

GENERAL NOTES

- G1. THE INTENT OF THE STRUCTURAL DRAWINGS IS TO SHOW THE MAIN STRUCTURAL FEATURES AND DESIGN FOR THE INTENDED PROJECT. ARCHITECTURAL DETAILS AND OTHER COMPONENTS THAT MAY BE NECESSARY TO CONSTRUCT THE PROJECT ARE SHOWN INCIDENTALLY ONLY AND NOT COMPLETELY. THEREFORE, ALL CONTRACT DRAWINGS AND SPECIFICATIONS MUST BE USED IN CONJUNCTION WITH THE STRUCTURAL DRAWINGS DURING ALL PHASES OF CONSTRUCTION. DISCREPANCIES BETWEEN STRUCTURAL DRAWINGS AND ARCHITECTURAL DRAWINGS, IF NOT CLARIFIED IN THE ADDENDA AT THE REQUEST OF THE CONTRACTOR, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING CONSTRUCTION FOR CLARIFICATIONS. THE CONTRACTOR SHALL TAKE THIS INTO CONSIDERATION IN HIS BID.
- G2. THE CONTRACTOR SHALL INFORM THE ARCHITECT OF ALL DISCREPANCIES BETWEEN DRAWINGS OF DIFFERENT TRADES PRIOR TO INITIATION OF ANY WORK.
- G3. THE DESIGN IS IN ACCORDANCE WITH THE NINTH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE.
- G4. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE SAFETY OF ADJACENT STRUCTURES, PROPERTY, AND THE PUBLIC. THE CONTRACTOR SHALL SHIELD, BRACE, AND PROTECT THE EXISTING BUILDING AS REQUIRED FOR CONSTRUCTION OF NEW WORK.
- G5. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR VERIFICATION OF LOCATIONS AND DIMENSIONS OF ALL CHASES, SLOTS, INSERTS, CURBS, OPENINGS, SLEEVES, ANCHOR BOLTS, FLOOR PITCHES, ANGLE FRAMES, AND ALL OTHER PROJECT REQUIREMENTS NOT SHOWN ON STRUCTURAL DRAWINGS. WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING LOCATIONS SHALL BE INCLUDED.
- G6. DETAILS SHOWN AS TYPICAL ARE APPLICABLE TO ALL SIMILAR CONDITIONS.
- G7. ALL CONTRACTORS ARE REQUIRED TO EXAMINE THE DRAWINGS AND SPECIFICATIONS CAREFULLY, VISIT THE SITE, AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, PRIOR TO SUBMITTING THE PROPOSAL. FAILURE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND LIMITATIONS WILL, IN NO WAY RELIEVE THE SUCCESSFUL BIDDER FROM FURNISHING ANY MATERIALS OR PERFORMING ANY WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS WITHOUT ADDITIONAL COST TO THE OWNER.
- G8. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS INCLUDING BUT NOT LIMITED TO TEMPORARY SHORING AND BRACING OF NEW AND EXISTING CONSTRUCTION TO MAINTAIN STRUCTURAL STABILITY FOR ALL CONDITIONS OF STATIC, DYNAMIC, GRAVITY, AND WIND LOADS DURING DEMOLITION PROCEDURES, REPAIR PROCEDURES, AND NEW CONSTRUCTION PROCEDURES THROUGHOUT THE DURATION OF THE CONSTRUCTION CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF TEMPORARY SHORING INCLUDING ENGINEERING AND A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF MASSACHUSETTS. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION-RELATED SAFETY MEASURES.
- G9. ANY ILLUSTRATION OR DESCRIPTION OF CONSTRUCTION SEQUENCING, TEMPORARY SHORING SEQUENCE, OR TEMPORARY SHORING SYSTEM, AS SHOWN ANYWHERE IN THE CONTRACT DOCUMENTS (DRAWINGS AND/OR SPECIFICATIONS) IS PROVIDED TO THE CONTRACTOR ONLY FOR ILLUSTRATION OF A POSSIBLE METHOD OR SEQUENCE OF ACCOMPLISHING THE WORK, TO DEMONSTRATE FEASIBILITY IN PRINCIPLE ONLY, UNLESS OTHERWISE NOTED. SUCH ILLUSTRATIONS OR DESCRIPTIONS OF CONSTRUCTION SEQUENCING OR TEMPORARY SHORING IN THE CONTRACT DOCUMENTS ARE DEEMED SUGGESTIONS FOR CONSIDERATION ONLY BY THE CONTRACTOR AND ARE NOT ENDORSED BY THE ARCHITECT OR ENGINEER AND ARE NOT INTENDED TO DICTATE TO THE CONTRACTOR THE SELECTION, DETAILS AND EXECUTION OF ALL CONSTRUCTION MEANS, METHODS AND/OR SEQUENCING OF THE CONSTRUCTION WORK ARE SOLELY THE CHOICE AND RESPONSIBILITY OF THE CONTRACTOR. SUCH ILLUSTRATIONS OR DESCRIPTIONS OF CONSTRUCTION SEQUENCING OR TEMPORARY SHORING IN THE CONTRACT DOCUMENTS ARE SHOWN ONLY FOR THOSE ASPECTS OF THE WORK WHERE COMPLEXITY, UNUSUAL CONDITIONS, OR GLOBAL STABILITY ARE RELATED TO THE PROJECT. NO WARRANTY NOTICE OF VERY SPECIAL ATTENTION REQUIRED BY THE CONTRACTOR. SUCH ILLUSTRATIONS OR DESCRIPTIONS OF CONSTRUCTION SEQUENCING OR TEMPORARY SHORING ARE NOT TO BE INTERPRETED IN ANY WAY AS LIMITING THE WORK REQUIRING SEQUENCING OR TEMPORARY SHORING TO ONLY THOSE ASPECTS ILLUSTRATED OR DESCRIBED. AS PART OF THE BASE CONTRACT WORK, THE CONTRACTOR SHALL IDENTIFY, PLAN, FOR, ENGINEER AND DETAIL, AND PROVIDE ALL CONSTRUCTION SEQUENCING AND TEMPORARY SHORING AS NECESSARY TO SAFELY AND SUCCESSFULLY EXECUTE ALL THE WORK ENCOMTERED FOR THIS PROJECT.

FOUNDATION NOTES

- F1. THE FOUNDATION DESIGN IS BASED ON THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY LAHAF GEOTECHNICAL CONSULTANTS, INC. AUGUST 12, 2020. REFER TO BORING LOGS AND TEST PIT DATA IN THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- F2. FOOTINGS SHALL BEAR TYPICALLY ON STRUCTURAL FILL PLACED DIRECTLY OVER THE NATURAL SAND AND GRAVEL OR ON ROCK HAVING A MINIMUM BEARING CAPACITY OF 2 TONS PER SQUARE FOOT. REFER TO EARTHWORK SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- F3. ALL BACKFILL UNDER STRUCTURAL SLABS, MATS, AND FOOTINGS WILL BE ENGINEERED STRUCTURAL FILL COMPACTED IN SPECIFIED LIFTS TO 95 PERCENT OF MAXIMUM DRY DENSITY, UNLESS OTHERWISE INDICATED OR SPECIFIED. REFER TO EARTHWORK SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- F4. PROVIDE SHEETING, BRACING, AND UNDERPINNINGS AS REQUIRED TO PRESERVE ADJACENT STRUCTURES.
- F5. FOUNDATIONS AND SLABS SHALL NOT BE POURED IN WATER OR ON FROZEN GROUND.
- F6. VERIFY LOCATIONS AND REQUIREMENTS FOR INSERTS, SLEEVES, CONDUITS, EMBEDMENTS, AND PENETRATIONS WITH RESPECTIVE TRADES BEFORE PLACING CONCRETE.
- F7. BLASTING SHALL BE COMPLETED BEFORE ANY CONCRETE IS PLACED.
- F8. DOVELS FROM FOUNDATIONS INTO PIERS, PIPE CAPS, COLUMNS, BUTTRESSES, OR WALLS SHALL BE THE SAME SIZE AND NUMBER AS REINFORCEMENT IN PIERS, COLUMNS, BUTTRESSES, OR WALLS ABOVE, EXCEPT AS OTHERWISE SHOWN.
- F9. CONTRACTOR SHALL PROVIDE CONTINUOUS DRAINAGE BY MECHANICAL METHODS TO CONTROL SURFACE AND UNDERGROUND WATER AS REQUIRED DURING CONSTRUCTION. REFER TO EARTHWORK SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- F10. CONTRACTOR SHALL ENSURE THAT GROUND WATER LEVELS UNDER ADJACENT STRUCTURES AND PROPERTIES ARE NOT ALTERED. REFER TO EARTHWORK SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- F11. ALL FOUNDATIONS UNITS (PIERS AND FOOTINGS) SHALL BE CENTERED UNDER SUPPORT MEMBERS, UNLESS NOTED OTHERWISE ON PLANS.
- F12. COORDINATE UNDER FLOOR AND PERIMETER DRAIN REQUIREMENTS WITH ARCHITECTURAL, CIVIL, AND PLUMBING DRAWINGS.
- F13. THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY FOR THE VALIDITY OF THE SUBSURFACE CONDITIONS DESCRIBED ON THE DRAWINGS, SPECIFICATIONS, BORING LOGS, OR TEST PITS. THIS DATA IS INCLUDED ONLY TO ASSIST THE CONTRACTOR DURING BIDDING AND SUBSEQUENT CONSTRUCTION AND REPRESENT CONDITIONS ONLY OF THOSE SPECIFIED LOCATIONS AT THE PARTICULAR TIME THEY WERE MADE.
- F14. CONTRACTOR SHALL INFORM THE ARCHITECT AND RELOCATE ANY EXISTING UTILITY LINES AS REQUIRED THAT MAY INTERFERE WITH NEW FOUNDATIONS. CONTRACTOR SHALL REMOVE ANY EXISTING UTILITY LINES THAT ARE BEING ABANDONED IN THE VICINITY OF THE NEW FOUNDATION AND BACKFILL THE AREA WITH COMPACTED STRUCTURAL FILL.
- F15. SEE THE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION AND OTHER SPECIFIC FOUNDATION CONSTRUCTION REQUIREMENTS.

REINFORCED CONCRETE NOTES

- R1. ALL CONCRETE WORK SHALL CONFORM TO ACI 318-14 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND TO THE NINTH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE. IN CASE OF CONFLICT, THE MASSACHUSETTS STATE BUILDING CODE SHALL GOVERN.
- R2. ALL CONCRETE SHALL BE CONTROLLED, MIXED, AND PLACED UNDER THE SUPERVISION OF AN APPROVED CONCRETE TESTING AGENCY, PROVIDED BY OWNER.
- R3. ALL CONCRETE EXPOSED TO THE WEATHER SHALL BE NORMAL WEIGHT CONCRETE WITH A MINIMUM 5,000 PSI 28 DAY COMPRESSION STRENGTH AND CONTAIN AIR ENTRAINMENT ADMIXTURE.
- R4. UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL BE NORMAL WEIGHT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 POUNDS PER SQUARE INCH AT THE END OF 28 DAYS. CONCRETE SLABS ON GRADE AND SUPPORTED CONCRETE SLABS SHALL BE NORMAL WEIGHT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 POUNDS PER SQUARE INCH AT THE END OF 28 DAYS. CONCRETE SLABS ON STEEL DECK SHALL BE NORMAL WEIGHT CONCRETE AS INDICATED ON PLANS WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT THE END OF 28 DAYS.
- R5. CONCRETE QUALITY IN ACCORDANCE WITH THE REQUIREMENTS OF THESE DRAWINGS AND SPECIFICATIONS IS ESSENTIAL TO THE STRUCTURAL PERFORMANCE OF THIS BUILDING. CONCRETE THAT IS NOT IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS WILL NOT BE ACCEPTED.
- R6. CONCRETE SHALL REACH THE 40 PERCENT OF ITS 28 DAY COMPRESSIVE STRENGTH (6i) BEFORE FORMS OR SHORES FOR WALLS MAY BE REMOVED, NO FORMS CAN BE REMOVED UNLESS CONCRETE HAS ATTAINED SUFFICIENT STRENGTH TO SUPPORT ITS OWN WEIGHT.
- R7. CONSTRUCTION JOINT LOCATIONS, OTHER THAN SHOWN ON THE DRAWINGS, ARE PERMITTED SUBJECT TO PRIOR APPROVAL OF THE ENGINEER. EXPANSION JOINT AND CONTROL JOINT LOCATIONS ARE MANDATORY AS SHOWN.
- R8. REINFORCING BARS SHALL CONFORM TO ASTM A615 WITH 60,000 POUNDS PER SQUARE INCH YIELD STRENGTH, AS INDICATED AND SHALL HAVE THE FOLLOWING CONCRETE COVER, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- A. SURFACES PLACED IN CONTACT WITH THE GROUND - 3"
- B. FORMED SURFACE EXPOSED TO GROUND - 2"
- C. INSIDE FACE OF FORMED WALL - 1 1/2"
- D. WALL PER TIES - 1 1/2"
- E. SLAB REINFORCING - 3/4" TOP & BOTTOM
- R9. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185, LAP TWO SQUARES AT ALL SPLICES AND TIE AT 3 FOOT CENTERS.
- R10. ALL LAP REINFORCING TO DEVELOP FULL TENSION CAPACITY OF THE SMALLER BAR REINFORCEMENT UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- R11. PROVIDE BAR SUPPORTS, SPACES, AND ACCESSORIES RECOMMENDED IN THE LATEST ADDITION OF THE ACI DETAILING MANUAL. PUBLICATION SHALL. ALL REINFORCEMENT DETAILING, LAP SPICES, AND EMBEDMENTS SHALL CONFORM TO THIS MANUAL. ALL ACCESSORIES, SUCH AS SLAB BOLSTERS AND BEAM AND SLAB CHAIRS IN CONTACT WITH EXPOSED SURFACES, SHALL BE ZINC COATED OR PLASTIC TYPE.
- R12. PIPES OR CONDUITS SHALL NOT BE PLACED IN SLABS ON GRADE OR ELEVATED SLABS.
- R13. CONCRETE WALLS SHALL BE CAST IN PANELS NOT EXCEEDING 60 FEET IN LENGTH.

REINFORCED CONCRETE NOTES (CONT)

- R14. DETAILING OF REINFORCEMENT SHALL BE ACCORDING TO THE LATEST EDITION OF ACI 318 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
- R15. SET SECRETLY AND TIE ALL REINFORCEMENT BEFORE PLACING CONCRETE. SETTING DOVELS AND REINFORCEMENT INTO WET CONCRETE IS PROHIBITED.
- R16. ALL REINFORCING WILL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS.
- R17. FOR CONCRETE FILL AND TOPPINGS, PLACE CONSTRUCTION AND EXPANSION JOINTS AT THE SAME LOCATION AS THE CONSTRUCTION AND EXPANSION JOINTS IN THE SUPPORTING CONCRETE.
- R18. BUILD ALL CONCRETE MAT FOUNDATIONS, BASE SLABS, WALLS, AND FLOORS TO MINIMIZE THE EFFECTS OF SHRINKAGE BY CASTING ALTERNATE SECTIONS. ADJACENT SECTIONS MAY BE CAST WHEN PREVIOUSLY PLACED SECTION HAS CURED FOR 48 HOURS AFTER ITS INITIAL SET. CURING REQUIREMENTS ARE SPECIFIED IN SECTION 03300, CAST-IN-PLACE CONCRETE OF THE SPECIFICATIONS.
- R19. EXPOSED EDGES OF CONCRETE ELEMENTS, SUCH AS PILASTERS, CURBS, AND EQUIPMENT PADS, WILL HAVE A 1/4 CHAMFER.
- R20. ALL KEYS SHALL BE 2"x4" (NOMINAL) UNLESS SHOWN OTHERWISE ON DRAWINGS.
- R21. NOT ALL OPENINGS THROUGH CONCRETE SLABS AND WALLS ARE SHOWN ON STRUCTURAL DRAWINGS. OPENINGS INDICATED, OR ANY ADDITIONAL OPENINGS OR INSERTS REQUIRED, SHALL BE VERIFIED WITH RESPECTIVE TRADES BEFORE POURING OF CONCRETE.
- R22. USE NON-SHRINK, NON-METALLIC GROUT WHERE INDICATED. SEE SECTION 03300, CAST-IN-PLACE CONCRETE OF THE SPECIFICATIONS FOR ALL THE REQUIREMENTS.
- R23. SEE ARCHITECTURAL DRAWINGS FOR FINISHES, DEPRESSIONS, REGLETS, NOTCHES, AND OTHER ARCHITECTURAL FEATURES.
- R24. PROVIDE SEALANT JOINTS FOR ALL EXPOSED TO VIEW CONSTRUCTION JOINTS, CONTROL JOINTS, AND SHEAR KEYS.
- R25. SET ANCHOR BOLTS AND EMBEDDED PLATES REQUIRED FOR CONNECTION OF WORK FURNISHED BY OTHER TRADES FOR INSTALLATION AS PART OF THEIR SCOPE OF WORK.
- R26. PROVIDE A MINIMUM OF 6" AT 12" EACH WAY, EACH FACE FOR ALL WALLS, FOOTINGS, PITS, OR PADS, UNLESS NOTED OTHERWISE.
- R27. PROVIDE CONCRETE PADS FOR MECHANICAL EQUIPMENT ACCORDING TO THE REQUIREMENTS OF THE MANUFACTURER AND IN ACCORDANCE WITH THE TYPICAL DETAILS ALWAYS PROVIDE A MINIMUM REINFORCEMENT FOR PADS, UNLESS NOTED OTHERWISE. COORDINATE LOCATIONS WITH MECHANICAL WORK.
- R28. PROVIDE CONDENSATE PITS AND OTHER DEPRESSIONS OR CURBS AS REQUIRED FOR COMPLETION OF THE MECHANICAL WORK.
- R29. NO CONCRETE SHALL BE PLACED BEFORE REVIEW AND APPROVAL OF THE REINFORCING AND EMBEDDED ITEMS HAVE BEEN OBTAINED FROM THE ARCHITECT / ENGINEER.
- R30. WHEN REINFORCEMENT IS PLACED IN TWO OR MORE LAYERS, BARS IN THE UPPER LAYERS SHALL BE PLACED DIRECTLY ABOVE THOSE IN THE BOTTOM LAYER WITH A CLEAR DISTANCE BETWEEN THE LAYERS NOT LESS THAN ONE INCH.
- R31. FLOOR SLABS WILL BE AN INTEGRAL PART OF STRUCTURAL SLABS. SEPARATE CONCRETE FILL IS NOT PERMITTED. ALL OPENINGS THROUGH THE STRUCTURAL DRAWINGS, CONCRETE CAST ON SLOPED SURFACES, SHALL BEGIN AT THE LOWEST ELEVATION AND CONTINUE MONOLITHICALLY TOWARD THE HIGHER ELEVATIONS UNTIL THE INTENDED POUR IS COMPLETED.
- R32. ELEVATED SLABS ON DECK SHALL BE FINISHED LEVEL USING LASER MEASUREMENT AND SHALL MEET THE TOLERANCES FOR FLATNESS. SLAB THICKNESS INDICATED ON THE PLANS ARE A MINIMUM THICKNESSES. FOR QUANTITY OF CONCRETE, THE CONTRACTOR SHALL TAKE INTO ACCOUNT DEFLECTIONS OF SUPPORTING STRUCTURAL MEMBERS, FORMS AND DECK FOR AN AVERAGE ADDITIONAL 3/4" OF CONCRETE FOR THE ENTIRE AREA OF THE SLAB. USE A MAXIMUM OF THE DESIGN SLAB THICKNESS PLUS 1 INCH MAX.
- R33. FIBER REINFORCEMENT SHALL BE ASTM C 1116 - TYPE III, MACRO-SYNTHETIC FIBERS (HIGH-VOLUME SYNTHETICS USED FOR REDUCTION OF PLASTIC AND DRYING SHRINKAGE CRACKING). PROVIDE IN SLABS-ON-GRADE, ONLY WHERE SHOWN ON THE DRAWINGS. CONTRACTOR SHALL FOLLOW ALL MANUFACTURERS REQUIREMENTS AND PROVIDE A DOSAGE AS RECOMMENDED BY THE MANUFACTURER FOR CONDITIONS SHOWN ON THE DRAWINGS. E.G. SLAB THICKNESS, CONCRETE MIX STRENGTH, SPACING, AND LOCATION OF CONSTRUCTION JOINTS AND SAW-CUT CONTROL JOINTS, ETC.

STRUCTURAL STEEL NOTES

- S1. ALL STEEL WORK SHALL CONFORM TO THE AISC 360-10 SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION AND TO THE NINTH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE. IN CASE OF CONFLICT, THE MASSACHUSETTS STATE BUILDING CODE SHALL GOVERN.
- S2. THE STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:
- A. ALL STRUCTURAL WIDE FLANGE SHAPES: ASTM A992 FY = 50ksi, HAVING A MINIMUM YIELD STRENGTH OF 50 KSI, UNLESS OTHERWISE NOTED.
- B. BARS, PLATES, CHANNELS, AND CONNECTION ANGLES: ASTM A36, UNLESS NOTED OTHERWISE.
- C. STRUCTURAL TUBES: ASTM A500, GRADE C, FY = 50ksi.
- D. STRUCTURAL PIPES: ASTM A53, GRADE B OR ASTM A501.
- E. ALL ANCHOR BOLTS SHALL CONFORM TO ASTM F1554.
- S3. ALL WELDING SHALL BE IN ACCORDANCE WITH THE AWS D1.1 STRUCTURAL WELDING CODE.
- S4. BOTTOM OF DECK ELEVATIONS REFER TO TOP ELEVATION OF SUPPORTING ELEMENT INCLUDING JOISTS, BEAMS, PLATES, TEES, ANGLES, ETC.
- S5. TOP-OF-STEEL ELEVATIONS INDICATED ON THE DRAWINGS REFER TO TOP OF TOP-BEAM FLANGE UNLESS NOTED OTHERWISE ON PLANS.
- S6. DESIGN AND DETAIL OF ALL CONNECTIONS SHALL BE ACCORDING TO AISC.
- S7. THE BEAM CONNECTION DESIGN SHOULD ACCOUNT FOR REACTIONS OF MEMBERS SUPPORTED BY THE BEAM NEAR SUPPORTS CONCENTRATED LOADS WITHIN ONE THIRD THE SPAN OF THE BEAM CLOSER TO THE SUPPORT AND/OR VERTICAL COMPONENTS OF FORCE IN DIAGONAL BRACING MEMBERS FRAMING INTO THE MEMBERS.
- S8. ALL CONNECTIONS SHALL BE BOLTED WITH ASTM A325 HIGH-STRENGTH BOLTS OR WELDED IN ACCORDANCE TO AWS AND WITH THE AISC MANUAL REQUIREMENTS UNLESS NOTED OTHERWISE.
- S9. UNLESS OTHERWISE NOTED IN PLAN, DETAIL, FLOOR MEMBER CONNECTIONS FOR THE FOLLOWING FACTORED (LRFD) VERTICAL REACTIONS:
- | SHAPE | MINIMUM REACTIONS (KIPS) | MINIMUM NUMBER OF ROWS |
|----------|--------------------------|------------------------|
| TO GIRDS | | |
| W12 | 30 | 3 |
| W14 | 38 | 4 |
| W16 | 45 | 4 |
| W18 | 54 | 4 |
| W21 | 69 | 4 |
| W24 | 86 | 5 |
| W27 | 103 | 6 |
| W30 | 129 | 7 |
| W33 | 153 | 8 |
| W36/W40 | 180 | 9 |
- S10. SHOP CONNECTIONS MAY BE BOLTED OR WELDED, UNLESS THE CONNECTION METHOD IS SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS.
- S11. THE CONTRACTOR SHALL SUPPLY ALL PLATES, CLIPS, SET ANGLES, CONNECTIONS, ETC. AS REQUIRED FOR COMPLETION OF THE STRUCTURE. EVEN IF SUCH ITEMS ARE NOT EXPLICITLY CALLED FOR ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS.
- S12. THE CONTRACTOR SHALL PROVIDE ALL EMBEDDED PLATES, SLEEVES, BOX-OUTS, CONDUITS, ETCETERAS, AS REQUIRED BY OTHER TRADES IN THE CONCRETE STRUCTURE.
- S13. CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY GUYING AND BRACING REQUIRED TO ERECT AND HOLD NEW STRUCTURE UNDER LOADS DURING CONSTRUCTION LOADS. THE STEEL FRAME IN ACCORDANCE WITH SECTION 7.3.1 OF THE AISC CODE OF STANDARD PRACTICE. IT RELIES ON THE INTERACTION BETWEEN THE METAL ROOF DECK, THE CONCRETE COMPOSITE FLOOR, BRACED FRAMES, AND MASONRY SHEAR WALLS FOR STABILITY. THE CONTRACTOR IS TO PROVIDE TEMPORARY SUPPORTS UNTIL ALL ELEMENTS REQUIRED FOR STABILITY OF THE STEEL FRAME ARE COMPLETED.
- S14. PROVIDE ANCHOR BOLTS, SETTING PLATES, AND EMBEDDED PLATES TO BE SET BY OTHERS.
- S15. PROVIDE 1/4" THICK LEVELING PLATES FOR USE IN ALIGNING AND SETTING ANCHOR BOLTS AND BASE PLATES.
- S16. MOMENT CONNECTIONS BETWEEN BEAMS AND COLUMNS INDICATED ON THE DRAWINGS SHALL BE DESIGNED AND DETAILED FOR THE FULL MOMENT CAPACITY OF THE CONNECTING MEMBERS, UNLESS NOTED OTHERWISE.
- S17. ALL TUBE STEEL COLUMN CAP PLATES ARE TO BE 1/2" THICK MINIMUM EXCEPT MOMENT FRAMED COLUMNS ARE TO BE 3/4" THICK MINIMUM OR MATCH BEAM FLANGE, WHICHEVER IS GREATER, UNLESS OTHERWISE NOTED.
- S18. PROVIDE 1/4" THICK CLOSURE PLATES AT ALL OPEN ENDED TUBE STEEL MEMBERS.
- S19. STEEL FRAMING SHALL NOT BE CANTED UNLESS SPECIFICALLY NOTED AS "CANTED" ON THE STRUCTURAL DRAWINGS. WHERE THE DECK SLOPE AROUND THE BEARING SURFACE IS GREATER THAN 1:24, PROVIDE STEEL SHIMS FOR ADEQUATE BEARING OF STEEL DECK.

STEEL JOIST NOTES

- SJ1. ALL STEEL JOISTS SHALL CONFORM TO SJI K-10 "STANDARD SPECIFICATION FOR OPEN WEB STEEL JOISTS K-SERIES", AND TO SJI L-10 "STANDARD SPECIFICATION FOR DEEP LONGSPAN STEEL JOISTS DL-SERIES" OF THE STEEL JOIST INSTITUTE AND TO THE NINTH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE. IN CASE OF CONFLICT, THE MASSACHUSETTS STATE BUILDING CODE SHALL GOVERN.
- SJ2. ALL WELDING WILL BE IN ACCORDANCE WITH THE AWS D1.1 STRUCTURAL WELDING CODE.
- SJ3. TOP AND BOTTOM CHORD OF ALL JOISTS SHALL BE OF DOUBLE ANGLES.
- SJ4. STARTING POINTS FOR ALL JOIST SPACING ARE BASED ON A JOIST OCCURRING AT COLUMN CENTER LINES UNLESS OTHERWISE NOTED ON PLANS.
- SJ5. ALL CONTINUOUS HORIZONTAL BRIDGING SHALL CONSIST OF TWO MEMBERS WITH ONE MEMBER AT TOP CHORD OF JOIST AND THE OTHER AT THE BOTTOM CHORD OF JOIST. ATTACH BY WELDING AT POINT OF CONTACT WITH EACH JOIST.
- SJ6. ALL BOLTED DIAGONAL BRIDGING SHALL CONSIST OF 2 MEMBERS BOLTED TO TOP CHORD OF JOIST AND BOTTOM CHORD OR FLANGE OF ADJACENT MEMBER AND BOLTED TOGETHER AT INTERSECTION.
- SJ7. DESIGN JOISTS AND PROVIDE UPLIFT BRIDGING FOR UPLIFT WIND LOADS AS PER SPECIFICATIONS. PROVIDE BRIDGING AT FIRST BOTTOM CHORD OF JOIST. ATTACH BY WELDING AT BOTH ENDS OF JOIST.

STEEL DECK

- SD1. ALL STEEL DECK WORK SHALL CONFORM TO THE REQUIREMENTS OF
- | | |
|--------------------|--|
| NC10 - 10 | STANDARD FOR NONCOMPOSITE STEEL FLOOR DECK. |
| RD10 - 10 | STANDARD FOR STEEL FLOOR DECK. |
| SD10 - 2011 | STANDARD FOR COMPOSITE STEEL FLOOR DECK SLABS. |
| SD1 - QA/QC - 2011 | STANDARD FOR QUALITY CONTROL AND QUALITY ASSURANCE FOR INSTALLATION OF STEEL DECK. |
- OF THE STEEL DECK INSTITUTE AND THE NINTH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE. IN CASE OF CONFLICT, THE MASSACHUSETTS STATE BUILDING CODE SHALL GOVERN.
- SD2. STEEL DECK UNITS SHALL BE FORMED FROM STEEL SHEETS CONFORMING TO ASTM A611, OR A653, WHERE GALVANIZED DECK IS INDICATED. SHEETS SHALL BE COATED WITH A ZINC COATING CONFORMING TO ASTM A653, G-60 COATING FOR FLOOR DECK AND FORM DECK AND G-90 COATING FOR ROOF DECK.
- SD3. STEEL DECKING SHALL BE FASTENED TO ALL SUPPORTING STEEL MEMBERS AS FOLLOWS AND AS SHOWN ON THE STRUCTURAL DRAWINGS.
- 3" DEEP DECK
- FIELD 5/8" DIAMETER ROUND SPOT WELDS TO STEEL SUPPORTS AT EACH RIB, 8" ON CENTER. PERIMETER: 3/4" DIAMETER ROUND SPOT WELDS TO STEEL SUPPORTS AT 8" ON CENTER. OPENINGS: 3/4" DIAMETER ROUND SPOT WELDS TO STEEL SUPPORTS AT 8" ON CENTER. CORNERS: TWO EACH 3/4" DIAMETER ROUND SPOT WELDS TO STEEL SUPPORTS. SIDEPLATES: NO. 10 TEK SCREWS AT 1'-0" ON CENTER AT SIDEPLATES BETWEEN SUPPORTS.
- 2" AND 3" DEEP COMPOSITE DECK
- FIELD 5/8" DIAMETER ROUND SPOT WELDS TO STEEL SUPPORTS AT EACH RIB, 12" ON CENTER. PERIMETER: 5/8" DIAMETER ROUND SPOT WELDS TO STEEL SUPPORTS AT 12" ON CENTER. OPENINGS: 3/4" DIAMETER ROUND SPOT WELDS TO STEEL SUPPORTS AT 12" ON CENTER. CORNERS: ONE EACH 5/8" DIAMETER ROUND SPOT WELDS TO STEEL SUPPORTS.
- SPOT WELDS SHALL BE FULLY JOINED ALL AROUND TO THE DECK. AFTER WELDING, ALL ROOF DECK WELDS SHALL BE PAINTED WITH ZRC COALD GALVANIZING COMPOUND.
- SD4. STEEL DECK SIZES, GAGES, AND MINIMUM PROPERTIES SHALL BE AS INDICATED ON DRAWINGS OR IN SPECIFICATIONS.
- SD5. PROVIDE MINIMUM 16 GAGE SCORED ANGLE OR GREATER WHERE REQUIRED AT PERIMETER OF BUILDING AND ALL OPENINGS IN CONCRETE SLAB ON STEEL DECK, UNLESS OTHERWISE NOTED.
- SD6. HANGING FROM OR ATTACHING TO METAL DECK IS PROHIBITED. ALL DUCTS, PIPES, CONDUITS SHALL BE SUPPORTED FROM STEEL FRAMING OR SUPPLEMENTAL STEEL FRAMING PROVIDED BY THE CONTRACTOR OR SUBCONTRACTOR.

UNIT PRICES - PROVIDE UNIT PRICES AS PART OF THE BID FOR THE FOLLOWING:

- 1.) STRUCTURAL STEEL BEAMS, ANGLES, PLATES, COLUMNS, ETC. THE UNIT PRICE SHALL INCLUDE WEIGHT OF THE STEEL, COST OF DETAILING, FABRICATION, DELIVERY AND INSTALLATION. PROVIDE THE UNIT PRICE FOR THE FOLLOWING, USING UNIT MEASUREMENT AS TON.
- A. STRUCTURAL STEEL UNIT WEIGHT UP TO 15 LB/LF.
- B. STRUCTURAL STEEL UNIT WEIGHT 15 TO 30 LB/LF.
- C. STRUCTURAL STEEL UNIT WEIGHT 30 TO 60 LB/LF.
- D. STRUCTURAL STEEL UNIT WEIGHT MORE THAN 60 LB/LF.
- 2.) COST OF REINFORCEMENT OF BEAMS IN THE SHOP FOR PENETRATIONS FOR DUCTS AND OTHER UTILITIES PER DETAIL 5 ON DRAWING 50-0.4 MINIMUM OF 10 LOCATIONS. IN ADDITION, PROVIDE UNIT COST OF EACH ADDITIONAL REINFORCEMENT DETAIL AND CREDIT FOR UNIT COST OF EACH DETAIL THAT IS REDUCED FROM ALLOWANCE OF MINIMUM 10 UNITS.
- 3.) COST OF PROVIDING UNREINFORCED PENETRATIONS THROUGH STEEL BEAMS PER DETAIL 6 ON DRAWING 50-0.6 FOR DUCTS AND OTHER UTILITIES AT A MINIMUM OF 10 LOCATIONS. IN ADDITION, PROVIDE UNIT COST OF EACH ADDITIONAL PENETRATION AND CREDIT FOR UNIT COST OF EACH DETAIL THAT IS REDUCED FROM ALLOWANCE A MINIMUM OF 10 PENETRATIONS.
- 4.) FRAMES FOR OPENINGS THROUGH ROOF PER DETAIL 28 AND 3 ON DRAWING 50-0.8. IN ADDITION, PROVIDE A UNIT COST IF THESE FRAMES WERE TO BE INSTALLED AFTER ALL OF THE STRUCTURAL STEEL HAS BEEN ERECTED. IN THE BASE BID, ALLOW FOR THE COST OF THIS DETAIL FOR ALL OPENINGS SHOWN IN THE STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. PROVIDE A UNIT COST OR CREDIT FOR EACH DETAIL THAT IS REDUCED FROM THE OPENINGS SHOWN ON THE STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
- 5.) FRAMES FOR OPENINGS THROUGH FLOOR AND ROOF PER DETAIL 1 ON DRAWING 50-0.8. IN ADDITION, PROVIDE A UNIT COST IF THESE FRAMES WERE TO BE INSTALLED AFTER ALL OF THE STRUCTURAL STEEL HAS BEEN ERECTED. IN THE BASE BID, ALLOW FOR THE COST OF THIS DETAIL FOR ALL OPENINGS SHOWN IN THE STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. PROVIDE A UNIT COST OR CREDIT FOR EACH DETAIL THAT IS REDUCED FROM THE OPENINGS SHOWN ON THE STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
- 6.) COST OF ONE SQUARE FOOT OF VARIOUS TYPES OF DECK SPECIFIED FOR THE PROJECT. THE UNIT PRICE SHALL INCLUDE MATERIAL COST OF THE DECK AND ACCESSORIES, COST OF DETAILING, FABRICATION, DELIVERY AND INSTALLATION.

NOTE:
ALL STEEL WORK INDICATED ON THE STRUCTURAL DRAWINGS IS BY 05 12 00 UNLESS SPECIFICALLY INDICATED TO BE BY 05 50 00 METAL FABRICATIONS.

DESIGN LOADS

- D1. ROOF SNOW LOADS
SNOW GROUND LOAD, Pg = 50 PSF
MINIMUM FLAT ROOF SNOW LOAD Pf = 30 PSF
FLAT ROOF SNOW LOAD PE = 39 PSF (PARTIALLY EXPOSED)
ALLOWANCE FOR DRIFTING PER MASSACHUSETTS STATE BUILDING CODE
- D2. FLOOR LIVE LOADS
MECHANICAL ROOMS 150 PSF MIN
PUBLIC GATHERING AREAS 100 PSF
STARISLOBBY 100 PSF
STORAGE 125 PSF
TYPICAL CONCENTRATED LOAD 1,000 POUNDS
FUTURE PHOTOVOLTAIC PANELS 15 PSF
CLASSROOMS 40PSF + 15 PSF PARTITIONS
LIBRARY READING ROOM 60PSF
CORRIDORS ABOVE FIRST FLOOR 80PSF
CONCENTRATED LOAD IN AUDITORIUM 3000 LBS
STAGE LOADING PLATFORM 400 PSF
TOILETS 60 PSF
ELEVATOR MACHINE ROOM 250 PSF
- D3. WIND LOADS
AS PER THE NINTH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE.
BASIC WIND SPEED 137 M.P.H.
EXPOSURE C
WIND LOADS IN ACCORDANCE WITH ASCE7-10
- D4. SEISMIC LOADS
AS PER THE NINTH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE
SEISMIC DESIGN CATEGORY B
SOIL PROFILE TYPE SITE CLASS C
MAPPED SPECTRAL RESPONSE ACCELERATIONS Sa = 0.232
S1 = 0.072
- BASIC SEISMIC FORCE RESISTING SYSTEMS
STRUCTURAL STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
- RESPONSE MODIFICATION FACTOR R = 3.0
DEFLECTION AMPLIFICATION FACTOR Cd = 3.0
ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE
SEISMIC IMPORTANCE FACTOR, I = 1.25
- RISK CATEGORY 3
SPECTRAL RESPONSE COEFFICIENT SDs = 0.174
SD1 = 0.01
AREA A AND B (TOTAL COMBINED) CS = 0.073
DESIGN BASE SHEAR V = 320 KIPS
- AREA C AND D
SEISMIC RESPONSE COEFFICIENT CS = 0.073
DESIGN BASE SHEAR V = 170 KIPS

EXPOSED STEEL NOTES:

- SPECIAL CARE USED IN THE HANDLING AND FABRICATING OF EXPOSED STEEL INDICATED ON THE DRAWINGS AND AS FOLLOWS:
- LOCATE FIELD JOINTS AT CONCEALED LOCATIONS IF POSSIBLE.
 - FABRICATE WITH EXPOSED SURFACES SMOOTH, SQUARE AND FREE OF SURFACE BLEMISHES INCLUDING FITTING, RUST, SCALE AND ROUGHNESS.
 - GRIND SHEARED, PUNCHED AND FLAME-CUT EDGES TO REMOVE BURRS AND PROVIDE SMOOTH SURFACES AND EDGES.
 - FABRICATE STEEL WITH EXPOSED SURFACES FREE OF MILL MARKS, INCLUDING ROLLED TRADE NAMES AND STAMPED OR RASSED IDENTIFICATION.
 - FABRICATE STEEL WITH EXPOSED SURFACES FREE OF SEAMS TO MAXIMUM EXTENT POSSIBLE.
 - REMOVE BLEMISHES BY FILLING OR GRINDING OR BY WELDING AND GRINDING, BEFORE CLEANING, TREATING AND SHOP PRIMING.
 - FABRICATE WITH PIECE MARKS FULLY HIDDEN IN THE COMPLETED STRUCTURE OR MADE WITH MEDIA THAT PERMITS FULL REMOVAL AFTER ERECTION.
 - ALL EXPOSED TO VIEW STEEL, NOT INDICATED TO RECEIVE SPRAY APPLIED FIREPROOFING SHALL BE SHOP PRIMED. COORDINATE WITH INTUMESCENT AND SPRAY FIREPROOFING WHERE REQUIRED.

DRAWING

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074
260 Charles Street
Studio 300
Waltham, MA 02453

Planning | Architecture | Interior Design
Tel: 817.954.1102
www.drara.com

NORTHEAST
METRO TECH

100 Hemlock Rd,
Wakefield, MA 01880

EDG

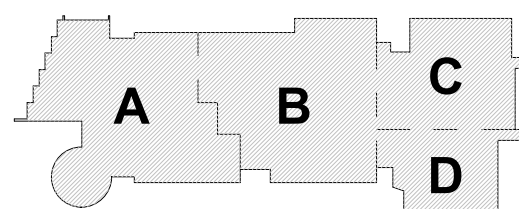
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

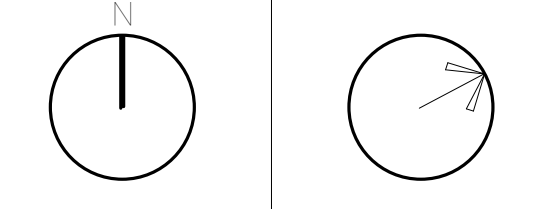
MSBA 90% CD
SUBMISSION

MAY 12, 2023



KEY PLAN

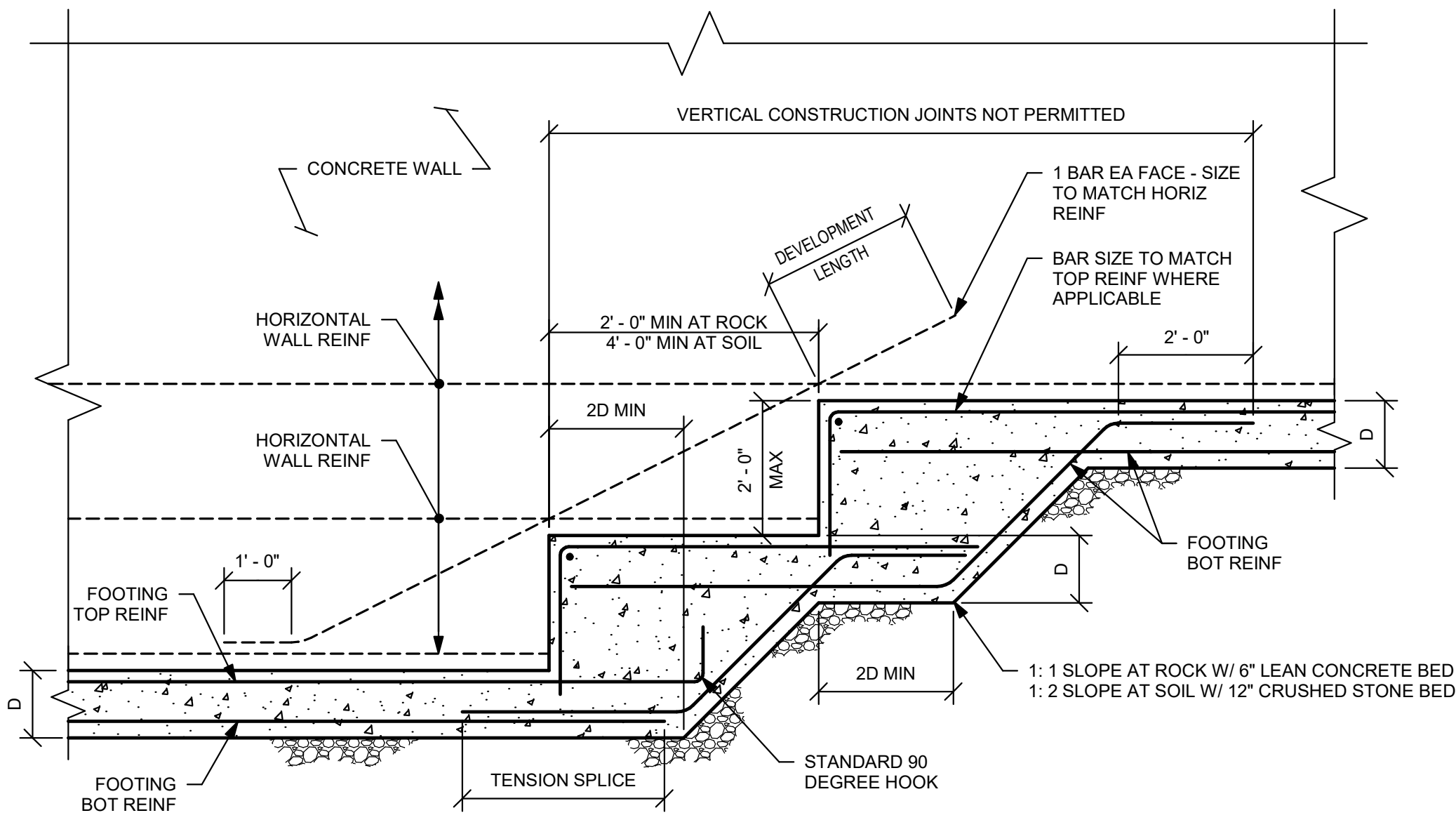
PROJECT NORTH
MAGNETIC NORTH



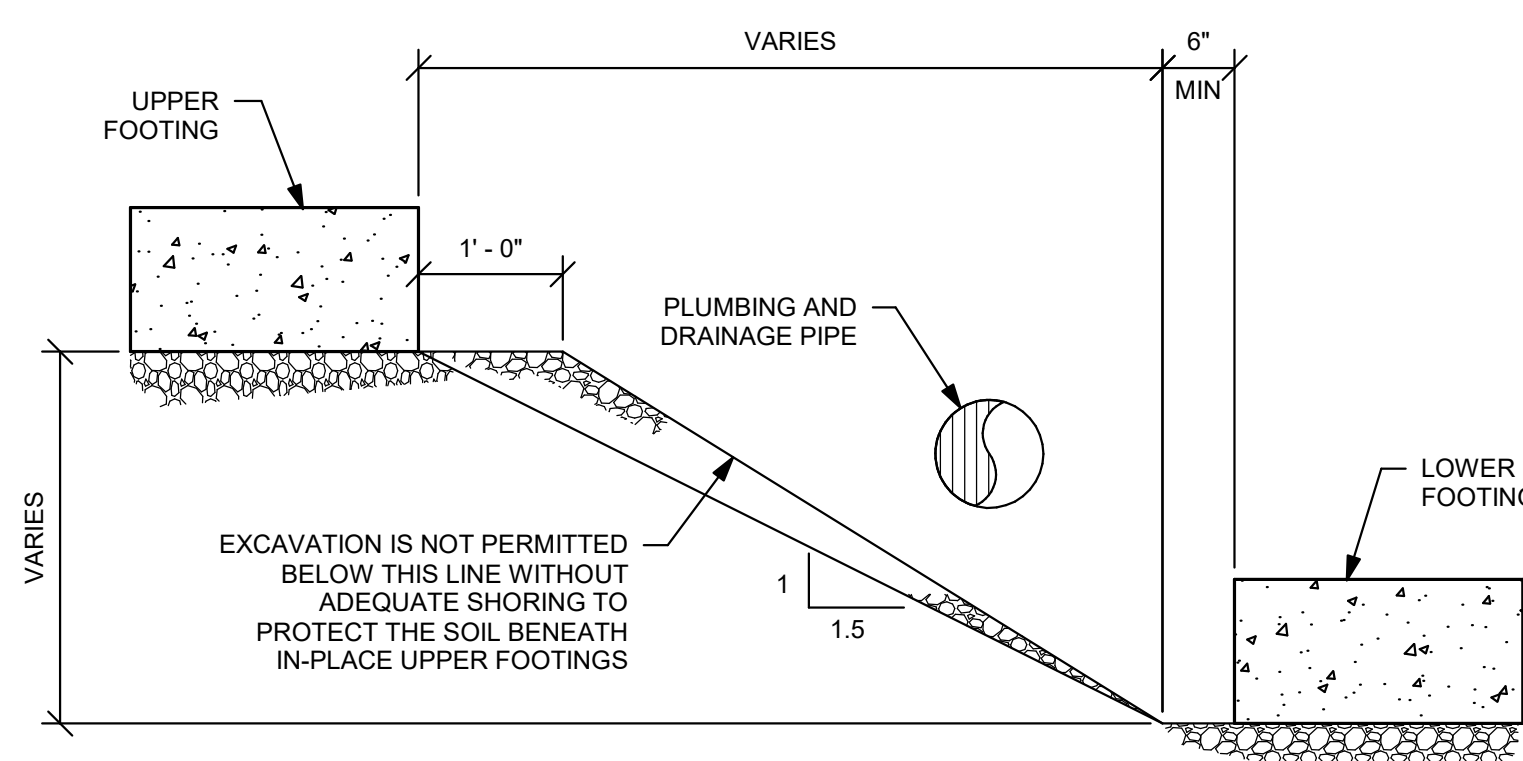
GENERAL
NOTES

Scale: 3/4" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

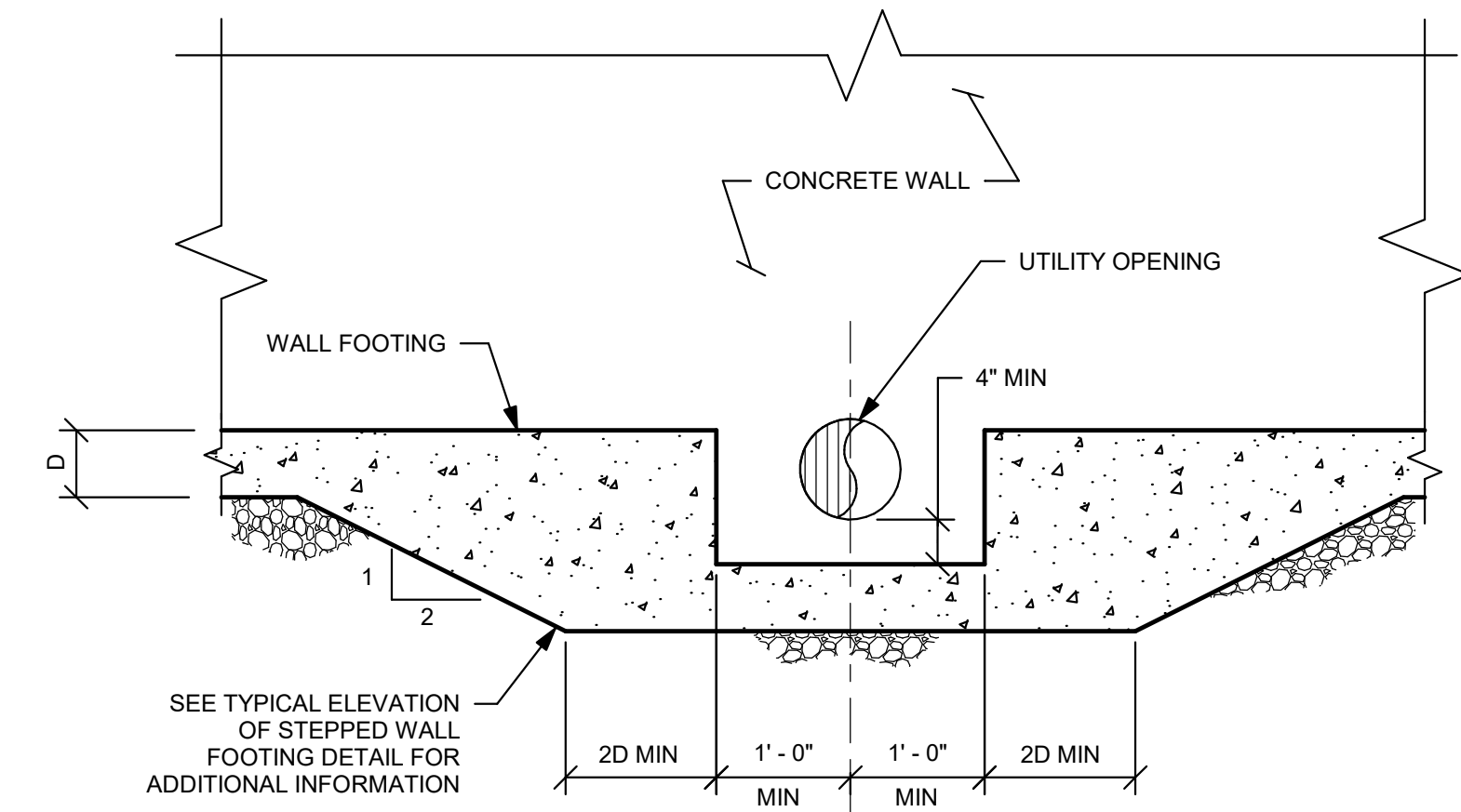
S0-0-1



TYPICAL ELEVATION OF STEPPED WALL FOOTING DETAIL

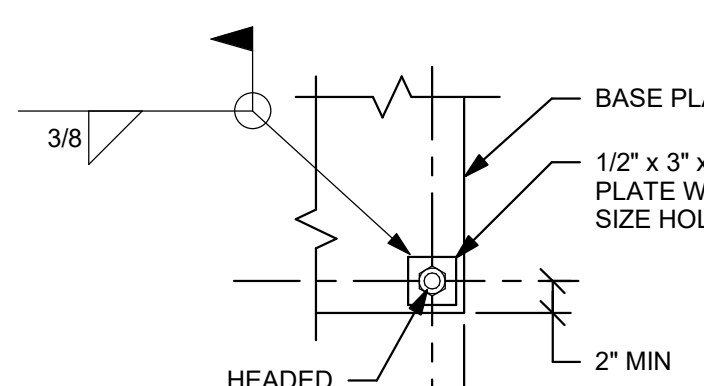


TYPICAL SLOPE BETWEEN FOOTINGS DETAIL

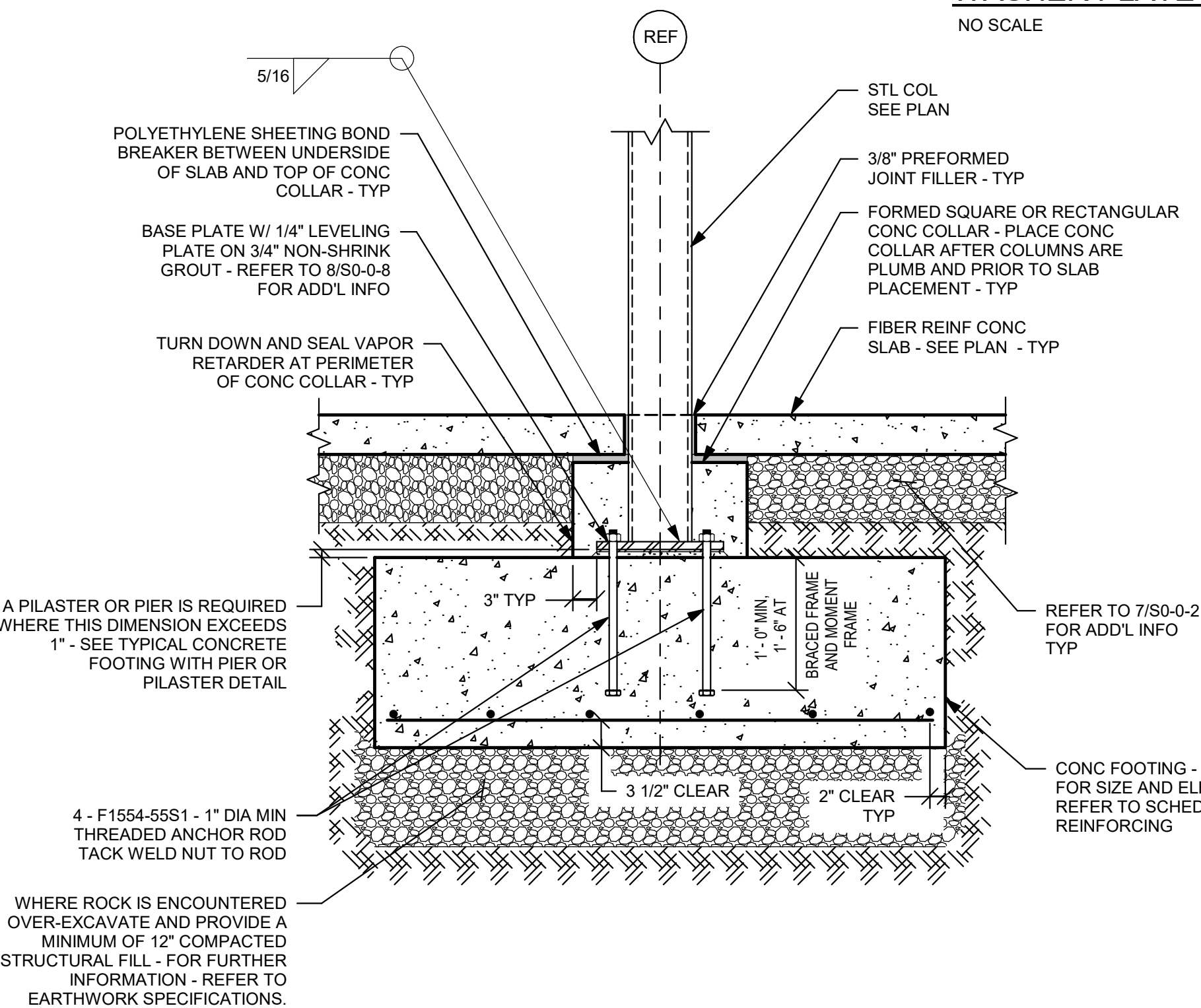


TYPICAL ELEVATION OF STEPPED WALL FOOTING AT UTILITY OPENING DETAIL

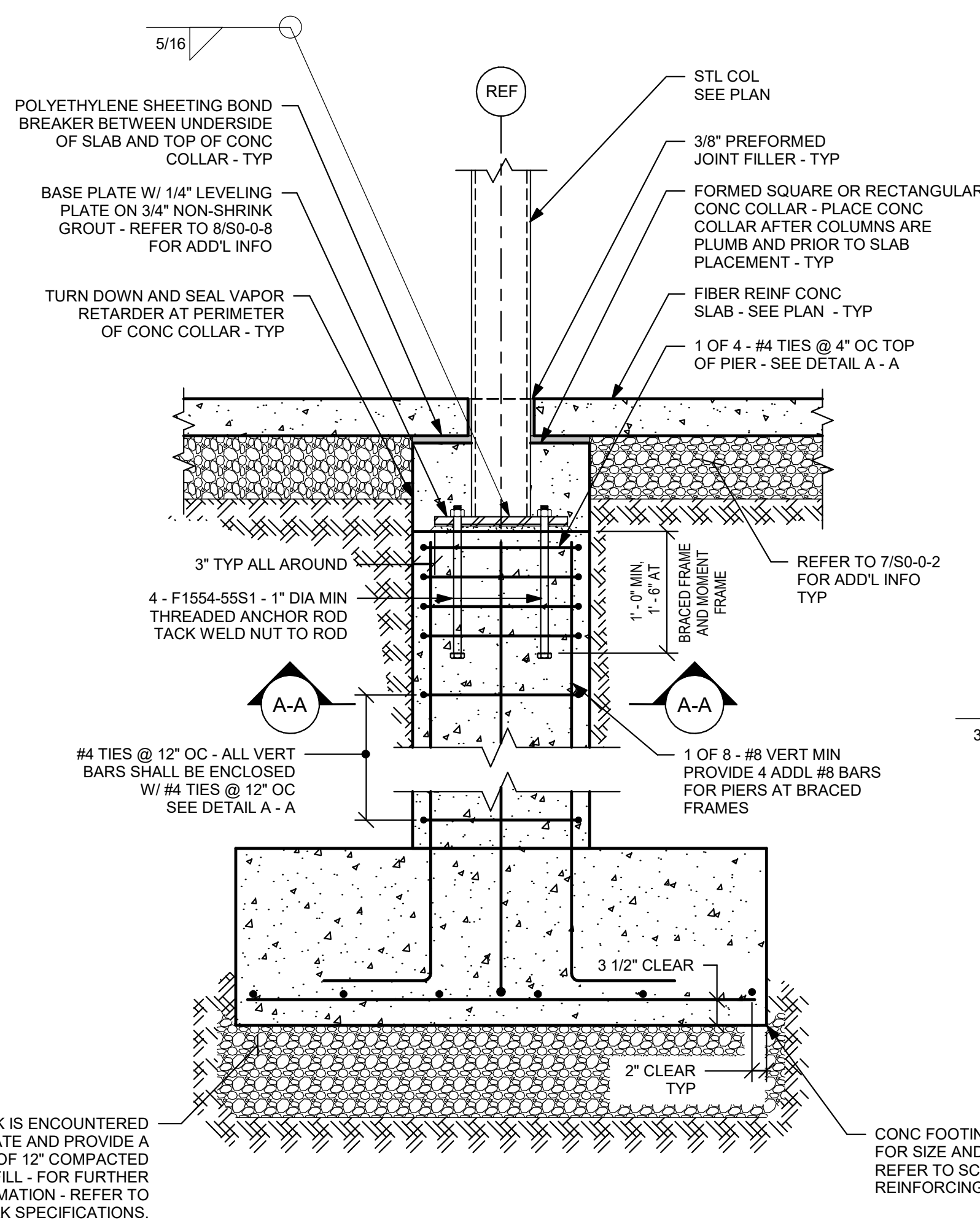
NOTE:
STEP FOOTING AS REQUIRED TO BE BELOW UTILITY OPENING.
COORDINATE WITH ALL CONTRACT DESIGN DISCIPLINES FOR
UTILITY OPENING SIZES, PLAN LOCATIONS AND ELEVATIONS.



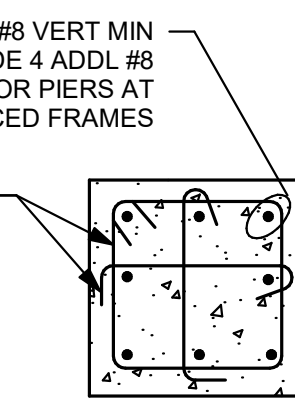
WASHER PLATE DETAIL



TYPICAL CONCRETE FOOTING WITHOUT PIER OR PILASTER DETAIL

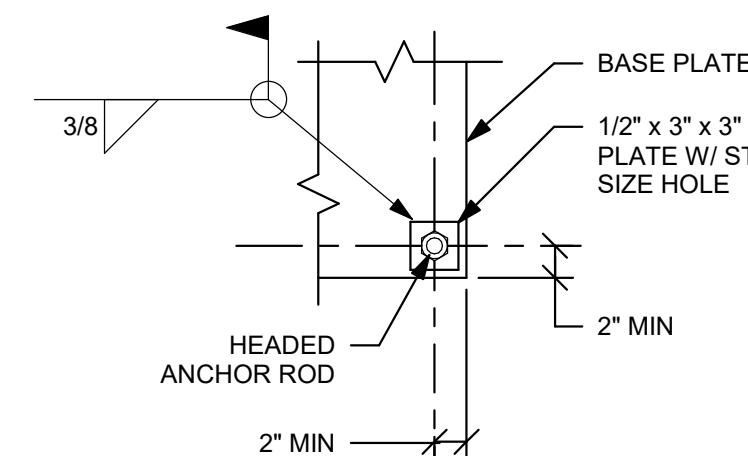


TYPICAL CONCRETE FOOTING WITH PIER OR PILASTER DETAIL

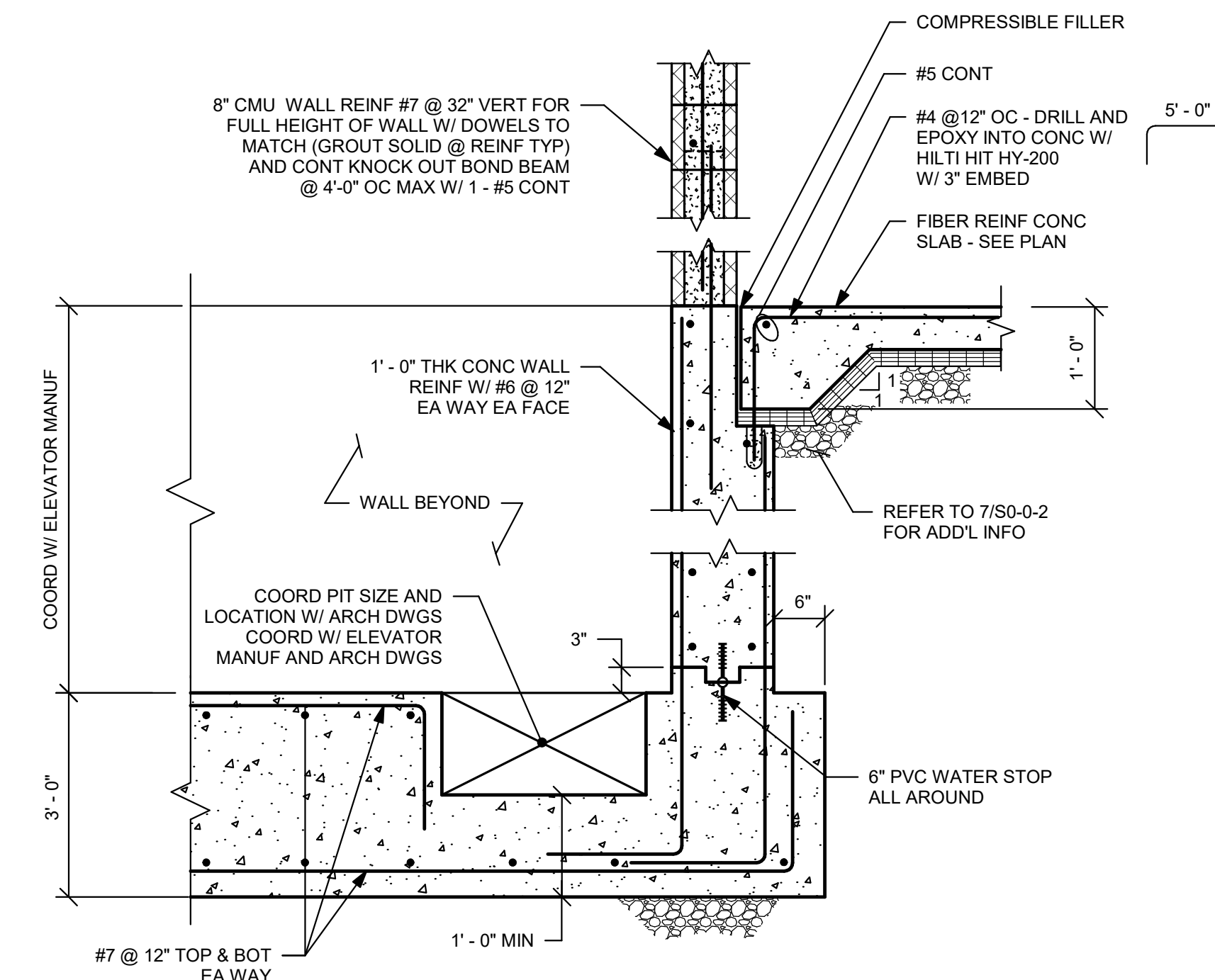


TYPICAL PIER DETAIL A - A

NOTE:
OFFSET PIER 3" FROM BASE PLATE ON ALL SIDES. NOTE: PIER DIMENSIONS AT BRACED FRAME LOCATIONS SHALL BE COORDINATED WITH BASE PLATE AND LEVELING PLATE SIZES.

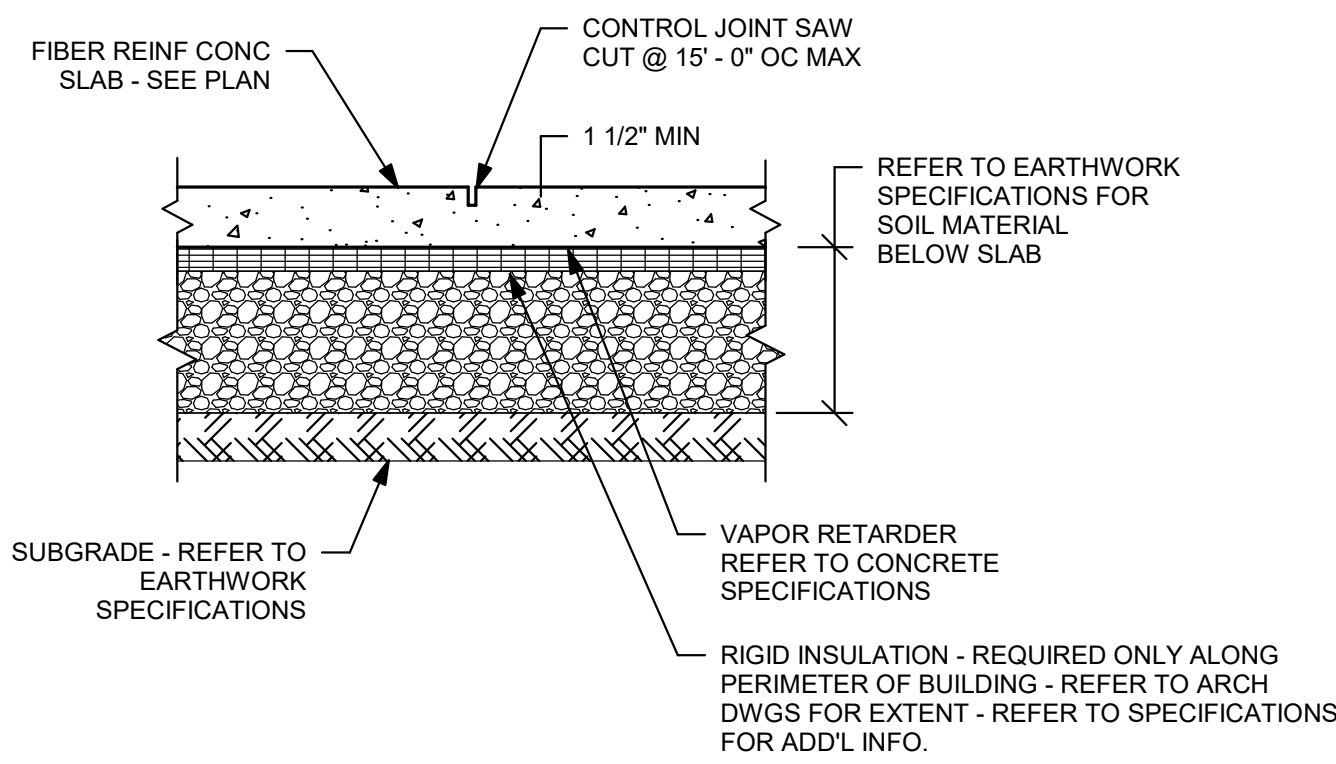


WASHER PLATE DETAIL



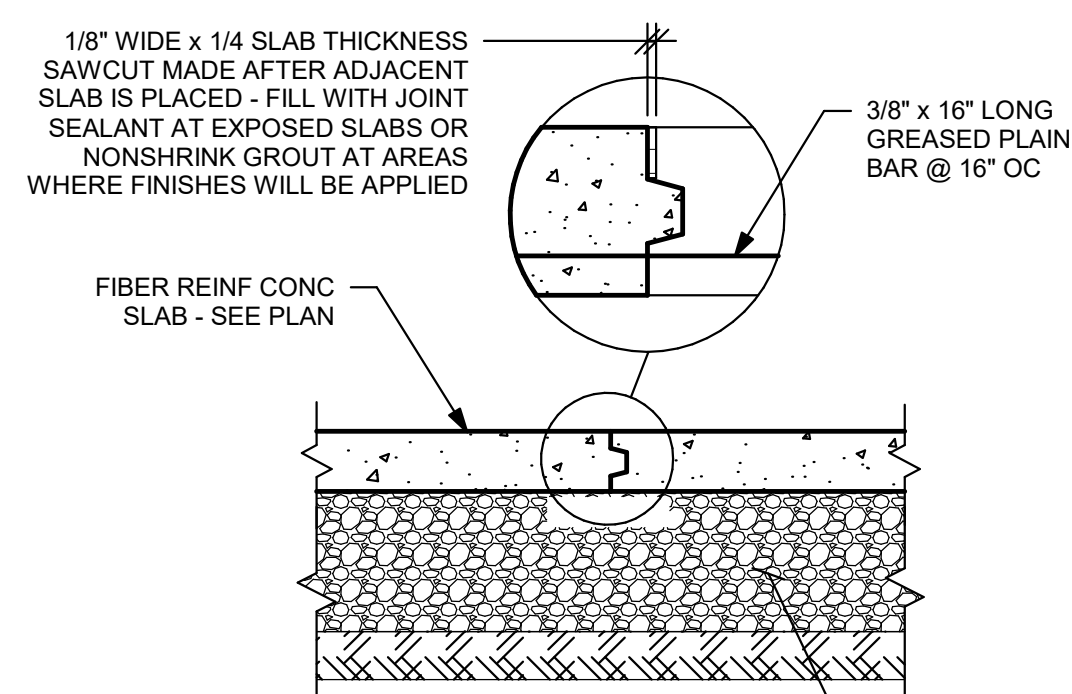
ELEVATOR PIT DETAIL

NOTES:
1) COORDINATE ELEVATOR PIT DIMENSIONS WITH ELEVATOR MANUFACTURER AND ARCHITECTURAL DRAWINGS.
2) SEE ARCH DWGS FOR SILL ANGLE AND COORD WITH ELEV MANUFACTURER.



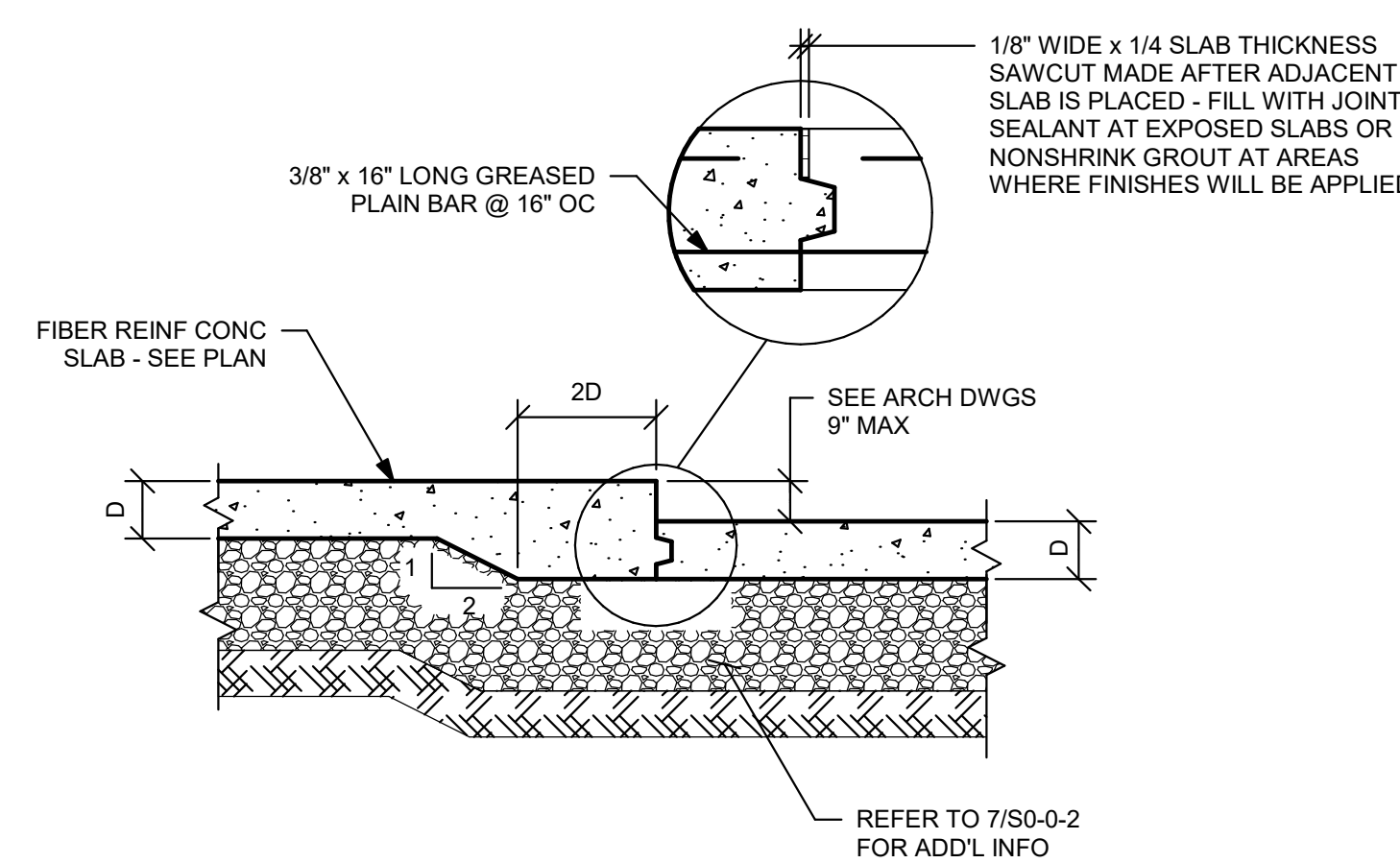
TYPICAL SLAB ON GRADE AND CONTROL JOINT DETAIL

NOTES:
1) SUBMIT A PLAN SHOWING PROPOSED LOCATIONS OF ALL THE CONTROL JOINTS AND CONSTRUCTION JOINTS FOR REVIEW BY THE ENGINEER PRIOR TO PLACEMENT OF CONCRETE FOR THE SLAB. CONTROL JOINTS SHALL TERMINATE AT SLAB EDGE OR CONSTRUCTION JOINT.
2) PROVIDE SUPPORT FOR WWR AT 3' - 0" ON CENTER MAXIMUM, EACH WAY.



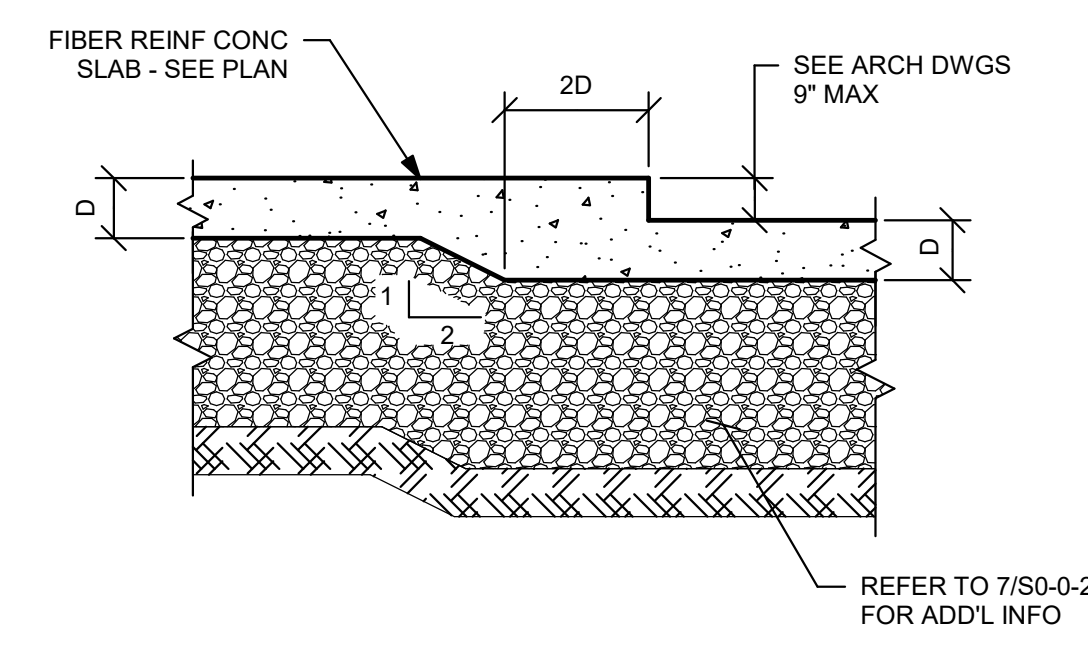
TYPICAL SLAB ON GRADE CONSTRUCTION JOINT DETAIL

NOTE:
SUBMIT A PLAN SHOWING PROPOSED LOCATIONS OF ALL THE CONTROL JOINTS AND CONSTRUCTION JOINTS FOR REVIEW BY THE ENGINEER PRIOR TO PLACEMENT OF CONCRETE FOR THE SLAB.



TYPICAL DEPRESSED SLAB ON GRADE CONSTRUCTION JOINT DETAIL

NOTE:
SUBMIT A PLAN SHOWING PROPOSED LOCATIONS OF ALL THE CONTROL JOINTS AND CONSTRUCTION JOINTS FOR REVIEW BY THE ENGINEER PRIOR TO PLACEMENT OF CONCRETE FOR THE SLAB.



TYPICAL DEPRESSED SLAB ON GRADE DETAIL

DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

260 Charles Street
Studio 300
Waltham, MA
02453

Planning | Architecture | Interior Design
Tel: 617.954.1700
www.dra.com

**NORTHEAST
METRO TECH**

100 Hemlock Rd.
Wakefield, MA 01880

EDG

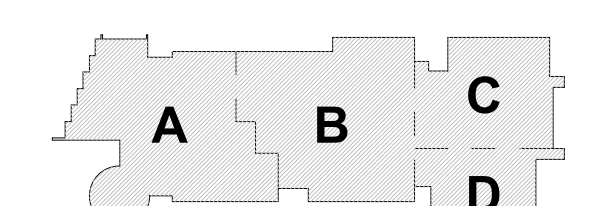
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

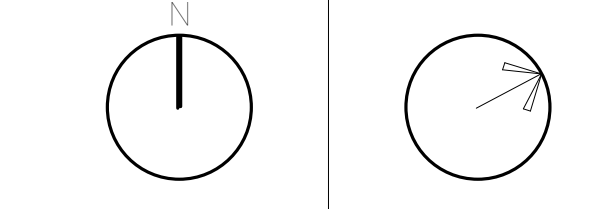
MSBA 90% CD
SUBMISSION

MAY 12, 2023



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



**TYPICAL
DETAILS**

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S0-0-2



NOTE "A"
COORDINATE WITH ARCHITECTURAL
AND MECHANICAL DRAWING FOR
TRENCH LOCATION AND EXTENTS.



NOTE:
FOR SIZE OF PADS AND LOCATIONS
SEE MECHANICAL AND ELECTRICAL DRAWINGS



NOTES

- 1.) REFER TO ARCHITECTURAL AND PLUMBING DRAWINGS FOR LOCATION AND ADDITIONAL INFORMATION.
- 2.) REFER TO PLUMBING DRAWINGS FOR PIT DIMENSIONS.
- 3.) COORDINATE COVER GRATING WITH METAL FABRICATIONS AND ARCHITECTURAL DRAWINGS.



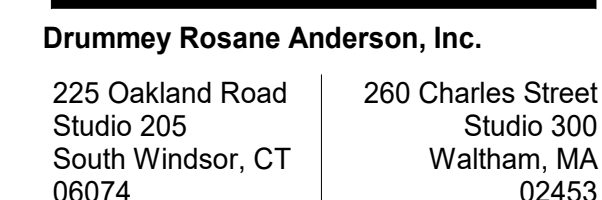
NOTE:
BACKFILL BOTH SIDES OF WALL SIMULTANEOUSLY TO
ELEVATION SHOWN - MAXIMUM OF 1' - 0" DIFFERENCE
IN ELEVATION OF BACKFILL.

NOTES:

- 1) FOR TOP OF WALL ELEVATIONS, GRADES AND FINISHES, FOOTING DRAINS, SEE ARCHITECTURAL, CIVIL AND SITE DRAWINGS.
- 2) ALL REINFORCING TO BE ASTM GRADE 60.
- 3) ALL CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI UNLESS NOTED OTHERWISE.
- 4) REFER TO SPECIFICATION SECTION 03300 FOR CONCRETE REQUIREMENTS.
- 5) REFER TO THE FOLLOWING TYPICAL DETAILS FOR ADDITIONAL REQUIREMENTS:
 - A. TYPICAL ELEVATION OF STEPPED WALL FOOTING DETAIL.
 - B. TYPICAL SLOPE BETWEEN FOOTINGS DETAIL.
 - C. TYPICAL ELEVATION OF STEPPED WALL FOOTING AT UTILITY OPENING DETAIL.
 - D. TYPICAL PLAN OF HORIZONTAL REINFORCING OF CONCRETE WALLS DETAIL.
 - E. MINIMUM SLOPE AND EMBEDMENT LENGTH SCHEDULE
- 6) WEEP HOLES SHALL BE 4" DIAMETER, GRAY, SCHEDULE 40 P.V.C. PIPE, ALIGN WEEP HOLES WITH VERTICAL REGLETS.
- 7) REFER TO LANDSCAPE DRAWINGS FOR FENCE/RAILING SLEEVES AND CONNECTION DETAILS AS APPLICABLE.
- 8) PLACE WALL WITH VERTICAL CONSTRUCTION JOINTS AT 30' - 0" OR MAX PER TYPICAL DETAIL 10 ON DRAWING S.O.3.



NOTE:
SIMILAR AT EXTERIOR COLUMNS.



Planning | Architecture | Interior Design
Tel: 617.954.1700
www.draws.com

**NORTHEAST
METRO TECH**

100 Hemlock Rd,
Wakefield, MA 01880



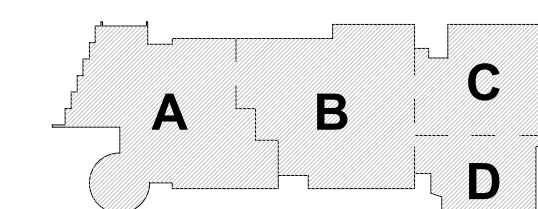
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023



KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

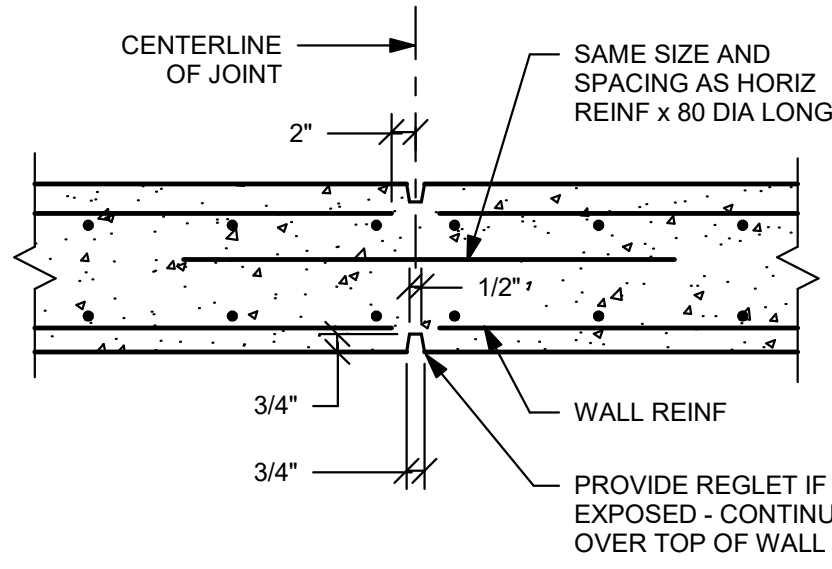
TYPICAL DETAILS

Scale: As indicated

Code:	As indicated
1111	0000

Job No.: 20202

S0-0-3

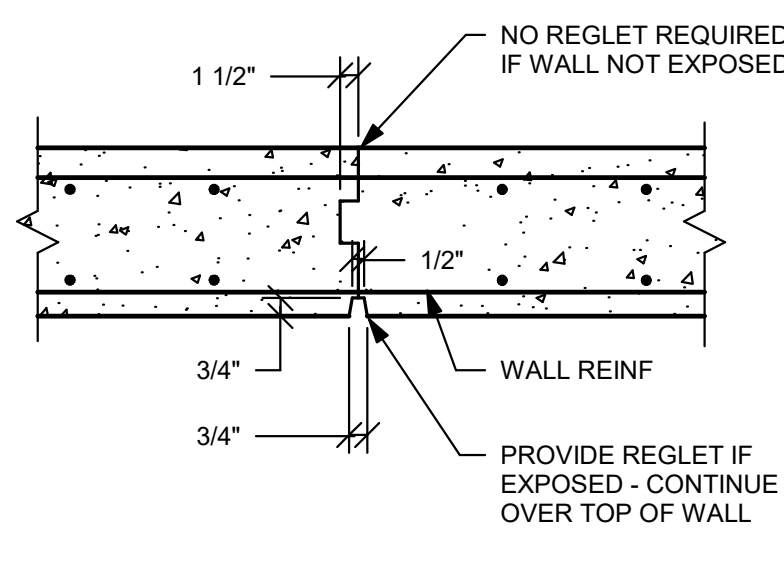


TYPICAL CONCRETE WALL CONTROL JOINT DETAIL

- NOTES:
- 1) SPACE AT 30' - 0" CENTER TO CENTER MAX.
 - 2) A CONSTRUCTION JOINT MAY BE SUBSTITUTED FOR A CONTROL JOINT, SEE CONSTRUCTION JOINT DETAIL.

1

NO SCALE

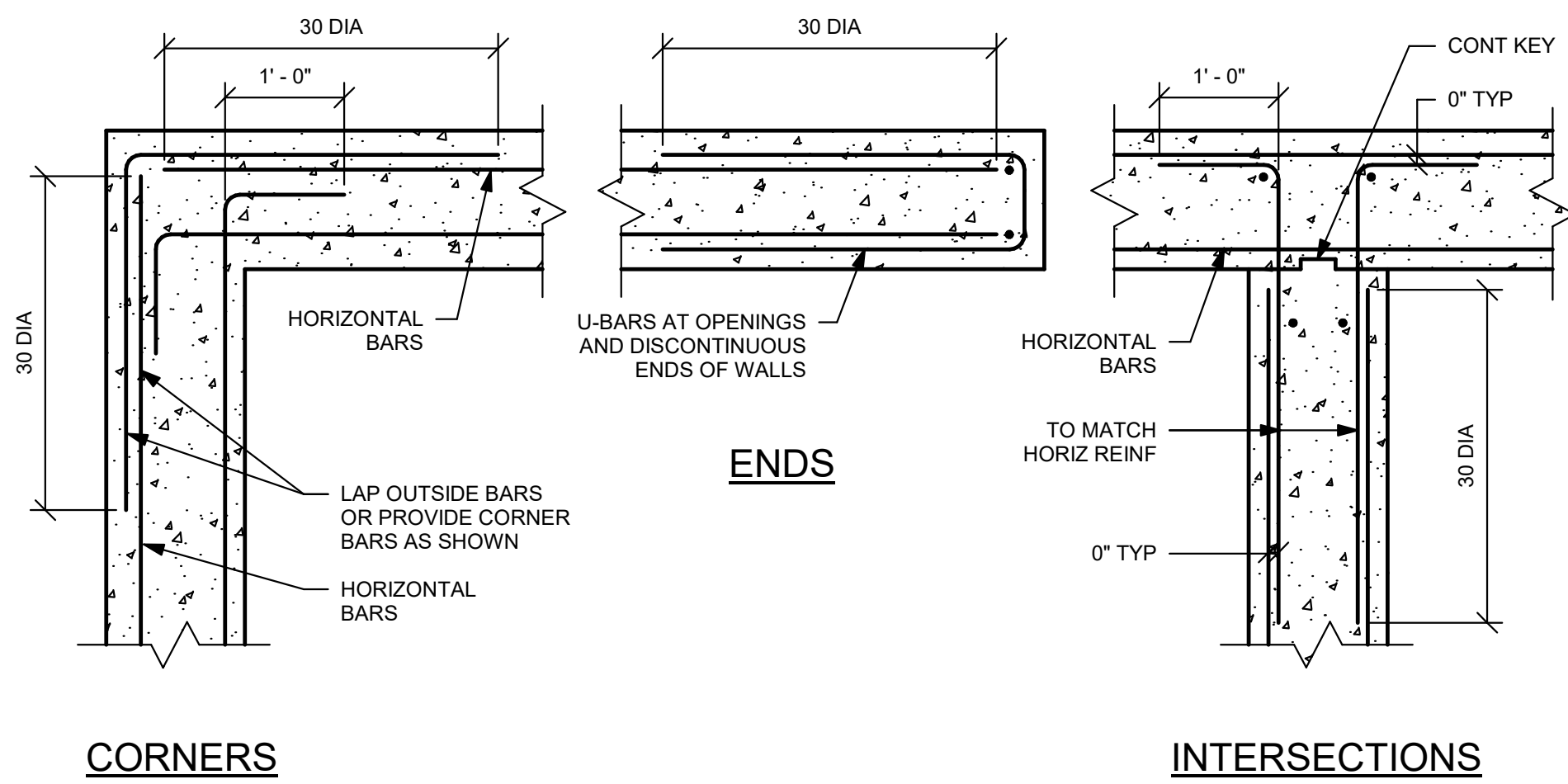


TYPICAL CONCRETE WALL CONSTRUCTION JOINT DETAIL

- NOTE:
SPACE AT 60' - 0" CENTER TO CENTER MAX.

2

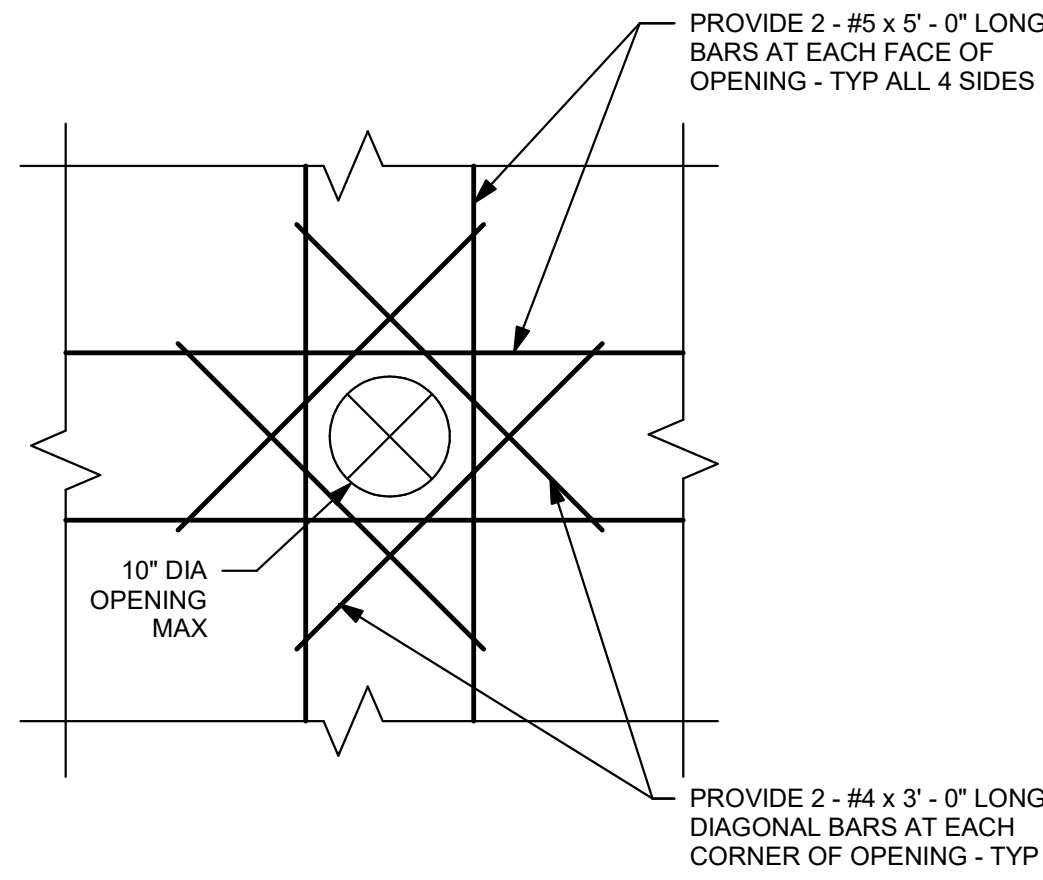
NO SCALE



TYPICAL PLAN OF HORIZONTAL REINFORCING OF CONCRETE WALLS DETAIL

3

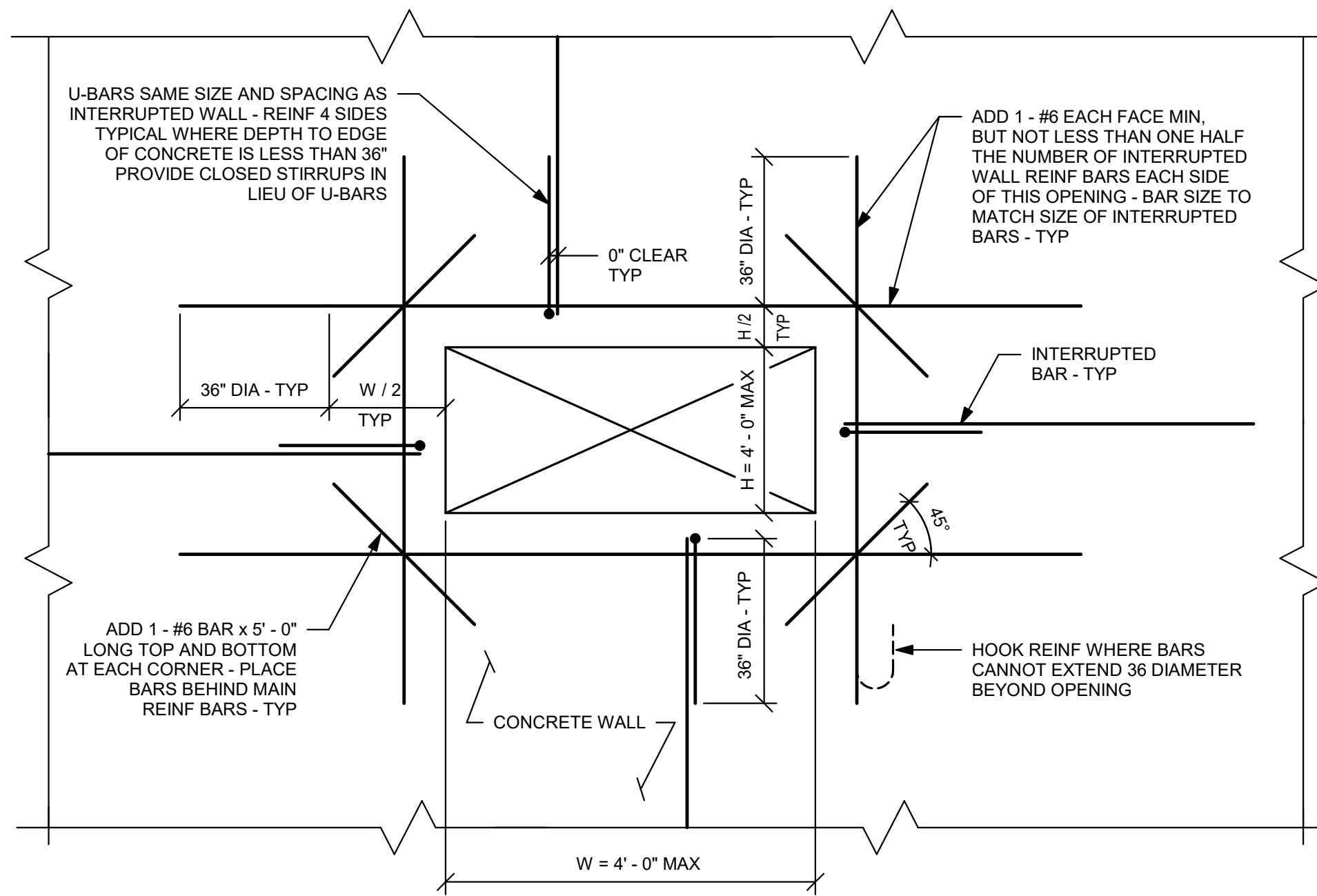
NO SCALE



- NOTE:
THE SLEEVE SHALL NOT INTERRUPT OR CUT THROUGH THE VERTICAL REINFORCING STEEL AND SHALL NOT BE PLACED IN COLUMN PILES OR PLASTERS.

4

NO SCALE



TYPICAL REINFORCEMENT AT OPENINGS IN REINFORCED CONCRETE WALLS DETAIL

- NOTES:
- 1) FOR QUANTITY, LOCATION, AND SIZES REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS.
 - 2) TREAT EACH CONDUIT AS A SEPARATE OPENING.
 - 3) PROVIDE A MINIMUM OF 12" CLEAR CONCRETE BETWEEN TOP OF PENETRATION AND TOP OF WALL.

5

NO SCALE

BAR SIZE	ℓd PER SPACING AND COVER CASE			
	CASE 1	CASE 2	CASE 1	CASE 2
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	19	15	28	22
#4	25	19	37	29
#5	31	24	47	36
#6	37	29	56	43
#7	44	34	67	51
#8	51	40	81	61
#9	58	47	96	71
#10	65	54	111	81
#11	72	61	126	91
#12	79	68	141	101
#13	86	75	156	111
#14	93	82	171	121
#15	100	89	186	131
#16	107	96	201	141
#17	114	103	216	151
#18	121	110	231	161

TENSION DEVELOPMENT LENGTHS, ℓd (INCHES)
FOR GRADE 60 UNCOATED BARS
fc = 4500 psi; NORMAL-WEIGHT CONCRETE
BASED ON ACI 12.2.2

BAR SIZE	LAP CLASS	LAP LENGTH PER SPACING AND COVER CASE			
		CASE 1	CASE 2	CASE 1	CASE 2
		TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	B	24	19	36	28
#4	B	32	25	48	37
#5	B	40	31	60	47
#6	B	48	37	72	56
#7	B	56	44	84	65
#8	B	64	51	96	76
#9	B	72	58	108	87
#10	B	80	65	120	98
#11	B	88	72	132	109
#12	B	96	79	144	120
#13	B	104	86	156	131
#14	B	112	93	168	142
#15	B	120	100	180	153
#16	B	128	107	192	164
#17	B	136	114	204	175
#18	B	144	121	216	186

TENSION LAP SPLICING LENGTHS, ℓs (INCHES)
FOR GRADE 60 UNCOATED BARS
fc = 4500 psi; NORMAL-WEIGHT CONCRETE
BASED ON ACI 12.2.2

BAR SIZE	ℓd PER SPACING AND COVER CASE			
	CASE 1	CASE 2	CASE 1	CASE 2
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	17	13	25	19
#4	22	17	33	26
#5	28	22	42	32
#6	33	26	50	38
#7	40	32	60	46
#8	46	38	72	55
#9	52	44	84	64
#10	58	50	96	73
#11	64	56	108	82
#12	70	62	120	91
#13	76	68	132	100
#14	82	74	144	109
#15	88	80	156	118
#16	94	86	168	127
#17	100	92	180	136
#18	106	98	192	145

TENSION DEVELOPMENT LENGTHS, ℓd (INCHES)
FOR GRADE 60 UNCOATED BARS
fc = 4500 psi; NORMAL-WEIGHT CONCRETE
BASED ON ACI 12.2.2

BAR SIZE	LAP CLASS	LAP LENGTH PER SPACING AND COVER CASE			
		CASE 1	CASE 2	CASE 1	CASE 2
		TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	B	22	17	33	25
#4	B	29	22	43	33
#5	B	36	28	54	42
#6	B	43	33	65	50
#7	B	50	39	76	59
#8	B	57	46	87	68
#9	B	64	53	98	77
#10	B	71	60	109	86
#11	B	78	67	120	95
#12	B	85	74	131	104
#13	B	92	81	142	113
#14	B	99	88	153	122
#15	B	106	95	164	131
#16	B	113	102	175	140
#17	B	120	109	186	149
#18	B	127	116	197	158

TENSION LAP SPLICING LENGTHS, ℓs (INCHES)
FOR GRADE 60 UNCOATED BARS
fc = 4500 psi; NORMAL-WEIGHT CONCRETE
BASED ON ACI 12.2.2

NOTES:

- 1) TOP BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST IN THE MEMBER BELOW THE REINFORCEMENT. WALL REINFORCEMENT IS CLASSIFIED AS OTHER BARS.
- 2) FOR LIGHTWEIGHT AGGREGATE CONCRETE MULTIPLY THE VALUES ABOVE BY 1.3.

ABBREVIATIONS:

- db DENOTES NOMINAL BAR DIAMETER
> DENOTES GREATER THAN
≥ DENOTES EQUAL TO OR GREATER THAN
≠ DENOTES NOT
≤ DENOTES EQUAL TO OR LESS THAN

4,500 PSI NORMAL-WEIGHT CONCRETE

CASE 1: BEAMS AND COLUMNS: CONCRETE COVER ≥ db, C-C; BAR SPACING ≥ 2 db, AND WITH STIRRUPS OR TIES THROUGHOUT (db NOT LESS THAN THE CODE MINIMUM); OTHER MEMBERS: CONCRETE COVER ≥ db, AND C-C; BAR SPACING ≥ 3 db

CASE 2: BEAMS AND COLUMNS: CONCRETE COVER < db, AND C-C; BAR SPACING < 2 db, OTHER MEMBERS: CONCRETE COVER < db, OR C-C; BAR SPACING < 3 db

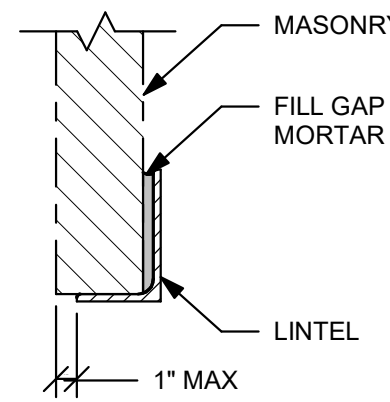
5,000 PSI NORMAL-WEIGHT CONCRETE

MINIMUM SPLICE AND EMBEDMENT LENGTH SCHEDULE

(UNLESS SHOWN OTHERWISE ON DRAWINGS)

NOTES:

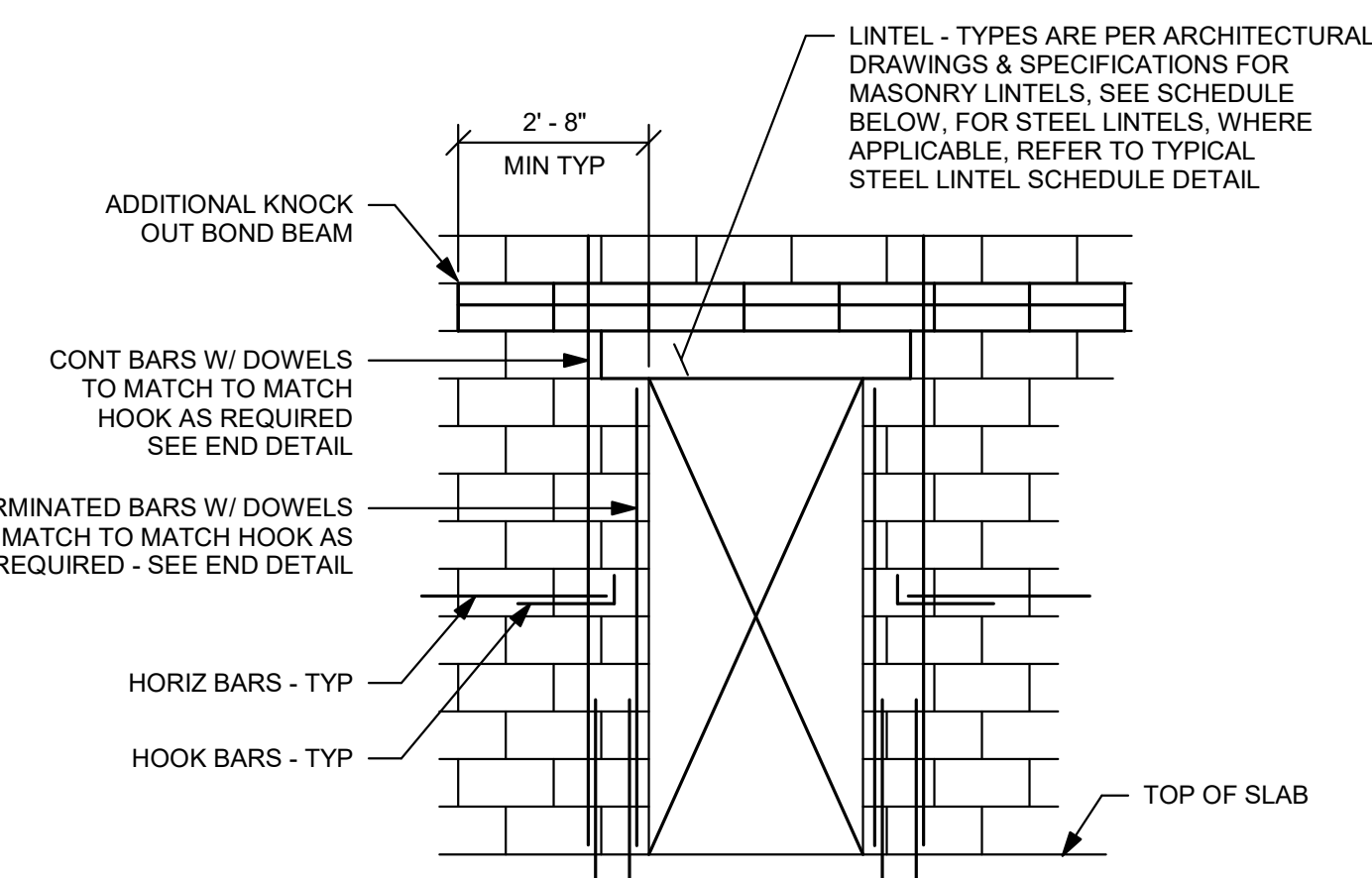
- 1) PROVIDE LINTELS OVER ALL MASONRY OPENINGS UNLESS OTHERWISE NOTED OR DETAILED.
- 2) PROVIDE ONE ANGLE FOR EACH 4" OF WALL THICKNESS. FOR 6" WALLS PROVIDE TEE, DOUBLE ANGLE OR BUILT-UP SECTION WITH PROPERTIES EQUAL TO OR GREATER THAN 1-1/2" TIMES ANGLE PROPERTIES FOR 4" WALL.
- 3) PROVIDE 8" OF BEARING EACH END OF ALL LINTELS.
- 4) SPAN LENGTH = CENTERLINE TO CENTERLINE OF BEARING.
- 5) ALL EXTERIOR LINTELS SHALL BE GALVANIZED. PROVIDE 1/4" THICK CLOSURE PLATE OVER AIR SPACE AT OPENINGS UNLESS NOTED OR DETAILED OTHERWISE ON ARCHITECTURAL DRAWINGS.
- 6) FOR CURVED LINTELS USE CHORD LENGTH IN CONJUNCTION WITH SCHEDULE ABOVE. PROVIDE HORIZONTAL ANGLES AT EACH END OF LINTEL FOR 8" OF BEARING. HORIZONTAL ANGLES SHALL MATCH LINTEL SIZE AND SHALL BE WELDED TO CURVED ANGLE WITH FULL PENETRATION WELD.
- 7) LOOSE LINTELS SHALL BE FURNISHED BY METAL FABRICATORS (SPECIFICATION 055000) AND INSTALLED BY UNIT MASONRY ASSEMBLIES (SPECIFICATION 042000).
- 8) LOOSE LINTELS ARE REQUIRED FOR ALL OPENINGS INCLUDING DOORS, WINDOWS, MECHANICAL DUCTS, PIPES ETC.
- 9) ALL THE LINTELS NOT ATTACHED TO STRUCTURAL STEEL ARE IN THE SCOPE OF THE METAL FABRICATOR CONTRACTOR (SPECIFICATION 055000). SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. ALL THE LINTELS WELDED TO STRUCTURAL STEEL ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND THE STRUCTURAL STEEL FABRICATOR.



TYPICAL SECTION SINGLE WYTHE MASONRY

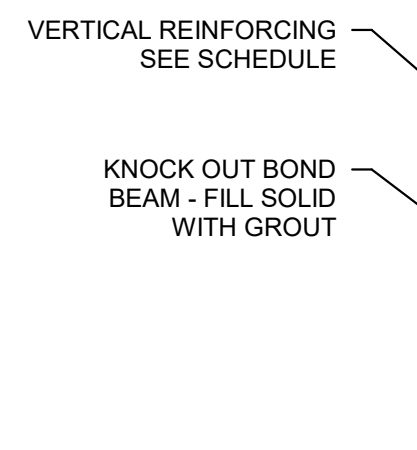
LINTEL SCHEDULE	
MASONRY OPENING	LINTEL SIZE
UP TO 4' - 6"	L 4" x 3-1/2" x 5/16" (4" LEG VERTICAL)
4' - 7" TO 6' - 0"	L 5" x 3-1/2" x 5/16" (5" LEG VERTICAL)
6' - 1" TO 8' - 0"	L 6" x 3-1/2" x 3/8" (6" LEG VERTICAL)
8' - 1" TO 10' - 0"	L 7" x 4" x 3/8" (7" LEG VERTICAL)

TYPICAL STEEL LINTEL SCHEDULE



TYPICAL DETAIL

CORNER DETAIL



BOND BEAM DETAIL

- NOTES:
- 1) SEE SCHEDULE FOR SPACING.
 - 2) PROVIDE REINFORCED BOND BEAM WITHIN 16" OF TOP OF WALL.
 - 3) PROVIDE REINFORCED BOND BEAM AT TOP AND BOTTOM OF ALL OPENINGS.

MASONRY LINTEL DETAIL AND SCHEDULE

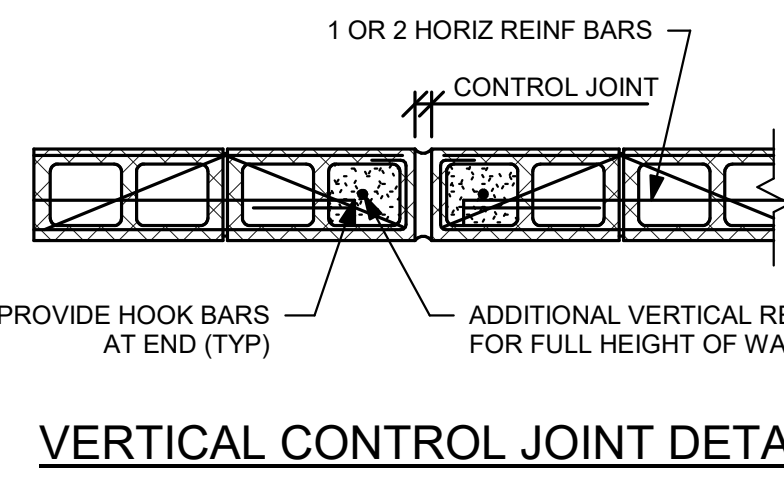
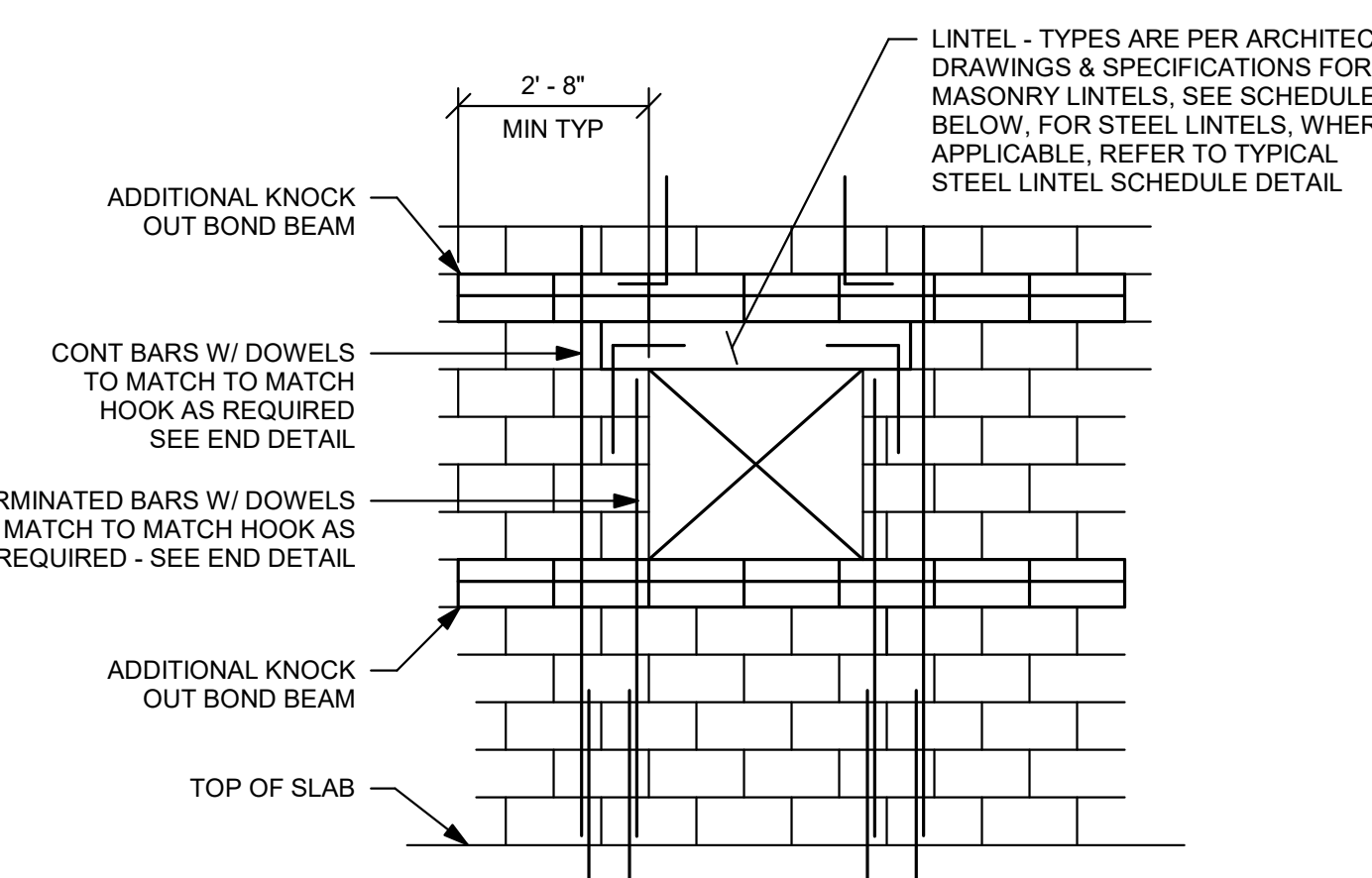
NOTE:
NO CONSTRUCTION JOINTS OR CONTROL JOINTS ARE PERMITTED WITHIN 3' - 0" OF EDGE OF OPENING.

MASONRY LINTEL SCHEDULE		
OPENING DIMS	8" OR 12" WIDE BEAM	REINFORCEMENT
0' - 0" - 4' - 0"	8" x 8" DEEP	2 - #5 CONT
4' - 0" - 8' - 0"	8" x 8" DEEP	2 - #5 CONT
8' - 0" - 12' - 0"	8" x 24" DEEP	2 - #5 CONT AND WIRE TRUSS TYPE - REINF AT JOINTS
0' - 0" - 4' - 0"	12" x 8" DEEP	2 - #5 CONT
4' - 0" - 8' - 0"	12" x 16" DEEP	2 - #5 CONT AND WIRE TRUSS TYPE - REINF AT JOINTS
8' - 0" - 12' - 0"	12" x 24" DEEP	2 - #5 TOP & BOT CONT AND WIRE TRUSS TYPE REINF AT JOINTS

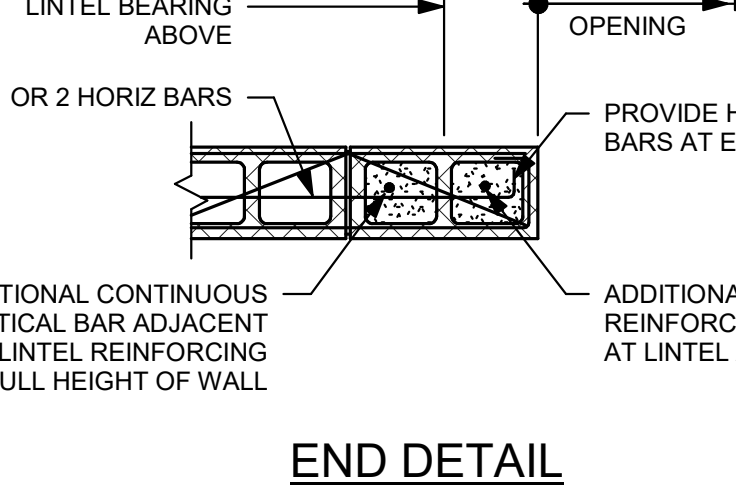
MINIMUM CONCRETE MASONRY WALL REINFORCING SCHEDULE			
WALL LOCATION	WALL THICKNESS	VERTICAL REINFORCING	HORIZONTAL REINFORCING
SHEAR WALLS AND LOADING BEARING WALLS SHOWN ON PLAN	8"	#1 @ 48"	1 - #5 IN BOND BEAM AT 48" ON CENTER
	12"	#6 @ 48"	2 - #5 IN BOND BEAM AT 48" ON CENTER
CLASS 'A' WALLS ALL EXTERIOR WALLS, STAIR WALLS, AND ELEVATOR SHAFT WALLS	8"	#6 @ 48"	1 - #5 IN BOND BEAM AT 48" ON CENTER
	12"	#7 @ 48"	1 - #5 IN BOND BEAM AT 48" ON CENTER
CLASS 'B' WALLS ALL INTERIOR CMU WALLS GREATER THAN 16' - 0" IN HEIGHT	ALL SIZES	#4 @ 48"	2 - #5 IN BOND BEAM AT 48" ON CENTER
	ALL SIZES	#4 @ 48"	1 - #4 IN BOND BEAM AT 48" ON CENTER
CLASS 'C' WALLS ALL INTERIOR CMU WALLS 16' - 0" IN HEIGHT OR LESS	ALL SIZES	#4 @ 48"	1 - #4 IN BOND BEAM AT 48" ON CENTER
	ALL SIZES	#4 @ 48"	1 - #4 IN BOND BEAM AT 48" ON CENTER

- NOTES:
- 1) REFER TO PLANS, SECTIONS, AND SPECIFICATIONS FOR REINFORCING REQUIREMENTS MORE STRINGENT THAN IN THE SCHEDULE.
 - 2) PROVIDE REINFORCED BOND BEAM WITHIN 16" OF TOP OF WALL.
 - 3) ALL VERTICAL REINFORCING TO BE IN SOLIDLY GROUTED CELLS. AND PROVIDE 48 DIAMETER LAP AT ALL BAR SPLICES TYPICAL.
 - 4) PROVIDE 9 GA HORIZONTAL JOINT REINFORCING AT 16" OC FOR ALL WALLS.

NOTE:
ALL REINFORCING WITHIN THE MASONRY WALL SHALL BE FURNISHED BY THE MASONRY SUB CONTRACTOR (SPECIFICATION 042000). EXCEPT BONES EMBEDDED IN CONCRETE FOUNDATION ARE THE RESPONSIBILITY TO THE GENERAL CONTRACTOR AND THE CONCRETE SUB-CONTRACTOR



VERTICAL CONTROL JOINT DETAIL



END DETAIL

- NOTES:
- 1) PROVIDE 1 - CONTINUOUS BAR AT MASONRY OPENING 4' - 0" OR LESS IN WIDTH AT STRUTTED ENDS.
 - 2) PROVIDE 2 - CONTINUOUS BARS AT MASONRY OPENING 4' - 0" TO 8' - 0" IN WIDTH.

TYPICAL REINFORCING AT CMU WALLS WITH OPENINGS ELEVATION

8

NO SCALE

DRA

Drumsey Rosane Anderson, Inc.
225 Oak Road
Studio 205
South Windsor, CT
06074

Planning | Architecture | Interior Design
Tel: 617.854.1702
www.dra.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023

A B C D

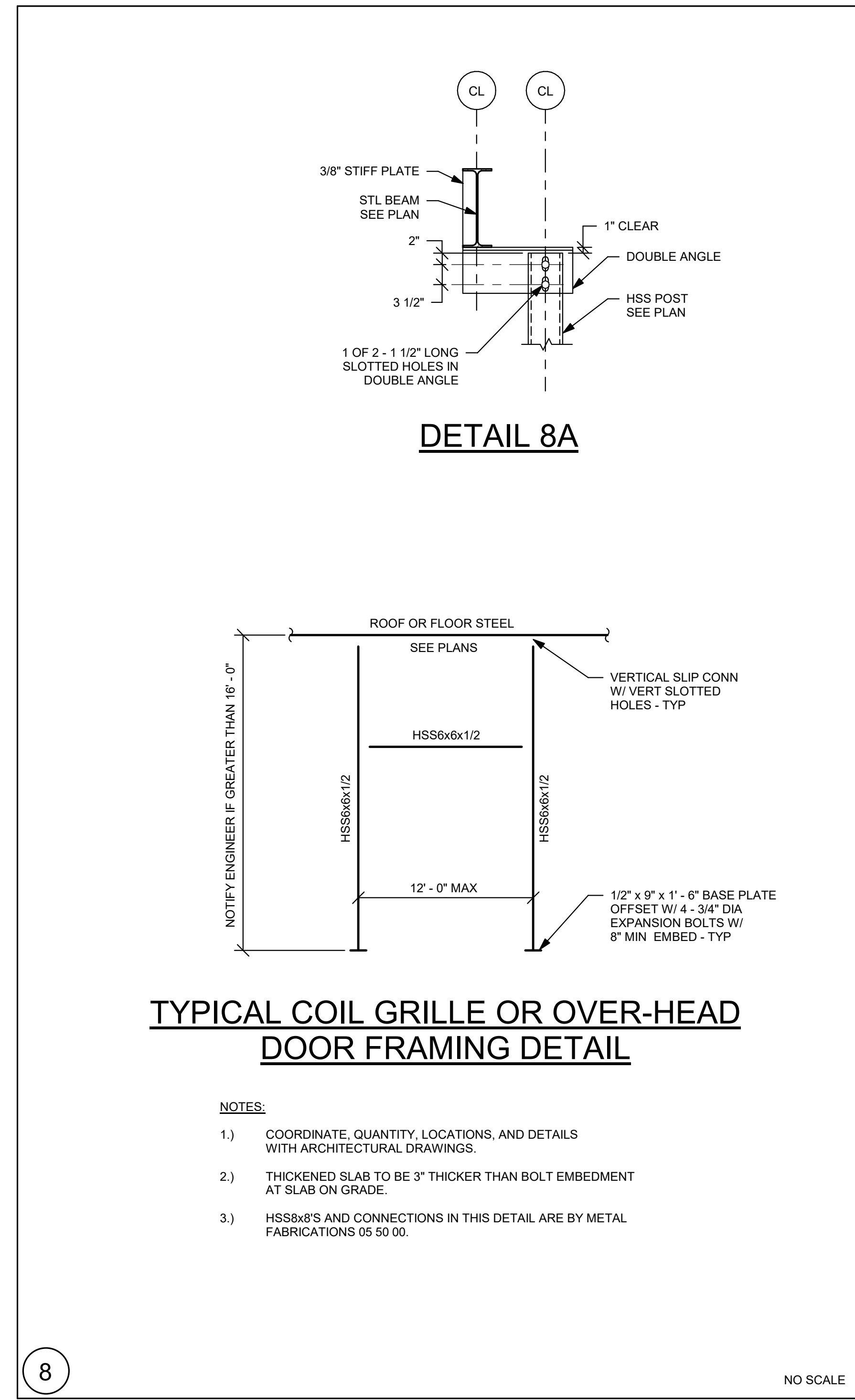
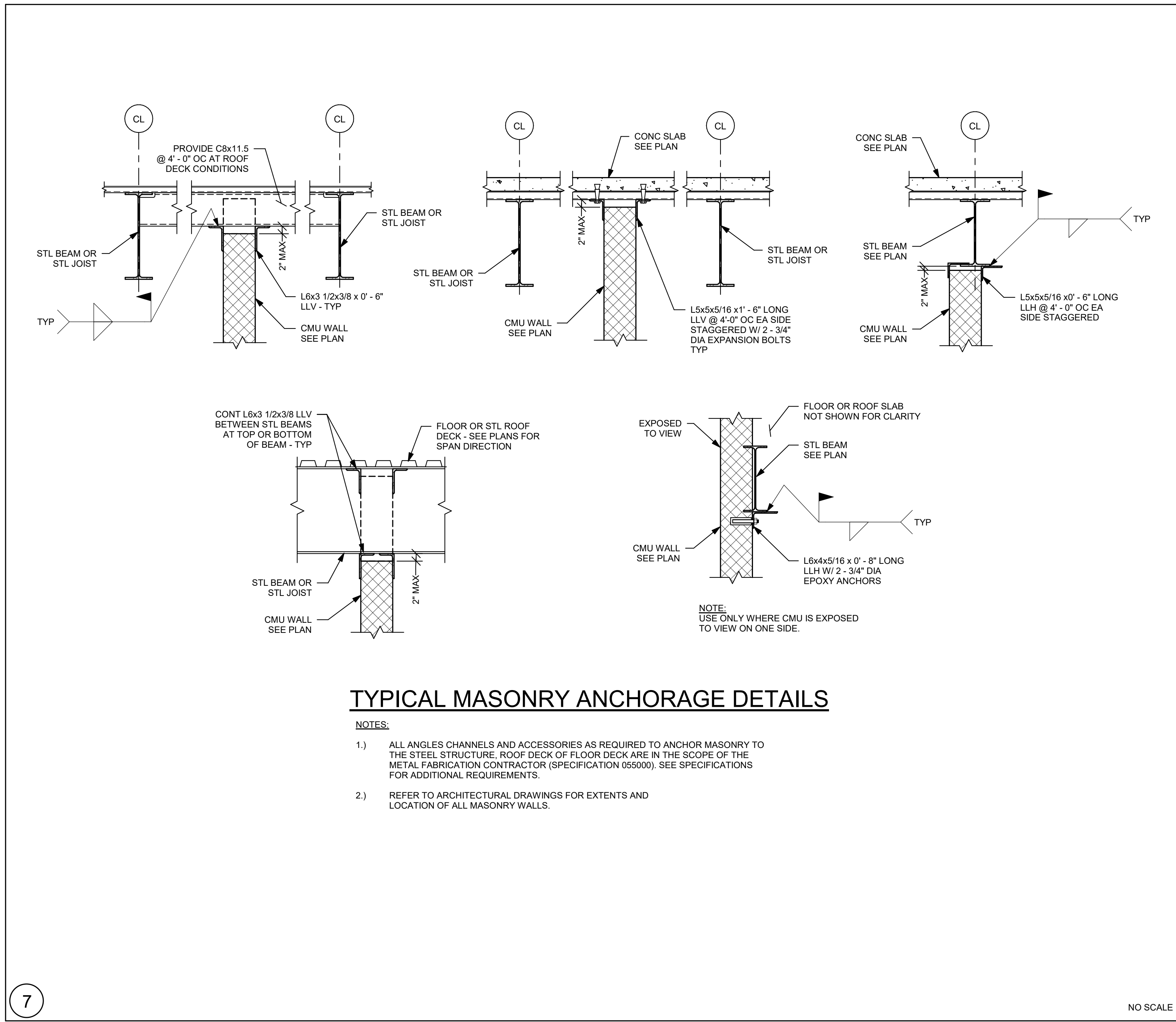
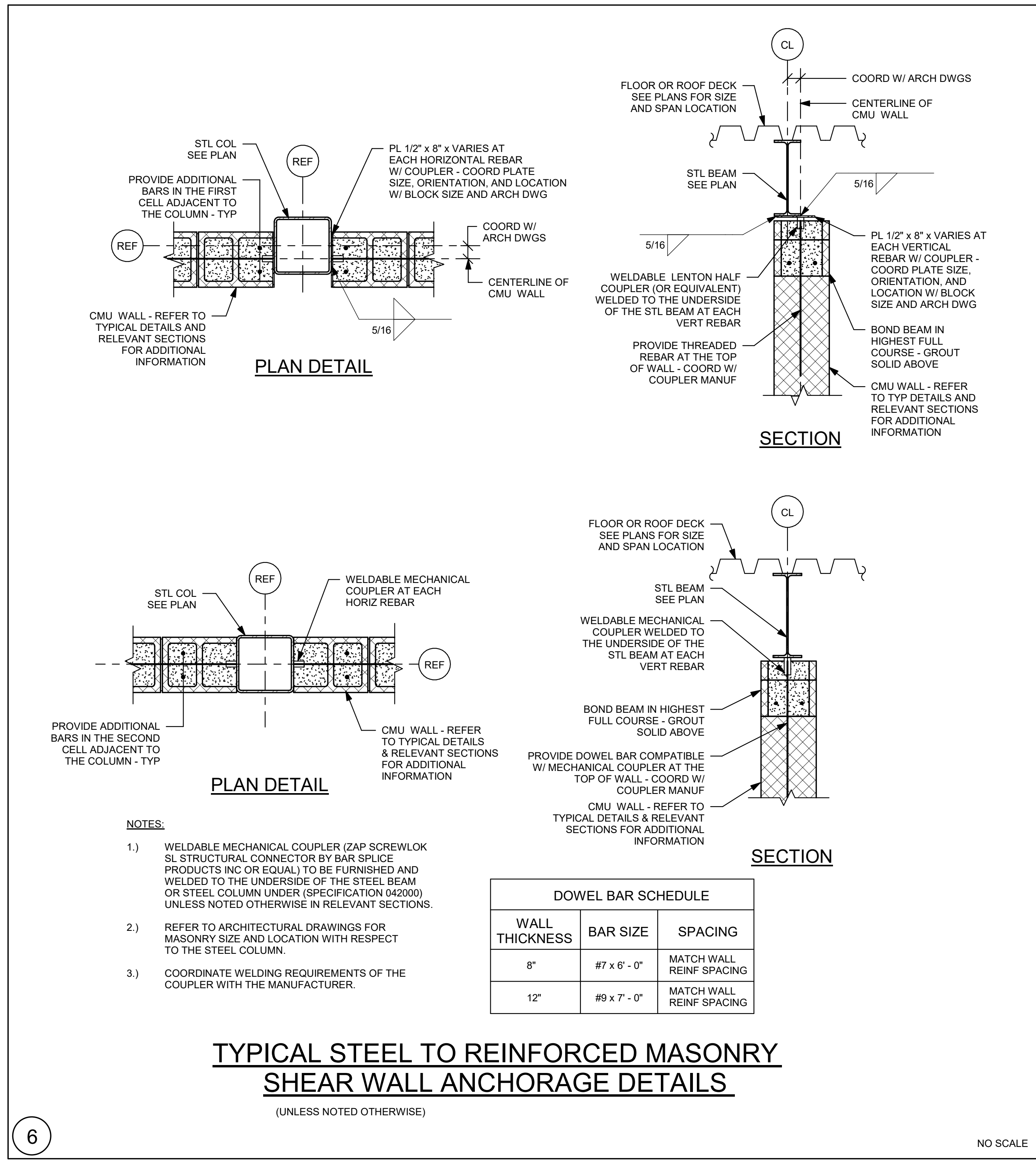
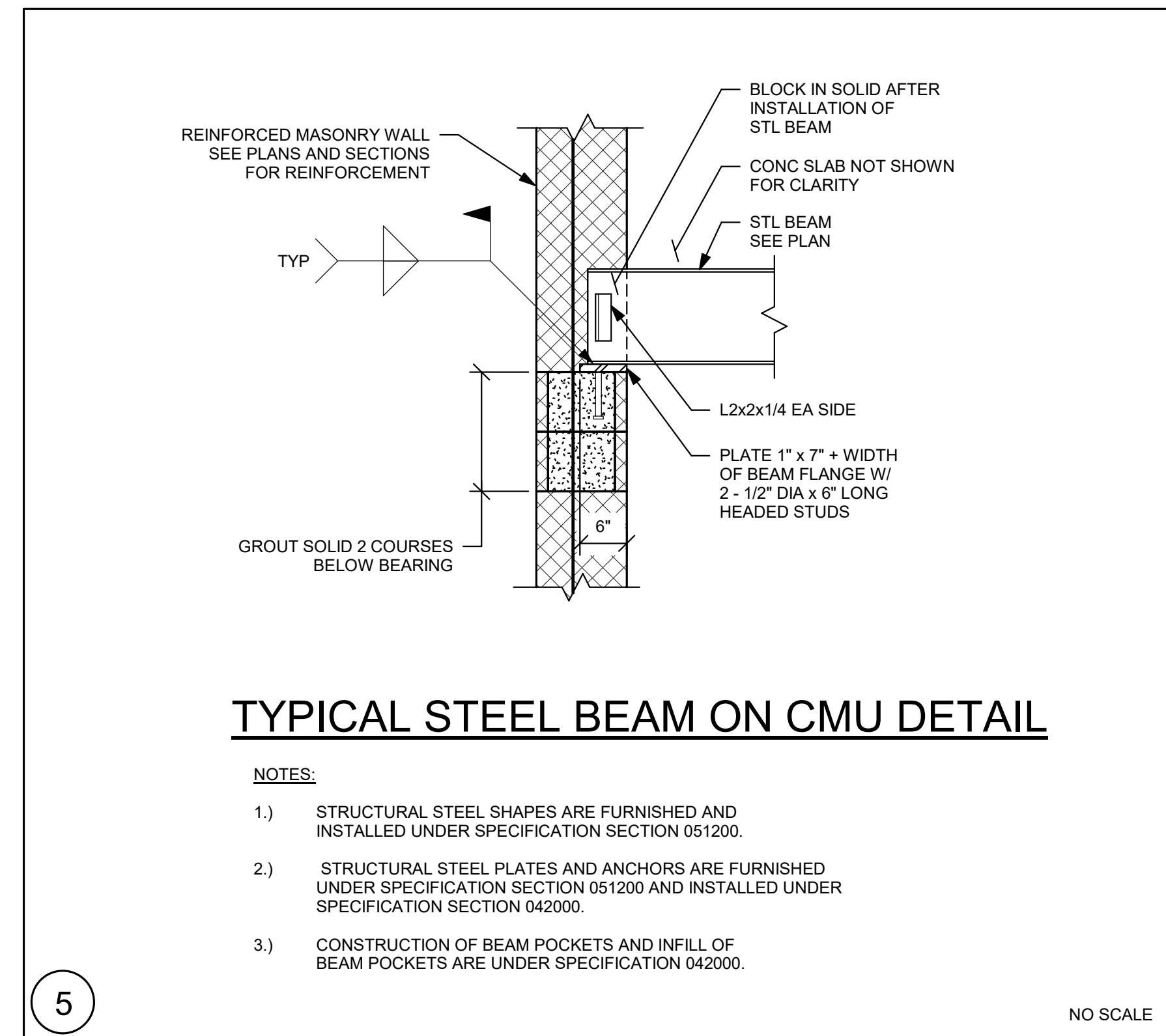
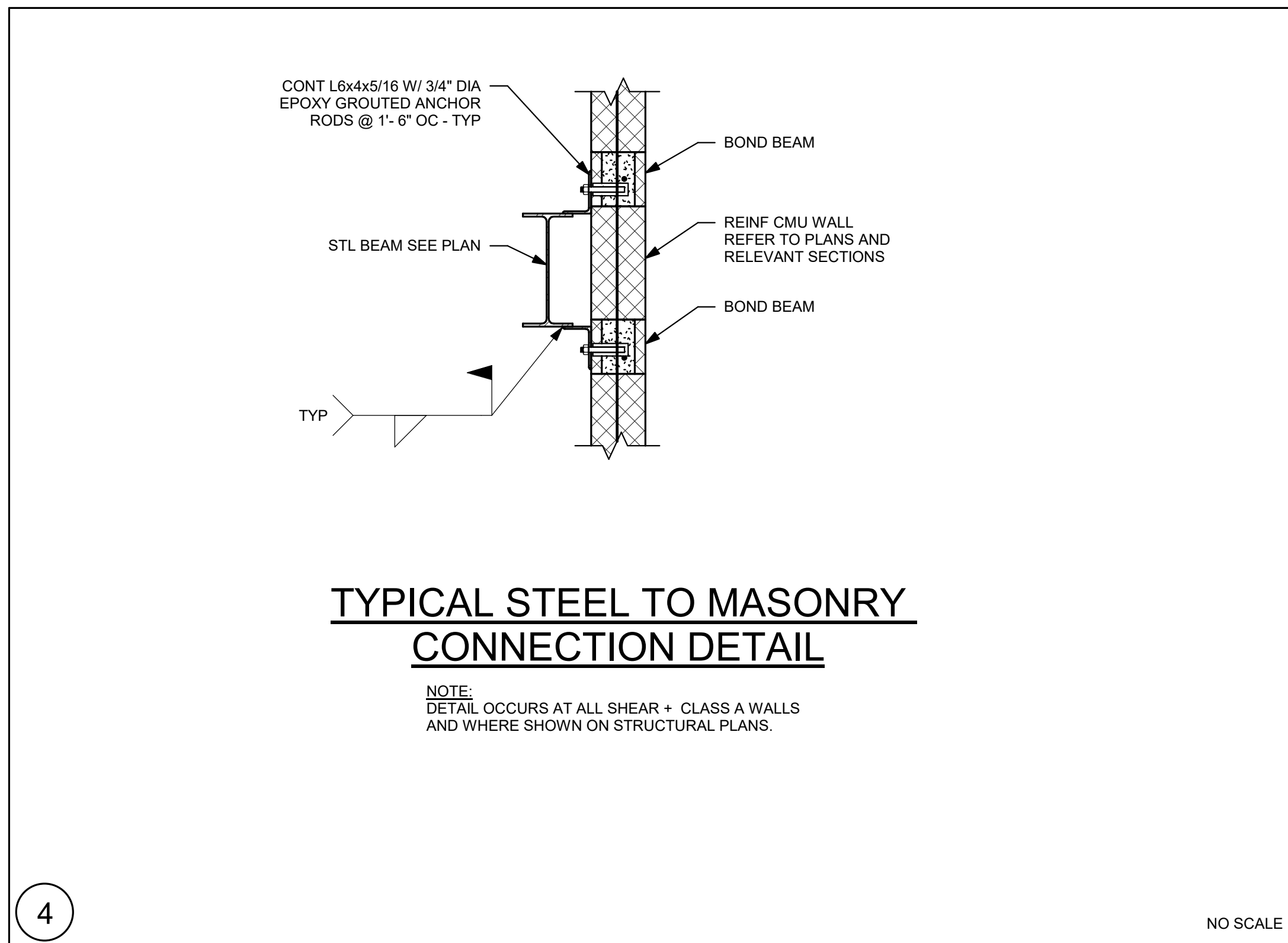
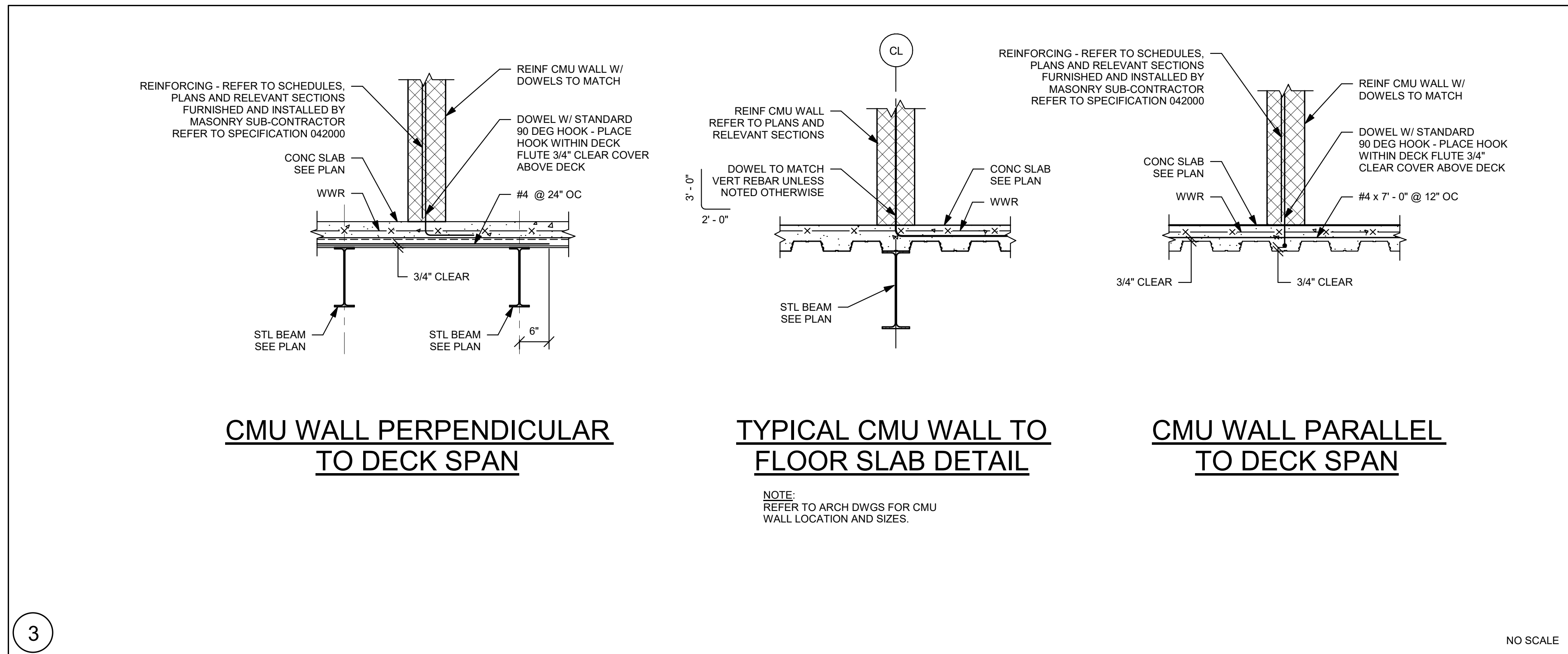
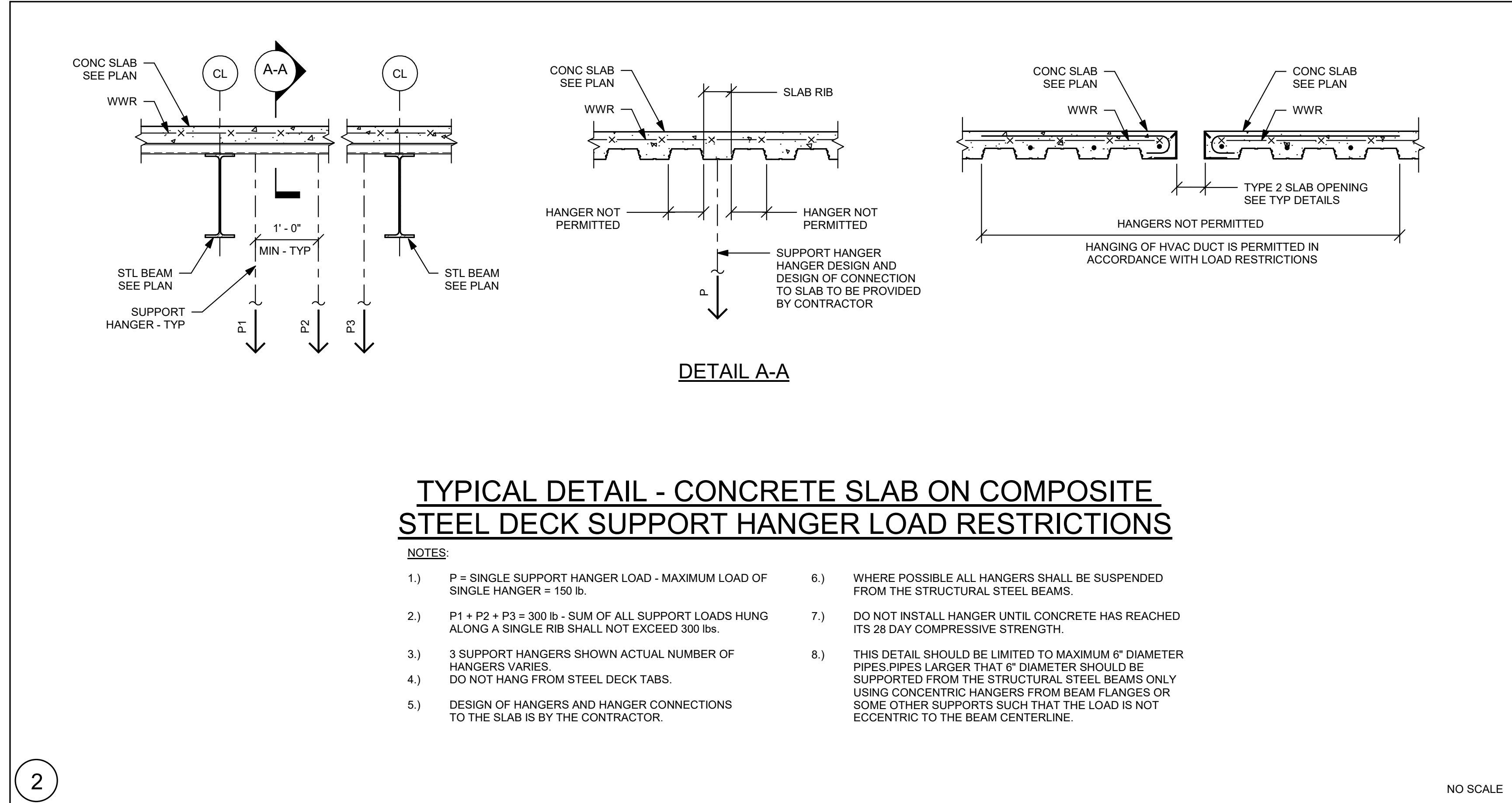
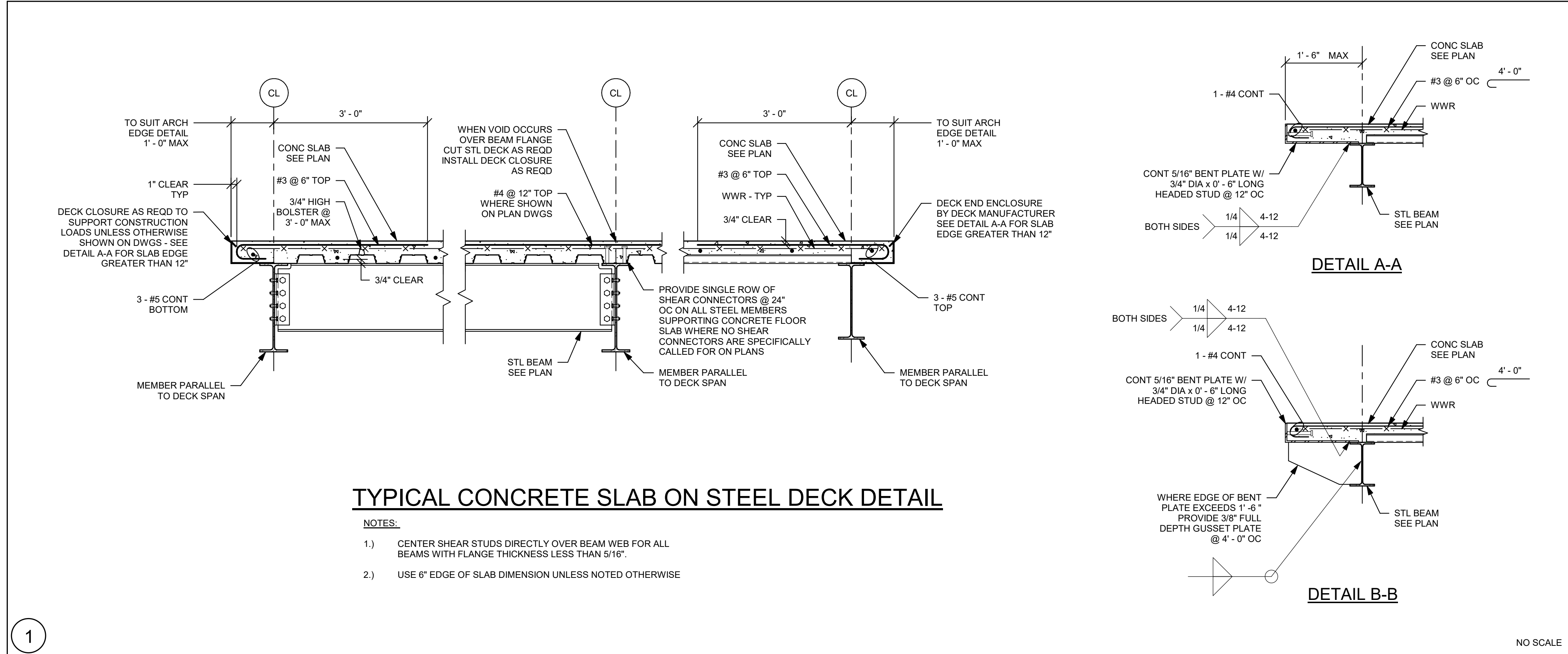
KEY PLAN

PROJECT NORTH MAGNETIC NORTH

TYPICAL
DETAILS

Scale: 3/4" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S0-0-4



DRA

Drumme Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Tel: 617.854.1700
www.dra.com

Planning | Architecture | Interior Design

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.

Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

MSBA 90% CD SUBMISSION

MAY 12, 2023

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

TYPICAL DETAILS

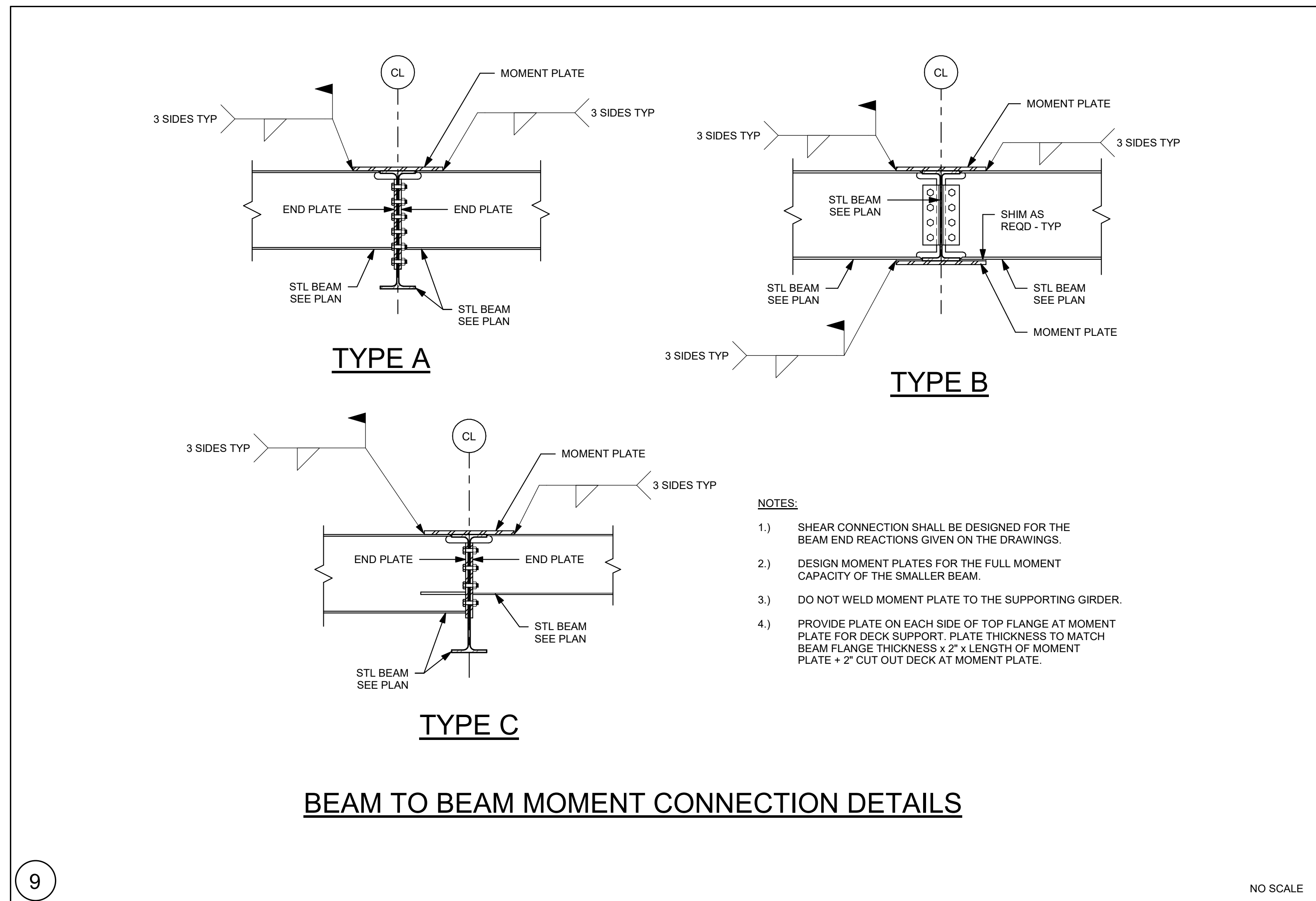
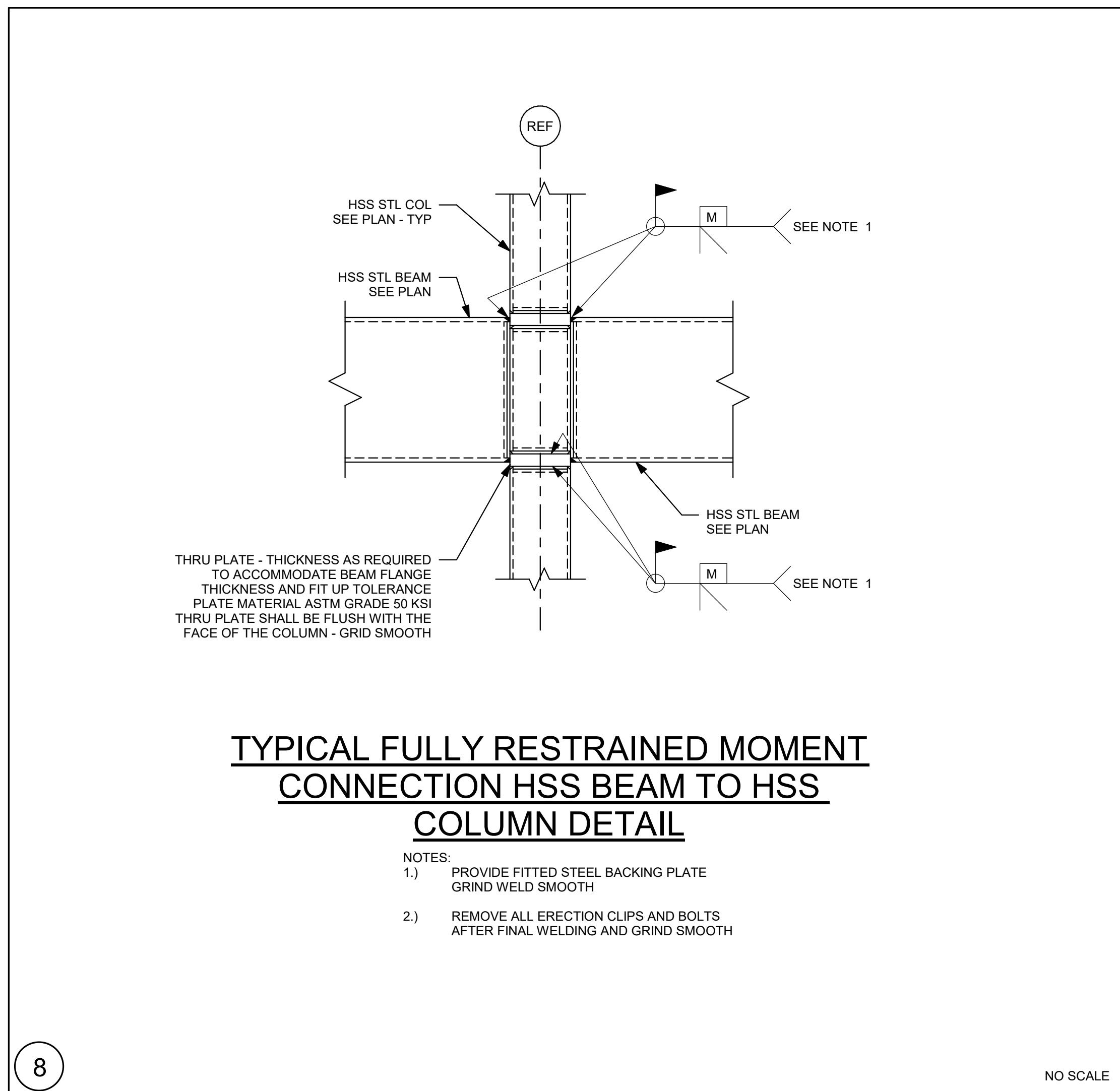
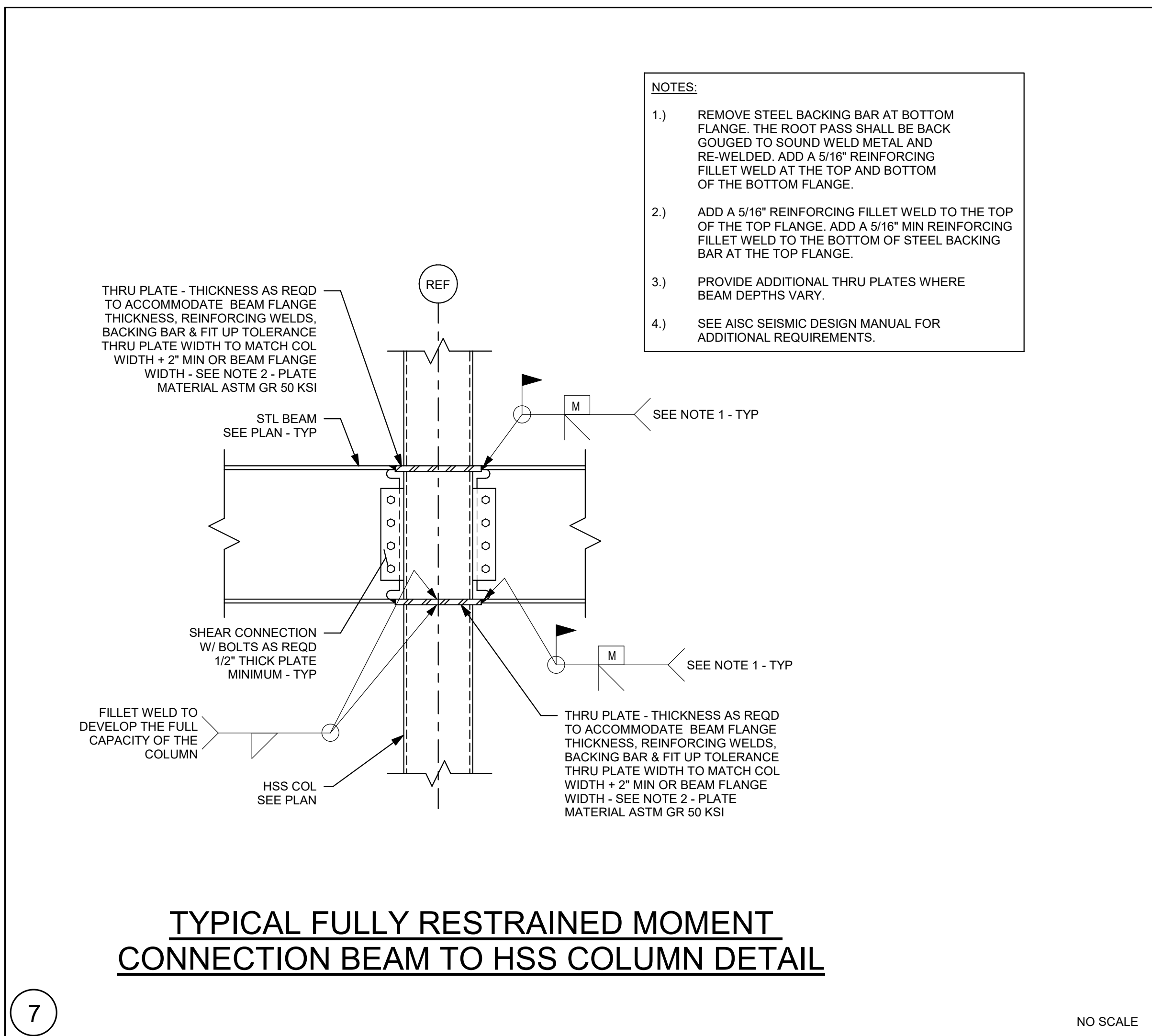
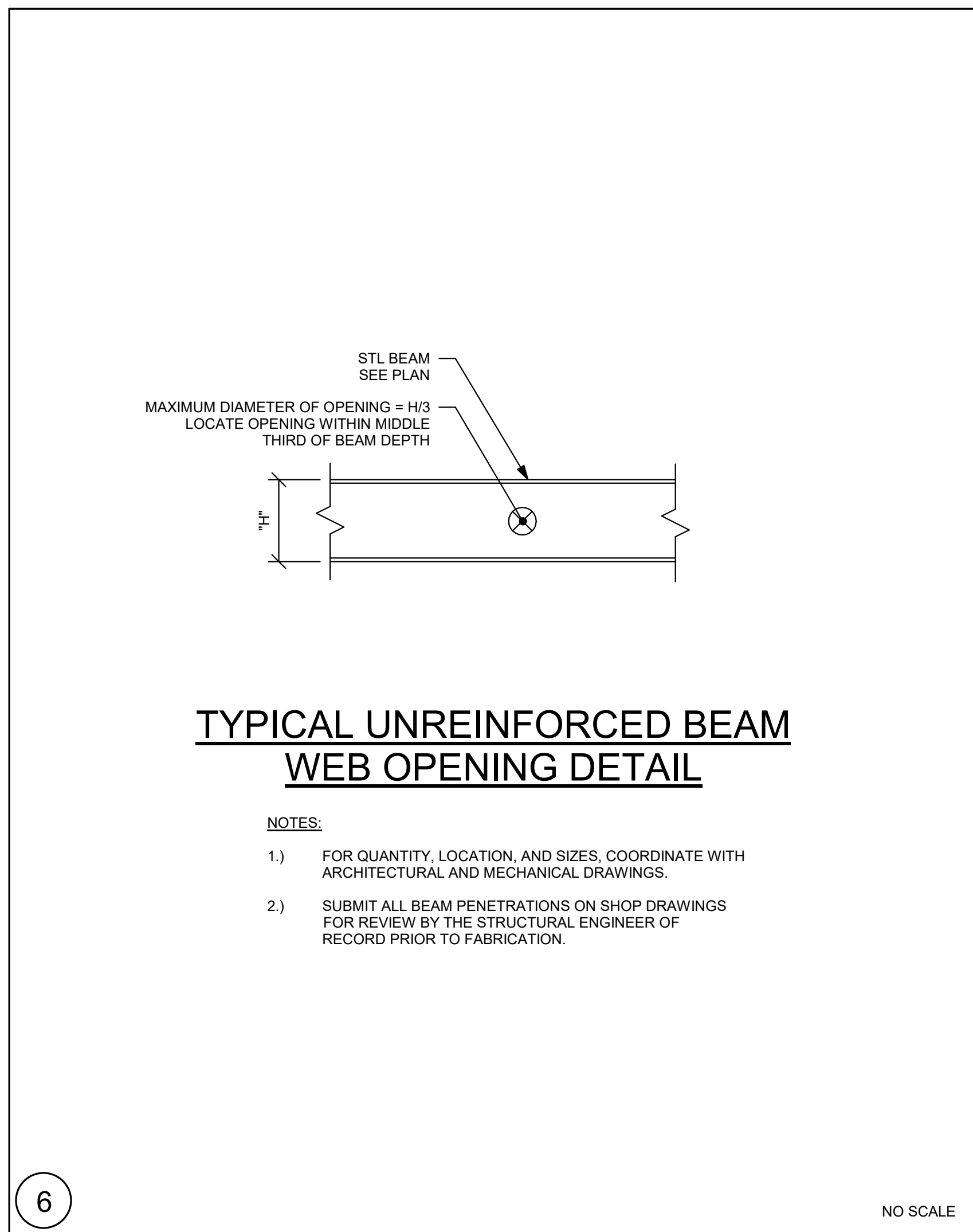
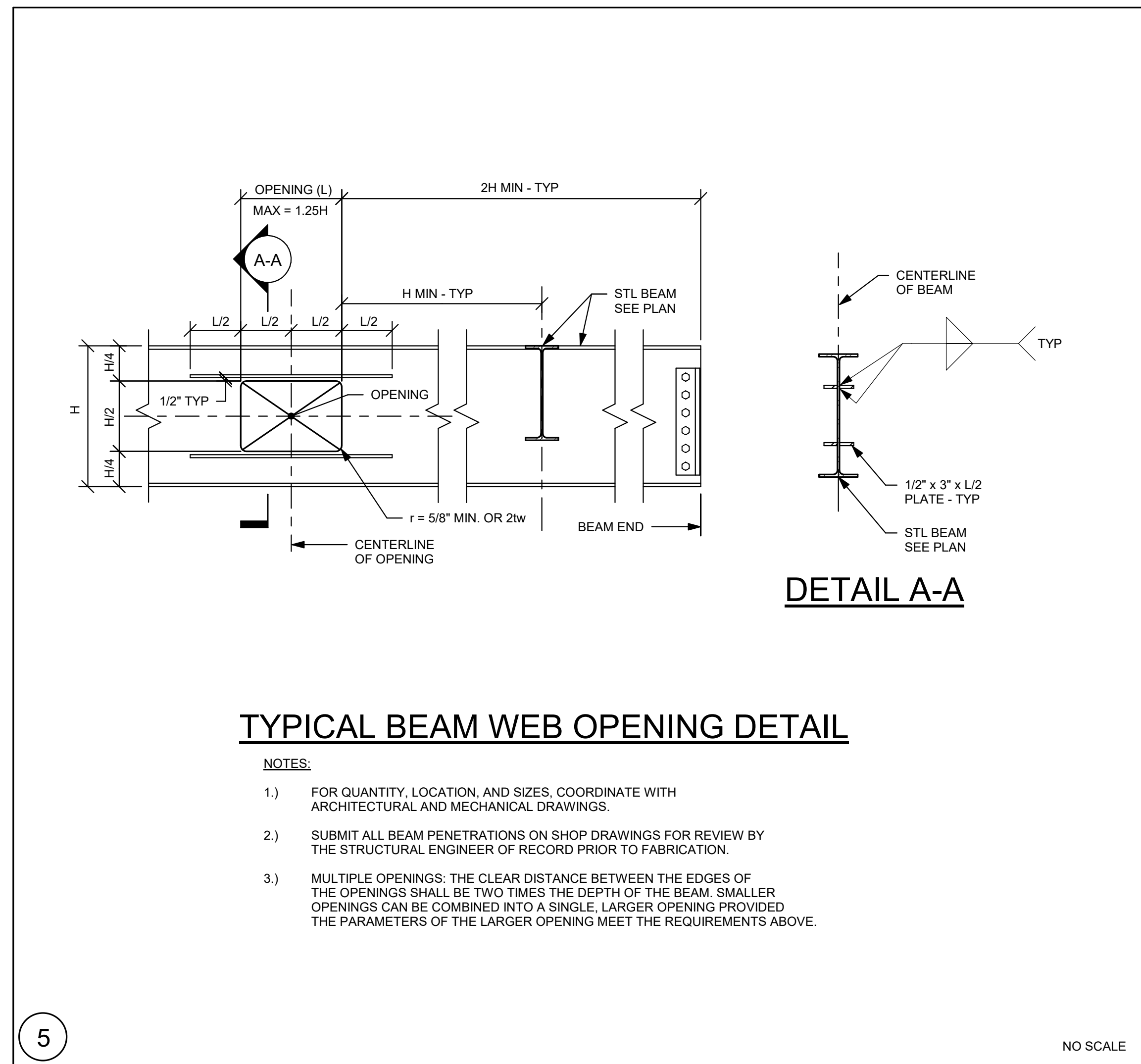
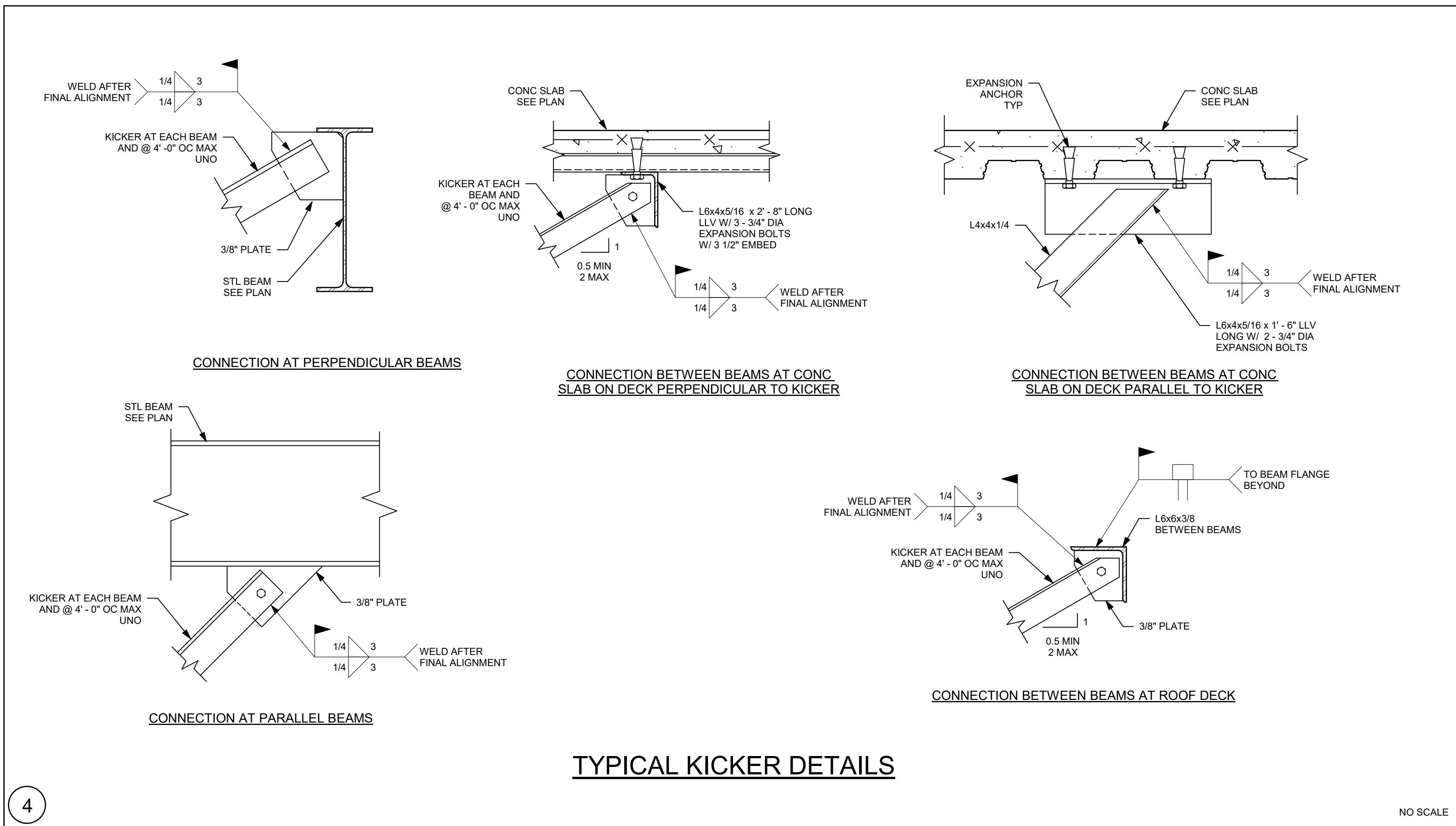
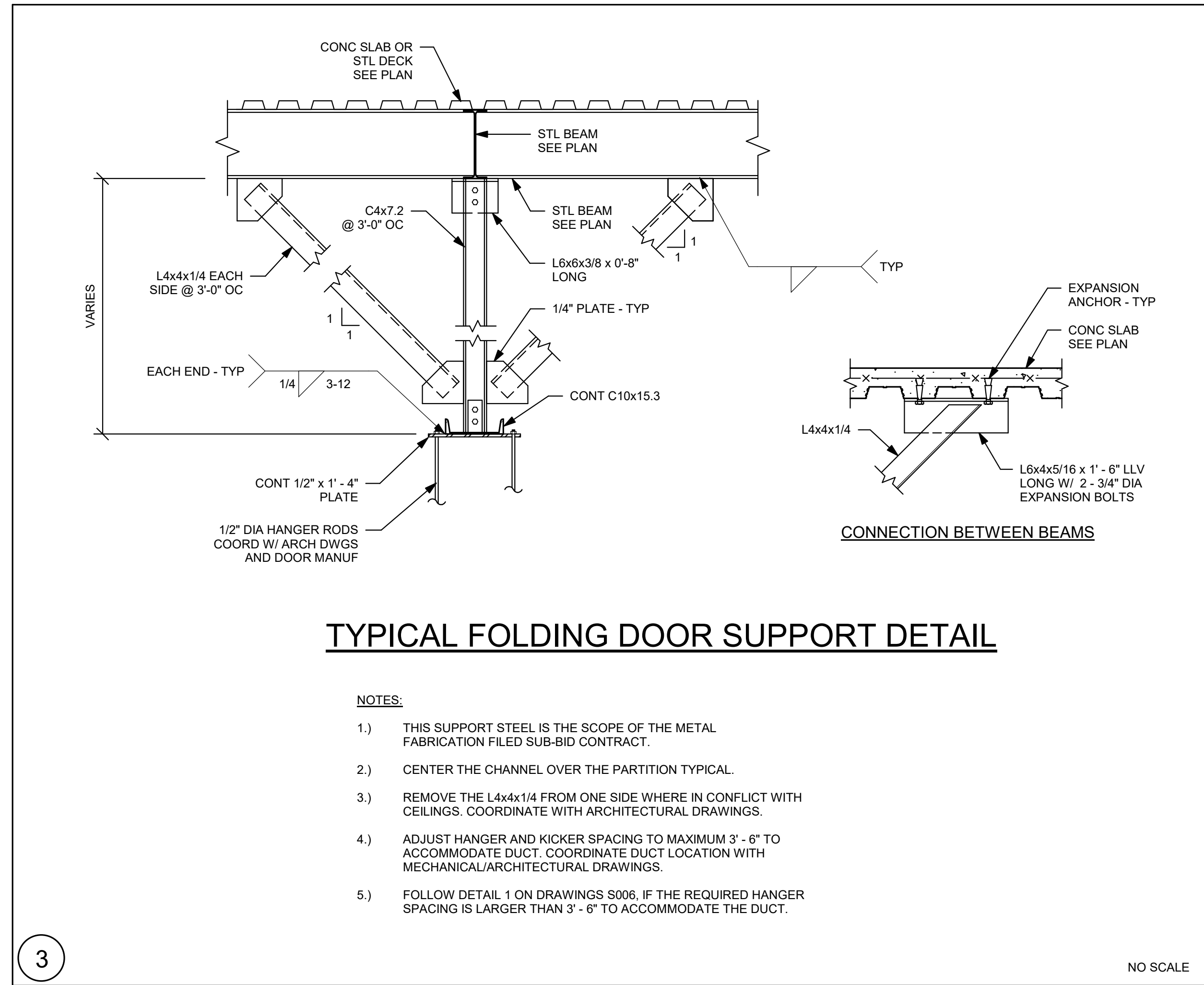
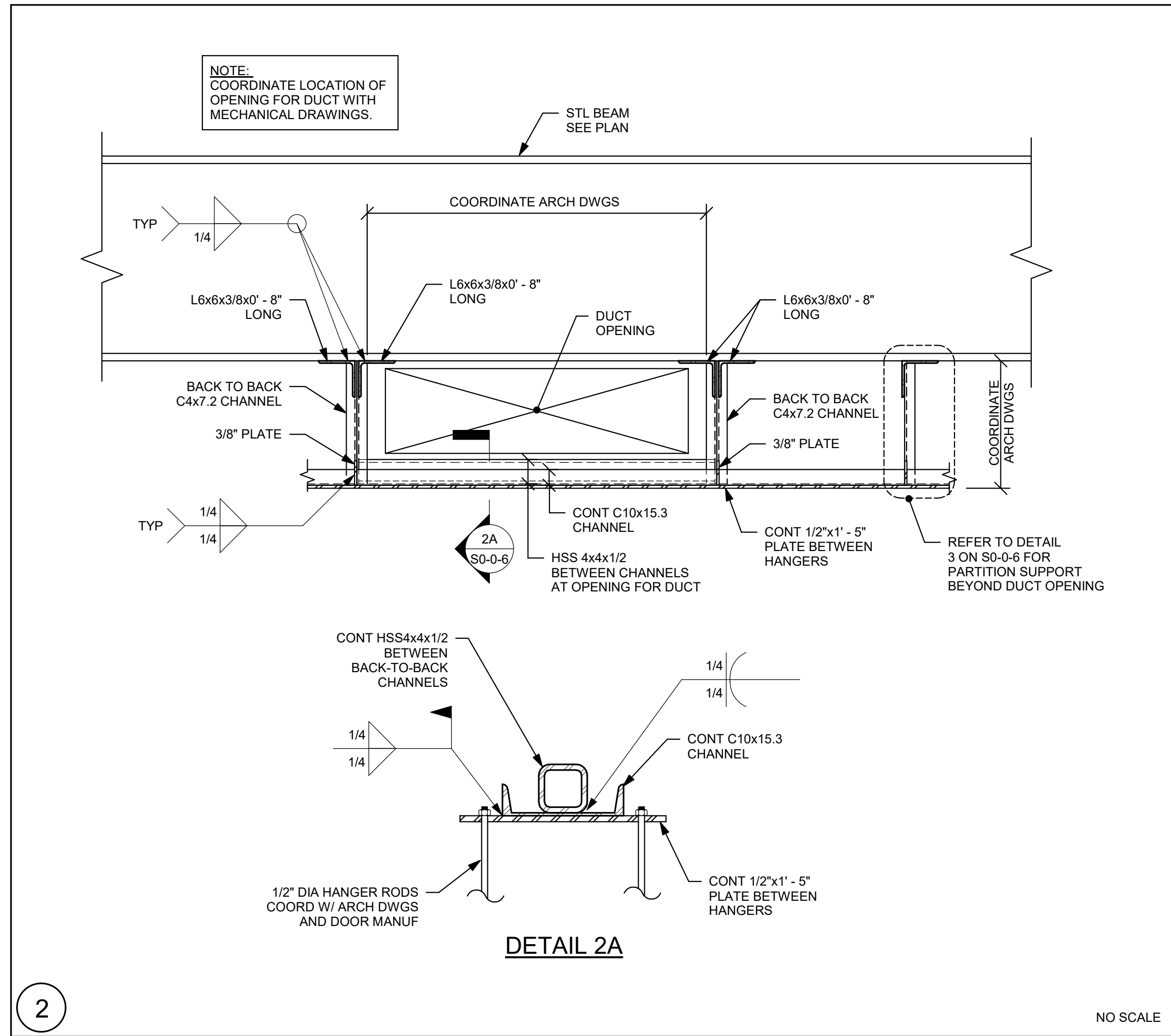
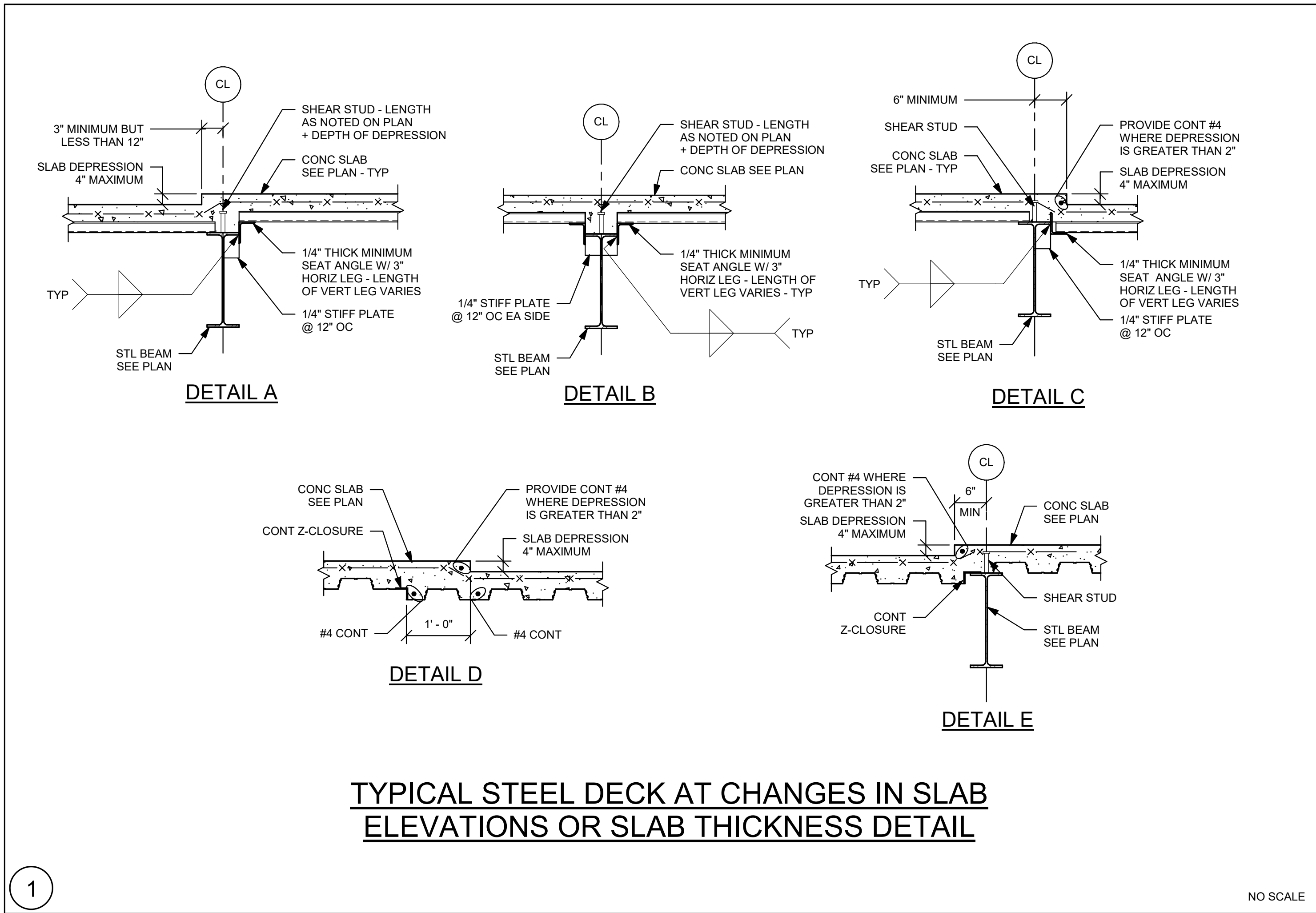
Scale: 3/4" = 1'-0"

Job No.: 20202

Drawn By: EDG

Date: MAY 12, 2023

S0-0-5



DRA

Drummay Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

280 Charles Street
Studio 300
Waltham, MA 02453

Planning | Architecture | Interior Design

Tel: 617.954.1700
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.

Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING IS A PART OF EARLY STRUCTURAL BID PACKAGE

MSBA 90% CD SUBMISSION

MAY 12, 2023

KEY PLAN

PROJECT NORTH

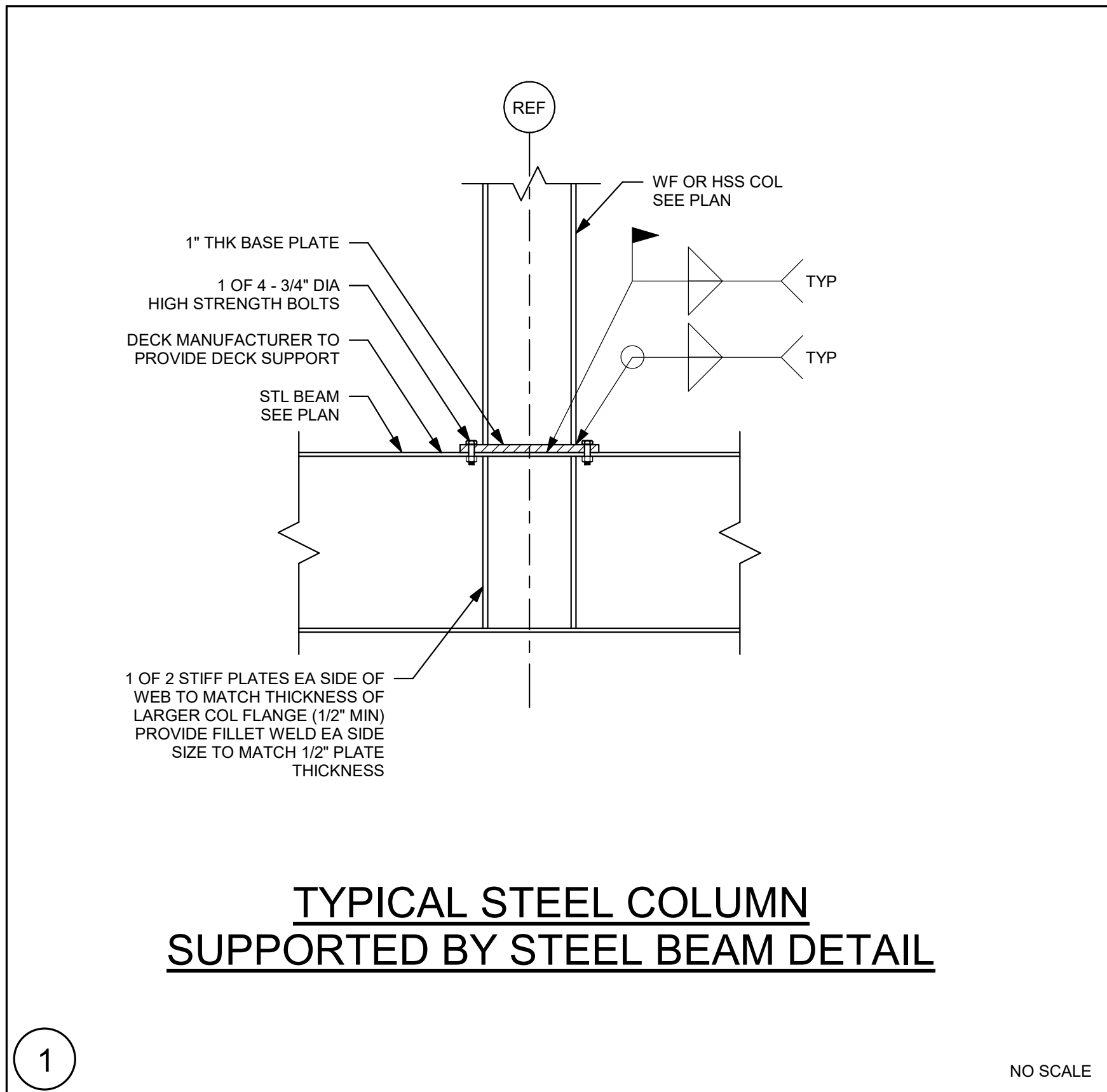
MAGNETIC NORTH

TYPICAL DETAILS

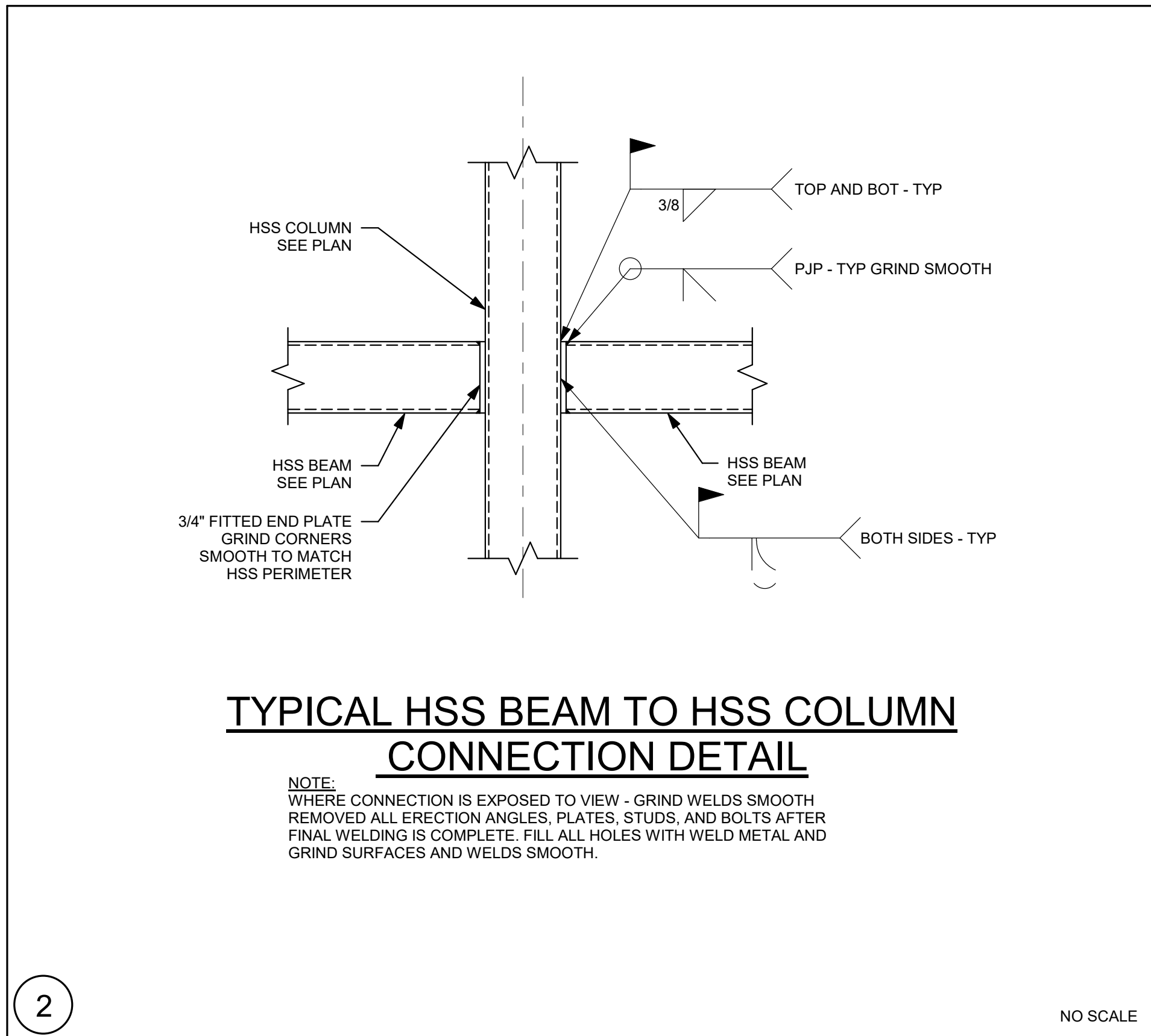
Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S0-0-6

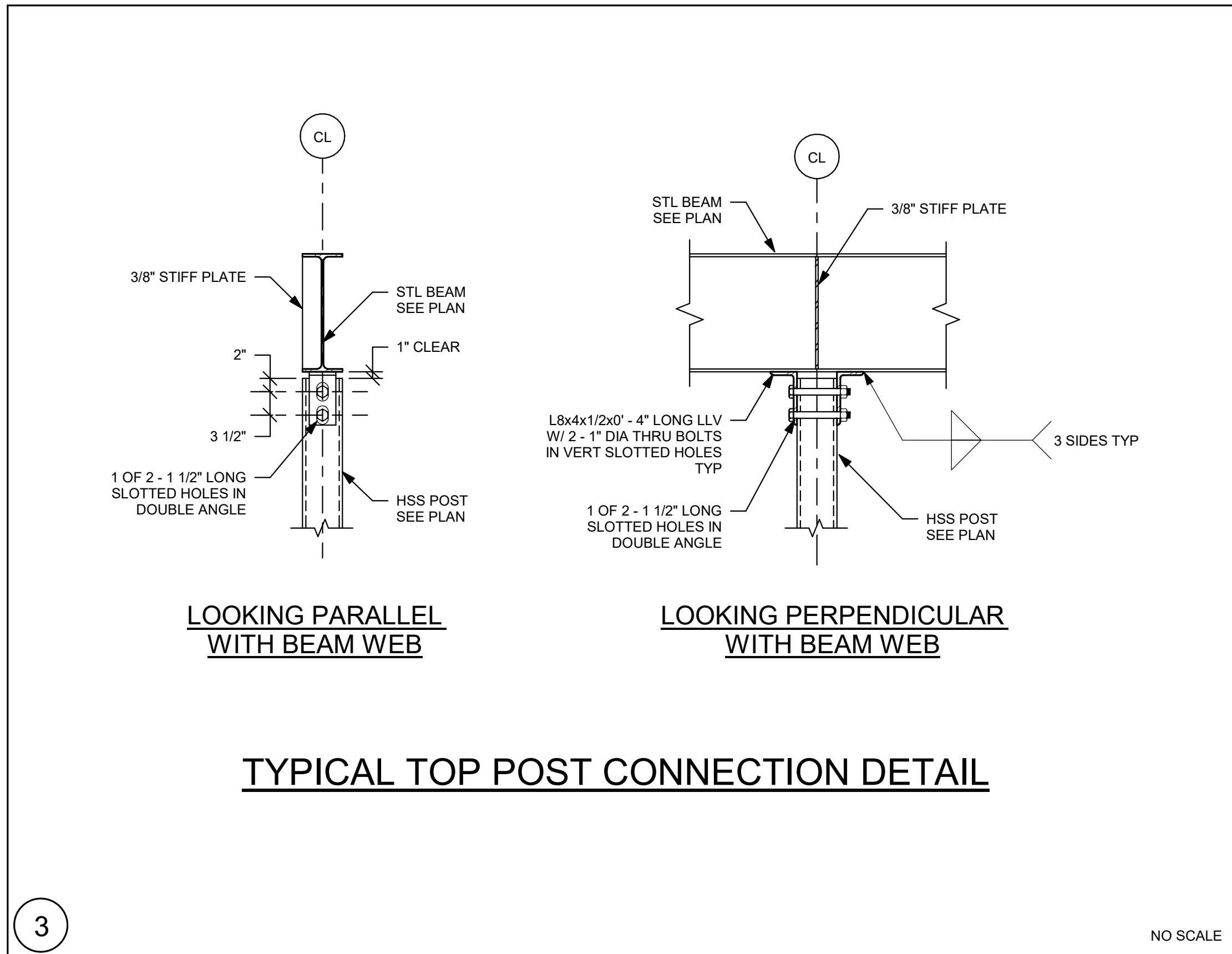
© COPYRIGHT 2021 DRUMMAY ROSANE ANDERSON, INC.



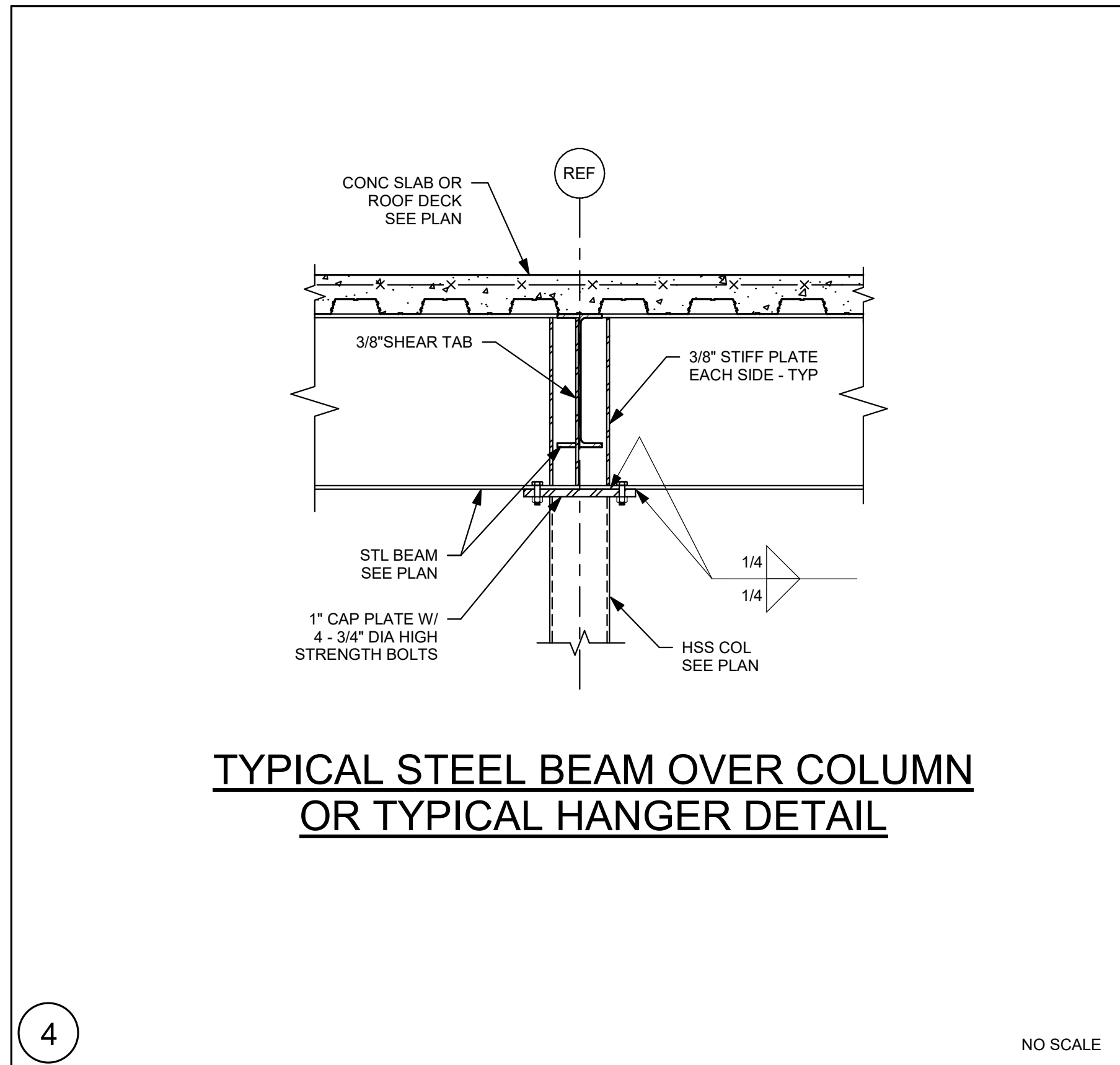
**TYPICAL STEEL COLUMN
SUPPORTED BY STEEL BEAM DETAIL**



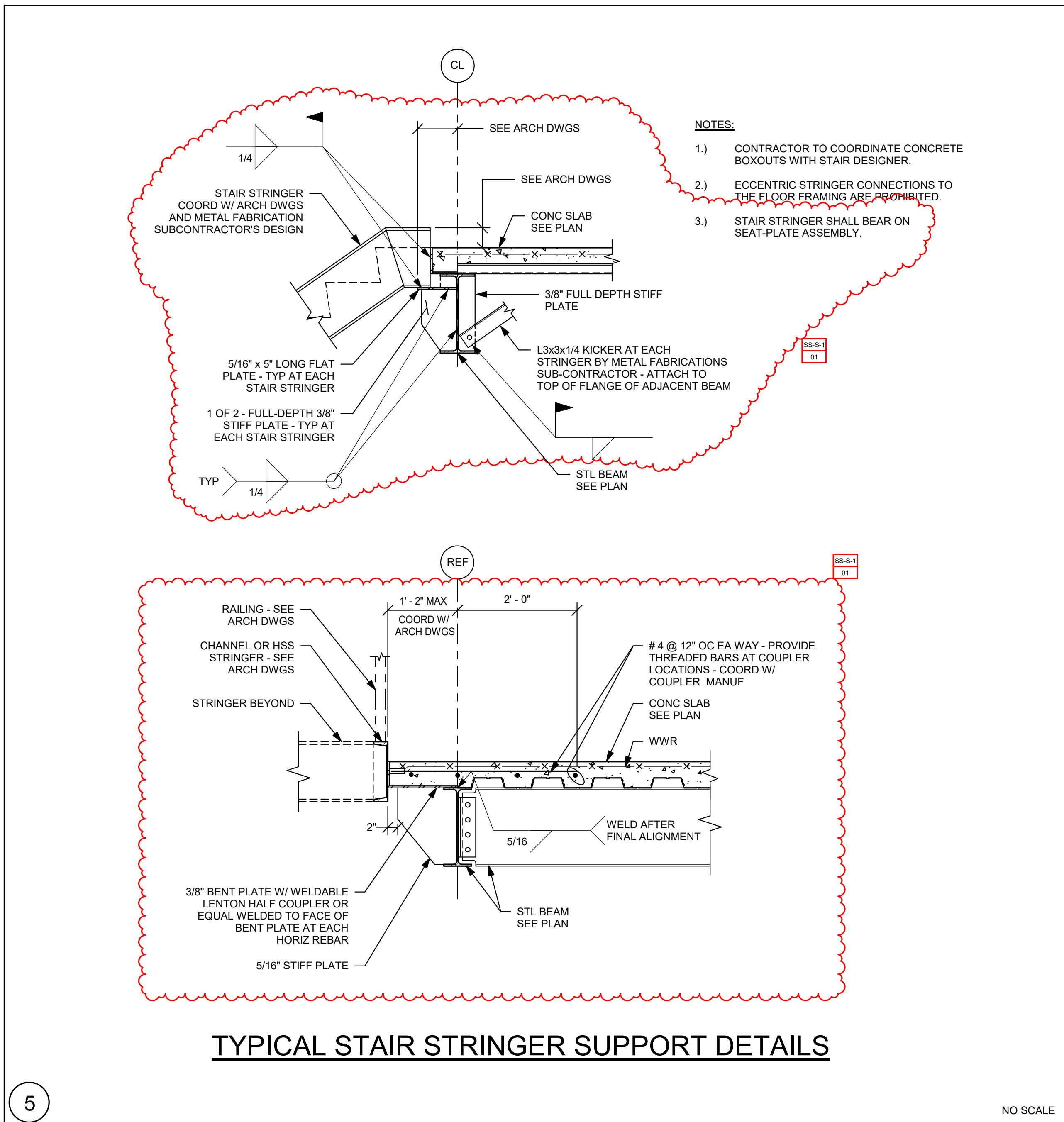
**TYPICAL HSS BEAM TO HSS COLUMN
CONNECTION DETAIL**



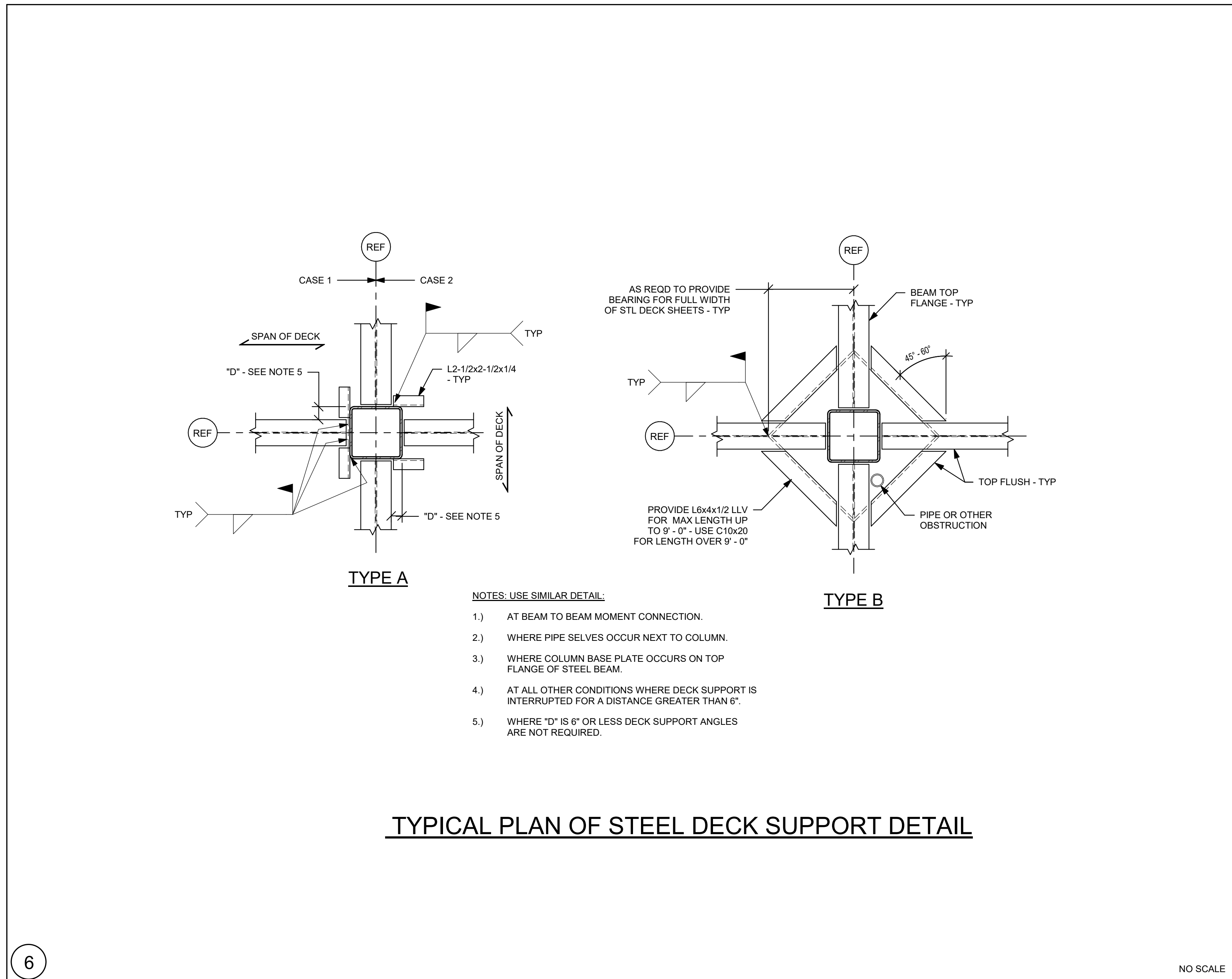
TYPICAL TOP POST CONNECTION DETAIL



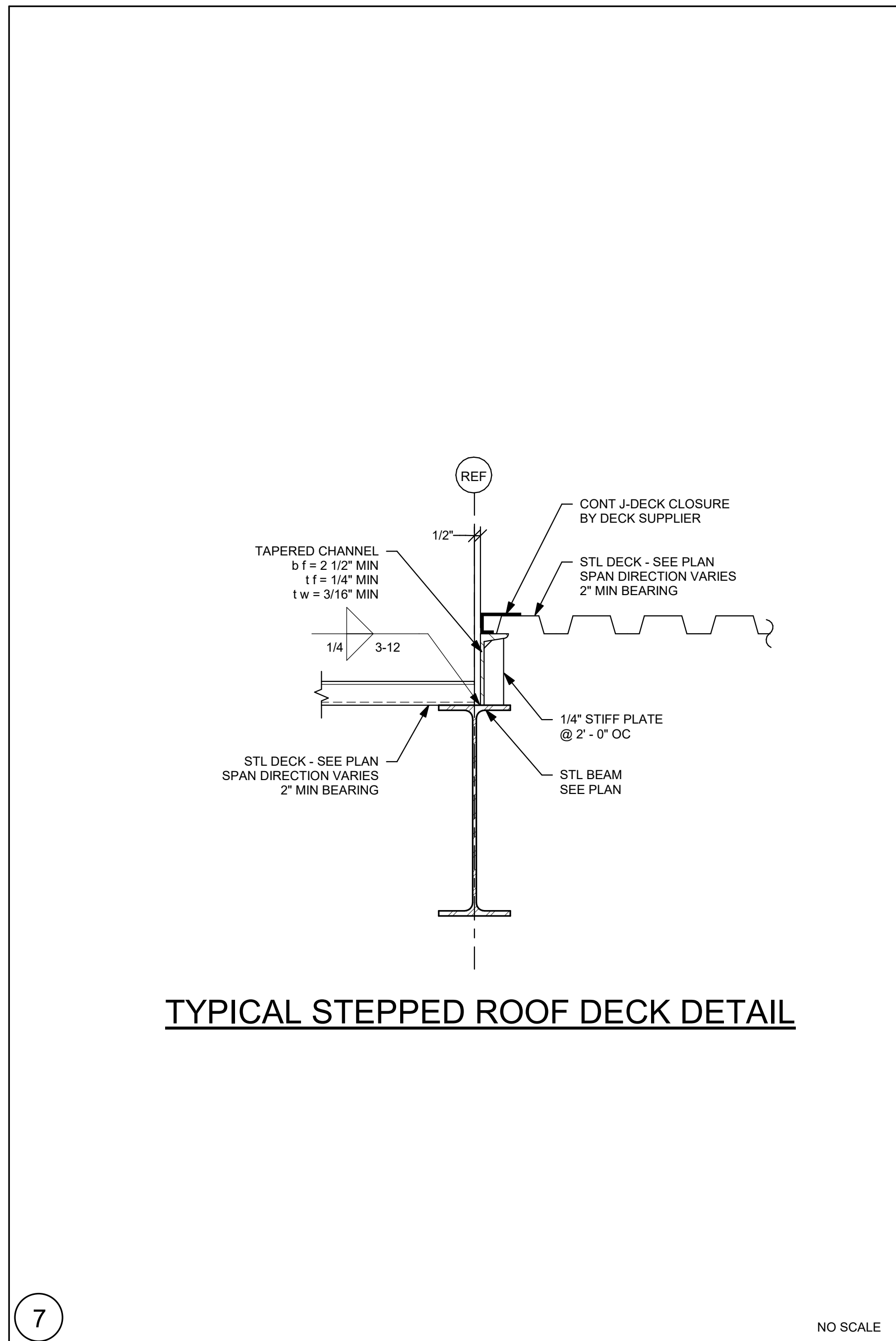
**TYPICAL STEEL BEAM OVER COLUMN
OR TYPICAL HANGER DETAIL**



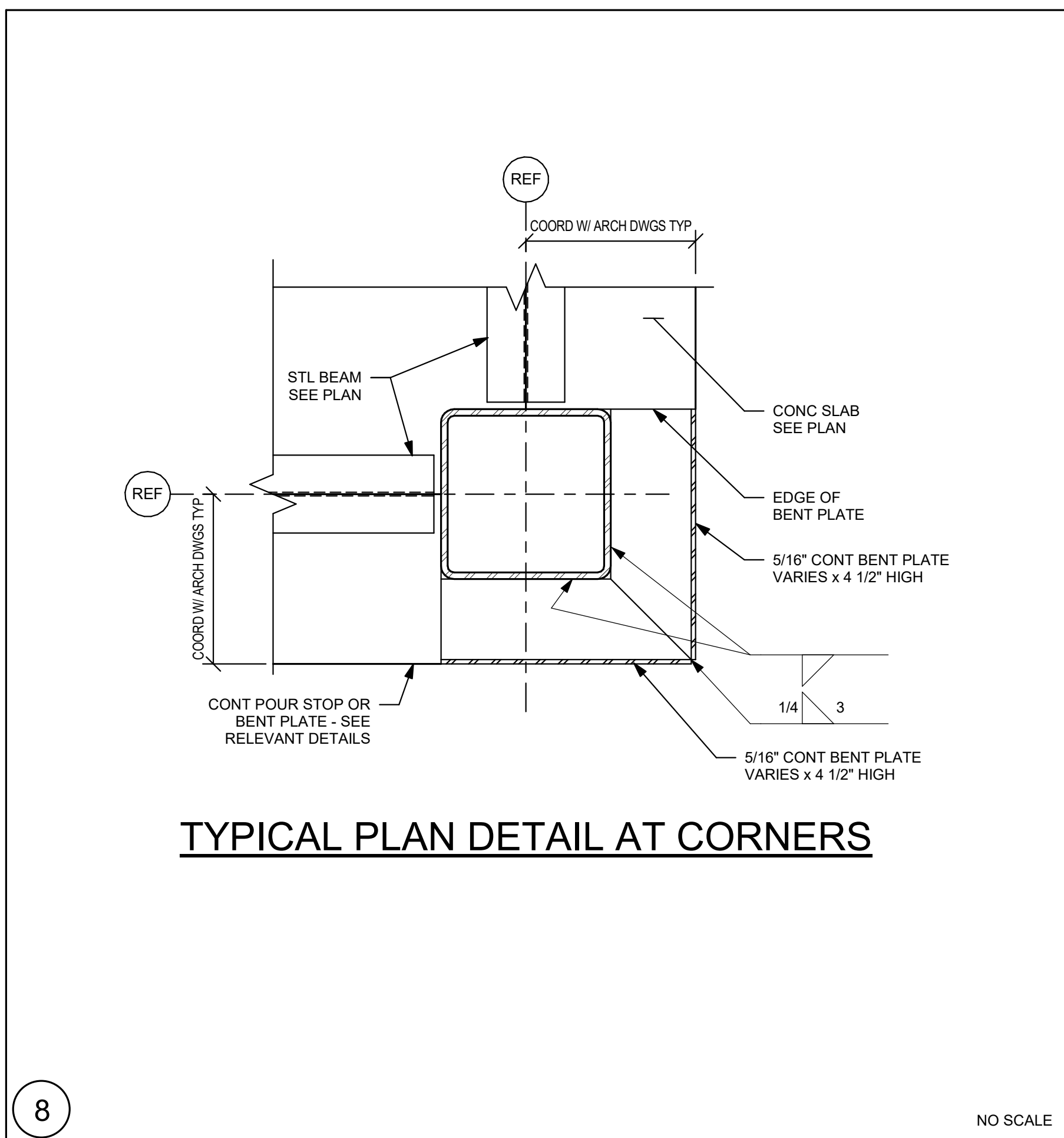
TYPICAL STAIR STRINGER SUPPORT DETAILS



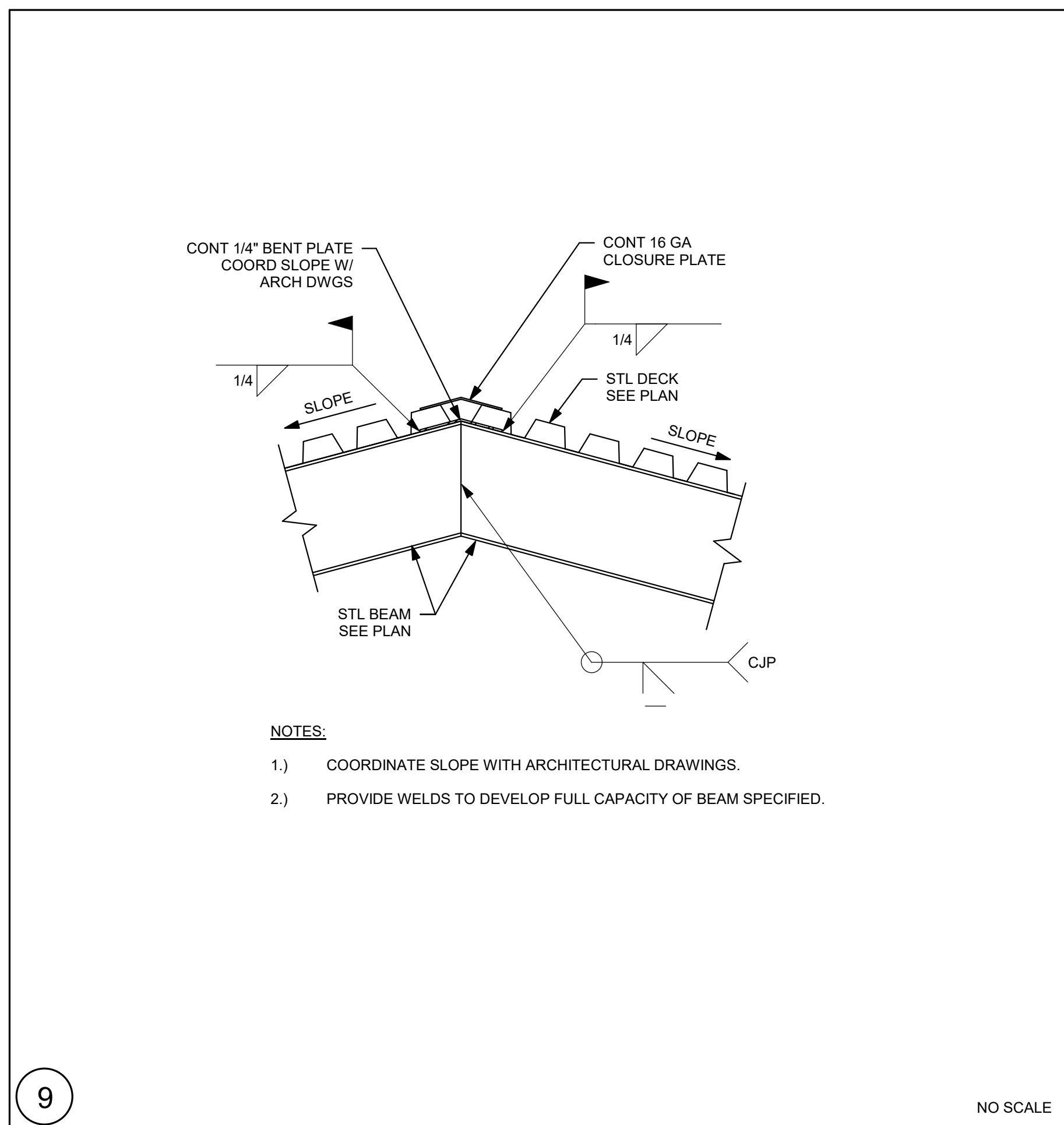
TYPICAL PLAN OF STEEL DECK SUPPORT DETAIL



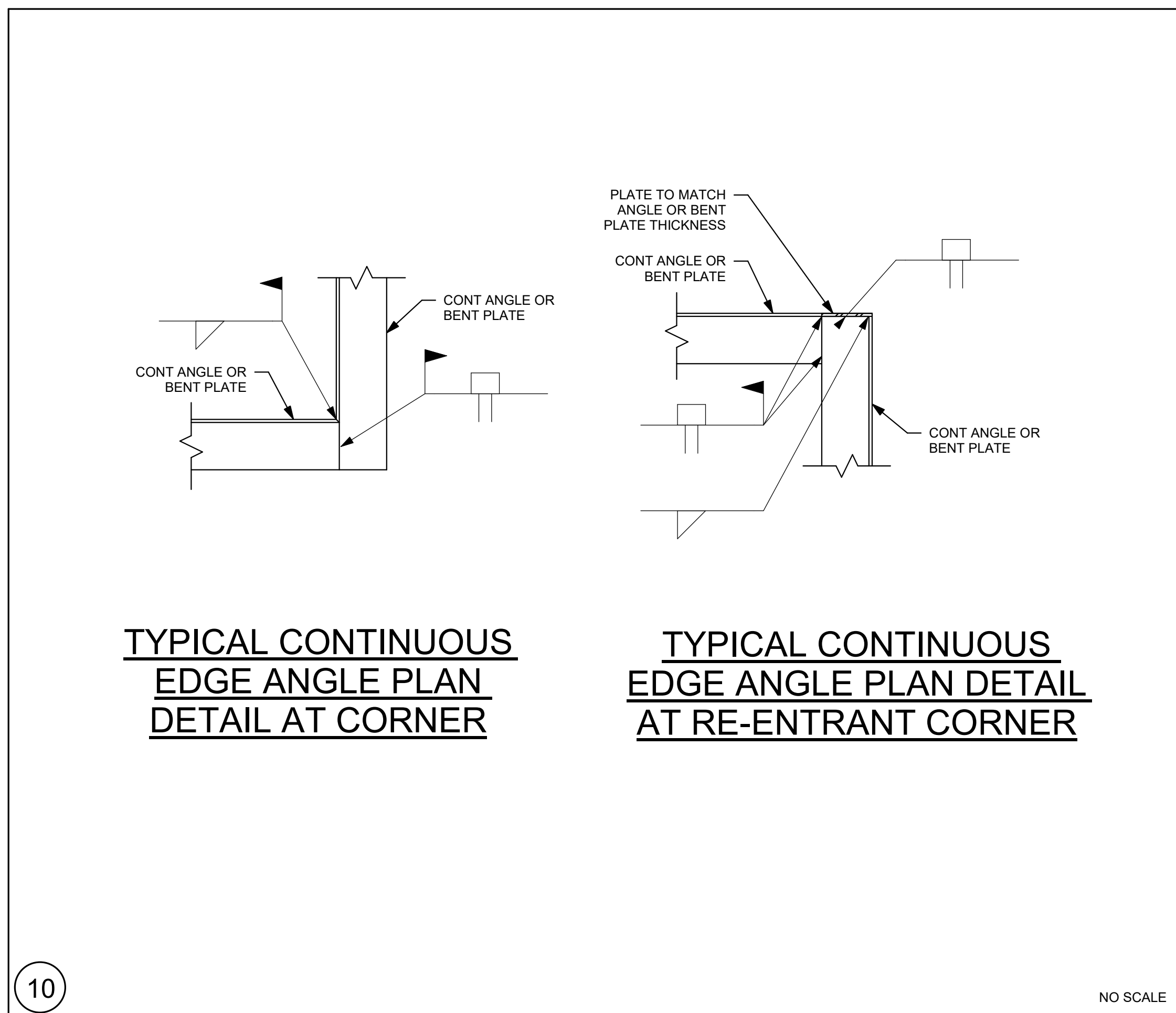
TYPICAL STEPPED ROOF DECK DETAIL



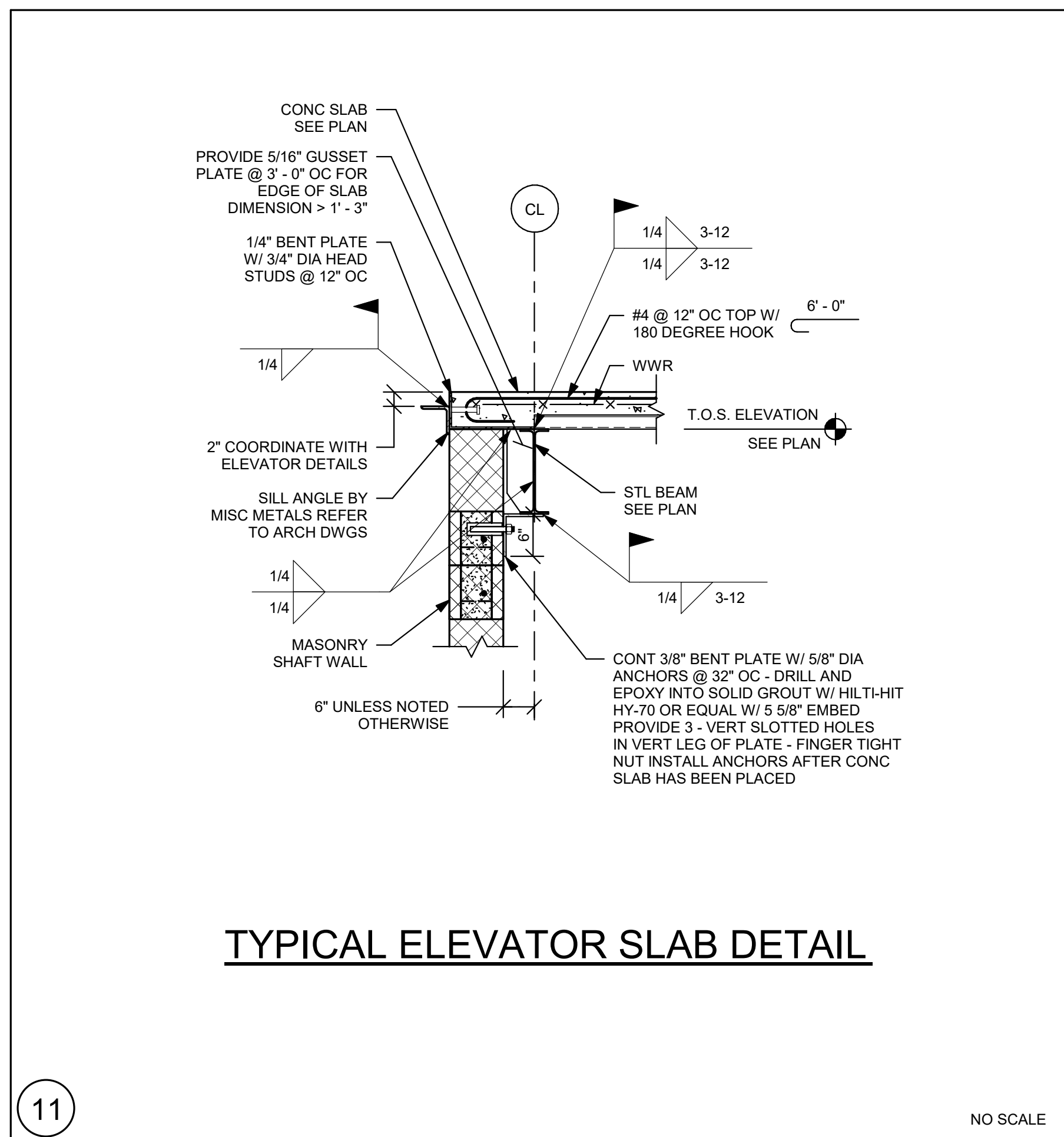
TYPICAL PLAN DETAIL AT CORNERS



**TYPICAL CONTINUOUS
EDGE ANGLE PLAN
DETAIL AT CORNER**



**TYPICAL CONTINUOUS
EDGE ANGLE PLAN DETAIL
AT RE-ENTRANT CORNER**



TYPICAL ELEVATOR SLAB DETAIL

DRA

Drummay Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074
Tel: 617.854.1702
www.dra.com

280 Charles Street
Studio 300
Waltham, MA 02453

Planning | Architecture | Interior Design

NORTHEAST
METRO TECH

100 Hemlock Rd,
Wakefield, MA 01880

EDG

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1
--------	-----------	--------------------------------

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023

KEY PLAN

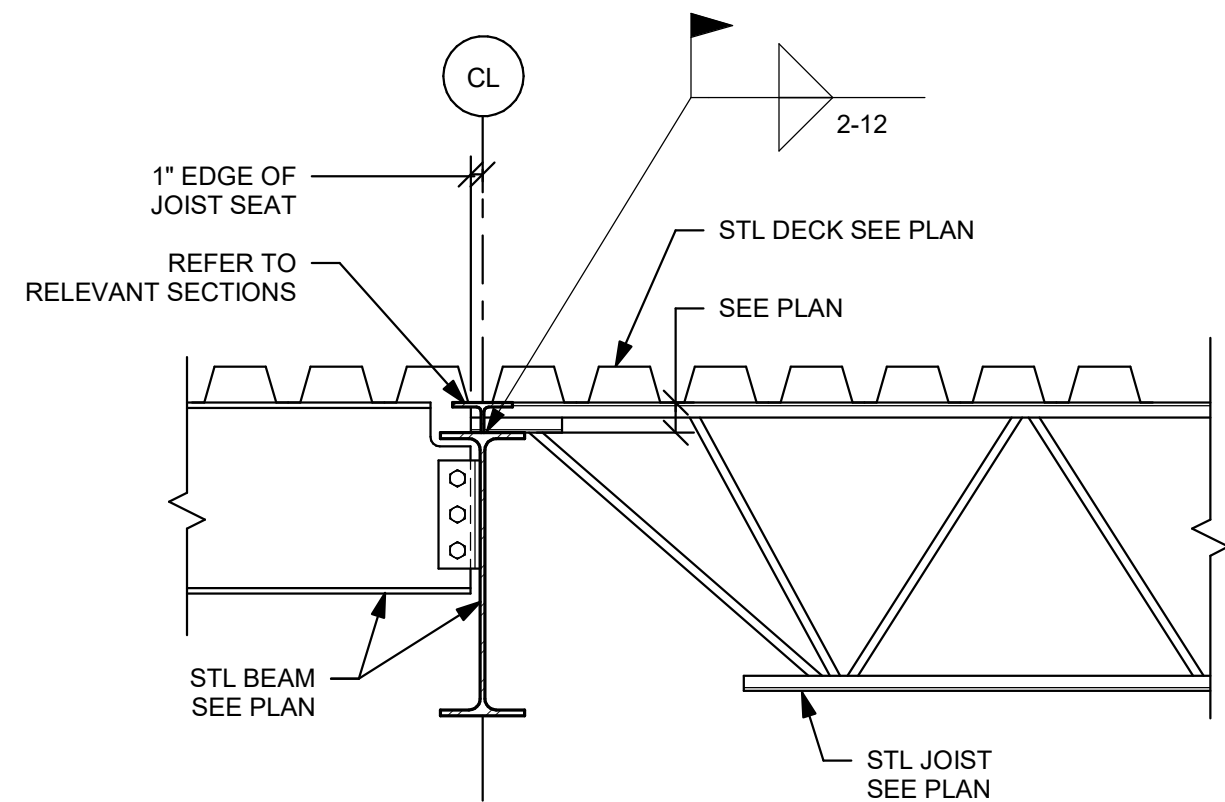
PROJECT NORTH

MAGNETIC NORTH

TYPICAL
DETAILS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

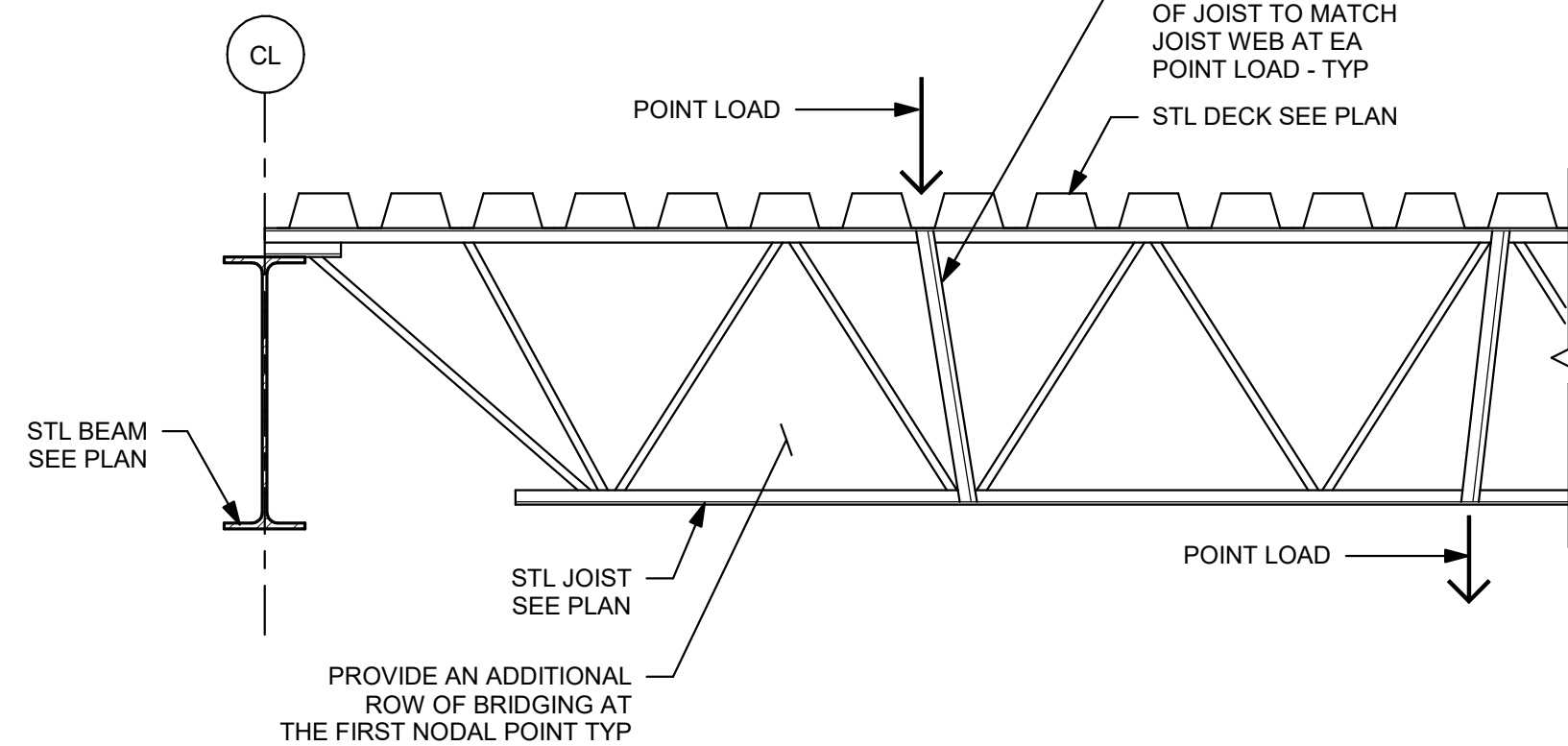
S0-0-7



**TYPICAL BEAM / JOIST
SUPPORT DETAIL AT ROOF**

1

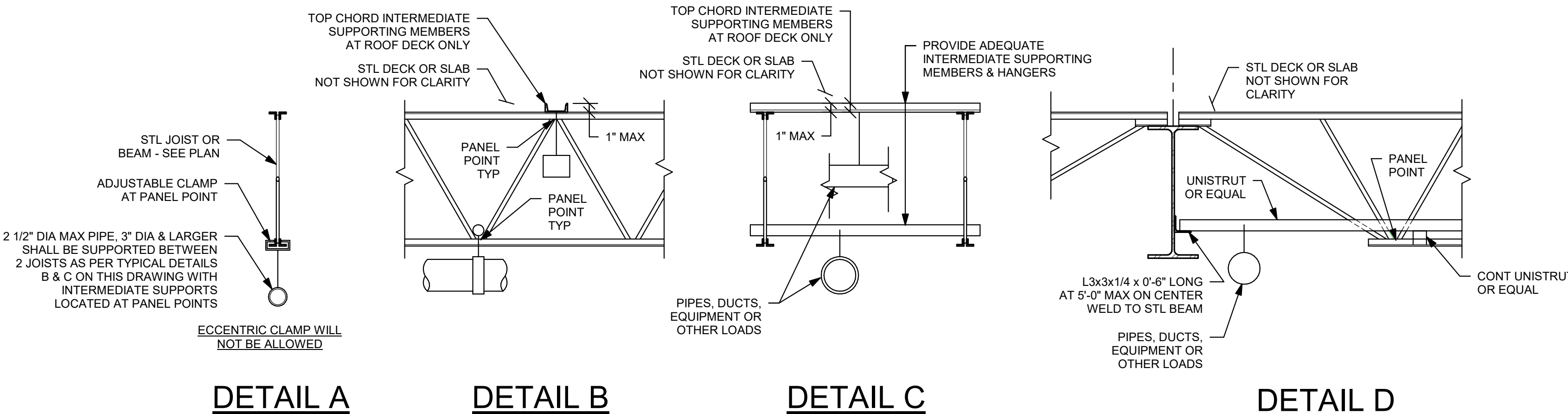
NO SCALE



**TYPICAL JOIST BOTTOM AND TOP
CHORD REINFORCING DETAIL**

2

NO SCALE



DETAIL A

DETAIL B

DETAIL C

DETAIL D

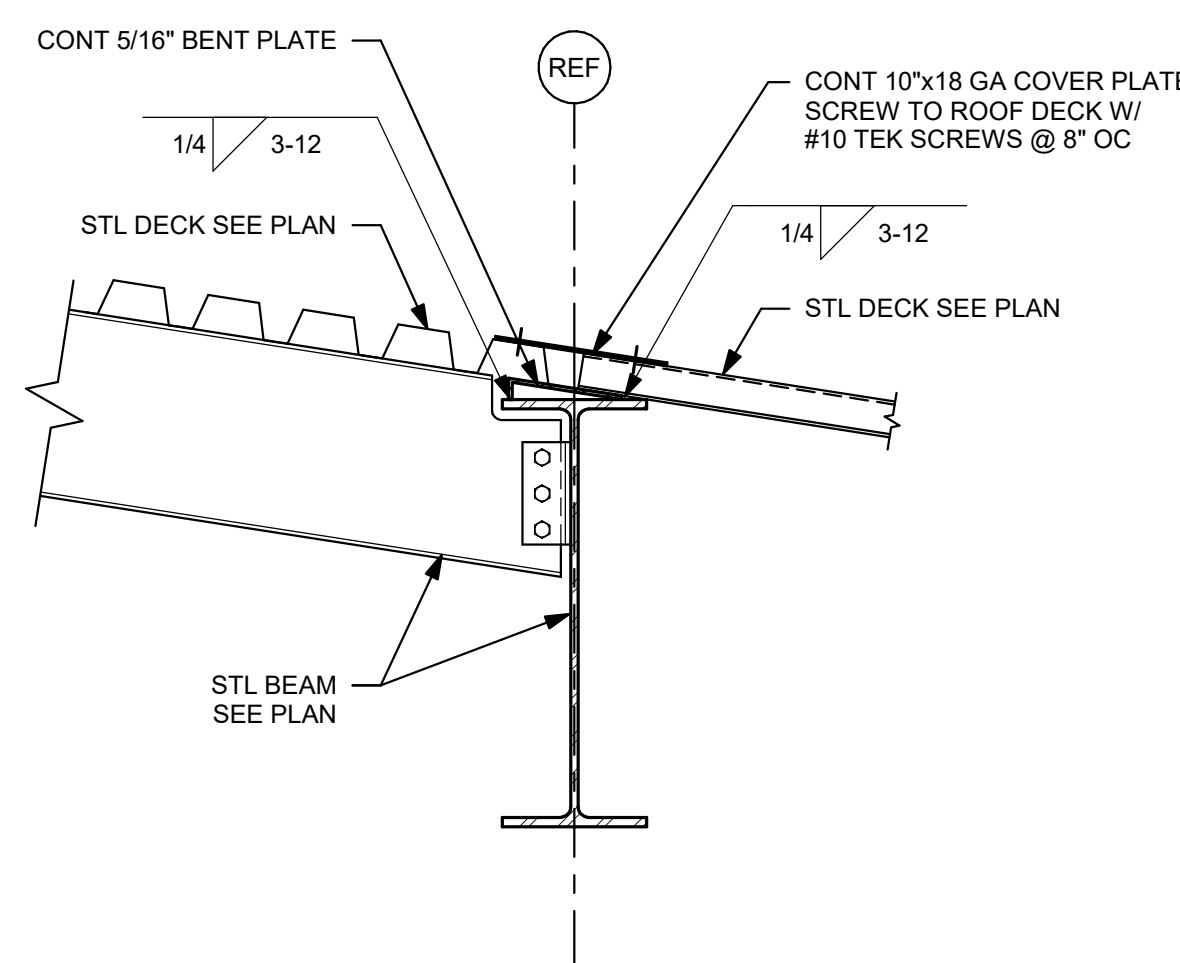
TYPICAL JOIST LOADING METHOD DETAIL

NOTES:

- WHERE POSSIBLE ALL HANGERS SHALL BE SUSPENDED FROM WIDE FLANGE BEAMS.
- PIPES, DUCTS, FIXTURES, ETC. SHALL NOT BE HUNG FROM NEW OR EXISTING STEEL DECK OR EXISTING CONCRETE SLAB OR BRIDGING ANGLES.
- THE SUM OF ALL BUILDING TRADES HANGER LOADS SHALL NOT EXCEED 250 LBS. PER JOIST. WHEN THIS MAXIMUM IS EXCEEDED A DETAIL OF PROPOSED METHOD OF HANGING SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL.
- HANGERS AND SUPPORTING MEMBERS SHALL BE LOCATED AT PANEL POINTS.
- PIPING WITH A 4" DIAMETER AND LARGER RUNNING PERPENDICULAR TO JOISTS SHALL BE SUPPORTED FROM EVERY JOIST.
- CONTRACTOR SHALL COORDINATE WITH ALL TRADES CONCERNED.
- USE THESE TYPICAL DETAILS WHERE APPLICABLE, UNLESS OTHERWISE SHOWN. FIELD MEASURE FOR SIZE OF EXISTING STRUCTURAL FRAMING.
- ALL ADDED UNISTRUTS, ANGLES, AND HANGERS TO BE SUPPLIED AND INSTALLED BY F.I.E.P. SUB-CONTRACTORS. REFER TO RELEVANT SPECIFICATIONS.
- REFER TO TYPICAL DETAIL 4 ON DRAWING S0-07 FOR ADDITIONAL REINFORCING WHEN HANGERS OR INTERMEDIATE SUPPORTING MEMBERS CAN NOT BE LOCATED AT PANEL POINT. ADDITIONAL REINFORCING SHALL BE SUPPLIED AND INSTALLED BY THE GENERAL CONTRACTOR.

3

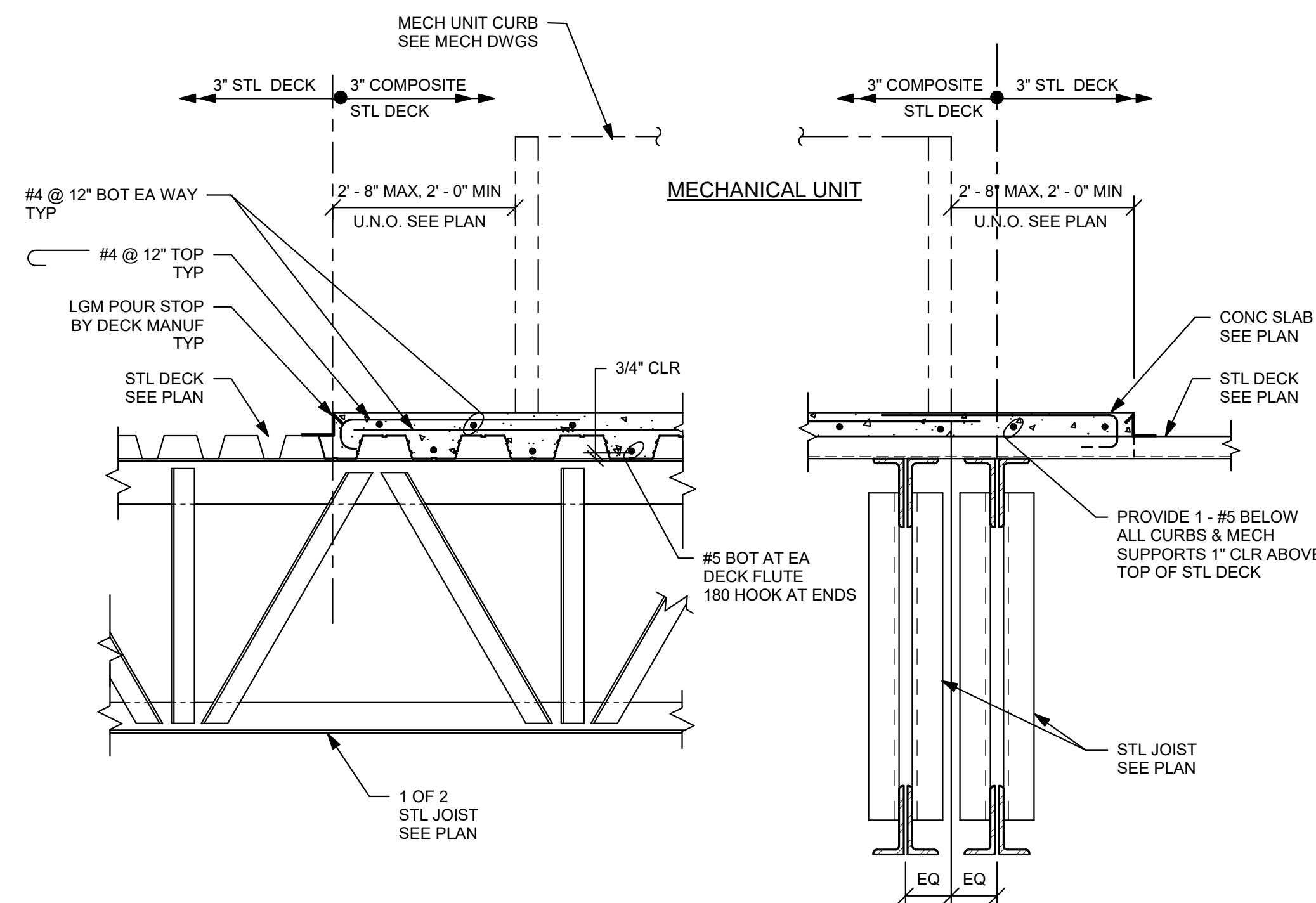
NO SCALE



**TYPICAL SLOPED DECK SUPPORT
AT STEEL BEAM DETAIL**

4

NO SCALE



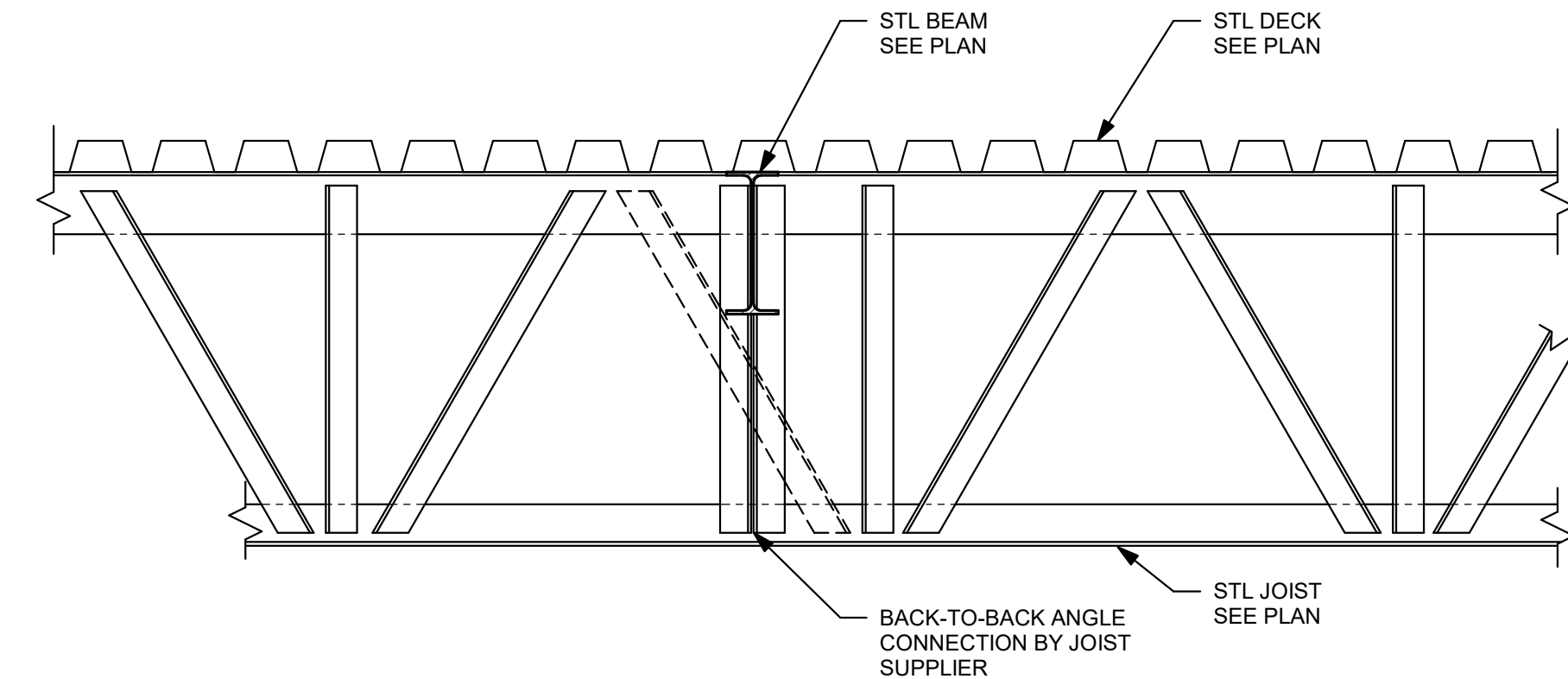
TYPICAL MECHANICAL UNIT ROOF SLAB

NOTES:

- 8" CONCRETE SLAB WITH 3" DEEP x 16 GAGE, GALVANIZED COMPOSITE METAL DECK.
- TOP OF SLAB ELEVATION VARIES WITH SLOPE OF DECK. MAINTAIN UNIFORM 6" SLAB THICKNESS.
- REFER TO PLANS FOR SLAB LOCATIONS.
- REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR MECHANICAL UNIT TO STRUCTURE CONNECTION AND ADDITIONAL DETAILS.
- COORDINATE SLAB OPENINGS WITH MECHANICAL DRAWINGS AND TYPICAL DETAILS.
- HOOK BARS AT RTU OPENINGS AND PROVIDE ADDITIONAL BARS AROUND OPENINGS PER TYPICAL DETAILS. OPENINGS GREATER THAN 2'-0" REQUIRE STEEL BEAMS PER TYPE 2 ON DETAIL 1 ON DRAWING S0-0-8.

5

NO SCALE



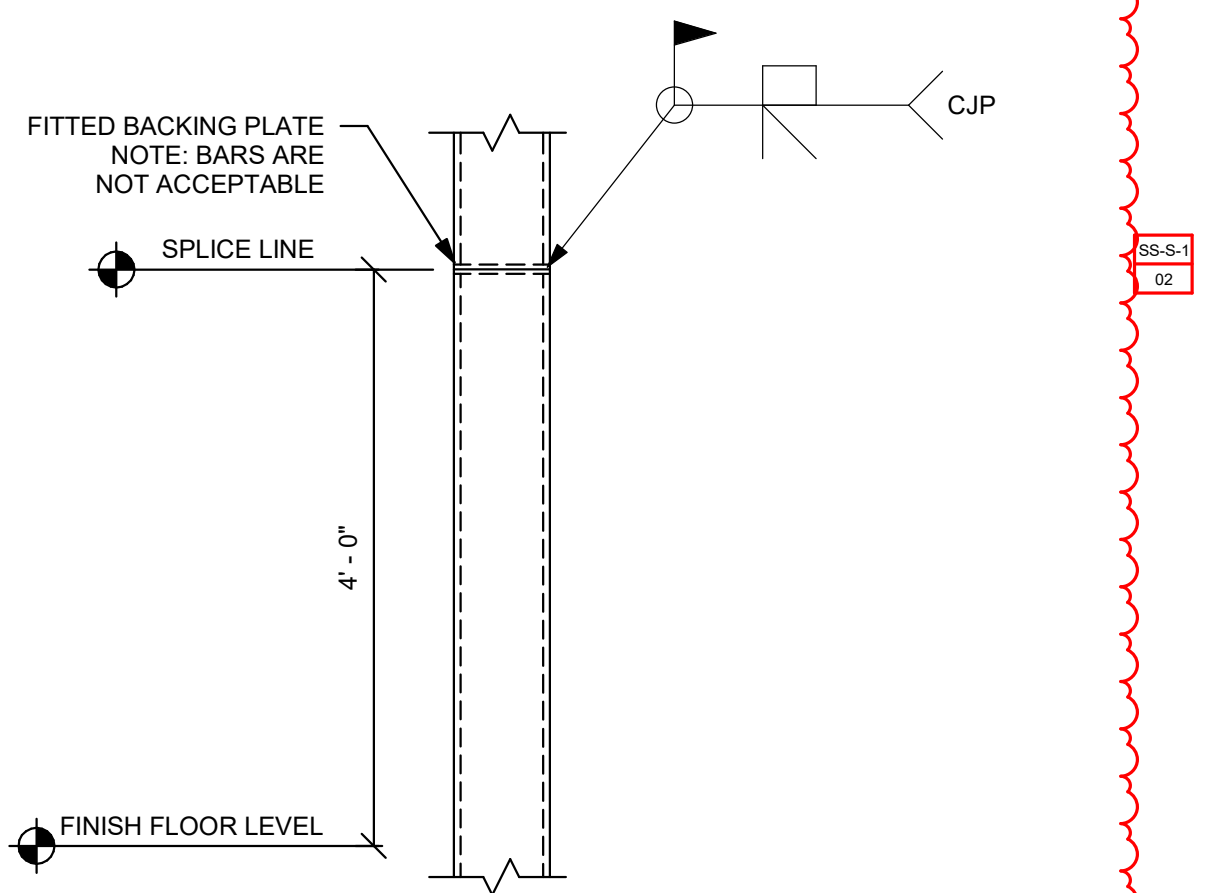
**TYPICAL STEEL BEAM - TO - OPEN WEB
JOIST CONNECTION DETAIL**

NOTES:

- COORDINATE DESIGN OF CONNECTION WITH STEEL BEAM REACTION TABLE ON S0-0-1.
- PROVIDE ADDITIONAL JOIST REINFORCEMENT FOR STEEL BEAMS NOT ALIGNED WITH PANEL POINTS AS REQUIRED. SEE DETAIL 2 ON S0-0-9 FOR ADDITIONAL INFORMATION.
- PROVIDE ADDITIONAL BRIDGING BETWEEN JOISTS AS REQUIRED.
- DO NOT SLOPE STEEL BEAM IF STEEL JOIST IS SLOPED. PROVIDE CONTINUOUS STEEL BENT PLATE ALONG STEEL BEAM AS REQUIRED FOR ADEQUATE DECK SUPPORT PER DETAIL 4 ON S0-0-9.

6

NO SCALE



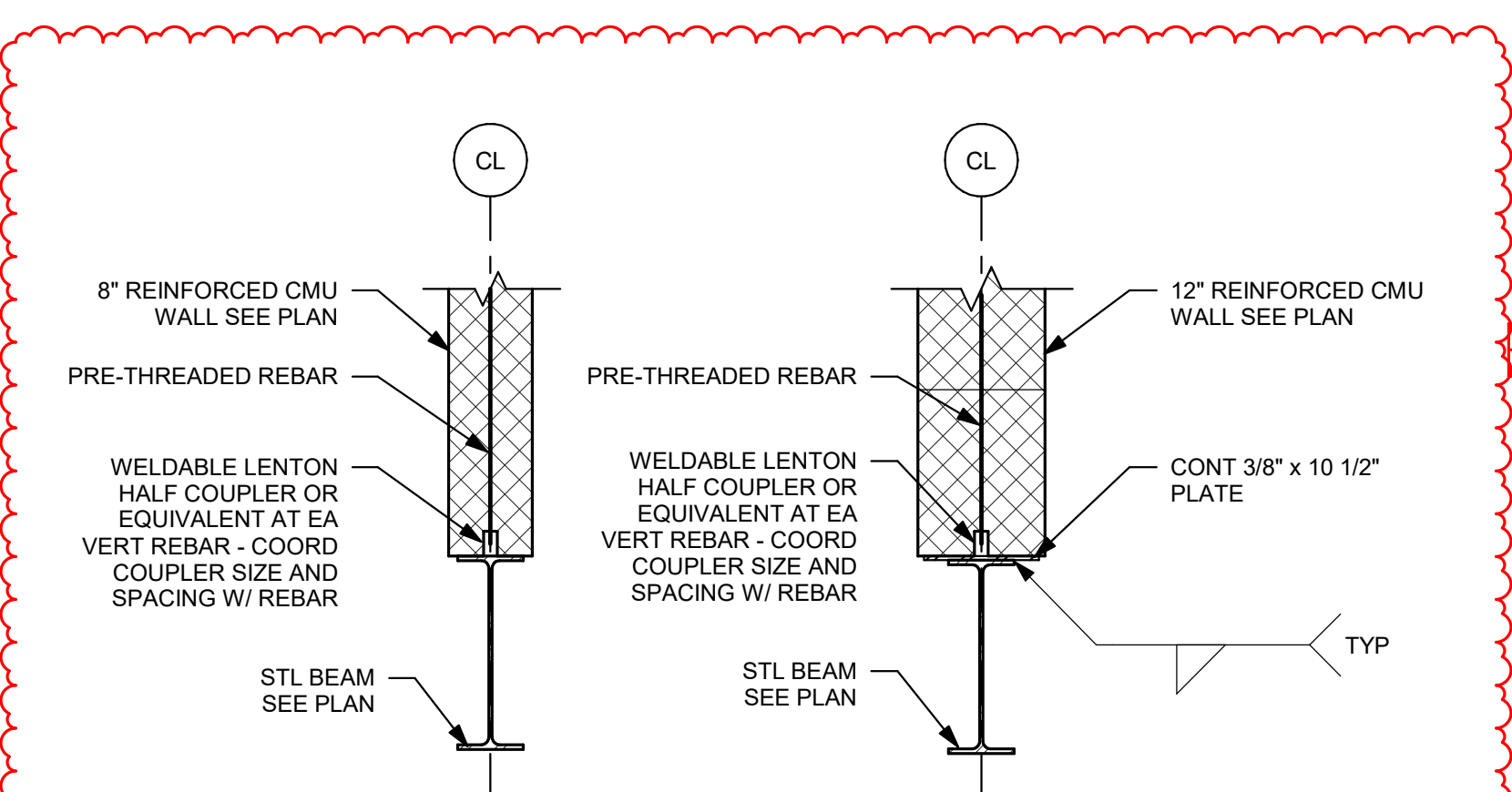
TYPICAL COLUMN SPLICE DETAIL

NOTES:

- SEE AISC STRUCTURAL STEEL MANUAL CASE X FOR INFORMATION NOT SHOWN.
- LIFTING AND ALIGNMENT CONNECTIONS TO BE DETAILED BY THE STEEL FABRICATOR.
- ALL LIFTING AND ALIGNMENT CONNECTIONS ARE TO BE REMOVED AND WELDS GROUND SMOOTH AFTER PERMANENT WELDING IS COMPLETE AND INSPECTED.

7

NO SCALE



BEAM SCHEDULE			
MASONRY OPENING	0' - 0" - 5' - 0"	5' - 1" - 8' - 0"	8' - 1" - 12' - 0"
8" CMU	W8x24	W10x30	W12x35
12" CMU	W8x24	W10x33	W12x50

**TYPICAL LINTEL SCHEDULE AT
LOAD BEARING MASONRY**

8

NO SCALE

9

NO SCALE

DRA

Drummay Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
Tel: 617.954.1702
www.dra.com

280 Charles Street
Studio 300
Waltham, MA
02453

Planning | Architecture | Interior Design

**NORTHEAST
METRO TECH**

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

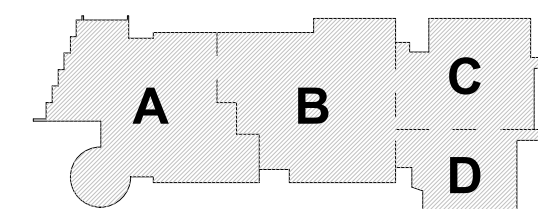
REVISION LIST

REV	DATE	DESCRIPTION
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

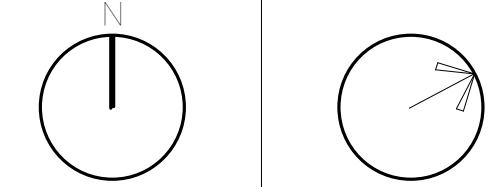
MSBA 90% CD
SUBMISSION

MAY 12, 2023



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



**TYPICAL
DETAILS**

Scale: 3/4" = 1'-0"

Job No.: 20202

Drawn By: EDG

Date: MAY 12, 2023

S0-0-9

DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

260 Charles Street
Studio 300
Waltham, MA
02453

Planning | Architecture | Interior Design
Tel: 617.954.1702
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd,
Wakefield, MA 01880



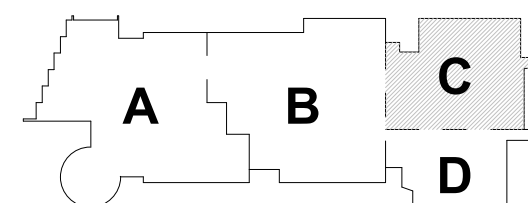
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST			
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1	
SS-S-2	4/21/2023	STRUCTURAL STEEL ADDENDUM 2	

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

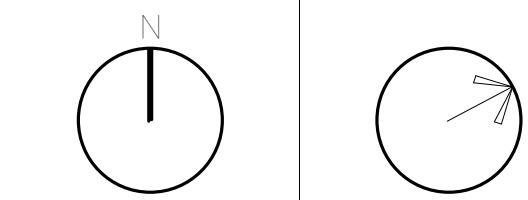
MAY 12, 2023



KEY PLAN

PROJECT NORTH

MAGNETIC NORTH



LOWER LEVEL FOUNDATION PLAN - AREA C

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

Job No.: 20202

Drawn By: EDG

Date: MAY 12, 2023

S1-1-0C

FOUNDATION NOTES:

- REFER TO GRADING DRAWINGS FOR PLAN AND GRADE ELEVATIONS. THE STRUCTURAL DRAWINGS USES A DATUM OF 100'-0" AT THE FIRST FLOOR LEVEL, EQUAL TO 163.50' ON THE SITE GRADING PLANS.
- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0.1, S0-0.2, S0-0.3, S0-0.4, S0-0.5, S0-0.6, S0-0.7 AND S0-0.8.
- F3 ETC., INDICATES A FOOTING TYPE, FOR SIZE OF FOOTING AND REINFORCEMENT SEE SCHEDULE ON THIS DRAWING.
- TOP OF FOOTING ELEVATION TO BE 3'-6" MINIMUM BELOW LOWEST ADJACENT FINISHED GRADE AT EXTERIOR CONDITIONS AND 2'-0" BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS. ALL OTHER TOP OF FOOTING ELEVATIONS ARE DENOTED AS THUS (X'-X") COMPUTED FROM A DATUM ELEVATION OF 100'-0" ON PLANS. CONTRACTOR TO COORDINATE AND VERIFY ALL TOP OF FOOTING ELEVATIONS WITH UNDERGROUND PLUMBING SUB-CONTRACTORS FIELD LAYOUT.
- ALL FOOTING ELEVATIONS NOTED ON PLAN ARE SHOWN ONLY TO ASSIST IN COORDINATION. ALL FOOTING ELEVATIONS MUST BE COORDINATED WITH STRUCTURAL REQUIREMENTS, TYPICAL DETAILS, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
- ALL FOOTINGS TO BE CENTERED UNDER COLUMNS UNLESS NOTED OTHERWISE.
- SF INDICATES A STEPPED FOOTING REFER TO DETAIL 1 ON DRAWING S0-0.2.
- C1 ETC., INDICATES A COLUMN TYPE, FOR SIZE OF COLUMNS AND BASE PLATES SEE SCHEDULE ON THIS DRAWING.
- BOTTOM OF BASE PLATE ELEVATION TO BE 1'-11" MINIMUM BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS, AND 1'-11" BELOW TOP OF CONCRETE SLAB AT EXTERIOR CONDITIONS. UNLESS NOTED OTHERWISE AS "X" REFER TO ARCHITECTURAL DRAWINGS FOR BRICK SHELF ELEVATIONS.
- FOR UNDER SLAB DRAINAGE AND WALL DRAINS, COORDINATE WITH ARCHITECTURAL, STRUCTURAL, CIVIL, AND PLUMBING DRAWINGS.
- INDICATES A DEPRESSIONED SLAB ON GRADE. REFER TO DETAILS 9 AND 10 ON DRAWING S0-0.2 COORDINATE ALL SLAB DEPRESSIONS WITH REQUIREMENTS ON ARCHITECTURAL DRAWINGS.
- FOR TYPICAL EXTERIOR DOOR DETAIL REFER TO DETAIL 5 ON DRAWING S0-0.8 AND RELEVANT SECTIONS.
- BF-1 ETC., INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0.5, S4-0.6, S4-0.7, S4-0.8, AND S4-0.9 FOR ADDITIONAL INFORMATION.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0.4 FOR REINFORCEMENT. DETAIL 6 ON DRAWING S0-0.5 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS AND DETAIL 7 ON DRAWING S4-0.5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- INDICATES CONCRETE PIER REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0.2.
- INDICATES UNDERGROUND UTILITY LINES PLUMBING THROUGH CONCRETE FOUNDATION WALL TYPICAL. COORDINATE FOOTING ELEVATION WITH PIPE INVERTS AND TYPICAL STRUCTURAL DETAILS.
- CONCRETE PIER REINFORCING PER DETAIL 5 ON DRAWING S0-0.2 IS TO BE PROVIDED FOR ALL CONCRETE WALLS SUPPORTING COLUMNS. HORIZONTAL WALL REINFORCING MUST REMAIN CONTINUOUS.

COLUMN SCHEDULE *		
MARK	SIZE	BASE PLATE SIZE
C1	HSS8x8x3/8	1' x 16' x 1'-4"
C2	HSS8x8x1/2	1' x 16' x 1'-4"
C3	HSS12x12x3/8	1' x 20' x 1'-8"
C4	HSS12x12x1/2	1' x 20' x 1'-8"
C5	HSS12x12x5/8	1' x 20' x 1'-8"
C6	HSS12.75x500	1' x 20' x 1'-8"
C7	HSS20x12x1/2	1 1/2' x 20' x 2'-4"
C8	HSS8x8x3/8	1' x 16' x 1'-0"
C9	HSS16x500	1 1/2' x 24' x 2'-0"
C10	HSS12x6x1/2	1 1/2' x 20' x 1'-2"
C11	HSS10x500	1' x 16' x 1'-6"
C12	HSS8x8x3/8	1' x 14' x 1'-2"
C13	HSS6x6x3/8	1' x 12' x 1'-2"

* BASE PLATE LENGTH AND WIDTH SPECIFIED IN SCHEDULE IS THE MINIMUM SIZE FOR A COLUMN THAT IS PART OF A BRACED FRAME. SEE FOUNDATION NOTE ABOVE AND REFER TO DETAILS ON DRAWING S4-0.8 AND S4-0.9 FOR ADDITIONAL INFORMATION.

* PROVIDE 4 - 1" DIA F1554-5581 ANCHOR RODS TYPICALLY. REFER TO DETAILS ON DRAWING S4-0.8 AND S4-0.9 FOR ADDITIONAL ANCHOR RODS FOR COLUMN RECEIVING BRACINGS.

FOOTING SCHEDULE F SERIES

MARK	SIZE	REINFORCEMENT
F4	4'-0" x 4'-0" x 2'-0"	6 - #5 BOT EA WAY
F5	5'-0" x 5'-0" x 2'-0"	7 - #5 BOT EA WAY
F6	6'-0" x 6'-0" x 2'-0"	8 - #5 BOT EA WAY
F7	7'-0" x 7'-0" x 2'-0"	9 - #5 BOT EA WAY
F8	8'-0" x 8'-0" x 3'-0"	10 - #5 BOT EA WAY
F9	9'-0" x 9'-0" x 3'-0"	11 - #5 BOT EA WAY
F10	10'-0" x 10'-0" x 3'-0"	12 - #5 BOT EA WAY
F11	11'-0" x 11'-0" x 3'-0"	13 - #10 BOT EA WAY
F12	12'-0" x 12'-0" x 4'-0"	14 - #10 BOT EA WAY
FA	SEE PLAN X 2'-0"	#8 @ 12" OC TOP AND BOT EA WAY

FOOTING SCHEDULE G SERIES

MARK	SIZE	REINFORCEMENT
G4	4'-0" x 4'-0" x 2'-0"	5 - #5 BOT EA WAY
G5	5'-0" x 5'-0" x 2'-0"	6 - #5 BOT EA WAY
G6	6'-0" x 6'-0" x 2'-0"	7 - #5 BOT EA WAY
G7	7'-0" x 7'-0" x 2'-0"	8 - #5 BOT EA WAY
G8	8'-0" x 8'-0" x 2'-0"	9 - #5 BOT EA WAY
G9	9'-0" x 9'-0" x 2'-0"	10 - #7 BOT EA WAY
G10	10'-0" x 10'-0" x 2'-0"	11 - #7 BOT EA WAY
G11	11'-0" x 11'-0" x 2'-0"	12 - #8 BOT EA WAY
G12	12'-0" x 12'-0" x 3'-0"	13 - #8 BOT EA WAY
G13	13'-0" x 13'-0" x 3'-0"	14 - #9 BOT EA WAY
G14	14'-0" x 14'-0" x 3'-0"	15 - #9 BOT EA WAY
G15	15'-0" x 15'-0" x 3'-0"	16 - #9 BOT EA WAY
GA	SEE PLAN X 2'-0"	#8 @ 12" OC TOP AND BOT EA WAY

T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING

BRACE FRAME KEY

0" TYP	WF	BF-X	INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL
0" TYP	BF-X	WF	INDICATES A BRACE FRAME ABOVE LEVEL
0" TYP	WF	BF-X	INDICATES A BRACE FRAME BELOW LEVEL

FIREPROOFING NOTES:

- STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- BRACED FRAME SHOWN ALONG COLUMN GRID AA BETWEEN GRIDS 6 AND 11, SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING. ALL OTHER EXPOSED TO VIEW BRACED FRAMES SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
Tel: 817.854.1702
www.dra.com

280 Charles Street
Studio 300
Waltham, MA
02453

Planning | Architecture | Interior Design

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



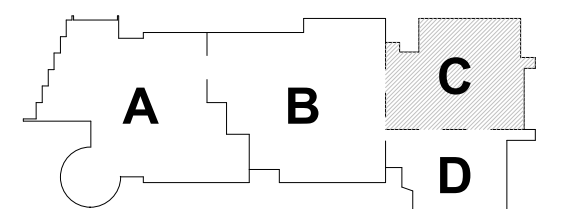
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST		
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1

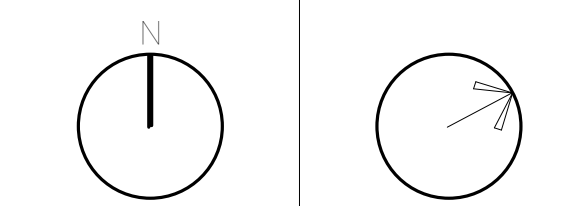
FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023



PROJECT NORTH
MAGNETIC NORTH



LOWER LEVEL FOUNDATION PLAN - AREA D

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S1-1-0D

FOUNDATION NOTES

- REFER TO GRADING DRAWINGS FOR PLAN AND GRADE ELEVATIONS. THE STRUCTURAL DRAWINGS USES A DATUM OF 100'-0" AT THE FIRST FLOOR LEVEL, EQUAL TO (163.50') ON THE SITE GRADING PLANS.
- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- ETC., INDICATES A FOOTING TYPE, FOR SIZE OF FOOTING AND REINFORCEMENT SEE SCHEDULE ON THIS DRAWING.
- TOP OF FOOTING ELEVATION TO BE 3'-6" MINIMUM BELOW LOWEST ADJACENT FINISHED GRADE AT EXTERIOR CONDITIONS AND 2'-0" BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS. ALL OTHER TOP OF FOOTING ELEVATIONS ARE DENOTED AS THUS (4'-1") COMPUTED FROM A DATUM ELEVATION OF 100'-0" ON PLANS. CONTRACTOR TO COORDINATE AND VERIFY ALL TOP OF FOOTING ELEVATIONS WITH UNDERGROUND PLUMBING SUB-CONTRACTORS FIELD LAYOUT.
- ALL FOOTING ELEVATIONS NOTED ON PLAN ARE SHOWN ONLY TO ASSIST IN COORDINATION. ALL FOOTING ELEVATIONS MUST BE COORDINATED WITH STRUCTURAL REQUIREMENTS, TYPICAL DETAILS, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
- ALL FOOTINGS TO BE CENTERED UNDER COLUMNS UNLESS NOTED OTHERWISE.
- SF INDICATES A STEPPED FOOTING REFER TO DETAIL 1 ON DRAWING S0-0-2.
- C1 ETC., INDICATES A COLUMN TYPE, FOR SIZE OF COLUMNS AND BASE PLATES SEE SCHEDULE ON THIS DRAWING.
- BOTTOM OF BASE PLATE ELEVATION TO BE 1'-11" MINIMUM BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS, AND 0'-11" BELOW TOP OF CONCRETE SLAB AT EXTERIOR CONDITIONS. UNLESS NOTED OTHERWISE AS (X'-X") REFER TO ARCHITECTURAL DRAWINGS FOR BRICK SHELF ELEVATIONS.
- FOR UNDER SLAB DRAINAGE AND WALL DRAINS, COORDINATE WITH ARCHITECTURAL, STRUCTURAL, CIVIL, AND PLUMBING DRAWINGS.
- INDICATES A DEPRESSED SLAB ON GRADE. REFER TO DETAILS 9 AND 10 ON DRAWING S0-0-2 COORDINATE ALL SLAB DEPRESSIONS WITH REQUIREMENTS ON ARCHITECTURAL DRAWINGS.
- FOR TYPICAL EXTERIOR DOOR DETAIL REFER TO DETAIL 6 ON DRAWING S0-0-8 AND RELEVANT SECTIONS.
- BF-1 ETC., INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0-5, S4-0-6, S4-0-7, S4-0-8, AND S4-0-9 FOR ADDITIONAL INFORMATION.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0-4 FOR REINFORCEMENT. DETAIL 5 ON DRAWING S0-0-5 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS. AND DETAIL 7 ON DRAWING S0-0-5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL. FOR NON-STRUCTURAL WALLS, REFER TO RELEVANT SECTIONS FOR CONNECTIONS FROM WALLS TO THE STRUCTURE.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- INDICATES CONCRETE PIER REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0-2.
- INDICATES UNDERGROUND UTILITY LINES PLUMBING THROUGH CONCRETE FOUNDATION WALLS. COORDINATE FOOTING ELEVATION WITH PIPE INVERTS AND TYPICAL STRUCTURAL DETAILS.
- CONCRETE PIER REINFORCING PER DETAIL 5 ON DRAWING S0-0-2 IS TO BE PROVIDED FOR ALL CONCRETE WALLS SUPPORTING COLUMNS. HORIZONTAL WALL REINFORCING MUST REMAIN CONTINUOUS.

COLUMN SCHEDULE *		
MARK	SIZE	BASE PLATE SIZE
C1	HSS8x8x3/8	1' x 16' x 1' - 4"
C2	HSS8x8x1/2	1' x 16' x 1' - 4"
C3	HSS12x12x3/8	1' x 20' x 1' - 8"
C4	HSS12x12x1/2	1' x 20' x 1' - 8"
C5	HSS12x12x5/8	1' x 20' x 1' - 8"
C6	HSS12.75x6.500	1' x 20' x 1' - 8"
C7	HSS20x12x1/2	1 1/2' x 20' x 2' - 4"
C8	HSS8x4x3/8	1' x 16' x 1' - 0"
C9	HSS16x6.500	1 1/2' x 24' x 2' - 0"
C10	HSS12x6x1/2	1 1/2' x 20' x 1' - 2"
C11	HSS10x6.500	1' x 18' x 1' - 6"
C12	HSS6x6x3/8	1' x 14' x 1' - 2"
C13	HSS6x4x3/8	1' x 12' x 1' - 2"

* BASE PLATE LENGTH AND WIDTH SPECIFIED IN SCHEDULE IS THE MINIMUM SIZE FOR A COLUMN THAT IS PART OF A BRACED FRAME. SEE FOUNDATION NOTE ABOVE AND REFER TO DETAILS ON DRAWING S4-0-8 AND S4-0-9 FOR ADDITIONAL INFORMATION.

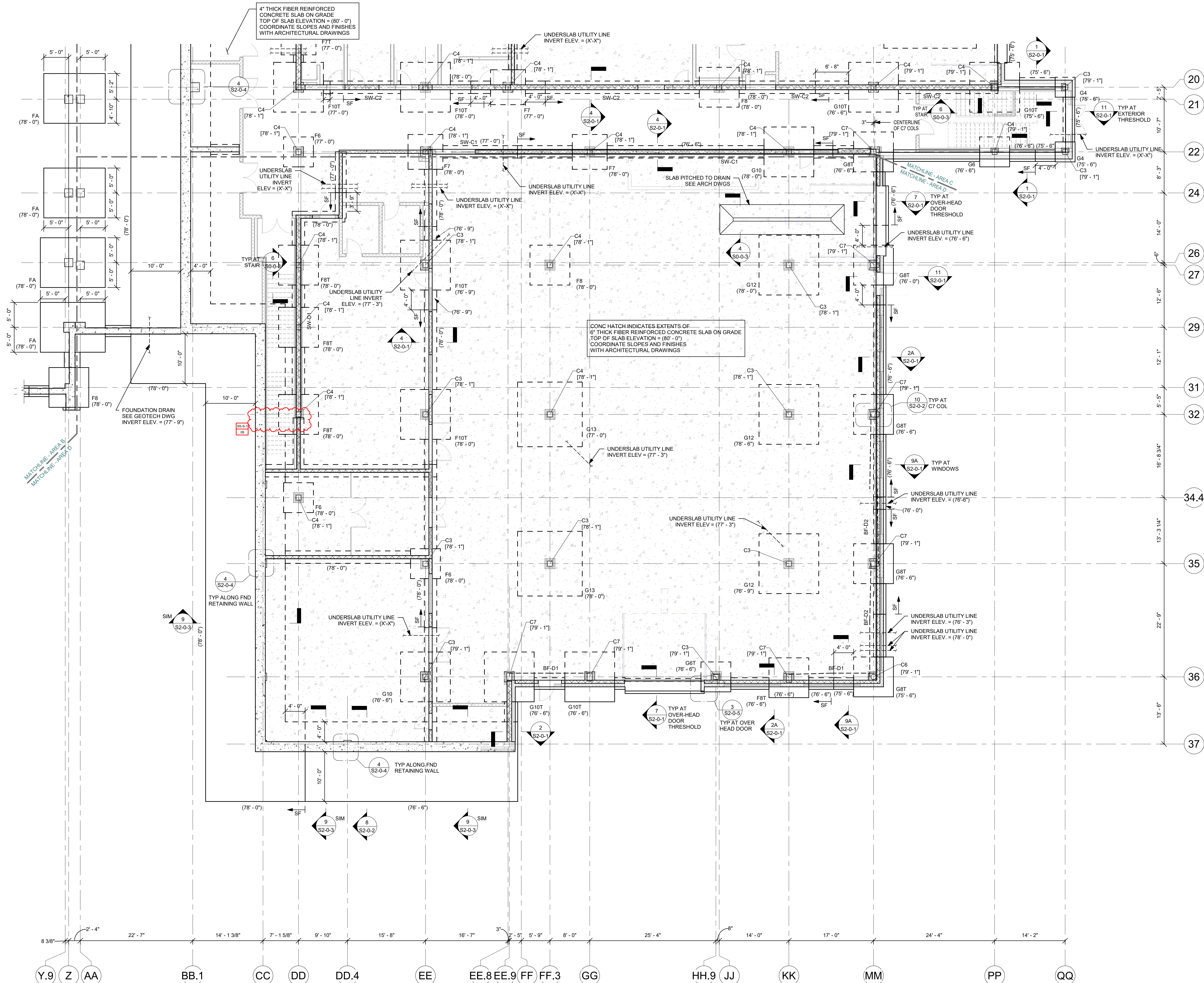
* PROVIDE 4" - 1" DIA F1554-5551 ANCHOR RODS TYPICALLY REFER TO DETAILS ON DRAWING S4-0-8 AND S4-0-9 FOR ADDITIONAL ANCHOR RODS FOR COLUMN RECEIVING BRACING.

FOOTING SCHEDULE F SERIES		
MARK	SIZE	REINFORCEMENT
F4	4'-0" x 4'-0" x 2'-0"	6 - #5 BOT EA WAY
F5	5'-0" x 5'-0" x 2'-0"	7 - #5 BOT EA WAY
F6	6'-0" x 6'-0" x 2'-0"	8 - #6 BOT EA WAY
F7	7'-0" x 7'-0" x 2'-0"	9 - #6 BOT EA WAY
F8	8'-0" x 8'-0" x 3'-0"	10 - #8 BOT EA WAY
F9	9'-0" x 9'-0" x 3'-0"	11 - #9 BOT EA WAY
F10	10'-0" x 10'-0" x 3'-6"	12 - #9 BOT EA WAY
F11	11'-0" x 11'-0" x 3'-6"	13 - #10 BOT EA WAY
F12	12'-0" x 12'-0" x 4'-0"	14 - #10 BOT EA WAY
FA	SEE PLAN x 2' - 0"	#8 @ 12" OC TOP AND BOT EA WAY

T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING

FOOTING SCHEDULE G SERIES		
MARK	SIZE	REINFORCEMENT
G4	4'-0" x 4'-0" x 2'-0"	5 - #5 BOT EA WAY
G5	5'-0" x 5'-0" x 2'-0"	6 - #5 BOT EA WAY
G6	6'-0" x 6'-0" x 2'-0"	7 - #6 BOT EA WAY
G7	7'-0" x 7'-0" x 2'-0"	8 - #6 BOT EA WAY
G8	8'-0" x 8'-0" x 2'-0"	9 - #6 BOT EA WAY
G9	9'-0" x 9'-0" x 2'-6"	10 - #7 BOT EA WAY
G10	10'-0" x 10'-0" x 2'-6"	11 - #7 BOT EA WAY
G11	11'-0" x 11'-0" x 2'-6"	12 - #8 BOT EA WAY
G12	12'-0" x 12'-0" x 3'-0"	13 - #8 BOT EA WAY
G13	13'-0" x 13'-0" x 3'-0"	14 - #9 BOT EA WAY
G14	14'-0" x 14'-0" x 3'-0"	15 - #9 BOT EA WAY
G15	15'-0" x 15'-0" x 3'-0"	16 - #9 BOT EA WAY
GA	SEE PLAN x 2' - 0"	#8 @ 12" OC TOP AND BOT EA WAY

T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING



- ### FIREPROOFING NOTES:
- STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 - EXPOSED TO VIEW BRACED FRAMES SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
 - COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

BRACE FRAME KEY		
0" TYP	WF	BF-X
0" TYP	BF-X	WF
0" TYP	WF	BF-X
0" TYP	BF-X	WF

INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL

INDICATES A BRACE FRAME ABOVE LEVEL

INDICATES A BRACE FRAME BELOW LEVEL

DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

260 Charles Street
Studio 300
Waltham, MA
02453

Planning | Architecture | Interior Design
Tel: 617.954.1702
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

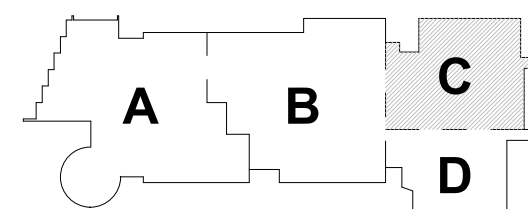
REVISION LIST

SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1
--------	-----------	--------------------------------

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

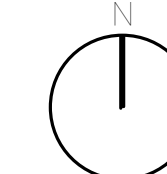
MSBA 90% CD
SUBMISSION

MAY 12, 2023

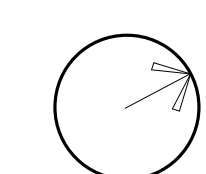


KEY PLAN

PROJECT NORTH



MAGNETIC NORTH



MEZZANINE FLOOR FRAMING PLAN - AREA C

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

Job No.: 20202

Drawn By: EDG

Date: MAY 12, 2023

S1-1-0MC

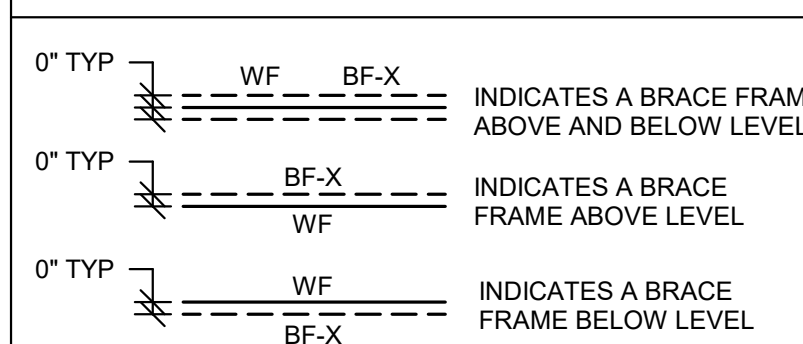
FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. PITCH ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- BF-1 ETC., INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0-1, S4-0-2, S4-0-3, S4-0-4, S4-0-5, S4-0-6, S4-0-7 AND S4-0-8 FOR ADDITIONAL INFORMATION.
- [XX] INDICATES THE NUMBER OF 3/4" DIAMETER x 4 1/4" LONG HEADSTUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 9 ON DRAWING S0-0-6.
- INDICATES A 5/16" FILLET WELD ALL AROUND (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0-7.
- <X'> INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 5-1/4" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 3 1/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6x6 - W2.1xW2.1 WWR.
- 1 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE B, GALVANIZED STEEL ROOF DECK.
- 3" NA INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE NA, GALVANIZED ACOUSTIC STEEL ROOF DECK.
- 4" LW INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6x6 - W2.1xW2.1 WWR.
- FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS FOR FRAMING INFORMATION. REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-0-8.
- 6" HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6". REINFORCE WITH 6x6 - W2.1xW2.1 WWR. REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0-7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA x 5' LONG HEADED STUDS.
- INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING S0-0-8 AND DETAIL 1 ON DRAWING S0-0-4. FOR DECKING SUPPORT, REFER TO DETAIL 5 ON DRAWING S0-0-7. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- WF INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING S0-0-7.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0-4 FOR REINFORCEMENT. DETAIL 6 ON DRAWING S0-0-3 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS. AND DETAIL 7 ON DRAWING S0-0-5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 8" x 2" PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- 10" x 2" PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- WF INDICATES A SPLICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPLICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-0-6.
- 9/16" INDICATES SPAN DIRECTION OF 9/16" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- XXXXX INDICATES OPENING IN WEB OF STEEL BEAM FOR MICH ELECT PLUMB/ FIRE PROTECT/ ETC COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 6 ON S0-0-6 FOR ADDITIONAL INFORMATION.
- 3" INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE N, GALVANIZED STEEL ROOF DECK.

FIREPROOFING NOTES:

- STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- BRACED FRAME SHOWN ALONG COLUMN GRID AA BETWEEN GRIDS 6 AND 11, SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING. ALL OTHER EXPOSED TO VIEW BRACED FRAMES SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

BRACE FRAME KEY



FRAMING ELEVATION NOTES:

- TYPICAL TOP-OF-CONCRETE TOPPING ELEVATION = (8'-6") AT THE MEZZANINE FLOOR LEVELS, IN THE AREAS BOUNDED BY GRIDS (DD) - (EE) AND (G) - (H), AND GRIDS (DD) - (FF) AND (I) - (J).
- FRAMING ELEVATIONS ARE BASED ON TYPICAL BOTTOM-OF-PLANK ELEVATION = (8'-6"), SHOWN ON THE ARCHITECTURAL DRAWINGS.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.

DRA

DrummeY Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
Tel: 817.854.1702
www.dra.com

260 Charles Street
Studio 300
Waltham, MA
02453

Planning | Architecture | Interior Design

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



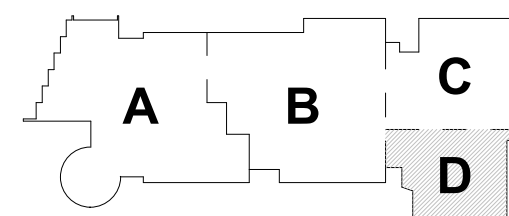
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST		
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

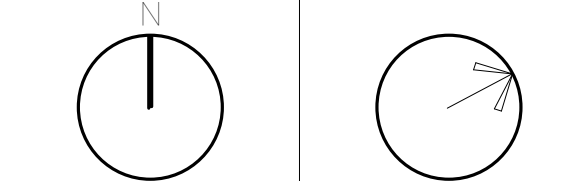
MSBA 90% CD
SUBMISSION

MAY 12, 2023



KEY PLAN

PROJECT NORTH
MAGNETIC NORTH



MEZZANINE FLOOR FRAMING PLAN - AREA D

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

Job No.: 20202

Drawn By: EDG

Date: MAY 12, 2023

S1-1-0MD

FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. FIT-ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- BF-1 ETC... INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0-1, S4-0-2, S4-0-3, S4-0-4, S4-0-5, S4-0-6, S4-0-7 AND S4-0-8 FOR ADDITIONAL INFORMATION.
- [XX] INDICATES THE NUMBER OF 3/4" DIAMETER x 4 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 9 ON DRAWING S0-0-6.
- INDICATES A 5/16" FILLET WELD ALL AROUND (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0-7.
- < X' > INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 5'-1/4" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 3 1/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6x6 - W2.1W2.1 WWR.
- 1'-1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE B, GALVANIZED STEEL ROOF DECK.
- 3" INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE NA, GALVANIZED ACOUSTIC STEEL ROOF DECK.
- 4" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6x6 - W2.1W2.1 WWR.
- FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, REFER TO DETAILS 1, 2, AND 3 ON DRAWING S0-0-6.
- HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6". REINFORCE WITH 6x6 - W2.1W2.1 WWR. REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0-7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA x 5' LONG HEADED STUDS.
- INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING S0-0-8 AND DETAIL 1 ON DRAWING S0-0-8 FOR DECKING SUPPORT. REFER TO DETAIL 8 ON DRAWING S0-0-7. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- WF INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING S0-0-7.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0-4 FOR REINFORCEMENT, DETAIL 6 ON DRAWING S0-0-5 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 7 ON DRAWING S0-0-5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 8" x 2" PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- 10" x 2" PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- WF INDICATES A SPLICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPLICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-0-6.
- 0/16" INDICATES SPAN DIRECTION OF 9/16" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- XX'xXX" INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECT/PLUMB/FIRE PROTECT/ETC COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 6 ON S0-0-6 FOR ADDITIONAL INFORMATION.
- 3" INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE N, GALVANIZED STEEL ROOF DECK.

FRAMING ELEVATION NOTES:

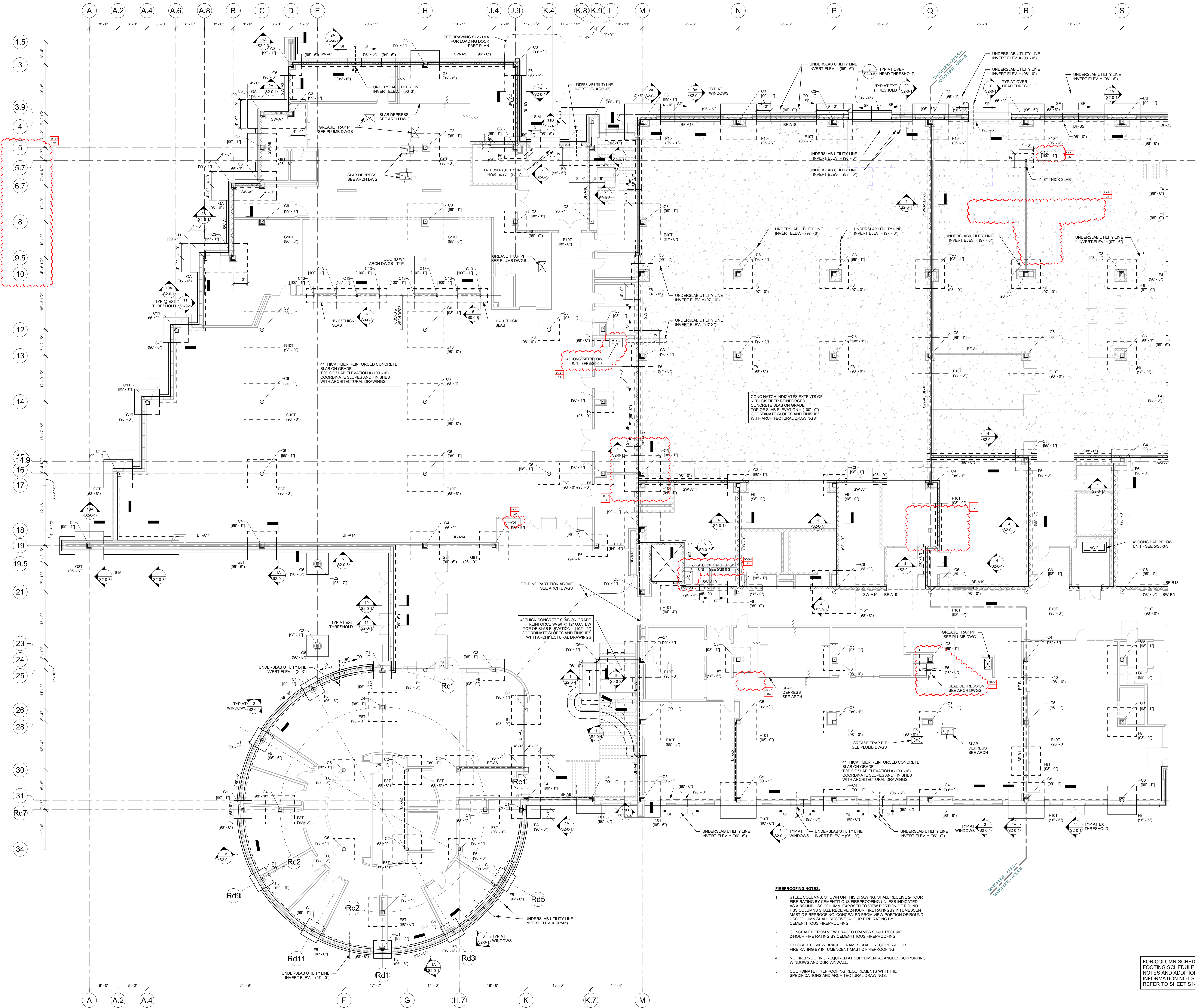
- TYPICAL TOP-OF-CONCRETE TOPPING ELEVATION = (89' - 6") AT THE MEZZANINE FLOOR LEVELS. IN THE AREA BOUNDED BY GRID (CC) - (EE) AND (22) - (36).
- FRAMING ELEVATIONS ARE BASED ON TYPICAL BOTTOM-OF-PLANK ELEVATION = (88' - 6"), SHOWN ON THE ARCHITECTURAL DRAWINGS.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.

FIREPROOFING NOTES:

- STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

BRACE FRAME KEY

- | | | | |
|--------|------|------|---|
| 0' TYP | WF | BF-X | INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL |
| 0' TYP | BF-X | WF | INDICATES A BRACE FRAME ABOVE LEVEL |
| 0' TYP | WF | BF-X | INDICATES A BRACE FRAME BELOW LEVEL |



DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074
Tel: 617.954.1702
www.dra.com

280 Charles Street
Studio 300
Waltham, MA 02453
Tel: 617.954.1702
www.dra.com

Planning | Architecture | Interior Design

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

SS-S-1 4/14/2023 STRUCTURAL STEEL ADDENDUM 1

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023

KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

FIRST FLOOR
FOUNDATION
PLAN - AREA A

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S1-1-1A

FOR COLUMN SCHEDULE, FOOTING SCHEDULE, PLAN NOTES AND ADDITIONAL INFORMATION NOT SHOWN, REFER TO SHEET S1-1-1B

DRA

Drumsey Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT
06074

260 Charles Street
Studio 300
Waltham, MA
02453

Planning | Architecture | Interior Design
Tel: 617.954.1702
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

- FOUNDATION NOTES:**
- REFER TO GRADING DRAWINGS FOR PLAN AND GRADE ELEVATIONS. THE STRUCTURAL DRAWINGS USE A DATUM OF 100'-0" AT THE FIRST FLOOR LEVEL, EQUAL TO (163.50) ON THE SITE GRADING PLANS.
 - FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0.1, S0-0.2, S0-0.3, S0-0.4, S0-0.5, S0-0.6, S0-0.7 AND S0-0.8.
 - F3 ETC. INDICATES A FOOTING TYPE. FOR SIZE OF FOOTING AND REINFORCEMENT SEE SCHEDULE ON THIS DRAWING.
 - TOP OF FOOTING ELEVATION TO BE 2'-6" MINIMUM BELOW LOWEST ADJACENT FINISHED GRADE AT EXTERIOR CONDITIONS AND 2'-0" BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS. ALL OTHER TOP OF FOOTING ELEVATIONS ARE DENOTED AS THUS (X'-X") COMPUTED FROM A DATUM ELEVATION OF 100'-0" ON PLANS. CONTRACTOR TO COORDINATE AND VERIFY ALL TOP OF FOOTING ELEVATIONS WITH UNDERGROUND PLUMBING SUB-CONTRACTORS FIELD LAYOUT.
 - ALL FOOTING ELEVATIONS NOTED ON PLAN ARE SHOWN ONLY TO ASSIST IN COORDINATION. ALL FOOTING ELEVATIONS MUST BE COORDINATED WITH STRUCTURAL REQUIREMENTS, TYPICAL DETAILS, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
 - ALL FOOTINGS TO BE CENTERED UNDER COLUMNS UNLESS NOTED OTHERWISE.
 - SF INDICATES A STEPPED FOOTING REFER TO DETAIL 1 ON DRAWING S0-0.2.
 - C1 ETC. INDICATES A COLUMN TYPE. FOR SIZE OF COLUMNS AND BASE PLATES SEE SCHEDULE ON THIS DRAWING.
 - BOTTOM OF BASE PLATE ELEVATION TO BE 1'-11" MINIMUM BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS, AND 0'-11" BELOW TOP OF CONCRETE SLAB AT EXTERIOR CONDITIONS. UNLESS NOTED OTHERWISE AS (XX'-XX") REFER TO ARCHITECTURAL DRAWINGS FOR BRICK SHELF ELEVATIONS.
 - FOR UNDER SLAB DRAINAGE AND WALL DRAINS, COORDINATE WITH ARCHITECTURAL, STRUCTURAL, CIVIL, AND PLUMBING DRAWINGS.
 - INDICATES A DEPRESSED SLAB ON GRADE. REFER TO DETAILS 9 AND 10 ON DRAWING S0-0.2 COORDINATE ALL SLAB DEPRESSIONS WITH REQUIREMENTS ON ARCHITECTURAL DRAWINGS.
 - FOR TYPICAL EXTERIOR DOOR DETAIL REFER TO DETAIL 6 ON DRAWING S0-0.8 AND RELEVANT SECTIONS.
 - BF-1 ETC. INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0.3, S4-0.4, S4-0.7, S4-0.8, AND S4-0.9 FOR ADDITIONAL INFORMATION.
 - INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0.4 FOR REINFORCEMENT. DETAIL 6 ON DRAWING S0-0.4 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS AND DETAIL 7 ON DRAWING S0-0.5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF STEEL WALLS TO THE STRUCTURE.
 - FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
 - INDICATES CONCRETE PIER REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0.2.
 - INDICATES UNDERGROUND UTILITY LINES PLUMBING THROUGH CONCRETE. REFER TO DETAIL 5 ON DRAWING S0-0.2 TO BE PROVIDED FOR ALL CONCRETE WALLS SUPPORTING COLUMNS. HORIZONTAL WALL REINFORCING MUST BE CONTINUOUS.

COLUMN SCHEDULE *

MARK	SIZE	BASE PLATE SIZE
C1	HSS8x8x3/8	1' x 16' x 1'-4"
C2	HSS8x8x1/2	1' x 16' x 1'-4"
C3	HSS12x12x3/8	1' x 20' x 1'-8"
C4	HSS12x12x1/2	1' x 20' x 1'-8"
C5	HSS12x12x5/8	1' x 20' x 1'-8"
C6	HSS12.75x12.75x5/8	1' x 20' x 1'-8"
C7	HSS20x12x1/2	1 1/2' x 20' x 2'-4"
C8	HSS8x4x3/8	1' x 16' x 1'-0"
C9	HSS16x10x5/8	1 1/2' x 24' x 2'-0"
C10	HSS12x6x1/2	1 1/2' x 20' x 1'-2"
C11	HSS10x10x5/8	1' x 16' x 1'-6"
C12	HSS8x6x3/8	1' x 14' x 1'-2"
C13	HSS8x4x3/8	1' x 12' x 1'-2"

* BASE PLATE LENGTH AND WIDTH SPECIFIED IN SCHEDULE IS THE MINIMUM SIZE FOR A COLUMN THAT IS PART OF A BRACED FRAME. SEE FOUNDATION NOTE ABOVE AND REFER TO DETAILS ON DRAWING S4-0.8 AND S4-0.9 FOR ADDITIONAL INFORMATION.

* PROVIDE 4-1" DIA F1554-5581 ANCHOR RODS TYPICALLY REFER TO DETAILS ON DRAWING S4-0.8 AND S4-0.9 FOR ADDITIONAL ANCHOR RODS FOR COLUMN RECEIVING BRACING.

FOOTING SCHEDULE F SERIES

MARK	SIZE	REINFORCEMENT
F4	4'-0" x 4'-0" x 2'-0"	6-#5 BOT EA WAY
F5	5'-0" x 5'-0" x 2'-0"	7-#5 BOT EA WAY
F6	6'-0" x 6'-0" x 2'-0"	8-#6 BOT EA WAY
F7	7'-0" x 7'-0" x 2'-0"	9-#6 BOT EA WAY
F8	8'-0" x 8'-0" x 3'-0"	10-#8 BOT EA WAY
F9	9'-0" x 9'-0" x 3'-0"	11-#9 BOT EA WAY
F10	10'-0" x 10'-0" x 3'-0"	12-#9 BOT EA WAY
F11	11'-0" x 11'-0" x 3'-0"	13-#10 BOT EA WAY
F12	12'-0" x 12'-0" x 4'-0"	14-#10 BOT EA WAY
FA	SEE PLAN x 2'-0"	#8 @ 12" OC TOP AND BOT EA WAY

T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING

FOOTING SCHEDULE Q SERIES

MARK	SIZE	REINFORCEMENT
G4	4'-0" x 4'-0" x 2'-0"	5-#5 BOT EA WAY
G5	5'-0" x 5'-0" x 2'-0"	6-#5 BOT EA WAY
G6	6'-0" x 6'-0" x 2'-0"	7-#6 BOT EA WAY
G7	7'-0" x 7'-0" x 2'-0"	8-#6 BOT EA WAY
G8	8'-0" x 8'-0" x 2'-0"	9-#6 BOT EA WAY
G9	9'-0" x 9'-0" x 2'-0"	10-#7 BOT EA WAY
G10	10'-0" x 10'-0" x 2'-0"	11-#7 BOT EA WAY
G11	11'-0" x 11'-0" x 2'-0"	12-#8 BOT EA WAY
G12	12'-0" x 12'-0" x 3'-0"	13-#9 BOT EA WAY
G13	13'-0" x 13'-0" x 3'-0"	14-#9 BOT EA WAY
G14	14'-0" x 14'-0" x 3'-0"	15-#9 BOT EA WAY
G15	15'-0" x 15'-0" x 3'-0"	16-#9 BOT EA WAY
GA	SEE PLAN x 2'-0"	#8 @ 12" OC TOP AND BOT EA WAY

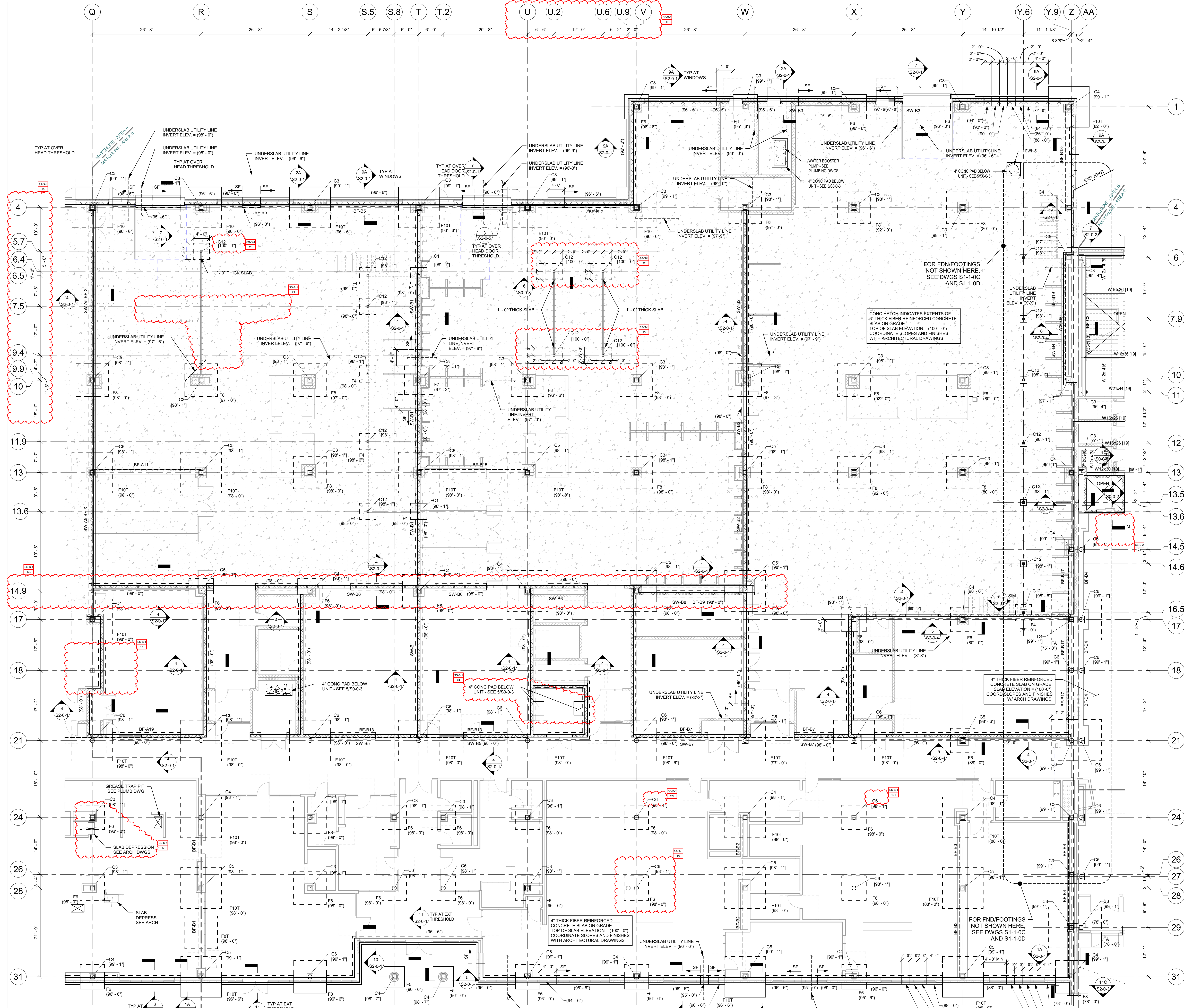
T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING

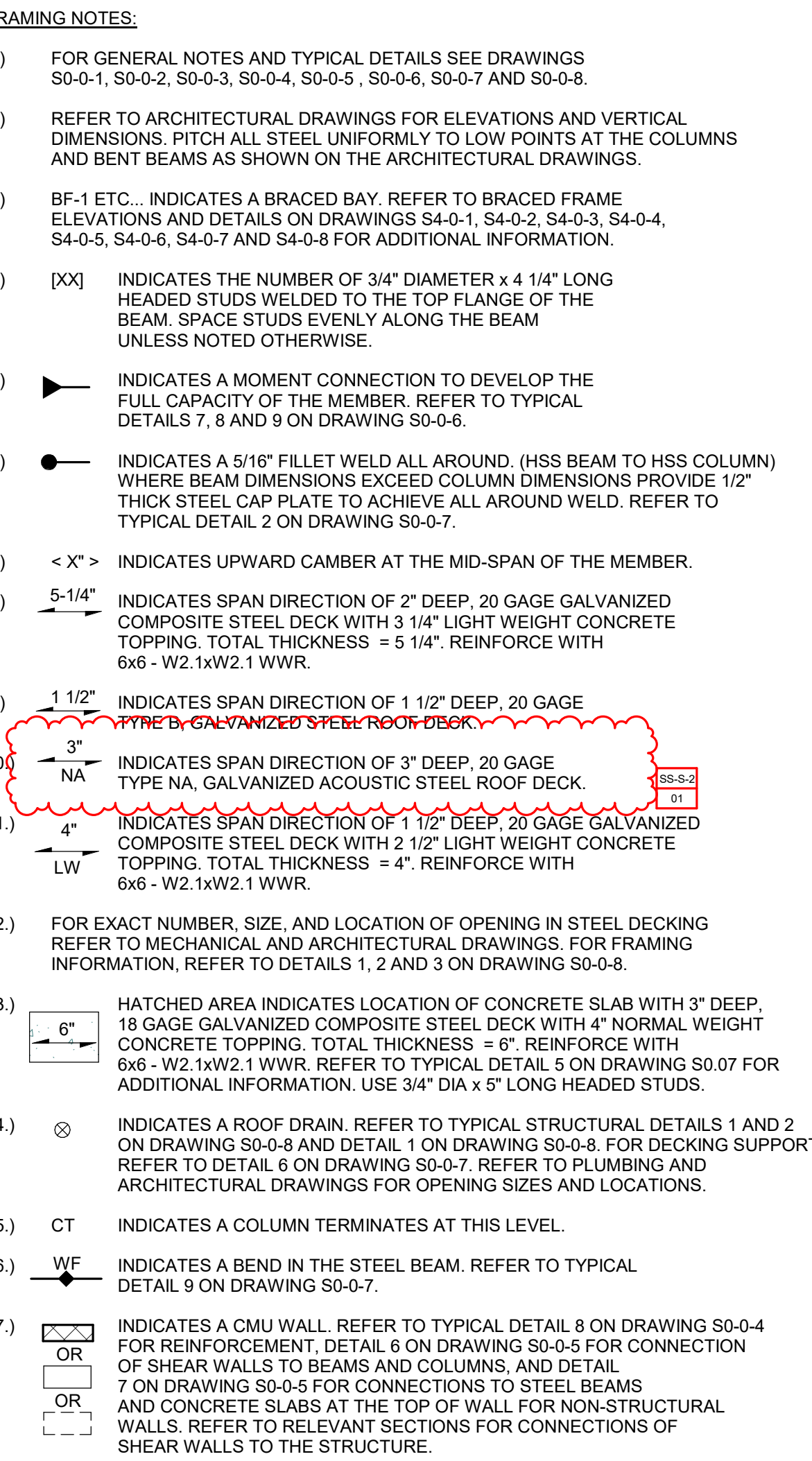
BRACE FRAME KEY

0" TYP	WF	BF-X	INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL
0" TYP	WF	BF-X	INDICATES A BRACE FRAME ABOVE LEVEL
0" TYP	WF	BF-X	INDICATES A BRACE FRAME BELOW LEVEL

FIREPROOFING NOTES:

- STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- NO FIREPROOFING REQUIRED AT COLUMNS AT GRIDS Y-10-6.5, Y-11-6.5, Y-10-9.2, AND Y-11-9.2 OR AT THE HSS TUBES FRAMING INTO THEM.
- STEEL COLUMNS SUPPORTING THE PLYWOOD MEZZANINES ALONG COLUMN GRIDS S.5 AND T.1 AND GRIDS Y.6 SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- NO FIREPROOFING REQUIRED AT SUPPLEMENTAL ANGLES SUPPORTING WINDOWS AND CURTAINWALLS.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.





FOOTING SCHEDULE F SERIES		
MARK	SIZE	REINFORCEMENT
F4	4'-0" x 4'-0" x 2'-0"	6- #5 BOT EA WAY
F5	5'-0" x 5'-0" x 2'-0"	7- #5 BOT EA WAY
F6	6'-0" x 6'-0" x 2'-6"	8- #6 BOT EA WAY
F7	7'-0" x 7'-0" x 2'-6"	9- #6 BOT EA WAY
F8	8'-0" x 8'-0" x 3'-0"	10- #8 BOT EA WAY
F9	9'-0" x 9'-0" x 3'-0"	11- #9 BOT EA WAY
F10	10'-0" x 10'-0" x 3'-6"	12- #9 BOT EA WAY
F11	11'-0" x 11'-0" x 3'-6"	13- #10 BOT EA WAY
F12	12'-0" x 12'-0" x 4'-0"	14- #10 BOT EA WAY
FA	SEE PLAN X-2	#8 @ 12"OC TOP AND BOT EA WAY

T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING

1. STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIBERPOOFING UNLESS INDICATED AS A ROUND HSS COLUMN OR BUILT-UP COLUMN ALONG COLUMN GRID BB. 1. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIBERPOOFING. ROUND HSS COLUMNS ALONG GRID BB 1 SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.

2. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING.

3. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.

4. CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.

5. EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.

6. AT STAIRS 4, 6, AND 7, ALL EXPOSED TO VIEW BEAMS AND HSS TUBES SUPPORTING STAIR LANDINGS AND STRINGERS SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING. NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES SUPPORTING ONLY CURTAINWALL.

7. NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES LOCATED AT THE VOCATIONAL OVERHEAD DOORS.

8. NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES LOCATED AT STOREFRONT, CURTAINWALL, AND FIBERGLASS PANEL HEADS.

9. COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

SEE TYPICAL DETAIL S AND BN-R-04 FOR ADDITIONAL INFORMATION.
INDICATES SPAN DIRECTION OF 3' DEEP 20 GAUGE TYPE M GALVANIZED STEEL ROOF DECK.

BRACE FRAME KEY

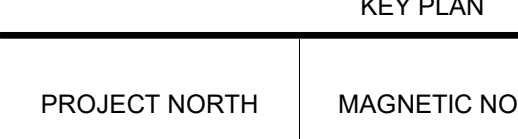
0" TYP	WF BF-X	INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL
0" TYP	BF-X	INDICATES A BRACE FRAME ABOVE LEVEL
0" TYP	WF	
0" TYP	WF BF-X	INDICATES A BRACE FRAME BELOW LEVEL

BRACE FRAME KEY		
0" TYP		INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL
0" TYP		INDICATES A BRACE FRAME ABOVE LEVEL
0" TYP		INDICATES A BRACE FRAME BELOW LEVEL

EDG
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MAY 12, 2023



Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

280 Charles Street
Studio 300
Waltham, MA
02453

Planning | Architecture | Interior Design
Tel: 617.864.1100
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0.1, S0-0.2, S0-0.3, S0-0.4, S0-0.5, S0-0.6, S0-0.7 AND S0-0.8.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. PITCH ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- BF-1 ETC. INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0.1, S4-0.2, S4-0.3, S4-0.4, S4-0.5, S4-0.6, S4-0.7 AND S4-0.8 FOR ADDITIONAL INFORMATION.
- [XX] INDICATES THE NUMBER OF 3/4" DIAMETER x 4 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 9 ON DRAWING S0-0.6.
- INDICATES A 5/16" FILLET WELD ALL AROUND. (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0.7.
- < X > INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 5'-14" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 3 1/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6x6 - W2 1XW2.1 WWR.
- 1 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE N, GALVANIZED STEEL ROOF DECK.
- 3" INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE NA, GALVANIZED ACOUSTIC STEEL ROOF DECK.
- 4" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6x6 - W2 1XW2.1 WWR.
- FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-0.8.
- HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6". REINFORCE WITH 6x6 - W2 1XW2.1 WWR. REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0.7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA x 5' LONG HEADED STUDS.
- INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING S0-0.8 AND DETAIL 1 ON DRAWING S0-0.8. FOR DECKING SUPPORT, REFER TO DETAIL 6 ON DRAWING S0-0.7. REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- WF INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING S0-0.7.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0.4 FOR REINFORCEMENT. DETAIL 6 ON DRAWING S0-0.4 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 7 ON DRAWING S0-0.5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 8" x 2" PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- 10" x 2" PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- WF INDICATES A SPICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-0.6.
- 9/16" INDICATES SPAN DIRECTION OF 8 1/8" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- XX'XX" INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECTRICAL/FIRE PROTECT/ETC COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 6 ON S0-0.4 FOR ADDITIONAL INFORMATION.
- 3" INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE N, GALVANIZED STEEL ROOF DECK.

COLUMN SCHEDULE *		
MARK	SIZE	BASE PLATE SIZE
C1	HSS8x8x3/8	1" x 16" x 1' - 4"
C2	HSS8x8x1/2	1" x 16" x 1' - 4"
C3	HSS12x12x3/8	1" x 20" x 1' - 8"
C4	HSS12x12x1/2	1" x 20" x 1' - 8"
C5	HSS12x12x5/8	1" x 20" x 1' - 8"
C6	HSS12x12x5/8	1" x 20" x 1' - 8"
C7	HSS20x12x1/2	1 1/2" x 20" x 2' - 4"
C8	HSS8x4x3/8	1" x 16" x 1' - 0"
C9	HSS16x6.500	1 1/2" x 24" x 2' - 0"
C10	HSS12x6x1/2	1 1/2" x 20" x 1' - 2"
C11	HSS10x6.500	1" x 18" x 1' - 8"
C12	HSS6x6x3/8	1" x 14" x 1' - 2"
C13	HSS6x4x3/8	1" x 12" x 1' - 2"

* BASE PLATE LENGTH AND WIDTH SPECIFIED IN SCHEDULE IS THE MINIMUM SIZE FOR A COLUMN THAT IS PART OF A BRACED FRAME. SEE FOUNDATION NOTE ABOVE AND REFER TO DETAILS ON DRAWING S4-0.8 AND S4-0.9 FOR ADDITIONAL INFORMATION.

* PROVIDE 4 - 1" DIA F1554-6551 ANCHOR RODS TYPICALLY REFER TO DETAILS ON DRAWING S4-0.8 AND S4-0.9 FOR ADDITIONAL ANCHOR RODS FOR COLUMN RECEIVING BRACING.

FOOTING SCHEDULE F SERIES

MARK	SIZE	REINFORCEMENT
F4	4' - 0" x 4' - 0" x 2' - 0"	6 - #5 BOT EA WAY
F5	5' - 0" x 5' - 0" x 2' - 0"	7 - #5 BOT EA WAY
F6	6' - 0" x 6' - 0" x 2' - 0"	8 - #6 BOT EA WAY
F7	7' - 0" x 7' - 0" x 2' - 0"	9 - #6 BOT EA WAY
F8	8' - 0" x 8' - 0" x 3' - 0"	10 - #8 BOT EA WAY
F9	9' - 0" x 9' - 0" x 3' - 0"	11 - #9 BOT EA WAY
F10	10' - 0" x 10' - 0" x 3' - 0"	12 - #9 BOT EA WAY
F11	11' - 0" x 11' - 0" x 3' - 0"	13 - #10 BOT EA WAY
F12	12' - 0" x 12' - 0" x 4' - 0"	14 - #10 BOT EA WAY
FA	SEE PLAN x 2' - 0"	#8 @ 12"OC TOP AND BOT EA WAY

T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING

BRACE FRAME KEY

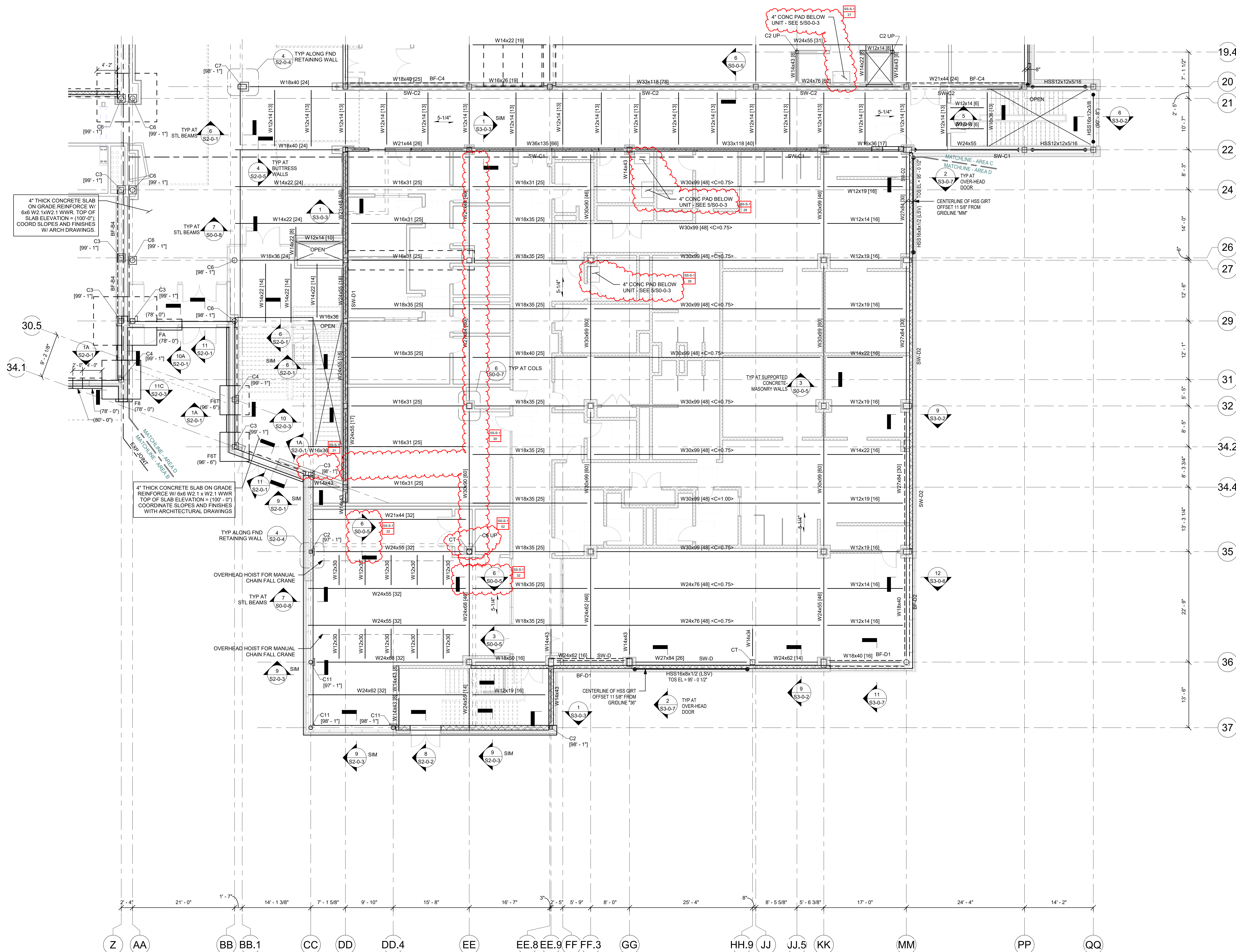
0" TYP	WF	BF-X	INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL
0" TYP	BF-X	WF	INDICATES A BRACE FRAME ABOVE LEVEL
0" TYP	WF	BF-X	INDICATES A BRACE FRAME BELOW LEVEL

FIREPROOFING NOTES:

- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN OR BUILT-UP COLUMN ALONG COLUMN GRID B6. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING. BUILT-UP COLUMNS ALONG GRID B6 SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- AT STAIRS 3, 5, AND 6, ALL EXPOSED TO VIEW BEAMS AND HSS TUBES SUPPORTING STAIR LANDINGS AND STRINGERS SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING. NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES SUPPORTING ONLY CURTAIN WALL.
- NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES LOCATED AT THE VOCATIONAL OVERHEAD DOORS.
- NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES LOCATED AT STOREFRONT, CURTAIN WALL, AND FIBERGLASS PANEL HEADS.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

FRAMING ELEVATION NOTES:

- TYPICAL UNDERSIDE OF DECK ELEVATION = (8' - 6 3/4") AT THE FIRST FLOOR LEVEL. IN THE AREA BOUNDED BY GRIDS (BB) - (MM) AND (22) - (27), UNLESS NOTED OTHERWISE AS (< X >), (< X' >), OR H/LO.
- FRAMING ELEVATIONS ARE BASED ON TOP-OF-FLOOR ELEVATION = (100' - 0"). SHOWN ON THE ARCHITECTURAL DRAWINGS.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.



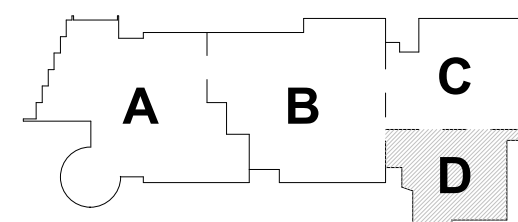
© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

REVISION LIST			
SS-S-1	4/14/2023	STRUCTURAL STEEL	ADDENDUM 1
SS-S-2	4/21/2023	STRUCTURAL STEEL	ADDENDUM 2

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

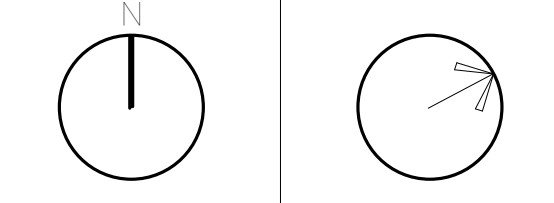
MSBA 90% CD
SUBMISSION

MAY 12, 2023



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



FIRST FLOOR FOUNDATION PLAN - AREA D

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG

S1-1-1D

DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
260 Charles Street
Studio 300
Waltham, MA
02453
Planning | Architecture | Interior Design
Tel: 617.954.1700
www.draa.com

NORTHEAST METRO TECH

100 Hemlock Rd,
Wakefield, MA 01880

EDG
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

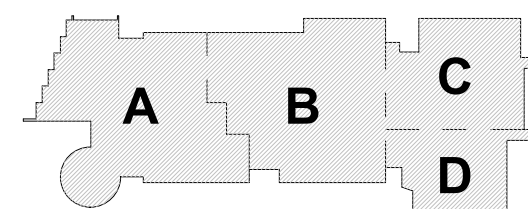
REVISION LIST

SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1
SS-S-2	4/21/2023	STRUCTURAL STEEL ADDENDUM 2

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

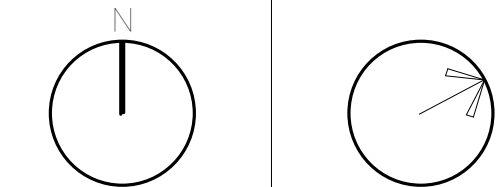
MSBA 90% CD
SUBMISSION

MAY 12, 2023



KEY PLAN

PROJECT NORTH
MAGNETIC NORTH



MEZZANINE FLOOR FRAMING - AREA A

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

Job No.: 20202

Drawn By: EDG

Date: MAY 12, 2023

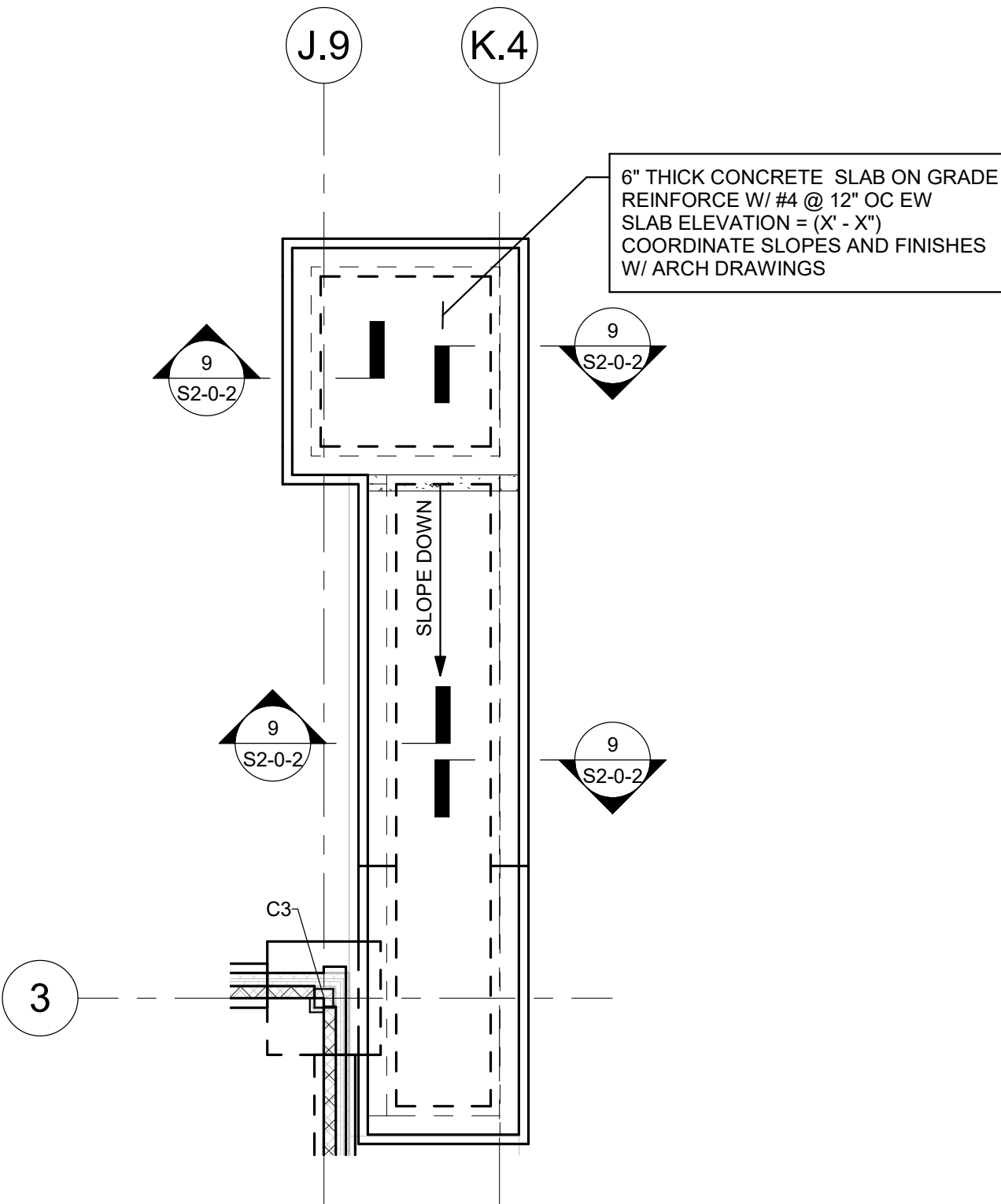
S1-1-1MA

FRAMING NOTES:

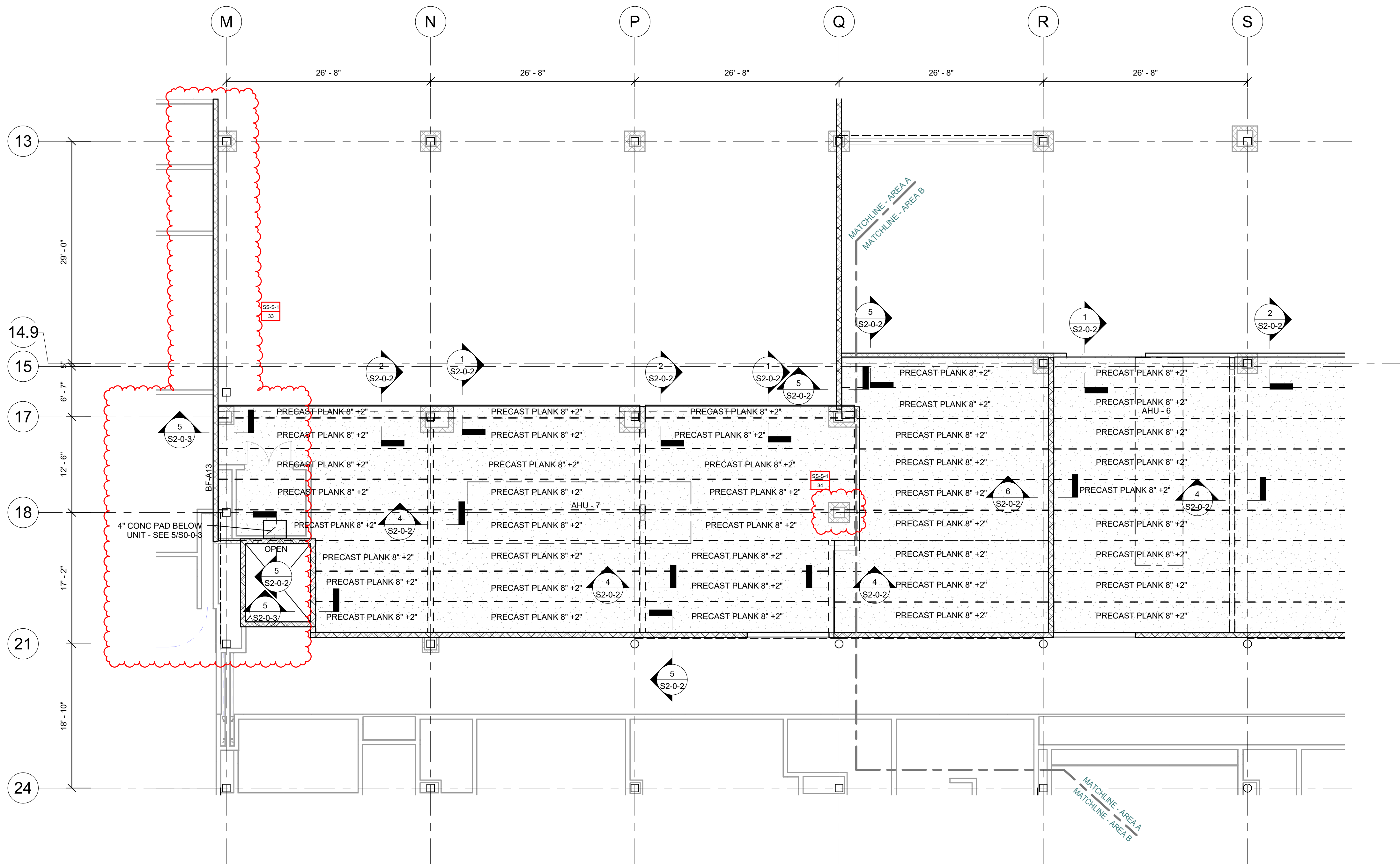
- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. FITCH ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- 8" ETC. INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0-1, S4-0-2, S4-0-3, S4-0-4, S4-0-5, S4-0-6, S4-0-7 AND S4-0-8 FOR ADDITIONAL INFORMATION.
- [X] INDICATES THE NUMBER OF 3/4" DIAMETER x 4 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 9 ON DRAWING S0-0-6.
- INDICATES A 5/16" FILLET WELD ALL AROUND (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0-7.
- < X' > INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 5-1/4" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 5 1/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6x6 - W2.1xW2.1 WWF.
- 1 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE NA, GALVANIZED STEEL ROOF DECK.
- 3" NA INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE NA, GALVANIZED STEEL ROOF DECK.
- 4" LW INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6x6 - W2.1xW2.1 WWF.
- FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS FOR FRAMING INFORMATION. REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-0-8.
- 6" HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6". REINFORCE WITH 6x6 - W2.1xW2.1 WWF. REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0-7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA x 5' LONG HOOKED STUDS.
- INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING S0-0-8 AND DETAIL 1 ON DRAWING S0-0-8. FOR DECKING SUPPORT, REFER TO DETAIL 6 ON DRAWING S0-0-7. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- WF INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0-7.
- OR OR INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0-4 FOR REINFORCEMENT. DETAIL 6 ON DRAWING S0-0-5 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS. AND DETAIL 7 ON DRAWING S0-0-5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 8" x 2" PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- 10" x 2" PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- WF INDICATES A SPLICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPLICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-0-6.
- 9/16" INDICATES SPAN DIRECTION OF 9/16" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- XXXXX INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECT/PLUMB/FIRE PROTECT/ETC. COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 6 ON S0-0-6 FOR ADDITIONAL INFORMATION.
- 3" INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE N, GALVANIZED STEEL ROOF DECK.

FIREPROOFING NOTES:

- STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.



LOADING DOCK PART PLAN



FRAMING ELEVATION NOTES:

- TYPICAL TOP-OF-CONCRETE TOPPING ELEVATION = (109'-8") AT THE MEZZANINE FLOOR LEVEL IN THE AREA BOUNDED BY GRID (M) - (O) AND (17) - (21).
- FRAMING ELEVATIONS ARE BASED ON TYPICAL BOTTOM-OF-PLANK ELEVATION = (108' - 8"), SHOWN ON THE ARCHITECTURAL DRAWINGS.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.

DRA

Drummeys Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
Tel: 817.854.1702
www.dra.com

280 Charles Street
Studio 300
Waltham, MA
02453
Tel: 617.854.1702
www.dra.com

Planning | Architecture | Interior Design

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



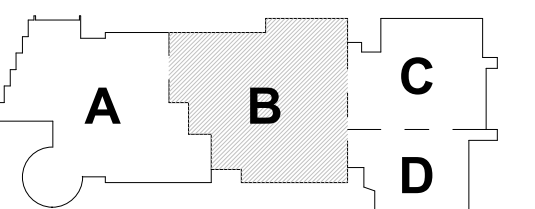
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST			
SS-S-1	4/14/2023	STRUCTURAL STEEL	ADDENDUM 1
SS-S-2	4/21/2023	STRUCTURAL STEEL	ADDENDUM 2

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023

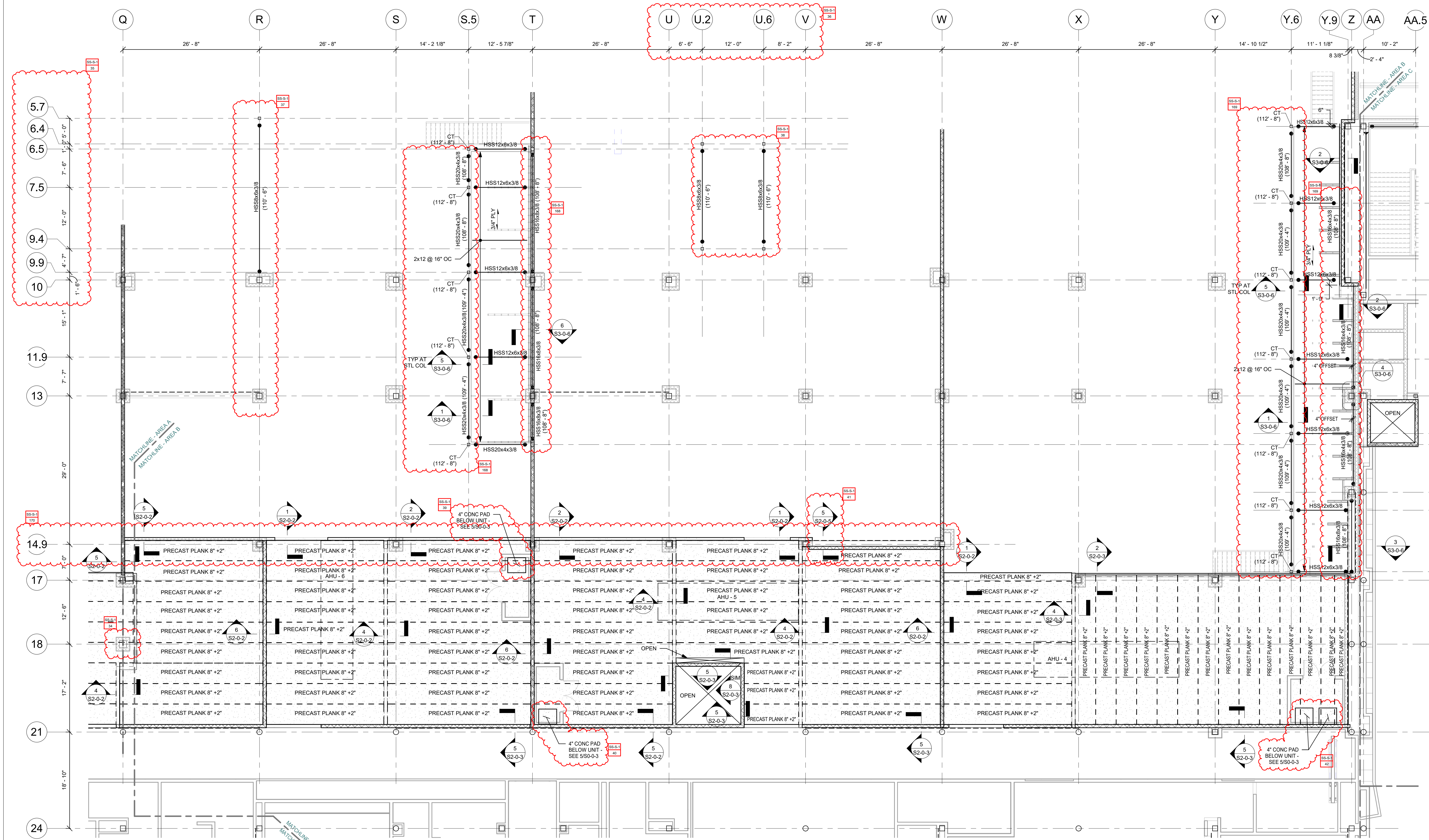


PROJECT NORTH
MAGNETIC NORTH

MEZZANINE FLOOR FRAMING- AREA B

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S1-1-1MB



FRAMING ELEVATION NOTES:

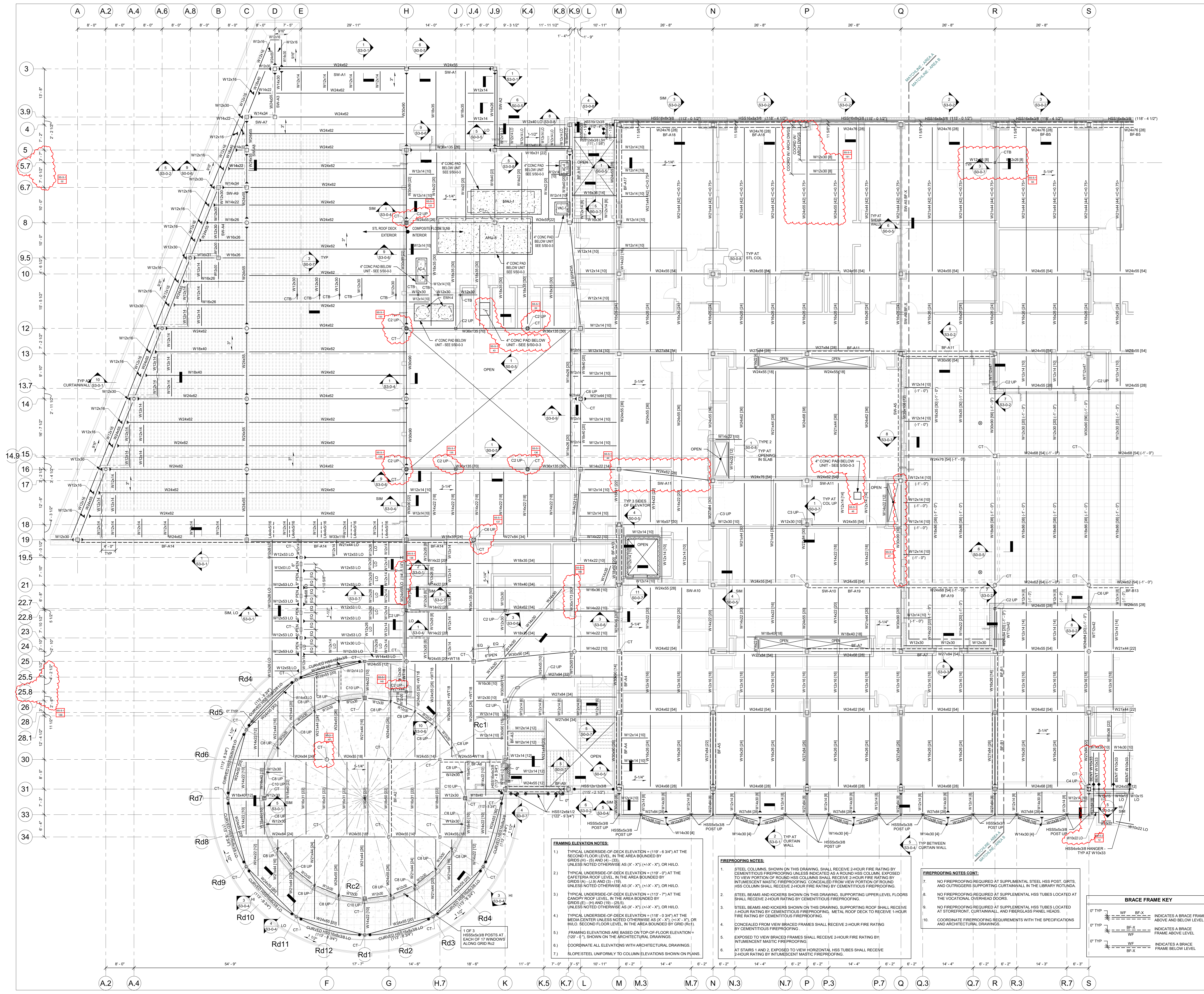
- TYPICAL TOP-OF-CONCRETE TOPPING ELEVATION = (109'-6") AT THE MEZZANINE FLOOR LEVEL, IN THE AREA BOUNDED BY GRIDS (Q) - (Z) AND (15) - (21).
- TYPICAL TOP-OF-STEEL ELEVATION = (108'-9") AT THE MEZZANINE FLOOR LEVEL, IN THE AREA BOUNDED BY GRIDS (S) - (T) AND (13) - (16), UNLESS NOTED OTHERWISE AS (X'-X"), (Y'-Y"), OR (H'-H").
- TYPICAL TOP-OF-STEEL ELEVATION = (108'-9") AT THE MEZZANINE FLOOR LEVEL, IN THE AREA BOUNDED BY GRIDS (Y) - (Z) AND (16) - (18.5), UNLESS NOTED OTHERWISE AS (X'-X"), (Y'-Y"), OR (H'-H").
- FRAMING ELEVATIONS ARE BASED ON TYPICAL BOTTOM-OF-PLANK ELEVATION = (108'-8"), SHOWN ON THE ARCHITECTURAL DRAWINGS.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.

FIREPROOFING NOTES:

- STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN, EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING, CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- STEEL COLUMNS, HSS BEAMS, AND ANGLES SUPPORTING THE PLYWOOD MEZZANINES BETWEEN COLUMN GRIDS S.5 AND T AND GRIDS Y.6 AND Z SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- NO FIREPROOFING REQUIRED AT COLUMNS AT GRIDS Y.10-6.5, Y.11-6.5, Y.10-9.2, AND Y.11-9.2 OR AT THE HISTUBES FRAMING INTO THEM.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. PITCH ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- BF-1 ETC., INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0-1, S4-0-2, S4-0-3, S4-0-4, S4-0-5, S4-0-6, S4-0-7 AND S4-0-8 FOR ADDITIONAL INFORMATION.
- (XX) INDICATES THE NUMBER OF 3/4" DIAMETER X 4 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 9 ON DRAWING S0-0-6.
- INDICATES A 5/16" FILLET WELD ALL AROUND. (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0-7.
- < X' > INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 5'-1/4" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 5 1/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6W6 - W2 1W2 1 WWR.
- 1 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE N, GALVANIZED STEEL ROOF DECK.
- 3" INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE NA, GALVANIZED STEEL ROOF DECK.
- 1 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 1 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6W6 - W2 1W2 1 WWR.
- FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-0-8.
- HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6". REINFORCE WITH 6W6 - W2 1W2 1 WWR. REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0-7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA X 5' LONG HEADED STUDS.
- INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING S0-0-8 AND DETAIL 1 ON DRAWING S0-0-8. FOR DECKING SUPPORT, REFER TO DETAIL 6 ON DRAWING S0-0-7. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- WF INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING S0-0-7.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0-4 FOR REINFORCEMENT. DETAIL 8 ON DRAWING S0-0-5 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 7 ON DRAWING S0-0-5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALLS FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 8" x 2" PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2-HOUR FIRE RATING.
- 10" x 2" PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2-HOUR FIRE RATING.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- INDICATES A SPLICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPLICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-0-6.
- 0/16" INDICATES SPAN DIRECTION OF 9/16" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- XX'XX" INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECT/PLUMB/FIRE PROTECT/ETC COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 6 ON S0-0-8 FOR ADDITIONAL INFORMATION.
- 3" INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE N, GALVANIZED STEEL ROOF DECK.



DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074
Tel: 617.854.1700
www.dra.com

280 Charles Street
Studio 300
Waltham, MA 02453
Tel: 617.854.1700
www.dra.com

Planning | Architecture | Interior Design

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1
SS-S-2	4/21/2023	STRUCTURAL STEEL ADDENDUM 2

FOR REFERENCE ONLY

SCOPE OF WORK ON THIS DRAWING IS A PART OF EARLY STRUCTURAL BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023

KEY PLAN

PROJECT NORTH
MAGNETIC NORTH

SECOND FLOOR
FRAMING PLAN -
AREA A

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S1-1-2A

- FIREPROOFING NOTES:**
- STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 - STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING.
 - STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 - CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 - EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 - NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES LOCATED AT THE VOCATIONAL OVERHEAD DOORS.
 - NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES LOCATED AT STOREFRONT, CURTAINWALL, AND FIBERGLASS PANEL HEADS.
 - COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

- FRAMING NOTES:**
- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0.1, S0-0.2, S0-0.3, S0-0.4, S0-0.5, S0-0.6, S0-0.7 AND S0-0.8.
 - REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. PITCH ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
 - BF-1 ETC., INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S0-0.1, S0-0.2, S0-0.3, S0-0.4, S0-0.5, S0-0.6, S0-0.7 AND S0-0.8 FOR ADDITIONAL INFORMATION.
 - [X] INDICATES THE NUMBER OF 3/4" DIAMETER x 4 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
 - INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 9 ON DRAWING S0-0.6.
 - INDICATES A 5/16" FILLET WELD ALL AROUND (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0.7.
 - <X> INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
 - 5-1/4" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 3 1/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6#6 - W2.1W2.1 WWF.
 - 1 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE N, GALVANIZED ACUSTIC STEEL ROOF DECK.
 - 3" NA INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE N, GALVANIZED ACUSTIC STEEL ROOF DECK.
 - 4" LW INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6#6 - W2.1W2.1 WWF.
 - FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-0.8.
 - HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 8" REINFORCE WITH 6#6 - W2.1W2.1 WWF. REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0.7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA x 5' LONG HEADED STUDS.
 - INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING S0-0.8 AND DETAIL 1 ON DRAWING S0-0.8 FOR DRAINAGE SUPPORT. REFER TO DETAIL 6 ON DRAWING S0-0.7. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
 - CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
 - INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING S0-0.7.
 - INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0.4 FOR REINFORCEMENT. DETAIL 6 ON DRAWING S0-0.5 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 7 ON DRAWING S0-0.3 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
 - PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATINGS.
 - PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATINGS.
 - FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
 - WF INDICATES A SPICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
 - INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-0.6.
 - 9/16" INDICATES SPAN DIRECTION OF 9/16" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
 - X"X"X" INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECT/PLUMB/FIRE PROTECT/ETC COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 6 ON S0-0.4 FOR ADDITIONAL INFORMATION.
 - 3" INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE N, GALVANIZED STEEL ROOF DECK.

- FRAMING ELEVATION NOTES:**
- TYPICAL ELEVATION OF DECK ELEVATION = (119' - 6 3/4") AT THE SECOND FLOOR LEVEL IN THE AREA BOUNDED BY GRIDS (Q) - (Z) AND (U) - (V). UNLESS NOTED OTHERWISE AS (X' - X"), ((X' - X') - X"), OR HI/LO.
 - TYPICAL UNDERSIDE OF DECK ELEVATION = (119' - 6 3/4") AT THE LOW ROOF LEVEL IN THE AREA BOUNDED BY GRIDS (U) - (Z) AND (U) - (V). UNLESS NOTED OTHERWISE AS (X' - X"), ((X' - X') - X"), OR HI/LO.
 - TYPICAL UNDERSIDE OF DECK ELEVATION = (113' - 5 3/4") AT THE CANOPY ROOF LEVEL IN THE AREA BOUNDED BY GRIDS (S) - (U) AND (U) - (V). UNLESS NOTED OTHERWISE AS (X' - X"), ((X' - X') - X"), OR HI/LO.
 - FRAMING ELEVATIONS ARE BASED ON TOP-OF-FLOOR ELEVATION = (120' - 0"), SHOWN ON THE ARCHITECTURAL DRAWINGS.
 - COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
 - SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

- BRACE FRAME KEY**
- | | | | |
|--------|------|------|---|
| 0" TYP | WF | BF-X | INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL |
| 0" TYP | BF-X | WF | INDICATES A BRACE FRAME ABOVE LEVEL |
| 0" TYP | WF | BF-X | INDICATES A BRACE FRAME BELOW LEVEL |

DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074
Tel: 817.954.1702
www.dra.com

260 Charles Street
Studio 300
Waltham, MA 02453

Planning | Architecture | Interior Design

NORTHEAST METRO TECH

100 Hemlock Rd,
Wakefield, MA 01880

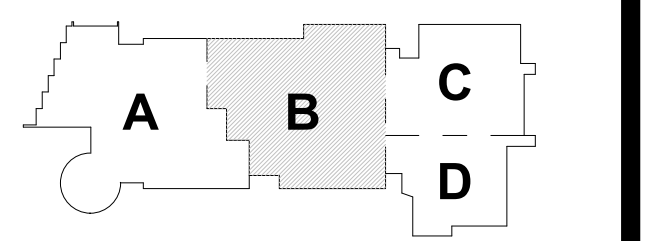
EDG
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST			
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1	
SS-S-2	4/21/2023	STRUCTURAL STEEL ADDENDUM 2	

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING IS A PART OF EARLY STRUCTURAL BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023



PROJECT NORTH
MAGNETIC NORTH

SECOND FLOOR FRAMING PLAN - AREA B

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S1-1-2B

DRA

Drummett Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

260 Charles Street
Studio 300
Waltham, MA
02453

Planning | Architecture | Interior Design
Tel: 817.854.1702
www.dra.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

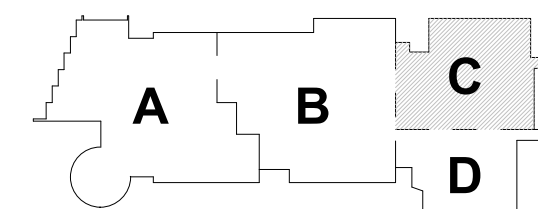
© COPYRIGHT 2021 DRUMMETT ROSANE ANDERSON, INC.

REVISION LIST			
SS-S-1	4/14/2023	STRUCTURAL STEEL	ADDENDUM 1
SS-S-2	4/21/2023	STRUCTURAL STEEL	ADDENDUM 2

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

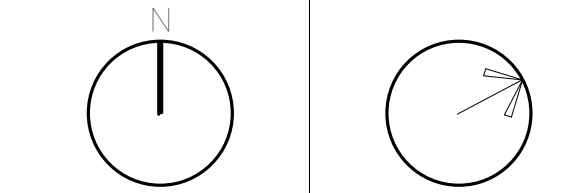
MSBA 90% CD
SUBMISSION

MAY 12, 2023



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



SECOND FLOOR
FRAMING PLAN -
AREA C

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

Job No.: 20202

Drawn By: EDG

Date: MAY 12, 2023

S1-1-2C

FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0.1, S0-0.2, S0-0.3, S0-0.4, S0-0.5, S0-0.6, S0-0.7 AND S0-0.8.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. PITCH ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- BF-1 ETC., INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0.1, S4-0.2, S4-0.3, S4-0.4, S4-0.5, S4-0.6, S4-0.7 AND S4-0.8 FOR ADDITIONAL INFORMATION.
- [X] INDICATES THE NUMBER OF 3/4" DIAMETER, 4' X 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 9 ON DRAWING S0-0.6.
- INDICATES A 5/16" FILLET WELD ALL AROUND. (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0.7.
- < X > INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 5'-1/4" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 3/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6#6 - W2, 1W2, 1 WWR.
- 1'-1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE NA, GALVANIZED STEEL ROOF DECK.
- INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE NA, GALVANIZED ACOUSTIC STEEL ROOF DECK.
- INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6#6 - W2, 1W2, 1 WWR.
- FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-0.8.
- HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6". REINFORCE WITH 6#6 - W2, 1W2, 1 WWR. REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0.7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA X 5' LONG HEADED STUDS.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0.4 FOR REINFORCEMENT. DETAIL 6 ON DRAWING S0-0.4 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 7 ON DRAWING S0-0.5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 8" x 2" PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- 10" x 2" PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- INDICATES A SPLICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPLICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-0.5.
- INDICATES SPAN DIRECTION OF 8 1/2" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECT/PLUMB/FIRE PROTECT/ETC COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAILS 6 AND 8 ON S0-0.4 FOR ADDITIONAL INFORMATION.
- INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE N, GALVANIZED STEEL ROOF DECK.

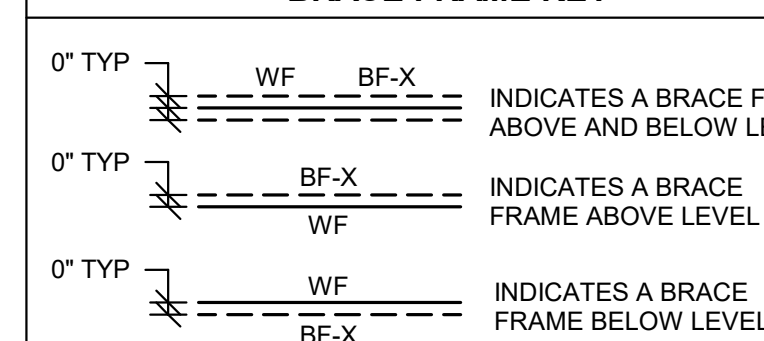
FRAMING ELEVATION NOTES:

- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (119' - 6 3/4") AT THE SECOND FLOOR LEVEL, IN THE AREA BOUNDED BY GRID (AA) - (GG) AND (1) - (22) UNLESS NOTED OTHERWISE AS (X' - X'), (+X' - X'), OR HI/LO.
- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (119' - 6 3/4") AT THE LOW ROOF LEVEL, IN THE AREA BOUNDED BY GRID (AA) - (FF) AND (2) - (11) UNLESS NOTED OTHERWISE AS (X' - X'), (+X' - X'), OR HI/LO.
- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (112' - 8") AT THE CANOPY ROOF LEVEL, IN THE AREA BOUNDED BY GRID (AA) - (DD) AND (4) - (6).
- FRAMING ELEVATIONS ARE BASED ON TOP-OF-FLOOR ELEVATION = (120' - 0") SHOWN ON THE ARCHITECTURAL DRAWINGS.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

FIREPROOFING NOTES:

- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN OR BUILT-UP COLUMN ALONG COLUMN GRID BB.1. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING. BUILT-UP COLUMNS ALONG GRID BB.1 SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- AT STAIRS 4 AND 7, ALL EXPOSED TO VIEW BEAMS AND HSS TUBES SUPPORTING STAIR LANDINGS AND STRINGERS SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING. NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES SUPPORTING ONLY CURTAINWALL.
- NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES SUPPORTING CURTAINWALL CW23.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

BRACE FRAME KEY



**NORTHEAST
METRO TECH**

100 Hemlock Rd,
Wakefield, MA 01880



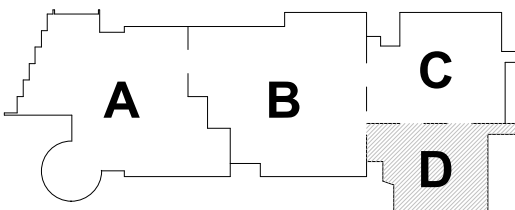
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST		
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1
SS-S-2	4/21/2023	STRUCTURAL STEEL ADDENDUM 2

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023



KEY PLAN

PROJECT NO. _____

MAGNETIC NOR

**SECOND FLOOR
FRAMING PLAN -
AREA D**

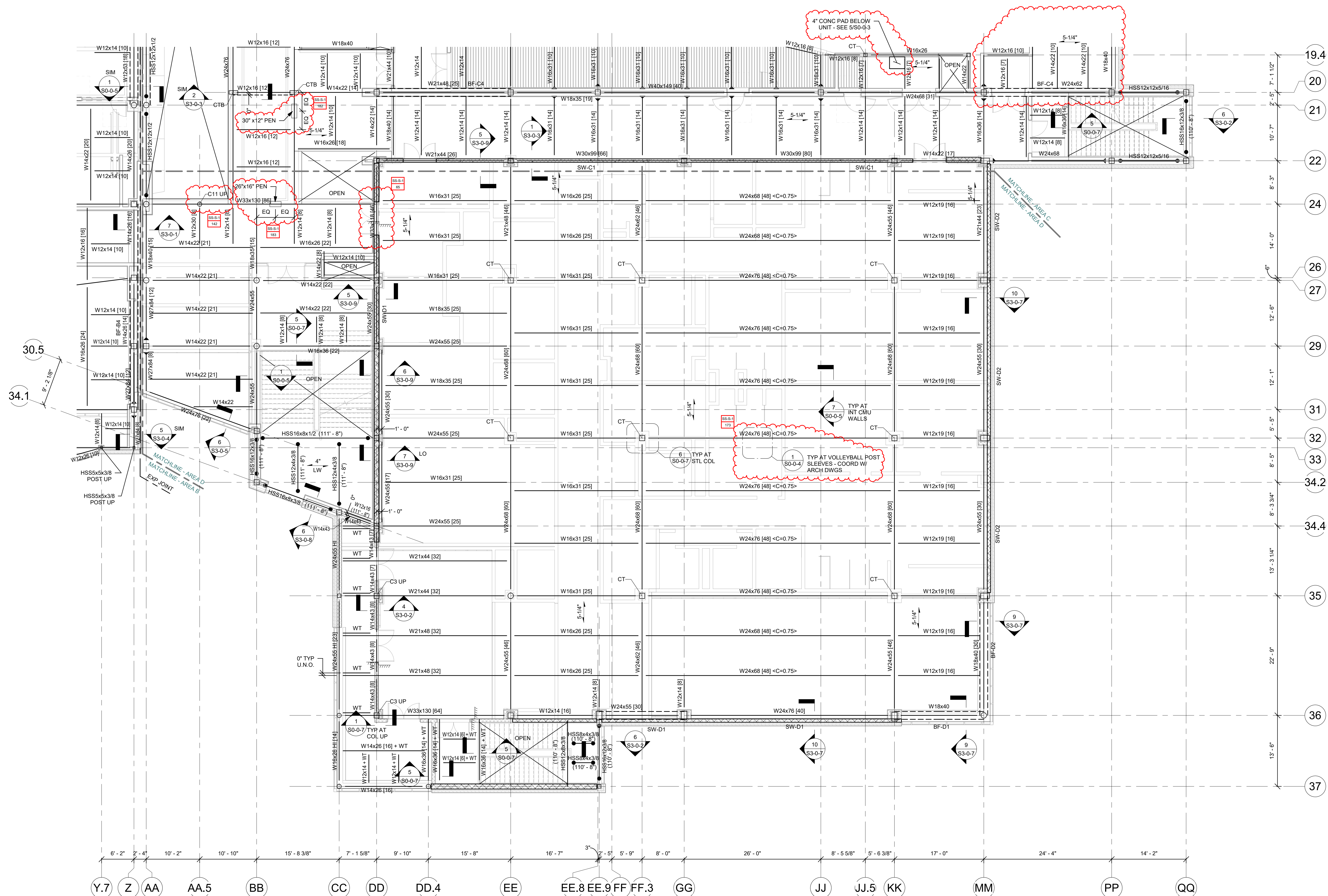
Scale: $1/8" = 1'-0"$

Job No. 30302

JOD NO.. 20202

Drawn By: EC

S1-1-2D



FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS 50-0-1, 50-0-2, 50-0-3, 50-0-4, 50-0-5, 50-0-6, 50-0-7 AND 50-0-8.
- 2) REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. DETAIL ALL STUDS UNLESS NOTED TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- 3) BFI-1 ETC., INDICATES A BRACED BAY. REFER TO BRACED FRAME DETAILS AND DETAILS ON DRAWINGS 54-0-1, 54-0-2, 54-0-3, 54-0-4, 54-0-5, 54-0-7 AND 54-0-8 FOR FURTHER INFORMATION.
- 4) [OK] INDICATES THE NUMBER OF 3/4" DIAMETER X 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EQUALLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- 5)  INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAIL 5-7 AND 5-9 ON DRAWING 50-0-6.
- 6)  INDICATES A 5/16" FLLET WELD ALL AROUND. (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2-1 ON DRAWING 50-0-6.
- 7)  INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 8) $< 5^{\circ}$ INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COPIRSTEEL STEEL DECK WITH 3 1/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6# - W2 10W12 WWR.
- 9) $1 1/2^{\circ}$ INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE-63 GALVANIZED STEEL ROOF DECK.
- 10)  INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE-NA GALVANIZED COPIRSTEEL STEEL ROOF DECK.
- 11) 4° INDICATES SPAN DIRECTION OF 4" DEEP, 20 GAGE GALVANIZED COPIRSTEEL STEEL DECK WITH 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6# - W2 10W12 WWR.
- 12)  INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE-63 GALVANIZED STEEL ROOF DECK.
- 13)  FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS, FOR FRAMING INFORMATION, REFER TO DETAILS 1, 2 AND 3 ON DRAWING 50-0-6.
- 14)  HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP HOLOW CORE PLANK WITH 5/8" DEEP PRESTRESSED, PRECAST CONCRETE TOPPING. TOTAL THICKNESS = 6" REINFORCE WITH 6# - W2 10W12 WWR. REFER TO TYPICAL DETAIL 5-5 ON DRAWING 50-0-7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA X 5" LONG HEADED STUDS.
- 15)  INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING 50-0-7 FOR ADDITIONAL INFORMATION. DETAIL 1 FOR DECKING SUPPORTS. REFER TO DETAIL 6 ON DRAWING 50-0-7. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- 16)  INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- 17)  INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9-B ON DRAWING 50-0-7.
- 18)  INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8-B ON DRAWING 50-0-4 FOR REINFORCEMENT. DETAIL 8-B ON DRAWING 50-0-4 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 8-C ON DRAWING 50-0-4 FOR CONNECTION OF SHEAR WALLS TO STUBS AND CONCRETE SLABS AT THE TOP OF WALL. FOR NON-STRUCTURAL WALLS REFER TO RELEVANT DETAILS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 19) $8^{\circ} \pm$  POLK PLANK INDICATES SPAN OF 1" DEEP PRESTRESSED, PRECAST CONCRETE HOLOW CORE PLANK WITH A MINIMUM OF 2" NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- 20) $10^{\circ} \pm$  POLK PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLOW CORE PLANK WITH A MINIMUM OF 2" NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- 21)  FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- 22)  INDICATES A SPICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- 23)  INDICATES A SLAB DEPRESSION. REFER TO DETAIL 8-1 ON DRAWING 50-0-7.
- 24) 916° INDICATES SPAN DIRECTION OF 916" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- 25)  INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECTR/PLUMB/FIRE PROTECT/ECT COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DET. 5-5 AND 5-9 ON DRAWING 50-0-6 FOR ADDITIONAL INFORMATION.
- 26) 4° INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE-NA GALVANIZED STEEL ROOF DECK.

FRAMING ELEVATION NOTES

- 1.) TYPICAL UNDER-OF-DECK ELEVATION = $(119' - 6 \frac{3}{4}" \text{ AT THE SECOND FLOOR LEVEL IN THE AREA BOUNDED BY GRIDS (AA) - (DD) AND (22) - (34.4). UNLESS NOTED OTHERWISE AS (X' - X') - (Y' - X' - X') OR HILLO.$
- 2.) TYPICAL UNDER-OF-DECK ELEVATION IS DEPRESSED BELOW $(119' - 6 \frac{3}{4}" \text{ AT THE GYM FLOOR LEVEL IN THE AREA BOUNDED BY GRIDS (DD) - (MM) AND (22) - (37). ELEVATION IS TO BE DETERMINED BASED ON THICKNESS OF GYM-FLOORING SYSTEM. UNLESS NOTED OTHERWISE AS (X' - X') - (Y' - X' - X') OR HILLO.$
- 3.) FRAMING ELEVATIONS ARE BASED ON TOP-OF-FLOOR ELEVATION = $(120' - 0")$, SHOWN ON THE ARCHITECTURAL DRAWINGS.
- 4.) COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- 5.) SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS

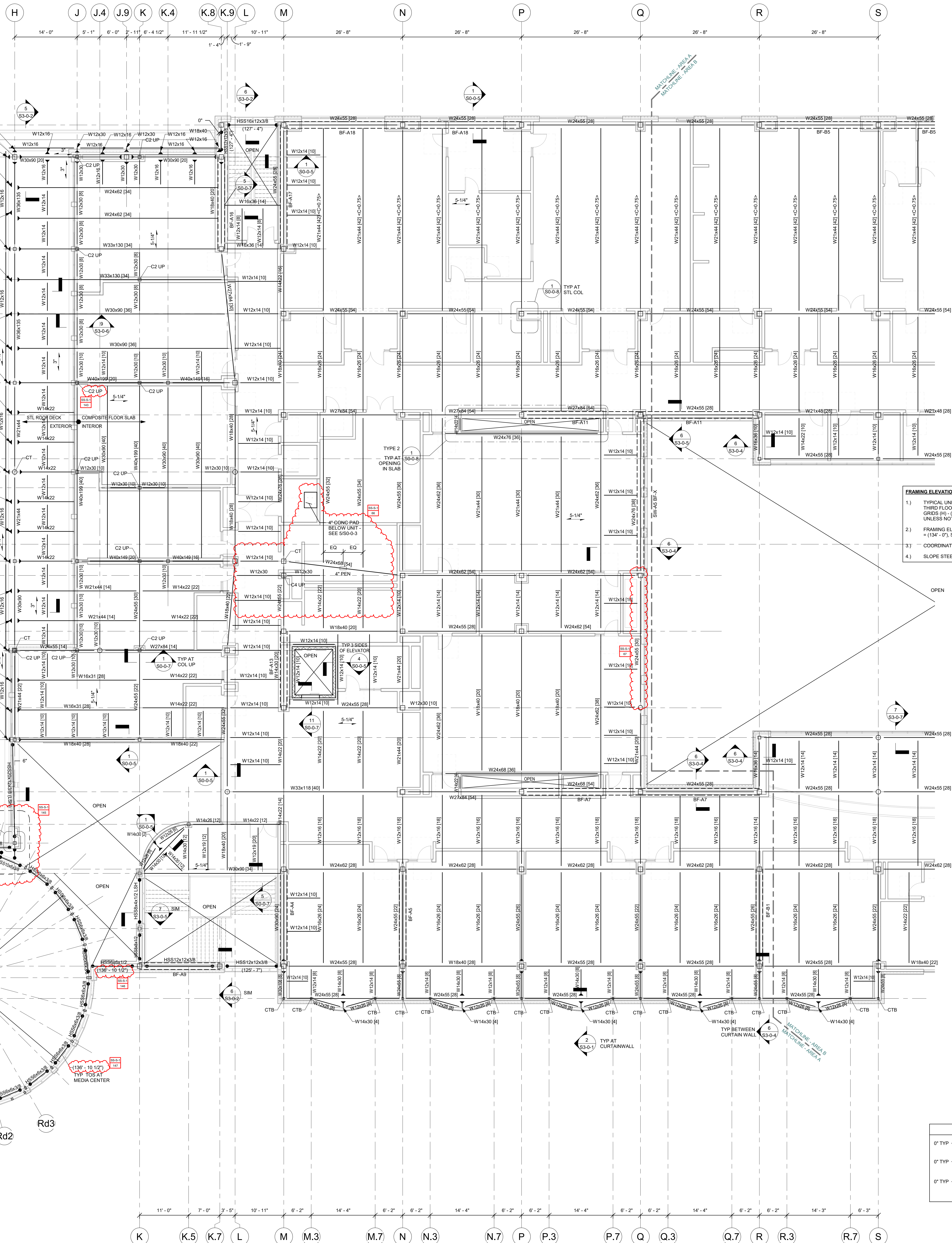
FIREPROOFING NOTES:

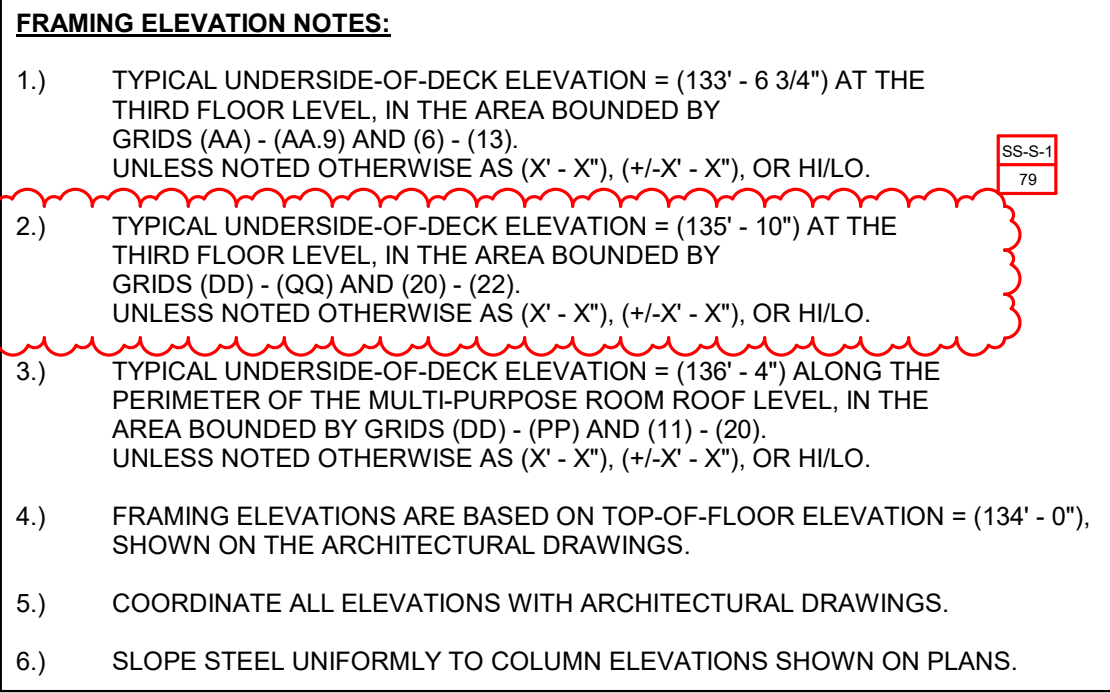
1. STEEL COLUMNS SHALL ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIBER REINFORCING UNLESS INDICATED AS A ROUND HSS COLUMN OR BUILT-UP COLUMN ALONG COLUMN GRID B-1. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIBER REINFORCING. EXPOSED TO VIEW PORTION OF BUILT-UP COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIBER REINFORCING. BUILT-UP COLUMNS ALONG GRID B-1 SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIBER REINFORCING.
2. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIBER REINFORCING.
3. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIBER REINFORCING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIBER REINFORCING.
4. CONCEALED FROM VIEW BRACED FRAMES AND HORIZONTAL HSS GIRTS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIBER REINFORCING.
5. EXPOSED TO VIEW BRACED FRAMES AND HORIZONTAL HSS GIRTS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIBER REINFORCING.
6. AT STAIR S-3, AND 6, ALL EXPOSED TO VIEW BEAMS AND HSS TUBES SUPPORTING STAIR LANDINGS AND STRINGERS SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIBER REINFORCING. NO REINFORCING REQUIRED AT SUPPLEMENTAL HSS TUBES SUPPORTING ONLY CURTAINWALL.
7. COORDINATE FIBER REINFORCING REQUIREMENTS WITH THE SPECIFICATIONS

BRACE FRAME KEY

0° TYP		INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL
0° TYP		INDICATES A BRACE FRAME ABOVE LEVEL
0° TYP		INDICATES A BRACE FRAME BELOW LEVEL

- FIREPROOFING NOTES:**
1. STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 2. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING.
 3. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 4. CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 5. EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 6. AT STAIRS 1 AND 2, EXPOSED TO VIEW HORIZONTAL HSS TUBES SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
 7. NO FIREPROOFING REQUIRED AT SUPPLEMENTAL STEEL HSS GIRTS, AND OUTRIGGERS SUPPORTING CURTAINWALL IN THE LIBRARY ROTUNDA.
 8. COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.





1. STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY MEANS OF GENUINE FIREPROOFING UNLESS INDICATED AS AROUND HSS COLUMN EXPOSED TO FIRE. PROTECTION OF CORRELATION OF JOISTS SHALL RECEIVE 1-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND STEEL COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY GENUINE FIREPROOFING.
2. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY GENUINE FIREPROOFING.
3. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY GENUINE FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY GENUINE FIREPROOFING.
4. IN MULTIPURPOSE JOISTS BETWEEN GRIDS D0 AND MM (INCLUDING MM) SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. REMAINING JOIST TO RECEIVE 1-HOUR FIRE RATING BY GENUINE FIREPROOFING.
5. CONCEALED FROM VIEW BRACED FRAMES AND HORIZONTAL HSS GIRTS SHALL RECEIVE 2-HOUR FIRE RATING BY GENUINE FIREPROOFING.
6. EXPOSED TO VIEW BRACED FRAMES AND HORIZONTAL HSS GIRTS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
7. AT STAIR 4 AND 5, ALL EXPOSED TO VIEW BEAMS AND HSS TUBES SUPPORTING STAIR LANDINGS AND STRINGERS SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING. NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES SUPPORTING ONLY 2 CURTAIN WALLS.
8. COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

1) FOR GENERAL NOTES AND SYMBOLS, SEE DETAILS DRAWINGS 50-0.1, 50-0.2, 50-0.3, 50-0.4, 50-0.5, 50-0.6, 50-0.7 AND 50-0.8.

2) REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. DETAIL ALL STEEL JOISTS TO 1/4" LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.

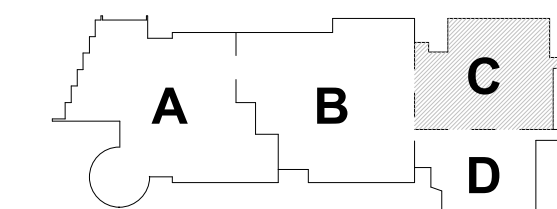
3) BFI-1/2" INDICATES A BRACED BAY REFER TO BRACED FRAME ELEVATIONS AND DETAILS 50-0.4, 50-0.5, 50-0.6, 50-0.7, 50-0.8, 50-0.9, 50-0.10, 50-0.11, 50-0.12, 50-0.13, 50-0.14, 50-0.15, 50-0.16, 50-0.17, 50-0.18, 50-0.19, 50-0.20, 50-0.21, 50-0.22, 50-0.23, 50-0.24, 50-0.25, 50-0.26, 50-0.27, 50-0.28, 50-0.29, 50-0.30, 50-0.31, 50-0.32, 50-0.33, 50-0.34, 50-0.35, 50-0.36, 50-0.37, 50-0.38, 50-0.39, 50-0.40, 50-0.41, 50-0.42, 50-0.43, 50-0.44, 50-0.45, 50-0.46, 50-0.47, 50-0.48, 50-0.49, 50-0.50, 50-0.51, 50-0.52, 50-0.53, 50-0.54, 50-0.55, 50-0.56, 50-0.57, 50-0.58, 50-0.59, 50-0.60, 50-0.61, 50-0.62, 50-0.63, 50-0.64, 50-0.65, 50-0.66, 50-0.67, 50-0.68, 50-0.69, 50-0.70, 50-0.71, 50-0.72, 50-0.73, 50-0.74, 50-0.75, 50-0.76, 50-0.77, 50-0.78, 50-0.79, 50-0.80, 50-0.81, 50-0.82, 50-0.83, 50-0.84, 50-0.85, 50-0.86, 50-0.87, 50-0.88, 50-0.89, 50-0.90, 50-0.91, 50-0.92, 50-0.93, 50-0.94, 50-0.95, 50-0.96, 50-0.97, 50-0.98, 50-0.99, 50-1.00, 50-1.01, 50-1.02, 50-1.03, 50-1.04, 50-1.05, 50-1.06, 50-1.07, 50-1.08, 50-1.09, 50-1.10, 50-1.11, 50-1.12, 50-1.13, 50-1.14, 50-1.15, 50-1.16, 50-1.17, 50-1.18, 50-1.19, 50-1.20, 50-1.21, 50-1.22, 50-1.23, 50-1.24, 50-1.25, 50-1.26, 50-1.27, 50-1.28, 50-1.29, 50-1.30, 50-1.31, 50-1.32, 50-1.33, 50-1.34, 50-1.35, 50-1.36, 50-1.37, 50-1.38, 50-1.39, 50-1.40, 50-1.41, 50-1.42, 50-1.43, 50-1.44, 50-1.45, 50-1.46, 50-1.47, 50-1.48, 50-1.49, 50-1.50, 50-1.51, 50-1.52, 50-1.53, 50-1.54, 50-1.55, 50-1.56, 50-1.57, 50-1.58, 50-1.59, 50-1.60, 50-1.61, 50-1.62, 50-1.63, 50-1.64, 50-1.65, 50-1.66, 50-1.67, 50-1.68, 50-1.69, 50-1.70, 50-1.71, 50-1.72, 50-1.73, 50-1.74, 50-1.75, 50-1.76, 50-1.77, 50-1.78, 50-1.79, 50-1.80, 50-1.81, 50-1.82, 50-1.83, 50-1.84, 50-1.85, 50-1.86, 50-1.87, 50-1.88, 50-1.89, 50-1.90, 50-1.91, 50-1.92, 50-1.93, 50-1.94, 50-1.95, 50-1.96, 50-1.97, 50-1.98, 50-1.99, 50-2.00, 50-2.01, 50-2.02, 50-2.03, 50-2.04, 50-2.05, 50-2.06, 50-2.07, 50-2.08, 50-2.09, 50-2.10, 50-2.11, 50-2.12, 50-2.13, 50-2.14, 50-2.15, 50-2.16, 50-2.17, 50-2.18, 50-2.19, 50-2.20, 50-2.21, 50-2.22, 50-2.23, 50-2.24, 50-2.25, 50-2.26, 50-2.27, 50-2.28, 50-2.29, 50-2.30, 50-2.31, 50-2.32, 50-2.33, 50-2.34, 50-2.35, 50-2.36, 50-2.37, 50-2.38, 50-2.39, 50-2.40, 50-2.41, 50-2.42, 50-2.43, 50-2.44, 50-2.45, 50-2.46, 50-2.47, 50-2.48, 50-2.49, 50-2.50, 50-2.51, 50-2.52, 50-2.53, 50-2.54, 50-2.55, 50-2.56, 50-2.57, 50-2.58, 50-2.59, 50-2.60, 50-2.61, 50-2.62, 50-2.63, 50-2.64, 50-2.65, 50-2.66, 50-2.67, 50-2.68, 50-2.69, 50-2.70, 50-2.71, 50-2.72, 50-2.73, 50-2.74, 50-2.75, 50-2.76, 50-2.77, 50-2.78, 50-2.79, 50-2.80, 50-2.81, 50-2.82, 50-2.83, 50-2.84, 50-2.85, 50-2.86, 50-2.87, 50-2.88, 50-2.89, 50-2.90, 50-2.91, 50-2.92, 50-2.93, 50-2.94, 50-2.95, 50-2.96, 50-2.97, 50-2.98, 50-2.99, 50-3.00, 50-3.01, 50-3.02, 50-3.03, 50-3.04, 50-3.05, 50-3.06, 50-3.07, 50-3.08, 50-3.09, 50-3.10, 50-3.11, 50-3.12, 50-3.13, 50-3.14, 50-3.15, 50-3.16, 50-3.17, 50-3.18, 50-3.19, 50-3.20, 50-3.21, 50-3.22, 50-3.23, 50-3.24, 50-3.25, 50-3.26, 50-3.27, 50-3.28, 50-3.29, 50-3.30, 50-3.31, 50-3.32, 50-3.33, 50-3.34, 50-3.35, 50-3.36, 50-3.37, 50-3.38, 50-3.39, 50-3.40, 50-3.41, 50-3.42, 50-3.43, 50-3.44, 50-3.45, 50-3.46, 50-3.47, 50-3.48, 50-3.49, 50-3.50, 50-3.51, 50-3.52, 50-3.53, 50-3.54, 50-3.55, 50-3.56, 50-3.57, 50-3.58, 50-3.59, 50-3.60, 50-3.61, 50-3.62, 50-3.63, 50-3.64, 50-3.65, 50-3.66, 50-3.67, 50-3.68, 50-3.69, 50-3.70, 50-3.71, 50-3.72, 50-3.73, 50-3.74, 50-3.75, 50-3.76, 50-3.77, 50-3.78, 50-3.79, 50-3.80, 50-3.81, 50-3.82, 50-3.83, 50-3.84, 50-3.85, 50-3.86, 50-3.87, 50-3.88, 50-3.89, 50-3.90, 50-3.91, 50-3.92, 50-3.93, 50-3.94, 50-3.95, 50-3.96, 50-3.97, 50-3.98, 50-3.99, 50-4.00, 50-4.01, 50-4.02, 50-4.03, 50-4.04, 50-4.05, 50-4.06, 50-4.07, 50-4.08, 50-4.09, 50-4.10, 50-4.11, 50-4.12, 50-4.13, 50-4.14, 50-4.15, 50-4.16, 50-4.17, 50-4.18, 50-4.19, 50-4.20, 50-4.21, 50-4.22, 50-4.23, 50-4.24, 50-4.25, 50-4.26, 50-4.27, 50-4.28, 50-4.29, 50-4.30, 50-4.31, 50-4.32, 50-4.33, 50-4.34, 50-4.35, 50-4.36, 50-4.37, 50-4.38, 50-4.39, 50-4

REVISION LIST		
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1
SS-S-2	4/21/2023	STRUCTURAL STEEL ADDENDUM 2

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

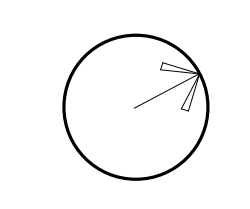
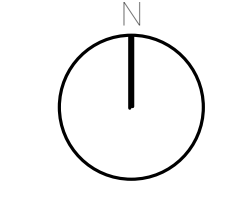
MAY 12, 2023



KEY PLAN

PROJECT NORTH

MAGNETIC NORTH



**THIRD FLOOR
FRAMING PLAN -
AREA C**

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

Job No.: 20202

Drawn By: F

Date: MAY 12, 2003

S1-1-3C

NORTHEAST METRO TECH

100 Hemlock Rd,
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

100 Hemlock Rd,
Wakefield, MA 01880

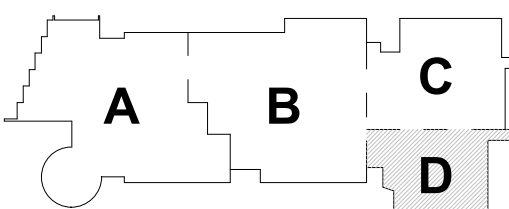


REVISION LIST		
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1
SS-S-2	4/21/2023	STRUCTURAL STEEL ADDENDUM 2

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023



KEY PLAN

PROJECT NO. _____

MAGNETIC NORTH

**THIRD FLOOR
FRAMING PLAN -
AREA D**

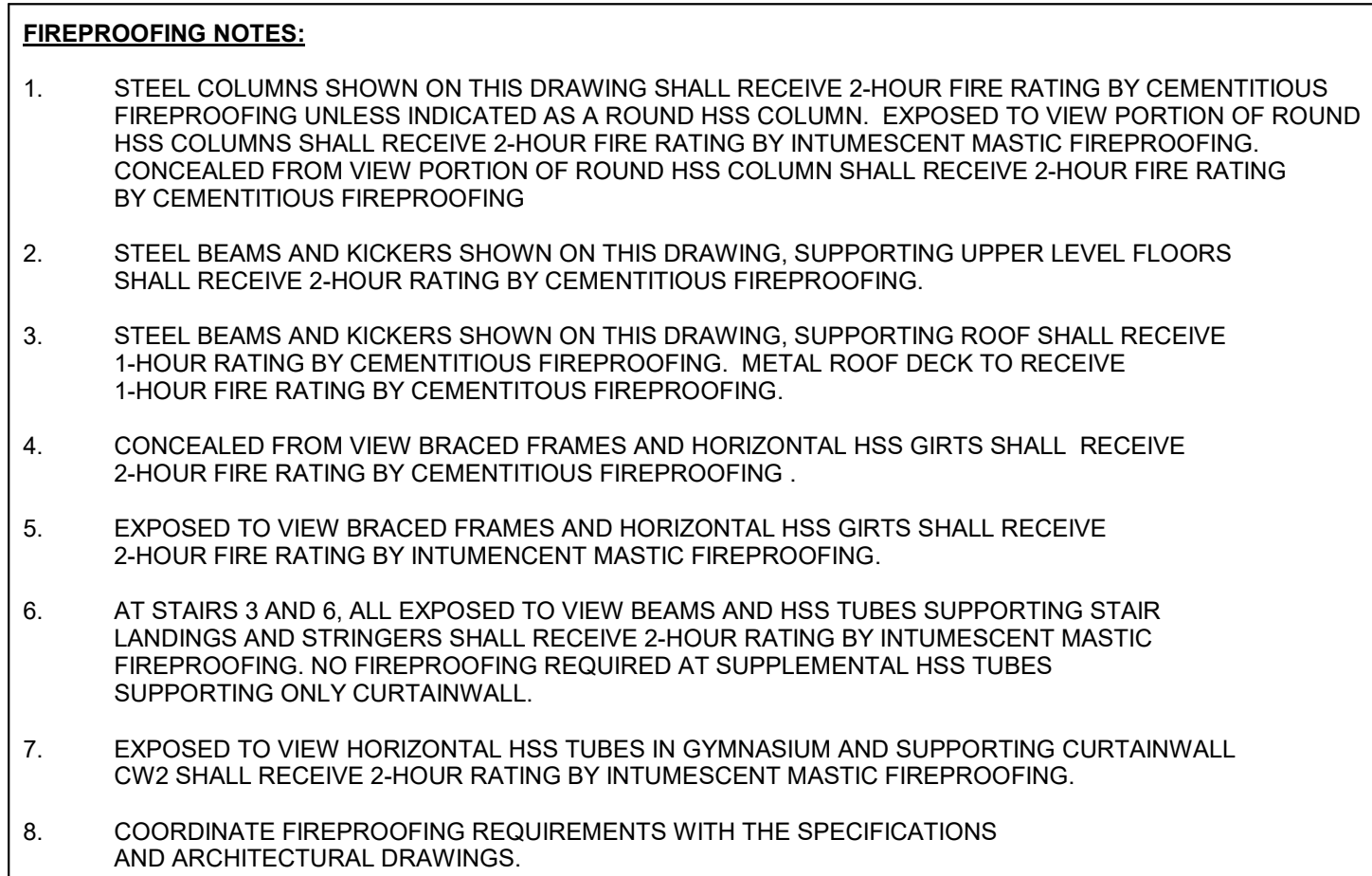
Scale: 1/8" = 1'-0"

00000

Page 58

ED

S1-1-3D



FRAMING ELEVATION NOTES:

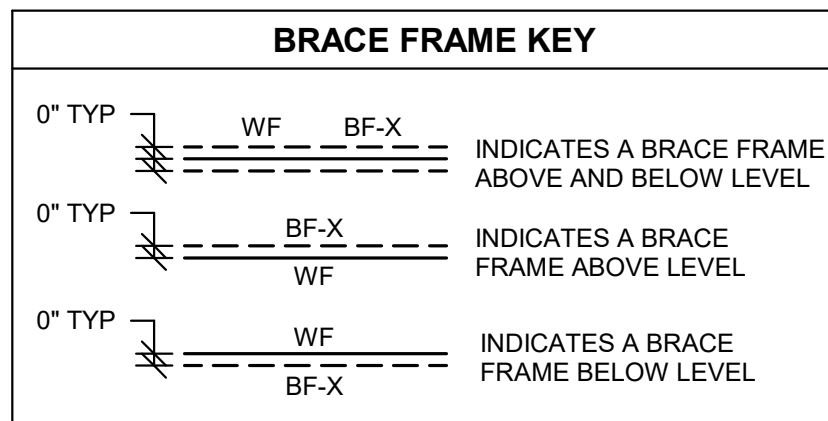
- 1.) TYPICAL UPSIDE-OF-DECK ELEVATION = $(133' - 6.34'')$ AT THE THIRD FLOOR LEVEL. IN THE AREA BOUNDED BY GRIDS (AA) - (DD) AND (24) - (34).
UNLESS NOTED OTHERWISE AS $(X' - X'')$, $(+X' - X'')$, OR HILLO.
- 2.) TYPICAL UPSIDE-OF-DECK ELEVATION = $(129' - 0'')$ AT THE LOW ROOF LEVEL. IN THE AREA BOUNDED BY GRIDS (CC) - (FF) AND (34) - (37).
UNLESS NOTED OTHERWISE AS $(X' - X'')$, $(+X' - X'')$, OR HILLO.
- 3.) FRAMING ELEVATIONS ARE BASED ON TOP-OF-FLOOR ELEVATION = $(134' - 0'')$. SHOWN ON THE ARCHITECTURAL DRAWINGS.
- 4.) COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- 5.) SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

BRACE FRAME KEY

0° TYP		INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL
0° TYP		INDICATES A BRACE FRAME ABOVE LEVEL
0° TYP		INDICATES A BRACE FRAME BELOW LEVEL

1.	STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN EXPOSED TO VARIOUS PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VARIOUS PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
2.	STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING.
3.	STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
4.	CONCEALED FROM VARIOUS PORTION OF STEEL BEAMS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
5.	EXPOSED TO VARIOUS PORTION OF STEEL BEAMS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
6.	AT STAIRS 1 AND 2, EXPOSED TO VARIOUS PORTION OF STEEL TUBES SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
7.	NO FIREPROOFING REQUIRED AT SUPPLEMENTAL STEEL HSS GIRTS, AND OUTRIGGERS SUPPORTING CURTAINWALL IN THE LIBRARY ROTUNDA.
8.	COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

- 1.) TYPICAL UNDERSIDE-OF-DECK ELEVATION = (147' - 6 3/4") AT THE FOURTH FLOOR LEVEL, IN THE AREA BOUNDED BY GRIDS (H) - (S) AND (4) - (33). UNLESS NOTED OTHERWISE AS (X' - X"), (+/- X' - X"), OR HI/LO.
- 2.) TYPICAL UNDERSIDE-OF-DECK ELEVATION = (147' - 6 3/4") AT THE MEDIA CENTER ROOF LEVEL, IN THE AREA BOUNDED BY GRID (Rc2).
- 3.) FRAMING ELEVATIONS ARE BASED ON TOP-OF-FLOOR ELEVATION = (148' - 0"), SHOWN ON THE ARCHITECTURAL DRAWINGS.
- 4.) COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- 5.) SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.



Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S1-1-4A

© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

DRA

Drummeys Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

280 Charles Street
Studio 300
Waltham, MA
02453

Planning | Architecture | Interior Design
Tel: 617.854.1700
www.dra.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



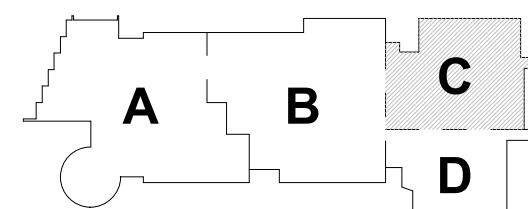
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021 DRUMMEYS ROSANE ANDERSON, INC.

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

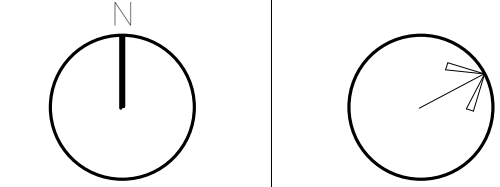
MSBA 90% CD
SUBMISSION

MAY 12, 2023



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



FOURTH FLOOR
FRAMING PLAN -
AREA C

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

Job No.: 20202

Drawn By: EDG

Date: MAY 12, 2023

S1-1-4C

FIREPROOFING NOTES:

1. STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
2. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING.
3. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
4. CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
5. EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
6. AT STAIRS 4 AND 7, ALL EXPOSED TO VIEW STRUCTURE SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
7. COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

FRAMING NOTES:

- 1.) FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- 2.) REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. FITCH ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- 3.) BF-1 ETC., INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0-1, S4-0-2, S4-0-3, S4-0-4, S4-0-5, S4-0-6, S4-0-7 AND S4-0-8 FOR ADDITIONAL INFORMATION.
- 4.) [X] INDICATES THE NUMBER OF 3/4" DIAMETER x 4 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- 5.) INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 9 ON DRAWING S0-0-6.
- 6.) INDICATES A 9/16" FLLET WELD ALL AROUND (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0-7.
- 7.) < X > INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 8.) 5-1/4" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 3 1/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6#6 - W2 1W/2 1 WWR.
- 9.) 1 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE B, GALVANIZED STEEL ROOF DECK.
- 10.) NA INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE NA, GALVANIZED ACOUSTIC STEEL ROOF DECK.
- 11.) 1 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 1 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6#6 - W2 1W/2 1 WWR.
- 12.) FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-0-8.
- 13.) 6" HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6". REINFORCE WITH 6#6 - W2 1W/2 1 WWR. REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0-7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA x 5' LONG HEADED STUDS.
- 14.) 8" INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING S0-0-8 AND DETAIL 1 ON DRAWING S0-0-8. FOR DECKING SUPPORT, REFER TO DETAIL 8 ON DRAWING S0-0-7. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- 15.) CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- 16.) WE INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING S0-0-7.
- 17.) 8" OR 10" INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 6 ON DRAWING S0-0-4 FOR REINFORCEMENT. DETAIL 6 ON DRAWING S0-0-4 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 7 ON DRAWING S0-0-4 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 18.) 8" x 2" PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- 19.) 10" x 2" PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- 20.) FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- 21.) WE INDICATES A SPLICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPLICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- 22.) mm INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-0-6.
- 23.) 9/16" INDICATES SPAN DIRECTION OF 9/16" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- 24.) XX'XX'XX' INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECT/PLUMB/FIRE PROTECT/ETC COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 6 ON S0-0-6 FOR ADDITIONAL INFORMATION.
- 25.) 3" INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE N, GALVANIZED STEEL ROOF DECK.

FRAMING ELEVATION NOTES:

- 1.) TYPICAL UNDERSIDE-OF-DECK ELEVATION = (147'-6 3/4") AT THE FOURTH FLOOR LEVEL, IN THE AREA BOUNDED BY GRIDS (AA) - (AA.9) AND (8) - (13) UNLESS NOTED OTHERWISE AS (X' - X'), (+X' - X'), OR HILO.
- 2.) TYPICAL UNDERSIDE-OF-DECK ELEVATION = (152'-4") AT THE CLEAR-STORY ROOF LEVEL, IN THE AREA BOUNDED BY GRIDS (AA) - (QQ) AND (10) - (22) UNLESS NOTED OTHERWISE AS (X' - X'), (+X' - X'), OR HILO.
- 3.) FRAMING ELEVATIONS ARE BASED ON TOP-OF-FLOOR ELEVATION = (148'-0"), SHOWN ON THE ARCHITECTURAL DRAWINGS.
- 4.) COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- 5.) SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

BRACE FRAME KEY

- 0" TYP. --- WF --- BF-X --- INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL
- 0" TYP. --- BF-X --- WF --- INDICATES A BRACE FRAME ABOVE LEVEL
- 0" TYP. --- WF --- BF-X --- INDICATES A BRACE FRAME BELOW LEVEL

© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
Tel: 817.854.1702
www.dra.com

280 Charles Street
Studio 300
Waltham, MA
02453

Planning | Architecture | Interior Design

NORTHEAST METRO TECH

100 Hemlock Rd,
Wakefield, MA 01880

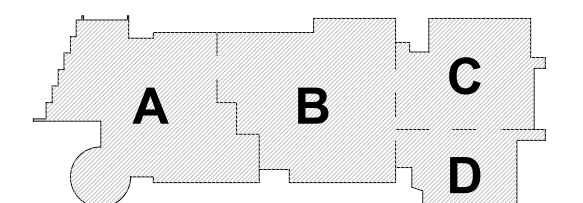
EDG
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST			
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1	
SS-S-2	4/21/2023	STRUCTURAL STEEL ADDENDUM 2	

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023



PROJECT NORTH
MAGNETIC NORTH

ROOF FRAMING PLAN - AREA A

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S1-1-5A

- ### FIREPROOFING NOTES:
- STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 - STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 - CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 - EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 - COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-1, S0-2, S0-3, S0-4, S0-5, S0-6, S0-7 AND S0-8.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. PITCH ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- BF-1 ETC. INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0-1, S4-0-2, S4-0-3, S4-0-4, S4-0-5, S4-0-6, S4-0-7 AND S4-0-8 FOR ADDITIONAL INFORMATION.
- [XX] INDICATES THE NUMBER OF 3/4" DIAMETER X 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 9 ON DRAWING S0-0-6.
- INDICATES A 5/16" FILLET WELD ALL AROUND (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS. PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0-7.
- + X" - INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 5-14" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 3/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6x6 - W2 1xW2 1 WWR.
- 1 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 3/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6x6 - W2 1xW2 1 WWR.
- INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE NA, GALVANIZED ACOUSTIC STEEL ROOF DECK.
- INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6x6 - W2 1xW2 1 WWR.
- FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-0-8.
- HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6" REINFORCE WITH 6x6 - W2 1xW2 1 WWR. REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0-7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA X 9' LONG HEADED STUDS.
- INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING S0-0-8 AND DETAIL 1 ON DRAWING S0-0-8 FOR DECKING SUPPORT. REFER TO DETAIL 8 ON DRAWING S0-0-7 FOR PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- WF INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING S0-0-7.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0-4 FOR REINFORCEMENT. DETAIL 8 ON DRAWING S0-0-5 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 7 ON DRAWING S0-0-5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 160 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2-HOUR FIRE RATING.
- PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 160 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2-HOUR FIRE RATING.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- WF INDICATES A SPICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-0-6.
- 9/16" INDICATES SPAN DIRECTION OF 9/16" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- XX-XX INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECT/PLUMB/FIRE PROTECT/ETC. COORDINATE WITH APPLICABLE DRAWINGS FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 6 ON S0-0-4 FOR ADDITIONAL INFORMATION.
- 3" INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE NA, GALVANIZED STEEL ROOF DECK.

FRAMING ELEVATION NOTES:

- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (162' - 0") AT THE ROOF LEVEL IN THE AREA BOUNDED BY GRIDS (K) - (S) AND (4) - (33). UNLESS NOTED OTHERWISE AS (X' - X'), (+X' - X'), OR HILO.
- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (163' - 4") AT THE ELEVATOR ROOF - AREA A.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

ELEVATOR ROOF FRAMING PART PLAN - AREA A

UD ELEV = 163' - 4"

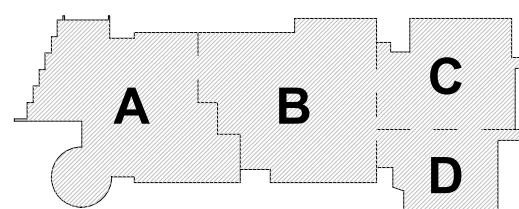
BRACE FRAME KEY		
0' TYP	WF BF-X	INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL
0' TYP	BF-X WF	INDICATES A BRACE FRAME ABOVE LEVEL
0' TYP	WF BF-X	INDICATES A BRACE FRAME BELOW LEVEL

REVISION LIST		
SS-S-2	4/21/2023	STRUCTURAL STEEL ADDENDUM 2

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

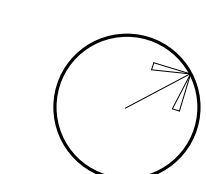
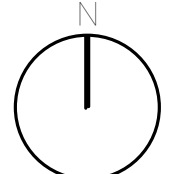
MAY 12, 2023



KEY PLAN

PROJECT NORTH

MAGNETIC NORTH



ROOF FRAMING PLAN - AREA C

Scale: $1/8" = 1'-0"$

Job No. 30302

Drawn By: EC

Date: MAY 19 2002

S1-1-5C

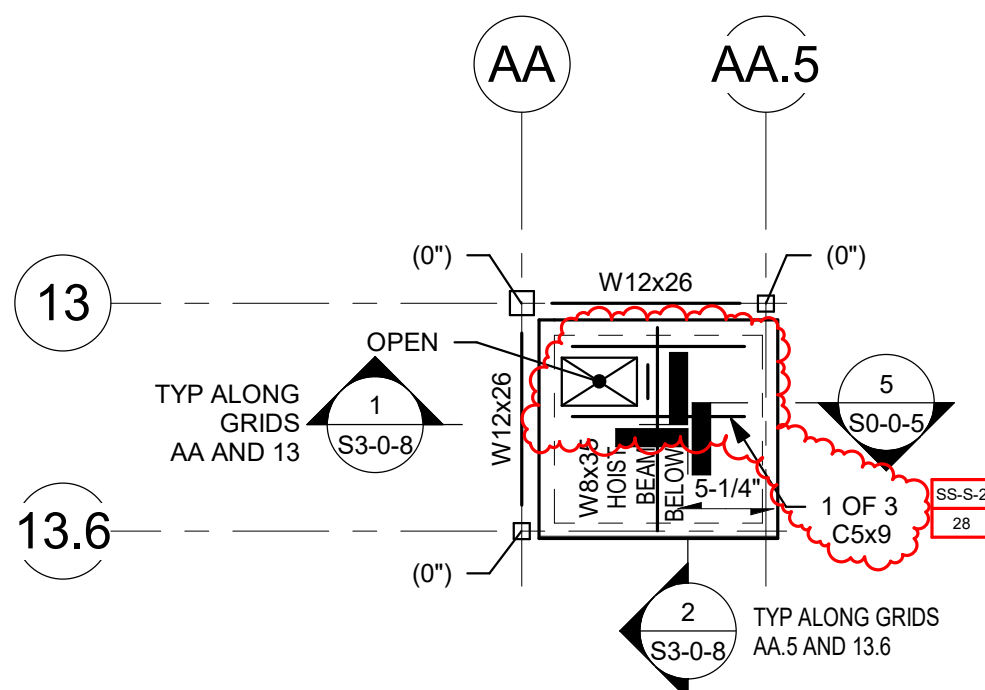
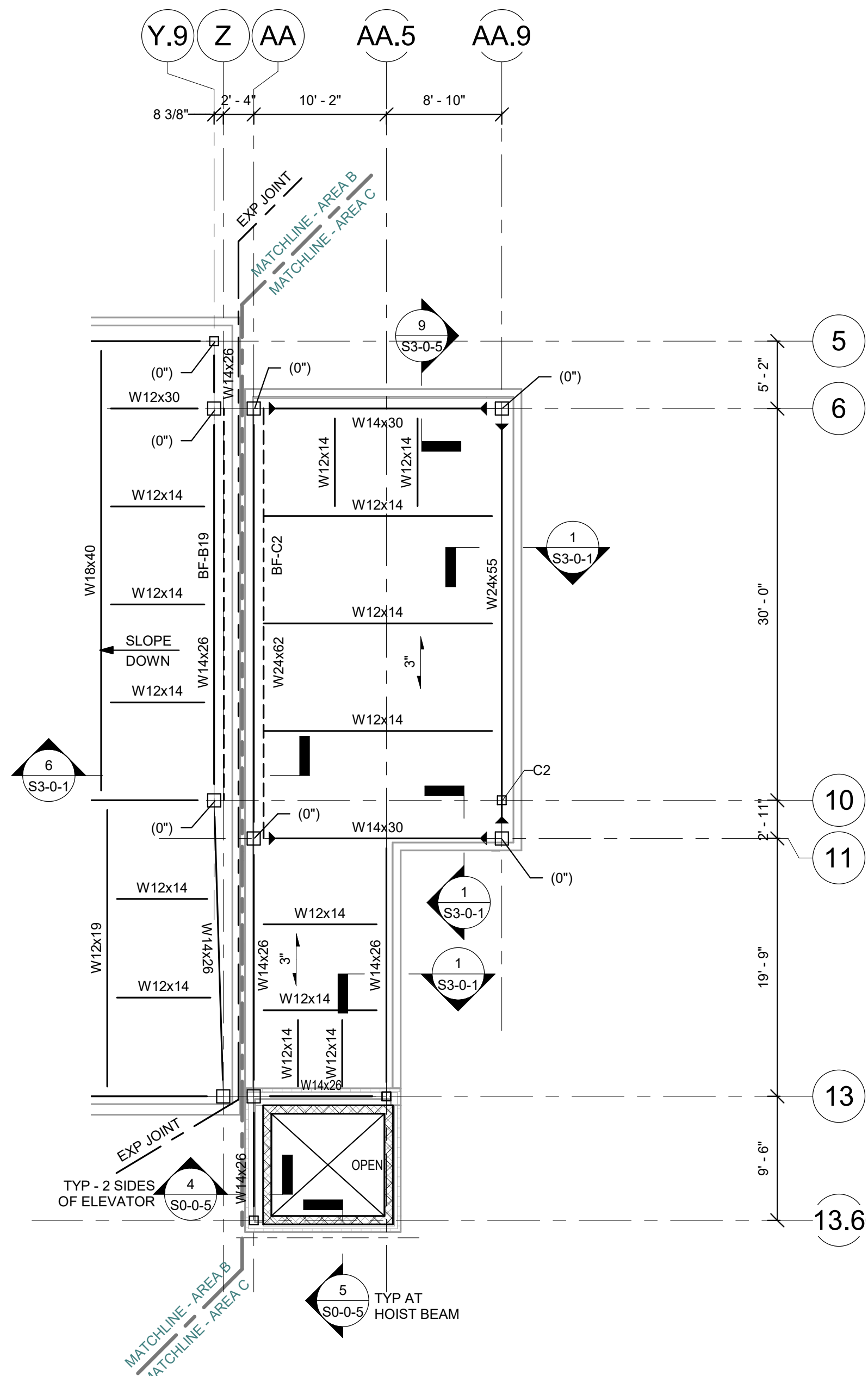
- PRELIMINARY NOTES:**
1. STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIBRE REINFORCED UNLESS INDICATED AS A ROUNDED HSS COLUMN. EXPOSED TOP PORTION OF ROUNDED HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCRETE FROM VIEW SECTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 2. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 3. CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 4. EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT FIREPROOFING.
 5. COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

FRAMING NOTES:

- 1) FOR GENERAL NOTES AND SYMBOLS, SEE DETAILS SEE DRAWINGS 50-0.1, 50-0.2, 50-0.3, 50-0.4, 50-0.5, 50-0.6, 50-0.7 AND 50-0.8.
- 2) REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. DETAIL ALL STEEL UNITS TO BE WELDED TO THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- 3) BF1+CTE INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS 54-0.1, 54-0.2, 54-0.3, 54-0.4, 54-0.5, 54-0.6 AND 54-0.7 FOR ADDITIONAL INFORMATION.
- 4) [OK] INDICATES THE SPAN OF 3/4" DIAMETER & 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS SPACING ALONGS THE BEAM UNLESS NOTED OTHERWISE.
- 5)  INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAIL 7, 8 AND 9 ON DRAWING 50-0.6.
- 6)  INDICATES A 5/16" FILLET WELD ALL AROUND. (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING 50-0.6.
- 7)  INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 8) $<5^{\circ}$ INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 3/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4" REINFORCE WITH 6# @ 12" V-21 WWR.
- 9)  $1^{1/2} \times 1^{1/2}$ INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE-B GALVANIZED COMPOSITE STEEL ROOF DECK.
- 10)  NA INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE NA GALVANIZED COMPOSITE STEEL ROOF DECK.
- 11)  LW INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 1 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4" REINFORCE WITH 6# @ 12" V-21 WWR.
- 12) FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, SEE DETAILS 1, 2 AND 3 ON DRAWING 50-0.8.
- 13)  HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6" REINFORCE WITH 6# @ 12" V-21 WWR. REFER TO TYPICAL STRUCTURAL DETAILS 50.07 FOR ADDITIONAL INFORMATION. USE 3/4" DIA X 6" LONG HEADED STUDS.
- 14)  INDICATES A ROOF DRAIN, REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING 50-0.8 AND DETAIL 10 ON DRAWING 50-0.7 FOR DECKING SUPPORT DETAIL. DETAIL 8 ON DRAWING 50-0.6 FOR DETAIL 10 PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- 15) CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- 16)  WF INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING 50-0.7.
- 17)  INDICATES A CMJ WALL. REFER TO TYPICAL DETAIL 9 ON DRAWING 50-0.4 FOR REINFORCEMENT. DETAIL 10 ON DRAWING 50-0.4 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 10 ON DRAWING 50-0.4 FOR CONNECTION OF STEEL PLUMBING AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL. REFER TO DETAILS 1 AND 2 ON DRAWING 50-0.6 FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 18) $8^{\circ} \pm 2^{\circ}$ PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM OF 20% NORMAL WEIGHT CONCRETE TOPPING, PLANK AND CONCRETE TOPPING SLAB IS DESIGNED TO SUPPORT A MINIMUM LIV LOAD CAPACITY OF 100 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATINGS.
- 19) $10^{\circ} \pm 2^{\circ}$ PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM OF 20% NORMAL WEIGHT CONCRETE TOPPING, PLANK AND CONCRETE TOPPING SLAB IS DESIGNED TO SUPPORT A MINIMUM LIV LOAD CAPACITY OF 100 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATINGS.
- 20) FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- 21)  WF INDICATES A SPICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- 22)  mmmmmm INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING 50-0.6.
- 23)  $9/16"$ INDICATES SPAN DIRECTION OF 9/16" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- 24)  XXXXXX INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECTR/PLUMB/FIRE PROTECT/ETC COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. REFER TO DETAILS 1 AND 2 ON DRAWING 50-0.6 FOR ADDITIONAL INFORMATION.
- 25)  3° INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE N GALVANIZED STEEL ROOF DECK.

FRAMING ELEVATION NOTES:

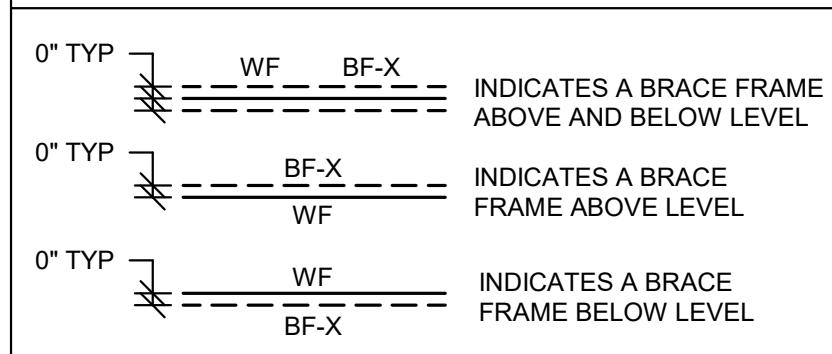
- 1.) TYPICAL UNDERSIDE-OF-DECK ELEVATION = (162' - 0") AT THE ROOF LEVEL, IN THE AREA BOUNDED BY GRIDS (AA) - (AA.9) AND (6) - (13.9) UNLESS NOTED OTHERWISE AS (X" - X'), (+X" - X"), OR HI/LO.
- 2.) TYPICAL UNDERSIDE-OF-DECK ELEVATION = (163' - 4") AT THE ELEVATOR ROOF - AREA C.
- 3.) COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- 4.) SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.



ELEVATOR ROOF FRAMING
PART PLAN - AREA C

U/D ELEV = 163' - 4"

BRACE FRAME KEY



Planning | Architecture | Interior Design
Tel: 617.954.1700
www.draws.com

100 Hemlock Rd,
Wakefield, MA 01880

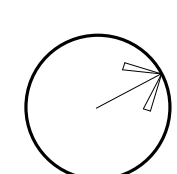


FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MAY 12, 2023



MAGNETIC NORTH



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

Job No.: 20202

Drawn By: EC

S1-1-5D

- ## FRAMING NOTES

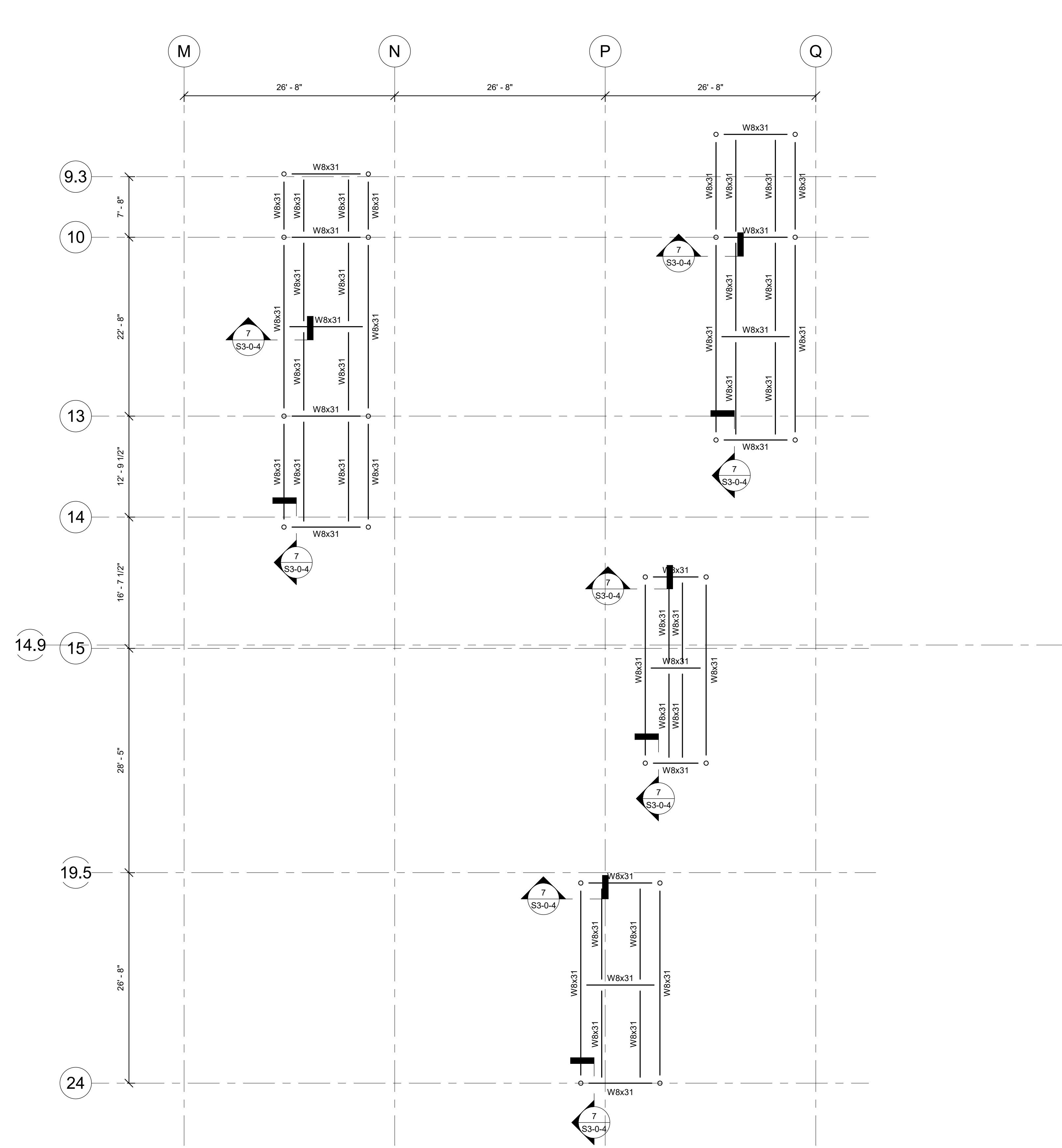
- ### FRAMING ELEVATION NOTES

- 1.) TYPICAL UNDERSIDE-OF-DECK ELEVATION = $(162' - 0")$ AT THE ROOF LEVEL, IN THE AREA BOUNDED BY GRIDS (AA) - (DD) AND (24) - (34) UNLESS NOTED OTHERWISE AS $(X' - X'')$, $(+X' - X'')$, OR HILO.
- 2.) COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- 3.) SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

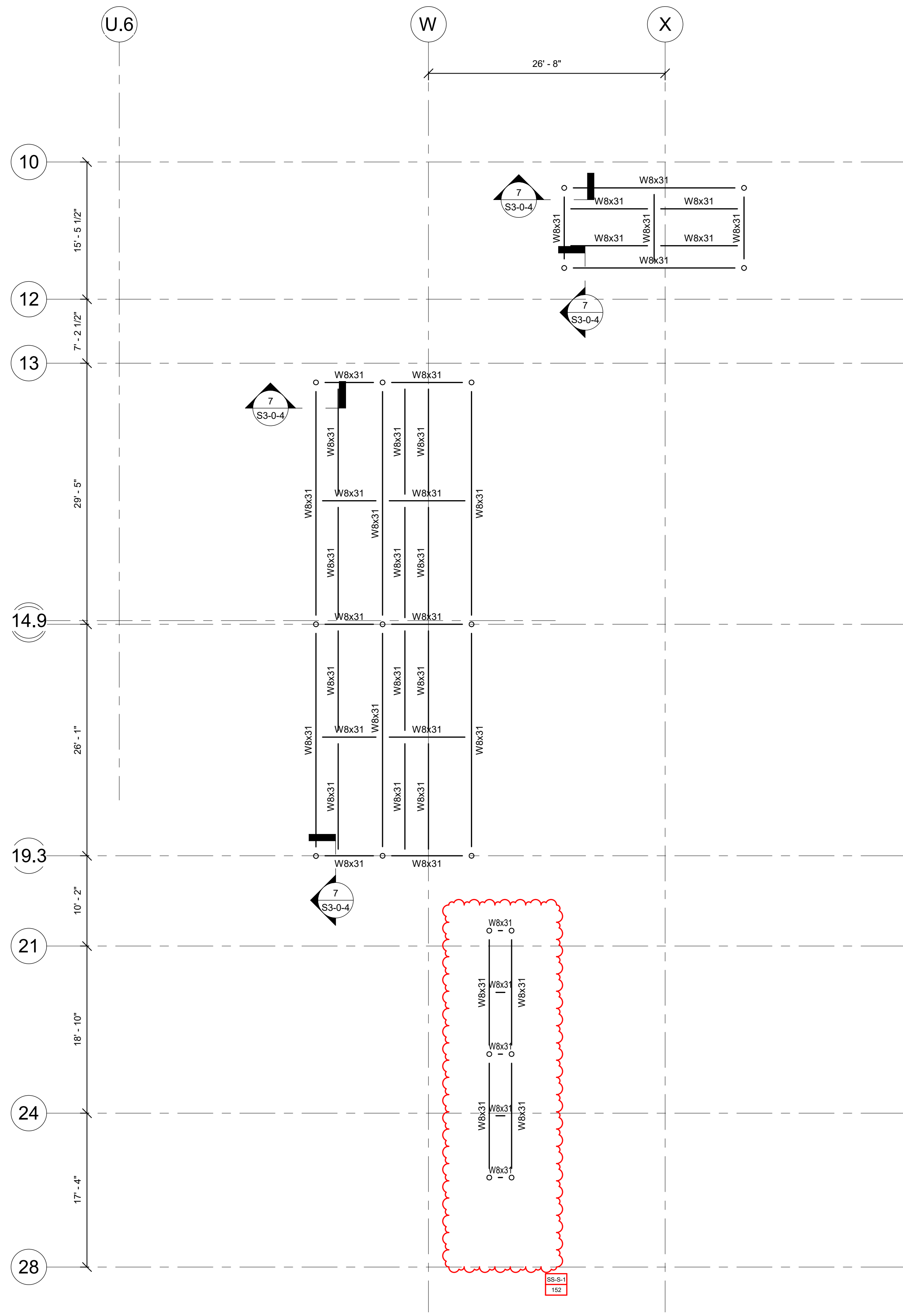
0" TYP INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL

0" TYP INDICATES A BRACE FRAME ABOVE LEVEL

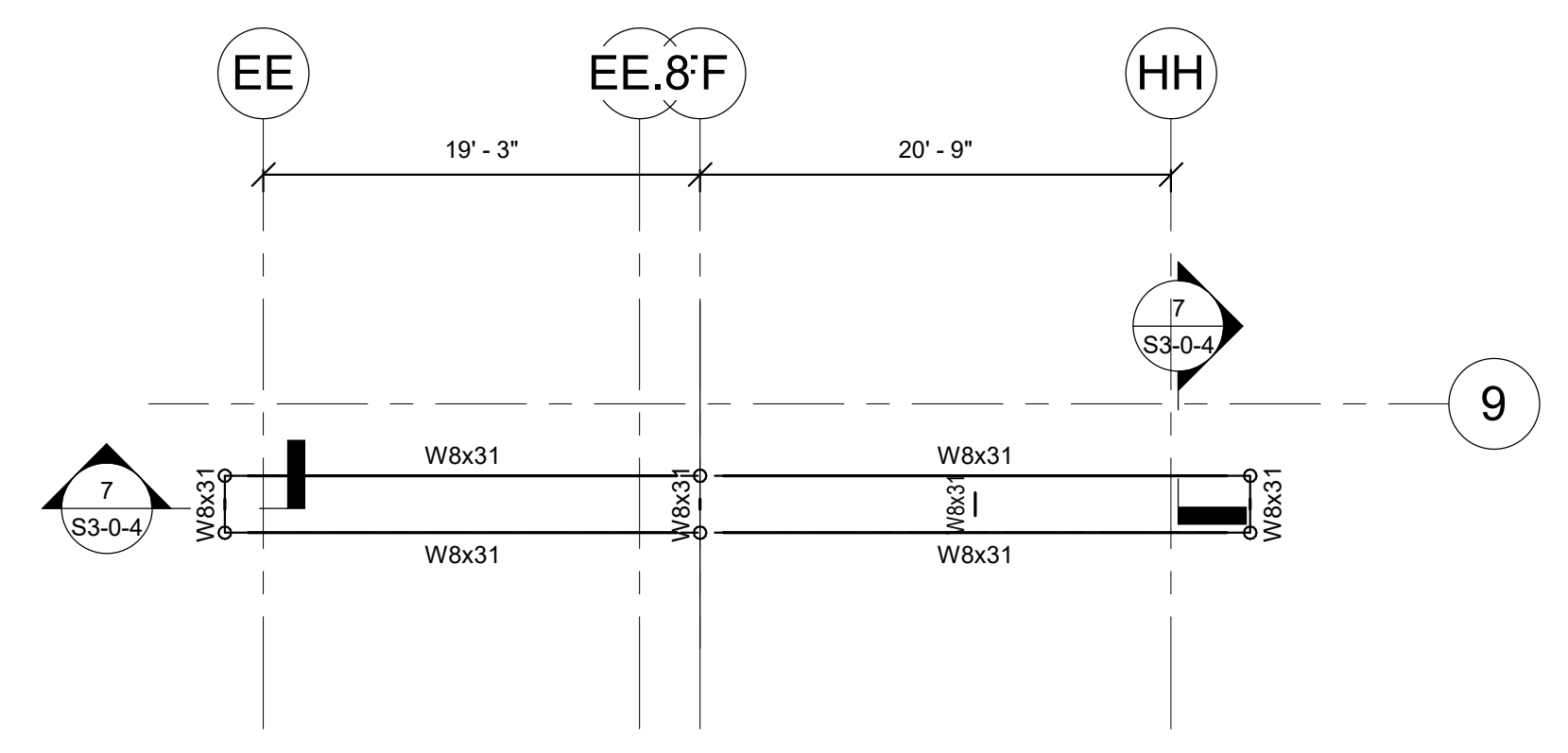
0" TYP INDICATES A BRACE FRAME BELOW LEVEL



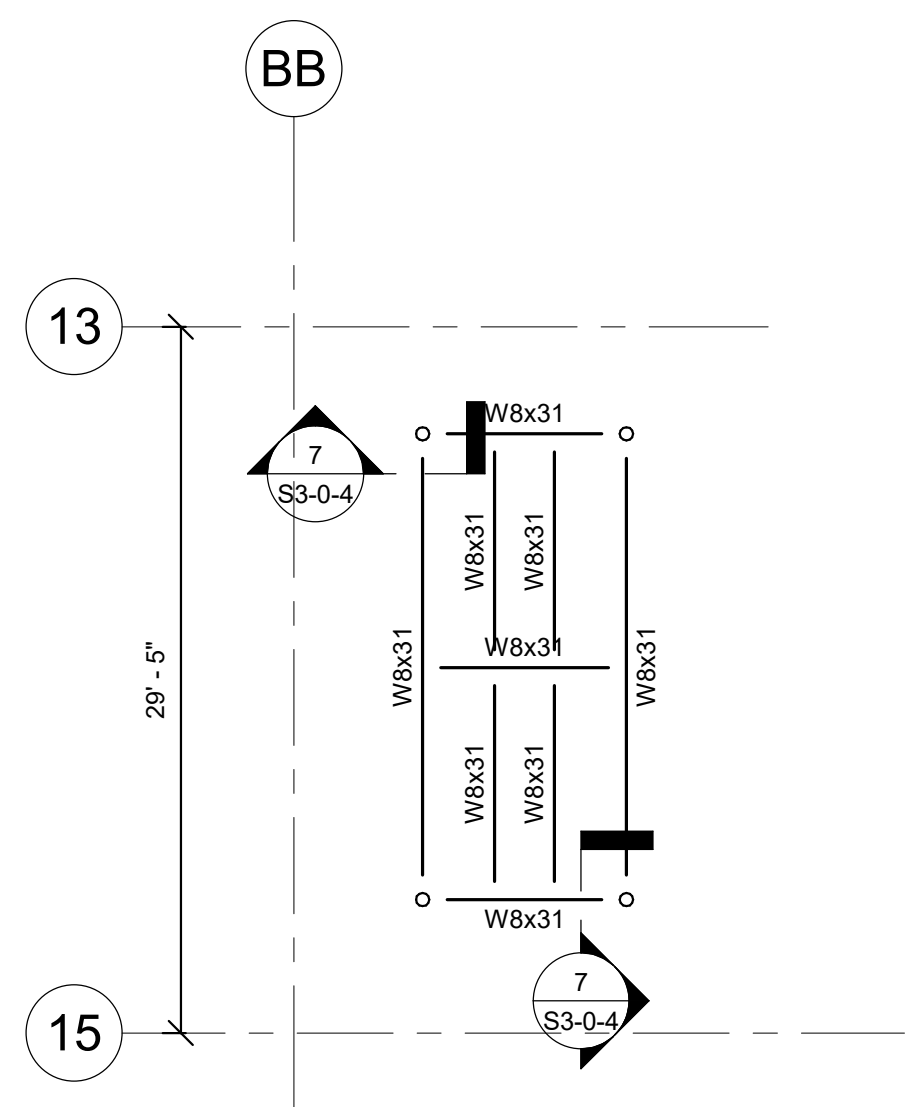
ROOF DUNNAGE FRAMING
PART PLAN - AREA A



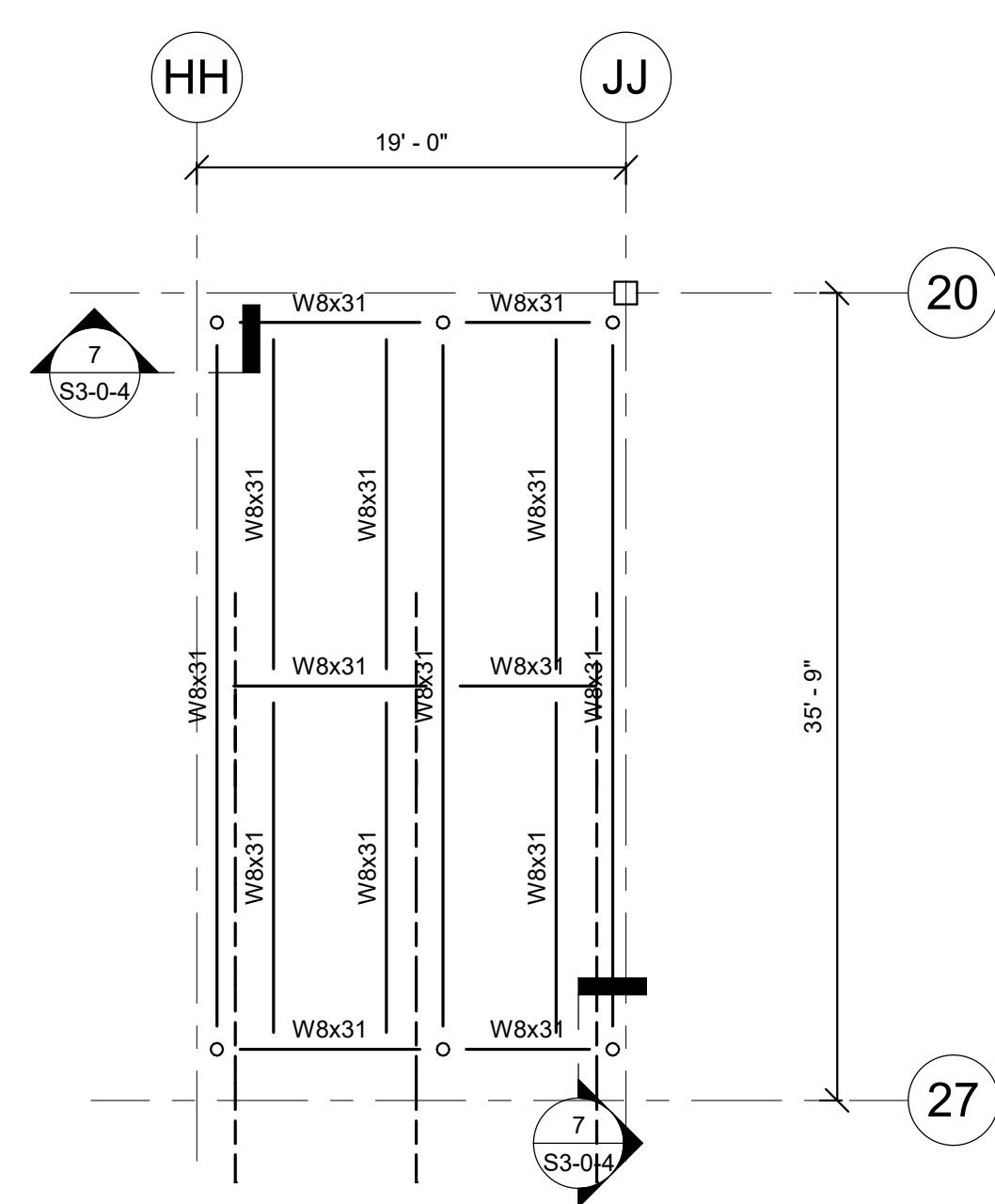
ROOF DUNNAGE FRAMING
PART PLAN - AREA B



ROOF DUNNAGE FRAMING
PART PLAN - AREA C



ROOF DUNNAGE FRAMING
PART PLAN - AREA C



ROOF DUNNAGE FRAMING
PART PLAN - AREA D

DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074
Tel: 617.854.1700
www.dra.com

280 Charles Street
Studio 300
Waltham, MA 02453

Planning | Architecture | Interior Design

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

SS-S-1

4/14/2023

STRUCTURAL STEEL
ADDENDUM 1

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023

KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

ROOF DUNNAGE
FRAMING PARTS

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

Job No.: 20202

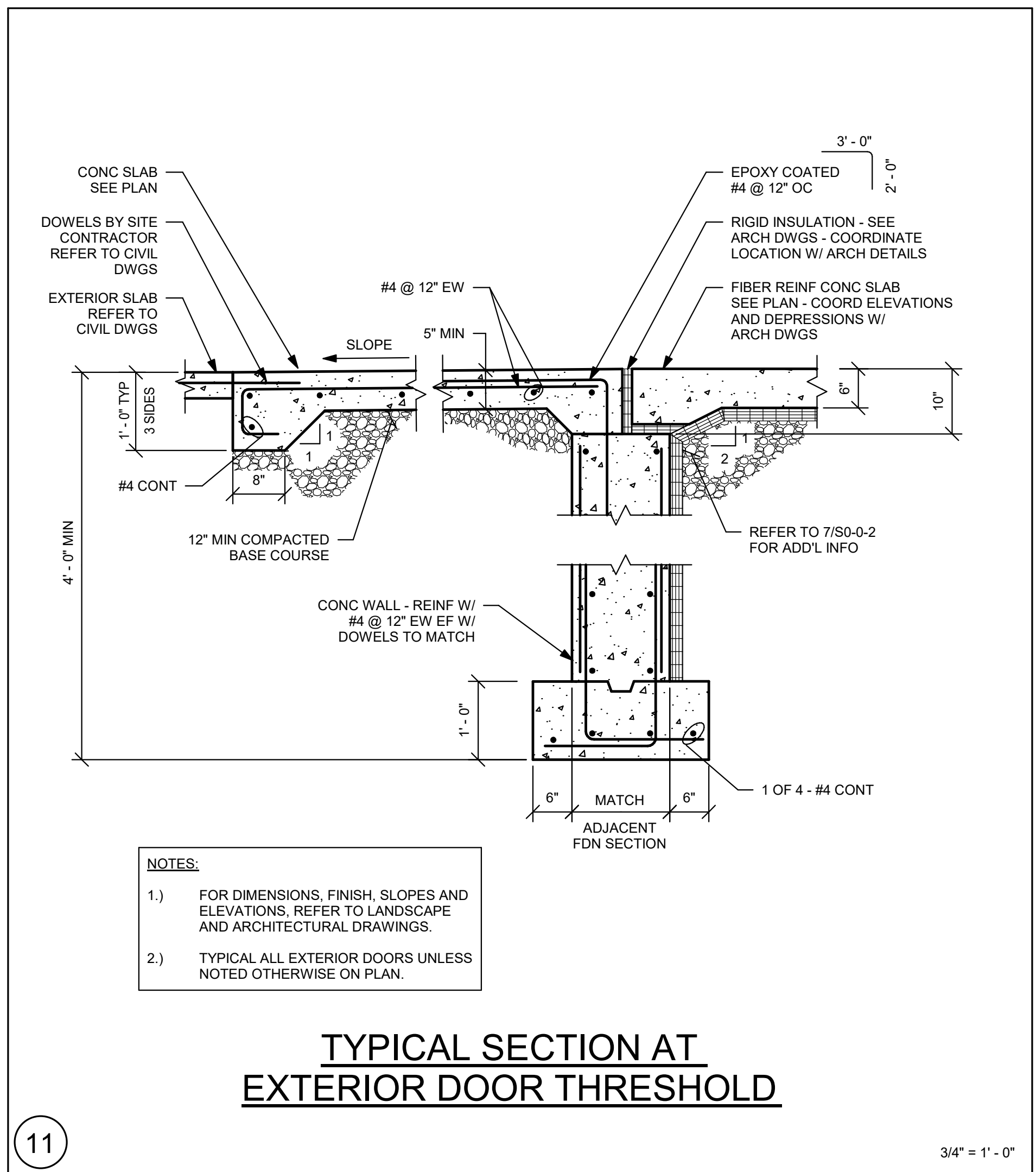
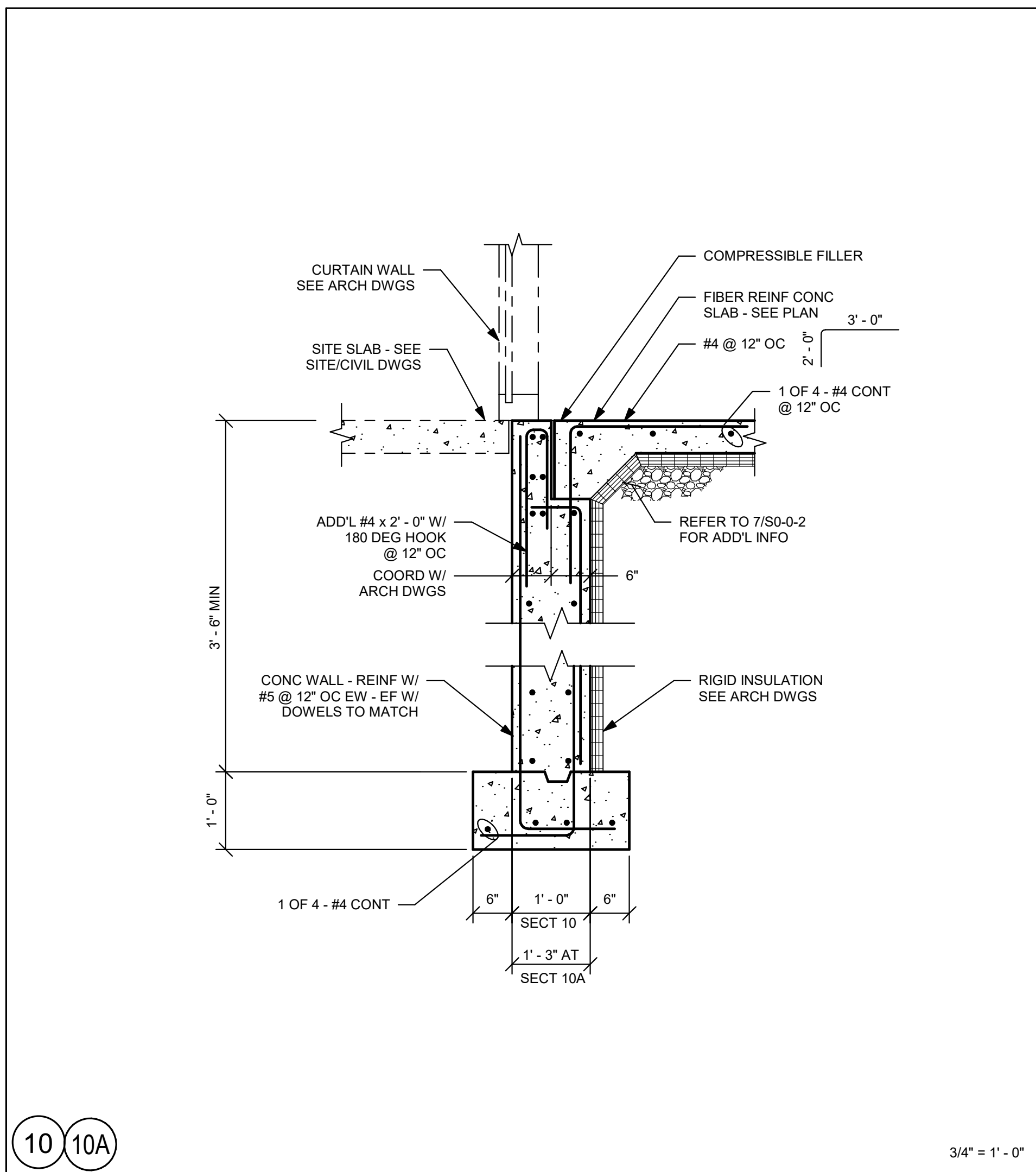
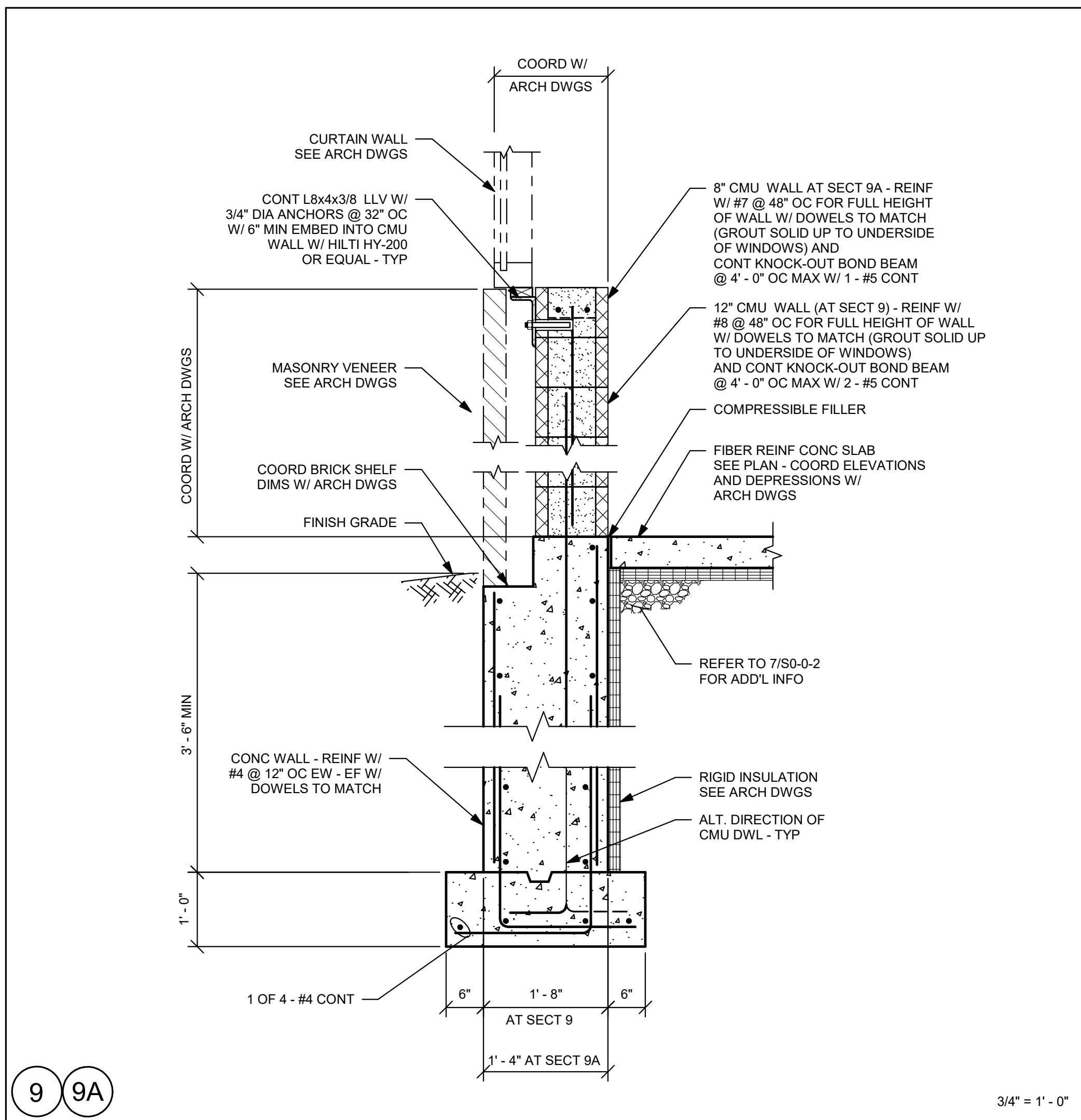
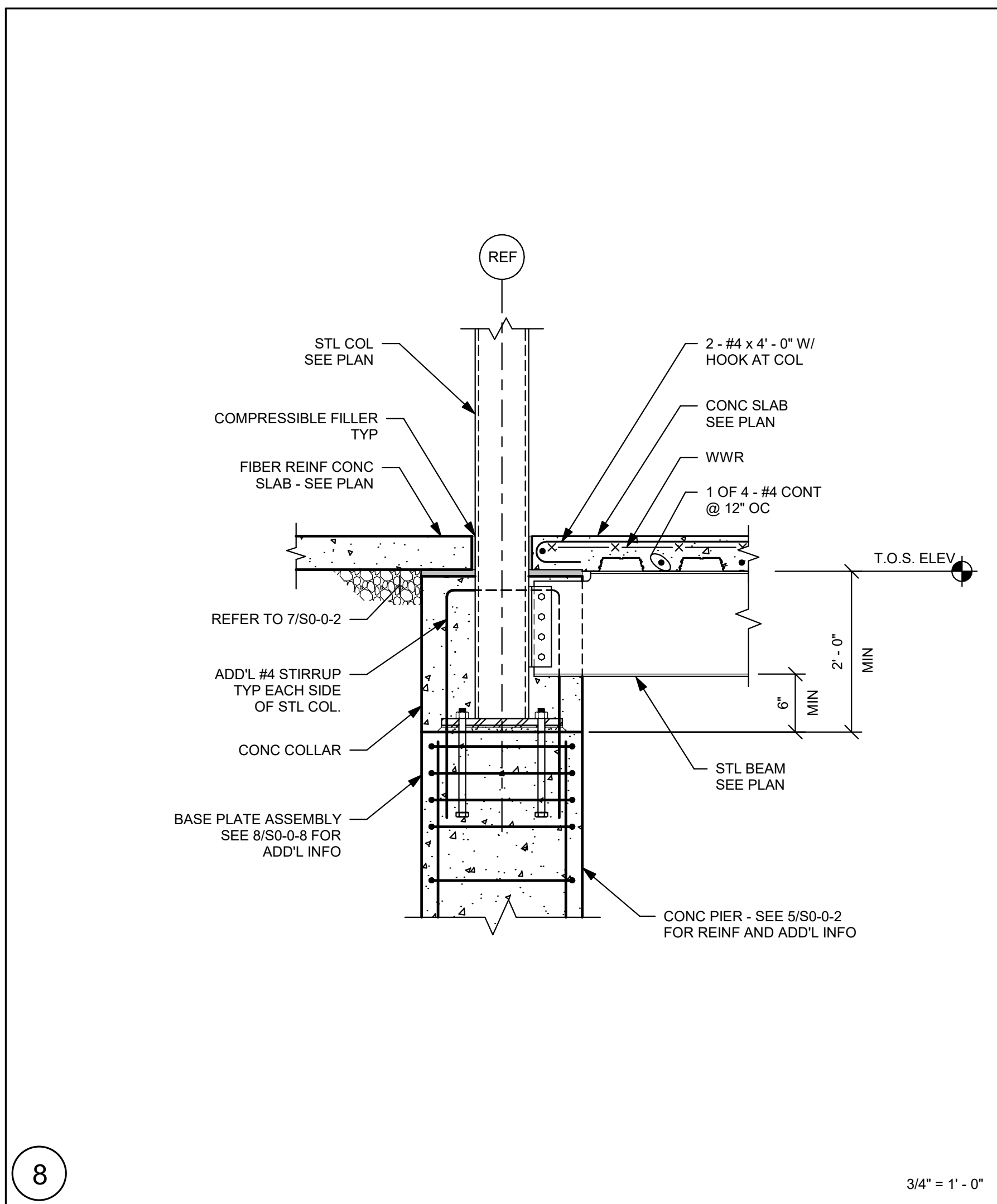
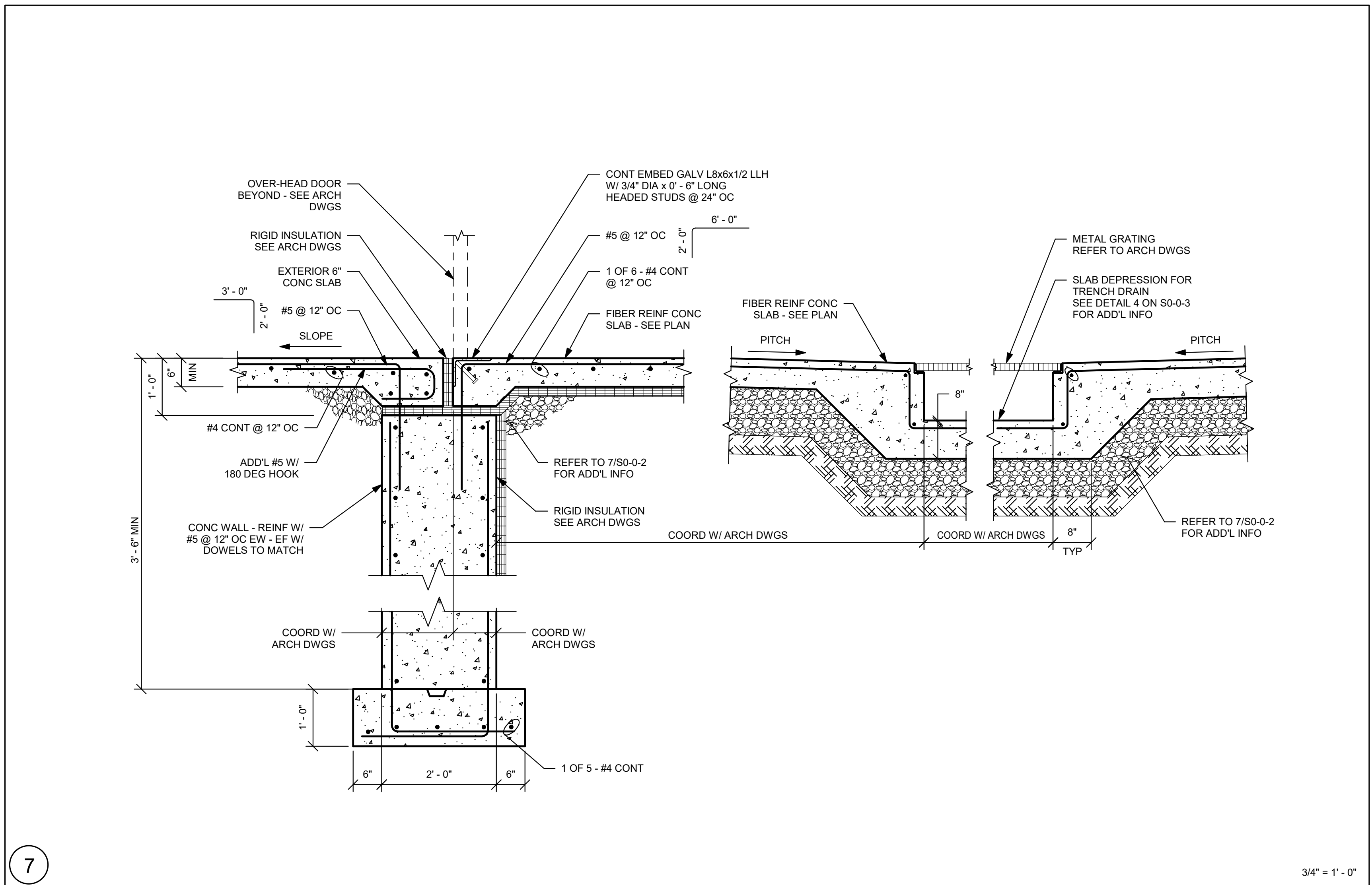
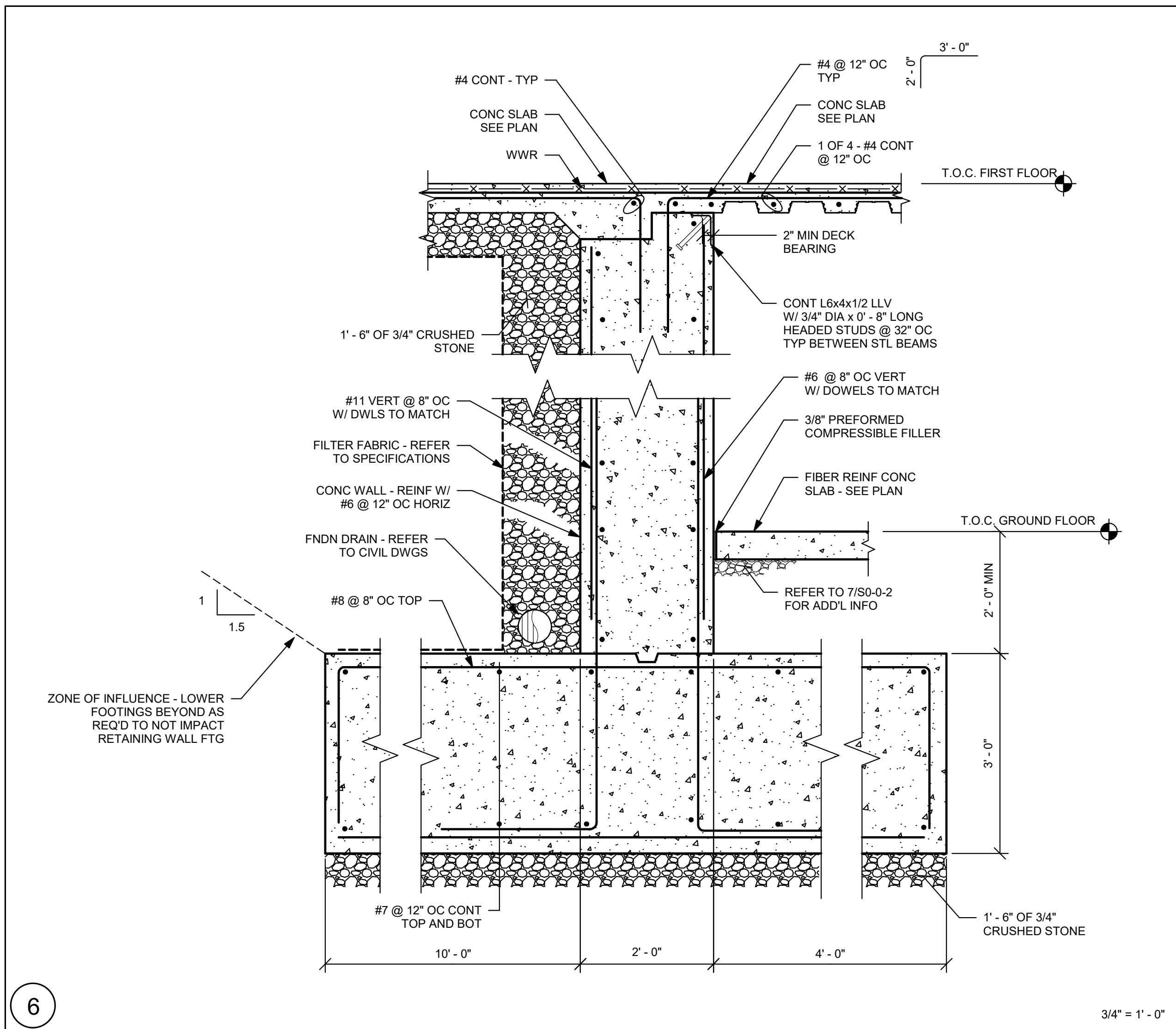
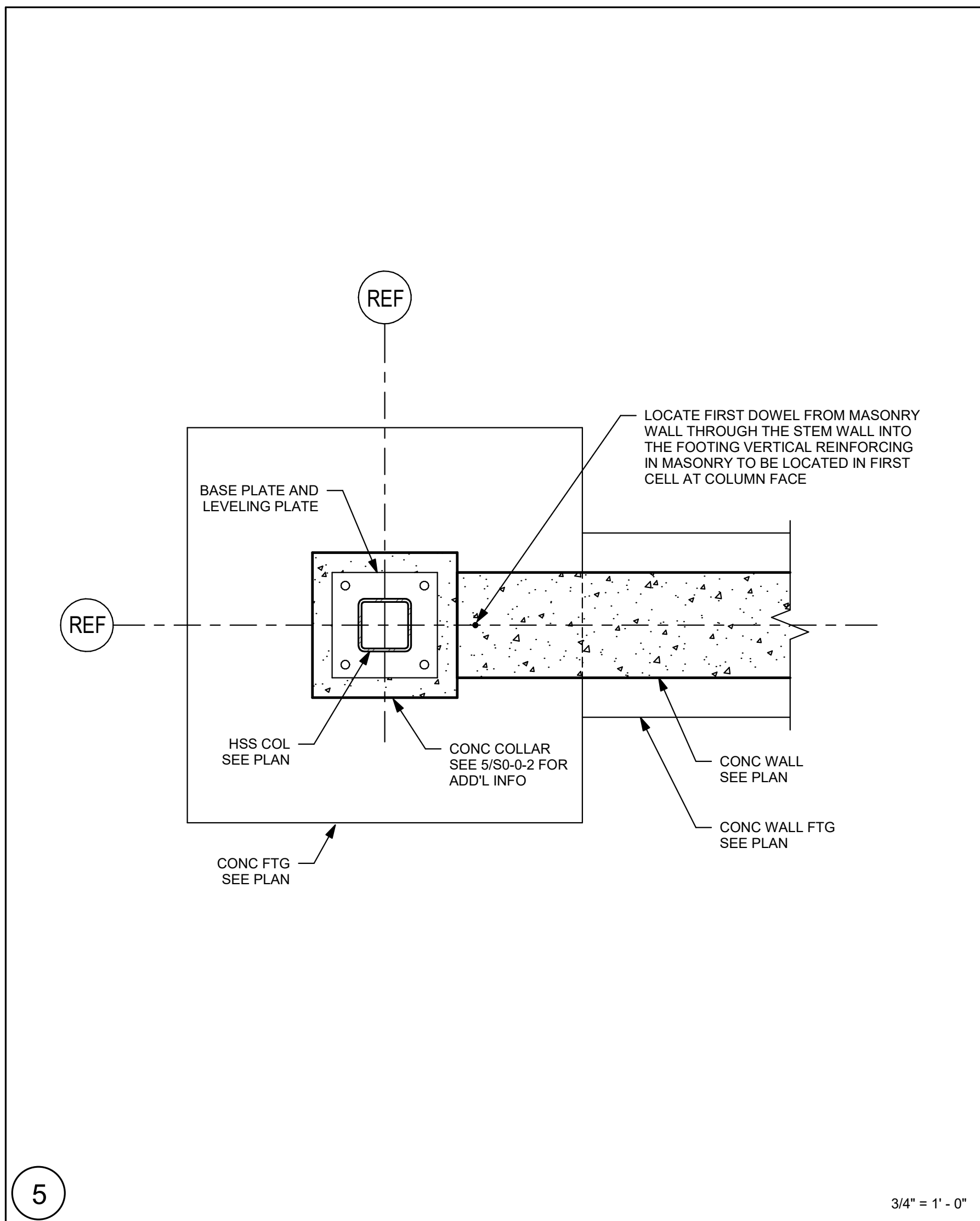
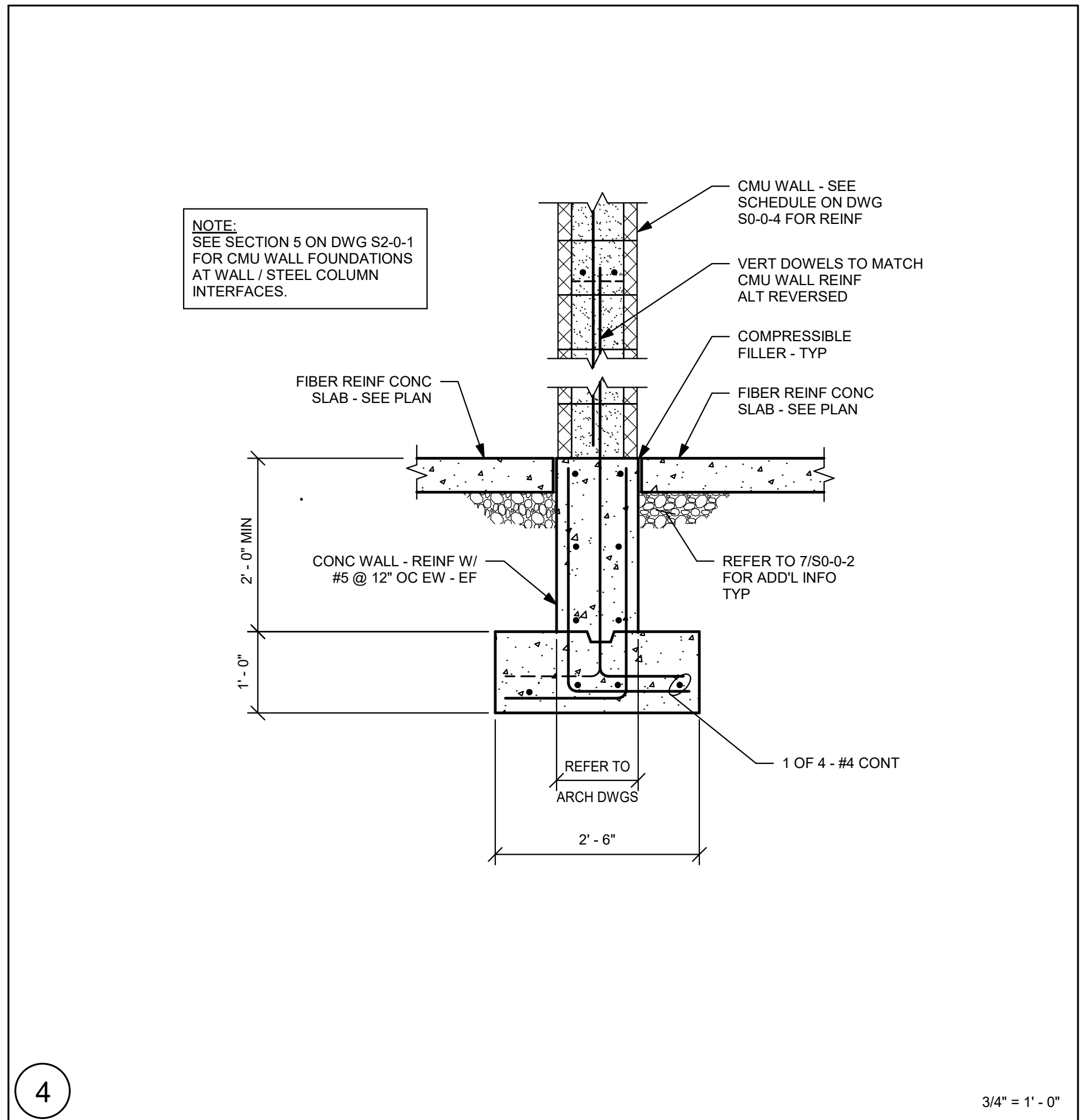
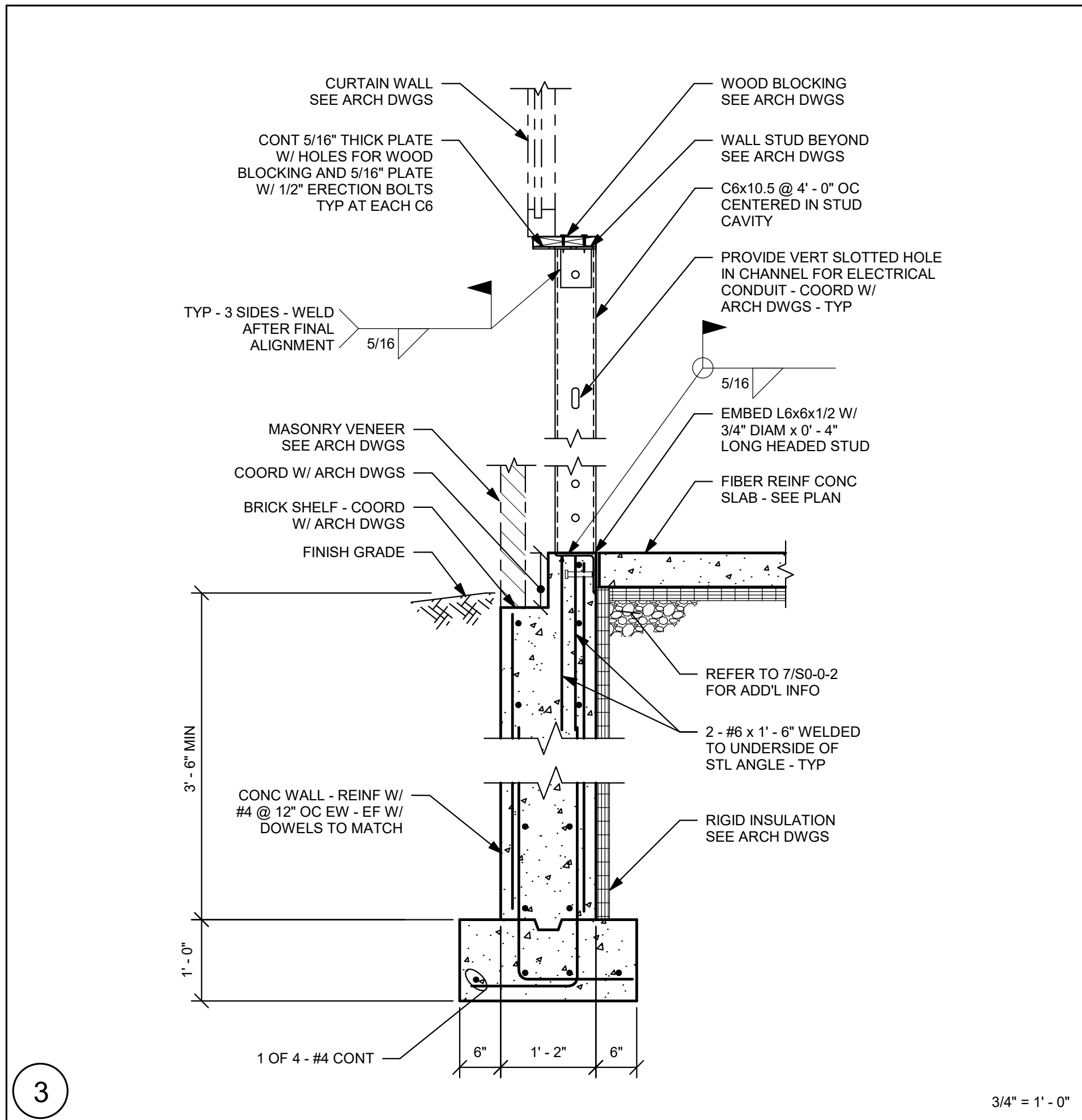
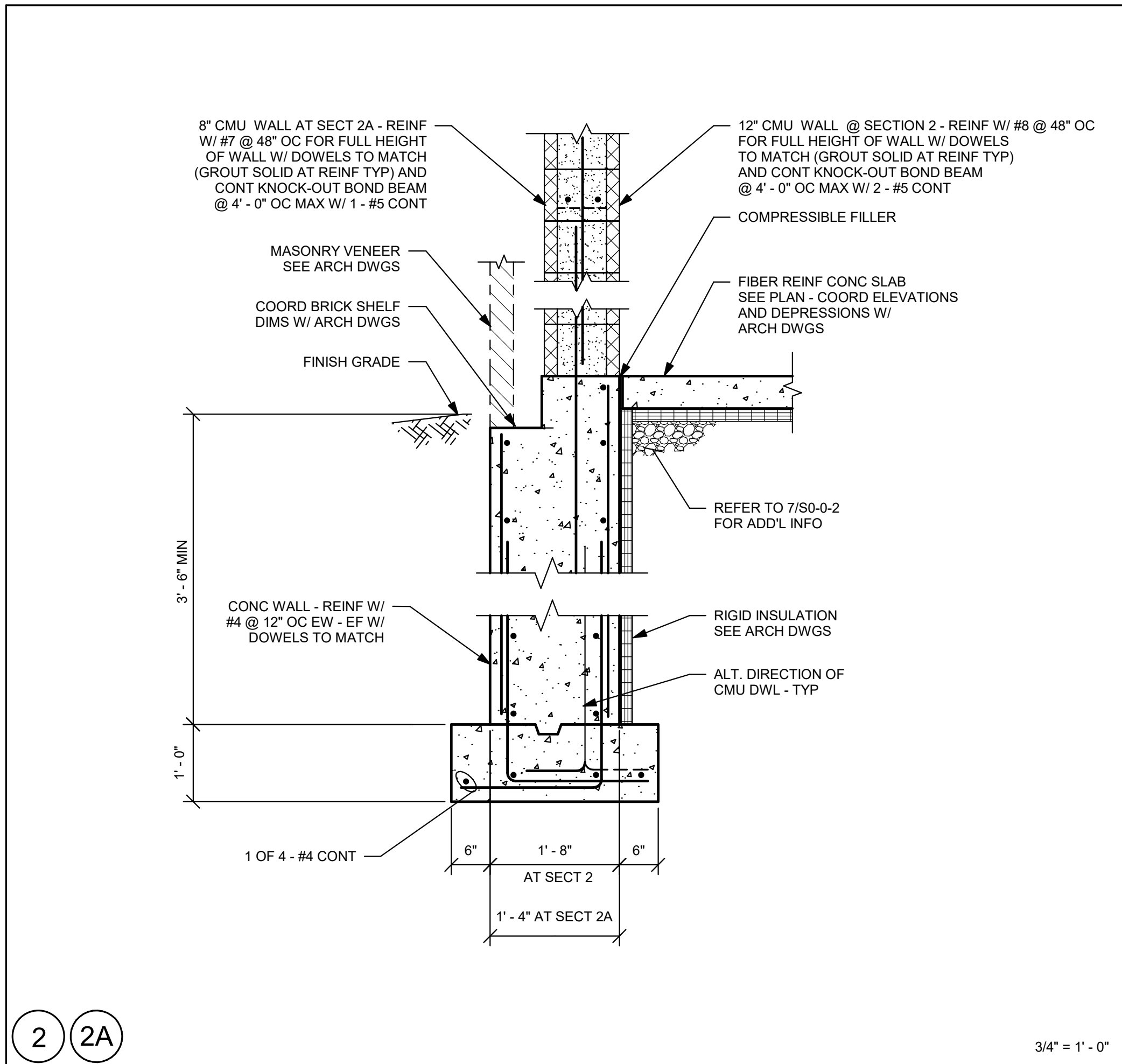
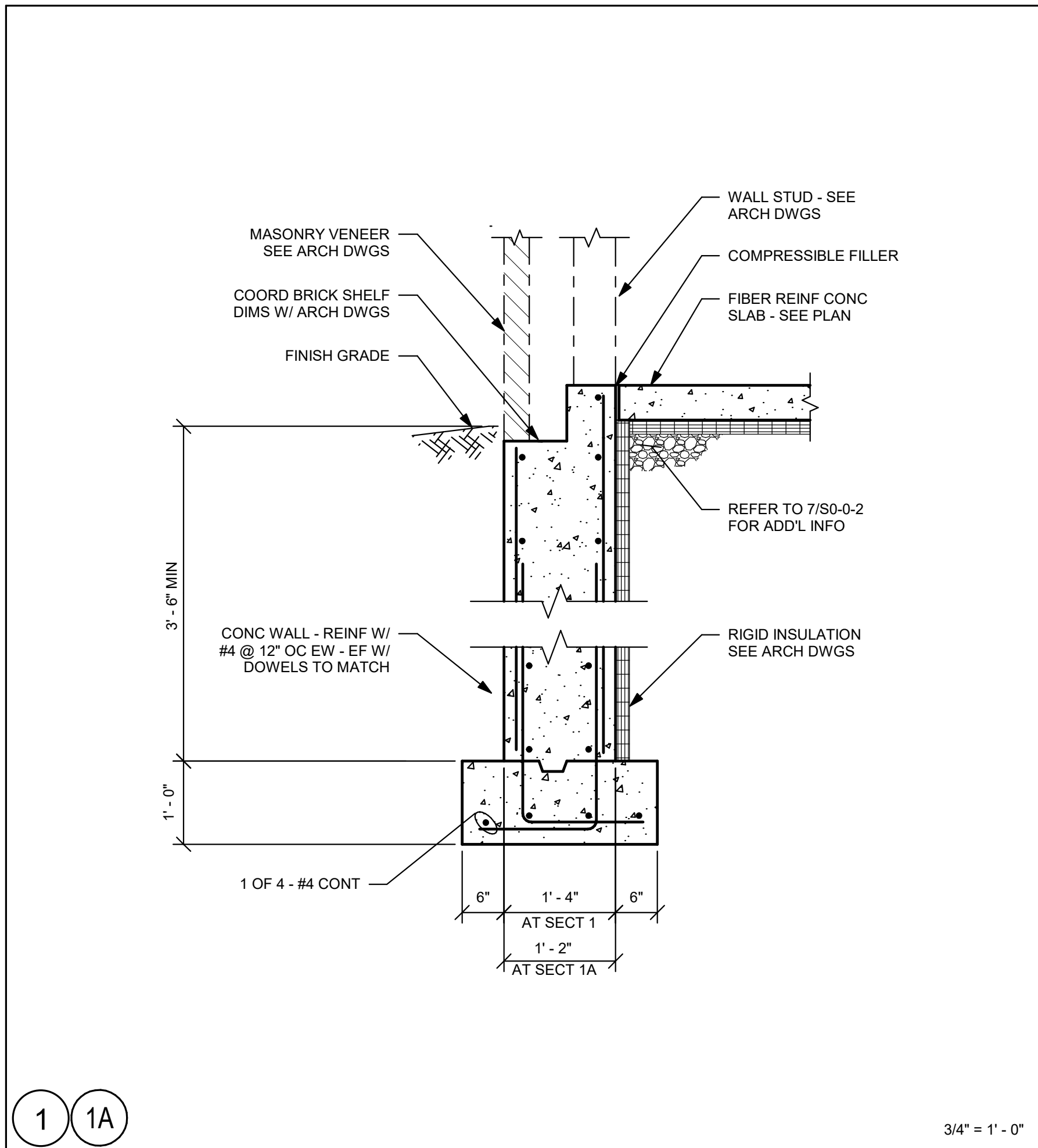
Drawn By: EDG

Date: MAY 12, 2023

S1-1-6

© COPYRIGHT 2021

DRUMSEY ROSANE ANDERSON, INC.



DRA

Drumsey Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning | Architecture | Interior Design

Tel: 617.854.1702
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.

Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023

KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

SECTIONS

Scale: 3/4" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S2-0-1

DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

260 Charles Street
Studio 300
Waltham, MA
02453

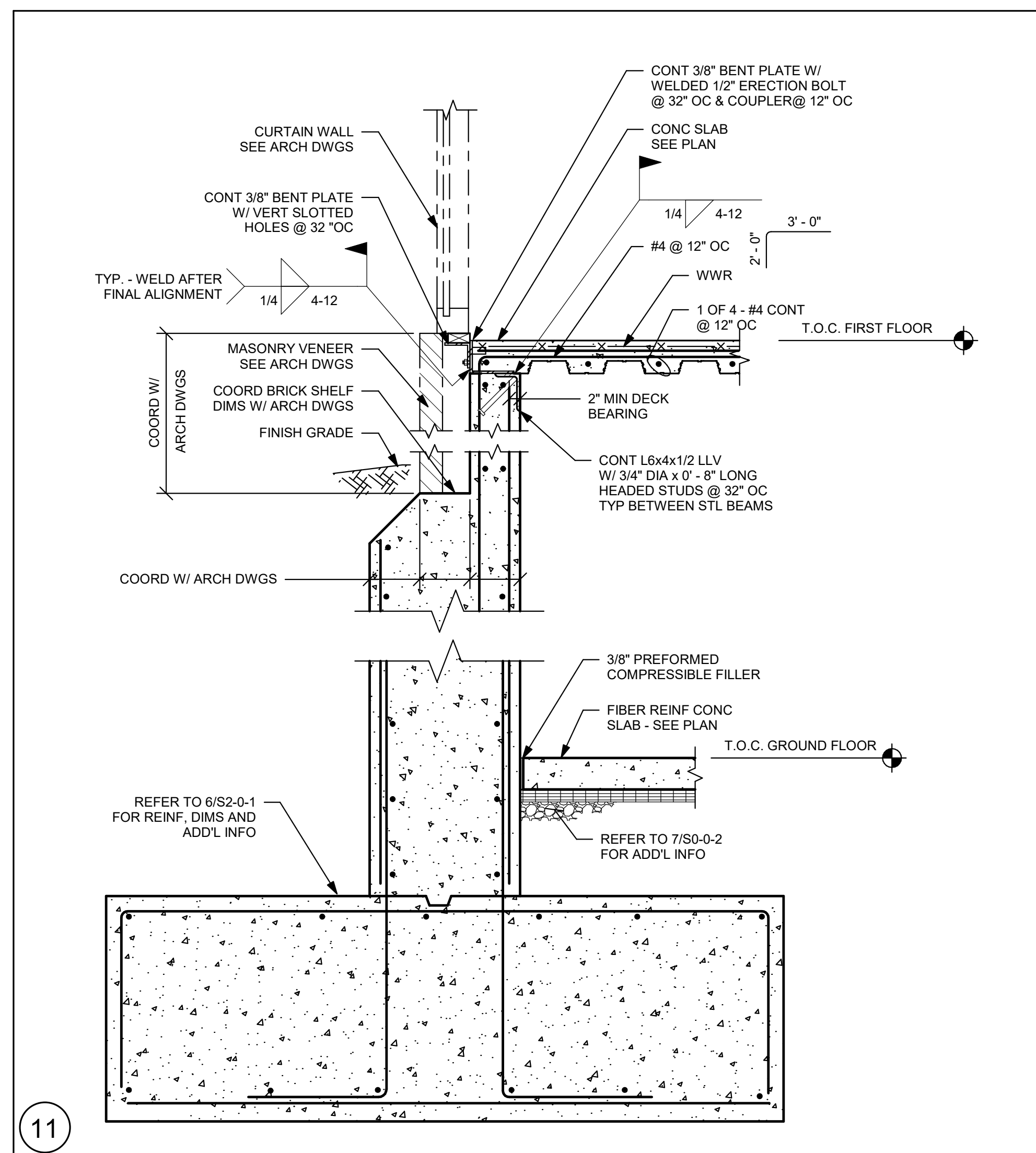
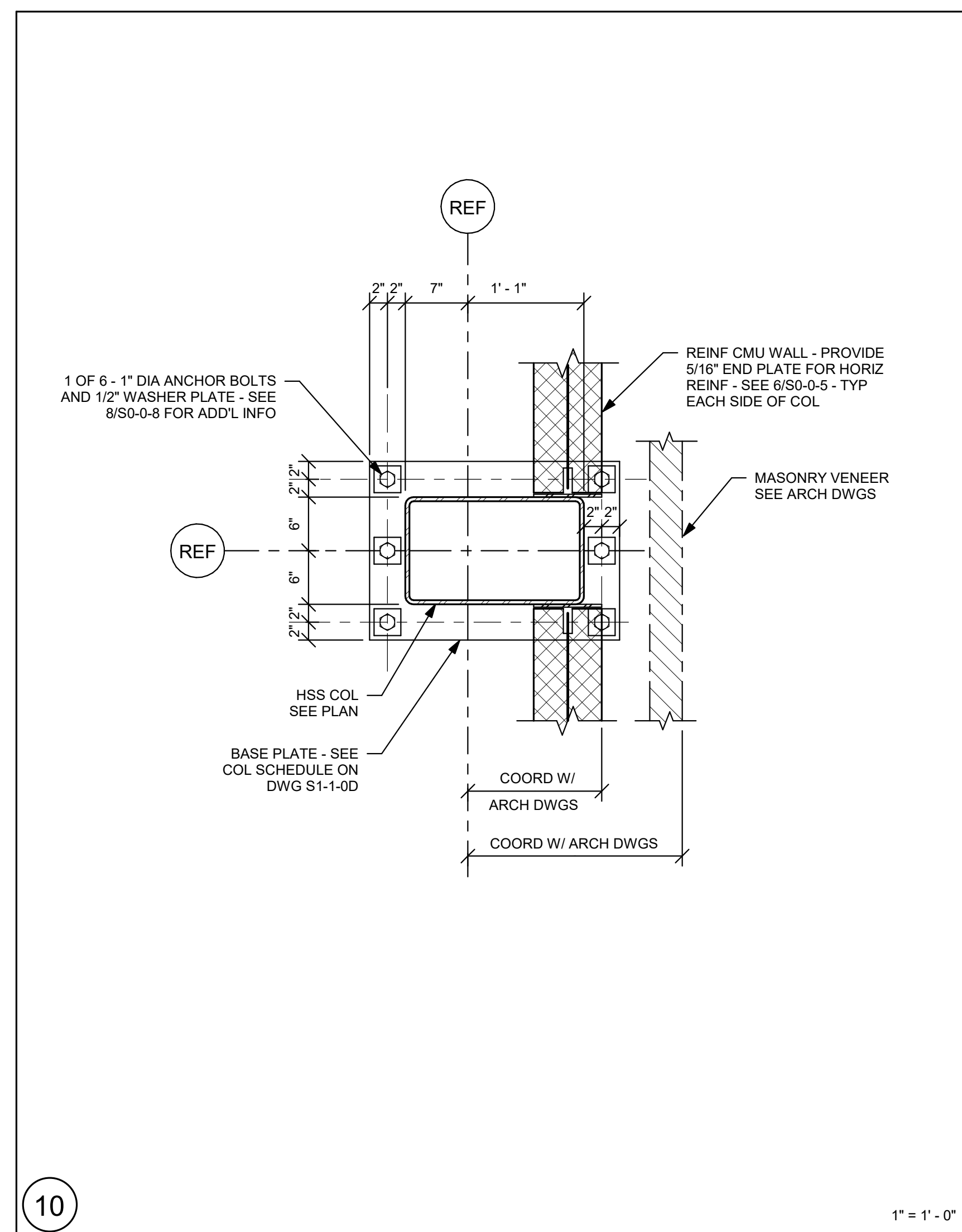
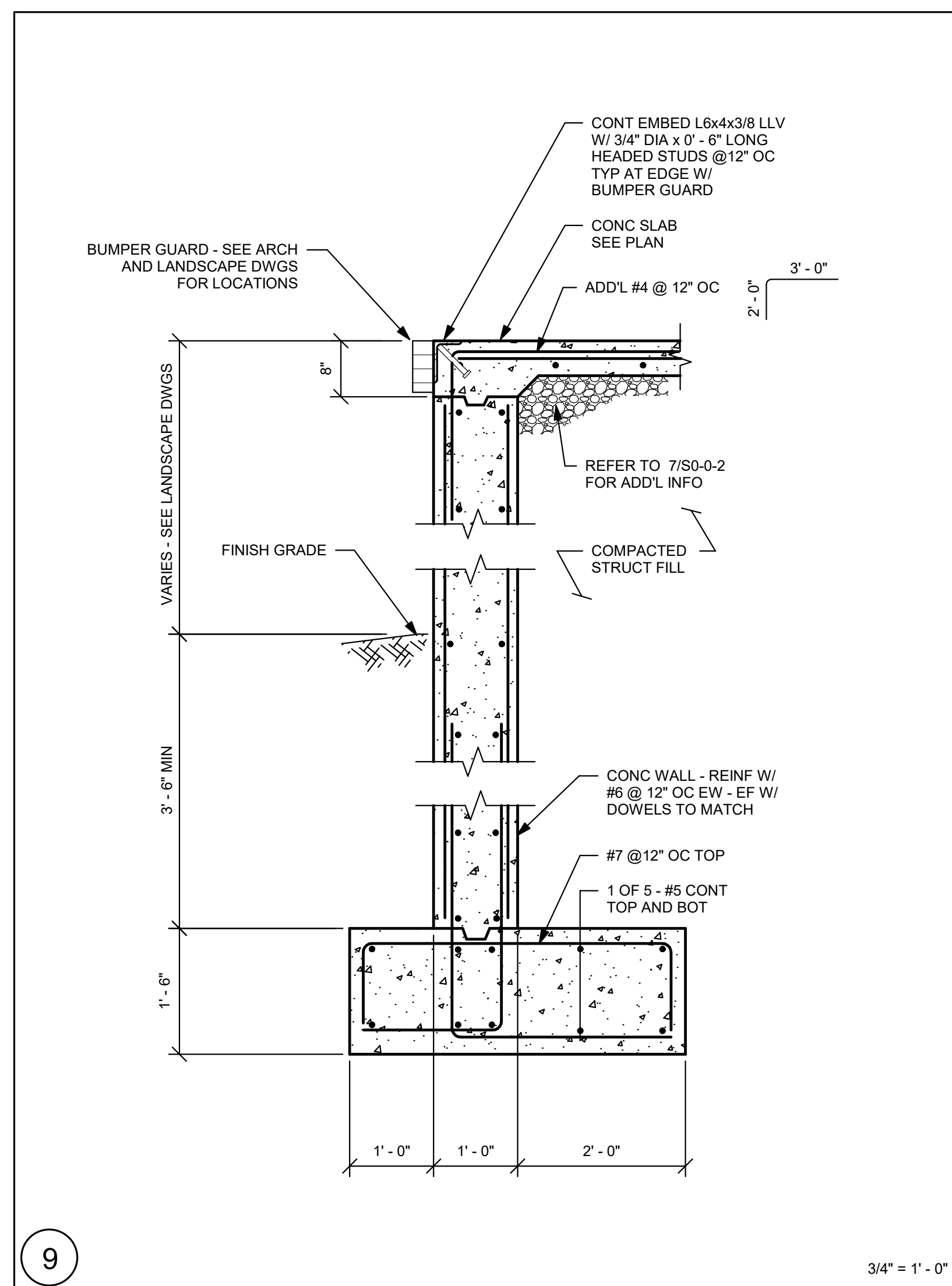
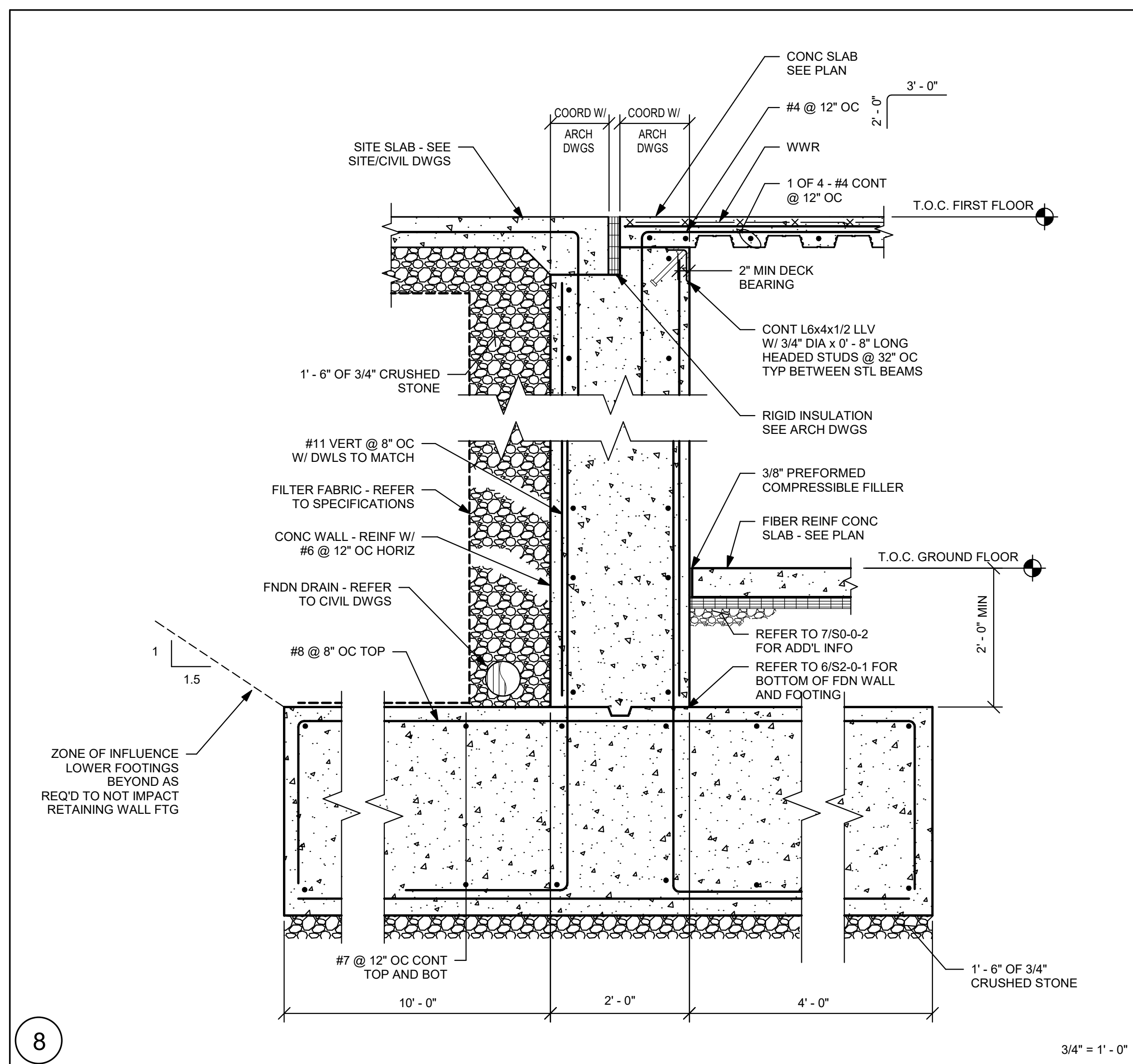
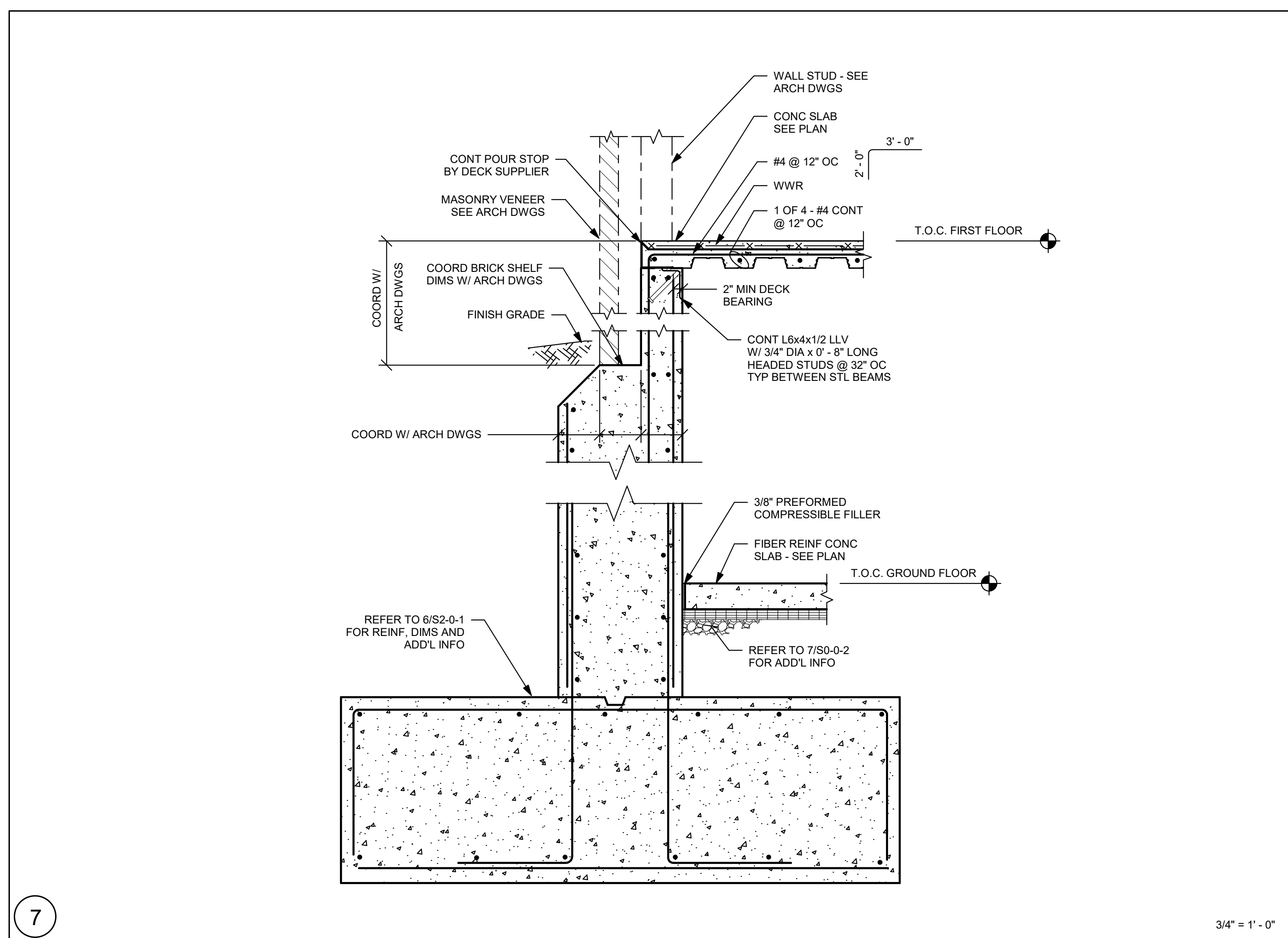
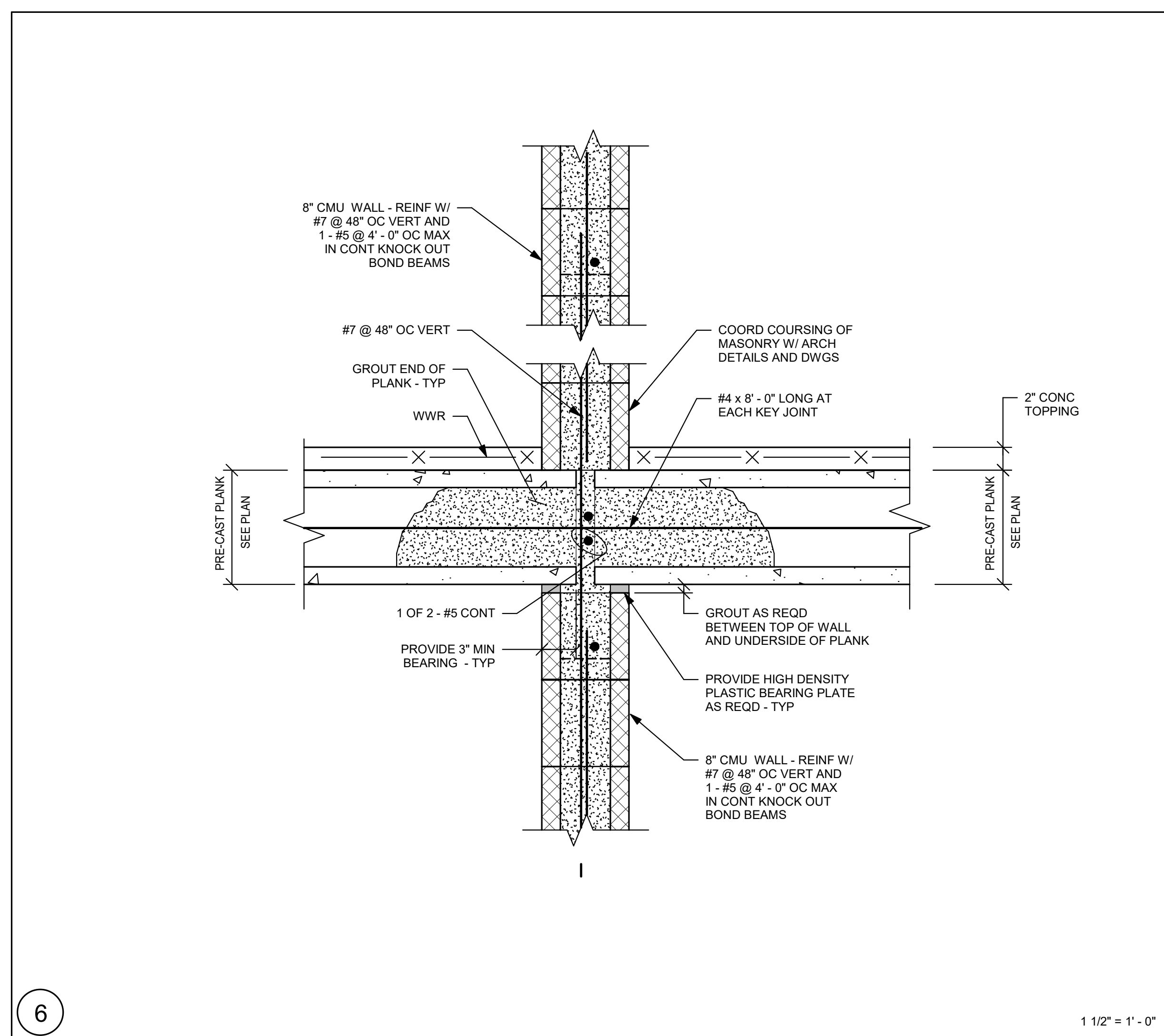
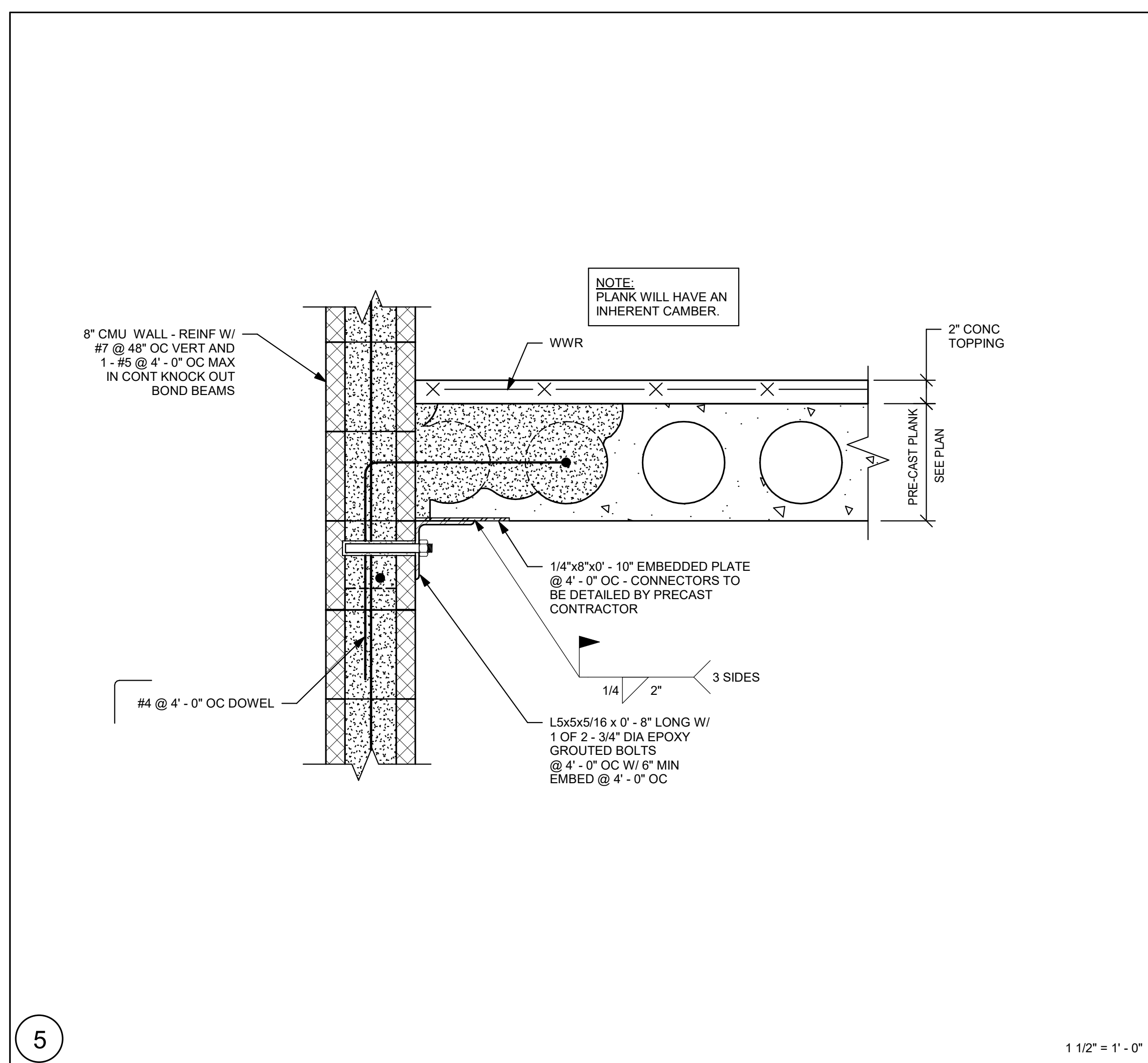
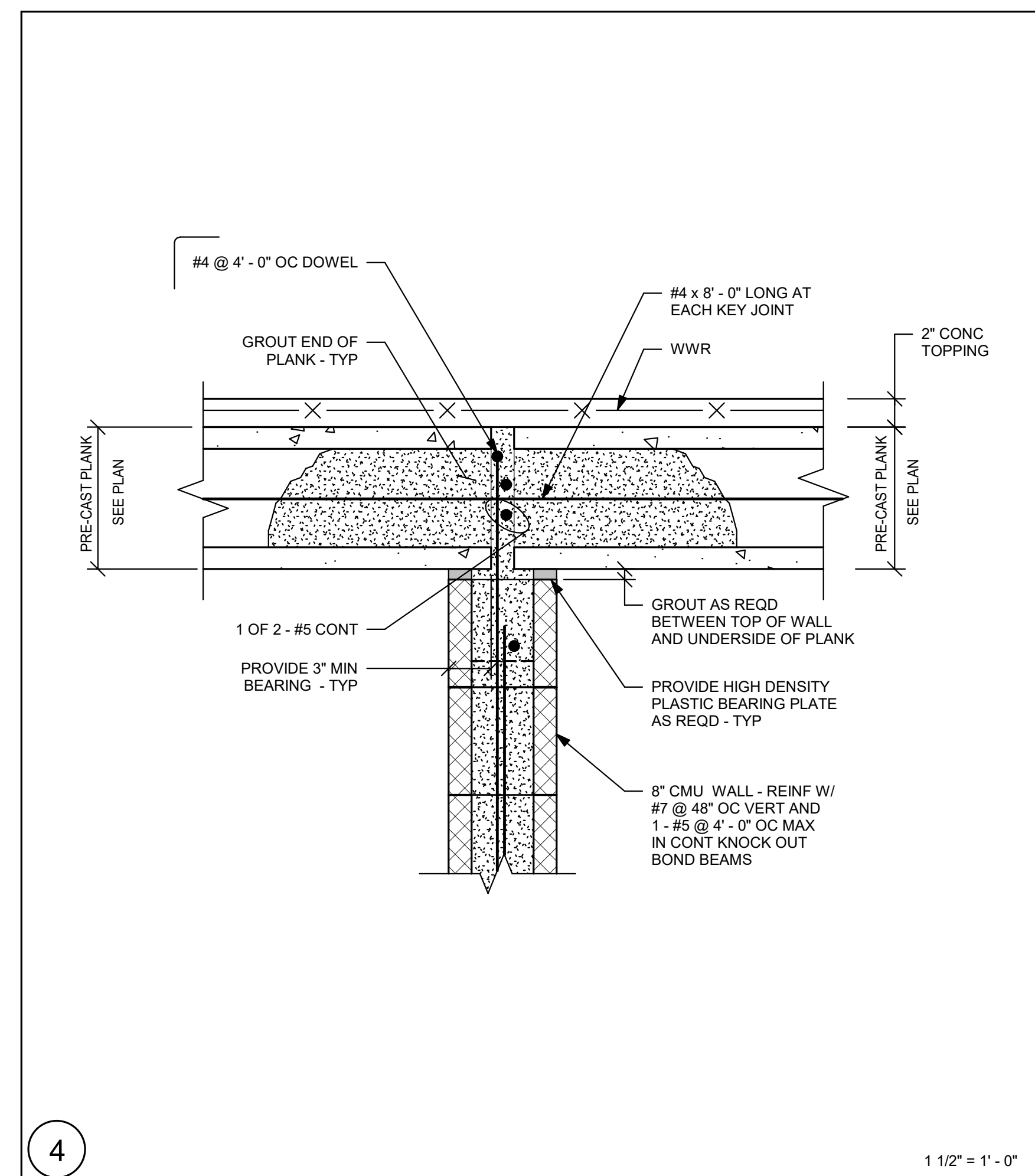
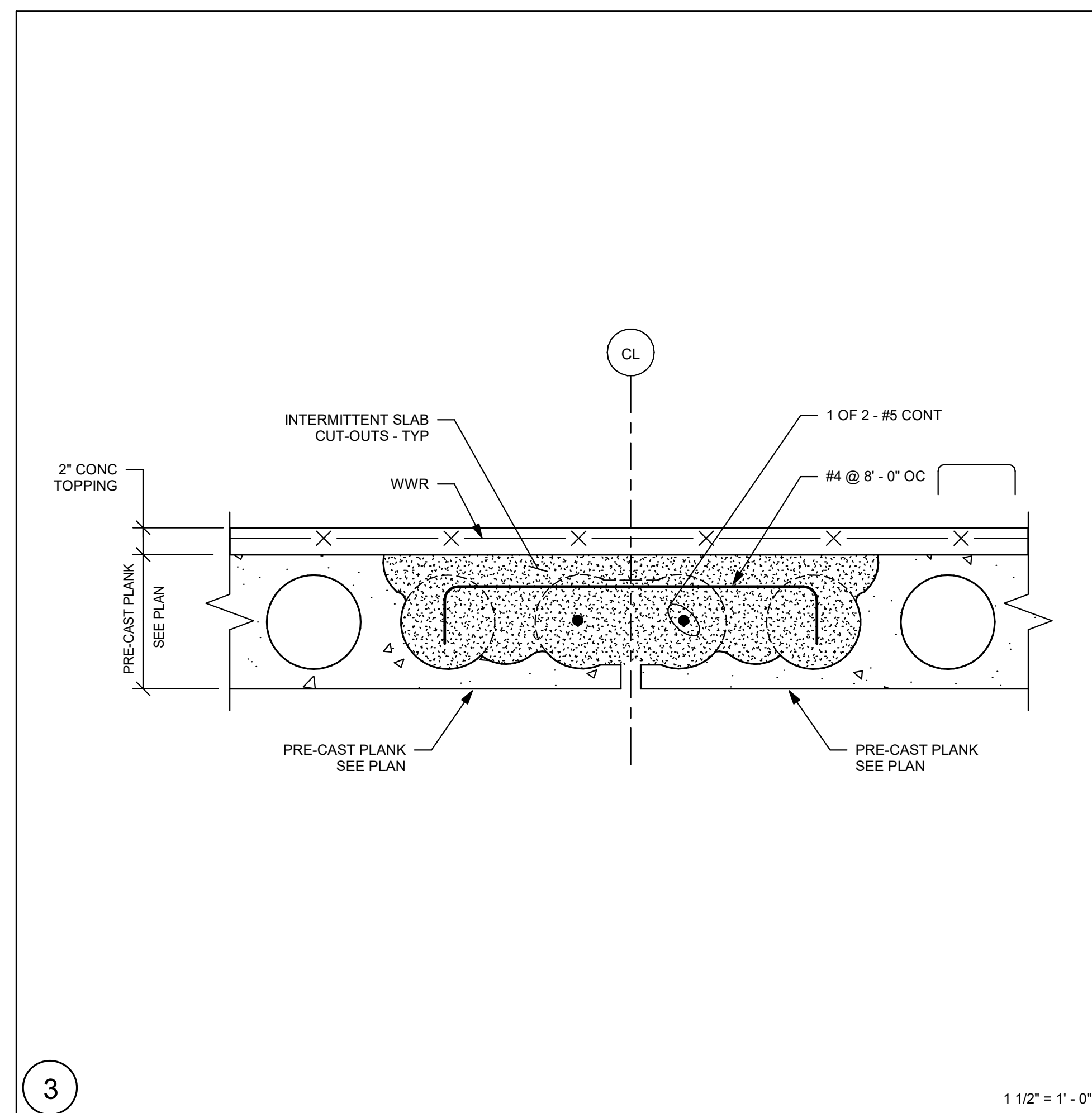
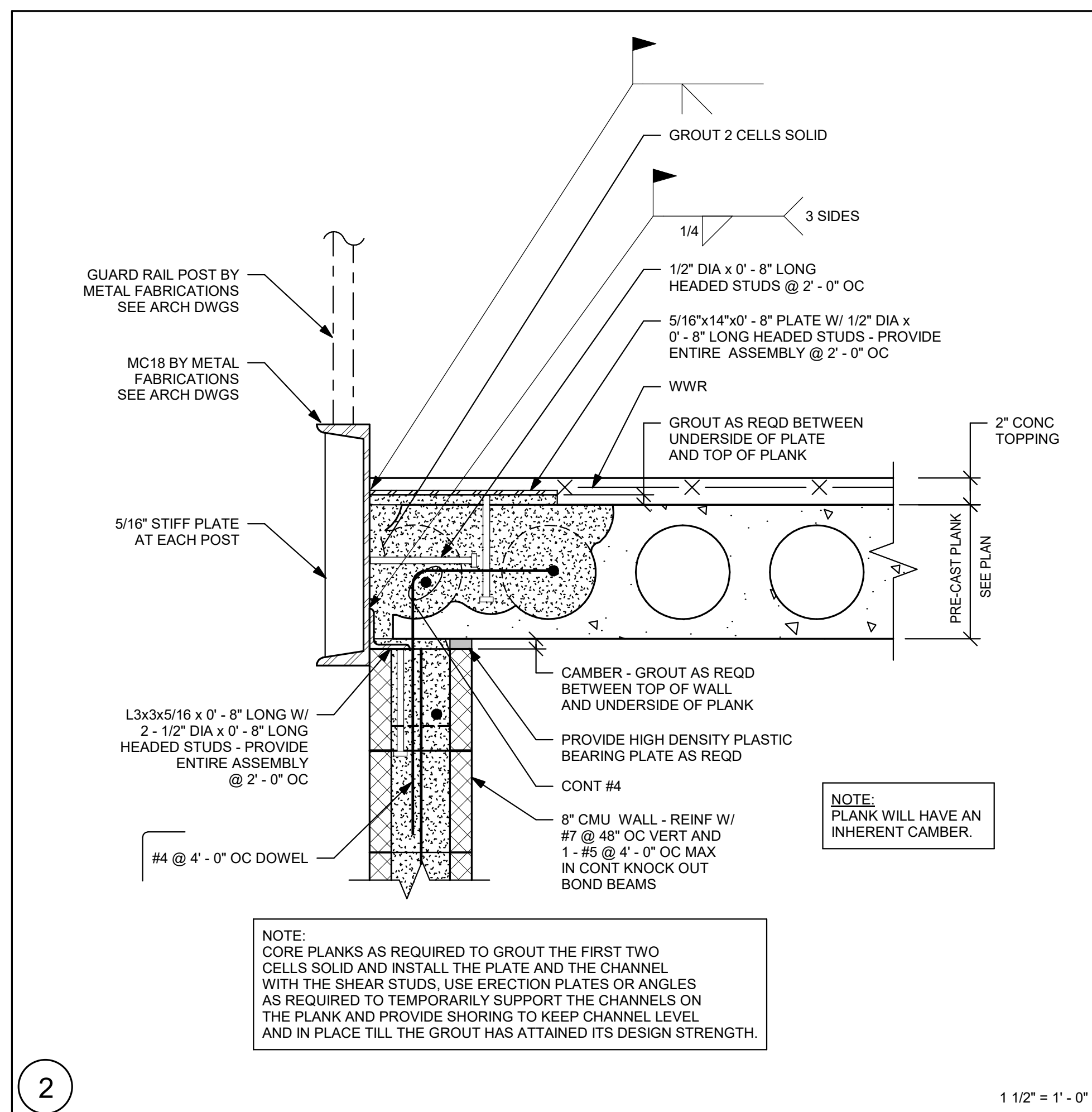
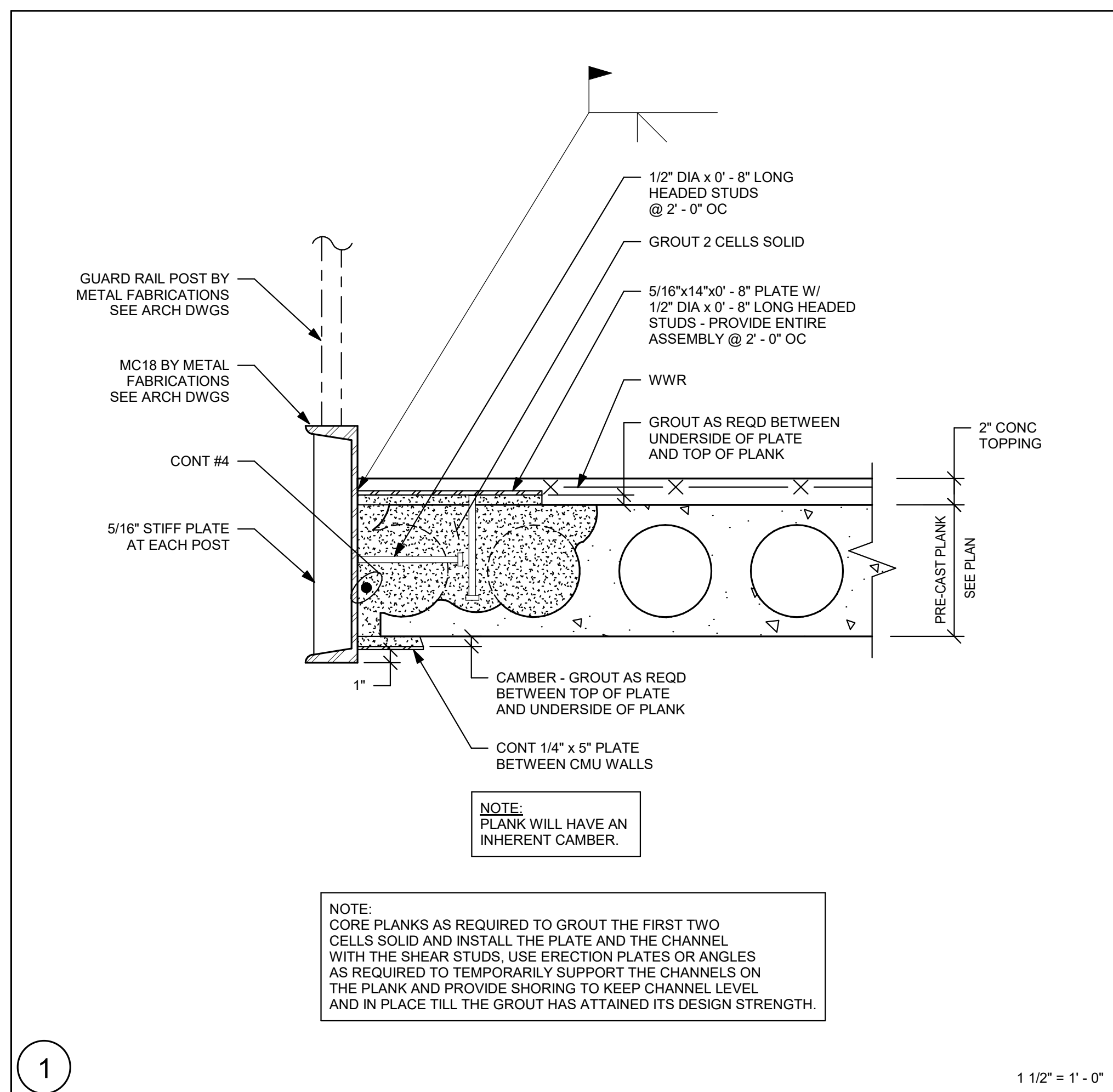
Planning | Architecture | Interior Design
Tel: 617.954.1700
www.dra-inc.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM



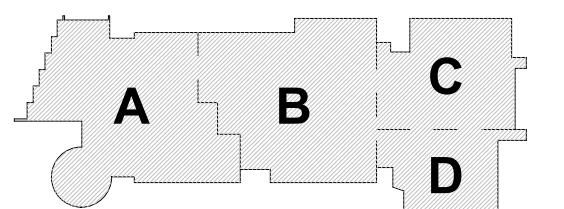
© COPYRIGHT 2021 DRUMSEY ROSANE ANDERSON, INC.

REVISION LIST

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023



KEY PLAN

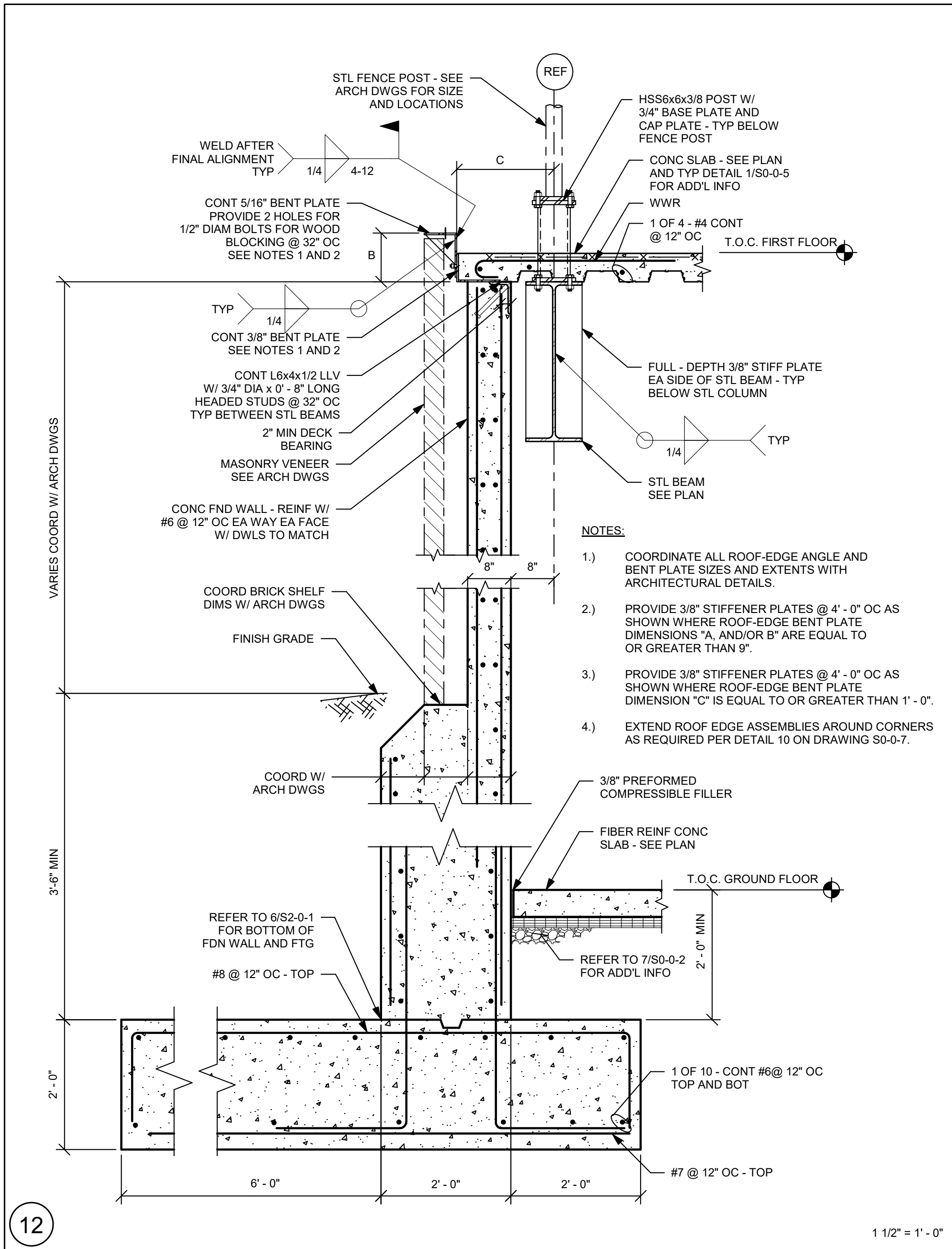
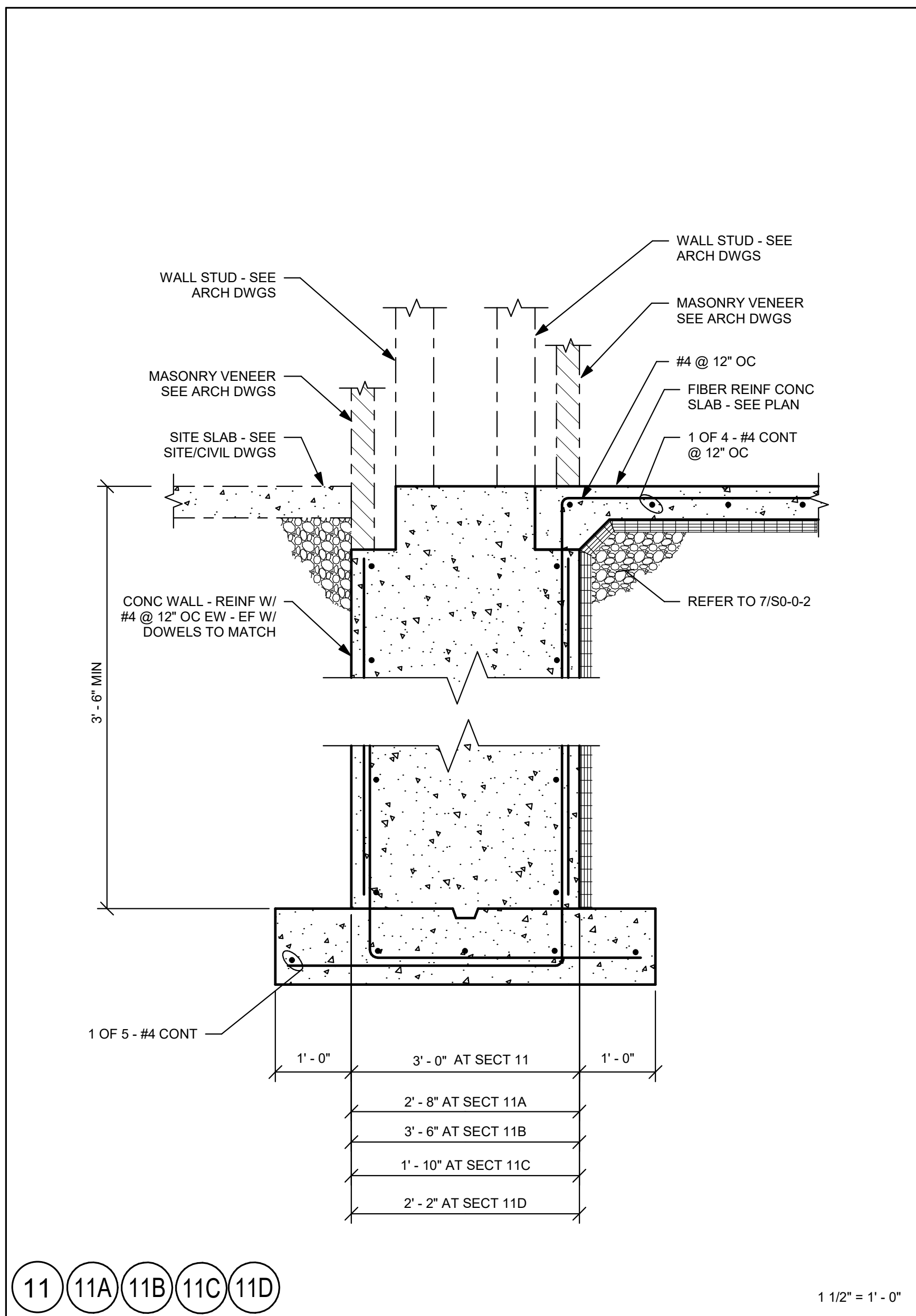
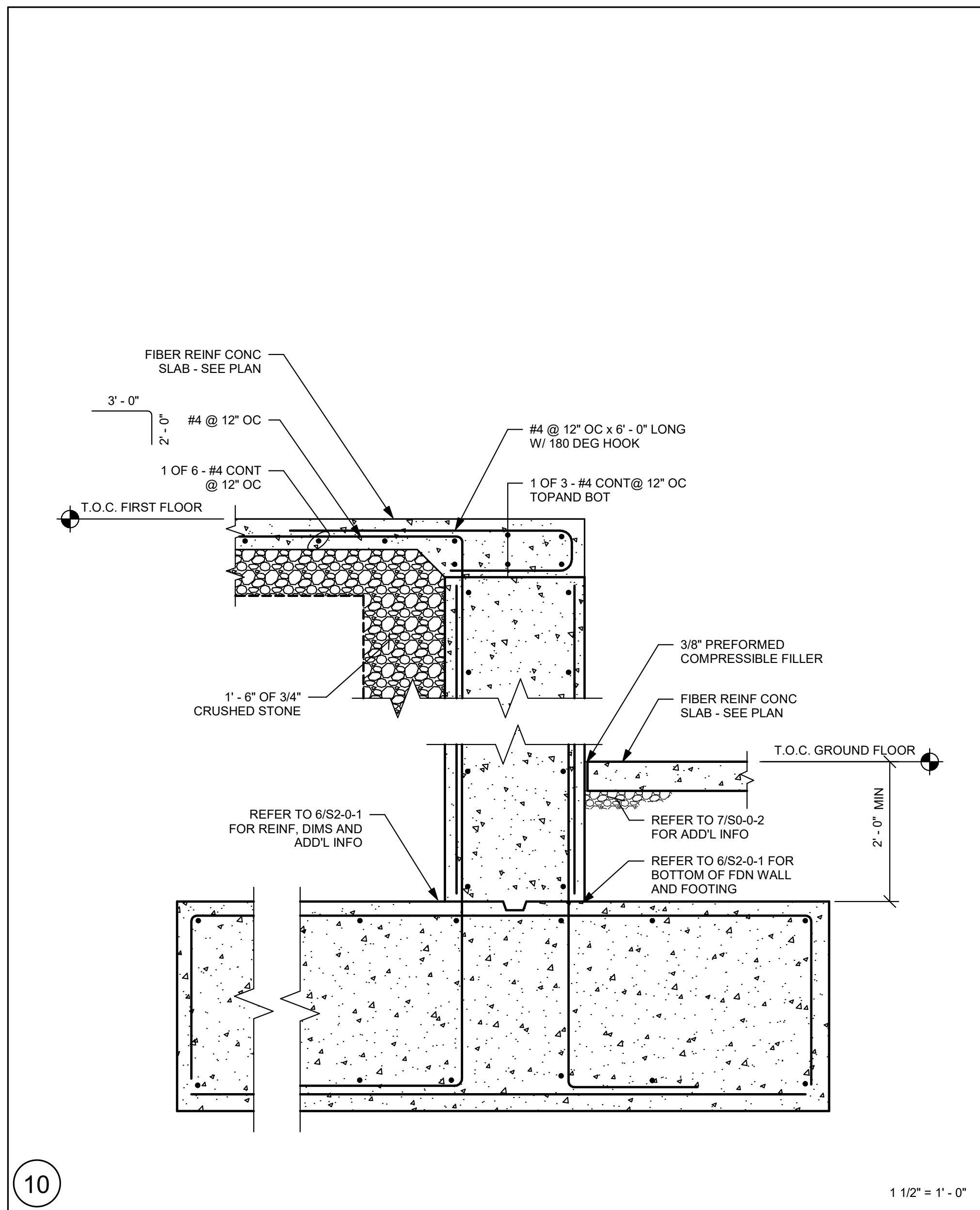
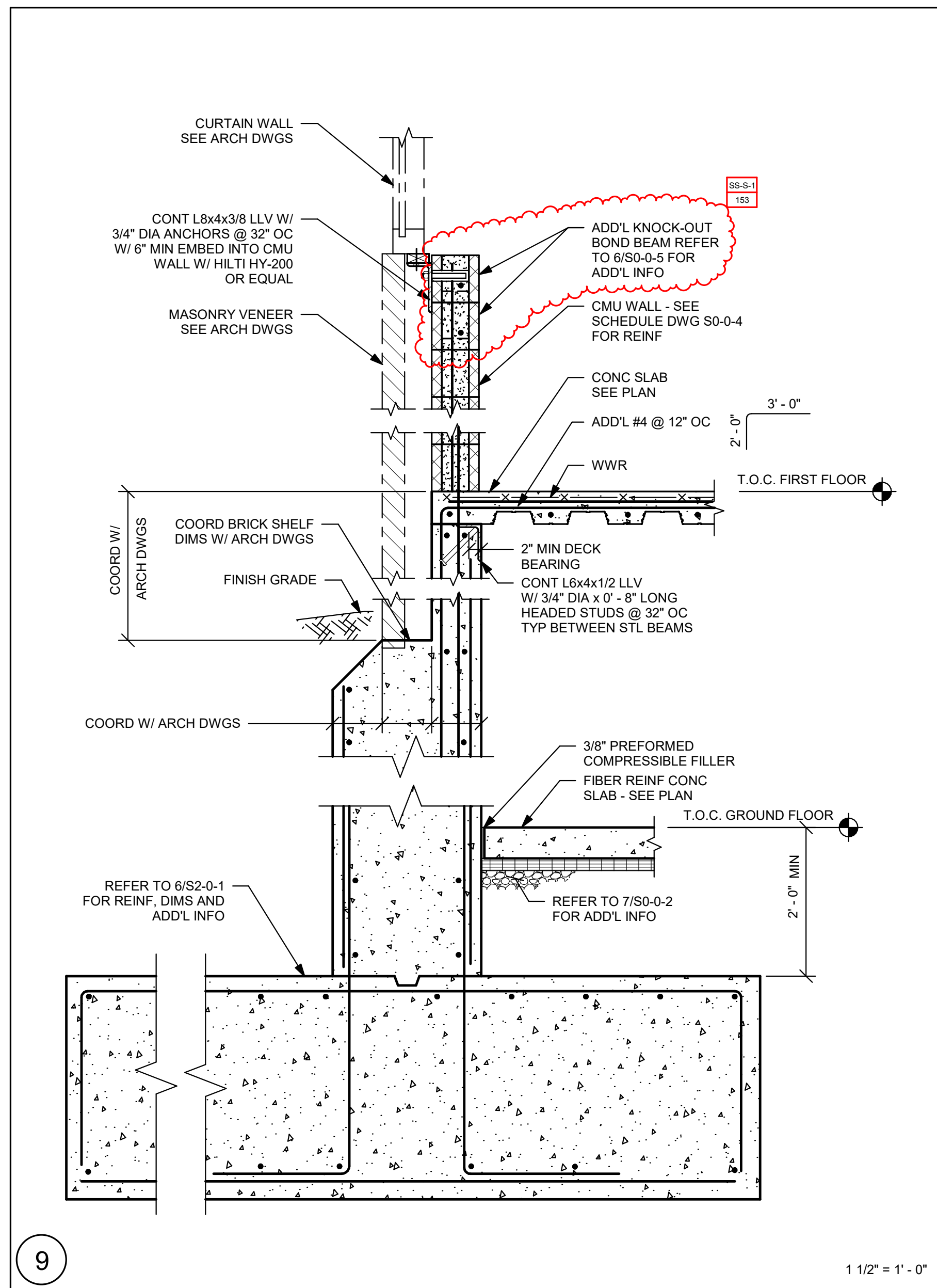
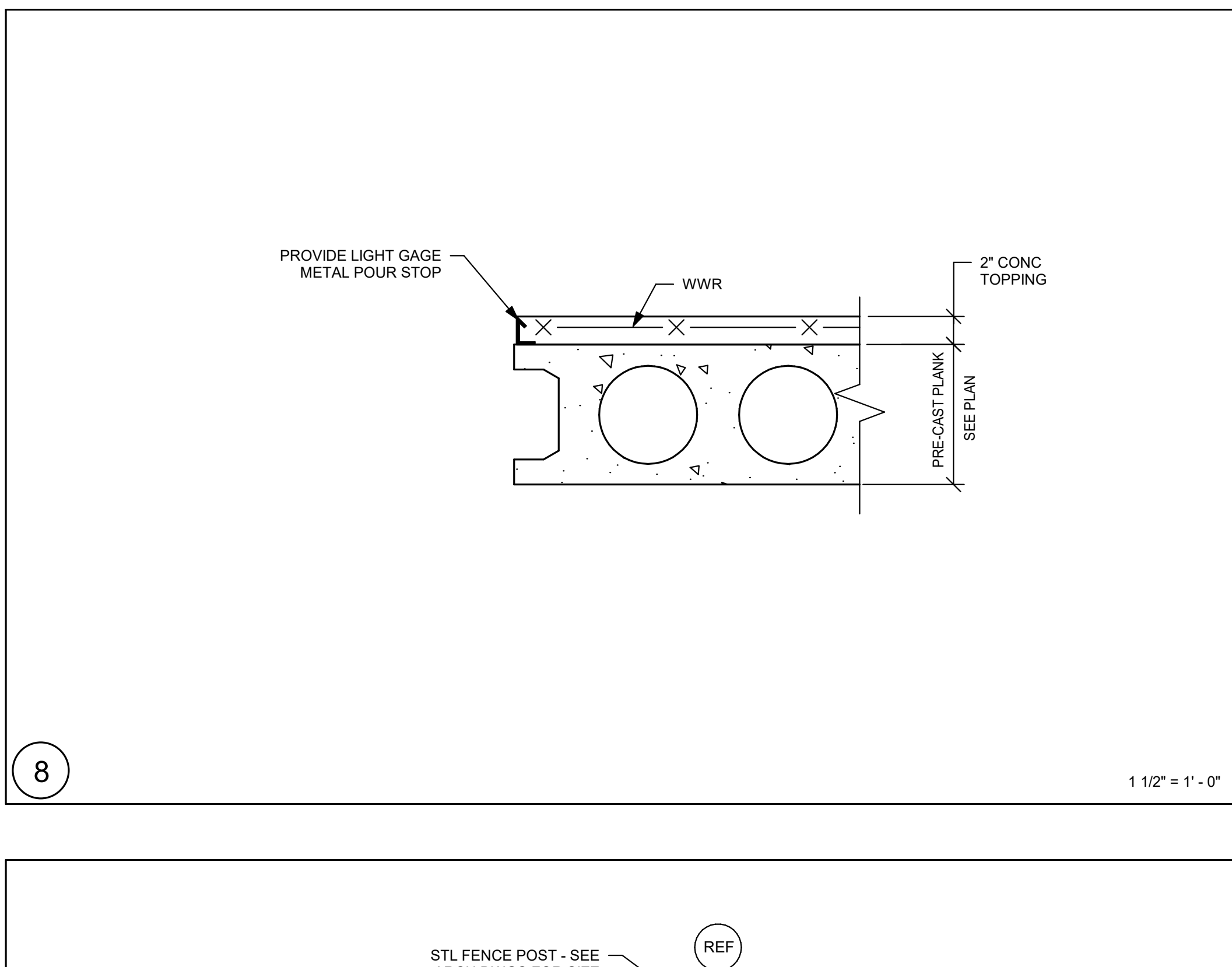
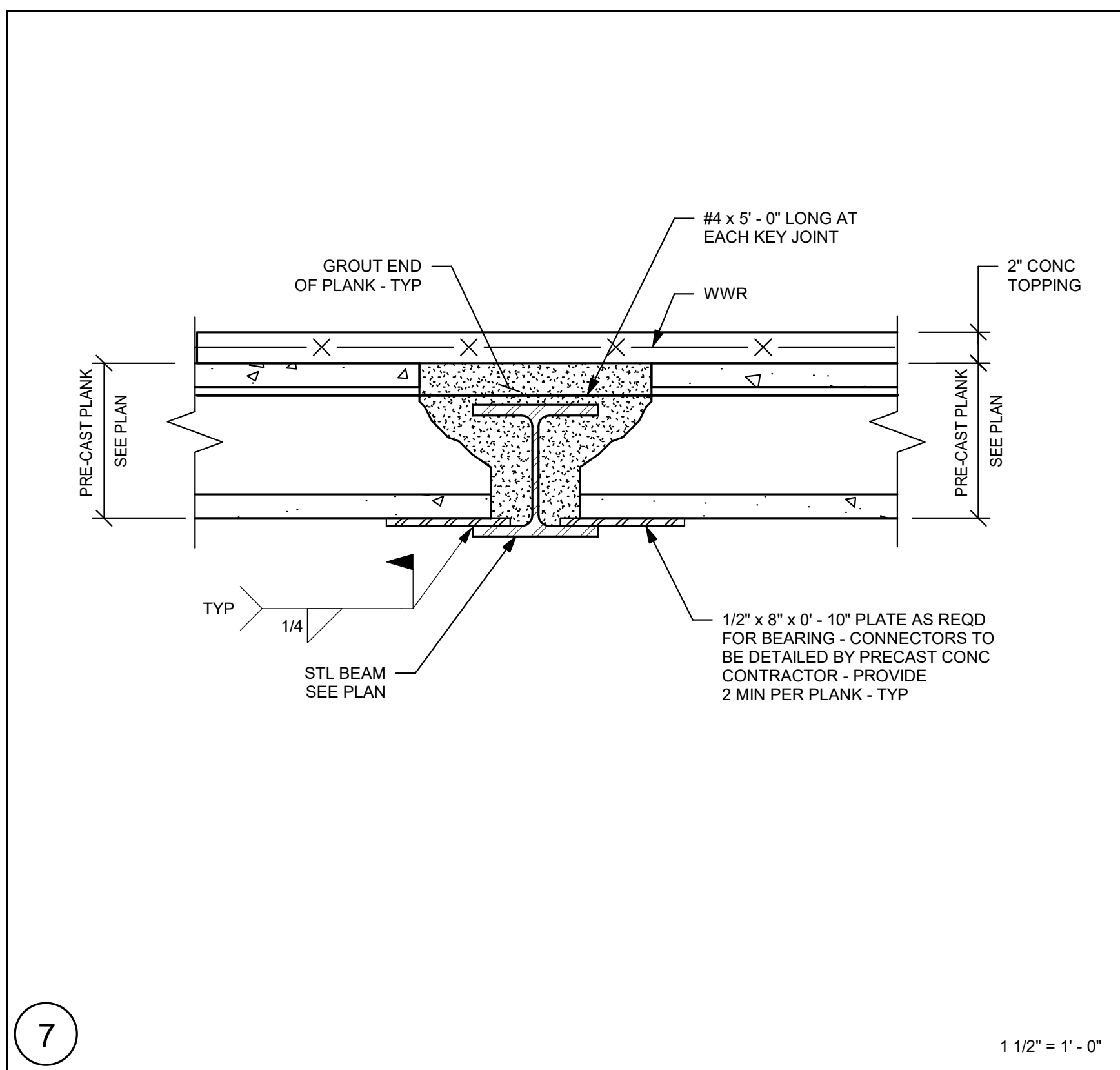
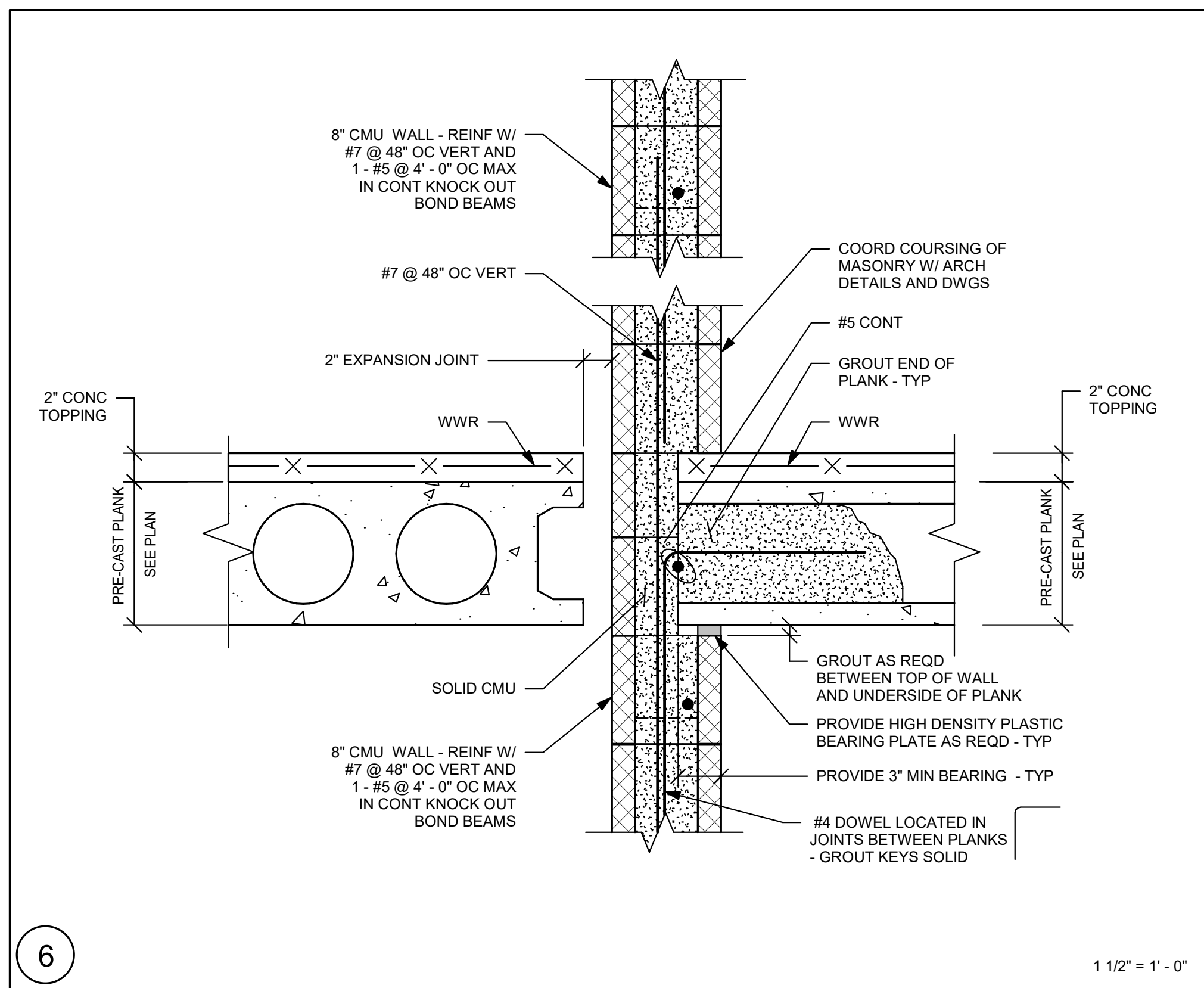
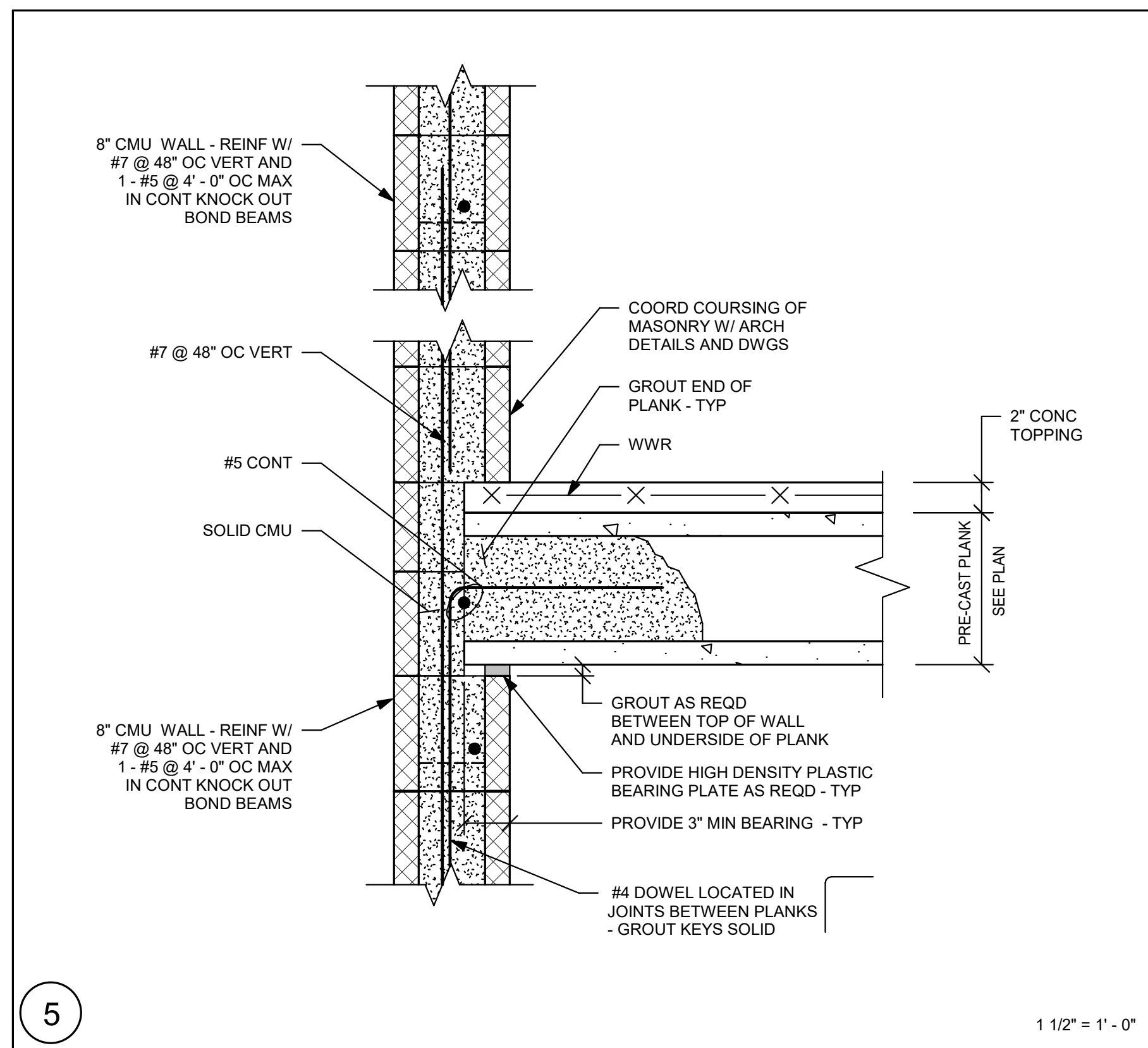
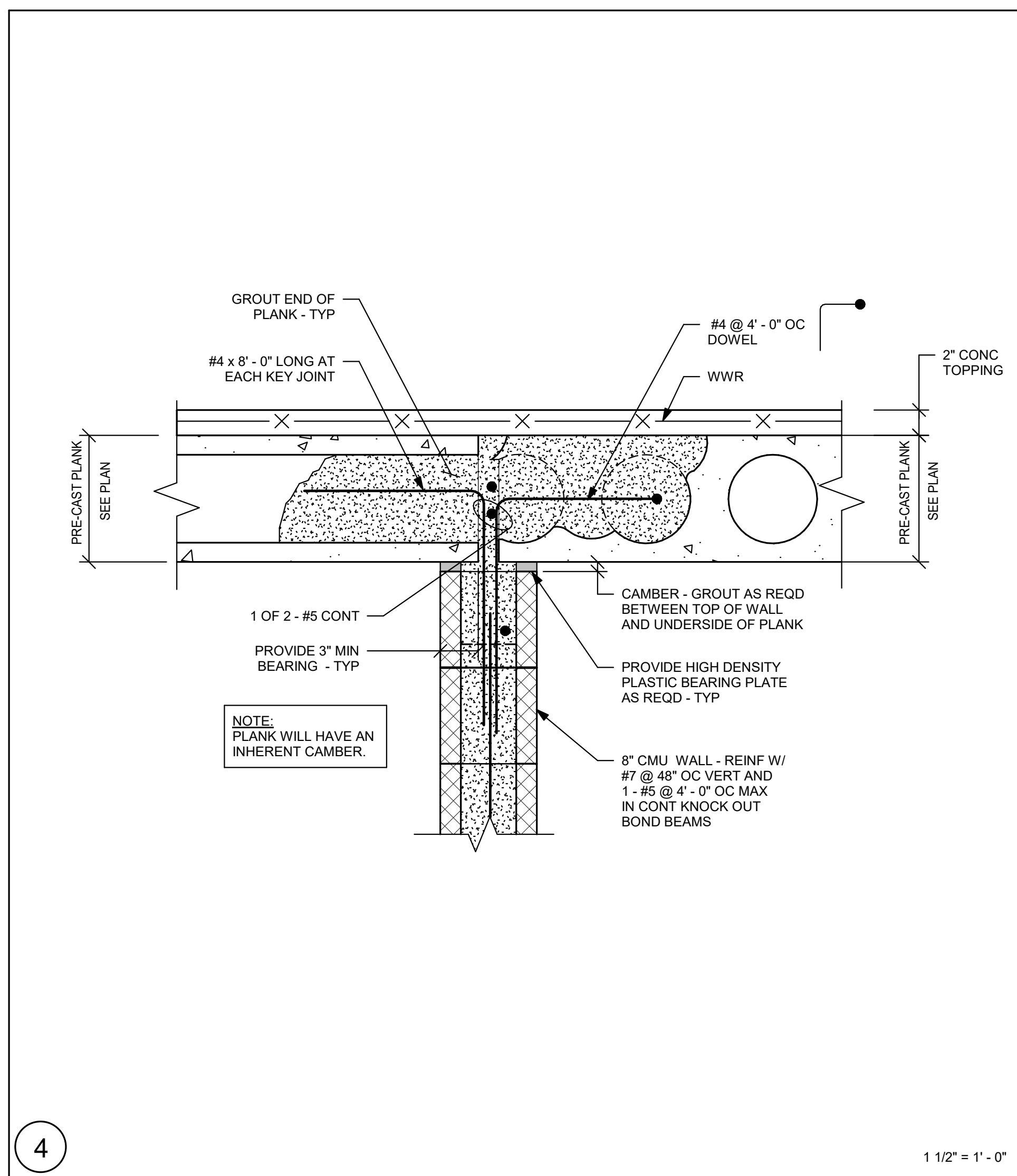
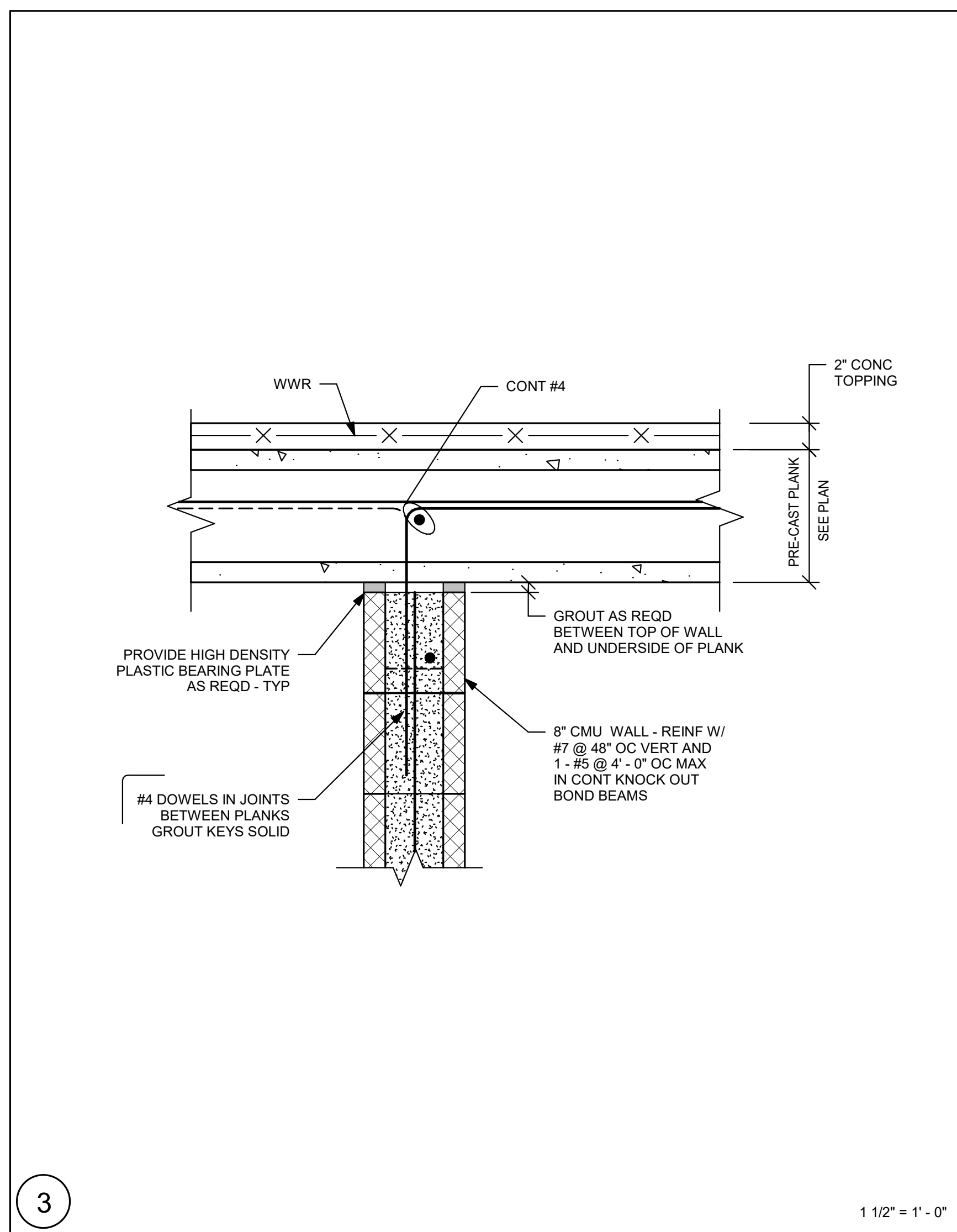
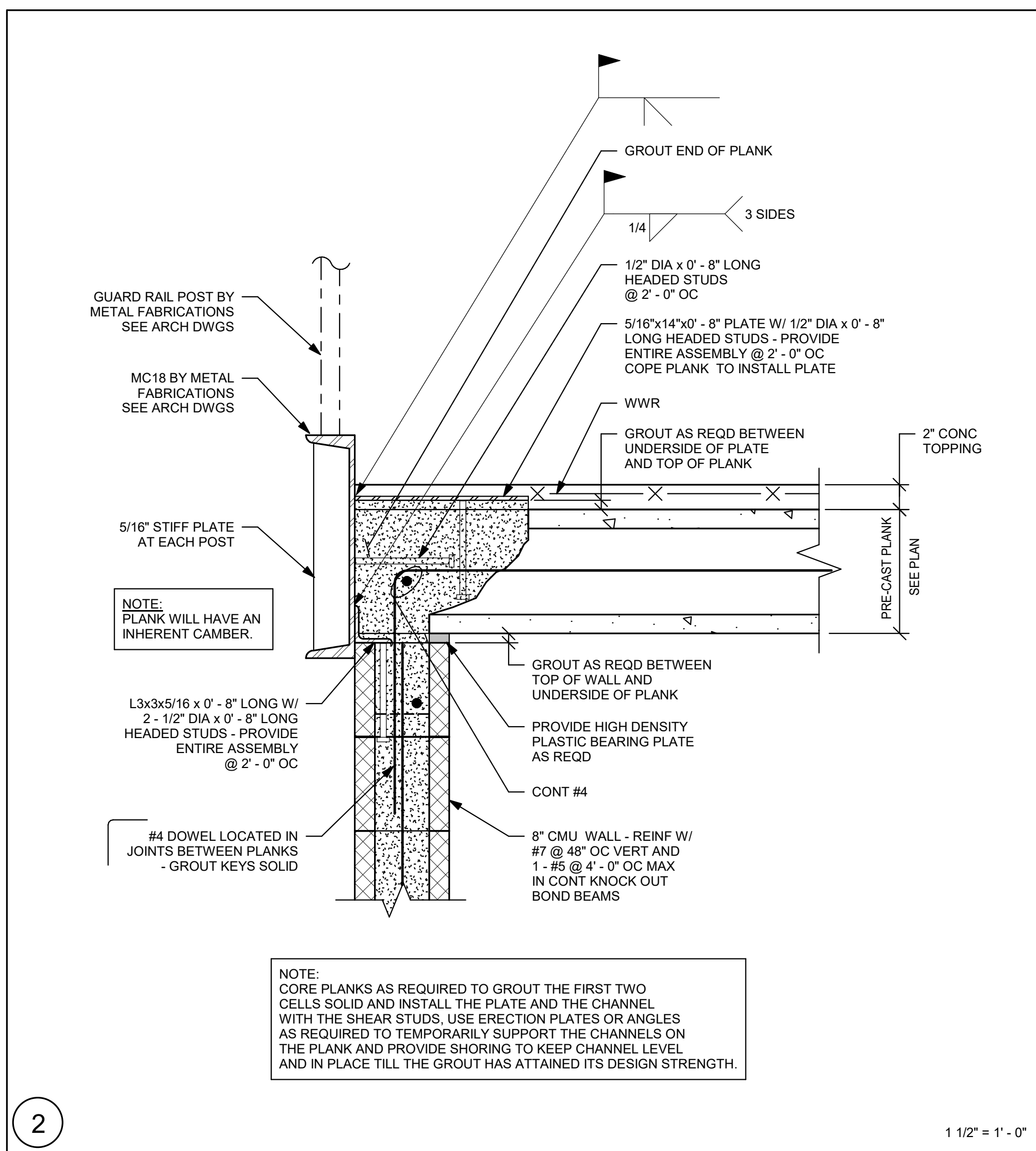
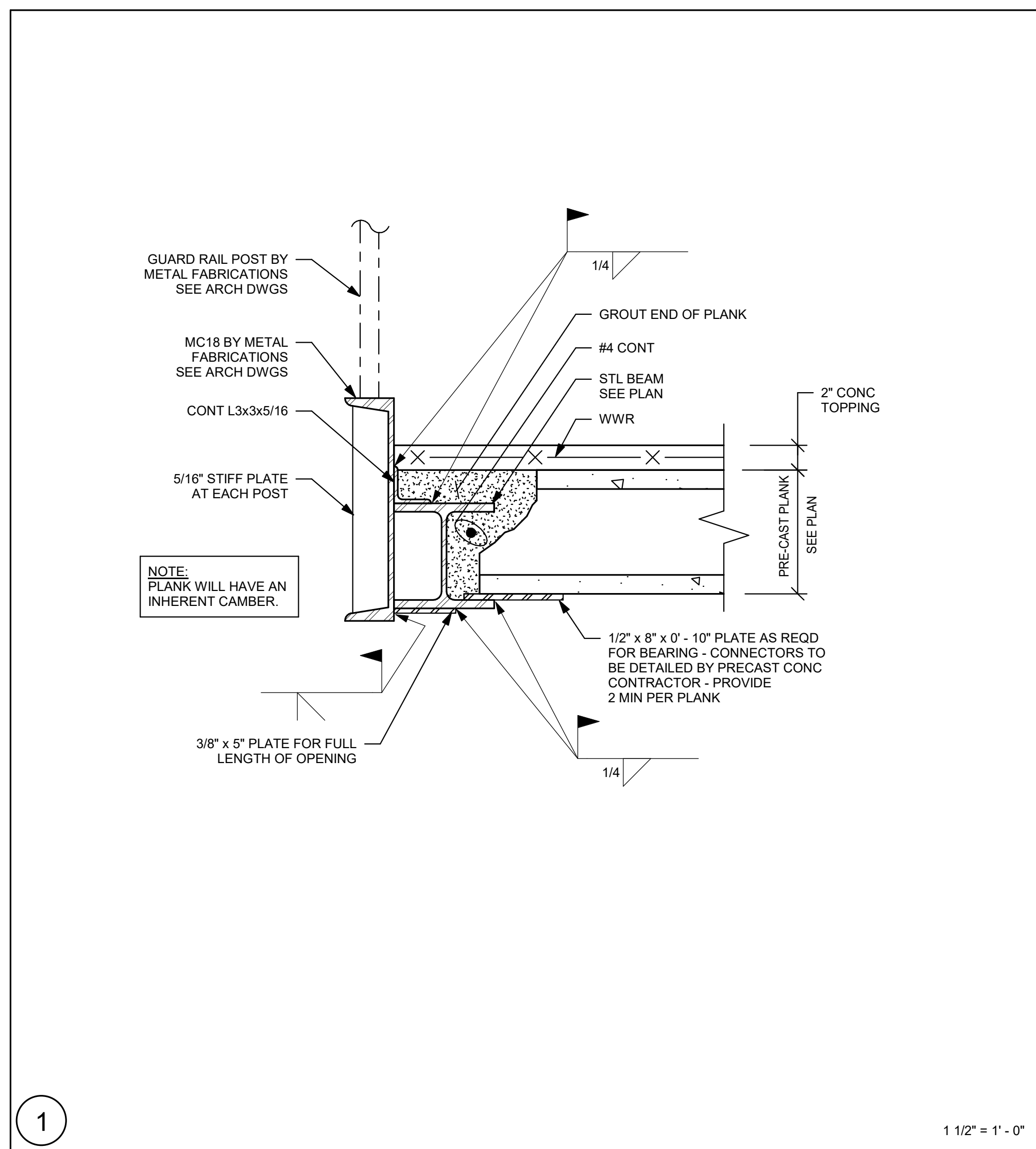
PROJECT NORTH

MAGNETIC NORTH

SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S2-0-2



DRA

Drumsey Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

280 Charles Street
Studio 300
Waltham, MA 02453

Planning | Architecture | Interior Design

Tel: 617.954.1702
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.

Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST		
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING IS A PART OF EARLY STRUCTURAL BID PACKAGE

MSBA 90% CD SUBMISSION

MAY 12, 2023

KEY PLAN

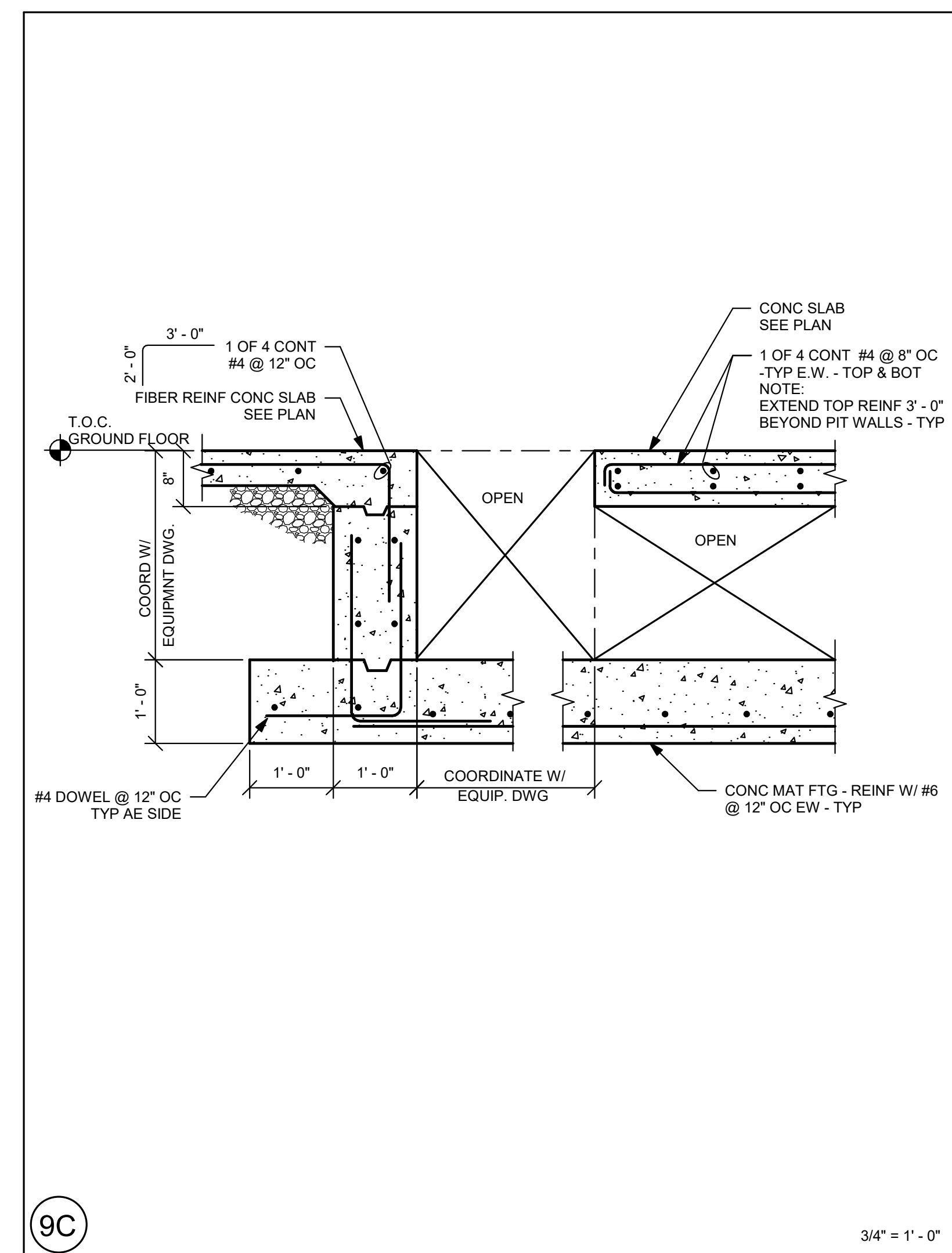
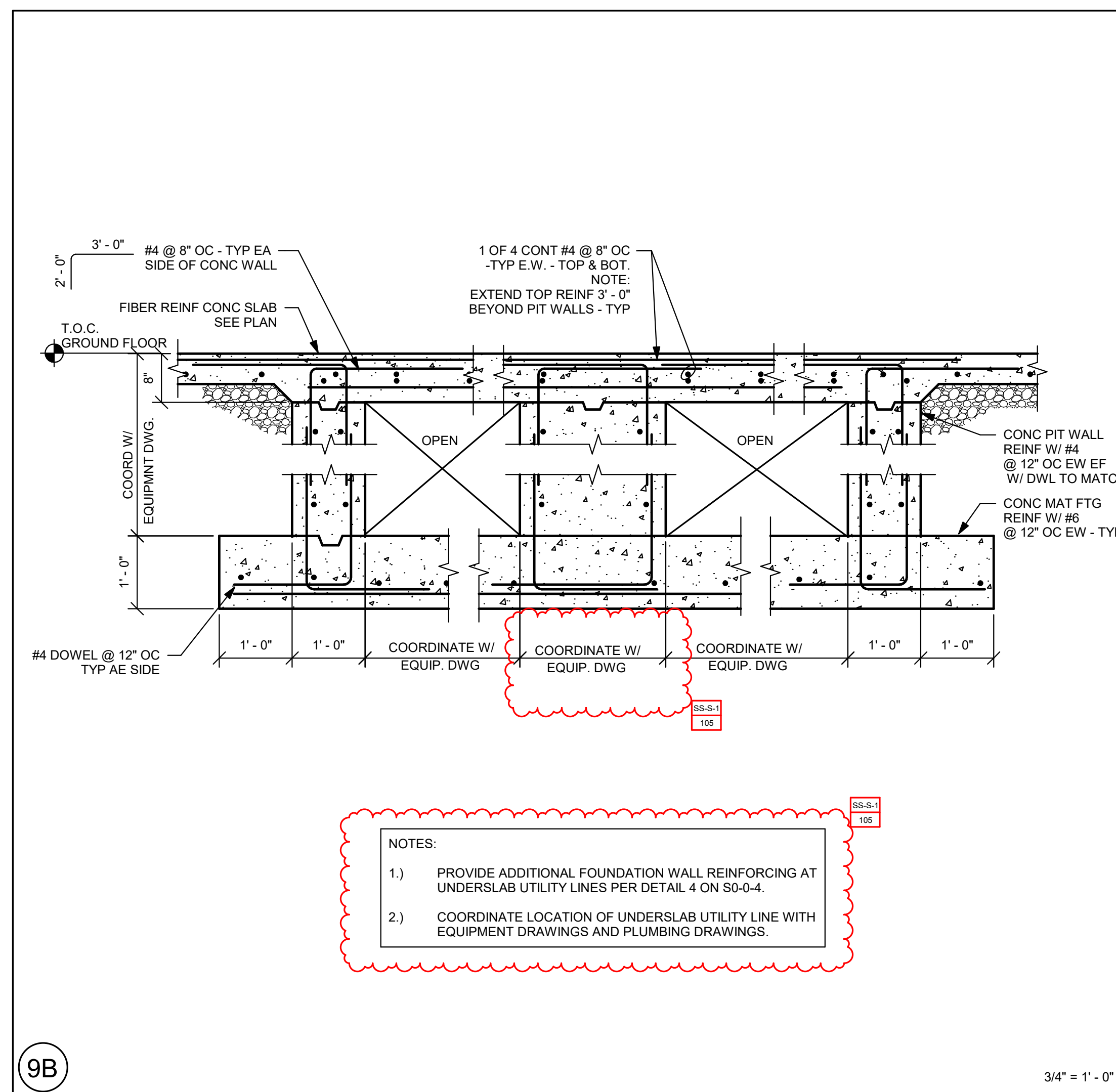
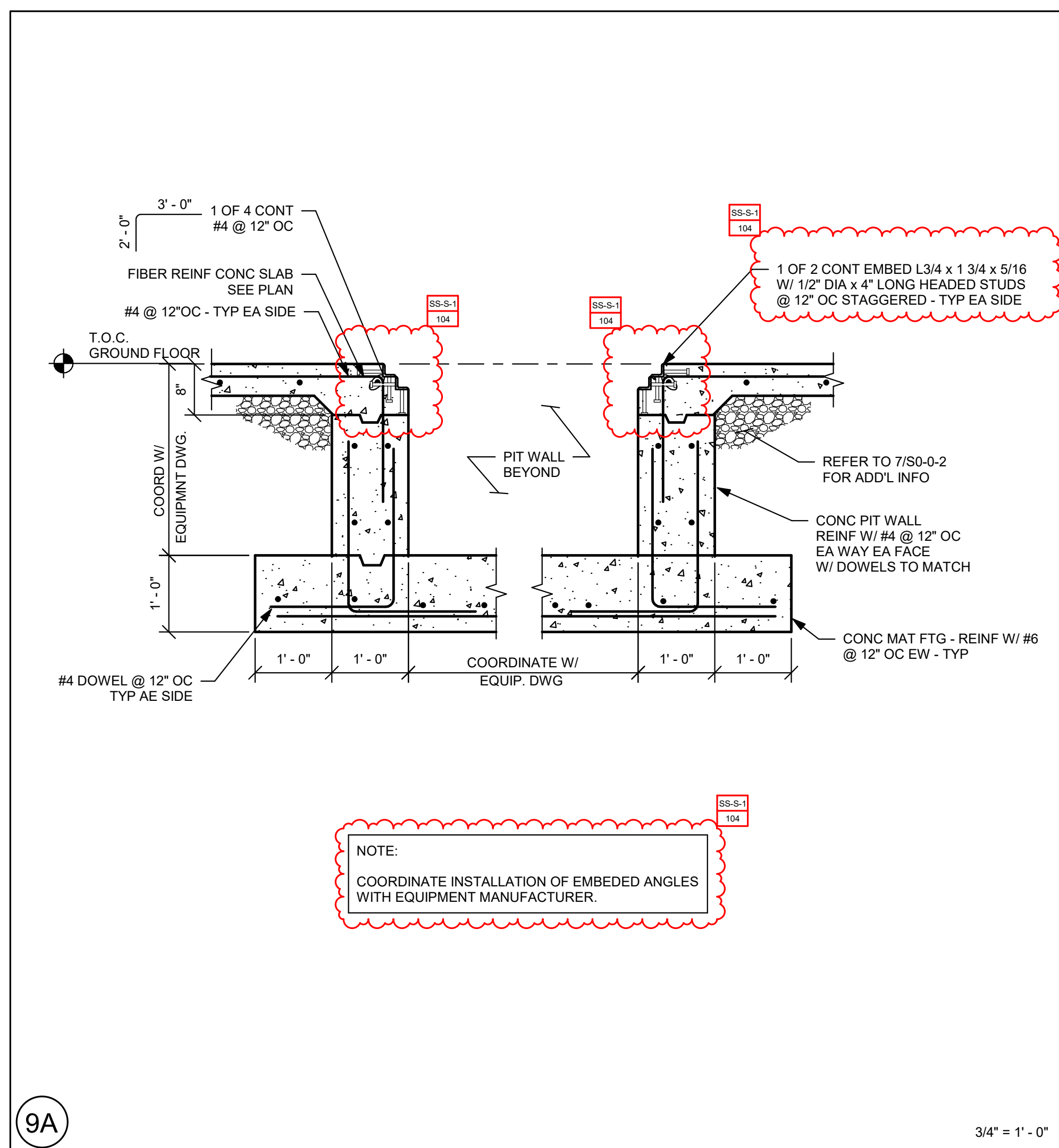
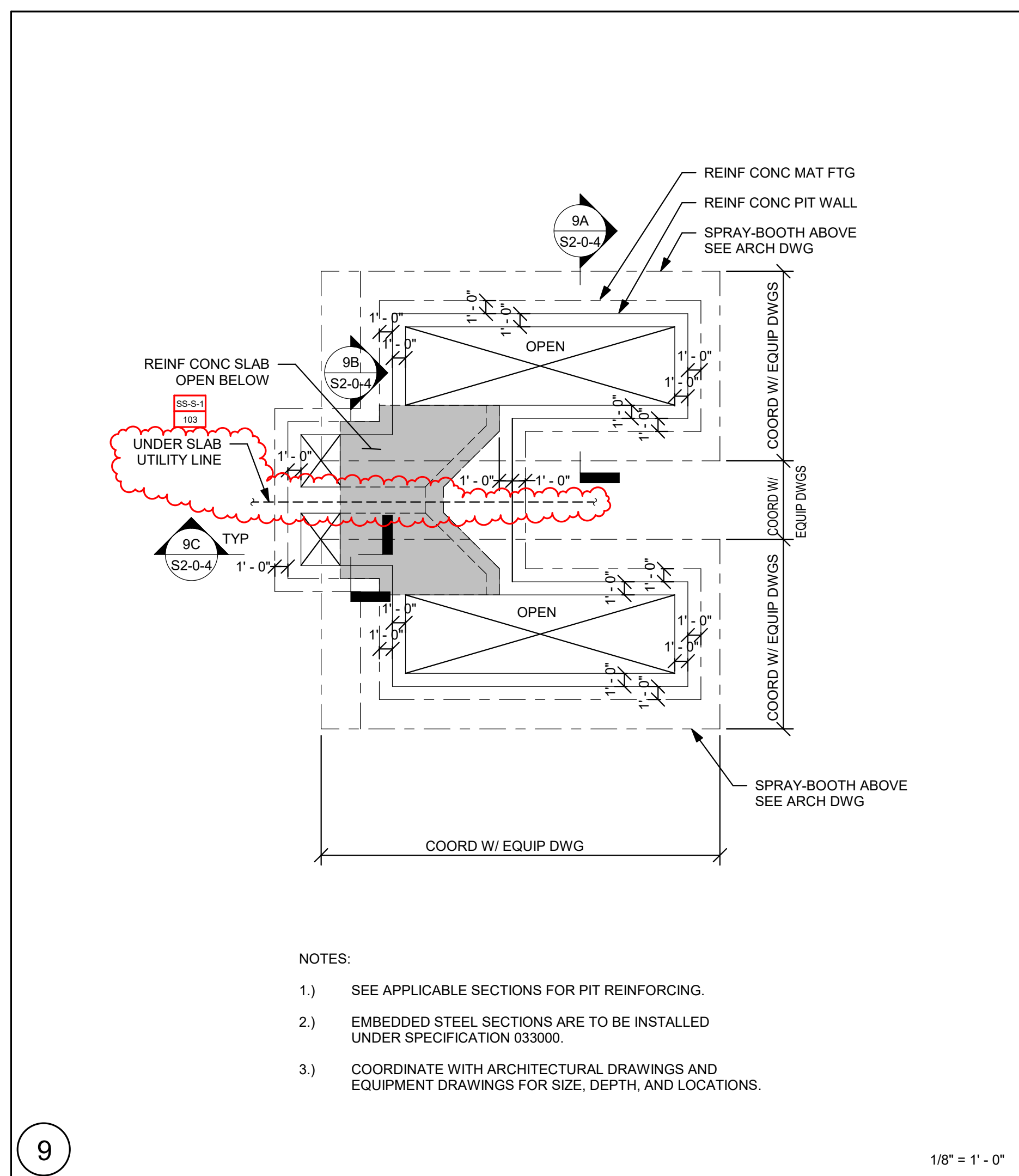
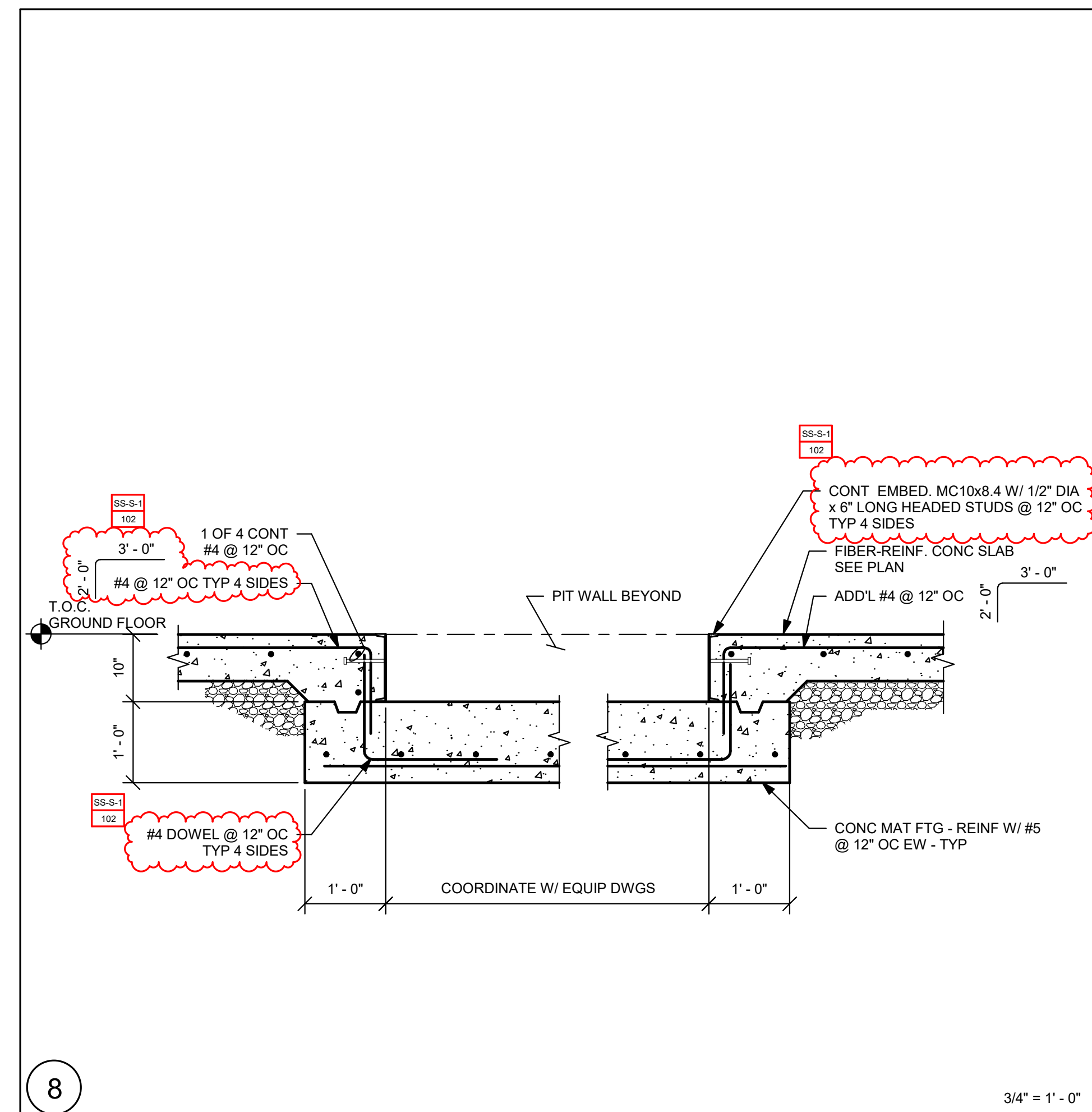
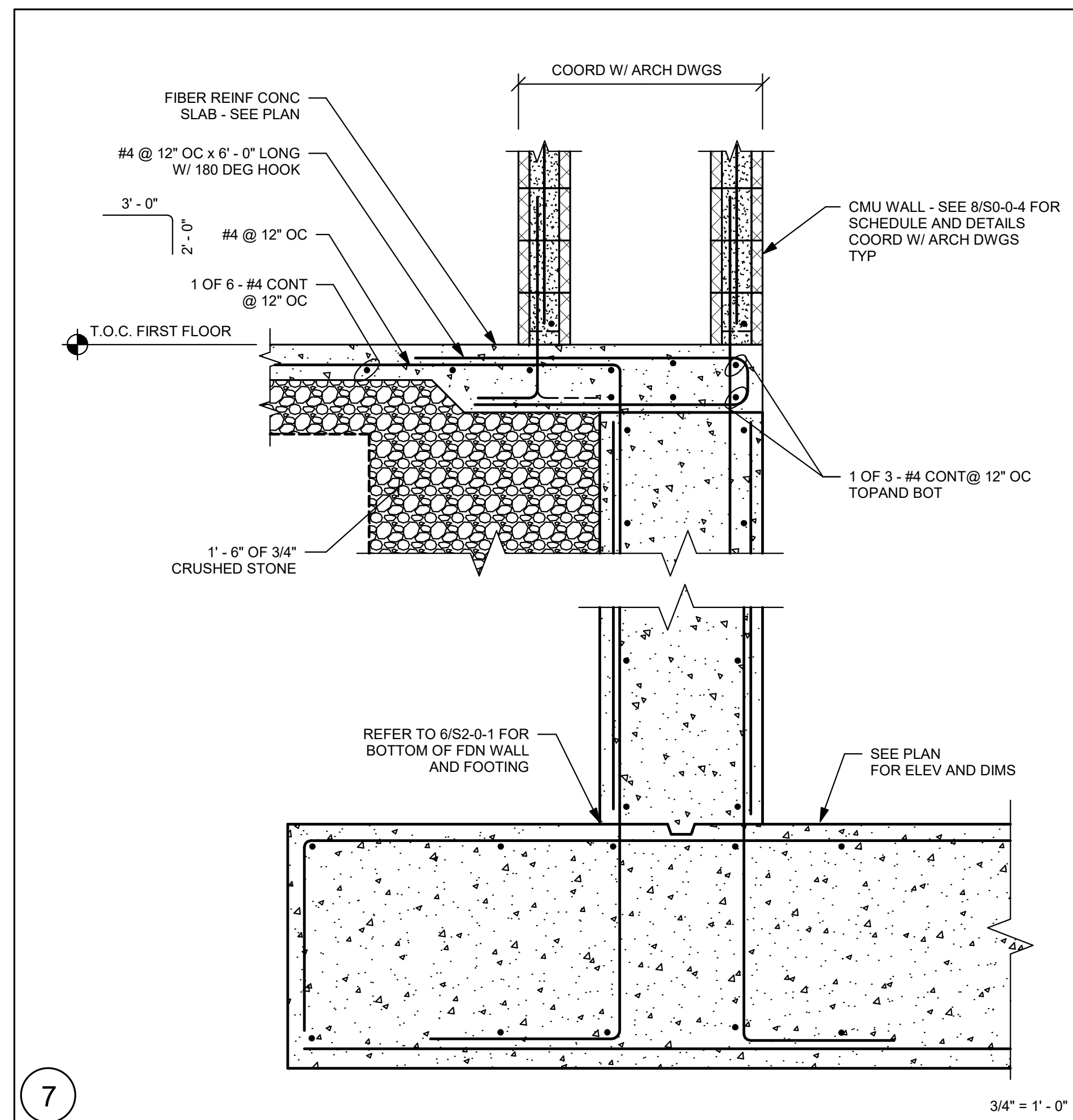
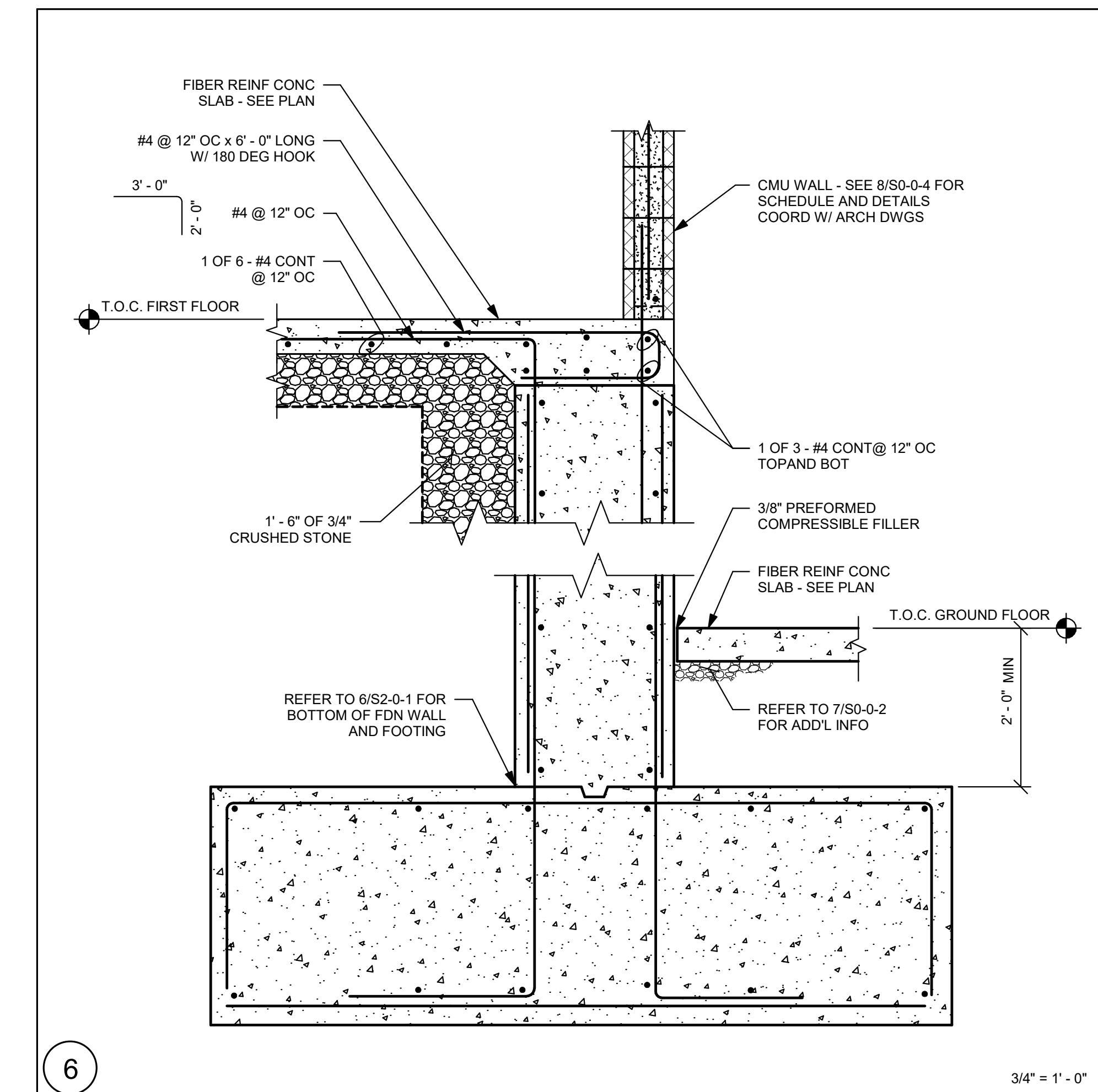
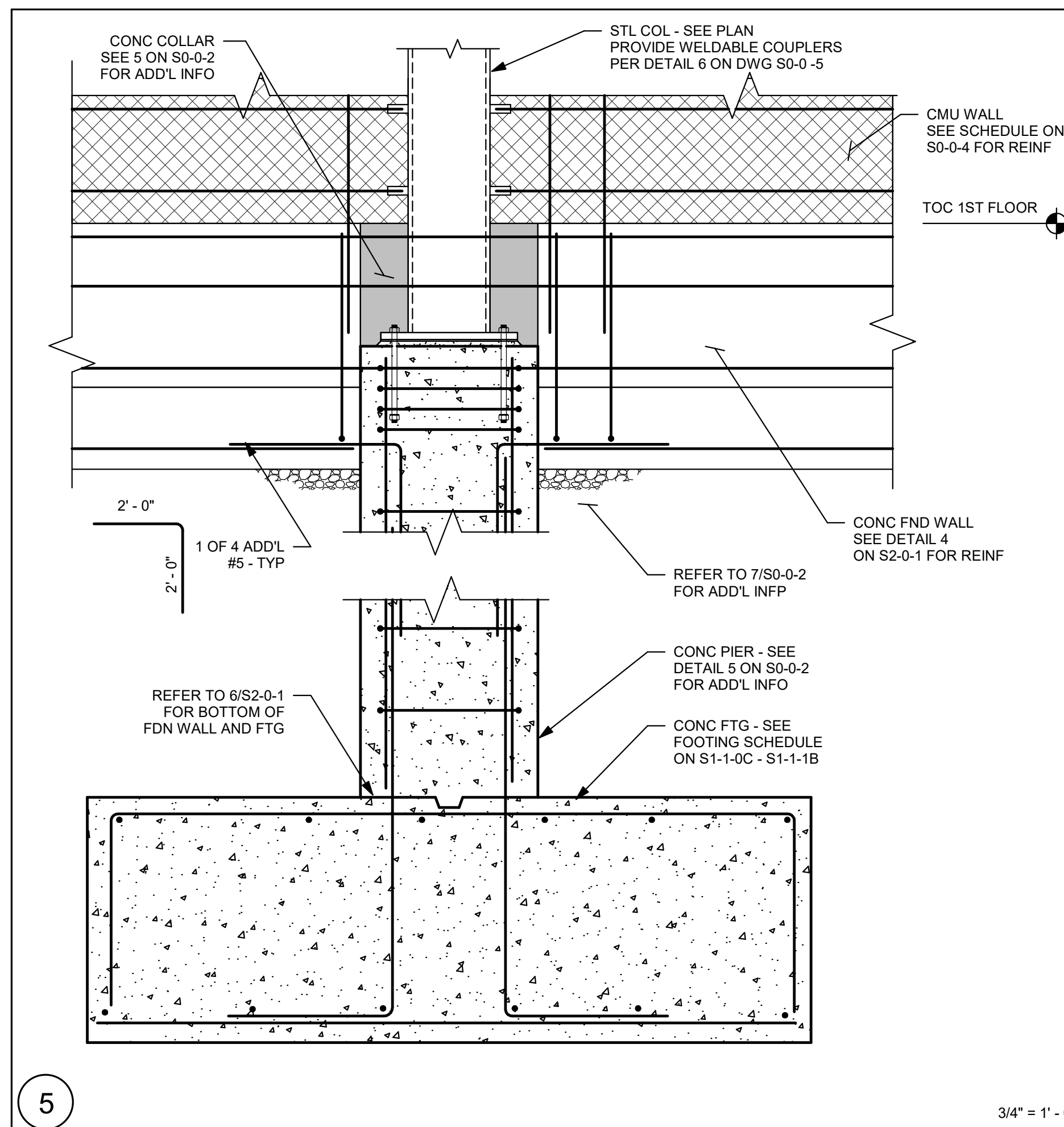
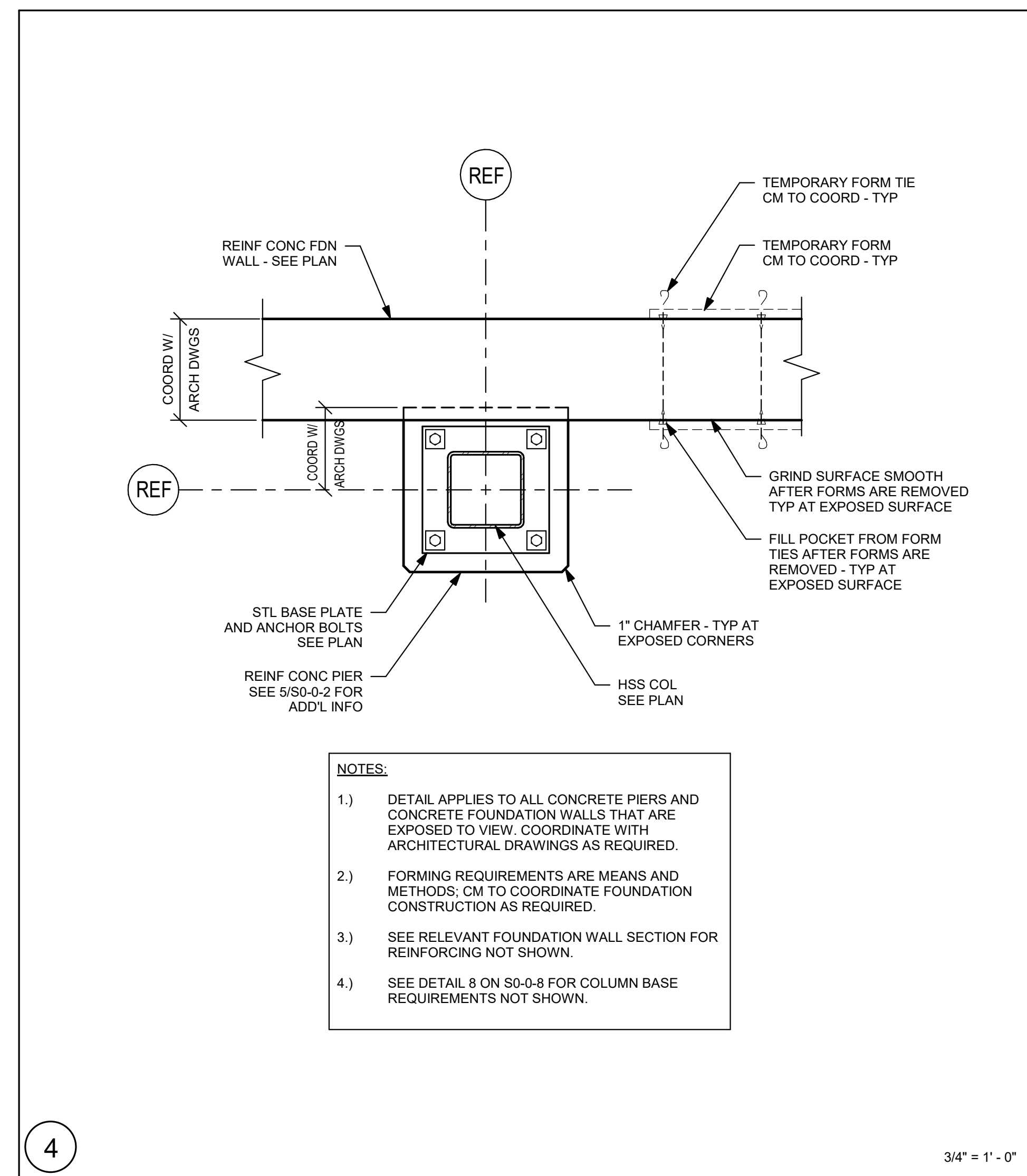
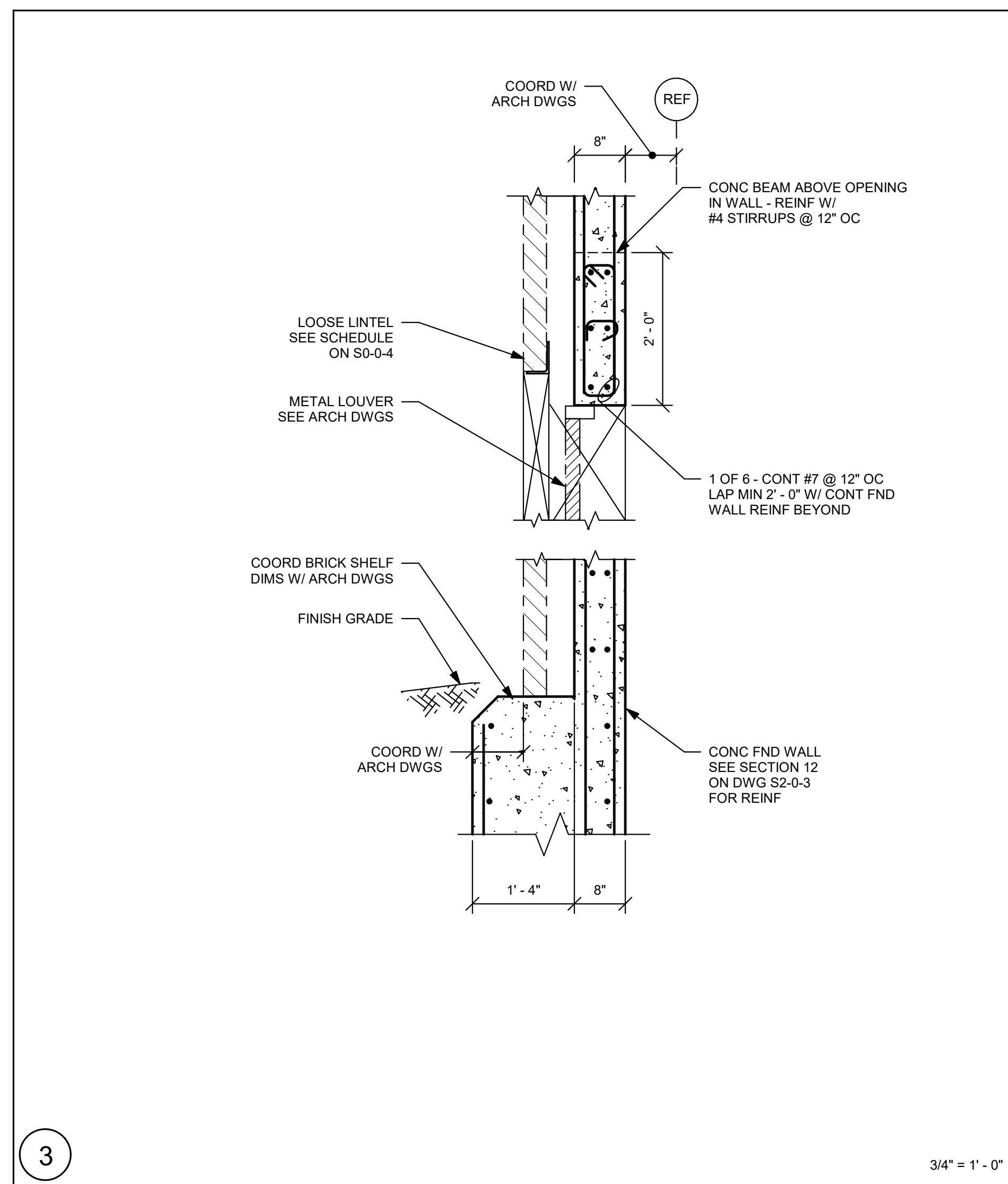
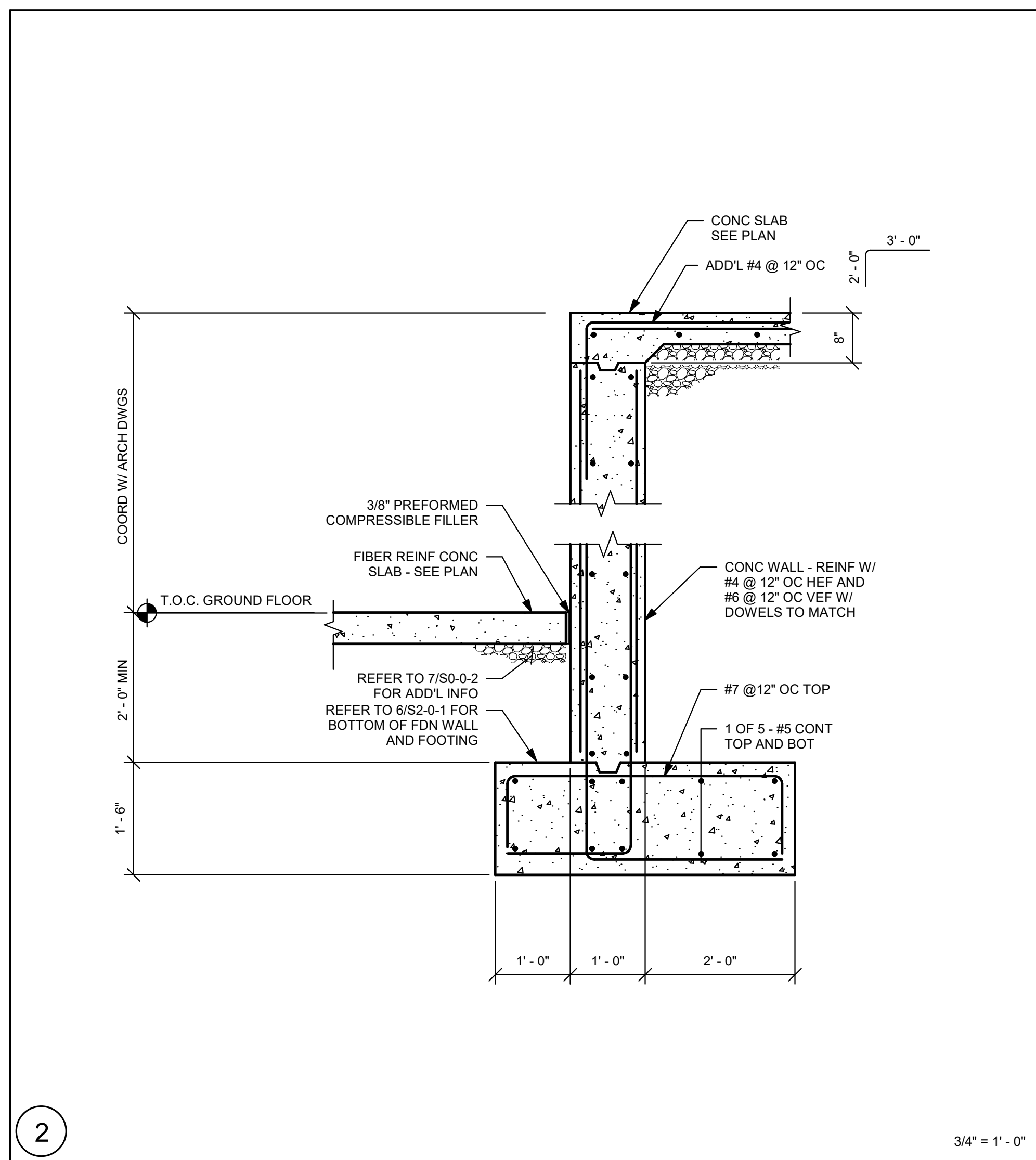
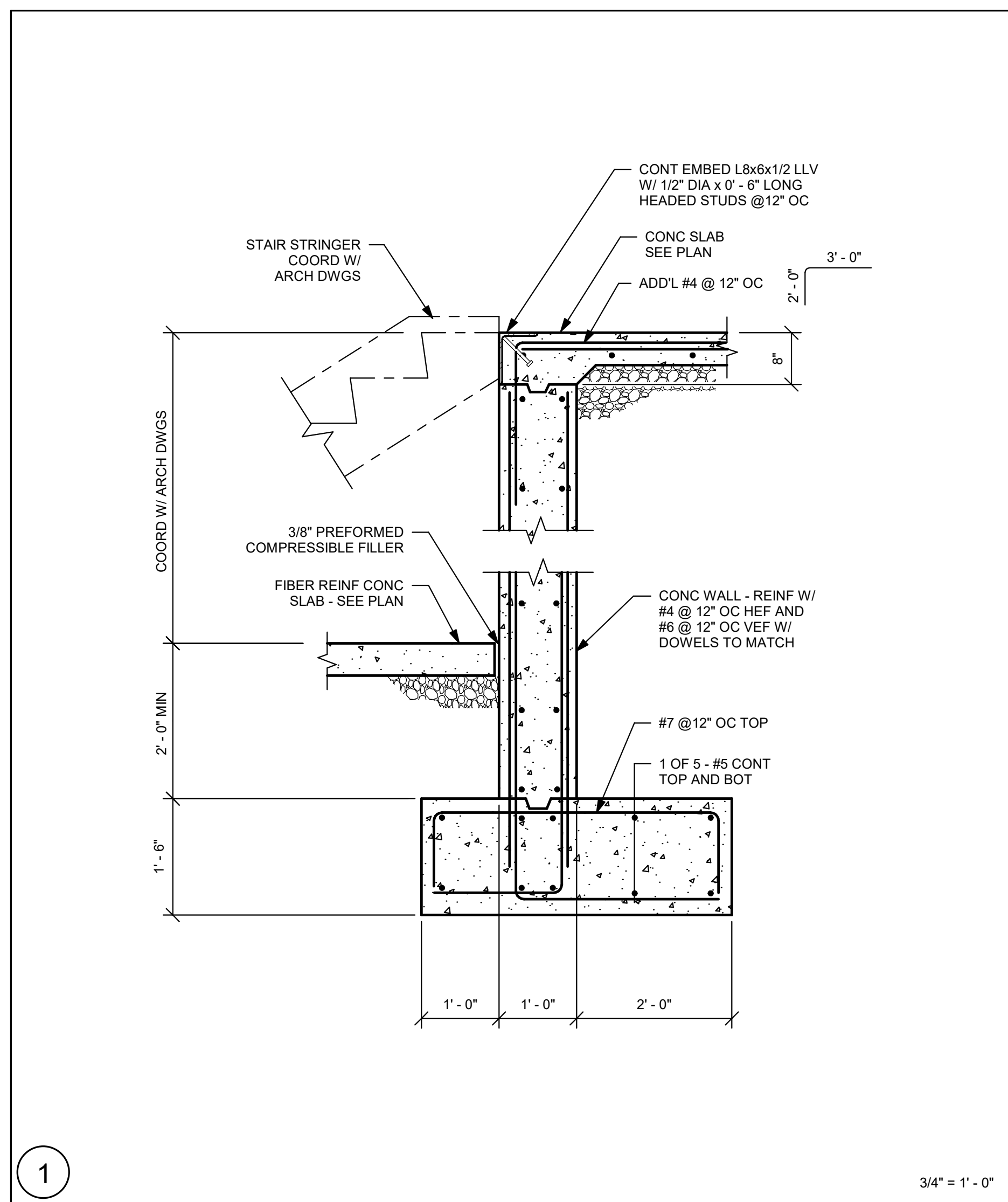
PROJECT NORTH

MAGNETIC NORTH

SECTIONS

Scale: As Indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S2-0-3



DRA

Drummet Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning | Architecture | Interior Design

Tel: 617.854.1700
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.

Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST	
SS-S-1	4/14/2023 STRUCTURAL STEEL ADDENDUM 1

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING IS A PART OF EARLY STRUCTURAL BID PACKAGE

MSBA 90% CD SUBMISSION

MAY 12, 2023

KEY PLAN

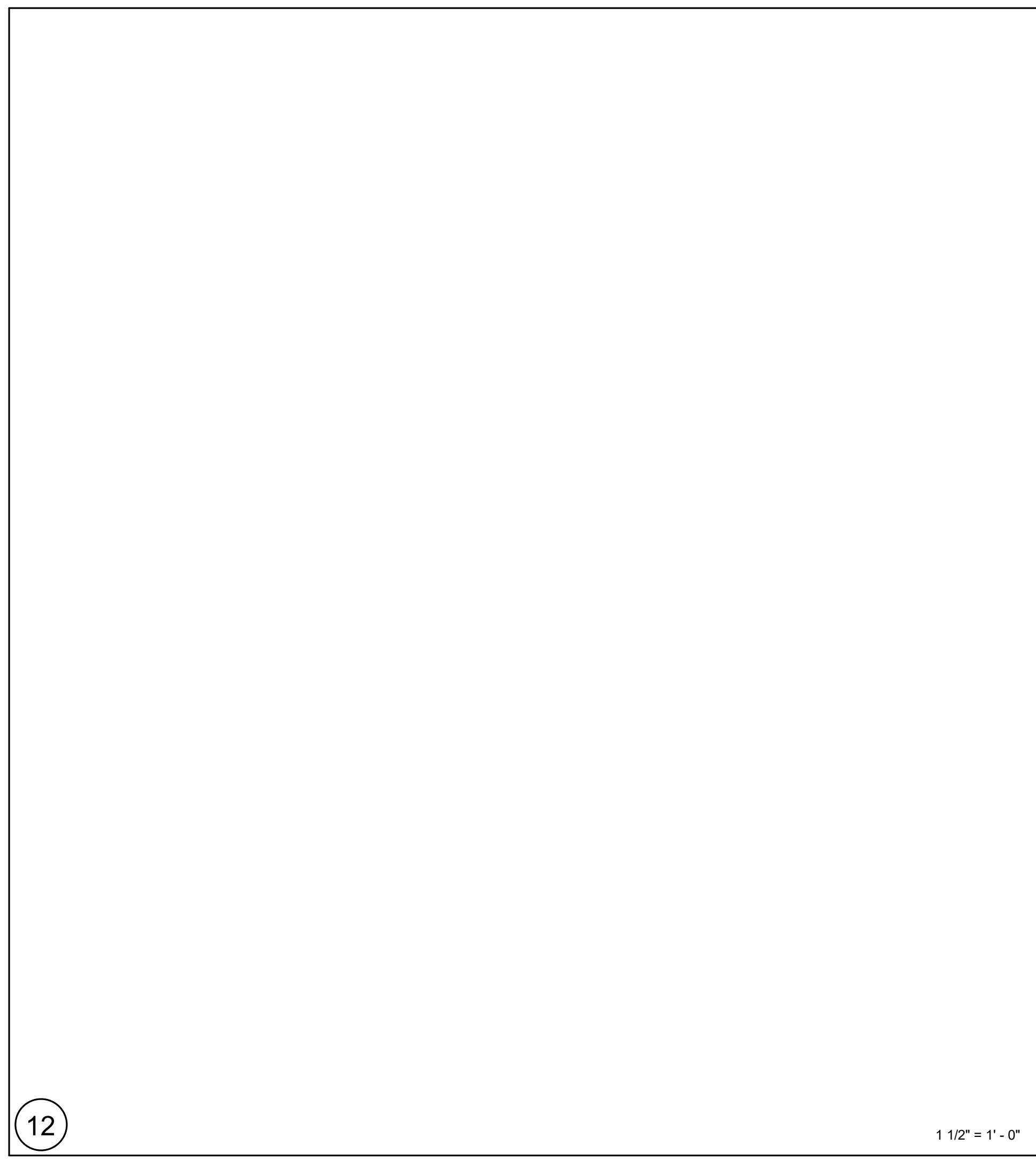
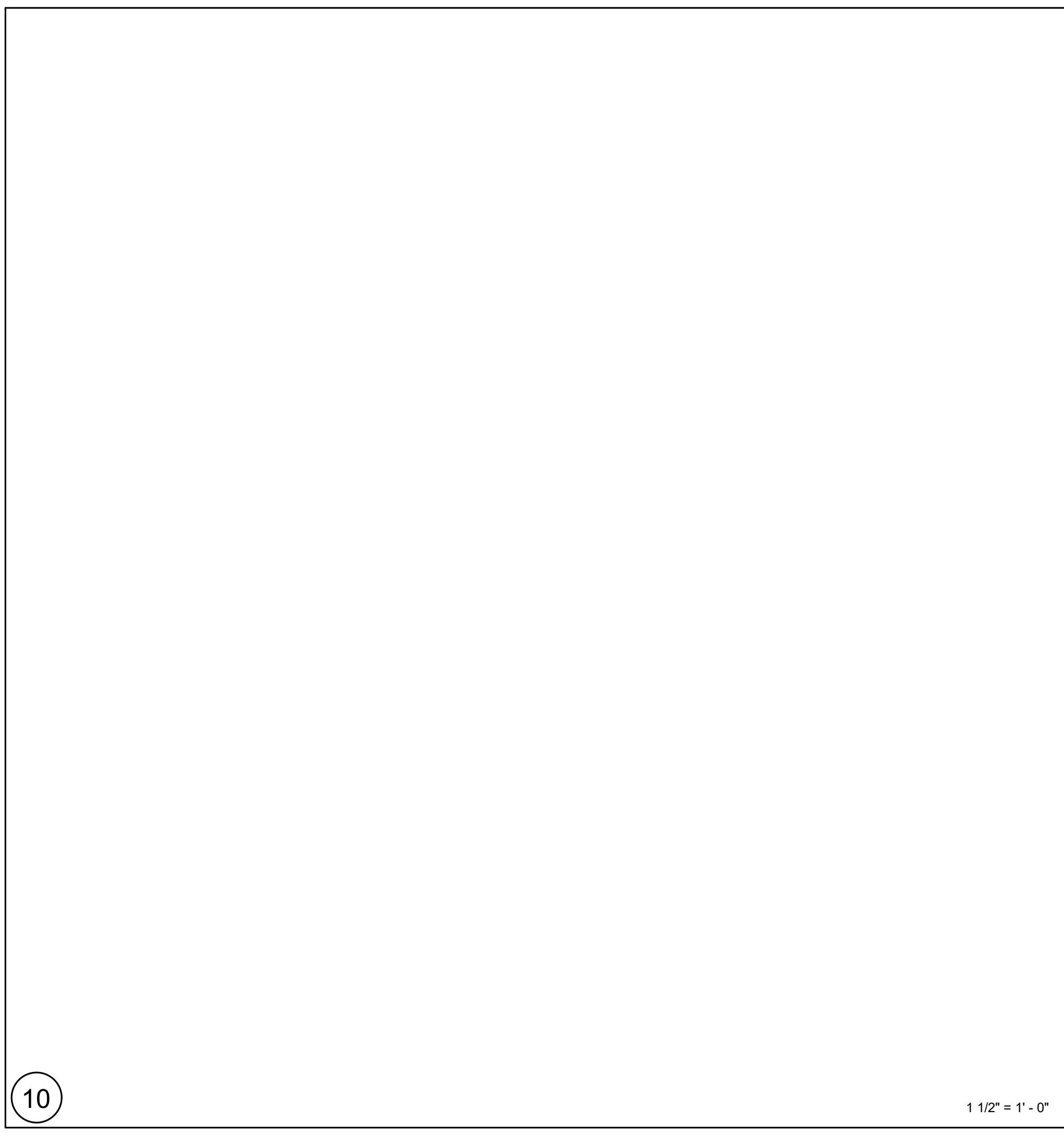
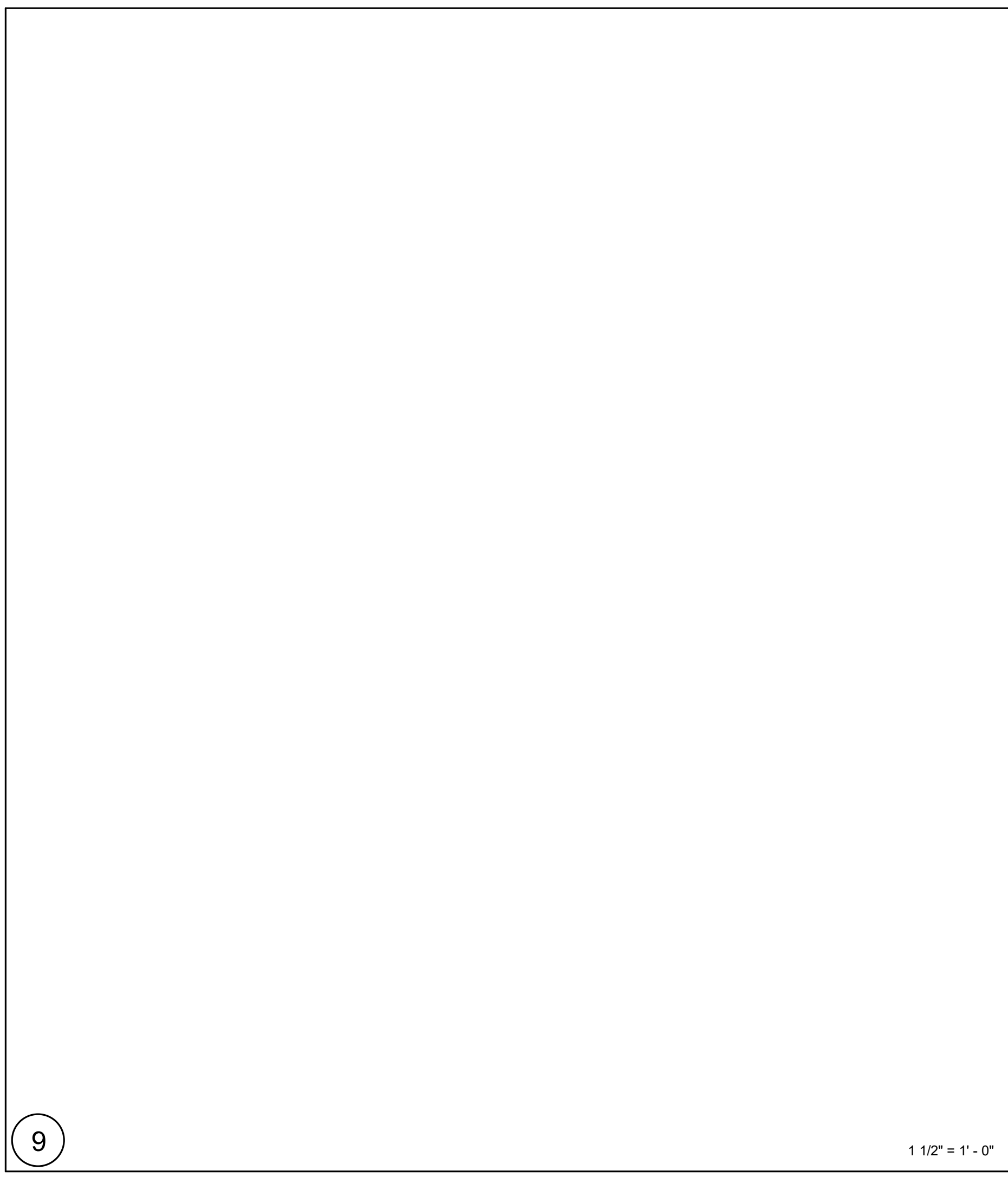
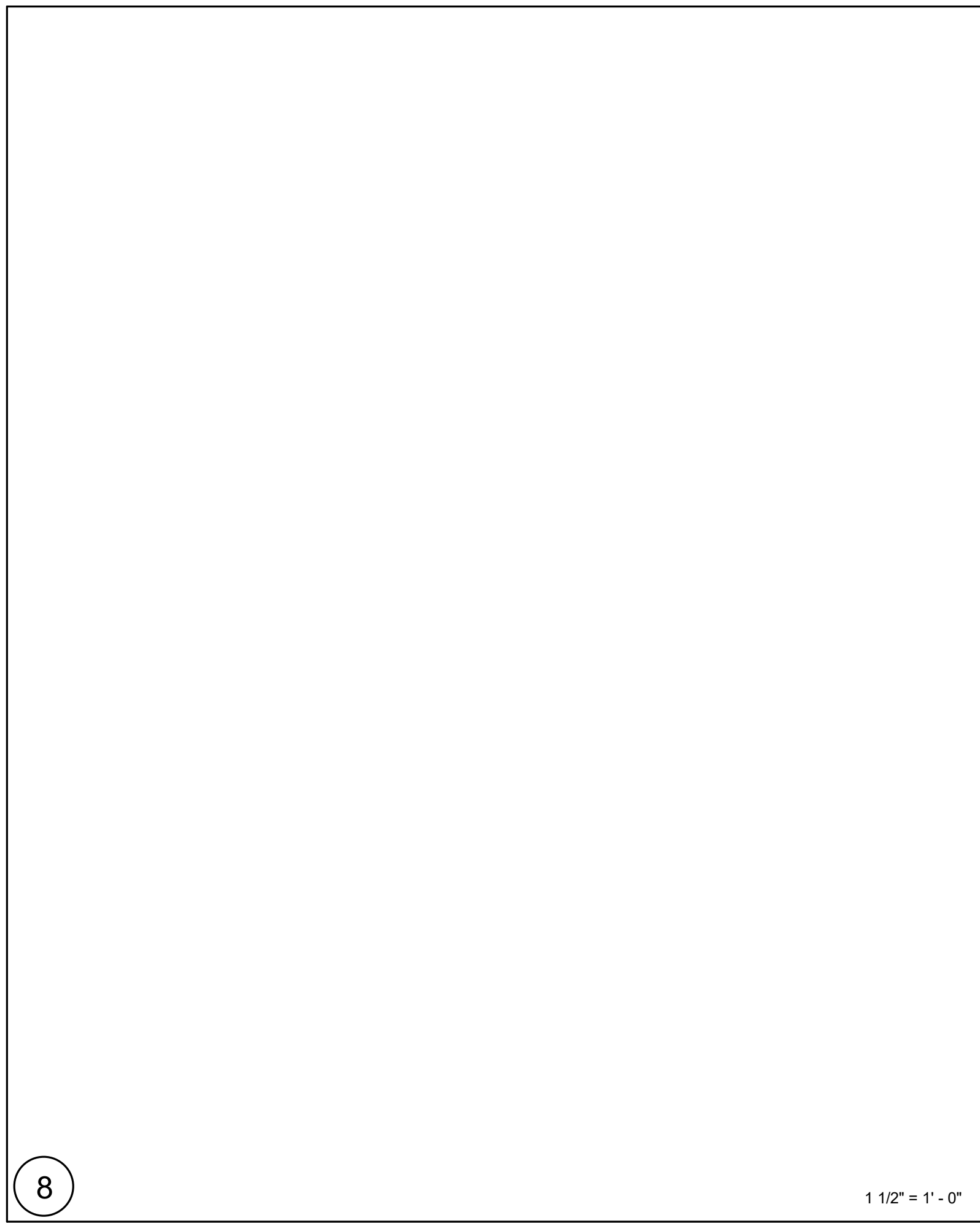
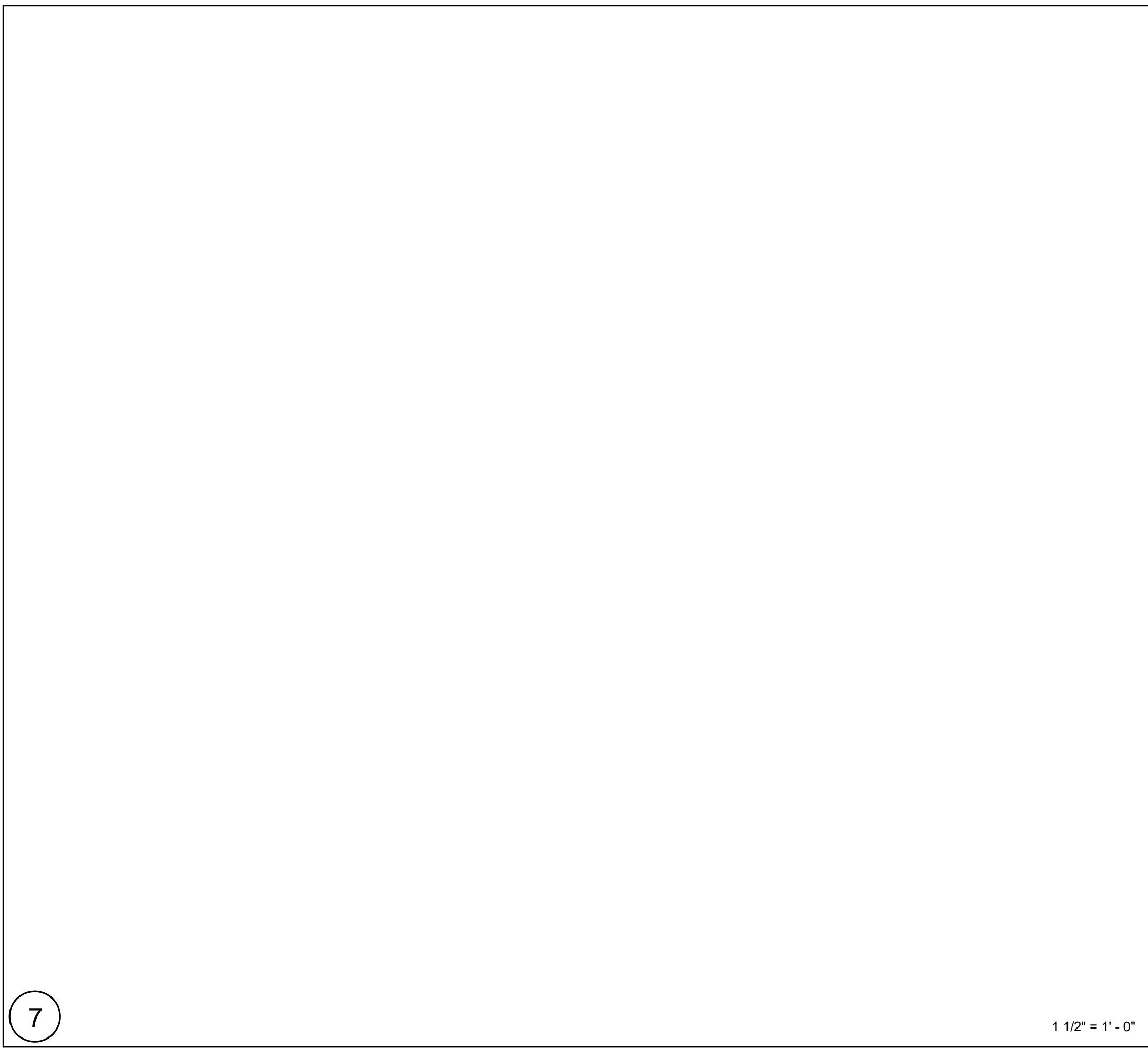
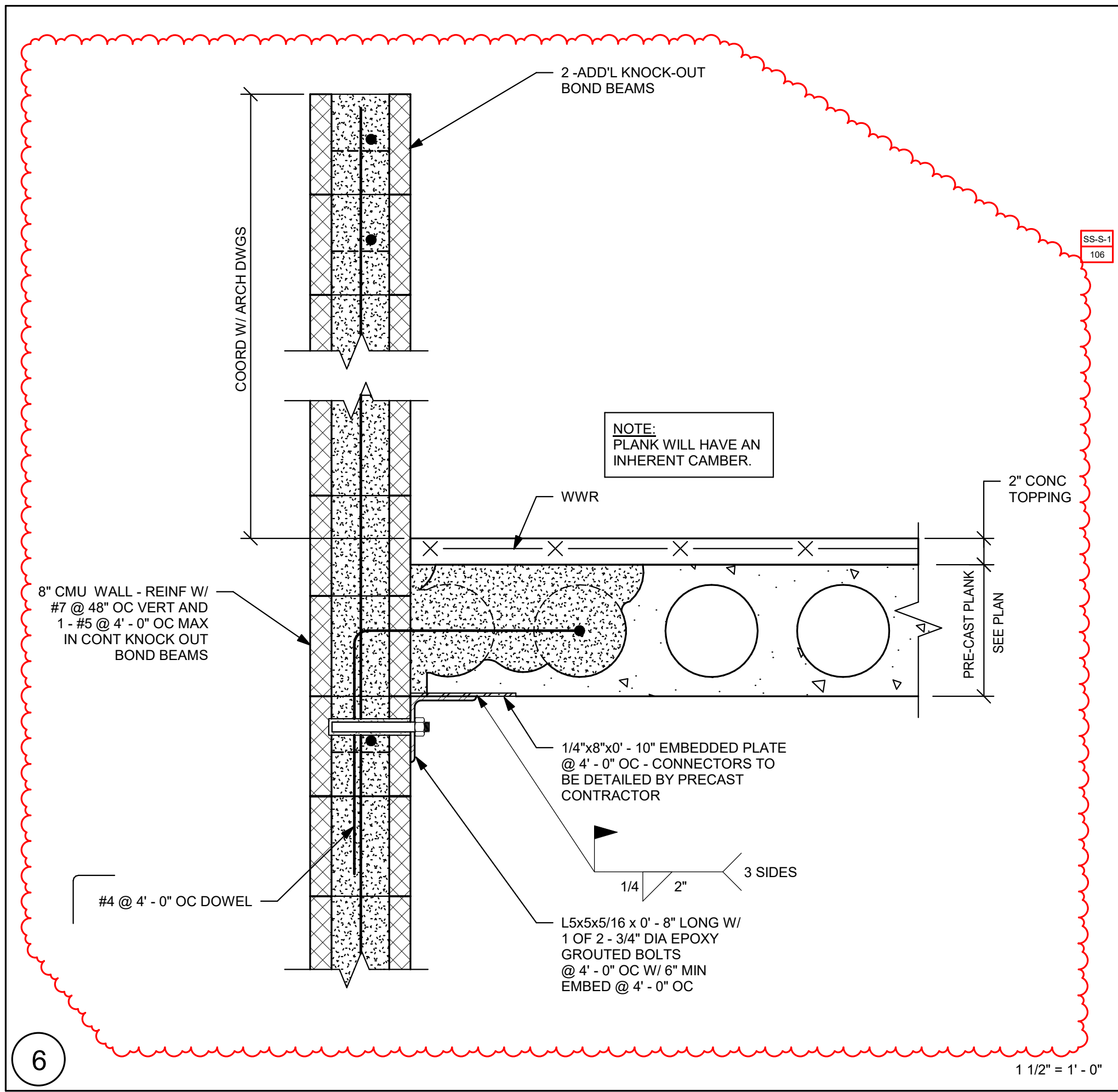
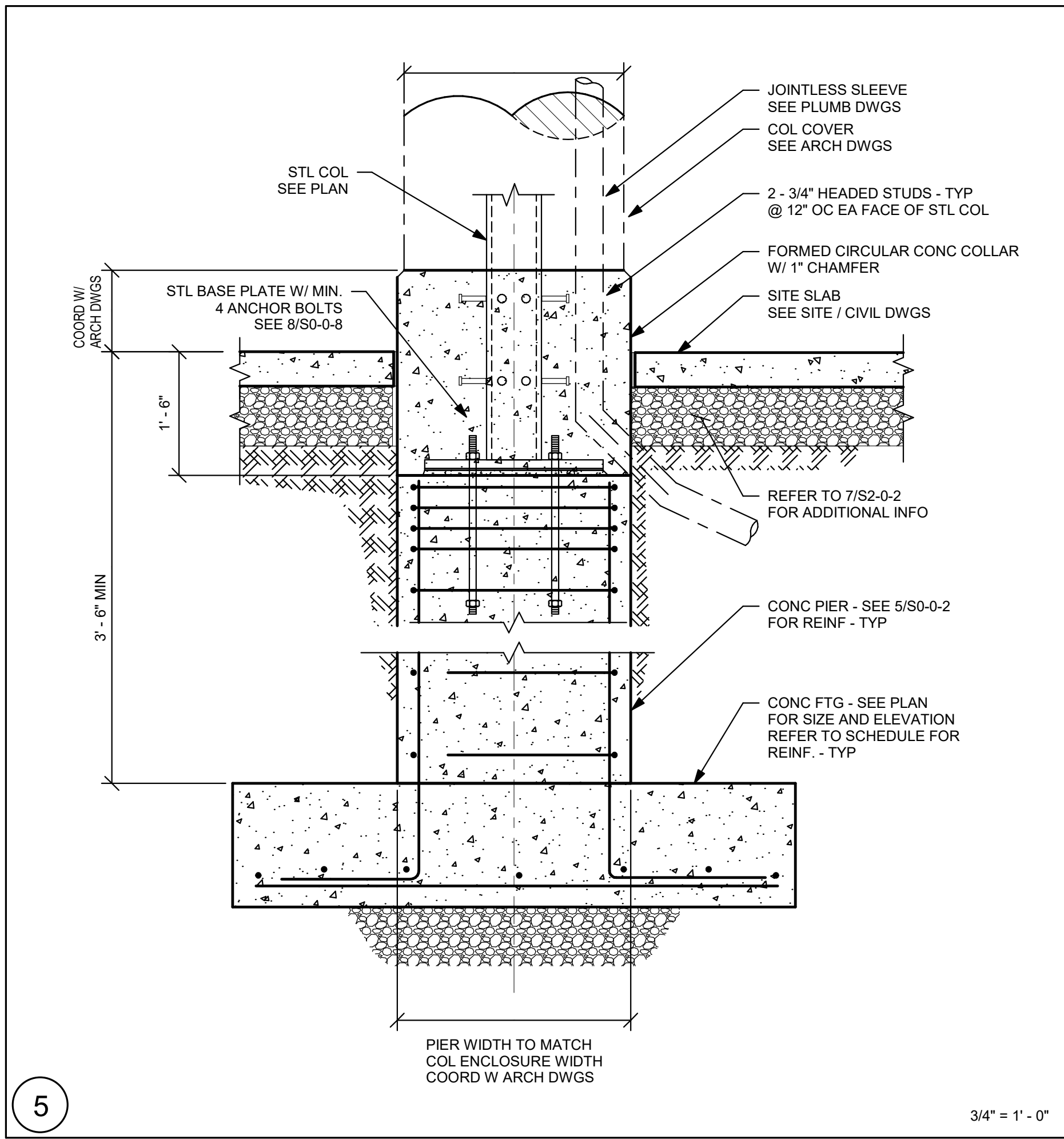
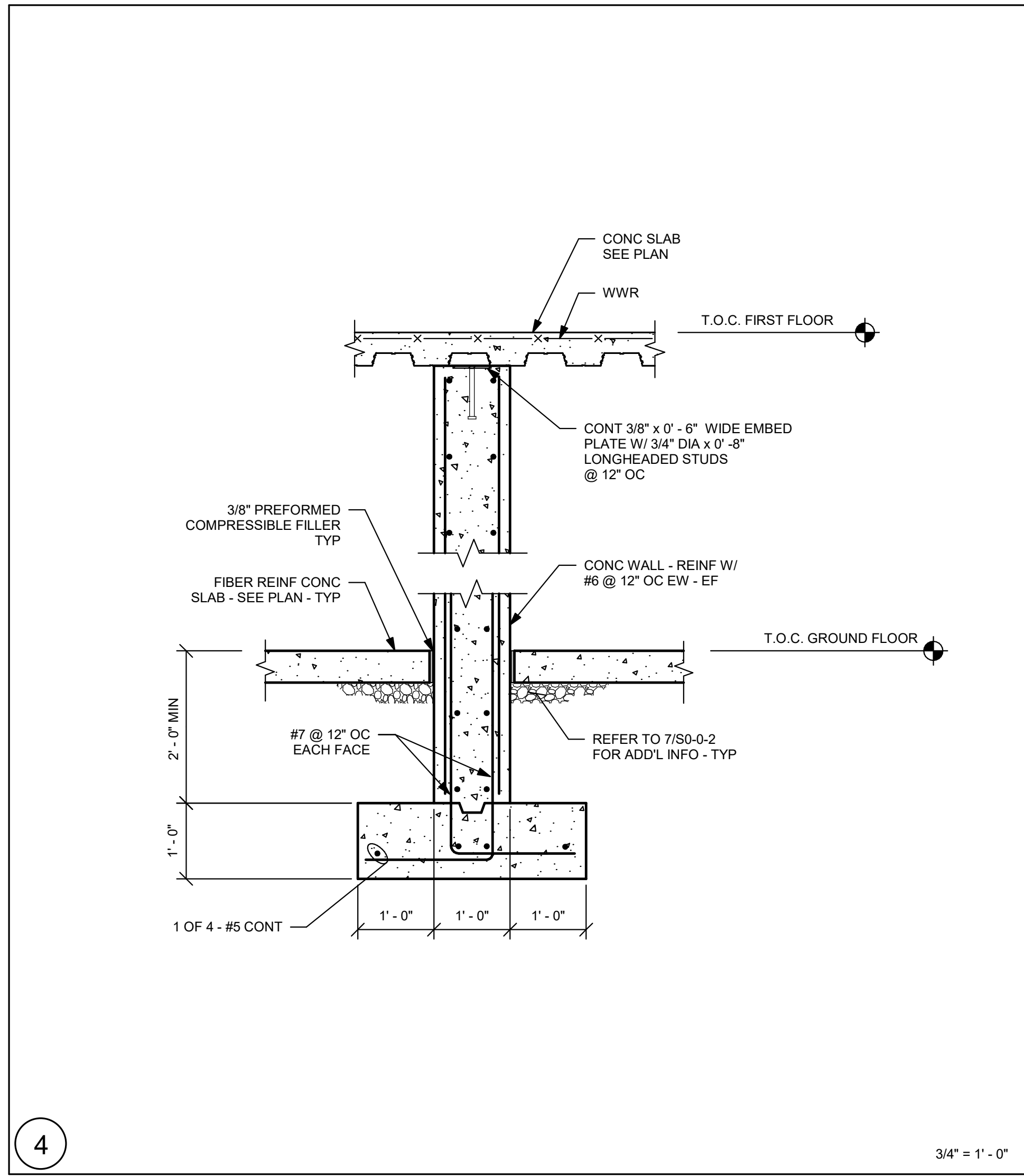
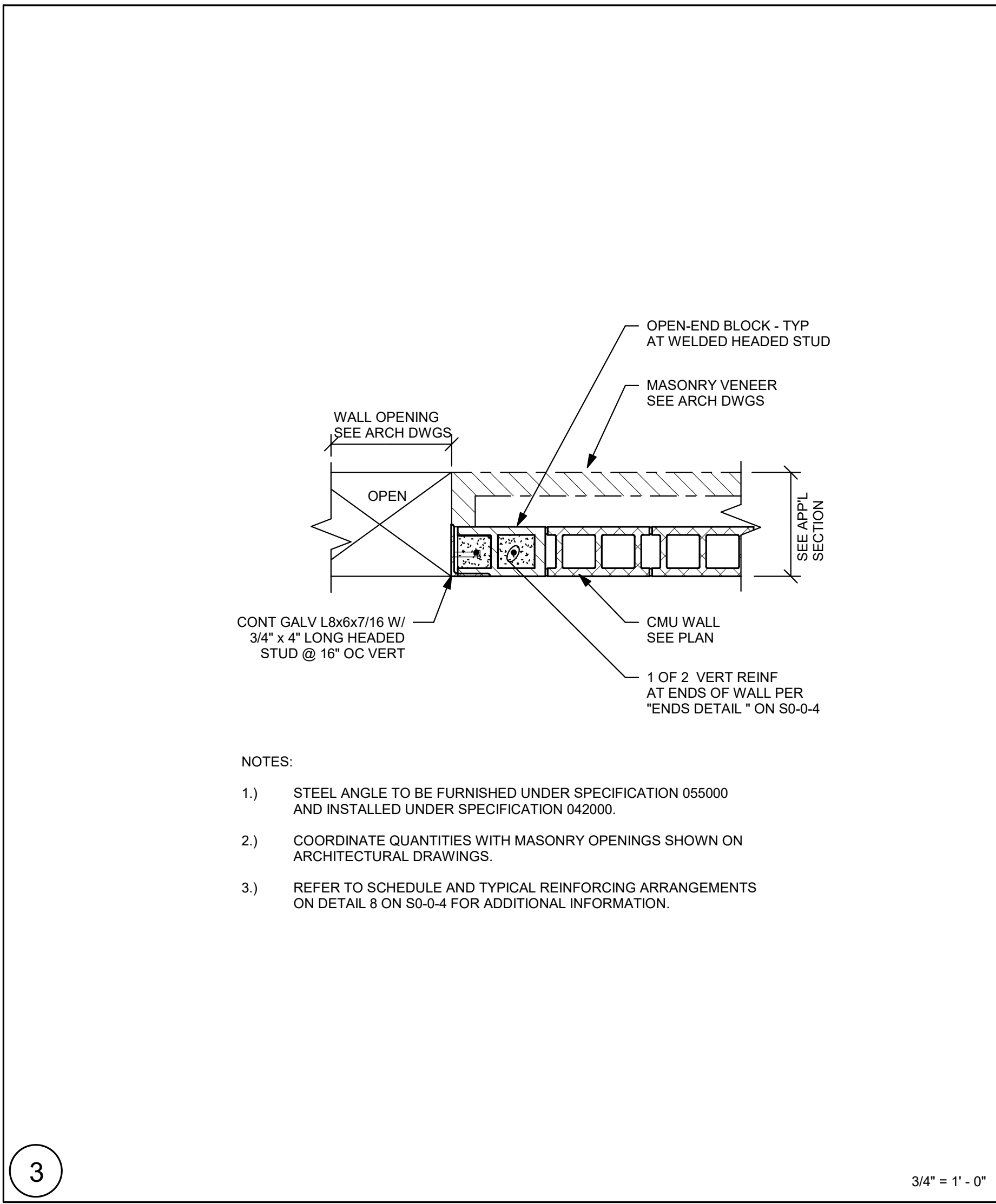
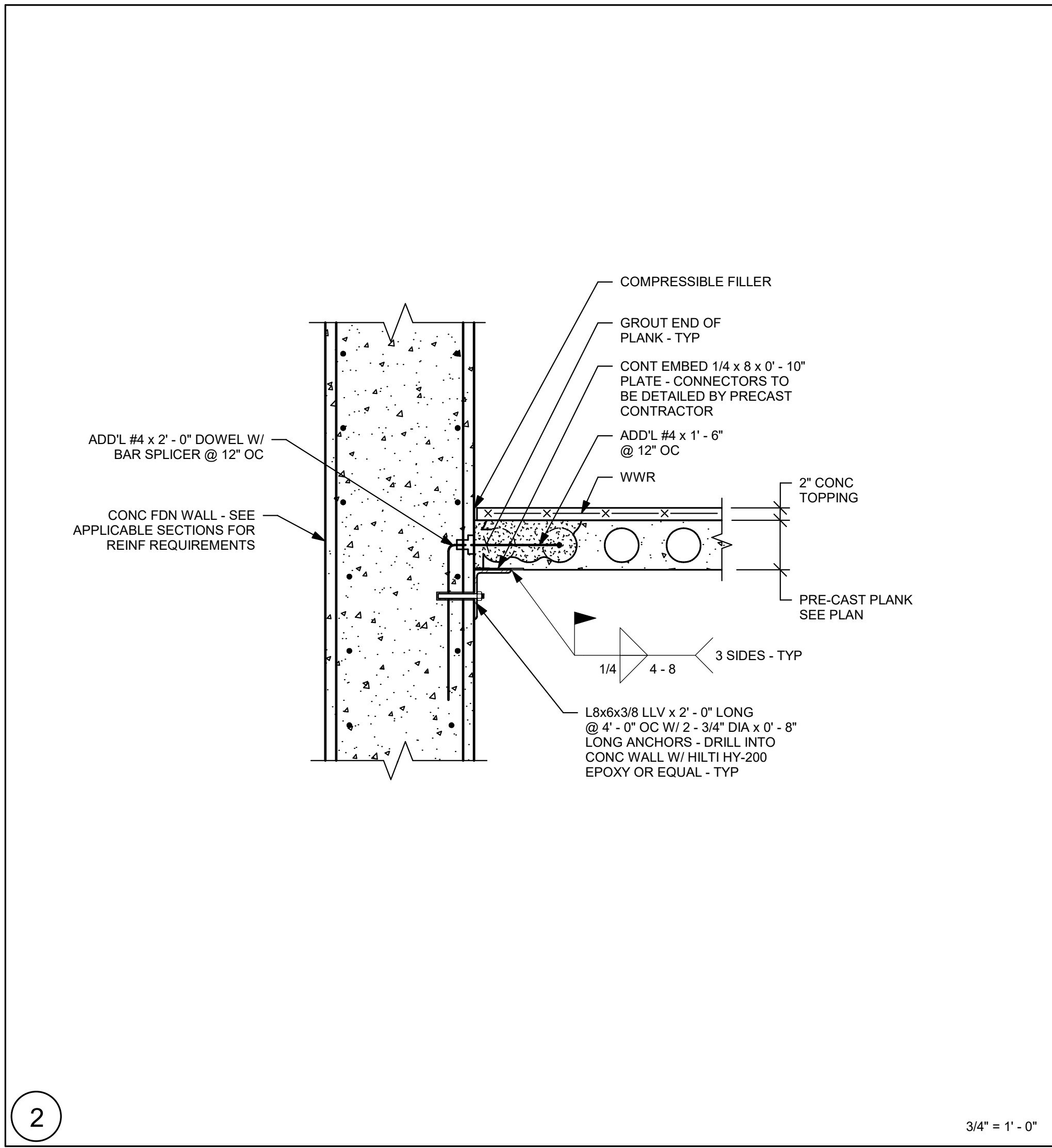
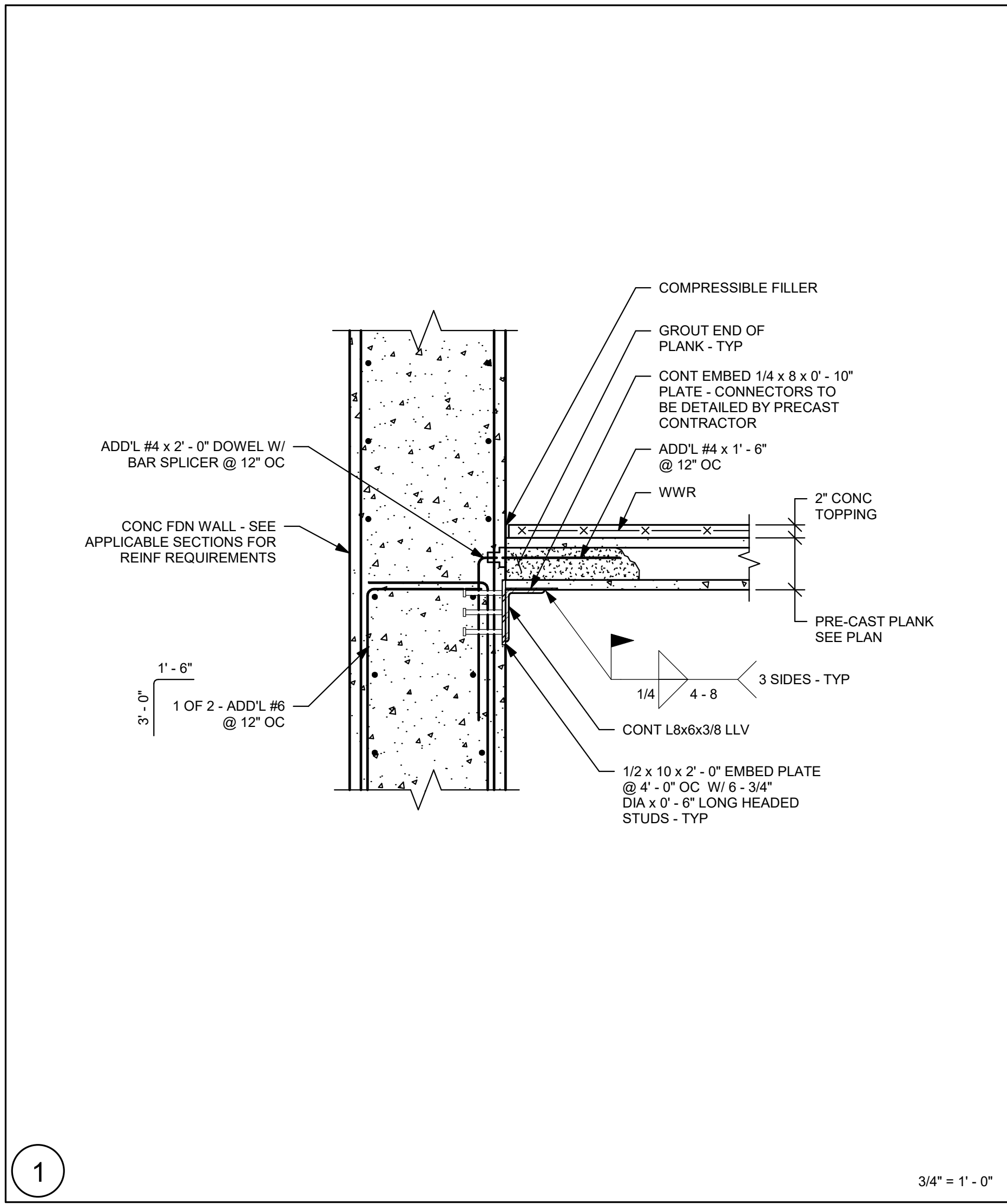
PROJECT NORTH

MAGNETIC NORTH

SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S2-0-4



DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074
Tel: 817.854.1702
www.dra.com

260 Charles Street
Studio 300
Waltham, MA 02453

Planning | Architecture | Interior Design

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

SS-S-14/14/2023STRUCTURAL STEEL
ADDENDUM 1

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023

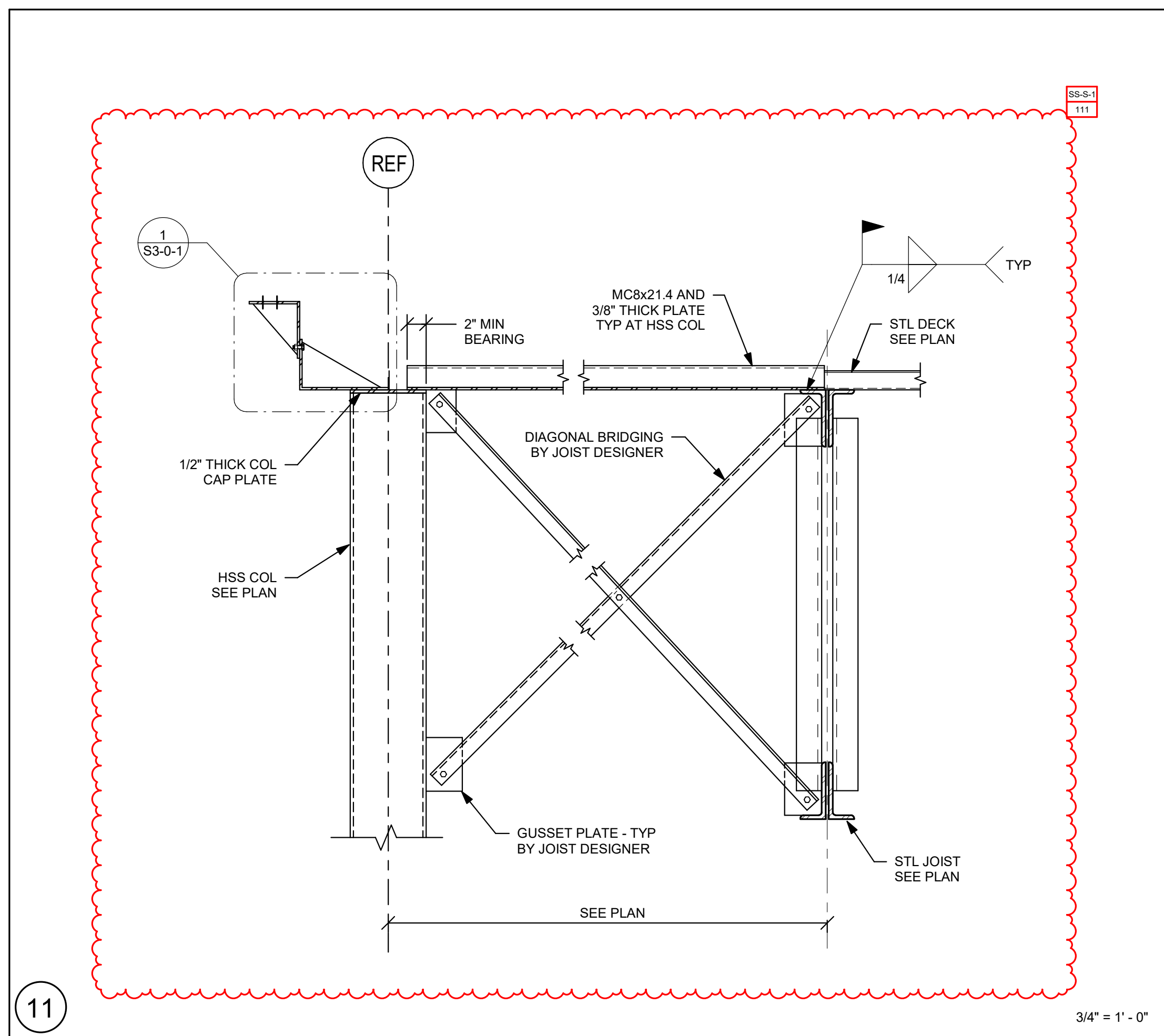
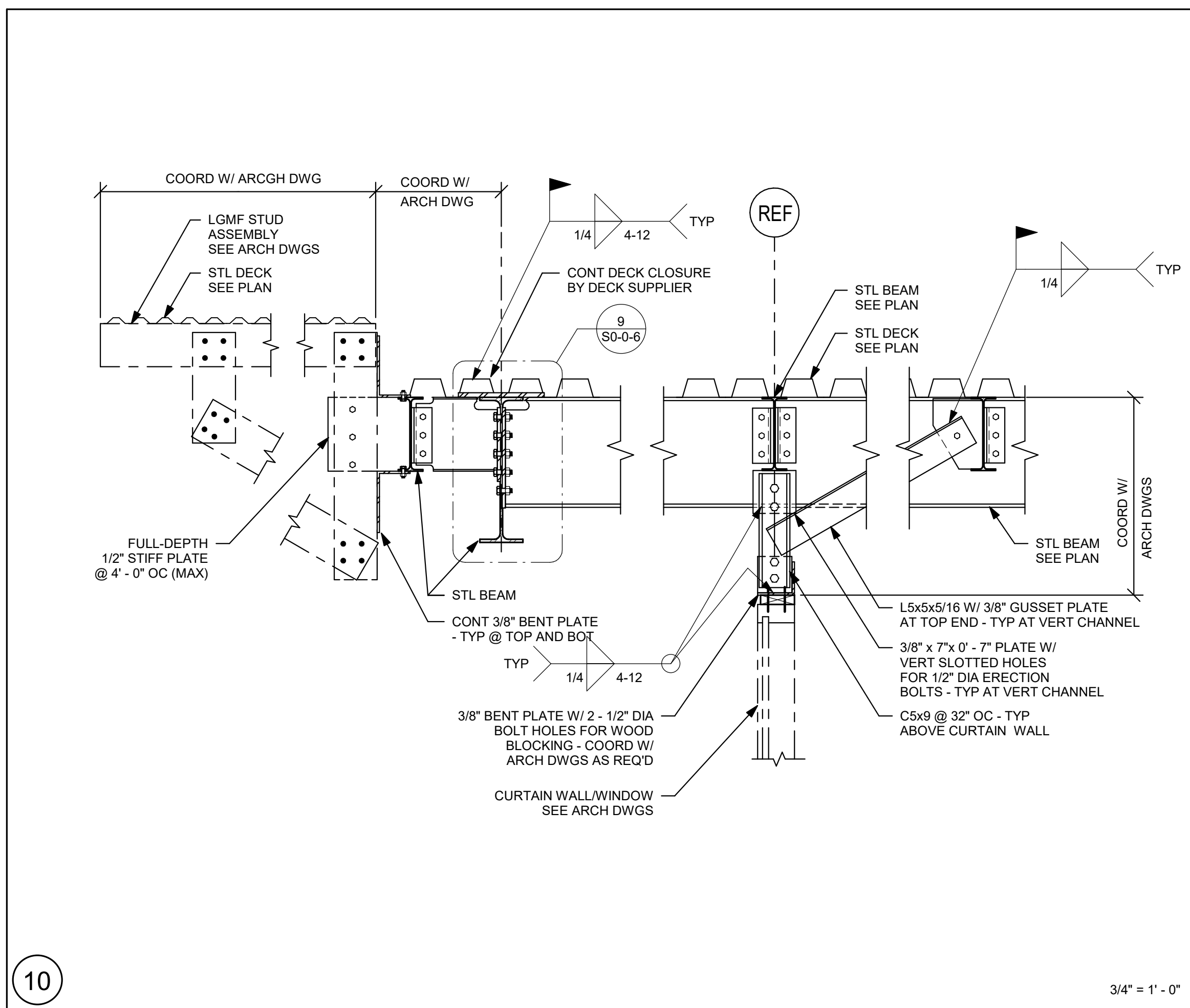
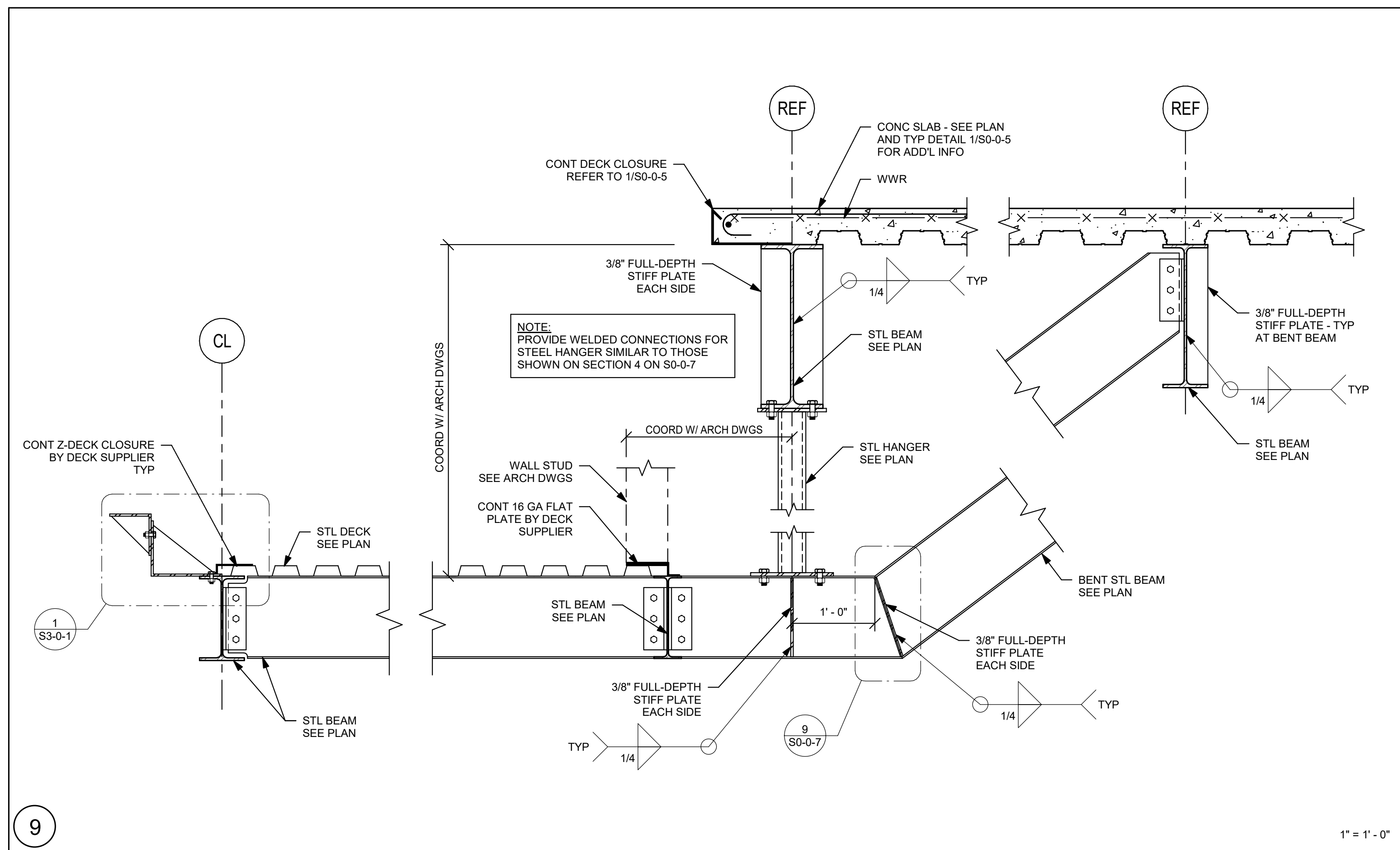
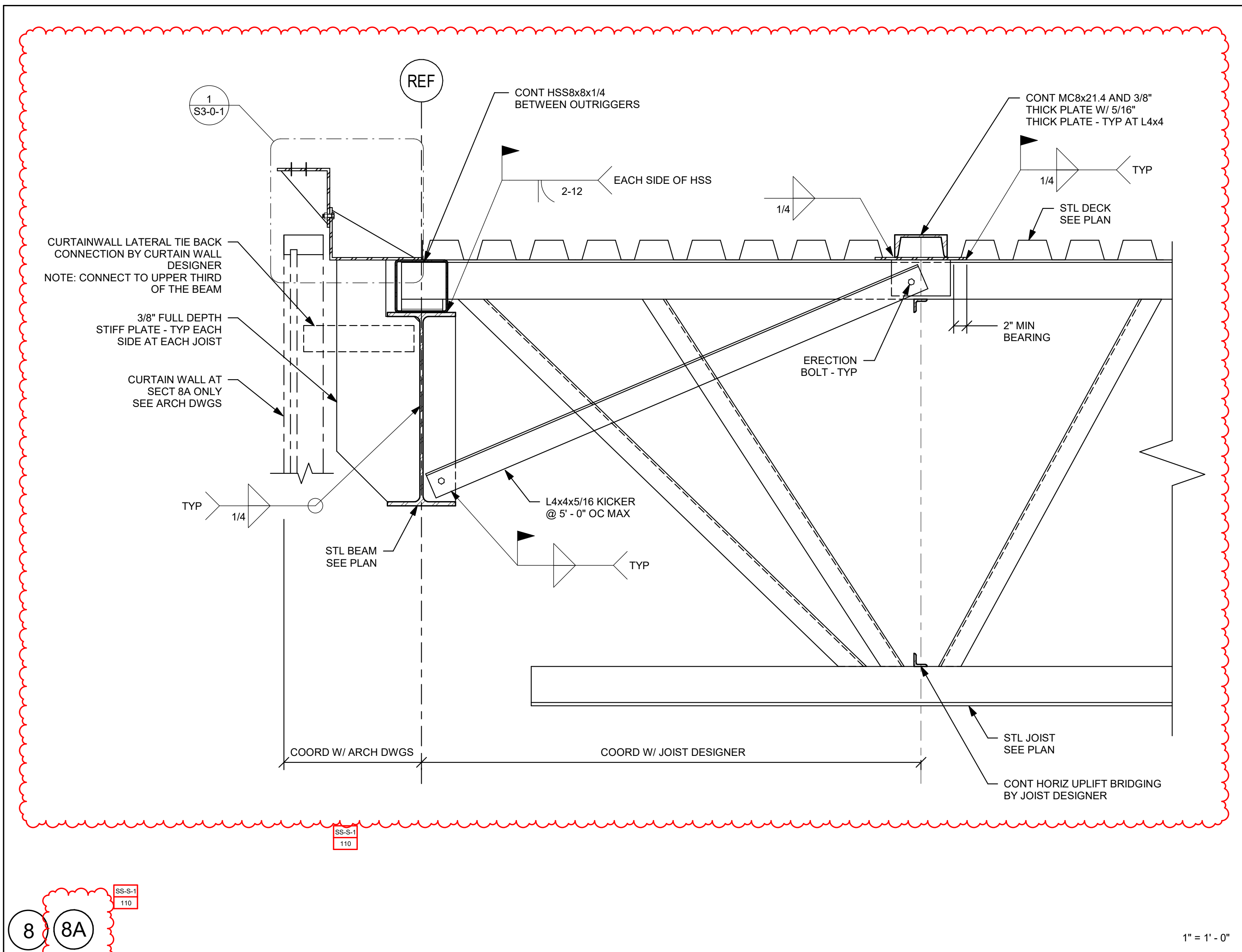
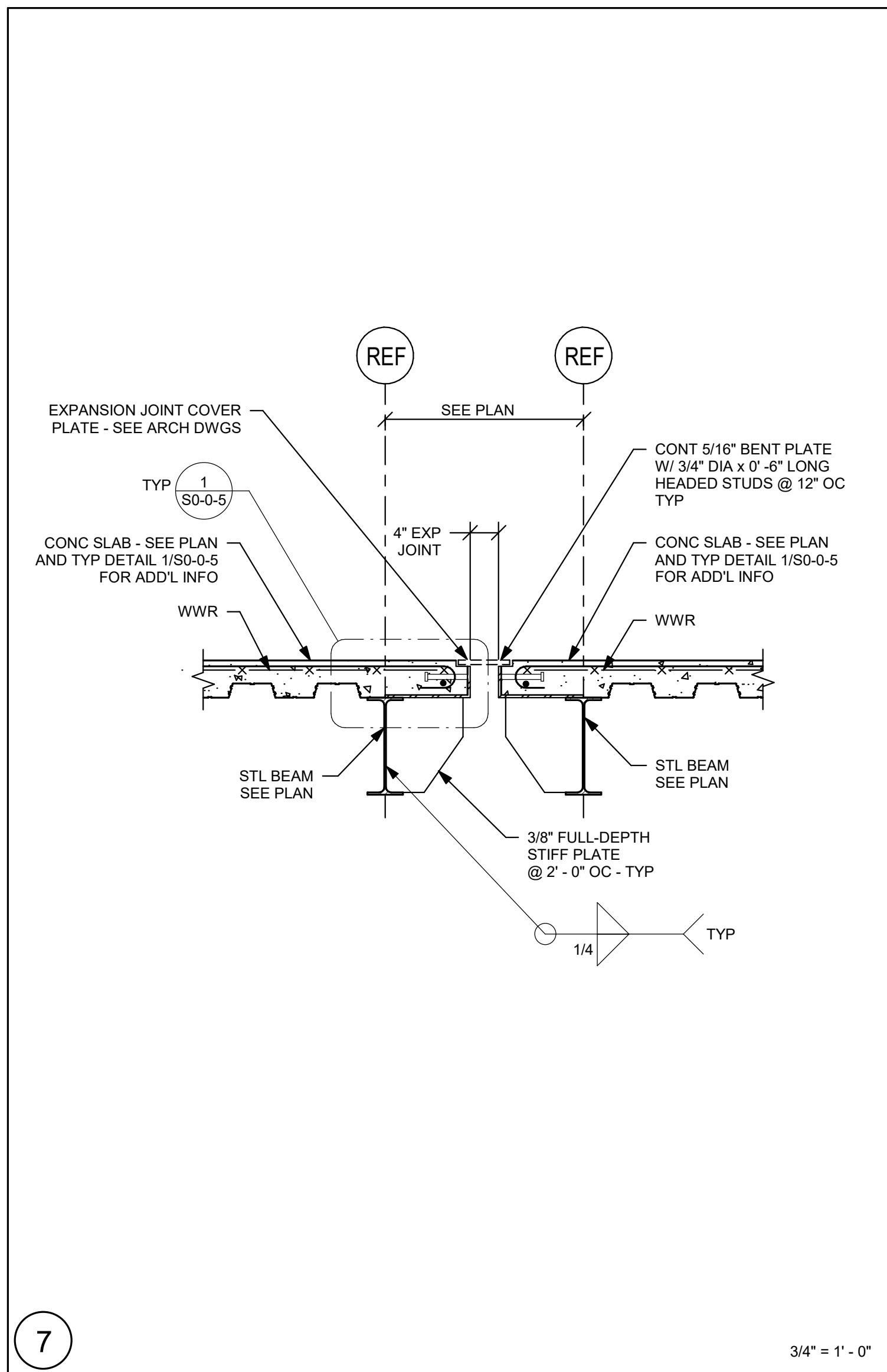
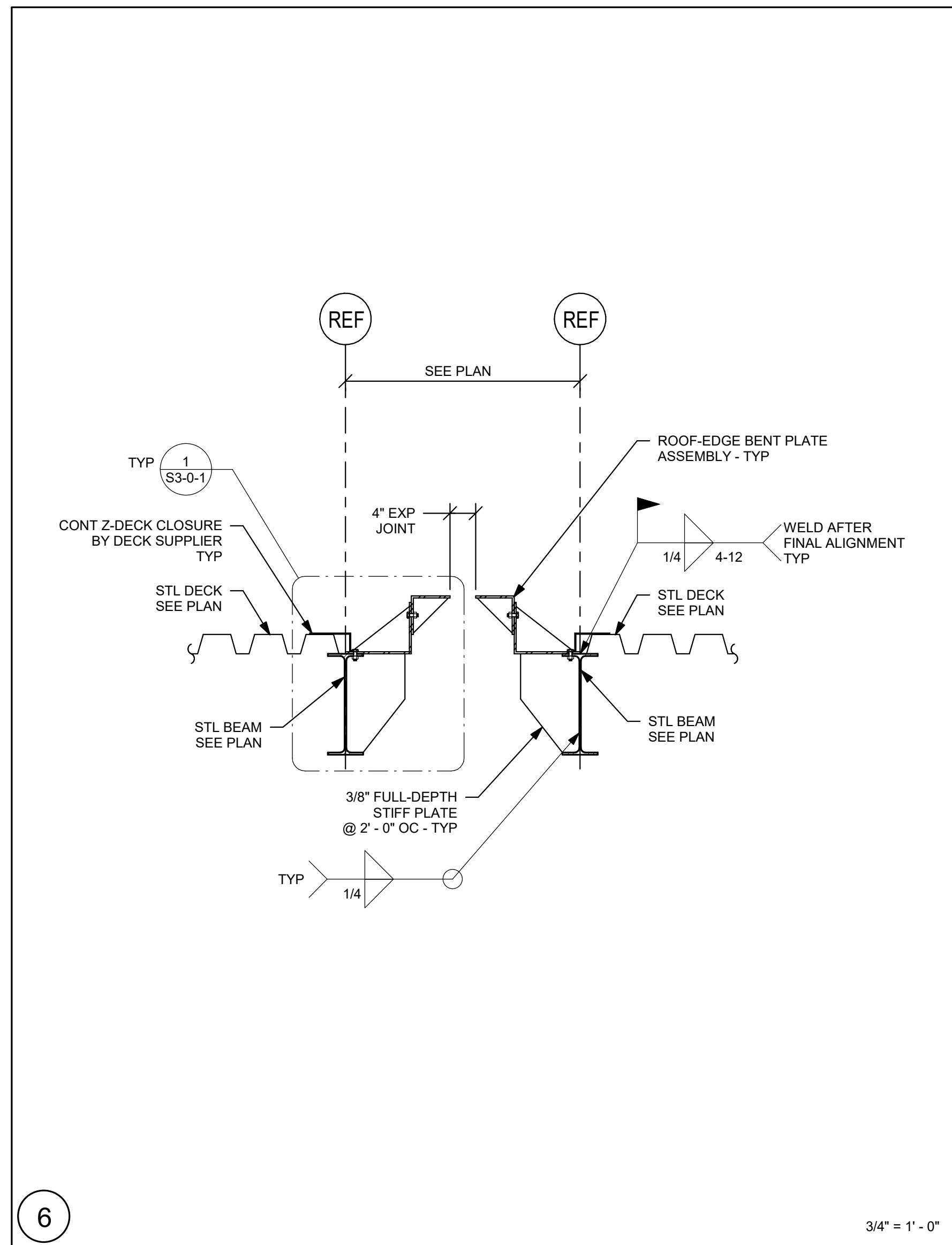
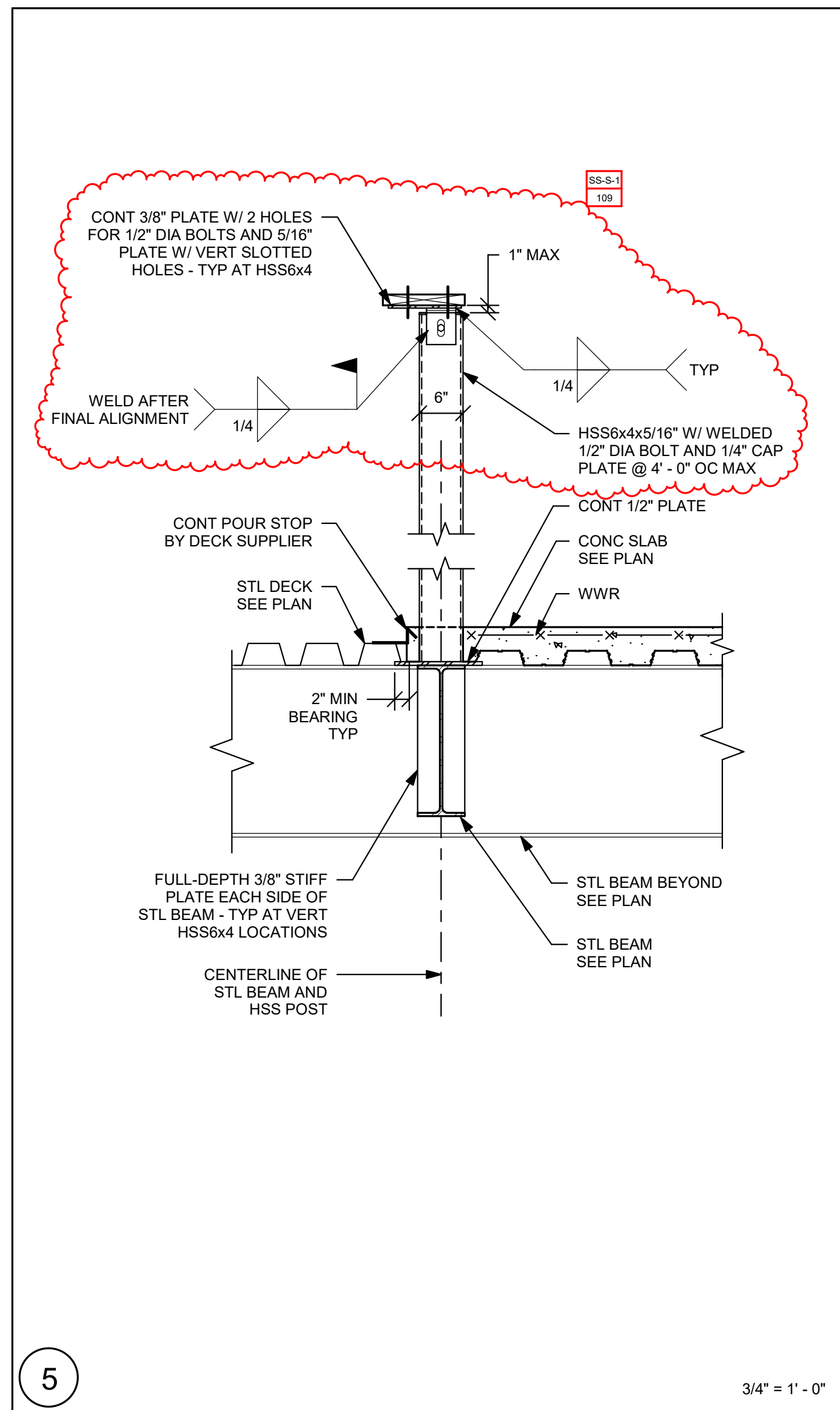
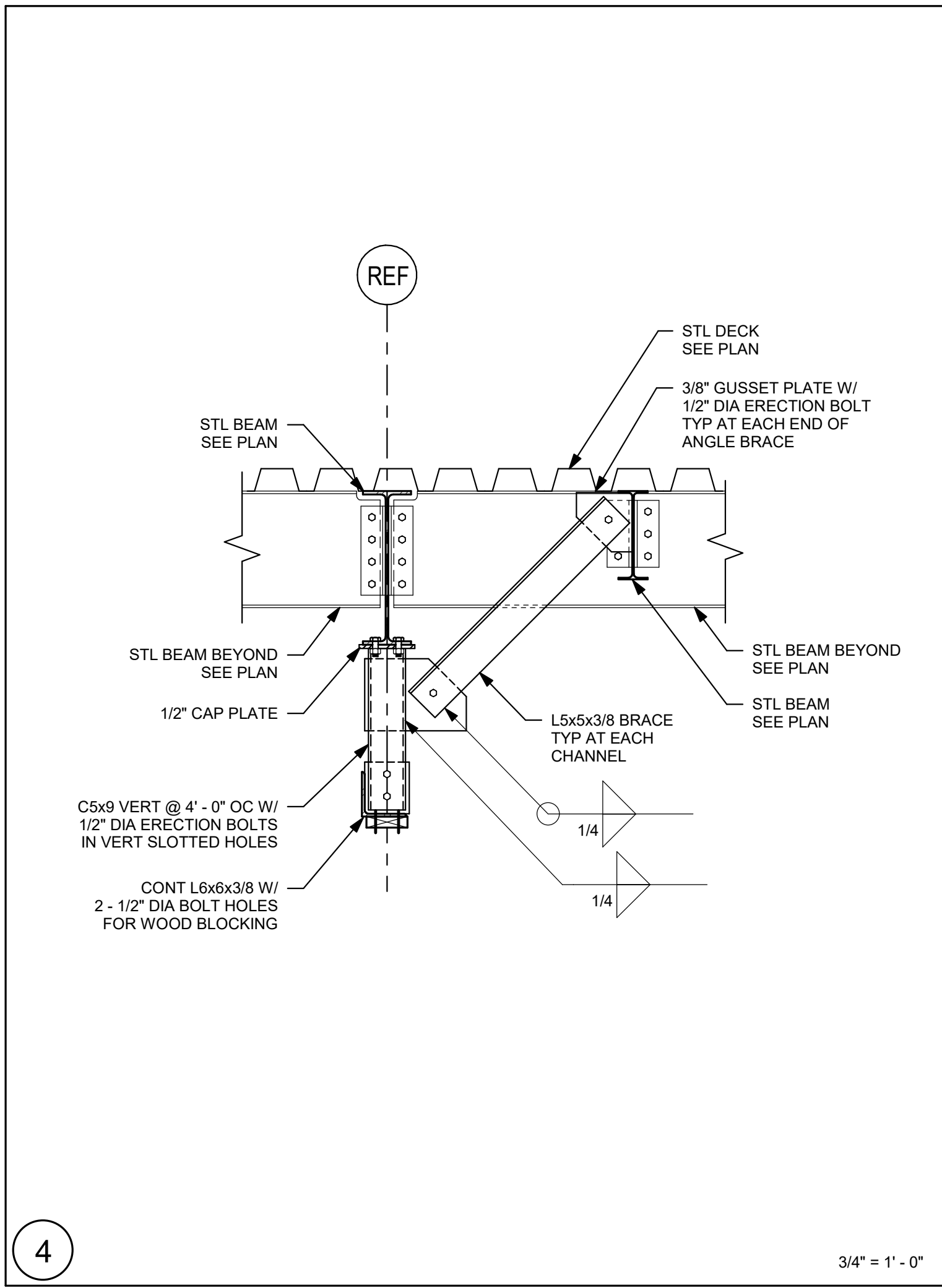
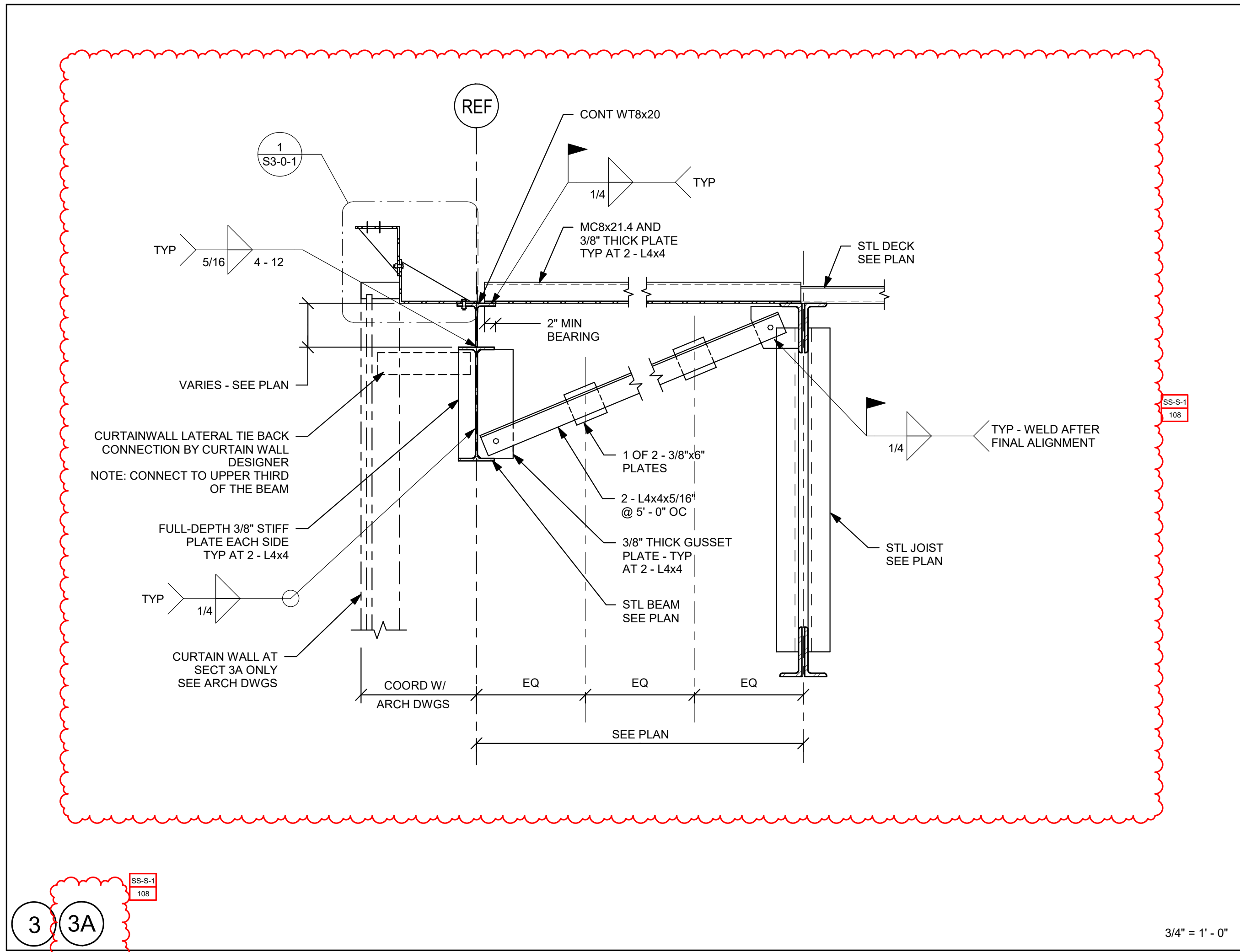
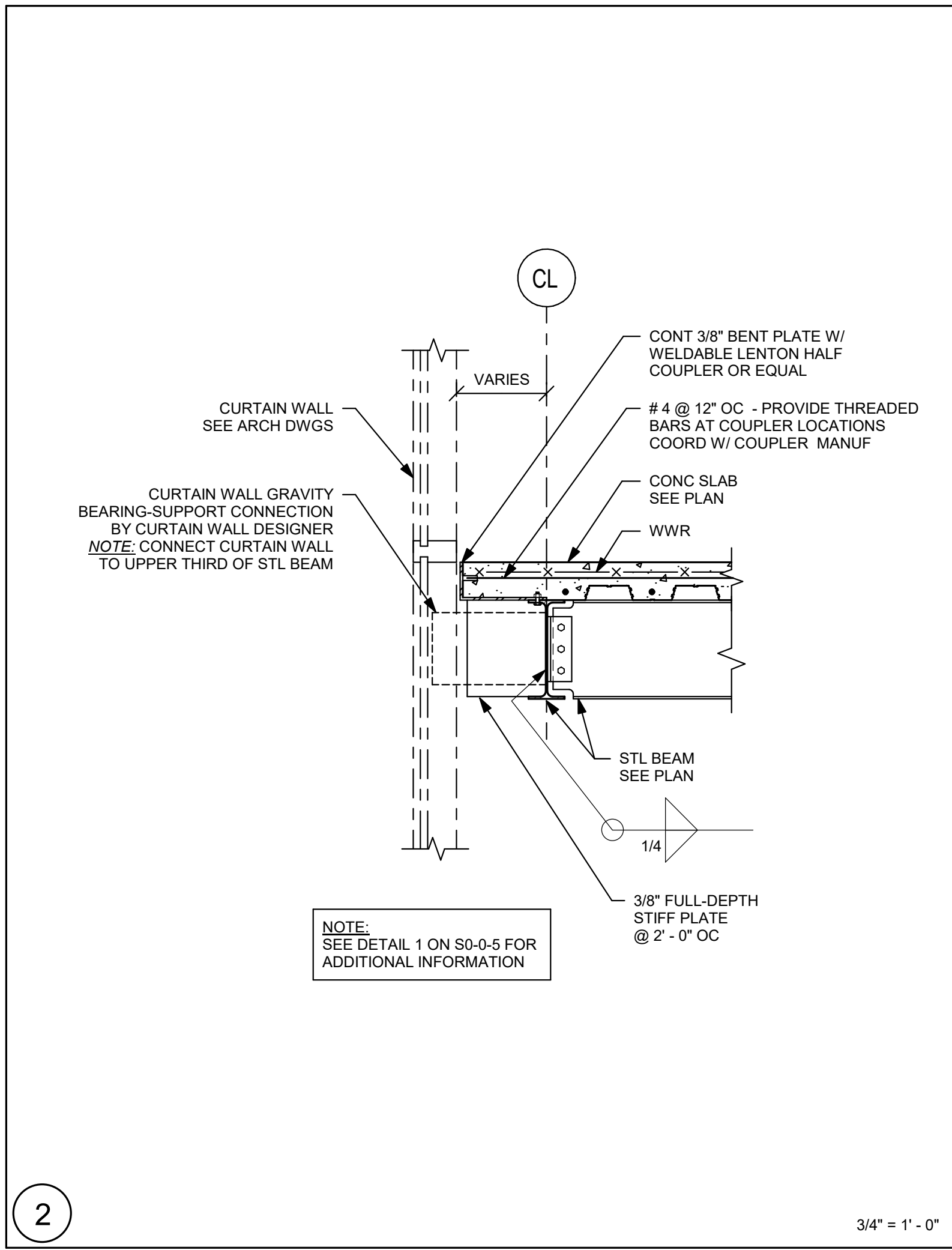
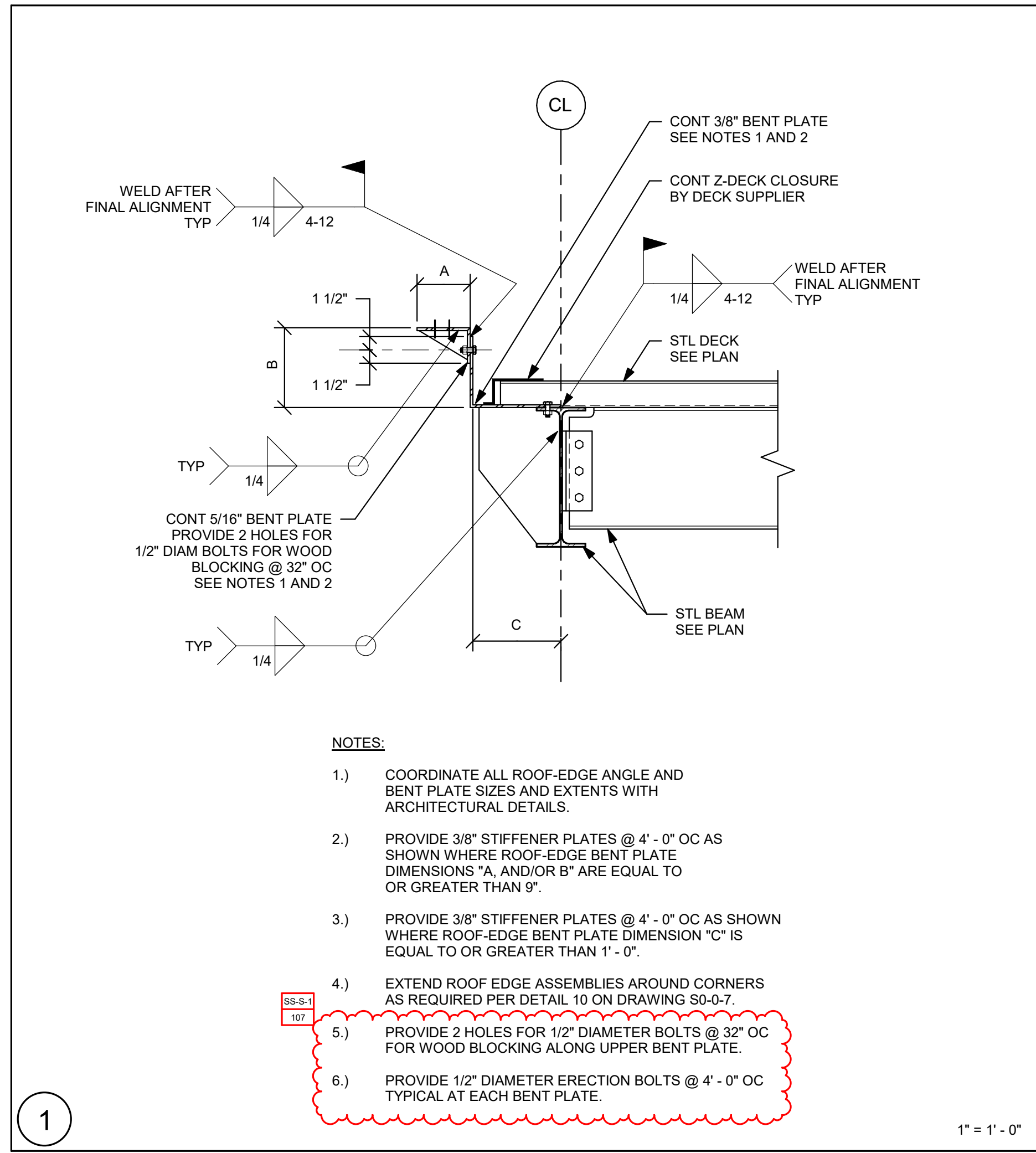
KEY PLAN

PROJECT NORTH
MAGNETIC NORTH

SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S2-0-5



**NORTHEAST
METRO TECH**

100 Hemlock Rd.
Wakefield, MA 01880

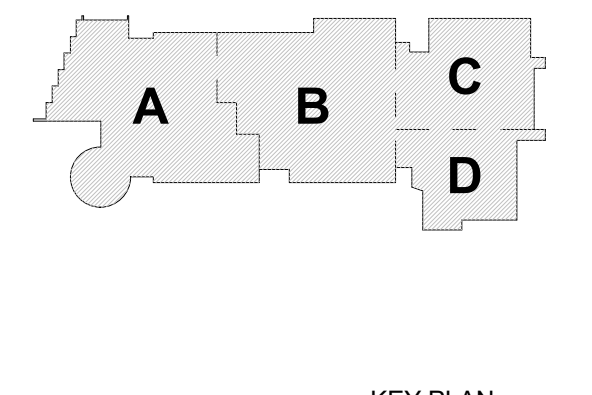
EDG
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST		
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING IS A PART OF EARLY STRUCTURAL BID PACKAGE

MSBA 90% CD
SUBMISSION

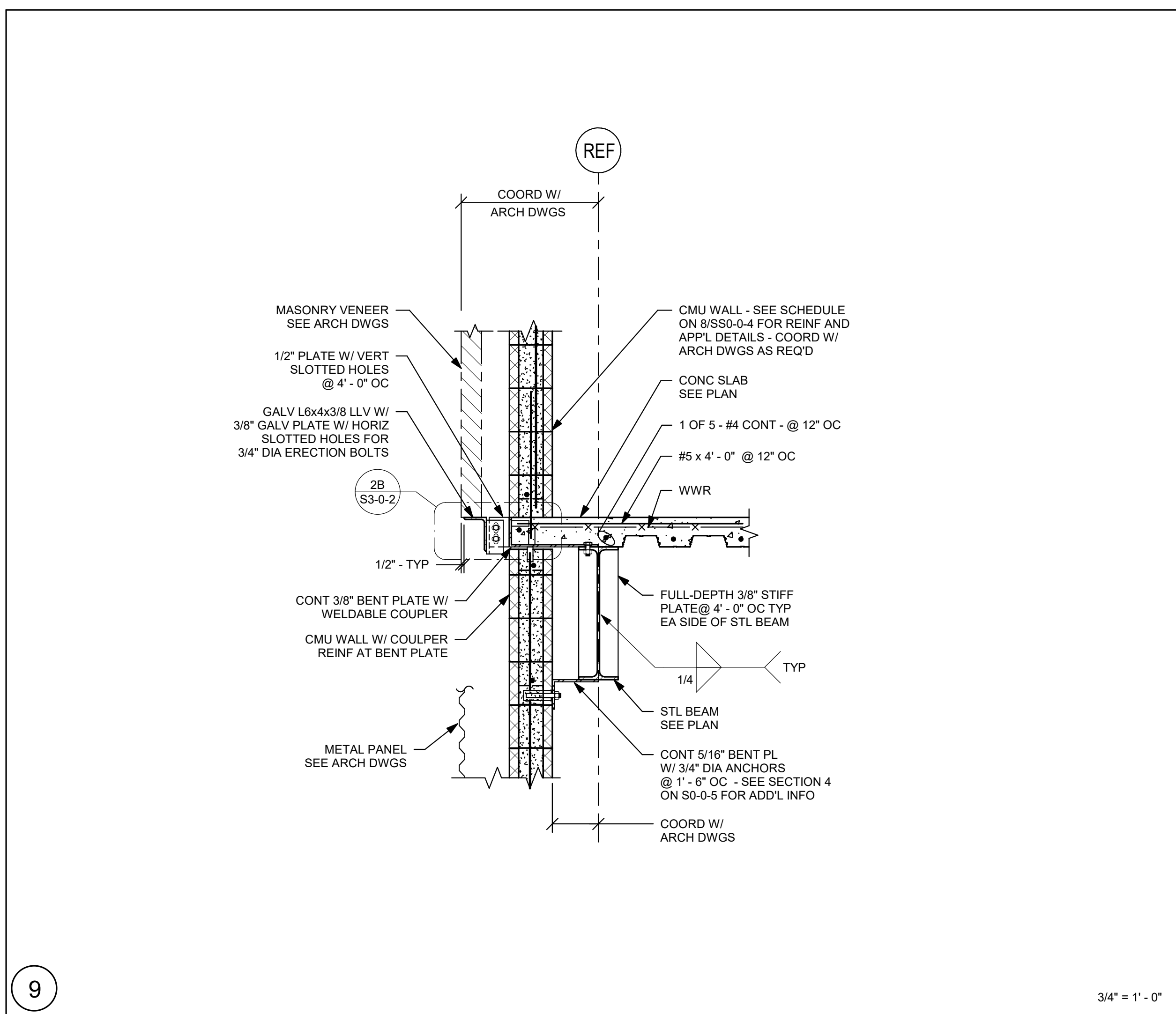
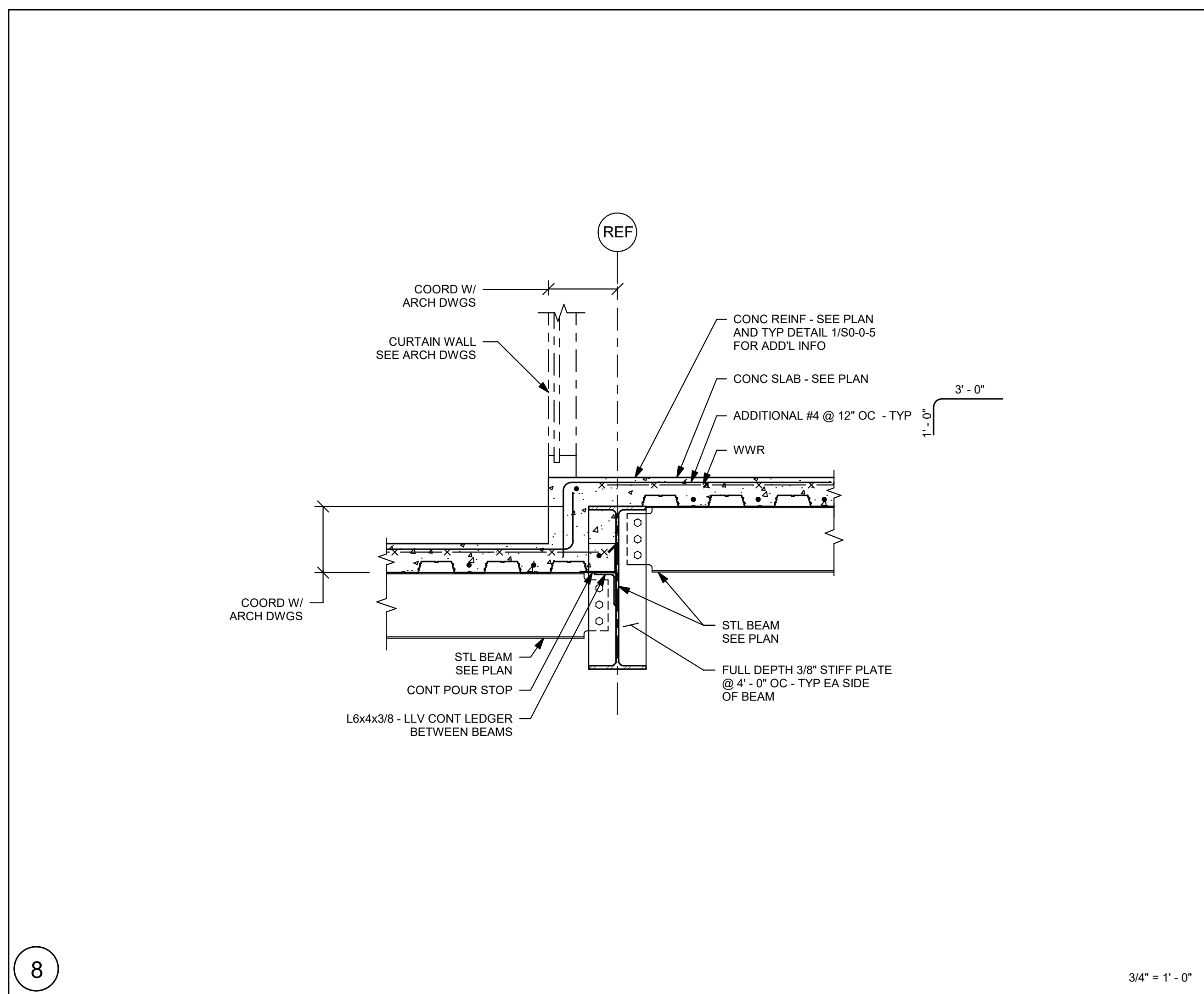
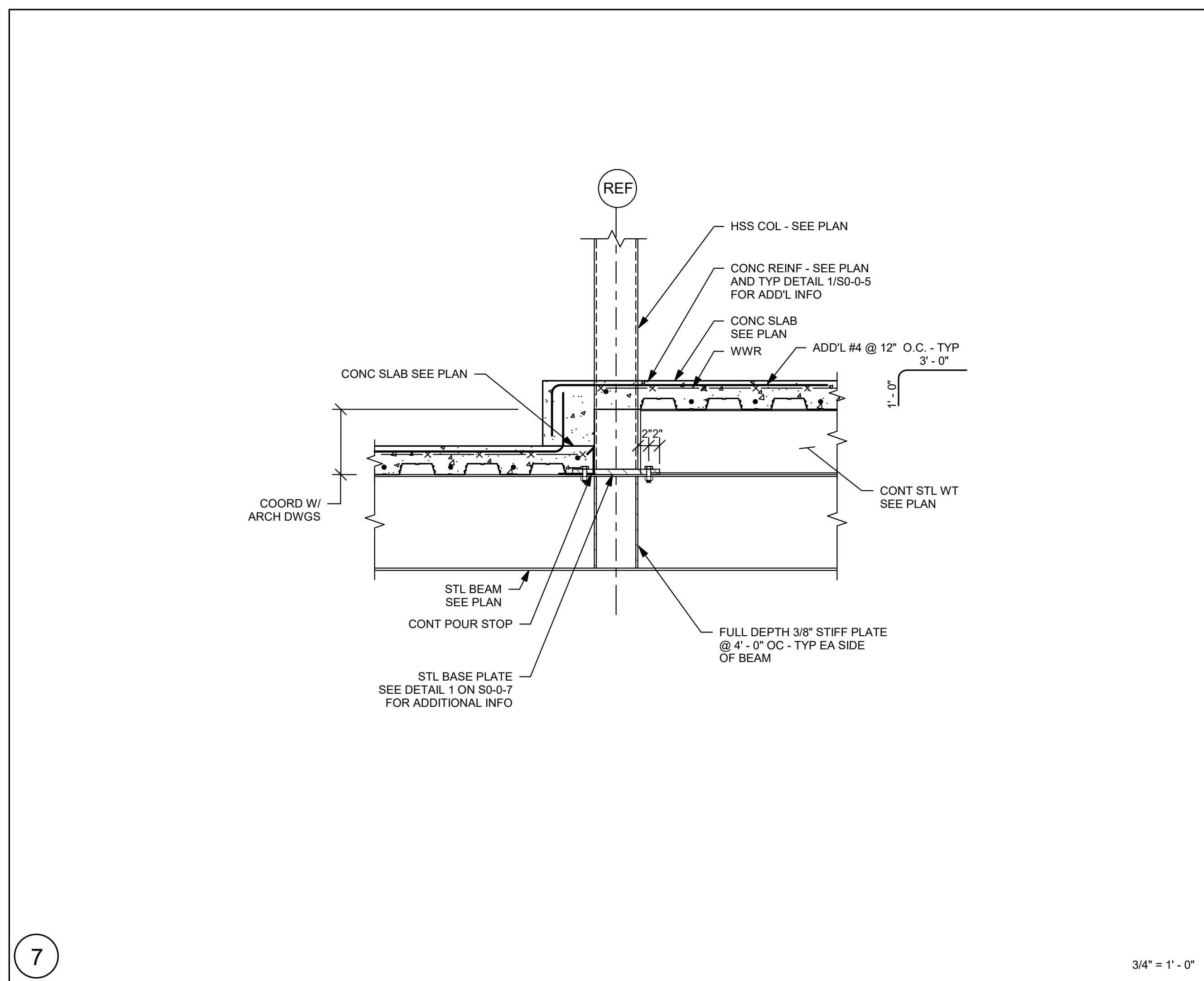
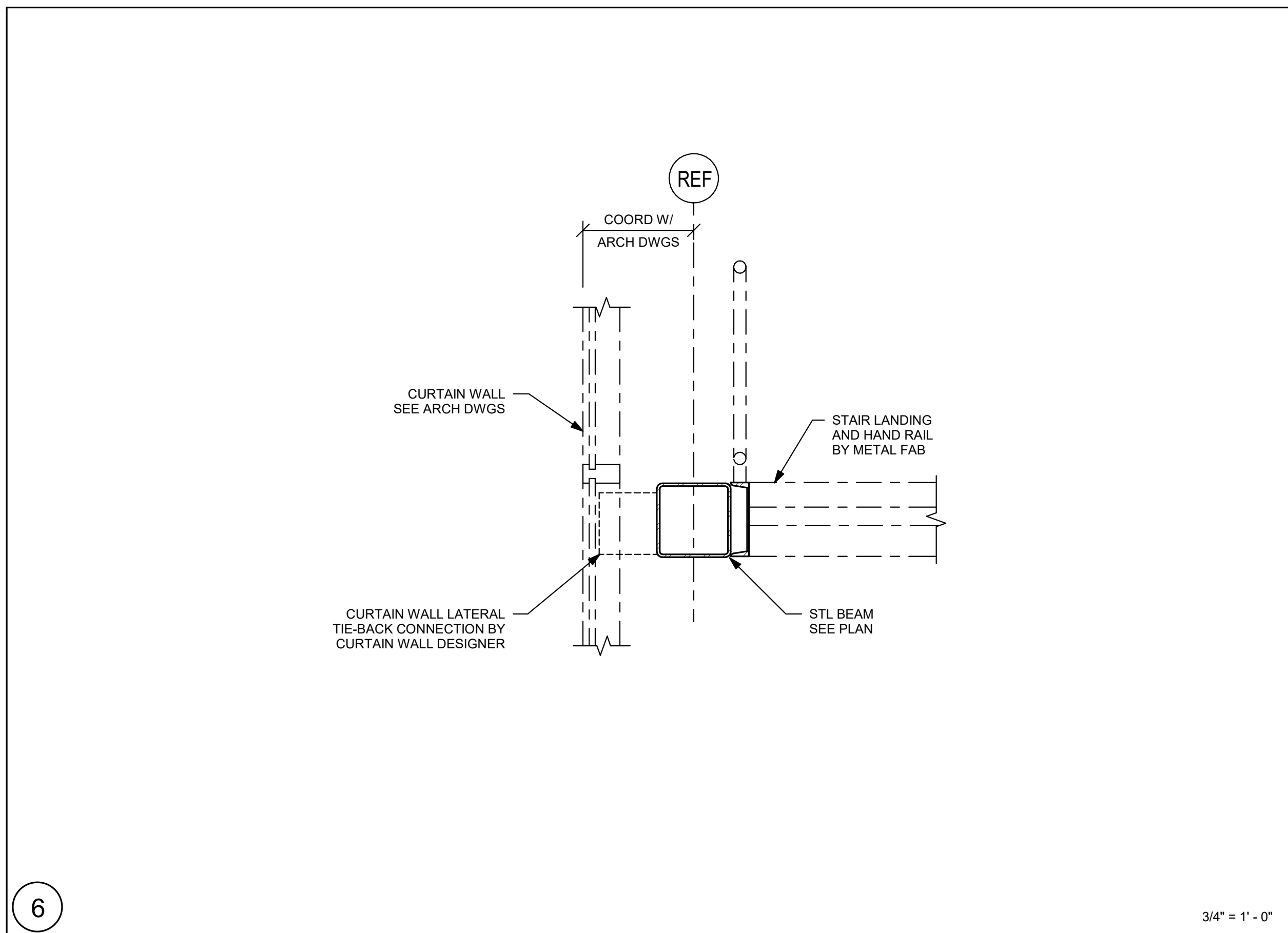
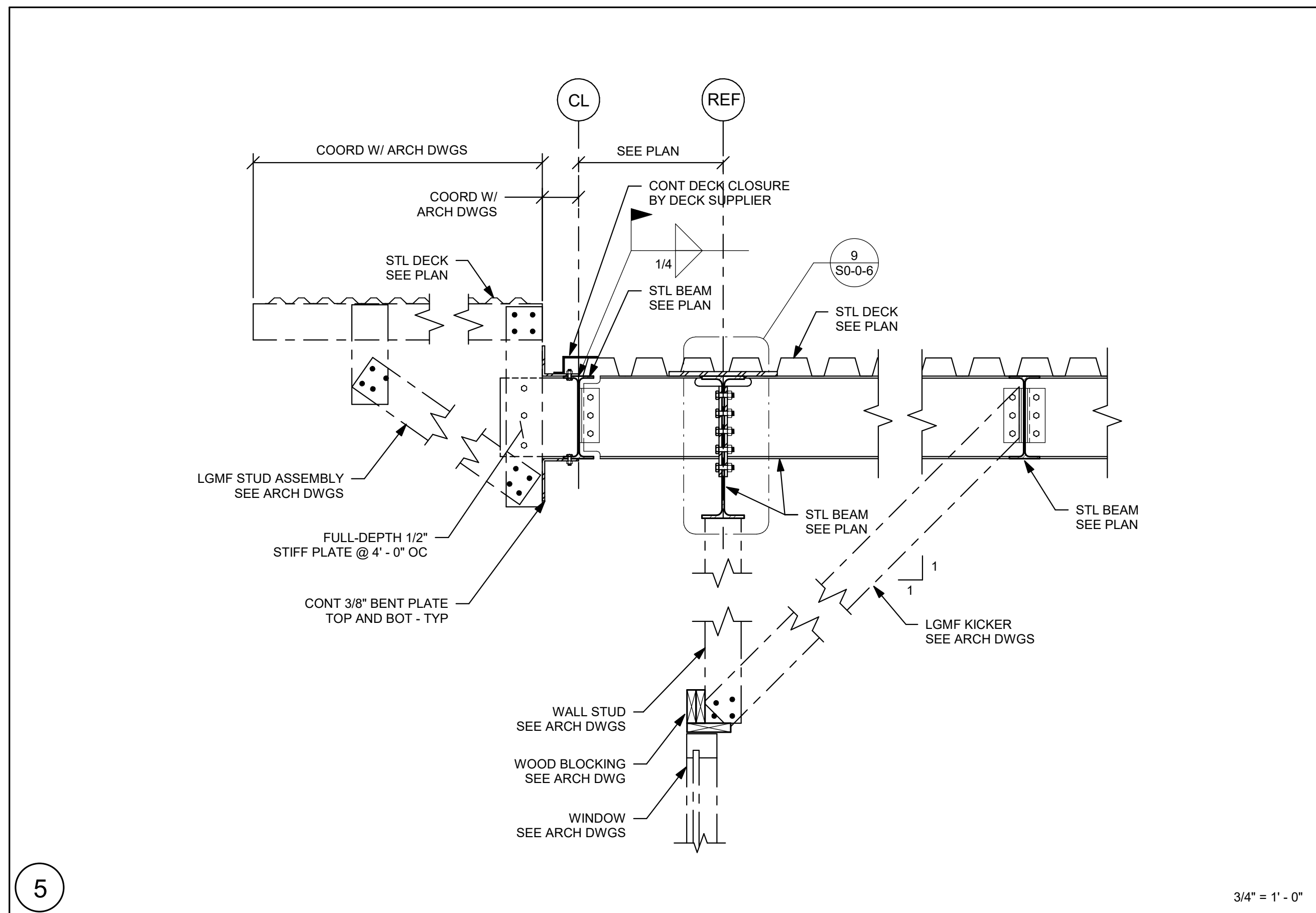
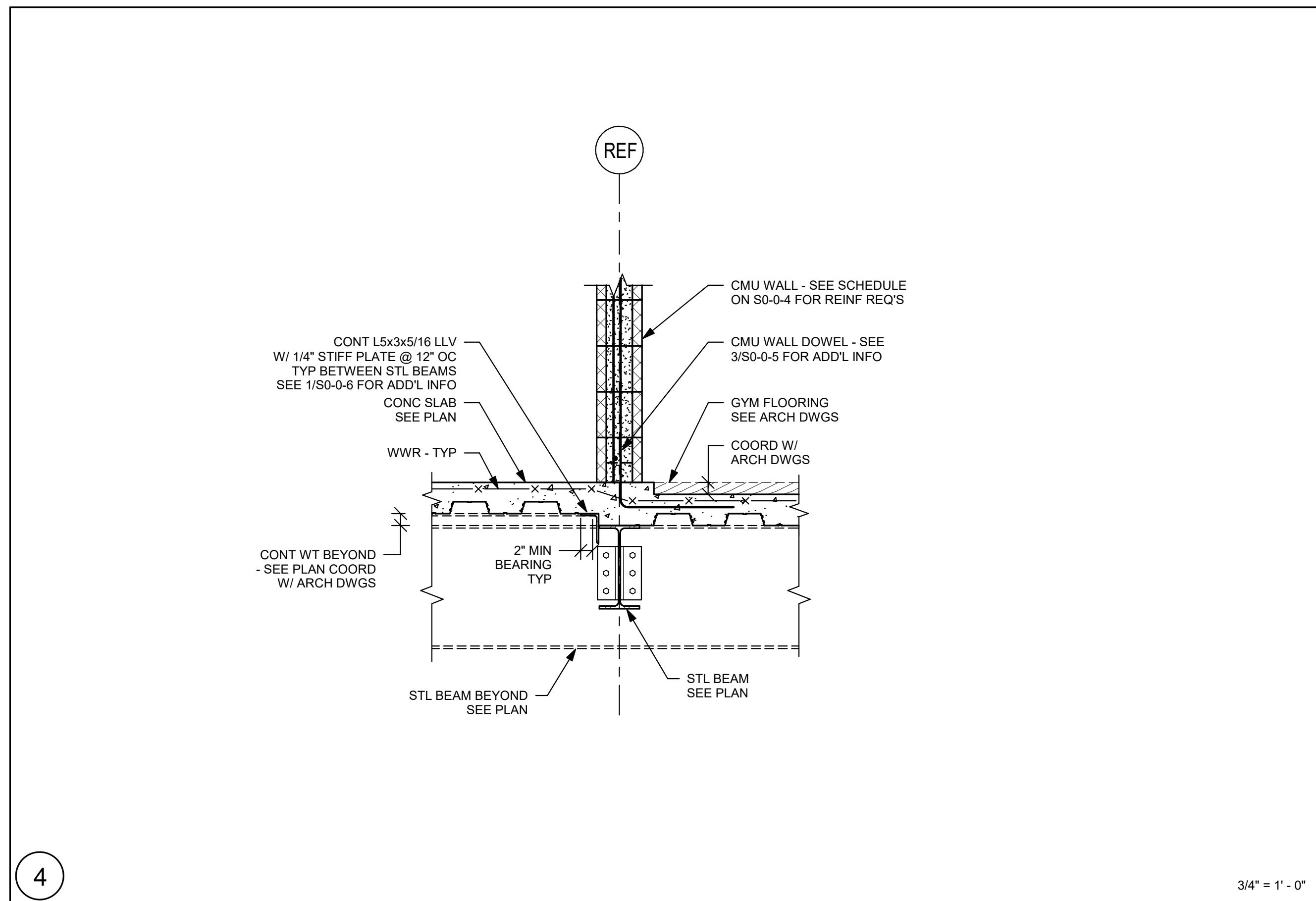
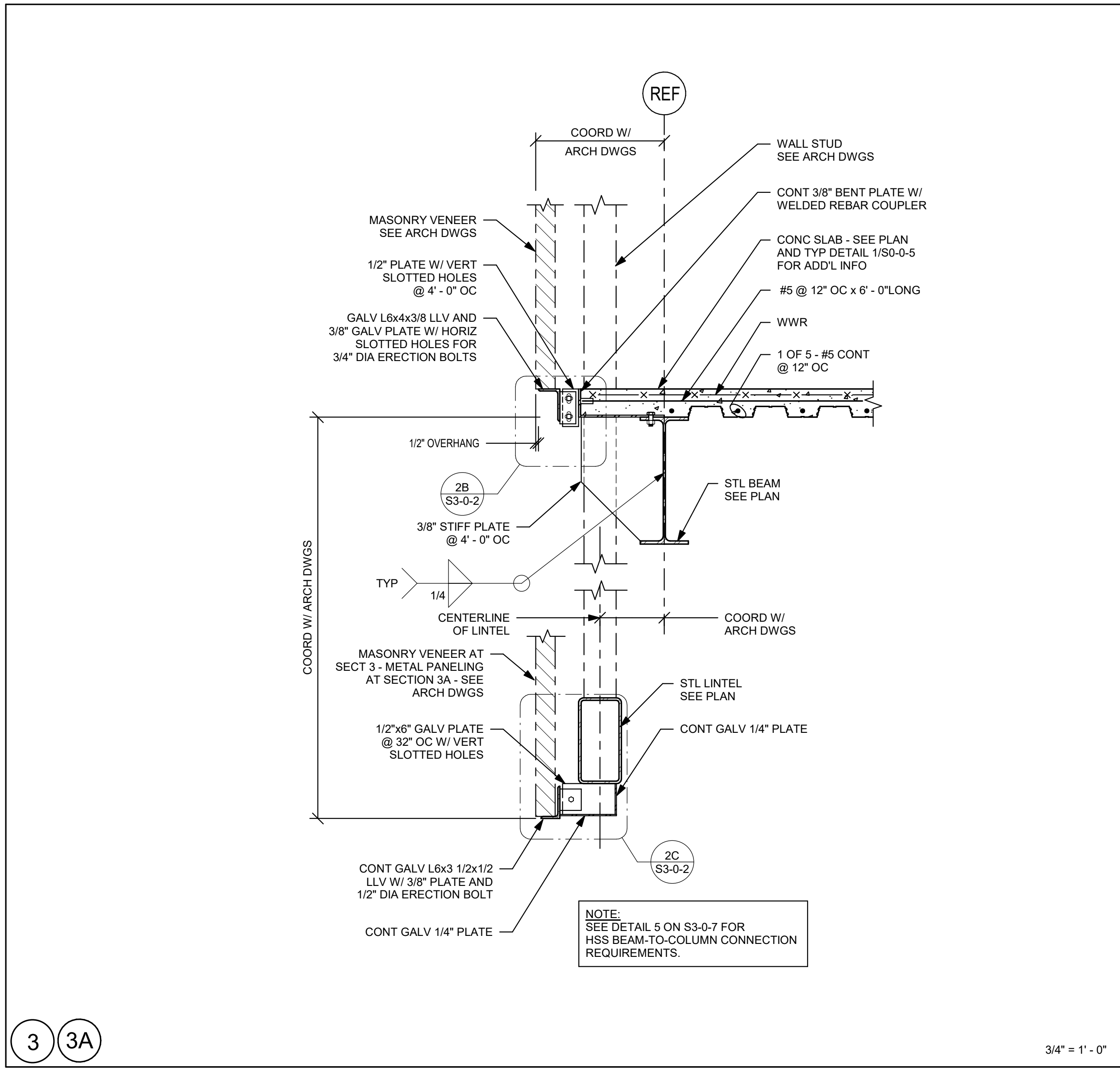
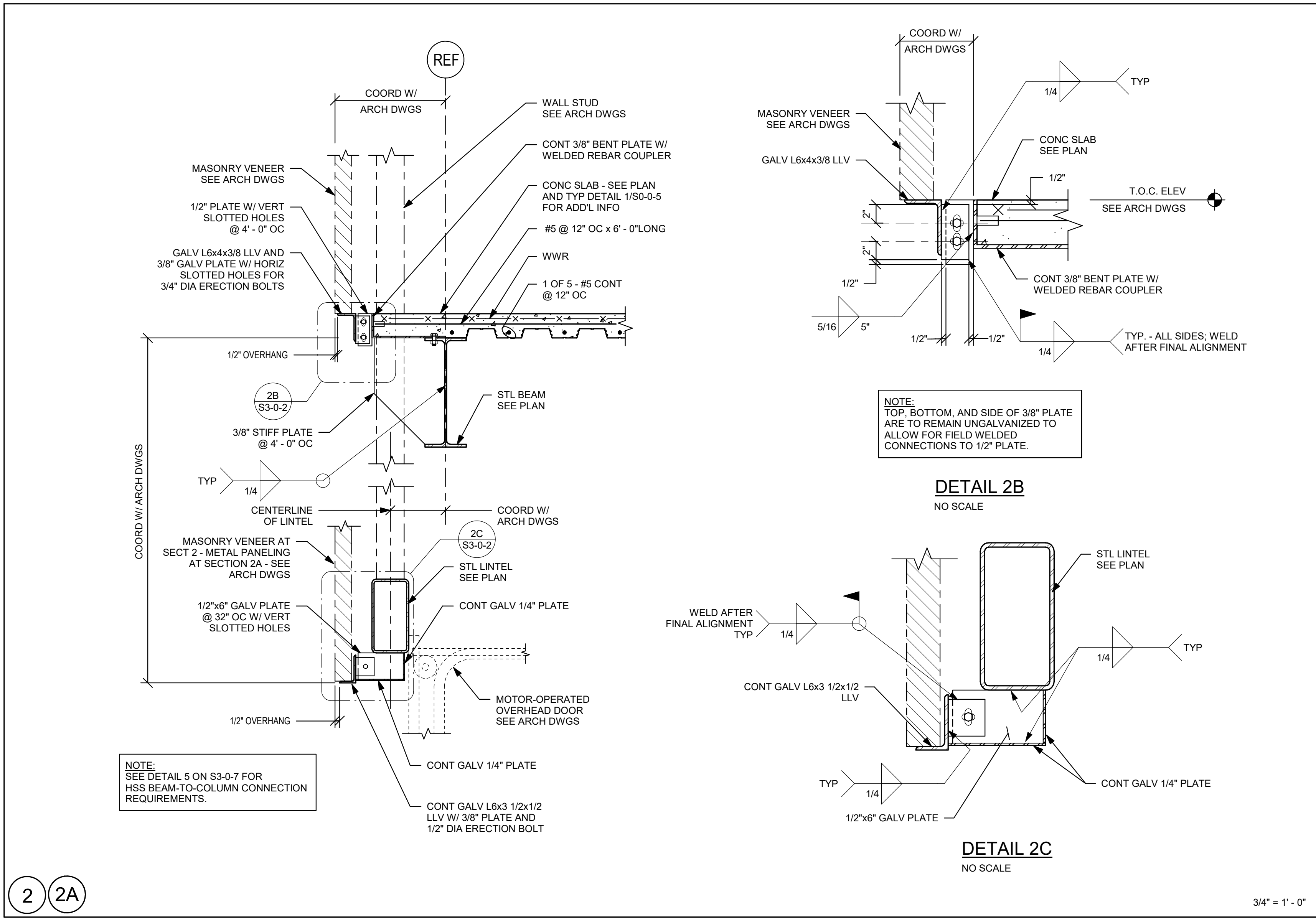
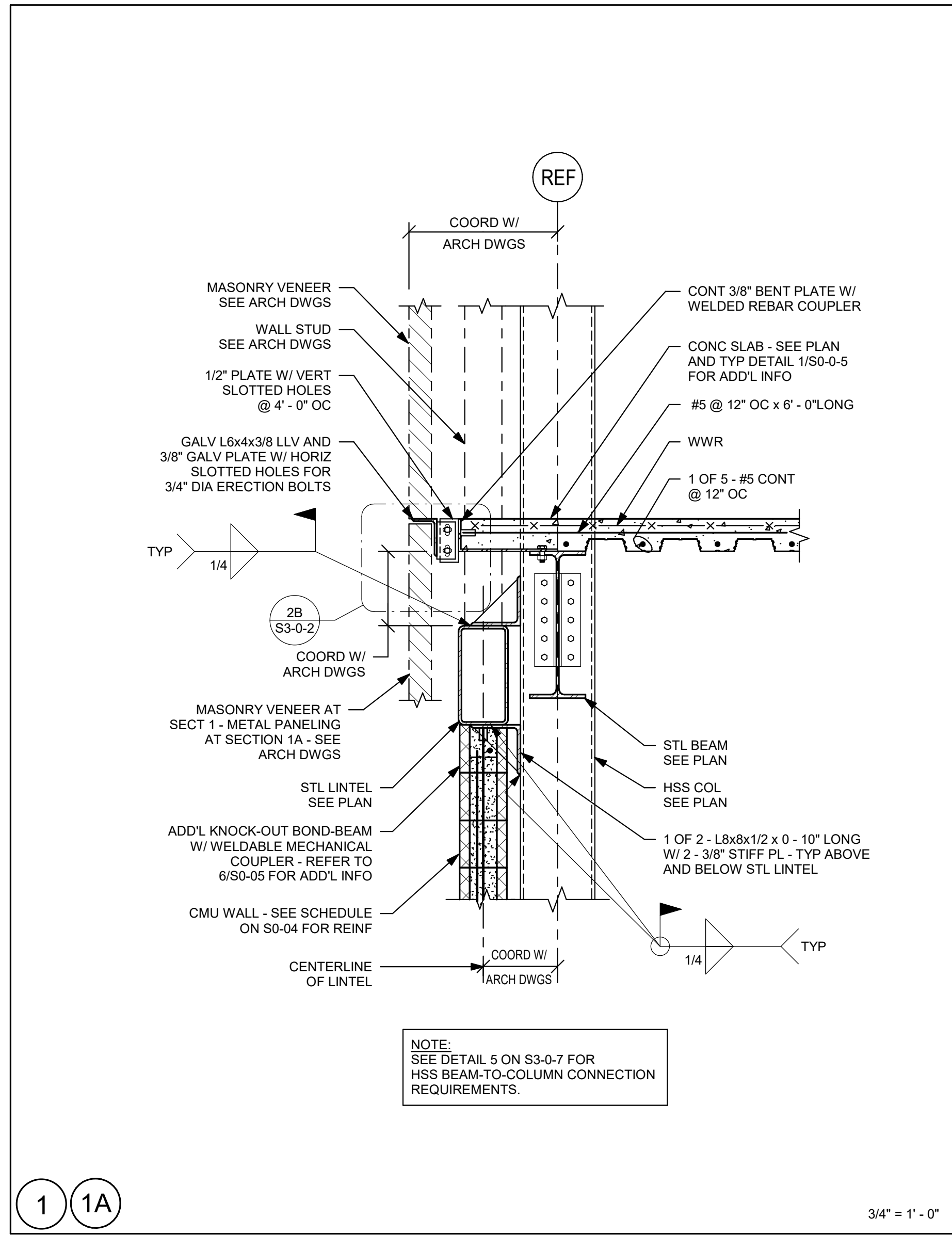
MAY 12, 2023



SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S3-0-1



DRA

Drumsey Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning | Architecture | Interior Design

Tel: 617.954.1700
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST	

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING IS A PART OF EARLY STRUCTURAL BID PACKAGE

MSBA 90% CD SUBMISSION

MAY 12, 2023

KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

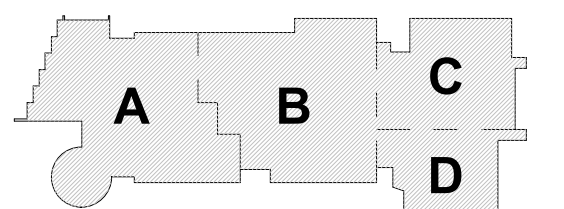
S3-0-2

**NORTHEAST
METRO TECH**100 Hemlock Rd.
Wakefield, MA 01880Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST		
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGEMSBA 90% CD
SUBMISSION

MAY 12, 2023



KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

SECTIONS

Scale: As indicated

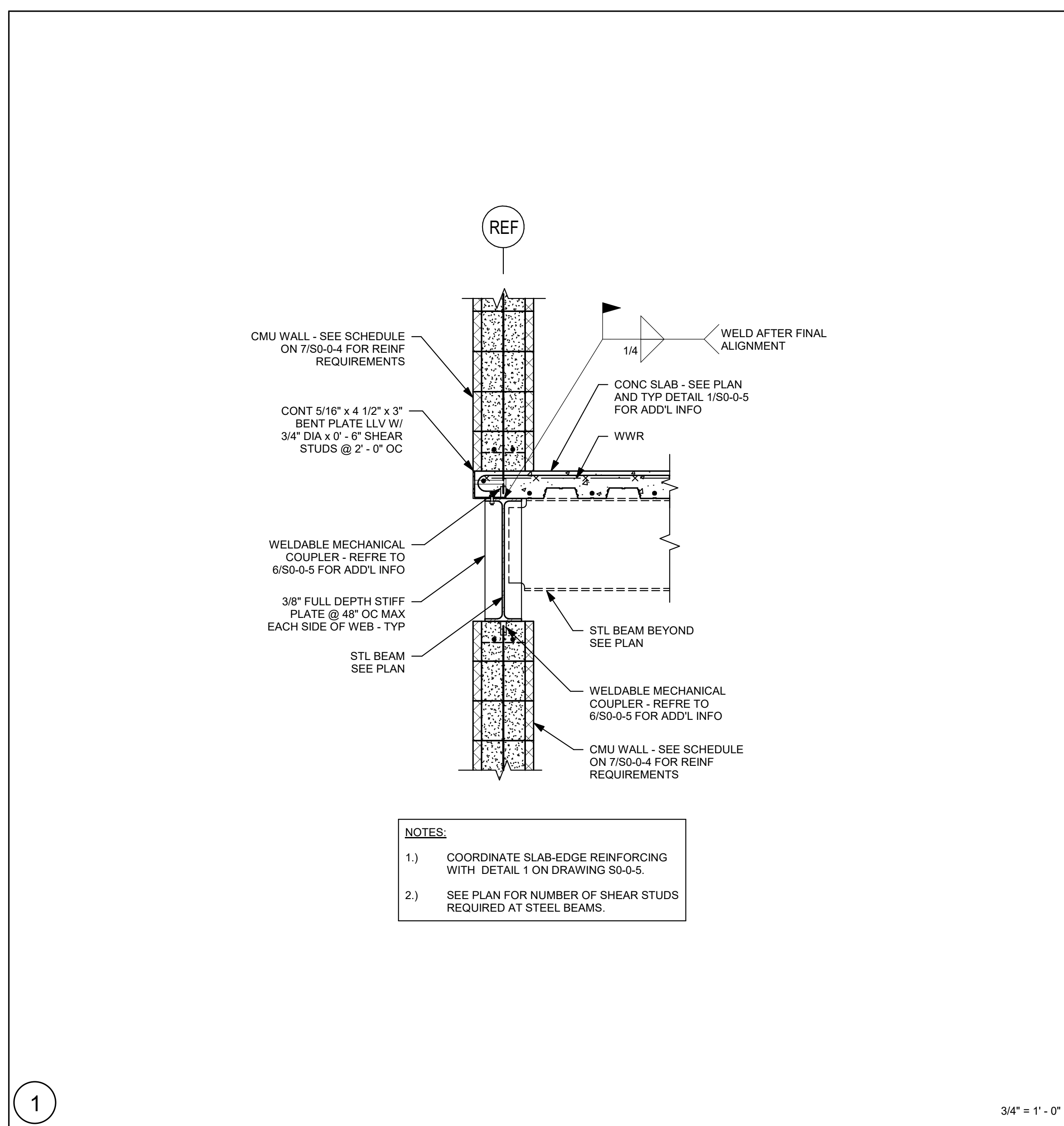
Job No.: 20202

Drawn By: EDG

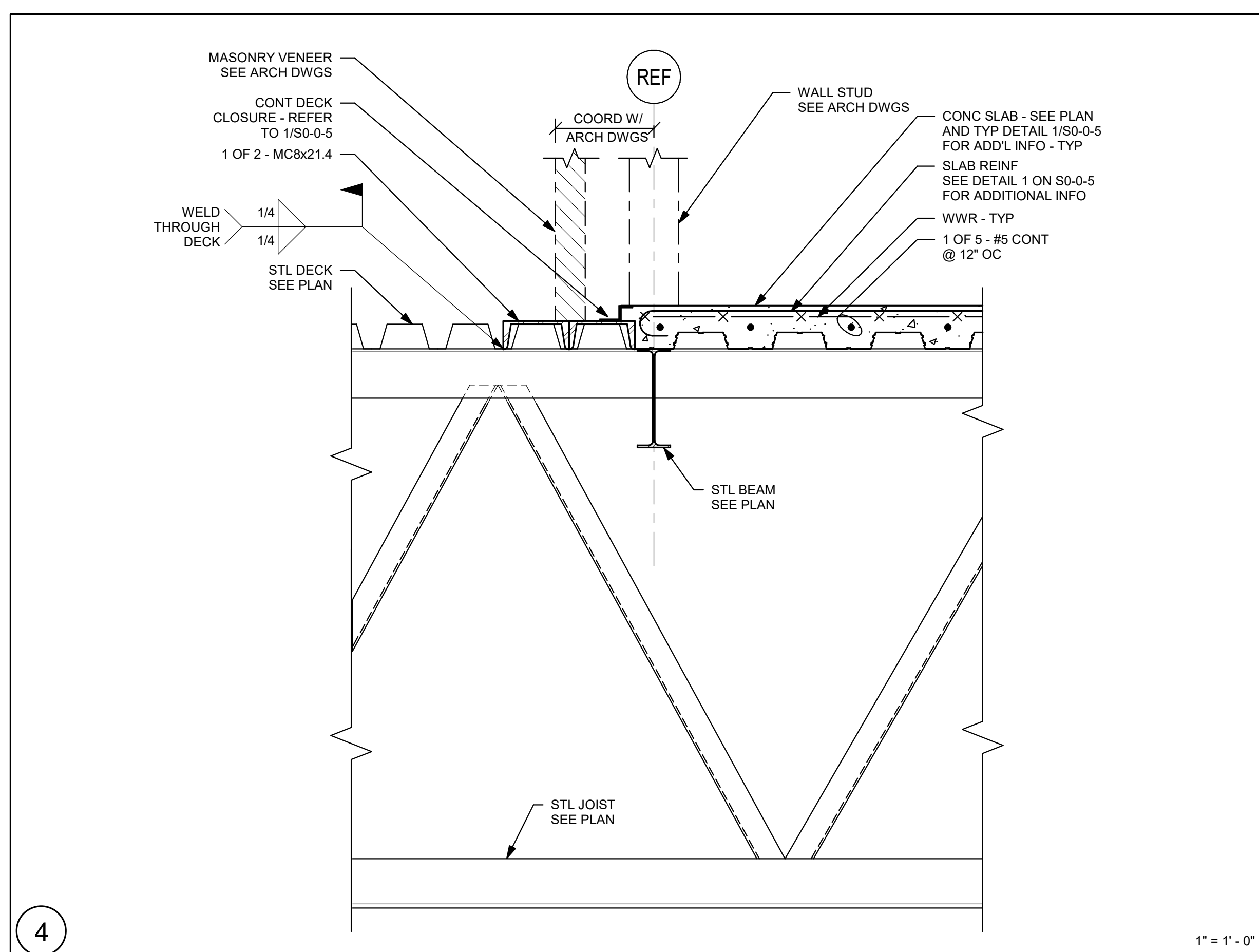
Date: MAY 12, 2023

S3-0-3

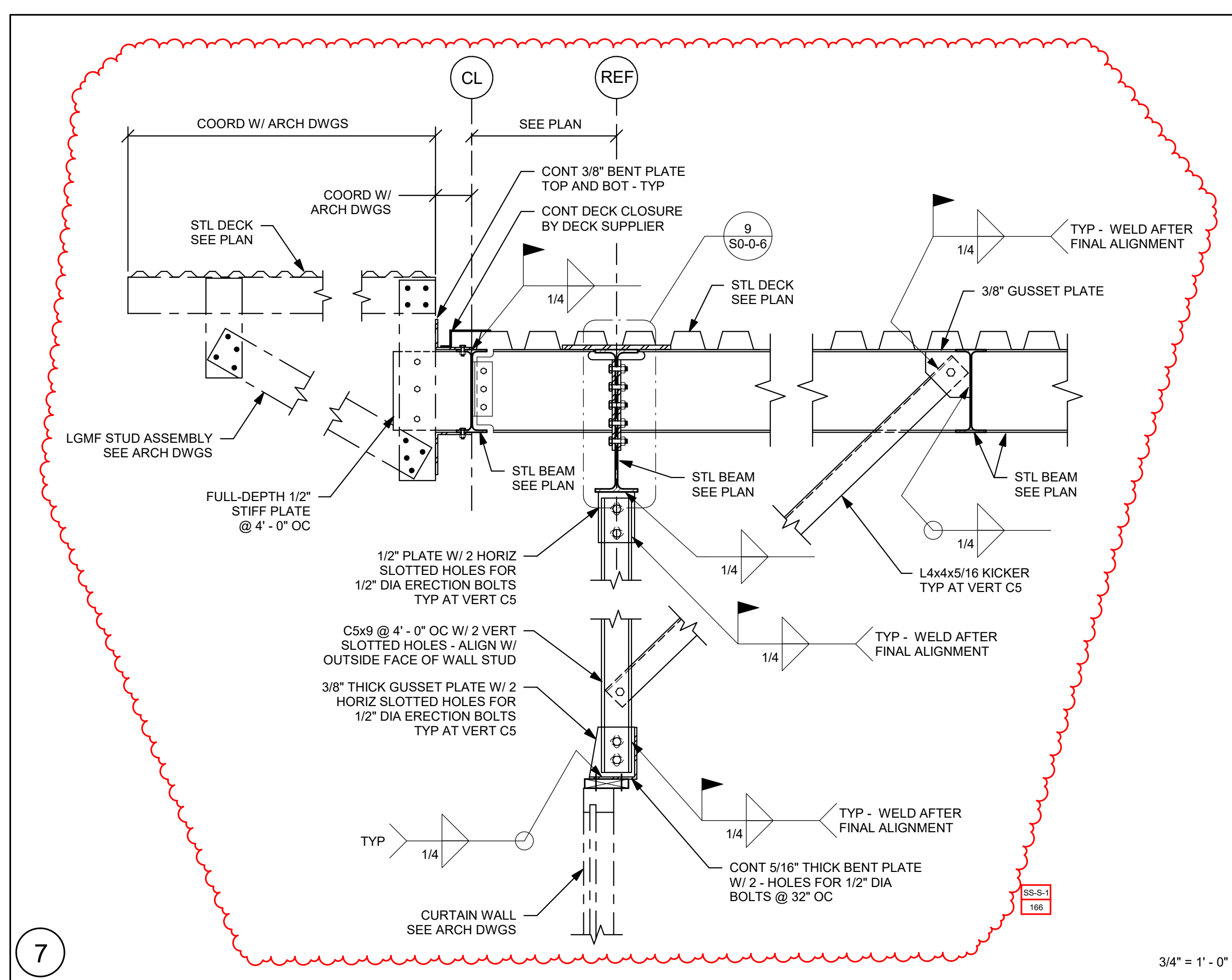
© COPYRIGHT 2021 DRUMSEY ROSANE ANDERSON, INC.



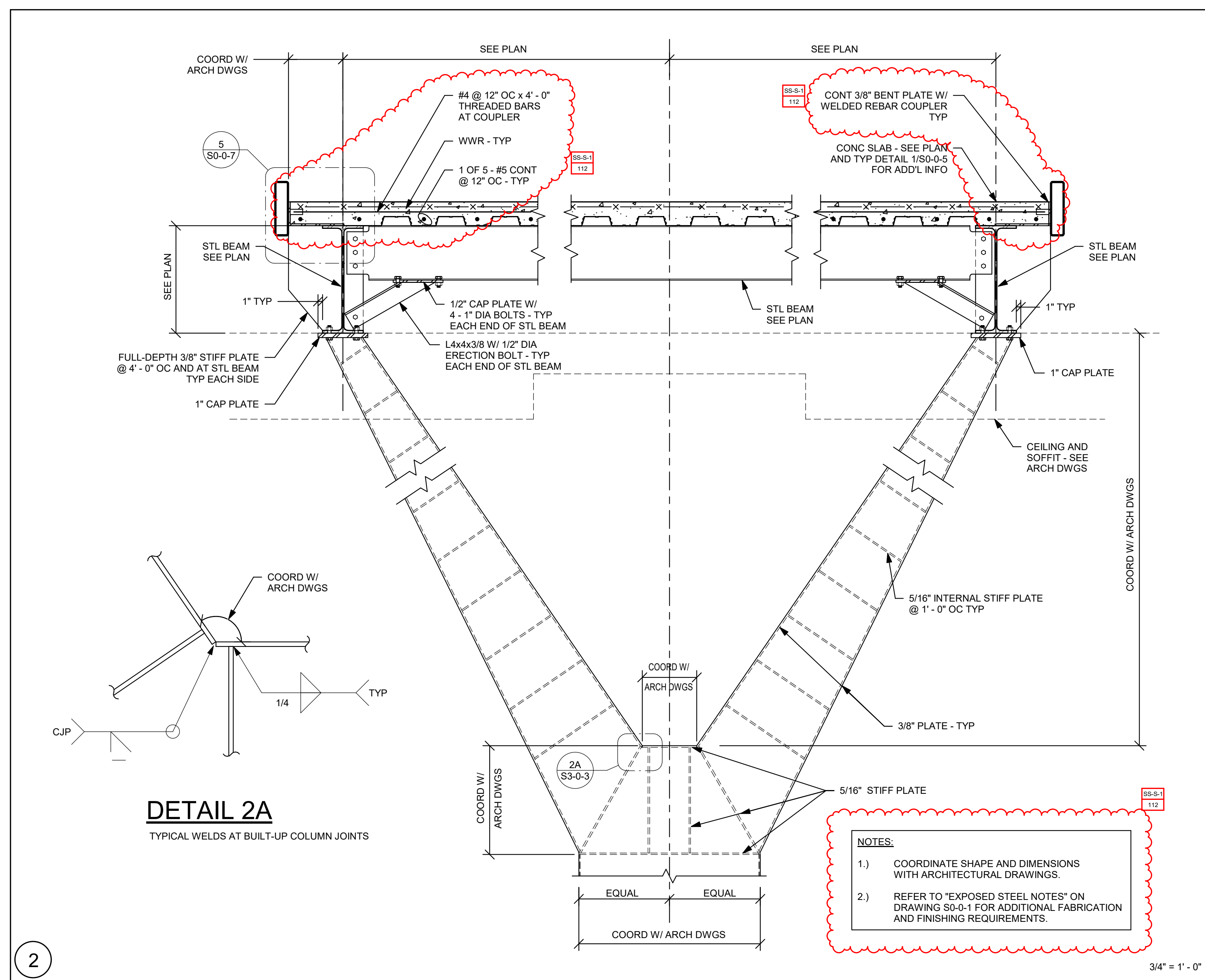
1



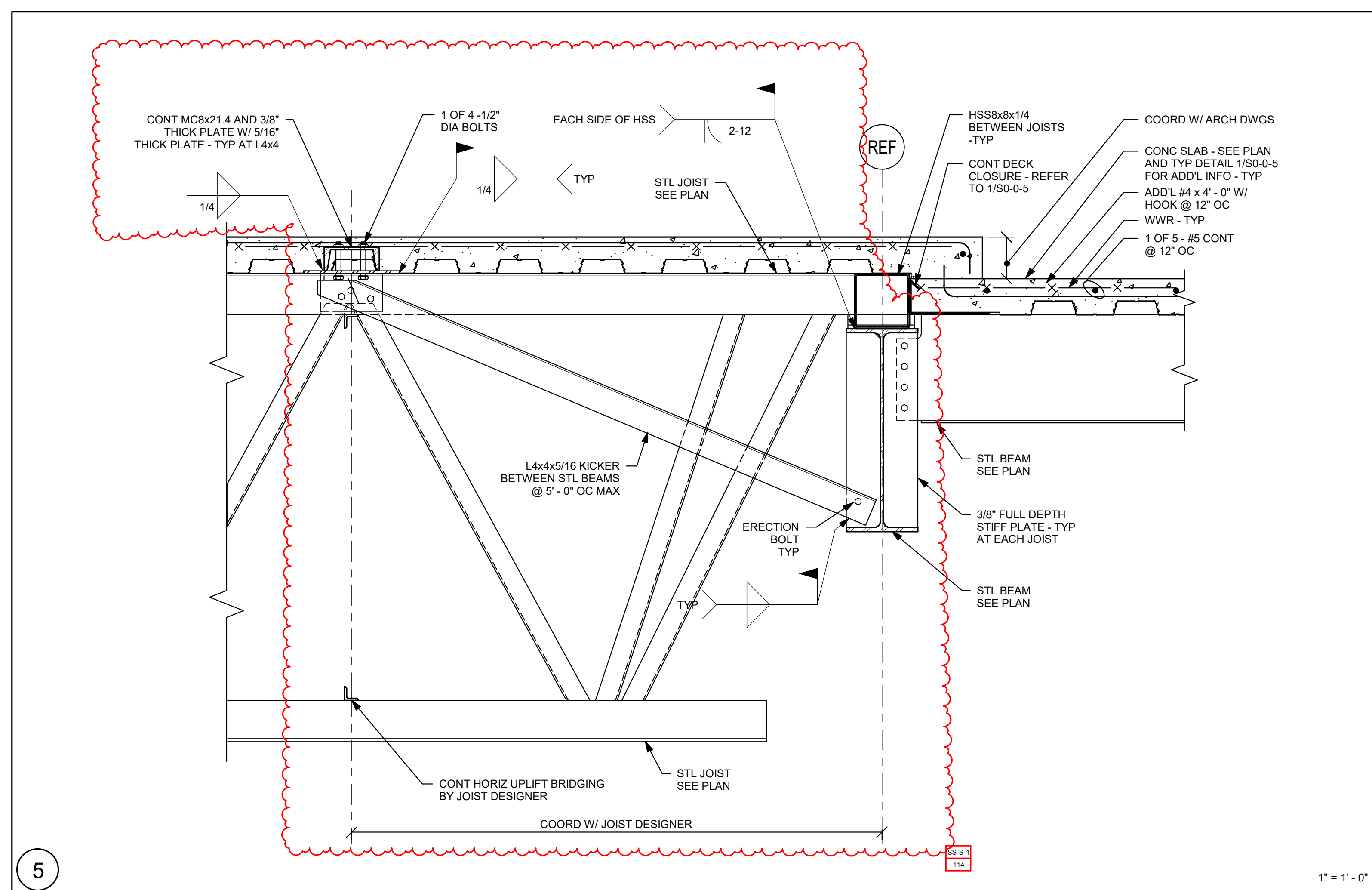
4



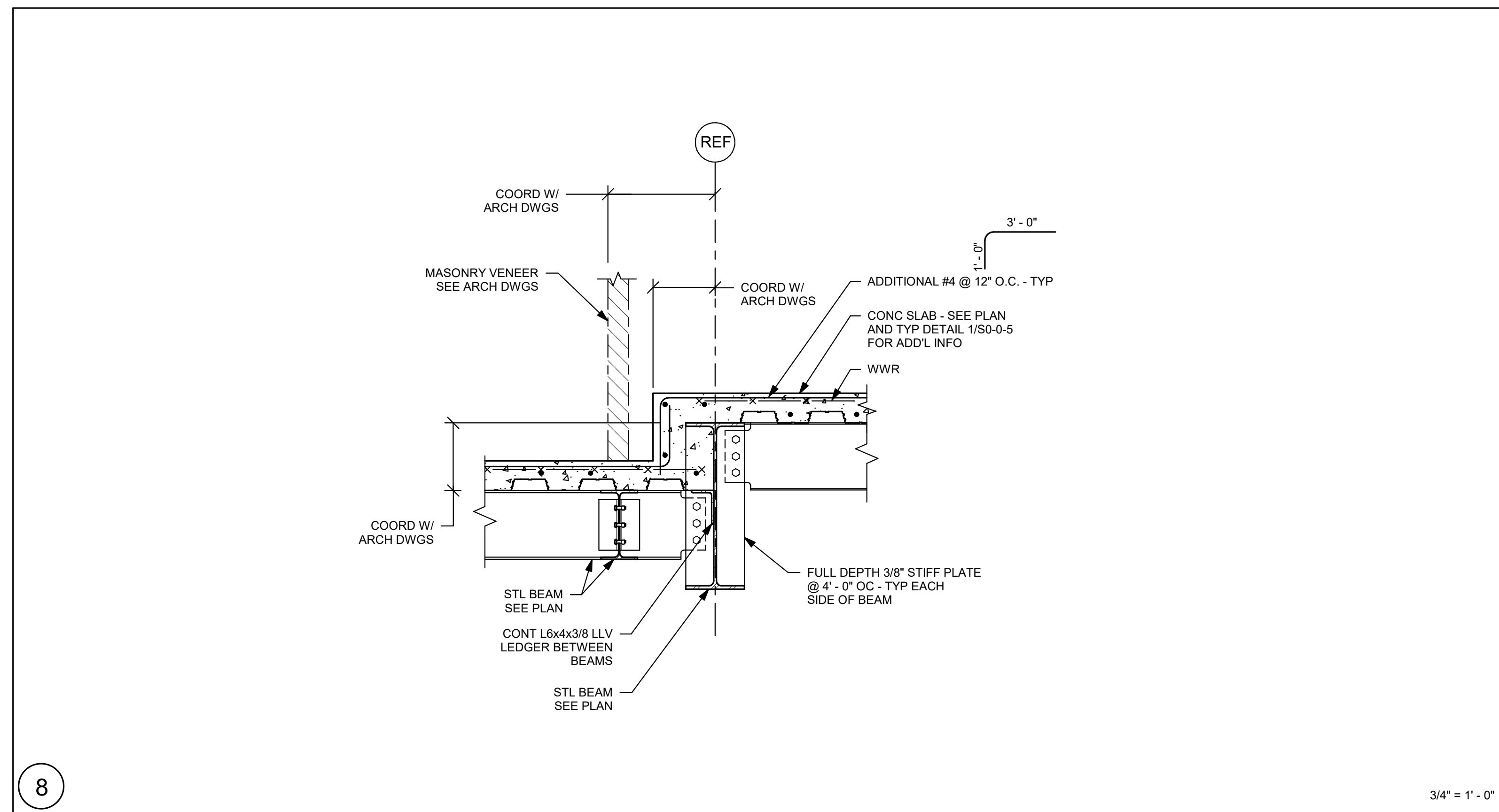
7



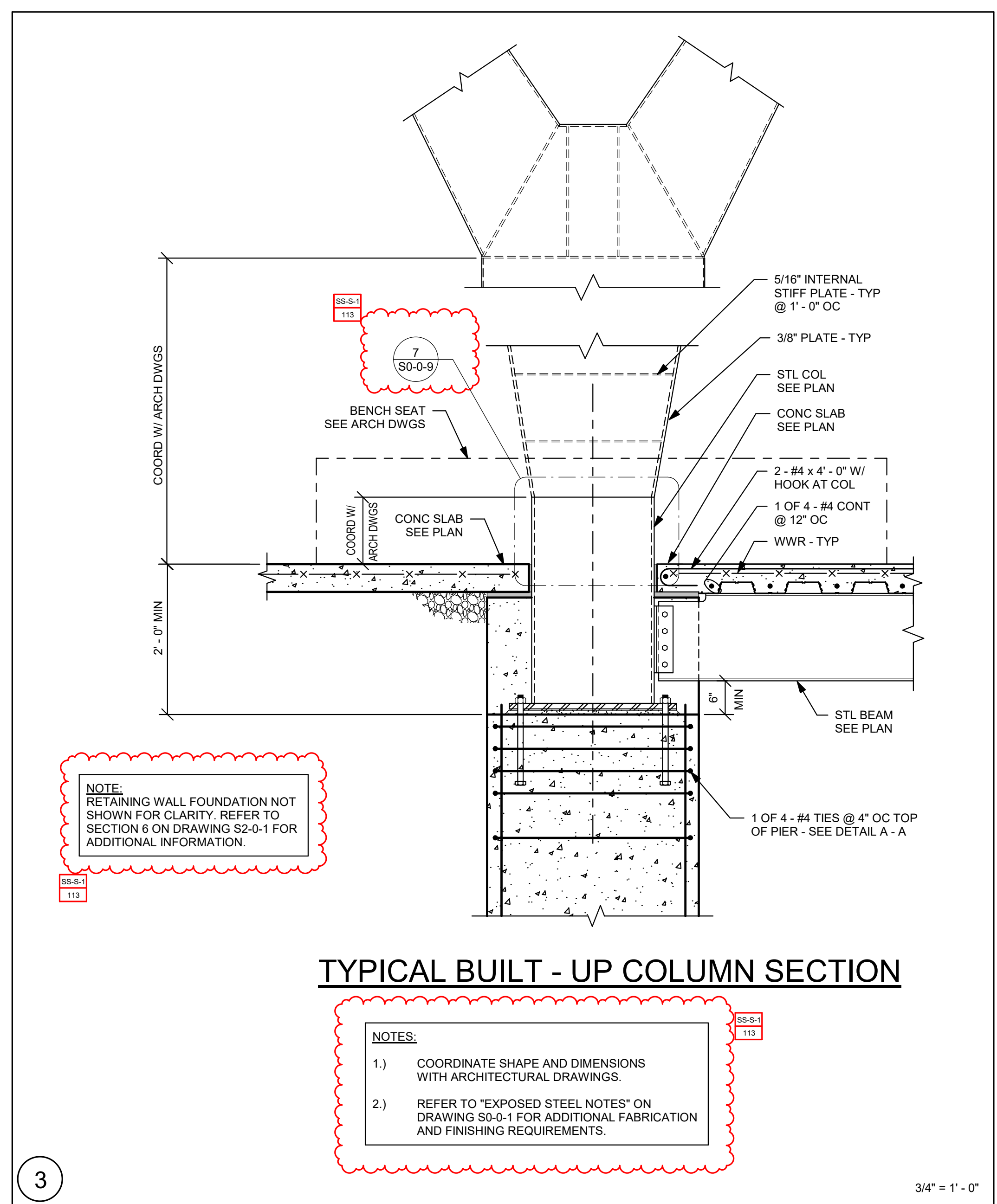
2



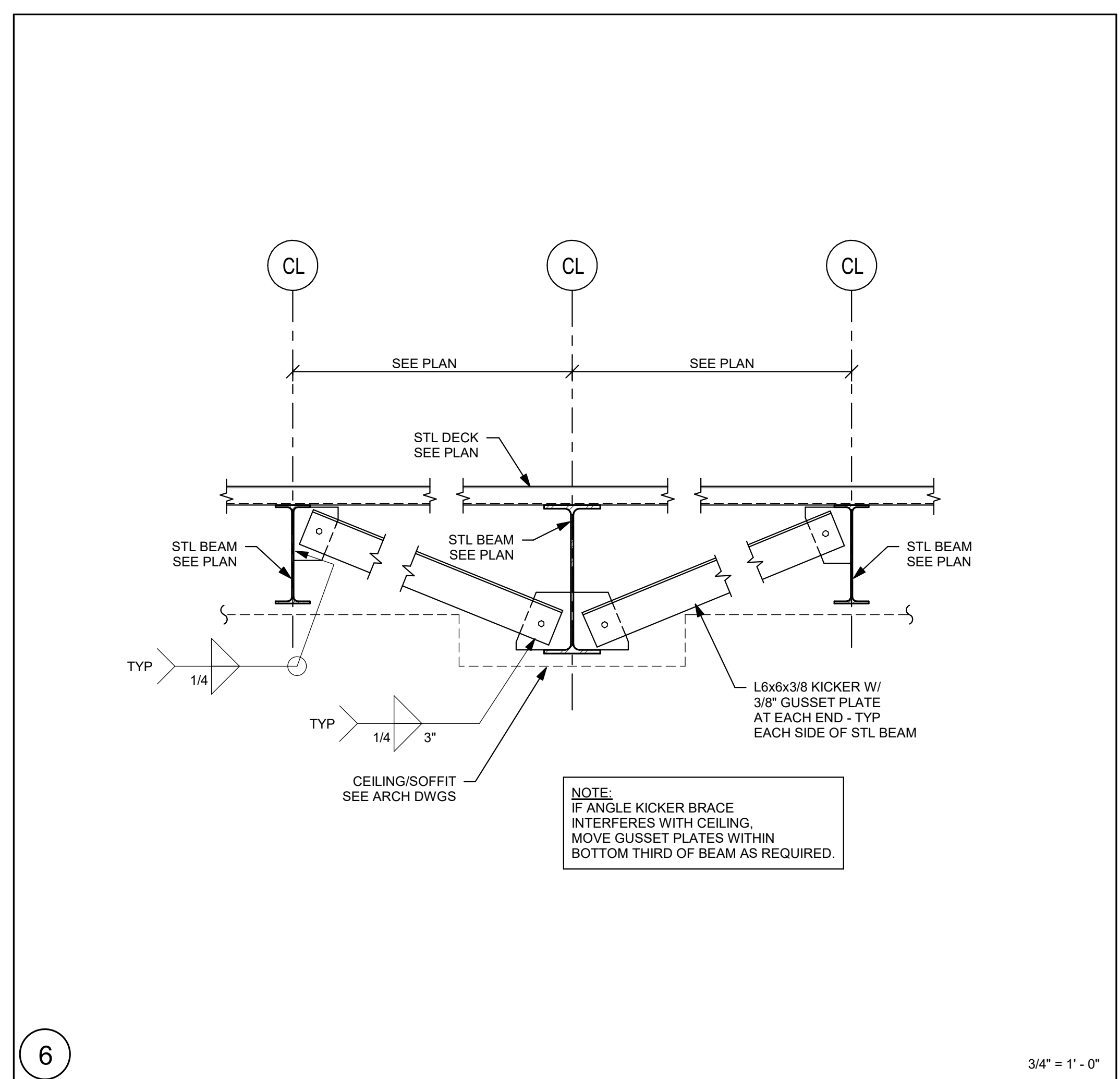
5



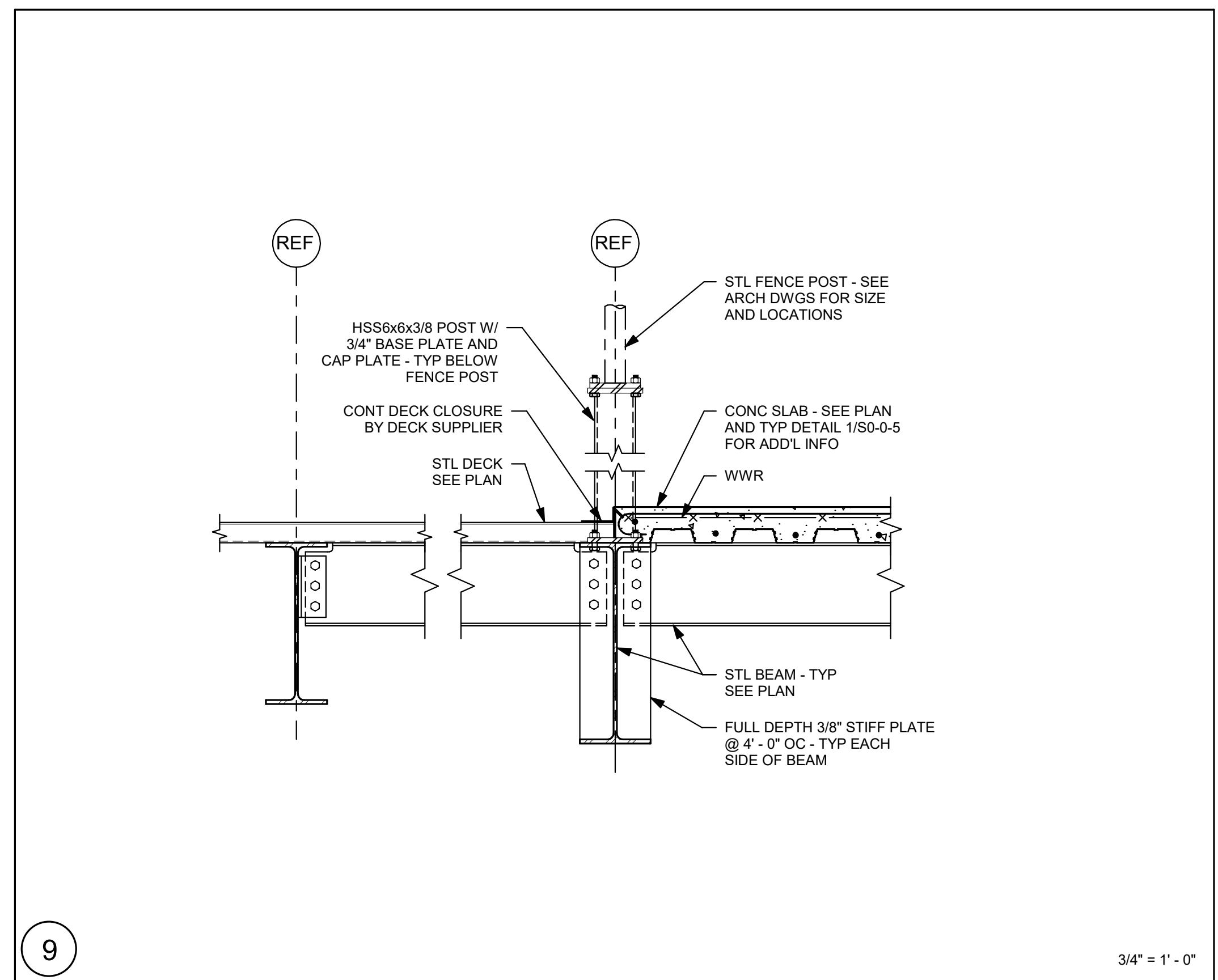
8



3



6



9

DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

260 Charles Street
Studio 300
Waltham, MA
02453

Planning | Architecture | Interior Design
Tel: 617.954.1700
www.drainc.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



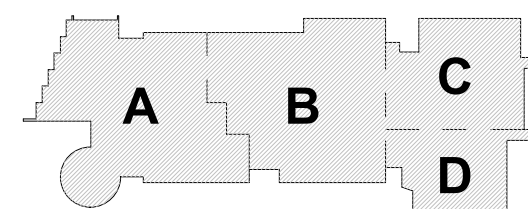
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021 DRUMSEY ROSANE ANDERSON, INC.

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

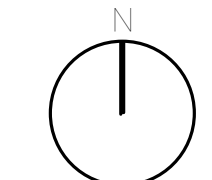
MSBA 90% CD
SUBMISSION

MAY 12, 2023

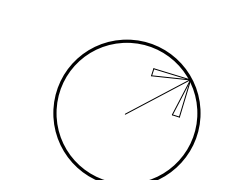


KEY PLAN

PROJECT NORTH



MAGNETIC NORTH



SECTIONS

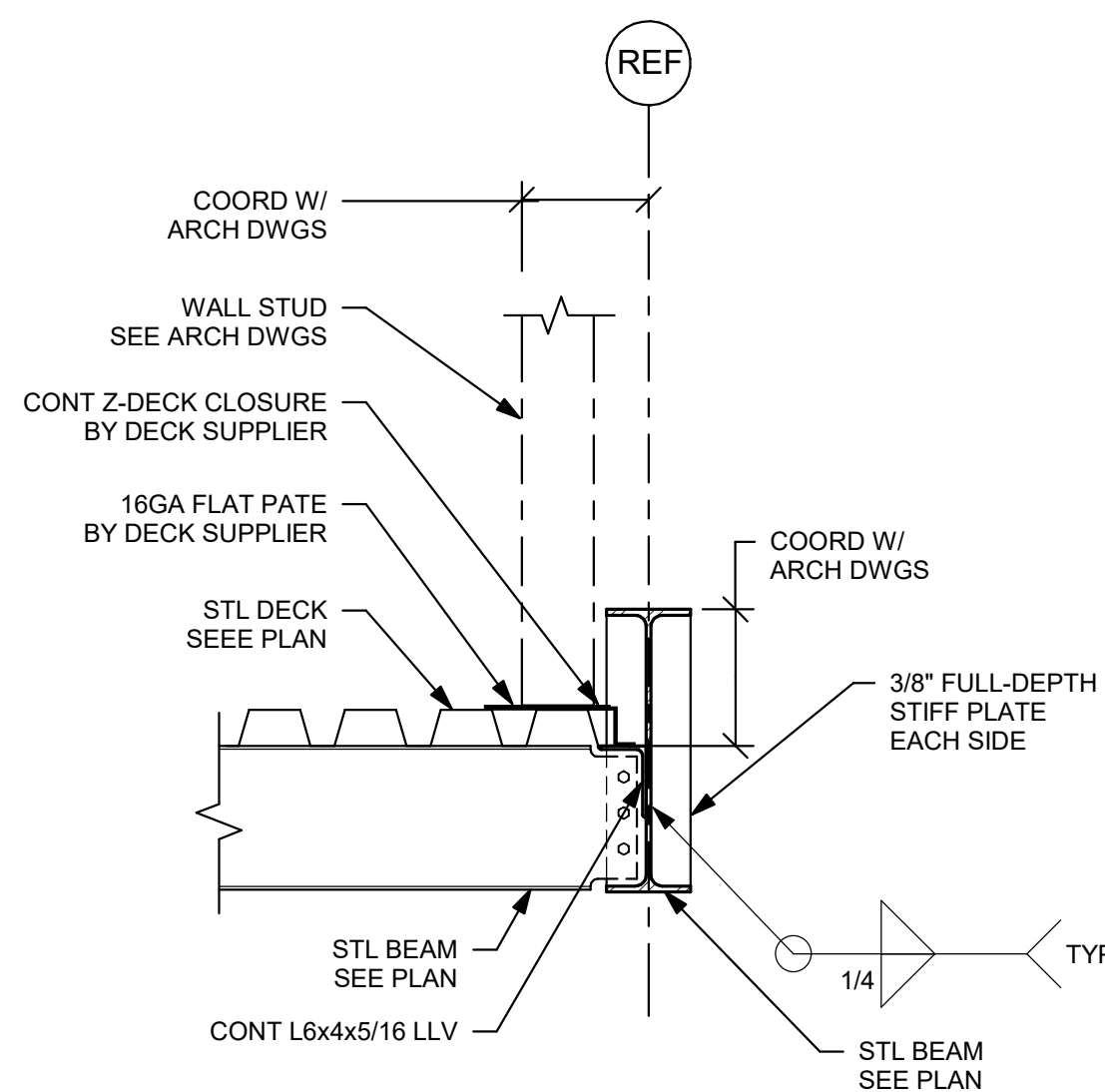
Scale: 3/4" = 1'-0"

Job No.: 20202

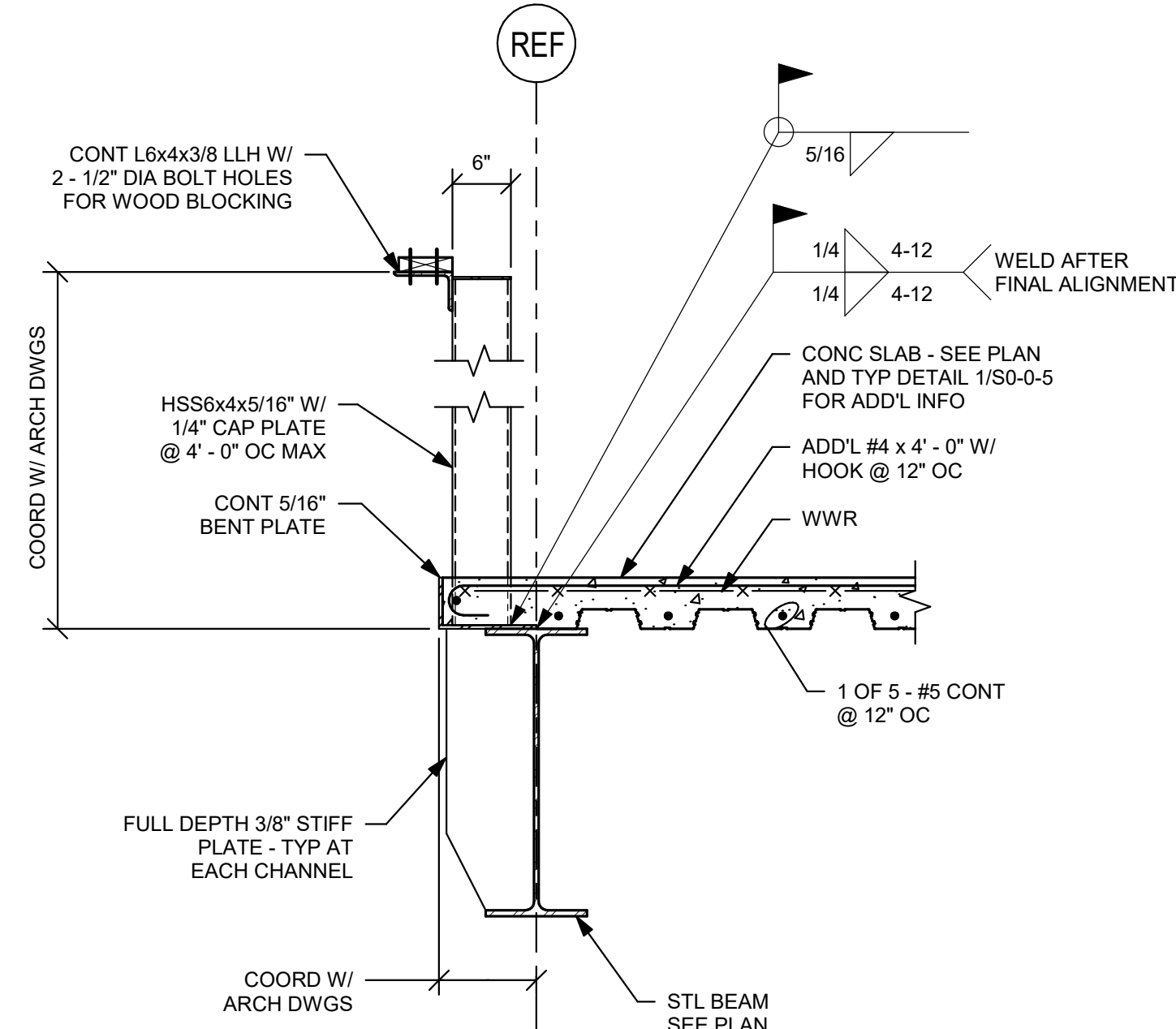
Drawn By: EDG

Date: MAY 12, 2023

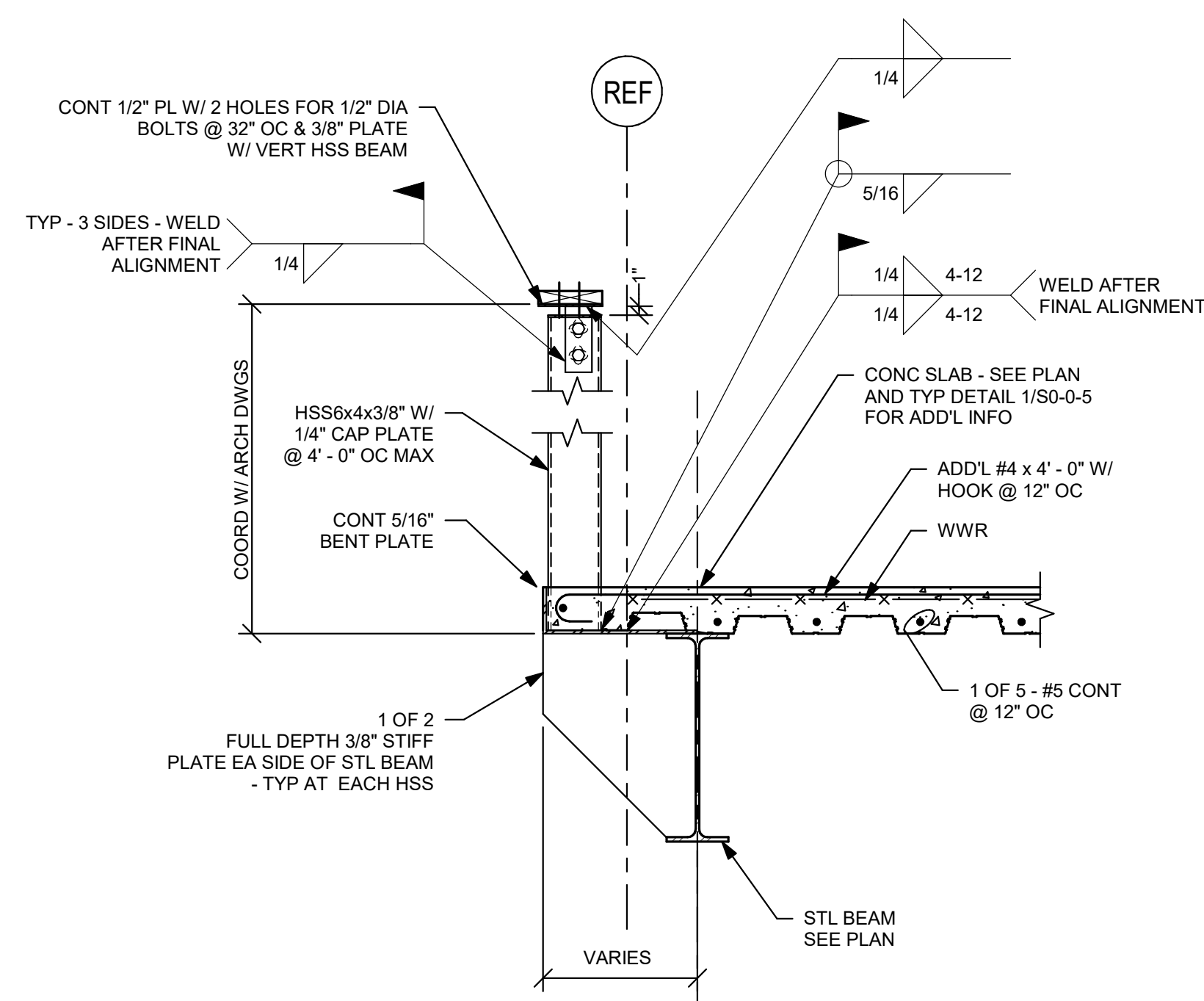
S3-0-4



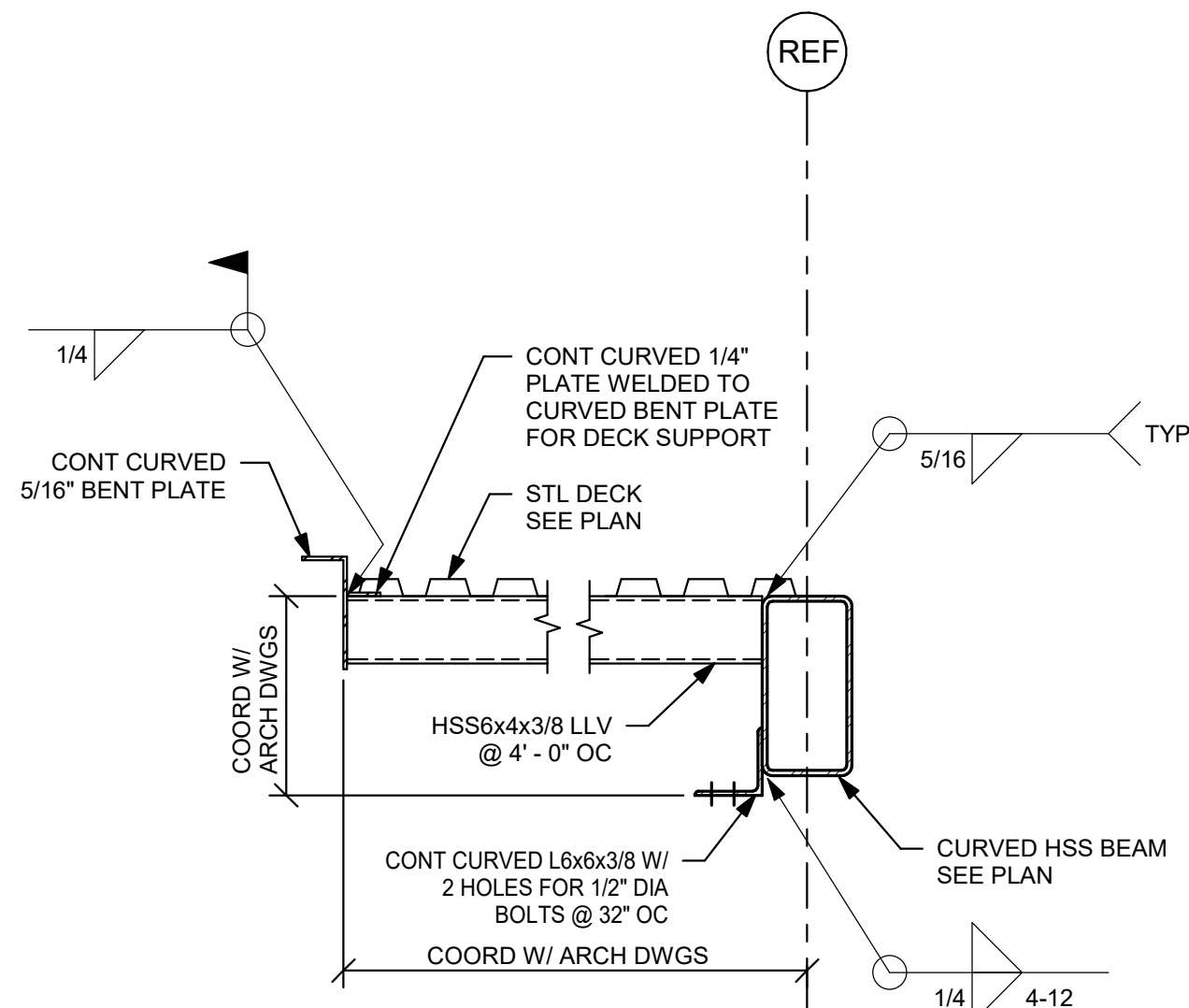
3/4" = 1'-0"



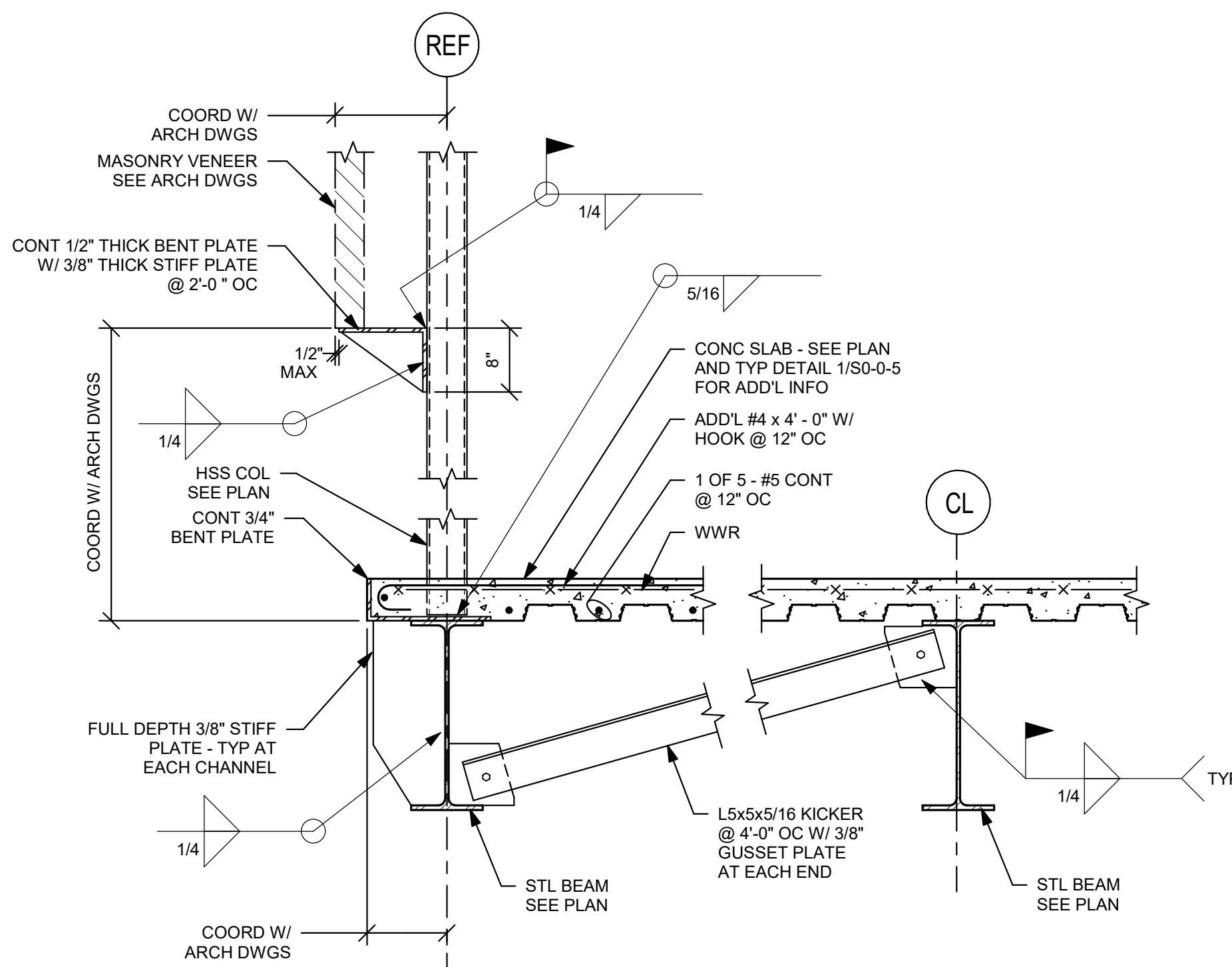
3/4" = 1'-0"



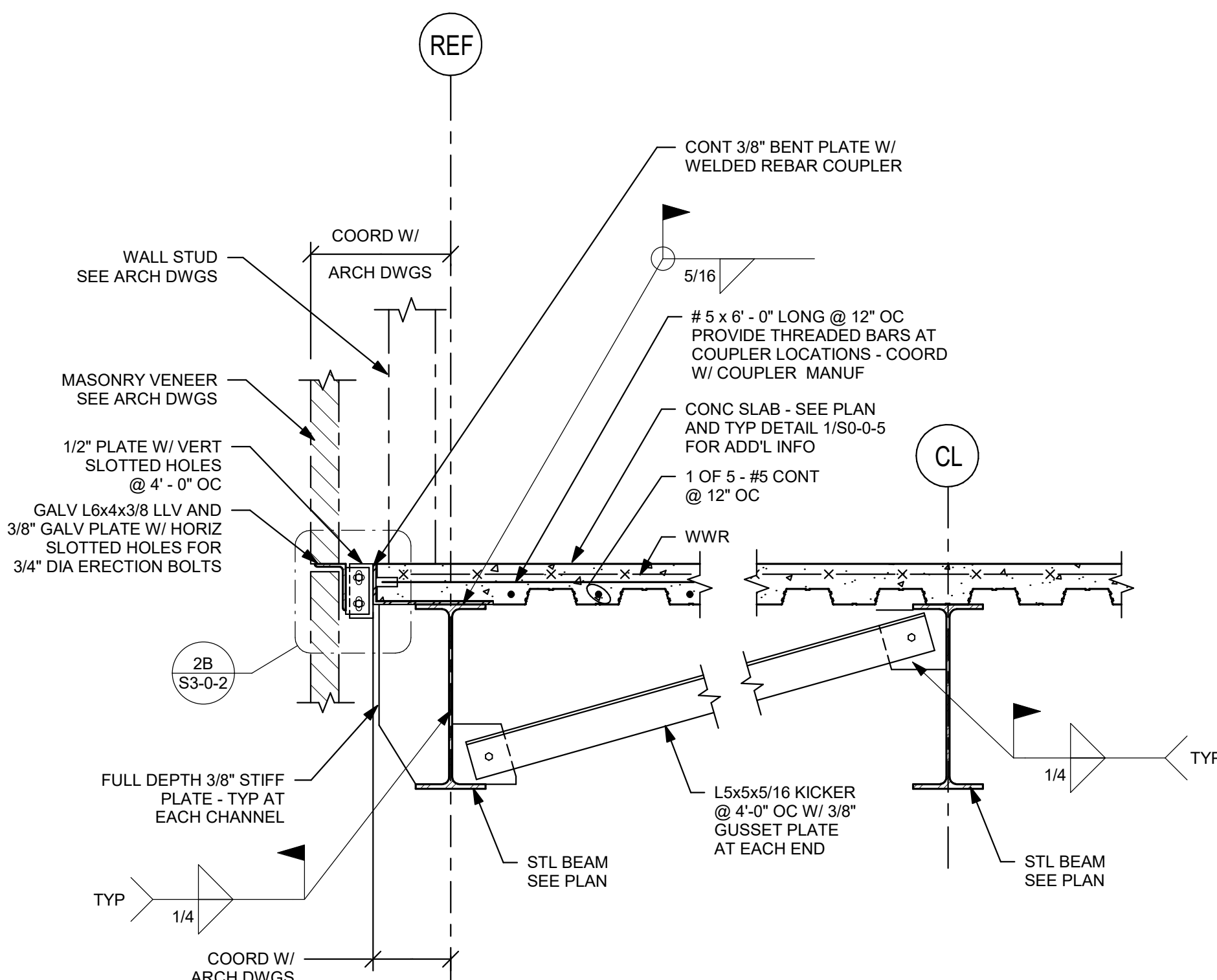
3/4" = 1'-0"



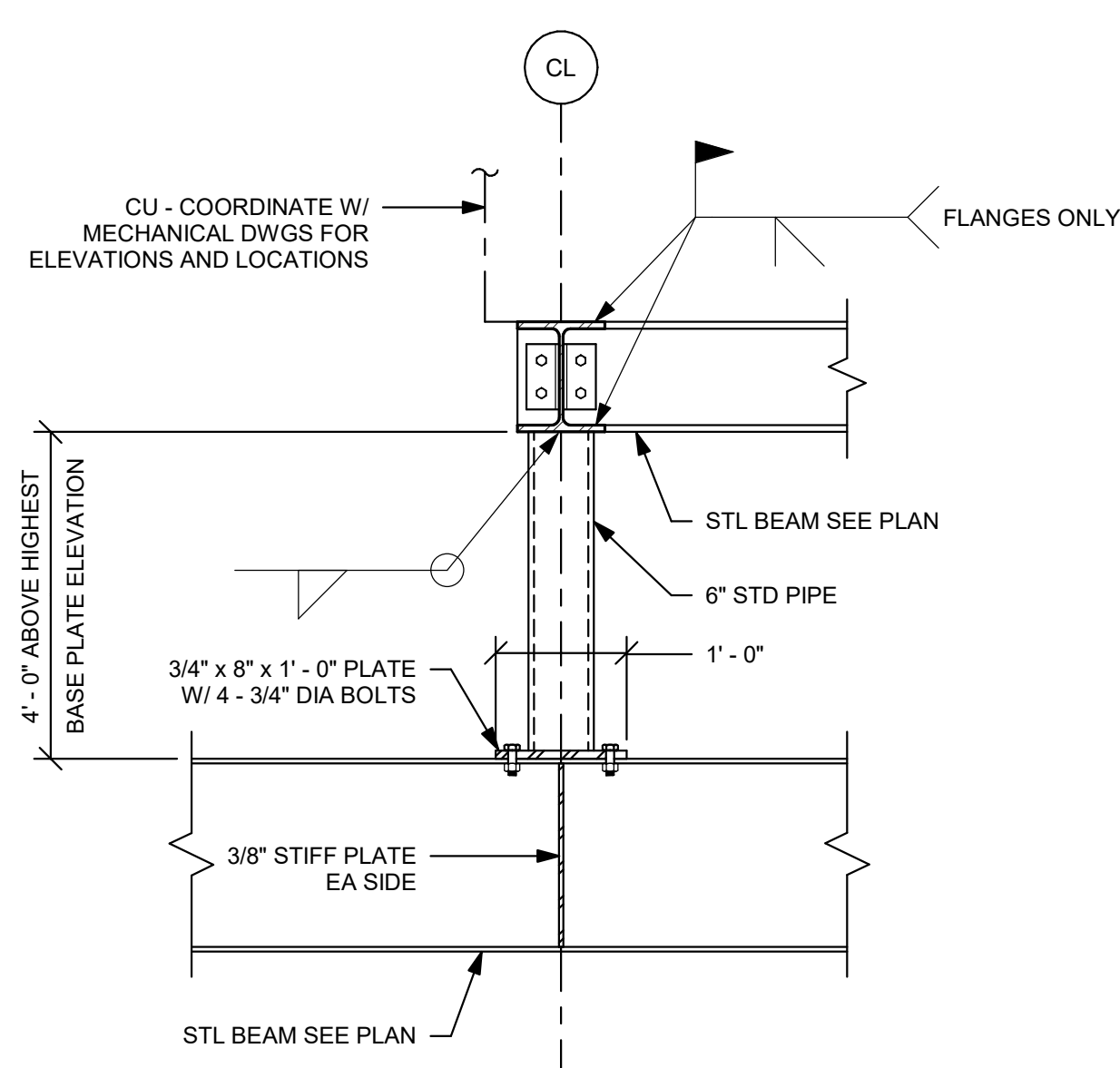
3/4" = 1'-0"



3/4" = 1'-0"



3/4" = 1'-0"

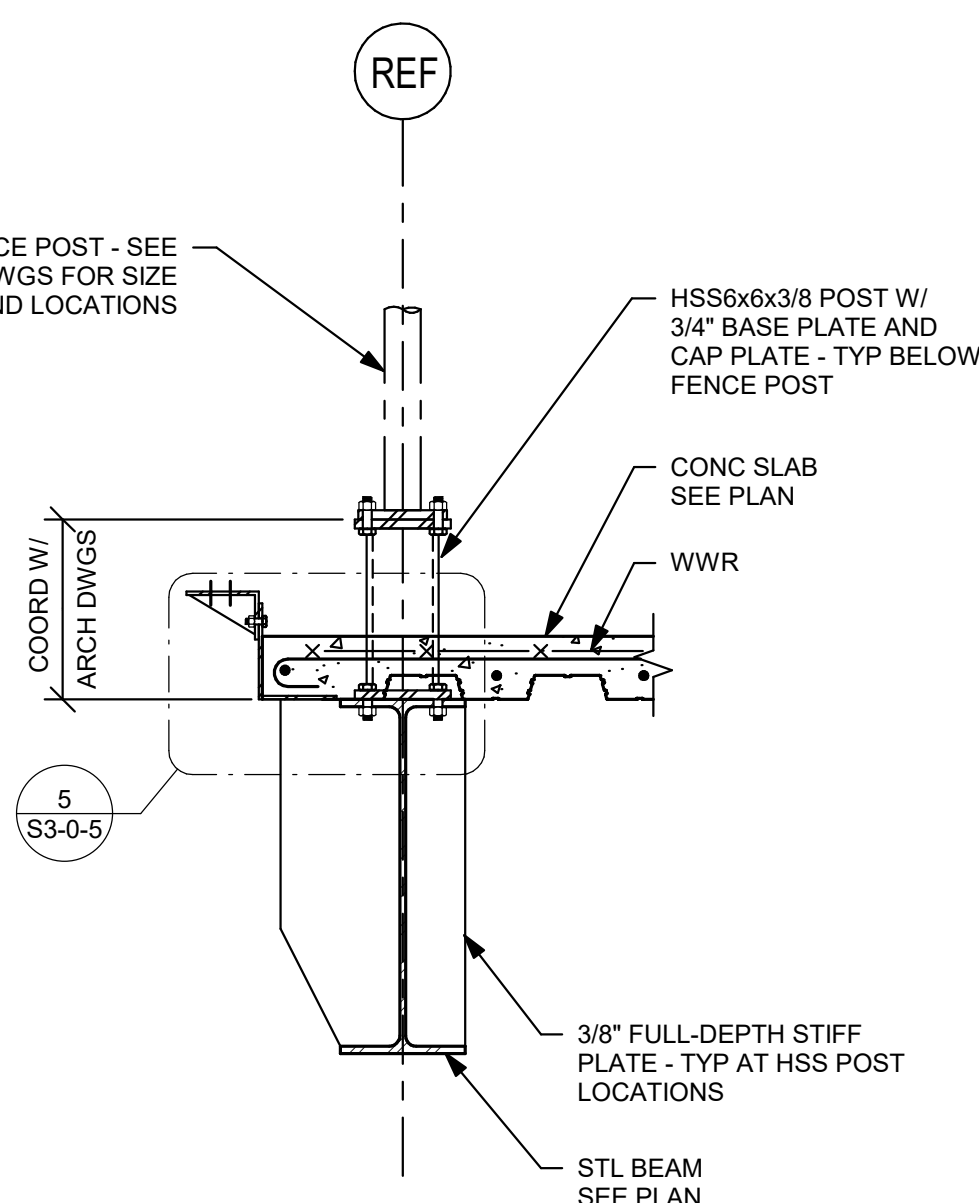


TYPICAL SUPPORT OF ROOF TOP MECHANICAL UNIT DETAIL

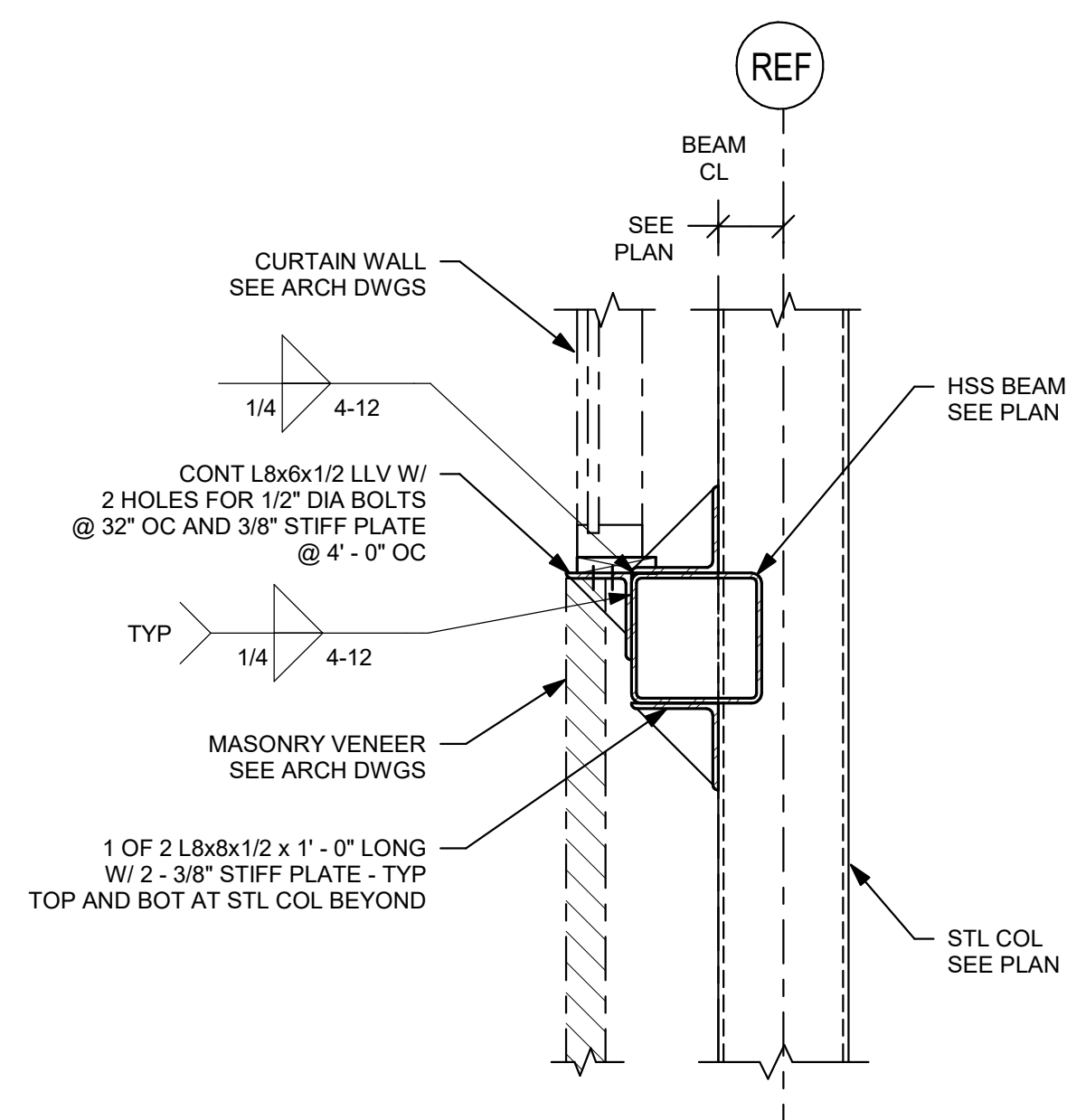
NOTES:

- 1.) ALL EXPOSED STEEL TO BE HOT-DIP GALVANIZED.
- 2.) TOUCH UP ALL FIELD WELDS WITH ZINC RICH PAINT

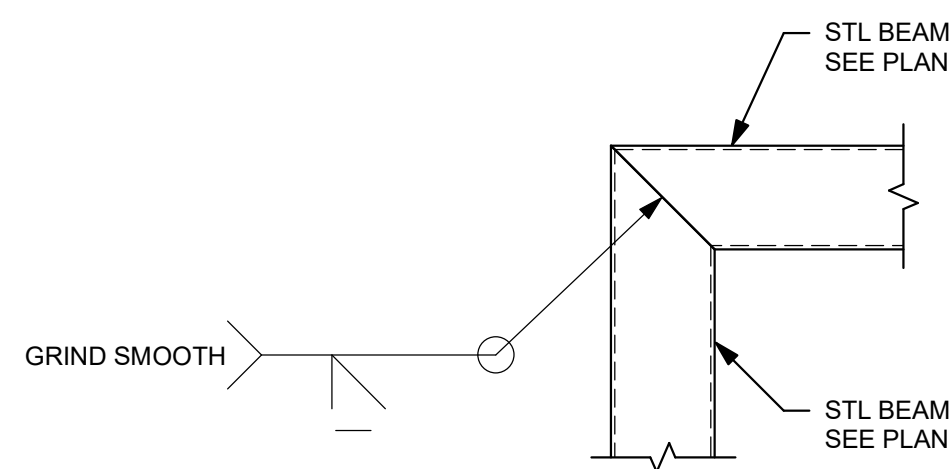
3/4" = 1'-0"



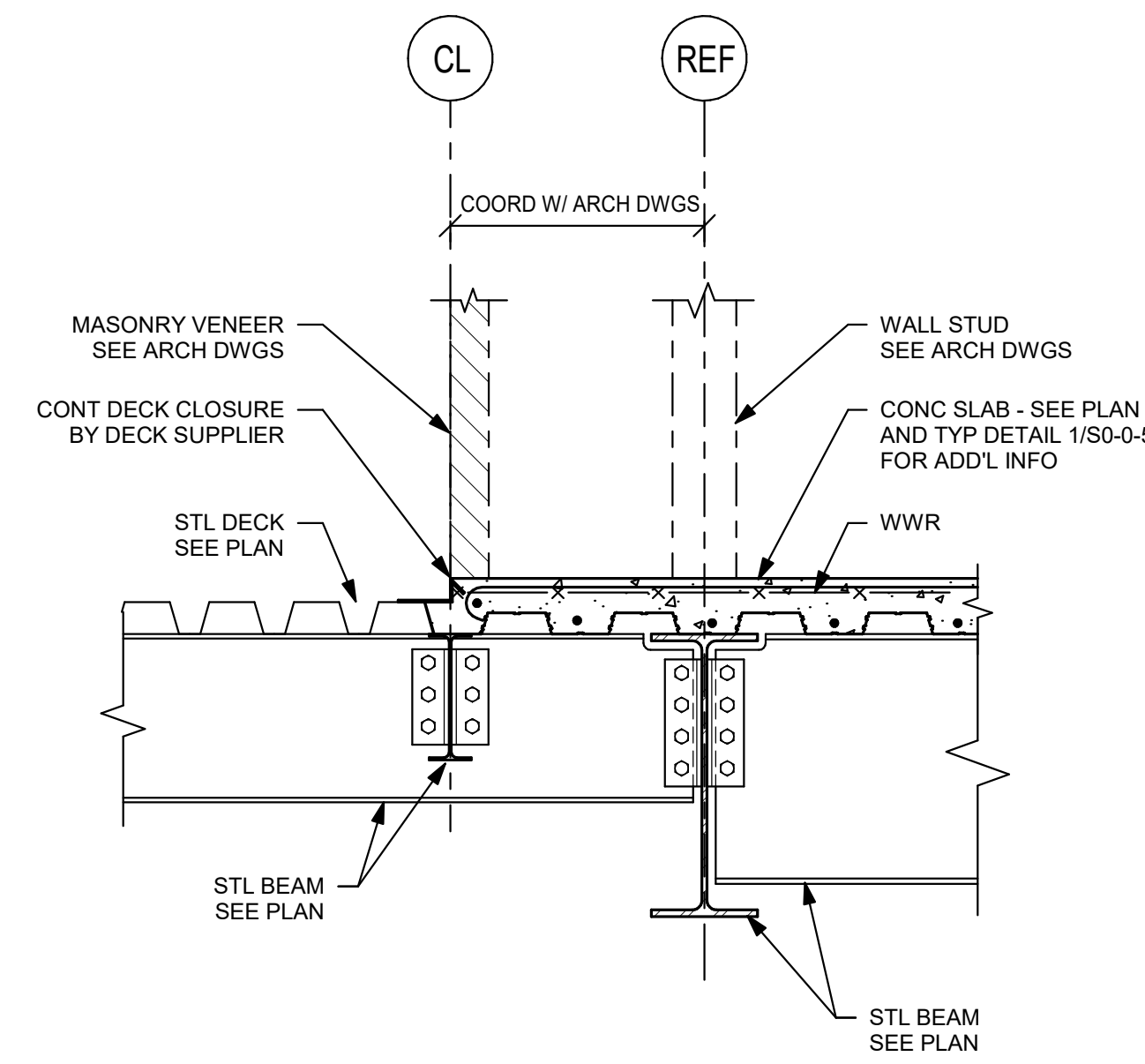
3/4" = 1'-0"



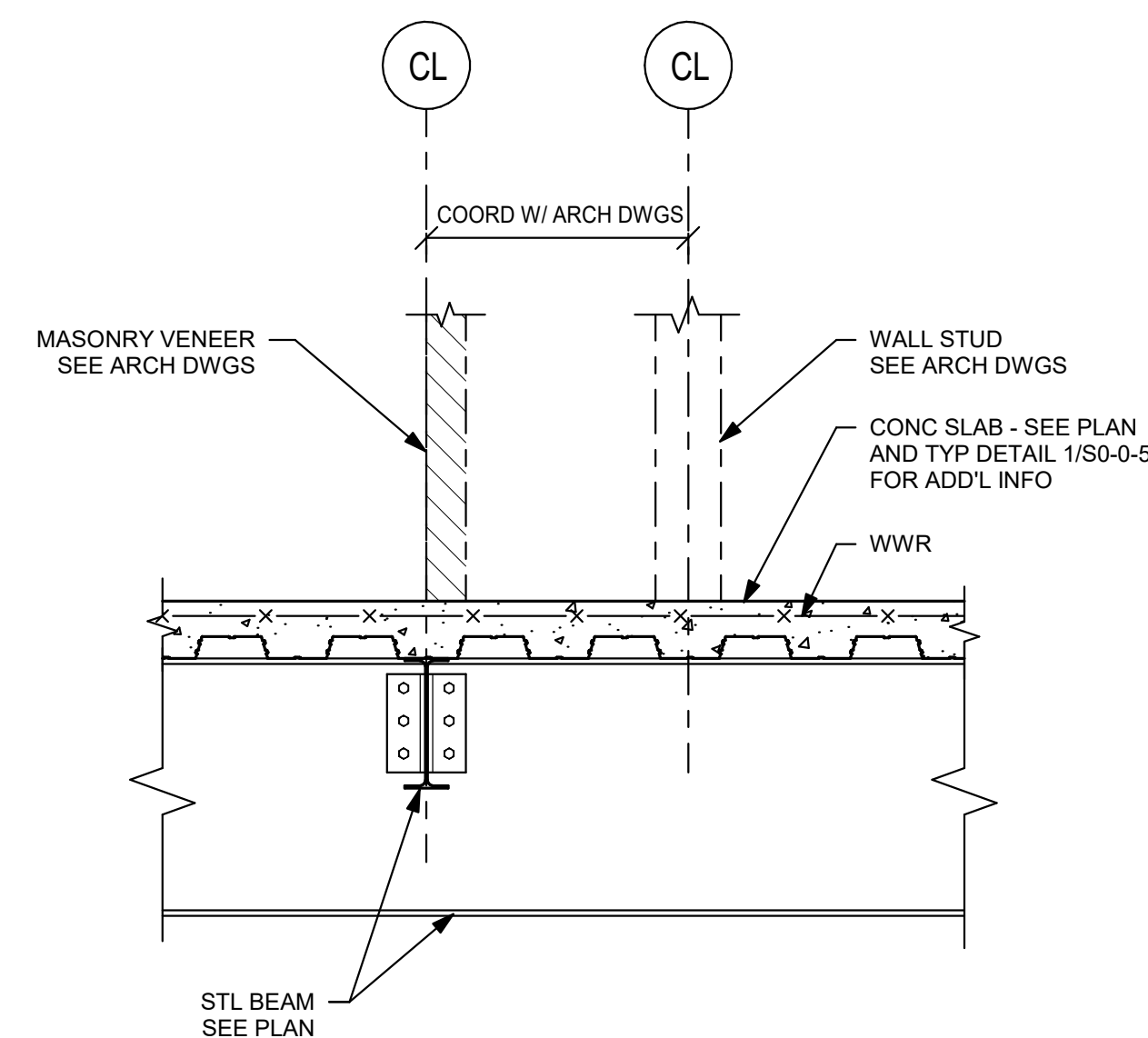
3/4" = 1'-0"



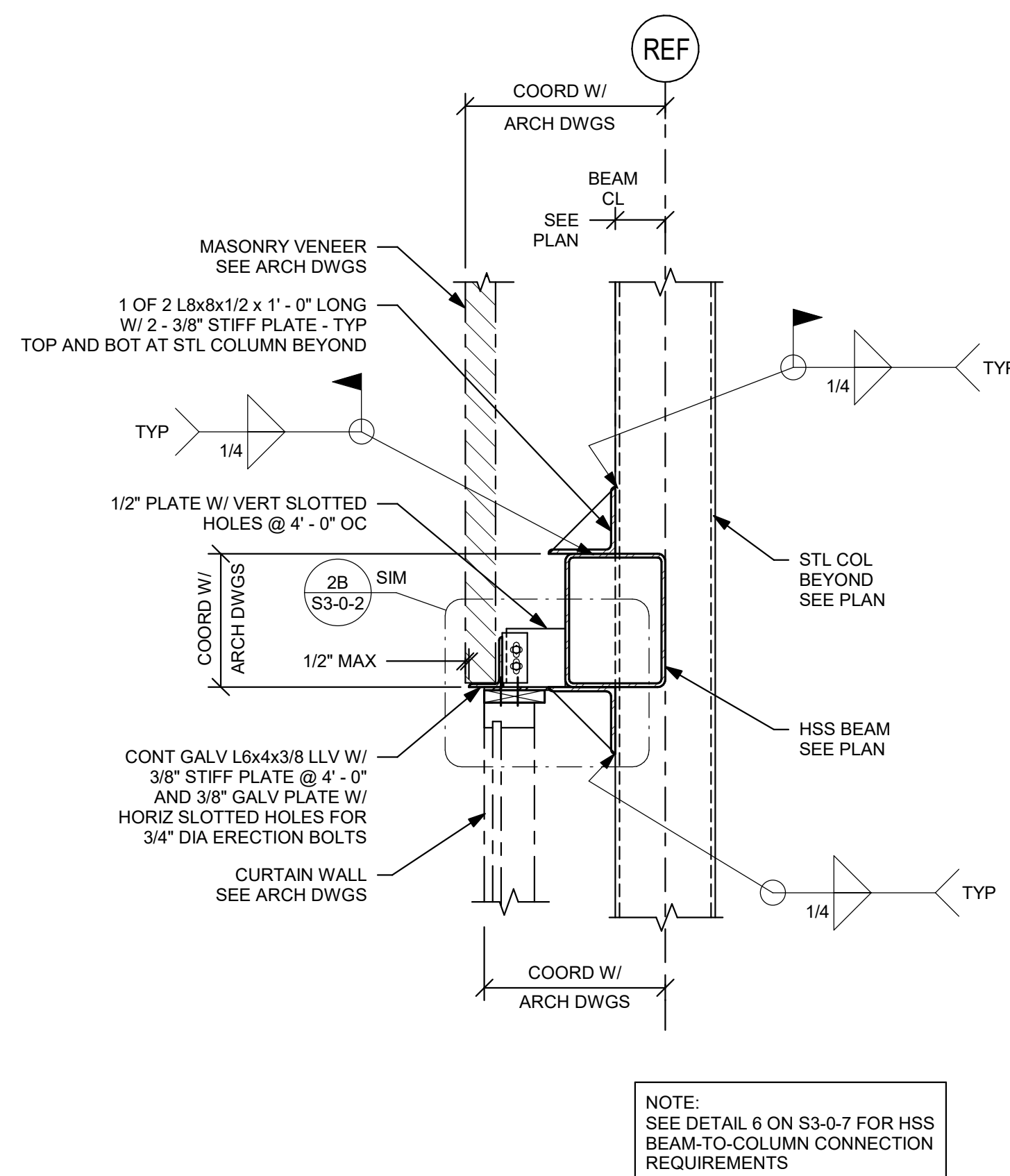
3/4" = 1' - 0"



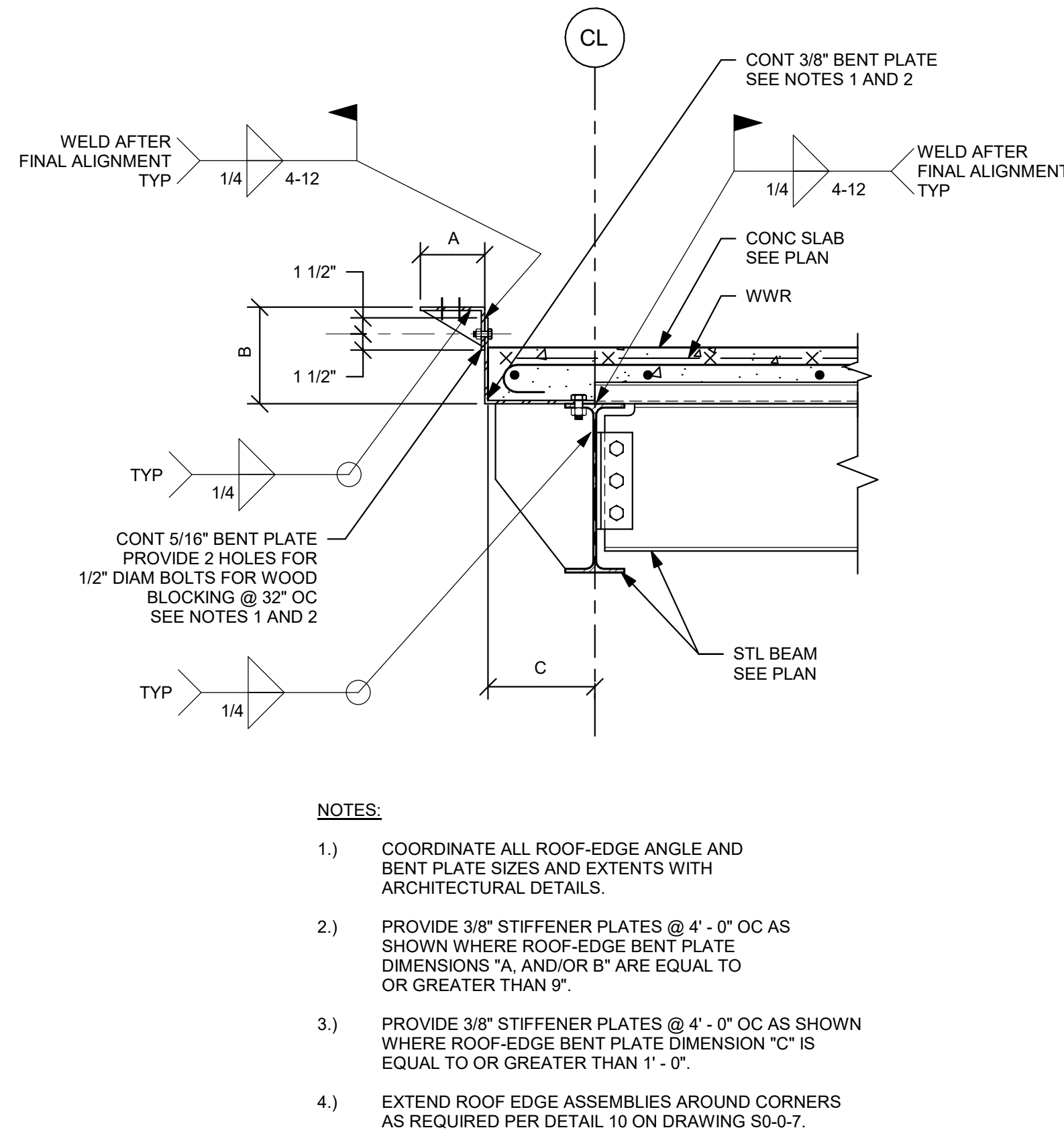
3/4" = 1' - 0"



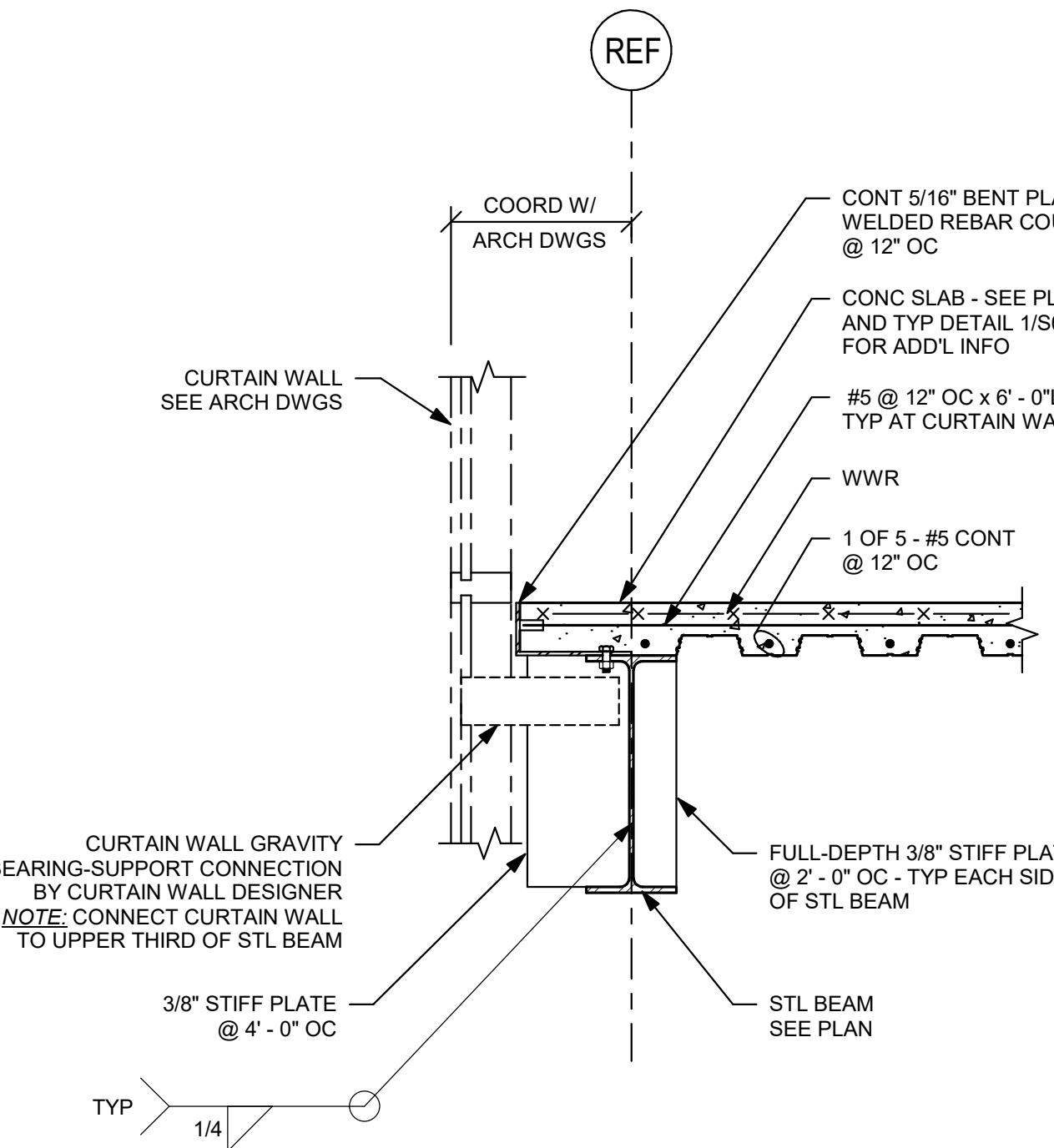
3/4" = 1' - 0"



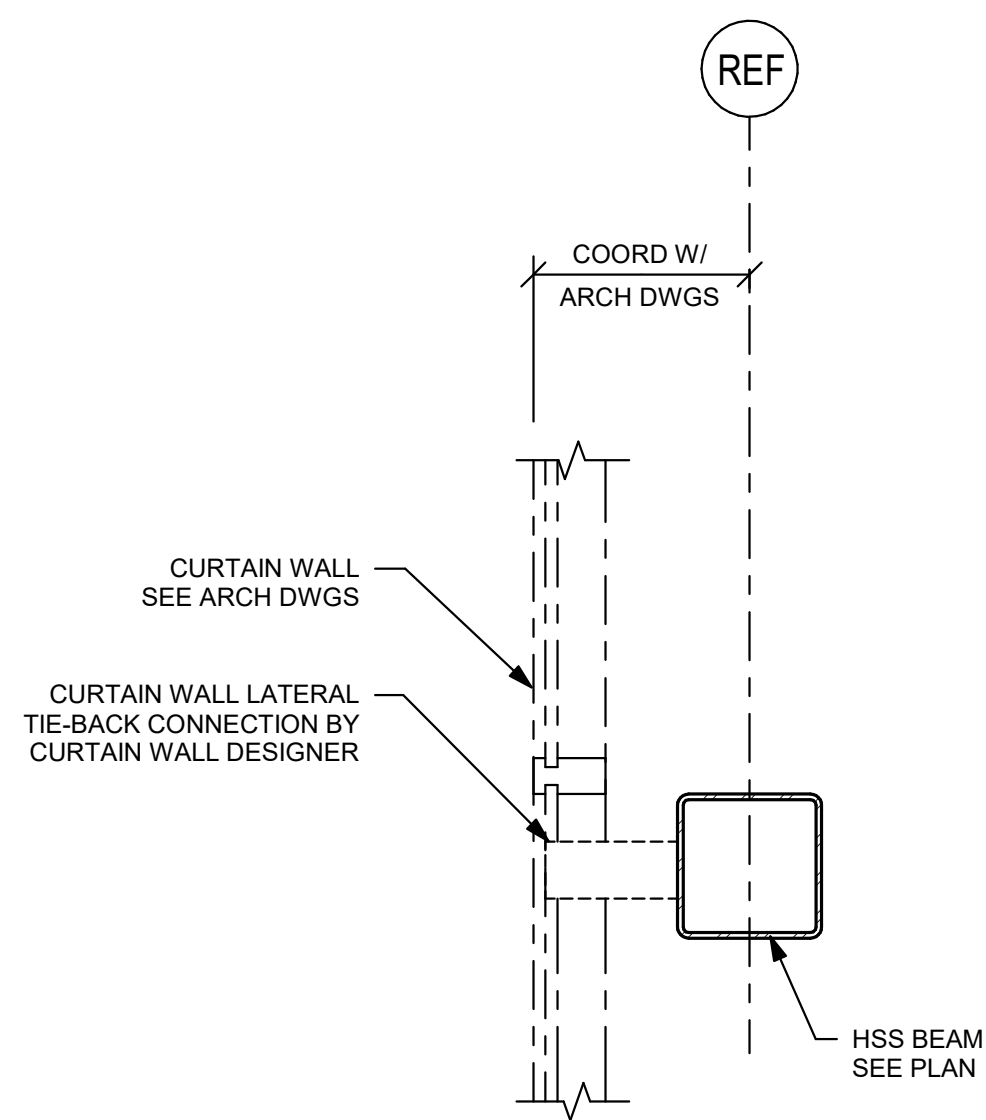
3/4" = 1' - 0"



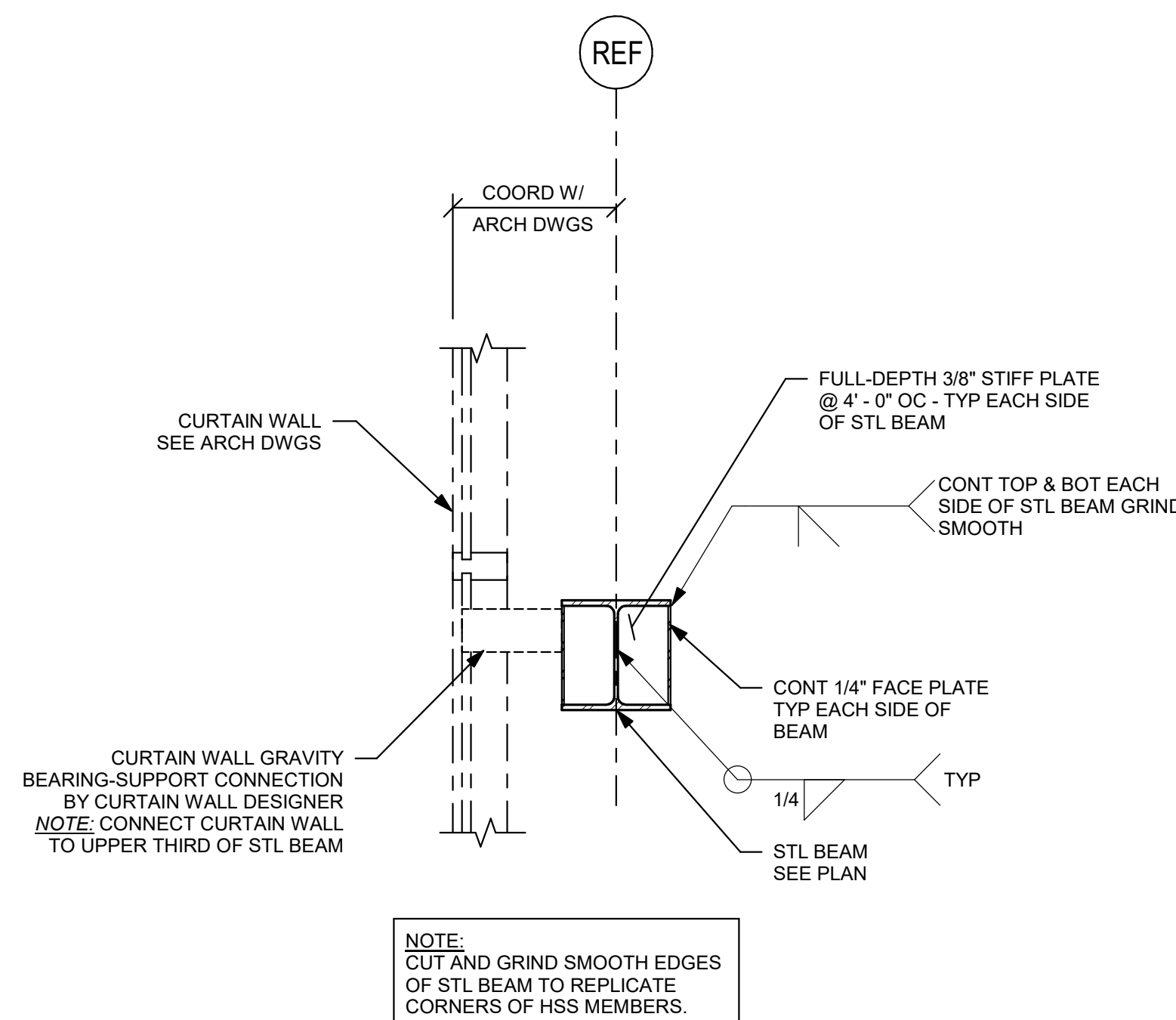
1" = 1' - 0"



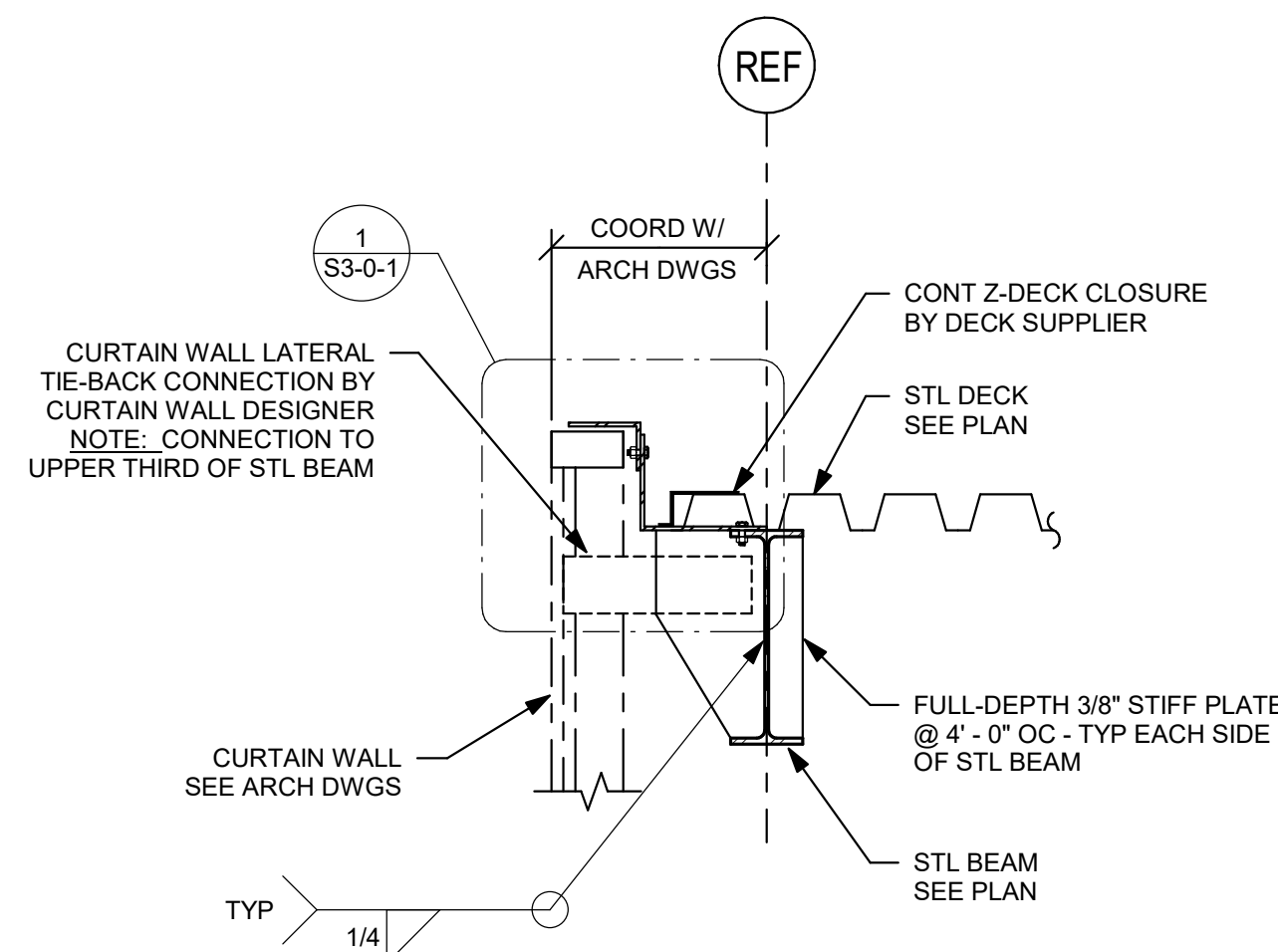
3/4" = 1' - 0"



3/4" = 1' - 0"



3/4" = 1' - 0"



3/4" = 1' - 0"

DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
Planning | Architecture | Interior Design
Tel: 617.854.1700
www.dra.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

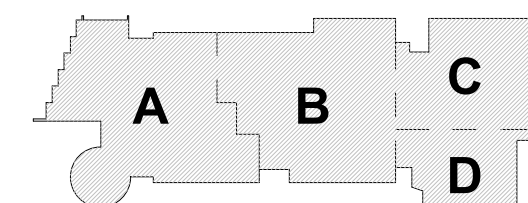
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023

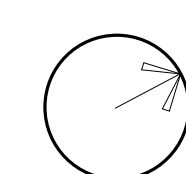


KEY PLAN

PROJECT NORTH



MAGNETIC NORTH



SECTIONS

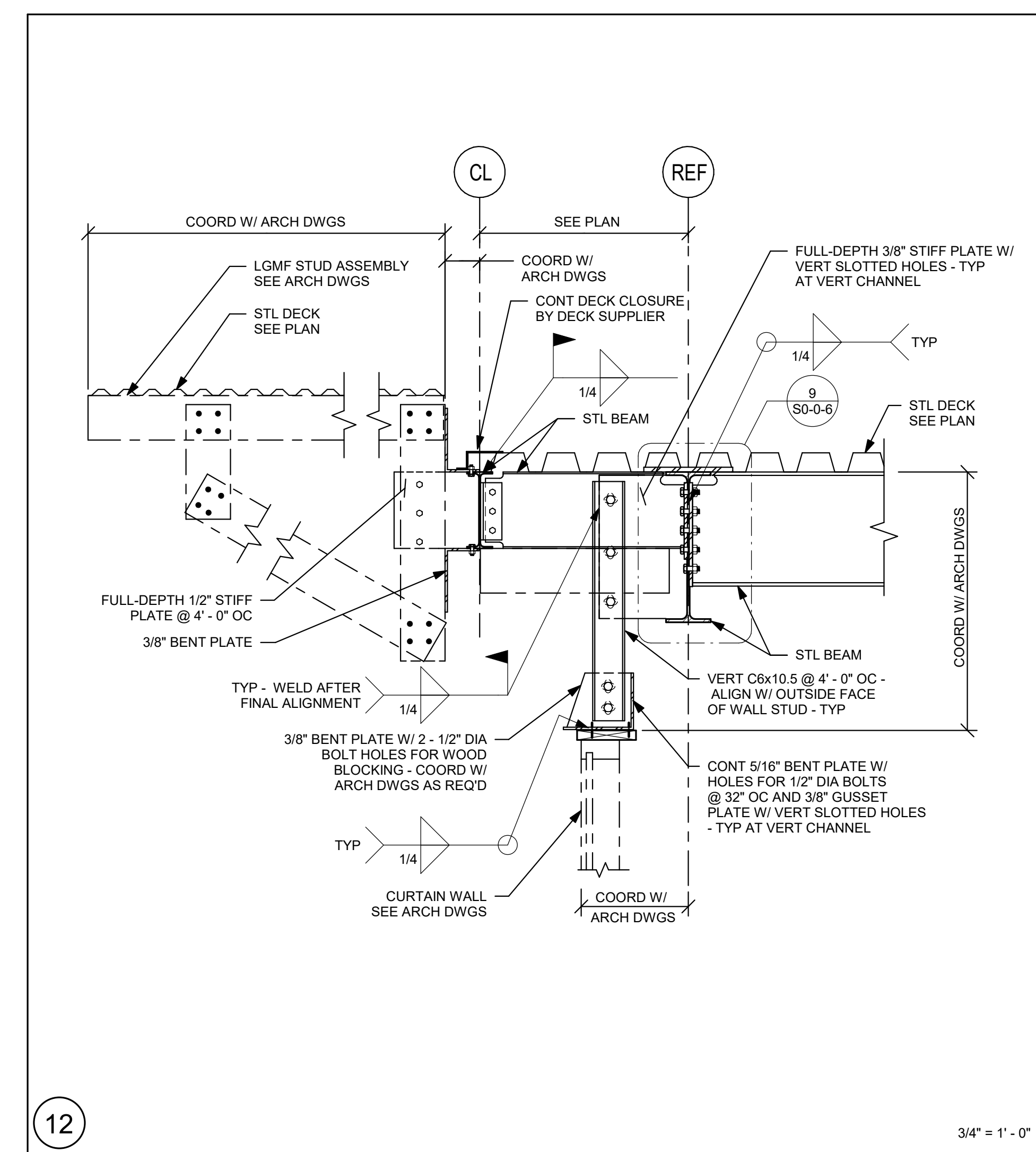
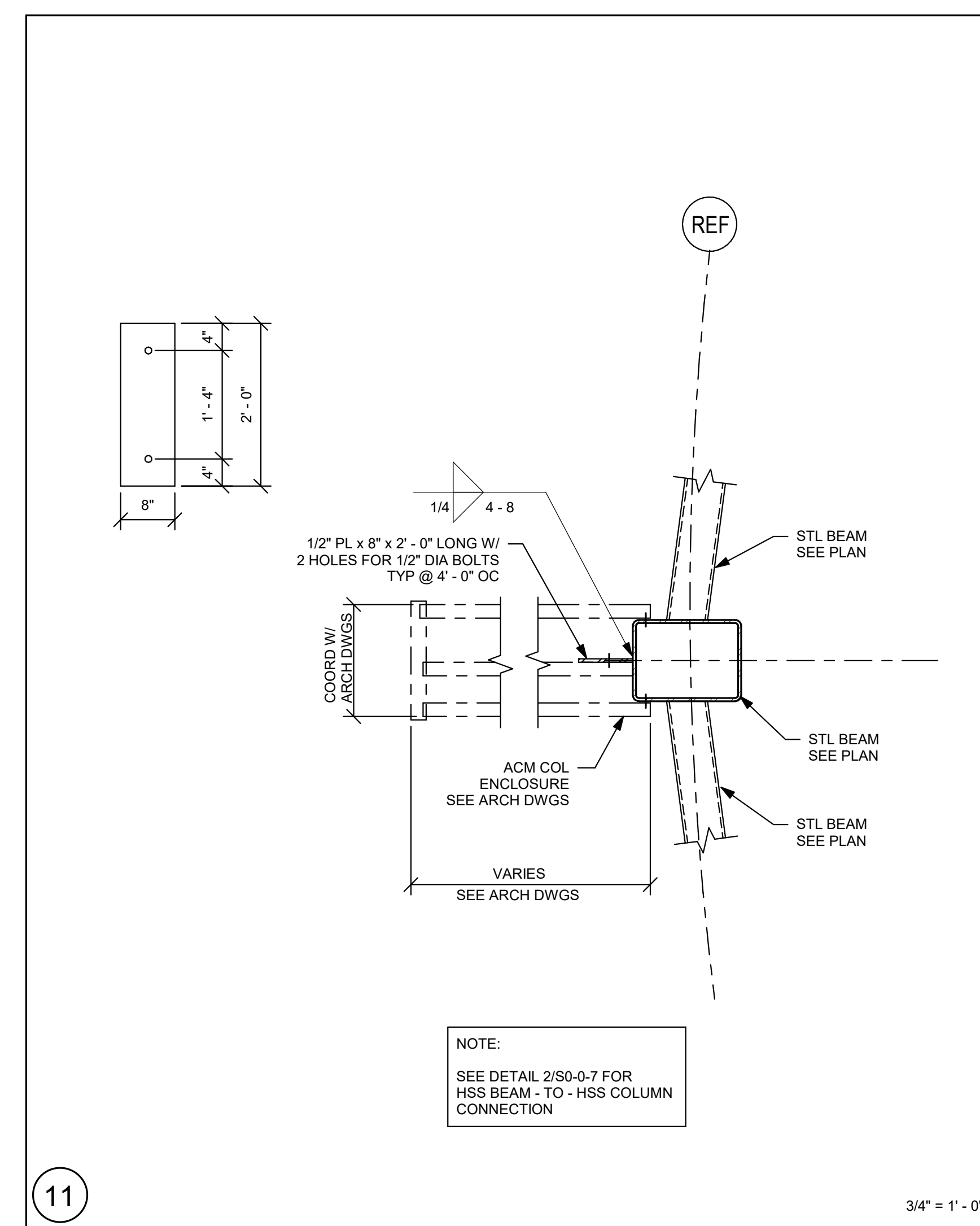
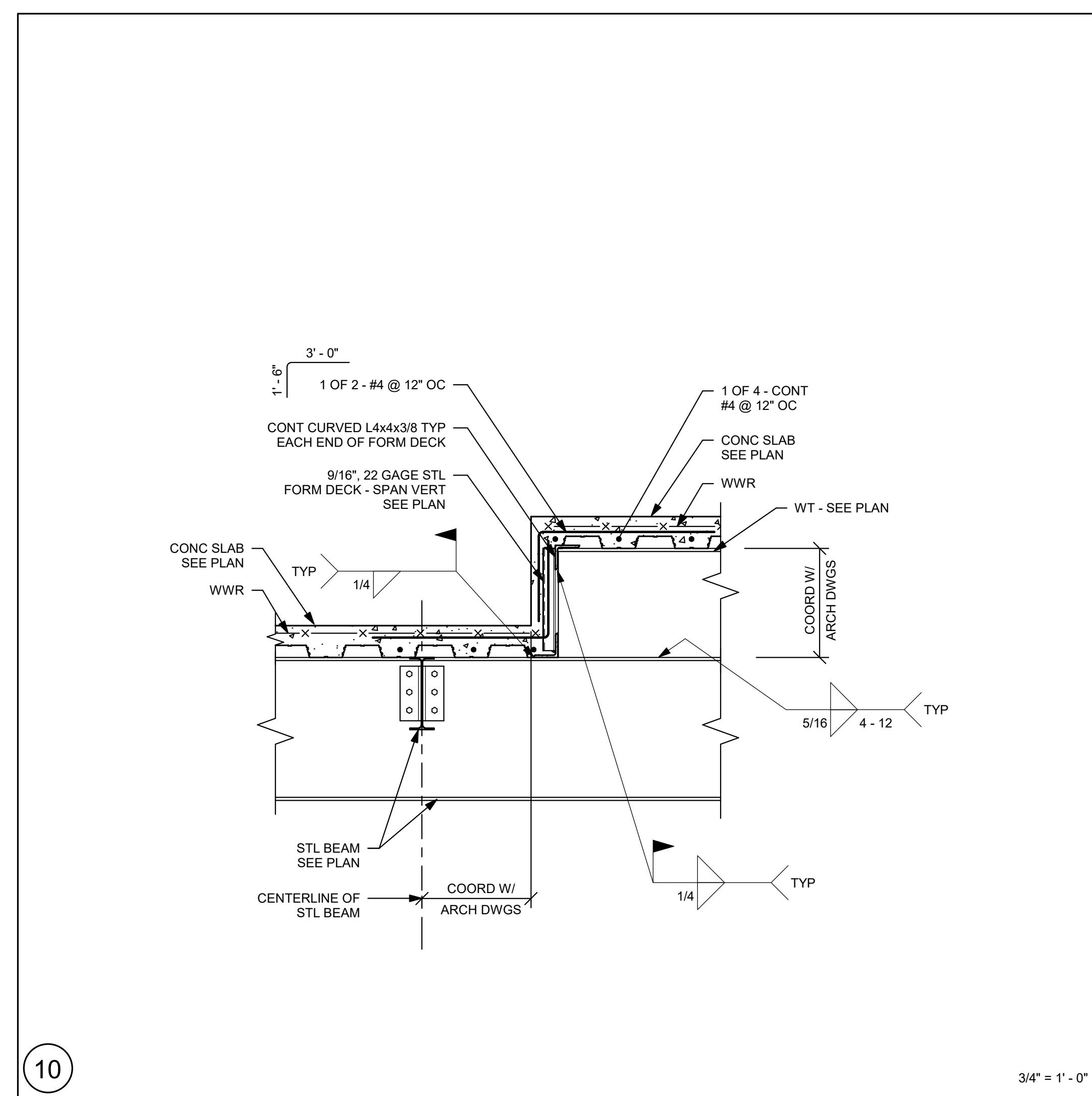
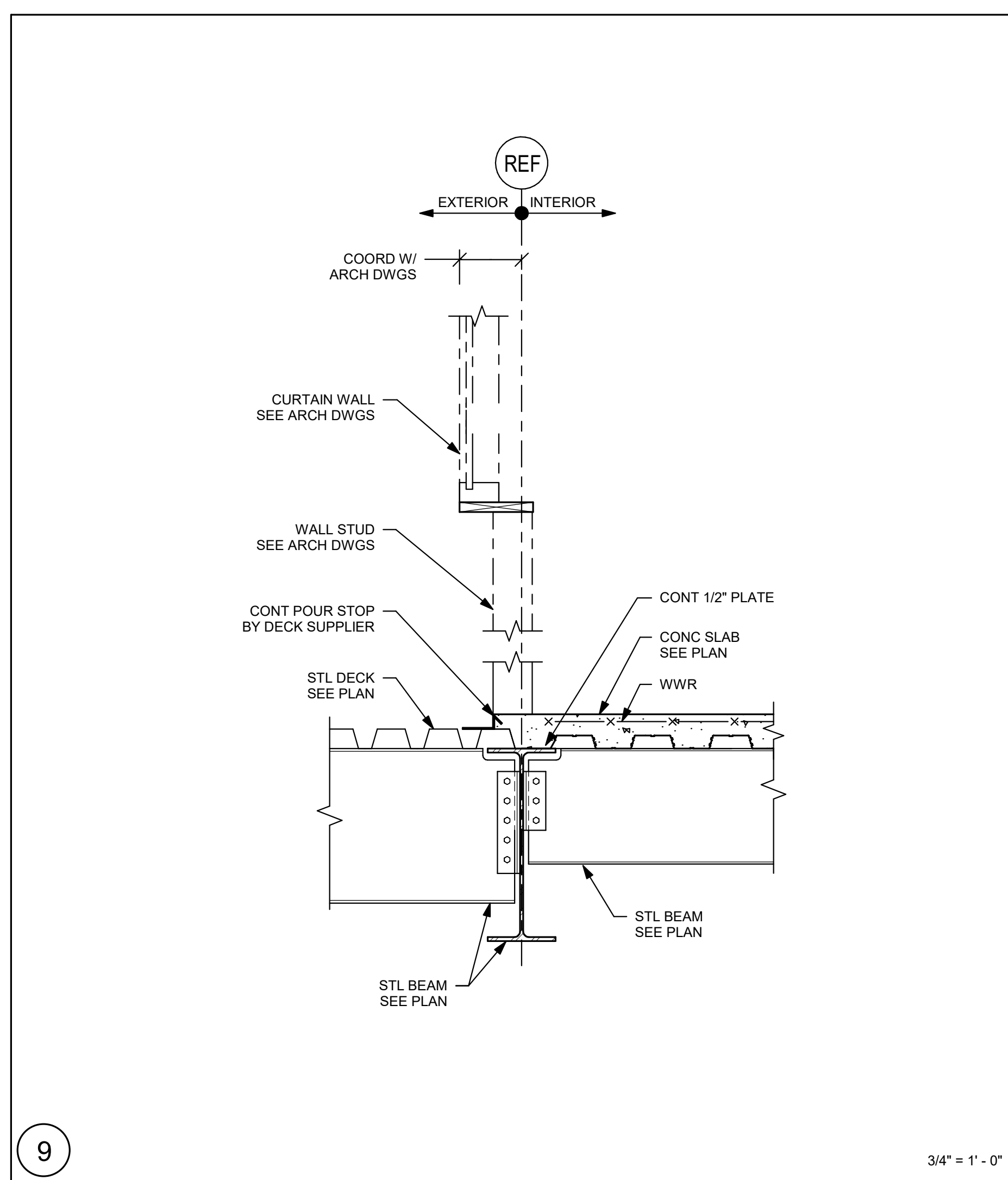
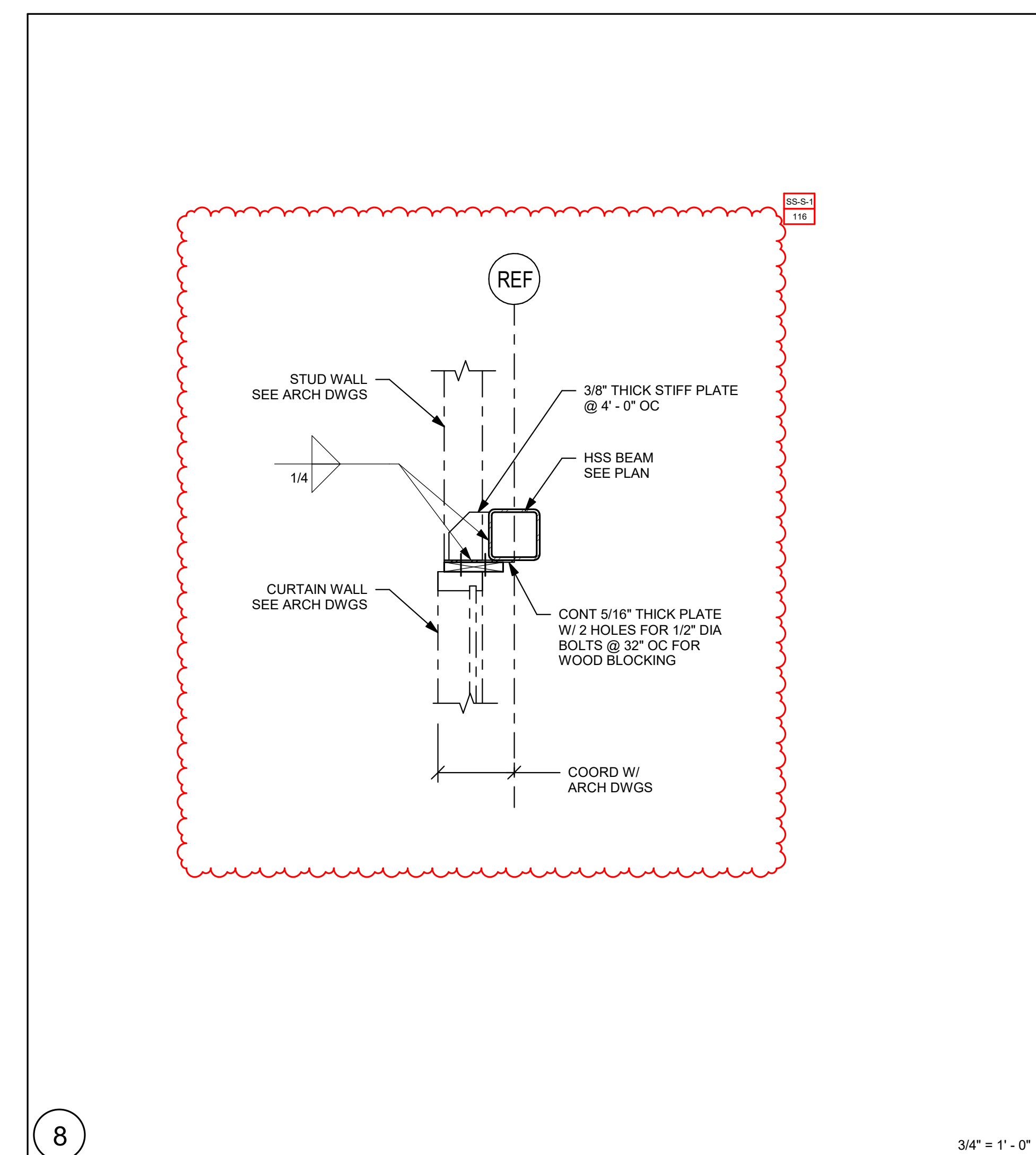
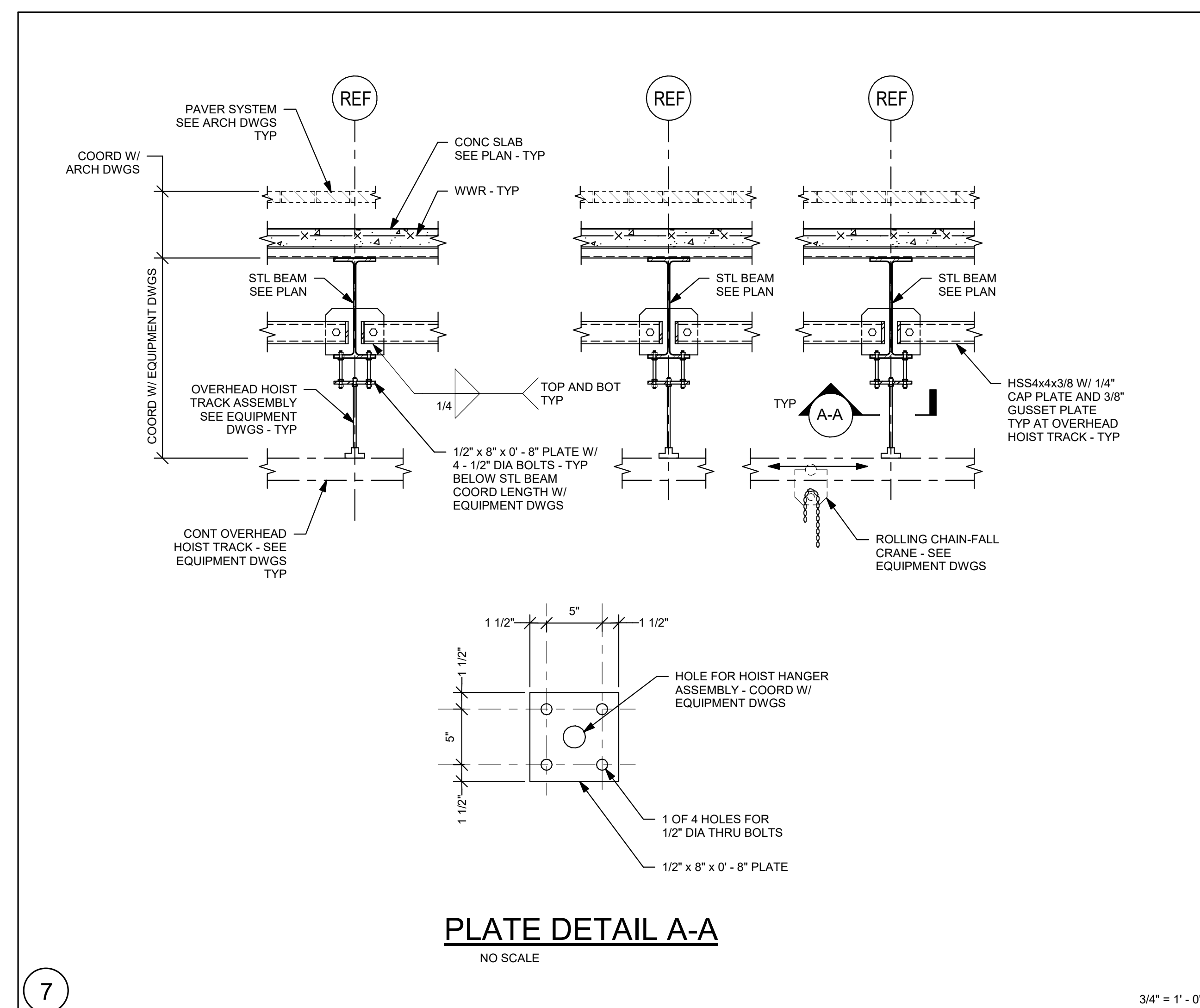
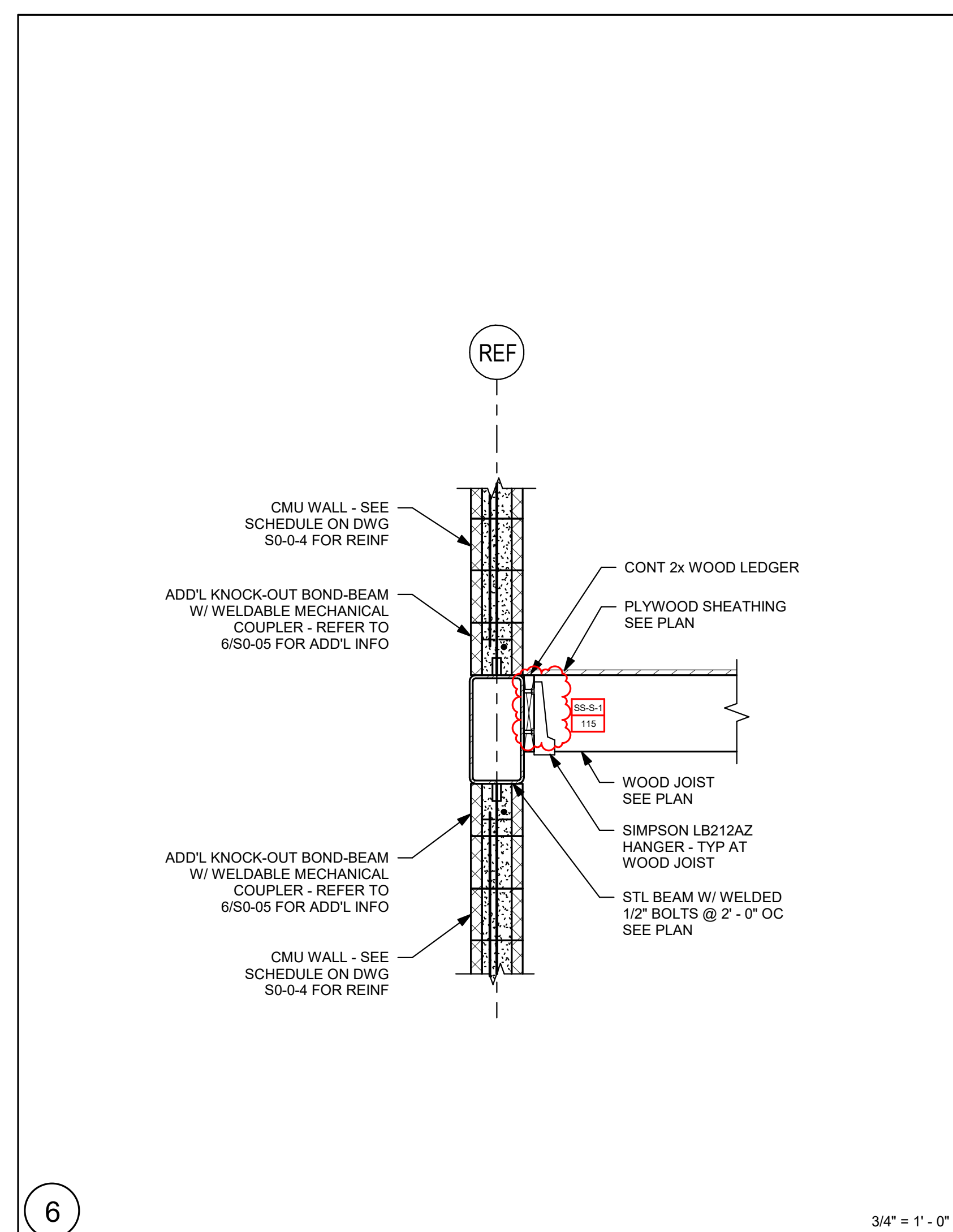
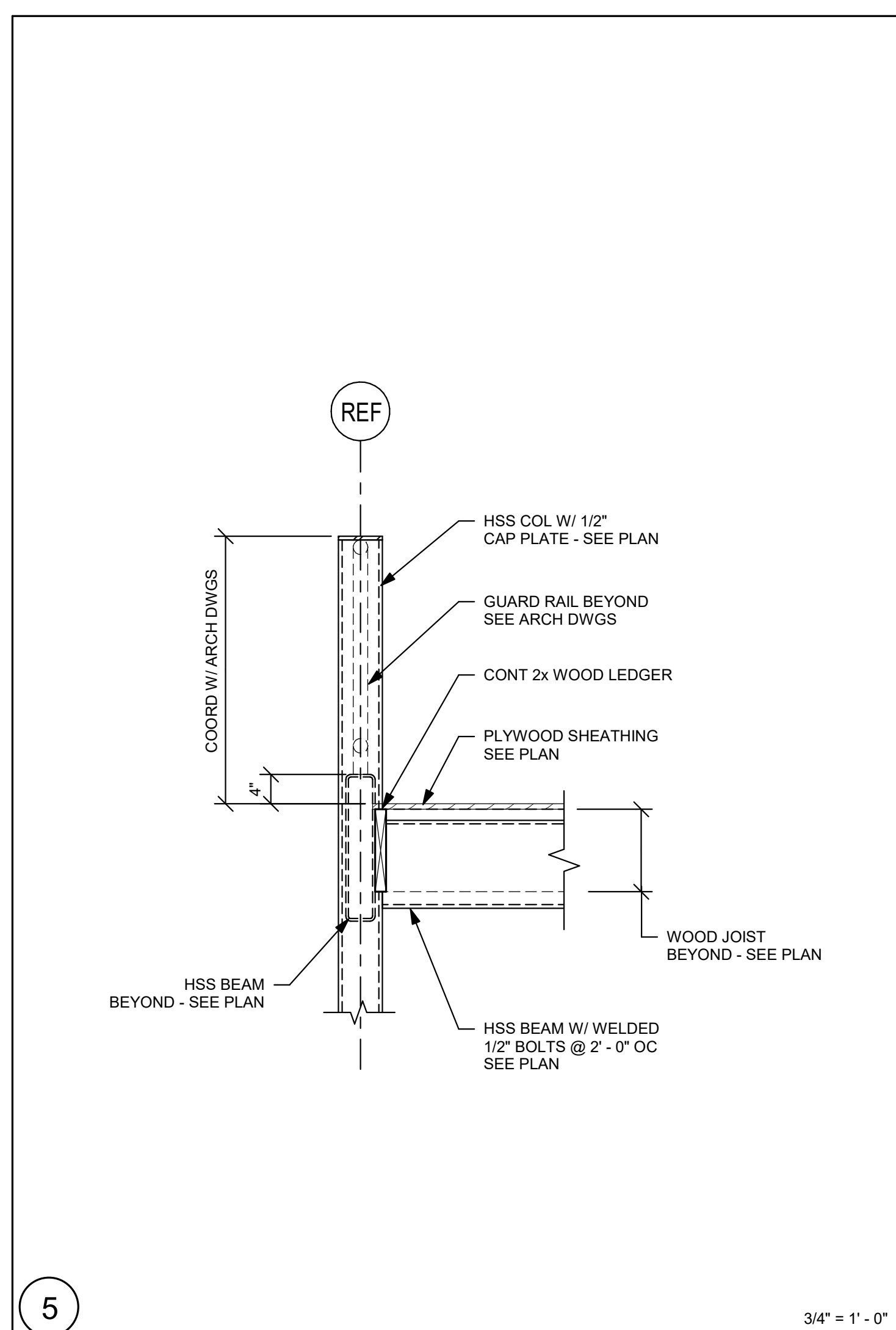
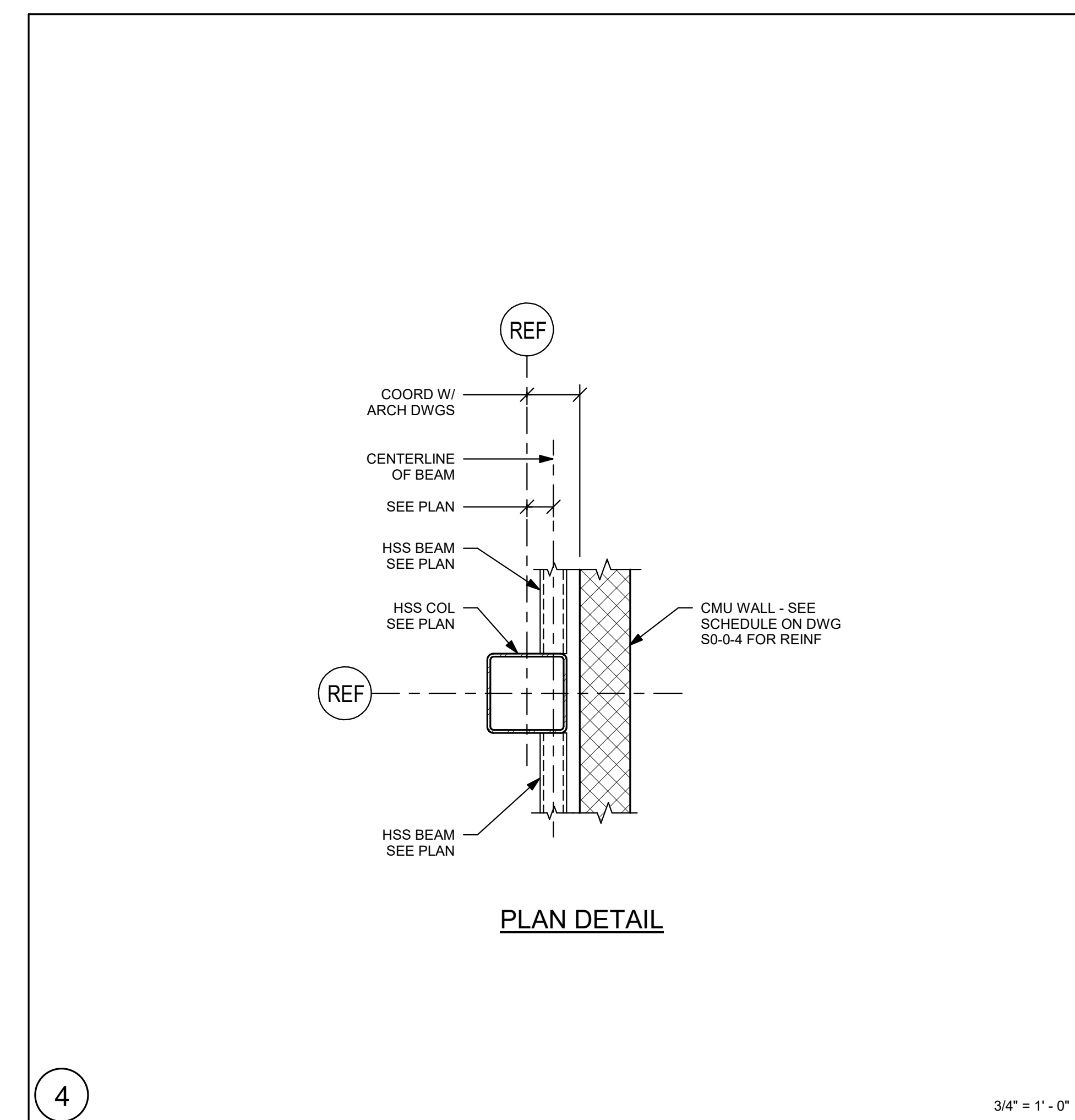
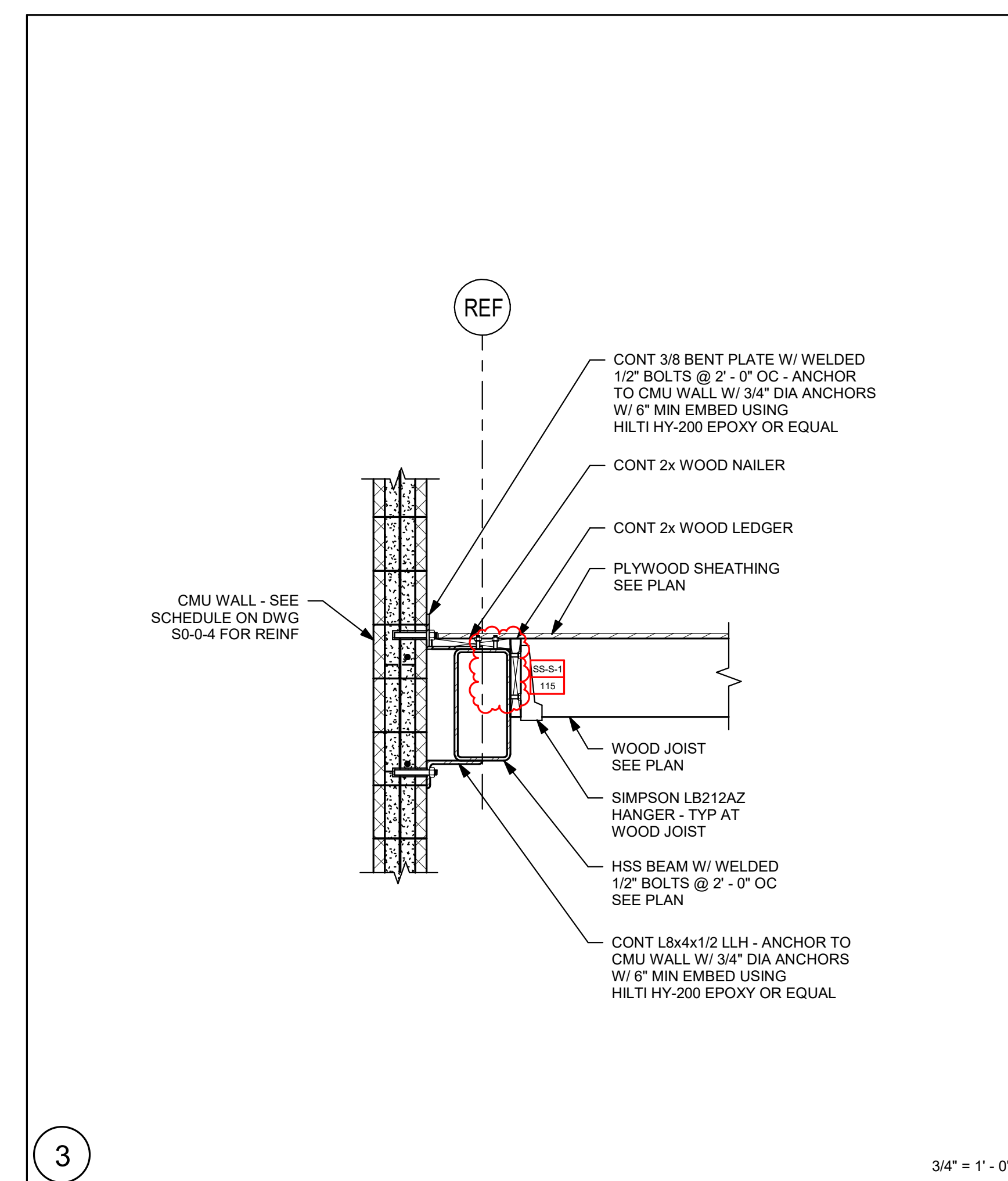
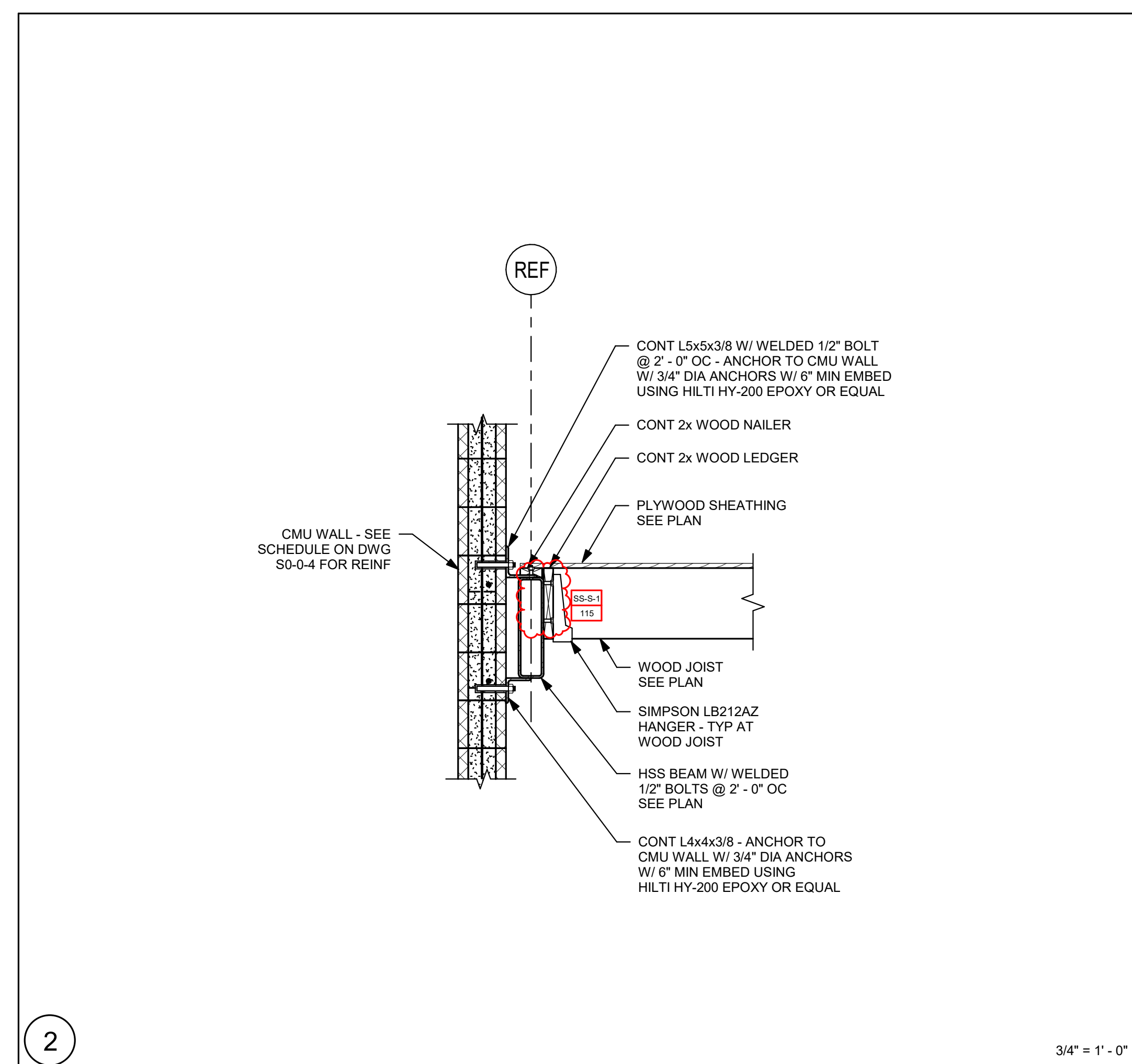
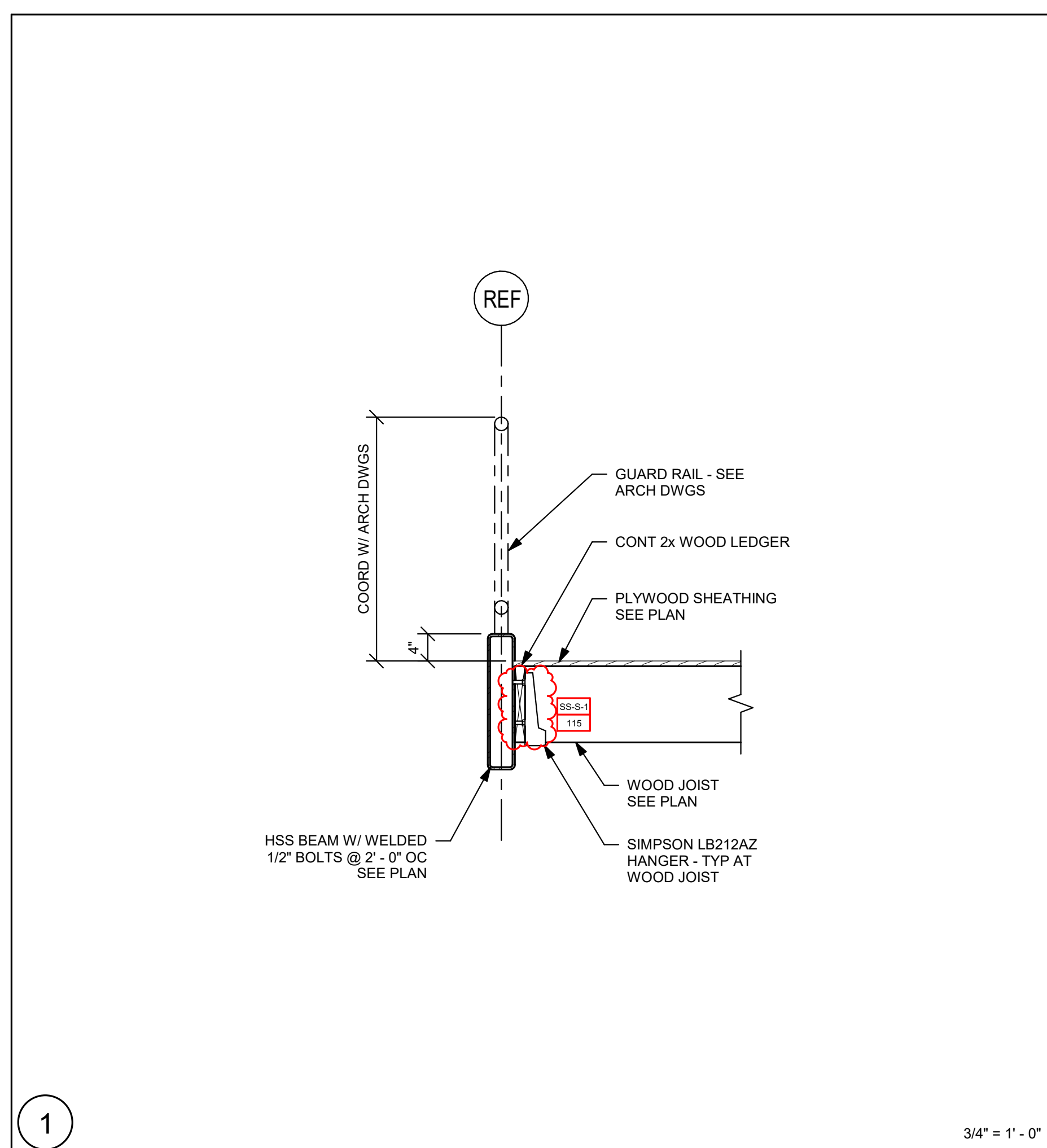
Scale: As indicated

Job No.: 20202

Drawn By: EDG

Date: MAY 12, 2023

S3-0-5

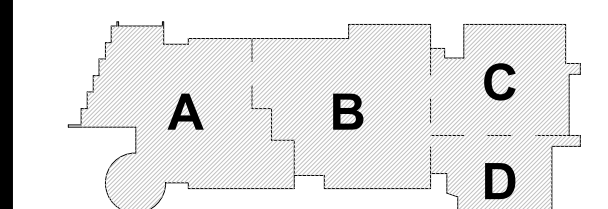


REVISION LIST		
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1

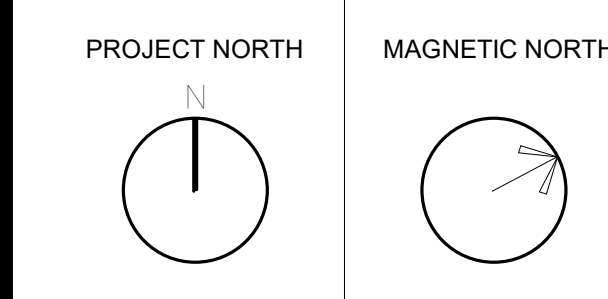
FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023



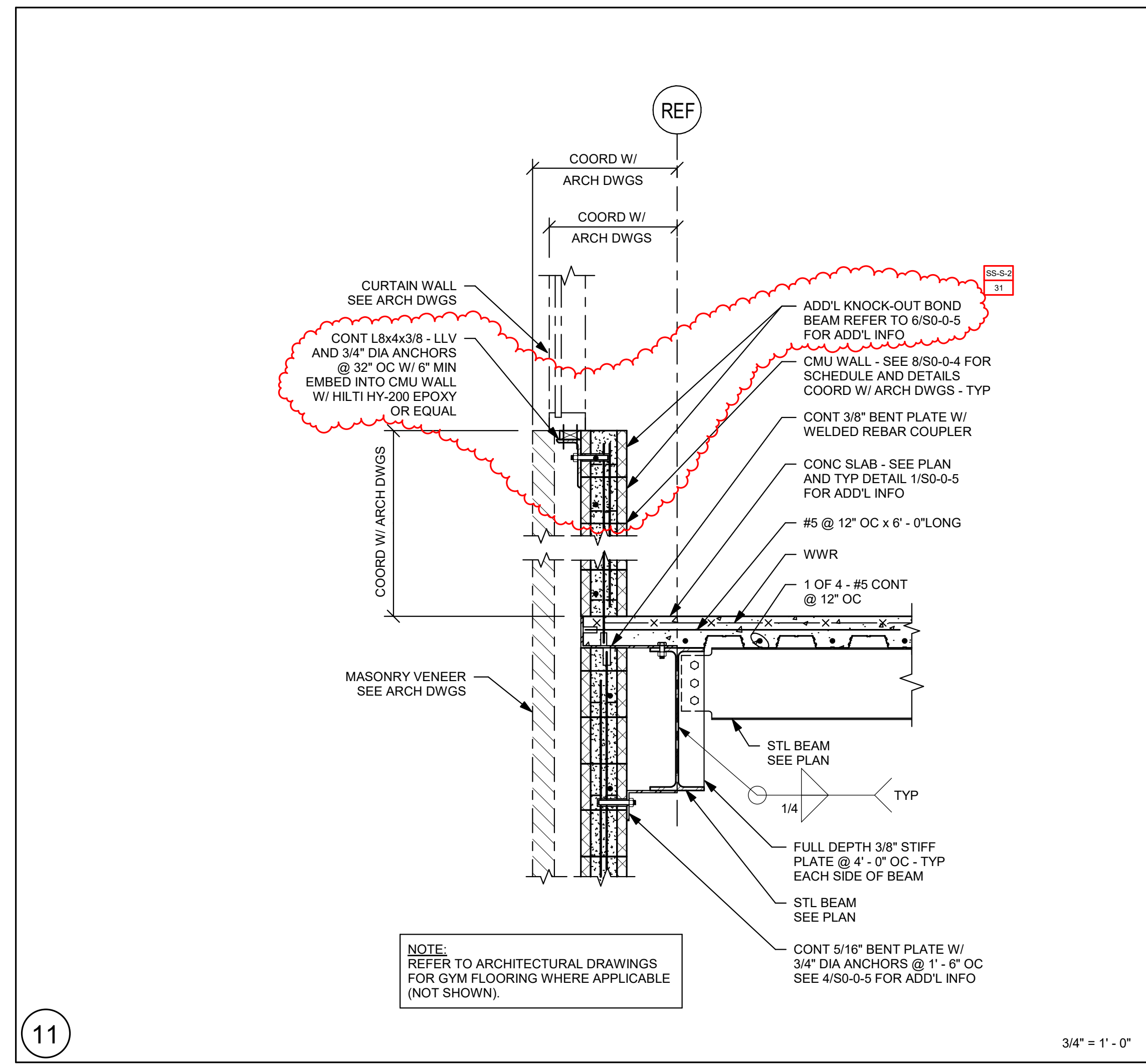
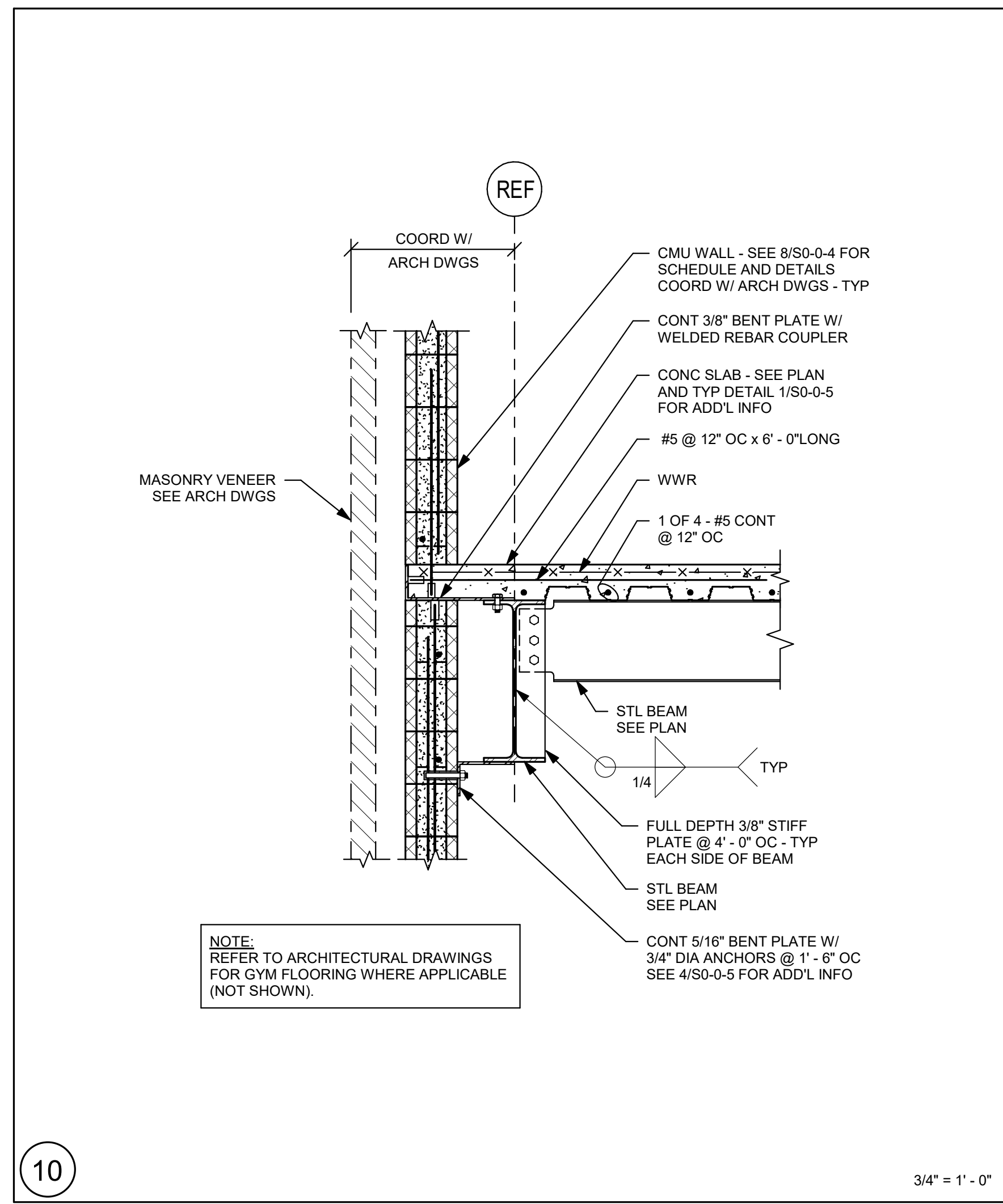
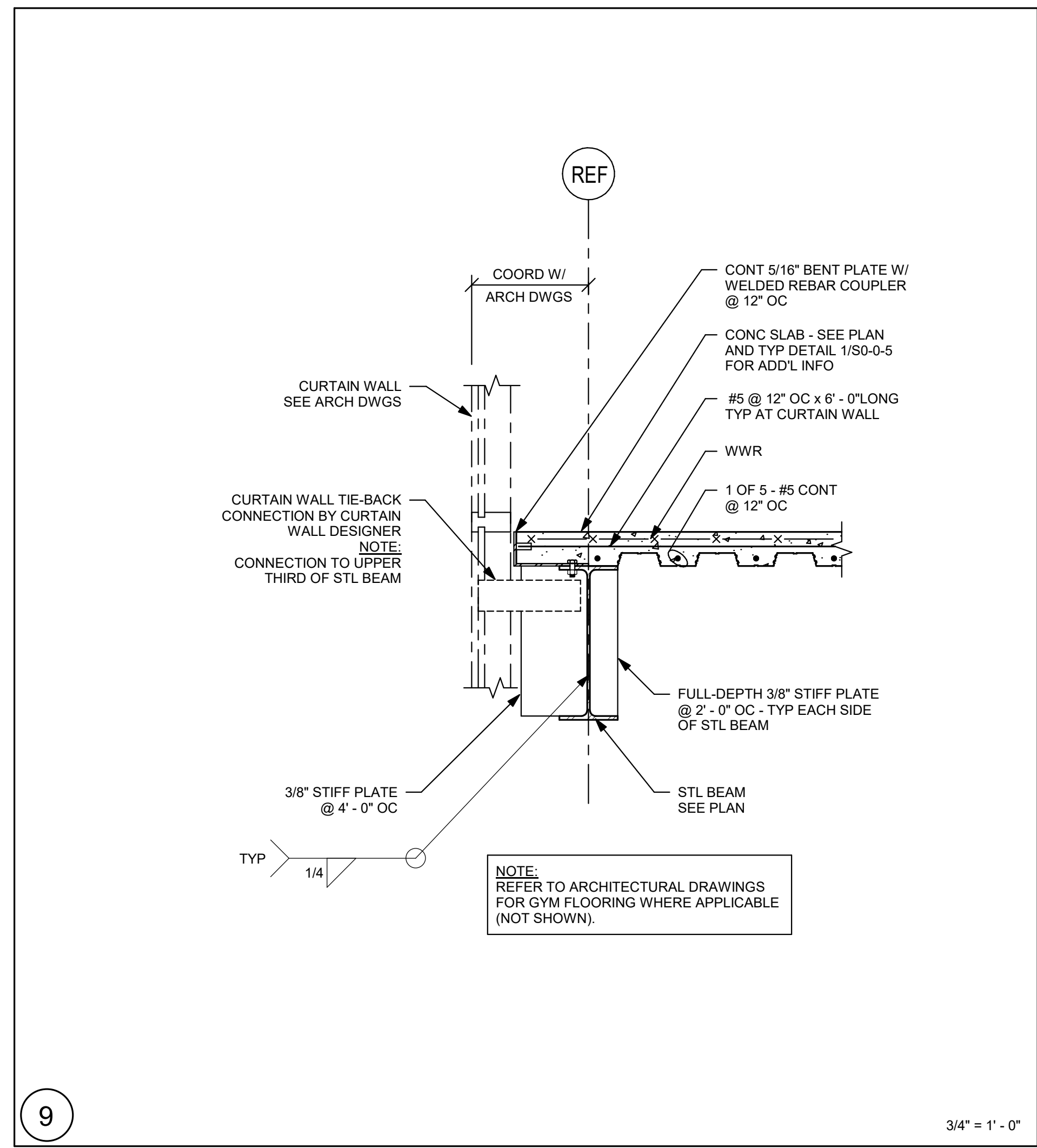
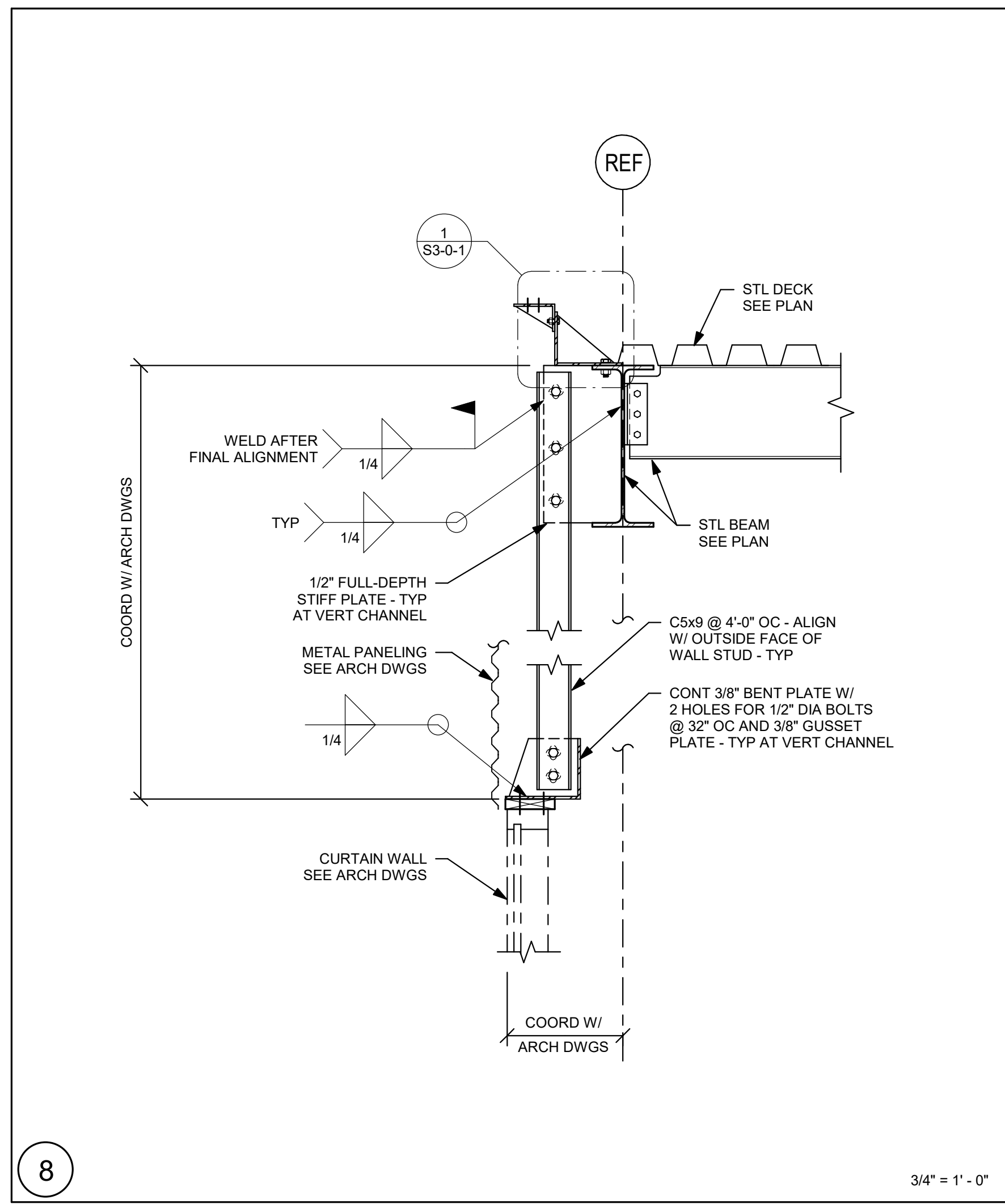
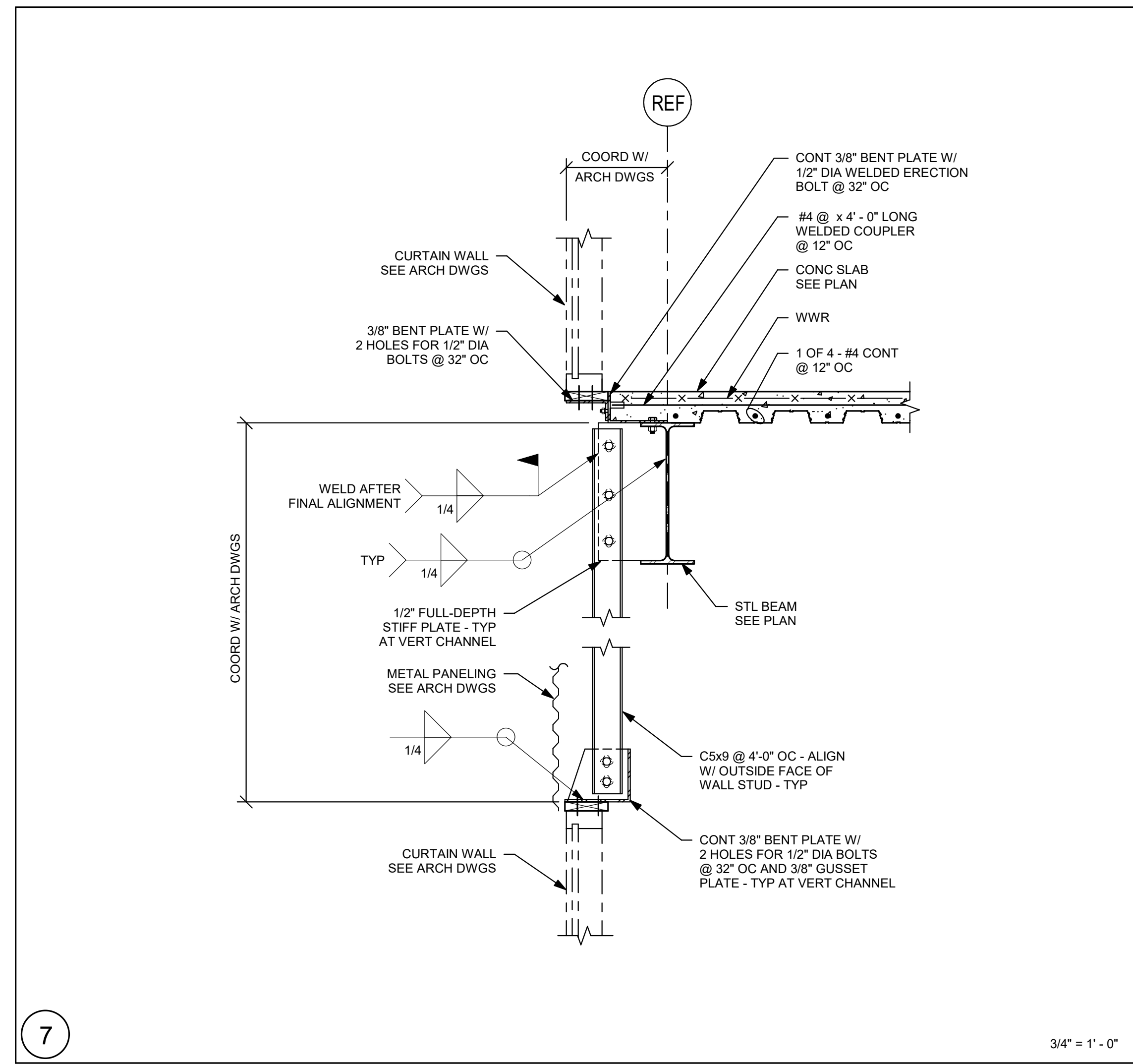
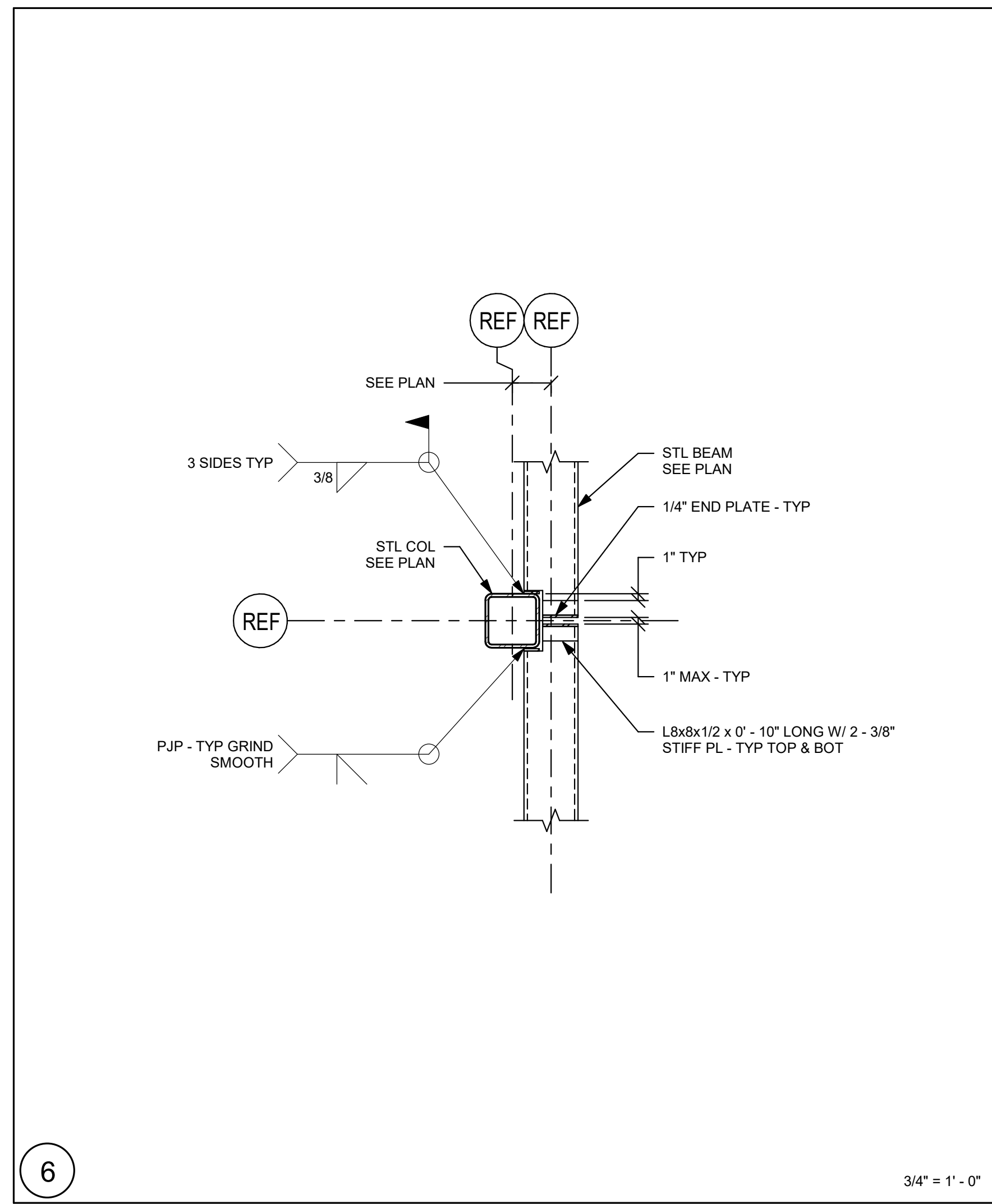
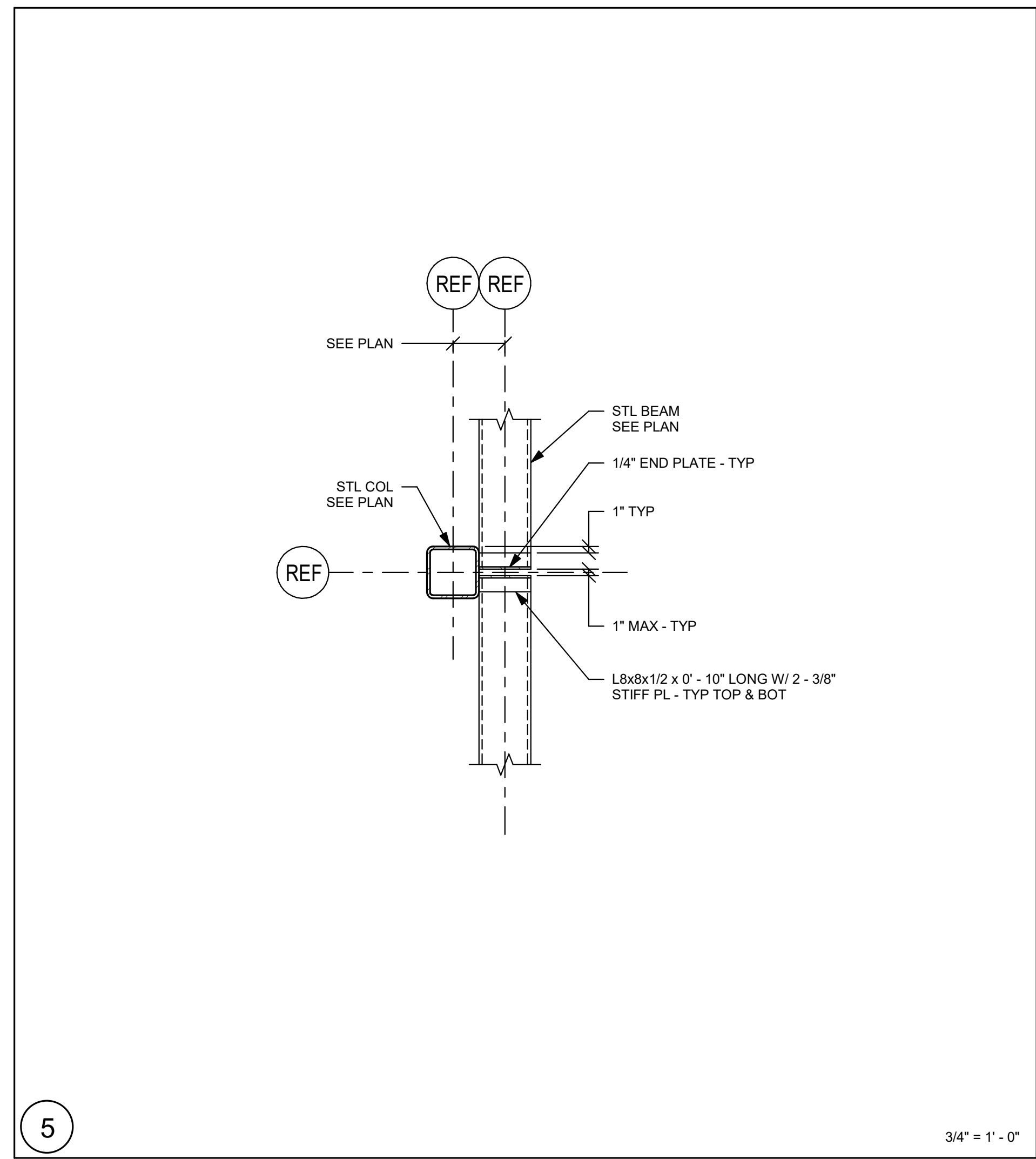
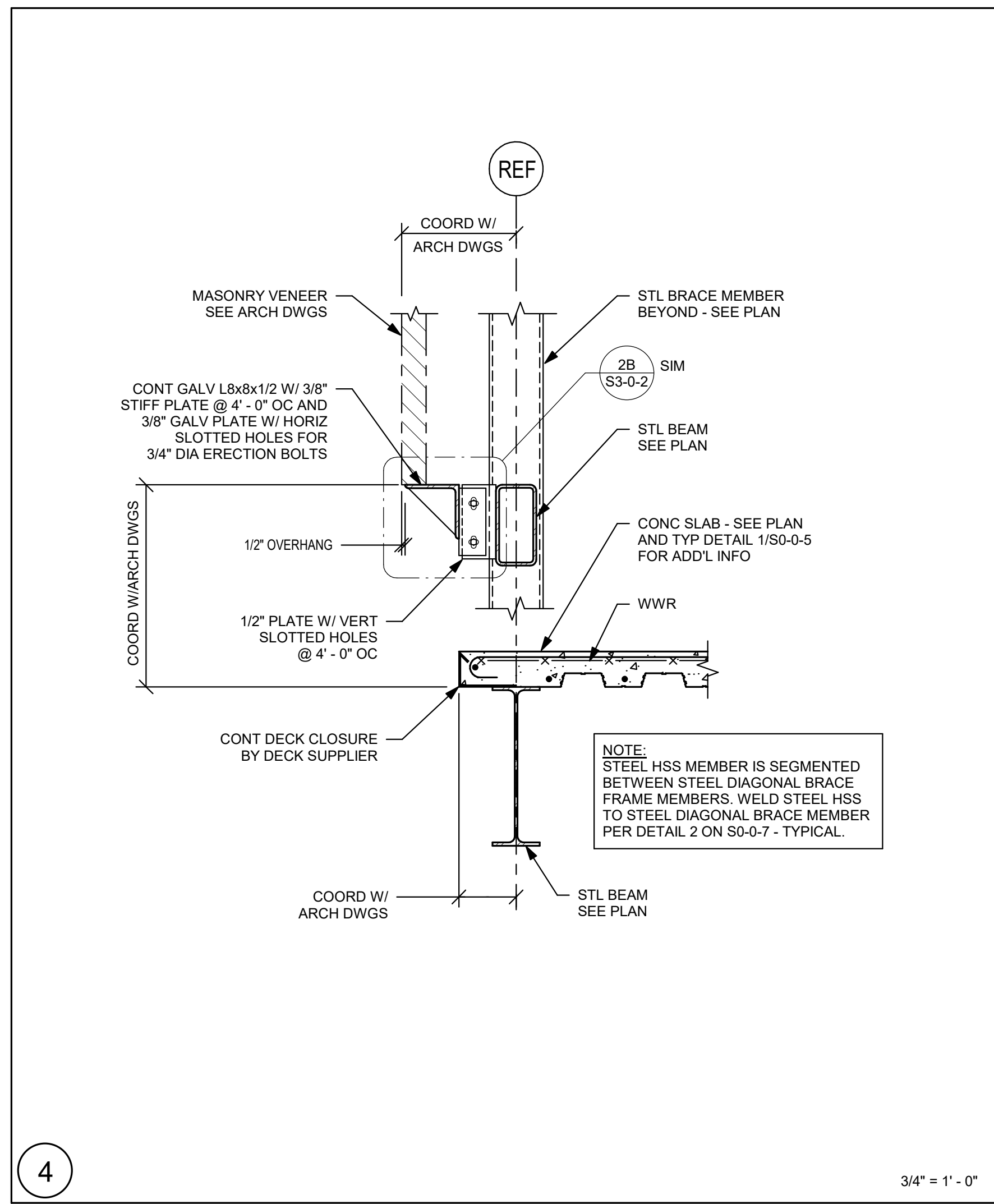
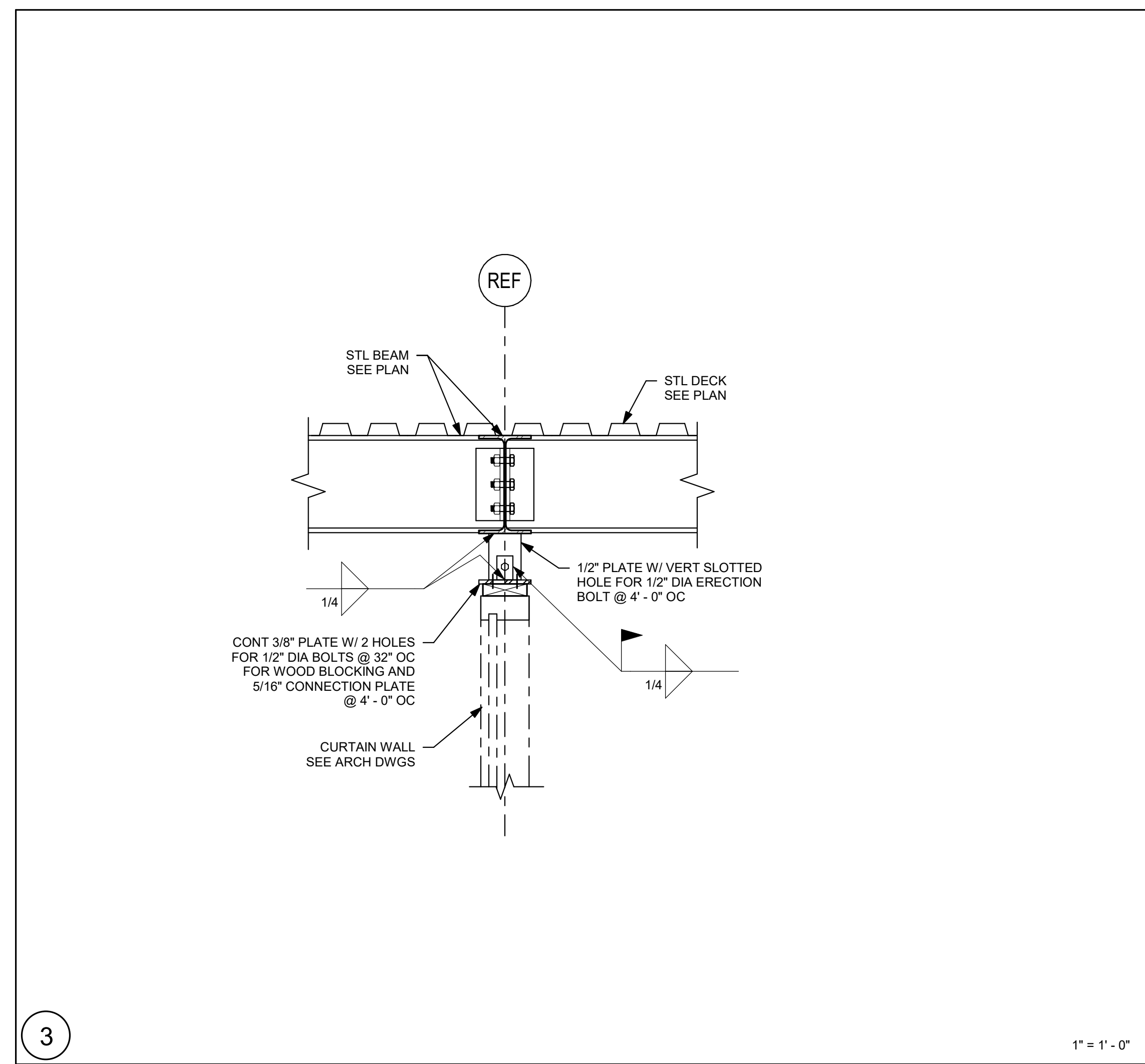
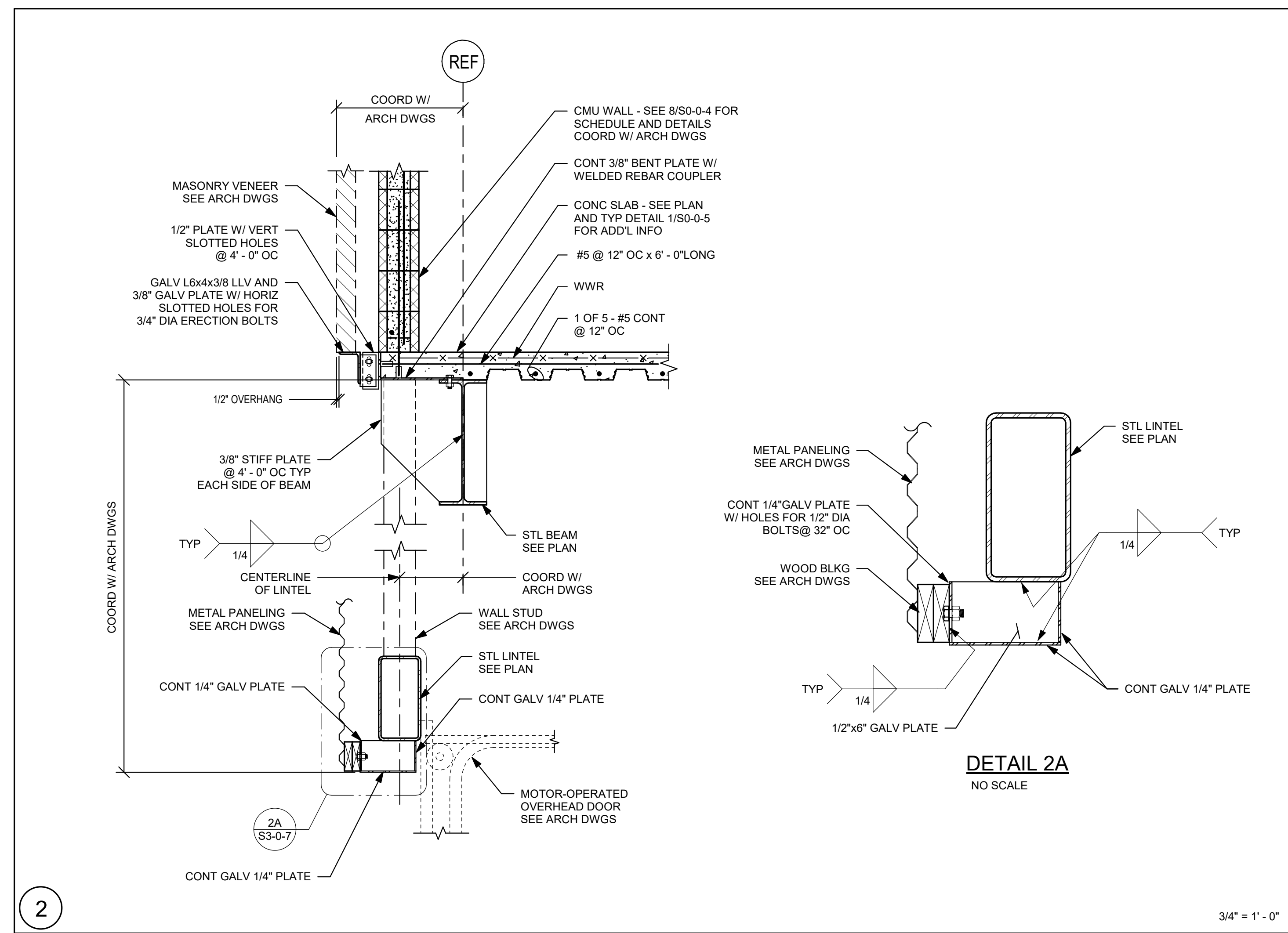
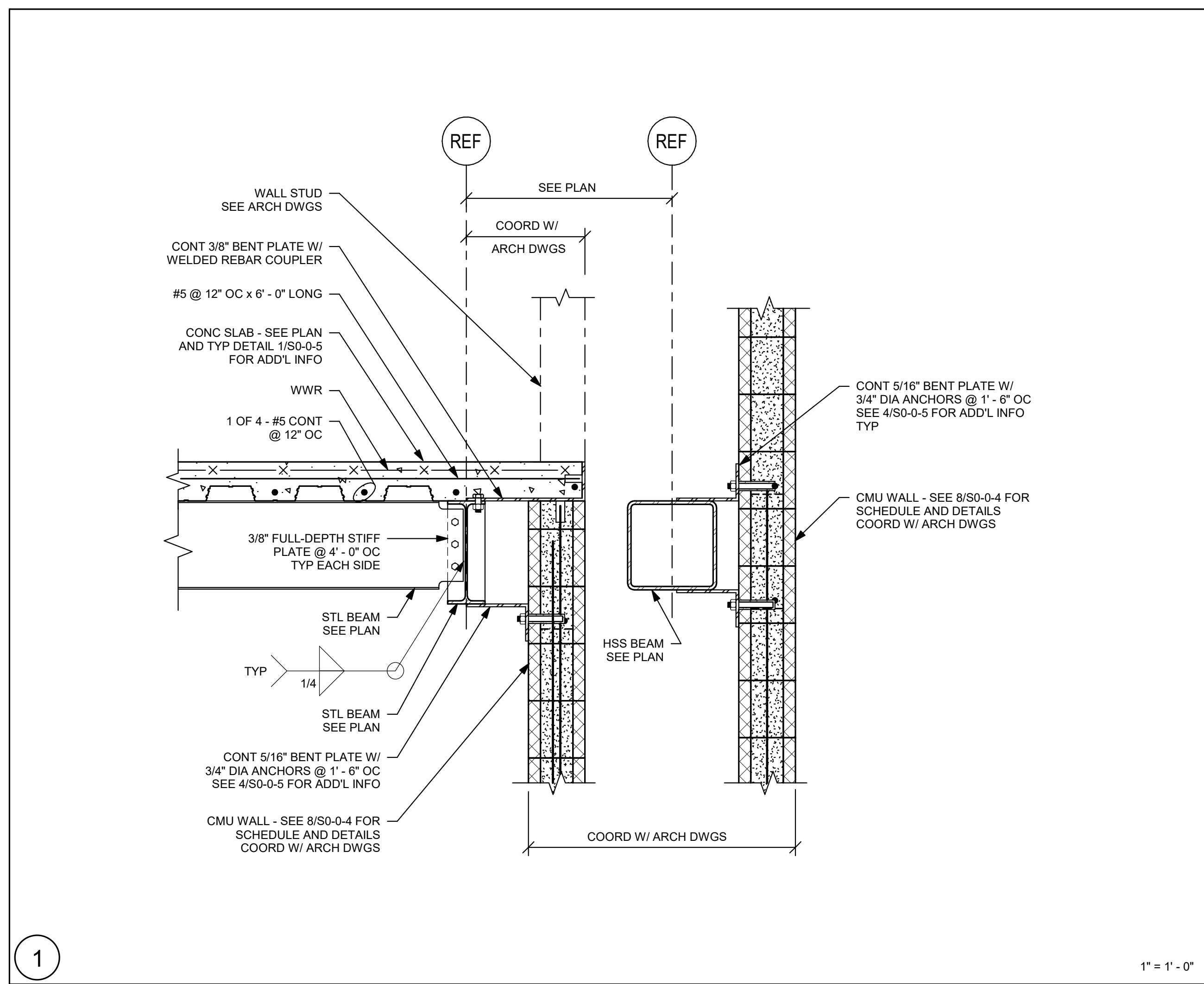
KEY PLAN



SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2003

S3-0-6



DRA

Drumsey Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning | Architecture | Interior Design

Tel: 617.954.1700
www.dra-inc.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.

Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST		
SS-S-2	4/21/2023	STRUCTURAL STEEL ADDENDUM 2

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING IS A PART OF EARLY STRUCTURAL BID PACKAGE

© COPYRIGHT 2021
DRUMSEY ROSANE ANDERSON, INC.

MSBA 90% CD SUBMISSION

MAY 12, 2023

KEY PLAN

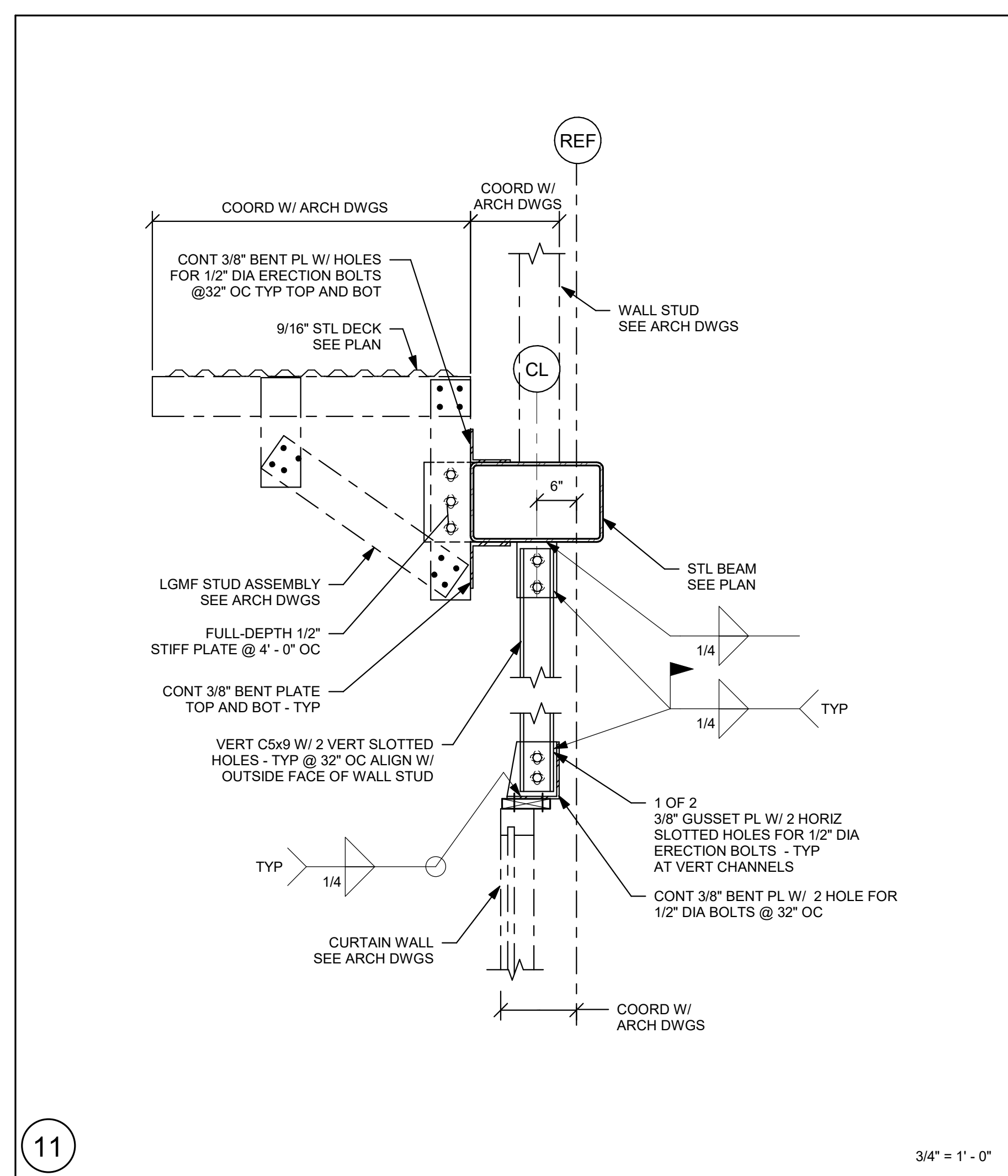
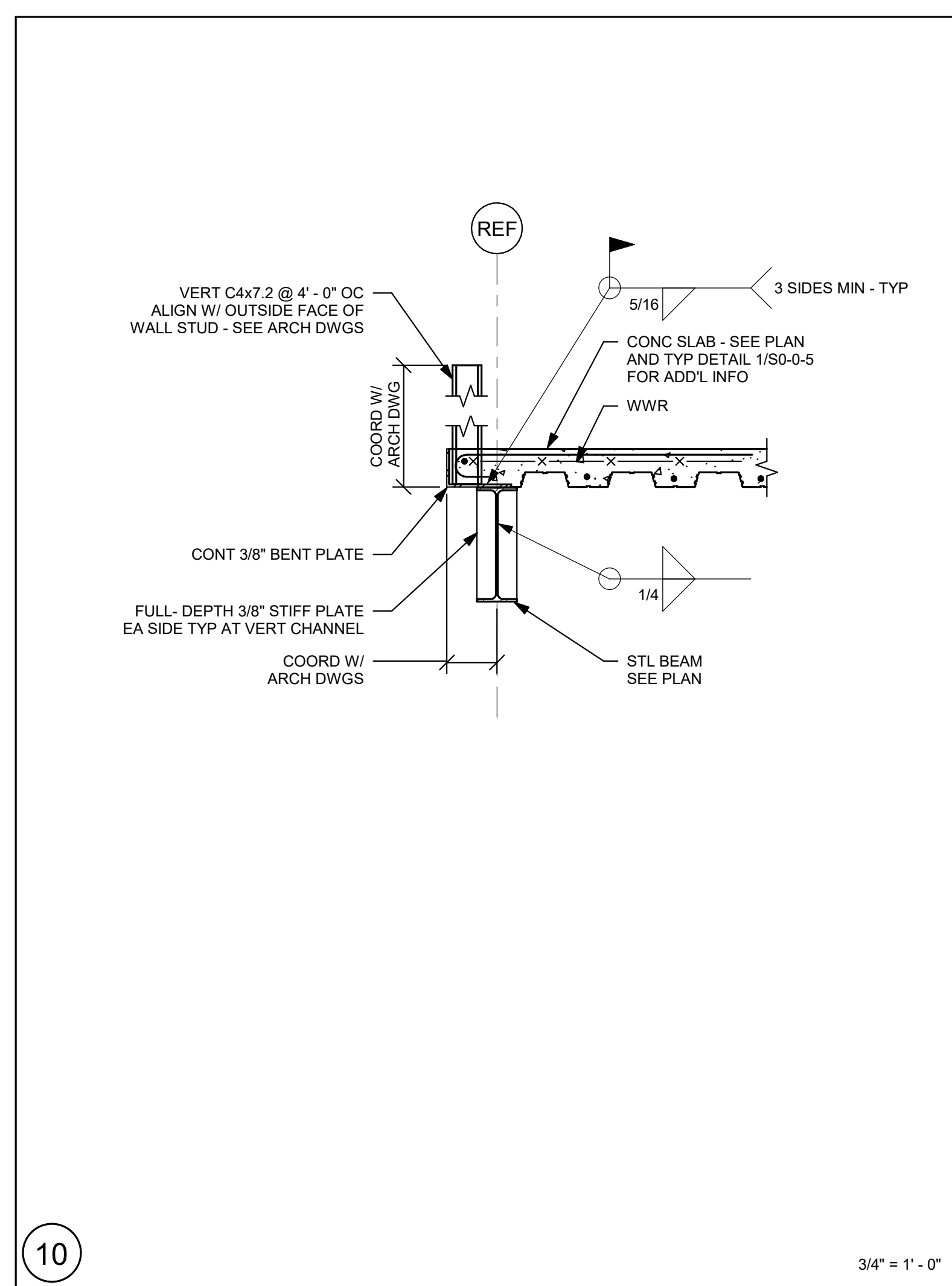
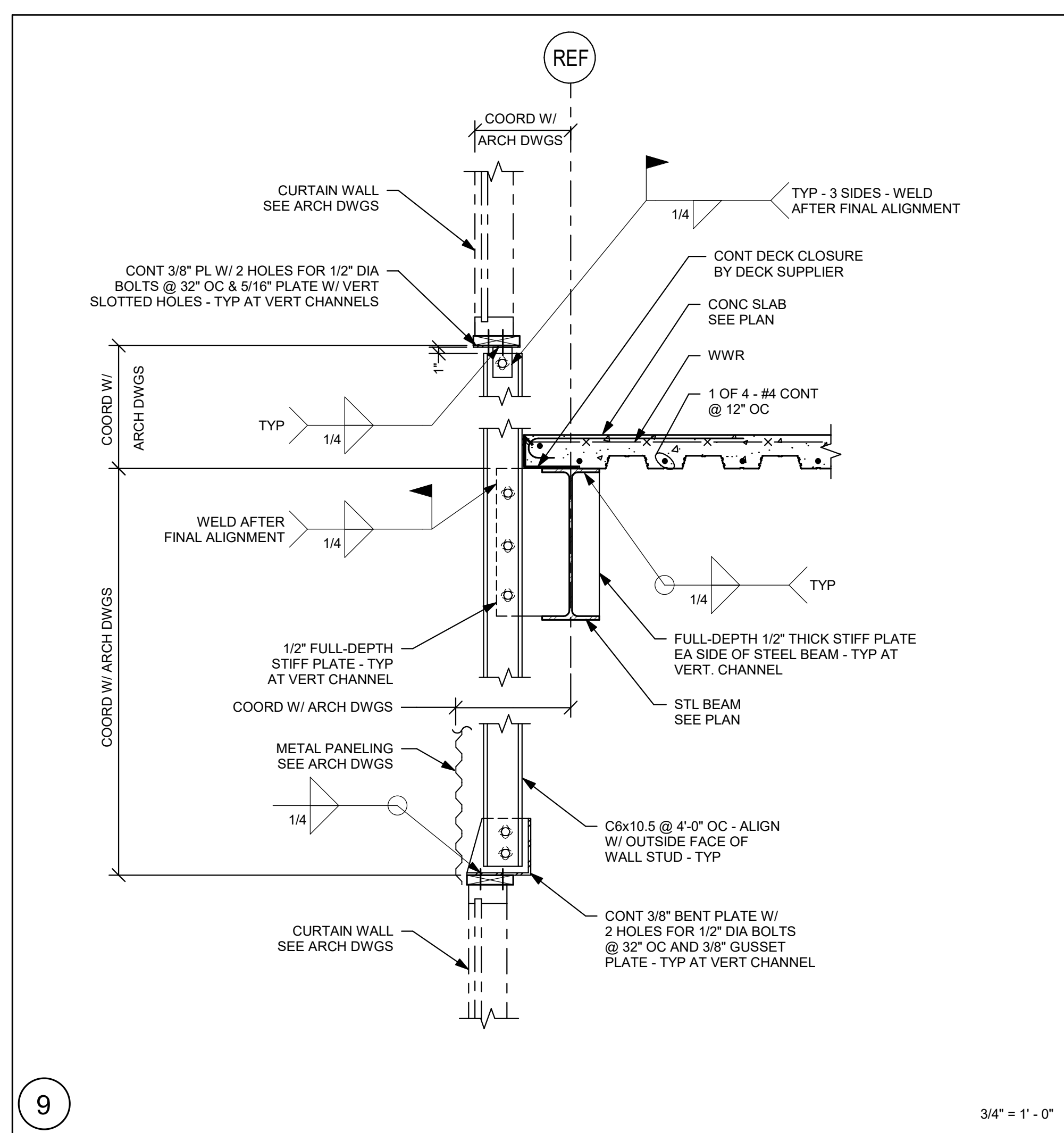
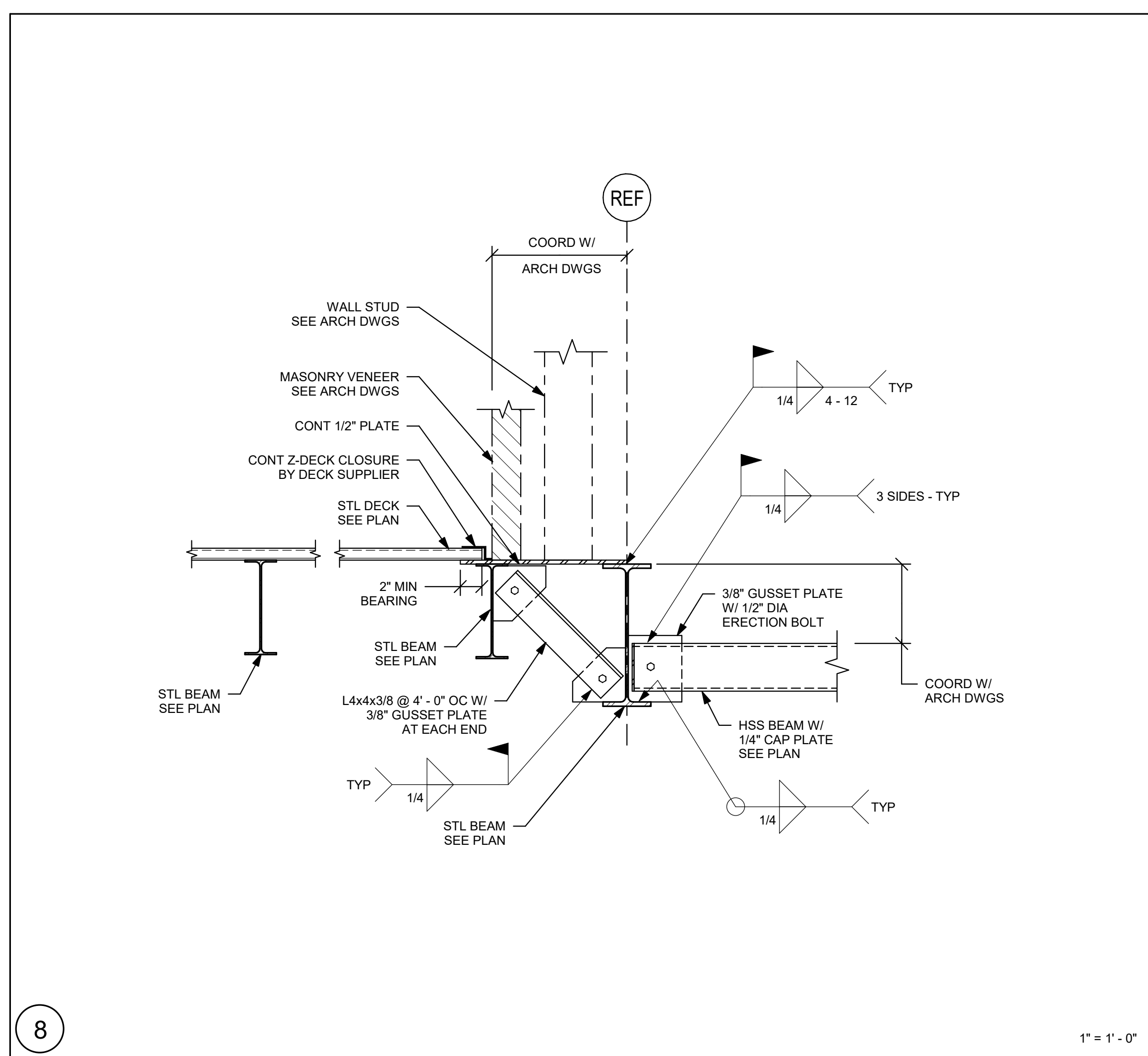
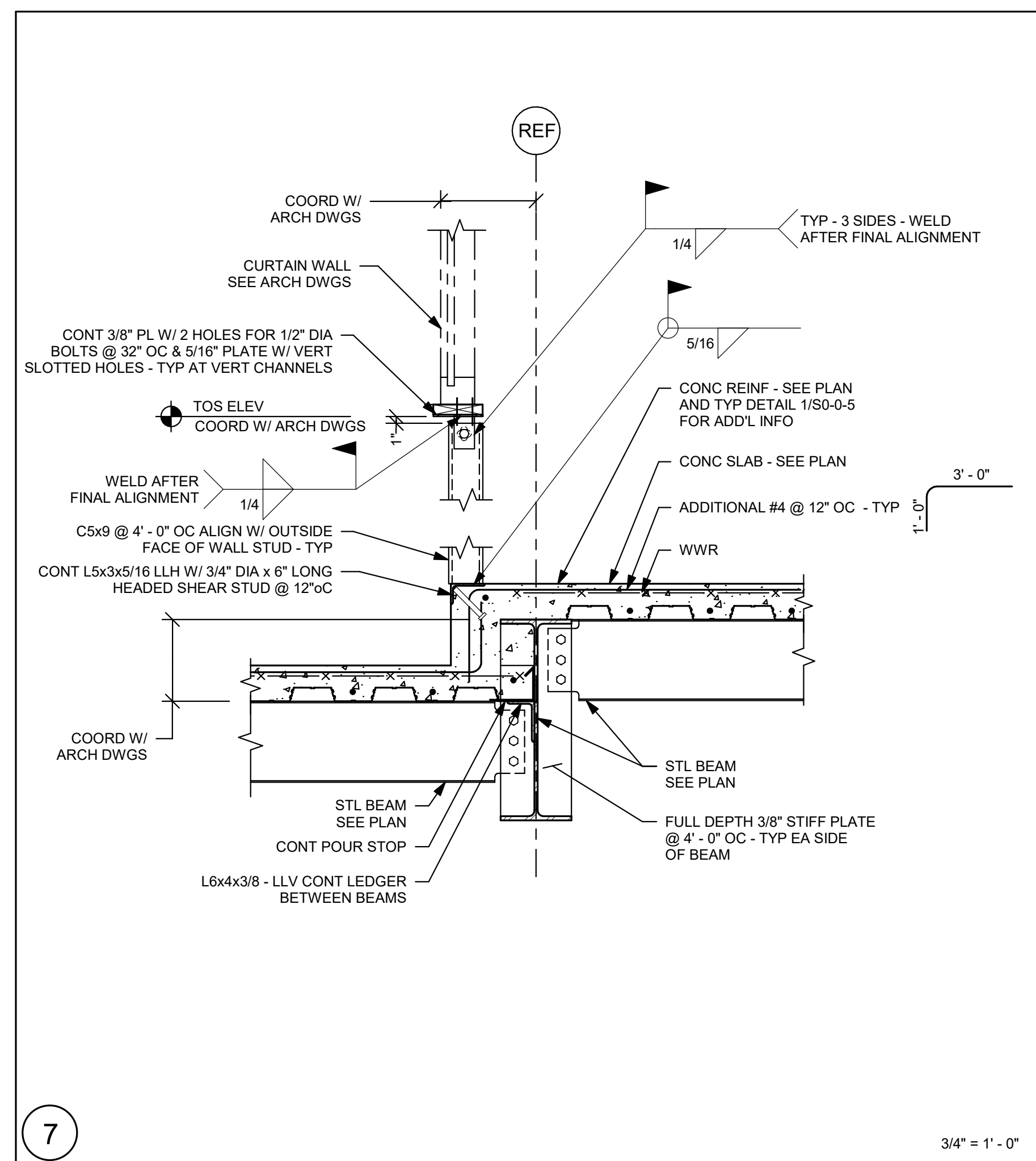
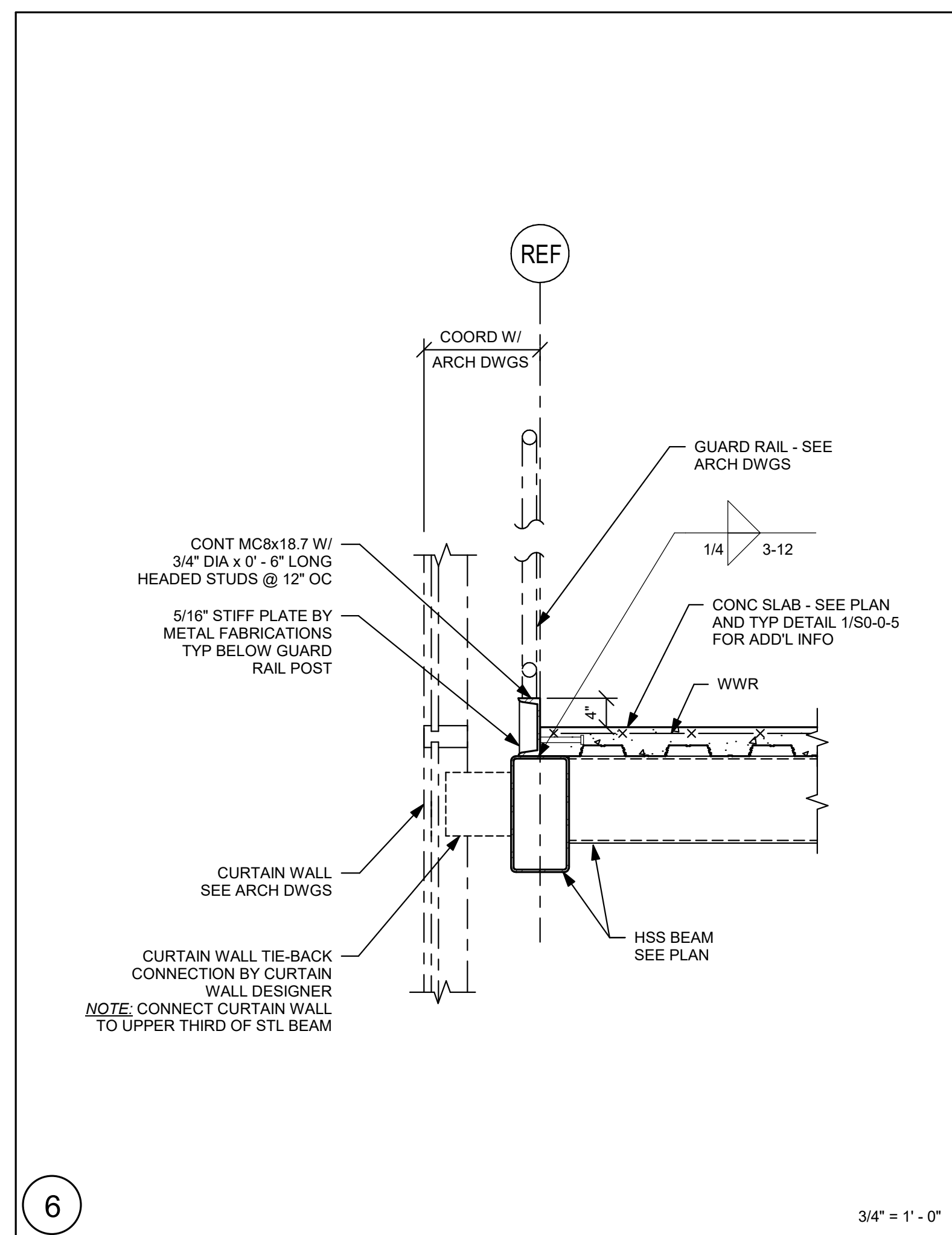
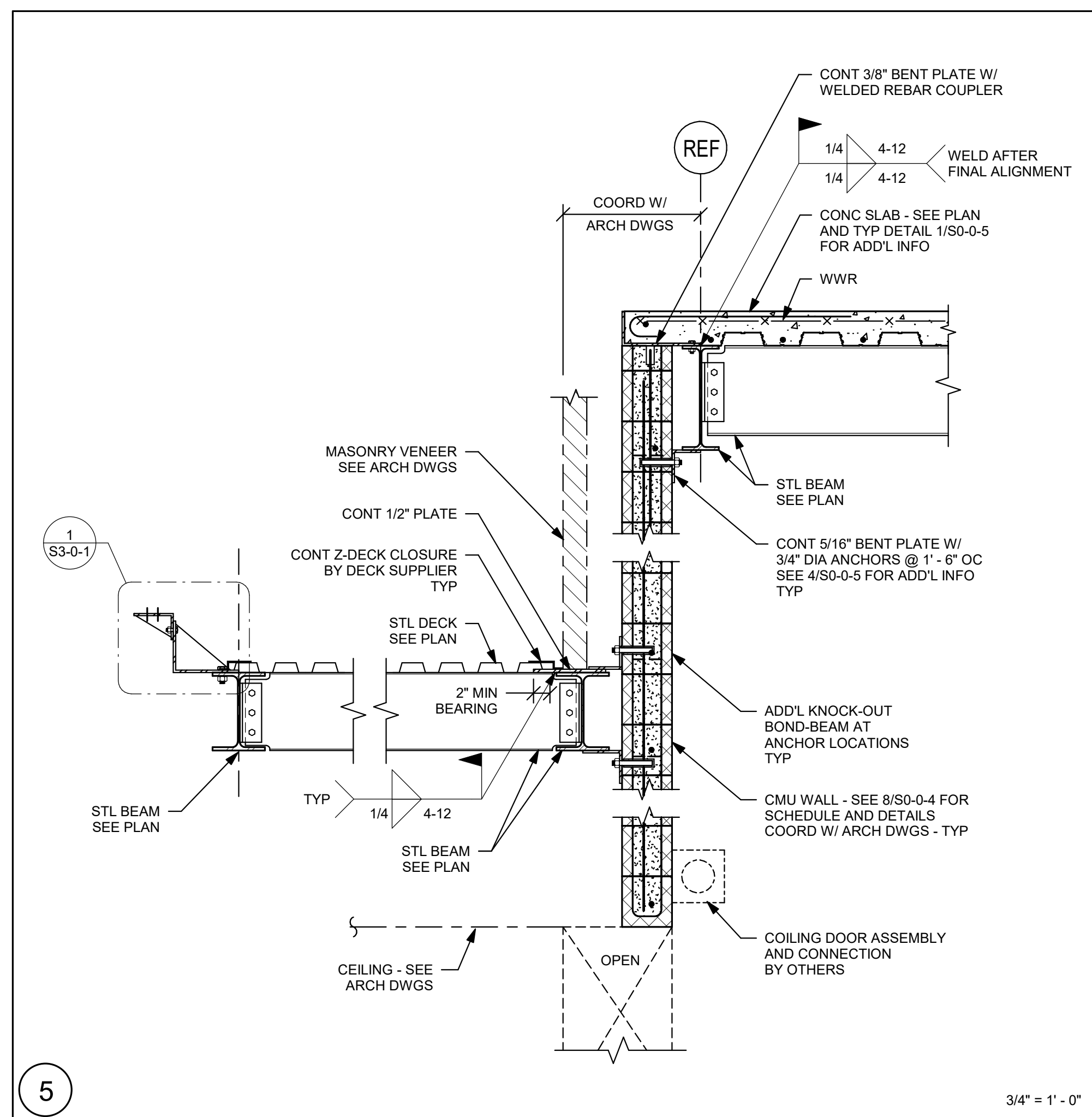
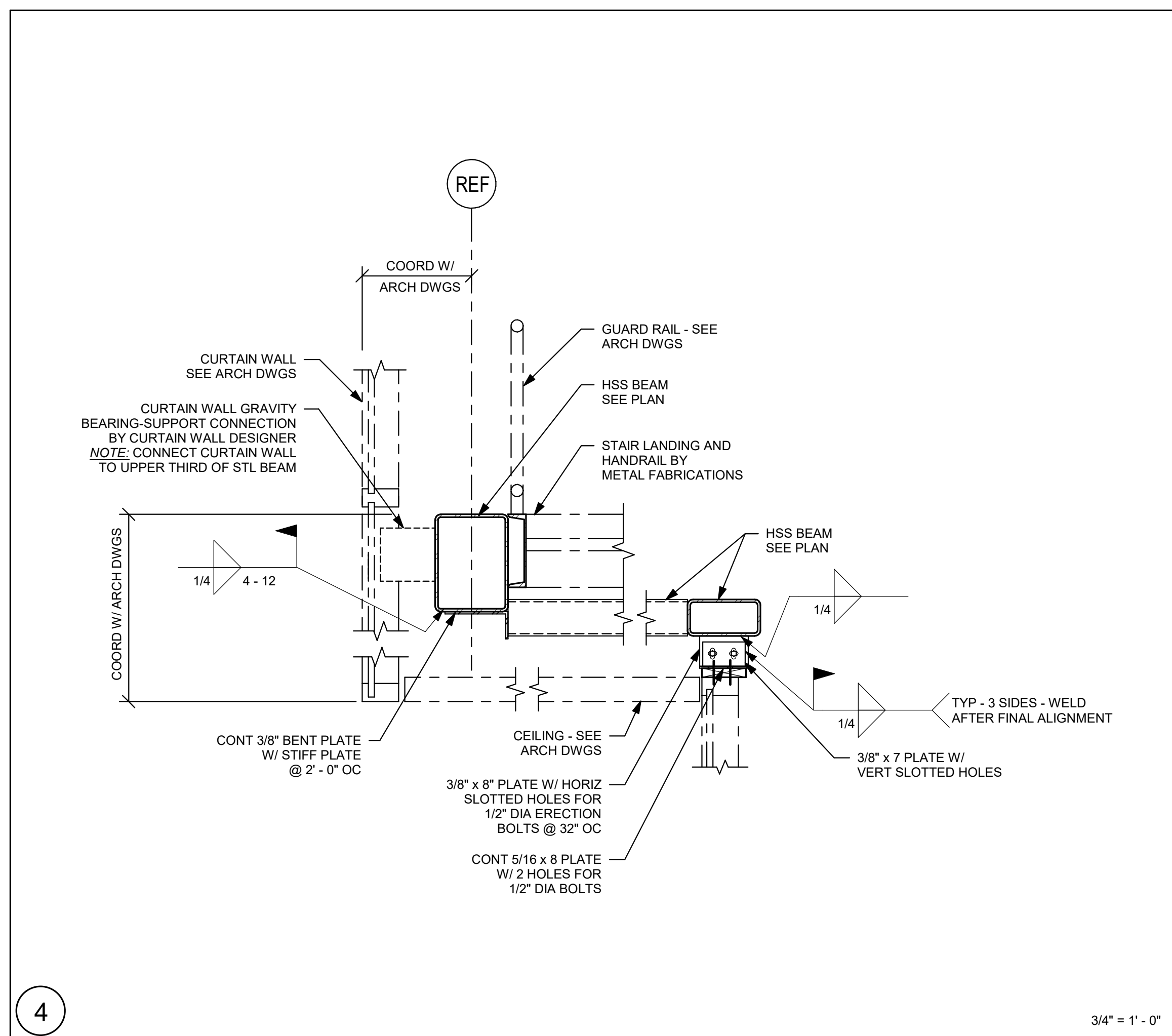
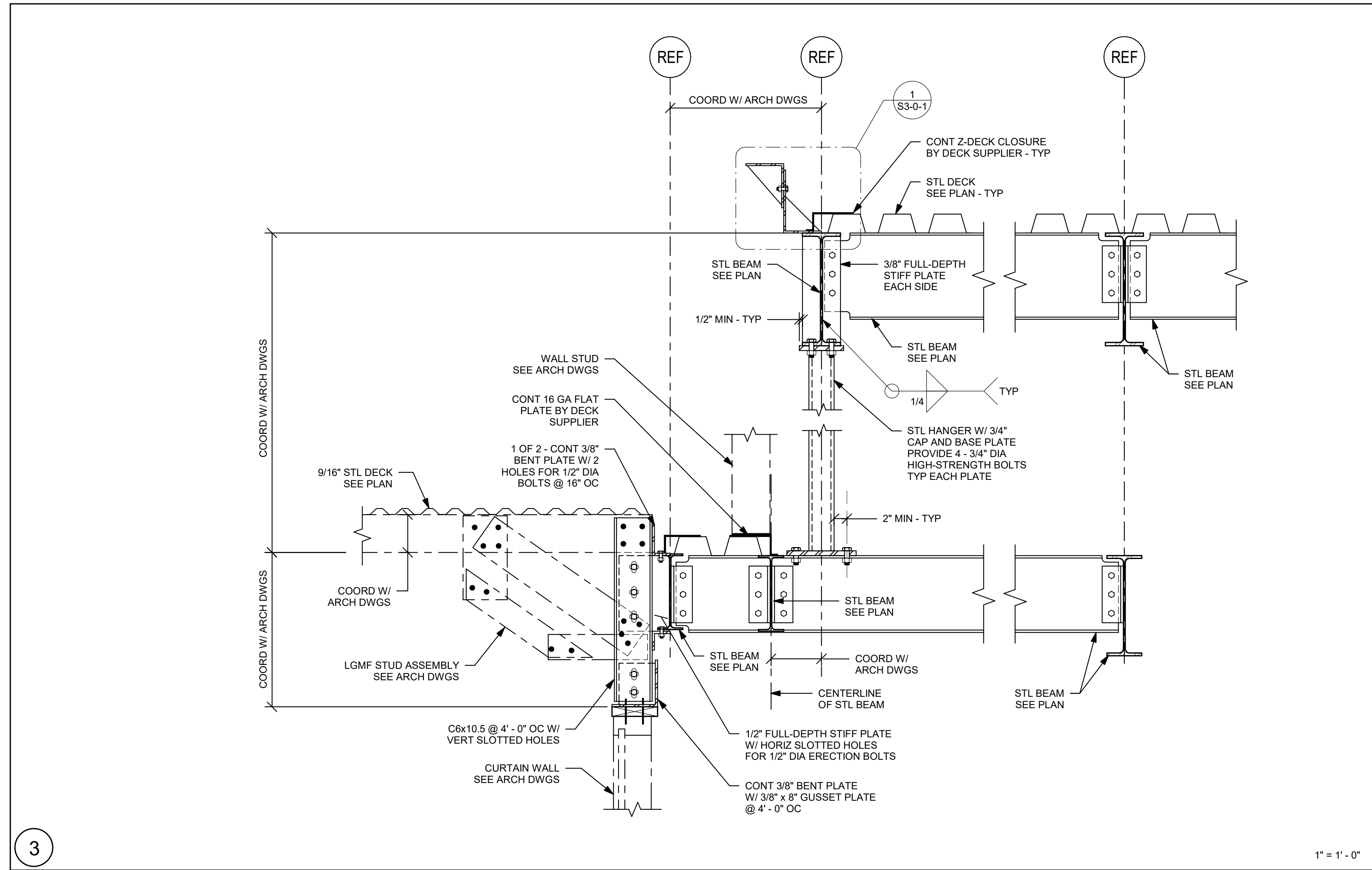
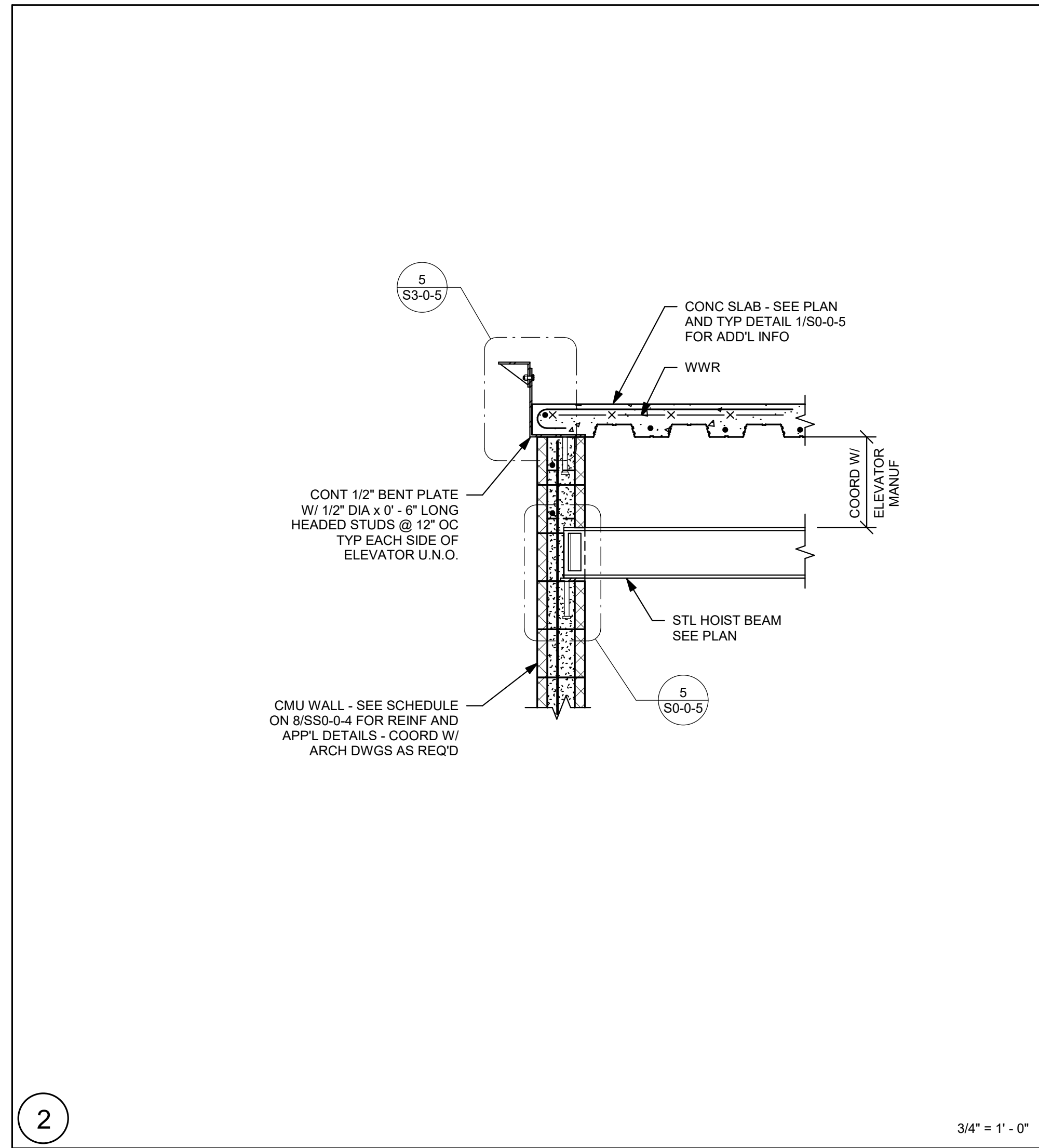
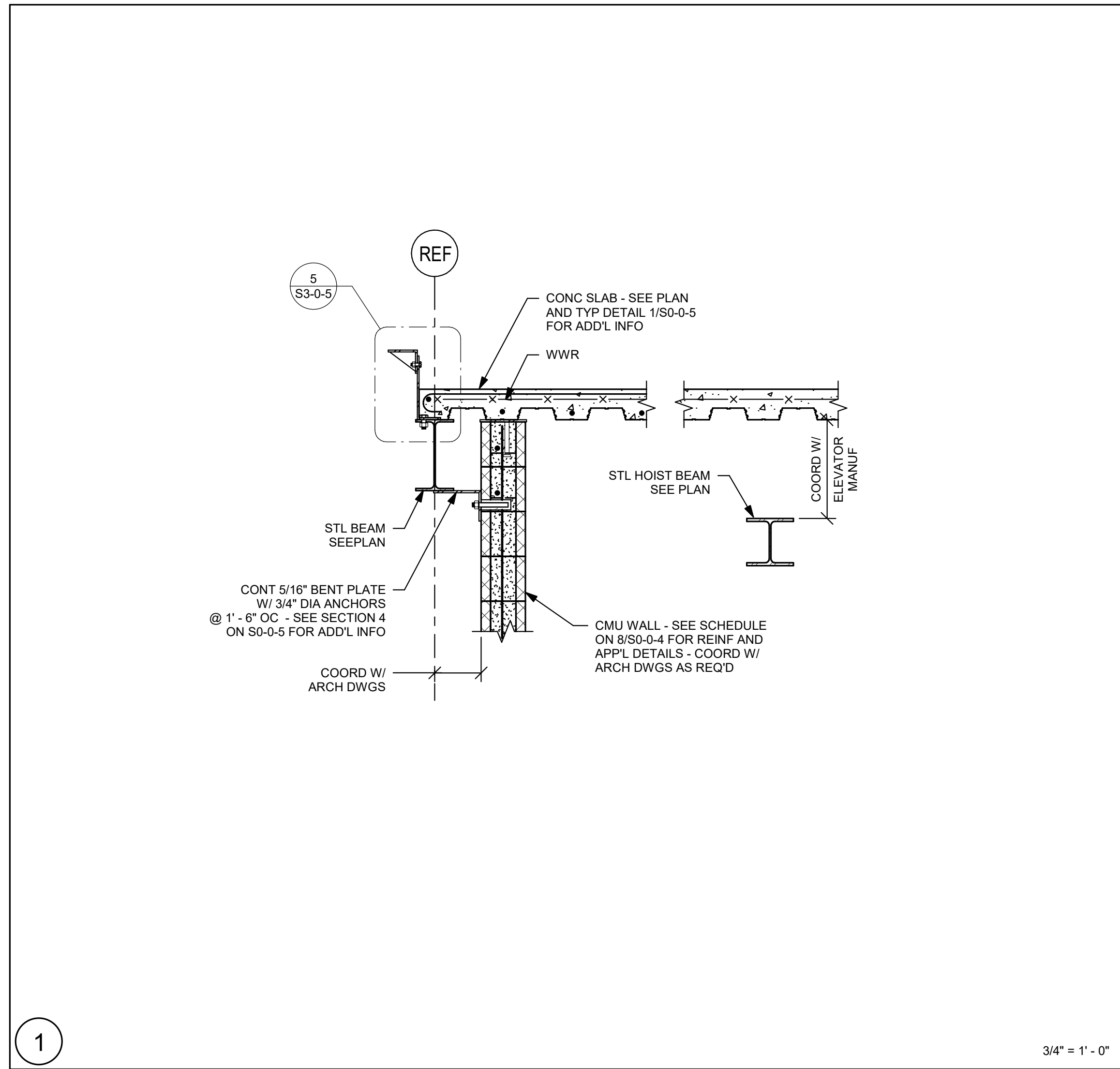
PROJECT NORTH

MAGNETIC NORTH

SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S3-0-7



**NORTHEAST
METRO TECH**

100 Hemlock Rd.
Wakefield, MA 01880

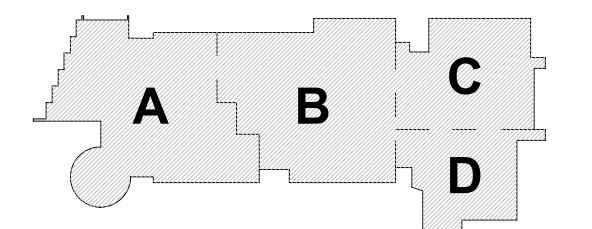
EDG
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

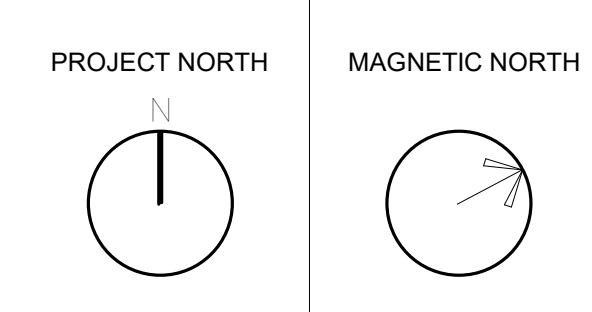
FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023



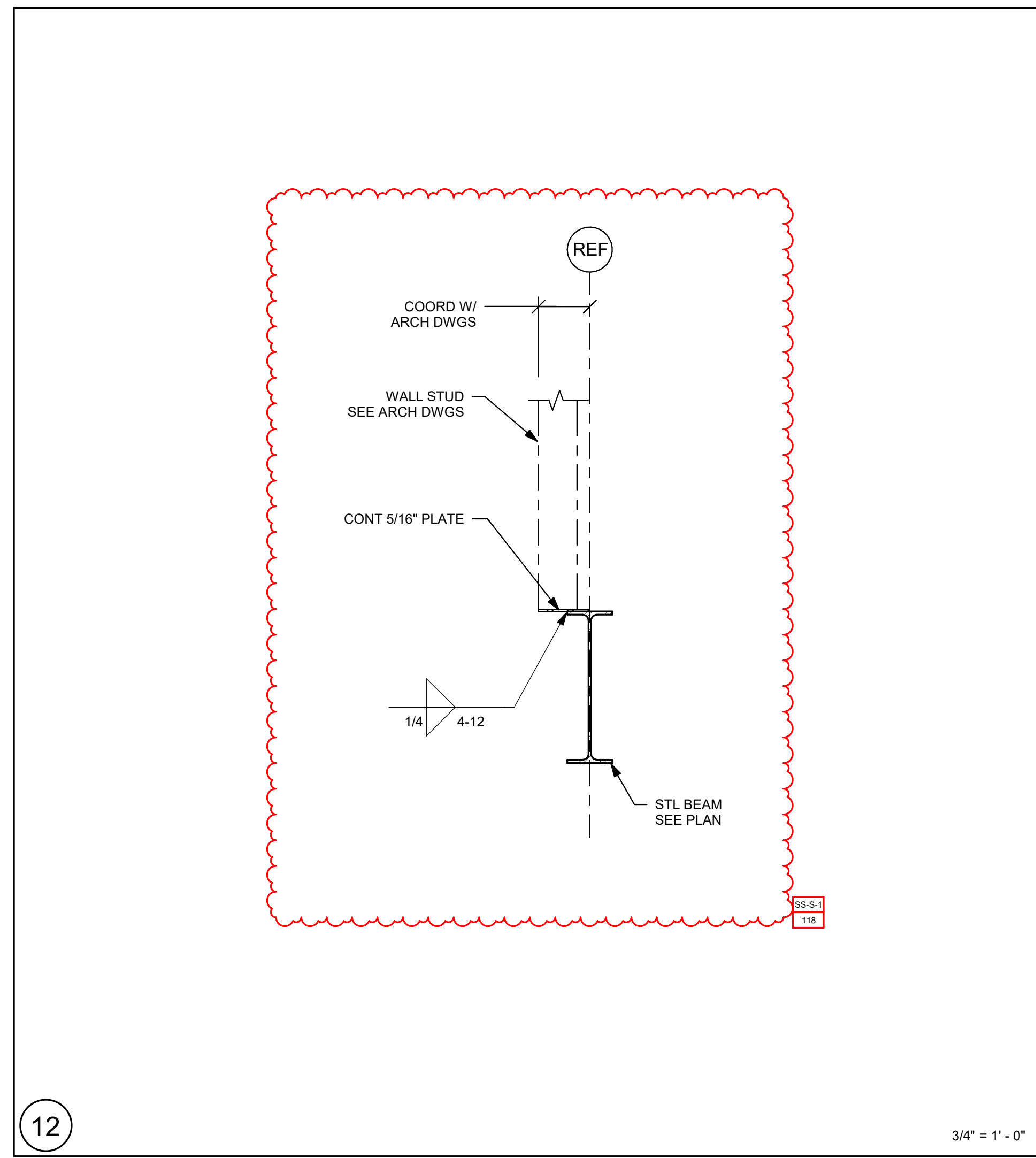
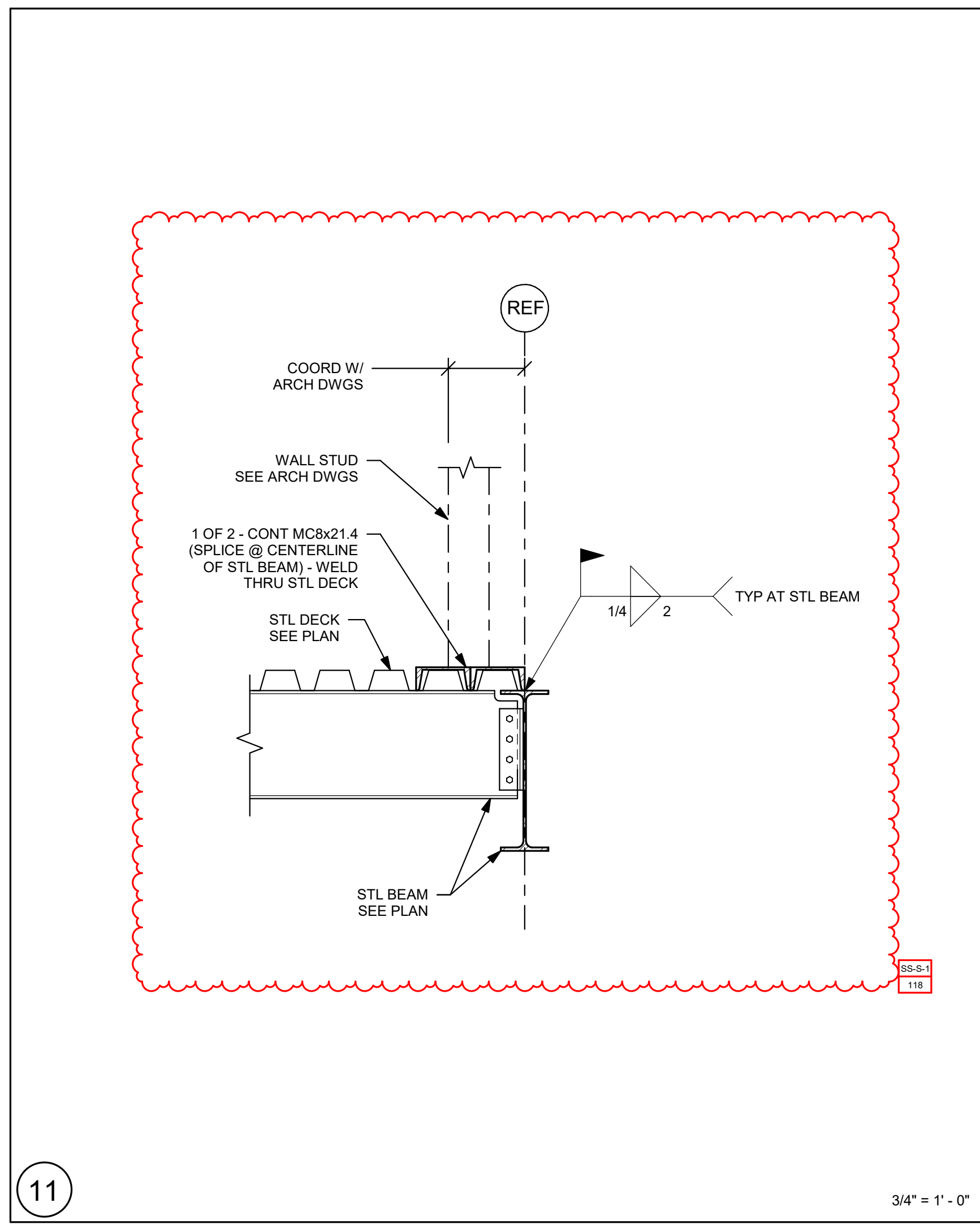
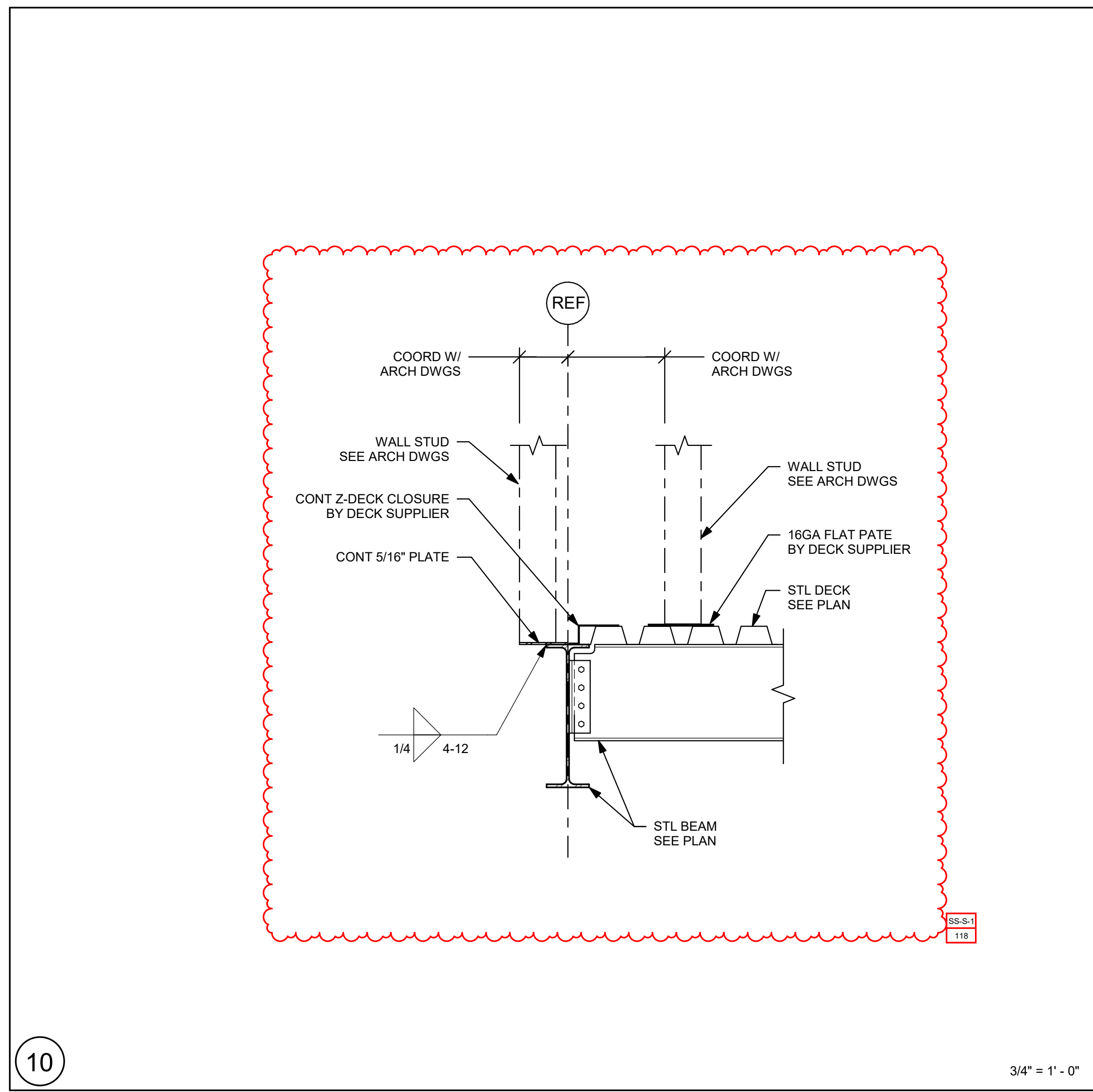
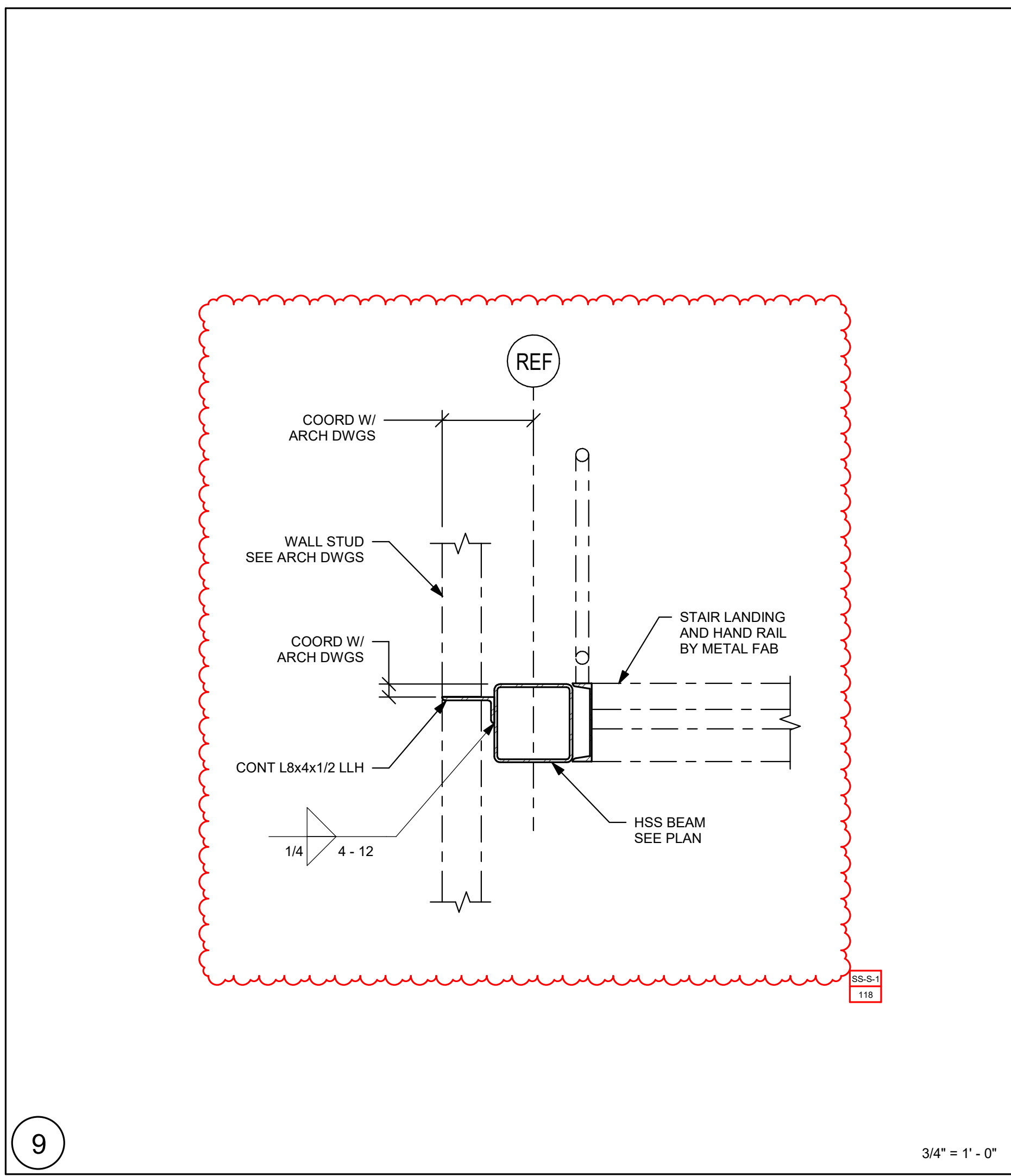
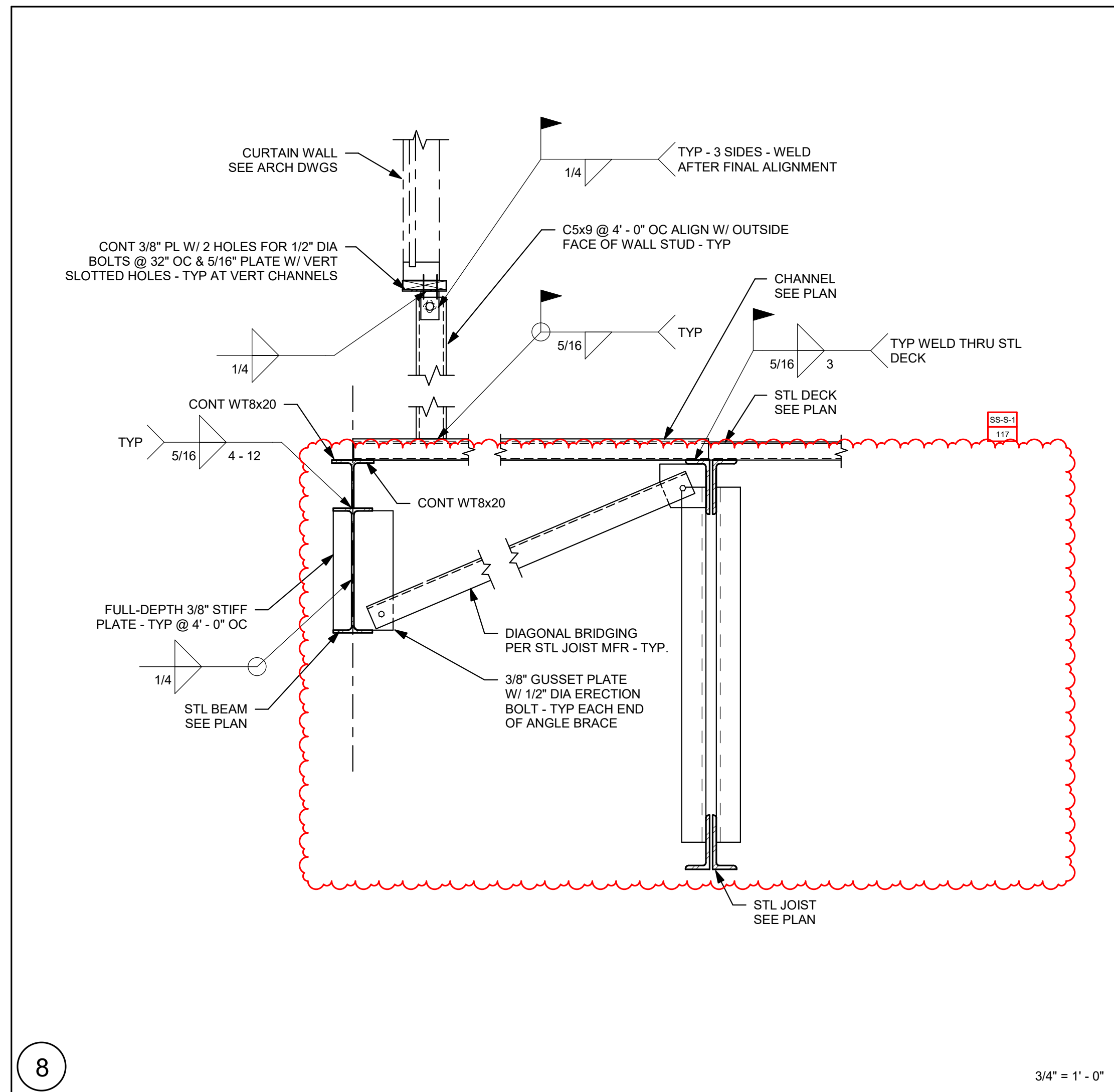
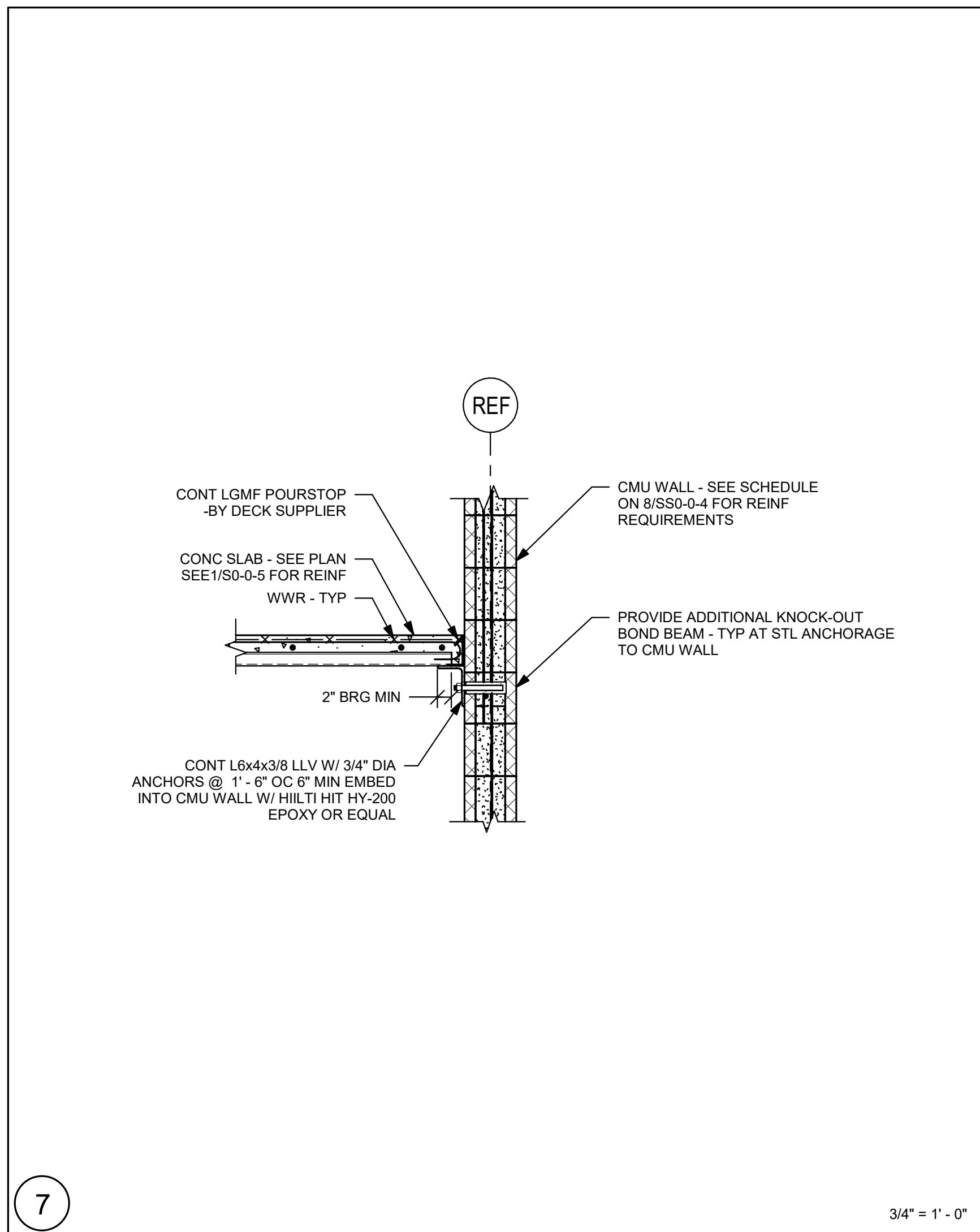
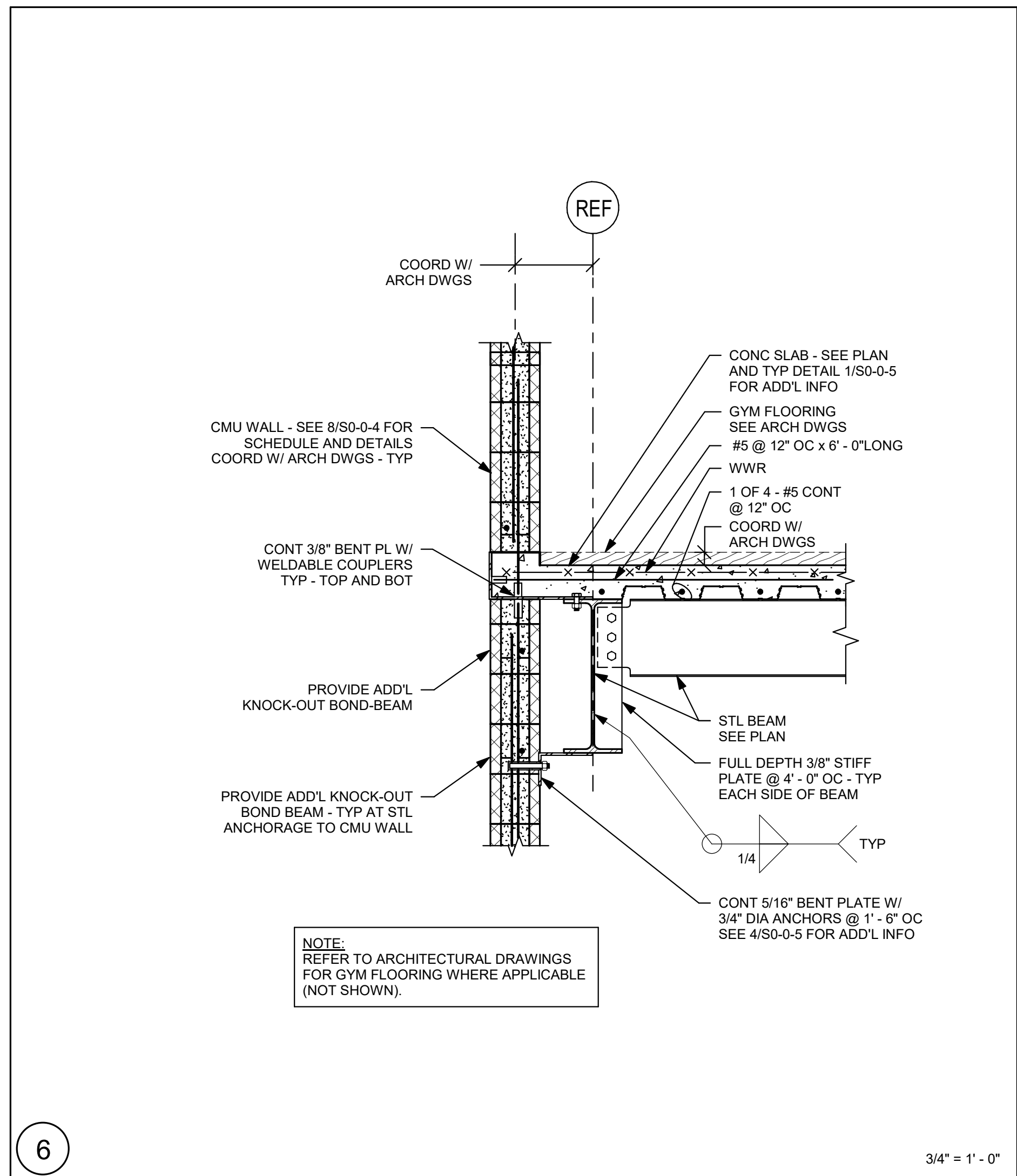
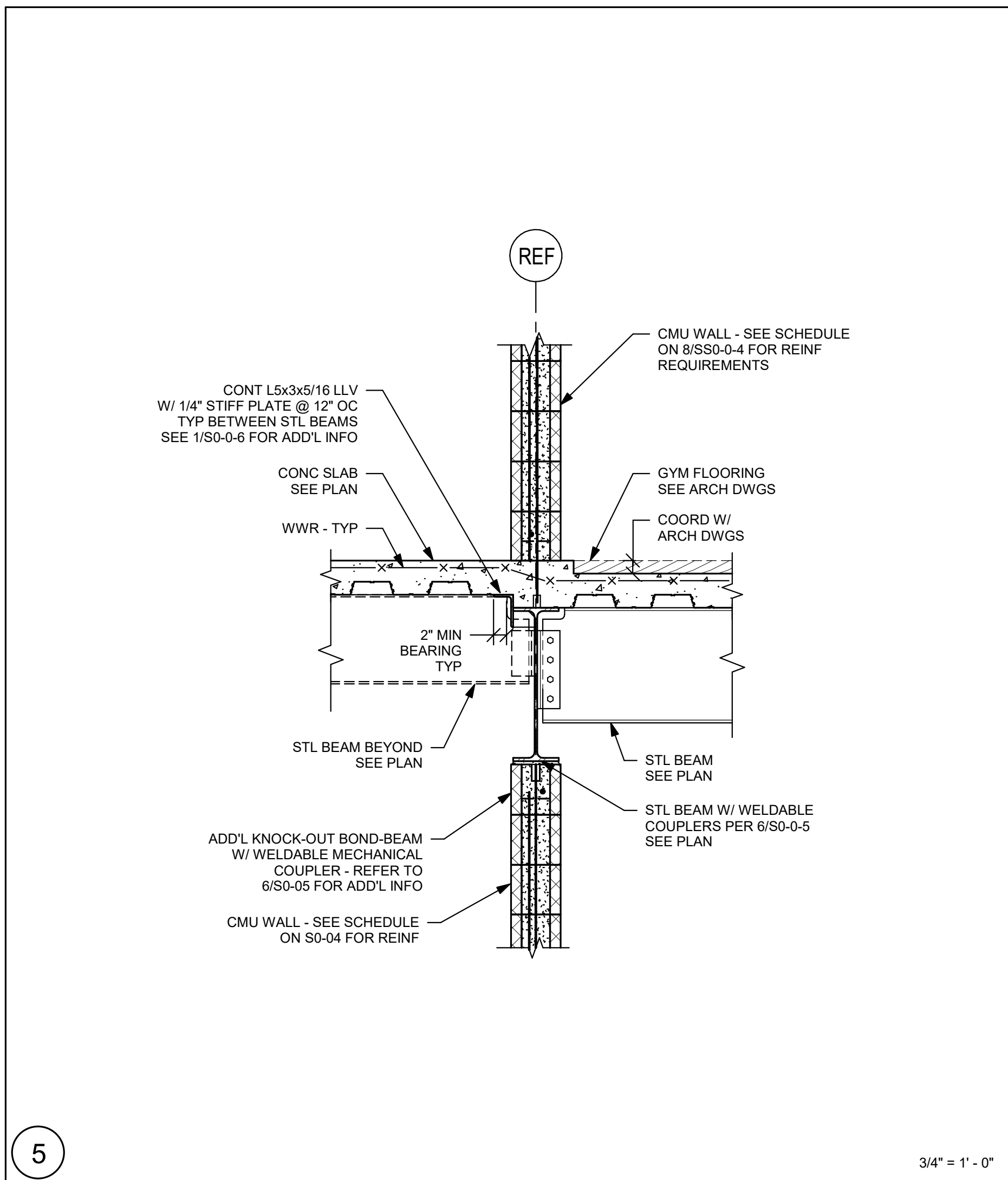
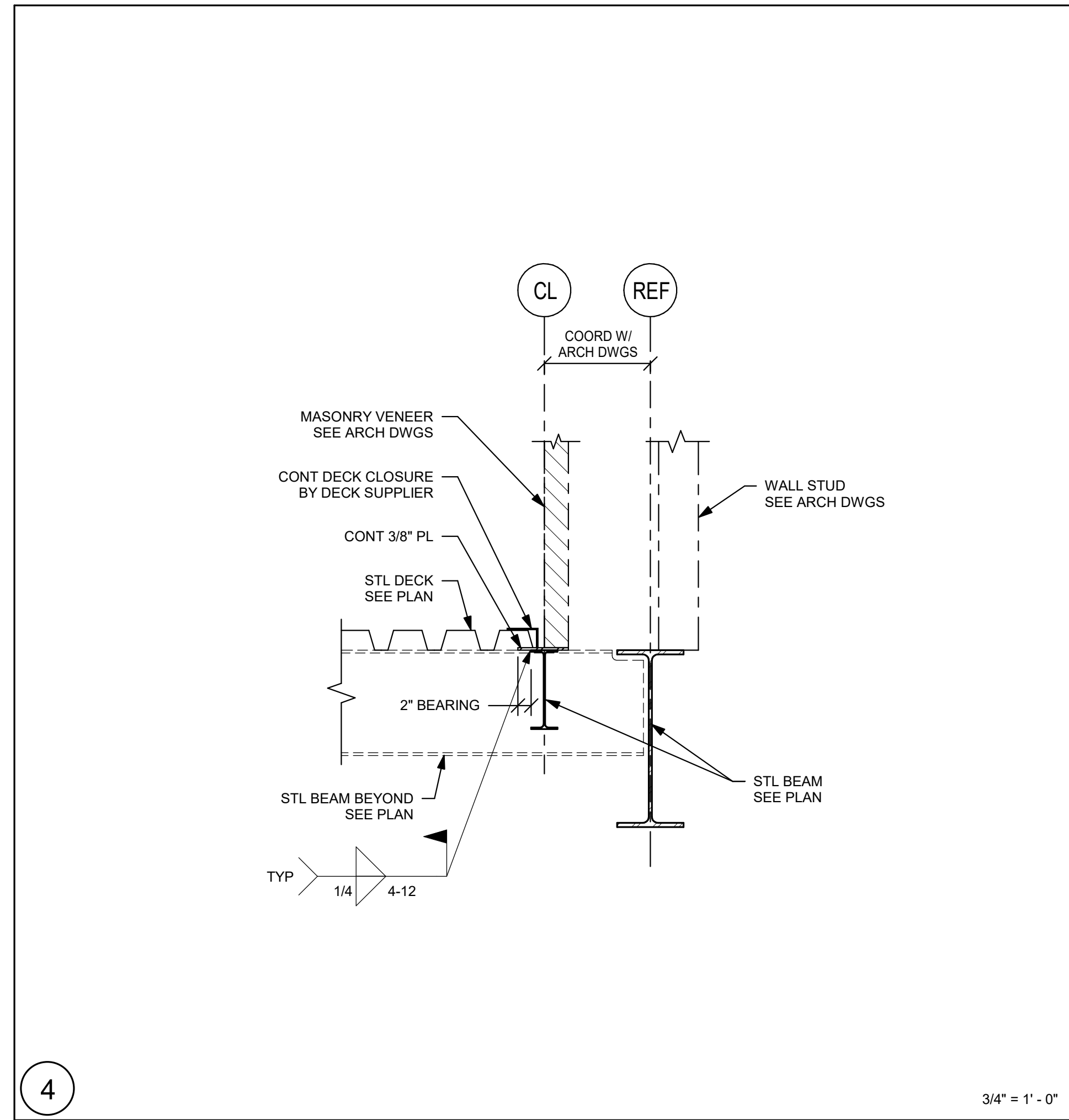
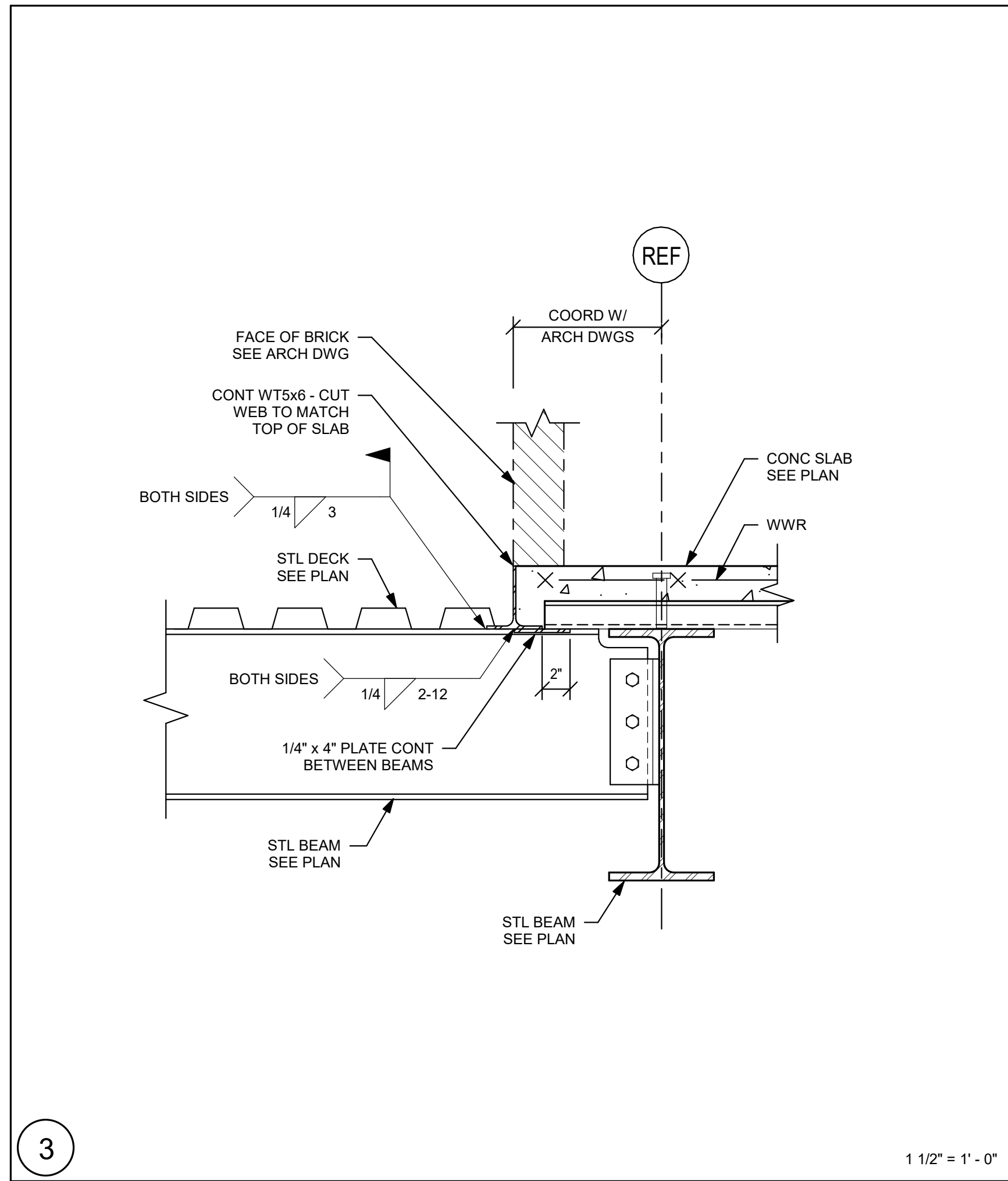
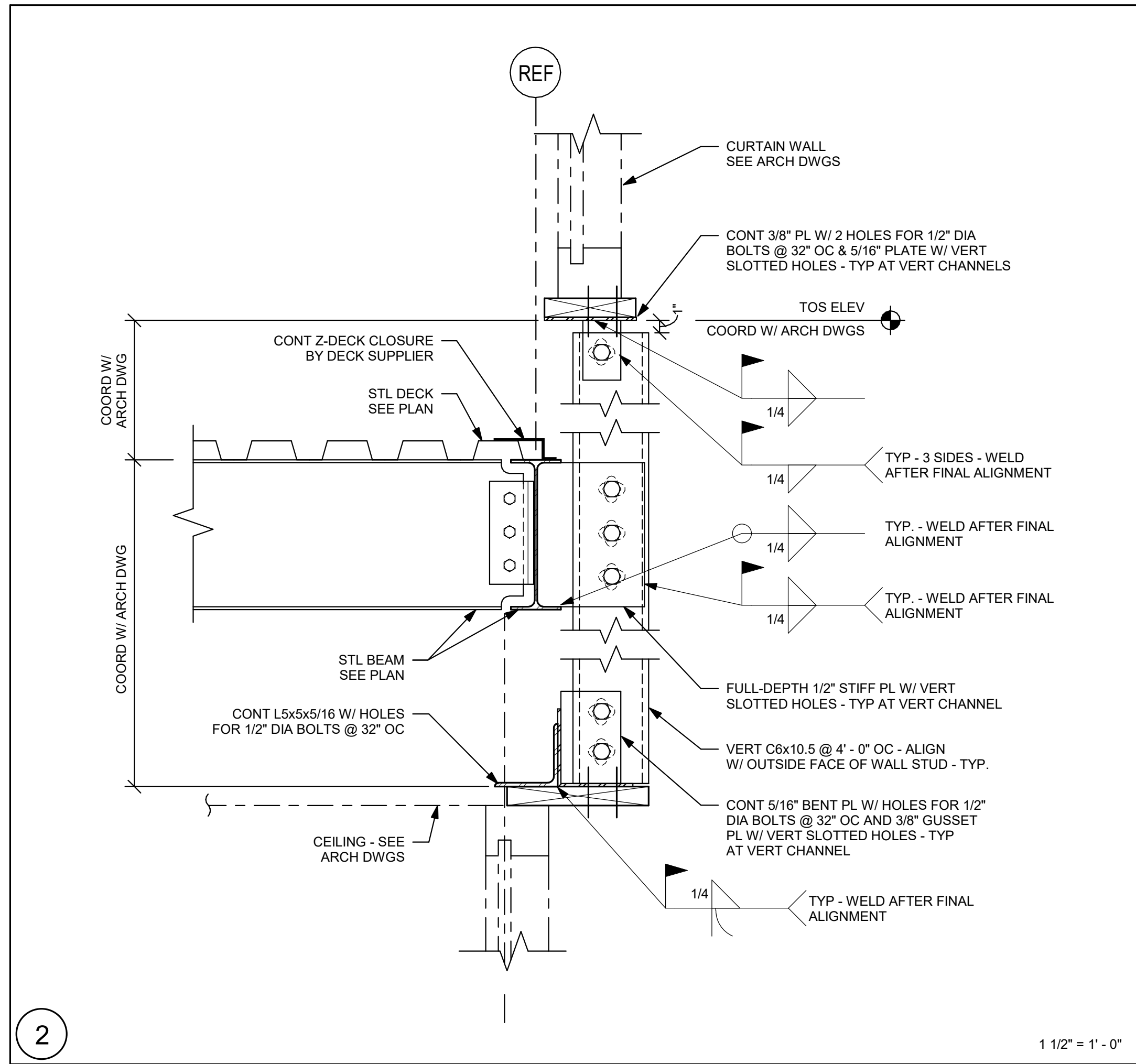
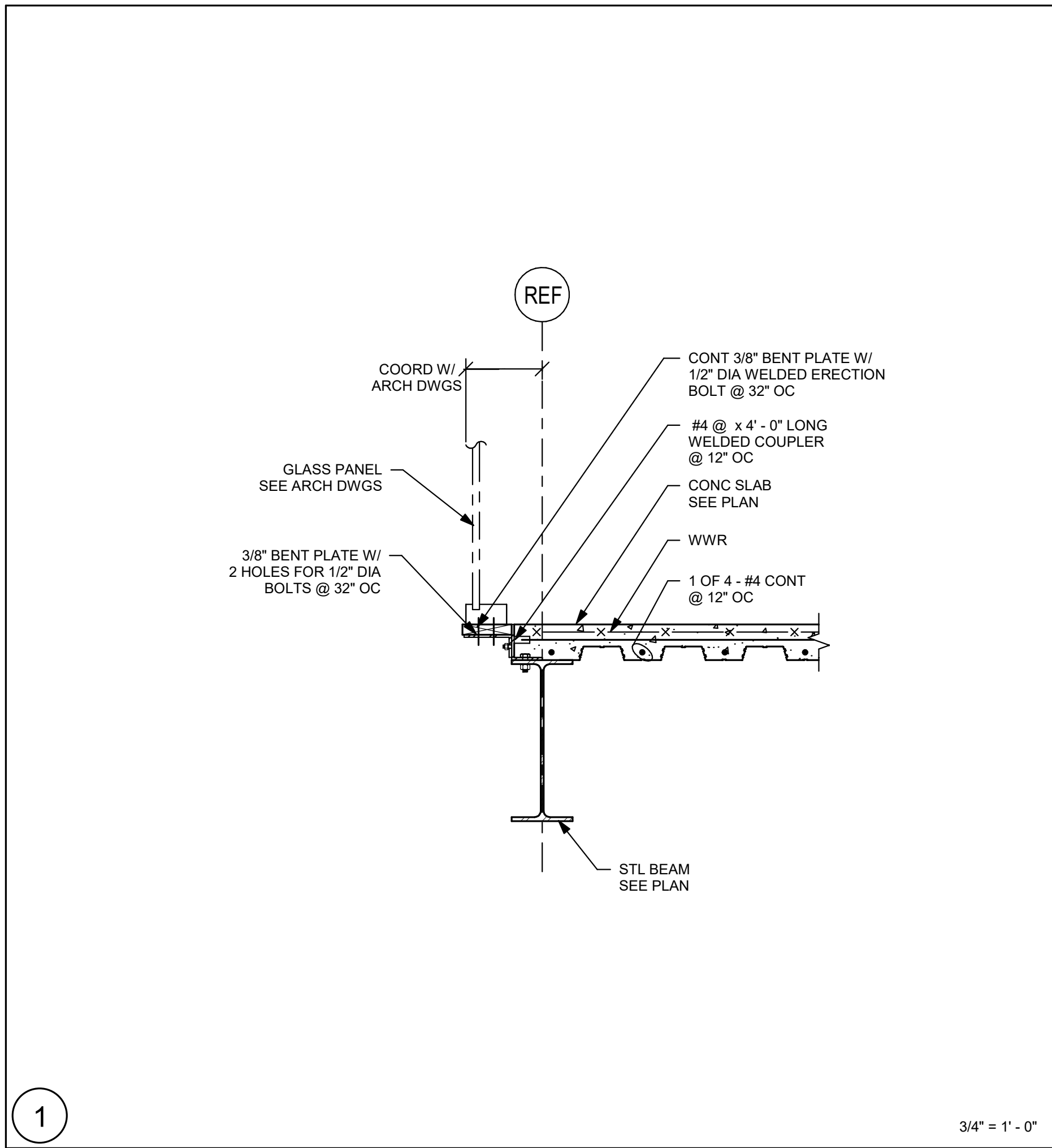
PROJECT NORTH



SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S3-0-8



DRA

DrummeY Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning | Architecture | Interior Design

Tel: 617.954.1700
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.

Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST		
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING IS A PART OF EARLY STRUCTURAL BID PACKAGE

MSBA 90% CD SUBMISSION

MAY 12, 2023

KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S3-0-9

DRA

Drumsey Rosane Anderson, Inc.

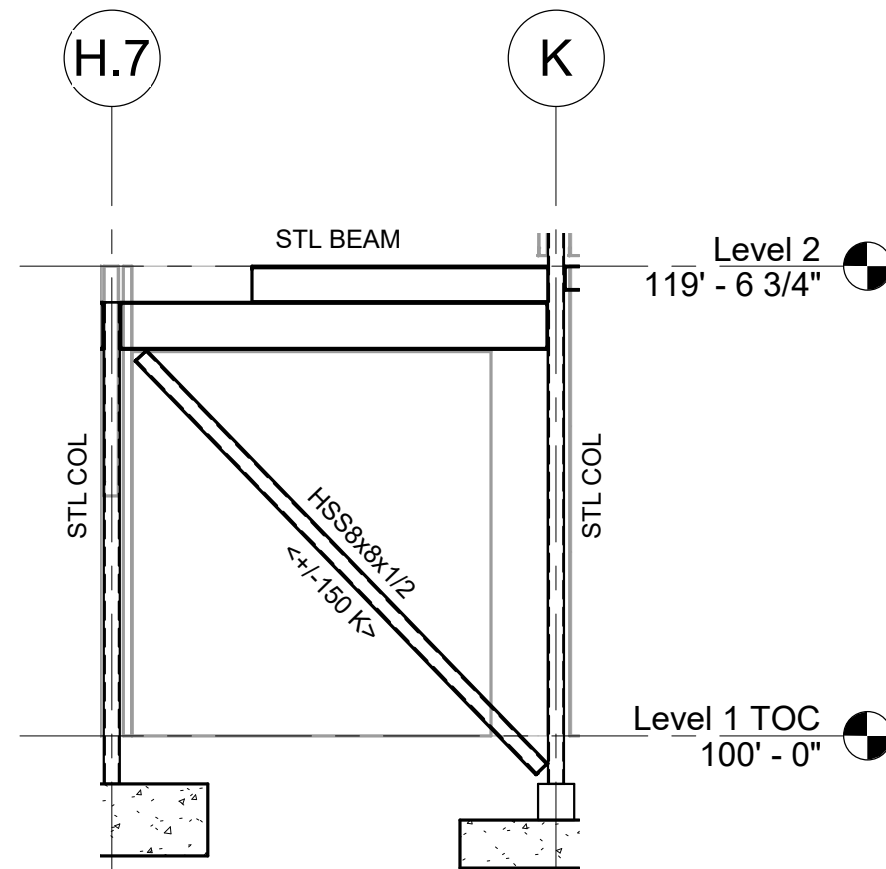
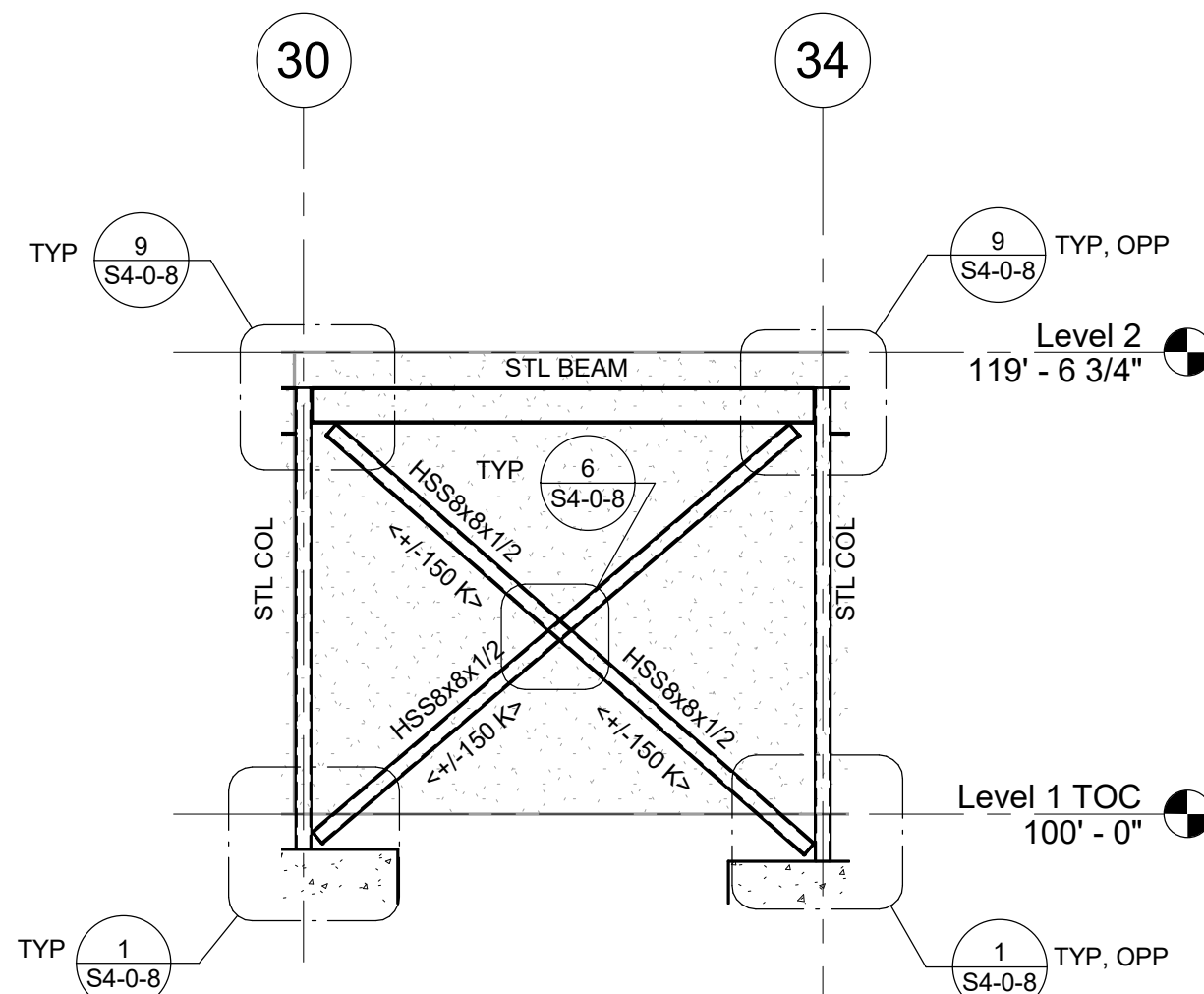
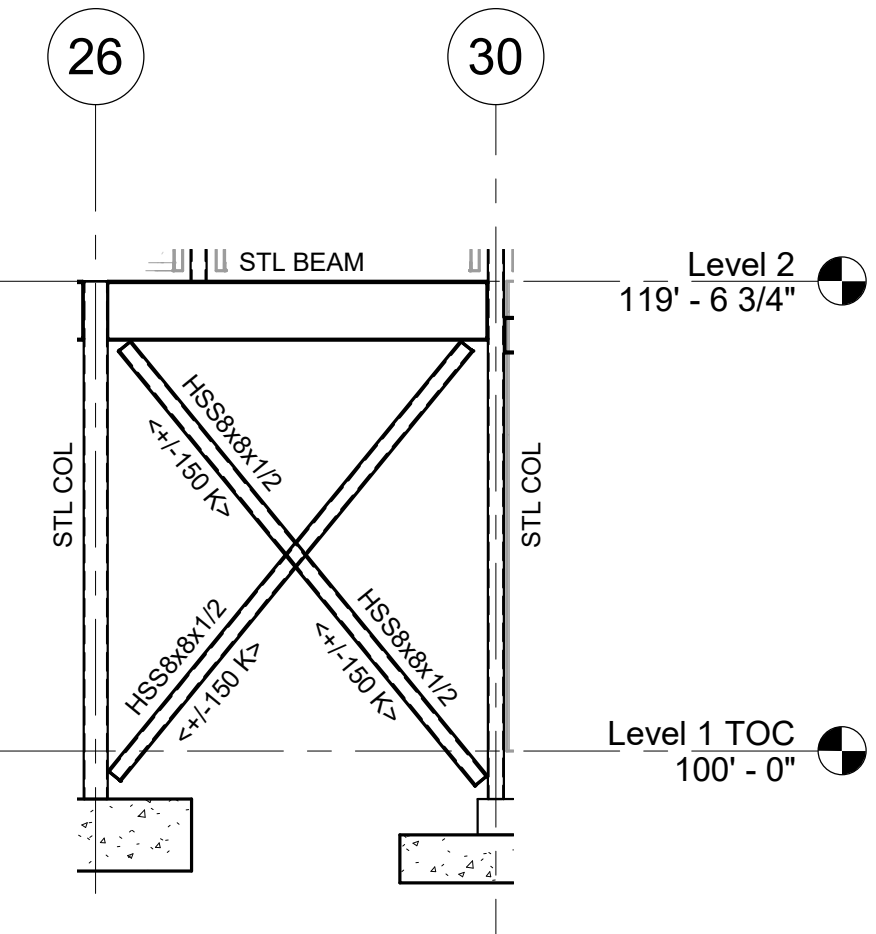
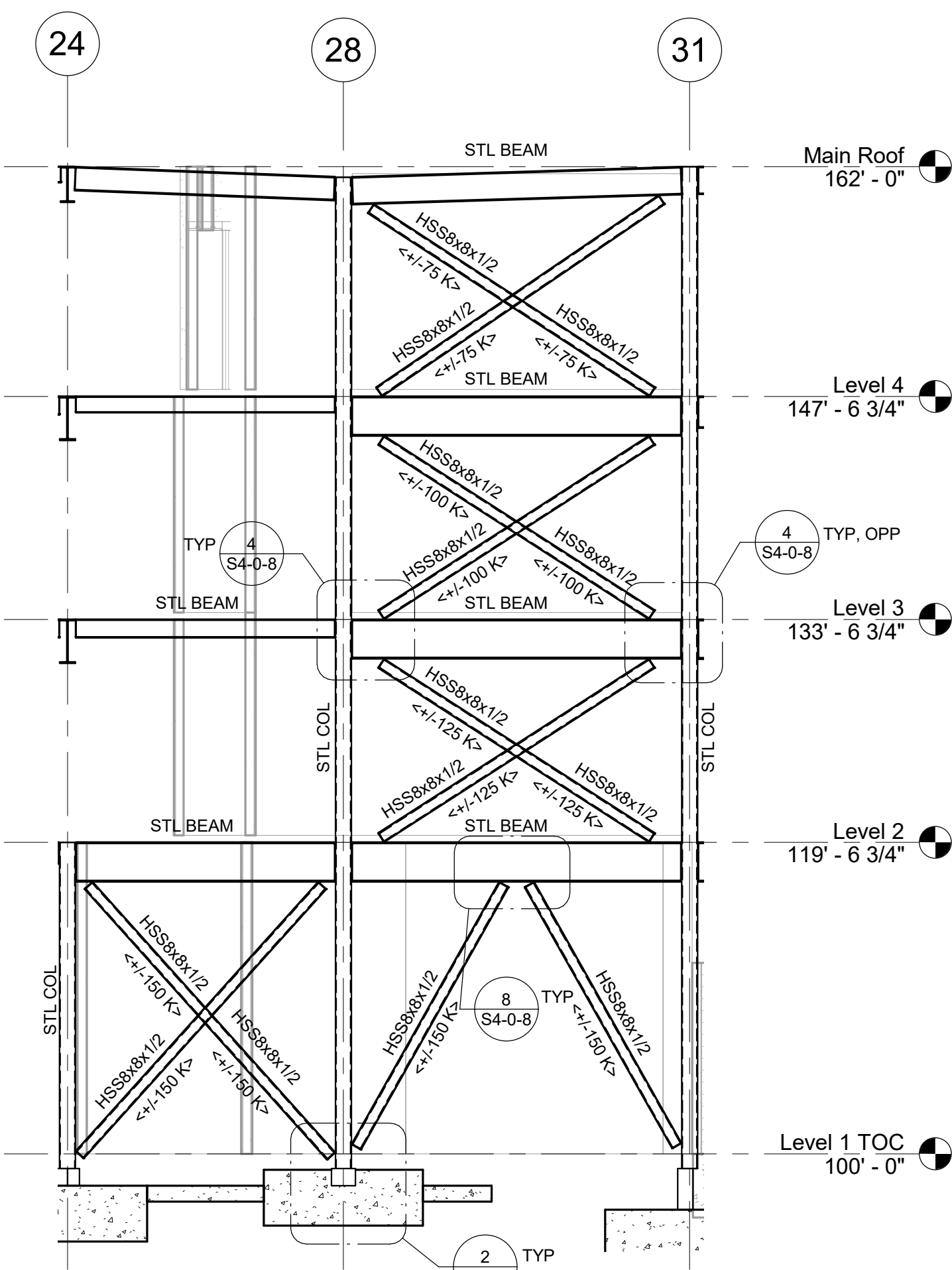
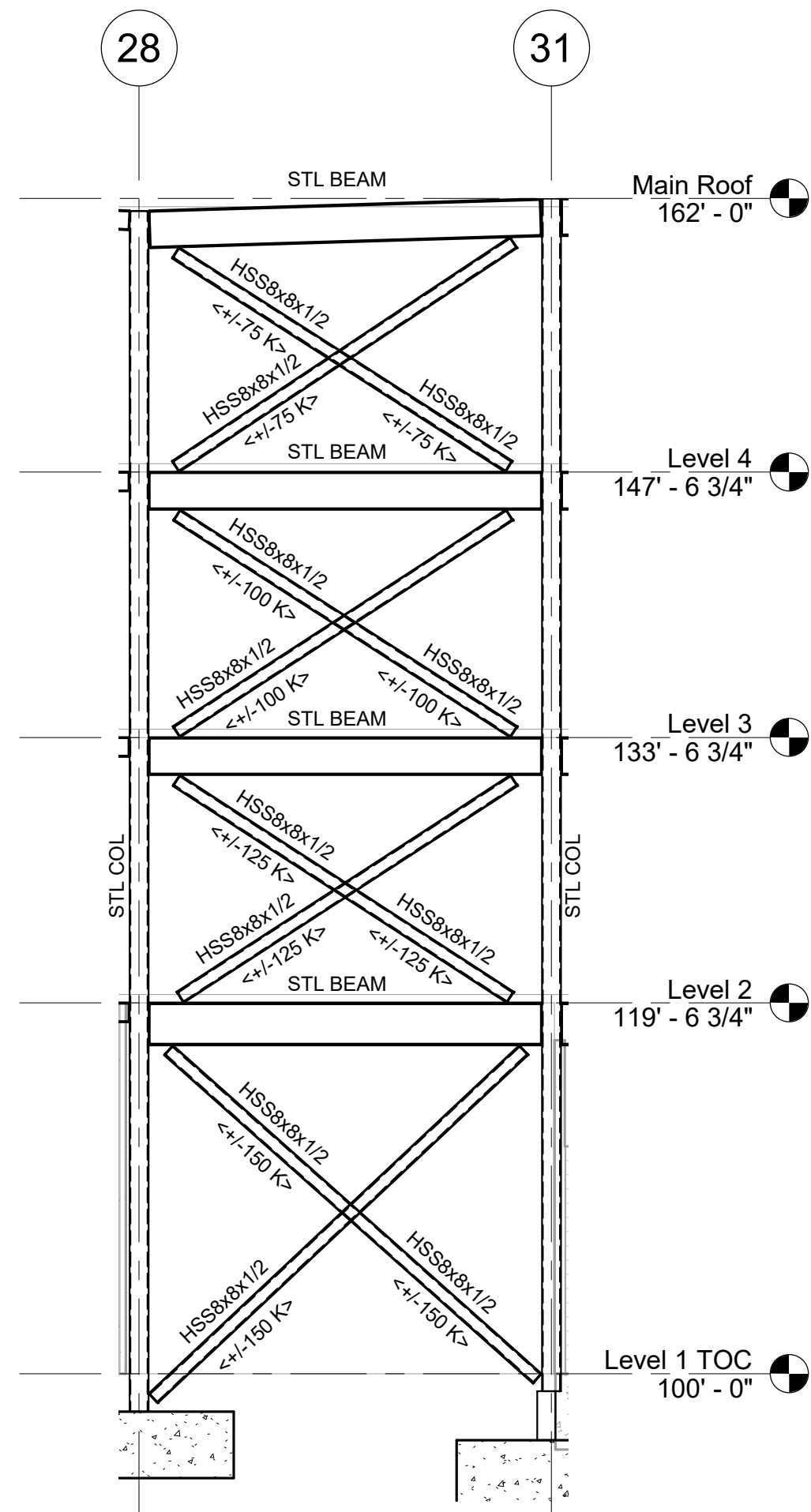
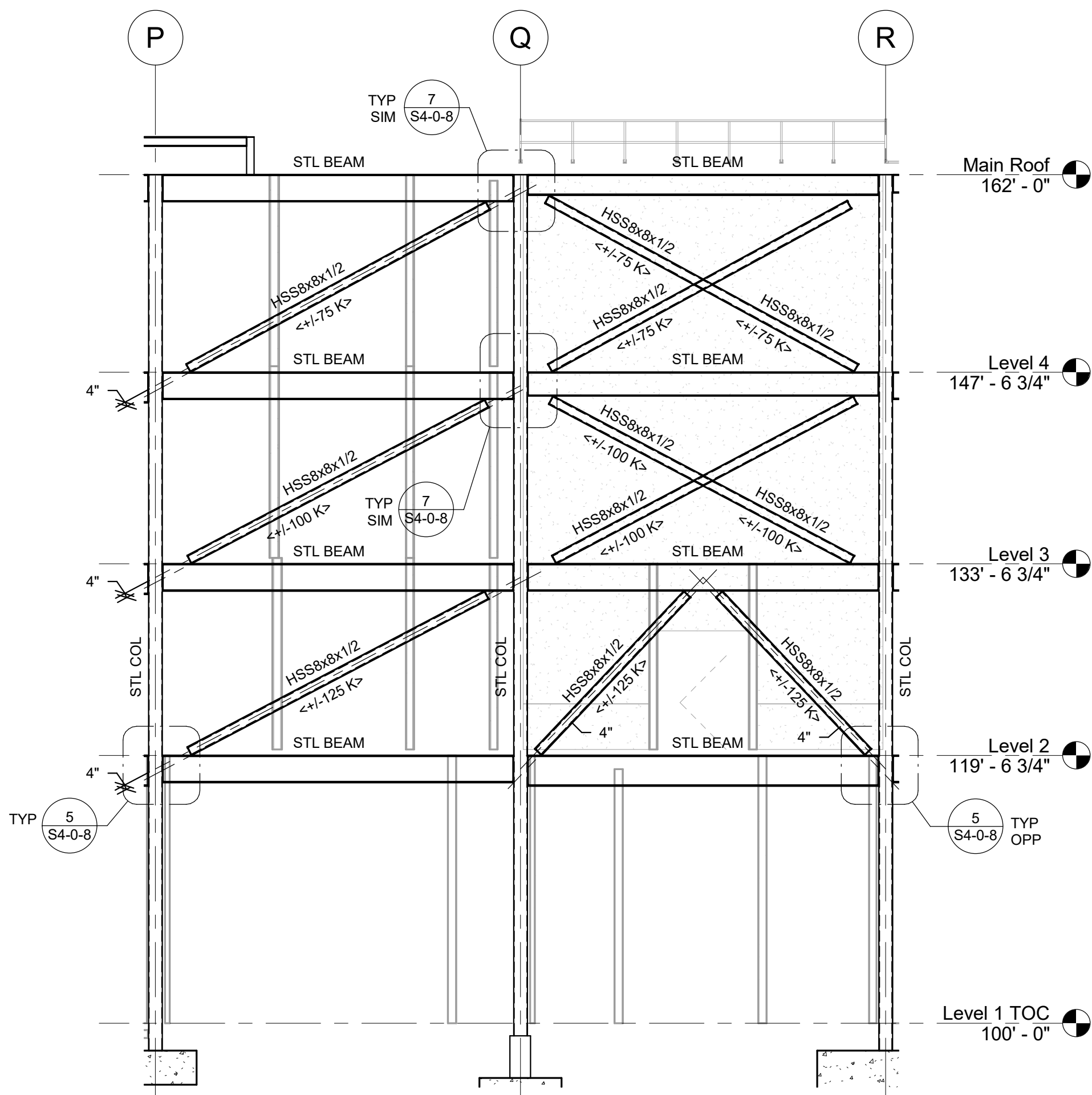
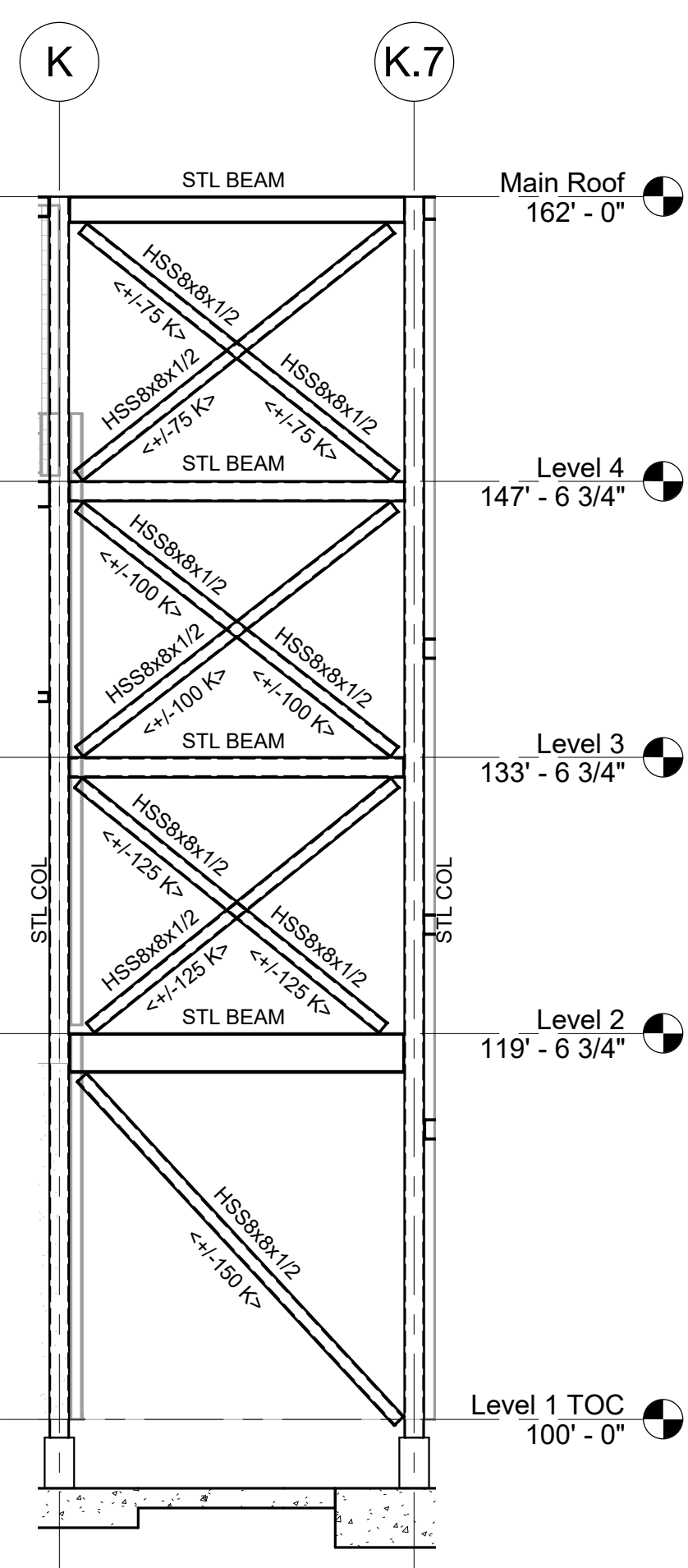
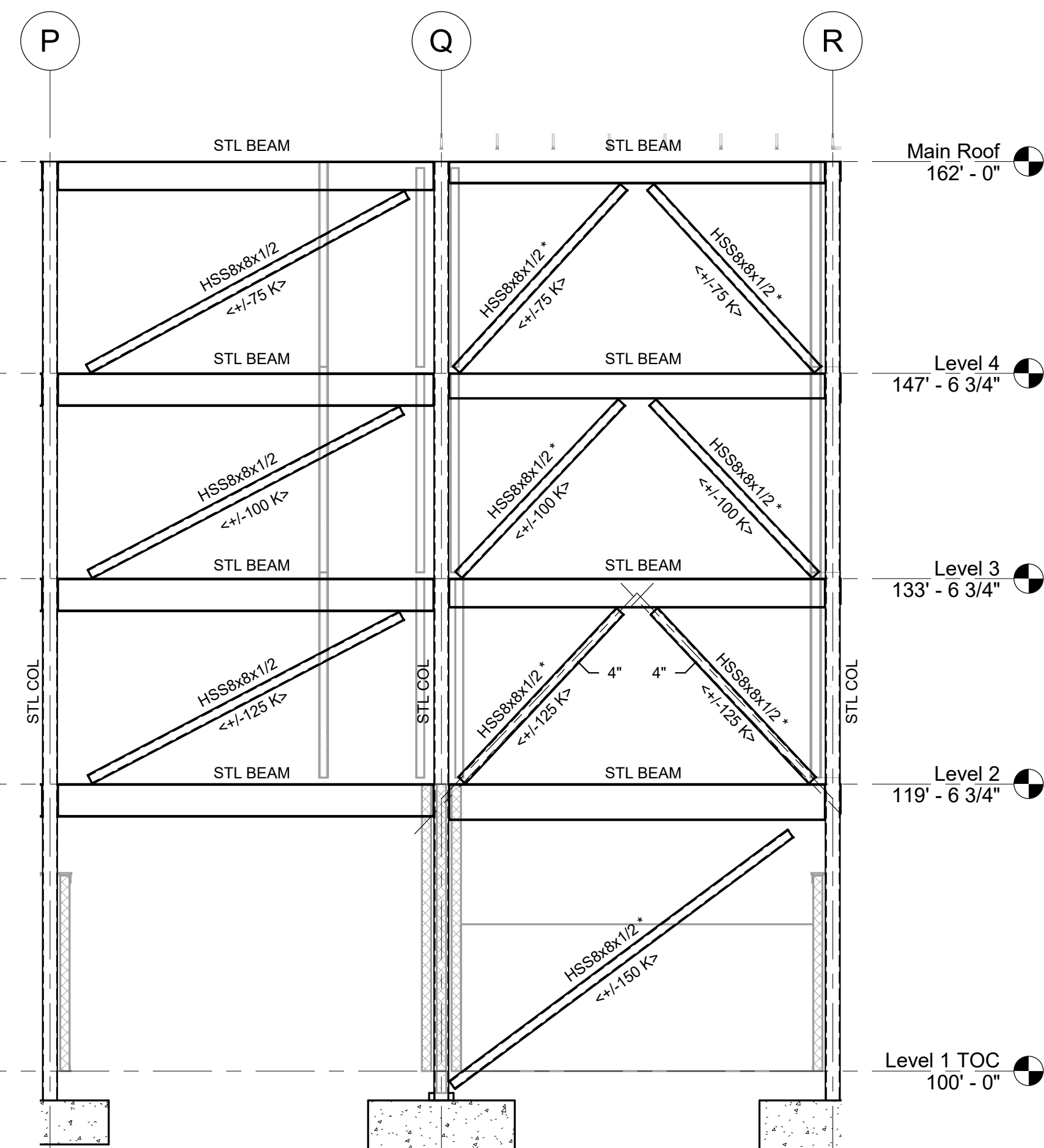
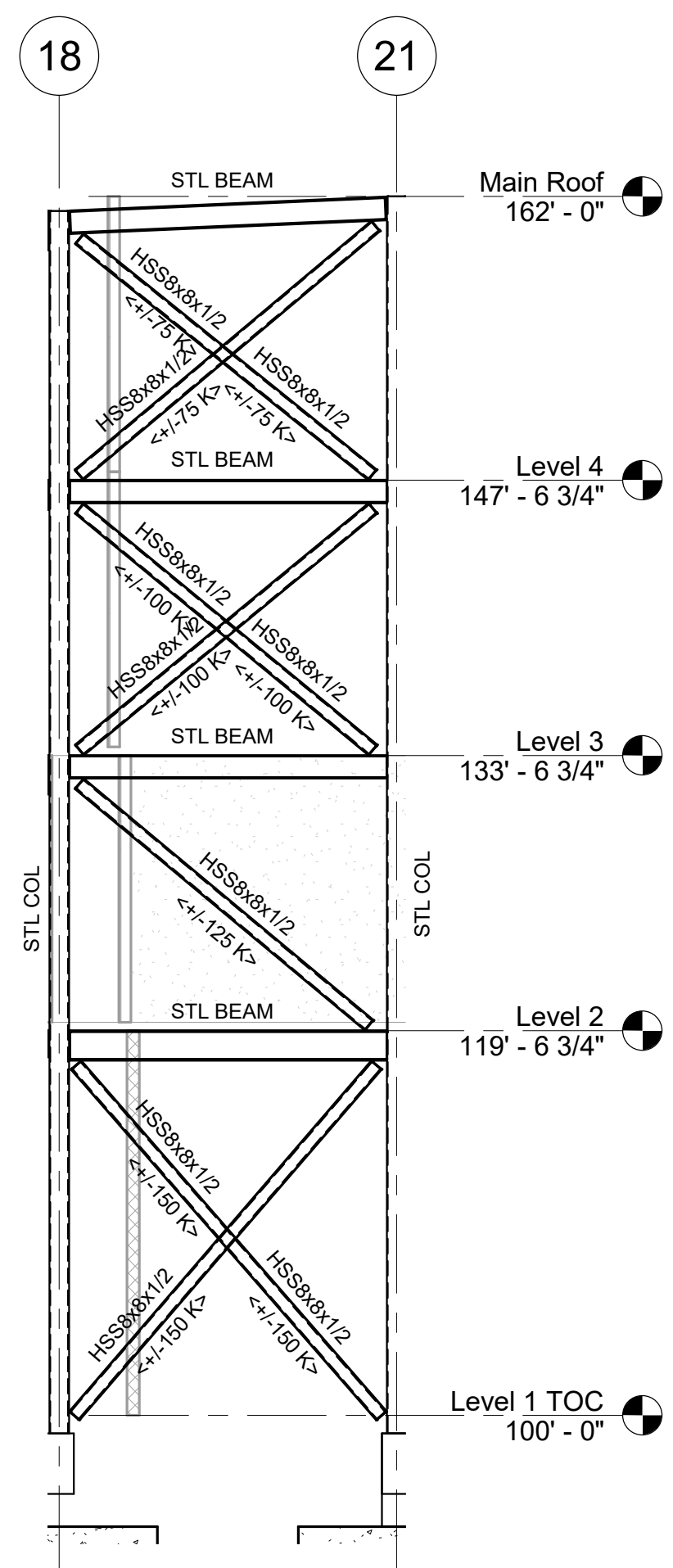
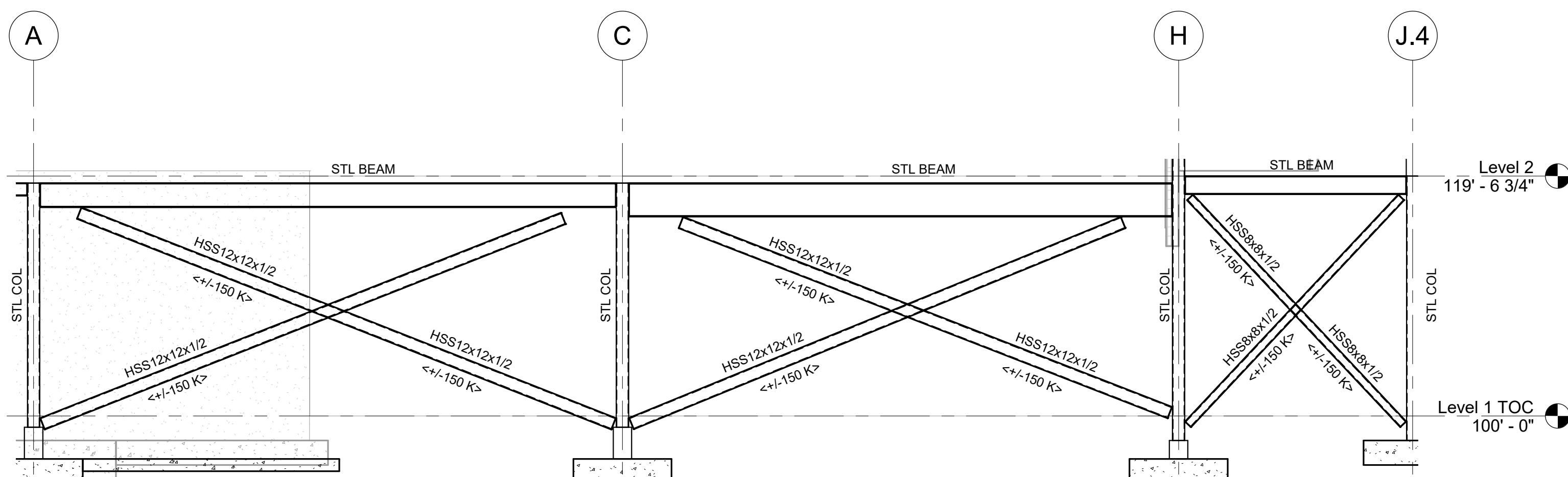
225 Oakland Road
Studio 205
South Windsor, CT
06074280 Charles Street
Studio 300
Waltham, MA
02453

Planning | Architecture | Interior Design

Tel: 617.954.1700
www.dra.comNORTHEAST
METRO TECH100 Hemlock Rd.
Wakefield, MA 01880Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

BRACE FRAME NOTES:

- 1.) FABRICATOR IS RESPONSIBLE FOR BRACE CONNECTION DESIGN.
- 2.) ELEVATIONS ARE SCHEMATIC ONLY AND INTENDED TO SHOW CONFIGURATION OF BRACED FRAMES AND BRACE FORCES.
- 3.) DESIGN DIAGONAL MEMBER CONNECTIONS FOR TWICE THE AXIAL DESIGN FORCE SHOWN BELOW EACH MEMBER <30k> (TENSION OR COMPRESSION). AXIAL DESIGN FORCE IS BASED ON LRFD. USE GENERAL UNIFORM FORCE METHOD FOR CONNECTION DESIGN.
- 4.) DO NOT WELD TOP END OF DIAGONAL BRACE MEMBERS IN PLACE UNTIL FLOOR SLABS AND ROOFING ARE IN PLACE. WELDS MUST BE FULLY INSPECTED AND APPROVED PRIOR TO PLACING ANY CONCRETE OR INSTALLING OTHER MATERIALS THAT WOULD COVER THE CONNECTIONS.
- 5.) BOLTED CONNECTIONS IN BRACED FRAMES SHALL BE DESIGNED AS SLIP CRITICAL CONNECTIONS.
- 6.) SEE PLANS FOR COLUMN AND BEAM SIZES.
- 7.) CENTERLINE OF BRACE MEMBER SHALL BE OFFSET FROM WORKPOINT LINE AS NOTED AS SHOWN ON ELEVATION.
- 8.) * SYMBOL AT THE END OF A STEEL BEAM SIZE (HSS*, WF*, ETC.) DENOTES EXPOSED BRACE FRAME MEMBERS, INCLUDING STEEL BEAMS AND COLUMNS TO RECEIVE INTUMESCENT MASTIC FIREPROOFING.

BF-A6
ALONG GRIDLINE 30BF-A2
ALONG GRIDLINE GBF-A3
ALONG GRIDLINE KBF-A4
ALONG GRIDLINE MBF-A5
ALONG GRIDLINE N(SEE NOTE #7)
BF-A7
ALONG GRIDLINE 24BF-A9
ALONG GRIDLINE 31(SEE NOTE #7)
BF-A11
ALONG GRIDLINE 13BF-A13
ALONG GRIDLINE MBF-A14
ALONG GRIDLINE 19

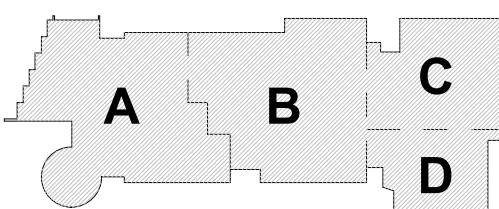
FIREPROOFING NOTES:

1. STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
2. CONCEALED FROM VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
3. EXPOSED TO VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
4. COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

REVISION LIST

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGEMSBA 90% CD
SUBMISSION

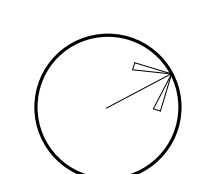
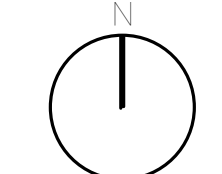
MAY 12, 2023



KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

BRACE FRAME
ELEVATIONS -
AREA A

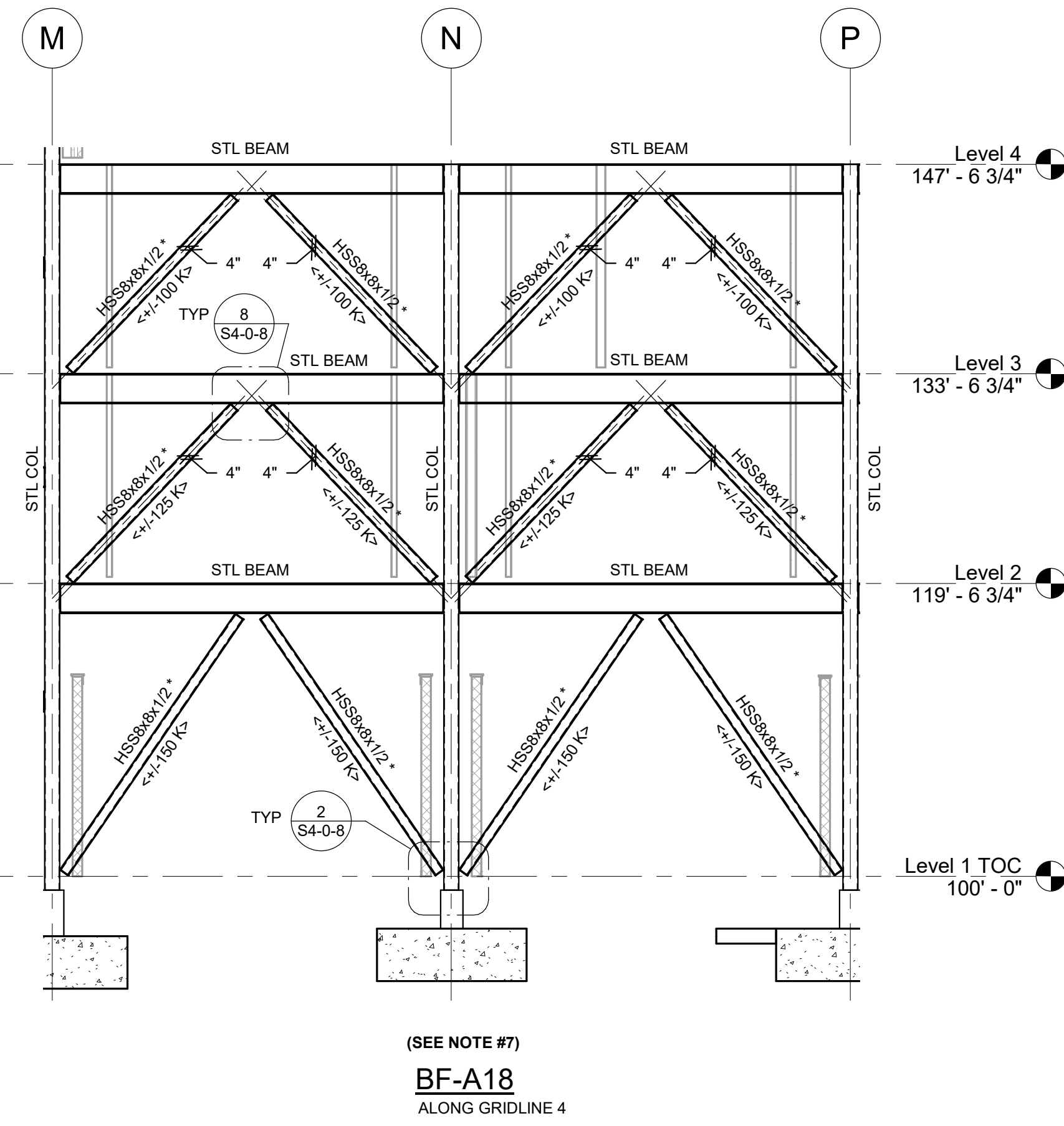
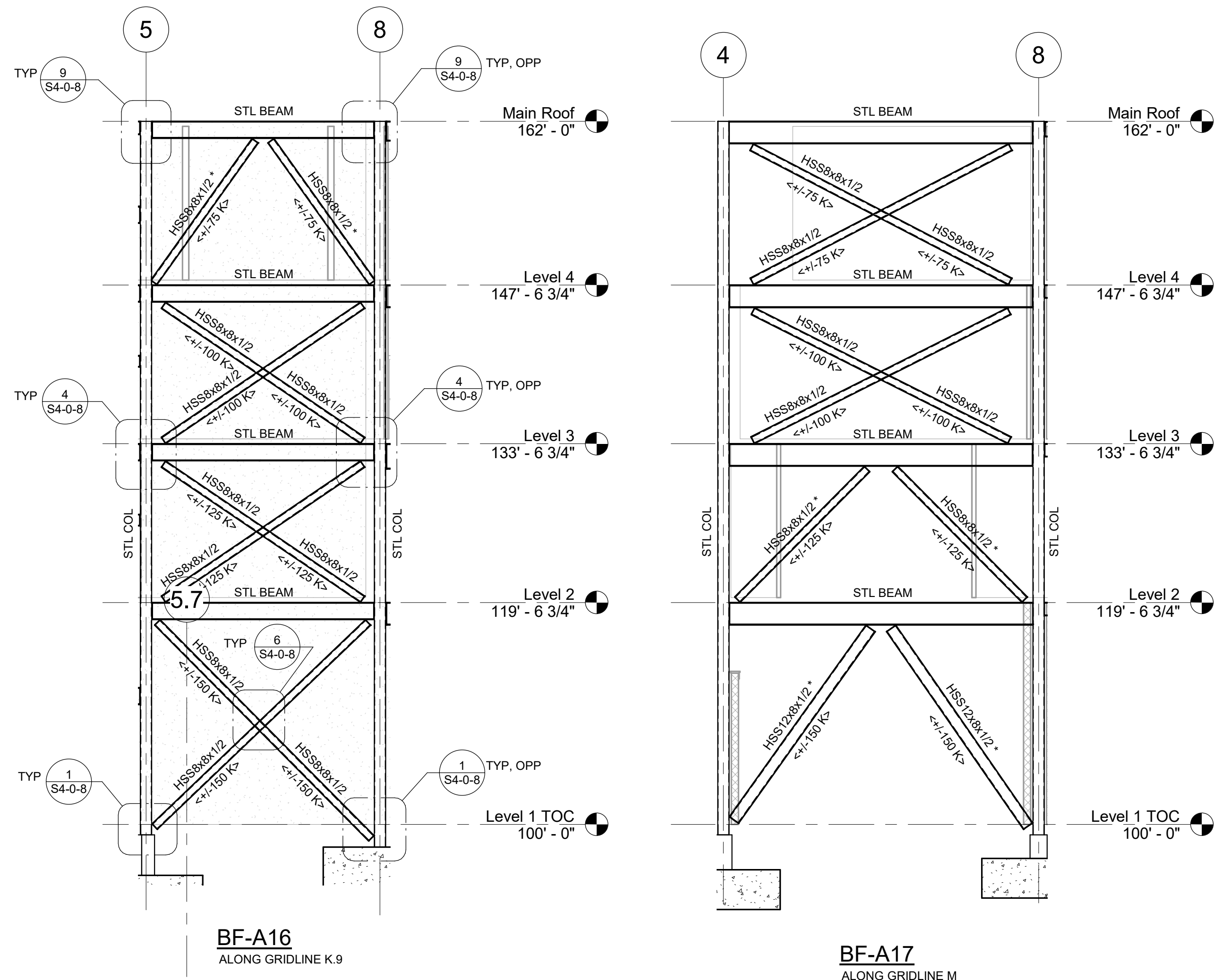
Scale: 1/8" = 1'-0"

Job No.: 20202

Drawn By: EDG

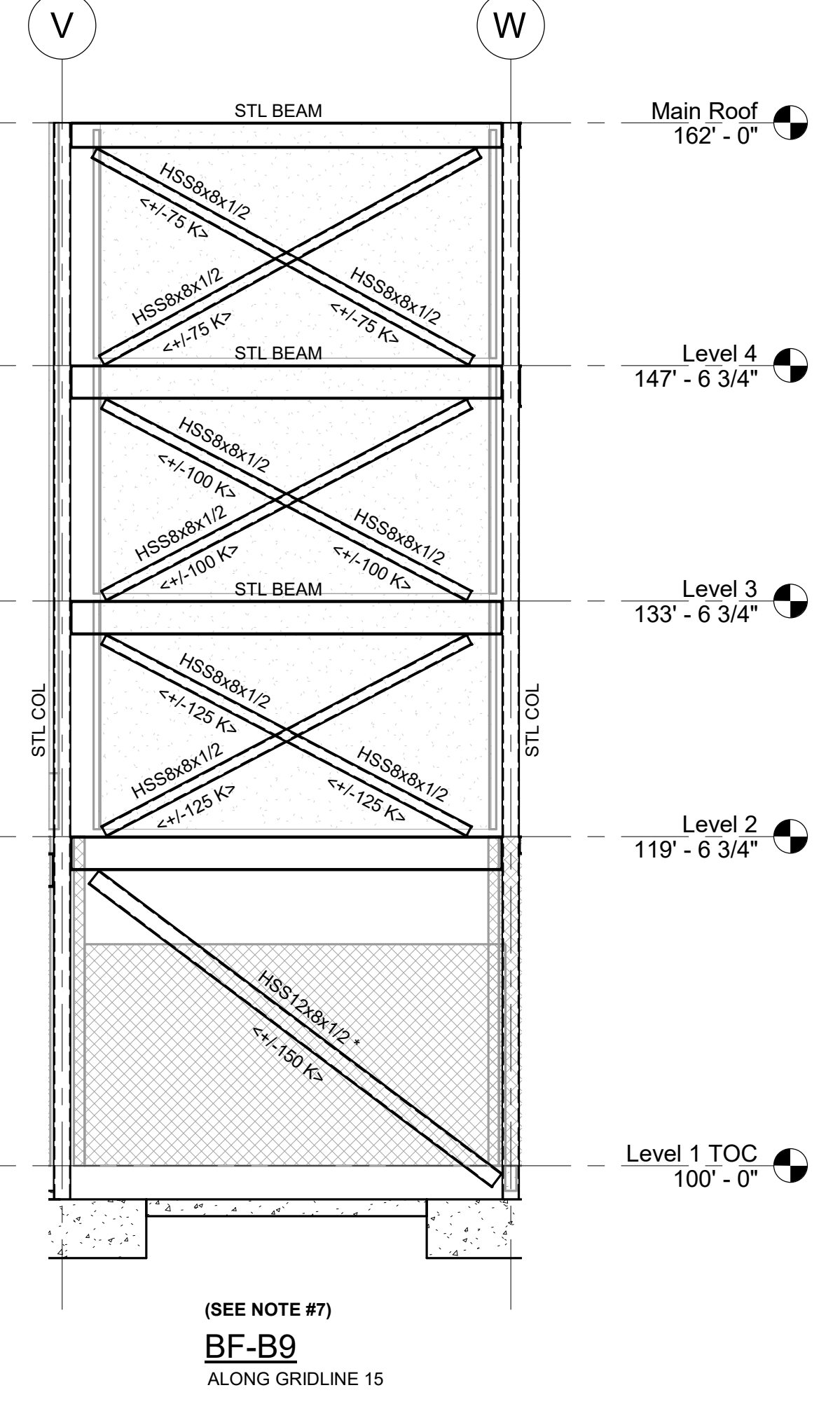
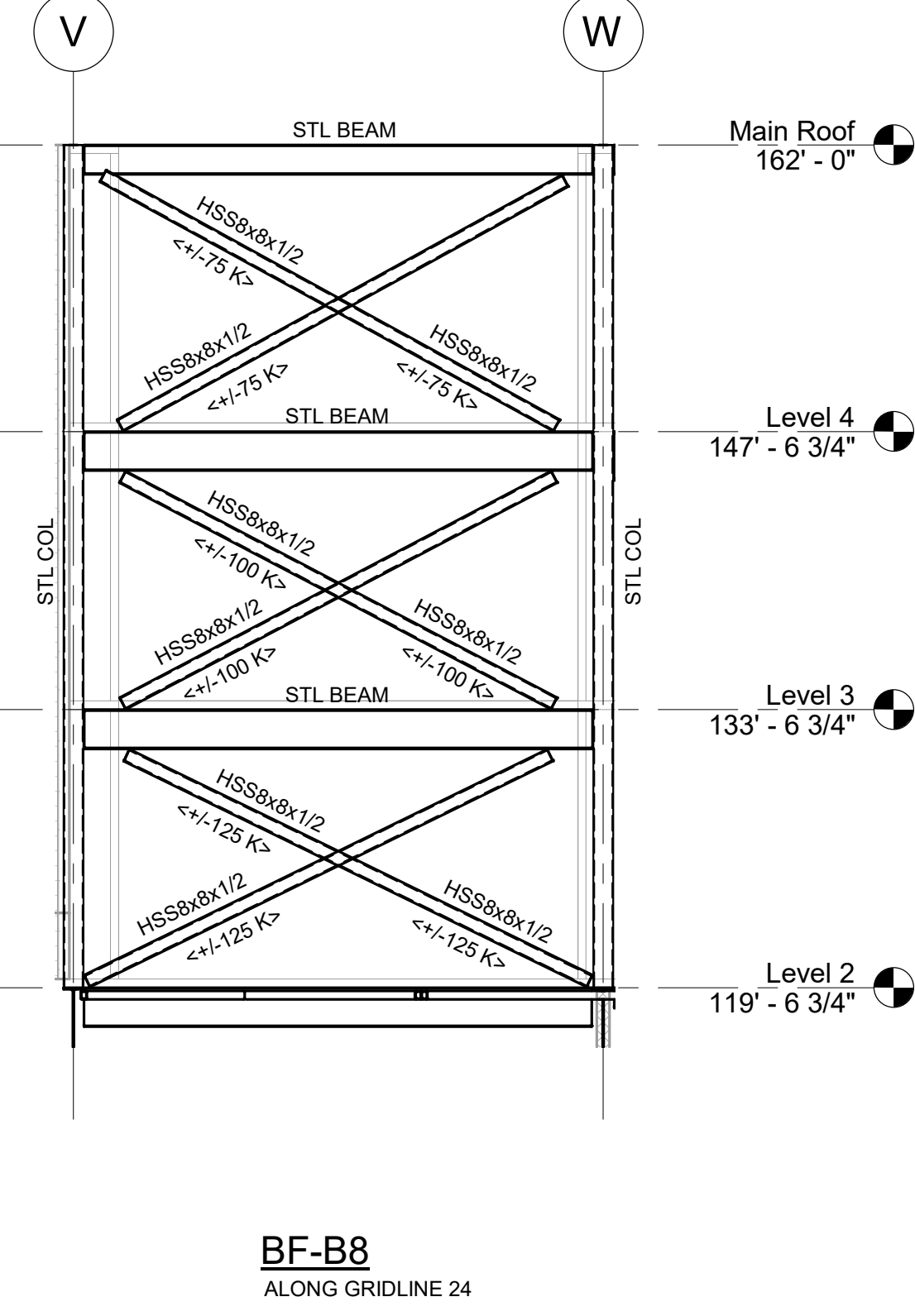
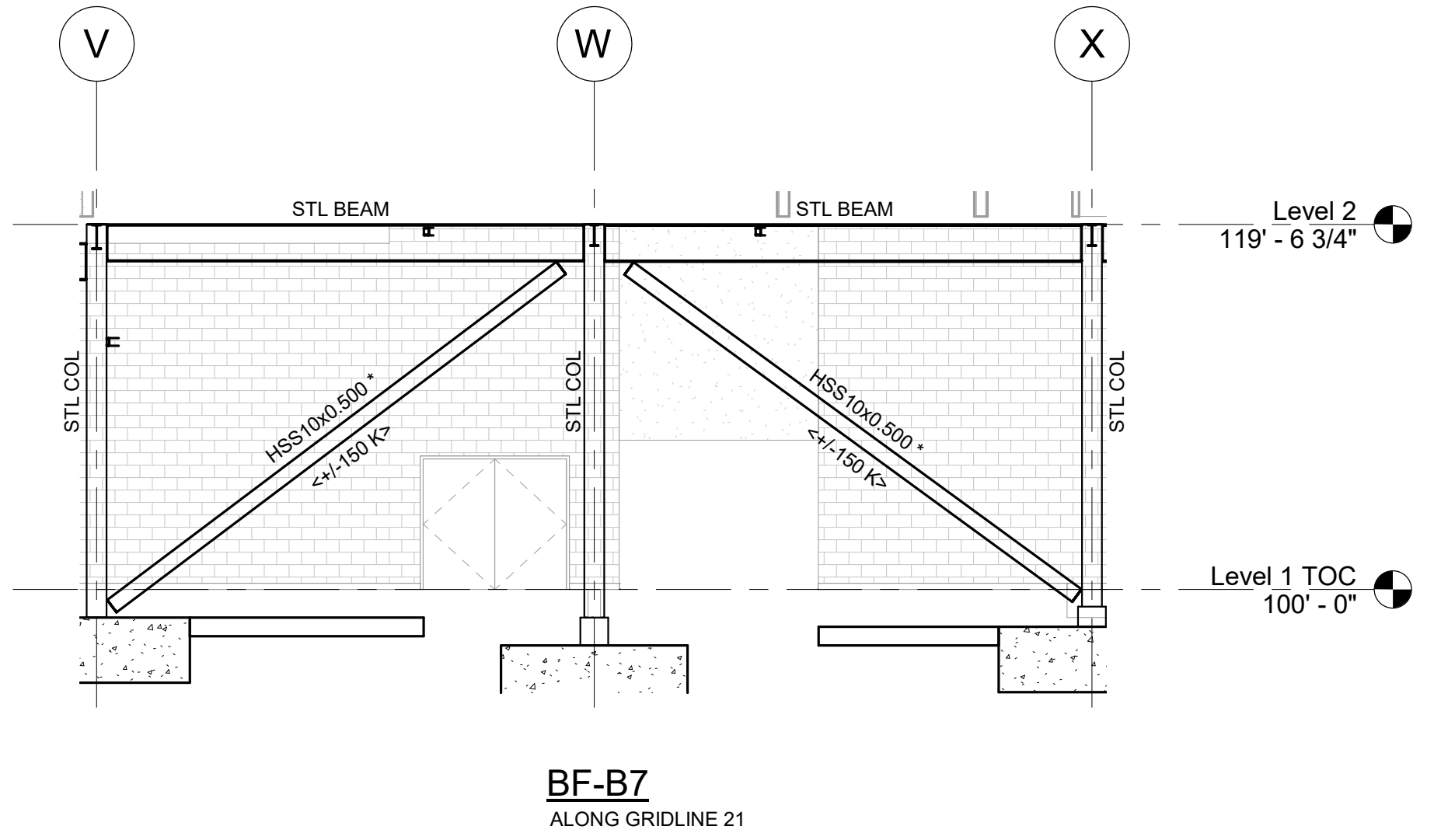
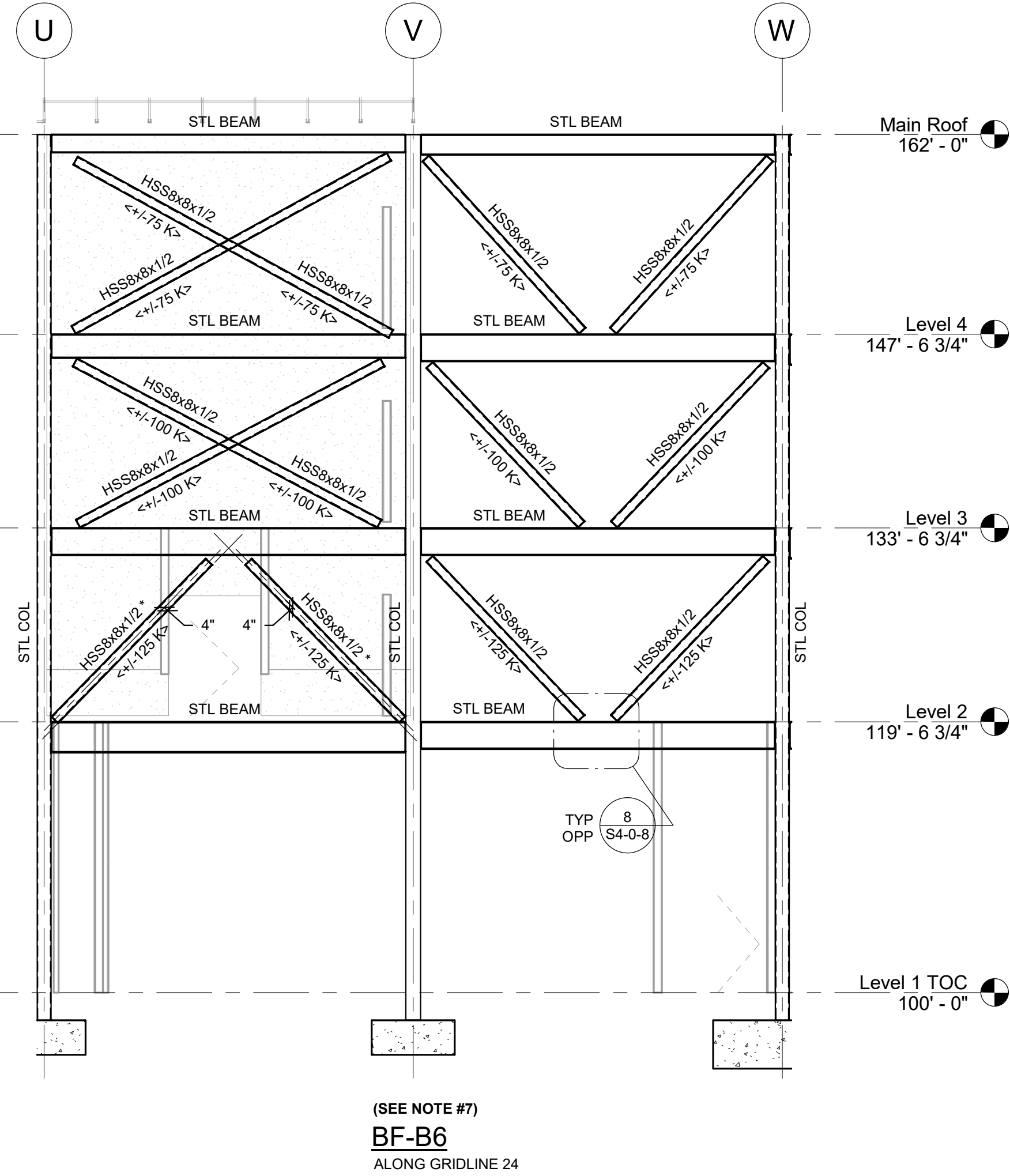
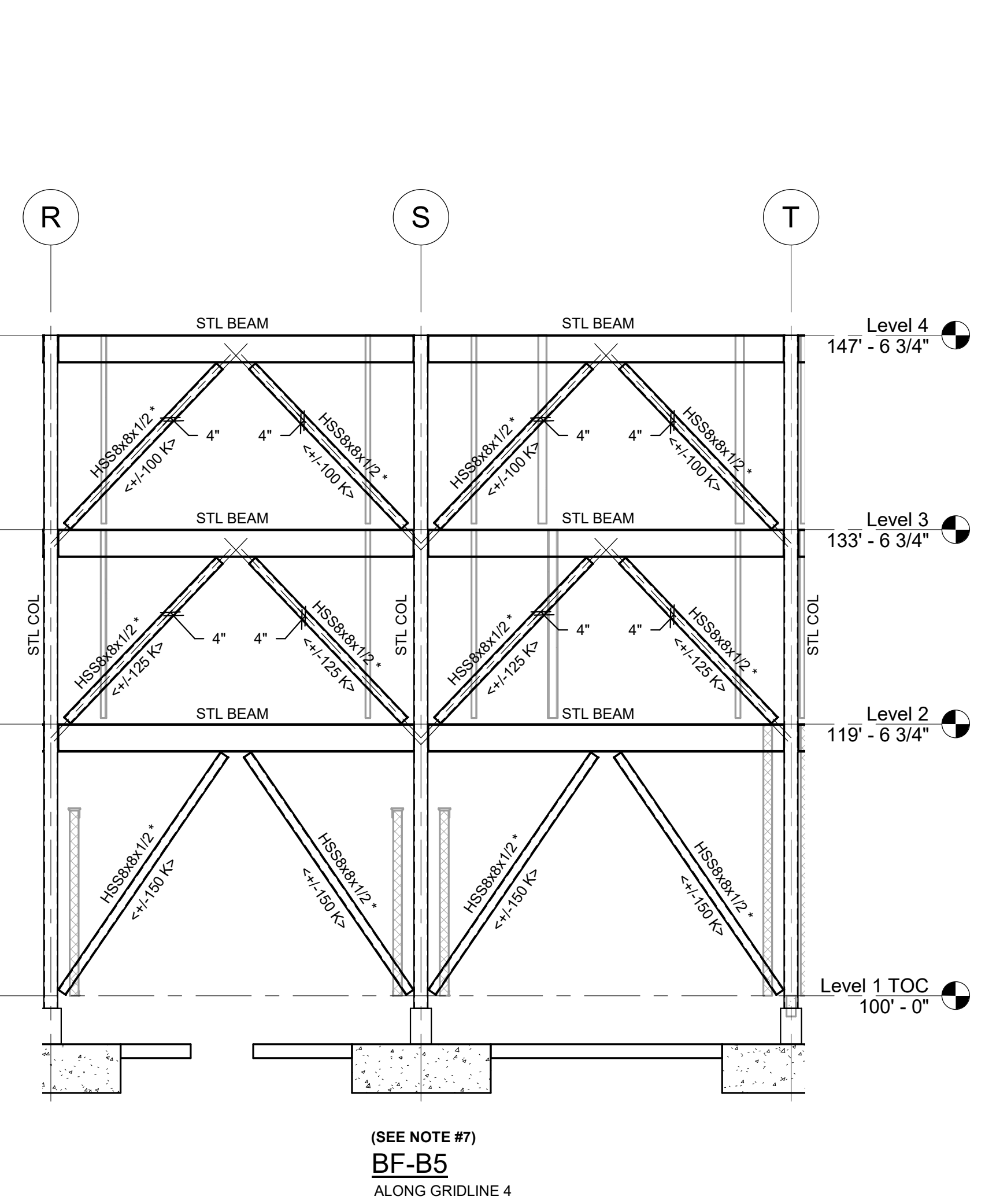
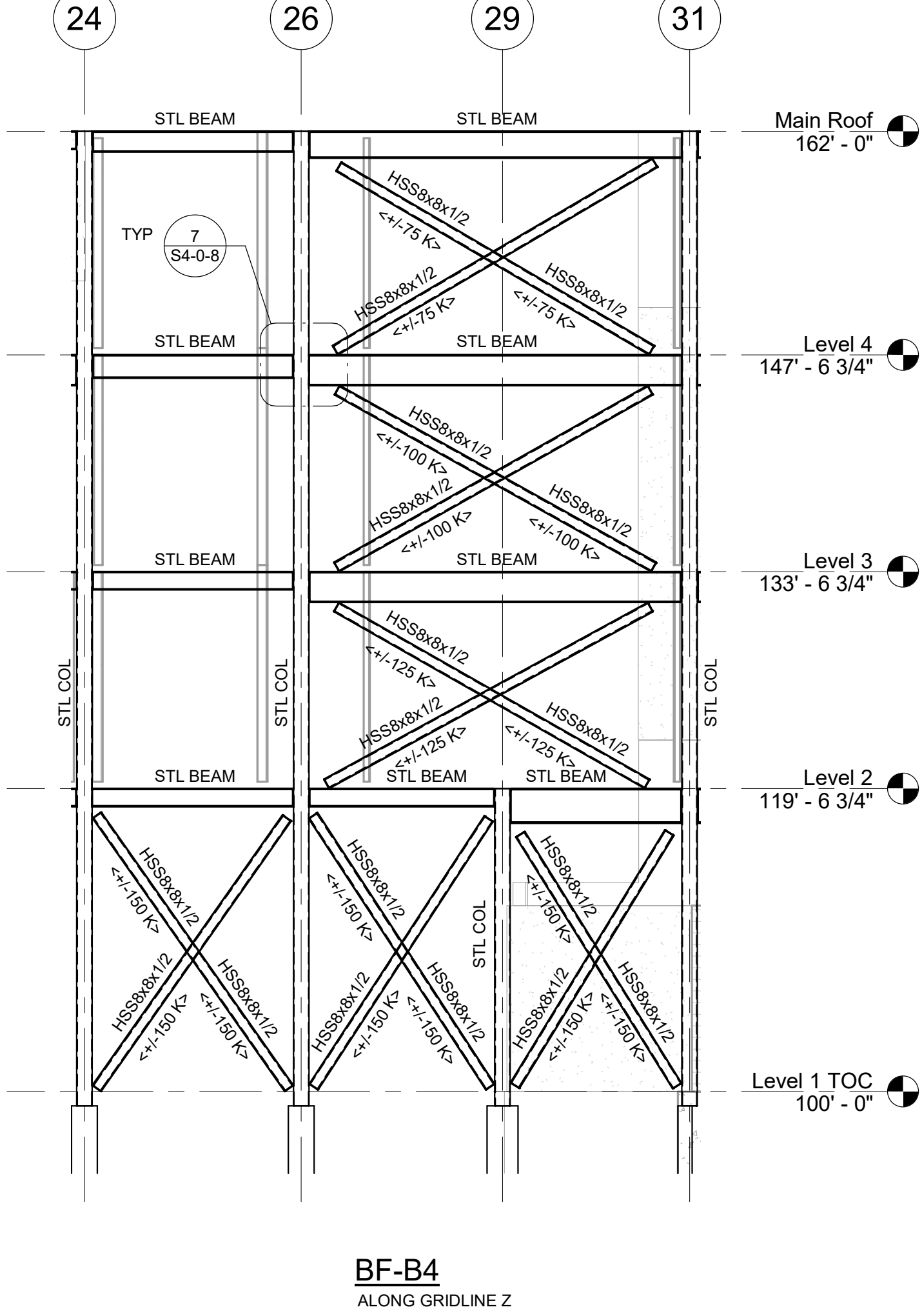
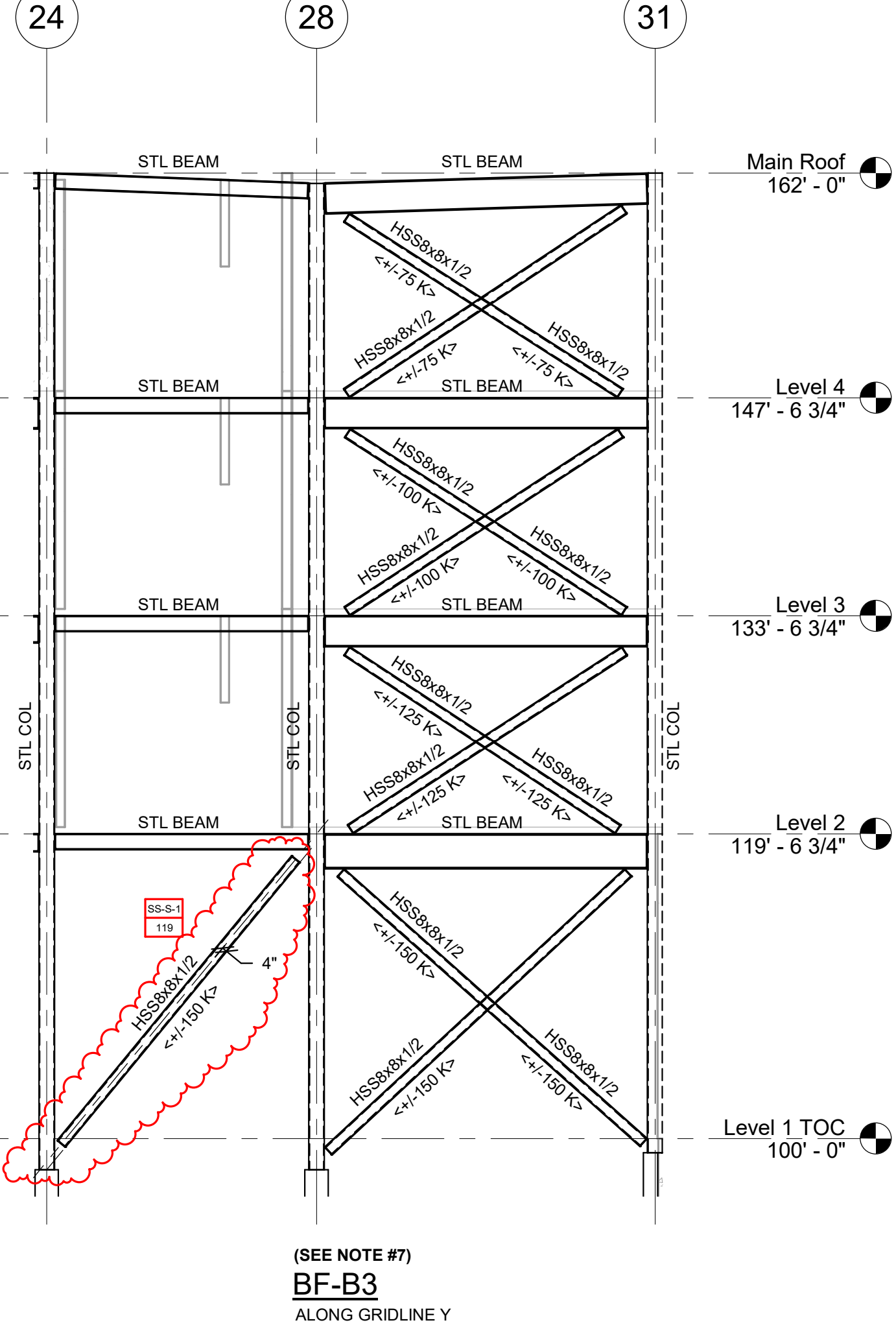
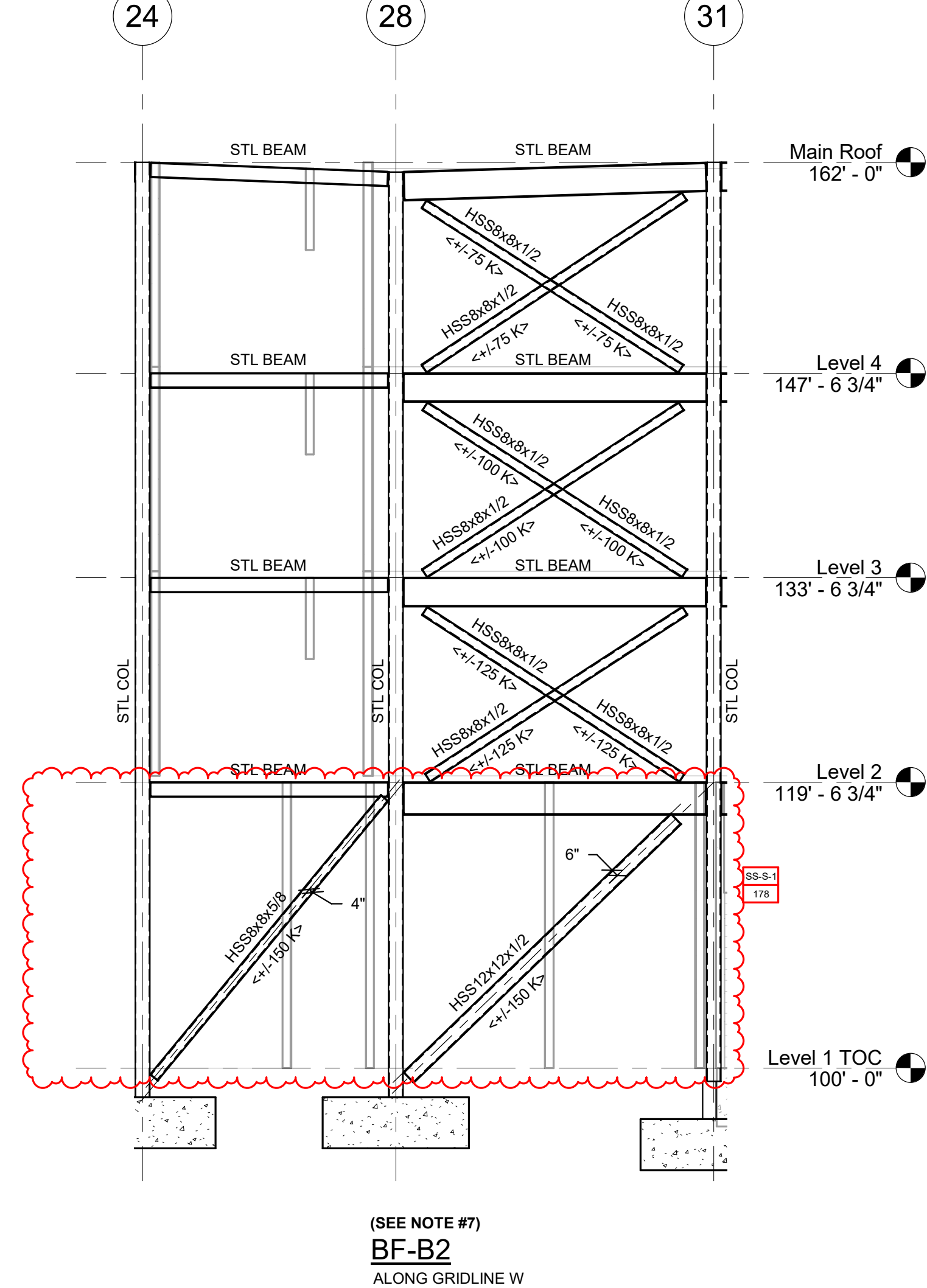
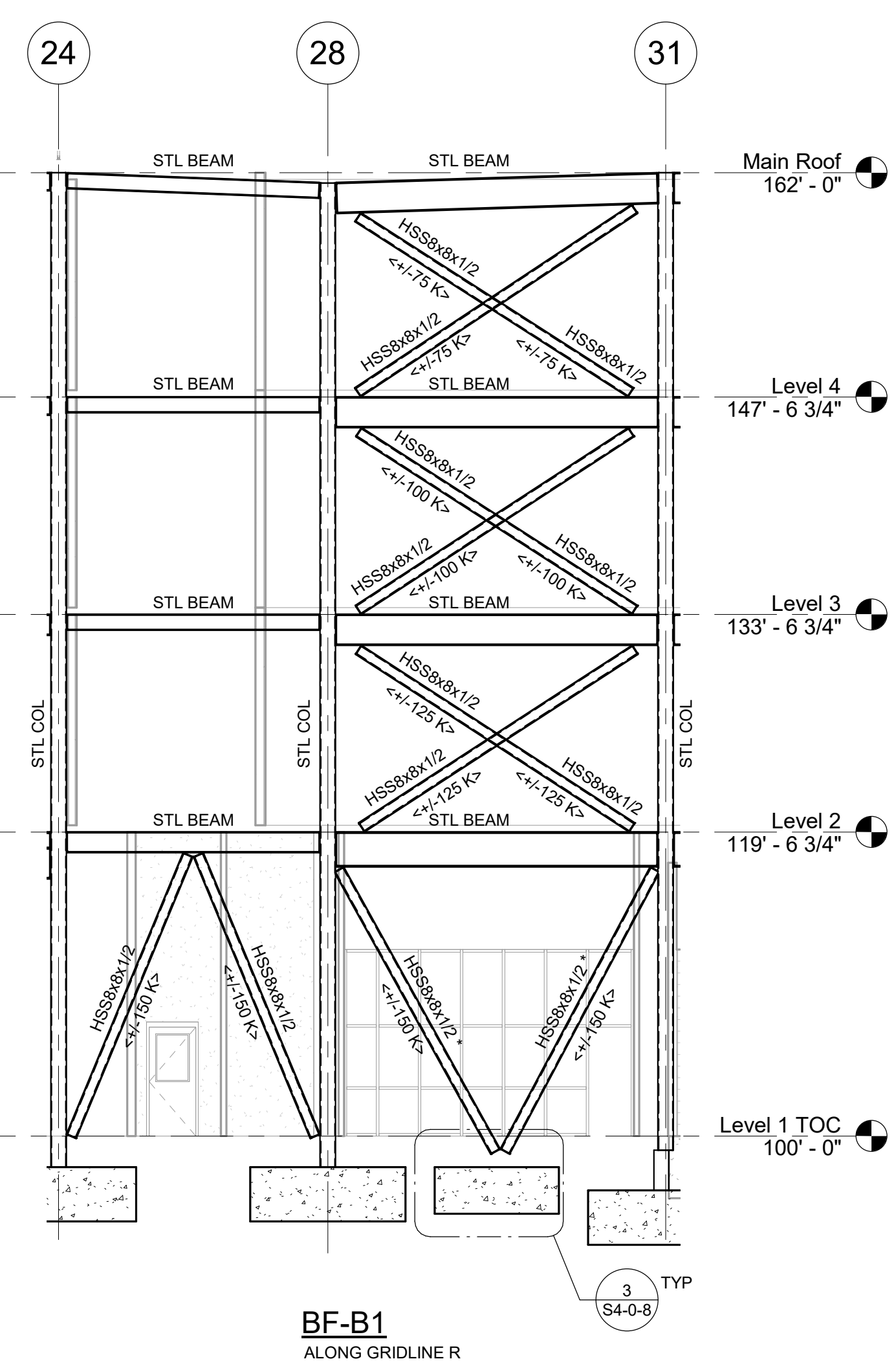
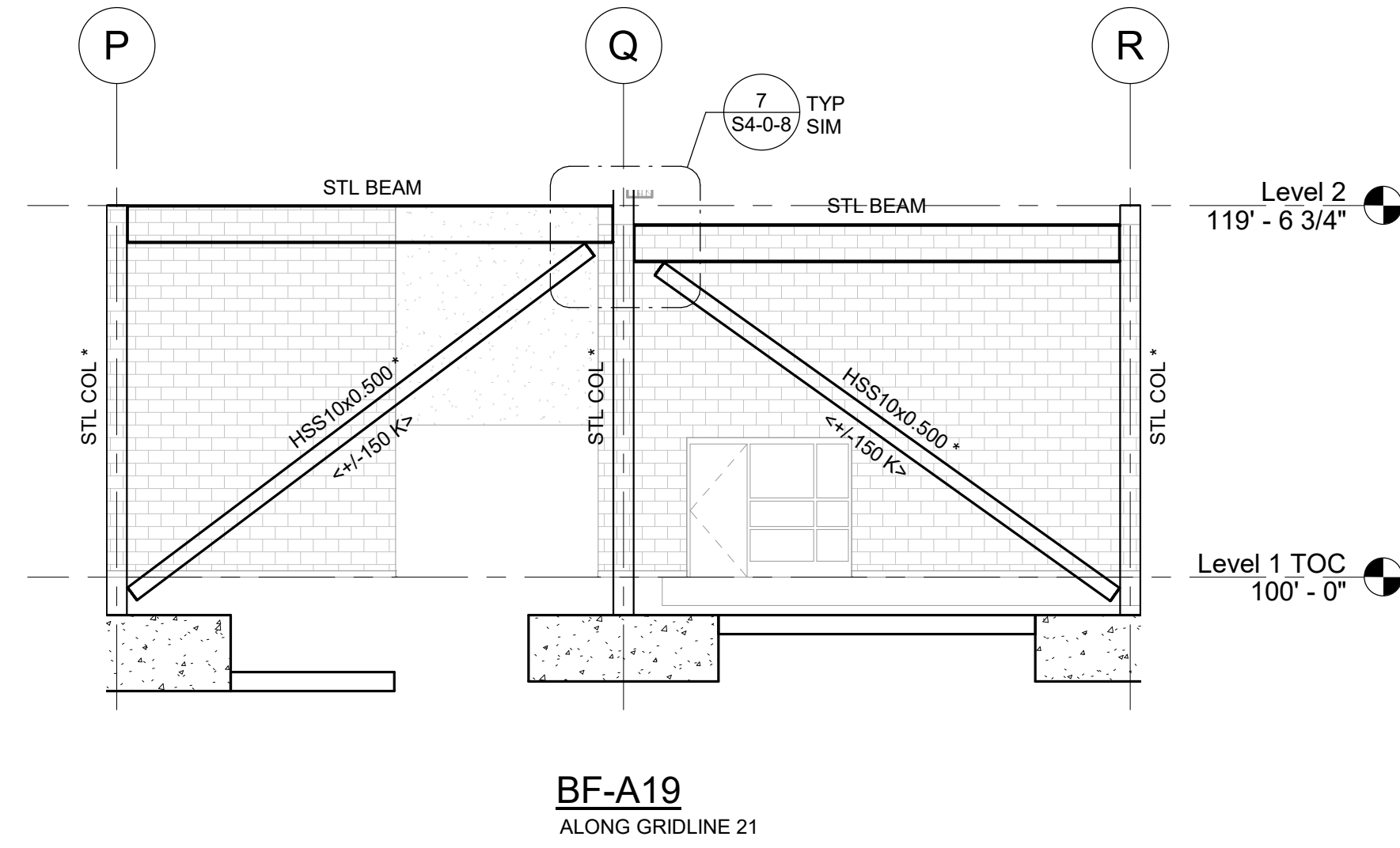
Date: MAY 12, 2023

S4-0-1



- FIREPROOFING NOTES:**
- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 - CONCEALED FROM VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 - EXPOSED TO VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 - COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

- BRACE FRAME NOTES:**
- FABRICATOR IS RESPONSIBLE FOR BRACE CONNECTION DESIGN.
 - ELEVATIONS ARE SCHEMATIC ONLY AND INTENDED TO SHOW CONFIGURATION OF BRACE FRAMES AND BRACE FORCES.
 - DESIGN DIAGONAL MEMBER CONNECTIONS FOR TWICE THE AXIAL DESIGN FORCE SHOWN BELOW EACH MEMBER <30k (TENSION OR COMPRESSION). AXIAL DESIGN FORCE IS BASED ON LRFD. USE GENERAL UNIFORM FORCE METHOD FOR CONNECTION DESIGN.
 - DO NOT WELD TOP END OF DIAGONAL BRACE MEMBERS IN PLACE UNTIL FLOOR SLAB AND ROOFING ARE IN PLACE. WELDS MUST BE FULLY INSPECTED AND APPROVED PRIOR TO PLACING ANY CONCRETE OR INSTALLING OTHER MATERIALS THAT WOULD COVER THE CONNECTIONS.
 - BOLTED CONNECTIONS IN BRACED FRAMES SHALL BE DESIGNED AS SLIP CRITICAL CONNECTIONS.
 - SEE PLANS FOR COLUMN AND BEAM SIZES.
 - CENTERLINE OF BRACE MEMBER SHALL BE OFFSET FROM WORKPOINT LINE AS NOTED AS SHOWN ON ELEVATION.
 - *SYMBOL AT THE END OF A STEEL BEAM SIZE (HSS*, WP*, ETC.) DENOTES EXPOSED BRACE FRAME MEMBERS, INCLUDING STEEL BEAMS AND COLUMNS TO RECEIVE INTUMESCENT MASTIC FIREPROOFING.



NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

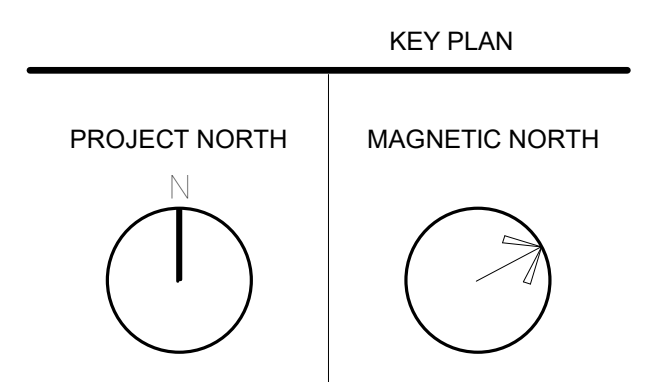
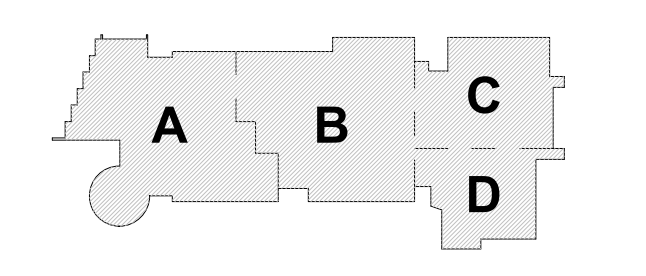
EDG
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST		
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING IS A PART OF EARLY STRUCTURAL BID PACKAGE

MSBA 90% CD SUBMISSION

MAY 12, 2023



BRACE FRAME ELEVATION - AREAS A + B

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S4-0-2

© COPYRIGHT 2021
DRUMSEY ROSANE ANDERSON, INC.

DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
260 Charles Street
Studio 300
Waltham, MA
02453
Planning | Architecture | Interior Design
Tel: 617.854.1700
www.dra.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



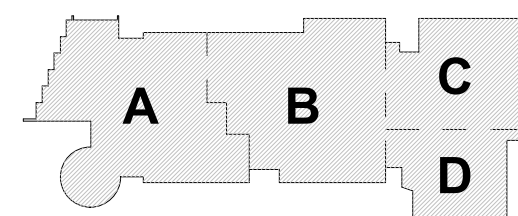
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

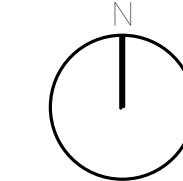
MSBA 90% CD
SUBMISSION

MAY 12, 2023

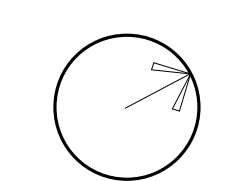


KEY PLAN

PROJECT NORTH



MAGNETIC NORTH



BRACE FRAME
ELEVATION -
AREA B

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

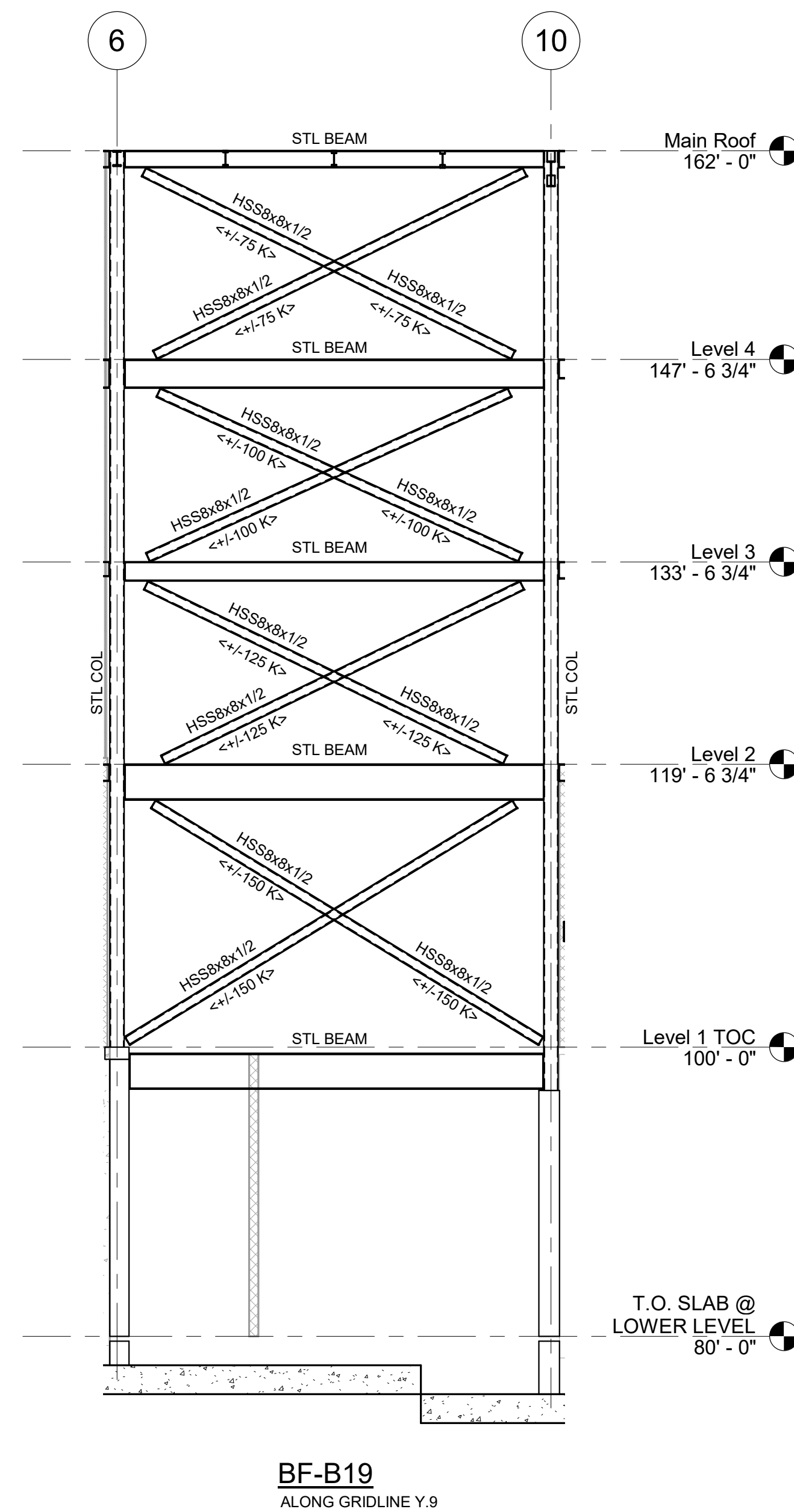
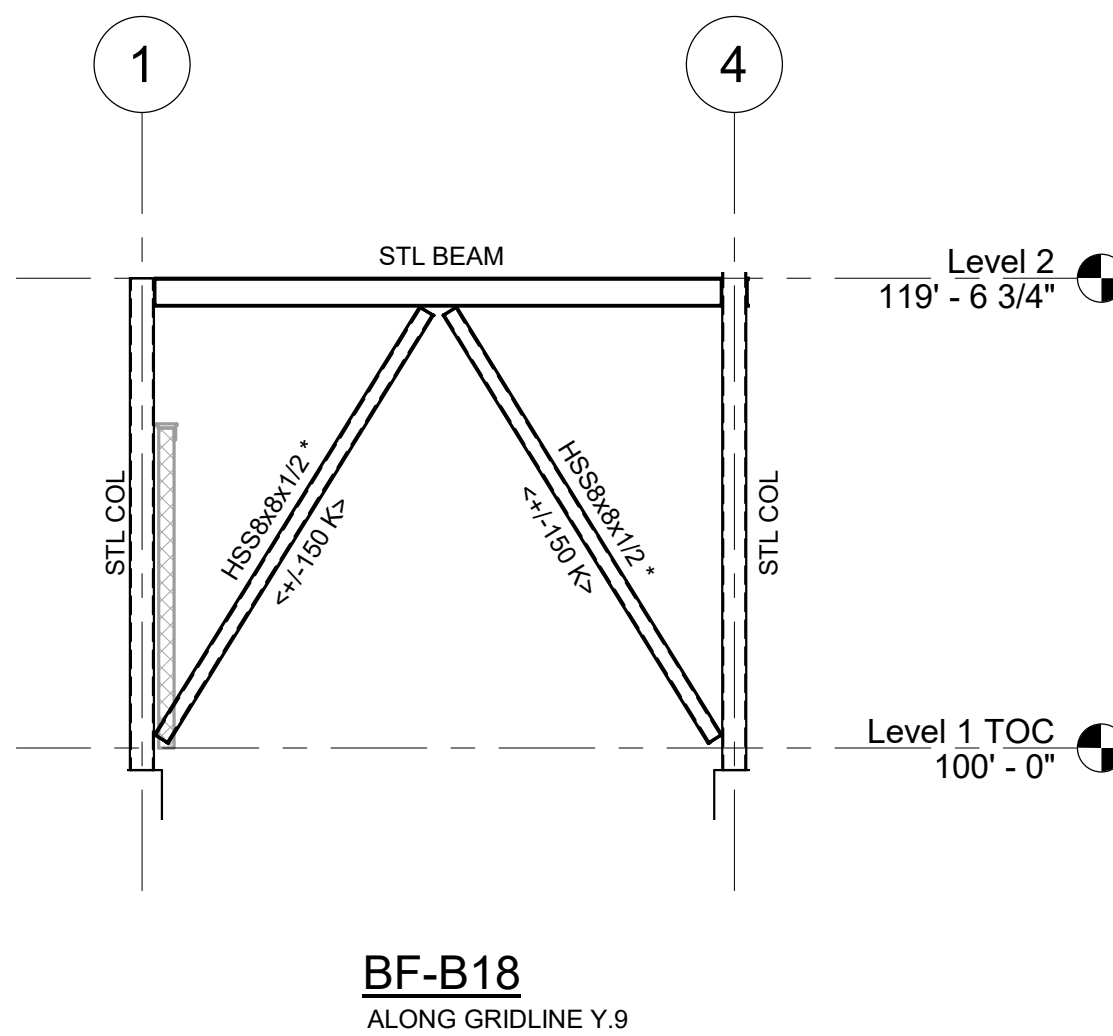
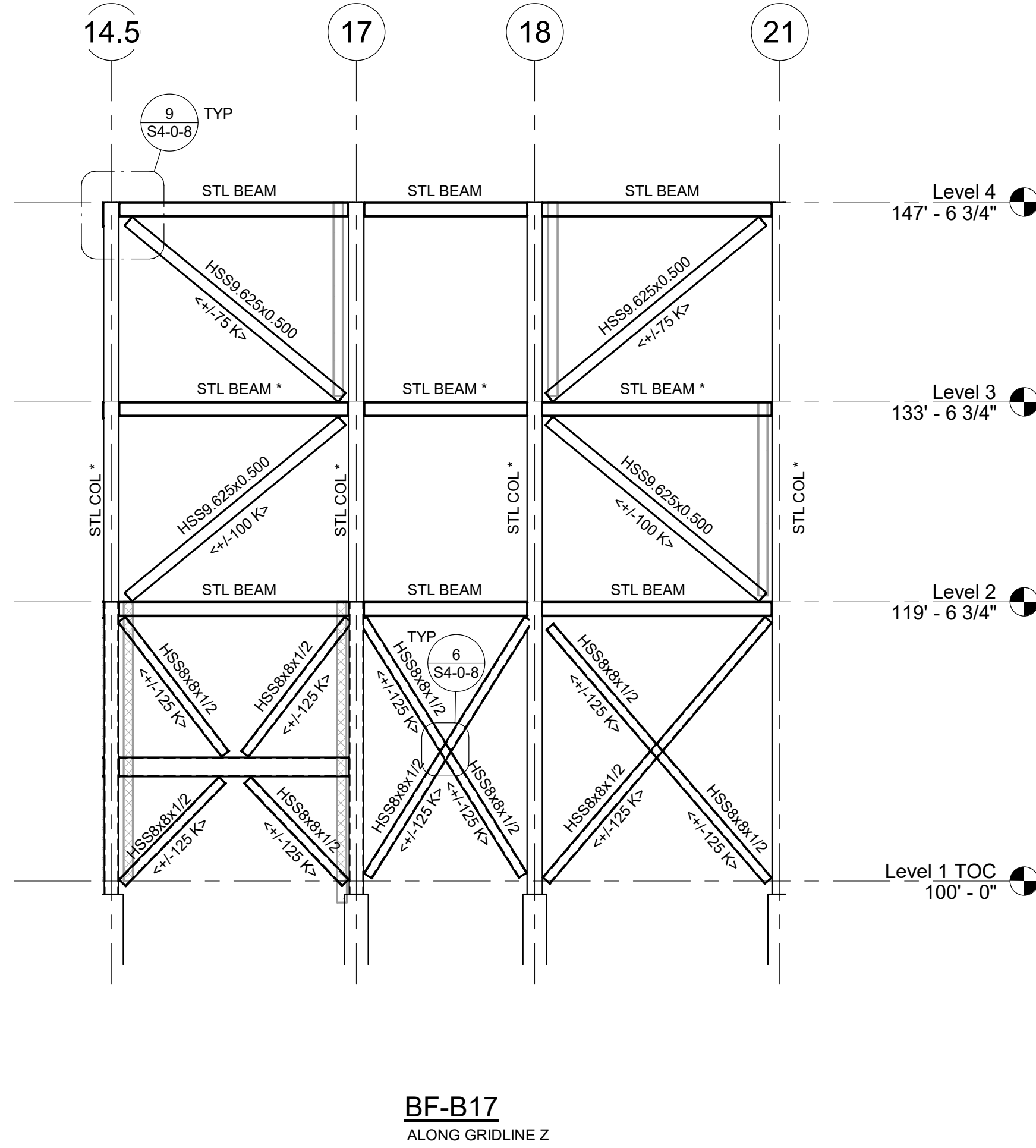
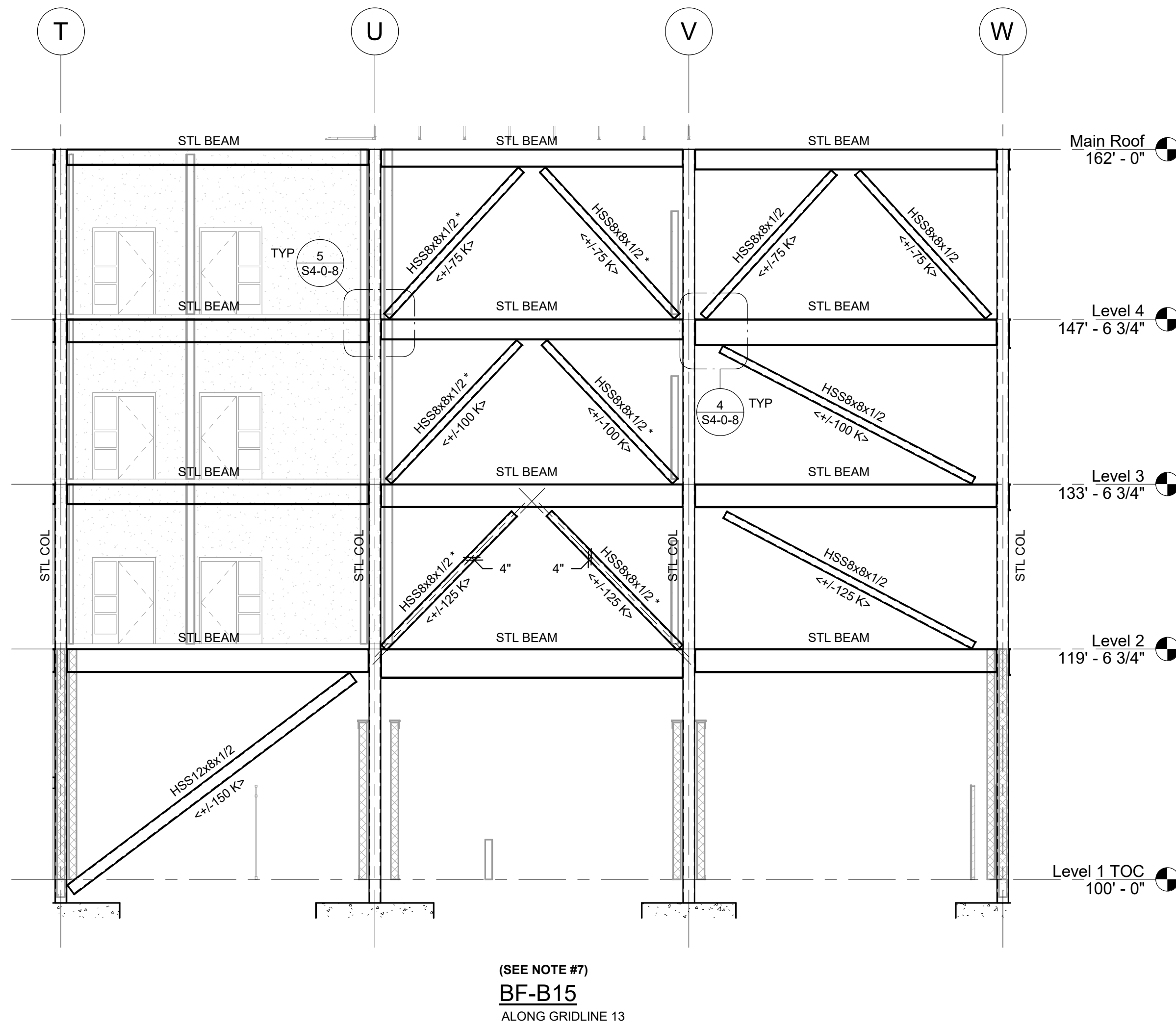
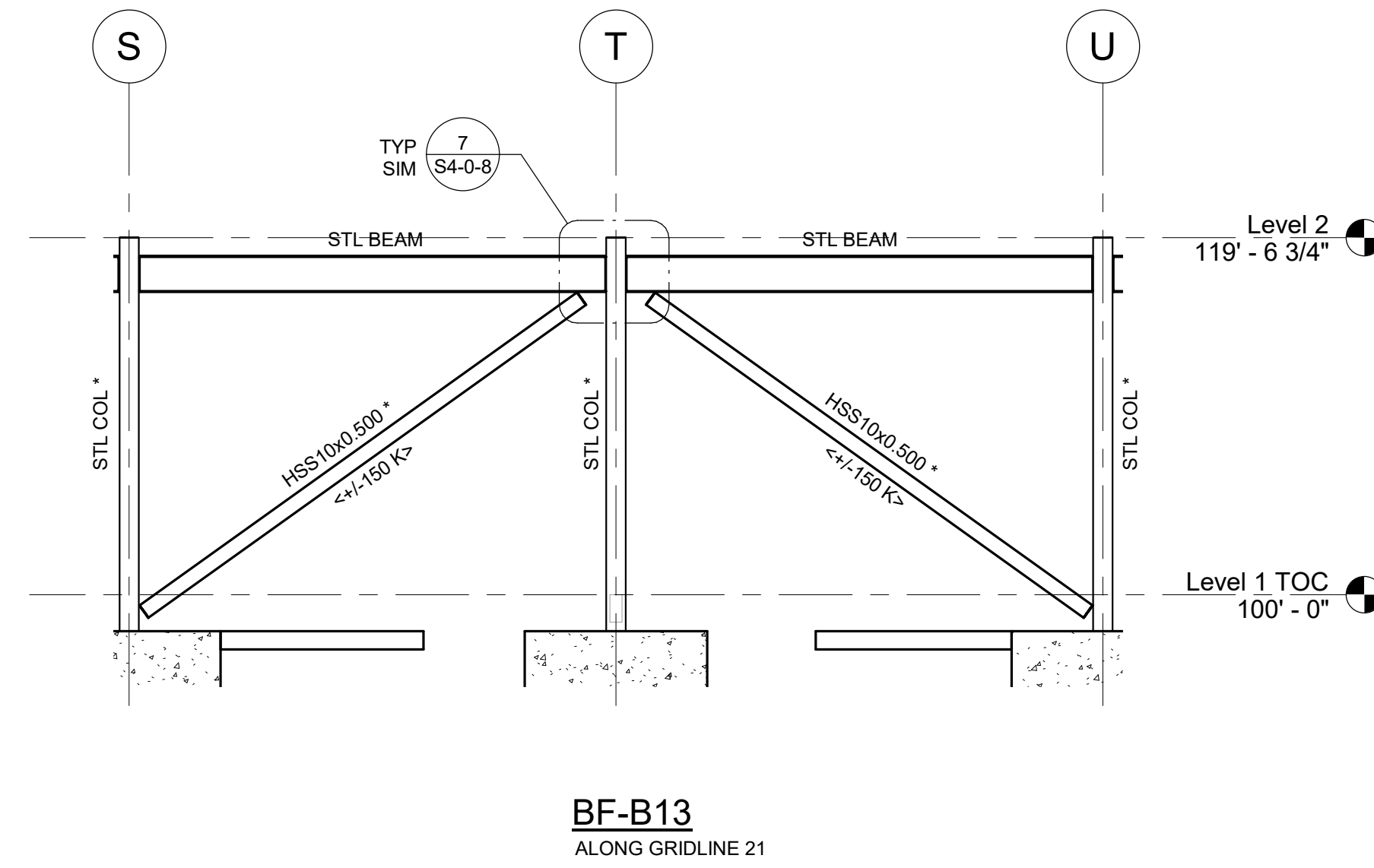
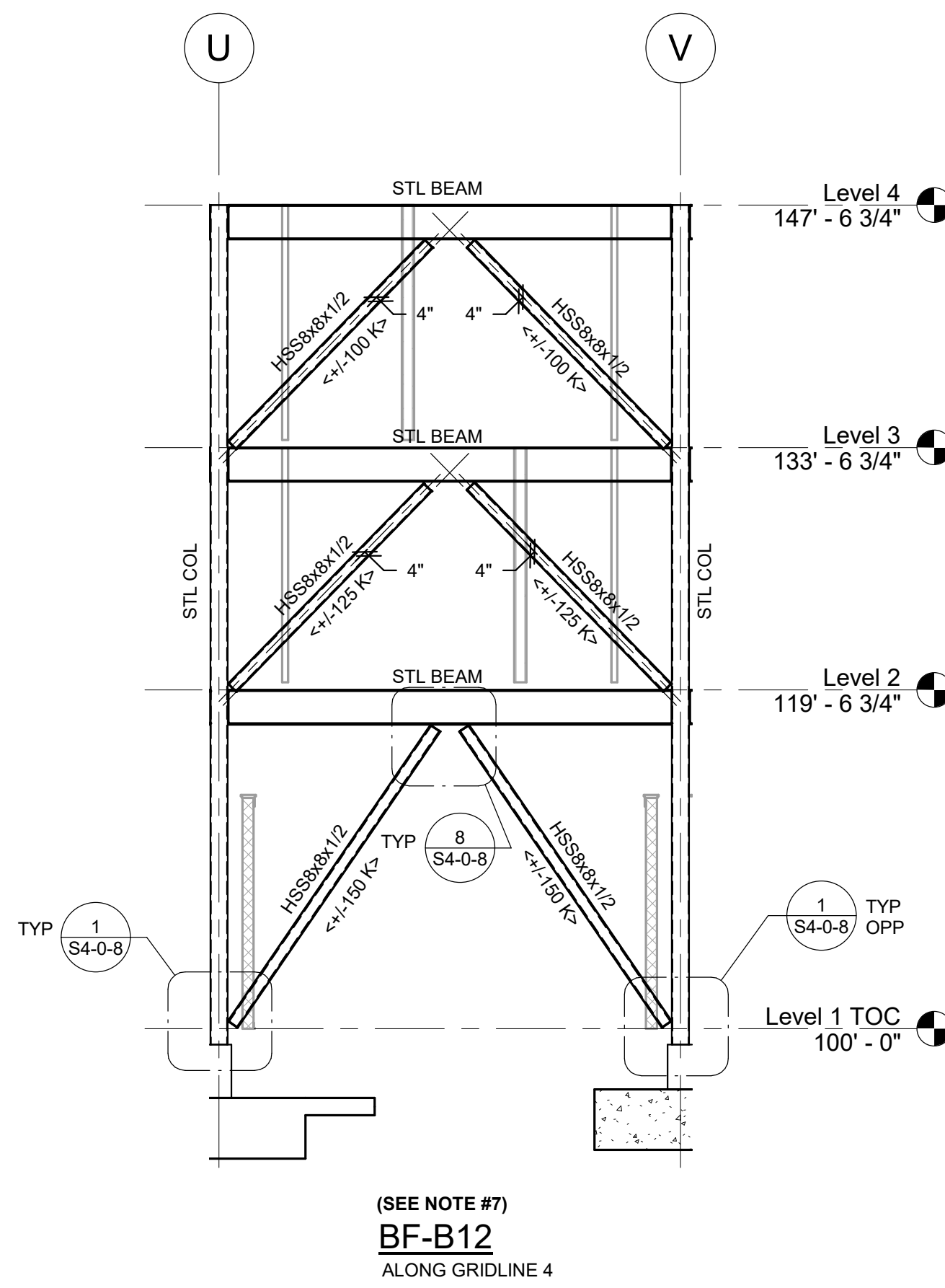
Job No.: 20202

Drawn By: EDG

Date: MAY 12, 2023

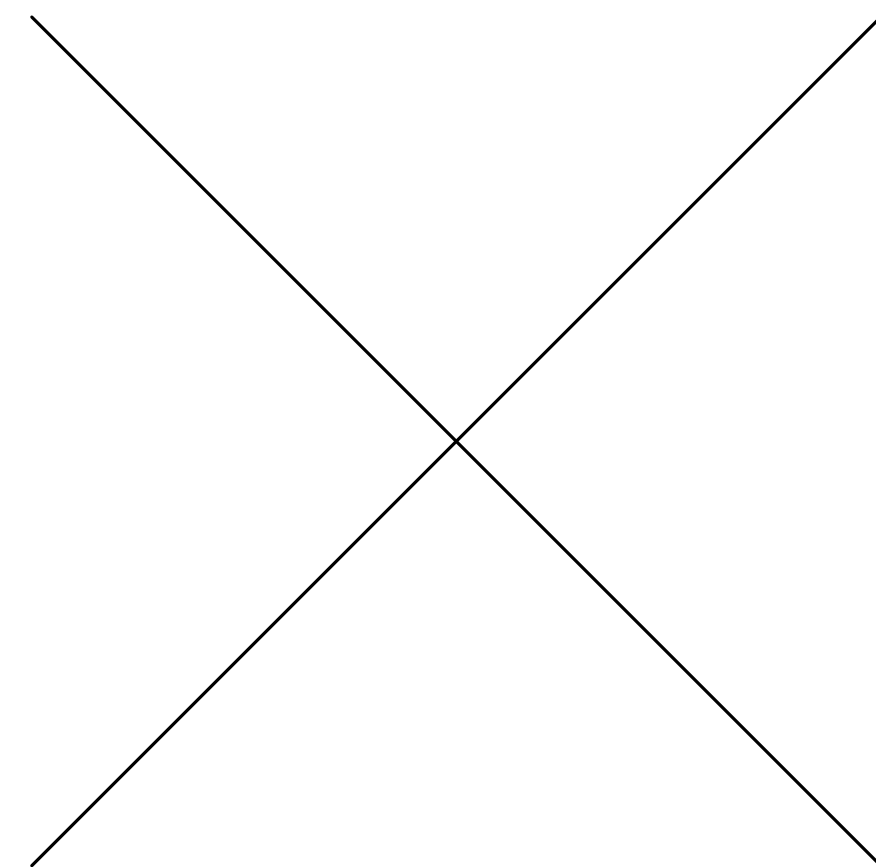
S4-0-3

NOT USED
BF-10B



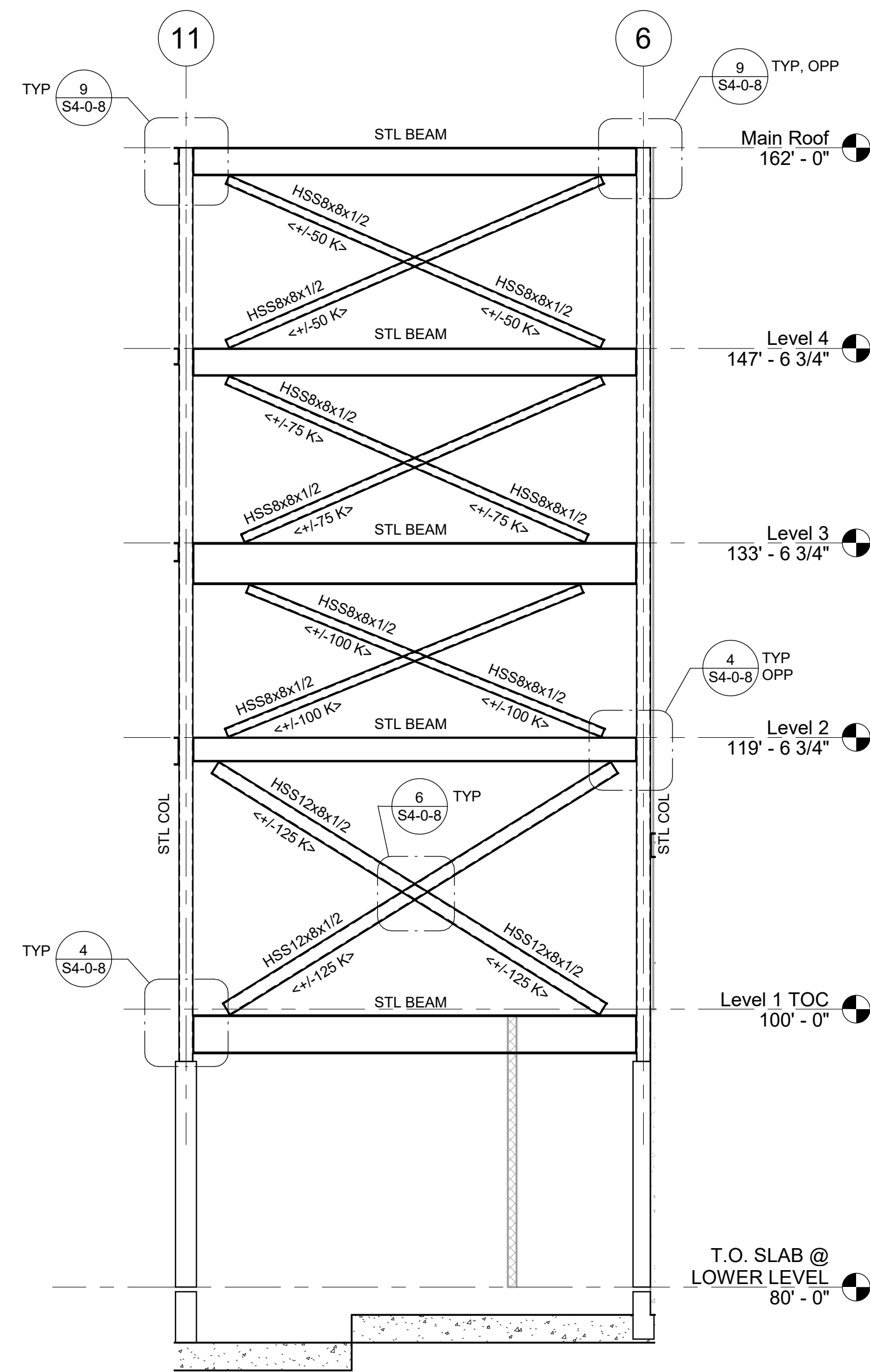
- FIREPROOFING NOTES:**
- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 - CONCEALED FROM VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 - EXPOSED TO VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 - COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

- BRACE FRAME NOTES:**
- FABRICATOR IS RESPONSIBLE FOR BRACE CONNECTION DESIGN.
 - ELEVATIONS ARE SCHEMATIC ONLY AND INTENDED TO SHOW CONFIGURATION OF BRACED FRAMES AND BRACE FORCES.
 - DESIGN DIAGONAL MEMBER CONNECTIONS FOR TWICE THE AXIAL DESIGN FORCE SHOWN BELOW EACH MEMBER <30k> (TENSION OR COMPRESSION). AXIAL DESIGN FORCE IS BASED ON LRFD. USE GENERAL UNIFORM FORCE METHOD FOR CONNECTION DESIGN.
 - DO NOT WELD TOP END OF DIAGONAL BRACE MEMBERS IN PLACE UNTIL FLOOR SLABS AND ROOFING ARE IN PLACE. WELDS MUST BE FULLY INSPECTED AND APPROVED PRIOR TO PLACING ANY CONCRETE OR INSTALLING OTHER MATERIALS THAT WOULD COVER THE CONNECTIONS.
 - BOLTED CONNECTIONS IN BRACED FRAMES SHALL BE DESIGNED AS SLIP CRITICAL CONNECTIONS.
 - SEE PLANS FOR COLUMN AND BEAM SIZES.
 - CENTERLINE OF BRACE MEMBER SHALL BE OFFSET FROM WORKPOINT LINE AS NOTED AS SHOWN ON ELEVATION.
 - * SYMBOL AT THE END OF A STEEL BEAM SIZE (HSS*, WP*, ETC.) DENOTES EXPOSED BRACE FRAME MEMBERS, (INCLUDING STEEL BEAMS AND COLUMNS) TO RECEIVE INTUMESCENT MASTIC FIREPROOFING.

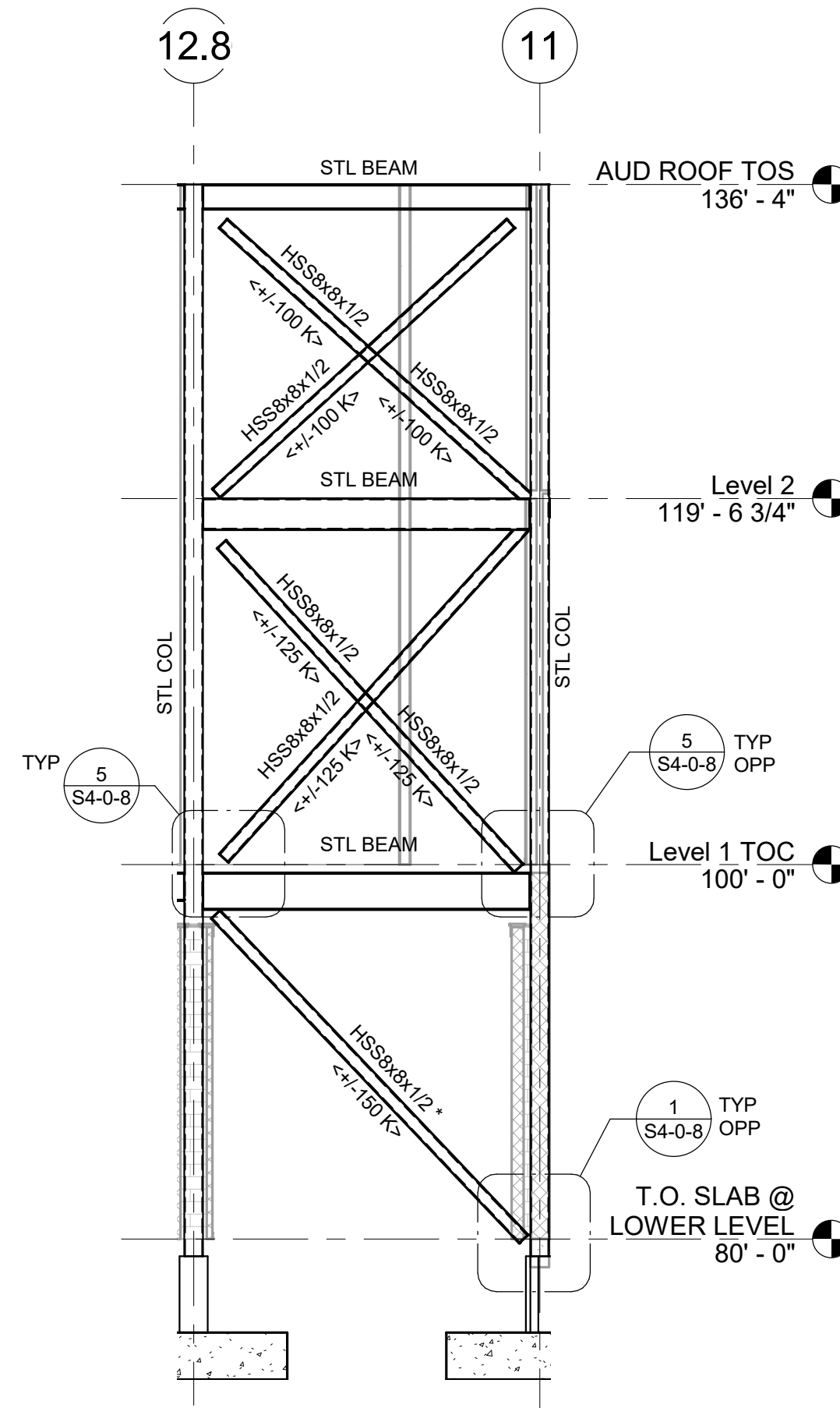


NOT USED

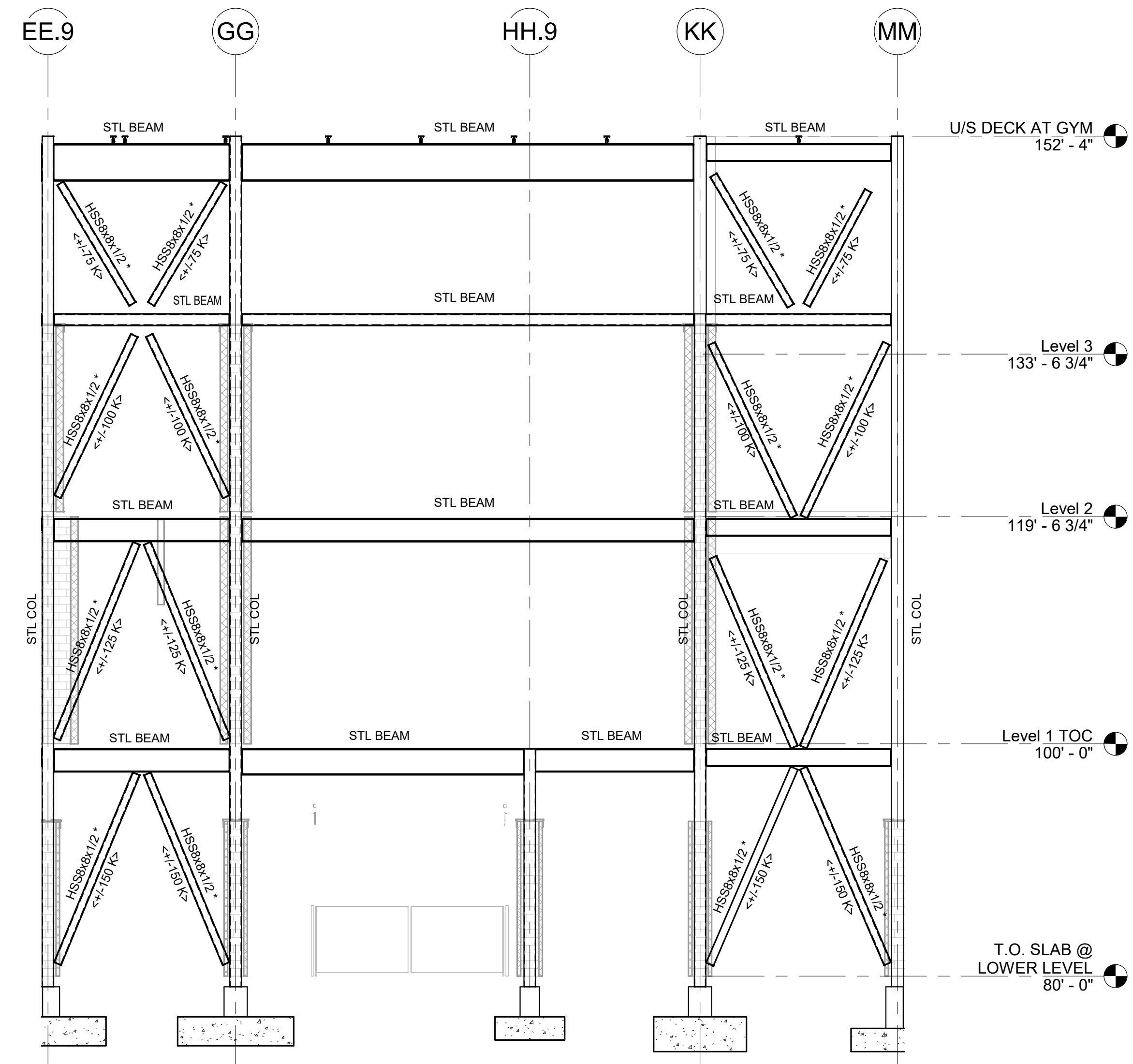
BF-C1



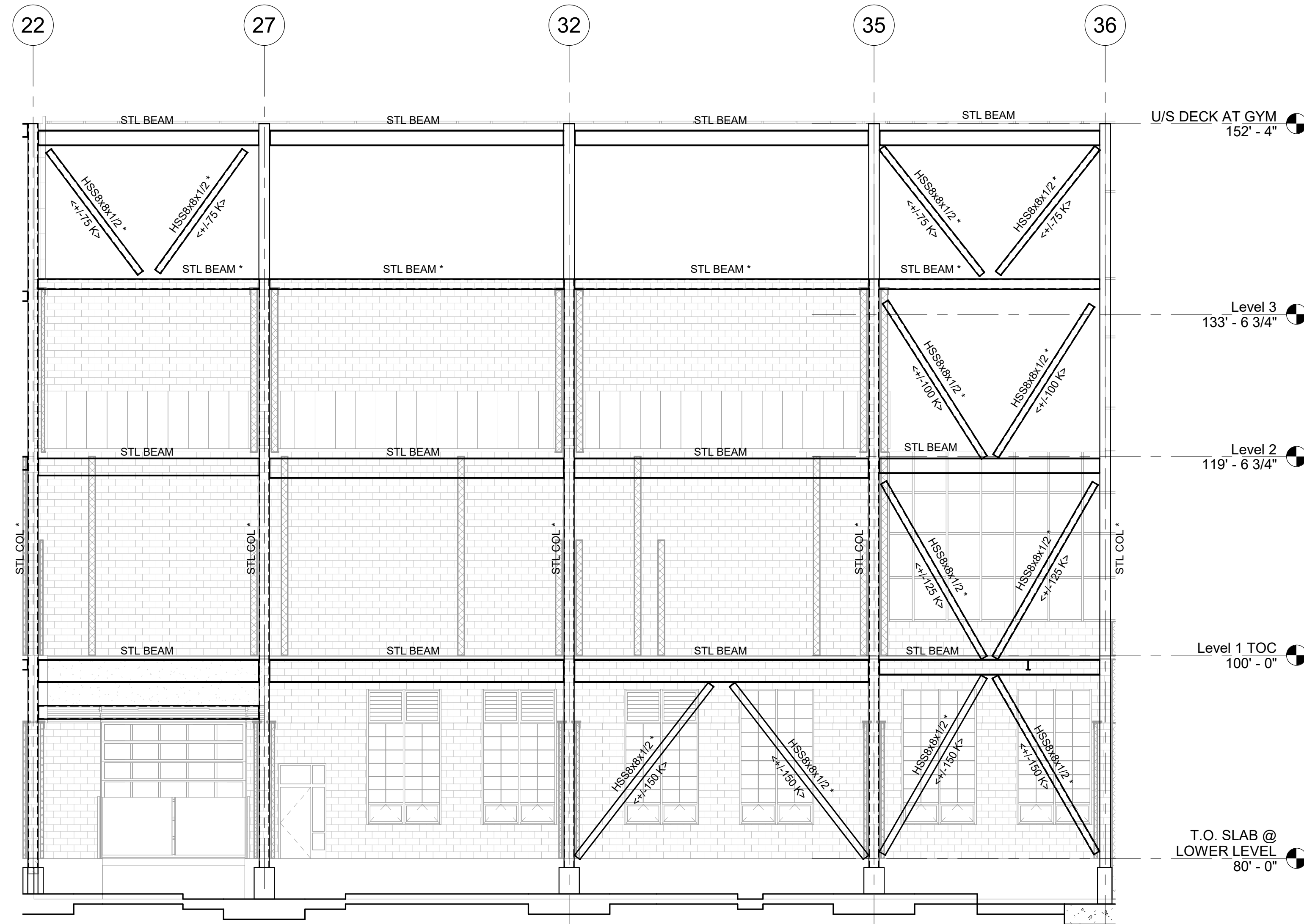
BF-C2
ALONG GRIDLINE AA



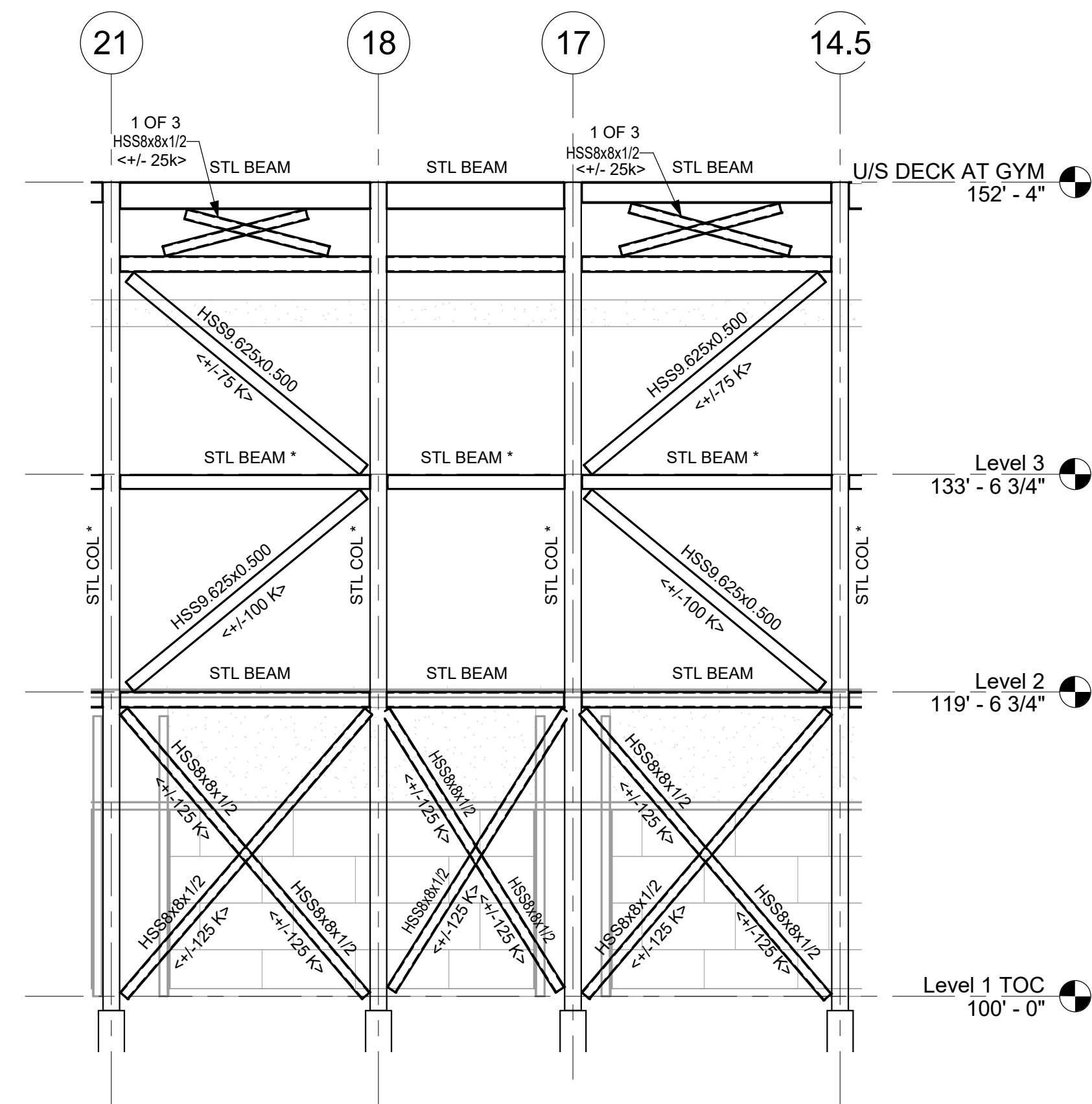
BF-C3
ALONG GRIDLINE PP



BF-D1 AND SW-D3
ALONG GRIDLINE 36



BF-D2 AND SW-D2
ALONG GRIDLINE MM



BF-D4
ALONG GRIDLINE AA

FIREPROOFING NOTES:

- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

BRACE FRAME NOTES:

- FABRICATOR IS RESPONSIBLE FOR BRACE CONNECTION DESIGN.
- ELEVATIONS ARE SCHEMATIC ONLY AND INTENDED TO SHOW CONFIGURATION OF BRACED FRAMES AND BRACE FORCES.
- DESIGN DIAGONAL MEMBER CONNECTIONS FOR TWICE THE AXIAL DESIGN FORCE SHOWN BELOW EACH MEMBER -30% (TENSION OR COMPRESSION). AXIAL DESIGN FORCE IS BASED ON LRFD. USE GENERAL UNIFORM FORCE METHOD FOR CONNECTION DESIGN.
- DO NOT WELD TOP END OF DIAGONAL BRACE MEMBERS IN PLACE UNTIL FLOOR SLABS AND ROOFING ARE IN PLACE. WELDS MUST BE FULLY INSPECTED AND APPROVED PRIOR TO PLACING ANY CONCRETE OR INSTALLING OTHER MATERIALS THAT WOULD COVER THE CONNECTIONS.
- BOLTED CONNECTIONS IN BRACED FRAMES SHALL BE DESIGNED AS SLIP CRITICAL CONNECTIONS.
- SEE PLANS FOR COLUMN AND BEAM SIZES.
- CENTERLINE OF BRACE MEMBER SHALL BE OFFSET FROM WORKPOINT LINE AS NOTED AS SHOWN ON ELEVATION.
- * SYMBOL AT THE END OF A STEEL BEAM SIZE (HSS*, WP*, ETC.) DENOTES EXPOSED BRACE FRAME MEMBERS, (INCLUDING STEEL BEAMS AND COLUMNS) TO RECEIVE INTUMESCENT MASTIC FIREPROOFING.

DRA

Drummay Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
Tel: 817.854.1702
www.dra.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

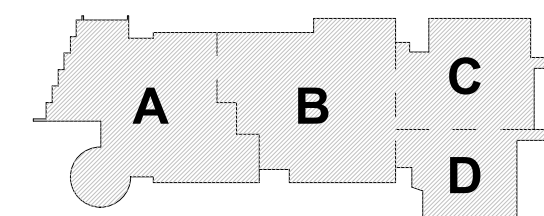
EDG
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

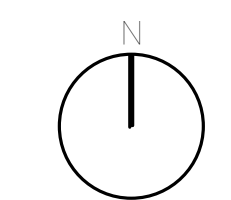
MSBA 90% CD
SUBMISSION

MAY 12, 2023

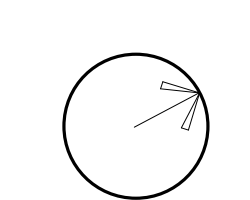


KEY PLAN

PROJECT NORTH



MAGNETIC NORTH



BRACED FRAME
ELEVATION C +
D

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

Job No.: 20202

Drawn By: EDG

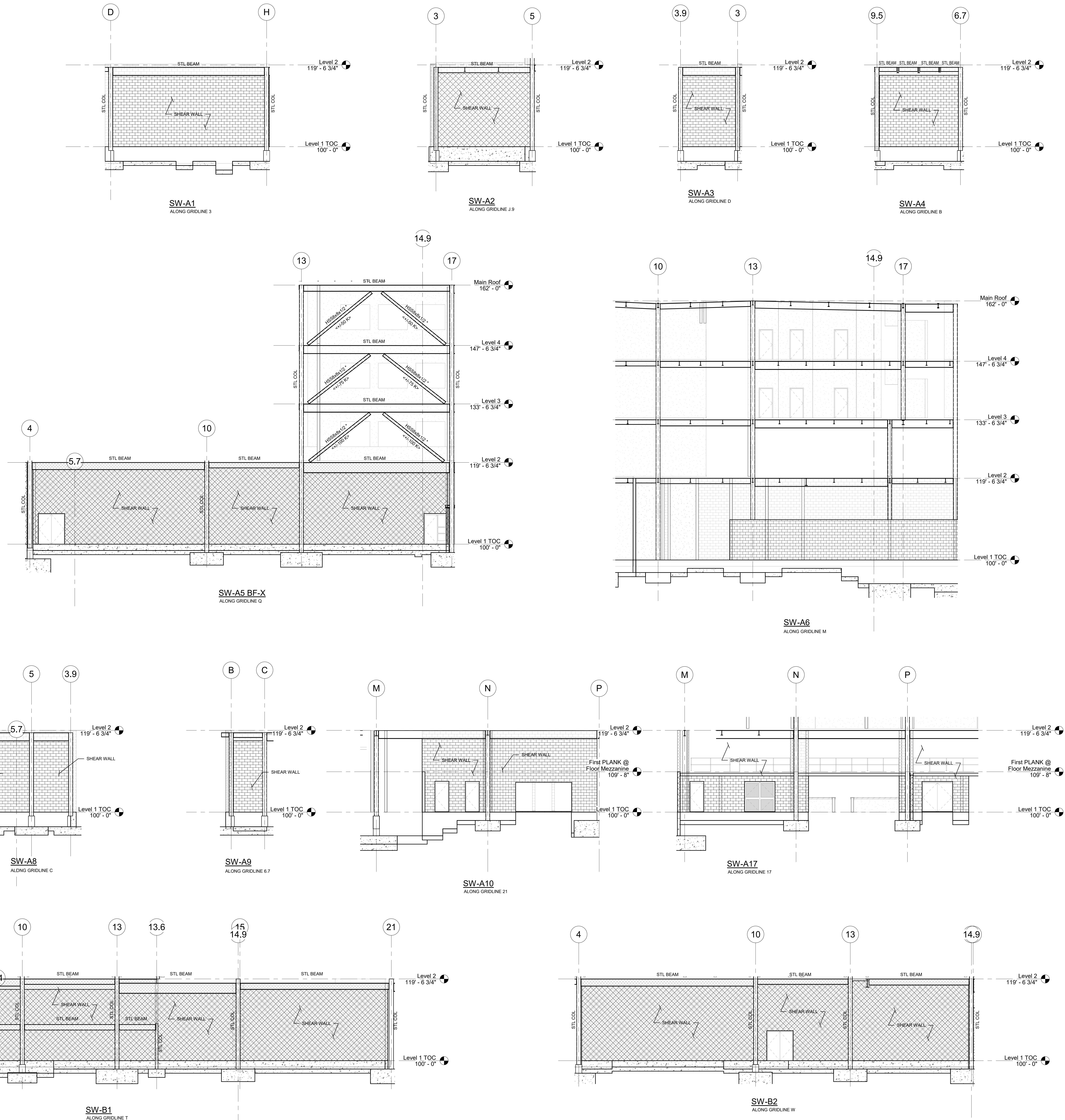
Date: MAY 12, 2023

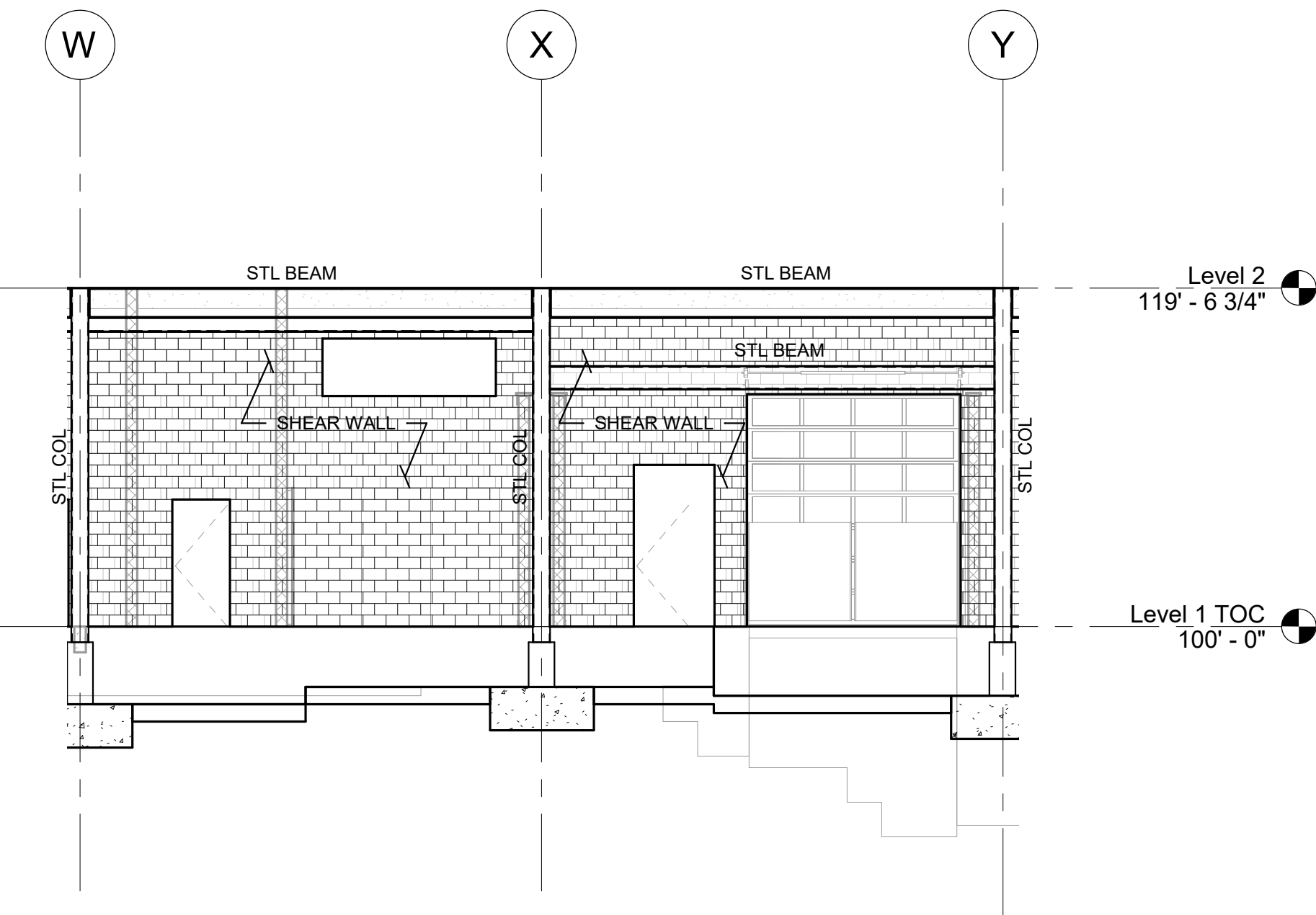
S4-0-4

- FIREPROOFING NOTES:**
1. STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 2. CONCEALED FROM VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 3. EXPOSED TO VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 4. COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

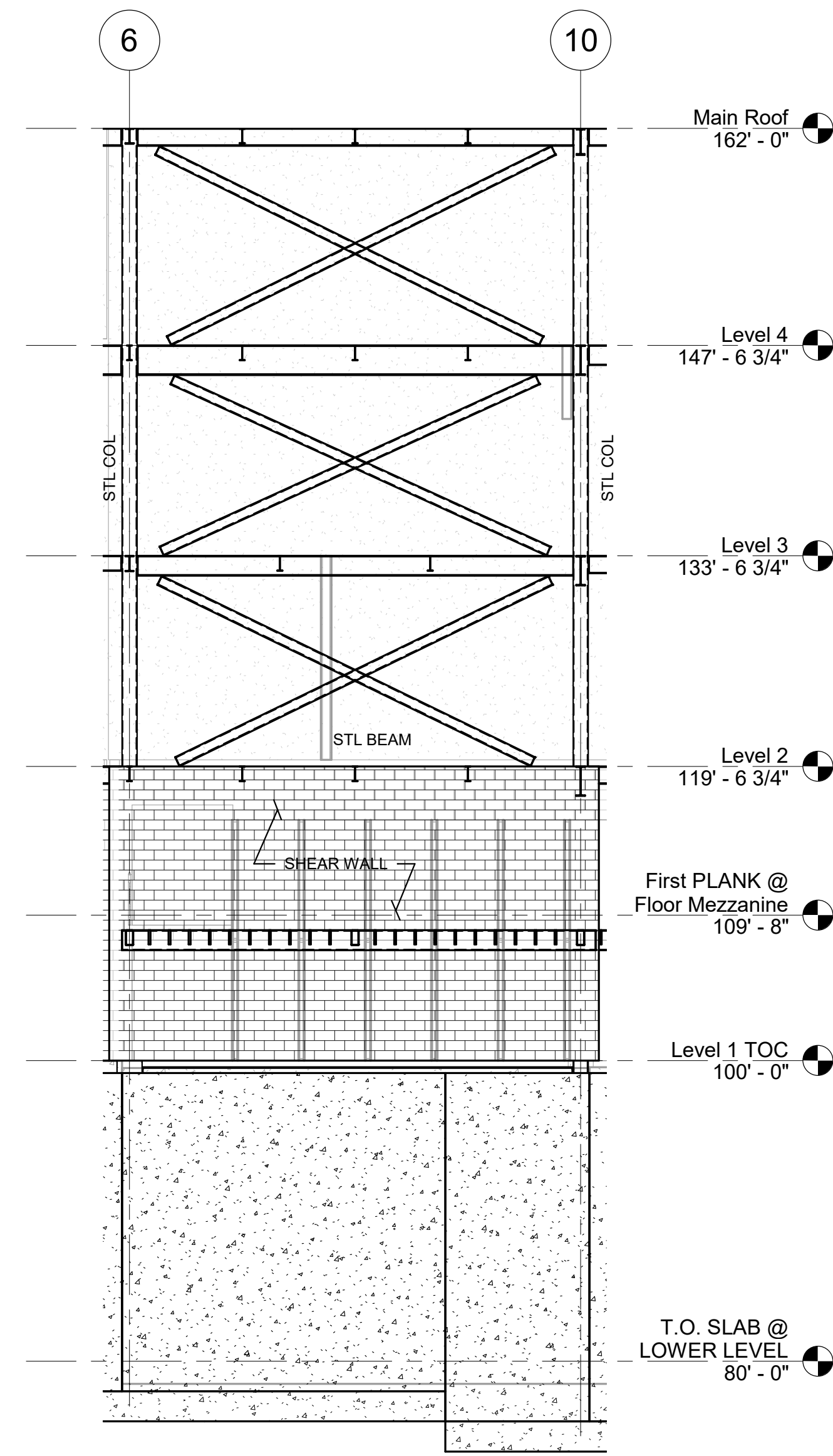
- BRACE FRAME NOTES:**
- 1.) FABRICATOR IS RESPONSIBLE FOR BRACE CONNECTION DESIGN.
 - 2.) ELEVATIONS ARE SCHEMATIC ONLY AND INTENDED TO SHOW CONFIGURATION OF BRACED FRAMES AND BRACE FORCES.
 - 3.) DESIGN DIAGONAL MEMBER CONNECTIONS FOR TWICE THE AXIAL DESIGN FORCE SHOWN BELOW EACH MEMBER <30k> (TENSION OR COMPRESSION). AXIAL DESIGN FORCE IS BASED ON LRFD. USE GENERAL UNIFORM FORCE METHOD FOR CONNECTION DESIGN.
 - 4.) DO NOT WELD TOP END OF DIAGONAL BRACE MEMBERS IN PLACE UNTIL FLOOR SLABS AND ROOFING ARE IN PLACE. WELDS MUST BE FULLY INSPECTED AND APPROVED PRIOR TO PLACING ANY CONCRETE OR INSTALLING OTHER MATERIALS THAT WOULD COVER THE CONNECTIONS.
 - 5.) BOLTED CONNECTIONS IN BRACED FRAMES SHALL BE DESIGNED AS SLIP CRITICAL CONNECTIONS.
 - 6.) SEE PLANS FOR COLUMN AND BEAM SIZES.
 - 7.) CENTERLINE OF BRACE MEMBER SHALL BE OFFSET FROM WORKPOINT LINE AS NOTED AS SHOWN ON ELEVATION.
 - 8.) * SYMBOL AT THE END OF A STEEL BEAM SIZE (HSS*, WF*, ETC.) DENOTES EXPOSED BRACE FRAME MEMBERS. (INCLUDING STEEL BEAMS AND COLUMNS) TO RECEIVE INTUMESCENT MASTIC FIREPROOFING.

- SHEAR WALL NOTES:**
1. ELEVATIONS ARE SCHEMATIC ONLY, AND INTENDED TO SHOW CONFIGURATION OF SHEAR WALLS.
 2. SEE PLANS FOR COLUMN AND BEAM SIZES.
 3. COORDINATE LOCATIONS OF OPENINGS WITHIN WALLS WITH ARCHITECTURAL DRAWINGS.
 4. SEE SCHEDULE ON S0-0.4 FOR REINFORCING REQUIREMENTS AT SHEAR WALLS.
 5. SEE DETAILS ON S0-0.4 FOR ADDITIONAL REINFORCING REQUIRED AT OPENINGS IN WALLS, CONTROL JOINT ARRANGEMENTS, ETC.
 6. SEE MASONRY UNTEL DETAIL AND SCHEDULE ON S0-0.4 FOR REINFORCING REQUIREMENTS.
 7. SEE DETAIL 6 ON S0-0.5 FOR REQUIREMENTS OF WELDABLE COUPLERS ALONG STRUCTURAL STEEL COLUMNS AND BEAMS AT CMU SHEAR WALLS.
 8. COORDINATE ADDITIONAL BOND-BEAMS AND REINFORCING REQUIRED WITHIN SHEAR WALLS WITH VARIOUS SECTIONS ON THE STRUCTURAL CONTRACT DRAWINGS.

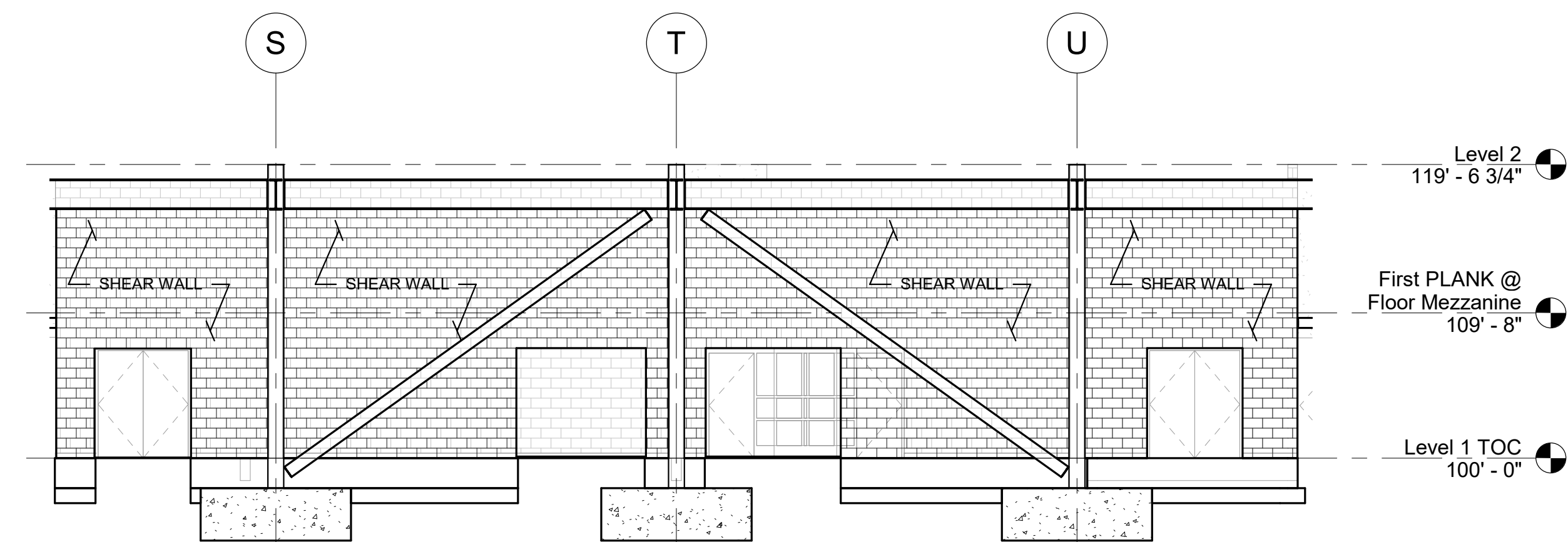




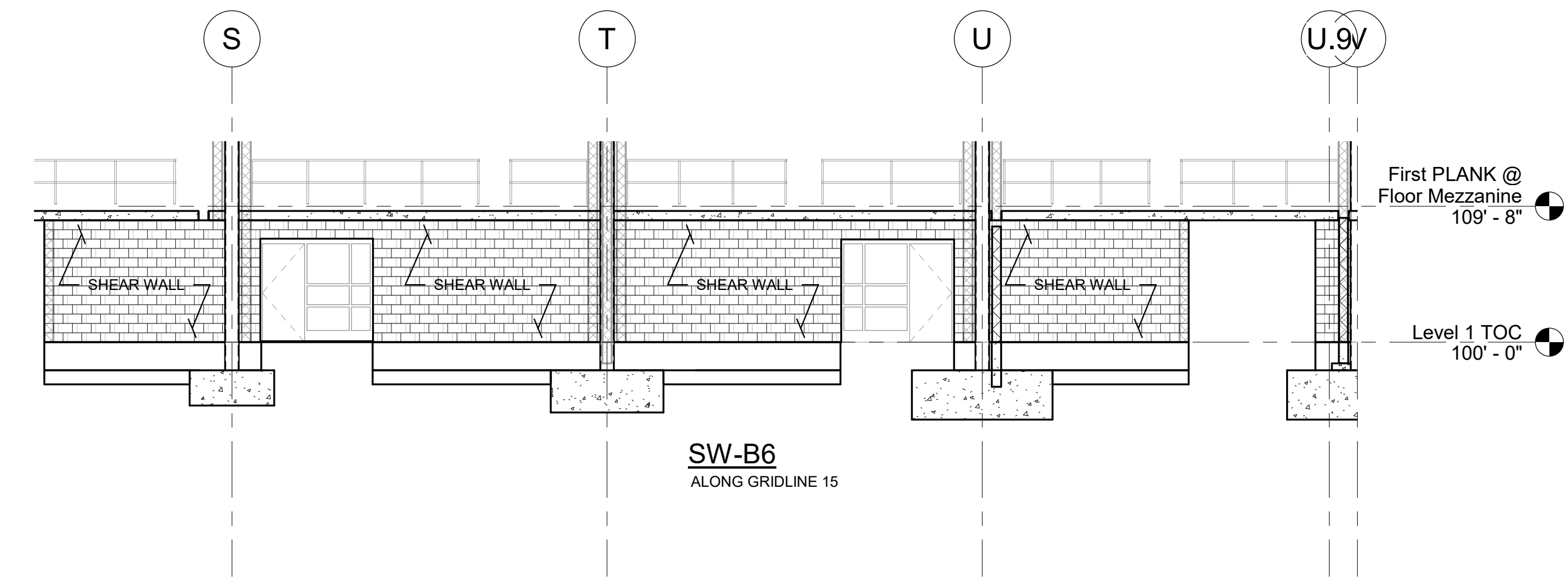
SW-B3
ALONG GRIDLINE 1



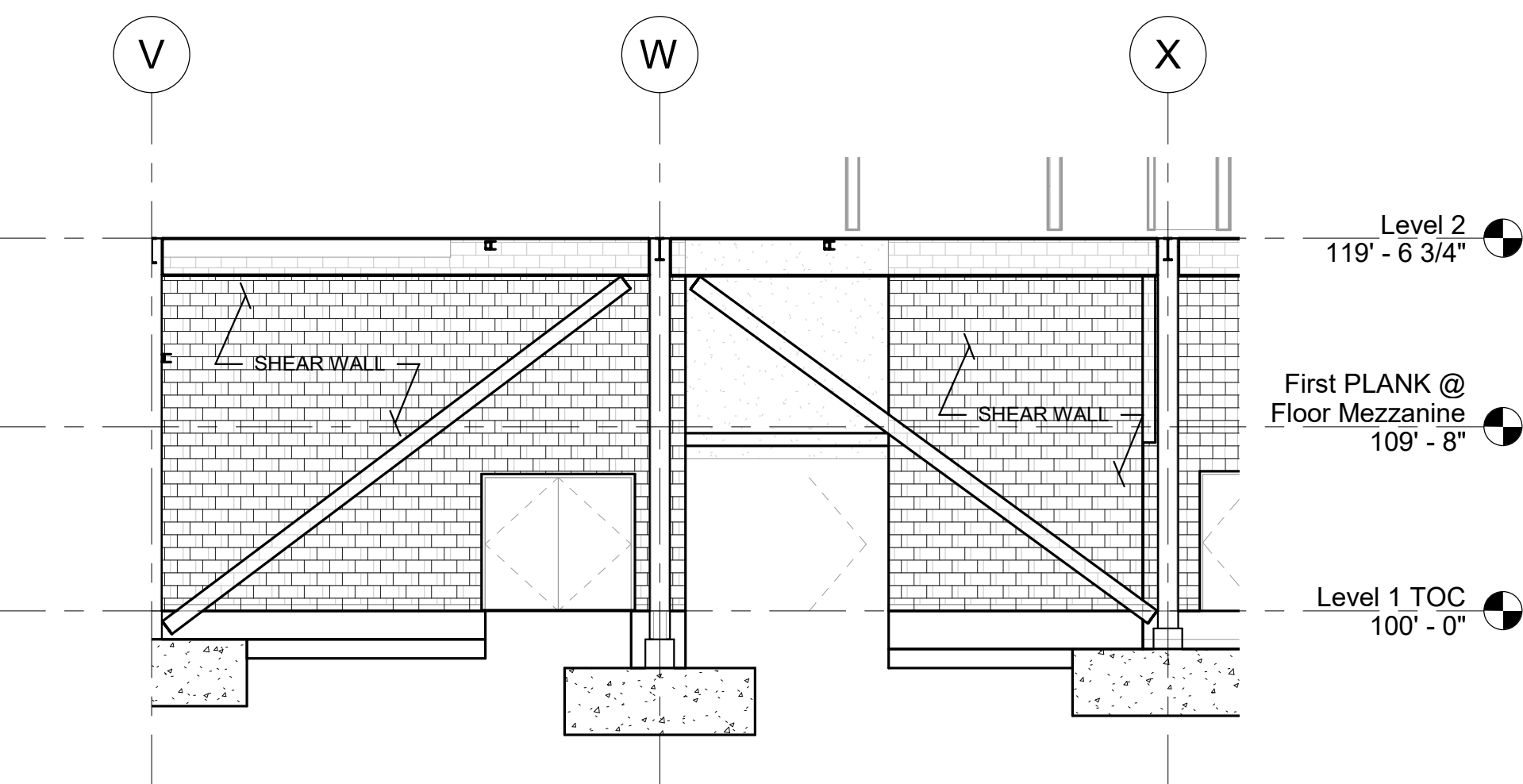
SW-B4
ALONG GRIDLINE Y.9



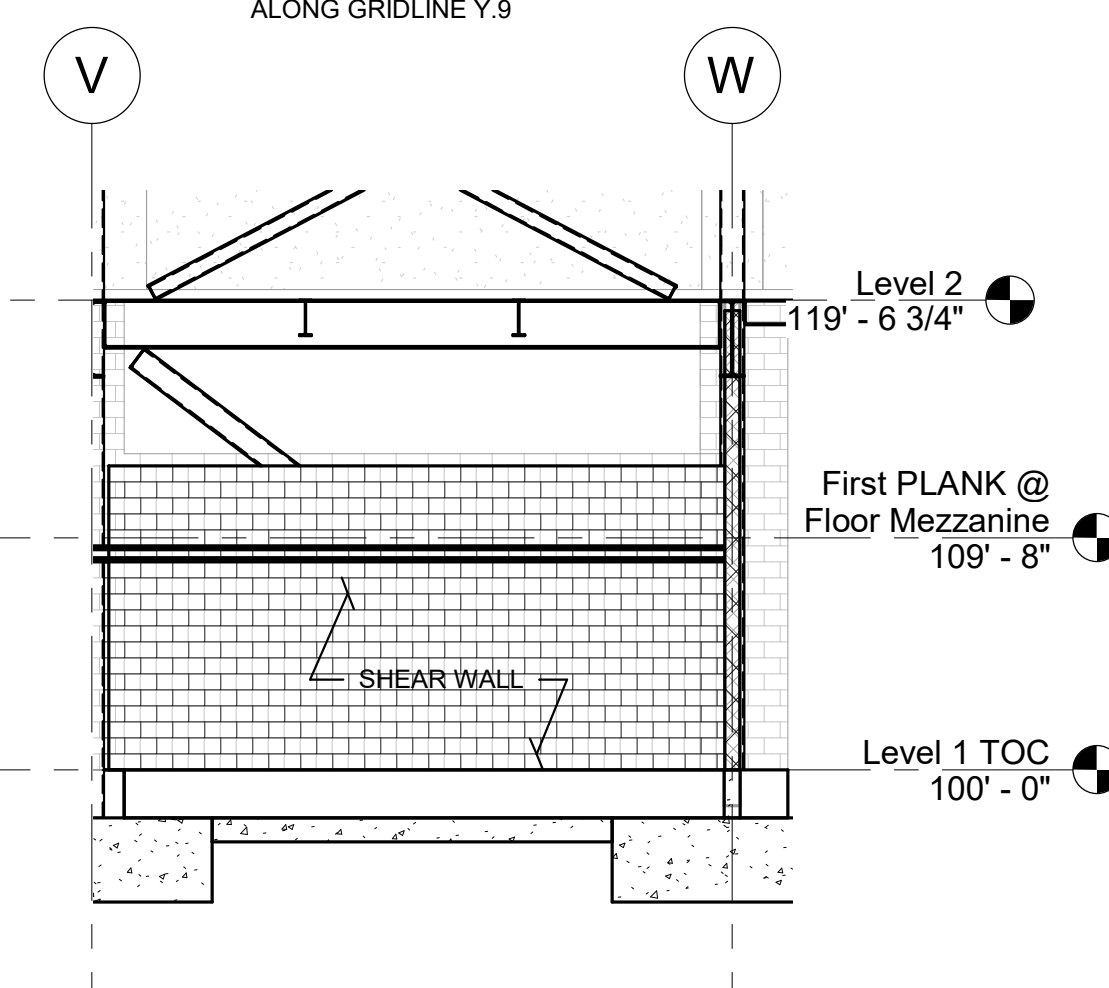
SW-B5
ALONG GRIDLINE 21



SW-B6
ALONG GRIDLINE 15



SW-B7
ALONG GRIDLINE 21

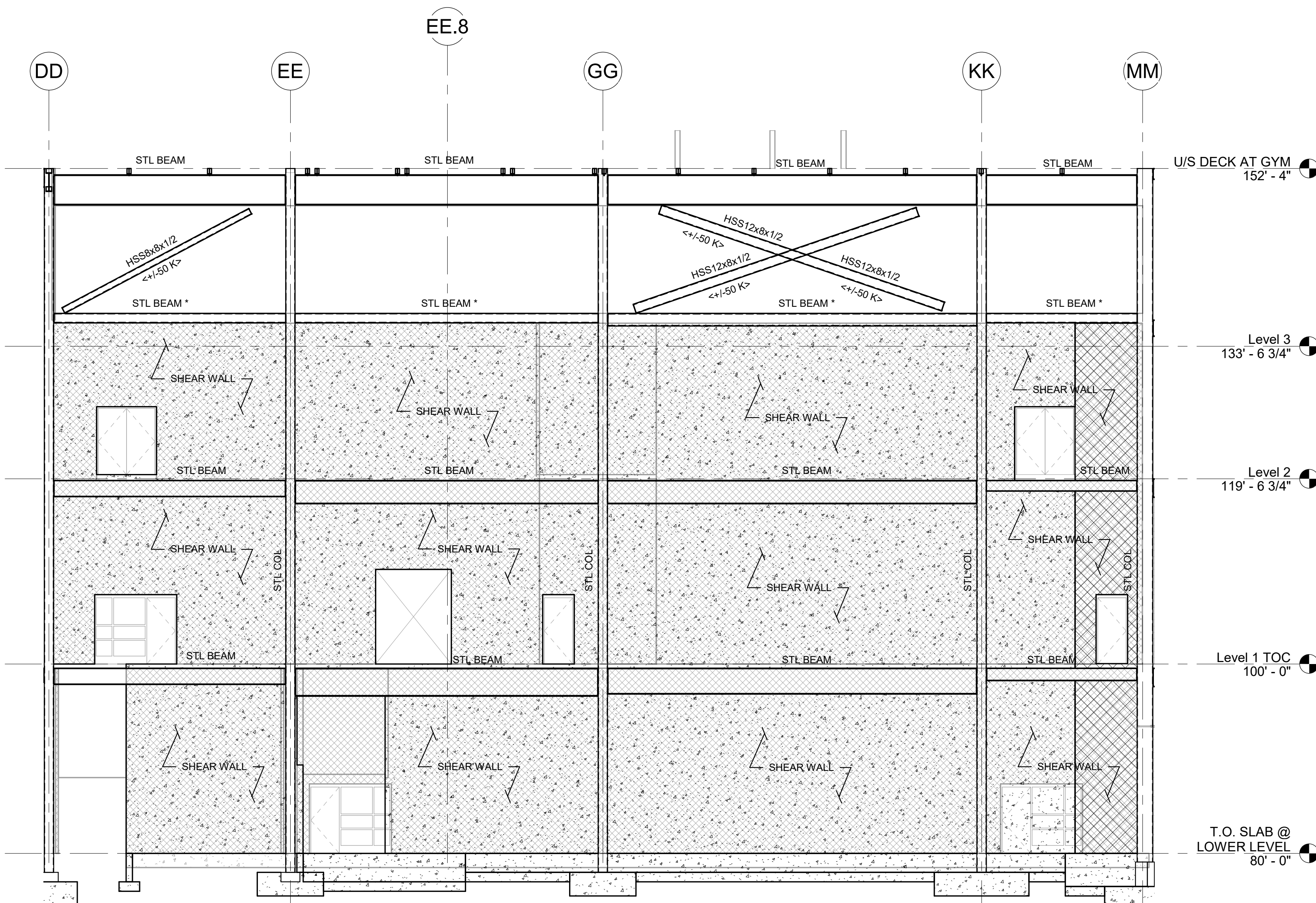


SW-B8
ALONG GRIDLINE 15

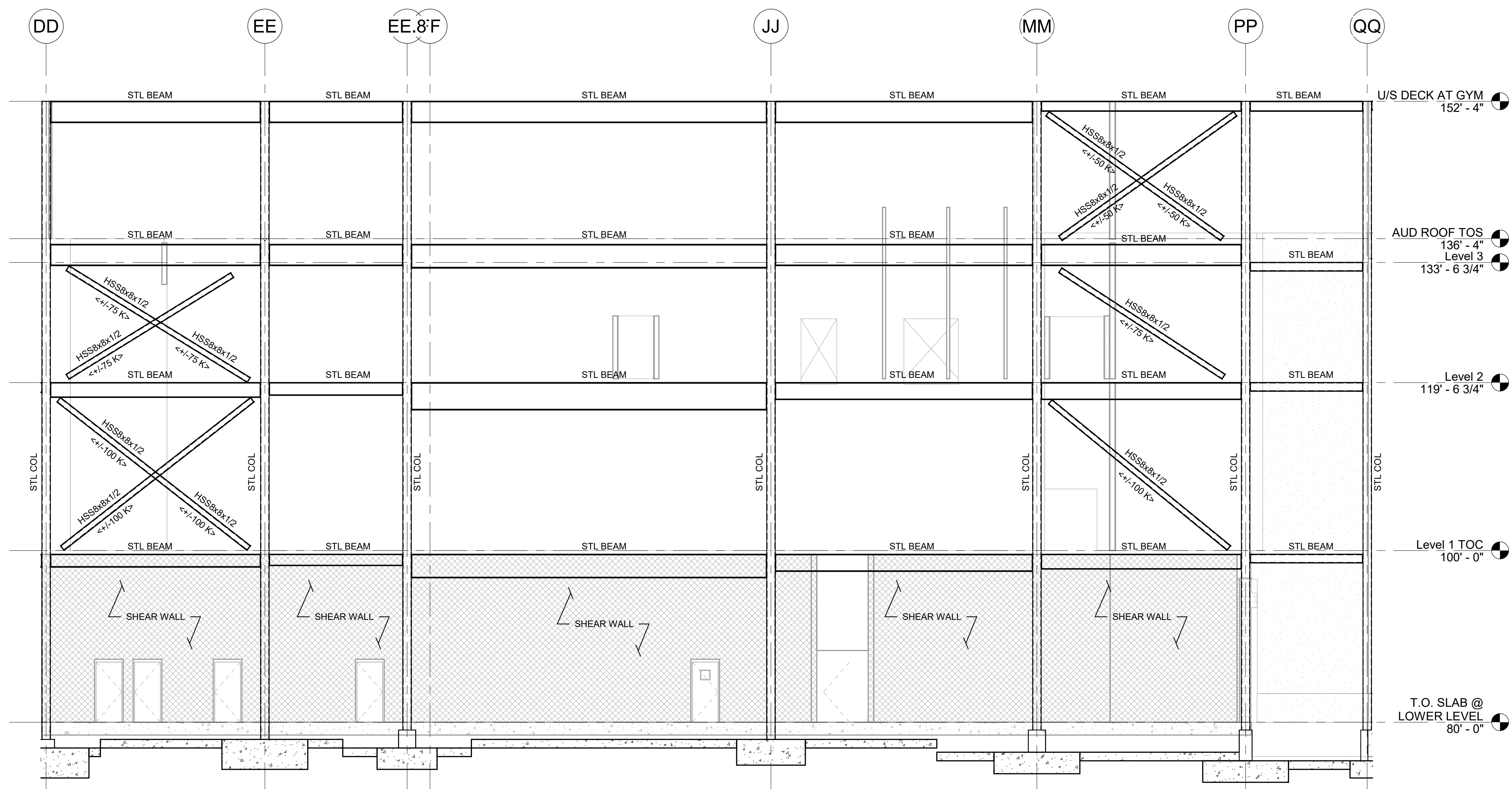
- FIREPROOFING NOTES:**
1. STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 2. CONCEALED FROM VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 3. EXPOSED TO VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 4. COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

- SHEAR WALL NOTES:**
1. ELEVATIONS ARE SCHEMATIC ONLY AND INTENDED TO SHOW CONFIGURATION OF SHEAR WALLS.
 2. SEE PLANS FOR COLUMN AND BEAM SIZES.
 3. COORDINATE LOCATIONS OF OPENINGS WITHIN WALLS WITH ARCHITECTURAL DRAWINGS.
 4. SEE SCHEDULE ON S0-0.4 FOR REINFORCING REQUIREMENTS AT SHEAR WALLS.
 5. SEE DETAILS ON S0-0.4 FOR ADDITIONAL REINFORCING REQUIRED AT OPENINGS IN WALLS. CONTROL JOINT ARRANGEMENTS, ETC.
 6. SEE MASONRY LINTEL DETAIL AND SCHEDULE ON S0-0.4 FOR REINFORCING REQUIREMENTS.
 7. SEE DETAIL 6 ON S0-0.5 FOR REQUIREMENTS OF WELDABLE COUPLERS ALONG STRUCTURAL STEEL COLUMNS AND BEAMS AT CMU SHEAR WALLS.
 8. COORDINATE ADDITIONAL BOND-BEAMS AND REINFORCING REQUIRED WITHIN SHEAR WALLS WITH VARIOUS SECTIONS ON THE STRUCTURAL CONTRACT DRAWINGS.

- BRACE FRAME NOTES:**
1. FABRICATOR IS RESPONSIBLE FOR BRACE CONNECTION DESIGN.
 2. ELEVATIONS ARE SCHEMATIC ONLY AND INTENDED TO SHOW CONFIGURATION OF BRACED FRAMES AND BRACE FORCES.
 3. DESIGN DIAGONAL MEMBER CONNECTIONS FOR TWICE THE AXIAL DESIGN FORCE SHOWN BELOW EACH MEMBER <30k> (TENSION OR COMPRESSION). AXIAL DESIGN FORCE IS BASED ON LRFD. USE GENERAL UNIFORM FORCE METHOD FOR CONNECTION DESIGN.
 4. DO NOT WELD TOP END OF DIAGONAL BRACE MEMBERS IN PLACE UNTIL FLOOR SLABS AND ROOFING ARE IN PLACE. WELDS MUST BE FULLY INSPECTED AND APPROVED PRIOR TO PLACING ANY CONCRETE OR INSTALLING OTHER MATERIALS THAT WOULD COVER THE CONNECTIONS.
 5. BOLTED CONNECTIONS IN BRACED FRAMES SHALL BE DESIGNED AS SLIP CRITICAL CONNECTIONS.
 6. SEE PLANS FOR COLUMN AND BEAM SIZES.
 7. CENTERLINE OF BRACE MEMBER SHALL BE OFFSET FROM WORKPOINT LINE AS NOTED AS SHOWN ON ELEVATION.
 8. * SYMBOL AT THE END OF A STEEL BEAM SIZE (HSS*, WF*, ETC.) DENOTES EXPOSED BRACE FRAME MEMBERS, (INCLUDING STEEL BEAMS AND COLUMNS) TO RECEIVE INTUMESCENT MASTIC FIREPROOFING.



(SEE NOTE #7)
SW-C1
ALONG GRIDLINE 22



BF-C4 AND SW-C2
ALONG GRIDLINE 20

DRA

Drummet Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
Tel: 817.854.1702
www.dra.com

280 Charles Street
Studio 300
Waltham, MA
02453

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

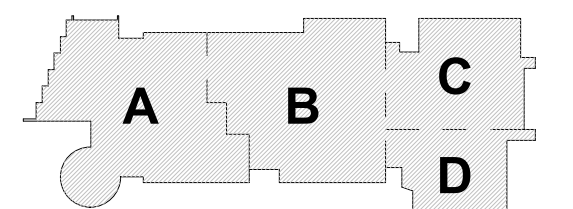
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

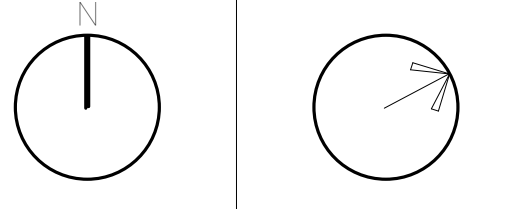
FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023



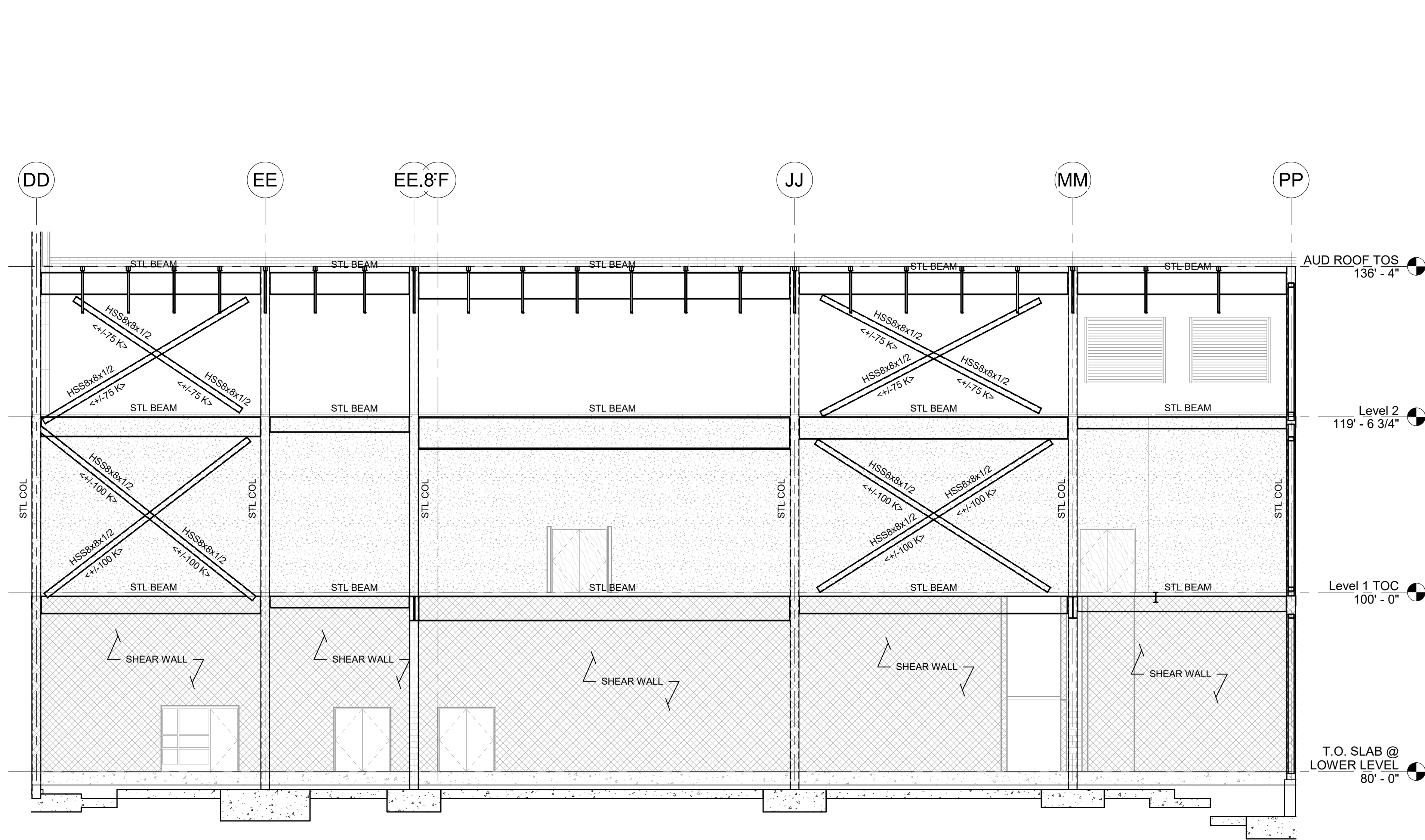
PROJECT NORTH
MAGNETIC NORTH



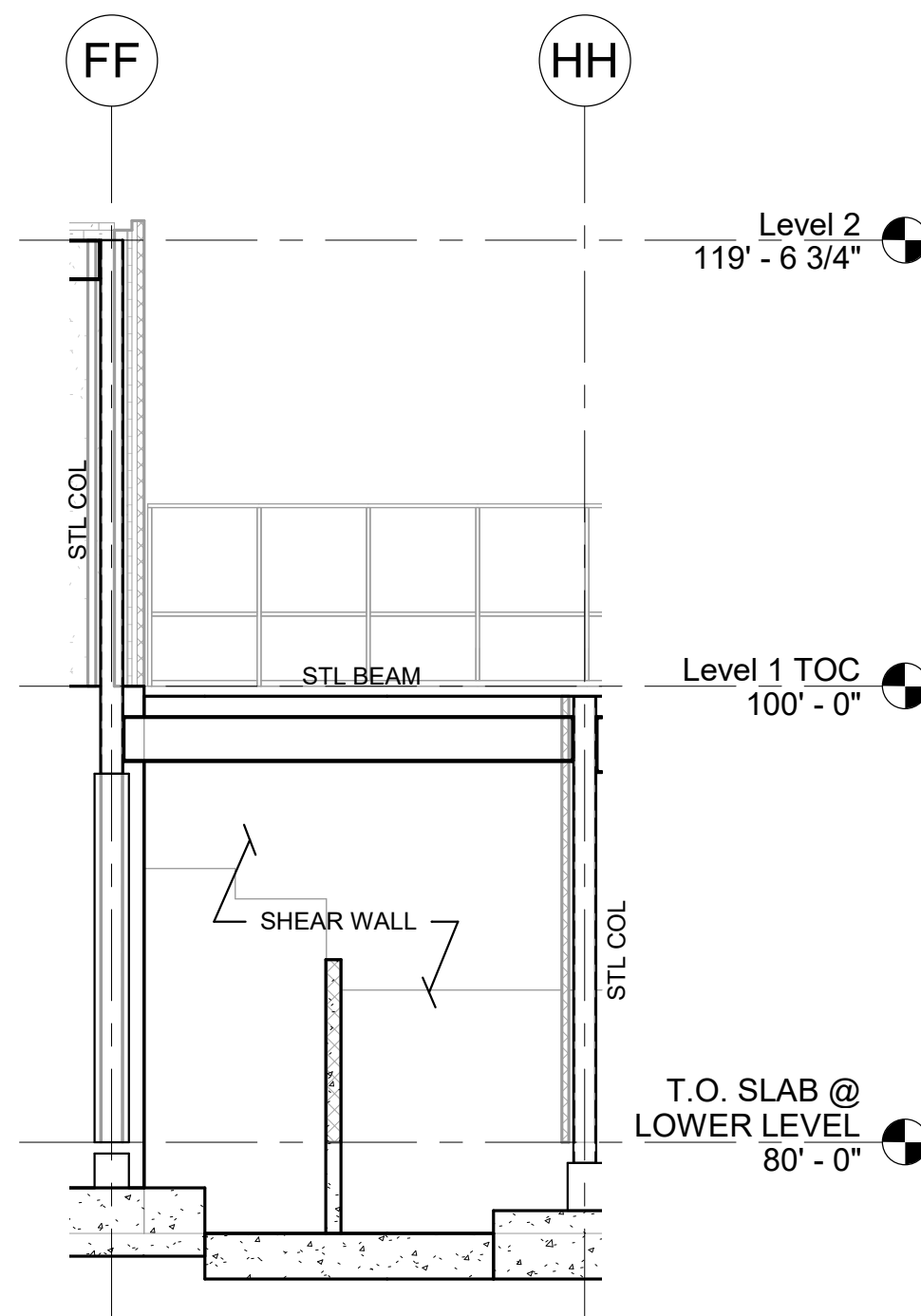
SHEAR WALLS

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

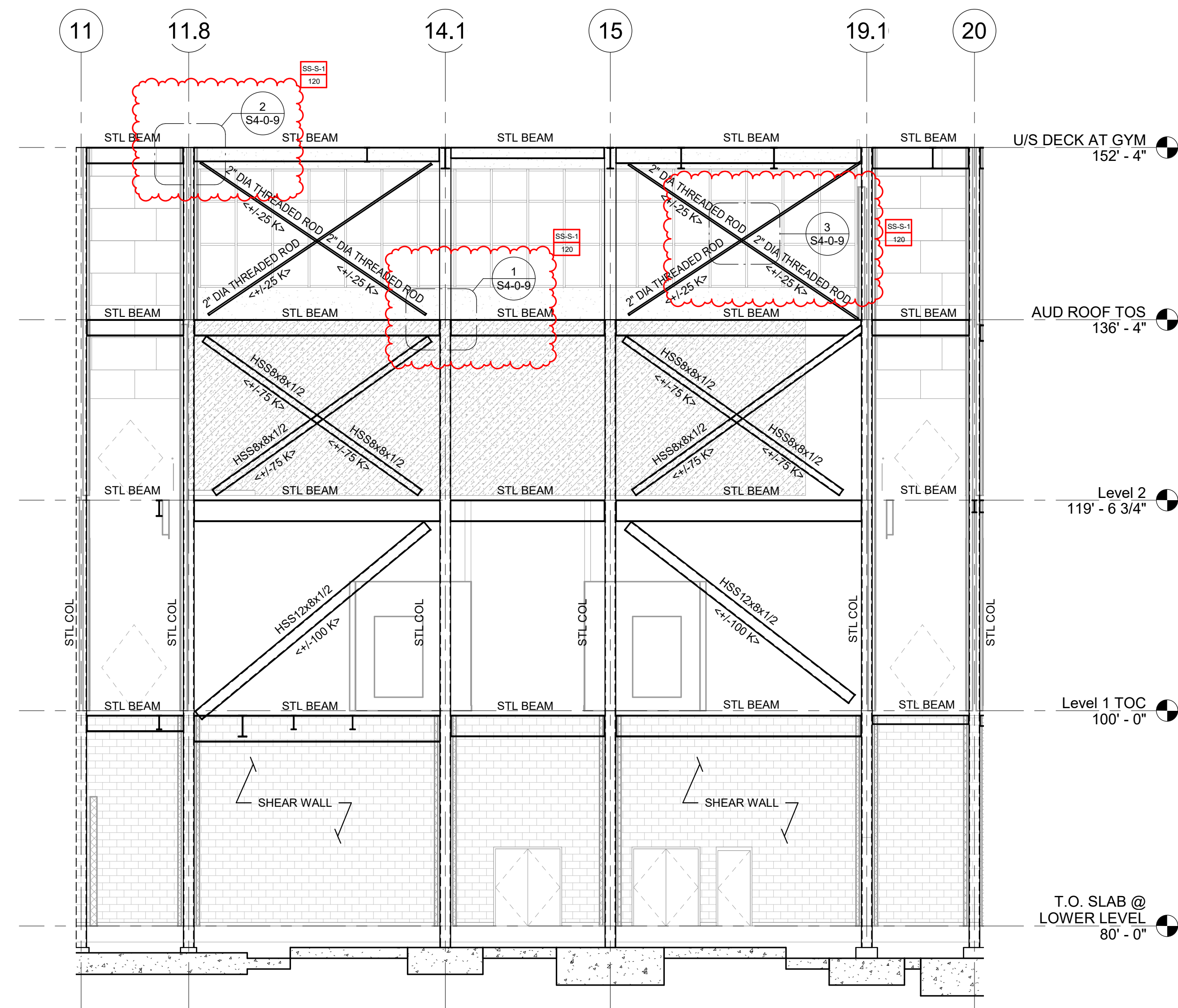
S4-0-6



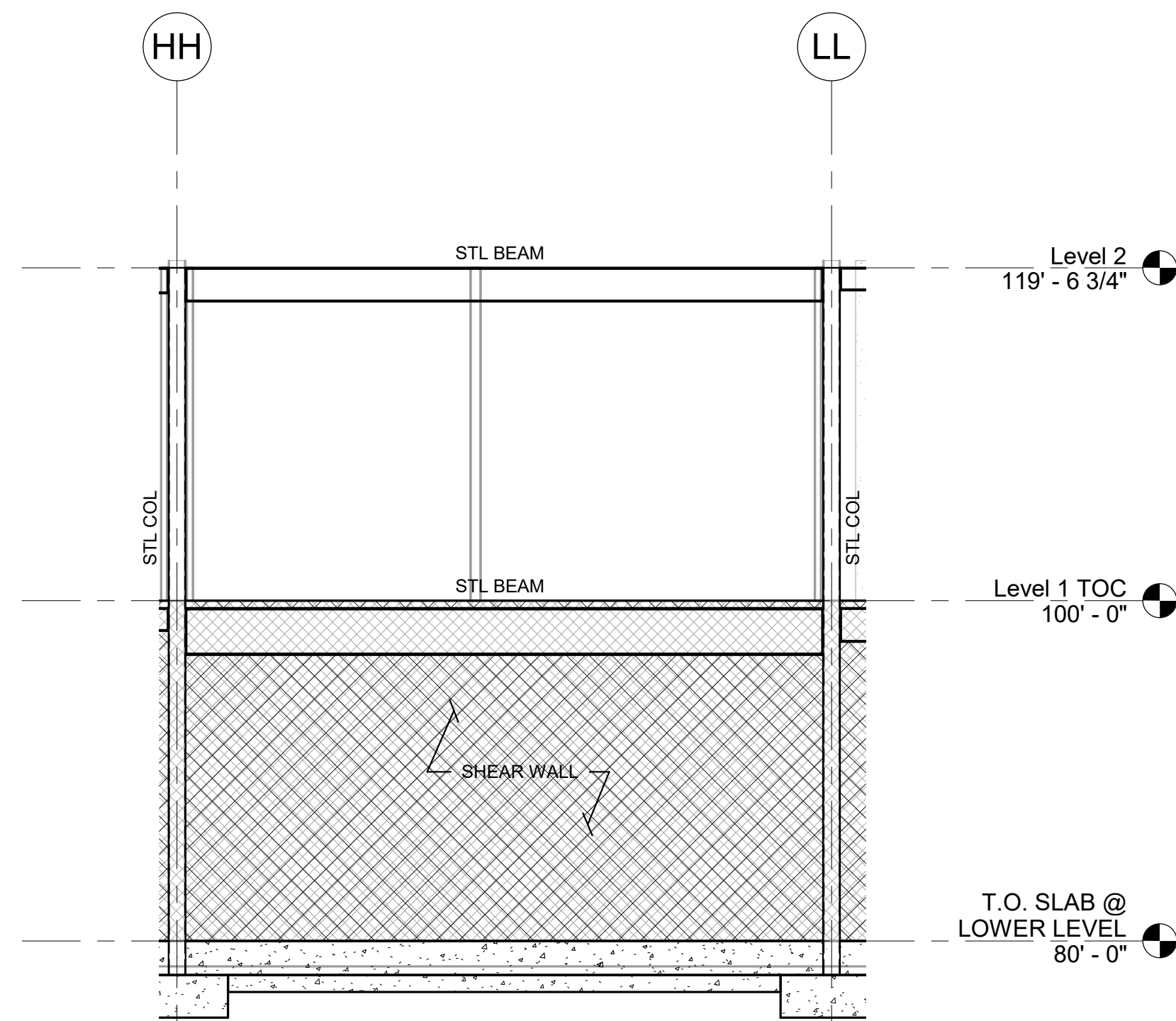
BF-C5 AND SW-C3
ALONG GRIDLINE 11



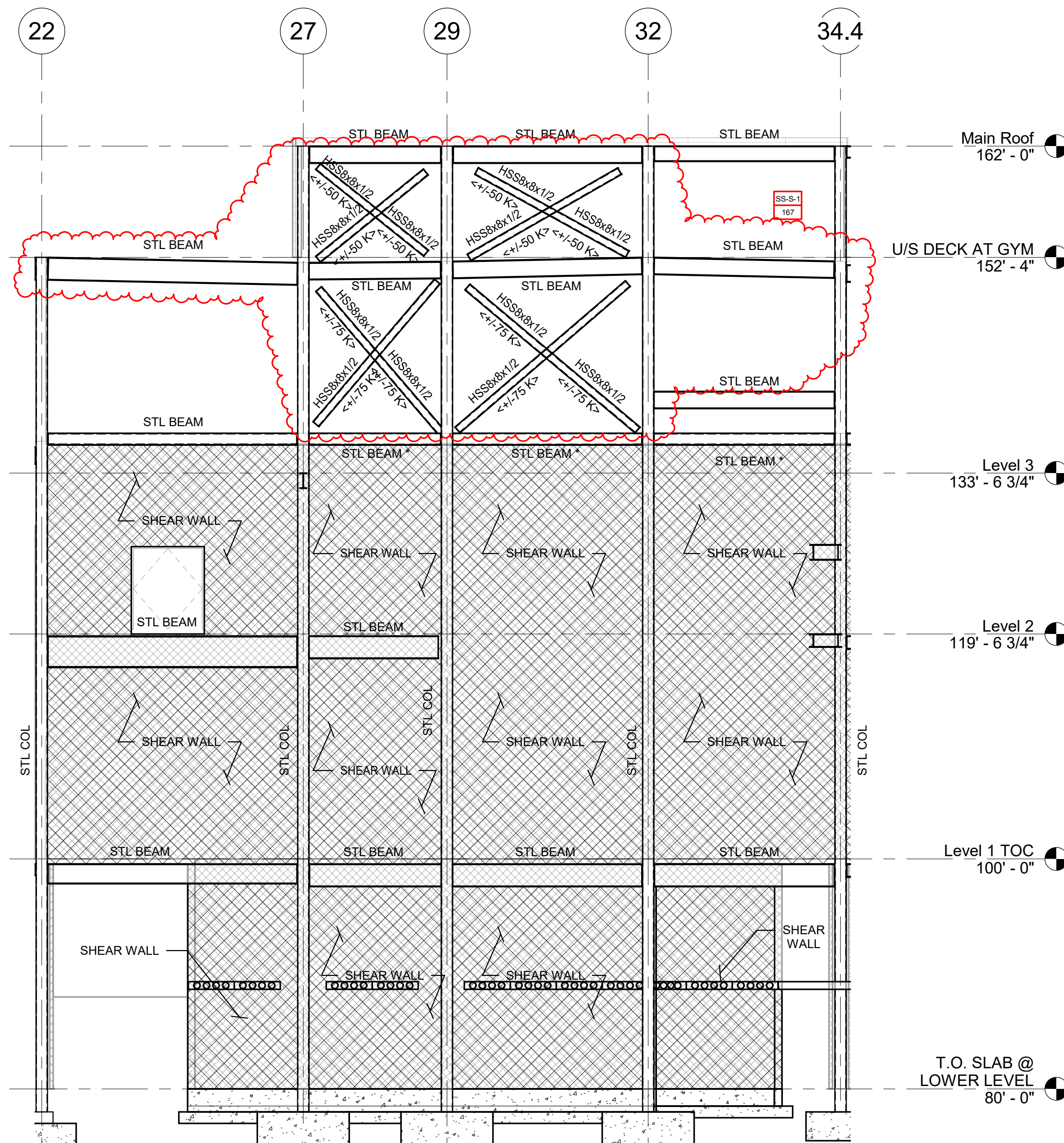
SW-C4
ALONG GRIDLINE 2



BF-C6 AND SW-C5
ALONG GRIDLINE DD



SW-C6
ALONG GRIDLINE 9



BF-D3 AND SW-D1
ALONG GRIDLINE DD

SHEAR WALL NOTES:

- ELEVATIONS ARE SCHEMATIC ONLY, AND INTENDED TO SHOW CONFIGURATION OF SHEAR WALLS.
- SEE PLANS FOR COLUMN AND BEAM SIZES.
- COORDINATE LOCATIONS OF OPENINGS WITHIN WALLS WITH ARCHITECTURAL DRAWINGS.
- SEE SCHEDULE ON SD-4 FOR REINFORCING REQUIREMENTS AT SHEAR WALLS.
- SEE DETAILS ON SD-4.4 FOR ADDITIONAL REINFORCING REQUIRED AT OPENINGS IN WALLS, CONTROL JOINT ARRANGEMENTS, ETC.
- SEE MASONRY LINTEL DETAIL AND SCHEDULE ON SD-0.4 FOR REINFORCING REQUIREMENTS.
- SEE DETAIL 6 ON SD-0.5 FOR REQUIREMENTS OF WELDABLE COUPLERS ALONG STRUCTURAL STEEL COLUMNS AND BEAMS AT CMU SHEAR WALLS.
- COORDINATE ADDITIONAL BOND-BEAMS AND REINFORCING REQUIRED WITHIN SHEAR WALLS WITH VARIOUS SECTIONS ON THE STRUCTURAL CONTRACT DRAWINGS.

BRACE FRAME NOTES:

- FABRICATOR IS RESPONSIBLE FOR BRACE CONNECTION DESIGN.
- ELEVATIONS ARE SCHEMATIC ONLY AND INTENDED TO SHOW CONFIGURATION OF BRACED FRAMES AND BRACE FORCES.
- DESIGN DIAGONAL MEMBER CONNECTIONS FOR TWICE THE AXIAL DESIGN FORCE SHOWN BELOW EACH MEMBER <30k> (TENSION OR COMPRESSION). AXIAL DESIGN FORCE IS BASED ON RFD. USE GENERAL UNIFORM FORCE METHOD FOR CONNECTION DESIGN.
- DO NOT WELD TOP END OF DIAGONAL BRACE MEMBERS IN PLACE UNTIL FLOOR SLABS AND ROOFING ARE IN PLACE. WELDS MUST BE FULLY INSPECTED AND APPROVED PRIOR TO PLACING ANY CONCRETE OR INSTALLING OTHER MATERIALS THAT WOULD COVER THE CONNECTIONS.
- BOLTED CONNECTIONS IN BRACED FRAMES SHALL BE DESIGNED AS SLIP CRITICAL CONNECTIONS.
- SEE PLANS FOR COLUMN AND BEAM SIZES.
- CENTERLINE OF BRACE MEMBER SHALL BE OFFSET FROM WORKPOINT LINE AS NOTED AS SHOWN ON ELEVATION.
- *SYMBOL AT THE END OF A STEEL BEAM SIZE (HSS", WP", ETC.) DENOTES EXPOSED BRACE FRAME MEMBERS, (INCLUDING STEEL BEAMS AND COLUMNS) TO RECEIVE INTUMESCENT MASTIC FIREPROOFING.

FIREPROOFING NOTES:

- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATINGS BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING, CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- CONCEALED FROM VIEW BRACE FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074
Tel: 817.854.1702
www.dra.com

280 Charles Street
Studio 300
Waltham, MA 02453

Planning | Architecture | Interior Design

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

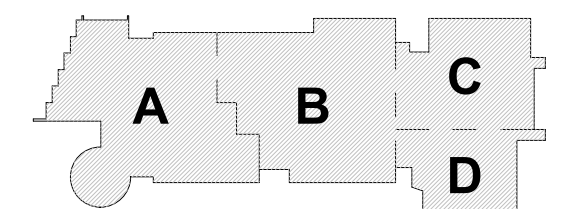
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST		
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023



PROJECT NORTH
MAGNETIC NORTH

SHEAR WALLS

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

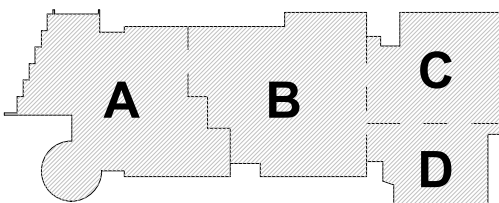
S4-0-7

NORTHEAST
METRO TECH100 Hemlock Rd.
Wakefield, MA 01880Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST			
SS-S-1	4/14/2023	STRUCTURAL STEEL	ADDENDUM 1

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGEMSBA 90% CD
SUBMISSION

MAY 12, 2023



KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

BRACED FRAME
DETAILS

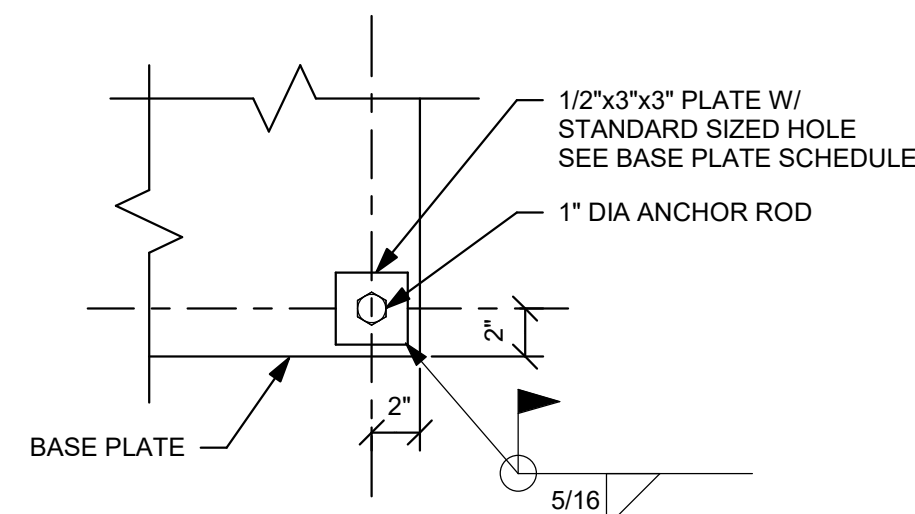
Scale: 3/4" = 1'-0"

Job No.: 20202

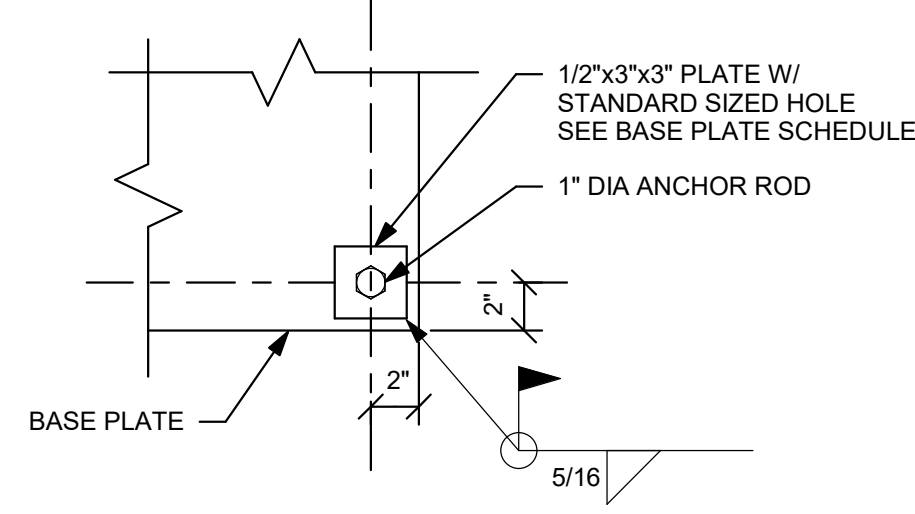
Drawn By: EDG

Date: MAY 12, 2023

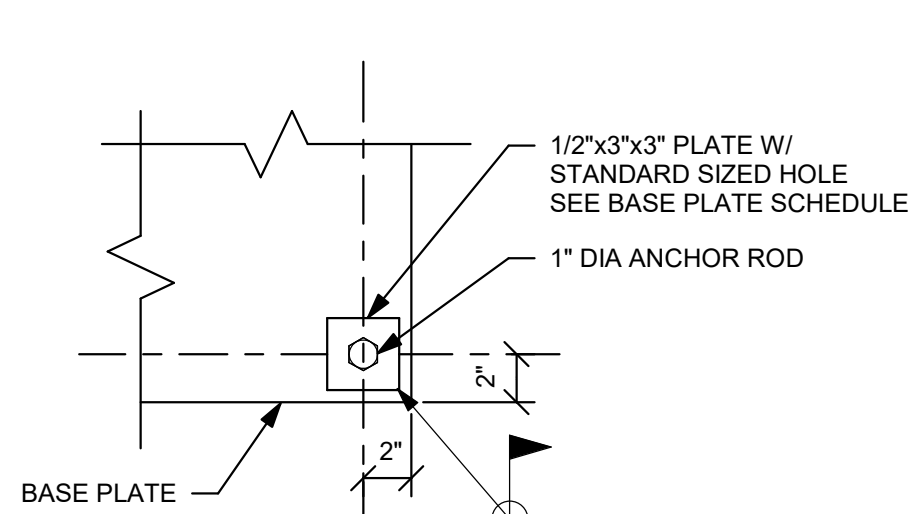
S4-0-8



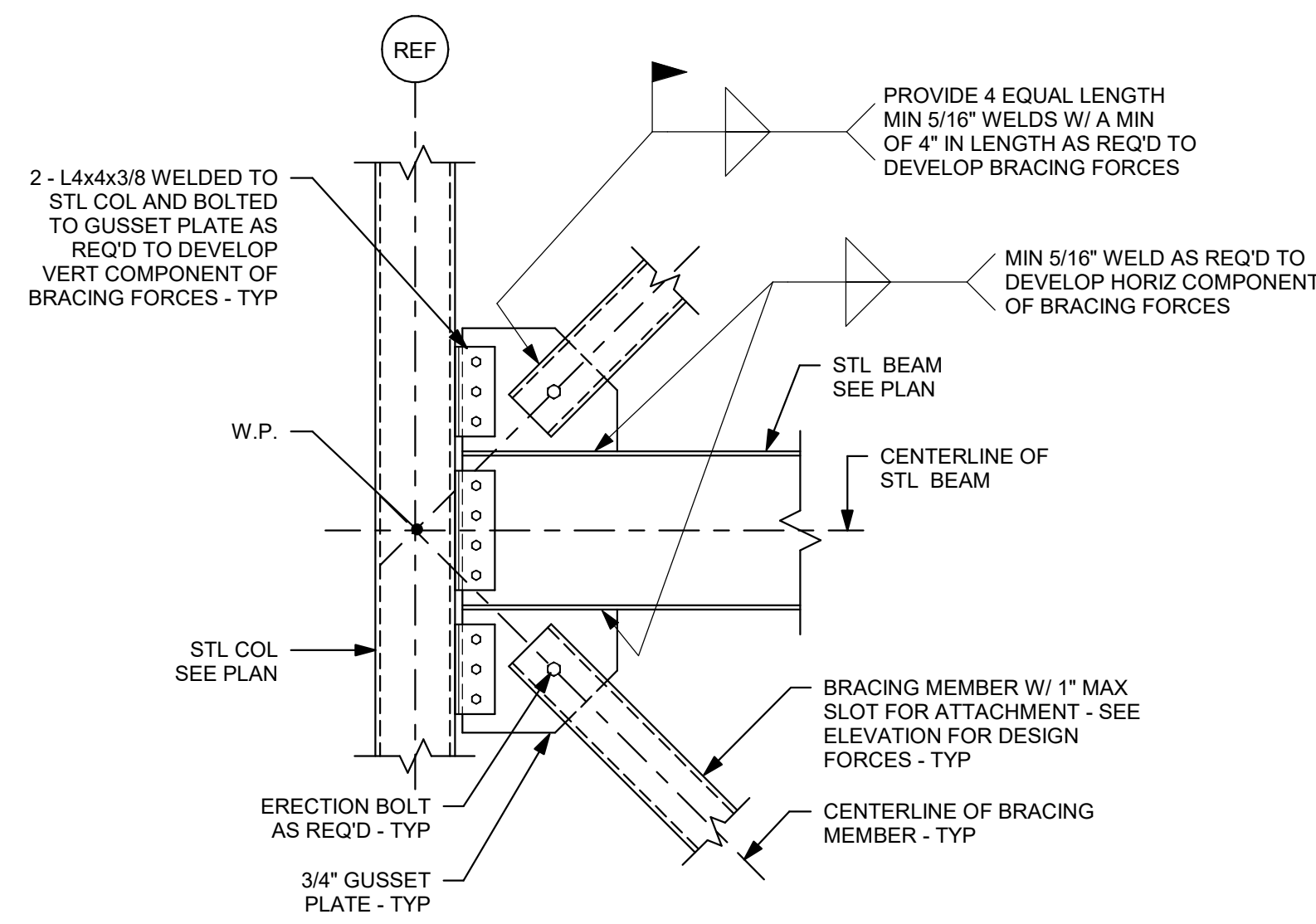
BASE PLATE DETAIL



BASE PLATE DETAIL



BASE PLATE DETAIL



- NOTES:
- 1.) PROVIDE ROUNDED GUSSET PLATES AT EXPOSED BRACED FRAMES.
 - 2.) REFER TO SPECIFICATIONS AND "EXPOSED STEEL NOTES" ON DRAWING S0-0-1 FOR ADDITIONAL REQUIREMENTS OF EXPOSED BRACED FRAMES.
 - 3.) COORDINATE WITH BRACE FRAME ELEVATIONS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF EXPOSED BRACED FRAME MEMBERS.

1

3/4" = 1' - 0"

2

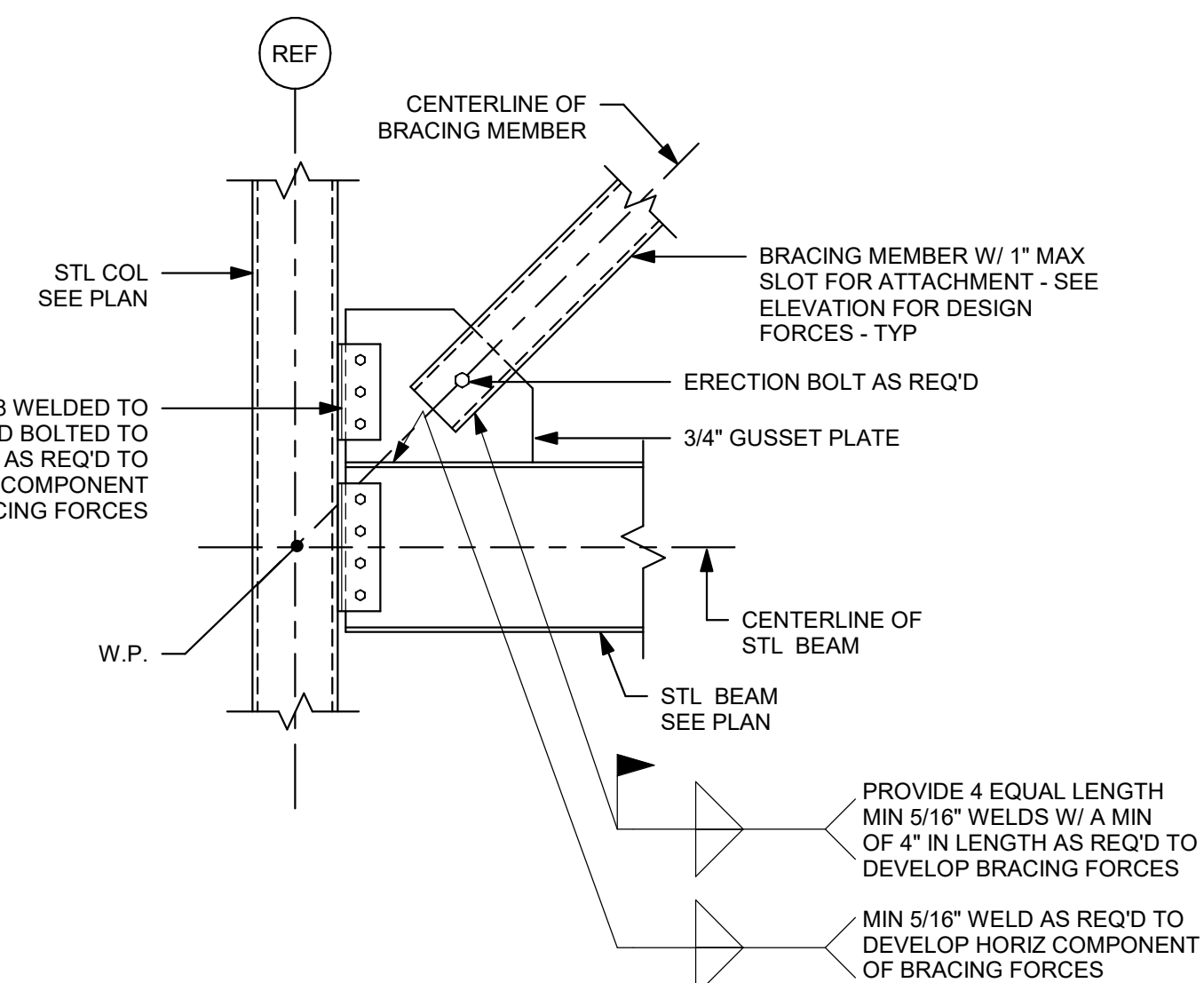
3/4" = 1' - 0"

3

3/4" = 1' - 0"

4

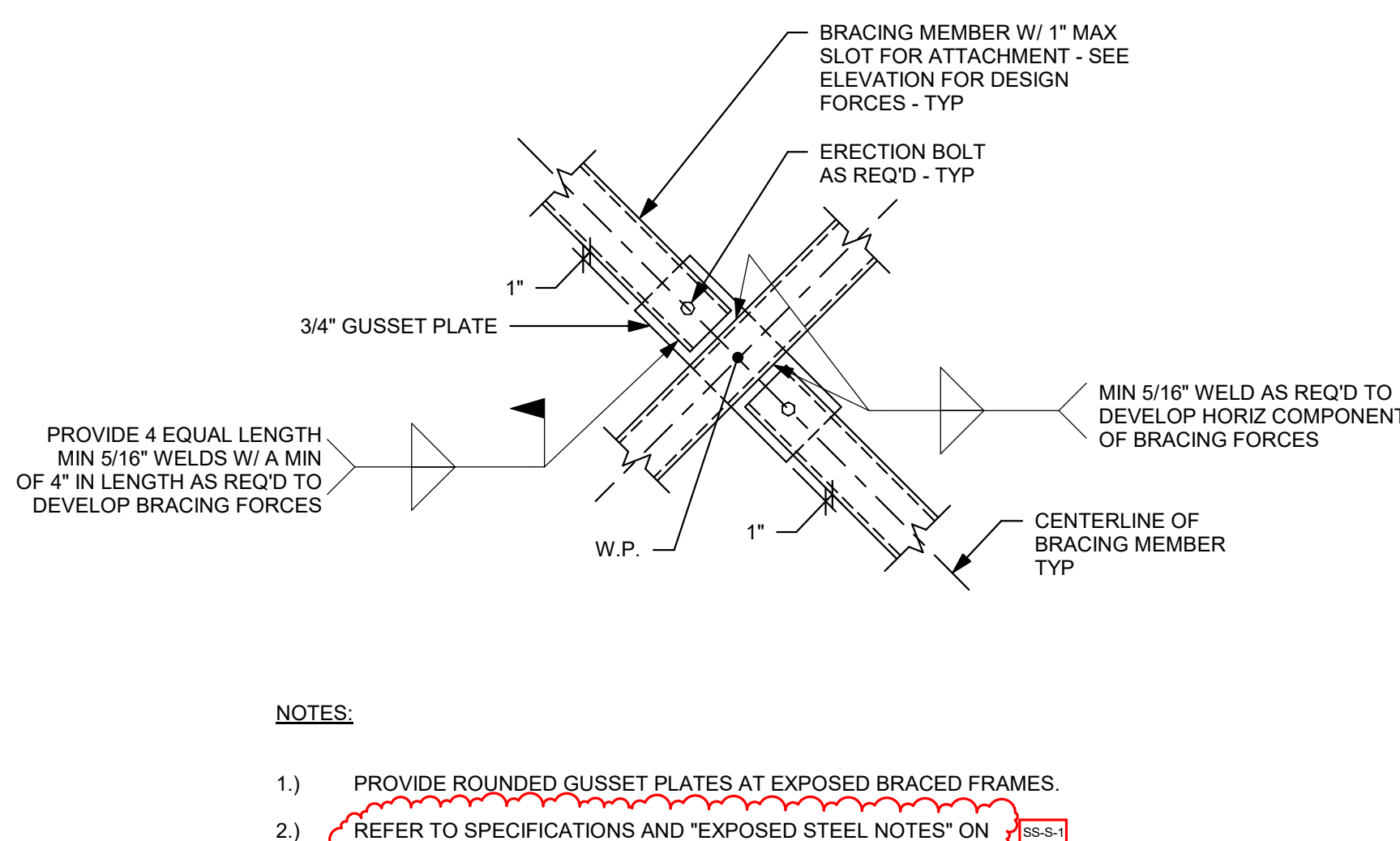
3/4" = 1' - 0"



- NOTES:
- 1.) PROVIDE ROUNDED GUSSET PLATES AT EXPOSED BRACED FRAMES.
 - 2.) REFER TO SPECIFICATIONS AND "EXPOSED STEEL NOTES" ON DRAWING S0-0-1 FOR ADDITIONAL REQUIREMENTS OF EXPOSED BRACED FRAMES.
 - 3.) COORDINATE WITH BRACE FRAME ELEVATIONS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF EXPOSED BRACED FRAME MEMBERS.

5

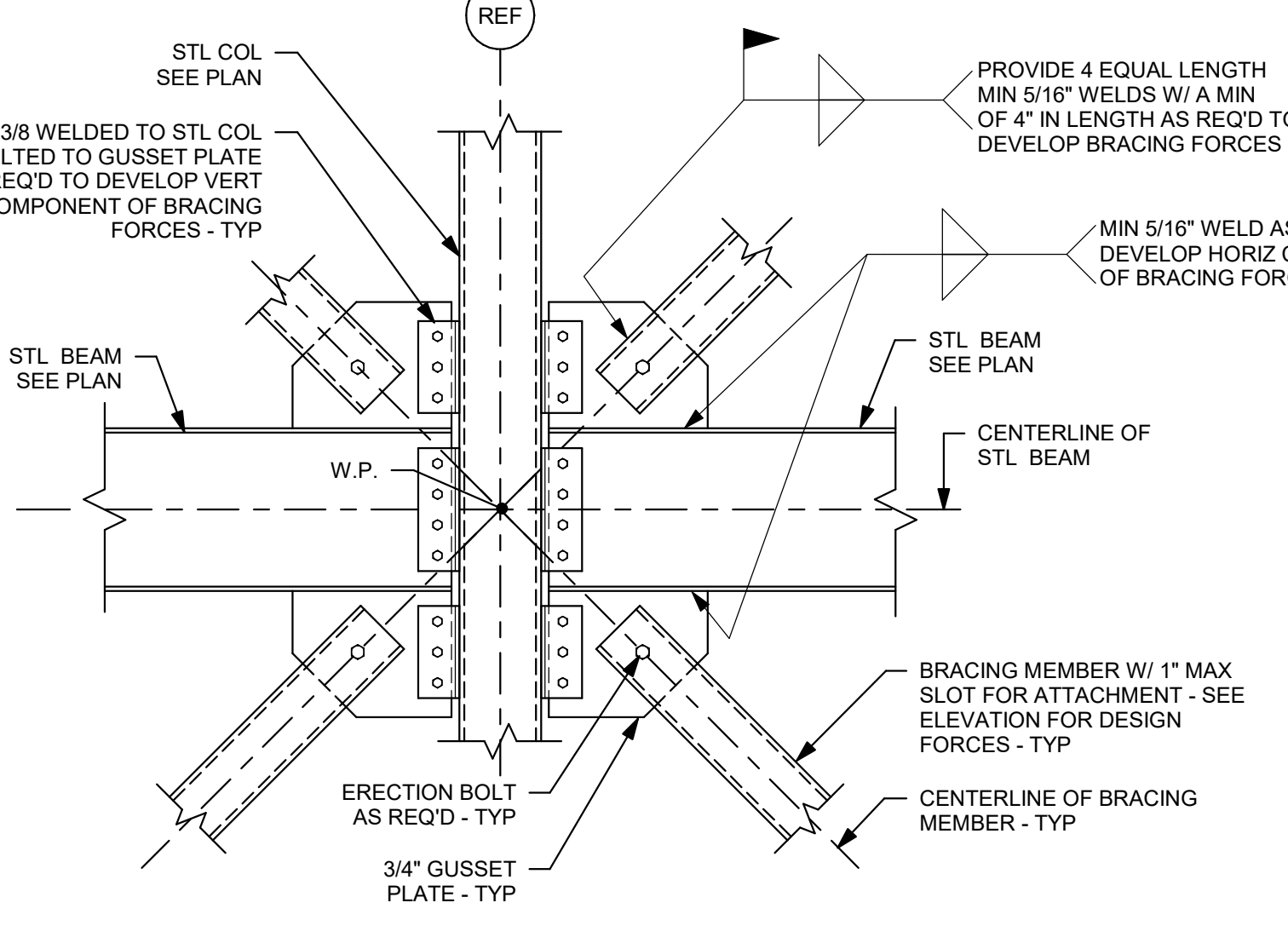
3/4" = 1' - 0"



- NOTES:
- 1.) PROVIDE ROUNDED GUSSET PLATES AT EXPOSED BRACED FRAMES.
 - 2.) REFER TO SPECIFICATIONS AND "EXPOSED STEEL NOTES" ON DRAWING S0-0-1 FOR ADDITIONAL REQUIREMENTS OF EXPOSED BRACED FRAMES.
 - 3.) COORDINATE WITH BRACE FRAME ELEVATIONS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF EXPOSED BRACED FRAME MEMBERS.
 - 4.) REFER TO ARCHITECTURAL DRAWINGS AND DETAILS FOR FINISHES AND ADDITIONAL INFORMATION.
 - 5.) PROVIDE CONTINUOUS WELD WITH NO GAPS. SHOP SLOTS PROVIDED IN THE BRACE TO BE FULLY WELDED IN THE FIELD WITH NO GAPS AND ROUND SMOOTH.

6

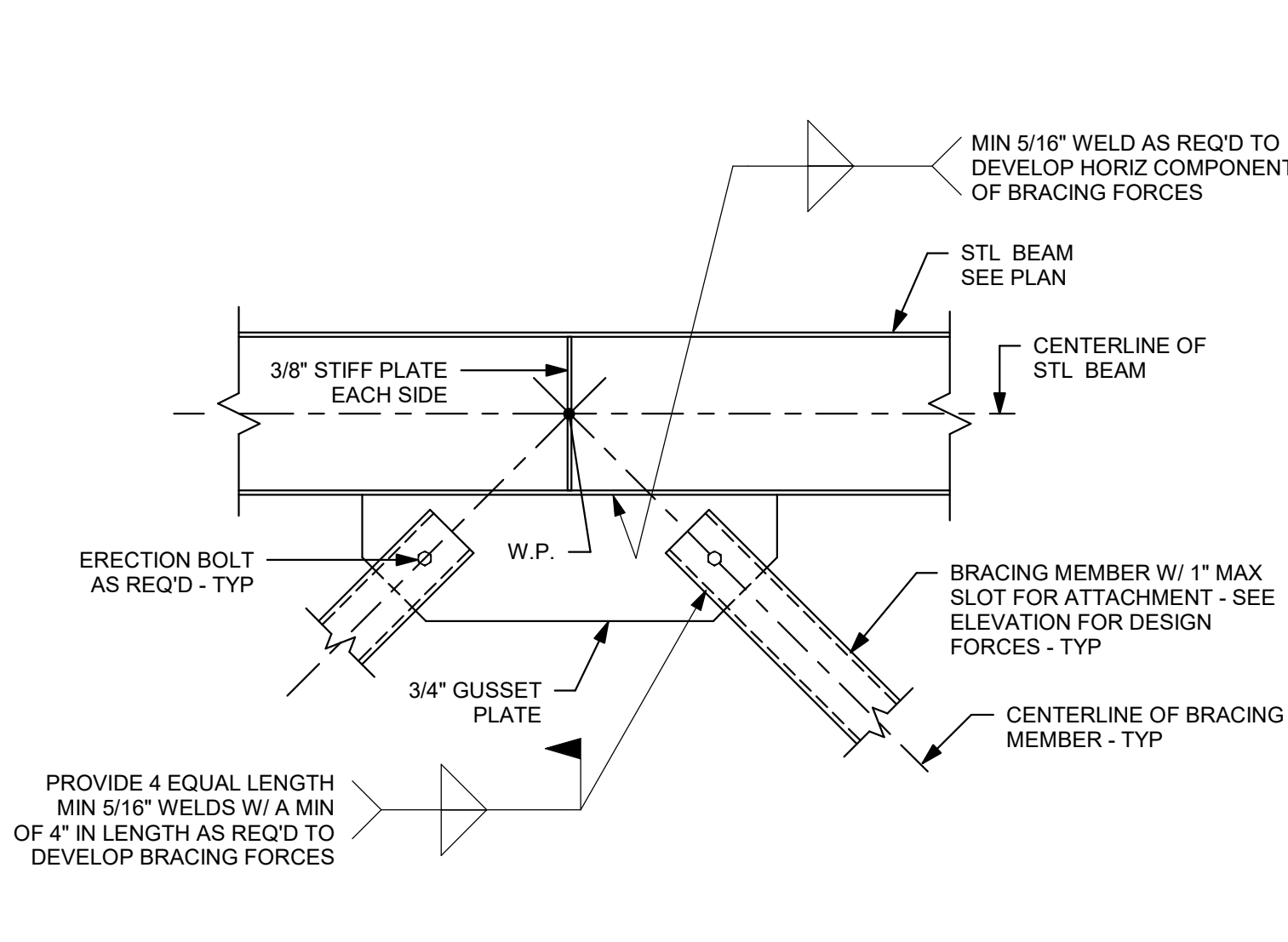
3/4" = 1' - 0"



- NOTES:
- 1.) PROVIDE ROUNDED GUSSET PLATES AT EXPOSED BRACED FRAMES.
 - 2.) REFER TO SPECIFICATIONS AND "EXPOSED STEEL NOTES" ON DRAWING S0-0-1 FOR ADDITIONAL REQUIREMENTS OF EXPOSED BRACED FRAMES.
 - 3.) COORDINATE WITH BRACE FRAME ELEVATIONS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF EXPOSED BRACED FRAME MEMBERS.

7

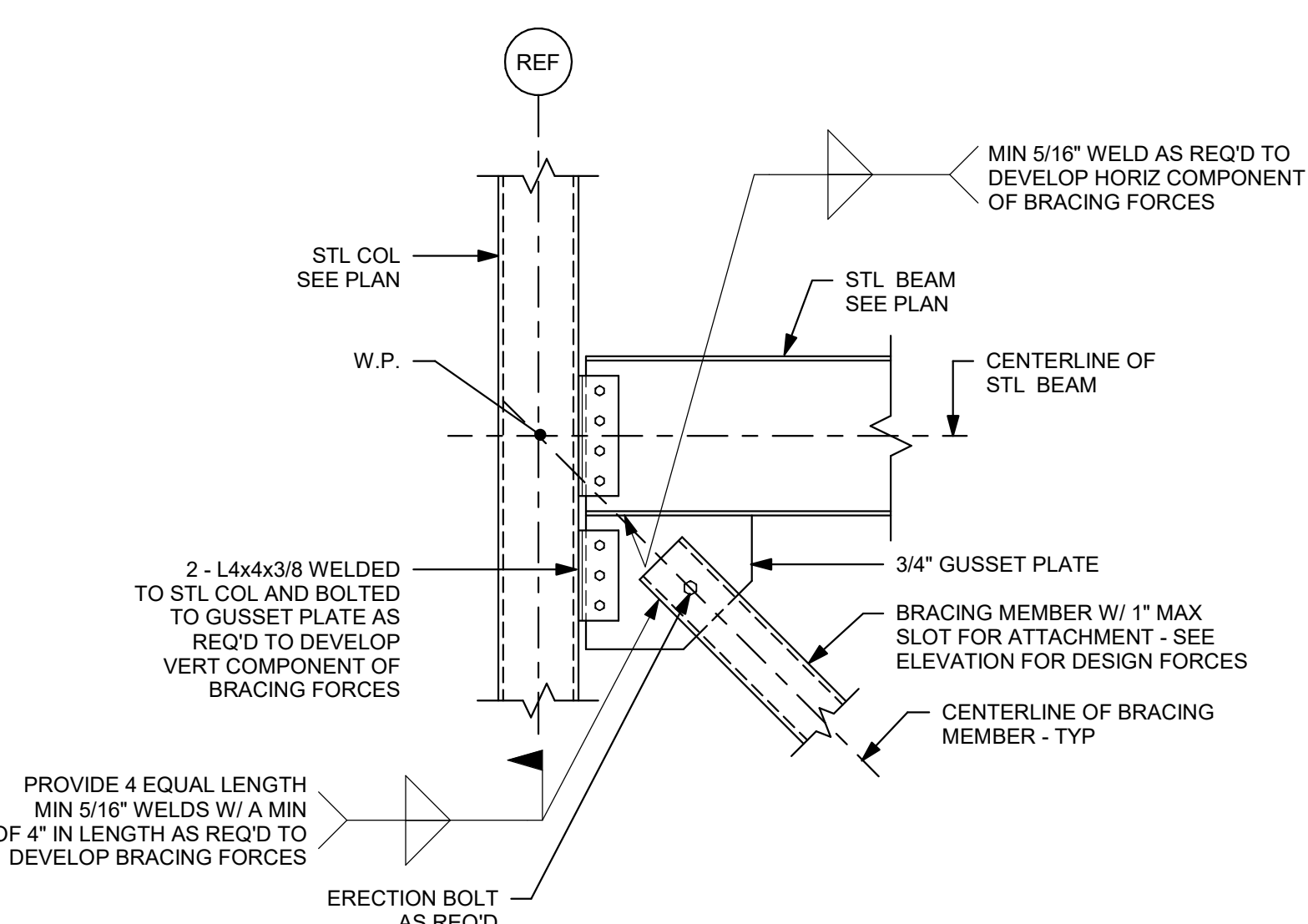
3/4" = 1' - 0"



- NOTES:
- 1.) PROVIDE ROUNDED GUSSET PLATES AT EXPOSED BRACED FRAMES.
 - 2.) REFER TO SPECIFICATIONS AND "EXPOSED STEEL NOTES" ON DRAWING S0-0-1 FOR ADDITIONAL REQUIREMENTS OF EXPOSED BRACED FRAMES.
 - 3.) COORDINATE WITH BRACE FRAME ELEVATIONS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF EXPOSED BRACED FRAME MEMBERS.

8

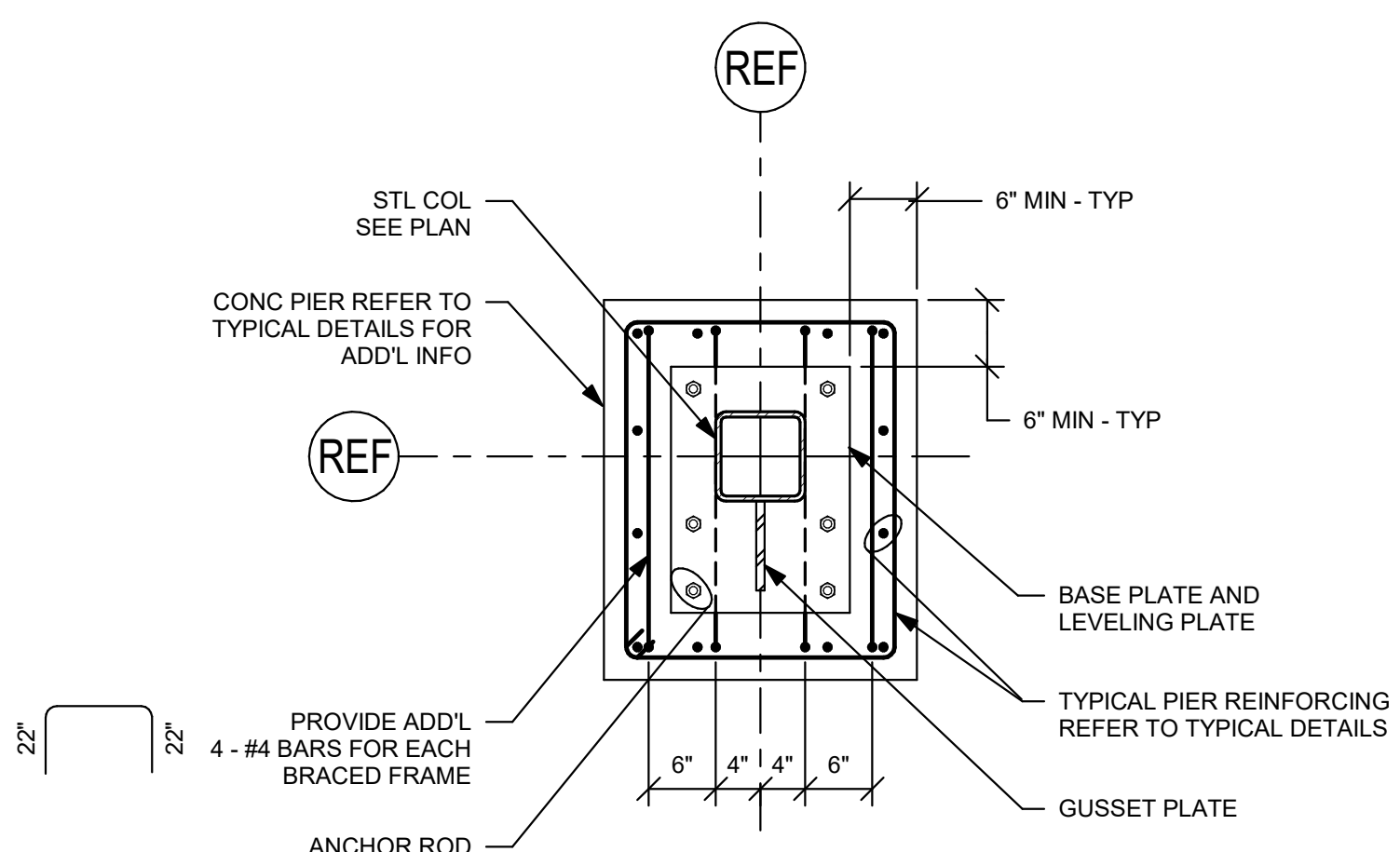
3/4" = 1' - 0"



- NOTES:
- 1.) PROVIDE ROUNDED GUSSET PLATES AT EXPOSED BRACED FRAMES.
 - 2.) REFER TO SPECIFICATIONS AND "EXPOSED STEEL NOTES" ON DRAWING S0-0-1 FOR ADDITIONAL REQUIREMENTS OF EXPOSED BRACED FRAMES.
 - 3.) COORDINATE WITH BRACE FRAME ELEVATIONS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF EXPOSED BRACED FRAME MEMBERS.

9

3/4" = 1' - 0"

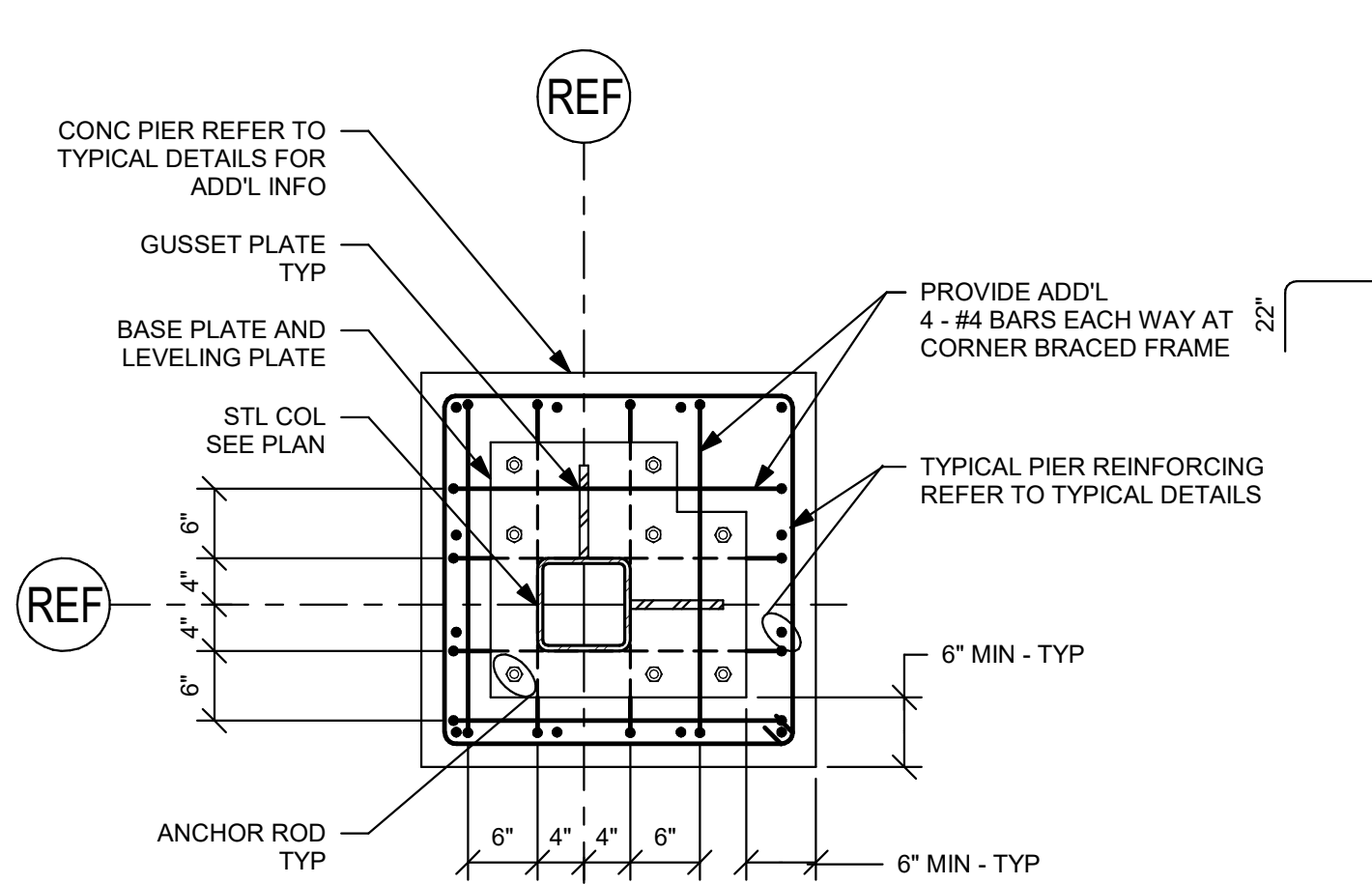


BRACE IN ONE DIRECTION AT PIER

NOTE:
THIS DETAIL APPLIES TO BRACE FRAMED
COLUMNS BEARING DIRECTLY ON PIERS.

10

3/4" = 1' - 0"

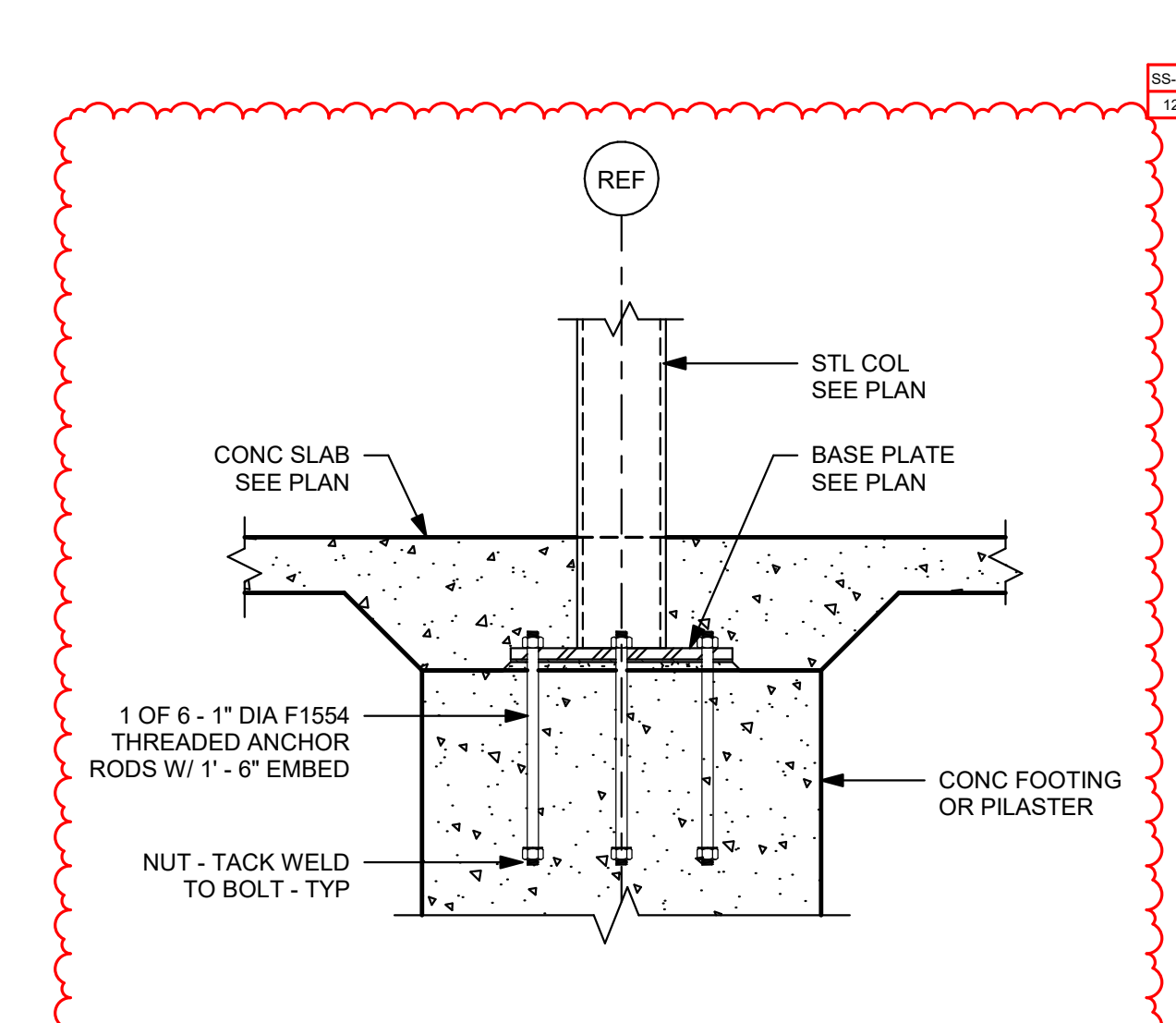


BRACE IN TWO DIRECTIONS AT PIER

NOTE:
THIS DETAIL APPLIES TO BRACE FRAMED
COLUMNS BEARING DIRECTLY ON PIERS.

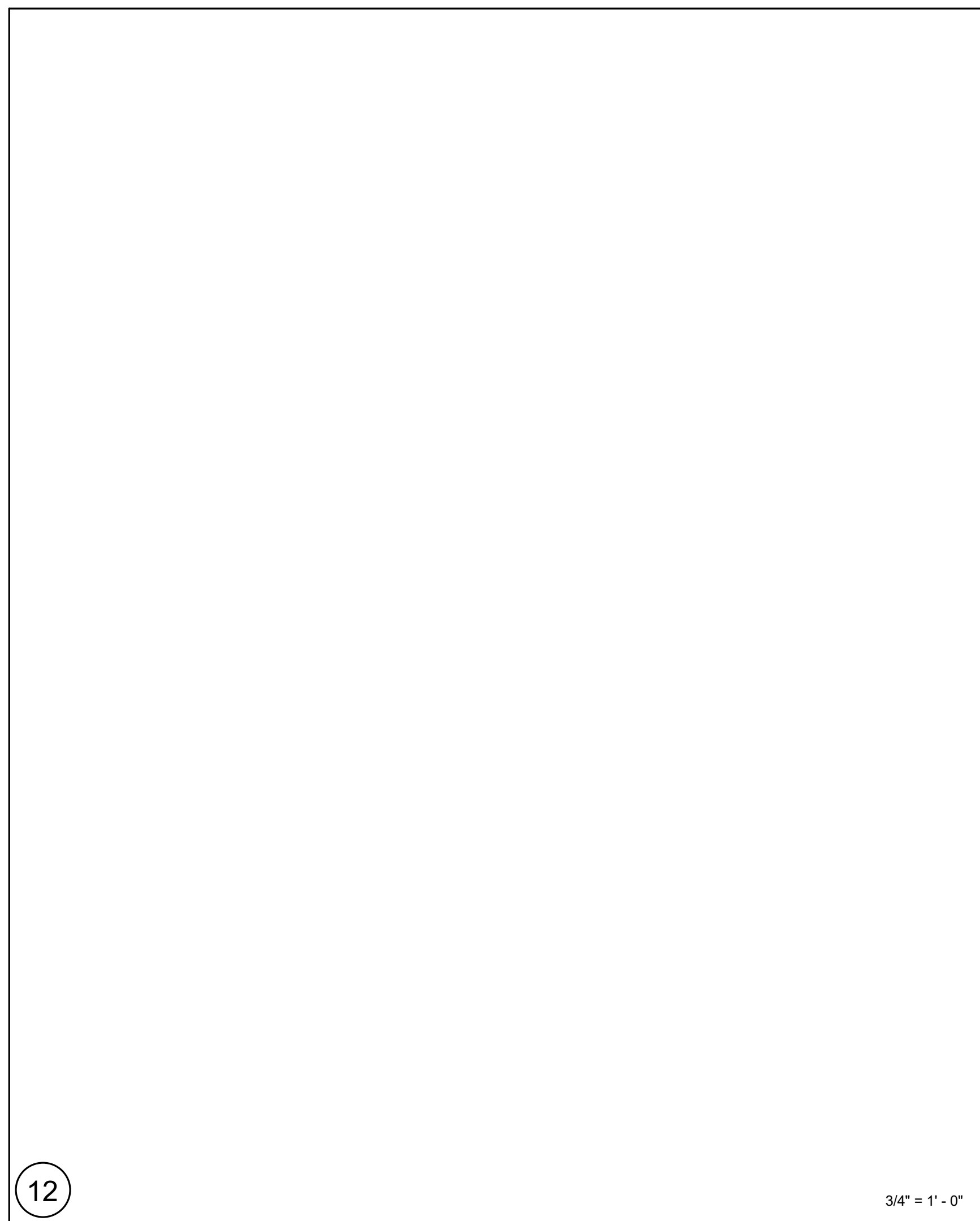
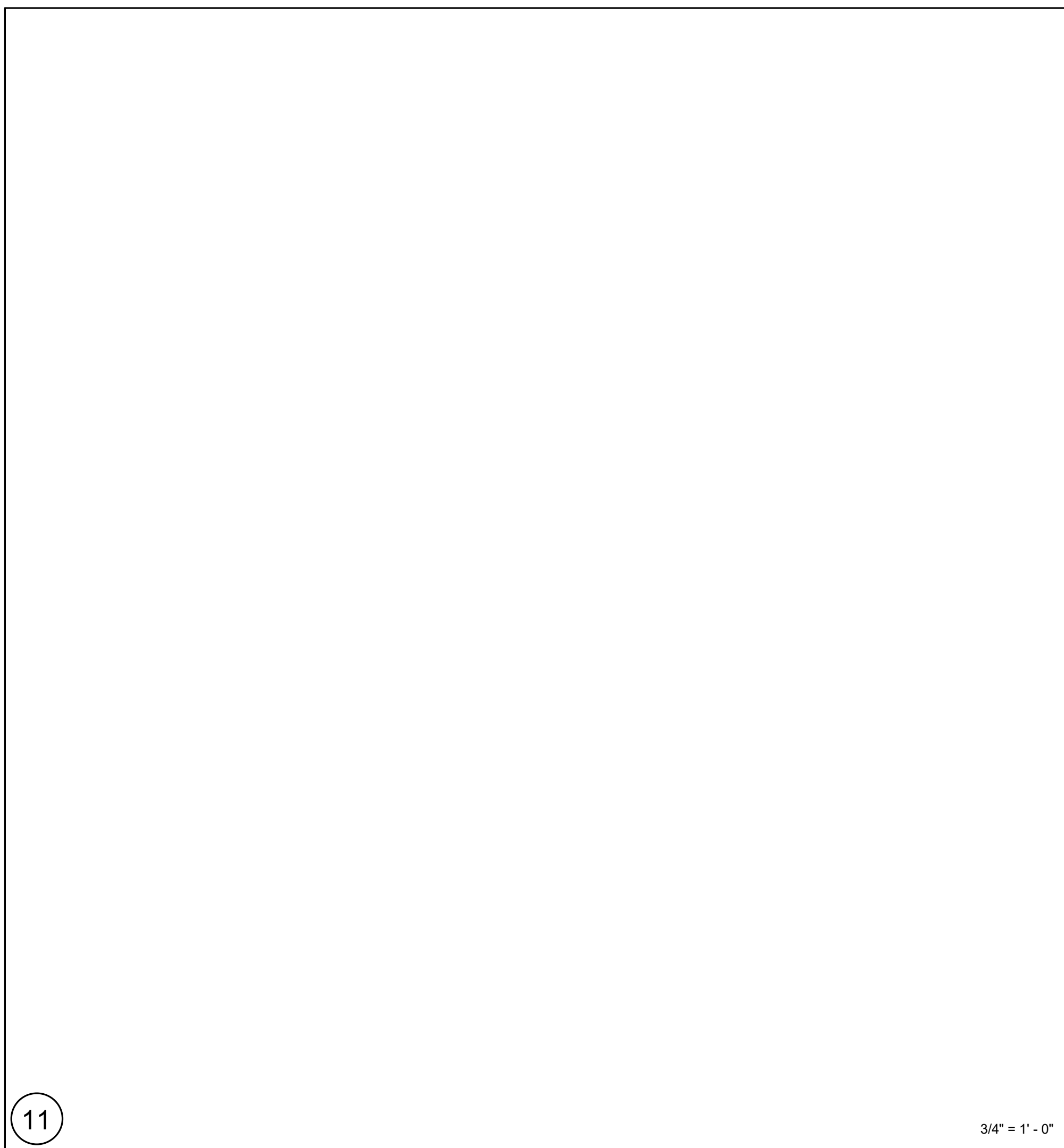
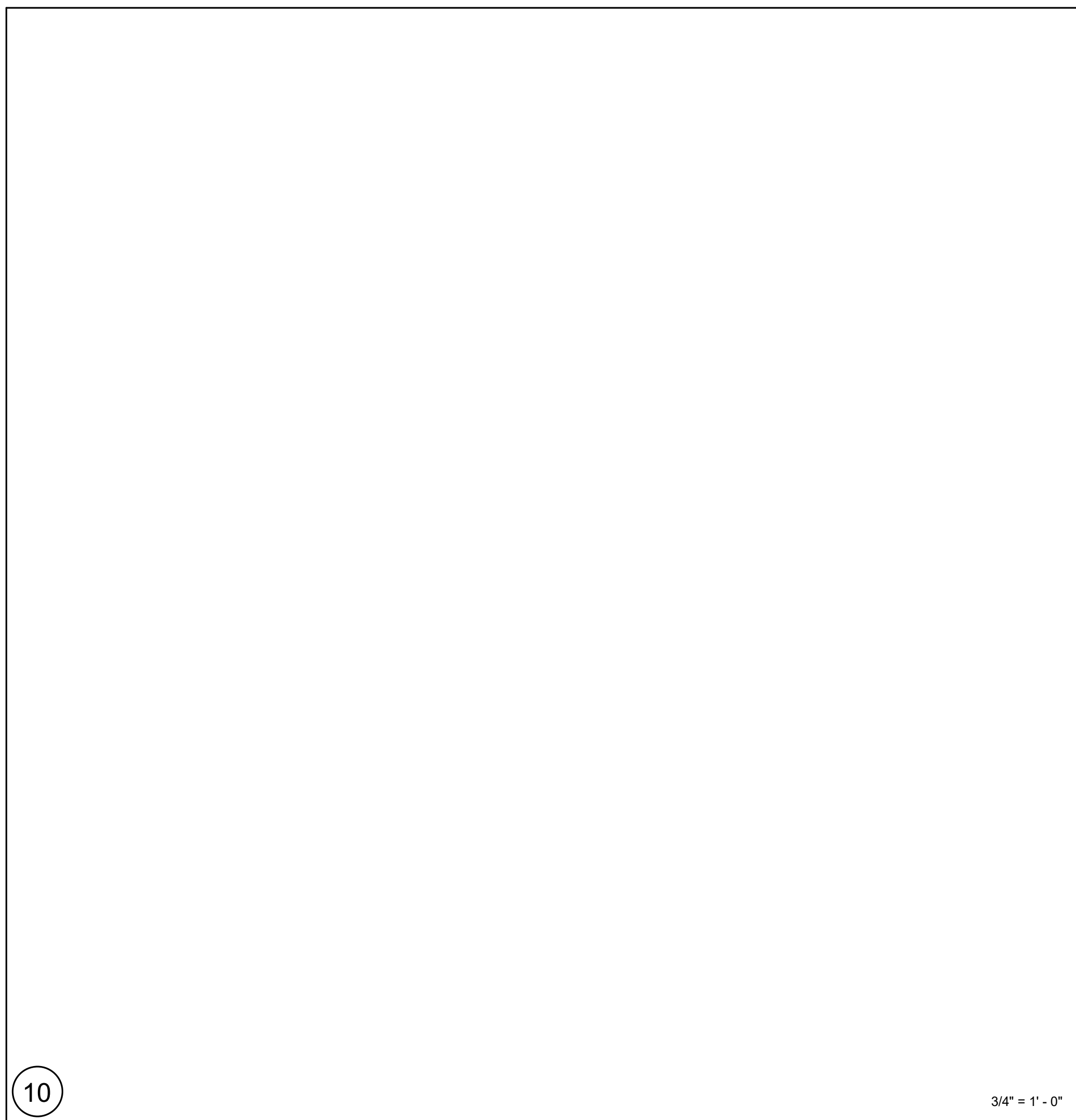
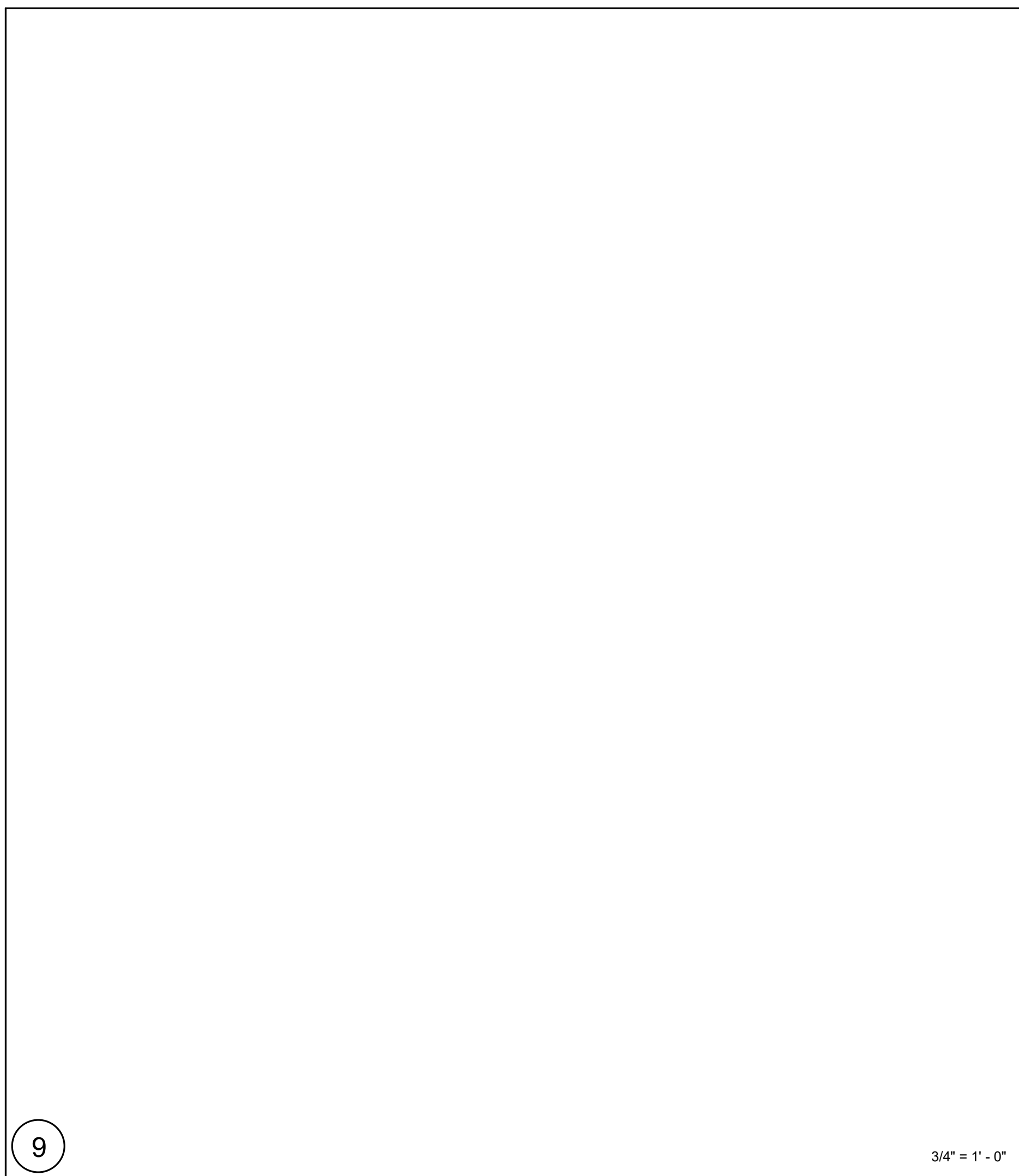
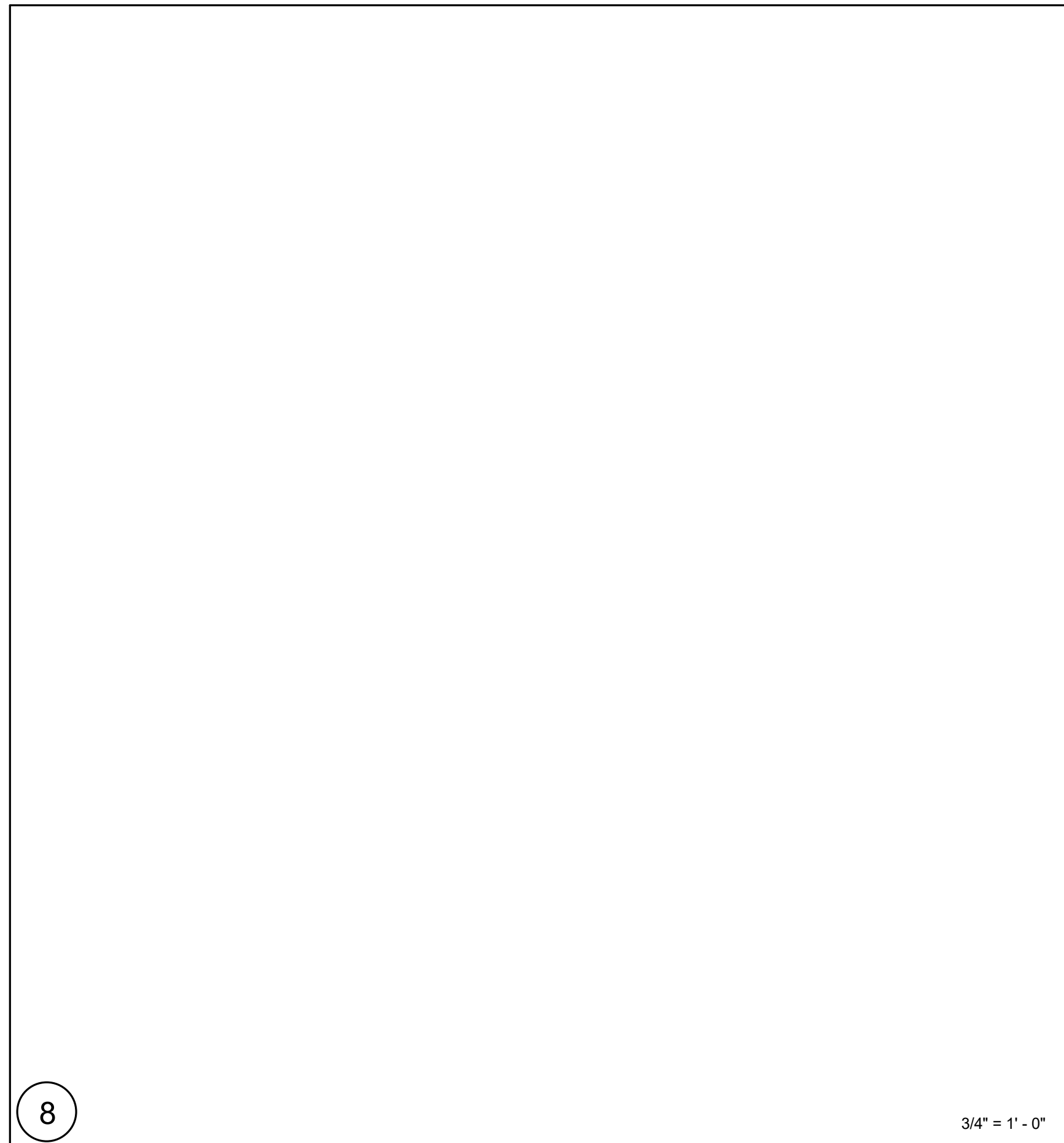
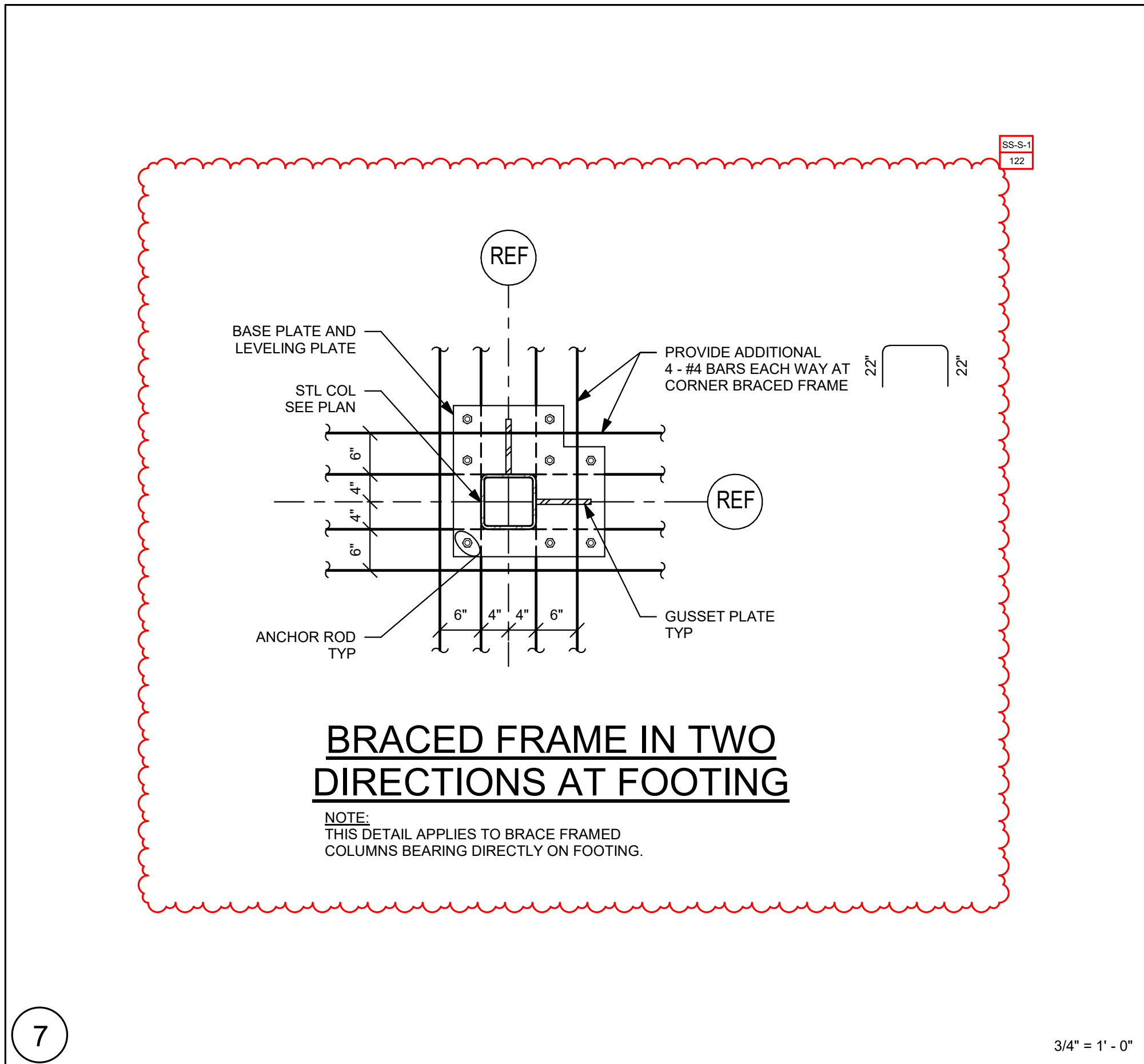
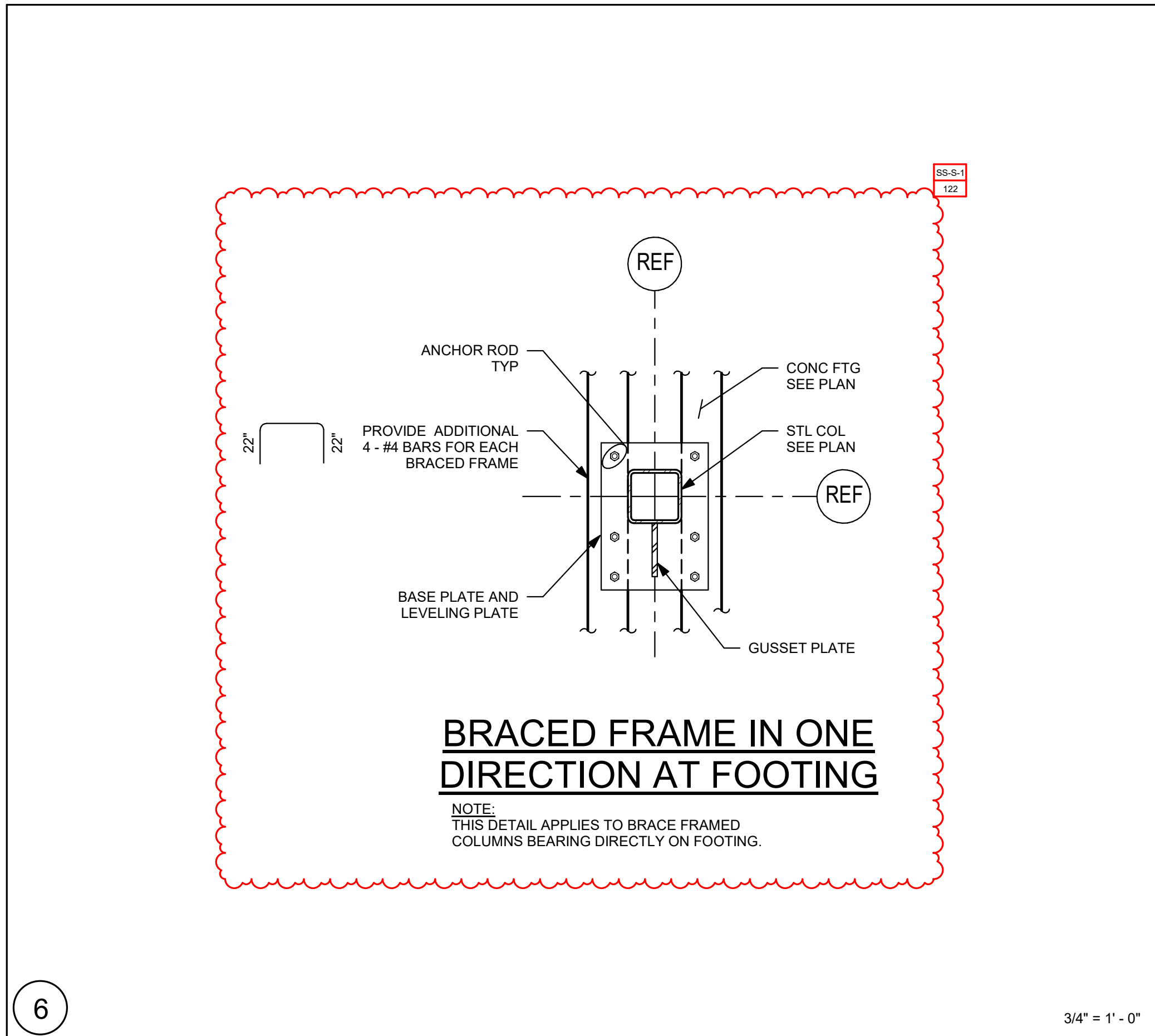
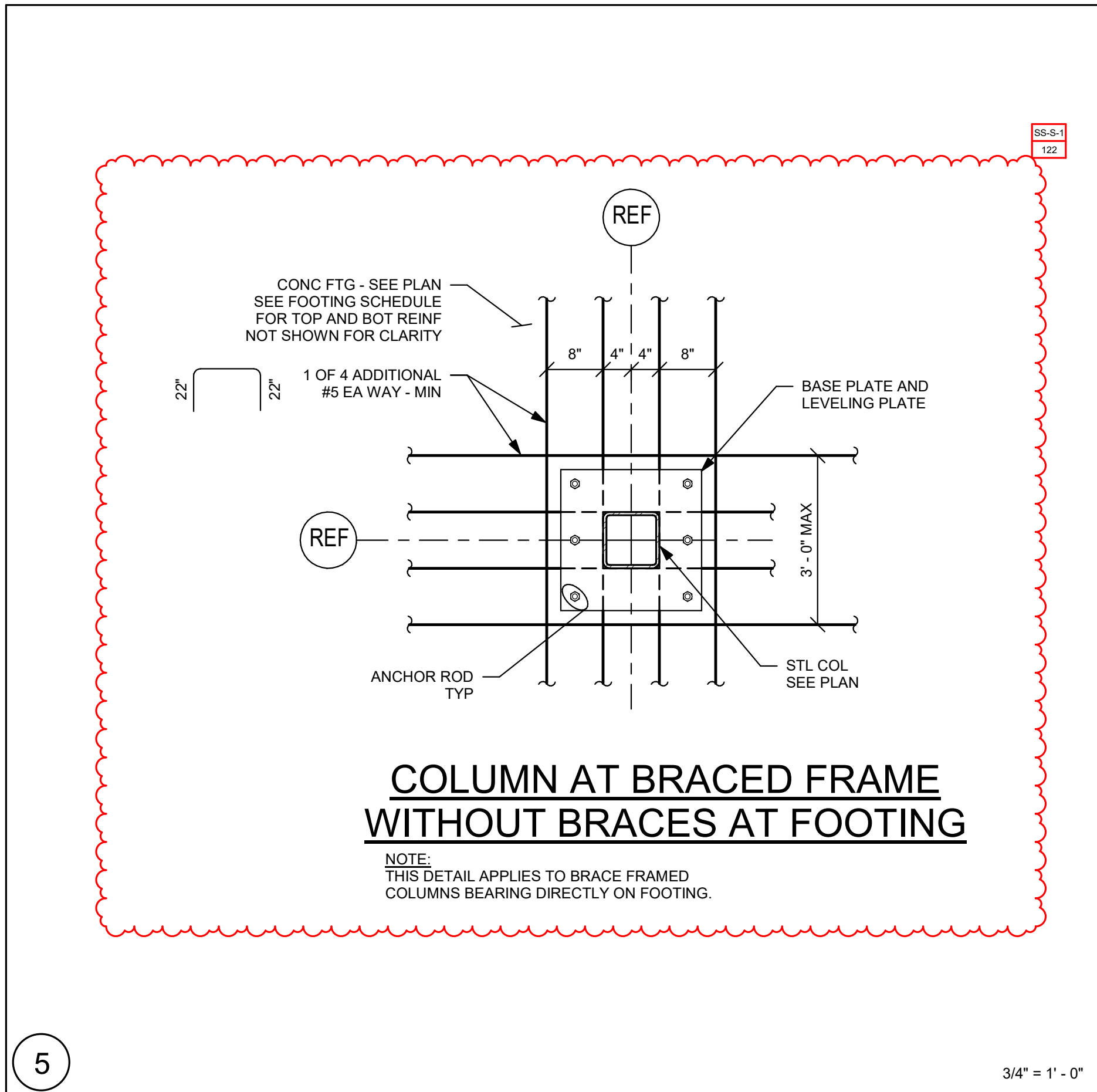
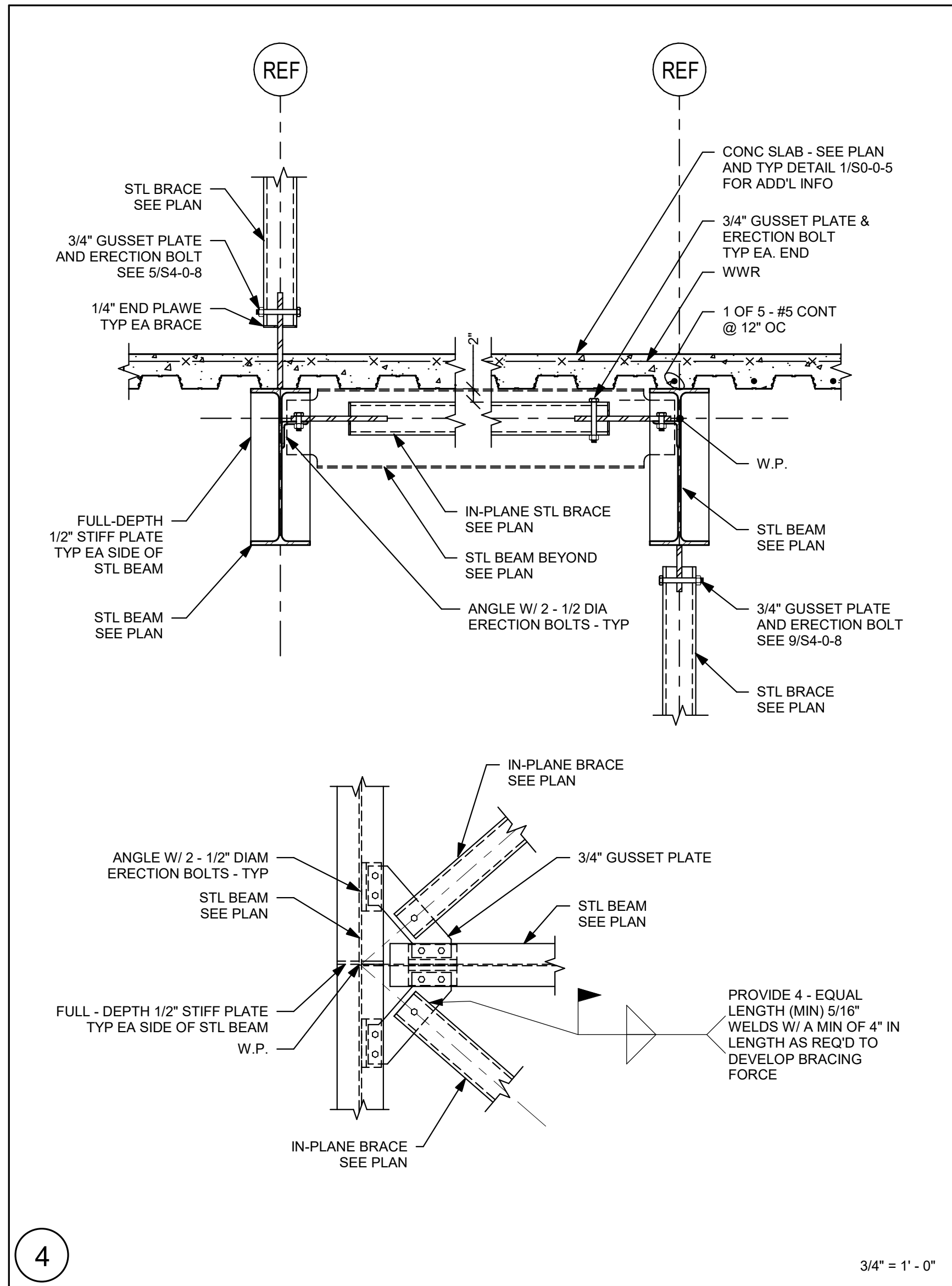
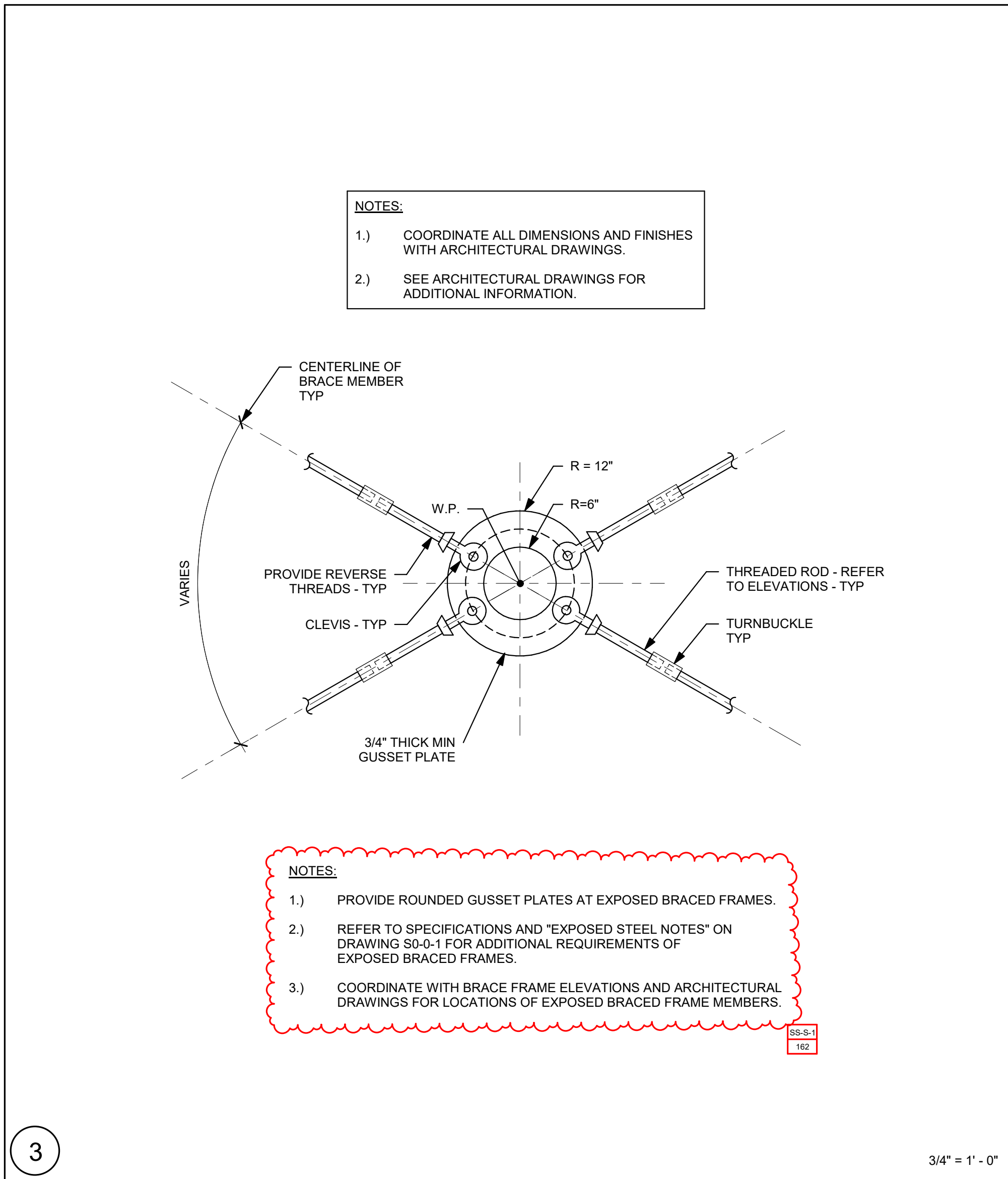
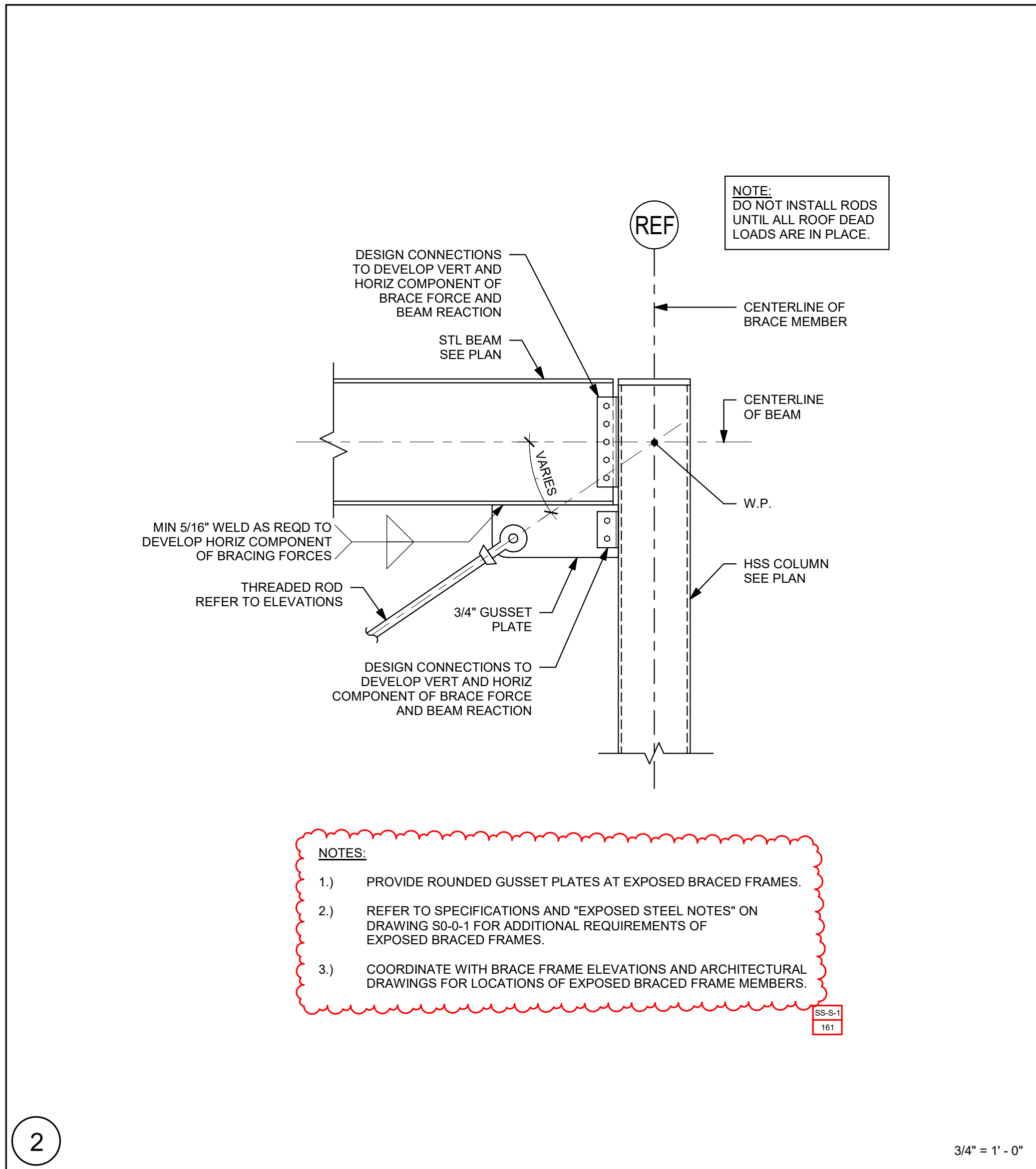
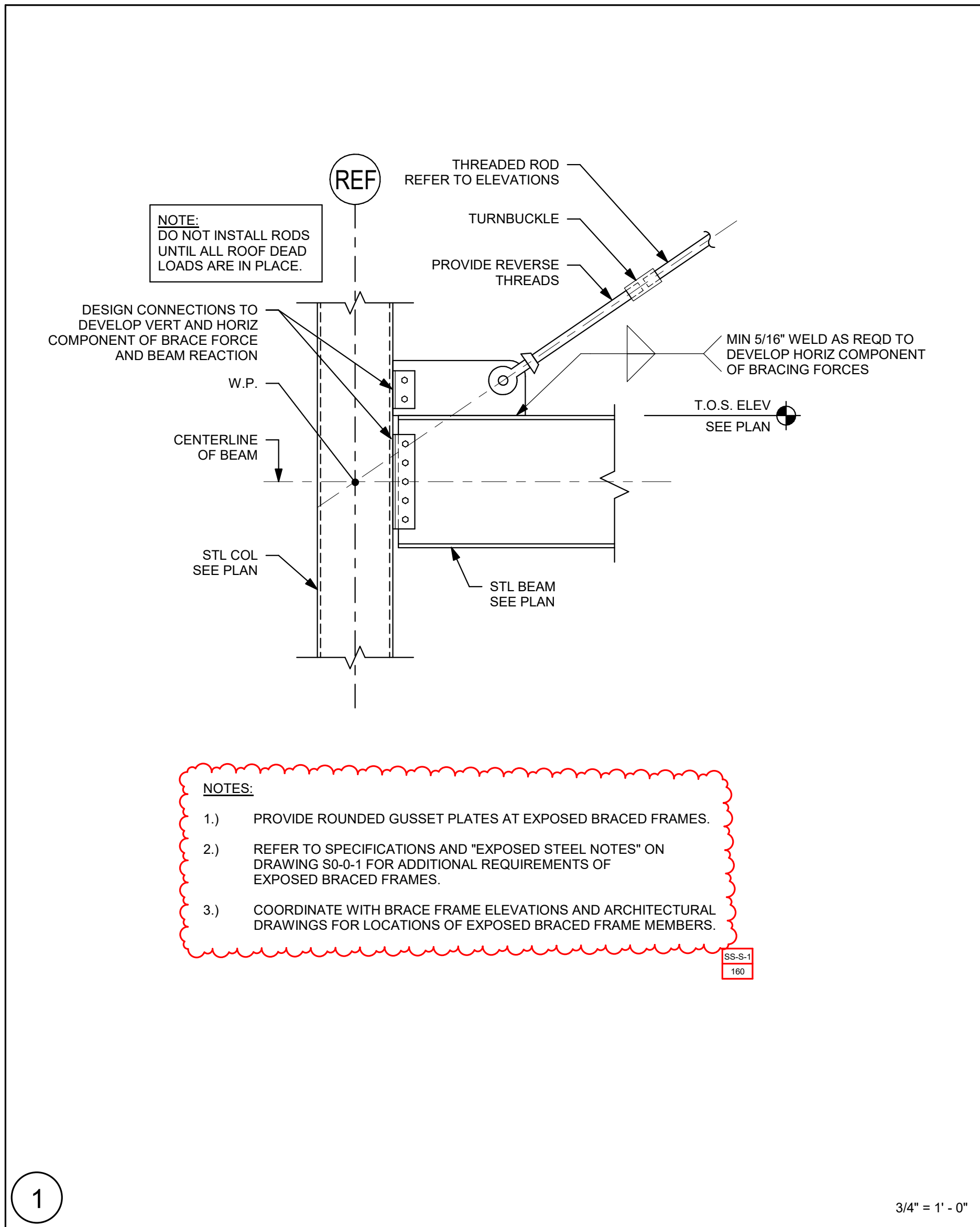
11

3/4" = 1' - 0"



12

3/4" = 1' - 0"



DRA

Drumme Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning | Architecture | Interior Design

Tel: 617.954.1700
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST		
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING IS A PART OF EARLY STRUCTURAL BID PACKAGE

MSBA 90% CD SUBMISSION

MAY 12, 2023

KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

BRACED FRAME DETAILS

Scale: 3/4" = 1'-0"

Job No.: 20202

Drawn By: EDG

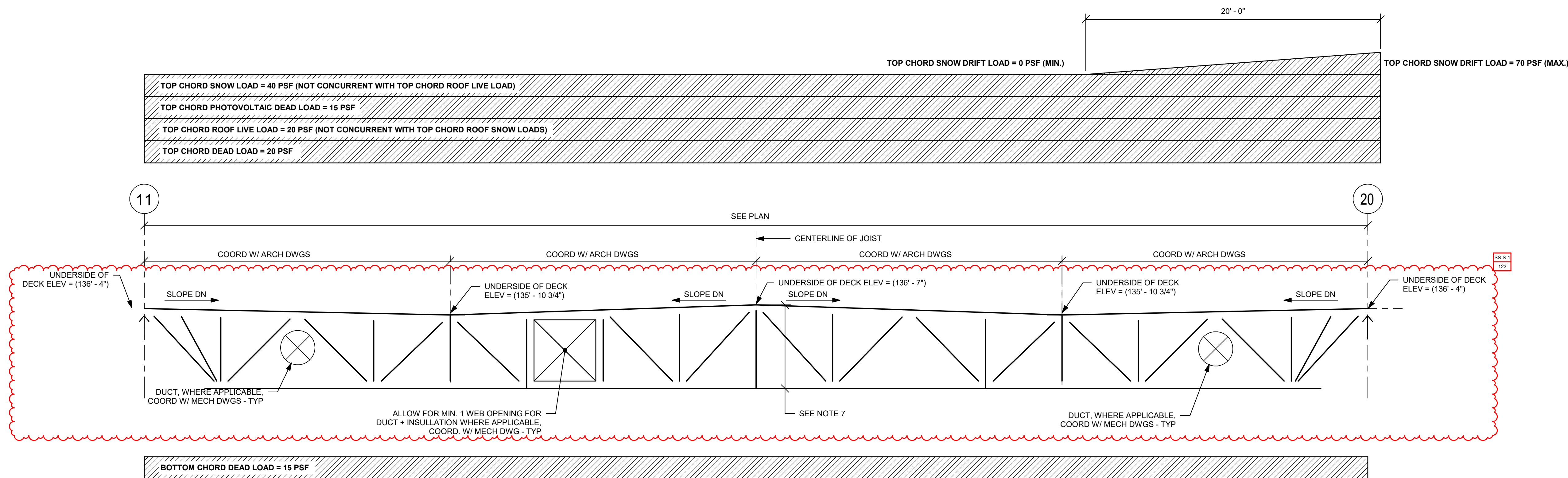
Date: MAY 12, 2023

S4-0-9

NORTHEAST
METRO TECH100 Hemlock Rd.
Wakefield, MA 01880Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

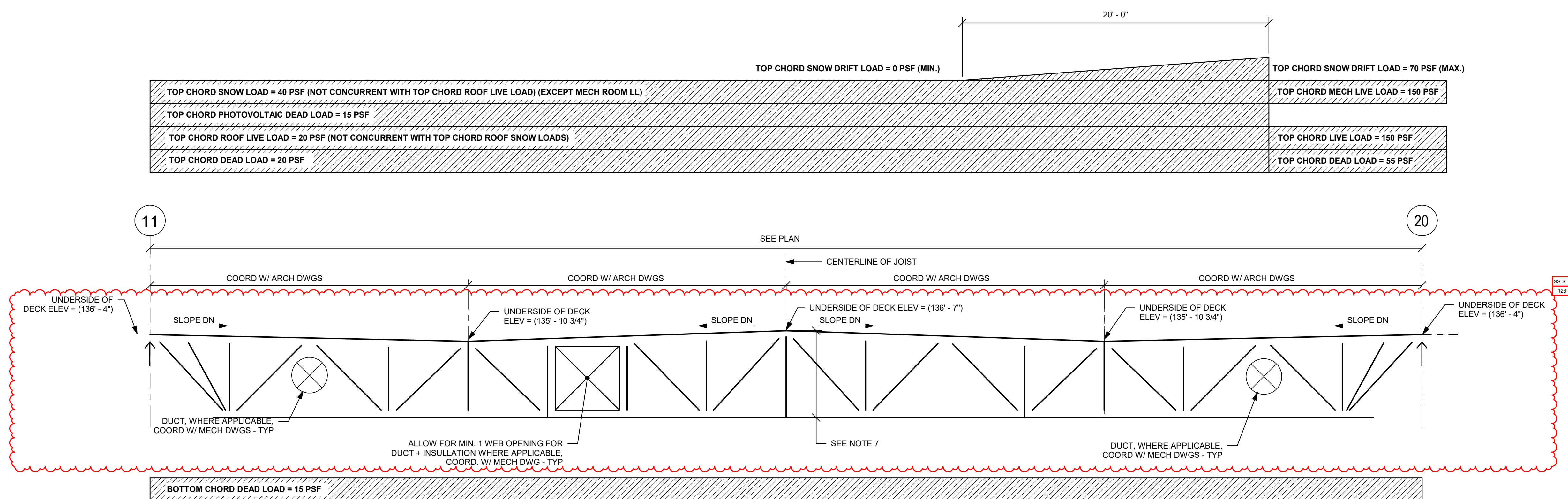
JOIST NOTES:

- JOIST SEAT DEPTH VARIES (8" MIN) AT CENTERLINE OF BEARING. COORDINATE WITH TOP OF STEEL BEAM.
- IN ADDITION TO THE LOADS SHOWN IN THE DIAGRAMS, DESIGN JOISTS AT THE GYMNASIUM FOR CONCENTRATED LOADS FROM MOTORIZED GYMNASIUM CURTAIN BATTING CAGE AND BASKETBALL BACKSTOP SUPPORT POINTS. REFER TO THE ARCHITECTURAL AND CEILING DRAWINGS. REFER TO MANUFACTURERS INFORMATION FOR LOAD MAGNITUDES AND LOCATIONS.
- REFER TO SPECIFICATIONS FOR UPLIFT LOAD ON THE JOISTS. DO NOT USE DESIGN DEAD LOAD TO OFFSET UPLIFT LOADS. ONLY SELF WEIGHT OF THE JOIST AND METAL ROOF DECK CAN BE USED TO OFFSET ANY UPLIFT LOADS.
- DESIGN FOR MAXIMUM LIVE LOADS DEFLECTION OF $L/360$.
- DESIGN ALL JOISTS FOR ADDITIONAL UPWARD LOAD OF 200 POUNDS AT FIRST PANELS POINT AT EACH END OF JOIST.
- IN ADDITION TO THE SLOPE, PROVIDE CAMBER PER SJI.
- JOIST DEPTH DESIGNATION INDICATED AT THE HIGHEST POINT (AT MID-SPAN).
- JOIST SHALL BE TOP CHORD, QUADRUPLE PITCHED UNDER-SLUNG JOIST. JOISTS ARE SYMMETRICAL ABOUT THE MIDSPAN.
- JOIST WEB CONFIGURATION IS BY JOIST SUPPLIER. WEB CONFIGURATION SHALL BE COMPATIBLE WITH MECHANICAL DUCT LAYOUT AND CATWALK SUPPORTS.
- JOIST MANUFACTURER SHALL DESIGN AND ACCOUNT FOR JOIST CAMBER AND JOIST DEFLECTION TO LIMIT DIFFERENTIAL DEFLECTION OF ADJACENT JOISTS TO ALLOW FOR PROPER INSTALLATION OF MULTIPLE SPAN ROOF DECK WITHOUT FIELD CUTTING OF DECK. REDUCE CAMBER BY HALF AT JOISTS ADJACENT TOP STRUCTURAL STEEL FRAMING.
- ALIGN PANEL POINTS OF ALL JOISTS AS SHOWN IN JOIST PROFILES.



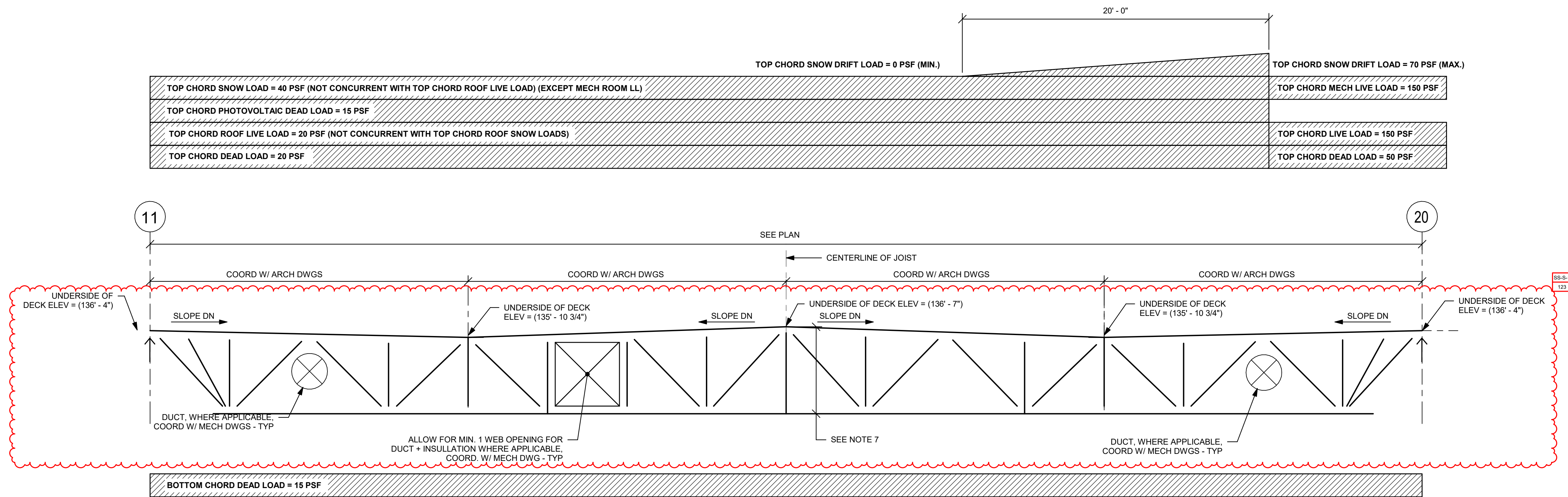
JOIST PROFILE AND LOAD DIAGRAM FOR 68DLHSP1

NOTE: SELF WEIGHT OF JOIST NOT INCLUDED IN LOADS



JOIST PROFILE AND LOAD DIAGRAM FOR 68DLHSP2

NOTE: SELF WEIGHT OF JOIST NOT INCLUDED IN LOADS



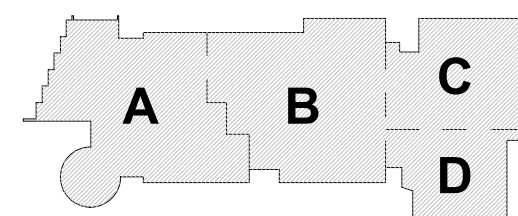
JOIST PROFILE AND LOAD DIAGRAM FOR 68DLHSP3

NOTE: SELF WEIGHT OF JOIST NOT INCLUDED IN LOADS

REVISION LIST		
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1

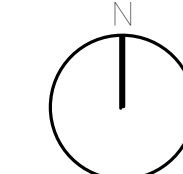
FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGEMSBA 90% CD
SUBMISSION

MAY 12, 2023

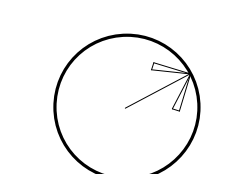


KEY PLAN

PROJECT NORTH



MAGNETIC NORTH

JOIST LOADING
DIAGRAMS

Scale: As indicated

Job No.: 20202

Drawn By: EDG

Date: MAY 12, 2023

S5-0-1

DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
260 Charles Street
Studio 300
Waltham, MA
02453
Planning | Architecture | Interior Design
Tel: 617.954.1700
www.dra.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

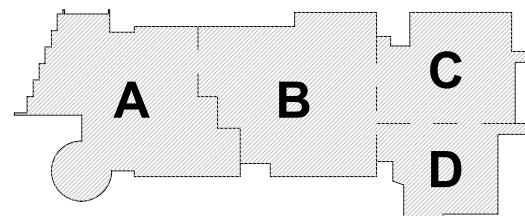
REVISION LIST

SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1
--------	-----------	--------------------------------

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

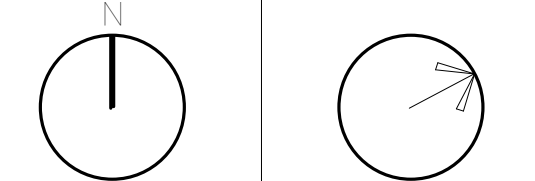
MSBA 90% CD
SUBMISSION

MAY 12, 2023



KEY PLAN

PROJECT NORTH
MAGNETIC NORTH



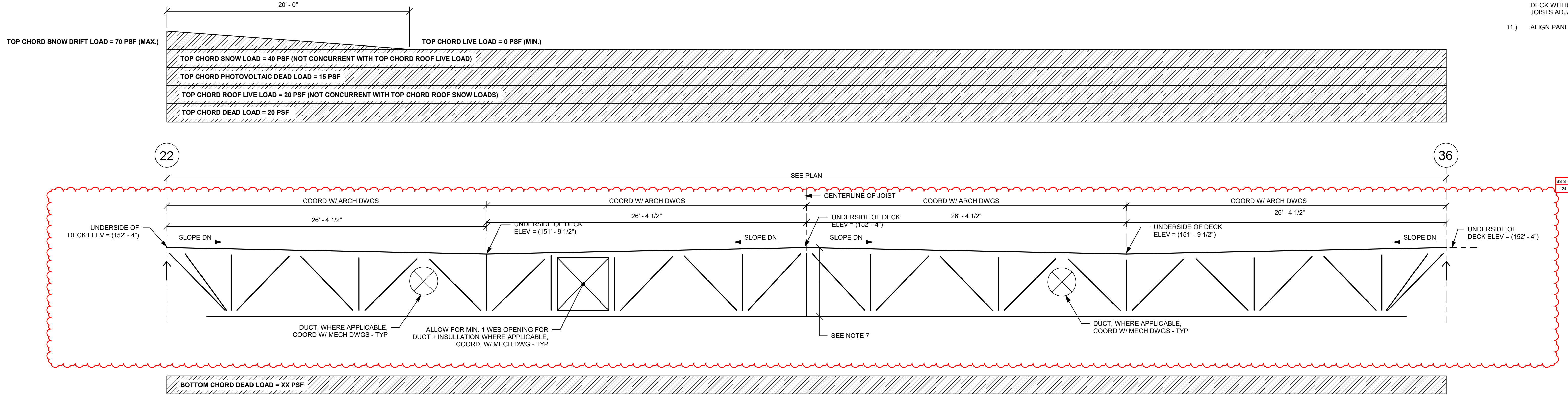
JOIST LOADING
DIAGRAMS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S5-0-2

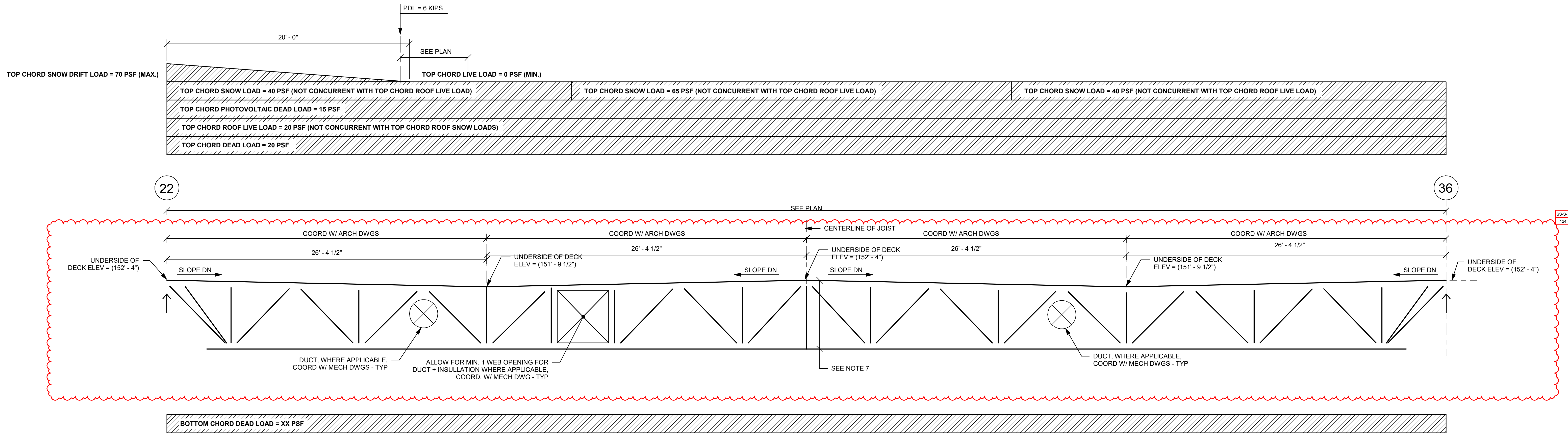
JOIST NOTES:

- JOIST SEAT DEPTH VARIES (8" MIN) AT CENTERLINE OF BEARING. COORDINATE WITH TOP OF STEEL BEAM.
- IN ADDITION TO THE LOADS SHOWN IN THE DIAGRAMS, DESIGN JOISTS AT THE GYMNASIUM FOR CONCENTRATED LOADS FROM MOTORIZED GYMNASIUM CURTAIN BATTING CAGE AND BASKETBALL BACKSTOP SUPPORT POINTS. REFER TO THE ARCHITECTURAL AND CEILING DRAWINGS. REFER TO MANUFACTURERS INFORMATION FOR LOAD MAGNITUDES AND LOCATIONS.
- REFER TO SPECIFICATIONS FOR UPLIFT LOAD ON THE JOISTS. DO NOT USE DESIGN DEAD LOAD TO OFFSET UPLIFT LOADS. ONLY SELF WEIGHT OF THE JOIST AND METAL ROOF DECK CAN BE USED TO OFFSET ANY UPLIFT LOADS.
- DESIGN FOR MAXIMUM LIVE LOADS DEFLECTION OF L/360.
- DESIGN ALL JOISTS FOR ADDITIONAL UPWARD LOAD OF 200 POUNDS AT FIRST PANEL POINT AT EACH END OF JOIST.
- IN ADDITION TO THE SLOPE, PROVIDE CAMBER PER S.J.
- JOIST DEPTH DESIGNATION INDICATED AT THE HIGHEST POINT (AT MID-SPAN).
- JOIST SHALL BE TOP CHORD, QUADRUPLE PITCHED UNDER-SLUNG JOIST. JOISTS ARE SYMMETRICAL ABOUT THE MIDSPAN.
- JOIST WEB CONFIGURATION IS BY JOIST SUPPLIER. WEB CONFIGURATION SHALL BE COMPATIBLE WITH MECHANICAL DUCT LAYOUT AND CATWALK SUPPORTS.
- JOIST MANUFACTURER SHALL DESIGN AND ACCOUNT FOR JOIST CAMBER AND JOIST DEFLECTION TO LIMIT DIFFERENTIAL DEFLECTION OF ADJACENT JOISTS TO ALLOW FOR PROPER INSTALLATION OF MULTIPLE SPAN ROOF DECK WITHOUT FIELD CUTTING OF DECK. REDUCE CAMBER BY HALF AT JOISTS ADJACENT TOP STRUCTURAL STEEL FRAMING.
- ALIGN PANEL POINTS OF ALL JOISTS AS SHOWN IN JOIST PROFILES.



JOIST PROFILE AND LOAD DIAGRAM FOR 68DLHSP4

NOTE: SELF WEIGHT OF JOIST IS NOT INCLUDED IN LOADS



JOIST PROFILE AND LOAD DIAGRAM FOR 60DLHSP5

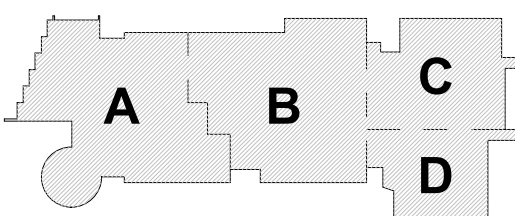
NOTE: SELF WEIGHT OF JOIST IS NOT INCLUDED IN LOADS

REVISION LIST		
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1

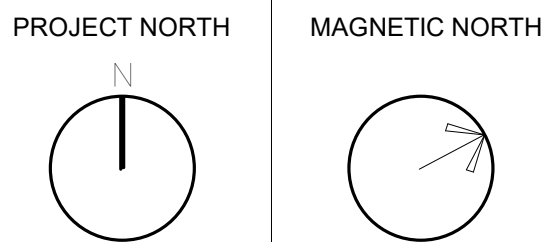
FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023



KEY PLAN



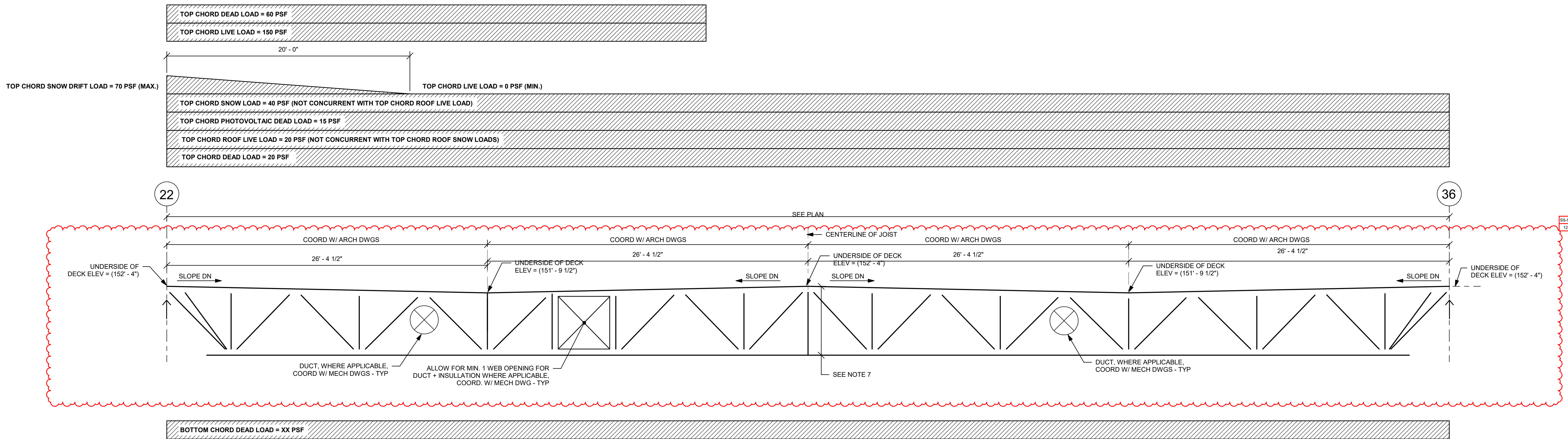
JOIST LOADING
DIAGRAMS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

S5-0-3

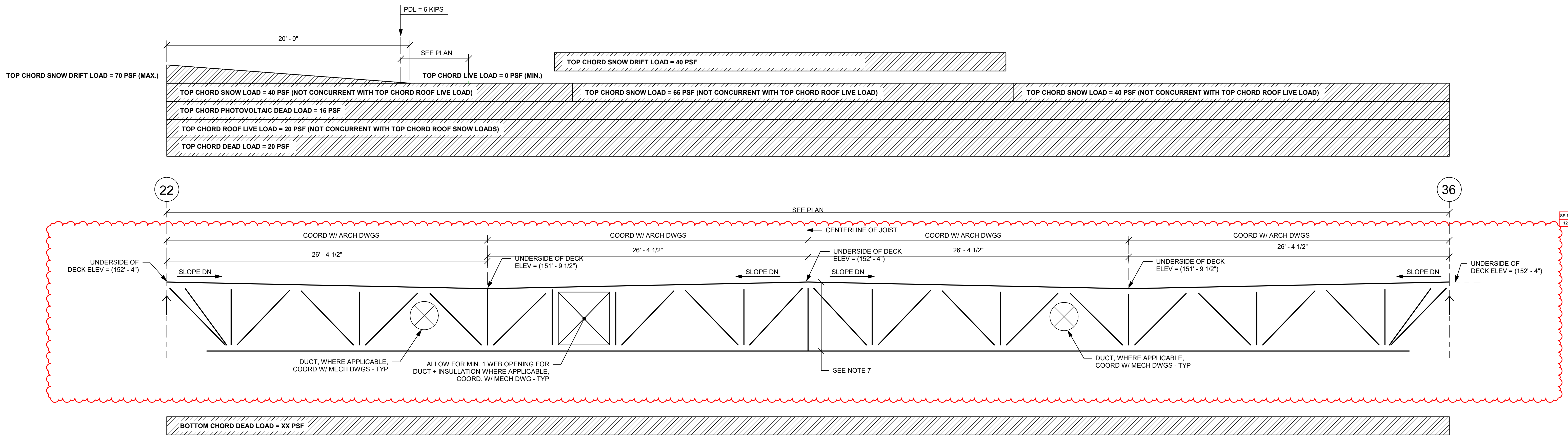
JOIST NOTES:

- JOIST SEAT DEPTH VARIES (8" MIN) AT CENTERLINE OF BEARING. COORDINATE WITH TOP OF STEEL BEAM.
- IN ADDITION TO THE LOADS SHOWN IN THE DIAGRAMS, DESIGN JOISTS AT THE GYMNASIUM FOR CONCENTRATED LOADS FROM MOTORIZED GYMNASIUM CURTAIN BATTING CAGE AND BASKETBALL BACKSTOP SUPPORT POINTS. REFER TO THE ARCHITECTURAL AND CEILING DRAWINGS. REFER TO MANUFACTURERS INFORMATION FOR LOAD MAGNITUDES AND LOCATIONS.
- REFER TO SPECIFICATIONS FOR UPLIFT LOAD ON THE JOISTS. DO NOT USE DESIGN DEAD LOAD TO OFFSET UPLIFT LOADS. ONLY SELF WEIGHT OF THE JOIST AND METAL ROOF DECK CAN BE USED TO OFFSET ANY UPLIFT LOADS.
- DESIGN FOR MAXIMUM LIVE LOADS DEFLECTION OF L/360.
- DESIGN ALL JOISTS FOR ADDITIONAL UPWARD LOAD OF 200 POUNDS AT FIRST PANEL POINT AT EACH END OF JOIST.
- IN ADDITION TO THE SLOPE, PROVIDE CAMBER PER SJI.
- JOIST DEPTH DESIGNATION INDICATED AT THE HIGHEST POINT (AT MID-SPAN).
- JOIST SHALL BE TOP CHORD, QUADRUPLE PITCHED UNDER-SLING JOIST. JOISTS ARE SYMMETRICAL ABOUT THE MIDSPAN.
- JOIST WEB CONFIGURATION IS BY JOIST SUPPLIER. WEB CONFIGURATION SHALL BE COMPATIBLE WITH MECHANICAL DUCT LAYOUT AND CATWALK SUPPORTS.
- JOIST MANUFACTURER SHALL DESIGN AND ACCOUNT FOR JOIST CAMBER AND JOIST DEFLECTION TO LIMIT DIFFERENTIAL DEFLECTION OF ADJACENT JOISTS TO ALLOW FOR PROPER INSTALLATION OF MULTIPLE SPAN ROOF DECK WITHOUT FIELD CUTTING OF DECK. REDUCE CAMBER BY HALF AT JOISTS ADJACENT TOP STRUCTURAL STEEL FRAMING.
- ALIGN PANEL POINTS OF ALL JOISTS AS SHOWN IN JOIST PROFILES.



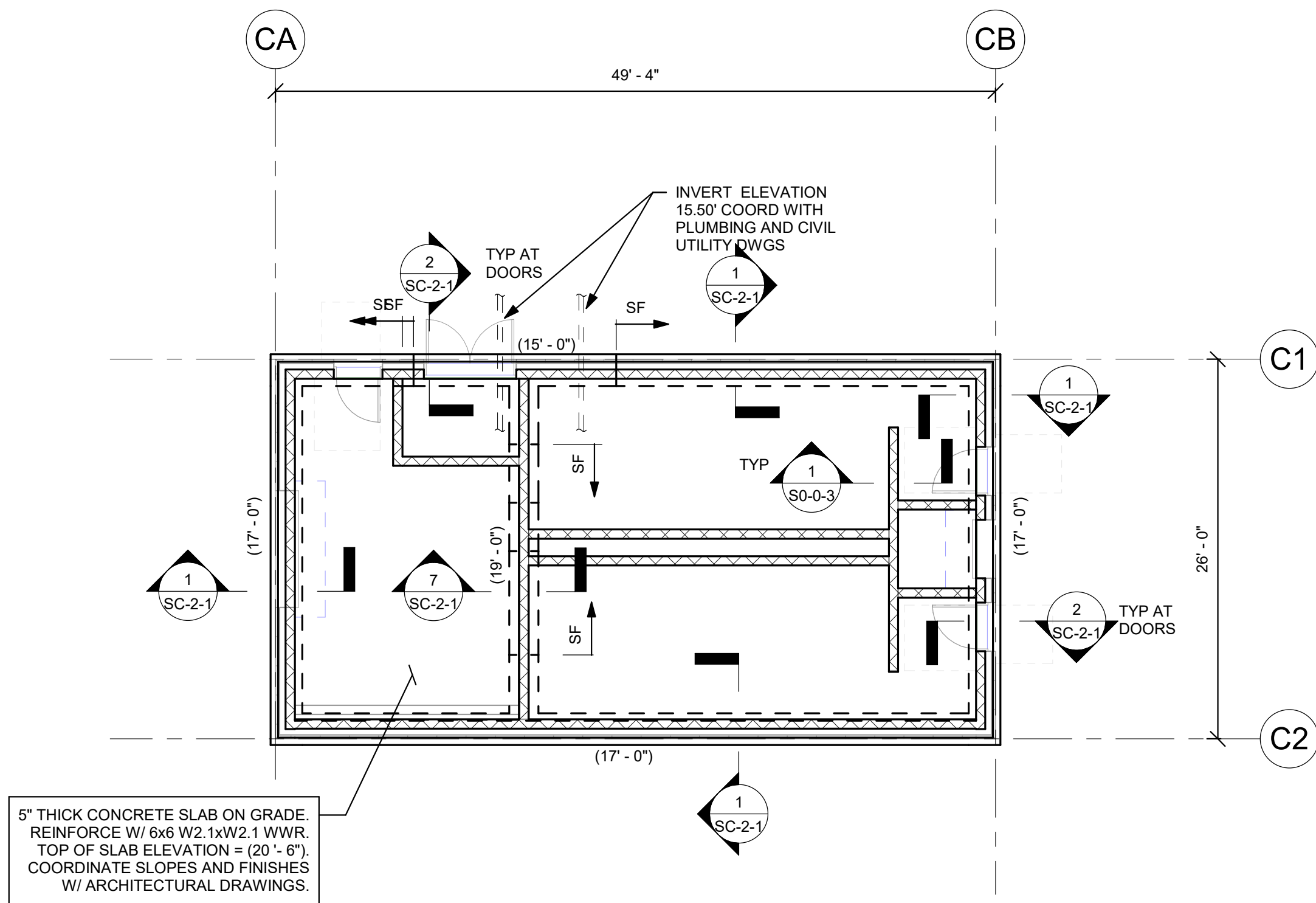
JOIST PROFILE AND LOAD DIAGRAM FOR 68DLHSP6

NOTE: SELF WEIGHT OF JOIST IS NOT INCLUDED IN LOADS

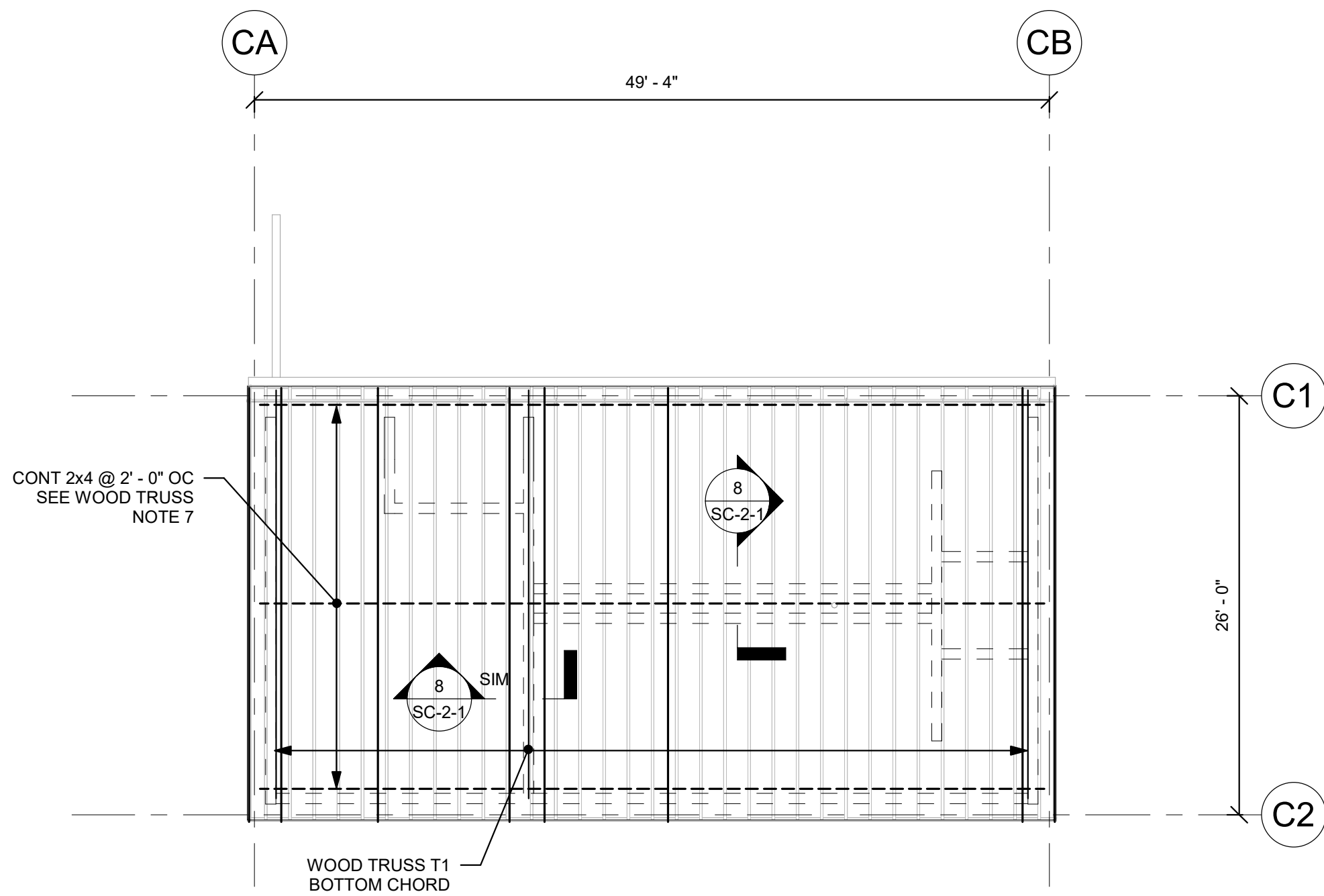


JOIST PROFILE AND LOAD DIAGRAM FOR 60DLHSP7

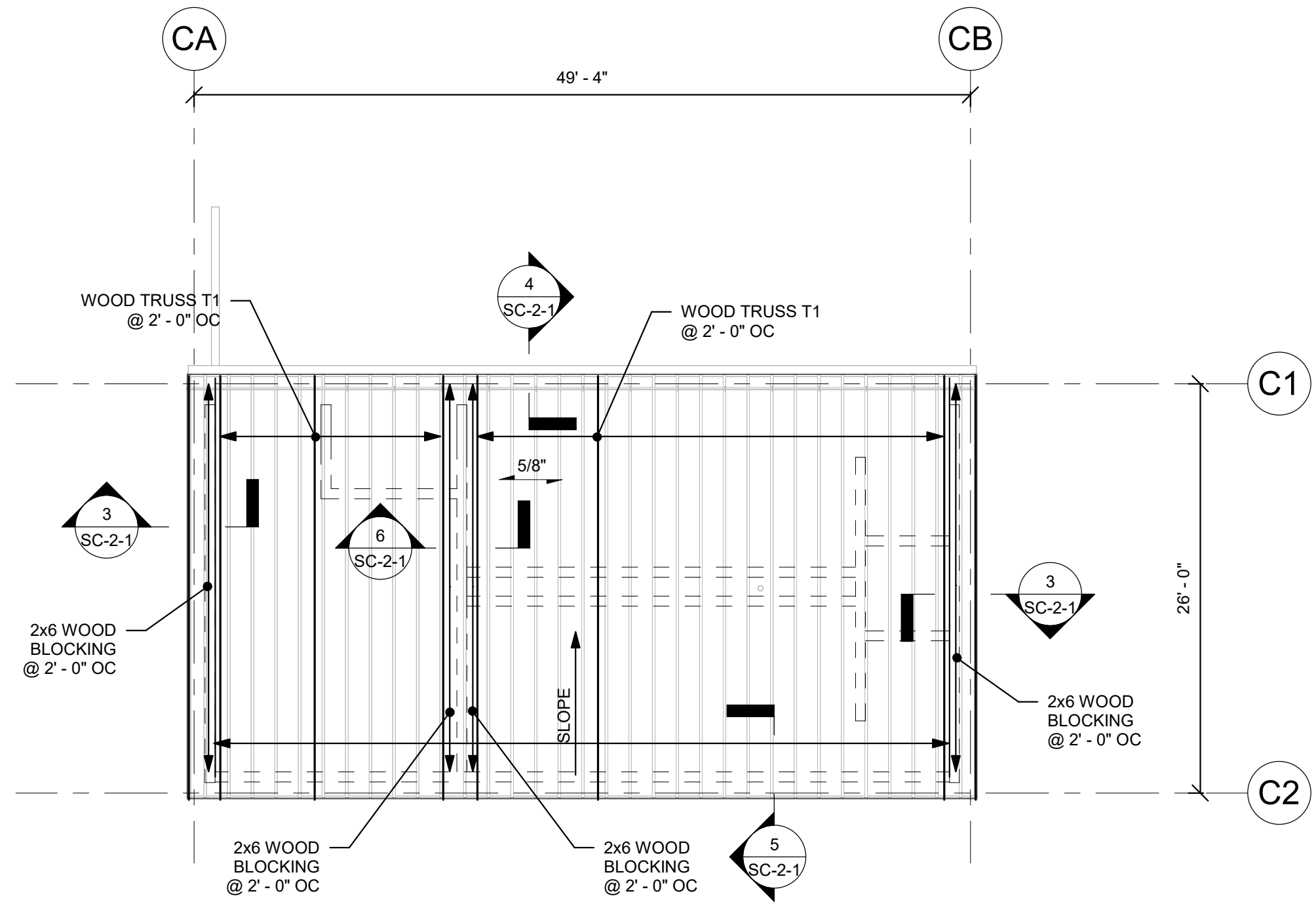
NOTE: SELF WEIGHT OF JOIST IS NOT INCLUDED IN LOADS



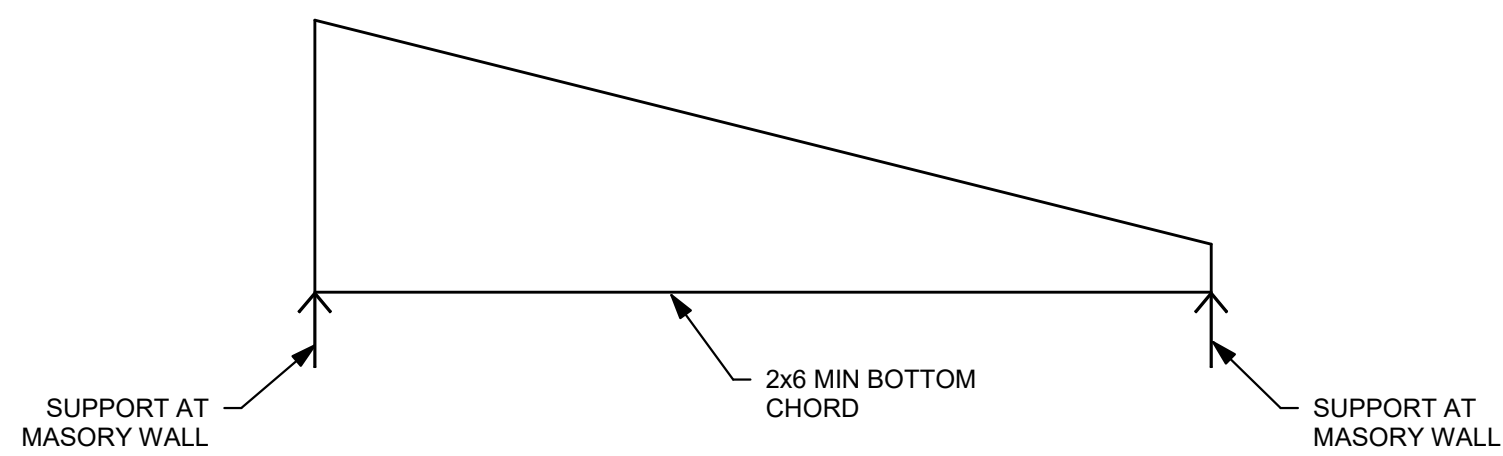
CONCESSION BUILDING GROUND FLOOR PLAN



CONCESSION BUILDING CEILING PLAN



CONCESSION BUILDING ROOF PLAN



WOOD TRUSS TYPE T1

WOOD TRUSS NOTES:

- TRUSS CONFIGURATIONS ARE DIAGRAMMATIC AND NOT TO SCALE. SEE ARCHITECTURAL DRAWINGS FOR EXACT LENGTHS AND CONDITIONS.
- REVIEW MECHANICAL ELECTRICAL AND PLUMBING DRAWINGS FOR ADDITIONAL EQUIPMENT LOADS.
- EXCEPT AS SHOWN OTHERWISE, DESIGN TRUSSES FOR THE FOLLOWING MINIMUM UNIFORM DESIGN LOADS:
TRUSS TYPE T1
TOP CHORD DEAD LOAD 15PSF
BOTTOM CHORD DEAD LOAD 5PSF
SNOW LOAD 30PSF
(SEE GENERAL NOTES ON S0-0-1 FOR WIND AND SEISMIC DESIGN CRITERIA)
- DESIGN AND PROVIDE ALL TEMPORARY ERECTION RESTRAINTS / BRACING.
- DESIGN AND PROVIDE ALL PERMANENT RESTRAINT / BRACING FOR WEB MEMBERS AS REQUIRED FOR A PERMANENT INSTALLATION.
- OSB STRUCTURAL USE SHEATHING PROVIDES PERMANENT BRACING FOR THE TOP CHORD WHERE SHOWN.
- PROVIDE CONTINUOUS 2x4 @ 2' - 0" ON CENTER (MAX.) FOR LATERAL BRACING OF TRUSS BOTTOM CHORD
- IN ADDITION TO WOOD BLOCKING SHOWN ON PLANS, PROVIDE 2x BLOCKING BETWEEN TOP CHORD OF TRUSSES AT EACH PANEL POINT. 2x BLOCKING SIZE TO MATCH TOP CHORD OF TRUSS.
- WHERE TRUSSES ARE TO BE SUPPLIED IN MORE THAN ONE PIECE, OR HINGED, DESIGN AND PROVIDE ALL NECESSARY BRACING CONNECTIONS AND ACCESSORIES.
- REFER TO GENERAL NOTES ON DRAWING S0-0-1 FOR ADDITIONAL REQUIREMENTS.
- DESIGN AND PROVIDE UPLIFT CONNECTORS. CONNECTORS SHOWN ARE MINIMUM REQUIREMENTS.

OSB STUCTURAL PANEL NAILING SCHEDULE
(EXCEPT AS NOTED OTHERWISE)

AT PANEL EDGE BOUNDARIES	10d COMMON NAILS AT 6" OC
AT OTHER PANEL EDGES	10d COMMON NAILS AT 6" OC
AT INTERMEDIATE PANEL SUPPORTS	10d COMMON NAILS AT 10" OC

FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- 5/8" INDICATES SPAN DIRECTION OF 5/8" ROOF SHEATHING. PROVIDE APA RATED STRUCTURAL SHEATHING EXPOSURE 1 PLYWOOD OR OSB.
- T1 ETC. INDICATES A PRE-FABRICATED WOOD TRUSS. SEE THIS DRAWING FOR TRUSS CONFIGURATION AND LOADING INFORMATION. MAXIMUM TRUSS SPACING EQUALS 2' - 0" ON CENTER.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.

FOUNDATION NOTES:

- REFER TO GRADING DRAWINGS FOR PLAN AND GRADE ELEVATIONS. THE STRUCTURAL DRAWINGS USES A DATUM OF 100'-0" AT THE MAIN FLOOR, WHICH CORRESPONDS TO 163.50' MEAN SEA LEVEL, AS SHOWN ON THE SITE AND CIVIL DRAWINGS.
- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- F3 ETC. INDICATES A FOOTING TYPE. FOR SIZE OF FOOTING AND REINFORCEMENT SEE SCHEDULE ON THIS DRAWING.
- TOP OF FOOTING ELEVATION TO BE 3' - 6" MINIMUM BELOW LOWEST ADJACENT FINISHED GRADE AT EXTERIOR CONDITIONS AND 2' - 0" BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS. ALL OTHER TOP OF FOOTING ELEVATIONS ARE DENOTED AS THUS (XX' - XX') ON PLANS. CONTRACTOR TO COORDINATE AND VERIFY ALL TOP OF FOOTING ELEVATIONS WITH UNDERGROUND PLUMBING SUB-CONTRACTOR'S FIELD LAYOUT.
- ALL FOOTING ELEVATIONS NOTED ON PLAN ARE SHOWN ONLY TO ASSIST IN COORDINATION. ALL FOOTING ELEVATIONS MUST BE COORDINATED WITH STRUCTURAL REQUIREMENTS, TYPICAL DETAILS, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
- SF INDICATES A STEPPED FOOTING REFER TO DETAIL 1 ON DRAWING S0-0-2.
- FOR UNDER SLAB DRAINAGE AND WALL DRAINS, COORDINATE WITH ARCHITECTURAL, STRUCTURAL, CIVIL, AND PLUMBING DRAWINGS.
- INDICATES A DEPRESSED SLAB ON GRADE. REFER TO DETAILS 6 AND 7 ON DRAWING S0-0-2 COORDINATE ALL SLAB DEPRESSIONS WITH REQUIREMENTS ON ARCHITECTURAL DRAWINGS.
- FOR TYPICAL EXTERIOR DOOR DETAIL REFER TO DETAIL 6 ON DRAWING S0-0-3 AND RELEVANT SECTIONS.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 3 ON DRAWING S0-0-4 FOR REINFORCEMENT AND DETAIL 4 ON DRAWING S0-0-4 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- INDICATES UNDERGROUND UTILITY LINES PLUMBING THROUGH CONCRETE FOUNDATION WALL TYPICAL. COORDINATE FOOTING ELEVATION WITH PIPE INVERTS AND TYPICAL STRUCTURAL DETAILS.

DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

260 Charles Street
Studio 300
Waltham, MA
02453

Planning | Architecture | Interior Design
Tel: 617.854.1700
www.dra.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

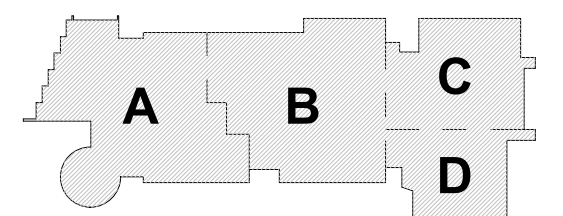
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

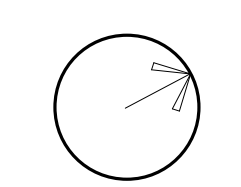
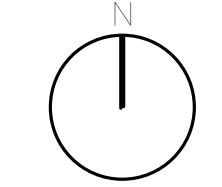
MAY 12, 2023



KEY PLAN

PROJECT NORTH

MAGNETIC NORTH



CONCESSION
BUILDING PLANS

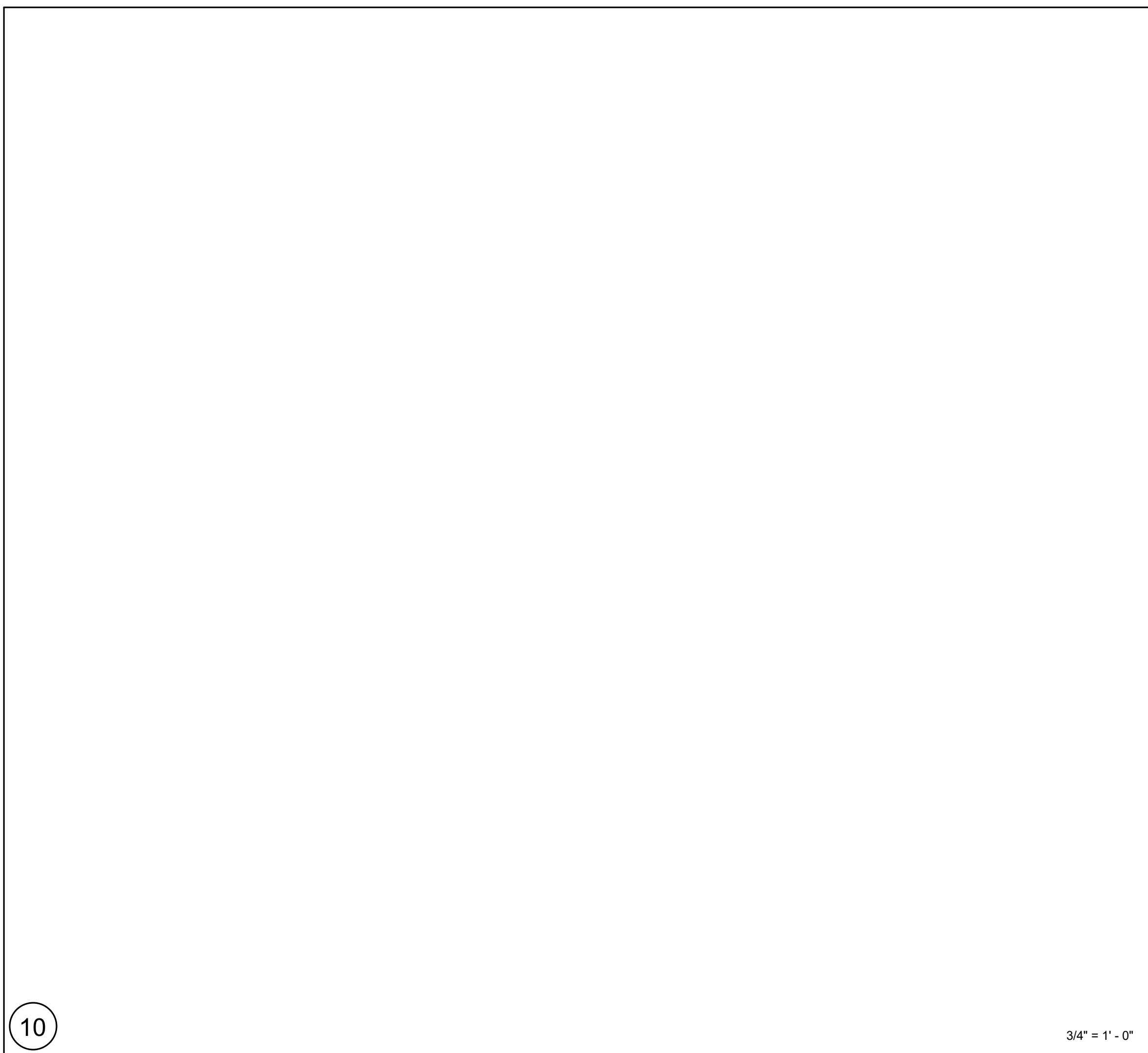
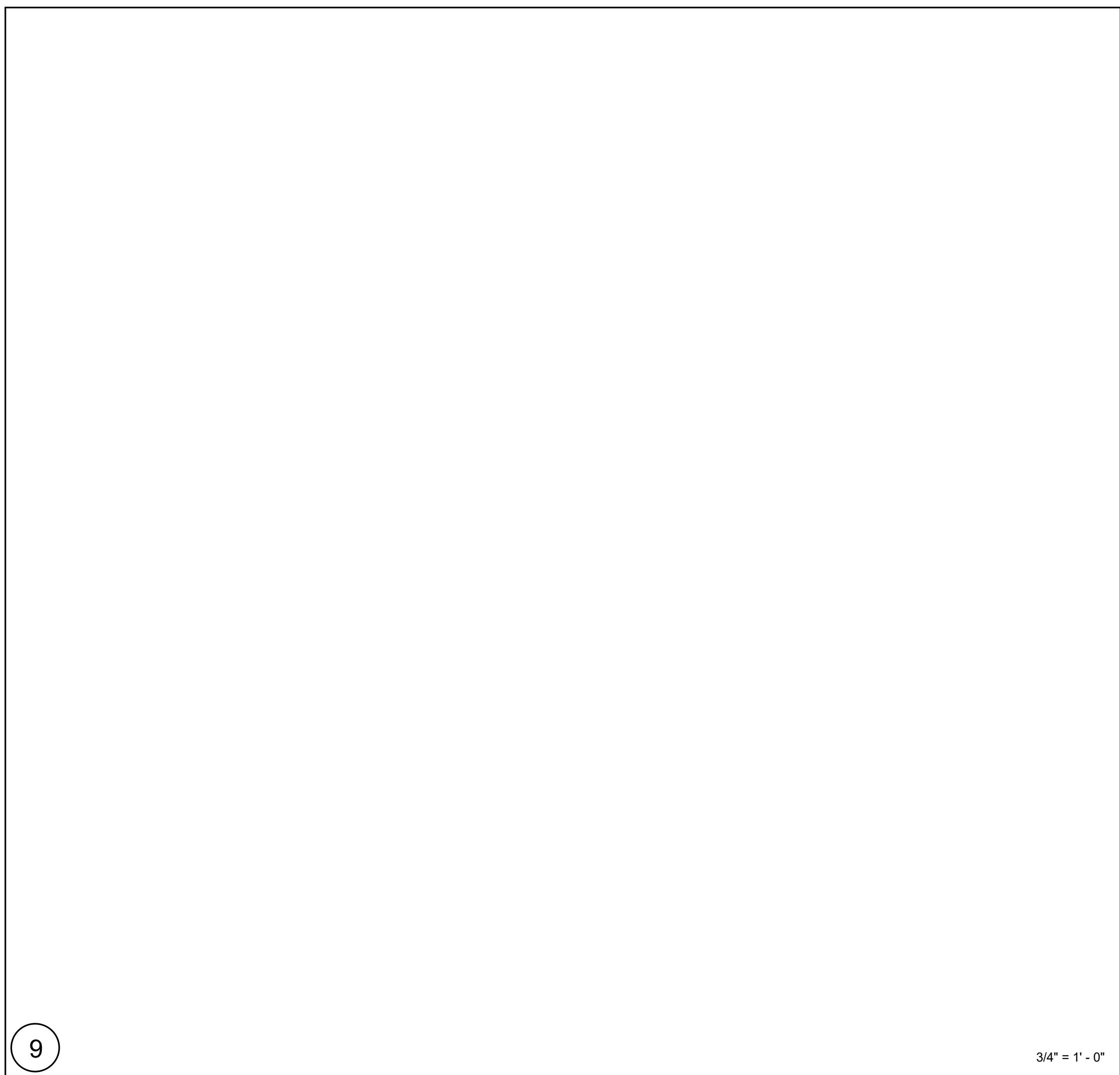
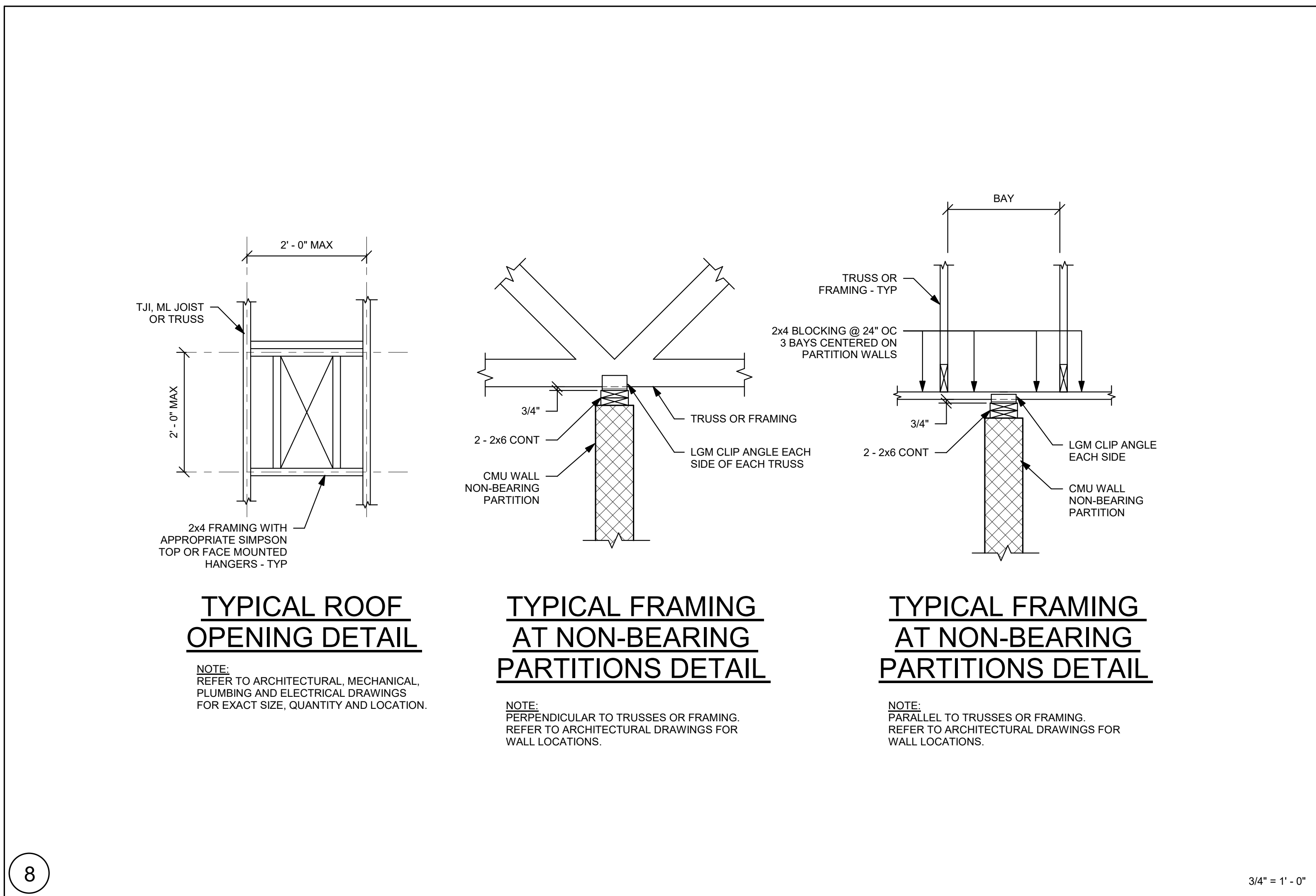
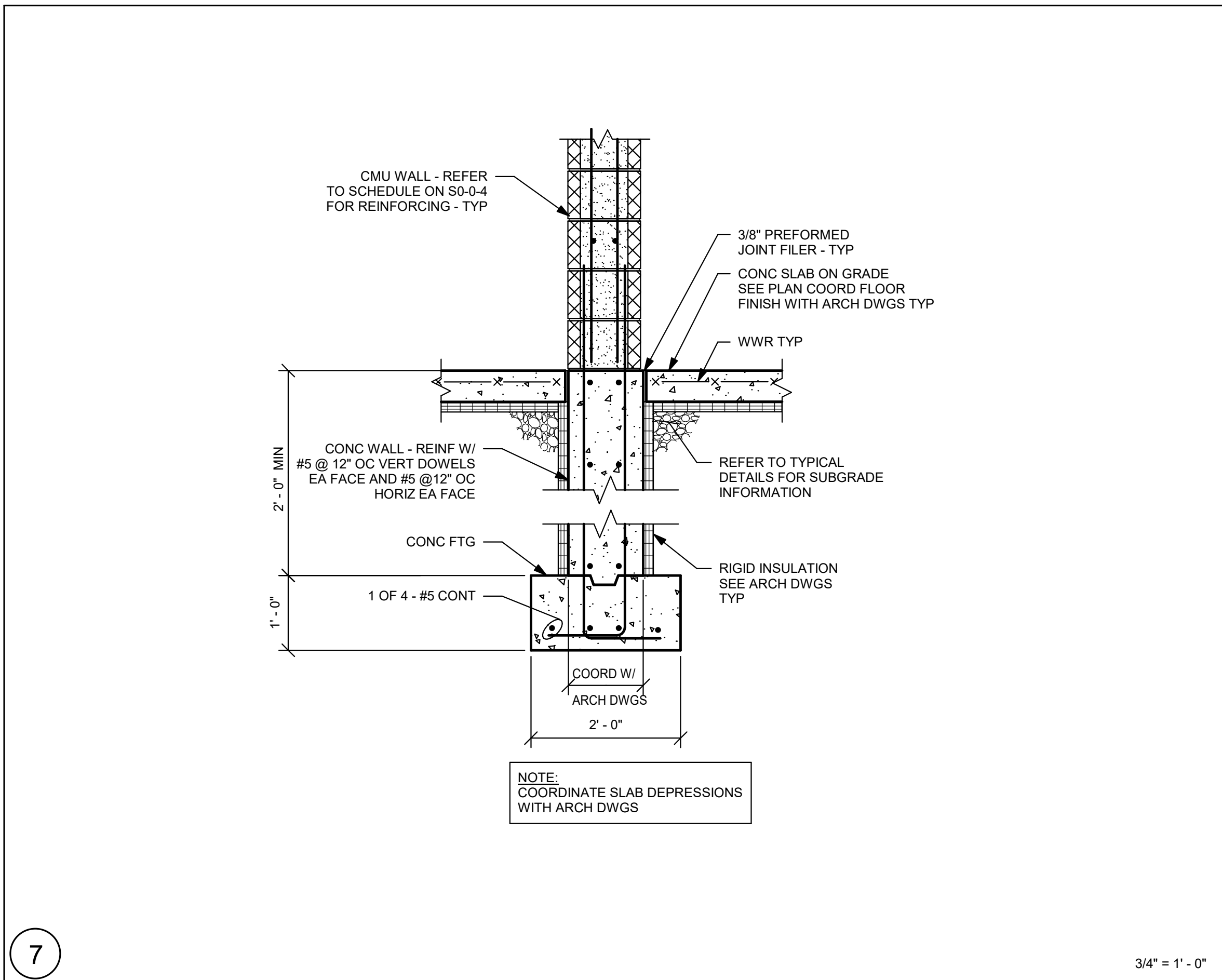
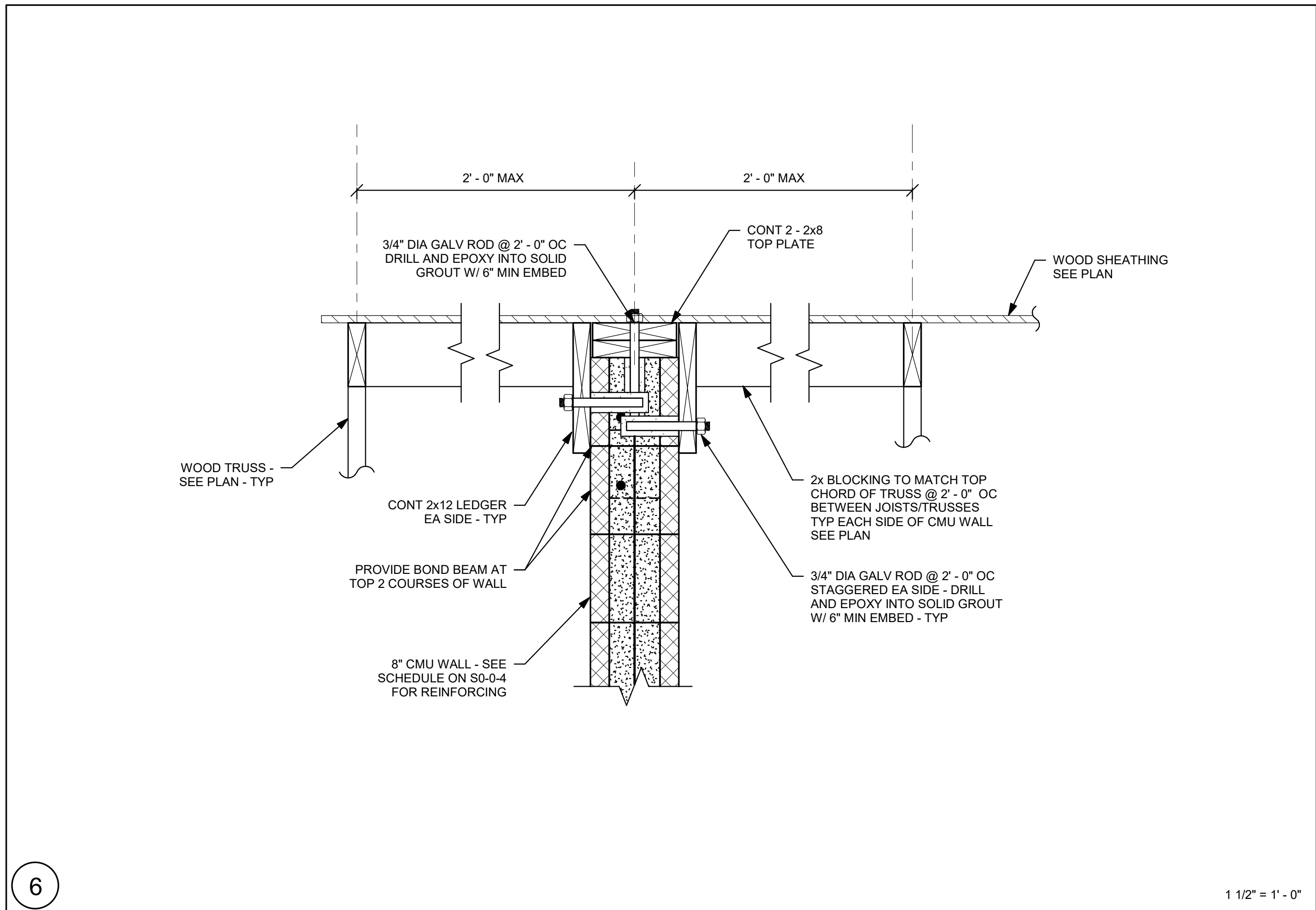
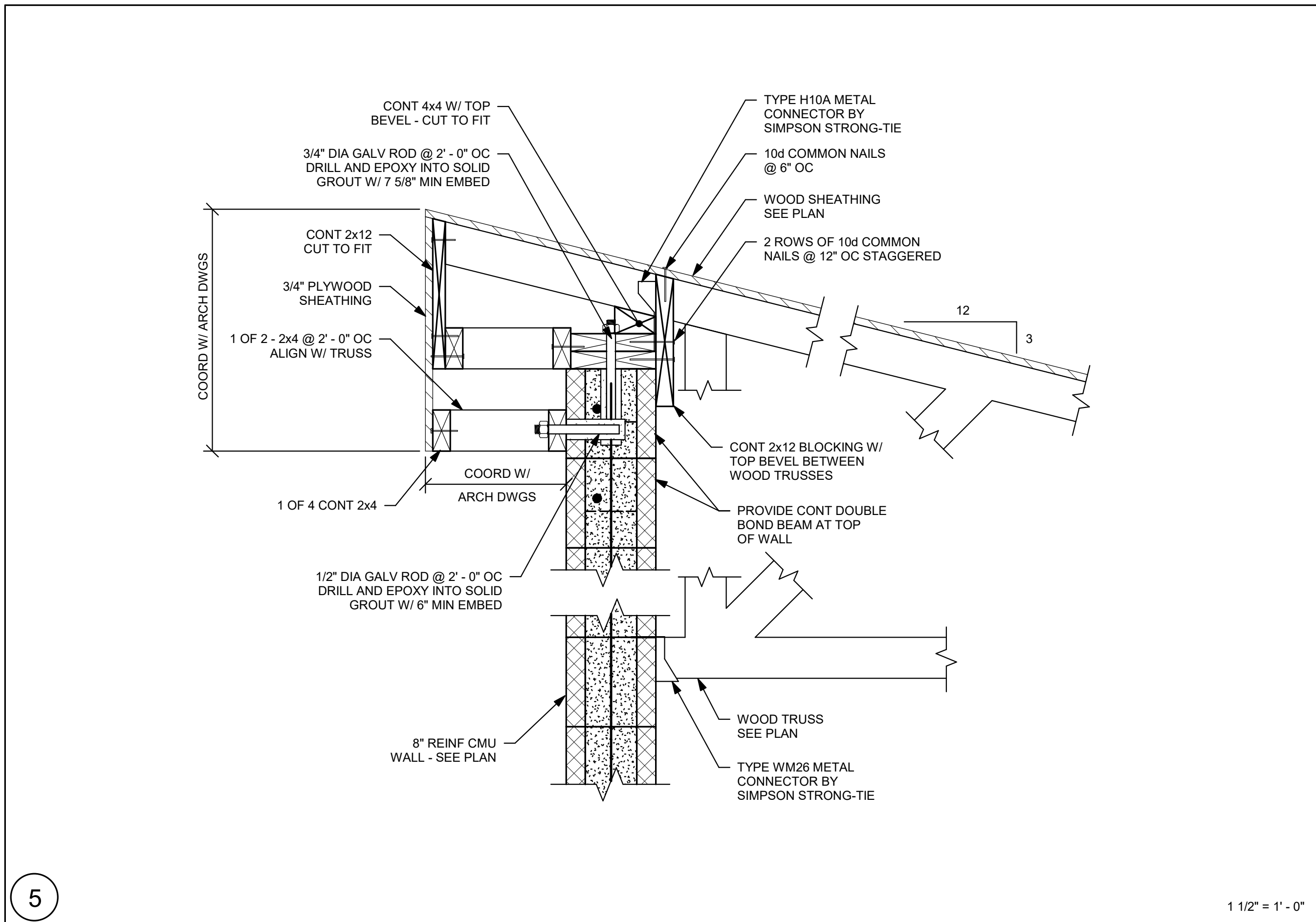
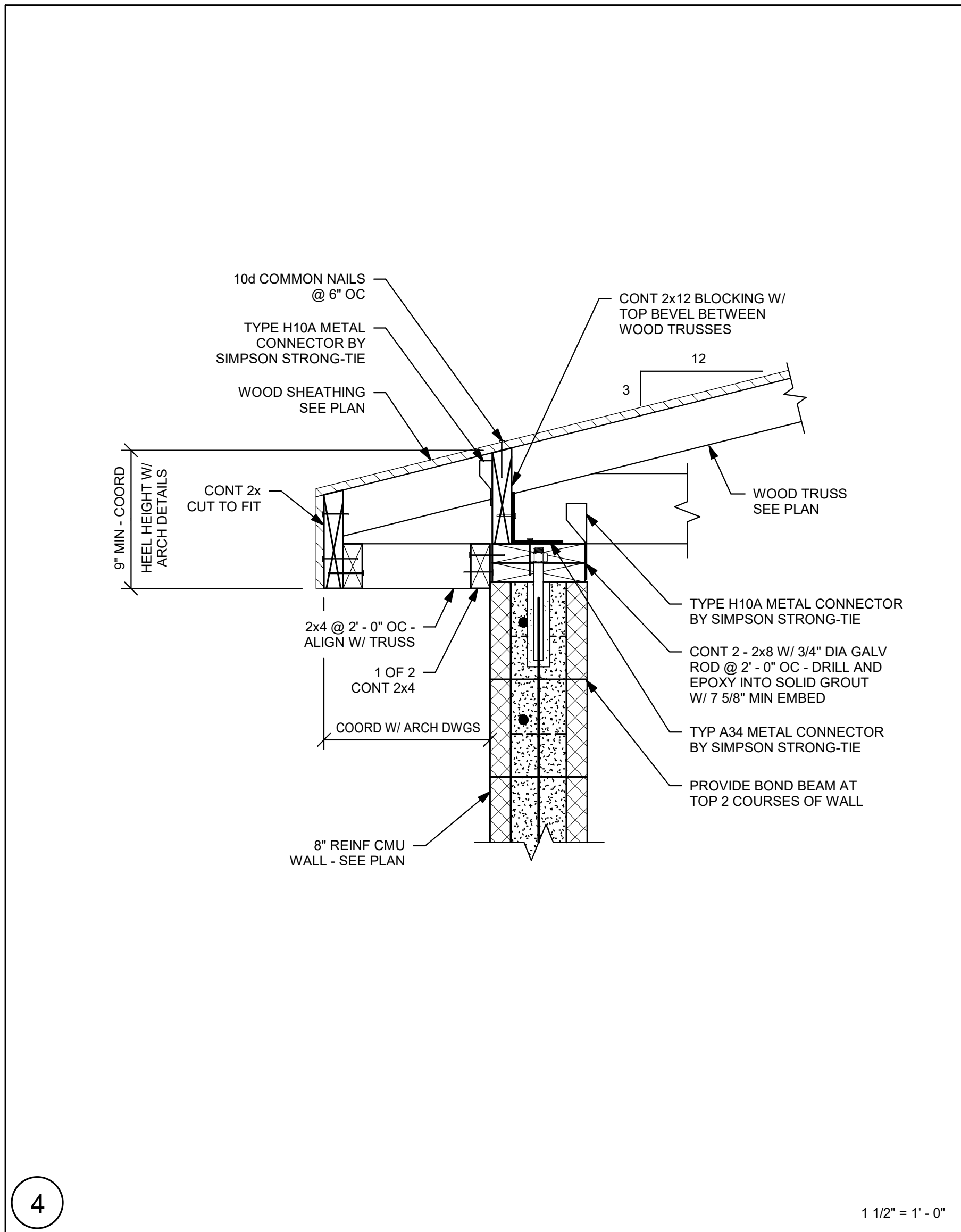
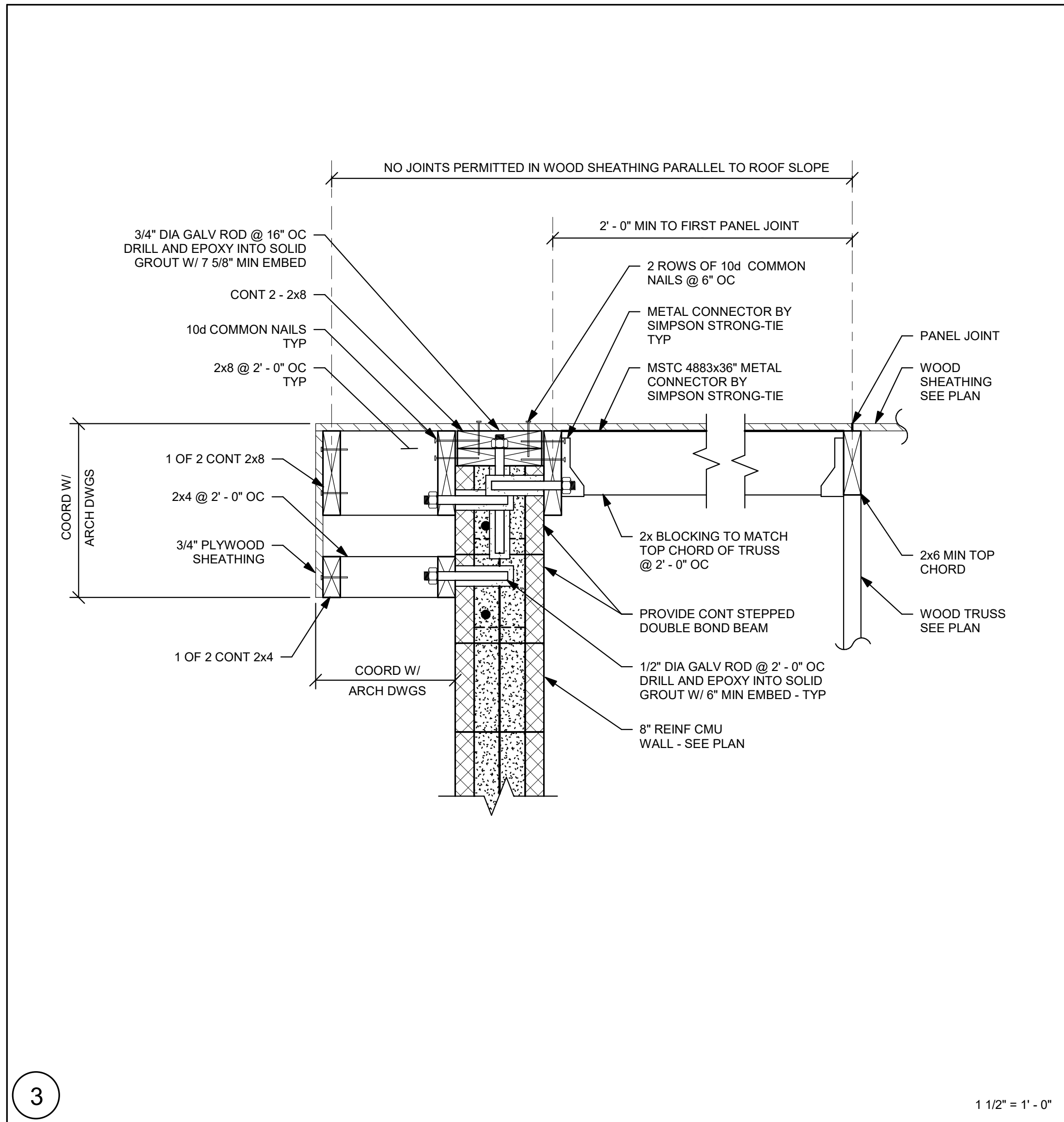
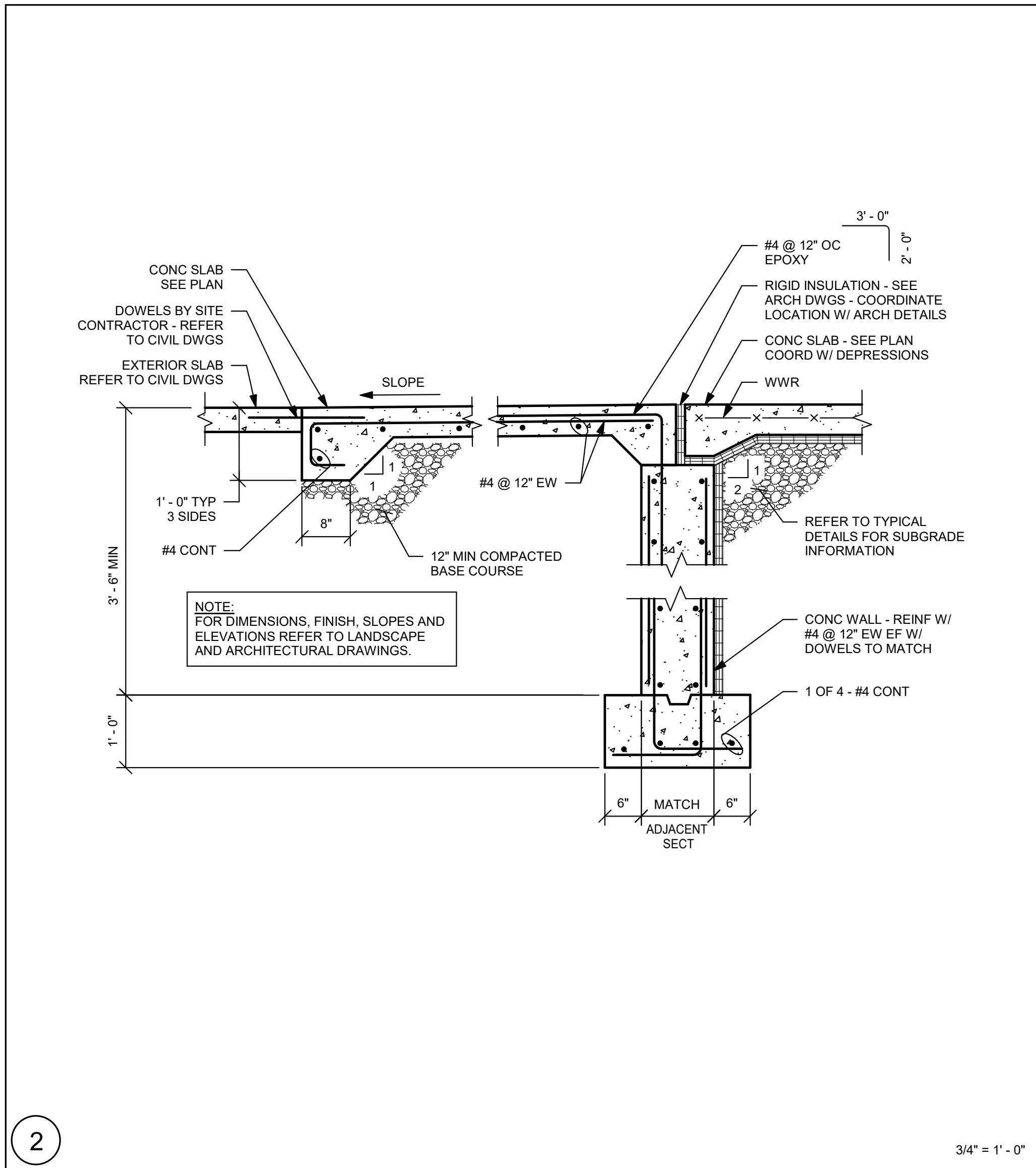
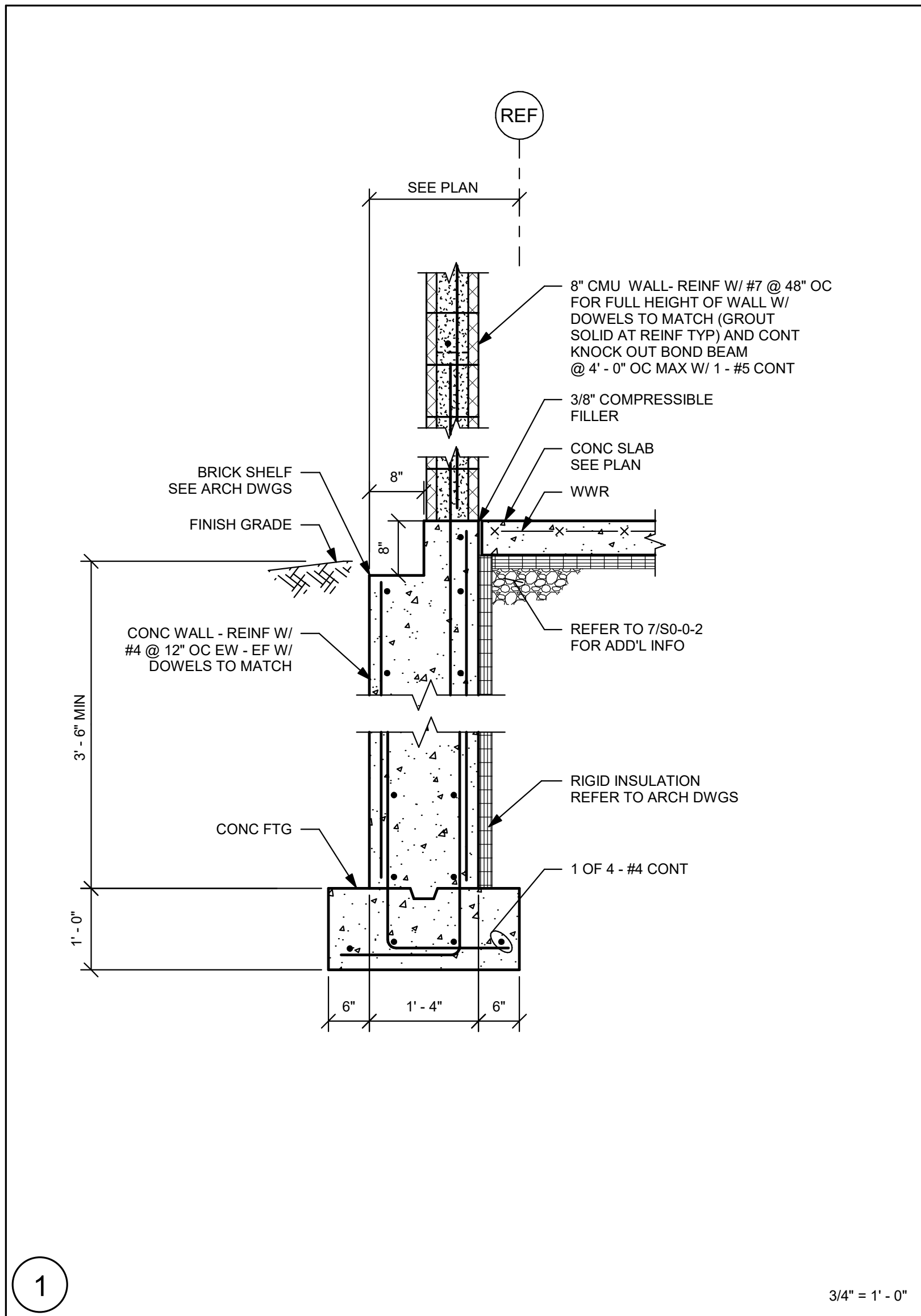
Scale: As indicated

Job No.: 20202

Drawn By: EDG

Date: MAY 12, 2023

SC-1-1



DRA

Drumsey Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning | Architecture | Interior Design

Tel: 617.954.1700
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.

Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023

KEY PLAN

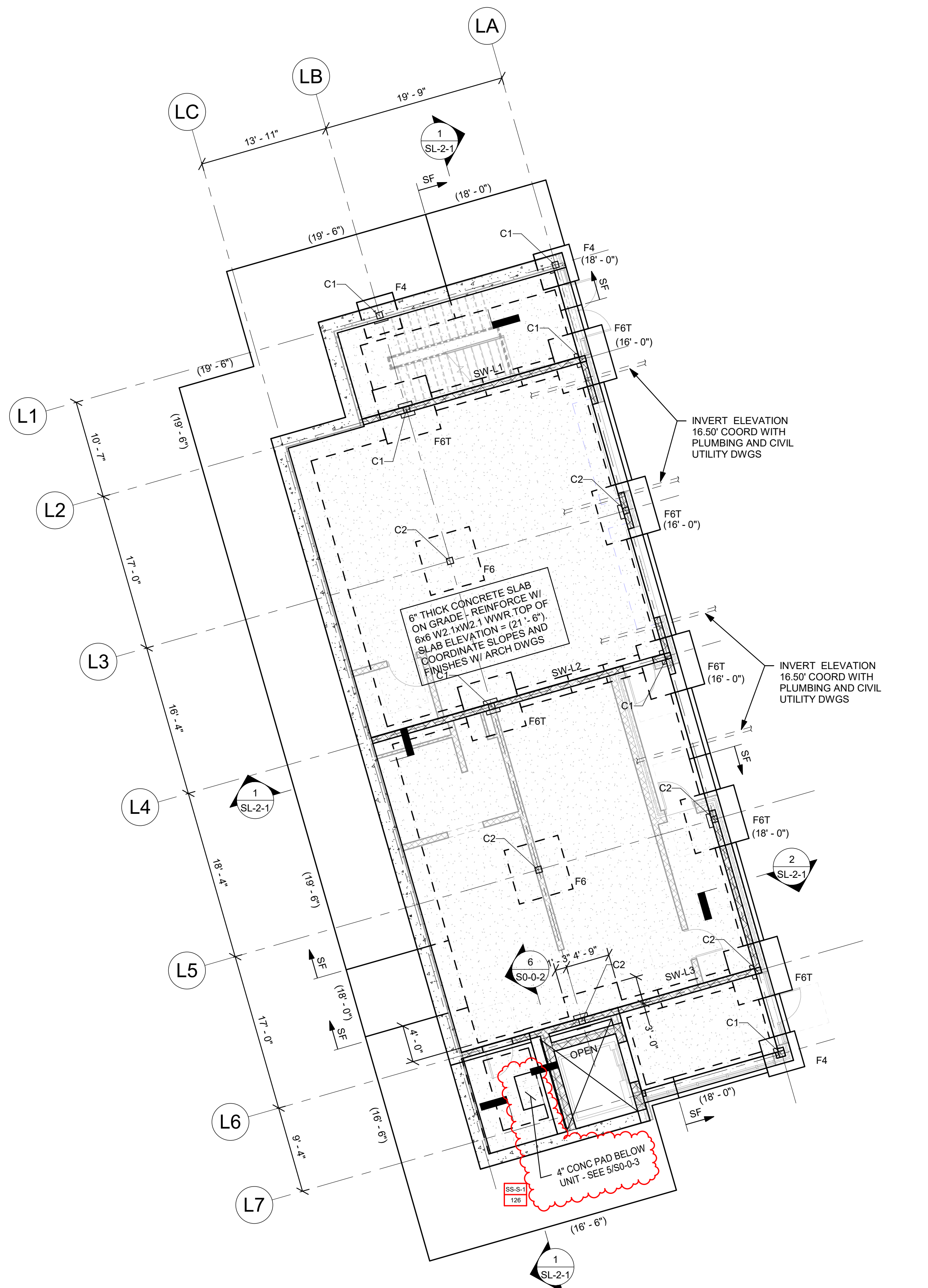
PROJECT NORTH

MAGNETIC NORTH

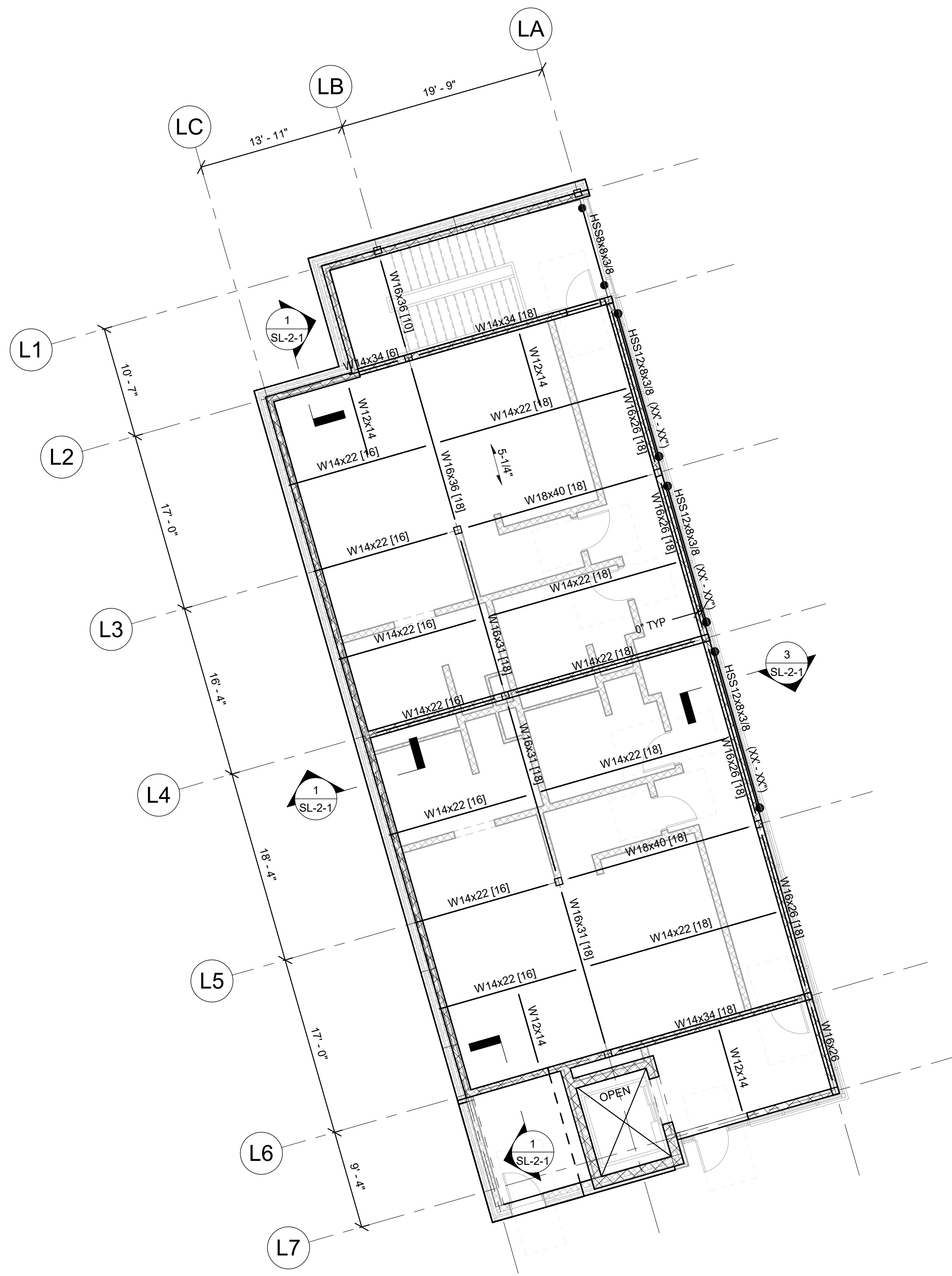
CONCESSION BUILDING SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

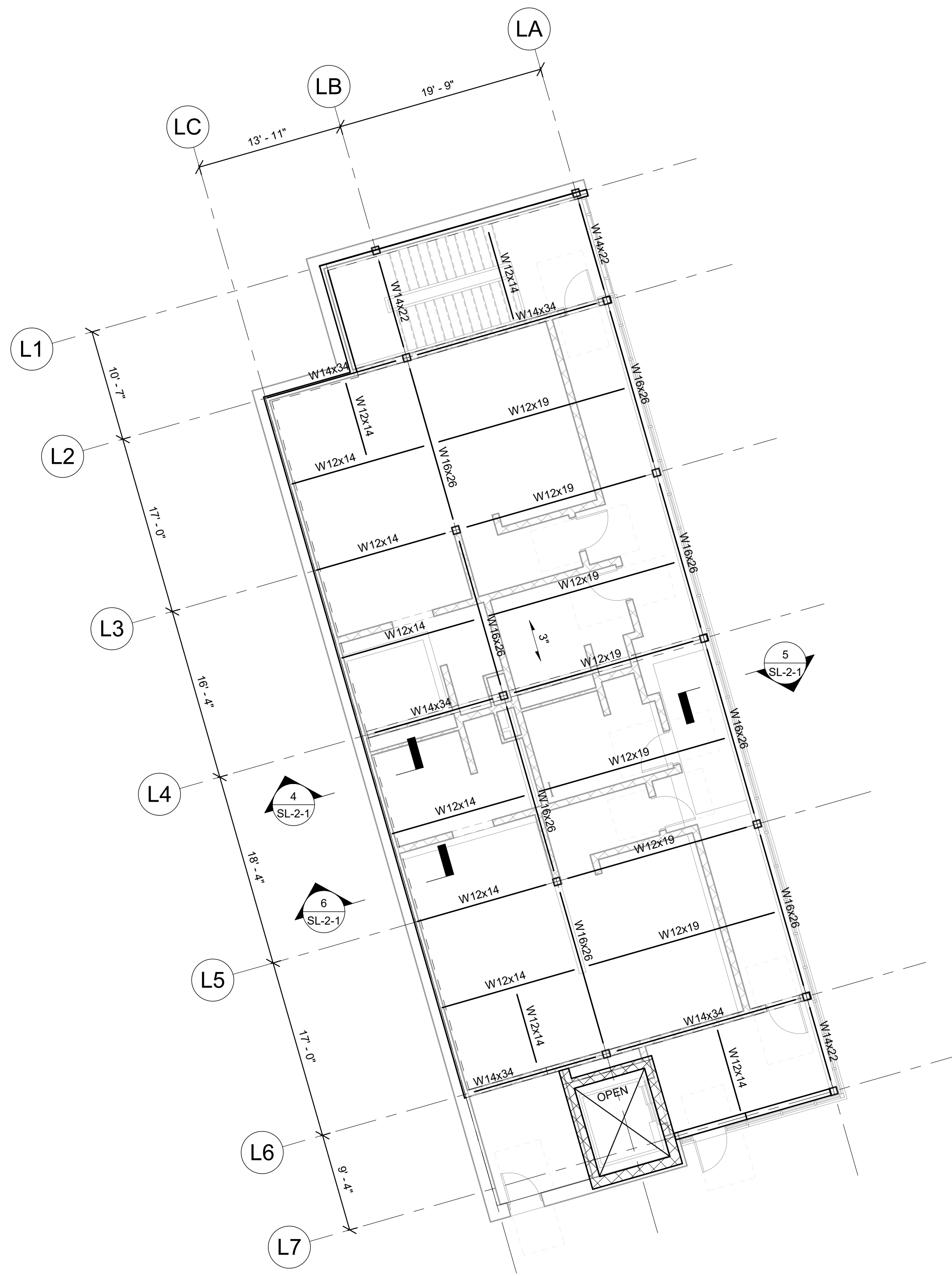
SC-2-1



LOCKER BUILDING GROUND FLOOR PLAN



LOCKER BUILDING FIRST FLOOR PLAN



LOCKER BUILDING ROOF PLAN

FOUNDATION NOTES:

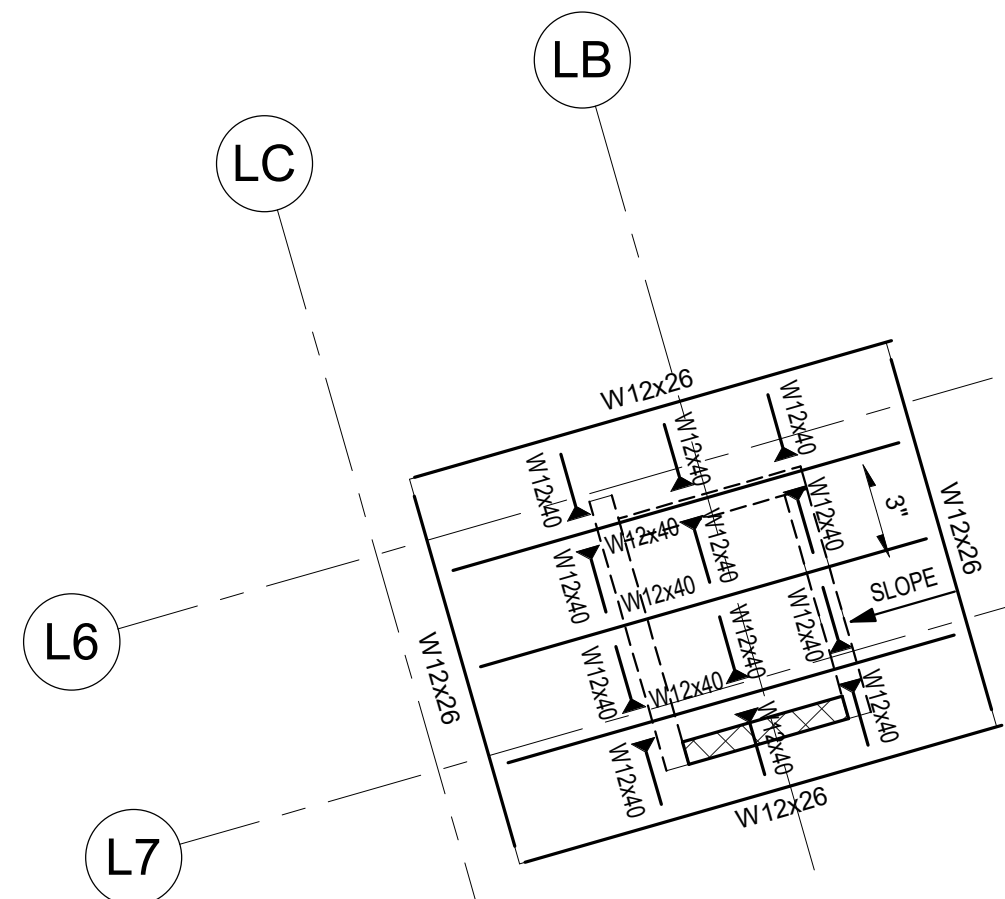
- 1.) REFER TO GRADING DRAWINGS FOR PLAN AND GRADE ELEVATIONS. THE STRUCTURAL DRAWINGS USES A DATUM OF 100'-0" AT THE MAIN FLOOR, WHICH CORRESPONDS TO 163.50' MEAN SEA LEVEL, AS SHOWN ON THE SITE AND CIVIL DRAWINGS.
- 2.) FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- 3.) F3 ETC... INDICATES A FOOTING TYPE, FOR SIZE OF FOOTING AND REINFORCEMENT SEE SCHEDULE ON THIS DRAWING.
- 4.) TOP OF FOOTING ELEVATION TO BE 3'-6" MINIMUM BELOW LOWEST ADJACENT FINISHED GRADE AT EXTERIOR CONDITIONS AND 2'-0" BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS. ALL OTHER TOP OF FOOTING ELEVATIONS ARE DENOTED AS THUS (XX'-XX") ON PLANS. CONTRACTOR TO COORDINATE AND VERIFY ALL TOP OF FOOTING ELEVATIONS WITH UNDERGROUND PLUMBING SUB-CONTRACTOR'S FIELD LAYOUT.
- 5.) ALL FOOTING ELEVATIONS NOTED ON PLAN ARE SHOWN ONLY TO ASSIST IN COORDINATION. ALL FOOTING ELEVATIONS MUST BE COORDINATED WITH STRUCTURAL REQUIREMENTS, TYPICAL DETAILS, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
- 6.) ALL FOOTINGS TO BE CENTERED UNDER COLUMNS UNLESS NOTED OTHERWISE.
- 7.) SF INDICATES A STEPPED FOOTING REFER TO DETAIL 1 ON DRAWING S0-0-2.
- 9.) BOTTOM OF BASE PLATE ELEVATION TO BE 1'-5" MINIMUM BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS, AND 0'-11" BELOW TOP OF CONCRETE SLAB AT EXTERIOR CONDITIONS. UNLESS NOTED OTHERWISE AS (XX'-XX") REFER TO ARCHITECTURAL DRAWINGS FOR BRICK SHELF ELEVATIONS.
- 10.) FOR UNDER SLAB DRAINAGE AND WALL DRAINS, COORDINATE WITH ARCHITECTURAL, STRUCTURAL, CIVIL, AND PLUMBING DRAWINGS.
- 11.) INDICATES A DEPRESSED SLAB ON GRADE. REFER TO DETAILS 6 AND 7 ON DRAWING S0-0-2 COORDINATE ALL SLAB DEPRESSIONS WITH REQUIREMENTS ON ARCHITECTURAL DRAWINGS.
- 12.) FOR TYPICAL EXTERIOR DOOR DETAIL, REFER TO DETAIL 6 ON DRAWING S0-0-3 AND RELEVANT SECTIONS.
- 13.) [XX] INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 3 ON DRAWING S0-0-4 FOR REINFORCEMENT AND DETAIL 4 ON DRAWING S0-0-6 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 14.) FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- 15.) [] INDICATES CONCRETE PIER REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0-2.
- 16.) [] INDICATES UNDERGROUND UTILITY LINES PLUMBING THROUGH CONCRETE FOUNDATION WALL TYPICAL. COORDINATE FOOTING ELEVATION WITH PIPE INVERTS AND TYPICAL STRUCTURAL DETAILS.
- 17.) CONCRETE PIER REINFORCING PER DETAIL 5 ON DRAWING S0-0-2 IS TO BE PROVIDED FOR ALL CONCRETE WALLS SUPPORTING COLUMNS. HORIZONTAL WALL REINFORCING MUST REMAIN CONTINUOUS.

FRAMING NOTES:

- 1.) FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- 2.) REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. FITCH ALL STEEL UNIFORMITY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- 3.) [XX] INDICATES THE NUMBER OF 3/4" DIAMETER x 3 1/2" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- 4.) INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 9 ON DRAWING ON DRAWING S0-0-6.
- 5.) INDICATES A 5/16" FILLET WELD ALL AROUND, (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0-7.
- 6.) < X > INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 7.) 1/2" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 2 1/2" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4 1/2" REINFORCE WITH 6x6 - W21x122.1 WWR.
- 8.) 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE B, GALVANIZED STEEL ROOF DECK.
- 9.) 3" INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE N, GALVANIZED STEEL ROOF DECK.
- 10.) FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, REFER TO DETAIL 1 AND 2 ON DRAWING S0-0-8.
- 11.) INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 8 ON DRAWING S0-0-9 AND DETAIL 11 ON DRAWING S0-0-8 FOR DECKING SUPPORT. REFER TO DETAIL 4 ON DRAWING S0-0-5. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- 12.) CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- 13.) WE INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING S0-0-8.
- 14.) [] INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 3 ON DRAWING S0-0-4 FOR REINFORCEMENT AND DETAIL 4 ON DRAWING S0-0-6 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 15.) FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.

FOOTING SCHEDULE		
DESIGN SOIL BEARING CAPACITY = 2 TSF		
MARK	SIZE	REINFORCEMENT
F4	4'-0" x 4'-0" x 1'-0"	6 - #5 BOT EA WAY
F6T	6'-0" x 6'-0" x 2'-0"	7 - #6 BOT EA WAY

T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING



LOCKER BUILDING ELEVATOR ROOF PART PLAN

DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
Tel: 817.854.1702
www.dra.com

260 Charles Street
Studio 300
Waltham, MA
02453
Tel: 817.854.1702
www.dra.com

Planning | Architecture | Interior Design

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

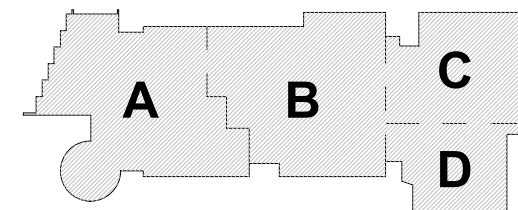
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST		
SS-S-1	4/14/2023	STRUCTURAL STEEL ADDENDUM 1

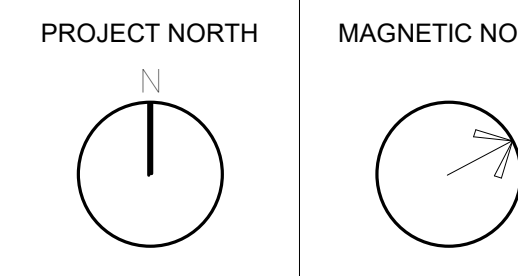
FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023



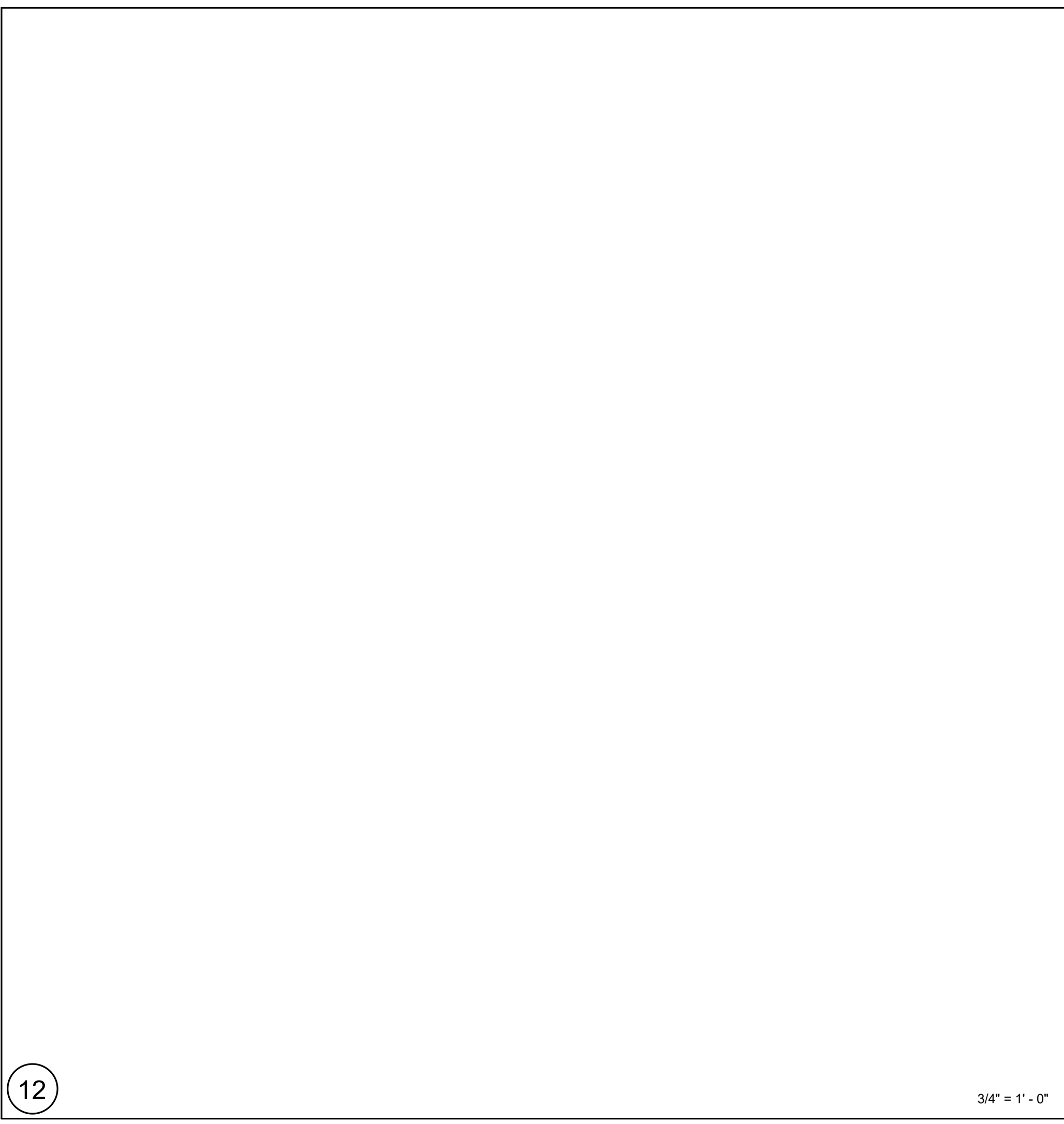
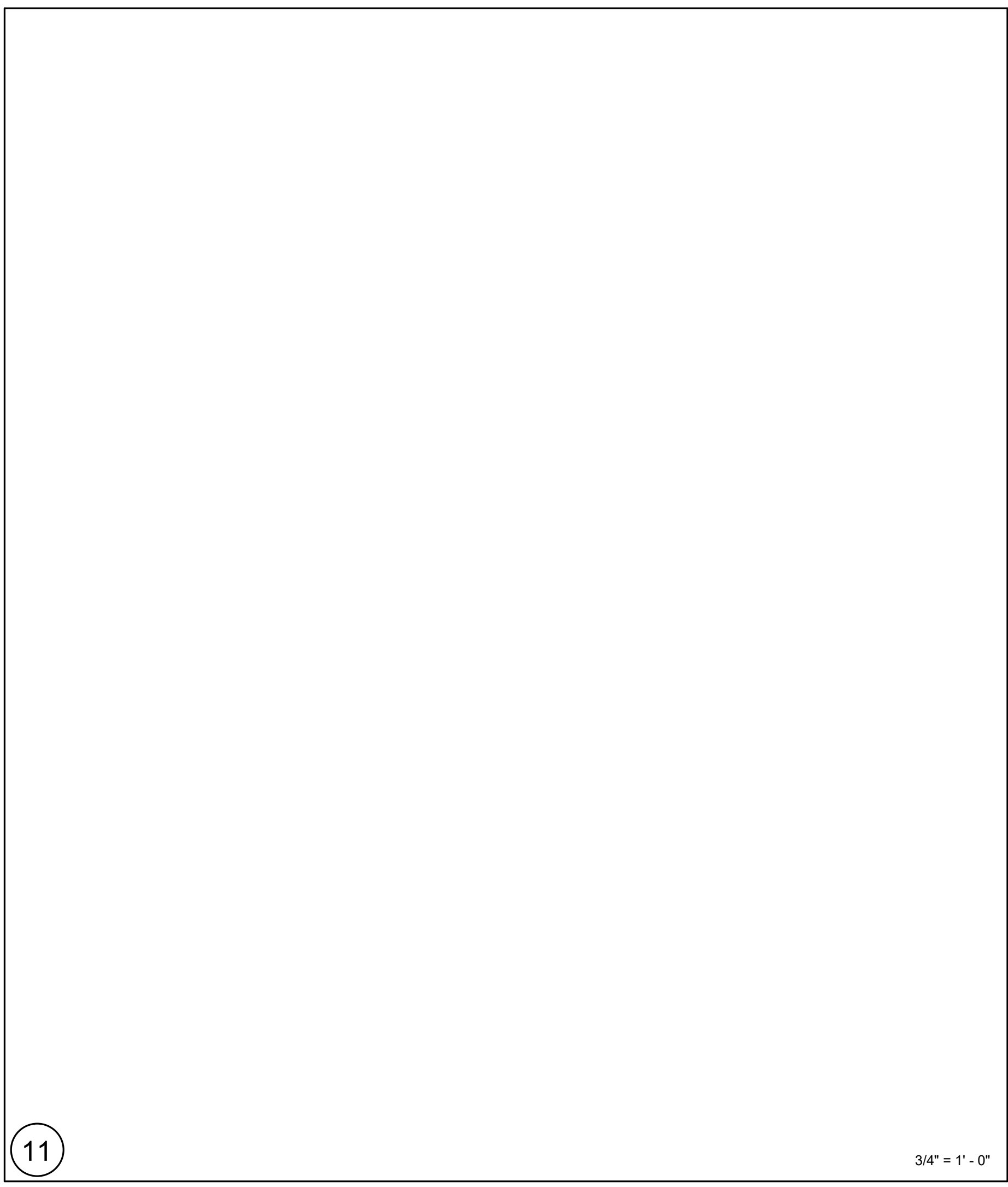
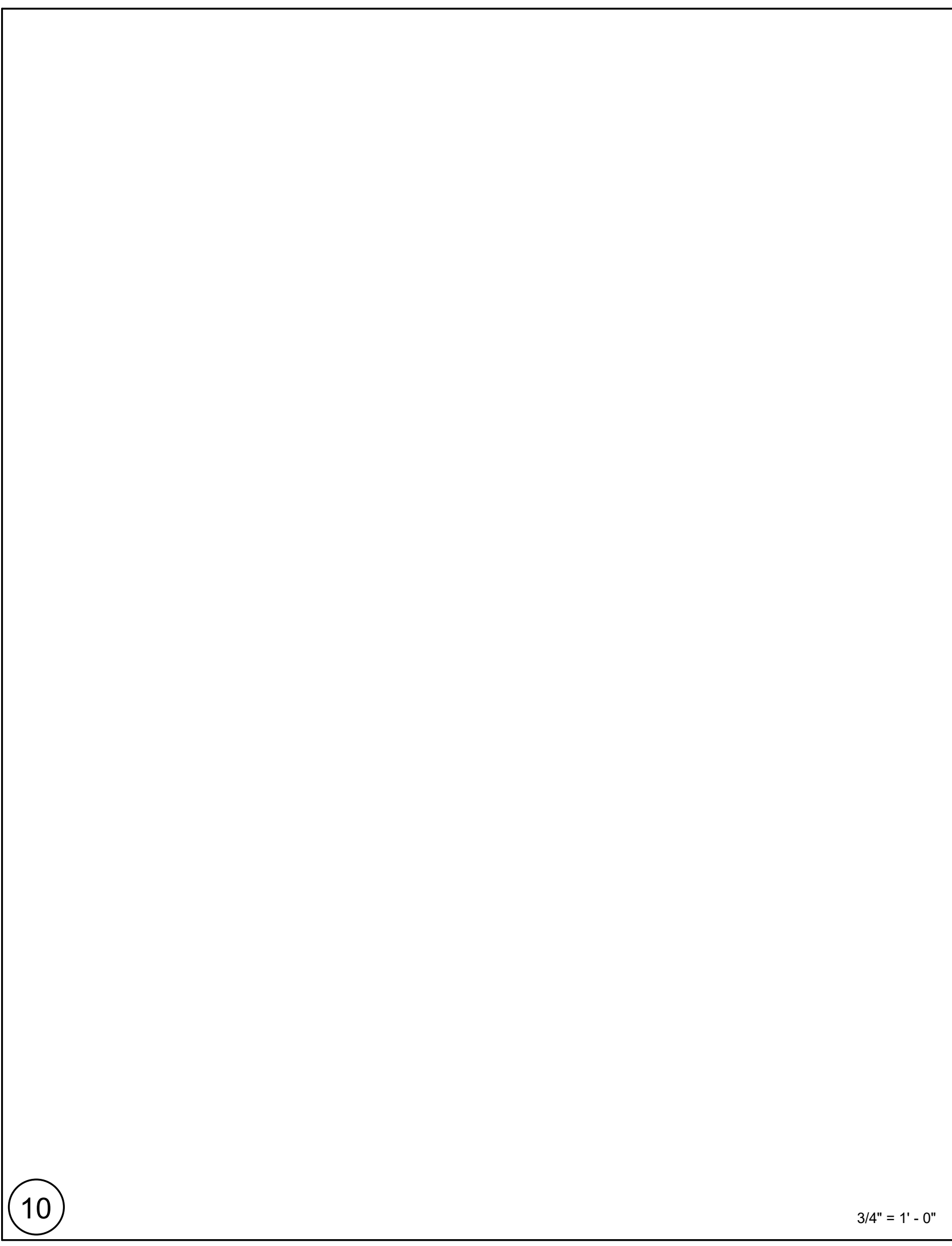
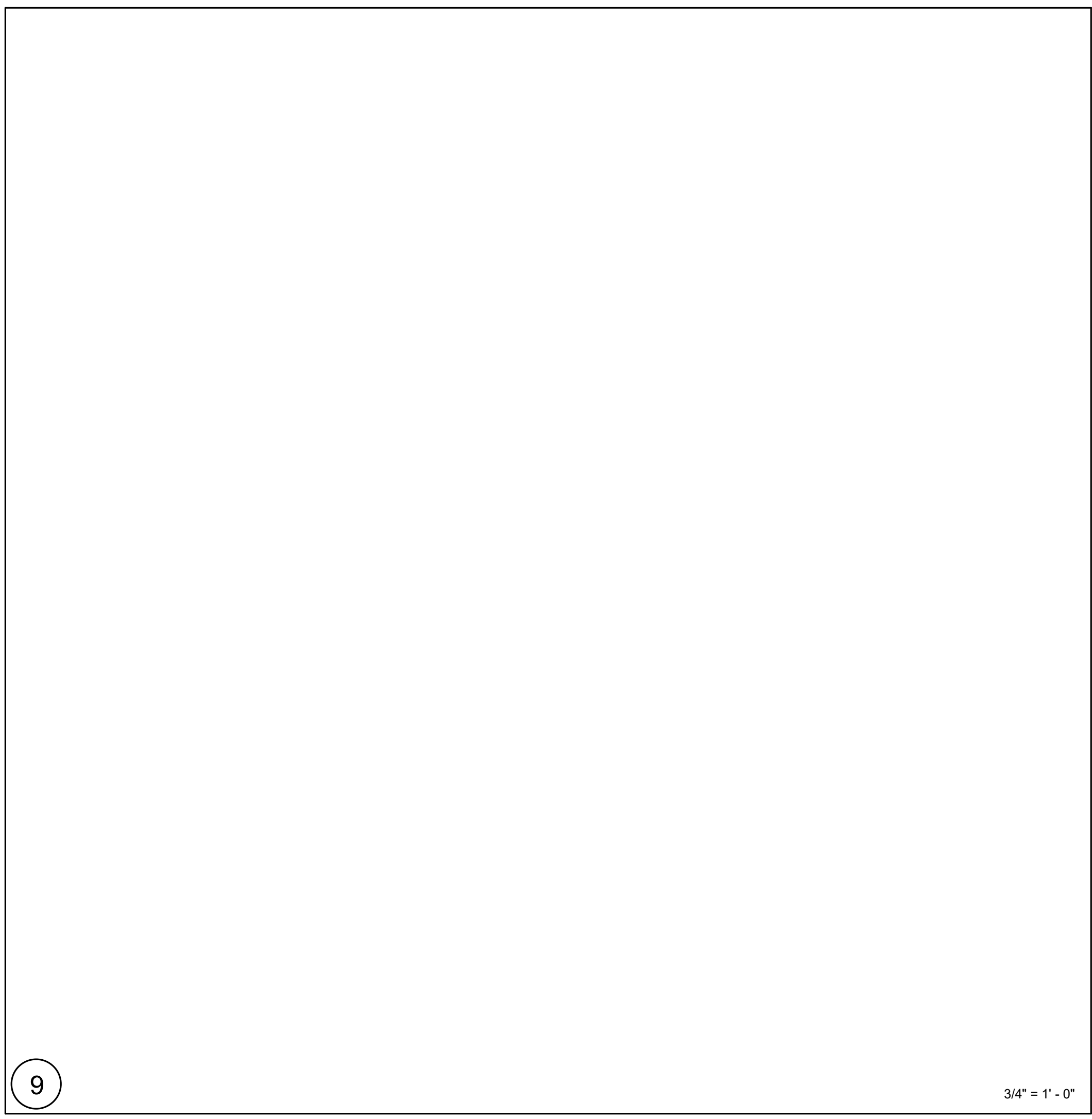
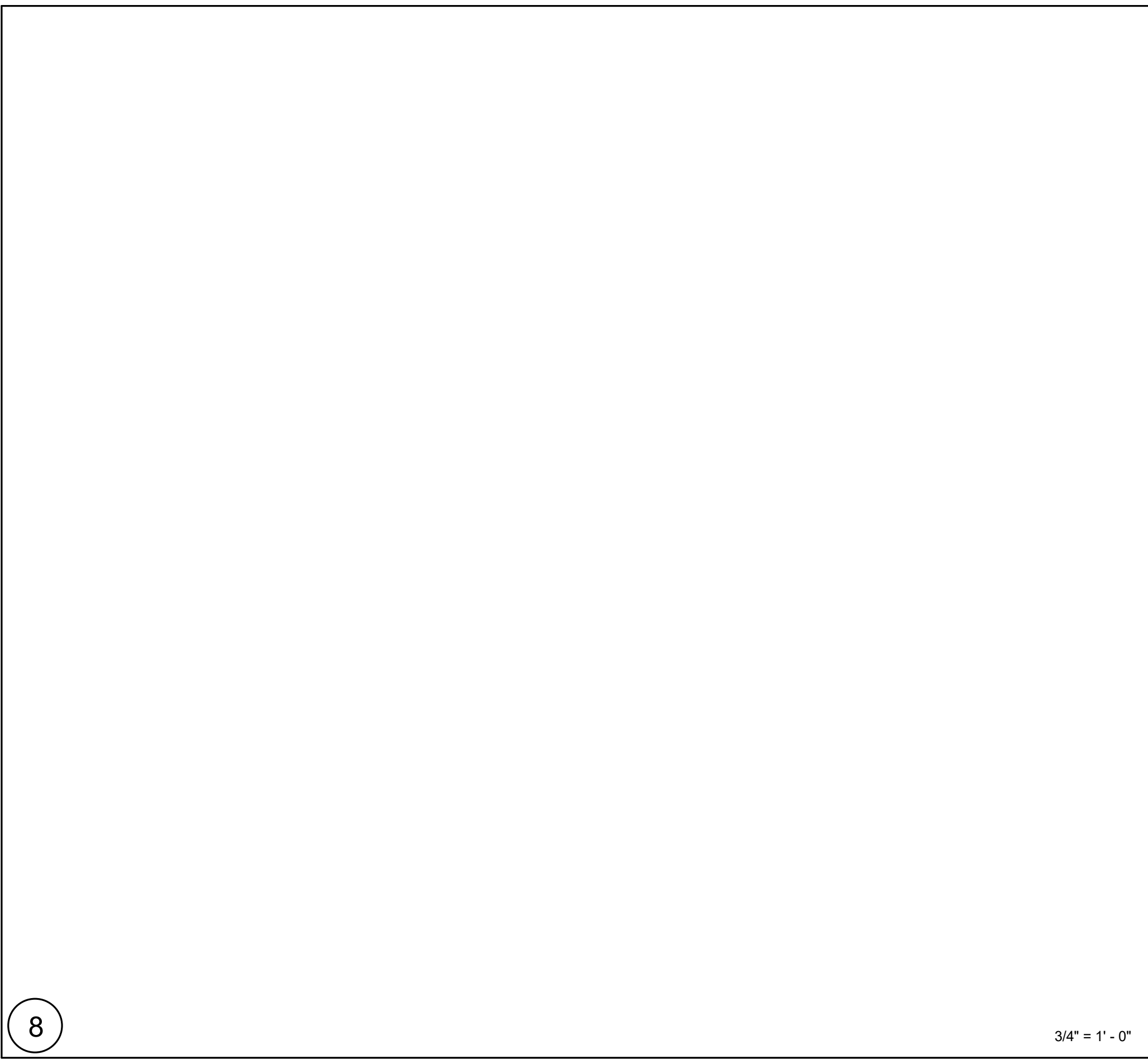
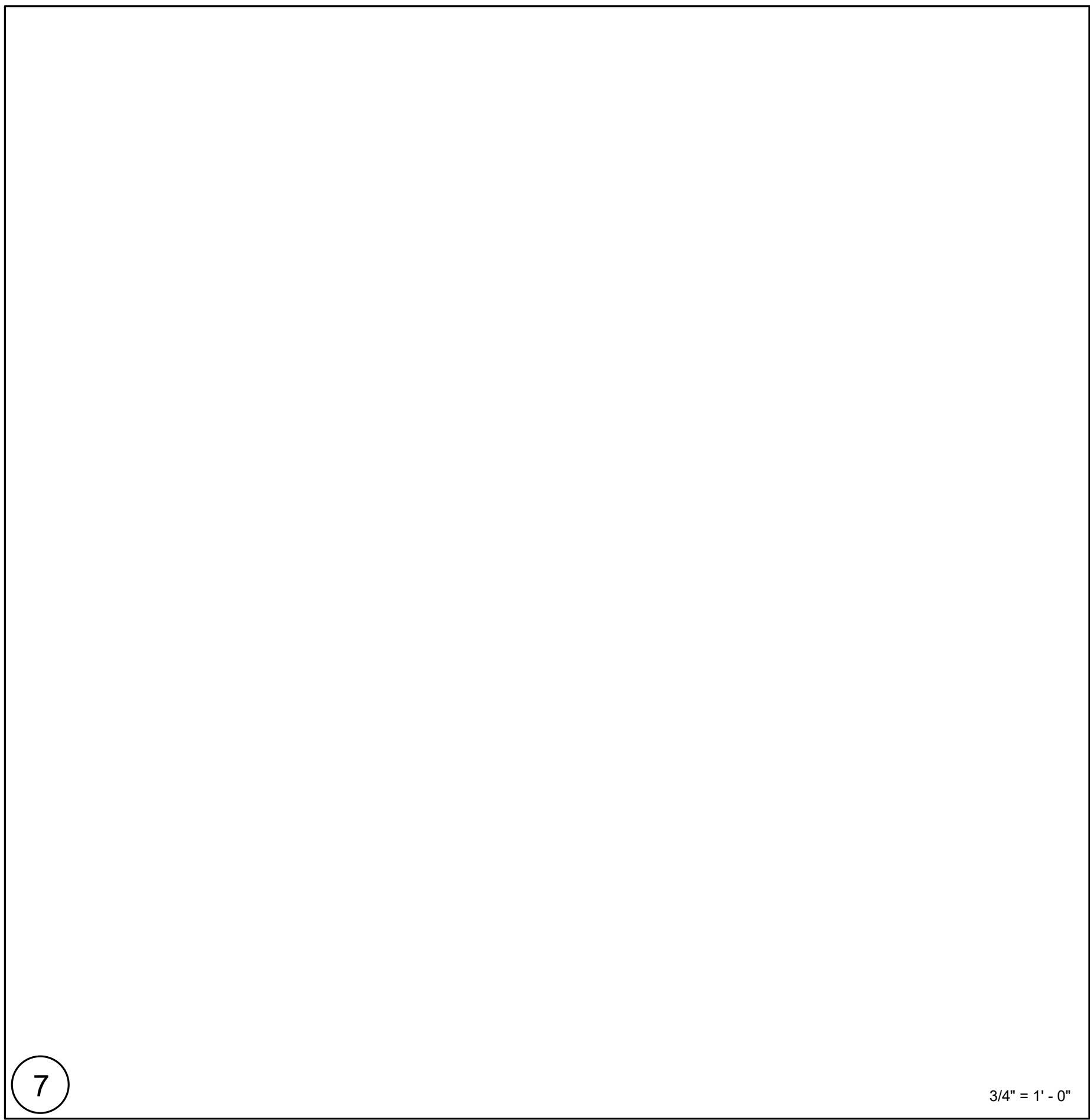
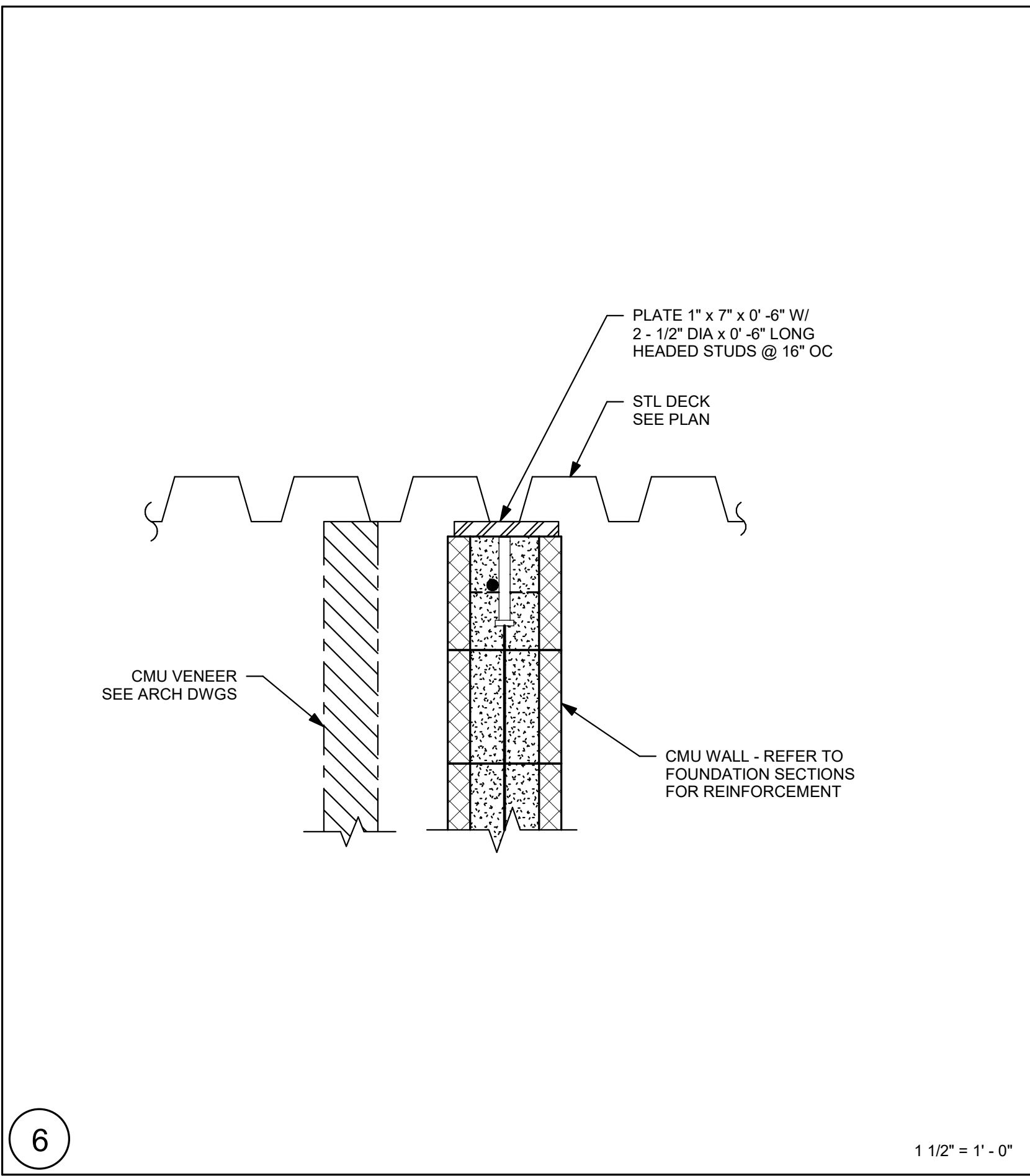
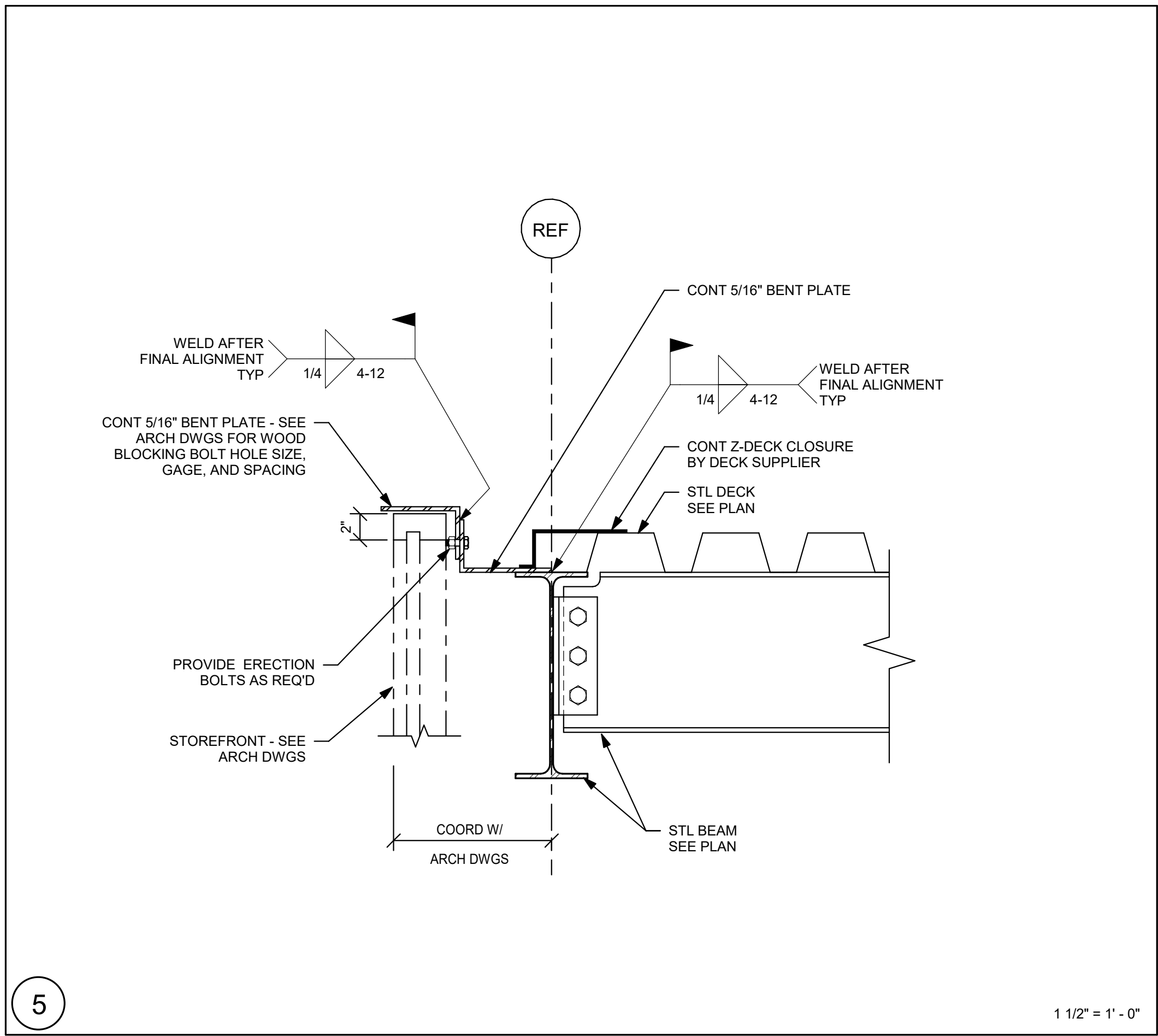
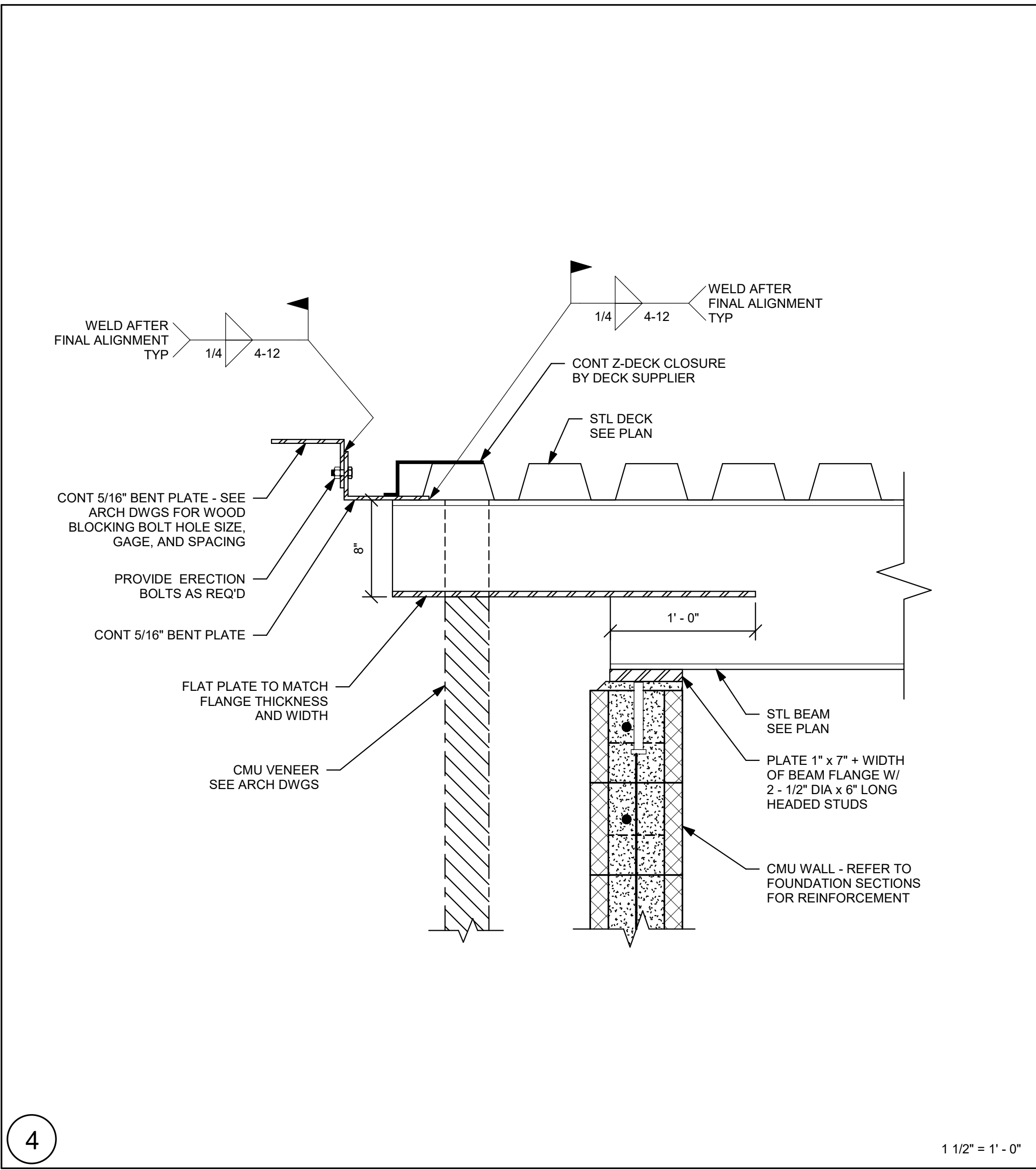
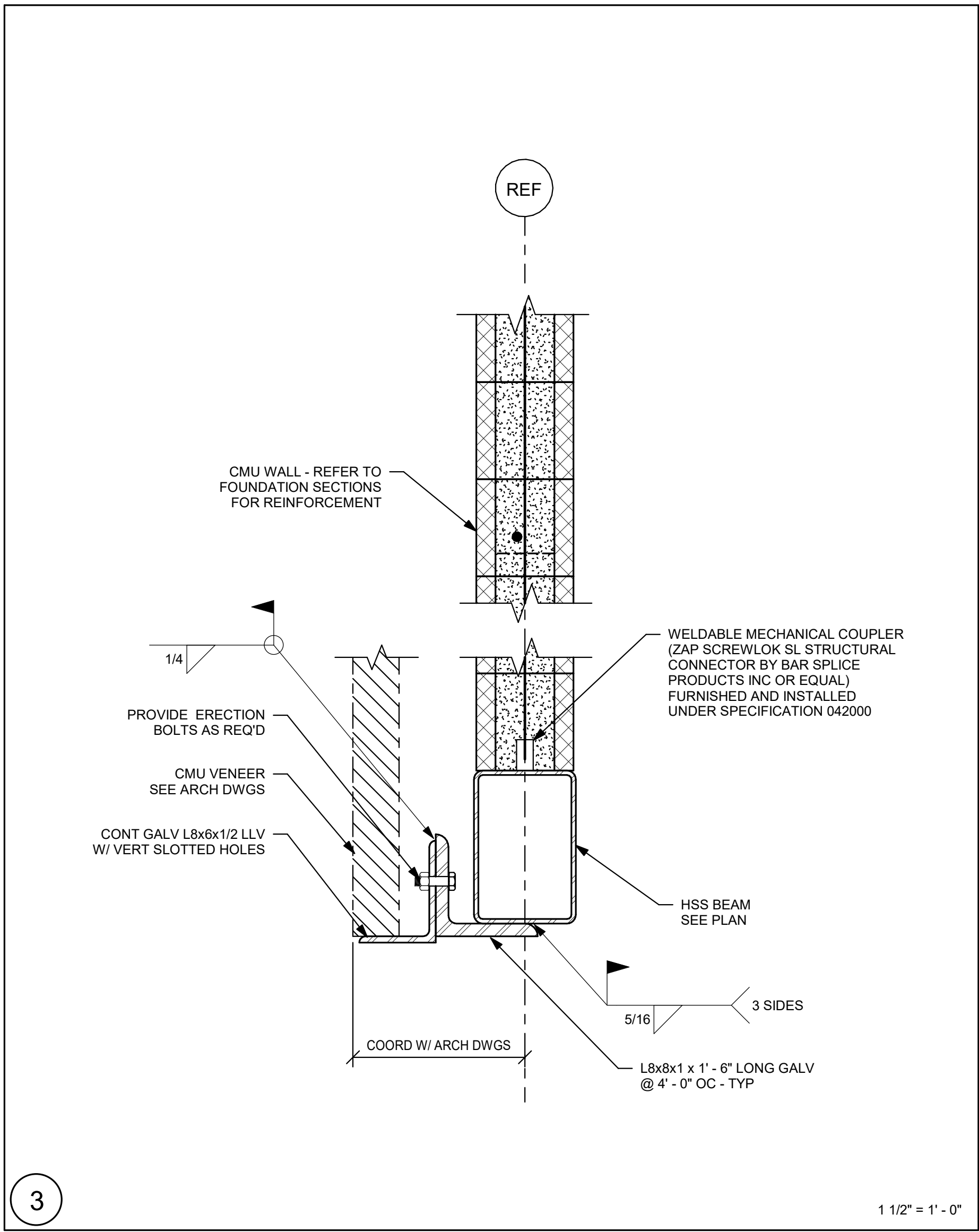
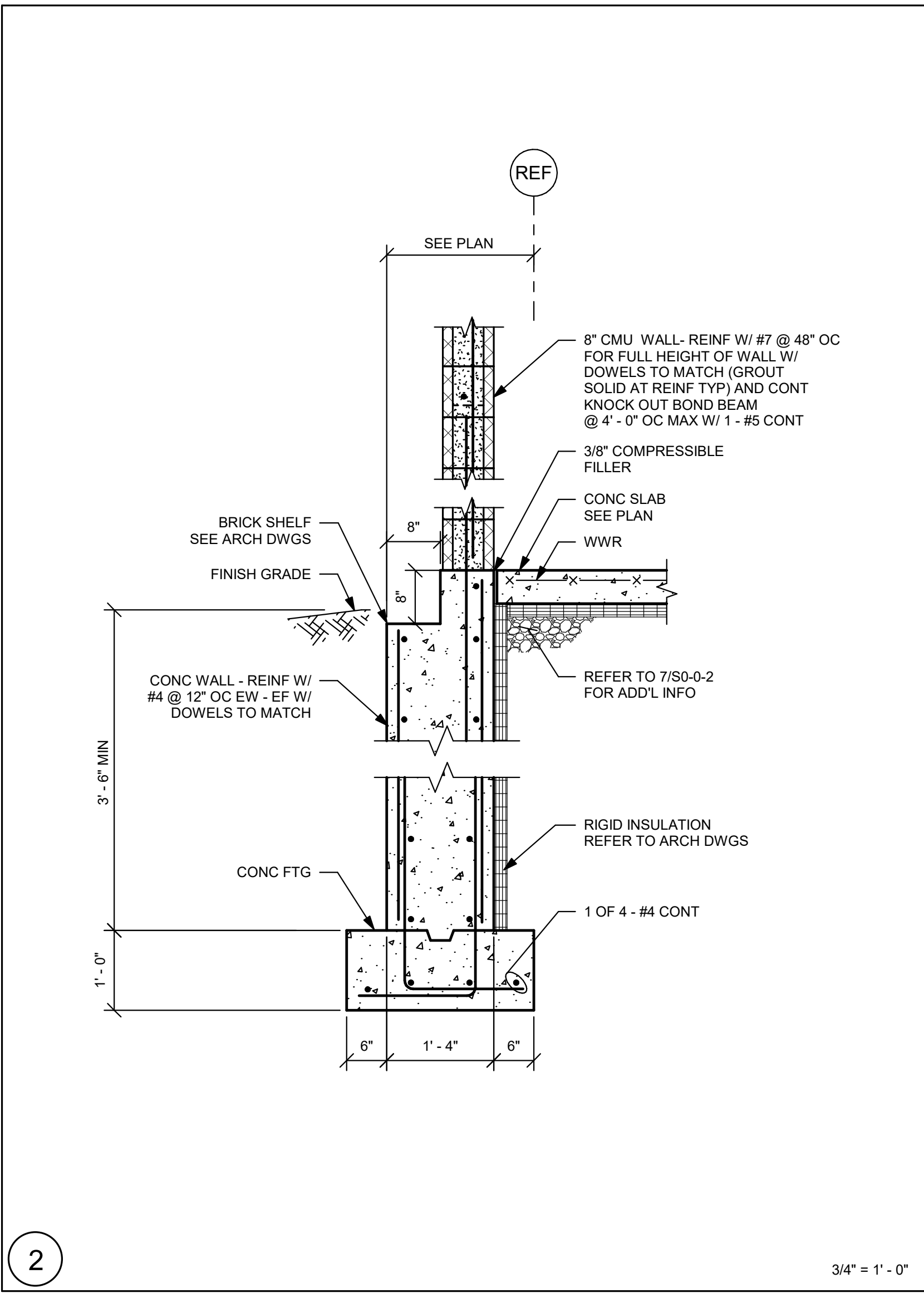
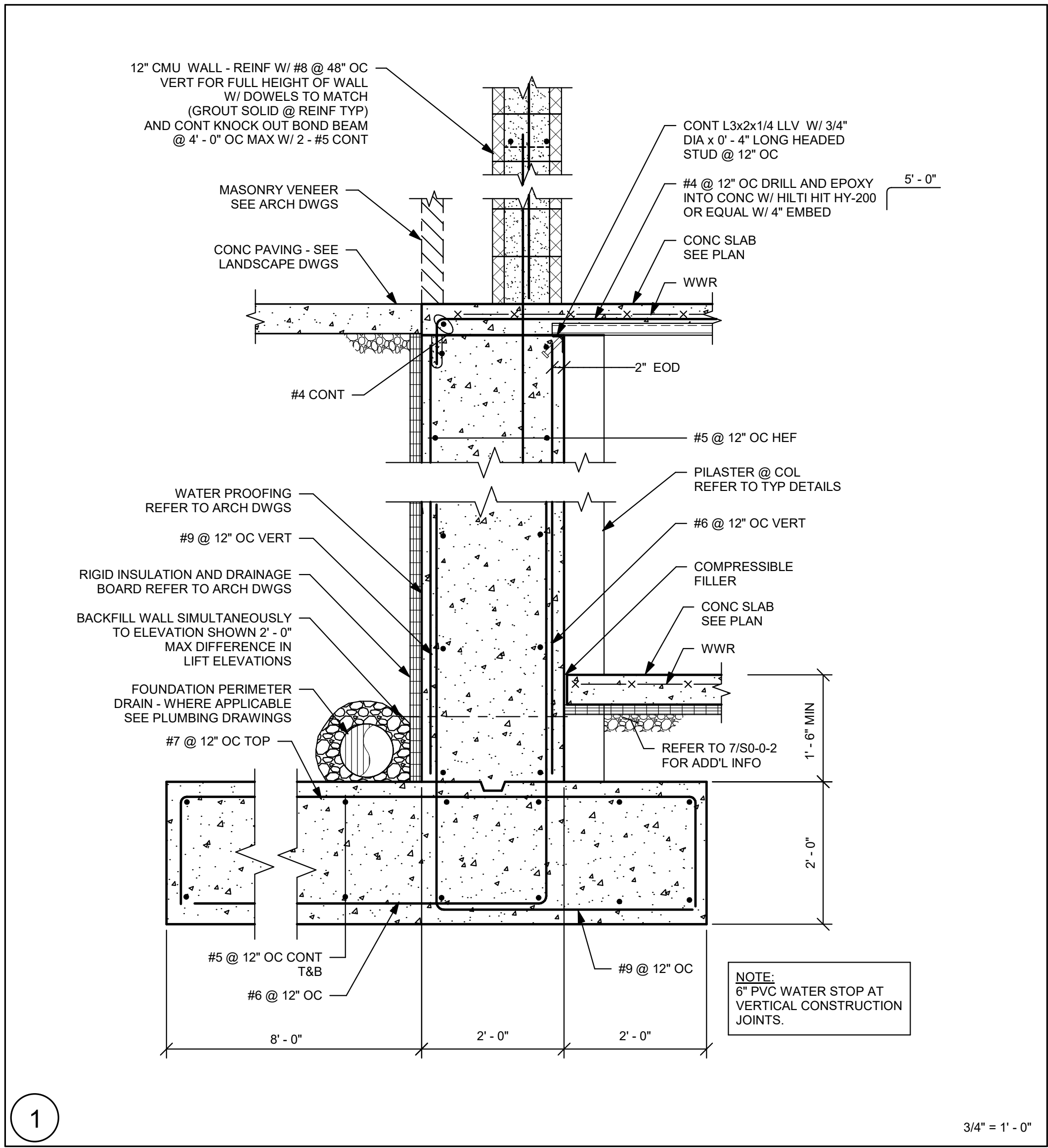
KEY PLAN



LOCKER
BUILDING PLANS

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

SL-1-1



DRA

Drummay Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT
06074

260 Charles Street
Studio 300
Waltham, MA
02453

Planning | Architecture | Interior Design

Tel: 617.954.1700
www.drainc.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.

Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

FOR REFERENCE ONLY

SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023

KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

LOCKER ROOM
BUILDING
SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

SL-2-1

DRA

Drummeys Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
260 Charles Street
Studio 300
Waltham, MA
02453
Planning | Architecture | Interior Design
Tel: 617.854.1700
www.dra.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



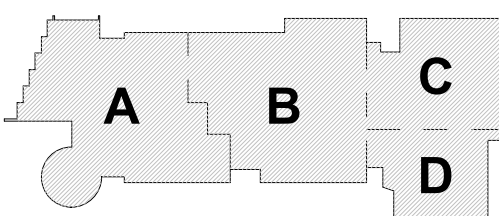
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

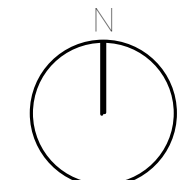
MSBA 90% CD
SUBMISSION

MAY 12, 2023

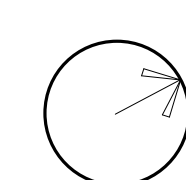


KEY PLAN

PROJECT NORTH



MAGNETIC NORTH



LOCKER ROOM
BUILDING
SHEAR WALLS

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

SL-3-1

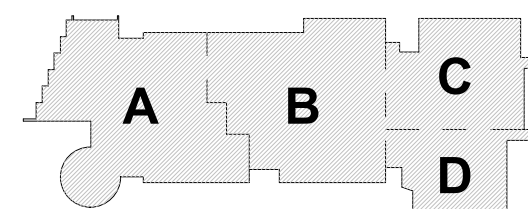
© COPYRIGHT 2021 DRUMMEYS ROSANE ANDERSON, INC.

NORTHEAST
METRO TECH100 Hemlock Rd.
Wakefield, MA 01880Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGEMSBA 90% CD
SUBMISSION

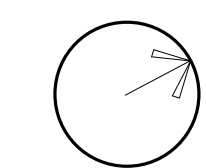
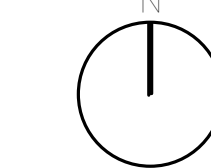
MAY 12, 2023



KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

MAINTENANCE
BUILDING PLANS

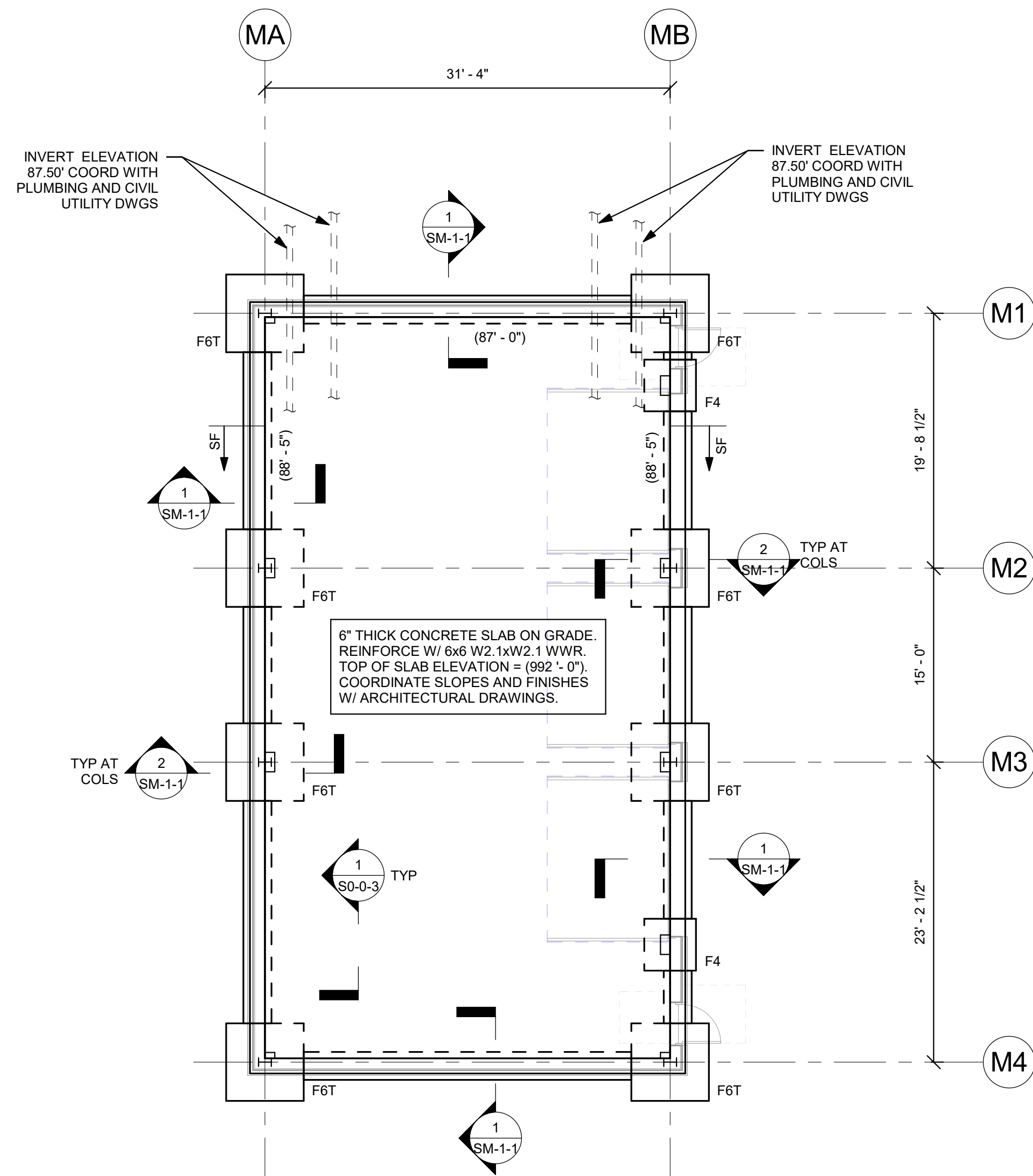
Scale: As indicated

Job No.: 20202

Drawn By: EDG

Date: MAY 12, 2023

SM-1-1



MAINTENANCE BUILDING GROUND FLOOR PLAN

FOUNDATION NOTES:

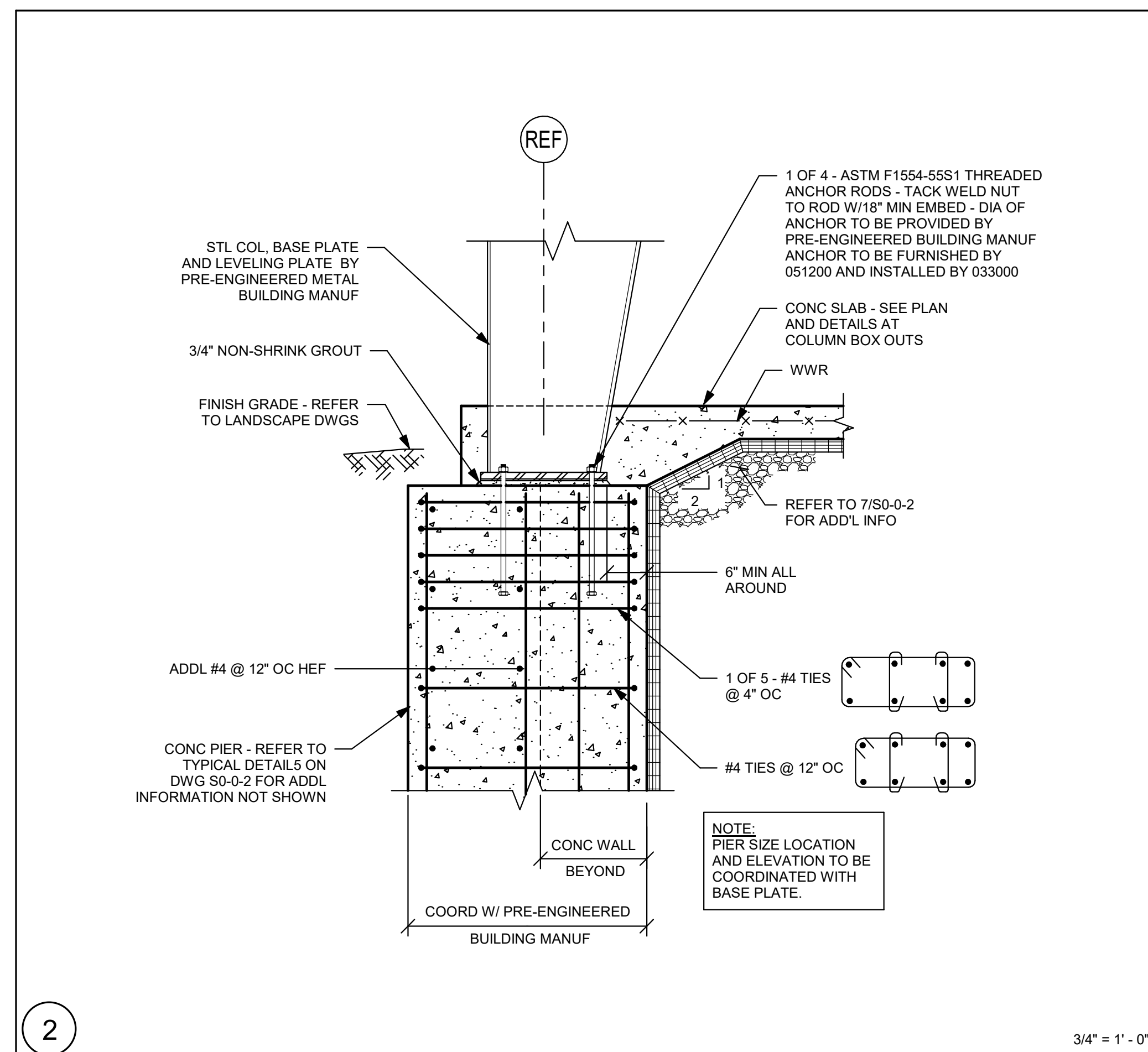
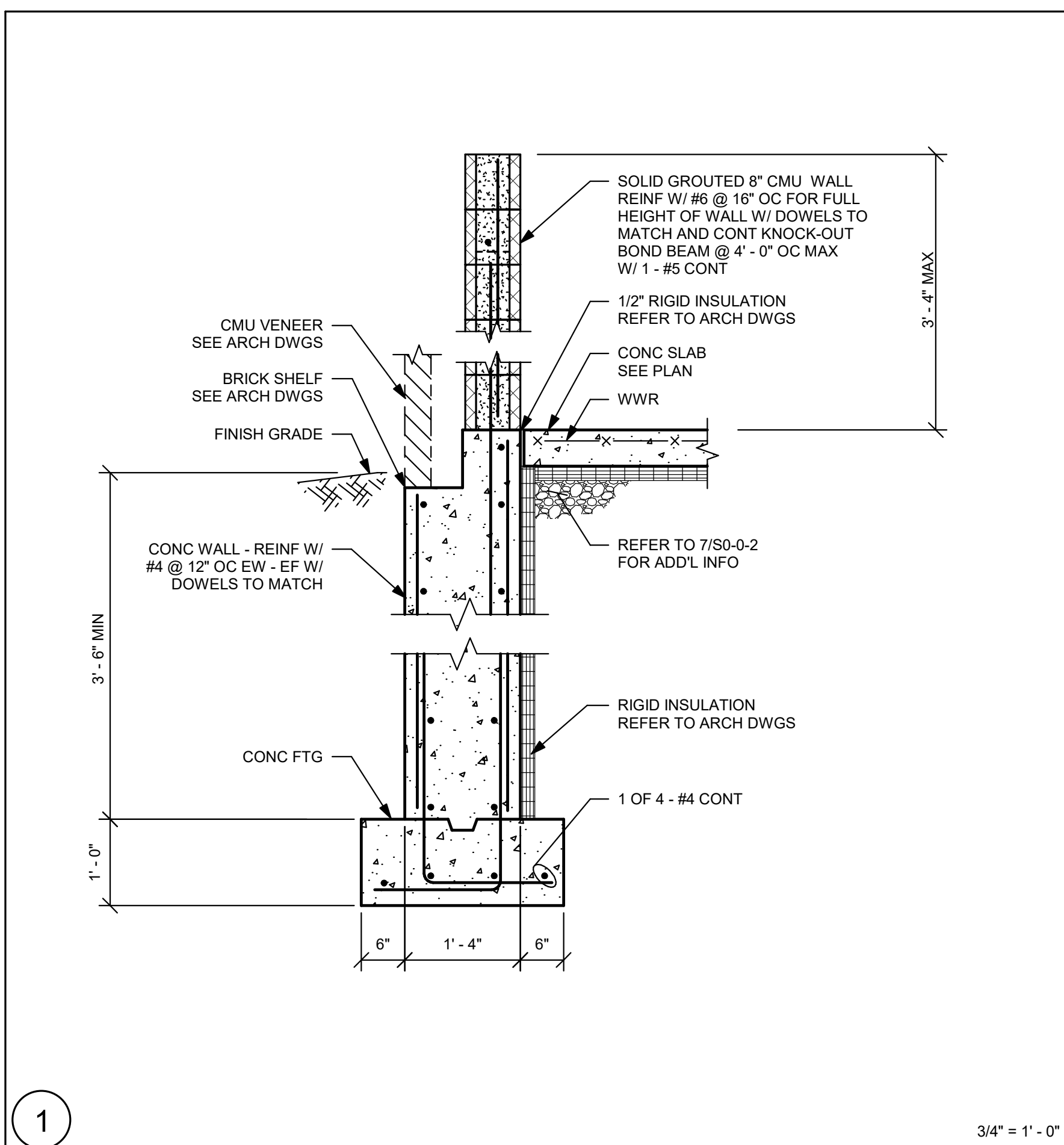
- 1) REFER TO GRADING DRAWINGS FOR PLAN AND GRADE ELEVATIONS. THE STRUCTURAL DRAWINGS USES A DATUM OF 100'-0" AT THE MAIN FLOOR, WHICH CORRESPONDS TO 163.87 MEAN SEA LEVEL, AS SHOWN ON THE SITE AND CIVIL DRAWINGS.
- 2) FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- 3) F3 ETC., INDICATES A FOOTING TYPE. FOR SIZE OF FOOTING AND REINFORCEMENT SEE SCHEDULE ON THIS DRAWING.
- 4) TOP OF FOOTING ELEVATION TO BE 3'-6" MINIMUM BELOW LOWEST ADJACENT FINISHED GRADE AT EXTERIOR CONDITIONS AND 2'-0" BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS. ALL OTHER TOP OF FOOTING ELEVATIONS ARE DENOTED AS THUS (XX'-XX") ON PLANS. CONTRACTOR TO COORDINATE AND VERIFY ALL TOP OF FOOTING ELEVATIONS WITH UNDERGROUND PLUMBING SUB-CONTRACTOR'S FIELD LAYOUT.
- 5) ALL FOOTING ELEVATIONS NOTED ON PLAN ARE SHOWN ONLY TO ASSIST IN COORDINATION. ALL FOOTING ELEVATIONS MUST BE COORDINATED WITH STRUCTURAL REQUIREMENTS, TYPICAL DETAILS, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
- 6) ALL FOOTINGS TO BE CENTERED UNDER COLUMNS UNLESS NOTED OTHERWISE.
- 7) SF → INDICATES A STEPPED FOOTING REFER TO DETAIL 1 ON DRAWING S0-0-2.
- 8) BOTTOM OF BASE PLATE ELEVATION TO BE 1'-5" MINIMUM BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS, AND 0'-11" BELOW TOP OF CONCRETE SLAB AT EXTERIOR CONDITIONS. UNLESS NOTED OTHERWISE AS (XX'-XX") REFER TO ARCHITECTURAL DRAWINGS FOR BRICK SHELF ELEVATIONS.
- 10) FOR UNDER SLAB DRAINAGE AND WALL DRAINS, COORDINATE WITH ARCHITECTURAL, STRUCTURAL, CIVIL, AND PLUMBING DRAWINGS.
- 11) → INDICATES A DEPRESSED SLAB ON GRADE. REFER TO DETAILS 6 AND 7 ON DRAWING S0-0-2 COORDINATE ALL SLAB DEPRESSIONS WITH REQUIREMENTS ON ARCHITECTURAL DRAWINGS.
- 12) FOR TYPICAL EXTERIOR DOOR DETAIL REFER TO DETAIL 6 ON DRAWING S0-0-3 AND RELEVANT SECTIONS.
- 13) → OR → 3 ON DRAWING S0-0-4 FOR REINFORCEMENT AND DETAIL 4 ON DRAWING S0-0-6 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 14) FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- 15) □ INDICATES CONCRETE PIER REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0-2.
- 16) ≡ ≡ ≡ INDICATES UNDERGROUND UTILITY LINES PLUMBING THROUGH CONCRETE FOUNDATION WALL TYPICAL. COORDINATE FOOTING ELEVATION WITH PIPE INVERTS AND TYPICAL STRUCTURAL DETAILS.

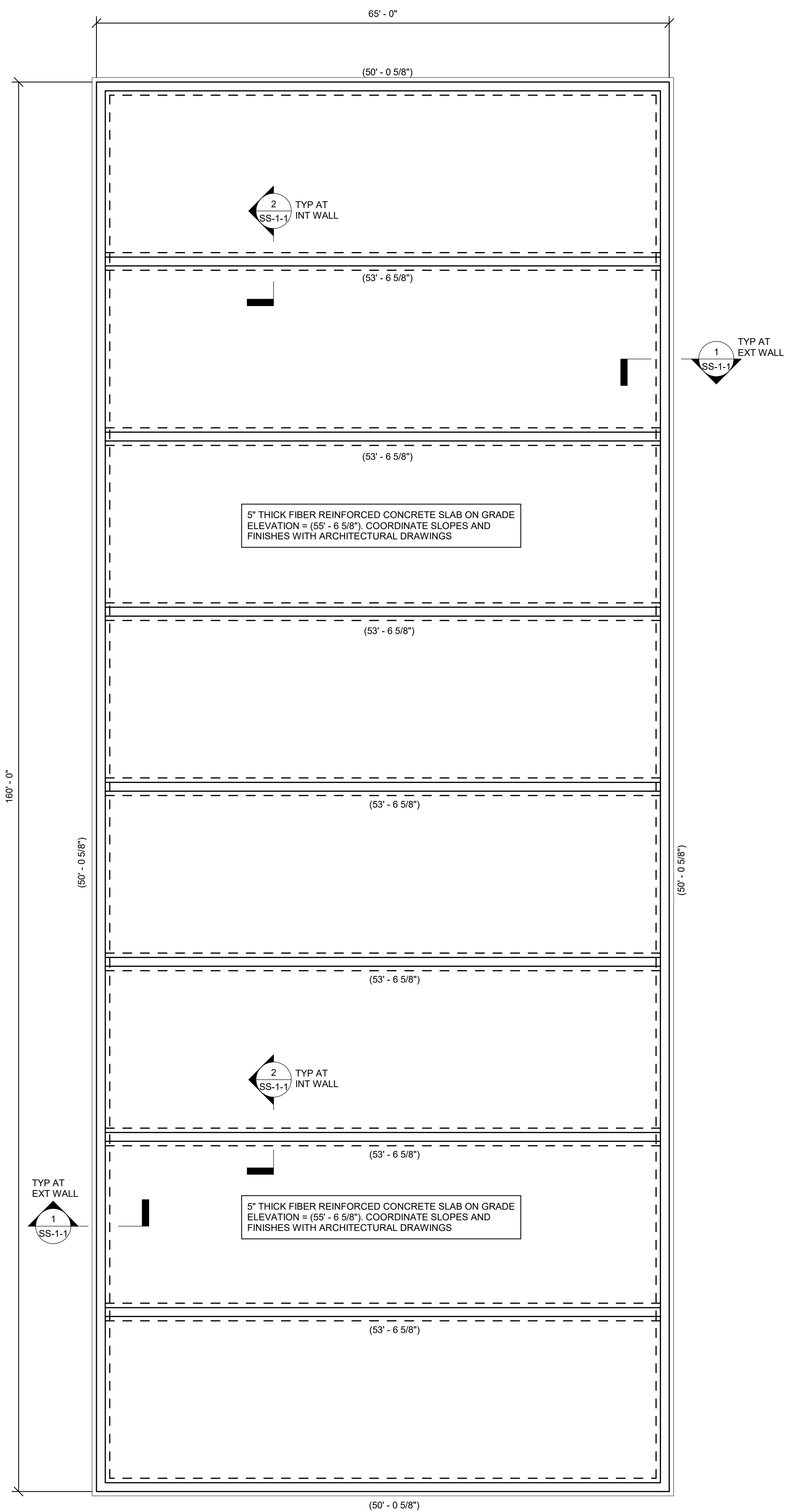
FOOTING SCHEDULE

DESIGN SOIL BEARING CAPACITY = 2 TSF

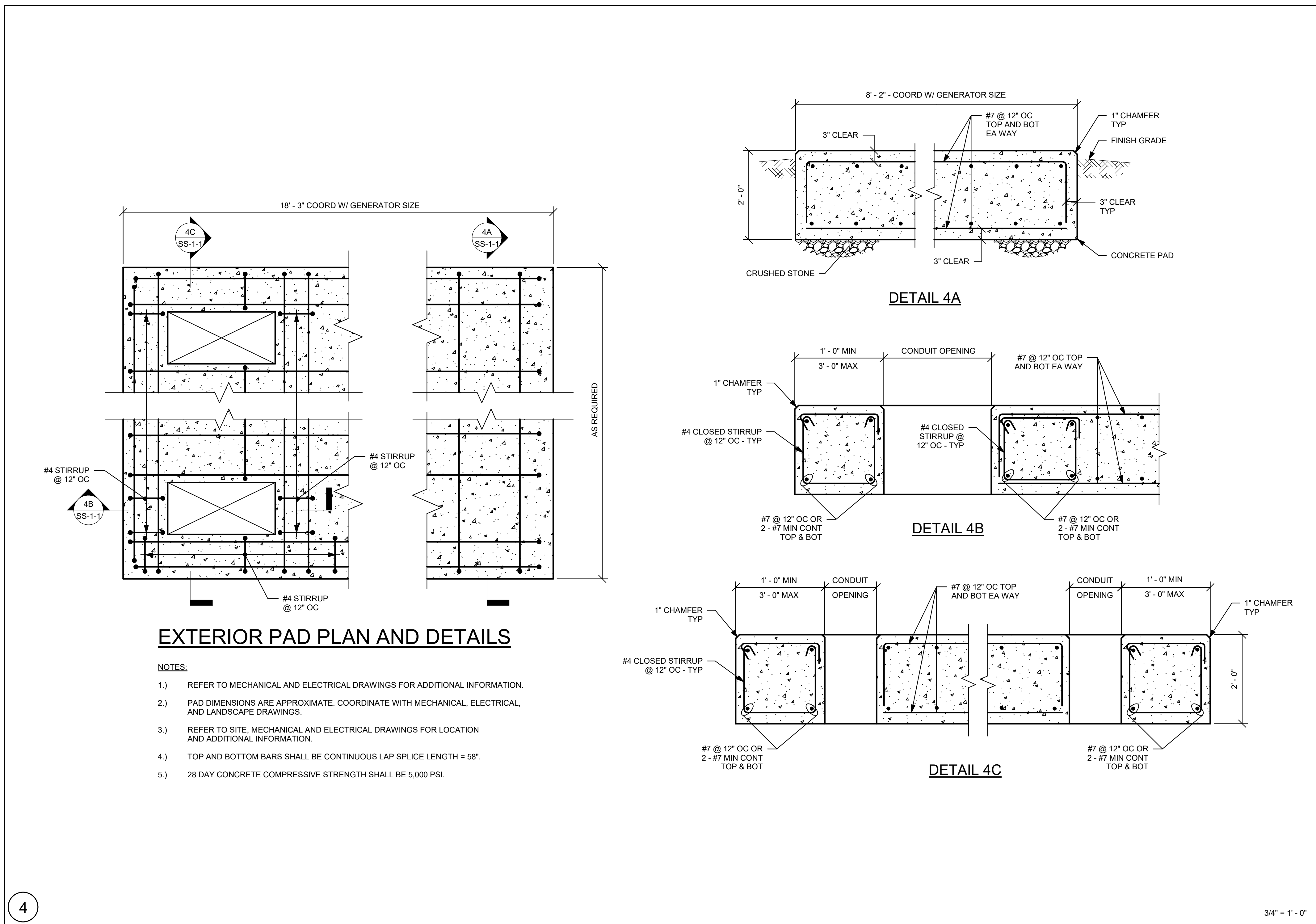
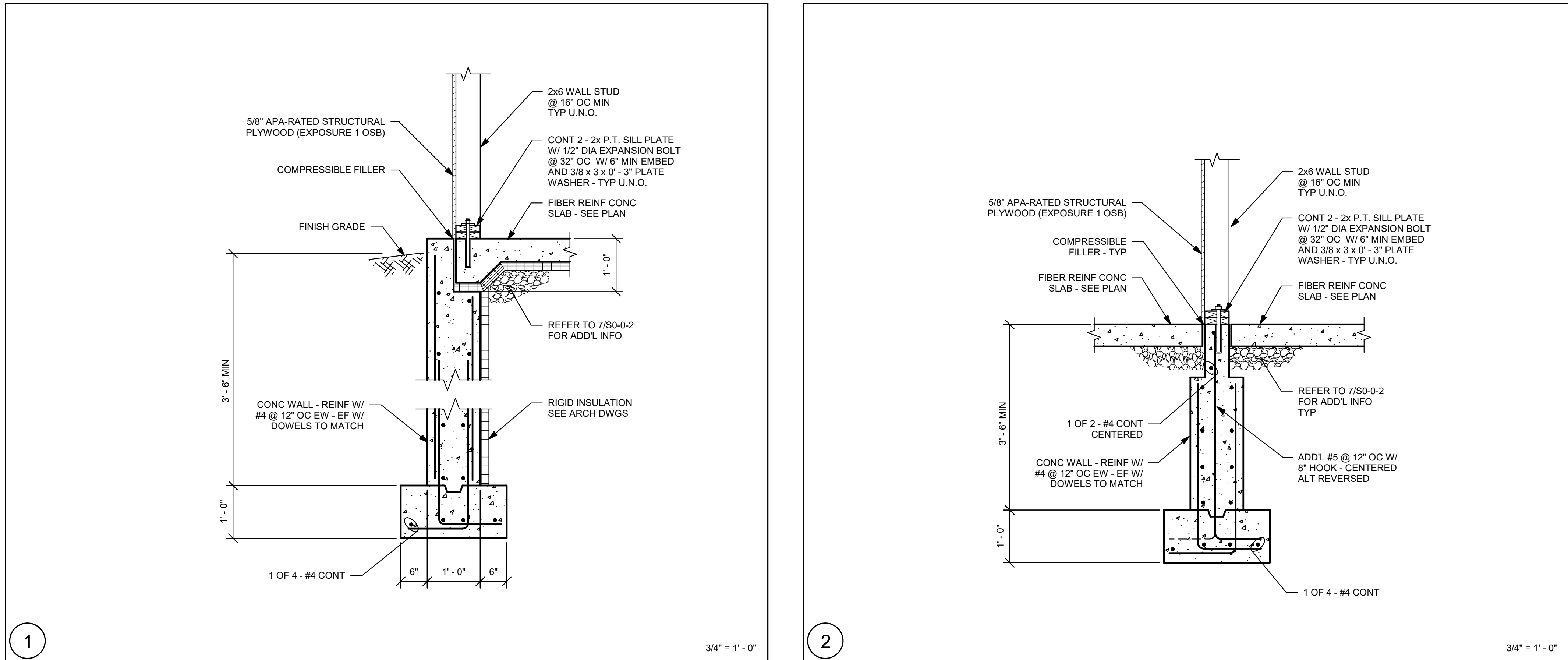
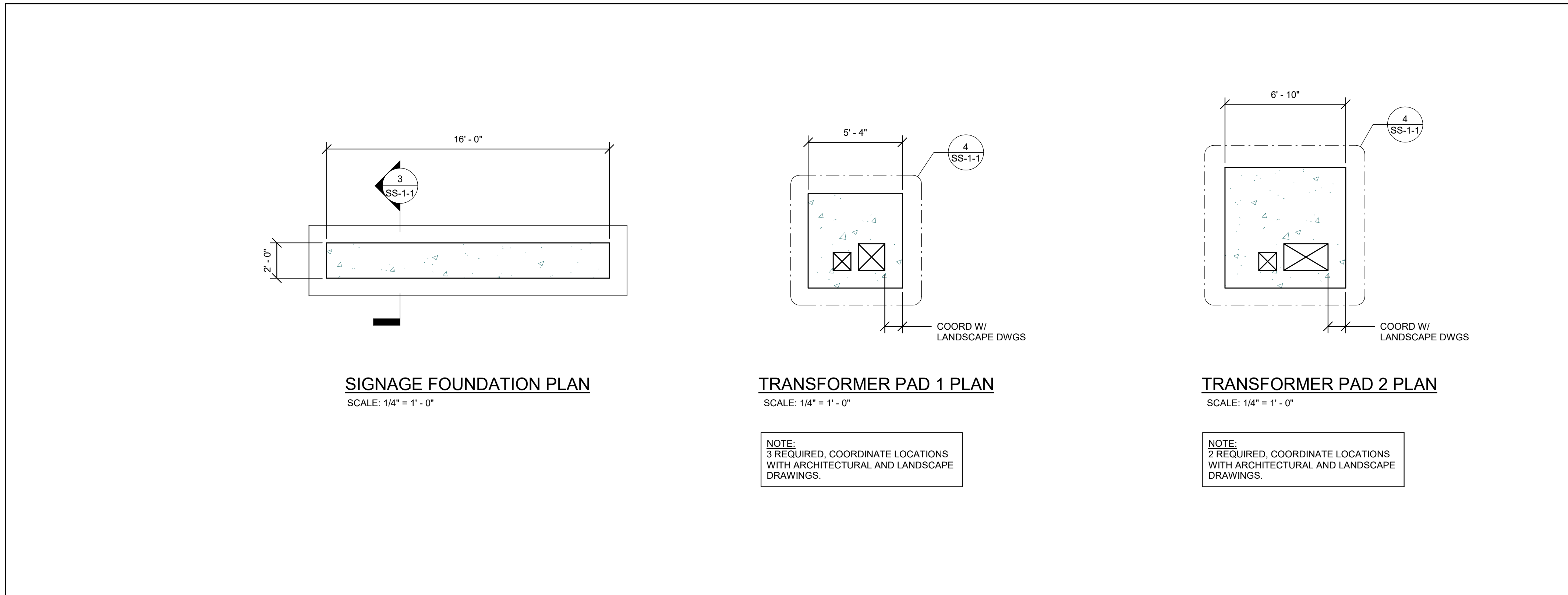
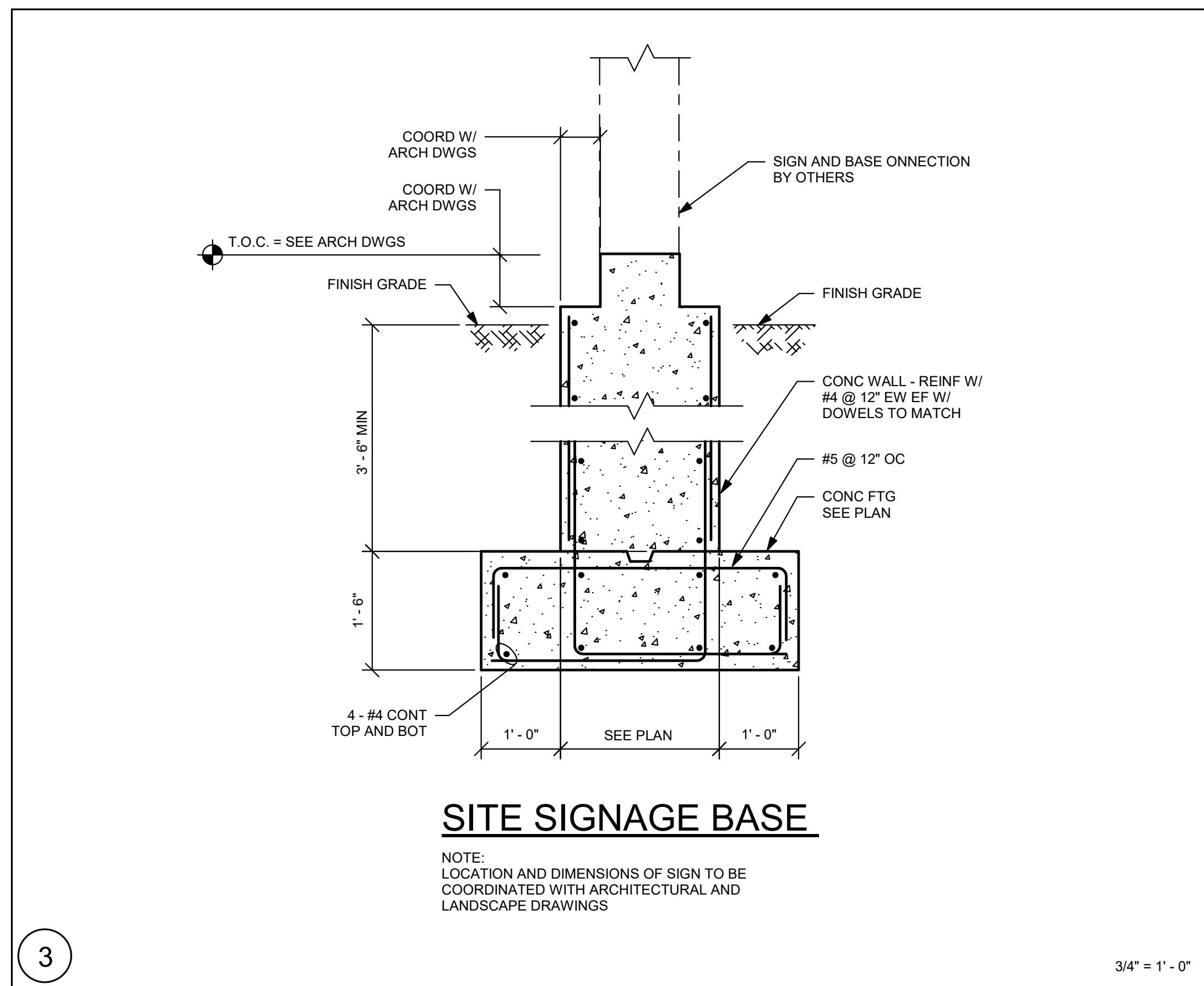
MARK	SIZE	REINFORCEMENT
F4	4'-0" x 4'-0" x 1'-6"	6 - #5 BOT EA WAY
F6T	6'-0" x 6'-0" x 2'-0"	7 - #6 BOT EA WAY

T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING





STORAGE BUILDING FOUNDATION PLAN



DRA

Drummay Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074
Tel: 617.854.1700
www.dra.com

260 Charles Street
Studio 300
Waltham, MA 02453
Tel: 617.854.1700
www.dra.com

Planning | Architecture | Interior Design

NORTHEAST
METRO TECH

100 Hemlock Rd,
Wakefield, MA 01880

EDG

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

REVISION LIST

FOR REFERENCE ONLY
SCOPE OF WORK ON THIS DRAWING
IS A PART OF EARLY STRUCTURAL
BID PACKAGE

MSBA 90% CD
SUBMISSION

MAY 12, 2023

A B C D

KEY PLAN

PROJECT NORTH
MAGNETIC NORTH

MAINTENANCE
SITE BUILDING
FOUNDATION
PLANS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: MAY 12, 2023

SS-1-1