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# RECORD DRAWING

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**CS3.2**  
UMB Project No. 99-311  
WTW Project No. 70-4091  
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## Drawing List

TOTAL DRAWINGS = 186



GENERAL NOTES

1. CODE

- A. ALL CONSTRUCTION SHALL CONFORM WITH THE PROVISIONS OF THE 2003 IBC CODE, AND BALTIMORE CITY SUPPLEMENTS.

2. DESIGN LOADING

- A. THE DESIGN DEAD LOAD FOR THE FRAMING IS AS FOLLOWS:

ROOF		FLOORS		MULTI-PURPOSE ROOM FLOOR	
MEMBRANE ROOFING	10 PSF	FLOORING	1 PSF	FLOORING	1 PSF
INSULATION	2 PSF	CONC. SLAB AND DECK	45 PSF	CONC. SLAB AND DECK	45 PSF
STRUCTURAL FRAMING	5 PSF	STRUCTURAL FRAMING	5 PSF	STYROFOAM	1 PSF
METAL DECK	2 PSF	CEILING	1 PSF	NORMAL WT. CONC. TOPPING	50 PSF
CEILING	1 PSF	MECHANICAL	3 PSF	STRUCTURAL FRAMING	5 PSF
MECHANICAL	3 PSF	MISCELLANEOUS	2 PSF	CEILING	1 PSF
MISCELLANEOUS	2 PSF			MECHANICAL	3 PSF
				MISCELLANEOUS	2 PSF
TOTAL DEAD LOAD	25 PSF	TOTAL DEAD LOAD	57 PSF	TOTAL DEAD LOAD	108 PSF

BALLROOM FLOOR

FLOORING	1 PSF
CONC. SLAB AND DECK	45 PSF
STRUCTURAL FRAMING	5 PSF
ACOUSTICAL CEILING	10 PSF
MECHANICAL	3 PSF
MISCELLANEOUS	2 PSF

TOTAL DEAD LOAD	66 PSF
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- THE MINIMUM DESIGN LIVE LOADINGS FOR ALL NEW FRAMING IS AS FOLLOWS:

ROOF	30 PSF
FRAMED FLOORS	100 PSF UNIFORM LOAD
STAIRS & LOBBIES	100 PSF
CORRIDORS	100 PSF
EQUIPMENT RMS., STORAGE	150 PSF
PATIO ROOF	100 PSF
BOOKSTORE	125 PSF
CONSTRUCTION LIVE LOAD FOR COMPOSITE BEAM BEFORE 75% OF f <sub>c</sub>	20 PSF

- B. LIVE LOAD REDUCTION BASED ON SECTION 1607.9 IBC 2003 AND SHALL NOT EXCEED:

50% FOR MEMBERS SUPPORTING 1 FLOOR  
40% FOR COLUMNS, BEAMS, GIRDERS AND FOOTINGS SUPPORTING 2 OR MORE FLOORS

- C. LATERAL LOADS:

SEISMIC LOAD:

SOIL SITE CLASS – "D" (BASED ON GEOTECHNICAL REPORT PREPARED BY T.L.B. ASSOCIATES, INC. DATED MAY 11, 2006).

S<sub>s</sub> = 0.169 G MAPPED SHORT PERIOD RESPONSE SPECTRAL ACCELERATION (BASED ON ADDENDUM TO GEOTECHNICAL REPORT PREPARED BY T.L.B. ASSOCIATES, INC. DATED AUGUST 11, 2006).

S<sub>1</sub> = 0.051 G MAPPED 1S PERIOD RESPONSE SPECTRAL ACCELERATION (BASED ON ADDENDUM TO GEOTECHNICAL REPORT PREPARED BY T.L.B. ASSOCIATES, INC. DATED AUGUST 11, 2006).

F<sub>a</sub> = 1.6 SITE CLASS COEFFICIENT FOR SHORT PERIODS (TABLE 1615.12(1))

F<sub>v</sub> = 2.4 SITE CLASS COEFFICIENT FOR 1S PERIOD (TABLE 1615.12(2))

C<sub>t</sub> = .020 BUILDING PERIOD COEFFICIENT FOR CONCENTRICALLY BRACED STEEL FRAMES.

SEISMIC USE GROUP – II (1604.5)  
SEISMIC DESIGN CATEGORY-"B" (TABLE 1616.3 (1), 1616.3(2))  
RESPONSE MODIFICATION FACTOR R = 3 FOR "STRUCTURAL STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE" (TABLE 1617.6)

SEISMIC BASE SHEAR IS DETERMINED BASED ON FOLLOWING GRAVITY LOAD PARTICIPATION

- a. TOTAL DEAD LOAD  
b. 10 PSF PARTITION LOAD  
c. OPERATING WEIGHT OF PERMANENT MECHANICAL EQUIPMENT (ELEVATOR EQUIPMENT, MECHANICAL AND ELECTRICAL ROOMS)

SEISMIC REDUNDANCY COEFFICIENT = 1.0 (1617.2.1)

WIND LOAD: (SECTION 1609 IBC 2003, SECTION 6 ASCE 7-02)

MEAN ROOF HEIGHT h<sub>m</sub> = 124'-8"  
WIND SPEED V = 90 mph  
EXPOSURE CATEGORY = "B" (1609.4 IBC 2003)  
IMPORTANCE FACTOR I<sub>w</sub> = 1.15 (TABLE 1604.5)

- D. THE CONTRACTOR IS CAUTIONED THAT THE LIVE LOAD CAPACITIES NOTED ABOVE HAVE BEEN REDUCED FOR MEMBERS SUPPORTING 150 SQUARE FEET OF FLOOR OR MORE IN ACCORDANCE WITH THE PROVISIONS OF THE BUILDING CODE.

- E. THE STRUCTURAL DRAWINGS ARE SUPPLEMENTAL TO THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK AND COORDINATE ALL THE DRAWINGS BEFORE FABRICATION AND/OR INSTALLATION OF ANY WORK. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.

3. GENERAL

- A. ALL WORK SPECIFIED HEREIN SHALL BE INSPECTED IN ACCORDANCE WITH THE BUILDING CODE AND ALL LOCAL ORDINANCES. THE OWNER SHALL HIRE AN EXPERIENCED, QUALIFIED INSPECTOR TO PERFORM ALL THE REQUIRED INSPECTION WORK. THE ENGINEER WILL NOT PERFORM THE REQUIRED AS A PART OF THEIR DESIGN SERVICES. THE ENGINEER MAY VISIT THE INSPECTION SITE TO ASCERTAIN GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS. SUCH SITE VISITS ARE NOT TO BE CONSTRUED AS MEETING ANY INSPECTION REQUIREMENTS UNLESS THE ENGINEER SPECIFICALLY SO STATES IN WRITING.

- B. ALL STAIRS, RAILINGS, METAL STUD WALLS, STOREFRONTS, AND EXTERIOR CEILINGS SHALL BE DESIGNED FOR ALL APPLICABLE DEAD LOADS AND FOR ALL LIVE, WIND, AND SEISMIC LOADS AS SPECIFIED IN THE LOCAL BUILDING CODE. SHOP DRAWINGS AND CALCULATIONS FOR THESE ITEMS SHALL BE SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN THE LOCAL JURISDICTION AND SHALL BE SUBMITTED TO THE ARCHITECT.

4. FOUNDATIONS

- A. ALL FILL UNDER FOOTINGS AND SLABS SHALL BE COMPACTED TO A DRY DENSITY OF AT LEAST 95 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T-180 (ASTM D-1557).

- B. ALL EXCAVATION, BACKFILLING, AND FILLING OPERATIONS BENEATH THE BUILDING SLAB AND FOUNDATIONS, AND ALL COMPACTION TESTS AND INSPECTION, SHALL BE DONE UNDER THE DIRECTION AND SUPERVISION OF A REGISTERED PROFESSIONAL SOILS ENGINEER RETAINED BY THE OWNER. ALL SOIL EQUIPMENT AND PROCEDURES SHALL BE APPROVED BY THE SOILS ENGINEER PRIOR TO ALL EARTHWORK OPERATIONS.

- C. PREPARATION OF THE SUBGRADE AND PLACEMENT OF CONTROLLED FILL SHALL BE DONE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT (MAY 11, 2006 WITH AUGUST 11, 2006 ADDENDUM). A COPY OF WHICH IS INCLUDED IN THE SPECIFICATIONS AND WITH WHICH THE CONTRACTOR MUST BE THOROUGHLY FAMILIAR.

- D. CAISSONS ARE DESIGNED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT (MAY 11, 2006 WITH AUGUST 11, 2006 ADDENDUM) BY TLB ASSOCIATES INC., FOR AN ALLOWABLE END BEARING CAPACITY OF 100 KSF, AND SKIN-FRICTION CAPACITY OF 0.5 KSF (BELOW ELEV. 43'). SOIL ABOVE ELEV. 43' IS DISREGARDED FOR SKIN FRICTION. BOTTOM OF CAISSON ELEVATIONS SHOWN ON PLAN ARE APPROXIMATE (FOR BIDDING PURPOSES) AND MAY HAVE TO BE ADJUSTED IN THE FIELD. CAISSONS SHALL BE DRILLED WITHOUT DISTURBING SURROUNDING SOIL. USE CASINGS OR SHORING TO PREVENT SLIDING OR CAVING FROM SEEPAGE. KEEP EXCAVATIONS FREE OF STORM WATER AND GROUND WATER INFILTRATION. CAISSON SHALL BE WITHIN ACI 336.1 TOLERANCES. CONCRETE SHALL BE PLACED IN ACCORDANCE WITH THE LOCAL BUILDING CODE, ACI-318 (LATEST LOCAL APPROVED EDITION), AND THE SPECIFICATIONS.

- E. ALL SPREAD FOOTINGS HAVE BEEN DESIGNED FOR AN ASSUMED ALLOWABLE NET SOIL BEARING PRESSURE OF 5000 PSF. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE ASSUMED SOIL BEARING PRESSURE. SHOULD THE SOIL BEARING PRESSURE BE FOUND TO BE LESS THAN 5000 PSF, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT.

5. CAST-IN-PLACE CONCRETE

5A. GENERAL CONSTRUCTION

- A. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST APPROVED (BY LOCAL GOVERNMENT) EDITIONS OF THE FOLLOWING A.C.I. AND A.S.T.M. DOCUMENTS:

ACI-301 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS  
ACI-302.1R FLOOR AND SLAB CONSTRUCTION  
ACI-318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE  
ACI-214 COMPRESSION TESTS  
ACI-306 COLD WEATHER  
ACI-315 DETAILING  
ACI-347 FORMWORK  
ACI-305 HOT WEATHER  
ACI-211 PROPORTIONS OF CONCRETE  
ACI-304 PLACING CONCRETE  
ASTM C94 READY-MIX CONCRETE

- B. ALL FIELD AND LAB TESTING OF CONCRETE SHALL CONFORM TO THE LATEST APPROVED (BY LOCAL GOVERNMENT) EDITIONS OF ASTM:

ASTM C31 FIELD CYLINDER SPECIMENS  
ASTM C143 SLUMP TEST  
ASTM C231 AIR CONTENT (WHEN REQUIRED)  
ASTM C39 LAB TESTING CYLINDERS  
ASTM C172 SAMPLING FRESH CONCRETE  
ASTM C42 HARDENED CORES (WHEN REQUIRED)

- C. ALL CONCRETE, UNLESS NOTED OTHERWISE, SHALL BE STONE AGGREGATE CONCRETE HAVING THE FOLLOWING MINIMUM 28 DAY COMPRESSIVE STRENGTHS:

ALL CONCRETE UNO – 3500 PSI  
FOUNDATIONS, FOUNDATION WALLS, GRADE BEAMS, PIERS AND BELOW GRADE WORK, CAISSONS – 5000 PSI  
CONCRETE ON COMPOSITE METAL DECK – 3500 PSI (LIGHTWEIGHT 110 PCF)  
SLABS ON GRADE – 3500 PSI  
CONCRETE AT ELEVATOR MACHINE ROOM – 5000 PSI (LIGHTWEIGHT 110 PCF)

- D. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE AN AIR ENTRAINMENT OF 6% ± 1.5%, UNLESS NOTED OTHERWISE. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED. MAXIMUM AGGREGATE SIZE FOR CONCRETE SHALL BE 3/4" UNO, 1" FOR FOUNDATIONS, FOUNDATION/BASEMENT WALLS, PIERS AND BELOW GRADE WORK. ALL CONCRETE SHALL CONTAIN A WATER REDUCING ADMIXTURE.

- E. ALL CONCRETE MIX DESIGNS AND ADMIXTURES SHALL BE APPROVED BY THE ARCHITECT 30 DAYS PRIOR TO INITIATION OF FIRST POUR.

- F. ALL REINFORCING BARS SHALL CONFORM TO ASTM A-615 GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185, FLAT SHEETS.

- G. ALL CONCRETE SHALL BE SAMPLED AND TESTED BY AN AGENCY RETAINED BY THE OWNER. THE CONTRACTOR SHALL NOTIFY THE TESTING AGENCY 48 HOURS PRIOR TO THE POURING OF ANY CONCRETE.

- H. PROVIDE WATER STOPS IN ALL CONSTRUCTION AND CONTROL JOINTS IN CONCRETE BELOW GRADE.

- I. CONCRETE EXPOSED TO PUBLIC VIEW SHALL MEET THE REQUIREMENTS FOR ARCHITECTURAL CONCRETE OF ACI 301.

- J. ALL FORMWORK SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE "FORMWORK FOR CONCRETE", SPECIAL PUBLICATION NO. 4 AND ACI'S "STANDARD RECOMMENDED PRACTICE FOR CONCRETE FORMWORK" (ACI-347, LATEST LOCAL APPROVED EDITION).

- K. ALL CONCRETE FILL FOR METAL PAN STAIRS SHALL BE PEA GRAVEL CONCRETE, HAVING A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI AT 28 DAYS. MAXIMUM SIZE OF AGGREGATE SHALL BE 1/2".

- L. LEAVE-IN-PLACE CONCRETE FORMS SHALL BE "STAY FORM" FORM LINER BY A.M.I.C.O. OR AN APPROVED EQUIVALENT. FORM TO BE 26 GAGE MIN. THICKNESS FABRICATED IN ACCORDANCE WITH ASTM C847.

CLEARANCES FOR REINFORCING:

CAISSON REINFORCING: 3" CLR.  
CAST AGAINST EARTH: 3" CLR.  
FORMED & EXPOSED TO EARTH OR WEATHER: #5 OR LARGER 2" CLR.  
#5 OR SMALLER 1 1/2" CLR.  
CONCRETE S.O.G. (TOP): 2" CLR.

NOT EXPOSED TO EARTH OR WEATHER:

SLABS & WALLS: 3/4" CLR.  
CONCRETE BEAM: 1 1/2" CLR.  
COLUMN SPIRALS OR TIES: 1 1/2" CLR.  
CONCRETE S.O.G. (TOP): 2" CLR.

5B. SLABS ON GRADE

- A. ALL SLABS ON GRADE SHALL CONSIST OF A 5" THICK CONCRETE SLAB UNO, REINFORCED WITH 6" x 6"- W2.9 X W2.9 WELDED WIRE MESH ON 15 MIL POLYOLEFIN VAPOR BARRIER ON TOP OF 6" POROUS FILL, U.N.O.

- B. CONTROL JOINTS FOR SLABS ON GRADE SHALL BE PROVIDED AT COLUMN CENTERLINE AND MORE FREQUENTLY SUCH THAT THE AREA OF THE SLAB DOES NOT EXCEED 625 SQUARE FEET BETWEEN JOINTS. CONTROL JOINT PANELS SHALL BE RECTANGULAR TYPICALLY IN SHAPE AND SHALL NOT EXCEED A LENGTH-TO- WIDTH RATIO OF 1.5. COORDINATE JOINTS WITH CORRIDOR AREAS WITH TILE FINISHES, SEE ARCHITECTURAL DRAWINGS. PROVIDE PROPOSED JOINT LAYOUT FOR REVIEW.

5C. REINFORCING STEEL

- A. EXCEPT AS NOTED, ALL REINFORCING SHALL BE HIGH STRENGTH NEW BILLET STEEL CONFORMING TO ASTM DESIGNATION A-615 (LATEST LOCAL APPROVED EDITION) (FY=60,000 PSI). ALL REINFORCING SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH THE ACI'S MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES (ACI-315)

5D. COMPOSITE BEAM OR STEEL FRAMED STRUCTURES

- A. LIGHTWEIGHT STRUCTURAL CONCRETE FOR FRAMED FLOOR SLABS SHALL BE STONE LIGHTWEIGHT WITH A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI AT 28 DAYS AND A MAXIMUM UNIT WEIGHT OF 110 ± 3 PCF, UNLESS NOTED OTHERWISE ON PLAN.

- B. THE CONTRACTOR'S ATTENTION IS DRAWN TO THE FACT THAT UNDER THE DEAD LOAD OF THE WET CONCRETE THE BEAMS AND METAL DECK WILL DEFLECT. THE DEPTH OF CONCRETE SHOWN ON THE DRAWINGS IS THE MINIMUM REQUIRED. THE CONTRACTOR SHALL MAKE ALLOWANCES FOR ANY ADDITIONAL CONCRETE THAT WILL BE REQUIRED DUE TO THE ABOVE DESCRIBED DEFLECTION.

- C. FRAMED FLOOR SLABS SHALL BE POURED IN STRIPS PERPENDICULAR TO THE STEEL GIRDERS. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT 1 WEEK PRIOR TO POUR THE LOCATIONS OF ALL CONSTRUCTION JOINTS AND THE SEQUENCING OF POURS PRIOR TO PROCEEDING.

- D. THE SYMBOL [N] ADJACENT TO A BEAM OR PORTION OF A BEAM INDICATES THE NUMBER OF 3/4 INCH DIAMETER HEADED STUDS TO BE WELDED TO THE TOP OF THE BEAM OR PORTION OF THE BEAM. STUDS SHALL EXTEND 1-1/2" ABOVE THE DECK AFTER INSTALLATION. THE NUMBER OF STUDS HAS BEEN DETERMINED BY ASSUMING THE SHAPE OF THE METAL DECK CAUSED NO REDUCTION IN THE SHEAR CAPACITY OF THE STUDS. IF REQUIRED, THE TOTAL NUMBER OF STUDS, N, SHALL BE INCREASED IN ACCORDANCE WITH SECTION 15 OF THE AISC SPECIFICATIONS. THAT IS, IF THE STUD-ALLOWABLE-LOAD-REDUCTION-FACTOR, N (FORMULAS (5-1) AND/OR (5-2) OF THE AISC SPECIFICATION), IS LESS THAN 1.0, THE NUMBER OF STUDS SHALL BE INCREASED BY MULTIPLYING THE NUMBER OF STUDS BY THE RECIPROCAL OF THE FACTOR, N.

- E. SEE MECHANICAL OR ARCHITECTURAL DRAWINGS FOR HOLES IN SLABS NOT SHOWN.

- F. FLOOR STRUCTURE ON THE FIRST FLOOR, SECOND FLOOR, THIRD FLOOR, FOURTH FLOOR AND FIFTH FLOOR ARE DESIGNED FOR MURRAY'S VIBRATION METHOD, STEEL DESIGN GUIDE SERIES II "FLOOR VIBRATIONS DUE TO HUMAN ACTIVITY". ALL FLOOR STRUCTURE SATISFY DESIGN CRITERIA, EXCEPT FLOOR STRUCTURE IN MULTIPURPOSE ROOM #1 (THIRD FLOOR), MULTIPURPOSE ROOM #2 (FOURTH FLOOR), AND BALLROOM (SECOND FLOOR).

6. ARCHITECTURAL PRECAST CONCRETE PANELS:

- A. REFER TO SPECIFICATIONS AND ARCHITECTURAL DRAWINGS AND DETAILS FOR TYPE AND LOCATION OF PANELS.

- B. METHOD AND LOCATIONS OF ATTACHMENT TO STRUCTURAL FRAME SHALL BE IN ACCORDANCE WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS UNLESS AUTHORIZED OTHERWISE IN WRITING BY STRUCTURAL ENGINEER OF RECORD.

- C. PRECAST MEMBERS MAY REQUIRE ELECTRICAL CONDUIT, JUNCTION BOXES, OPENINGS, ETC. FOR THE PASSAGE OF UTILITIES. THEY MAY ALSO REQUIRE INSERTS, PLATES AND ANCHORS FOR THE ATTACHMENT OF OTHER EQUIPMENT. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ITEMS REQUIRED AND THEIR POSITIONING. COORDINATE WITH APPROPRIATE TRADES: CHAMFER, REVEALS, REGLETS, INSERTS, FINISHES, ETC. ARE NOT INDICATED ON THE STRUCTURAL DRAWINGS, REFER TO ARCHITECTURAL DETAILS.

- D. DESIGN PRECAST ELEMENTS AND THEIR CONNECTIONS IN ACCORDANCE WITH ACI AND PCI REQUIREMENTS UNDER THE DIRECT SUPERVISION OF AN ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION FOR THE LIVE, DEAD AND LATERAL LOADS REQUIRED BY THESE DOCUMENTS AND APPLICABLE CODES. SUBMIT CALCULATIONS AND SHOP DRAWINGS BEARING ENGINEER'S SEAL AND SIGNATURE.

- E. SUBMIT CALCULATIONS FOR PRECAST CONNECTIONS SHOWING A RATIONAL COMPLETE LOAD PATH, INCLUDING EFFECTS ON SUPPORTING MEMBERS. DESIGN CONNECTIONS SO THAT NO ECCENTRIC OR TORSIONAL FORCES ARE INDUCED IN THE SUPPORTING MEMBERS. CLEARLY INDICATE ALL LOADS IMPOSED UPON THE STRUCTURAL SYSTEM IN THE CALCULATIONS. REVIEW OF THE CALCULATIONS BY THE STRUCTURAL ENGINEER OF RECORD IS SOLELY FOR THE PURPOSE OF EVALUATING THE IMPACT OF THESE LOADS ON THE STRUCTURAL SYSTEM.

7. MASONRY

- A. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530/ASCE 9).

- B. ALL EXTERIOR WALLS AND ALL WALLS SUPPORTING LOADS OTHER THAN THEIR OWN WEIGHT SHALL BE CONSTRUCTED OF LOAD BEARING UNITS.

- C. HOLLOW LOAD-BEARING BLOCK SHALL CONFORM TO ASTM C-90 AND SOLID LOAD-BEARING BLOCK SHALL CONFORM TO ASTM C-145. PROVIDE TYPE N-1.

- D. ALL BEARING WALLS SHALL BE LAID UP WITH TYPE S MORTAR.

- E. ALL MASONRY WALLS SHALL BE REINFORCED WITH TRUSS-TYPE GALVANIZED JOINT REINFORCEMENT SPACED VERTICALLY AT 16" O.C., U.N.O. PROVIDE CORNER AND TEE PIECES AT ALL INTERSECTIONS. LAP ALL JOINT REINF. 6" MINIMUM.

- F. PROVIDE 16" MINIMUM DEPTH OF 100% SOLID MASONRY OR HOLLOW BLOCK FILLED SOLID WITH GROUT BELOW ALL LINTELS.

- G. BRACE AND SHORE ALL NEW MASONRY WALLS AS REQUIRED UNTIL ROOF DECKS HAVE BEEN COMPLETELY INSTALLED.

- H. PROVIDE SOLID BLOCK OR FILL WALL SOLID WITH GROUT DIRECTLY BELOW ALL CHANGES IN WALL THICKNESS OR CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS BEARING FOR ALL FACE SHELLS OF BLOCK.

- I. ALL FILL FOR MASONRY WALLS SHALL BE GROUT CONFORMING TO A.S.T.M. C476 FILL SHALL BE PLACED IN 5'-0" MAXIMUM LIFTS.

- J. LAP ALL VERTICAL REINFORCING 48 BAR DIAMETERS MINIMUM.

- K. ALL MASONRY CONSTRUCTION SHALL BE INSPECTED AS PER ACI 530/ASCE 5.

- L. ALL GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2000 PSI.

- M. THE COMPRESSIVE STRENGTH OF MASONRY SHALL BE F'M = 1800 PSI MINIMUM.

8. STRUCTURAL AND MISCELLANEOUS STEEL

8A. GENERAL AND NEW CONSTRUCTION

- A. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE NINTH EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" AND ALL ITS SUPPLEMENTS, AND TO THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES."

- B. ALL MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A-36 HAVING A MINIMUM YIELD STRENGTH OF 36,000 PSI.

- C. ALL STRUCTURAL STEEL SHALL BE AS FOLLOWS:  
COLUMNS: ASTM A-992, FY = 50,000 PSI  
BEAMS AND GIRDERS: ASTM A-992, FY = 50,000 PSI

- D. STEEL TUBES SHALL CONFORM TO ASTM A500 GRADE B, FY = 46,000 PSI.

- E. ALL STEEL PIPE SHALL CONFORM TO ASTM A-501, FY = 36,000 PSI OR ASTM A-53 TYPE "E" OR "S" GRADE B, FY = 35,000 PSI.

- F. ALL WELDED CONNECTIONS SHALL BE DONE WITH E70XX ELECTRODES. SHOP AND FIELD WELDS SHALL BE MADE BY APPROVED CERTIFIED WELDERS AND SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE FOR BUILDINGS AWS D1.1. WELDS SHALL DEVELOP THE FULL STRENGTH OF MATERIALS BEING WELDED UNLESS OTHERWISE NOTED.

- G. ALL BUTT WELDS SHALL BE FULL PENETRATION BUTT WELDS IN ACCORDANCE WITH THE STRUCTURAL WELDING CODE (AWS/AWS D1.1). THESE WELDS SHALL BE MADE ONLY BY OPERATORS QUALIFIED BY PROPERLY DESCRIBED TESTS IN THE STRUCTURAL WELDING CODE IN BUILDING CONSTRUCTION OF THE AMERICAN WELDING SOCIETY. ACCEPTANCE TO BE SUBJECT TO THE INSPECTION AND REVIEW OF AN INDEPENDENT INSPECTION AGENCY.

- H. WELDING SEQUENCE AND TECHNIQUE SHALL BE SUCH THAT DISTORTION OF STEEL MEMBERS IS MINIMIZED AND UNDUE DISTORTION IS AVOIDED.

- I. CONNECTIONS DETAILED BY THE FABRICATOR SHALL MEET THE FOLLOWING REQUIREMENTS:

- 1) PARAGRAPH 4.2.1 OF THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" IS HEREBY MODIFIED BY DELETION OF THE FOLLOWING SENTENCE: "THIS APPROVAL CONSTITUTES THE OWNER'S ACCEPTANCE OF ALL RESPONSIBILITY FOR THE DESIGN ADEQUACY OF ANY CONNECTIONS DESIGNED BY THE FABRICATOR AS A PART OF HIS PREPARATION OF THESE SHOP DRAWINGS."

- 2) UNLESS OTHERWISE NOTED ALL CONNECTIONS DESIGNED BY THE FABRICATOR SHALL BE DESIGNED IN ACCORDANCE WITH THE "AISC MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN", 9TH EDITION AND THE "AISC MANUAL OF STEEL CONSTRUCTION, VOLUME II, CONNECTIONS" USING THE ASD 9TH EDITION PROVISIONS CONTAINED THEREIN. THE USE OF "SNUG TIGHT" BOLTED CONNECTIONS IS NOT PERMITTED. BOLTS SHALL BE SLIP CRITICAL OR BEARING. SHEAR CONNECTIONS SHALL DEVELOP THE END REACTION W<sub>e</sub>/2L WHERE "W<sub>e</sub>" IS THE UNIFORM LOAD CONSTANT IN KIPS PER FOOT AND WHERE "L" IS THE SPAN IN FEET, AS SHOWN IN THE TABLES "UNIFORM LOAD CONSTANTS FOR BEAMS LATERALLY SUPPORTED" FOR GIVEN SHAPE, SPAN AND STEEL SPECIFIED, EXCEPT CONSIDERATION SHALL BE GIVEN TO CONCENTRATED LOADS NEAR THE ENDS OF BEAMS. BOLTED CONNECTIONS SHALL HAVE NO LESS THAN TWO BOLTS. ALL COMPOSITE STEEL BEAM CONNECTIONS SHALL BE DESIGNED FOR 150% OF THE ABOVE SPECIFIED CAPACITY.

- 3) WHERE BEARING TYPE CONNECTIONS ARE SPECIFIED, SHEAR VALUES FOR THREADS INCLUDED IN THE SHEAR PLANE SHALL BE USED, EXCEPT AS FOLLOWS: SPECIAL CONNECTIONS FOR REACTIONS EXCEEDING 45 KIPS MAY BE DESIGNED AND DETAILED USING LARGE DIAMETER BOLTS AND/OR HIGH STRENGTH BOLTS AND/OR BOLT STRENGTHS FOR THREADS EXCLUDED FROM THE SHEAR PLANE.

- 4) CONNECTIONS OTHER THAN THOSE SPECIFIED IN PARAGRAPHS (2) AND (3) ABOVE MAY BE USED PROVIDED THAT COMPLETE STRUCTURAL COMPUTATIONS SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN MARYLAND ARE SUBMITTED TO THE ARCHITECT.

- 5) BOLTS USED IN MOMENT RESISTING FRAME CONNECTIONS SHALL BE SLIP CRITICAL BOLTS.

- J. ALL STRUCTURAL STEEL AND STEEL COLUMNS SHALL BE FIREPROOFED, UNLESS OTHERWISE NOTED.

- K. CASTELLATED BEAMS SHALL BE SMARTBEAM AS MANUFACTURED BY CMC STEEL PRODUCTS OR APPROVED EQUIVALENT.

9. STEEL STAIRS

- A. ALL STAIR FRAMING SHALL BE DESIGNED BY THE STAIR MANUFACTURER TO SUPPORT ALL DEAD LOADS PLUS A MINIMUM LIVE LOADING OF 100 PSF.

- B. PROVIDE STEEL HANGERS, CLIP ANGLES, ETC., AS REQUIRED TO SUPPORT STAIR FRAMING FROM THE STRUCTURE. LOCATIONS TO BE CONCEALED WITHIN WALL FRAMING. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ARCHITECT/ENGINEER'S ATTENTION PRIOR TO FABRICATION.

- C. SHOP DRAWINGS FOR ALL STAIRS SHALL BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND AND STATING THAT ALL STAIR COMPONENTS HAVE BEEN DESIGNED TO THE SPECIFIED LOADING AND COMPLIES WITH THE BUILDING CODE.

10. METAL DECKING

- A. ALL METAL DECKING SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE "SPECIFICATION OF THE STEEL DECK INSTITUTE." ALL METAL DECKING SHALL BE THREE SPAN CONTINUOUS.

- B. UNLESS NOTED OTHERWISE, ALL METAL ROOF DECK SHALL BE GALVANIZED 1-1/2"-20 GAGE WIDE RIB TYPE "B" DECKING AS MANUFACTURED BY UNITED STATES DECK INC. OR AN APPROVED EQUIVALENT.

- C. ACOUSTICAL METAL ROOF DECK AT NATATORIUM SHALL BE GALVANIZED WITH G90 AND PAINTED 3" DEEP 20/20 GAGE TYPE NCA CELLULAR DECKING AS MANUFACTURED BY UNITED STATES DECK INC. OR AN APPROVED EQUIVALENT.

- D. ROOF DECKING SHALL BE FASTENED TO SUPPORTS WITH 5/8"Ø PLUG WELDS AT 6" O/C AT SUPPORTS AND PERIMETER AND 1'-6" O/C AT SIDE SEAMS.

- E. UNLESS NOTED OTHERWISE, ALL COMPOSITE METAL DECKING SHALL BE 2" DEEP x 20 GAGE COMPOSITE WIDE-RIB FLOOR DECK WITH AVERAGE MINIMUM RIB WIDTH OF 6" AS MANUFACTURED BY UNITED STEEL DECK, INC. OR APPROVED EQUIVALENT.

- F. AT THE POOL (SEE DRAWINGS), PROVIDE 3" DEEP x 18 GAGE TYPE 3 C CONFORM GALVANIZED NON-COMPOSITE DECK AS MANUFACTURED BY VULCRAFT OR APPROVED EQUIVALENT.

- G. FLOOR DECKING SHALL BE FASTENED TO SUPPORT WITH 5/8"Ø PUDDLE WELD AT 12" O/C AT SUPPORTS AND PERIMETER AND SPACING AS SPECIFIED BY MANUFACTURER AT SIDE SEAMS.

- H. GALVANIZING FOR ALL DECKING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A525 CLASS G90.

11. STRUCTURAL METAL STUDS

- A. ALL METAL STUDS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTES "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS."

- B. METAL STUDS 16 GAGE AND HEAVIER SHALL CONFORM TO ASTM A-446 GRADE D, F<sub>y</sub>=50,000 PSI. 18 GAGE AND LIGHTER METAL STUDS SHALL CONFORM TO ASTM A-446 GRADE A, F<sub>y</sub>= 33,000 PSI.

- C. PROVIDE ONE ROW OF WALL BRIDGING MINIMUM AT MID-HEIGHT OF STUDS, 4'-0" ON CENTER MAX.

- D. PROVIDE A MINIMUM OF 2 METAL STUDS AT ALL CORNERS AND ON BOTH SIDES OF ALL OPENINGS, UNLESS NOTED OTHERWISE.

- E. ALL STRUCTURAL METAL STUDS SHALL BE DESIGNED BY THE CONTRACTOR. METAL STUD CALCULATIONS AND SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. SUBMIT CALCULATIONS TO ARCHITECT FOR APPROVAL.

- F. STUD GAGE AND/OR SPACING SHALL BE MODIFIED AS REQUIRED AT BUILDING CORNERS FOR INCREASED CORNER WIND PRESSURES.

- G. ALL STRUCTURAL METAL STUDS SHALL BE 18 GAGE MINIMUM.

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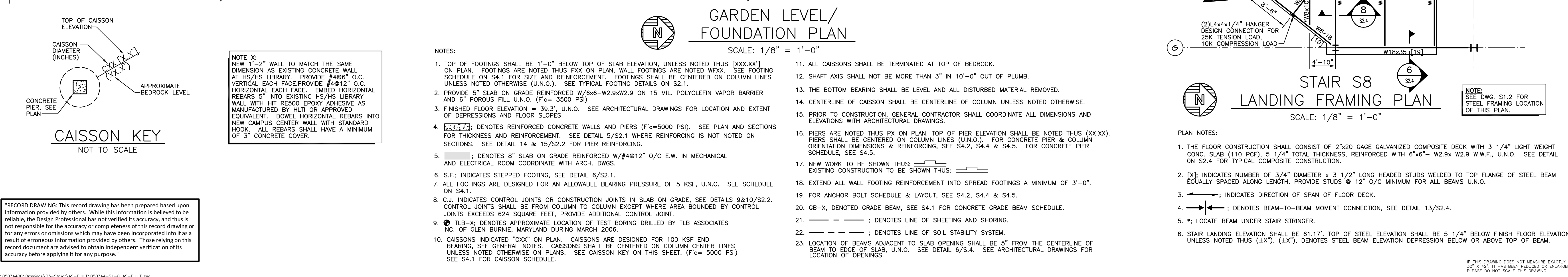
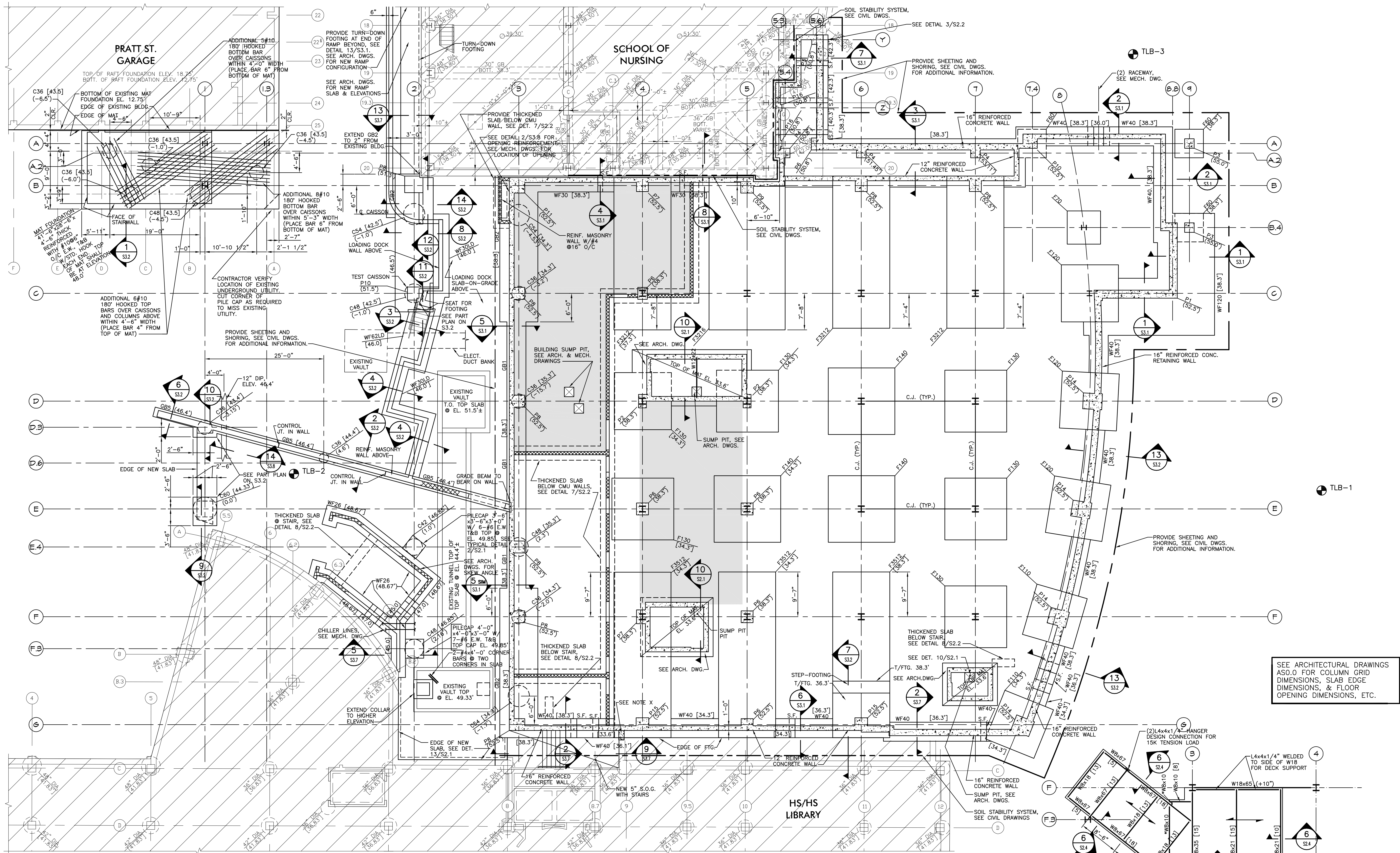
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**Campus Center**  
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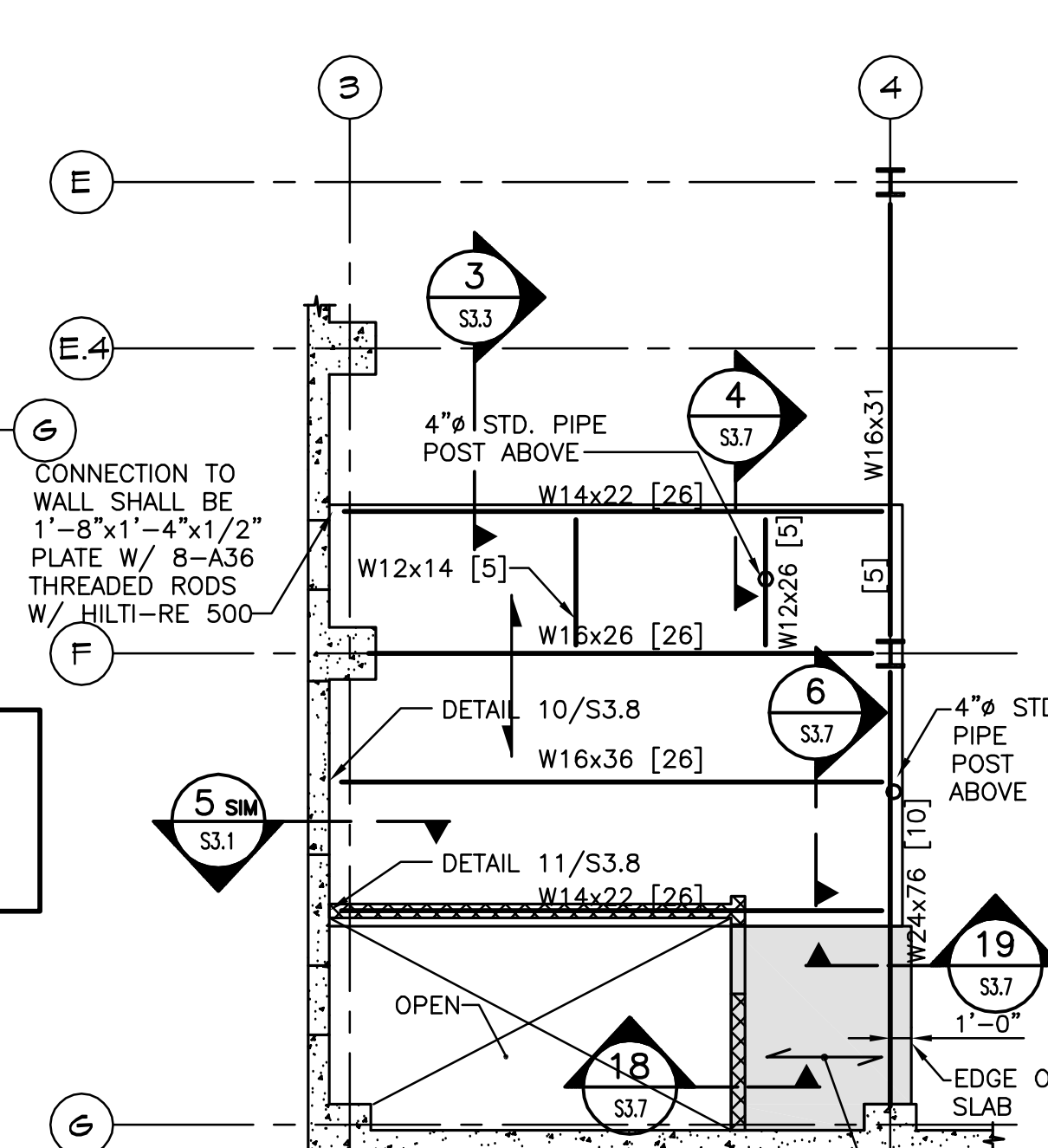
**Garden Level And Foundation Plan**

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 CONSTRUCTION  
 DOCUMENTS

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**S1.0**



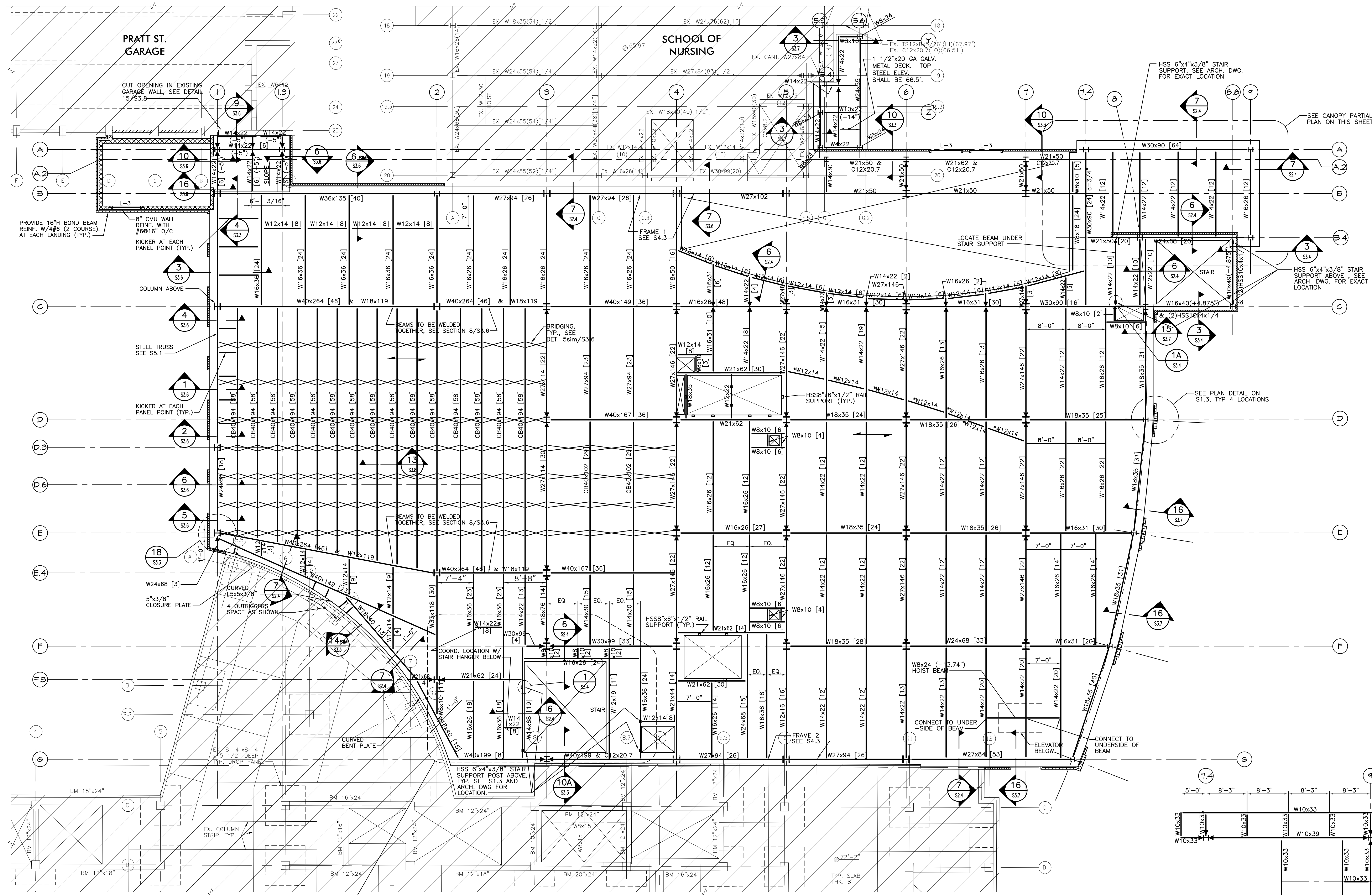


RECEIVING AREA  
PARTIAL PLAN  
SCALE: 1/8" = 1'-0"

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1. THE FLOOR CONSTRUCTION NORTH OF COLUMN LINE 3 SHALL CONSIST OF 2"x20 GAGE GALVANIZED COMPOSITE DECK WITH 5 1/4" TOTAL THICKNESS LIGHT WEIGHT CONCRETE SLAB (110 PCF) REINFORCED WITH 6"x6" -W29xW2.9 W.W.F. SEE DETAILS ON S2.4 FOR TYPICAL COMPOSITE CONSTRUCTION.
2. FIRST FLOOR ELEVATION SHALL BE 55.5' U.N.O. ON PLAN. TOP OF STEEL ELEVATION SHALL BE 5 1/4" BELOW FINISHED FLOOR EL. 55.00' AS NOTED THUS (x.4"). (x.4"), DENOTES STEEL BEAM DIMENSION ABOVE OR BELOW TOP OF STEEL ELEVATION.
3. [X]; INDICATES NUMBER OF 3/4" DIAMETER X 3 1/2" LONG HEADED STUDS WELDED TO TOP FLANGE OF STEEL BEAM EVENLY SPACED ALONG LENGTH. PROVIDE STUDS @ 12" O/C MINIMUM FOR ALL BEAMS U.N.O.
4. ; INDICATES DIRECTION OF SPAN OF FLOOR DECK.
5. ; INDICATES BEAM-TO-COLUMN MOMENT CONNECTION, SEE DETAIL 13/S2.4.
6. C-xxx"; INDICATES AMOUNT OF CAMBER.
7. SEE ARCHITECTURAL DRAWINGS FOR ALL ELEVATIONS AND DIMENSIONS NOT SHOWN.
8. ALL BEAMS ARE SPACED EQUALLY BETWEEN COLUMN LINES UNLESS NOTED.
9. SEE EMBEDDED CONNECTION PLATE DETAIL ON 9/S2.5 FOR STEEL BEAM CONNECTION TO CONCRETE WALL DETAIL. SEE REINFORCING STEEL DETAIL ON 11/S2.1 FOR ADDITIONAL STEEL IN CONCRETE WALL UNDER BEAM BEARING POINT.
10. [ ]; DENOTES FLOOR CONSTRUCTION CONSISTING OF 2"x20 GAGE GALVANIZED METAL DECK WITH 4 1/4" THICKNESS LIGHTWEIGHT CONCRETE SLAB (110 PCF) (TOTAL THICKNESS 6 1/4") REINFORCED WITH 6"x6" -W29xW2.9 W.W.F. TOP OF SLAB EL. 54.5'
11. SEE DETAIL S2/2.2 FOR ADDITIONAL CONCRETE WALL CORNER REINFORCING.
12. LOCATION OF BEAMS ADJACENT TO SLAB OPENING SHALL BE 5" FROM THE CENTERLINE OF BEAM TO EDGE OF SLAB, U.N.O SEE DETAIL 6/S.4. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF OPENINGS.
13. SEE S.4.1 FOR LIGHT-GAGE METAL WALL STUD SCHEDULE, SEE ARCH. DWGS. FOR DEPTH OF ALL STUDS.



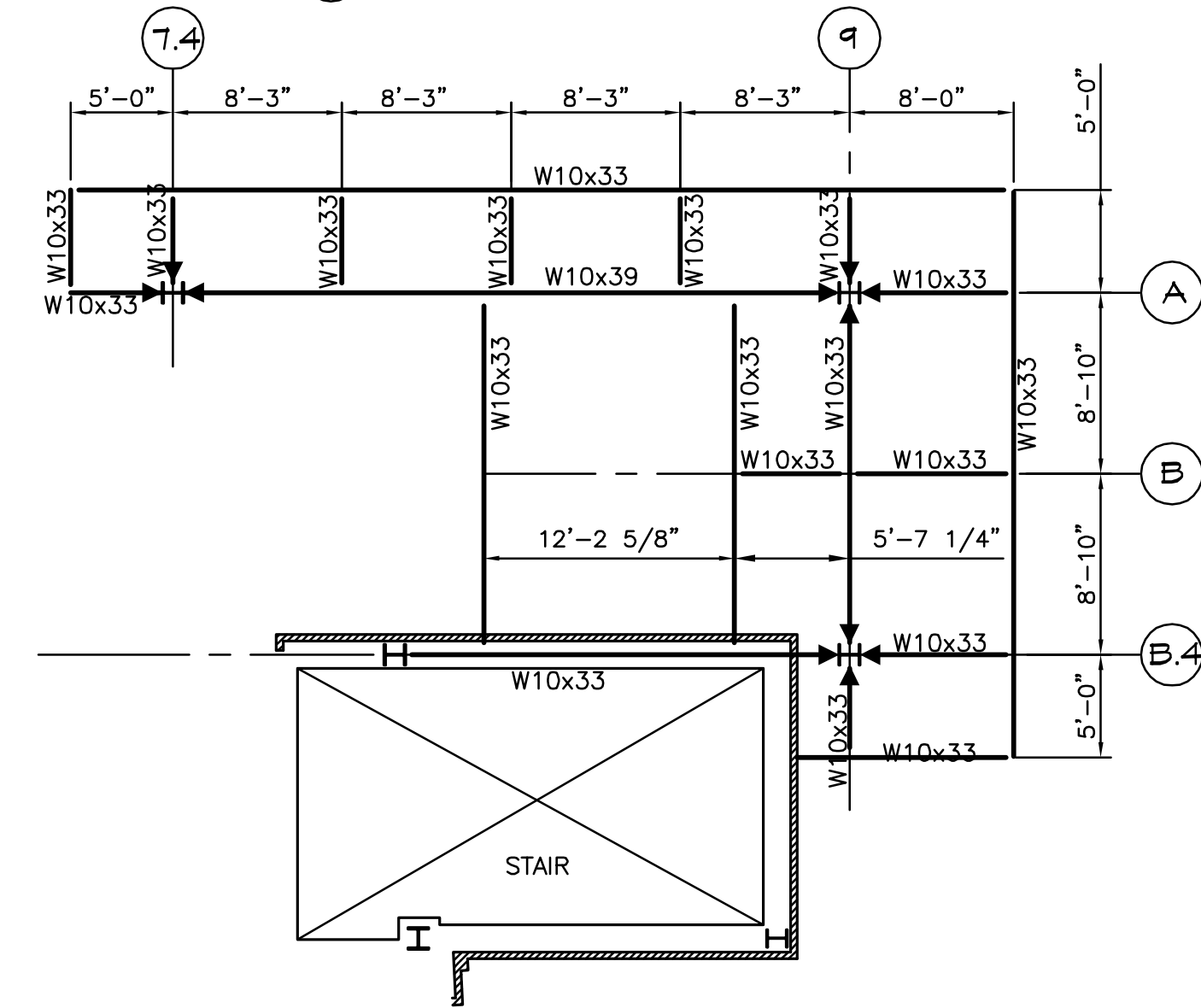


## SECOND FLOOR FRAMING PLAN

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

NOTES:

1. THE FLOOR CONSTRUCTION SHALL CONSIST OF 2"x20 GAGE GALVANIZED COMPOSITE DECK WITH 5 1/4" TOTAL THICKNESS LIGHTWEIGHT CONCRETE SLAB (110 PCF) REINFORCED WITH 6"x6"- W2.9x W2.9 W.W.F. SEE DETAILS ON S2.4 FOR TYPICAL COMPOSITE CONSTRUCTION.
2. (X): INDICATES NUMBER OF 3/4" DIAMETER x 3 1/2" LONG HEADED STUDS WELDED TO TOP FLANGE OF STEEL BEAM EVENLY SPACED ALONG LENGTH. PROVIDE STUDS @ 12" O/C MINIMUM FOR ALL BEAMS U.N.O.
3. ————: INDICATES DIRECTION OF SPAN OF FLOOR DECK.
4. ————: INDICATES BEAM-TO-COLUMN MOMENT CONNECTION, ————: INDICATES BEAM-TO-BEAM MOMENT CONNECTION, SEE DETAIL 13/52.4.
5. C-XXX": INDICATES AMOUNT OF CAMBER.
6. SEE ARCHITECTURAL DRAWINGS FOR ALL ELEVATIONS AND DIMENSIONS NOT SHOWN.
7. ALL BEAMS ARE SPACED EVENLY BETWEEN COLUMN LINES UNLESS NOTED.
8. SECOND FLOOR ELEVATION SHALL BE 72.17'. TOP OF STEEL ELEVATION SHALL BE 5 1/4" BELOW FINISH FLOOR ELEVATION, UNLESS NOTED THUS (±X"). (±X"), DENOTES STEEL BEAM ELEVATION DEPRESSED BELOW TOP OF BEAM.
9. CB: INDICATES CASTELLATED BEAM.
10. \* : DENOTES LOCATE BEAM UNDER OVERHEAD COILING GRILL, SEE ARCH. DWG. FOR LOCATION.
11. LOCATION OF BEAMS ADJACENT TO SLAB OPENING SHALL BE 5" FROM THE CENTERLINE OF BEAM TO EDGE OF SLAB, U.N.O., SEE DETAIL 6/5.4. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF OPENINGS.
12. SEE S4.1 FOR LIGHT-GAGE METAL WALL STUD SCHEDULE, SEE ARCH. DWGS. FOR DEPTH OF ALL STUDS.



## CANOPY PARTIAL PLAN

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

NOTES:

1. TOP OF STEEL BEAM ELEVATION SHALL BE 66.083'.

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## Second Floor Framing Plan

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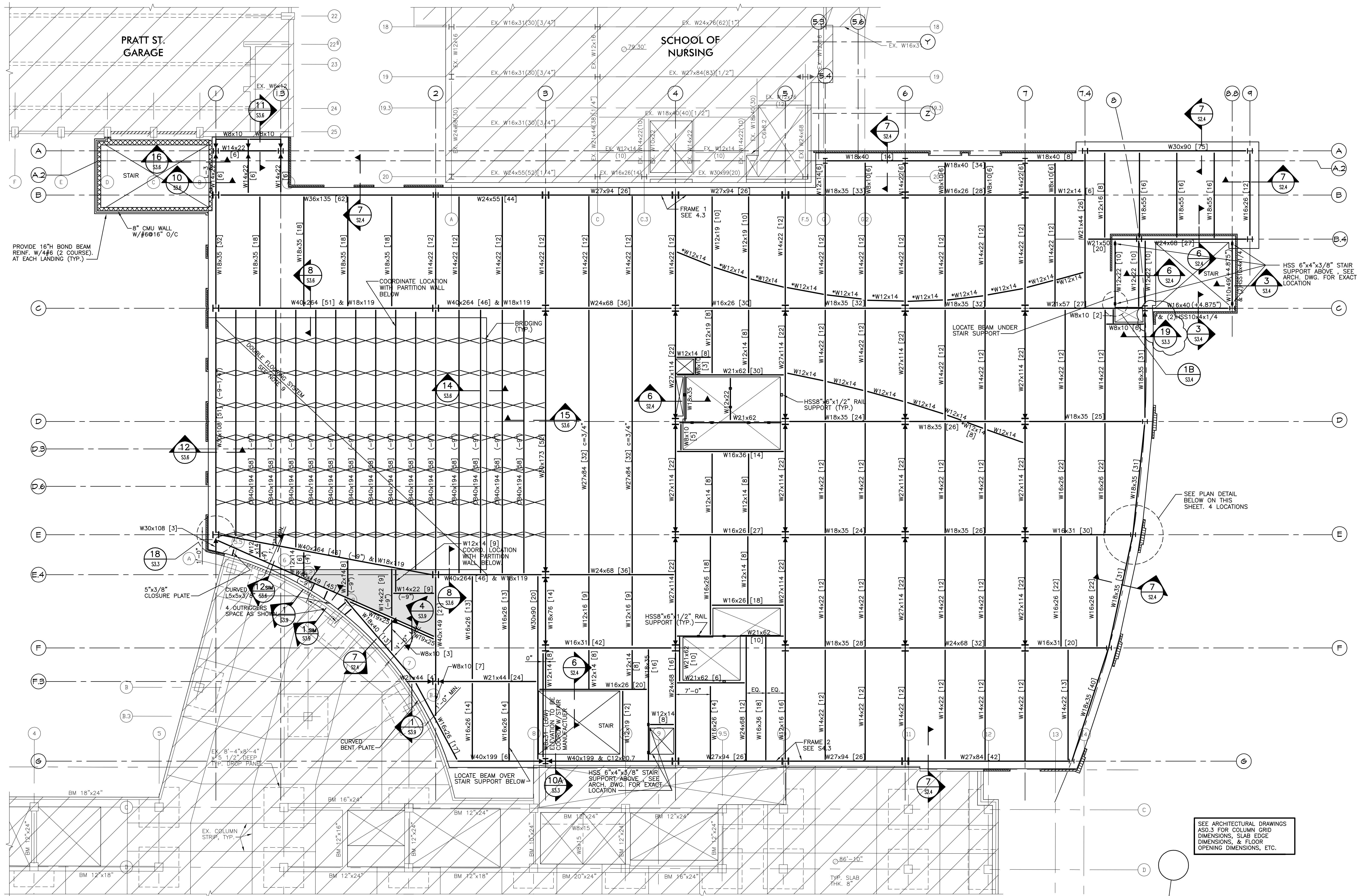
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**S1.2**

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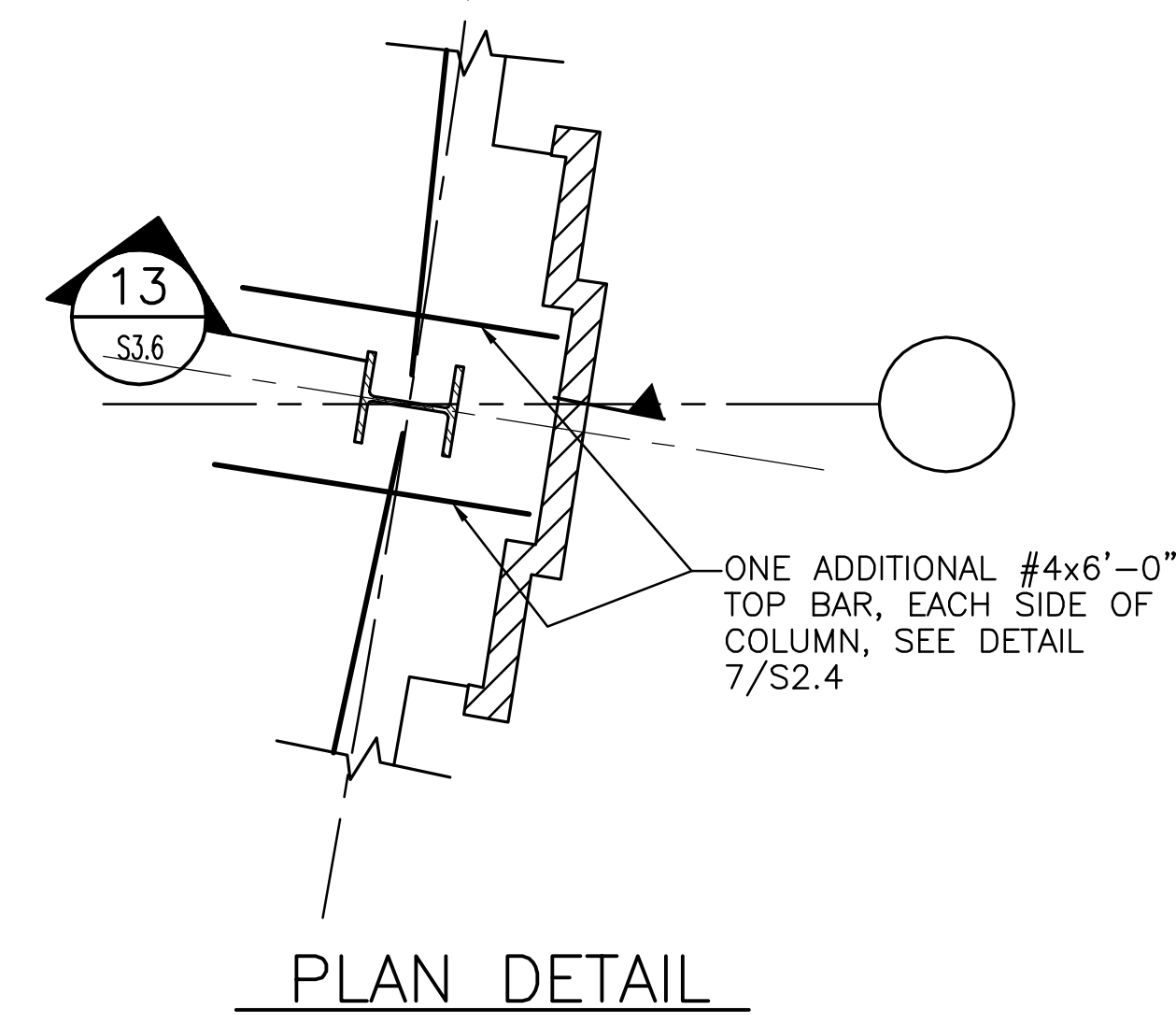
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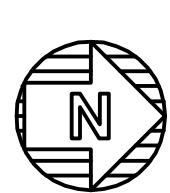
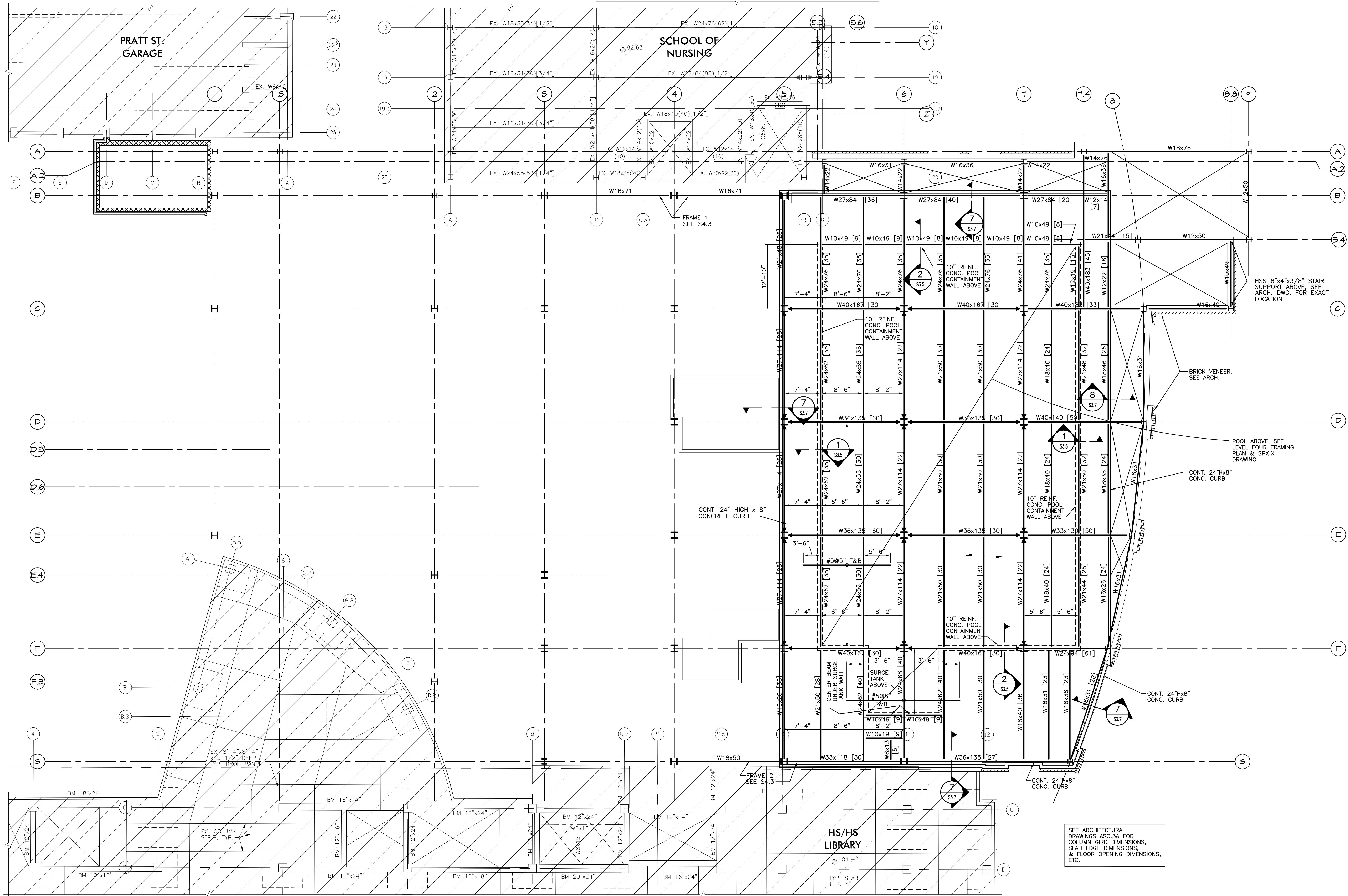
**THIRD FLOOR FRAMING PLAN**  
SCALE: 1/8" = 1'-0"

- NOTES:
1. THE FLOOR CONSTRUCTION SHALL CONSIST OF 2"x20 GAGE GALVANIZED COMPOSITE DECK WITH 5 1/4" TOTAL THICKNESS LIGHTWEIGHT CONCRETE SLAB (110 PCF) REINFORCED WITH 6"x6"- W2.9x W2.9 W.W.F. SEE DETAILS ON S2.4 FOR TYPICAL COMPOSITE CONSTRUCTION.
  2. [X]: INDICATES NUMBER OF 3/4" DIAMETER x 3 1/2" LONG HEADED STUDS WELDED TO TOP FLANGE OF STEEL BEAM EVENLY SPACED ALONG LENGTH. PROVIDE STUDS @ 12" O/C MINIMUM FOR ALL BEAMS U.N.O.
  3. → : INDICATES DIRECTION OF SPAN OF FLOOR DECK.
  4. H : INDICATES BEAM-TO-COLUMN MOMENT CONNECTION, H : INDICATES BEAM-TO-BEAM MOMENT CONNECTION. SEE DETAIL 13/S2.4.
  5. C-XXX": INDICATES AMOUNT OF CAMBER.
  6. SEE ARCHITECTURAL DRAWINGS FOR ALL ELEVATIONS AND DIMENSIONS NOT SHOWN.
  7. ALL BEAMS ARE SPACED EVENLY BETWEEN COLUMN LINES UNLESS NOTED.
  8. THIRD FLOOR ELEVATION SHALL BE 93.5'. TOP OF STEEL ELEVATION SHALL BE 5 1/4" BELOW FINISH FLOOR ELEVATION, UNLESS NOTED THUS (EX'). (EX') DENOTES STEEL BEAM ELEVATION DERESSED BELOW TOP OF BEAM.
  9. SEE ASO.3 FOR EXACT EXTENT OF DOUBLE FLOOR SYSTEM.
  10. CB: INDICATES CASTELLATED BEAM.
  11. \* : LOCATE BEAM FOR OVERHEAD COILING SHUTTER OR OVERHEAD COILING GRILL CONNECTION, SEE ARCH. DWG. FOR LOCATION.
  12. LOCATION OF BEAMS ADJACENT TO SLAB OPENING SHALL BE 5" FROM THE CENTERLINE OF BEAM TO EDGE OF SLAB, U.N.O. SEE DETAIL 6/S.4. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF OPENINGS.
  13. SEE S4.1 FOR LIGHT-GAGE METAL WALL STUD SCHEDULE, SEE ARCH. DWGS. FOR DEPTH OF ALL STUDS.
  14. [THICKENED SLAB], THICKENED SLAB.



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## POOL SUPPORT FRAMING PLAN

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

### NOTES:

1. TOP OF STEEL BEAM ELEVATION (B.O. METAL DECK) = 106'-8 1/2" UNLESS NOTED OTHERWISE ON PLAN THUS (±X"), WHICH INDICATES TOP OF BEAM IS ABOVE OR BELOW TOP OF STEEL ELEVATION.
2. THE FLOOR CONSTRUCTION SHALL CONSIST OF 3"x18 GAGE GALVANIZED TYPE 3C CONFORM DECK WITH 6 1/2" LIGHTWEIGHT CONCRETE SLAB (110 PCF) 9 1/2" TOTAL THICKNESS REINFORCED WITH #5@8" O/C E.W. T&B, UNLESS NOTED OTHERWISE. SEE DETAILS ON S2.4 FOR TYPICAL COMPOSITE CONSTRUCTION. N/S LAYERS TO BE TOP & BOTTOM LAYERS.
3. [X]: INDICATES NUMBER OF 3/4" DIAMETER x 4 1/2" LONG HEADED STUDS WELDED TO TOP FLANGE OF STEEL BEAM EVENLY SPACED ALONG LENGTH. PROVIDE STUDS @ 12" O/C MINIMUM FOR ALL BEAMS U.N.O.
4. ————> ; INDICATES DIRECTION OF SPAN OF METAL DECK.
5. ————> ; INDICATES BEAM-TO-COLUMN MOMENT CONNECTION, ————> ; DENOTES BEAM-TO-BEAM MOMENT CONNECTION. SEE DETAIL 13/S2.4.
6. SEE ARCHITECTURAL DRAWINGS FOR ALL ELEVATIONS AND DIMENSIONS NOT SHOWN.
7. ALL BEAMS ARE SPACED EVENLY BETWEEN COLUMN LINES UNLESS NOTED.
8. CB: INDICATES CASTELLATED BEAM.
9. LOCATION OF BEAMS ADJACENT TO SLAB OPENING SHALL BE 5" FROM THE CENTERLINE OF BEAM TO EDGE OF SLAB, U.N.O. SEE DETAIL 6/S.4. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF OPENINGS.
10. SEE S4.1 FOR LIGHT-GAGE METAL WALL STUD SCHEDULE, SEE ARCH. DWGS. FOR DEPTH OF ALL STUDS.

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## Pool Support Framing Plan

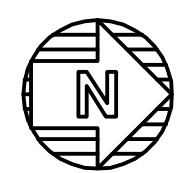
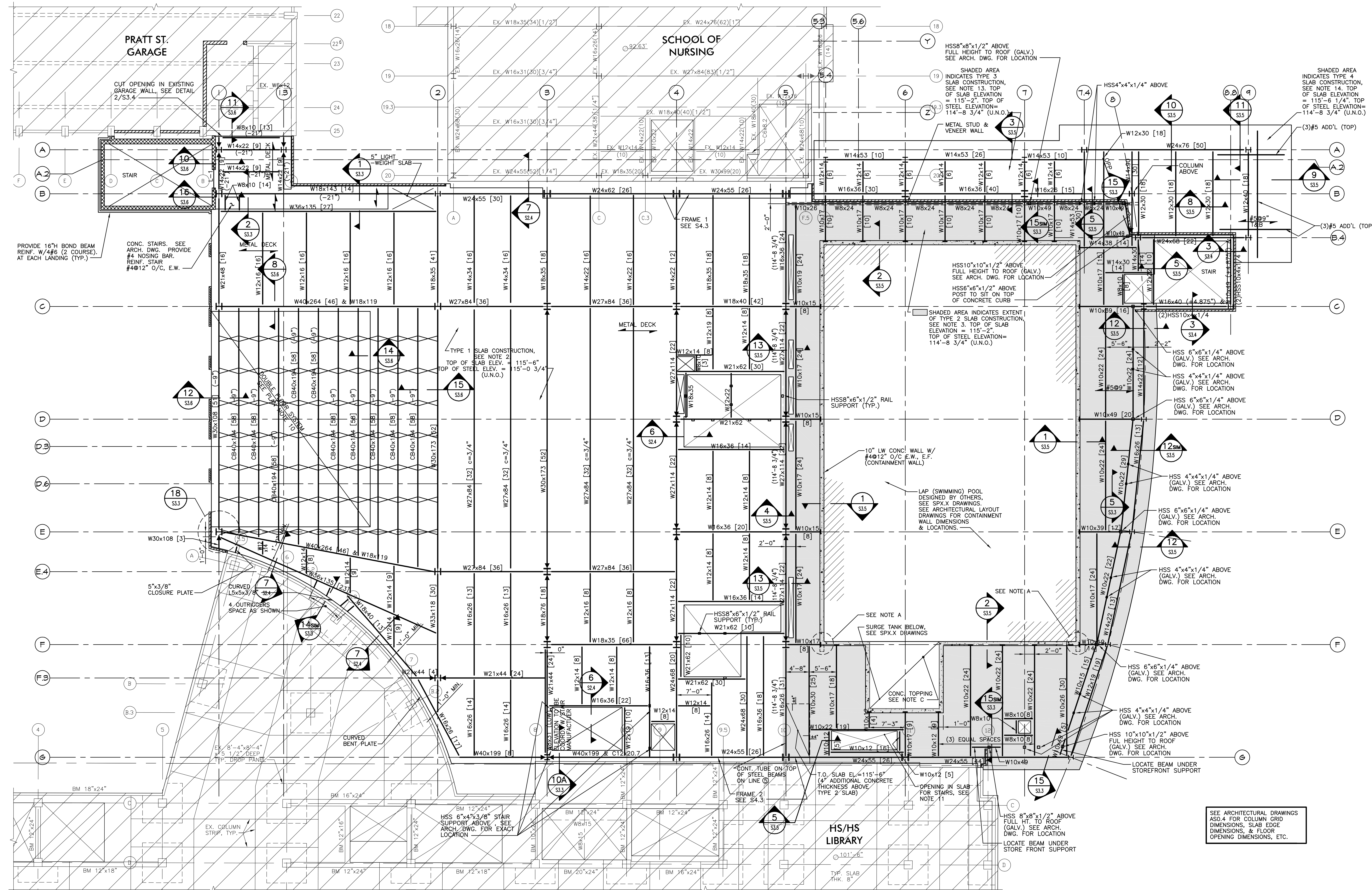
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# S1.3A

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**FOURTH FLOOR FRAMING PLAN**

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

**NOTES:**

- FOURTH FLOOR ELEVATION SHALL BE 115.5'. TOP OF STEEL ELEVATION VARIES, NOTED ON PLAN THUS (XXX'-X").
- TYPE 1 SLAB CONSTRUCTION SHALL CONSIST OF 2"x20 GAGE GALVANIZED COMPOSITE METAL DECK W/3 1/4" LIGHTWEIGHT CONCRETE (110 PSF) SLAB ABOVE (5 1/4" TOTAL THICKNESS). REINFORCE SLAB W/6"x6" - W2.9x2.9 W.W.F. TOP OF SLAB ELEVATION IS AS NOTED ON PLAN. STEEL BEAMS BELOW SHALL BE SPRAY FIREPROOFED. SEE DETAILS ON S2.4 FOR TYPICAL COMPOSITE CONSTRUCTION.
- TYPE 2 SLAB CONSTRUCTION SHALL CONSIST OF A FORMED 5 1/4" LIGHTWEIGHT CONCRETE SLAB W/#509 N/S & #4012 E/W, CENTERED IN SLAB, N/S BARS ON BOTTOM, TOP OF SLAB ELEVATION IS AS NOTED ON PLAN. STEEL BEAMS BELOW SHALL BE ENCASED IN CONCRETE. SEE DETAIL 6/S3.5.
- [X]: INDICATES NUMBER OF 3/4" DIAMETER HEADED STUDS (3 1/2" LONG FOR TYPE 1 SLAB, 4 1/2" LONG FOR TYPE 2 SLAB) WELDED TO TOP FLANGE OF STEEL BEAM EVENLY SPACED ALONG LENGTH. PROVIDE STUDS @ 12" O/C MINIMUM FOR ALL BEAMS U.N.O.
- : INDICATES DIRECTION OF SPAN OF METAL DECK, OR DIRECTION OF MAIN BARS IN FORMED SLAB.
- : INDICATES BEAM-TO-COLUMN MOMENT CONNECTION. —: INDICATES BEAM-TO-BEAM MOMENT CONNECTION. SEE DETAIL 13/S2.4.
- C-XXX', INDICATES AMOUNT OF CAMBER.
- SEE ARCHITECTURAL DRAWINGS FOR ALL ELEVATIONS AND DIMENSIONS NOT SHOWN.
- ALL BEAMS ARE SPACED EVENLY BETWEEN COLUMN LINES UNLESS NOTED.
- SEE ASO.4 FOR EXACT EXTENT OF DOUBLE FLOOR SYSTEM.
- STAIRS ARE CONCRETE FILLED METAL PAN STAIRS W/STEEL CHANNEL STRINGERS, STRUCTURALLY DESIGNED BY THE CONTRACTOR. SEE ARCH. DRAWINGS FOR DIMENSIONS.
- CB: INDICATES CASTELLATED BEAM.
- TYPE 3 SLAB CONSTRUCTION SHALL CONSIST OF A FORMED 5 1/4" LIGHTWEIGHT CONCRETE SLAB W/ #509 EACH WAY, TOP & BOTTOM, #509 N/S TOP & BOTTOM. STEEL BEAMS SHALL BE SPRAY-FIREPROOFED.
- TYPE 4 SLAB CONSTRUCTION SHALL CONSIST OF A FORMED 9 1/2" LIGHTWEIGHT CONCRETE SLAB W/ #509 EACH WAY, TOP & BOTTOM, #509 N/S TOP & BOTTOM. STEEL BEAMS SHALL BE SPRAY-FIREPROOFED.
- LOCATION OF BEAMS ADJACENT TO SLAB OPENING SHALL BE 5" FROM THE CENTERLINE OF BEAM TO EDGE OF SLAB, U.N.O. SEE DETAIL 6/S.4. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF OPENINGS.
- SEE S4.1 FOR LIGHT-GAGE METAL WALL STUD SCHEDULE, SEE ARCH. DWGS. FOR DEPTH OF ALL STUDS.

NOTE A: CONCRETE CORBEL, (2) TOTAL. SEE DETAIL 7/S3.5.

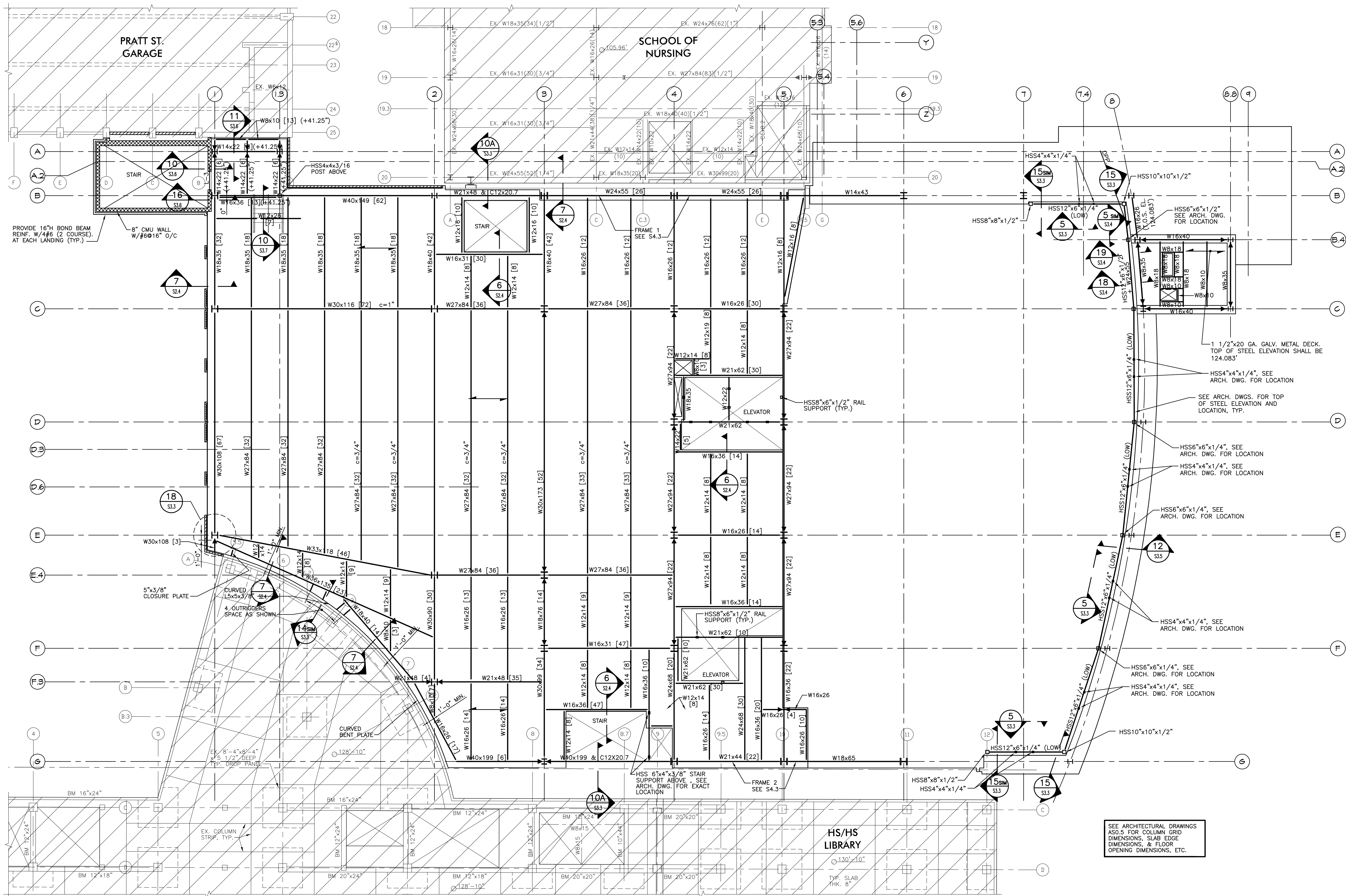
NOTE B: PROVIDE SCHEDULE 40 PIPE SLEEVE FOR FLOOR DRAINS. COORDINATE SIZE & LOCATION W/MECHANICAL AND ARCHITECTURAL DRAWINGS.

NOTE C: TOP SLAB OF TANK TO BE DESIGNED FOR ADDITIONAL 100 PSF LL + 50 PSF DL IN ADDITION TO SELFWEIGHT AND MISCELLANEOUS TANK LOADS.

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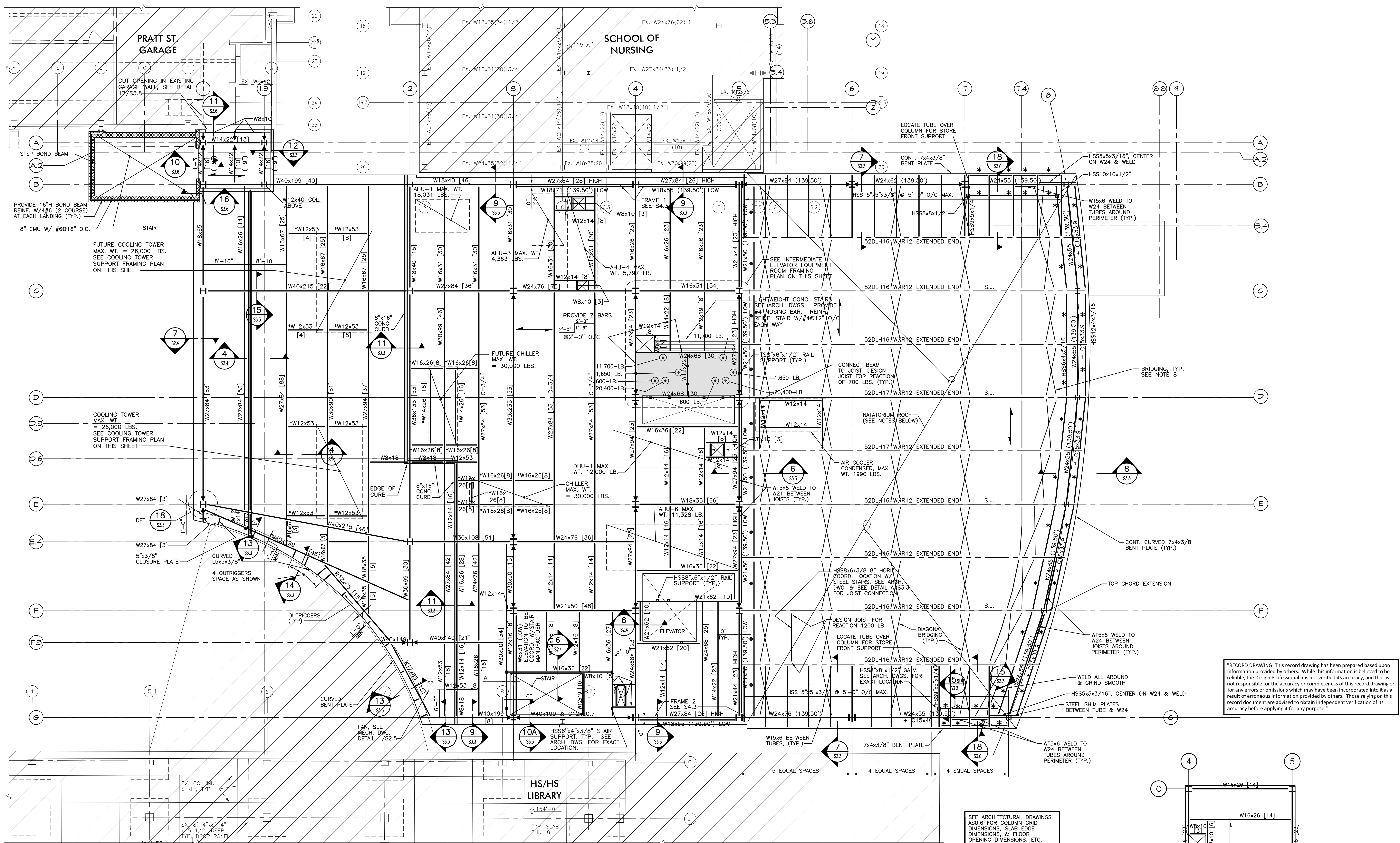
FIFTH  
FLOOR FRAMING PLAN  
SCALE: 1/8" = 1'-0"

NOTES:

1. THE FLOOR CONSTRUCTION SHALL CONSIST OF 2"x20 GAGE GALVANIZED COMPOSITE DECK WITH 5 1/4" TOTAL THICKNESS LIGHTWEIGHT CONCRETE SLAB (110 PCF) REINFORCED WITH 6"x6" W2.9x W.W.F. SEE DETAILS ON S2.4 FOR TYPICAL COMPOSITE CONSTRUCTION.
2. [X]; INDICATES NUMBER OF 3/4" DIAMETER x 3 1/2" LONG HEADED STUDS WELDED TO TOP FLANGE OF STEEL BEAM EVENLY SPACED ALONG LENGTH. PROVIDE STUDS @ 12" O/C MINIMUM FOR ALL BEAMS U.N.O.
3. - - - - - ; INDICATES DIRECTION OF SPAN OF FLOOR DECK.
4. - - - - - ; INDICATES BEAM-TO-COLUMN MOMENT CONNECTION, - - - - - ; DENOTES BEAM-TO-BEAM MOMENT CONNECTION, SEE DETAIL 13/S2.4.
5. C-XXX"; INDICATES AMOUNT OF CAMBER.
6. SEE ARCHITECTURAL DRAWINGS FOR ALL ELEVATIONS AND DIMENSIONS NOT SHOWN.
7. ALL BEAMS ARE SPACED EVENLY BETWEEN COLUMN LINES UNLESS NOTED.
8. FIFTH FLOOR ELEVATION SHALL BE 129.83'. TOP OF STEEL ELEVATION SHALL BE 5 1/4" BELOW FINISH FLOOR ELEVATION, UNLESS NOTED THUS (±X"). (±X"), DENOTES STEEL BEAM ELEVATION DEPRESSED BELOW OR ABOVE TOP OF BEAM.
9. CB; INDICATES CASTELLATED BEAM.
10. LOCATION OF BEAMS ADJACENT TO SLAB OPENING SHALL BE 5" FROM THE CENTERLINE OF BEAM TO EDGE OF SLAB, U.N.O. SEE DETAIL 6/S.4. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF OPENINGS.
11. SEE S4.1 FOR LIGHT-GAGE METAL WALL STUD SCHEDULE, SEE ARCH. DWGS. FOR DEPTH OF ALL STUDS.

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**PENTHOUSE FLOOR/  
LOW ROOF PLAN**  
SCALE: 1/8" = 1'-0"

- FLOOR PLAN NOTES:**
- THE FLOOR CONSTRUCTION SHALL CONSIST OF 2"x20 GAGE GALVANIZED COMPOSITE DECK WITH 3 1/4" LIGHT WEIGHT CONC. SLAB (110 PCF), 1/4" TOTAL THICKNESS, REINFORCED WITH 6"x6" W2.9x2.9 W.W.F., U.N.O. SEE DETAIL ON S2.4 FOR TYPICAL COMPOSITE CONSTRUCTION.
  - [X]; INDICATES NUMBER OF 3/4" DIAMETER x 3 1/2" LONG HEADED STUDS WELDED TO TOP FLANGE OF STEEL BEAM EQUALLY SPACED ALONG LENGTH. PROVIDE STUDS @ 12" O/C MINIMUM FOR ALL BEAMS U.N.O.
  - [<->]; INDICATES DIRECTION OF SPAN OF FLOOR DECK.
  - [<->]; INDICATES BEAM-TO-COLUMN MOMENT CONNECTION, SEE DETAIL 13/S2.4. [<->]; DENOTES BEAM-TO-BEAM MOMENT CONNECTION, SEE DETAIL 13/S2.4.
  - C-XXX"; INDICATES AMOUNT OF CAMBER.
  - SEE ARCHITECTURAL DRAWINGS FOR ALL ELEVATIONS AND DIMENSIONS NOT SHOWN.
  - ALL BEAMS ARE SPACED EQUALLY BETWEEN COLUMN LINES UNLESS NOTED.
  - PENTHOUSE ELEVATION SHALL BE 145.5'. TOP OF STEEL ELEVATION SHALL BE 5 1/4" BELOW FINISH FLOOR ELEVATION. UNLESS NOTED THIS IS XXX' ON PLAN.
  - \*. DENOTES LOCATE BEAM TO SUIT EQUIPMENT OR SCREEN WALL SUPPORT.
  - SEE DETAIL 1/S2.5, 2/S2.5 AND 3/S2.5 FOR MECHANICAL OPENING DETAILS.
  - SEE DETAIL 5/S2.2 FOR TYPICAL CONCRETE PAD FOR EQUIPMENT DETAIL.
  - [ ] DENOTES 13" THK. FORMED LIGHT-WEIGHT CONCRETE DECK WITH #806" O.C. T&B EAST/WEST DIRECTION, #5012" O.C. T&B NORTH/SOUTH DIRECTION. XXX-LB. DENOTES ELEVATOR LOADS.
  - LOCATION OF BEAMS ADJACENT TO SLAB OPENING SHALL BE 5" FROM THE CENTERLINE OF BEAM TO EDGE OF SLAB, U.N.O. SEE DETAIL 6/S.4. SEE ARCHITECTURAL & MECHANICAL DRAWINGS FOR LOCATION OF OPENINGS.
  - SEE S4.1 FOR LIGHT-GAGE METAL WALL STUD SCHEDULE, SEE ARCH. DWGS. FOR DEPTH OF ALL STUDS.

**COOLING TOWER SUPPORT  
FRAMING PLAN**  
SCALE: 1/8" = 1'-0"

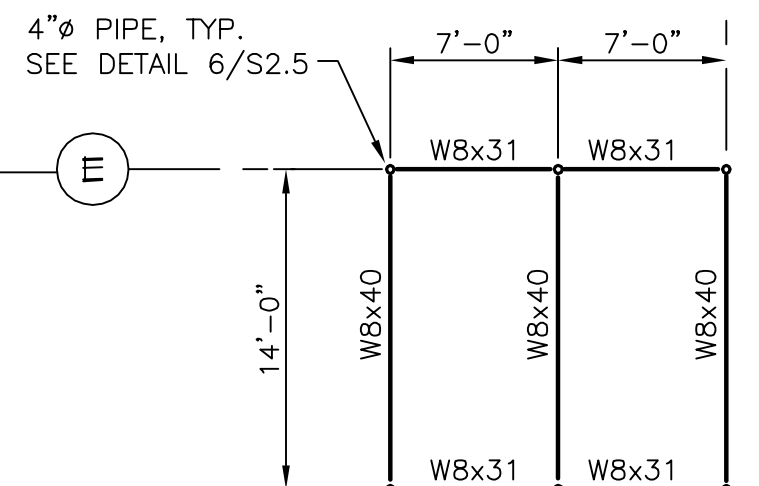
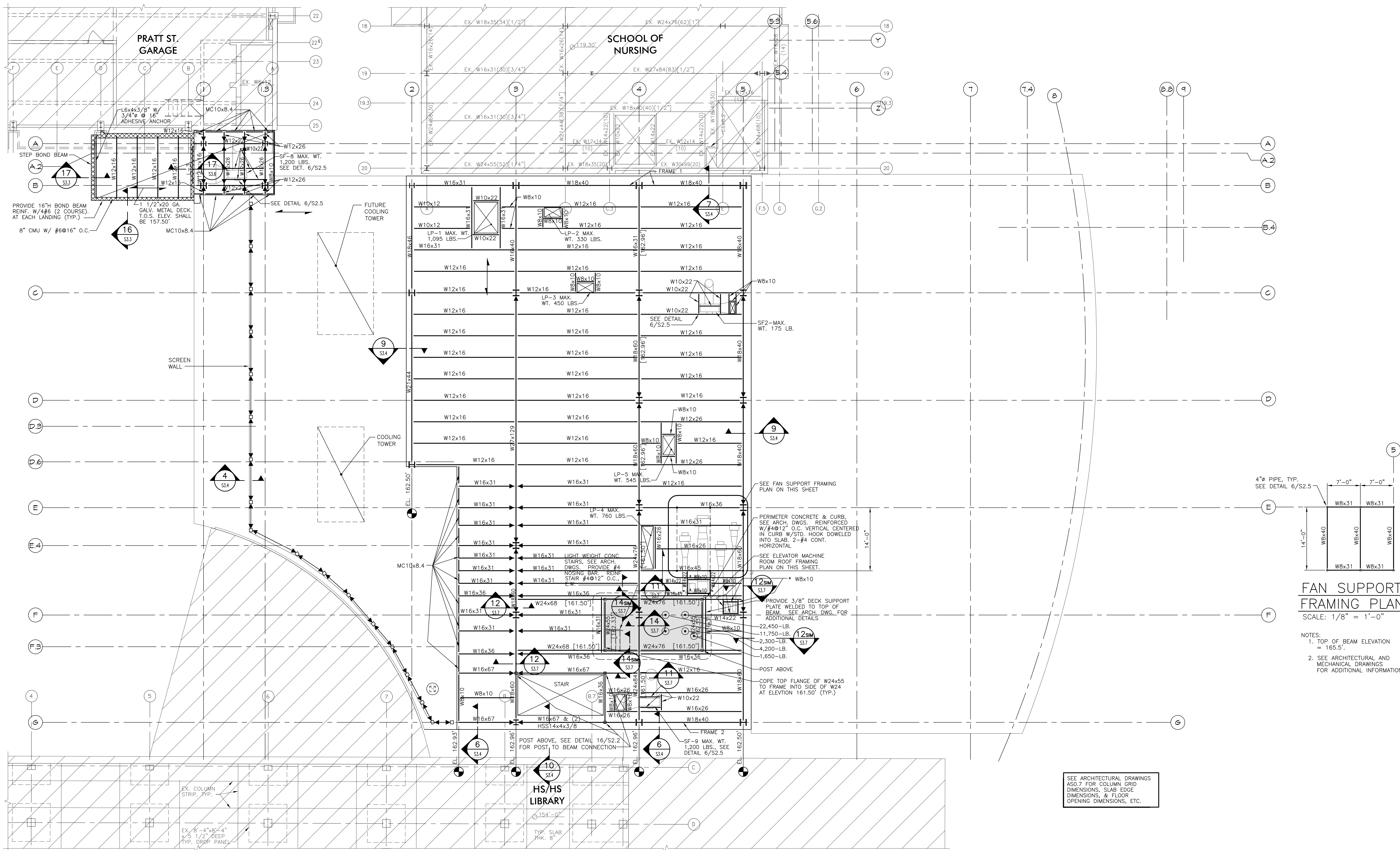
- PLAN NOTE:**
- TOP OF STEEL BEAM ELEVATION = 150.75'.
  - COORDINATE LOCATION OF BEAMS WITH COOLING TOWER SUPPORT.
  - ALL STEEL AND CONNECTIONS SHALL BE HOT-DIP GALVANIZED.
  - SEE MECHANICAL DRAWINGS FOR LOCATIONS OF COOLING TOWERS.
  - COORDINATE DIMENSION OF COOLING TOWER PLAN WITH APPROVED COOLING TOWER.

- NATATORIUM ROOF FRAMING NOTES:**
- THE ROOF DECK SHALL CONSIST OF 3"x20 GA. GALVANIZED ACOUSTICAL CELLULAR METAL DECKING. DECKING SHALL BE G90 GALVANIZED AND PAINTED.
  - [<->]; INDICATES DIRECTION OF SPAN OF ROOF DECK.
  - SEE ARCHITECTURAL DRAWINGS FOR ALL ELEVATIONS AND DIMENSIONS NOT SHOWN.
  - ALL JOISTS ARE SPACED EQUALLY BETWEEN COLUMN LINES UNLESS NOTED.
  - TOP OF STEEL ELEVATION SHALL BE 139.92' UNLESS NOTED (XXX'XX") ON PLAN. TOP OF STEEL IS DEFINED AS BOTTOM OF METAL DECK.
  - SJ; INDICATES STRUT JOIST. SEE TYPICAL DETAIL 7/S2.5 AND 8/S2.5. DO NOT CONNECT BOTTOM CHORDS OF STRUT JOISTS UNTIL ALL DEAD LOAD IS APPLIED TO JOIST.
  - JOISTS TO BE DESIGNED FOR A 10#/SF UPLIFT LOAD.
  - [X]; INDICATES BOLTED DIAGONAL BRIDGING PER MANUFACTURERS SPECIFICATIONS.
  - \*; INDICATES TUBE FOR STORE FRONT SUPPORT. SEE SECTION 8/S3.3. AND 18/S3.6.
  - ALL STEEL AND CONNECTIONS INCLUDING COLUMNS NORTH OF COLUMN LINE 5 (INCLUDING COLUMN LINE 5) TO BE HOT-DIPPED GALVANIZED.
  - ALL JOISTS SHALL RECEIVE HOT-DIP GALVANIZE, PRIMER AND HIGH PERFORMANCE COATING. PRIMER AND HIGH PERFORMANCE COATING WILL BE SPECIFIED IN BID PACKAGE 3.
  - HSS8"x8"x1/4". COORDINATE LOCATION OF TUBE WITH LIGHT GAGE FRAMING. SEE ARCHITECTURAL AND MECHANICAL DRAWING. SEE DETAIL 4/S3.3 FOR TUBE TO JOIST CONNECTION.
  - ALL JOIST ON NATATORIUM ROOF REQUIRE SPECIAL DESIGN. JOIST MANUFACTURER SHALL DESIGN JOISTS FOR LOADS SHOWN ON PLAN AND SECTIONS AND THE FOLLOWING: DEAD LOAD OF 30 PSF AND LIVE LOAD OF 30 PSF (PLUS DRIFTING SNOW PER IBC 2003)

**INTERMEDIATE ELEVATOR  
EQUIPMENT ROOM FRAMING PLAN**  
SCALE: 1/8" = 1'-0"

- FLOOR PLAN NOTES:**
- THE FLOOR CONSTRUCTION SHALL CONSIST OF 2"x20 GAGE GALVANIZED COMPOSITE DECK WITH 3 1/4" LIGHT WEIGHT CONC. SLAB (110 PCF), 5 1/4" TOTAL THICKNESS, REINFORCED WITH 6"x6" W2.9x2.9 W.W.F., U.N.O. SEE DETAIL ON S2.4 FOR TYPICAL COMPOSITE CONSTRUCTION.
  - [X]; INDICATES NUMBER OF 3/4" DIAMETER x 3 1/2" LONG HEADED STUDS WELDED TO TOP FLANGE OF STEEL BEAM EQUALLY SPACED ALONG LENGTH. PROVIDE STUDS @ 12" O/C MINIMUM FOR ALL BEAMS (UNLESS NOTED OTHERWISE).
  - [<->]; INDICATES DIRECTION OF SPAN OF FLOOR DECK.
  - INTERMEDIATE ELEVATOR EQUIPMENT ROOM ELEVATION SHALL BE 155.19'. TOP OF STEEL ELEVATION SHALL BE 5 1/4" BELOW FLOOR ELEVATION. (3X), DENOTES STEEL BEAM ELEVATION DERESSED BELOW BOTTOM OF DECK.
  - LIVE LOAD IN THIS AREA DESIGNED FOR 50psf.



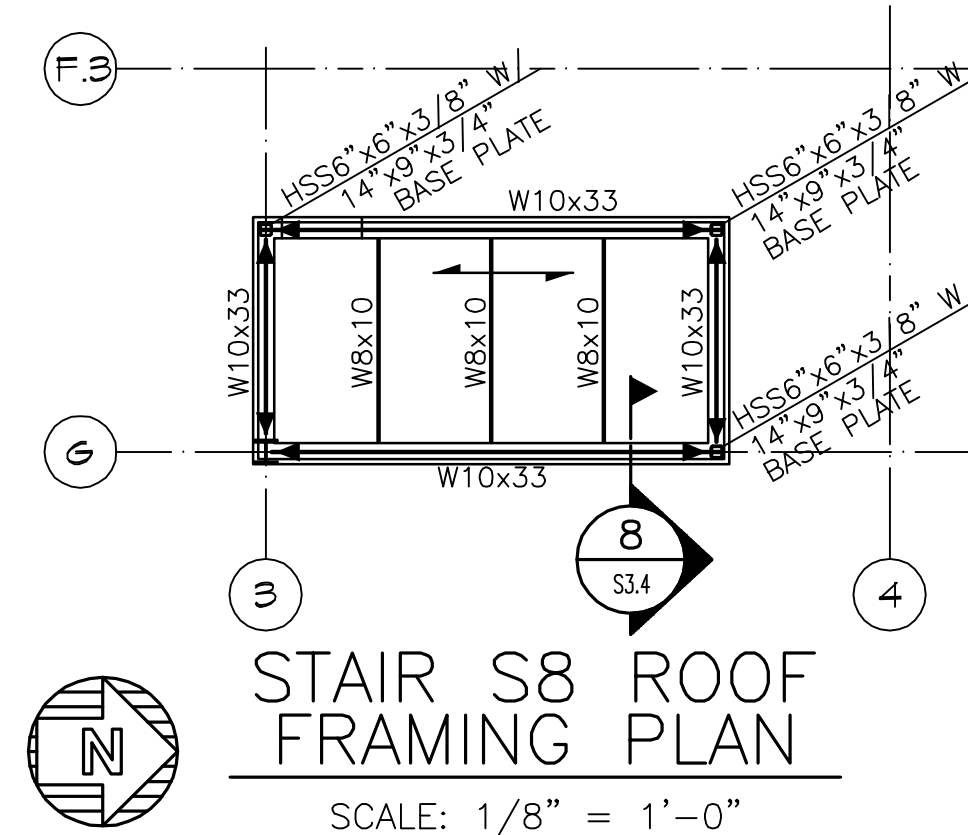


**FAN SUPPORT FRAMING PLAN**  
SCALE: 1/8" = 1'-0"

- NOTES:
1. TOP OF BEAM ELEVATION = 165.5'
  2. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

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

- NOTES:
1. THE ROOF DECK SHALL CONSIST OF 1 1/2"x20 GA. GALVANIZED METAL DECKING, U.N.O.
  2. : INDICATES DIRECTION OF SPAN OF ROOF DECK.
  3. : INDICATES BEAM-TO-COLUMN MOMENT CONNECTION.
  4. SEE ARCHITECTURAL DRAWINGS FOR ALL ELEVATIONS AND DIMENSIONS NOT SHOWN.
  5. ALL BEAMS ARE SPACED EQUALLY BETWEEN COLUMN LINES UNLESS NOTED.
  6. BOTTOM OF DECK ELEVATION IS NOTED THUS ON PLAN.
  7. SEE DETAIL 2/S2.5 FOR TYPICAL MECHANICAL OPENING DETAILS.
  8. [XXX.XX] DENOTES TOP OF STEEL BEAM ELEVATION.
  9. : DENOTES 13" THK. FORMED LIGHT-WEIGHT CONCRETE SLAB (5000 PSI) WITH #8@6" O.C. T&B EAST/WEST DIRECTION, #6@12" O.C. T&B NORTH/SOUTH DIRECTION. XXX-LB., DENOTES ELEVATOR LOADS.
  10. LOCATION OF BEAMS ADJACENT TO SLAB OPENING SHALL BE 5" FROM THE CENTERLINE OF BEAM TO EDGE OF SLAB, U.N.O., SEE DETAIL 6/S.4. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATION OF OPENINGS.
  11. SEE S4.1 FOR LIGHT-GAGE METAL WALL STUD SCHEDULE, SEE ARCH. DWGS. FOR DEPTH OF ALL STUDS.
  12. \* : DENOTES COORDINATE LOCATION OF BEAM WITH CURB. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.

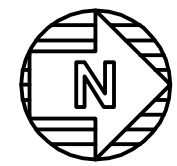
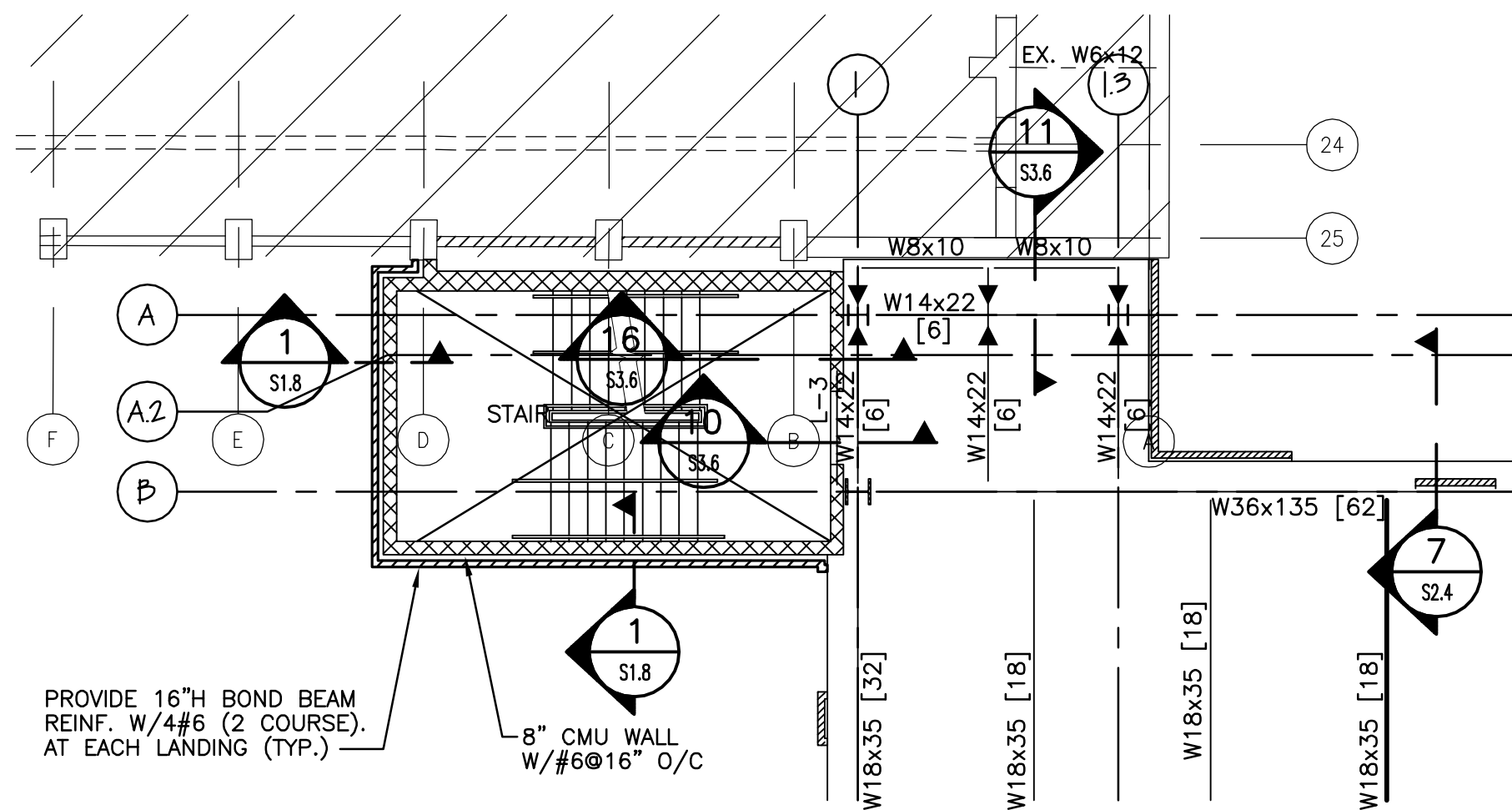


- NOTES:
1. THE ROOF DECK SHALL CONSIST OF 1 1/2"x20 GA. GALVANIZED METAL DECKING, U.N.O.
  2. : INDICATES DIRECTION OF SPAN OF ROOF DECK.
  3. TOP OF STEEL ELEVATION SHALL BE 173.0'.
  4. : INDICATES BEAM-TO-COLUMN MOMENT CONNECTION, SEE DETAIL 16/S2.4.
  5. : INDICATES BEAM-TO-HOLLOW-STEEL SECTION MOMENT CONNECTION, SEE SECTION 8/S3.4.

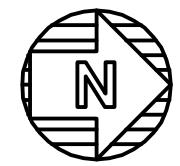
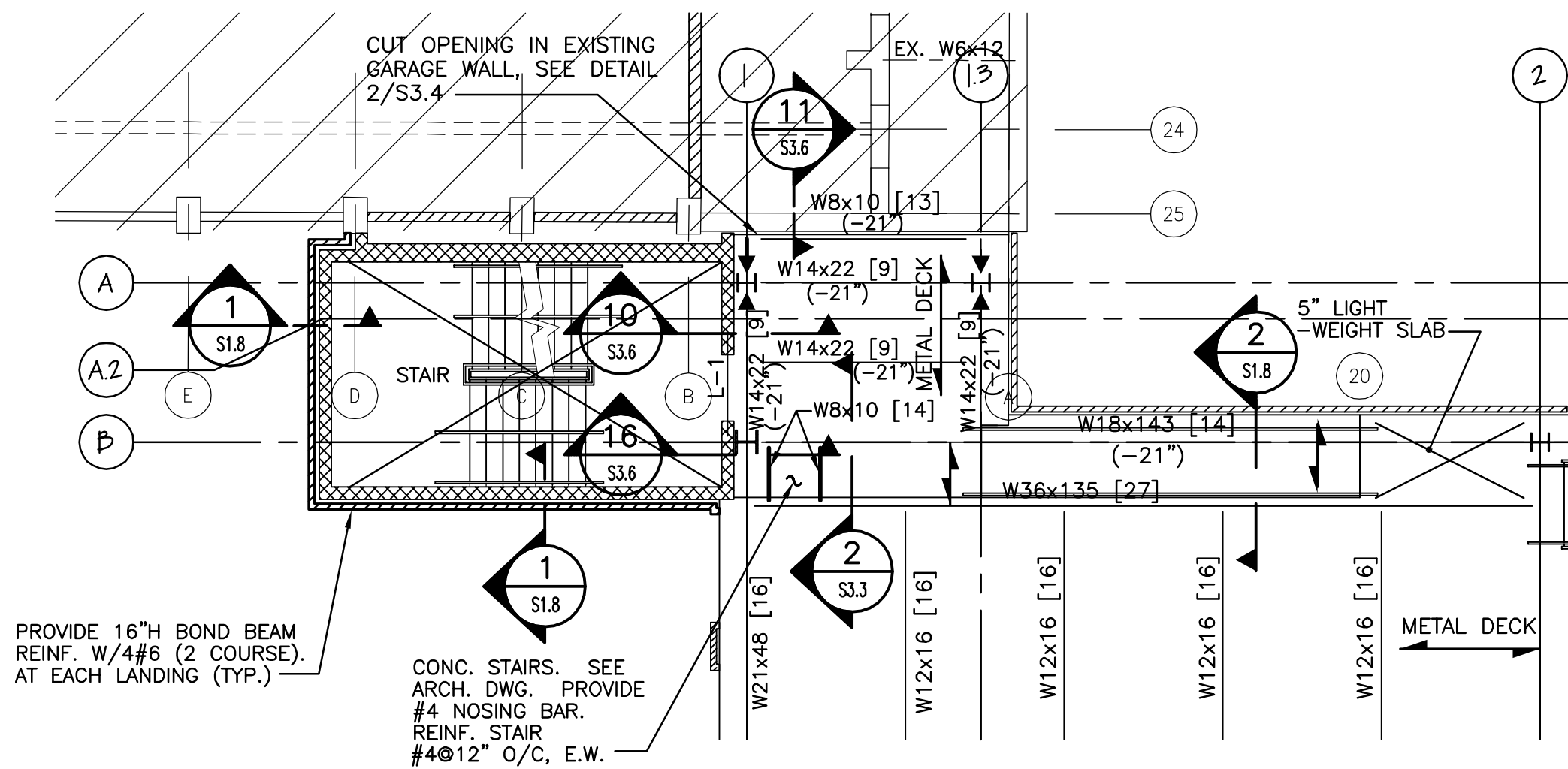
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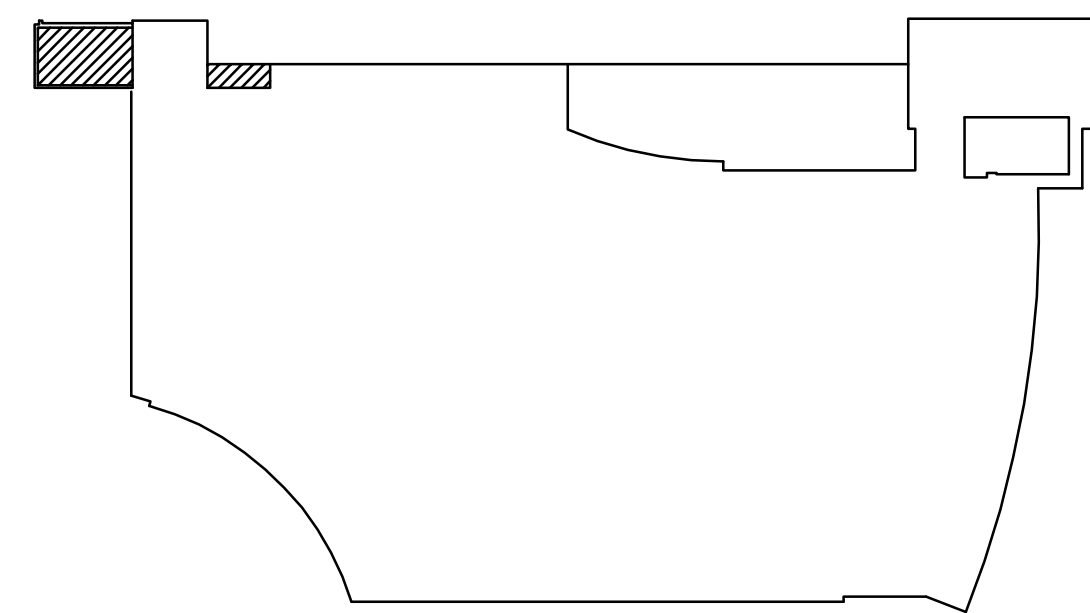




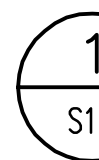
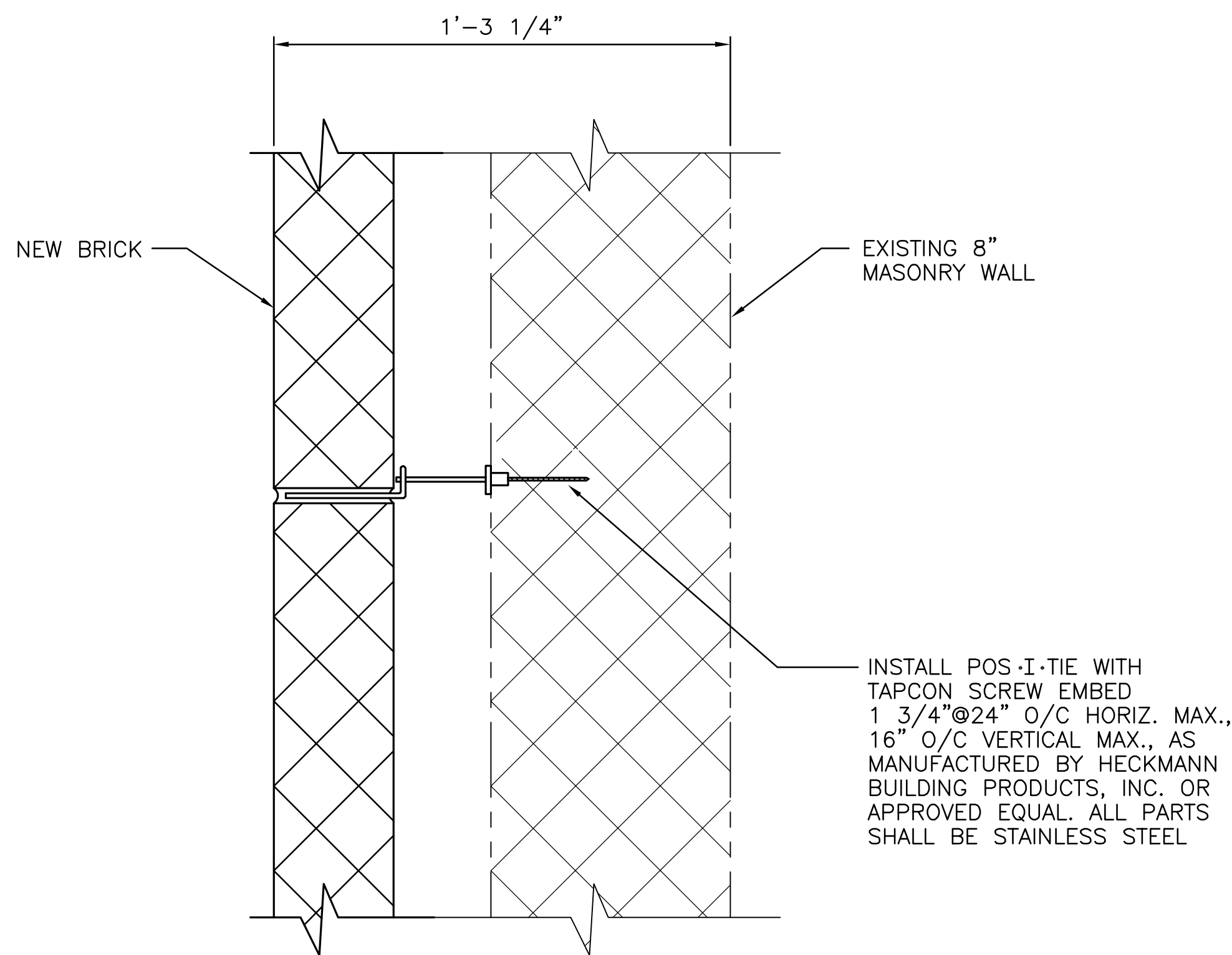
**PARTIAL THIRD FLOOR FRAMING PLAN**  
SCALE: 1/8"=1'-0"



**PARTIAL FOURTH FLOOR FRAMING PLAN**  
SCALE: 1/8"=1'-0"

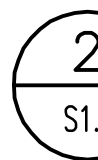
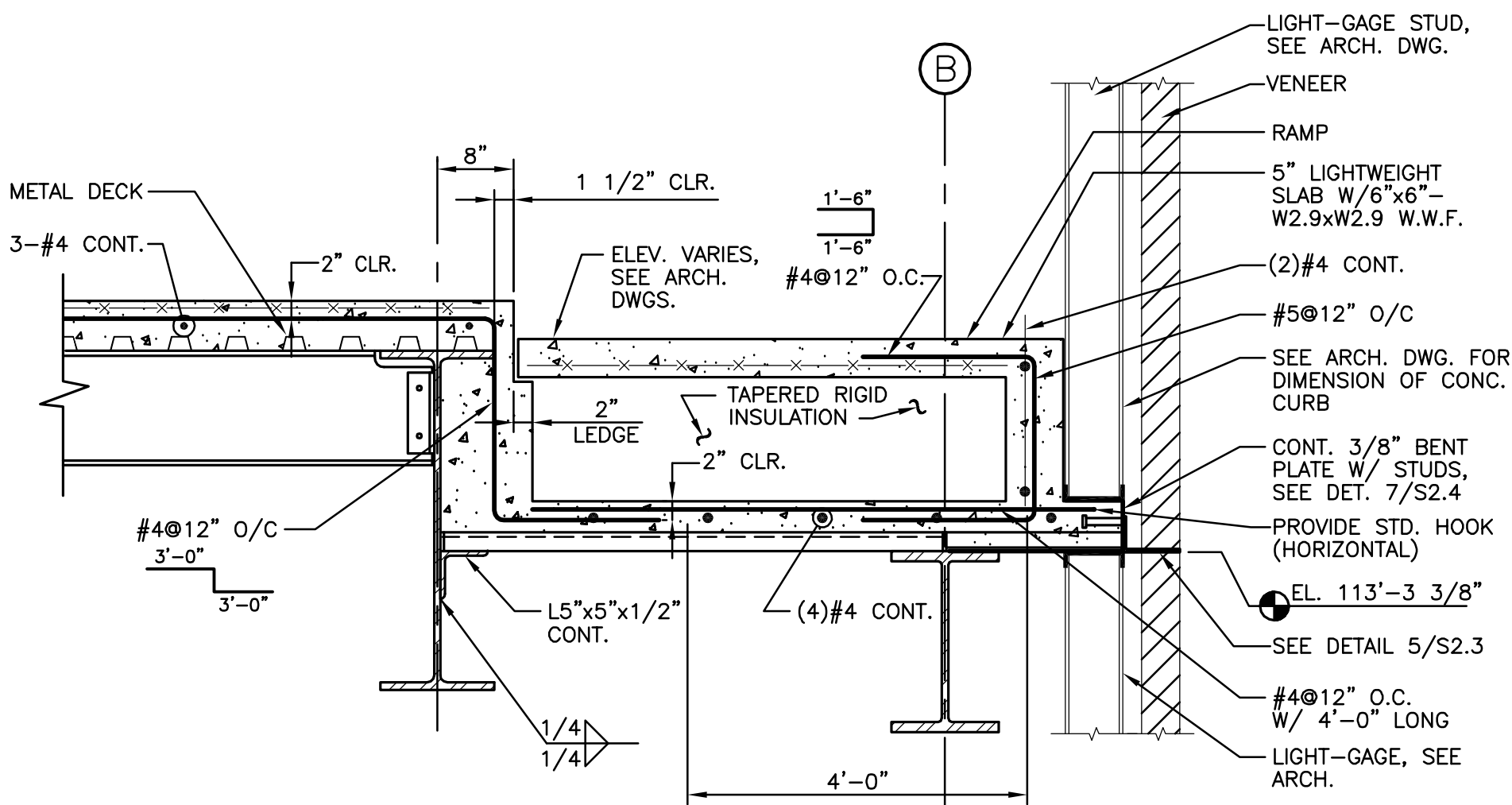


**KEY PLAN**



**SECTION**  
S1.8

SCALE: 3"=1'-0"



**SECTION**  
S1.8

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

#### GENERAL NOTES

1. INSTALL SHELF ANGLES PER SECTION 2/S1.8 AND SECTIONS ALREADY SPECIFIED IN 100% CONSTRUCTION DOCUMENT DATED MAY 2, 2007. SEE SHEET ALT 2 DATED 05/22/08 BULLETIN #44 FOR LOCATION OF ADDED BRICK.
2. SEE MASONRY WALL LINTEL SCHEDULE ON S4.1 SPECIFIED IN 100% CONSTRUCTION DOCUMENT DATED MAY 2, 2007 FOR ADDED WINDOW LINTELS. SEE SHEET ALT 2 DATED 05/22/08 BULLETIN #44 FOR LOCATION OF ADDED WINDOWS.

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30" X 42" IT HAS BEEN REDUCED OR ENLARGED.  
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#### Campus Center

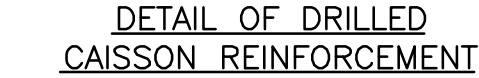
West Lombard Street  
University of Maryland, Baltimore  
Baltimore, MD



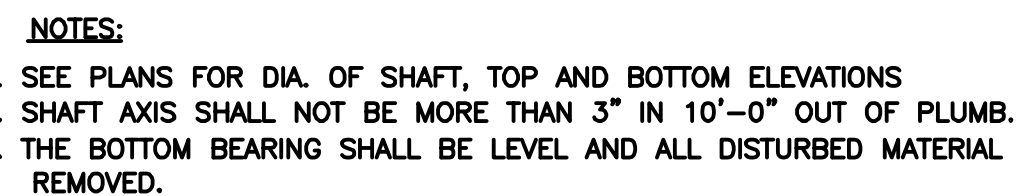
## Alternates 10 & 11 Plans And Sections

100%  
CONSTRUCTION  
DOCUMENTS

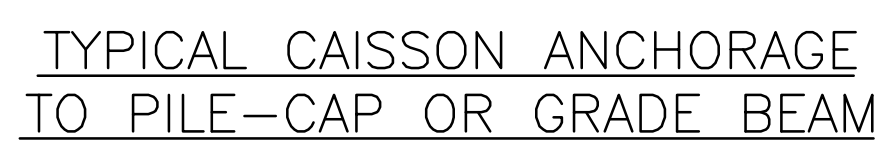




S2.1 SCALE: 3/8"=1'-0'



S2.1 NOT TO SCALE



S2.1 NOT TO SCALE



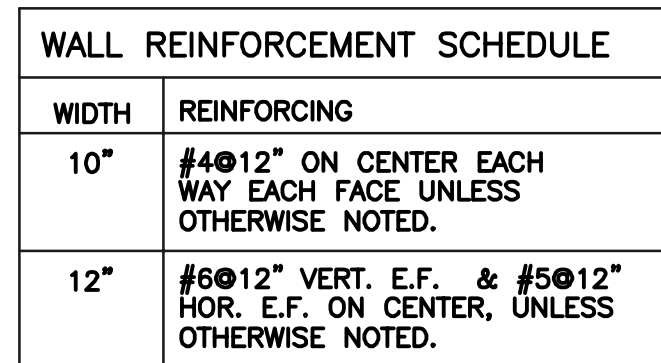
S2.1 NOT TO SCALE



TYPICAL PIPE UNDER FOOTING



S2.1 NOT TO SCALE

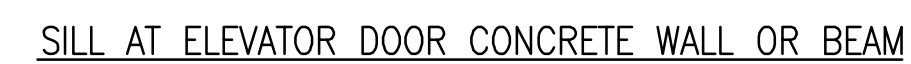


### TYPICAL WALL FOOTING

S2.1 NOT TO SCALE



S2.1 NOT TO SCALE



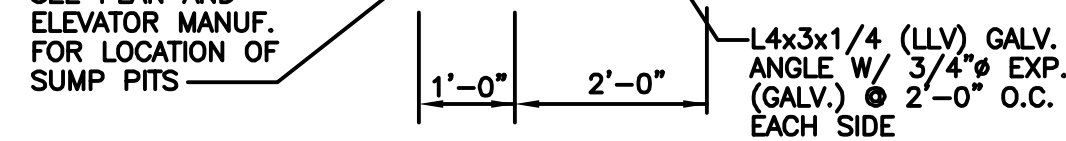
S2.1 NOT TO SCALE



S2.1 SCALE: 3/4"=1'-0"



### TYPICAL COLUMN AND FOOTING



S2.1 NOT TO SCALE

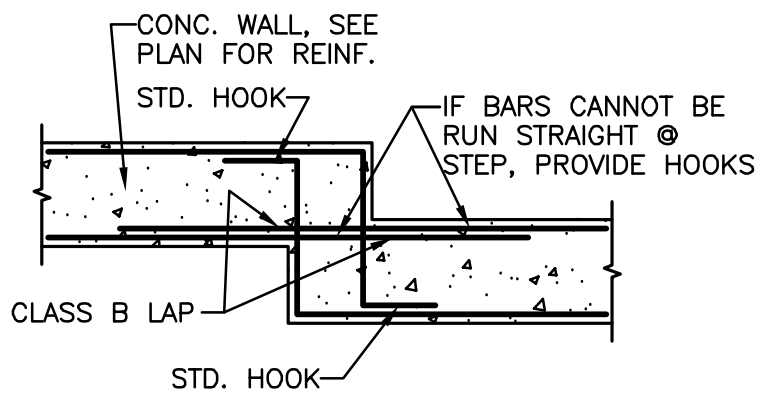


S2.1 NOT TO SCALE



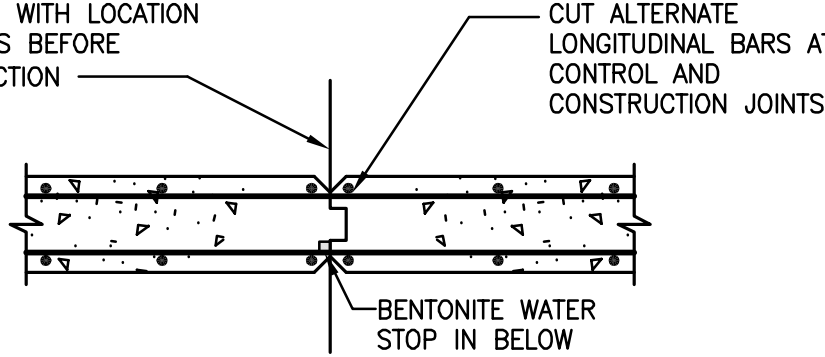
S2.1 NOT TO SCALE





TYPICAL CONCRETE WALL STEP DETAIL

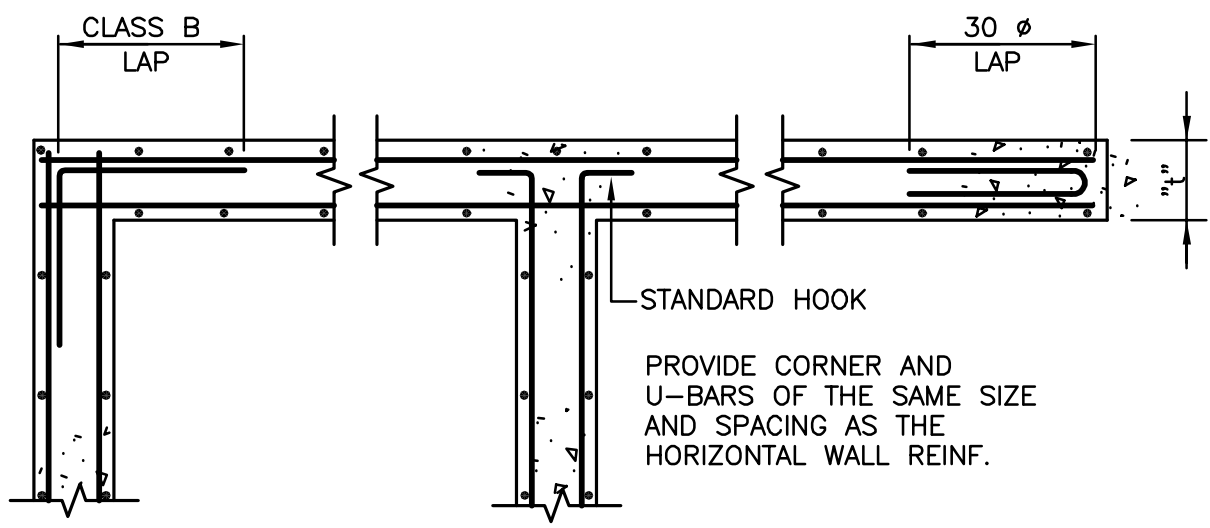
PROVIDE CONTROL OR CONSTRUCTION JOINTS @ 30'-0" MAX. ON CENTER. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH LOCATION OF JOINTS BEFORE CONSTRUCTION.



CONSTRUCTION JOINT

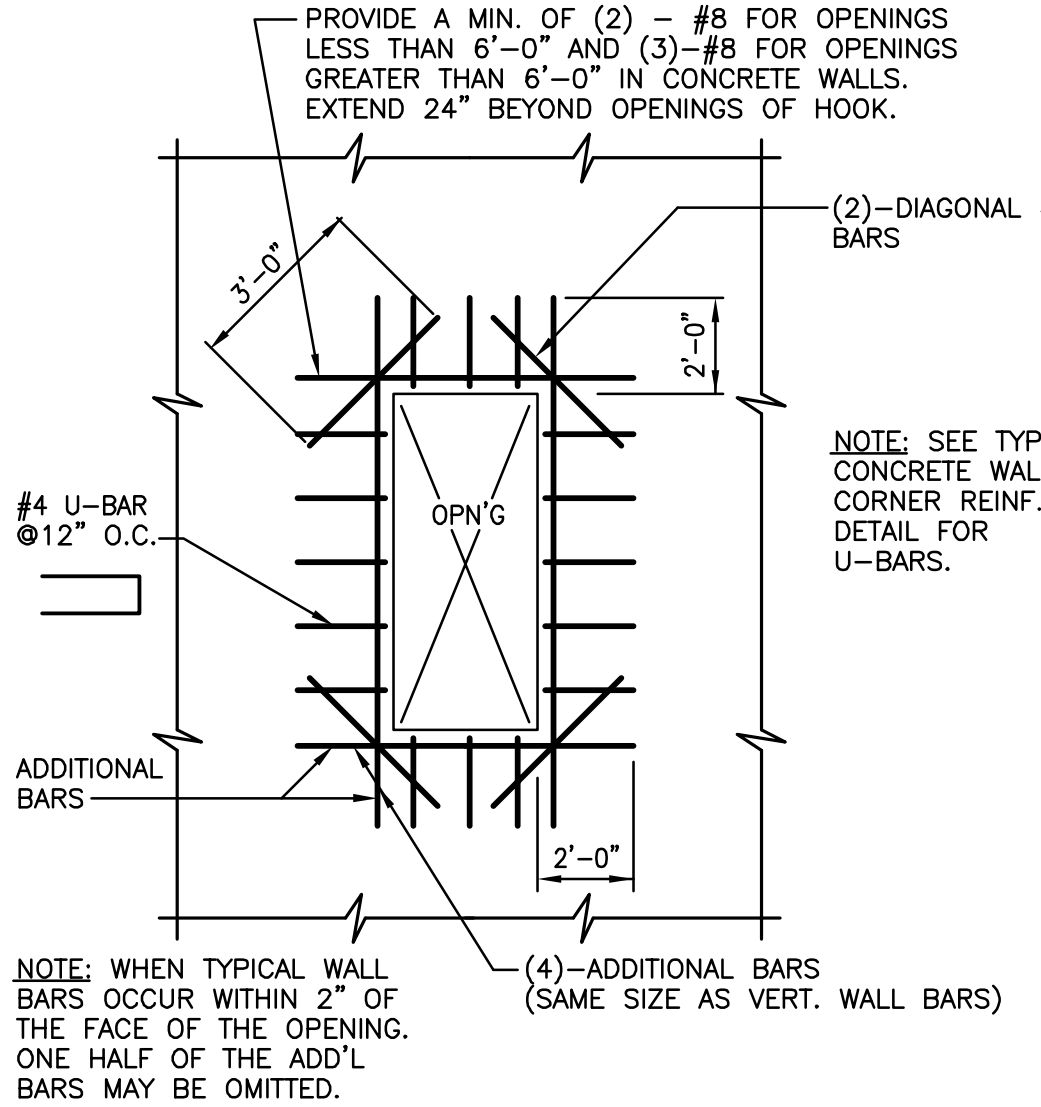
TYPICAL CONCRETE WALL JOINT

1  
S2.2  
DETAIL  
NOT TO SCALE



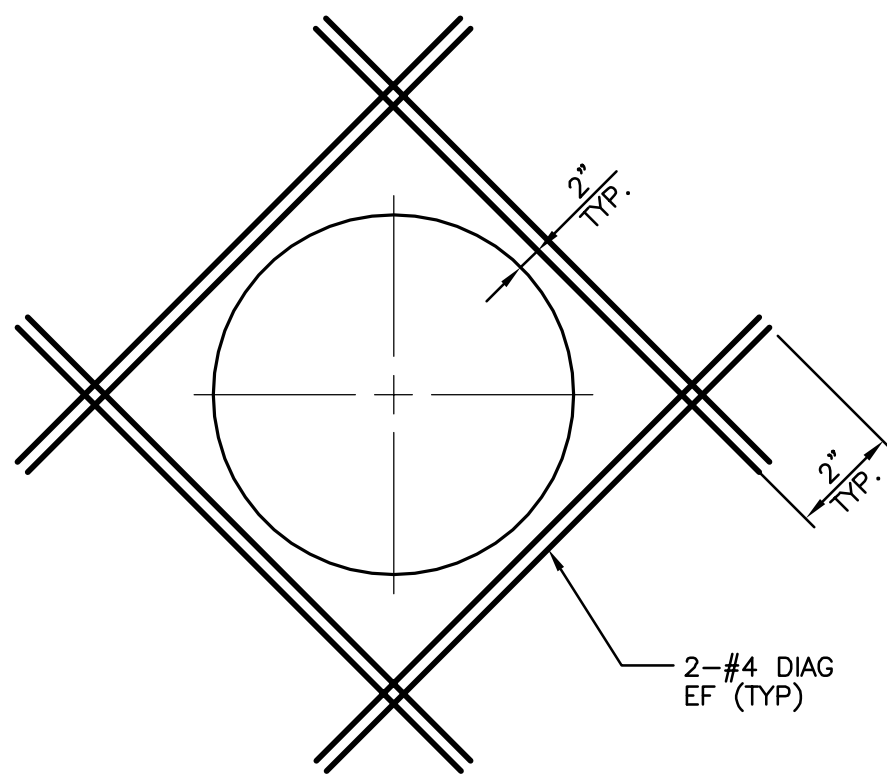
TYPICAL CONCRETE WALL CORNER REINFORCING

2  
S2.2  
DETAIL  
NOT TO SCALE

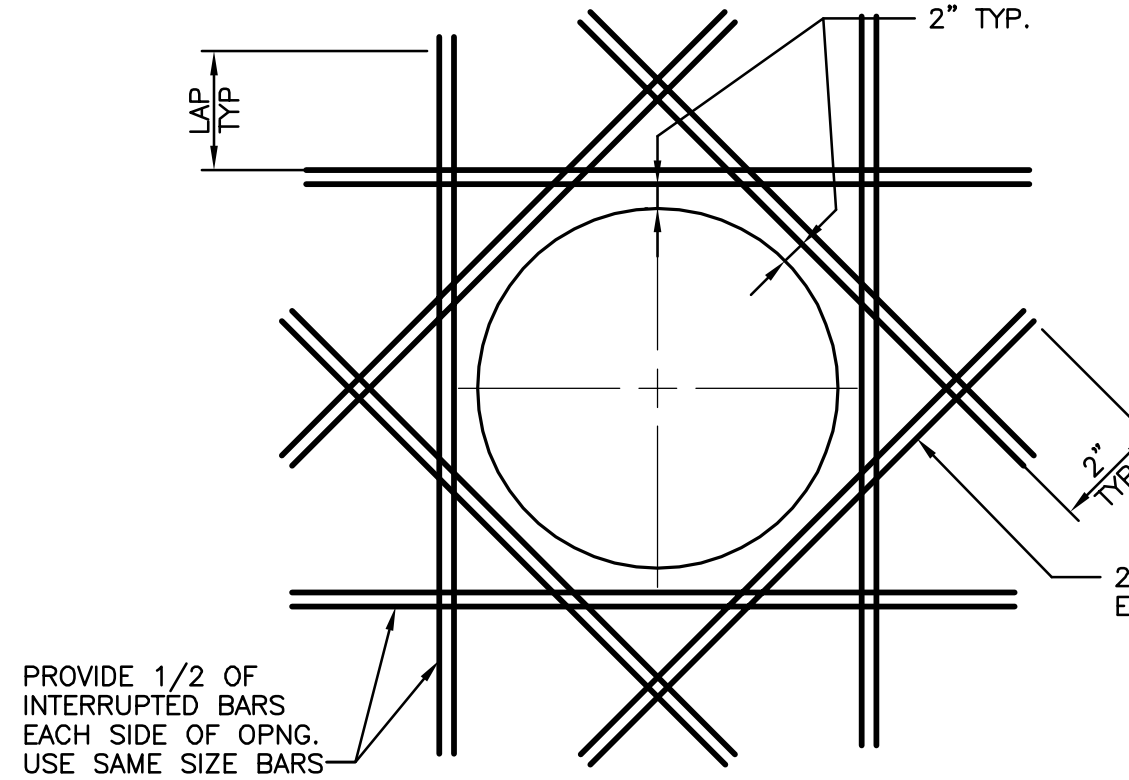


ADDITIONAL BARS AROUND WALL OPENINGS IN CONCRETE WALL

3  
S2.2  
DETAIL  
NOT TO SCALE



WITHOUT INTERRUPTING REINFORCING STEEL BARS



WITH INTERRUPTING REINFORCING STEEL BARS

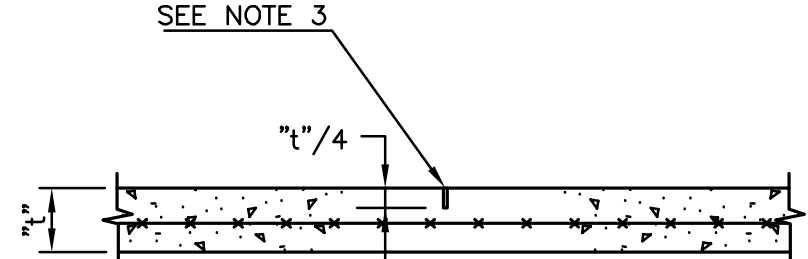
TYPICAL REINFORCEMENT FOR CONCRETE PENETRATION (UNLESS OTHERWISE SHOWN)  
NOT TO SCALE

NOTE:  
PARALLEL REINFORCEMENT IS TO BE SAME SIZE AS INTERRUPTED BARS.

FOR OPENING 3'-0"x3'-0" OR SMALLER

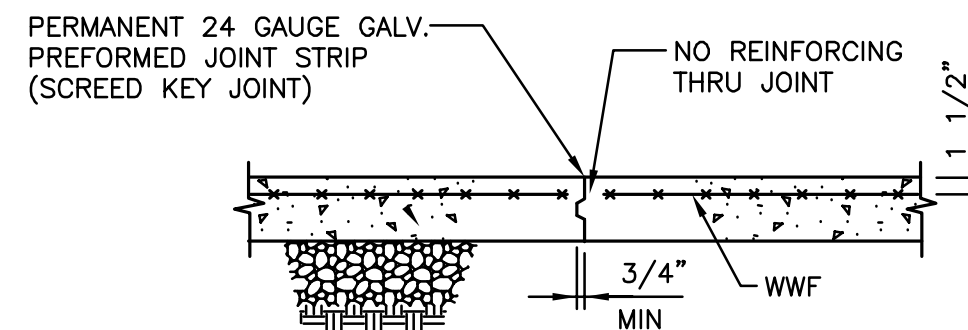
4  
S2.2  
DETAIL  
SCALE: 3/4"=1'-0"

SAWCUT JOINT AS SOON AS SURFACE IS FIRM ENOUGH SO THAT IT WILL NOT BE TORN OR DAMAGED BY BLADE (APPROX. 4-12 HOURS AFTER CONCRETE HARDENS).



SAWCUT CONTROL JOINTS

- NOTES:
1. PROVIDE SAWCUT CONTROL JOINTS IN SLABS ON GRADE WHERE NOTED THUS (C.J.) ON THE PLAN.
  2. AT SAWCUT CONTROL JOINTS, CUT ALTERNATE WIRES CROSSING THE JOINT.
  3. FILL JOINT W/100% SOLIDS, FLEXIBLE TWO PART POLYUREA ELASTOMER WITH A SHORE "A" HARDNESS OF 75 AND IS COMPATIBLE W/JET FUEL. ALLOW 60 TO 90 DAYS TO ELAPSE FOR CONCRETE SHRINKAGE PRIOR TO FILLING JOINT.



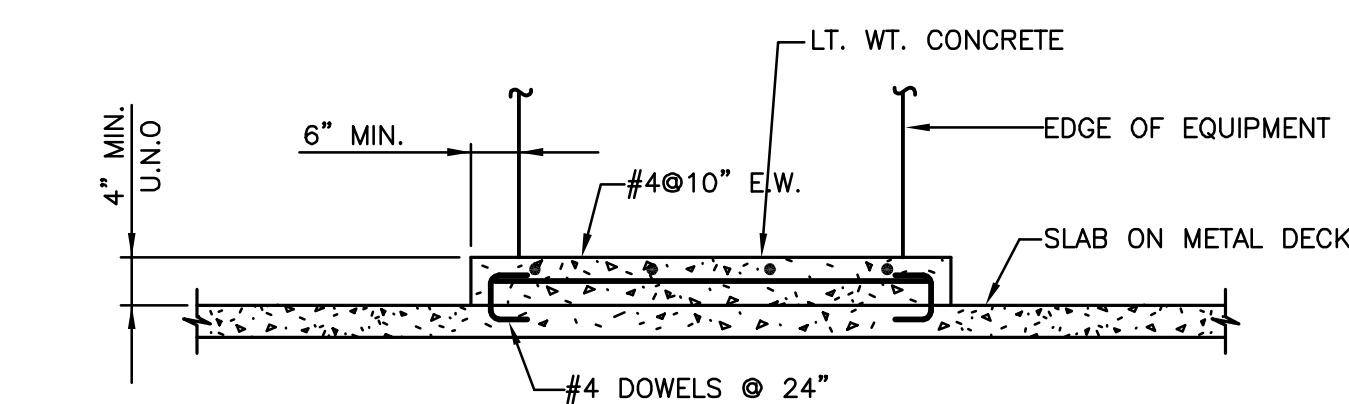
- NOTES:
1. CONSTRUCTION JOINT MAY REPLACE CONTROL JOINT.
  2. REFER TO ARCHITECTURAL DETAILS FOR JOINT FILLER WHERE REQUIRED.
  3. CONTRACTOR SHALL SUBMIT LOCATION OF JOINTS FOR APPROVAL.
  4. PROVIDE SUPPORT CHAIRS TO HOLD W.W.F. AND/OR REINFORCING IN POSITION DURING CONCRETE PLACEMENT.

TYPICAL SLAB ON GRADE CONTROL JOINT

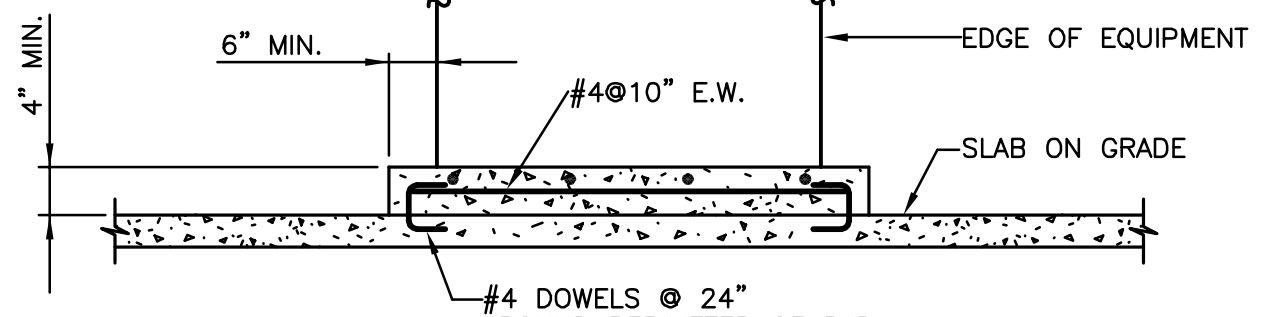
9  
S2.2  
DETAIL  
NOT TO SCALE

TYPICAL SLAB ON GRADE CONSTRUCTION JOINT

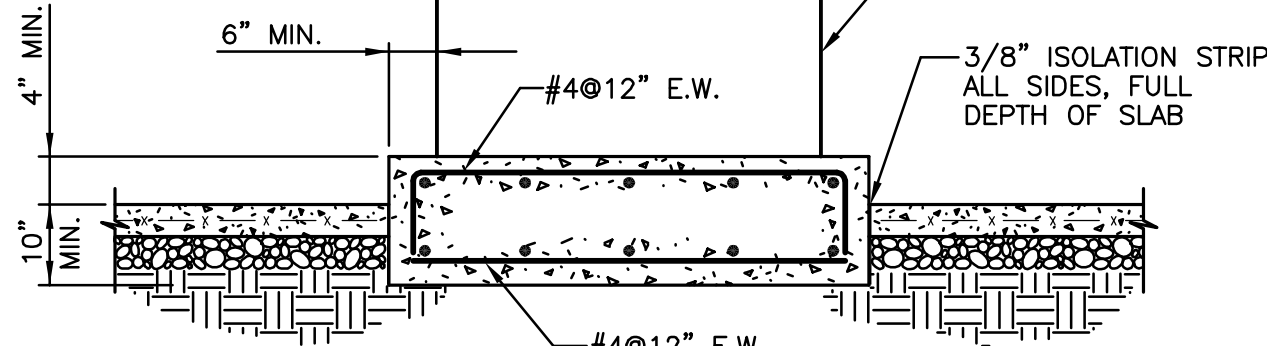
10  
S2.2  
DETAIL  
NOT TO SCALE



TYPICAL FRAMED SLAB PAD FOR EQUIPMENT

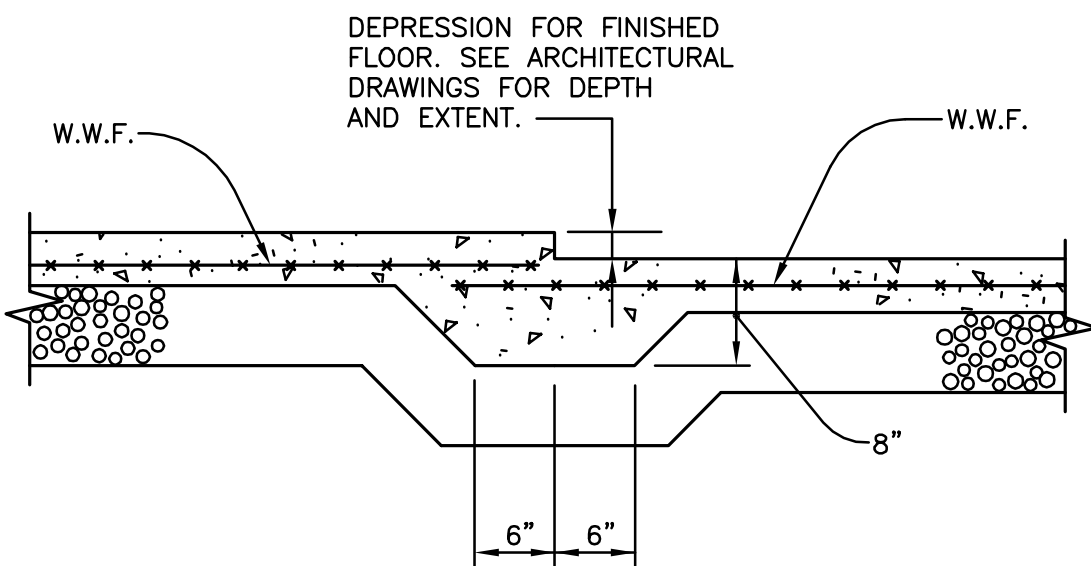


CONCRETE PAD



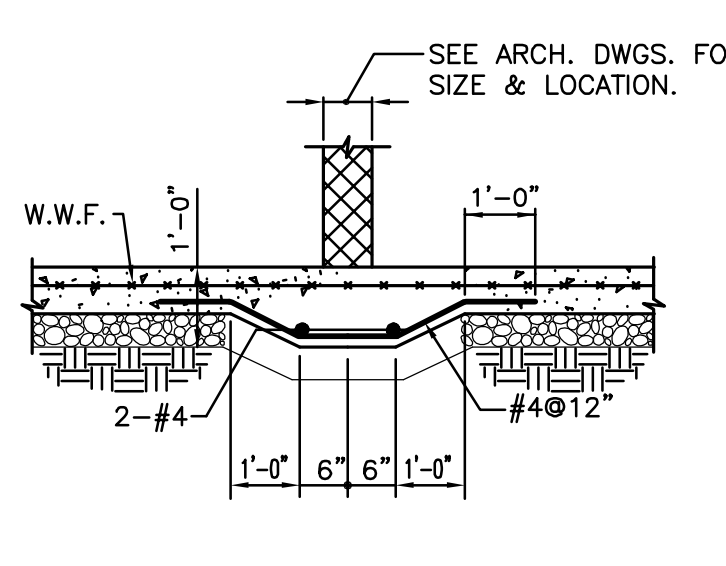
CONCRETE BASE  
NOTE: SEE MECHANICAL AND ARCHITECTURAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF CONCRETE BASES AND PADS FOR EQUIPMENT.  
TYPICAL CONCRETE BASE AND PAD FOR EQUIPMENT

5  
S2.2  
DETAIL  
NOT TO SCALE



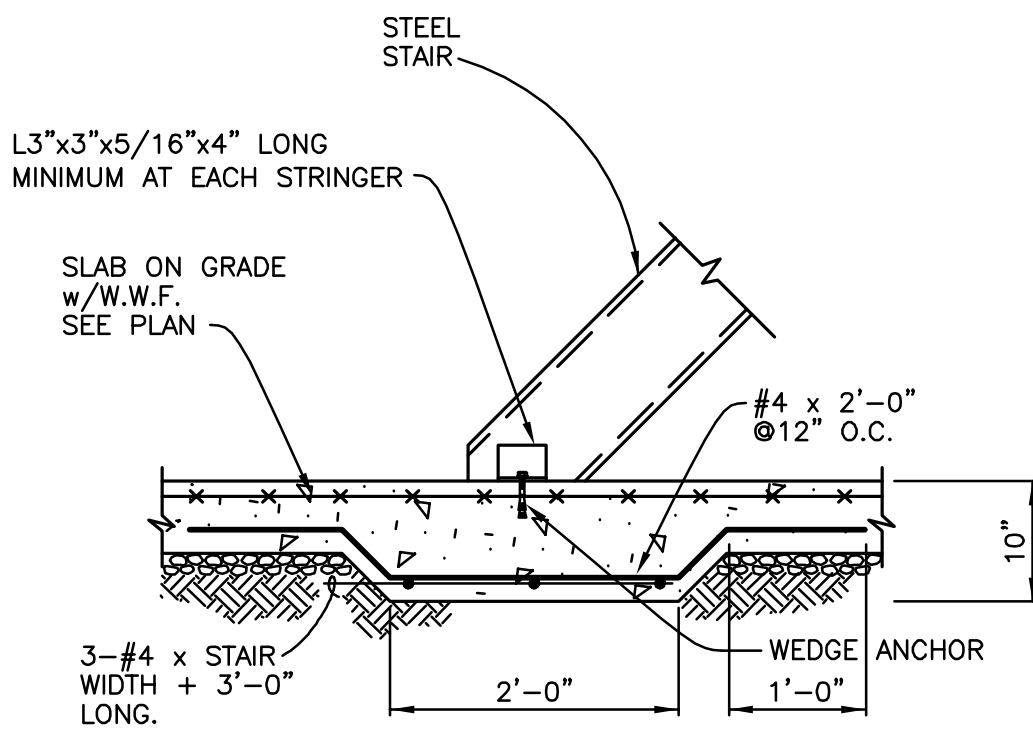
TYPICAL SLAB ON GRADE DEPRESSION

6  
S2.2  
DETAIL  
NOT TO SCALE



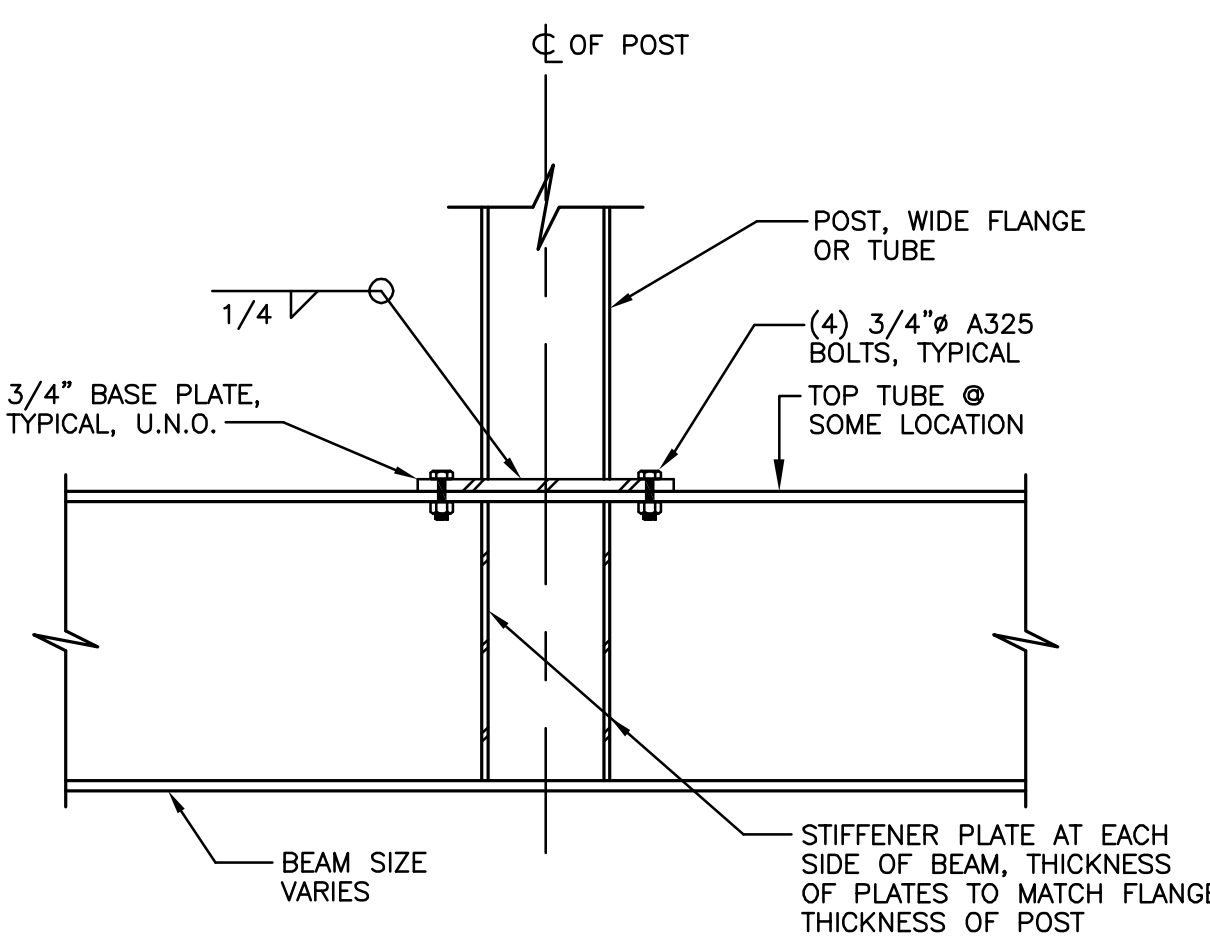
TYPICAL THICKENED SLAB AT NON-BEARING WALLS

7  
S2.2  
SECTION  
NOT TO SCALE



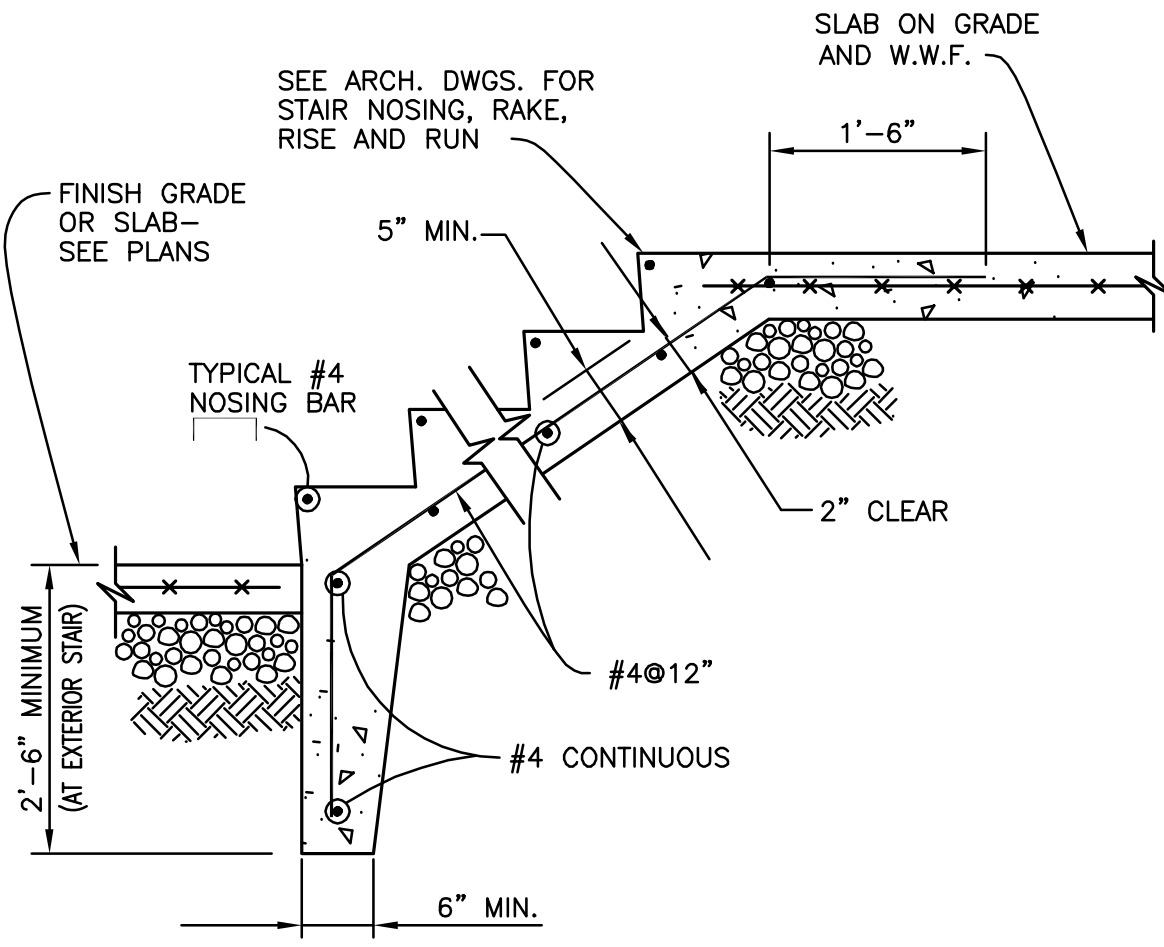
SLAB ON GRADE AT STEEL STAIR

8  
S2.2  
DETAIL  
NOT TO SCALE



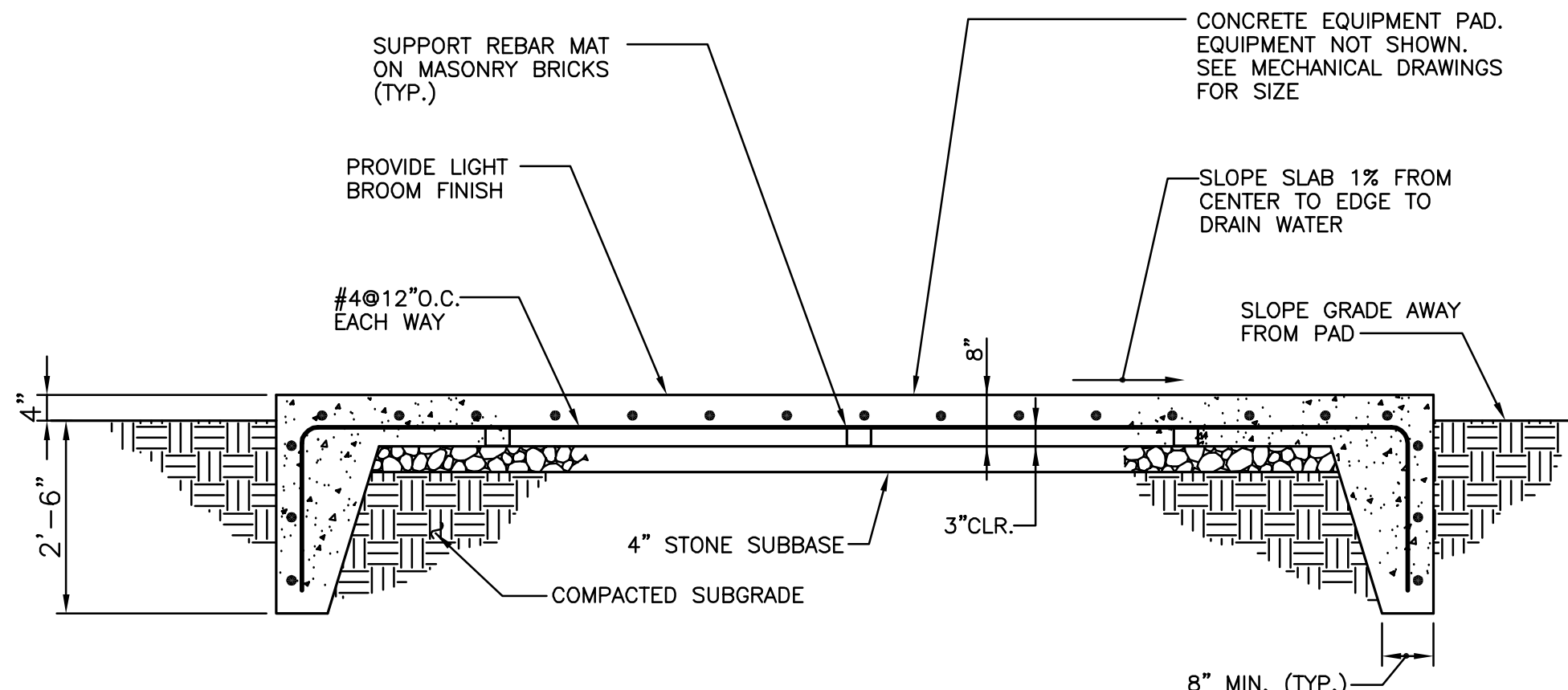
TYPICAL POST CONNECTION

16  
S2.2  
DETAIL  
NOT TO SCALE



CONCRETE STAIR ON GRADE

12  
S2.2  
DETAIL  
NOT TO SCALE



TYPICAL SECTION THRU EXTERIOR EQUIPMENT PAD

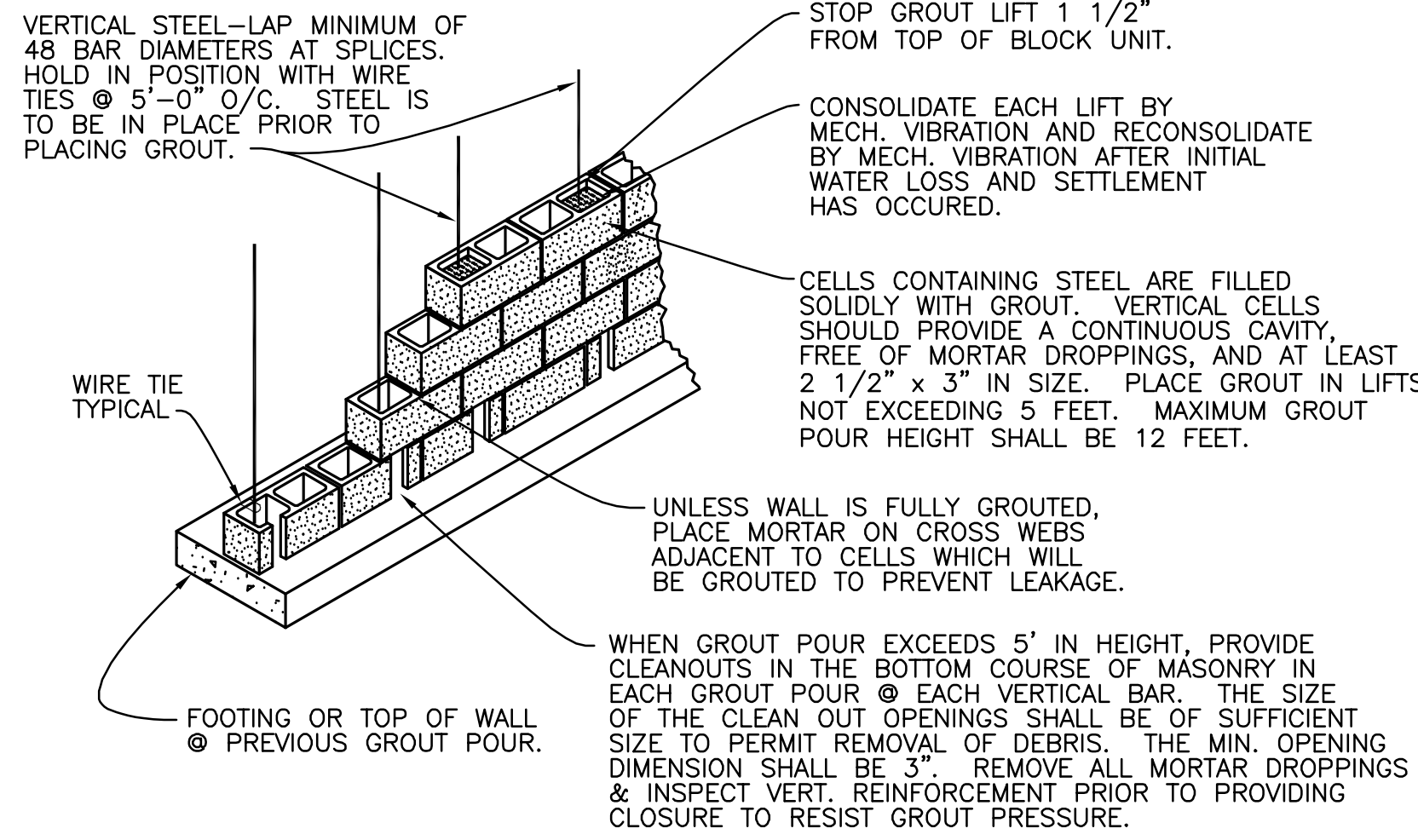
13  
S2.2  
SECTION  
SCALE: 1/2"=1'-0"

EQUIPMENT PAD NOTES:

1. ALL CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH  $f_c' = 4000$  PSI AT 28 DAYS. CONCRETE SHALL HAVE  $5\% \pm 1\%$  ENTRAINED AIR.
2. ALL REINFORCEMENT SHALL BE ASTM A-615 GRADE 60.
3. ANCHOR EQUIPMENT TO CONCRETE PAD PER MANUFACTURER'S RECOMMENDATIONS.
4. PROVIDE GALVANIZED STEEL SHIMS AND NON-SHRINK GROUT UNDER EQUIPMENT AS REQUIRED TO LEVEL EQUIPMENT AND FULLY SUPPORT PER MANUFACTURER'S RECOMMENDATIONS.

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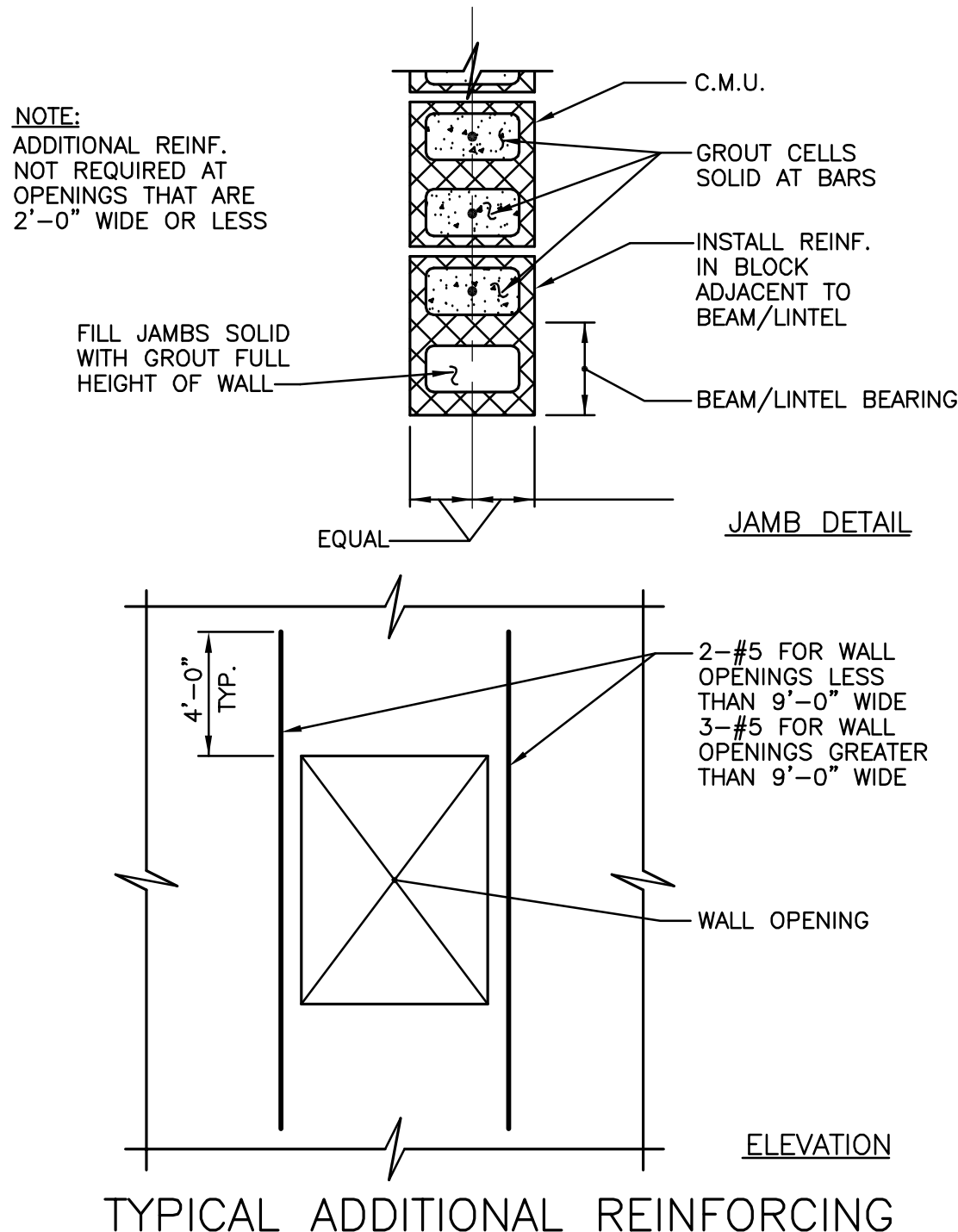


TYPICAL REINFORCED MASONRY CONSTRUCTION

1  
S2.3

DETAIL

NOT TO SCALE

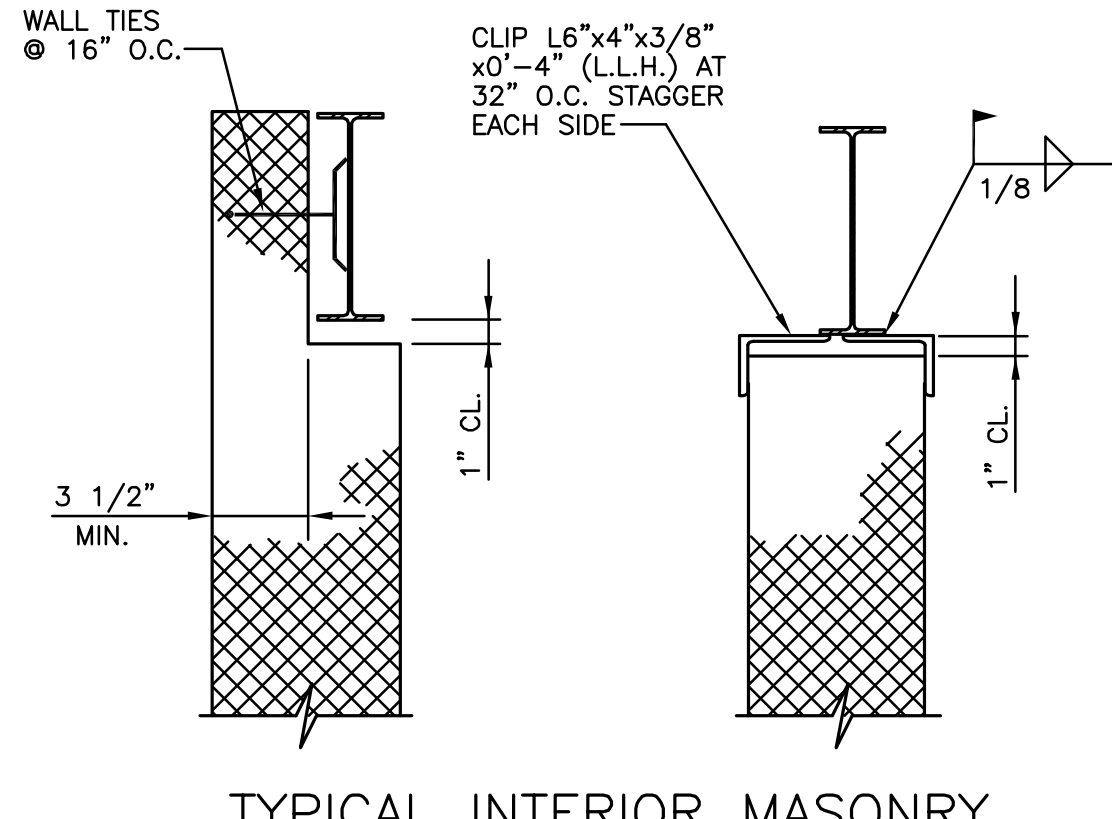


TYPICAL ADDITIONAL REINFORCING AT OPENINGS IN EXTERIOR MASONRY WALLS

2  
S2.3

DETAIL

NOT TO SCALE

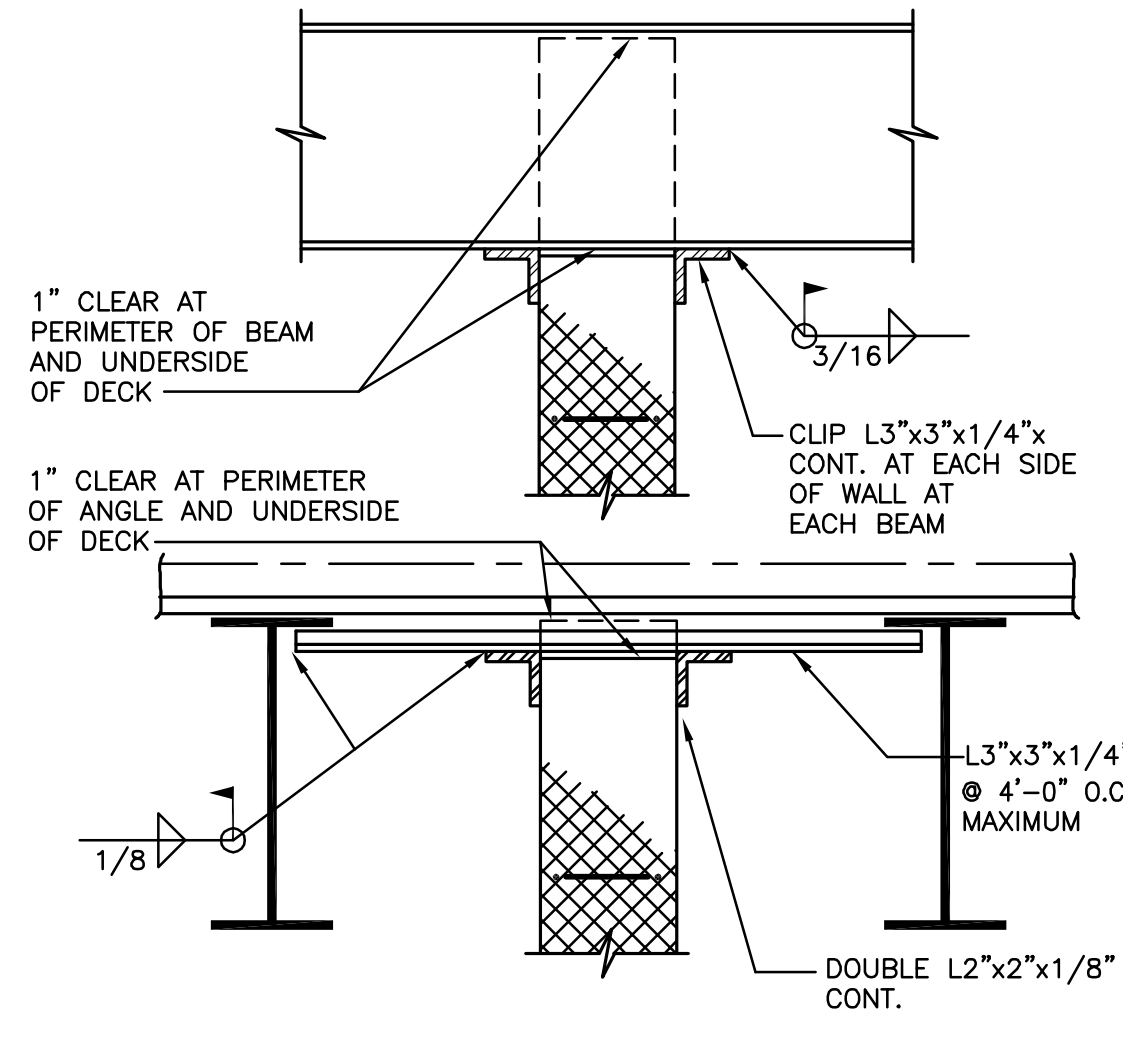


TYPICAL INTERIOR MASONRY WALL BRACING

3  
S2.3

DETAIL

NOT TO SCALE

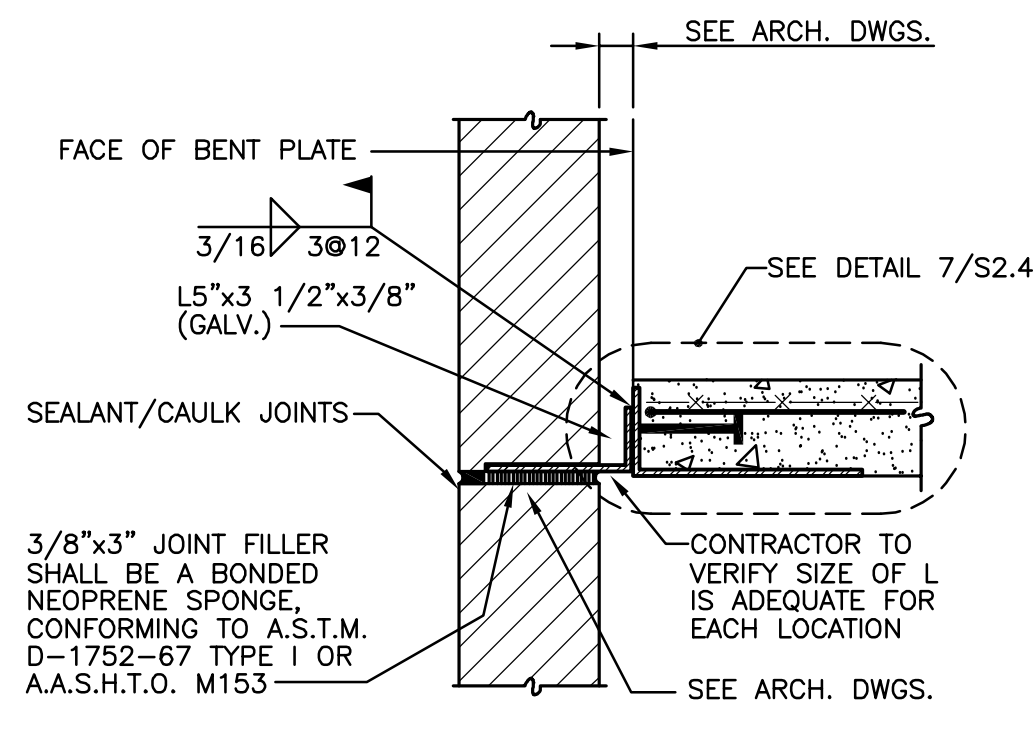


TYPICAL MASONRY WALL BRACING

4  
S2.3

DETAIL

NOT TO SCALE

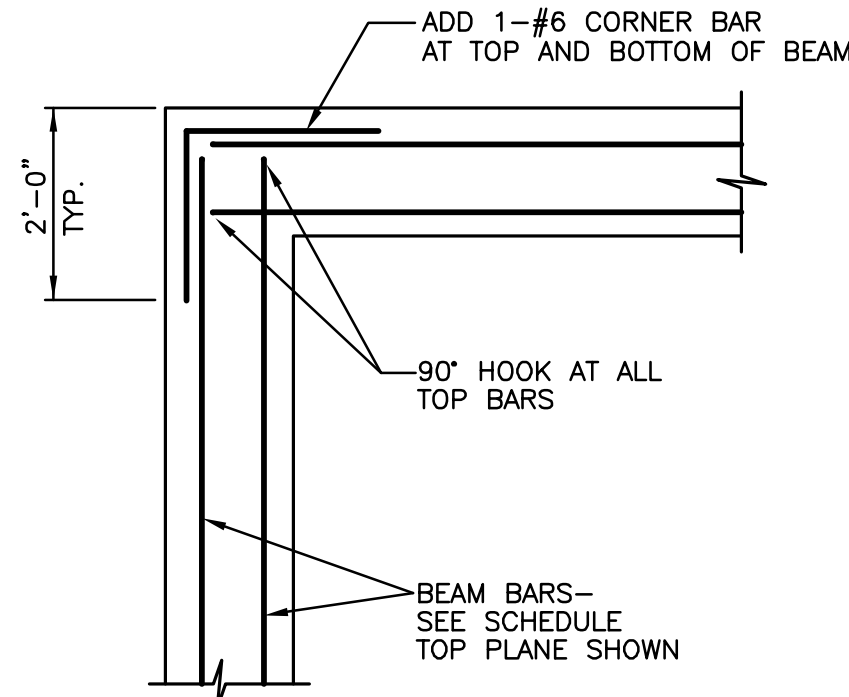


TYPICAL SHELF ANGLE EXTENSION WALL

5  
S2.3

DETAIL

NOT TO SCALE

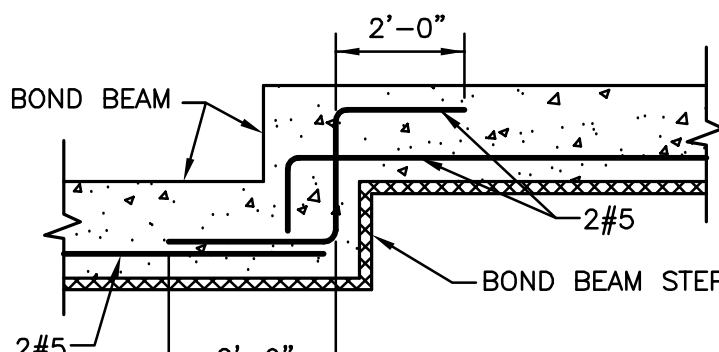


TYPICAL GRADE BEAM CORNER PLAN

6  
S2.3

DETAIL

NOT TO SCALE

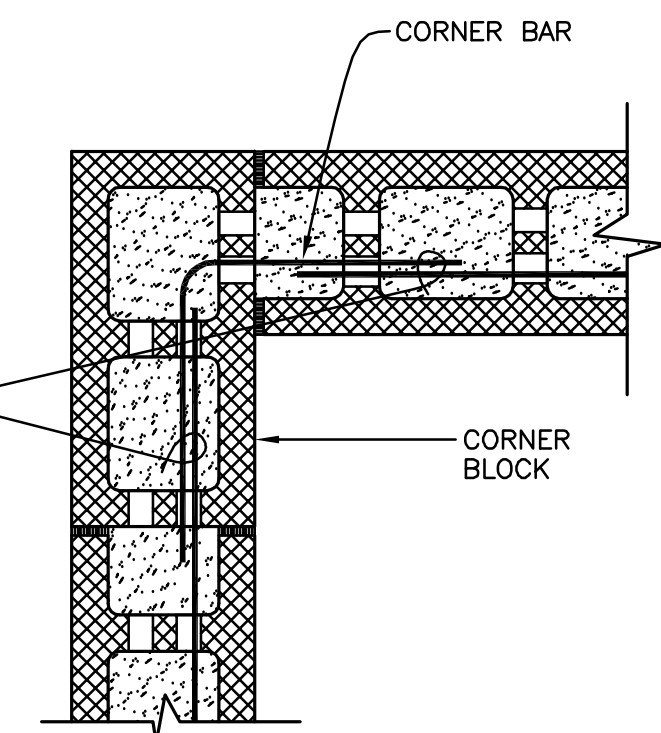


TYPICAL BOND BEAM STEP

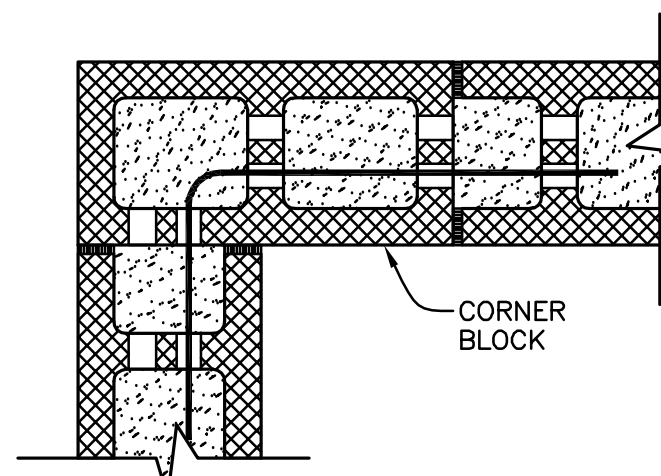
7  
S2.3

DETAIL

NOT TO SCALE



8" WALL FIRST COURSE



8" WALL SECOND COURSE

8  
S2.3

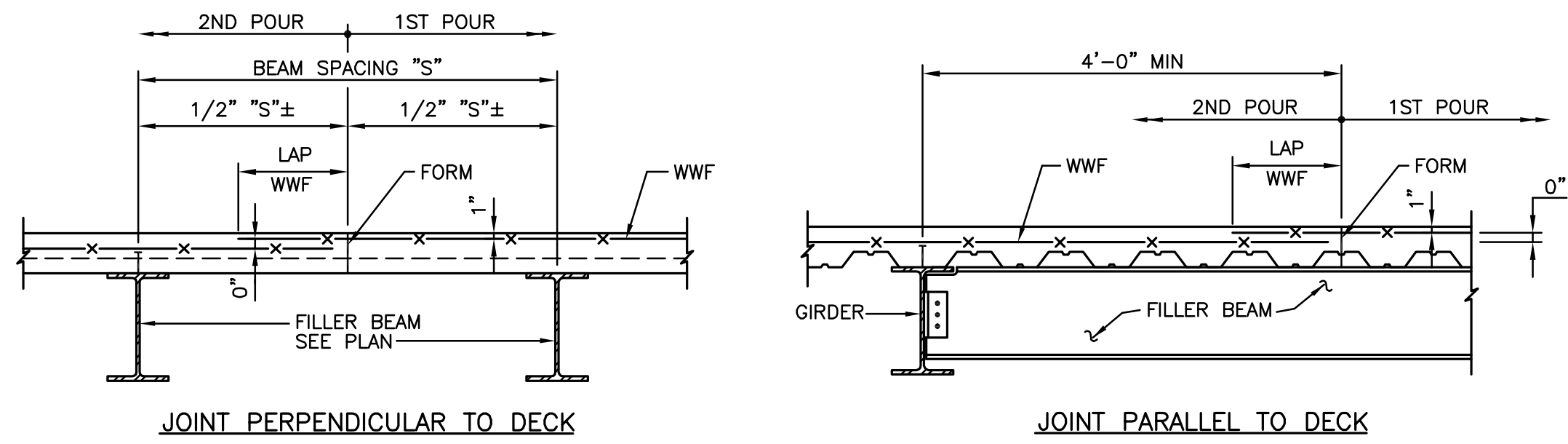
DETAIL

NOT TO SCALE

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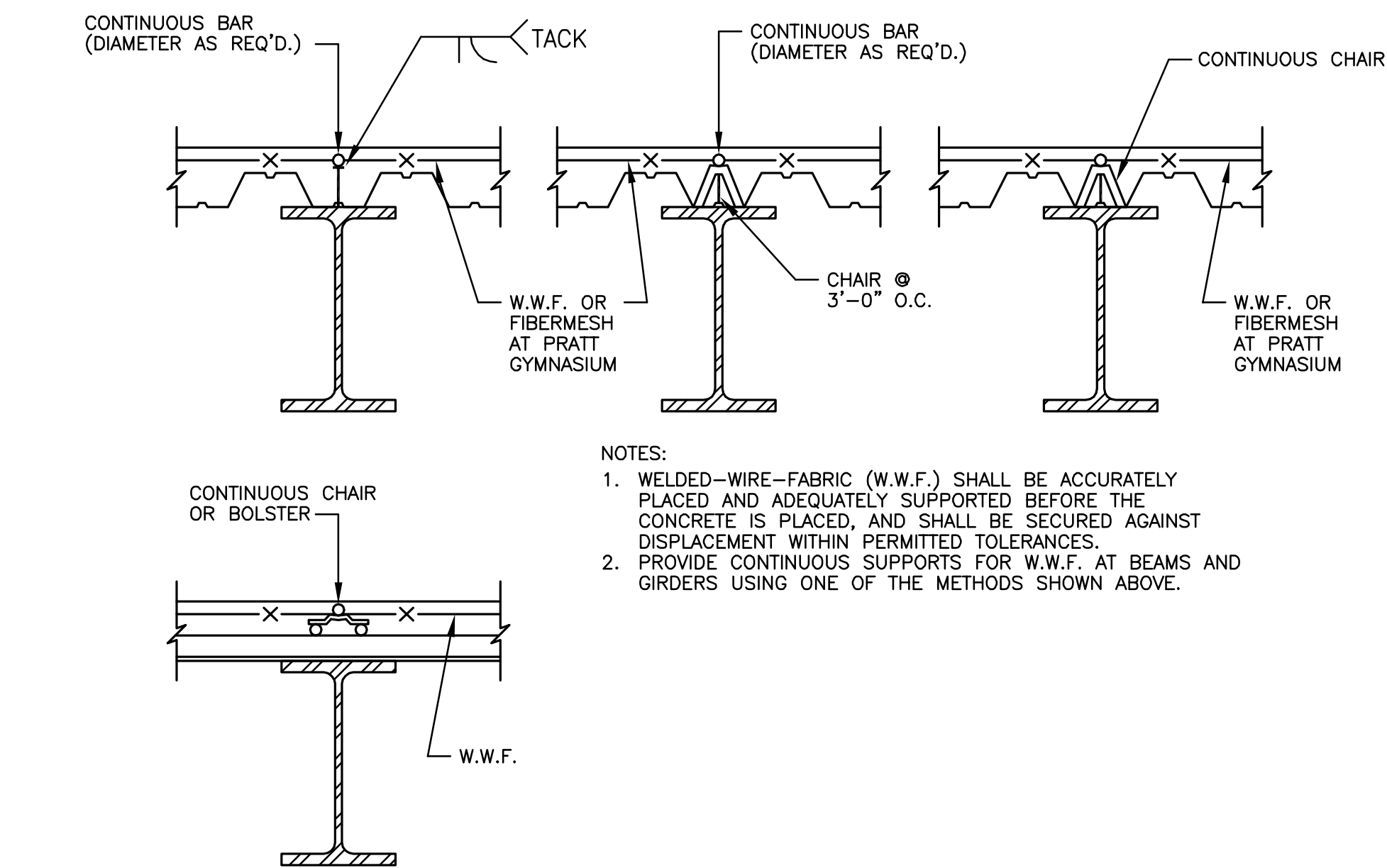
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30" x 42", IT HAS BEEN REDUCED OR ENLARGED.  
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NOTE:  
LAP = CROSS WIRE SPACING PLUS 2".  
**TYPICAL CONSTRUCTION JOINT DETAIL  
FOR SLAB ON METAL DECK**

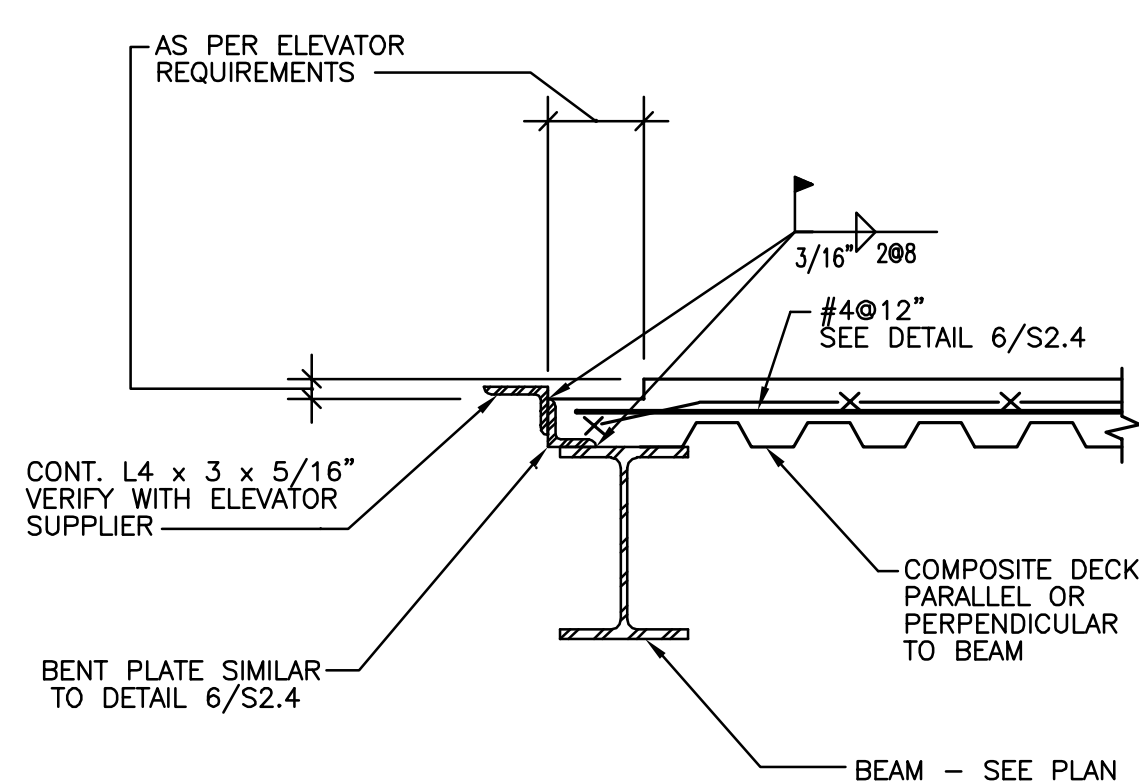
**1 SECTION**  
S2.4 SCALE: 3/4" = 1'-0"



- NOTES:  
1. WELDED-WIRE-FABRIC (W.W.F.) SHALL BE ACCURATELY PLACED AND ADEQUATELY SUPPORTED BEFORE THE CONCRETE IS PLACED, AND SHALL BE SECURED AGAINST DISPLACEMENT WITHIN PERMITTED TOLERANCES.  
2. PROVIDE CONTINUOUS SUPPORTS FOR W.W.F. AT BEAMS AND GIRDERS USING ONE OF THE METHODS SHOWN ABOVE.

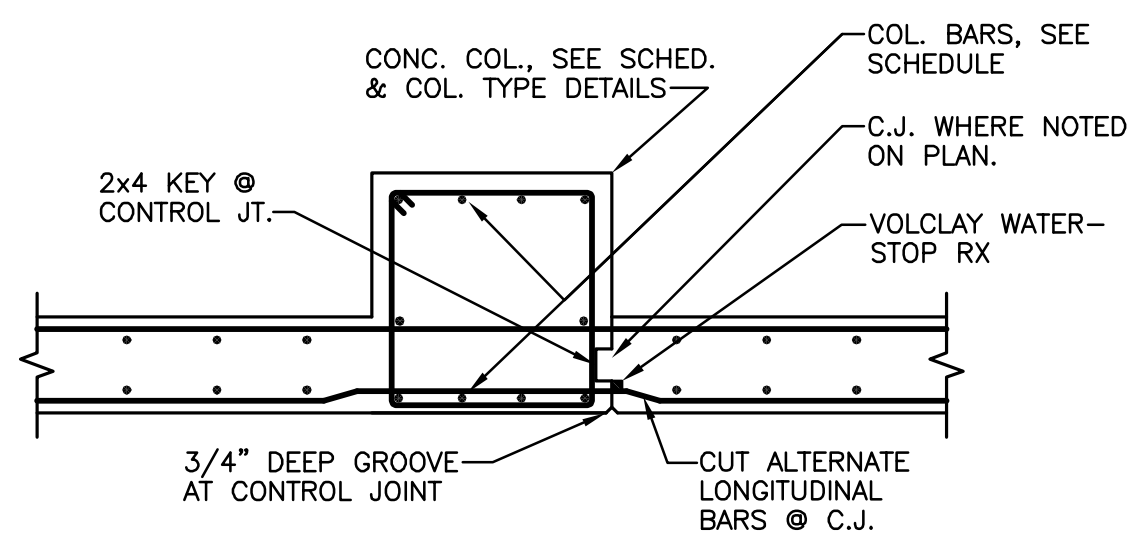
**TYPICAL WELDED-WIRE-FABRIC SUPPORT DETAILS**

**5 DETAIL**  
S2.4 SCALE: 3/16"=1'-0"



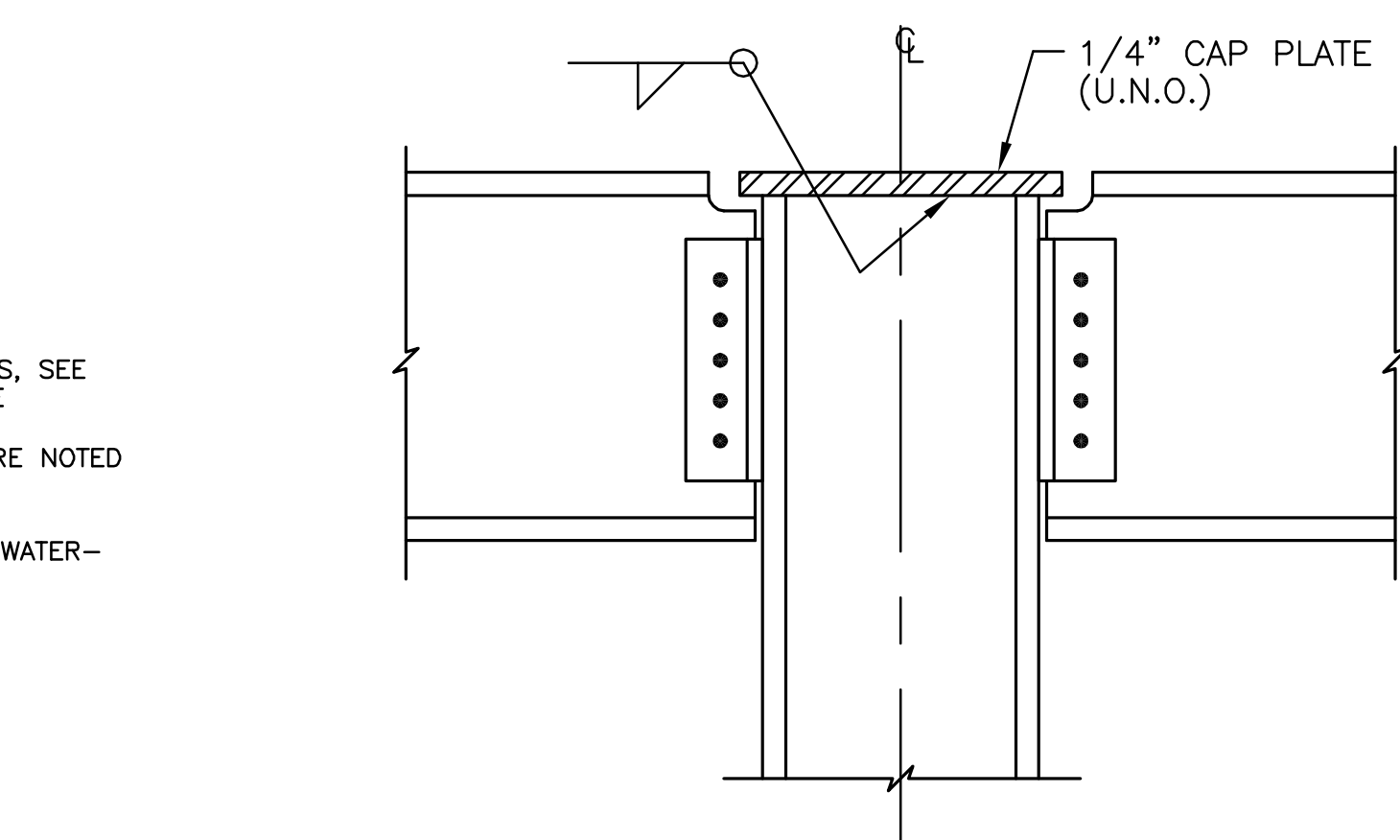
**SILL AT ELEVATOR DOOR  
STEEL FRAMED DOOR**

**9 DETAIL**  
S2.4 NOT TO SCALE



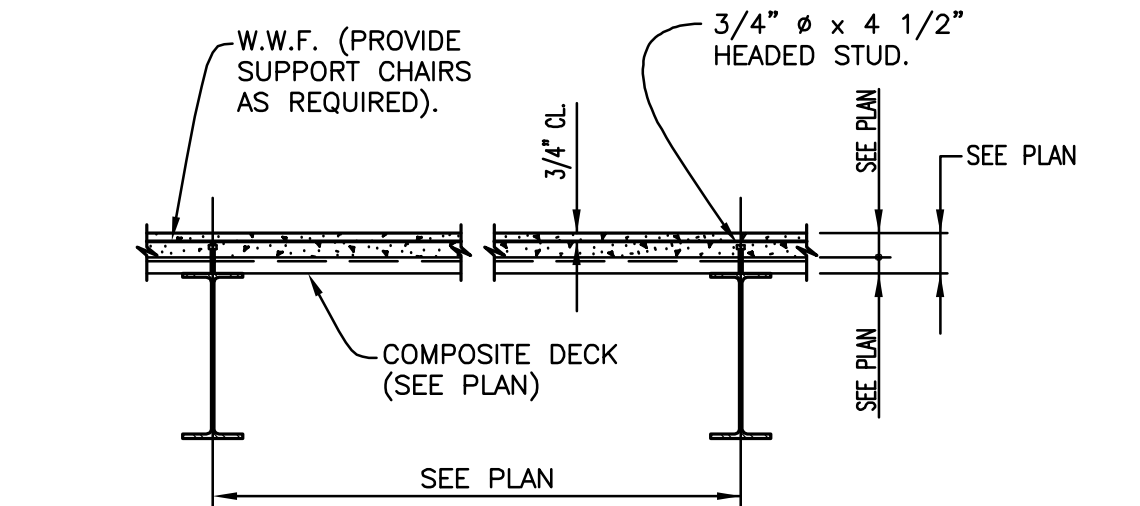
**TYPICAL WALL REINFORCEMENT @ COLUMN**

**14 DETAIL**  
S2.4 NOT TO SCALE



**TYPICAL TOP OF COLUMN**

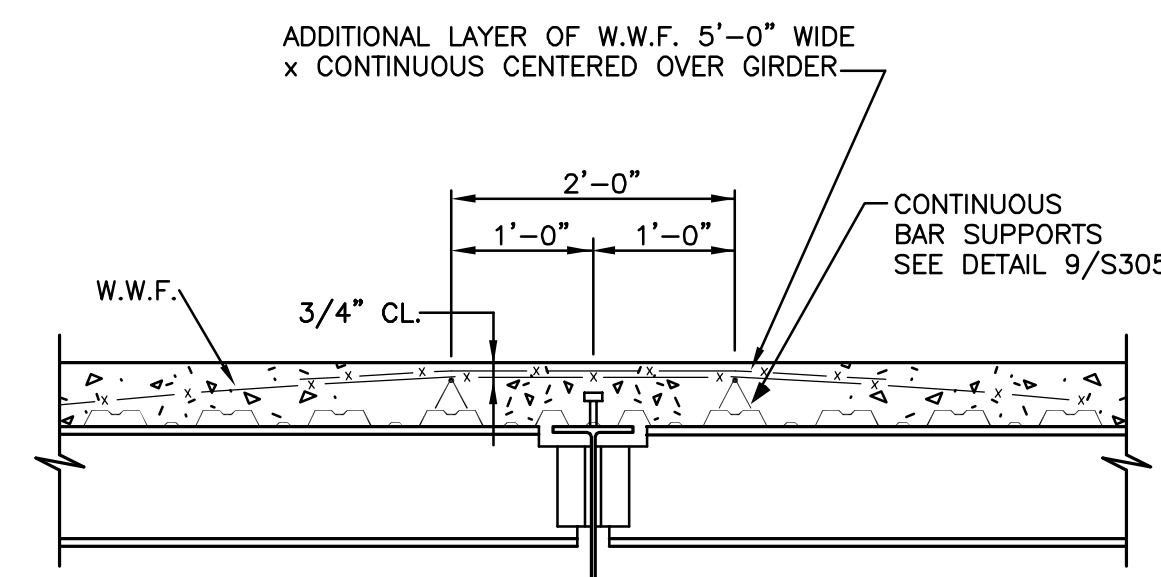
**15 SECTION**  
S2.4 SCALE: NONE



- STUD INSTALLATION NOTES:  
1. WHEN DECK SPANS PERPENDICULAR TO BEAM START AT ENDS OF BEAM AND PLACE A SINGLE STUD IN EVERY OTHER RIB WORKING TOWARDS THE CENTER OF THE BEAM. STUDS REMAIN IN PLACE IF RIBS STARTING AT BEAM ENDS AND WORKING TOWARDS THE CENTER IF MORE THAN ONE STUD PER RIB IS REQUIRED. PLACE TWO STUDS IN THE RIBS, AGAIN STARTING FROM BEAM ENDS.  
2. WHEN DECK SPANS PARALLEL TO BEAM SPACE STUDS EVENLY ALONG LENGTH OF BEAM, UNLESS OTHERWISE NOTED ON PLAN.  
3. MAXIMUM STUD SPACING ALONG LENGTH OF BEAM = 32". MINIMUM STUD SPACING TO 1/2" MINIMUM STUD SPACING PERPENDICULAR TO THE LENGTH OF BEAM FOR DOUBLE STUDS = 3".  
4. WELD STUDS TO BEAM PER AWS D1.1-B6.

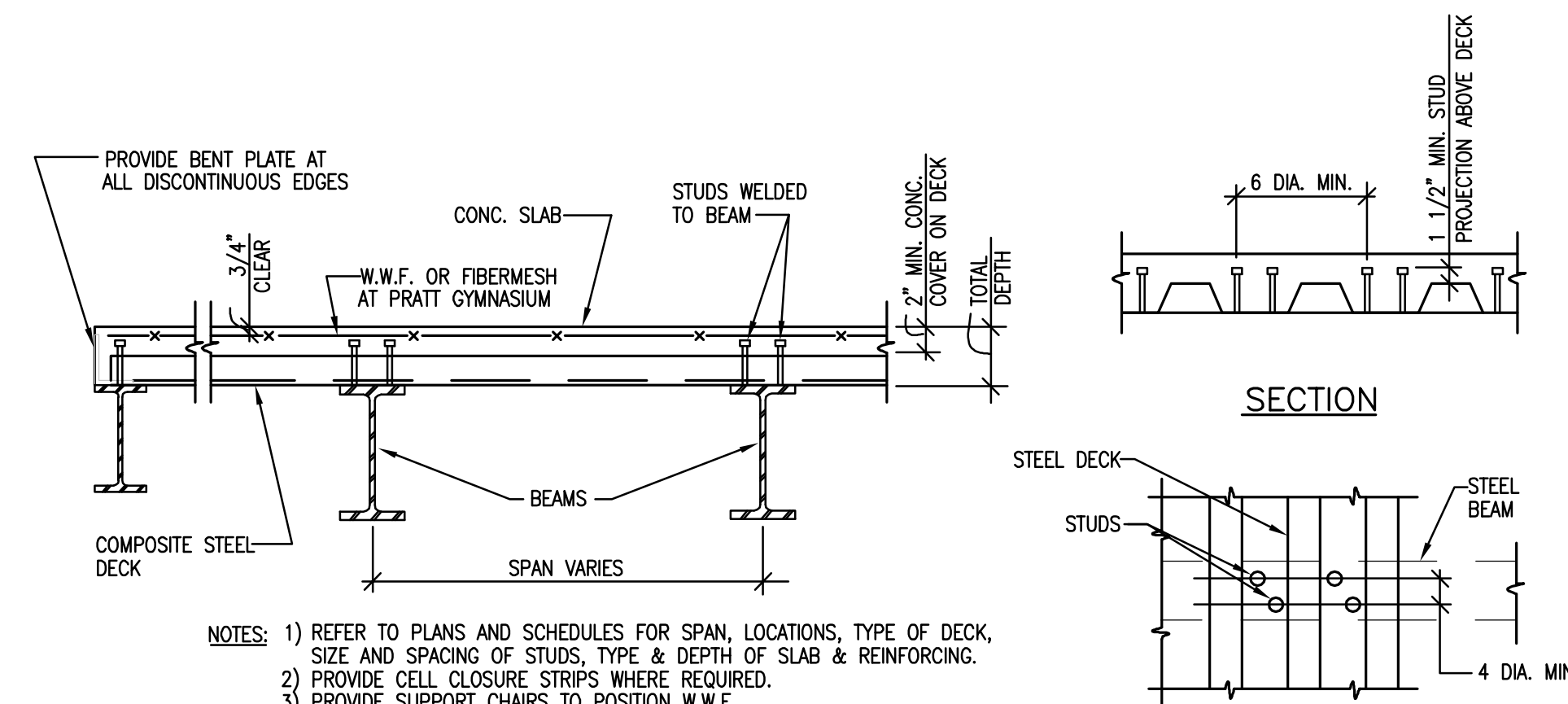
**TYPICAL COMPOSITE SLAB**

**2 DETAIL**  
S2.4 NOT TO SCALE



**SLAB REINFORCING  
AT INTERIOR GIRDERS**

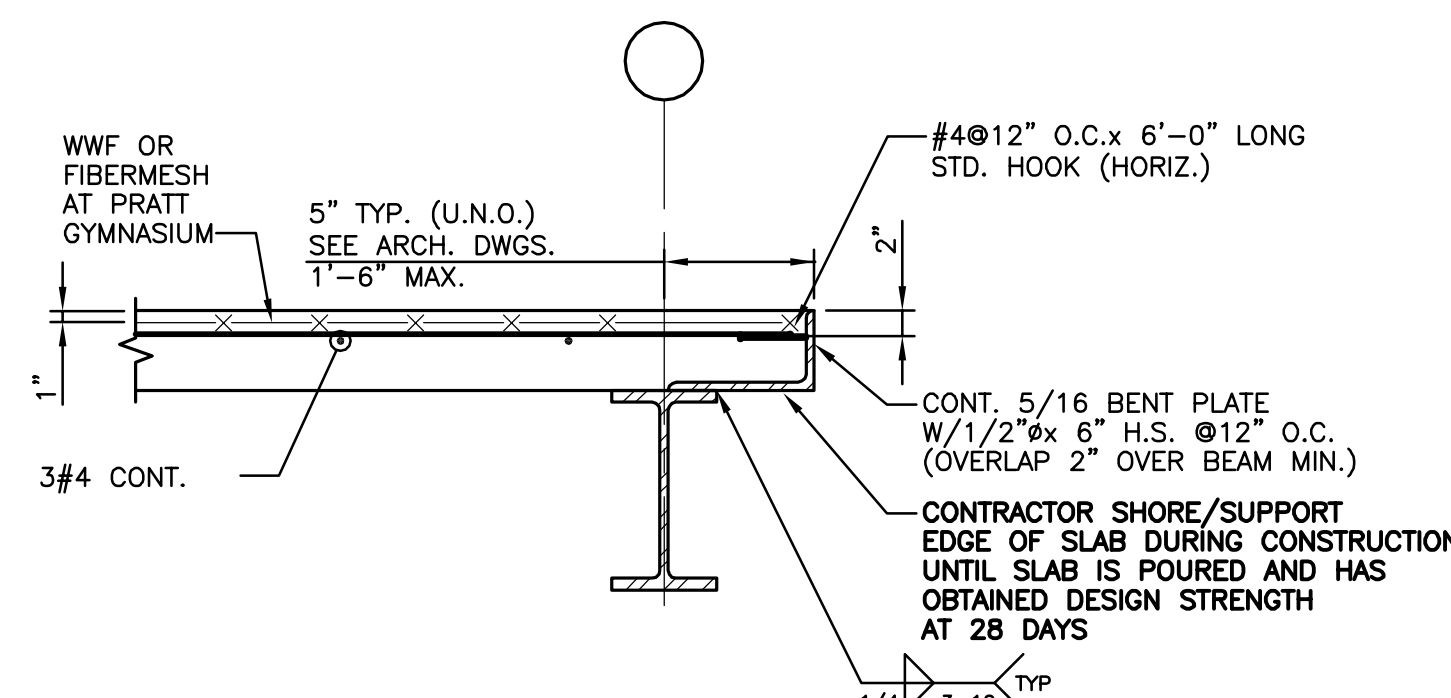
**3 DETAIL**  
S2.4 NOT TO SCALE



- NOTES: 1) REFER TO PLANS AND SCHEDULES FOR SPAN, LOCATIONS, TYPE OF DECK, SIZE AND SPACING OF STUDS, TYPE & DEPTH OF SLAB & REINFORCING.  
2) PROVIDE CELL CLOSURE STRIPS WHERE REQUIRED.  
3) PROVIDE SUPPORT CHAIRS TO POSITION W.W.F.

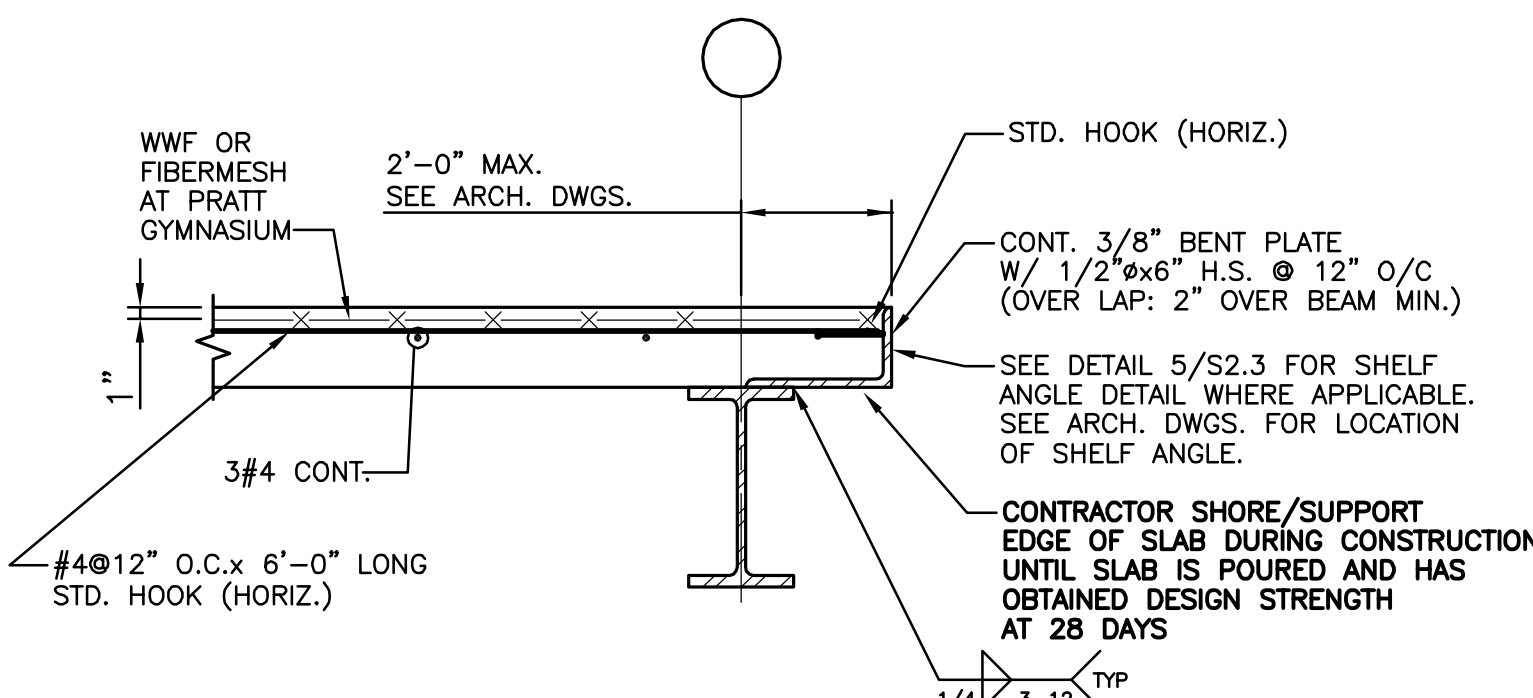
**PLAN**

**4 CONCRETE COMPOSITE SLAB**  
S2.4 NOT TO SCALE



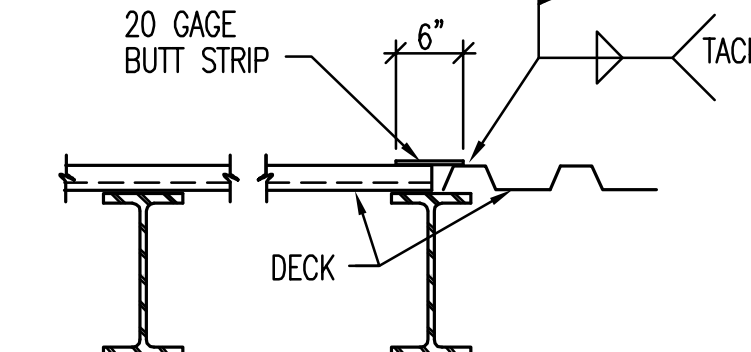
**TYPICAL EDGE OF SLAB AT INTERIOR OPENINGS, UNO**

**6 DETAIL**  
S2.4 SCALE: 1" = 1'-0"



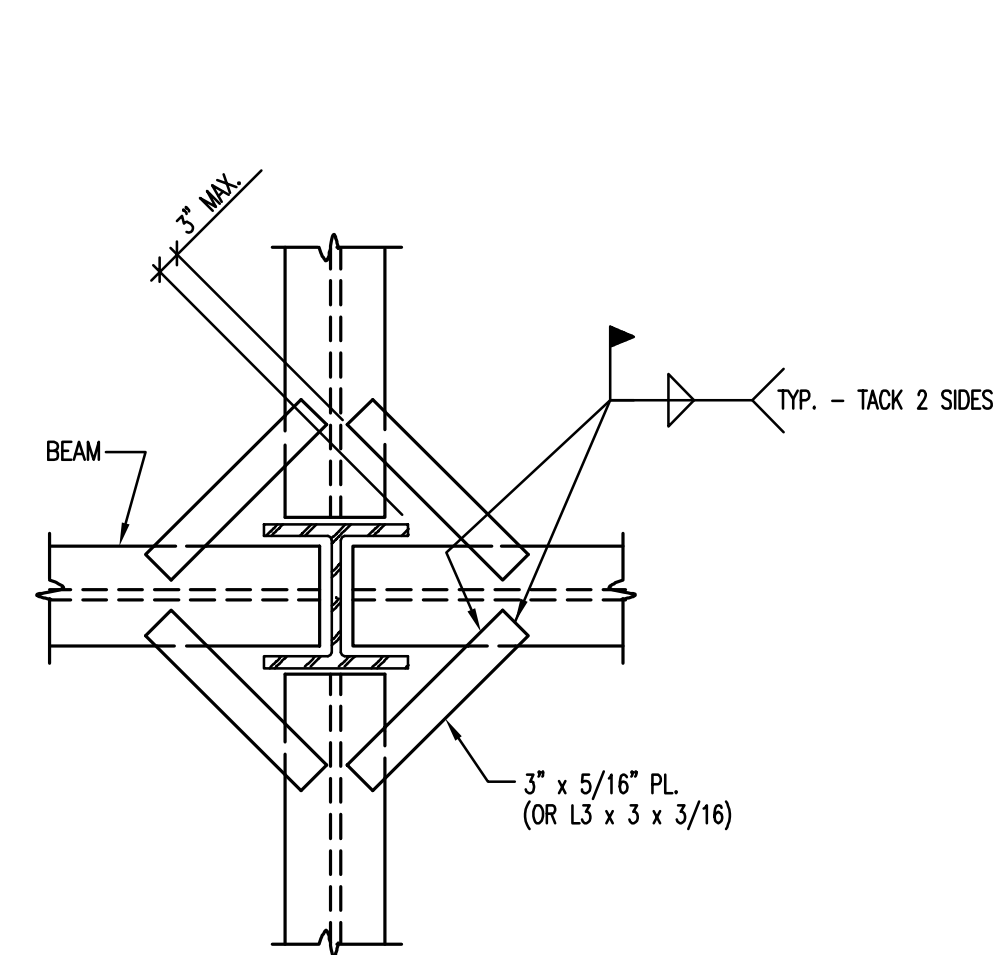
**TYPICAL EDGE OF SLAB AT EXTERIOR OF BUILDING**

**7 DETAIL**  
S2.4 SCALE: 1" = 1'-0"



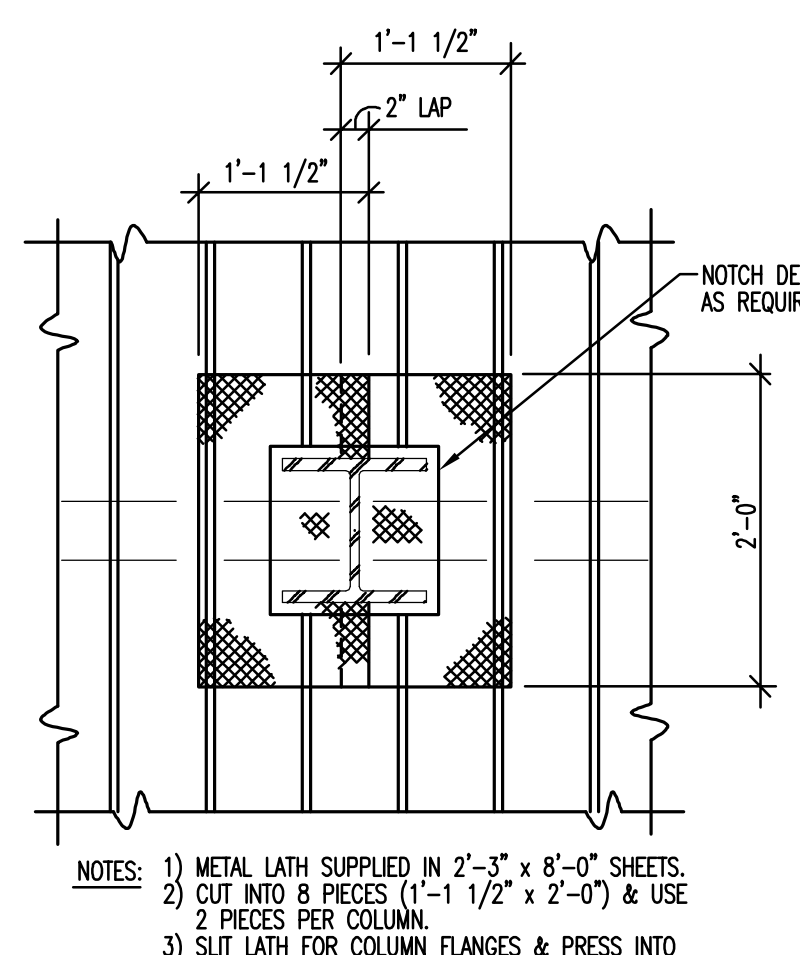
**DECK SUPPORT WHERE DECK  
SPAN CHANGES DIRECTION**

**8 DETAIL**  
S2.4 NOT TO SCALE



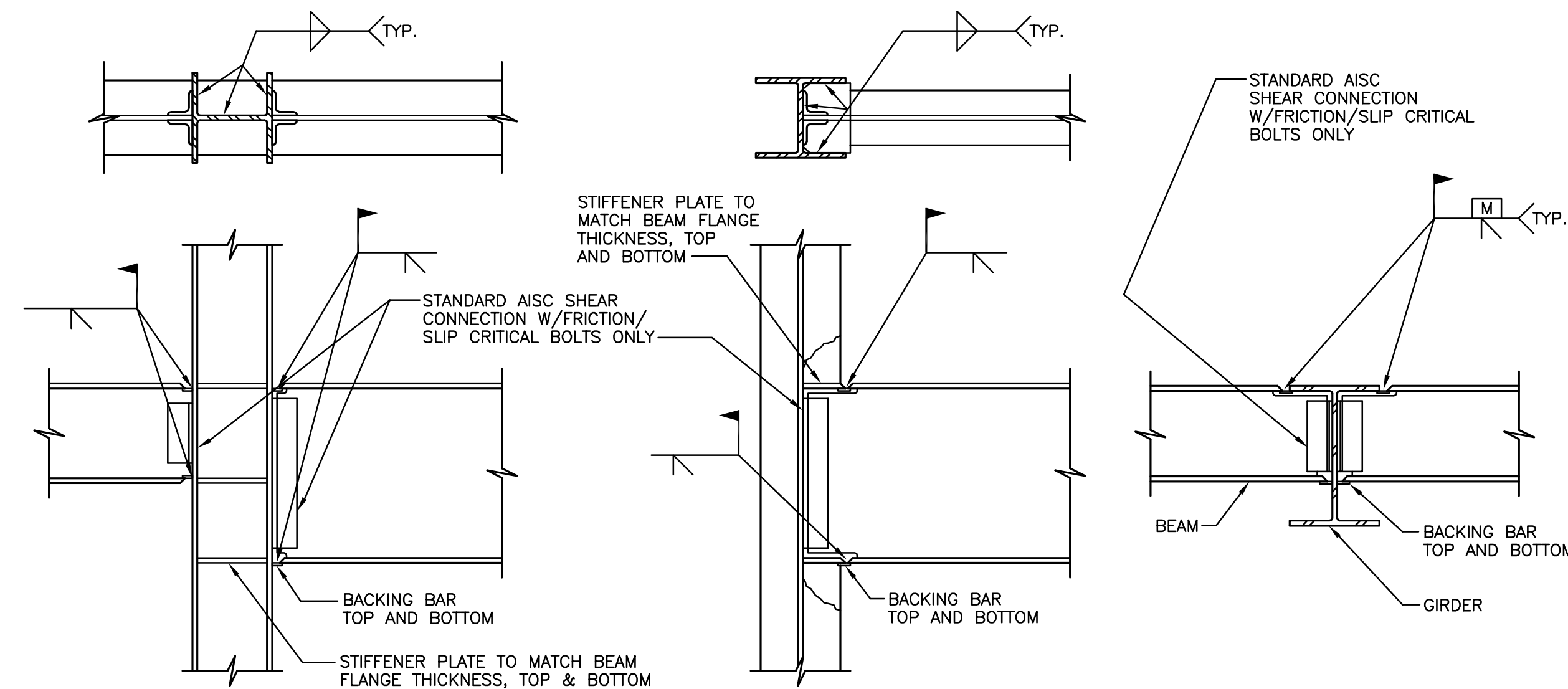
**SUPPORT OF FLOOR DECK AT COLUMN**

**11 DETAIL**  
S2.4 NOT TO SCALE



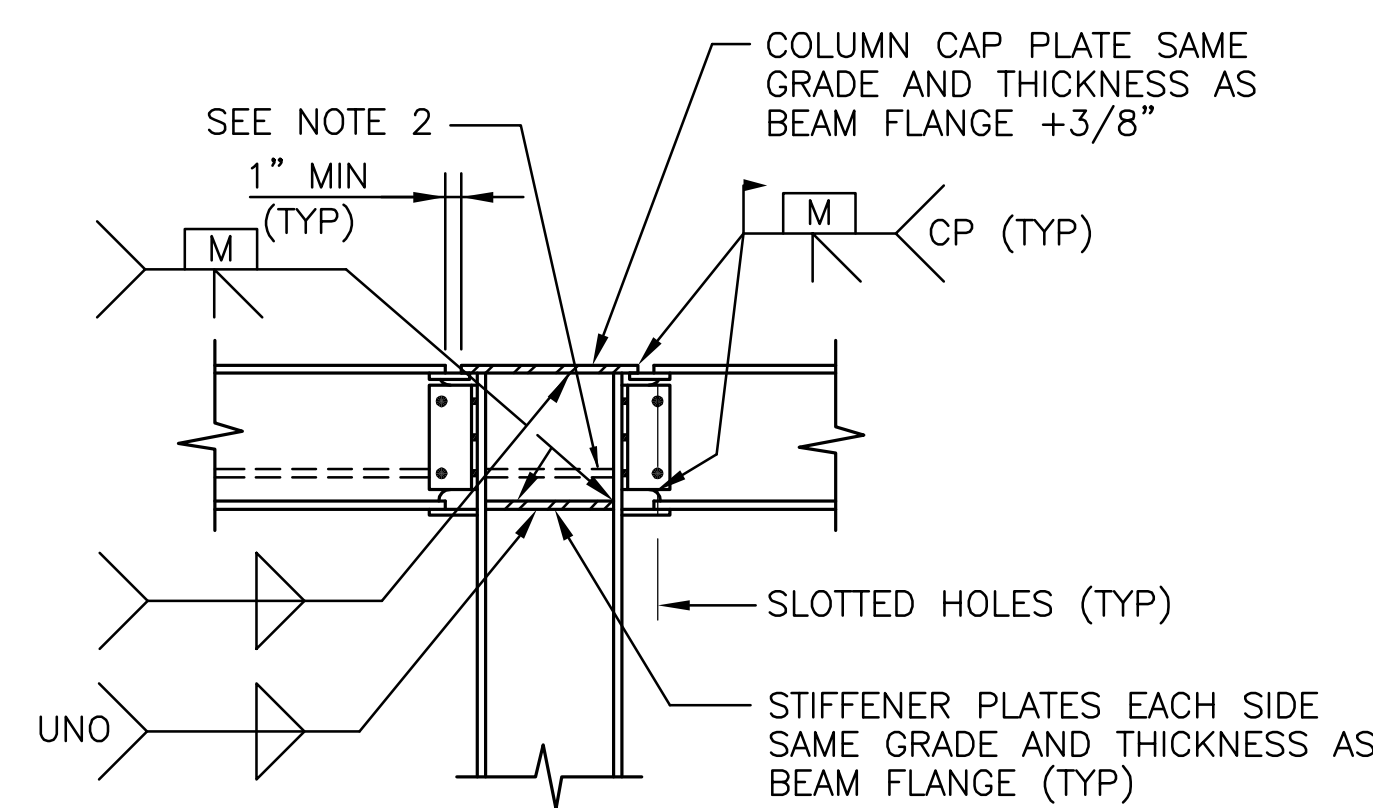
**DAM FOR DECK POUR AT COLUMN**

**12 DETAIL**  
S2.4 NOT TO SCALE



**TYPICAL MOMENT CONNECTION DETAILS**

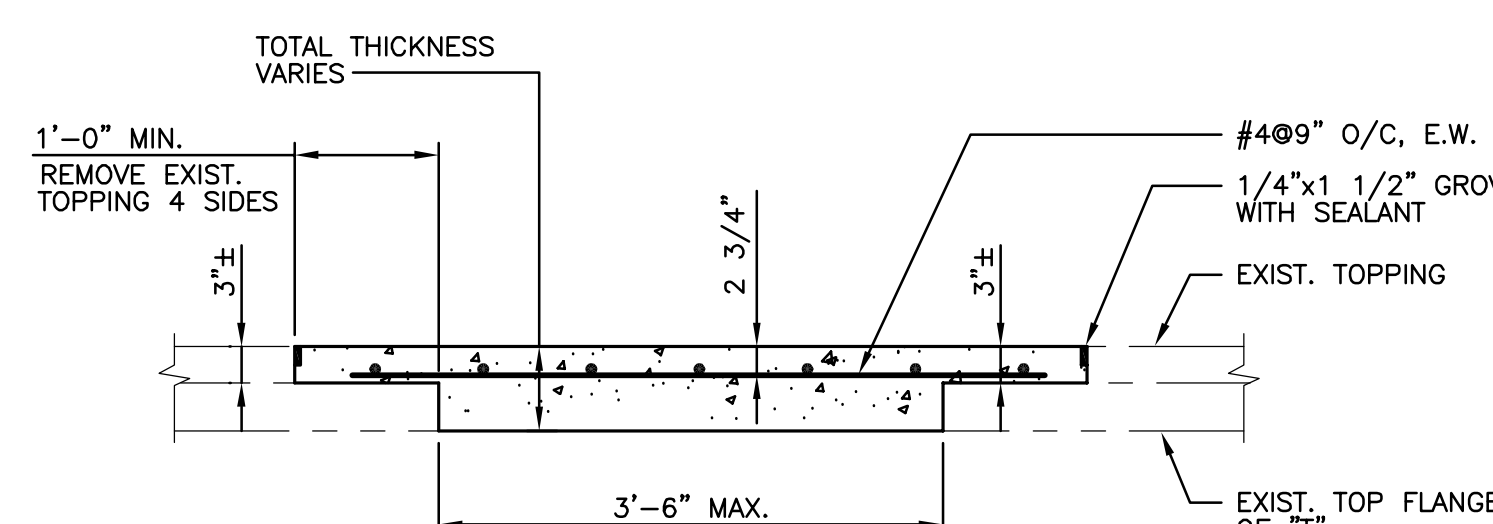
**13 DETAIL**  
S2.4 NOT TO SCALE



- NOTES:  
1. C.P. = COMPLETE PENETRATION WELD.  
2. PROVIDE 2 PAIRS OF STIFFENER PLATES WHEN BEAMS OF DIFFERENT DEPTHS ARE MOMENT CONNECTED, EXCEPT STIFFENER PLATE MAY BE SLOPED IF BEAM FLANGES ARE OFFSET BY 3" OR LESS.

**TYPICAL MOMENT CONNECTION TO  
COLUMN FLANGE @ TOP OF COLUMN**

**16 SECTION**  
S2.4 SCALE: 1"=1'-0"



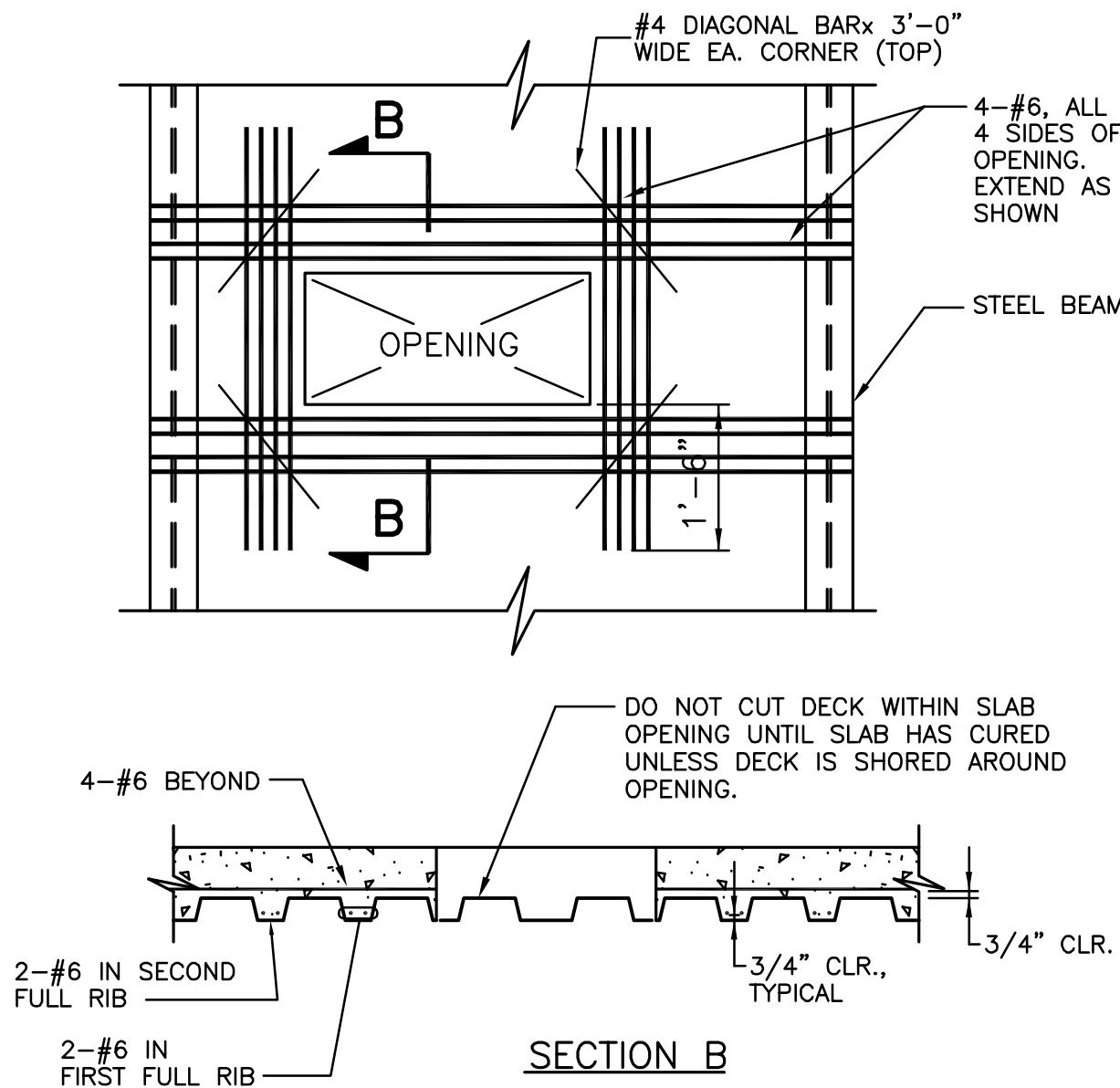
**TYPICAL EXISTING OPENING FILL-IN DETAIL**

**17 DETAIL**  
S2.4 SCALE: 3/4" = 1'-0"

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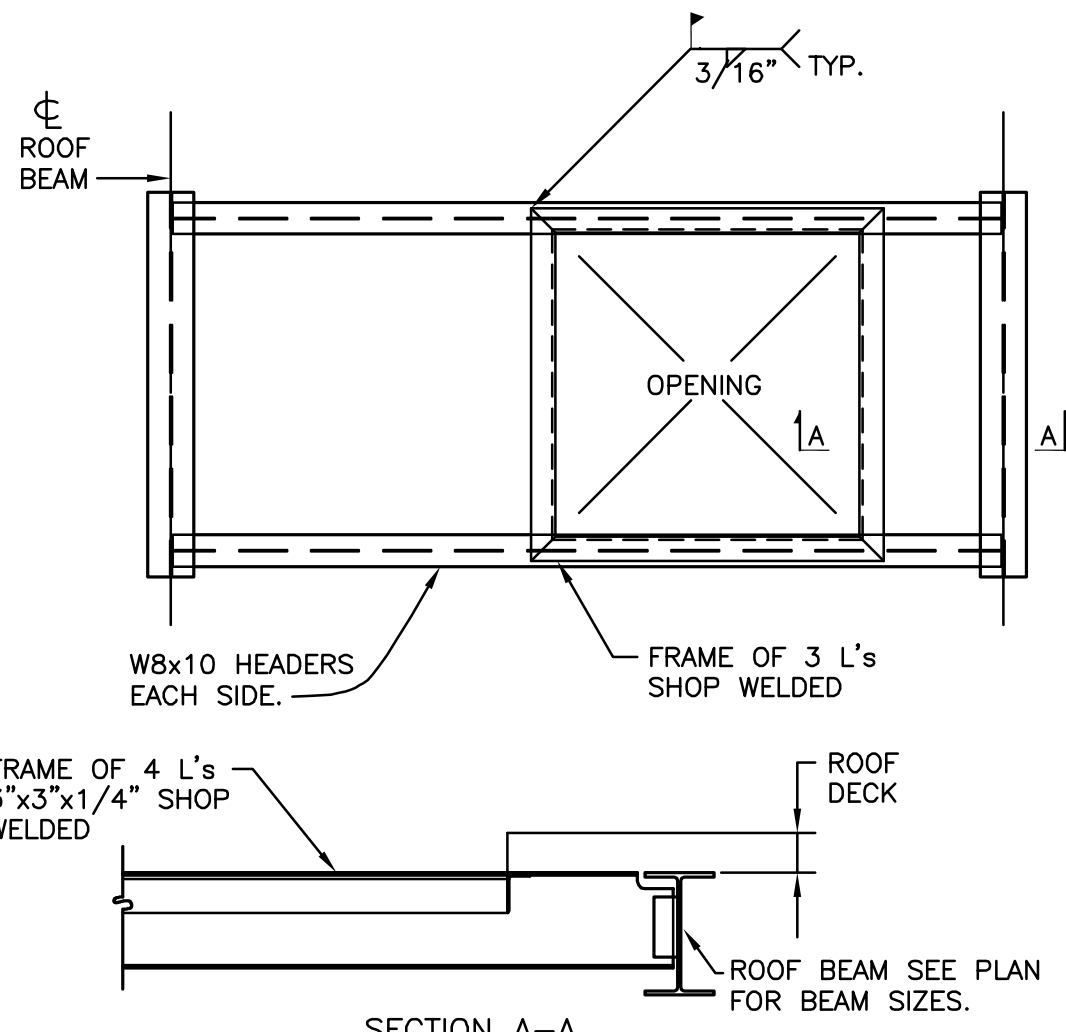
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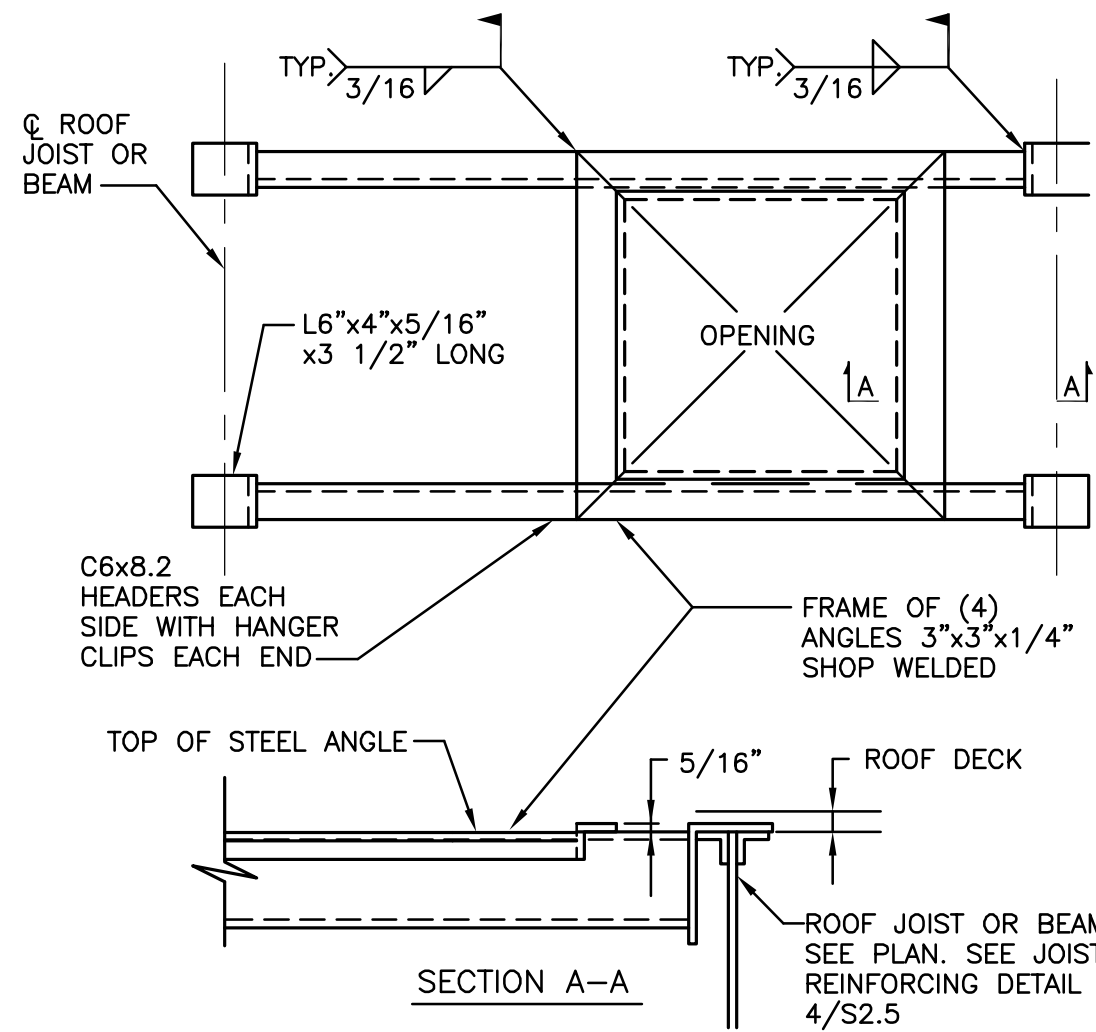
ADDITIONAL BARS AROUND SLAB OPENINGS WITH METAL DECK

1  
S2.5  
DETAIL  
NOT TO SCALE



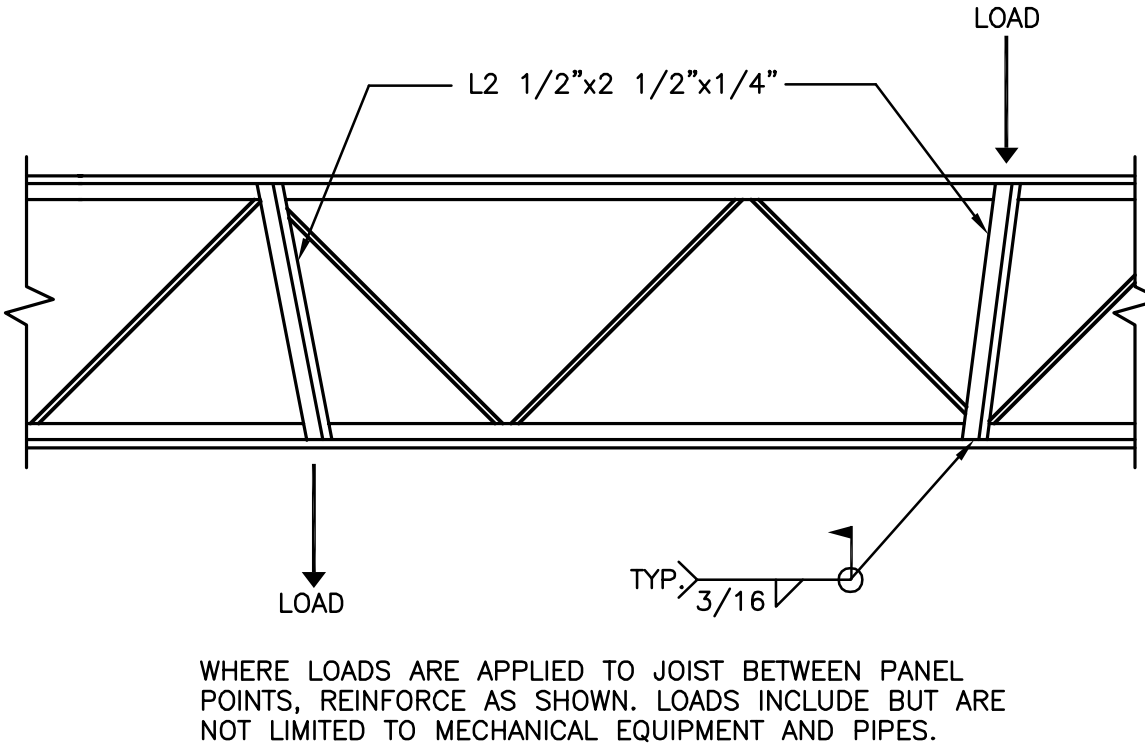
TYPICAL MECHANICAL OPENING

2  
S2.5  
DETAIL  
NOT TO SCALE



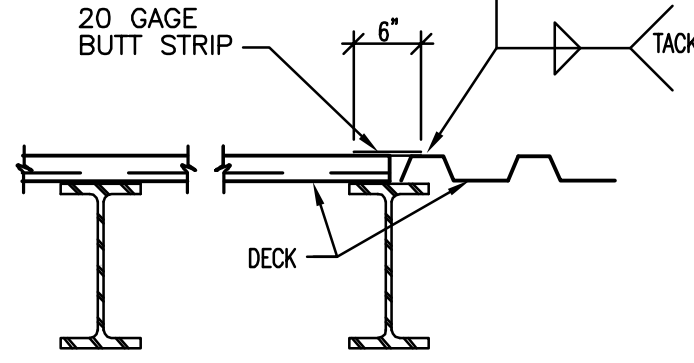
TYPICAL MECHANICAL OPENING

3  
S2.5  
DETAIL  
NOT TO SCALE



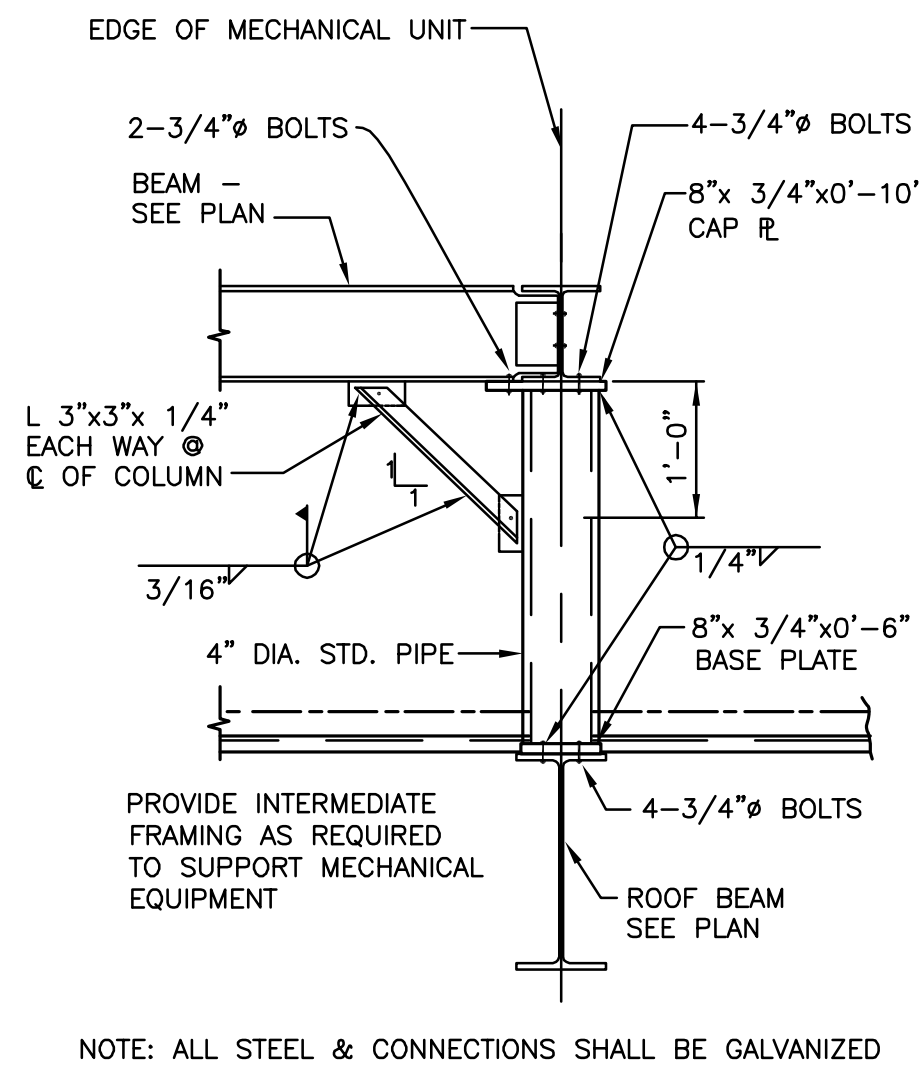
TYPICAL JOIST REINFORCEMENT

4  
S2.5  
DETAIL  
NOT TO SCALE



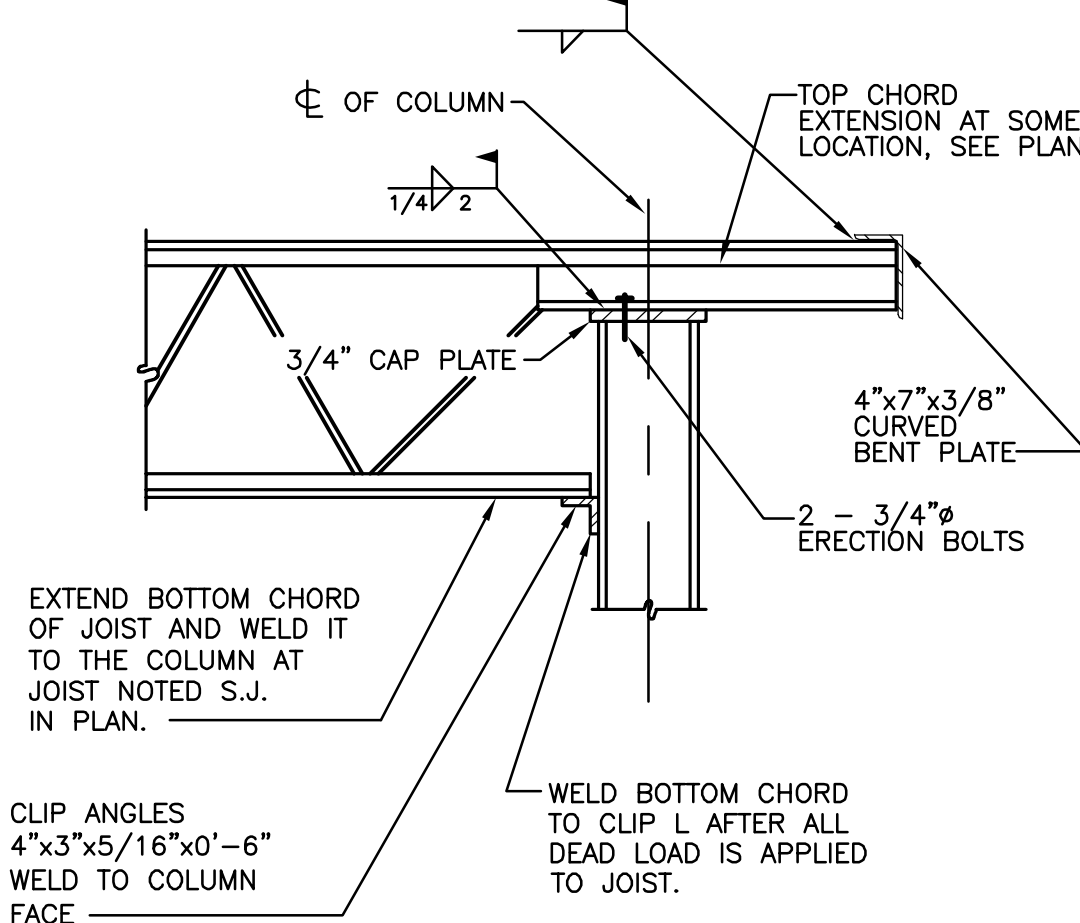
DECK SUPPORT WHERE DECK SPAN CHANGES DIRECTION

5  
S2.5  
DETAIL  
NOT TO SCALE



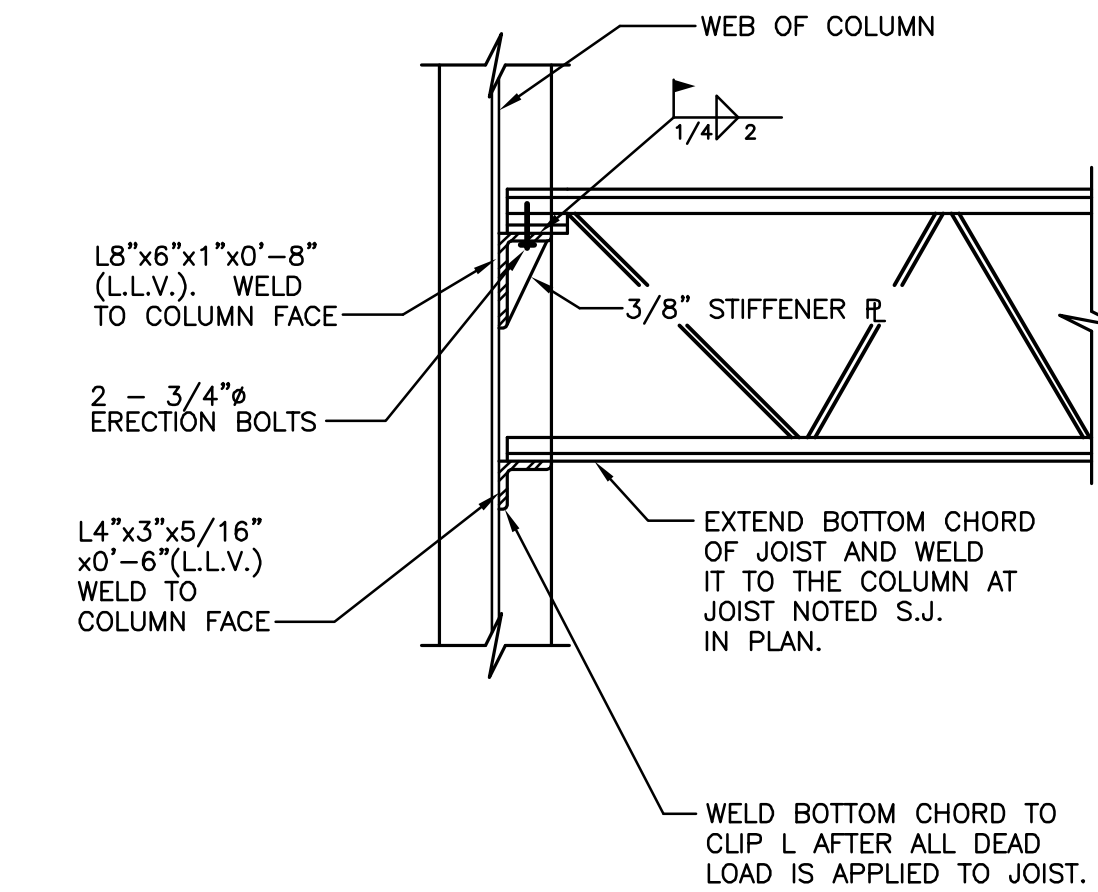
TYPICAL MECHANICAL SUPPORT FRAME

6  
S2.5  
DETAIL  
NOT TO SCALE



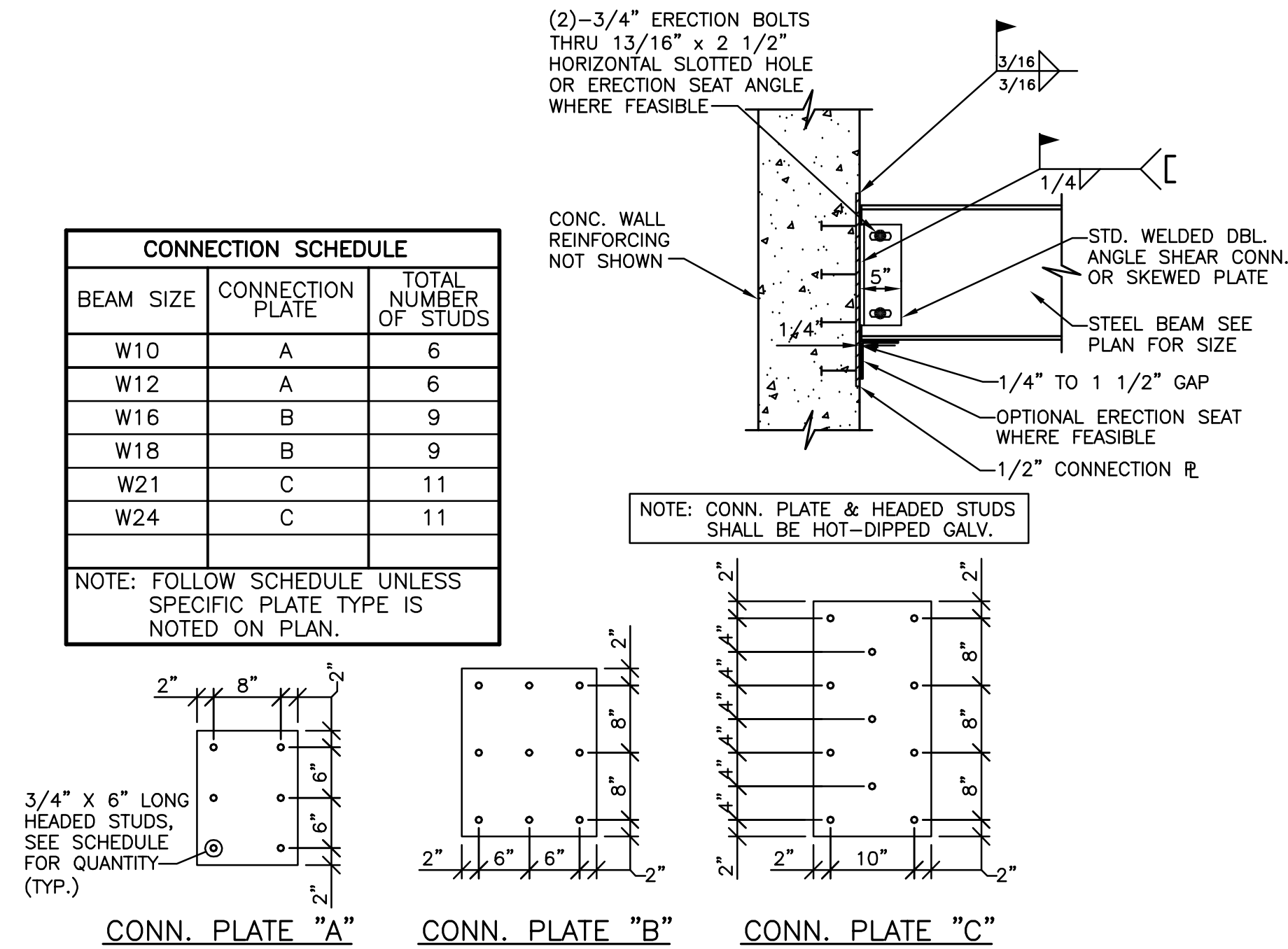
TYPICAL STRUT JOIST TO COLUMN

7  
S2.5  
DETAIL  
NOT TO SCALE

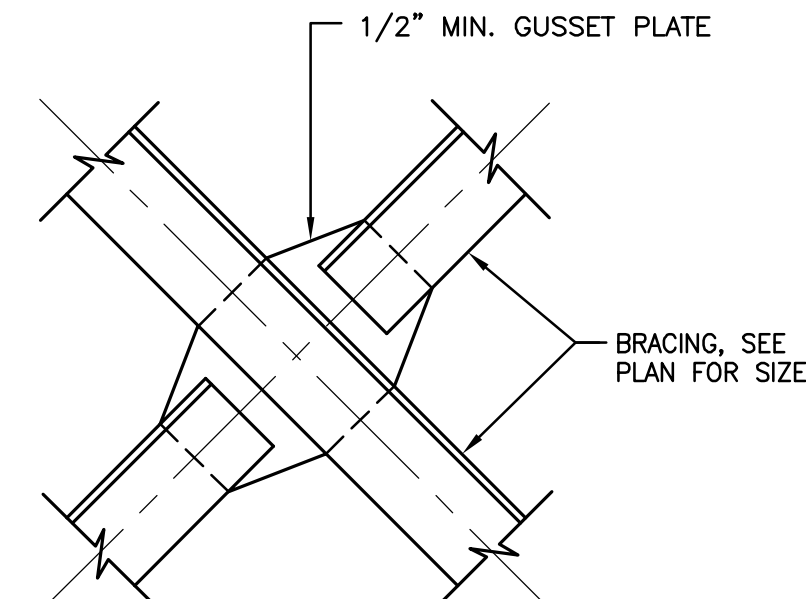


TYPICAL STRUT JOIST TO COLUMN CONNECTION

8  
S2.5  
SECTION  
NOT TO SCALE

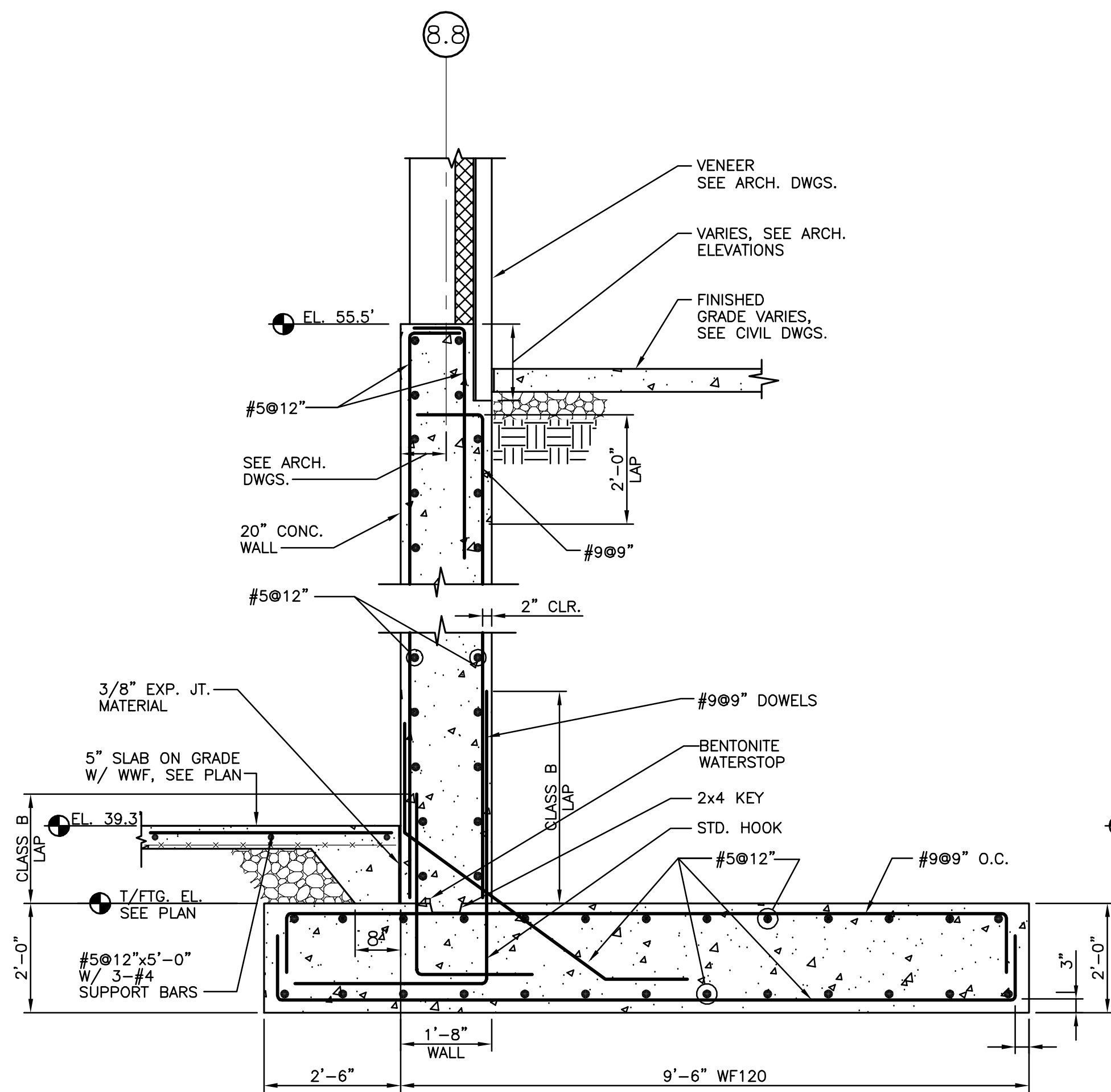


9  
S2.5  
EMBEDDED PLATE CONNECTION DETAIL  
SCALE: 3/4" = 1'-0"



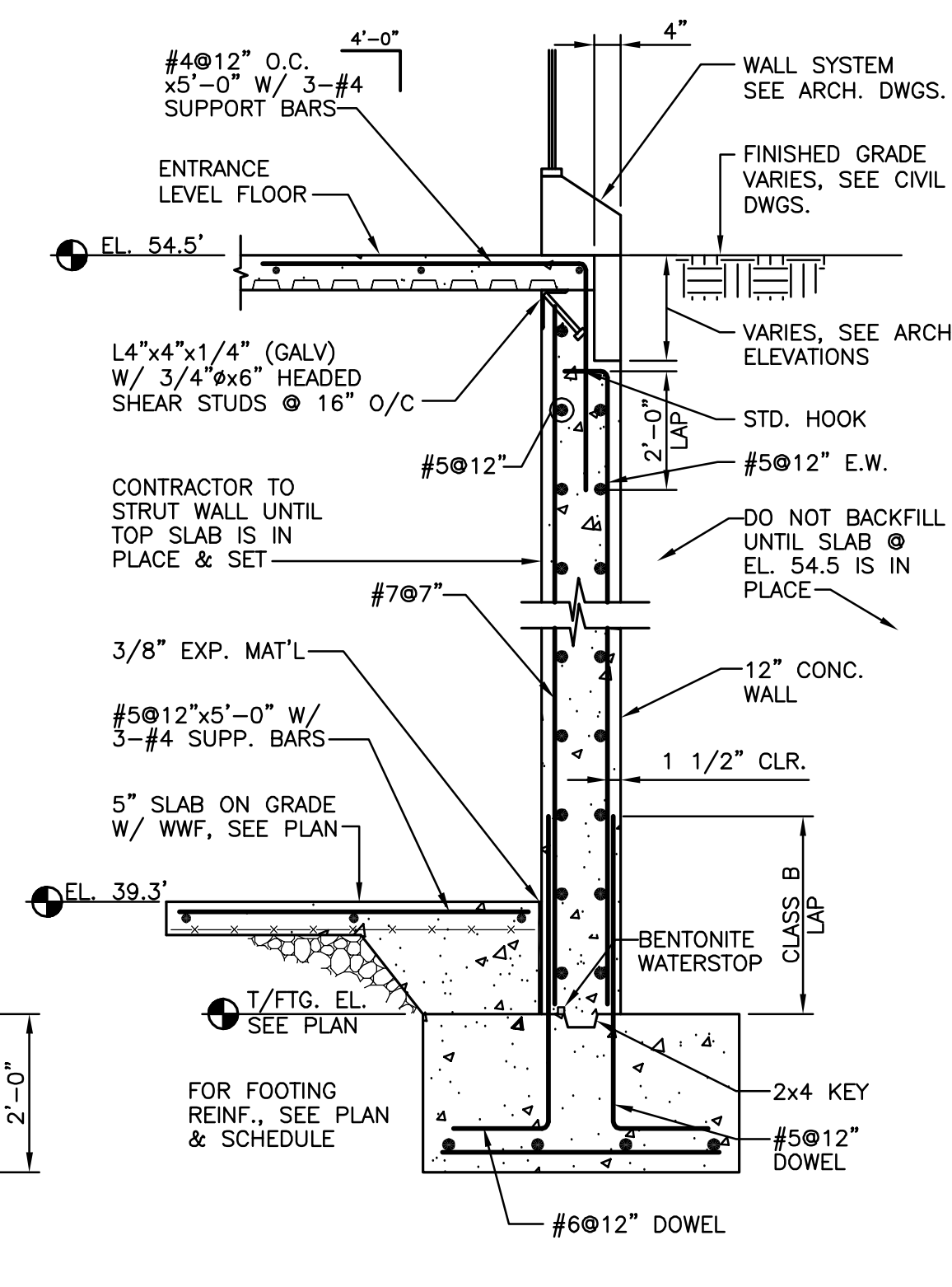
10  
S2.5  
SECTION  
SCALE: 1 1/2" = 1'-0"





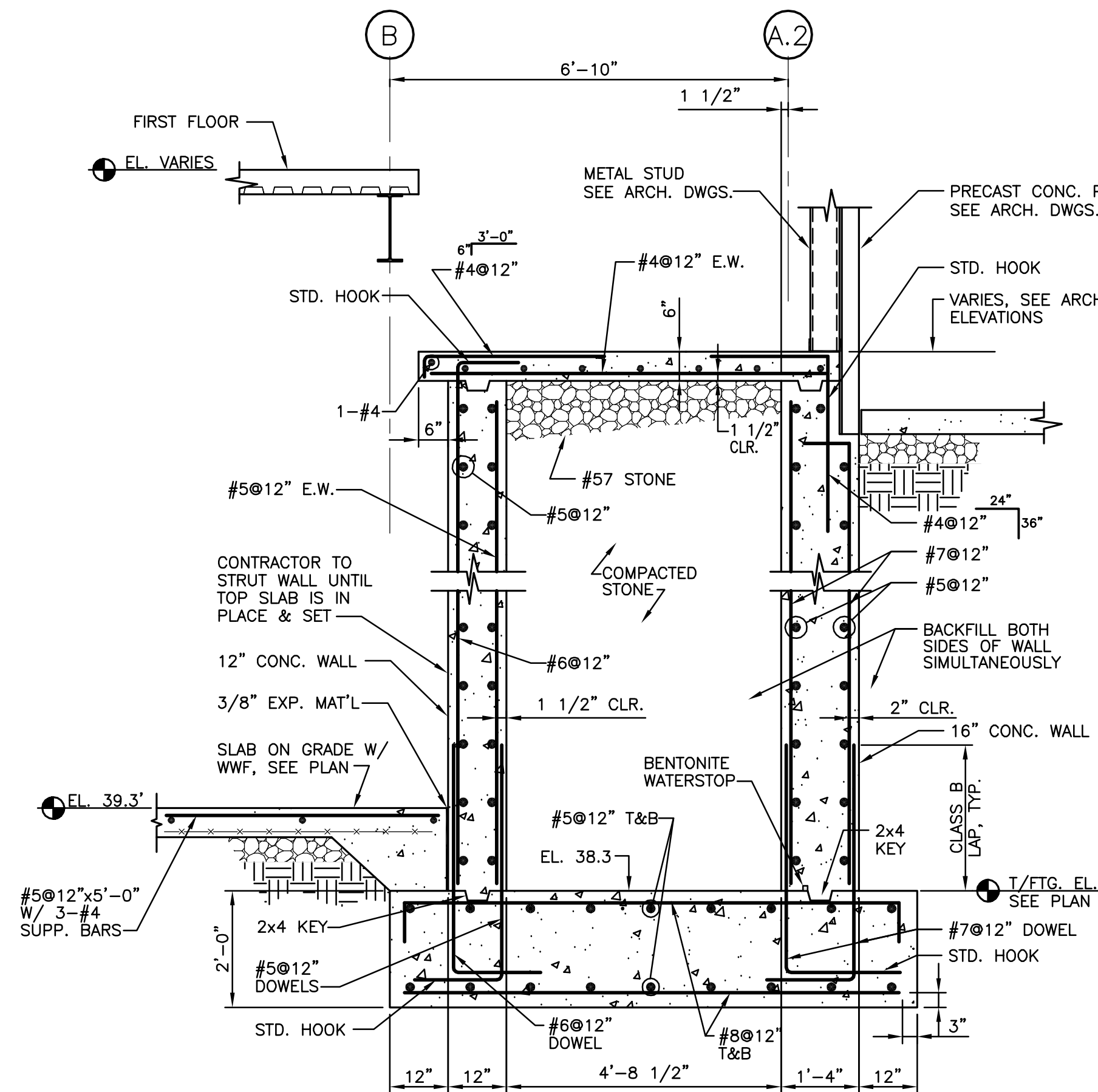
NORTH CANTILEVERED RETAINING WALL AT STAIR S1

**1 SECTION**  
S3.1 SCALE: 1/2"=1'-0"



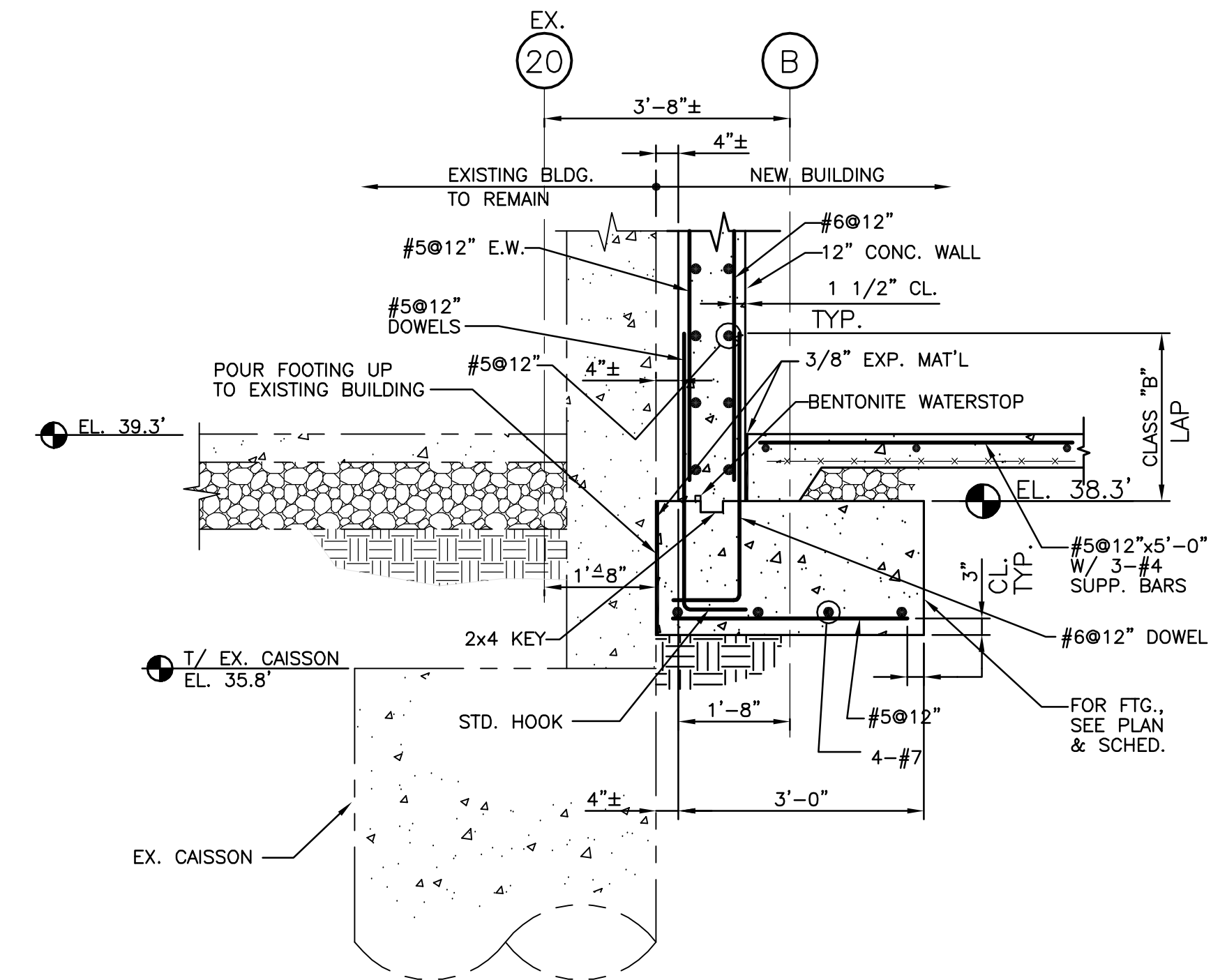
BASEMENT WALL THRU NORTHWEST CORNER

**2 SECTION**  
S3.1 SCALE: 1/2"=1'-0"



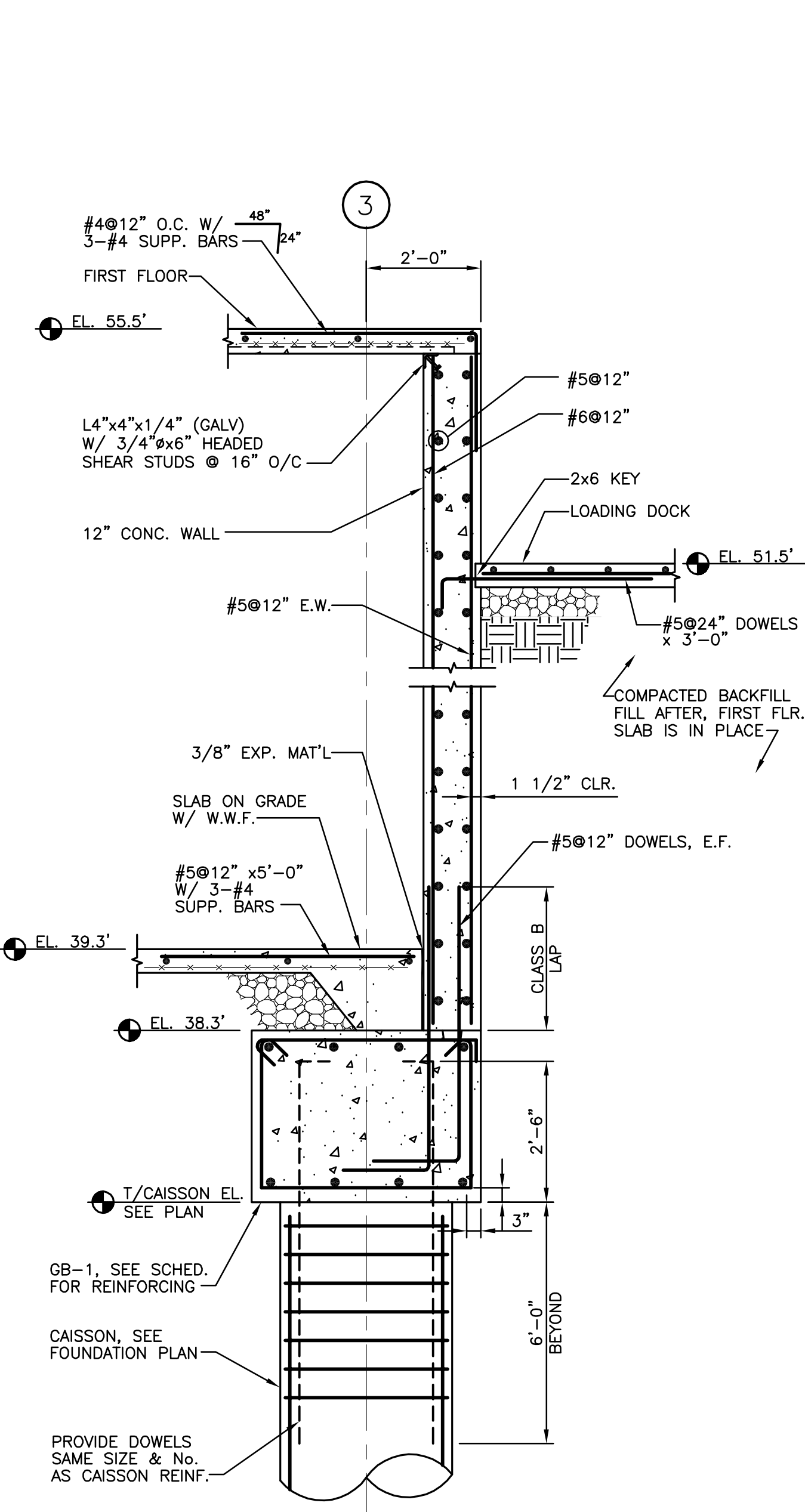
WEST RETAINING WALL @ RAMP

**3 SECTION**  
S3.1 SCALE: 1/2"=1'-0"



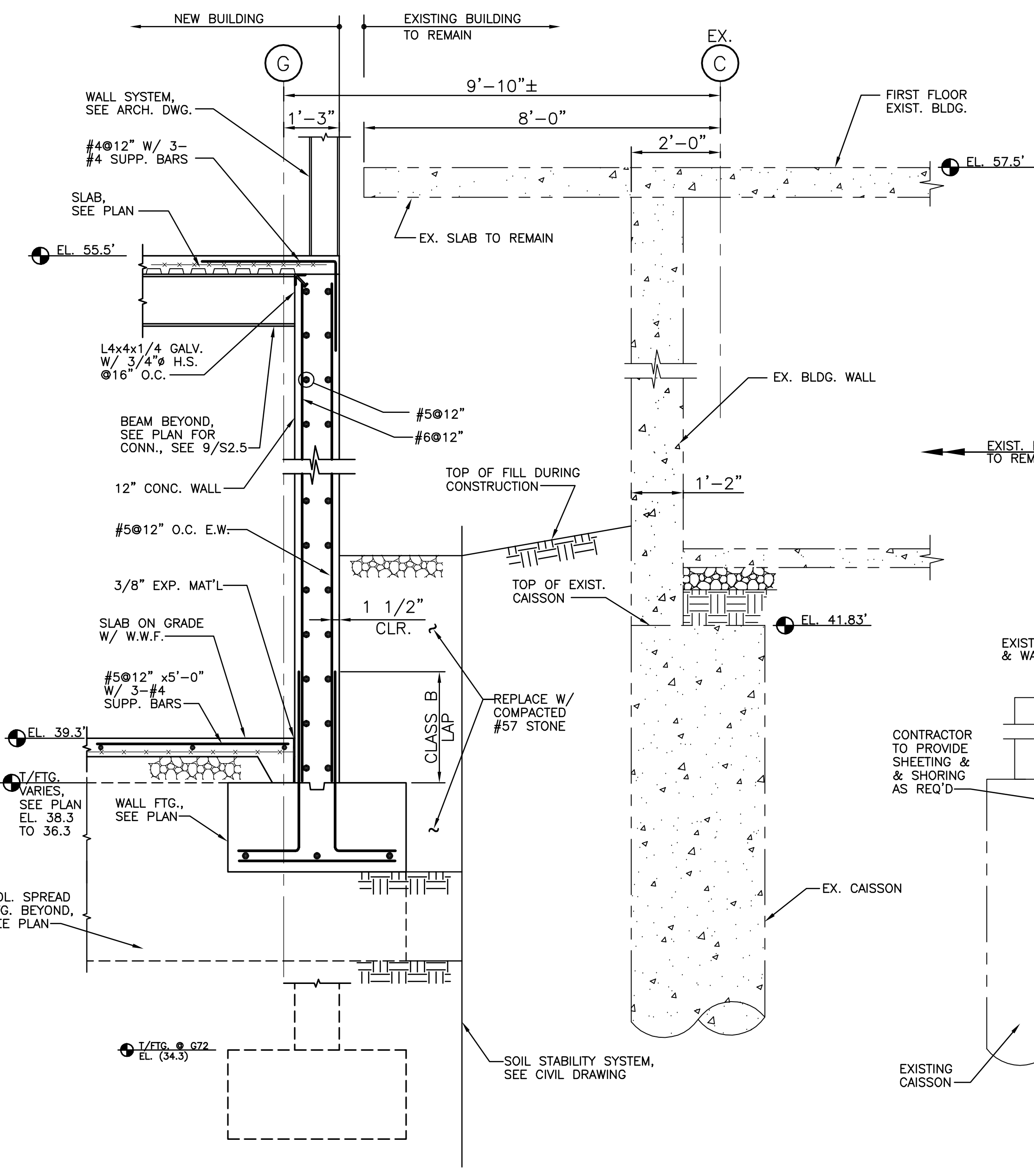
WEST BASEMENT WALL AT SCHOOL OF NURSING

**4 SECTION**  
S3.1 SCALE: 1/2"=1'-0"



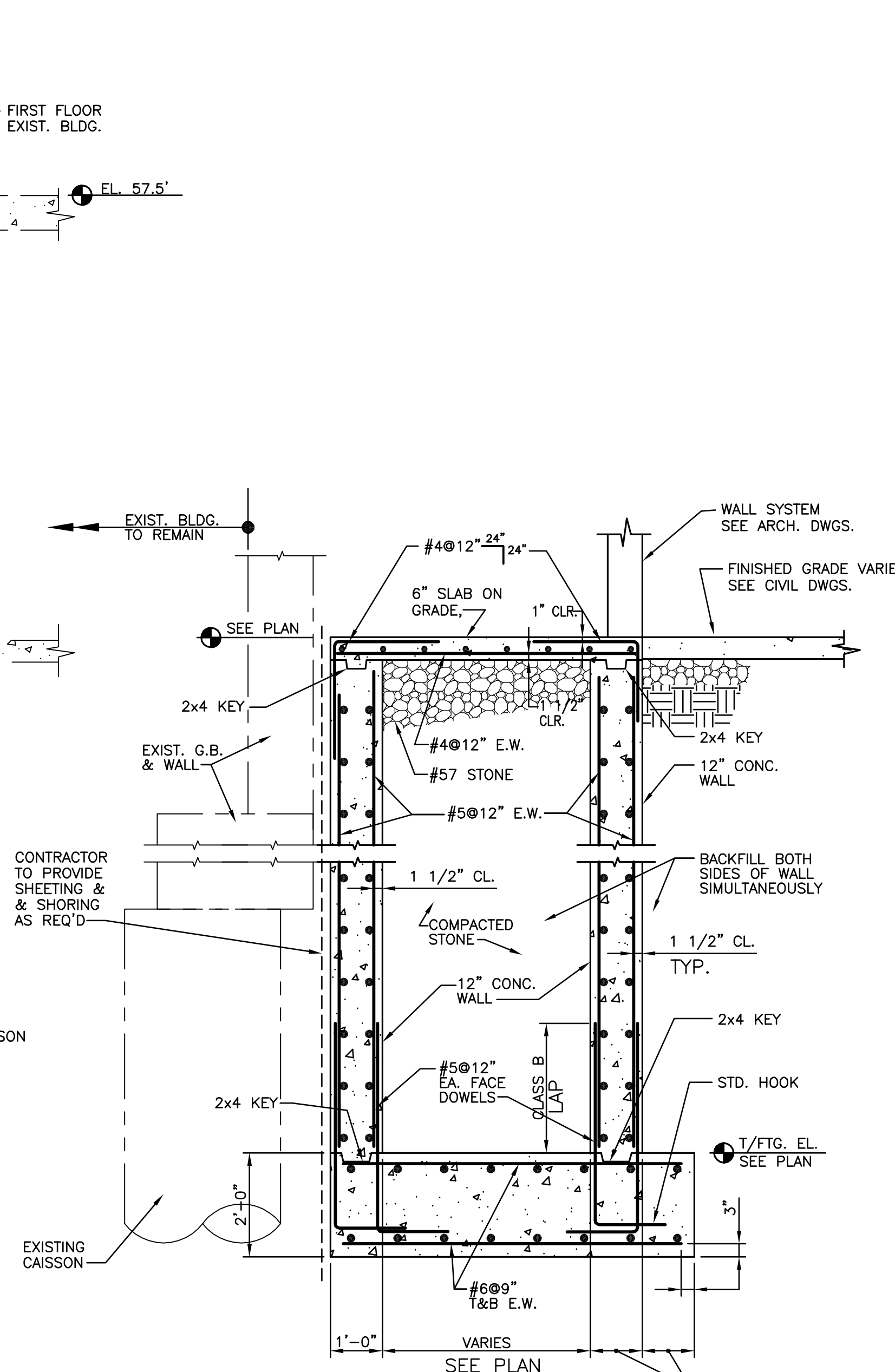
SOUTH BASEMENT WALL

**5 SECTION**  
S3.1 SCALE: 1/2"=1'-0"



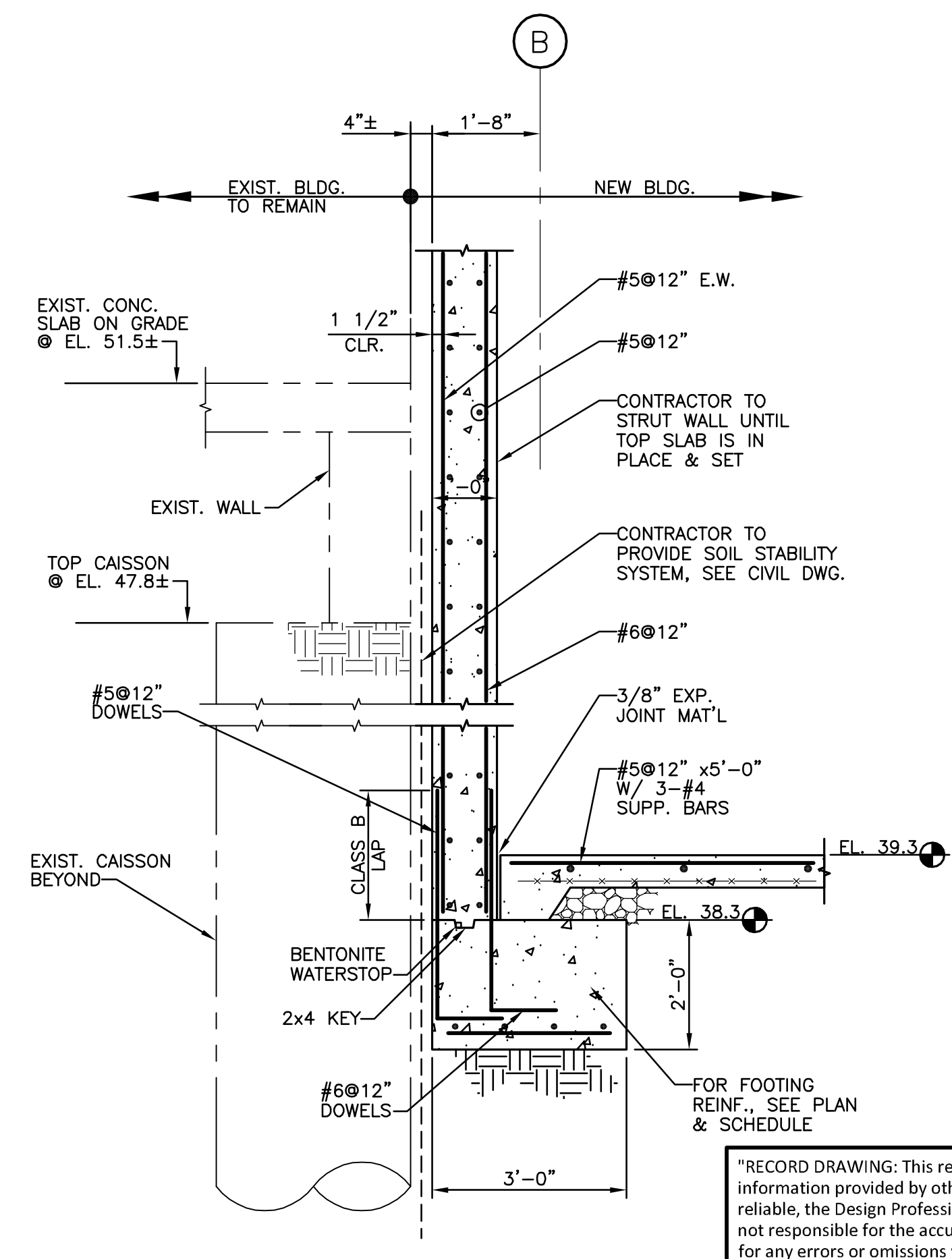
EAST BASEMENT WALL THROUGH HS/HS LIBRARY

**6 SECTION**  
S3.1 SCALE: 1/2"=1'-0"



BASEMENT WALL THRU SCHOOL OF NURSING NEW VESTIBULE

**7 SECTION**  
S3.1 SCALE: 1/2"=1'-0"

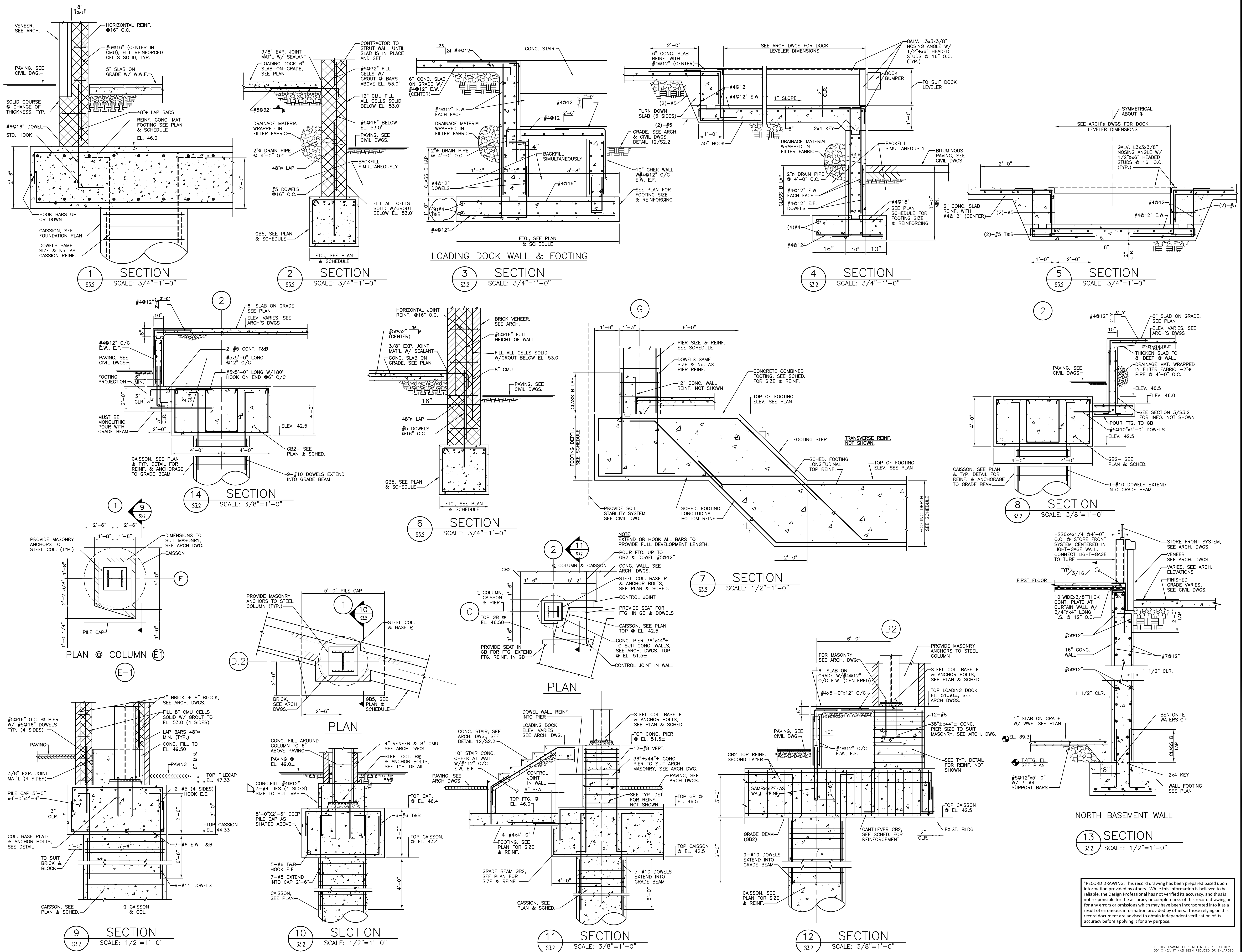


**8 SECTION**  
S3.1 SCALE: 1/2"=1'-0"

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3 01/29/10 RECORD DRAWINGS  
2 05/02/07 BULLETIN #10  
1 04/09/07 BULLETIN #9  
0 02/16/07 ISSUE FOR BID  
Rev. Date: Comment:  
Issued: FEBRUARY 16, 2007

**Campus Center**  
West Lombard Street  
University of Maryland, Baltimore  
Baltimore, MD



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100%  
CONSTRUCTION  
DOCUMENTS

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WTH PROJECT NO. 70-4091  
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**S3.2**

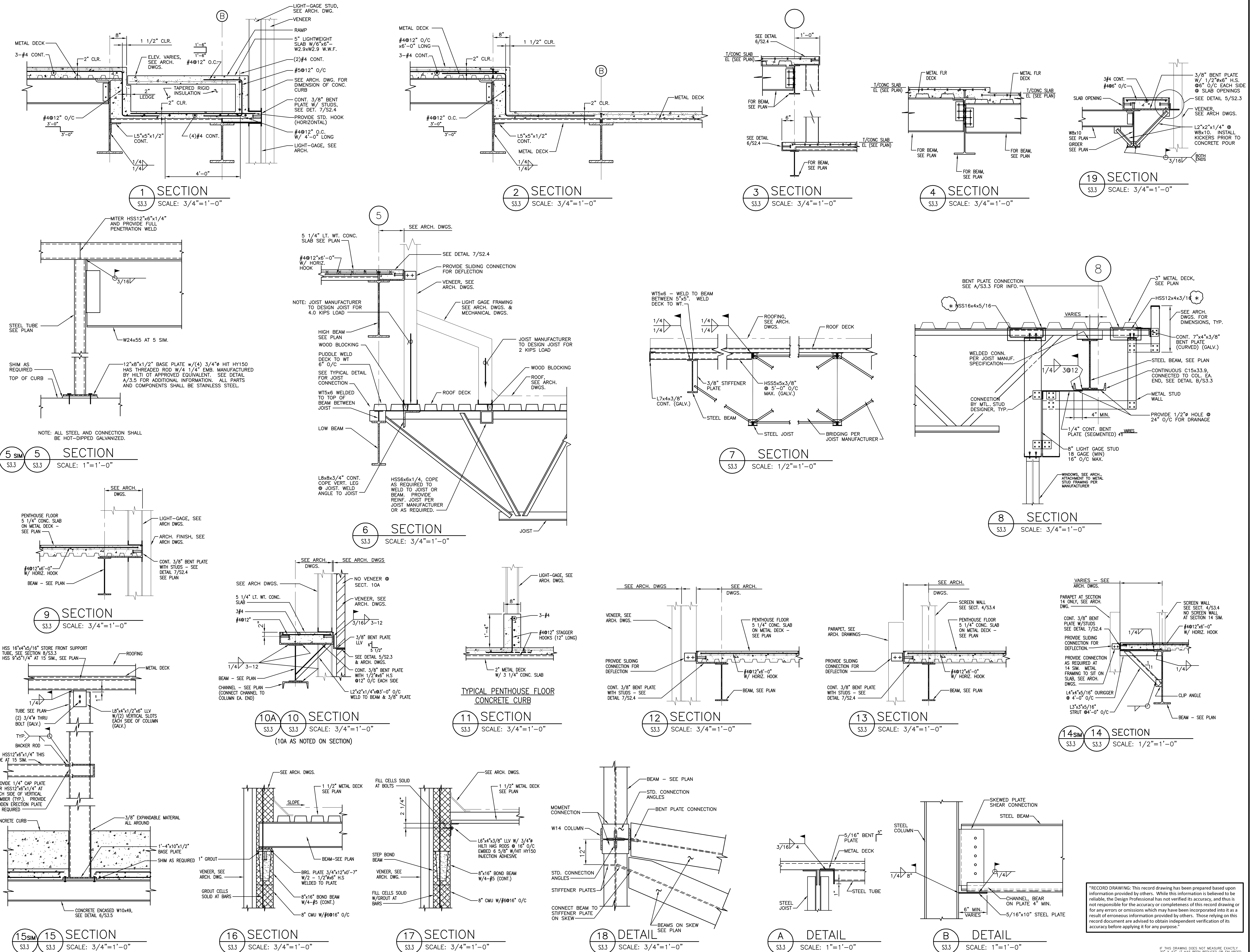
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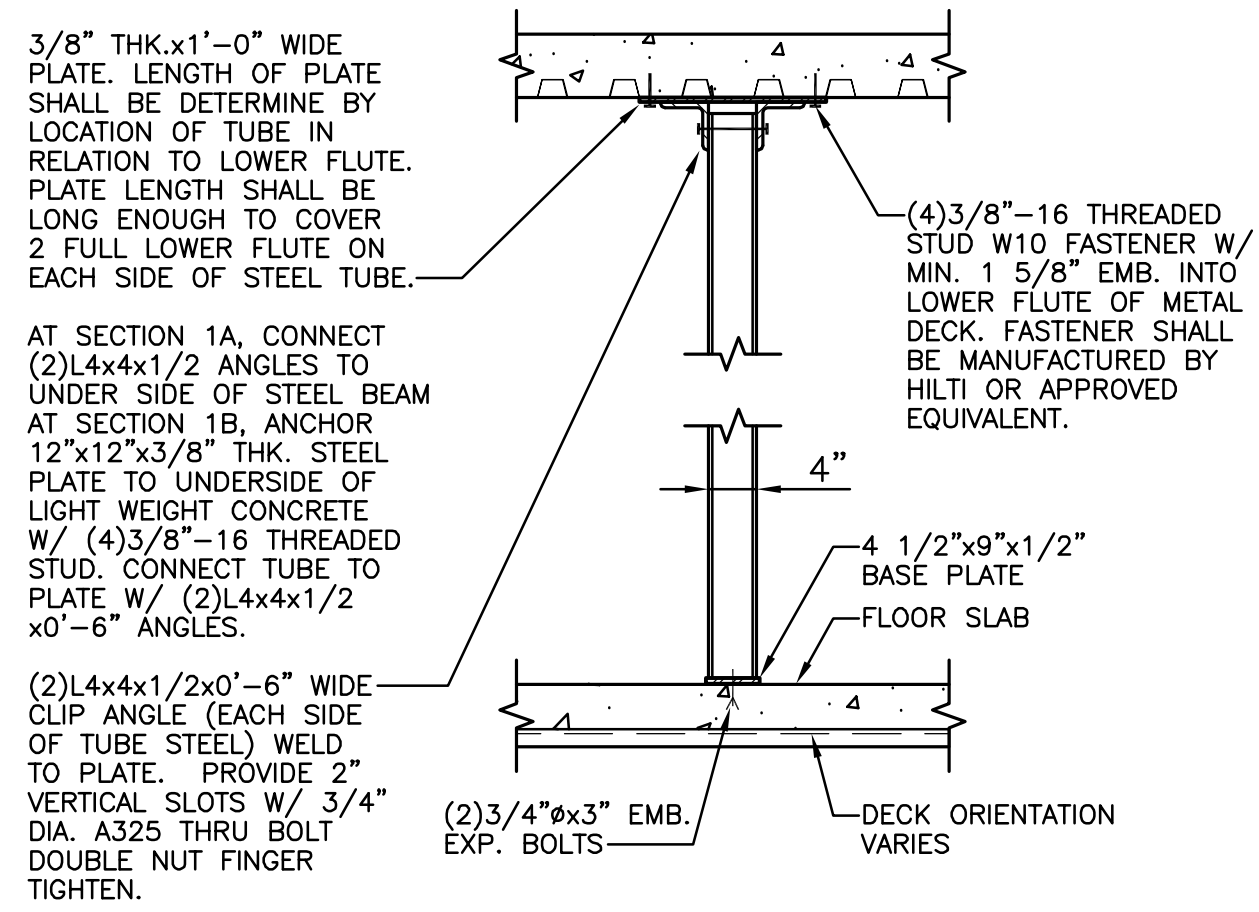


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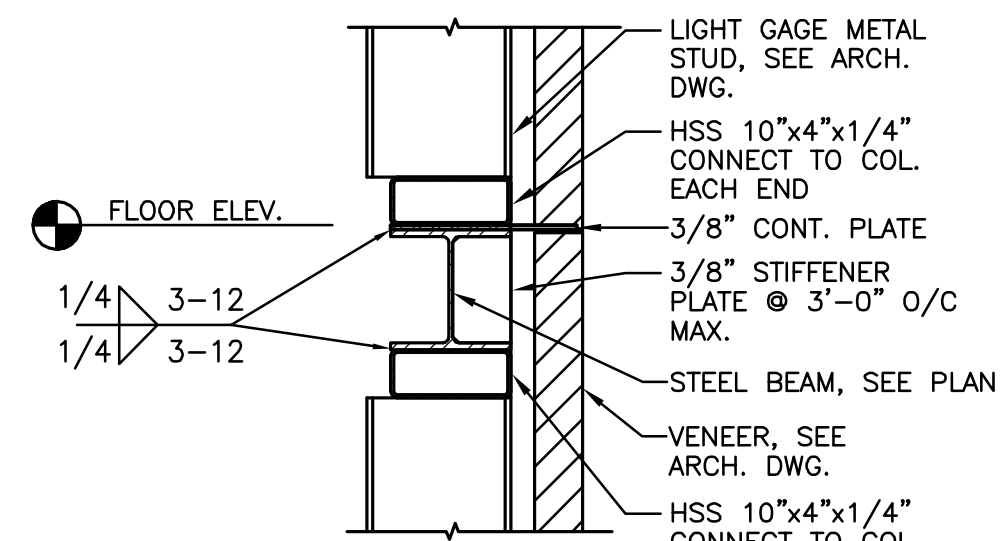
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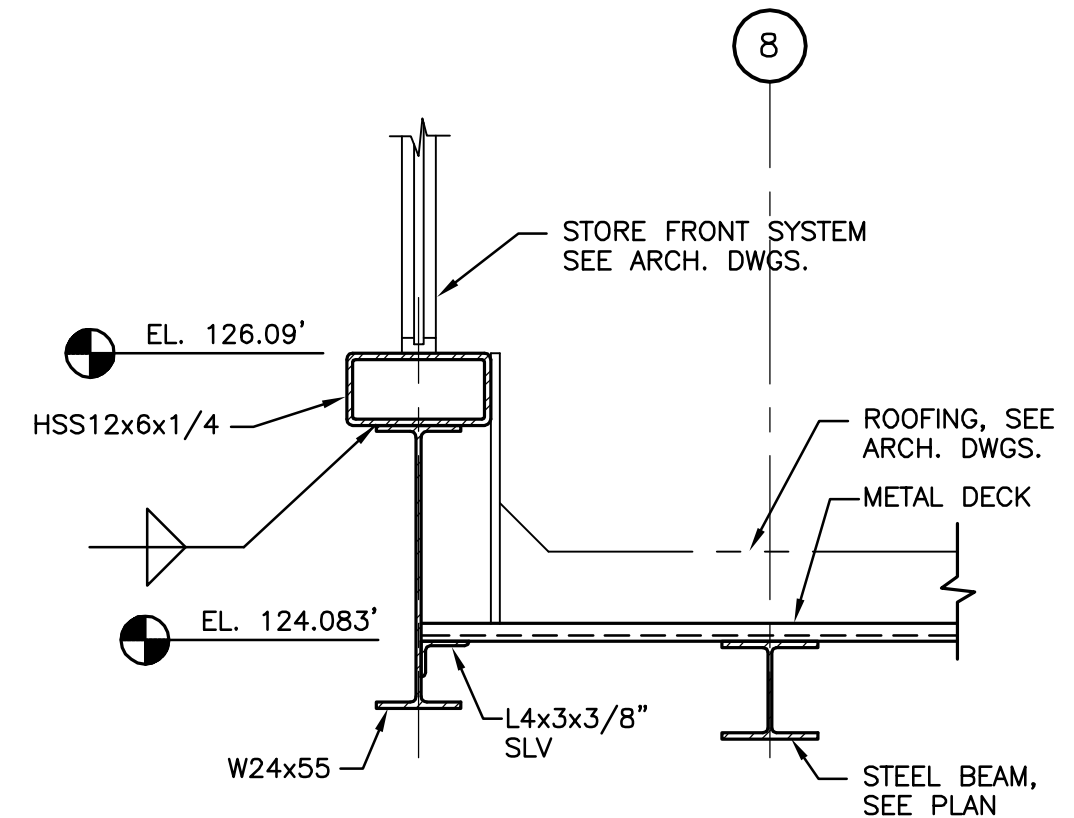




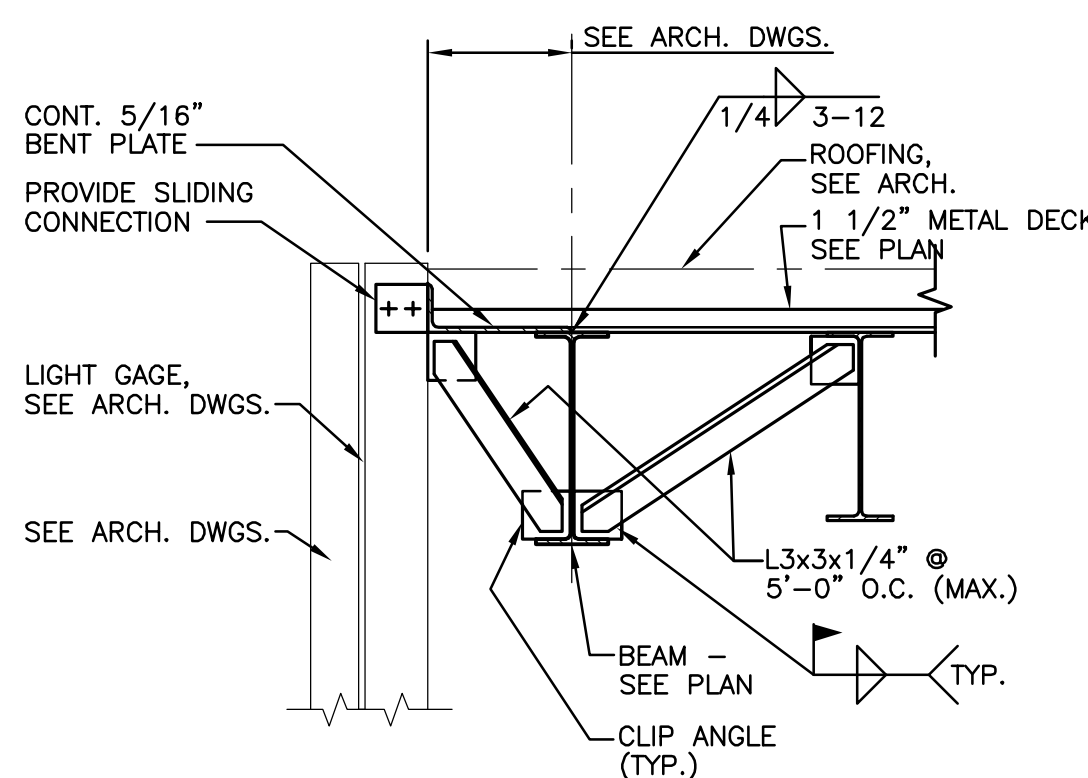
**1B SECTION**  
S3.4 SCALE: 3/4"=1'-0"



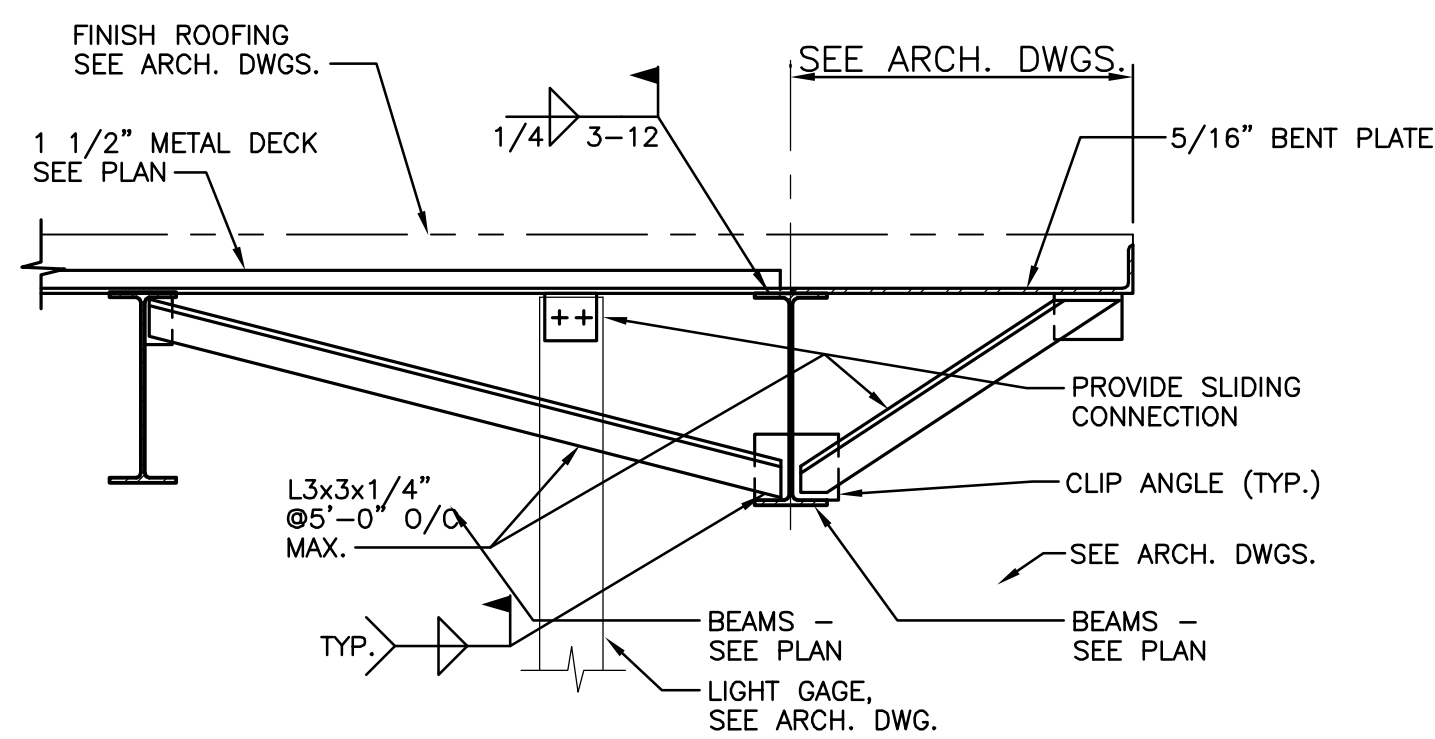
**3 SECTION**  
S3.4 SCALE: 3/4"=1'-0"



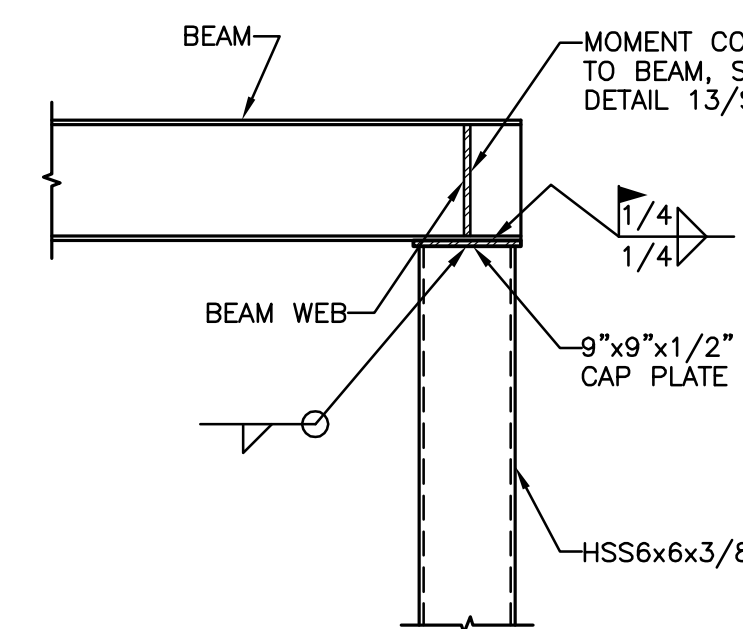
**18 SECTION**  
S3.4 SCALE: 3/4"=1'-0"



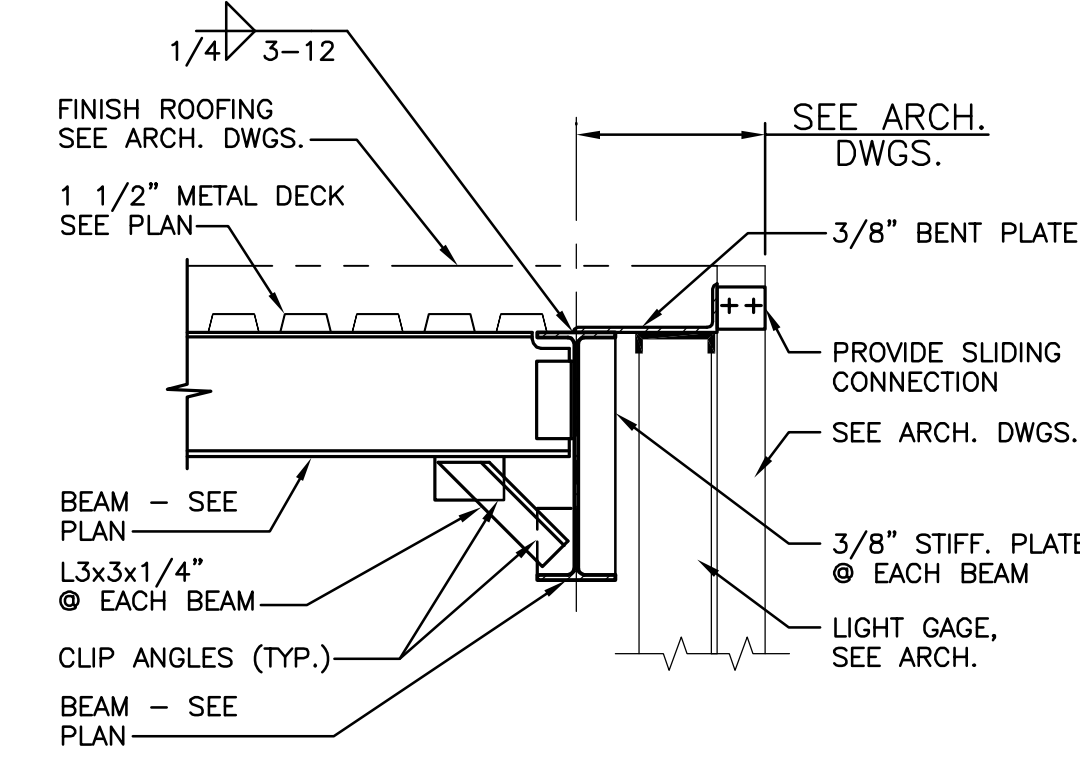
**6 SECTION**  
S3.4 SCALE: 3/4"=1'-0"



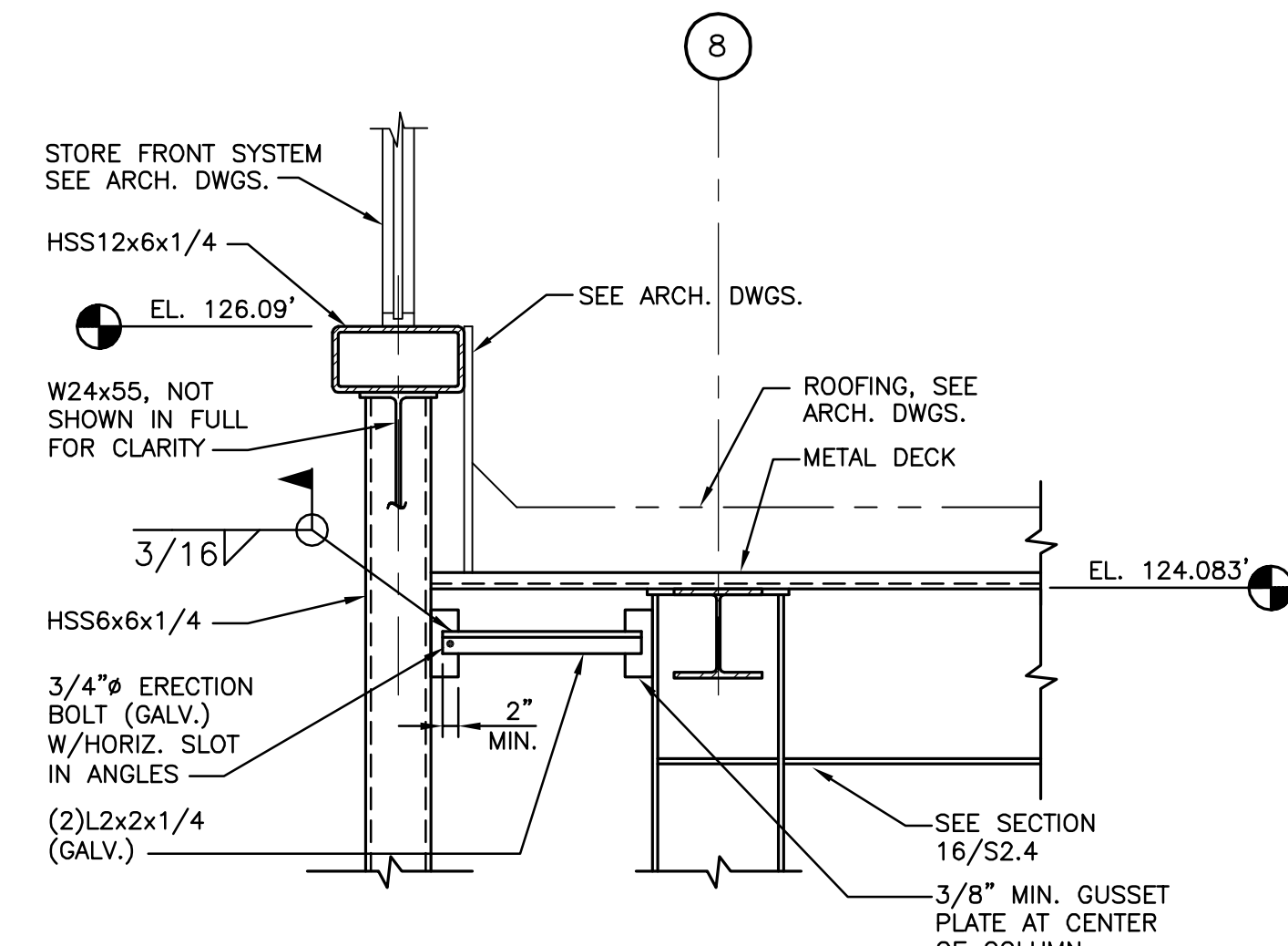
**7 SECTION**  
S3.4 SCALE: 3/4"=1'-0"



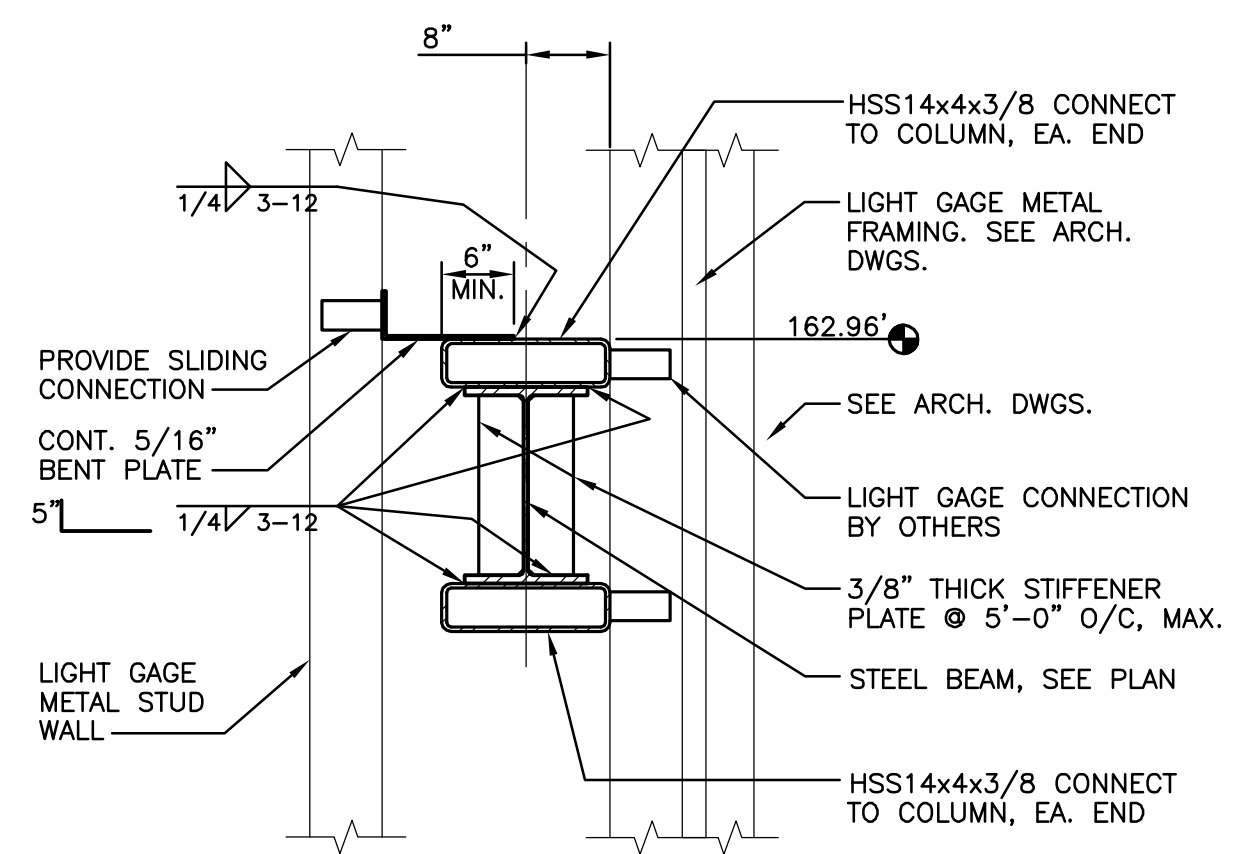
**8 SECTION**  
S3.4 SCALE: 3/4"=1'-0"



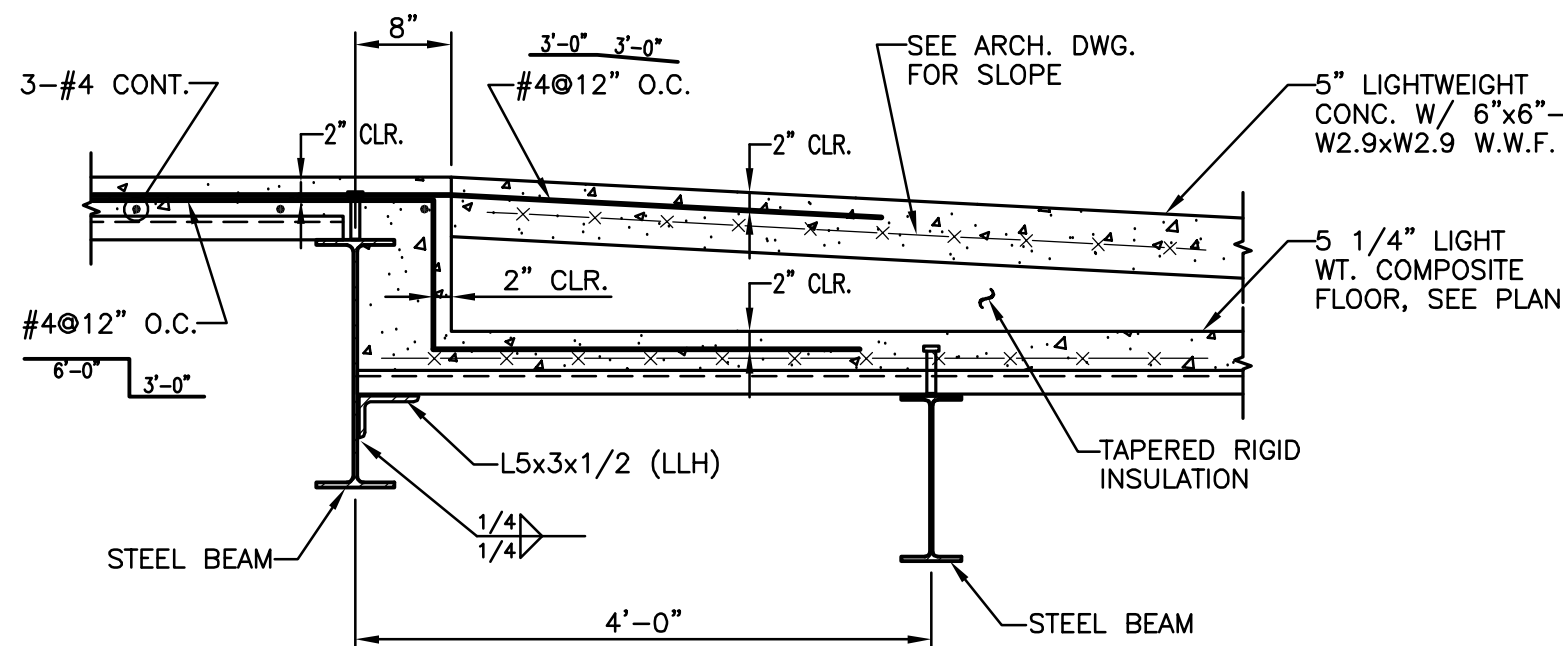
**9 SECTION**  
S3.4 SCALE: 3/4"=1'-0"



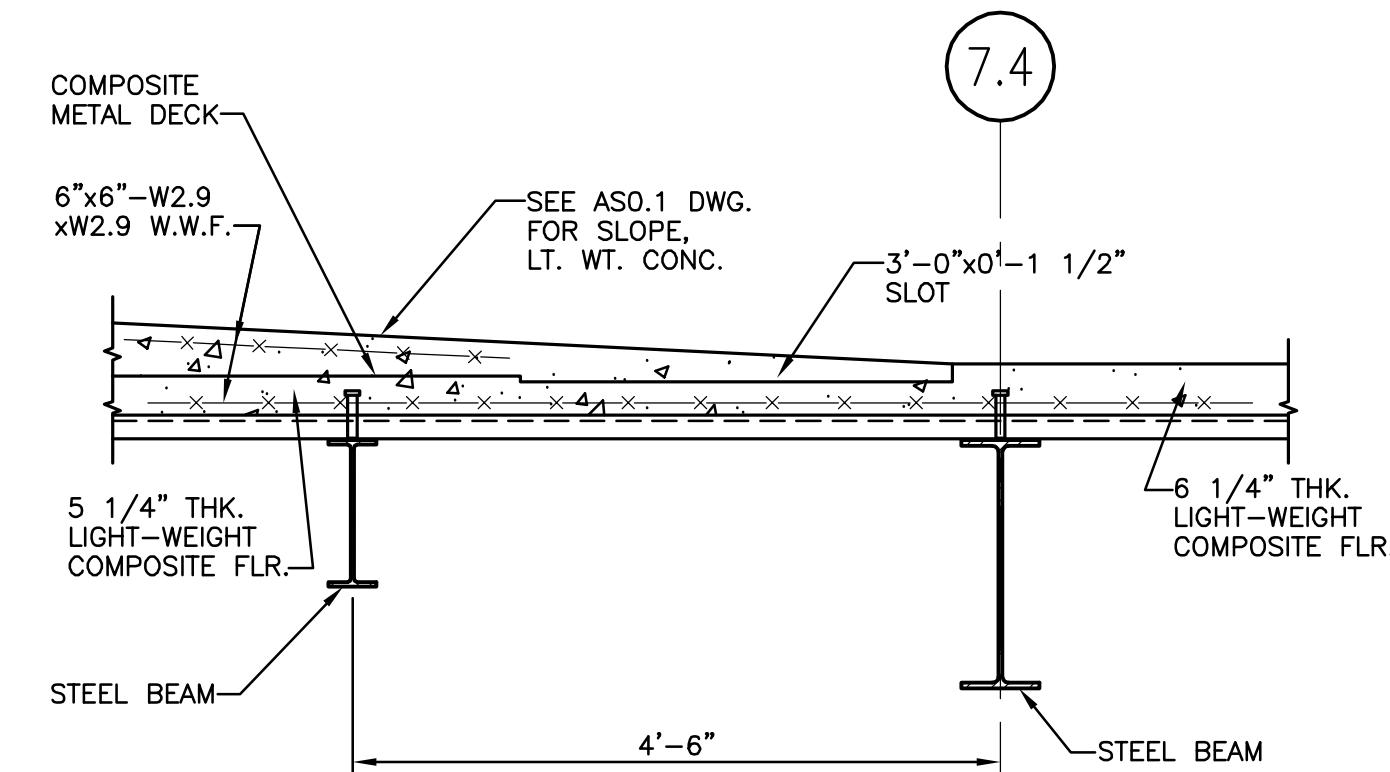
**19 SECTION**  
S3.4 SCALE: 3/4"=1'-0"



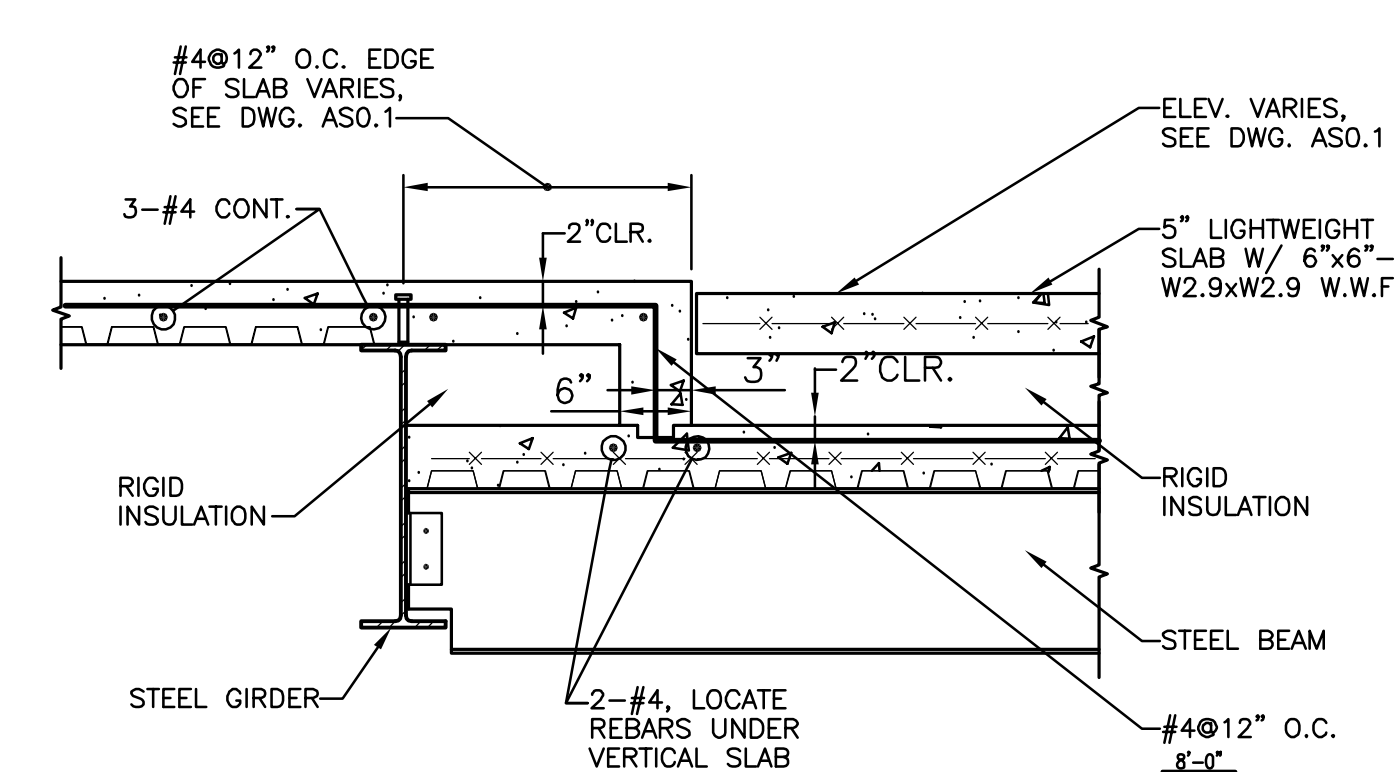
**10 SECTION**  
S3.4 SCALE: 3/4"=1'-0"



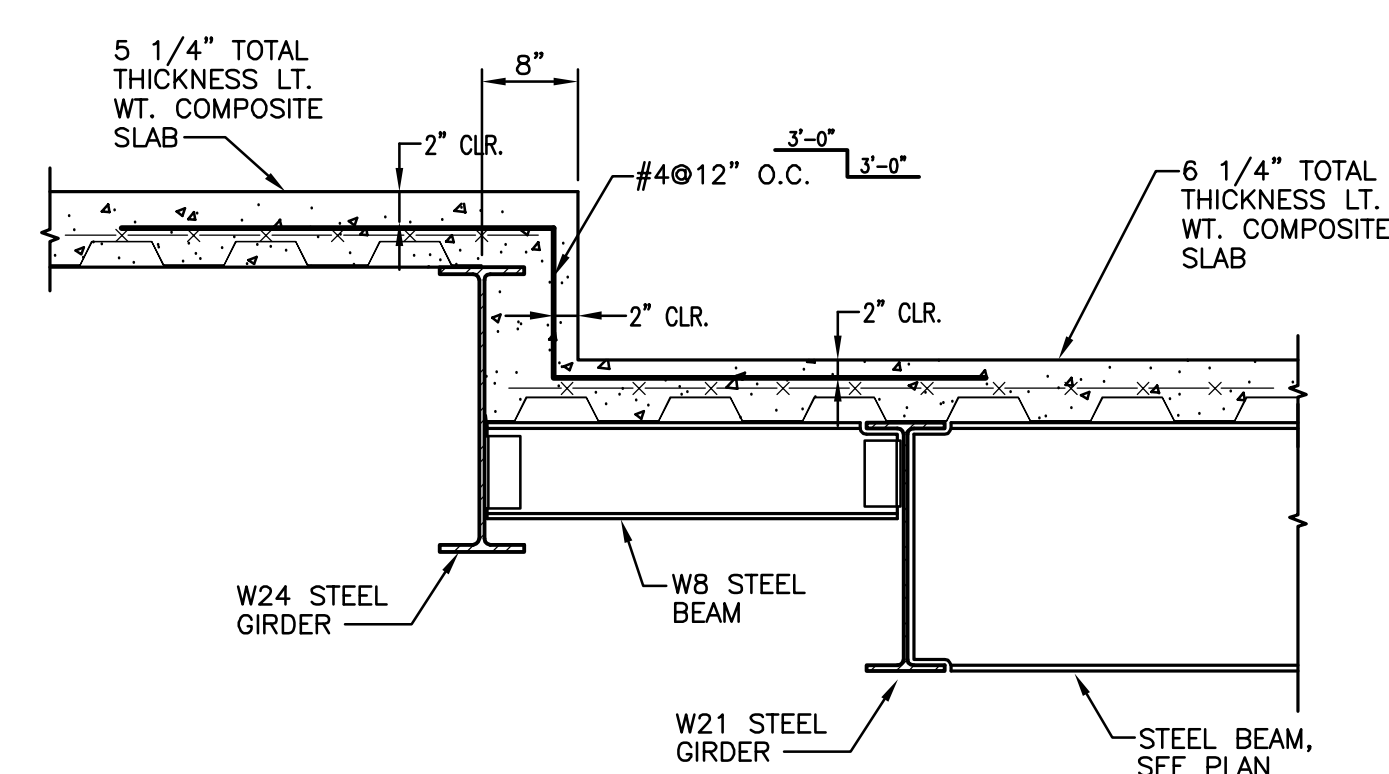
**11 SECTION**  
S3.4 SCALE: 3/4"=1'-0"



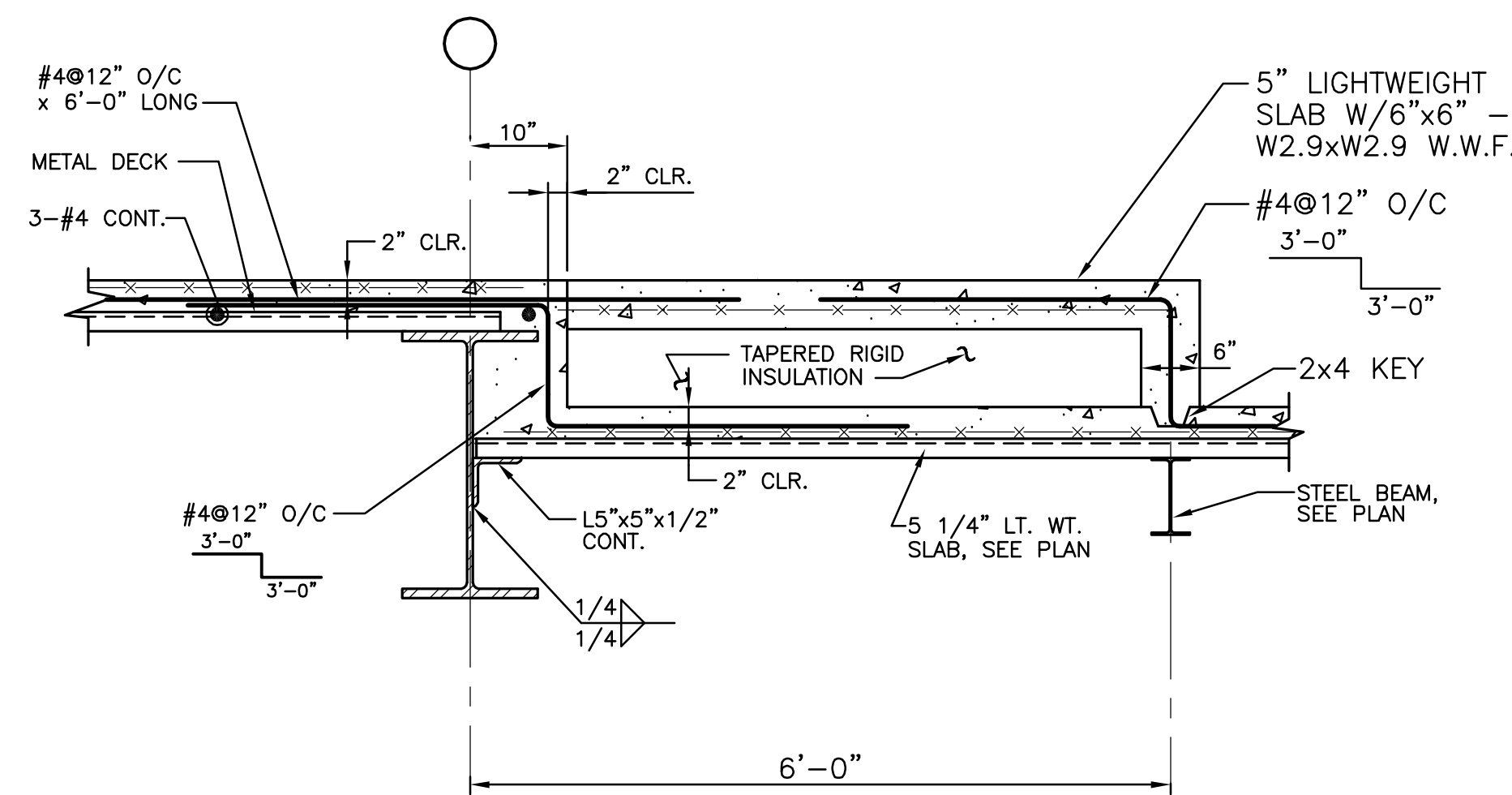
**12 SECTION**  
S3.4 SCALE: 3/4"=1'-0"



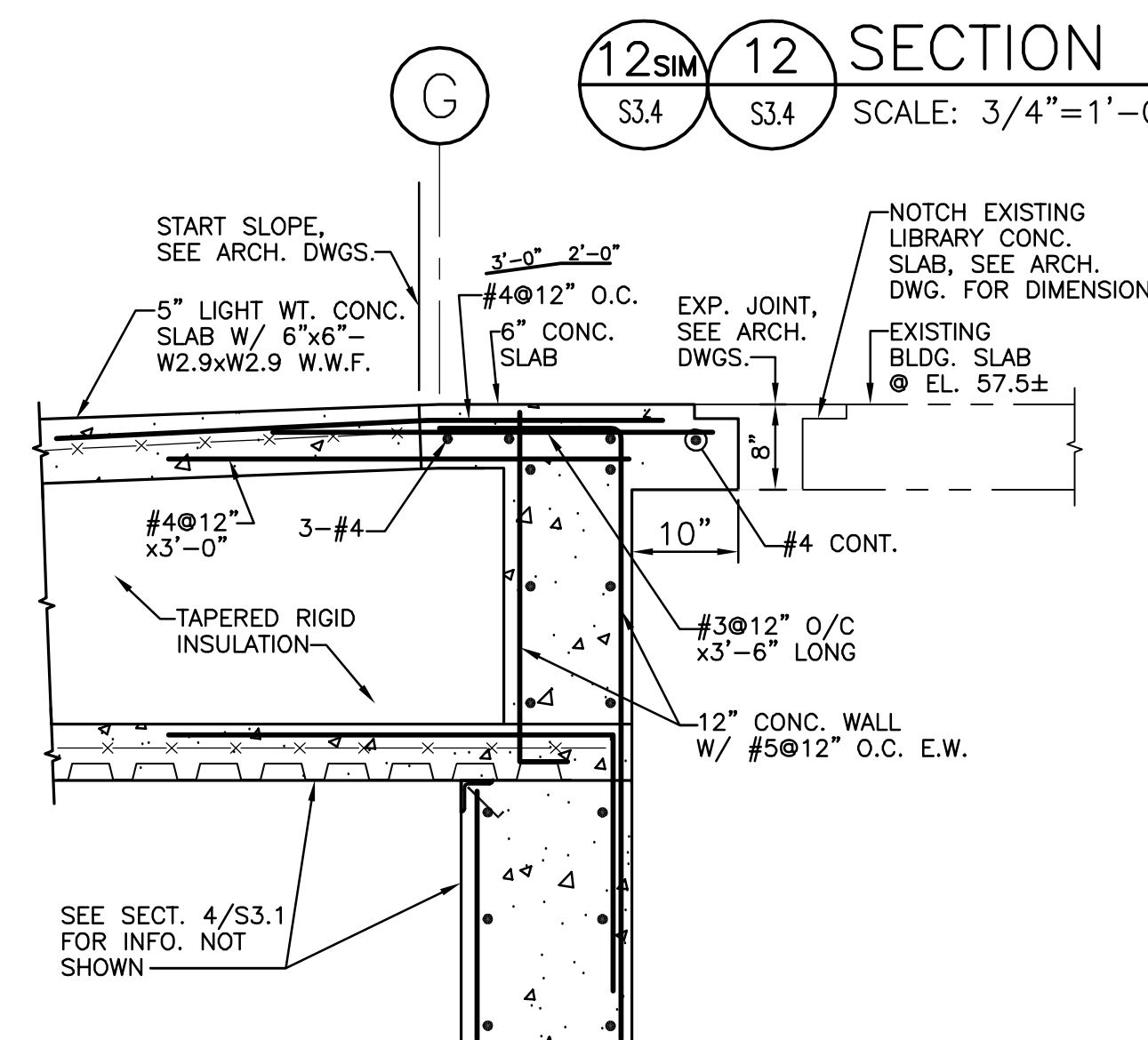
**13 SECTION**  
S3.4 SCALE: 3/4"=1'-0"



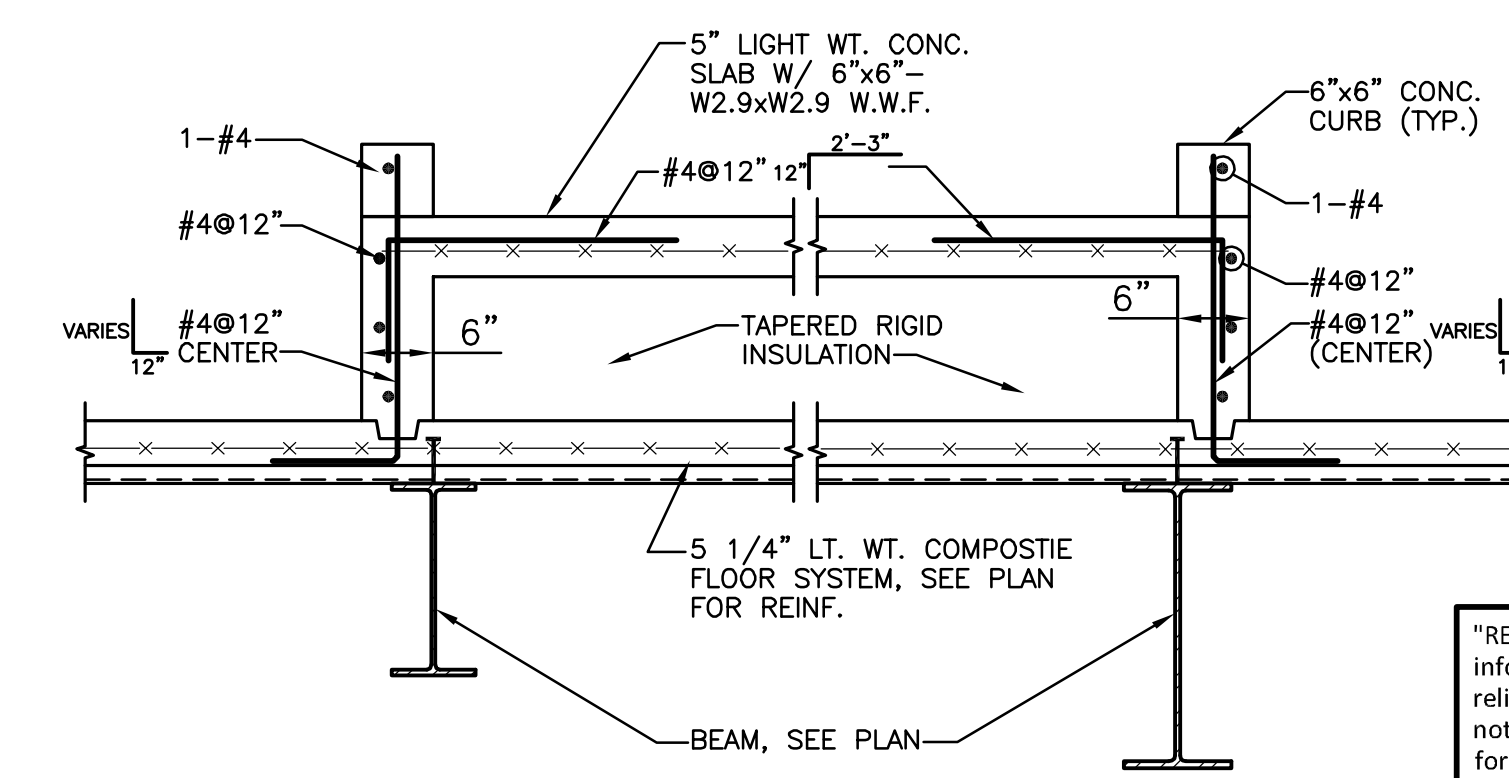
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S3.4 SCALE: 3/4"=1'-0"



**15 SECTION**  
S3.4 SCALE: 3/4"=1'-0"



**16 SECTION**  
S3.4 SCALE: 3/4"=1'-0"



**17 SECTION**  
S3.4 SCALE: 3/4"=1'-0"

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3 01/29/10 RECORD DRAWINGS  
2 05/02/07 BULLETIN #10  
1 04/09/07 BULLETIN #9  
0 02/16/07 ISSUE FOR BID  
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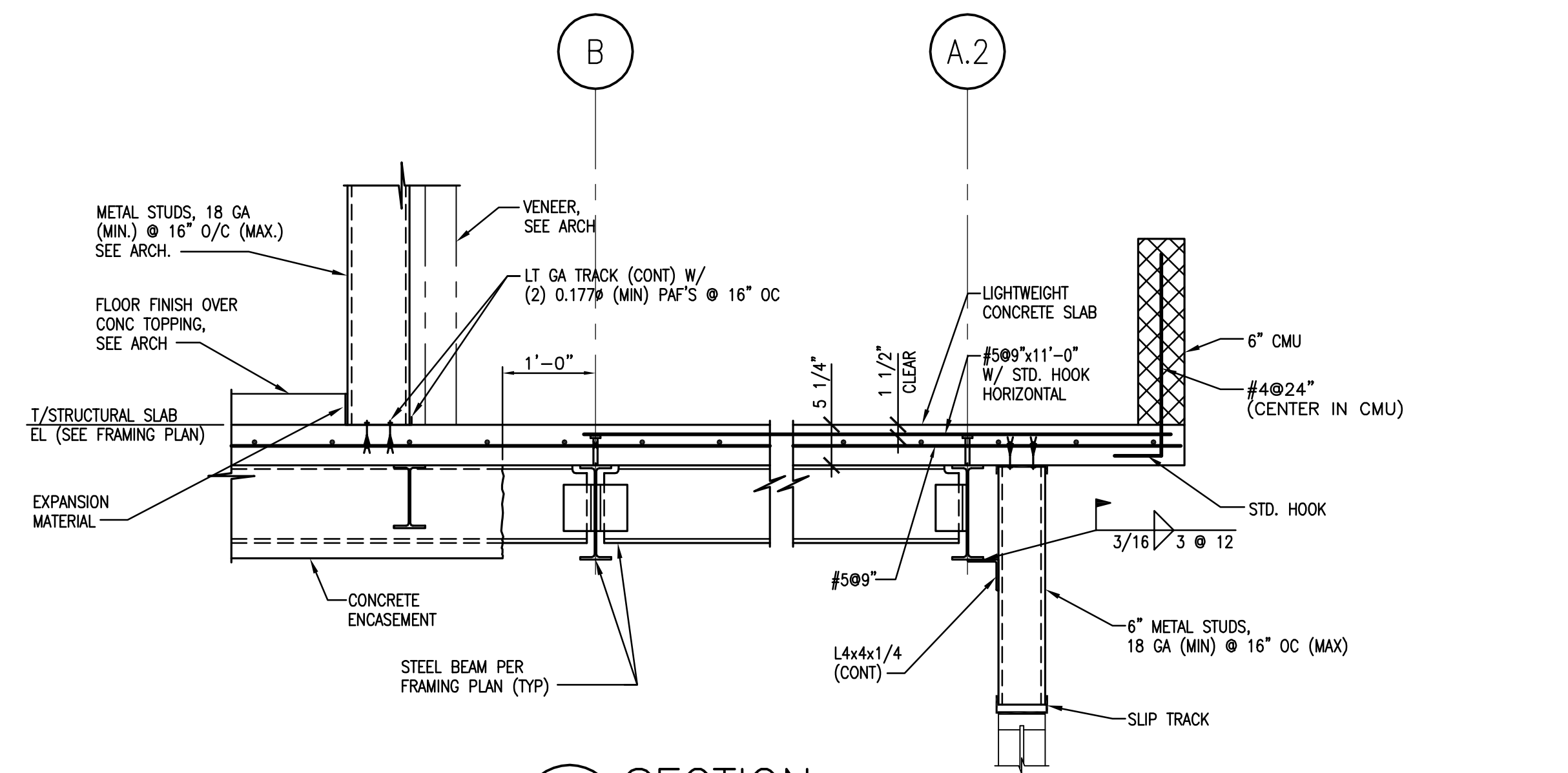
**Sections  
And  
Details**

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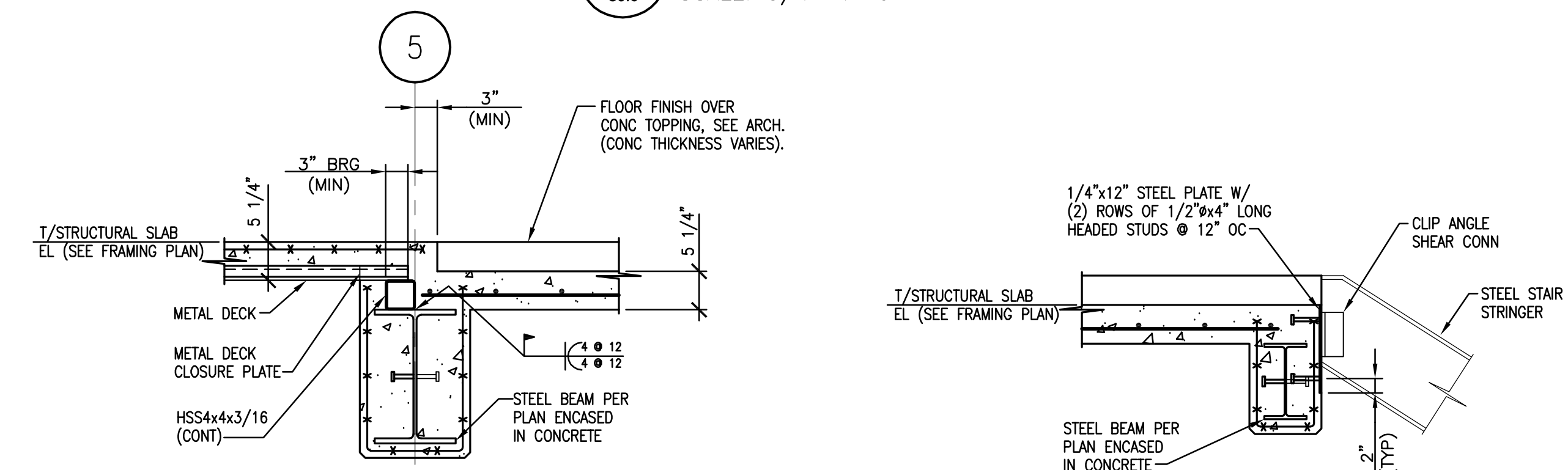
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**S3.4**



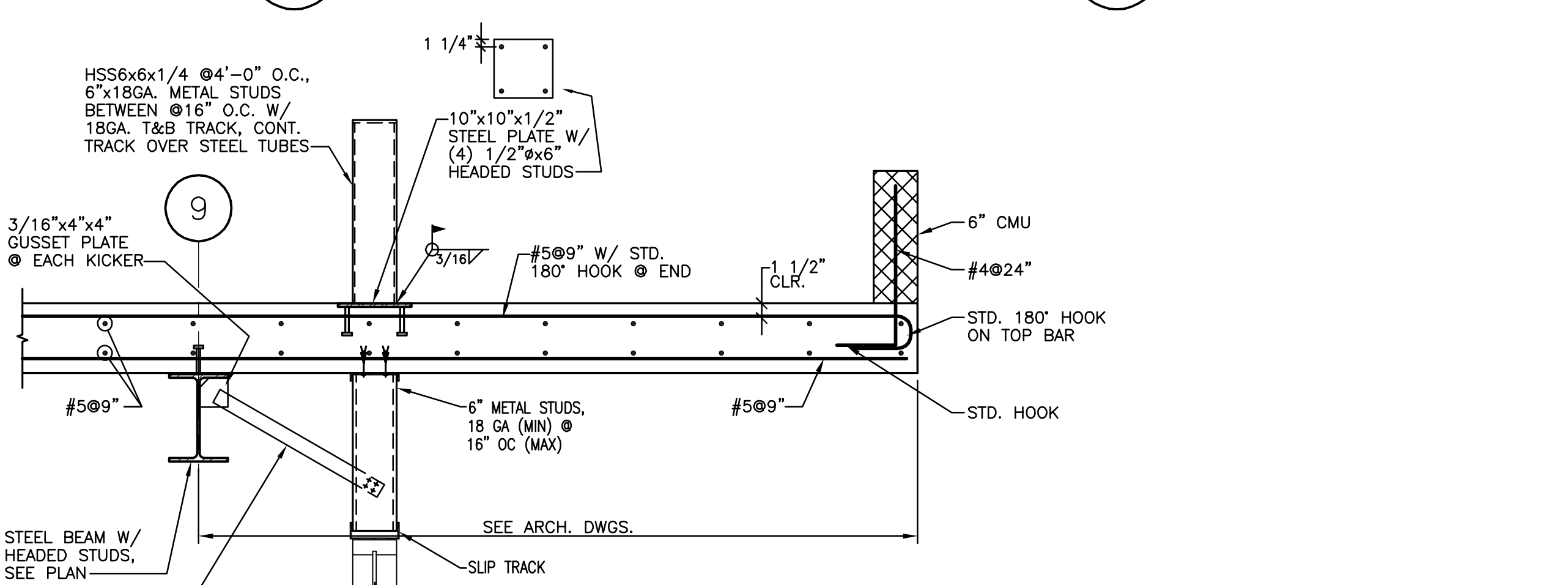


**3 SECTION**  
S3.5 SCALE: 3/4"=1'-0"



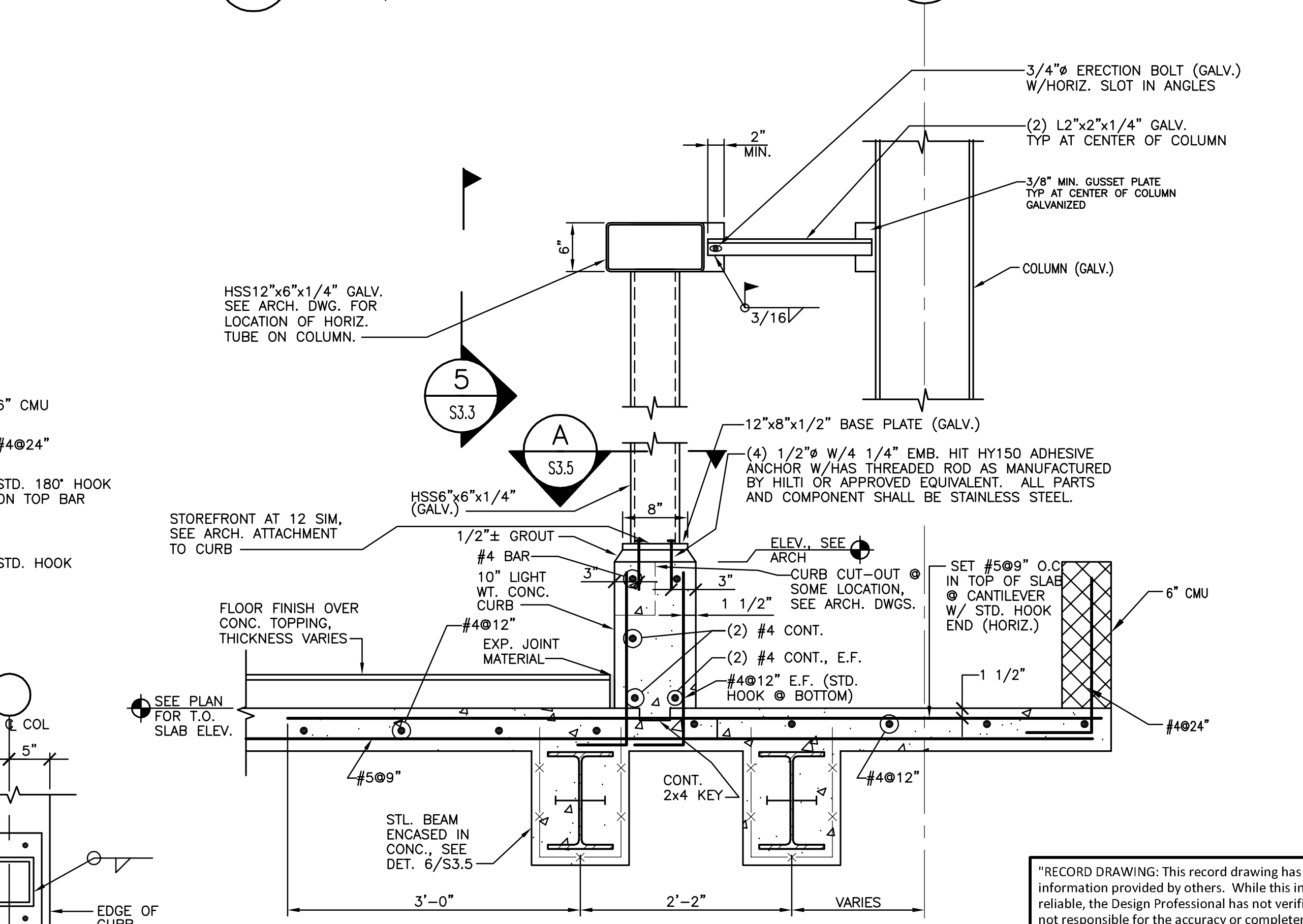
**4 SECTION**  
S3.5 SCALE: 3/4"=1'-0"

**5 SECTION**  
S3.5 SCALE: 3/4"=1'-0"



**9 SECTION**  
S3.5 SCALE: 3/4"=1'-0"

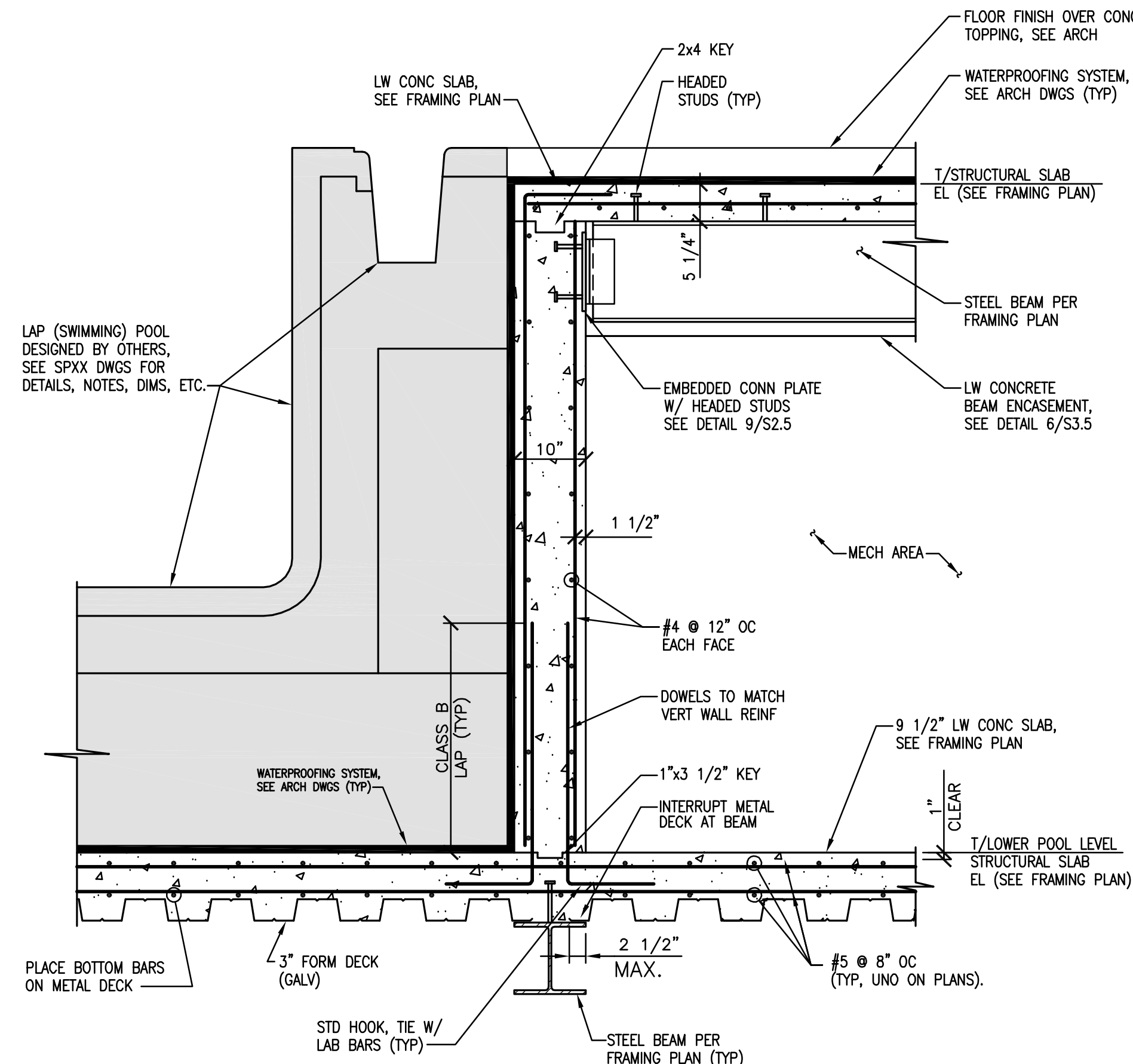
**8 SECTION**  
S3.5 SCALE: 3/4"=1'-0"



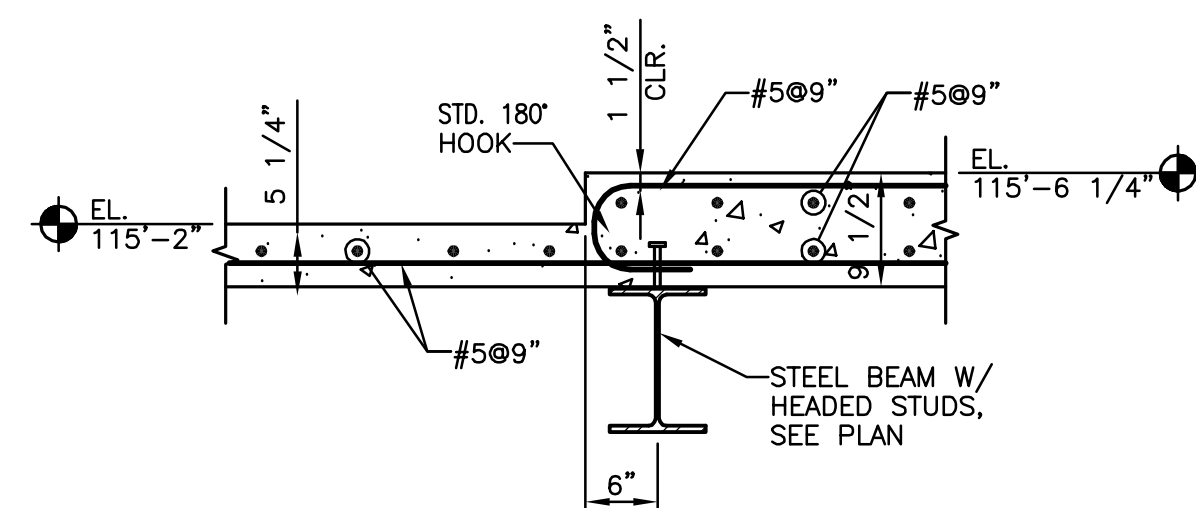
NOTE: ALL STEEL AND CONNECTIONS NOT ENCASED IN CONCRETE SHALL BE HOT-DIPPED GALVANIZED.

**12 SECTION**  
S3.5 SCALE: 1"=1'-0"

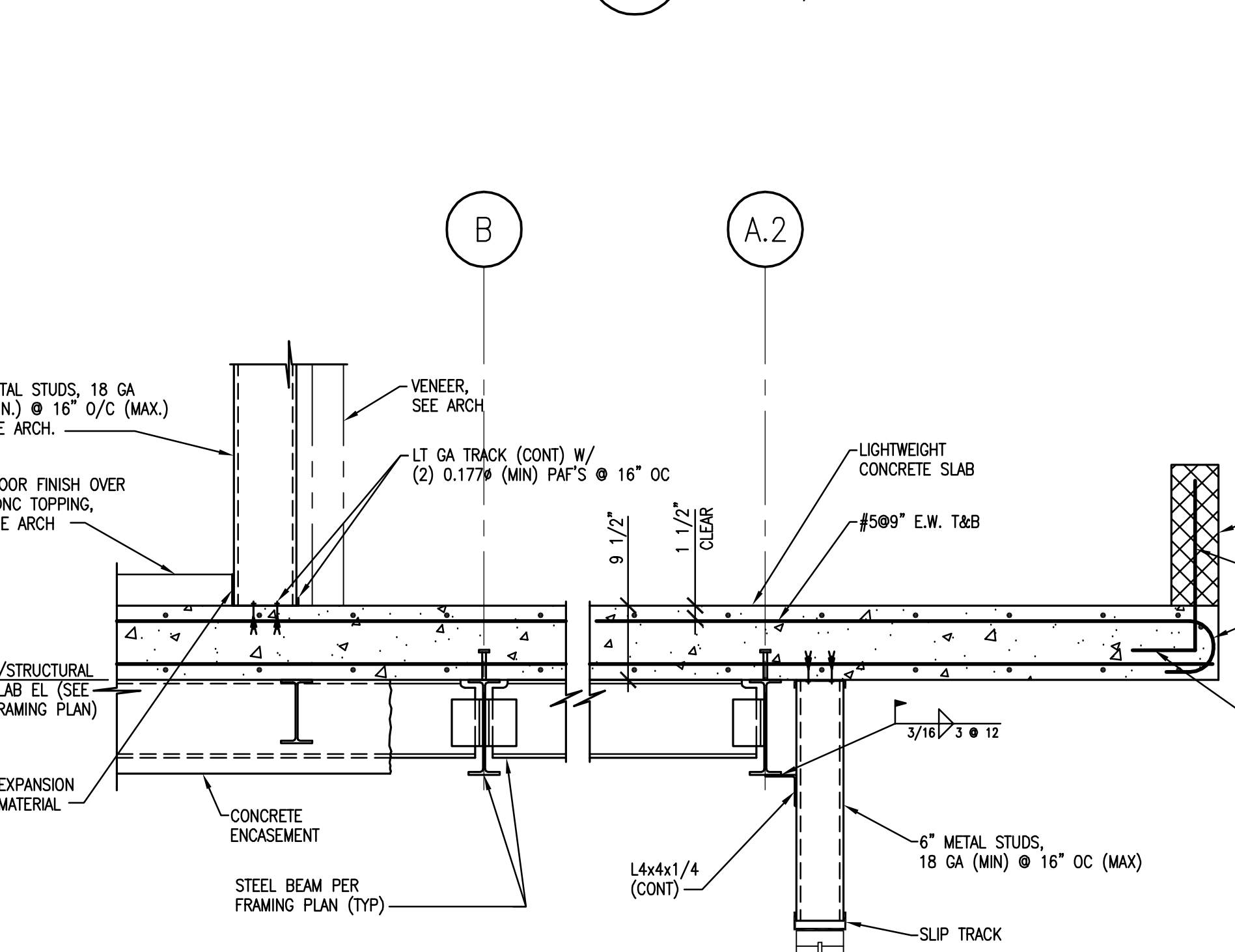
**A SECTION**  
S3.5 SCALE: 1"=1'-0"



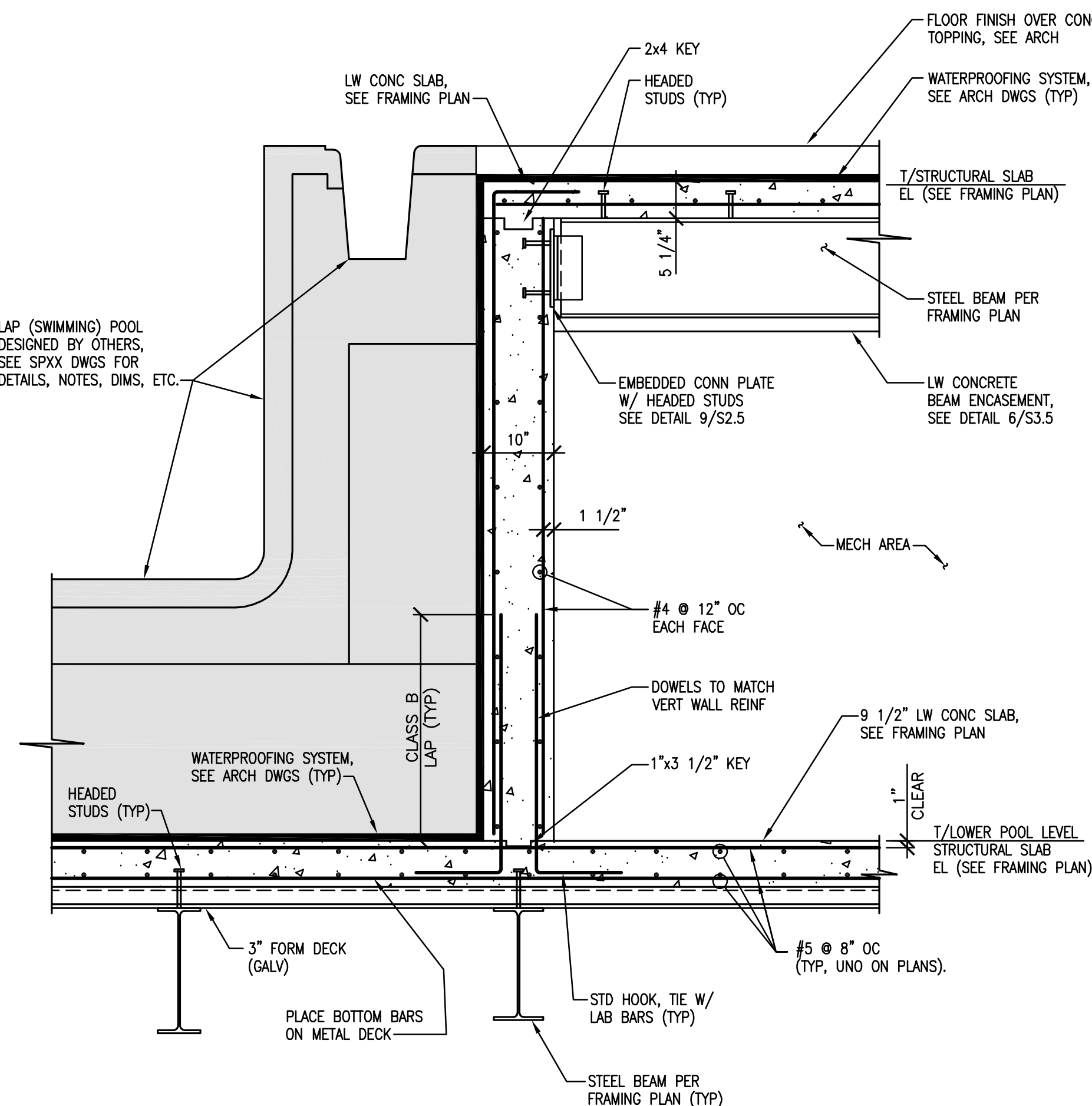
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S3.5 SCALE: 3/4"=1'-0"



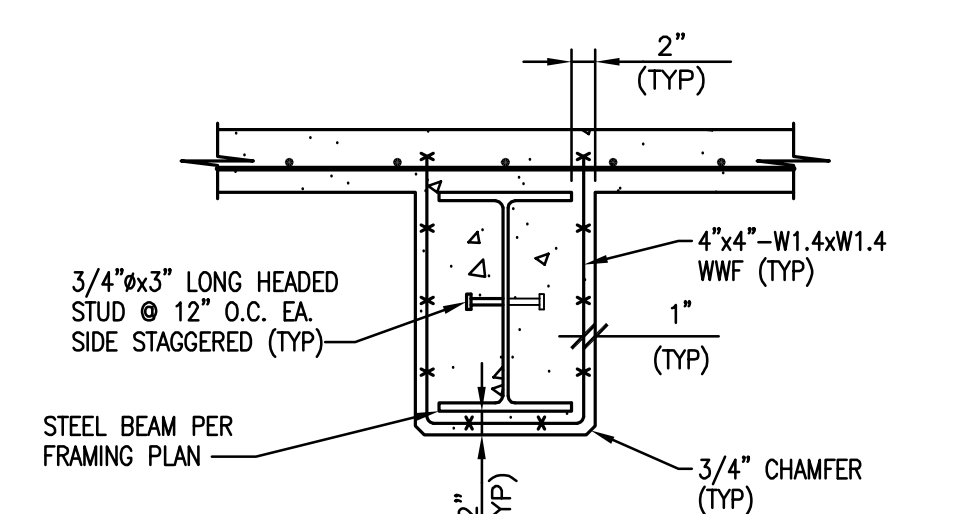
**8 SECTION**  
S3.5 SCALE: 3/4"=1'-0"



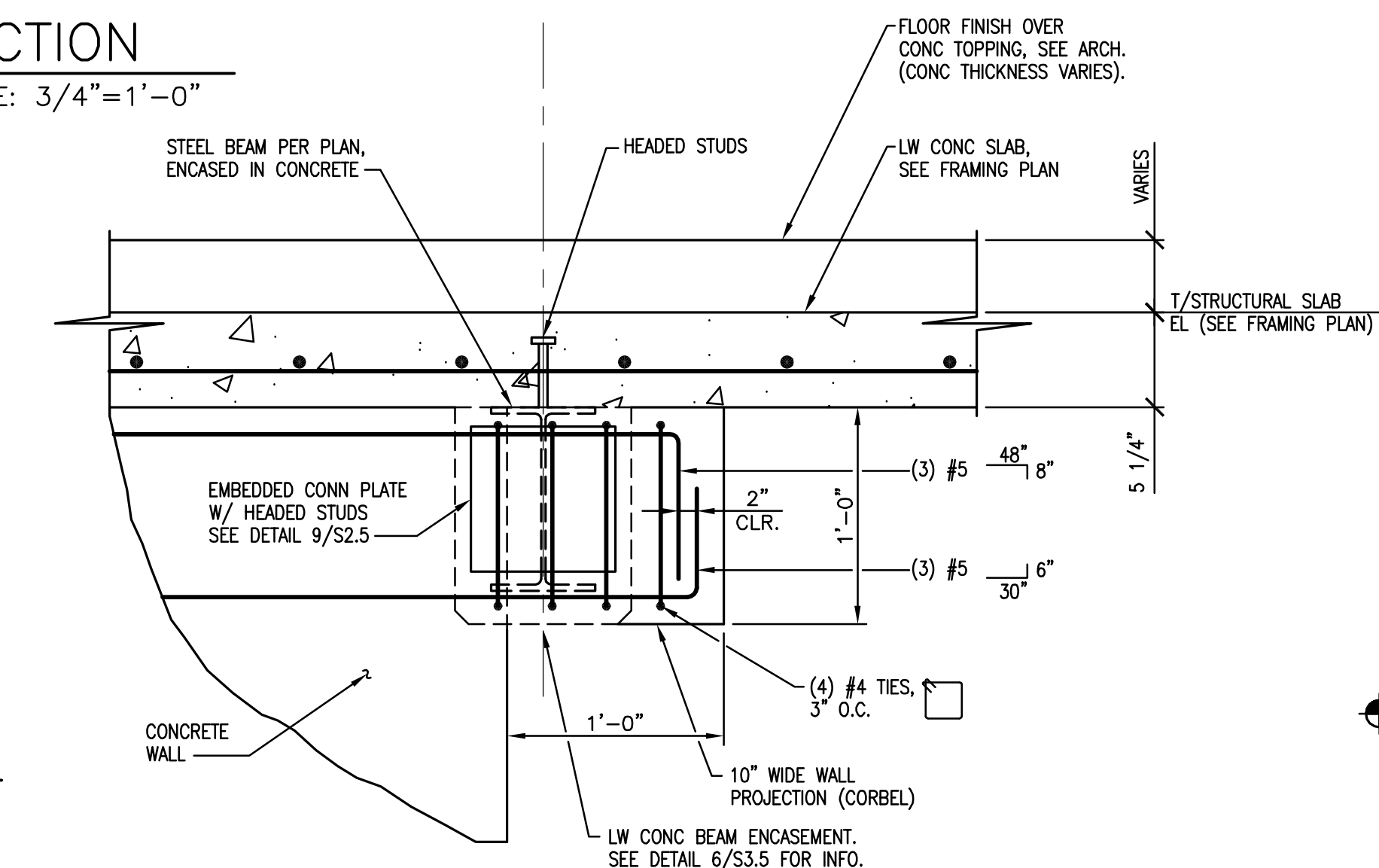
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S3.5 SCALE: 3/4"=1'-0"



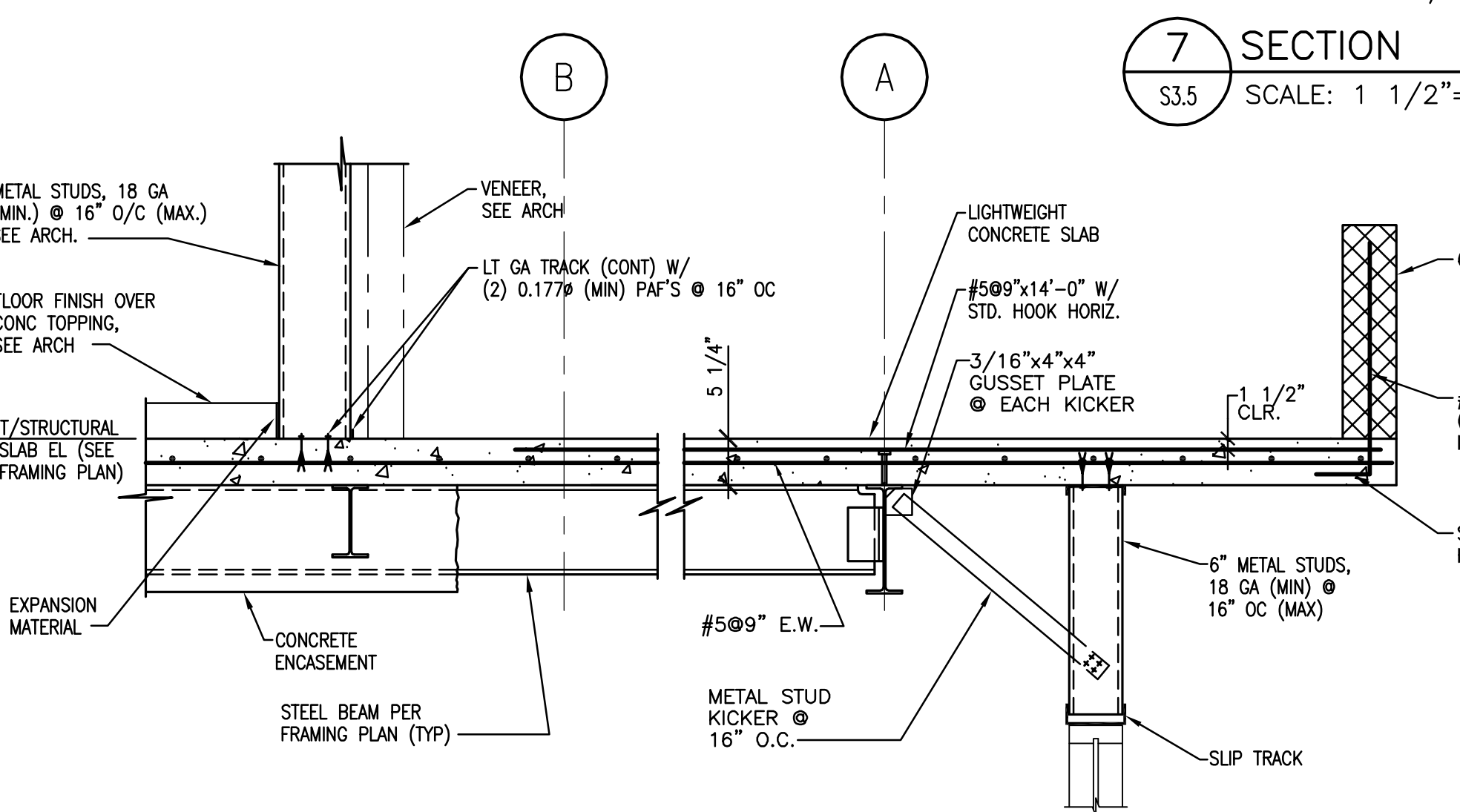
**1 SECTION**  
S3.5 SCALE: 3/4"=1'-0"



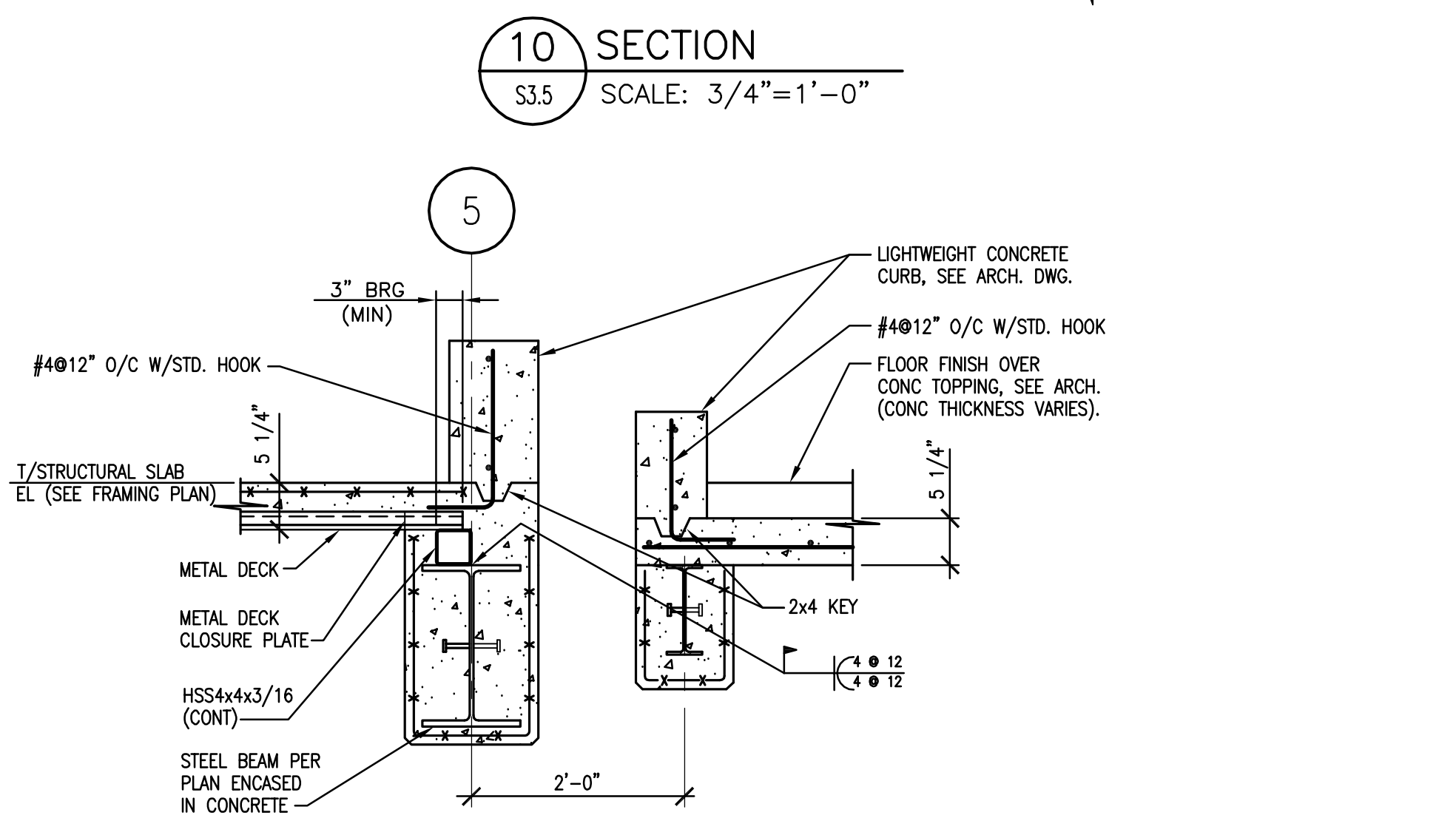
**6 TYPICAL CONCRETE ENCASED STEEL BEAM DETAIL**  
S3.5 NOT TO SCALE



**7 SECTION**  
S3.5 SCALE: 1 1/2"=1'-0"

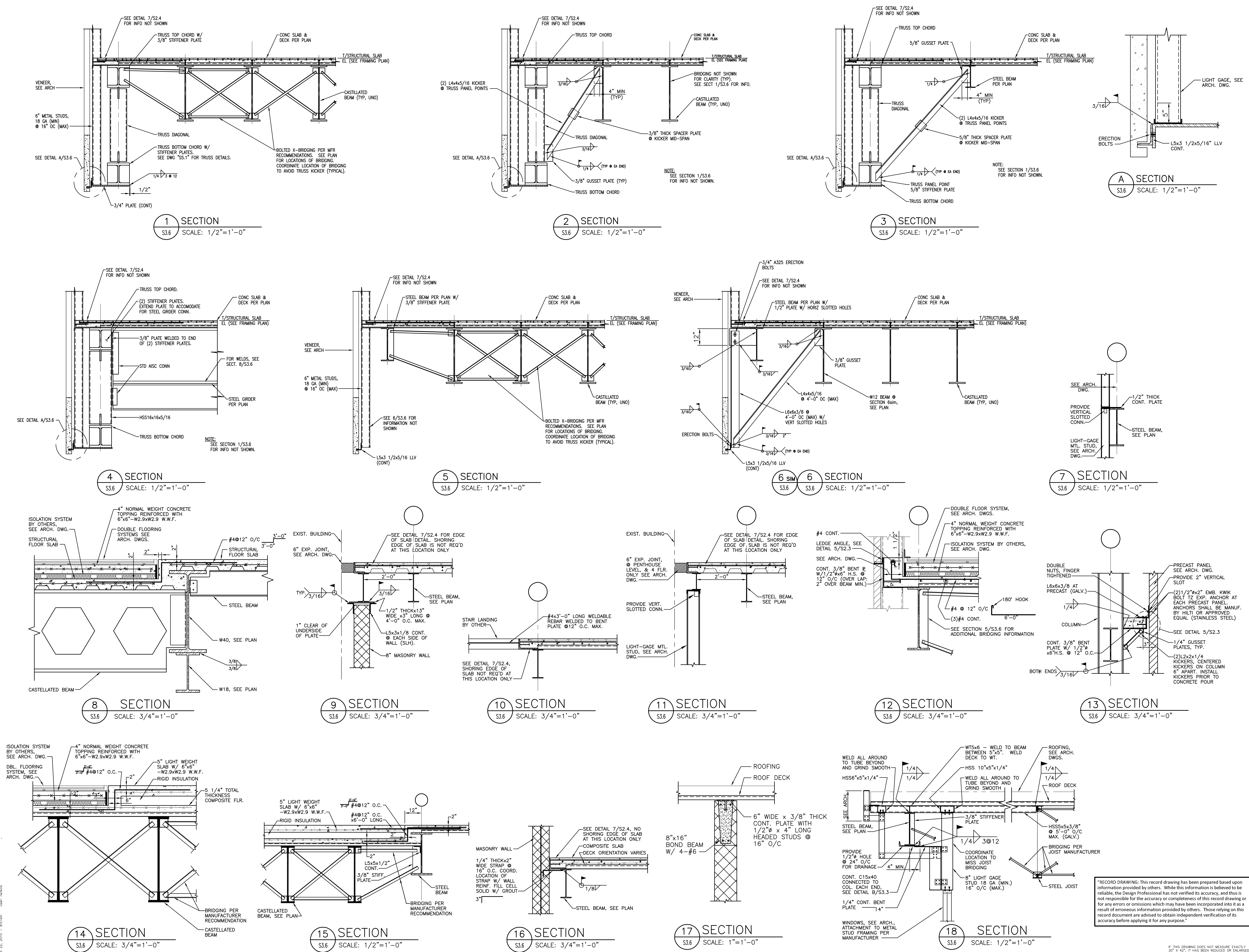


**10 SECTION**  
S3.5 SCALE: 3/4"=1'-0"



**13 SECTION**  
S3.5 SCALE: 3/4"=1'-0"





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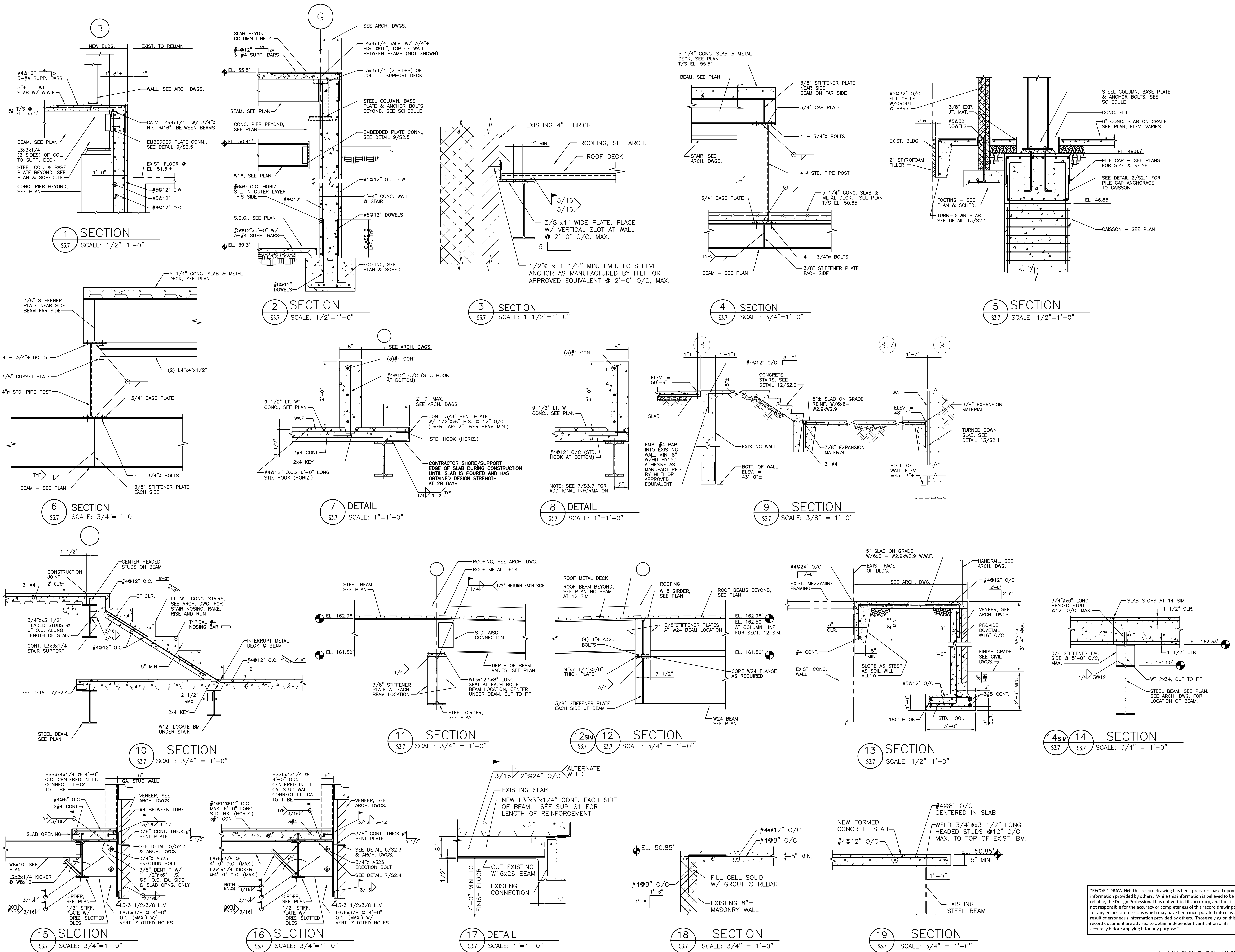
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**S3.6**

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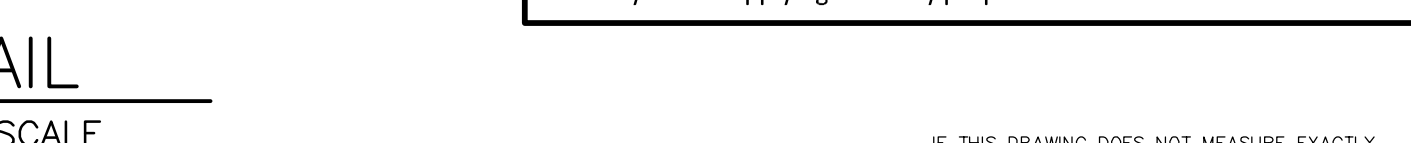
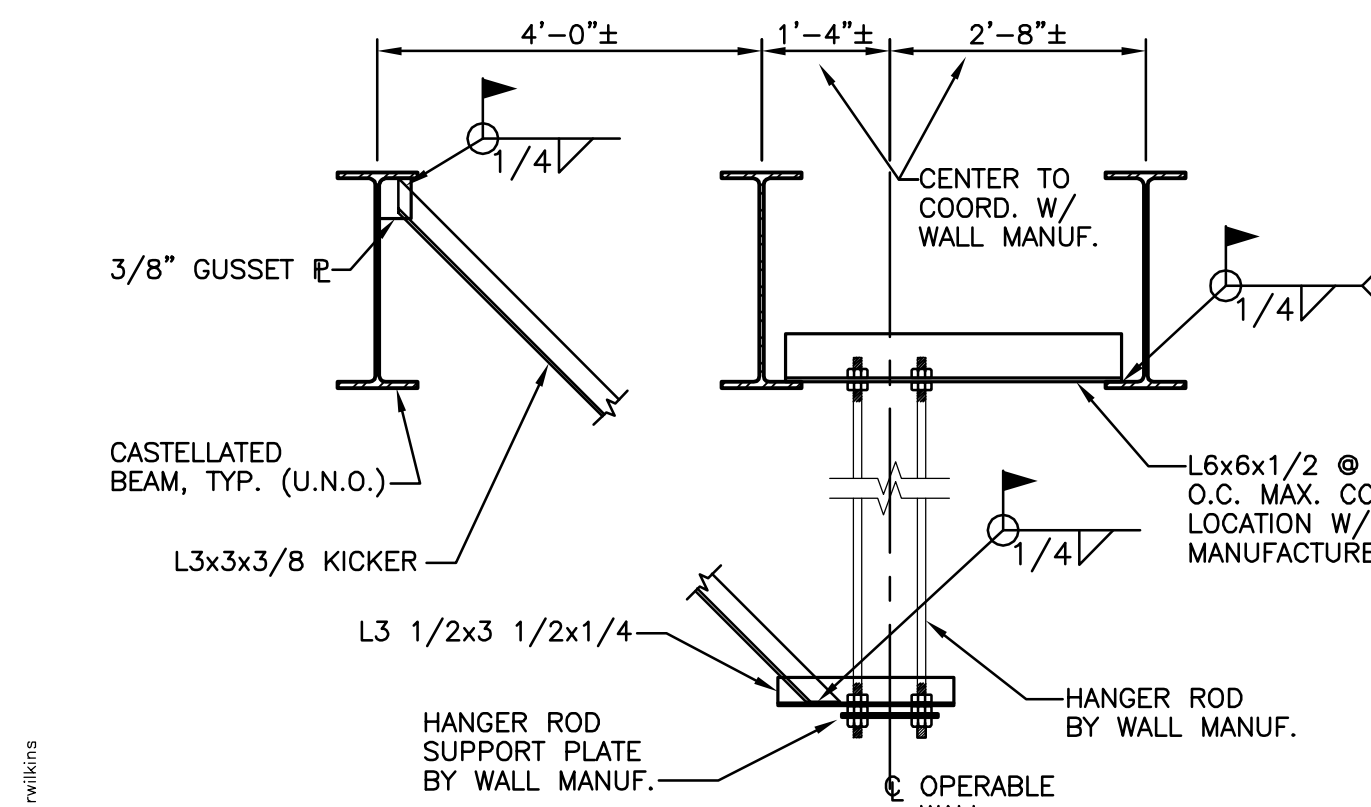
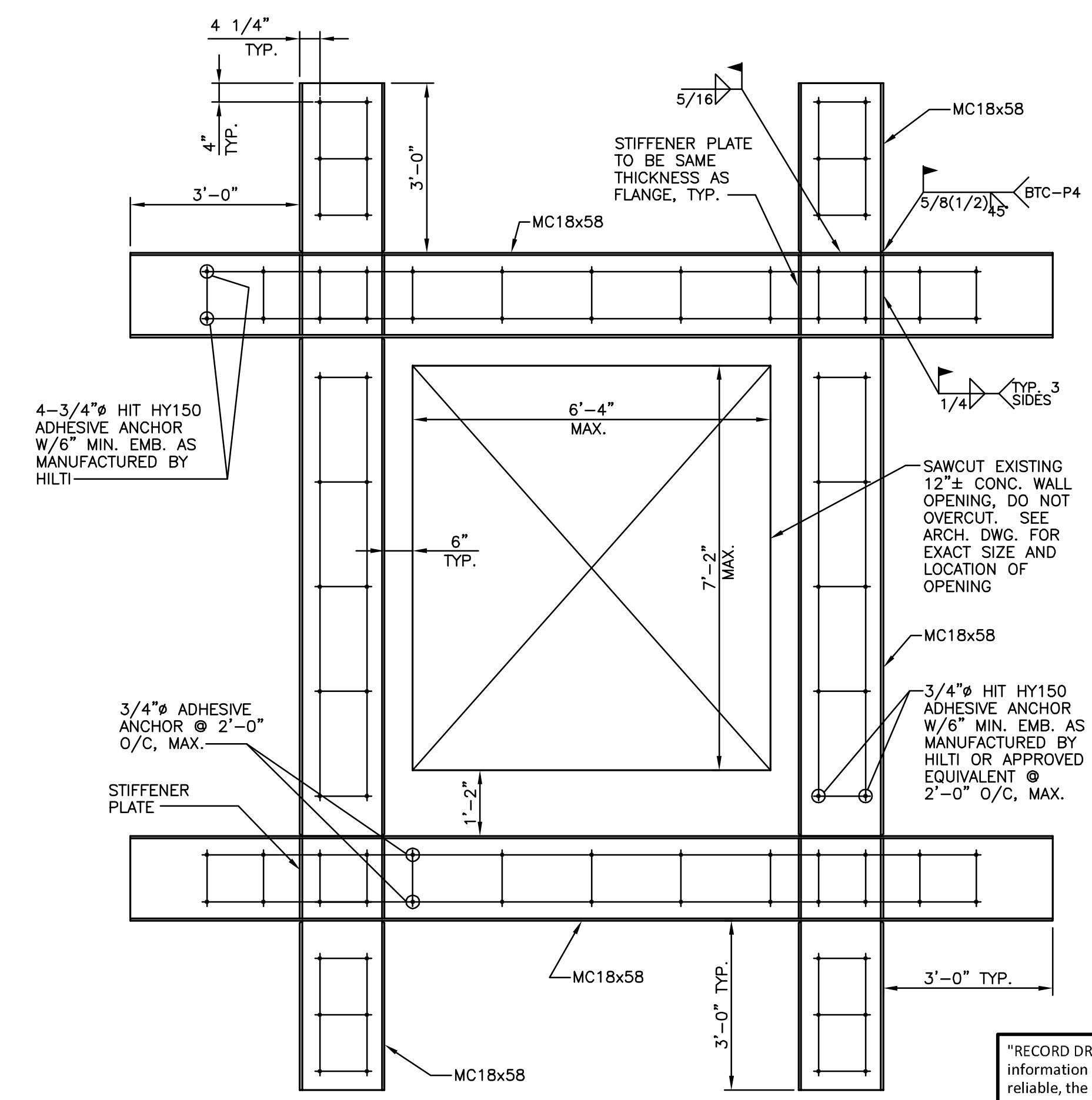
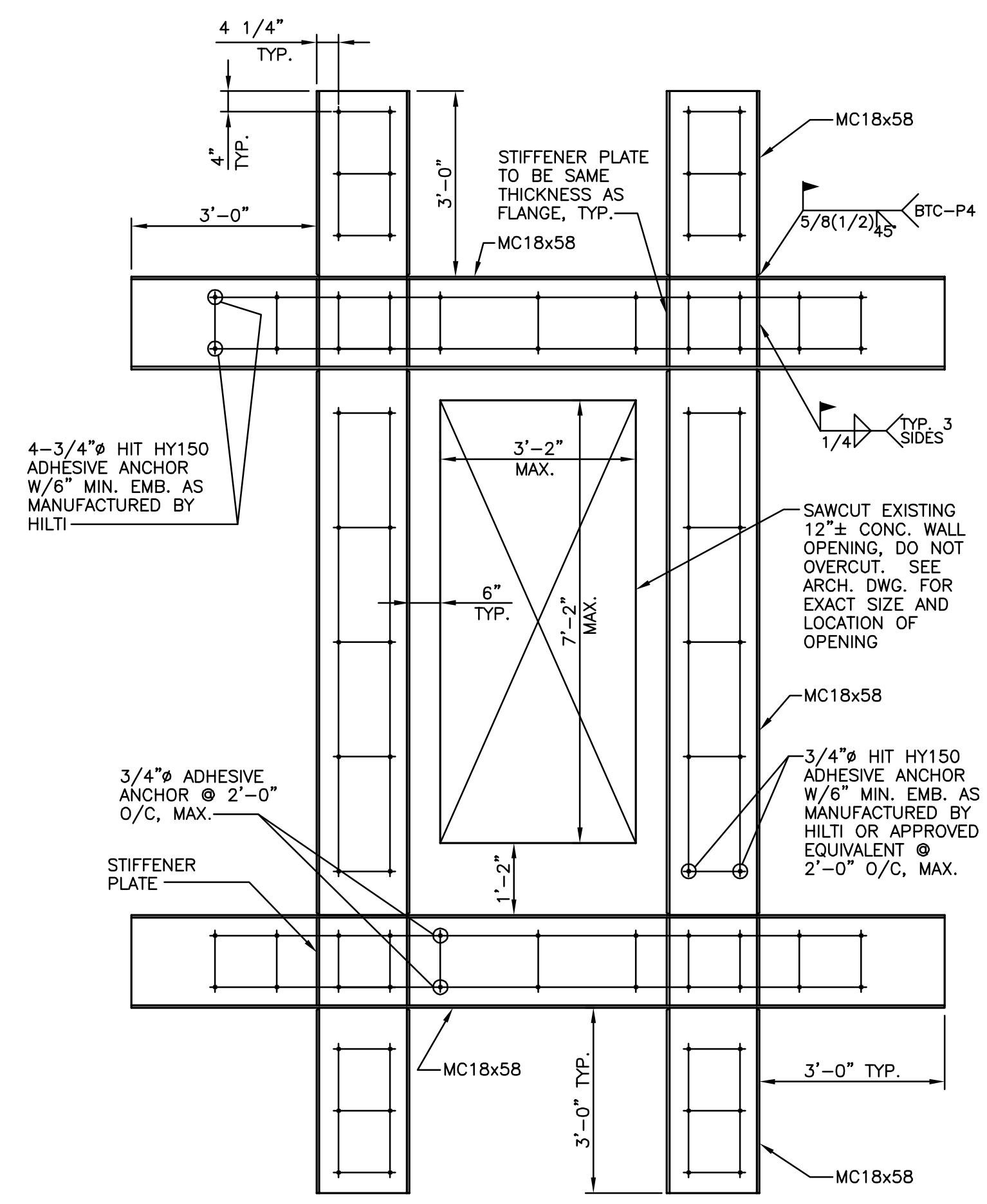
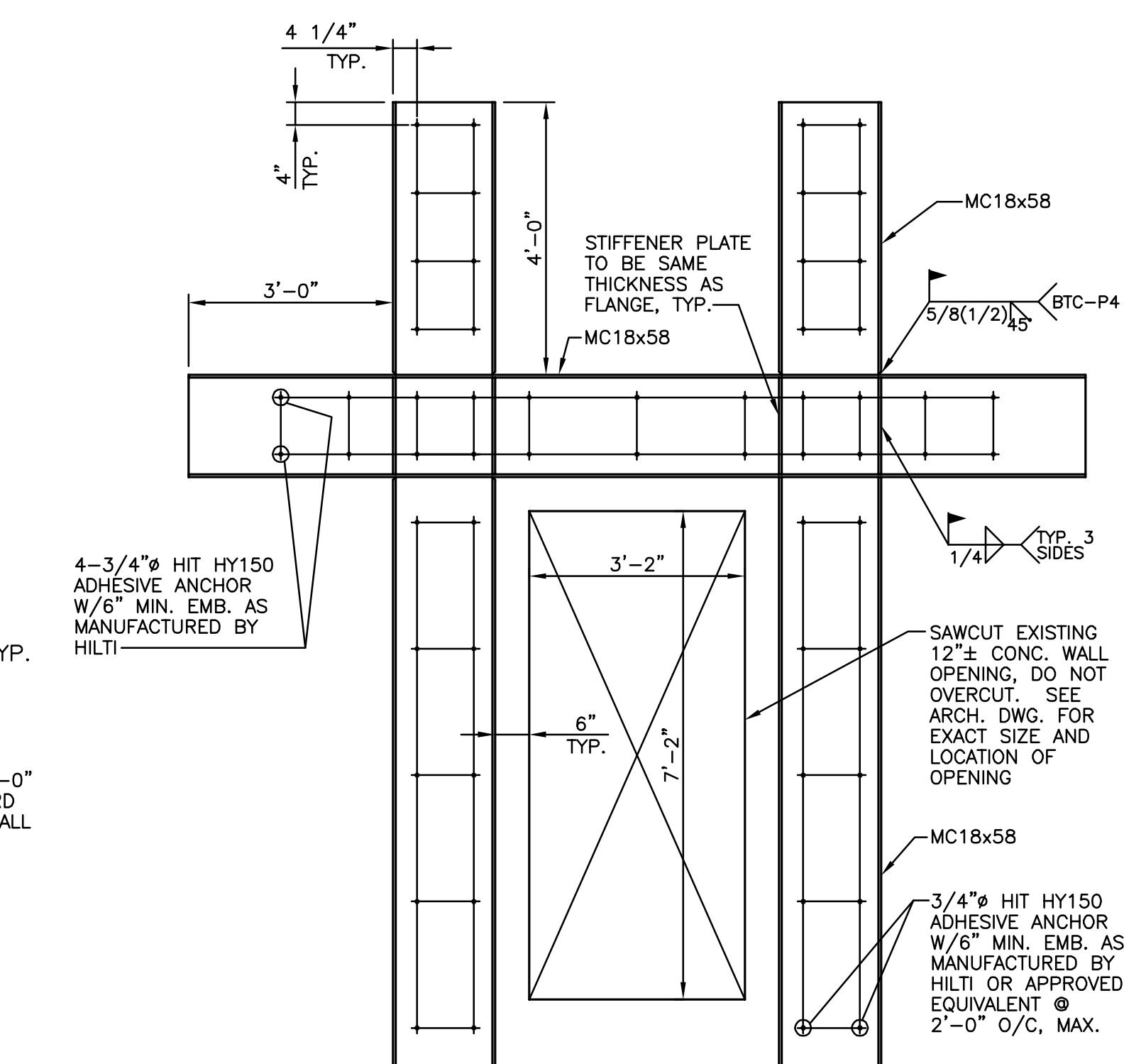
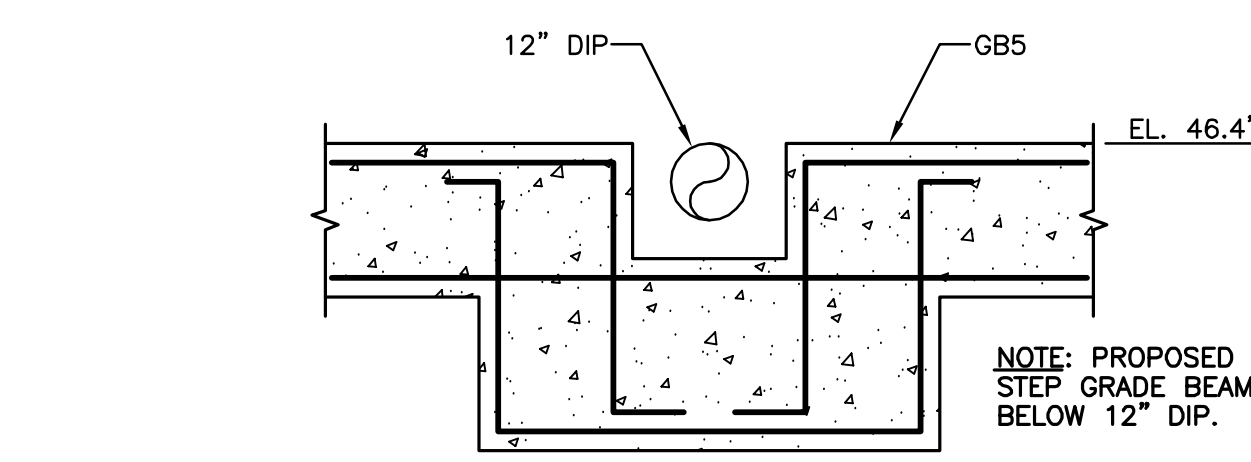
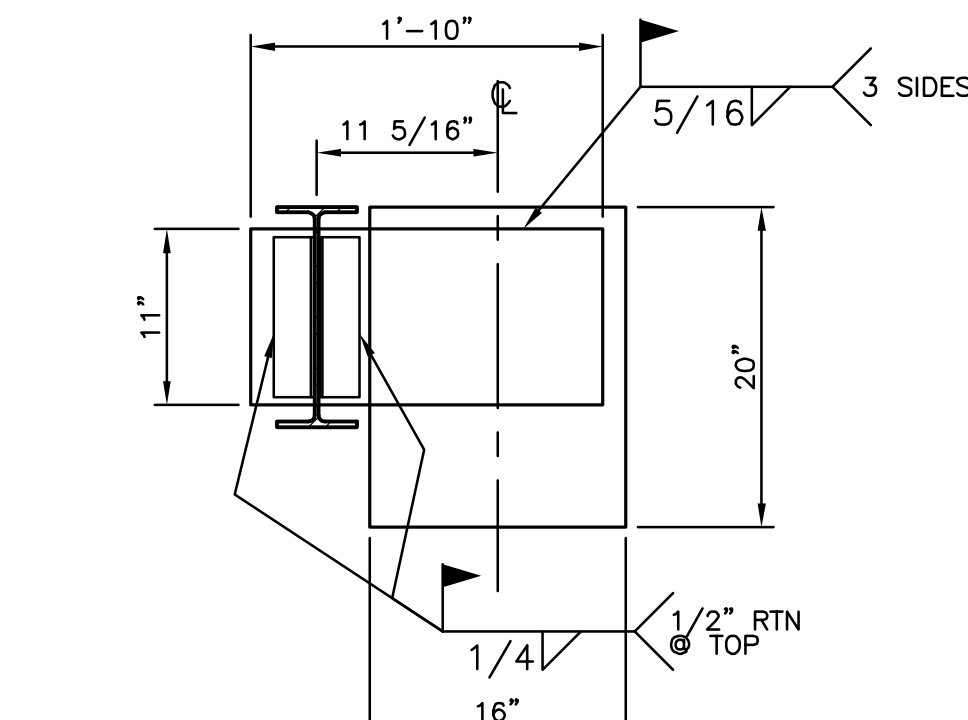
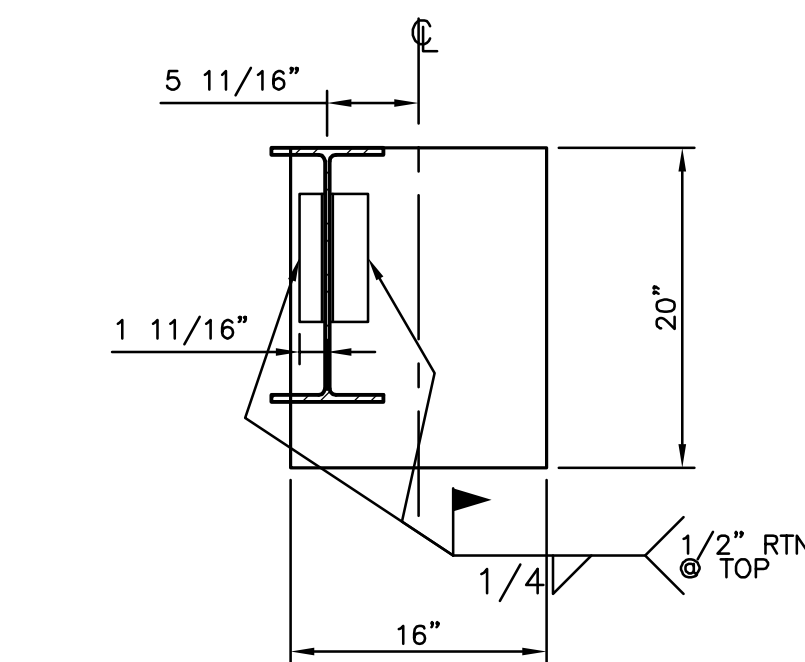
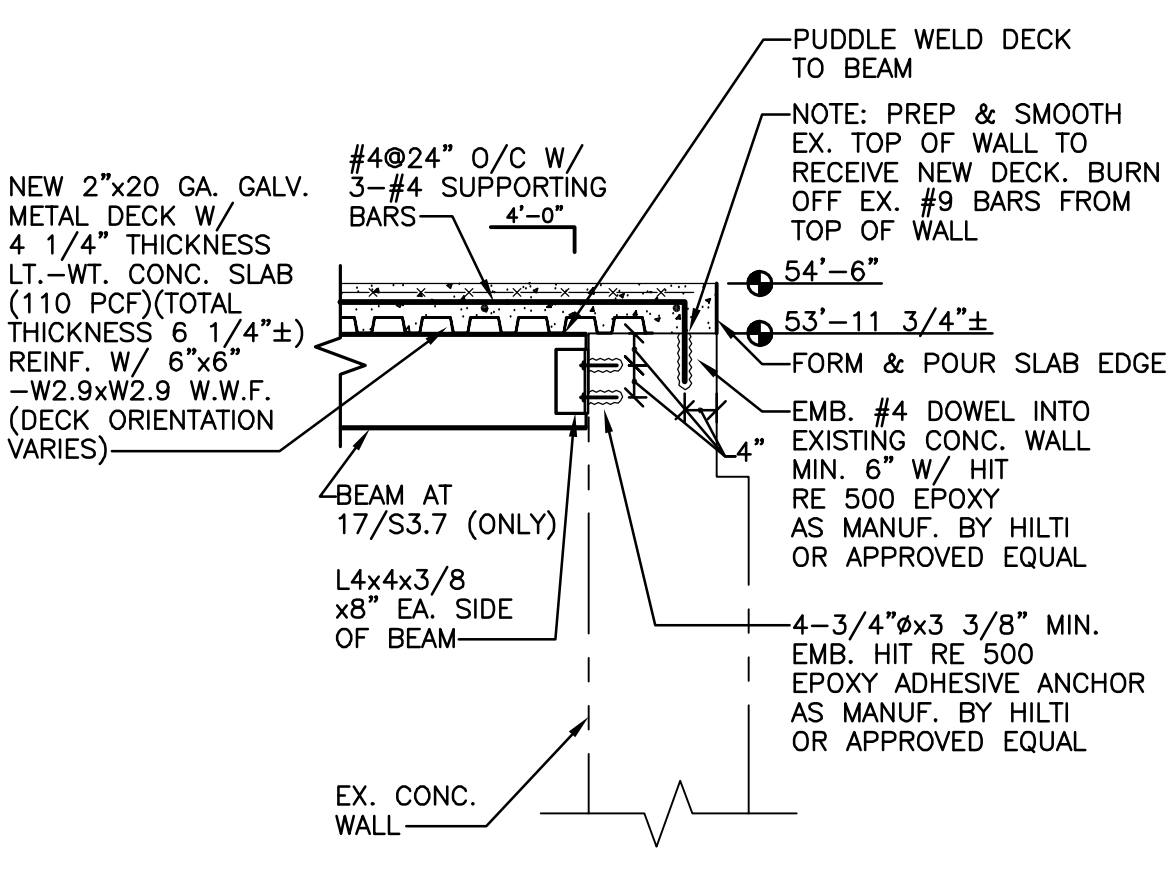
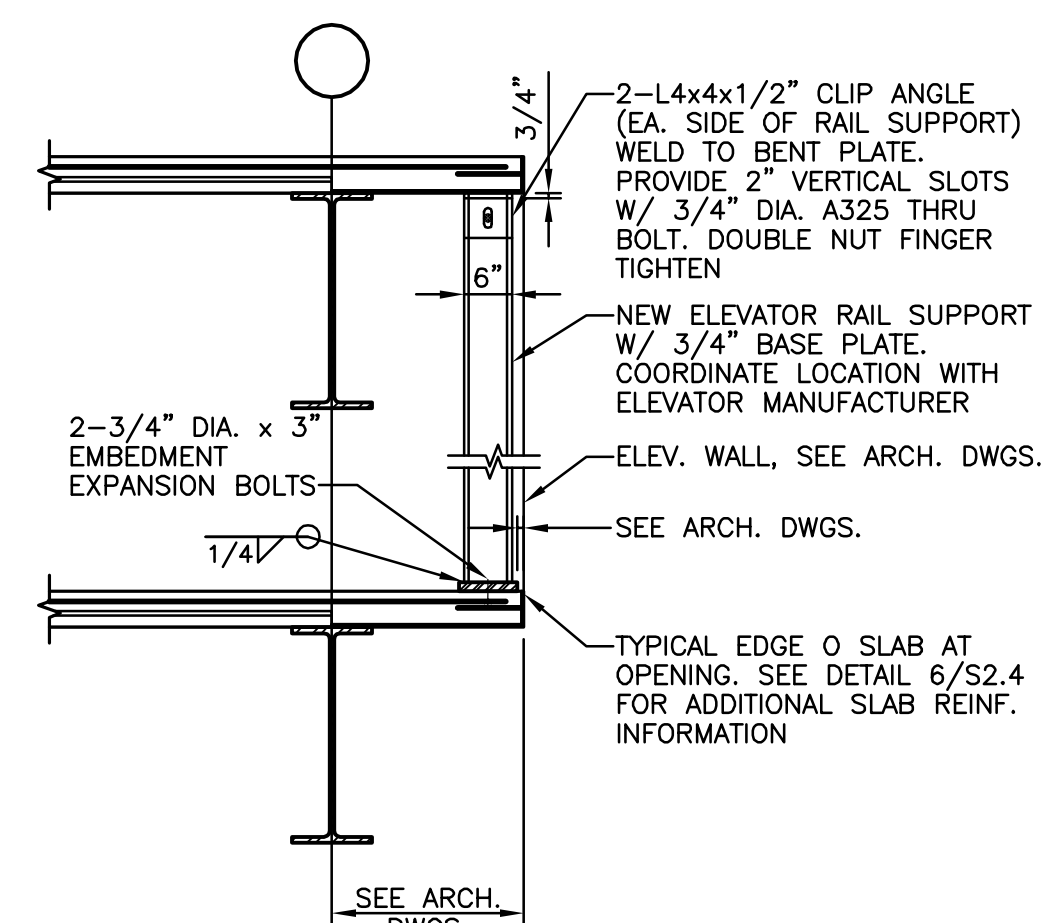
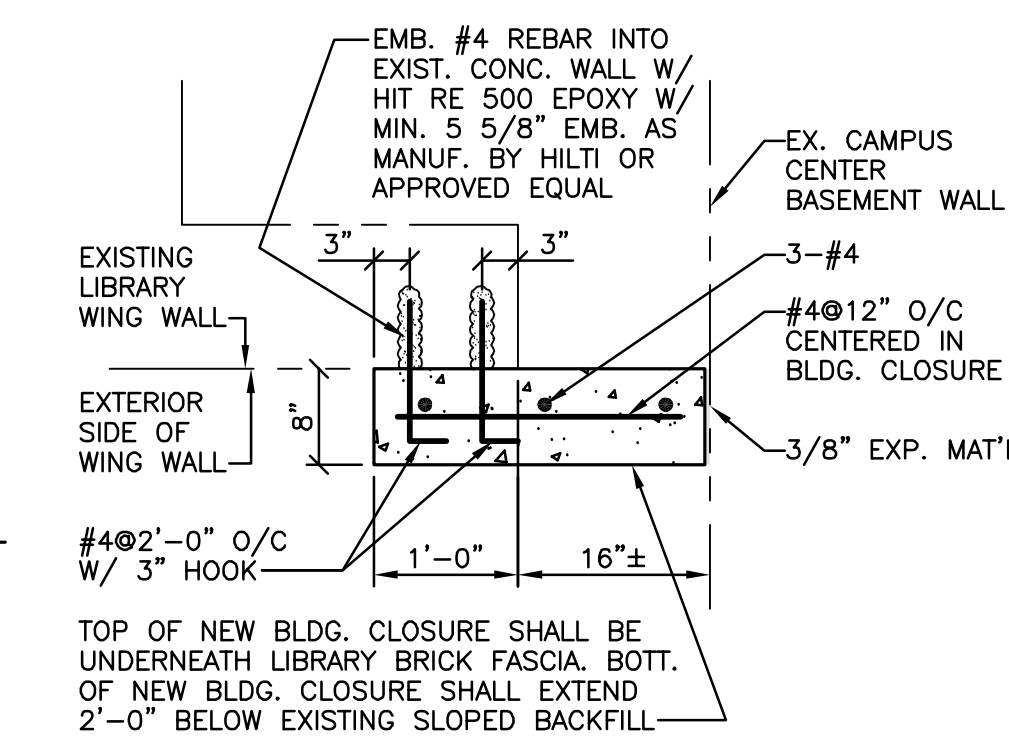
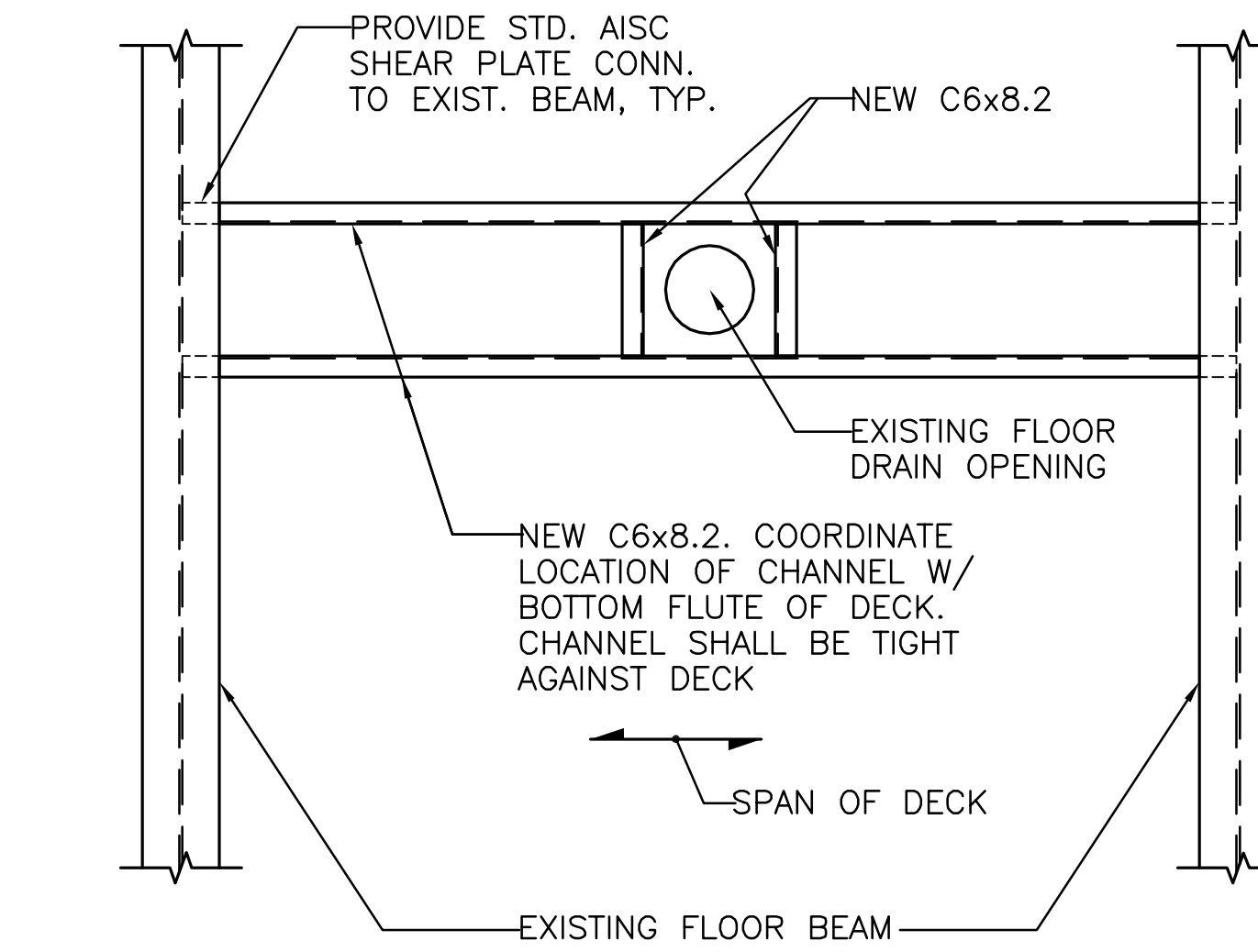
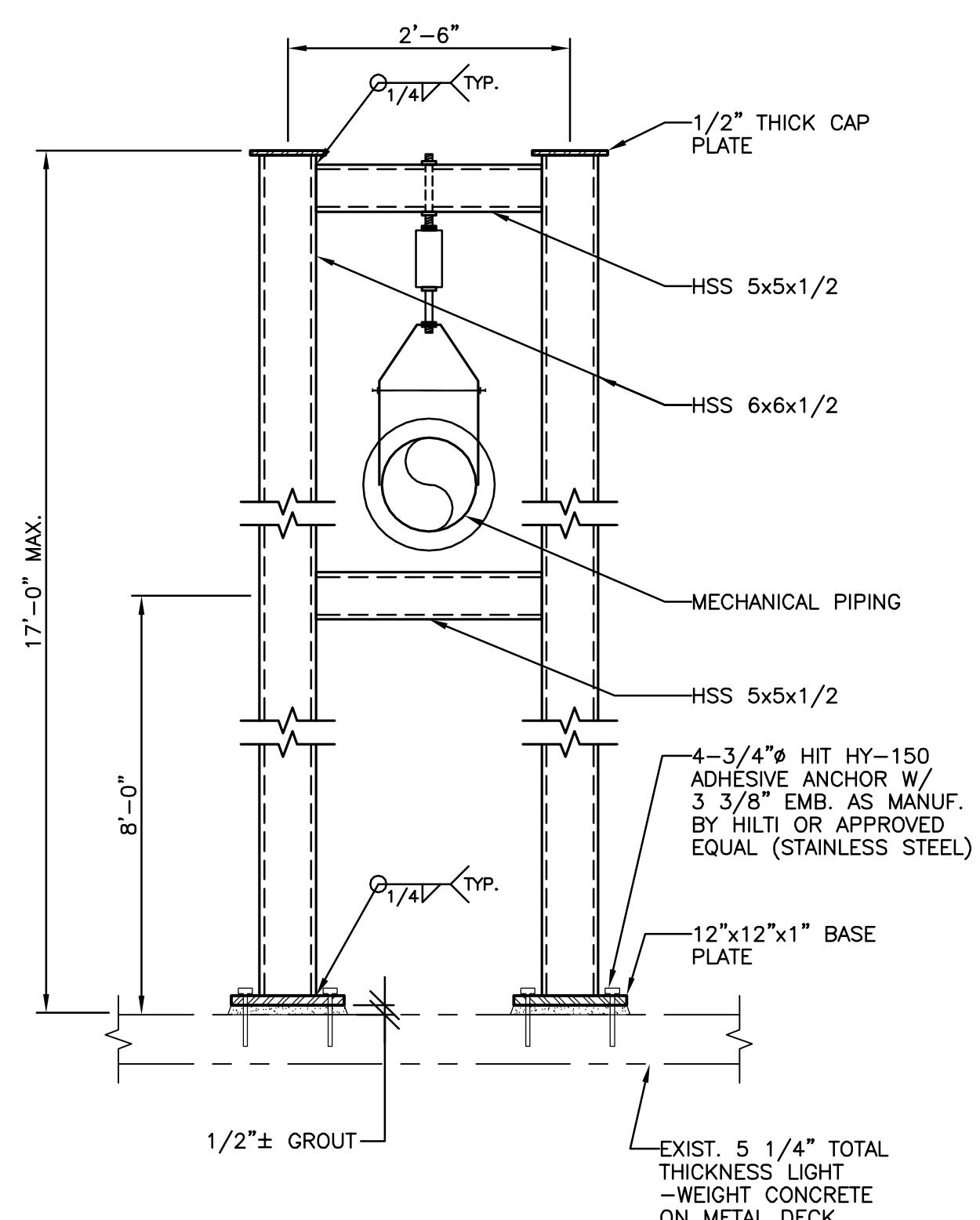
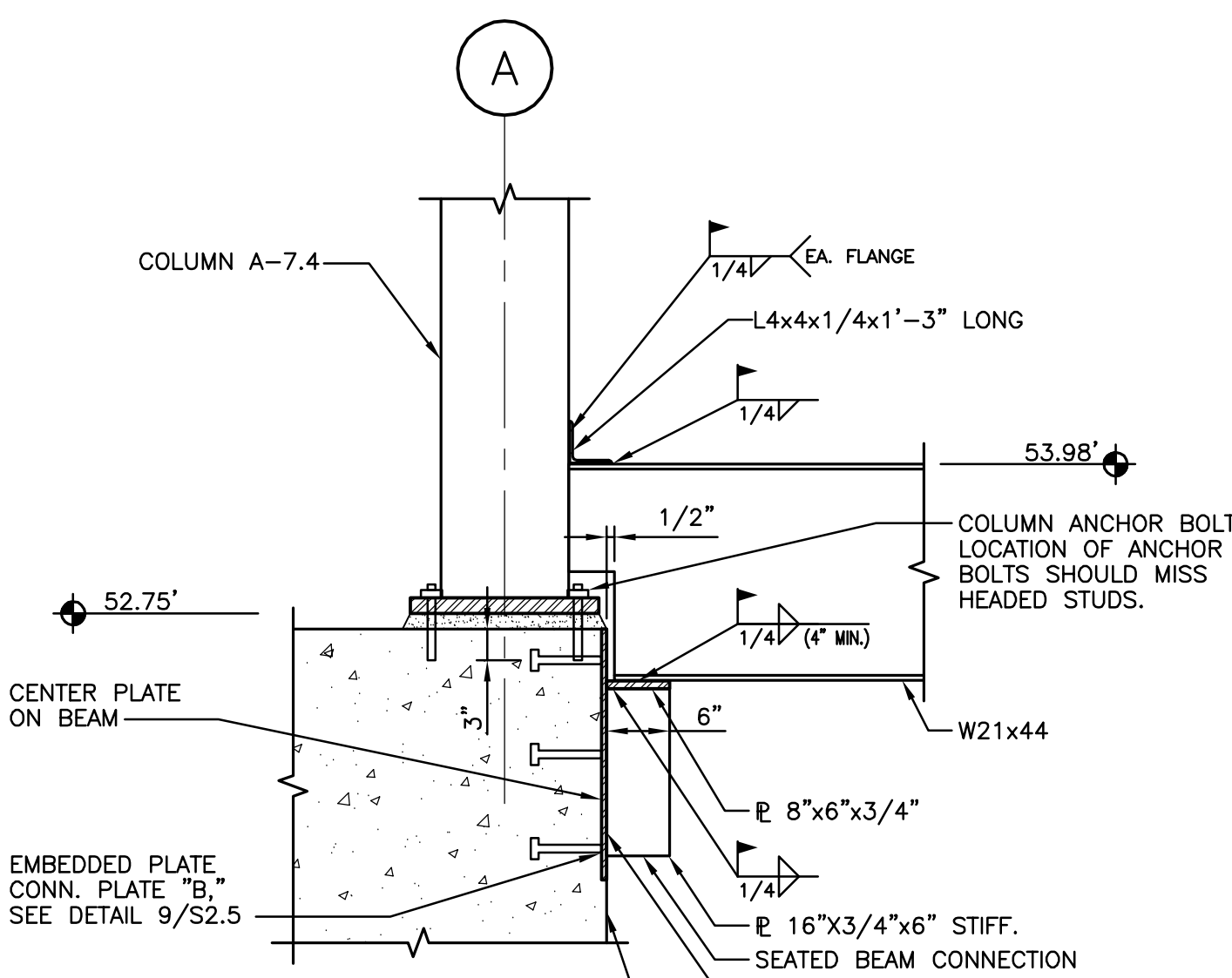
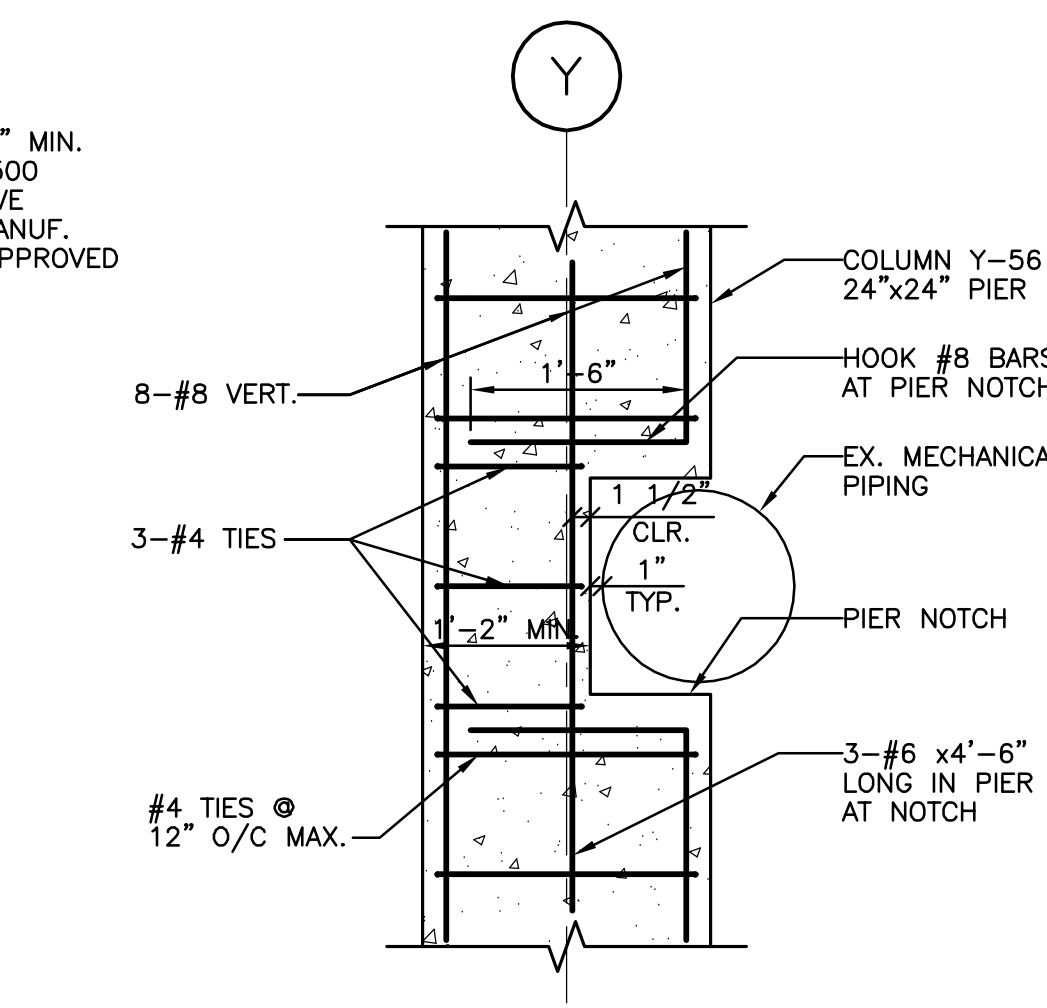
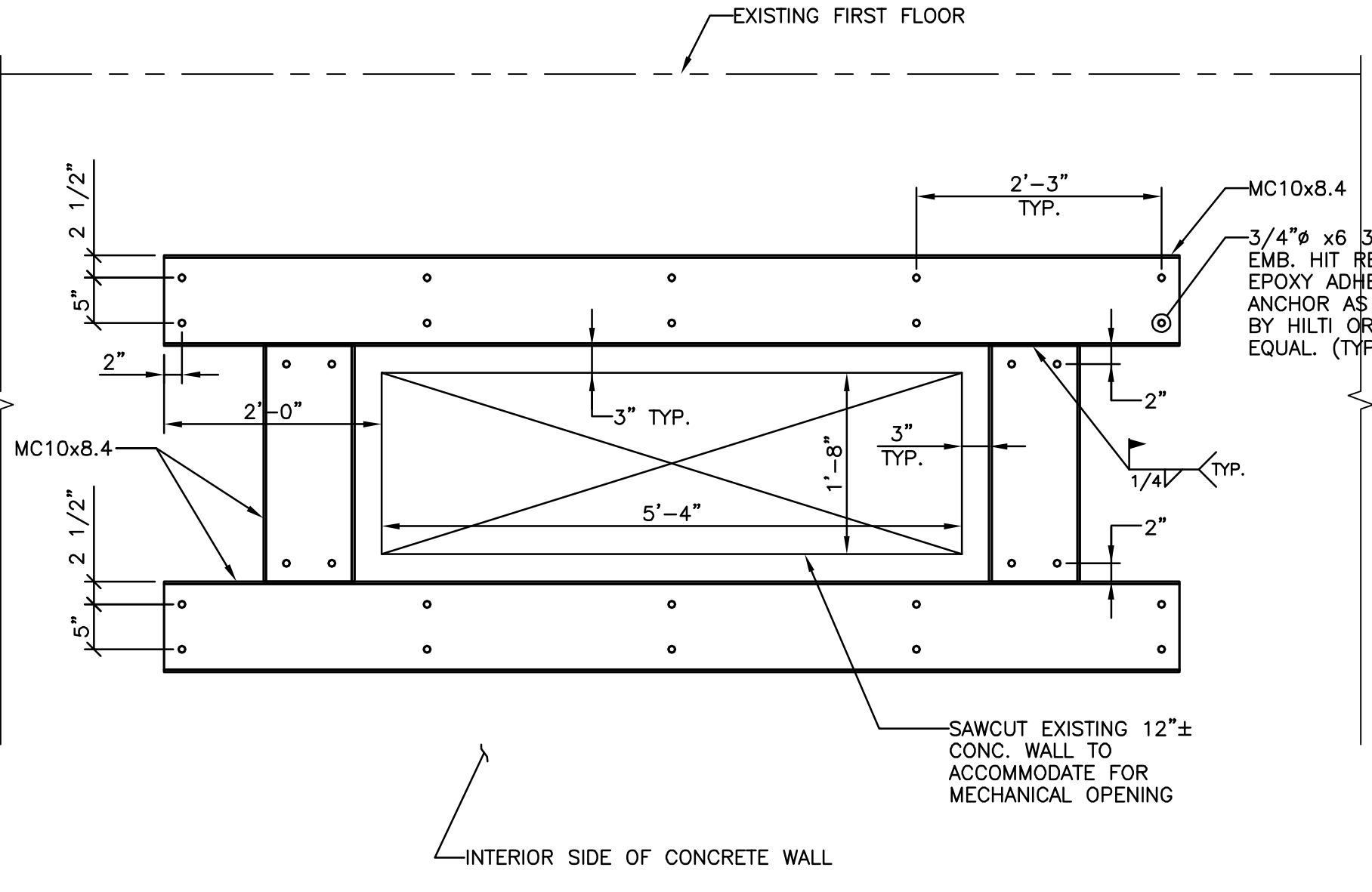
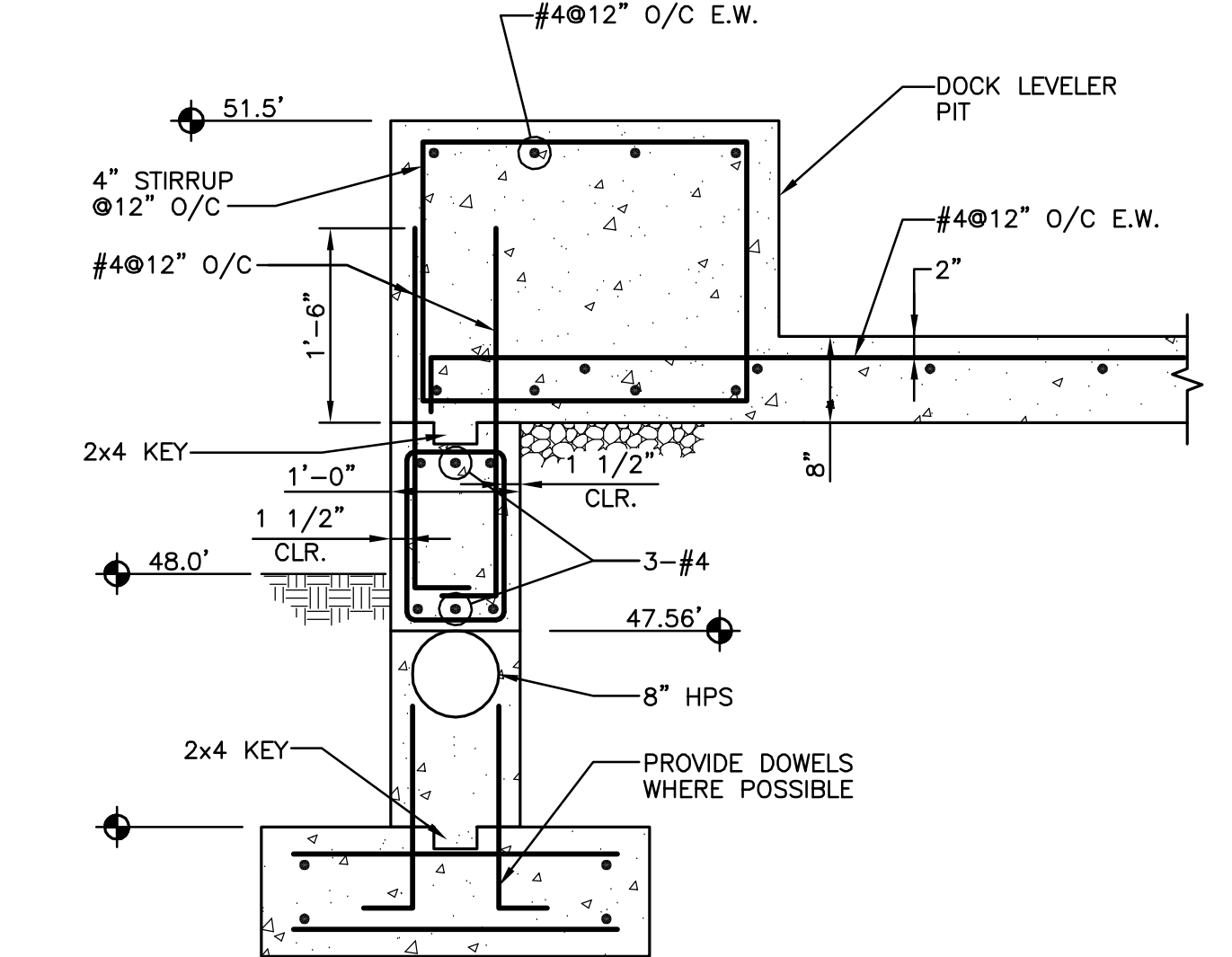




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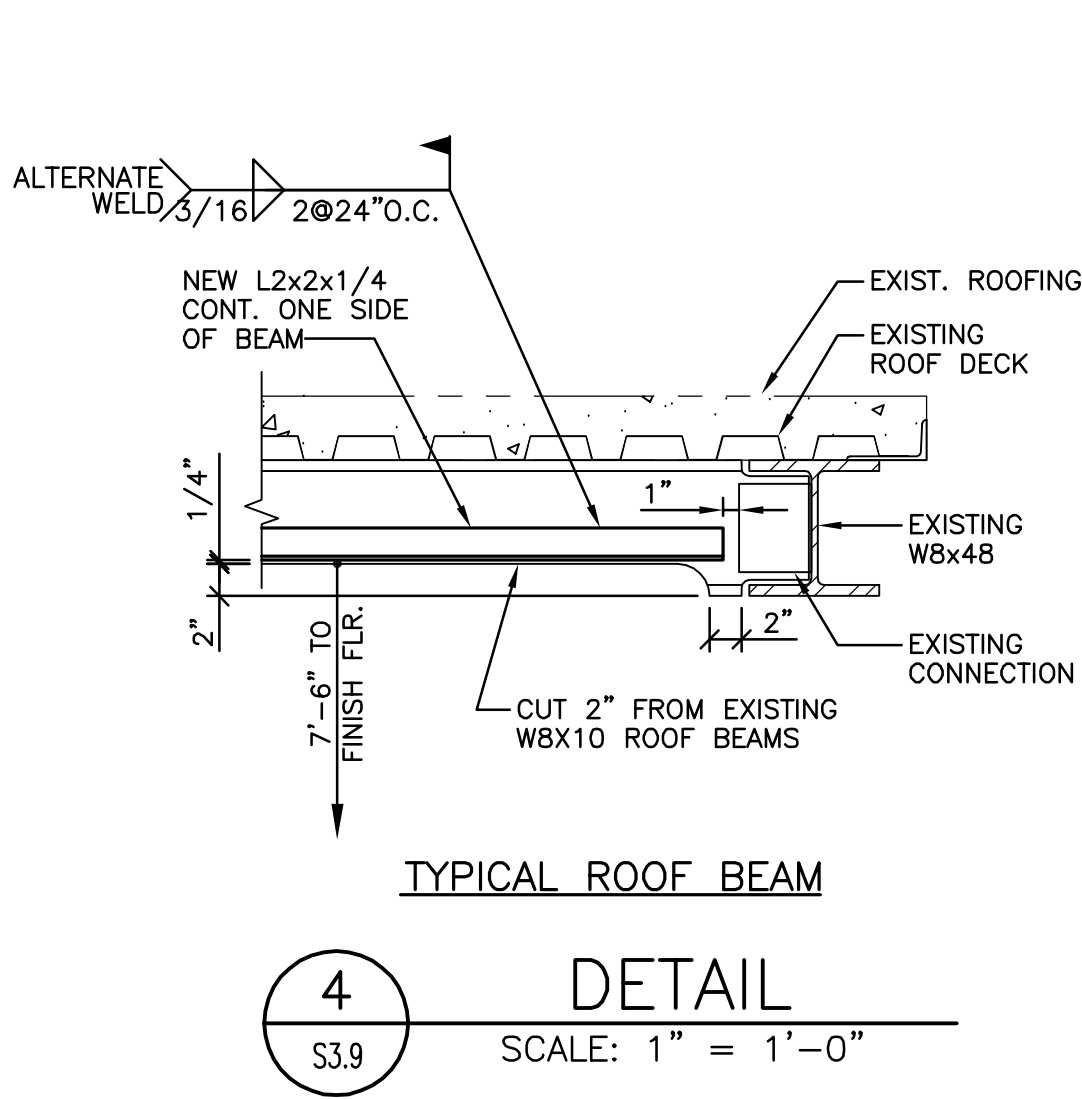
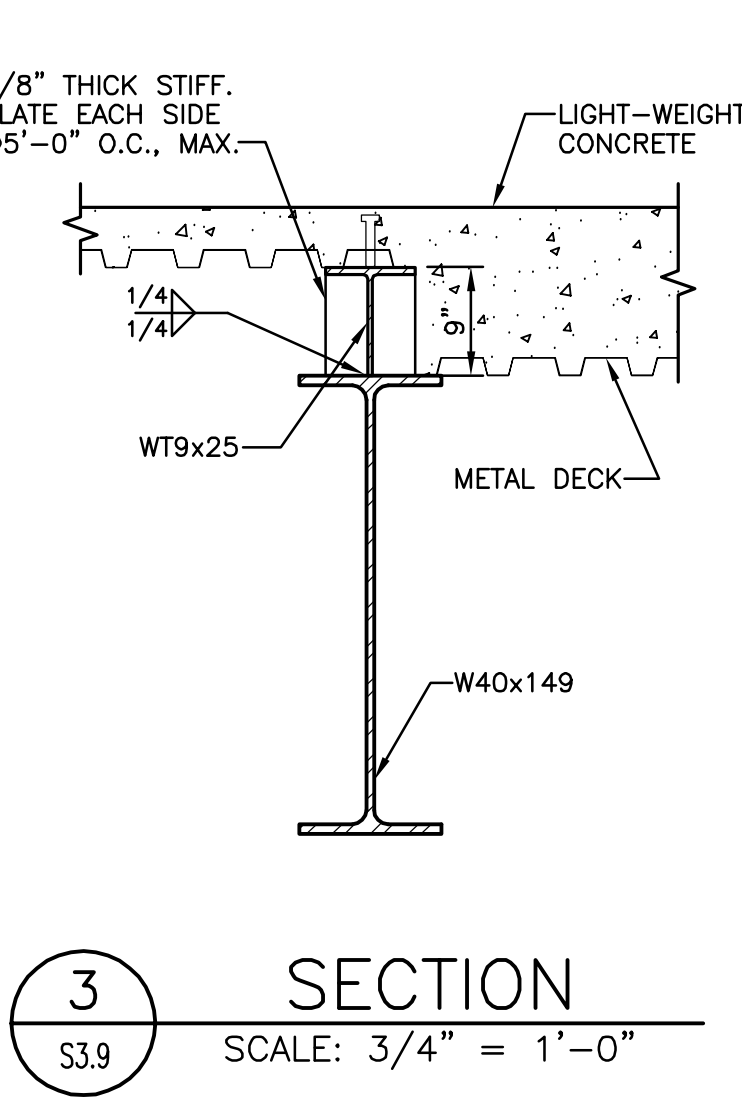
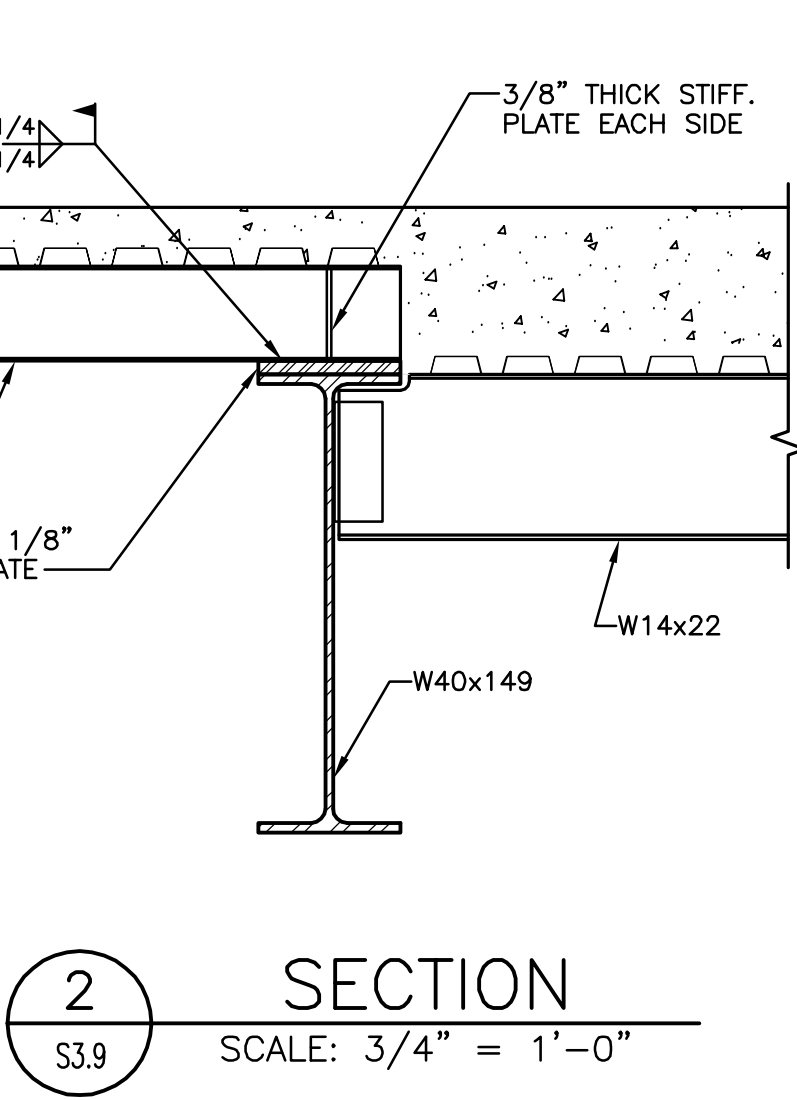
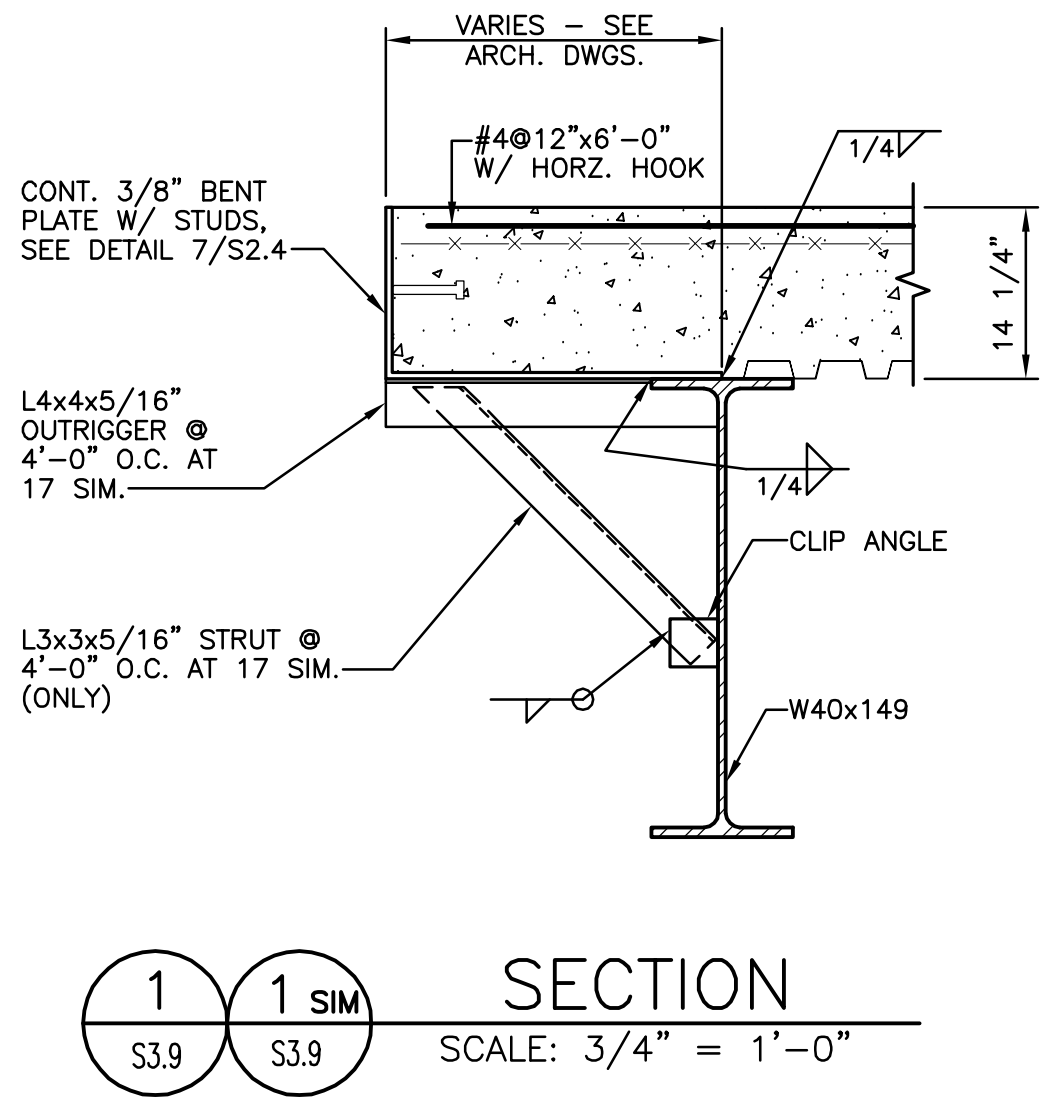
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**S3.8**

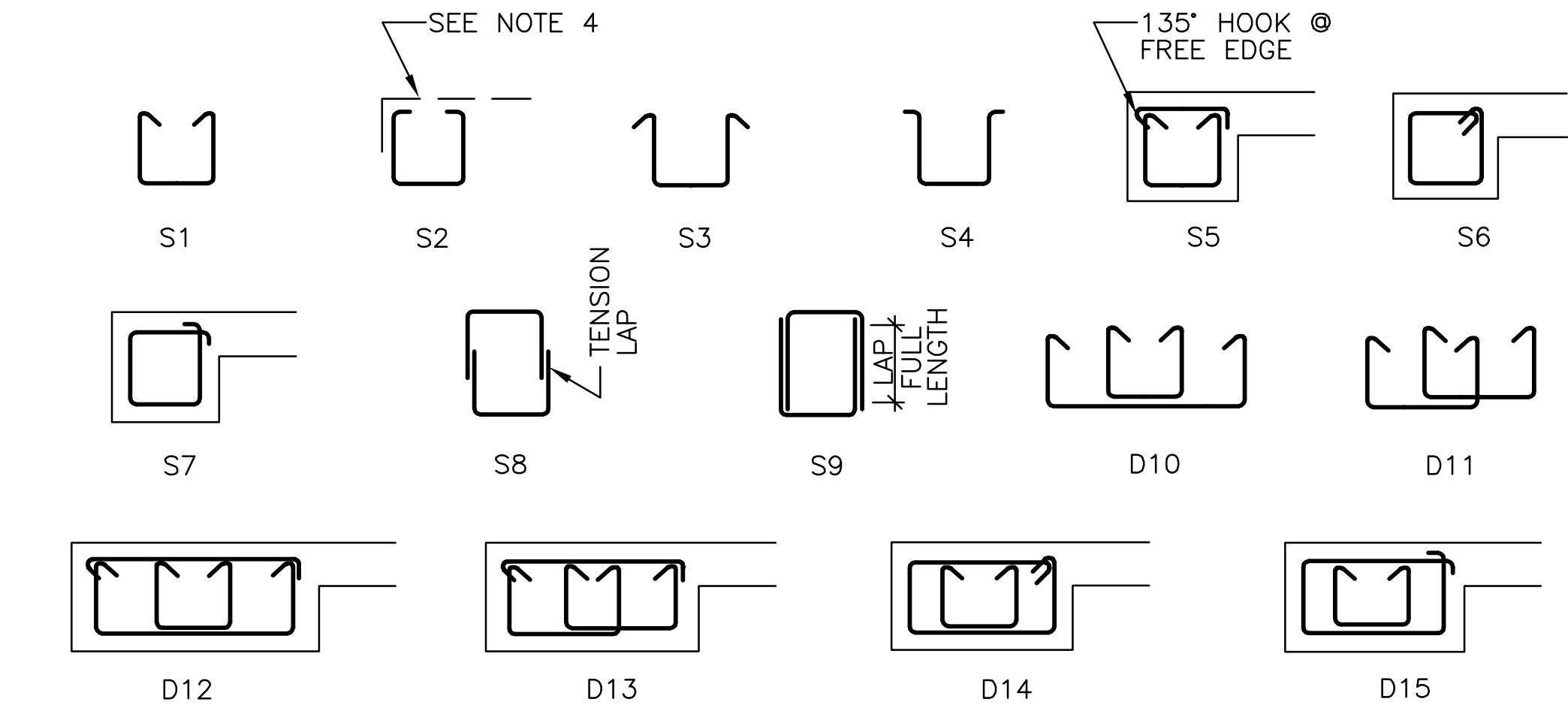
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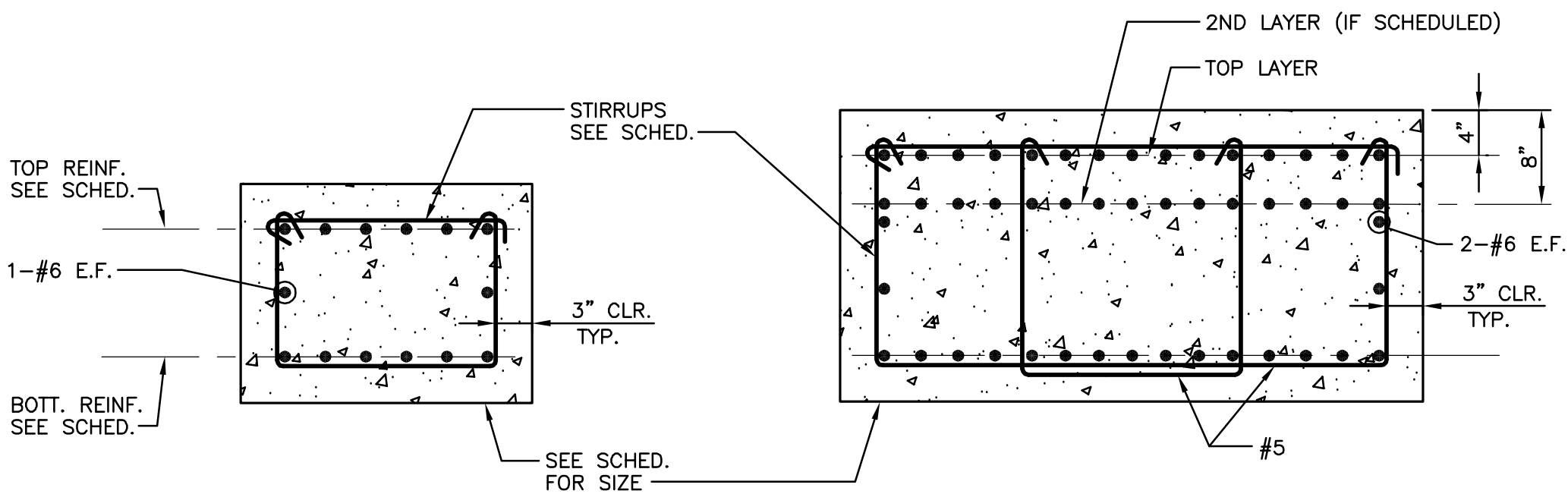




- NOTES:
- 1) STIRRUP TYPE DESIGNATIONS:  
"S" SINGLE TIE (W/ CAP IF APPLIES)  
"D" DOUBLE TIE (W/ CAP IF APPLIES)
  - 2) ALL 90° & 135° SHALL BE STANDARD BAR BENDS UNLESS DETAILED OTHERWISE.
  - 3) HOOKS AT TOP OF STIRRUPS SHALL BE PLACED AS SHOWN AT DISCONTINUOUS EDGE CONDITIONS.
  - 4) FOR STIRRUP TYPES S1, S2, S3, S4, TOP LEG OF STIRRUP IS PROVIDED BY SLAB REINFORCING. WHERE STIRRUP SPACING IS CLOSER THAN SLAB REINFORCING, PROVIDE #4 TOP LEG AS SHOWN FOR STIRRUP TYPE S5.

## STIRRUP TYPES

S4.1 NOT TO SCALE



TYPICAL GRADE BEAM SECTION

SECTION THRU GB2  
SECTION THRU GB4 SIMILAR

FOOTING SCHEDULE			
MARK	SIZE	REINFORCEMENT	REMARKS
F60	6'-0"x6'-0"x24"	(6) #7 E.W. BOTTOM	
F70	7'-0"x7'-0"x24"	(8) #7 E.W. BOTTOM	
F110	11'-0"x11'-0"x33"	(14) #8 E.W. BOTTOM	
F120	12'-0"x12'-0"x36"	(14) #9 E.W. BOTTOM	
F130	13'-0"x13'-0"x38"	(17) #9 E.W. BOTTOM	
F140	14'-0"x14'-0"x40"	(19) #9 E.W. BOTTOM	
F2817	28'-6"x16'-6"x30"	#9#6" E.W., T&B	MAT FOUNDATION
F3212	12'-0"x32'-0"x48"	#9#6" E.W., T&B	EXTEND SHORT BARS INTO ELEV. MAT
F3216	16'-0"x32'-0"x48"	#9#6" E.W., T&B	
F3512	12'-0"x35'-0"x48"	#9#6" E.W., T&B	
WF26	2'-6"x12" CONT.	(3) #4 CONT. W/#4#12" TRANSVERSE	
WF30	3'-0"x24" CONT.	(5) #4 CONT. W/#6#19" TRANSVERSE	
WF30LD	3'-0"x12" CONT.	(4) #4 CONT. W/#4#12" TRANSVERSE	4-#4 CONT. #4#18" TOP SEE 3/S3.2
WF36	3'-6"x12" CONT.	(5) #4 CONT. W/#5#16" TRANSVERSE	
WF40	4'-0"x24" CONT.	(5) #5 CONT. W/#5#12" TRANSVERSE	
WF120	12'-0"x24" CONT.	(13)#6 CONT. T&B W/#9#9" TOP AND #5#9" BOTTOM - TRANSVERSE	
WF62	6'-2"x12" CONT.	(9) #4 CONT. W/#4#12" TRANSVERSE	

FOOTING SCHEDULE NOTES:  
1. FOOTINGS WITH TOP & BOTTOM BARS SHALL HAVE ALL BAR ENDS HOOKED.

CONCRETE GRADE BEAM SCHEDULE						
MARK	SIZE		REINFORCING		STIRRUPS	
	W (INCH)	D (INCH)	BOTTOM BARS	TOP BARS	SIZE TYPE	SPACING (INCH) (SEE NOTE 1)
GB-1	48	36	(9)#10	(9)#10 TFL	5 SS	BAL#12
GB-2	96	48	(15)#9	(30)#10 TFL	5 D12 SS	906" O.C., FROM END OF CANT., BAL#12
GB-3	16	24	(3)#7	(3)#6	4 S6	BAL#10
GB-4	48	30	(5)#8	(8)#10	5 D12 D12	6" # CANTILEVER BAL#12
GB-5	24	24	(5)#9	(5)#9	4	6" # 10 E.E. BAL#12

CONCRETE BEAM SCHEDULE NOTES:  
1. x@x" INDICATES NO. OF STIRRUPS @ NOTED SPACING.  
2. FOR TYP. GRADE BEAM DETAILS, SEE 3/S2.1.

LIGHT GAGE METAL WALL STUD SCHEDULE					
	MAX. HT.	WIDTH	MIN. FLANGE WIDTH	MIN. GAGE	MAX. SPACING
EXTERIOR	16'-8"	6"	2"	12GA.	12"
	16'-8"	8"	2"	14GA.	16"
	22'-0"	10"	2"	16GA.	16"
	22'-0"	12"	2"	18GA.	16"
INTERIOR (BETWEEN BUILDINGS)	22'-0"	6"	1 5/8"	18GA.	16"

NOTE:  
ALL LIGHT GAGE SHALL BE MINIMUM 50 KSI STEEL.

CAISSON SCHEDULE			
CAISSON MARK	SHAFT DIA	REINFORCING STEEL	REMARKS
C24	2'-0"	7-#6 W/ #3 TIES @ 12" O.C.	FULL LENGTH VERT. REINF. UNLESS NOTED * ON PLAN.
C36	3'-0"	7-#8 W/ #3 TIES @ 16" O.C.	
C42	3'-6"	7-#9 W/ #4 TIES @ 18" O.C.	
C48	4'-0"	7-#10 W/ #4 TIES @ 18" O.C.	
C54	4'-6"	9-#10 W/ #4 TIES @ 18" O.C.	
C60	5'-0"	9-#11 W/ #4 TIES @ 18" O.C.	

- NOTES:
1. END BEARING = 100 KSF (ALLOWABLE)
  2. SKIN FRICTION = 0.5 KSF (ALLOWABLE)
  3. SEE TYPICAL DRILLED PIER (CAISSON) DETAILS ON DWGS. S2.1 FOR ADDITIONAL INFORMATION.
  4. CAISSONS ARE CENTERED ON COLUMN LINES UNLESS NOTED OTHERWISE.

MASONRY WALL LINTEL SCHEDULE			
MARK	SIZE	SPAN	REMARKS
P	8" DEEP PRECAST CONCRETE LINTEL REINFORCED WITH 1-#4 TOP AND BOTTOM FOR EACH 4" OF WALL THICKNESS.	UP TO 5'-0" CLEAR	AT 6" THICK WALLS PROVIDE 1-#5 TOP & BOTTOM
L-1	1-L 4"x3 1/2"x5/16"	UP TO 4'-0" CLEAR	1-L FOR EACH 4" THICKNESS OF MASONRY
L-2	1-L 5"x3 1/2"x5/16"	4'-0" TO 6'-0" CLEAR	D.O.
L-3	1-L 6"x3 1/2"x5/16"	6'-0" TO 8'-0" CLEAR	D.O.
L-4	W8x18 + SUSPENDED PLATE	SEE PLAN	

NOTES:

1. ALL LINTELS SHALL HAVE 6" MINIMUM BEARING AT EACH END.
2. PROVIDE LINTELS OVER ALL OPENINGS PER ABOVE, INCLUDING DOORS, WINDOWS, DUCTS, LOUVERS, RECESSES, AND OTHER OPENINGS, UNLESS SHOWN OR NOTED OTHERWISE ON STRUCTURAL OR ARCHITECTURAL DRAWINGS.
3. FOR DIMENSIONS AND LOCATION OF OPENINGS, SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.
4. WRAP END OF LINTELS IN BUILDING PAPER AT CONTROL JOINTS.
5. SUSPENDED PLATES SHALL BE 5/16"x1" LESS THAN NOMINAL WALL THICKNESS. HANGER PLATES SHALL BE 1/4"x8" LESS THAN NOMINAL WALL THICKNESS OR 4" MINIMUM AND SHALL BE SPACED @ 32" MAXIMUM ON CENTER AND 8" MAXIMUM FROM JAMB. STOP SUSPENDED PLATE 1/2" FROM MASONRY JAMBS.
6. ALL EXTERIOR LINTELS SHALL BE HOT DIPPED GALVANIZED.



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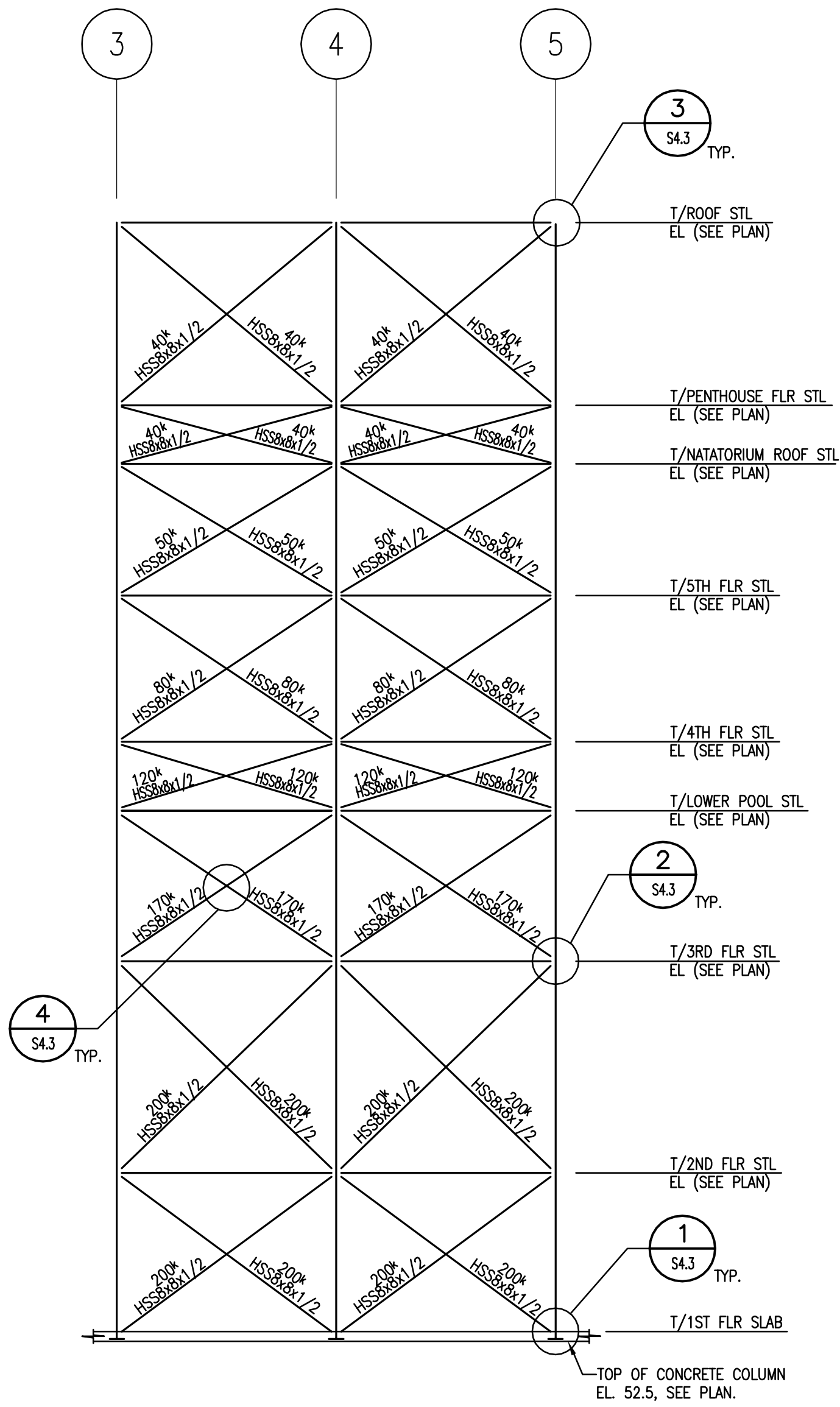
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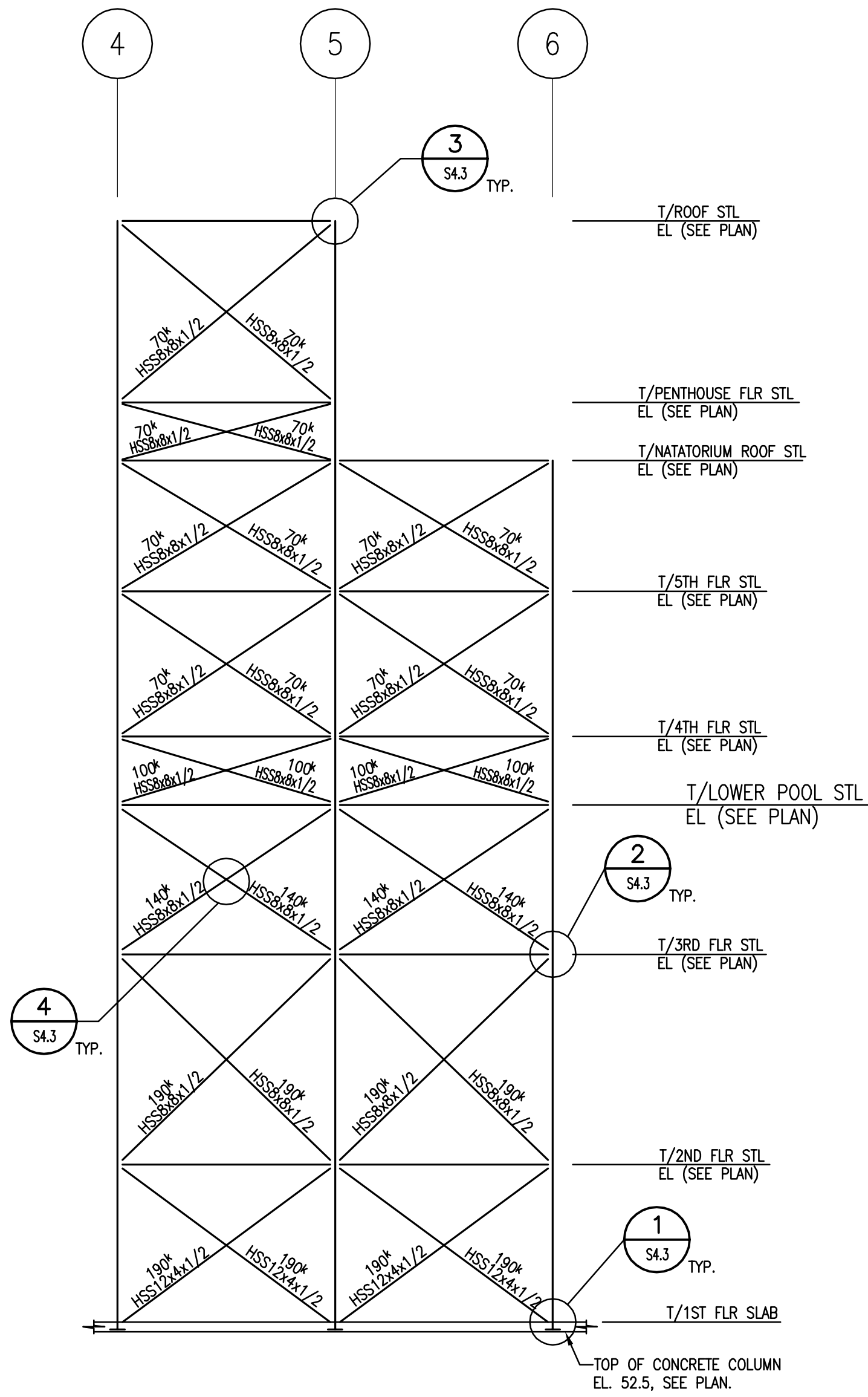
## S4.2





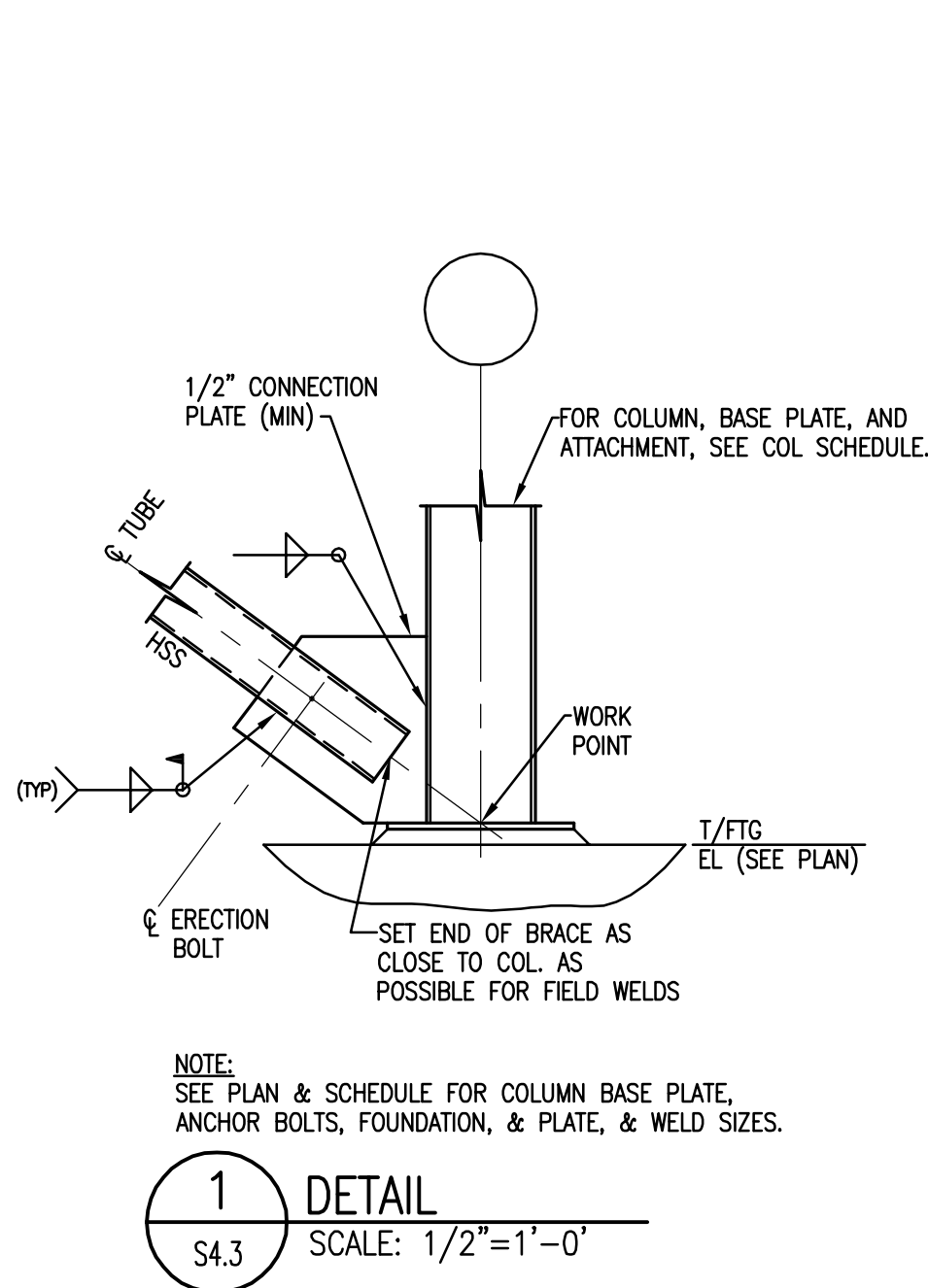
- NOTES:
1. COLUMN SPLICES SHALL BE DESIGNED FOR TENSION AND COMPRESSION LOADING.
  2. FOR PROPOSED SPLICE LOCATIONS, SEE COLUMN SCHEDULE ON S4.2.
  3. PRIOR TO FABRICATION, SUBMIT CONNECTION DESIGN CALCULATIONS TO ARCHITECT OF RECORD, SIGNED, AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND.
  4. SEE PLANS AND SCHEDULES FOR COLUMN AND BEAM SIZES.
  5. FORCES SHOWN ON DRAWING ARE SERVICE LOAD TENSION FORCES IN KIPS. 33% STRESS INCREASES IN CONNECTION DESIGN ARE NOT PERMITTED. ALL FORCES SHOWN ON ELEVATION DO NOT OCCUR SIMULTANEOUSLY.
  6. CONNECTIONS SHOULD BE DESIGNED FOR 2 DIAGONALS IN TENSION FOR LOADS FROM THE RIGHT DIRECTION AND/OR 2 DIAGONALS FOR LOADS FROM THE LEFT DIRECTION.

FRAME 1 ON COLUMN LINE (B)  
NOT TO SCALE

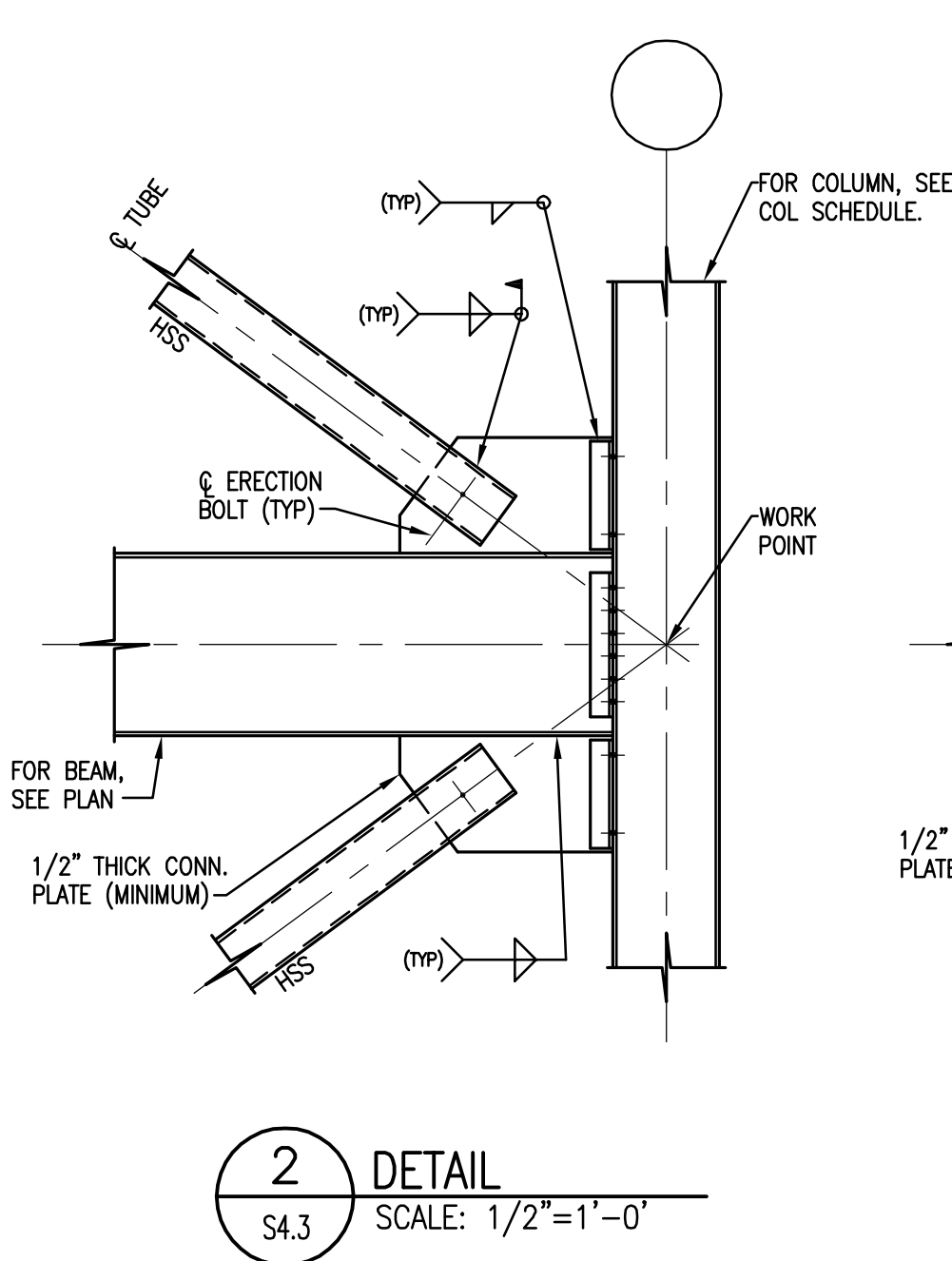


- NOTES:
1. COLUMN SPLICES SHALL BE DESIGNED FOR TENSION AND COMPRESSION LOADING.
  2. FOR PROPOSED SPLICE LOCATIONS, SEE COLUMN SCHEDULE ON S4.2.
  3. PRIOR TO FABRICATION, SUBMIT CONNECTION DESIGN CALCULATIONS TO ARCHITECT OF RECORD, SIGNED, AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND.
  4. SEE PLANS AND SCHEDULES FOR COLUMN AND BEAM SIZES.
  5. FORCES SHOWN ON DRAWING ARE SERVICE LOAD TENSION FORCES IN KIPS. 33% STRESS INCREASES IN CONNECTION DESIGN ARE NOT PERMITTED. ALL FORCES SHOWN ON ELEVATION DO NOT OCCUR SIMULTANEOUSLY.
  6. CONNECTIONS SHOULD BE DESIGNED FOR 2 DIAGONALS IN TENSION FOR LOADS FROM THE RIGHT DIRECTION AND/OR 2 DIAGONALS FOR LOADS FROM THE LEFT DIRECTION.

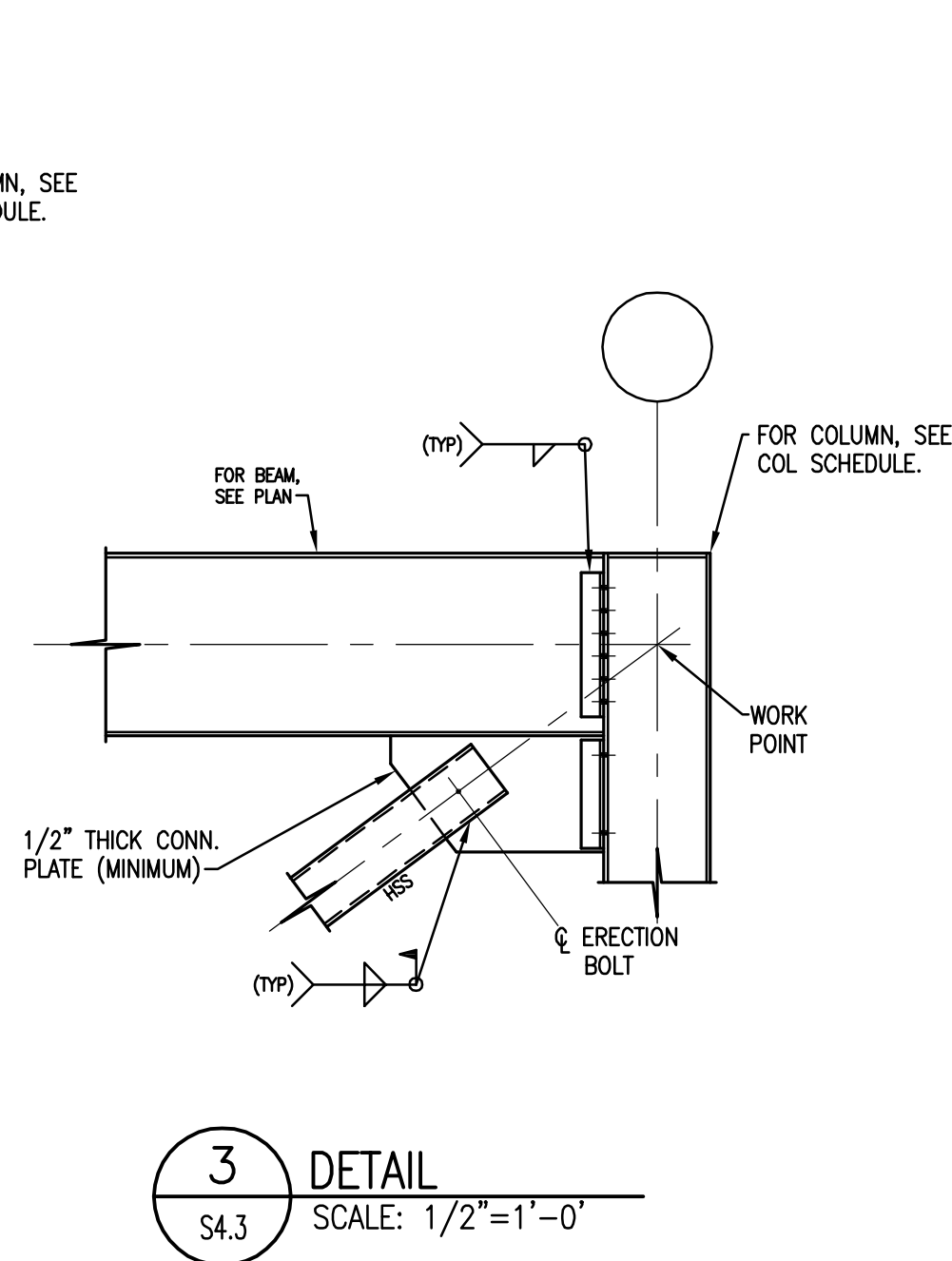
FRAME 2 ON COLUMN LINE (G)  
NOT TO SCALE



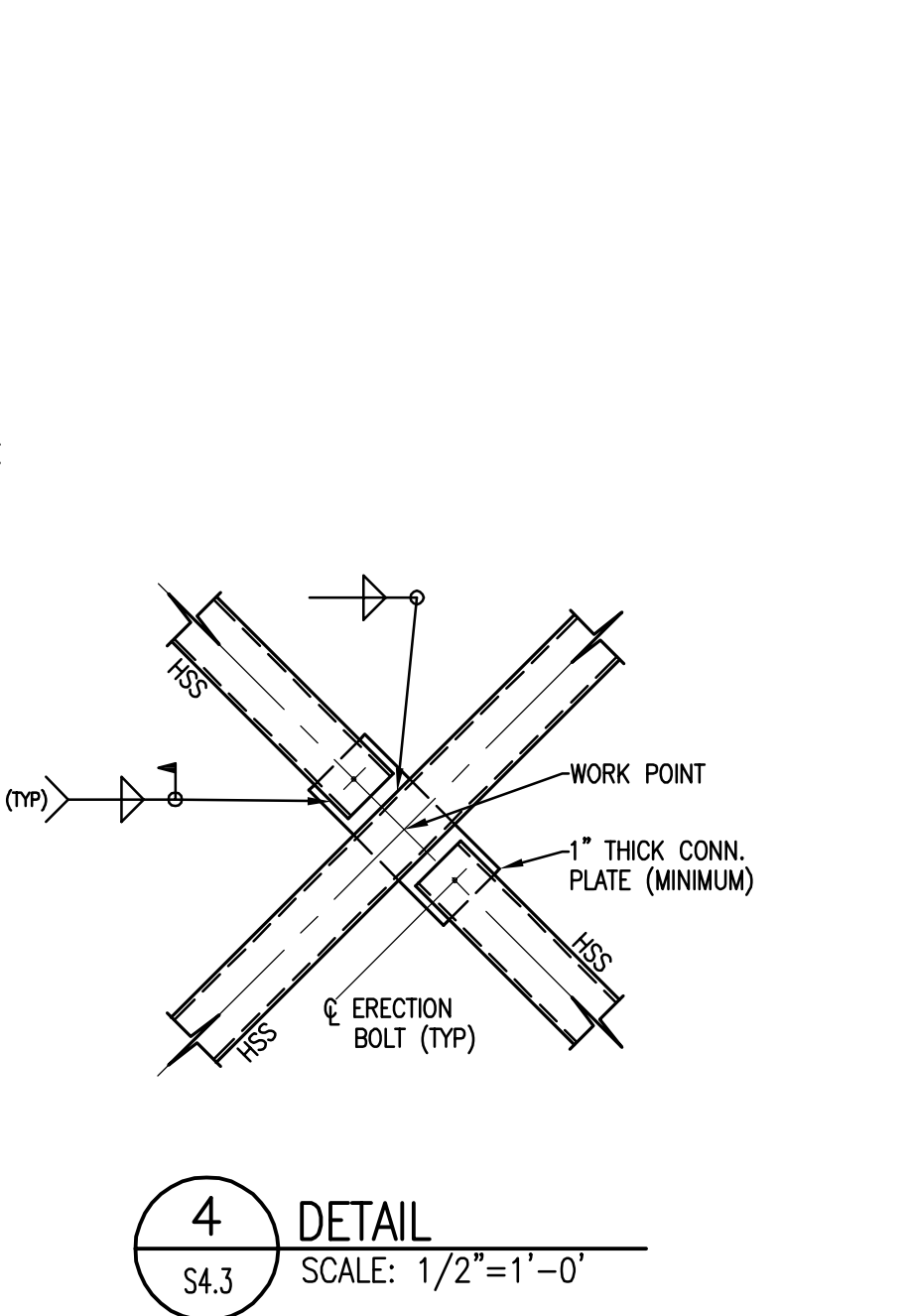
1 DETAIL  
SCALE: 1/2"=1'-0"



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



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

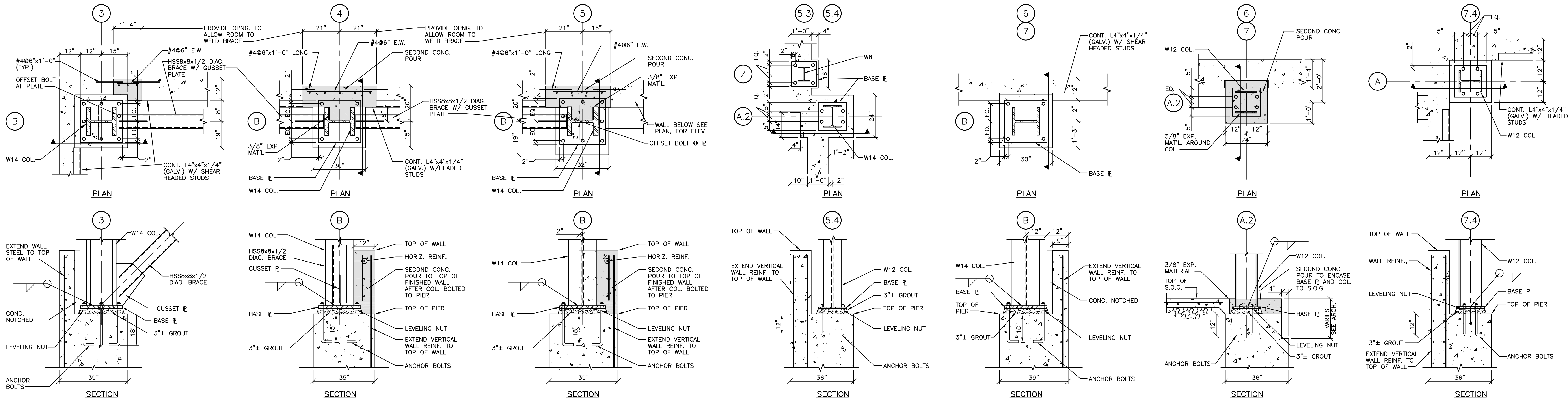


4 DETAIL  
SCALE: 1/2"=1'-0"

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COLUMN BASE DETAIL — B-3

COLUMN BASE DETAIL — B-4

COLUMN BASE DETAIL — B-5

COLUMN BASE DETAIL — A-5.4

COLUMN BASE DETAIL — B-6, B-7

COLUMN BASE DETAIL — A.2-6, A.2-7

COLUMN BASE DETAIL — A-7.4

1 DETAIL  
S4.4 SCALE: 1/2"=1'-0"

2 DETAIL  
S4.4 SCALE: 1/2"=1'-0"

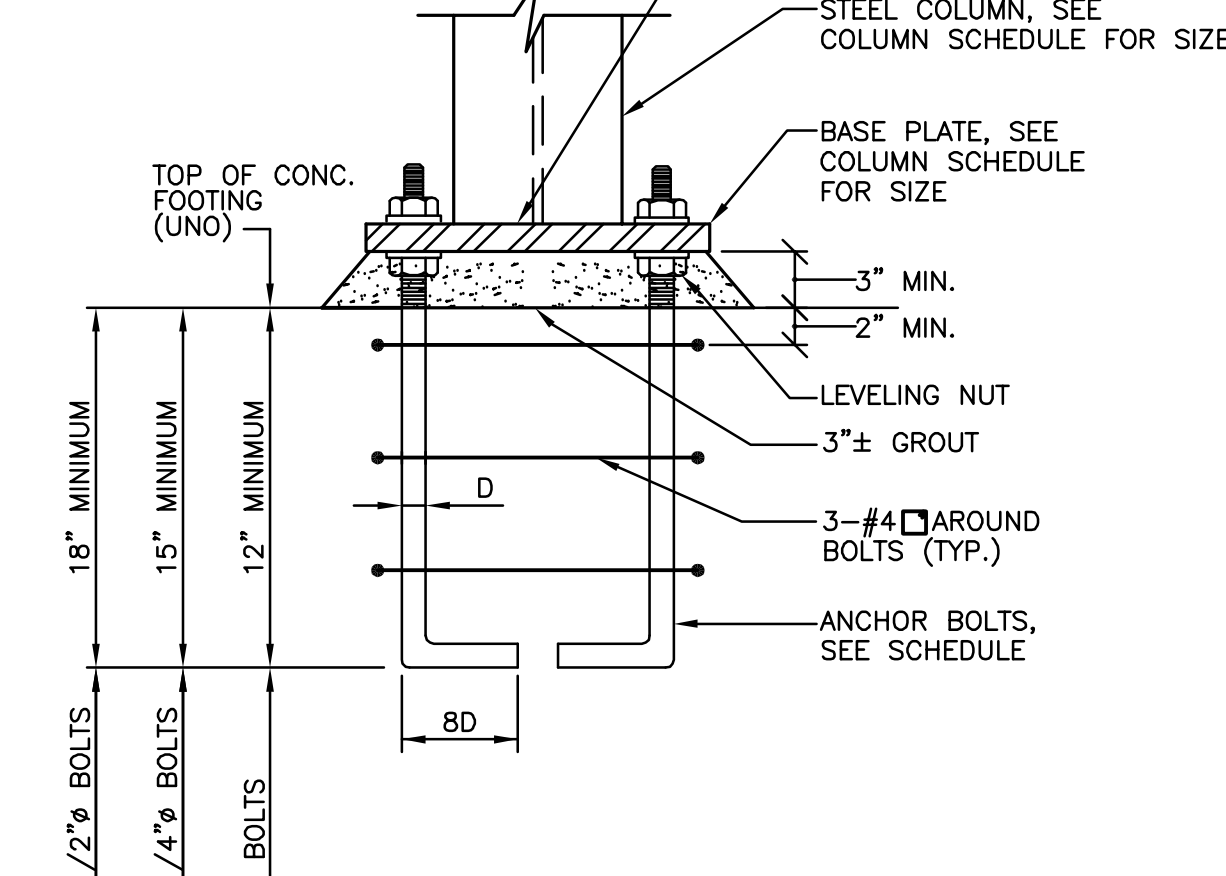
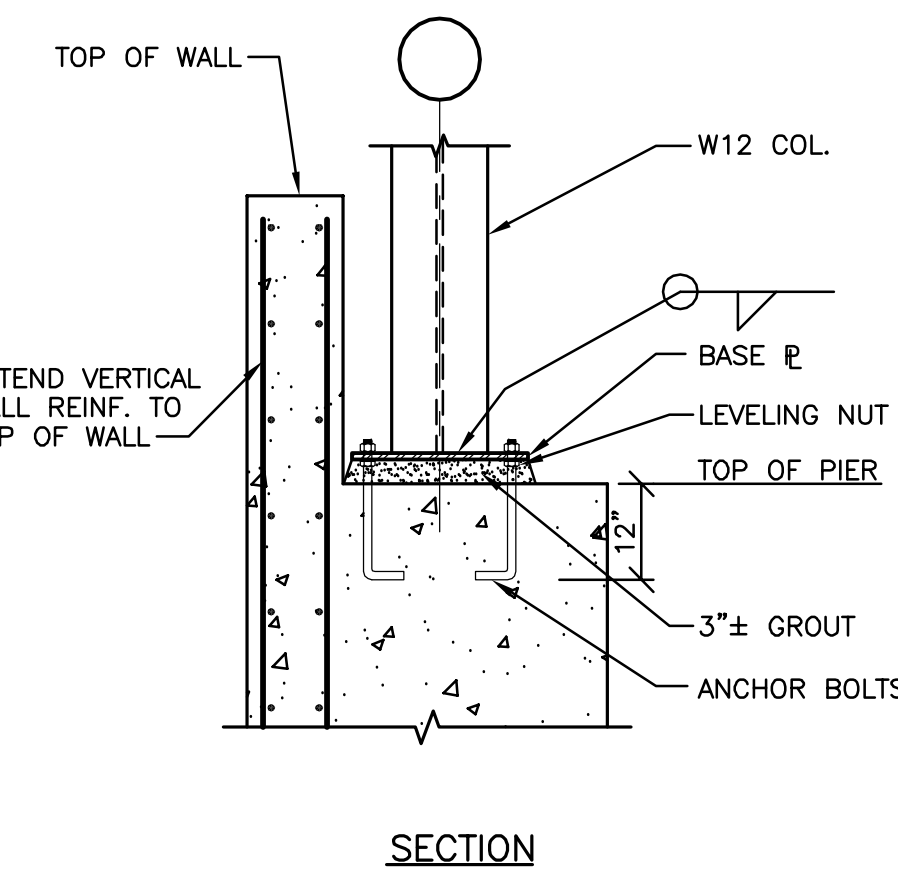
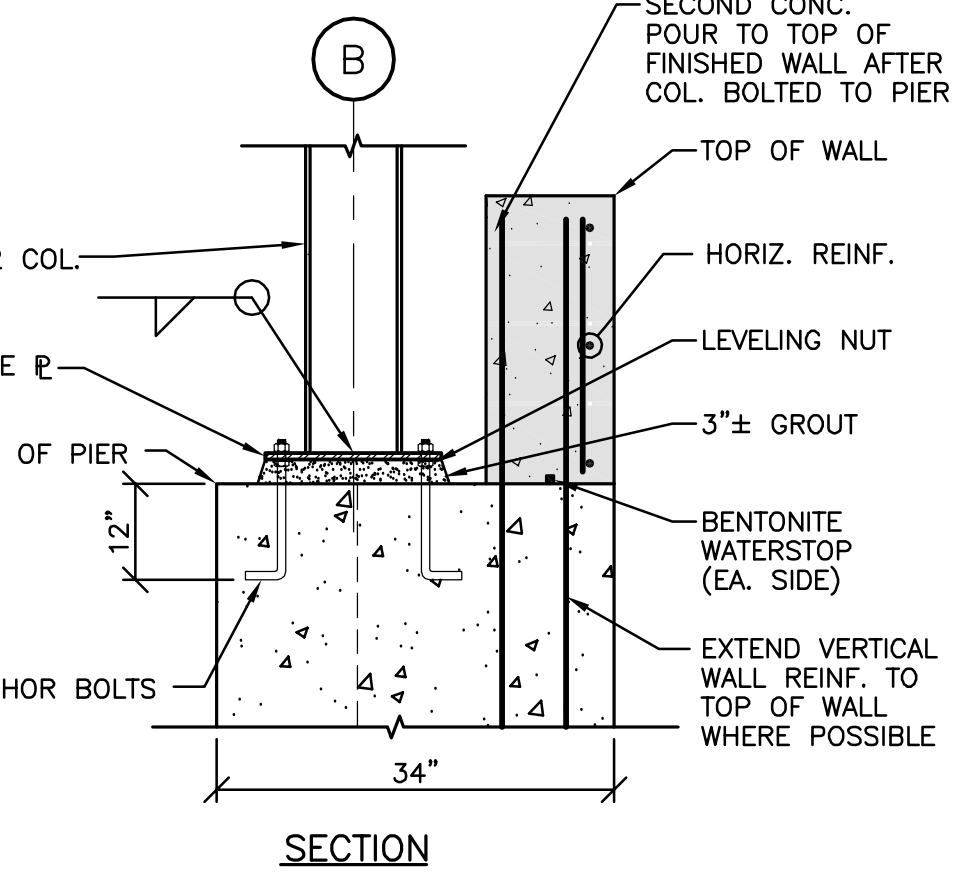
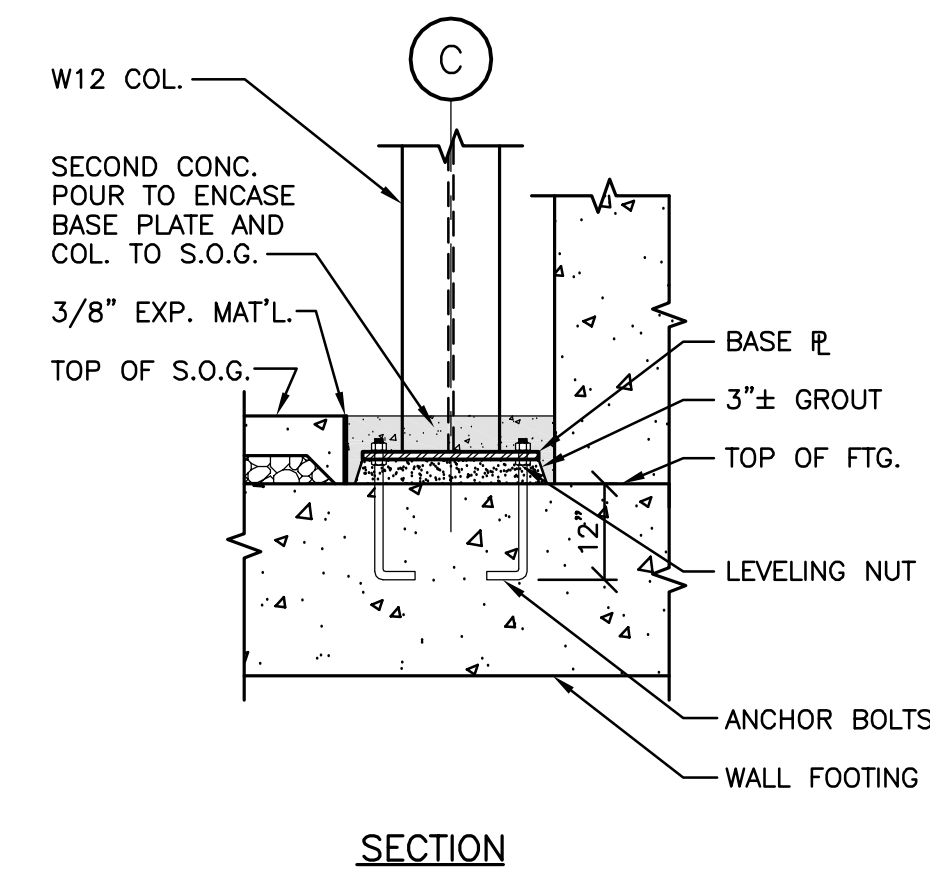
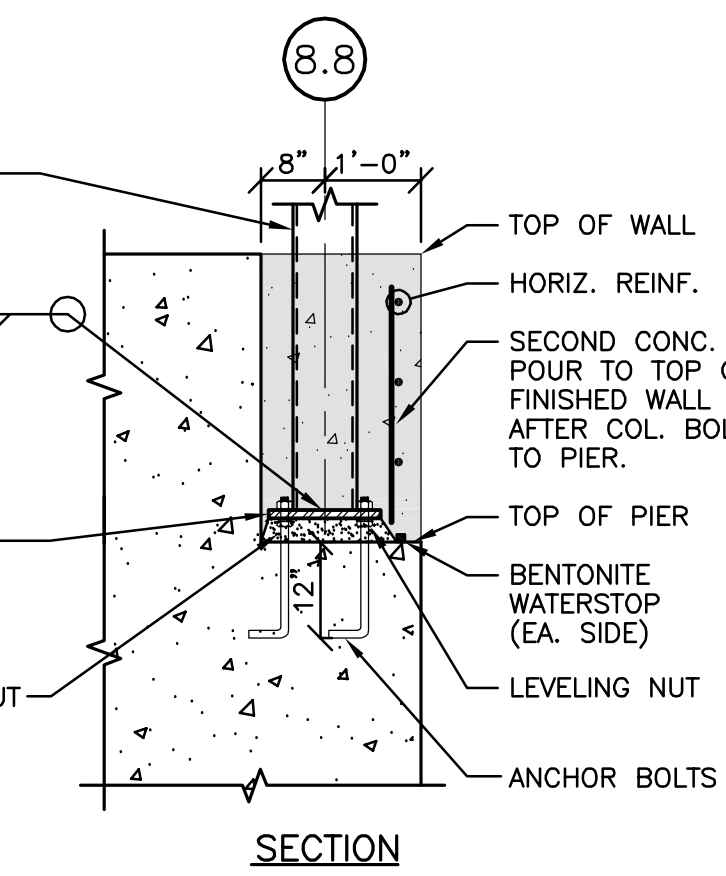
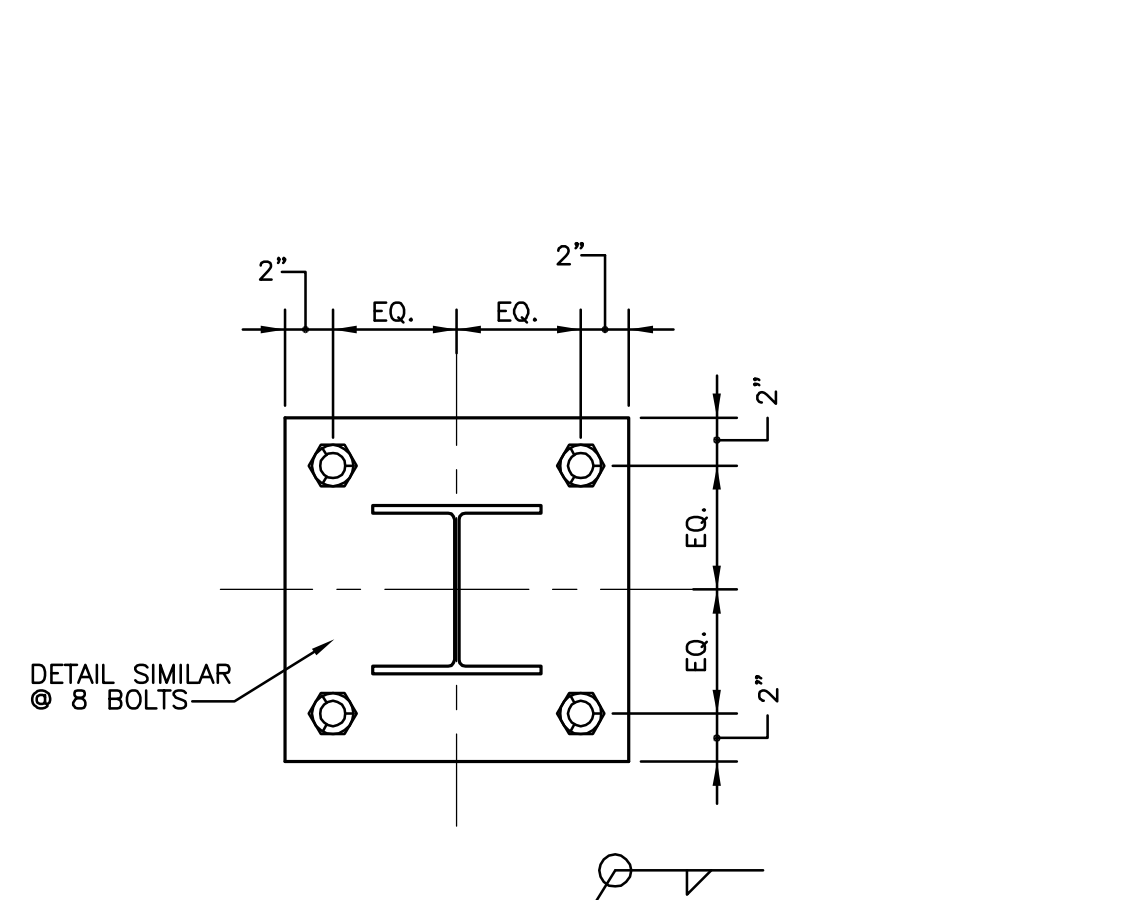
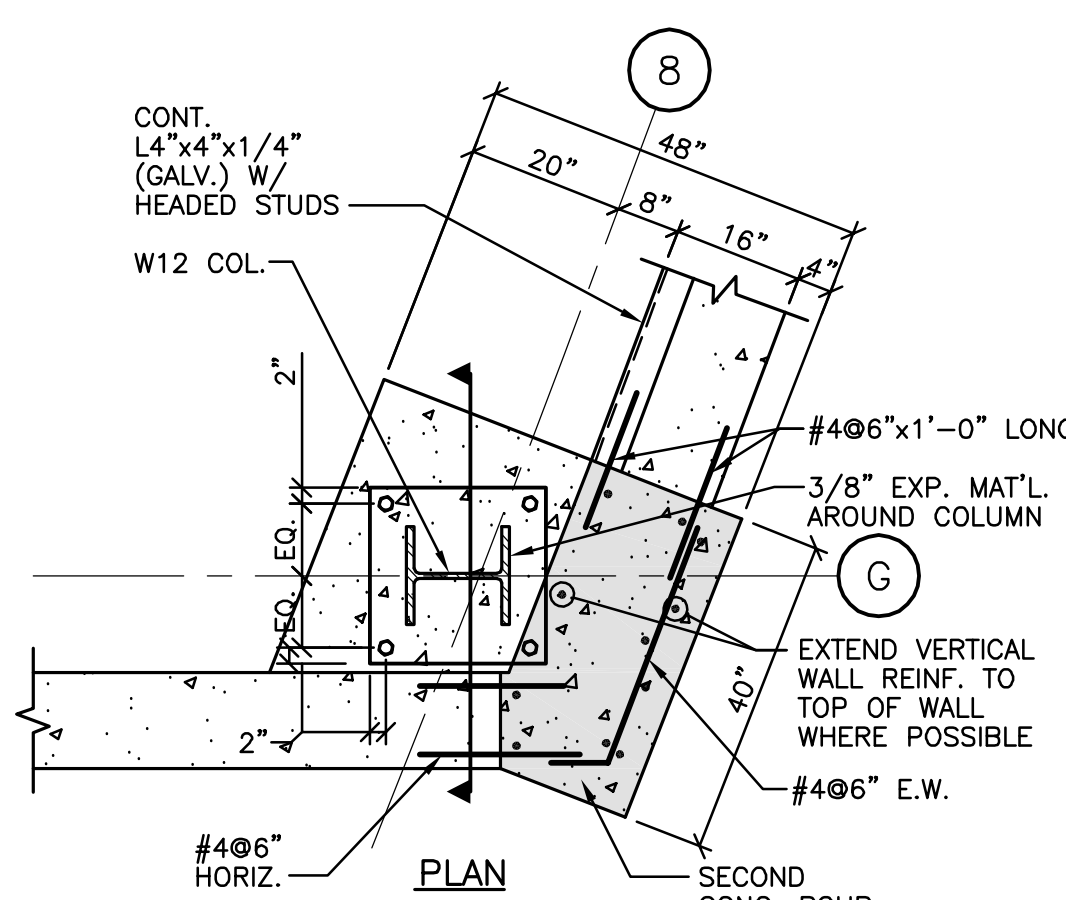
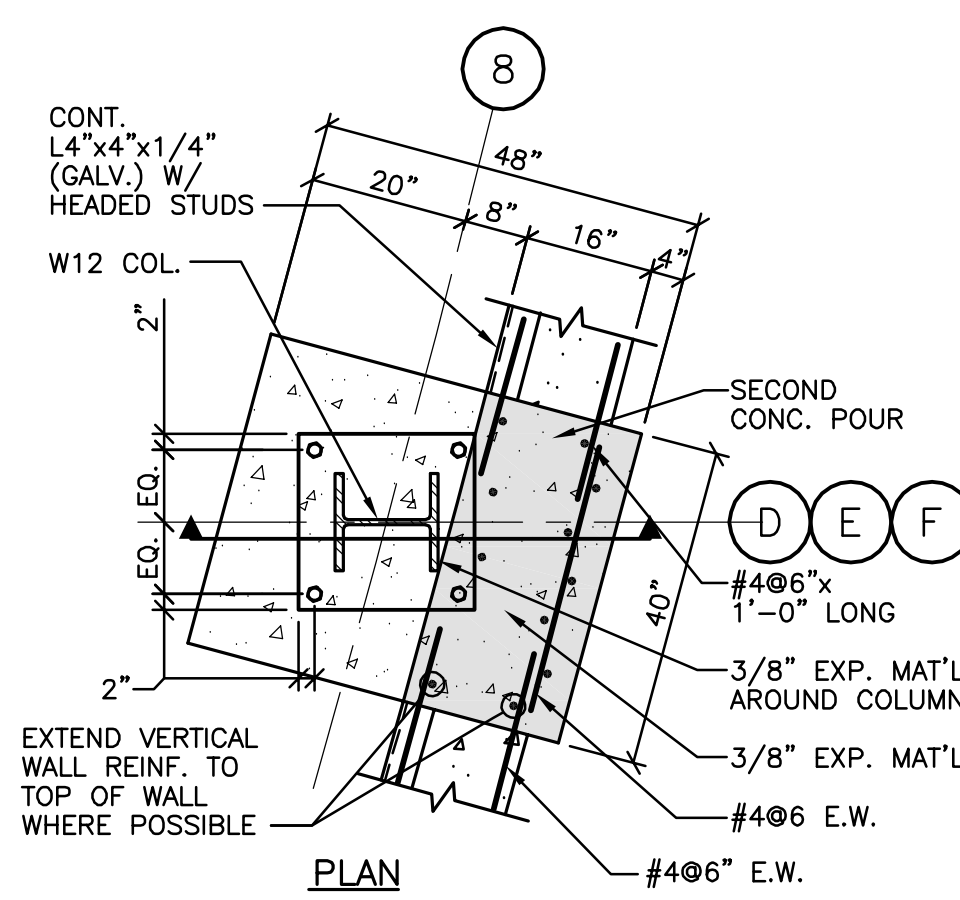
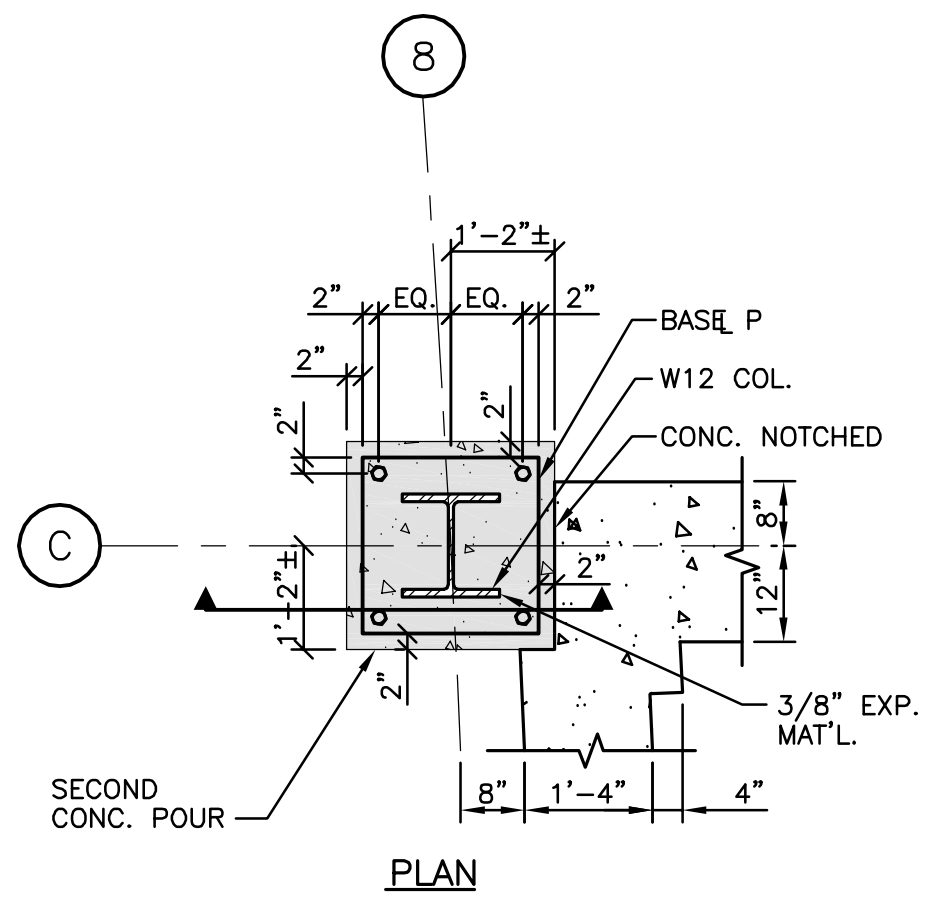
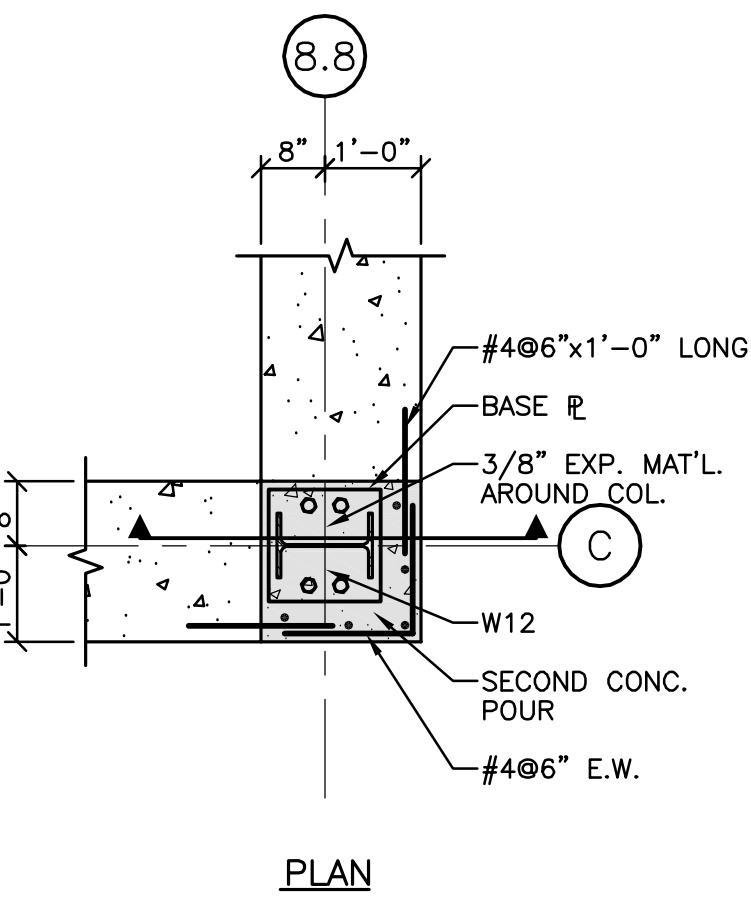
3 DETAIL  
S4.4 SCALE: 1/2"=1'-0"

4 DETAIL  
S4.4 SCALE: 1/2"=1'-0"

5 DETAIL  
S4.4 SCALE: 1/2"=1'-0"

6 DETAIL  
S4.4 SCALE: 1/2"=1'-0"

7 DETAIL  
S4.4 SCALE: 1/2"=1'-0"



COLUMN BASE DETAIL — C-9.7

COLUMN BASE DETAIL — C-8

COLUMN BASE DETAIL — D-8, E-8, F-8

COLUMN BASE DETAIL — G-8

TYPICAL BOLT COLUMN BASE DETAIL, U.N.O.

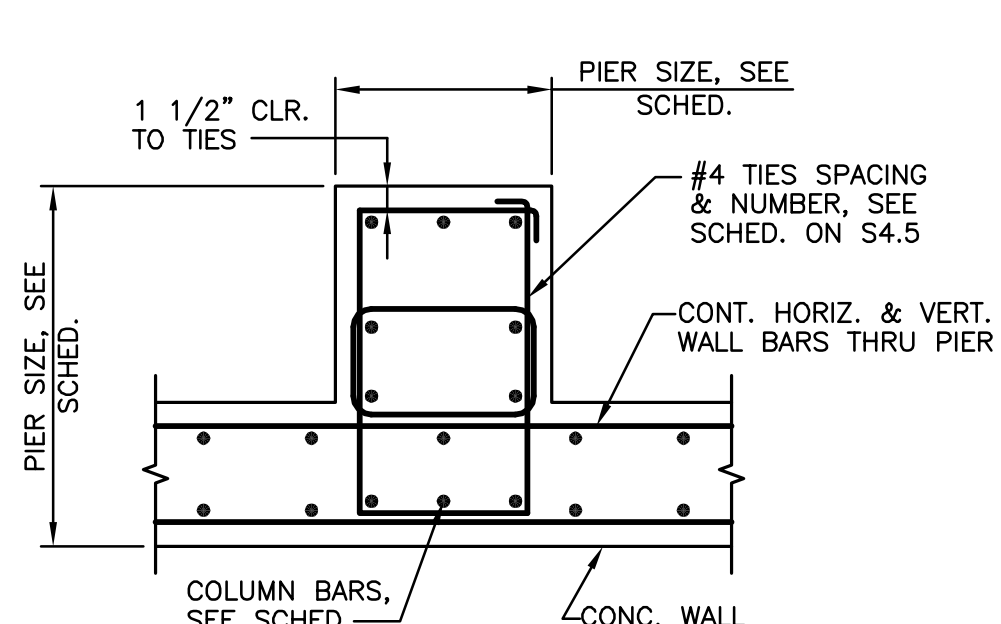
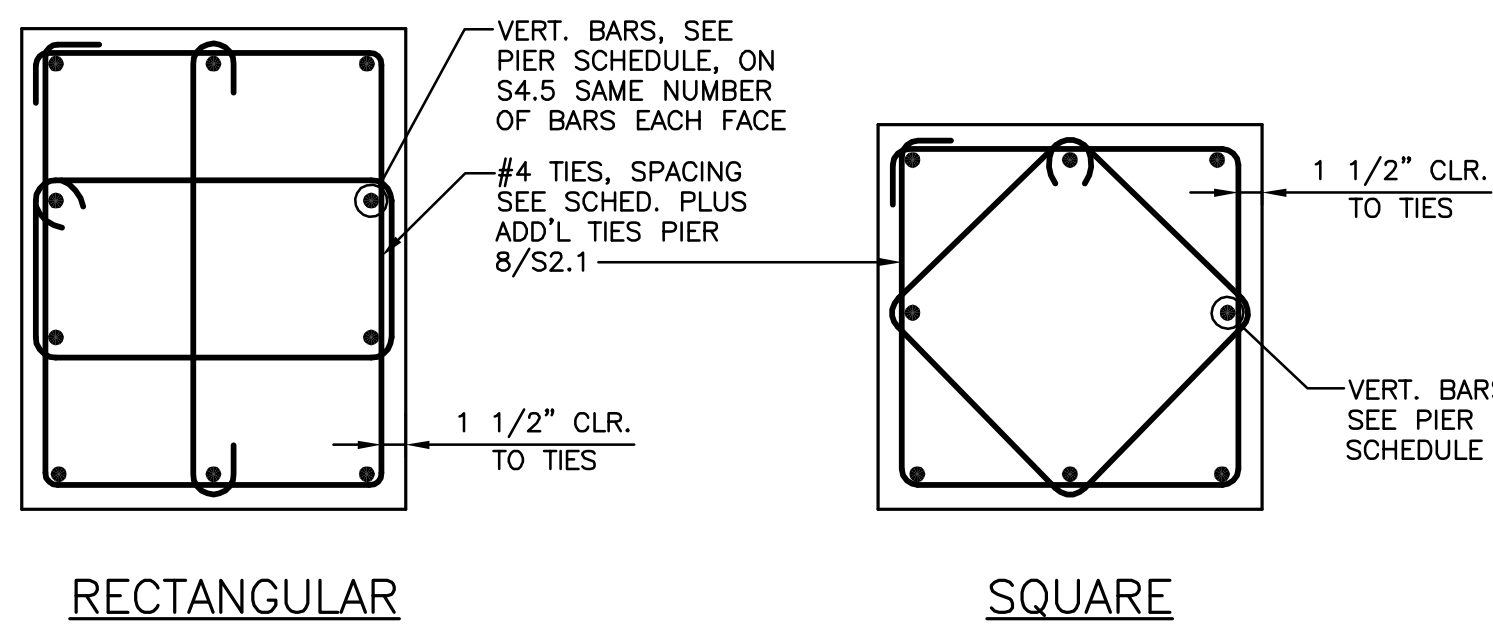
8 DETAIL  
S4.4 SCALE: 1/2"=1'-0"

9 DETAIL  
S4.4 SCALE: 1/2"=1'-0"

10 DETAIL  
S4.4 SCALE: 1/2"=1'-0"

11 DETAIL  
S4.4 SCALE: 1/2"=1'-0"

12 DETAIL  
S4.4 NOT TO SCALE



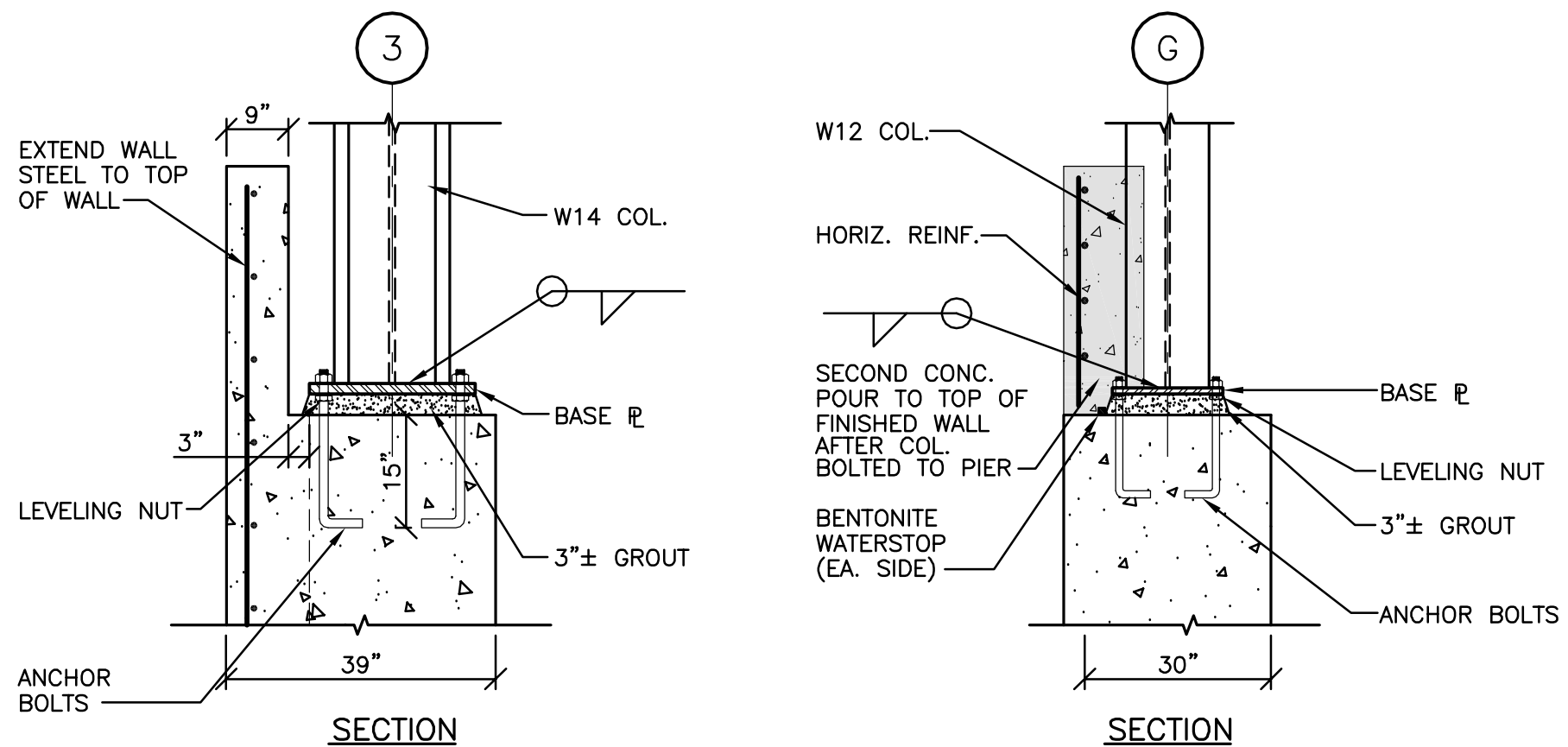
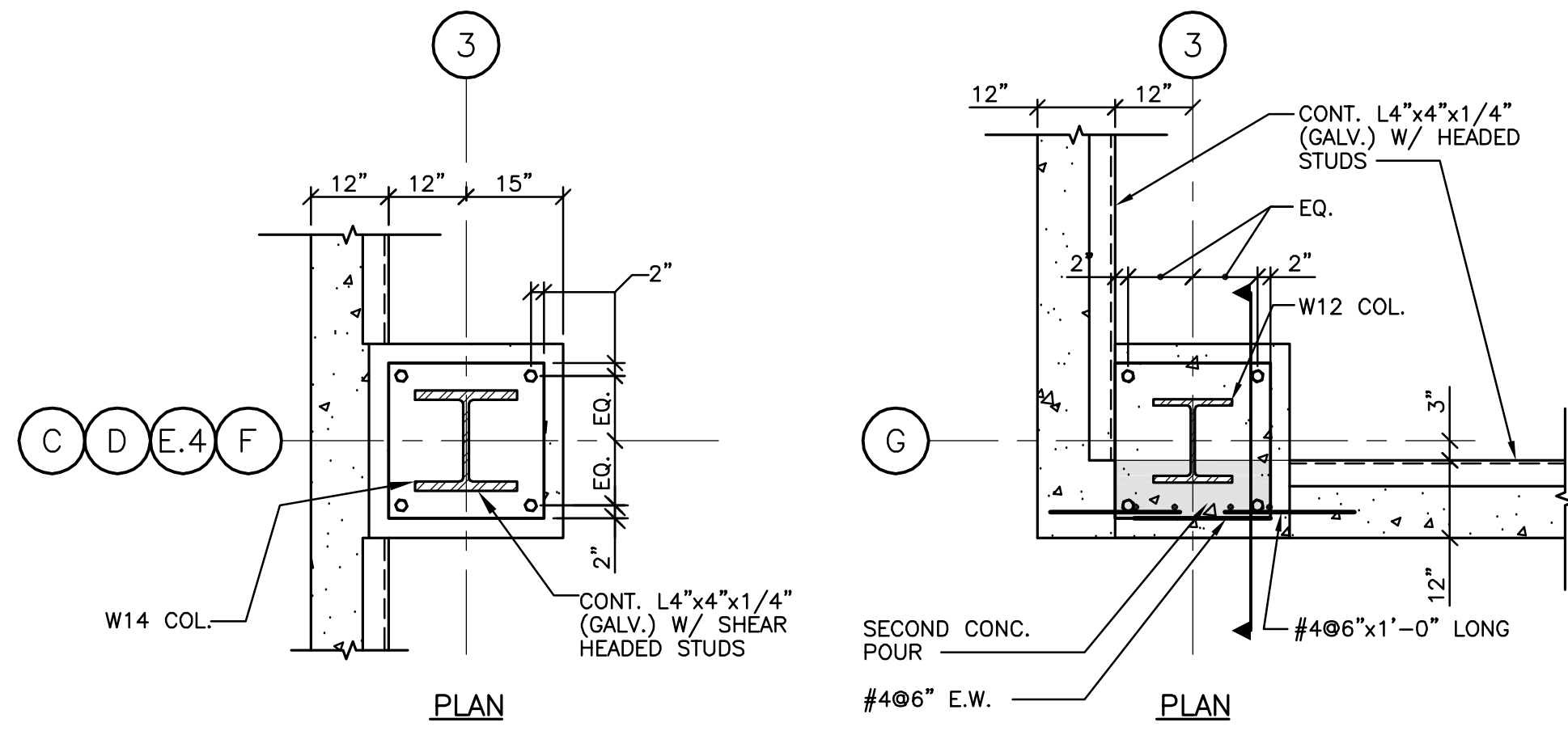
14 CONCRETE PIERS DETAIL  
S4.4 NOT TO SCALE

15 DETAIL  
S4.4 SCALE: 3/4"=1'-0"

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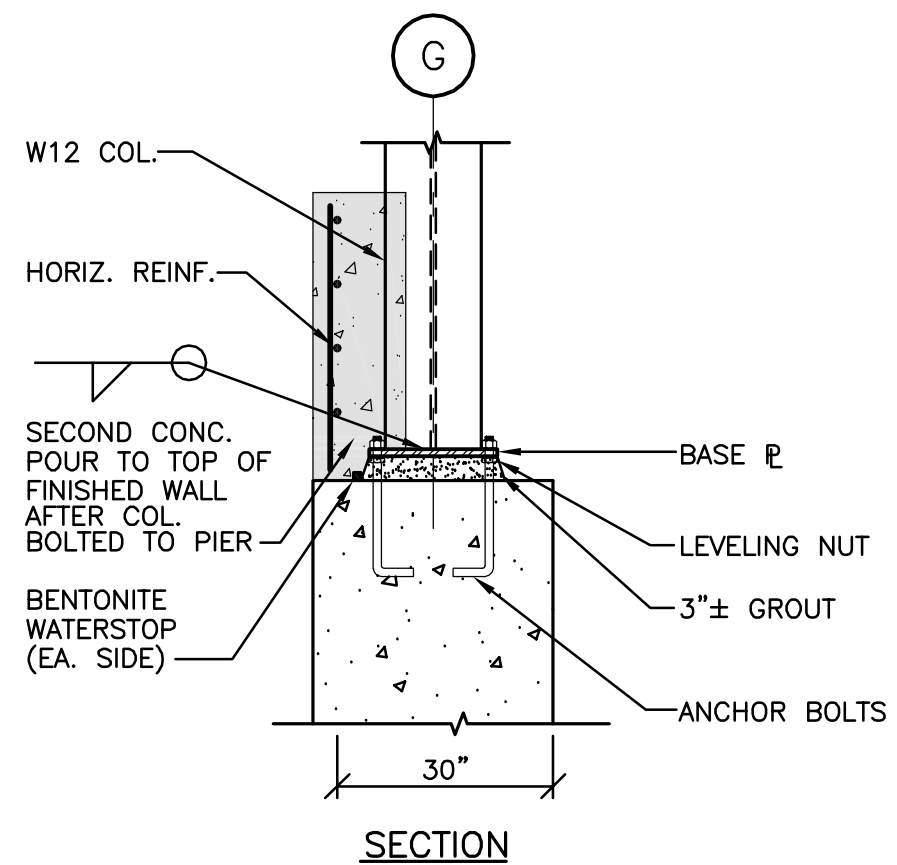
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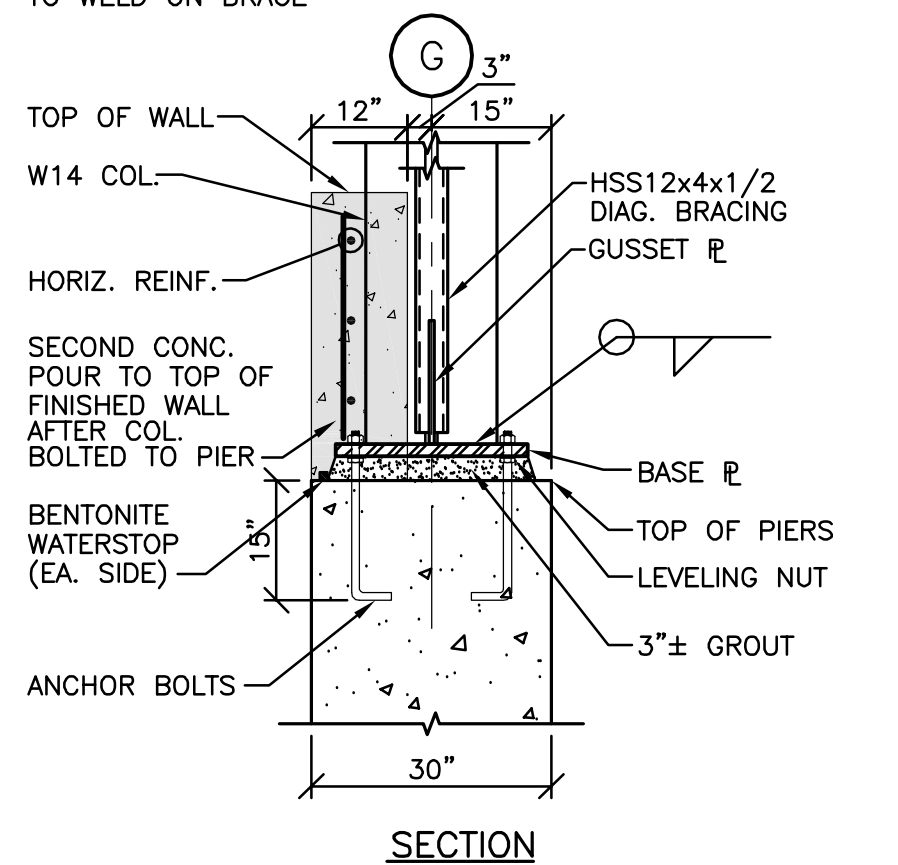
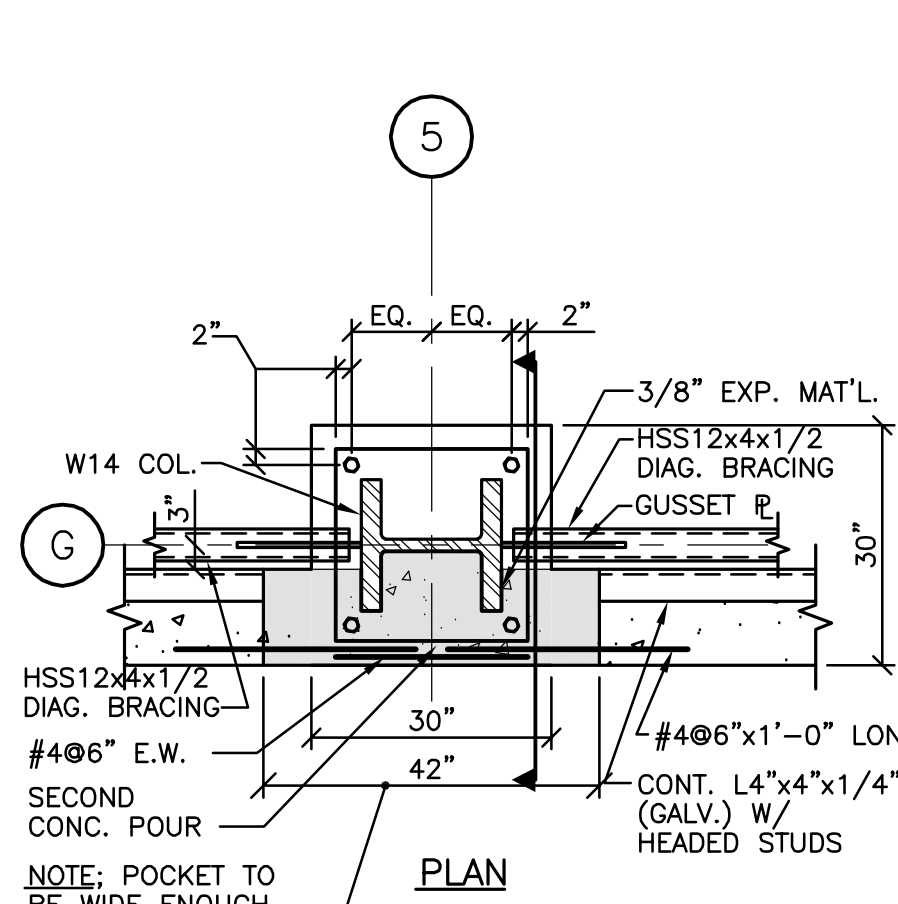
COLUMN BASE DETAIL  
— C-3, D-3, E.4-3, F-3

1 DETAIL  
S4.5 SCALE: 1/2"=1'-0"



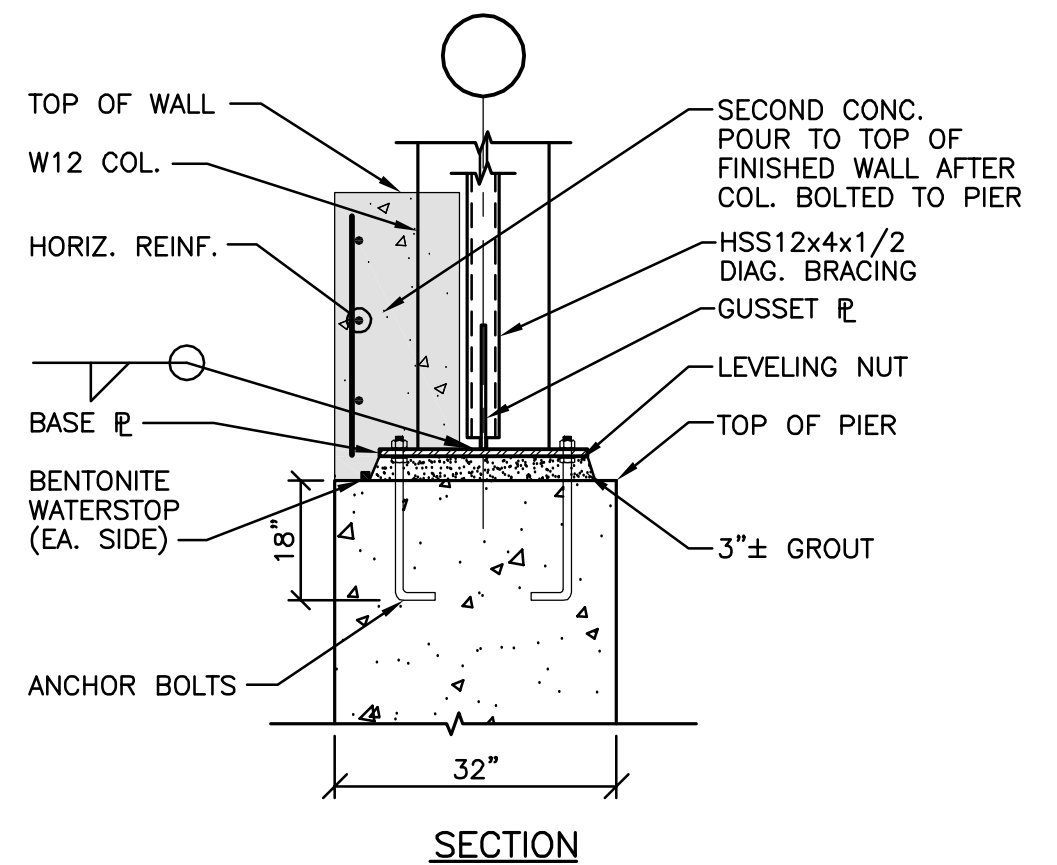
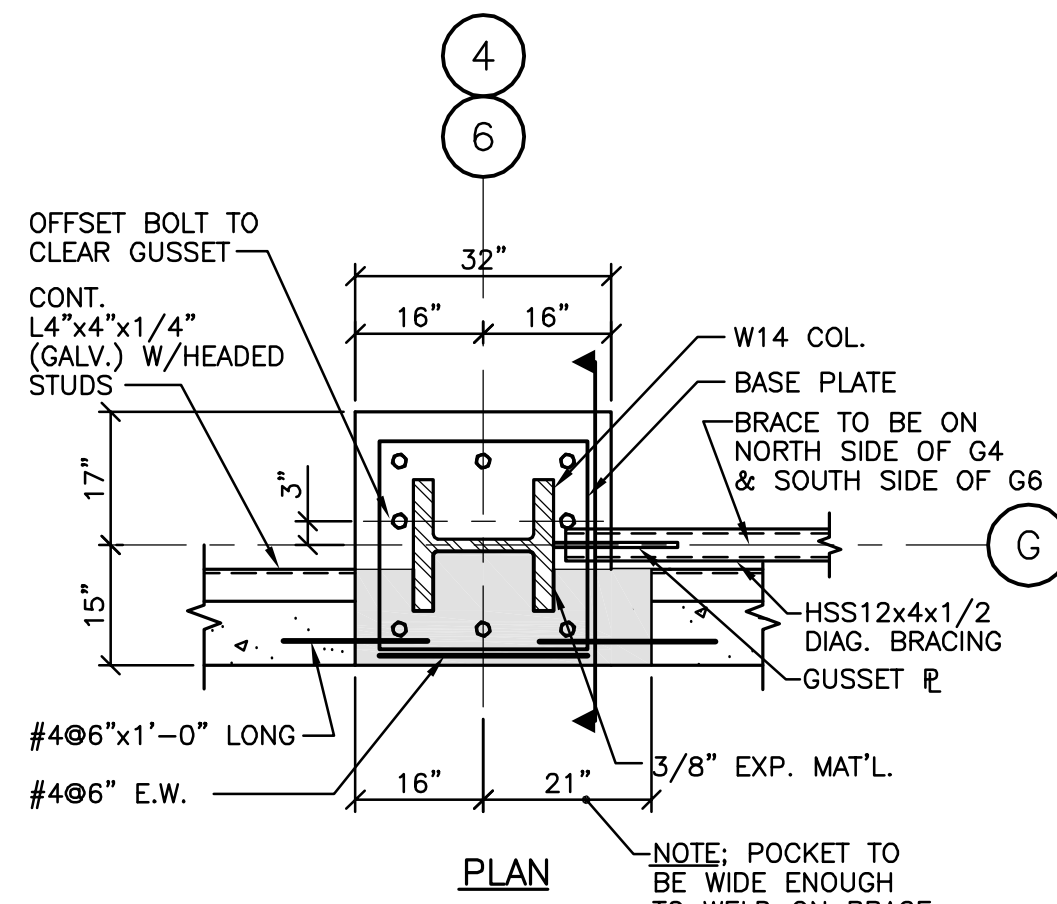
COLUMN BASE DETAIL — G-3

2 DETAIL  
S4.5 SCALE: 1/2"=1'-0"



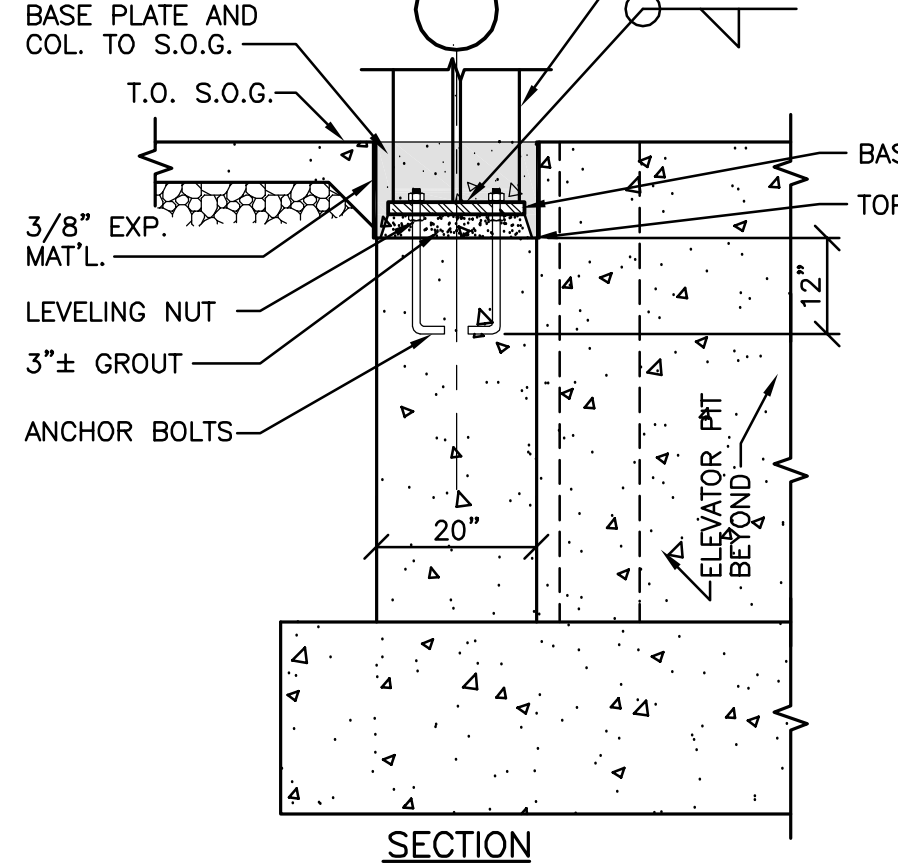
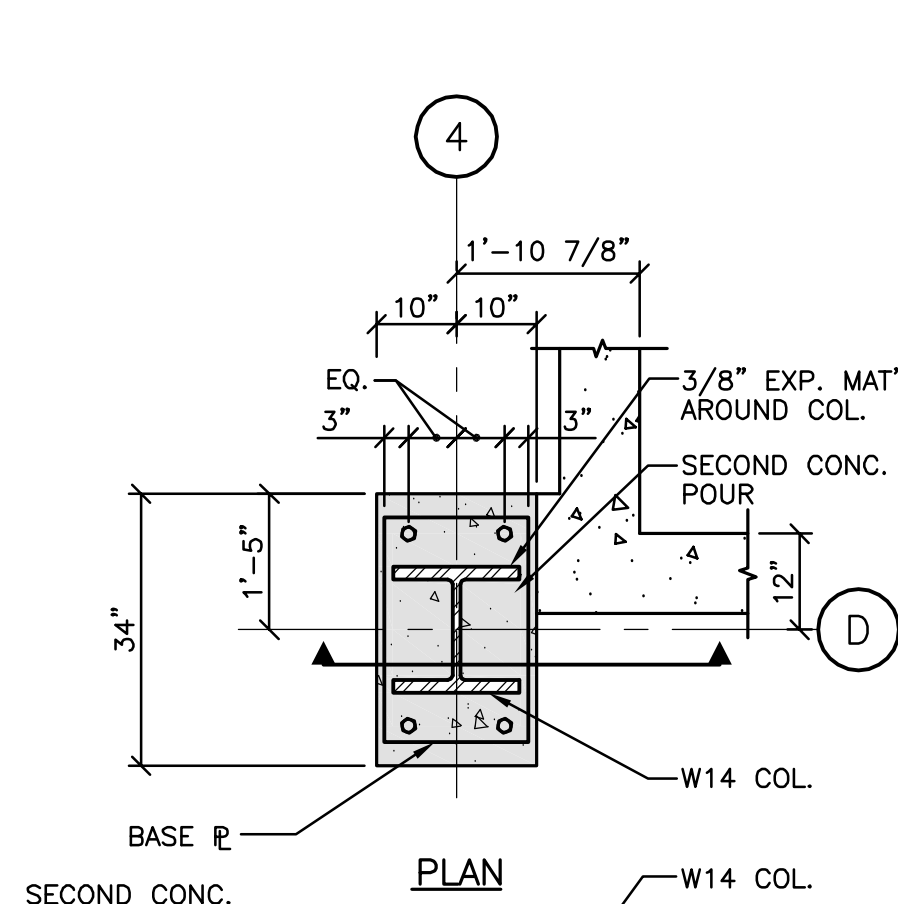
COLUMN BASE DETAIL  
— G-5

3 DETAIL  
S4.5 SCALE: 1/2"=1'-0"



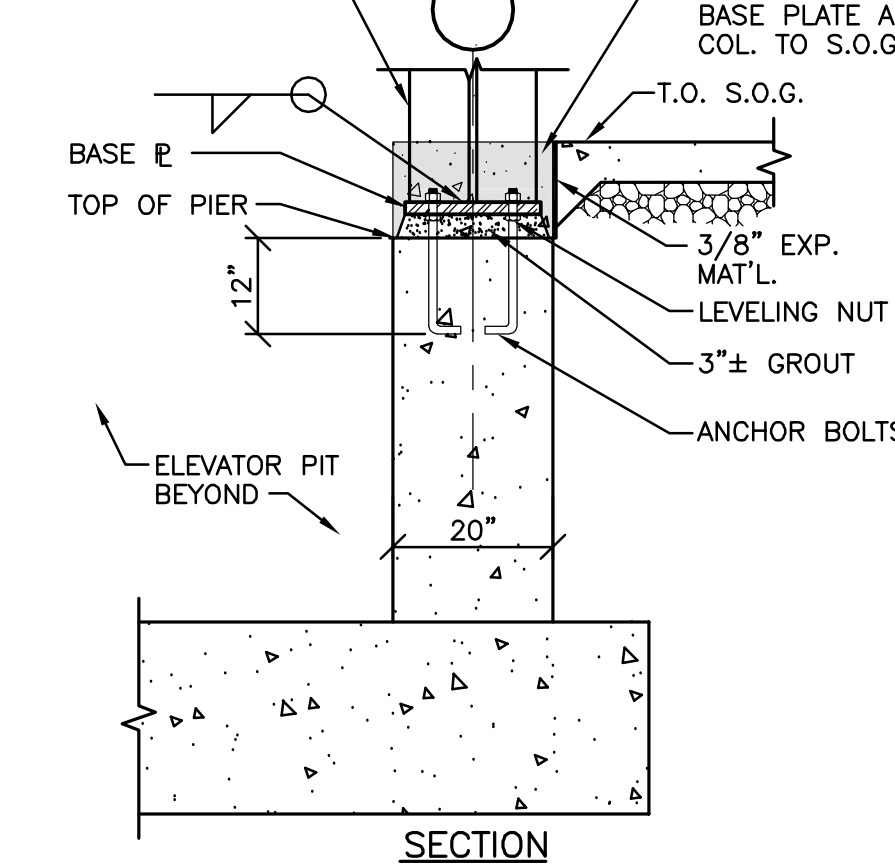
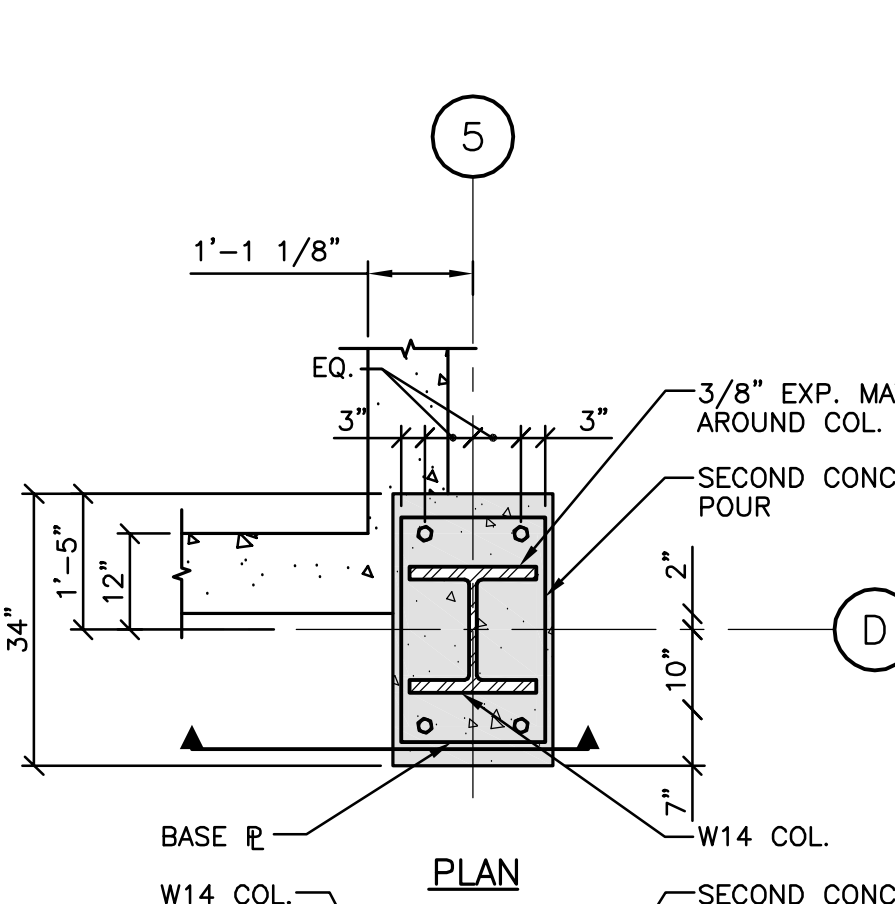
COLUMN BASE DETAIL — G-4, G-6

4 DETAIL  
S4.5 SCALE: 1/2"=1'-0"



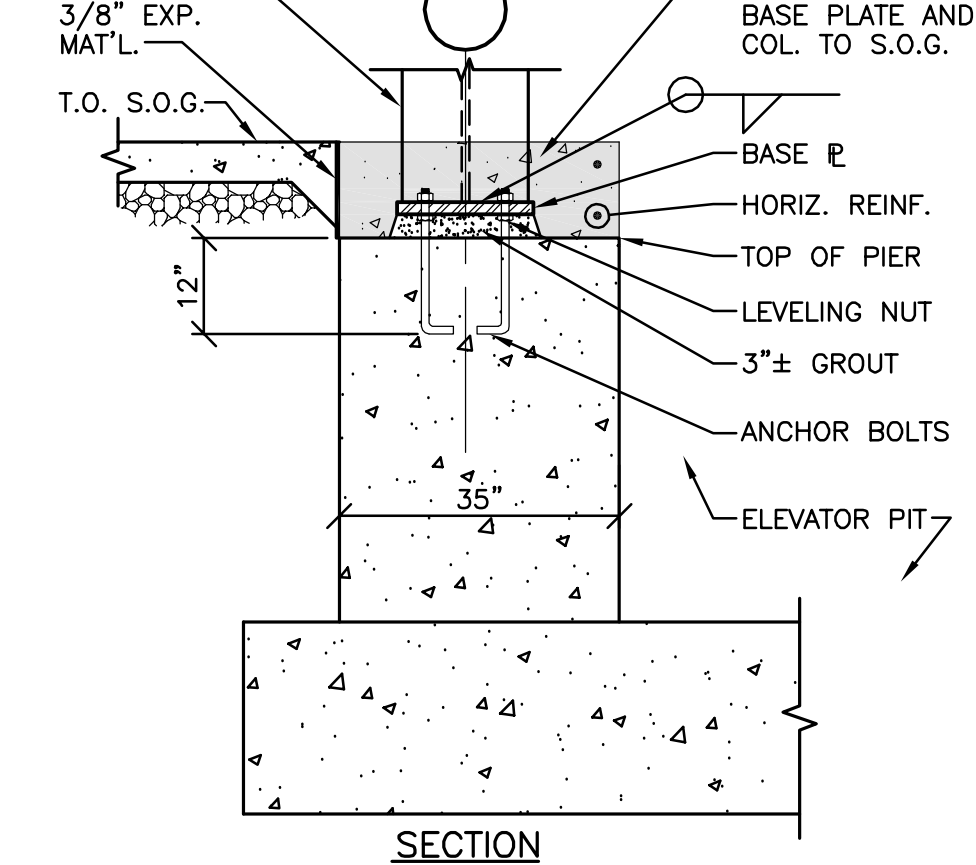
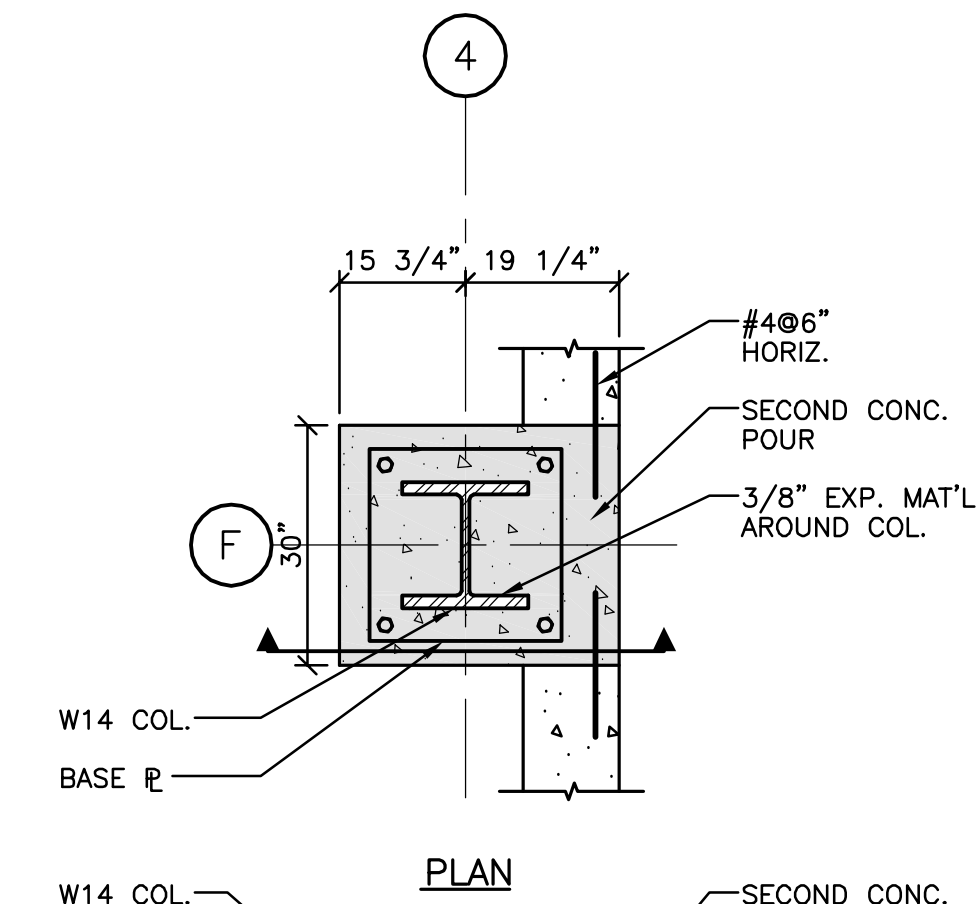
COLUMN BASE DETAIL  
— D-4

5 DETAIL  
S4.5 SCALE: 1/2"=1'-0"



COLUMN BASE DETAIL  
— D-4

6 DETAIL  
S4.5 SCALE: 1/2"=1'-0"



COLUMN BASE DETAIL — F-4

7 DETAIL  
S4.5 SCALE: 1/2"=1'-0"

PIER SCHEDULE			
MARK	SIZE	REINFORCEMENT	
		VERTICALS	TIES
P1	20"x20"	8-#8	#4@12"
P2	20"x34"	10-#8	#4@12"
P3	24"x24"	8-#8	#4@12"
P4	24"x36"	12-#8	#4@12"
P5	24"x40"	12-#8	#4@12"
P6	30"x30"	12-#8	#4@12"
P7	30"x35"	14-#8	#4@12"
P8	30"x39"	16-#8	#4@12"
P9	32"x39"	16-#8	#4@12"
P10	36"x36"	16-#8	#4@12"
P11	39"x39"	16-#9	#4@12"
P12	36"x44"	16-#8	#4@12"
P13	38"x44"	16-#8	#4@12"
P14	40"x48	16-#8	#4@12"
P15	32"x32"	12-#8	#4@12"
P16	16"x16"	8-#8	#4@12"

\*SIZE TO SUIT MASONRY, SEE ARCH'S DWGS.

NOTES:

- ALL PIERS TO HAVE 5-#4 TIES @ 3" O.C. TOP.
- FOR ORIENTATION OF PIERS SEE DWGS. S4.4 & S4.5.
- FOR ELEVATIONS OF TOPS OF PIERS, SEE DWG. S1.0.

**WTW ARCHITECTS**  
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**WBCW** — Architects  
 Whitney Bailey Cox & Magnani, LLC — Consulting Engineers  
848 Fairmount Ave., Suite 100  
Baltimore, MD 21205 (410) 512-4500

2 01/28/10 RECORD DRAWINGS  
 1 04/09/07 BULLETIN #3  
 0 02/16/07 ISSUE FOR BID  
 Rev. Date: Comment:  
 Issued: **FEBRUARY 16, 2007**

**Campus Center**  
 West Lombard Street  
 University of Maryland, Baltimore  
 Baltimore, MD

**Column & Base Plate Details**

100%  
 CONSTRUCTION  
 DOCUMENTS

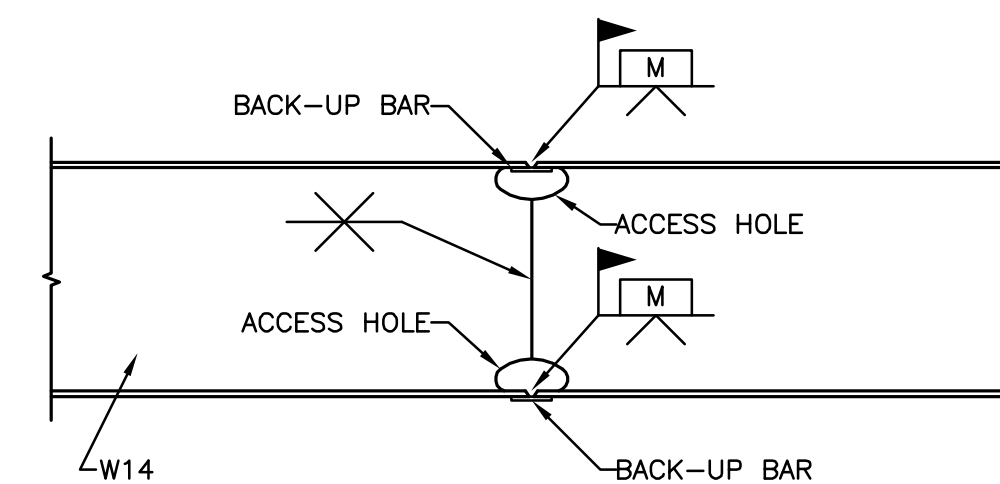
UMB PROJECT NO. 99-311  
 WTM PROJECT NO. 70-4091  
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**S4.5**

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**NOTES:**

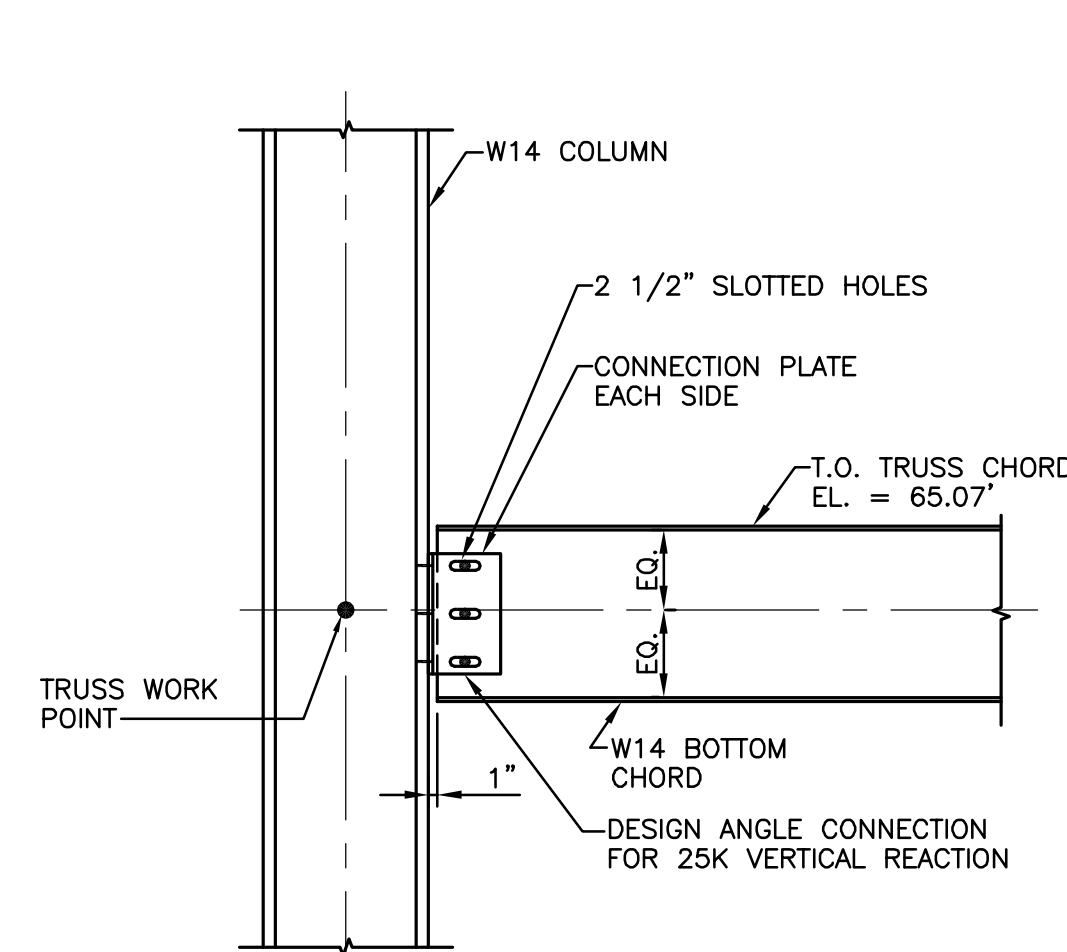
1. ALL WELDS ARE TO BE FULL PENETRATION BUTT WELDS.
2. ALL WELDS FOR SPLICES SHALL BE TESTED BY ULTRASONIC TESTING.
3. CONTRACTOR SHALL SUBMIT PROPOSED LOCATION OF TOP AND BOTTOM CHORD SPLICES TO ENGINEER FOR REVIEW AND APPROVAL.

## DETAIL

1 ELEVATION  
S5.1 SCALE: 3/8"=1'-0"

1. TUBE-TO-GUSSET & GUSSET-TO-CHORD CONNECTIONS SHALL BE SHOP WELDED, EXCEPT WHERE NOT FEASIBLE.
2. TRUSS CONNECTIONS (INCLUDING GUSSET PLATE SIZES) SHALL BE DESIGNED BY THE STEEL FABRICATOR.
3. GUSSET PLATES SHALL BE 1" THICK MINIMUM, WITH STIFFENERS AS REQUIRED.
4. SEE FRAMING PLANS FOR ADDITIONAL SECTIONS, EXTENT OF CONCRETE SLAB, ETC.
5. CONTRACTOR SHALL SUBMIT PROPOSED SEQUENCE OF ERECTION DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. PRICE ADJUSTMENT: THE DRAWINGS SHALL SHOW CONSTRUCTION STAGES AND THE EXTENT OF CONSTRUCTION LOADS TO BE SUPPORTED BY THE TRUSS @ EACH STAGE.

6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ADEQUATELY BRACE THE TRUSS AND COLUMNS DURING ALL PHASES OF CONSTRUCTION.
7. STRUCTURAL STEEL FABRICATOR IS TO DESIGN AND DETAIL ALL TRUSS CONNECTIONS AND SUBMIT CALCULATIONS FOR CONNECTIONS SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF MARYLAND. FABRICATOR SHALL ALSO VERIFY DETAILS & SECTIONS SHOWN ON THIS DRAWING ARE ADEQUATE FOR LOCATIONS INDICATED AND STRESSES SHOWN.
8. SURFACE FIELD AREAS TO BE INSPECTED AND TESTED. SEE SPECIFICATIONS.
9. LOADS SHOWN ON MEMBERS THUSXXXX (KIPS). (c)= COMPRESSION, (t)= TENSION
10. CONNECTIONS OF TRUSS MEMBERS SHALL DEVELOP THE DESIGN LOADS INDICATED, BUT NOT LESS THAN 50% OF THE EFFECTIVE STRENGTH OF THE MEMBER.



3  
S5.1

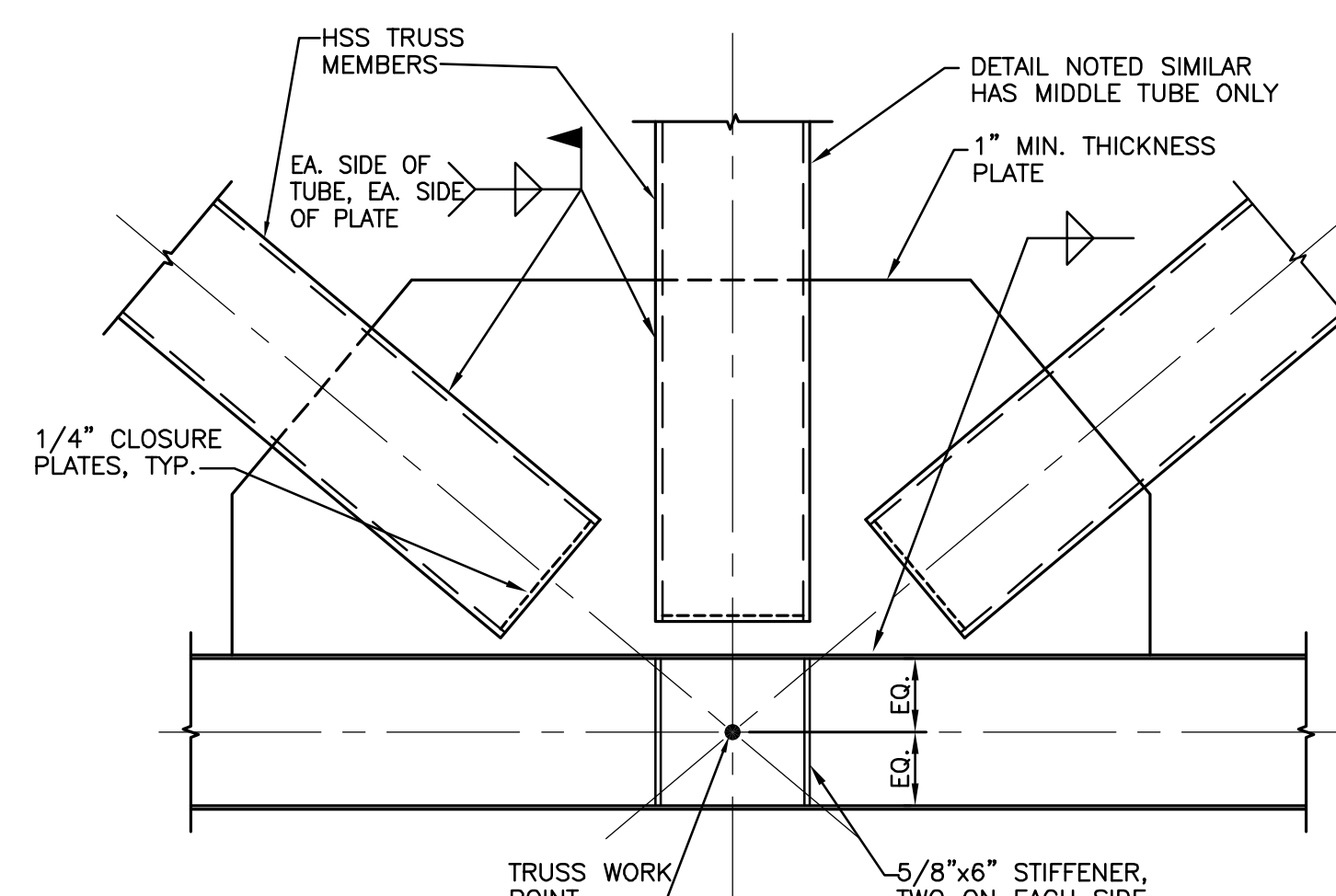
DETAIL

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

4  
S5.1

DETAIL

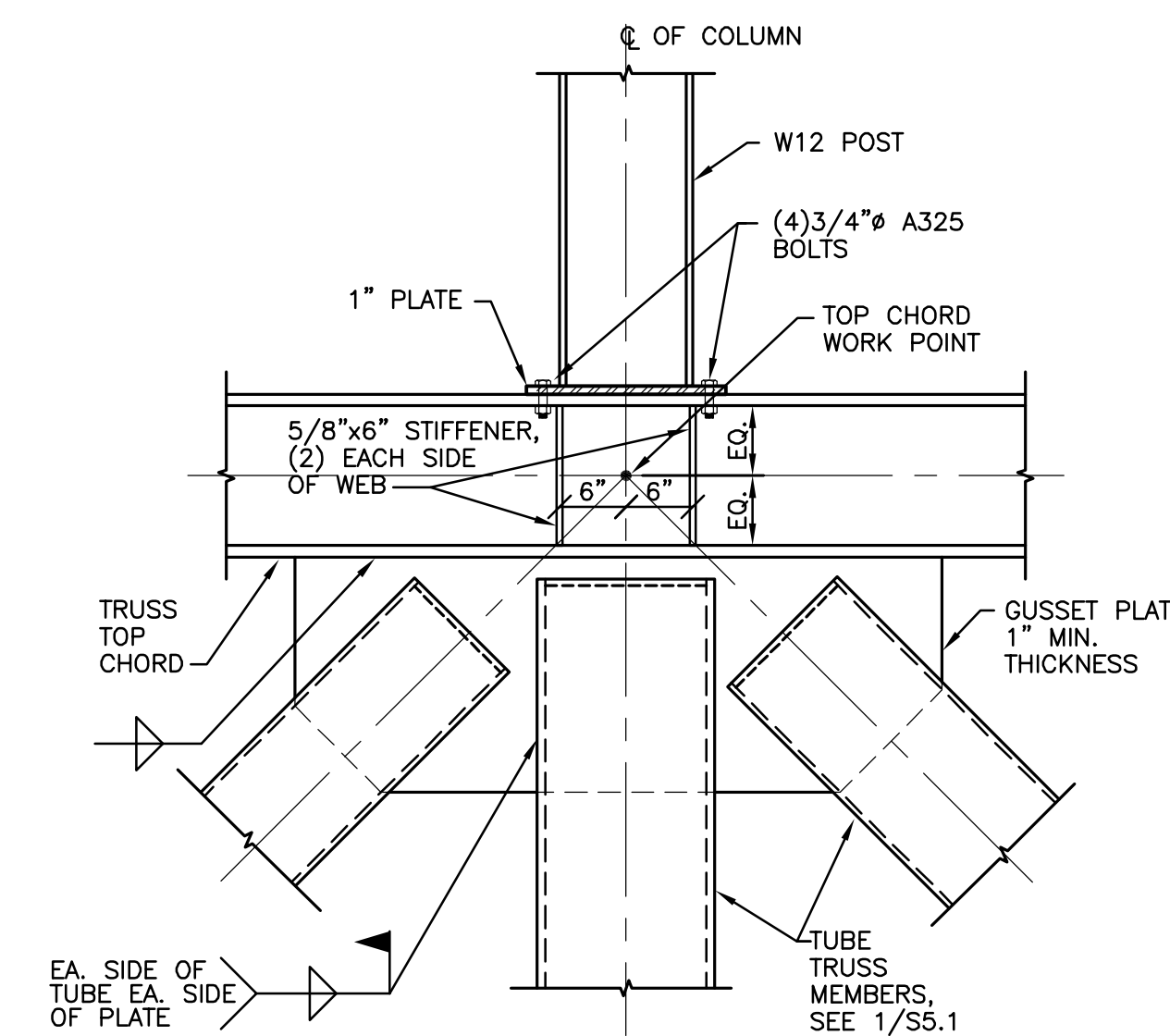
SCALE:  $3/4"=1'-0"$



5 5 SIM  
S5.1 S5.1

DETAIL

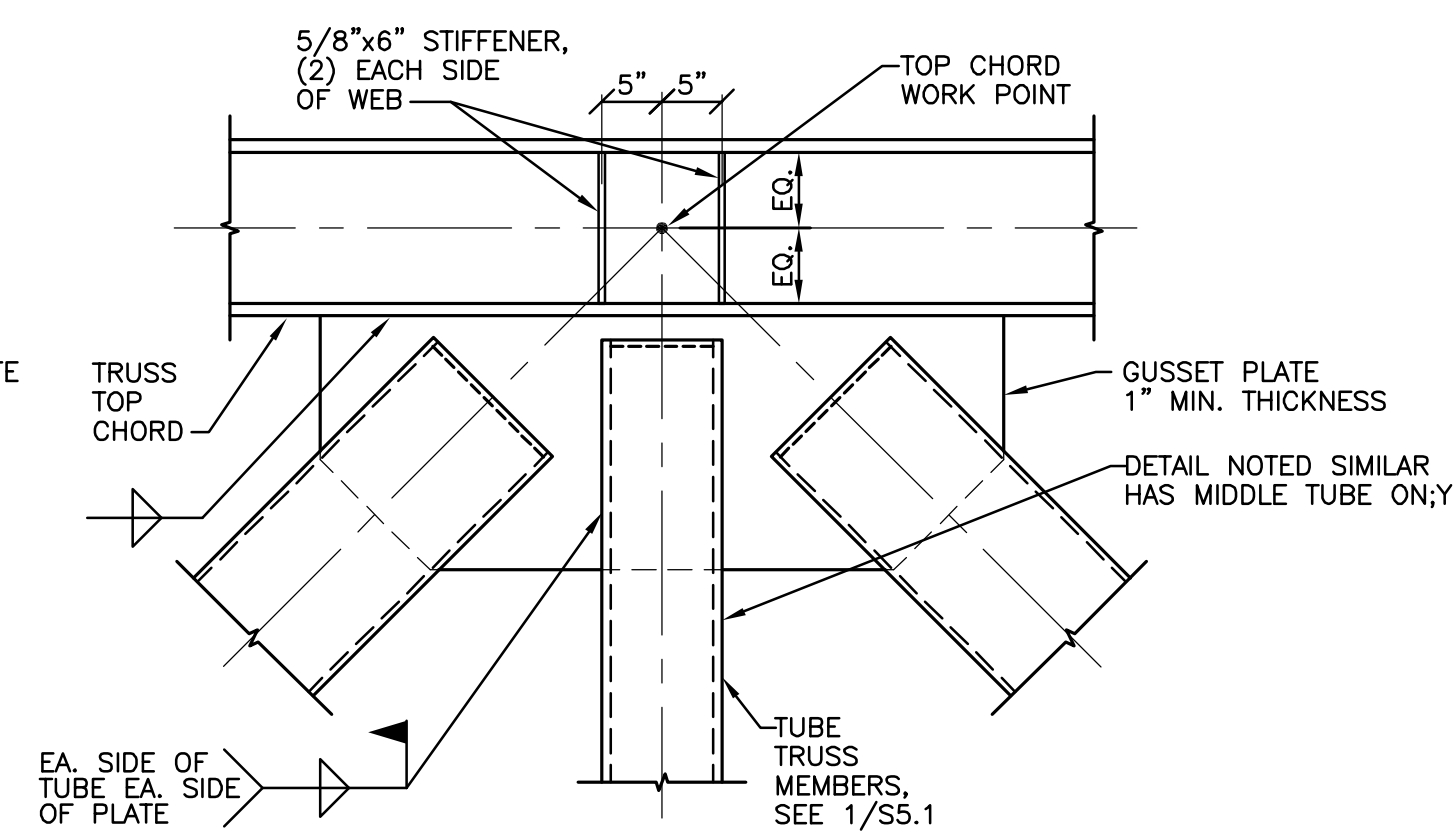
SCALE: 3/4"=1'-0"



6  
S5.1

DETAIL

SCALE:  $\frac{3}{4}" = 1' - 0"$

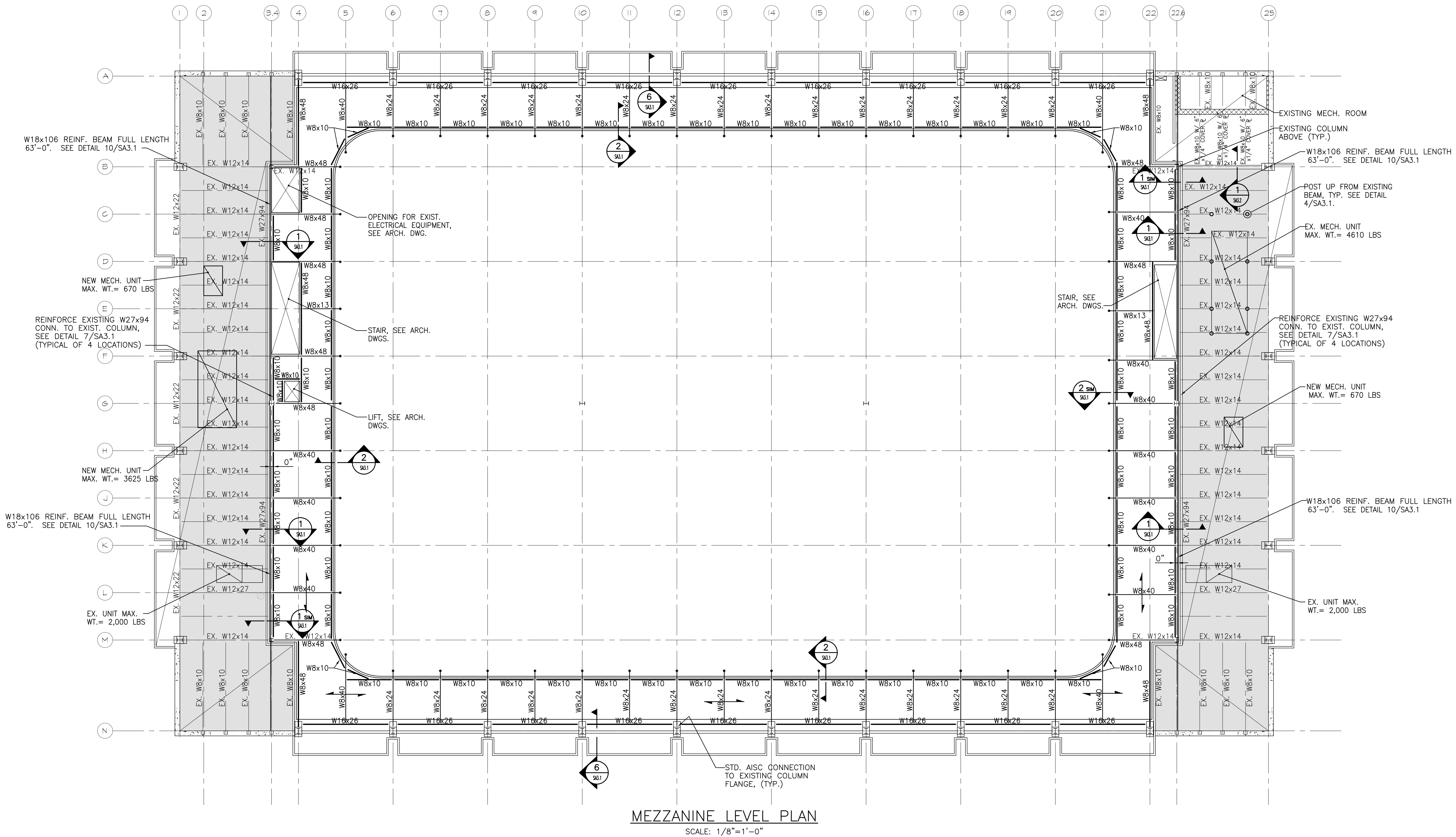


7 7 SIM DETAIL  
S5.1 S5.1 SCALE: 3/4"=1'-0"

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**MEZZANINE LEVEL PLAN**  
SCALE: 1/8"=1'-0"

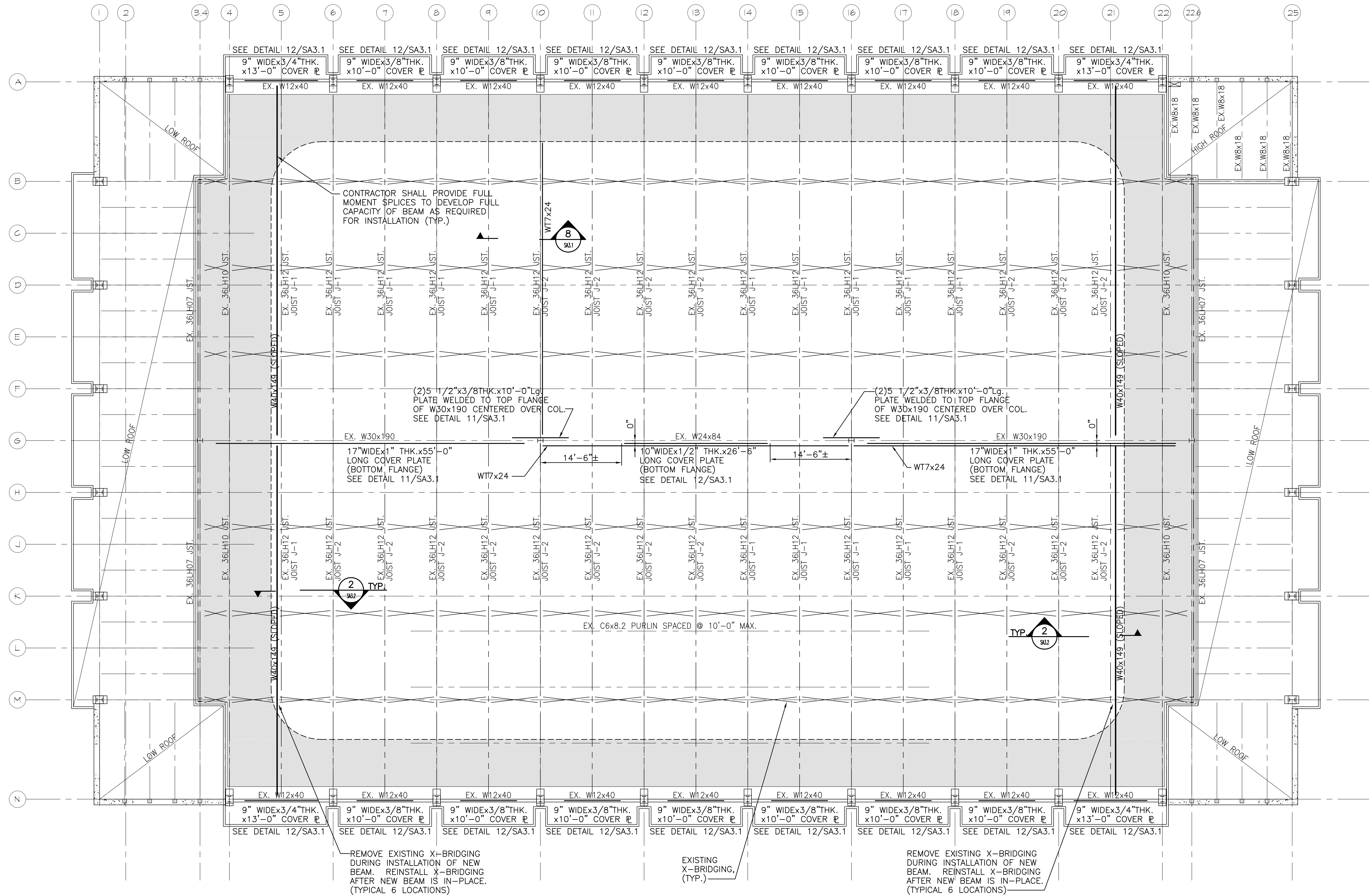
**PLAN NOTE:**

1. RUNNING TRACK FLOOR CONSTRUCTION SHALL CONSIST OF 1 1/2"x18 GAGE GALVANIZED COMPOSITE DECK WITH 4" MINIMUM THICKNESS LIGHT-WEIGHT CONCRETE SLAB (110 PSF) REINFORCED WITH 4 LBS./CUBIC YARD OF FIBERMESH 650 AS MANUFACTURED BY PROPEX CONCRETE SYSTEM. SEE DETAILS S2.4 FOR TYPICAL COMPOSITE CONSTRUCTION. (SEE ARCH. DWGS. FOR THICKEN SLABS AT TRACK BANKING).
2. PROVIDE 3/4" DIAMETER x 3" LONG HEADED STUDS WELDED TO TOP FLANGE OF STEEL BEAM @ 24" O.C. MINIMUM FOR ALL BEAMS, U.N.O.
3.  DENOTES EXISTING PURLITE LT.-WT. FILL AND ROOFING TO BE REMOVED (SEE ARCH. DWGS.). CONTRACTOR SHALL ASSUME 50% OF EXISTING DECK WILL NEED TO BE REPAIRED. PROVIDE NEW 1 1/2"x20 GA. TYPE B METAL DECK TO BE INSTALLED OVER DAMAGED EXISTING METAL DECK. NEW DECK SHALL SPAN MINIMUM TWO SPANS & SHALL COVER MINIMUM 6" ON EACH SIDE OF DAMAGED DECK AREA. NEW ROOF DECK SHALL BE FASTENED TO SUPPORTS WITH S-MD 12-24"x1 1/4" HWH #5 KWI-K-COTE SCREWS AS MANUFACTURED BY HILTI OR APPROVED EQUIVALENT @ 6" O.C. AT SUPPORTS AND PERIMETER & 1'-6" O.C. AT SIDE SEAMS.
4. TOP OF NEW STEEL BEAM ELEVATION SHALL BE 55.42'.
5. SPLICE HANGER RODS AT ALL EAST AND WEST SIDES WITH 1 1/4"Ø x 7 1/2" LONG ASTM A563 GR. A SLEEVE NUT WITH PROOF LOAD 96.9K AS MANUFACTURED BY WEACALL.
6. SEE DETAIL 4/SA3.2 AND 5/SA3.2 FOR HANGER TO JOIST CONNECTIONS AT SOME LOCATIONS.

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## ROOF FRAMING PLAN

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

PLAN NOTE:  
1. [Symbol]: DENOTES RUNNING TRACK BELOW, SEE AS1.1.  
2. JOIST J-X: DENOTES STEEL JOIST REINF., SEE AS3.1.  
3. ALL ANGLE REINFORCING SHALL BE A992 STEEL.

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1 01/29/10 RECORD DRAWINGS  
0 05/02/07 FOR CONSTRUCTION  
Rev. Date: Comment:  
Issued: MAY 2, 2007

**Campus Center**  
West Lombard Street  
University of Maryland, Baltimore  
Baltimore, MD



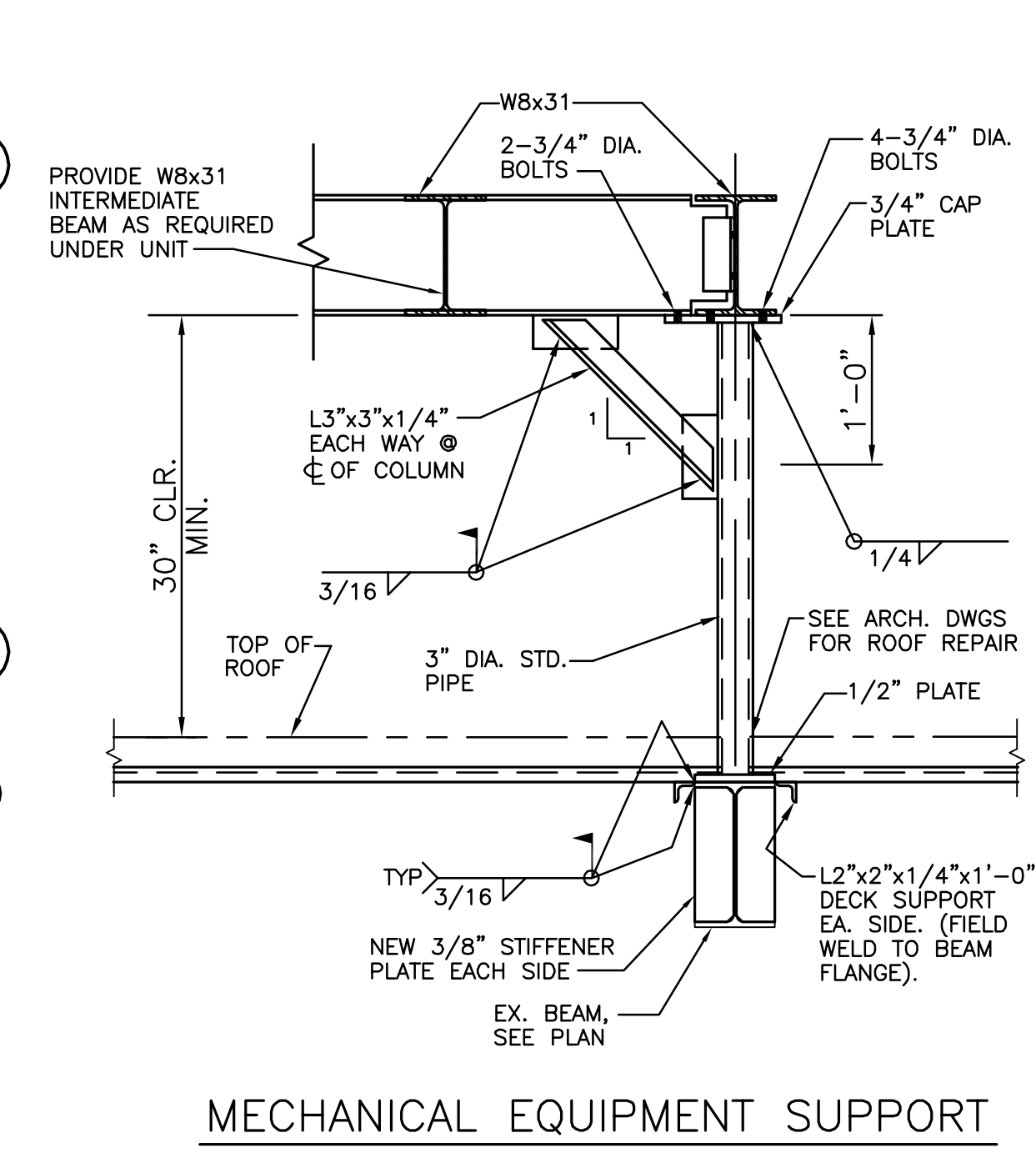
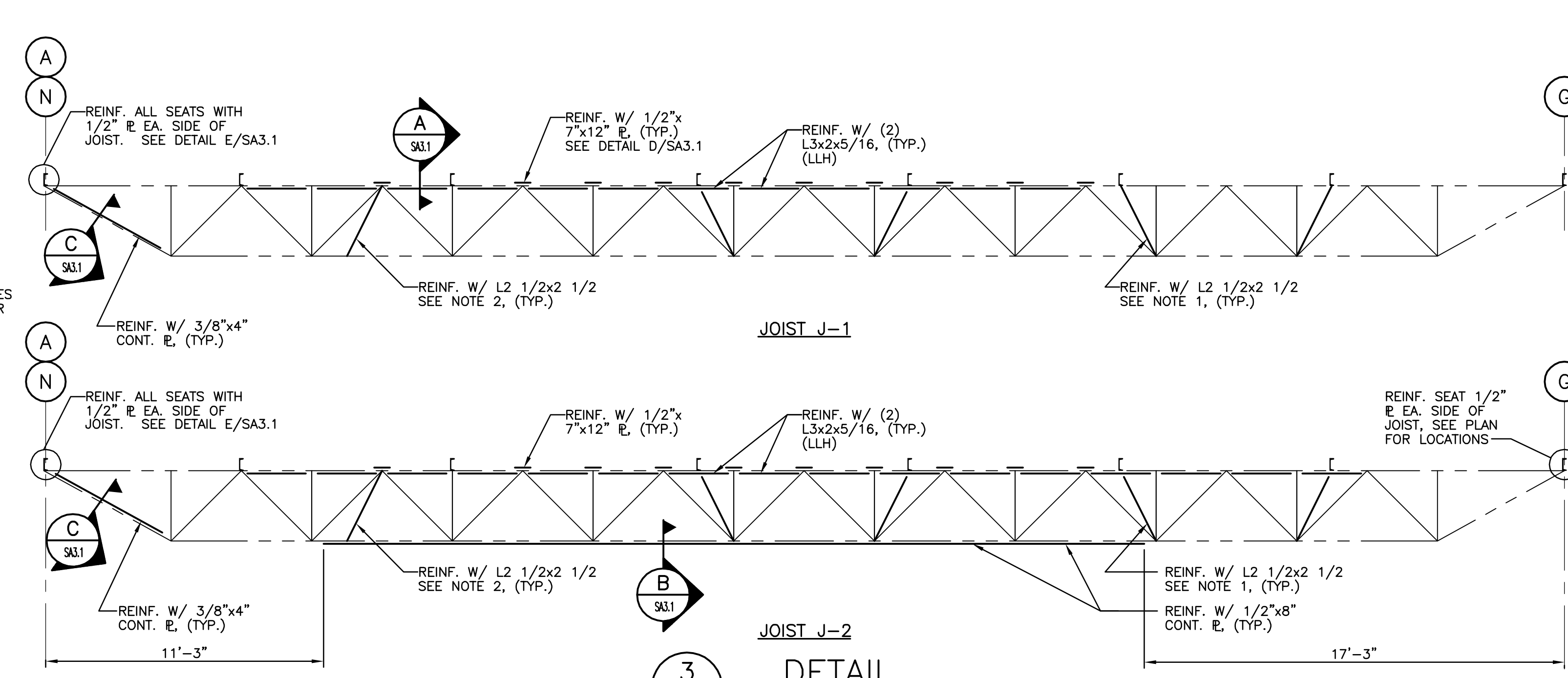
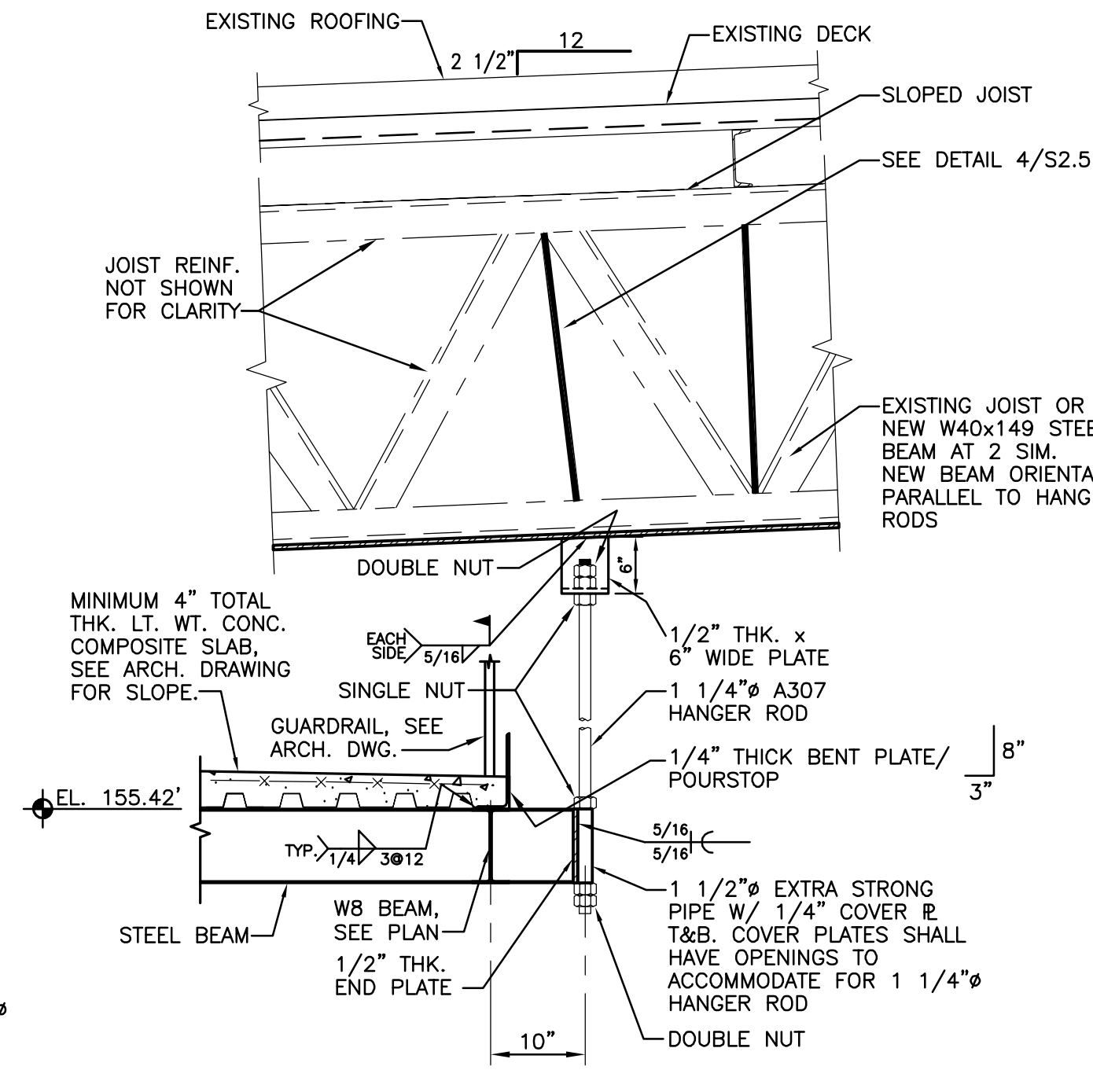
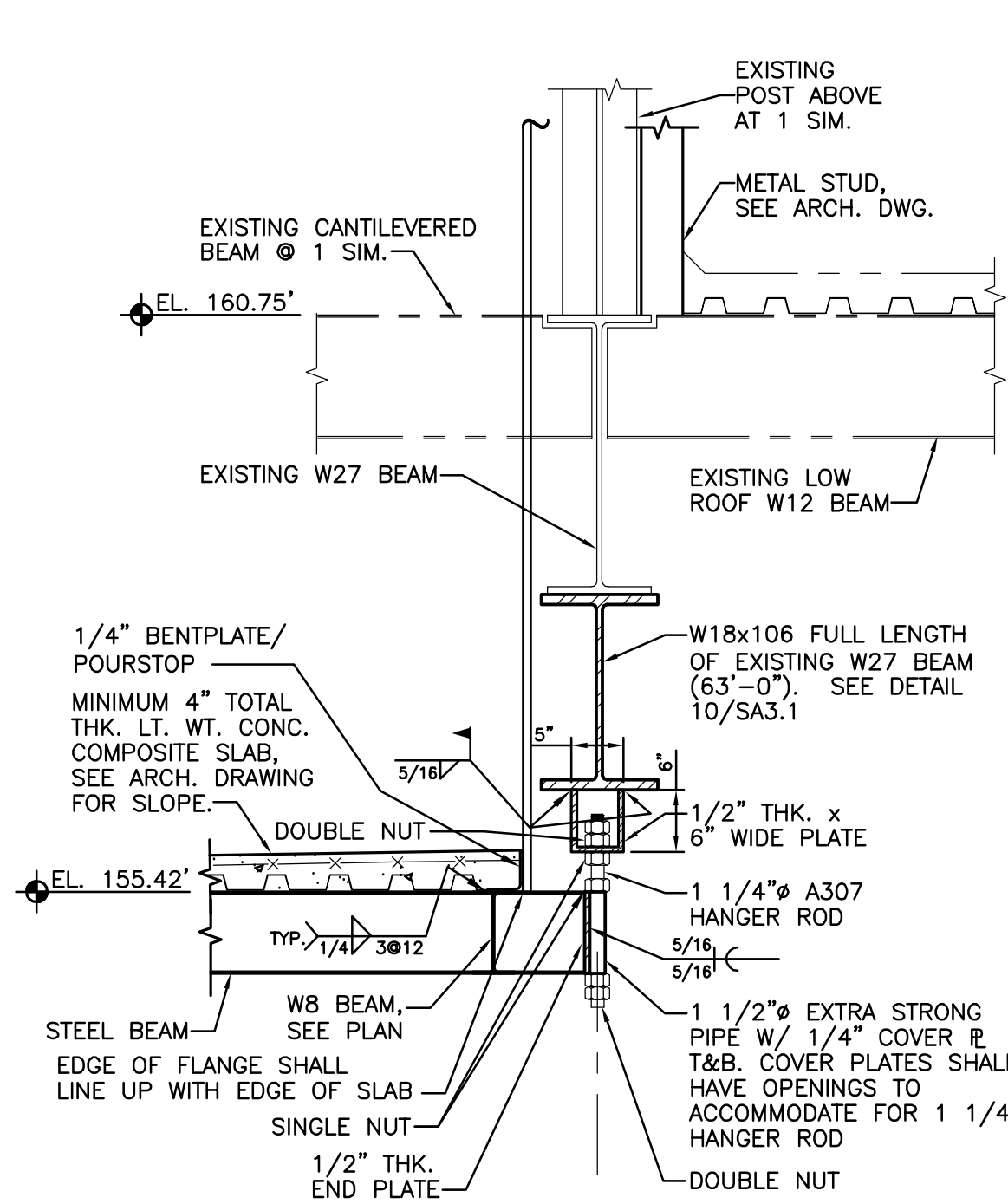
**ROOF FRAMING PLAN**  
**Pratt Gymnasium**

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**SA1.2**





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

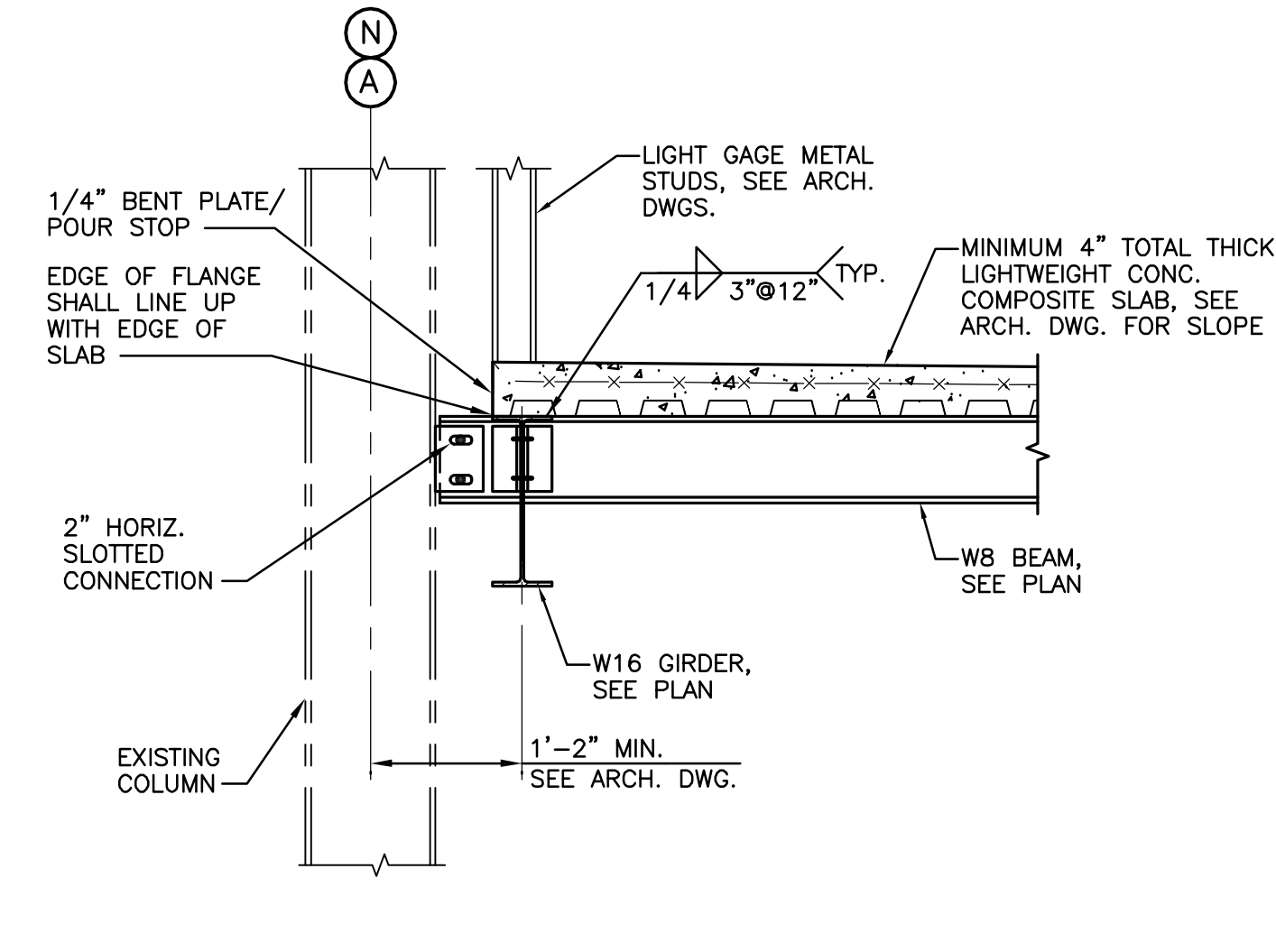
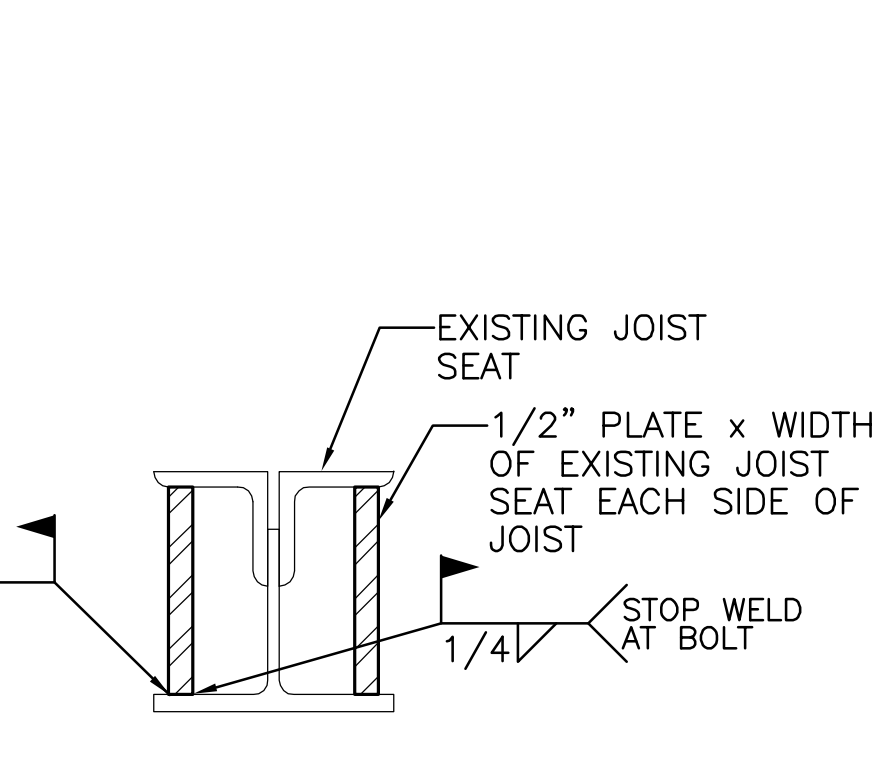
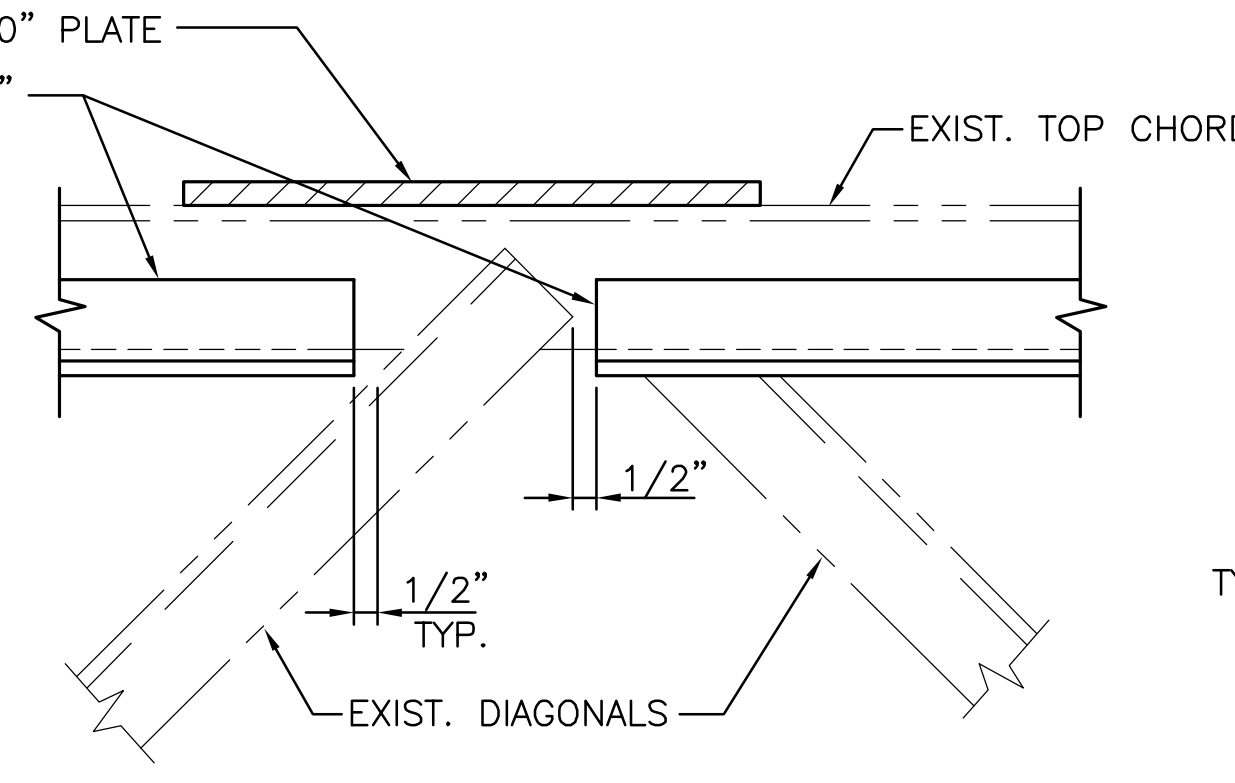
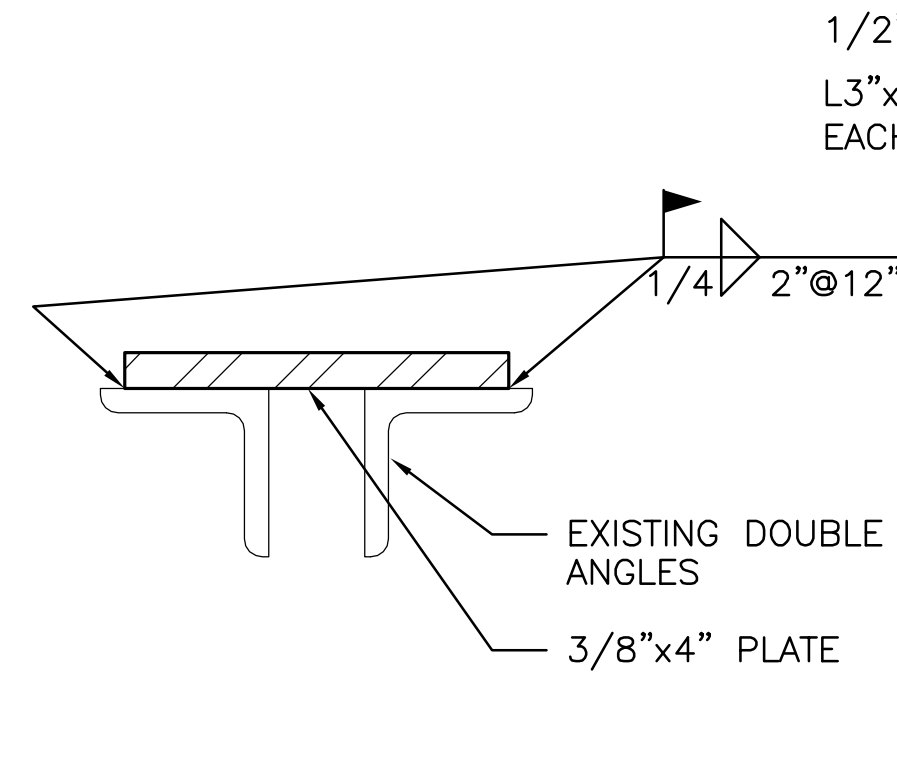
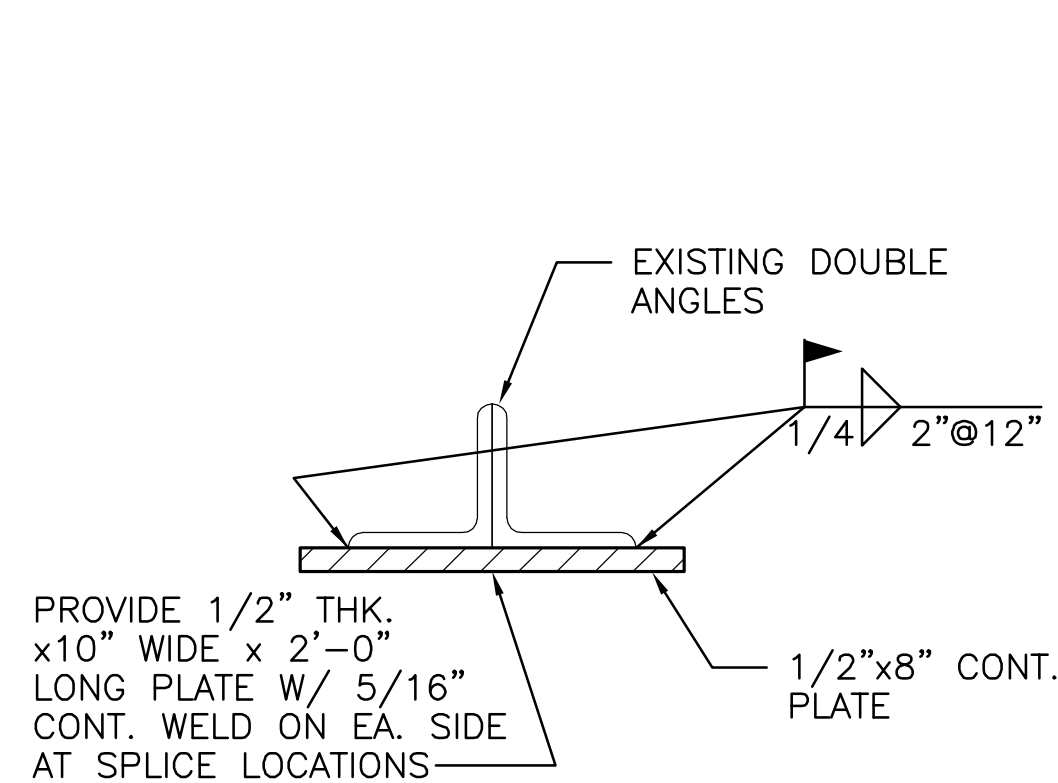
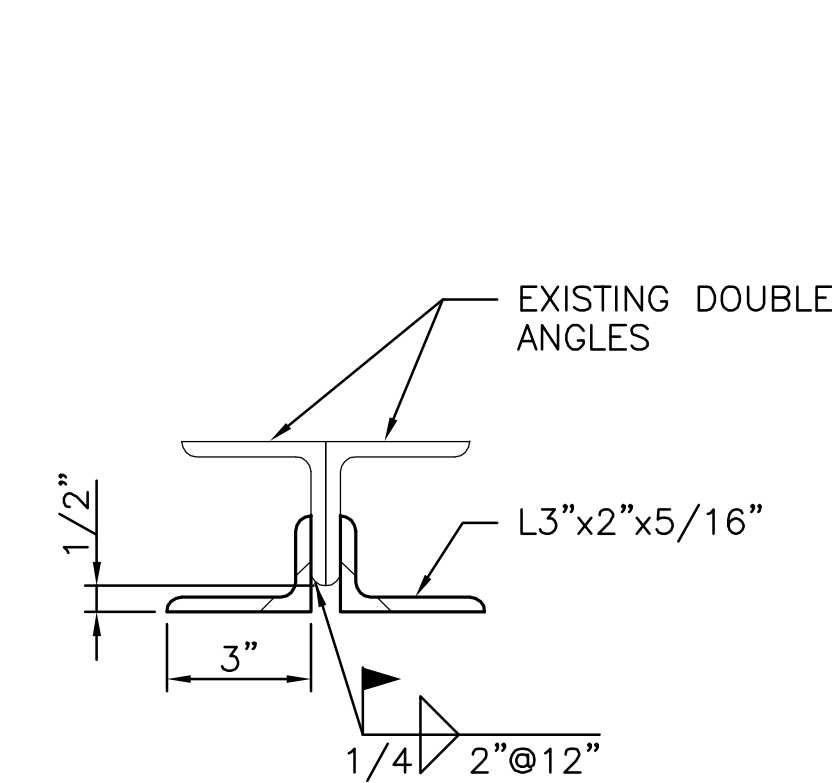
**2 SECTION**  
SCALE: 3/4" = 1'-0"

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

**4 DETAIL**  
SCALE: NOT TO SCALE

**JOIST NOTES:**

1. PROVIDE REINFORCEMENT FOR EXISTING PURLINS. WHERE PURLIN LOCATIONS FALL BEYOND 3" OF A PANEL POINT, REINFORCE ACCORDING TO 4/S2.5. QUANTITY SHOWN ON JOIST ELEVATION APPROXIMATE, VERIFY LOCATIONS IN FIELD.
2. PROVIDE REINFORCEMENT ABOVE HANGER ROD TRACK SUPPORT PER 4/S2.5. COORDINATE LOCATION WITH ARCH. DWGS.
3. ALL ANGLE REINFORCING SHALL BE A992 STEEL.



**A SECTION**  
SCALE: 3" = 1'-0"

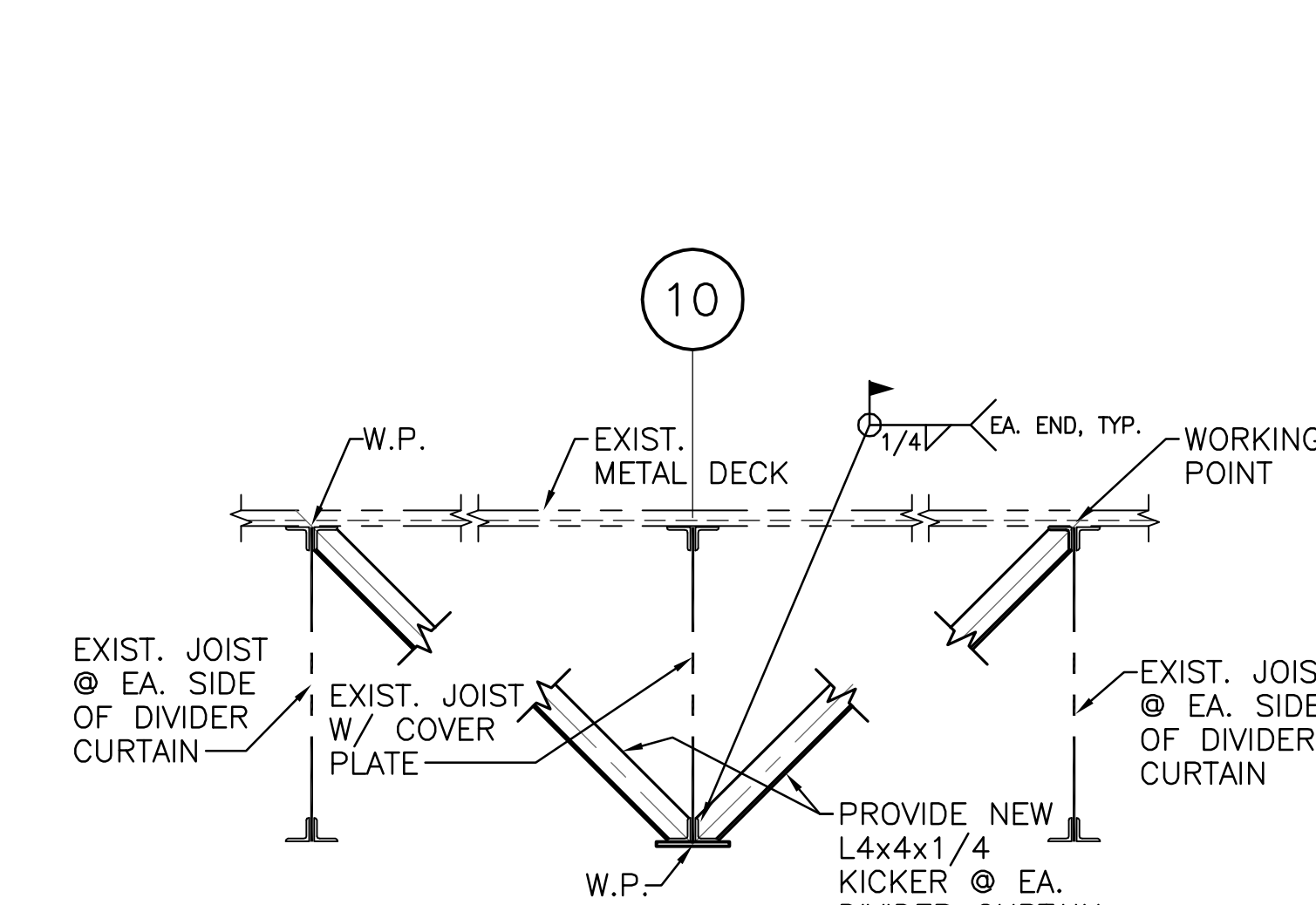
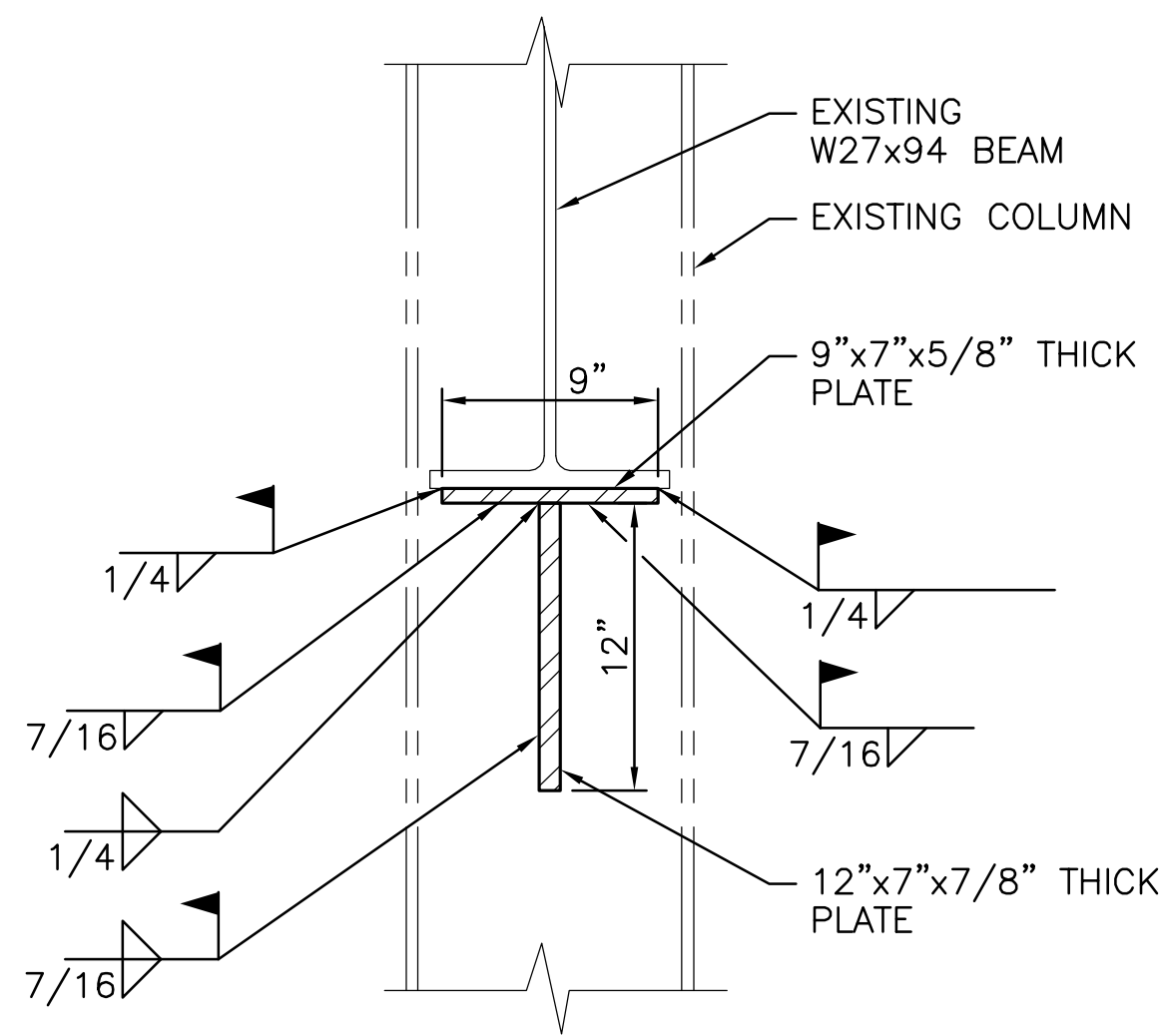
**B SECTION**  
SCALE: 3" = 1'-0"

**C SECTION**  
SCALE: 6" = 1'-0"

**D DETAIL**  
SCALE: 3" = 1'-0"

**E SECTION**  
SCALE: NOT TO SCALE

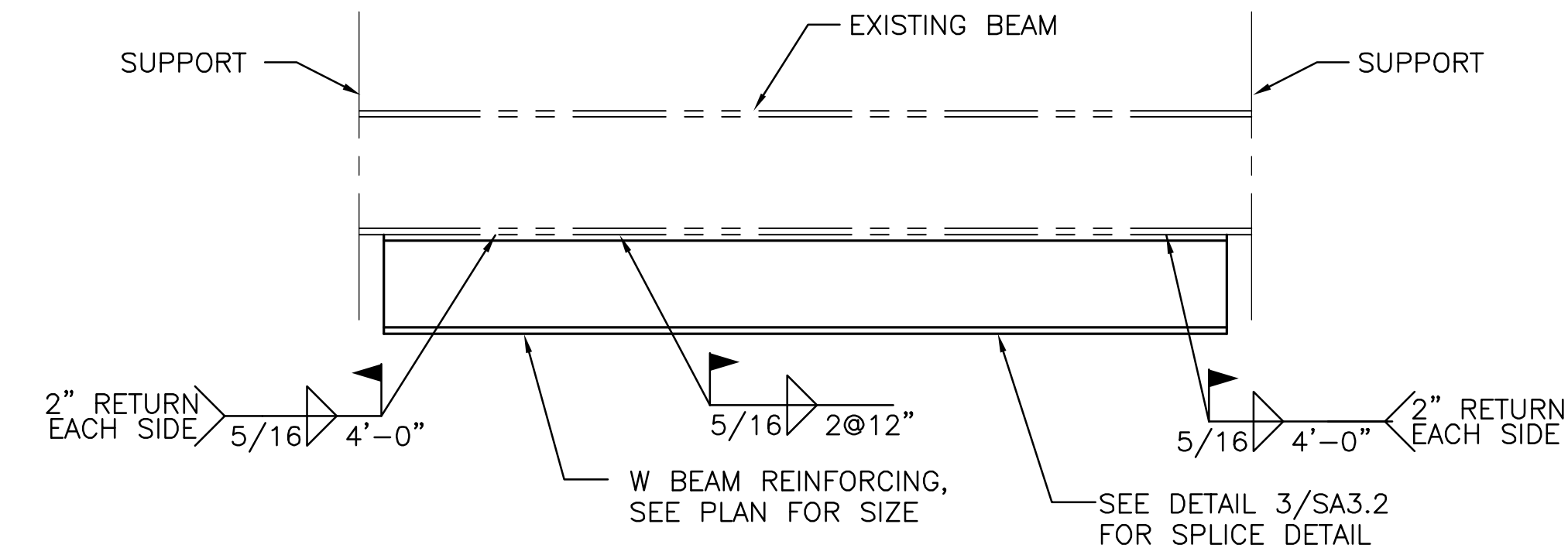
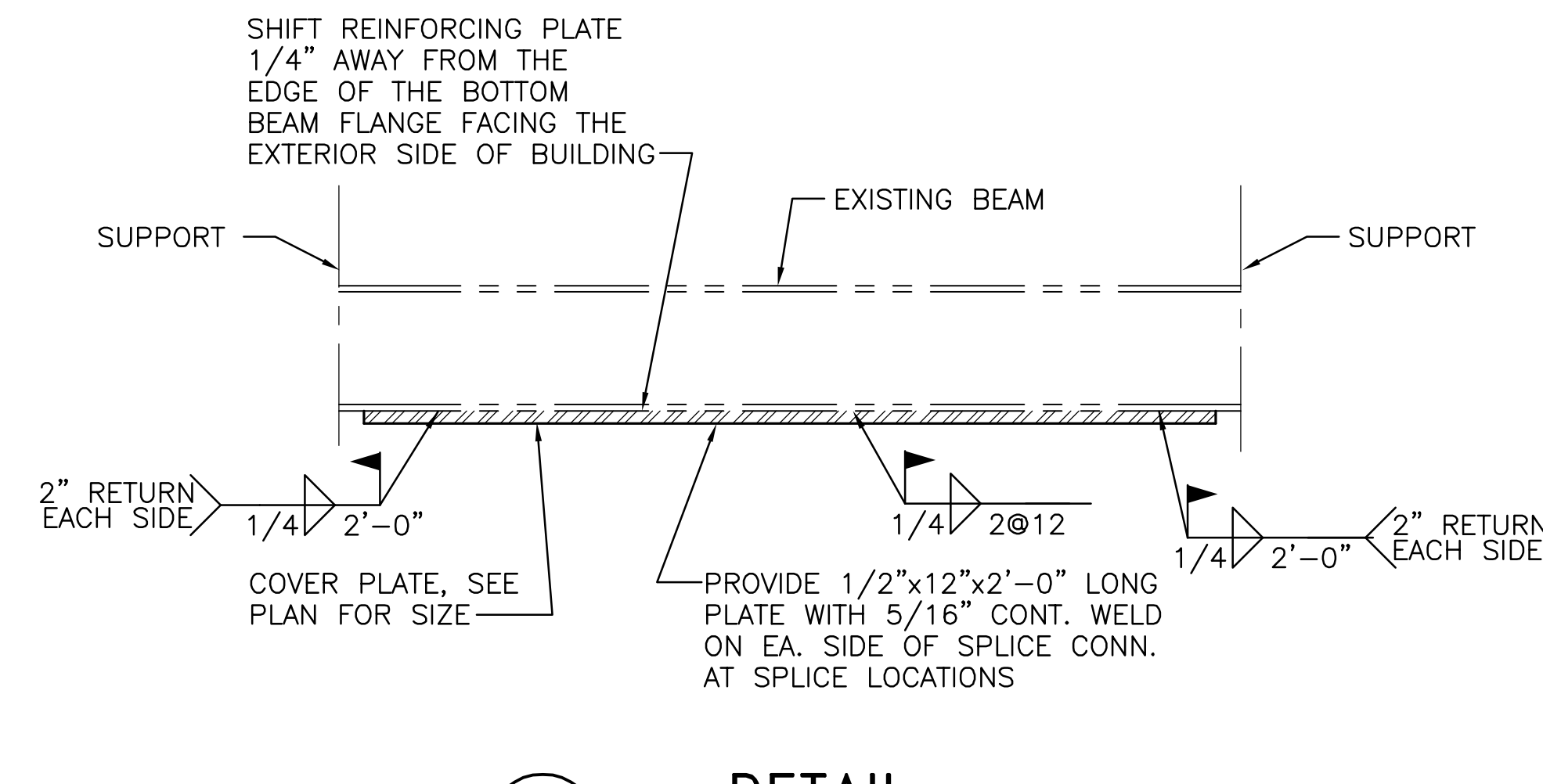
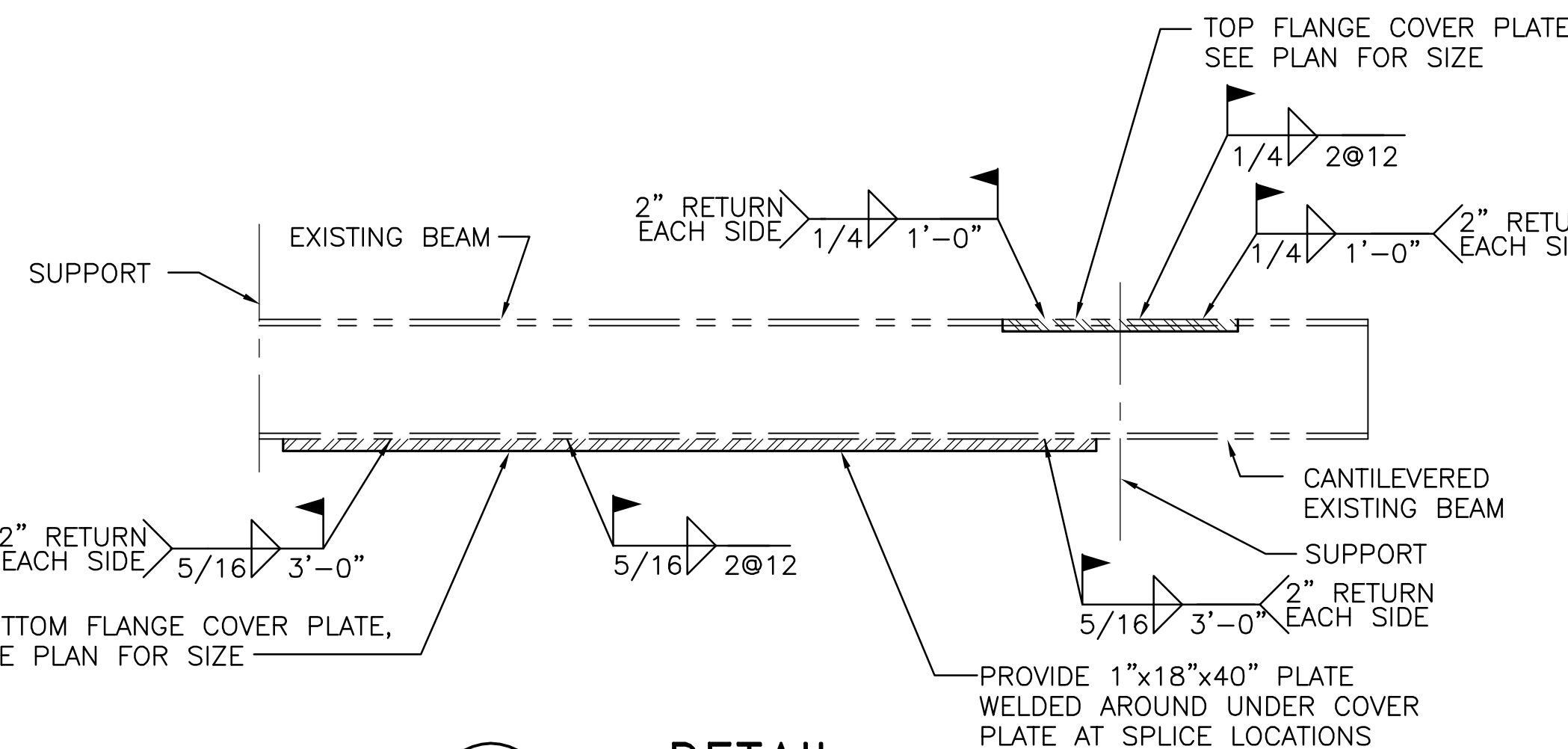
**6 SECTION**  
SCALE: 3/4" = 1'-0"



**DIVIDER CURTAIN JOIST REINFORCEMENT**

**7 DETAIL**  
SCALE: 1 1/2" = 1'-0"

**8 DETAIL**  
SCALE: NOT TO SCALE



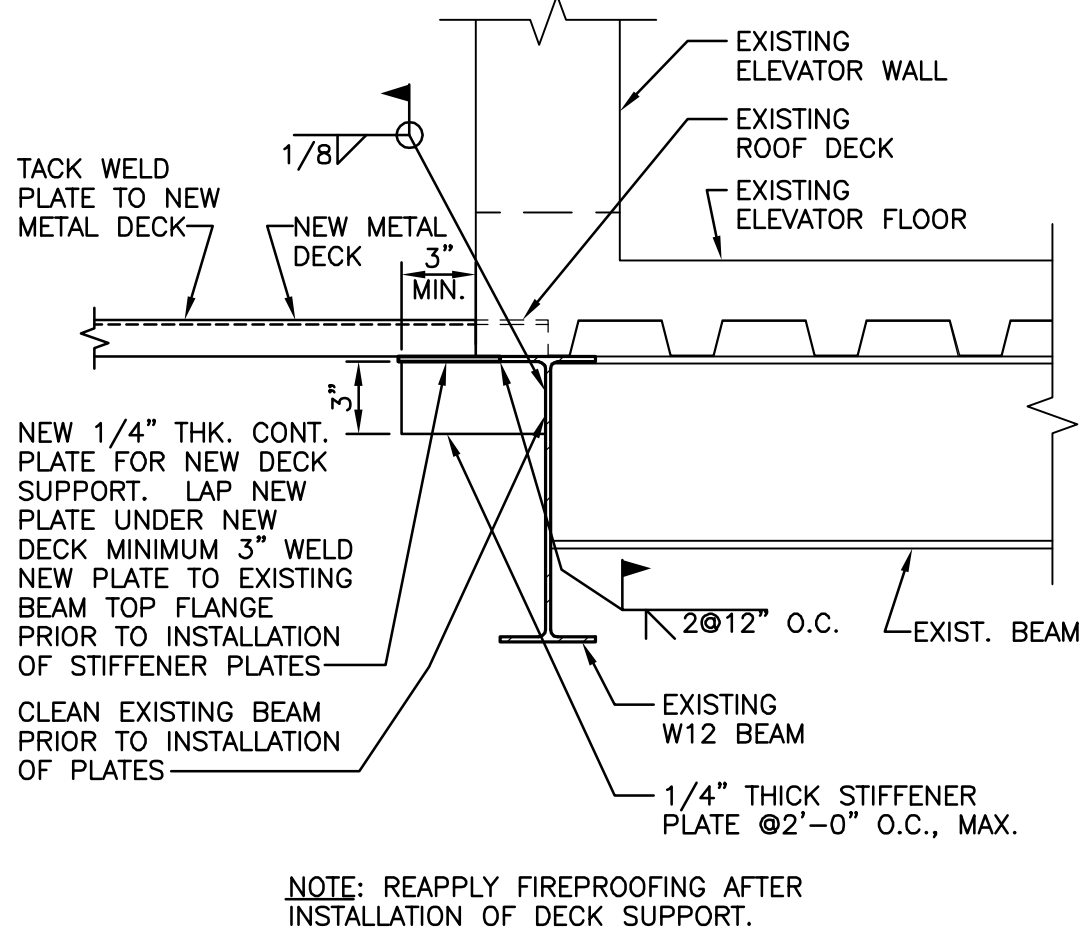
**10 DETAIL**  
SCALE: NOT TO SCALE

**11 DETAIL**  
SCALE: NOT TO SCALE

**12 DETAIL**  
SCALE: NOT TO SCALE

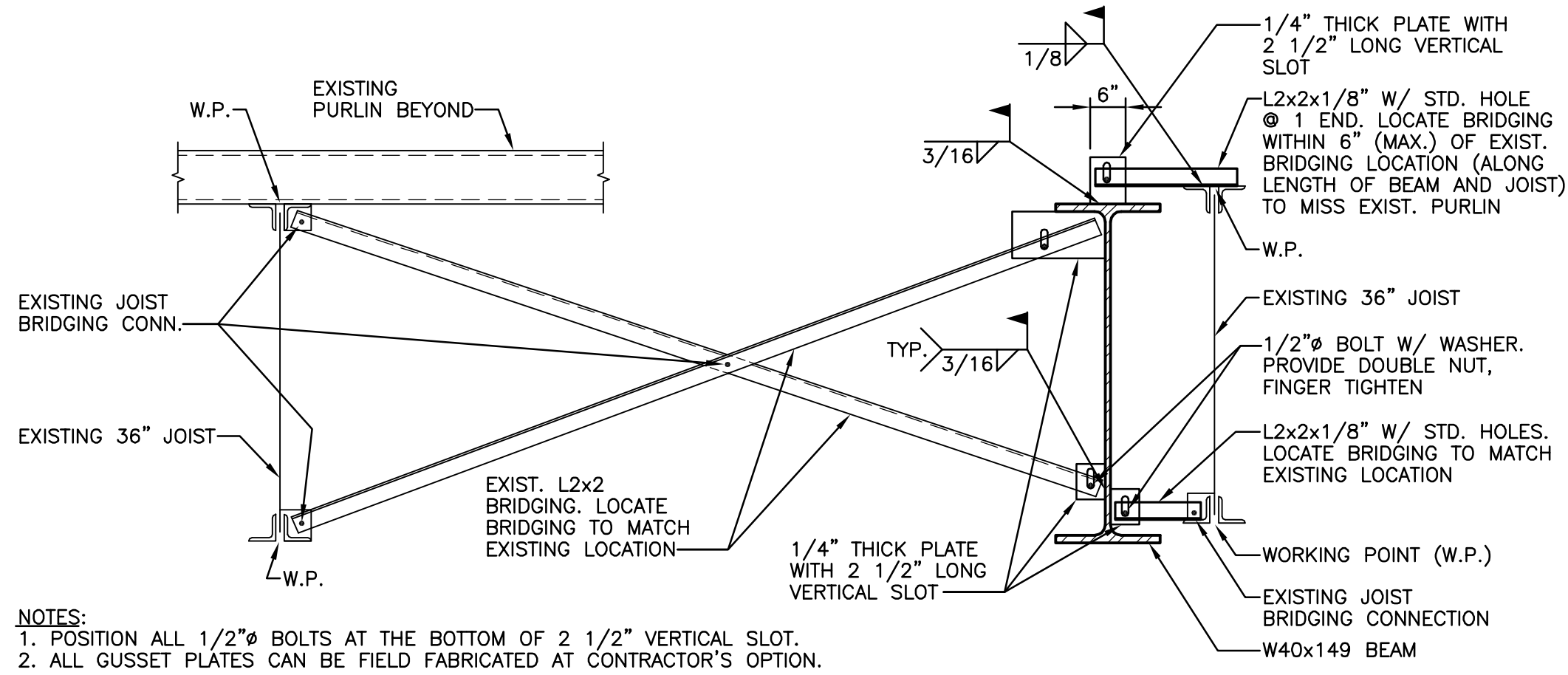
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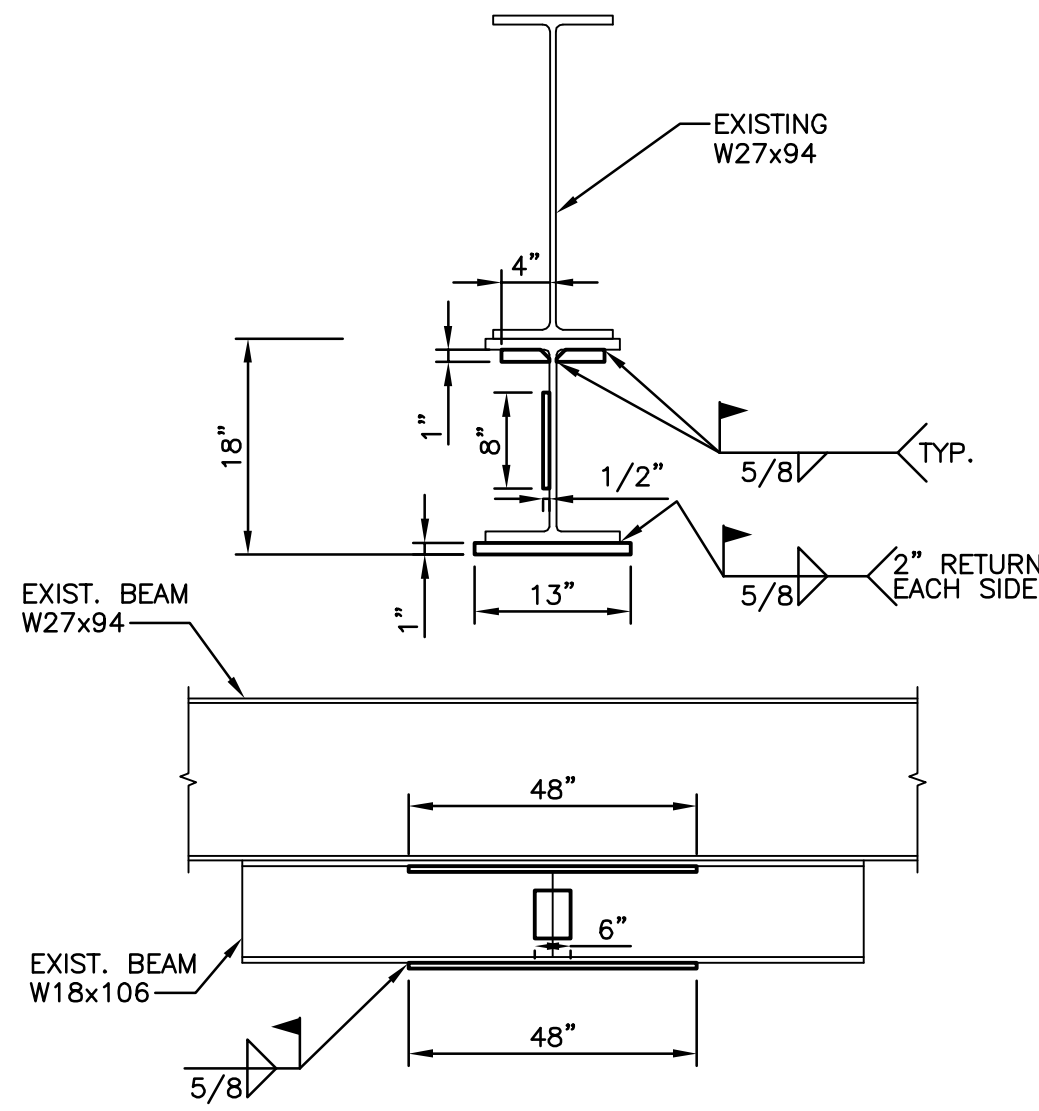
NOTE: REAPPLY FIREPROOFING AFTER INSTALLATION OF DECK SUPPORT.

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

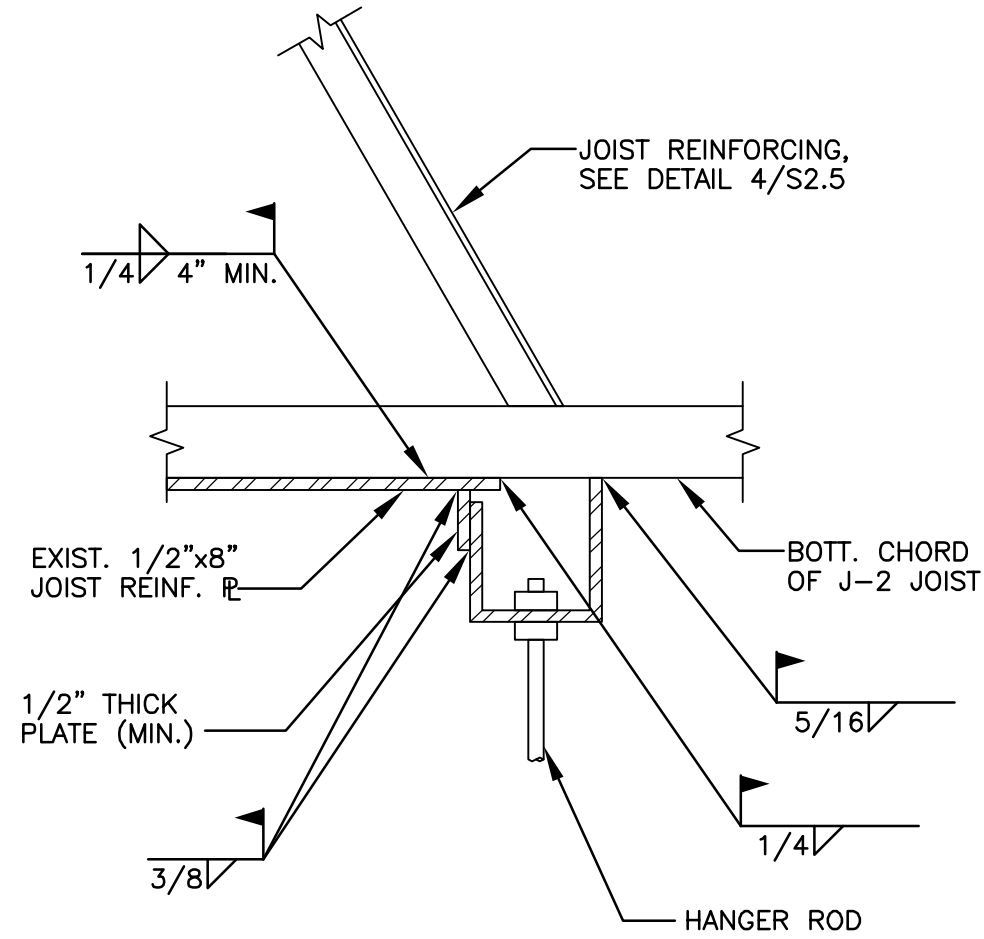


NOTES:  
1. POSITION ALL 1/2\"/>

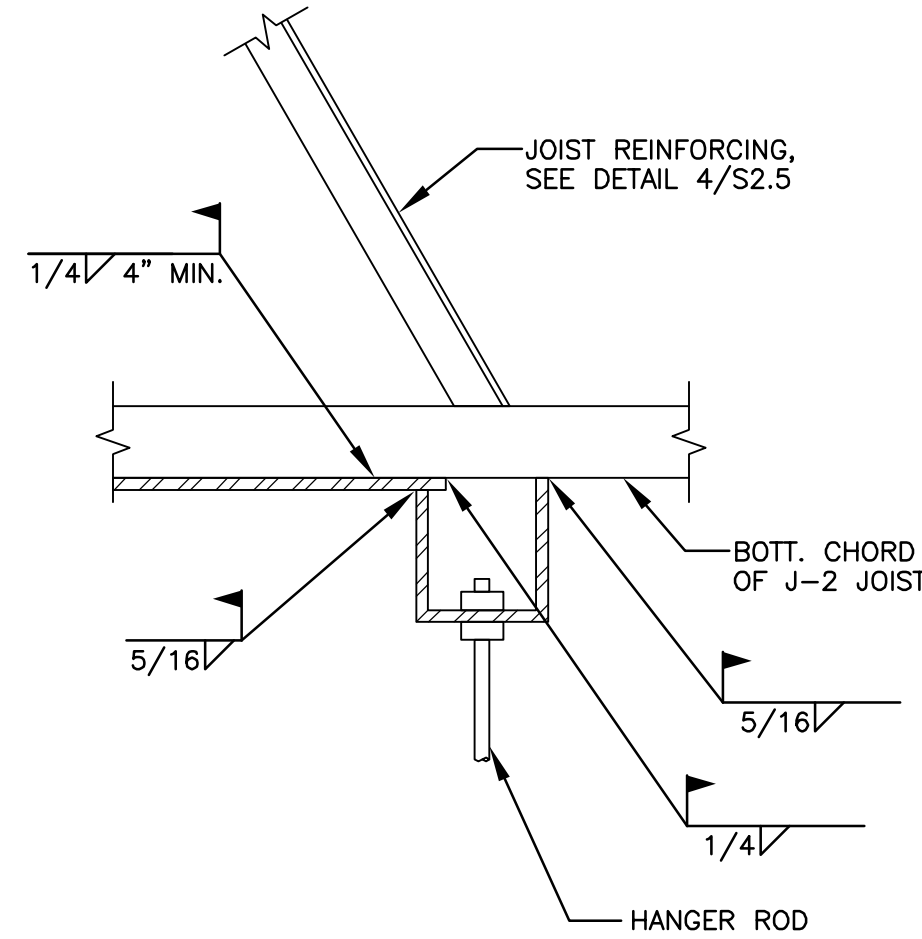
**2 SECTION**  
NOT TO SCALE



**3 DETAIL**  
NOT TO SCALE



**4 DETAIL**  
SCALE: 1 1/2" = 1'-0"

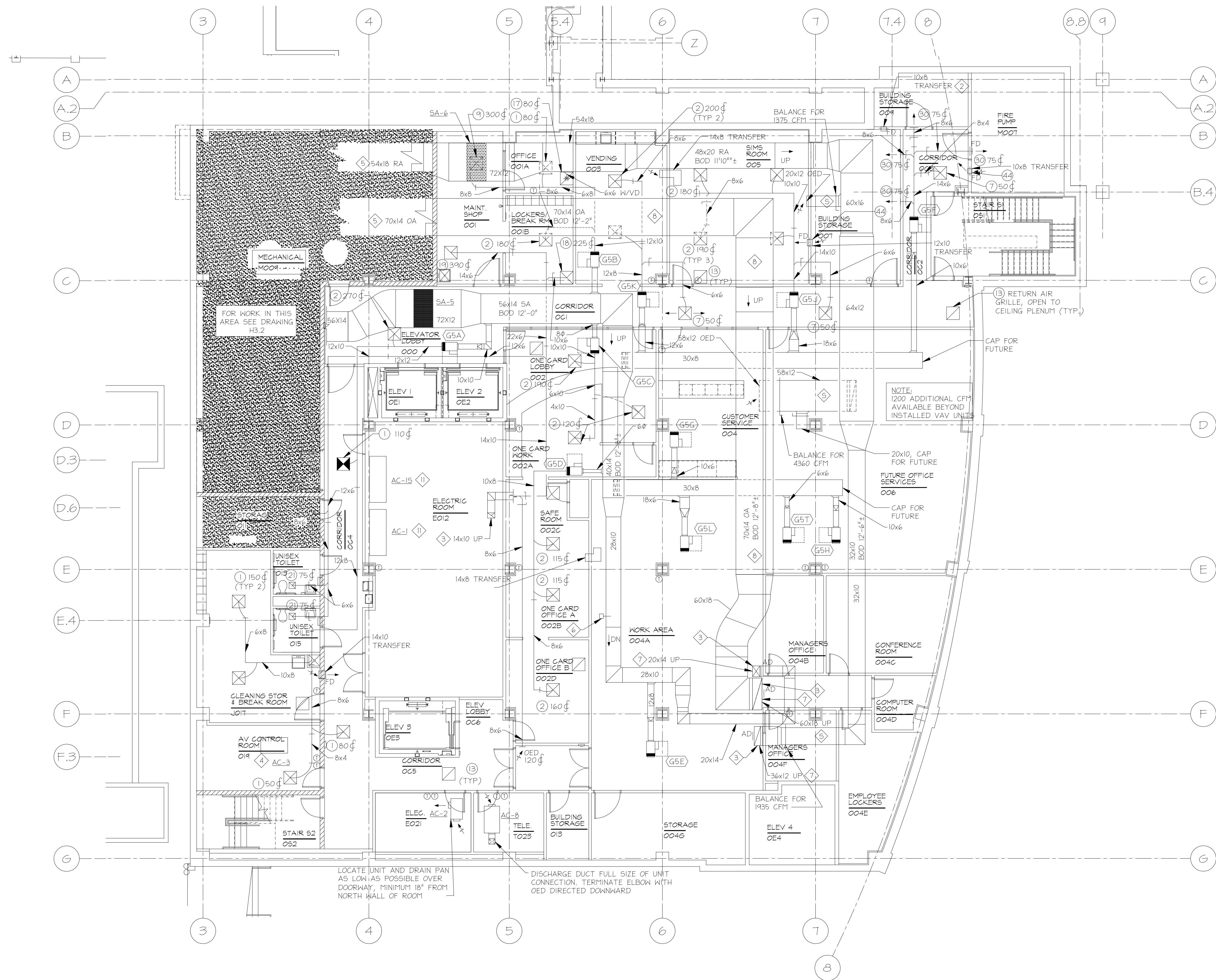


**5 DETAIL**  
SCALE: 1 1/2" = 1'-0"



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1 DUCTWORK - GARDEN LEVEL  
1/8"=1'-0"

# SPECIAL NOTES:

- 1 N/A.
- 2 PROVIDE GRILLE (44) ON EACH WALL SURFACE.
- 3 PROVIDE FIRE DAMPER AT SLAB PENETRATION.
- 4 SEE DRAWING H3.5 FOR DUCTWORK ASSOCIATED WITH AC UNIT.
- 5 FOR CONT. SEE DWG. H3.2.
- 6 STATIC PRESSURE SENSOR. SEE ATC SCHEMATICS.
- 7 RISER AND FIRE DAMPER IN ORIGINAL SCOPE OF WORK.
- 8 DUCT IN ORIGINAL SCOPE OF WORK.
- 9 N/A.
- 10 N/A.
- 11 PROVIDE UNIT WITH OPTIONAL TOP DISCHARGE PLENUM, WITH HORIZONTAL THROW LOUVERED AIR DEVICE.

# DRAWING NOTES:

1. ALL OPEN END DUCTS SHALL BE PROVIDED WITH BELLMOUTH PER DETAIL.
2. TRANSFER DUCTS SHALL BE ABOVE CEILINGS, AND MIN. 90" AFF. DUCTS WITH ELBOWS SHALL BE MIN 18" LONG IN EACH LEG.
3. TRANSFER DUCTS SHALL BE GALVANIZED SHEET METAL, PRESSURE RATING 1.0 IN. W.G., LINED WITH 1" SOUND LINING INSTALLED PER SECTION 15890. INDICATED DIMENSIONS ARE CLEAR AIR SIZE. INCREASE SHEET METAL DIMENSIONS TO SUIT.



TIMBER COURT  
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Engineering Co.

1237 ANAPOLIS ROAD  
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410-519-0800  
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MEC PROJECT NO. 0512300

20	1/29/10	RECORD DRAWING
19	8/4/09	BULLETIN #101
18	4/29/09	BULLETIN #100
17	4/30/09	BULLETIN #100R
16	3/30/09	BULLETIN #105
15	4/15/09	BULLETIN #095
14	3/2/09	BULLETIN #84
13	12/16/08	BULLETIN #82
12	12/7/08	BULLETIN #80
11	11/20/08	BULLETIN #78
10	11/19/08	BULLETIN #72 (rev)
9	10/20/08	BULLETIN #69
8	9/4/08	BULLETIN #63
7	7/28/08	BULLETIN #55
6	6/23/08	BULLETIN #51
5	05/23/08	COORD. DWGS RFI 163
4	05/09/08	BULLETIN #31
3	04/14/08	CR-39
2	03/10/08	CRM-2
1	02/18/08	CRM-1
0	05/02/07	For Construction
Rev.	Date:	Comment:
Issued: May 2, 2007		

# Campus Center

621 West Lombard Street  
University of Maryland,  
Baltimore  
Baltimore, MD

# Ductwork Garden Level

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DOCUMENTS

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IF THIS DRAWING DOES NOT MEASURE EXACTLY 36" X 42", IT HAS BEEN REDUCED OR ENLARGED. PLEASE DO NOT SCALE THIS DRAWING.

UMB PROJECT NO. 99-311  
W&W PROJECT NO. 70-4091  
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H1.0





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1227 ANNAPOLIS ROAD  
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MEC PROJECT NO. 0512300

20	1/29/10	RECORD DRAWING
19	8/4/09	BULLETIN #101
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17	4/30/09	BULLETIN #100R
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15	4/15/09	BULLETIN #095
14	3/2/09	BULLETIN #94
13	12/16/08	BULLETIN #92
12	12/7/08	BULLETIN #90
11	11/20/08	BULLETIN #79
10	11/19/08	BULLETIN #72 (rev)
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7	7/28/08	BULLETIN #55
6	6/23/08	BULLETIN #51
5	05/23/08	COORD. DWGS RFI 163
4	05/09/08	BULLETIN #31
3	04/14/08	CBM-39
2	03/10/08	CBM-2
1	02/18/08	CBM-1
0	05/02/07	For Construction

Rev. Date: Comment:  
Issued: May 2, 2007

## Campus Center

621 West Lombard Street  
University of Maryland,  
Baltimore  
Baltimore, MD

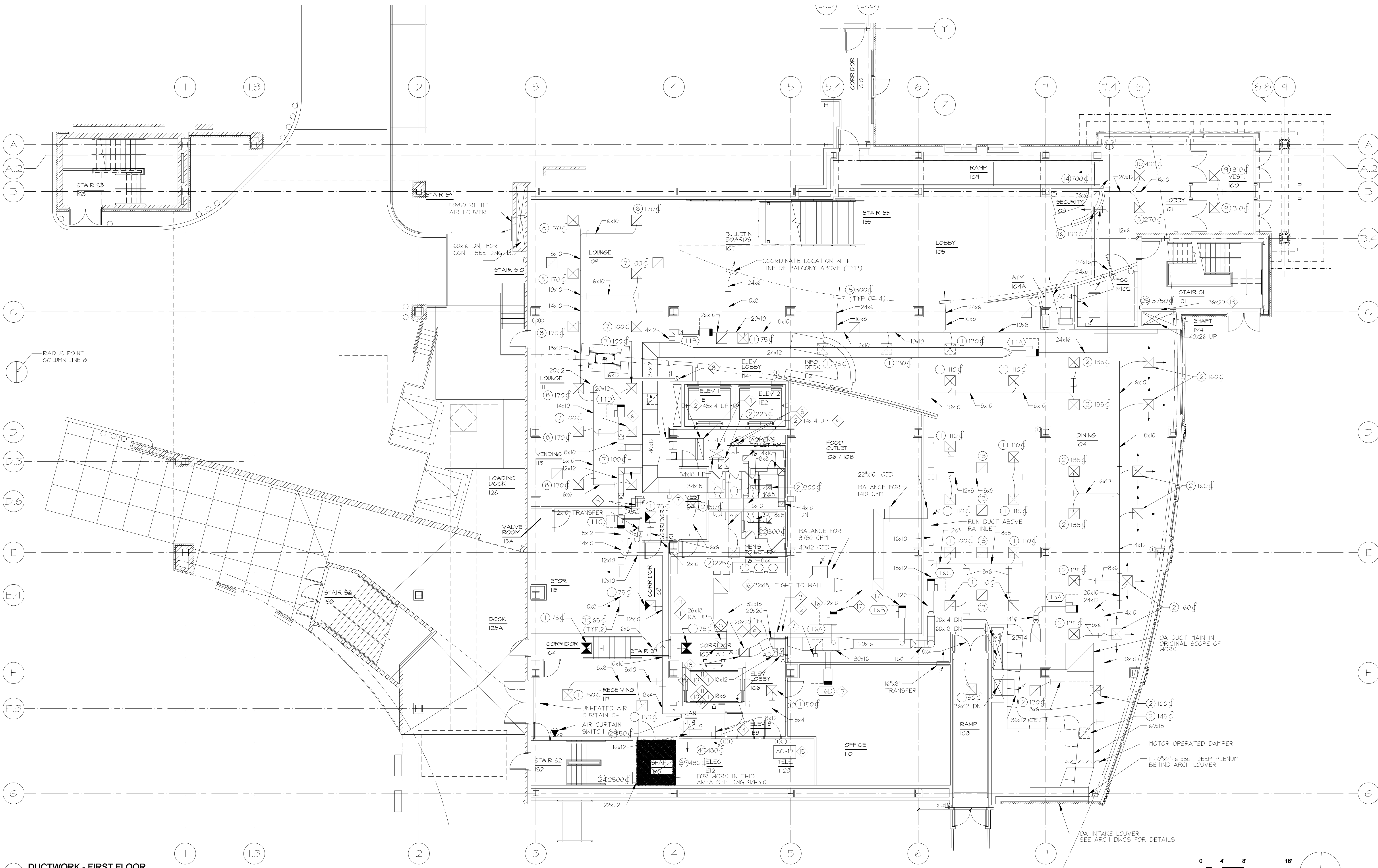
## Ductwork First Floor

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DOCUMENTS

UMB PROJECT NO. 99-311  
WTW PROJECT NO. 70-4091  
© WTW ARCHITECTS S(edin)E(0) yyy)

# H1.1

IF THIS DRAWING DOES NOT MEASURE EXACTLY 30" X 42", IT HAS BEEN REDUCED OR ENLARGED. PLEASE DO NOT SCALE THIS DRAWING.



1 DUCTWORK - FIRST FLOOR  
1/8"=1'-0"

### DRAWING NOTES:

- ALL OPEN END DUCTS SHALL BE PROVIDED WITH BELLMOUTH PER DETAIL.
- TRANSFER DUCTS SHALL BE ABOVE CEILINGS, AND MIN. 90" AFF. DUCTS WITH ELBOWS SHALL BE MIN 18" LONG IN EACH LEG.
- TRANSFER DUCTS SHALL BE GALVANIZED SHEET METAL, PRESSURE RATING 1.0 IN. W.G., LINED WITH 1" SOUND LINING INSTALLED PER SECTION 15040. INDICATED DIMENSIONS ARE CLEAR AIR SIDE, INCREASE SHEET METAL DIMENSIONS TO SUIT.

### SPECIAL NOTES:

- FOR CONTINUATION SEE DRAWING 1/H3.0.
- FOR CONTINUATION SEE DRAWING 2/H3.0.
- 12x18, CAP FOR FUTURE CONNECTION TO GREASE EXHAUST HOODS.
- 10x8 EXHAUST DUCT DOWN TO GARDEN LEVEL CEILING SPACE, FOR CONTINUATION SEE H1.0.
- SEE DWG. H2.1 FOR CHILLED WATER PIPING IN THIS AREA.
- 48x14 OED.
- STATIC PRESSURE SENSOR, SEE ATC SCHEMATICS.
- 10"Ø O.D. TYPE L FLUE VENT UP. COORD LOCATION WITH PLUMBING RISERS IN SHAFT.
- FOR CONTINUATION SEE DRAWING 1/H3.0.
- PROVIDE FIRE DAMPER AT SLAB PENETRATION.
- GREASE EXHAUST, PROVIDE FIRE RATED INSULATION AS SPECIFIED.
- PROVIDE RATED CLEANOUT ACCESS DOOR AT BOTTOM OF GREASE EXHAUST RISER.
- 18x18, CAP FOR FUTURE CONNECTION TO GREASE EXHAUST HOODS.
- LOCATE GRILLE AS HIGH AS POSSIBLE.
- ATC PANEL.
- SEE DWG. H3.5 FOR DUCT LAYOUT.
- TIGHT TO STRUCTURE.
- FOR FUTURE USE UNDER SEPARATE TENANT FIT-OUT PROJECT. BALANCE ACCORDING TO SCHEDULED AIRFLOW, UNDER THIS PROJECT.
- RISER AND FIRE DAMPER IN ORIGINAL SCOPE OF WORK.

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17	4/29/09	BULLETIN #108R
16	3/30/09	BULLETIN #105
15	4/15/09	BULLETIN #99R
14	3/2/09	BULLETIN #94
13	12/16/08	BULLETIN #92
12	12/7/08	BULLETIN #90
11	11/25/08	BULLETIN #78
10	11/19/08	BULLETIN #72 (rev)
9	10/20/08	BULLETIN #69
8	9/4/08	BULLETIN #63
7	7/28/08	BULLETIN #55
6	6/23/08	BULLETIN #51
5	05/23/08	COORD. DWGS RFI 16
4	05/09/08	BULLETIN #31
3	04/14/08	CB-39
2	03/10/08	CBM-2
1	02/18/08	CBM-1
0	05/02/07	For Construction
Rev. Date:		Comment:
Issued: May 2, 2007		

## Campus Center

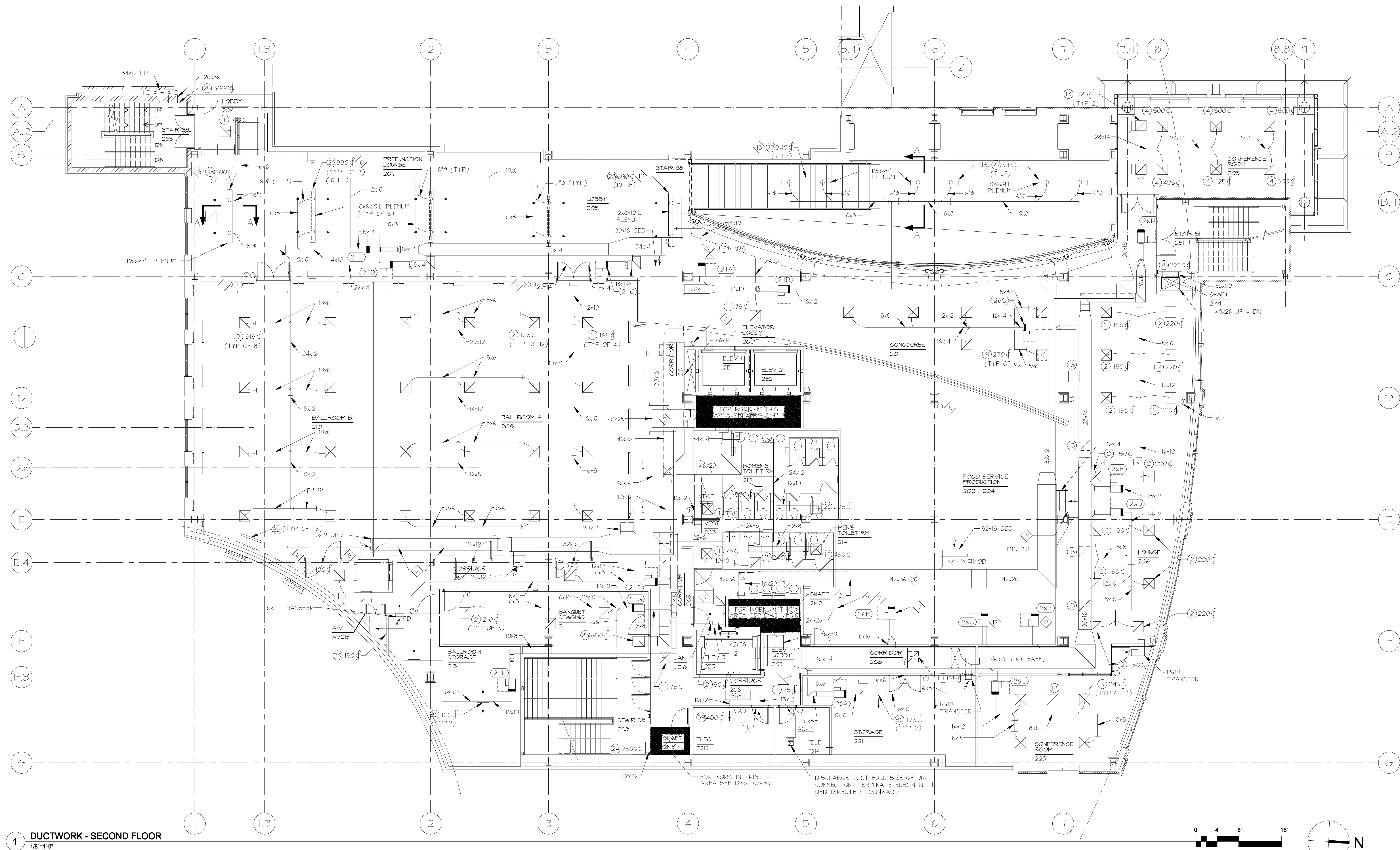
621 West Lombard Street  
University of Maryland,  
Baltimore  
Baltimore, MD

## Ductwork Second Floor

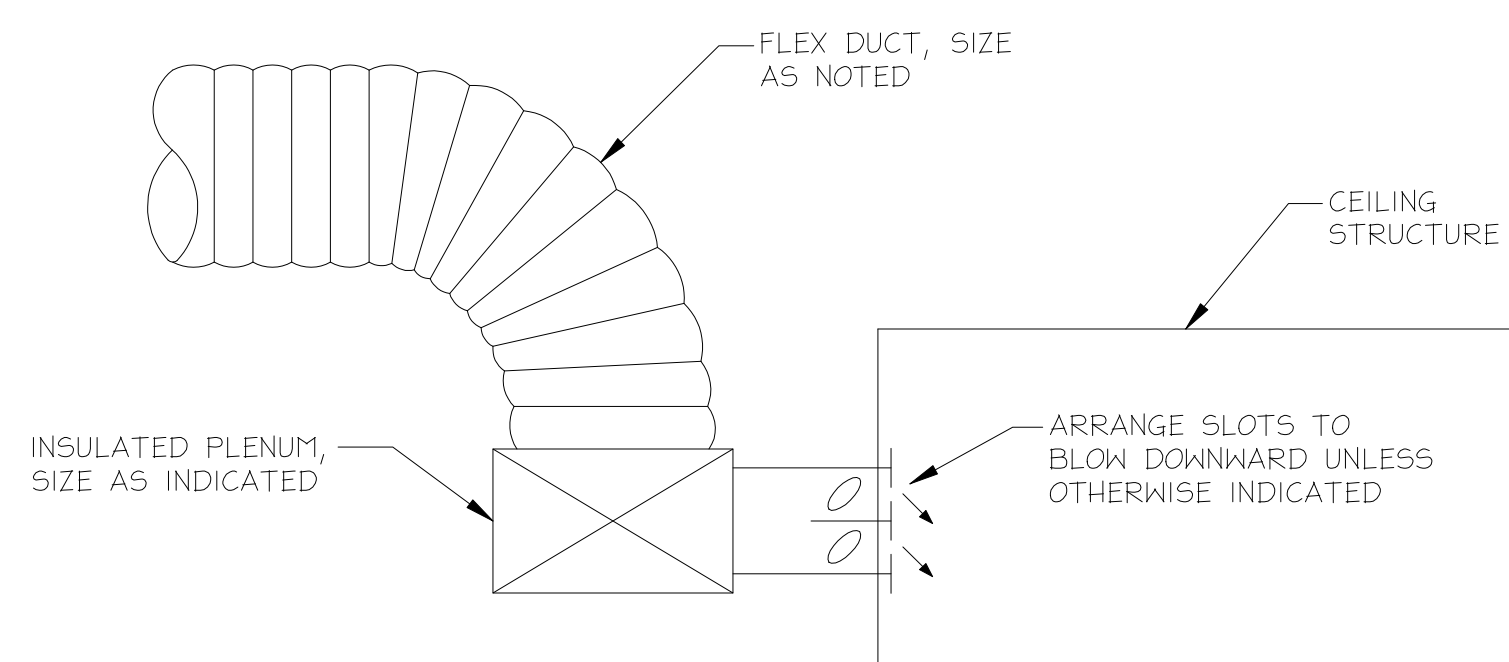
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H1.2



**1 DUCTWORK - SECOND FLOOR**  
1/8"=1'-0"



**2 DETAIL A-A: SLOT DIFFUSERS AT BULKHEADS**  
NOT TO SCALE

### DRAWING NOTES:

- ALL OPEN END DUCTS SHALL BE PROVIDED WITH BELLMOUTH PER DETAIL.
- TRANSFER DUCTS SHALL BE ABOVE CEILINGS, AND MIN. 9" AFF. DUCTS WITH ELBOWS SHALL BE MIN 18" LONG IN EACH LEG.
- TRANSFER DUCTS SHALL BE GALVANIZED SHEET METAL, PRESSURE RATING 1.0 IN. W.G., LINED WITH 1" SOUND LINING INSTALLED PER SECTION 15840. INDICATED DIMENSIONS ARE CLEAR AIR SIDE. INCREASE SHEET METAL DIMENSIONS TO SUIT.

### SPECIAL NOTES:

- SLOT DIFFUSERS RETURN OPEN TO PLENUM.
- 20x14 OED, FOR FUTURE CONNECTION TO GREASE EXHAUST HOODS.
- 26x24 OED, FOR FUTURE CONNECTION TO GREASE EXHAUST HOODS.
- 10" ØD TYPE L FLUE VENT UP & DN. COORD. LOCATION WITH PLUMBING RISERS.
- NOT USED.
- BLANK OFF THIS AIR DEVICE.
- GREASE EXHAUST, PROVIDE FIRE RATED INSULATION AS SPECIFIED.
- LOCATE GRILLE AS HIGH AS POSSIBLE.
- PROVIDE BLANK SLOT DIFFUSERS SUCH THAT DEVICE EXTENDS FULL LENGTH OF ADJACENT 16" HIGH CEILING. BLANK SLOTS SHALL BE OPEN TO CEILING PLENUM FOR RETURN AIR USE.
- LOCATE SLOT DIFFUSER IN BOTTOM OF PLENUM.
- VERIFY SENSOR LOCATIONS WITH OWNER & ARCHITECT.
- ATC PANEL.
- NOT USED.
- CONTROL UNITS 26G, 21B, AND 21A IN PARALLEL.
- CONTROL UNITS 26C AND 26E IN PARALLEL.
- CONTROL UNITS 26D AND 26F IN PARALLEL.
- FOR FUTURE USE UNDER SEPARATE TENANT FIT-OUT PROJECT. BALANCE ACCORDING TO SCHEDULED MINIMUM AIRFLOW, UNDER THIS PROJECT.
- PROVIDE ADDITIONAL 1 LF BLANK DIFFUSER AT EACH END TO BRING TOTAL VISIBLE LENGTH TO 9 LF, CENTERED ON BULKHEAD.
- BALANCE FOR 5680 CFM.
- TIGHT TO STRUCTURE.
- PROVIDE 18x12 FILTER RETURN GRILLE (TITUS 350RLF1 OR EQUAL) WITH 1" MERV 7 FILTER). REMOVE FILTER FROM AC-11.

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