

GENERAL NOTES:

1. THE STRUCTURAL DRAWINGS MUST BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS, AND THE SPECIFICATIONS. THE CONTRACTOR MUST VERIFY THE REQUIREMENTS OF OTHER TRADES AS TO SLEEVES, CHASES, HANGERS, INSERTS, ANCHORS, HOLES, AND ADDITIONAL ITEMS TO BE PLACED OR SET IN THE STRUCTURAL WORK.
2. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF THE NORTH CAROLINA STATE BUILDING CODE, 2018 EDITION.
3. THE WORK OUTLINED IN THE BUILDING CODE IS SUBJECT TO SPECIAL INSPECTIONS AS DESCRIBED IN THE TECHNICAL SPECIFICATIONS AND BUILDING CODE.
4. THE CONTRACTOR MUST PROVIDE TEMPORARY SHORING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL PERMANENT SUPPORTS AND LATERAL BRACING ARE IN PLACE.
5. THE CONTRACTOR MUST FIELD VERIFY THE DIMENSIONS, ELEVATIONS, AND OTHER REQUIREMENTS NECESSARY FOR THE PROPER CONSTRUCTION AND ALIGNMENT OF THE NEW PORTIONS OF THE STRUCTURE TO THE EXISTING. ANY DIMENSIONS SHOWN OF EXISTING STRUCTURES MUST BE CONSIDERED AS APPROXIMATE AND ADEQUATE FOR BIDDING PURPOSES ONLY. THE CONTRACTOR MUST MAKE ALL MEASUREMENTS NECESSARY FOR THE FABRICATION AND ERECTION OF STRUCTURAL MEMBERS. DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER.
6. DISCREPANCIES BETWEEN DRAWINGS, BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, OR WITHIN THE SPECIFICATIONS, MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER DURING THE BIDDING PROCESS IN TIME TO PERMIT CLARIFICATION BY ADDENDUM. IF INCONSISTENCIES, DISCREPANCIES OR CONTRADICTIONS IN THE CONTRACT DOCUMENTS ARE DISCOVERED AFTER THE CLOSE OF BIDDING QUESTIONS, THE CONTRACTOR MUST BE DEEMED BY SUBMITTAL OF THEIR BID, TO HAVE BID THE MOST COSTLY AS TO LABOR, MATERIALS, DURATION, SEQUENCE AND METHOD OF CONSTRUCTION TO PROVIDE THE WORK.
7. THESE STRUCTURAL DRAWINGS ARE ISSUED ON THE DATE INDICATED FOR THE PURPOSE DESIGNATED. THESE DRAWINGS MUST NOT BE ISSUED OR RELEASED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN AUTHORIZATION OF THE STRUCTURAL ENGINEER OF RECORD.
8. DESIGN CRITERIA:

CLASSIFICATION OF BUILDING	
RISK CATEGORY	III
SUPER IMPOSED ROOF DEAD LOADS - UNIFORM:	
STANDING SEAM ROOF FINISH	2 PSF
5" FIBERBOARD INSULATION	4 PSF
ROOF MEMBRANE	1 1/2 PSF
METAL DECK	3 PSF
ACOUSTICAL TILE CEILING & SUPPORTS	3 PSF
SPRINKLERS	3 PSF
DUCTS, LIGHTS, MISC. MECHANICAL	3 PSF
SUPER IMPOSED FLOOR DEAD LOADS - UNIFORM:	
FLOOR FINISH	2 PSF
ACOUSTICAL TILE CEILING & SUPPORTS	3 PSF
SPRINKLERS	3 PSF
DUCTS, LIGHTS, MISC. MECHANICAL	3 PSF
COLLATERAL	2 PSF
METAL DECK	3 PSF
LIVE LOADS - UNIFORM:	
SLAB ON GRADE	100 PSF
OFFICE	80 PSF
ROOF	20 PSF
CLASSROOMS	50 PSF
OFFICE	50 PSF
PARTITION ALLOWANCE	15 PSF
LIGHT STORAGE	125 PSF
MECHANICAL ROOM	150 PSF
MECHANICAL MEZZANINE	150 PSF
ELEVATOR MACHINE ROOM	150 PSF
CORRIDORS (FIRST FLOOR)	100 PSF
CORRIDORS (SERVING PUBLIC SPACES)	100 PSF
CORRIDORS (ABOVE FIRST FLOOR)	80 PSF
STAIRWAYS	100 PSF

LIVE LOAD REDUCTION OF THE UNIFORMLY DISTRIBUTED FLOOR LIVE LOADS HAS BEEN UTILIZED.

LIVE LOADS - CONCENTRATED:

FLOORS	1,000#
ROOFS	300#
GRATINGS	300#

UNLESS OTHERWISE NOTED, CONCENTRATED LOADS ARE APPLIED UNIFORMLY OVER 2'-6" x 2'-6" AREA.

SPECIAL LOADS:

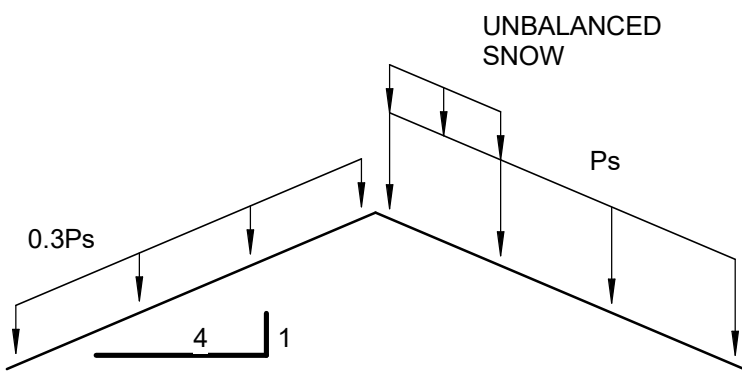
MAXIMUM CONSTRUCTION LOADS ON STEEL DECK . . . 20 PSF

RAIN LOADS:

15 MINUTE RAIN INTENSITY	7.3 IN/HR
60 MINUTE RAIN INTENSITY	4 IN/HR

WHERE ROOFS DO NOT SHED WATER BY MEANS OF GABLE ROOFS TO THE PERIMETER OF THE BUILDING ROOFS MUST PROVIDE PRIMARY AND SECONDARY DRAINAGE TO PROVIDE ADEQUATE DRAINAGE THAT WILL NOT CAUSE PONDING ON THE ROOF STRUCTURE. ROOF IS ONLY DESIGNED FOR RESPECTIVE DEAD AND LIVE LOADS. RAIN LOADS ARE TO BE DRAINED WITH PROPER DRAINAGE FOR THE ABOVE RAIN INTENSITIES.

SNOW LOADS:	
GROUND SNOW LOAD (Pg)	15 PSF
IMPORTANCE FACTOR (Is)	1.1
THERMAL FACTOR (Ct)	1.1
EXPOSURE FACTOR (Ce)	1.0
FLAT ROOF LOAD (Pf)	12.7 PSF
ROOF SLOPE FACTOR (Cs)	0.9
SLOPED SLOPED ROOF LOAD (Ps)	11.4 PSF
MINIMUM SNOW LOAD (Pm)	16.5 PSF
UNBALANCED SNOW LOAD	28 PSF
UNBALANCED SNOW WIDTH	6 FT
DRIFT SURCHARGE (Pd)	REF TABL



SNOW DRIFT SCHEDULE		
Pd (#) W	DRIFT VALUES	
	W	Pd
①	5 FT	19 PSF
②	11 FT	43 PSF
③	4 FT	16 PSF
④	6 FT	24 PSF

NOTE: SNOW DRIFT LOADS ARE IN ADDITION TO FLAT ROOF LOADS.

GENERAL NOTES: (CONT'D)

SEISMIC LOADS:	
SITE CLASSIFICATION	D
SEISMIC DESIGN CATEGORY	B
IMPORTANCE FACTOR (IE)	1.25
SPECTRAL RESPONSE ACCELERATIONS:	
Ss	0.116
Sms	0.186
S1	0.124
Sd1	0.094
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE
LATERAL FORCE RESISTING SYSTEM	INTERMEDIATE REINFORCED MASONRY SHEAR WALLS
RESPONSE MODIFICATION COEFFICIENT (R)	3.5
SEISMIC RESPONSE COEFFICIENT (Cs)	0.065
ULTIMATE SEISMIC BASE SHEAR (V)	130 KIPS
LATERAL DESIGN CONTROL	
CONTROLLING LATERAL LOADS	SEISMIC
WIND LOADS:	
BASIC WIND SPEED (V)	122 MPH
NOMINAL DESIGN (VASD) WIND SPEED	94 MPH
EXPOSURE CATEGORY	B
INTERNAL PRESSURE COEFFICIENT	-0.18
COMPONENT AND CLADDING PRESSURES:	
WALLS, ZONE 5 (10 SF)	38 PSF
ROOF, ZONE 3 (10 SF)	64 PSF
ULTIMATE WIND BASE SHEARS (FOR MWFRS):	
Vx	127 KIPS
Vy	85 KIPS

FOUNDATION NOTES:

1. FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING REPORT PREPARED BY BUILDING AND EARTH GEOTECHNICAL ENGINEERS, DATED DECEMBER 11, 2023.
2. FOUNDATIONS HAVE BEEN DESIGNED FOR A NET ALLOWABLE SOIL BEARING PRESSURE OF 3,000 PSF.
3. PRIOR TO PLACING FOUNDATION CONCRETE, ALL FOUNDATION EXCAVATIONS MUST BE INSPECTED BY THE OWNER'S GEOTECHNICAL TESTING AGENCY SPECIAL INSPECTOR TO EXPLORE THE EXTENT OF LOOSE, SOFT, EXPANSIVE, OR OTHERWISE UNSATISFACTORY SOIL MATERIAL AND TO VERIFY DESIGN BEARING PRESSURE. DIRECTION FOR CORRECTIVE ACTION WILL BE PROVIDED BY THE OWNER'S GEOTECHNICAL TESTING AGENCY SPECIAL INSPECTOR WHERE UNSATISFACTORY SOILS ARE PRESENT.
4. NO UNBALANCED BACKFILLING MUST BE DONE AGAINST MASONRY OR CONCRETE WALLS UNLESS WALLS ARE SECURELY BRACED AGAINST OVERTURNING, EITHER BY TEMPORARY CONSTRUCTION BRACING OR BY PERMANENT CONSTRUCTION UNLESS OTHERWISE INDICATED.
5. CONTROL GROUNDWATER AND SURFACE RUNOFF THROUGHOUT THE CONSTRUCTION PROCESS. INUNDATION AND LONG TERM EXPOSURE OF BEARING SURFACES WHICH RESULT IN DETERIORATION OF BEARING MUST BE PREVENTED.
6. BACKFILL AT RETAINING WALLS AND BASEMENT WALLS SHALL CONSIST OF CLEAN GRAVEL OR GRAVEL-SAND MIXTURE. FOLLOW ALL GEOTECHNICAL RECOMMENDATIONS FOR BACKFILL.

CAST-IN-PLACE CONCRETE NOTES:

1. CONCRETE MUST BE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301 AND 318.
2. CONCRETE MUST BE NORMAL WEIGHT AND MUST OBTAIN 28 DAY COMPRESSIVE STRENGTHS AS FOLLOWS:
- | | |
|--------------------------------------|-----------|
| A. SLAB-ON-GRADE | 3,500 PSI |
| B. SLABS ON METAL DECK | 3,500 PSI |
| C. COLUMNS AND WALLS | 4,000 PSI |
| D. CONCRETE NOT OTHERWISE NOTED | 3,000 PSI |
| E. SITE AND BUILDING RETAINING WALLS | 4,000 PSI |
| F. FOUNDATIONS | 3,000 PSI |
3. REINFORCING MATERIALS MUST BE AS FOLLOWS:
- A. REINFORCING BARS - ASTM A615, GRADE 60, DEFORMED.
- B. WELDED REINFORCING BARS - ASTM A706, GRADE 60.
- C. WELDED WIRE REINFORCEMENT - ASTM A1064, WELDED STEEL WIRE REINFORCEMENT; PROVIDE SHEET TYPE, ROLL TYPE IS NOT ACCEPTABLE.
4. ALL REINFORCING STEEL AND EMBEDDED ITEMS SUCH AS ANCHOR RODS AND WELD PLATES MUST BE ACCURATELY PLACED AND ADEQUATELY TIED AND SUPPORTED BEFORE CONCRETE IS PLACED TO PREVENT DISPLACEMENT BEYOND PERMITTED TOLERANCES.
5. CONCRETE COVER TO REINFORCING STEEL MUST CONFORM TO THE MINIMUM COVER RECOMMENDATIONS IN ACI 318, UNLESS THE DRAWINGS SHOW GREATER COVER REQUIREMENTS.
6. LAP CONTINUOUS REINFORCING STEEL 57 X BAR DIAMETER, UNLESS OTHERWISE NOTED.

CONCRETE MASONRY NOTES:

1. CONCRETE MASONRY MATERIALS AND CONSTRUCTION MUST CONFORM TO THE AMERICAN CONCRETE INSTITUTE (ACI) 530.
2. CONCRETE MASONRY UNITS MUST CONFORM TO ASTM C90 AND MUST BE MADE WITH LIGHTWEIGHT AGGREGATE. MINIMUM NET AREA COMPRESSIVE STRENGTH OF MASONRY UNITS MUST BE 2,000 PSI AT 28 DAYS.
3. COMPRESSIVE STRENGTH OF MASONRY MUST BE DETERMINED BY THE UNIT STRENGTH METHOD AS SET FORTH IN ACI 530.1. THE NET AREA COMPRESSIVE STRENGTH OF MASONRY, fm, MUST BE 2,000 PSI AT 28 DAYS.
4. MORTAR MUST BE TYPE 'M' OR 'S' AND MUST COMPLY WITH ASTM C270, PROPORTIONS OR PROPERTIES SPECIFICATION.
5. GROUT MUST COMPLY WITH EITHER THE PROPORTIONS OR PROPERTIES SPECIFICATION OF ASTM C476 AND AS FOLLOWS:
- A. PROPORTIONS SPECIFICATION: THIS MIX CANNOT CONTAIN ADMIXTURES. WATER MUST BE ADDED IN THE FIELD IN ORDER TO ACHIEVE A SLUMP OF 8-11 INCHES WHEN PLACED IN THE CONCRETE MASONRY UNITS. MORTAR, PEA-GRAVEL CONCRETE, OR "CHAT" MIXES ARE NOT ACCEPTABLE SUBSTITUTES FOR THE SPECIFIED GROUT.
- B. PROPERTIES SPECIFICATION: THIS MIX MUST BE PROPORTIONED TO OBTAIN A DOCUMENTED 28 DAY COMPRESSIVE STRENGTH OF 2,000 PSI, WITH AN 8-11 INCH SLUMP WHEN PLACED IN THE CONCRETE MASONRY UNITS.
6. REINFORCING STEEL MUST COMPLY WITH ASTM A615, GRADE 60. SHOP FABRICATE REINFORCING BARS WHICH ARE SHOWN TO BE BENT OR HOOKED.
7. ALL BOND BEAMS, REINFORCED CELLS AND CELLS WITH EXPANSION BOLTS, EMBED PLATES OR OTHER ANCHORS AND ALL CELLS BELOW GRADE MUST BE GROUTED SOLID. GROUT PROCEDURE MUST COMPLY WITH ACI 530.1.
8. ALL CMU WALLS MUST BE REINFORCED CONTINUOUSLY FROM FOUNDATION TO TOP OF WALL. WHERE REINFORCING IS INTERRUPTED, OFFSET AND LAP ADDITIONAL BARS PER THE "TYPICAL OFFSET SPLICE AT MASONRY WALL DETAILS."
9. LAP ALL REINFORCING PER SCHEDULE BELOW, TYPICAL UNLESS OTHERWISE NOTED:
- | MASONRY LAP SCHEDULE | |
|----------------------|-------------------|
| REINF SIZE | 72 x BAR DIAMETER |
| #4 | 36" |
| #5 | 45" |
| #6 | 54" |
| #7 | 63" |
| #8 | 72" |
10. PROVIDE ONE VERTICAL BAR EACH SIDE OF ALL OPENINGS AND CONTROL JOINTS, AND AT CORNERS AND INTERSECTIONS OF ALL MASONRY WALLS, BOTH BEARING AND NON-BEARING WALLS. SHOW CONTROL JOINT LOCATIONS ON THE REINFORCING STEEL SHOP DRAWINGS.
11. ALL NON-BEARING MASONRY WALLS MUST BE REINFORCED WITH #4 VERTICAL BARS AT 40 INCHES ON CENTER, TYPICAL UNLESS OTHERWISE NOTED. ALL NON-BEARING MASONRY WALLS MUST BE BRACED PER "TYPICAL NON-BEARING MASONRY PARTITION DETAILS".
12. PROVIDE REINFORCING STEEL DOWELS OF THE SAME SIZE AND SPACING AS VERTICAL REINFORCING FROM THE SUPPORTING STRUCTURE. DOWELS MUST HAVE STANDARD ACI HOOKS.
13. PROVIDE STANDARD 9 GAGE LADDER TYPE HORIZONTAL JOINT REINFORCING IN CMU WALLS AT 16 INCHES ON CENTER AND IN TWO JOINTS IMMEDIATELY ABOVE AND BELOW ALL OPENINGS, EXTENDING A MINIMUM OF 2 FEET BEYOND THE JAMB ON EACH SIDE OF THE OPENING, EXCEPT AT CONTROL JOINTS.
14. PROVIDE HORIZONTAL BOND BEAMS WITH CONTINUOUS REINFORCING AS SHOWN IN THE SECTIONS AND DETAILS. DISCONTINUE ALL HORIZONTAL REINFORCING AT CONTROL JOINTS EXCEPT FOR THE BOND BEAMS AT JOIST BEARING ELEVATIONS.
15. DO NOT LOCATE CONTROL JOINTS WITHIN TWO FEET OF STEEL BEAM BEARING LOCATIONS.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL MUST BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) 360.
2. STRUCTURAL STEEL MUST COMPLY WITH THE FOLLOWING SPECIFICATIONS:
- A. STRUCTURAL STEEL SHAPES, PLATES AND BARS UNLESS OTHERWISE NOTED - ASTM A36, Fy = 36 KSI
- B. STRUCTURAL STEEL W-SHAPES - ASTM A992, Fy = 50 KSI
- C. HOLLOW STRUCTURAL SECTIONS (HSS):
- a. SQUARE & RECTANGULAR - ASTM A500, GRADE C, Fy = 50 KSI
- b. ROUND - ASTM A500, GRADE C, Fy = 46 KSI
- D. ANCHOR RODS - ASTM F1554, GRADE [56] [55]
- E. HIGH STRENGTH BOLTS - ASTM A325 (TYPICAL UON)
- F. WASHERS - ASTM F436
- G. NUTS - ASTM A563
3. UNLESS OTHERWISE NOTED, ALL REQUIRED DESIGN STRENGTHS AND REACTIONS INDICATED ARE BASED ON THE "LOADING COMBINATIONS USING STRENGTH DESIGN OR LOAD AND RESISTANCE FACTOR DESIGN" PER SECTION 1605.2 OF THE BUILDING CODE.
4. STRUCTURAL STEEL FRAME IS CONSIDERED AS UNRESTRAINED FOR FIRE PROTECTION PURPOSES.
5. UNLESS OTHERWISE NOTED, BEAM CONNECTIONS MUST BE AISC "SIMPLE SHEAR CONNECTIONS" WITH ASTM A325 BOLTS DESIGNED FOR ONE HALF THE MAXIMUM TOTAL UNIFORM LOAD FOR LATERALLY SUPPORTED BEAMS GIVEN IN TABLE 3-6 OF THE "STEEL CONSTRUCTION MANUAL."
6. UNLESS OTHERWISE NOTED, BEAM CONNECTIONS MUST BE AISC "SIMPLE SHEAR CONNECTIONS" WITH ASTM A325 BOLTS. DESIGN CONNECTIONS FOR THE REACTIONS (LRFD FACTORED LOADING) SHOWN ON THE DRAWINGS AND THE MINIMUM NUMBER OF BOLTS SHOWN BELOW. IF NO REACTION IS SHOWN, DESIGN CONNECTIONS FOR REACTIONS AND THE MINIMUM NUMBER OF BOLTS SHOWN BELOW.
- | BEAM SIZE | DESIGN REACTION (LRFD) | MIN # OF BOLTS |
|-------------|------------------------|----------------|
| W8 | 20 KIPS | 2 |
| W10 | 20 KIPS | 2 |
| W12 AND W14 | 35 KIPS | 3 |
| W16 | 40 KIPS | 3 |
| W18 | 45 KIPS | 4 |
| W21 | 55 KIPS | 5 |
| W24 | 65 KIPS | 6 |
7. HIGH STRENGTH BOLTS MAY BE TIGHTENED TO THE "SNUG TIGHT" CONDITION IN LIEU OF FULL PRETENSIONING.
8. REFER TO THE SPECIFICATIONS FOR REQUIREMENTS OF "DELEGATED DESIGN" CONNECTIONS.
9. FOR STRUCTURAL STEEL CONNECTIONS INDICATED AS "DELEGATED DESIGN", INCLUDE STRUCTURAL CALCULATIONS SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA RESPONSIBLE FOR THEIR PREPARATION. IN ADDITION, THE PROFESSIONAL ENGINEER RESPONSIBLE FOR CONNECTION DESIGN MUST REVIEW THE SHOP DRAWINGS PRIOR TO SUBMITTAL TO VERIFY THAT THE CONNECTIONS AS DETAILED ON THE SHOP DRAWINGS COMPLY WITH THE CONNECTION DESIGN REQUIREMENTS OF THE FINAL CALCULATIONS. A REVIEW LETTER, SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER RESPONSIBLE FOR CONNECTION DESIGN MUST BE PROVIDED WITH THE SHOP DRAWINGS AND CALCULATION SUBMITTAL STATING THAT THIS REVIEW AND VERIFICATION HAS BEEN COMPLETED.
10. DELEGATED DESIGN CONNECTIONS ARE AS FOLLOWS:
- A. SHEAR CONNECTIONS
- B. COLLECTOR BEAMS
- C. LINTEL AND WIND GIRTS
- D. MOMENT CONNECTIONS.
11. HIGH STRENGTH BOLTS MUST BE FULLY PRETENSIONED USING LOAD INDICATOR WASHERS OR TENSION CONTROL "TWIST OFF" BOLTS.
12. PROVIDE ANGLE FRAMING AROUND OPENINGS LARGER THAN 6 INCHES AND LESS THAN 24 INCHES IN ANY DIMENSION (INCLUDING ROOF DRAINS) TO SUPPORT STEEL DECK, TYPICAL UNLESS OTHERWISE NOTED OR DETAILED AS FOLLOWS:
- | JOIST/BEAM SPACING | ANGLE SIZE |
|--------------------|------------|
| TO 5'-0" | L3x3x1/4 |

13. WELDING MUST BE IN ACCORDANCE WITH AWS D1.1, "STRUCTURAL WELDING CODE - STEEL." WELD ELECTRODES MUST BE E70XX LOW HYDROGEN, UNLESS OTHERWISE NOTED, PROVIDE CONTINUOUS FILLET WELDS WITH MINIMUM SIZE REQUIRED BY TABLE J2.4 AISC 360.
14. COORDINATE ALL MEMBER LOCATIONS, UNIT WEIGHTS, OPENING SIZES, AND CURB DIMENSIONS FOR MECHANICAL EQUIPMENT WITH THE ACTUAL EQUIPMENT FURNISHED.
15. STRUCTURAL STEEL SCHEDULED TO RECEIVE SPRAYED-ON FIREPROOFING MUST NOT BE PRIME PAINTED.
16. HOT-DIP GALVANIZE AFTER FABRICATION THE FOLLOWING:
- A. ANGLES AND PLATES SUPPORTING MASONRY IN EXTERIOR WALLS.
- B. LINTELS AND LINTEL ASSEMBLIES SUPPORTING MASONRY IN EXTERIOR WALLS.
- C. ALL STEEL EXPOSED TO WEATHER IN THE FINAL CONSTRUCTION.
- D. ITEMS IDENTIFIED AS GALVANIZED ON ARCHITECTURAL OR STRUCTURAL DRAWINGS.
17. ALL MEMBERS EXPOSED TO VIEW IN THE FINISHED CONSTRUCTION MUST BE CONSIDERED ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS).
18. STEEL MEMBERS MUST BE SPLICED ONLY WHERE INDICATED. CONTINUOUS MEMBERS MUST BE SPLICED OVER SUPPORTS, UNLESS OTHERWISE NOTED MEMBERS INDICATED AS DIAPHRAGM CHORDS (DC) MUST HAVE FULL PENETRATION BUTT WELD SPLICES, UNLESS OTHERWISE NOTED.

STEEL JOIST NOTES:

1. STEEL JOISTS MUST BE IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE (SJI) STANDARD SPECIFICATIONS.
2. STEEL JOISTS DESIGNATED "SP" ON PLANS ARE SPECIAL JOISTS WHICH MUST BE DESIGNED FOR THE SPECIAL CRITERIA INDICATED.
3. JOIST BRIDGING MUST CONFORM TO SJI SPECIFICATIONS, INCLUDING BRIDGING REQUIRED FOR JOISTS SUBJECTED TO UPLIFT LOADS. PROVIDE CROSS-BRIDGING AT ENDS OF BRIDGING LINES AND CHANGES IN JOIST DEPTHS AND AT ROLLED STEEL SHAPES RUNNING PARALLEL TO JOISTS. BRIDGING SHOWN MUST BE PROVIDED, IN ADDITION TO THE REQUIRED STANDARD BRIDGING, ENDS OF ALL BRIDGING LINES MUST BE ANCHORED TO WALLS OR BEAMS.
4. ROOF JOISTS MUST BE DESIGNED FOR NET UPLIFT LOADS ULTIMATE OF 25 PSF.
5. ALL JOISTS MUST BE DESIGNED FOR A CONCENTRATED LOAD OF 300 LBS. HUNG FROM THE JOIST TOP OR BOTTOM CHORD AT ANY POINT ALONG THE SPAN. (BEND LOAD AND ADD LOAD CHECK).
6. PERMANENT SUSPENDED LOADS MUST NOT BE SUPPORTED BY JOIST BRIDGING.
7. SUBMIT SPRINKLER SHOP DRAWINGS INCLUDING LOADS AND LOCATIONS PRIOR TO FABRICATION OF JOISTS.
8. COMPLY WITH OSHA SAFETY STANDARDS FOR THE ERECTION OF STEEL JOISTS.
9. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS AND CALCULATIONS PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA FOR THE DESIGN OF SPECIAL JOISTS OR JOISTS INDICATED TO COMPLY WITH SPECIFIC LOADING REQUIREMENTS.

STEEL DECK NOTES:

1. STEEL DECK MUST BE IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTE (AISI), "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" AND THE STEEL DECK INSTITUTE (SDI), "DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS."
2. STEEL DECK INSTALLATION MUST COMPLY WITH THE FOLLOWING:
- A. ROOF DECK: 1 1/2" x 22 GAGE TYPE 'B' GALVANIZED, UNLESS OTHERWISE NOTED, ATTACH DECK TO SUPPORTS WITH 5/8 INCH DIAMETER PUDDLE WELDS IN ALL RIBS WHERE END LAPS OCCUR AND AT 16 INCHES ON CENTER ALONG SUPPORTS WITH A 36/7 PATTERN. FASTEN SIDE LAPS WITH #10 SELF-TAPPING HEX HEAD SCREWS AT 1/4 POINTS BETWEEN SUPPORTS. FASTEN EDGE MOST DECK PANEL TO STEEL FRAMING WITH 5/8 INCH DIAMETER PUDDLE WELDS AT SAME SPACING AS SIDELAP FASTENERS.
- B. NON COMPOSITE DECK AT JOIST FLOORS: 1 1/2" x 20 GAGE GALVANIZED, UNLESS OTHERWISE NOTED, ATTACH DECK TO SUPPORTS WITH 5/8 INCH DIAMETER PUDDLE WELDS AT 12 INCHES ON CENTER. FASTEN SIDELAPS WITH #10 SELF-TAPPING HEX HEAD SCREWS AT 1/3 POINTS BETWEEN SUPPORTS. FASTEN EDGE MOST DECK PANEL TO STEEL FRAMING WITH 5/8 INCH DIAMETER PUDDLE WELDS AT SAME SPACING AS SIDELAP FASTENERS.
3. STEEL DECK MUST BE INSTALLED PERPENDICULAR TO SUPPORTS AND MUST HAVE A MINIMUM OF THREE CONTINUOUS SPANS. ENDLAPS MUST ONLY OCCUR AT SUPPORTS.
4. WELDING MUST BE IN ACCORDANCE WITH AWS D1.3 "STRUCTURAL WELDING CODE - SHEET STEEL".
5. PERMANENT SUSPENDED LOADS MUST NOT BE SUPPORTED BY STEEL ROOF DECK.
6. SHEAR CONNECTORS FOR COMPOSITE FLOOR SYSTEMS MUST BE 3/4 INCH DIAMETER HEADED STUDS CONFORMING WITH ASTM A108, GRADE 1015 OR 1020. PROVIDE HEADED STUDS AS SHOWN ON PLANS AND DETAILS. NET IN-PLACE LENGTH MUST BE 1 1/2 INCHES ABOVE TOP OF COMPOSITE STEEL DECK.
7. CONDUIT AND PIPING MUST NOT BE PLACED IN ELEVATED SLABS.

SPECIALTY STRUCTURAL ELEMENTS:

1. THE FOLLOWING BUILDING ELEMENTS REQUIRE DELEGATED DESIGN AND ENGINEERING BY A SPECIALTY STRUCTURAL ENGINEER:
- A. METAL STAIRS
- B. CURTAIN WALL AND GLAZING ASSEMBLIES INCLUDING CONNECTIONS TO THE STRUCTURE
- C. COLD-FORMED METAL FRAMING (CFMF)
- D. STRUCTURAL JOINT CONNECTIONS
- E. PRE-FABRICATED CANOPIES AND AWNINGS
- REFERENCE SPECIFICATIONS FOR COMPLETE REQUIREMENTS
2. SUBMIT COMPLETE CALCULATIONS AND SHOP DRAWINGS, SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA RESPONSIBLE FOR THE DESIGN, INCLUDING DESIGN LOADINGS AND REACTIONS APPLIED TO THE SUPPORTING STRUCTURE. INCLUDE A SUMMARY OF THE CONTROLLING LOAD CASES FOR EACH LOCATION.
3. IN ADDITION TO THEIR OWN DEAD WEIGHT AND THE DEAD LOADS SHOWN OR INDICATED IN THE DRAWINGS, MEMBERS MUST BE DESIGNED TO SUPPORT THE LOADS INDICATED IN THE GENERAL NOTES.
4. CONNECTION DETAILS SHOWN ARE SCHEMATIC ONLY. ALL CONNECTIONS MUST BE DESIGNED AND DETAILED BY THE MANUFACTURER TO SUIT THE SPECIFIED LOADS. CONNECTIONS MUST ACCOUNT FOR THERMAL MOVEMENT, DEFLECTION AND CREEP. DETAIL ALL CONNECTIONS ON SHOP DRAWINGS.
5. THE CONTRACTOR MUST BE RESPONSIBLE FOR THE COORDINATION OF ALL SPECIALTY STRUCTURAL ELEMENTS AND COST ASSOCIATED WITH A CONTRACTOR INITIATED CHANGE IN BUILDING STRUCTURE, INCLUDING CONSTRUCTION COSTS AND RE-ENGINEERING COSTS.



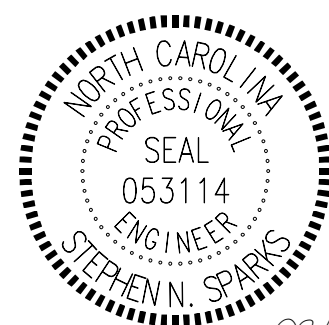
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PROJECT TITLE



02/26/2024

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2. MATERIALS, DIMENSIONS AND ALL OTHER CONDITIONS WHICH ARE NOT OTHERWISE SPECIFIED ON THIS DRAWING SHALL BE CONTROLLED AS HAVING THE SAME MEANING AS EARLIER INDICATED CONDITIONS WHICH ARE MORE FULLY DEFINED ELSEWHERE ON THIS PROJECT OR OTHER DRAWINGS OF THIS PROJECT.

3. DO NOT SCALE OFF DIMENSIONS.

REVISIONS		
NO.	DATE	DESCRIPTION
1	2/26/2024	ADDENDUM 2

CD
PERMIT SET
2307
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GENERAL NOTES
SHEET TITLE

S001

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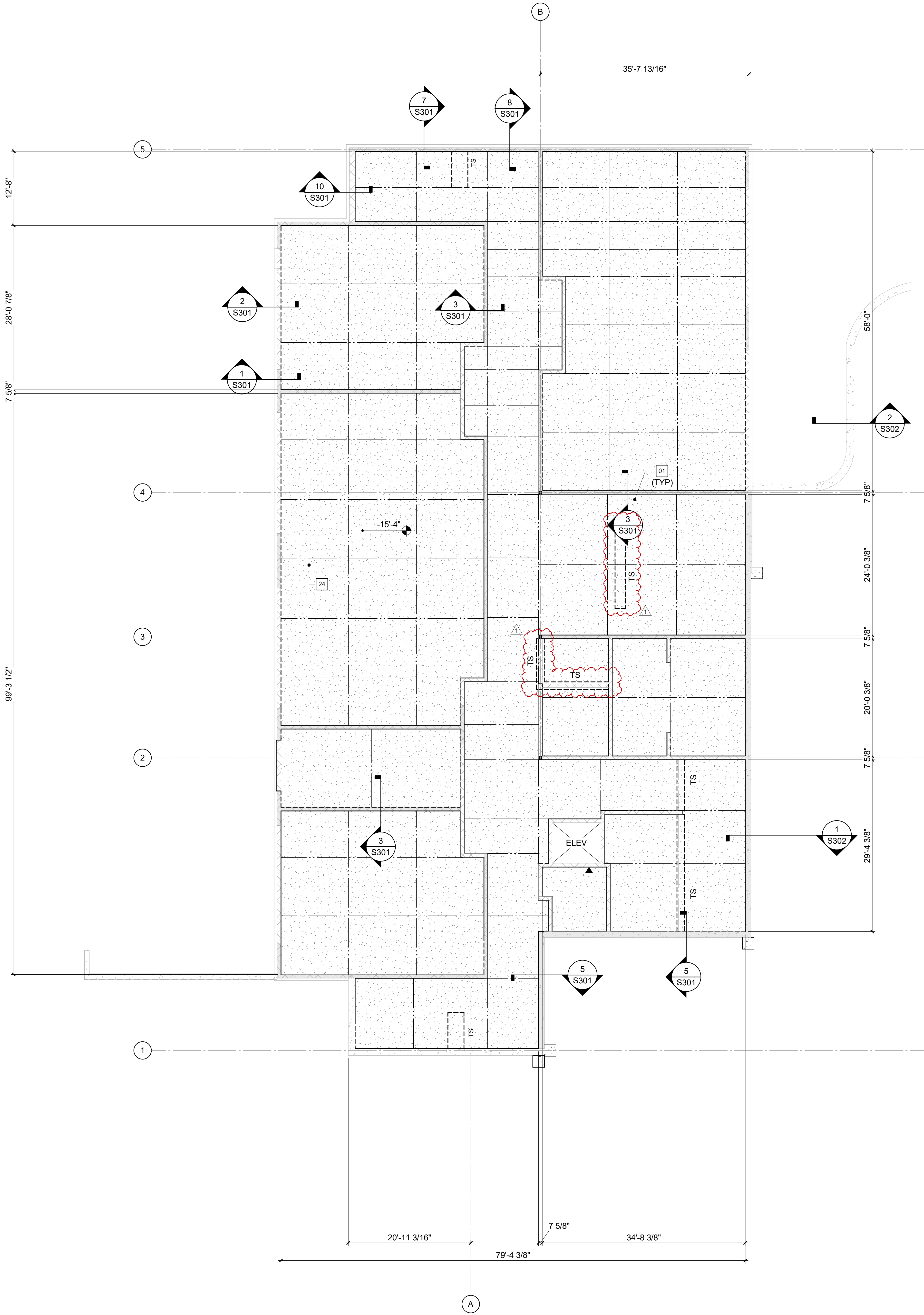
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1

GROUND FLOOR SLAB PLAN

1/8" = 1'-0"



SLAB PLAN NOTES

- REFERENCE ARCHITECTURAL DRAWINGS FOR DIMENSIONS TO NONBEARING WALLS, WALL CONTROL JOINTS AND OPENINGS.
- ALL ELEVATIONS ARE BASED ON A REFERENCED FIRST FLOOR ELEVATION OF 0'-0" = 316.64' AND REFERENCED GROUND FLOOR ELEVATION OF -15'-4" = 301.30'. REFER TO ARCHITECTURAL DRAWINGS FOR FINISH FLOOR MATERIALS.
- REFERENCE ARCHITECTURAL DRAWINGS FOR EXACT LIMITS OF SLAB DEPRESSIONS AND OMITTED SLABS.
- FLOOR SINKS AND DRAINS ARE NOT SHOWN ON PLAN. REFERENCE PME DRAWINGS FOR LOCATIONS.
- REFERENCE CIVIL AND LANDSCAPE DRAWINGS FOR EXTERIOR CONCRETE SLABS AND PAVING.
- SLAB-ON-GRADE JOINTS MUST BE SAWED JOINTS OR KEYED CONSTRUCTION JOINTS, UNLESS OTHERWISE NOTED. CONTRACTOR MUST COORDINATE ALL SLAB JOINTS WITH JOINTS IN BONDED FLOOR FINISHES. REFERENCE ARCHITECTURAL DRAWINGS FOR FLOOR FINISH JOINT LOCATIONS.
- PLACE (1) #4 x 3'-0" IN MIDDLE OF SLAB AT RE-ENTRANT CORNERS WHERE A SLAB JOINT DOES NOT OCCUR.

KEY NOTES

- 4" CONCRETE SLAB-ON-GRADE OVER VAPOR RETARDER AND 4" DEPTH OF POROUS FILL UNLESS OTHERWISE INDICATED. REINFORCE SLAB WITH 6x6-W2.9xW2.9. WELDED WIRE REINFORCING PLACED 1 1/2" CLEAR BELOW TOP OF SLAB. MAINTAIN REINFORCEMENT IN POSITION ON BOLSTERS, CHAIRS OR SPACERS DURING CONCRETE PLACEMENT.
- SLAB-ON-GRADE JOINT. REFERENCE FOUNDATION/SLAB PLAN NOTES AND TYPICAL DETAILS.
- REFERENCE THICKENED SLAB TYPICAL DETAIL AT INTERIOR NON-BEARING MASONRY WALL.

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COOPER ACADEMY A & R PROJECT TITLE

lynchmykins
COLLABORATE. COLLABORATE. CREATE.
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LM Project Number: LK21.298
Corporation No. C-4360

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GROUND FLOOR SLAB
PLAN
SHEET TITLE

S102

SHEET

KEY NOTES

- 10 EXISTING BUILDING. REFERENCE EXISTING DRAWINGS FOR INFORMATION NOT NOTED. CONTRACTOR TO FIELD VERIFY FOUNDATION ELEVATIONS AND CONDITIONS ADJACENT TO NEW ADDITION.
- 13 AT EXISTING COLUMN FOOTING STEP NEW FOOTING AND MATCH ELEVATION AT BOTTOM OF FOOTING. EPOXY DOWEL REINFORCEMENT PER TYPICAL DETAIL.
- 14 REFERENCE TYPICAL EDGE OF SLAB DETAIL AND ARCH FOR ELEVATOR THRESHOLD.
- 17 REFERENCE TYPICAL HSS WINDGIRT AT MASONRY STAIRWELL STOREFRONT.
- 18 CANOPY BY OTHERS. MAX WEIGHT 15 PSF.
- 19 REFERENCE TYPICAL SLAB OPENING FRAMING SUPPORT DETAIL ON SHEET S502.
- 20 REFERENCE TYPICAL DETAIL AT FIRE DOORS FOR JAMBS AND LINTEL.
- 32 REFERENCE TYPICAL STEEL LINTEL SCHEDULE FOR STEEL BEAM LINTEL AT OPENINGS SUPPORTING FLOOR FRAMING AT BUILDING PERIMETER.
- 57 24" X 24" CONCRETE PIER CAST MONOLITHIC WITH CONCRETE WALL FROM TOP OF FOOTING TO UNDERSIDE OF UPPER GRADE BEAM REINFORCE PIER WITH 12-#6 VERTICAL AND #4 CLOSED TIES AT 8" ON-CENTER. FULL HEIGHT.
- 59 STAIR TO BE DELEGATED DESIGN.

MARK	SIZE		REINFORCING		REMARKS
	WIDTH	DEPTH	CONTINUOUS	TRANSVERSE	
			SIZE	SIZE	
GB24x24	24"	24"	(4) #5 T&B	#4 CLOSED TIES AT 12" OC	-

FOUNDATION PLAN NOTES

- A. REFERENCE ARCHITECTURAL DRAWINGS FOR DIMENSIONS TO NONBEARING WALLS, WALL CONTROL JOINTS AND OPENINGS.
- B. ALL ELEVATIONS ARE BASED ON A REFERENCED FIRST FLOOR ELEVATION OF 0'-0" = 316.64' AND REFERENCED GROUND FLOOR ELEVATION OF -15'-4" = 301.30'. REFER TO ARCHITECTURAL DRAWINGS FOR FINISH FLOOR MATERIALS.
- C. TOP OF ALL COLUMN AND WALL FOOTINGS MUST BE AT THE FOLLOWING ELEVATIONS UNLESS OTHERWISE NOTED ON PLAN. EXTERIOR WALL AND COLUMN FOOTINGS -2'-0" (-2'-0" AT FIRST FLOOR SLAB ON GRADE. -17'-4" AT GROUND FLOOR). INTERIOR WALL FOOTINGS -0'-8" (-0'-8" AT FIRST FLOOR SLAB ON GRADE. -16'-0" AT GROUND FLOOR).
- D. NOT ALL UTILITY LOCATIONS ARE SHOWN ON PLAN. THE CONTRACTOR MUST COORDINATE THE LOCATIONS, SIZES, AND INVERTS OF UTILITIES. AT LOCATIONS WHERE UTILITIES PASS BELOW THE TOP OF FOOTING ELEVATION, STEP THE TOP OF FOOTING DOWN ON EACH SIDE PER THE "STEPPED FOOTING DETAIL" AND SLEEVE THE UTILITY THROUGH THE FOUNDATION WALL. THE CONTRACTOR MAY, AT HIS/HER OPTION, SLEEVE THE UTILITY THROUGH THE FOUNDATION PER THE "UTILITY SLEEVE DETAIL".
- E. UNLESS OTHERWISE INDICATED, EXTEND WALL FOOTINGS A MINIMUM OF 6 INCHES BEYOND ENDS OF WALLS.
- F. NOT ALL SITE WALLS ARE NOT SHOWN ON PLAN. CONTRACTOR MUST COORDINATE CIVIL AND LANDSCAPE DRAWINGS FOR SITE WALL INFORMATION.
- G. DIMENSIONS SHOWN ON FOUNDATION PLAN ARE TO COLUMN GRIDLINES AND OUTSIDE FACE OF FOUNDATION WALLS, UNLESS OTHERWISE NOTED.

FRAMING PLAN NOTES

- A. REFERENCE FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
- B. TOP OF FINISHED FLOOR ELEVATION SHALL BE AS NOTED ON SLAB PLANS.
- C. FLOOR JOISTS AND BEAMS MUST BE EQUALLY SPACED BETWEEN POINTS OF KNOWN DIMENSIONS (NOT TO EXCEED 4'-0" ON-CENTER).
- D. STEEL ROOF FRAMING SUPPORTING 1 1/2" STEEL ROOF DECK MUST BE EQUALLY SPACED BETWEEN POINTS OF KNOWN DIMENSIONS (NOT TO EXCEED 5'-0" ON-CENTER).
- E. CONTRACTOR MUST POUR SLAB TO THICKNESS. SLAB AND JOISTS ARE NOT DESIGNED FOR EXCESS IN THICKNESS DUE TO CONCRETE POUR PONDING.
- F. PROVIDE BOTTOM CHORD EXTENSIONS AT ALL JOISTS ON COLUMN CENTERLINES.
- G. AT STEEL ROOF FRAMING, BOTTOM OF DECK ELEVATIONS ARE SHOWN ON PLAN. INTERMEDIATE ELEVATIONS SHALL BE STRAIGHT LINES BETWEEN GIVEN ELEVATIONS. INTERPOLATE AS REQUIRED FOR INTERMEDIATE BEARING ELEVATIONS, UNLESS OTHERWISE NOTED.
- H. COORDINATE AND VERIFY ALL MEMBER LOCATIONS, DIMENSIONS, WEIGHTS, OPENING SIZES, AND CURB DIMENSIONS FOR ALL MECHANICAL EQUIPMENT WITH THE ACTUAL EQUIPMENT FURNISHED. INCLUDE THIS INFORMATION ON THE JOIST AND STRUCTURAL STEEL SHOP DRAWINGS.

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Corporation No. C-4360

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FIRST FLOOR
FOUNDATION/FRAMING
PLAN
SHEET TITLE

S111

SHEET

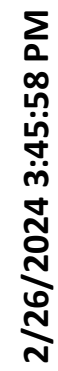
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1 FIRST FLOOR FRAMING/FOUNDATION PLAN

1/8" = 1'-0"

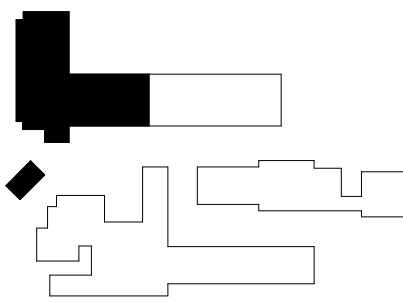


SHEET



FRAMING PLAN NOTES

- A. REFERENCE FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
- B. TOP OF FINISHED FLOOR ELEVATION SHALL BE AS NOTED ON SLAB PLANS.
- C. FLOOR JOISTS AND BEAMS MUST BE EQUALLY SPACED BETWEEN POINTS OF KNOWN DIMENSIONS (NOT TO EXCEED 4'-0" ON-CENTER).
- D. STEEL ROOF FRAMING SUPPORTING 1/2" STEEL ROOF DECK MUST BE EQUALLY SPACED BETWEEN POINTS OF KNOWN DIMENSIONS (NOT TO EXCEED 5'-0" ON-CENTER).
- E. CONTRACTOR MUST POUR SLAB TO THICKNESS. SLAB AND JOISTS ARE NOT DESIGNED FOR EXCESS IN THICKNESS DUE TO CONCRETE POUR PONDING.
- F. PROVIDE BOTTOM CHORD EXTENSIONS AT ALL JOISTS ON COLUMN CENTERLINES.
- G. AT STEEL ROOF FRAMING, BOTTOM OF DECK ELEVATIONS ARE SHOWN ON PLAN. INTERMEDIATE ELEVATIONS SHALL BE STRAIGHT LINES BETWEEN GIVEN ELEVATIONS. INTERPOLATE AS REQUIRED FOR INTERMEDIATE BEARING ELEVATIONS, UNLESS OTHERWISE NOTED.
- H. COORDINATE AND VERIFY ALL MEMBER LOCATIONS, DIMENSIONS, WEIGHTS, OPENING SIZES, AND CURB DIMENSIONS FOR ALL MECHANICAL EQUIPMENT WITH THE ACTUAL EQUIPMENT FURNISHED. INCLUDE THIS INFORMATION ON THE JOIST AND STRUCTURAL STEEL SHOP DRAWINGS.



COOPER ACADEMY
A & R
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02/26/2024



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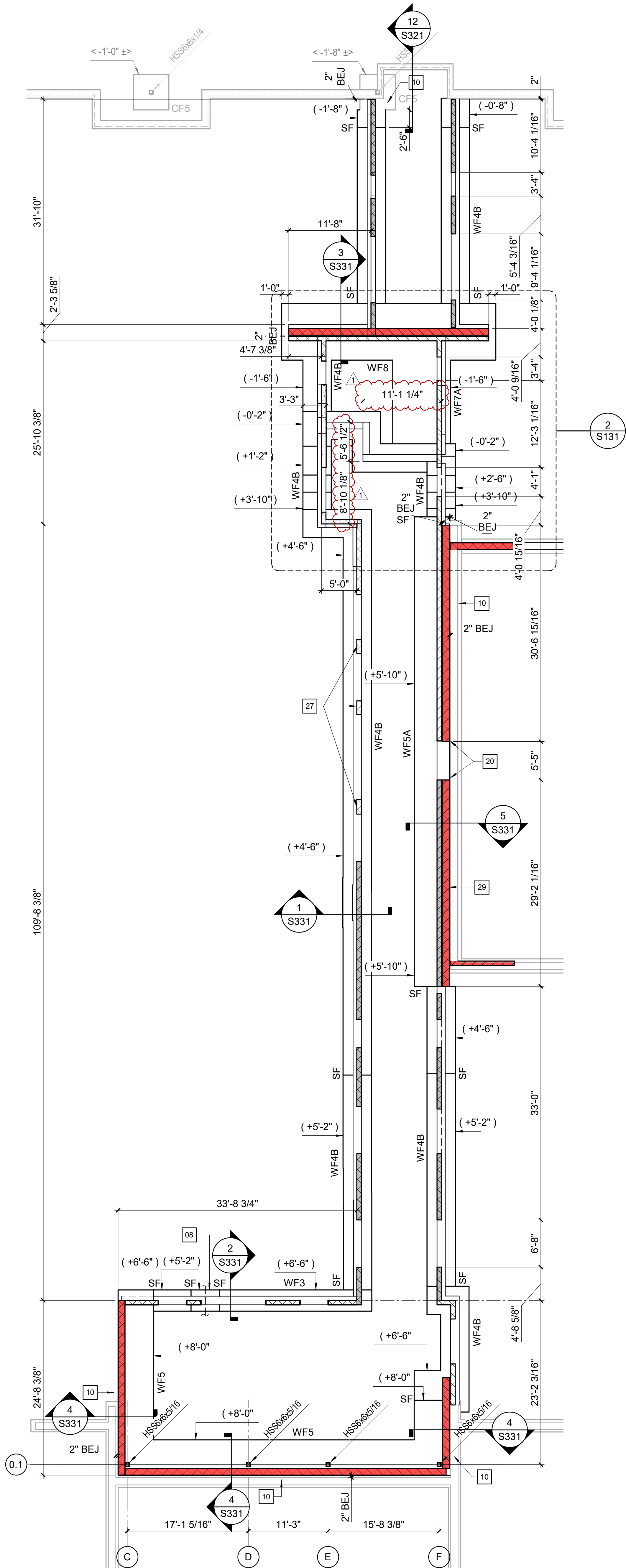
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BOOMERANG DESIGN PROJECT NUMBER
02.26.2024
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**EQUIPMENT
PLATFORM FRAMING
PLAN**
SHEET TITLE

S121

SHEET

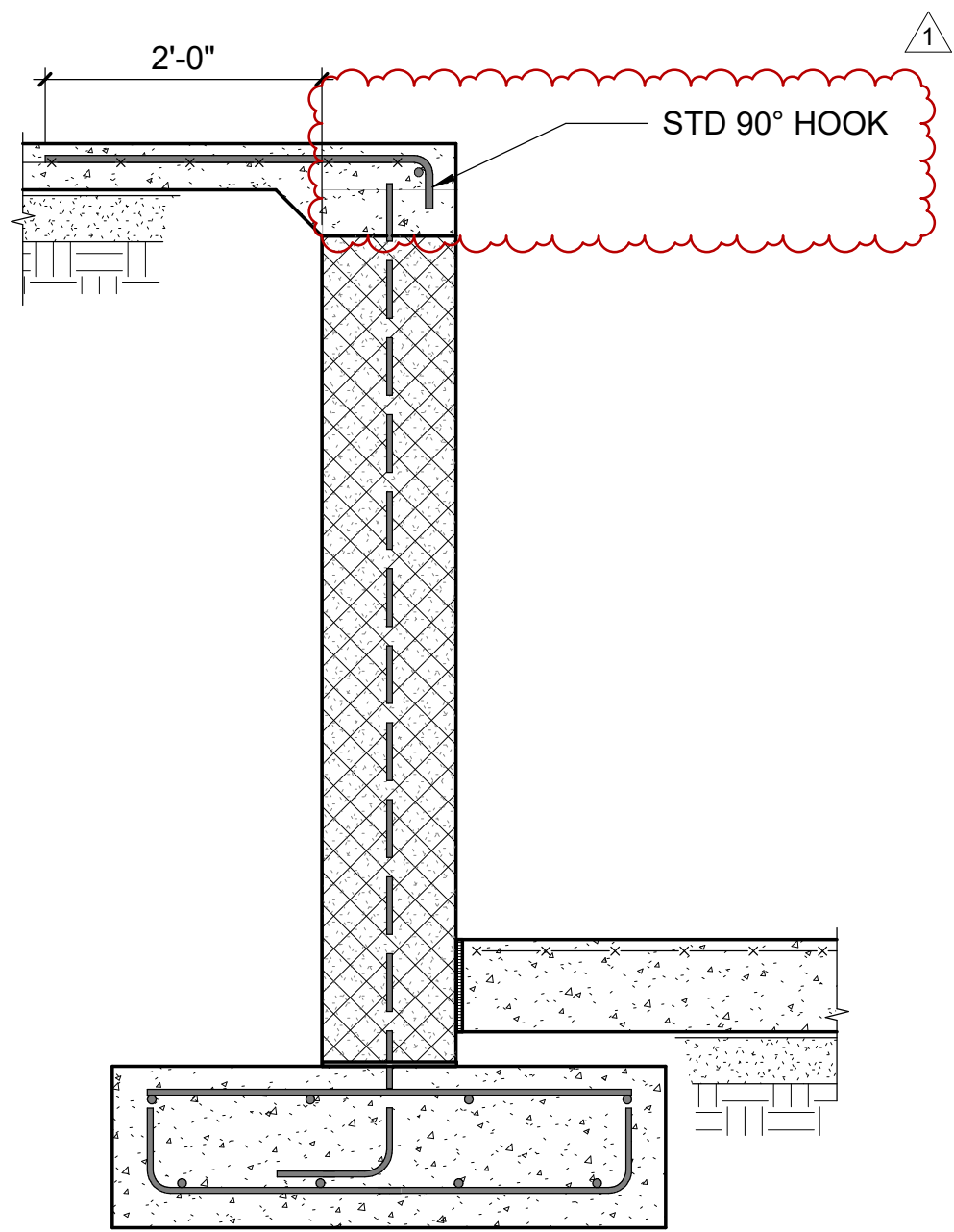
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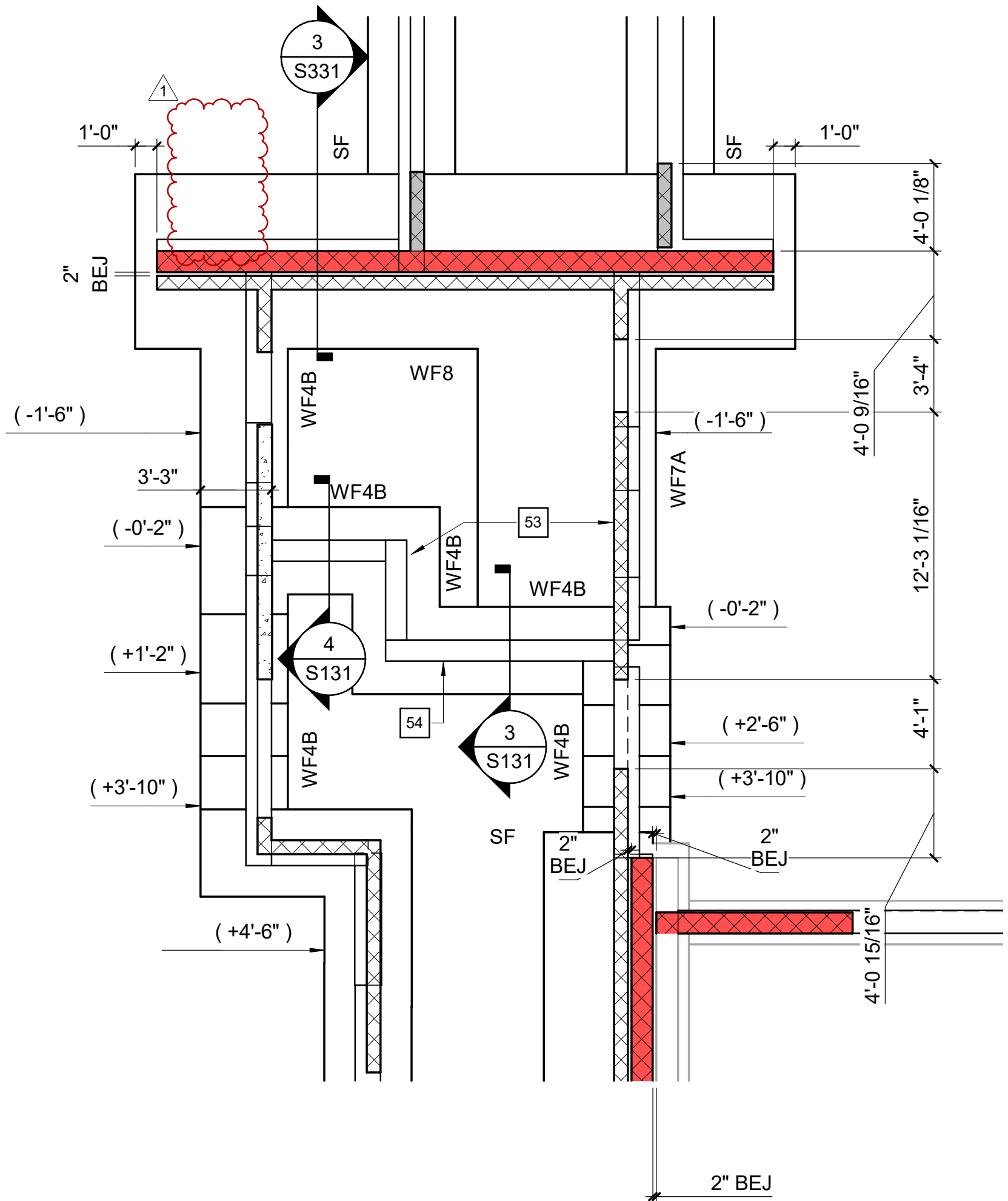
1 CONNECTOR FOUNDATION PLAN
1/8" = 1'-0"

WALL FOOTING SCHEDULE					
MARK	SIZE		REINFORCING		REMARKS
	WIDTH	DEPTH	CONTINUOUS	TRANSVERSE	
WF3	3' - 0"	1'-0"	(3) #5 T&B	#5 AT 36" OC TOP AND #5 AT 24" OC BOT	TOP BARS AT SHEAR WALL ONLY
WF4	4' - 0"	1'-0"	(4) #5 T&B	#5 AT 36" OC T&B AND #5 AT 24" OC BOT	TOP BARS AT SHEAR WALL ONLY HOOKED BOTTOM BARS AT CONNECTOR ONLY.
WF4B	4' - 0"	1'-2"	(4) #5 T&B	#5 AT 24" OC TOP AND #5 AT 16" OC BOT	HOOKED ENDS AT TRANSVERSE REINF. AT CONNECTOR BOTTOM BARS AT 24" OC.
WF5	5' - 0"	1'-4"	(5) #5 T&B	#5 AT 12" OC T&B	HOOKED ENDS AT TRANSVERSE REINF.
WF5A	5' - 0"	1'-0"	(5) #5 T&B	#5 AT 12" OC T&B	HOOKED ENDS AT TRANSVERSE REINF.
WF8	8' - 0"	1'-4"	(8) #5 T&B	#6 AT 12" OC T&B	HOOKED ENDS AT TRANSVERSE REINF.

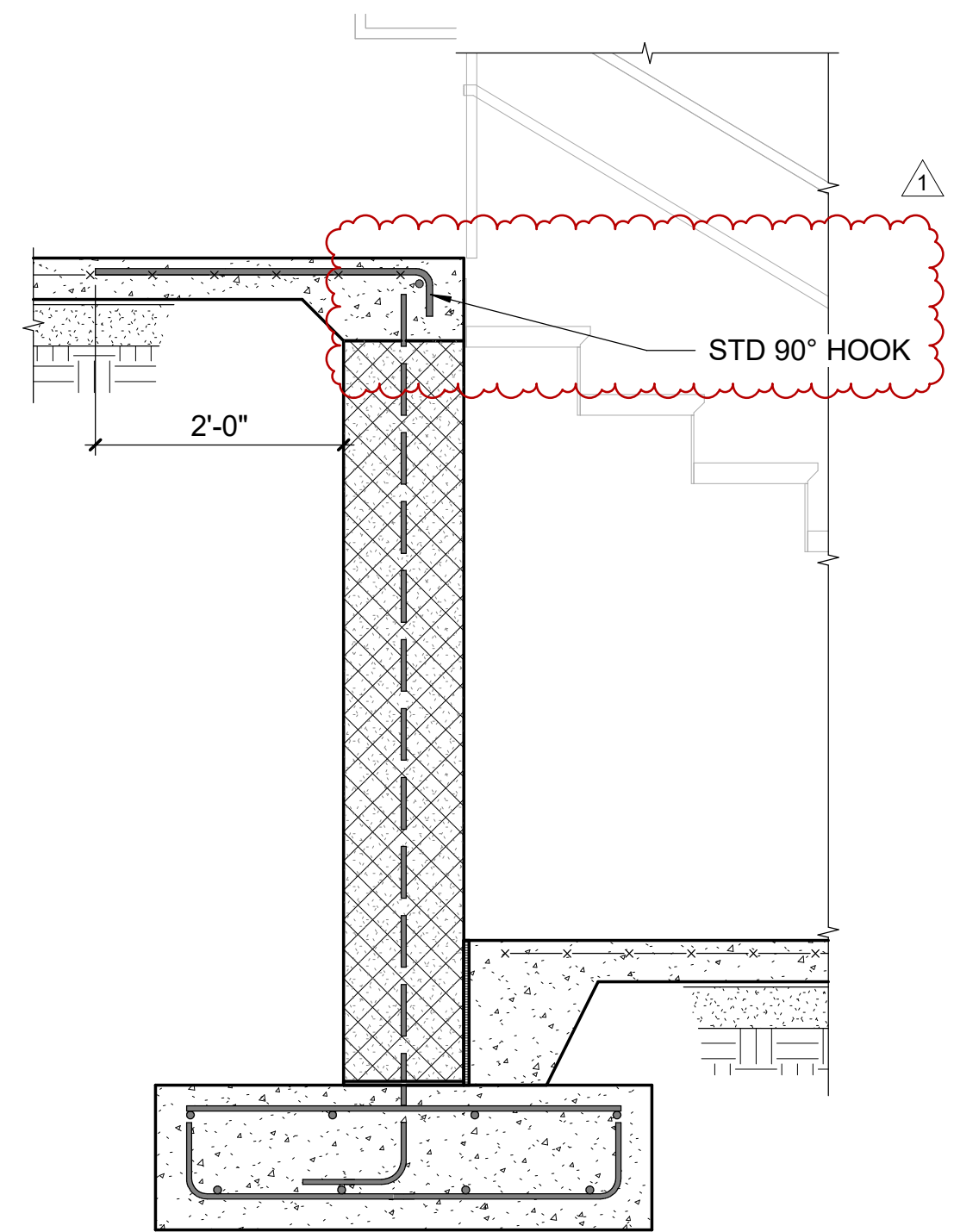
COLUMN FOOTING SCHEDULE						
MARK	SIZE			REINFORCING		REMARKS
	LENGTH	WIDTH	DEPTH	BOTTOM	TOP	
CF5	5' - 0"	5' - 0"	1'-2"	(5) #6 EW	(5) #6 EW	-
CF6	6' - 0"	6' - 0"	1'-2"	(6) #6 EW	(6) #6 EW	-



4 SECTION
3/4" = 1'-0"



2 CONNECTOR FOUNDATION PLAN AT LIFT
3/16" = 1'-0"



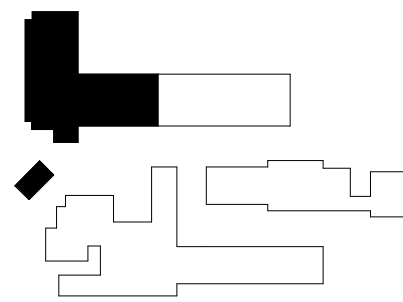
3 SECTION
3/4" = 1'-0"

FOUNDATION PLAN NOTES

- REFERENCE ARCHITECTURAL DRAWINGS FOR DIMENSIONS TO NONBEARING WALLS, WALL CONTROL JOINTS AND OPENINGS.
- ALL ELEVATIONS ARE BASED ON A REFERENCED FIRST FLOOR ELEVATION OF 0'-0" = 316.64' AND REFERENCED GROUND FLOOR ELEVATION OF -15'-4" = 301.30'. REFER TO ARCHITECTURAL DRAWINGS FOR FINISH FLOOR MATERIALS.
- TOP OF ALL COLUMN AND WALL FOOTINGS MUST BE AT THE FOLLOWING ELEVATIONS UNLESS OTHERWISE NOTED ON PLAN. EXTERIOR WALL AND COLUMN FOOTINGS -2'-0" (-2'-0" AT FIRST FLOOR SLAB ON GRADE. (-17'-4" AT GROUND FLOOR). INTERIOR WALL FOOTINGS -0'-8" (-0'-8" AT FIRST FLOOR SLAB ON GRADE. -16'-0" AT GROUND FLOOR).
- NOT ALL UTILITY LOCATIONS ARE SHOWN ON PLAN. THE CONTRACTOR MUST COORDINATE THE LOCATIONS, SIZES, AND INVERTS OF UTILITIES. AT LOCATIONS WHERE UTILITIES PASS BELOW THE TOP OF FOOTING ELEVATION, STEP THE TOP OF FOOTING DOWN ON EACH SIDE PER THE "STEPPED FOOTING DETAIL" AND SLEEVE THE UTILITY THROUGH THE FOUNDATION WALL. THE CONTRACTOR MAY, AT HIS/HER OPTION, SLEEVE THE UTILITY THROUGH THE FOUNDATION PER THE "UTILITY SLEEVE DETAIL".
- UNLESS OTHERWISE INDICATED, EXTEND WALL FOOTINGS A MINIMUM OF 6 INCHES BEYOND ENDS OF WALLS.
- NOT ALL SITE WALLS ARE NOT SHOWN ON PLAN. CONTRACTOR MUST COORDINATE CIVIL AND LANDSCAPE DRAWINGS FOR SITE WALL INFORMATION.
- DIMENSIONS SHOWN ON FOUNDATION PLAN ARE TO COLUMN GRIDLINES AND OUTSIDE FACE OF FOUNDATION WALLS, UNLESS OTHERWISE NOTED.

KEY NOTES

- PIPE PENETRATION THROUGH WALL ABOVE FOOTING. REFERENCE TYPICAL DETAIL. COORDINATE EXACT LOCATION AND ELEVATION WITH PLUMBING DRAWINGS.
- EXISTING BUILDING. REFERENCE EXISTING DRAWINGS FOR INFORMATION NOT NOTED. CONTRACTOR TO FIELD VERIFY FOUNDATION ELEVATIONS AND CONDITIONS ADJACENT TO NEW ADDITION.
- REFERENCE TYPICAL DETAIL AT FIRE DOORS FOR JAMBS AND LINTEL.
- AT THESE LOCATION REINFORCE PIER WITH (1) #5 AT EACH FACE. (6) BARS MINIMUM TOTAL. PROVIDE #2 CLOSED TIES AT 16 INCHES OC.
- GENERAL CONTRACTOR VERIFY EXISTING FOOTING ELEVATION.
- REINFORCE WALL ACCORDING TO SITE RETAINING WALL SCHEDULE FOR 6'-0" TALL WALL. REINFORCE EXTEND OF FOOTING TOE AND HEEL WITH #5 AT 12 INCHES OC EA WAY REFERENCE SITE AND BUILDING RETAINING WALL DETAIL. AT EXTERIOR WALL PROVIDE DOWELS FOR MASONRY REINFORCEMENT ABOVE.
- REINFORCE WALL ACCORDING TO SITE RETAINING WALL SCHEDULE FOR 6'-0" TALL WALL. SOIL SIDE ON STAIR HIGHER ELEVATION. BACKFILL WALL EVENLY AT BACKFILL AND STAIR STEPS.



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1 CONN
1/8" = 1'-0"

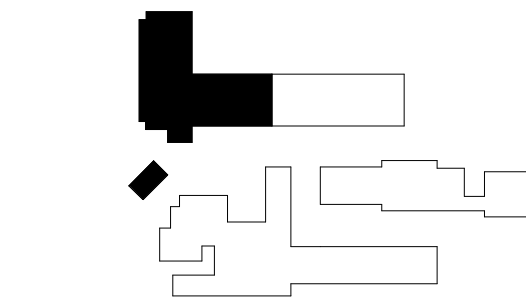
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- C. REFERENCE ARCHITECTURAL DRAWINGS FOR EXACT LIMITS OF SLAB DEPRESSIONS AND OMITTED SLABS.
- D. FLOOR SINKS AND DRAINS ARE NOT SHOWN ON PLAN. REFERENCE PME DRAWINGS FOR LOCATIONS.
- E. REFERENCE CIVIL AND LANDSCAPE DRAWINGS FOR EXTERIOR CONCRETE SLABS AND PAVING.
- F. SLAB-ON-GRADE JOINTS MUST BE SAWED JOINTS OR KEYED CONSTRUCTION JOINTS, UNLESS OTHERWISE NOTED. CONTRACTOR MUST COORDINATE ALL SLAB JOINTS WITH JOINTS IN BONDED FLOOR FINISHES. REFERENCE ARCHITECTURAL DRAWINGS FOR FLOOR FINISH JOINT LOCATIONS.
- G. PLACE (1) #4 x 3'-0" IN MIDDLE OF SLAB AT RE-ENTRANT CORNERS WHERE A SLAB JOINT DOES NOT OCCUR.

01 4" CONCRETE SLAB-ON-GRADE OVER VAPOR RETARDER AND 4"
DEPTH OF POROUS FILL UNLESS OTHERWISE INDICATED.
REINFORCE SLAB WITH 6x6-2W-9x2W-9. WELDED WIRE
REINFORCING PLANTING BED BELOW TOP OF SLAB.
MAINTAIN REINFORCEMENT IN POSITION ON BOLSTERS, CHAIRS
OR SPACERS DURING CONCRETE PLACEMENT.

12 DEPRESSED SLAB AT ADA LIFT. REFERENCE ARCHITECTURAL
DRAWINGS AND LIFT SUPPLIER FOR ADDITIONAL REQUIREMENTS.

38 REFERENCE TYPICAL STAIR ON GRADE DETAIL ON SHEET S502.

41 PROVIDE CONTROL JOINT AT RAMP WHERE SLAB ON GRADE
CHANGES IN SLOPE. TYPICAL.



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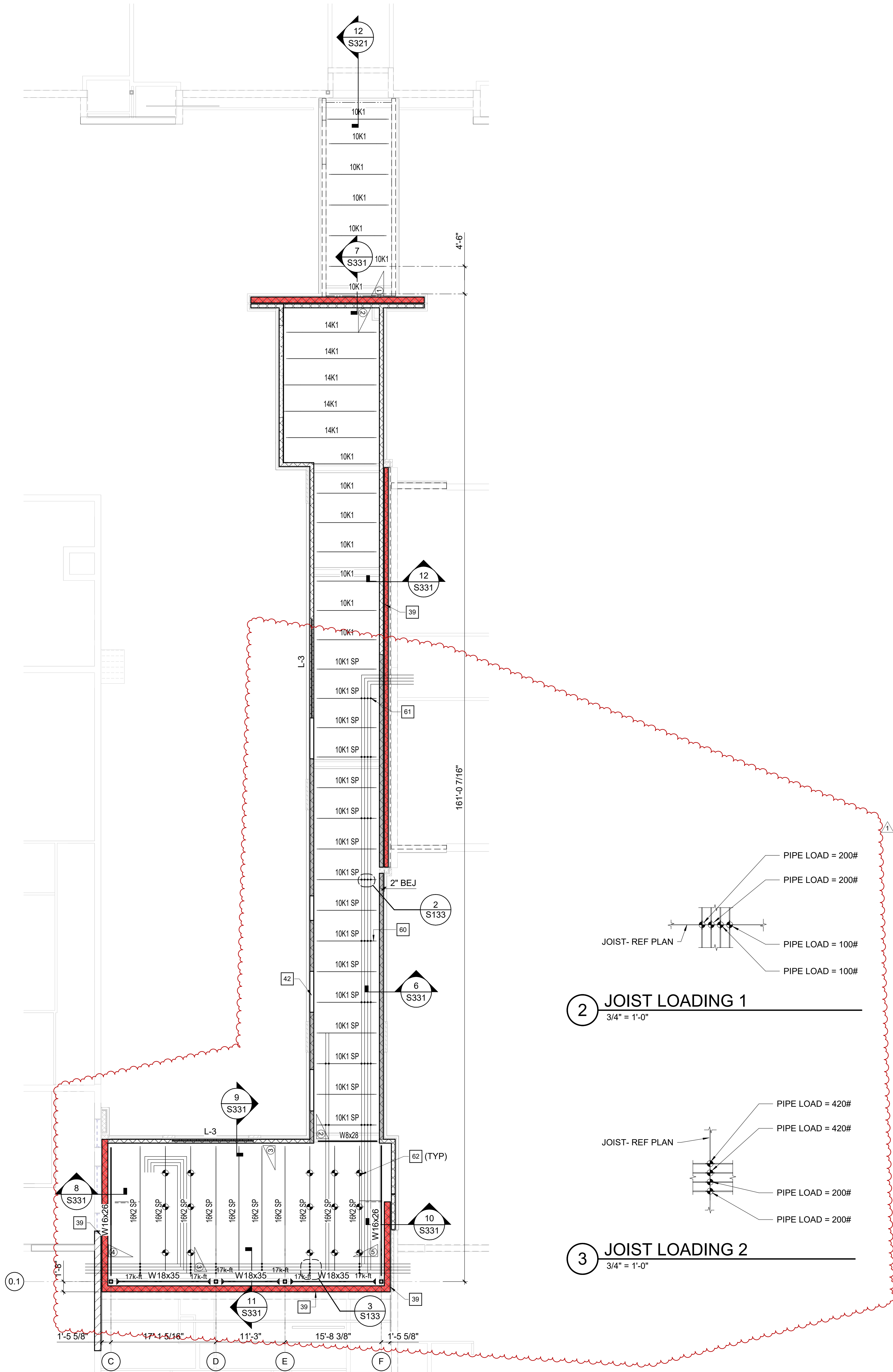
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1 CONNECTOR ROOF FRAMING PLAN

1/8" = 1'-0"



FRAMING PLAN NOTES

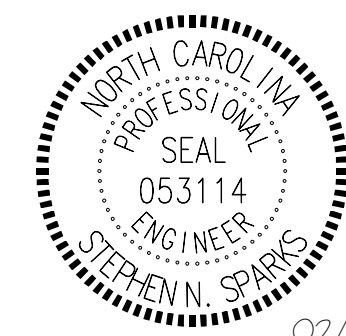
- REFERENCE FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
- TOP OF FINISHED FLOOR ELEVATION SHALL BE AS NOTED ON SLAB PLANS.
- FLOOR JOISTS AND BEAMS MUST BE EQUALLY SPACED BETWEEN POINTS OF KNOWN DIMENSIONS (NOT TO EXCEED 4'-0" ON-CENTER).
- STEEL ROOF FRAMING SUPPORTING 1 1/2" STEEL ROOF DECK MUST BE EQUALLY SPACED BETWEEN POINTS OF KNOWN DIMENSIONS (NOT TO EXCEED 5'-0" ON-CENTER).
- CONTRACTOR MUST POUR SLAB TO THICKNESS. SLAB AND JOISTS ARE NOT DESIGNED FOR EXCESS IN THICKNESS DUE TO CONCRETE POUR PONDING.
- PROVIDE BOTTOM CHORD EXTENSIONS AT ALL JOISTS ON COLUMN CENTERLINES.
- AT STEEL ROOF FRAMING, BOTTOM OF DECK ELEVATIONS ARE SHOWN ON PLAN. INTERMEDIATE ELEVATIONS SHALL BE STRAIGHT LINES BETWEEN GIVEN ELEVATIONS. INTERPOLATE AS REQUIRED FOR INTERMEDIATE BEARING ELEVATIONS, UNLESS OTHERWISE NOTED.
- COORDINATE AND VERIFY ALL MEMBER LOCATIONS, DIMENSIONS, WEIGHTS, OPENING SIZES, AND CURB DIMENSIONS FOR ALL MECHANICAL EQUIPMENT WITH THE ACTUAL EQUIPMENT FURNISHED. INCLUDE THIS INFORMATION ON THE JOIST AND STRUCTURAL STEEL SHOP DRAWINGS.

KEY NOTES

- 2 INCH EXPANSION JOINT TYPICAL AT FIREWALL ADJACENT TO NEW CONSTRUCTION AND EXISTING STRUCTURES. REFERENCE FOUNDATION FOR DIMENSIONS.
- AT CONNECTOR BOND BEAM LINTELS PER TYPICAL DETAIL ON S503 UNLESS OTHERWISE NOTED ON PLAN.
- CHILLED WATER AND HOT WATER LINES TO BE HUNG FROM JOIST. JOIST SUPPLIER TO DESIGN JOIST TO SUPPORT WATER LINES.
- APPROXIMATE SUPPORT POINTS. FINAL WATER LINE SUPPORT POINTS TO BE COORDINATE WITH MEP.
- JOIST TO BE DESIGNED FOR A 400# POINT LOAD. PIPES ARE TO BE CENTERED BETWEEN JOIST. COORDINATE FILE LOCATIONS PRIOR TO FABRICATION AND PLACEMENT.

COOPER ACADEMY A & R

PROJECT TITLE



02/26/2024



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Corporation No. C-4360

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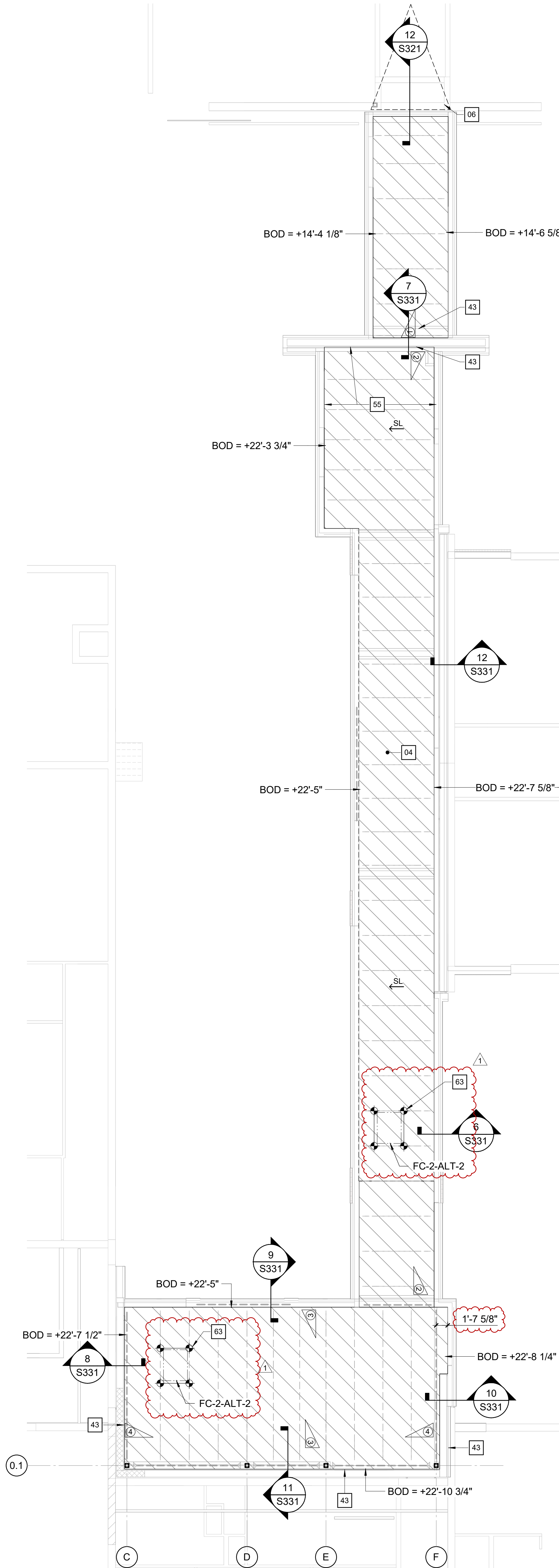
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**ALT. 2 CONNECTOR
ROOF FRAMING PLAN**
SHEET TITLE

S133

SHEET

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1 CONNECTOR ROOF DECK PLAN

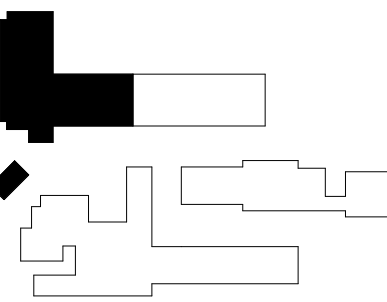
1/8" = 1'-0"

FRAMING PLAN NOTES

- REFERENCE FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
- TOP OF FINISHED FLOOR ELEVATION SHALL BE AS NOTED ON SLAB PLANS.
- FLOOR JOISTS AND BEAMS MUST BE EQUALLY SPACED BETWEEN POINTS OF KNOWN DIMENSIONS (NOT TO EXCEED 4'-0" ON-CENTER).
- STEEL ROOF FRAMING SUPPORTING 1 1/2" STEEL ROOF DECK MUST BE EQUALLY SPACED BETWEEN POINTS OF KNOWN DIMENSIONS (NOT TO EXCEED 5'-0" ON-CENTER).
- CONTRACTOR MUST POUR SLAB TO THICKNESS. SLAB AND JOISTS ARE NOT DESIGNED FOR EXCESS IN THICKNESS DUE TO CONCRETE POUR PONDING.
- PROVIDE BOTTOM CHORD EXTENSIONS AT ALL JOISTS ON COLUMN CENTERLINES.
- AT STEEL ROOF FRAMING, BOTTOM OF DECK ELEVATIONS ARE SHOWN ON PLAN. INTERMEDIATE ELEVATIONS SHALL BE STRAIGHT LINES BETWEEN GIVEN ELEVATIONS. INTERPOLATE AS REQUIRED FOR INTERMEDIATE BEARING ELEVATIONS, UNLESS OTHERWISE NOTED.
- COORDINATE AND VERIFY ALL MEMBER LOCATIONS, DIMENSIONS, WEIGHTS, OPENING SIZES, AND CURB DIMENSIONS FOR ALL MECHANICAL EQUIPMENT WITH THE ACTUAL EQUIPMENT FURNISHED. INCLUDE THIS INFORMATION ON THE JOIST AND STRUCTURAL STEEL SHOP DRAWINGS.

KEY NOTES

- 1 1/2" x 22 GAGE ROOF DECK. REFERENCE STEEL DECK NOTES.
- ROOF OVERBUILT BY CFMF SUPPLIER OVER ROOF DECK.
- REFERENCE FOUNDATION PLANS FOR BUILDING EXPANSION JOINTS DIMENSIONS.
- DECK BEARING ANGLE ANCHORS AT 8 INCHES ON CENTER AT THESE WALLS. SPLICE DECK BEARING ANGLES FOR CONTINUOUS CHORD.
- ROOF TOP UNIT TO BE ATTACHED TO STRUCTURE. ASSUME LOAD OF 150# AT EACH SUPPORT POINT. FINAL LOAD AND UNIT LOCATION TO BE COORDINATED WITH MEP.



COOPER ACADEMY A & R

PROJECT TITLE



02/26/2024



Structural Engineers
301 N West St., Suite 105
Raleigh, NC 27603
919.782.1833 - lynchmykins.com
LM Project Number: LK21.298
Corporation No. C-4360

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**ALT. 2 CONNECTOR
ROOF DECK PLAN**
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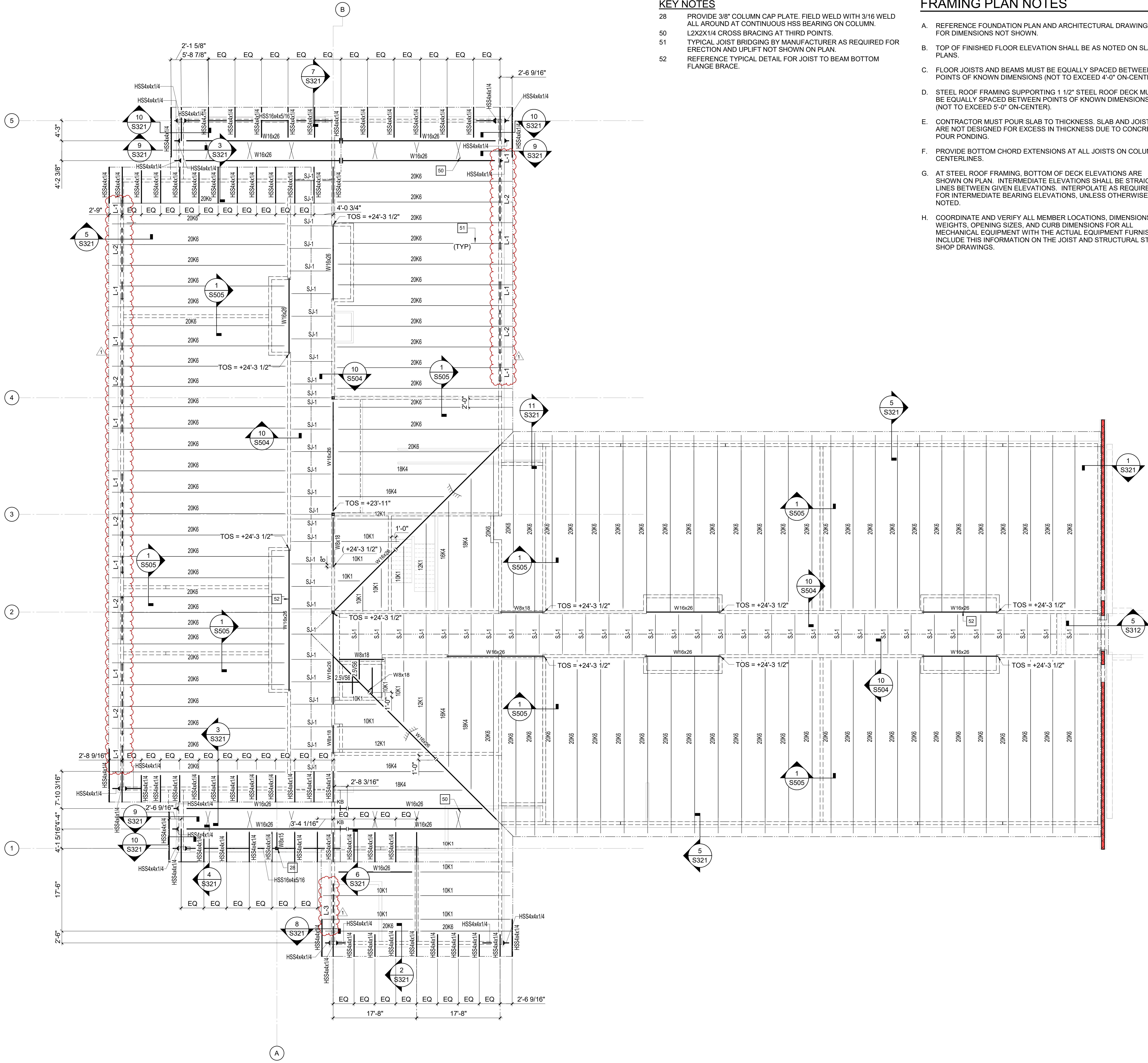
S134

SHEET



1 ROOF FRAMING PLAN

1/8" = 1'-0"



KEY NOTES

- 28 PROVIDE 3/8" COLUMN CAP PLATE, FIELD WELD WITH 3/16 WELD ALL AROUND AT CONTINUOUS HSS BEARING ON COLUMN.
- 50 L2X2X1/4 CROSS BRACING BY MANUFACTURER AS REQUIRED FOR ERECTION AND UPLIFT NOT SHOWN ON PLAN.
- 52 REFERENCE TYPICAL DETAIL FOR JOIST TO BEAM BOTTOM FLANGE BRACE.

FRAMING PLAN NOTES

- A. REFERENCE FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
- B. TOP OF FINISHED FLOOR ELEVATION SHALL BE AS NOTED ON SLAB PLANS.
- C. FLOOR JOISTS AND BEAMS MUST BE EQUALLY SPACED BETWEEN POINTS OF KNOWN DIMENSIONS (NOT TO EXCEED 4'-0" ON-CENTER).
- D. STEEL ROOF FRAMING SUPPORTING 1 1/2" STEEL ROOF DECK MUST BE EQUALLY SPACED BETWEEN POINTS OF KNOWN DIMENSIONS (NOT TO EXCEED 5'-0" ON-CENTER).
- E. CONTRACTOR MUST POUR SLAB TO THICKNESS. SLAB AND JOISTS ARE NOT DESIGNED FOR EXCESS IN THICKNESS DUE TO CONCRETE POUR PONDING.
- F. PROVIDE BOTTOM CHORD EXTENSIONS AT ALL JOISTS ON COLUMN CENTERLINES.
- G. AT STEEL ROOF FRAMING, BOTTOM OF DECK ELEVATIONS ARE SHOWN ON PLAN. INTERMEDIATE ELEVATIONS SHALL BE STRAIGHT LINES BETWEEN GIVEN ELEVATIONS. INTERPOLATE AS REQUIRED FOR INTERMEDIATE BEARING ELEVATIONS, UNLESS OTHERWISE NOTED.
- H. COORDINATE AND VERIFY ALL MEMBER LOCATIONS, DIMENSIONS, WEIGHTS, OPENING SIZES, AND CURB DIMENSIONS FOR ALL MECHANICAL EQUIPMENT WITH THE ACTUAL EQUIPMENT FURNISHED. INCLUDE THIS INFORMATION ON THE JOIST AND STRUCTURAL STEEL SHOP DRAWINGS.

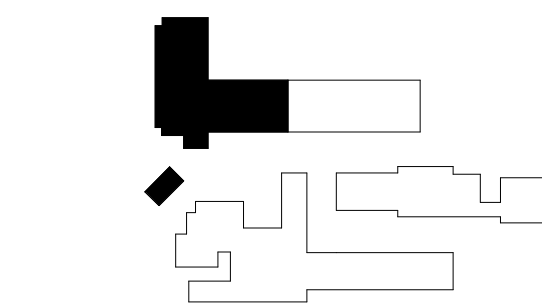


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1230 W. Morehead St., Suite 214
Charlotte, NC 28208
704/731-7000

RALEIGH
6131 Falls of Neuse Rd., Suite 204
Raleigh, NC 27609
919/975-6400

LEWISTON
1070 S. Lake Dr., Suite J
Lewiston, NC 28133
803/754-0507



COOPER ACADEMY A & R PROJECT TITLE



02/26/2024



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LM Project Number: LMK21.298
Corporation No. C-4360

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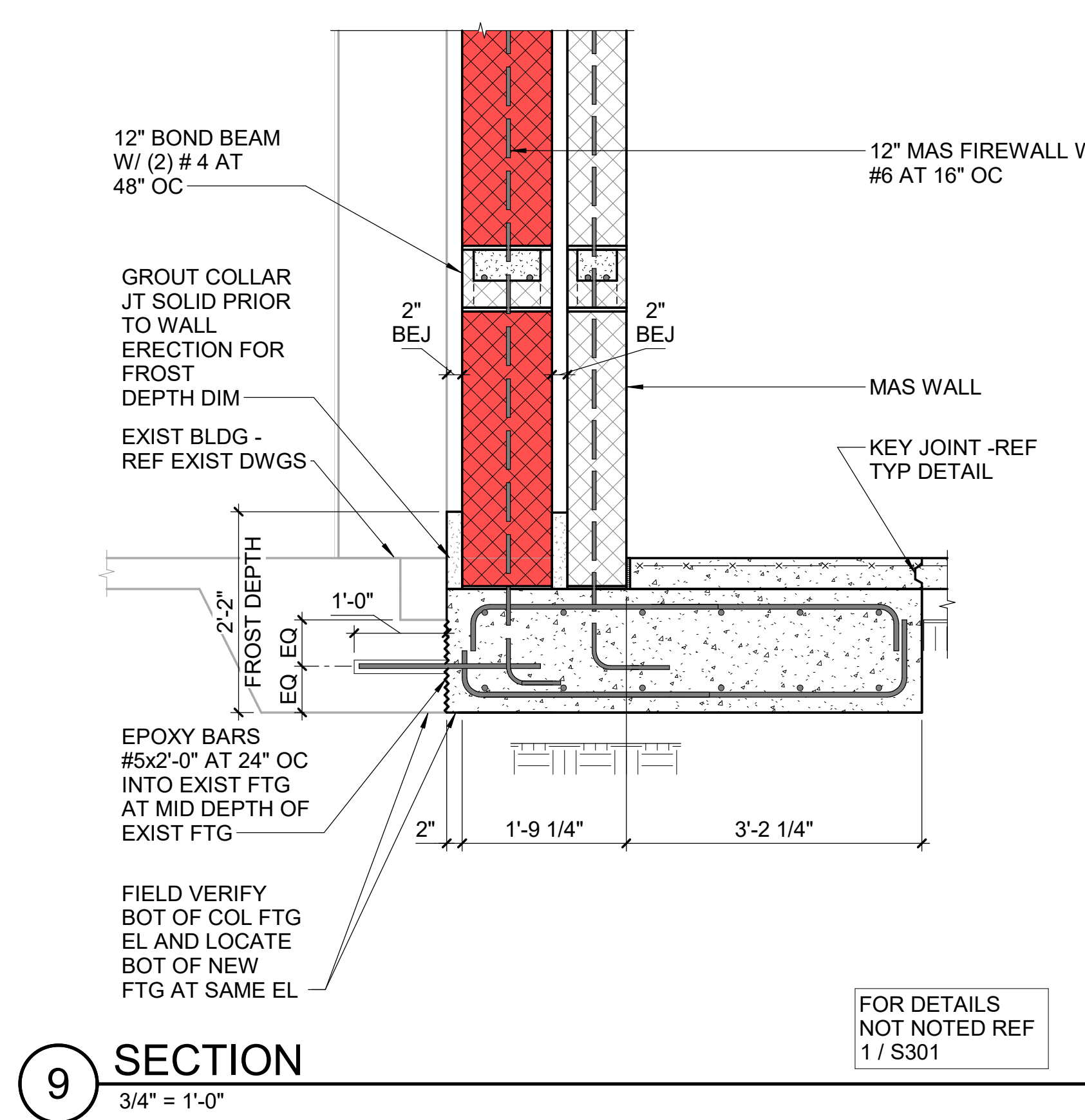
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SHEET TITLE

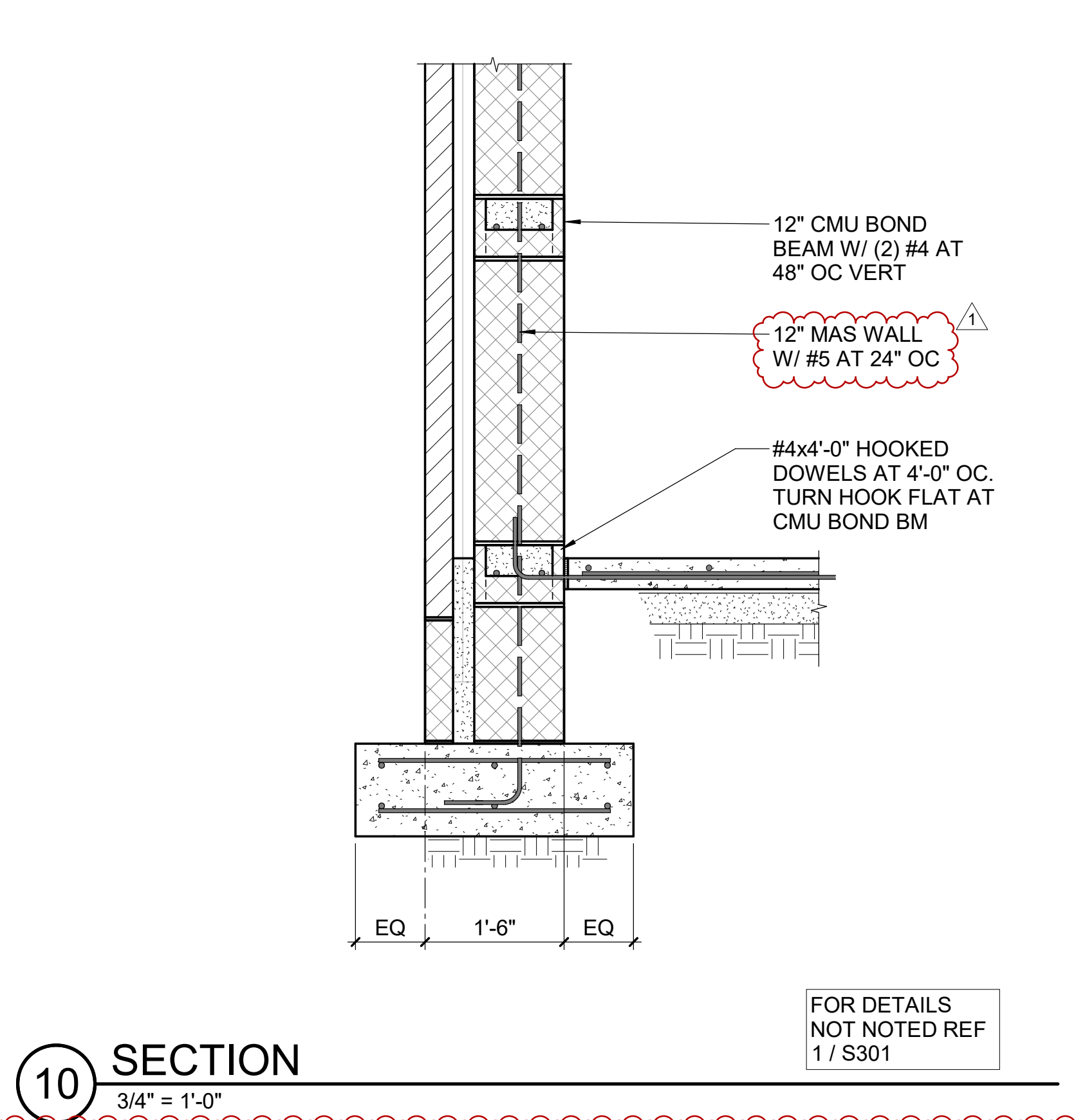
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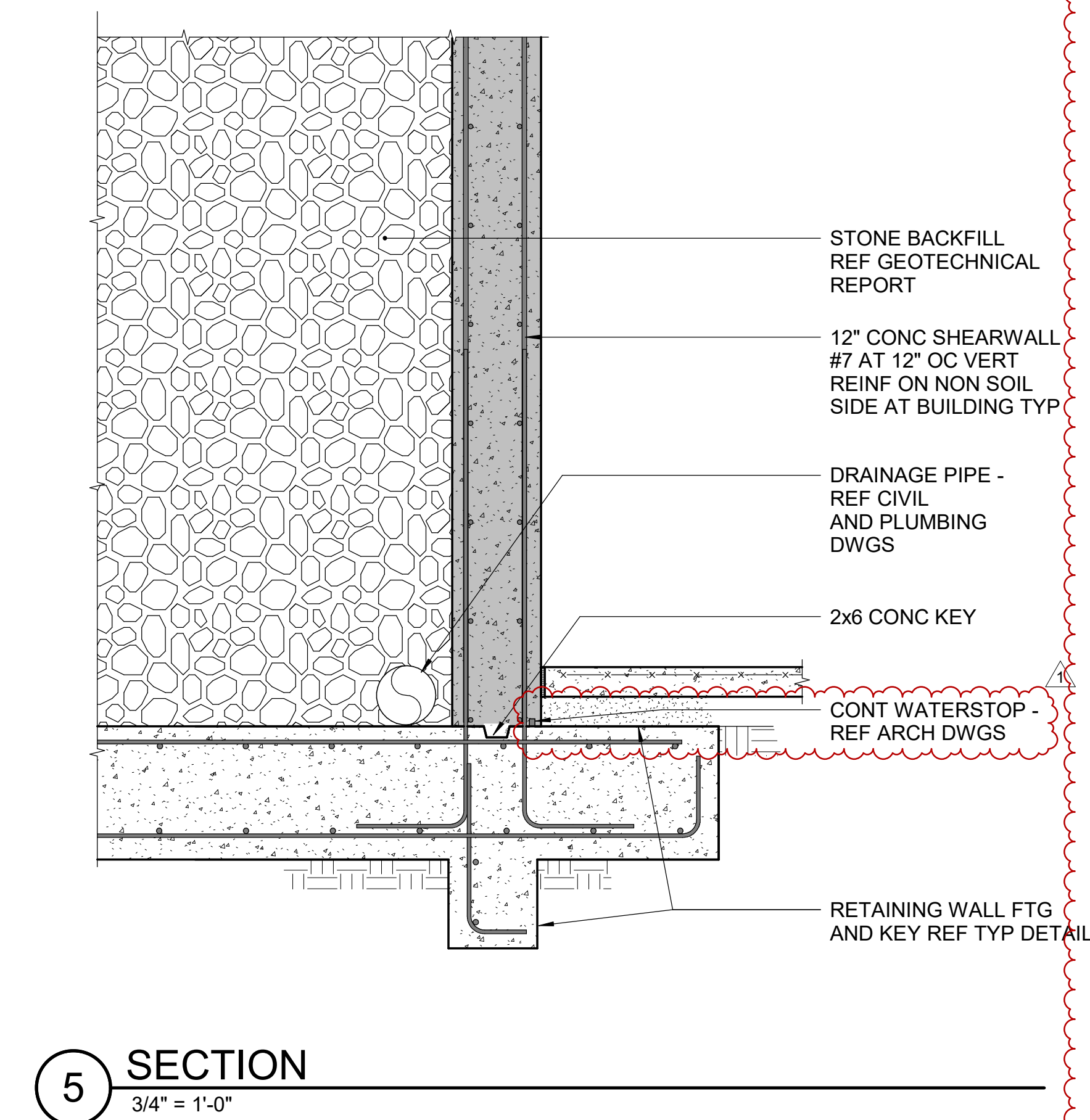
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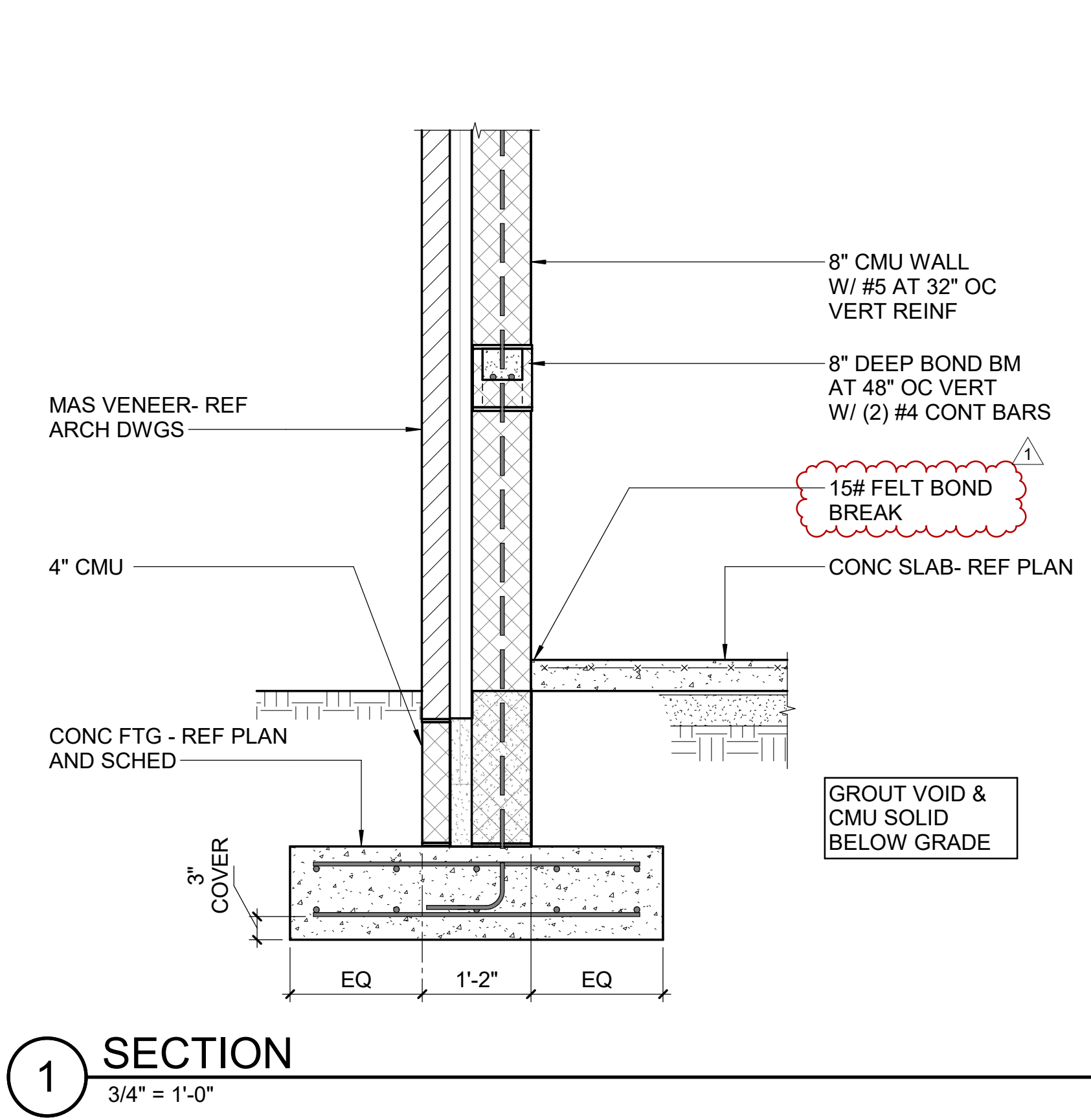
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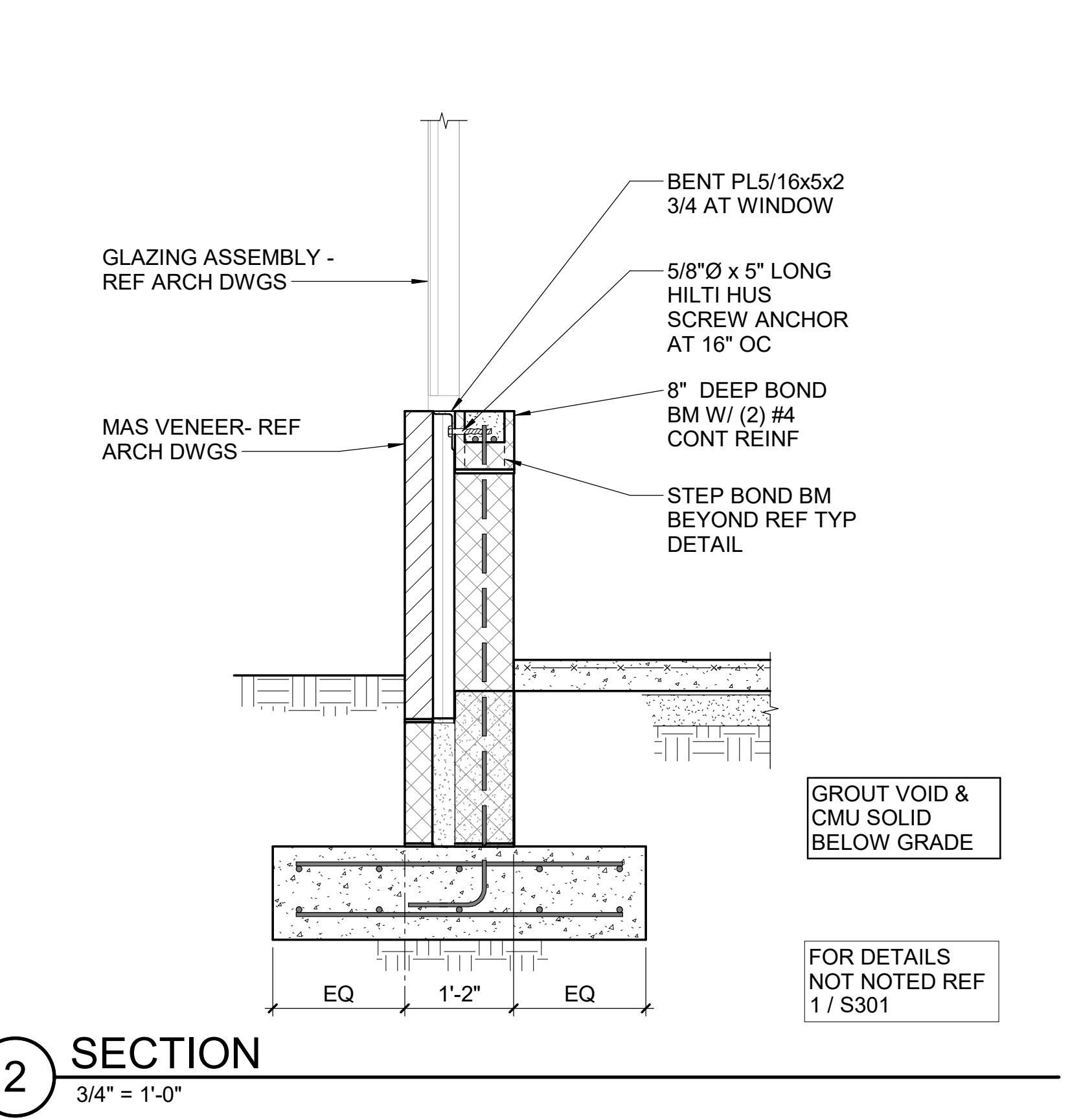
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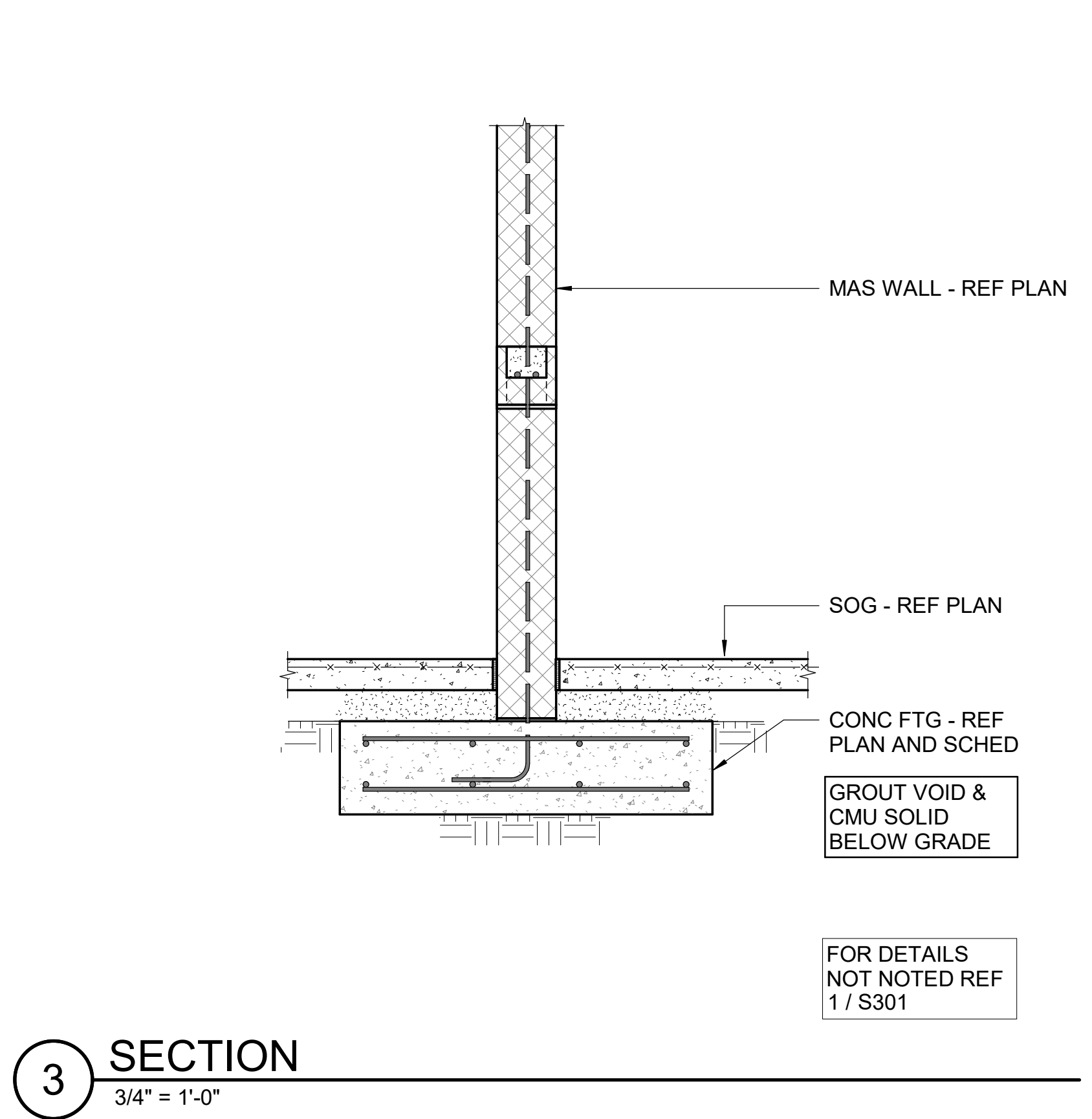
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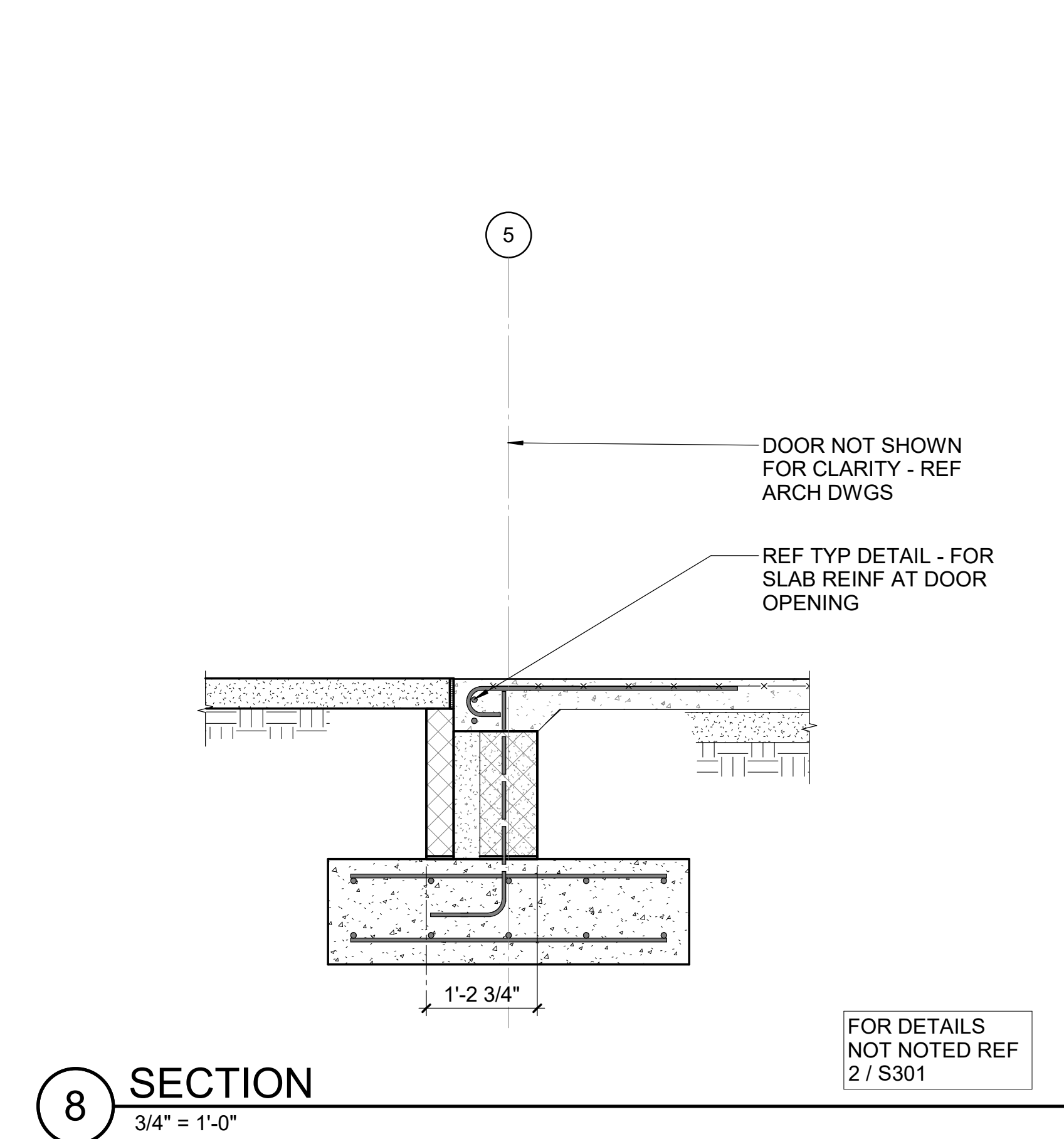
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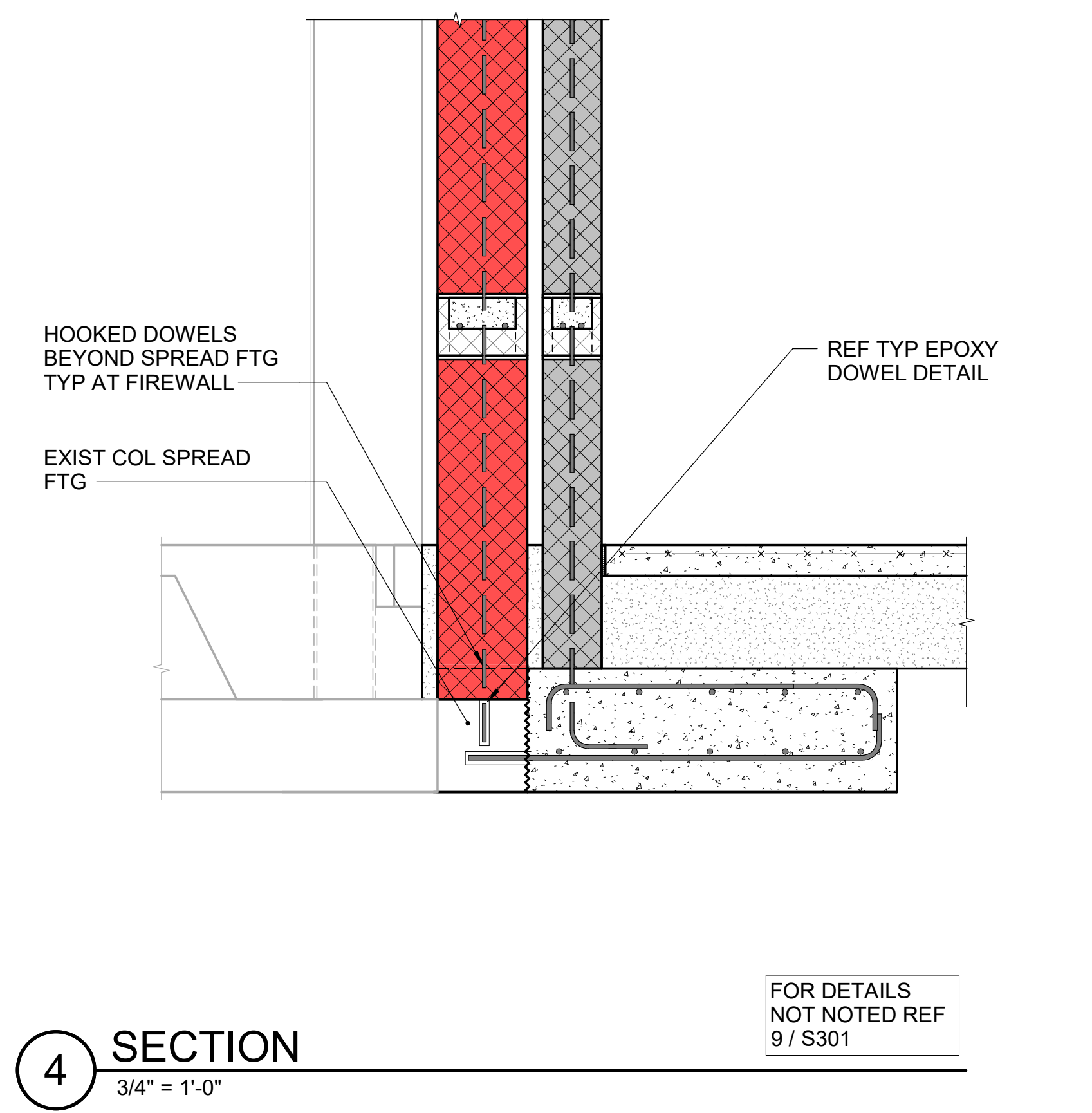
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3/4" = 1'-0"



3 SECTION
3/4" = 1'-0"



8 SECTION
3/4" = 1'-0"



4 SECTION
3/4" = 1'-0"



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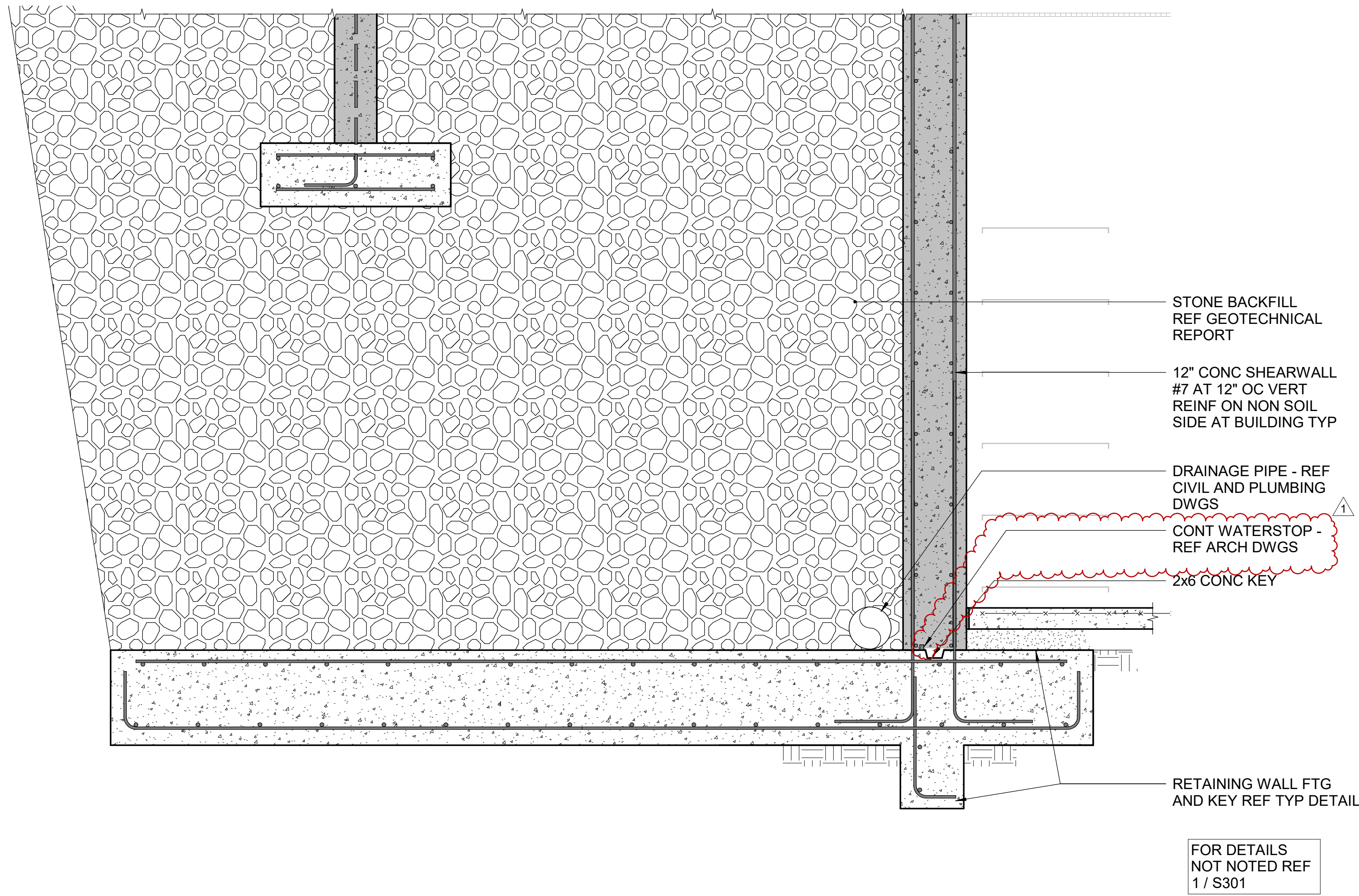
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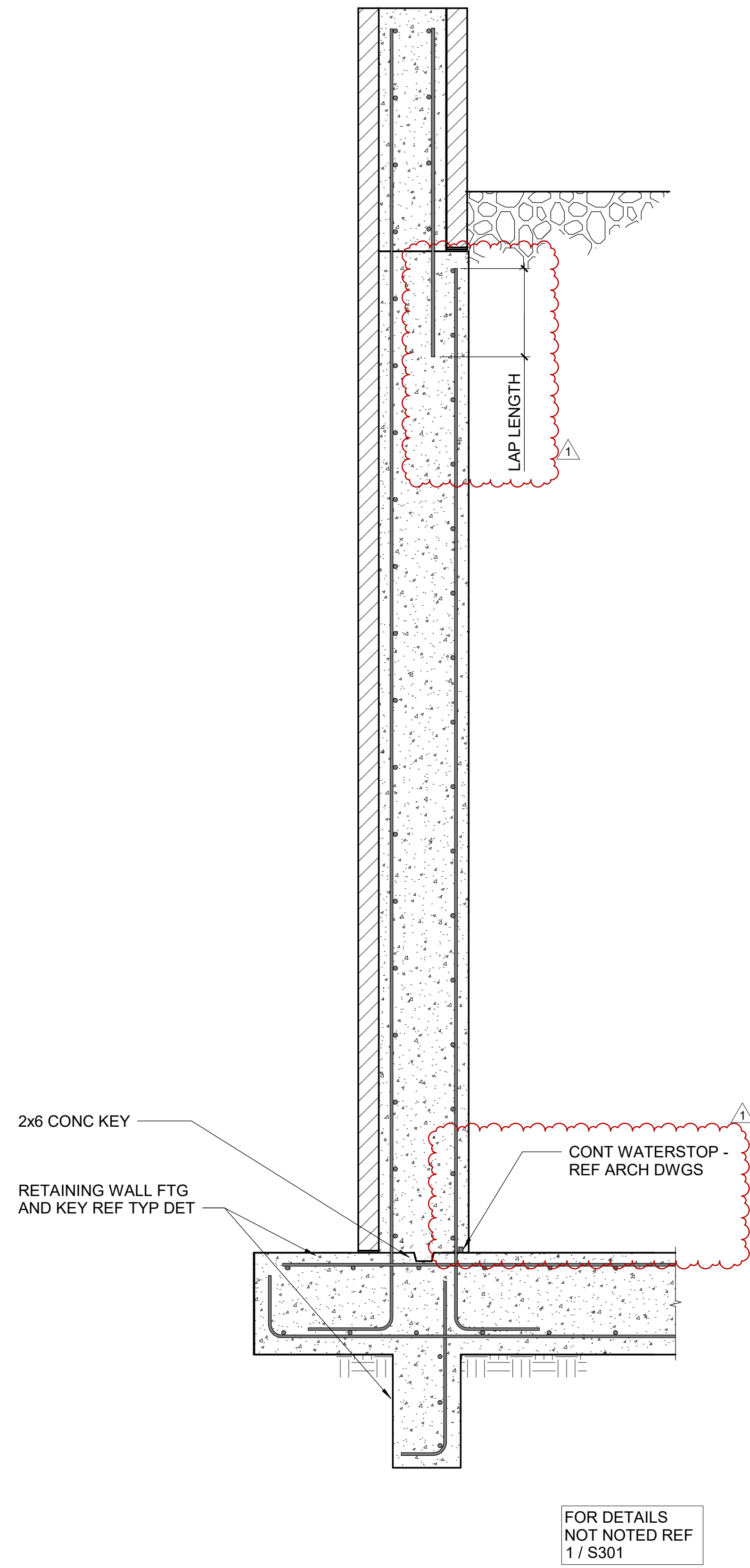
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NO.	DATE	DESCRIPTION
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2 SECTION
3/4" = 1'-0"



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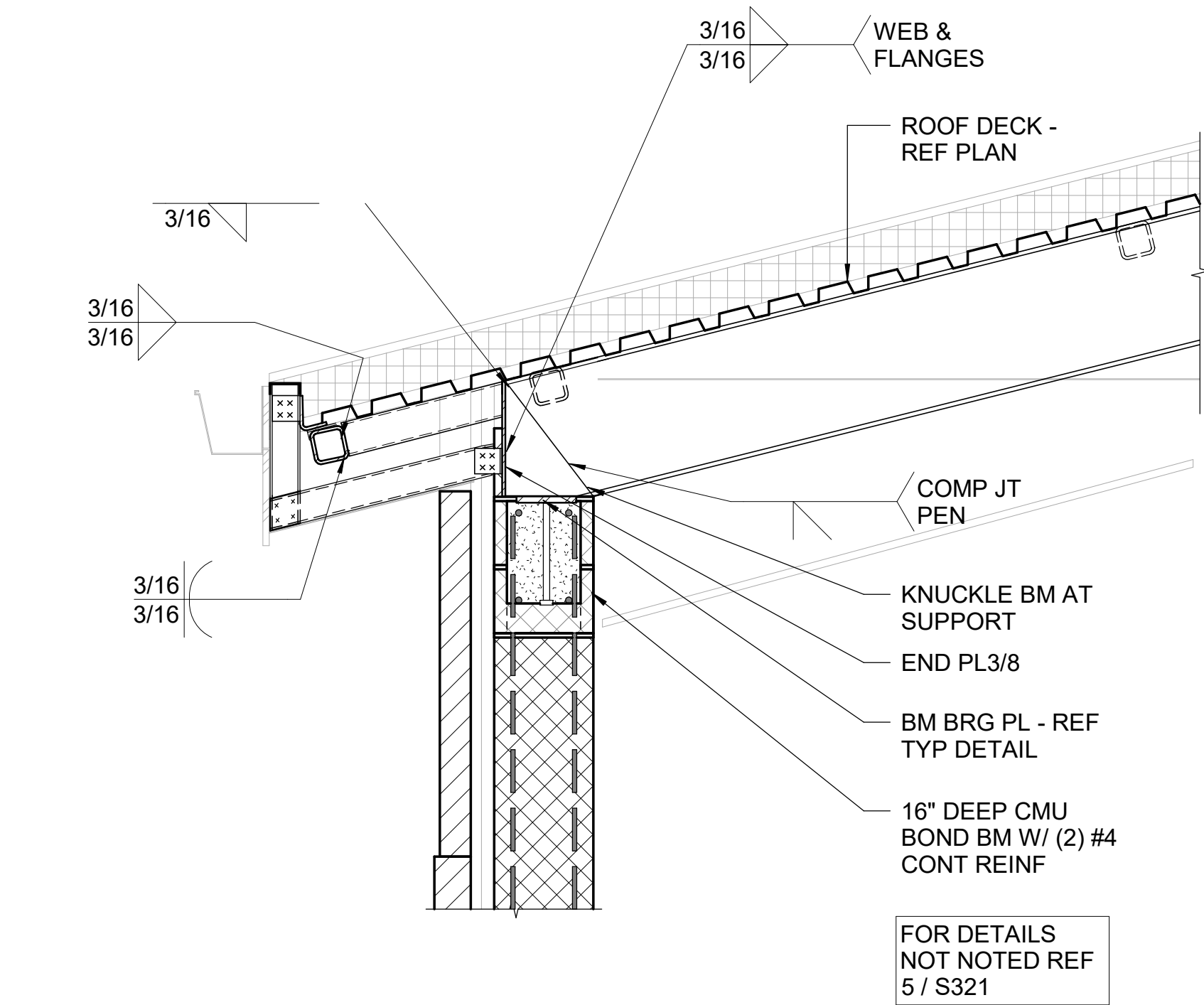
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LM Project Number: LK21.298
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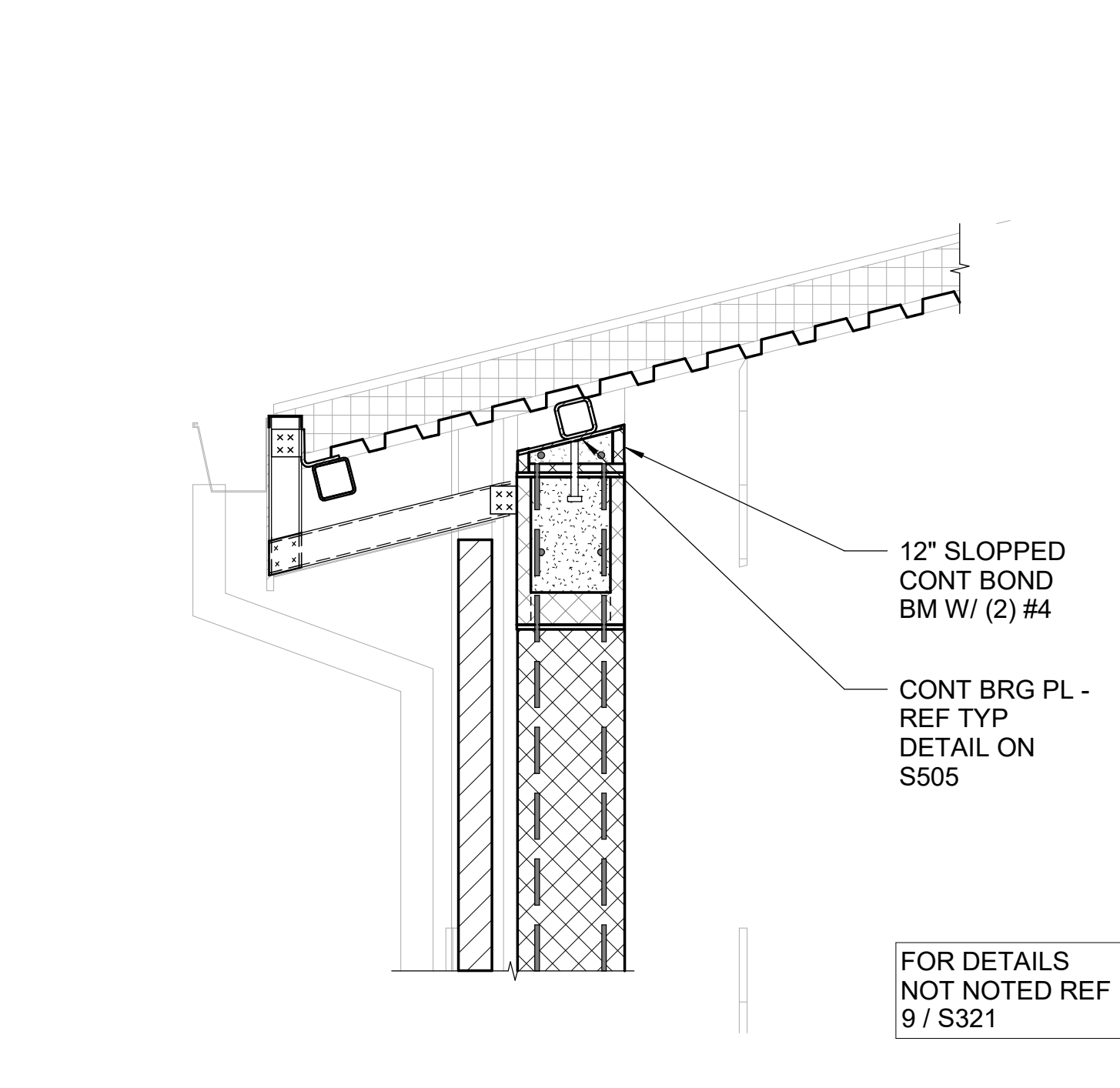
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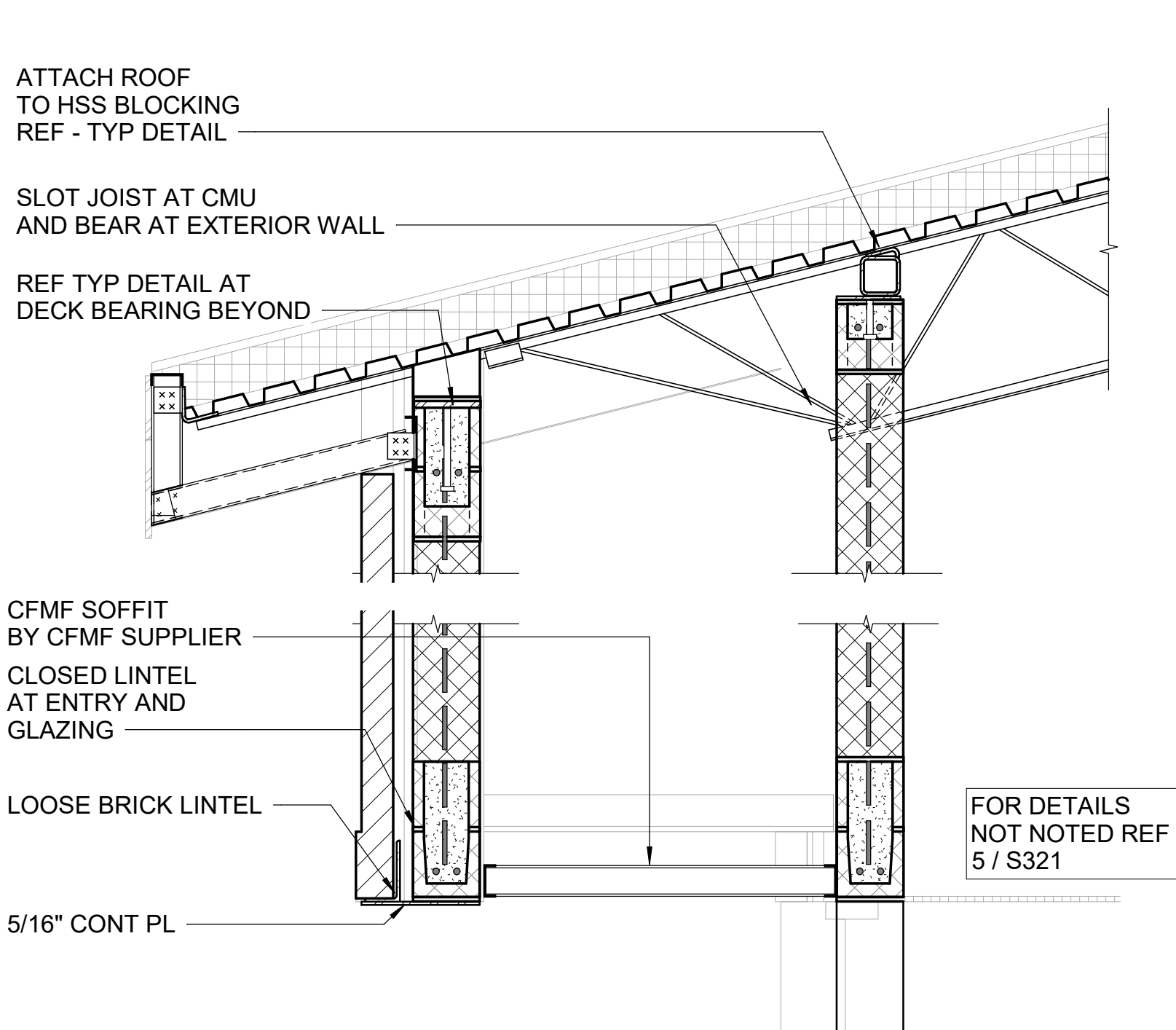
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S302
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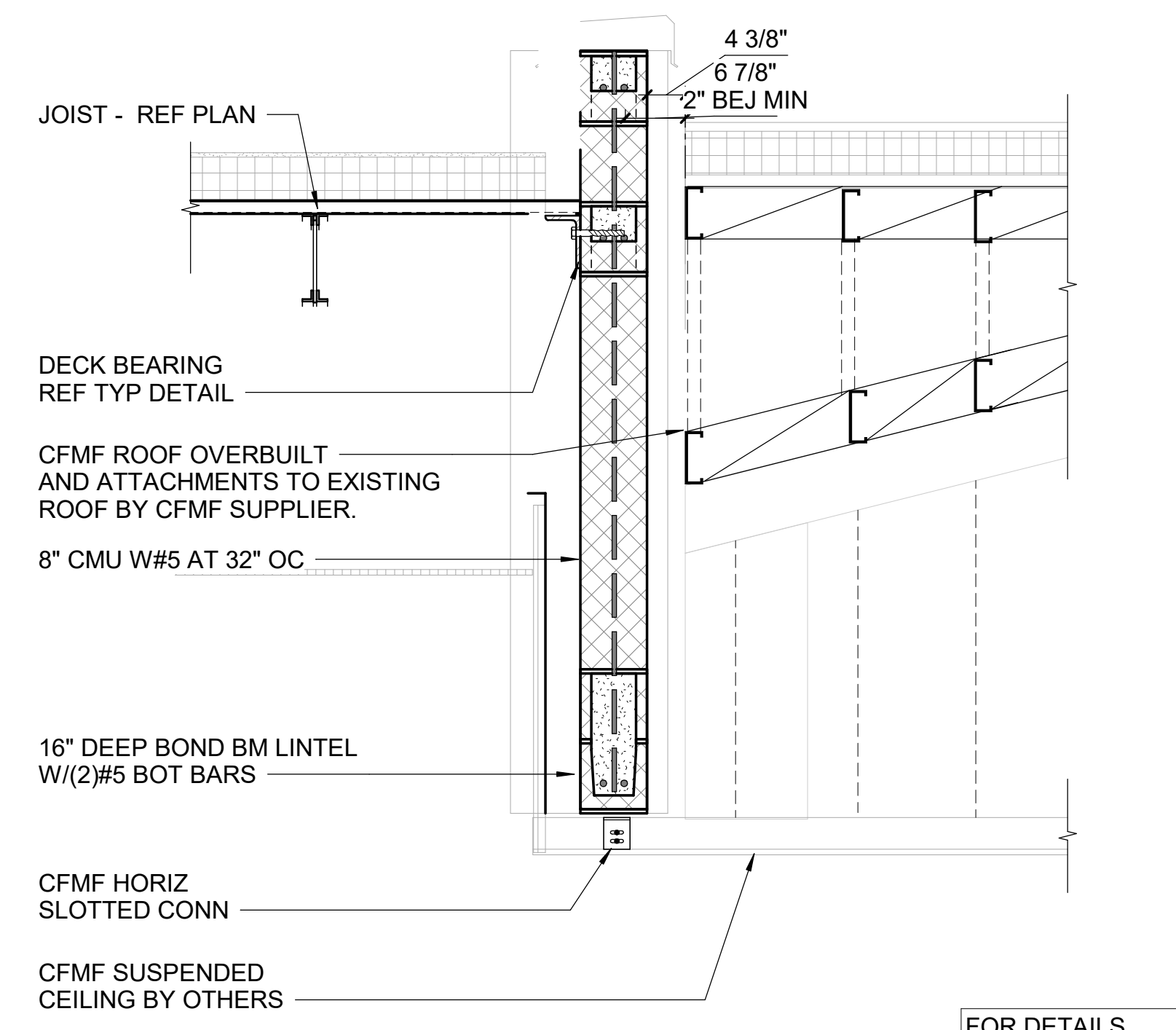
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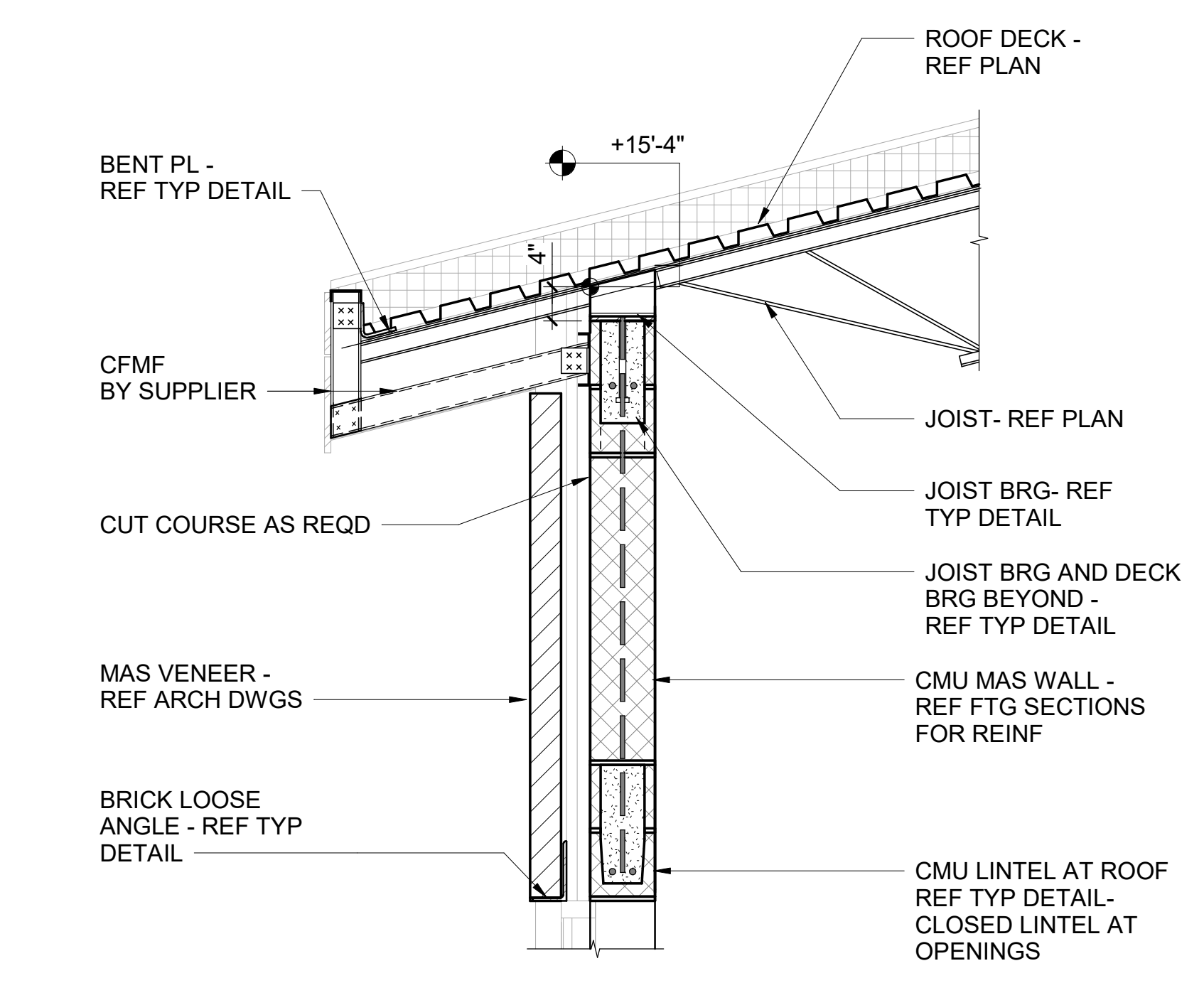
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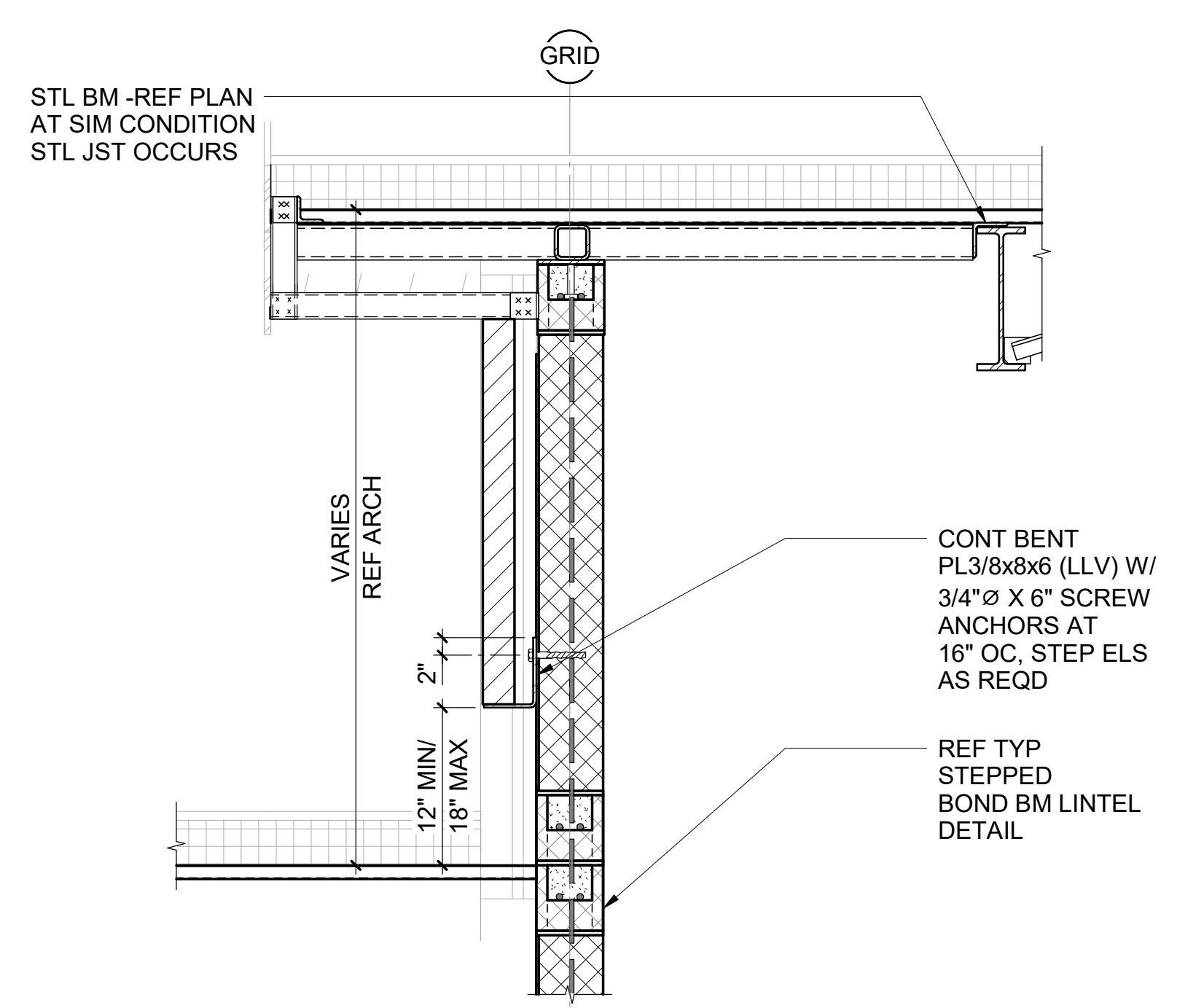
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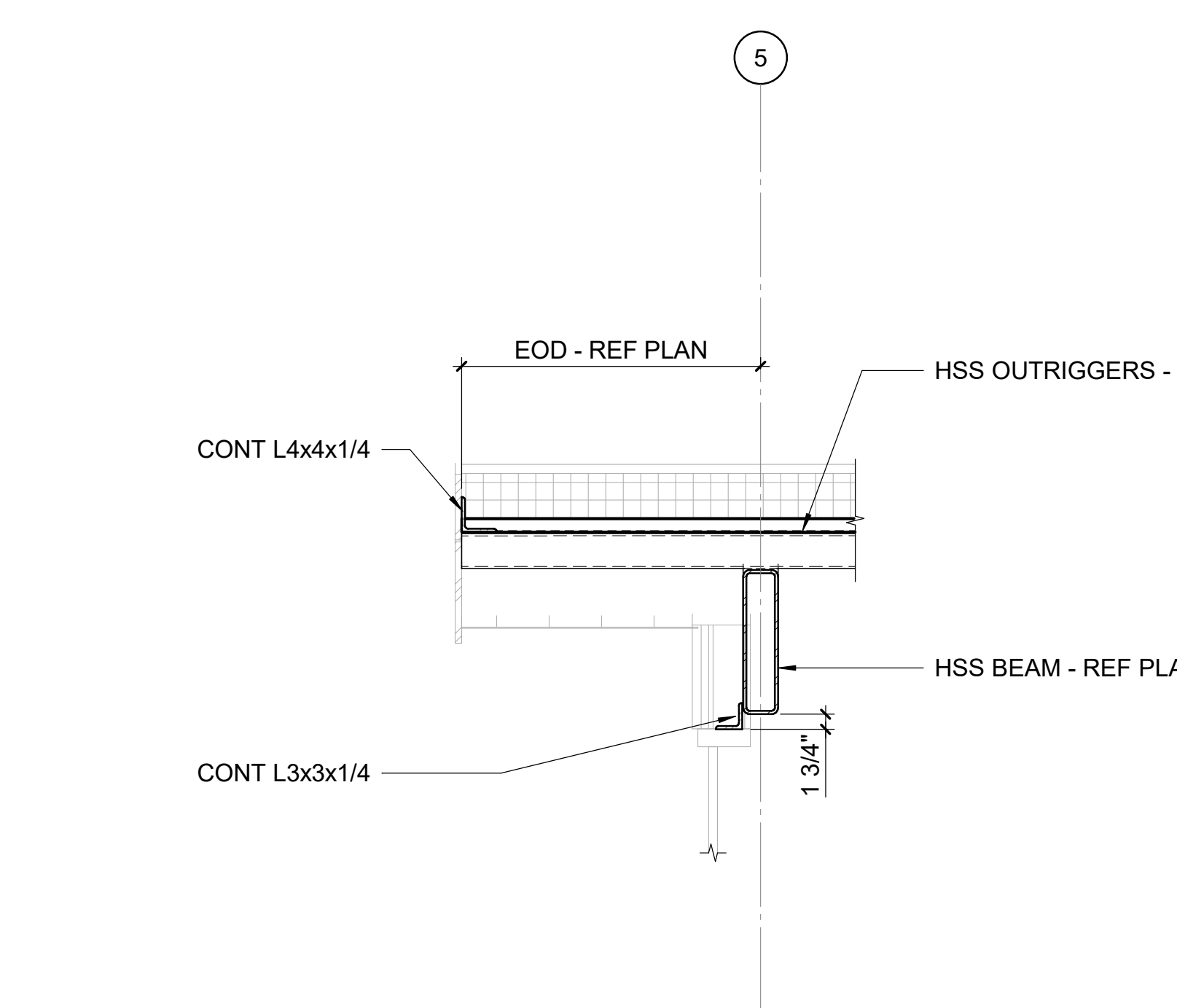
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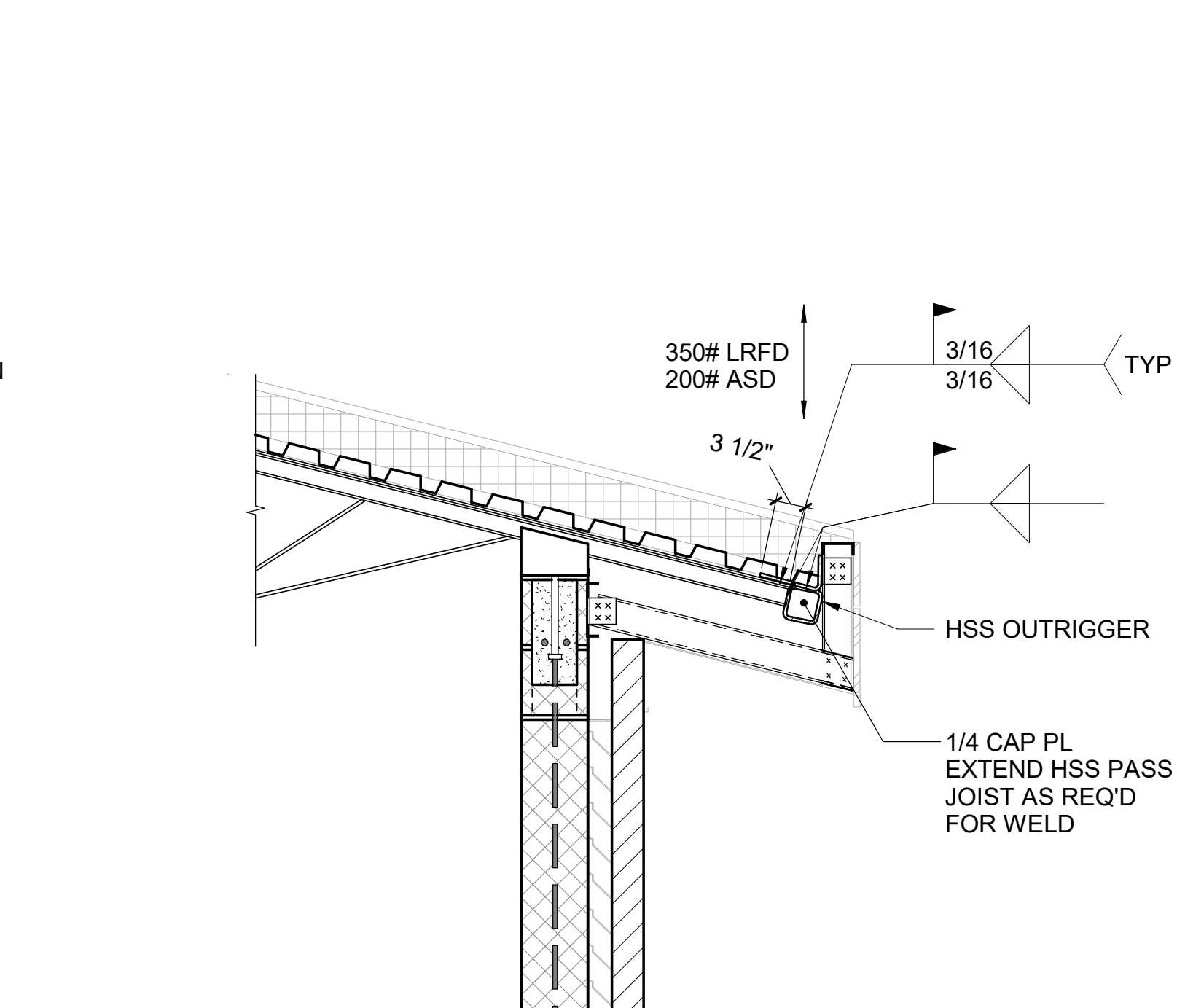
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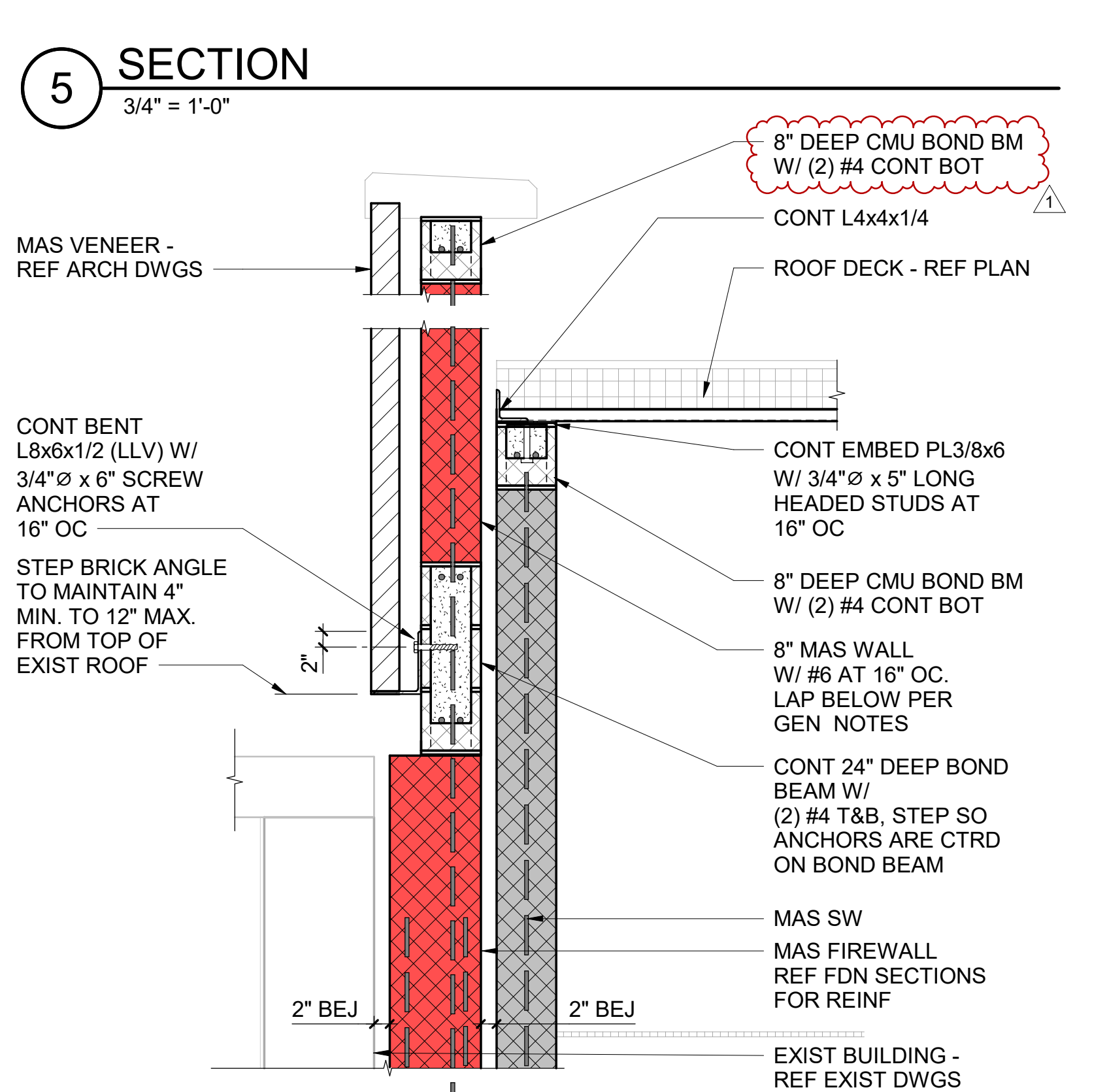
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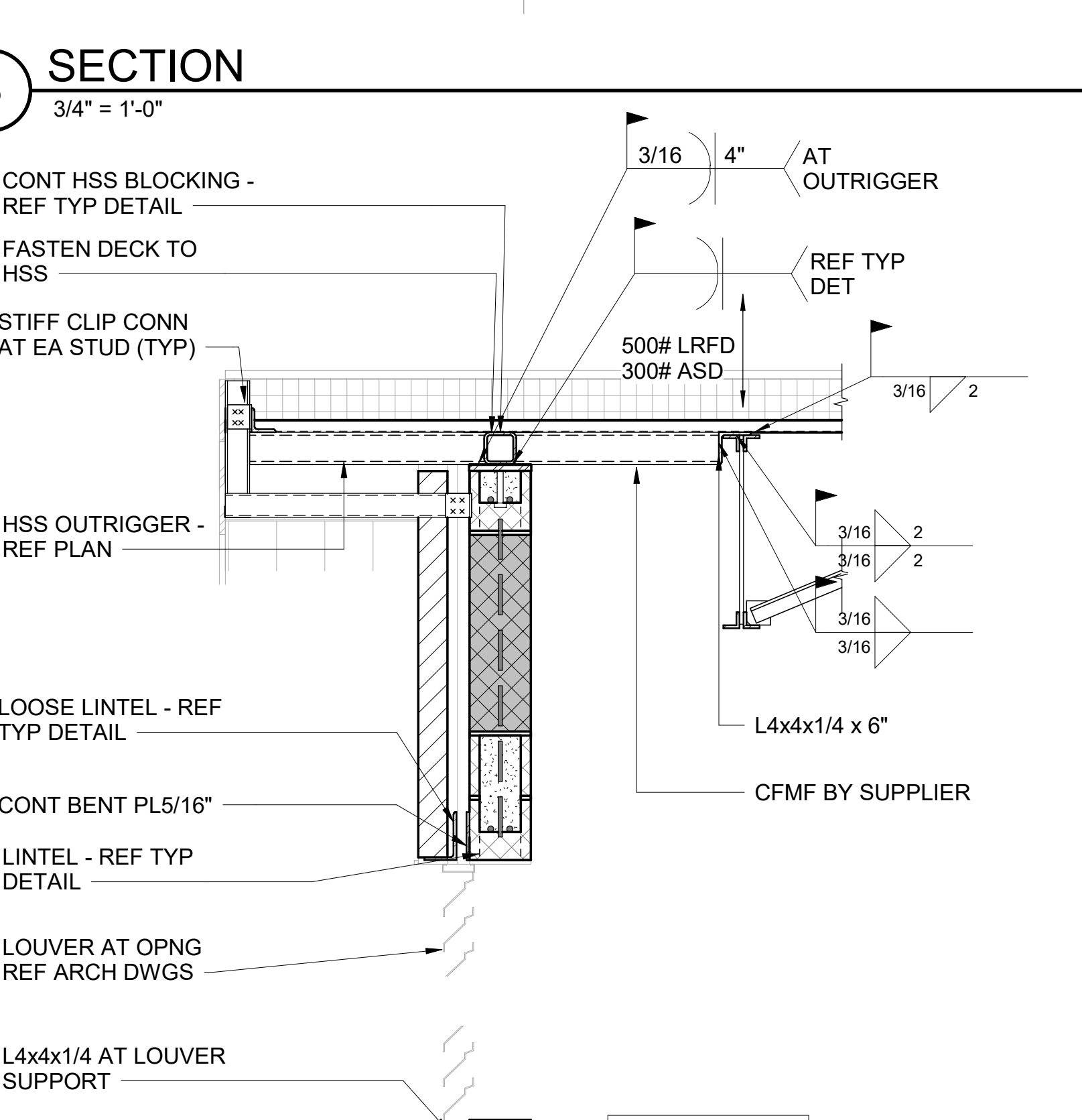
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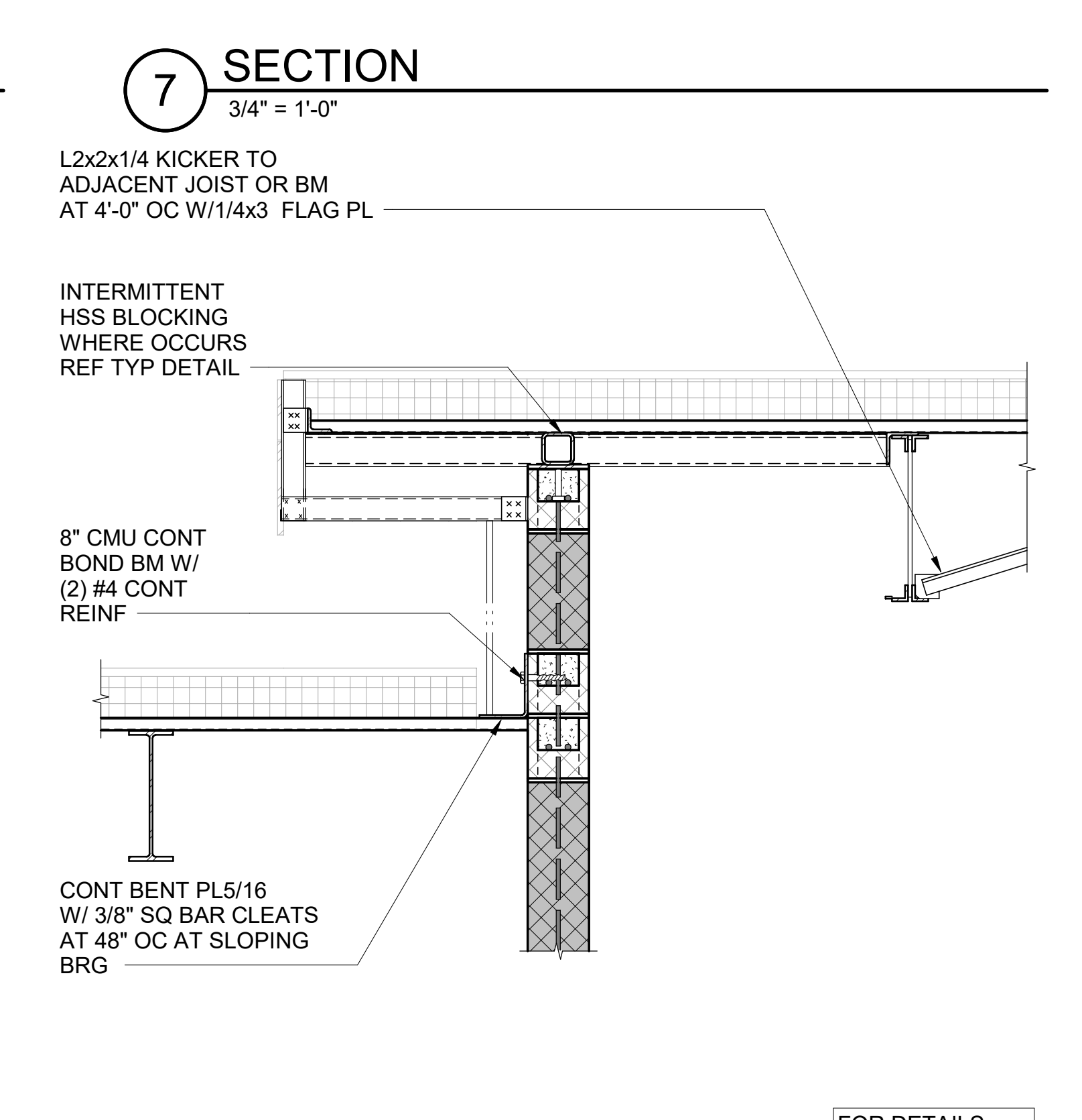
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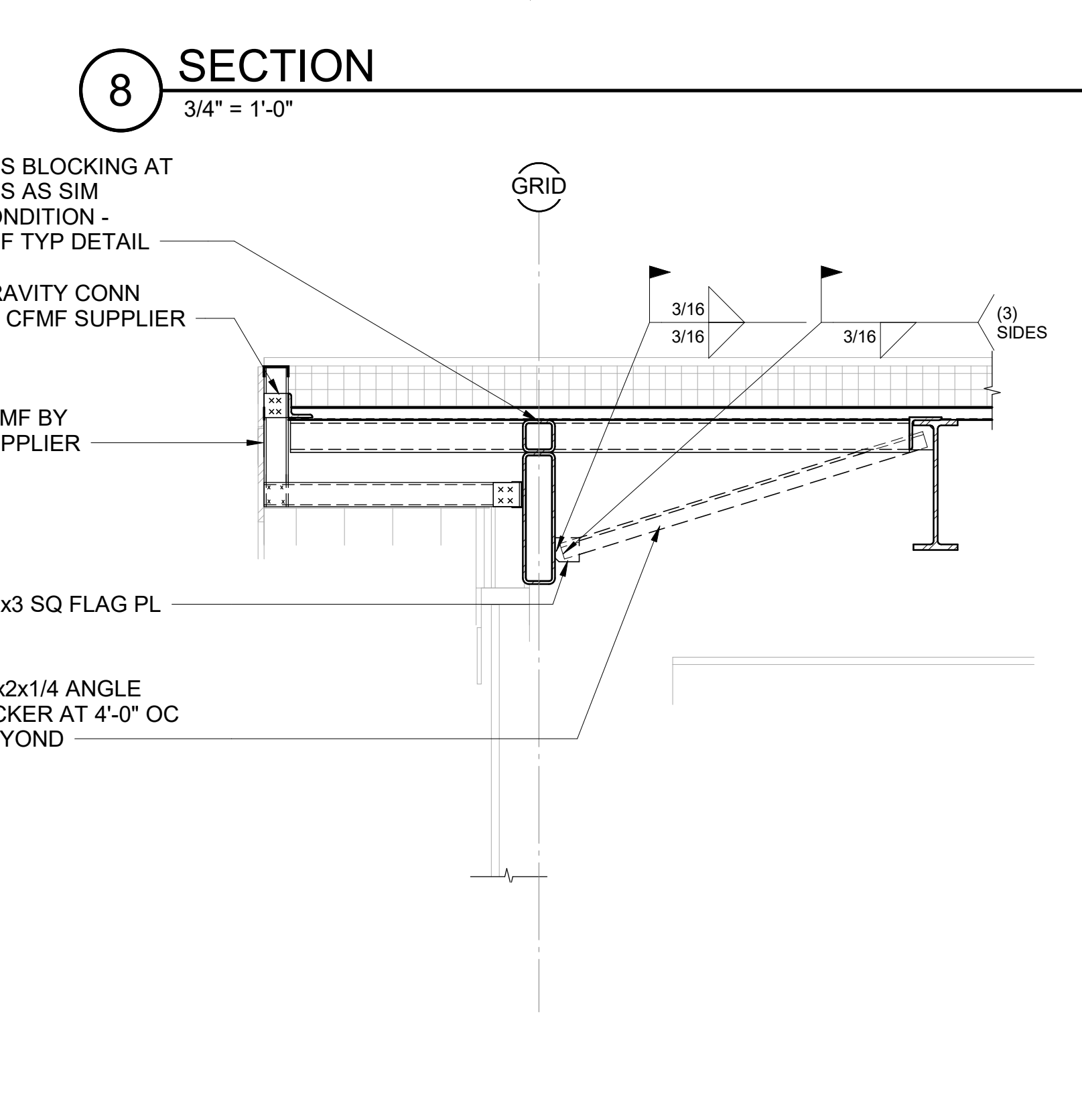
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2 SECTION
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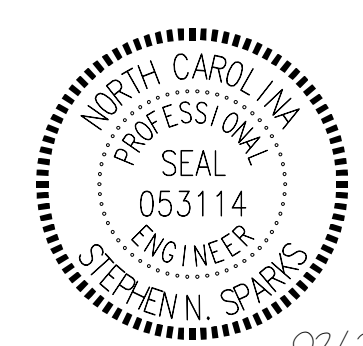


3 SECTION
3/4" = 1'-0"



4 SECTION
3/4" = 1'-0"

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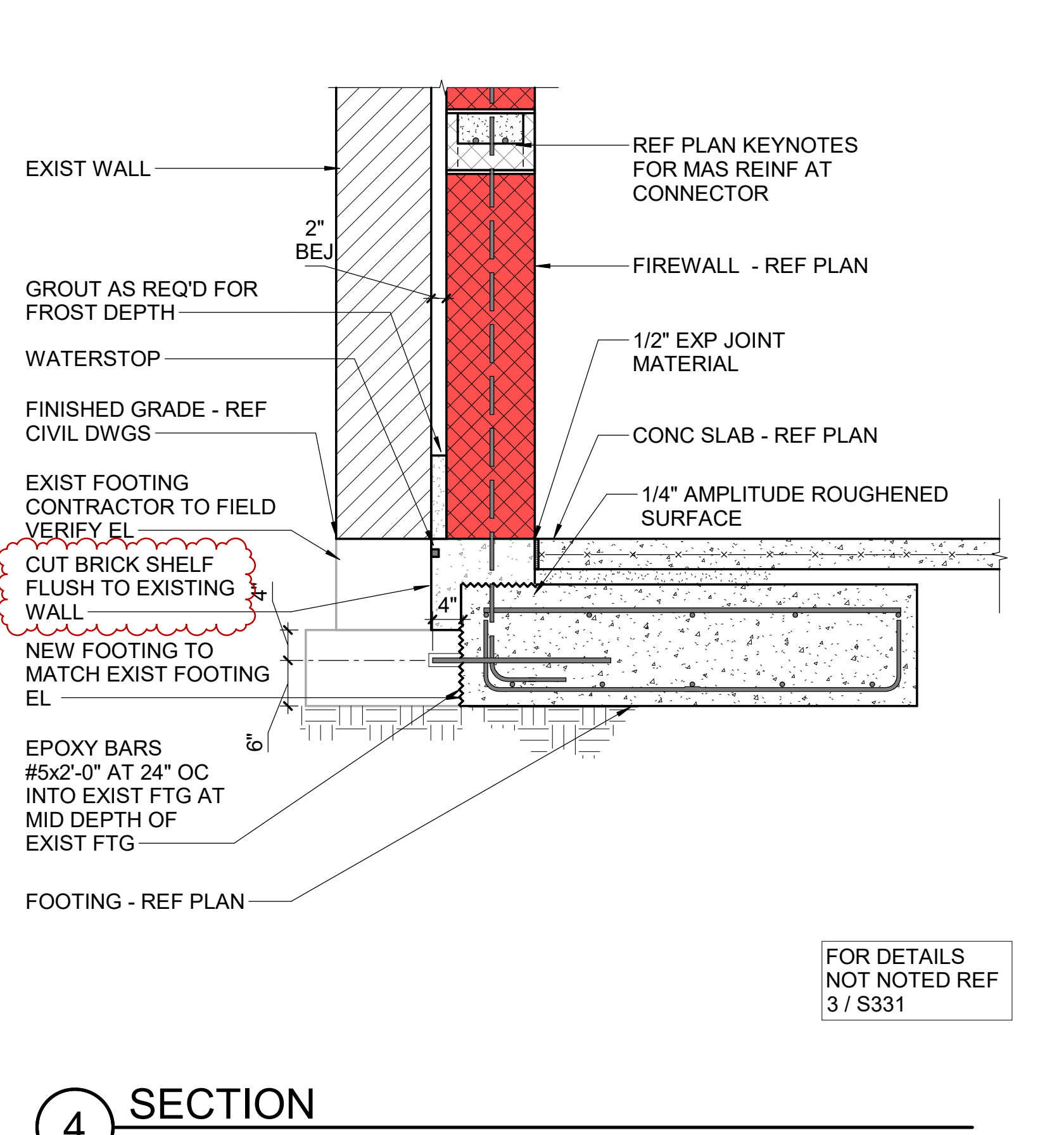
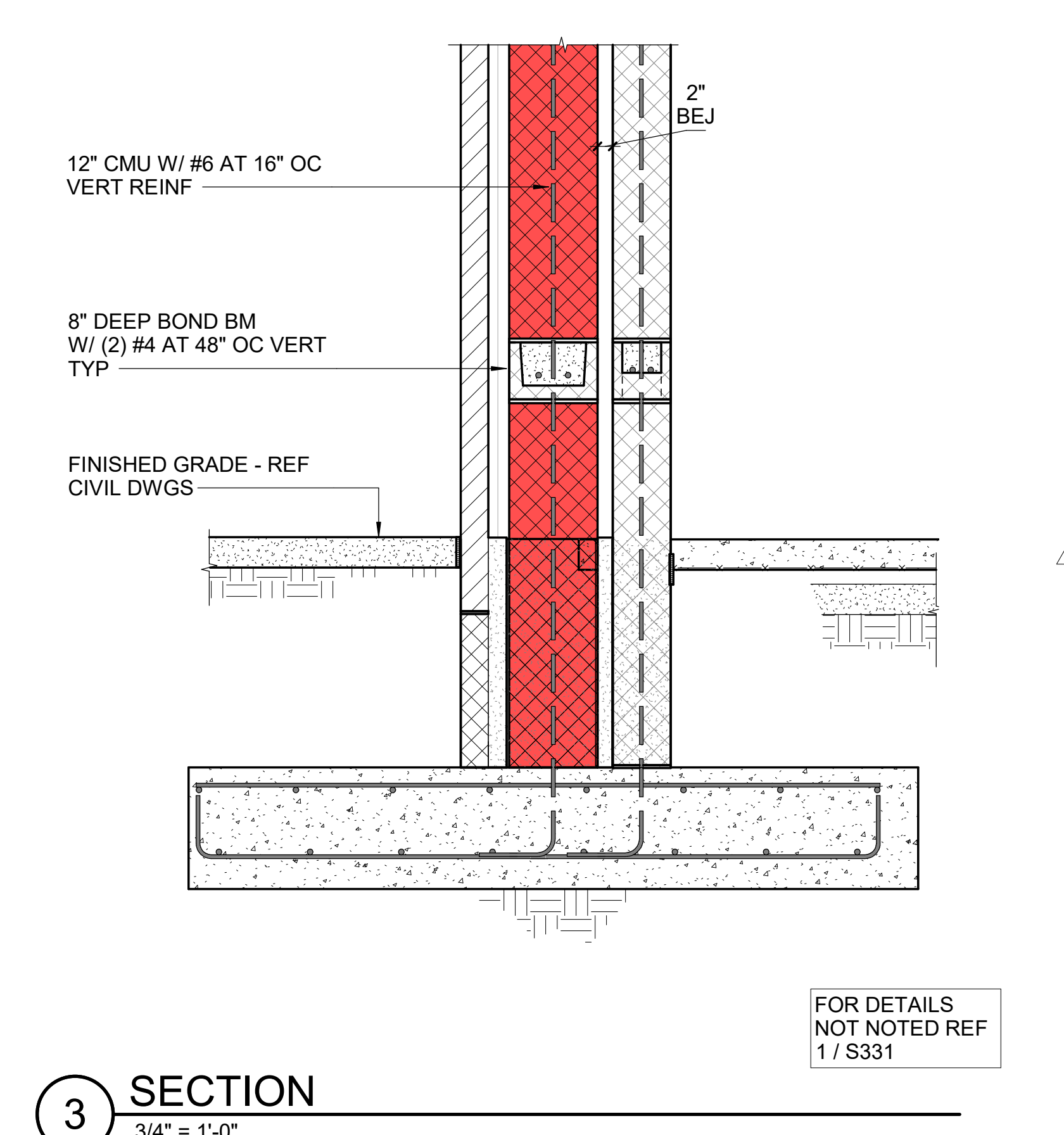
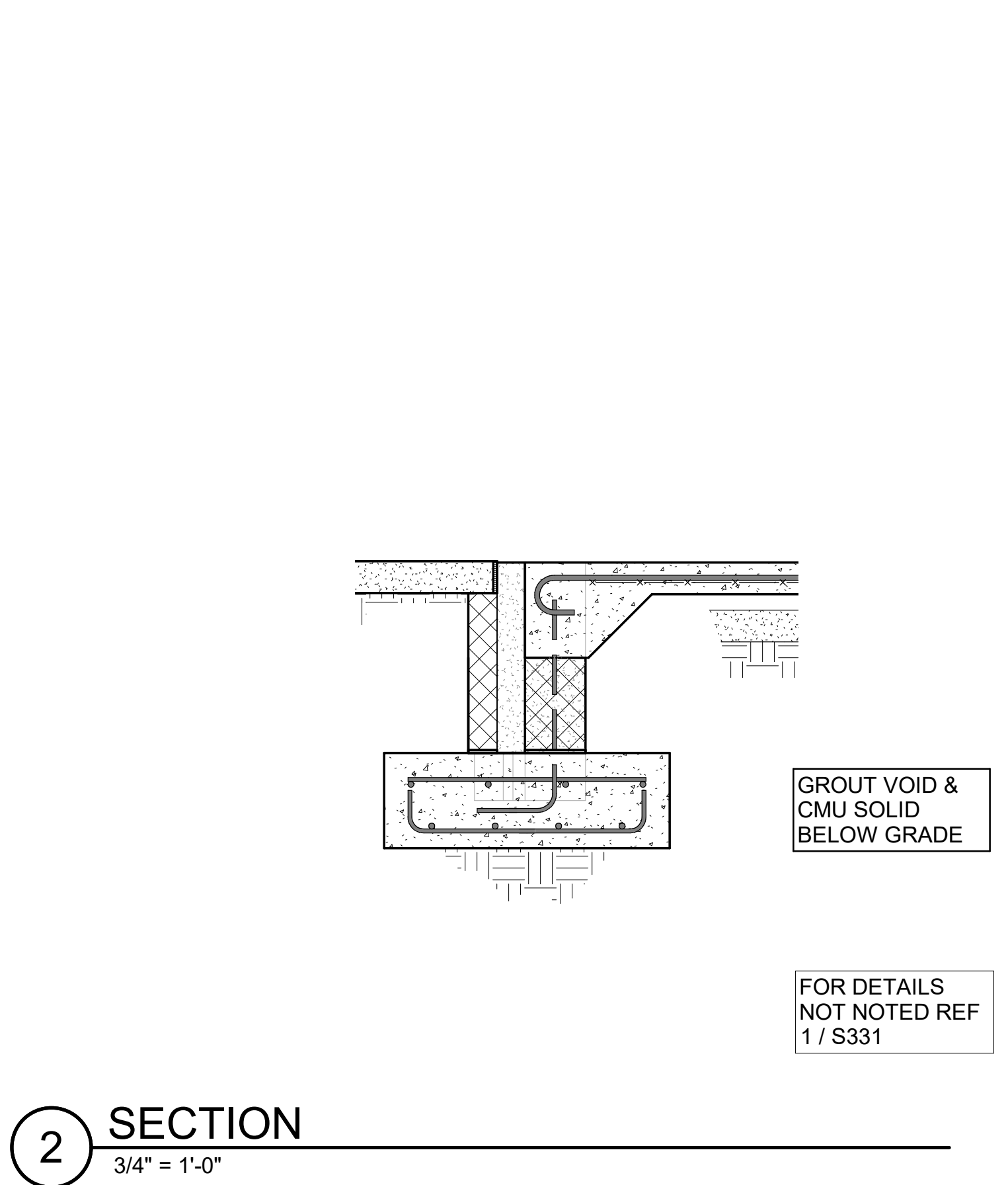
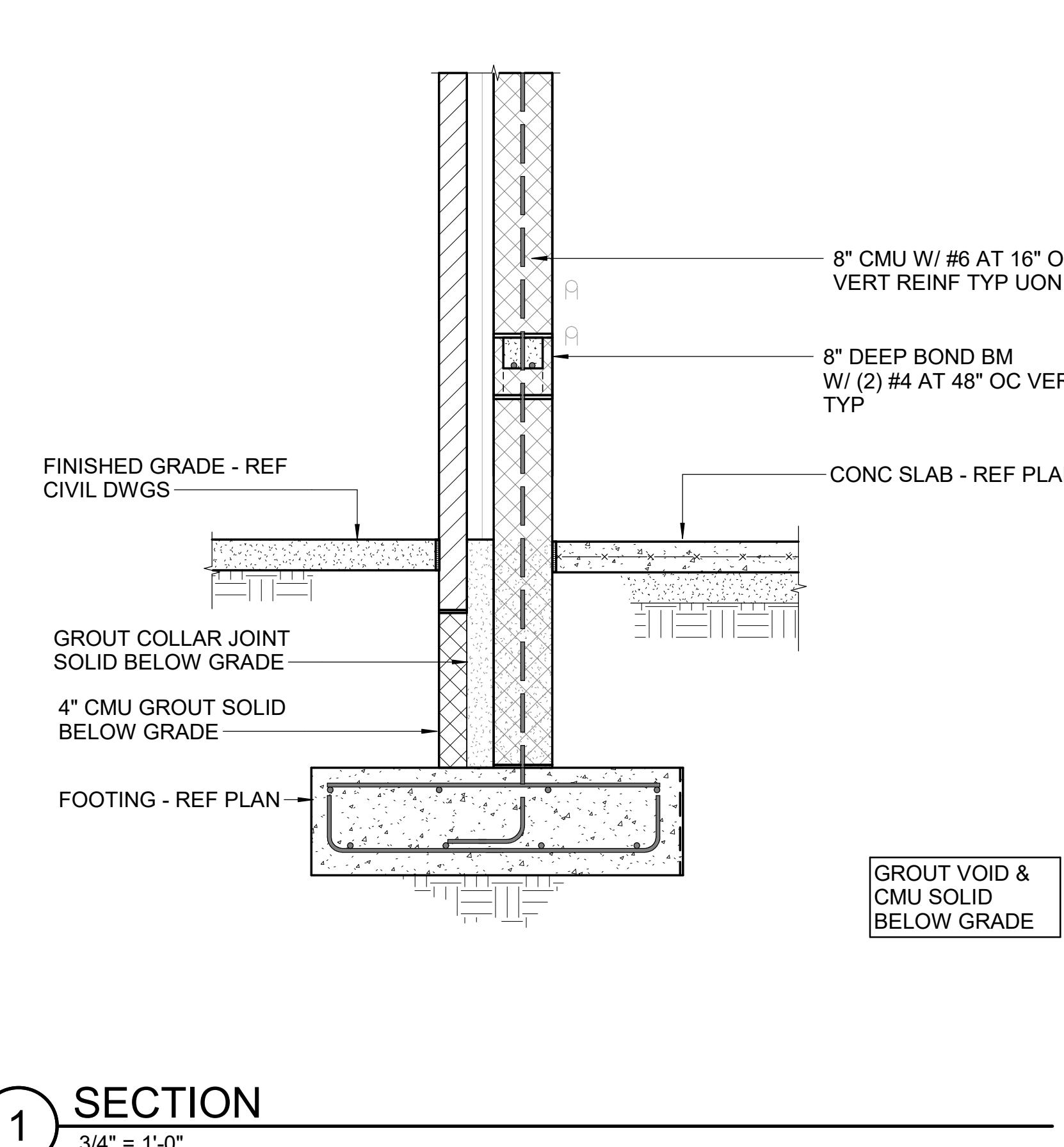
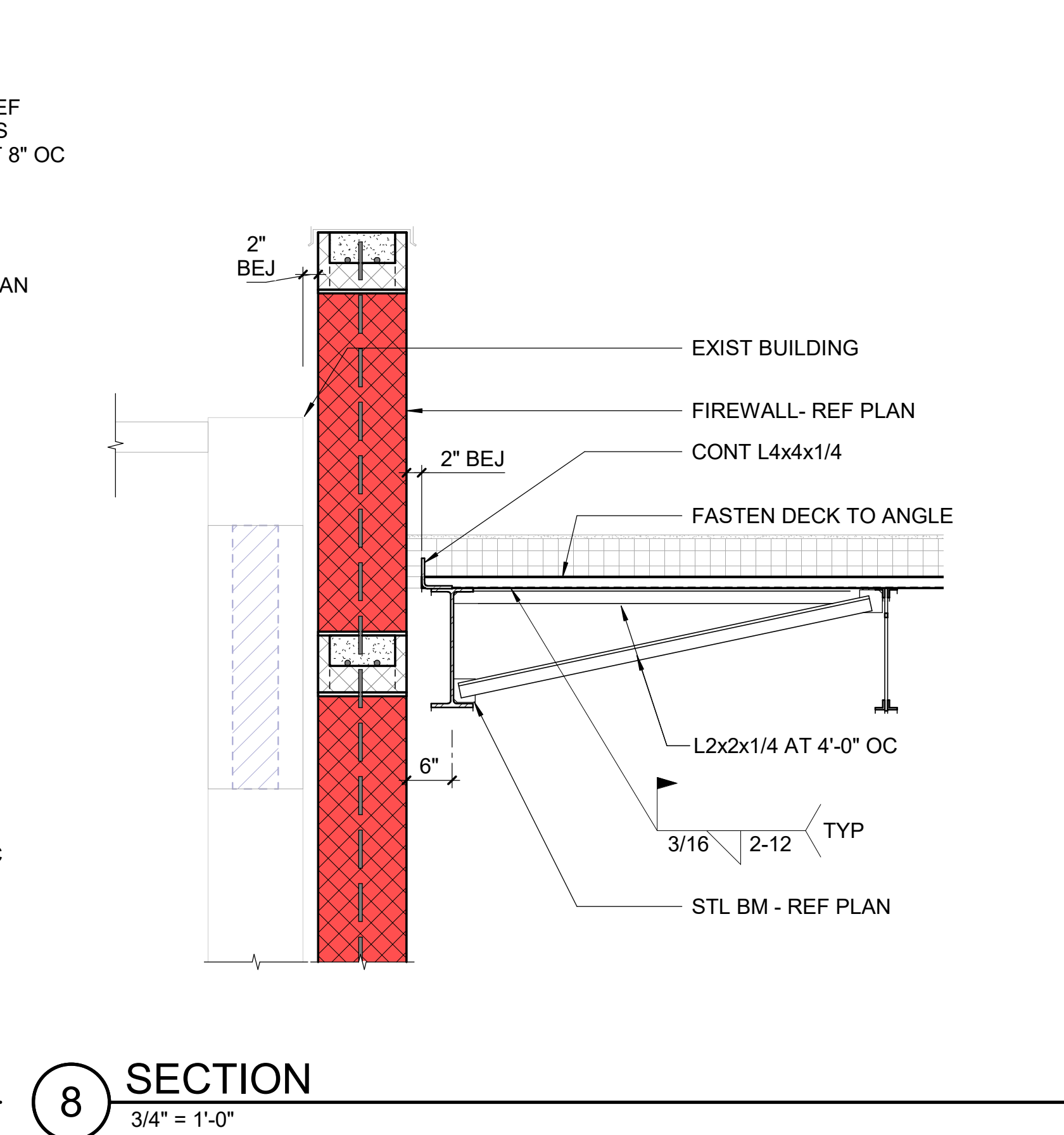
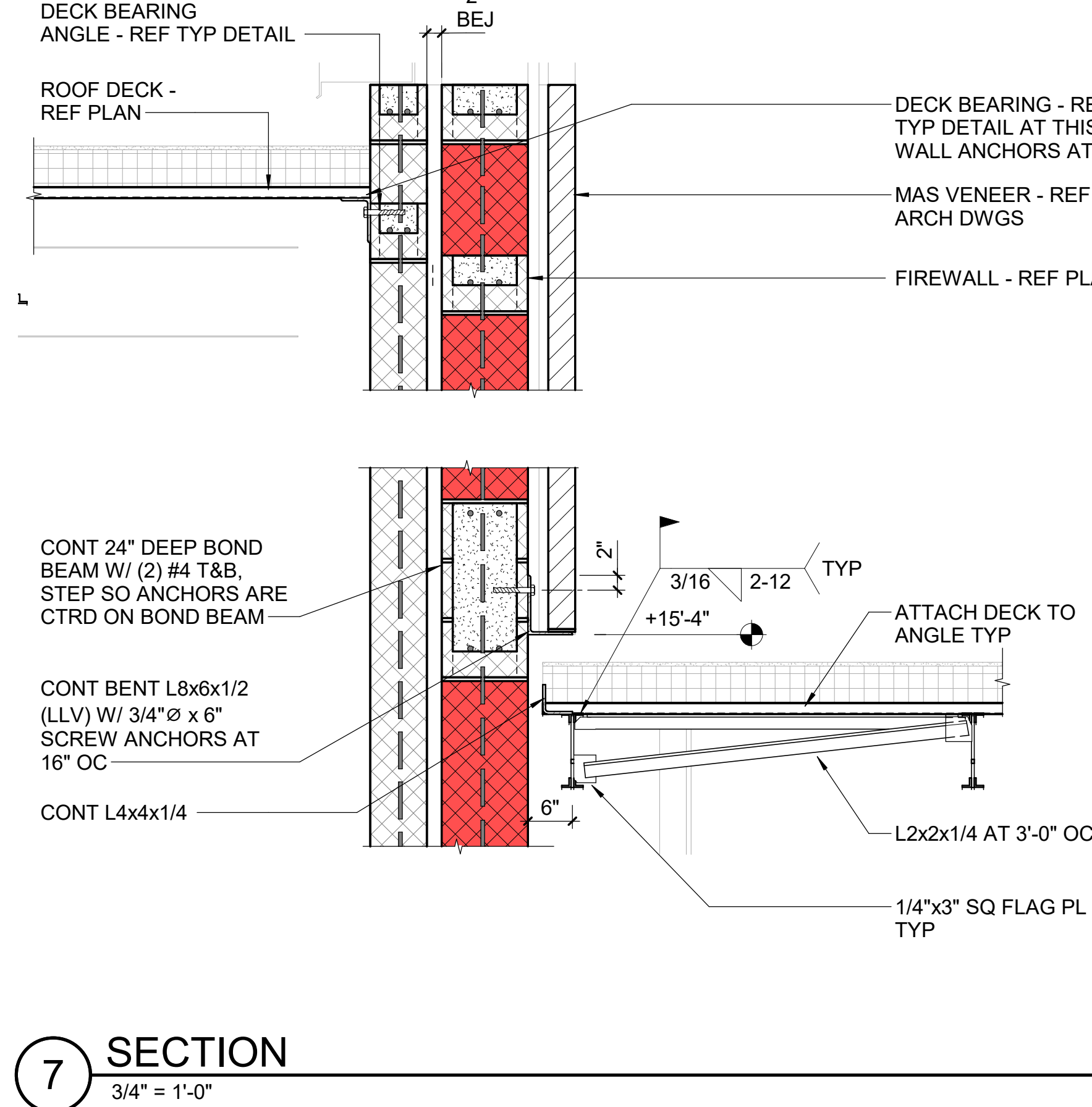
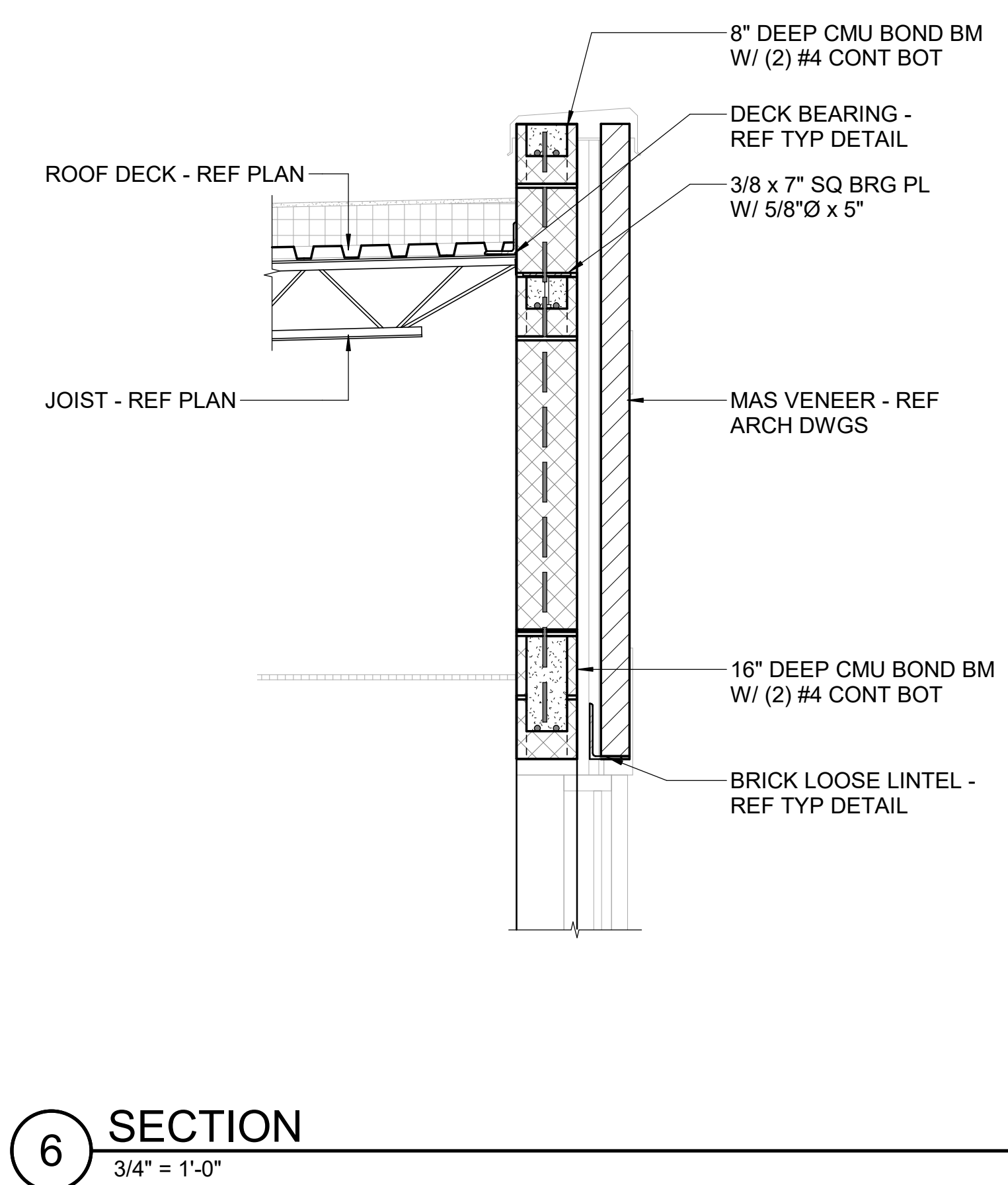
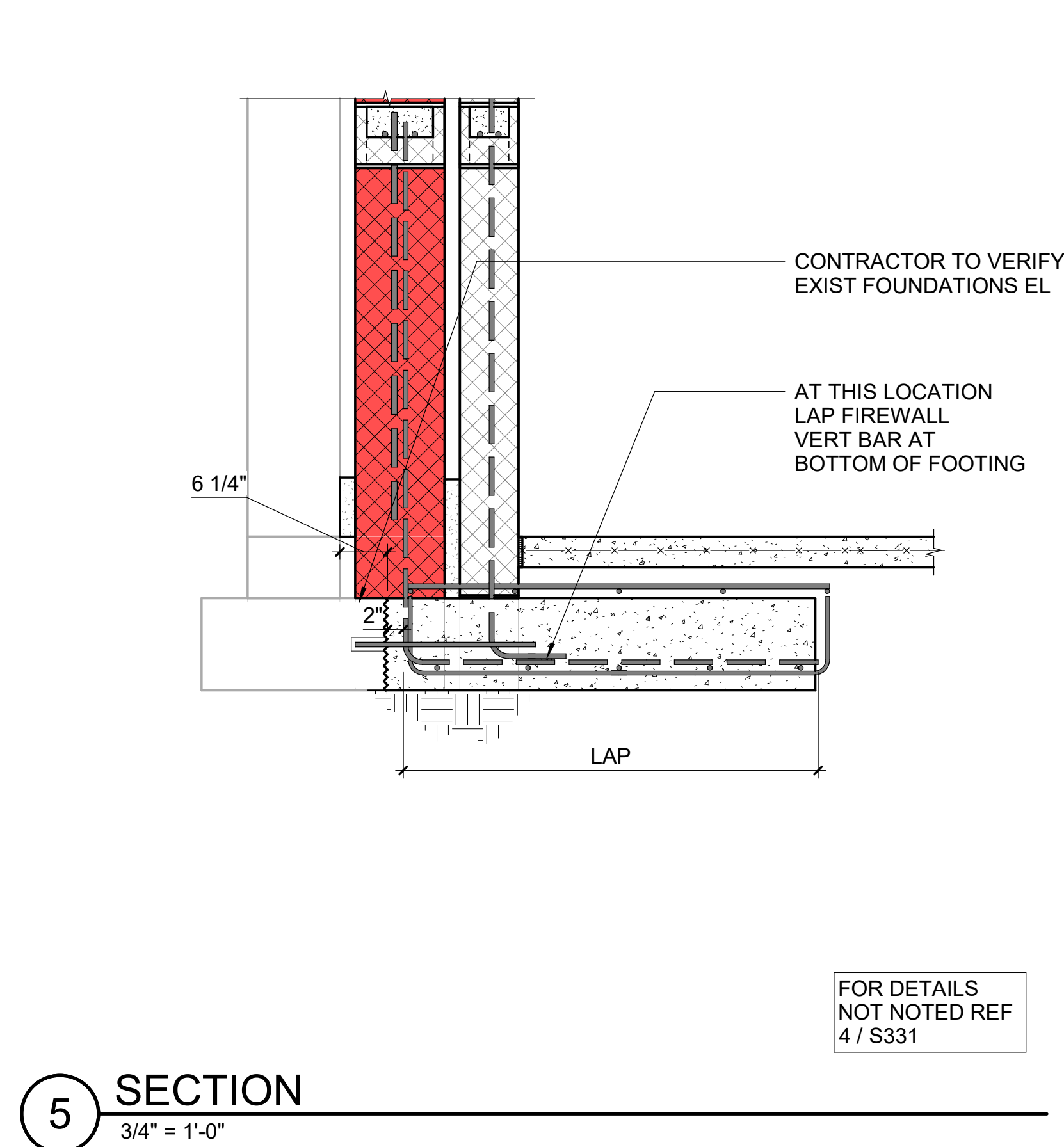
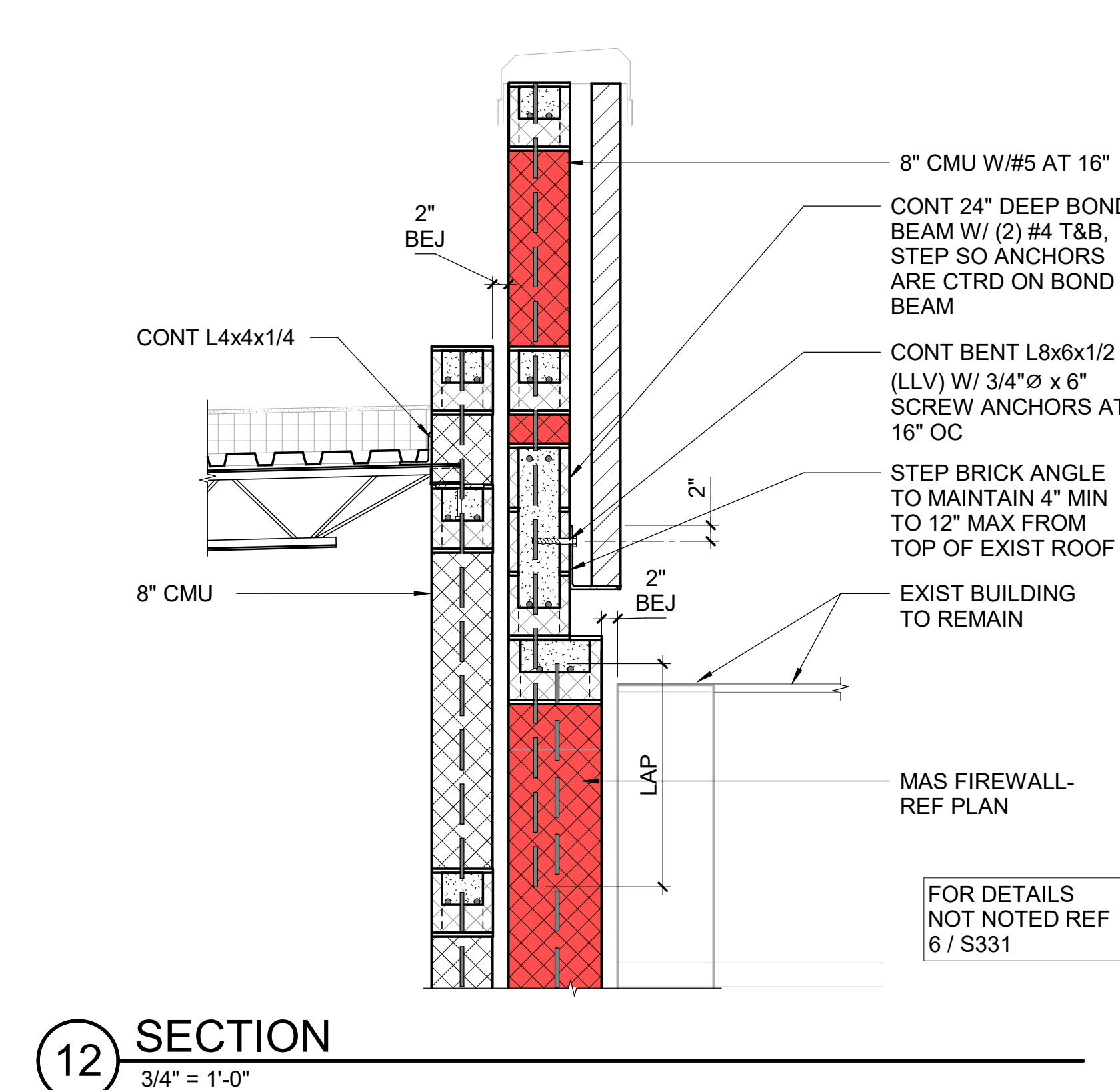
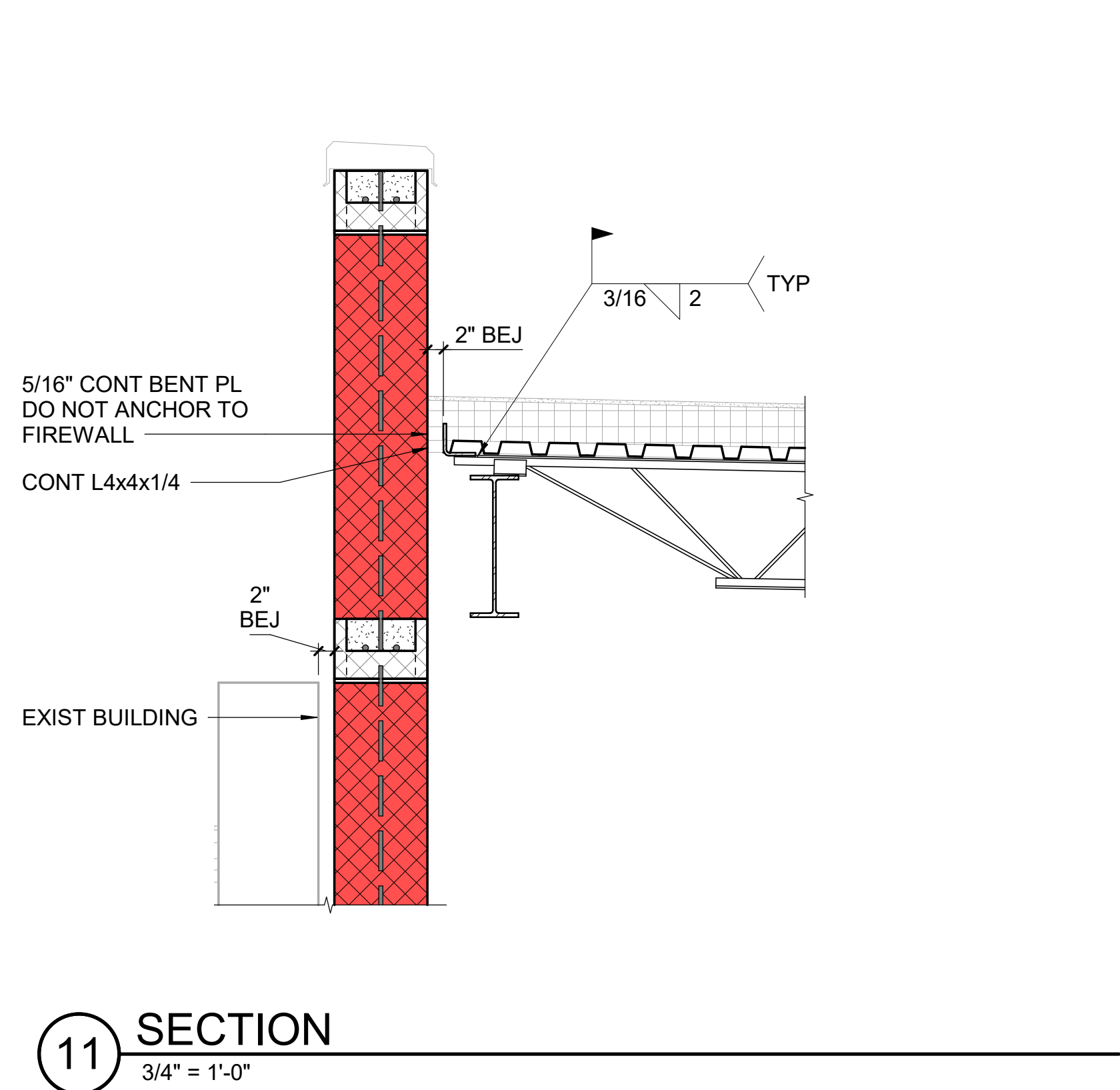
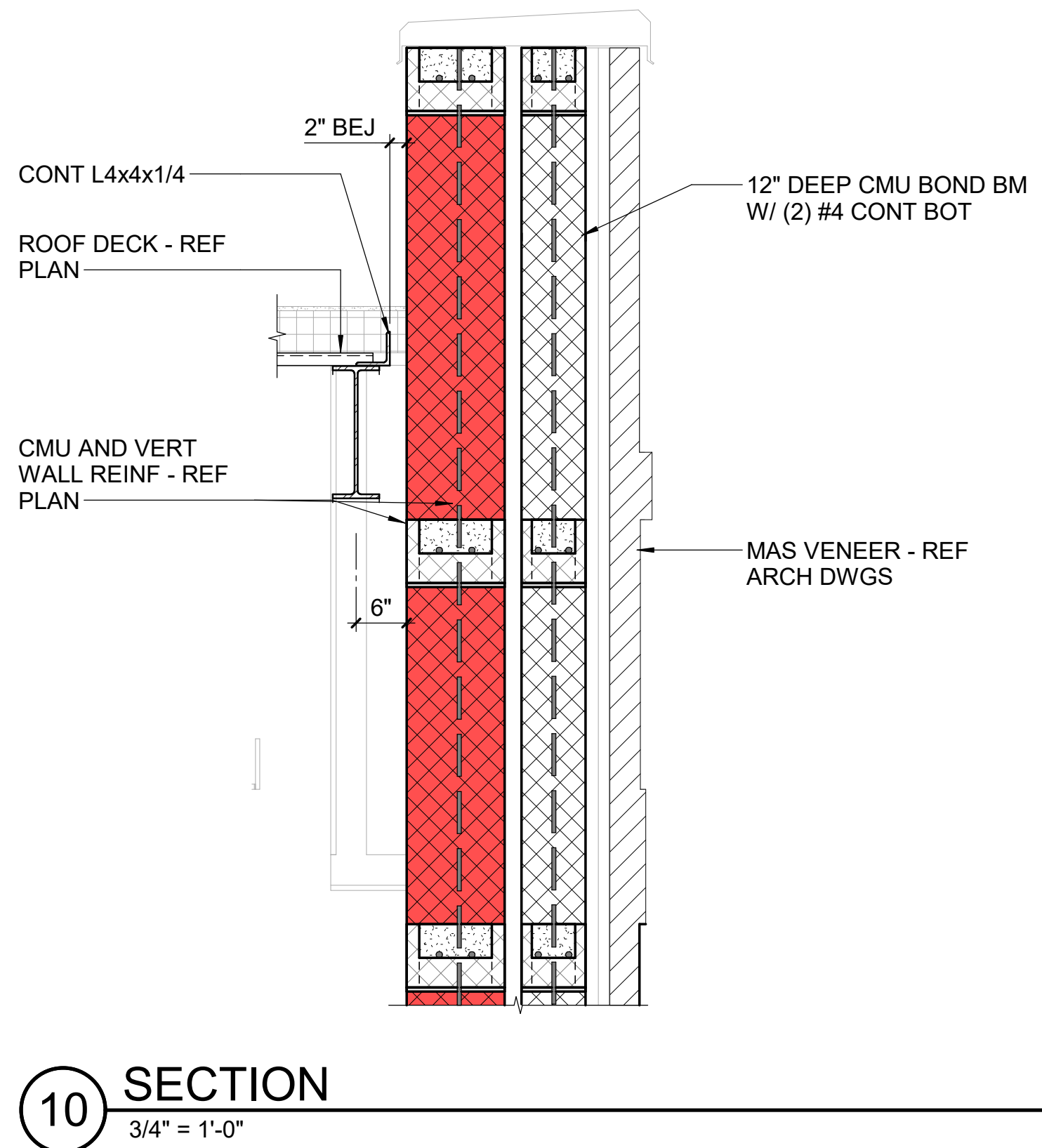
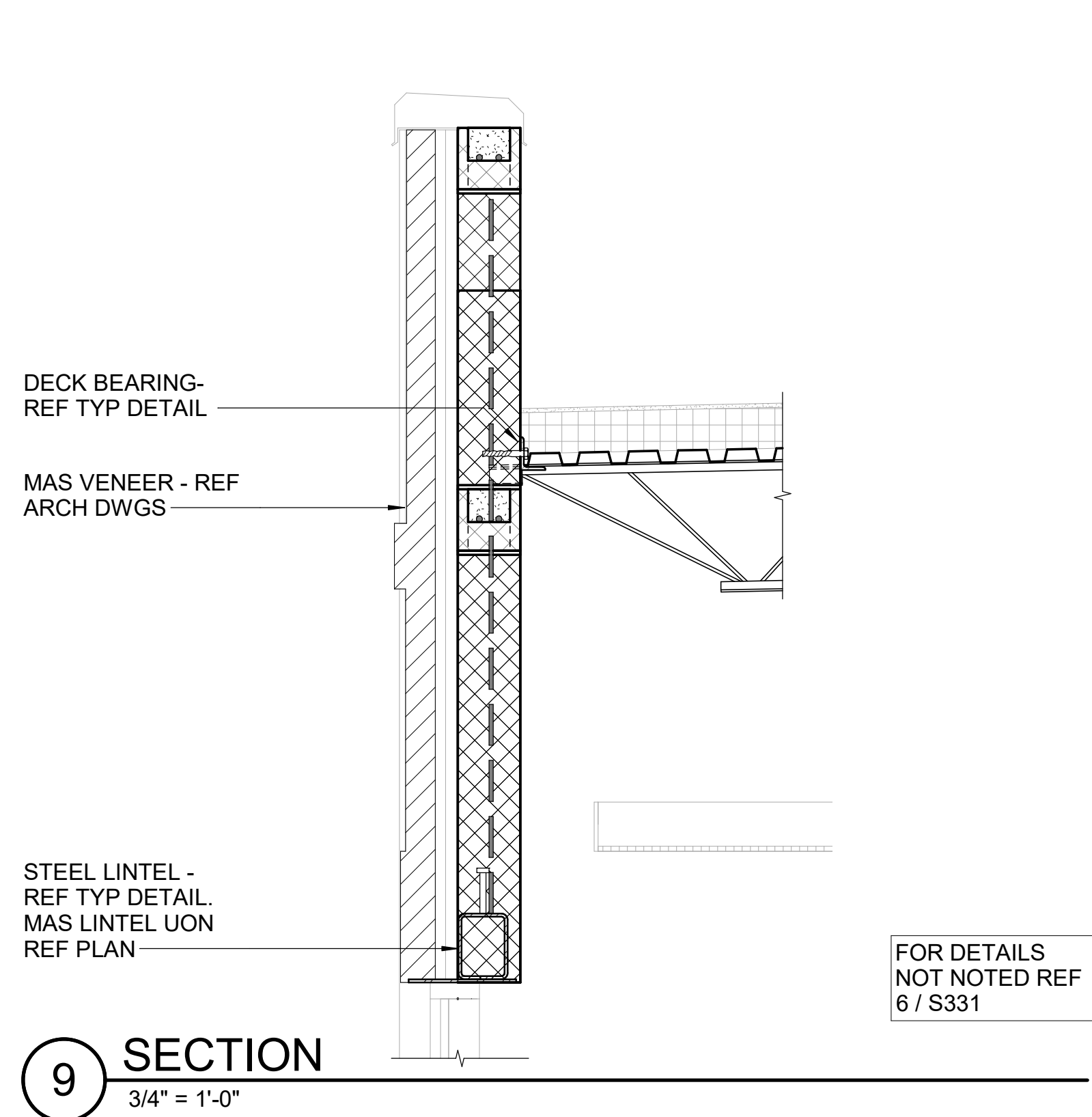
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S321
SHEET



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SECTIONS
SHEET TITLE

S331

SHEET

07 EXTERIOR EQUIPMENT PAD FOR CHILLER AND TRANSFORMER. REFERENCE
TYPICAL DETAIL ON THIS SHEET.

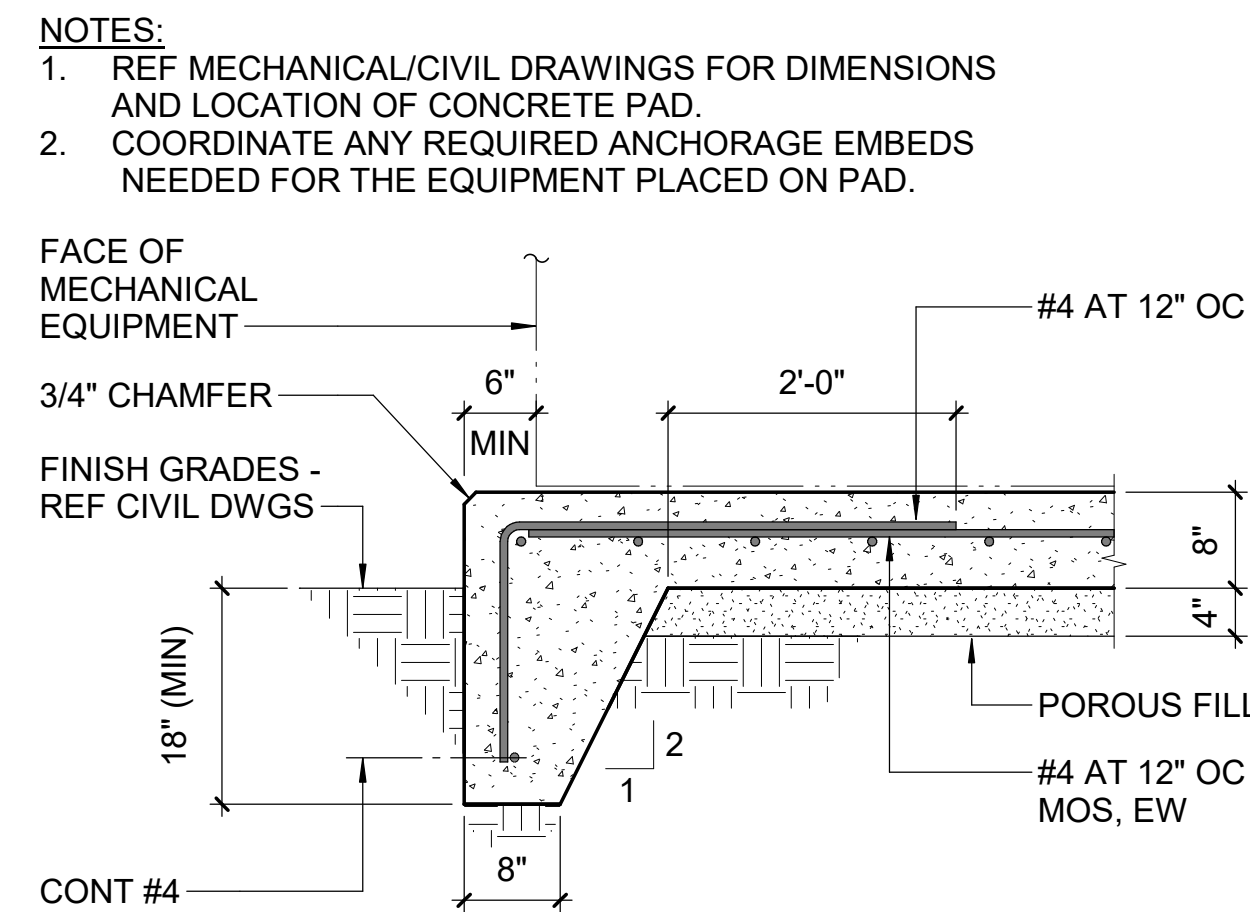
15 PROVIDE 4 FOOT HEEL AND REINFORCE ACCORDING TO SHORTEST WALL
ON SITE RETAINING WALL SCHEDULE WITH (6) #5 LONGITUDINAL FOOTING
REINFORCEMENT TOP AND BOTTOM. TYPICAL REINFORCEMENT
THEREAFTER.

16 PROVIDE 3 FOOT HEEL AND REINFORCE ACCORDING TO SHORTEST WALL
ON SITE RETAINING WALL SCHEDULE WITH (5) #5 LONGITUDINAL FOOTING
REINFORCEMENT TOP AND BOTTOM. TYPICAL REINFORCEMENT
THEREAFTER.

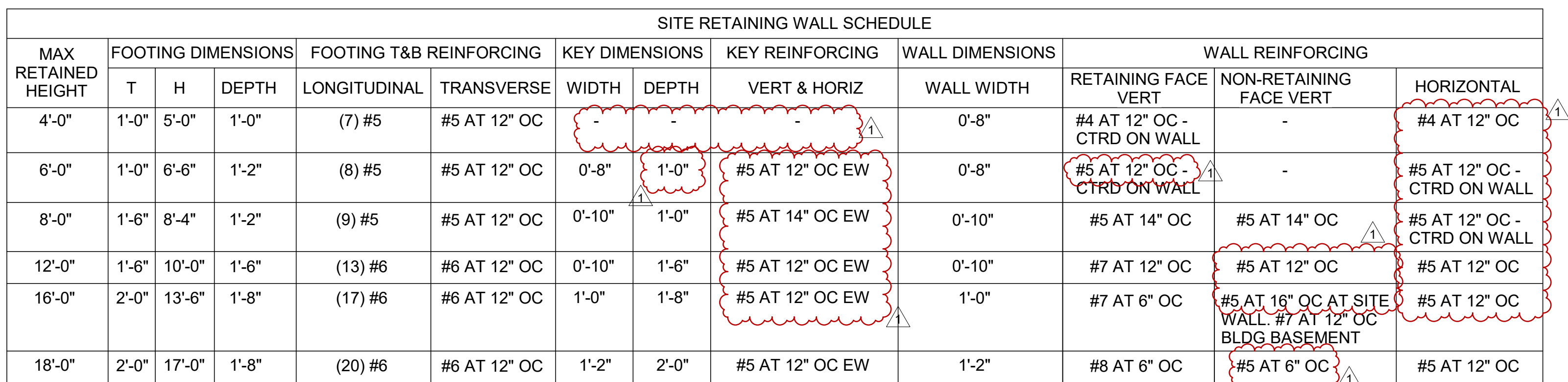
37 AT WF3 BACKFILL WALL EVENLY ON BOTH SIDES.

- A. REFERENCE ARCHITECTURAL DRAWINGS FOR DIMENSIONS TO NONBEARING WALLS, WALL CONTROL JOINTS AND OPENINGS.
- B. ALL ELEVATIONS ARE BASED ON A REFERENCED FIRST FLOOR ELEVATION OF 0'-0" = 316.64' AND REFERENCED GROUND FLOOR ELEVATION OF -15'-4" = 301.30'. REFER TO ARCHITECTURAL DRAWINGS FOR FINISH FLOOR MATERIALS.
- C. TOP OF ALL COLUMN AND WALL FOOTINGS MUST BE AT THE FOLLOWING ELEVATIONS UNLESS OTHERWISE NOTED ON PLAN. EXTERIOR WALL AND COLUMN FOOTINGS -2'-0" (-2'-0" AT FIRST FLOOR SLAB ON GRADE, (-17'-4" AT GROUND FLOOR); INTERIOR WALL FOOTINGS -0'-8" -0'-8" AT FIRST FLOOR SLAB ON GRADE, -16'-0" (AT GROUND FLOOR).
- D. NOT ALL UTILITY LOCATIONS ARE SHOWN ON PLAN. THE CONTRACTOR MUST COORDINATE THE LOCATIONS, SIZES, AND INVERTS OF UTILITIES. AT LOCATIONS WHERE UTILITIES PASS BELOW THE TOP OF FOOTING ELEVATION, STEP THE TOP OF FOOTING DOWN ON EACH SIDE PER THE "STEPPED FOOTING DETAIL" AND SLEEVE THE UTILITY THROUGH THE FOUNDATION WALL. THE CONTRACTOR MAY, AT HIS/HER OPTION, SLEEVE THE UTILITY THROUGH THE FOUNDATION PER THE "UTILITY SLEEVE DETAIL".
- E. UNLESS OTHERWISE INDICATED, EXTEND WALL FOOTINGS A MINIMUM OF 6 INCHES BEYOND ENDS OF WALLS.
- F. NOT ALL SITE WALLS ARE NOT SHOWN ON PLAN. CONTRACTOR MUST COORDINATE CIVIL AND LANDSCAPE DRAWINGS FOR SITE WALL INFORMATION.
- G. DIMENSIONS SHOWN ON FOUNDATION PLAN ARE TO COLUMN GRIDLINES AND OUTSIDE FACE OF FOUNDATION WALLS, UNLESS OTHERWISE NOTED.

- A. REFERENCE FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
- B. TOP OF FINISHED FLOOR ELEVATION SHALL BE AS NOTED ON SLAB PLANS.
- C. FLOOR JOISTS AND BEAMS MUST BE EQUALLY SPACED BETWEEN POINTS OF KNOWN DIMENSIONS (NOT TO EXCEED 4'-0" ON-CENTER).
- D. STEEL ROOF FRAMING SUPPORTING 1 1/2" STEEL ROOF DECK MUST BE EQUALLY SPACED BETWEEN POINTS OF KNOWN DIMENSIONS (NOT TO EXCEED 5'-0" ON-CENTER).
- E. CONTRACTOR MUST POUR SLAB TO THICKNESS. SLAB AND JOISTS ARE NOT DESIGNED FOR EXCESS IN THICKNESS DUE TO CONCRETE POUR PONDING.
- F. PROVIDE BOTTOM CHORD EXTENSIONS AT ALL JOISTS ON COLUMN CENTERLINES.
- G. AT STEEL ROOF FRAMING, BOTTOM OF DECK ELEVATIONS ARE SHOWN ON PLAN. INTERMEDIATE ELEVATIONS SHALL BE STRAIGHT LINES BETWEEN GIVEN ELEVATIONS. INTERPOLATE AS REQUIRED FOR INTERMEDIATE BEARING ELEVATIONS, UNLESS OTHERWISE NOTED.
- H. COORDINATE AND VERIFY ALL MEMBER LOCATIONS, DIMENSIONS, WEIGHTS, OPENING SIZES, AND CURB DIMENSIONS FOR ALL MINOR ELECTRICAL EQUIPMENT WITH THE ACTUAL EQUIPMENT FURNISHED. INCLUDE THIS INFORMATION ON THE JOIST AND STRUCTURAL STEEL SHOP DRAWINGS.



3 TYPICAL EXTERIOR EQUIPMENT PAD DETAIL



2 TYPICAL SITE AND BUILDING RETAINING WALL SCHEDULE AND DETAIL

1 MECHANICAL ENCLOSURE PLAN
3/16" = 1'-0"

COOPER ACADEMY
A & R
PROJECT TITLE



02/26/2024




Structural Engineers
301 N West St., Suite 105
Raleigh, NC 27603
919.782.1833 - lynchmykins.com
LM Project Number: LM21.298
Corporation No. C-4360

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NO.	DATE	DESCRIPTION
1	2/26/2024	ADDENDUM 2

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2307
BOOMERANG DESIGN PROJECT NUMBER

02.26.2024
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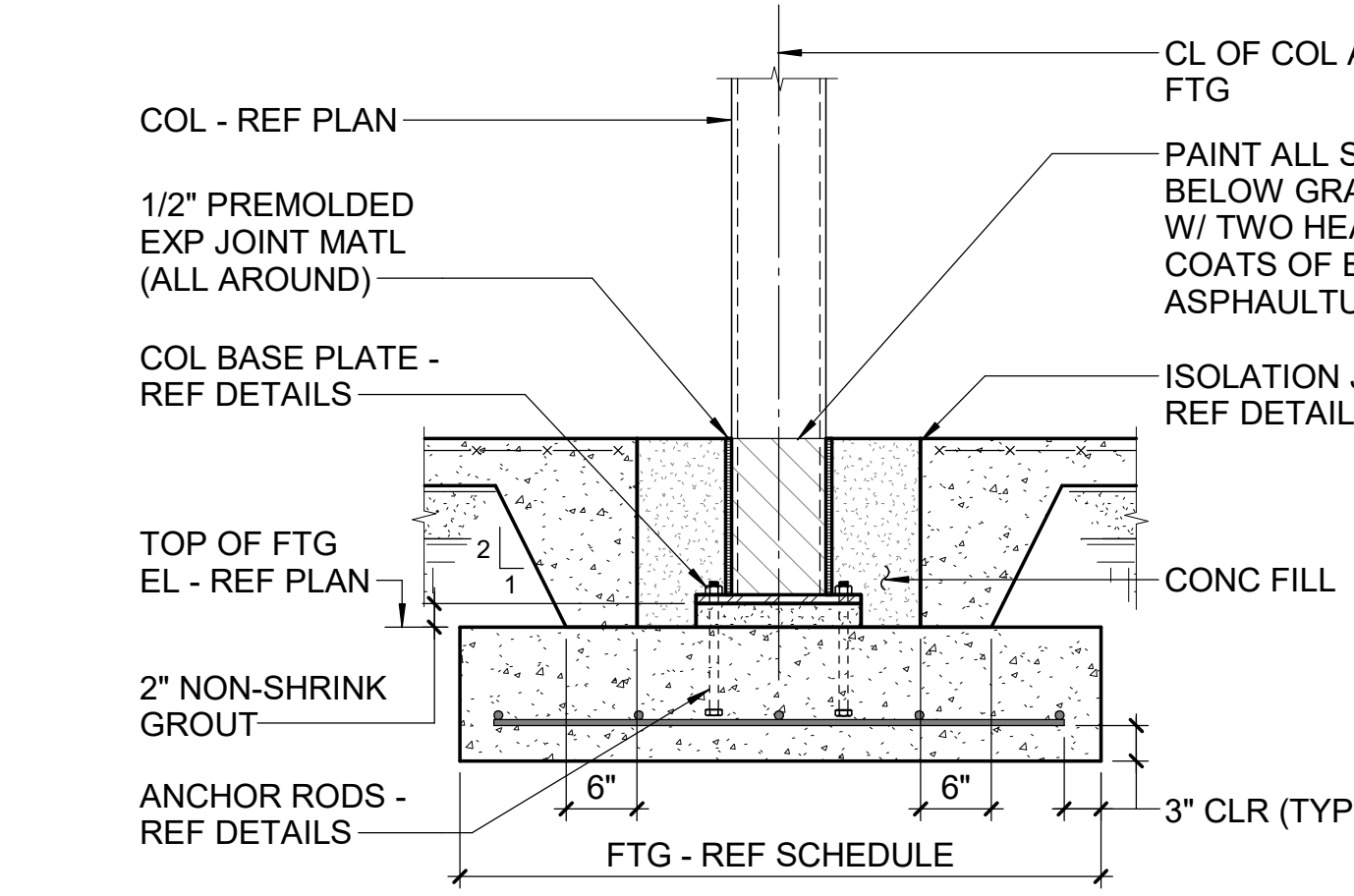
ENLARGED PLANS
SHEET TITLE

S401

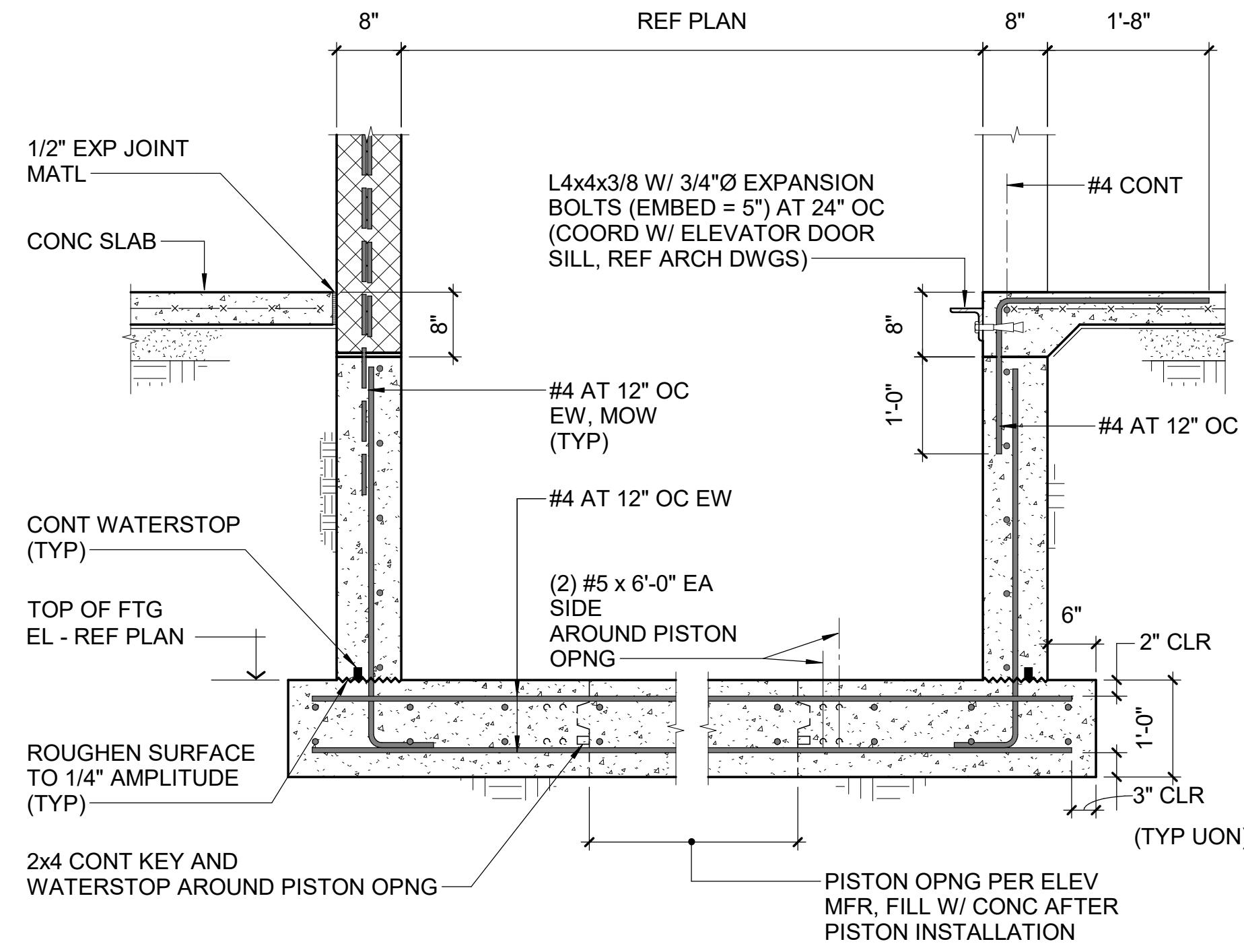
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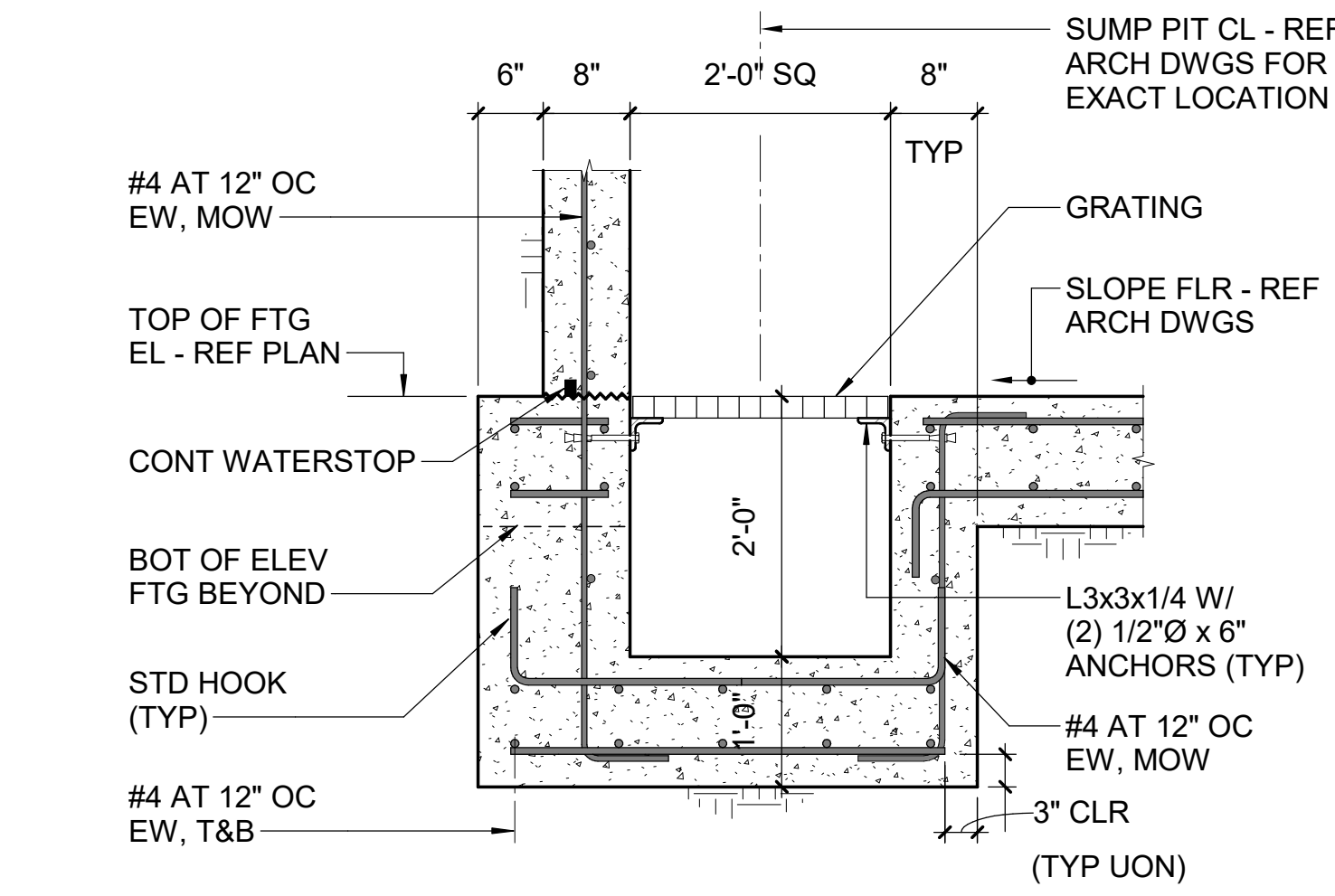
1 TYPICAL COLUMN & FOOTING DETAIL



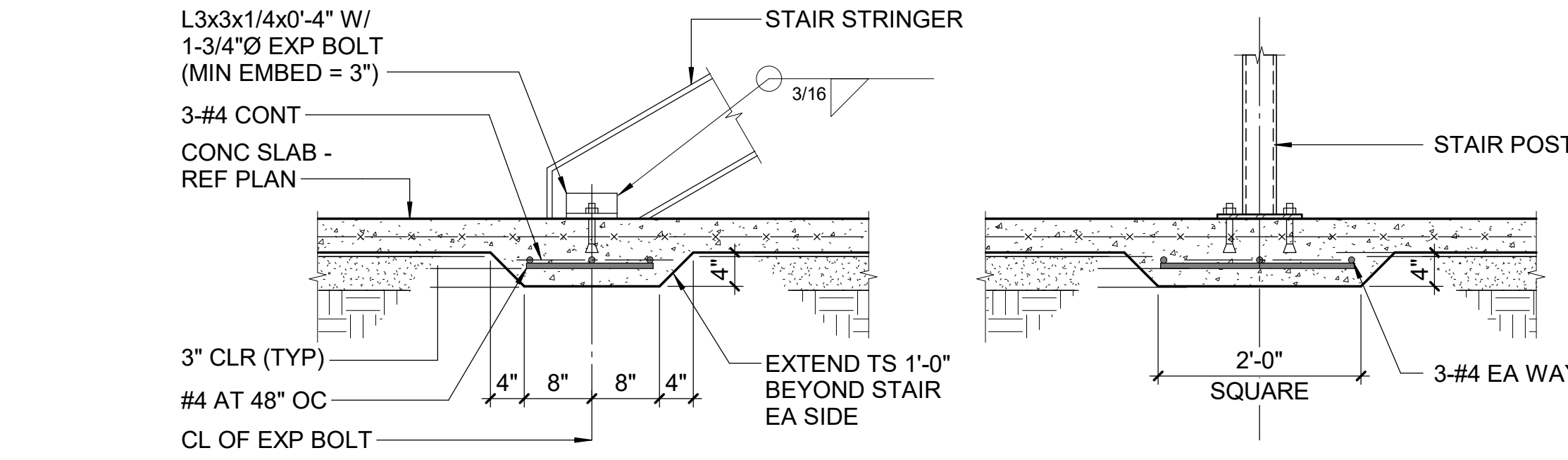
5 TYPICAL ELEVATOR PIT DETAIL



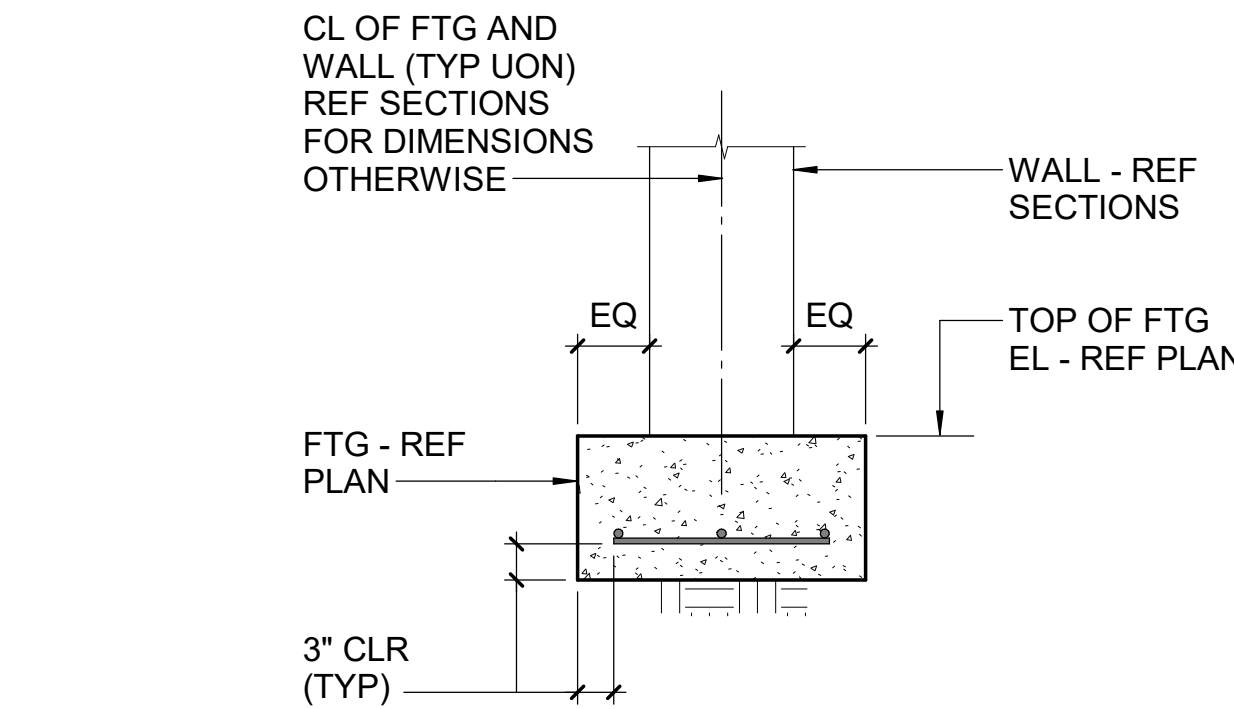
8 ELEVATOR SUMP PIT DETAIL



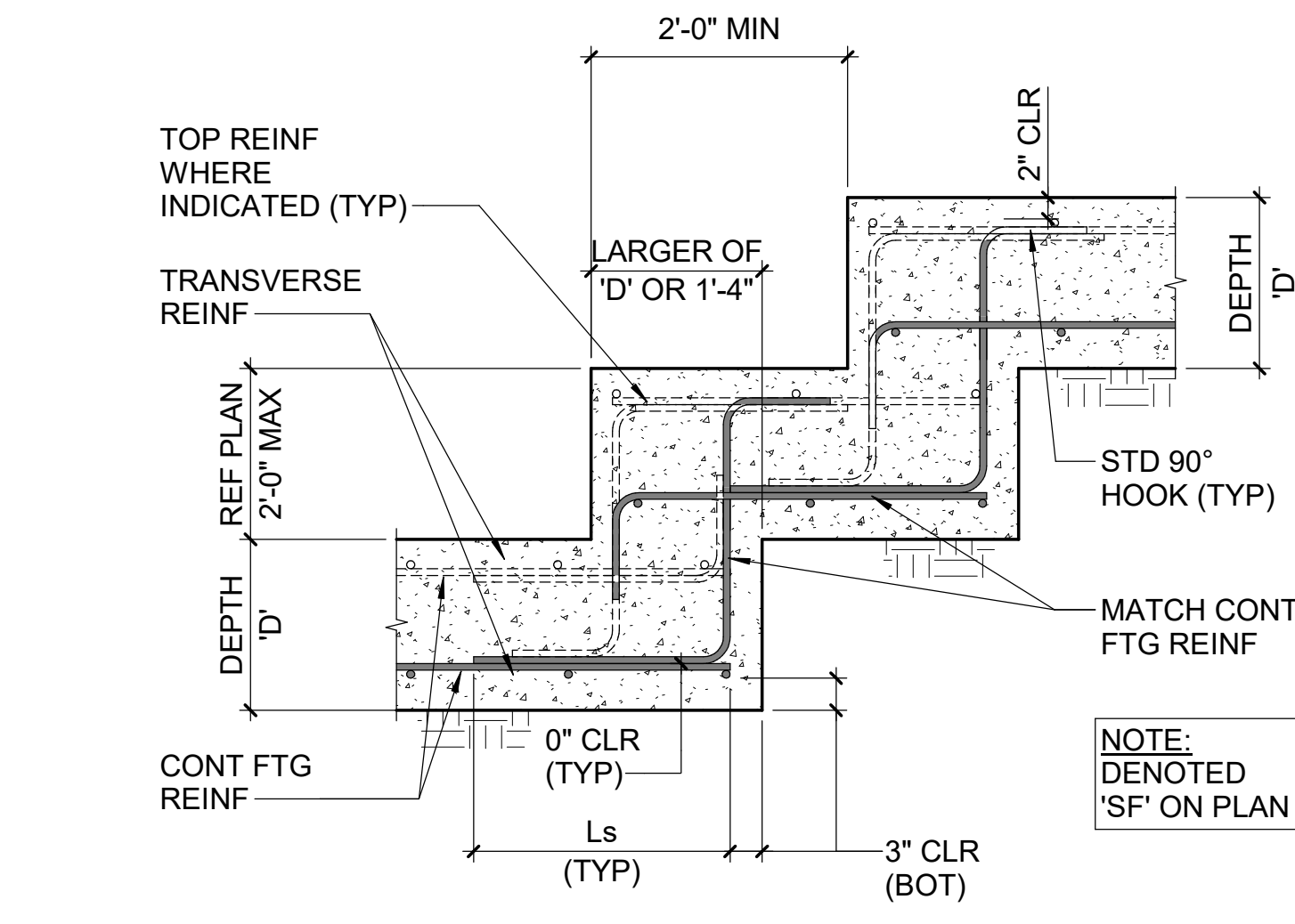
12 TYPICAL THICKENED SLAB AT STAIR LANDING OR POST DETAIL



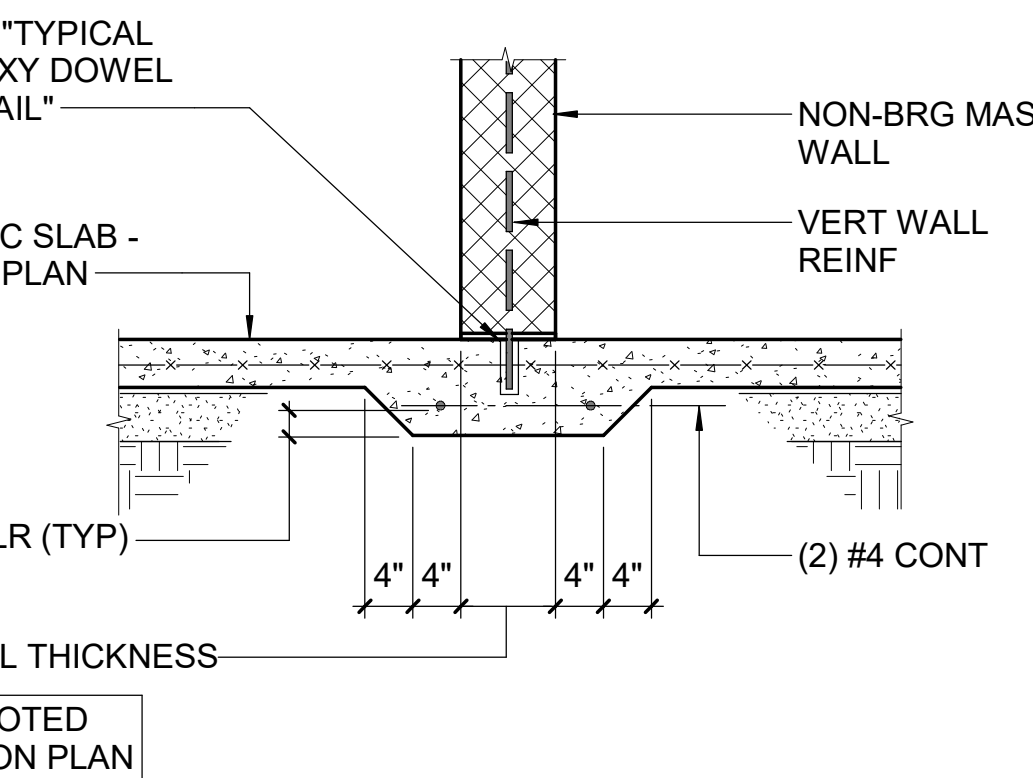
2 TYPICAL WALL FOOTING DETAIL



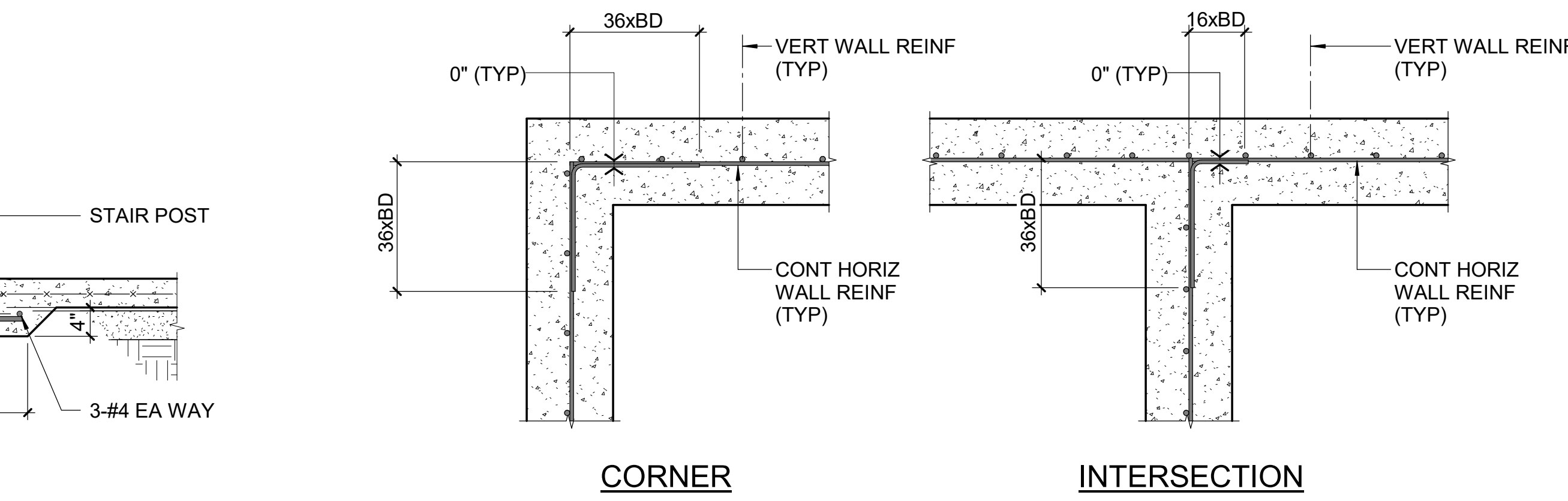
6 TYPICAL STEPPED WALL FOOTING DETAIL



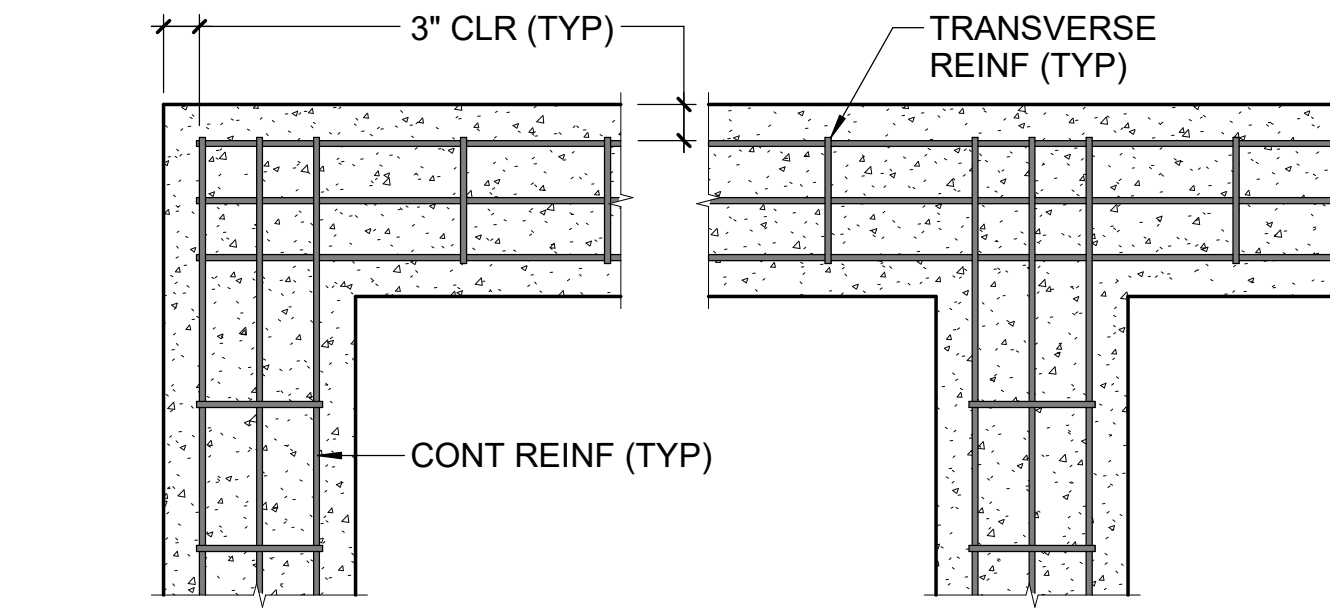
9 TYPICAL THICKENED SLAB DETAIL



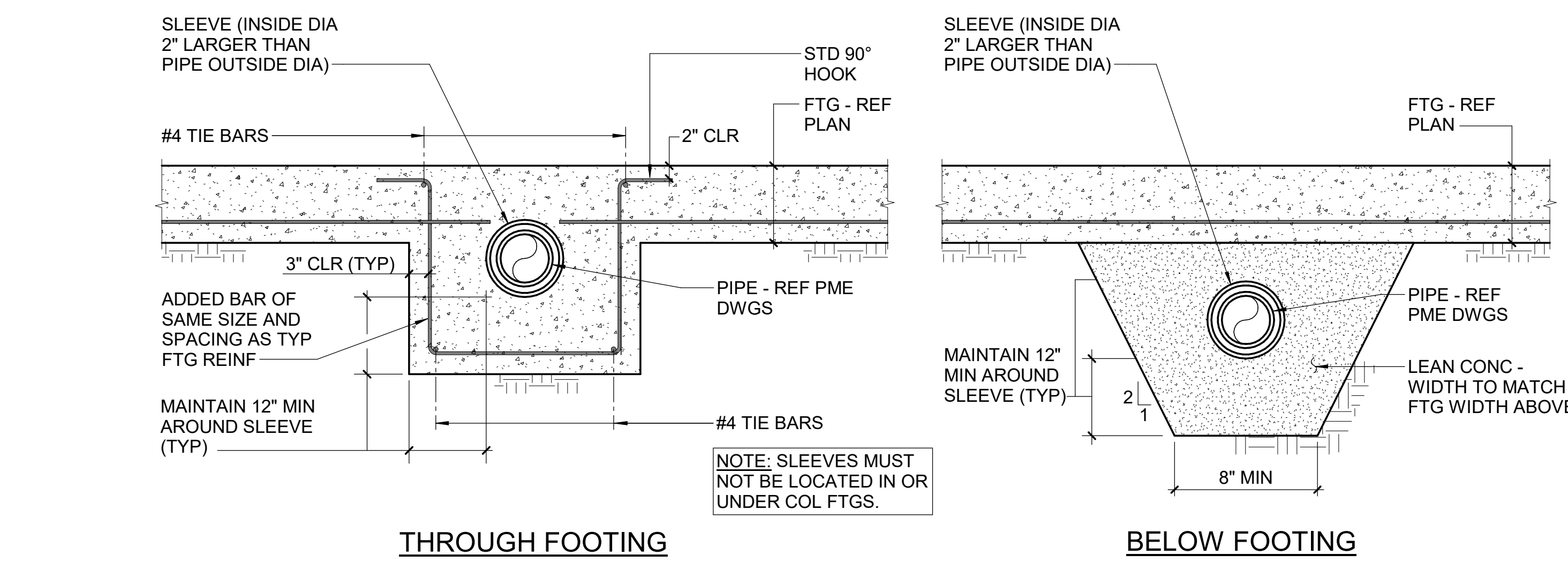
13 TYPICAL DETAIL AT CORNERS AND INTERSECTIONS OF CONCRETE WALLS



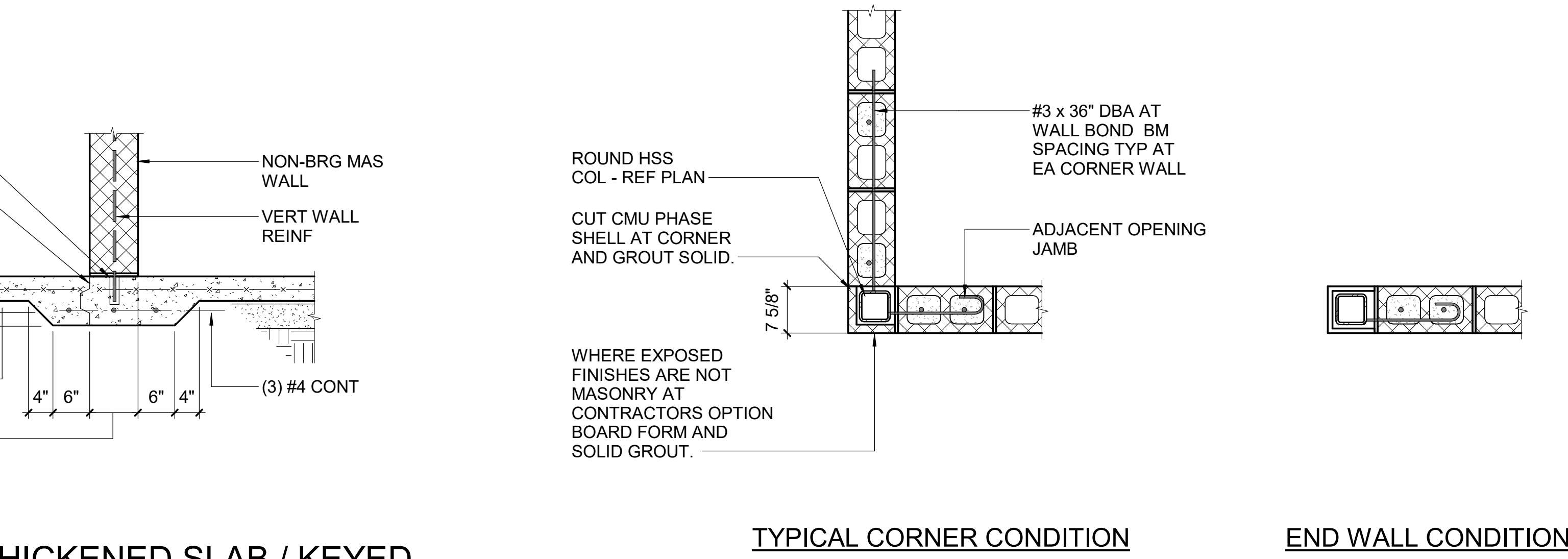
3 TYPICAL WALL FOOTING CORNER & INTERSECTION DETAILS



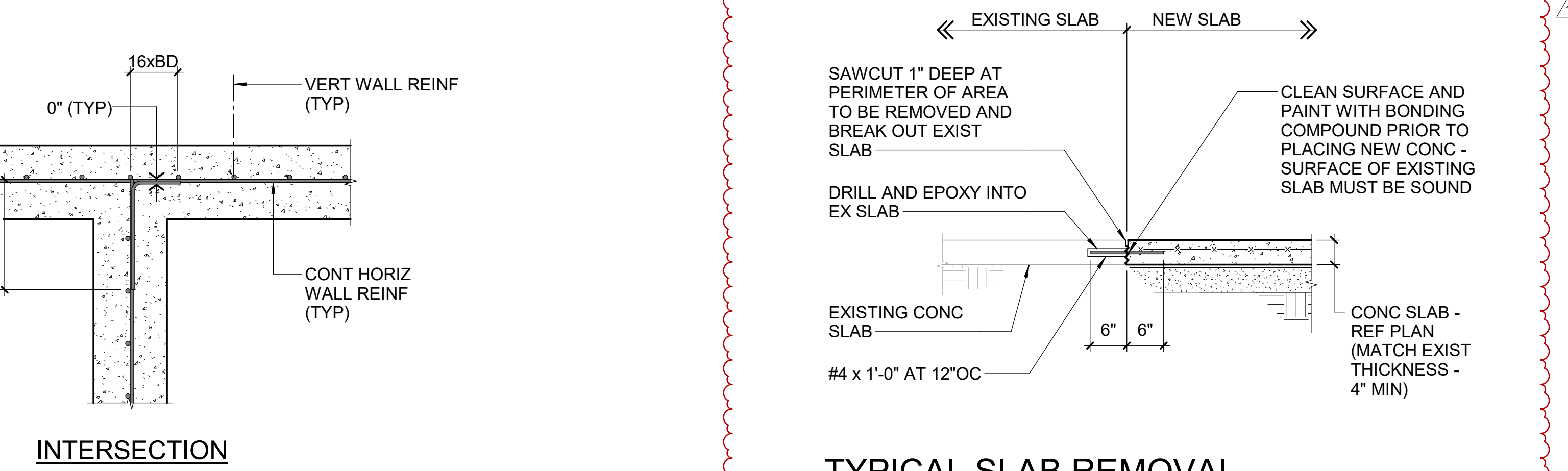
7 TYPICAL PIPE SLEEVE AT WALL FOOTING DETAILS



11 TYPICAL STEEL COLUMN AT MASONRY WALL DETAILS



14 TYPICAL SLAB REMOVAL & REPLACEMENT DETAIL



INTERSECTION

CORNER

S501

TYPICAL DETAILS

DRAWING RELEASE DATE

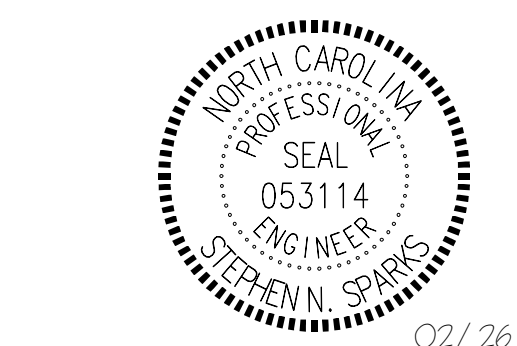
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COOPER ACADEMY

A & R

PROJECT TITLE

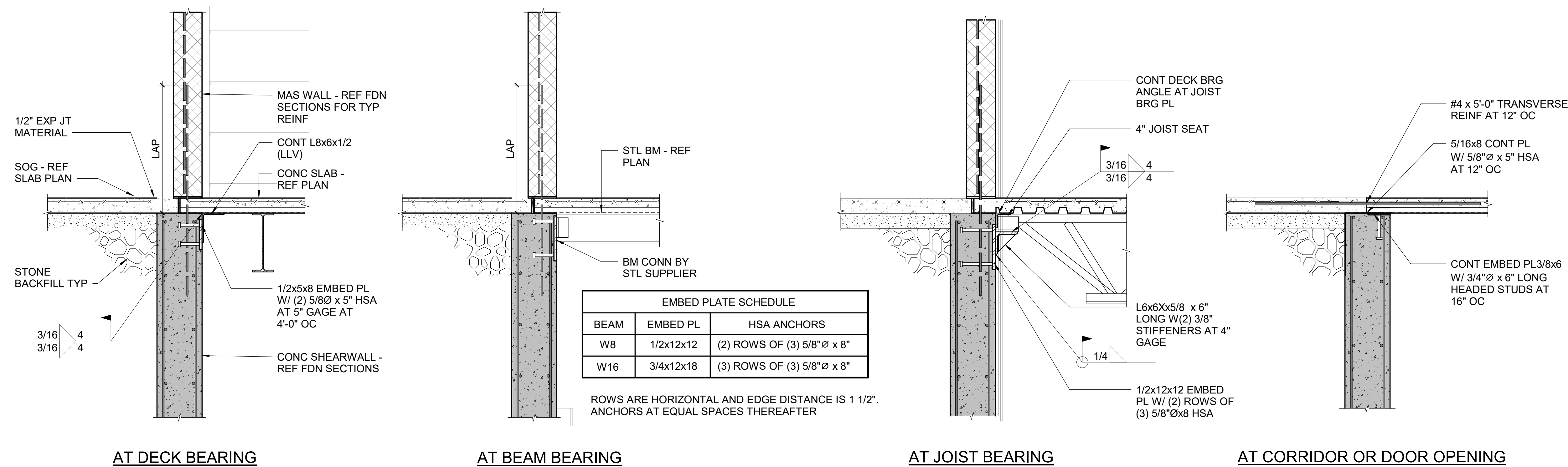
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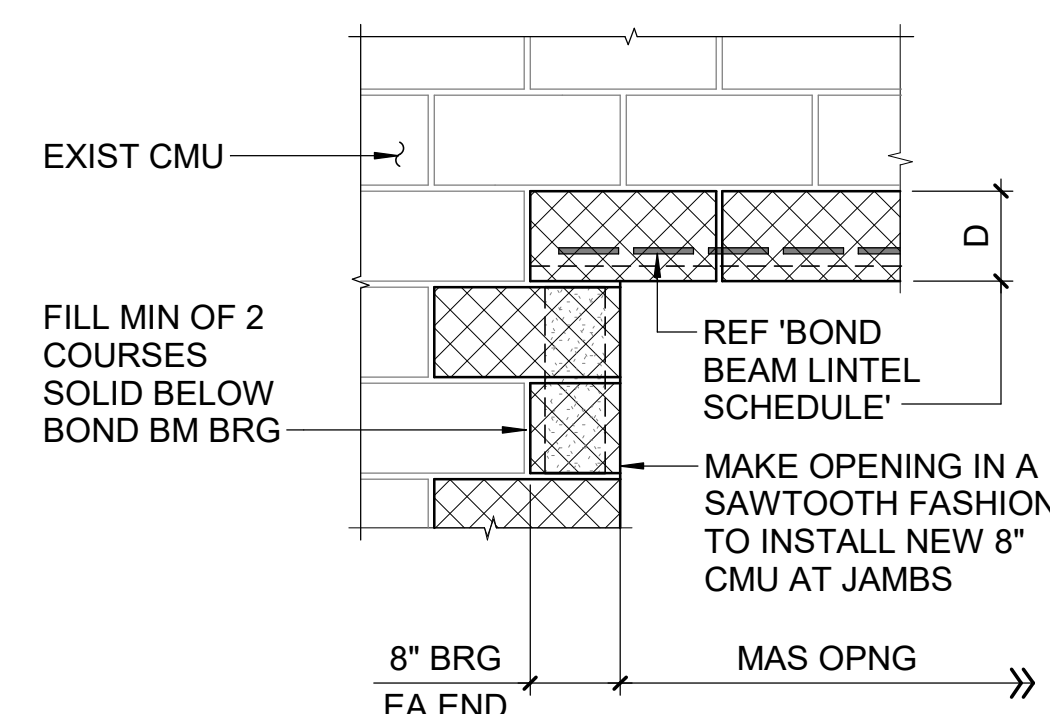
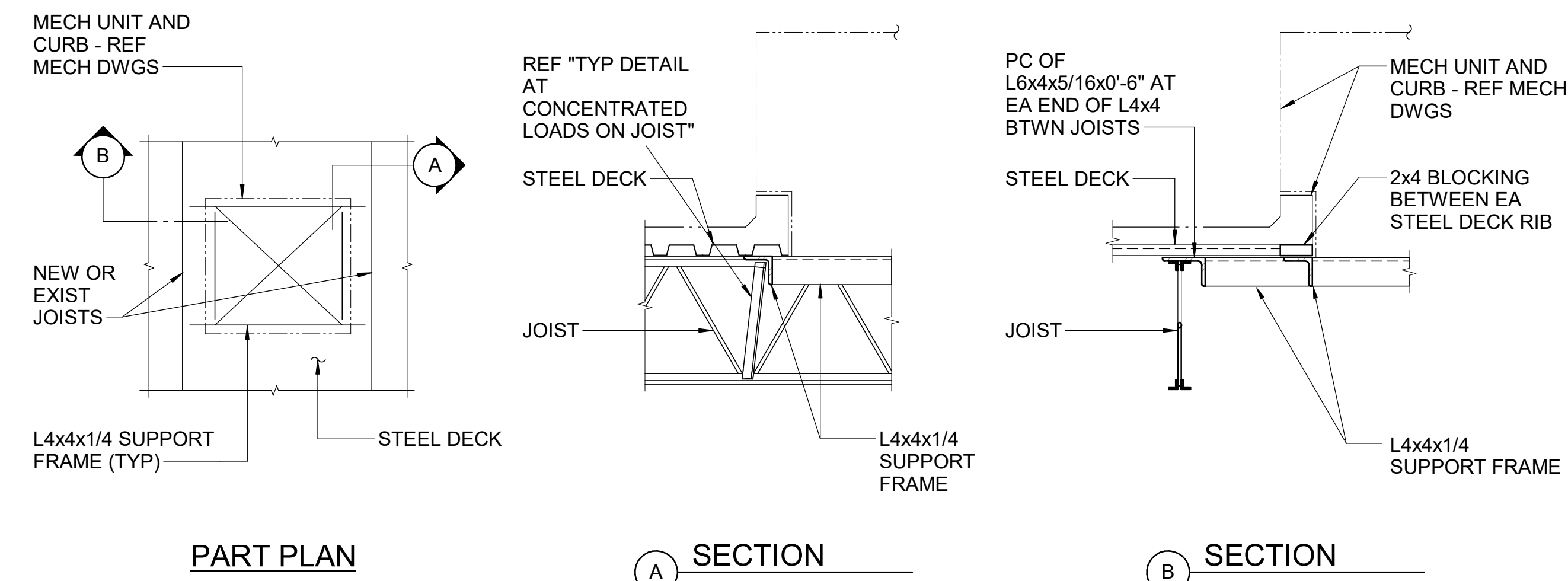
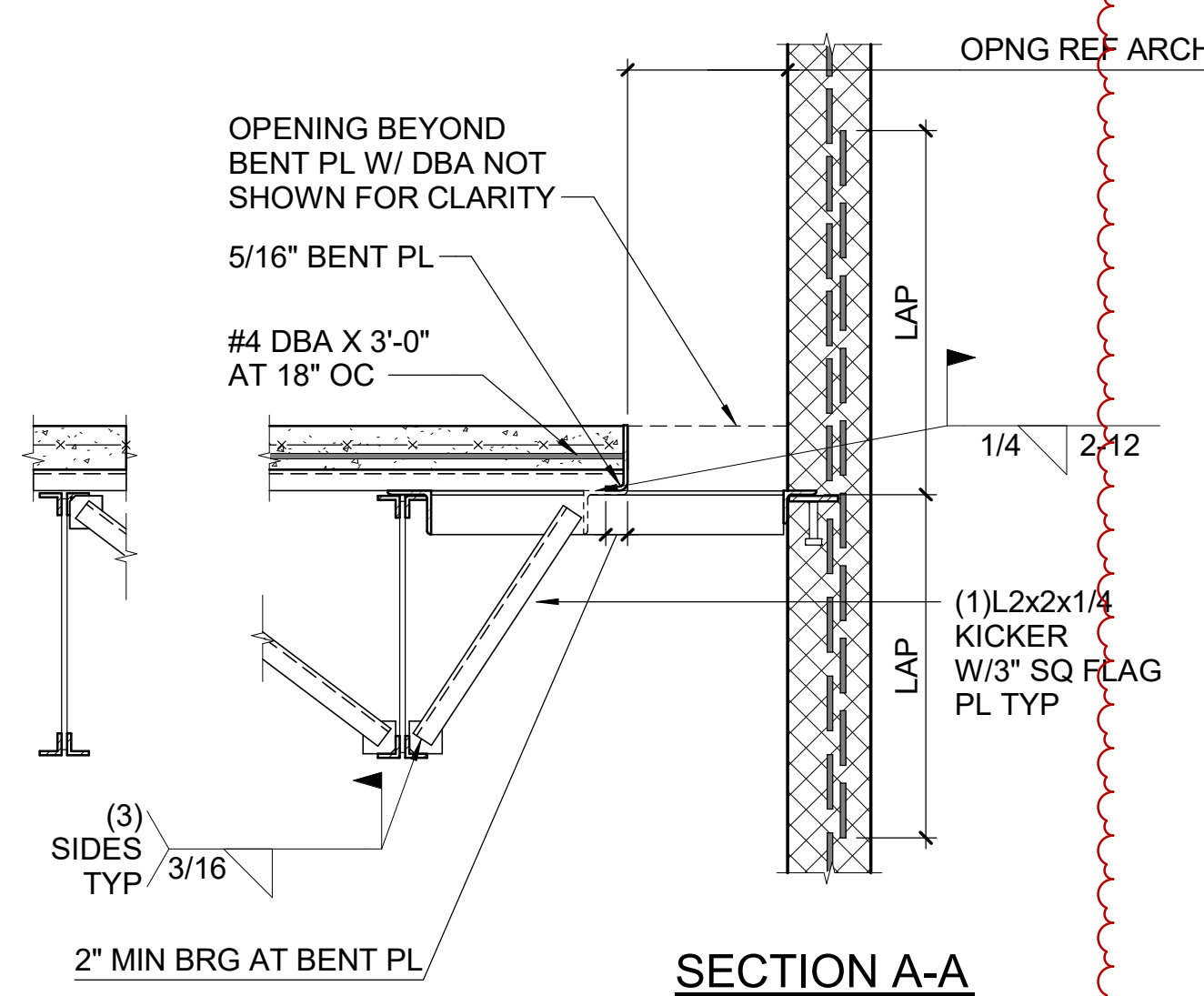
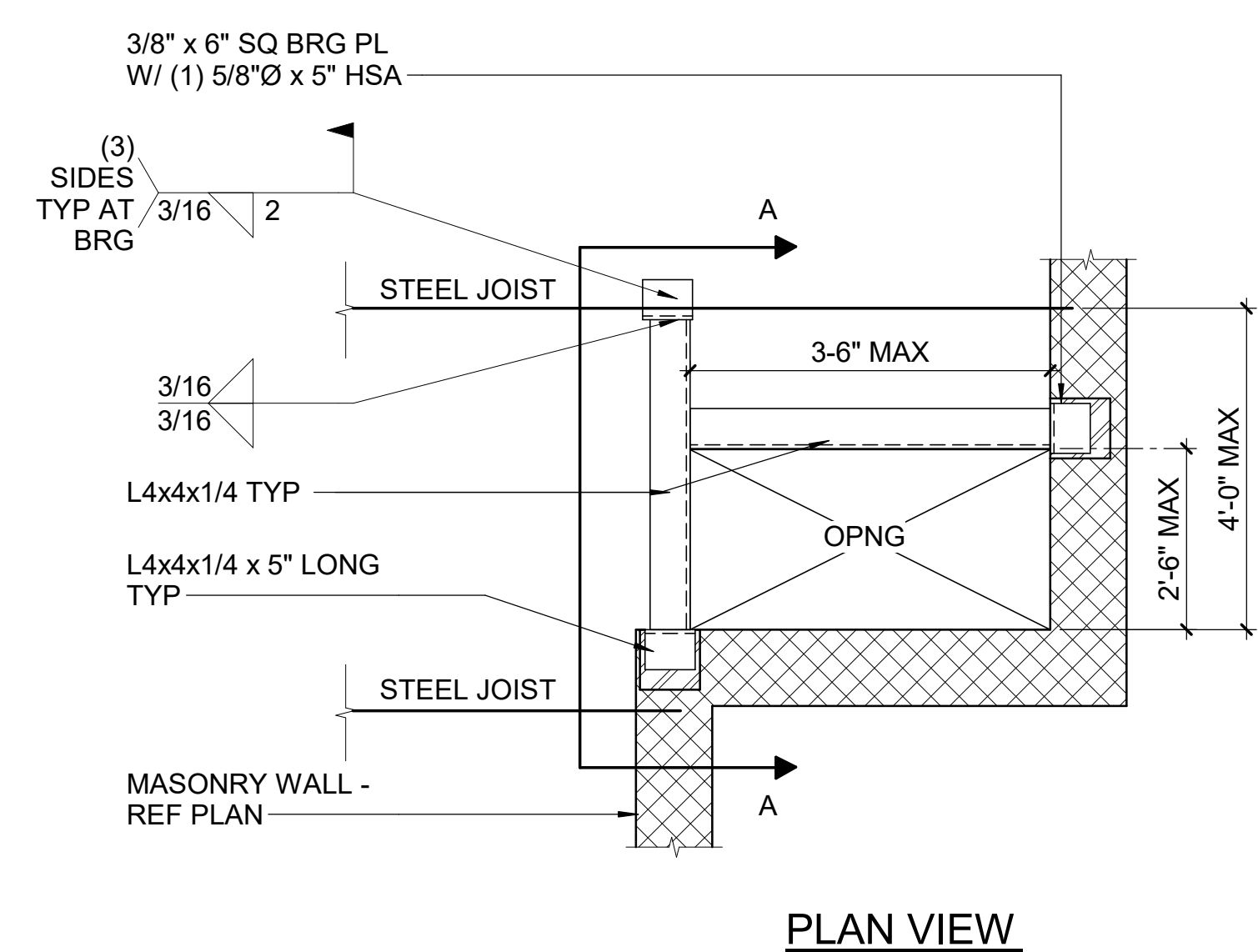
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6131 Falls of Neuse Rd., Suite 204
Raleigh, NC 27609
919/775-6600

LEWISTON
1070 S. Lake Dr., Suite J
Lewiston, NC 28073
803/754-0027



7
3/4" = 1'-0"

TYPICAL CONCRETE BASEMENT WALL FRAMING SUPPORT DETAILS



4
NTS

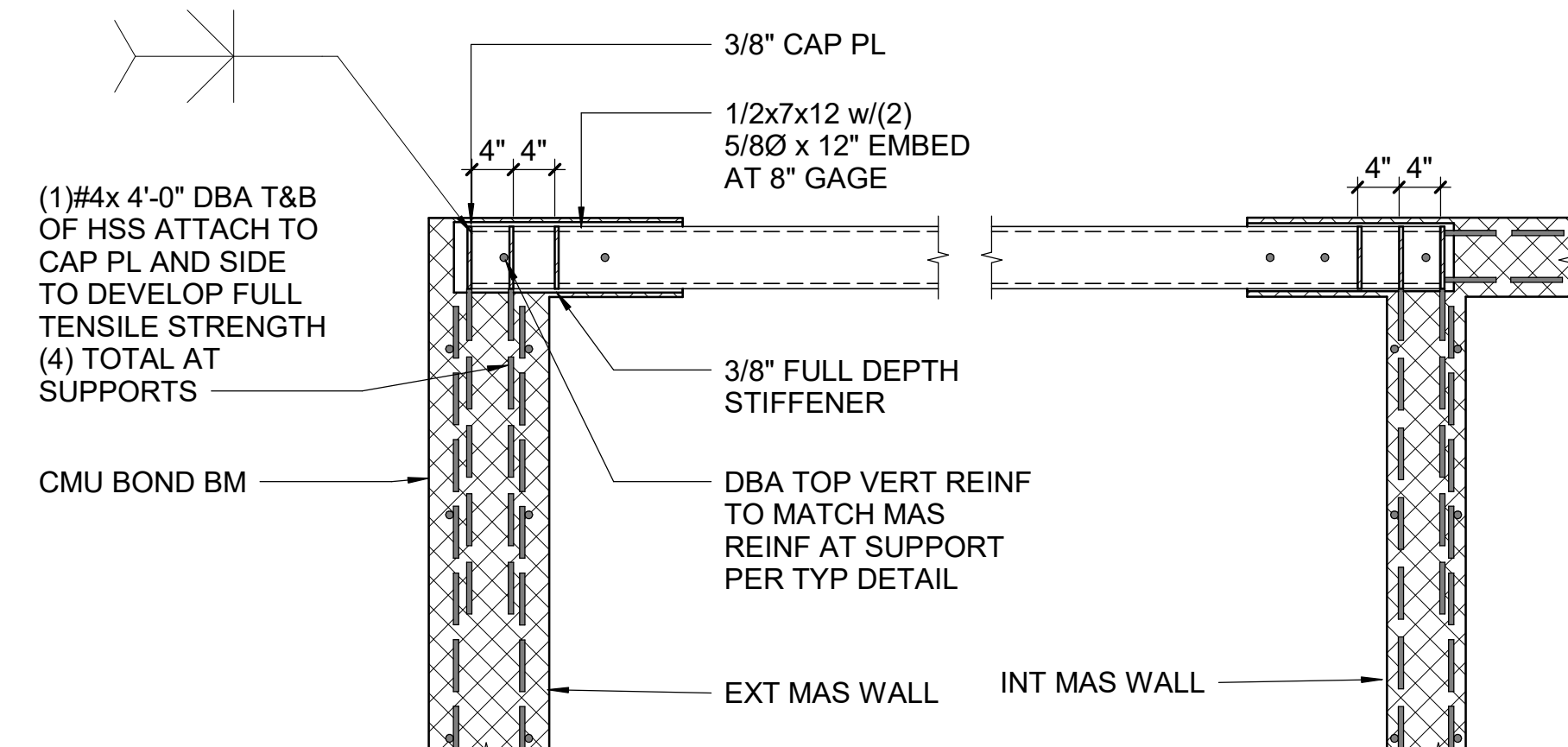
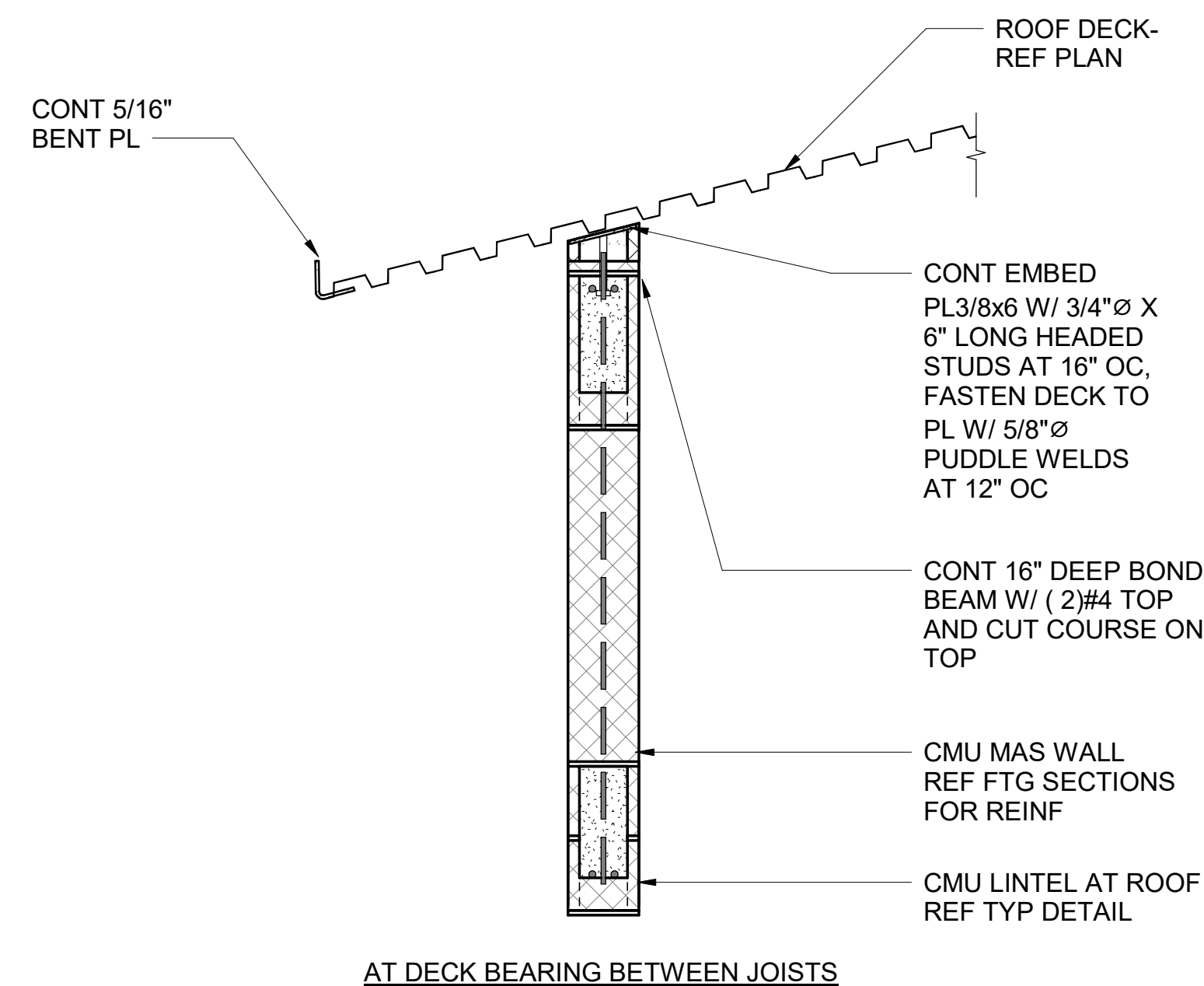
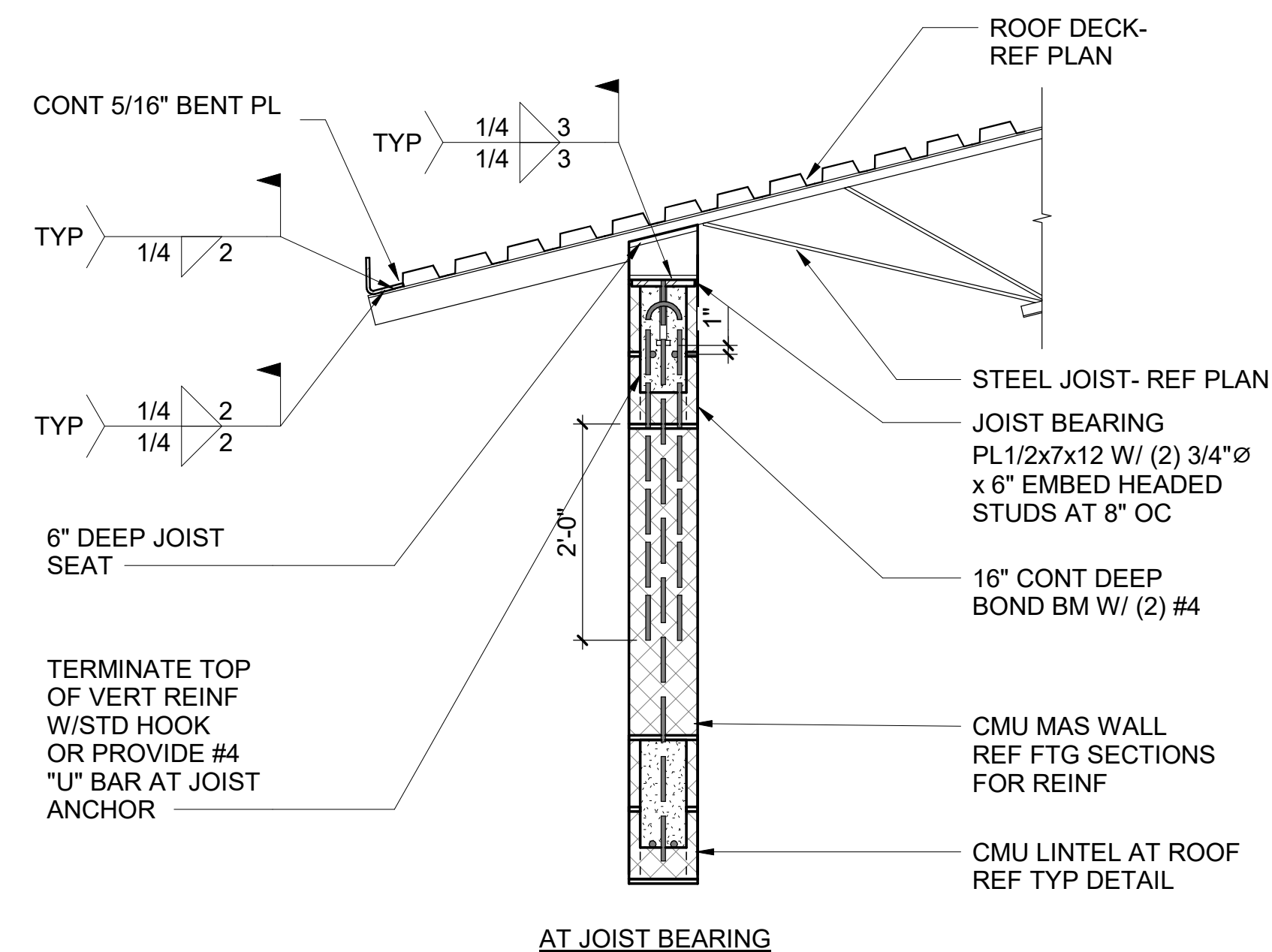
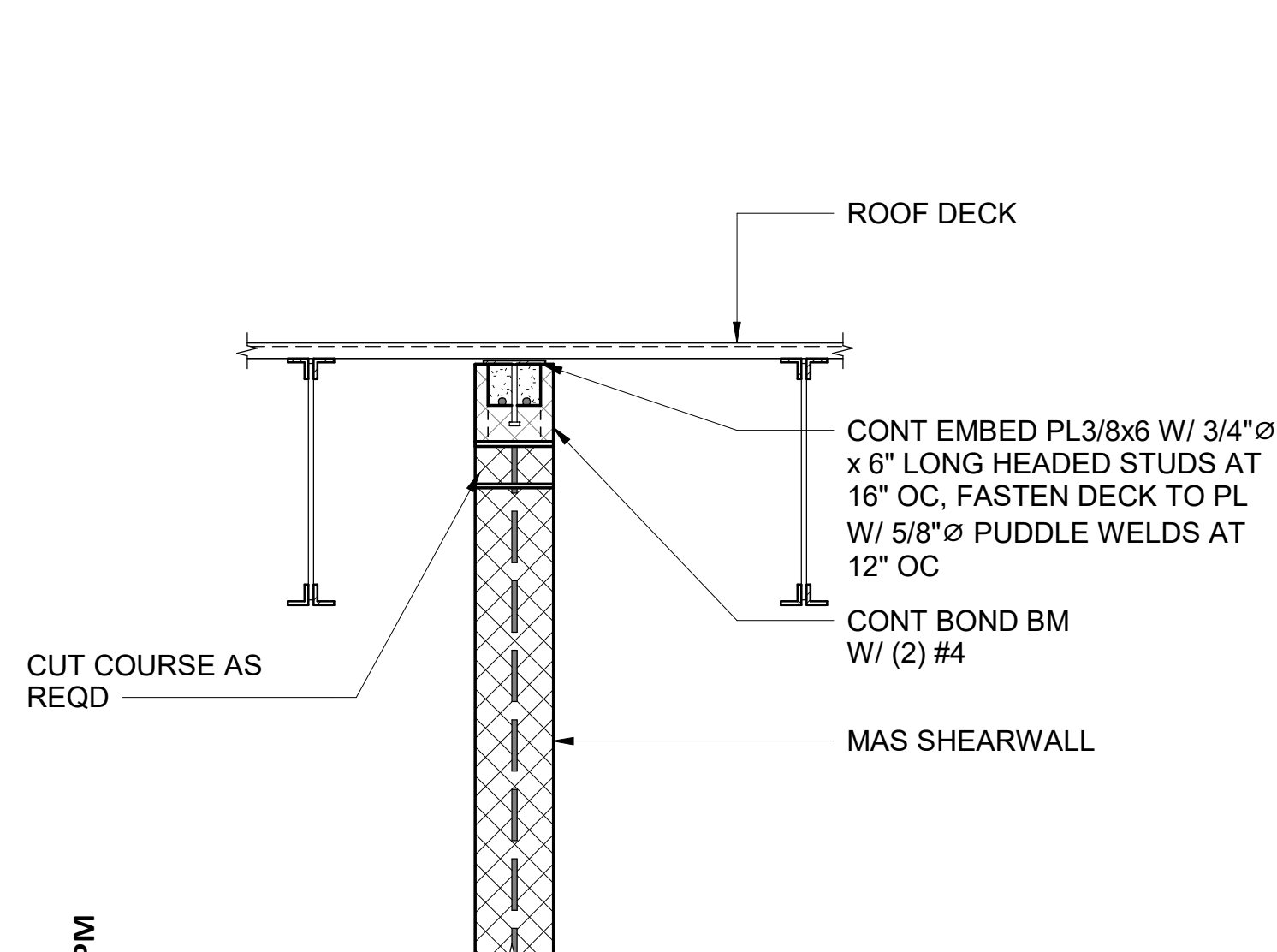
TYPICAL OPENING AT CORRIDOR

5
3/4" = 1'-0"

TYPICAL ROOF TOP MECHANICAL UNIT SUPPORT DETAILS

6
3/4" = 1'-0"

TYPICAL LINTEL BEARING ON EXISTING MASONRY DETAIL



1
3/4" = 1'-0"

TYPICAL INTERIOR MASONRY SHEARWALL DETAIL

2
NTS

TYPICAL SLOPPED ROOF BEARING AT PERIMETER DETAIL

3
NTS

TYPICAL HSS WINDGIRT AT MASONRY STAIRWELL STOREFRONT