PRODUCTS UNLESS THE CONTINUOUS ROD TIE-DOWN SYSTEM INSTALLATION DETAILS SPECIFICALLY IDENTIFY A PRODUCT AS ACCEPTABLE FOR WELDING AND IS DETAILED TO BE WELDED BY THE CONTINUOUS ROD TIE-DOWN SYSTEM PROVIDER. SOME STEELS HAVE POOR WELDABILITY AND A TENDENCY TO CRACK WHEN WELDED. RODS, NUTS, AND COUPLER NUTS SHALL NOT BE WELDED UNLESS THEY ARE OF A WELDABLE MATERIAL. WHERE THE STRUCTURAL DRAWINGS SPECIFY WELDING OF COUPLER NUTS, A WELDABLE COUPLER NUT MUST BE USED.
10. IN THE EVENT OF A DISCREPANCY BETWEEN THE STRUCTURAL DRAWINGS AND THE CONTINUOUS ROD TIE-DOWN SYSTEM INSTALLATION DETAILS, THE STRUCTURAL DRAWINGS SHALL GOVERN.
11. THE CONTINUOUS ROD TIE-DOWN SYSTEM RUN START/TERMINATIONS SHALL BE AS SET FORTH ON THE STRUCTURAL DRAWINGS. ALTERNATE RUN START/TERMINATIONS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW PRIOR TO PLACEMENT OF THE CONCRETE AND AT THE CONTRACTOR'S EXPENSE. SUBMITTAL SHALL INCLUDE CALCULATIONS IN COMPLIANCE WITH THE GOVERNING BUILDING CODE, INCLUDING CONCRETE ANCHORAGE IN ACCORDANCE WITH THE LATEST ACI 318 PROVISIONS FOR STRENGTH DESIGN AND CONVERSION TO ASD LOAD LEVELS.
12. A PRE-CONSTRUCTION MEETING IS RECOMMENDED WITH THE CONTINUOUS ROD TIE-DOWN SYSTEM SUPPLIER PRIOR TO PLACEMENT OF THE CONCRETE. THE PURPOSE OF THIS MEETING IS TO ASSIST IN VERIFYING QUANTITIES AND UNDERSTANDING THE INSTALLATION PROCESS.

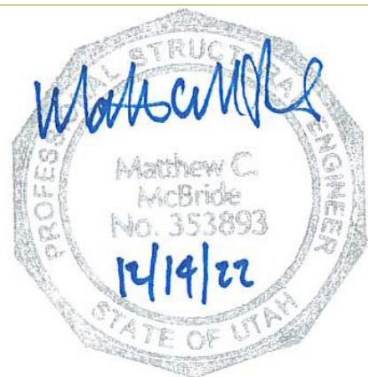
Q. STRUCTURAL DELEGATED DESIGNS AND DEFERRED SUBMITTALS

1. STRUCTURAL DELEGATED DESIGNS AND SUBSEQUENT DEFERRED SUBMITTALS ARE FOR ELEMENTS, PARTS, OR PORTIONS OF THE OVERALL STRUCTURAL SYSTEM THAT ARE INDICATED OR REFERRED TO ON THESE DRAWINGS AND THAT ARE CRITICAL TO THE PERFORMANCE OF THE OVERALL STRUCTURAL SYSTEM. DESIGN CRITERIA HAS BEEN PROVIDED FOR THESE ITEMS IN THE STRUCTURAL NOTES, PLANS, AND DETAILS.
2. STRUCTURAL DEFERRED SUBMITTALS ARE COMPLETE PACKAGES TO BE SUBMITTED FOR REVIEW THAT INCLUDE DRAWINGS AND CALCULATIONS FOR ALL DELEGATED DESIGN ITEMS AND THEIR CONNECTIONS. DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THEIR DESIGN.
3. ARW ENGINEERS WILL REVIEW STRUCTURAL DEFERRED SUBMITTALS TO VERIFY DESIGN CRITERIA IS COMPLIANT WITH THE APPROVED CONSTRUCTION DOCUMENTS.
4. STRUCTURAL DELEGATED DESIGN COMPONENTS SHALL NOT BE INSTALLED UNTIL APPROVED BY THE BUILDING OFFICIAL.
5. STRUCTURAL DELEGATED DESIGN ITEMS REQUIRING DEFERRED SUBMITTALS INCLUDE, BUT ARE NOT LIMITED TO:
 - a. METAL-PLATE-CONNECTED WOOD TRUSSES, BLOCKING, BRIDGING, BRIDGING CONNECTIONS, TRUSS HANGERS, AND RELATED COMPONENTS.
 - b. TILT-UP CONCRETE WALL PANELS THAT ARE PART OF THE PRIMARY STRUCTURAL SYSTEM.
 - c. DISPLACEMENT RAMMED AGGREGATE PIERS.

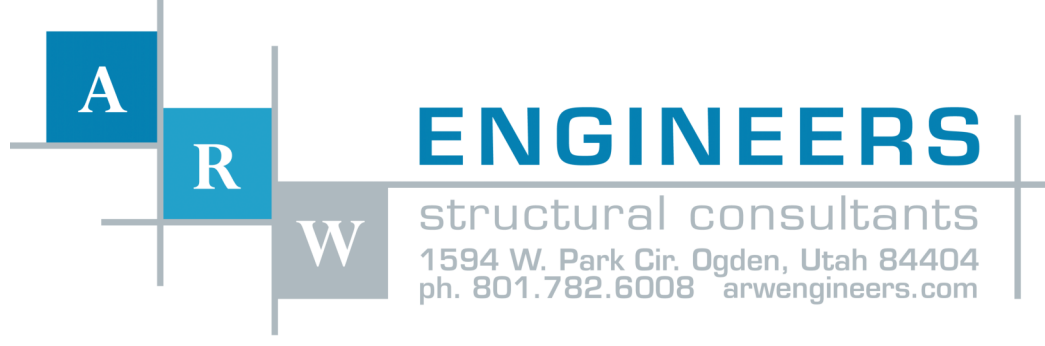
R. NON-STRUCTURAL DELEGATED DESIGNS AND DEFERRED SUBMITTALS

1. NON-STRUCTURAL DELEGATED DESIGNS AND SUBSEQUENT DEFERRED SUBMITTALS ARE FOR ITEMS NOT INCLUDED IN THE STRUCTURAL DELEGATED DESIGN SECTION. THESE ARE ITEMS THAT ARE NOT CRITICAL TO THE OVERALL PERFORMANCE OF THE STRUCTURAL SYSTEM BUT THAT IMPART LOADS AND FORCES TO THE STRUCTURAL SYSTEM.
2. NON-STRUCTURAL DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN.
3. ARW ENGINEERS WILL REVIEW NON-STRUCTURAL DEFERRED SUBMITTALS TO VERIFY DESIGN CRITERIA IS COMPLIANT WITH THE APPROVED CONSTRUCTION DOCUMENTS.
4. IF THE STRUCTURAL DRAWINGS INCLUDE LOADS TO ACCOMMODATE NON-STRUCTURAL ELEMENTS, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION INDICATING THAT THE NON-STRUCTURAL ELEMENTS COMPLY WITH THE LOADING CRITERIA PROVIDED HEREIN. SUCH DOCUMENTATION SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN.
5. WHEN THE NON-STRUCTURAL DEFERRED SUBMITTAL INDICATES THAT THE ELEMENT WILL IMPART FORCES IN EXCESS OF LOADS THAT ARE INDICATED ON THE STRUCTURAL DRAWINGS, THE CONTRACTOR SHALL SUBMIT A DETAILED GRAPHICAL REPRESENTATION OF THOSE DESIGN LOADS, INCLUDING MAGNITUDE, AND LOCATION. THE GRAPHIC SHALL BE ACCOMPANIED BY DOCUMENTATION INDICATING THAT THE NON-STRUCTURAL ELEMENT DESIGN COMPLIES WITH THE LOADING CRITERIA PROVIDED HEREIN. THE LETTER SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN.
6. NON-STRUCTURAL DELEGATED DESIGN ITEMS REQUIRING DEFERRED SUBMITTALS SHALL INCLUDE, BUT ARE NOT LIMITED TO:
 - a. SEISMIC BRACING OF ALL ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL ITEMS WHERE REQUIRED BY THE MOST RECENT VERSION OF ASCE 7 AND THE PROJECT CONTRACT DOCUMENTS.

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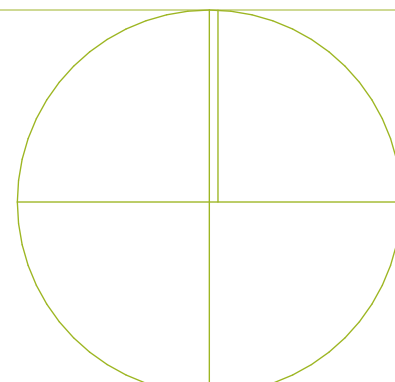


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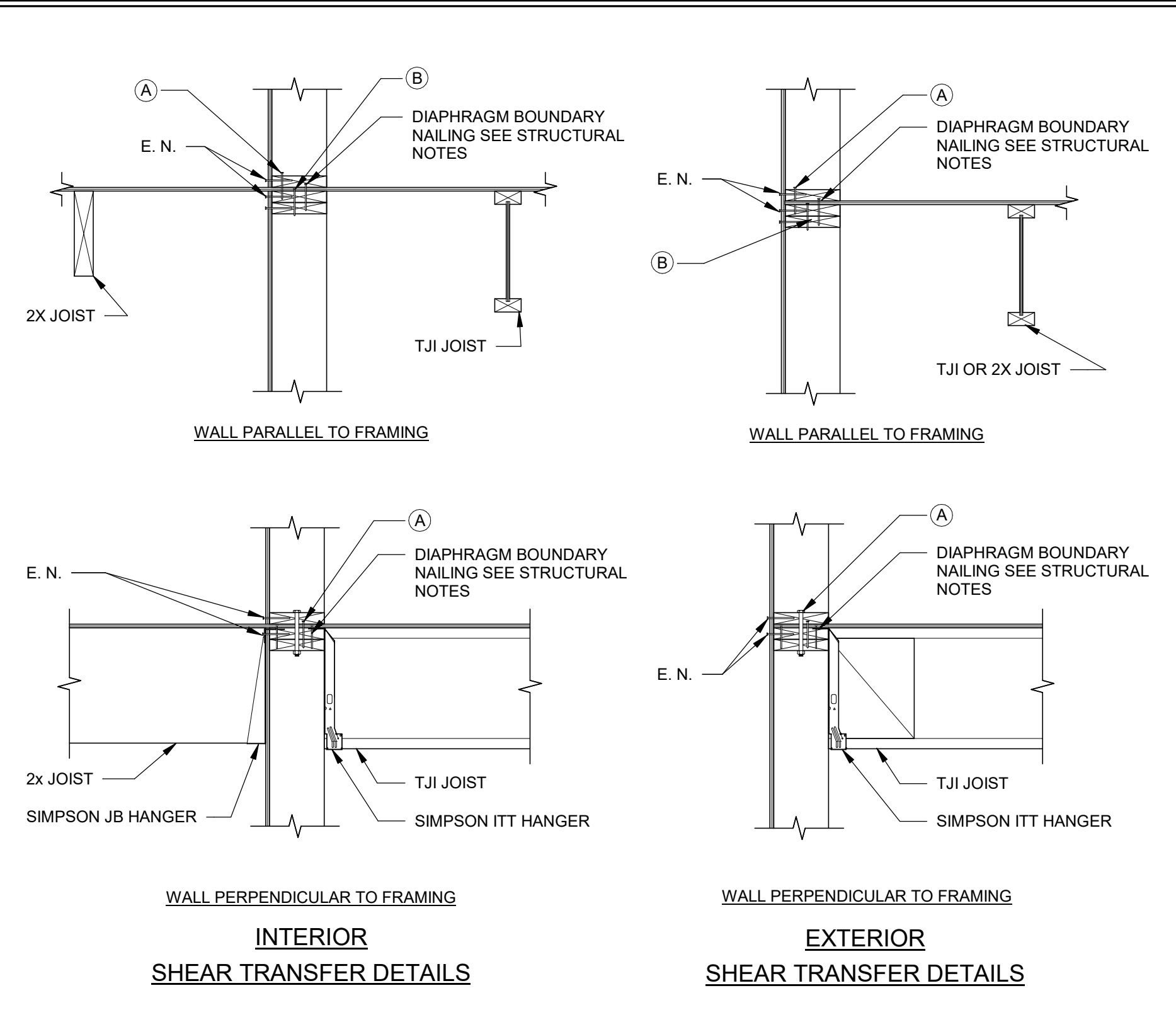
STRUCTURAL NOTES

S0.02

WOOD SHEAR WALL SCHEDULE

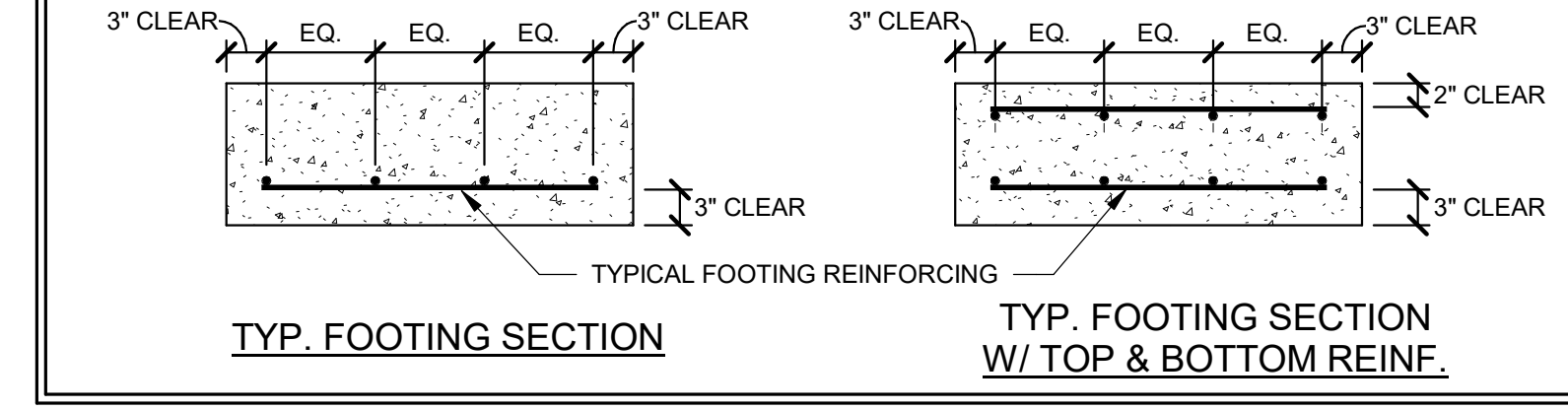
WALL MARK	LEVEL	(NOTE 8) PLYWOOD SHEATHING (CDX U.N.O.)	EDGE NAILING (E.N.) (SEE NOTES 2 & 3)	NOMINAL BOTTOM PLATE SIZE	(NOTE 7) NOM STUD SIZE (MIN.)	CONNECTION NAILING				TYP. SILL PLATE ANCHOR BOLTS (NOTE 9)		COMMENTS
						BOTTOM PL. (A) (SEE NOTE 4) (L)-LAG (ST)-STAGGER	NAILING TOP PL. TOGETHER (B)	BLKG. TO TOP PL. (C)	TOP PL. SPLICE	DIAM.	SPA.	
SW-1	GROUND TO ROOF	15/32"	10d @ 6"o.c.	2x	1.75x5.5 LVL	16d @ 4"o.c.	(32) 10d	A35 @ 24"o.c.	10d @ 6"o.c.	5/8" DIA.	24"o.c.	
SW-2	GROUND TO ROOF	15/32"	10d @ 4"o.c.	2x	1.75x5.5 LVL	16d @ 4"o.c.	(32) 10d	A35 @ 24"o.c.	10d @ 6"o.c.	5/8" DIA.	24"o.c.	
SW-3	GROUND TO ROOF	15/32"	10d @ 4"o.c.	2x	1.75x9.5 LVL	16d @ 4"o.c.	(32) 10d	A35 @ 24"o.c.	10d @ 6"o.c.	5/8" DIA.	24"o.c.	

NOTES:
 1. ALL SHEATHING PANEL EDGES TO BE BLOCKED. USE 3x BLOCKING WHERE 3x STUDS ARE REQUIRED.
 2. ALL NAILS TO BE COMMON OR GALVANIZED BOX.
 3. FIELD NAILING TO BE SAME NAILS @ 12"o.c.
 4. (A) CONNECTION IS FOR 2ND FLOOR AND ABOVE.
 5. AT SHEAR WALLS W/ SHEATHING ON BOTH SIDES, BOTH VERTICAL AND HORIZONTAL JOINTS ON OPPOSITE SIDES OF THE WALL SHALL BE STAGGERED.
 6. STAGGER E.N. AT DOUBLE TOP PLATES.
 7. 3x NOMINAL FRAMING MEMBERS TO OCCUR AT ABUTTING PANEL EDGES. 2x NOMINAL FRAMING MEMBERS MAY BE USED AT INTERIOR OF PANEL, UNLESS NOTED OTHERWISE IN FLOOR FRAMING NOTES. (2) 2x NAILED TOGETHER W/ (2) 16d NAILS @ 16"o.c. OR 4x NOMINAL FRAMING MEMBERS OF THE SAME DEPTH AND LUMBER GRADE MAY BE USED IN LIEU OF 3x MEMBERS AT CONTRACTOR OPTION.
 8. SHEATHING SHALL BE STAMPED W/ APA STAMP: O.S.B. OF EQUIVALENT THICKNESS, GRADE, AND RATING MAY BE USED IN LIEU OF PLYWOOD.
 9. ALL SILL PLATE ANCHOR BOLTS TO HAVE MINIMUM 8" EMBEDMENT INTO CONCRETE. SEE DETAIL 8/S2.01 FOR HOLDOWN ANCHORAGE REQUIREMENTS.
 10. SEE THIS SHEET FOR TYPICAL SHEAR TRANSFER DETAILS.
 11. TOP PLATE SPLICE NAILING SHALL APPLY TO EACH SIDE OF THE SPLICE. THE LENGTH OF THE OVERLAP SHALL BE SUFFICIENT TO PREVENT SPLITTING (48" MIN.)



FOOTING SCHEDULE

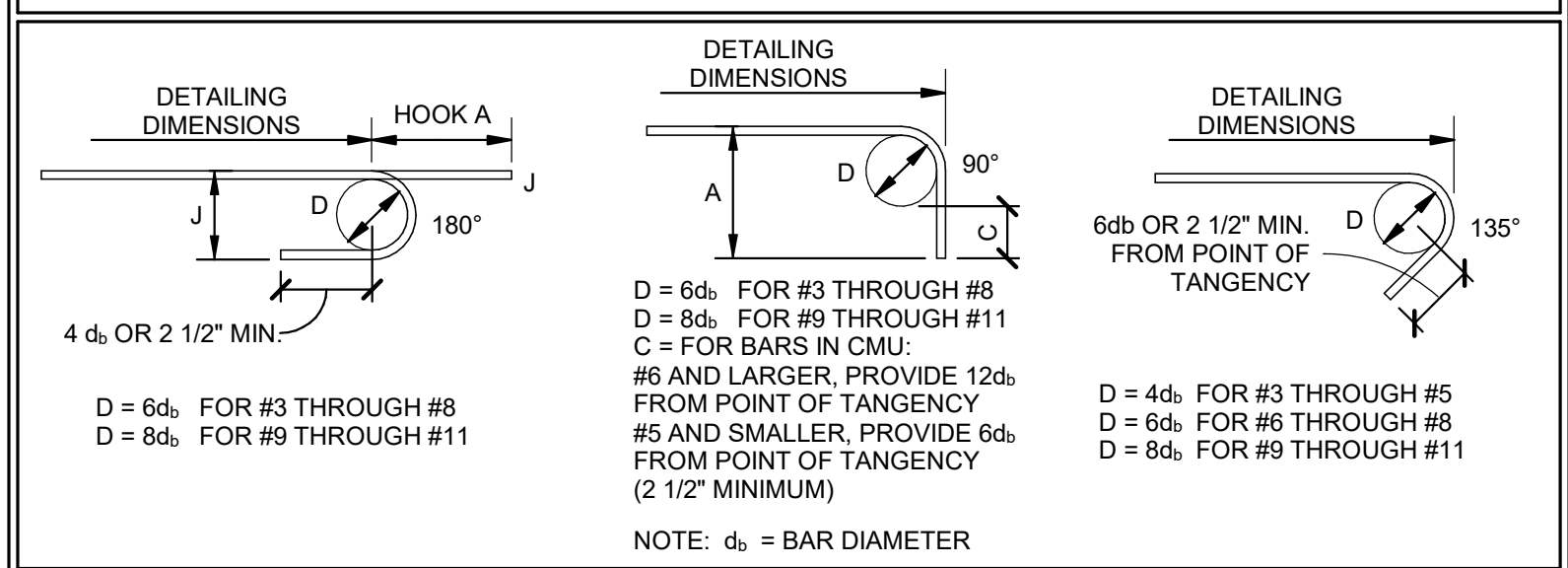
MARK	WIDTH	LENGTH	THICK	LENGTHWISE REINF.		CROSSWISE REINF.		REMARKS
				NO.	SIZE	NO.	SIZE	
FC2	2'-0"	CONT.	12"	(2)	#5	--	--	--
FT2	2'-0"	CONT.	12"	(2)	#5	--	--	--
F2	2'-0"	2'-0"	16"	(2)	#5	(2)	#5	--
F2.5	2'-6"	2'-6"	12"	(3)	#5	(3)	#5	--
F3	3'-0"	3'-0"	12"	(3)	#5	(3)	#5	--
F3.5	3'-6"	3'-6"	12"	(3)	#5	(3)	#5	--
F4	4'-0"	4'-0"	12"	(4)	#5	(4)	#5	--
F5	5'-0"	5'-0"	12"	(5)	#5	(5)	#5	--



LEGEND OF SYMBOLS AND ABBREVIATIONS

AB = ANCHOR BOLT	ARCH = ARCHITECT	BLW = BELOW	BN = BOUNDARY NAILING	BS = BOUNDARY SCREW	BRB = BUCKLING RESTRAINED BRACE	BRBF = BUCKLING RESTRAINED BRACE FRAME	C/J/P = COMPLETE JOINT PENETRATION	CL = CENTERLINE	CMU = CONCRETE MASONRY UNIT	COL = COLUMN	CONC = CONCRETE	CP = CONCRETE PIER	DC = DEMAND CRITICAL	DIA / Ø = DIAMETER	DBA = DEFORMED BAR ANCHOR	DBE = DECK BEARING ELEVATION	ELEV = ELEVATION	EN = EDGE NAILING	EOD = EDGE OF DECK	FDN = FOUNDATION	FTG = FOOTING	FFE = FINISHED FLOOR ELEVATION	GB = CONCRETE GRADE BEAM	HSA = HEADED STUD ANCHOR	JBE = JOIST BEARING ELEVATION	KB = KICKER BRACE	MAX = MAXIMUM	MB = MASONRY BEAM	MC = MASONRY COLUMN	MECH = MECHANICAL	MEZZ = MEZZANINE	MIN = MINIMUM	MJ = MASONRY JAMB	MW = MASONRY WALL	NS, FS = NEAR SIDE, FAR SIDE	OAE = OR APPROVED EQUAL	OPP = OPPOSITE	PAF = POWDER ACTUATED FASTENER	PL = PLATE	REINF = REINFORCING	REQ'D = REQUIRED	SIM = SIMILAR	SSH = STEEL STUD HEADER	SSJ = STEEL STUD JAMB	SSS = STEEL STUD SILL	SSW = STEEL STUD WALL	TOB = TOP OF BEAM ELEVATION	TOC = TOP OF CONCRETE SLAB	TOF = TOP OF FOOTING	TOG = TOP OF GIRDER ELEVATION	TOM = TOP OF MASONRY	TOS = TOP OF STEEL ELEVATION	TYP = TYPICAL	UNO = UNLESS NOTED OTHERWISE	FOOTING MARK	TOP OF FOOTING ELEVATION	SECTION MARK	SHEET NUMBER	TOP OF FOUNDATION WALL OR COLUMN PIER ELEVATION	CENTERLINE	CONCRETE MASONRY UNIT	COLUMN	SHEAR WALL - SEE SCHEDULE	MIN. LENGTH OF SHEAR WALL	FOOTING STEP	MASONRY WALL	DEPRESS FDN. WALL AND POUR FLOOR SLAB OVER AT MASONRY FOUNDATION WALL	DEPRESS FDN. WALL AND POUR FLOOR SLAB OVER AT CONCRETE FOUNDATION WALL	MASONRY BEAM	CONCRETE BEAM	SIMPSON HOLDOWN SIZE POST - SIZE OF END POST CONNECTED TO HOLDOWN PLAN CONFIGURATION AT HOLDOWN AT FOUNDATION	FRAMING ANGLE SEE TYPICAL DETAIL	FRAMING CHANNEL SEE TYPICAL DETAIL	ITEMS, DETAILS, & SYSTEMS WHICH ARE PART OF THE LATERAL FORCE RESISTING SYSTEM.	MOMENT RESISTING CONNECTIONS - SEE DETAIL	MOMENT RESISTING CANTILEVER CONNECTIONS - SEE DETAIL	KICKER BRACE
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STANDARD HOOK & BEND SCHEDULE

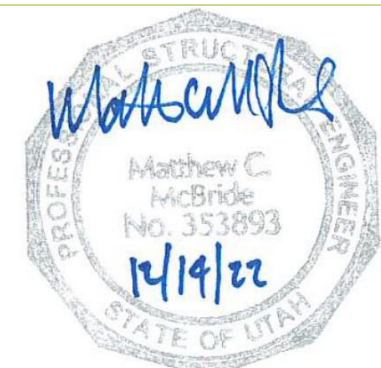


BAR SIZE	DIMENSION OF STANDARD 180° HOOKS, ALL GRADES		DIMENSION OF STANDARD 90° HOOKS, ALL GRADES
	A	J	A
#3	5"	3"	6"
#4	6"	4"	8"
#5	7"	5"	10"
#6	8"	6"	1'-0"
#7	10"	7"	1'-2"
#8	11"	8"	1'-4"
#9	1'-3"	11 3/4"	1'-7"
#10	1'-5"	1'-1 1/4"	1'-10"
#11	1'-7"	1'-2 3/4"	2'-0"

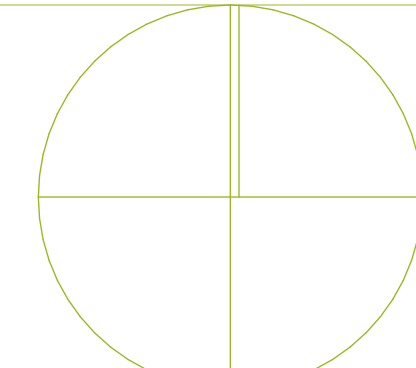
WOOD OPENING SCHEDULE

OPENING SIZE	KING STUDS	TRIMMER STUDS	HEADER BEAM
UP TO 6'-0"	(2) 1 3/4x5 1/2 LVL	(2) 1 3/4x5 1/2 LVL	(3) 1 3/4x9 1/2 LVL
6'-1" TO 10'-0"	(2) 1 3/4x5 1/2 LVL	(3) 1 3/4x5 1/2 LVL	(3) 1 3/4x9 1/4 LVL
10'-0" TO 20'-0"	(3) 1 3/4x5 1/2 LVL	(3) 1 3/4x5 1/2 LVL	(3) 1 3/4x16 LVL

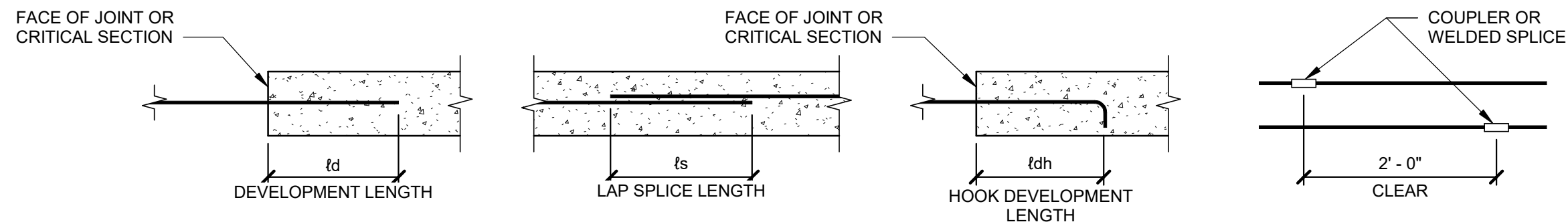
DOUBLE 2x WALL TOP PLATE - SEE STRUCTURAL NOTES
 CRIPPLE STUDS (WHERE OCCURS)
 SIMPSON LCE4 POST CAP - TYP. EACH SIDE
 HEADER BEAM - SEE SCHEDULE
 TRIMMER STUDS - SEE SCHEDULE
 KING STUDS - SEE SCHEDULE



NO.	DATE	DESCRIPTION



2018 IBC CONCRETE REBAR LAP SPLICE SCHEDULE
FOR CONCRETE APPLICATIONS (ACI 318 - 14)



BAR LOCATION	CONCRETE		CONCRETE REINFORCING & SPLICE LENGTHS (IN)																								COMMENTS			
			BAR SIZE																											
			#3	#4	#5	#6	#7	#8	#9	#10	#11	#3	#4	#5	#6	#7	#8	#9	#10	#11	#3	#4	#5	#6	#7	#8		#9	#10	#11
VERT. WALL BARS, FILL ON METAL DECK	NWC	3000 PSI	17	22	8	22	29	8	28	36	10	33	43	12	48	62	13	55	72	15	62	81	17	69	90	19	76	99	30	
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	3000 PSI	17	22	8	22	29	8	28	36	10	33	43	12	48	62	13	55	72	15	62	81	17	69	90	19	76	99	30	
BEAM BOTTOM BARS, COLUMN BARS	NWC	3000 PSI	17	22	8	22	29	11	28	36	14	33	43	16	48	62	19	55	72	22	62	81	25	69	90	27	76	99	30	
FOOTING BOTTOM BARS	NWC	3000 PSI	12	16	8	14	18	8	17	22	10	20	26	12	29	38	13	33	43	15	37	48	17	42	55	19	46	60	30	
BEAM TOP BARS	NWC	3000 PSI	22	29	8	29	38	11	36	47	14	43	56	16	63	82	19	72	94	22	81	105	25	90	117	27	98	127	30	
SLAB ON GRADE	NWC	3000 PSI	12	16	8	14	18	8	17	22	10	20	26	12	32	42	13	42	55	15	53	69	17	69	90	19	76	99	30	

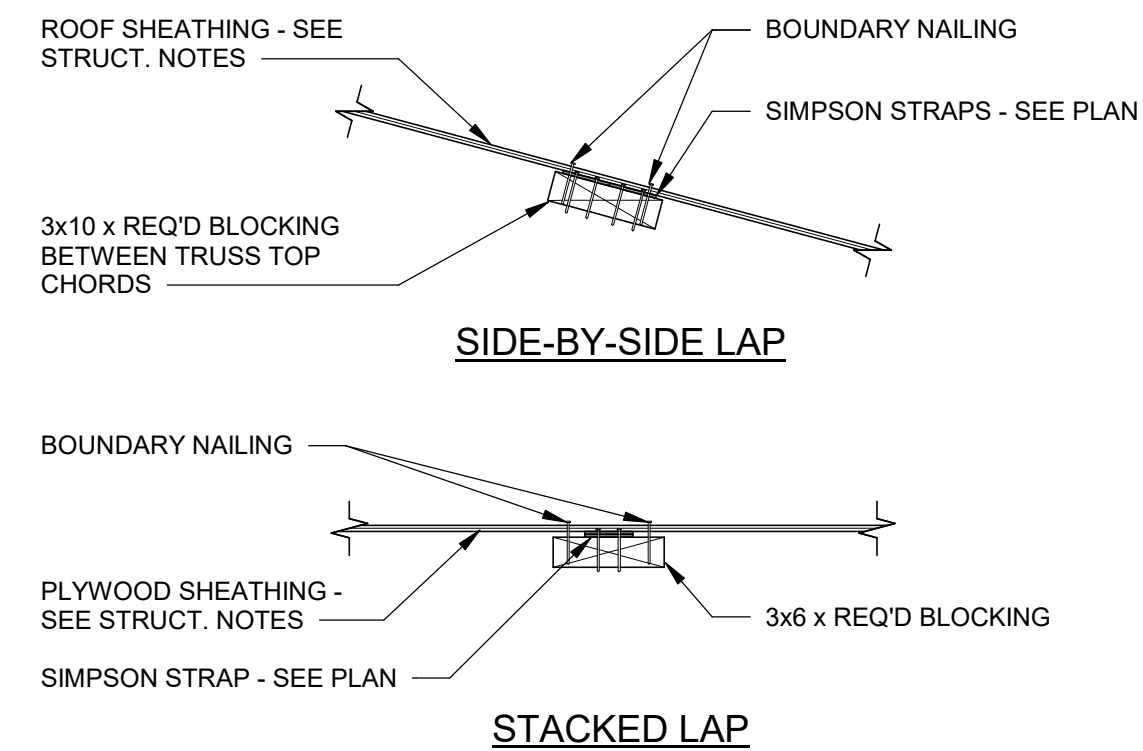
BAR LOCATION	CONCRETE		CONCRETE REINFORCING & SPLICE LENGTHS (IN)																								COMMENTS			
			BAR SIZE																											
			#3	#4	#5	#6	#7	#8	#9	#10	#11	#3	#4	#5	#6	#7	#8	#9	#10	#11	#3	#4	#5	#6	#7	#8		#9	#10	#11
VERT. WALL BARS, FILL ON METAL DECK	NWC	4500 PSI	14	18	7	18	23	6	23	30	8	27	35	9	40	52	11	45	59	13	51	66	14	56	73	16	62	81	25	
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	4500 PSI	14	18	7	18	23	6	23	30	8	27	35	9	40	52	11	45	59	13	51	66	14	56	73	16	62	81	25	
BEAM BOTTOM BARS, COLUMN BARS	NWC	4500 PSI	14	18	7	18	23	9	23	30	11	27	35	13	40	52	16	45	59	18	51	66	20	56	73	22	62	81	25	
FOOTING BOTTOM BARS	NWC	4500 PSI	12	16	7	12	16	6	14	18	8	17	22	9	24	31	11	27	35	13	31	40	14	34	44	16	37	48	25	
BEAM TOP BARS	NWC	4500 PSI	18	23	7	24	31	9	30	39	11	35	46	13	51	66	16	59	77	18	66	86	20	73	95	22	80	104	25	
SLAB ON GRADE	NWC	4500 PSI	12	16	7	12	16	6	14	18	8	17	22	9	27	35	11	34	44	13	44	57	14	56	73	16	62	81	25	

- NOTES:
- MECHANICAL COUPLERS MAY BE USED IN LIEU OF LAP SPLICES SHOWN. SEE STRUCTURAL NOTES FOR MINIMUM COUPLER CAPACITY. WHERE MECHANICAL COUPLERS ARE USED, STAGGER ADJACENT SPLICES A MINIMUM OF 24" AS INDICATED ABOVE.
 - LENGTHS INDICATED IN THIS SCHEDULE SHALL BE INCREASED BY 50% FOR STRAIGHT BAR DEVELOPMENT AND 20% FOR HOOKED BARS WHERE EPOXY COATING IS USED.
 - WHEN SPLICING BARS OF DIFFERENT SIZES, USE LAP SPLICE LENGTH OF LARGER BARS UNO.
 - SPLICE BARS LARGER THAN #11 USING MECHANICAL COUPLERS.

COIL STRAP LAP SPLICE SCHEDULE

ITEM #	LAP SPLICE			COMMENTS
	MIN. # FASTENER PER SPLICE	MIN. LAP SPLICE LENGTH		
		STACKED	SIDE-BY-SIDE	
CMST 12	25-16d	22"	33"	
	30-10d	27"	39"	
CMST 14	18-16d	16"	26"	
	21-10d	19"	30"	
CMSTC 16	13-16d	11"	20"	
	15-10d	12"	20"	
CS 14	26-10d	--	15"	
	30-8d	--	16"	
CS 16	20-10d	--	11"	
	22-8d	--	13"	
CS 18	16-10d	--	9"	
	18-8d	--	11"	
CS 20	12-10d	--	6"	
	14-8d	--	9"	
CS 22	10-10d	--	7"	
	12-8d	--	6"	

- NOTES:
- NO STRAP MODIFICATION IS ALLOWED.
 - SPLICE MUST MEET BOTH THE MINIMUM NUMBER OF FASTENERS AND THE MINIMUM SPLICE LENGTH.
 - ALL NAIL SIZES LISTED ARE COMMON NAILS.
 - 10d COMMON MAY BE REPLACED BY 16d SINKERS. NO OTHER NAIL SUBSTITUTION IS ALLOWED FOR LAP SPLICES.
 - IF WOOD SPLITTING OCCURS, USE EVERY OTHER NAIL HOLE AND LENGTHEN SPLICE TO ACCOMMODATE THE REQUIRED NUMBER OF NAILS.
 - ALL STRAPS TO BE INSTALLED UNDER SHEATHING.
 - TWO OPTIONS EXIST FOR COIL STRAP LAPPING.
 - LAP ONE STRAP STACKED ON TOP OF THE OTHER STRAP.
 - INSTALL STRAPS SIDE BY SIDE - TO DO THIS A LARGER BLOCK MUST BE USED. THE BLOCK MUST BE ON SOLID PIECE.
 - STRAP TO BE INSTALLED TIGHT.



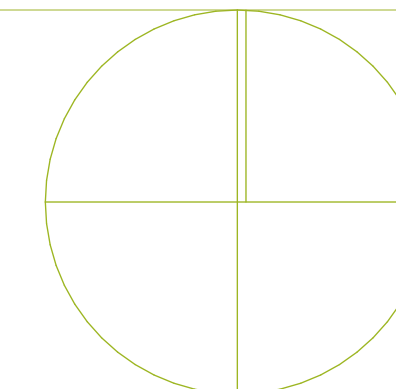
SPECIAL INSPECTION SCHEDULE 1, 2

ESTABLISHED PER 2018 IBC SECTION 110 AND CHAPTER 17

ITEM	CONTINUOUS ³	PERIODIC ³	REFERENCE	COMMENTS
PRE-FAB CONSTRUCTION (IBC 1704.2)			REFERENCE NOTES P1 & P2	P1. SPECIAL INSPECTION IS NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. PROVIDED THE FABRICATOR COMPLIES WITH IBC. P2. INSPECTION FOR PREFABRICATED CONSTRUCTION SHALL BE THE SAME AS IF THE MATERIAL USED IN THE CONSTRUCTION TOOK PLACE ON SITE. SPECIAL INSPECTION WILL NOT BE REQUIRED DURING PREFABRICATION IF THE APPROVED AGENCY CERTIFIES THE CONSTRUCTION AND FURNISHES EVIDENCE OF COMPLIANCE. (SEE NOTE 2).
CONCRETE CONSTRUCTION (IBC 1705.3)			SEE IBC TABLE 1705.3 - REF. NOTE C1	C1. SPECIAL INSPECTION IS NOT REQUIRED FOR CONC. ISOLATED SPREAD FOOTINGS, CONTINUOUS FOOTINGS, NON-STRUCTURAL SLABS, FOUNDATION WALLS, PATIOS, DRIVEWAYS, AND SIDEWALKS PROVIDED THE REQUIREMENTS OF IBC 1705.3 ARE MET. C2. PERIODIC SPECIAL INSPECTION IS ALLOWED FOR VERIFICATION OF THE WELDABILITY OF REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS, AND SHEAR REINFORCEMENT. PERIODIC SPECIAL INSPECTION IS ALLOWED FOR WELDING OF OTHER ASTM A 706 REINFORCING STEEL NOT INCLUDED IN THE CONTINUOUS SPECIAL INSPECTION REQUIREMENTS NOTED ABOVE. C3. PERFORM AIR SLUMP AND TEMP. TESTS WHEN CONCRETE SAMPLES ARE CAST. C4. PERIODIC SPECIAL INSPECTION IS REQUIRED FOR VERIFICATION OF IN-SITU CONCRETE STRENGTH FOR POST-TENSIONED CONCRETE PRIOR TO TENSIONING TENDONS OR REMOVING SHORING OR FORMS. C5. EPOXY AND EXPANSION ANCHORS INTO MASONRY OR CONCRETE MAY BE USED ONLY WHEN APPROVED BY ARCHITECT, AND/OR ENGINEER USING AN APPROVED PRODUCT WITH CURRENT PUBLISHED ICC RESEARCH REPORT NUMBERS. COORDINATE CONTINUOUS/PERIODIC SPECIAL INSPECTION REQUIREMENTS WITH ICC REPORT.
REINFORCING STEEL PLACEMENT		●		
WELDING OF REINFORCING STEEL	●	●	REFERENCE NOTE C2	
EMBEDDED BOLTS & PLATES	●			
VERIFYING REQUIRED DESIGN MIX		●		
CONCRETE PLACEMENT / SAMPLING	●		REFERENCE NOTE C3	
CURING TEMPERATURE / TECHNIQUES		●		
PRESTRESSED CONCRETE				
APPLICATION OF PRESTRESSING FORCES	●			
GROUTING BONDED TENDONS	●		IN SEISMIC-FORCE-RESISTING SYSTEM	
ERECTION OF PRECAST MEMBERS		●		
VERIFICATION OF IN-SITU STRENGTH		●	REFERENCE NOTE C4	
EPOXY / EXPANSION ANCHOR PLACEMENT	●	●	REFERENCE NOTE C5	
WOOD (IBC 1705.5 & 1705.11.1 & 1705.12.2)				
HIGH LOAD DIAPHRAGMS (ROOF / FLOOR)		●	REFERENCE NOTE W1	W1. WOOD STRUCTURAL PANEL SHEATHING SHALL BE INSPECTED TO ASCERTAIN THAT GRADE AND THICKNESS ARE IN COMPLIANCE WITH APPROVED BUILDING PLANS. NOMINAL SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES, THE NAIL OR STAPLE DIAMETER AND LENGTH, THE NUMBER OF FASTENER LINES, AND SPACING BETWEEN FASTENERS IN EACH LINE AND AT EDGE MARGINS SHALL ALSO BE INSPECTED AND VERIFIED FOR COMPLIANCE WITH APPROVED BUILDING PLANS.
SITE-BUILT ASSEMBLIES		●		
SHEAR WALL & DIAPHRAGM NAILING		●	REFERENCE NOTE W2	W2. SPECIAL INSPECTION IS NOT REQUIRED FOR WOOD SHEAR WALLS, WOOD DIAPHRAGMS, INCLUDING NAILING, & BOLTING, AND OTHER FASTENING TO OTHER COMPONENTS WHERE THE SPACING OF THE SHEATHING FASTENERS IS GREATER THAN 4" o.c.
DRAG STRUTS		●		W3. SPECIAL INSPECTION SHALL BE PERFORMED TO VERIFY THAT THE INSTALLATION OF TEMPORARY AND PERMANENT RESTRAINT/BRACING IS INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE.
BRACES & SHEAR PANELS		●		
HOLD-DOWNS		●		
GLUING OPERATIONS	●			
METAL-PLATE-CONNECTED WOOD TRUSSES WITH HEIGHTS GREATER THAN OR EQUAL TO 60"		●	REFERENCE NOTE W2	
METAL-PLATE-CONNECTED WOOD TRUSSES WITH SPANS GREATER THAN OR EQUAL TO 60 FEET		●	REFERENCE NOTE W3	
SOILS (IBC 1705.6)			REFERENCE NOTE F1	
VERIFY ADEQUATE MATERIALS BELOW FOOTINGS		●	REFERENCE NOTE F1	F1. SPECIAL INSPECTION OF SOILS SHALL REFERENCE THE APPROVED SOILS REPORT TO DETERMINE COMPLIANCE. WHERE SOILS REPORT IS NOT PROVIDED SPECIAL INSPECTIONS ARE REQUIRED TO VERIFY THAT THE IN-PLACE DRY DENSITY OF THE COMPACTED FILL IS NOT LESS THAN 90 PERCENT OF THE MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT DETERMINED IN ACCORDANCE WITH ASTM D 1557.
EXCAVATIONS EXTEND TO PROPER DEPTH AND REACH PROPER MATERIAL		●	REFERENCE NOTE F2	
CLASSIFY & TEST CONTROLLED FILL MATERIALS		●	REFERENCE NOTE F2	
PERFORM MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL.	●		REFERENCE NOTE F1	
PROPERLY PREPARED SITE AND SUB-GRADE PRIOR TO FILL.		●	REFERENCE NOTE F1	

GENERAL SPECIAL INSPECTION NOTES :

- THE ITEMS MARKED WITH A "●" IN THE SPECIAL INSPECTION SCHEDULE SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO THE MATERIAL SAMPLING AND TESTING SECTION, THE PROJECT SPECIFICATIONS, AND THE SPECIFIC GENERAL NOTES SECTIONS. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ARCHITECT, ENGINEER, CONTRACTOR, AND BUILDING OFFICIAL. ANY ITEMS WHICH FAIL TO COMPLY WITH THE APPROVED CONSTRUCTION DOCUMENTS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF DISCREPANCIES ARE NOT CORRECTED, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL, ARCHITECT, AND ENGINEER PRIOR TO COMPLETION OF THAT PHASE OF WORK. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.
- ANY CONSTRUCTION OR MATERIAL THAT HAS FAILED INSPECTION SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT.
- CONTINUOUS SPECIAL INSPECTION MEANS THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED. PERIODIC SPECIAL INSPECTION MEANS THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK. (IBC SECTION 202)

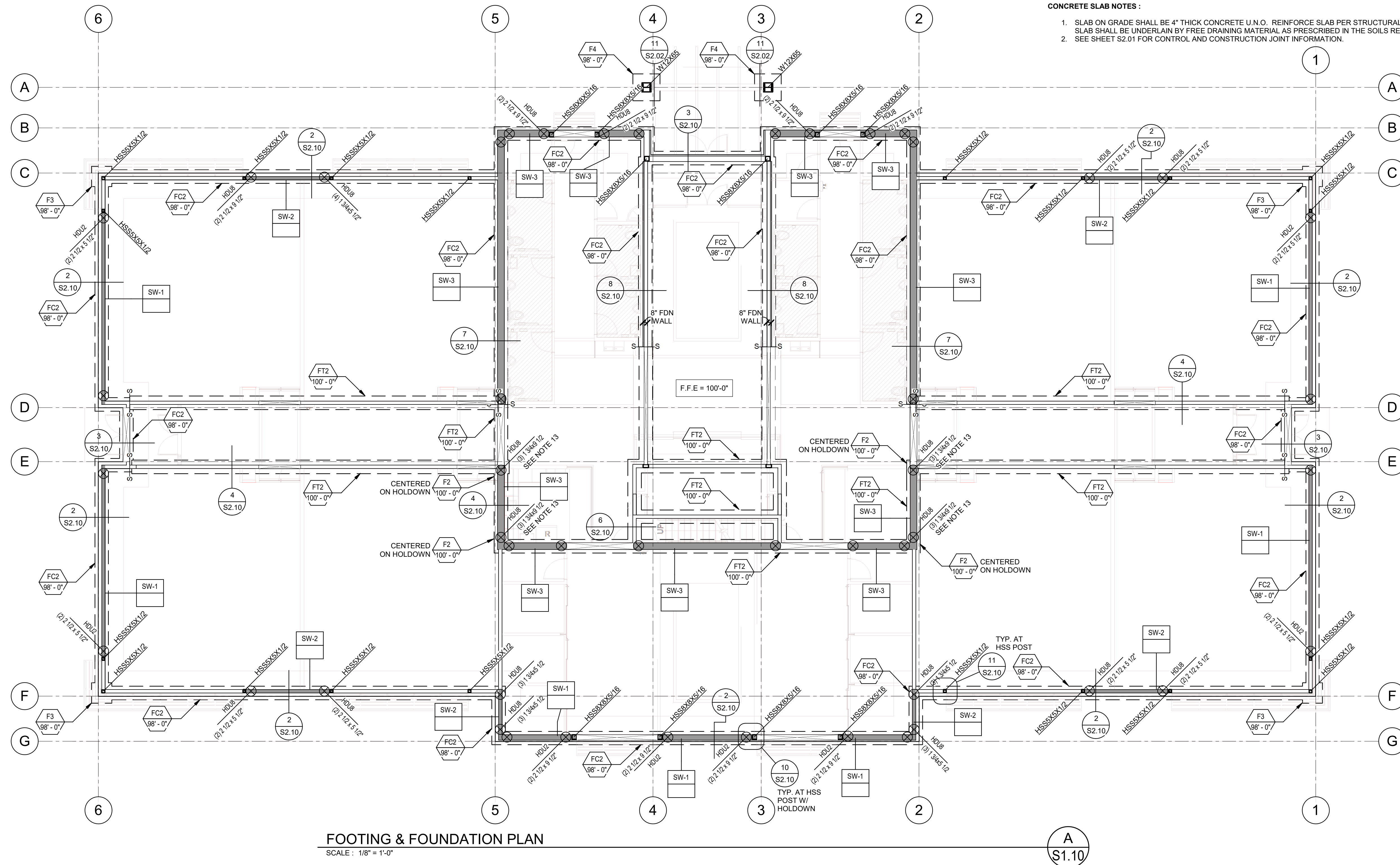


FOOTING & FOUNDATION NOTES :

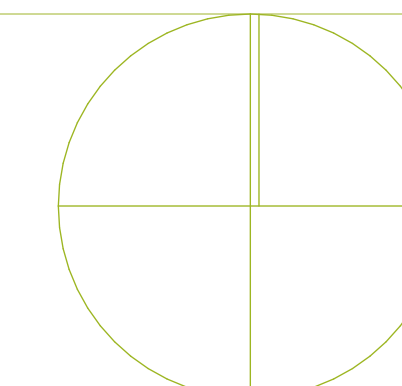
- SEE SHEET S0.01 & S0.02 FOR GENERAL STRUCTURAL NOTES.
- ALL FOOTINGS SHALL BE PLACED ON SOIL WHICH HAS BEEN PREPARED FOR THE BEARING PRESSURE SHOWN IN THE STRUCTURAL NOTES.
- VERIFY ALL DIMENSIONS WITH DRAWINGS AND NOTIFY ENGINEER OF ANY DISCREPANCIES FOUND.
- SOLID GROUT ALL MASONRY COURSES BELOW FINISHED FLOOR OR EXTERIOR GRADE (WHICHEVER HIGHER).
- SEE SHEET S0.03 FOR FOOTING SCHEDULE.
- PROVIDE DOWELS IN FOOTINGS / FOUNDATIONS TO MATCH VERTICAL WALL REINFORCING U.N.O.
- SEE SHEET S2.01 & S2.10 FOR TYPICAL FOOTING AND FOUNDATION DETAILS.
- ALL EXTERIOR WALL FOOTINGS TO BEAR A MINIMUM DIMENSION BELOW EXTERIOR GRADE AS NOTED IN GENERAL STRUCTURAL NOTES.
- FOUNDATION WALLS ARE DESIGNED AND DETAILED FOR THE COMPLETED CONDITION. CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION. BACKFILLED WALLS SHALL BE ADEQUATELY BRACED DURING CONSTRUCTION AND BACKFILLING TO PRODUCE PLUMB AND TRUE FINISHED WALLS.
- ALL ANCHORS, HOLD-DOWNS, ANCHOR BOLTS, DOWELS, EMBEDDED ITEMS, ETC. SHALL BE HELD IN PLACE PRIOR TO AND DURING CONCRETE AND/OR GROUT PLACEMENT.
- COORDINATE ALL FOOTING DEPTHS (INTERIOR AND EXTERIOR) WITH DRAINS, CONDUITS, ETC. THAT MAY INTERFERE WITH FOOTINGS.
- ⊗ = INDICATE HDU2 W/ (2) 2x STUDS U.N.O. SEE DETAILS 8/S2.01 & 1/S2.02 FOR MORE INFORMATION.
- ANCHOR TO BE 7/8" SIMPSON SET-XP EPOXY W/ 8" MIN. EMBEDMENT.

CONCRETE SLAB NOTES :

- SLAB ON GRADE SHALL BE 4" THICK CONCRETE U.N.O. REINFORCE SLAB PER STRUCTURAL NOTES.
- SLAB SHALL BE UNDERLAIN BY FREE DRAINING MATERIAL AS PRESCRIBED IN THE SOILS REPORT.
- SEE SHEET S2.01 FOR CONTROL AND CONSTRUCTION JOINT INFORMATION.

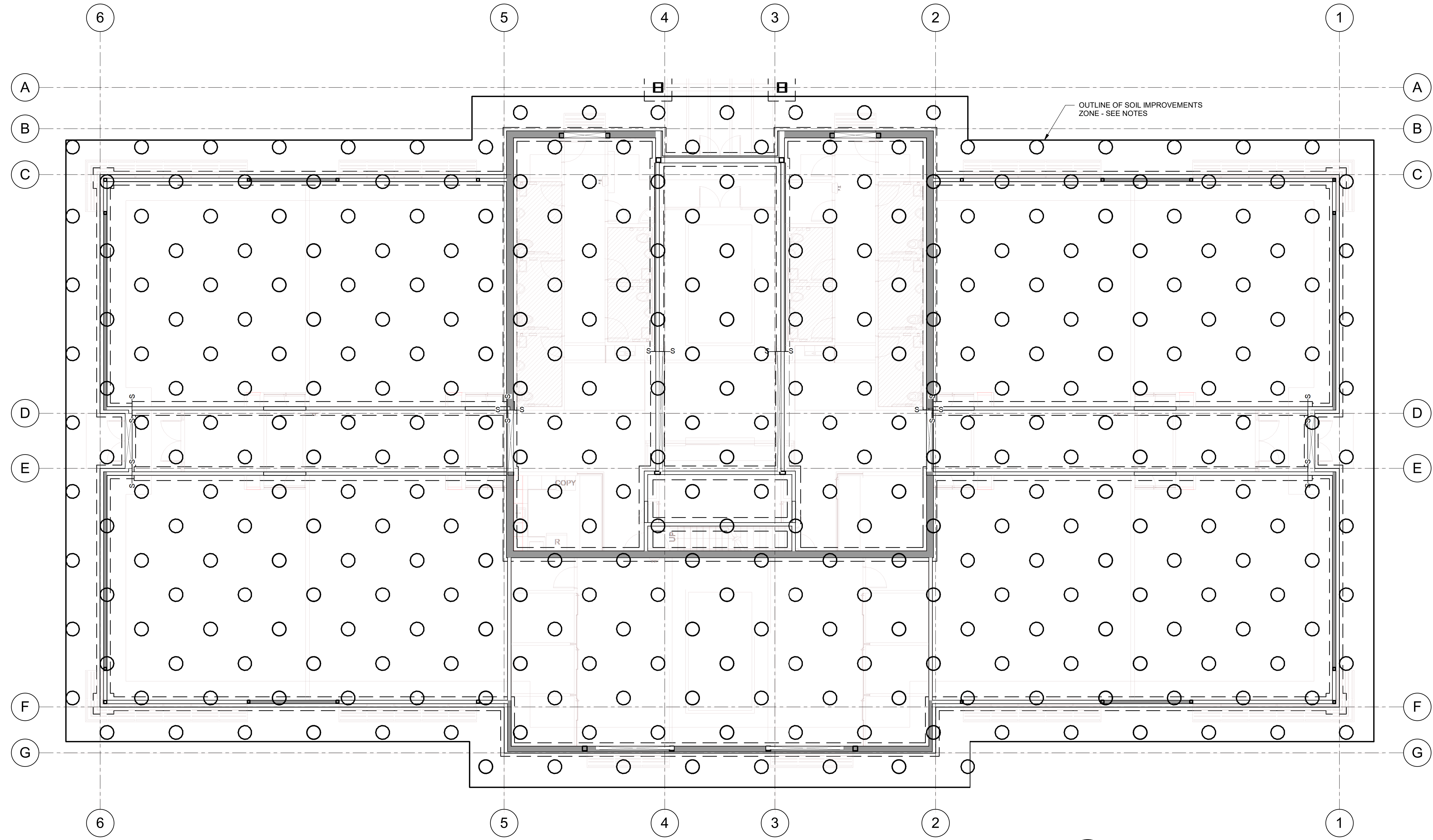


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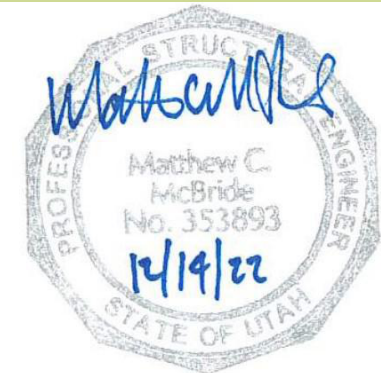
SOIL IMPROVEMENT NOTES :

1. SEE SHEET S0.01 & S0.02 FOR GENERAL STRUCTURAL NOTES.
2. SOIL IMPROVEMENT SHALL BE PROVIDED USING RAMMED AGGREGATE PIERS AS OUTLINED IN THE GEOTECHNICAL REPORT AND THE FOLLOWING:
 - A. DESIGN OF THE SOIL IMPROVEMENT SYSTEM SHALL BE A DEFERRED SUBMITTAL LAYOUT SHOWN IN SCHEMATIC AND PROVIDED AS REFERENCE ONLY.
 - B. THE SOIL IMPROVEMENT SYSTEM SHALL FOLLOW THE REQUIREMENTS OF THE GEOTECHNICAL REPORT TO IMPROVE THE PERFORMANCE OF THE SITE FOR LIQUEFACTION.
 - C. A MINIMUM OF 1500 PSF SHALL BE ACHIEVED THROUGHOUT THE ENTIRE SOIL IMPROVEMENT ZONE.
 - D. THE SOIL IMPROVEMENT ZONE SHALL EXTEND A MINIMUM OF 5'-0" OUTSIDE THE BUILDING FOOTPRINT.
 - E. THE DEPTH OF THE SOIL IMPROVEMENT SYSTEM SHALL BE A MINIMUM OF 15'-0" TO 20'-0" TO EXTEND PIERS BELOW SOIL THAT IS SUSCEPTIBLE TO LIQUEFACTION AS NOTED IN THE GEOTECHNICAL REPORT.

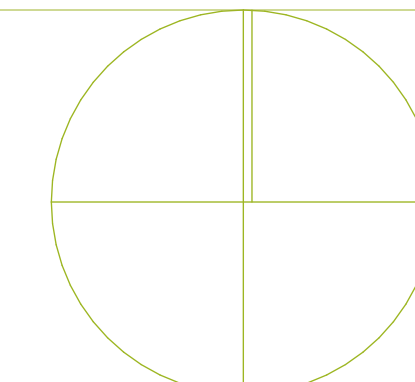


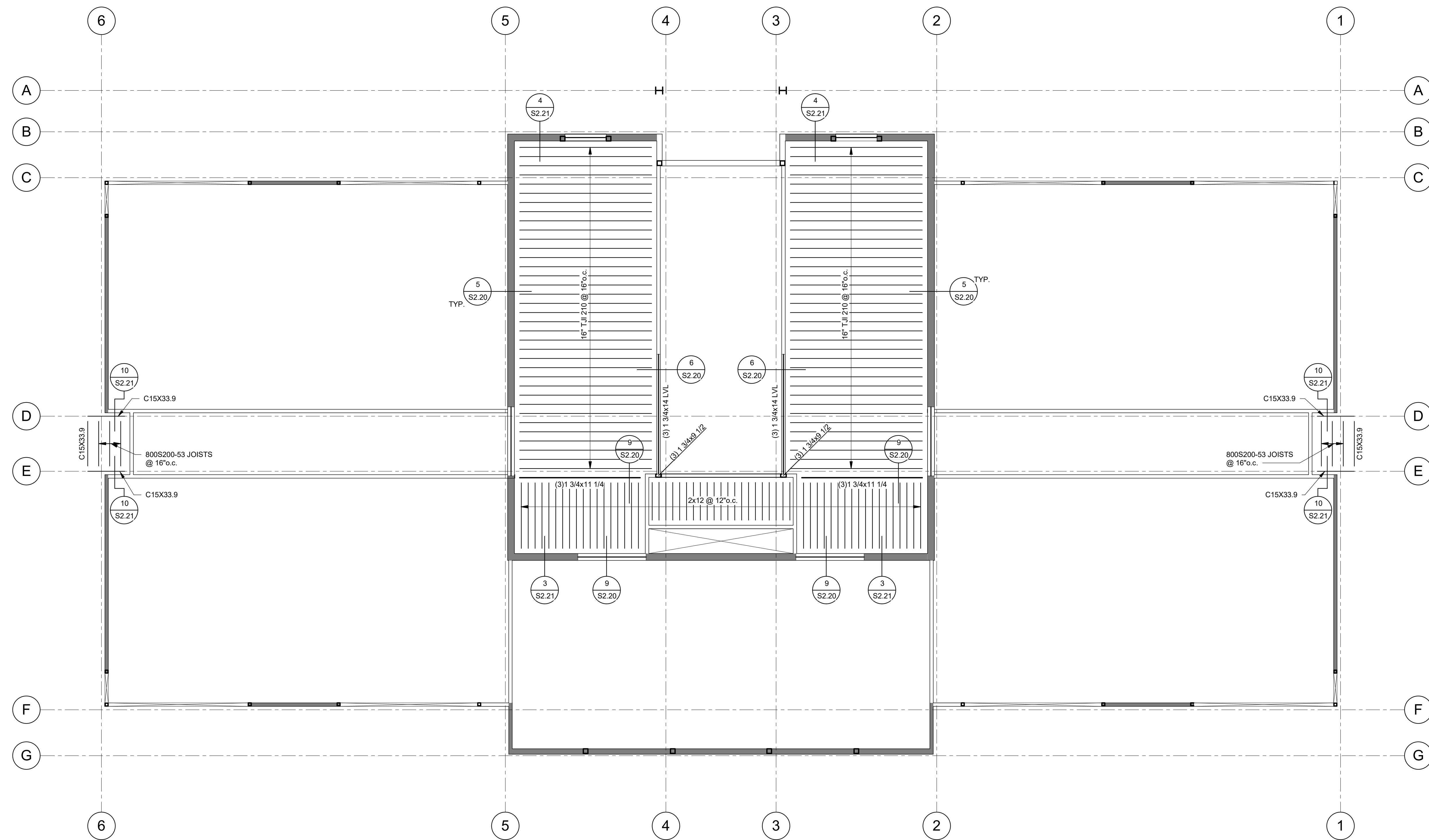
SOIL IMPROVEMENT PLAN
SCALE : 1/8" = 1'-0"

A
S1.11



NO.	DATE	DESCRIPTION

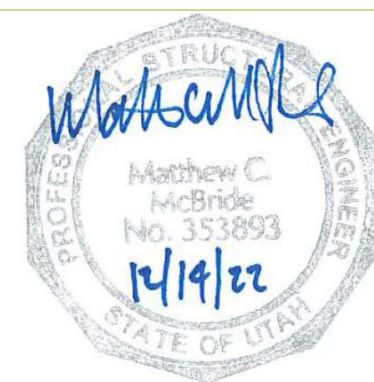




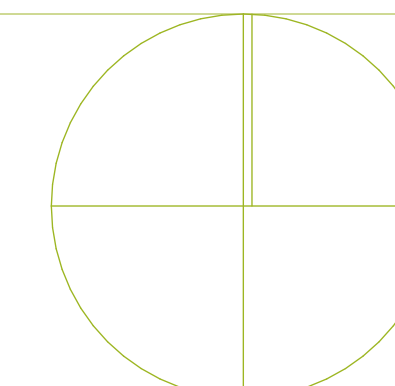
MEZZANINE FRAMING PLAN

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

A
S1.20



NO.	DATE	DESCRIPTION



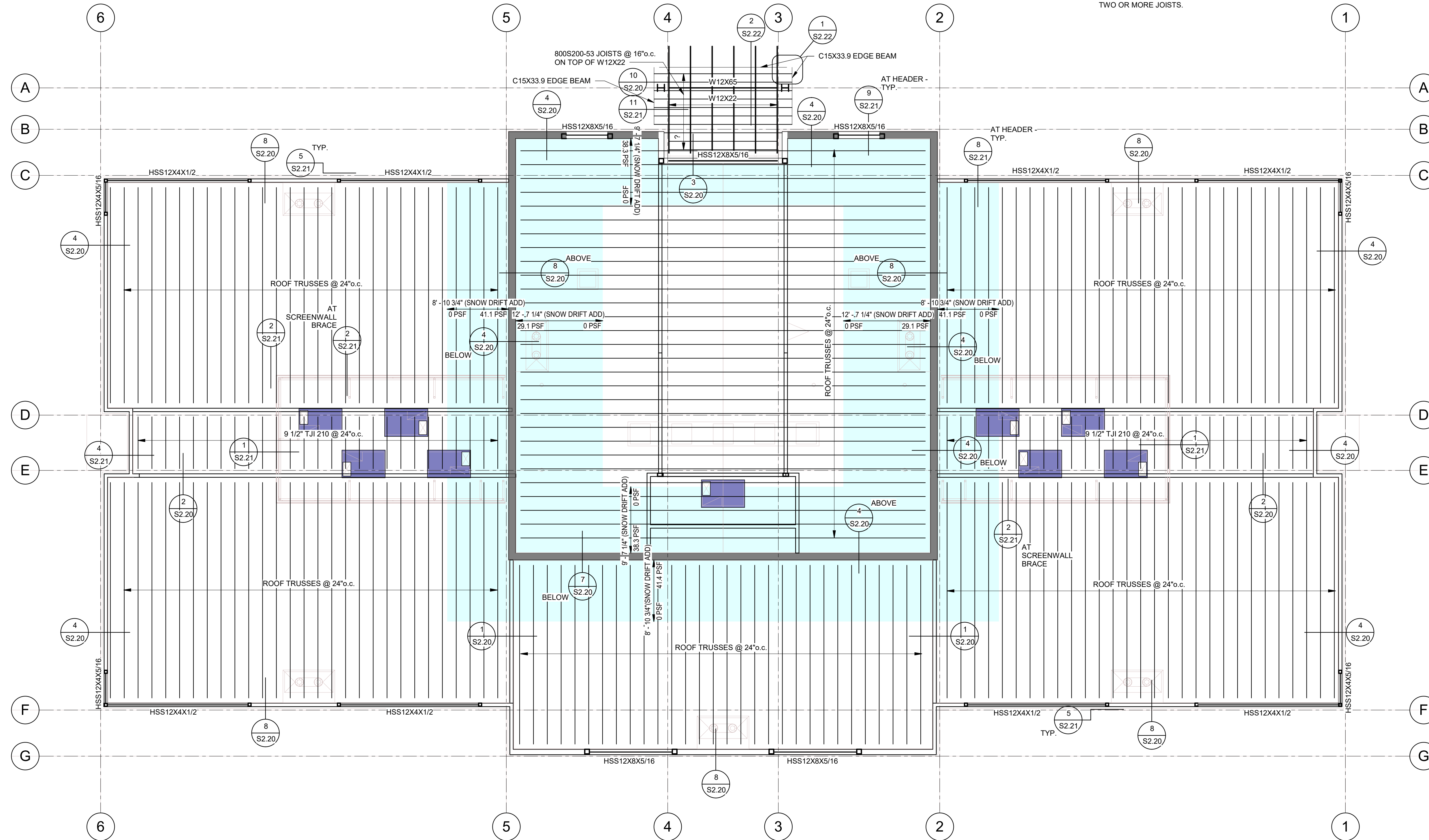
PRE-MANUFACTURED TRUSS NOTES :

- PRE-MANUFACTURED TRUSSES SHALL BE DESIGNED PER ALL APPLICABLE LOAD COMBINATIONS AND LOAD CONFIGURATIONS AS REQUIRED BY THE GOVERNING CODE AND THE GENERAL STRUCTURAL NOTES :
THE FOLLOWING CRITERIA SHALL BE USED IN DESIGN.
SNOW LOAD = PER GENERAL STRUCTURAL NOTES
LIVE LOAD = PER GENERAL STRUCTURAL NOTES
DEAD LOAD = 15 PSF TOP CHORD
10 PSF BOTTOM CHORD
WIND LOAD = PER GENERAL STRUCTURAL NOTES
SNOW DRIFT = AS DETERMINED BY THE TRUSS MANUFACTURER. CONSIDER BALANCED, UNBALANCED AND DRIFT LOCATIONS
- ALL TRUSSES SHALL BE DESIGNED FOR A 150 POUND POINT LOAD APPLIED AT ANY LOCATION ALONG THE BOTTOM CHORD. DESIGN ALL TRUSSES FOR WIND UPLIFT PER THE GOVERNING CODE WITH A 8 PSF DEAD LOAD.
- ALL TRUSS TO TRUSS CONNECTIONS PROVIDED BY TRUSS MANUFACTURER.
- TRUSS MANUFACTURER SHALL COORDINATE AND INCLUDE ALL ADD LOADS AS INDICATED ON THE FRAMING PLAN(S).

- COORDINATE DUCT RUNS AND TRUSS WEB CONFIGURATIONS WITH MECHANICAL & ARCH. DRAWINGS. DO NOT FIELD MODIFY TRUSSES TO ACCOMMODATE DUCTING AND OTHER MISCELLANEOUS EQUIPMENT WITHOUT WRITTEN DIRECTION FROM THE TRUSS MANUFACTURER OR STRUCTURAL ENGINEER.
- COORDINATE ALLOWABLE TRUSS DEFLECTIONS WITH ARCHITECT FOR DETAILING OF NON-BEARING STUD WALLS BELOW.
- CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND CALCULATIONS FOR REVIEW AS REQUIRED BY THE DEFERRED SUBMITTAL SECTION OF THE GENERAL STRUCTURAL NOTES.
- WHERE INDICATED, BLOCK PANEL EDGES OF ROOF SHEATHING WITH FLAT 2X BLOCKING.

ROOF FRAMING NOTES :

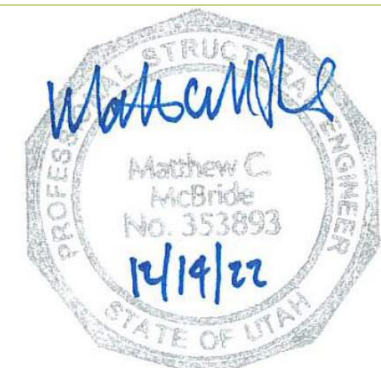
- SEE SHEET S0.01 & S0.02 FOR GENERAL STRUCTURAL NOTES.
- GENERAL CONTRACTOR SHALL VERIFY MECHANICAL EQUIPMENT WEIGHTS, DIMENSIONS, AND LOCATIONS W/ MECHANICAL AND REFRIGERATION CONTRACTORS PRIOR TO ORDERING/FABRICATING JOISTS.
- JOISTS SUPPORTING MECHANICAL EQUIPMENT SHALL BE DESIGNED FOR ADDITIONAL LOADS INDICATED.
- WHERE JOIST AXIAL LOADS ARE SHOWN ON THE PLANS (XX.X(W)) OR (XX.X(E)), LOADS ARE ASD LEV LOADS
- SNOW DRIFT LOADS INDICATED ON FRAMING PLANS SHALL BE APPLIED IN ADDITION TO UNIFORMLY DISTRIBUTED LOADS INDICATED IN TRUSS NOTES
- PROVIDE ADDED HORIZONTAL AND VERTICAL JOISTS LOADS WHERE INDICATED ON PLAN OR DETAIL
- TRUSSES SHALL BE DESIGNED FOR 15 PSF NET WIND UPLIFT.
- SEE ROOF DECK SCHEDULE FOR REQUIRED DECK AND ATTACHMENTS.
- CONTRACTOR SHALL ERECT AND MAINTAIN ADEQUATE TEMPORARY BRACING UNTIL ALL ROOF FRAMING AND DECK ATTACHMENTS ARE COMPLETE.
- CONCENTRATED LOADS FROM EQUIPMENT, PIPING, ETC., SHALL NOT BE HUNG FROM JOISTS EXCEPT AT PANEL POINTS AND AS APPROVED BY THE ENGINEER.
- JOIST BRACING DESIGN AND LOCATION BY JOIST MANUFACTURER.
- ANY CONCENTRATED LOAD ON JOIST CHORDS (INCLUDING FRAMING ANGLES) NOT LOCATED WITHIN 6" OF A PANEL POINT REQUIRE (2) 1. 2" X 2" X 1/4" FROM THE POINT LOAD TO THE NEAREST OPPOSITE CHORD PANEL POINT (CONTRACTOR SUPPLIED AND INSTALLED).
- ANY ROOF SUPPORTED PIPING 6" OR LARGER RUNNING PARALLEL TO JOIST SHALL BE SUPPORTED BY TWO OR MORE JOISTS.



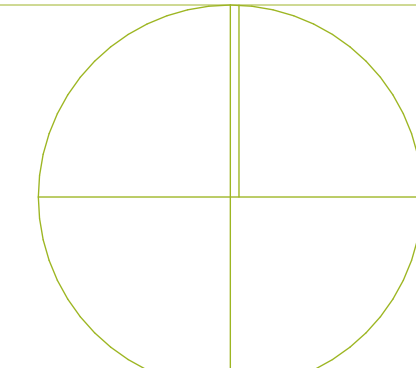
ROOF FRAMING PLAN

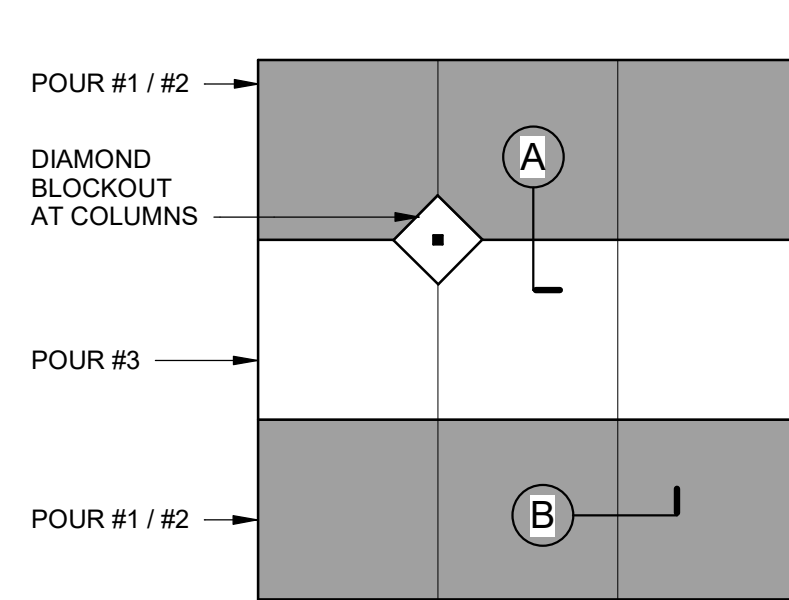
SCALE : 1/8" = 1'-0"

A
S1.30

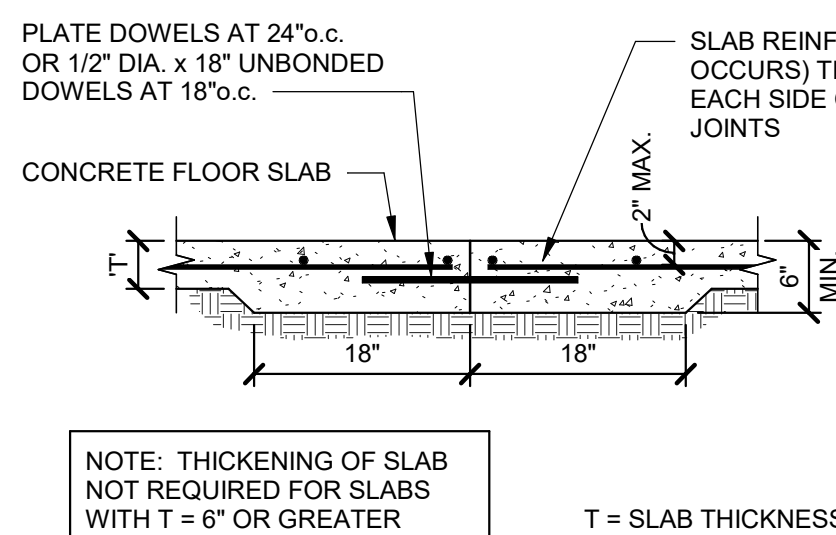


NO.	DATE	DESCRIPTION

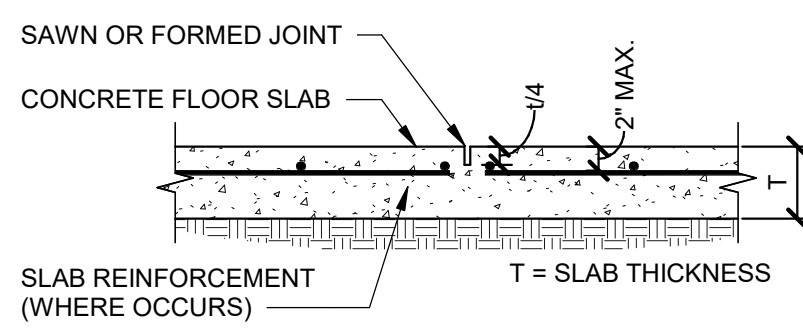




NOTES:
1. JOINTS SHALL OCCUR AT MAIN COLUMN / GRID LINES W/ 10'-0" MAX. SPACING BETWEEN JOINTS AT 4' SLABS, 12'-0" MAX. AT 5' SLABS, AND 15'-0" MAX. AT 6' SLABS.
2. SEE PLAN FOR SLAB THICKNESS 'T' AND REINFORCING SIZE AND SPACING.



CONSTRUCTION JOINT (A)
SCALE: NONE

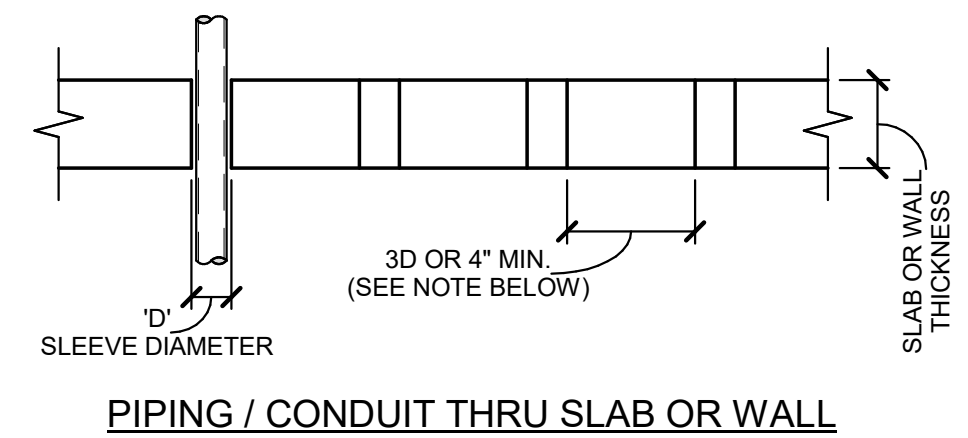


CONTROL JOINT (B)
SCALE: NONE

TYPICAL CONCRETE SLAB JOINTS

SCALE: NONE

1
S2.01



MAX 'D' = T/3 OR 2" WHICHEVER IS SMALLER

NOTE: WHERE CLEAR DISTANCE BETWEEN SLEEVES IS IMPOSSIBLE, THIS AREA SHALL BE TREATED AS AN OPENING PER REINFORCING AT STRUCTURAL CONCRETE SLAB OPENINGS, SEE TYP. DETAIL.

PIPING / CONDUIT IN SLAB OR WALL

TYP. PIPING/CONDUIT AT SLAB OR WALL

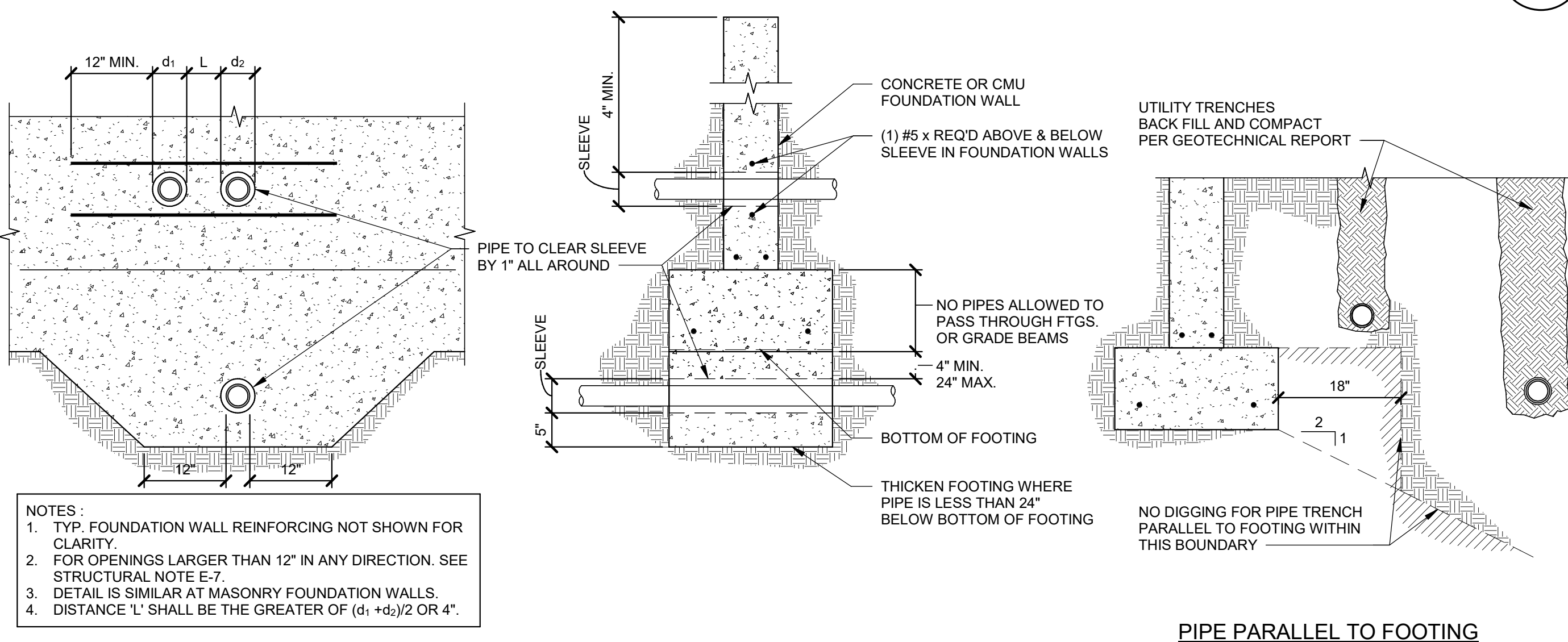
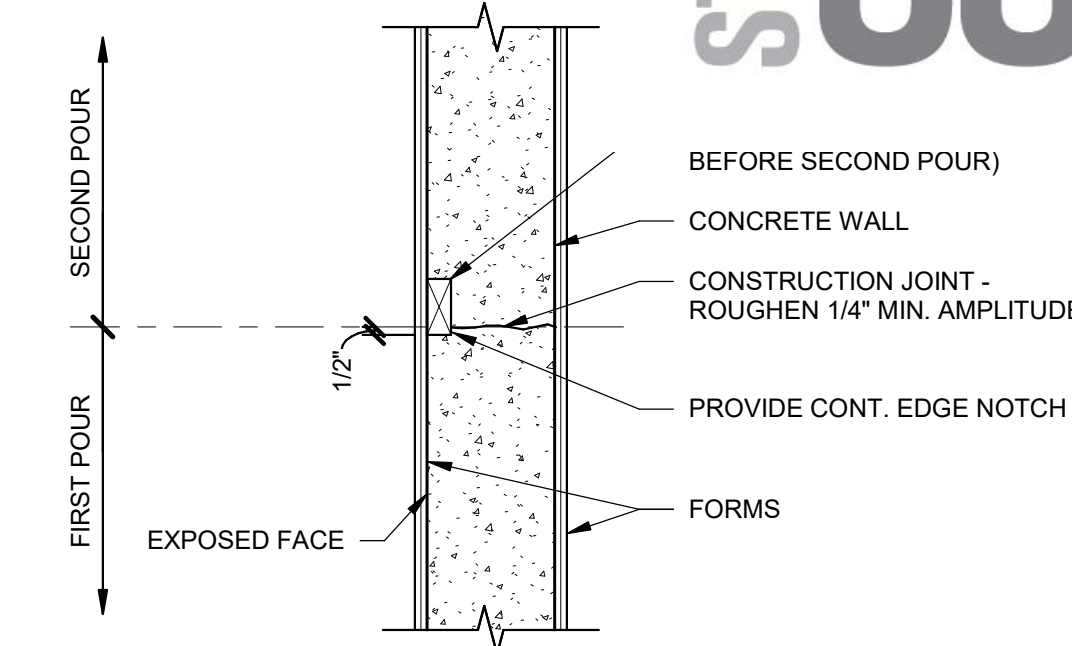
SCALE: NONE

2
S2.01

TYPICAL CONSTRUCTION JOINT DETAIL IN CONC. WALL

SCALE: NONE

3
S2.01



NOTES:
1. TYP. FOUNDATION WALL REINFORCING NOT SHOWN FOR CLARITY.
2. FOR OPENINGS LARGER THAN 12" IN ANY DIRECTION, SEE STRUCTURAL NOTE E-7.
3. DETAIL IS SIMILAR AT MASONRY FOUNDATION WALLS.
4. DISTANCE 'L' SHALL BE THE GREATER OF (d1 + d2)/2 OR 4".

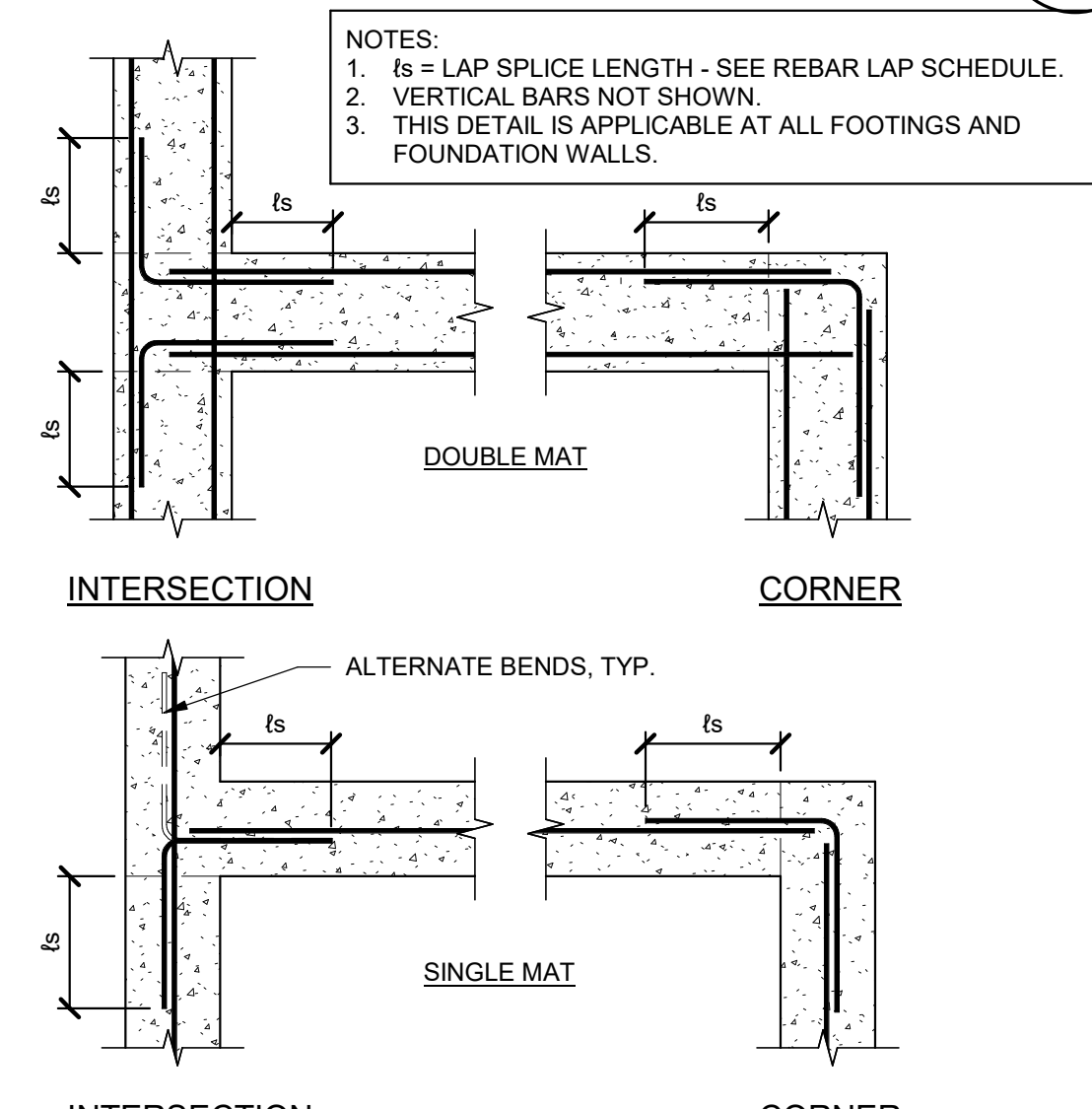
PIPE CROSSING FOOTING / FOUNDATION WALL

PIPE PARALLEL TO FOOTING

ALLOWABLE PIPING LOCATIONS @ FOOTING DETAIL

SCALE: NONE

4
S2.01



TYP. REINF. @ INTERSECTIONS IN CONC. DETAIL

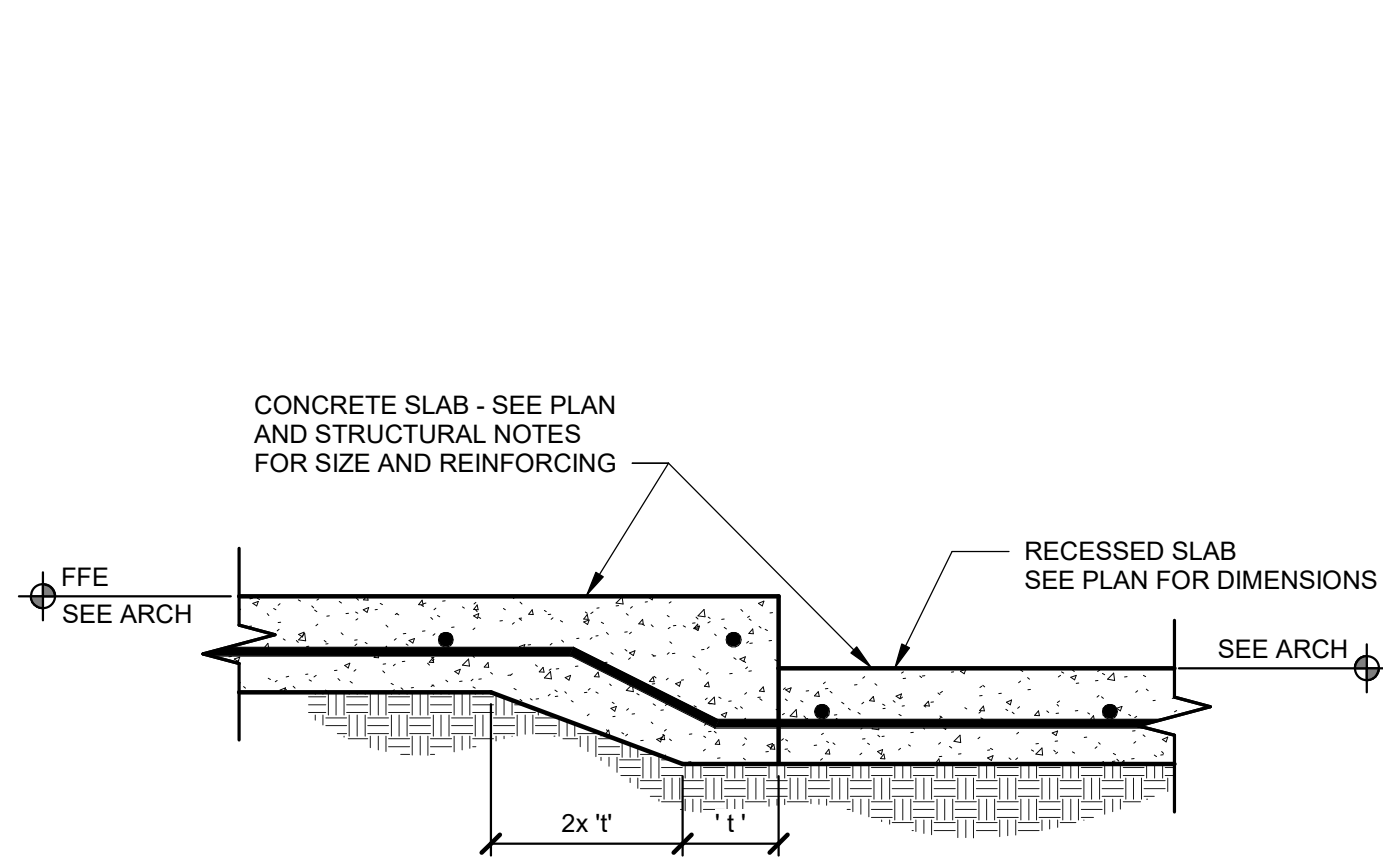
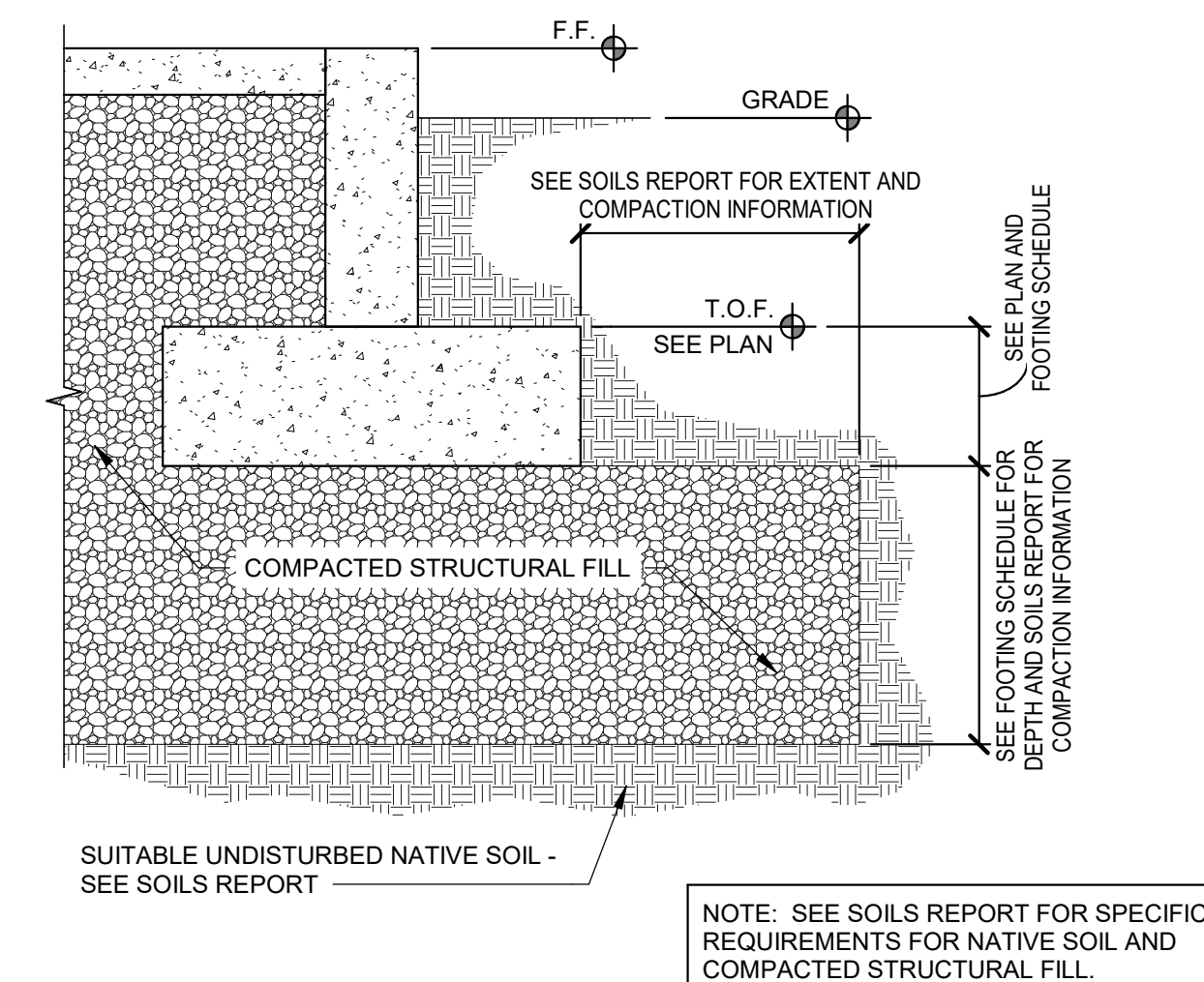
SCALE: NONE

5
S2.01

TYP. FOOTING OVER COMPACTED STRUCTURAL FILL

SCALE: NONE

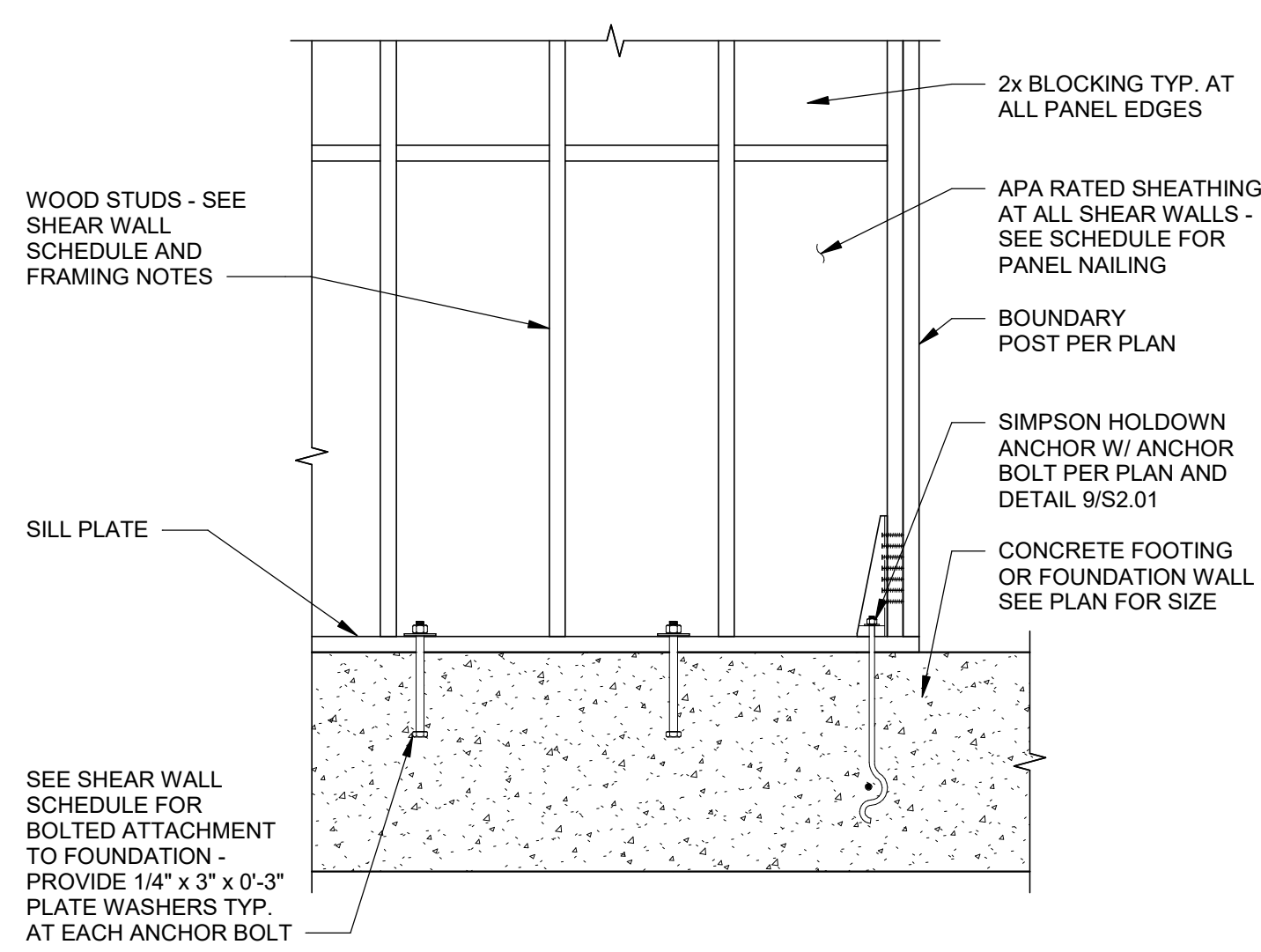
6
S2.01



TYPICAL RECESSED SLAB

SCALE: NONE

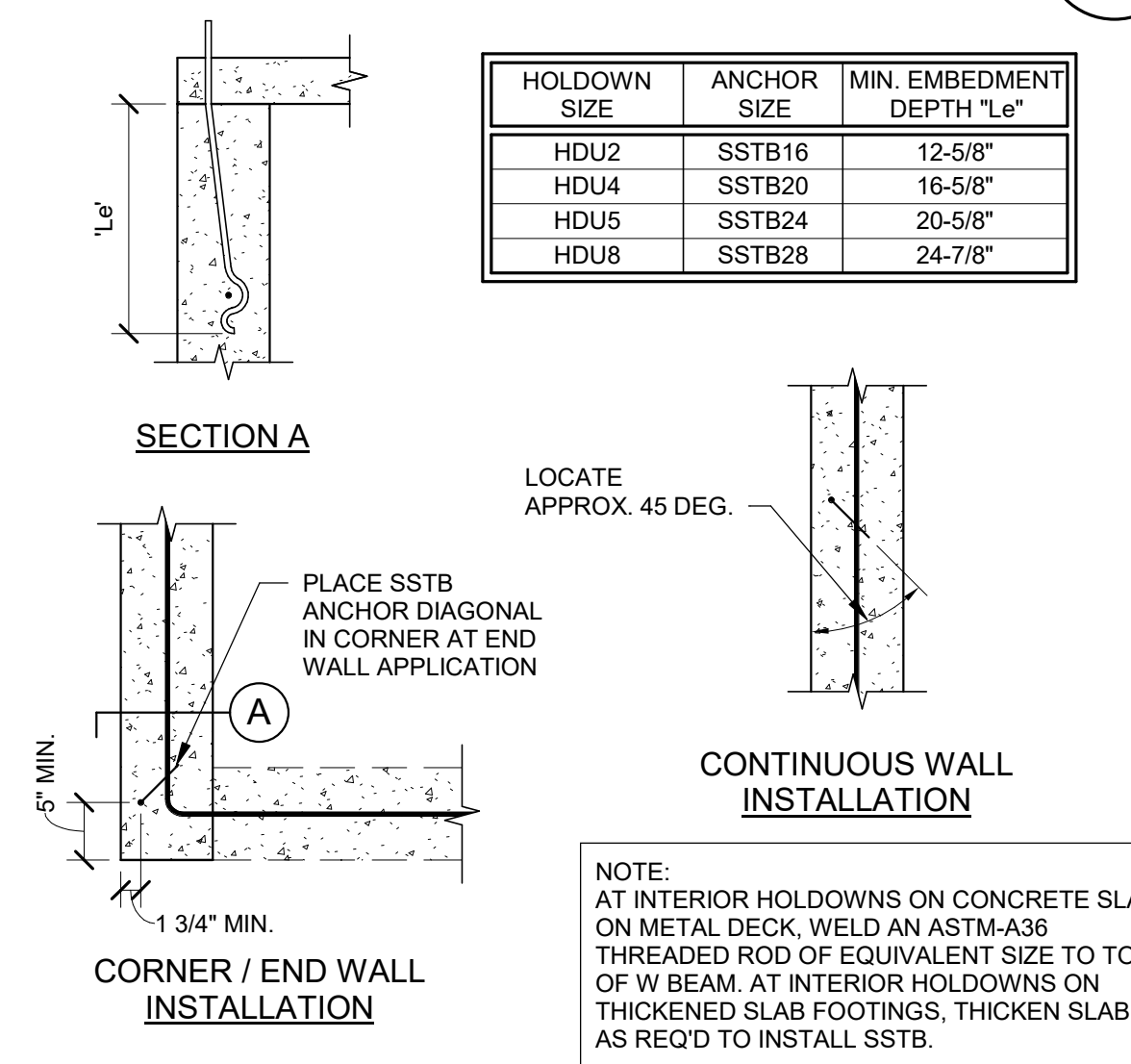
7
S2.01



TYP. HOLDOWN DETAIL

SCALE: NONE

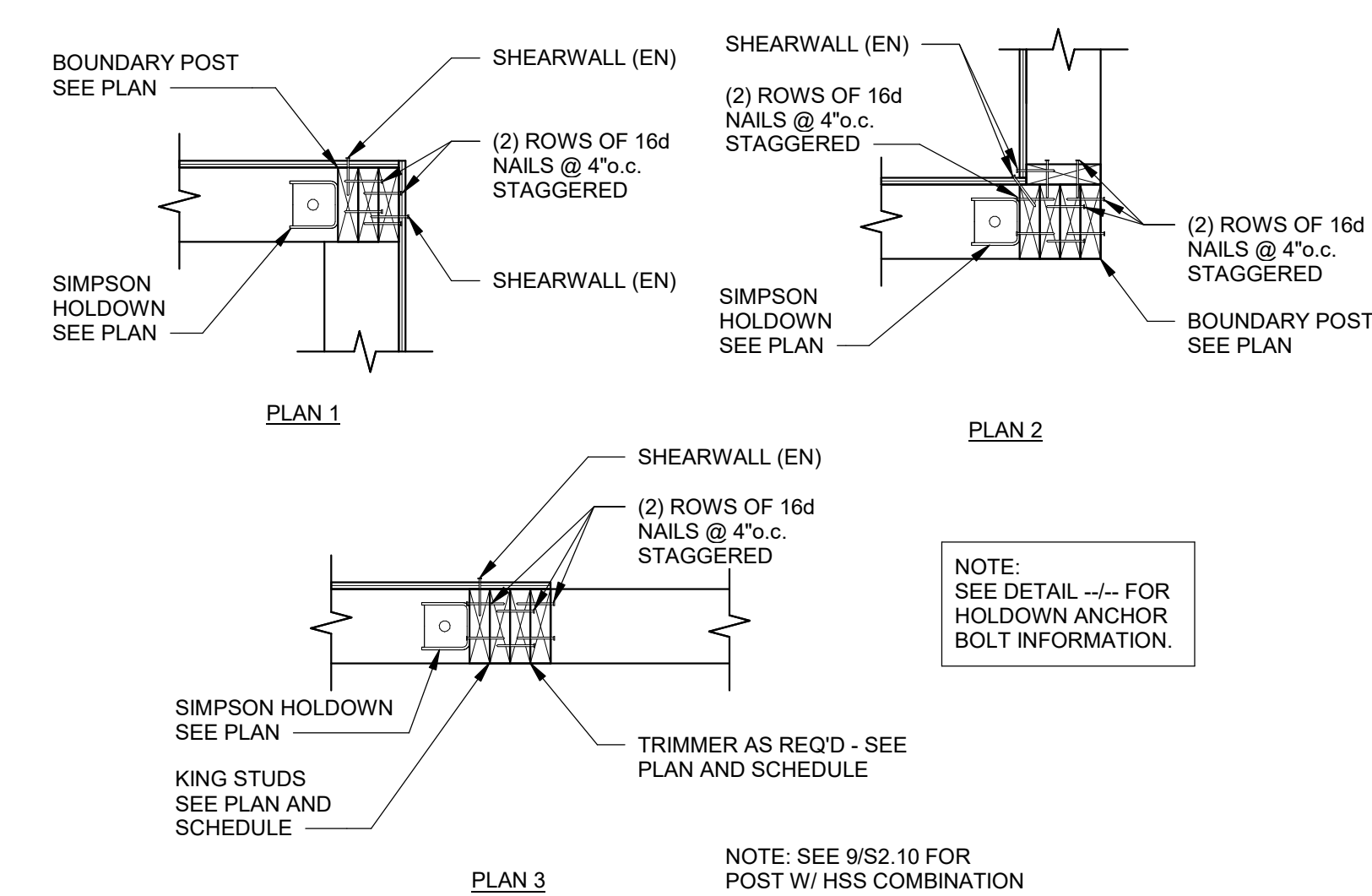
8
S2.01



HOLDOWN EMBED SCHEDULE

SCALE: NONE

9
S2.01

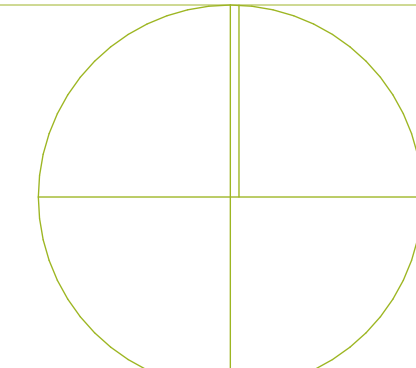


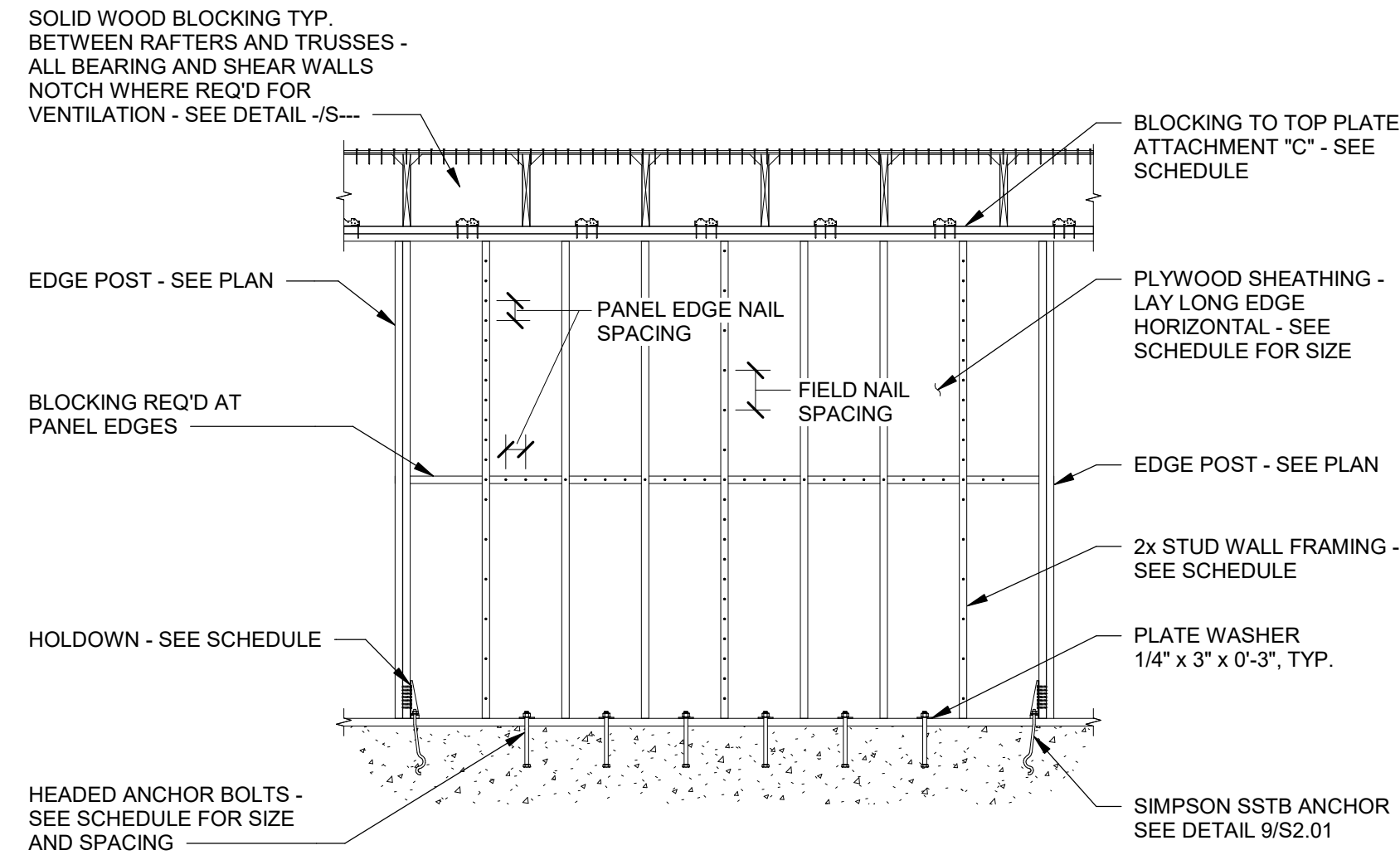
BOUNDARY POST LAYOUT FOR HOLDOWNS

SCALE: NONE

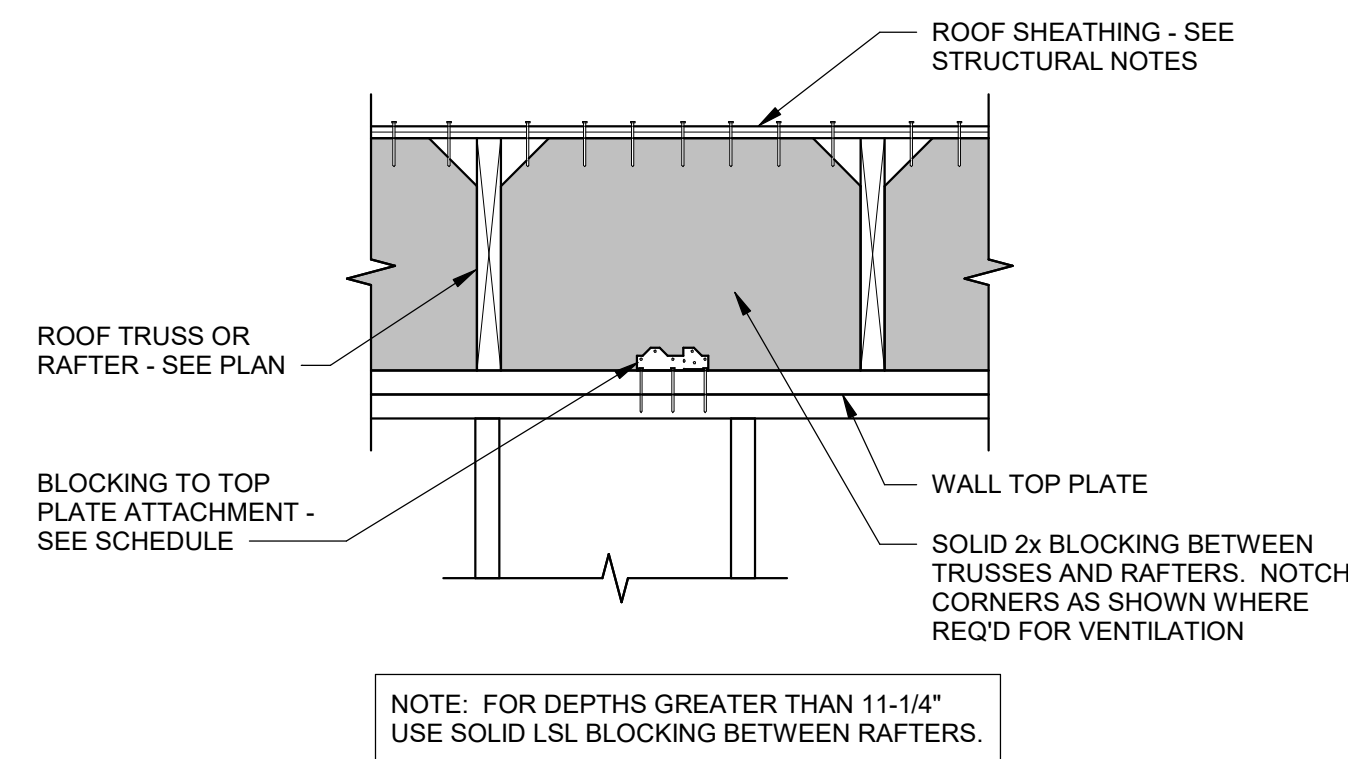
10
S2.01

NO.	DATE	DESCRIPTION

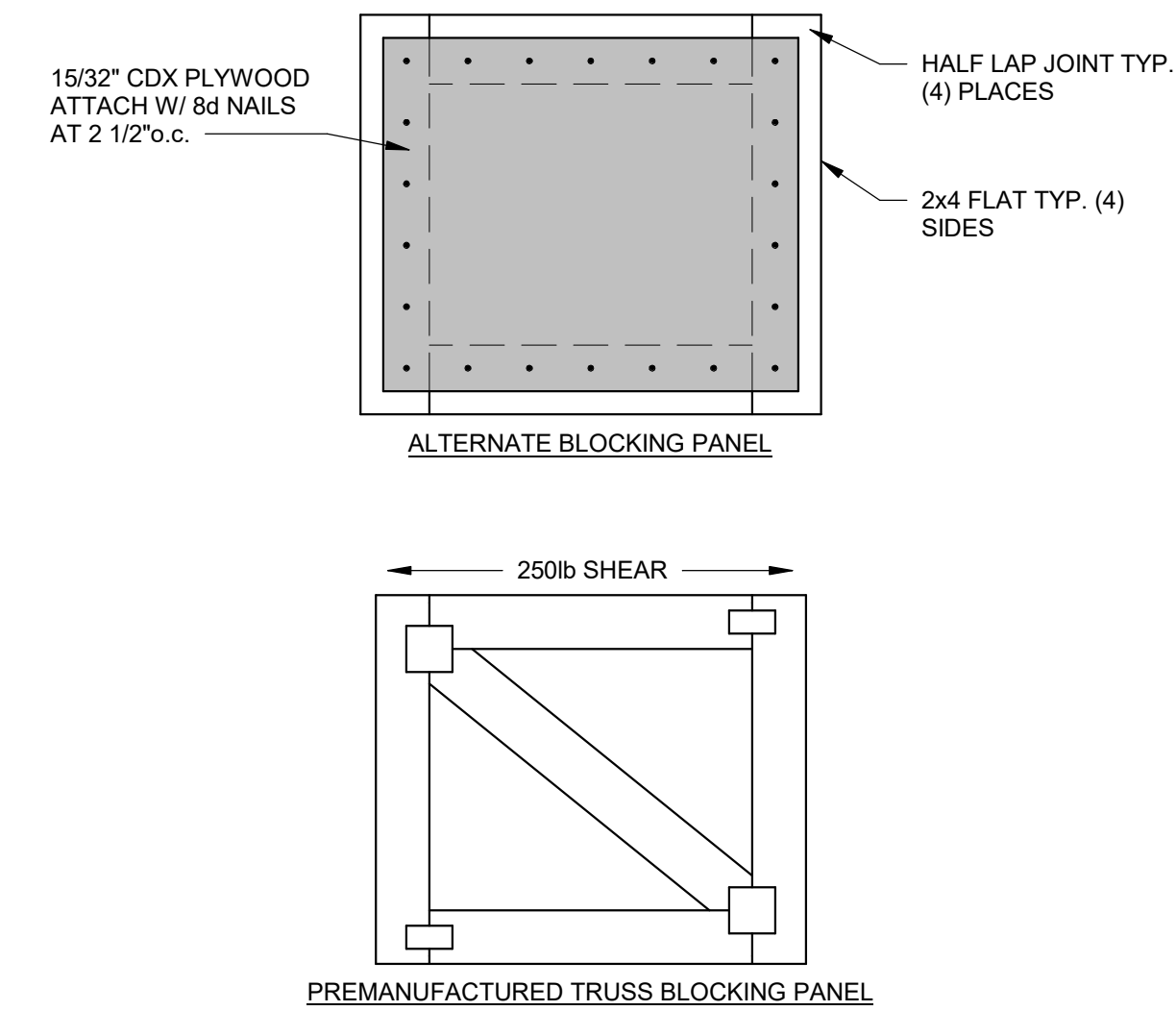




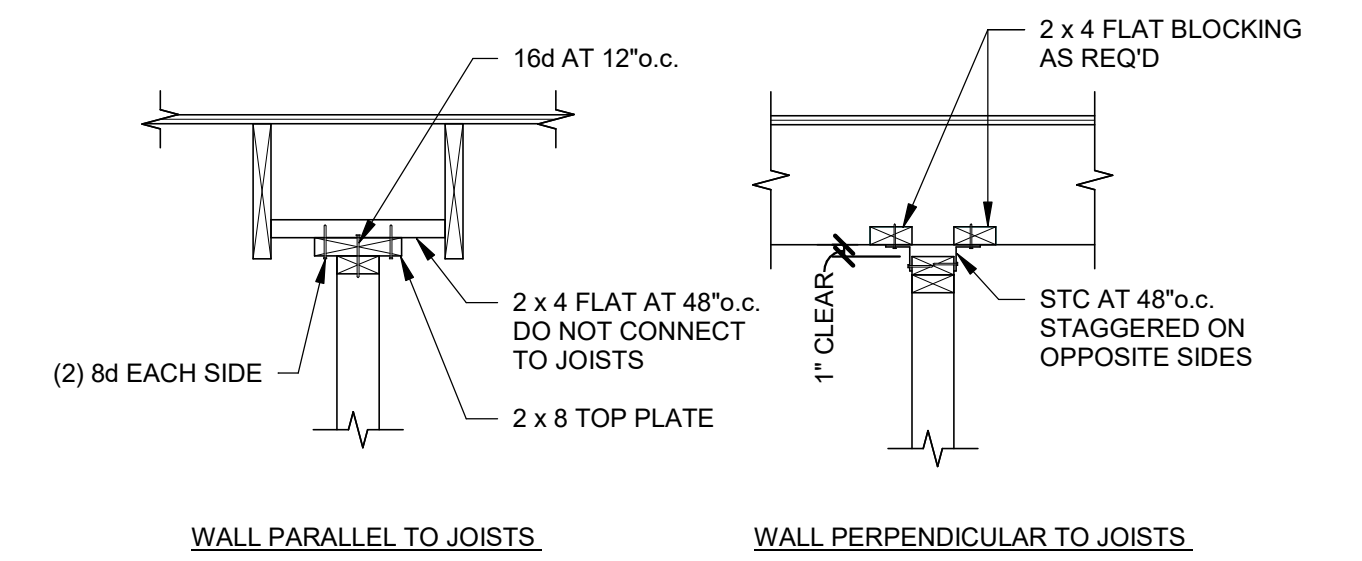
DETAIL 1
SCALE: NONE
S2.02



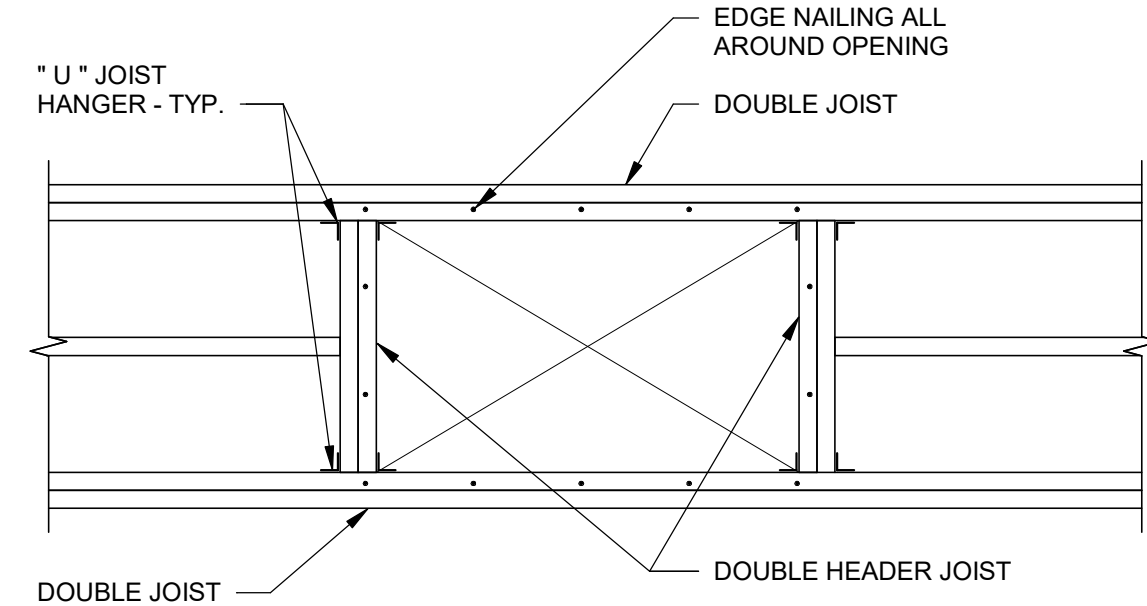
DETAIL 2
SCALE: NONE
S2.02



TRUSS BLOCKING PANELS 3
SCALE: NONE
S2.02

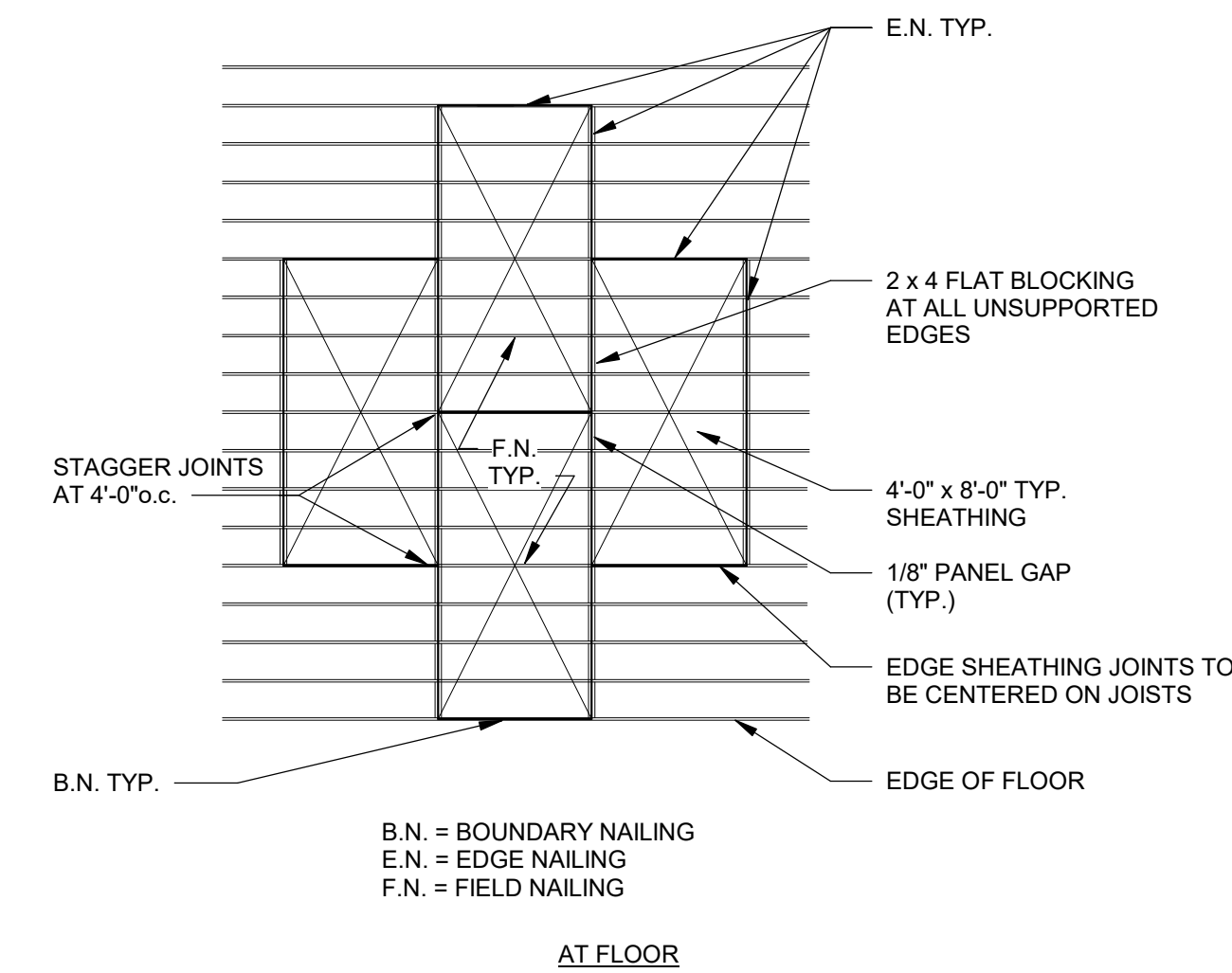


DETAIL 4
SCALE: NONE
S2.02

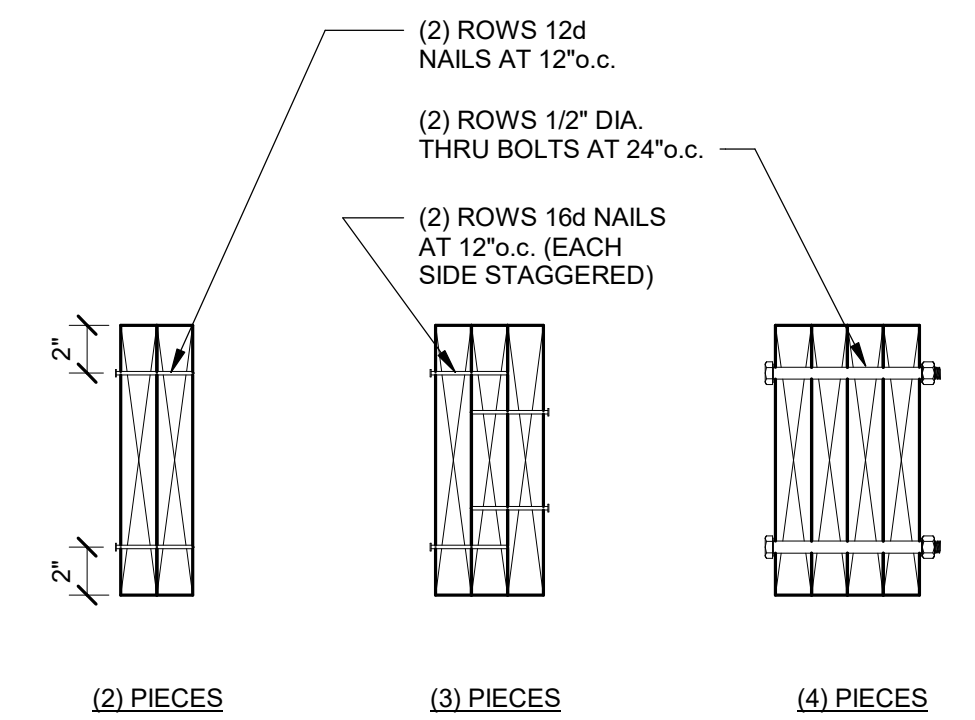
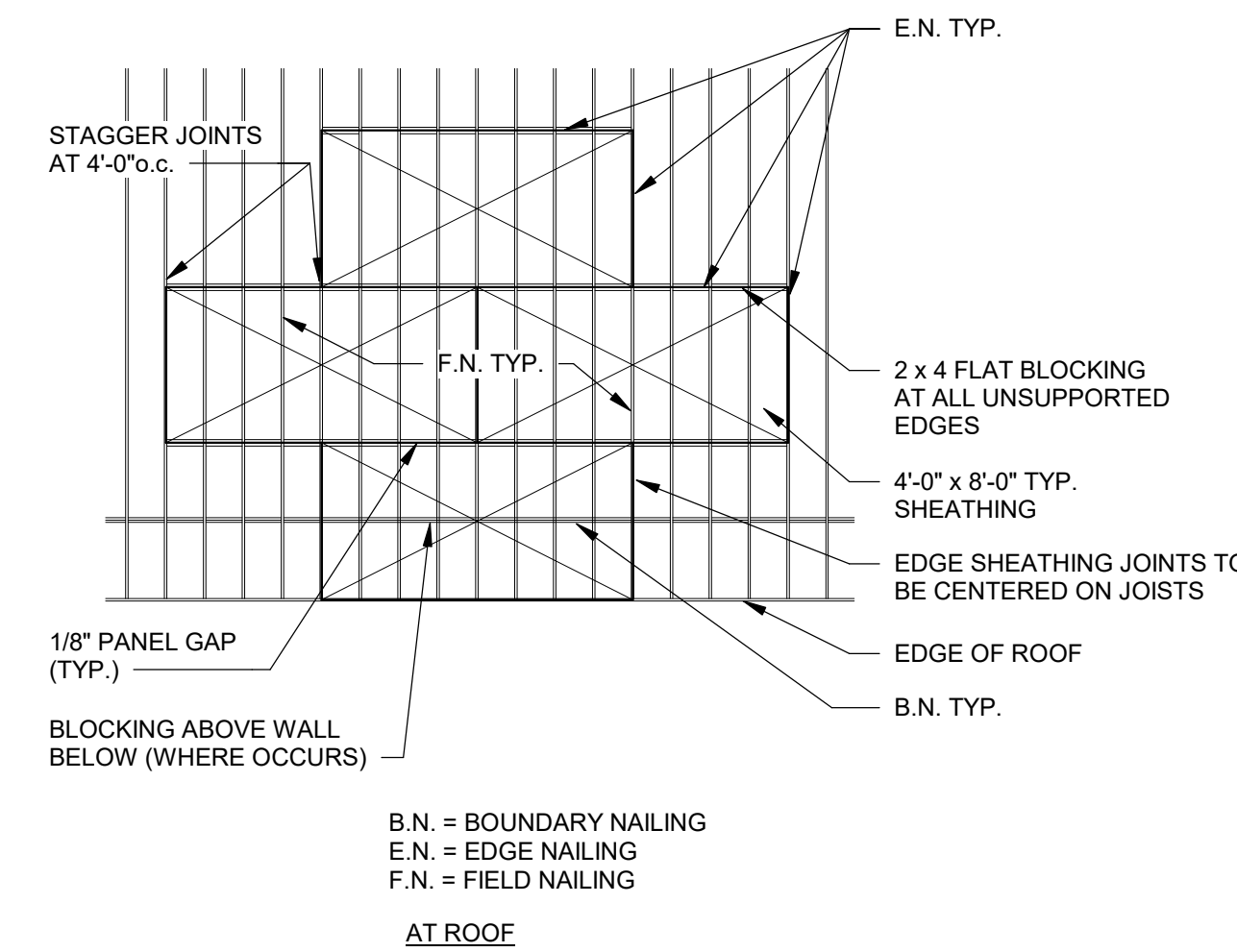


MAX. OPENING 4'-0" x 4'-0"

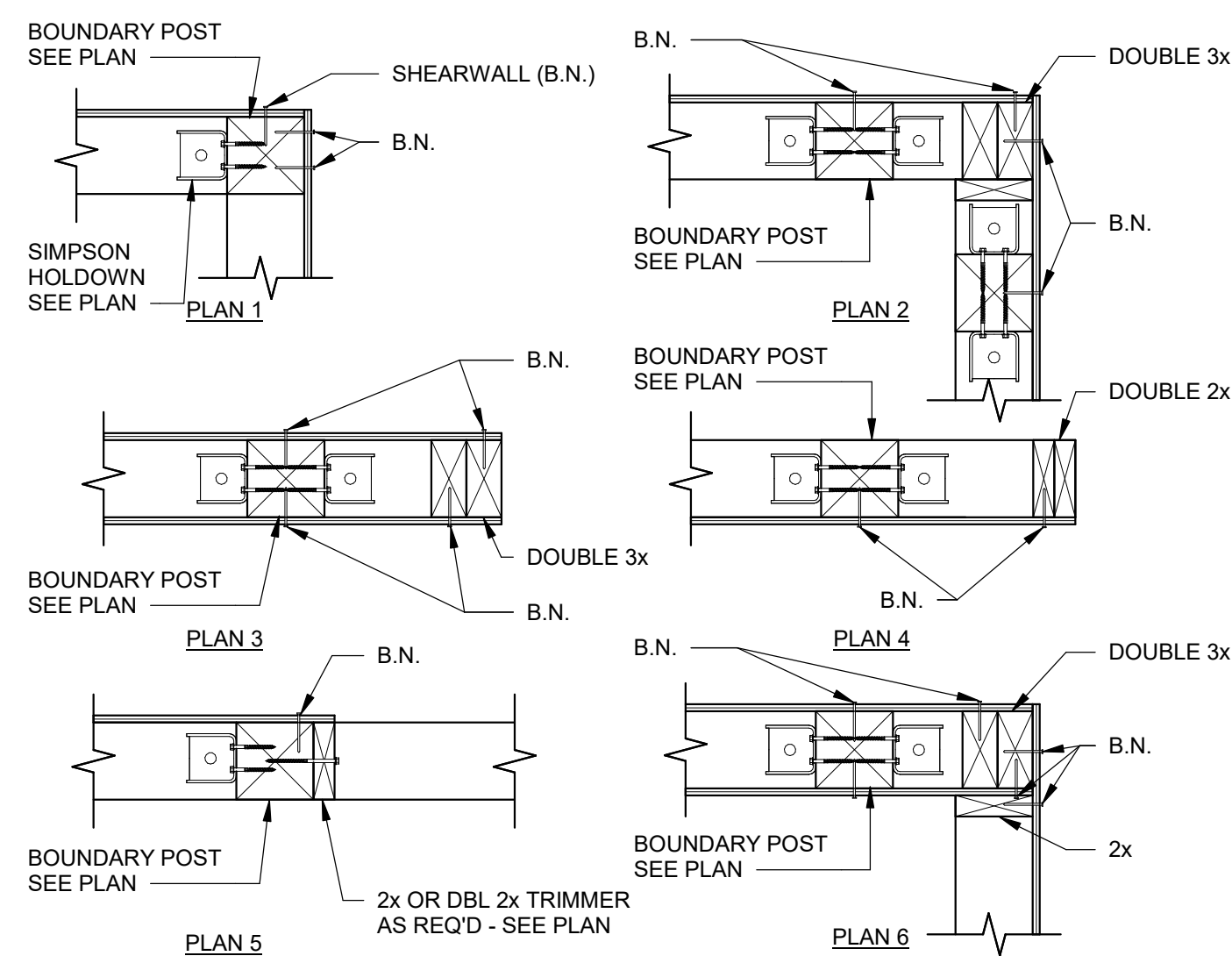
DETAIL 5
SCALE: NONE
S2.02



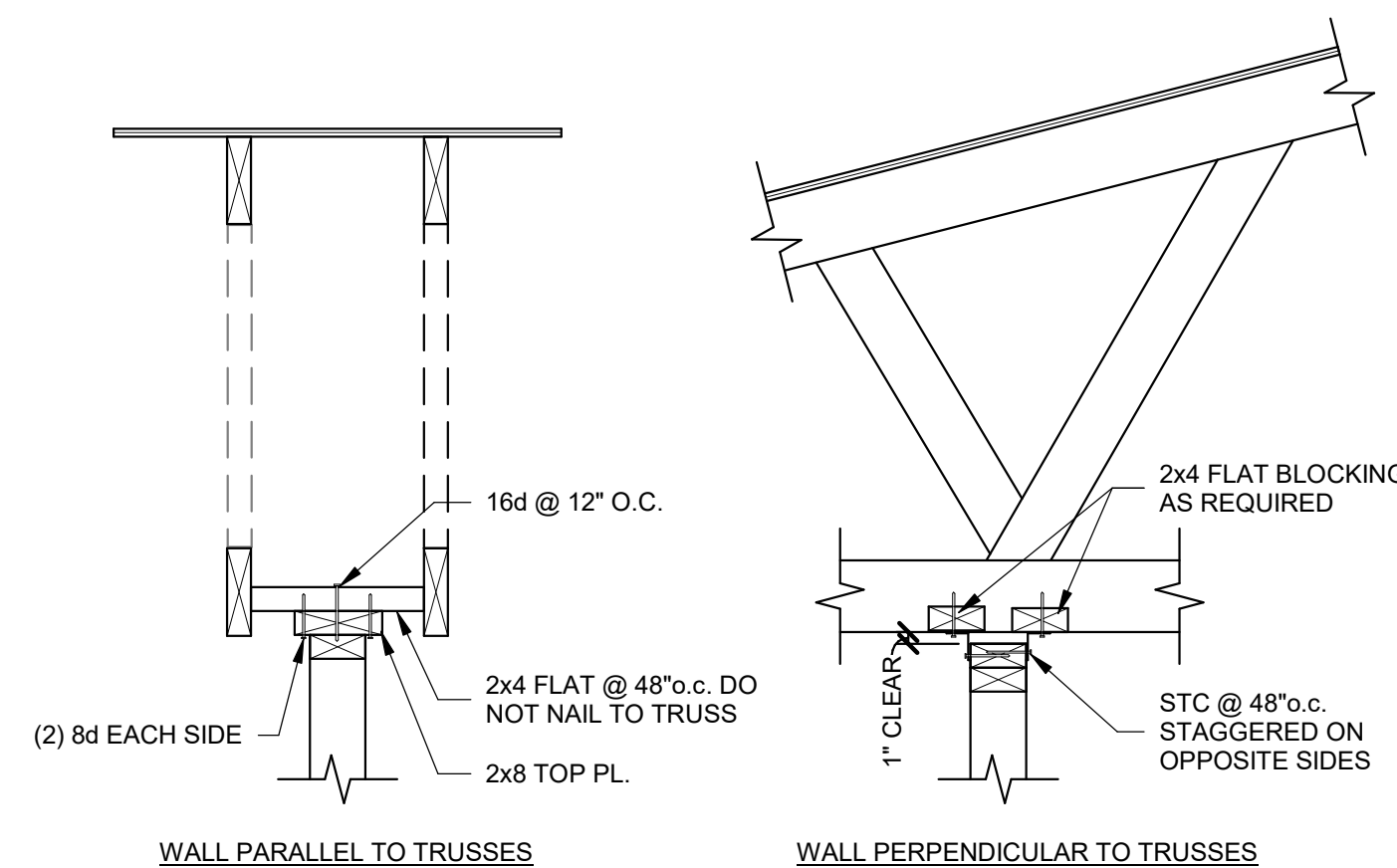
TYP. SHEATHING LAYOUT 6
SCALE: NONE
S2.02



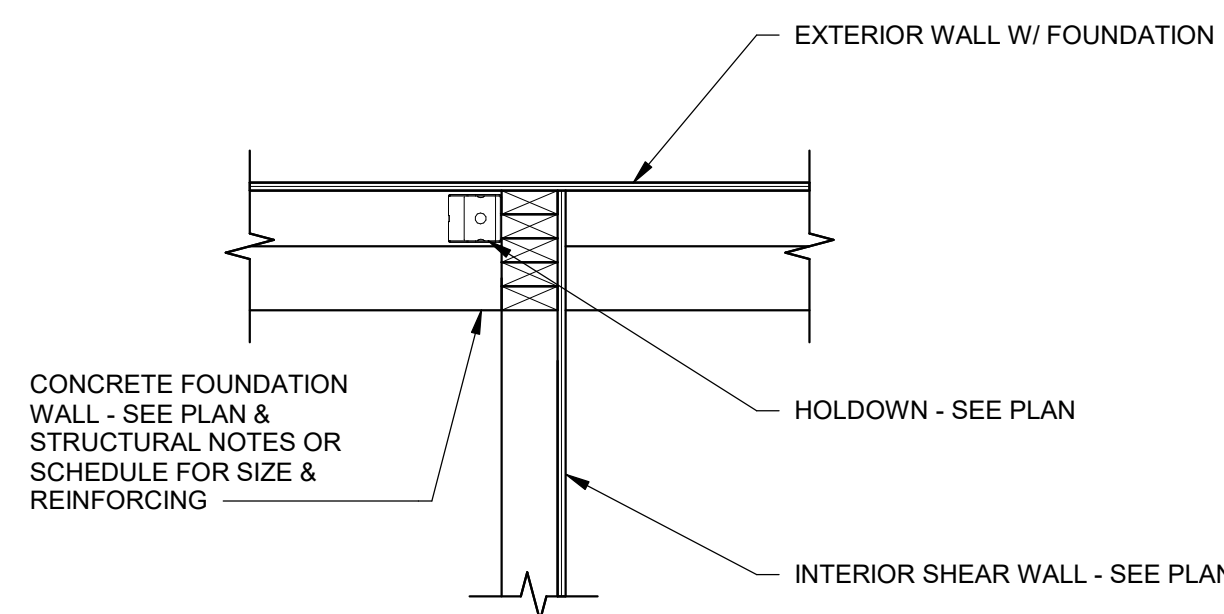
HEADER AND BEAM MEMBER CONNECTIONS 7
SCALE: NONE
S2.02



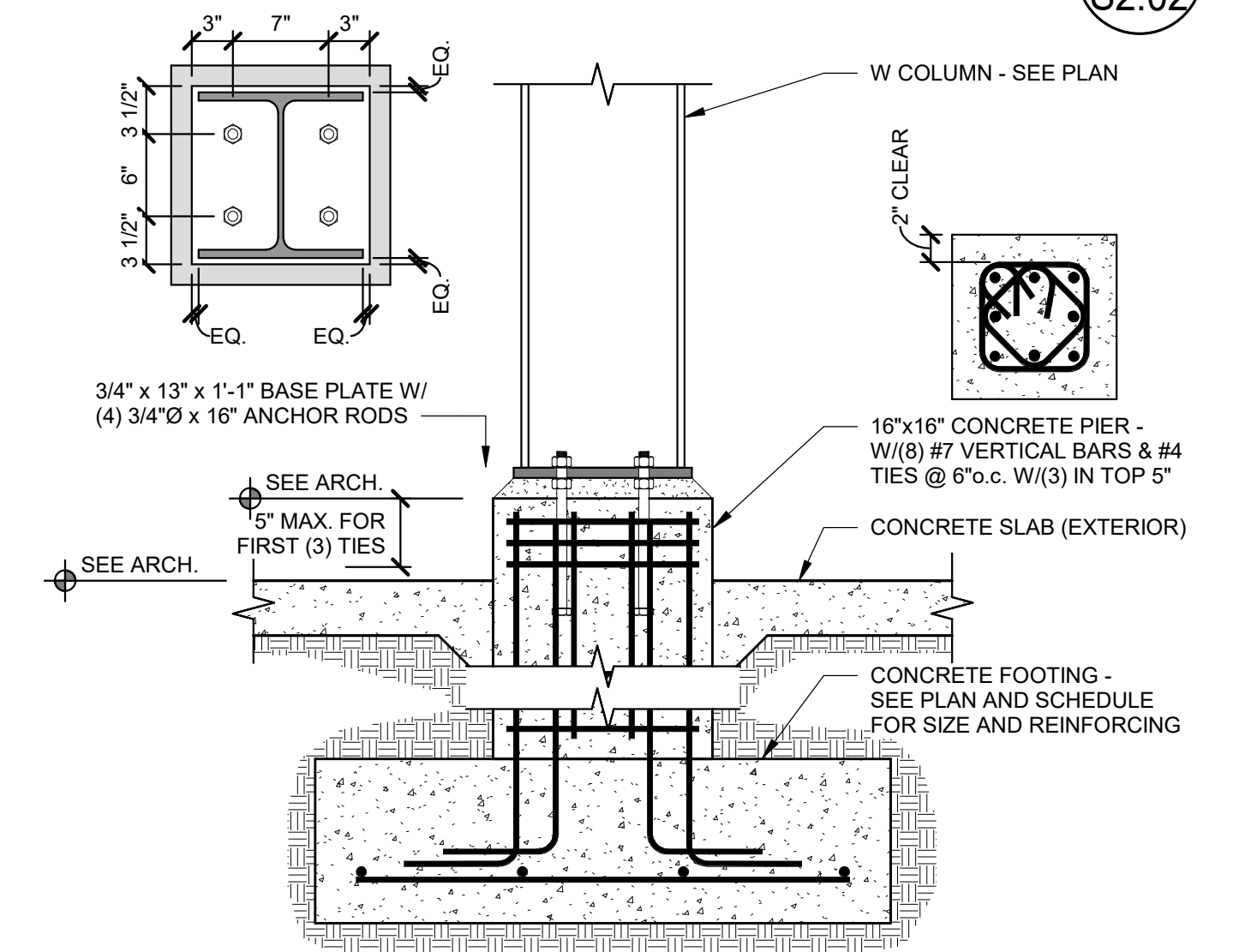
DETAIL 8
SCALE: NONE
S2.02



DETAIL 9
SCALE: NONE
S2.02

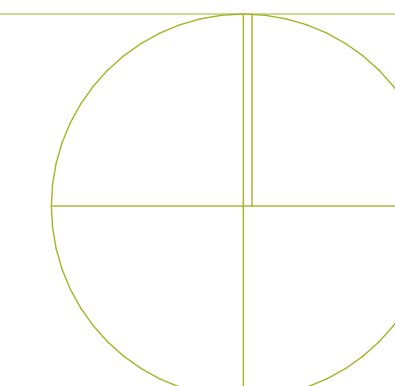


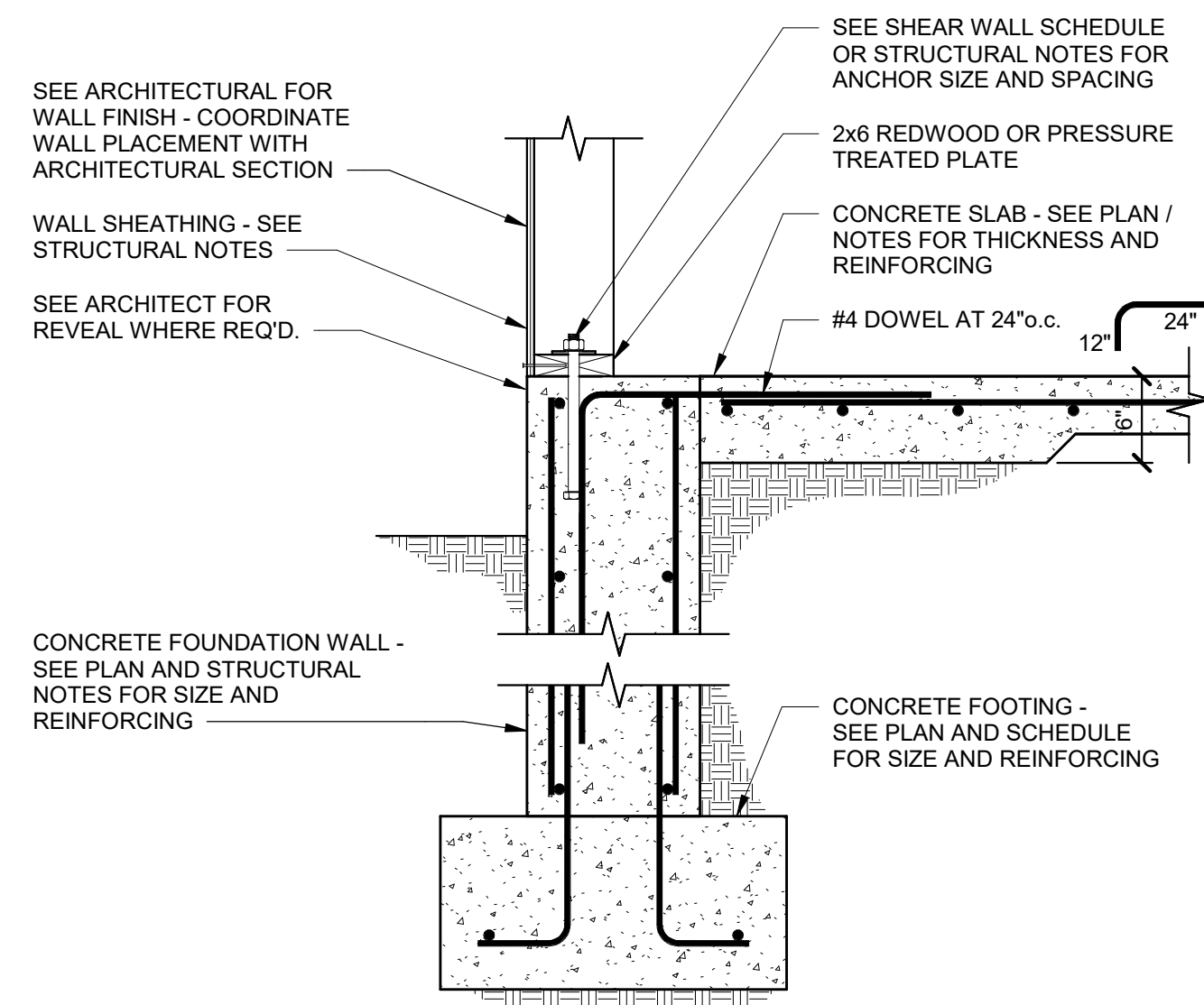
DETAIL 10
SCALE: NONE
S2.02



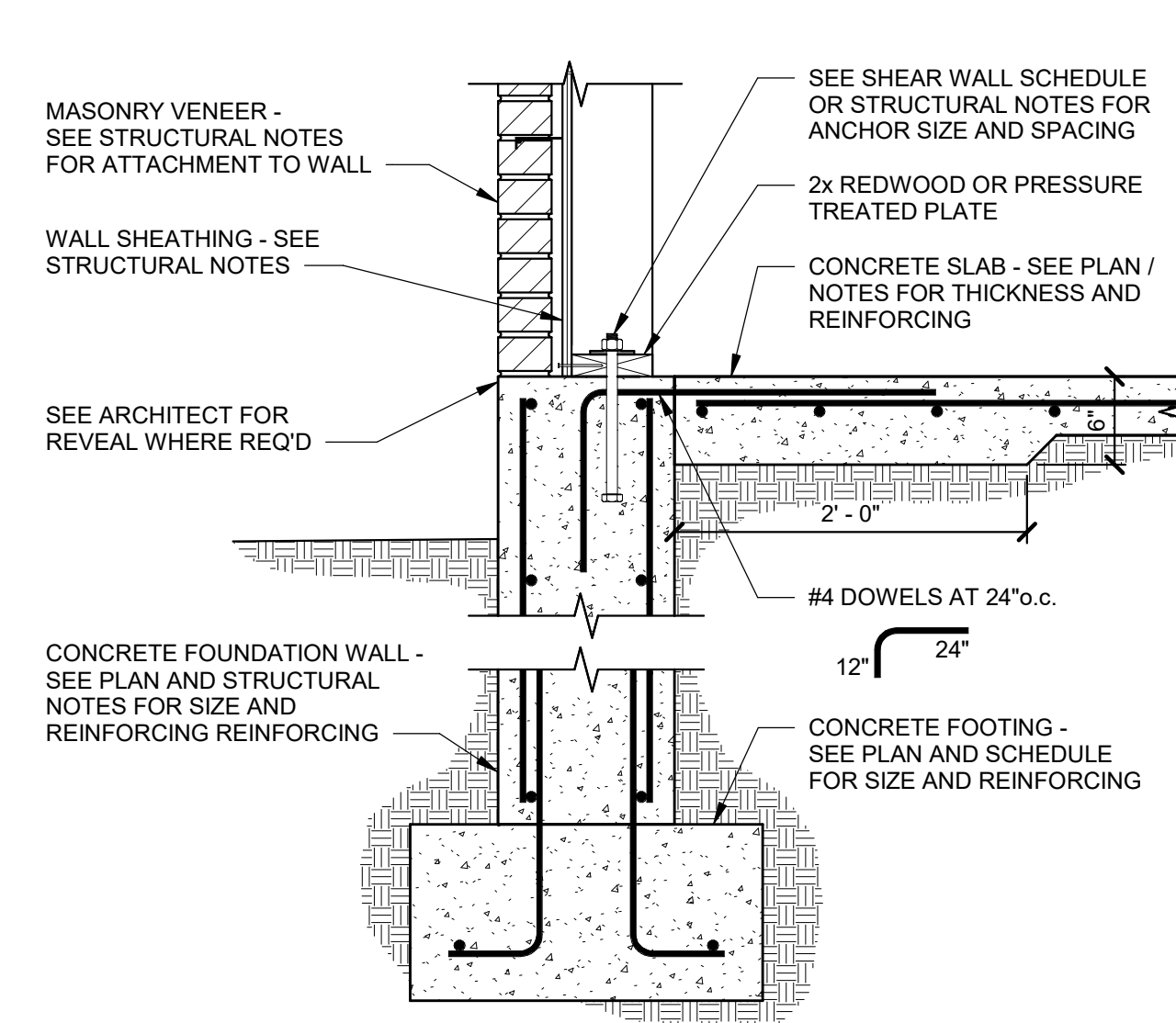
CONCRETE PIER 11
SCALE: NONE
S2.02

NO.	DATE	DESCRIPTION

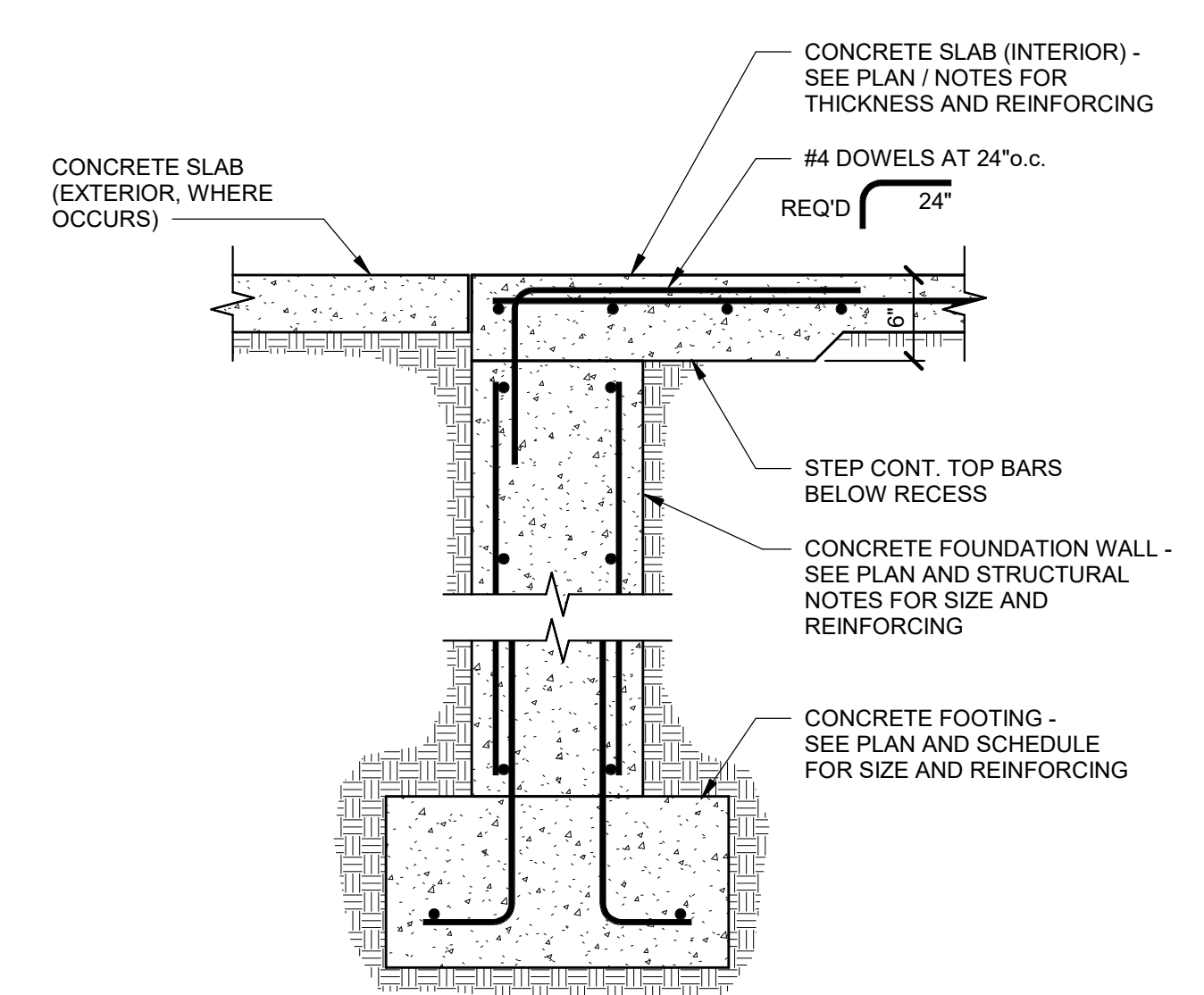




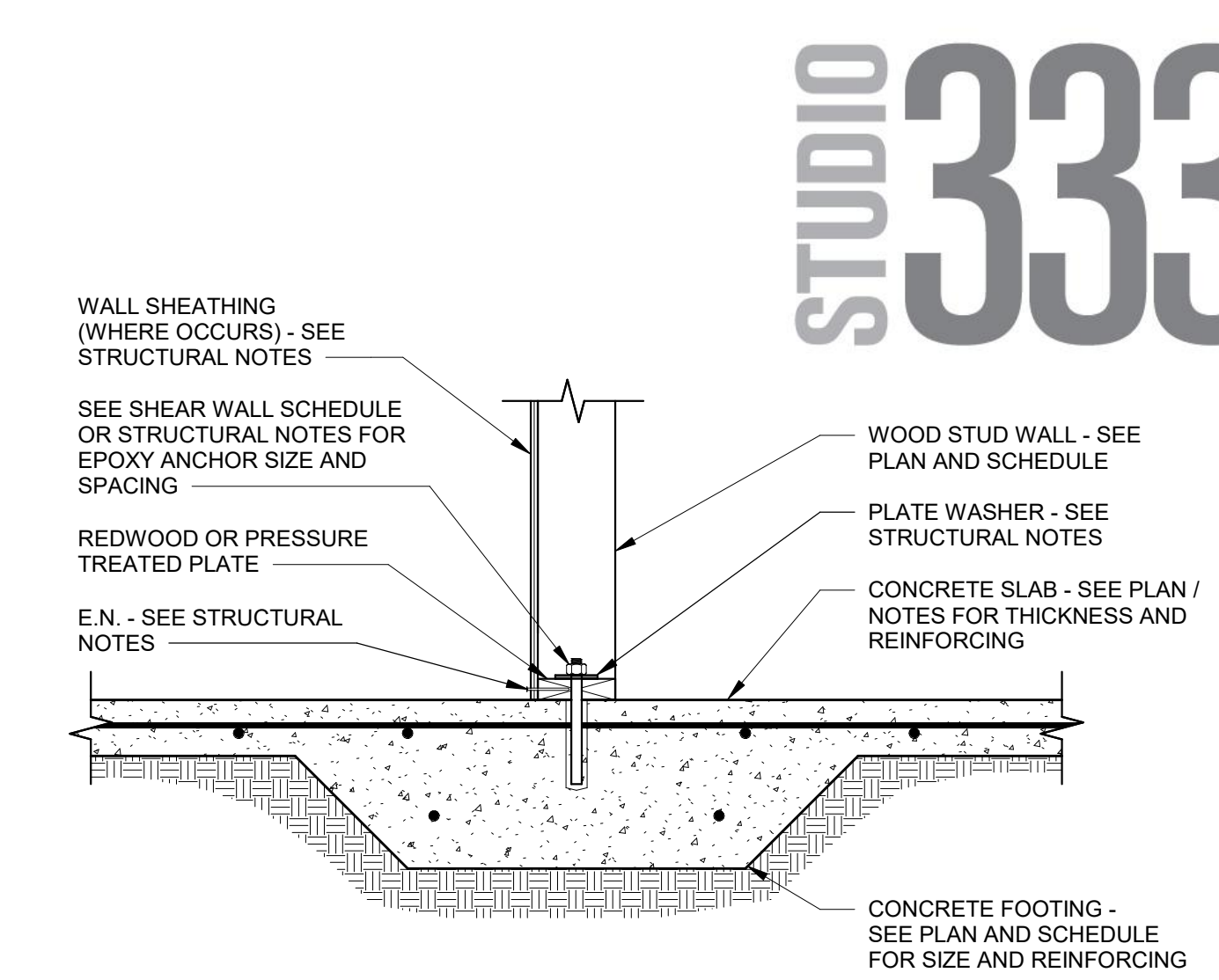
FOOTING SECTION @ TIMBER WALL DETAIL 1
SCALE: NONE S2.10



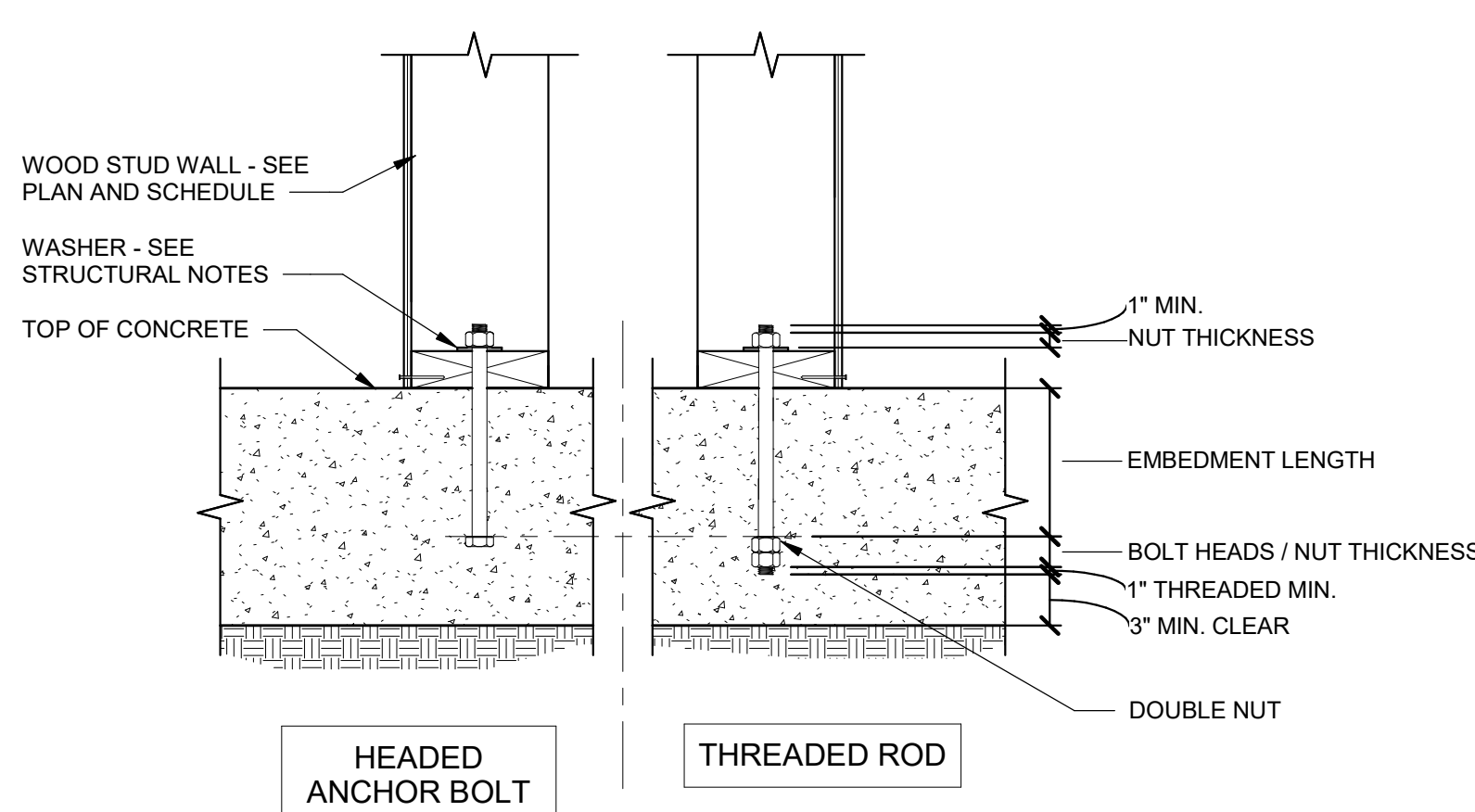
SECTION @ EXTERIOR TIMBER WALL 2
SCALE: NONE S2.10



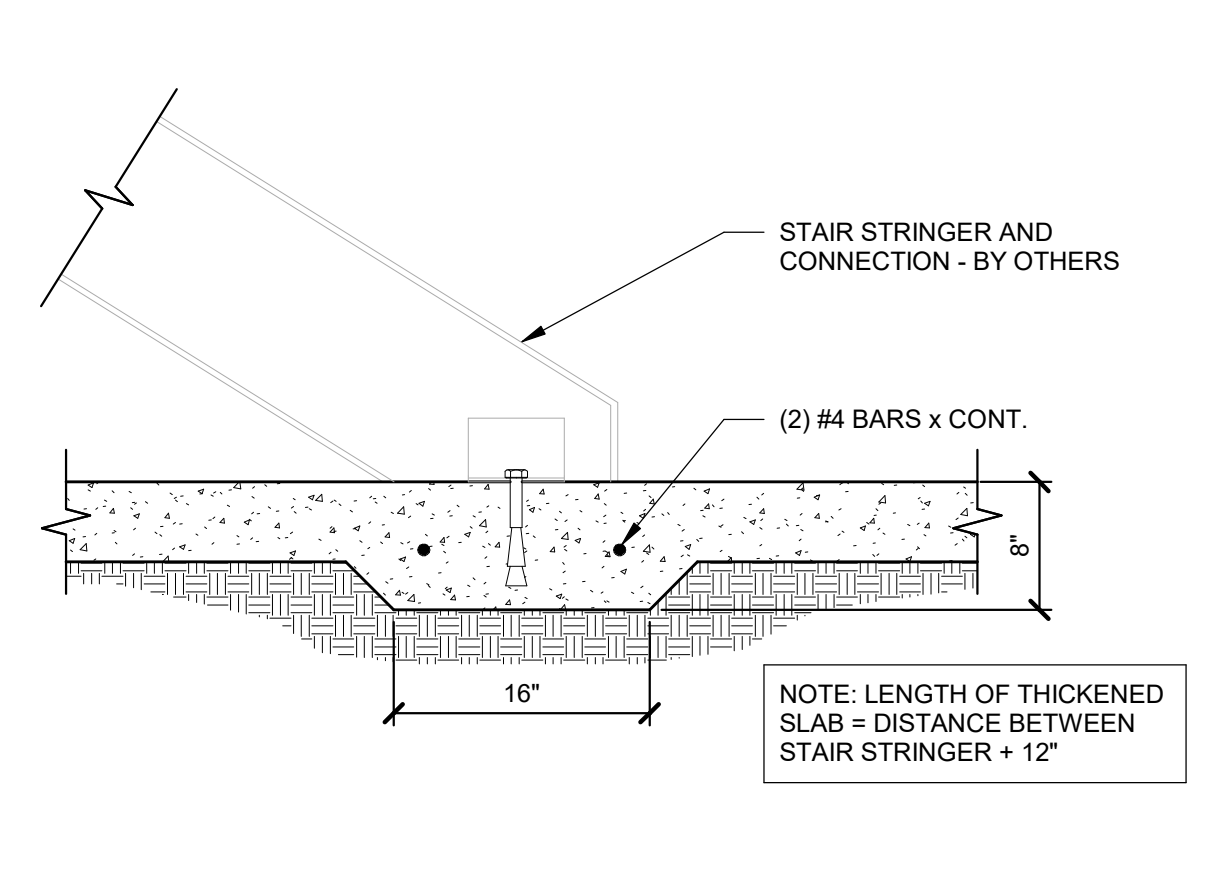
CONCRETE FOUNDATION @ OPENING 3
SCALE: NONE S2.10



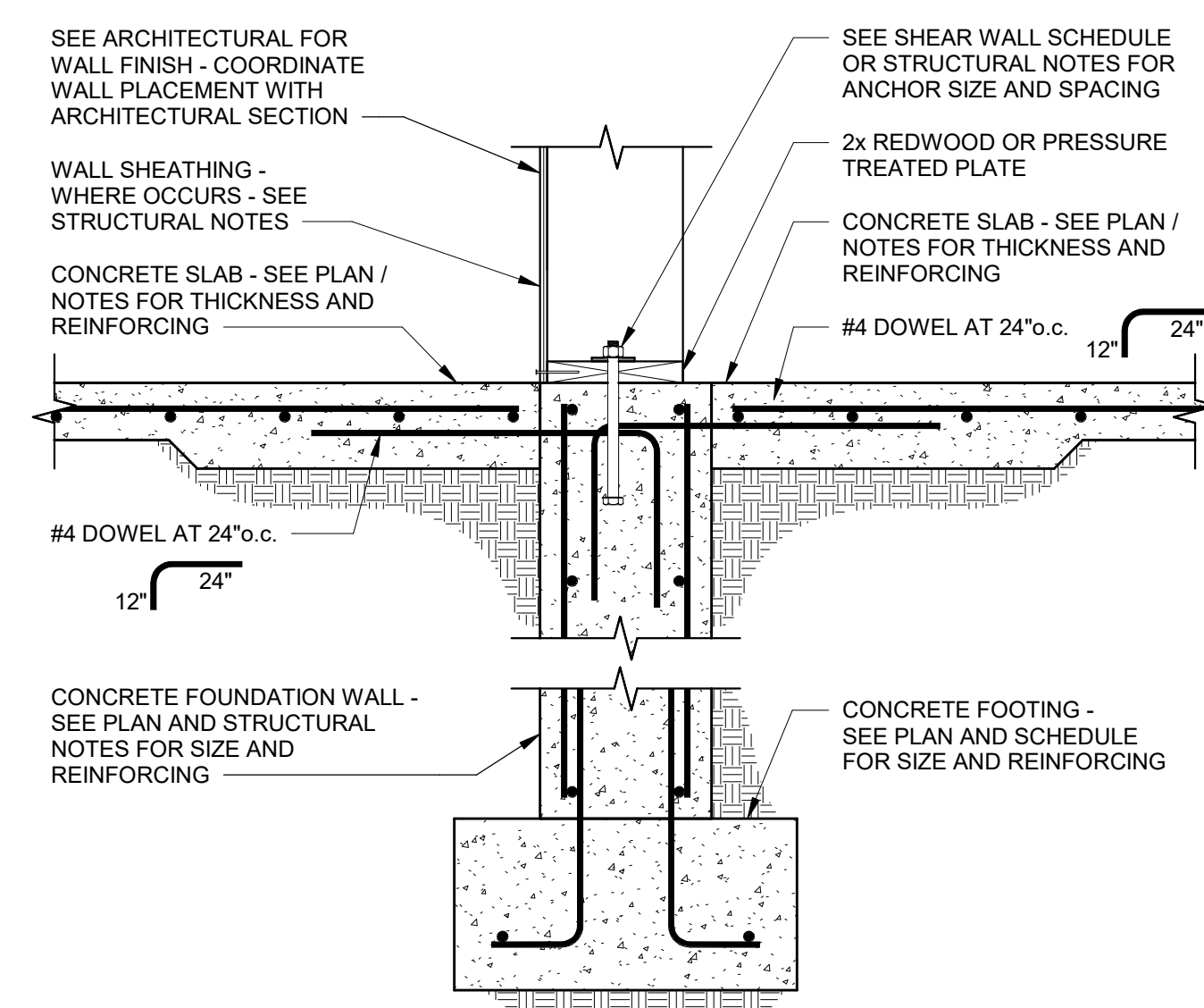
STUD WALL ON THICKENED SLAB 4
SCALE: NONE S2.10



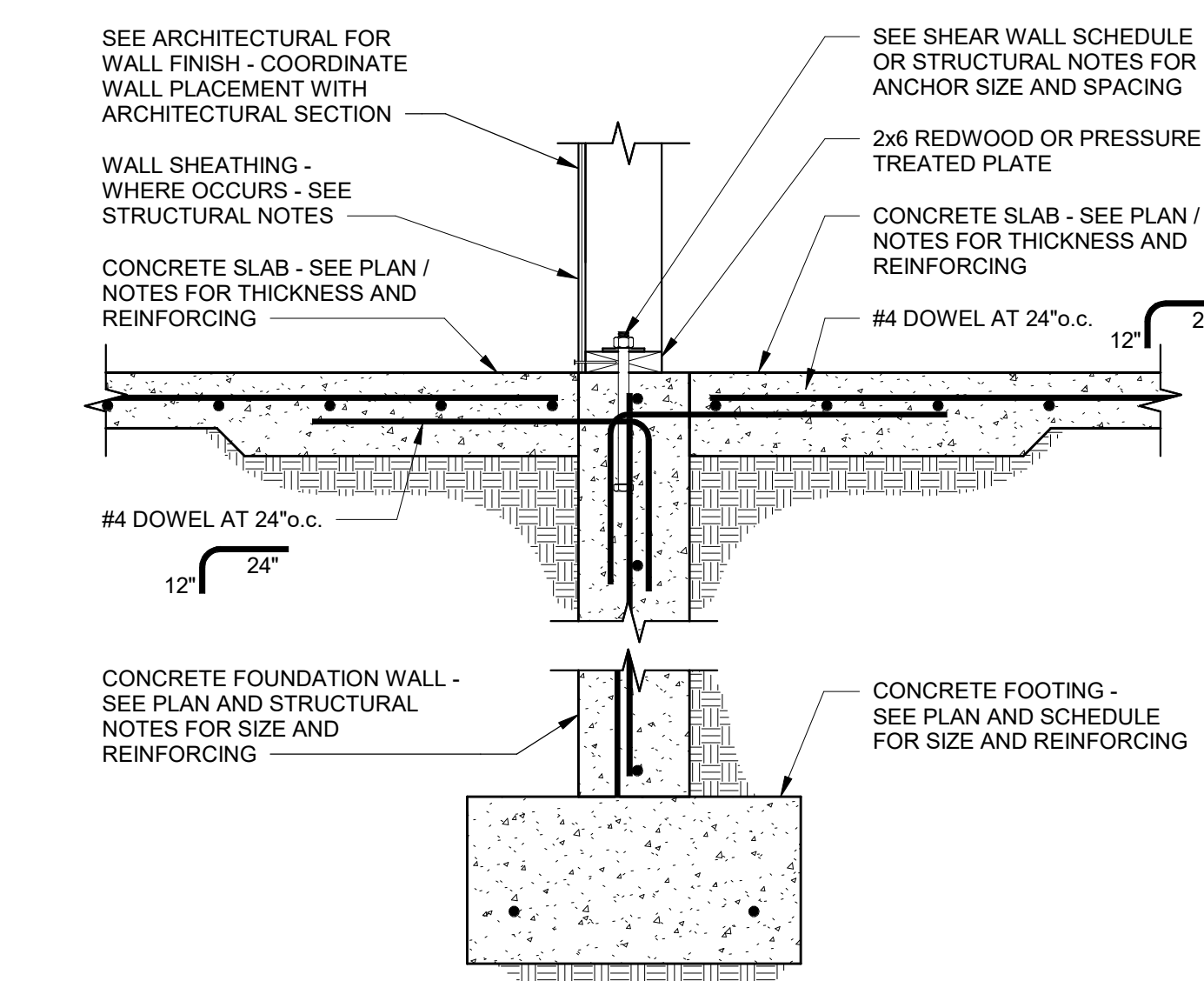
DETAIL 5
SCALE: NONE S2.10



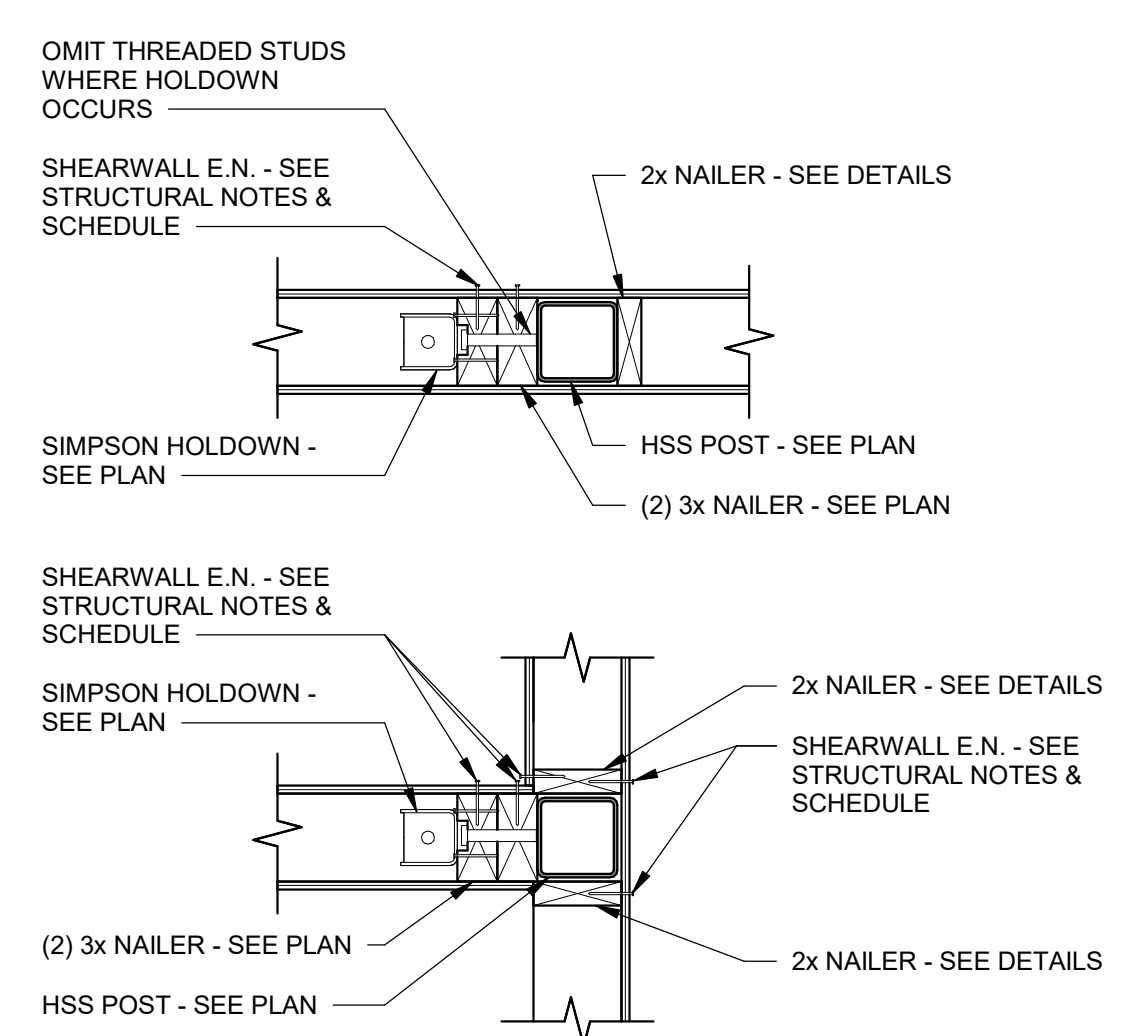
THICKENED SLAB @ STAIR 6
SCALE: NONE S2.10



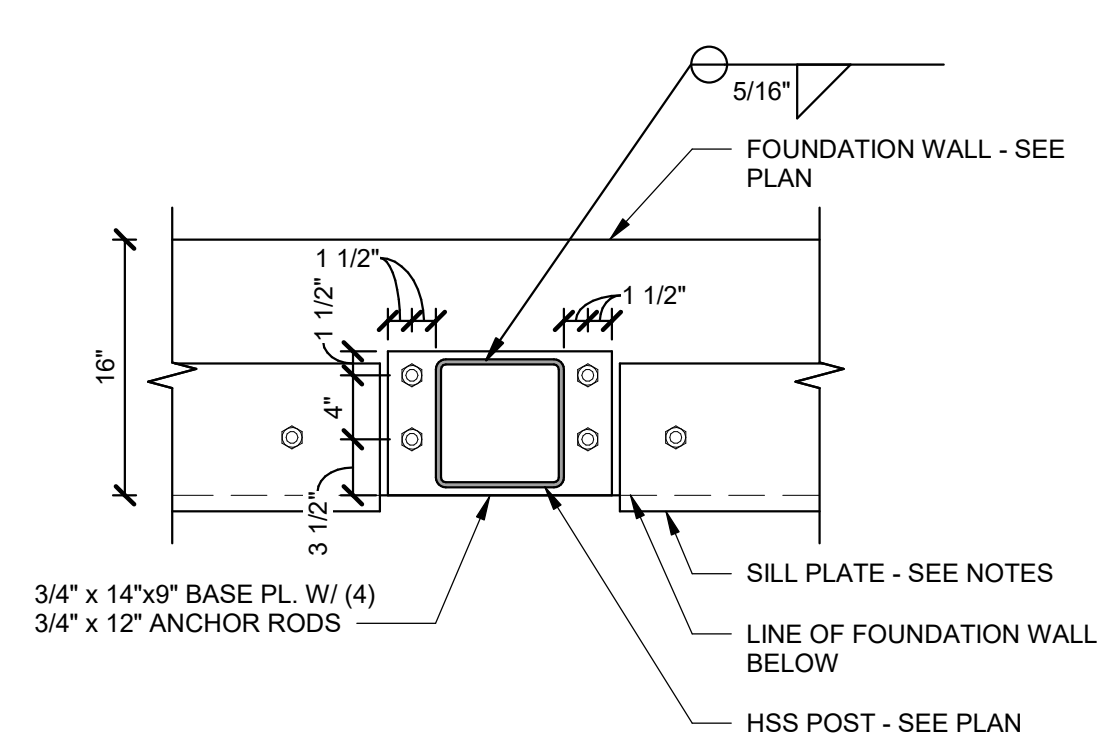
FOOTING SECTION @ TIMBER WALL DETAIL 7
SCALE: NONE S2.10



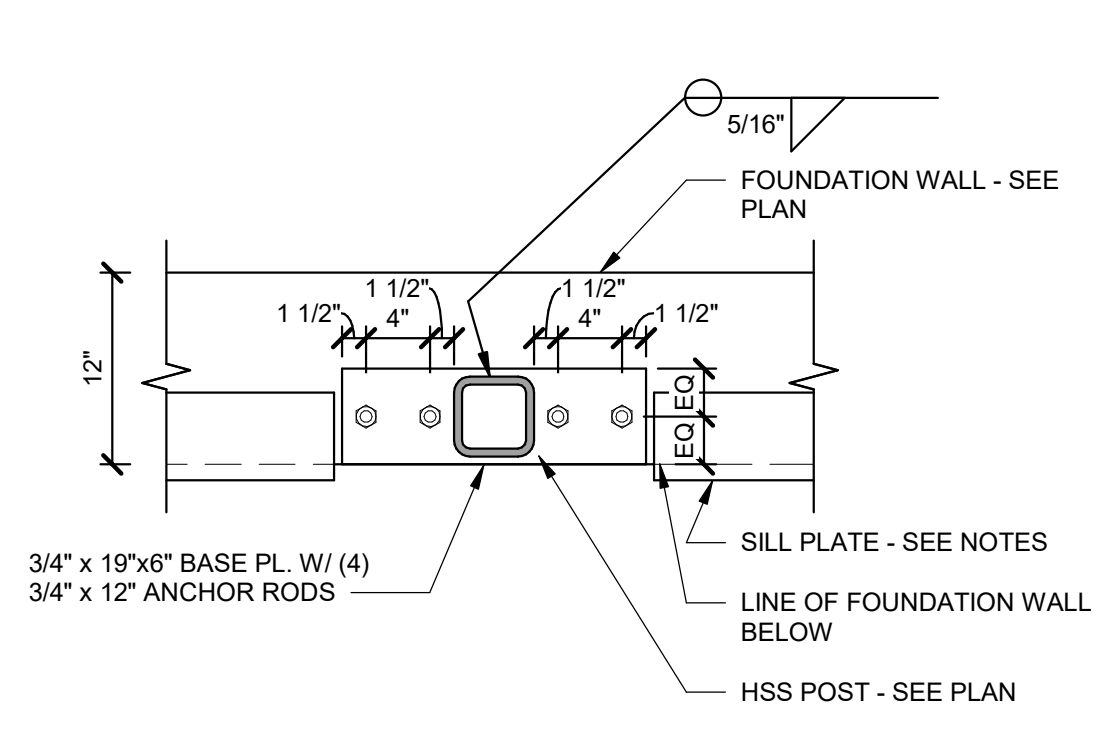
FOOTING SECTION @ TIMBER WALL DETAIL 8
SCALE: NONE S2.10



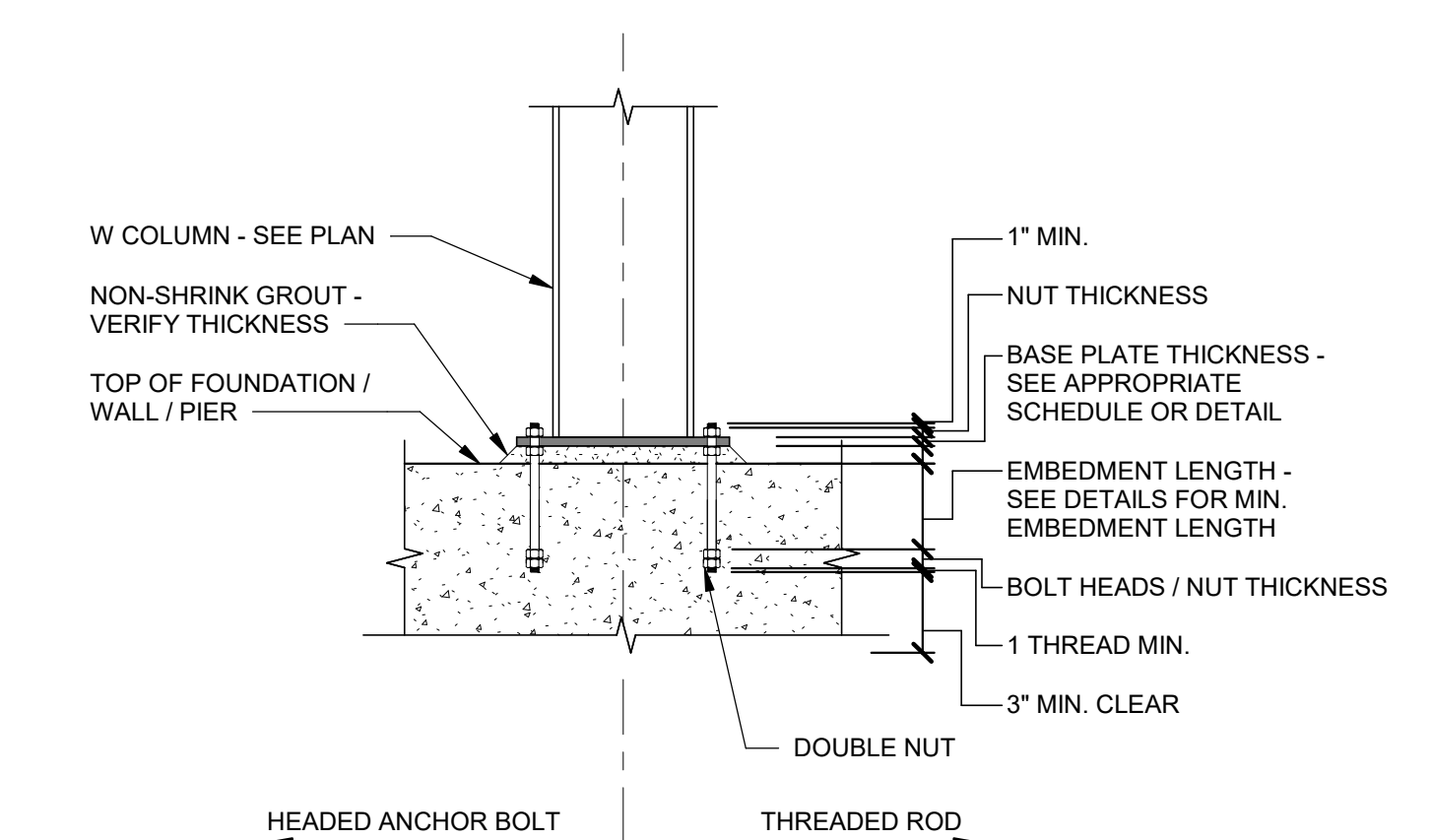
DETAIL 9
SCALE: NONE S2.10



DETAIL 10
SCALE: NONE S2.10

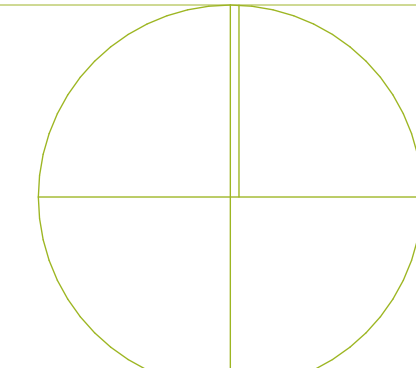


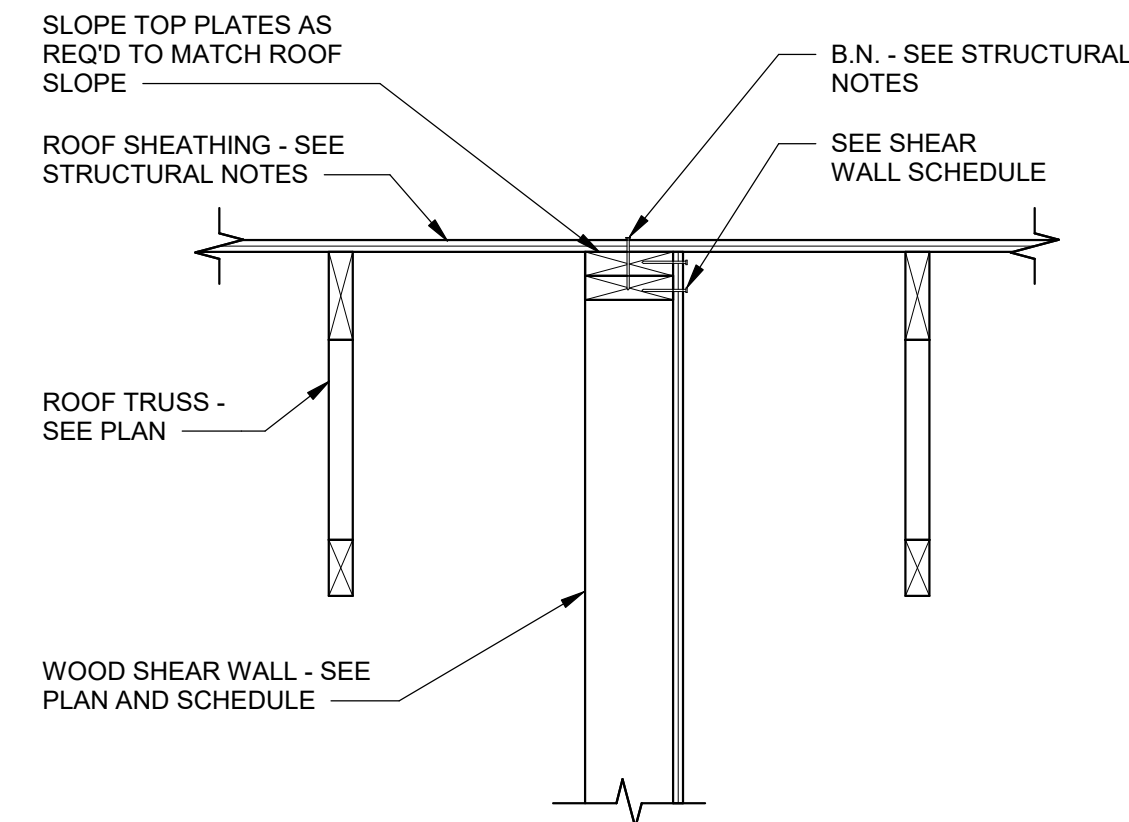
DETAIL 11
SCALE: NONE S2.10



TYPICAL ANCHOR BOLT EMBEDMENT DETAIL 12
SCALE: NONE S2.10

NO.	DATE	DESCRIPTION



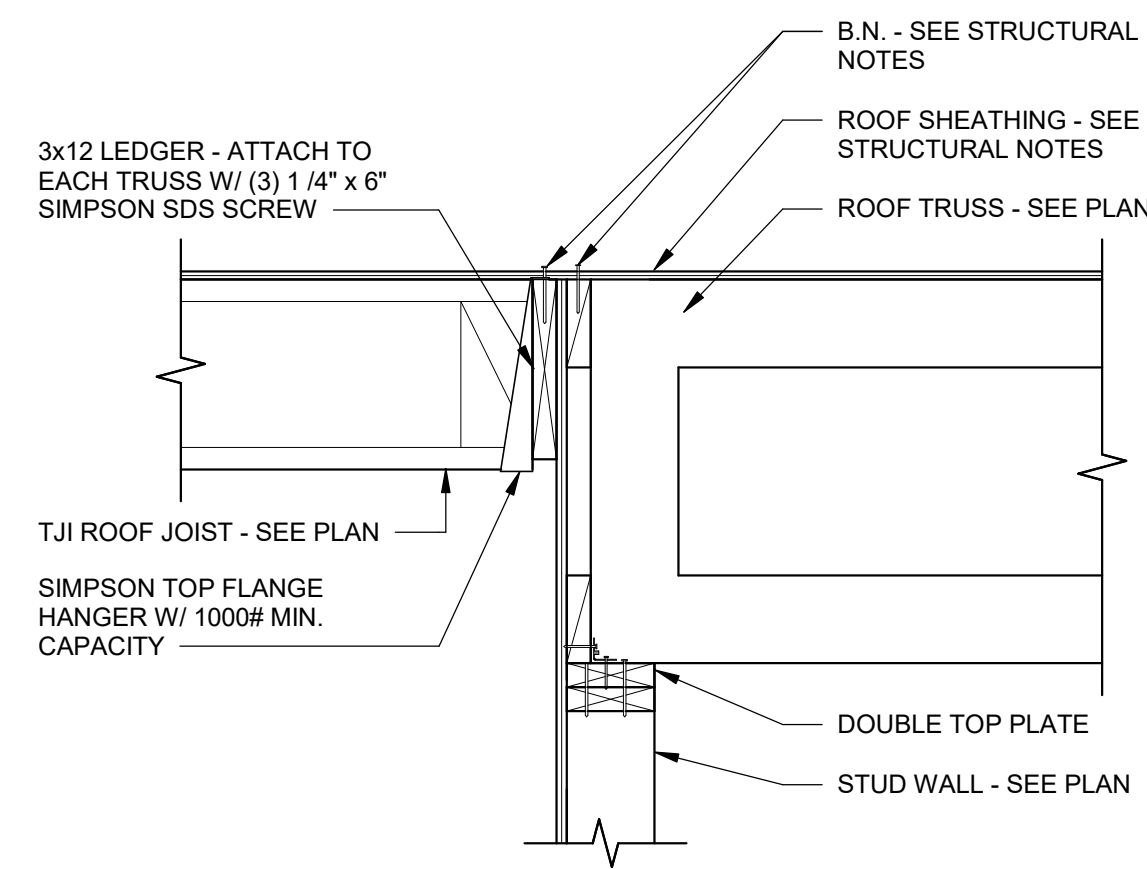


SHEAR WALL PARALLEL TO ROOF TRUSSES

DETAIL

SCALE: NONE

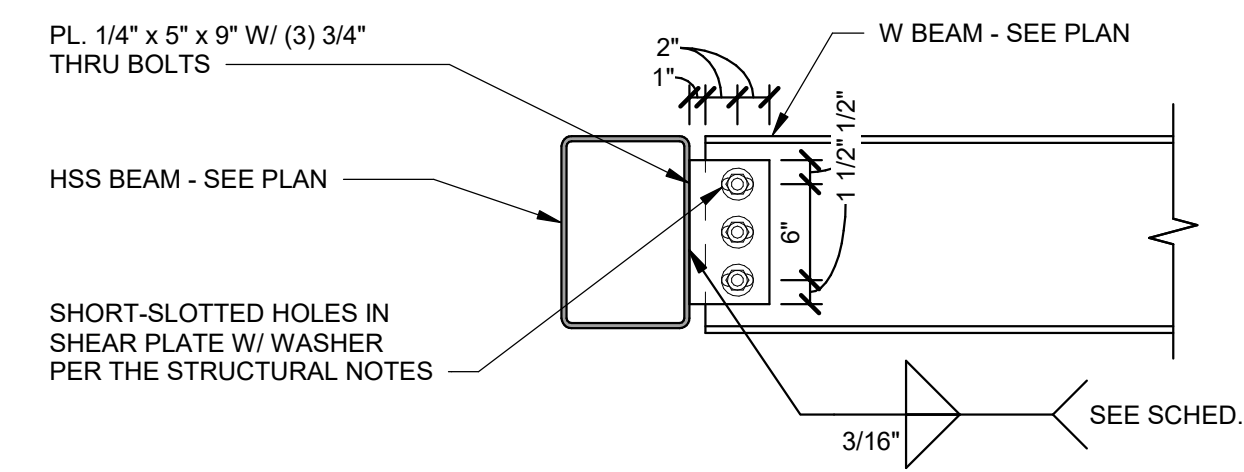
1
S2.20



DETAIL

SCALE: NONE

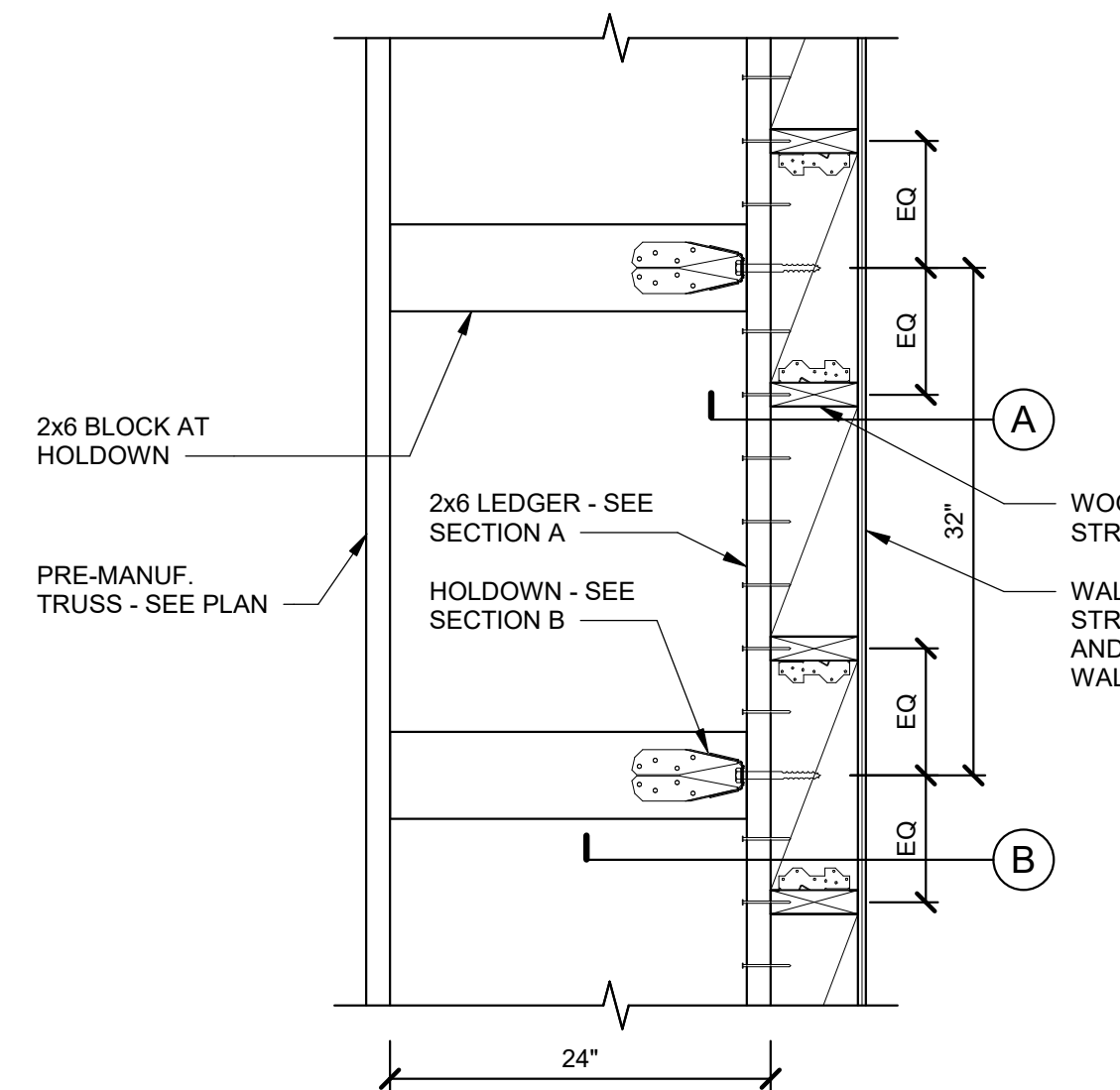
2
S2.20



TYPICAL BEAM CONNECTIONS DETAIL

SCALE: NONE

3
S2.20

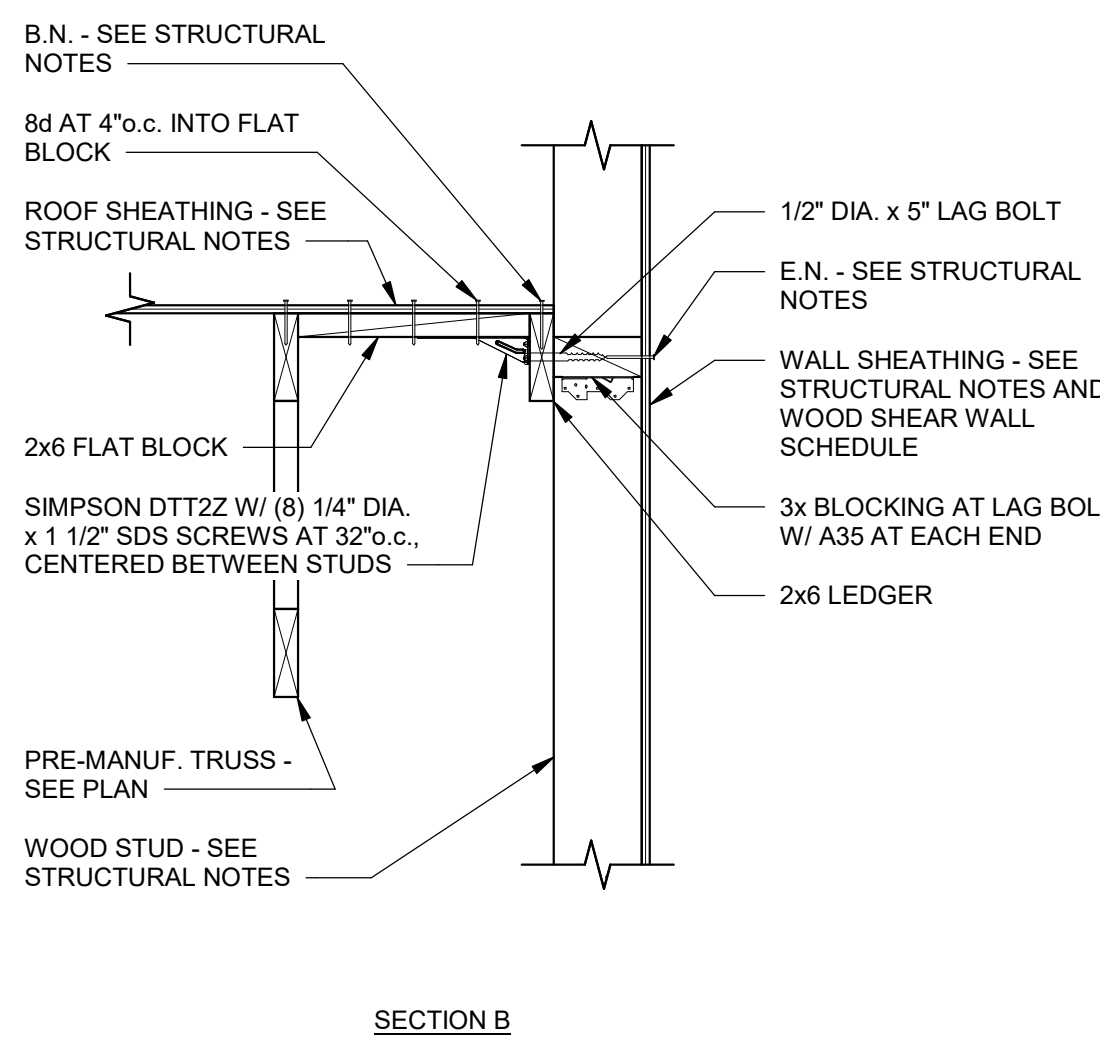


BALLOON FRAMED PARAPET

SCALE: NONE

4
S2.20

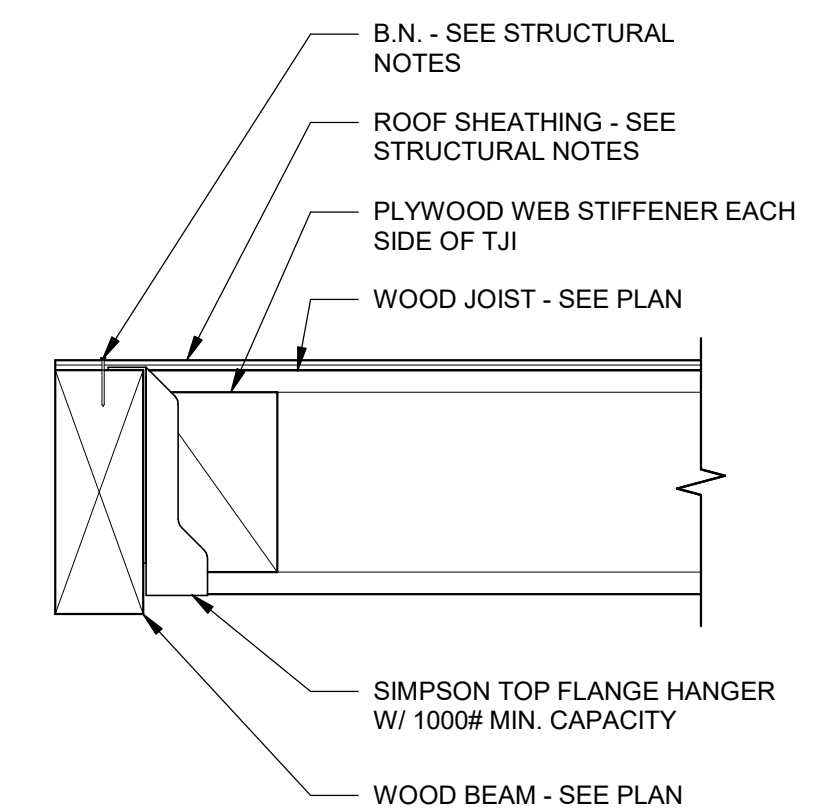
NOTE: AT GYM WALLS, PLACE SIMPSON DTT2Z AT EACH STUD CAVITY AT A MAX SPACING OF 18\"/>



DETAIL

SCALE: NONE

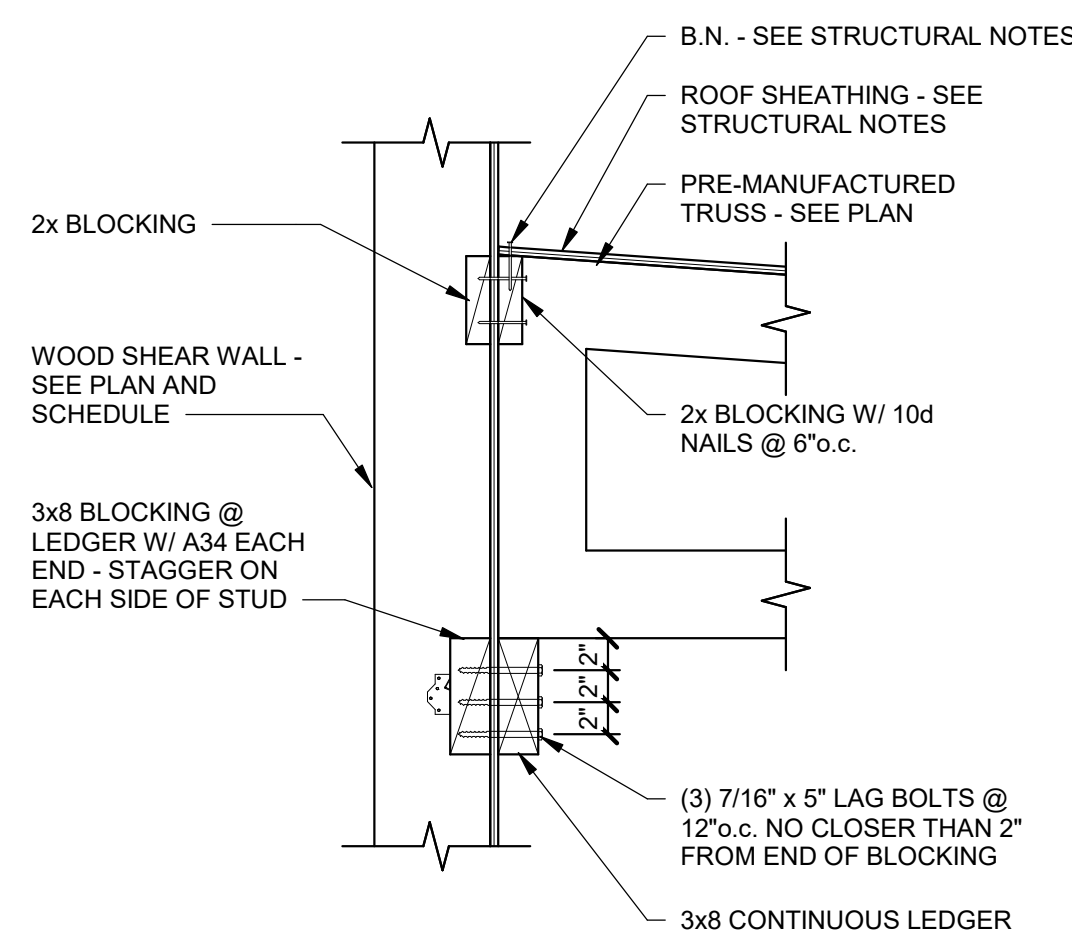
5
S2.20



DETAIL

SCALE: NONE

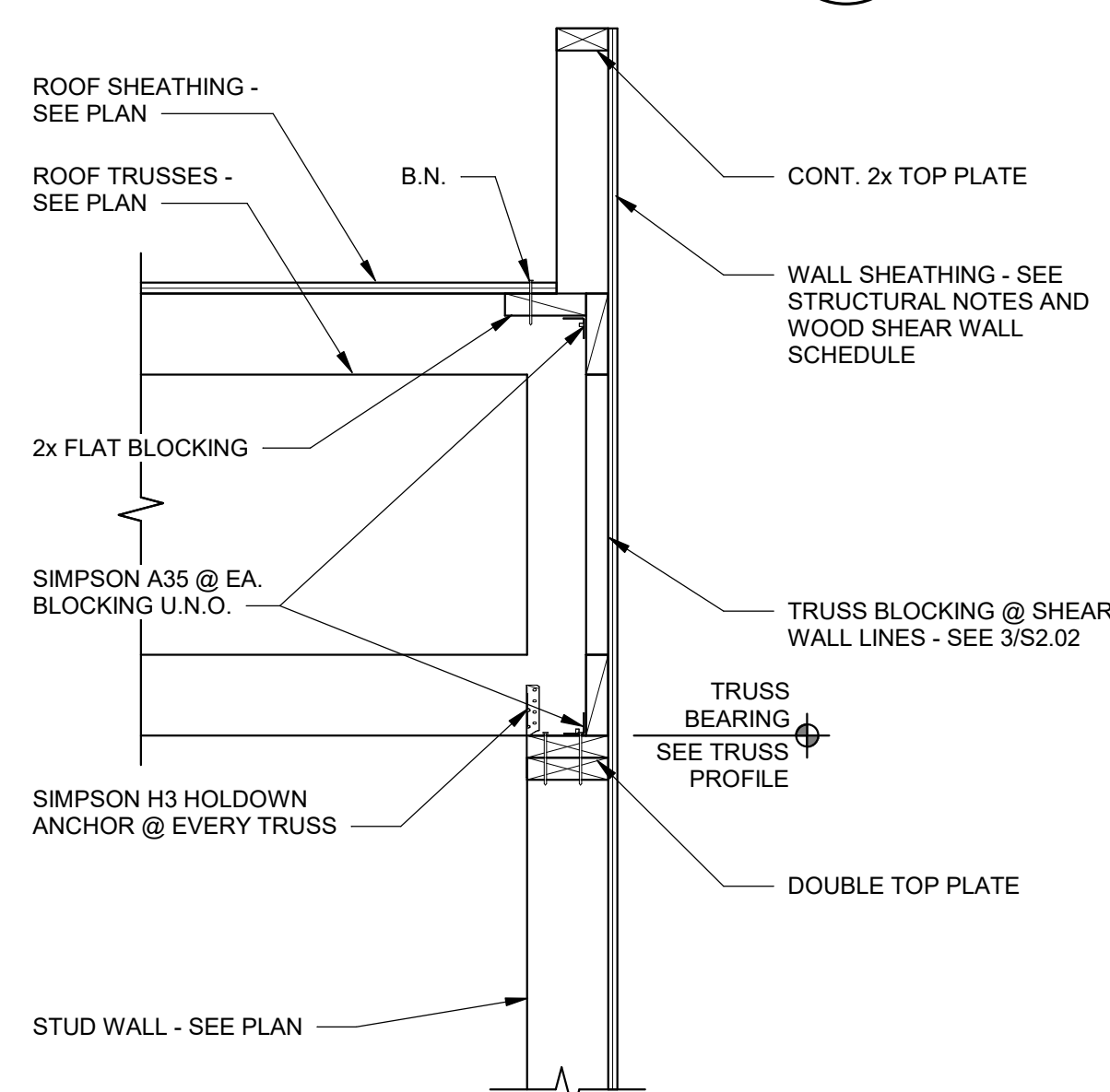
6
S2.20



DETAIL

SCALE: NONE

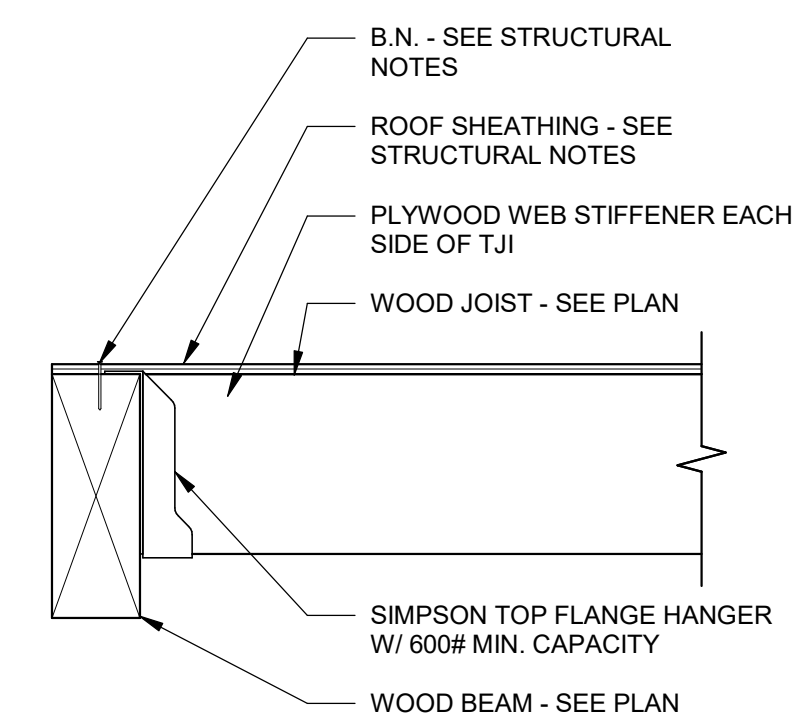
7
S2.20



DETAIL

SCALE: NONE

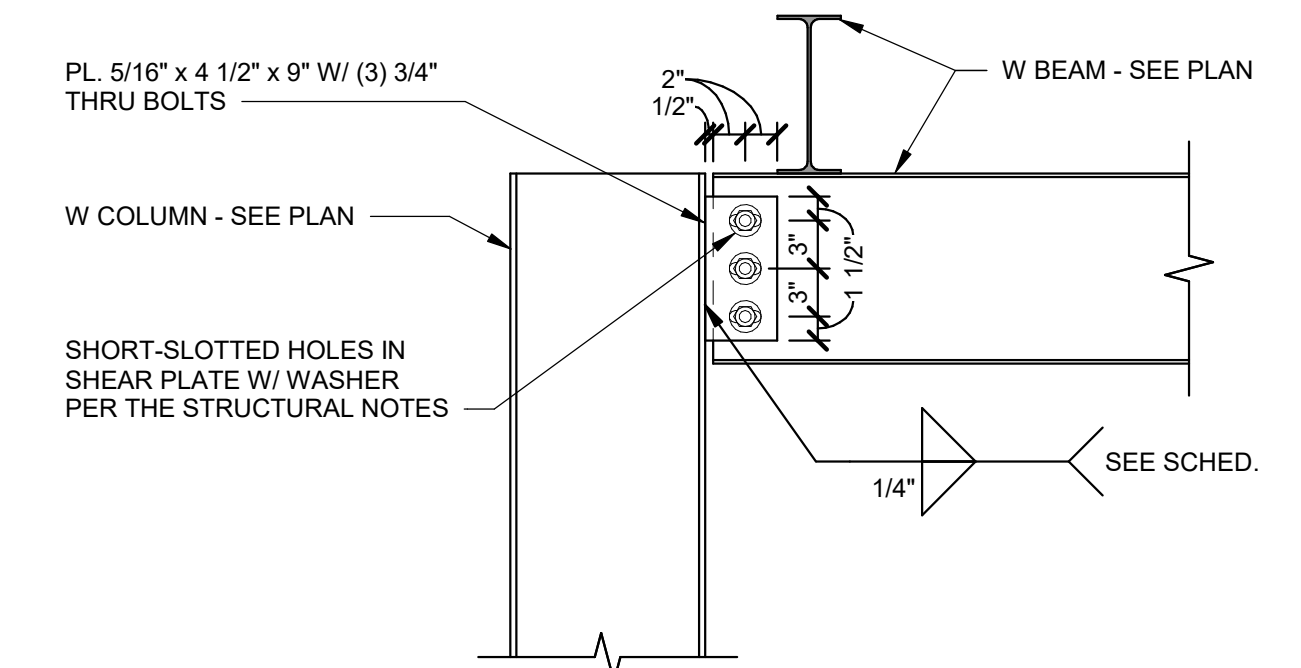
8
S2.20



DETAIL

SCALE: NONE

9
S2.20

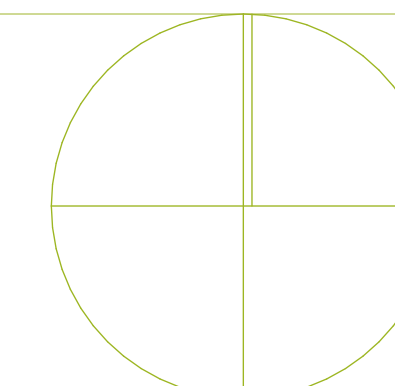


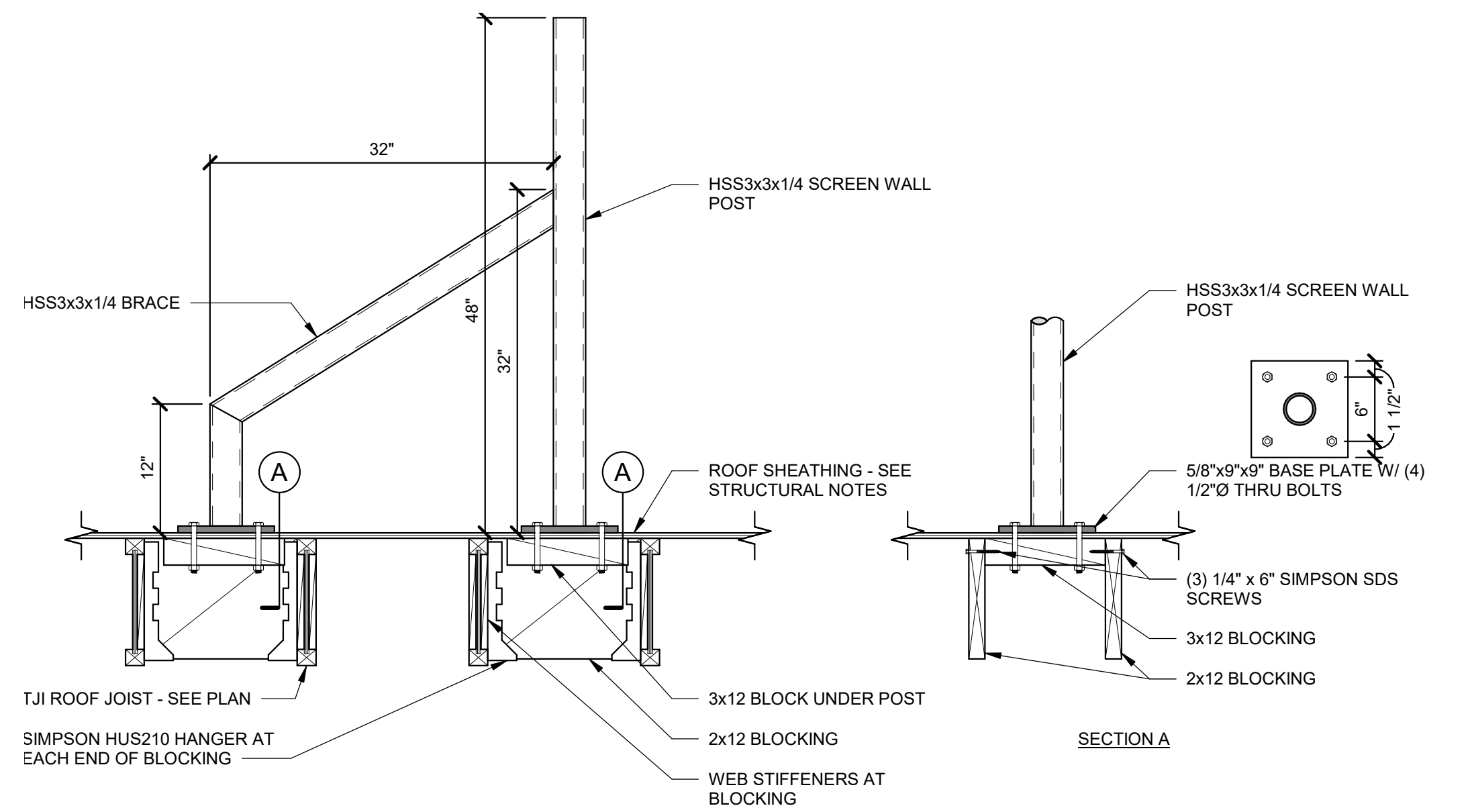
TYPICAL BEAM CONNECTIONS DETAIL

SCALE: NONE

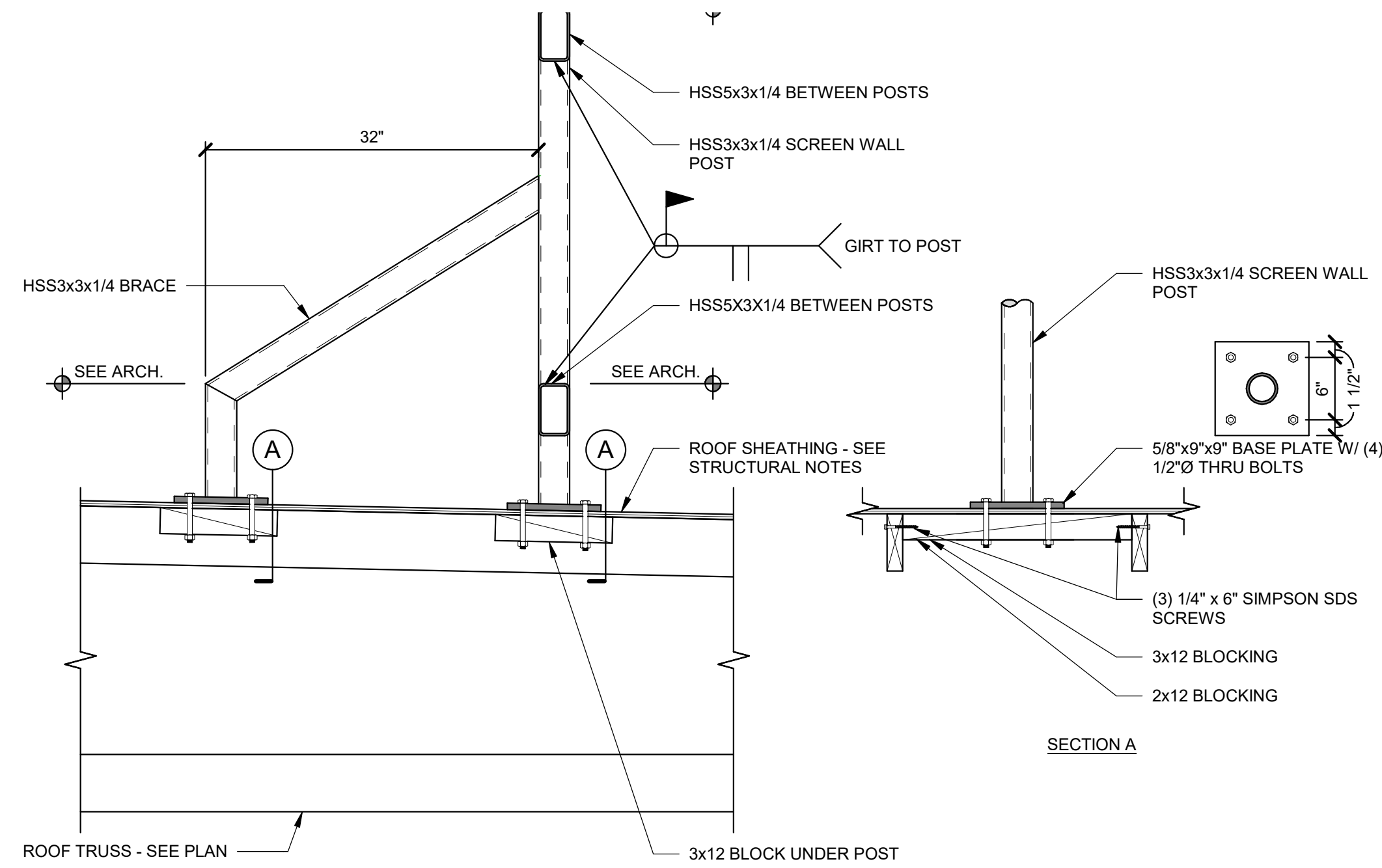
10
S2.20

NO.	DATE	DESCRIPTION

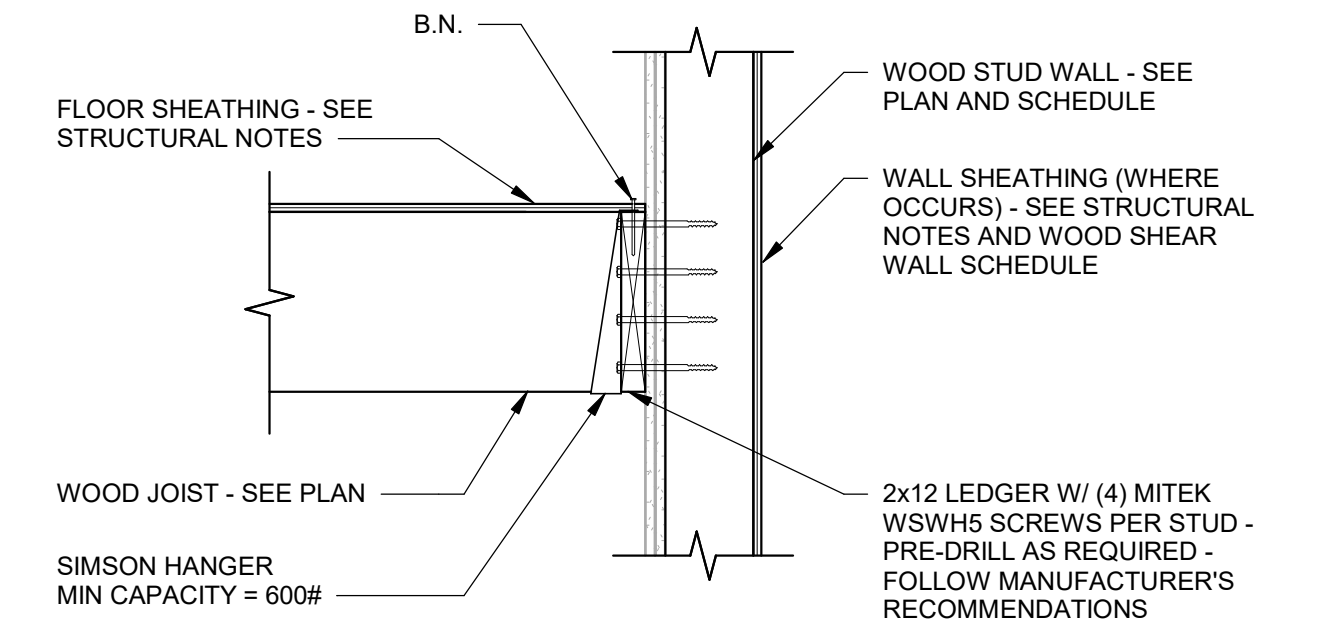




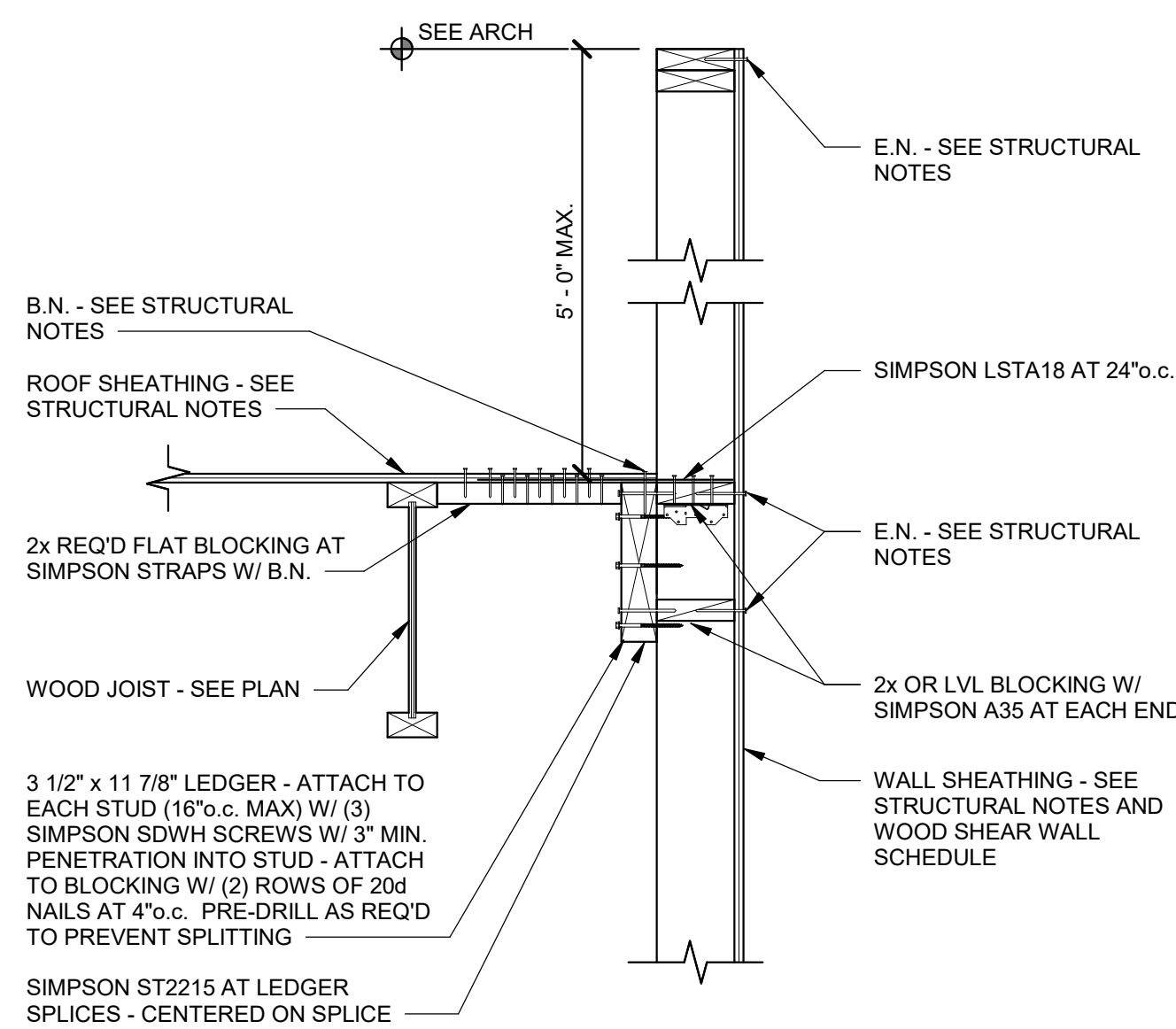
DETAIL 1
SCALE: NONE



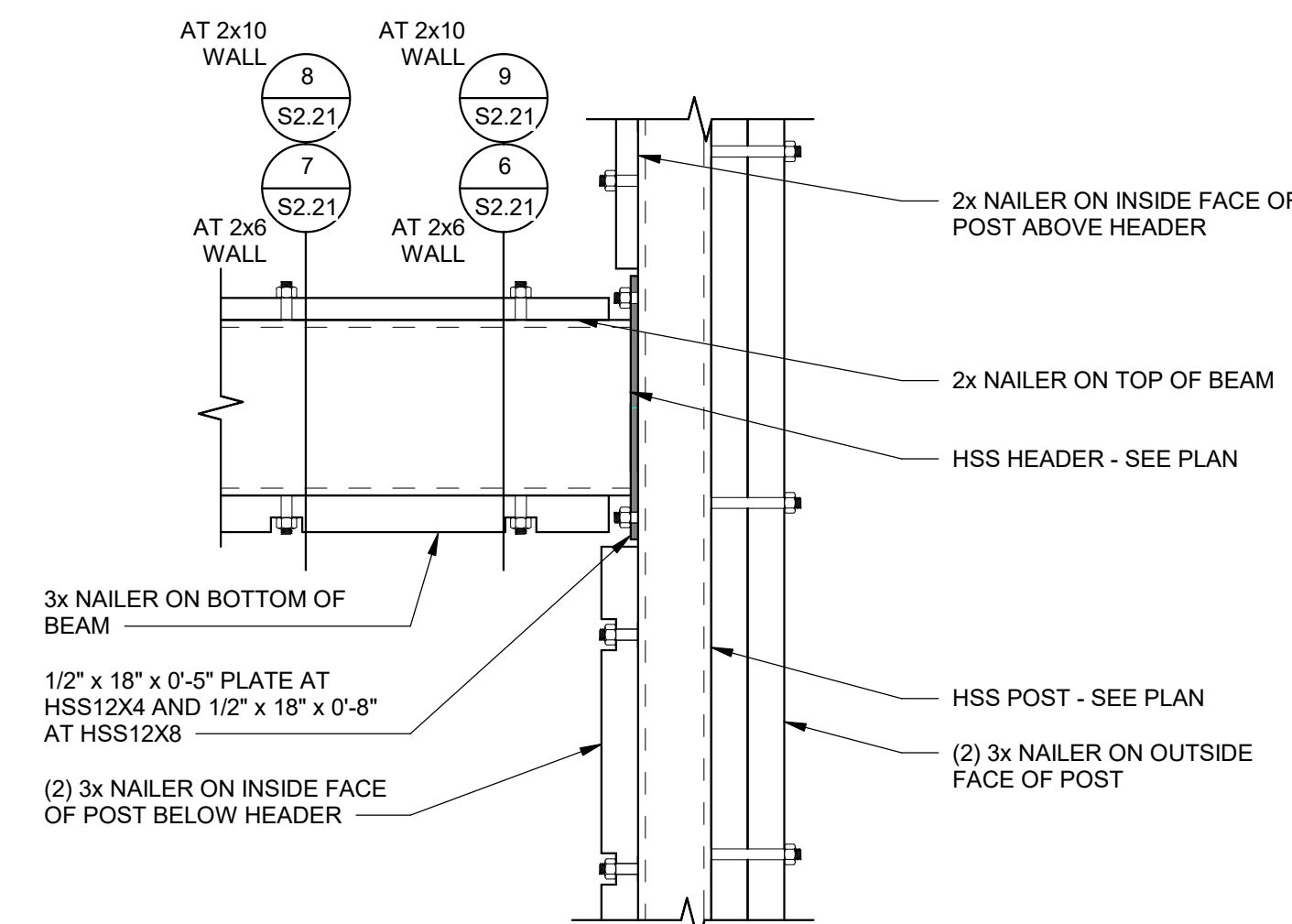
DETAIL 2
SCALE: NONE



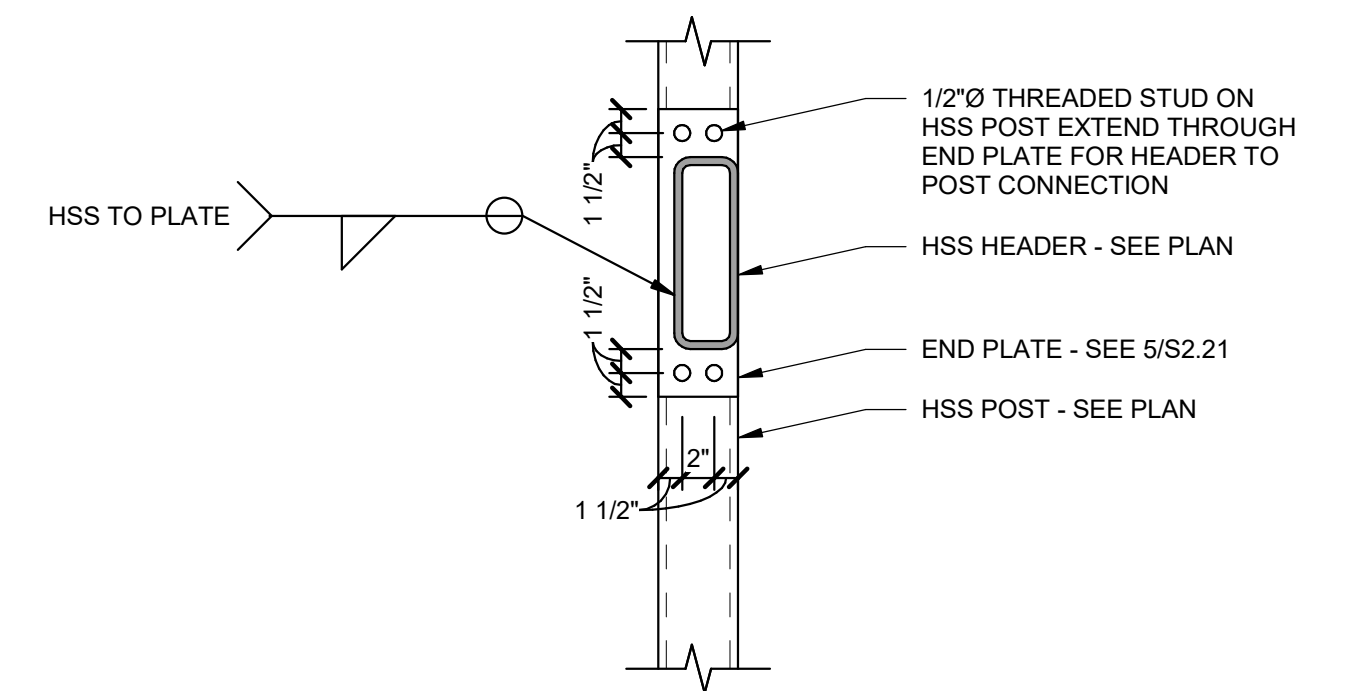
DETAIL 3
SCALE: NONE



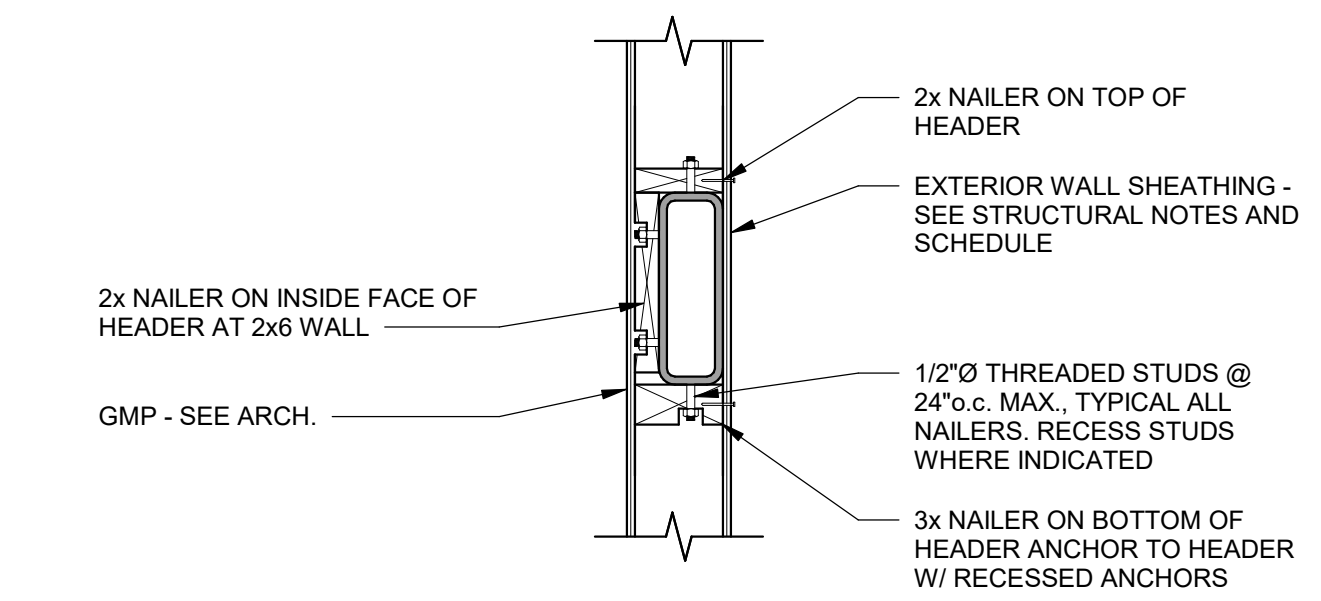
BALLOON FRAMED PARAPET
SCALE: NONE



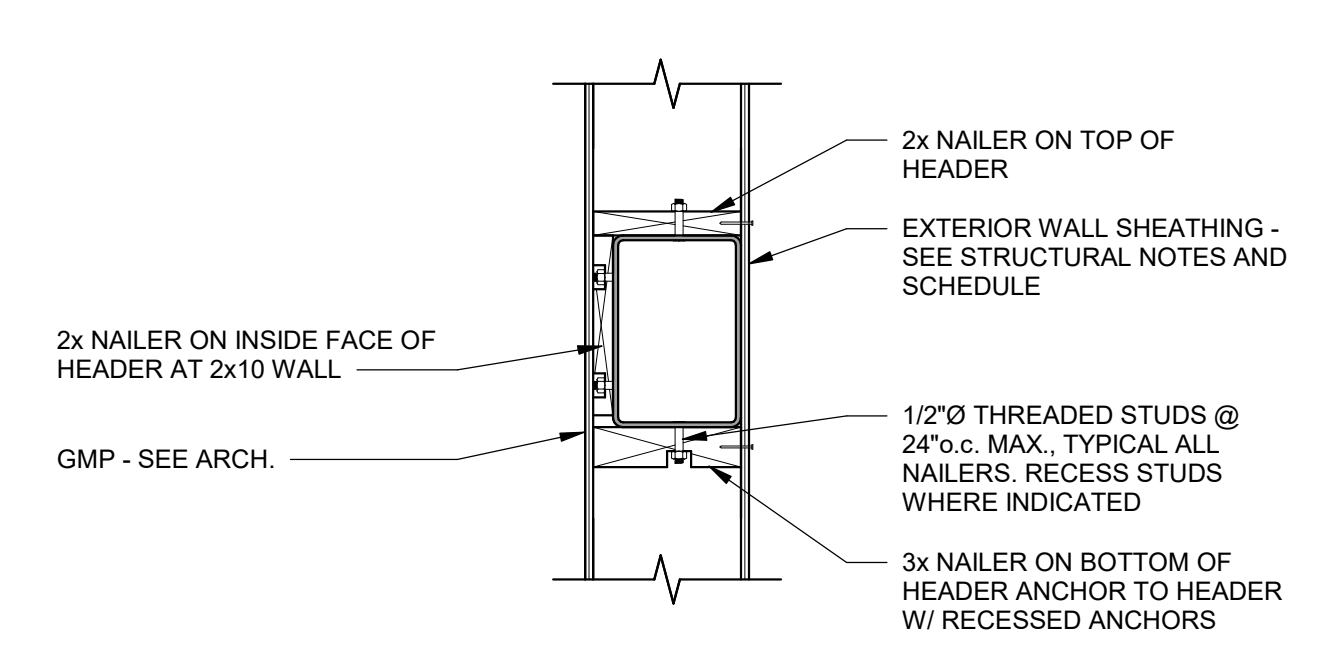
DETAIL 5
SCALE: NONE



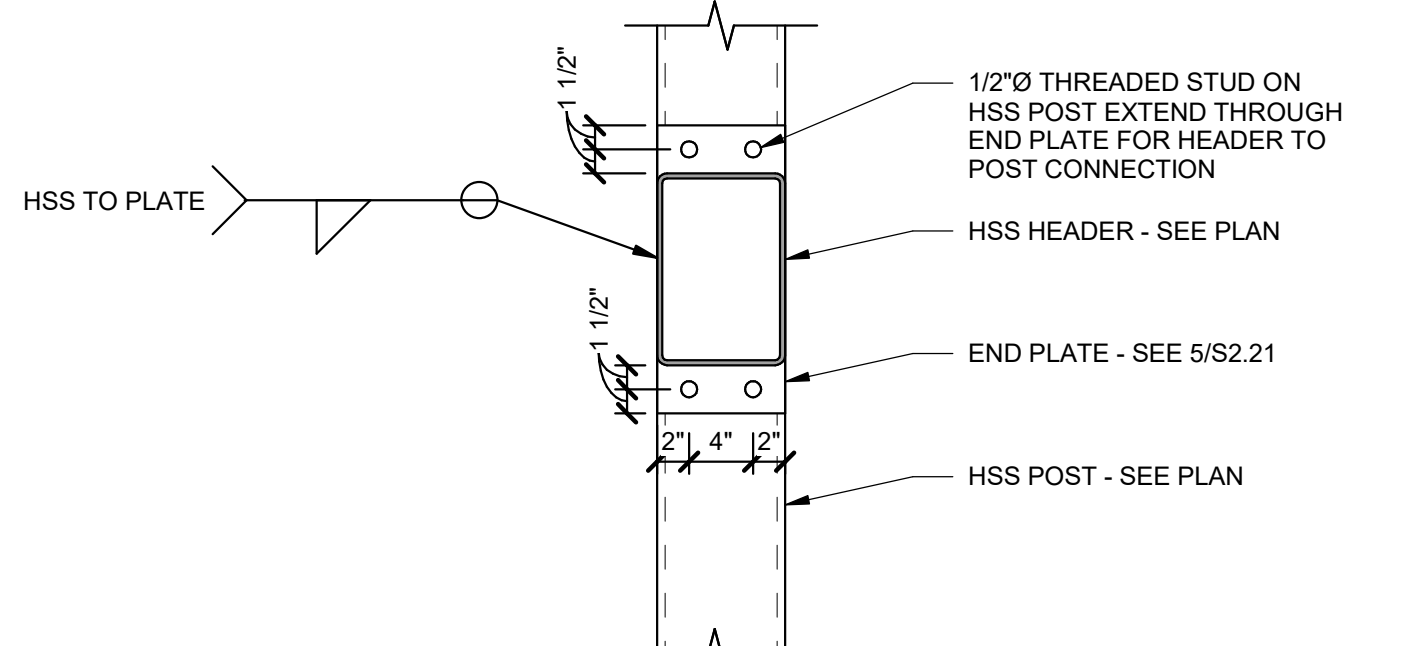
DETAIL 6
SCALE: NONE



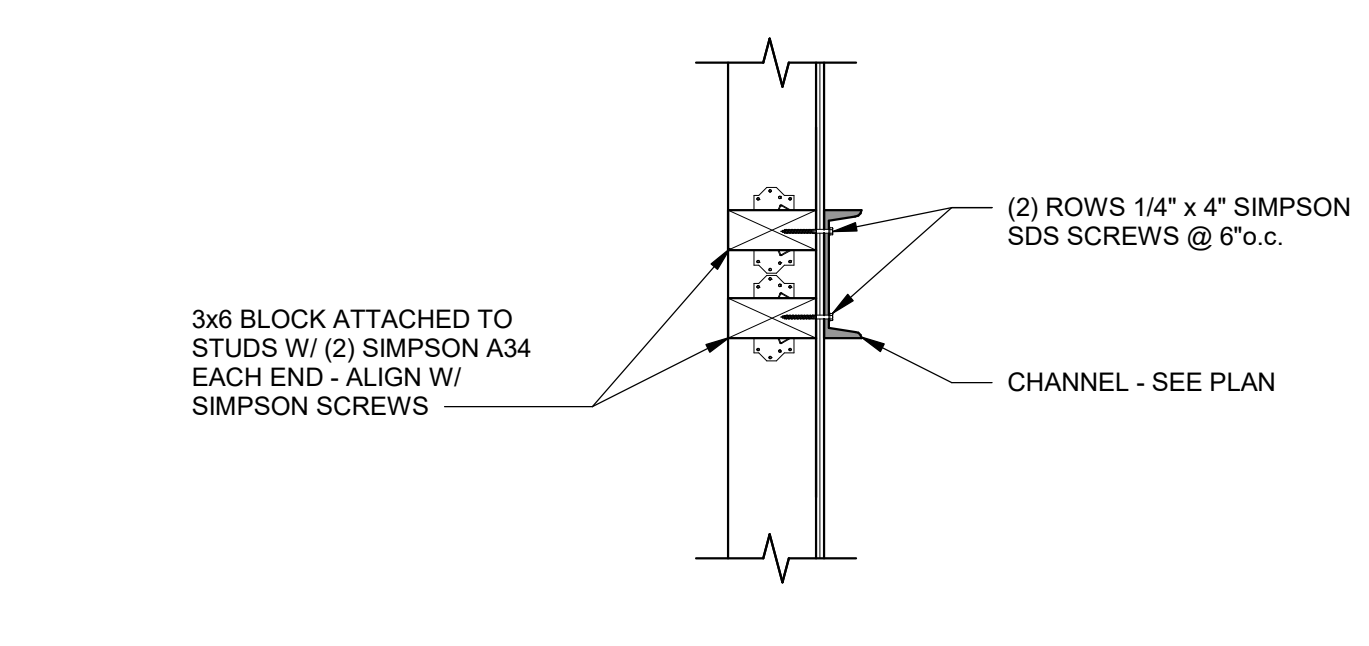
DETAIL 7
SCALE: NONE



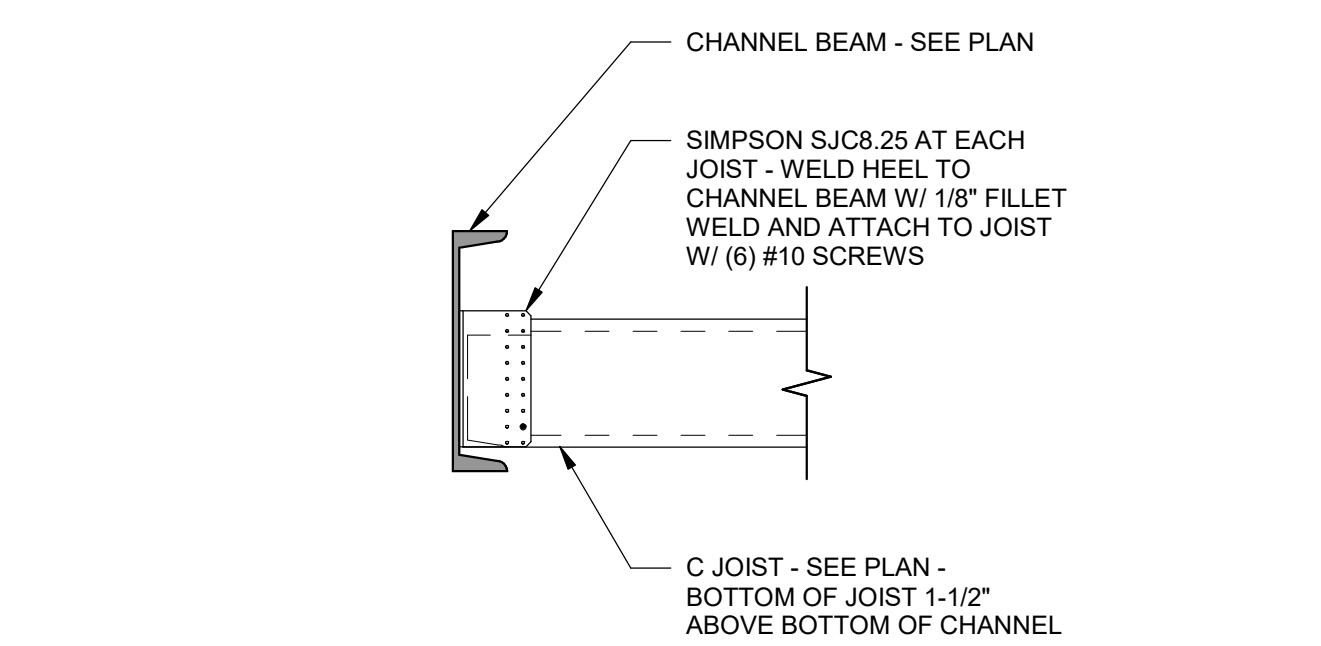
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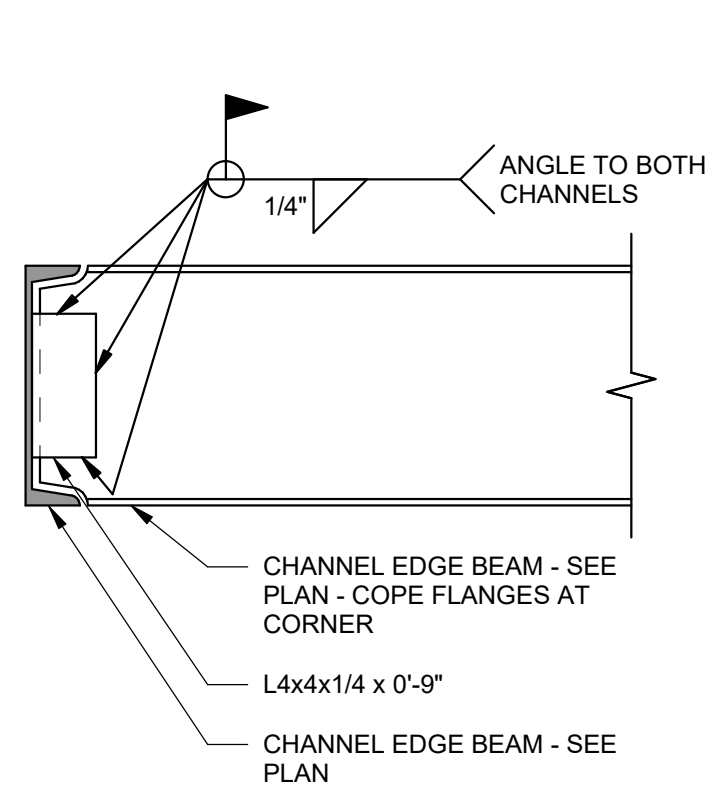
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DETAIL 10
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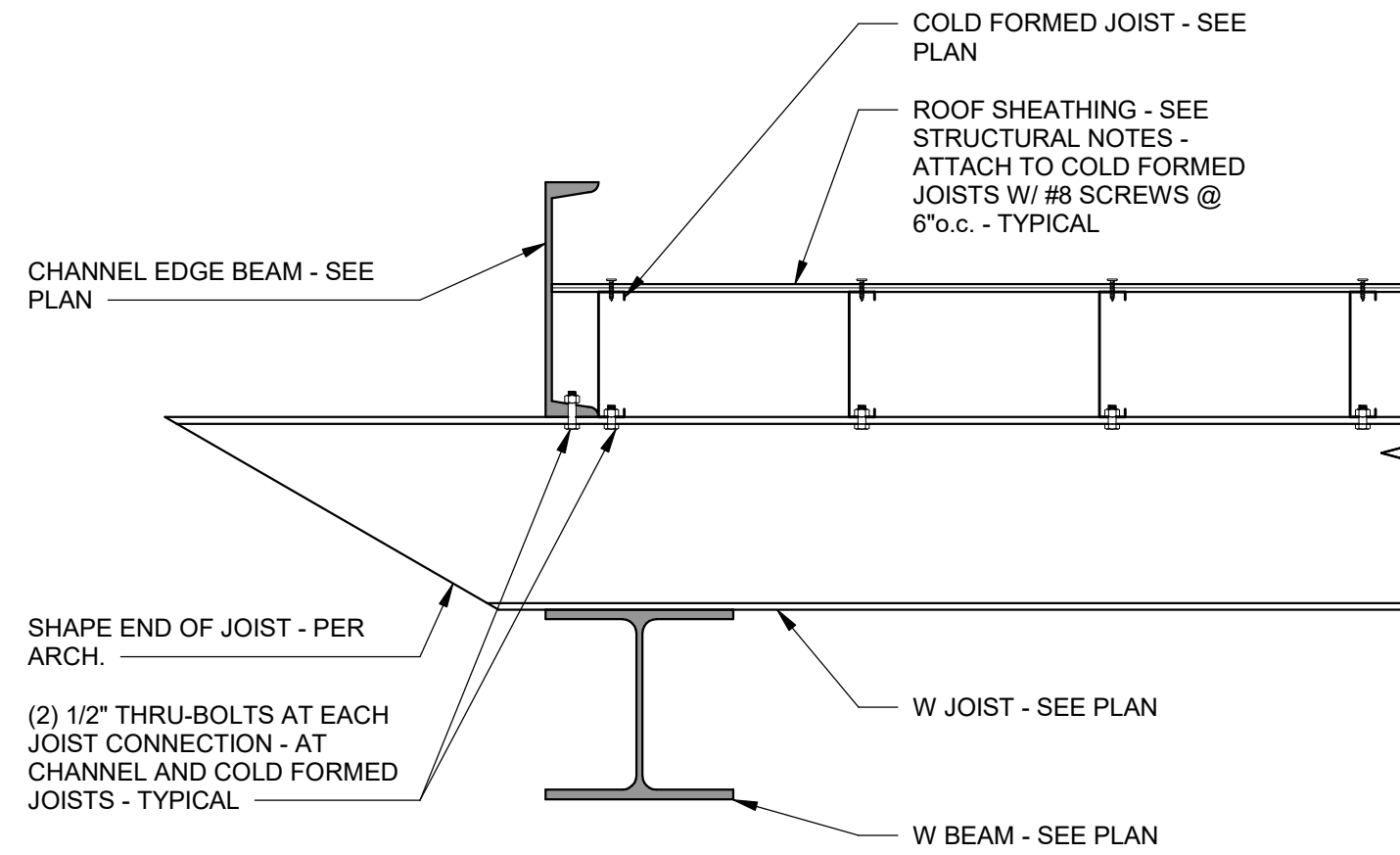


DETAIL 11
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DETAIL
SCALE: NONE

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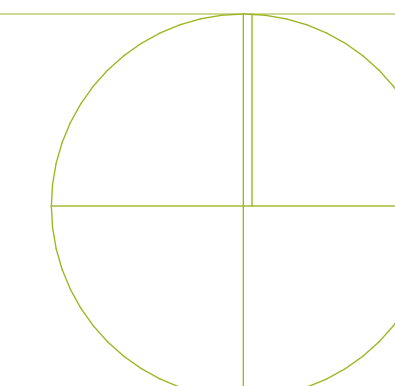


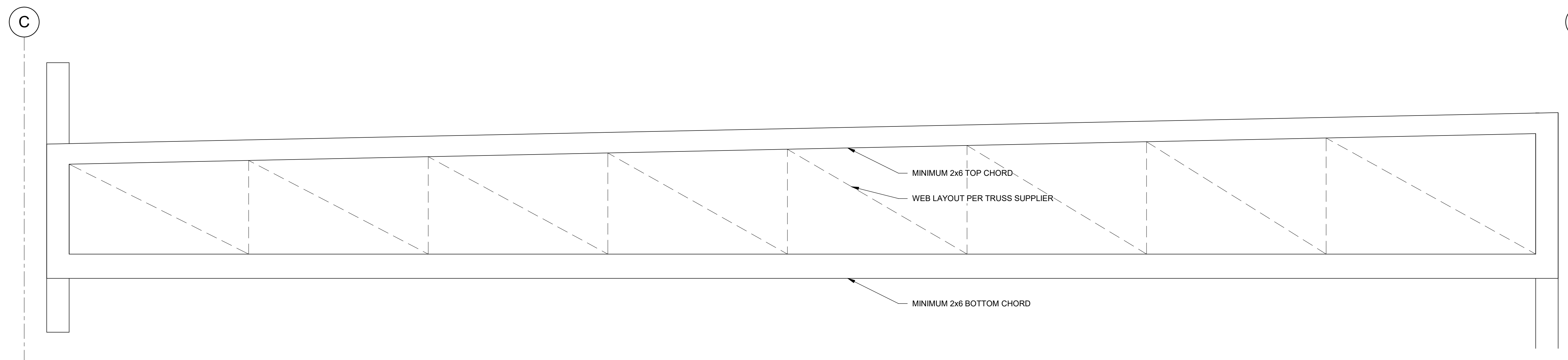
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S2.22



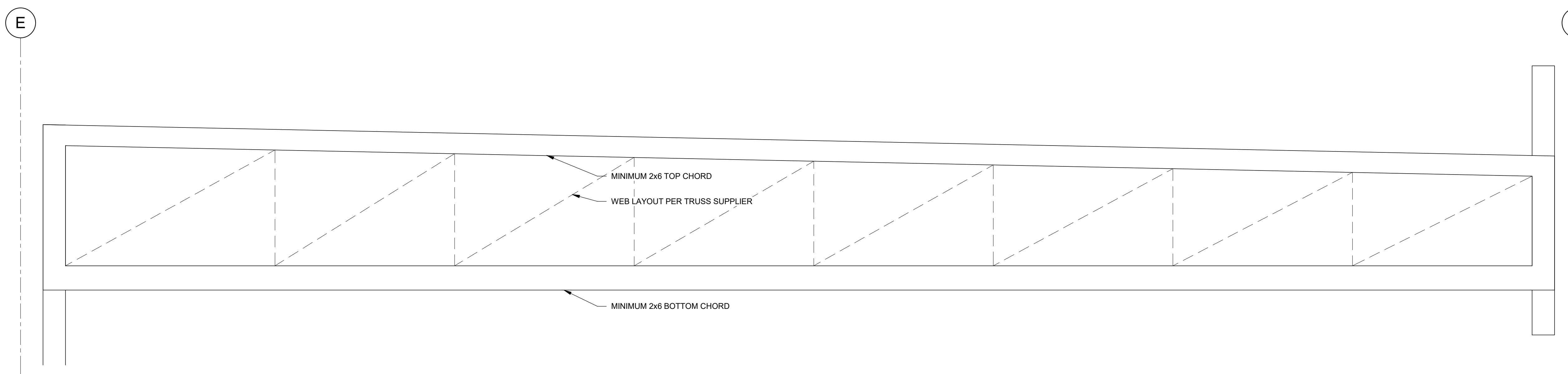
NO.	DATE	DESCRIPTION





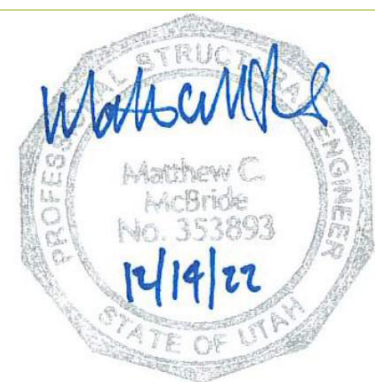
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S3.01

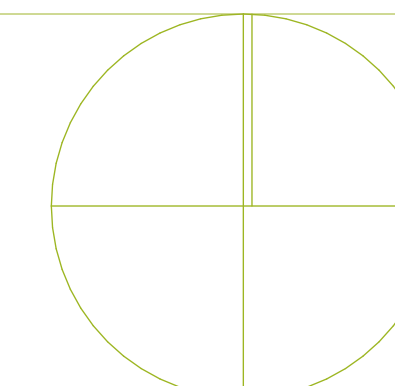


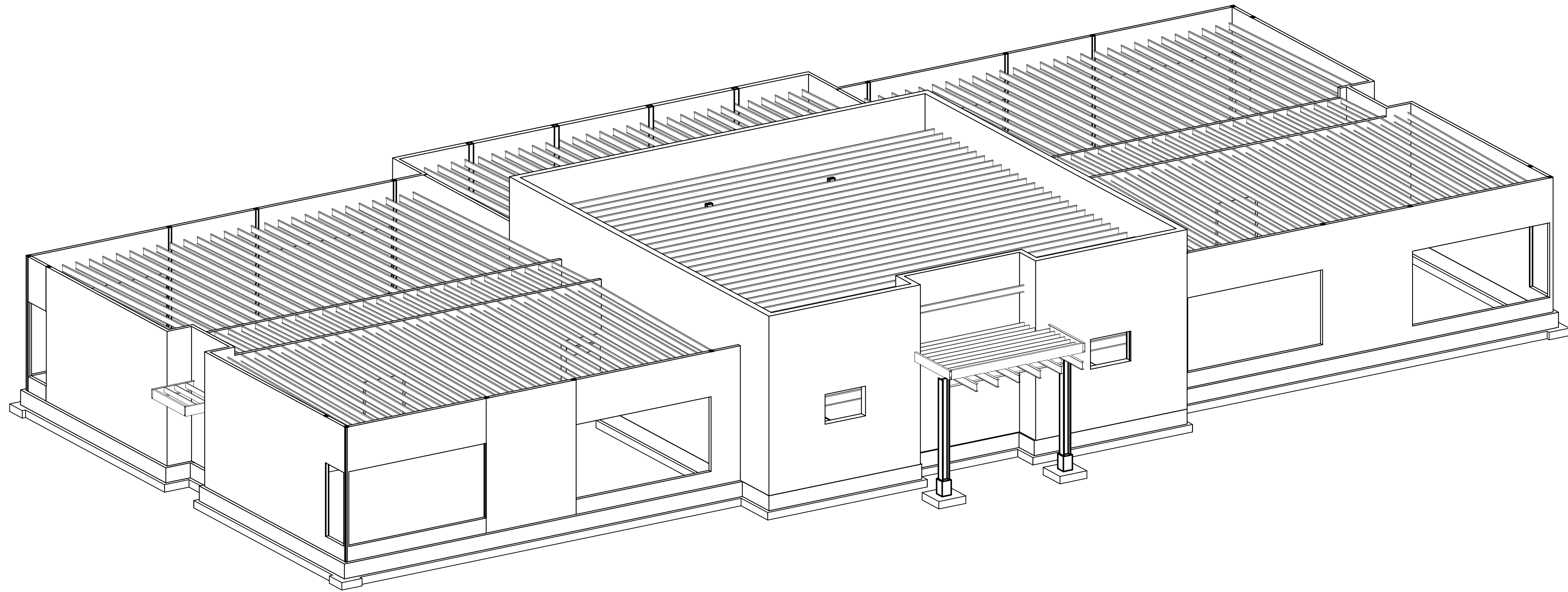
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B
S3.01



NO.	DATE	DESCRIPTION





3D REFERENCE VIEW

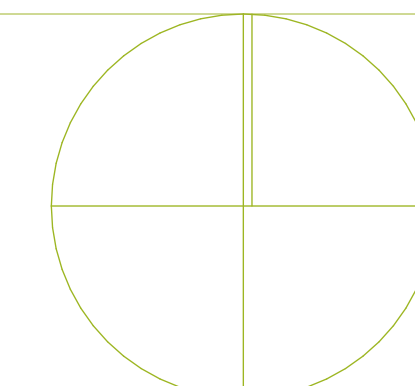
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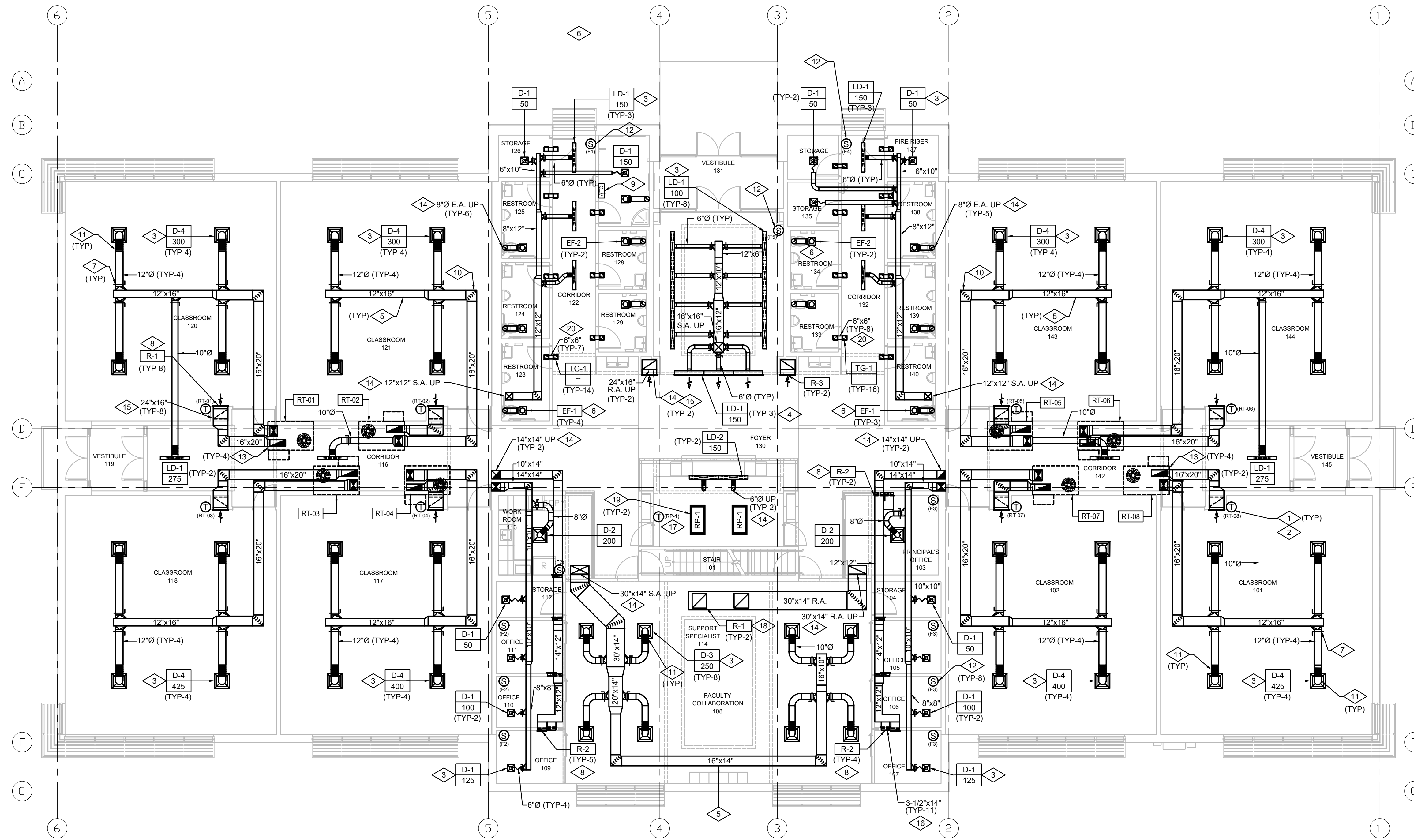
A
S4.01

NOTE: THIS VIEW REPRESENTS A SCHEMATIC RENDERING ONLY AND IS NOT INTENDED TO CONVEY CONSTRUCTION INFORMATION. ALL CONSTRUCTION SHALL COMPLY WITH SPECIFIC NOTES AND DETAILS WITHIN THE STRUCTURAL DRAWINGS.

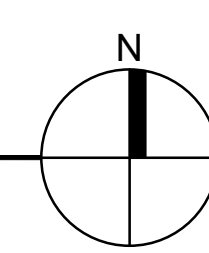


NO.	DATE	DESCRIPTION



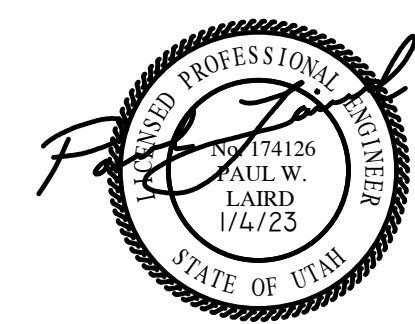


FIRST FLOOR MECHANICAL PLAN
SCALE: 1/8" = 1'-0"



- KEYED NOTES:**
- 1 THERMOSTAT. MOUNT 48 INCHES A.F.F. MAKE ALL REQUIRED CONTROL CONNECTIONS TO ROOF TOP UNIT OR FURNACE FOR A COMPLETE AND FUNCTIONAL TEMPERATURE CONTROL SYSTEM.
 - 2 ALL TEMPERATURE CONTROL WIRING SHALL BE INSTALLED IN EMT CONDUIT.
 - 3 INSTALL CEILING AND WALL MTD DIFFUSERS AND GRILLES AS INDICATED. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND ELEVATION DRAWINGS FOR EXACT LOCATION. (TYP). SEE DETAILS 4/M6.1 AND 6/M6.1
 - 4 INSTALL WALL MTD S.A. LINEAR DIFFUSER IN THIS LOCATION. COORDINATE W/ ARCHITECT FOR LOCATION. PROVIDE PLENUM BOOT, BALANCING DAMPER AND FLANGED WALL FRAME FOR MOUNTING.
 - 5 RUN DUCTWORK HIGH CLOSE TO ROOF STRUCTURE. COORDINATE LOCATION WITH FIRE PROTECTION, ELECTRICAL AND PLUMBING TRADES.
 - 6 INSTALL CEILING MOUNTED EXHAUST FAN IN THIS LOCATION. SEE INSTALLATION DETAIL 6/M5.2
 - 7 VOLUME DAMPER (TYP).
 - 8 INSTALL LOW SIDEWALL R.A. GRILLE IN THIS LOCATION. MOUNT GRILLE 6" A.F.F. SEE DETAIL 4/M6.3
 - 9 INSTALL BLDG ATC CONTROL PANEL IN THIS LOCATION. PROVIDE 120V / 1 PH POWER CONNECTION. MOUNT PNL 54" A.F.F.
 - 10 DUCT TURNING VANES (TYP)
 - 11 INSULATED FLEXIBLE DUCT CONNECTION. LIMIT LENGTH OF FLEXIBLE DUCT TO 3'-0" (TYP)
 - 12 AVERAGING TEMPERATURE SENSOR. MOUNT 48 INCHES A.F.F. MAKE ALL REQUIRED CONNECTIONS TO FURNACE AND ATC CONTROLS FOR A COMPLETE AND FUNCTIONAL TEMPERATURE CONTROL SYSTEM.
 - 13 ROOF TOP UNIT. MOUNT ROOF TOP UNIT ON 14 INCH HIGH INSULATED ROOF CURB. SEE DETAIL 1/M6.1
 - 14 FOR CONTINUATION OF DUCTWORK SEE DRAWING M1.2
 - 15 24"x16" LINED R.A. DUCT UP IN FRAMED CHASE.
 - 16 INSTALL UNLINED 14"x3-1/2" R.A. DUCT BETWEEN WALL STUDS. (TYP) SEE DETAIL 4/M6.3
 - 17 INSTALL RADIANT ELECTRIC CEILING PANEL CONTROL THERMOSTAT ON WALL IN THIS LOCATION. MOUNT THERMOSTAT 48" A.F.F.
 - 18 INSTALL R.A. GRILLES TO BOTTOM OF DUCT CENTERED BETWEEN LIGHTS
 - 19 INSTALL ELECTRIC RADIANT CEILING PANEL IN THIS LOCATION SEE DETAIL 5/M6.1
 - 20 INSTALL TRANSFER AIR (T.A.) DUCT AND GRILLES IN THIS LOCATION. SEE DETAIL 7/M5.2 (TYP)

STUDIO 333 ARCHITECTS
333 24TH STREET
OGDEN, UT 84401
801.394.3033



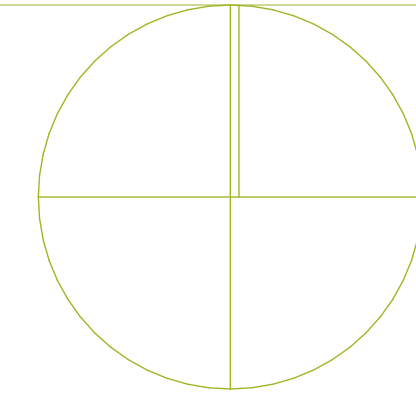
WEST FIELD SR SEMINARY
2200 S STREET, TAYLOR, UT

OLSEN & PETERSON
consulting engineers, inc.

14 East 2700 South, Salt Lake City, UT 84115
Phone: (801) 486-4646 Fax: (801) 467-2531

NO.	DATE	DESCRIPTION

PERMIT SET
DATE: 01.25.23
PROJECT NUMBER: 2154

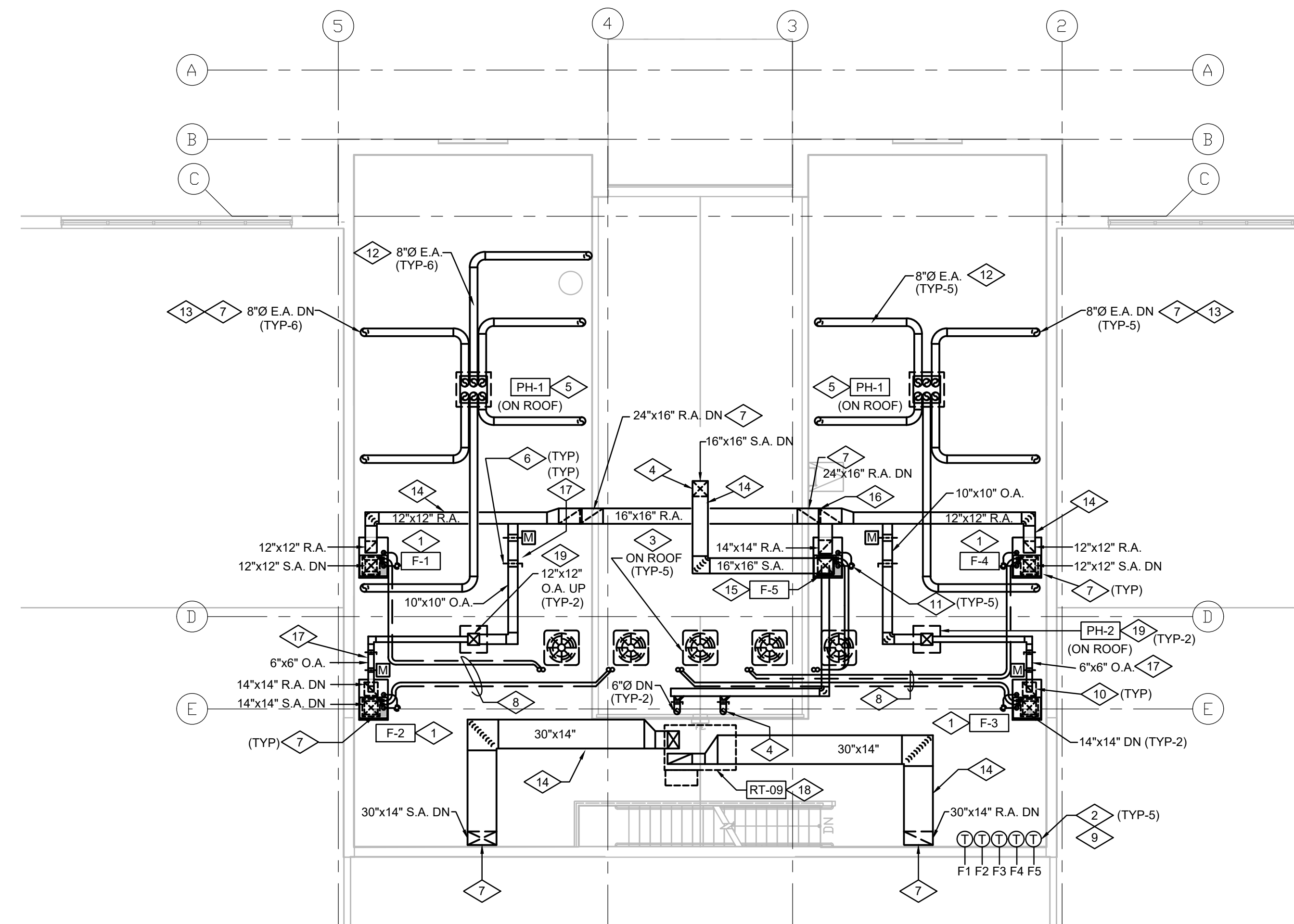


FIRST FLOOR MECHANICAL PLAN

M1.1

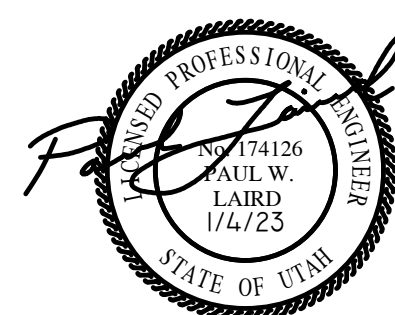
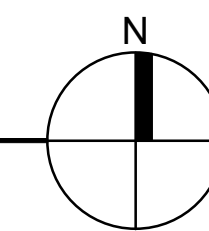
REFERENCE NOTES

- 1 INSTALL NEW DOWNFLOW FURNACE AND COOLING COIL IN THIS LOCATION. SEE DETAIL 3/M6.1.
- 2 THERMOSTAT. HONEYWELL LCBS CONTROLLER. MOUNT THERMOSTAT 48 INCHES A.F.F. MAKE ALL REQUIRED CONNECTIONS FOR A COMPLETE AND FUNCTIONAL TEMPERATURE CONTROL SYSTEM.
- 3 INSTALL CONDENSING UNIT ON ROOF. MOUNT CONDENSING UNIT ON 14" HIGH INSULATED ROOF CURB. SECURE CONDENSING UNIT TO ROOF CURB. SEE DETAIL 1/M6.3.
- 4 EXTEND S.A. DUCT DN TO CEILING MTD LINEAR DIFFUSERS. SEE DRAWING M1.1 FOR CONTINUATION.
- 5 INSTALL ROOF MOUNTED EXHAUST AIR PENTHOUSE IN THIS LOCATION. SEE DETAIL 5/M6.2.
- 6 VOLUME DAMPER (TYP).
- 7 FOR CONTINUATION OF DUCTWORK SEE DRAWING M1.1
- 8 RUN REFRIGERATION LIQUID AND SUCTION LINES HIGH CLOSE TO STRUCTURE. SEE PIPING SUPPORT DETAILS 1/M6.2 & 2/M6.2.
- 9 ALL TEMPERATURE CONTROL WIRING SHALL BE INSTALLED IN EMT CONDUIT.
- 10 RETURN AIR DUCT TO EXTEND UP THROUGH FLOOR INTO FURNACE PLENUM.
- 11 EXTEND 3" SCH. 40 PVC C.A. & FLUE PIPES FROM FURNACE TO ROOF. PROVIDE CONCENTRIC FLUE TERMINATION KIT AT ROOF. SEE DETAIL 3/M6.2.
- 12 RUN EXHAUST AIR DUCTS HIGH CLOSE TO CEILING. EXTEND UP THROUGH ROOF INTO E.A. PENTHOUSE. (TYP)
- 13 8" DIA. EXHAUST AIR DUCT UP FROM CEILING EXHAUST FAN BELOW. COORDINATE LOCATION OF EXHAUST DUCT WITH BLDG STRUCTURE.
- 14 DUCTWORK TO RUN HIGH CLOSE TO STRUCTURE. COORDINATE LOCATION WITH LIGHTING AND PLUMBING TRADES.
- 15 INSTALL NEW UPFLOW FURNACE AND COOLING COIL IN THIS LOCATION. SEE DETAIL 8/M6.2.
- 16 OFFSET RETURN AIR DUCT AS NEEDED.
- 17 INSTALL MOTORIZED DAMPER AND VOLUME DAMPER IN THIS LOCATION SEE DETAIL 5/M6.3.
- 18 ROOF TOP UNIT. MOUNT ROOF TOP UNIT ON 14 INCH HIGH INSULATED ROOF CURB. SEE DETAIL 1/M6.1.
- 19 INSTALL ROOF MOUNTED OUTSIDE AIR PENTHOUSE IN THIS LOCATION. SEE DETAIL 6/M6.3.

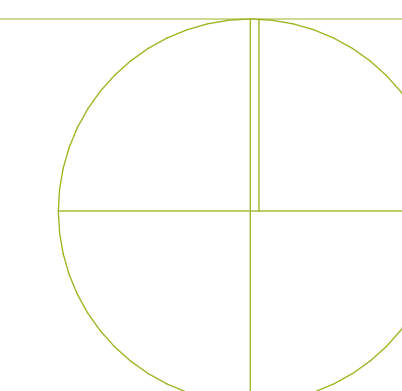


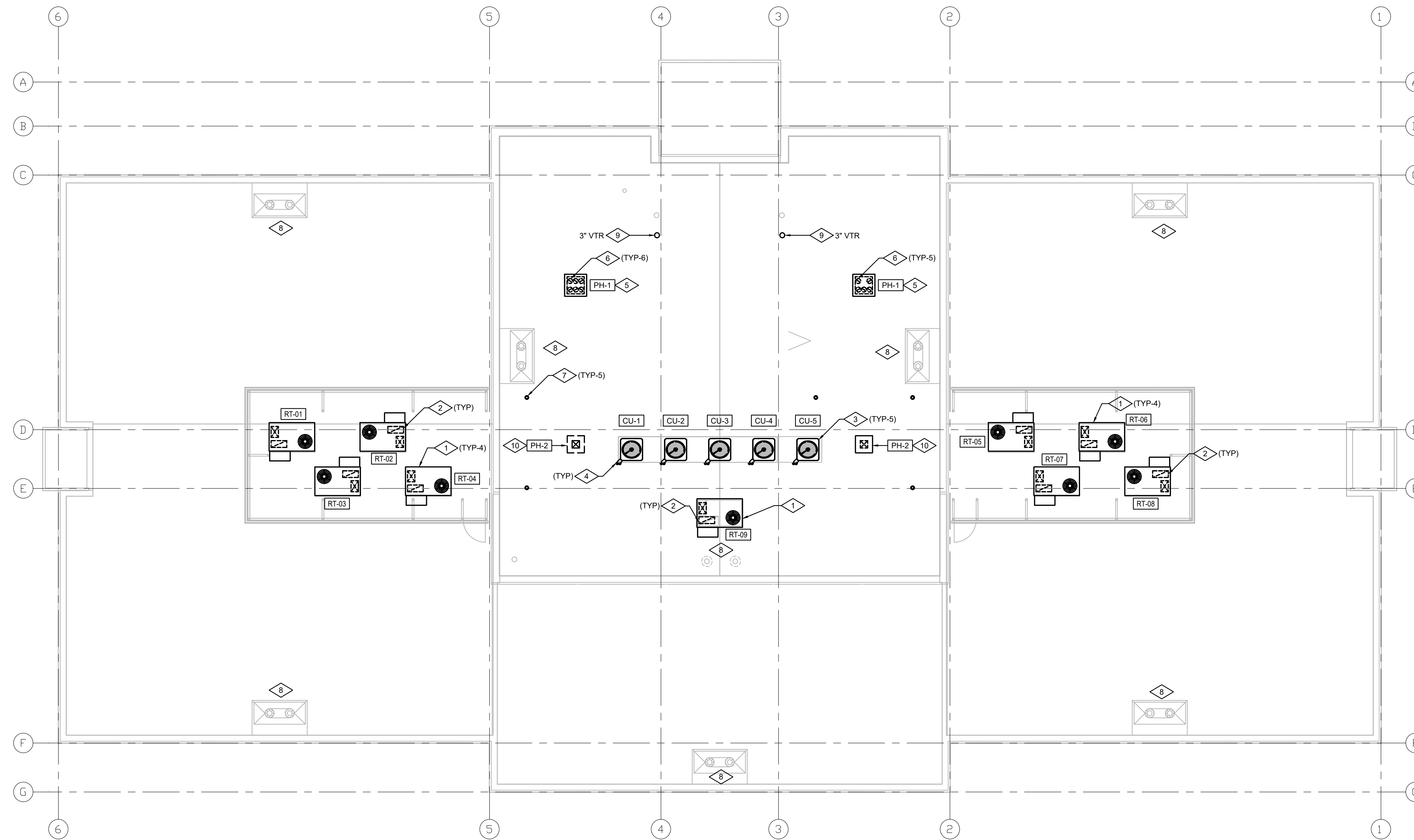
SECOND FLOOR MECHANICAL PLAN

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



NO.	DATE	DESCRIPTION



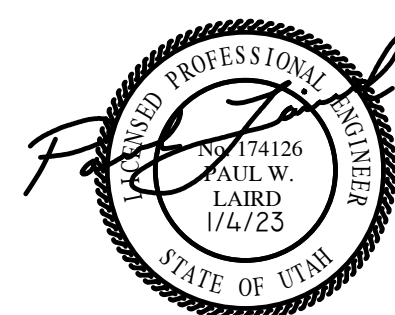
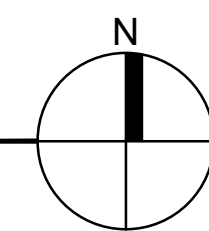


REFERENCE NOTES

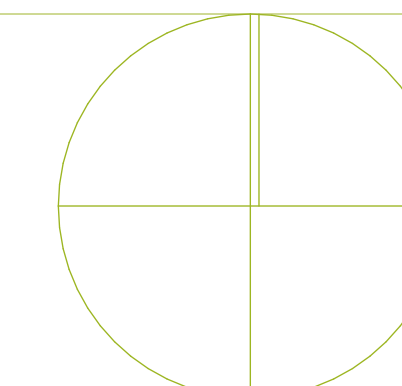
- 1 INSTALL ROOF TOP UNIT IN THIS LOCATNO. MOUNT ROOF TOP UNIT ON 14 INCH HIGH ROOF CURB. SEE DETAIL 1/M6.1.
- 2 COORDINATE ROOF TOP UNIT S.A. AND R.A. ROOF PENETRATIONS WITH STRUCTURAL ENGINEER. PROVIDE FRAMED ROOF OPENINGS FOR EACH DUCT THROUGH ROOF PENETRATION.
- 3 MOUNT CONDENSING UNIT IN THIS LOCATION. MOUNT CONDENSING UNIT ON 14" HIGH ROOF CURB. SEE DETAIL 1/M6.3.
- 4 EXTEND REFRIGERATION PIPING FROM CONDENSING UNIT DN THROUGH ROOF. PROVIDE ROOF JACKS FOR EACH PIPE PENETRATION. SEAL WATERTIGHT.
- 5 INSTALL E.A. PENTHOUSE IN THIS LOCATION. MOUNT PENTHOUSE ON 14" HIGH ROOF CURB. SEE DETAIL 5/M6.2
- 6 EXHAUST AIR DUCTS TO EXTEND UP INTO PENTHOUSE. (TYP)
- 7 FURNACE CONCENTRIC ROOF KIT. SEE DETAIL 3/M6.2.
- 8 ROOF DRAINS SHOWN FOR REFERENCE ONLY.
- 9 PLUMBING VENT. SHOWN FOR REFERENCE ONLY.
- 10 INSTALL ROOF MOUNTED OUTSIDE AIR PENTHOUSE IN THIS LOCATION. SEE DETAIL 6/M6.3.

MECHANICAL ROOF PLAN

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



NO.	DATE	DESCRIPTION



DIFFUSER, GRILLE AND REGISTER SCHEDULE					
SYMBOL	TYPE	NECK SIZE	LOCATION	AIR PATTERN	MAKE & MODEL
D-1 CFM	SUPPLY AIR	6"Ø	CEILING MTD.	4-WAY	PRICE SPD 12" x 12" FACE (1)(3)
D-2 CFM	SUPPLY AIR	8"Ø	CEILING MTD.	4-WAY	PRICE SPD 24" x 24" FACE (1)(3)
D-3 CFM	SUPPLY AIR	10"Ø	CEILING MTD.	4-WAY	PRICE SPD 24" x 24" FACE (1)(3)
D-4 CFM	SUPPLY AIR	12"Ø	CEILING MTD.	4-WAY	PRICE SPD 24" x 24" FACE (1)(3)
LD-1 CFM	LINEAR SLOT	10"Ø / 48" x 6"	CEIL & WALL MTD.	2-WAY	PRICE SDB100 - 3 SLOT (1)(4)(5)
LD-2 CFM	LINEAR SLOT	6"Ø / 48" x 6"	CEILING MTD.	2-WAY	PRICE TBD4 2-SLOT FACE (1)(3)(4)
R-1	RETURN AIR	24"x24"	WALL MTD.	1-WAY	PRICE 535 (1)(2)(3)
R-2	RETURN AIR	14"x8"	WALL MTD.	1-WAY	PRICE 535 (1)(2)(3)
R-3	RETURN AIR	24"x16"	WALL MTD.	1-WAY	PRICE 535 (1)(2)(5)
TG-1 CFM	TRANSFER AIR	6"x 6"	CEILING MTD.	1-WAY	PRICE 535 (1)(3)

NOTES:
 (1) PROVIDE MOUNTING FRAMES FOR T-BAR CEILING, GYP. BOARD CEILING OR GYP. BOARD WALL.
 (2) MOUNT GRILLE LOW ON WALL ABOVE FLOOR BASE OR AS INDICATED
 (3) TO HAVE BRIGHT WHITE POWDER COAT FINISH.
 (4) FURNISH WITH INSULATED AND TAPERED PLENUM SUPPLY BOX.
 (5) TO HAVE ANODIZED ALUMINUM FINISH.

FURNACE/COIL PIPING SCHEDULE (1)(2)		
SYMBOL	LIQUID LINE	SUCTION LINE
F-1	3/8"	7/8"
F-2	3/8"	3/4"
F-3	3/8"	3/4"
F-4	3/8"	7/8"
F-5	3/8"	7/8"

NOTES:
 (1) REFRIGERATION LINE SIZES TO BE SIZED ACCORDING TO FURNACE COOLING COIL AND CONDENSING UNIT MANUFACTURERS GUIDE LINES.
 (2) PRE-CHARGED FLEXIBLE COPPER OR ALUMINUM REFRIGERATION LINES ARE NOT ACCEPTABLE. ALL PIPING SHALL BE NITROGENIZED ACR HARD DRAWN COPPER WITH BRAZED FITTINGS.

FURNACE SCHEDULE												
SYMBOL	ARRANG.	(2) TWO STAGE HTG. CAP. BTUH		CFM	EXT. S.P.	OUTSIDE AIR (CFM)	CLG. COIL CAP.		MOTOR		MANUFACTURER & MODEL (1)(2)(3)	
		INPUT	INPUT				BTUH	COND.	H.P.	ELECT.		SPEED
F-1	DOWNFLOW	60000	58000	650	0.8"	200	42000	95°F	0.75	120/1/60	MED	CARRIER 59SC5B-060 (4)
F-2	DOWNFLOW	60000	58000	575	0.8"	40	30000	95°F	0.75	120/1/60	MED	CARRIER 59SC5B-060 (4)
F-3	DOWNFLOW	60000	58000	575	0.8"	40	30000	95°F	0.75	120/1/60	MED	CARRIER 59SC5B-060 (4)
F-4	DOWNFLOW	60000	58000	650	0.8"	200	42000	95°F	0.75	120/1/60	MED	CARRIER 59SC5B-060 (4)
F-5	UPFLOW	100000	97000	1550	0.8"	200	48000	95°F	1.00	120/1/60	MED-HIGH	CARRIER 59SC5B-100 (5)

NOTES:
 (1) FURNACES TO BE COMPLETE WITH MATCHING CASED DX COOLING COILS OF SIZE INDICATED, ECM BLOWER, AND CONCENTRIC FLUE ROOF KITS
 (2) TWO-STAGE, MULTI-POSITION, HIGH/LOW GAS FIRED FURNACE WITH ECM MOTORS
 (3) PROVIDE EXTERNAL FILTER SECTION. SEE DETAIL XX.XX
 (4) COOLING COIL TO BE VERTICAL DOWNFLOW TYPE. CARRIER CNPVP
 (5) COOLING COIL TO BE VERTICAL UPFLOW TYPE. CARRIER CNPVP

CONDENSING UNIT SCHEDULE													
SYMBOL	SERVES	COOLING CAPACITY				ELECTRICAL						MANUFACTURER & MODEL (1)(2)(3)(4)	
		MIN SEER	CAPACITY	E.A.T.	REF	COMP	NO.	FAN	NO.	VOLTS	PH		HZ
CU-1	F-1	14.0	42000	95° F	R-410A	17.9	1	1.20	1	208	1	60	CARRIER 24 ACC6-42
CU-2	F-2	14.0	30000	95° F	R-410A	12.8	1	0.70	1	208	1	60	CARRIER 24 ACC6-30
CU-3	F-3	14.0	30000	95° F	R-410A	12.8	1	0.70	1	208	1	60	CARRIER 24 ACC6-30
CU-4	F-4	14.0	42000	95° F	R-410A	17.9	1	1.20	1	208	1	60	CARRIER 24 ACC6-36
CU-5	F-5	14.0	48000	95° F	R-410A	19.9	1	1.20	1	208	1	60	CARRIER 24 ACC6-48

NOTES:
 (1) 1" MOUNT ALL CONDENSING UNITS ON 24" HIGH ROOF CURB WITH 1" THICK NEOPRENE VIBRATION ISOLATORS AT EACH CORNER
 (2) 14 SEER MINIMAL ACCEPTABLE EFFICIENCY
 (3) PROVIDE SEISMIC ATTACHMENT CLIPS- 1 PER SIDE - 4 PER CONDENSING UNIT. SEE DETAIL XX.XX
 (4) MAINTAIN MANUFACTURER'S RECOMMENDED SERVICE AND OPERATIONAL CLEARANCES AROUND THE CONDENSING UNITS

LEGEND AND ABBREVIATIONS	
— RL —	REFRIGERANT LIQUID
— RS —	REFRIGERANT SUCTION
AD	ACCESS DOOR
R.A.	RETURN AIR
S.A.	SUPPLY AIR
O.A.	OUTSIDE AIR
E.A.	EXHAUST AIR
Ⓣ	THERMOSTAT
Ⓢ	REMOTE SENSOR
P.O.C.	POINT OF CONNECTION
M	MOTORIZED DAMPER
⊗	S.A. DUCT SECTION UP
⊗	S.A. DUCT SECTION DN
	FLEXIBLE DUCT CONNECTION
	MANUAL DAMPER
	MOTORIZED DAMPER
	UNDERGROUND DUCT
	R.A., E.A. OR O.A. DUCT SECTION UP
	R.A., E.A. OR O.A. DUCT SECTION DN
	SUPPLY AND RETURN AIR DUCT TAKE-OFF
	SINGLE THICKNESS TURNING VANES
	DUCT TRANSITION

ELECTRIC RADIANT PANEL SCHEDULE								
SYMBOL	LOCATION	CAPACITY (WATTS)	CAPACITY (MBH)	SIZE	ELECTRICAL			MAKE & MODEL
					VOLTS	PHASE	HZ	
RP-1	CEILING	500	1705	48"x24"	208	1	60	MARLEY BERKO CP501F (1)(2)

NOTES:
 (1) UL LISTED, 1" THICK WHITE PANELS W/ FIBERGLASS INSULATION
 (2) FURNISH WITH JUNCTION-BOX, FACTORY WIRED, 22 GAUGE FRAME WITH GALV. STEEL BACK, AND RECESSED CEILING MOUNTING KIT FOR GYP BOARD CEILING.

ROOFTOP UNIT SCHEDULE																				
SYMBOL	SERVES	CFM	EXTERNAL STATIC PRESS.	FAN H.P.	DRIVE	COOLING CAPACITY					HEATING CAPACITY				ELEC	MCA	MFS	WEIGHT LBS.	SIZE	MANUFACTURER & MODEL (1)(2)(3)(4)(6)
						OAT	EDB/EWB	TOTAL MBH	SENSIBLE MBH	SEER/EER	TYPE	GAS CONN.	MBH IN	MBH OUT						
RT-01	CLASSROOM 120	1475	0.8	1.0	BELT	95	80/62	48.7	37.1	15.4	INDIRECT GAS	1/2"	112/82	90/66	208 V/3/60	24.0	30	720	74" x 49" x 41"	YORK ZYG05E2B3AB2B324A2 (4 TON)
RT-02	CLASSROOM 121	1425	0.8	1.0	BELT	95	80/62	48.7	37.1	15.4	INDIRECT GAS	1/2"	112/82	90/66	208 V/3/60	24.0	30	720	74" x 49" x 41"	YORK ZYG05E2B3AB2B324A2 (4 TON)
RT-03	CLASSROOM 118	1700	0.8	1.5	BELT	95	80/62	66.1	65.8	15.2	INDIRECT GAS	1/2"	112/82	90/66	208 V/3/60	30.0	45	740	74" x 49" x 41"	YORK ZYG06E2B3AB2B324A2 (5 TON)
RT-04	CLASSROOM 117	1600	0.8	1.5	BELT	95	80/62	66.1	65.8	15.2	INDIRECT GAS	1/2"	112/82	90/66	208 V/3/60	30.0	45	740	74" x 49" x 41"	YORK ZYG06E2B3AB2B324A2 (5 TON)
RT-05	CLASSROOM 143	1475	0.8	1.0	BELT	95	80/62	48.7	37.1	15.4	INDIRECT GAS	1/2"	112/82	90/66	208 V/3/60	24.0	30	720	74" x 49" x 41"	YORK ZYG05E2B3AB2B324A2 (4 TON)
RT-06	CLASSROOM 144	1475	0.8	1.0	BELT	95	80/62	48.7	37.1	15.4	INDIRECT GAS	1/2"	112/82	90/66	208 V/3/60	24.0	30	720	74" x 49" x 41"	YORK ZYG05E2B3AB2B324A2 (4 TON)
RT-07	CLASSROOM 102	1600	0.8	1.5	BELT	95	80/62	66.1	65.8	15.2	INDIRECT GAS	1/2"	112/82	90/66	208 V/3/60	30.0	45	740	74" x 49" x 41"	YORK ZYG06E2B3AB2B324A2 (5 TON)
RT-08	CLASSROOM 101	1700	0.8	1.5	BELT	95	80/62	66.1	65.8	15.2	INDIRECT GAS	1/2"	112/82	90/66	208 V/3/60	30.0	45	740	74" x 49" x 41"	YORK ZYG06E2B3AB2B324A2 (5 TON)
RT-09	FACULTY COLL 108	2000	0.8	2.0	BELT	95	80/62	87.1	71.0	12.0	INDIRECT GAS	3/4"	125/90	100/72	208 V/3/60	39.0	50.0	900	88" x 62" x 41"	YORK ZYG07E2B3AB2B324A2 (6 TON)

NOTES:
 (1) FURNISH ROOF TOP UNIT COMPLETE WITH FULL DRY BULB ECONOMIZER, BACNET CARD AND OPEN PROTOCOL CONTROLS FOR HONEYWELL LCBS CONTROLS. MOTORIZED R.A. & O.A. DAMPERS, GRAVITY RELIEF, WEATHERHOODS FOR O.A. AND RELIEF AIR, HAIL GUARDS, POWERED CONVENIENCE OUTLET, SINGLE POINT POWER CONNECTION W/ NON-FUSED DISCONNECT, STAINLESS STEEL DRAIN PAN, HIGH ALTITUDE KIT, LBOZ GAS REGULATOR, MERV 8 AIR FILTERS, 2 STAGE MEDIUM GAS HEAT & LOCKING HINGED SERVICE ACCESS DOORS.
 (2) INSTALL NEW ROOF-TOP UNIT LEVEL AND PLUMB PER MANUFACTURERS INSTRUCTIONS. MAINTAIN MANUFACTURERS RECOMMENDED SERVICE AND OPERATIONAL CLEARANCES AROUND UNIT.
 (3) PROVIDE 14 INCH HIGH FACTORY FABRICATED AND INSULATED ROOF CURB. VERIFY LOCATION OF ROOF CURB AND ROOF OPENINGS WITH STRUCTURAL ENGINEER PRIOR TO INSTALLING. ROOF OPENINGS FOR SUPPLY AND RETURN AIR DUCTWORK TO BE STRUCTURALLY FRAMED TO MATCH SUPPLY AND RETURN AIR OPENING SIZES PER ROOF TOP UNIT MANUFACTURER.
 (4) AIRFLOW, HEATING AND COOLING CAPACITIES ARE MINIMUM ACCEPTABLE. CONTRACTOR TO SELECT EQUIPMENT FOR PROJECT SITE ALTITUDE OF 4200 FT ASL. 95 DEG F DB AND 62 DEG F WB.

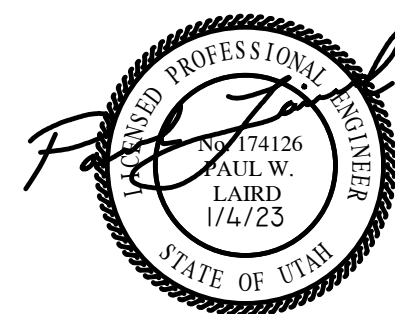
PROJECT DESIGN DATA:	
LOCATION:	OGDEN, UTAH
LATITUDE:	41.22°
LONGITUDE:	111.97°
ELEVATION:	4200 FT
SUMMER DESIGN DRY BULB:	97°F
WINTER DESIGN DRY BULB:	65°F
DEFAULT SUMMER INDOOR DRY BULB:	1°F
DEFAULT WINTER INDOOR DRY BULB:	75°F
	72°F

PENTHOUSE SCHEDULE					
SYMBOL	TYPE	THROAT SIZE	LOUVERS HEIGHT	CFM	MAKE & MODEL (1)
PH-1	EXHAUST AIR	30" x 24"	5 20"	VARIABLE	GREENHECK WRH-30X24-5
PH-2	OUTSIDE AIR	12" x 12"	3 14"	VARIABLE	GREENHECK FGI-12X12X14

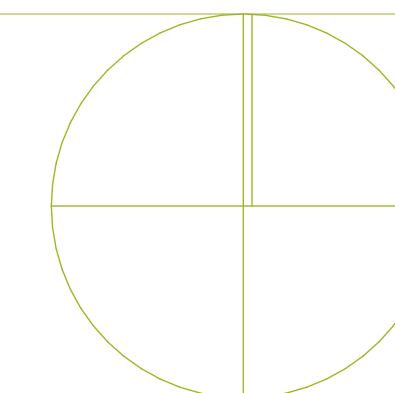
NOTES:
 (1) FURNISH COMPLETE WITH 14" HIGH ROOF CURB, STAINLESS STEEL BIRD SCREEN.

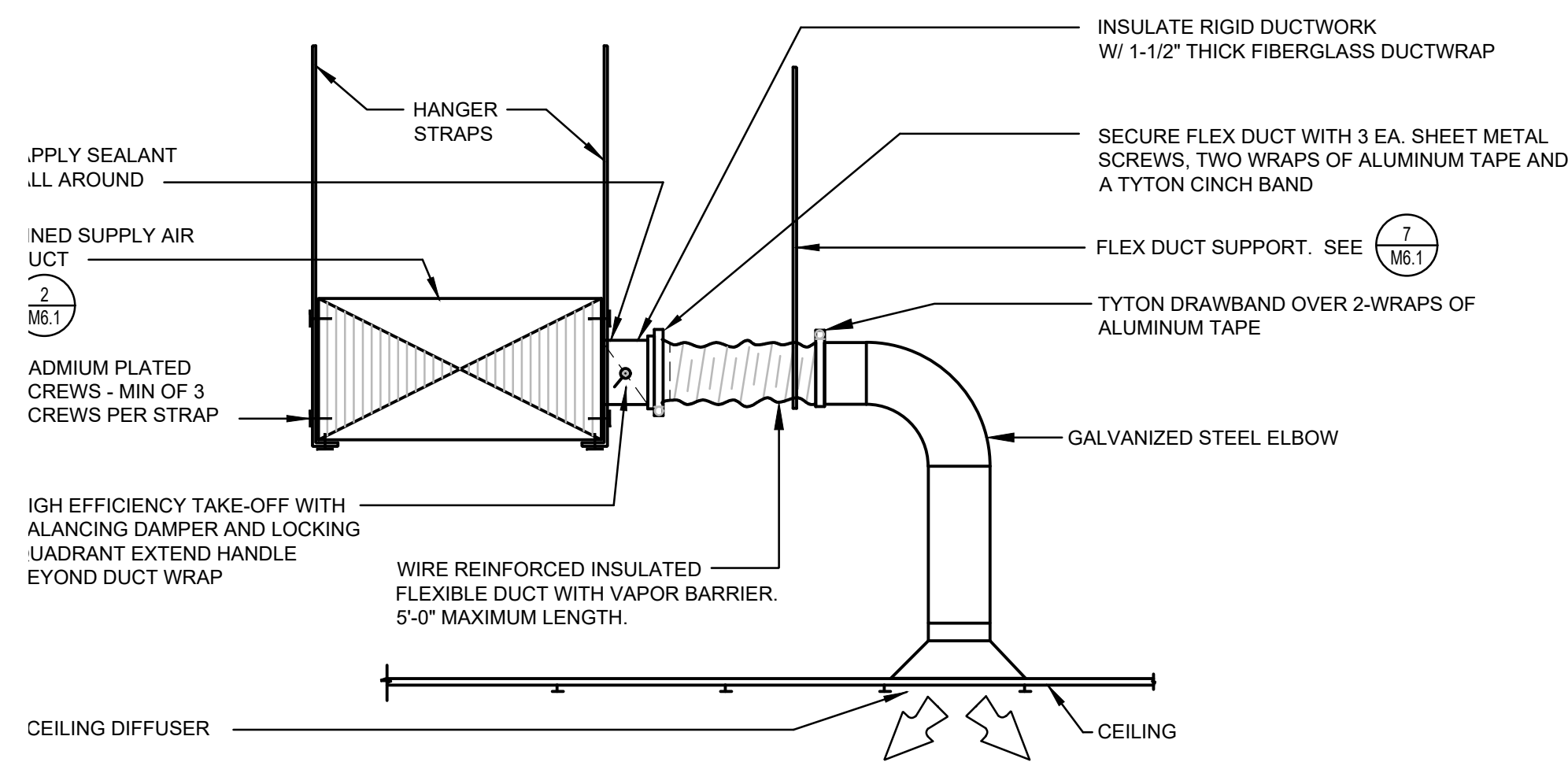
EXHAUST FAN SCHEDULE																
SYMBOL	MANUFACTURER AND MODEL NUMBER	SERVES	TYPE	AIR TYPE	FAN							ELECTRICAL			PHYSICAL	NOTES
					MAXIMUM AIRFLOW RATE (CFM)	STATIC PRESSURE (IN. WATER)	OUTLET VELOCITY (FPM)	FAN SPEED (RPM)	FAN WHEEL DRIVE	STATIC EFFICIENCY (%)	MAX SONES	MOTOR SIZE (HP)	MOTOR SPEED (RPM)	VOLT/PH/HZ		
EF-1	COOK GC-148	RESTROOMS	CEILING MTD.	EXHAUST	135	0.25	640	1075	DIRECT	32	3.4	40 WATTS	1075	120/1/60	20	(1)(2)(3)
EF-2	COOK GC-148	RESTROOMS	CEILING MTD.	EXHAUST	100	0.25	510	1075	DIRECT	30	3.4	35 WATTS	1075	120/1/60	20	(1)(2)(3)

NOTES:
 (1) FURNISH EXHAUST FAN WITH INTEGRAL BACKDRAFT DAMPER, FACTORY MOUNTED FAN SPEED CONTROL, VIBRATION ISOLATION KIT AND ELECTRICAL DISCONNECT.
 (2) FURNISH EXHAUST FAN WITH WHITE ALUMINUM GRILLE.
 (3) REFER TO SPECIFICATIONS FOR EXHAUST FAN CONTROL SEQUENCE. BALANCE EXHAUST FAN TO CFM INDICATED.

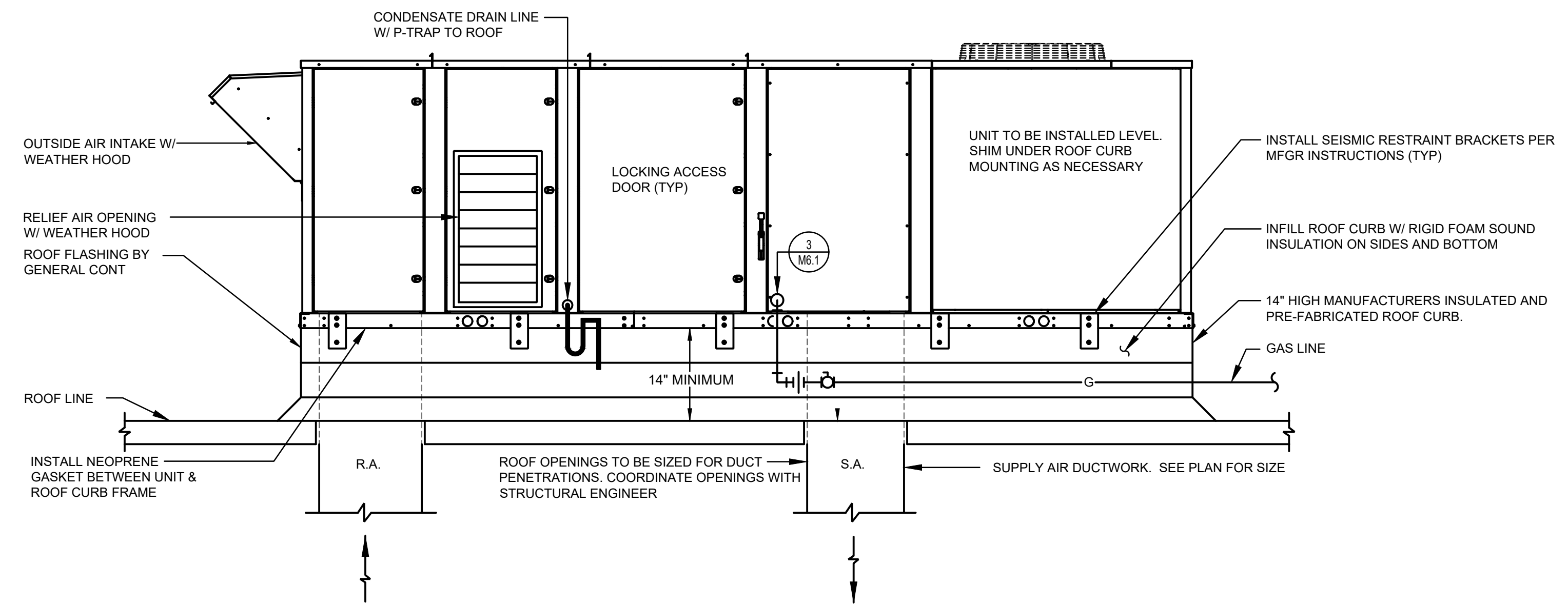


NO.	DATE	DESCRIPTION

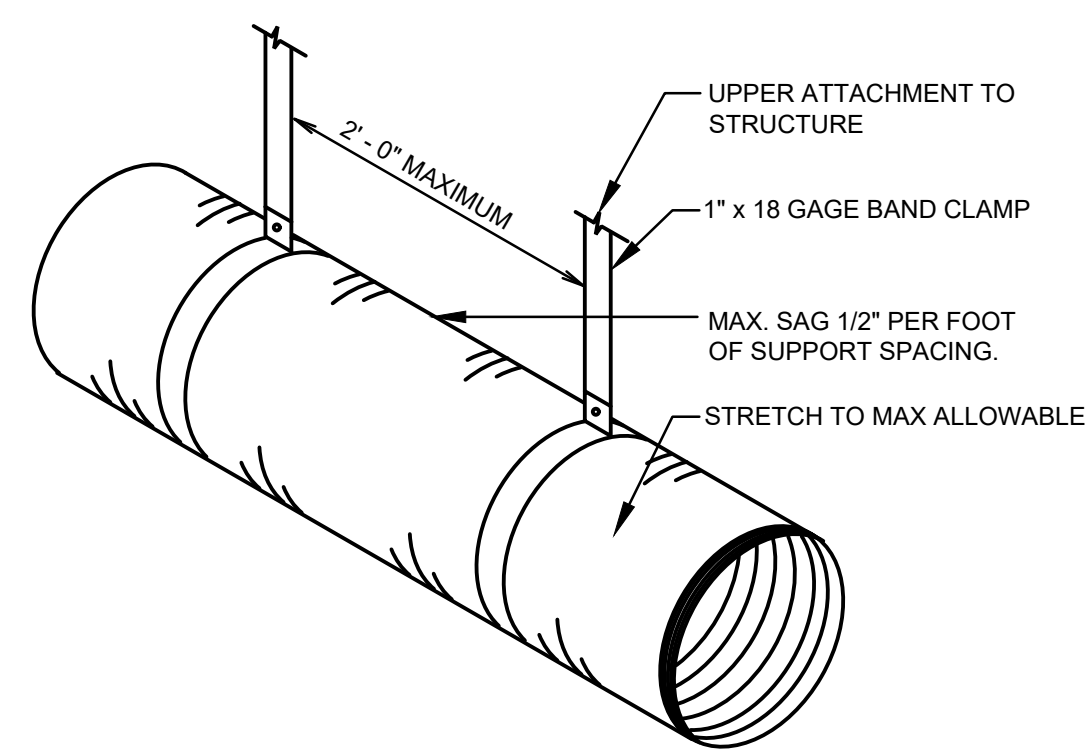




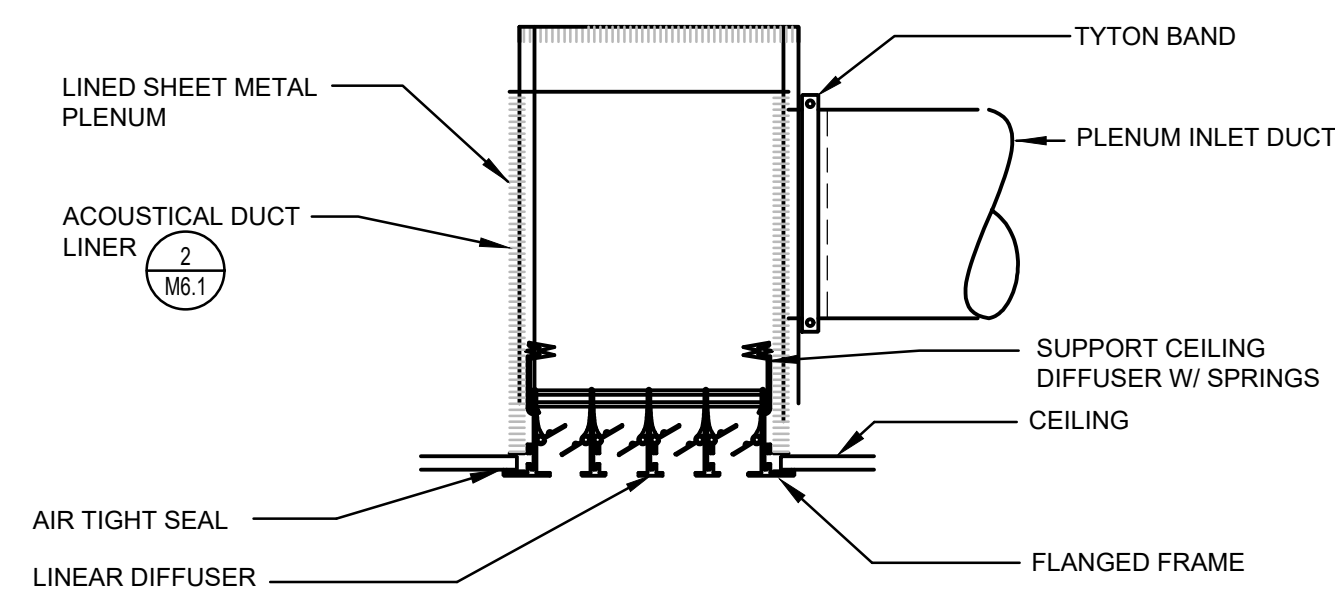
CEILING DIFFUSER INSTALLATION DETAIL (6) NOT TO SCALE M6.1



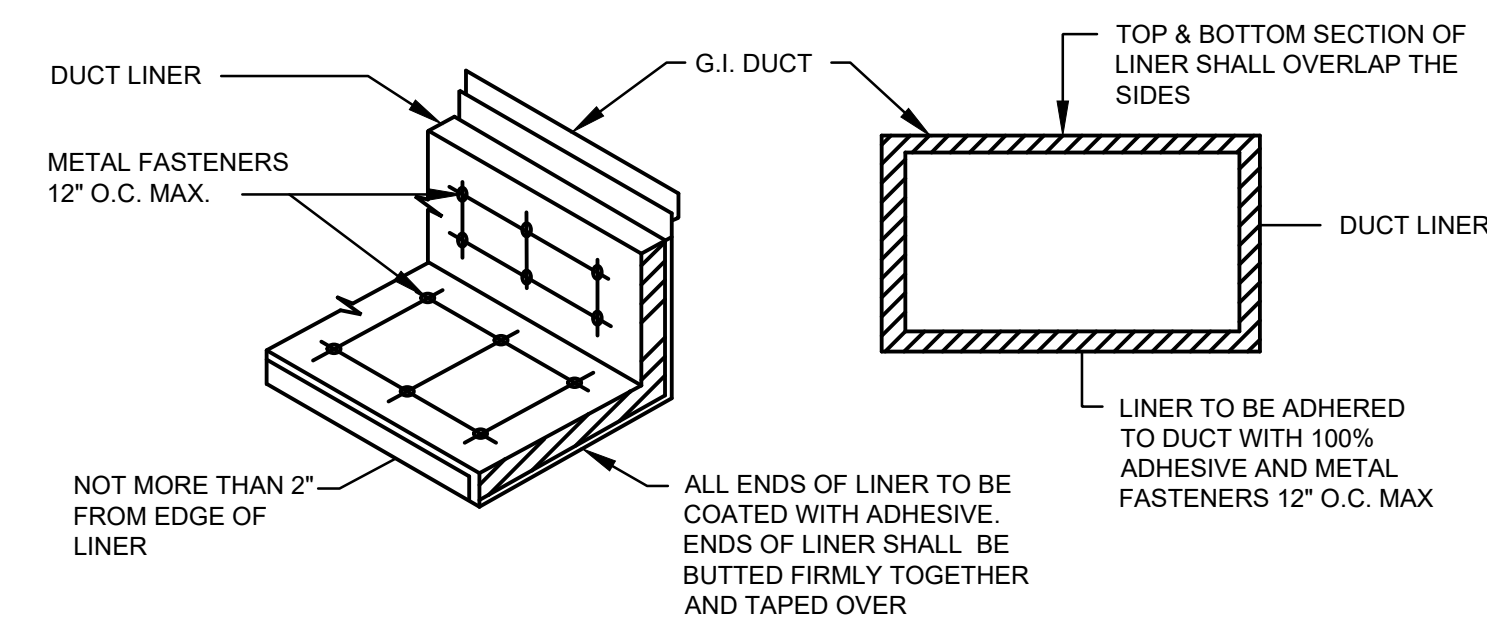
PACKAGED ROOF-TOP UNIT DETAIL (1) NOT TO SCALE M6.1



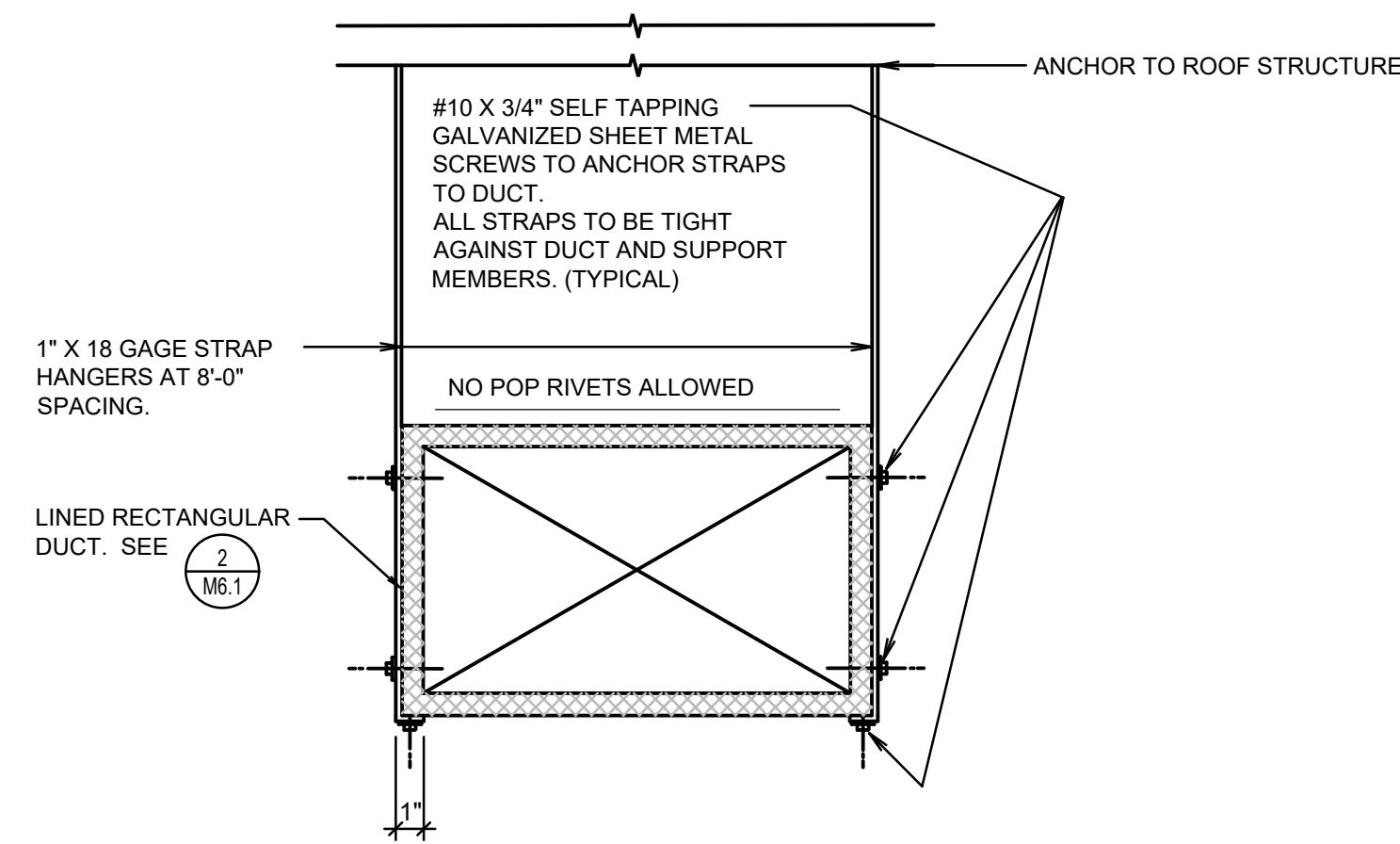
FLEXIBLE DUCT SUPPORT DETAIL (7) NOT TO SCALE M6.1



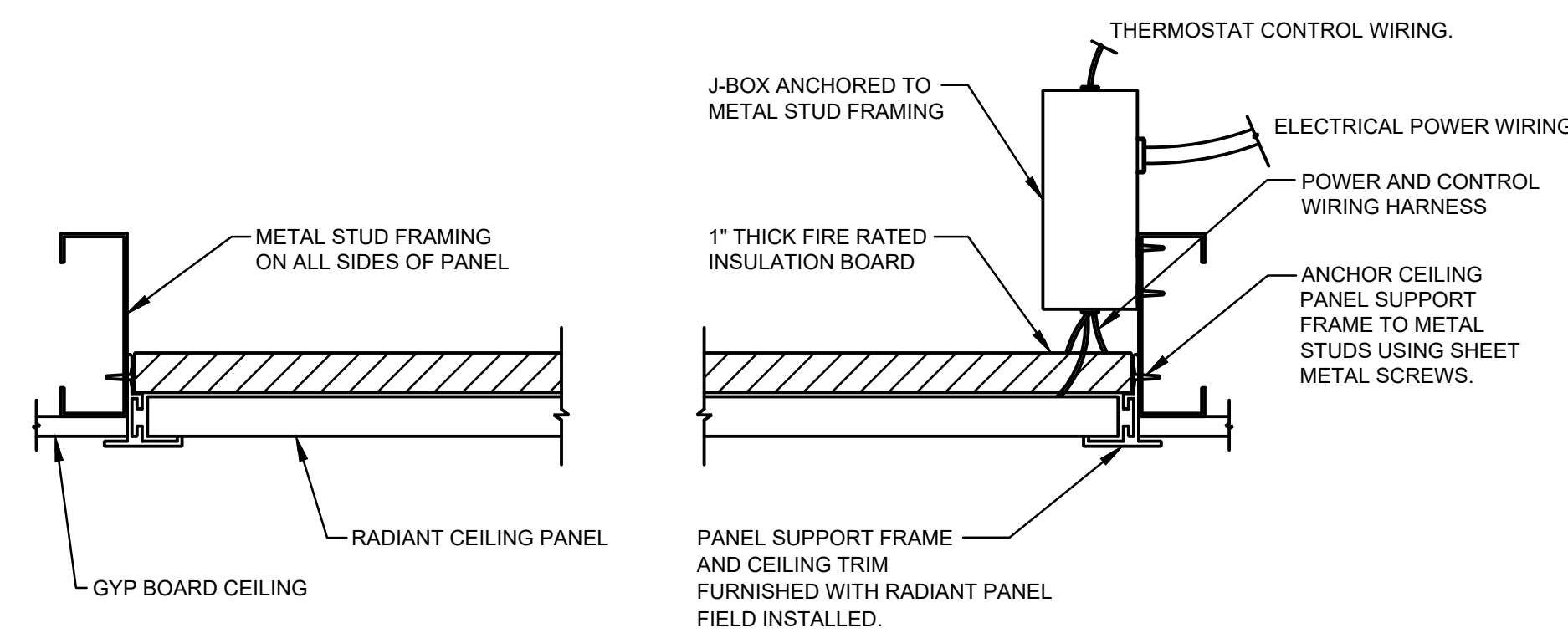
LINEAR DIFFUSER INSTALLATION DETAIL (4) NOT TO SCALE M6.1



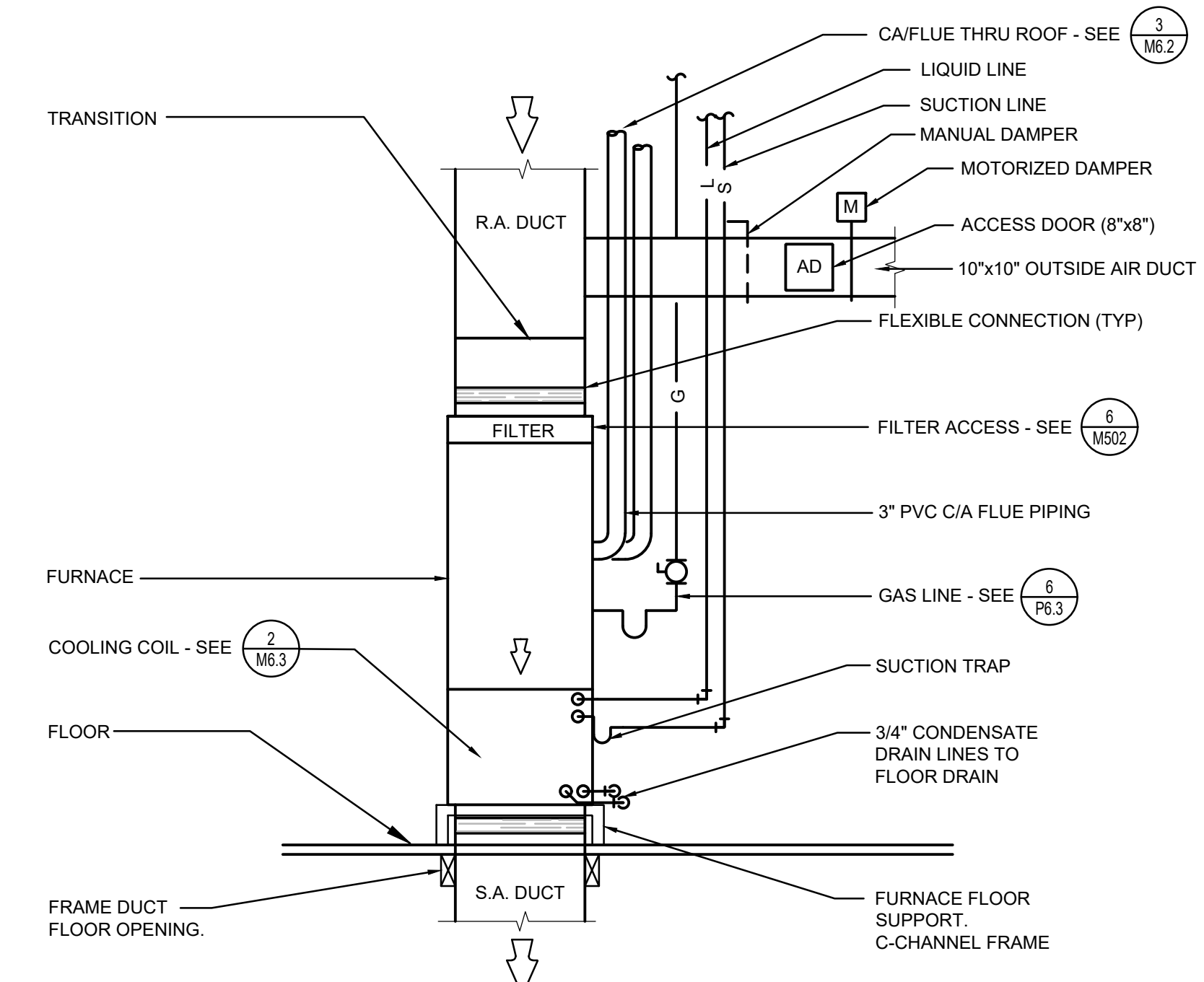
DUCT LINER DETAIL (2) NOT TO SCALE M6.1



MAIN DUCT INSTALLATION DETAIL (8) NOT TO SCALE M6.1

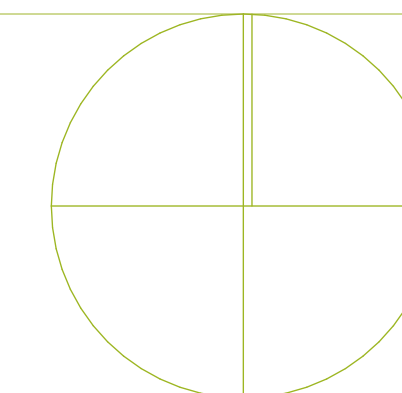


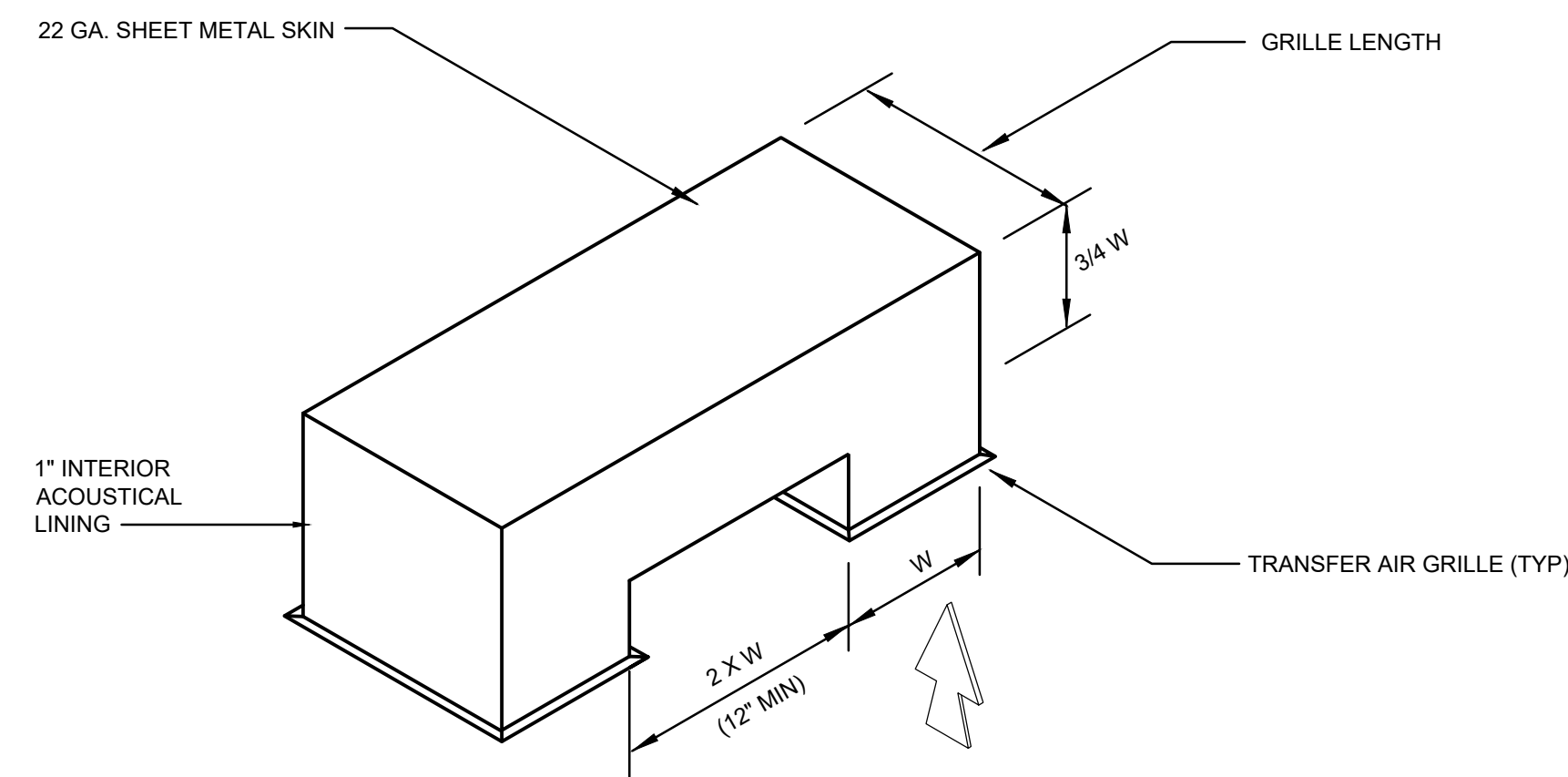
RADIANT CEILING PANEL INSTALLATION DETAIL (5) NOT TO SCALE M6.1



TYPICAL DOWNFLOW FURNACE DETAIL (3) NOT TO SCALE M6.1

NO.	DATE	DESCRIPTION

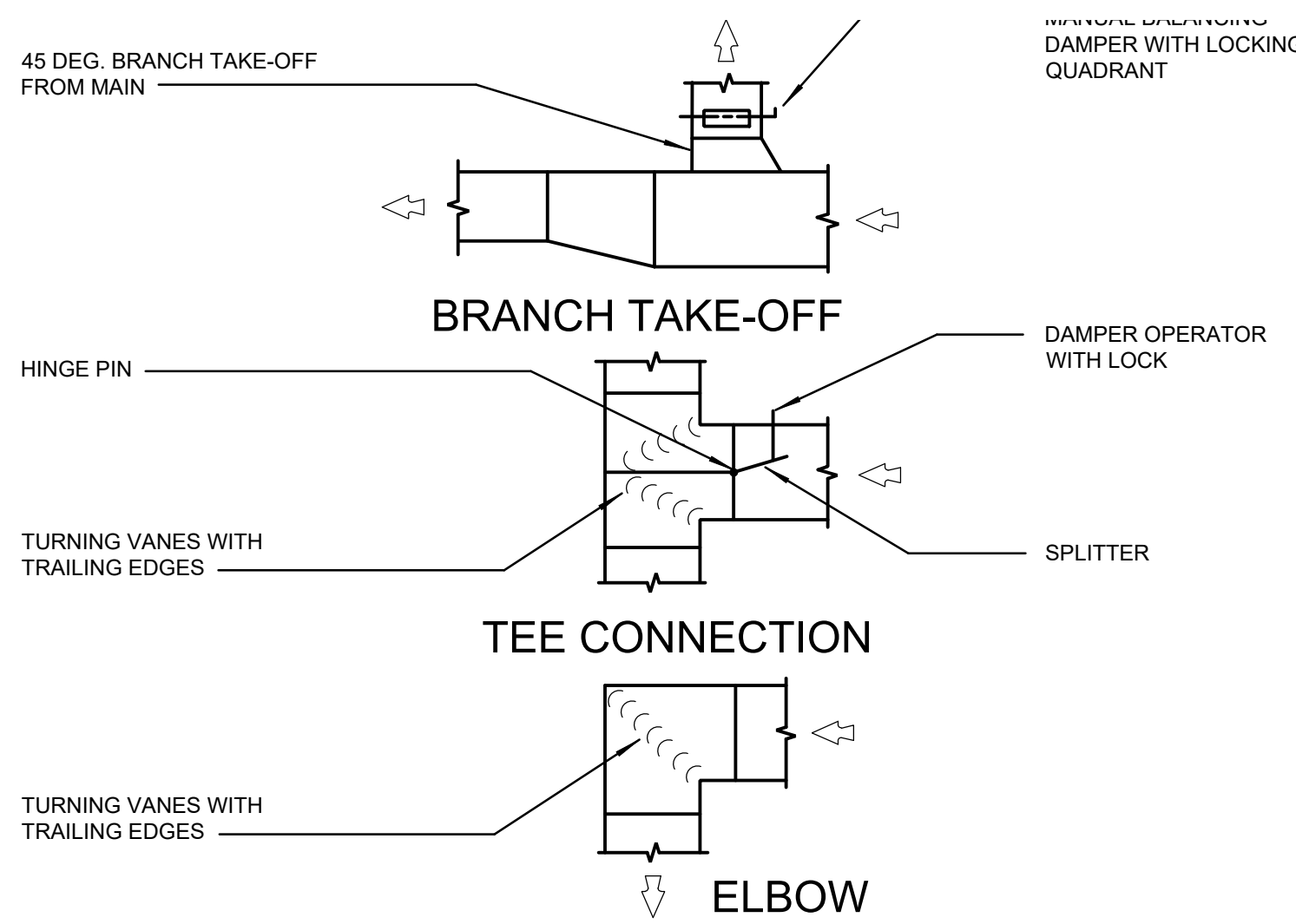




TRANSFER AIR DUCT DETAIL

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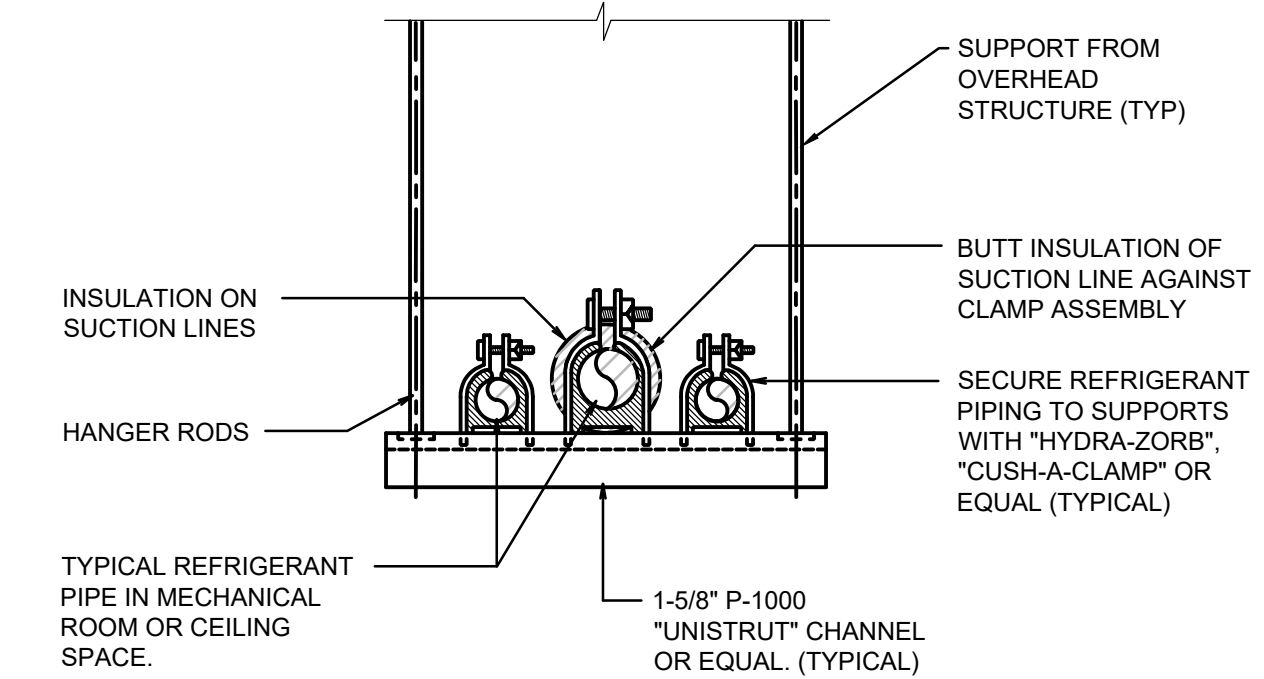
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M6.2



LOW PRESSURE DUCT DETAILS

NOT TO SCALE

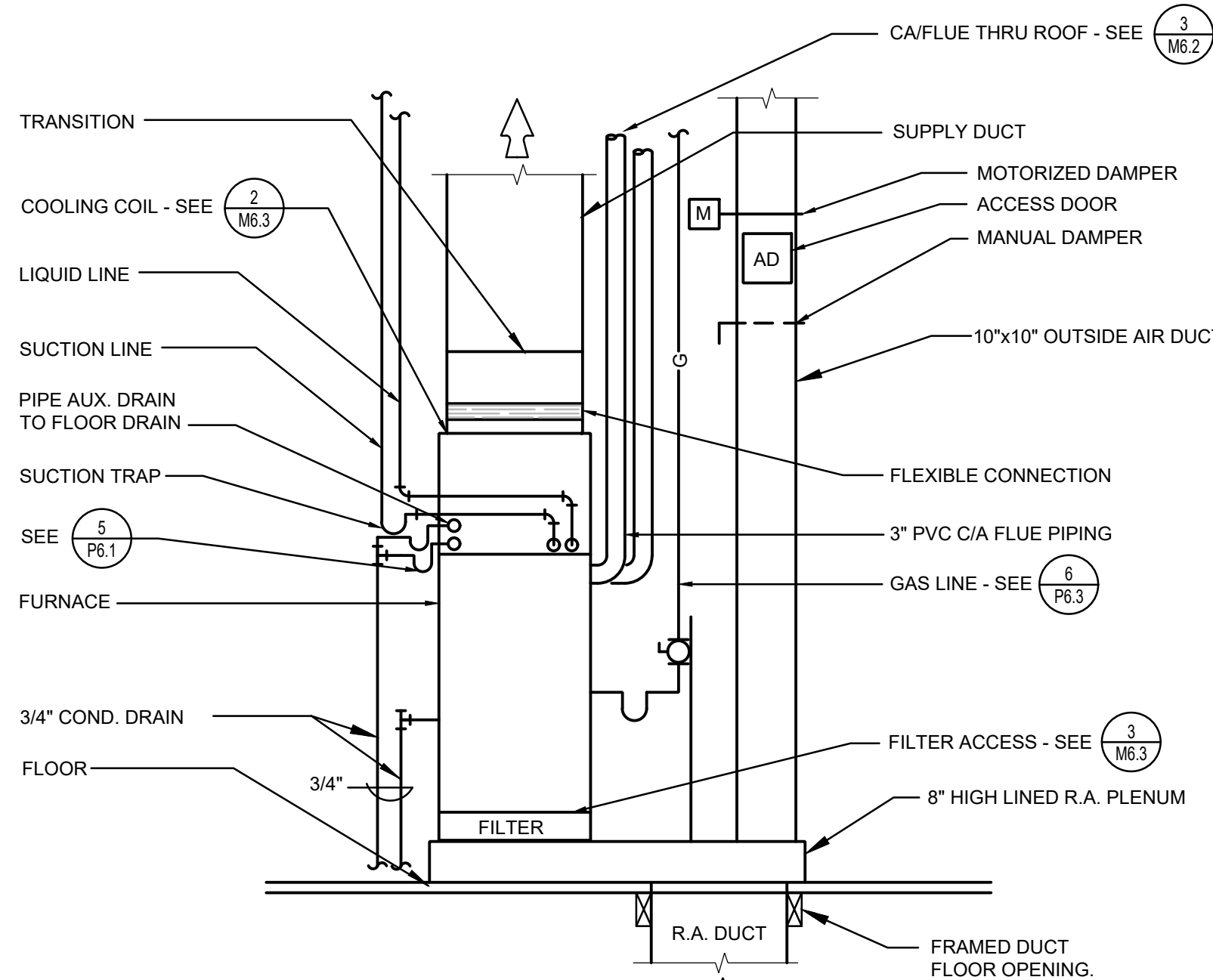
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M6.2



SUSPENDED REFRIGERANT PIPE SUPPORT AT CEILING

SCALE: NONE

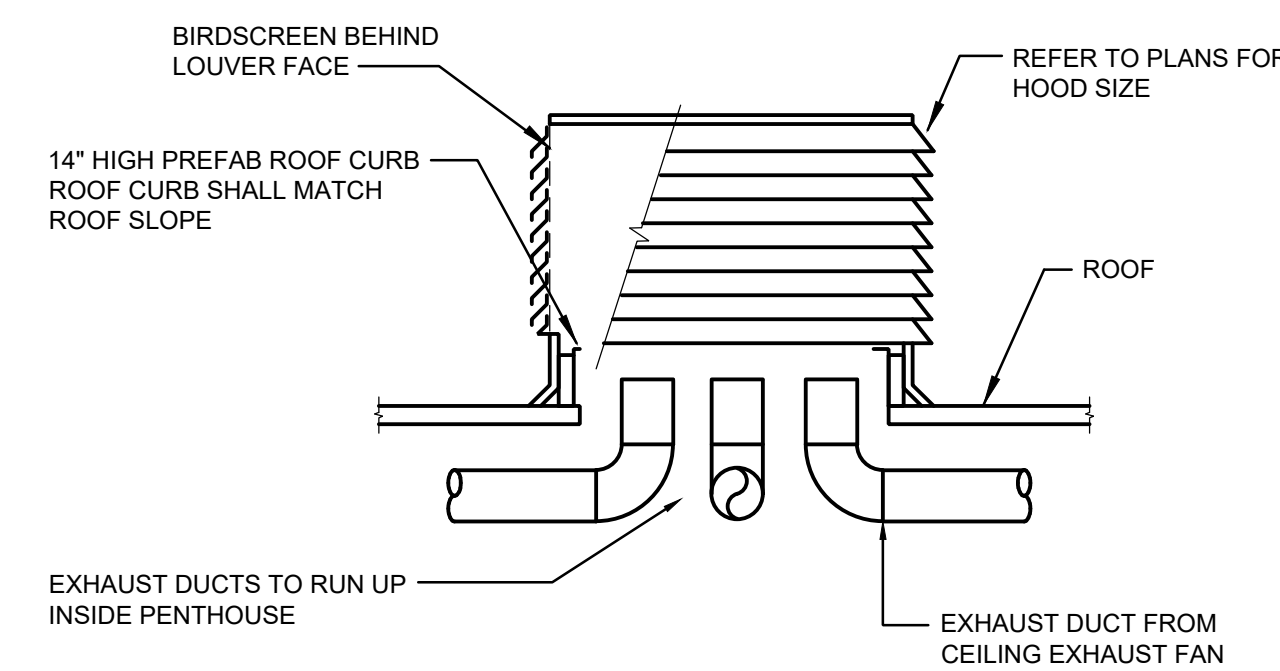
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M6.2



TYPICAL UPFLOW FURNACE DETAIL

NOT TO SCALE

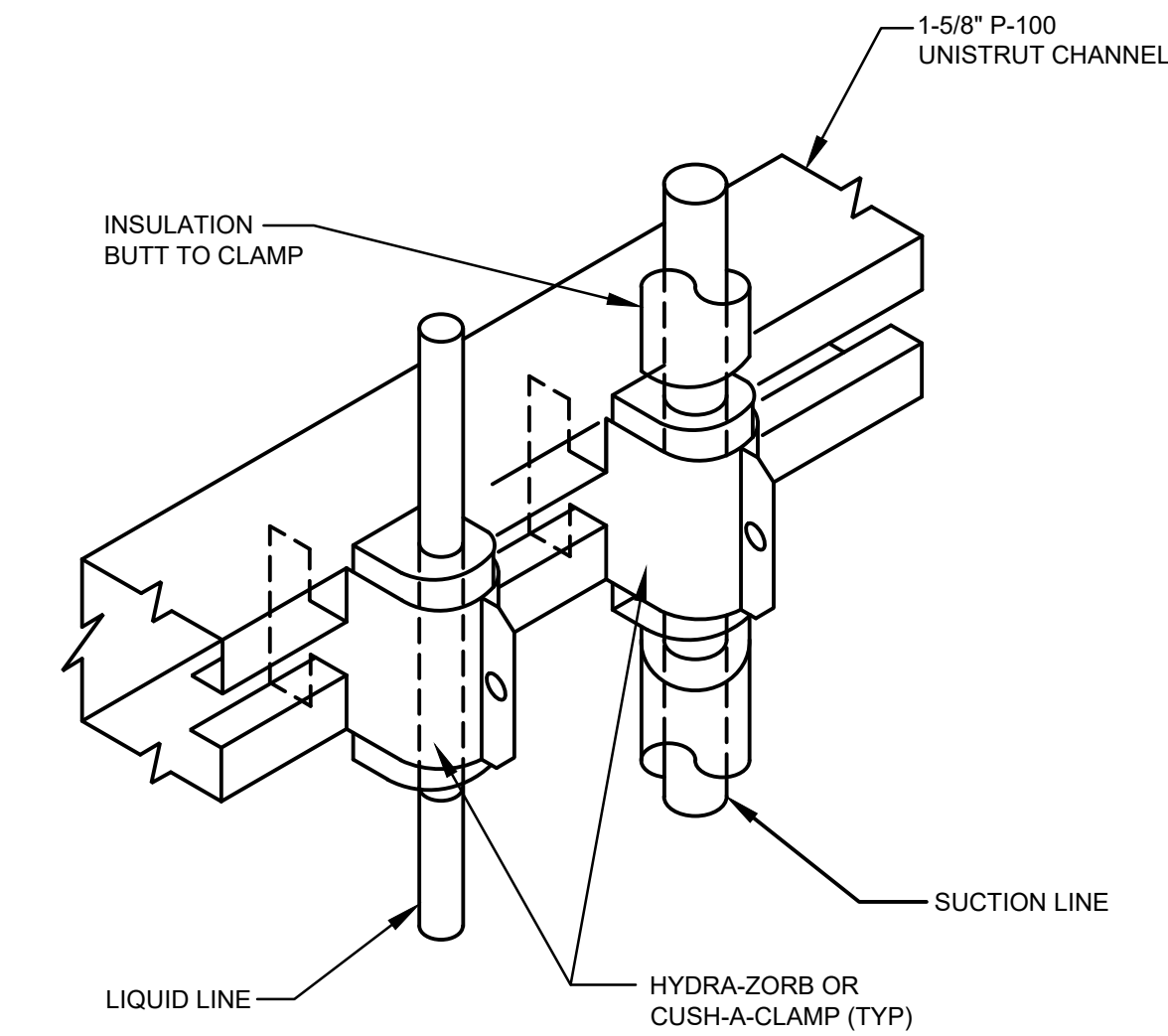
8
M6.2



EXHAUST PENTHOUSE ROOF HOOD DETAIL

NOT TO SCALE

5
M6.2



REFRIGERANT PIPE SUPPORT

SCALE: NONE

2
M6.2

DIMENSION OF LONGEST SIDE, INCHES	SHEET METAL GAGE (ALL FOUR SIDES)	MINIMUM REINFORCING ANGLE SIZE AND MAXIMUM LONGITUDINAL SPACING BETWEEN TRANSVERSE JOINTS & OR INTERMEDIATE REINFORCING	TRANSVERSE REINFORCING (1)				
			MIN. H. IN.	AT JOINTS			
				DRIVE SLIP	HEMME S SLIP	ALTERN BAR SLIP	REIN-FORCED BAR SLIP
UP THRU 12	26	NONE REQUIRED	1	26	26	24	24
13 - 18	24	NONE REQUIRED	1	24	24	24	24
19 - 30	24	1"x1"x1/8" @ 60 IN	1	-	24	24	24
31 - 36	22	1"x1"x1/8" @ 60 IN	1	-	-	22	22

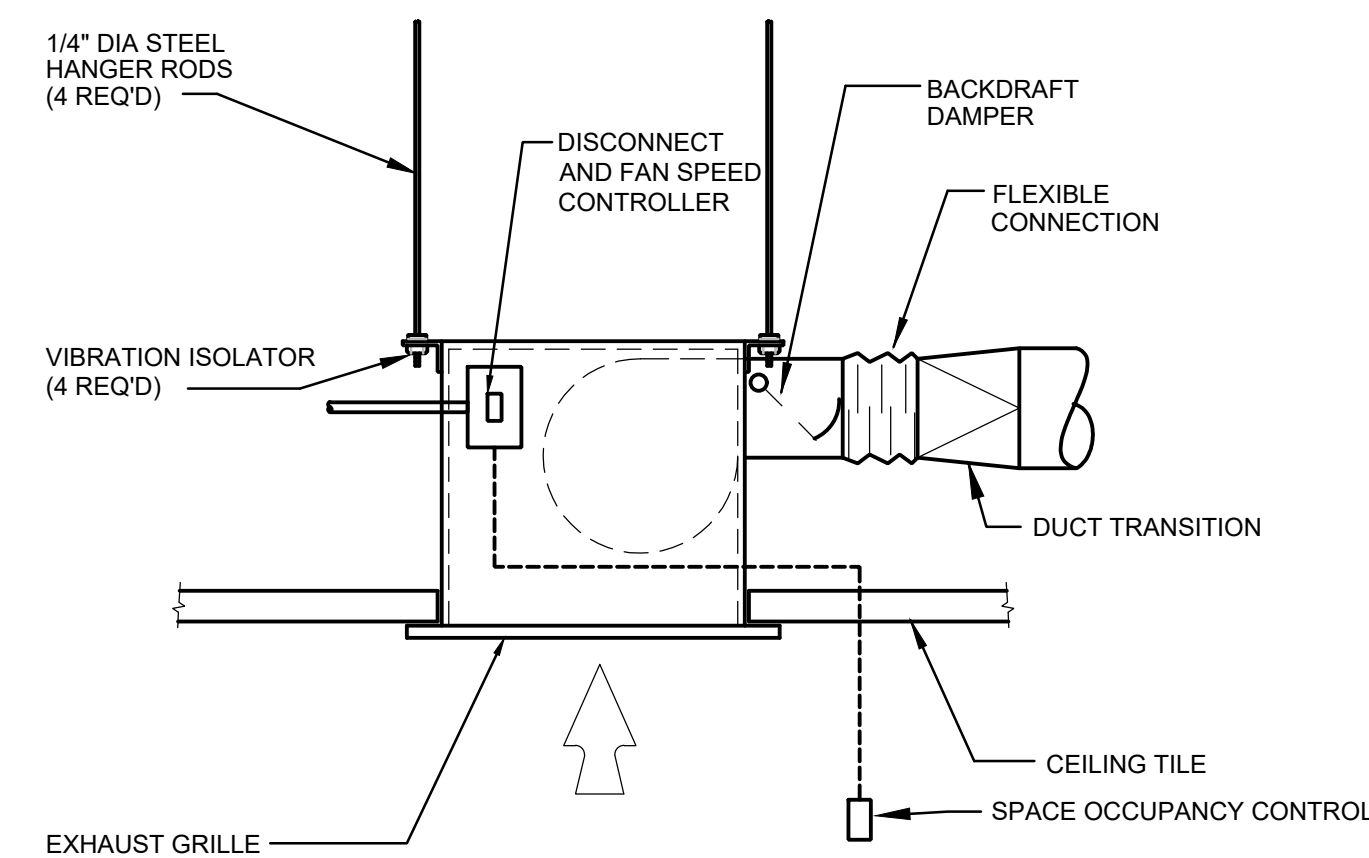
(1) TRANSVERSE REINFORCING SIZE IS DETERMINED BY DIMENSION OF SIDE TO WHICH ANGLE IS APPLIED.

(2) LONGITUDINAL JOINTS TO BE PITTSBURG OR SNAP LOCK TYPE.

DUCT CONSTRUCTION DETAIL

SCALE: NONE

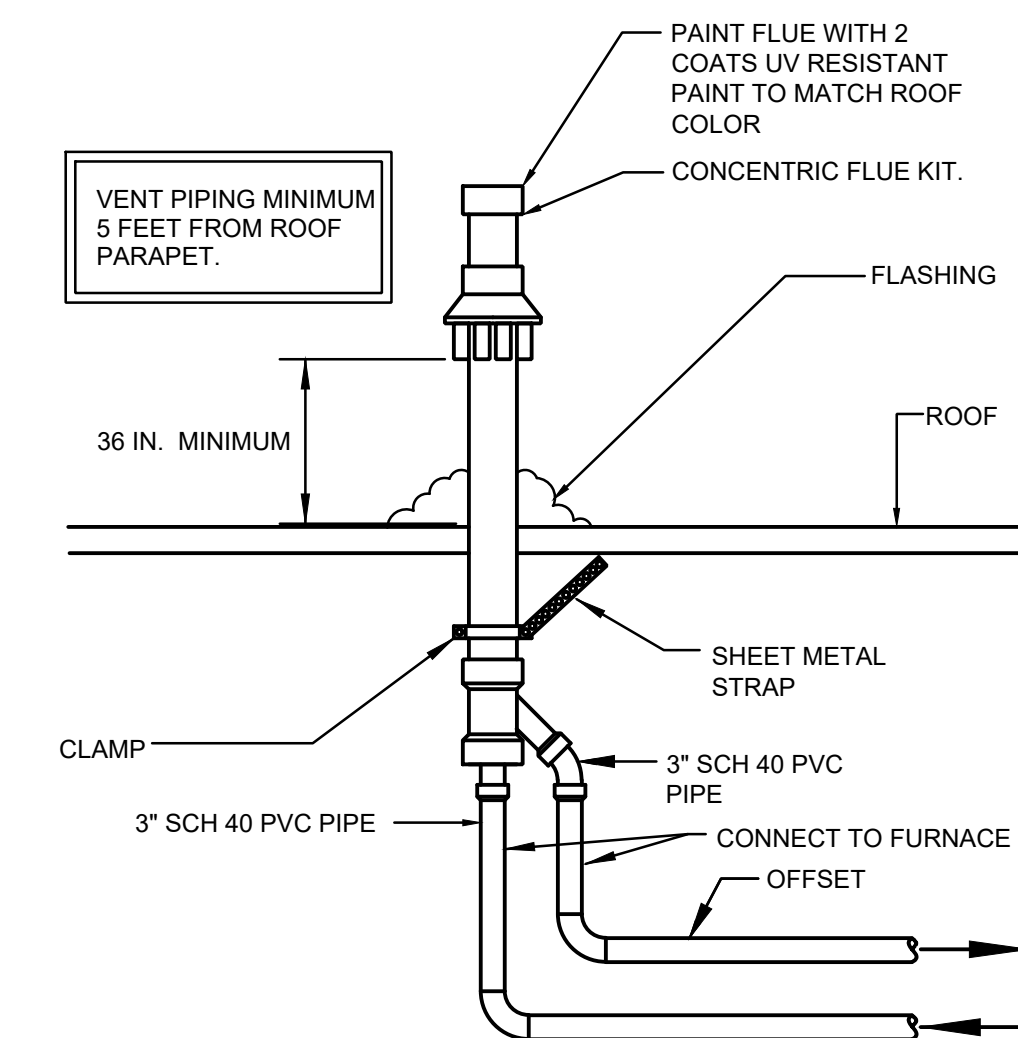
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M6.2



CEILING EXHAUST FAN DETAIL

NOT TO SCALE

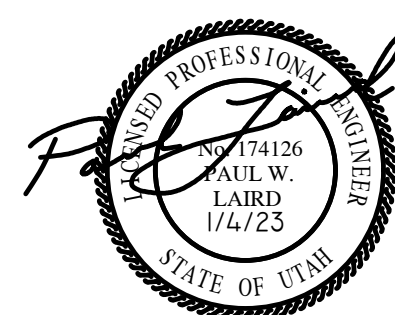
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M6.2



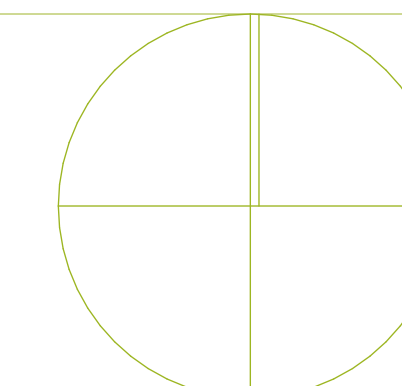
FURNACE VENTING DETAIL

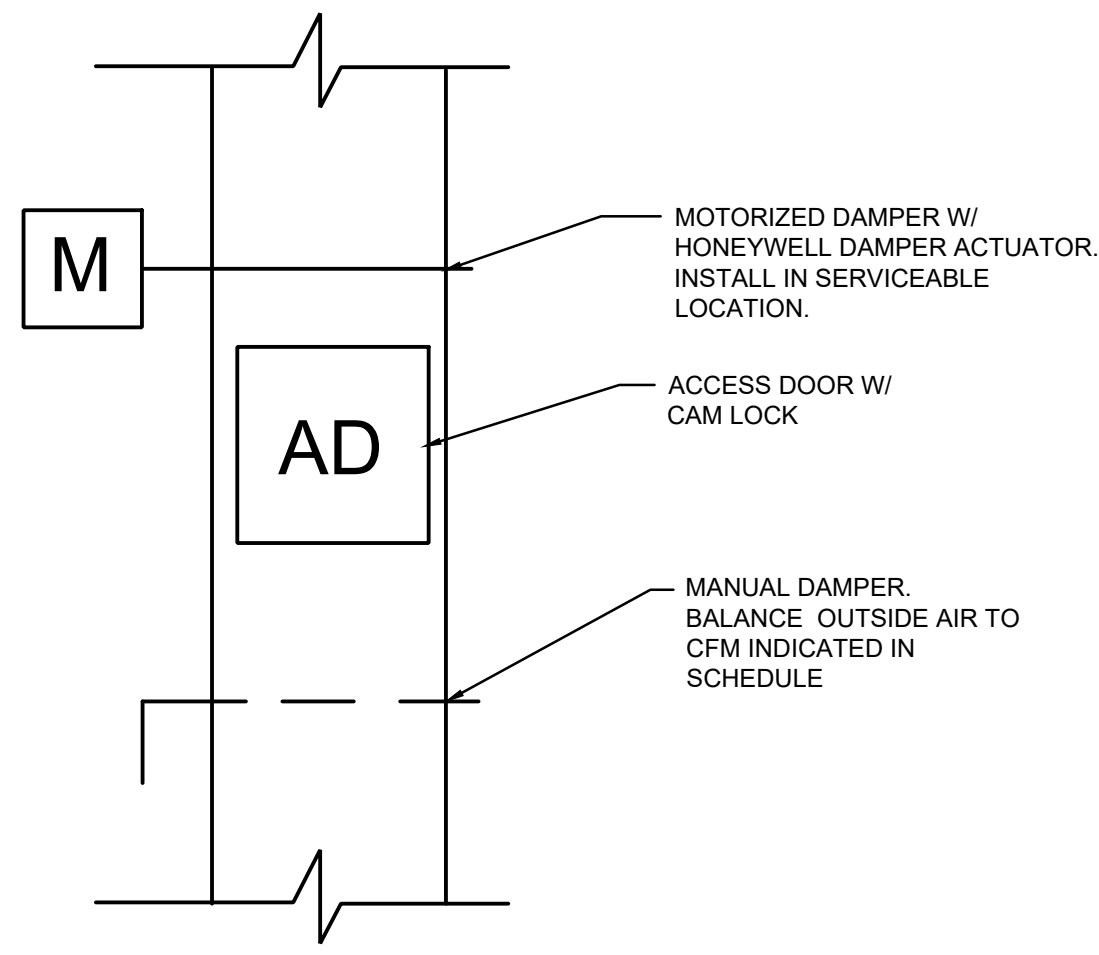
NOT TO SCALE

3
M6.2

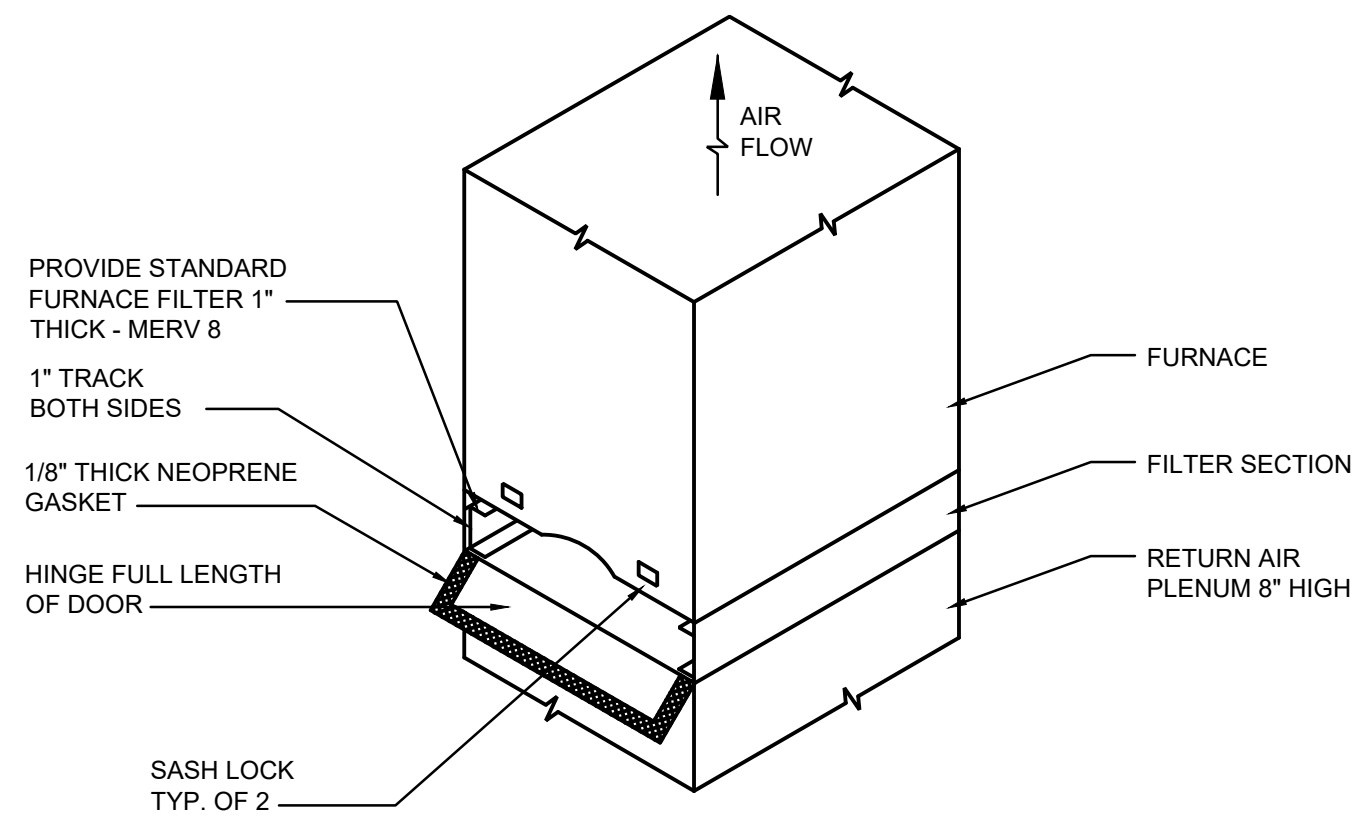


NO.	DATE	DESCRIPTION

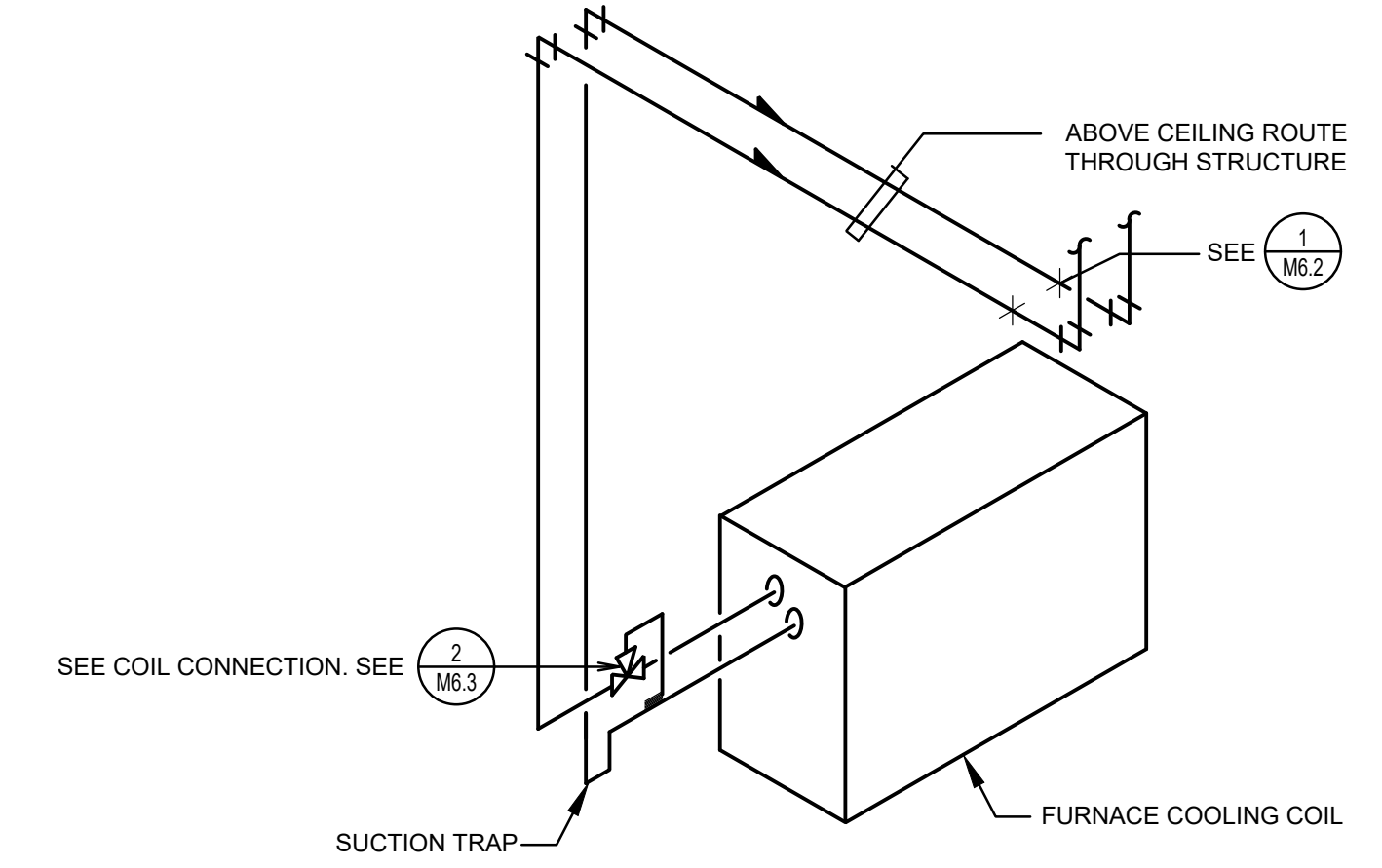
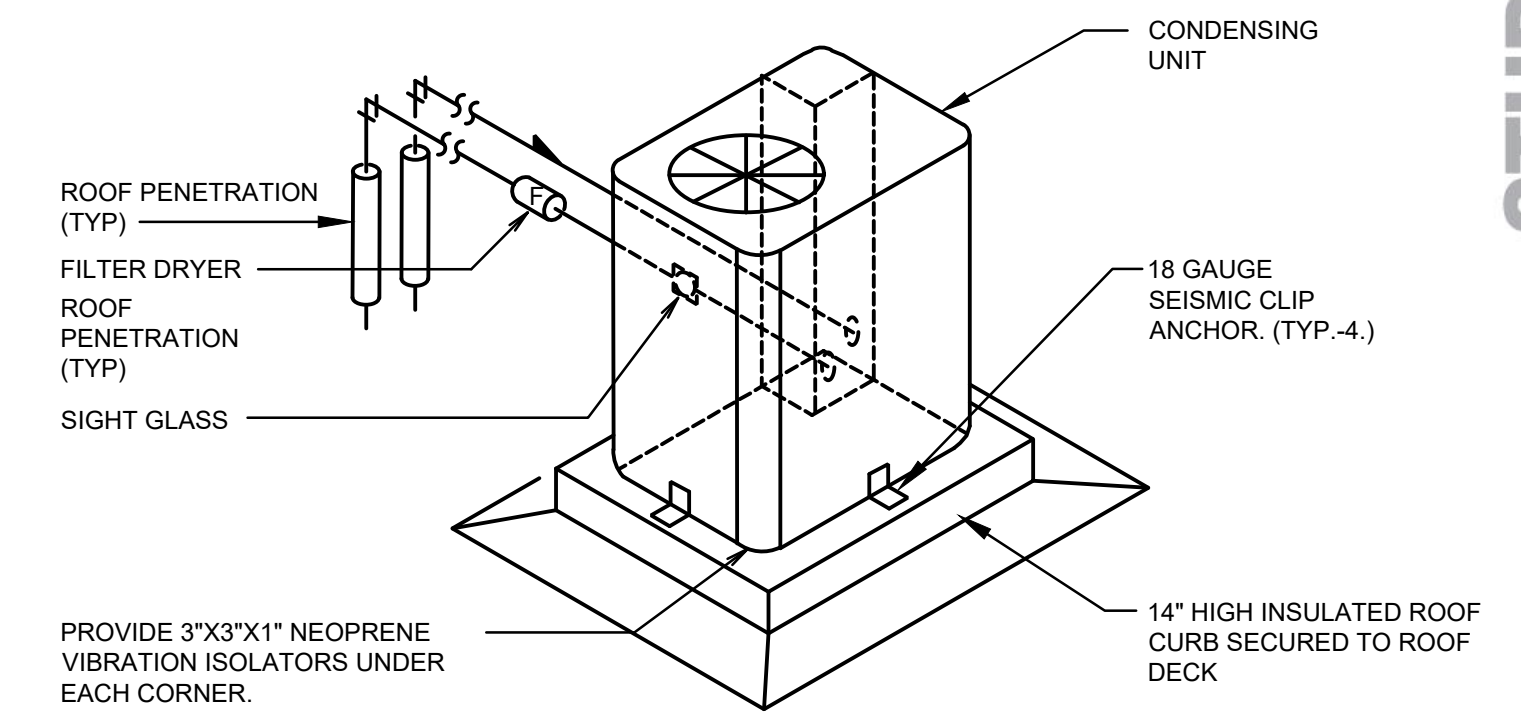




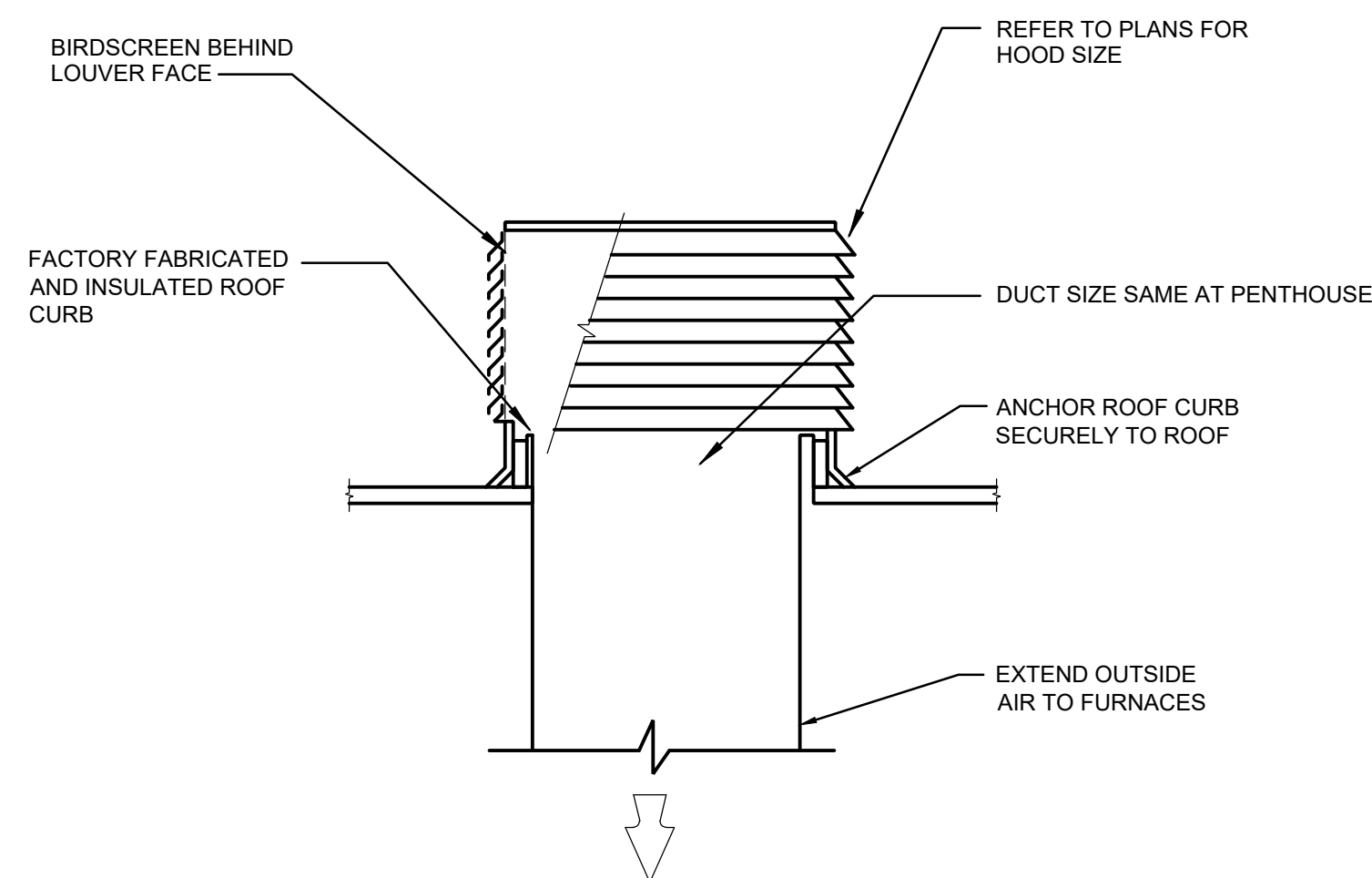
OUTSIDE AIR DAMPER DETAIL 5
NOT TO SCALE M6.3



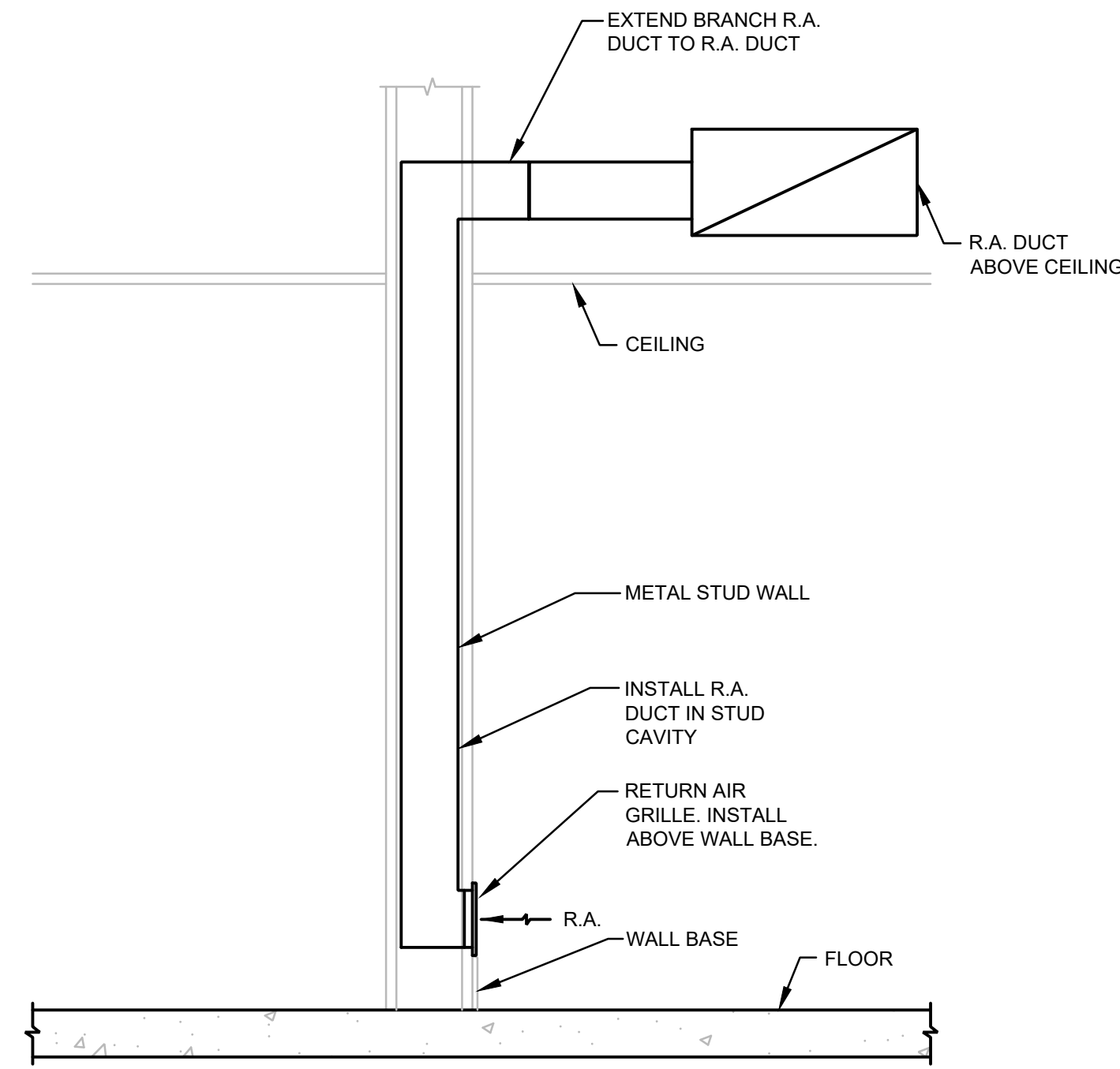
EXTERNAL FILTER SECTION DETAIL 3
NOT TO SCALE M6.3



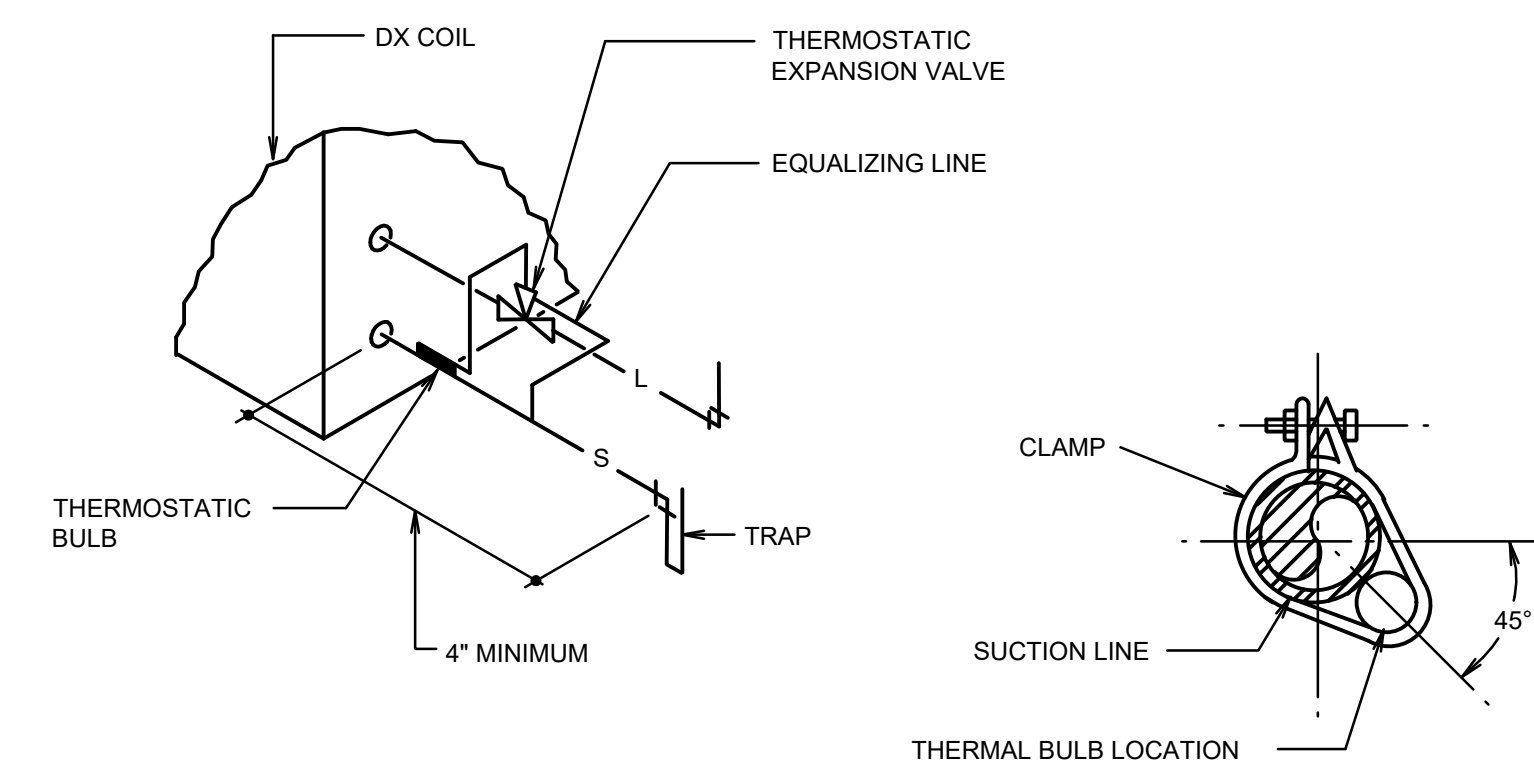
REFRIGERANT PIPING DETAIL 1
SCALE: NONE M6.3



PENTHOUSE ROOF HOOD DETAIL 6
NOT TO SCALE M6.3

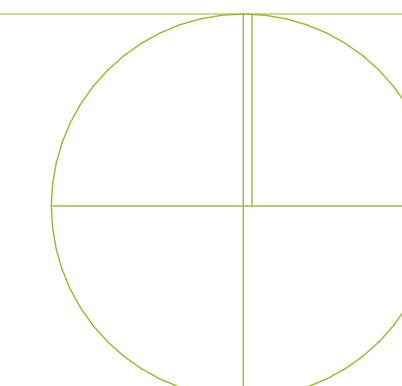


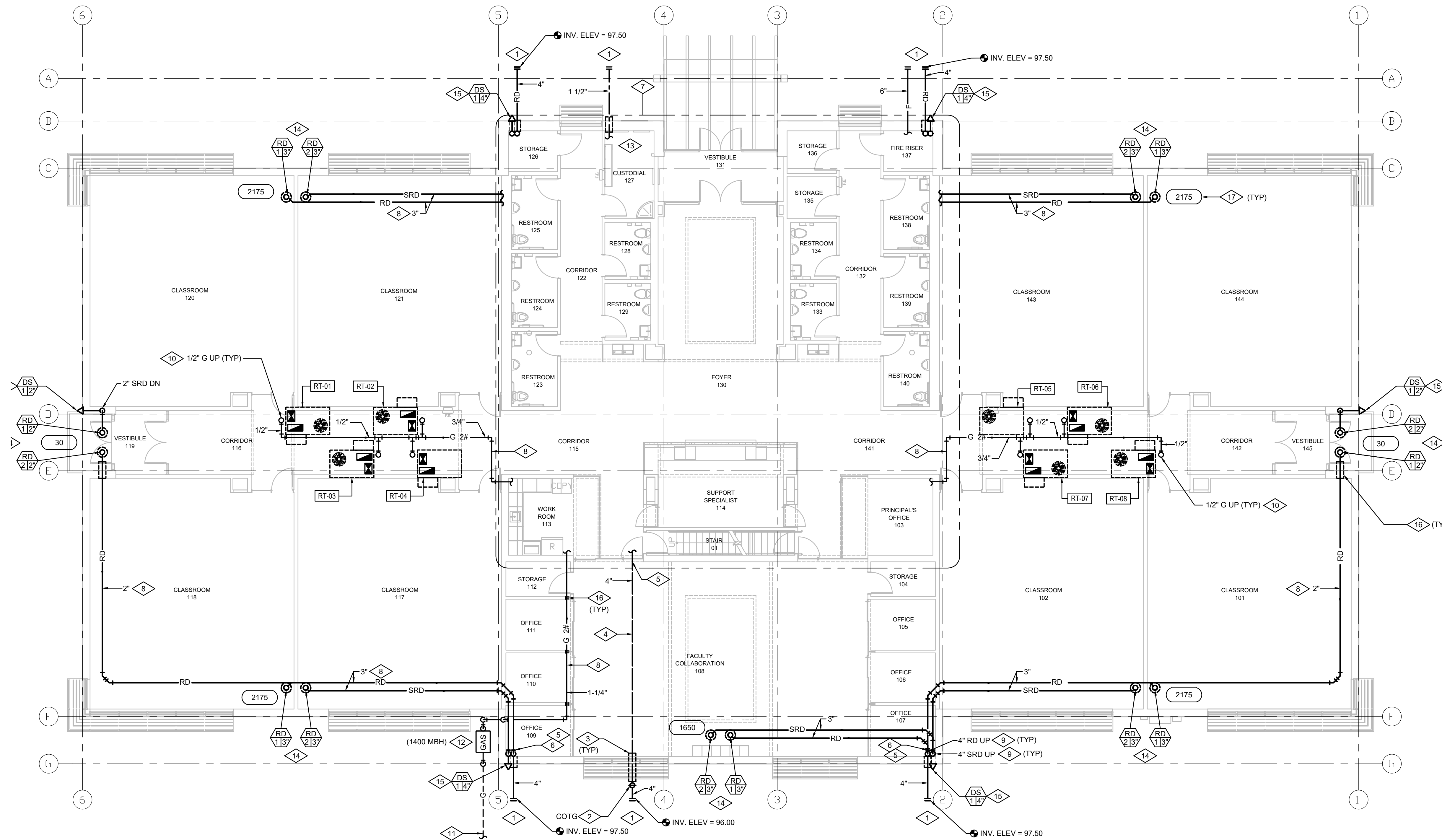
RETURN AIR CONNECTION DETAIL 4
NOT TO SCALE M6.3



REFRIGERANT COIL CONNECTION DETAIL 2
SCALE: NONE M6.3

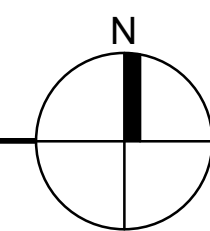
NO.	DATE	DESCRIPTION





FIRST FLOOR PLUMBING PLAN

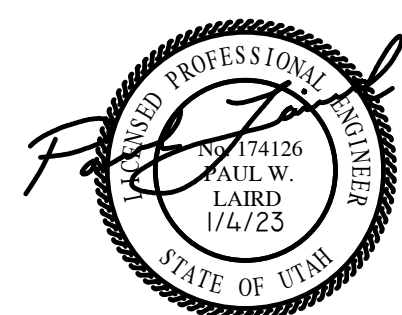
SCALE: 1/8" = 1'-0"



REFERENCE NOTES

- 1 POINT OF CONNECTION (P.O.C.) CONNECT TO SITE UTILITY PIPING IN THIS LOCATION. MATCH PIPING SIZE AND MATERIAL OR PROVIDE COMPATIBLE TRANSITION.
- 2 CLEANOUT TO GRADE (COTG). SEE DETAIL 9/P6.3
- 3 RUN PIPING UNDER OR OVER BUILDING FOOTING. PROVIDE SCHEDULE 40 PIPE SLEEVE.
- 4 PIPING TO RUN BELOW FLOOR. SLOPE AT 2%
- 5 COORDINATE LOCATION OF PIPING WITH STRUCTURAL FOOTINGS. RUN PIPING UNDER FOOTINGS WHERE NEEDED.
- 6 PROVIDE CLEANOUT (C.O.) AT BASE OF STACK 12" A.F.F.
- 7 FOR PLUMBING WORK IN THIS AREA SEE DRAWINGS P2.1 AND P2.2
- 8 PIPING TO RUN HIGH ABOVE CEILING. COORDINATE LOCATION WITH MECHANICAL, STRUCTURAL, AND ELECTRICAL TRADES.
- 9 PRIMARY AND SECONDARY ROOF DRAIN LINES TO DROP IN FURRED OUT WALL CHASE AS INDICATED.
- 10 PIPE 1/2" GAS LINE UP THRU ROOF TO RTU. EXTEND GAS UP THRU RTU BASE OR PROVIDE ROOF PENETRATION. TERMINATE GAS LINE AT RTU WITH BALL VALVE AND FLEX CONNECTOR. SEE DETAILS 2/P6.2 AND 6/P6.3
- 11 BURIED GAS SERVICE LINE BY DOMINION ENERGY CORP. COORDINATE LOCATION OF GAS LINE WITH SITE UTILITIES CONTRACTOR.
- 12 GAS SERVICE LOCATION. METER/REGULATOR SET TO BE PROVIDED AND INSTALLED BY DOMINION ENERGY CORP. PLUMBING CONTRACTOR TO COORDINATE INSTALLATION. GENERAL CONTRACTOR TO PROVIDE 5' x 3' x 4" HIGH CONCRETE PAD FOR METER SET. REQUESTED BUILDING DELIVERY PRESSURE AT METER OUTLET = 2 PSIG. BUILDING DEMAND = 1400 MBH, 1625 CFH. SEE DETAIL 4/P6.2
- 13 BUILDING DOMESTIC WATER SERVICE ENTRANCE. SEE DETAIL 3/P6.1
- 14 PRIMARY AND SECONDARY ROOF DRAINS. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION. SEE DETAIL 1/P6.2
- 15 DOWNSPOUT NOZZLE. MOUNT 12" A.F.G. SEE DETAIL 8/P6.3
- 16 WALL PENETRATION. CAULK AND SEAL AROUND PIPE PENETRATION WITH FIBERGLASS BATT AND SILICONE SEALANT.
- 17 NUMBER INDICATES SQUARE FOOTAGE OF ROOF DRAINAGE AREA SERVED (TYP)

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333 24TH STREET
OGDEN, UT 84401
801.394.3033



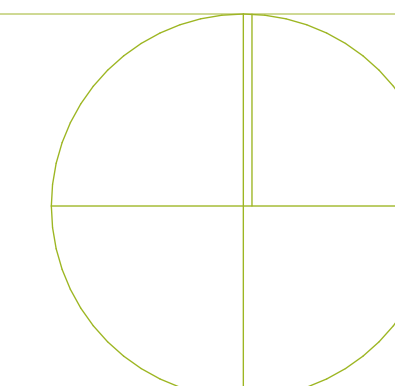
WEST FIELD SR SEMINARY
2200 S STREET, TAYLOR, UT

OLSEN & PETERSON
consulting engineers, inc.

14 East 2700 South, Salt Lake City, UT 84115
Phone: (801) 486-4646 Fax: (801) 467-2531

NO.	DATE	DESCRIPTION

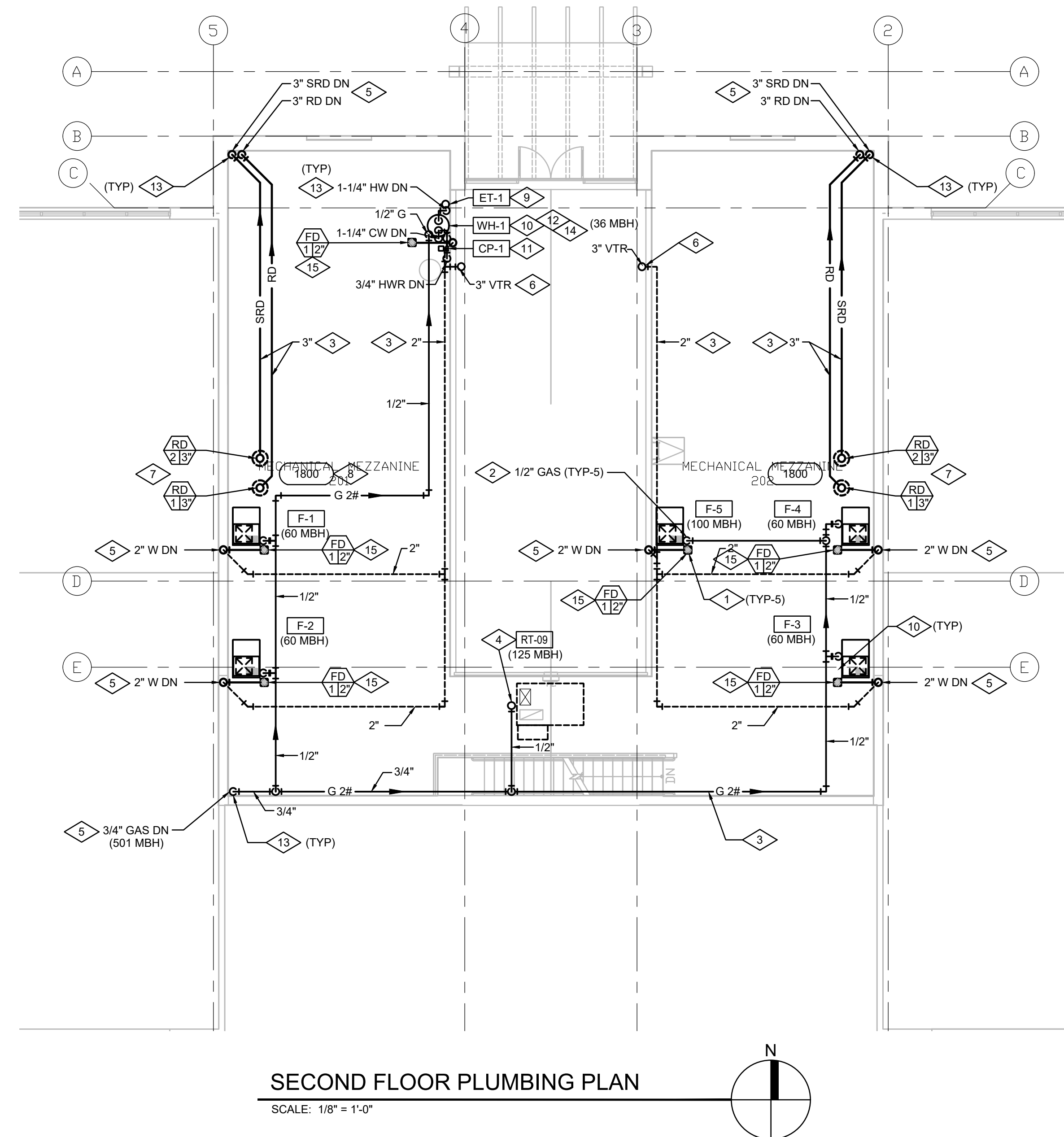
PERMIT SET
DATE: 01.25.23
PROJECT NUMBER: 2154



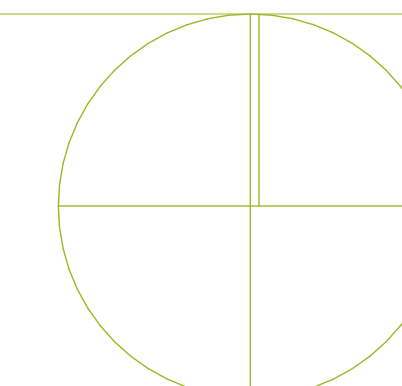
FIRST FLOOR PLUMBING PLAN

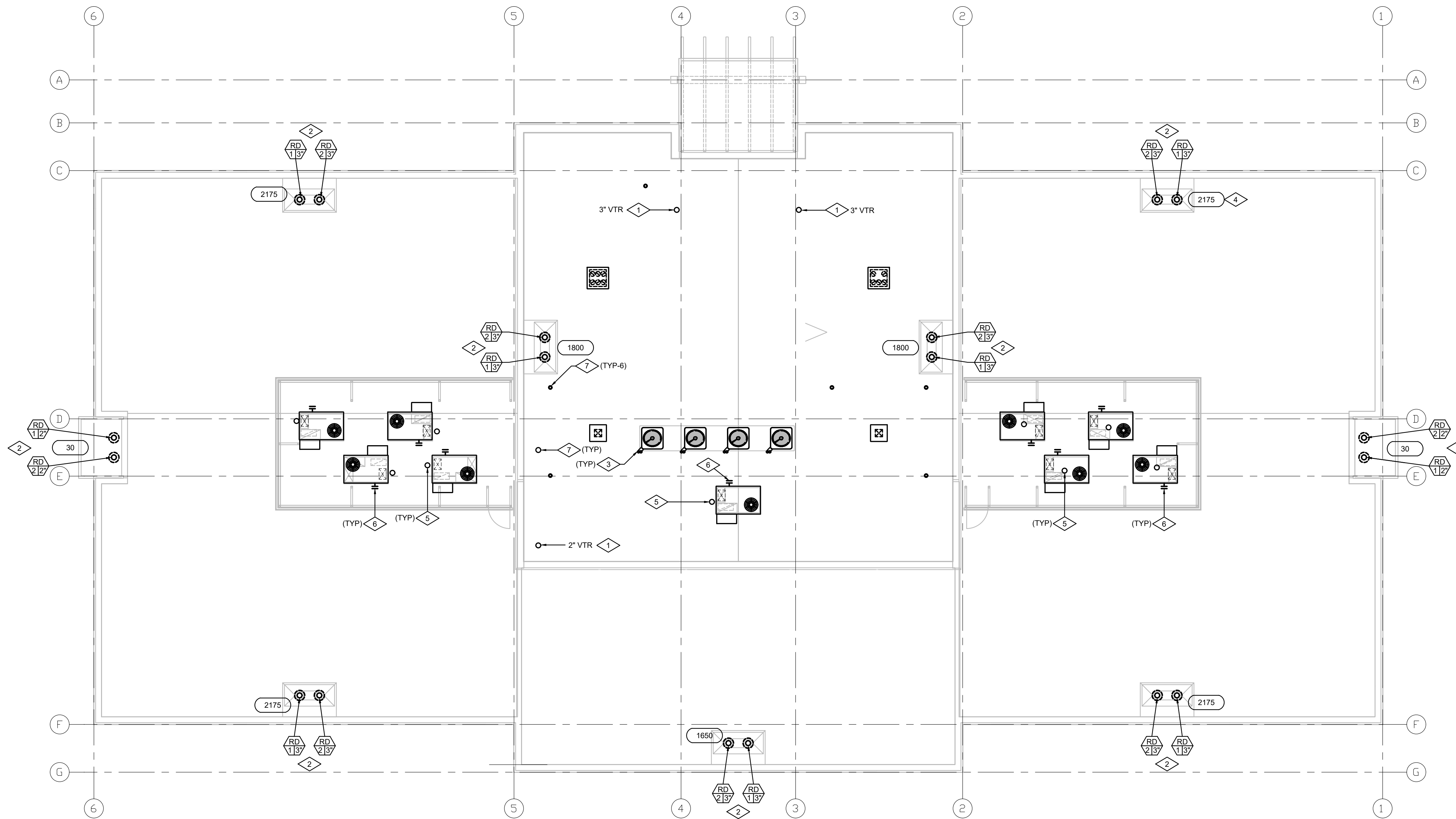
REFERENCE NOTES

- 1 PIPE PRIMARY AND SECONDARY CONDENSATE DRAIN LINES FROM FURNACE AND COOLING COIL TO FLOOR DRAIN. SEE 5/P6.2
- 2 PIPE 1/2" GAS LINE TO FURNACE. PROVIDE BALL VALVE AND FLEXIBLE GAS CONNECTOR AT POINT OF CONNECTION. SEE DETAIL 6/P6.3
- 3 RUN PIPING HIGH CLOSE TO STRUCTURE. COORDINATE LOCATION WITH MECHANICAL, ELECTRICAL AND FIRE PROTECTION TRADES.
- 4 PIPE 1/2" GAS LINE UP THRU ROOF TO RTU. EXTEND GAS UP THRU RTU BASE OR PROVIDE ROOF PENETRATION. TERMINATE GAS LINE AT RTU WITH BALL VALVE AND FLEX CONNECTOR. SEE DETAILS 2/P6.2 AND 6/P6.3
- 5 FOR CONTINUATION OF PIPING SEE DRAWING P1.1
- 6 VENT THRU ROOF (VTR) SEE DETAIL 3/P6.2
- 7 PRIMARY AND SECONDARY ROOF DRAINS. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION. SEE DETAIL 1/P6.2
- 8 NUMBER INDICATES SQUARE FOOTAGE OF ROOF DRAINAGE AREA SERVED (TYP)
- 9 INSTALL DOMESTIC WATER EXPANSION TANK HIGH ON WALL IN THIS LOCATION.
- 10 INSTALL GAS FIRED WATER HEATER IN THIS LOCATION. SEE DETAIL 4/P6.1
- 11 INSTALL DOMESTIC HW CIRCULATION PUMP IN THIS LOCATION. SECURE PUMP TO WALL. SEE DETAIL 3/P6.3
- 12 PROVIDE 2"DEEP ALUMINUM DRIP PAN UNDER WATER HEATER. SUPPORT WATER HEATER ABOVE DRIP WITH 1" THICK NEOPRENE VIBRATION ISOLATORS. PIPE DRIP PAN OUTLET TO FLOOR DRAIN.
- 13 ALL PIPE THRU FLOOR PENETRATIONS SHALL BE SLEEVED AND MADE WATER TIGHT. SEE DETAIL 5/P6.3
- 14 PIPE WATER HEATER P&T VALVE FULL SIZE TO FLOOR DRAIN OR DRIP PAN.
- 15 INSTALL FLOOR DRAIN COMPLETE WITH WATER PROOF MEMBRANE (TYP)



NO.	DATE	DESCRIPTION



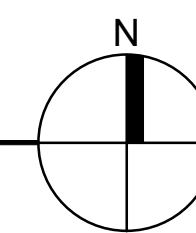


REFERENCE NOTES

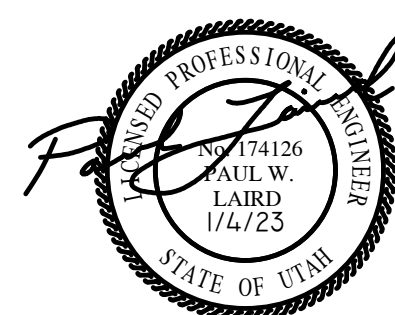
- 1 VENT THRU ROOF (VTR). SEE DETAIL 3/P6.2
- 2 PRIMARY AND SECONDARY ROOF DRAINS. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION. COORDINATE WITH GENERAL CONTRACTOR ON PLACEMENT.
- 3 MECHANICAL EQUIPMENT SHOWN FOR REFERENCE ONLY.
- 4 NUMBER INDICATES SQUARE FOOTAGE OF ROOF DRAINAGE AREA SERVED (TYP)
- 5 PIPE 1/2" GAS LINE UP THRU ROOF TO RTU. EXTEND GAS UP THRU RTU BASE OR PROVIDE ROOF PENETRATION. TERMINATE GAS LINE AT RTU WITH BALL VALVE AND FLEX CONNECTOR. SEE DETAILS 2/P6.2 AND 6/P6.3
- 6 PIPE CONDENSATE DRAIN LINE FROM ROOF TOP UNIT DRAIN PAN TO ROOF. PROVIDE 3 INCH DEEP P-TRAP. SEE DETAIL 5/P6.1
- 7 FURNACE AND WATER HEATER CONCENTRIC ROOF KIT SHOWN FOR REFERENCE ONLY.

ROOF PLUMBING PLAN

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



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 801.394.3033



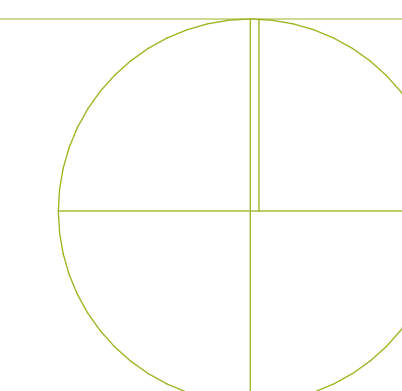
WEST FIELD SR SEMINARY
 2200 S STREET, TAYLOR, UT

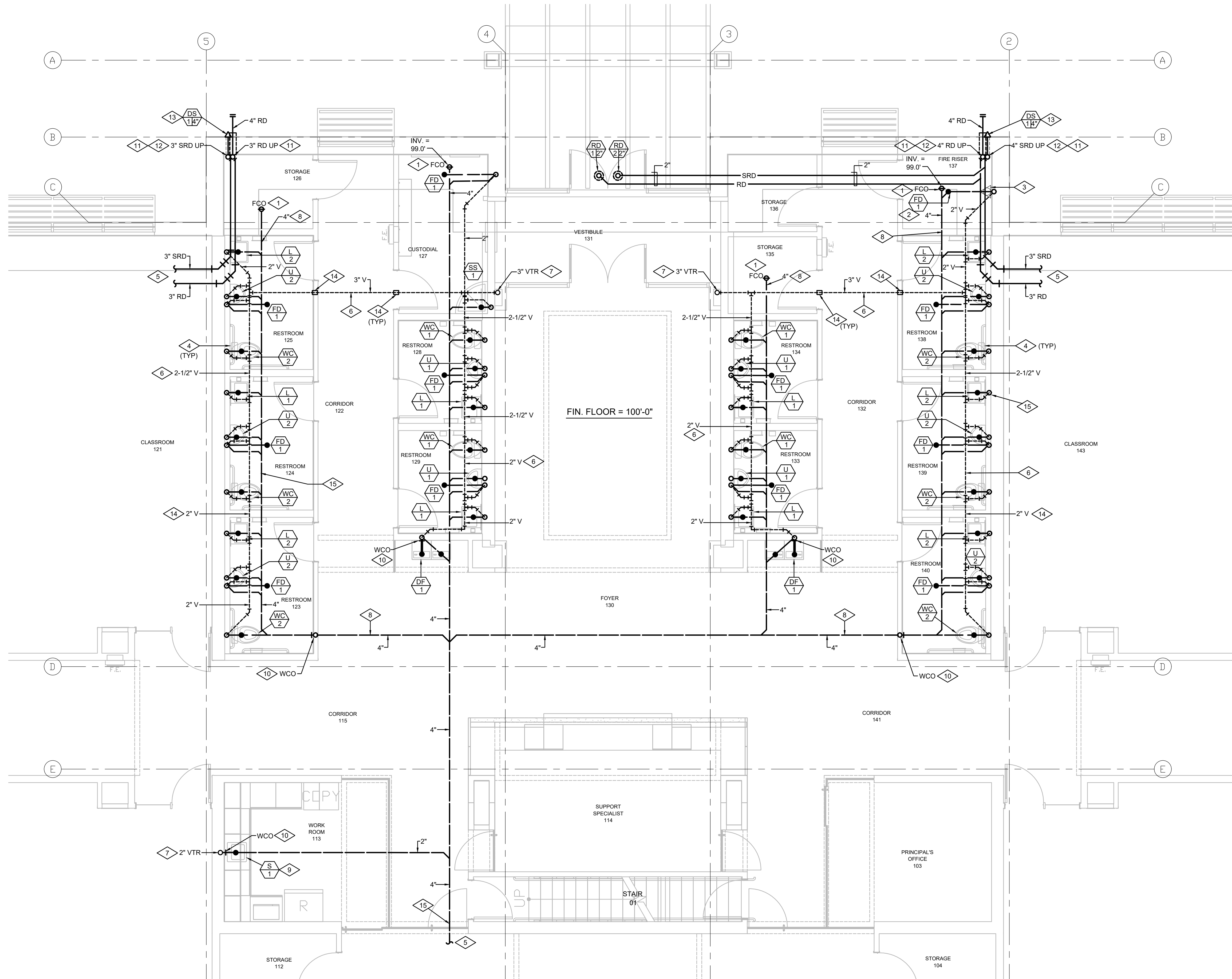
OLSEN & PETERSON
 consulting engineers, inc.

14 East 2700 South, Salt Lake City, UT 84115
 Phone: (801) 486-4646 Fax: (801) 467-2531

NO.	DATE	DESCRIPTION

PERMIT SET
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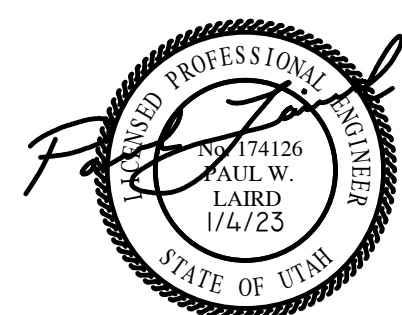
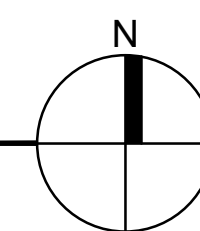


REFERENCE NOTES

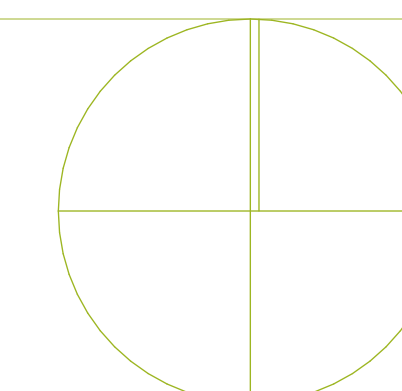
- 1 FLOOR CLEANOUT (FCO). SEE DETAIL 7/P6.2.
- 2 INSTALL FLOOR DRAIN FLUSH WITH FLOOR IN THIS LOCATION. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION. (TYP)
- 3 FIRE RISER SHOWN FOR REFERENCE ONLY. COORDINATE ROOF DRAIN PIPING LOCATION WITH FIRE RISER SERVICE LINE.
- 4 INSTALL PLUMBING FIXTURES IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. INSTALL FIXTURES AND APPURTENANCES LEVEL AND PLUMB. COORDINATE LOCATION OF WALL MOUNTED PLUMBING FIXTURES WITH ARCHITECTURAL ELEVATION DRAWINGS. (TYP)
- 5 FOR CONTINUATION OF PIPING SEE DRAWING P1.1.
- 6 PIPING TO RUN HIGH ABOVE CEILING. COORDINATE LOCATION WITH MECHANICAL, STRUCTURAL, AND ELECTRICAL TRADES.
- 7 VENT THRU ROOF (VTR). SEE DETAIL 3/P6.2.
- 8 PIPING TO RUN BELOW FLOOR. SLOPE AT 2%.
- 9 INSTALL SINK IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. PIPE 2" WASTE AND 2" VENT LINES FROM SINK IN WALL AND CONNECT TO MAIN WASTE AND VENT LINES AS INDICATED.
- 10 WALL CLEANOUT (WCO). SEE DETAIL 6/P6.2.
- 11 ROOF DRAIN LINES (RD) TO DROP IN COLUMN OR WALL CHASE AS INDICATED. PROVIDE CLEANOUT (C.O.) AT BASE OF STACK 12" A.F.F.
- 12 FOR CONTINUATION OF PIPING SEE P1.2.
- 13 DOWNSPOUT NOZZLE. MOUNT 18" A.F.G. SEE DETAIL 8/P6.3.
- 14 WALL PENETRATION. CAULK AND SEAL AROUND PIPE PENETRATION WITH FIBERGLASS BATT AND SILICONE SEALANT.
- 15 COORDINATE LOCATION OF PIPING WITH BUILDING FOOTINGS. ROUTE PIPING UNDER OR OVER FOOTINGS AS NEEDED. DO NOT SLEEVE OR RUN PIPING THROUGH FOOTINGS.

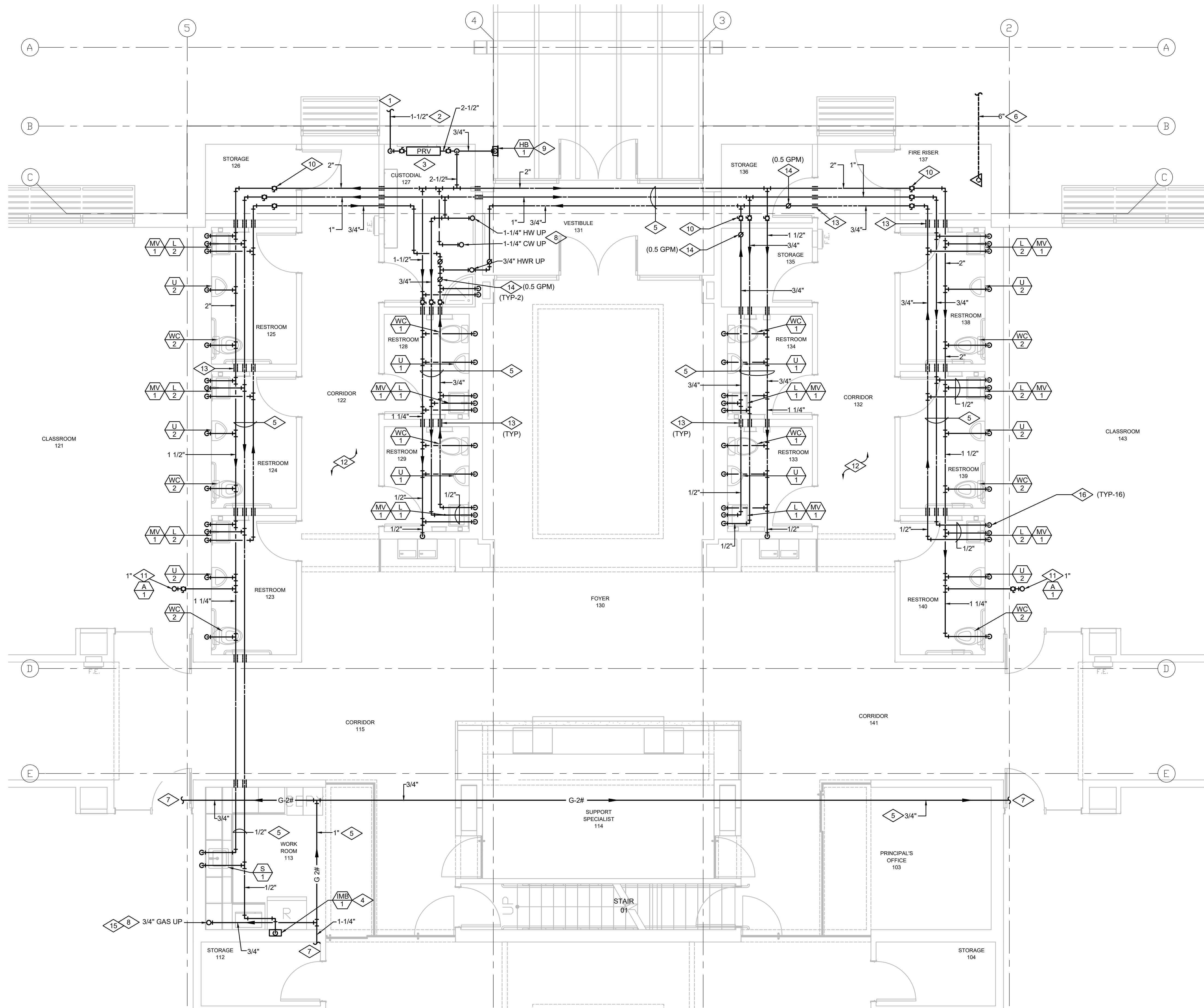
ENLARGED REST ROOMS PLAN - WASTE AND VENT

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



NO.	DATE	DESCRIPTION

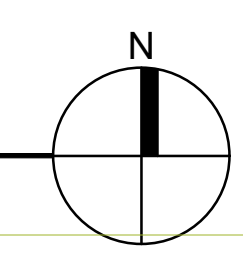




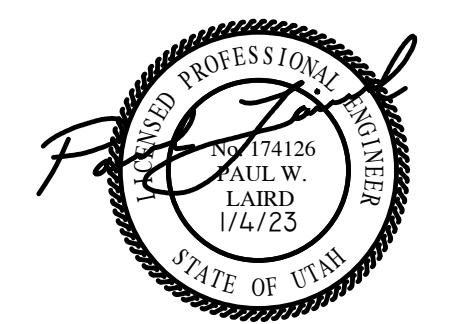
REFERENCE NOTES

- 1 POINT OF CONNECTION (P.O.C.) CONNECT TO SITE UTILITY PIPING IN THIS LOCATION. MATCH PIPING SIZE AND MATERIAL OR PROVIDE COMPATIBLE TRANSITION.
- 2 PIPING TO RUN BELOW FROST LINE. COORDINATE LOCATION OF PIPING WITH STRUCTURAL FOOTINGS.
- 3 BUILDING DOMESTIC WATER SERVICE ENTRANCE. SEE DETAIL 3/P6.1
- 4 INSTALL ICE MAKER BOX 24" A.F.F.
- 5 PIPING TO RUN HIGH ABOVE CEILING. COORDINATE LOCATION WITH MECHANICAL, STRUCTURAL, AND ELECTRICAL TRADES.
- 6 FIRE SERVICE LINE. SHOWN FOR REFERENCE ONLY. SEE FIRE PROTECTION DRAWINGS.
- 7 FOR CONTINUATION OF PIPING SEE DRAWING P1.1.
- 8 3/4" GAS UP TO MECHANICAL MEZZANINE. SEE DRAWING P1.2 FOR CONTINUATION.
- 9 PIPE 3/4" CW LINE DOWN IN WALL TO HYDRANT. MOUNT NON-FREEZE WALL HYDRANT 24" A.F.G.
- 10 INSTALL ISOLATION VALVES IN EXPOSED STRUCTURE OR ABOVE CEILING. PROVIDE LOCKING CEILING DOOR OR REMOVABLE CEILING TILE FOR SERVICE ACCESS.
- 11 INSTALL 1" DIA. WATER HAMMER ARRESTOR ABOVE ACCESSIBLE CEILING IN THIS LOCATION. PROVIDE BALL ISOLATION VALVE.
- 12 INSTALL PLUMBING FIXTURES LEVEL AND PLUMB IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS OF PLUMBING FIXTURES (TYP).
- 13 WALL PENETRATION. CAULK AND SEAL AROUND PIPE PENETRATION WITH FIBERGLASS BATT AND SILICONE SEALANT. (TYP)
- 14 INSTALL BALANCE VALVE IN THIS LOCATION. BALANCE WATER FLOW TO GPM INDICATED.
- 15 FOR CONTINUATION OF PIPING SEE DRAWING P1.2
- 16 INSTALL ASSE 1070 MIXING VALVE BELOW LAVATORY. SEE DETAIL 2/P6.1 (TYP ALL LAVATORIES)

ENLARGED REST ROOMS PLAN - WATER AND GAS
SCALE: 1/4" = 1'-0"



STUDIO 333 ARCHITECTS
333 24TH STREET
OGDEN, UT 84401
801.394.3033



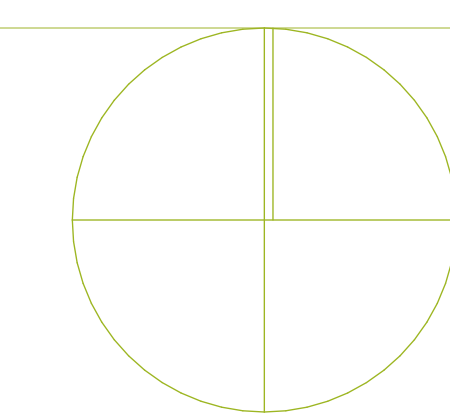
WEST FIELD SR SEMINARY
2200 S STREET, TAYLOR, UT

OLSEN & PETERSON
consulting engineers, inc.

14 East 2700 South, Salt Lake City, UT 84115
Phone: (801) 486-4646 Fax: (801) 467-2531

NO.	DATE	DESCRIPTION

PERMIT SET
DATE: 01.25.23
PROJECT NUMBER: 2154



ENLARGED PLUMBING
PLAN WASTE AND GAS

ATURAL GAS PIPING SCHEDULE

EQUIPMENT	INPUT (BTU)	INPUT (CFH)	GAS CONN (IN.)
RT-01	112,000	130	1/2"
RT-02	112,000	130	1/2"
RT-03	112,000	130	1/2"
RT-04	112,000	130	1/2"
RT-05	112,000	130	1/2"
RT-06	112,000	130	1/2"
RT-07	112,000	130	1/2"
RT-08	112,000	130	1/2"
RT-09	125,000	145	1/2"
F-1	60,000	70	1/2"
F-2	60,000	70	1/2"
F-3	60,000	70	1/2"
F-4	60,000	70	1/2"
F-5	100,000	116	1/2"
WH-1	36,500	42	1/2"
SUB-TOTAL	1,397,500	1625	1 1/4"
TOTAL	1,397,500	1625	1 1/4"

DEVELOPED PIPE LENGTH = 175 FT
 DELIVERY PRESSURE = 2 PSIG
 R CAPACITY = 1625 CFH

PLUMBING EQUIPMENT SCHEDULE

SYMBOL	EQUIPMENT DESCRIPTION
WH-1	WATER HEATER: GAS FIRED, POWER PVC VENT, ULTRA LOW NOX, 40 GALLON STORAGE CAPACITY, 36 MBH INPUT, 36 GPH RECOVERY @ 90 DEG RISE, CERTIFIED FOR 5000 FT ALTITUDE. FURNISH COMPETE WITH T&P RELIEF VALVE AND THREADED HOSE DRAIN CONNECTION. PROVIDE 28" DIA ALUMINUM DRIP PAN WITH THREADED DRAIN OUTLET. ANCHOR WATER HEATER TO WALL WITH SEISMIC WALL STRAPS. MANUFACTURER: RHEEM MODEL: XG40T08PN36U1 ELECTRICAL: 120 VOLT, 1 PHASE BLOWER SIZE: 20" DIA X 68" HIGH WEIGHT: 160 LBS
ET-1	EXPANSION TANK: NON-ASME TYPE, 2.0 GALLON TOTAL VOLUME, 0.45 ACCEPTANCE FACTOR, 1/2" NPT CONNECTION, MAXIMUM WORKING PRESSURE = 150 PSIG, NSF 61 LISTED, MAX ALLOWABLE WORKING TEMP = 200 DEG F MANUFACTURER: AMTROL MODEL: ST-5 ELECTRICAL: NONE SIZE: 8" DIA X 12.75" HIGH OPER WEIGHT: 25 LBS
CP-1	CIRCULATION PUMP: DOMESTIC WATER, BRONZE CONSTRUCTION, STAINLESS STEEL SHAFT, INTEGRAL CHECK VALVE, 2 GPM @ 5 FT HEAD, 1/2" CONNECTIONS, FURNISH COMPLETE WITH AQUASTAT PUMP CONTROLLER SET AT 120 DEG. F. MANUFACTURER: TACO MODEL: 006-IFC ELECTRICAL: 1/25 HP 120 VOLT, 1PHASE SIZE: 2" x 6" x 7" WEIGHT: 7 LBS

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	WASTE	VENT	C.W.	H.W.	NOTES	(1)	
WC	WATER CLOSET	4"	2"	1"	--	FLOOR MOUNTED FLUSH VALVE		
WC	WATER CLOSET	4"	2"	1"	--	FLOOR MOUNTED - (ADA) FLUSH VALVE		
L	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	WALL MOUNTED		
L	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	WALL MOUNTED - (ADA)		
U	URINAL	3"	2"	3/4"	--	WALL MOUNTED FLUSH VALVE		
U	URINAL	3"	2"	3/4"	--	WALL MOUNTED - (ADA) FLUSH VALVE		
A	ARRESTOR	--	--	1"	--	WATER HAMMER ARRESTOR		
IMB	ICE MAKER BOX	--	--	3/8"	--	RECESSED WALL BOX TYPE		
SS	SERVICE SINK	3"	2"	3/4"	3/4"	FLOOR MTD, CORNER TYPE WITH WALL MOUNTED FAUCET.		
FD	FLOOR DRAIN	SEE PLANS FOR SIZE			WITH DEEP SEAL P-TRAP AND ASSE PROSET TRAP GUARD			
DF	DRINKING FOUNTAIN	1-1/2"	1-1/2"	1/2"	--	DUAL LEVEL - ELECTRIC W/ BOTTLE FILLER - (ADA) 120V /1160 POWER		
S	SINK	1-1/2"	1-1/2"	1/2"	1/2"	SINGLE COMPARTMENT STAINLESS STEEL COUNTER MOUNTED		
HB	HOSE BIBB	--	--	3/4"	--	NON-FREEZE TYPE WALL MOUNTED		
MV	MIXING VALVE	--	--	3/8"	3/8"	UNDER SINK MIXING VALVE ASSE 1070 WATTS LEMM-UT-MI		
DN	DOWN SPOUT	SEE PLANS FOR SIZE			SEE SPECIFICATIONS			
RD	ROOF DRAIN (PRIMARY)	SEE PLANS FOR SIZE			SEE SPECIFICATIONS			(2)
RD	ROOF DRAIN (SECONDARY)	SEE PLANS FOR SIZE			SEE SPECIFICATIONS			(2)

- NOTES:
 (1) CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL PLUMBING FIXTURES WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN OR INSTALLATION.
 (2) REMOVE EXISTING ROOF DRAINS AND REPLACE WITH NEW. COORDINATE NEW ROOF DRAIN INSTALLATION WITH ROOFING CONTRACTOR TO PROVIDE REQUIRED FLASHING.

BUILDING SERVICES PIPING MATERIALS LISTING AND IDENTIFICATION

ABLE WATER PIPING SYSTEMS:
 VE-GRADE - COPPER PIPE AND TUBING MEETING REQUIREMENTS OF ASTM B 88, 1/2" L WITH WROUGHT COPPER SWEAT FITTINGS WITH 95/5 OR 96/4 TIN-ANTIMONY ZER.
 TIFICATION: COLD WATER (CW); BLUE LETTERING ON WHITE BACKGROUND. HOT (HW); RED LETTERING ON WHITE BACKGROUND.

JW-GRADE - HDPE SDR11 WATER PIPE 200 PSI RATED FOR POTABLE WATER /ICE. PIPE MEETING REQUIREMENTS OF NSF 14, PS OD PE3608 160 PSI / 200 PSI DR11 ASTM D-3035 AWWA C901

TARY WASTE AND VENT PIPING SYSTEMS:
 VE GRADE - PVC SCHEDULE 40 SOLID-WALL ASTM D 2665, PLASTIC PIPE AND KET TYPE FITTINGS, MADE TO ASTM D 3311, DRAIN, WASTE, AND VENT PATTERNS. ED USING CEMENT PRIMER MEETING REQUIREMENTS OF ASTM F 656 AND PIPE ENT MEETING REQUIREMENTS OF ASTM D 2564.
 TIFICATION: GREEN LETTERING ON WHITE BACKGROUND.

JW GRADE - PVC SCHEDULE 40 SOLID-WALL ASTM D 2665, PLASTIC PIPE AND KET TYPE FITTINGS, MADE TO ASTM D 3311, DRAIN, WASTE, AND VENT PATTERNS. ED USING CEMENT PRIMER MEETING REQUIREMENTS OF ASTM F 656 AND PIPE ENT MEETING REQUIREMENTS OF ASTM D 2564.

IM DRAINAGE PIPING SYSTEMS:
 VE GRADE - PVC SCHEDULE 40 SOLID-WALL ASTM D 2665, PLASTIC PIPE AND KET TYPE FITTINGS, MADE TO ASTM D 3311, DRAIN, WASTE, AND VENT PATTERNS. ED USING CEMENT PRIMER MEETING REQUIREMENTS OF ASTM F 656 AND PIPE ENT MEETING REQUIREMENTS OF ASTM D 2564.

JW GRADE - PVC SCHEDULE 40 SOLID-WALL ASTM D 2665, PLASTIC PIPE AND KET TYPE FITTINGS, MADE TO ASTM D 3311, DRAIN, WASTE, AND VENT PATTERNS. ED USING CEMENT PRIMER MEETING REQUIREMENTS OF ASTM F 656 AND PIPE ENT MEETING REQUIREMENTS OF ASTM D 2564.

RIGERANT PIPING SYSTEMS:
 3" COPPER TUBING MEETING REQUIREMENTS OF ASTM B 280, HARD DRAWN IGH T LENGTHS WITH WROUGHT COPPER BRAZED FITTINGS WITH AWS 5SIFICATION BCUP-4 COPPER PHOSPHORUS OR AWS CLASSIFICATION BCUP-5 2ER PHOSPHORUS RODS AND WHITE BRAZING OR HIGH QUALITY SILVER SOLDER .
 TIFICATION: BLACK LETTERING ON YELLOW BACKGROUND

JRAL GAS PIPING SYSTEMS:
 VE GRADE - SCHEDULE 40 BLACK CARBON STEEL PIPE MEETING REQUIREMENTS STM A 53 WITH STANDARD WEIGHT BUTT WELDED STEEL FORGED WELDING TYPE NGS.
 TIFICATION: BLACK LETTERING ON YELLOW BACKGROUND.
 TING: ALL EXPOSED GAS PIPING ON ROOF SHALL BE PAINTED WITH TWO COATS ELLOW ENAMEL GRADE PAINT AND STENCILED "GAS".

PLUMBING PIPING LEGEND

DESCRIPTION	SYMBOL
WASTE	_____
VENT	_____
COLD WATER	-----
HOT WATER	-----
NATURAL GAS	----- G 2#
DRAIN	----- D
ROOF DRAIN	----- RD
SECONDARY ROOF DRAIN	----- SRD

PIPING INSULATION SCHEDULE

FLUID OPERATING TEMPERATURE RANGE (°F) AND USAGE	INSULATION CONDUCTIVITY		≥ NOMINAL PIPE OR TUBE SIZE, IN.				
	CONDUCTIVITY, BTU IN / FT ² °F	MEAN RATING TEMPERATURE, °F	< 1	1 TO < 1-1/2	1-1/2 TO < 4	4 TO < 8	≥ 8
> 350	0.32 TO 0.34	250	4.5	5.0	5.0	5.0	5.0
251 TO 350	0.29 TO 0.32	200	3.0	4.0	4.5	4.5	4.5
201 TO 250	0.27 TO 0.30	150	2.5	2.5	2.5	3.0	3.0
141 TO 200	0.25 TO 0.29	125	1.5	1.5	2.0	2.0	2.0
105 TO 140	0.22 TO 0.28	100	1.0	1.0	1.5	1.5	1.5
40 TO 104	0.21 TO 0.27	75	0.5	0.5	1	1.5	1.5
< 40	0.20 TO 0.29	50	0.5	1.0	1.5	2.0	2.0

TABLE APPLIES TO ALL DOMESTIC HOT AND COLD WATER SYSTEMS, STORM DRAIN AND REFRIGERANT PIPING SYSTEMS.

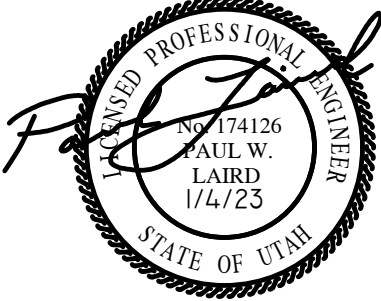
BRANCH WATER LINE SCHEDULE

FIXTURE	FIXTURE UNITS	TOTAL QUANTITY OF FIXTURES SERVED BY A GIVEN PIPE SIZE					
		1/2"	3/4"	1"	1 1/4"	1-1/2"	2"
WATER CLOSET	5	1	2	4	6	10	20
LAVATORY	1.5	2	4	6	8	15	50
BREAK ROOM SINK	2	1	3	5	7	15	50
SERVICE SINK	4	--	1	2	3	7	25
DRINKING FOUNTAIN	1	2	6	10	15	30	--
HOSE BIBB	3	--	1	3	5	10	33
TOTAL FIXTURE UNITS SERVED BY PIPE SIZE		2	6	10	15	30	100

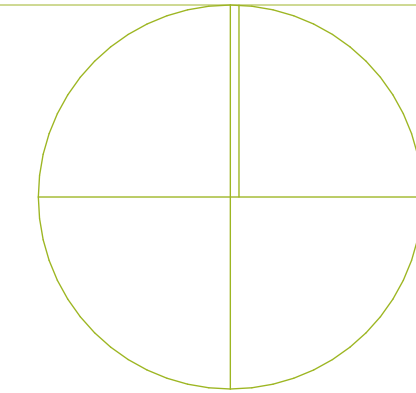
- NOTE:
 (1) MINIMUM PIPE SIZE TO ANY FIXTURE TO BE 1/2". WHERE PIPE SIZE IS SHOWN ON DRAWINGS, IT SHALL BE FOLLOWED.
 (2) WATER SUPPLY FIXTURE UNITS: 120

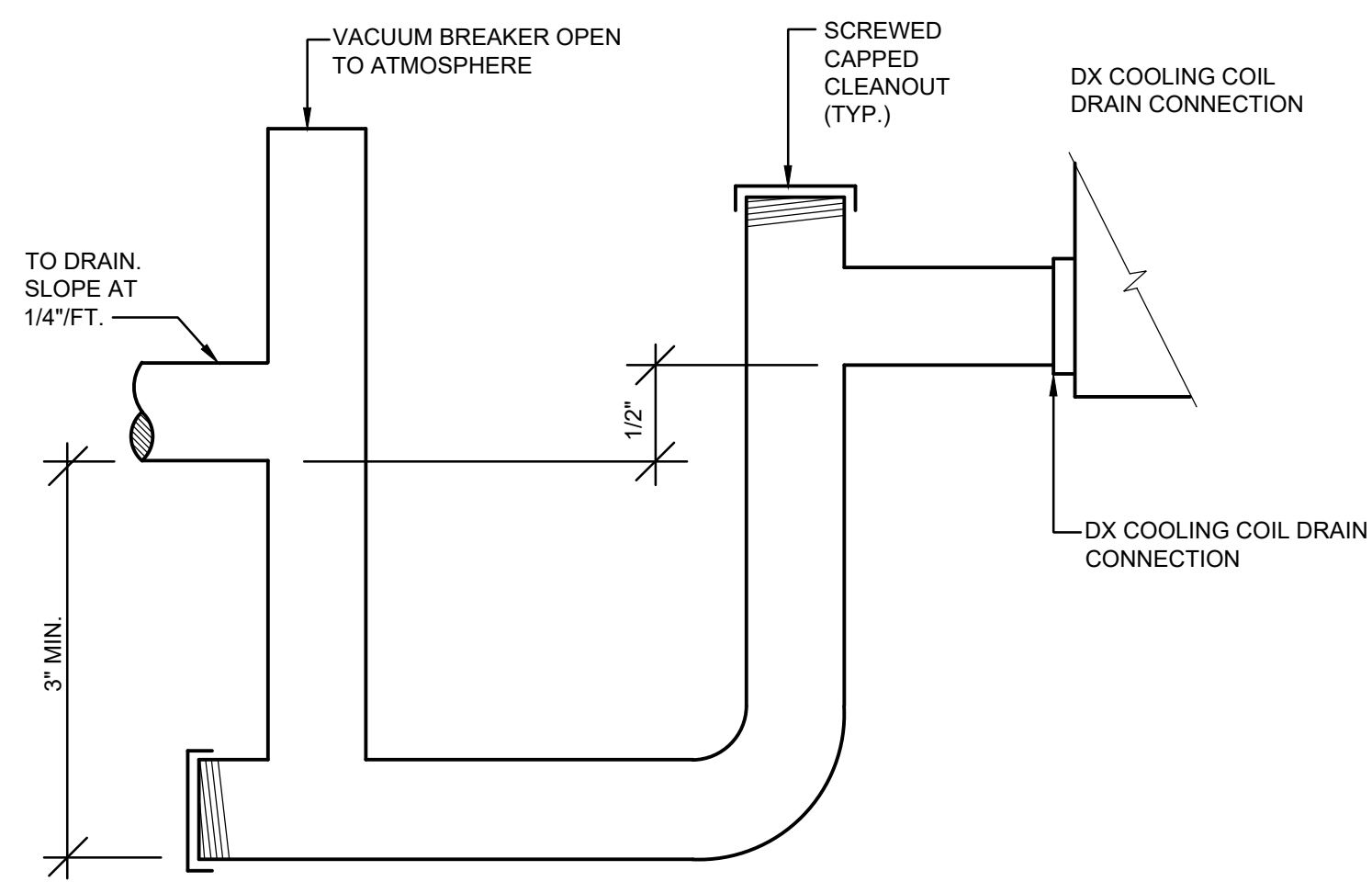
GENERAL PLUMBING NOTES:

- A. CODE COMPLIANCE: ALL PLUMBING WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT ADOPTED VERSIONS OF THE INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL PLUMBING CODE (IPC), INTERNATIONAL FUEL GAS CODE (IFGC) AND NATIONAL ELECTRICAL CODE (NEC) INCLUDING ALL STATE AND LOCAL AMENDMENTS AND LIFE SAFETY CODES ENFORCED OR CURRENTLY IMPLEMENTED BY THE BUILDING AUTHORITY HAVING JURISDICTION IN WHICH THE PROJECT RESIDES.
- B. COORDINATION PROCEDURES: CONTRACTOR SHALL COORDINATE ALL PLUMBING (PL) WORK WITH THE ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL (M), FIRE PROTECTION (FP) AND ELECTRICAL TRADES OF THIS PROJECT. REFER TO DRAWINGS, SPECIFICATIONS, SUBMITTALS AND SHOP DRAWINGS OF THE VARIOUS TRADES FOR PROJECT SPECIFIC REQUIREMENTS FOR COORDINATION PURPOSES.
- C. DRAWINGS: DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE NOT TO BE SCALED. PIPE ROUTING, PLUMBING EQUIPMENT AND FIXTURE LOCATIONS INDICATED ON THE DRAWINGS IS APPROXIMATE. NO ATTEMPT HAS BEEN MADE TO SHOW ALL PLUMBING OFFSETS, EQUIPMENT AND DEVICES. CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL PLUMBING EQUIPMENT AND FIXTURES REQUIRED PRIOR TO BIDDING. THE PLUMBING CONTRACTOR SHALL PROVIDE ALL REQUIRED OFFSETS, FITTINGS AND TRANSITIONS AS NEEDED TO FACILITATE INSTALLATION OF THE PLUMBING SYSTEMS IN HARMONY WITH THE OTHER RESPECTIVE TRADES OF THE PROJECT.
- D. EQUIPMENT SELECTIONS: ALL PROJECT EQUIPMENT PROVIDED BY THE CONTRACTOR SHALL BE SELECTED TO MEET AND OPERATE AT THE CAPACITIES INDICATED IN THE CONTRACT DOCUMENTS AT THE JOB SITE CONDITIONS. JOB SITE CONDITIONS INCLUDE ELEVATION ABOVE SEA LEVEL, AMBIENT SUMMER AND WINTER DRY BULB/WET BULB TEMPERATURES, WIND DIRECTION AND PROPERTY LINES.
- E. SUBMITTALS: PRODUCT DATA FOR ALL PLUMBING EQUIPMENT AND MATERIALS TO BE PROVIDED BY THE PLUMBING CONTRACTOR SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AS PART OF THE SUBMITTAL PROCESS IN ACCORDANCE WITH THE SPECIFICATIONS PRIOR TO ORDERING, PURCHASING OR INSTALLATION.
- F. WORKMANSHIP: ALL PLUMBING WORK TO BE INSTALLED IN A PROFESSIONAL AND WORKMANLIKE MANNER. INSTALL ALL PRODUCTS AND MATERIALS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND CONSTRUCTION INDUSTRY STANDARDS.
- G. INVERTS: ALL INVERT PIPE ELEVATIONS SHOWN ON THE DRAWINGS ARE BASED OFF OF A FINISHED FLOOR ELEVATION OF 100'-0". THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE GENERAL AND SITE CIVIL CONTRACTOR FOR PIPE CONNECTION LOCATIONS. PLUMBING CONTRACTOR SHALL CONNECT TO THE SITE UTILITY PIPING; MATCHING PIPING SIZE AND MATERIAL OR PROVIDING COMPATIBLE TRANSITIONS.
- H. SEISMIC CONDITIONS: ALL PLUMBING PIPING AND EQUIPMENT INSTALLED SHALL BE SEISMICALLY BRACED OR RESTRAINED IN COMPLIANCE WITH REQUIREMENTS IN THE IBC. PROVIDE VIBRATION ISOLATION AND SEISMIC-RESTRAINT DEVICES, RESTRAINTS AND SUPPORTS AS REQUIRED. PROVIDE AND SUBMIT SEISMIC RESTRAINT CALCULATIONS, DETAILS, DESIGN CRITERIA AND ANALYSIS DATA SIGNED AND SEALED BY A QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.
- I. WARRANTY: THE CONTRACTOR SHALL WARRANT TO THE OWNER THAT ALL PLUMBING MATERIALS AND EQUIPMENT FURNISHED UNDER THE CONTRACT WILL BE NEW AND OF GOOD QUALITY, UNLESS OTHERWISE REQUIRED OR PERMITTED BY THE CONTRACT DOCUMENTS, AND THAT THE WORK WILL BE FREE FROM DEFECTS NOT INHERENT IN THE QUALITY REQUIRED OR PERMITTED; AND THAT THE WORK WILL CONFORM TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. WARRANTY PERIOD FOR THIS WORK SHALL EXTEND FOR ONE YEAR AFTER DATE OF SUBSTANTIAL COMPLETION.
- J. CHANGES: IF CONCEALED OR UNKNOWN PHYSICAL CONDITIONS ARE ENCOUNTERED AT THE SITE THAT DIFFER MATERIALLY FROM THOSE INDICATED IN THE CONTRACT DOCUMENTS OR FROM THOSE CONDITIONS ORDINARILY FOUND TO EXIST, THE CONTRACTOR SHALL STOP WORK AND NOTIFY THE OWNER OR ARCHITECT OF THOSE CONDITIONS. THE CONTRACTOR SHALL BE INSTRUCTED AND DIRECTED ON HOW TO PROCEED WITH ANY REQUIRED CHANGES. THE CONTRACT SUM AND CONTRACT TIME SHALL BE SUBJECT TO EQUITABLE ADJUSTMENT FOR CHANGES TO THE CONTRACT DOCUMENTS FOR SUCH CHANGES. SHOULD THE CONTRACTOR PROCEED WITH THE WORK WITHOUT INSTRUCTION, NOTIFICATION OF CHANGE OR AN APPROVED CHANGE ORDER; HE DOES SO AT HIS OWN FINANCIAL RISK.
- K. EXISTING CONDITIONS: PRIOR TO BIDDING OR BEGINNING THE WORK THE CONTRACTOR SHALL CAREFULLY EXAMINE THE BUILDING SITE AND COMPARE THE CONTRACT DOCUMENTS WITH EXISTING CONDITIONS. ACCEPTANCE OF THE CONTRACT IS ACKNOWLEDGMENT BY THE CONTRACTOR THAT HE HAS VISITED THE SITE AND IS AWARE AND ACCEPTING OF THE EXISTING CONDITIONS.
- L. CLEANUP: DURING THE CONSTRUCTION AND UPON COMPLETION OF THE WORK, THE PLUMBING CONTRACTOR SHALL REMOVE FROM THE PROJECT SITE ALL UNUSED MATERIALS, EQUIPMENT, PACKAGING AND DEBRIS FOR WHICH THE CONTRACTOR IS RESPONSIBLE. ALL UNUSED MATERIALS, EQUIPMENT, PACKAGING AND DEBRIS NOT ECONOMICALLY RECOVERABLE SHALL BE REMOVED, TRANSPORTED AND LEGALLY DISPOSED OF OFF-SITE.
- M. UTILITY INTERRUPTIONS: EXISTING PLUMBING UTILITIES SHALL REMAIN IN SERVICE EXCEPT AS REQUIRED FOR SCHEDULED INTERRUPTIONS. INTERRUPTIONS OF SERVICE OR UTILITIES SHALL BE SCHEDULED WITH THE OWNER AND ARCHITECT AT LEAST TWO WEEKS IN ADVANCE.
- N. TIME IS OF THE ESSENCE: THE CONTRACTOR SHALL COMMENCE WORK UNDER THIS CONTRACT UPON RECEIPT OF THE OWNER'S WRITTEN NOTICE TO TO PROCEED. THE CONTRACTOR SHALL COMPLETE THE WORK AND HAVE IT READY FOR SUBSTANTIAL COMPLETION INSPECTION BY THE DATE NOTED IN THE CONTRACT.

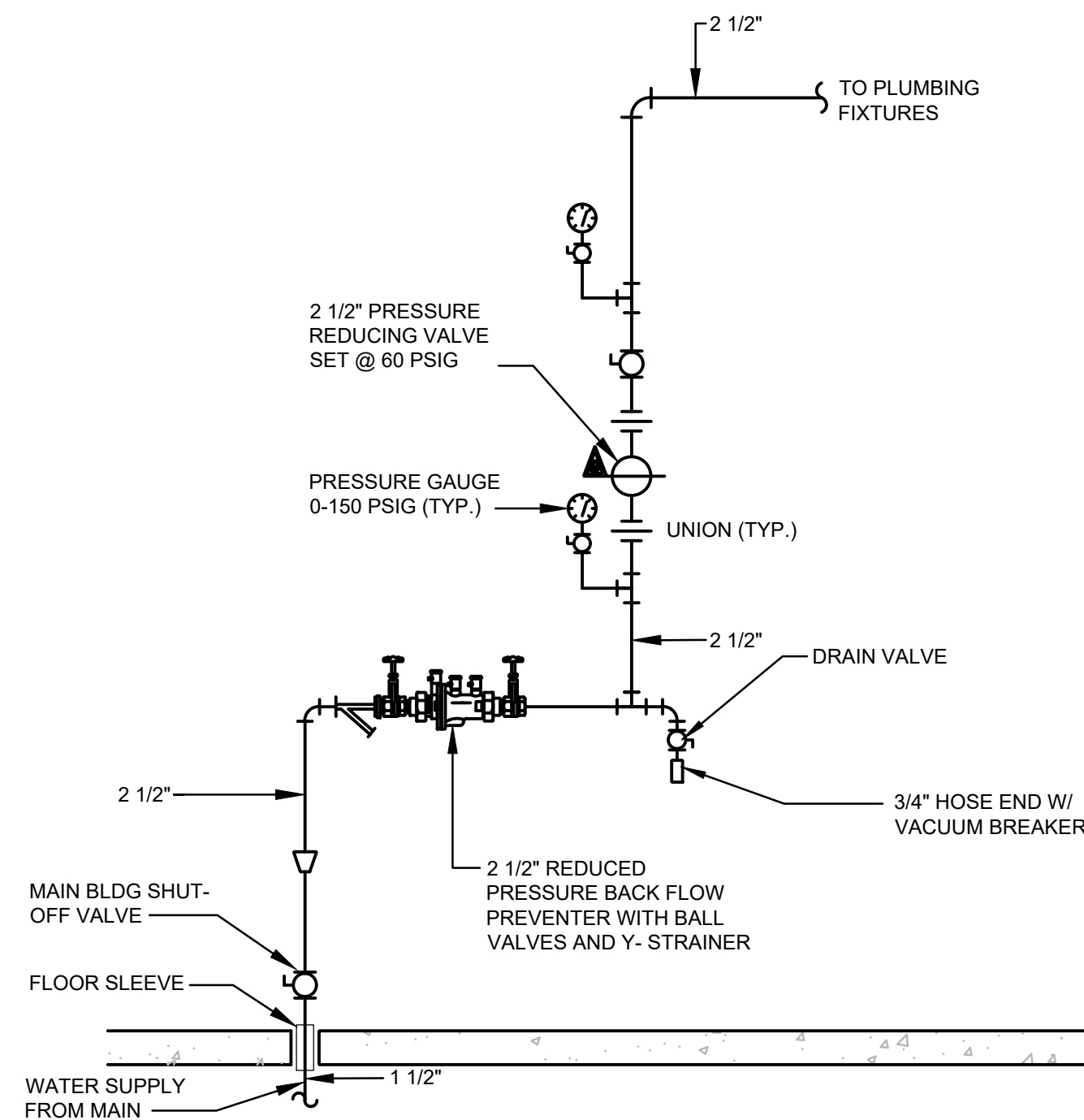


NO.	DATE	DESCRIPTION

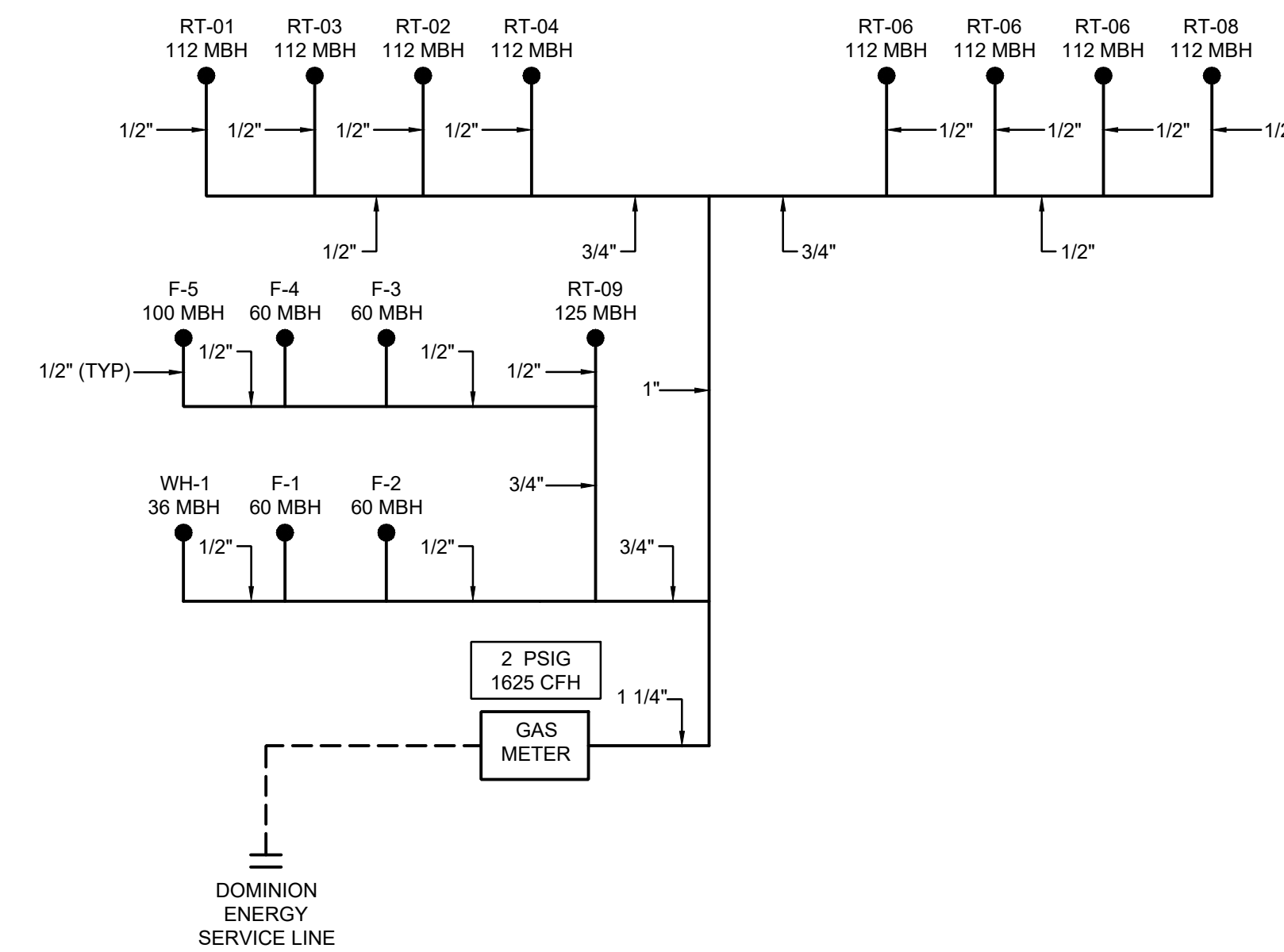




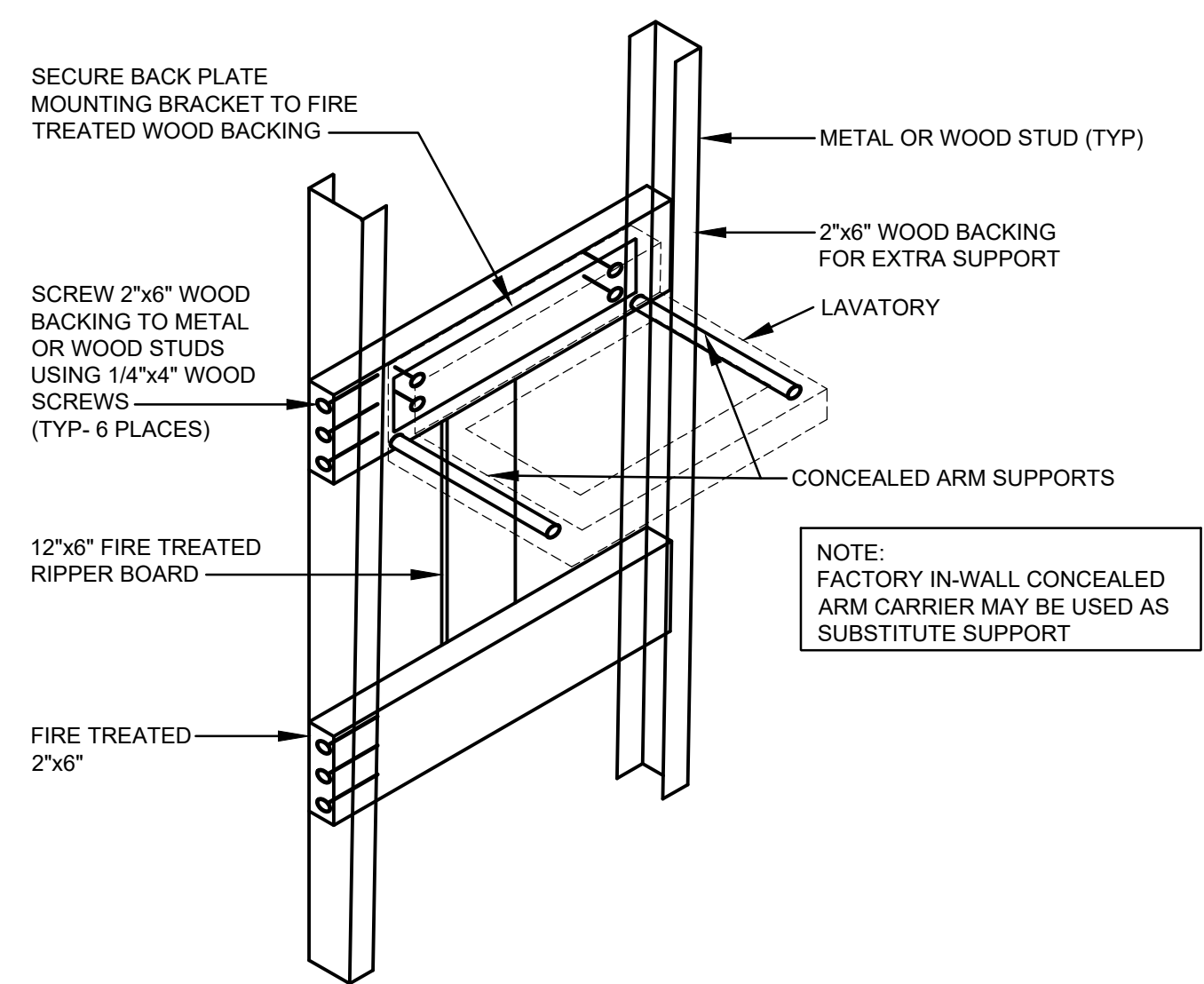
COOLING COIL CONDENSATE DRAIN DETAIL 5
NOT TO SCALE P6.1



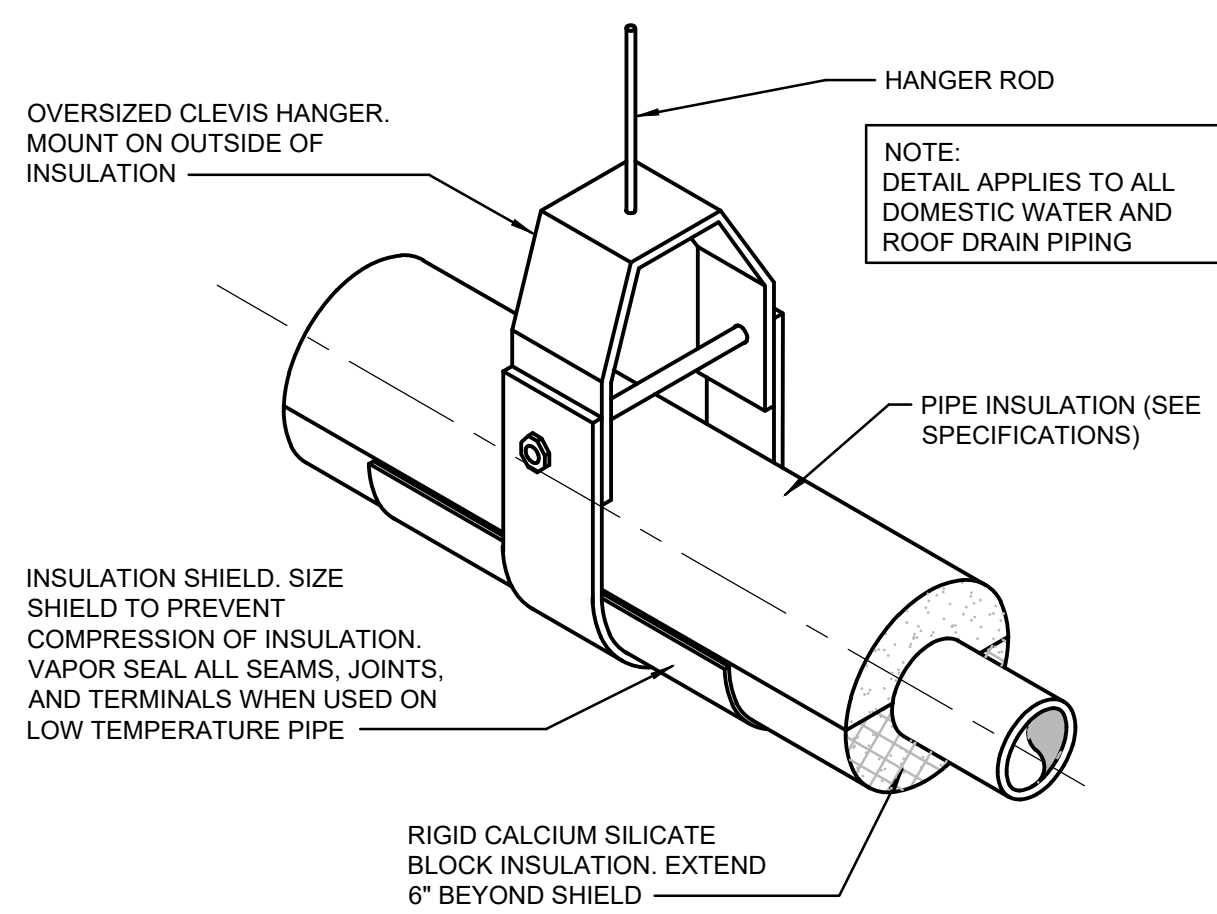
WATER PRESSURE REDUCING STATION DETAIL 3
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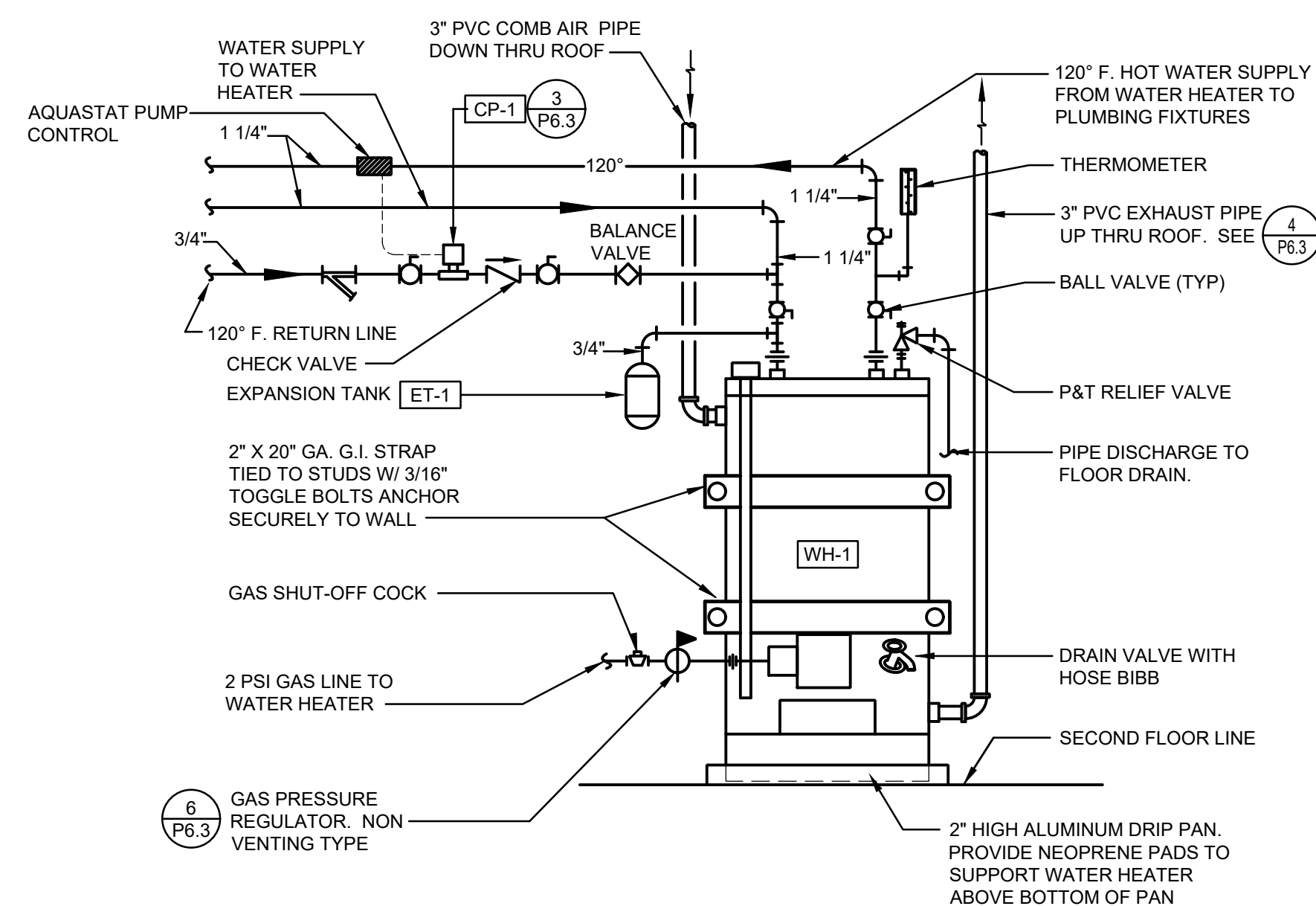
GAS PIPING SCHEMATIC 1
NOT TO SCALE P6.1



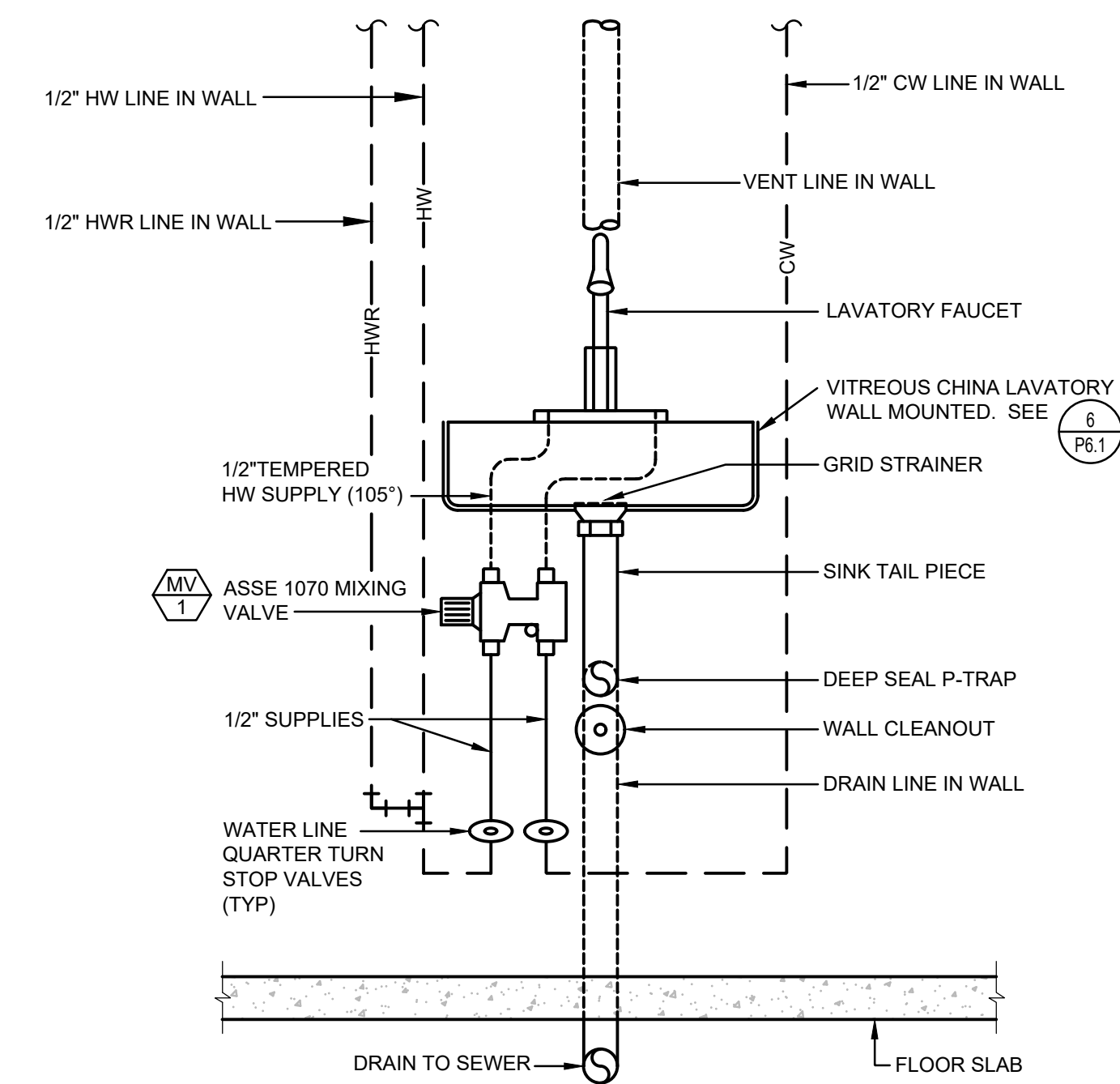
LAVATORY SUPPORT DETAIL 6
NOT TO SCALE P6.1



PIPE SUPPORT DETAIL 7
NOT TO SCALE P6.1



GAS FIRED WATER HEATER DETAIL 4
NOT TO SCALE P6.1



LAVATORY INSTALLATION DETAIL 2
NOT TO SCALE P6.1

NO.	DATE	DESCRIPTION

