

STRUCTURAL ABBREVIATIONS

Table of structural abbreviations including terms like ANCHOR BOLT, BOTTOM OF BUILDING, CENTER TO CENTER, and various material and construction terms.

SHOP DRAWINGS AND SUBMITTALS

- 1. THE GENERAL CONTRACTOR SHALL FOLLOW THE ARCHITECT'S INSTRUCTIONS FOR DISTRIBUTION OF SHOP DRAWINGS.
2. SHOP DRAWING REVIEW IS FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT. CORRECTIONS OR COMMENTS MADE ON THIS REVIEW DO NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS AND/OR OMISSIONS, NOR FROM COMPLIANCE WITH THE PLANS AND SPECIFICATIONS.
3. APPROVAL OF SHOP DRAWINGS DOES NOT INDICATE AN ACCEPTANCE OF DEVIATIONS FROM THE CONTRACT DOCUMENTS OR PREVIOUS SHOP DRAWING REVIEW, UNLESS SPECIFICALLY NOTED THEREBY BY ENGINEER OF RECORD.

CAST-IN-PLACE CONCRETE NOTES

- 1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE PUBLICATIONS 'BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE' - ACI 318 LATEST EDITION, AND 'SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS' - ACI 301 LATEST EDITION.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS IN ACCORDANCE WITH THE FOLLOWING 'SCHEDULE OF CAST-IN-PLACE CONCRETE CONSTRUCTION MATERIALS':
3. ALL CONCRETE SHALL HAVE A MINIMUM SLUMP OF 4" PLUS OR MINUS 1", AND HAVE 2 TO 4% AIR ENTRAINMENT.

CONCRETE SLAB ON GROUND NOTES

- 1. THE CONCRETE SLAB ON GROUND FOR THIS PROJECT IS PRESCRIPTIVE; NO STRUCTURAL DESIGN HAS BEEN PROVIDED.
2. THE CONCRETE SLAB ON GROUND HAS BEEN SPECIFIED BASED ON THE FOLLOWING ASSUMPTIONS:
A. MINIMUM SOIL BEARING PRESSURE OF 2000 PSF.
B. SOIL CONSTANT 'K' VALUE OF 150 PSI/IN.
C. WALLS MUST BE CONFIRMED BY GEOTECH REPORT, REFERENCE 'FOUNDATION AND GEOTECHNICAL NOTE' #2.

STRUCTURAL STEEL NOTES

- 1. ALL STRUCTURAL STEEL DETAILING, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH 'SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS' - AISC 360, LATEST EDITION.
2. WELDED CONNECTIONS SHALL CONFORM TO THE LATEST EDITION CODE OF THE AMERICAN WELDING SOCIETY, AWS D1.1.
3. ALL FABRICATION AND ERECTION WORK SHALL BE PERFORMED BY AISC CERTIFIED FABRICATORS AND ERECTORS.
4. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING MATERIAL REQUIREMENTS, UNLESS NOTED OTHERWISE.

- 4. NAME, ADDRESS, AND CONTACT NUMBER OF CONTRACTOR, SUBCONTRACTOR, ETC. SUBMITTING SHOP DRAWINGS.
5. SHEET NUMBER.
6. DATE DRAWING WAS PREPARED, THE INITIALS OF THE PERSON WHO PREPARED THE DRAWINGS, AND THE INITIALS OF THE PERSON WHO CHECKED THE DRAWINGS.
7. ANY REPRODUCTION OF THESE CONTRACT DRAWINGS NOT COMPLYING WITH THE ABOVE WILL BE REJECTED.
8. SOME STRUCTURAL SYSTEMS INCLUDED IN THESE CONTRACT DRAWINGS ARE INDICATED AS 'DESIGNED BY SPECIALTY' OR 'DELEGATED ENGINEER'. 'DELEGATED ENGINEERING SUBMITTALS' SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED.

Table titled 'PROTECTION FOR REINFORCEMENT IN CAST-IN-PLACE CONCRETE' with columns for APPLICATION and CLEAR COVER, detailing requirements for various concrete and steel conditions.

TILT-UP CONCRETE WALL SYSTEM NOTES

- 1. ALL CONCRETE SHALL BE IN ACCORDANCE WITH THE PUBLICATIONS 'BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE' - ACI 318 LATEST EDITION, AND 'SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS' - ACI 301 LATEST EDITION.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS IN ACCORDANCE WITH THE FOLLOWING 'SCHEDULE OF CAST-IN-PLACE CONCRETE CONSTRUCTION MATERIALS':
3. ALL CONCRETE SHALL BE PLACED IN A CONTINUOUS OPERATION AND CONSOLIDATED USING MECHANICAL VIBRATION.

POST-INSTALLED ANCHORS NOTES

- 1. POST-INSTALLED ANCHOR SYSTEMS SHALL COMPLY WITH THE LATEST REVISION OF ICC-ES ACCEPTANCE CRITERIA AC308 AND HAVE A VALID ICC-ES REPORT IN ACCORDANCE WITH ALL APPLICABLE CODES.
2. POST-INSTALLED ANCHOR SYSTEMS MUST BE INSTALLED IN STRICT ACCORDANCE WITH ALL WRITTEN MANUFACTURER INSTRUCTIONS INCLUDING ANY SPECIAL EQUIPMENT REQUIREMENTS.
3. THE PRODUCTS LISTED BELOW ARE THE BASIS OF DESIGN FOR THIS PROJECT. SUBSTITUTION REQUESTS FOR PRODUCTS OTHER THAN THOSE LISTED BELOW SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW PRIOR TO INSTALLATION. SUBSTITUTIONS WILL ONLY BE CONSIDERED FOR PRODUCTS THAT HAVE A CODE REPORT RECOGNIZING THE PRODUCT FOR THE APPROPRIATE APPLICATION AND PROJECT BUILDING CODE.

PROTECTION FOR REINFORCEMENT IN TILT-UP WALL CONCRETE

Table detailing protection for reinforcement in tilt-up wall concrete, including application and clear cover requirements for different concrete and steel conditions.

OPEN WEB STEEL JOIST NOTES

- 1. DESIGN, DETAILING, FABRICATION, AND ERECTION OF STEEL JOISTS AND JOIST GIRDERS SHALL BE IN ACCORDANCE WITH 'SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS' - AISC 360, LATEST EDITION AND WITH THE LATEST CODES AND STANDARDS OF THE STEEL JOIST INSTITUTE, SJI.
2. STEEL JOIST AND JOIST GIRDER MANUFACTURER SHALL BE A MEMBER OF THE STEEL JOIST INSTITUTE.
3. JOISTS SHALL BE DESIGNED FOR THE COMBINED DEAD, LIVE, AND WIND LOADS AS NOTED IN THE LOAD TABLES AND AS NOTED ON PLAN. IN ALL CASES, JOISTS SHALL NOT BE DESIGNED FOR LESS LOAD THAN PRESCRIBED IN THE STANDARD JOIST LOADING TABLES FOR THE STEEL JOIST INSTITUTE.
4. PROVIDE UPLIFT BRIDGING AND STANDARD JOIST BRIDGING IN ACCORDANCE WITH THE LATEST SJI SPECIFICATIONS.

GOVERNING CODES AND STANDARDS

- 1. 'FLORIDA BUILDING CODE' - FBC 2020, 7TH EDITION.
2. 'MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES' - ASCE 7-16.
3. 'BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE' - ACI 318-14.
4. 'ACI MANUAL OF CONCRETE PRACTICE' - PARTS 1 THROUGH 5 - LATEST EDITION.
5. 'SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS' - AISC 360-16.
6. 'STRUCTURAL WELDING CODE - STEEL' - AWS D1.1-2020.

FOUNDATION AND GEOTECHNICAL NOTES

- 1. NO GEOTECHNICAL REPORT WAS PROVIDED FOR THIS SITE AT THE TIME OF THESE CONTRACT DRAWINGS. THE OWNER SHALL ENGAGE A GEOTECHNICAL ENGINEER TO PROVIDE AN INDUSTRY STANDARD GEOTECHNICAL ENGINEERING SERVICES REPORT FOR THE SITE CONDITIONS AND THE PROPOSED STRUCTURE.
2. THE ASSUMED ALLOWABLE SOIL BEARING PRESSURE IS 2000 PSF. THIS ASSUMED SOIL BEARING PRESSURE IS BASED ON TABLE 1906.2 OF THE FLORIDA BUILDING CODE - SANDY SOILS. UPON REVIEW OF THE COMPLETED GEOTECHNICAL ENGINEERING REPORT, THIS ASSUMPTION WILL BE REVIEWED. REVISIONS TO ANY FOUNDATIONS AS REQUIRED WILL BE COMPLETED. ANY CHANGES TO THE DESIGN INTENT SHALL BE THE RESPONSIBILITY OF THE BUILDING OWNER.
3. ALL REQUIREMENTS FOR SITE PREPARATION AND SOIL COMPACTION SPECIFIED IN THE GEOTECHNICAL REPORT SHALL BE FOLLOWED UNLESS ADDITIONAL MORE STRINGENT REQUIREMENTS ARE SPECIFIED. A CERTIFIED TESTING AGENCY SHALL PERFORM SOIL DENSITY AND COMPACTION TESTS TO ENSURE CONFORMANCE WITH THE GEOTECHNICAL REPORT. SUBMIT ALL TESTS RESULTS TO THE PROJECT ARCHITECT AND ENGINEER. TEST PER THE FOLLOWING:
A. PAVED AND BUILDING SLAB LAYER: AT SUBGRADE AND AT EACH COMPACTED FILL LAYER, AT LEAST ONE TEST FOR EVERY 200 SQ. FT. BUT IN NO CASE FEWER THAN 3 TESTS.
B. FOOTINGS: AT EACH COMPACTED BACKFILL LAYER AT EACH FOOTING OR ONE TEST FOR EACH 50 SQ. FT. OF WALL FOOTING.
C. CONTRACTOR SHALL RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS OBTAINED.

PROTECTION FOR REINFORCEMENT IN TILT-UP WALL CONCRETE

Table detailing protection for reinforcement in tilt-up wall concrete, including application and clear cover requirements for different concrete and steel conditions.

METAL ROOF DECK NOTES

- 1. DETAILING, FABRICATION, AND ERECTION OF STEEL DECK SHALL BE IN ACCORDANCE WITH THE LATEST STEEL DECK SPECIFICATIONS. AWS, AND CONTRACT DOCUMENTS. DECK SHALL CONFORM TO 'BASIC DESIGN IDENTIFICATION' AS ADOPTED BY THE STEEL DECK INSTITUTE, SDI.
2. STEEL DECK PROFILE SHALL CONFORM TO FACTORY MANUFACTURED REQUIREMENTS.
3. METAL ROOF DECK SHALL BE MINIMUM 1-1/2" DEEP 22 GA. TYPE B (AS IDENTIFIED BY SDI) PAINTED WHITE UNDERSIDE AND GRAY TOP SIDE. STEEL DECK CONFORMING TO ASTM A708 OR ASTM A1030 WITH MINIMUM YIELD STRESS OF 50 KSI. REFERENCE DRAWINGS FOR REQUIRED DECK STRENGTH. DECK FINISH SHALL BE SHOP PRIMED WITH BAKED-ON, LEAD- AND CHROMATE-FREE RUST-INHIBITIVE PRIMER, COMPLYING WITH PERFORMANCE REQUIREMENTS OF SSPC-Paint 25.
4. DECK SUPPLIER SHALL PROVIDE ANY MISCELLANEOUS CLOSURE PEEPS, POUR STOPS, DRUM SUMP PANS, ETC. TO COMPLETE PROJECT. MISCELLANEOUS ITEMS SHALL MATCH AT A MINIMUM THE STEEL DECK FINISH AND THICKNESS.
5. THE DECK SHALL BE PLACED ON THE SUPPORTING FRAMEWORK WITH A MINIMUM END LAP OF TWO INCHES CENTERED OVER THE SUPPORTS. THE DECK SHALL BE ATTACHED TO THE SUPPORTS, AND THE SIDE LAP OF ADJACENT UNITS IN THE PATTERN'S SHOW ON THE CONTRACT DRAWINGS.

GENERAL CONDITIONS

- 1. THE GENERAL CONTRACTOR SHALL REVIEW AND VERIFY THAT ALL DIMENSIONS ARE COORDINATED BETWEEN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO FABRICATION OR START OF CONSTRUCTION.
2. THE GENERAL CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL CONDITIONS AT THE PROJECT SITE AND SHALL NOTIFY ARCHITECT/ENGINEER OF DISCREPANCIES BETWEEN THE ACTUAL CONDITIONS AND INFORMATION SHOWN ON THE DRAWINGS BEFORE PROCEEDING WITH ANY WORK.
3. THESE STRUCTURAL DRAWINGS ARE TO BE USED IN COMBINATION WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND CIVIL DRAWINGS, AND ANY OTHER PROJECT CONTRACT DOCUMENTS NOT LISTED. REFER TO THESE DRAWINGS FOR DETAILS AND INFORMATION THAT MAY RELATE TO STRUCTURAL COMPONENTS.
4. THESE CONTRACT DRAWINGS AND RELATED SPECIFICATIONS, IF PROVIDED, REPRESENT THE COMPLETED DESIGN OF THE STRUCTURE. THEY DO NOT INDICATE THE MEANS AND METHODS OF CONSTRUCTION UNLESS SO STATED OR NOTED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO ENSURE THE SAFETY OF THE CONSTRUCTION SITE.
5. OBSERVATION VISITE TO THE SITE BY THE EOR OR REPRESENTATIVES OF THE EOR MAY BE MADE DURING CONSTRUCTION. ANY SUPPORT SERVICES PERFORMED BY THE EOR SHALL BE DISTINGUISHED FROM INSPECTION AND/OR TESTING SERVICES PERFORMED BY OTHERS AND ARE NOT TO BE CONSIDERED AS SUPERVISION AND/OR MANAGEMENT OF CONSTRUCTION.
6. THE OWNER WILL ENGAGE A QUALIFIED, APPROVED TESTING AGENCY TO PROVIDE SERVICES AS INDICATED BELOW. SUBMIT REPORTS TO STRUCTURAL ENGINEER AND ARCHITECT.
A. TEST SOIL COMPACTION PER LATEST GEOTECHNICAL REPORT (U.O.)
B. TEST CONCRETE IN ACCORDANCE WITH ASTM C172 AND C31.
C. VISUALLY INSPECT FIELD WELDS, BOLTED CONNECTIONS, AND OTHER STRUCTURAL STEEL CONNECTIONS. ALL FIELD WELDS SHALL BE INSPECTED BY A CERTIFIED WELD INSPECTOR.

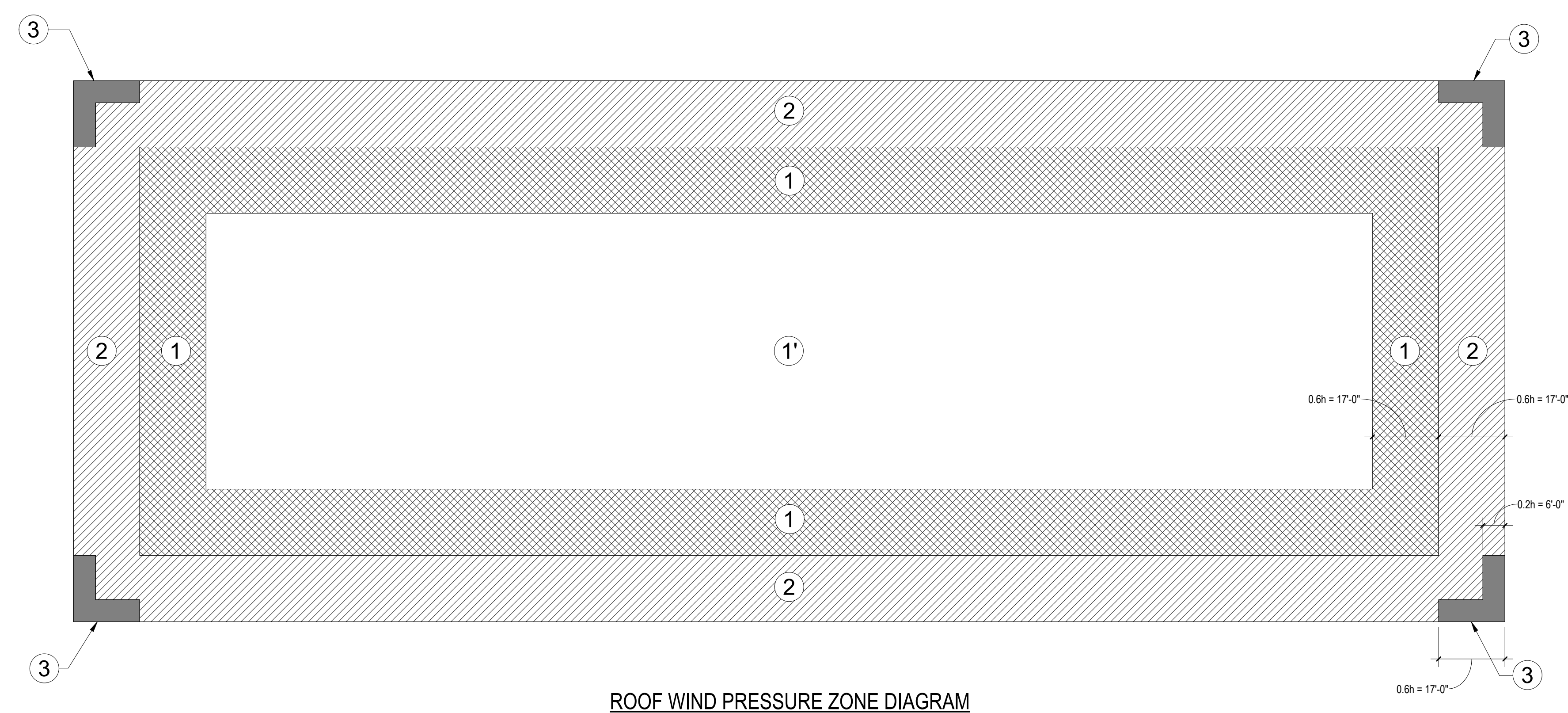
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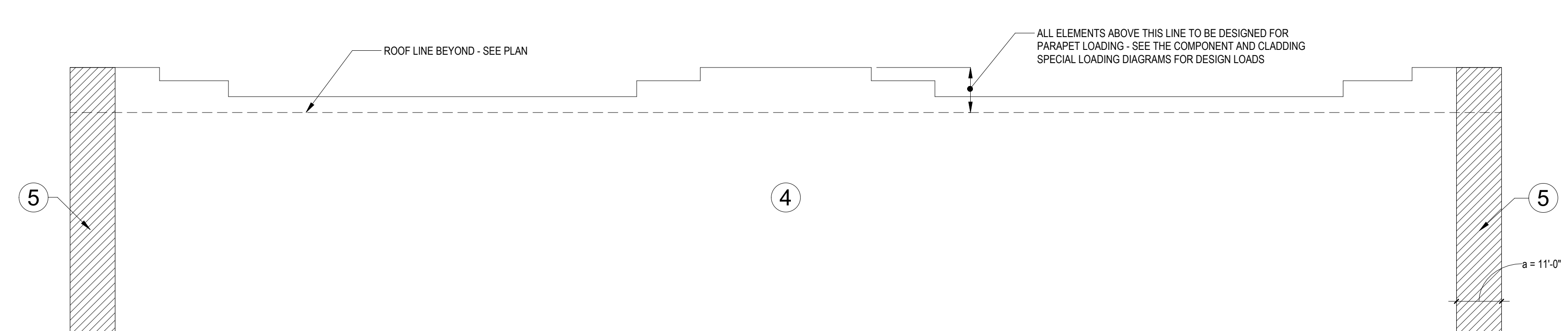
IMAGE BUILDERS - WGCC NEW CONSTRUCTION - IMAGE BUILDERS 690 GARDEN COMMERCE PARKWAY WINTER GARDEN, FL 34787 GENERAL STRUCTURAL NOTES

Professional Engineer Seal for Jonathan D. Collins, No. 74693, State of Florida.

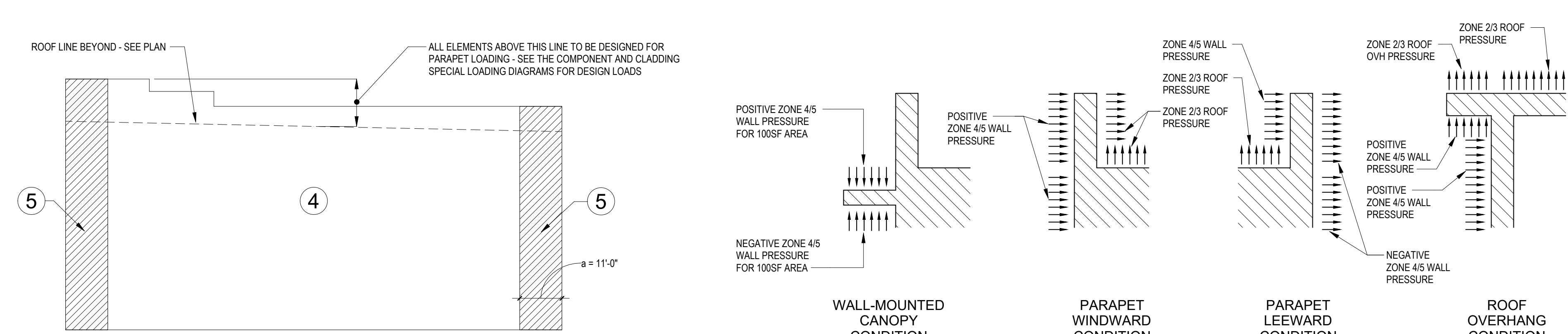
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ROOF WIND PRESSURE ZONE DIAGRAM



SIDE WALL WIND PRESSURE ZONE DIAGRAM



END WALL WIND PRESSURE ZONE DIAGRAM

COMPONENTS AND CLADDING SPECIAL LOADING DIAGRAMS

TABLE 1: DESIGN LOADS & DESIGN CRITERIA

DEAD LOADS				
BUILDING COMPONENT	TYPICAL ROOF OVER WAREHOUSE	TYPICAL ROOF OVER OFFICE SPACE	TYPICAL MEZZ FLOOR OVER EQUIP ROOMS	NOT USED
TPO ROOFING	2.0 PSF	2.0 PSF	— PSF	— PSF
INSULATION	2.0 PSF	2.0 PSF	— PSF	— PSF
METAL DECK	2.0 PSF	2.0 PSF	— PSF	— PSF
STEEL JOISTS	3.0 PSF	3.0 PSF	— PSF	— PSF
FIRE SPRINKLERS	1.5 PSF	2.0 PSF	— PSF	— PSF
MECHANICAL	1.5 PSF	2.0 PSF	— PSF	— PSF
CEILING	— PSF	2.0 PSF	— PSF	— PSF
SOLAR PANELS	— PSF	— PSF	— PSF	— PSF
MISCELLANEOUS	3.0 PSF	3.0 PSF	— PSF	— PSF
STRUCT FLOOR SLAB	— PSF	— PSF	— PSF	— PSF
FLOORING	— PSF	— PSF	— PSF	— PSF
TOTAL DEAD LOAD	15.0 PSF	18.0 PSF	— PSF	— PSF
LIVE LOADS				
ROOF LIVE LOAD	20.0 PSF	20.0 PSF	— PSF	— PSF
LIVE LOAD	— PSF	— PSF	— PSF	— PSF
ROOF CONCENTRATED	150 LBS	150 LBS	— LBS	— LBS
FLOOR CONCENTRATED	— LBS	— LBS	— LBS	— LBS
WIND LOAD CRITERIA				
BASIC WIND SPEED (ULT)	139 MPH	BUILDING RISK CATEGORY	II	
BASIC WIND SPEED (ASD)	108 MPH	EXPOSURE CATEGORY	C	
VELOCITY PRESSURE, q _s (ULT)	40.7	ENCLOSURE CLASSIFICATION	ENCLOSED	
VELOCITY PRESSURE, q _s (ASD)	31.5	INTERNAL PRESSURE COEFFICIENT	+/- 0.18	

NOTES:

- ROOF LIVE LOADS MAY BE REDUCED, WHERE APPLICABLE, PER FLORIDA BUILDING CODE SEC 1607.2.2.1. REDUCED UNIFORM LIVE LOAD SHALL NOT BE LESS THAN 12.0 PSF.
- CONCENTRATED ROOF LOADS OVER STEEL JOIST ROOFS SHALL BE APPLIED AS BEND CHECK LOADS TO THE ROOF JOISTS AT THE TOP AND BOTTOM CHORDS (NOT SIMULTANEOUSLY).

TABLE 2: STRENGTH DESIGN (ULTIMATE) WIND PRESSURES

POSITIVE WIND PRESSURES ON WALLS & WALL OPENINGS					
WIND PRESSURE ZONE	EFF. AREA	EFF. AREA	EFF. AREA	EFF. AREA	EFF. AREA
≤ 10 SF	20 SF	50 SF	100 SF	≥ 200 SF	
WALL ZONE ④	44.0 PSF	42.0 PSF	38.4 PSF	37.5 PSF	35.5 PSF
WALL ZONE ⑤	44.0 PSF	42.0 PSF	38.4 PSF	37.5 PSF	35.5 PSF
NEGATIVE WIND PRESSURES ON WALLS & WALL OPENINGS					
WIND PRESSURE ZONE	EFF. AREA	EFF. AREA	EFF. AREA	EFF. AREA	EFF. AREA
≤ 10 SF	20 SF	50 SF	100 SF	≥ 200 SF	
WALL ZONE ④	-47.6 PSF	-45.7 PSF	-43.1 PSF	-41.2 PSF	-39.2 PSF
WALL ZONE ⑤	-48.6 PSF	-47.7 PSF	-45.6 PSF	-45.7 PSF	-41.8 PSF
POSITIVE WIND PRESSURES ON ROOFING & ROOF FRAMING					
WIND PRESSURE ZONE	EFF. AREA	EFF. AREA	EFF. AREA	EFF. AREA	EFF. AREA
≤ 10 SF	20 SF	50 SF	100 SF	≥ 200 SF	
ROOF ZONE ①	19.5 PSF	18.3 PSF	16.7 PSF	16.0 PSF	16.0 PSF
ROOF ZONE ②	19.5 PSF	18.3 PSF	16.7 PSF	16.0 PSF	16.0 PSF
ROOF ZONE ③	19.5 PSF	18.3 PSF	16.7 PSF	16.0 PSF	16.0 PSF
NEGATIVE WIND PRESSURES ON ROOFING & ROOF FRAMING					
WIND PRESSURE ZONE	EFF. AREA	EFF. AREA	EFF. AREA	EFF. AREA	EFF. AREA
≤ 10 SF	20 SF	50 SF	100 SF	≥ 200 SF	
ROOF ZONE ①	-44.0 PSF	-44.0 PSF	-44.0 PSF	-44.0 PSF	-37.8 PSF
ROOF ZONE ②	-76.5 PSF	-71.5 PSF	-64.8 PSF	-58.8 PSF	-54.7 PSF
ROOF ZONE ③	-100.9 PSF	-94.5 PSF	-85.9 PSF	-79.4 PSF	-72.9 PSF
ROOF ZONE ④	-137.6 PSF	-124.6 PSF	-107.4 PSF	-94.5 PSF	-81.5 PSF

NOTES:

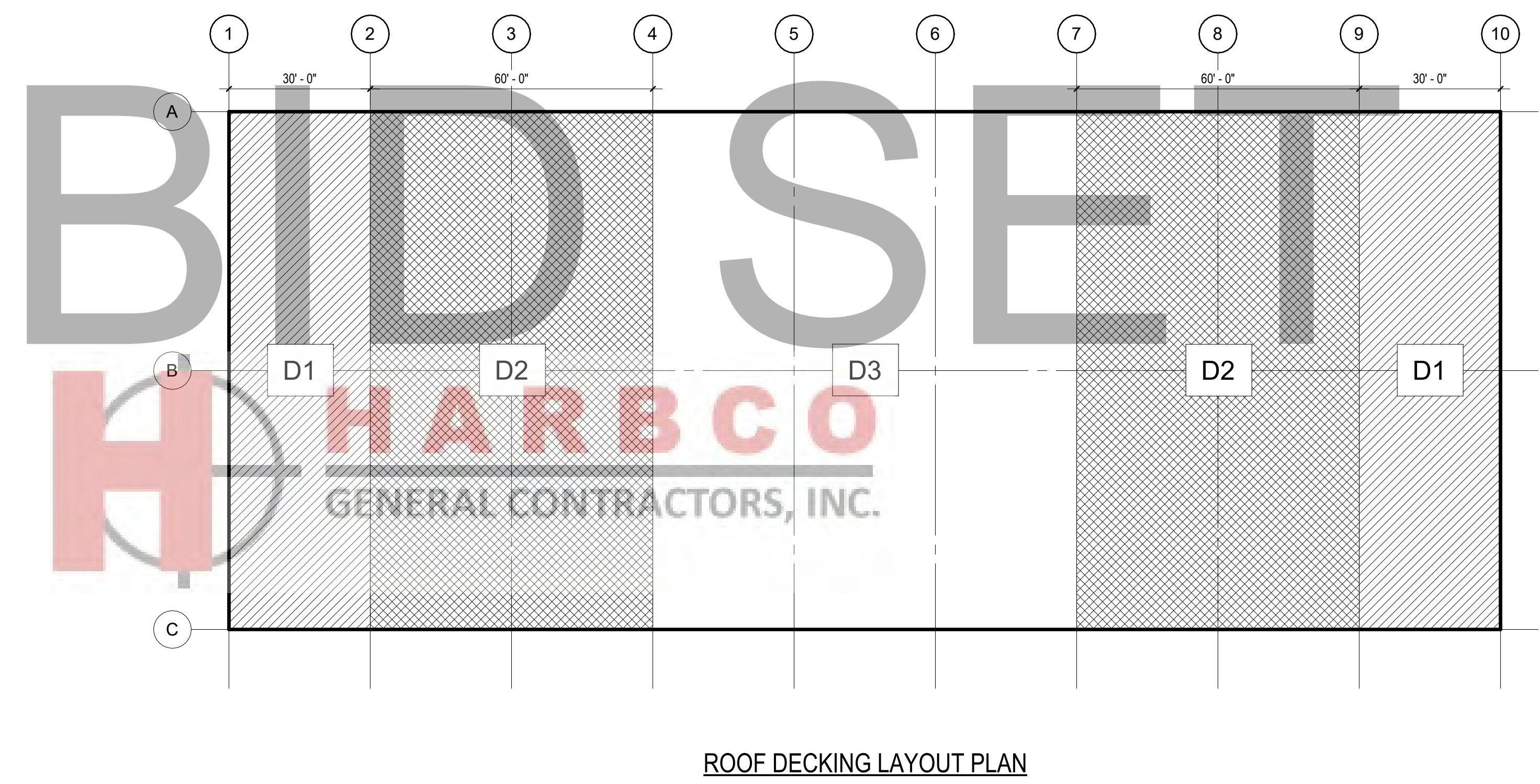
- WIND PRESSURES IN THE TABLES ABOVE ARE BASED ON CALCULATIONS FROM ASCE 7-16.
- OVERHANG PRESSURES IN THE TABLES ABOVE SHALL APPLY TO ALL ROOFS OVER BALCONIES, BREEZEWAYS, AND COVERED ENTRIES. COORDINATE WITH ARCHITECTURAL DRAWINGS.
- PROVIDE IMPACT RESISTANT GLAZING AS REQUIRED FOR WIND BORNE DEBRIS PER FLORIDA BUILDING CODE.
- MAXIMUM ALLOWABLE DEAD LOADS TO BE USED TO RESIST UPLIFT SHALL BE AS FOLLOWS:
 A. NET UPLIFT = ULTIMATE UPLIFT - 10 PSF DEAD LOAD
 B. NET UPLIFT = ALLOWABLE UPLIFT - 6 PSF DEAD LOAD

TABLE 3: ALLOWABLE STRESS (ASD) WIND PRESSURES

POSITIVE WIND PRESSURES ON WALLS & WALL OPENINGS					
WIND PRESSURE ZONE	EFF. AREA	EFF. AREA	EFF. AREA	EFF. AREA	EFF. AREA
≤ 10 SF	20 SF	50 SF	100 SF	≥ 200 SF	
WALL ZONE ④	26.4 PSF	25.2 PSF	23.7 PSF	22.5 PSF	21.3 PSF
WALL ZONE ⑤	26.4 PSF	25.2 PSF	23.7 PSF	22.5 PSF	21.3 PSF
NEGATIVE WIND PRESSURES ON WALLS & WALL OPENINGS					
WIND PRESSURE ZONE	EFF. AREA	EFF. AREA	EFF. AREA	EFF. AREA	EFF. AREA
≤ 10 SF	20 SF	50 SF	100 SF	≥ 200 SF	
WALL ZONE ④	-28.6 PSF	-27.4 PSF	-25.9 PSF	-24.7 PSF	-23.5 PSF
WALL ZONE ⑤	-35.2 PSF	-32.8 PSF	-29.7 PSF	-27.4 PSF	-25.1 PSF
POSITIVE WIND PRESSURES ON ROOFING & ROOF FRAMING					
WIND PRESSURE ZONE	EFF. AREA	EFF. AREA	EFF. AREA	EFF. AREA	EFF. AREA
≤ 10 SF	20 SF	50 SF	100 SF	≥ 200 SF	
ROOF ZONE ①	11.7 PSF	11.0 PSF	10.0 PSF	9.6 PSF	9.6 PSF
ROOF ZONE ②	11.7 PSF	11.0 PSF	10.0 PSF	9.6 PSF	9.6 PSF
ROOF ZONE ③	11.7 PSF	11.0 PSF	10.0 PSF	9.6 PSF	9.6 PSF
NEGATIVE WIND PRESSURES ON ROOFING & ROOF FRAMING					
WIND PRESSURE ZONE	EFF. AREA	EFF. AREA	EFF. AREA	EFF. AREA	EFF. AREA
≤ 10 SF	20 SF	50 SF	100 SF	≥ 200 SF	
ROOF ZONE ①	-26.4 PSF	-26.4 PSF	-26.4 PSF	-26.4 PSF	-22.7 PSF
ROOF ZONE ②	-45.9 PSF	-42.9 PSF	-38.9 PSF	-35.9 PSF	-32.8 PSF
ROOF ZONE ③	-60.6 PSF	-56.7 PSF	-51.5 PSF	-47.6 PSF	-43.7 PSF
ROOF ZONE ④	-82.5 PSF	-74.8 PSF	-64.5 PSF	-56.7 PSF	-48.9 PSF

NOTES:

- WIND PRESSURES IN THE TABLES ABOVE ARE BASED ON CALCULATIONS FROM ASCE 7-16.
- OVERHANG PRESSURES IN THE TABLES ABOVE SHALL APPLY TO ALL ROOFS OVER BALCONIES, BREEZEWAYS, AND COVERED ENTRIES. COORDINATE WITH ARCHITECTURAL DRAWINGS.
- PROVIDE IMPACT RESISTANT GLAZING AS REQUIRED FOR WIND BORNE DEBRIS PER FLORIDA BUILDING CODE.
- MAXIMUM ALLOWABLE DEAD LOADS TO BE USED TO RESIST UPLIFT SHALL BE AS FOLLOWS:
 A. NET UPLIFT = ULTIMATE UPLIFT - 10 PSF DEAD LOAD
 B. NET UPLIFT = ALLOWABLE UPLIFT - 6 PSF DEAD LOAD



ROOF DECKING LAYOUT PLAN

ROOF DECK SCHEDULE

ZONE	DECK TYPE	SUPPORT FASTENERS	FASTENER PATTERN	SIDLAP FASTENERS	FASTENER PER SPAN
D1	1-1/2" - 22 GA - TYPE "B"	5/8" DIA. PUDDLE WELDS	36/7	#12-14 TEK SCREWS	12 - 6" O.C.
D2	1-1/2" - 22 GA - TYPE "B"	5/8" DIA. PUDDLE WELDS	36/5	#12-14 TEK SCREWS	6 - 12" O.C.
D3	1-1/2" - 22 GA - TYPE "B"	5/8" DIA. PUDDLE WELDS	36/9	#12-14 TEK SCREWS	6 - 12" O.C.

NOTES:

- FASTEN DECK EDGE SIDELAP AT PERIMETER WITH 3/8" DIA. PUDDLE WELDS AT 6" O.C.
- FASTEN DECK EDGE SUPPORT AT PERIMETER WITH 5/8" DIA. PUDDLE WELDS TO MATCH FASTENER PATTERN AS NOTED IN SCHEDULE.
- REFERENCE FASTENER PATTERNS AND SIDELAP FASTENER SPACING DETAILS SHOWN IN DETAILS BELOW.

BID SET

12-15-22

HARBCO

GENERAL CONTRACTORS, INC.

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AS INDICATED

12/15/22

JDC

JDC

DATE: 12/15/22

DRAWN BY: JDC

CHECKED BY: JDC

IMAGE BUILDERS - WGCC

NEW CONSTRUCTION - IMAGE BUILDERS

690 GARDEN COMMERCE PARKWAY

WINTER GARDEN, FL 34787

DESIGN LOADS

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STATE OF FLORIDA

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Of Sheets

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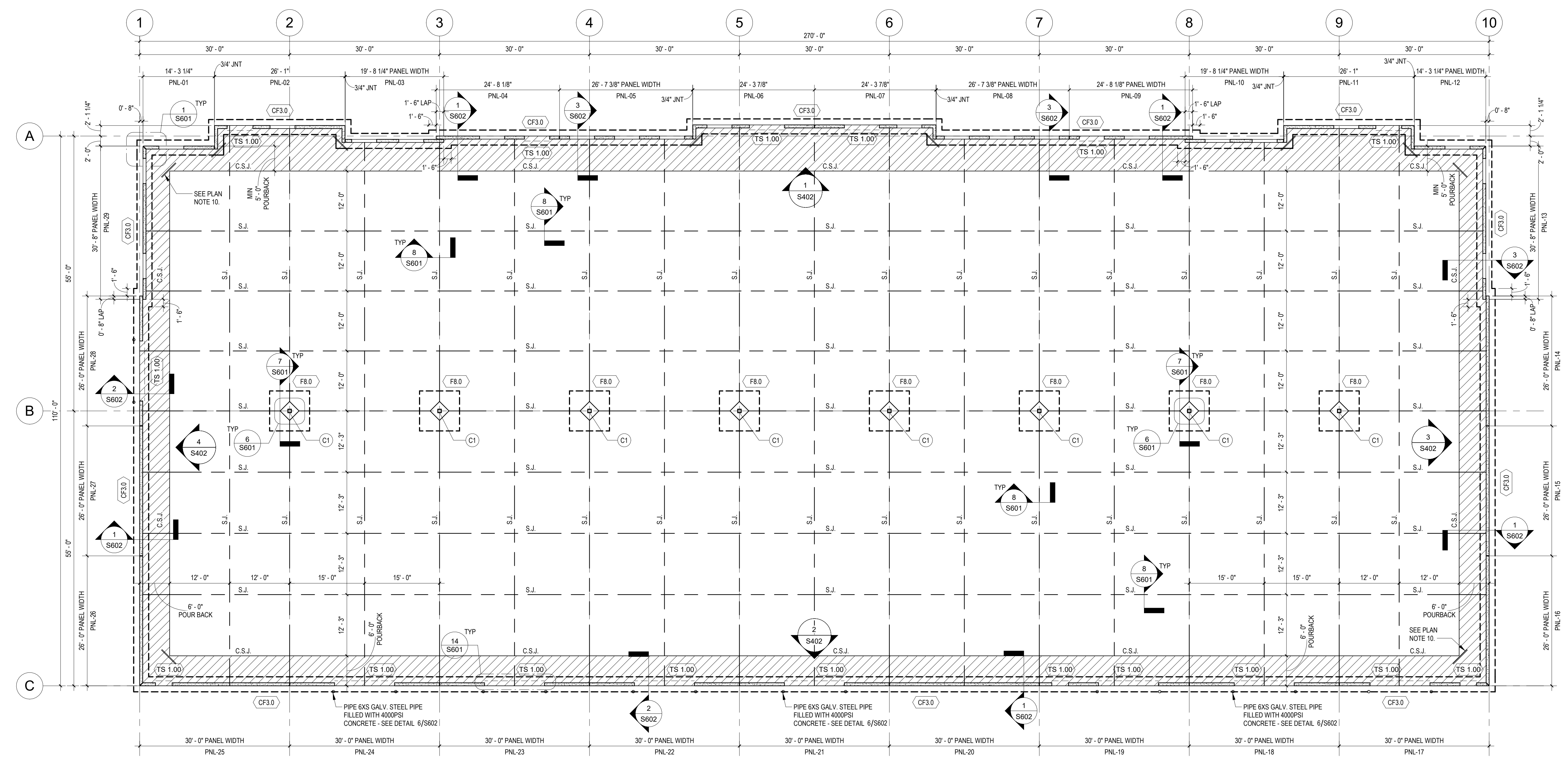
FOUNDATION PLAN NOTES:

- REFERENCE THE STRUCTURAL GENERAL NOTES ON DRAWINGS S001 & S002. GENERAL NOTES INCLUDE CODES AND STANDARDS, DESIGN LOADS AND OTHER REQUIREMENTS.
- CONTRACTOR TO VERIFY ALL ELEVATIONS AND DIMENSIONS SHOWN WITH ARCHITECTURAL DRAWINGS AND EQUIPMENT SUPPLIERS SHOP DRAWINGS PRIOR TO FABRICATION AND / OR START OF CONSTRUCTION.
- COORDINATE EXISTING / INSTALLED UNDERGROUND UTILITIES AND OTHER BURIED PIPES AND CONDUITS PRIOR TO PLACEMENT OF FOOTINGS. DO NOT PLACE BUILDING FOUNDATIONS OVER EXISTING / INSTALLED PIPES AND CONDUITS UNLESS APPROVED OTHERWISE.
- T.O. FOOTING ELEVATION IS AT -1'-0" (U.N.O.) THIS IS A REFERENCE ELEVATION ONLY. SEE FOUNDATION DETAIL SHEETS AND SCHEDULES FOR FOUNDATION SIZE AND REINFORCEMENT.
- EXTEND ALL CONTINUOUS REINFORCEMENT INTO ADJACENT SPREAD FOOTINGS A MINIMUM DISTANCE OF 4'-0".
- ALL WALLS AND COLUMNS ARE TO BE CENTERED ON FOUNDATIONS UNLESS NOTED OTHERWISE. SEE PLAN DIMENSIONS FOR OFFSETS.
- PREPARE THE SLAB SUB-BASE AND COMPACT THE SOIL PER THE PROJECT GEOTECHNICAL REPORT, THE CIVIL DRAWINGS, AND THE STRUCTURAL GENERAL NOTES. IF ANY OF THESE DRAWINGS OR NOTES ARE IN CONFLICT, THE CONTRACTOR MUST ALERT THE ENGINEER FOR CLARIFICATION PRIOR TO START OF CONSTRUCTION.
- T.O. SLAB ELEVATION IS AT 0'-0" (U.N.O.) THIS IS A REFERENCE ELEVATION ONLY. SEE FOUNDATION AND SLAB ON GRADE DETAIL SHEETS.
- REFERENCE THE CONCRETE SLAB ON GROUND SCHEDULE, INCLUDED ON THIS SHEET, FOR FLOOR SLAB THICKNESS AND REINFORCEMENT.
- PROVIDE (2) #4 x 4'-6" LG BARS AT TOP OF SLAB AT ALL RE-ENTRANT CORNERS AND DISCONTINUOUS ENDS OF SLAB SAW-CUT JOINTS.
- REFERENCE THE ARCHITECTURAL DRAWINGS FOR SLAB EDGES, FLOOR SLOPES, WALL OPENINGS, AND OTHER DIMENSIONS NOT GIVEN. CONTRACTOR MUST COORDINATE AND VERIFY ALL DIMENSIONS WITH PROJECT ARCHITECT PRIOR TO FABRICATION.

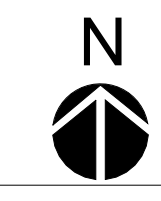
LEGEND

- EL = #'-##" INDICATES TOP OF CONCRETE FOOTING ELEVATION.
- T.O. FTG. INDICATES TOP OF FOOTING.
- F8.0 INDICATES SPREAD FOOTING TYPE. SEE FOUNDATION SCHEDULE FOR SIZE AND REINFORCEMENT.
- CF3.0 INDICATES CONTINUOUS FOOTING TYPE. SEE FOUNDATION SCHEDULE FOR SIZE AND REINFORCEMENT.
- TS# INDICATES THICKENED SLAB EDGE TYPE. SEE FOUNDATION SCHEDULE FOR SIZE AND REINFORCEMENT.
- CH INDICATES STEEL COLUMN TYPE. SEE STEEL COLUMN SCHEDULE FOR COLUMN SIZE AND BASEPLATE DETAILS.
- CC# INDICATES CONCRETE COLUMN TYPE. SEE CONCRETE COLUMN SCHEDULE FOR COLUMN SIZE AND REINFORCEMENT DETAILS.
- S.F. INDICATES STEPPED FOOTING PER DETAILS 2/S601 AND 3/S602.
- S.J. INDICATES SLAB SAWCUT JOINT PER DETAIL 1/S602.
- C.S.J. INDICATES CONSTRUCTION JOINT PER TYPICAL DETAIL 2/S602 OR AS REQUIRED PER CONSTRUCTION SEQUENCING.

SLAB ON GRADE SCHEDULE		
PLAN MARK	SLAB CONSTRUCTION	REMARKS
A	6" THICK CONCRETE SLAB ON GRADE REINF w/ 6x6 - W1.4W1.4 WELDED WIRE MESH. PROVIDE 15 MIL VAPOR RETARDER ON TREATED/COMPACTED SUBGRADE. PROVIDE (3) #4 BARS AT 1'-0" O.C. ALONG PERIMETER OF TYPICAL SLAB ADJACENT TO POURBACK JOINT.	TYPICAL SLAB
B	SLAB ON GRADE POURBACK STRIP. THICKNESS AND TYPICAL REINFORCEMENT TO MATCH TYPICAL SLAB. PROVIDE ADDITIONAL #4 AT 24" O.C. IN THE SHORT DIRECTION AND #4 AT 48" O.C. IN THE LONG DIRECTION. REFERENCE TYPICAL DETAILS AND SECTIONS FOR REQUIRED REINFORCEMENT AT SLAB JOINTS.	TYPICAL POURBACK
C	8" THICK CONCRETE SLAB ON GRADE REINF w/ #4 BARS AT 12" O.C. EACH WAY, TOP AND BOTTOM. SEE GENERAL NOTES FOR CONCRETE COVER TO REINFORCEMENT REQUIREMENTS.	DUMPSTER PAD SEE 1/S603



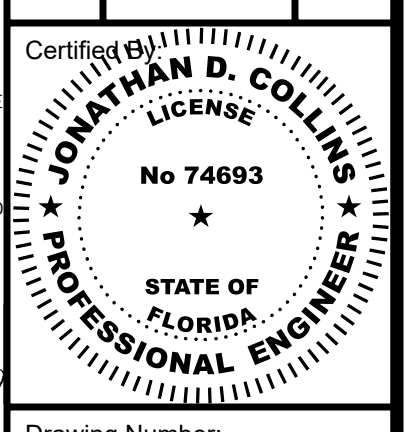
1 FOUNDATION AND SLAB ON GRADE PLAN
S101 3/32" = 1'-0"



BID SET 12-15-22



IMAGE BUILDERS - WGCC
NEW CONSTRUCTION - IMAGE BUILDERS
690 GARDEN COMMERCE PARKWAY
WINTER GARDEN, FL 34787
FOUNDATION PLAN



Drawing Number:
S101
Of Sheets
Job Number:
A/E Job Number:
18406

ROOF FRAMING PLAN NOTES:

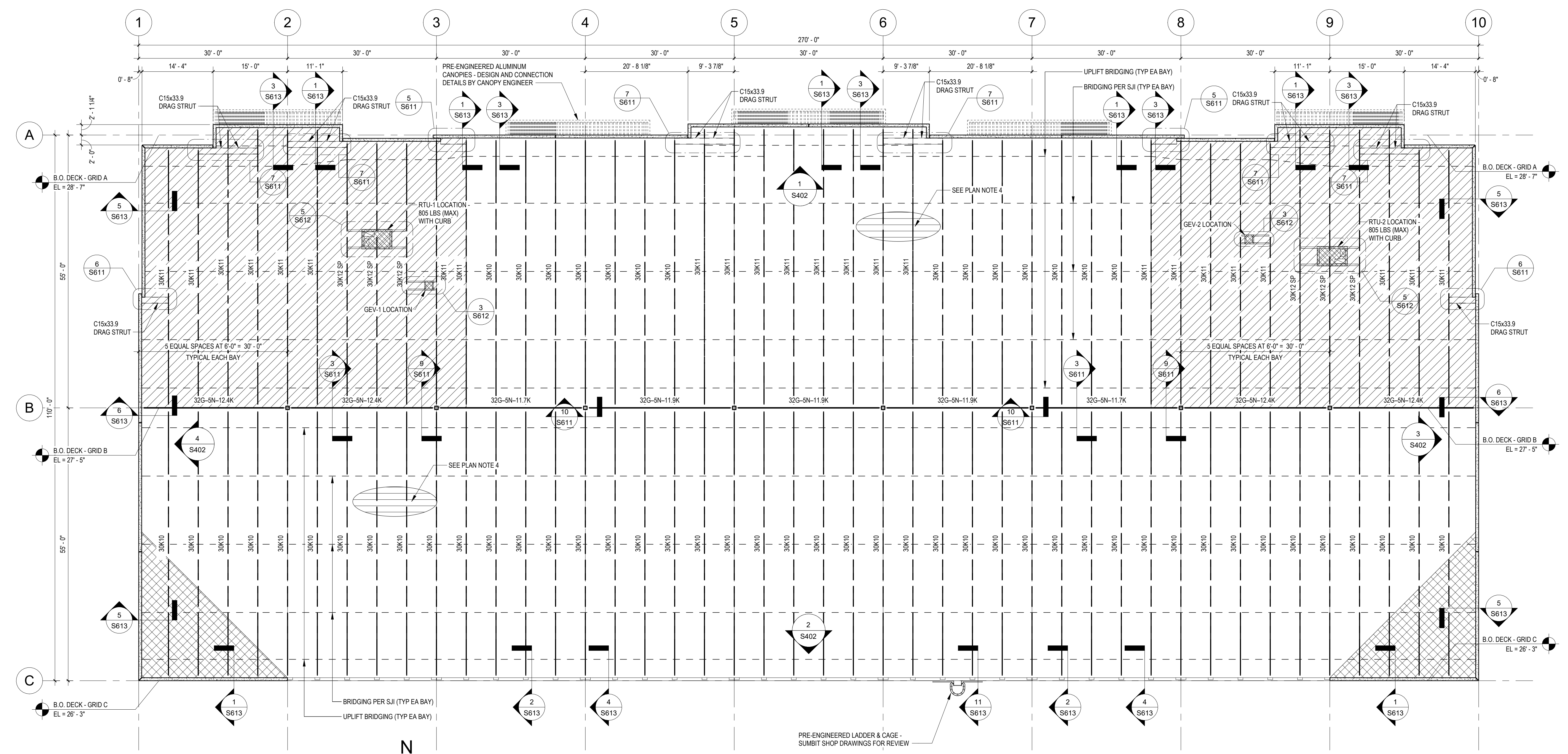
- REFERENCE THE STRUCTURAL GENERAL NOTES ON DRAWINGS S001 & S002. GENERAL NOTES INCLUDE CODES AND STANDARDS, DESIGN LOADS AND OTHER REQUIREMENTS.
- TOP OF STEEL ELEVATIONS MAY VARY. SEE THE STRUCTURAL AND ARCHITECTURAL PLANS AND SECTIONS FOR REQUIRED ELEVATIONS. (#-#) INDICATES TOP OF STEEL ELEVATION.
- CONTRACTOR SHALL VERIFY ALL ELEVATIONS AND DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS PRIOR TO FABRICATION AND/OR START OF CONSTRUCTION.
- ROOF DECK SHALL BE GALV. 1-1/2" - 22GA WIDE RIB METAL DECK, (U.N.O.) SPANNING OVER OPEN WEB STEEL JOISTS SPACED AT 6'-0" O.C. (MAX) OR AS INDICATED ON ROOF FRAMING PLAN.

DECK SECTION PROPERTIES:
Ip = 0.155 in⁴/ft
Iy = 0.183 in⁴/ft
Sp = 0.186 in³/ft
Sh = 0.182 in³/ft
Fy = 60 KSI
- FASTEN ROOF DECK TO ALL SUPPORTS w/ 5/8" DIA. RIDGEL WELDS AND ATTACH DECK SIDELAPS w/ #12 TEK SCREWS. REFERENCE THE ROOF DECK FASTENING SCHEDULE AND ROOF DECKING PLAN PROVIDED ON SHEET S002.
- PROVIDE L4x4x3/8 EDGE ANGLE AROUND ALL OPENINGS AND AROUND PERIMETER OF ROOF. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF EDGE ANGLES. SEE DECK ANGLE SPLICE DETAIL 4/S611
- (5" L), (5" R), OR (5" LR) INDICATE 5" JOIST SEAT AT END OF STEEL JOIST AS NOTED IN LIEU OF STANDARD 2-1/2" SEAT. STEEL DETAILER SHALL COORDINATE T.O. STEEL ELEVATIONS WITH JOIST MANUFACTURER.
- OPEN WEB STEEL JOISTS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE SPECIFICATION OF THE STEEL JOIST INSTITUTE. PROVIDE JOIST REINFORCEMENT PER TYPICAL DETAIL 1/S611 AT CONCENTRATED LOADS - 150 LBS.
- PROVIDE STANDARD JOIST BRIDGING AND UPLIFT BRIDGING PER LATEST SJI SPECIFICATIONS AND THE STEEL JOIST SHOP DRAWINGS (TYPICAL).
- SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ELEVATIONS AND DETAILS NOT SHOWN. RESOLVE ALL DISCREPANCIES PRIOR TO FABRICATION.
- COORDINATE ALL ROOF OPENINGS AND MISCELLANEOUS ROOF DECK PENETRATIONS AND EQUIPMENT WITH THE ARCHITECTURAL AND MEP DRAWINGS. REFERENCE THE TYPICAL ROOF OPENING DETAILS ON SHEET S612.
- JOISTS NOTED AS 30K12 SP SHALL BE DESIGNED FOR PROJECT TYPICAL UNIFORM LOADING AS WELL AS SERVICE CONCENTRATED LOADS AS NOTED AT THE CURB FRAMES.

DEAD LOAD: 252 LBS
WIND LOAD: +/- 540 LBS

LEGEND

- (#-#) INDICATES BOTTOM OF DECK ELEVATION. SEE PLAN.
- c = #" INDICATES REQUIRED POSITIVE CAMBER IN W-BEAM.
- ▶ INDICATES RIGID MOMENT CONNECTION AT SUPPORT.
- K.B. INDICATES KNEE-BRACE AT BEAM-COLUMN JOINT. SEE STEEL ELEVATIONS ON S301 FOR DETAILS.
- D.B. INDICATES FULL- OR HALF-DEPTH DIAGONAL BRACE. SEE STEEL ELEVATIONS ON S301 FOR DETAILS.
- CO INDICATES STEEL COLUMN TYPE. SEE STEEL COLUMN SCHEDULE FOR COLUMN SIZE AND BASEPLATE DETAILS.
- CC INDICATES CONCRETE COLUMN TYPE. SEE CONCRETE COLUMN SCHEDULE FOR COLUMN SIZE AND REINFORCEMENT DETAILS.
- R.D. ⊗ INDICATES ROOF DRAIN LOCATIONS. REFER TO ARCHITECTURAL AND MEP DRAWINGS FOR COORDINATION.
- REGION INDICATES "OFFICE" LOADING. REFERENCE TABLE 1 ON SHEET S002 FOR DESIGN LOAD DATA.
- REGION INDICATES ADDITIONAL TAPERED INSULATION REQUIRED TO CREATE ALTERNATE ROOF SLOPE.

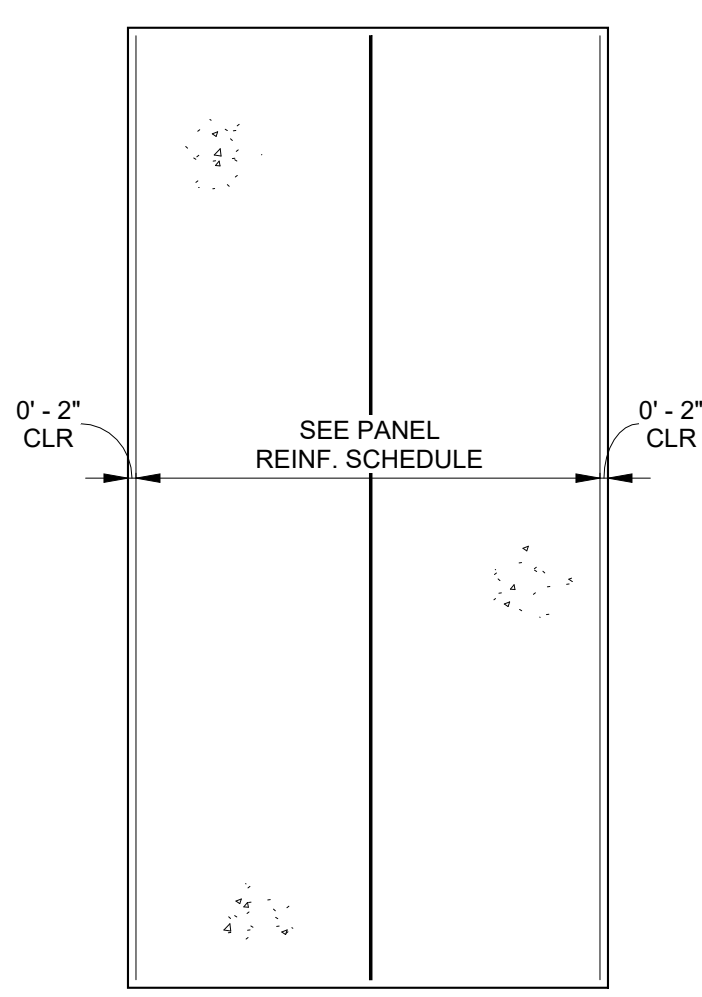


1 ROOF FRAMING PLAN
S111 / 3/32" = 1'-0"

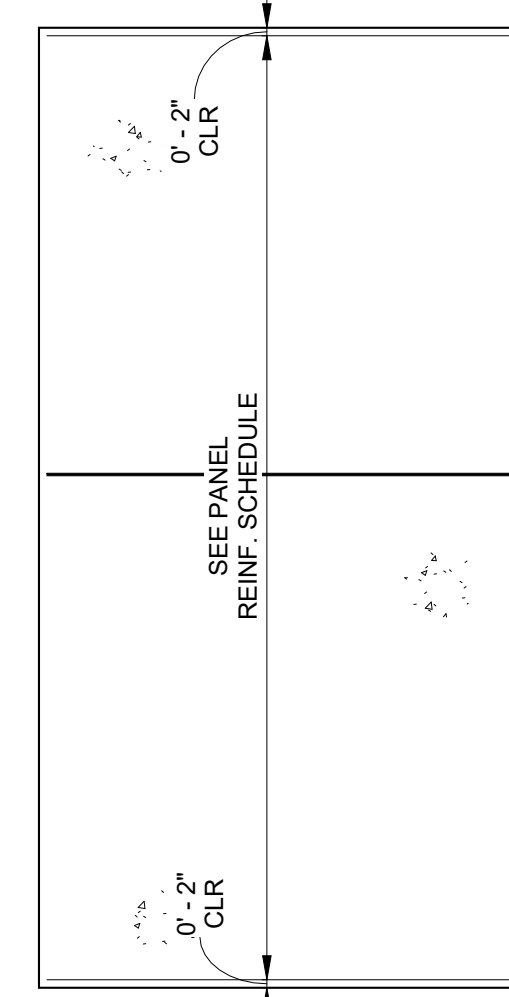
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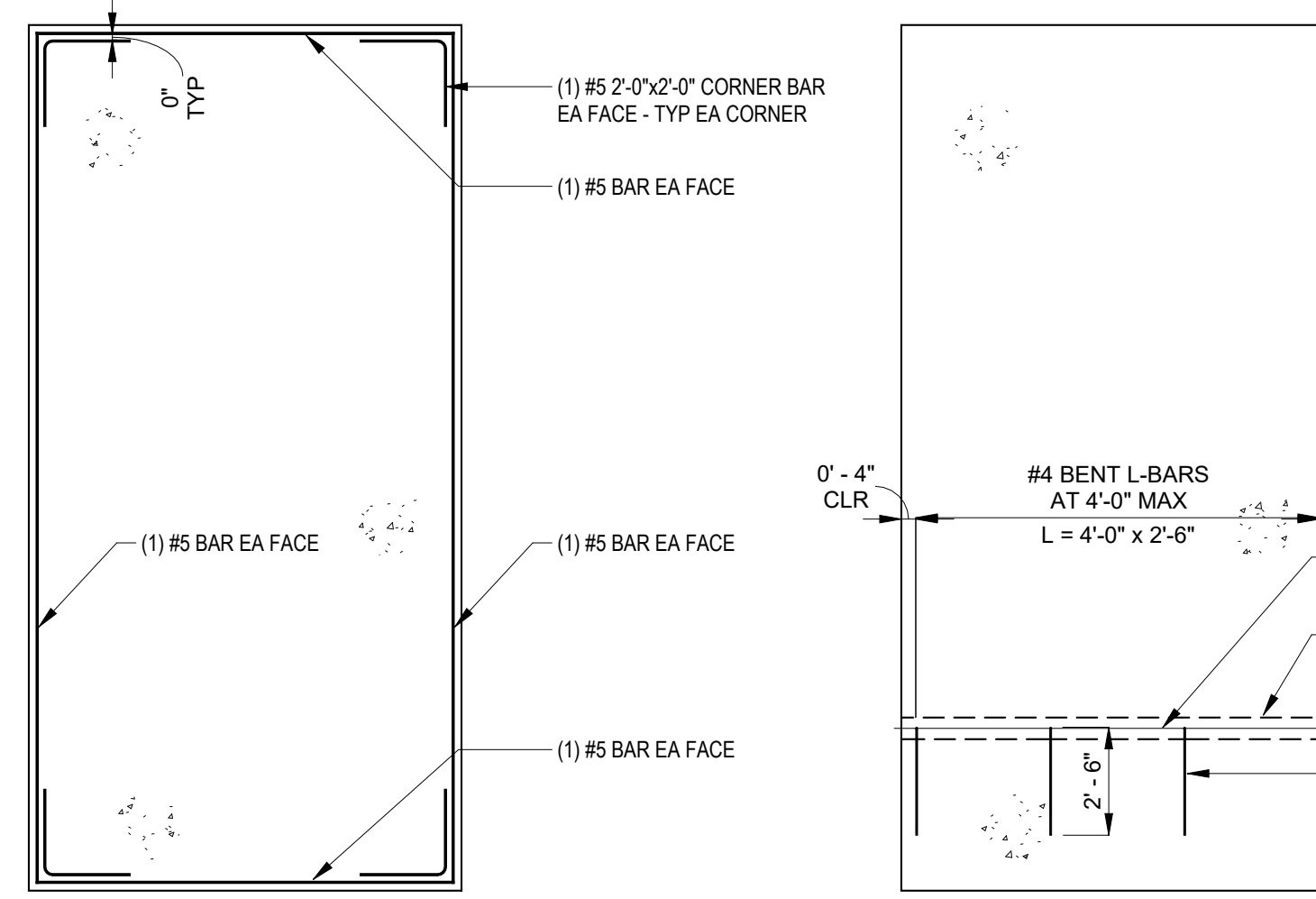
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PROFESSIONAL ENGINEER
JDC



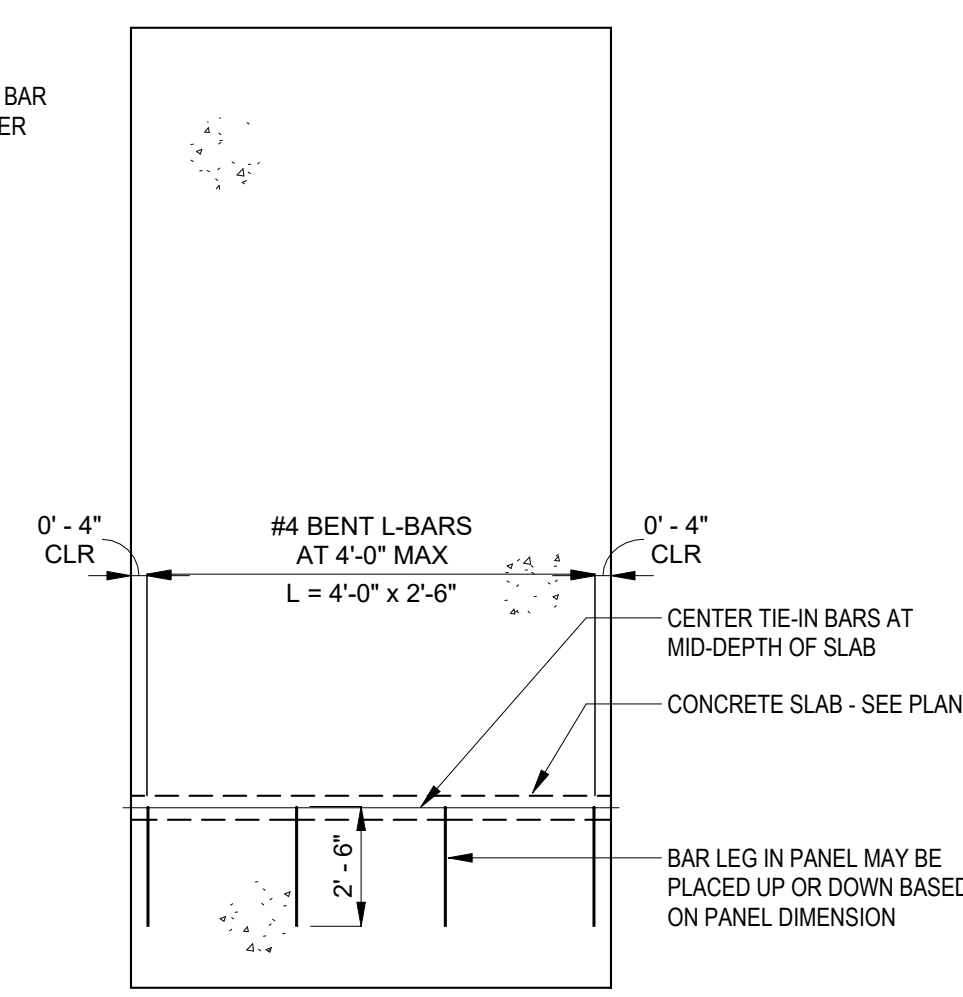
VERTICAL REINFORCEMENT



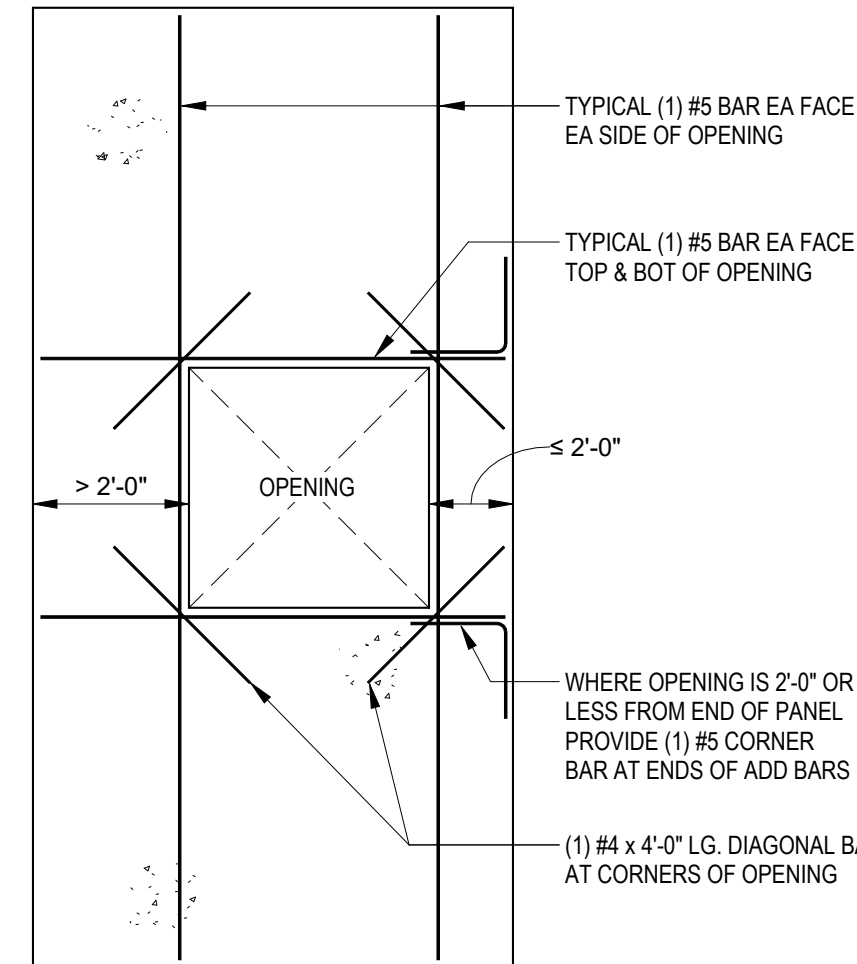
HORIZONTAL REINFORCEMENT



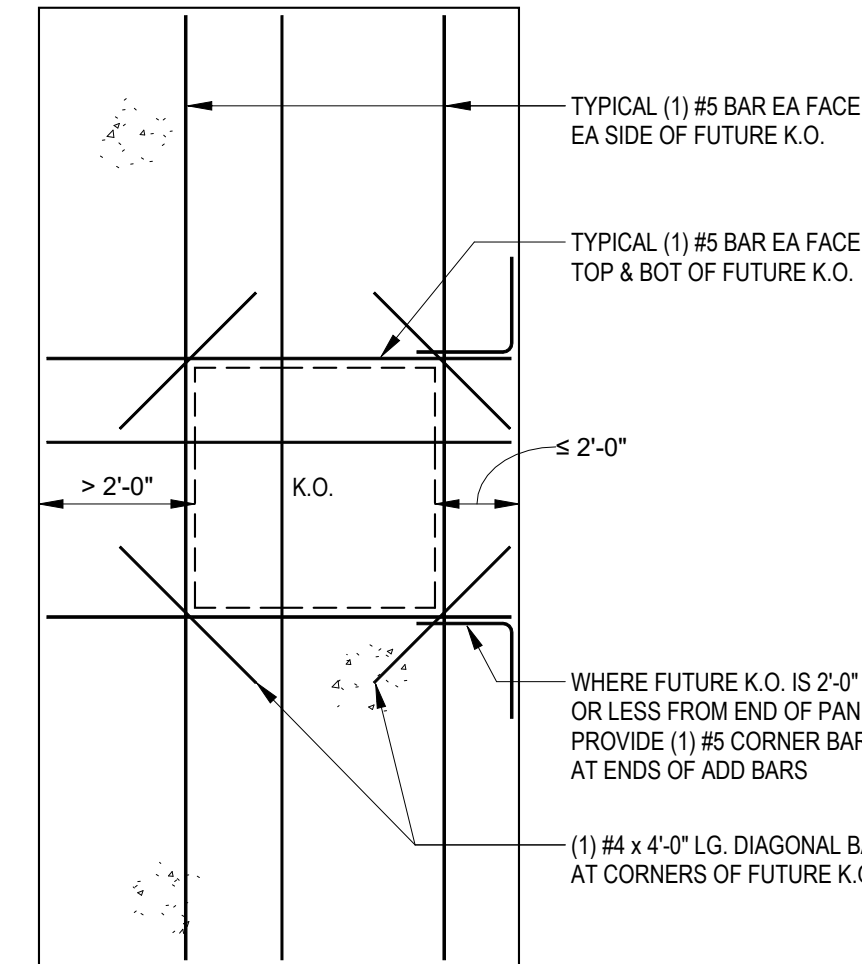
PERIMETER REINFORCEMENT



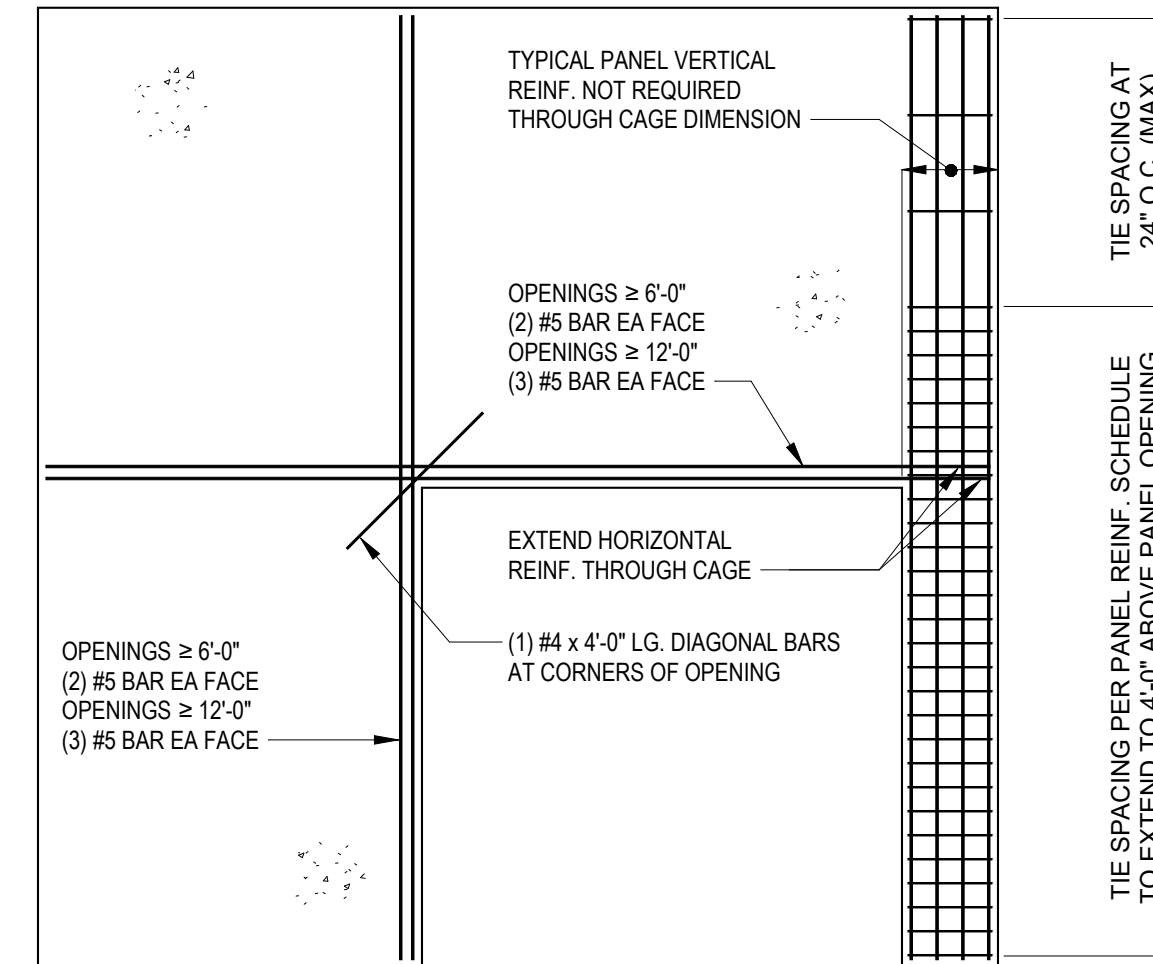
SLAB TIE-IN REINFORCEMENT



ADD'L REINFORCEMENT AT OPENINGS



ADD'L REINFORCEMENT AT KNOCKOUTS



REINFORCEMENT DETAILS FOR LARGE OPENINGS & CAGES

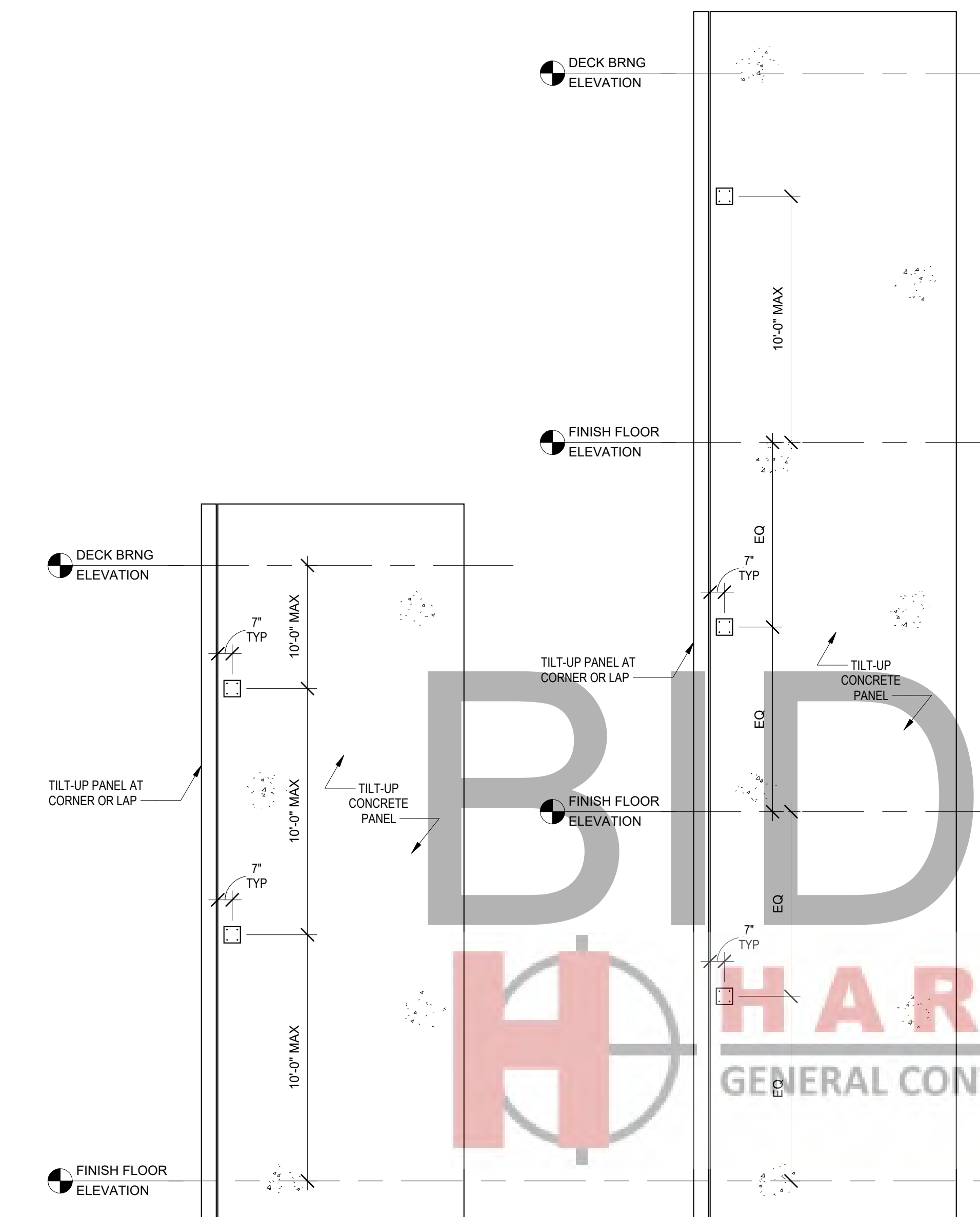
TYPICAL PANEL REINFORCING NOTES:

1. THESE SKETCHES ARE TO AID THE DETAILER IN THE PREPARATION OF DETAILED PANEL REINFORCEMENT SHOP DRAWINGS.
2. THE REINFORCEMENT IN EACH SKETCH PROVIDED ARE INTENDED TO BE USED SIMULTANEOUSLY. ALL PANELS WITH HAVE TYPICAL VERTICAL, HORIZONTAL, PERIMETER ADD REINFORCEMENT AND SLAB TIE-IN REINFORCEMENT. PANELS WITH OPENINGS WILL ALSO HAVE ADDITIONAL REINFORCEMENT AT OPENINGS AS NOTED.
3. PANELS WITH "KNOCK OUTS" FOR FUTURE OPENINGS WILL HAVE BOTH CONTINUOUS VERTICAL AND HORIZONTAL REINFORCEMENT THROUGH THE ENTIRE PANEL AS WELL AS ADDITIONAL OPENING REINFORCEMENT ADJACENT TO THE KNOCK OUT AS SHOWN.
4. WHERE SLAB TIE-IN REINFORCEMENT IS INTERRUPTED BY PANEL OPENINGS, THE EQUIVALENT QUANTITY OF INTERRUPTED SLAB TIE-IN BARS SHALL BE PROVIDED TO EITHER SIDE OF OPENING, HALF THE QUANTITY TO EACH SIDE.

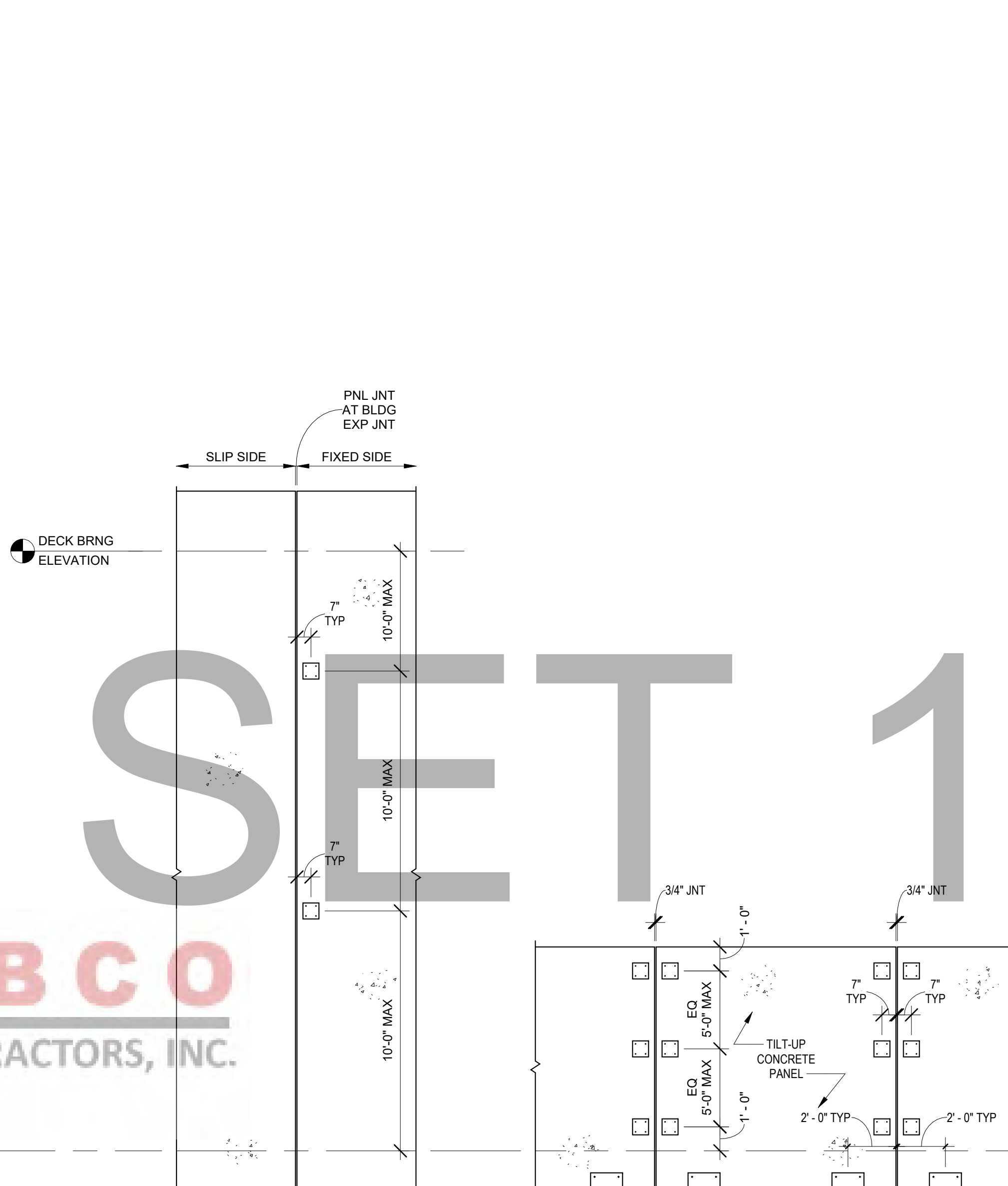
LARGE OPENINGS AND PANEL LEG CAGE REINFORCING NOTES:

1. THESE SKETCHES ARE TO AID THE DETAILER IN THE PREPARATION OF DETAILED PANEL REINFORCEMENT SHOP DRAWINGS.
2. THE PANEL LEG CAGE REINFORCEMENT SHALL BE FULLY TIED WITH CLOSED #3 TIES, OR SIZE AS NOTED IN PANEL REINFORCEMENT ELEVATIONS.
3. CAGE REINFORCEMENT SHALL TAKE PRECEDENCE OVER TYPICAL PANEL DISTRIBUTED REINFORCEMENT. IN CASE OF CONFLICT BETWEEN CAGE REINFORCEMENT AND TYPICAL REINFORCEMENT, CAGE REINFORCEMENT SHALL BE LOCATED TO THE OUTSIDE FACES OF THE PANEL AND PANEL TYPICAL REINFORCEMENT SHALL BE PLACED TO THE INTERIOR OF THE CAGE.
4. ALL EMBEDDED ELECTRICAL EQUIPMENT, PIPES, SLEEVES, INSERTS, ETC. SHALL BE LOCATED TO PROVIDE 2" CLEAR DIMENSION BETWEEN INSERT AND CAGE REINFORCEMENT. CONTACT ARCHITECT AND ENGINEER IN CASE OF CONFLICT.
5. WHERE SLAB TIE-IN REINFORCEMENT IS INTERRUPTED BY PANEL OPENINGS, THE EQUIVALENT QUANTITY OF INTERRUPTED SLAB TIE-IN BARS SHALL BE PROVIDED TO EITHER SIDE OF OPENING, HALF THE QUANTITY TO EACH SIDE. ALTERNATIVELY, PANEL LEG TO FOOTING ANCHORAGE MAY BE PROVIDED.

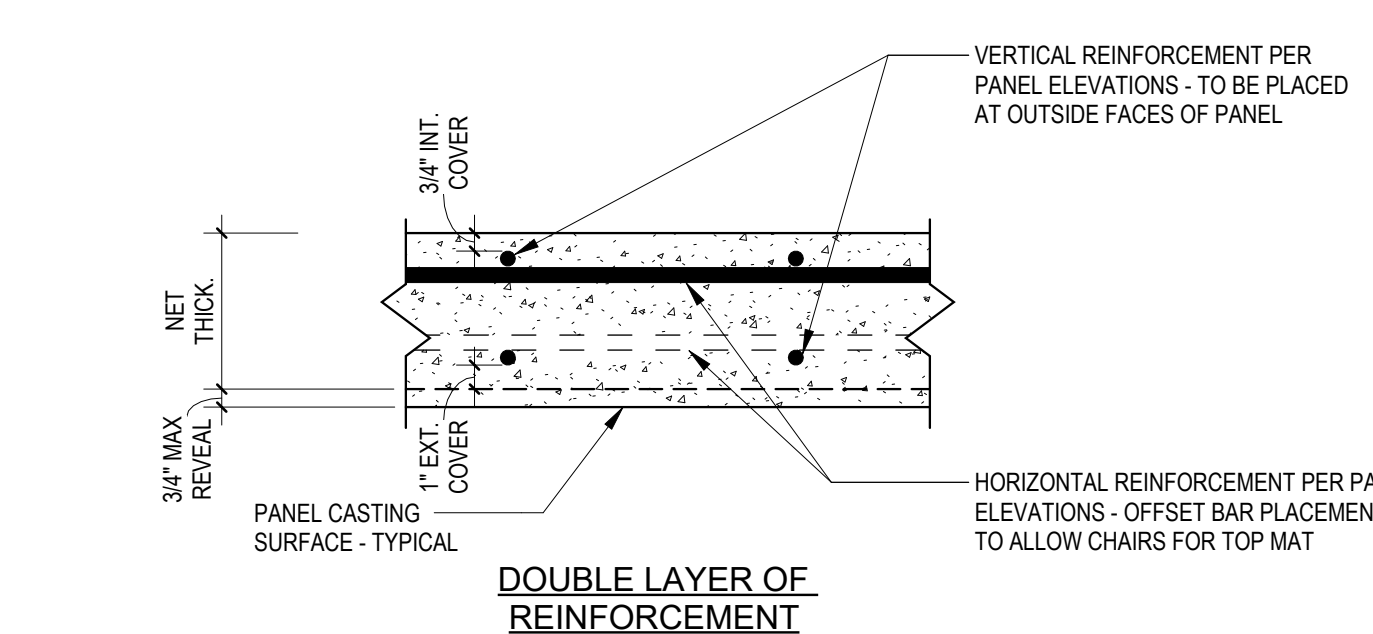
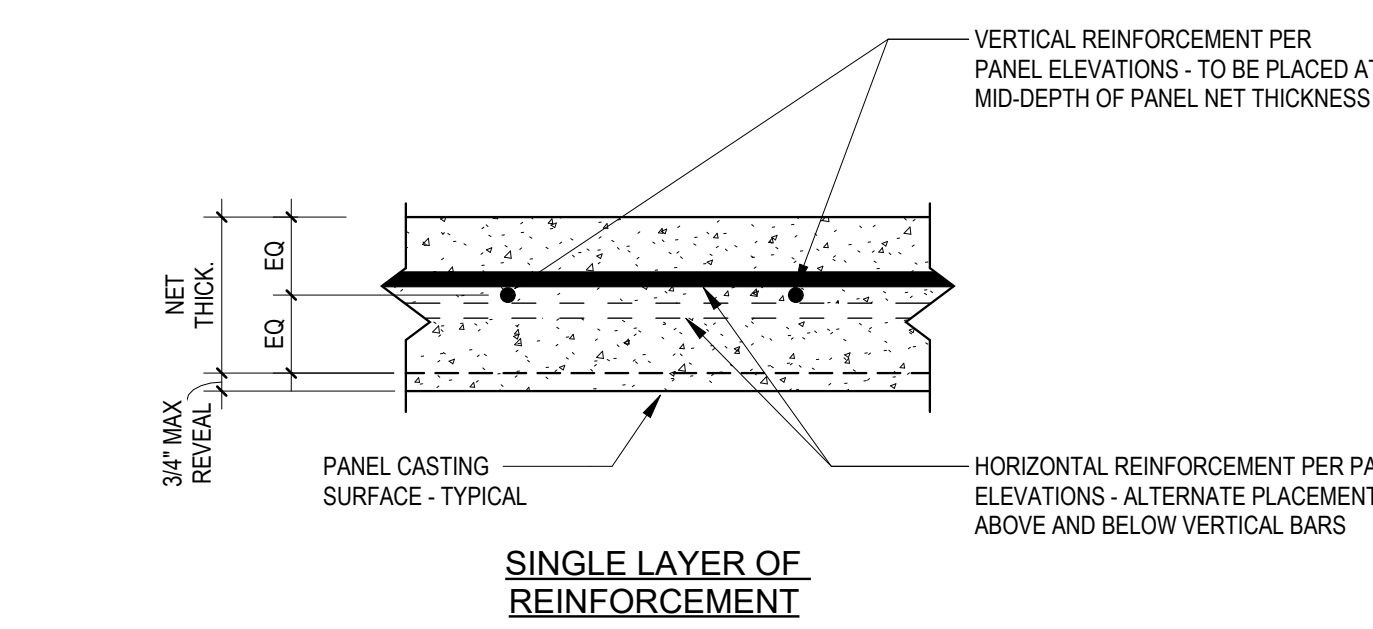
1 TYPICAL TILT-UP WALL PANEL REINFORCING
1/4" = 1'-0"



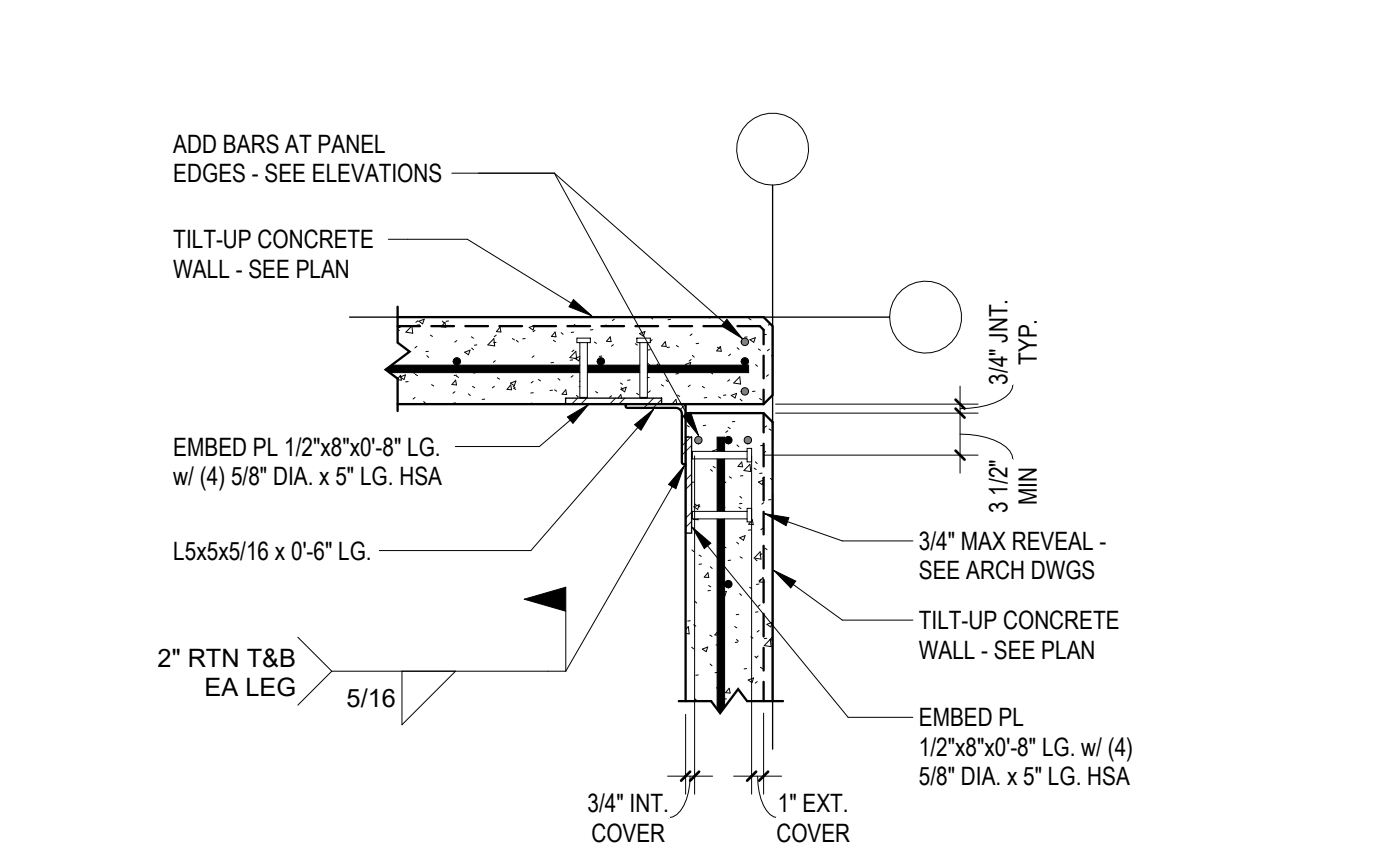
2 TYPICAL TILT-UP WALL PANEL-TO-PANEL CONNECTION EMBED LAYOUT
1/4" = 1'-0"



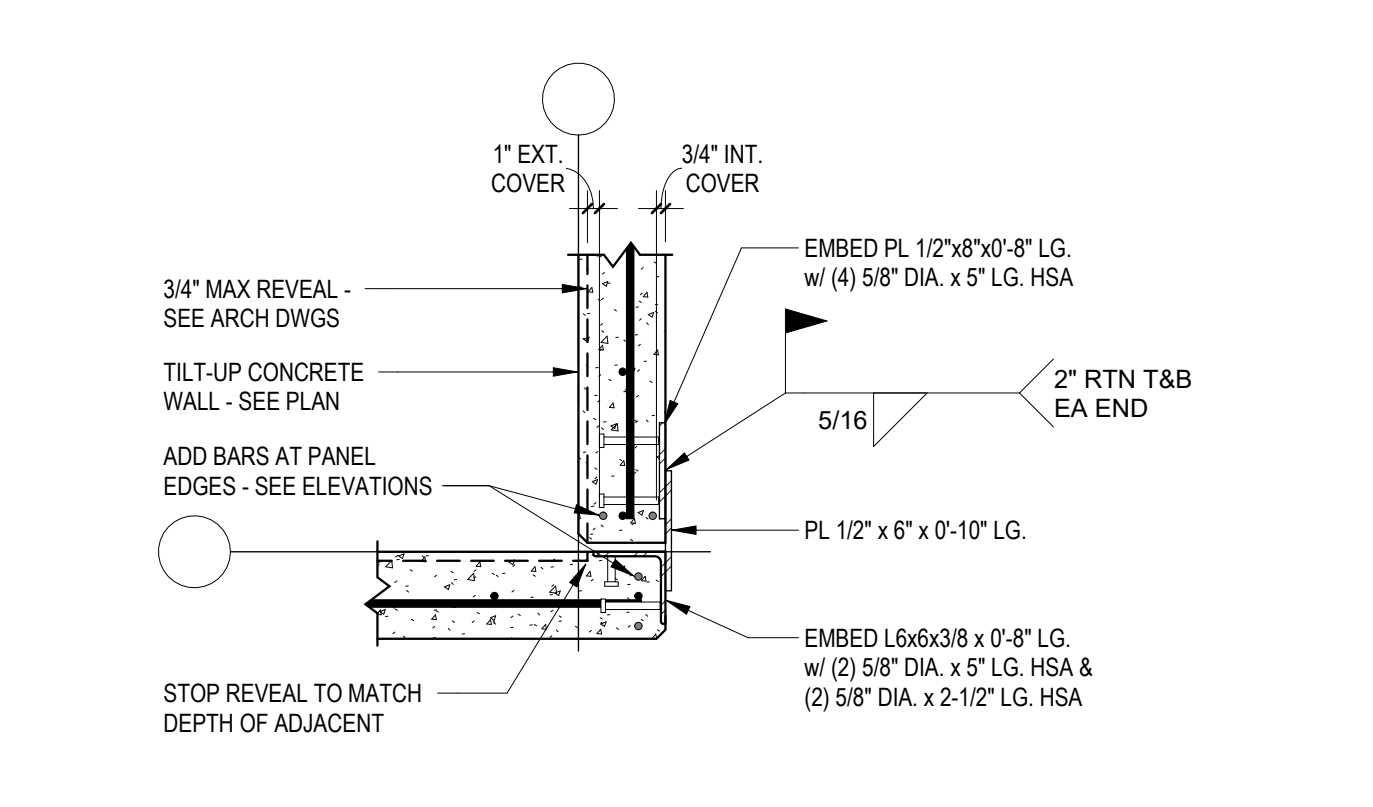
11 TYPICAL TILT-UP WALL PANEL-TO-PANEL CONNECTION AT BLDG EXPANSION JOINT
3/4" = 1'-0"



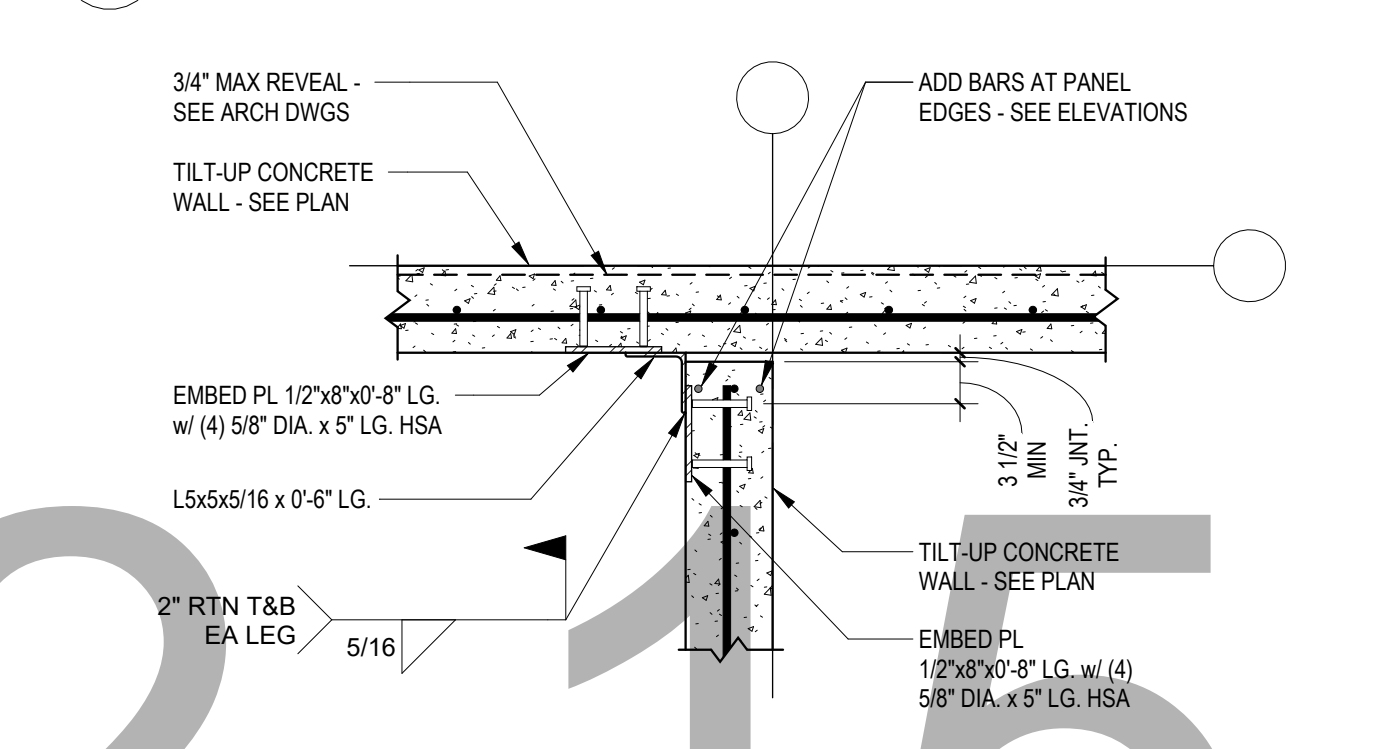
3 TYPICAL PANEL REINFORCEMENT LAYOUT
1 1/2" = 1'-0"



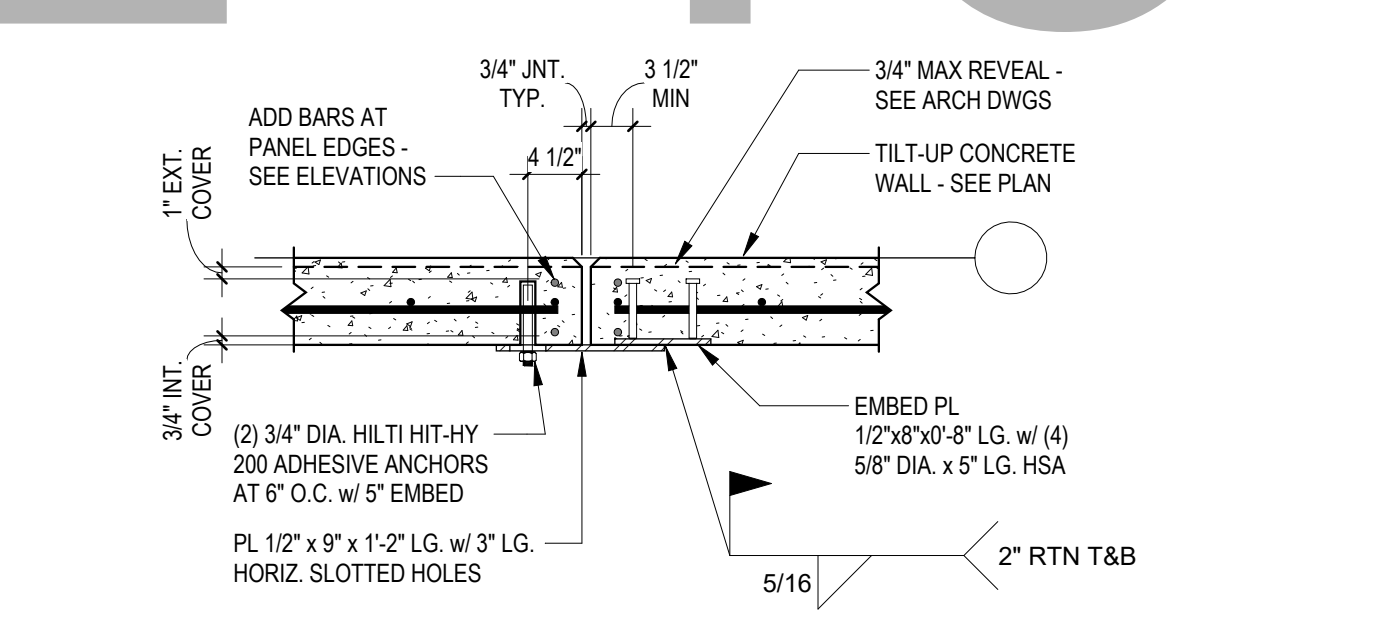
5 TYP PANEL TO PANEL CONNECTION SQUARE OR BUTT JOINT
3/4" = 1'-0"



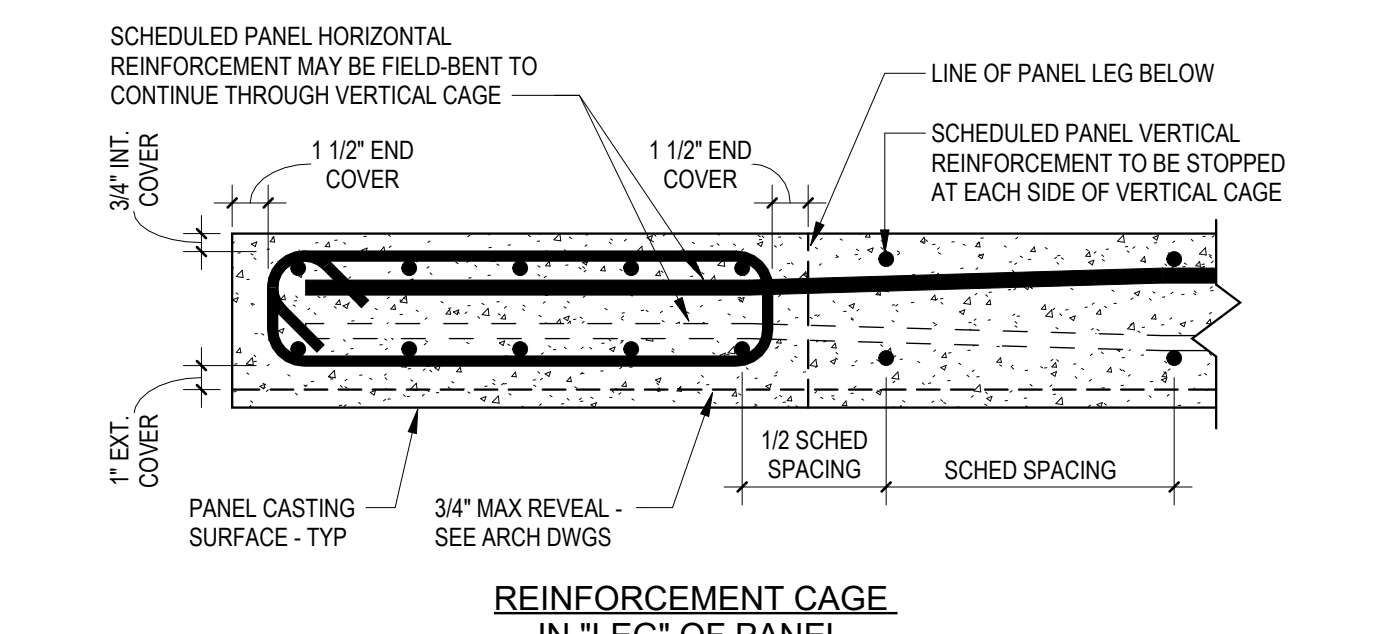
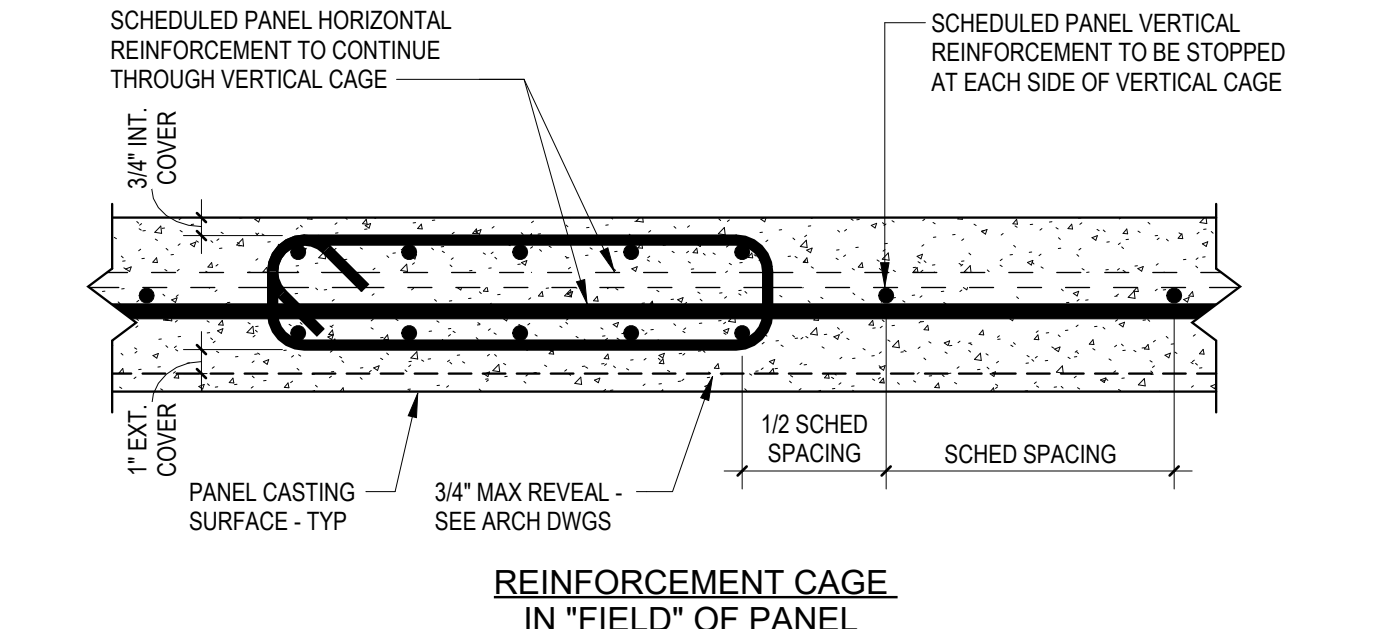
7 TYP PANEL TO PANEL CONNECTION INSIDE CORNER JOINT
3/4" = 1'-0"



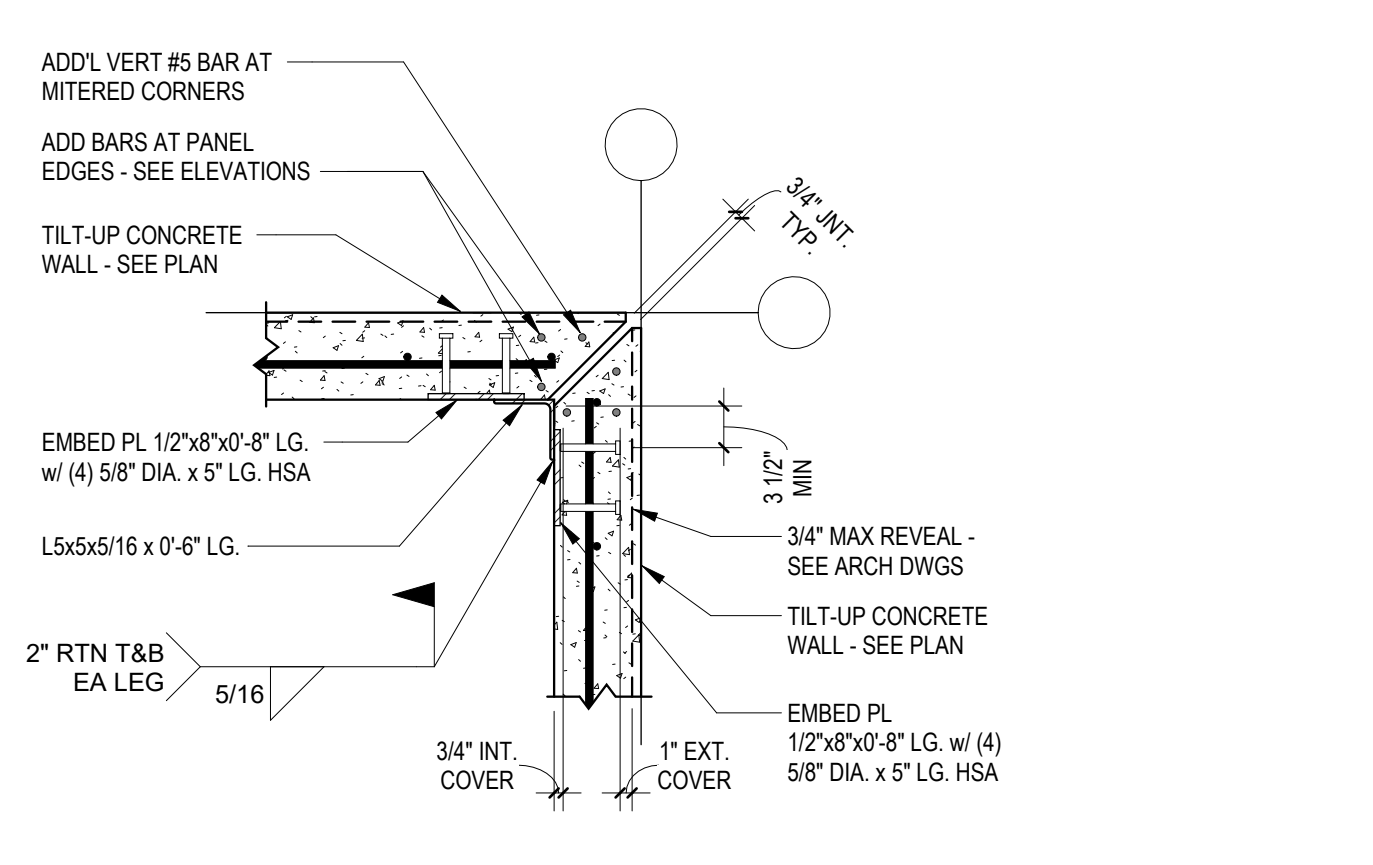
9 TYP PANEL TO PANEL CONNECTION PANEL "T" JOINT
3/4" = 1'-0"



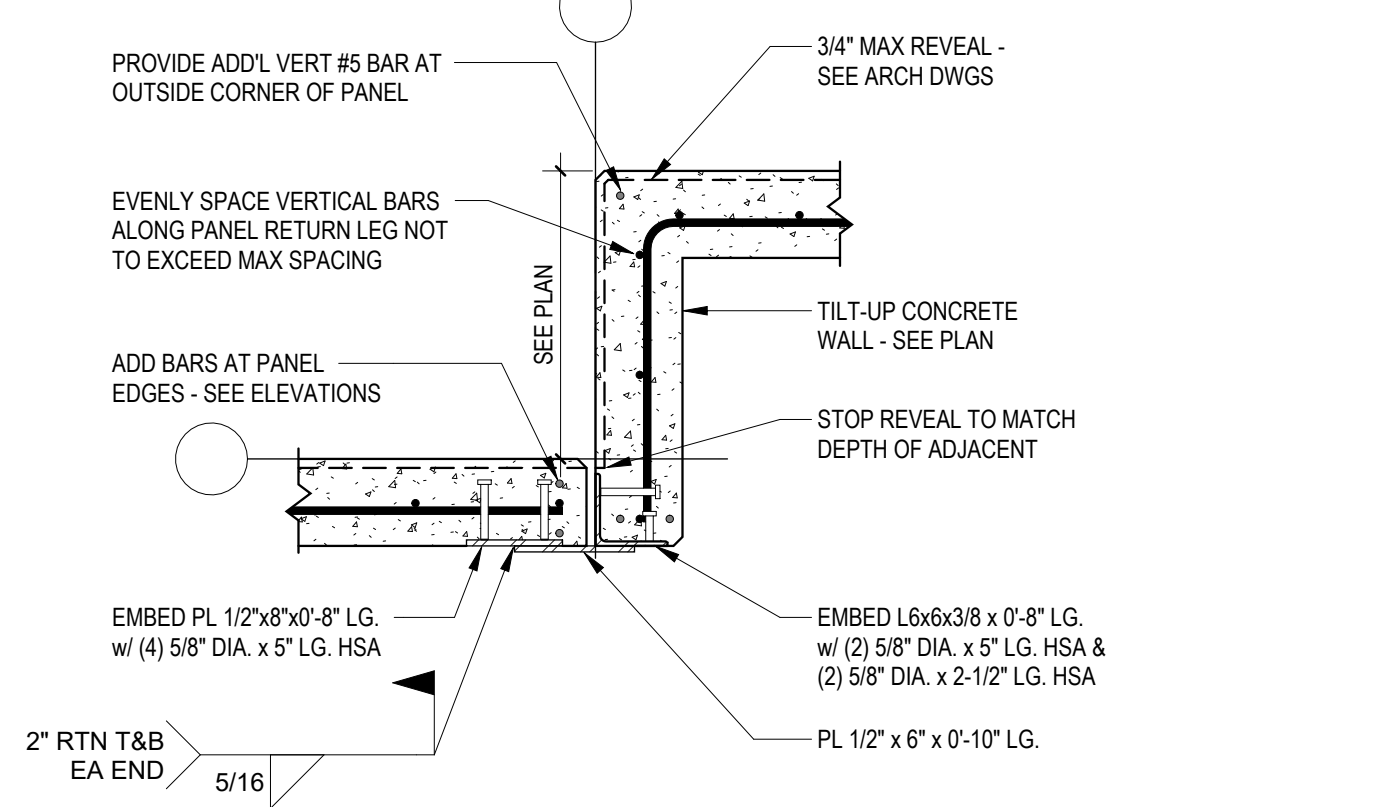
11 TYP PANEL TO PANEL CONNECTION AT BLDG EXPANSION JOINT
3/4" = 1'-0"



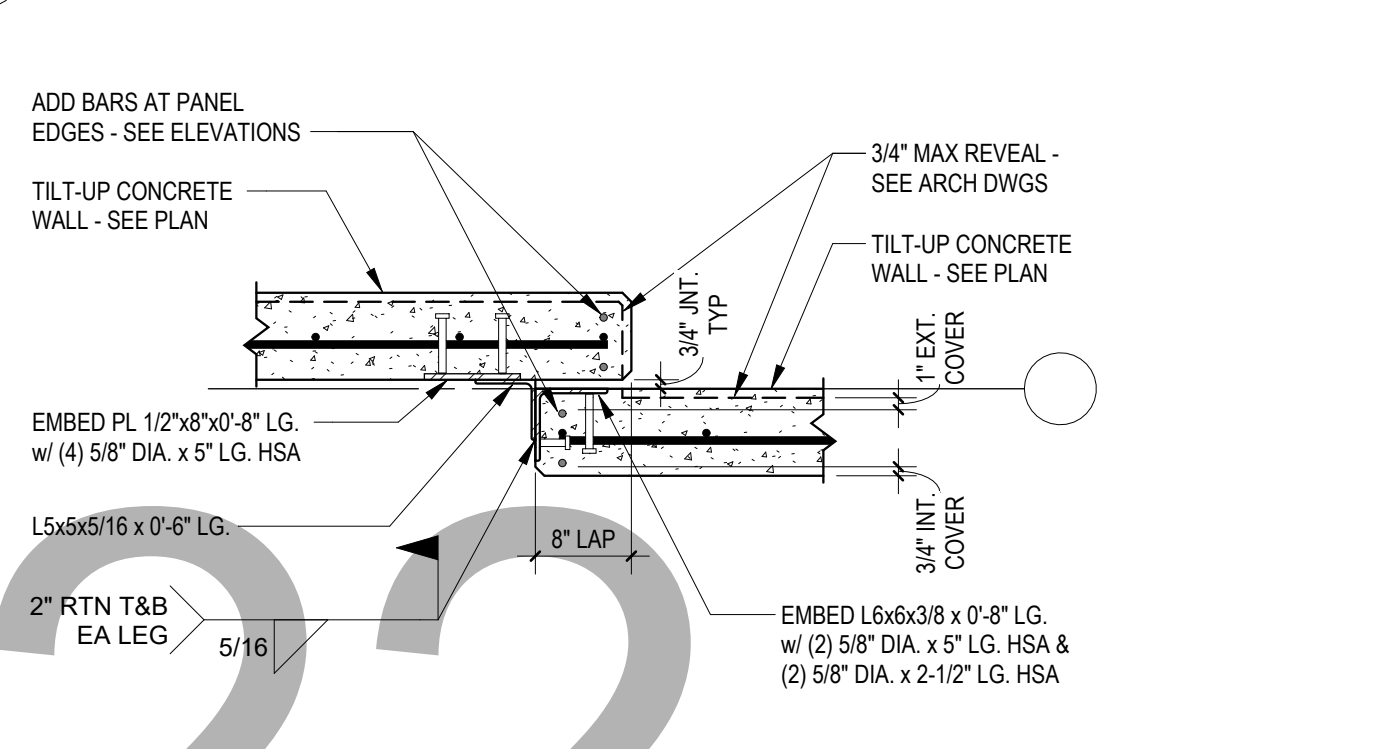
4 TYPICAL PANEL CAGE REINFORCEMENT
1 1/2" = 1'-0"



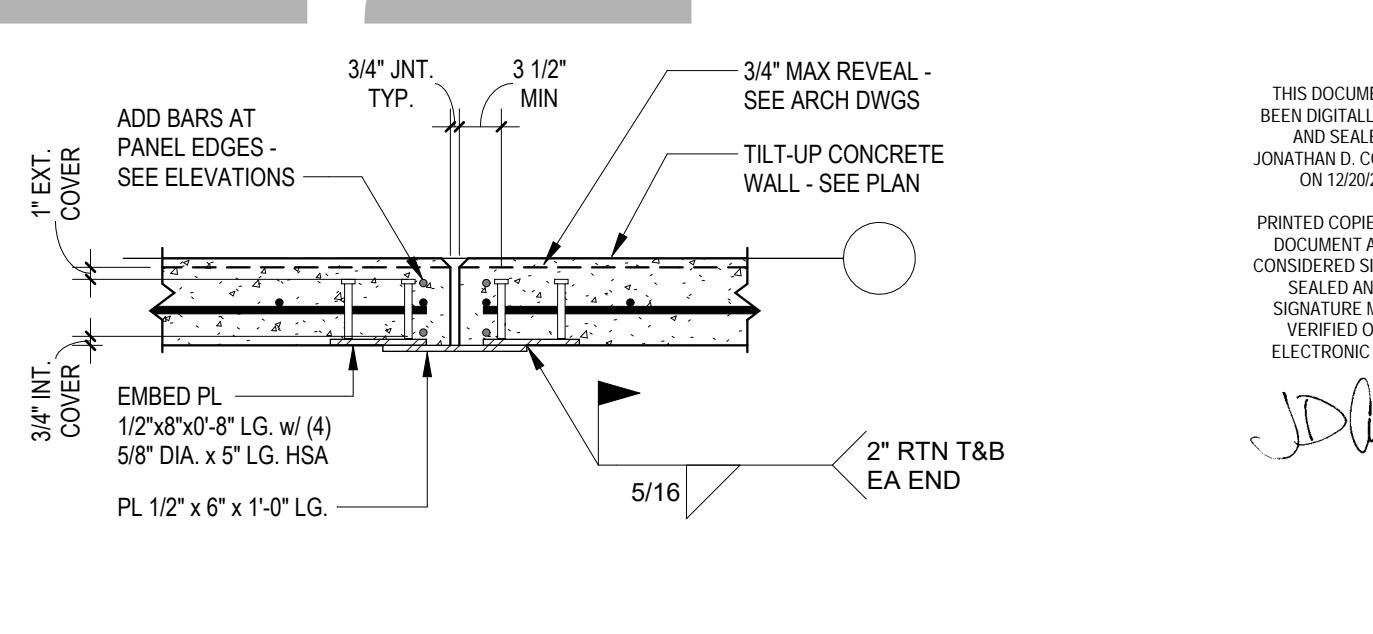
6 TYP PANEL TO PANEL CONNECTION MITERED CORNER JOINT
3/4" = 1'-0"



8 TYP PANEL TO PANEL CONNECTION PANEL RETURN JOINT
3/4" = 1'-0"



10 TYP PANEL TO PANEL CONNECTION PANEL LAP JOINT
3/4" = 1'-0"



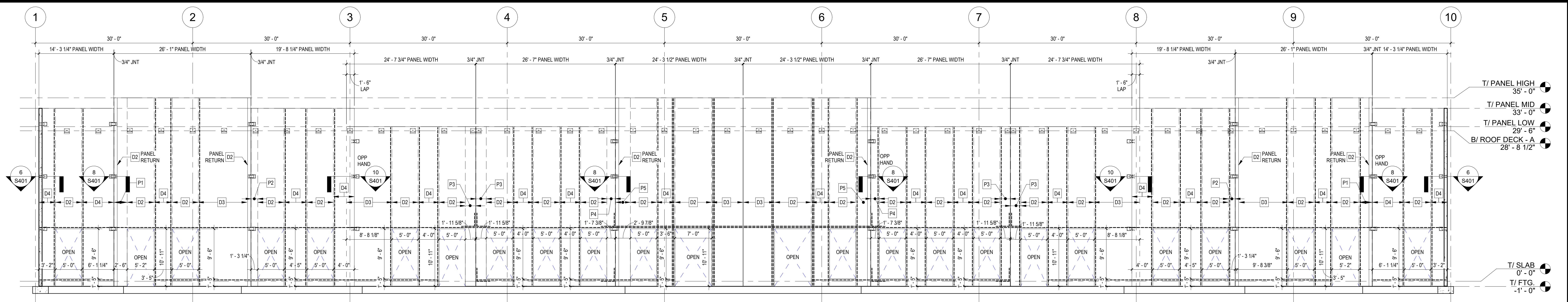
12 TYP PANEL TO PANEL CONNECTION AT CANTILEVER PANELS
3/4" = 1'-0"

Revisions:	AS INDICATED	12/15/22	JDC	JDC
Date:	AS INDICATED	12/15/22	JDC	JDC
Drawn By:			JDC	JDC
Checked By:			JDC	JDC

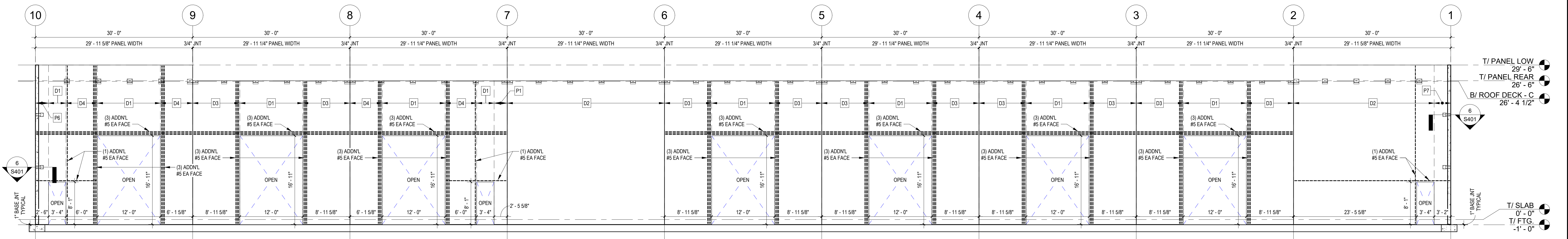
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HARBCO
GENERAL CONTRACTORS, INC.

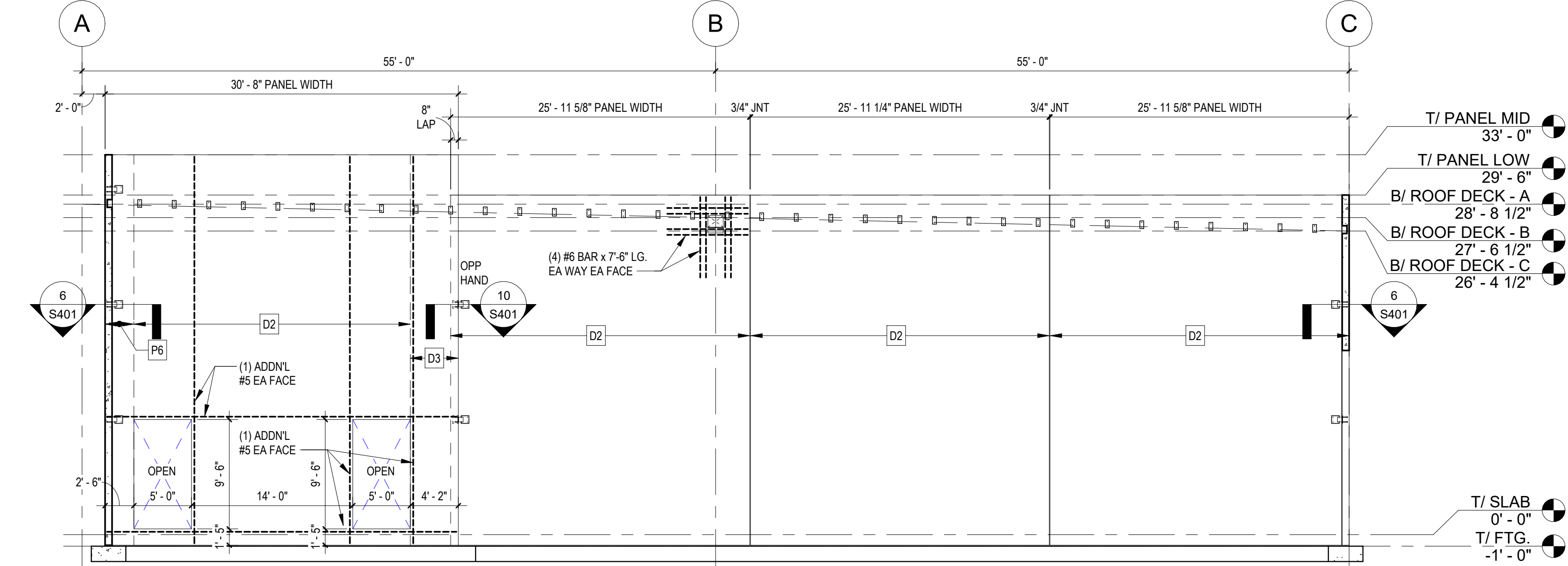
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STATE OF FLORIDA
JDC



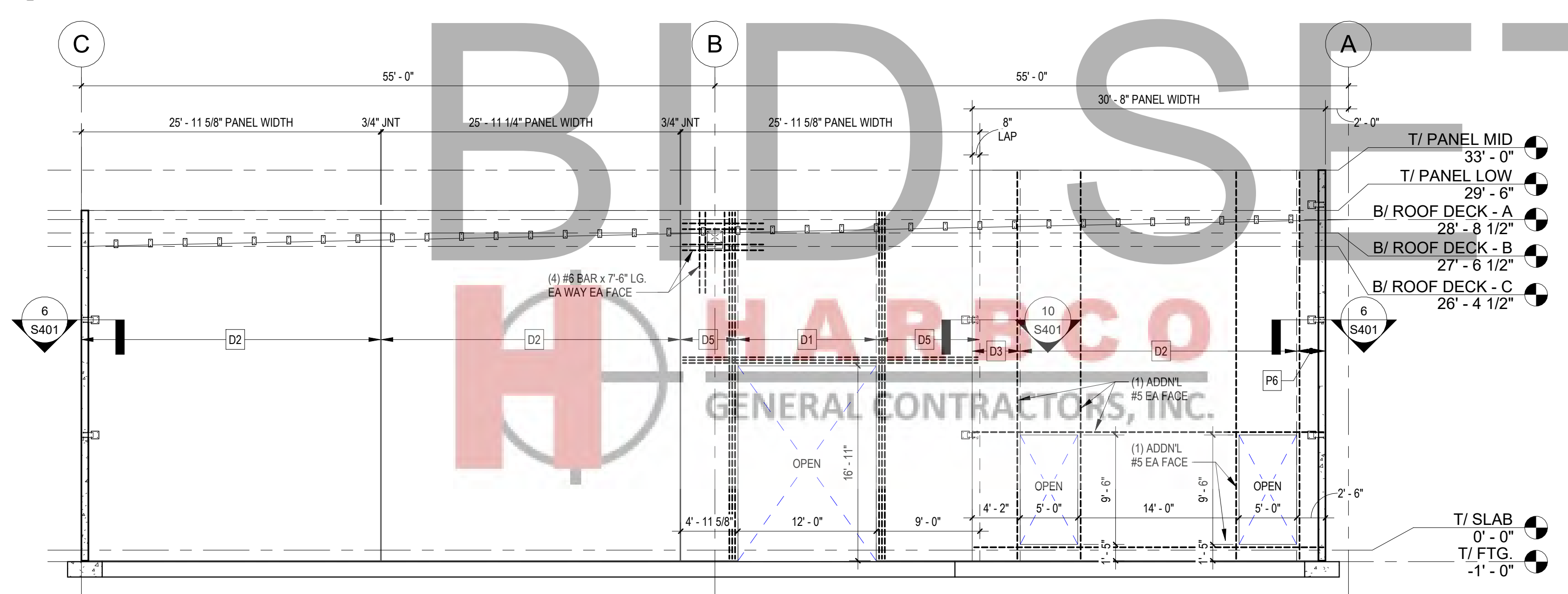
1 TILT-UP PANEL ELEVATION - ALONG GRID A
 S402
 1/8" = 1'-0"



2 TILT-UP PANEL ELEVATION - ALONG GRID C
 S402
 1/8" = 1'-0"



3 TILT-UP PANEL ELEVATION - ALONG GRID 1
 S402
 1/8" = 1'-0"



4 TILT-UP PANEL ELEVATION - ALONG GRID 1
 S402
 1/8" = 1'-0"

TILT-UP PANEL - DISTRIBUTED REINFORCEMENT SCHEDULE

REINF. MARK	PANEL TYPICAL DISTRIBUTED REINF.	REMARKS
D1	VERTICAL: #5 AT 10" O.C.	----
	HORIZONTAL: #4 AT 12" O.C.	----
D2	VERTICAL: #5 AT 12" O.C.	----
	HORIZONTAL: #4 AT 12" O.C.	----
D3	VERTICAL: #5 AT 8" O.C.	----
	HORIZONTAL: #4 AT 12" O.C.	----
D4	VERTICAL: #5 AT 12" O.C. (EA FACE)	DOUBLE MAT
	HORIZONTAL: #4 AT 18" O.C. (EA FACE)	DOUBLE MAT
D5	VERTICAL: #5 AT 8" O.C. (EA FACE)	DOUBLE MAT
	HORIZONTAL: #4 AT 18" O.C. (EA FACE)	DOUBLE MAT

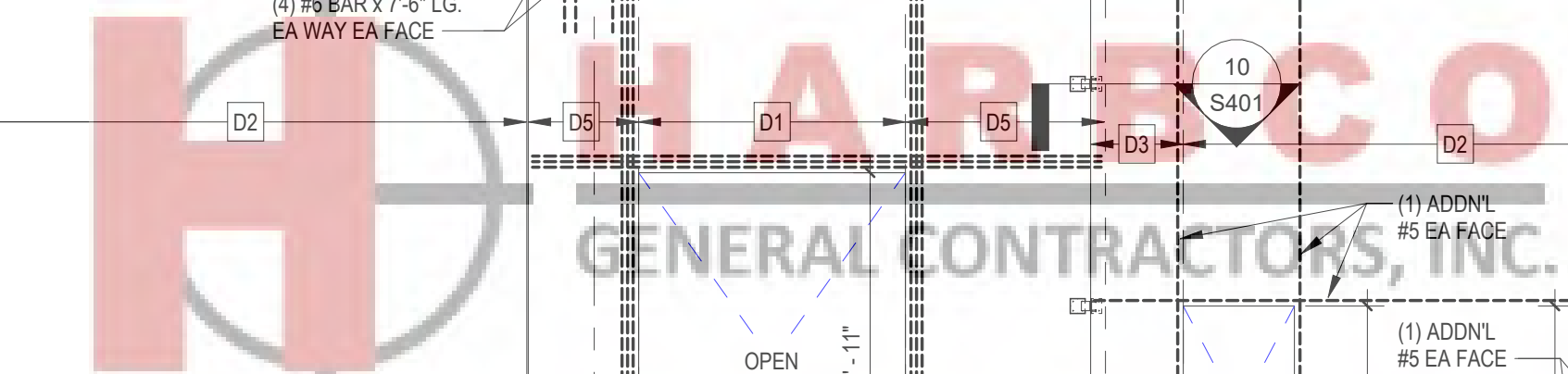
NOTES:
 1. UNLESS NOTED OTHERWISE ON PLAN, ALL TILT-UP CONCRETE PANEL ELEVATIONS ARE VIEWED FROM THE INSIDE OF THE BUILDING.
 2. ALL DISTRIBUTED REINFORCEMENT SHOWN ON THE PANEL ELEVATIONS IS IN ADDITION TO THE TYPICAL PERIMETER, SLAB TIE-IN AND OPENING ADD BARS AS NOTED ON SHEET S401.
 3. ALL REBAR AT CONCRETE FACE EXPOSED TO EARTH OR WEATHER SHALL HAVE A MINIMUM CONCRETE COVER OF 1" AT REVEALS AND RECESSES.
 4. REFERENCE TYPICAL TILT-UP DETAILS, NOTES, AND OTHER INFORMATION ON SHEET S401.

TILT-UP PANEL - PANEL LEG REINFORCEMENT SCHEDULE

REINF. MARK	CONCENTRATED PANEL LEG REINF.	REINF. DIAGRAM
P1	VERTICALS: (4) #6 EACH FACE	
	CLOSED TIES: #3 AT 6" O.C.	
P2	VERTICALS: (3) #6 EACH FACE	
	CLOSED TIES: #3 AT 6" O.C.	
P3	VERTICALS: (4) #6 EACH FACE	
	CLOSED TIES: #3 AT 6" O.C.	
P4	VERTICALS: (3) #6 EACH FACE	
	CLOSED TIES: #3 AT 6" O.C.	
P5	VERTICALS: (4) #6 EACH FACE	
	CLOSED TIES: #3 AT 6" O.C.	
P6	VERTICALS: (4) #6 EACH FACE	
	CLOSED TIES: #3 AT 6" O.C.	
P7	VERTICALS: (5) #6 EACH FACE	
	CLOSED TIES: #3 AT 6" O.C.	

NOTES:
 1. UNLESS NOTED OTHERWISE ON PLAN, ALL TILT-UP CONCRETE PANEL ELEVATIONS ARE VIEWED FROM THE INSIDE OF THE BUILDING.
 2. PANEL LEG DIMENSIONS SHOWN IN THIS SCHEDULE ARE NOMINAL DIMENSIONS. THESE DIMENSIONS DO NOT NECESSARILY INCLUDE PANEL JOINT THICKNESSES.
 3. ALL REBAR AT CONCRETE FACE EXPOSED TO EARTH OR WEATHER SHALL HAVE A MINIMUM CONCRETE COVER OF 1" AT REVEALS AND RECESSES.
 4. REFERENCE TYPICAL TILT-UP DETAILS, NOTES, AND OTHER INFORMATION ON SHEET S401.

BID SET 12-15-22



OWNER:

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 Orlando, Florida 32801
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 FAX: 407.363.6137
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Revisions:
 AS INDICATED
 Date: 12/15/22
 Drawn By: JDC
 Checked By: JDC

IMAGE BUILDERS - WGCC
 NEW CONSTRUCTION - IMAGE BUILDERS
 690 GARDEN COMMERCE PARKWAY
 WINTER GARDEN, FL 34787

TILT-UP PANEL ELEVATIONS

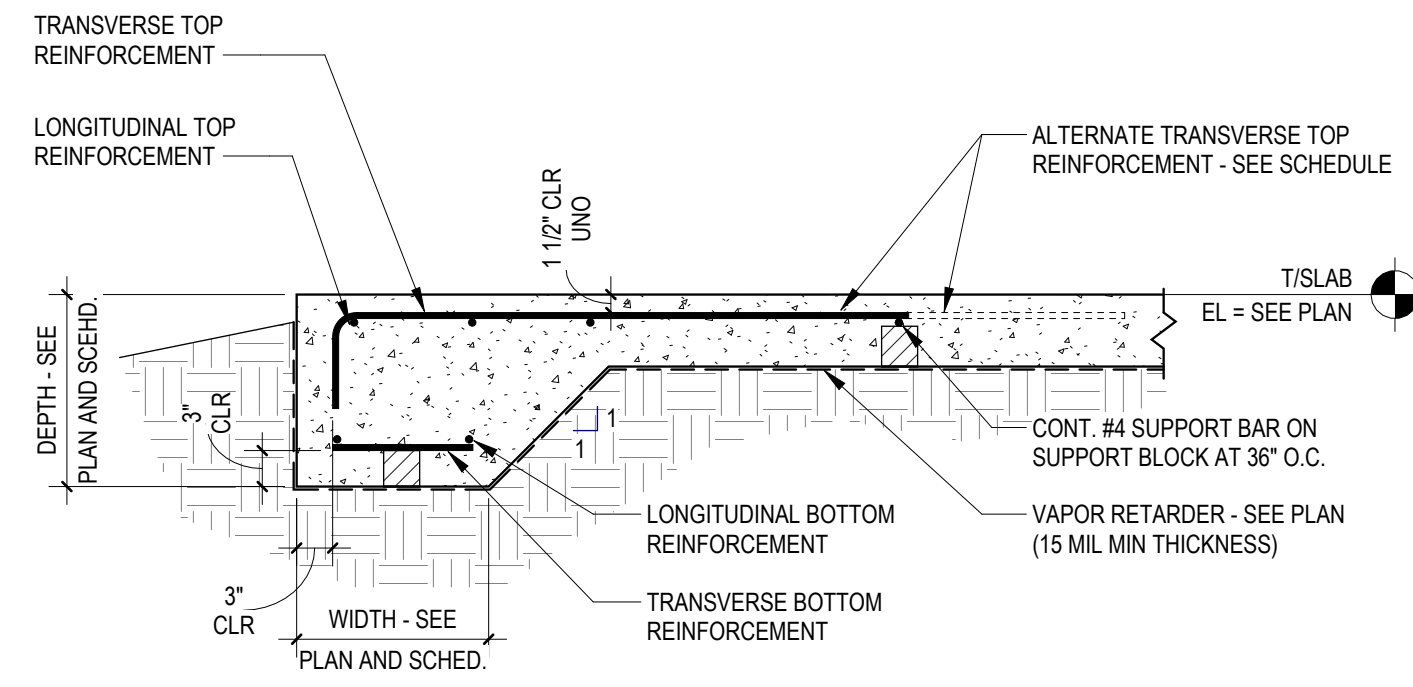
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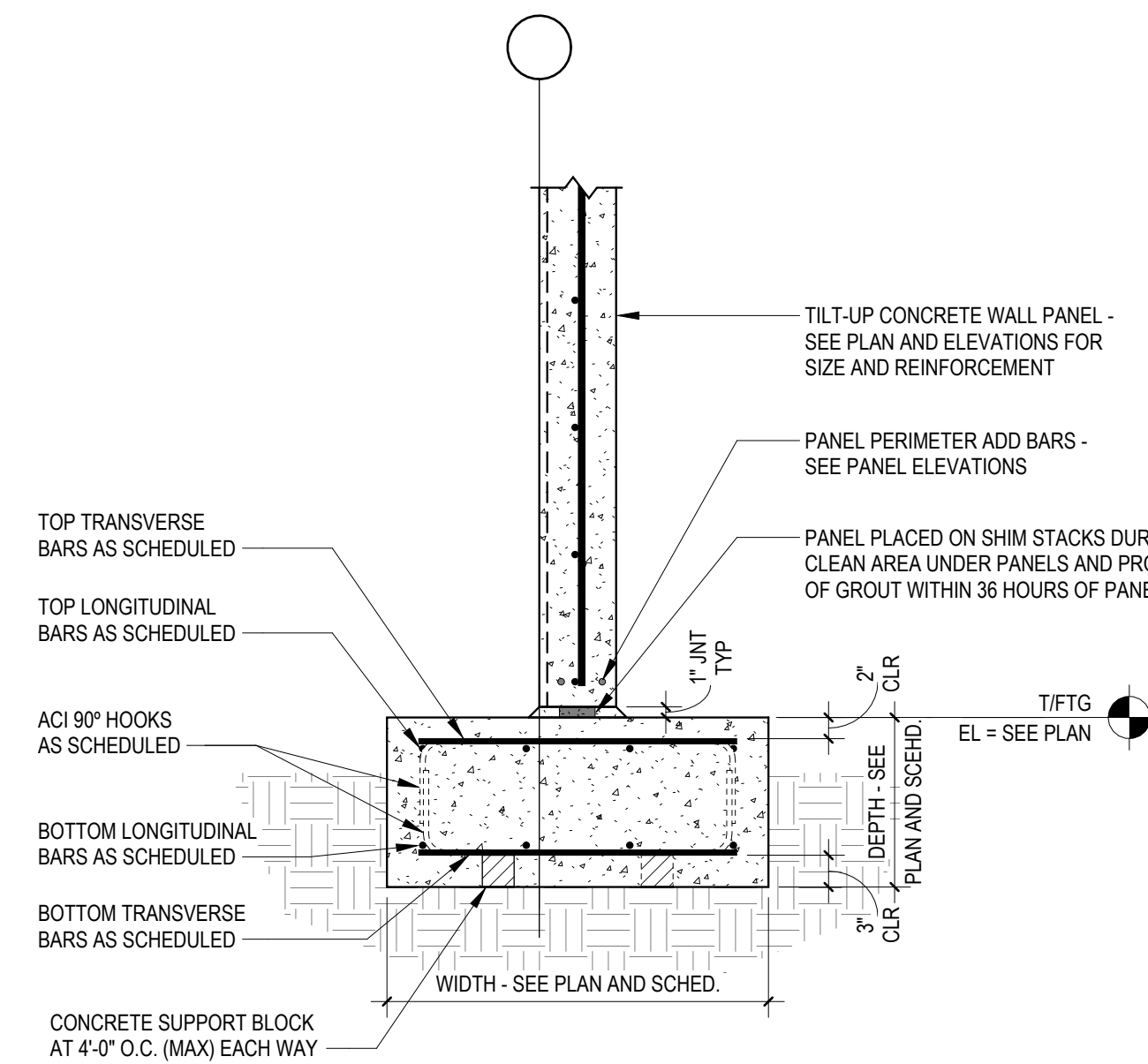
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 Of Sheets

Job Number:
18406

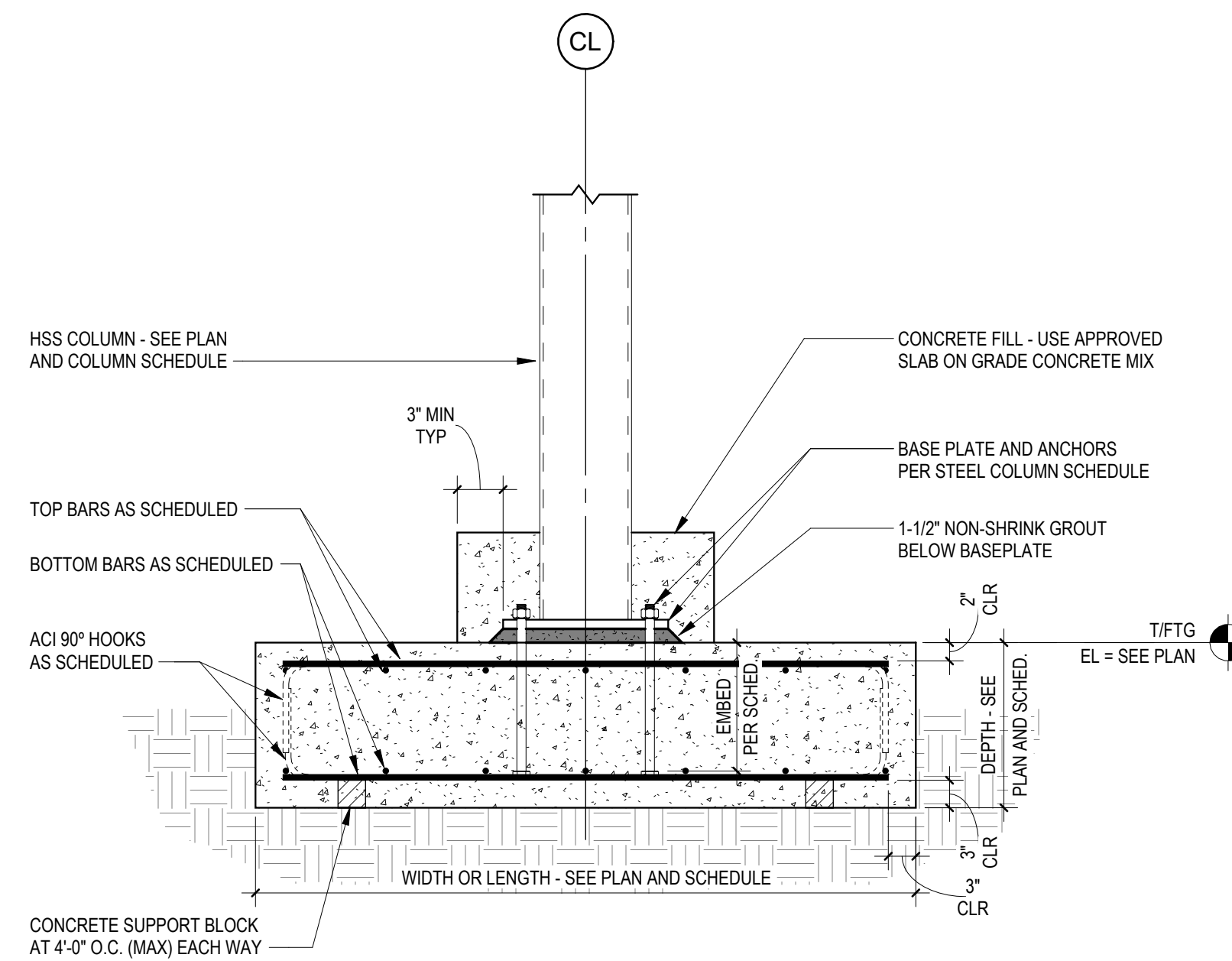
A/E Job Number:



TYPICAL THICKENED SLAB EDGE FOOTING REINFORCEMENT



TYPICAL CONTINUOUS FOOTING REINFORCEMENT



TYPICAL SPREAD FOOTING REINFORCEMENT

CONCRETE FOOTING SCHEDULE					
TYPE	SIZE			REINFORCING	REMARKS
	WIDTH	LENGTH	DEPTH		
F8.0	8'-0"	8'-0"	1'-6"	(9) #6 x 7'-6" LG. EA WAY TOP (9) #6 x 7'-6" LG. EA WAY BOTTOM	SPREAD FOOTING
CF3.0	3'-0"	CONT.	1'-0"	LONG. (4) #5 x CONT. BOTTOM TRANS. #4 x 2'-6" LG. AT 16" O.C. BOTTOM	CONTINUOUS FOOTING
CF4.5	4'-6"	CONT.	1'-4"	LONG. (5) #5 x CONT. TOP & BOTTOM TRANS. #4 x 4'-0" LG. AT 12" O.C. TOP & BOTTOM	CONTINUOUS FOOTING
TS1.00	1'-0"	CONT.	1'-0"	LONG. (2) #4 x CONT. TOP LONG. (2) #4 x CONT. BOTTOM ALT. TRANS. #4 x 3'-6" & 5'-0" LG. w/ ACI 90° HOOK TOP #4 x 1'-0" LG. SKEWED SUPPORT BAR AT 36" O.C. BOT	THICKENED SLAB EDGE
TS1.33	1'-4"	CONT.	1'-0"	LONG. (2) #5 x CONT. TOP LONG. (2) #5 x CONT. BOTTOM ALT. TRANS. #4 x 4'-0" & 5'-6" LG. w/ ACI 90° HOOK TOP #4 x 1'-0" LG. SKEWED SUPPORT BAR AT 36" O.C. BOT	THICKENED SLAB EDGE

TENSION DEVELOPMENT LENGTHS AND LAP SPICE LENGTHS FOR UNCOATED BARS																									
BAR SIZE	LAP CLASS	3000 PSI		4000 PSI		5000 PSI		6000 PSI		7000 PSI		≥ 8000 PSI													
		TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS												
		CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2												
#3	A	22	32	17	25	19	28	15	22	17	25	13	19	15	23	12	18	14	21	12	16	13	20	12	15
#3	B	28	42	22	32	24	36	19	28	22	33	17	25	20	30	15	23	18	28	14	21	17	26	13	20
#4	A	29	43	22	33	25	37	19	29	22	33	17	26	20	31	16	24	19	28	15	22	18	26	14	20
#4	B	37	56	29	43	32	48	25	37	29	43	22	33	26	40	20	31	25	37	19	28	23	34	18	26
#5	A	36	54	28	41	31	47	24	36	28	42	22	32	25	38	20	29	24	35	16	27	22	33	17	25
#5	B	47	70	36	54	40	60	31	47	36	54	28	42	33	49	25	38	31	46	24	35	29	43	22	33
#6	A	43	64	33	50	37	56	29	43	33	50	26	38	31	46	24	35	28	42	22	33	26	40	20	30
#6	B	56	84	43	64	48	72	37	56	43	65	33	50	40	59	31	46	37	55	28	42	40	51	26	40
#7	A	63	94	48	72	54	81	42	63	49	73	37	56	44	66	34	51	41	61	32	47	38	58	30	44
#7	B	81	122	63	94	70	106	54	81	63	94	49	73	58	86	44	66	53	80	41	61	50	75	38	58
#8	A	72	107	55	82	62	93	48	71	55	83	43	64	51	76	39	58	47	70	36	54	44	66	34	51
#8	B	93	139	72	107	80	121	62	93	72	108	55	83	66	98	51	76	61	91	47	70	57	85	44	66
#9	A	81	121	62	93	70	105	54	81	63	94	48	72	57	85	44	66	53	79	41	61	49	74	38	57
#9	B	105	157	81	121	91	136	70	105	81	122	63	94	74	111	57	85	69	103	53	79	64	96	49	74
#10	A	91	136	70	105	79	118	61	91	70	105	54	81	64	96	49	74	59	89	46	69	56	83	43	64
#10	B	118	177	91	136	102	153	79	118	91	137	70	105	83	125	64	96	77	116	59	89	72	108	56	83
#11	A	101	151	76	116	87	131	67	101	76	117	60	90	71	107	55	82	66	99	51	76	62	93	48	71
#11	B	131	196	101	151	113	170	87	131	101	152	78	117	93	139	71	107	86	128	66	99	80	120	62	93
#14	N/A ⁽¹⁾	121	161	93	139	105	157	81	121	94	140	72	108	86	128	66	99	79	119	61	91	74	111	57	85
#18	N/A ⁽¹⁾	161	241	124	186	139	209	107	161	125	187	96	144	114	171	88	131	106	158	81	122	99	148	76	114

NOTES:

- TABULATED VALUES ARE BASED ON GRADE 60 REINFORCING BARS AND NORMAL WEIGHT CONCRETE. ALL VALUES ARE LENGTHS IN INCHES.
- TENSION DEVELOPMENT AND LAP SPICE LENGTHS ARE CALCULATED PER ACI 318-14, SECTION 25.4.2 AND 25.5.2, RESPECTIVELY. TABULATED VALUES FOR BEAMS AND COLUMNS ARE BASED ON TRANSVERSE REINFORCEMENT AND CONCRETE COVER MEETING MINIMUM CODE REQUIREMENTS.
- CASE 1 AND CASE 2 ARE DEPENDENT ON THE TYPE OF STRUCTURAL ELEMENT, CONCRETE COVER, AND THE CENTER-TO-CENTER SPACING OF THE BARS. CASES ARE DEFINED AS FOLLOWS:
 - BEAMS AND COLUMNS:
 - CASE 1: COVER OF AT LEAST 1.0 (db) AND C-C SPACING OF AT LEAST 2.0 (db) - WHERE (db) IS THE DIAMETER OF THE BAR.
 - CASE 2: COVER LESS THAN 1.0 (db) OR C-C SPACING LESS THAN 2.0 (db)
 - ALL OTHER STRUCTURAL MEMBERS:
 - CASE 1: COVER OF AT LEAST 1.0 (db) AND C-C SPACING OF AT LEAST 3.0 (db)
 - CASE 2: COVER LESS THAN 1.0 (db) OR C-C SPACING LESS THAN 3.0 (db)
- LAP SPICE LENGTHS ARE MULTIPLES OF THE CALCULATED TENSION DEVELOPMENT LENGTH PER ACI 318-14, SECTION 25.2.2 AS FOLLOWS:
 - CLASS "A" = 1.0 (L_d)
 - CLASS "B" = 1.3 (L_d)
- ACI 318-14 DOES NOT ALLOW TENSION LAP SPICES OF #14 OR #18 BARS. THE TABULATED VALUES FOR THESE BAR SIZES ARE THE TENSION DEVELOPMENT LENGTHS.
- TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
- FOR LIGHTWEIGHT AGGREGATE CONCRETE, ALL TABULATED VALUES SHALL BE MULTIPLIED BY A FACTOR OF 1.3.

TENSION DEVELOPMENT LENGTHS OF ACI STANDARD HOOKS FOR UNCOATED BARS							
BAR SIZE	3000 PSI	3500 PSI	4000 PSI	5000 PSI	6000 PSI	7000 PSI	≥8000 PSI
#3	10	9	9	8	7	7	6
#4	13	12	12	10	10	9	8
#5	17	16	15	13	12	11	10
#6	20	19	17	16	14	13	12
#7	23	22	20	18	17	15	14
#8	27	25	23	21	19	18	16
#9	30	28	26	23	21	20	18
#10	34	31	29	26	24	22	21
#11	37	35	32	29	27	25	23
#14	45	42	39	35	32	29	28
#18	60	55	52	46	45	39	37

NOTES:

- TABULATED VALUES ARE BASED ON GRADE 60 REINFORCING BARS AND NORMAL WEIGHT CONCRETE. ALL VALUES ARE LENGTHS IN INCHES.
- TENSION DEVELOPMENT LENGTHS OF STANDARD HOOKS ARE CALCULATED PER ACI 318-14, SECTION 25.4.3.
- FOR BAR SIZES #3 THROUGH #11 ONLY, THE FOLLOWING FURTHER REDUCTIONS IN LENGTH CAN BE APPLIED:
 - IF CONCRETE COVER CONFORMS TO ACI 318-14, SECTION 25.4.3.2:
 - A MODIFICATION FACTOR OF 0.7 MAY BE APPLIED, HOWEVER.
 - THE FINAL CALCULATED LENGTH OF THE HOOK SHALL NOT BE LESS THAN EITHER 8.0 (db) OR 6 INCHES.
 - IF HOOK IS ENCLOSED IN TIES OR STIRRUPS PER ACI 318-14, SECTION 25.4.3.2:
 - A MODIFICATION FACTOR OF 0.8 MAY BE APPLIED, HOWEVER.
 - THE FINAL CALCULATED LENGTH OF THE HOOK SHALL NOT BE LESS THAN EITHER 8.0 (db) OR 6 INCHES.
- FOR LIGHTWEIGHT AGGREGATE CONCRETE, ALL TABULATED VALUES SHALL BE MULTIPLIED BY A FACTOR OF 1.3.

BID SET 12-15



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Revisions:

AS INDICATED	12/15/22	JDC	JDC
Date:	Drawn By:	Checked By:	

Scale:

IMAGE BUILDERS - WGCC
NEW CONSTRUCTION - IMAGE BUILDERS
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WINTER GARDEN, FL 34787

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Professional Engineer
No 74693
STATE OF FLORIDA

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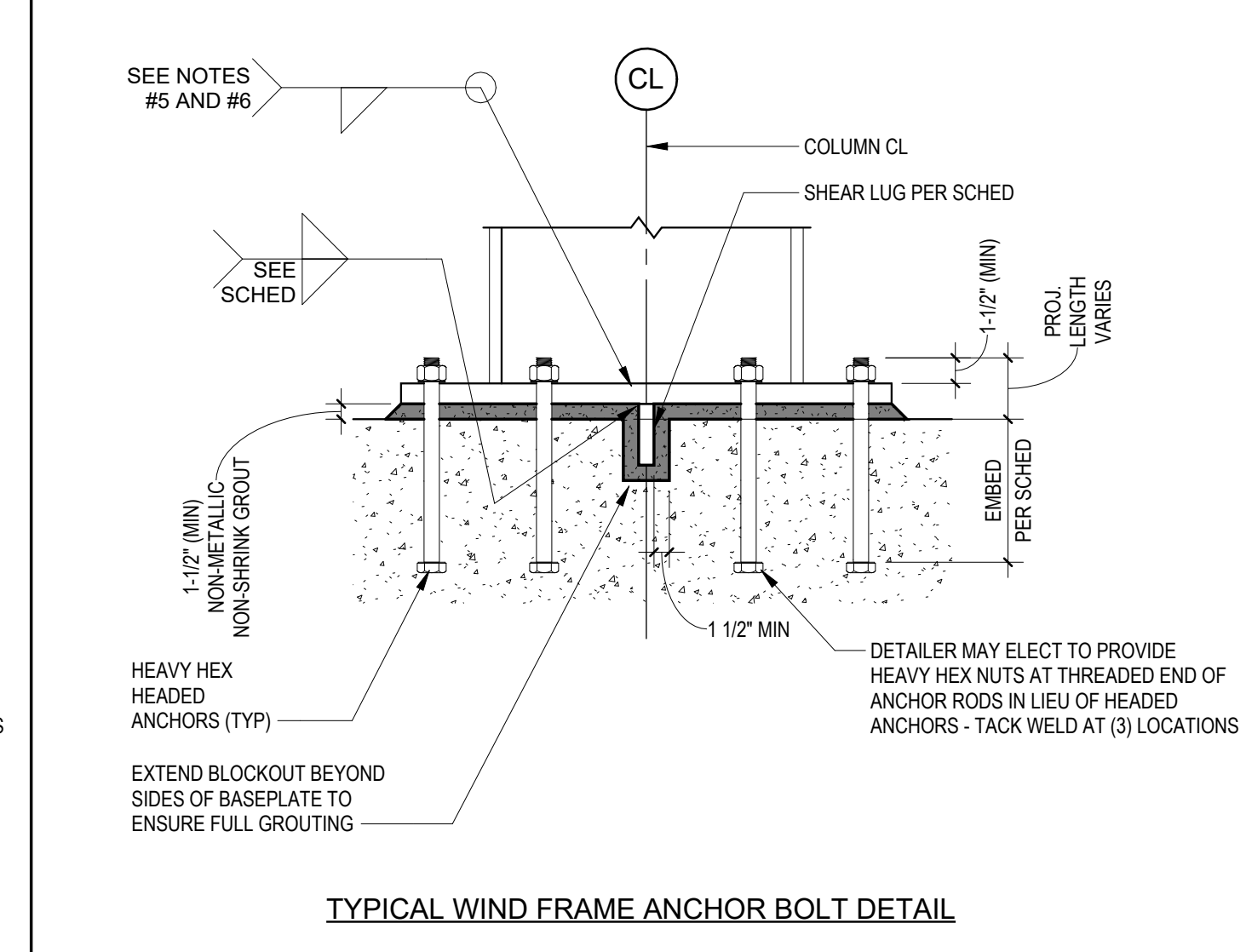
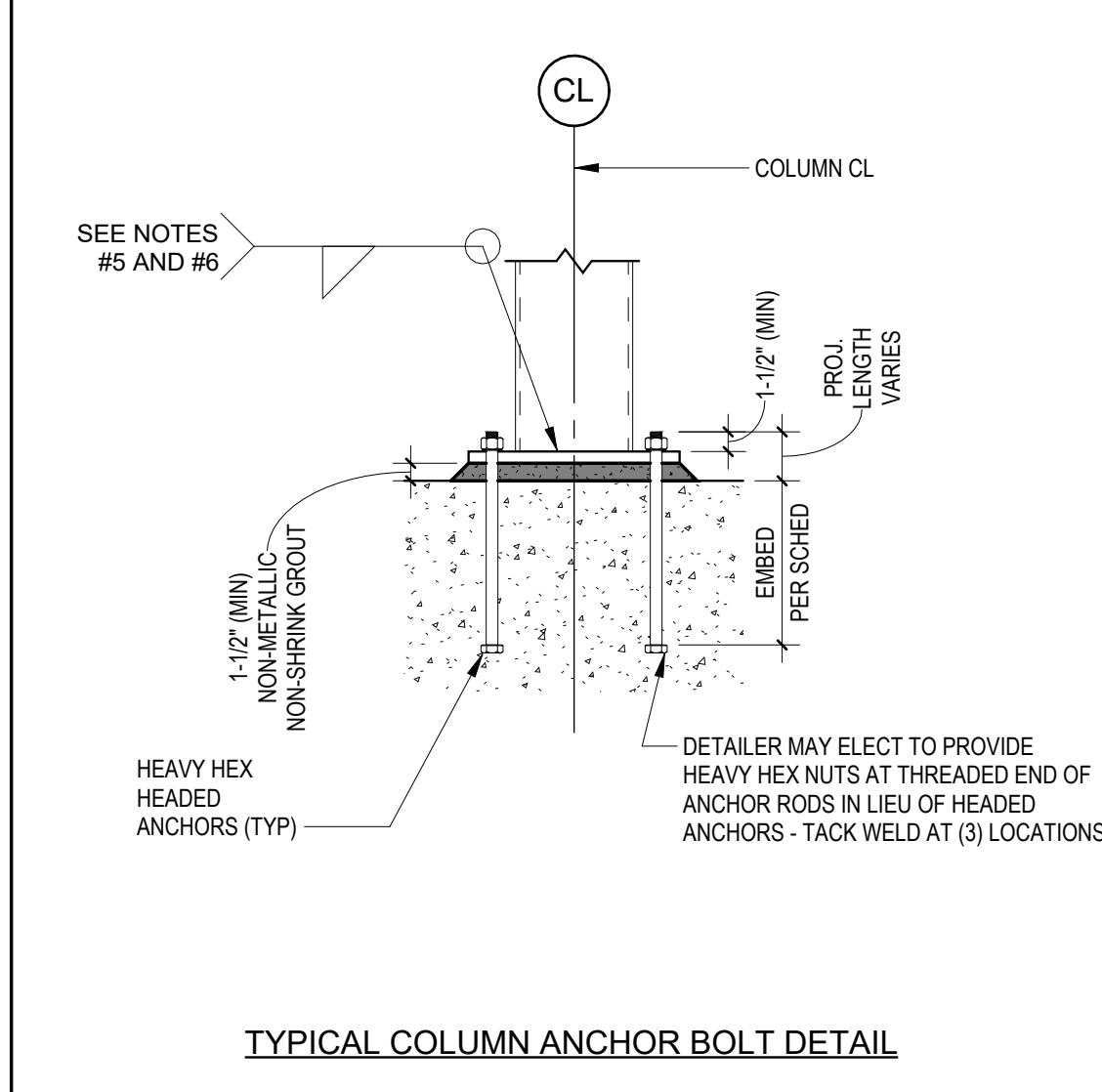
Job Number:

A/E Job Number: **18406**

STEEL COLUMN AND BASE PLATE SCHEDULE

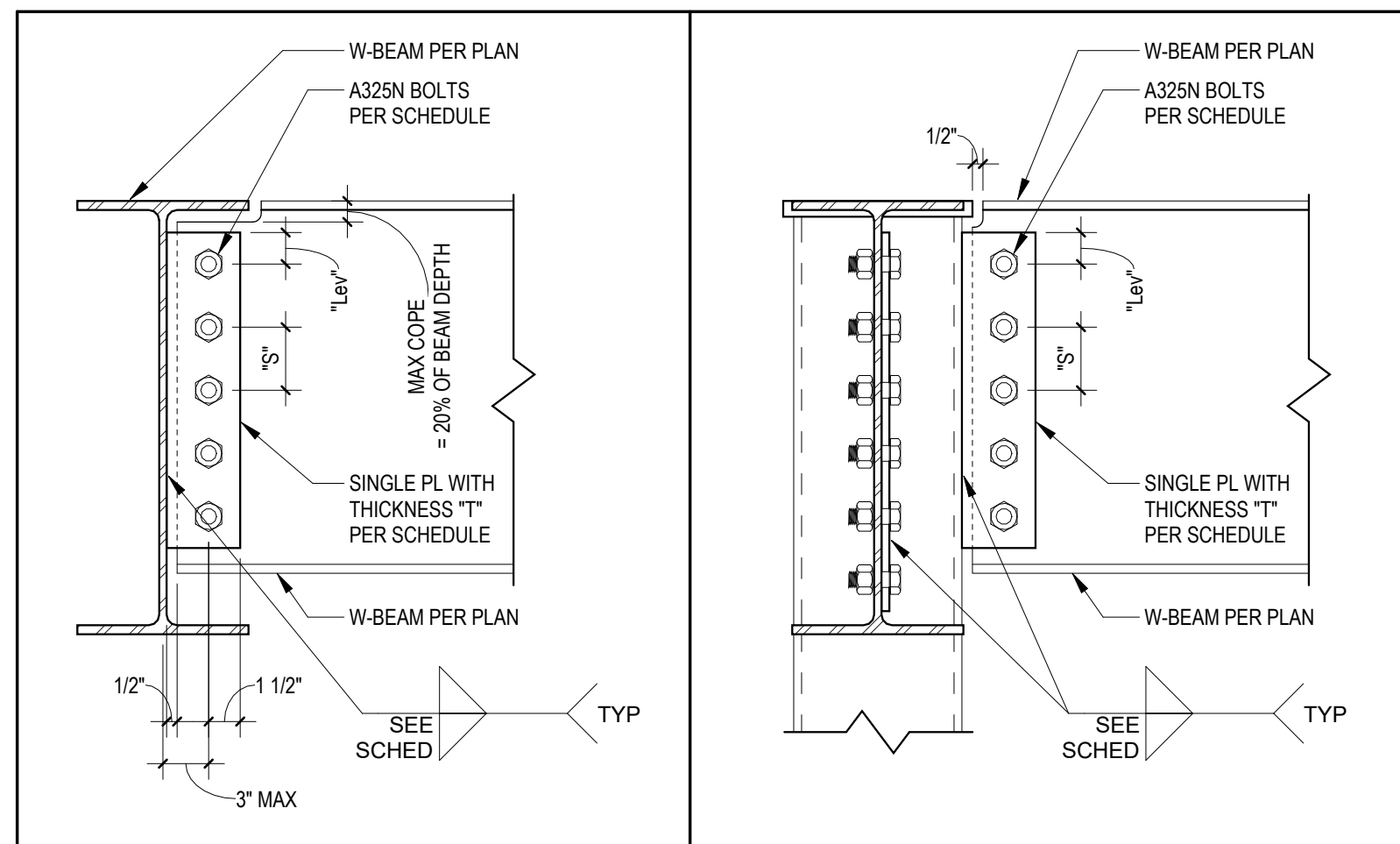
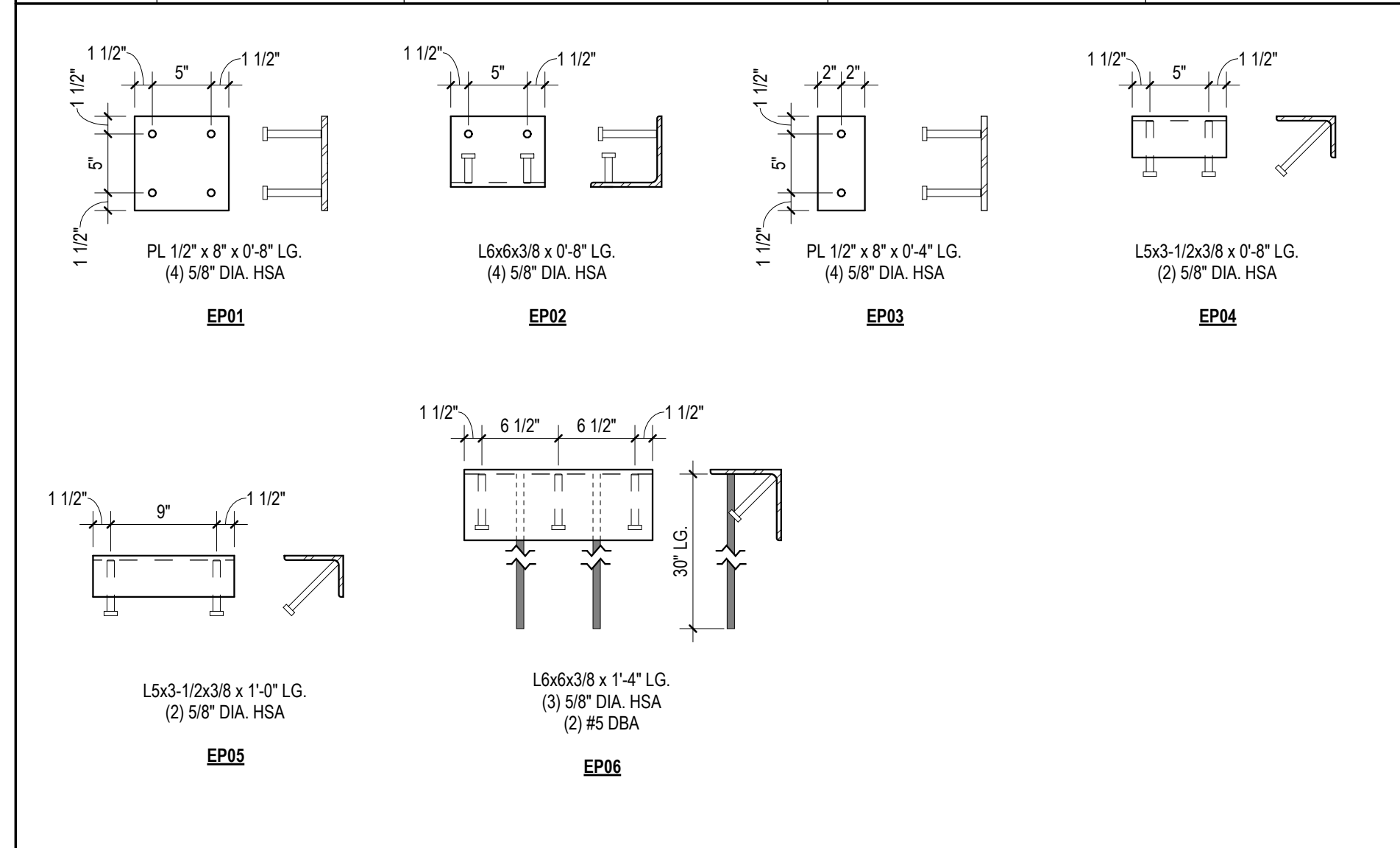
TYPE	HSS 8x8x1/4	---	---	---
BASE PLATE PLAN				
BASE PLATE	PL 1" x 1'-4" x 1'-4"			
ANCHOR BOLTS	(4) 3/4" DIA. ANCHORS 12" EMBEDMENT			
COLUMN MARK	C1	C-	C-	C-

- COLUMN AND BASE PLATE NOTES:**
- PROVIDE 1/4" CAP PLACES ON ALL TUBE AND PIPE COLUMNS THAT ARE NOT LOADED THROUGH THE CAP PLATE.
 - ALL BASE PLATE AND SHEAR LUG MATERIAL TO BE ASTM A572 GRADE 50, UNLESS NOTED OTHERWISE.
 - ALL ANCHORS TO BE ASTM F1554, 55 KSI, S1 WELDABLE MATERIAL UNLESS NOTED OTHERWISE.
 - SET ALL BASE PLATES ON WEDGES, SHIMS, OR LEVELING NUTS AS REQUIRED. FULL BED OF NON-METALLIC, NON-SHRINK, HIGH STRENGTH GROUT MUST BE INSTALLED BELOW BASE PLATE. GROUT MUST BE INSTALLED IMMEDIATELY AFTER ERECTION OF MAIN JOIST GIRDERS AND JOISTS AT COLUMN LINES.
 - ALL WELDS ARE CONTINUOUS AROUND COLUMN BASE.
 - UNLESS OTHERWISE NOTED, PROVIDE 5/16" FILLET WELDS AT COLUMN MATERIAL GREATER THAN 1/2" WALL THICKNESS. PROVIDE 1/4" FILLET WELD OTHERWISE.



STEEL EMBED PLATE SCHEDULE

EMBED MARK	PLATE / ANGLE SIZE	HEADED STUD QUANTITY AND LAYOUT	EMBED USE	COMMENTS
EP01	PL 1/2" x 8" x 0'-8" L.G.	(4) 5/8" DIA. x 5" L.G. HSA - (2) ROWS OF (2)	PANEL TO PANEL CONNECTION	----
EP02	L6x6x3/8 x 0'-8" L.G.	(2) 5/8" DIA. x 5" L.G. HSA & (2) 5/8" DIA. x 2-1/2" L.G. HSA	PANEL TO PANEL CONNECTION	----
EP03	PL 1/2" x 8" x 0'-4" L.G.	(2) 5/8" DIA. x 5" L.G. HSA - (2) ROWS OF (1)	DECK ANGLE TO PANEL CONNECTION	----
EP04	L5x3-1/2x3/8 x 1'-0" L.G. (LLH)	(2) 5/8" DIA. x 6" L.G. HSA - AT 45°	DECK ANGLE TO PANEL CONNECTION	----
EP05	L5x3-1/2x3/8 x 1'-0" L.G. (LLH)	(2) 5/8" DIA. x 6" L.G. HSA - AT 45°	TYP JOIST TO PANEL CONNECTION	----
EP06	L6x6x3/8 x 1'-4" L.G.	(3) 5/8" DIA. x 6" L.G. HSA AT 45° & (2) #5 x 30" L.G. DBA	JOIST GIRDER TO PANEL CONNECTION	----
EP##	PL 1" x W" x L'-L" L.G.	(#) 5/8" DIA. x 5" L.G. HSA - (#) ROWS OF (#)	STEEL BEAM TO PANEL CONNECTION	----



SINGLE PLATE CONNECTION SCHEDULE

CAPACITY (KIPS) (FACTORED)	BEAM SIZE	NO. OF A325N BOLTS	HOLE TYPE	PLATE DIMENSIONS		BOLT SPACING (S)	MIN. EDGE DISTANCE (L _{min})	FILLET WELD SIZE (EA SIDE)
				"T"	"L"			
25	W8	(2) 3/4" DIA.	SSLT	3/8"	8"	3"	1 1/2"	1/4"
44	W10	(3) 3/4" DIA.	SSLT	3/8"	8"	2 3/4"	1 1/4"	1/4"
44	W12	(3) 3/4" DIA.	SSLT	3/8"	9"	3"	1 1/2"	1/4"
44	W14	(3) 3/4" DIA.	SSLT	3/8"	9"	3"	1 1/2"	1/4"
63	W16	(4) 3/4" DIA.	SSLT	3/8"	12"	3"	1 1/2"	1/4"
82	W18	(5) 3/4" DIA.	SSLT	3/8"	15"	3"	1 1/2"	1/4"
89	W21	(6) 3/4" DIA.	SSLT	5/16"	18"	3"	1 1/2"	1/4"
108	W24	(7) 3/4" DIA.	SSLT	5/16"	21"	3"	1 1/2"	1/4"
127	W27	(8) 3/4" DIA.	SSLT	5/16"	24"	3"	1 1/2"	1/4"
142	W30	(9) 3/4" DIA.	SSLT	5/16"	27"	3"	1 1/2"	1/4"
157	W33	(10) 3/4" DIA.	SSLT	5/16"	30"	3"	1 1/2"	1/4"
173	W36	(11) 3/4" DIA.	SSLT	5/16"	33"	3"	1 1/2"	1/4"

STD STANDARD HOLES
 SSLT SHORT-SLOTTED HOLES (TRANSVERSE TO DIRECTION OF LOAD)
 N THREADS INCLUDED IN THE SHEAR PLANE (ALLOWED)
 X THREADS EXCLUDED FROM THE SHEAR PLANE

VALUES ARE BASED ON TABLE 10-10a OF THE AISC STEEL CONSTRUCTION MANUAL - 15TH ED.
 VALUES ARE BASED ON A MINIMUM WEB THICKNESS OF 1/4"

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IMAGE BUILDERS - WGCC
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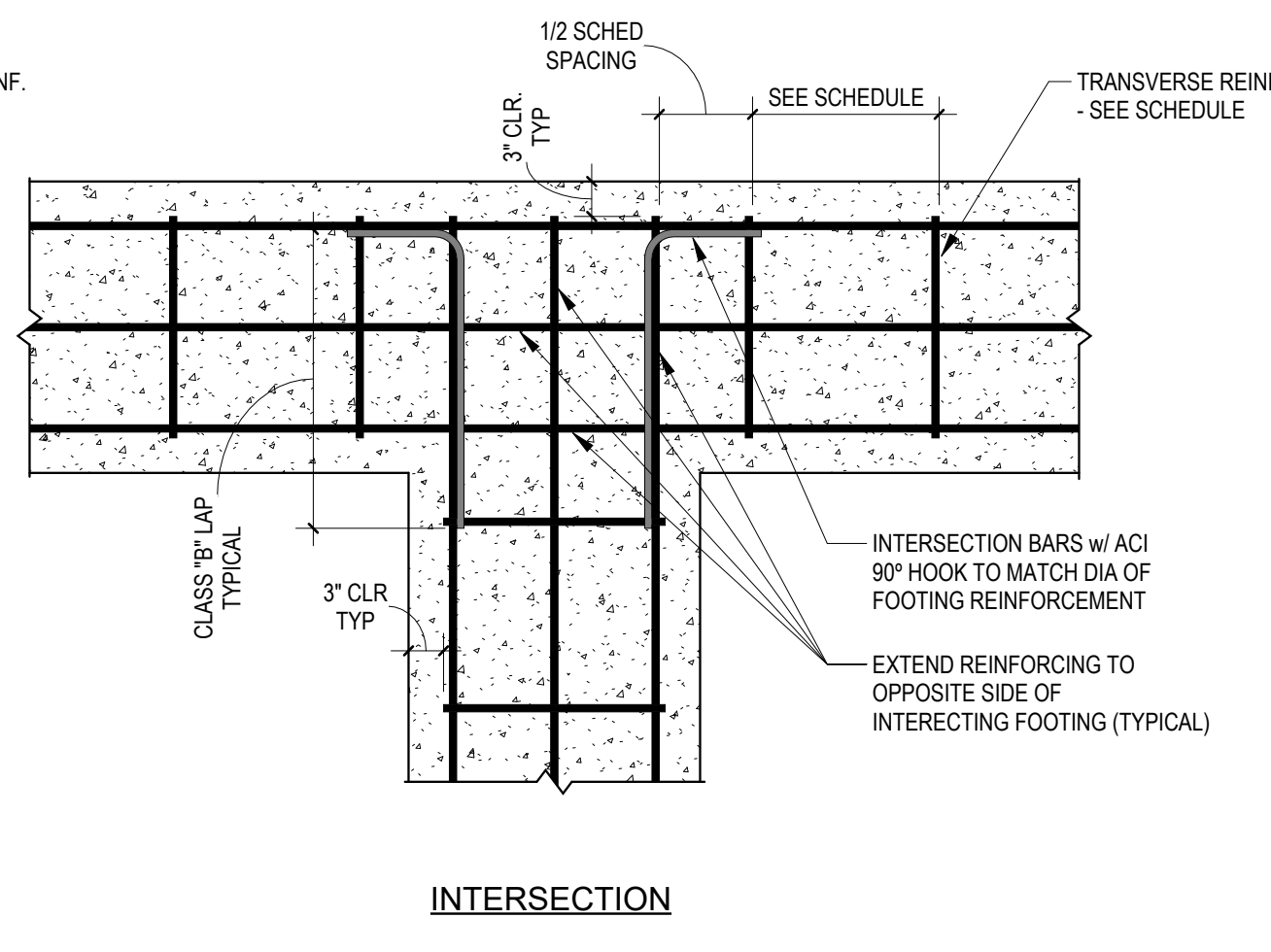
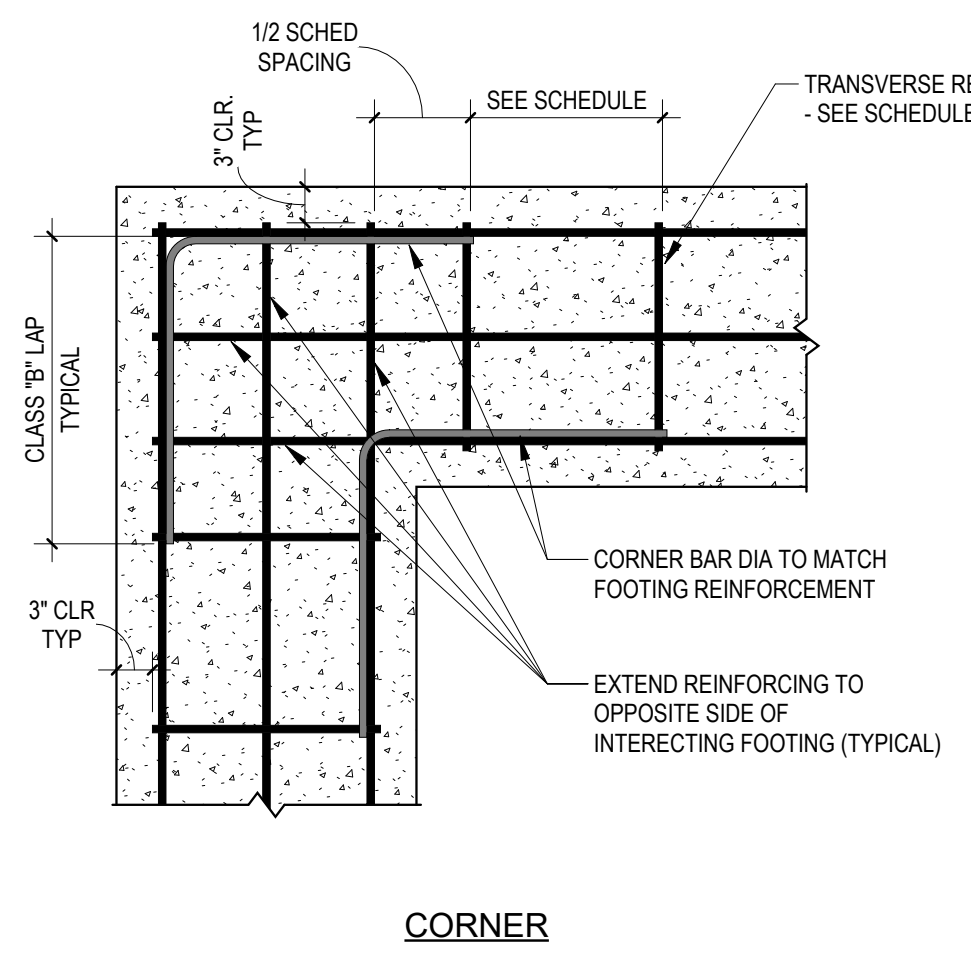
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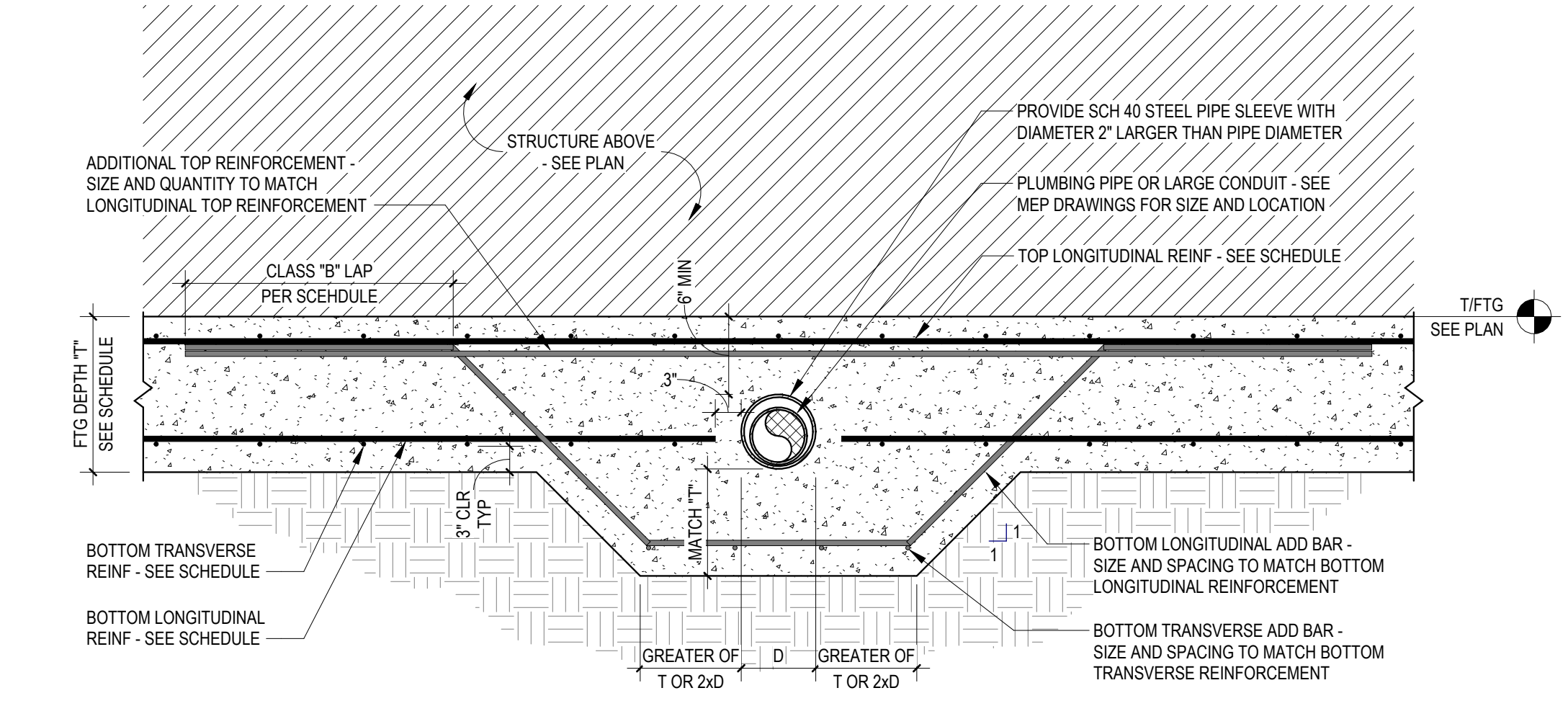
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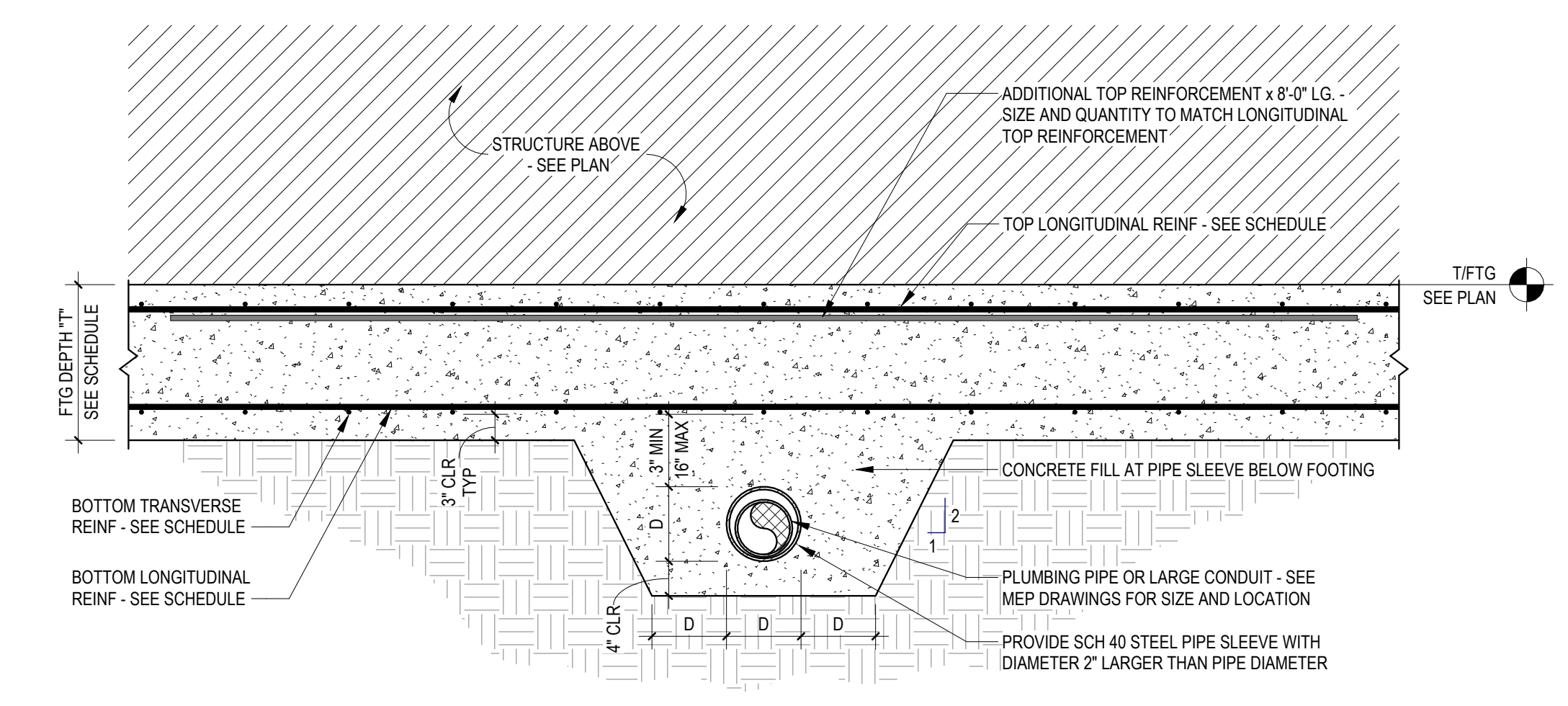
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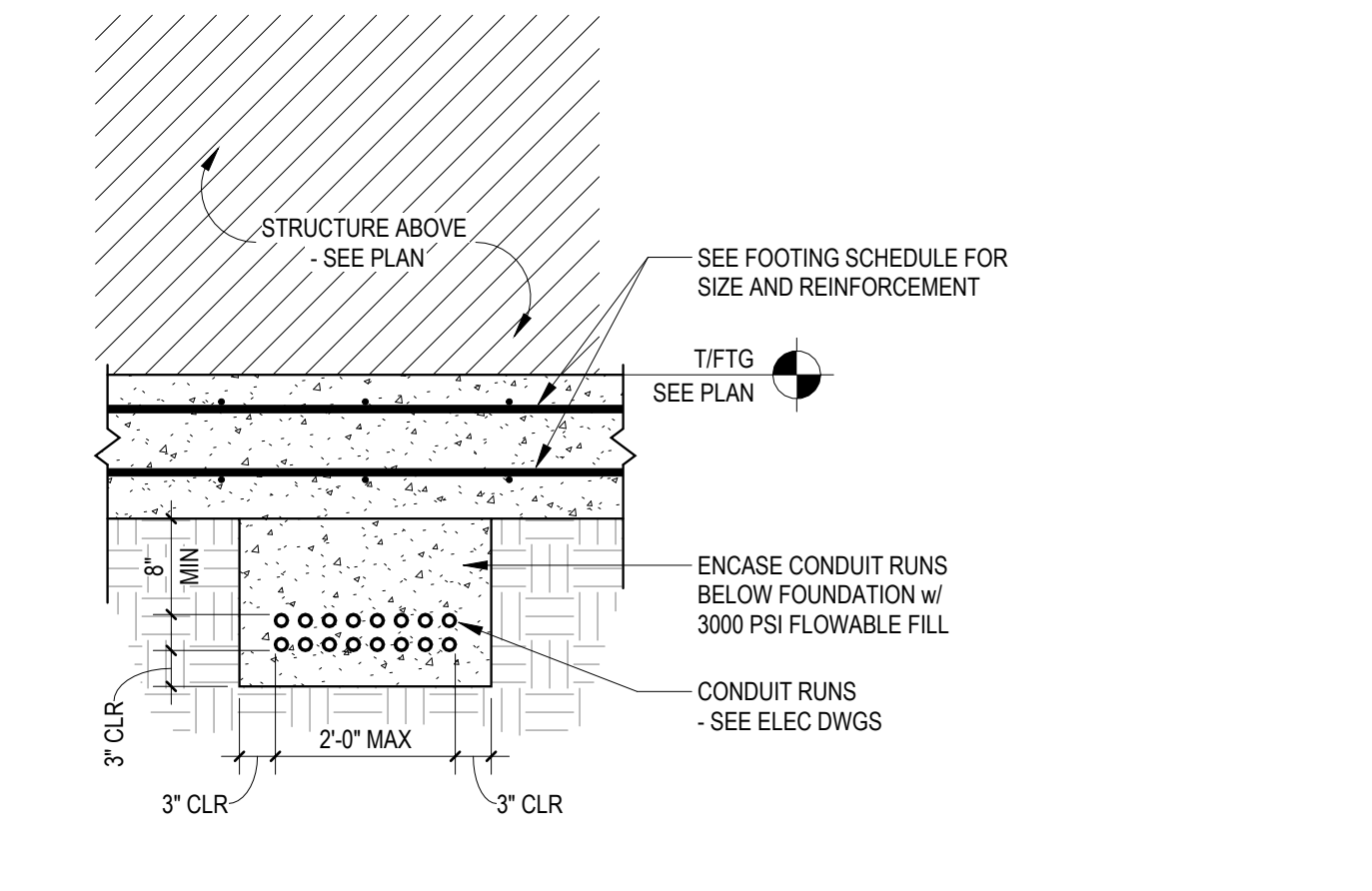
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S601 3/4" = 1'-0"



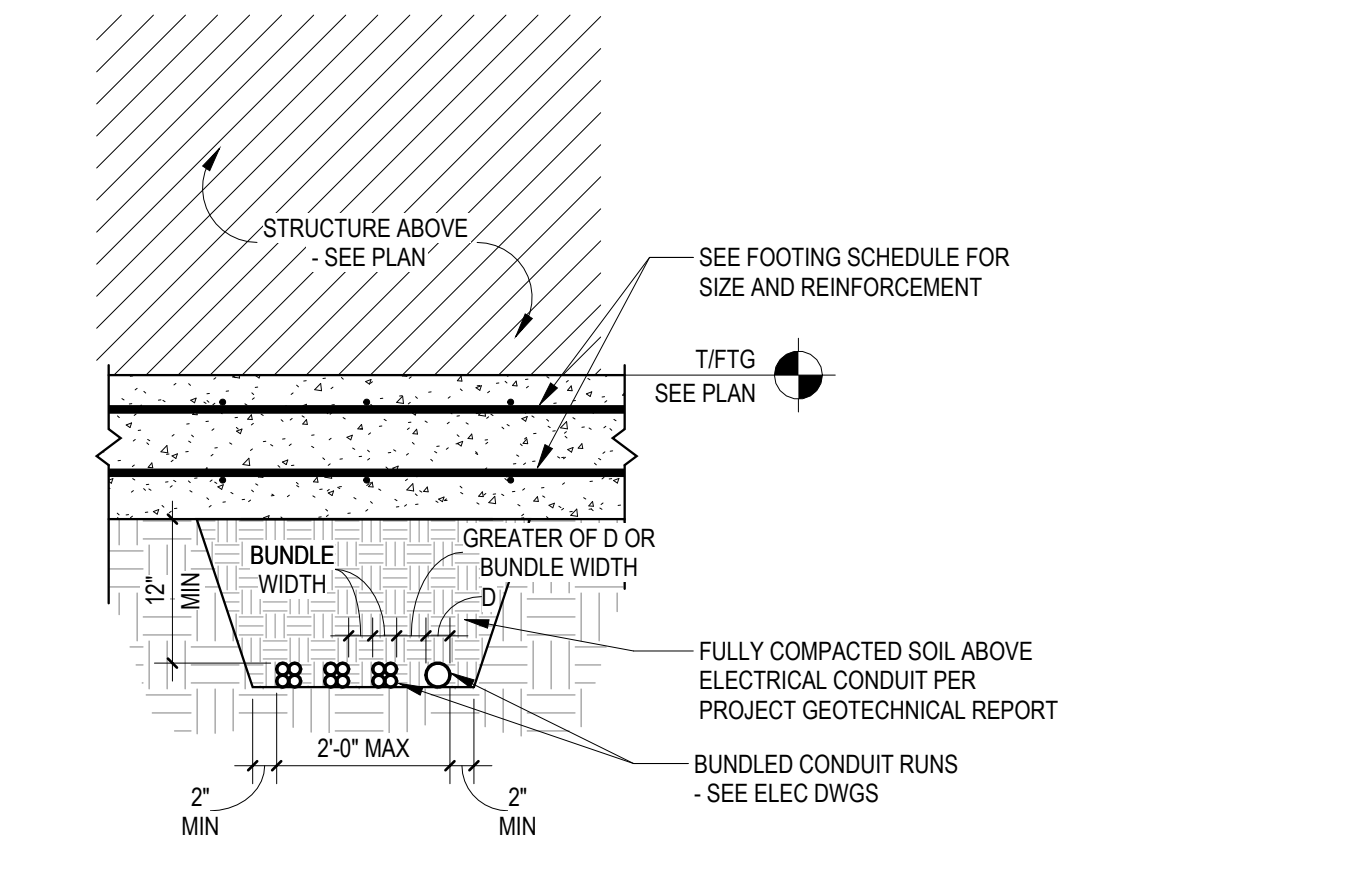
2 TYPICAL CONTINUOUS FOOTING WITH PIPE SLEEVE THROUGH FOOTING
S601 3/4" = 1'-0"



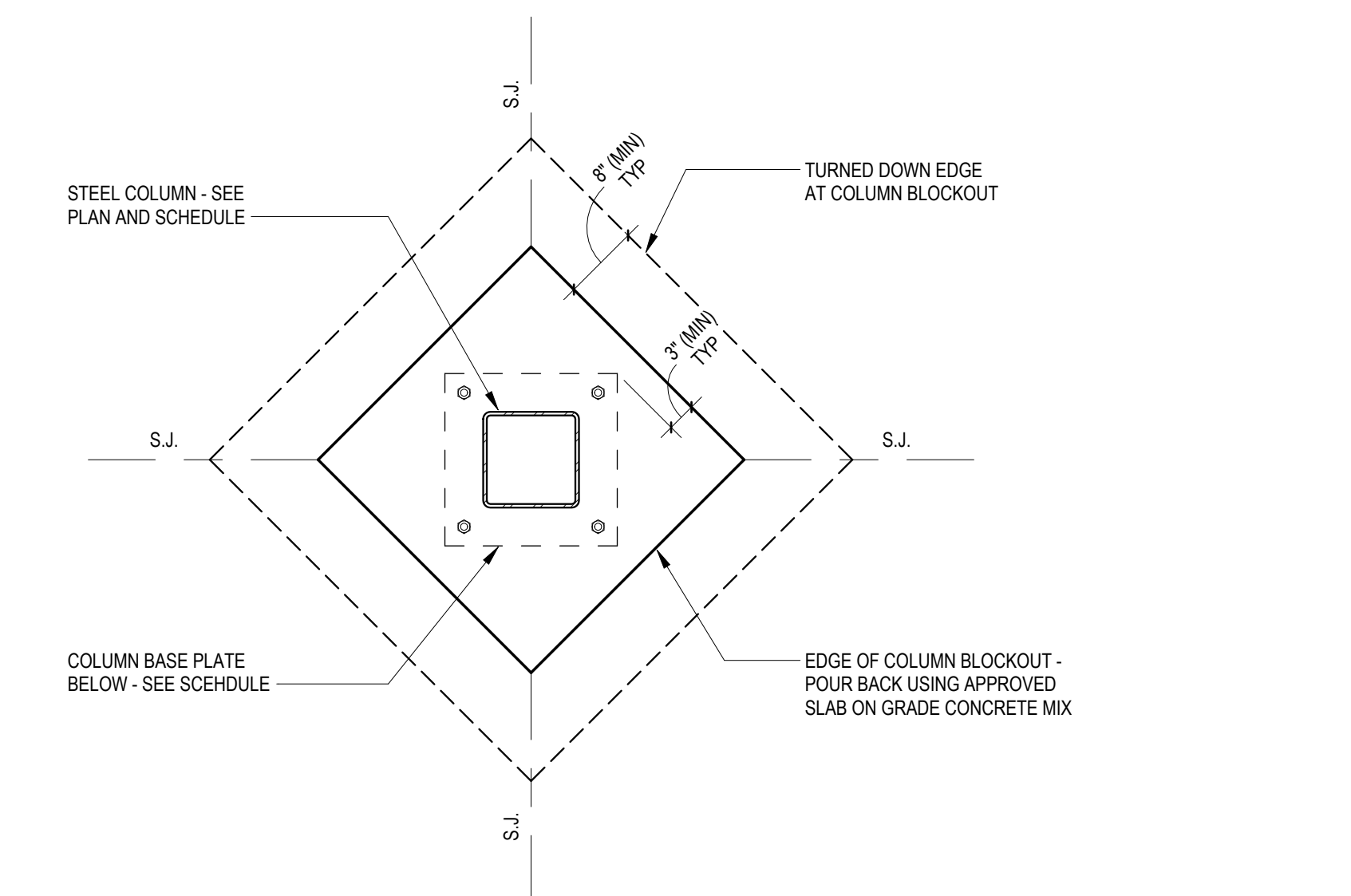
3 TYPICAL CONTINUOUS FOOTING WITH PIPE SLEEVE BELOW FOOTING
S601 3/4" = 1'-0"



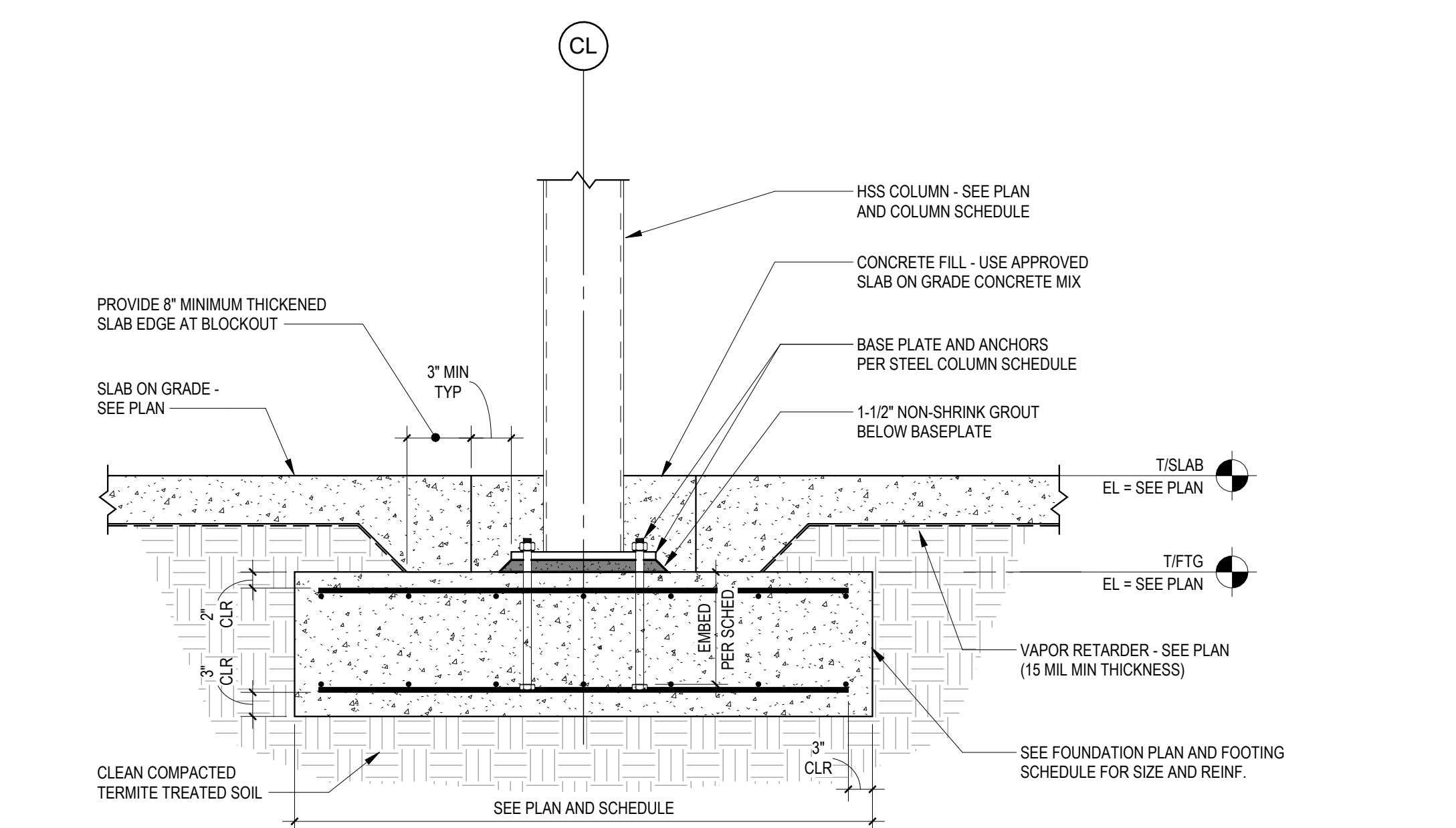
4 TYPICAL ELECTRICAL CONDUIT PLACED AFTER FOUNDATION
S601 3/4" = 1'-0"



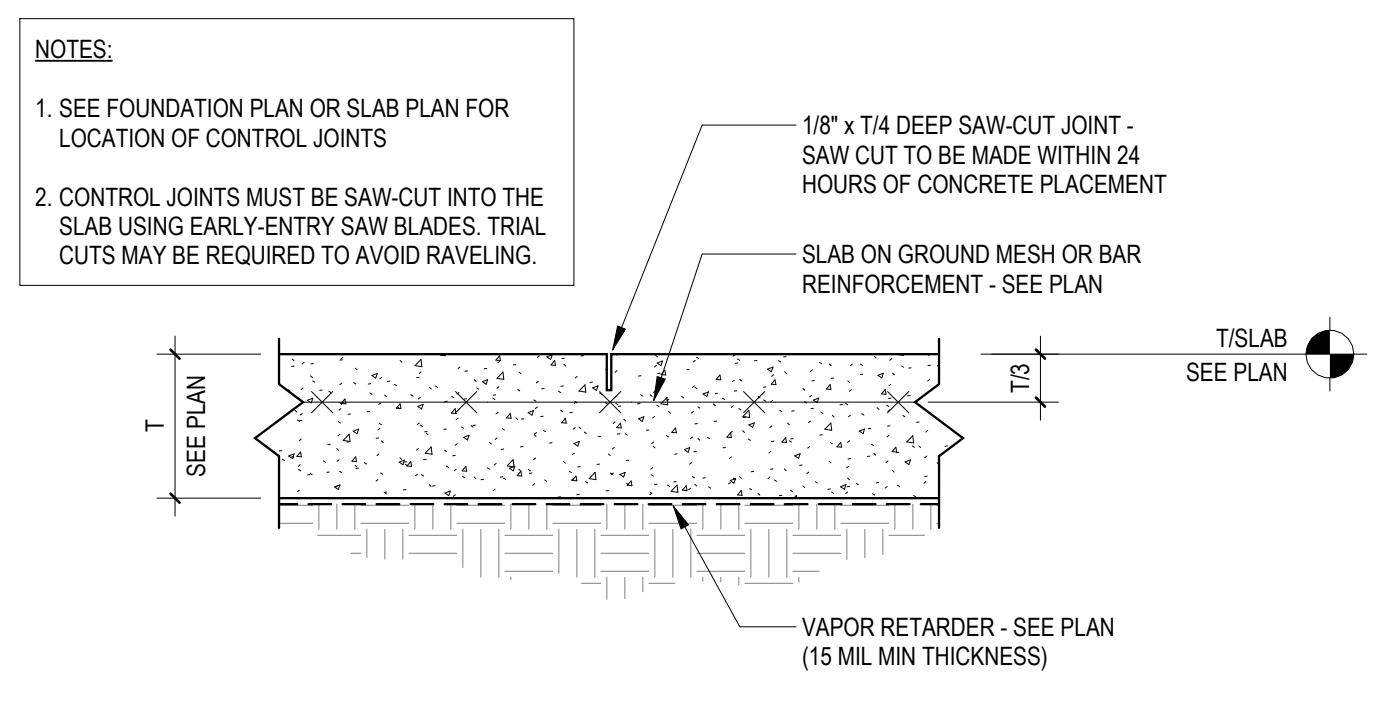
5 TYPICAL ELECTRICAL CONDUIT PLACED BEFORE FOUNDATION
S601 3/4" = 1'-0"



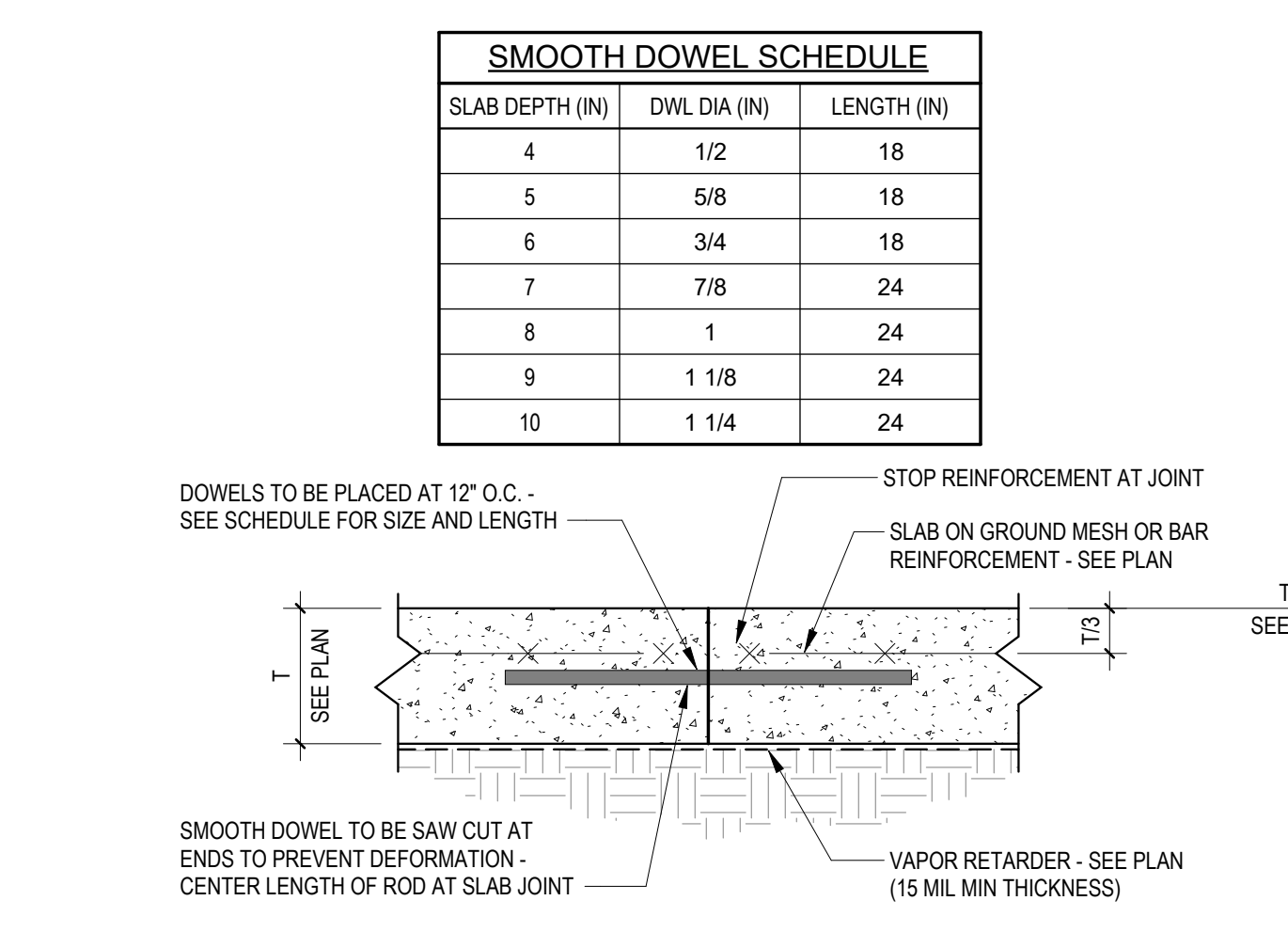
6 TYPICAL COLUMN ISOLATION JOINT
S601 3/4" = 1'-0"



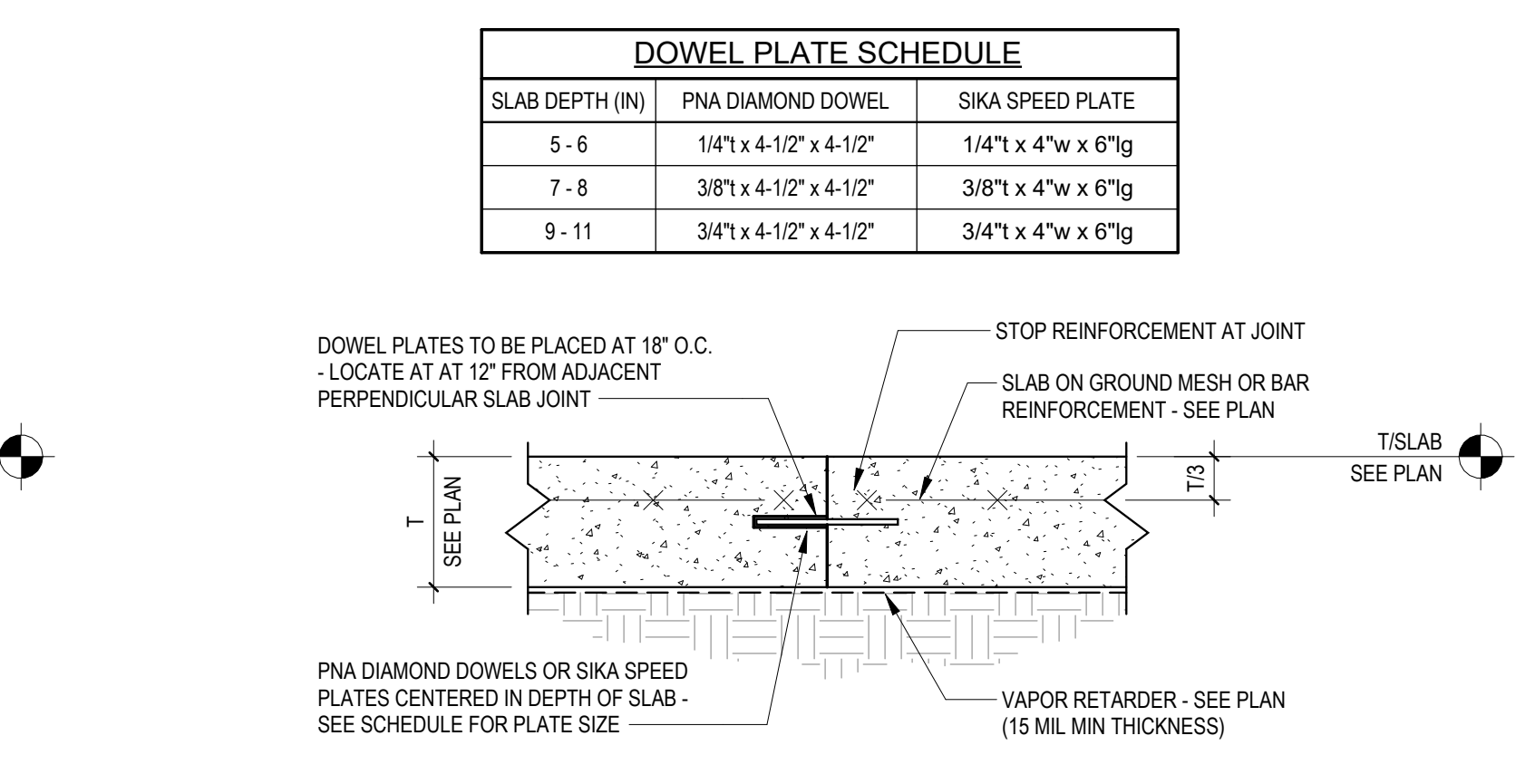
7 INTERIOR COLUMN FOOTING SECTION
S601 3/4" = 1'-0"



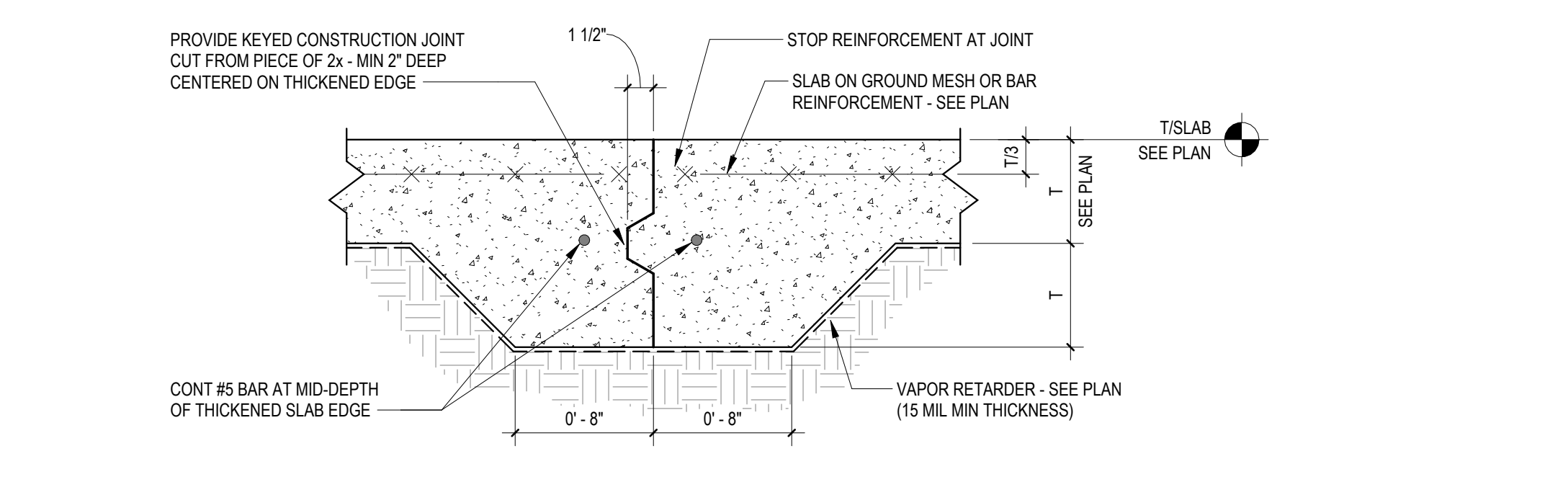
8 TYPICAL SLAB ON GROUND SAW-CUT JOINT
S601 1 1/2" = 1'-0"



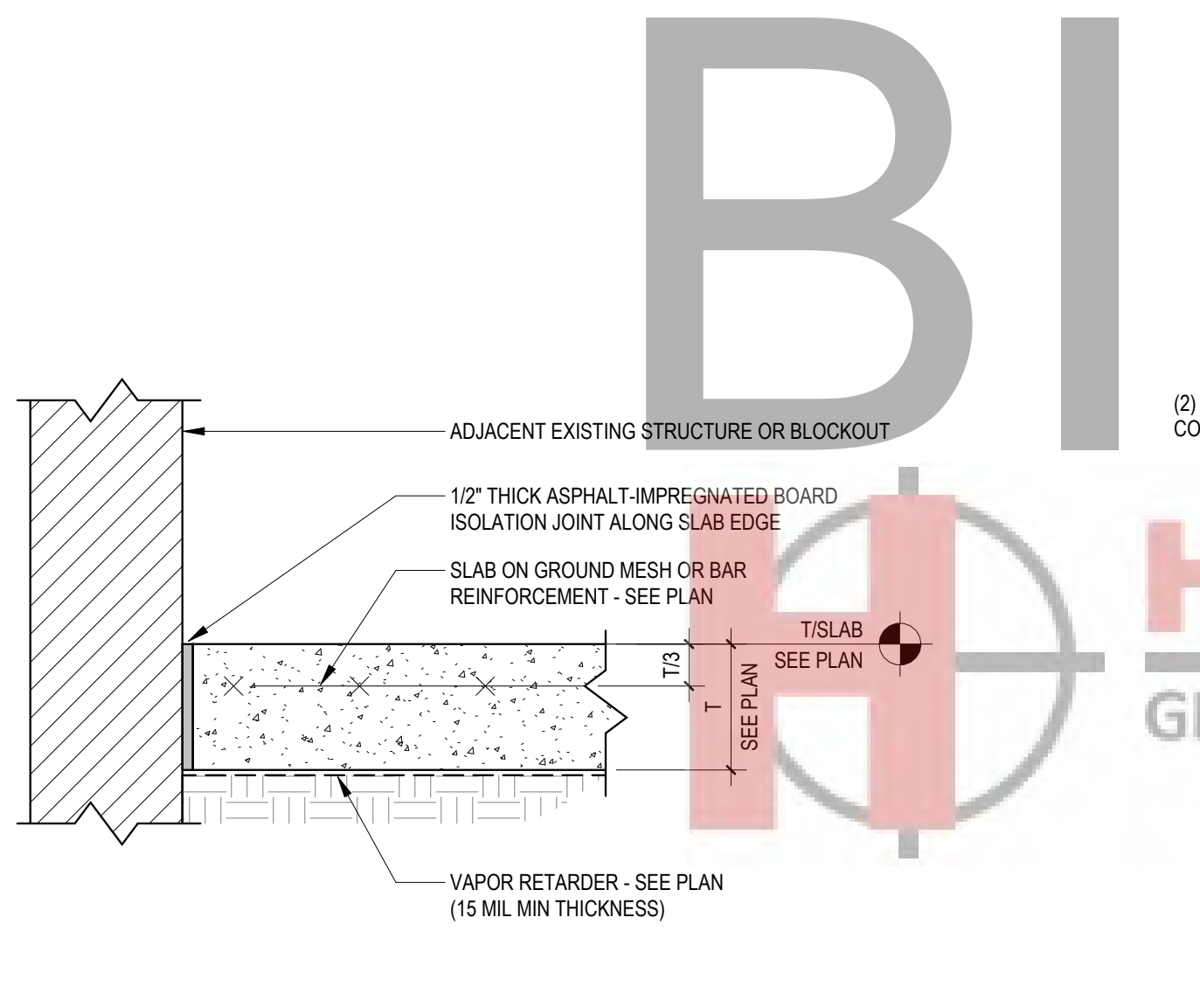
9 SLAB CONSTRUCTION JOINT - SMOOTH DOWELS
S601 1 1/2" = 1'-0"



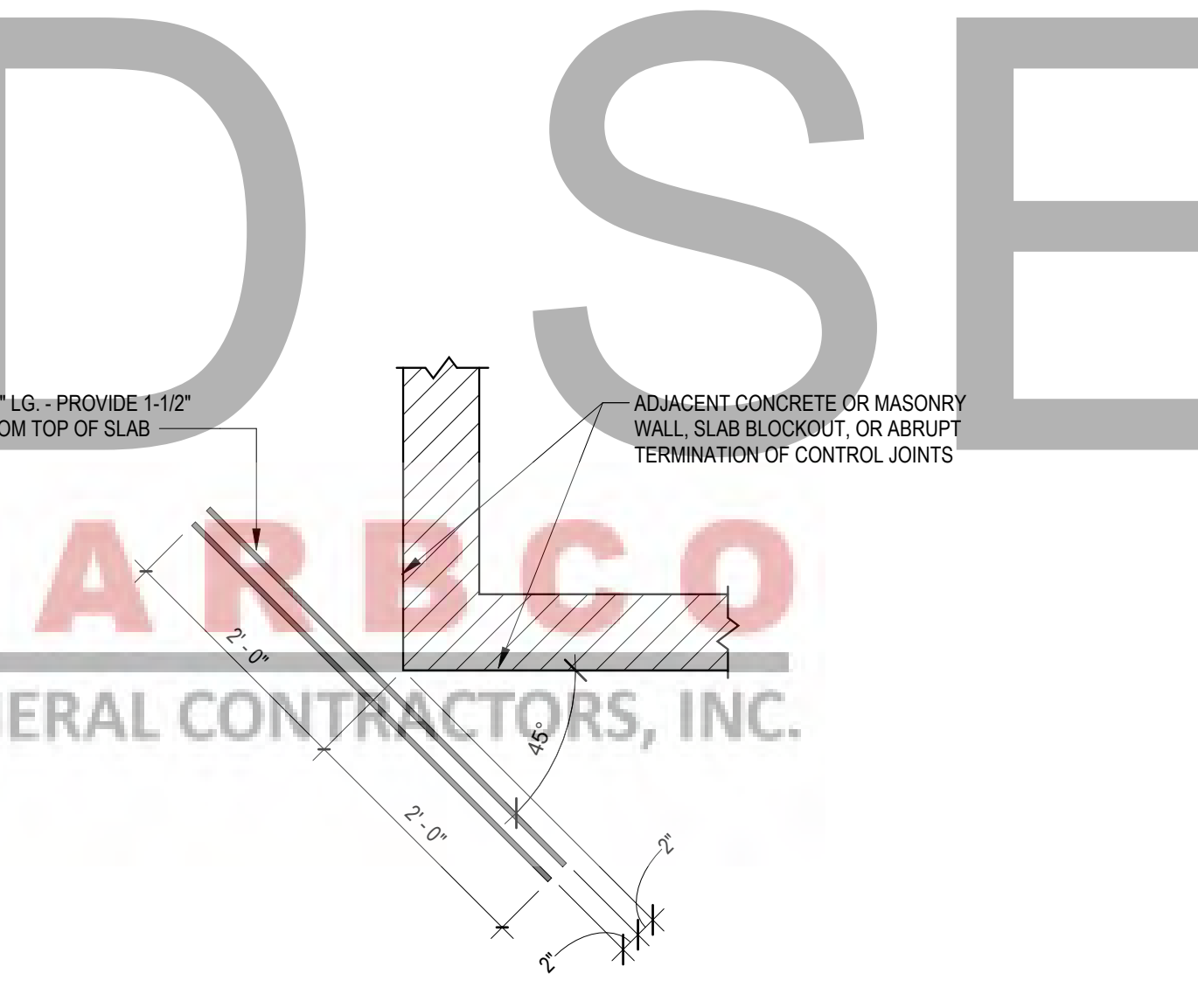
10 SLAB CONSTRUCTION JOINT - DOWEL PLATES
S601 1 1/2" = 1'-0"



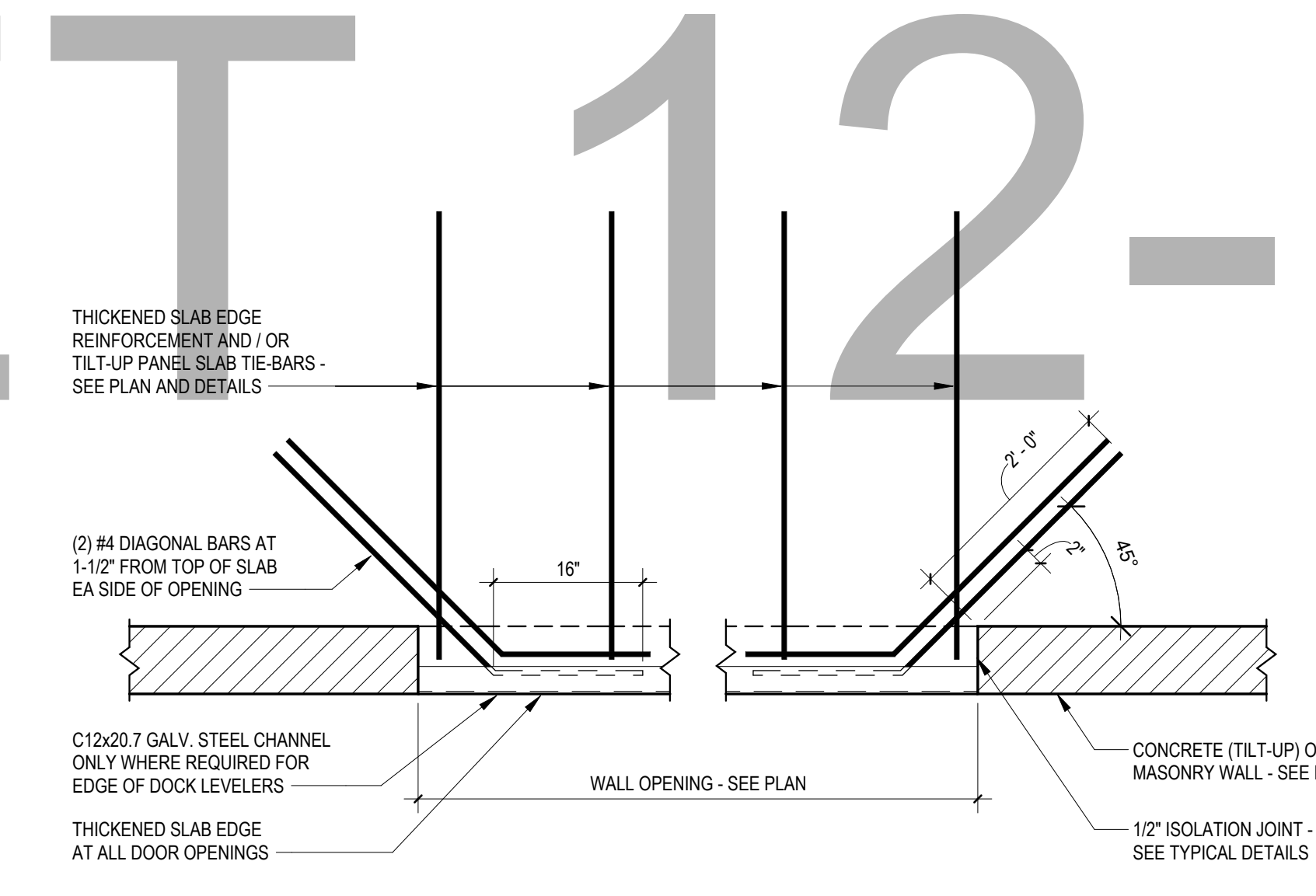
11 SLAB CONSTRUCTION JOINT - THICKENED EDGE
S601 1 1/2" = 1'-0"



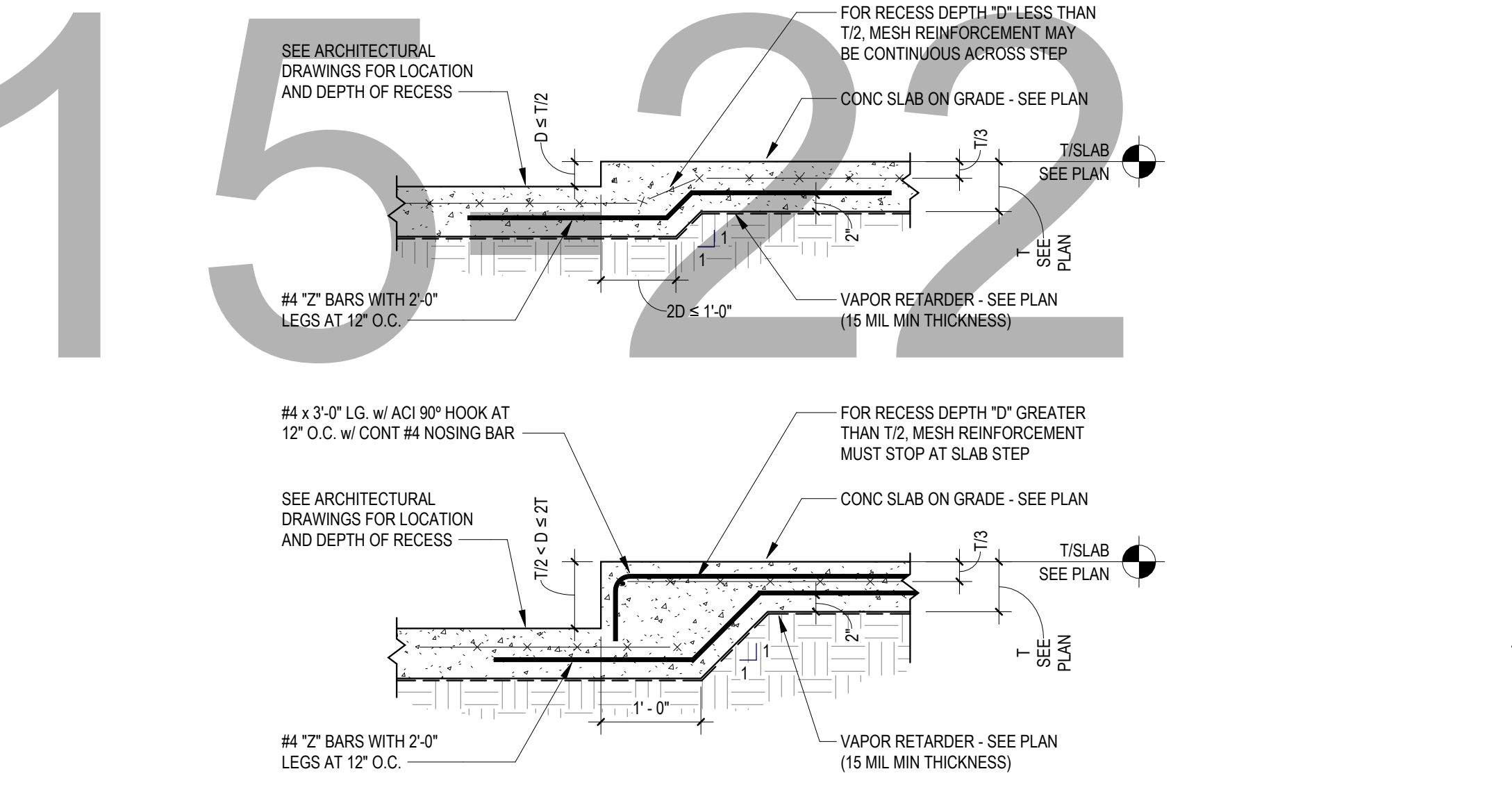
12 TYPICAL SLAB ISOLATION JOINT
S601 1 1/2" = 1'-0"



13 TYPICAL SLAB RE-ENTRANT BARS
S601 3/4" = 1'-0"

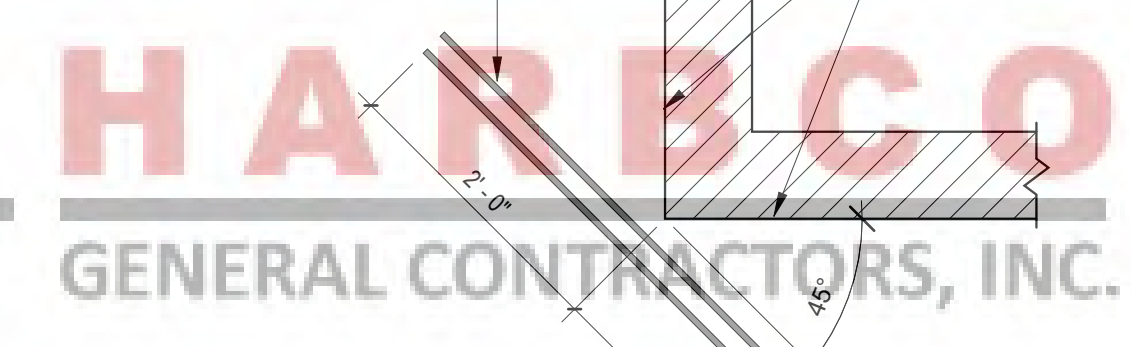


14 TYPICAL SLAB RE-ENTRANT BARS AT WALL OPENINGS
S601 3/4" = 1'-0"



15 TYPICAL SLAB ON GROUND STEP / RECESS
S601 3/4" = 1'-0"

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FOUNDATION SECTIONS & DETAILS

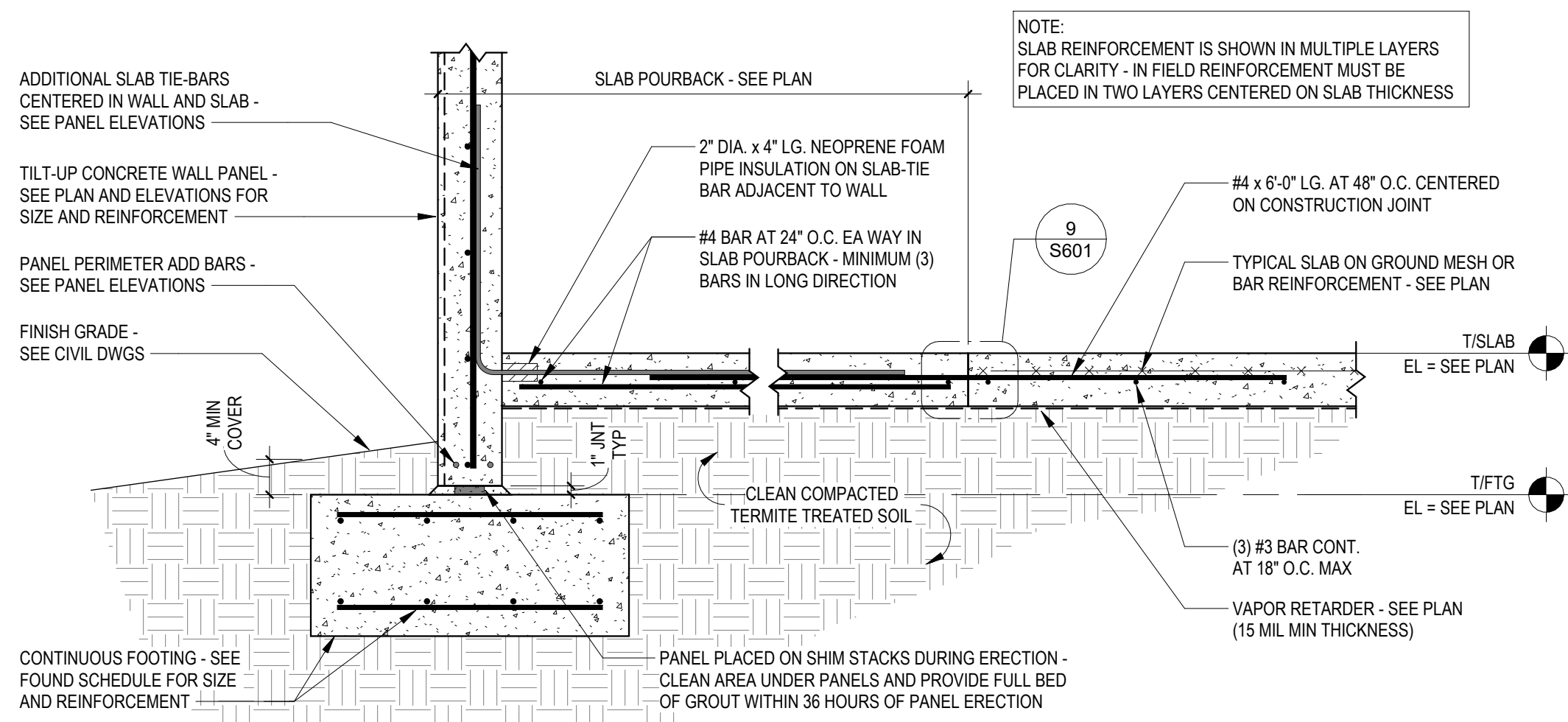
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Jonathan D. Collins
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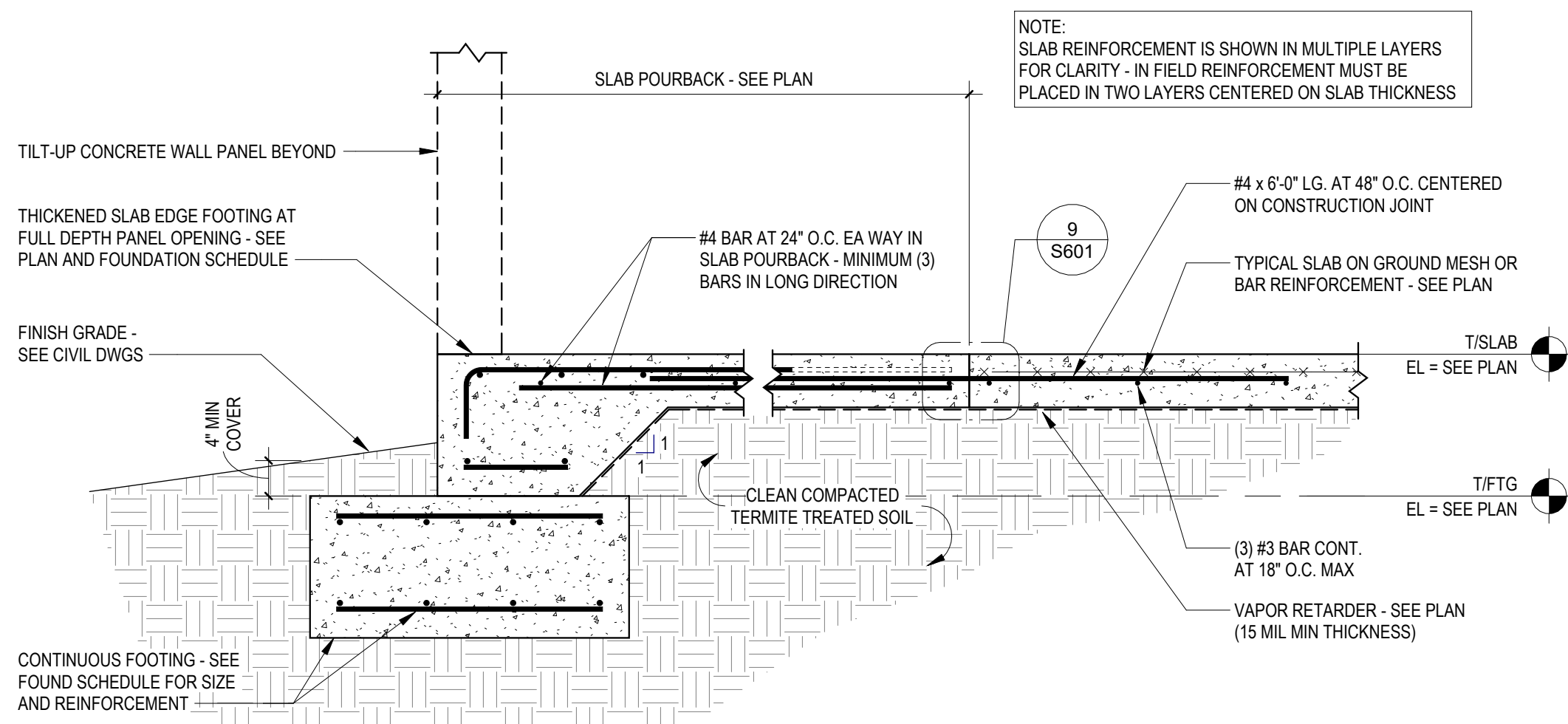
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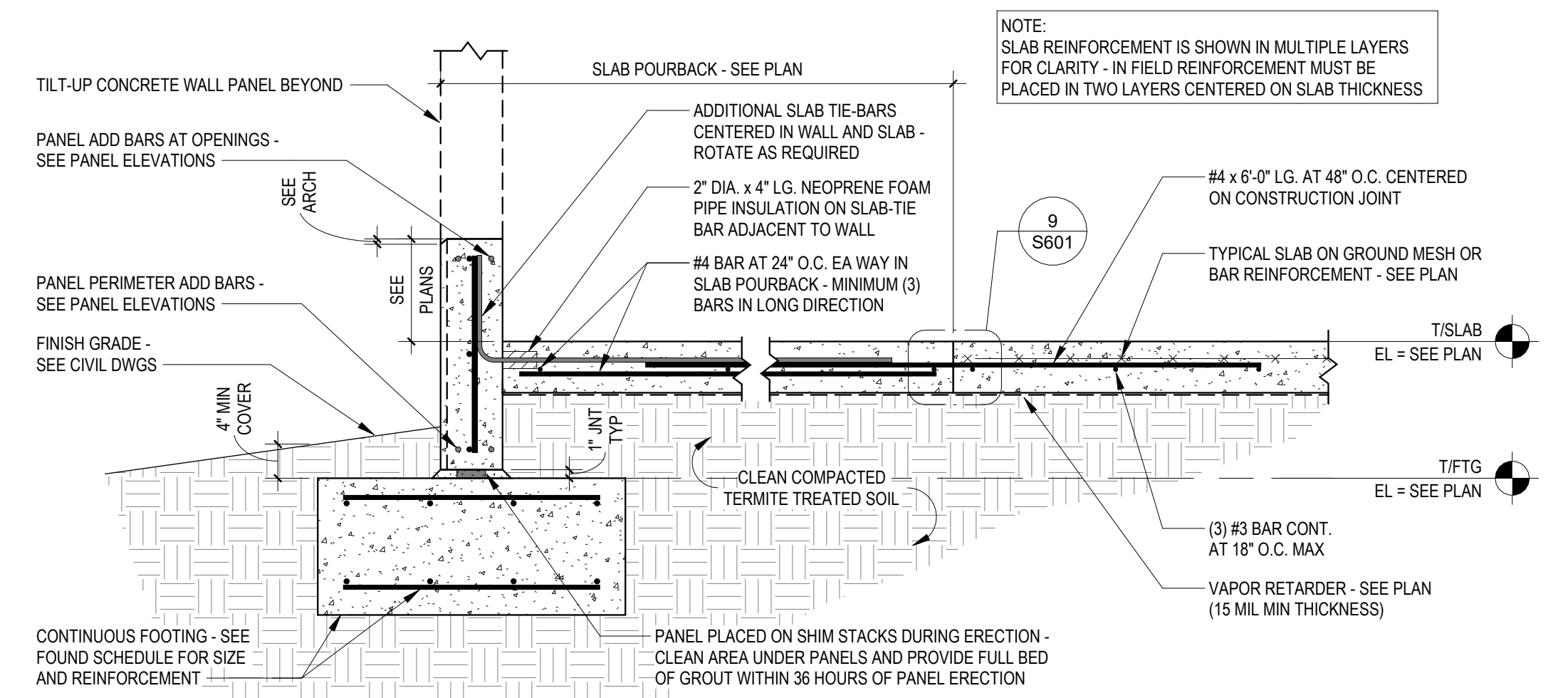
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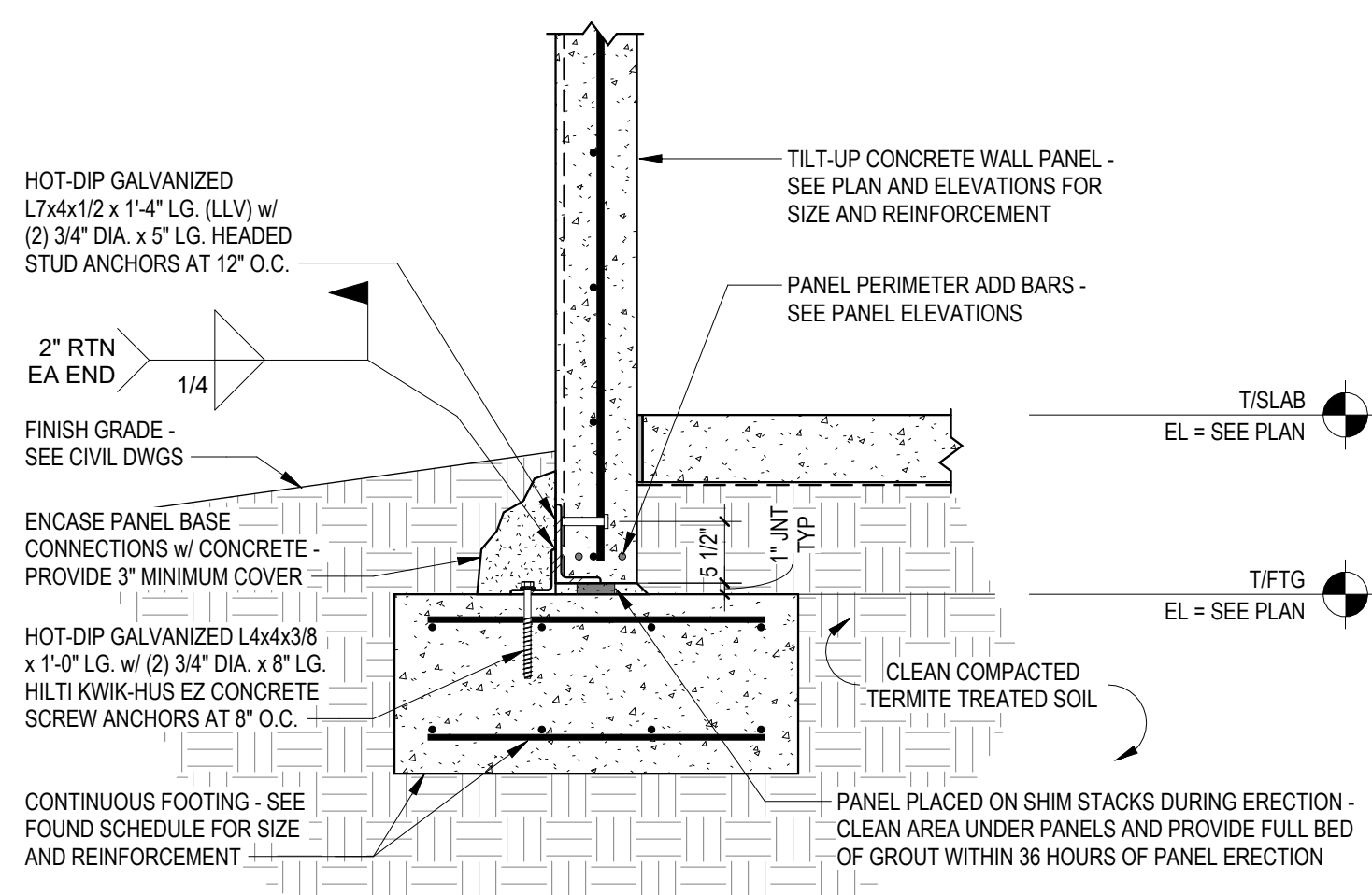
1 TYPICAL PERIMETER SECTION
S602 3/4" = 1'-0"



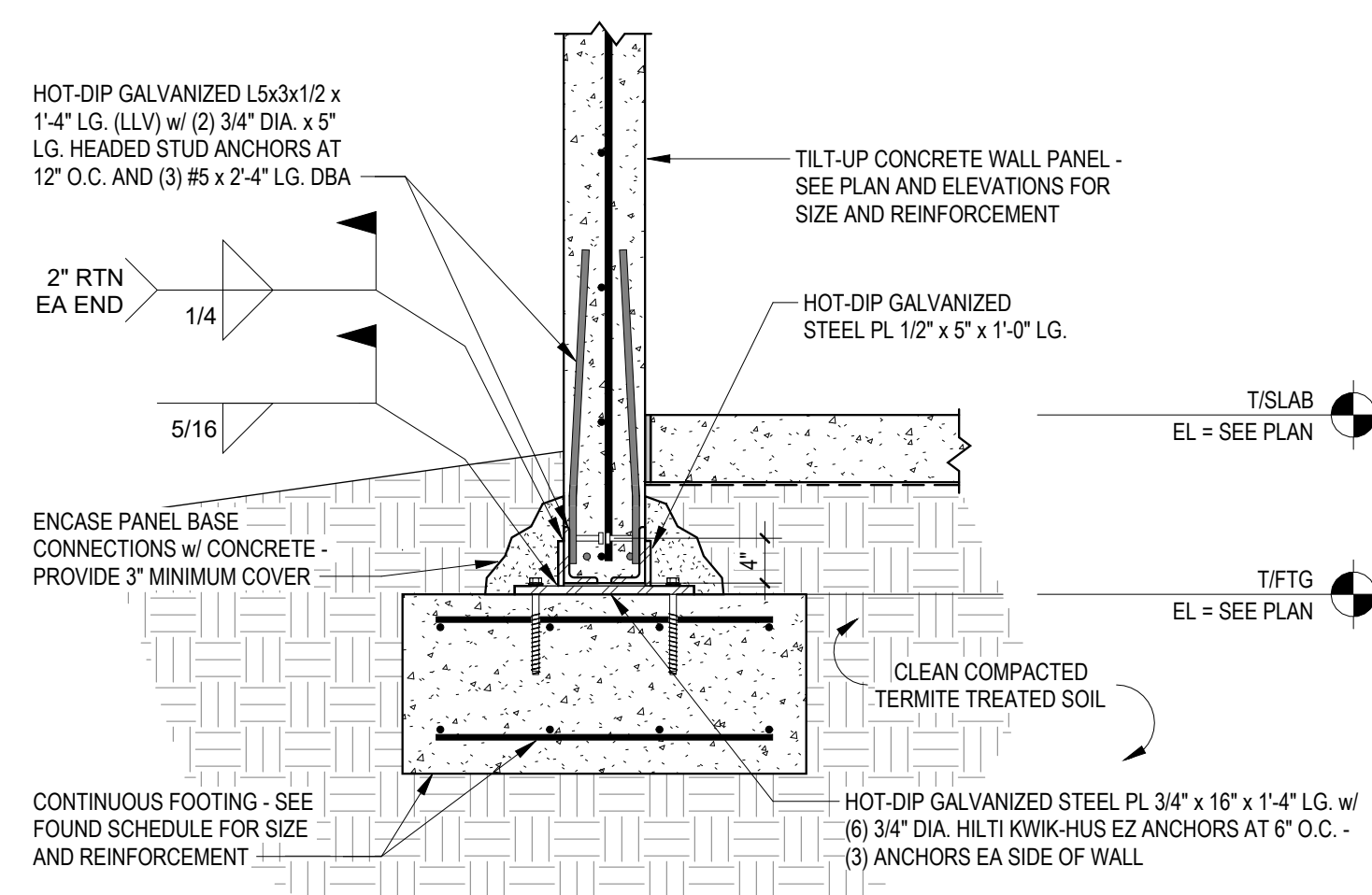
2 TYPICAL PERIMETER SECTION AT PANEL OPENING
S602 3/4" = 1'-0"



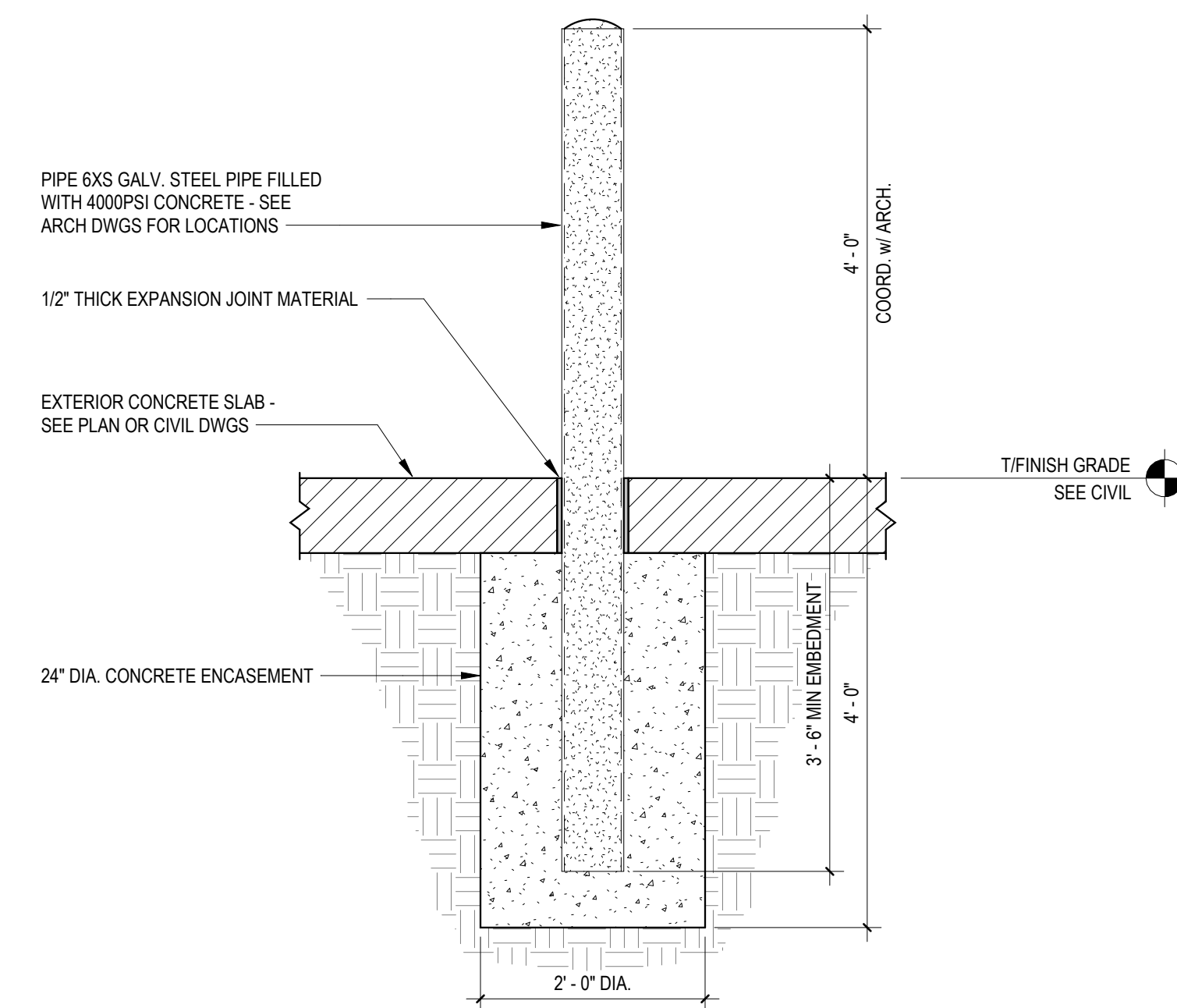
3 TYPICAL PERIMETER SECTION AT WINDOW OPENING
S602 3/4" = 1'-0"



4 TYPICAL PANEL TO FOOTING CONNECTION
S602 3/4" = 1'-0"



5 PANEL TO FOOTING CONNECTION AT DISCONTINUOUS ENDS
S602 3/4" = 1'-0"



6 TYP 6" PIPE BOLLARD DETAIL
S602 3/4" = 1'-0"

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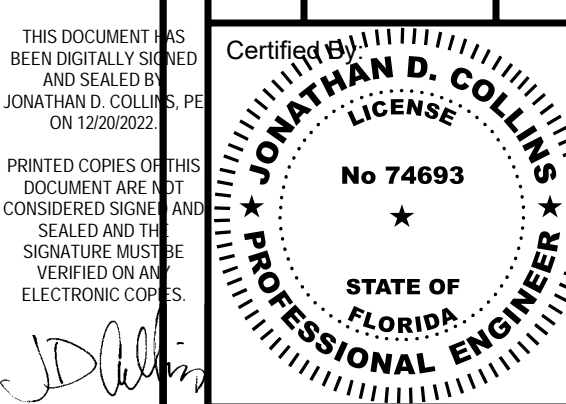


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FOUNDATION SECTIONS & DETAILS



Drawing Number:
S602
Of Sheets
Job Number:
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DUMPSTER PAD PLAN AND DETAILS
Professional Engineer
JONATHAN D. COLLINS
No 74693
STATE OF FLORIDA
Drawing Number:
S603
Of Sheets
Job Number:
A/E Job Number:
18406

FOUNDATION PLAN NOTES:

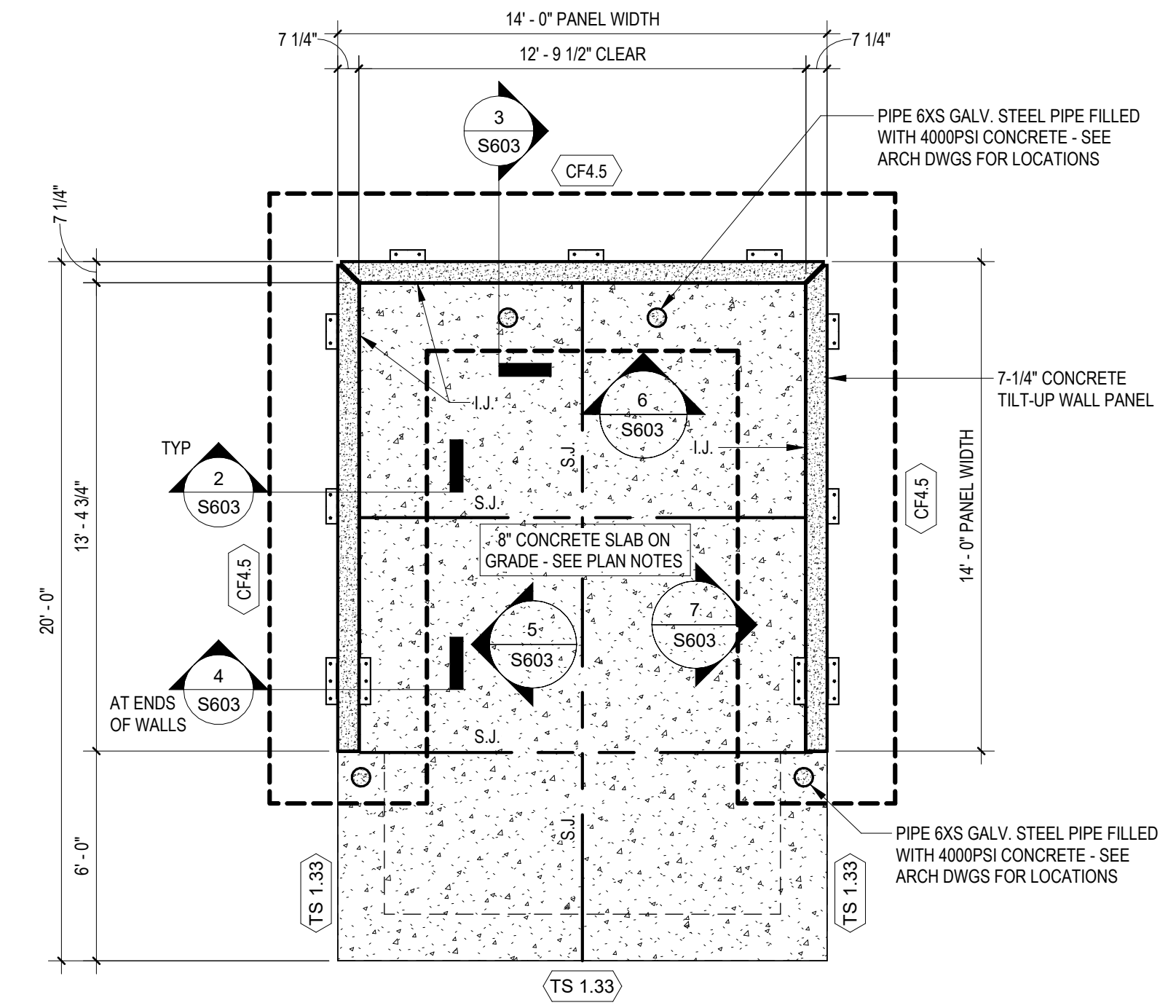
- REFERENCE THE STRUCTURAL GENERAL NOTES ON DRAWINGS S001 & S002. GENERAL NOTES INCLUDE CODES AND STANDARDS, DESIGN LOADS AND OTHER REQUIREMENTS.
- PREPARE THE SLAB SUB-BASE AND COMPACT THE SOIL PER THE PROJECT GEOTECHNICAL REPORT, THE CIVIL DRAWINGS, AND THE STRUCTURAL GENERAL NOTES. IF ANY OF THESE DRAWINGS OR NOTES ARE IN CONFLICT, THE CONTRACTOR MUST ALERT THE ENGINEER FOR CLARIFICATION PRIOR TO START OF CONSTRUCTION.
- T.O. FOOTING ELEVATION IS AT -1'-6" (U.N.O.) THIS IS A REFERENCE ELEVATION ONLY. SEE FOUNDATION DETAIL SHEETS AND SCHEDULES FOR FOUNDATION SIZE AND REINFORCEMENT.
- T.O. SLAB ELEVATION IS AT 0'-0" (U.N.O.) THIS IS A REFERENCE ELEVATION ONLY. SEE FOUNDATION AND SLAB ON GRADE DETAIL SHEETS.
- SLAB ON GROUND IS 8" MINIMUM THICK 4,000 PSI CONCRETE SLAB U.N.O. REINFORCED WITH #4 AT 12" O.C. EACH WAY TOP & BOTTOM.
- REFERENCE THE ARCHITECTURAL DRAWINGS FOR SLAB EDGES, FLOOR SLOPES, WALL OPENINGS, AND OTHER DIMENSIONS NOT GIVEN. CONTRACTOR MUST COORDINATE AND VERIFY ALL DIMENSIONS WITH PROJECT ARCHITECT PRIOR TO FABRICATION.

LEGEND

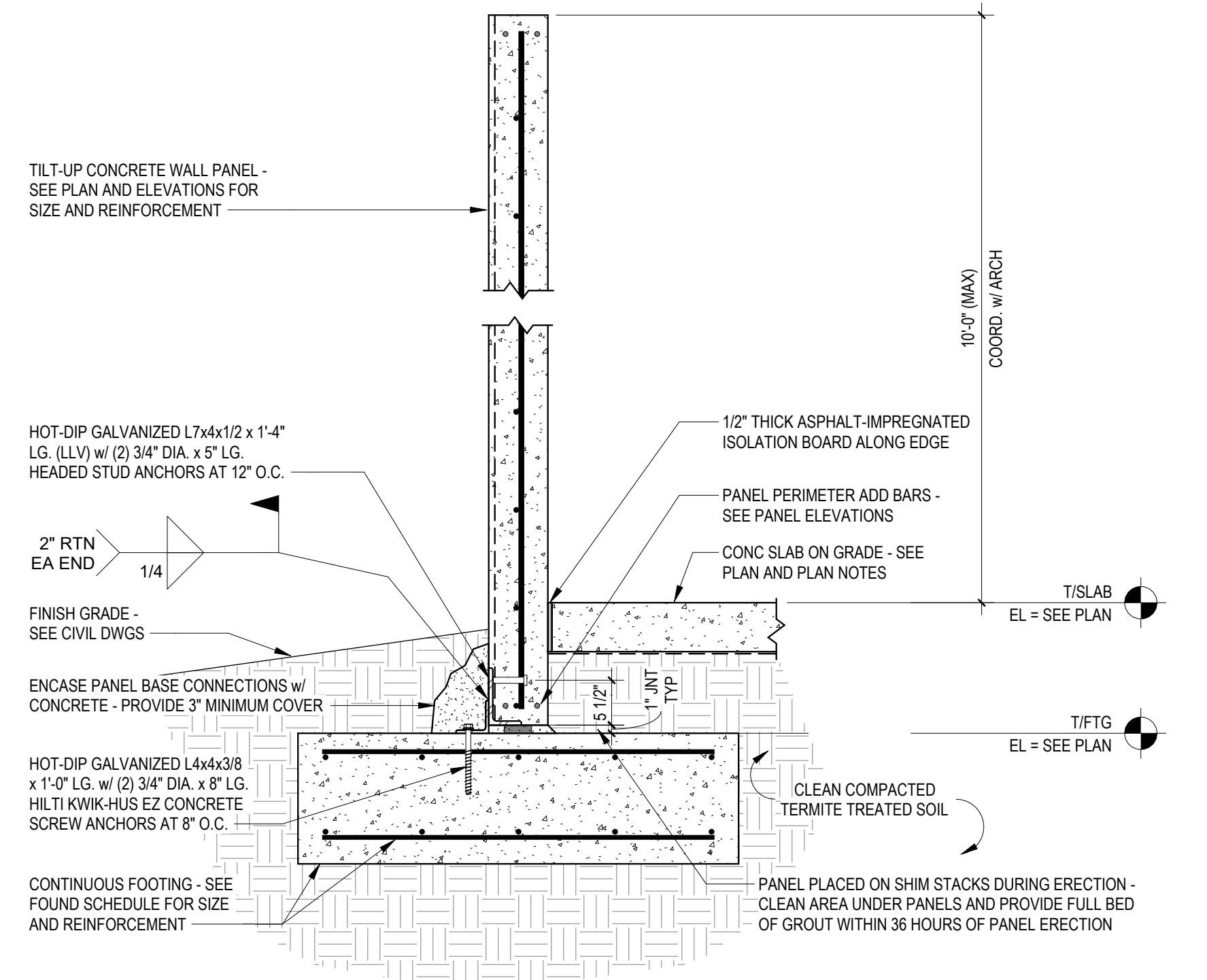
- EL = #'-##"
T.O. FTG INDICATES TOP OF CONCRETE FOOTING ELEVATION.
- CF#.# INDICATES CONTINUOUS FOOTING TYPE. SEE FOUNDATION SCHEDULE FOR SIZE AND REINFORCEMENT.
- TS#.# INDICATES THICKENED SLAB EDGE TYPE. SEE FOUNDATION SCHEDULE FOR SIZE AND REINFORCEMENT.
- S.J. INDICATES SLAB SAWCUT JOINT PER DETAIL 8/S601
- I.J. INDICATES ISOLATION JOINT WITH 1/2" THICK ASPHALT-IMPREGNATED BOARD PER TYPICAL DETAIL 12/S601

CONCRETE FOOTING SCHEDULE

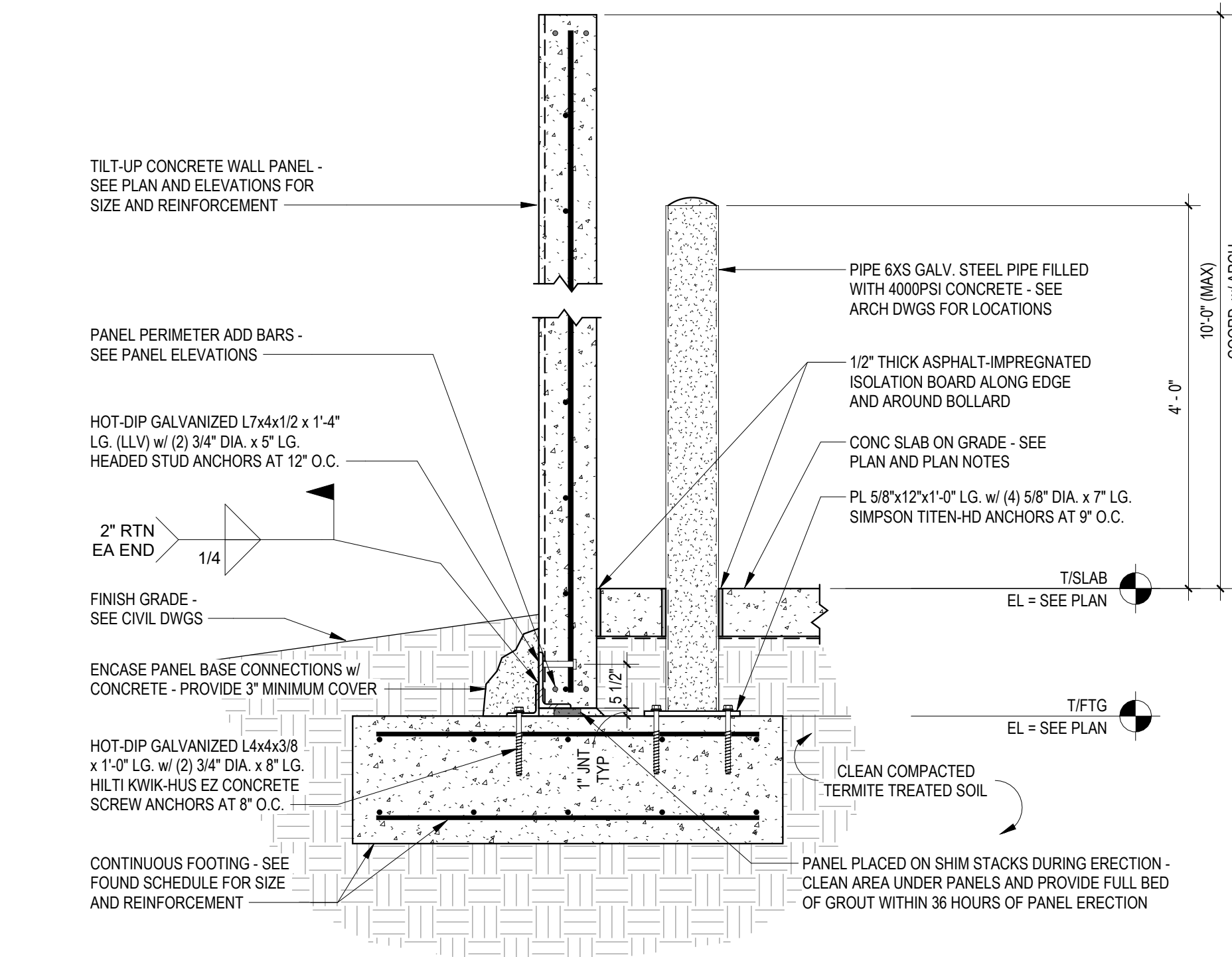
TYPE	WIDTH	LENGTH	DEPTH	REINFORCING	REMARKS
CF 4.5	4'-6"	CONT.	1'-4"	LONG. (5) #5 x CONT. TOP & BOTTOM TRANS. #4 x 4'-0" LG. AT 12" O.C. TOP & BOTTOM	CONTINUOUS FOOTING
TS 1.33	1'-4"	CONT.	1'-0"	LONG. (2) #5 x CONT. TOP LONG. (2) #5 x CONT. BOTTOM ALT. TRANS. #4 x 4'-0" & 5'-6" LG. w/ A21 90° HOOK TOP #4 x 1'-0" LG. SKEWED SUPPORT BAR AT 36" O.C. BOT	THICKENED SLAB EDGE



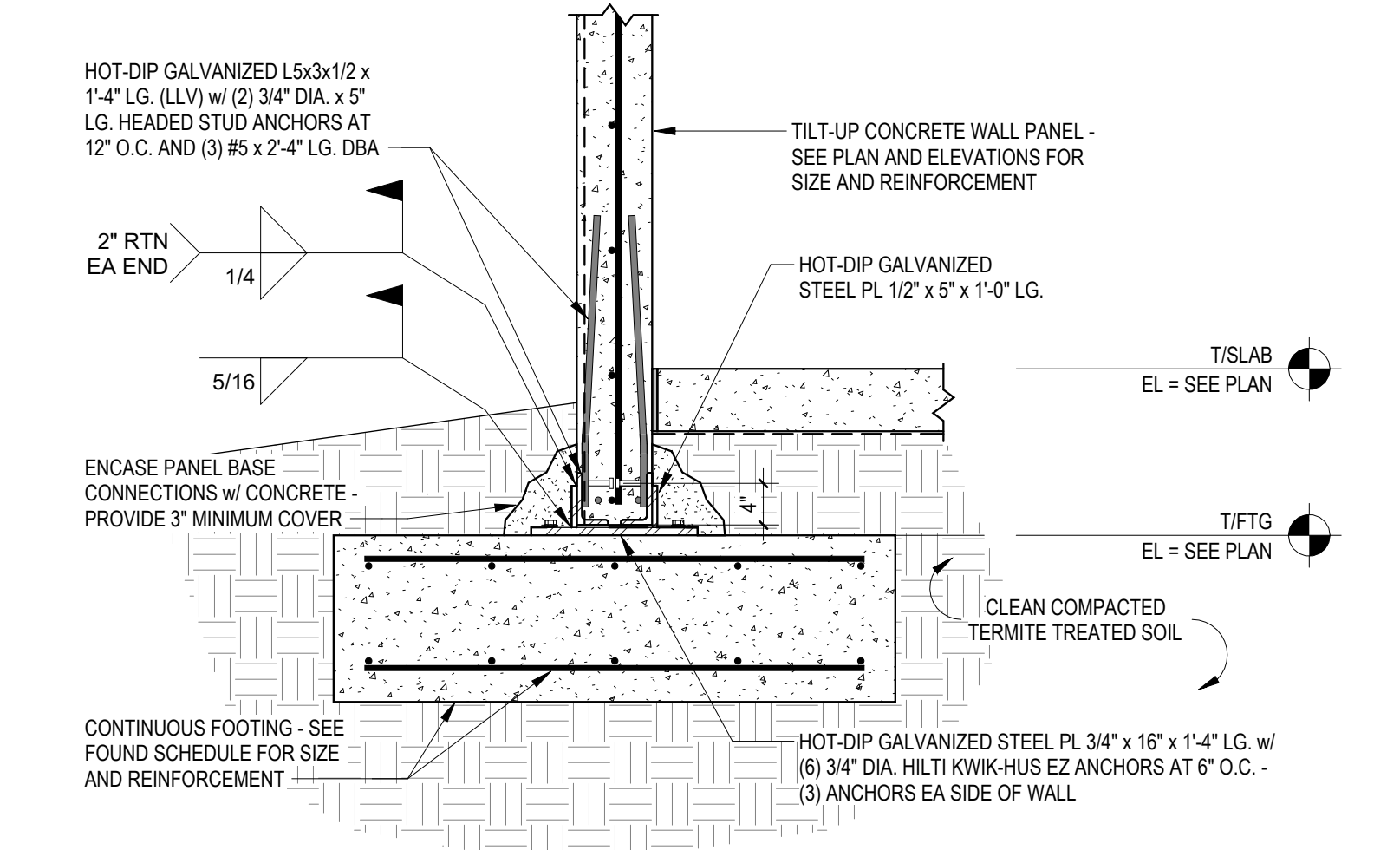
1 FOUNDATION PLAN - AT DUMPSTER AREA
S603 14" = 1'-0"



2 TYPICAL TILT-UP SCREEN WALL AT DUMPSTER
S603 3/4" = 1'-0"



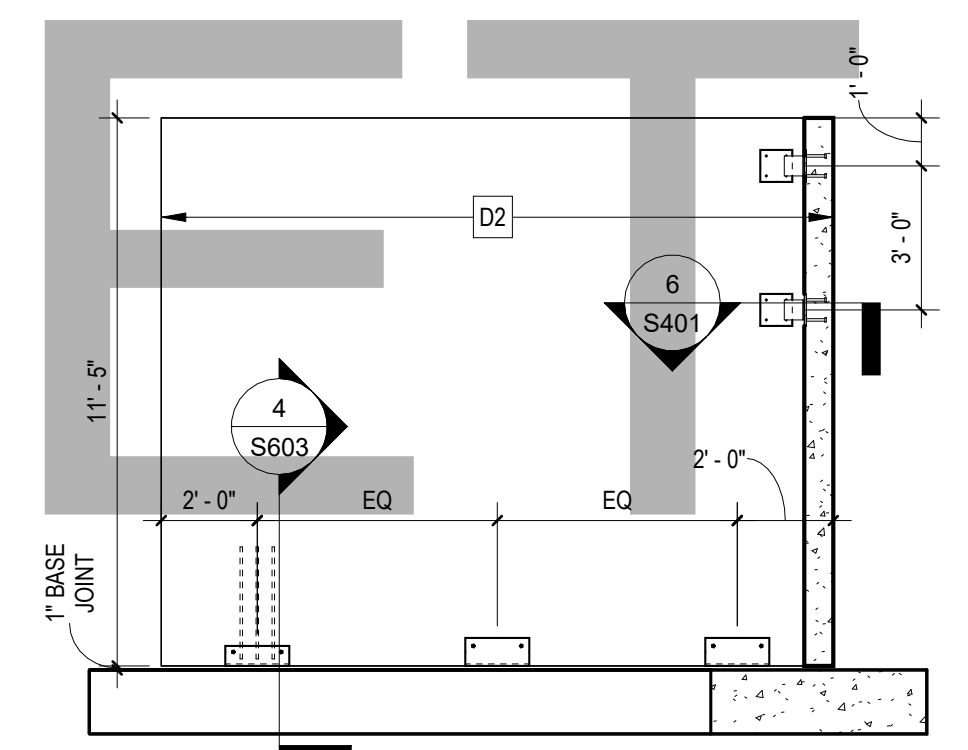
3 TYPICAL TILT-UP SCREEN WALL AT DUMPSTER WITH BOLLARD
S603 3/4" = 1'-0"



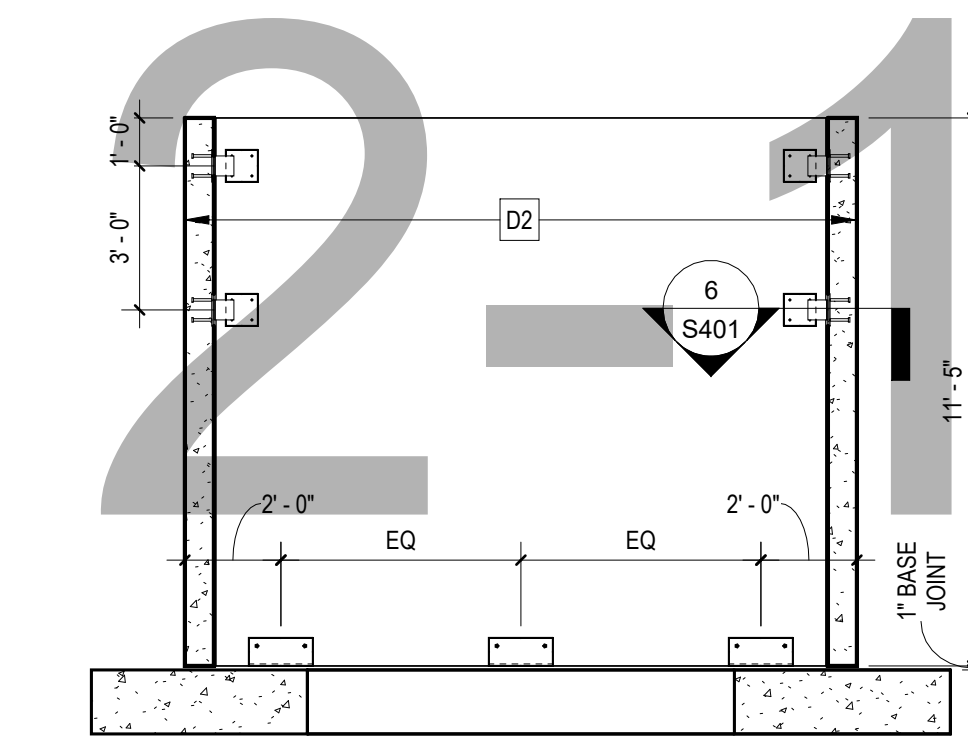
4 PANEL TO FOOTING CONNECTION AT DISCONTINUOUS ENDS
S603 3/4" = 1'-0"

BEINF. MARK	PANEL TYPICAL DISTRIBUTED REIN.	REMARKS
D1	VERTICAL: #5 AT 16" O.C. HORIZONTAL: #4 AT 12" O.C.	---
D2	VERTICAL: #5 AT 12" O.C. HORIZONTAL: #4 AT 12" O.C.	---
D3	VERTICAL: #5 AT 8" O.C. HORIZONTAL: #4 AT 12" O.C.	---
D4	VERTICAL: #5 AT 12" O.C. (EA FACE) HORIZONTAL: #4 AT 18" O.C. (EA FACE)	DOUBLE MAT
D5	VERTICAL: #5 AT 8" O.C. (EA FACE) HORIZONTAL: #4 AT 18" O.C. (EA FACE)	DOUBLE MAT

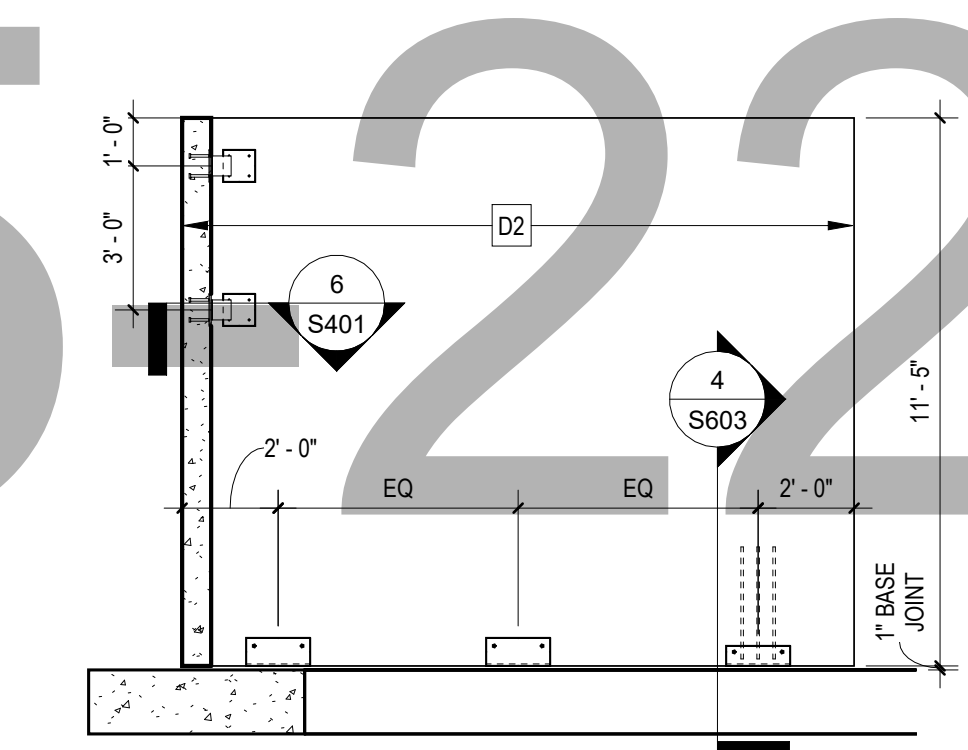
NOTES:
1. UNLESS NOTED OTHERWISE ON PLAN, ALL TILT-UP CONCRETE PANEL ELEVATIONS ARE VIEWED FROM THE INSIDE OF THE BUILDING.
2. ALL DISTRIBUTED REINFORCEMENT SHOWN ON THE PANEL ELEVATIONS IS IN ADDITION TO THE TYPICAL PERIMETER, SLAB TIE-IN, AND OPENING ADD BARS AS NOTED ON SHEET S401.
3. ALL REBAR AT CONCRETE FACE EXPOSED TO EARTH OR WEATHER SHALL HAVE A MINIMUM CONCRETE COVER OF 1" AT REVEALS AND RECESSES.
4. REFERENCE TYPICAL TILT-UP DETAILS, NOTES, AND OTHER INFORMATION ON SHEET S401.



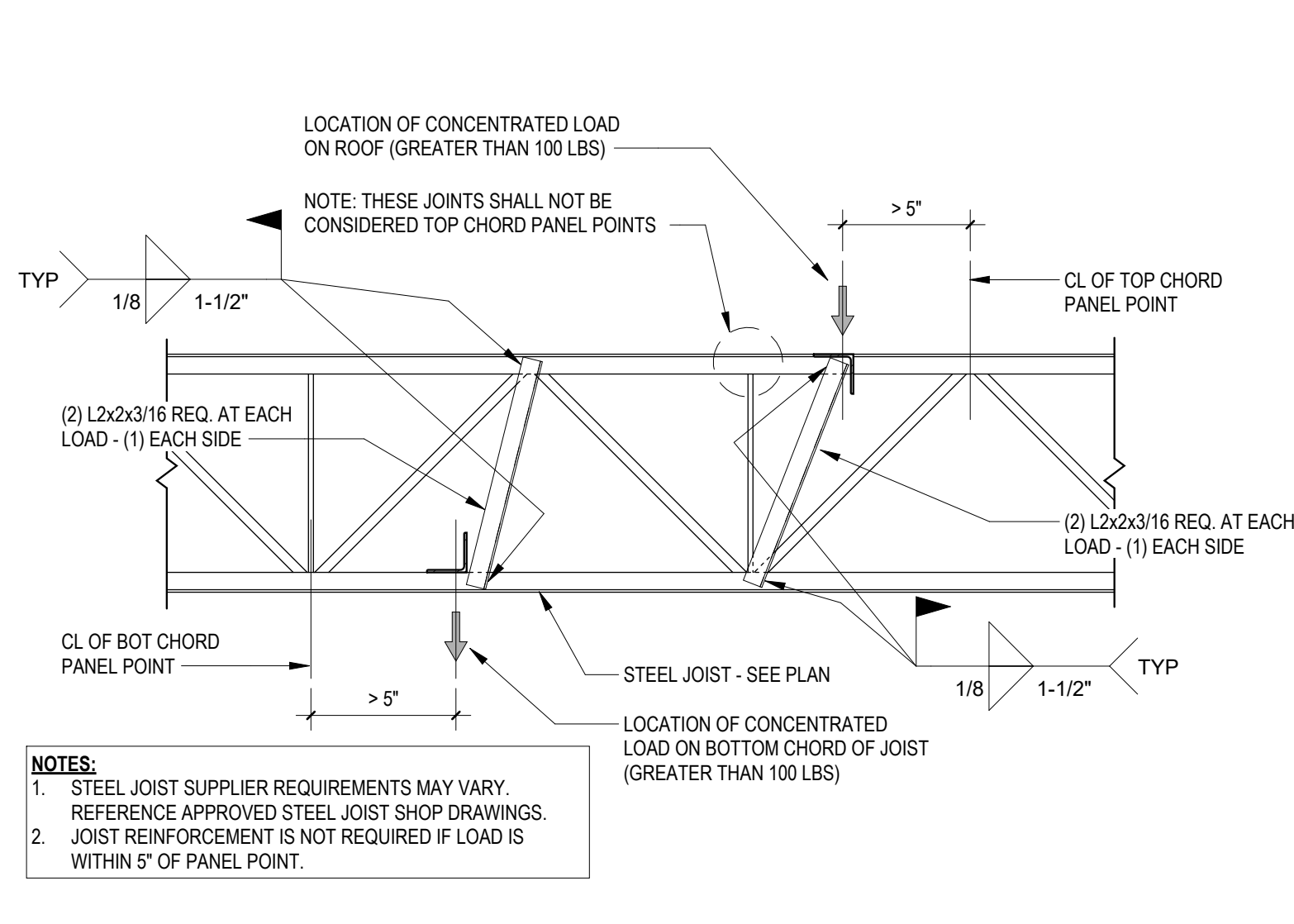
5 TILT-UP PANEL ELEVATION
S603 1/4" = 1'-0"



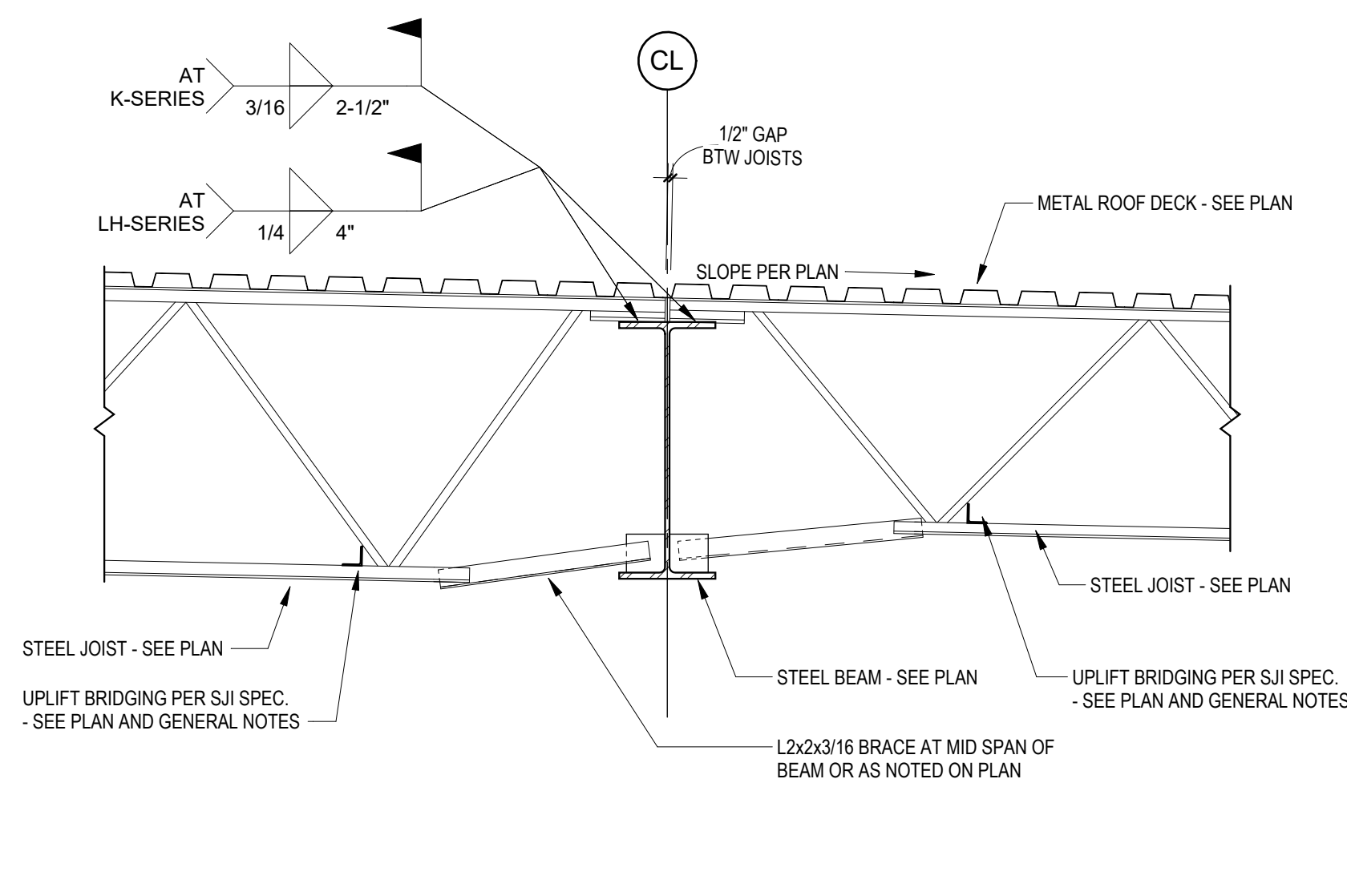
6 TILT-UP PANEL ELEVATION
S603 1/4" = 1'-0"



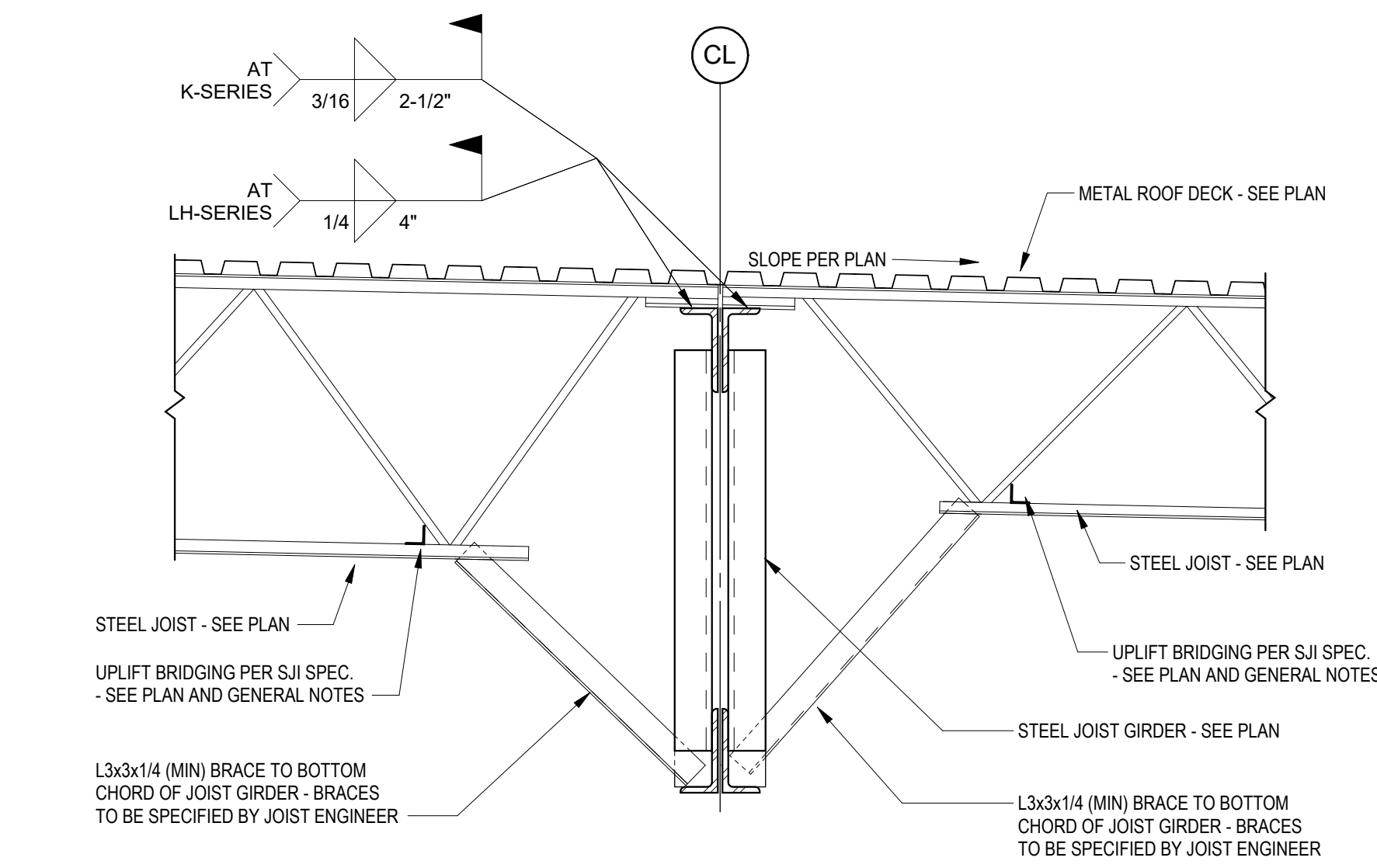
7 TILT-UP PANEL ELEVATION
S603 1/4" = 1'-0"



1 TYPICAL STEEL JOIST REINF AT CONCENTRATED LOADS
S611 3/4" = 1'-0"



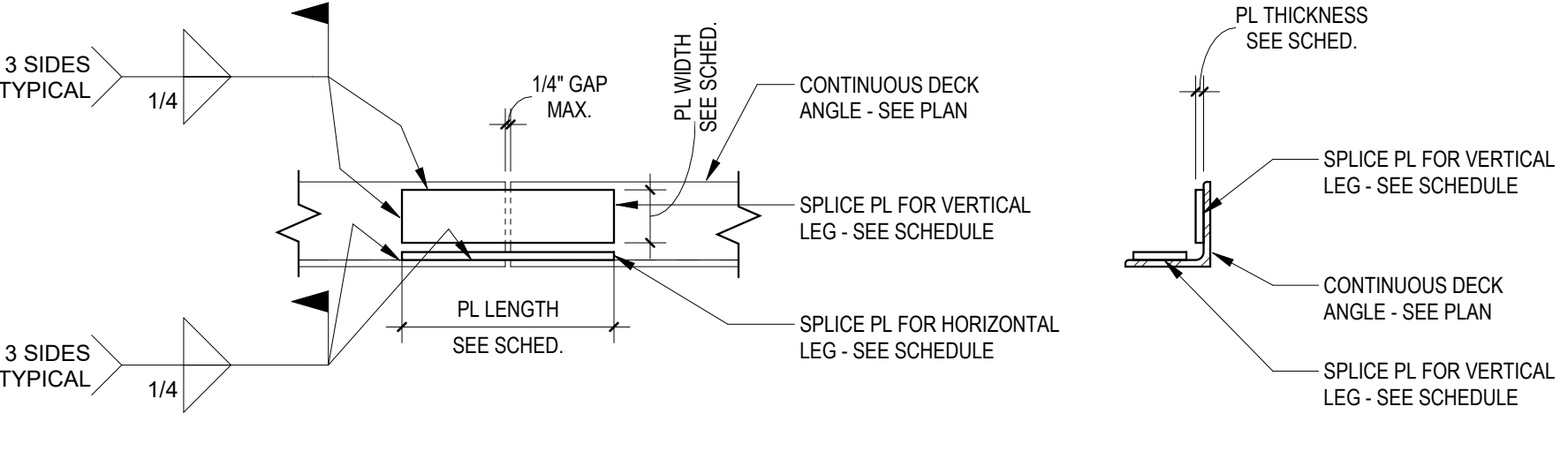
2 TYPICAL STEEL JOIST BRACE TO WIDE FLANGE GIRDER
S611 3/4" = 1'-0"



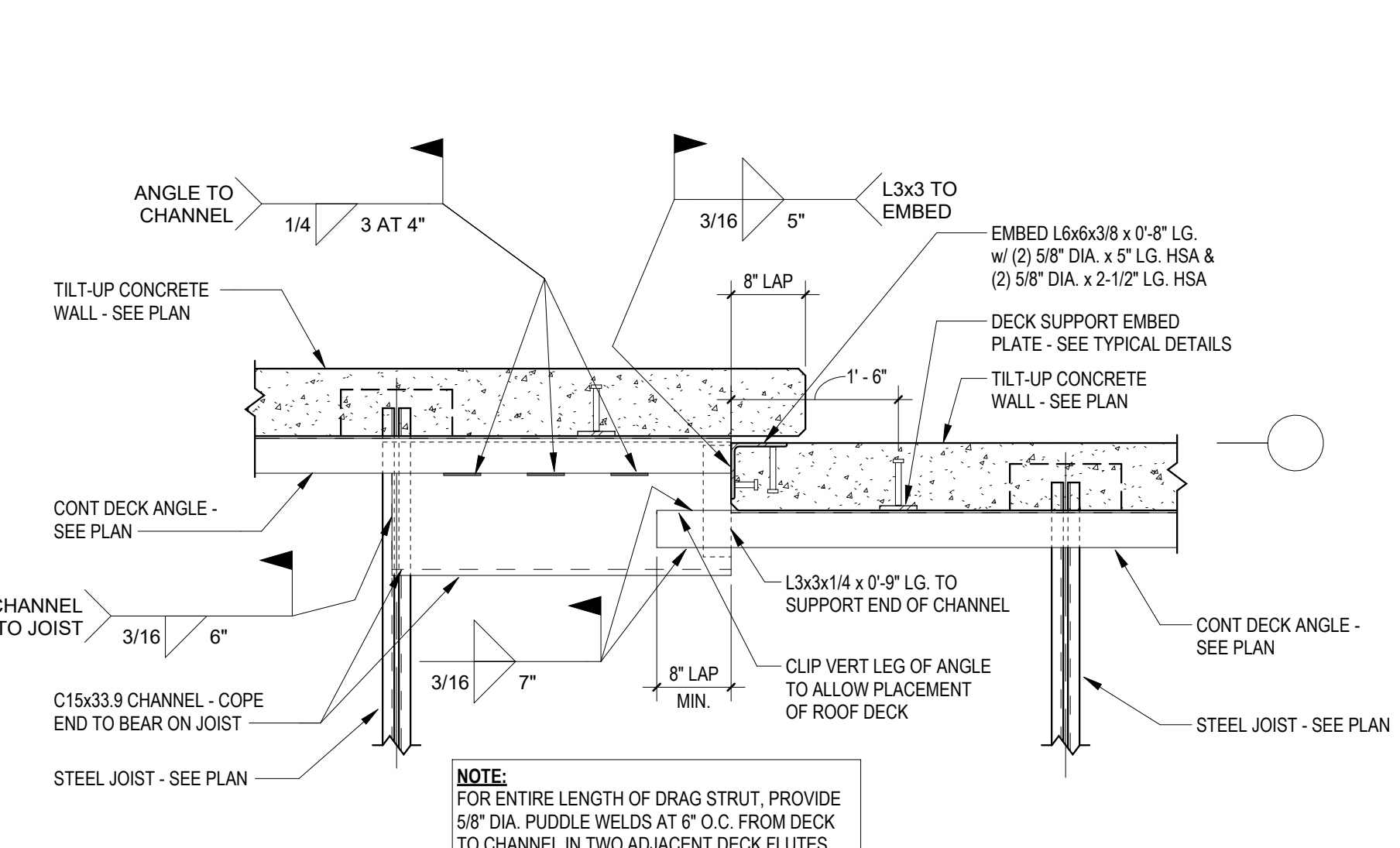
3 TYPICAL STEEL JOIST BRACE TO JOIST GIRDER
S611 3/4" = 1'-0"

ANGLE LEG SIZE	PL THICKNESS (IN)	PL WIDTH (IN)	PL LENGTH (IN)
3" x 1/4"	3/8"	2"	8"
3" x 5/16"	1/2"	2"	8"
3" x 3/8"	5/8"	2"	8"
4" x 1/4"	3/8"	2-1/2"	8"
4" x 5/16"	1/2"	2-1/2"	8"
4" x 3/8"	1/2"	2-1/2"	8"
5" x 1/4"	3/8"	3"	10"
5" x 5/16"	1/2"	3"	10"
5" x 3/8"	1/2"	3"	10"
6" x 1/4"	3/8"	4"	12"
6" x 5/16"	3/8"	4"	12"
6" x 3/8"	1/2"	4"	12"

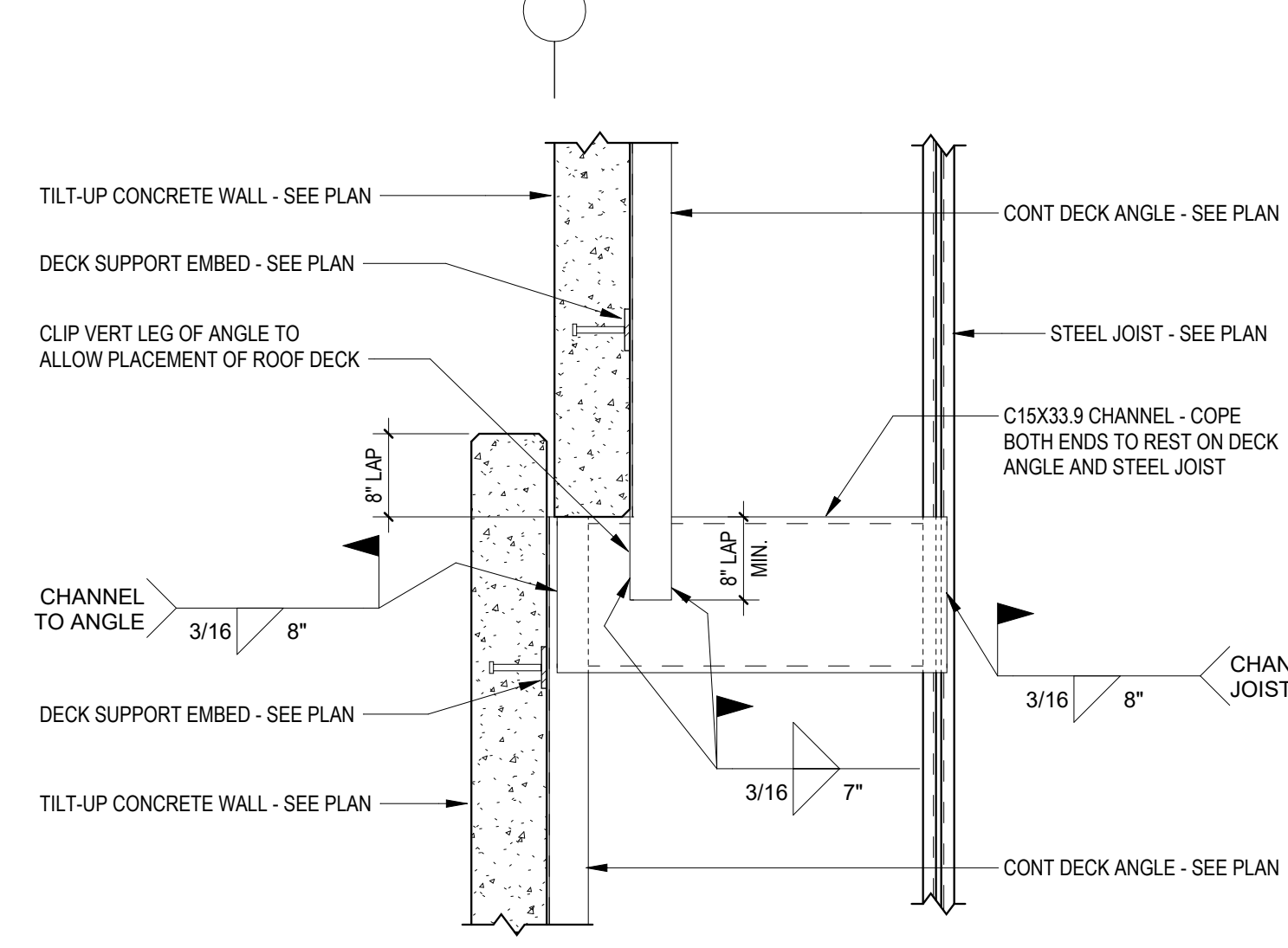
SCHEDULE EXAMPLE:
SPECIFIED DECK SUPPORT ANGLE PER PLAN IS L5x3x5/16 (LLH)
VERTICAL SPLICE PLATE TO BE PL 1/2" x 2" x 0'-8" LG.
HORIZONTAL SPLICE PLATE TO BE PL 1/2" x 3" x 0'-10" LG.
CONTRACTOR MAY ELECT TO USE EQUAL SIZE PLATES PROVIDED THAT THE MINIMUM PLATE SIZE IN THE SCHEDULE IS MET.



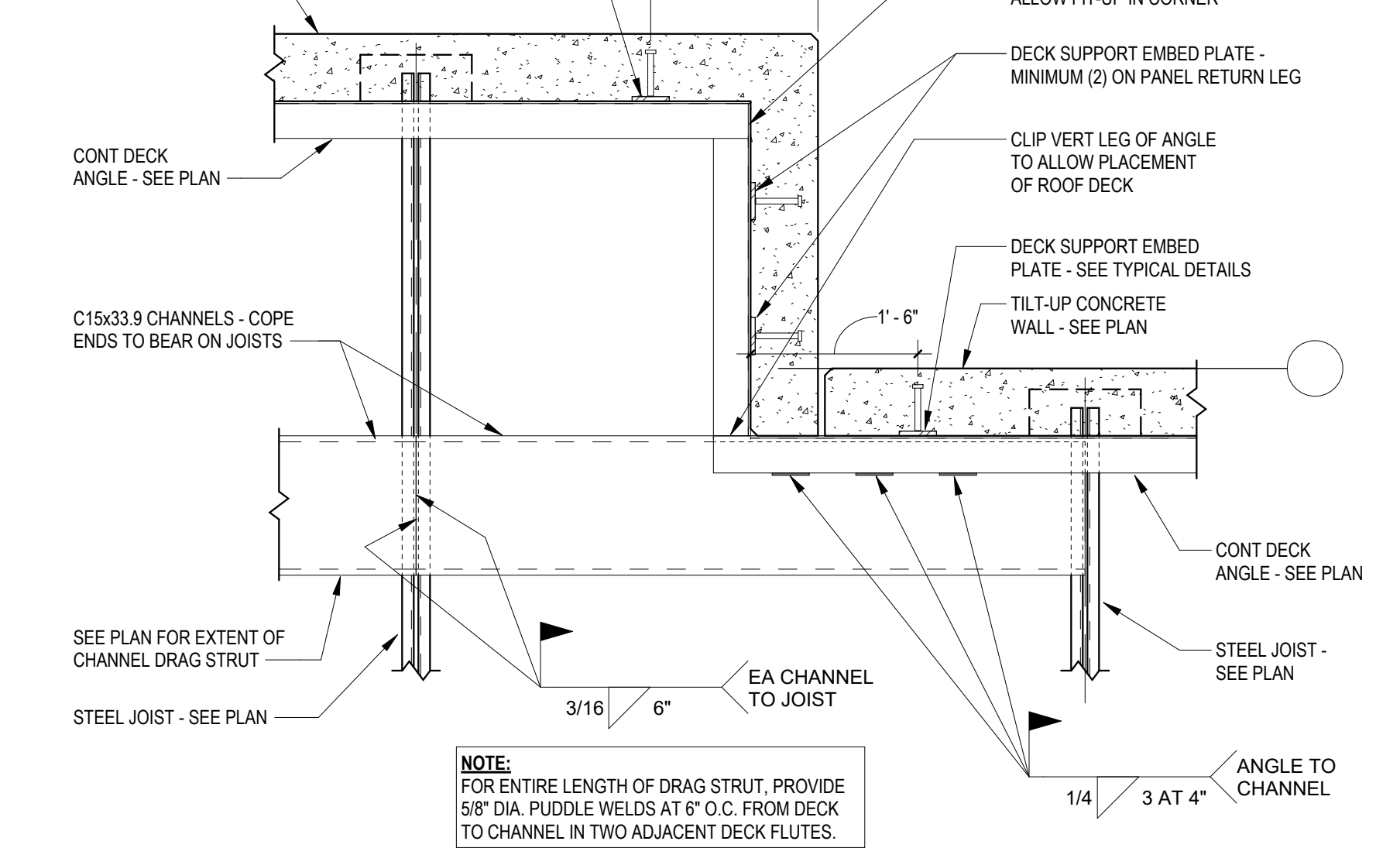
4 TYPICAL DECK ANGLE SPLICE DETAIL
S611 1 1/2" = 1'-0"



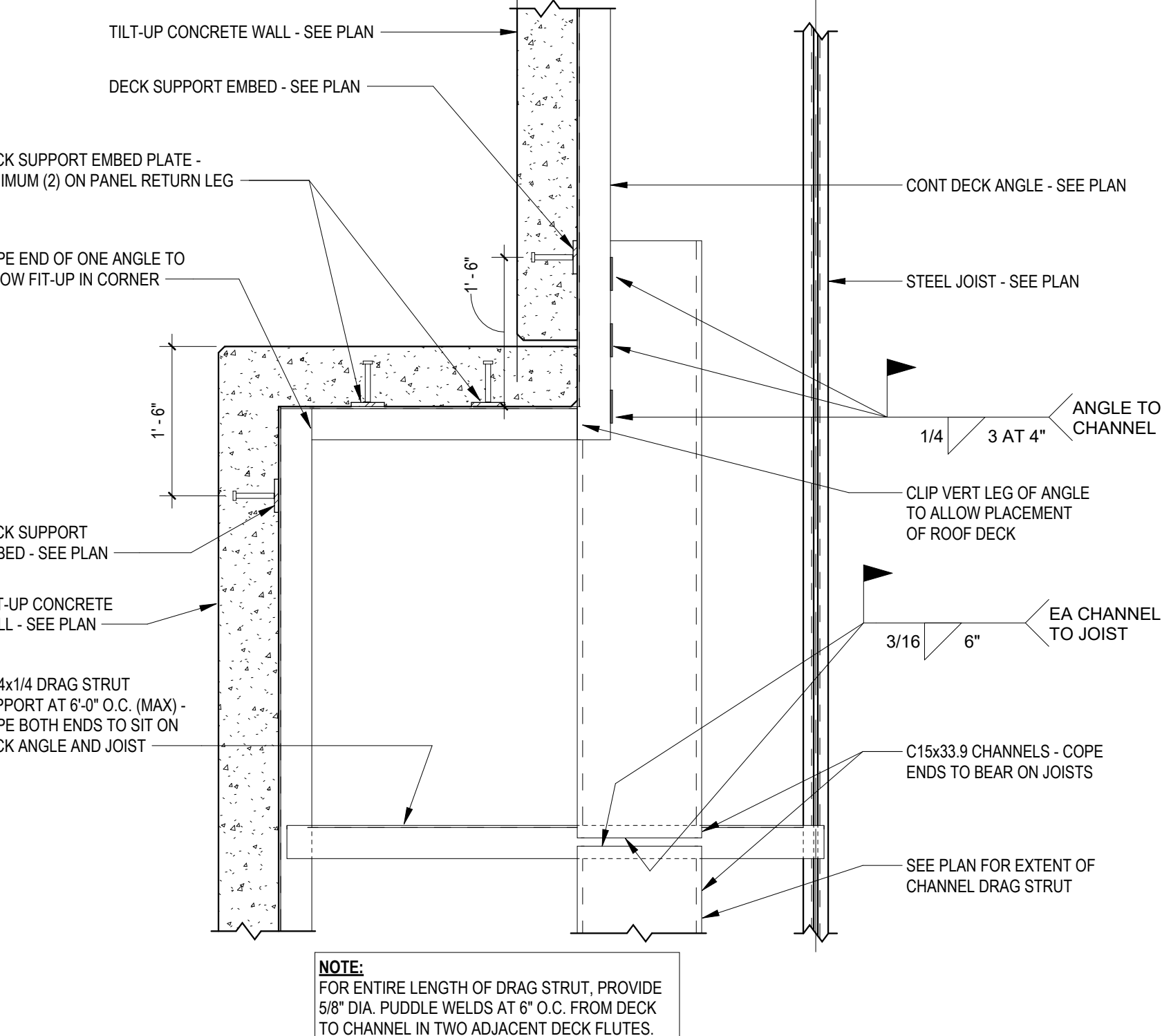
5 DRAG STRUT DETAIL AT WALL LAP - JOISTS PERPENDICULAR
S611 3/4" = 1'-0"



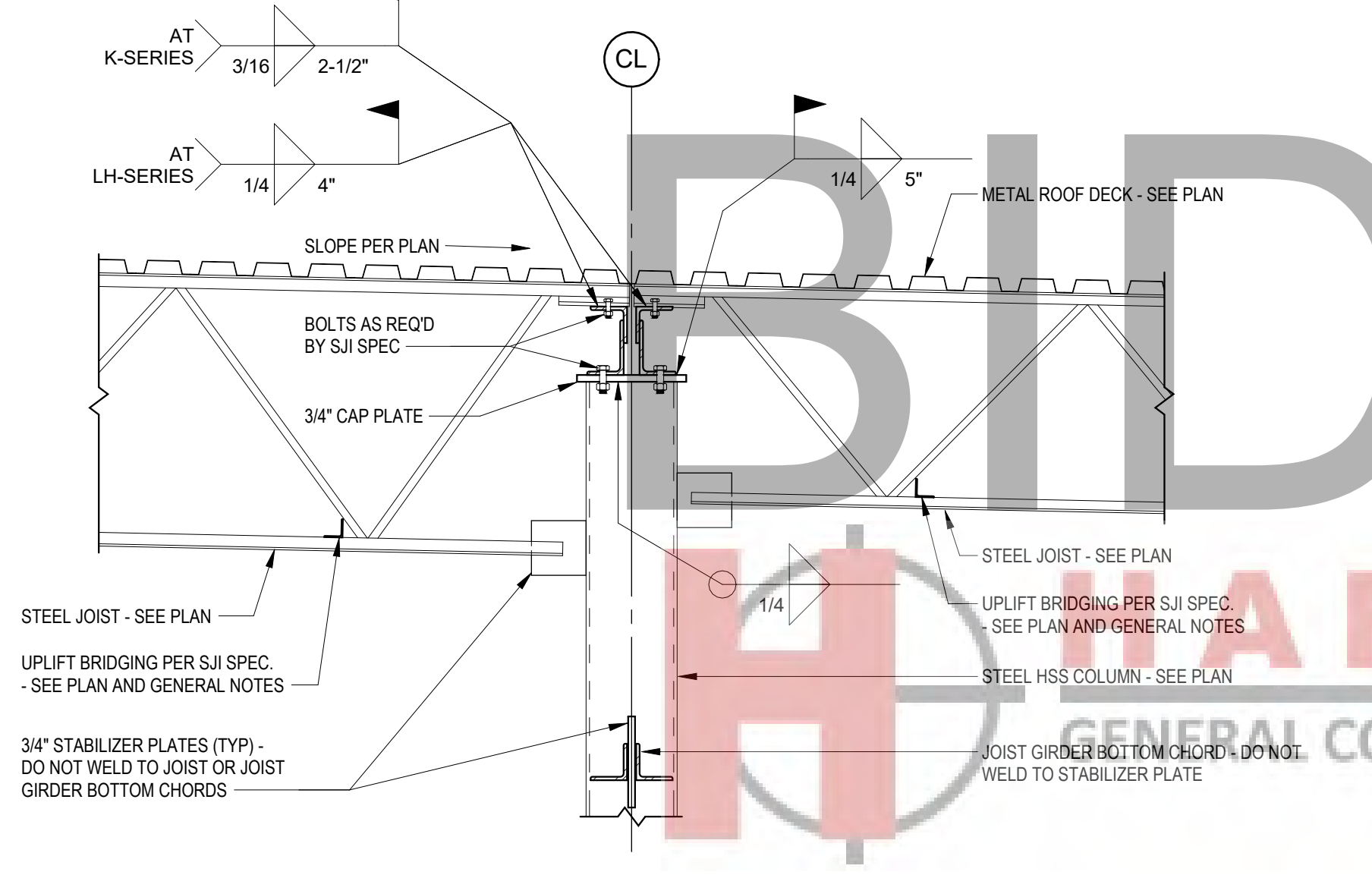
6 DRAG STRUT DETAIL AT WALL LAP - JOISTS PARALLEL
S611 3/4" = 1'-0"



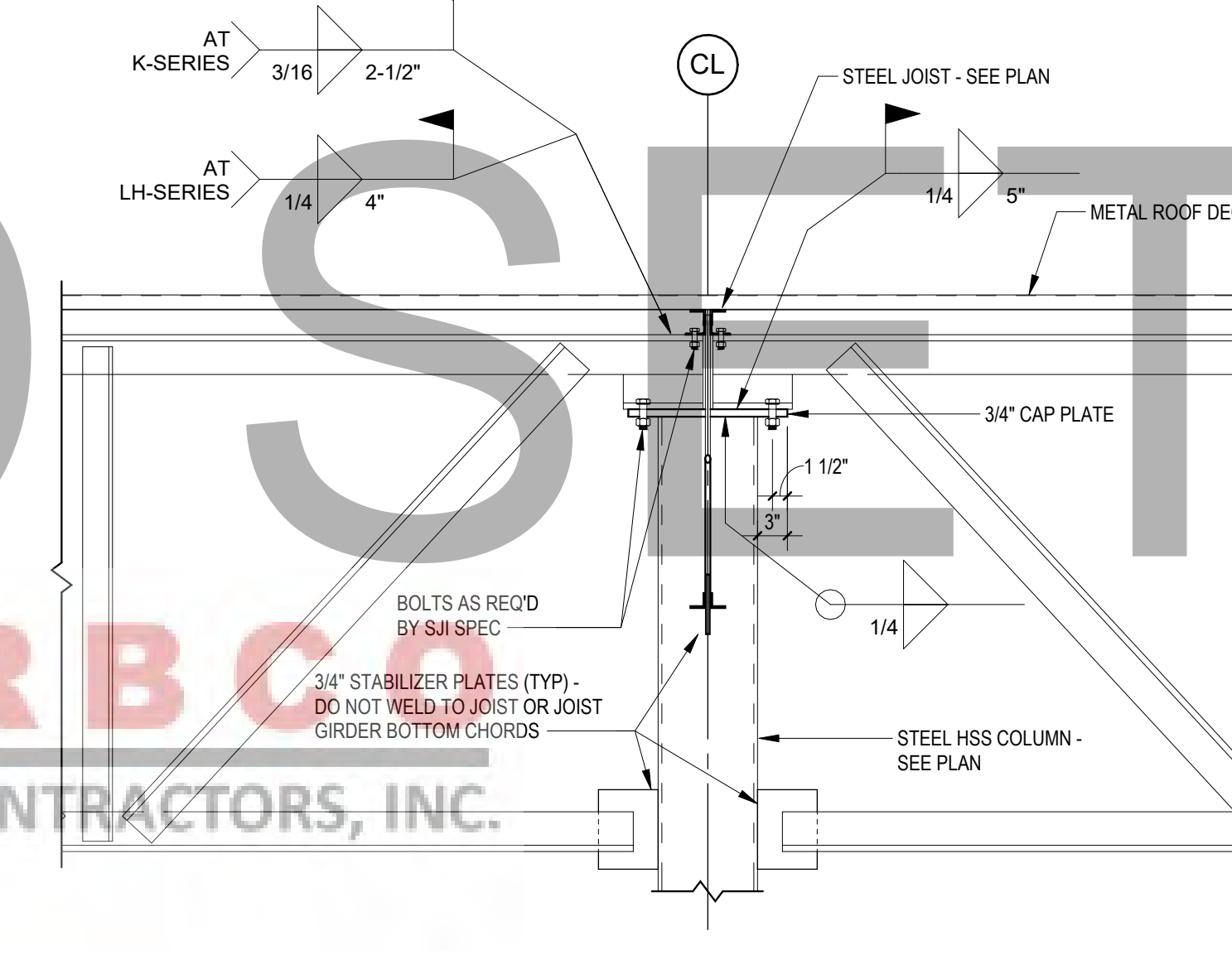
7 DRAG STRUT DETAIL AT WALL RETURN - JOISTS PERPENDICULAR
S611 3/4" = 1'-0"



8 DRAG STRUT DETAIL AT WALL RETURN - JOISTS PARALLEL
S611 3/4" = 1'-0"



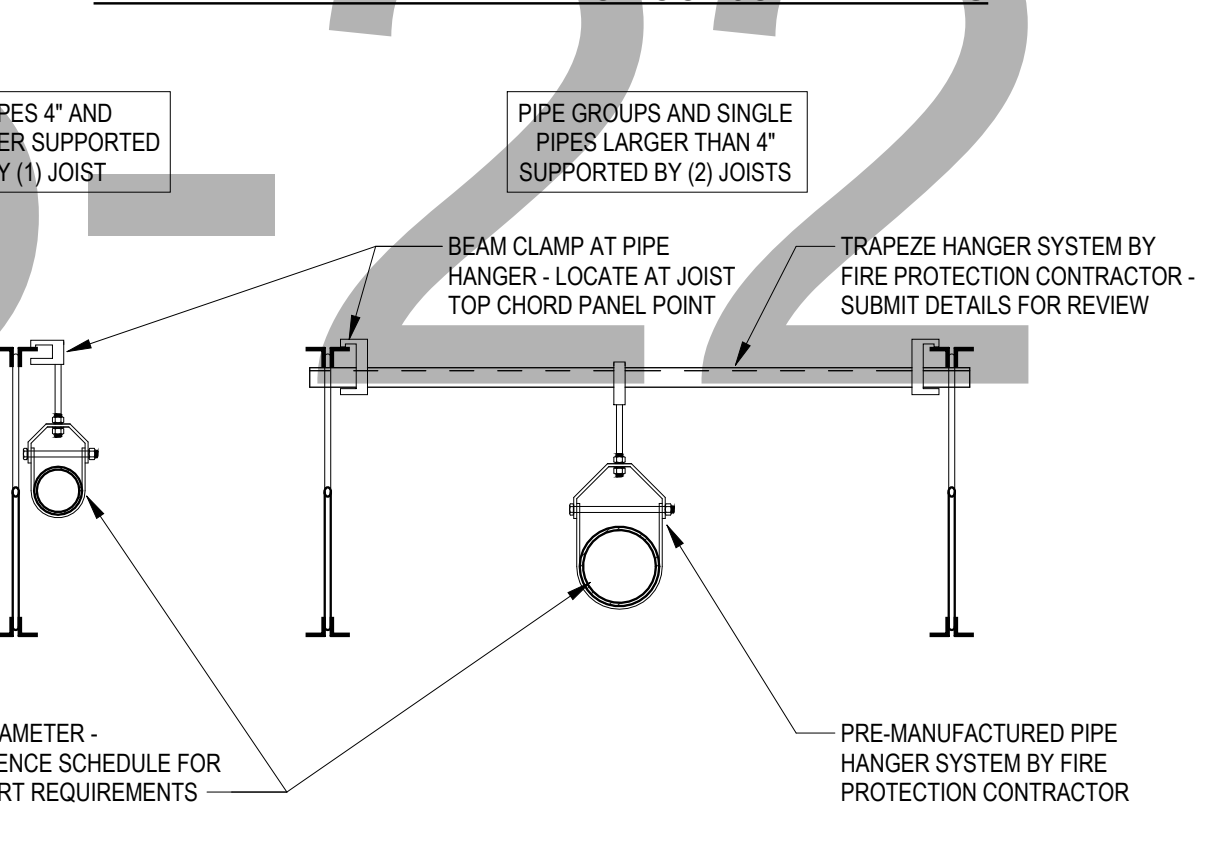
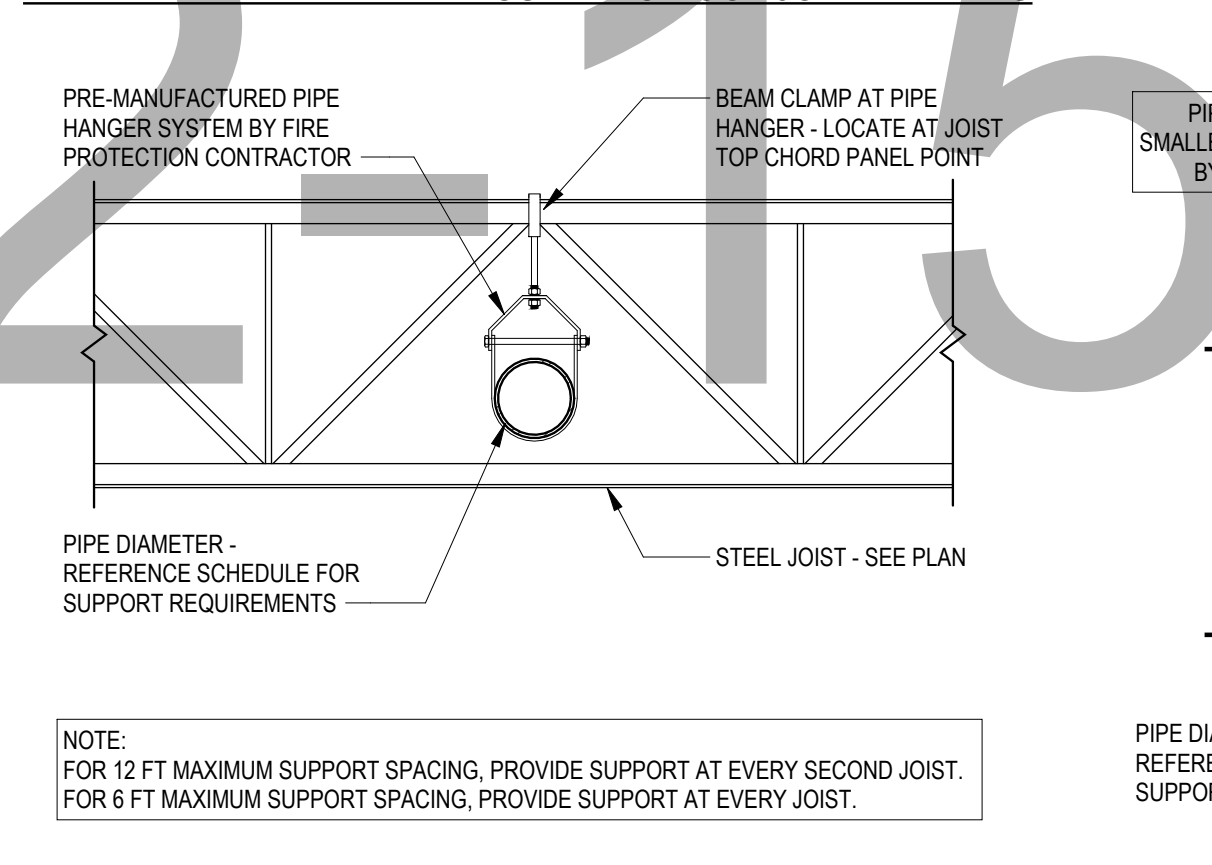
9 TYPICAL GIRDER AND JOIST SECTION AT COLUMN
S611 3/4" = 1'-0"



10 TYPICAL GIRDER AND JOIST SECTION AT COLUMN
S611 3/4" = 1'-0"

PIPE NOMINAL DIA. (IN.)	PIPE WEIGHT (LBF/FT)	PARALLEL PIPE MAX SUPPORT SPACING (FT)	CONCENTRATED LOAD ON SUPPORT (LB)	PERPENDICULAR PIPE MAX SUPPORT SPACING (FT)	CONCENTRATED LOAD ON SUPPORT (LB)
2 1/2"	8.0	12	96	12	96
3"	11.0	12	132	12	132
4"	17.0	8	136	12	204
6"	32.0	12*	192*	6	192
8"	51.0	12*	306*	6	306

NOTES:
1. PIPES IN TABLE ARE ASSUMED TO BE SCHEDULE 40 (OR STANDARD) ASTM A53 GRADE B STEEL PIPE.
2. PIPE WEIGHT PROVIDED INCLUDES WEIGHT OF PIPE + WATER.
3. EXACT PIPING LAYOUT IS TO BE PROVIDED BY FIRE PROTECTION SPRINKLER SHOP DRAWINGS. SHOP DRAWINGS SHALL INCLUDE PROPOSED LOCATION OF ALL PIPE RUNS AND INTENDED PIPE SUPPORT DETAILS AND ACCESSORIES.
4. (*) IN SCHEDULE INDICATES PIPES RUNNING PARALLEL WITH JOISTS WHERE PIPE SUPPORTS MUST BE DISTRIBUTED ACROSS (2) JOISTS. LOAD PROVIDED IS THE EXPECTED CONCENTRATED LOAD ON EACH JOIST.
5. ANY PROPOSED PIPING LARGER THAN 8" NOMINAL DIAMETER MUST BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER OF RECORD WITH PROPOSED PIPE SUPPORT DETAILS AND ROUTING.
6. ALL PIPING SHALL BE INSTALLED SO THAT ALL PIPES, PIPE HANGERS, ETC. ARE LOCATED ABOVE THE BOTTOM OF THE ROOF FRAMING MEMBERS.



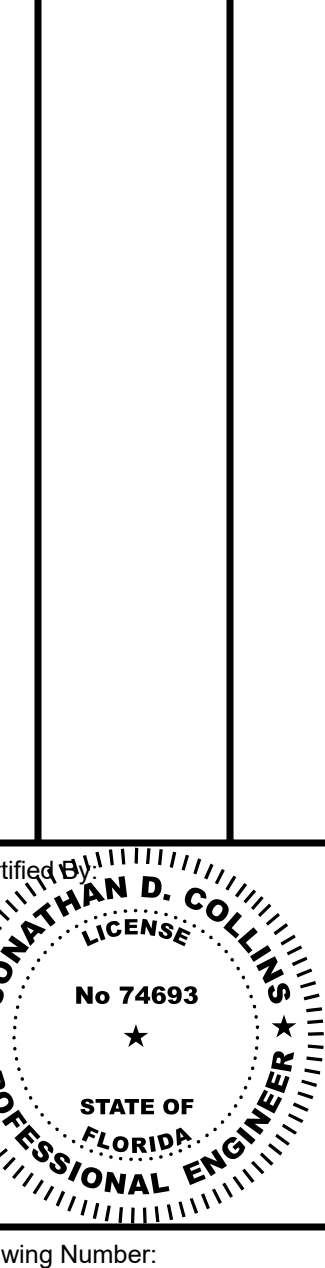
11 WATER PIPE SUPPORT SCHEDULE AND DETAILS
S611 3/4" = 1'-0"

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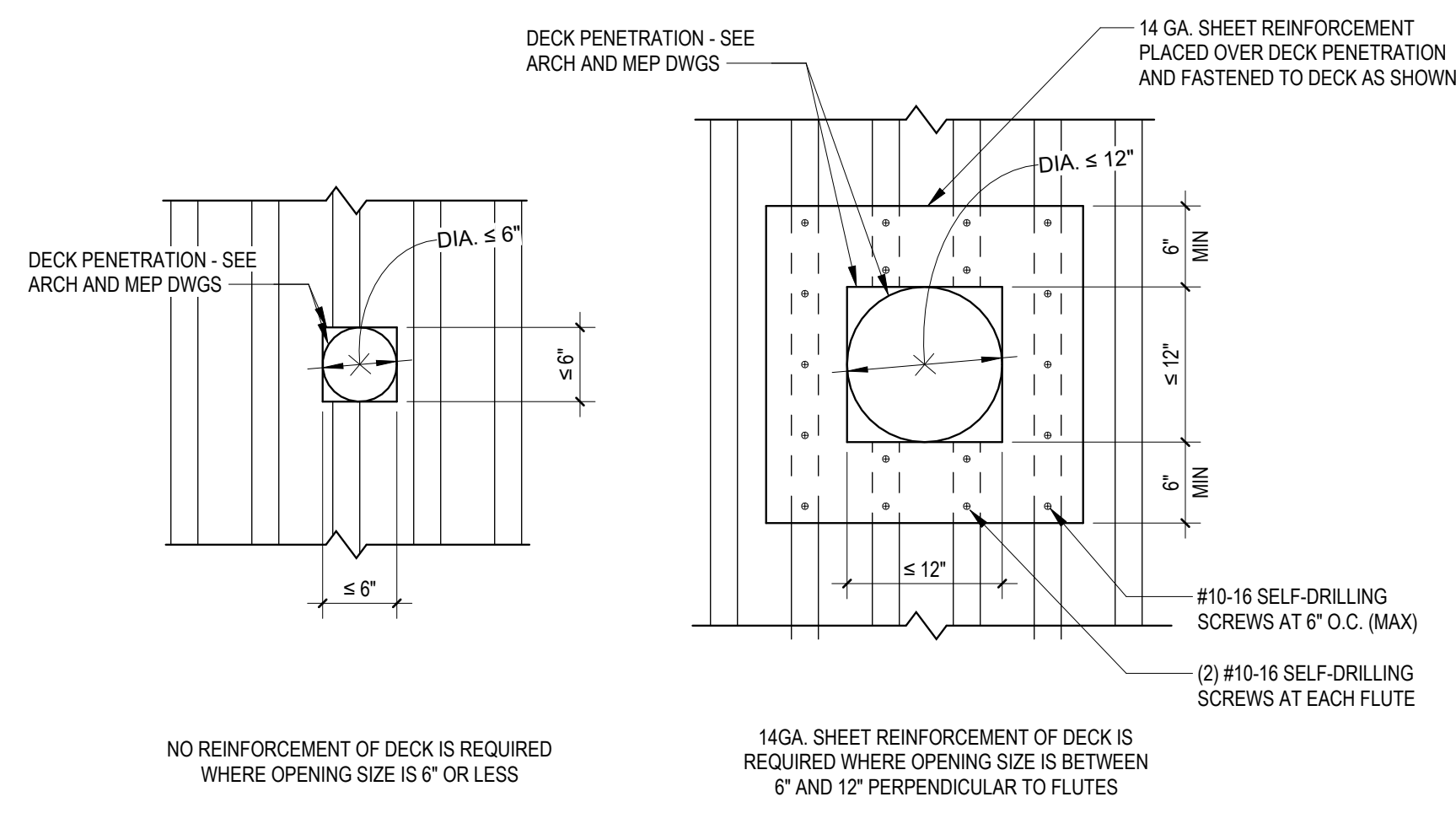


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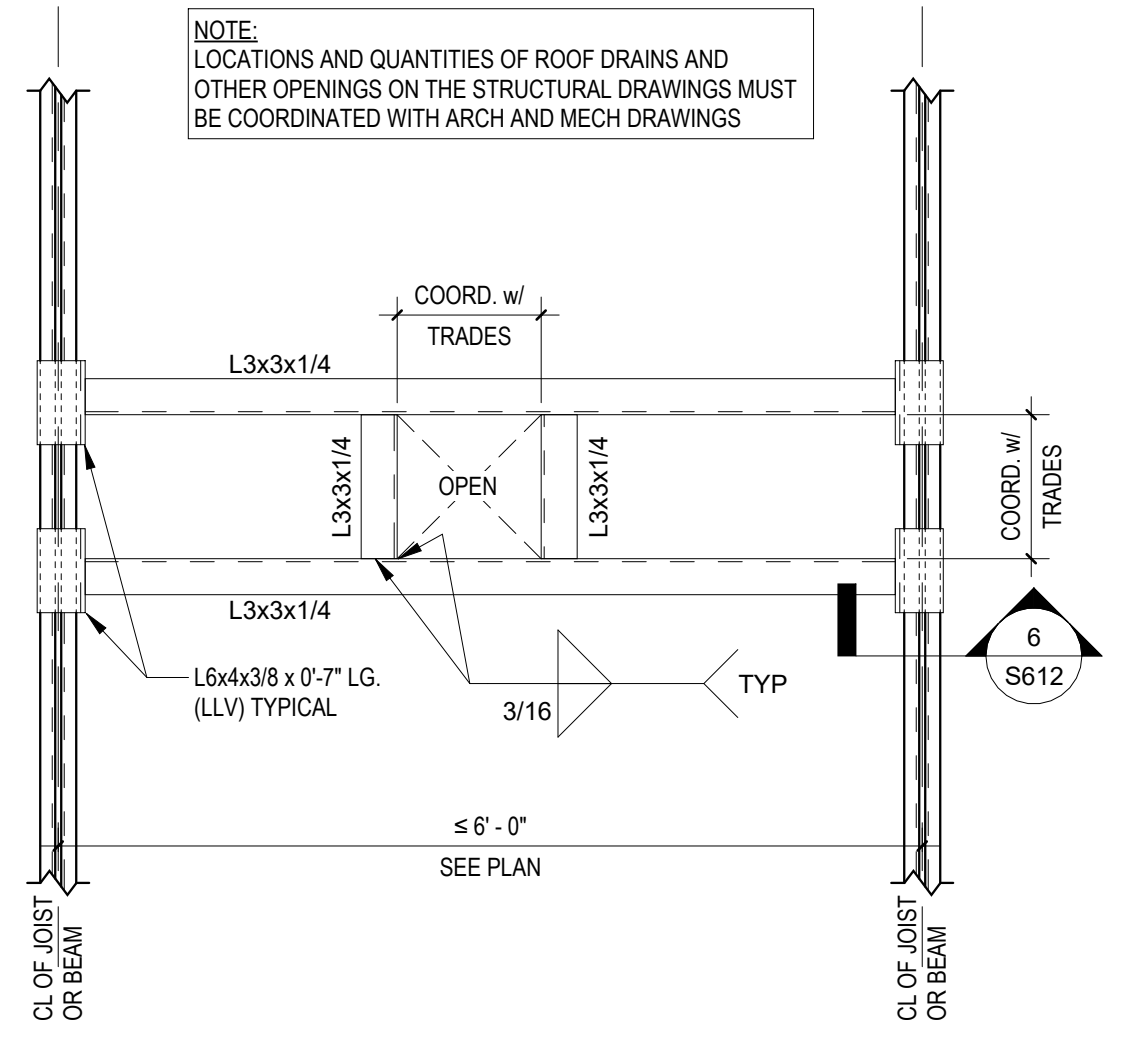
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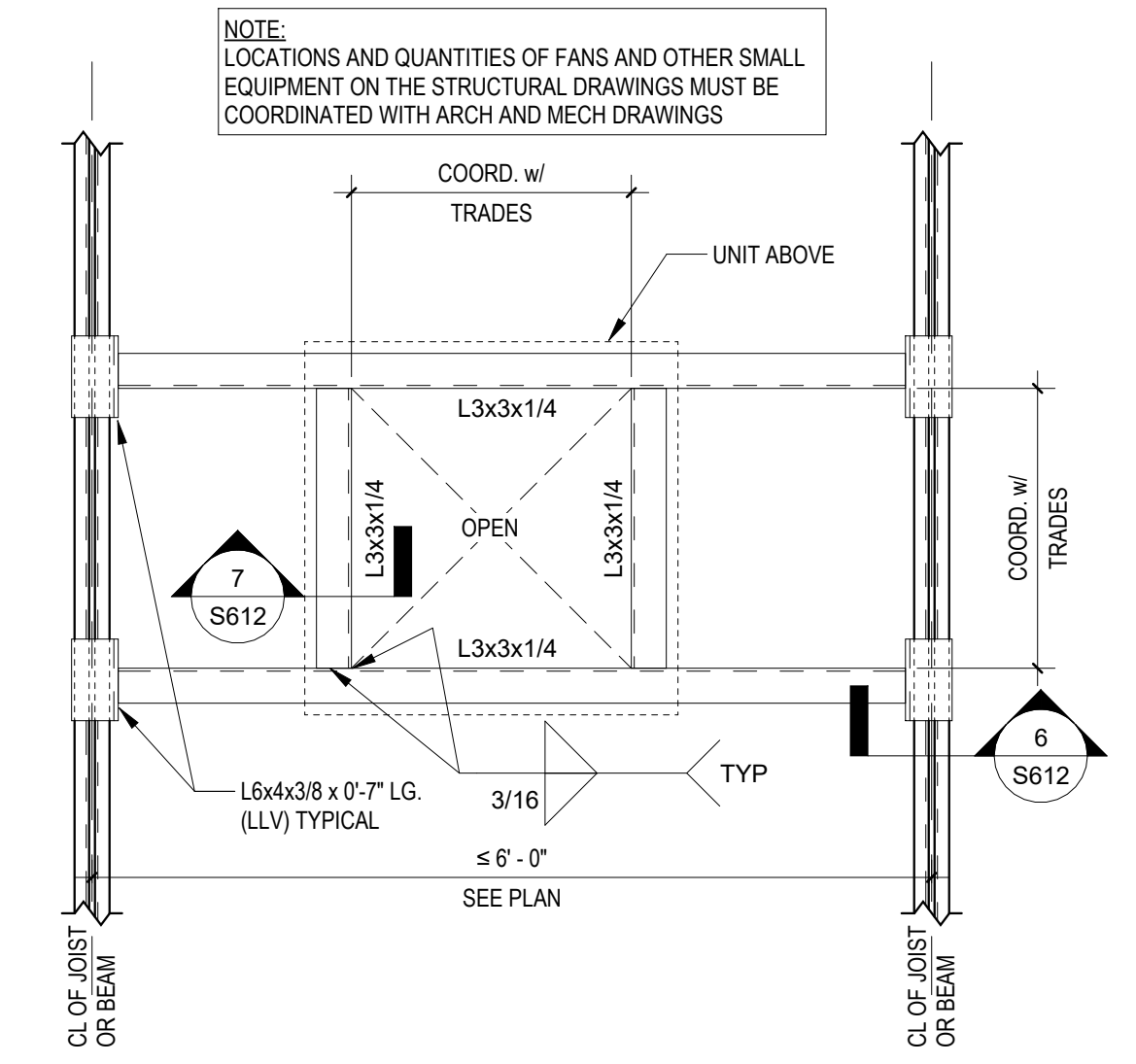
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Job Number:
A/E Job Number:
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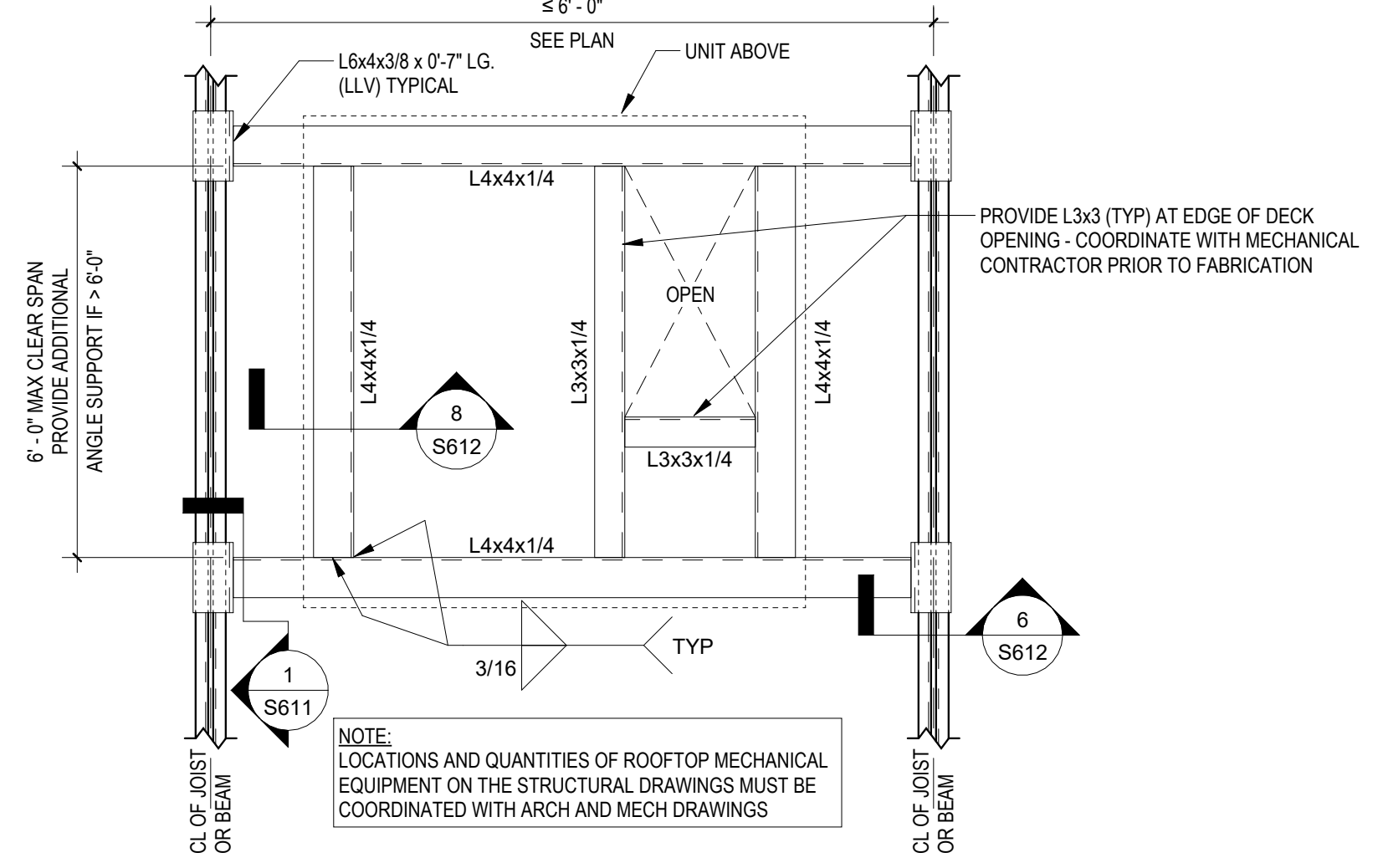
1 ROOF DECK REINFORCEMENT AT SMALL PENETRATIONS
 1" = 1'-0"



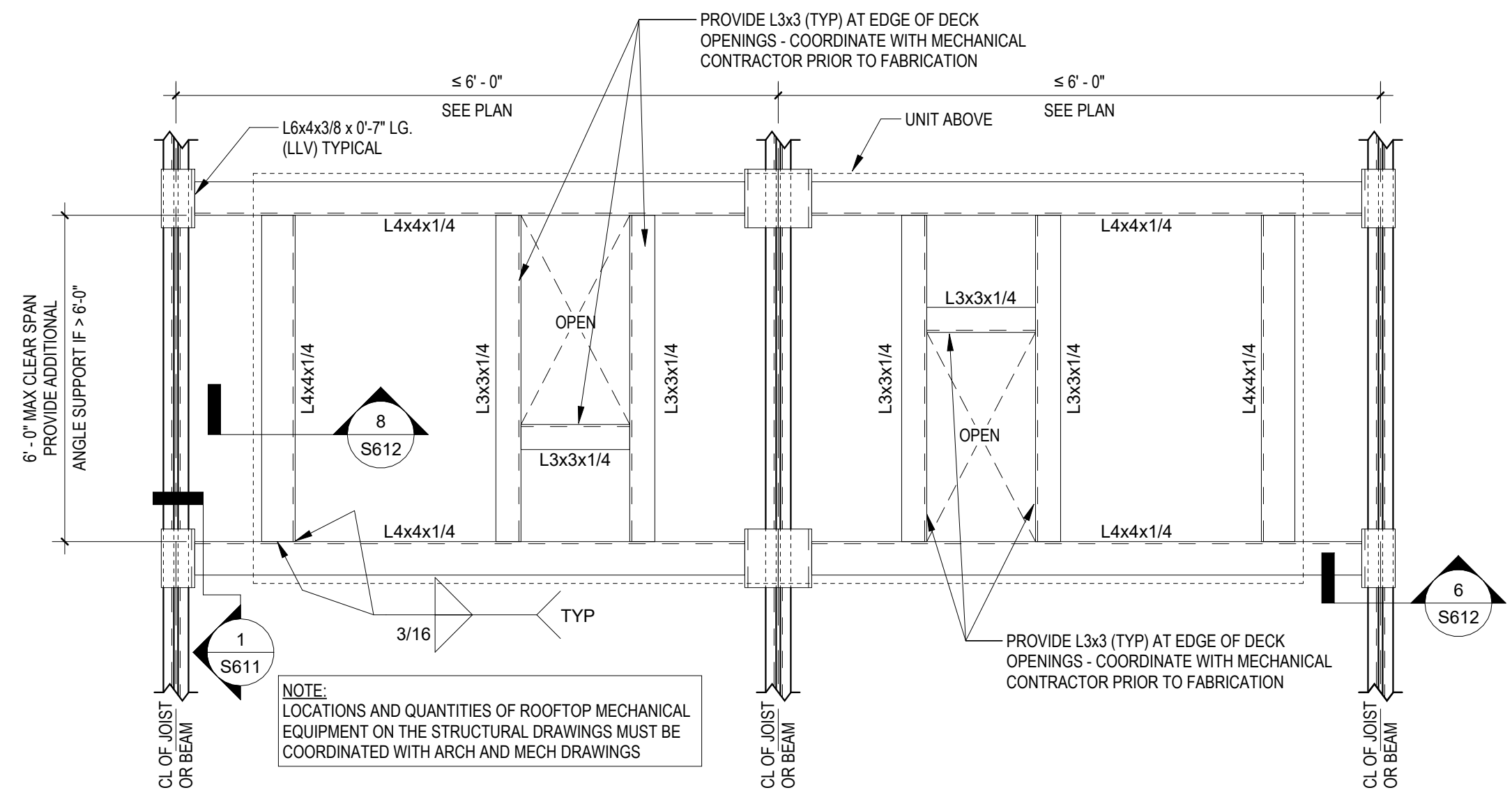
2 ROOF DRAIN AND OPENINGS > 12"
 3/4" = 1'-0"



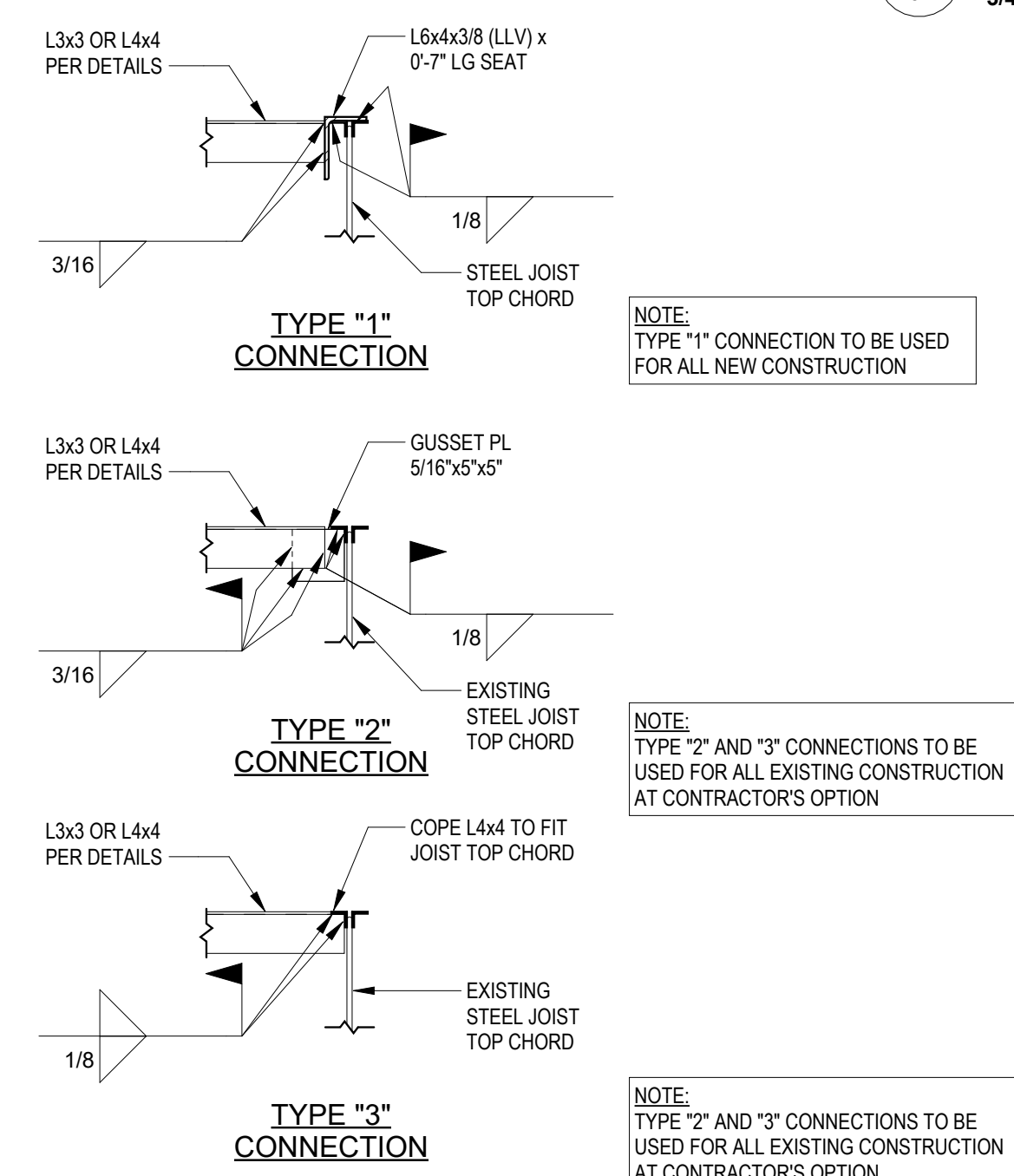
3 TYPICAL SMALL FAN / ROOF OPENING DETAIL
 3/4" = 1'-0"



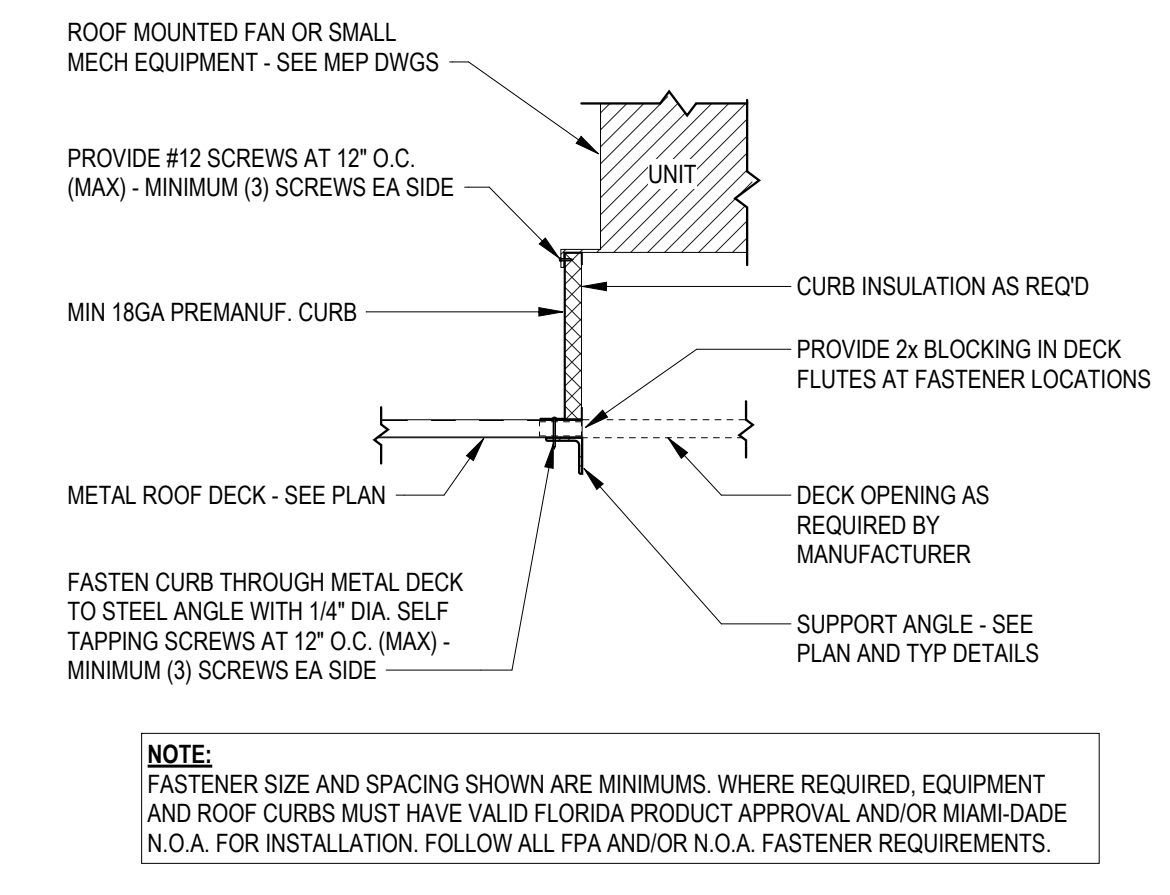
4 TYPICAL RTU/DECK OPENING DETAIL - 2 SUPPORT JOISTS
 3/4" = 1'-0"



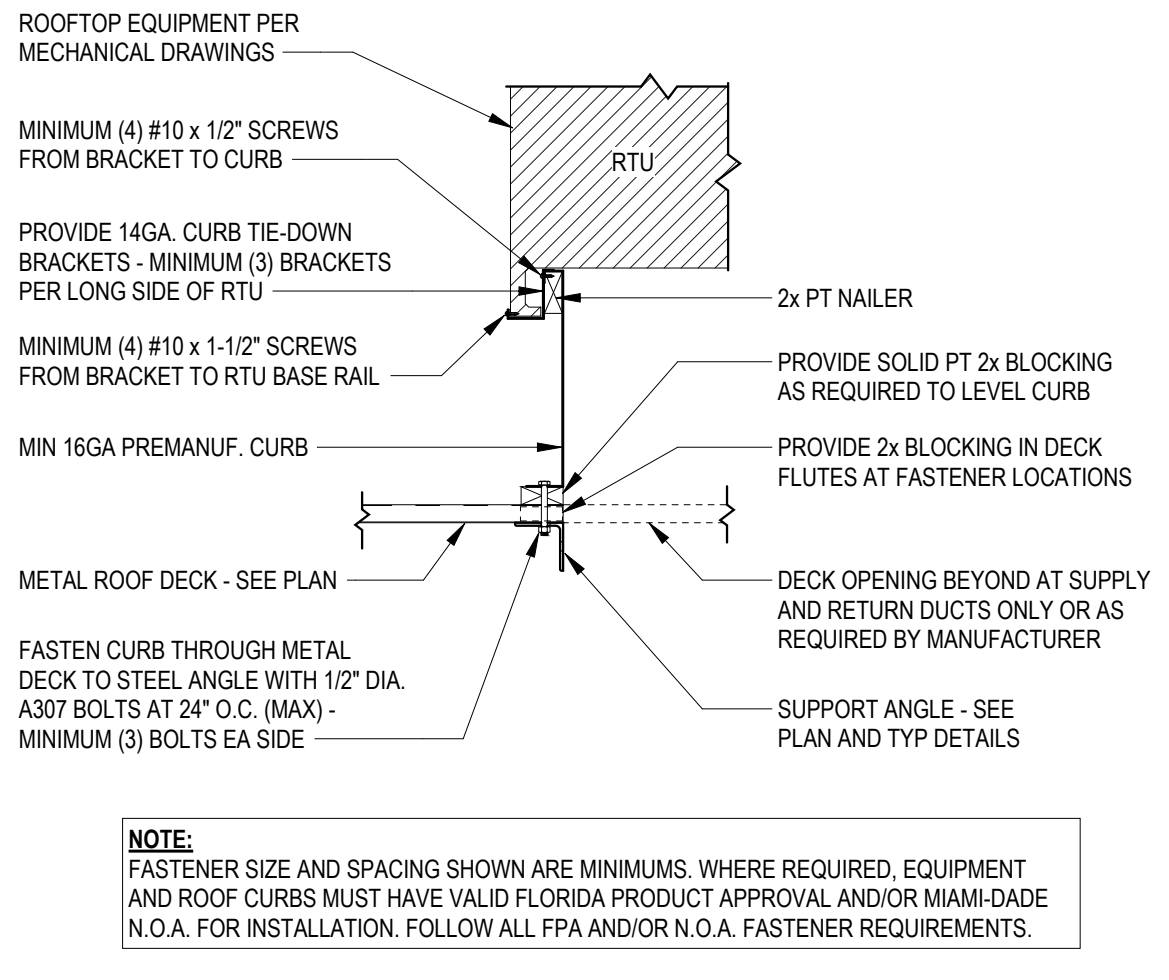
5 TYPICAL RTU/DECK OPENING DETAIL - 3 OR MORE SUPPORT JOISTS
 3/4" = 1'-0"



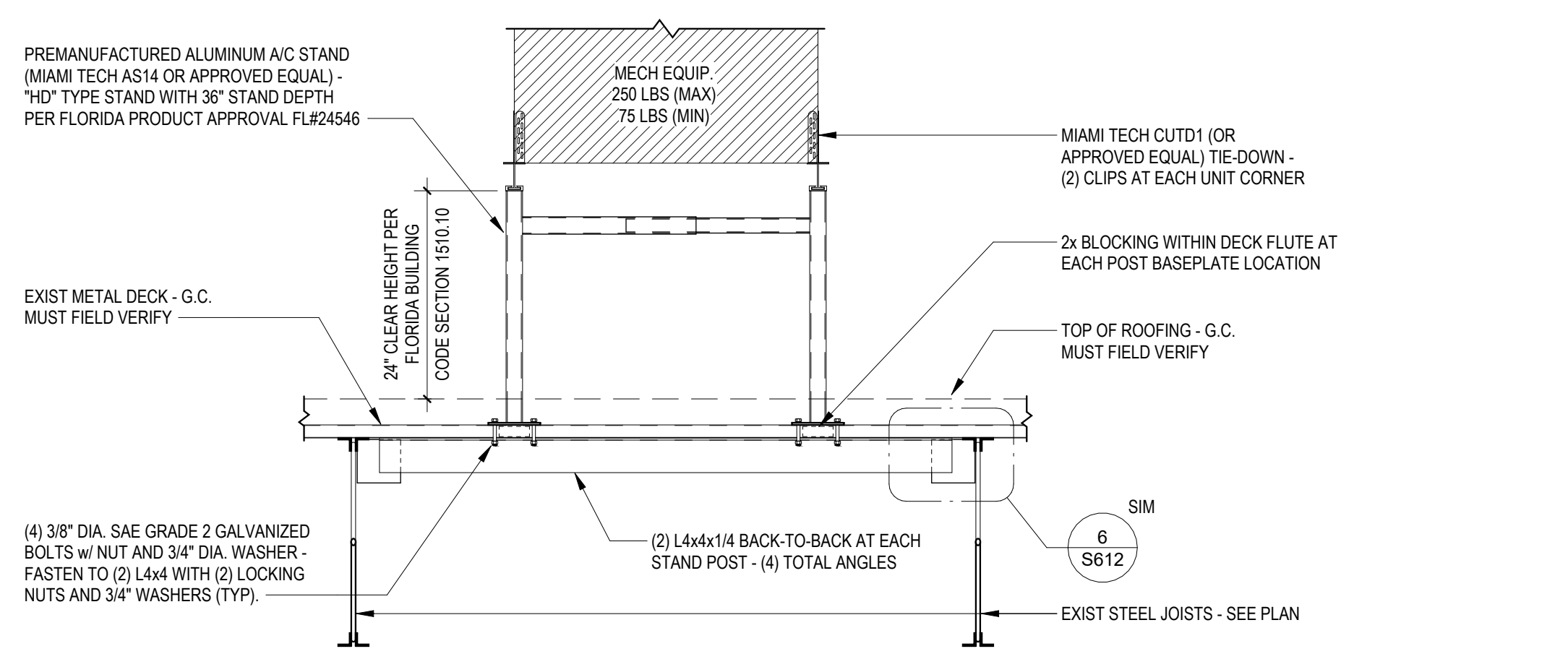
6 TYP SUPPORT ANGLE CONNECTION TO JOIST
 3/4" = 1'-0"



7 TYPICAL SMALL FAN CONNECTION DETAIL
 3/4" = 1'-0"



8 TYPICAL RTU / CURB CONNECTION DETAIL
 3/4" = 1'-0"



9 TYPICAL PRE-ENGINEERED A/C STAND SUPPORT DETAIL
 3/4" = 1'-0"

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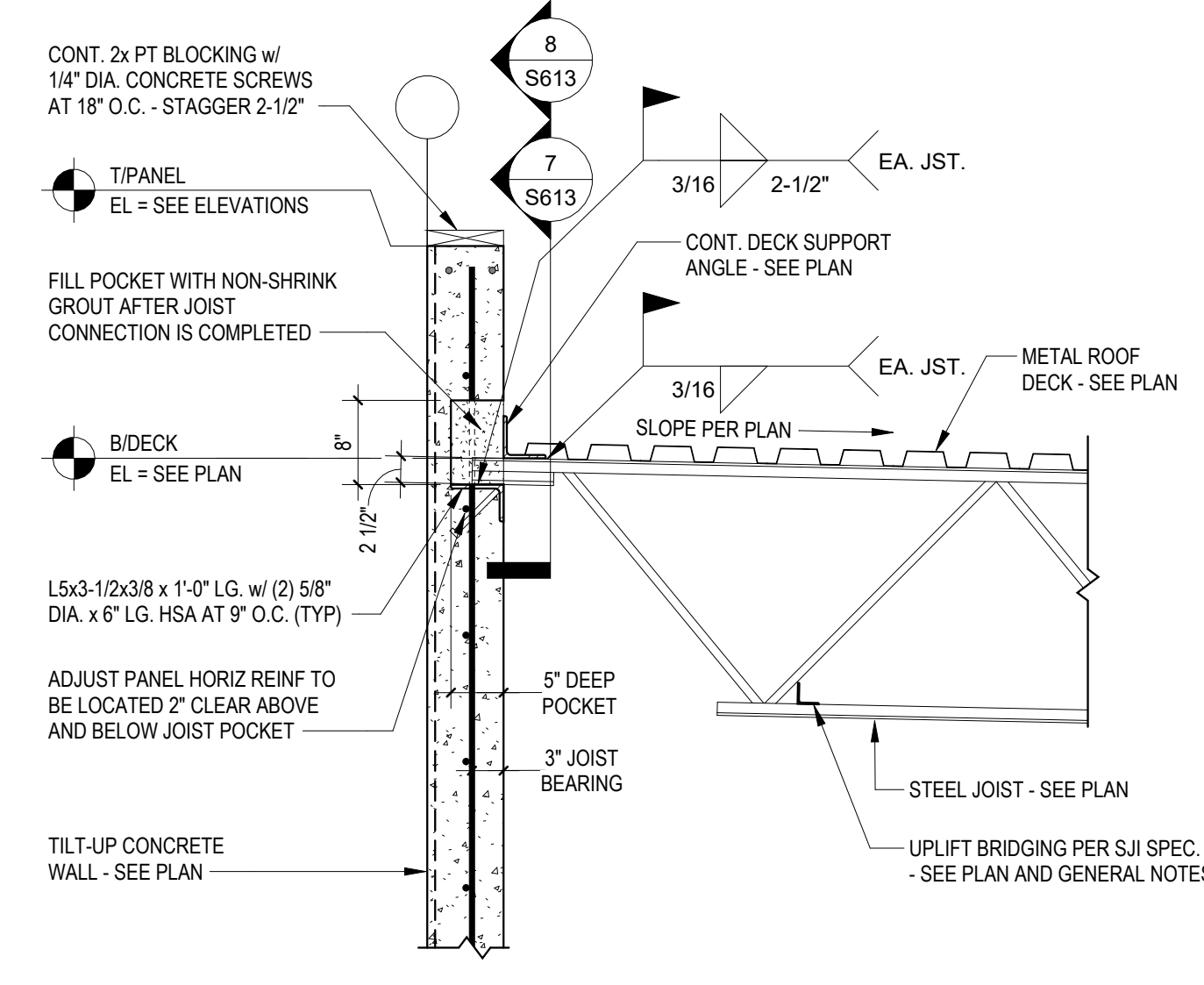
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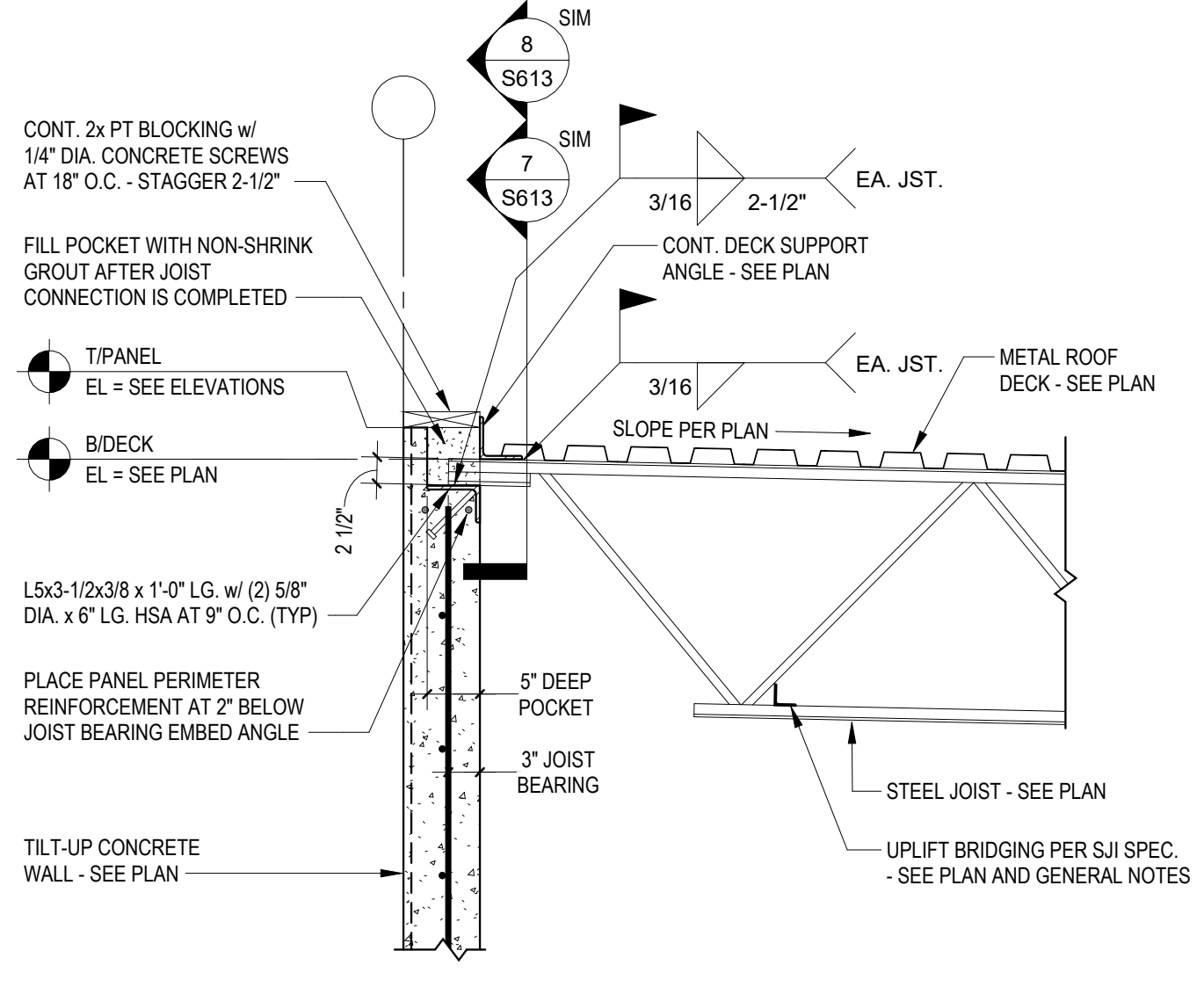
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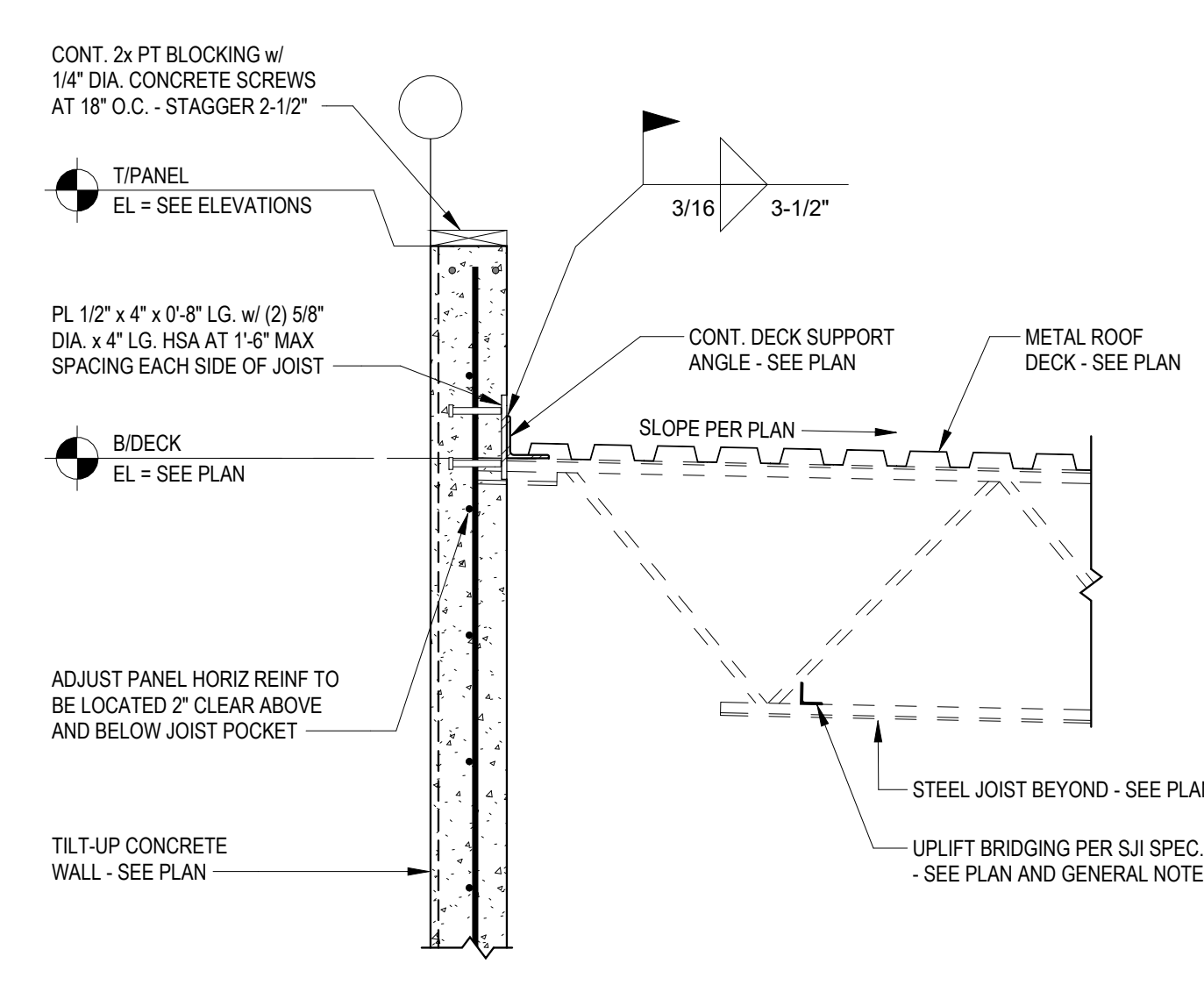
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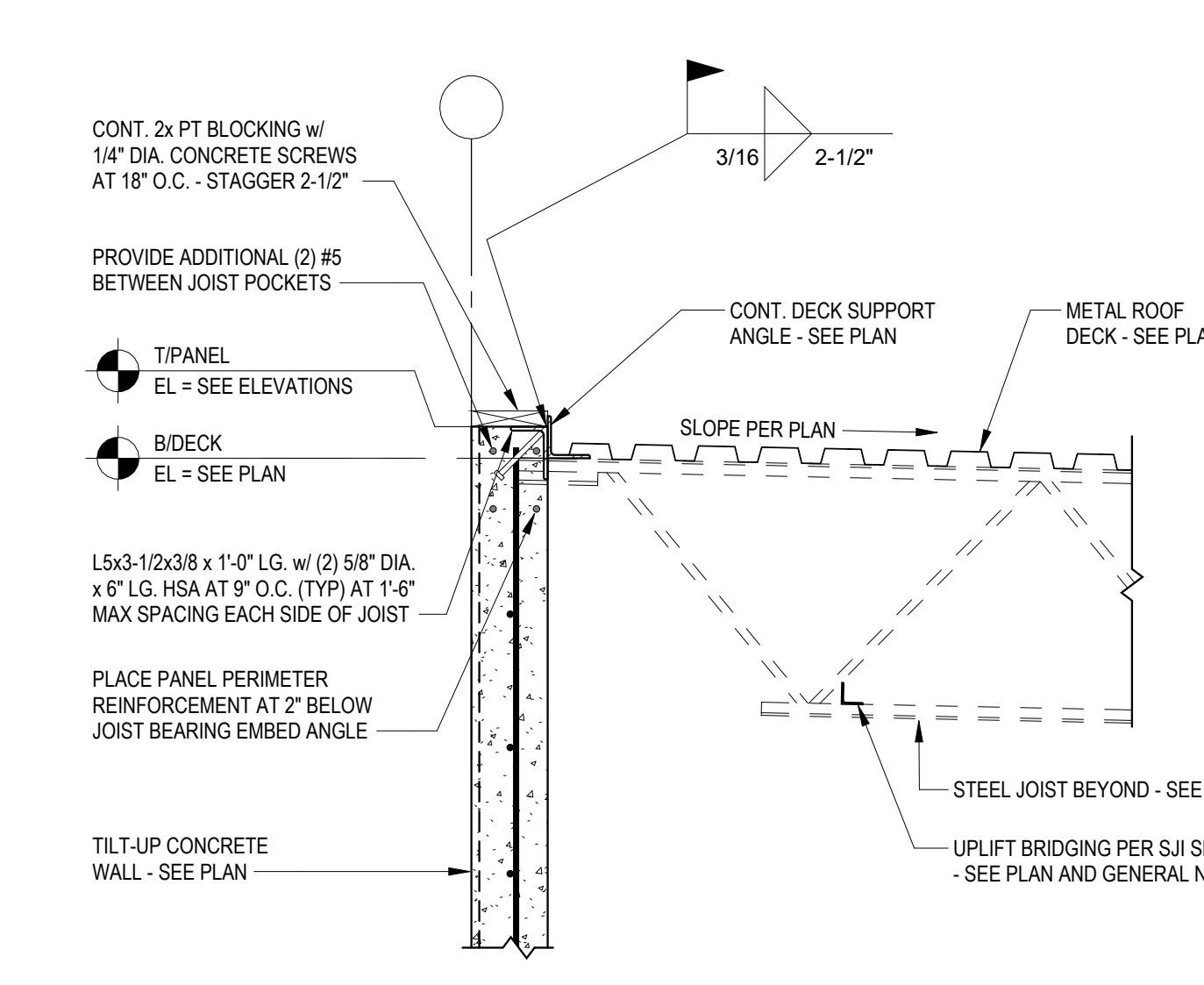
1 TYPICAL SECTION AT JOIST BEARING
S613 3/4" = 1'-0"



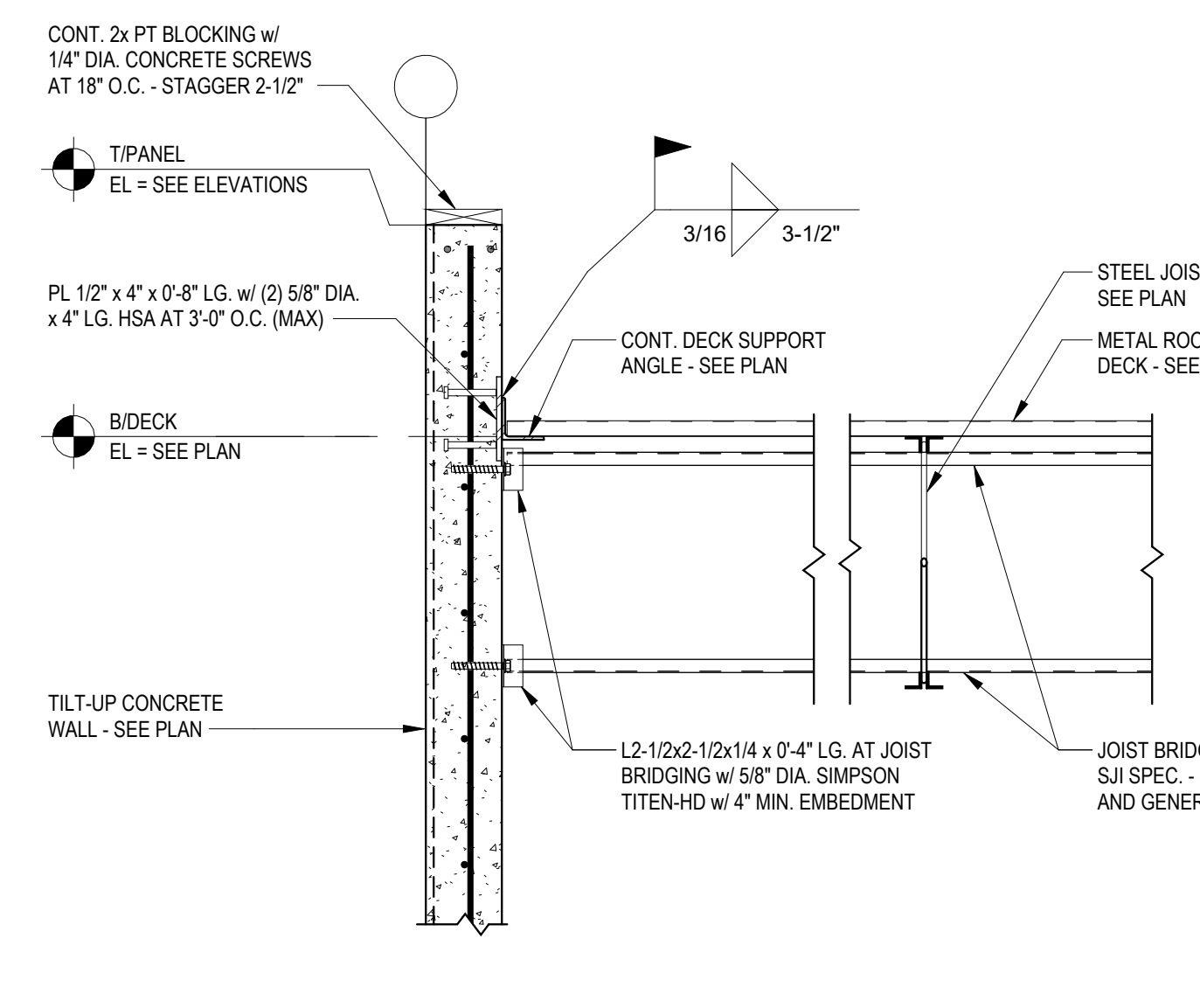
2 TYPICAL SECTION AT JOIST BEARING
S613 3/4" = 1'-0"



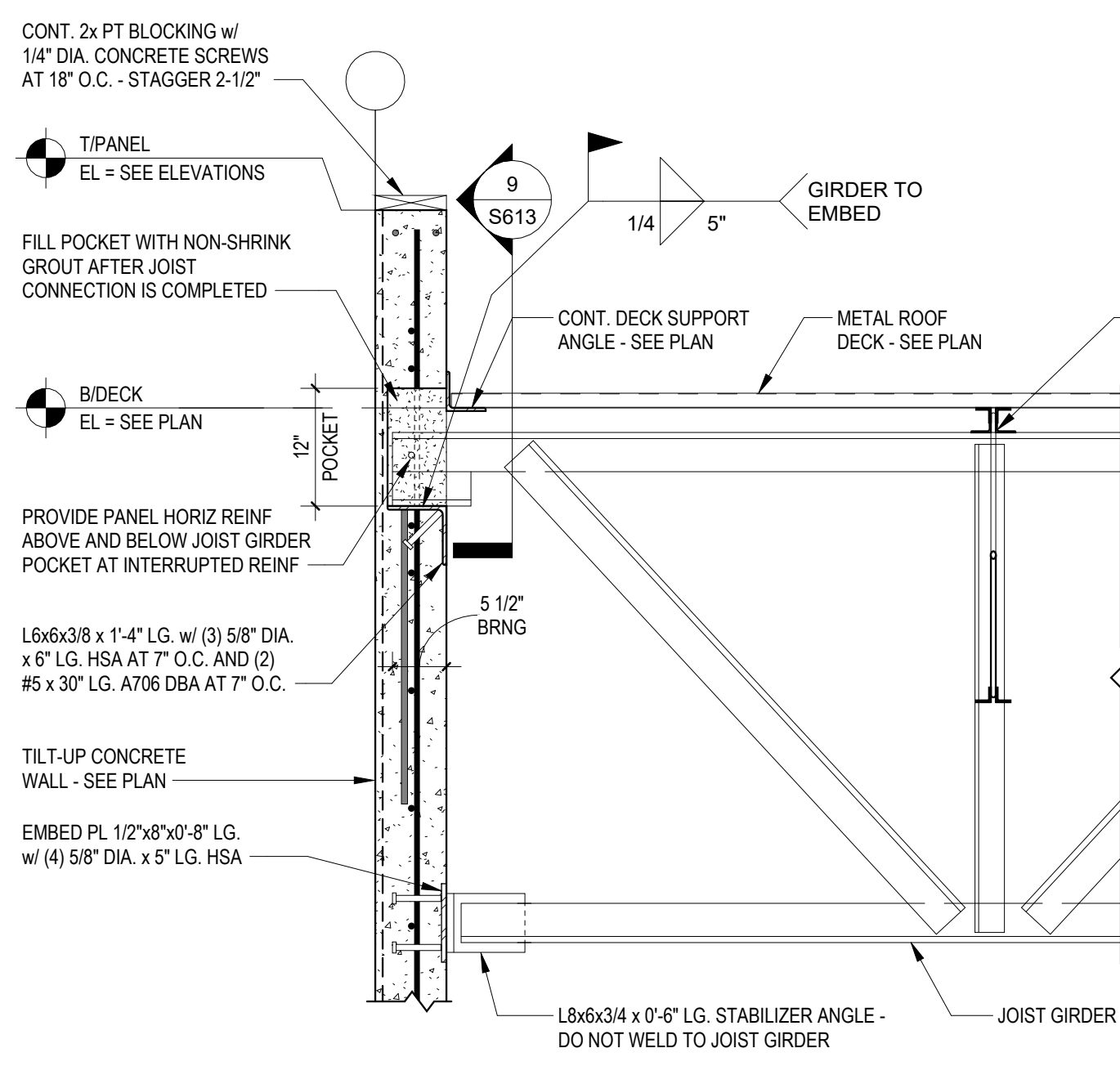
3 TYPICAL SECTION AT DECK BEARING
S613 3/4" = 1'-0"



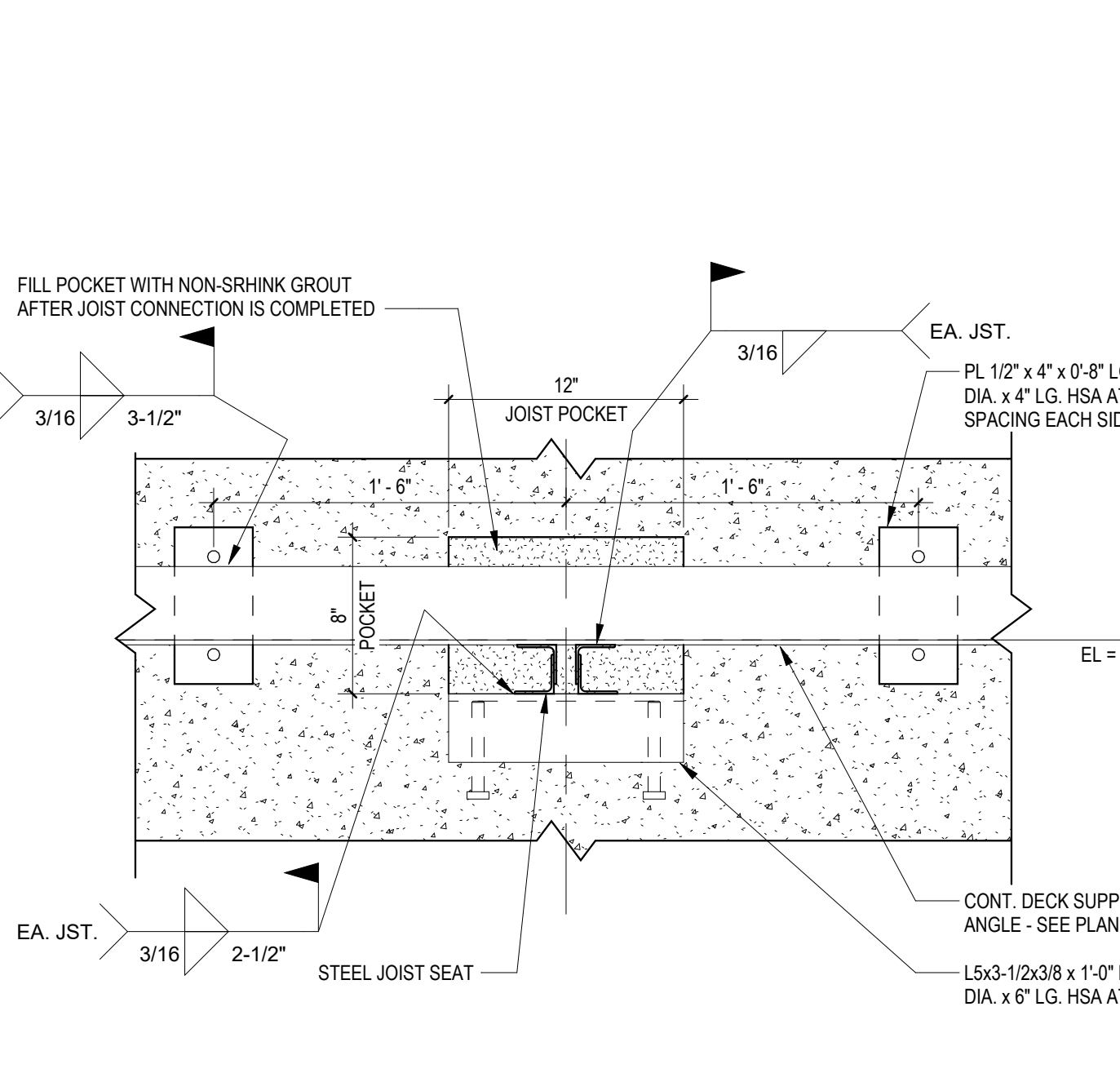
4 TYPICAL SECTION AT DECK BEARING
S613 3/4" = 1'-0"



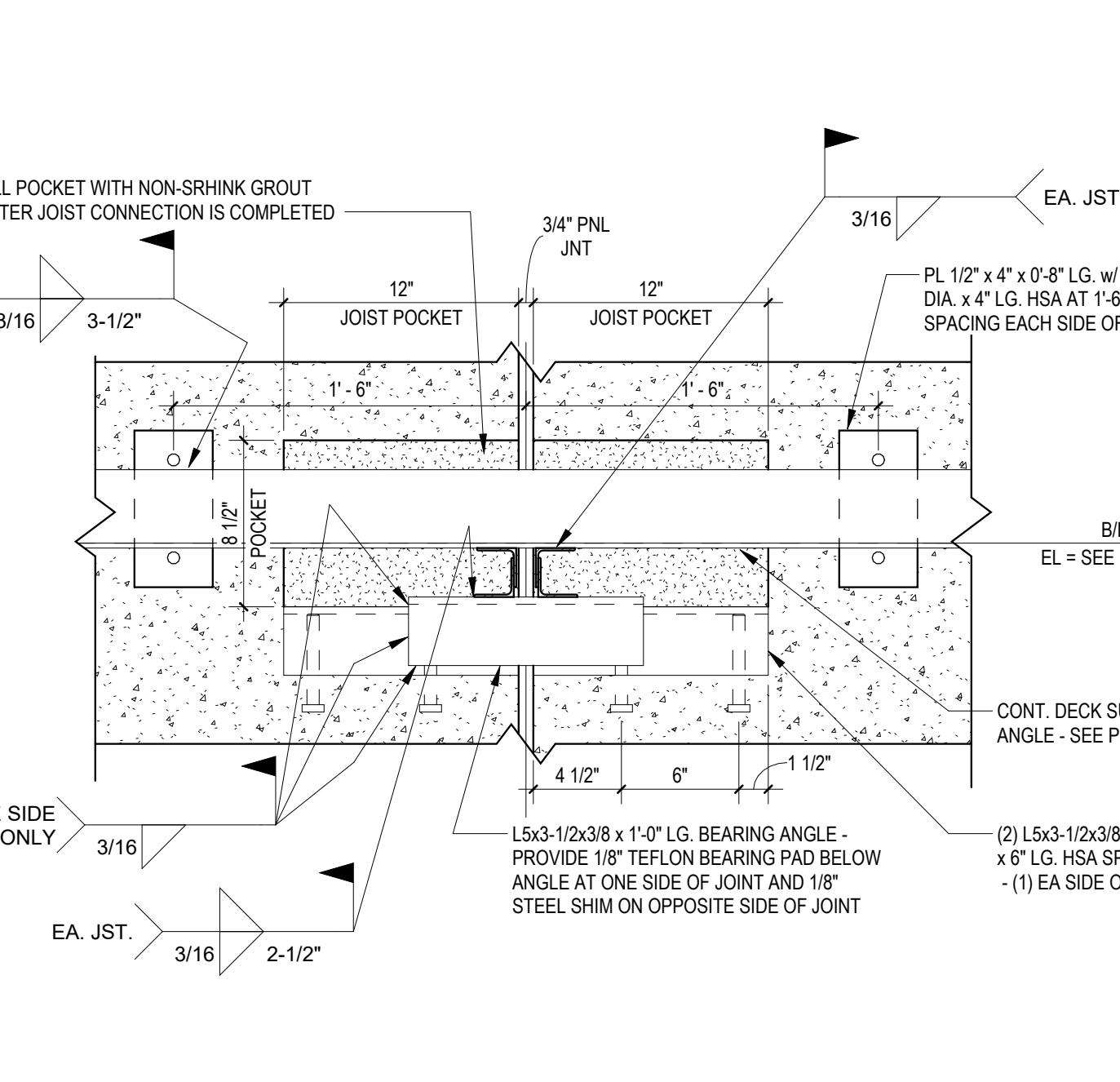
5 TYPICAL SECTION AT DECK BEARING PARALLEL TO JOIST
S613 3/4" = 1'-0"



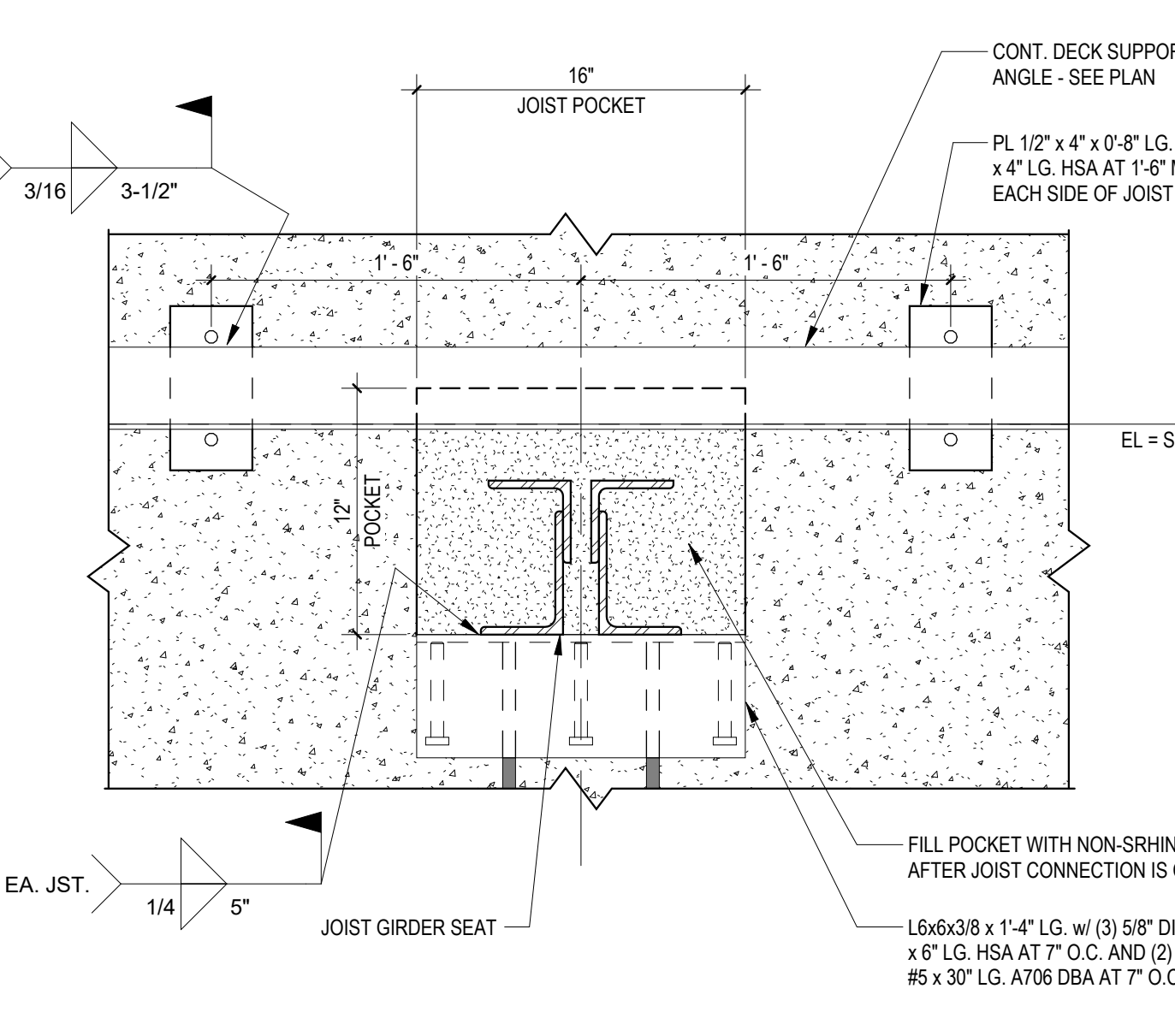
6 TYPICAL SECTION AT JOIST GIRDER BEARING
S613 3/4" = 1'-0"



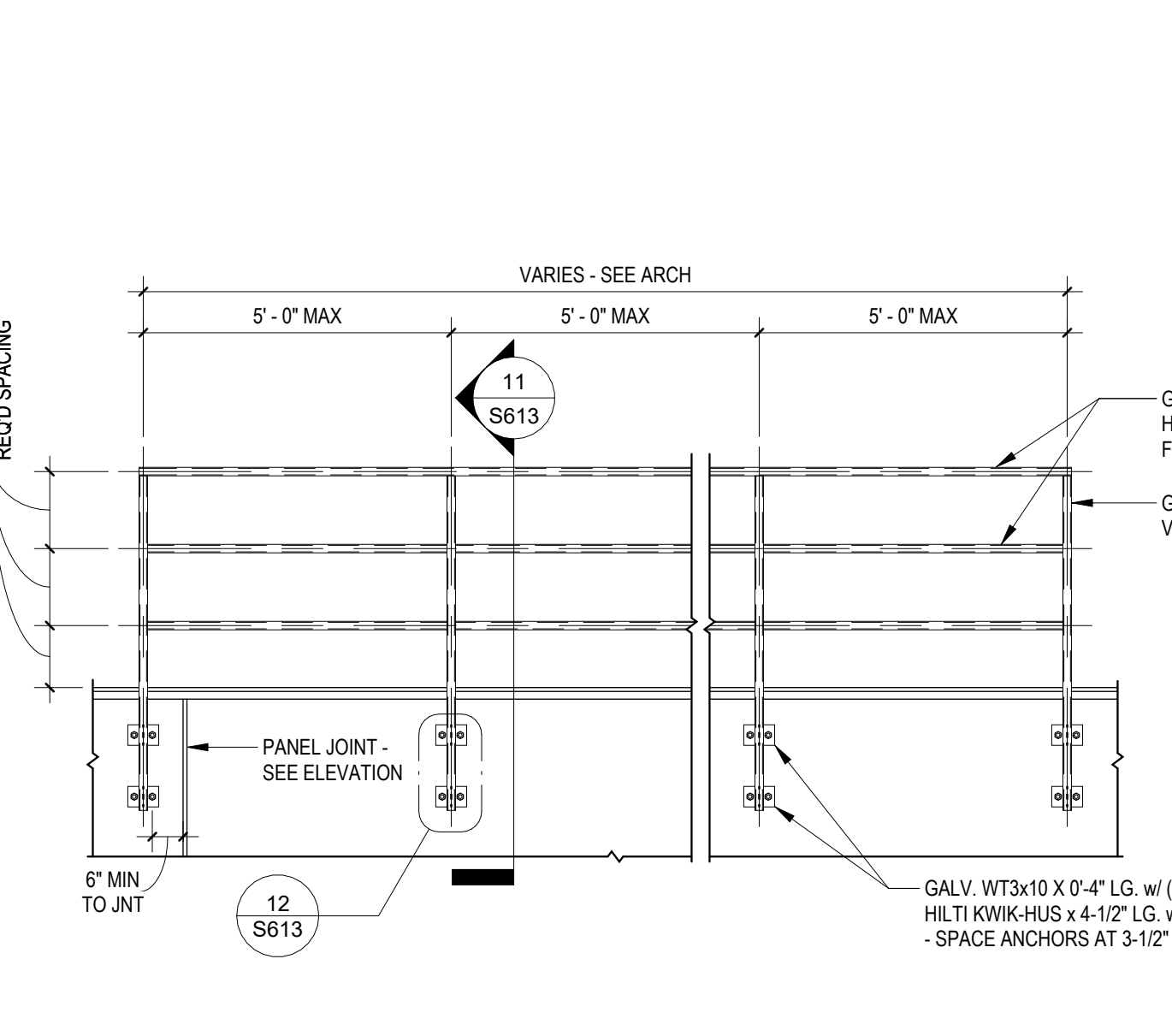
7 JOIST BEARING POCKET ELEVATION
S613 1 1/2" = 1'-0"



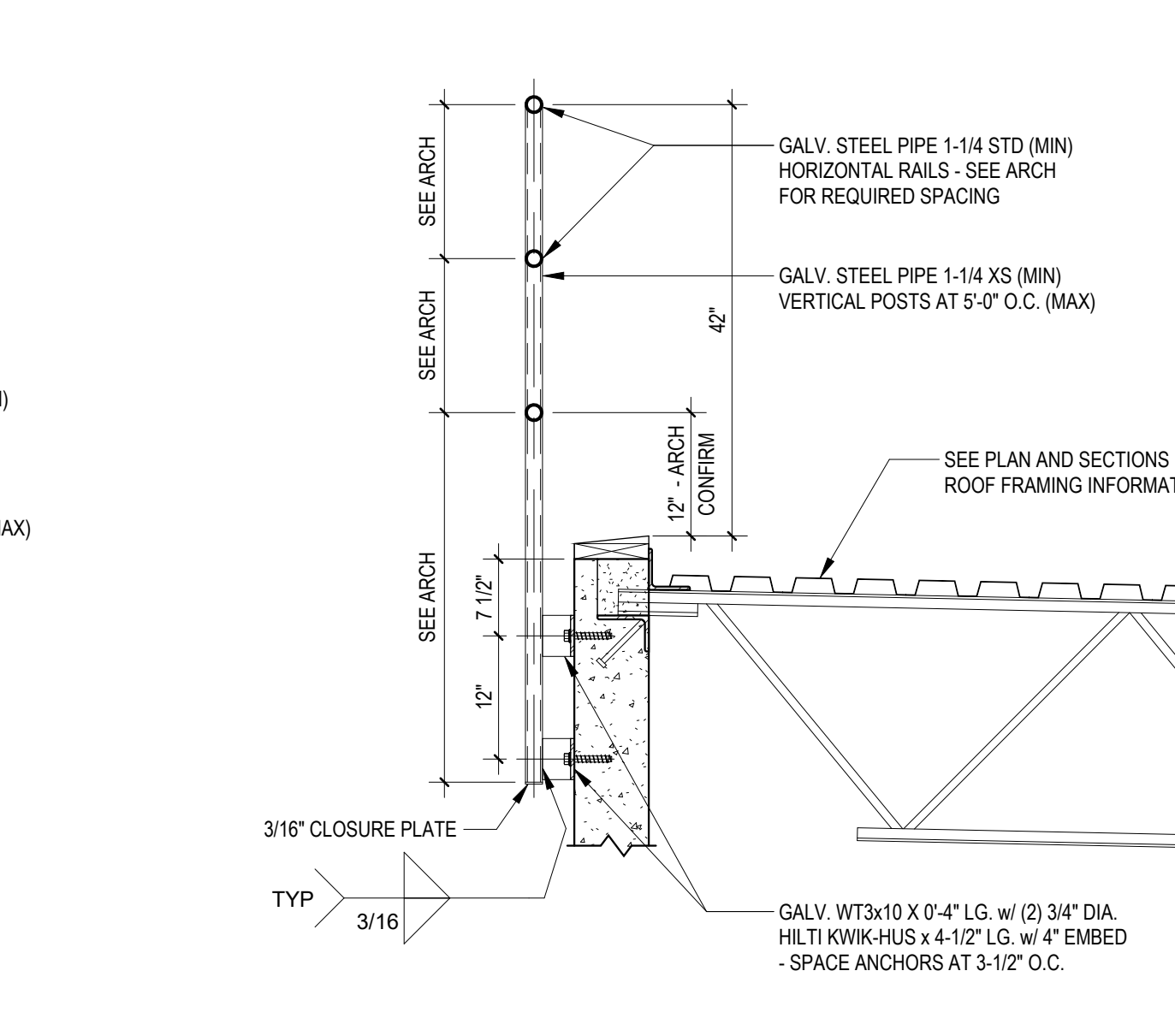
8 JOIST BEARING POCKET ELEVATION AT PANEL JOINT
S613 1 1/2" = 1'-0"



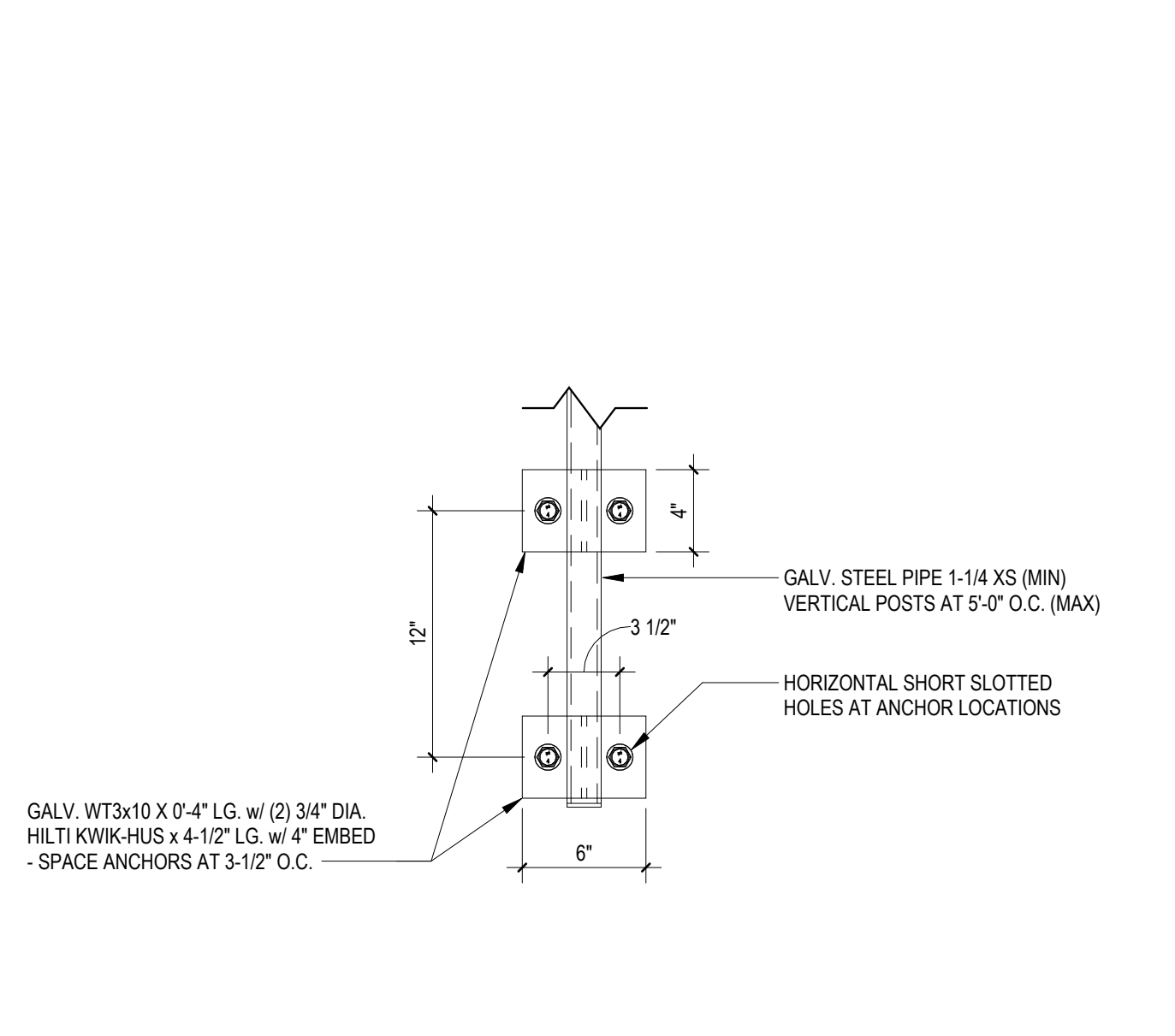
9 JOIST GIRDER BEARING POCKET ELEVATION
S613 1 1/2" = 1'-0"



10 TYPICAL GUARDRAIL ELEVATION
S613 3/8" = 1'-0"



11 GUARDRAIL SECTION AT TILT-WALL
S613 3/4" = 1'-0"



12 GUARDRAIL ANCHORAGE DETAIL
S613 1 1/2" = 1'-0"

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