

STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS & TESTING

- 1. SPECIAL INSPECTIONS AND STRUCTURAL TESTING SHALL BE PROVIDED BY AN INDEPENDENT AGENCY EMPLOYED BY THE OWNER FOR THE ITEMS IDENTIFIED IN THIS SECTION AND IN OTHER AREAS OF THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS...
2. THE NAMES AND CREDENTIALS OF THE SPECIAL INSPECTORS TO BE USED SHALL BE SUBMITTED TO THE BUILDING OFFICIAL FOR APPROVAL...
3. DATES OF THE SPECIAL INSPECTION...
4. DUTIES AND RESPONSIBILITIES OF THE CONTRACTOR...
5. PLEASE SEE THE SPECIAL INSPECTION SCHEDULE FOR THE TESTS, DUTIES AND FREQUENCY OF SPECIAL INSPECTIONS AND STRUCTURAL TESTS AS PART OF THIS PROJECT.

WIND-RESISTING COMPONENTS (1703.1.3)

- PERIODIC SPECIAL INSPECTION IS REQUIRED FOR FASTENING OF THE FOLLOWING SYSTEMS AND COMPONENTS:
1. ROOF COVERING, ROOF DECK AND ROOF FRAMING CONNECTIONS
2. EXTERIOR WALL COVERING AND WALL CONNECTIONS TO ROOF AND FLOOR DIAPHRAGMS AND FRAMING

REQUIRED VERIFICATION AND INSPECTION OF GRADING AND DRAINAGE FOR FOUNDATIONS ON EXPANSIVE SOILS

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: AFTER BUILDING CONSTRUCTION AND LANDSCAPING HAVE BEEN COMPLETED, FINAL GRADES SHALL BE VERIFIED TO DOCUMENT REQUIRED DRAINAGE; AFTER BUILDING CONSTRUCTION AND LANDSCAPING HAVE BEEN COMPLETED, DOWNPOUTS SHALL BE INSPECTED TO CONFIRM CONFORMANCE; GRADES AROUND THE STRUCTURE SHALL BE PERIODICALLY INSPECTED AND ADJUSTED AS PART OF THE BUILDING'S MAINTENANCE PROGRAM; PLUMBING LEAK "HYDROSTATIC" TEST PERFORMED BY A LICENSED PLUMBER, TEST TO OCCUR AFTER ROUGH PLUMBING INSTALL; WHERE PAVING/FLATWORK ABOUT THE FOUNDATION, A MAINTENANCE PROGRAM SHALL BE ESTABLISHED TO EFFECTIVELY SEAL AND MAINTAIN JOINTS AND PREVENT SURFACE WATER INFILTRATION.

REQUIRED VERIFICATION AND INSPECTION OF SOILS (TABLE 1706.4)

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY; VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIALS; PERFORM CLASSIFICATION AND TESTING OF COMPACTED MATERIALS; VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL; PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THE SITE HAS BEEN PREPARED PROPERLY.

REQUIRED VERIFICATION AND INSPECTION OF WOOD CONSTRUCTION (§1706.5)

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: PREFABRICATED WOOD STRUCTURAL ELEMENTS (METAL PLATE CONNECTED WOOD TRUSSES FABRICATION AND INSTALLATION PROCEDURES) NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION; HIGH-LOAD DIAPHRAGMS; METAL PLATE-CONNECTED WOOD TRUSSES SPANNING 60 FT OR GREATER; INSPECTION OF NAILING, BOLTING, ANCHORING AND OTHER FASTENING COMPONENTS WITHIN THE SEISMIC / MAIN WIND FORCE RESISTING SYSTEM; MOISTURE CONTENT OF LOAD BEARING WOOD FRAMING.

REQUIRED VERIFICATION AND INSPECTION OF STRUCTURAL STEEL CONSTRUCTION (§1705.2.1)

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: THE SPECIAL INSPECTOR SHALL INSPECT THE FABRICATED OR ERECTED STEEL FRAME, AS APPROPRIATE, TO VERIFY COMPLIANCE WITH THE DETAIL SHOWN ON THE CONSTRUCTION DOCUMENTS; STRUCTURAL STEEL - ANCHOR RODS / EMBED PLATES.

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: THE SPECIAL INSPECTOR SHALL BE ON THE PREMISES FOR INSPECTION DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENT SUPPORTING STRUCTURAL STEEL; STRUCTURAL STEEL - WELDS.

STRUCTURAL STEEL - WELDS

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: INSPECTION TASKS PRIOR TO WELDING (ASCC 340 TABLE N6.4-1); WELDING PROCEDURE SPECIFICATION (WPS) AVAILABLE; MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE; MATERIAL IDENTIFICATION (MPE / GRADE); WELDER IDENTIFICATION SYSTEM; FIT-UP GROOVE WELDS; CONFIGURATION AND FINISH OF ACCESS HOLES; FIT-UP FILLET WELDS; CHECK WELDING EQUIPMENT; INSPECTION TASKS DURING WELDING (ASCC 340 TABLE N6.4-2); USE OF QUALIFIED WELDERS; CONTROL AND HANDLING OF WELDING CONSUMABLES; NO WELDING OVER CRACKED TACK WELDS; ENVIRONMENTAL CONDITIONS (WIND SPEED WITHIN LIMITS, PRECIPITATION AND TEMPERATURE); WPS FOLLOWED; WELDED TECHNIQUES; WELDS CLEANED; SIZE, LENGTH AND LOCATION OF WELDS; WELDS MEET VISUAL ACCEPTANCE CRITERIA; AWC STRIKES; I-AREA; BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED); REPAIR ACTIVITIES; DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT MEMBER.

NON-DESTRUCTIVE TESTING OF WELDED JOINTS

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: FILLET WELDS; PARTIAL JOINT PENETRATION (PJP) WELDS INCLUDING FLARE BEVEL WELDS; COMPLETE JOINT PENETRATION (CJP) WELDS.

STRUCTURAL STEEL HIGH-STRENGTH BOLTS (TURN-OF-NUT)

TURN-OF-NUT PRETENSIONING: THE INSPECTOR SHALL OBSERVE THE PRE-INSTALLATION VERIFICATION TESTING REQUIRED IN SECTION 8.2. SUBSEQUENTLY, IT SHALL BE ENSURED BY ROUTINE OBSERVATION THAT THE BOLTING CREW PROPERLY ROTATES THE TURNED ELEMENT RELATIVE TO THE UNTURNED ELEMENT BY THE AMOUNT SPECIFIED IN TABLE 8.2.4.3 (AS APPLICABLE). WHEN FASTENER ASSEMBLIES ARE MANIPULATED AFTER THE INITIAL FIT-UP OF THE JOINT BUT PRIOR TO PRETENSIONING, VISUAL INSPECTION AFTER PRETENSIONING IS PERMITTED IN LIEU OF ROUTINE OBSERVATION. NO FURTHER EVIDENCE OF CONFORMANCY IS REQUIRED. A PRETENSION THAT IS GREATER THAN THE VALUE SPECIFIED IN TABLE 8.1 SHALL NOT BE CAUSE FOR REJECTION. A ROTATION THAT EXCEEDS THE REQUIRED VALUES, INCLUDING TOLERANCE, SPECIFIED IN TABLE 8.2 SHALL NOT BE CAUSE FOR REJECTION.

Table 8.2: NUT ROTATION FROM SNUG-TIGHT CONDITION FOR TURN-OF-NUT PRETENSIONING. Columns: BOLT LENGTH, DISPOSITION OF OUTER FACES OF BOLTED PARTS (BOTH FACES NORMAL TO BOLT AXIS, ONE FACE NORMAL TO BOLT AXIS, OTHER SLOPED NOT MORE THAN 1:20, BOTH FACES SLOPED NOT MORE THAN 1:20 FROM NORMAL TO BOLT AXIS). Rows: LENGTH ≤ 4d, 4d < LENGTH ≤ 8d, 8d < LENGTH ≤ 12d.

STRUCTURAL STEEL HIGH-STRENGTH BOLTS (SNUG-TIGHT) - INSPECTION TASKS PRIOR TO BOLTING

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: DOCUMENTATION AND ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS.

STRUCTURAL STEEL HIGH-STRENGTH BOLTS (SNUG-TIGHT) - INSPECTION TASKS DURING BOLTING

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: DOCUMENTATION OF ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS.

RENOVATION Wranglers logo and contact information: Owner: Renovation Wranglers, 102 E 26th St, Bryan, TX 77803. Architect of Record: LKB Architecture, 2929 Allen Pkwy Suite 200, Houston, TX 77019.

DUDDLEY logo and contact information: Structural: Dudley, 6102 Imperial Loop Drive, College Station, TX 77845.

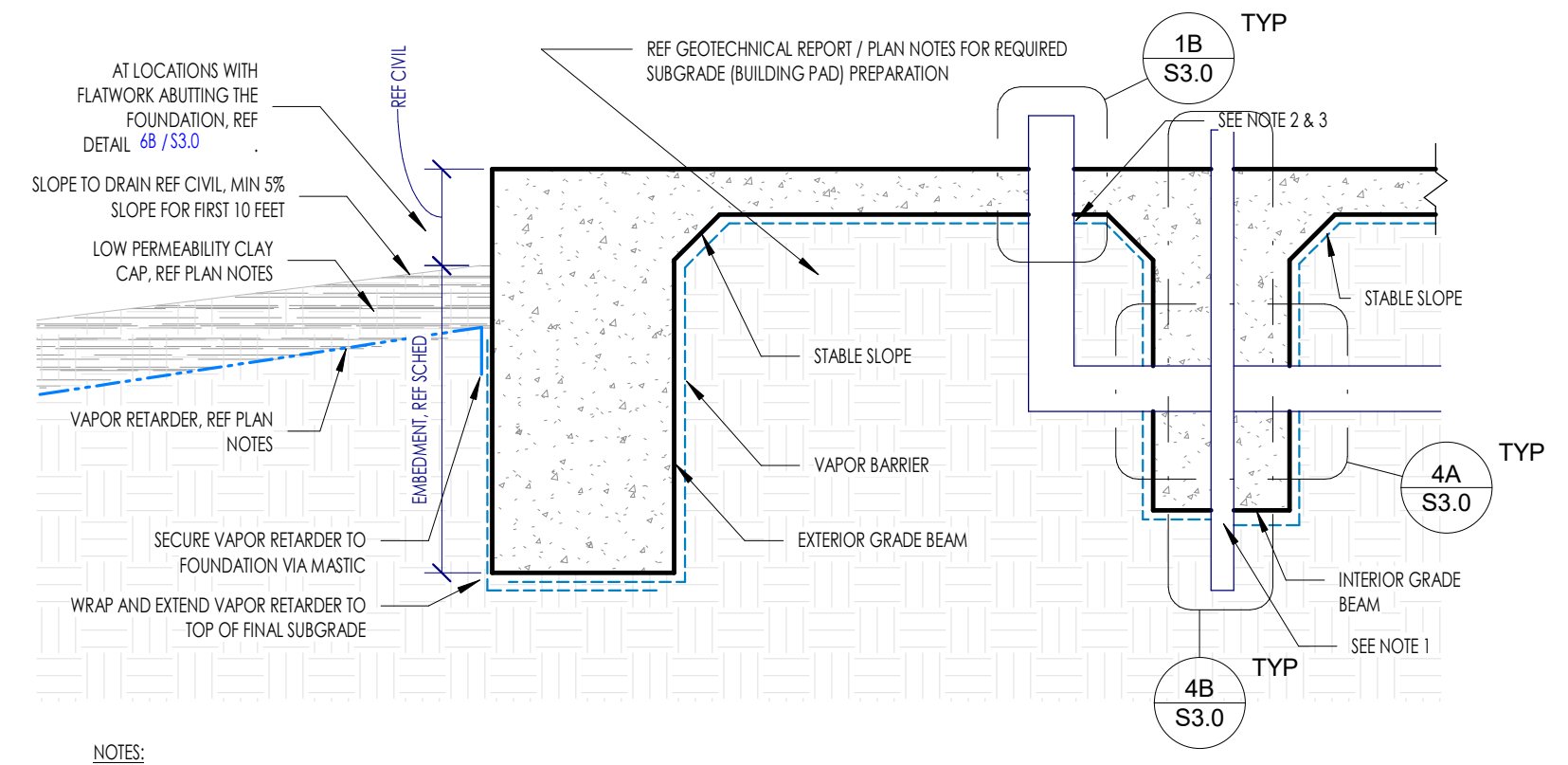
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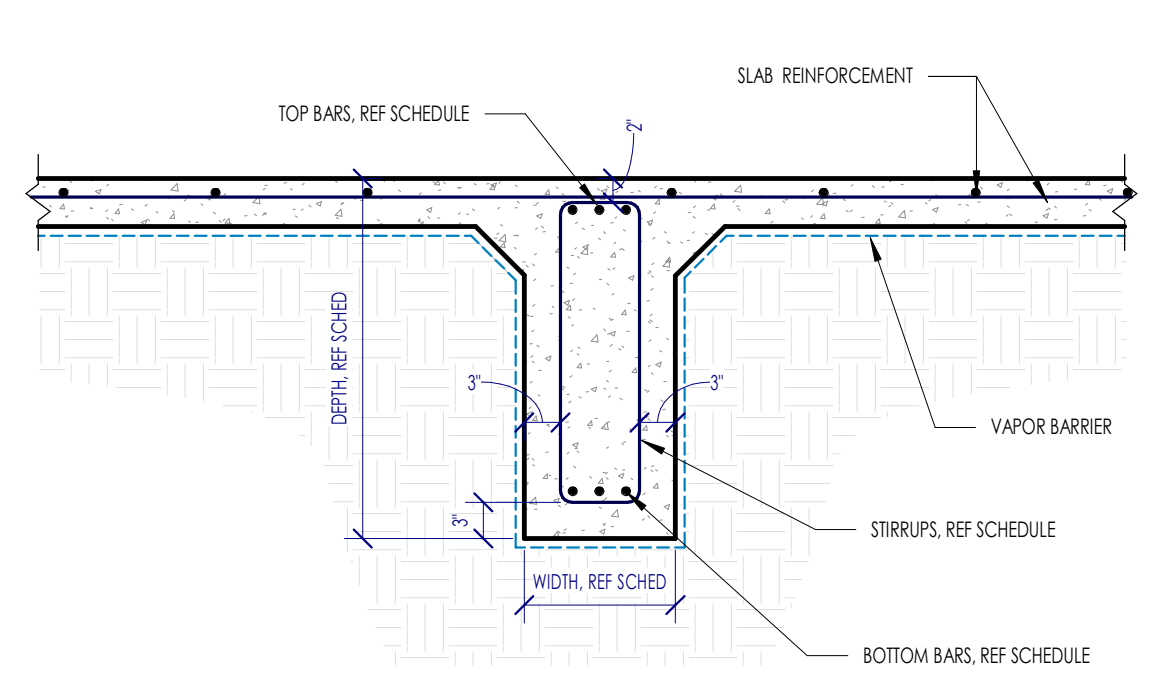
openingdesign logo and contact information: Architect: OpeningDesign, 17 S Fairchild | FL 7, Madison, WI 53703.

Red circular stamp: 06/19/2022 Issued for Permit. Includes a grid of red circles.

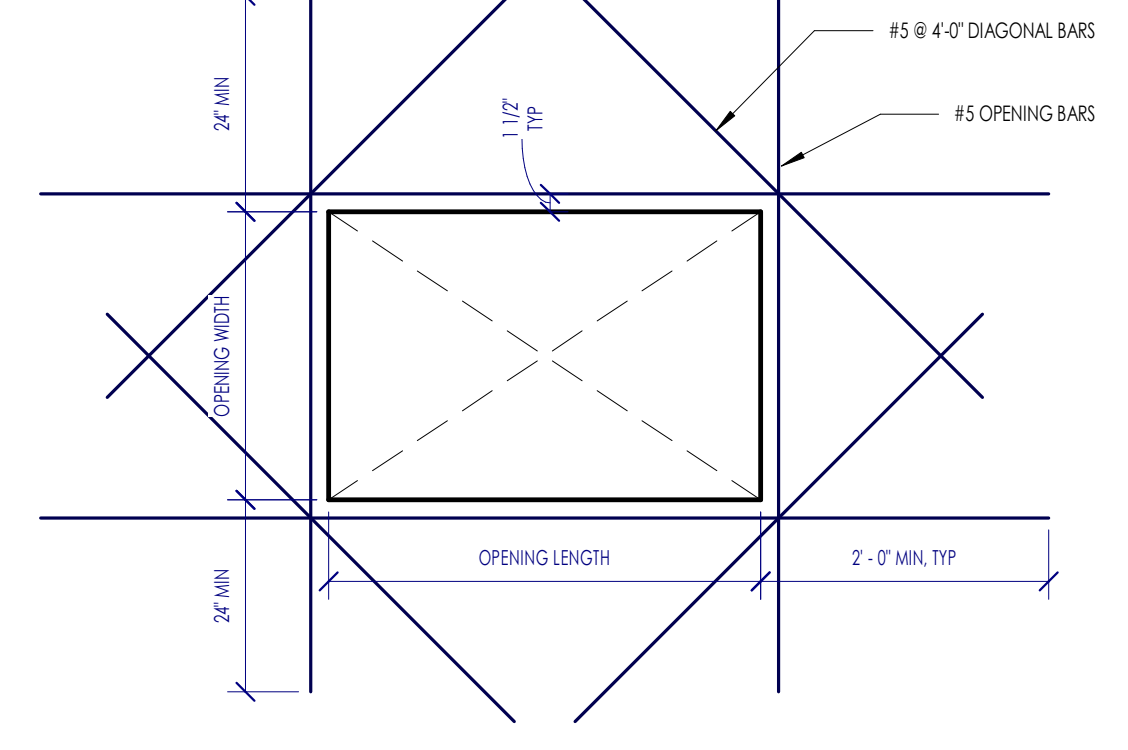
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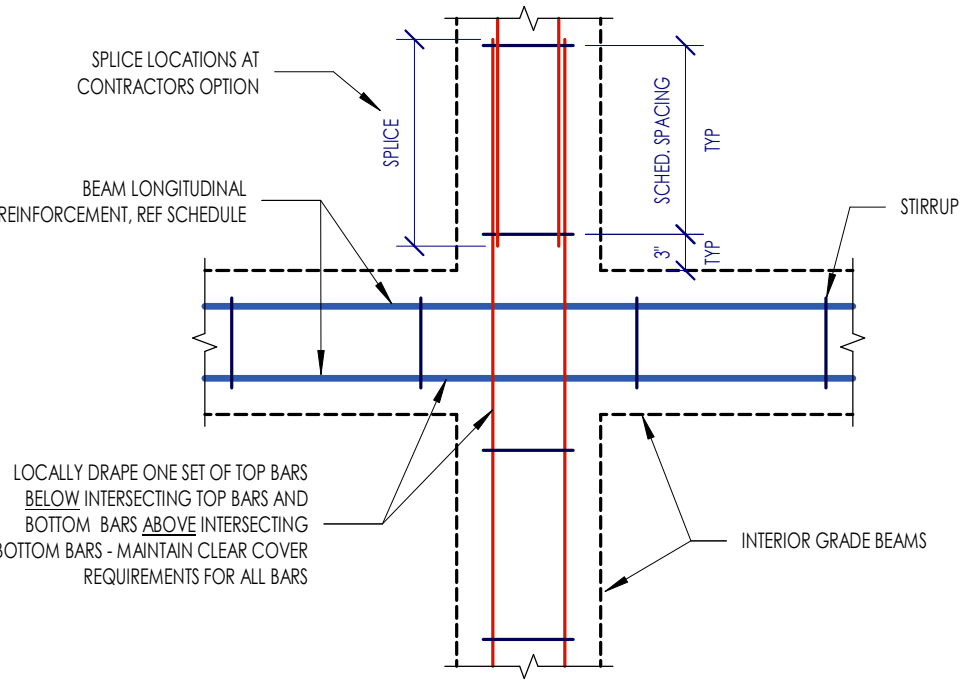
4B S3.0 TYPICAL SUBGRADE AND VAPOR RETARDER PREPARATION



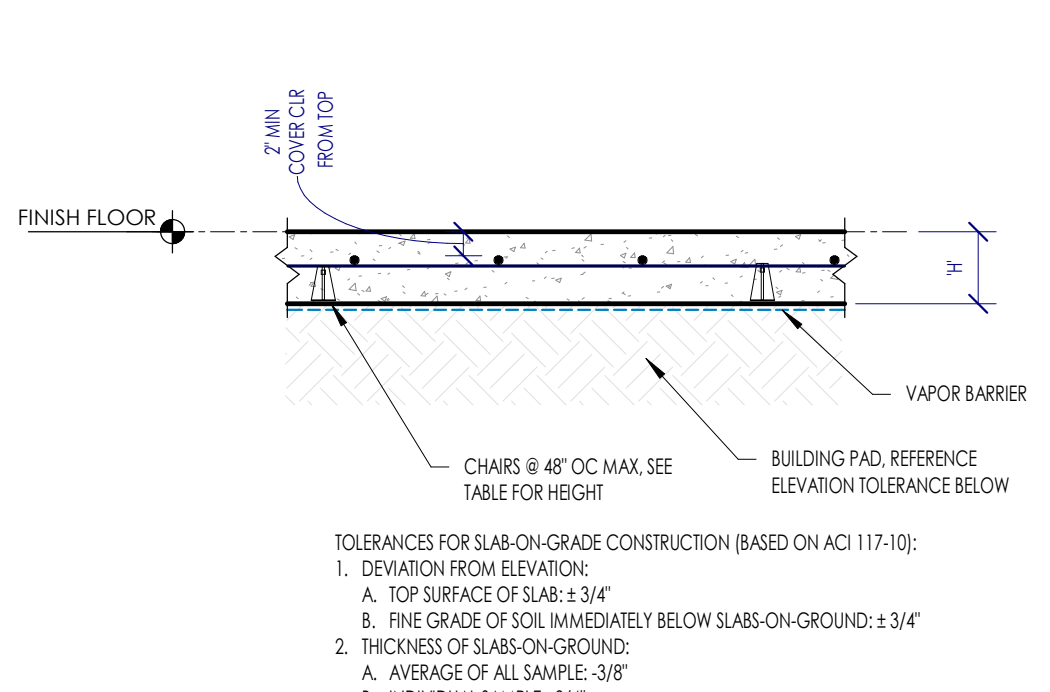
2D S3.0 TYPICAL INTERIOR GRADE BEAM



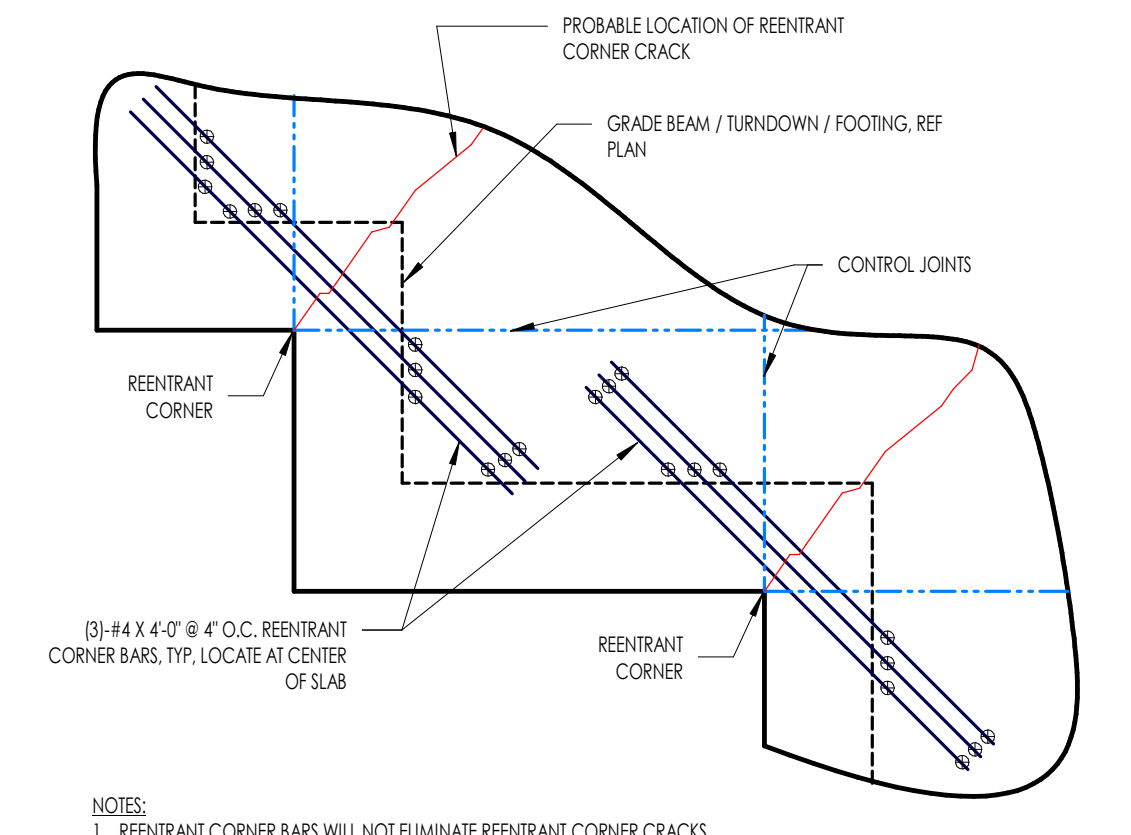
1D S3.0 TYPICAL REINFORCEMENT AT SLAB BLOCKOUT



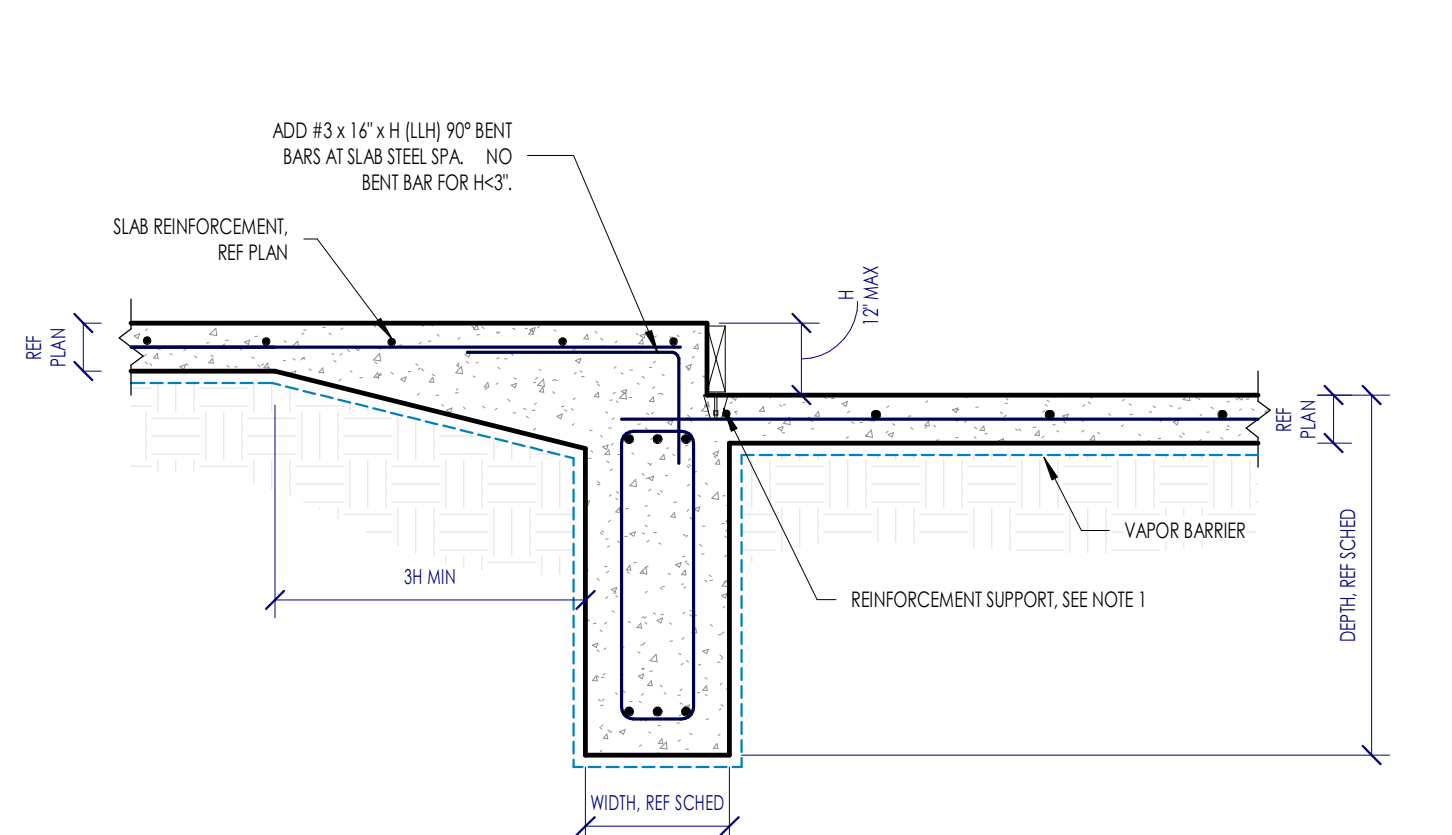
6C S3.0 TYPICAL INTERIOR BEAM INTERSECTION



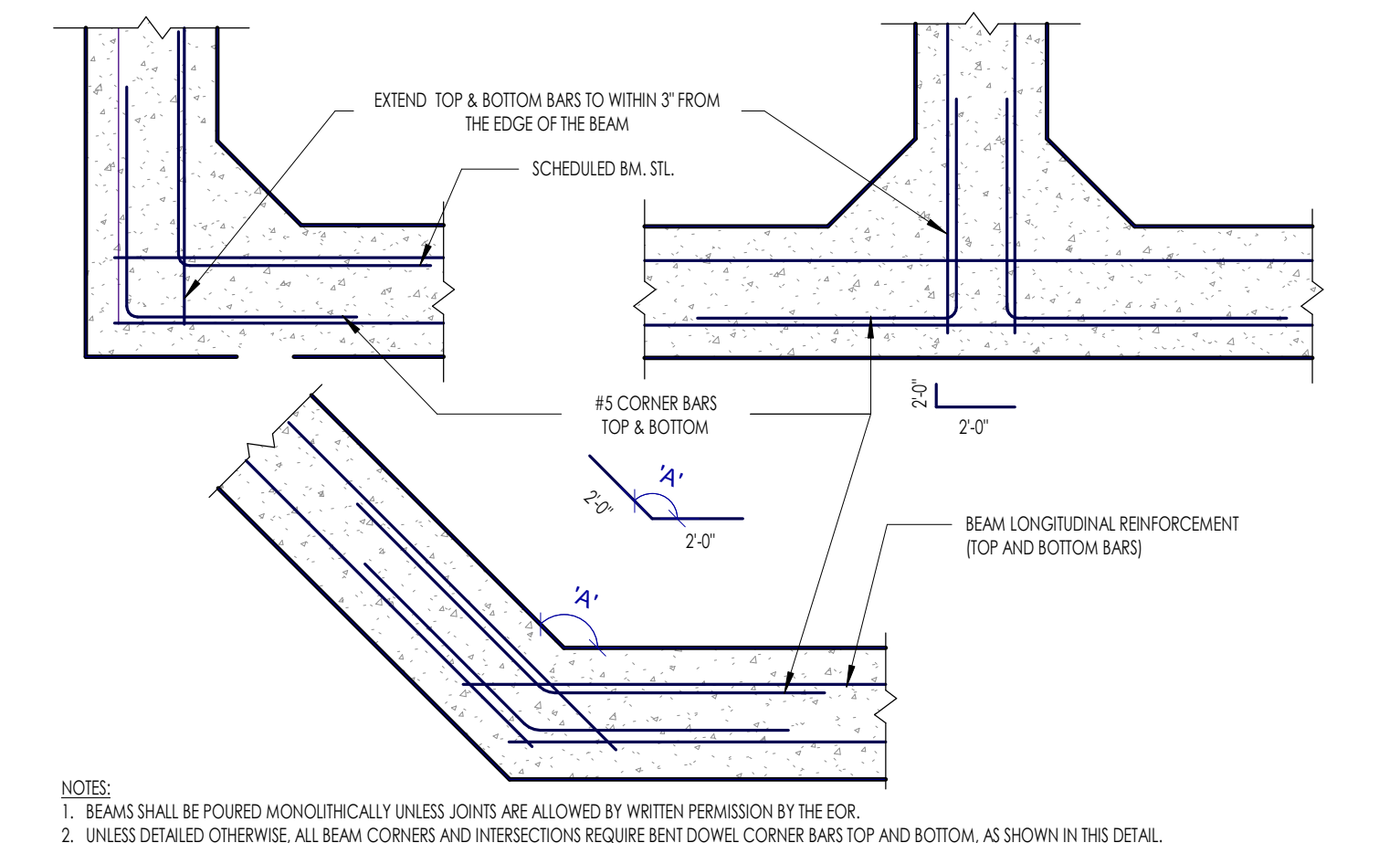
5C S3.0 TYPICAL SLAB-ON-GRADE SECTION



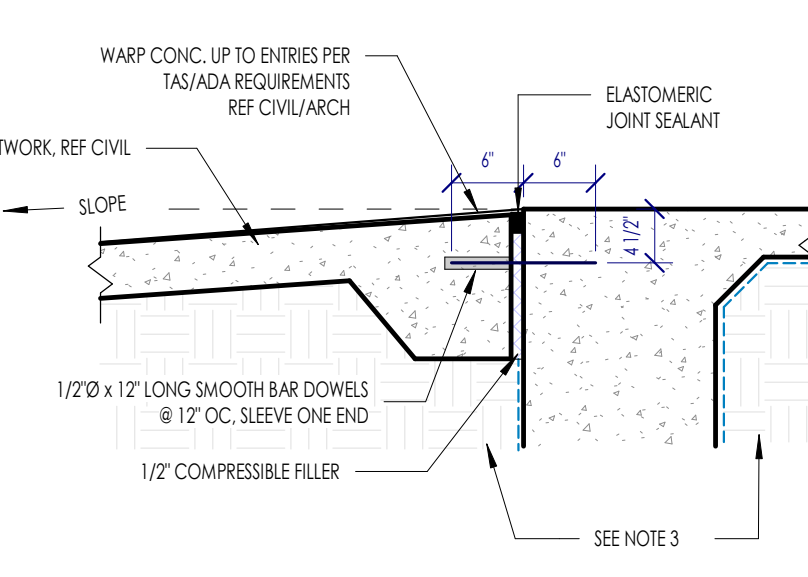
4C S3.0 TYPICAL REENRANT CORNER BARS



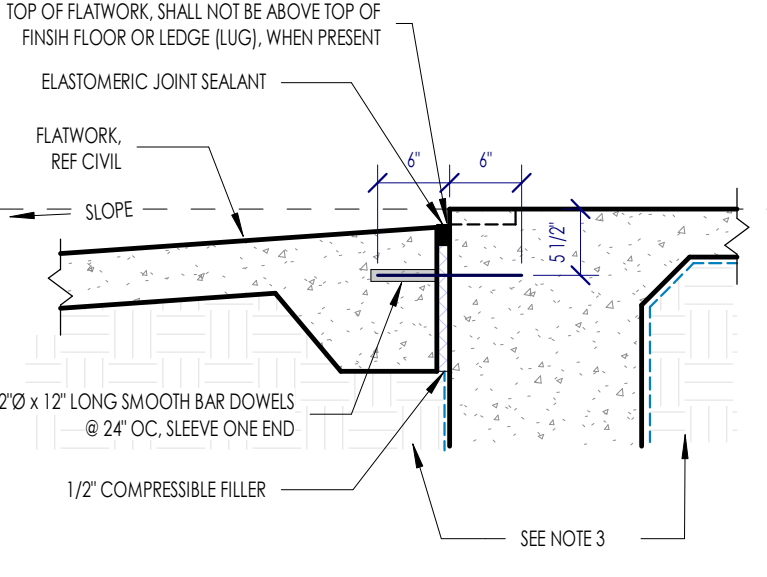
3C S3.0 TYPICAL SLAB DROP AT GRADE BEAM



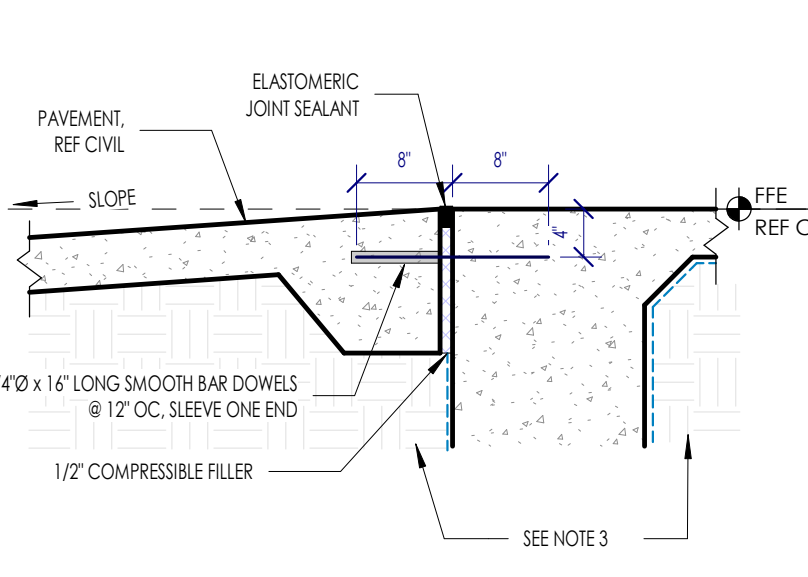
1C S3.0 TYPICAL CORNER BARS



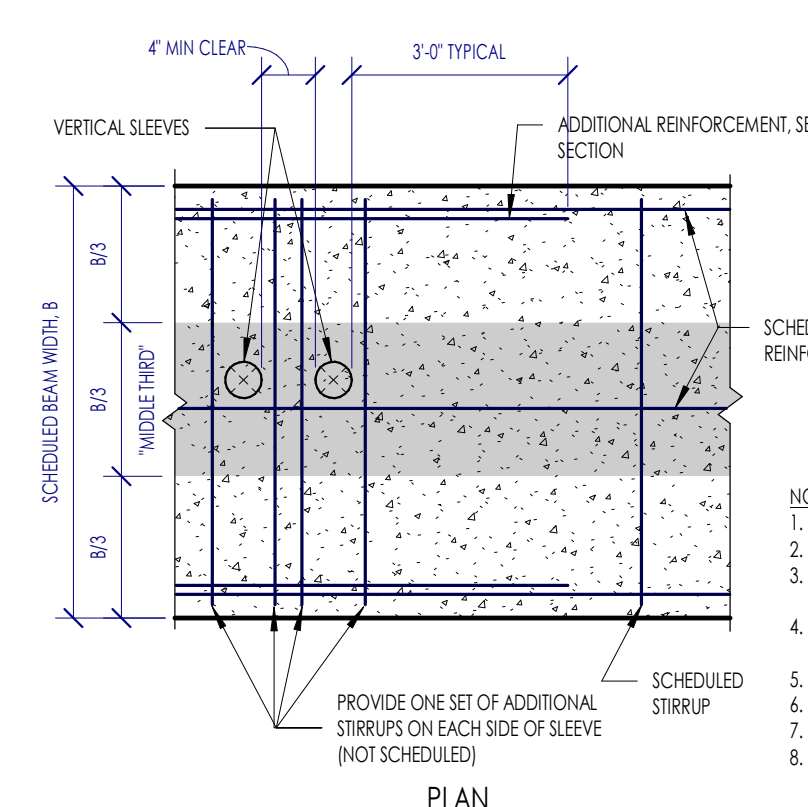
FLATWORK AT ENTRY DOOR



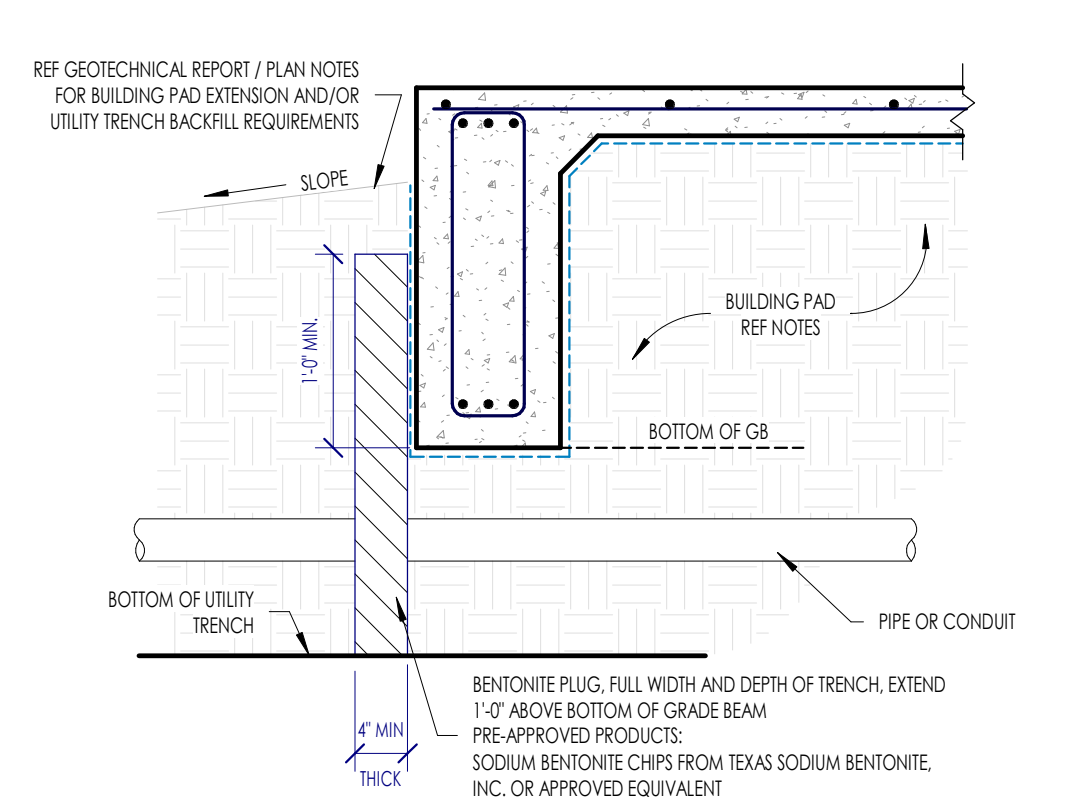
FLATWORK NOT AT ENTRY DOOR



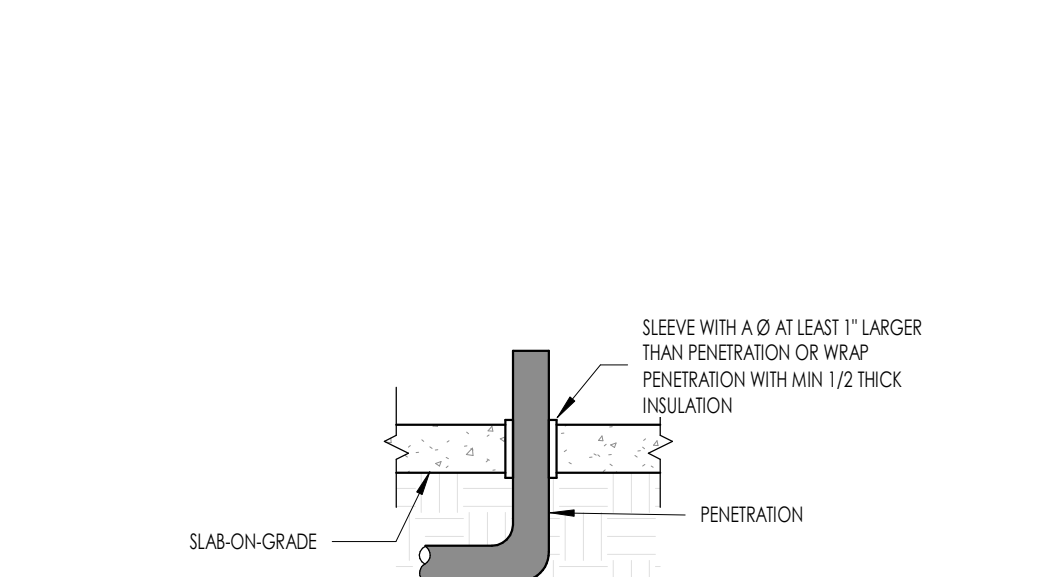
AT PAVEMENT (DRIVE-IN)



4B S3.0 TYPICAL VERTICAL PENETRATION IN GRADE BEAM



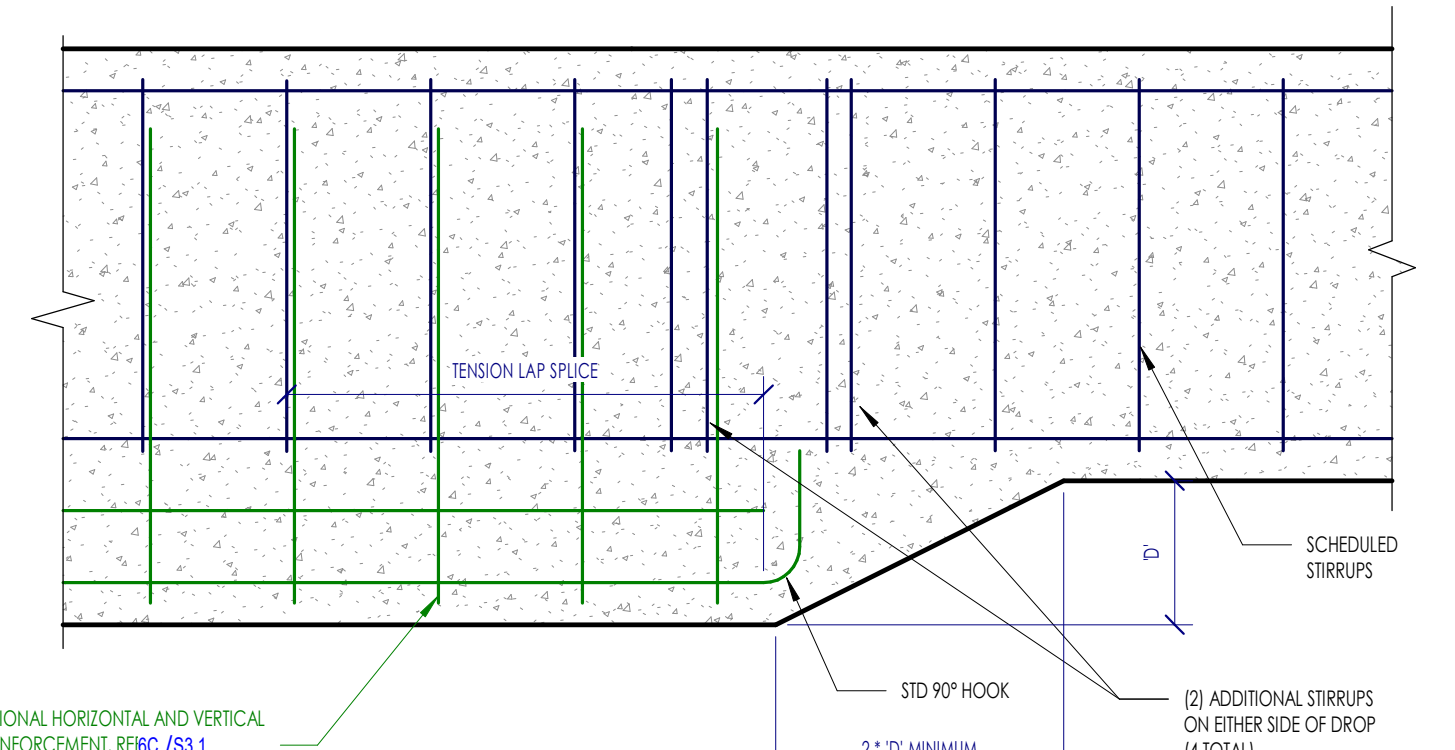
2B S3.0 TYPICAL UTILITY TRENCH UNDER BUILDING PAD BENTONITE PLUG AT EXTERIOR BEAM



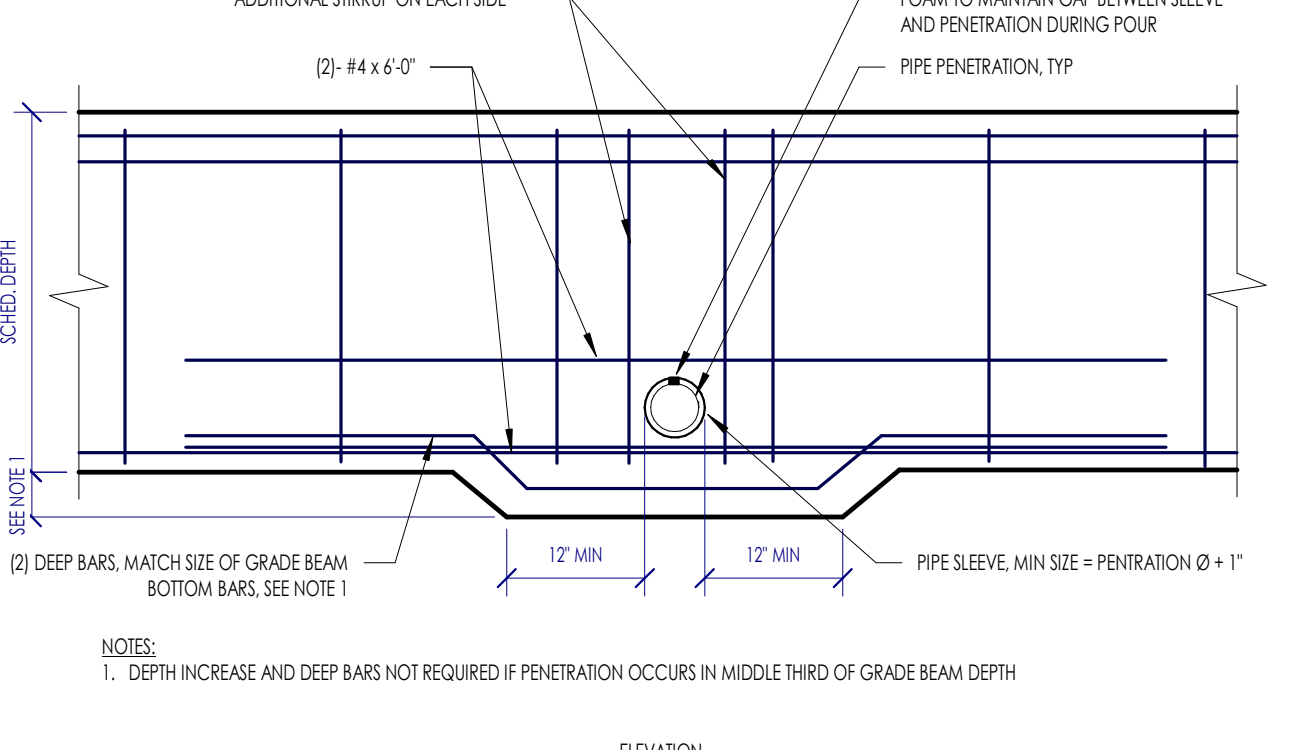
1B S3.0 VERTICAL PENETRATION THROUGH SLAB-ON-GRADE

NOTES:
1. CONTRACTOR TO SUBMIT TO OWNER, ARCHITECT AND ENGINEER THE PRODUCT DATA FOR THE ELASTOMERIC JOINT SEALANT WHICH MUST INCLUDE A RECOMMENDED MAINTENANCE PROGRAM FOR THE SEALANT.
2. REFERENCE ARCHITECTURE / CIVIL FOR ADA REQUIREMENTS, TOP OF FLATWORK / PAVEMENT.
3. BUILDING PAD SUBGRADE IMPROVEMENT TO CONTINUE FOR A MINIMUM OF 3' OUTSIDE THE FOUNDATION UNDER FLATWORK / PAVEMENT.

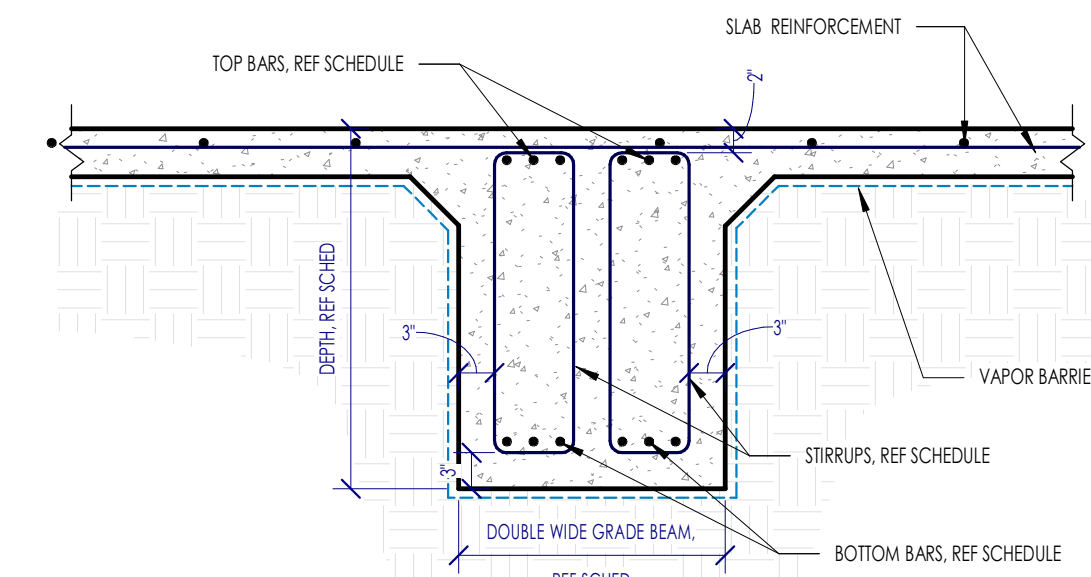
4B S3.0 TYPICAL FLATWORK / PAVEMENT DOWELS AT BUILDING



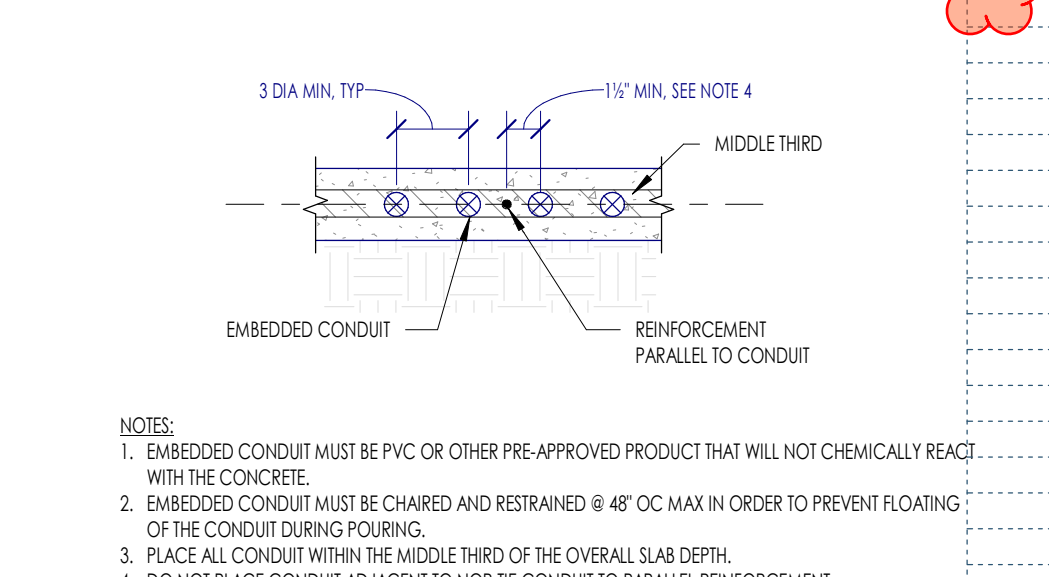
6A S3.0 TYPICAL DROP TRANSITION IN GRADE BEAM - VERTICAL MOISTURE BARRIER



4A S3.0 TYPICAL HORIZONTAL PENETRATION IN BEAM



2A S3.0 TYPICAL DOUBLE WIDE INTERIOR GRADE BEAM



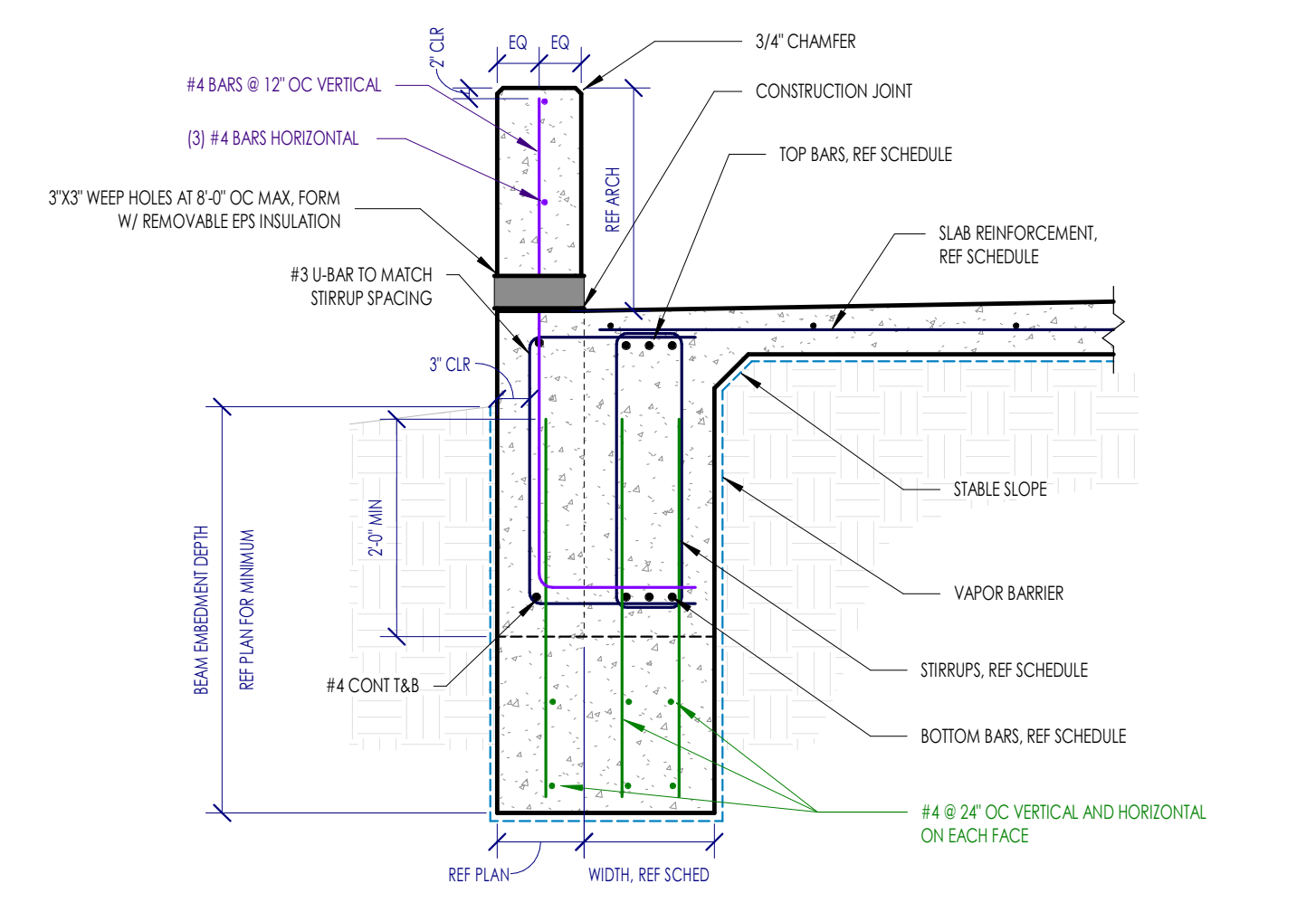
1A S3.0 TYPICAL CONDUITS EMBEDDED IN SLAB-ON-GRADE

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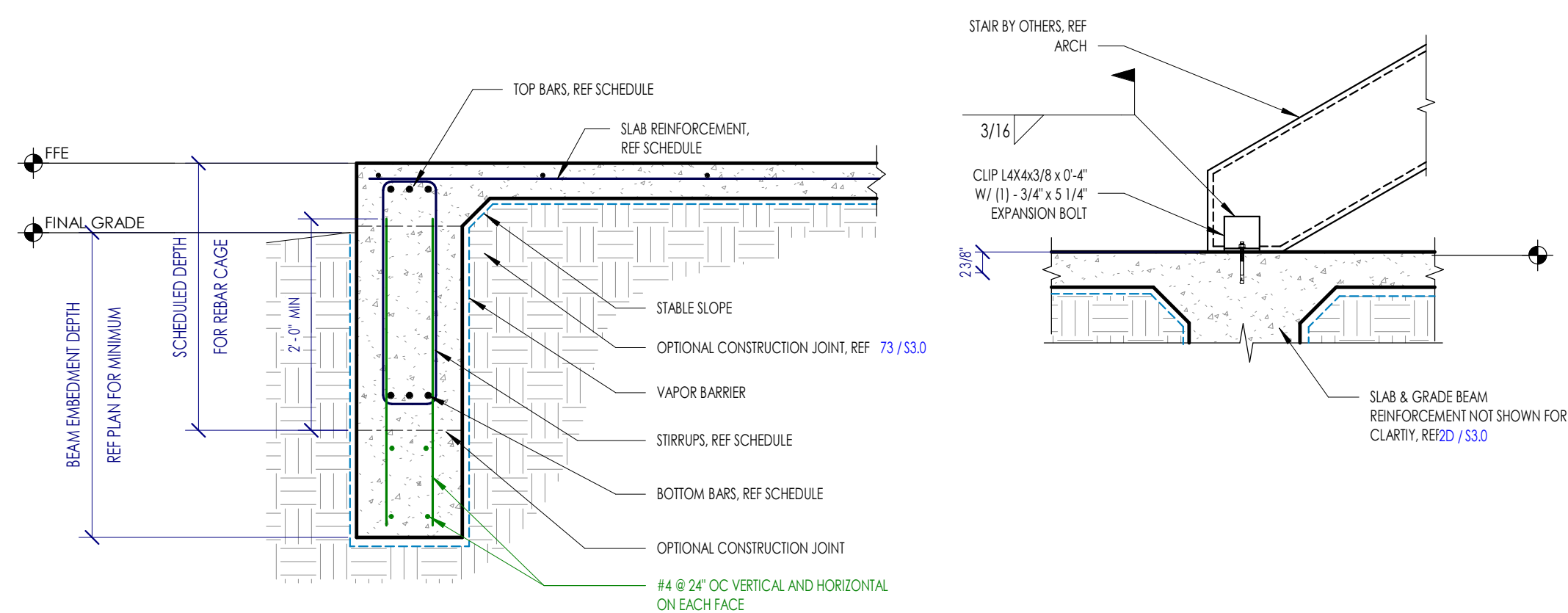
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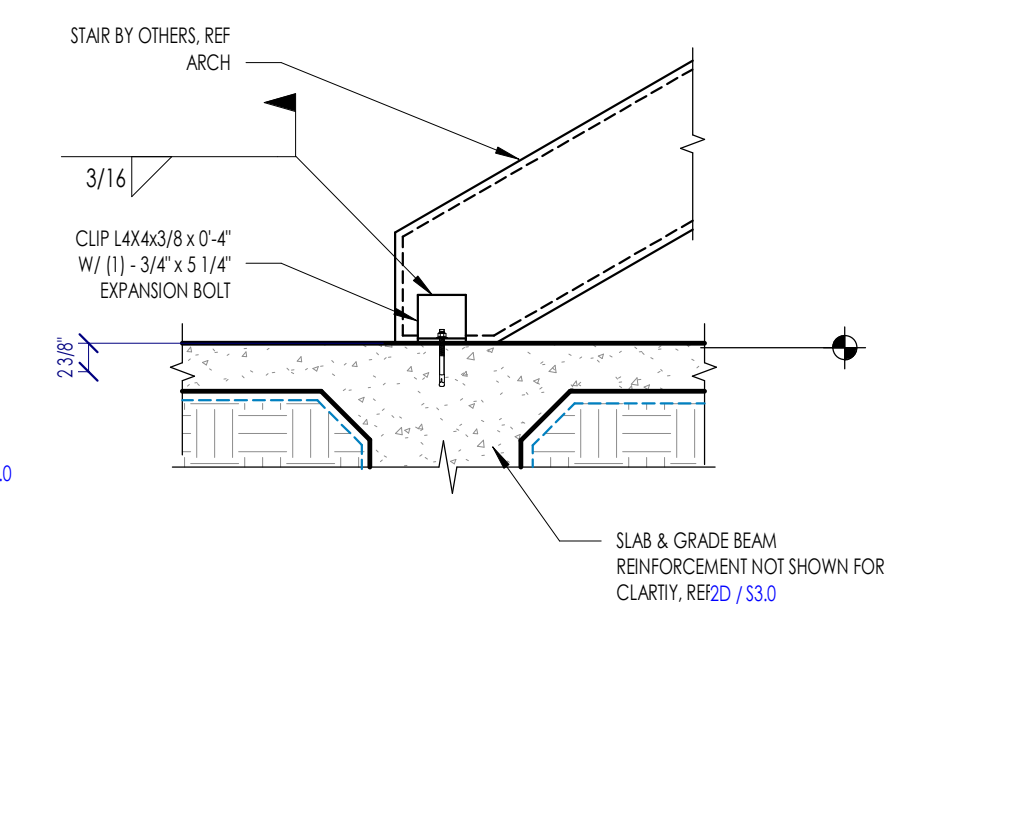
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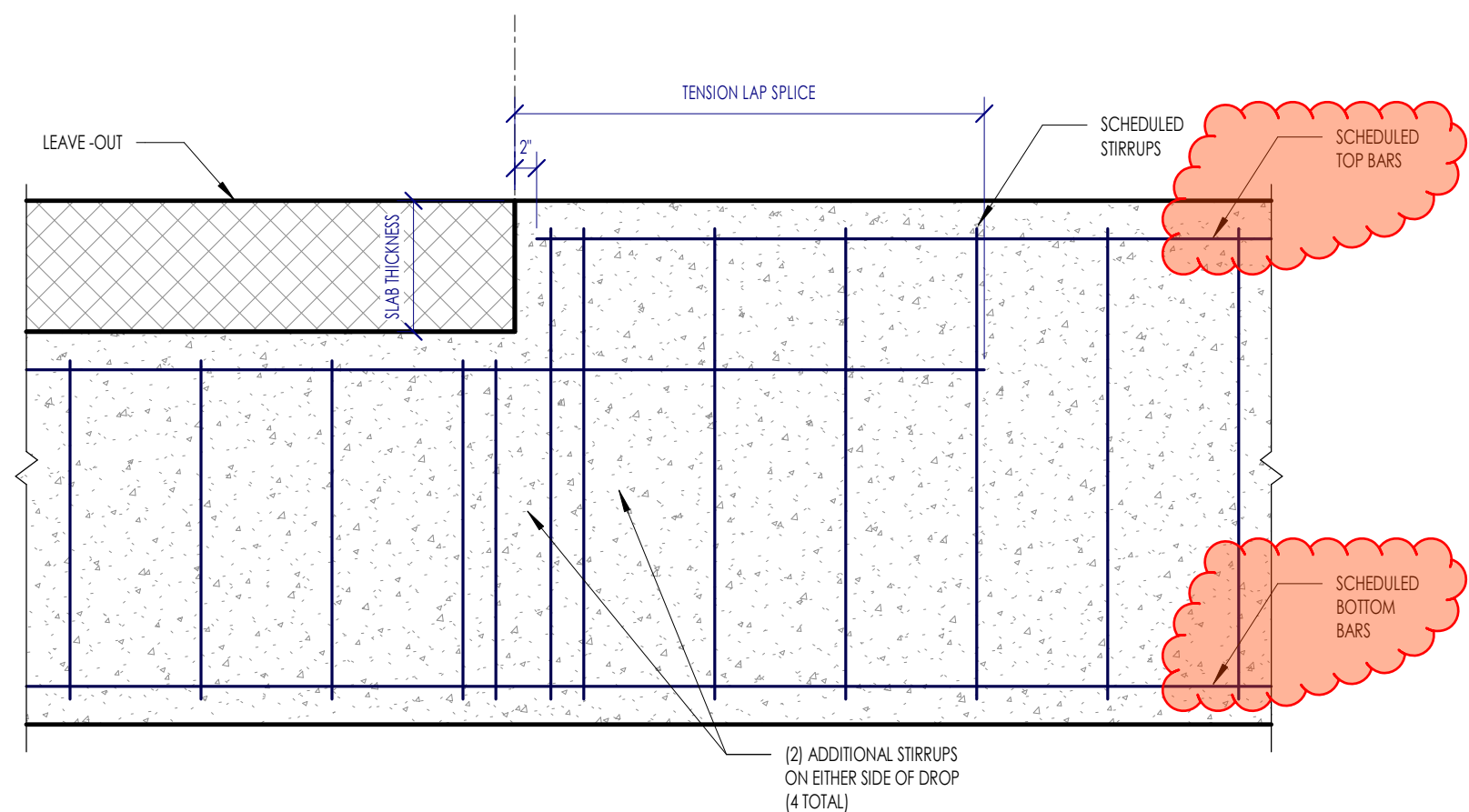
1D S3.1 TYPICAL EXTERIOR WIDENED GRADE BEAM AT CURB - VERTICAL MOISTURE BARRIER



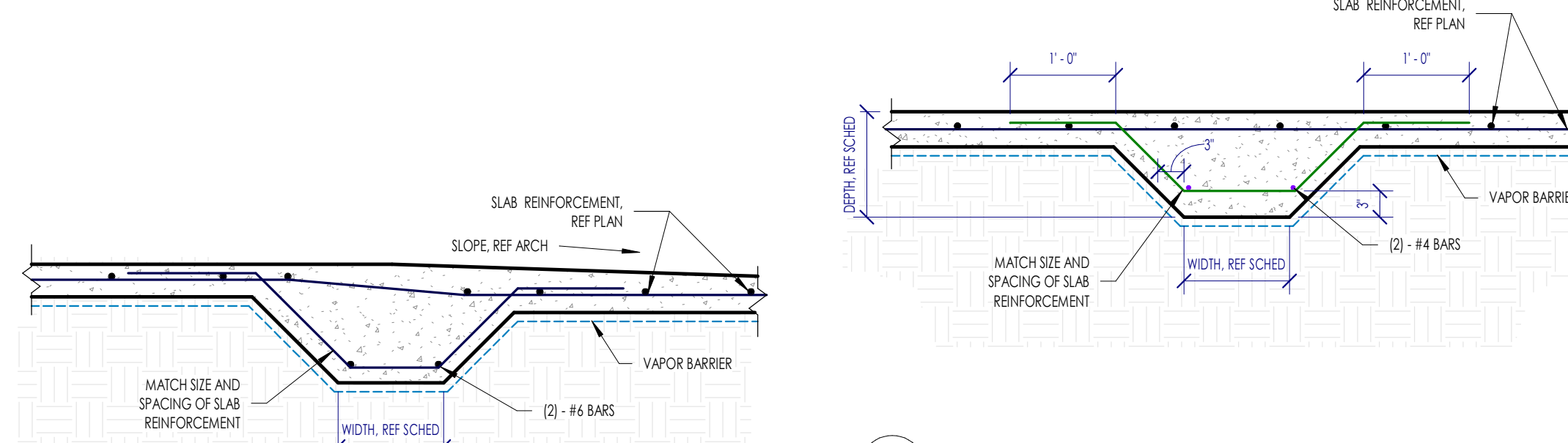
6C S3.1 TYPICAL EXTERIOR GRADE BEAM - VERTICAL MOISTURE BARRIER



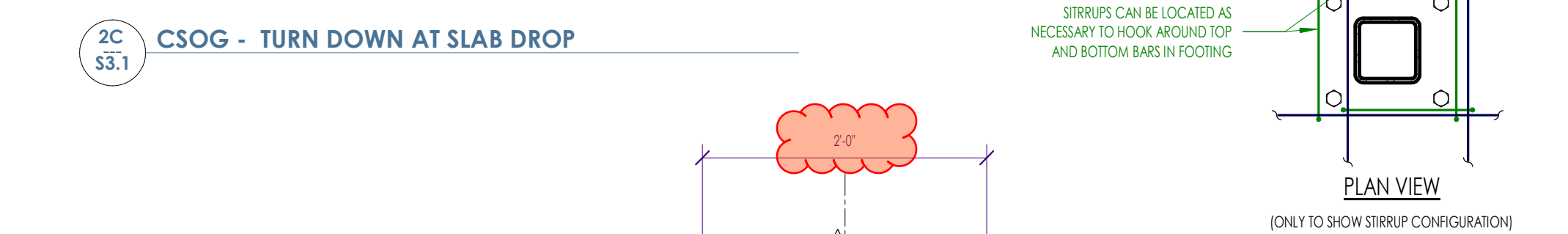
5C S3.1 TYPICAL GRADE BEAM AT STEEL STAIRS



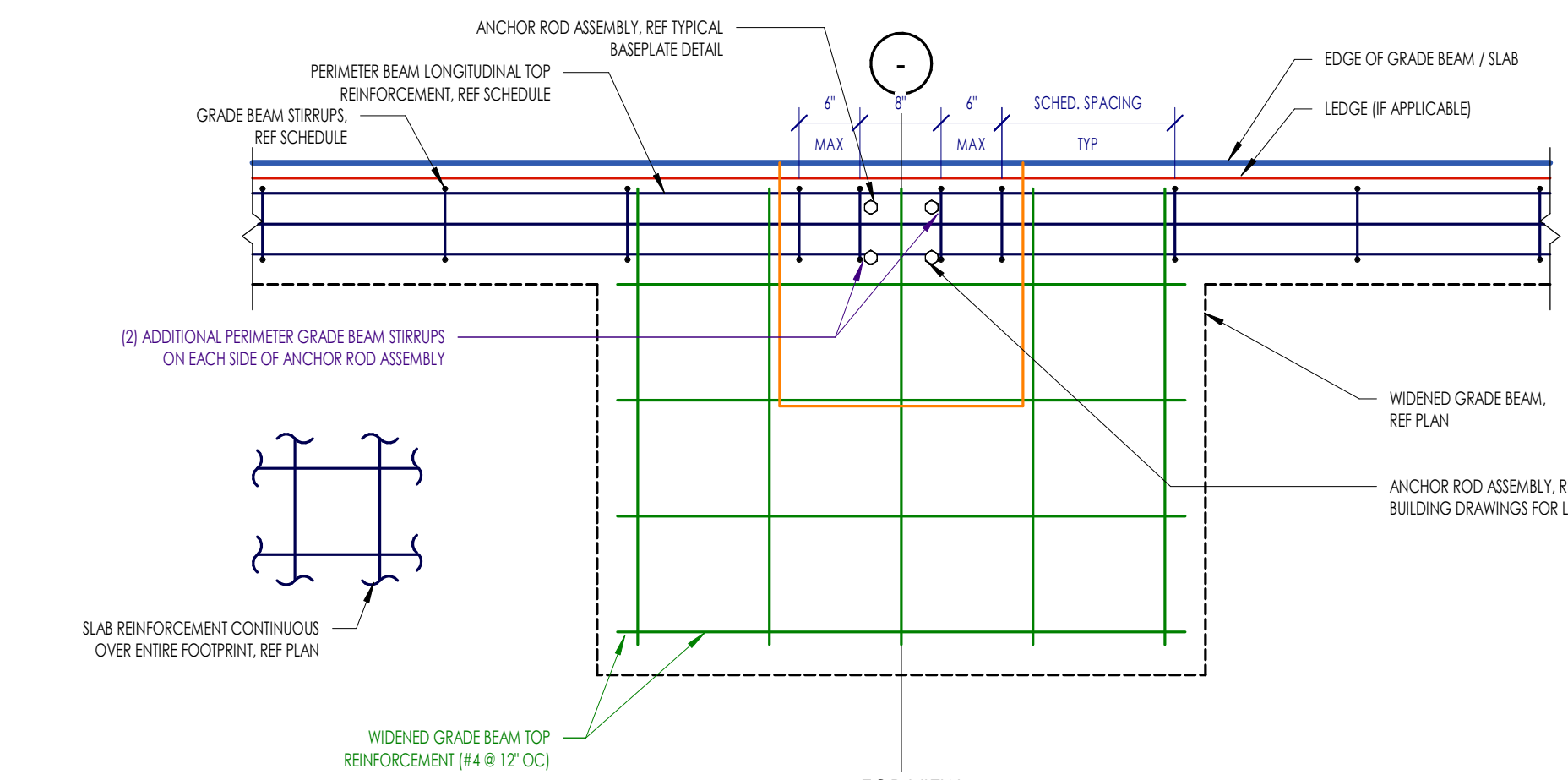
4C S3.1 TYPICAL DROP TRANSITION IN GRADE BEAM TOP REINFORCEMENT AT SLAB LEAVE-OUT



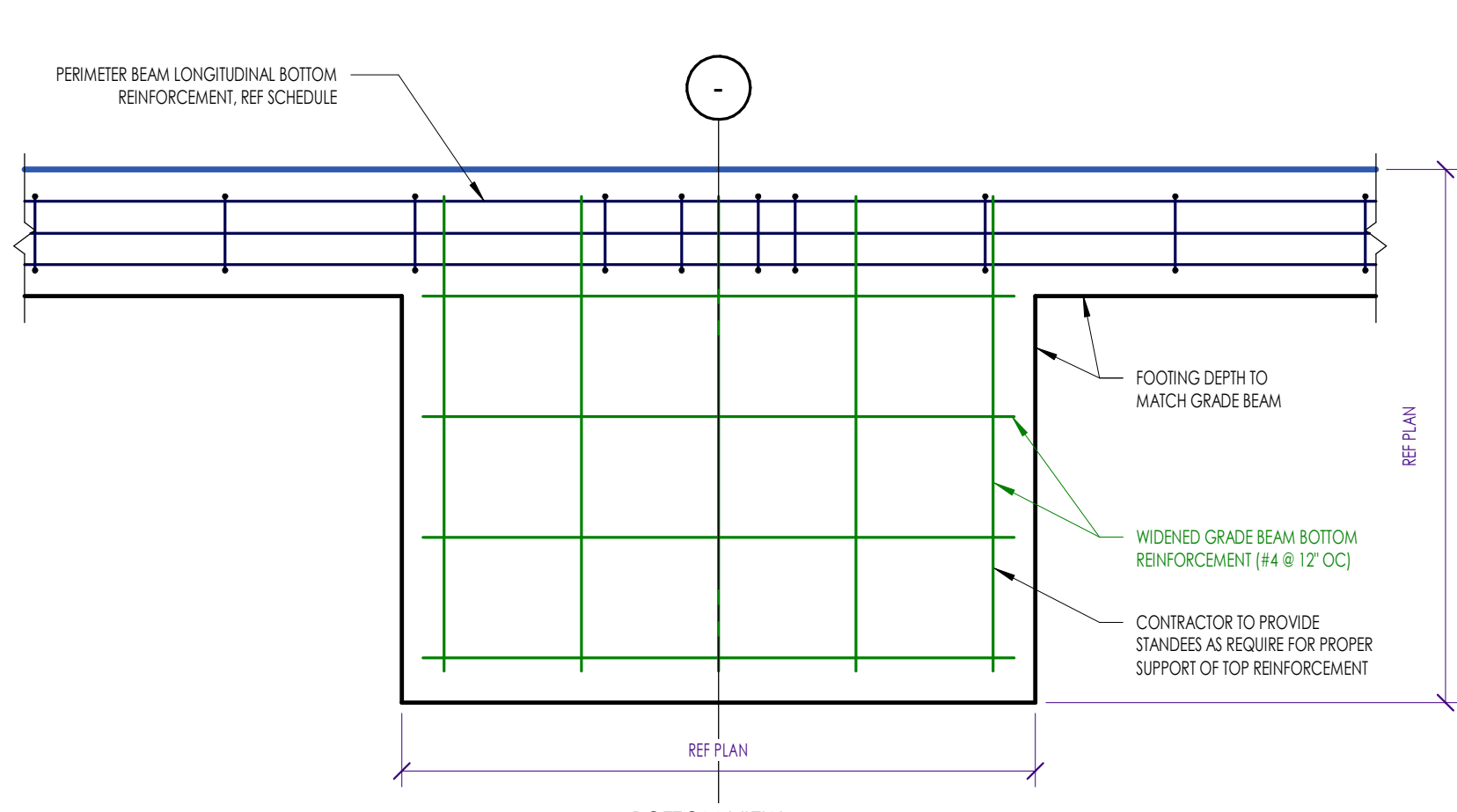
1C S3.1 TYPICAL TURN DOWN BEAM



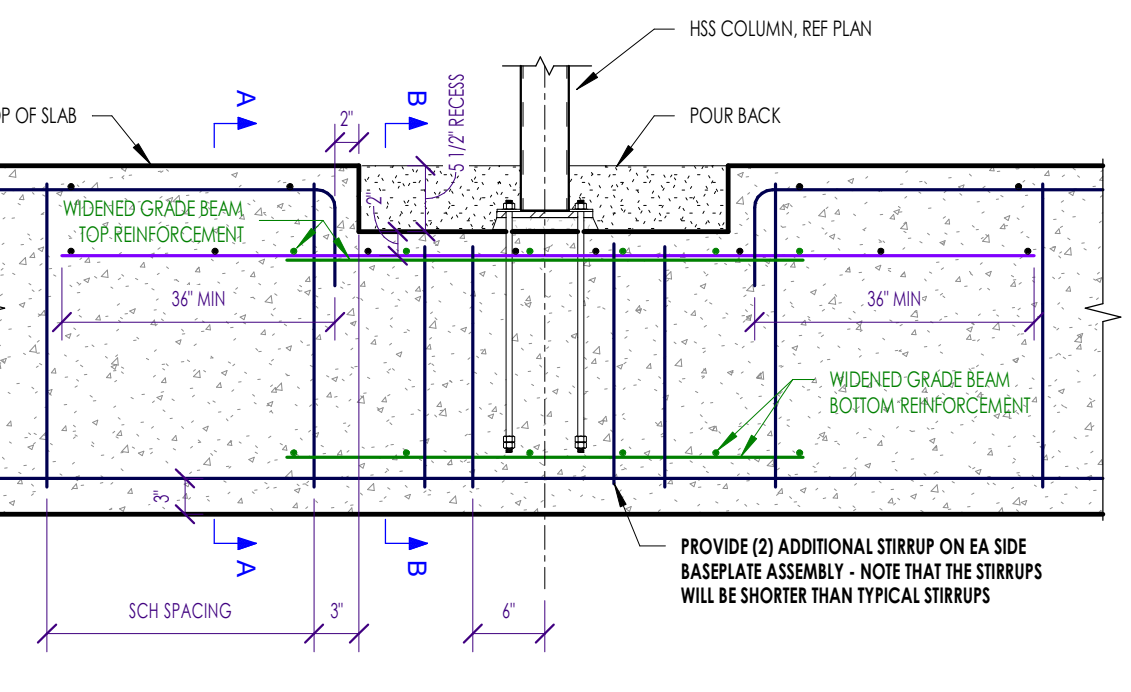
2C S3.1 CSOG - TURN DOWN AT SLAB DROP



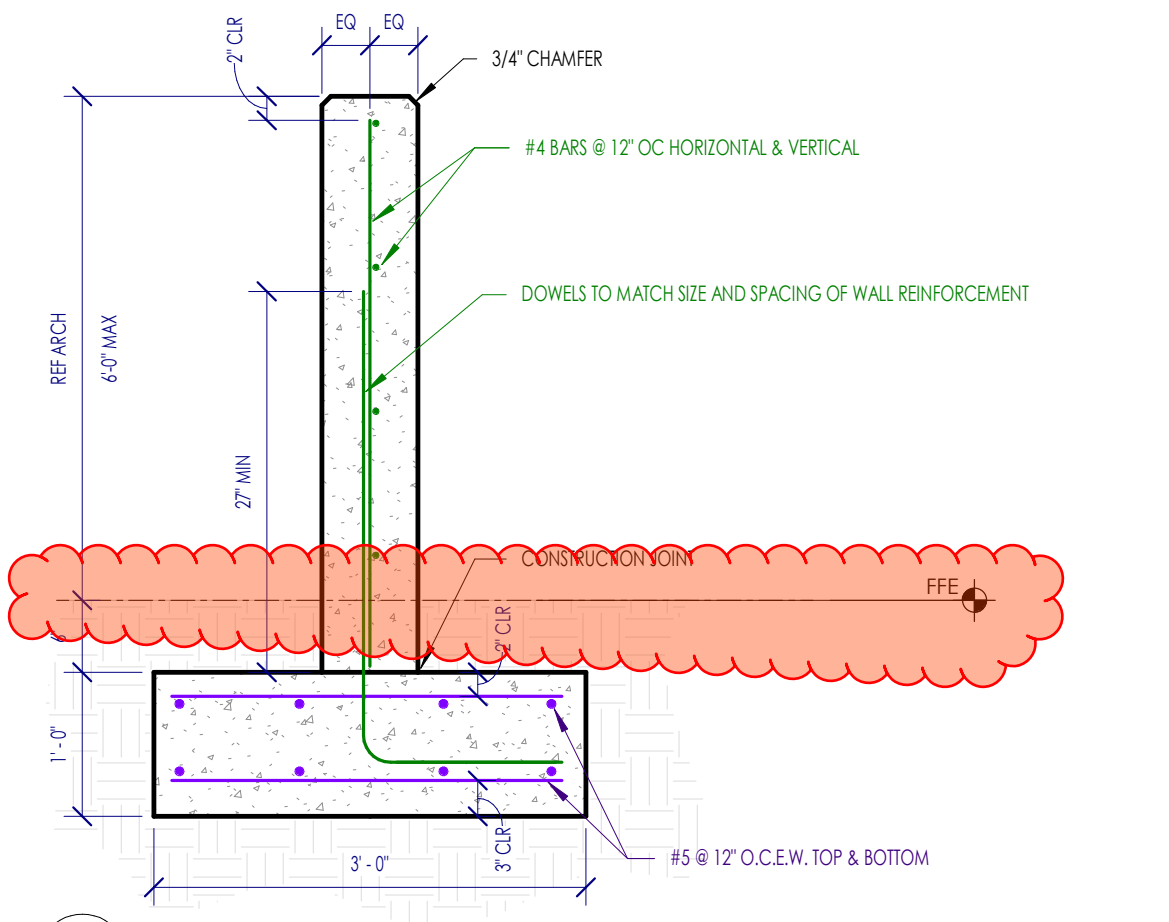
6B S3.1 TYPICAL WIDENED FOOTING AT COLUMN - EMBEDDED BASE PLATE



4C S3.1 TYPICAL DROP TRANSITION IN GRADE BEAM TOP REINFORCEMENT AT SLAB LEAVE-OUT



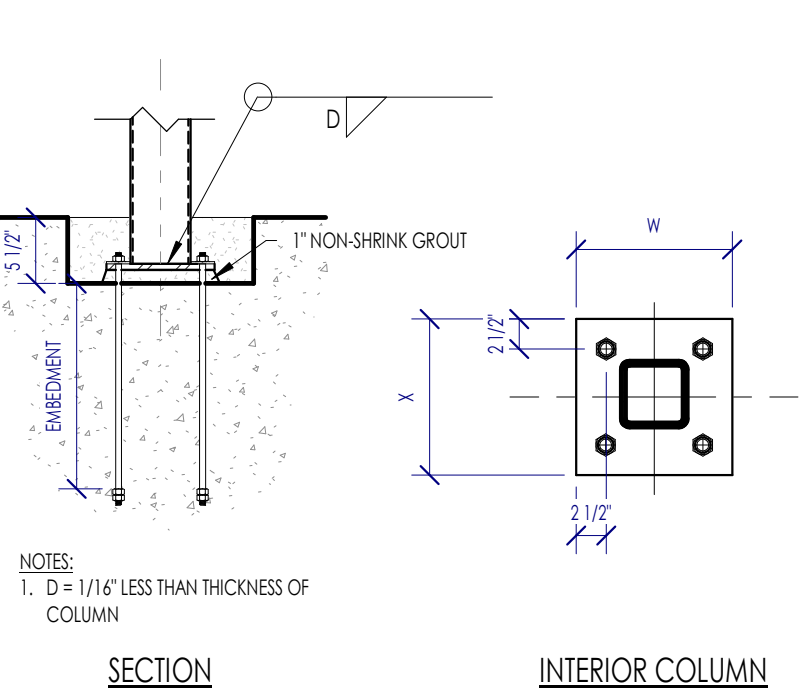
2B S3.1 TYPICAL SPREAD FOOTING AT INTERIOR COLUMN



4A S3.1 TYPICAL MOMENT SIGN FOUNDATION

COLUMN	BASE PLATE DIMENSIONS			CONDITION	ANCHOR BOLTS		
	X	W	T		NO./TYPE	DIA.	EMBEDMENT
HSS5X5LS	13"	13"	1"	INTERIOR	4/A	1"	1'-0"
HSS8X8	16"	16"	1"	INTERIOR	4/A	1"	1'-0"

5A S3.1 TYPICAL BASEPLATE DETAIL



3A S3.1 TYPICAL ANCHOR ROD

ANCHOR ROD DIAMETER	HOLE DIAMETER	SQUARE PLATE WASHER SIZE	PLATE WASHER THICKNESS	TYPE B ANCHOR PLATE
5/8"	1.316"	1 1/2"	1/4"	PL17X10-4
3/4"	1.516"	2"	1/4"	PL17X10-4
7/8"	1.916"	2 1/2"	5/16"	PL17X10-4
1"	1.1316"	3"	3/8"	PL19X10-5
1 1/2"	2.516"	3 1/2"	1/2"	PL19X10-5

- NOTES:
1. ALL TYPE A ANCHOR RODS SHALL BE F1554 GRADE 36.
 2. ALL TYPE B ANCHOR RODS SHALL BE F1554 GRADE 55.1.
 3. PLATE WASHERS MUST BE WELDED TO THE BASE PLATE WITH MINIMUM 3/16" FLLET WELD ALL-AROUND.
 4. EMBEDMENT DEPTH ARE PRELIMINARY. FINAL EMBEDMENT TO BE PROVIDED AFTER REVIEW OF METAL BUILDING REACTIONS.
 5. ALL ANCHOR ROD HOLES SHALL ADHERE TO AISC DESIGN GUIDE 01 - TABLE 2.3.
 6. THE DOUBLE NUT MAY BE OMITTED IF THE NUT IS TACK WELDED TO THE ROD.

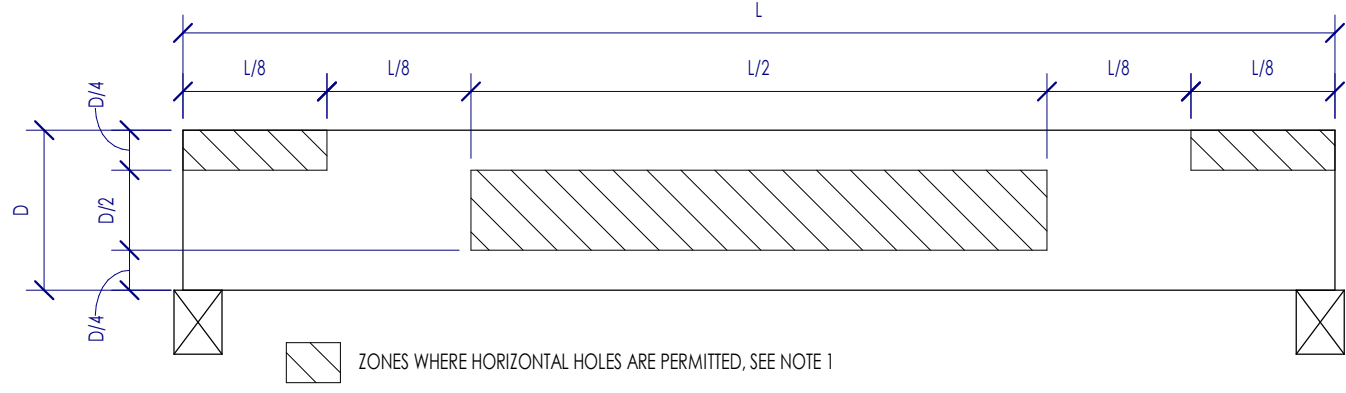
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TYPICAL FASTENING SCHEDULE			
CONNECTION ID	CONNECTION TYPE	FASTENING	FASTENING ORIENTATION
1	JOIST TO BIL OR GIRDER	(1) - 0.131" X 3"	TOENAIL
2	SOLE PLATE TO JOIST OR BLOCKING	0.148" X 3" NAILS @ 12" OC NAILS	FACE NAIL
3	TOP PLATE TO STUD	(1) - 0.131" X 3" NAILS	END NAIL
4	STUD TO SOLE PLATE - OPTION 1	(2) - 1/4" COMMON (2) - 0.131" X 3" NAILS	END NAIL
5	STUD TO SOLE PLATE - OPTION 2	(4) 0.131" X 3" NAILS	TOENAIL
6	DOUBLE/MULTIPLE STUDS	REFERENCE DETAIL 3A/S4.0	FACE NAIL
7	DOUBLE TOP PLATES	0.131" X 3" NAILS @ 12" OC	FACE NAIL
8	DOUBLE TOP PLATE SPICE	REFERENCE DETAIL 3A/S4.0	FACE NAIL
9	BLOCKING BETWEEN JOISTS/RAFTERS TO TOP PLATE	(1) - 0.131" X 3" NAILS	TOENAIL
10	RIM JOIST TO TOP PLATE	0.131" X 3" NAILS @ 6" OC	TOENAIL
11	CeILING JOIST TO TOP PLATE	(1) - 0.131" X 3" NAILS	TOENAIL
12	CeILING JOIST LAP OVER PARTITION	(1) - 0.131" X 3" NAILS	FACE NAIL
13	CeILING JOIST TO PARALLEL RAFTERS	(1) - 0.131" X 3" NAILS	FACE NAIL
14	RAFTER TO TOP PLATE	(1) - 0.131" X 3" NAILS	TOENAIL
15	BUILT-UP CORNER STUDS	0.131" X 3" NAILS @ 14" OC	FACE NAIL
16	BUILT-UP BEAMS	REFERENCE DETAIL 2A/S4.0	FACE NAIL
17	COLLAR TIE TO RAFTER	(1) - 0.131" X 3" NAILS	FACE NAIL
18	JACK RAFTER TO HP	(1) - 0.131" X 3" NAILS	TOENAIL
19	RAFTER TO RIDGE BOARD/BEAM	(1) - 0.131" X 3" NAILS	TOENAIL
20	BLOCKING AT STUDS	(1) - 0.131" X 3" NAILS EACH SIDE	TOENAIL

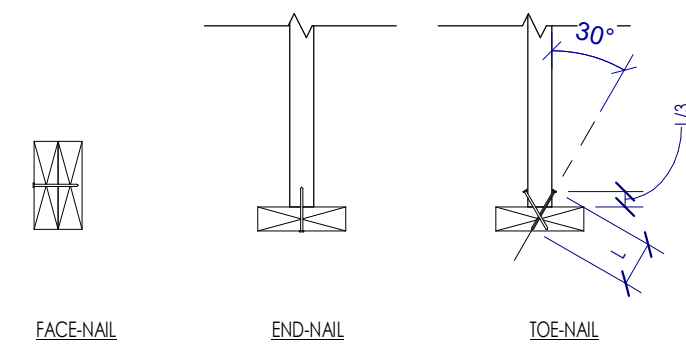
NOTES:
1. THESE CONNECTIONS ARE TO BE APPLIED UNLESS NOTED OTHERWISE IN PLAN SECTION, ELEVATION OR DETAIL VIEWS.

6D S4.0 TYPICAL WOOD FASTENING SCHEDULE

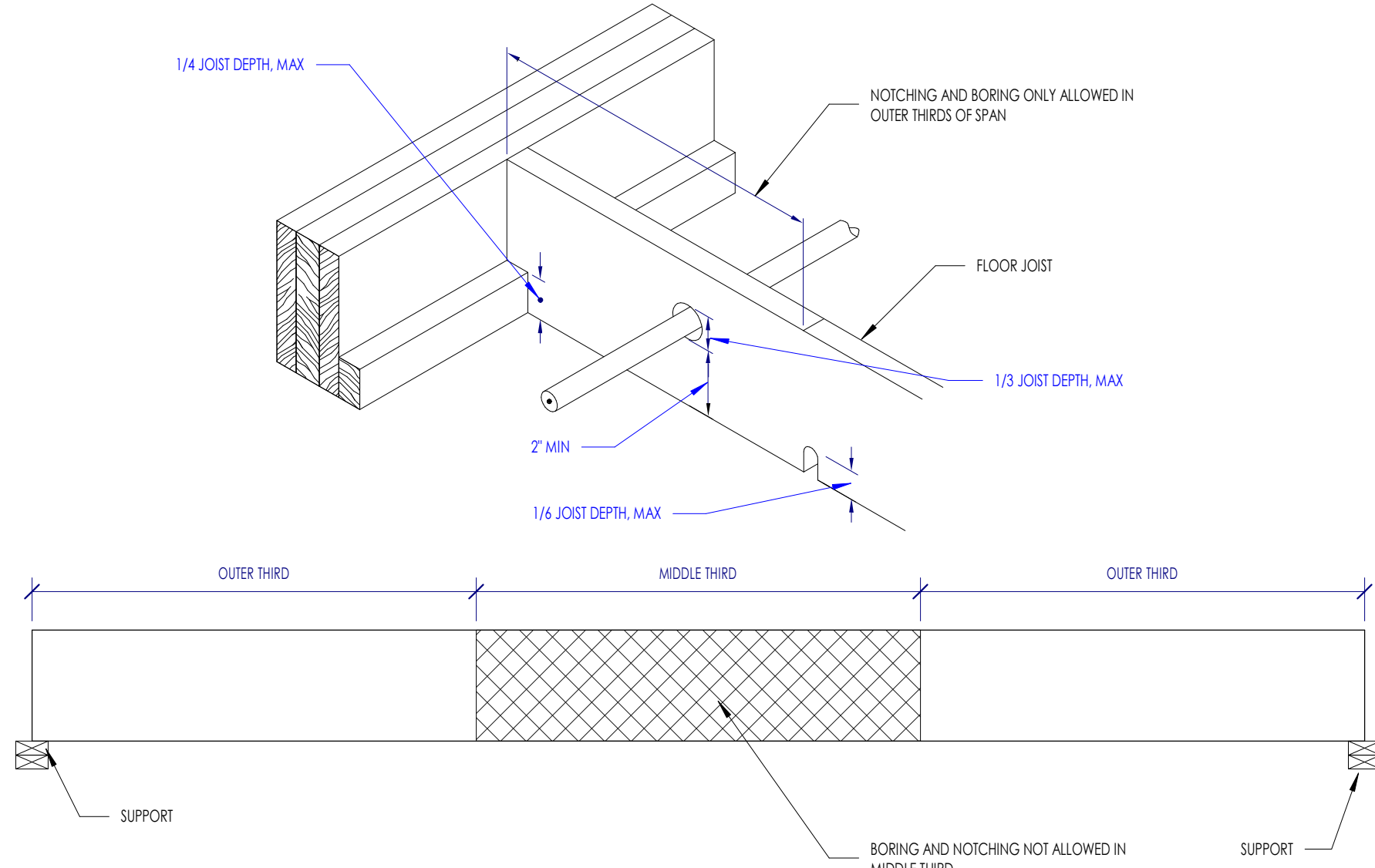


NOTES:
1. HOLE SIZE: THE HOLE DIAMETER SHALL NOT EXCEED 1/4" OR D/10, WHICHEVER IS SMALLER.
2. SPACING: FOR LARGER HOLE DIAMETERS OR FOR HOLES OUTSIDE OF THE PERMITTED ZONES, WRITTEN PERMISSION MUST BE OBTAINED FROM THE EOR.
3. LIMITATIONS: THE ABOVE CRITERIA ONLY APPLY TO SIMPLY SUPPORTED, UNIFORMLY LOADED GLUE LAMINATED BEAMS. FOR BEAMS THAT ARE EITHER CONTINUOUS ACROSS MULTIPLE SPANS OR THAT ARE SUPPORTING NON-UNIFORM LOADS, WRITTEN PERMISSION MUST BE OBTAINED FROM THE EOR.

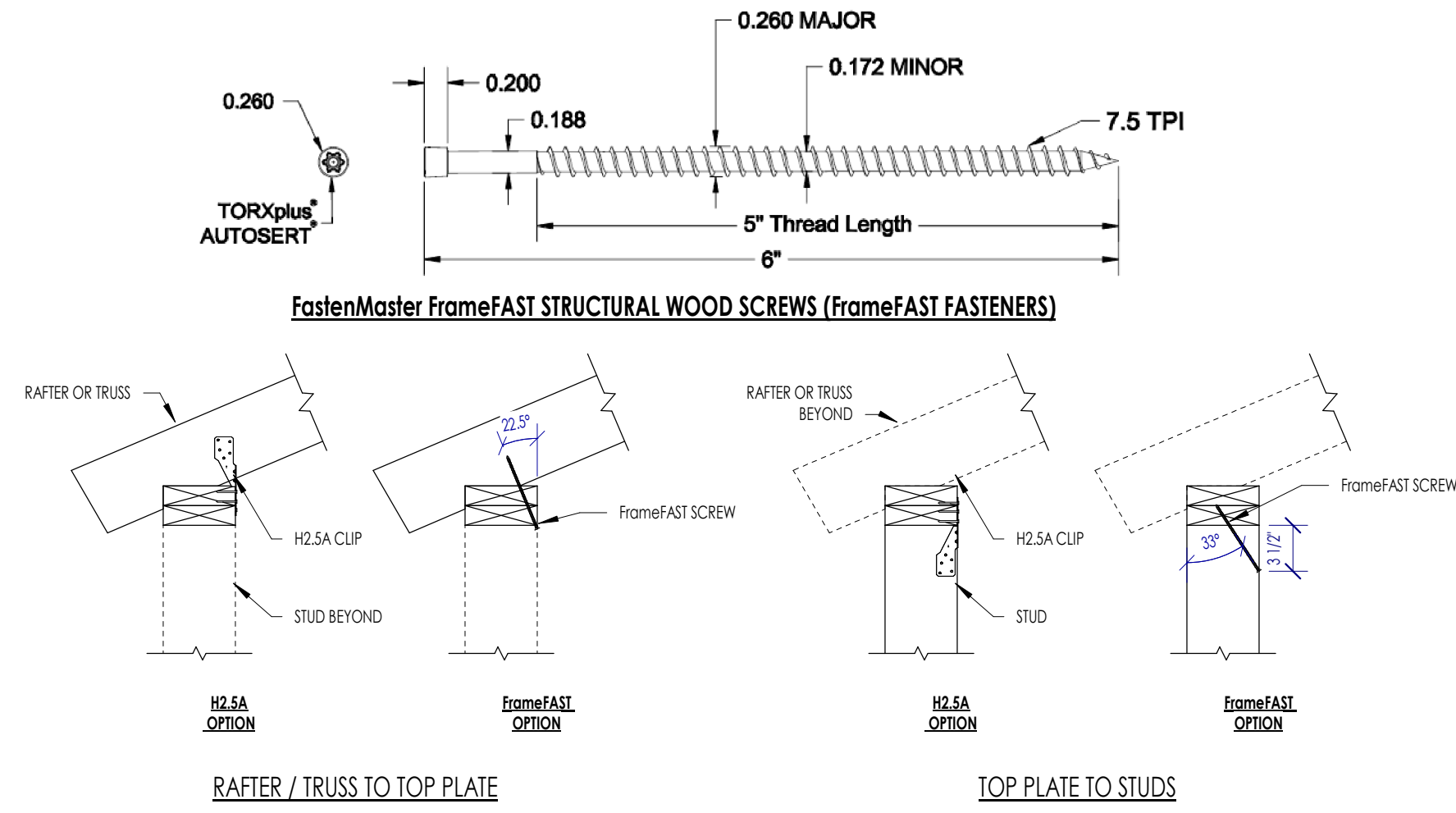
4E S4.0 ALLOWABLE HORIZONTAL HOLE LOCATIONS IN GLUE LAMINATED TIMBER BEAMS



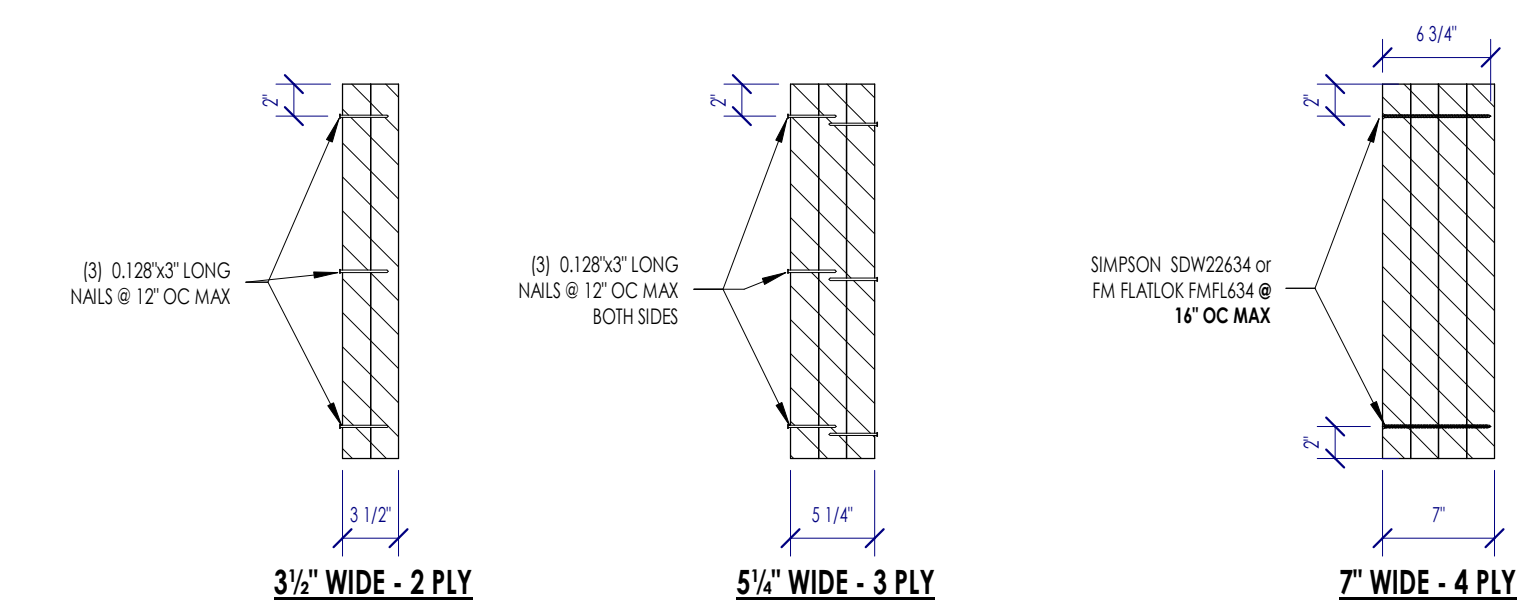
4D S4.0 TYPICAL NAILING CONFIGURATIONS



6C S4.0 ALLOWABLE NOTCHING AND BORING OF FLOOR JOISTS



4C S4.0 ALLOWABLE SUBSTITUTION OF H2.5A CLIPS WITH FrameFAST SCREWS - UPLIFT LOAD PATH



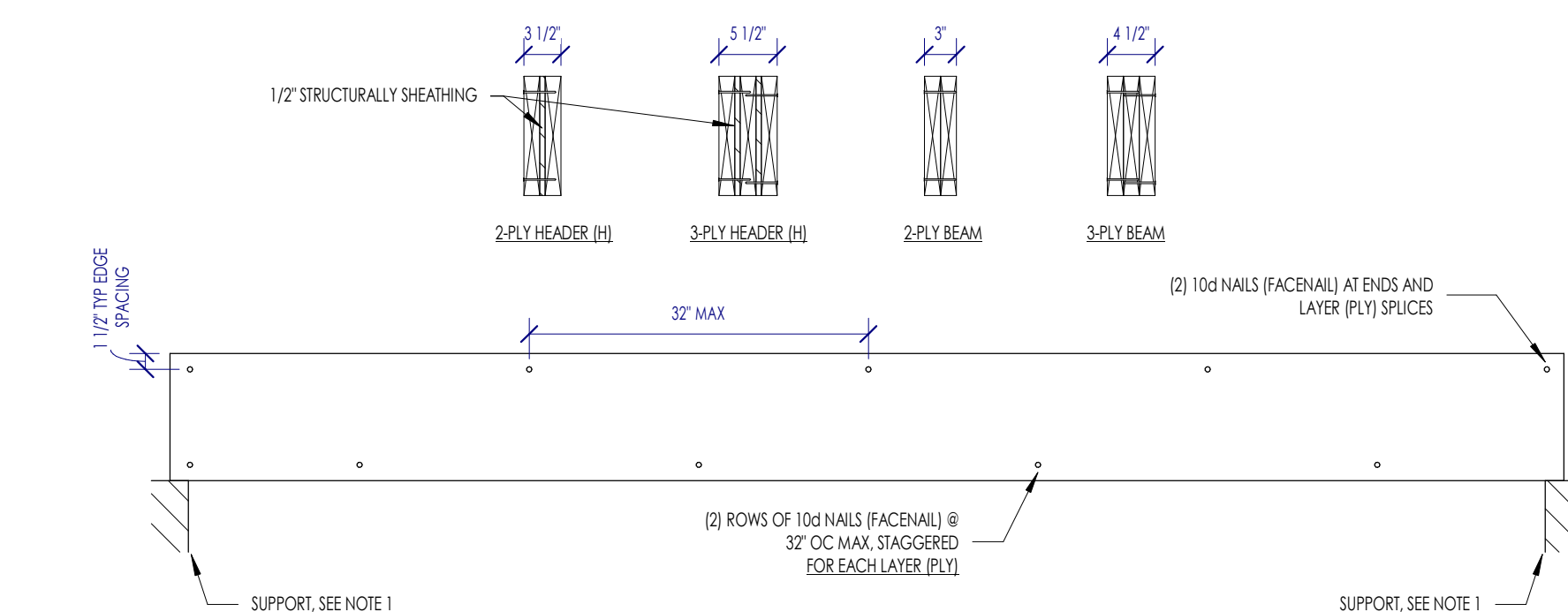
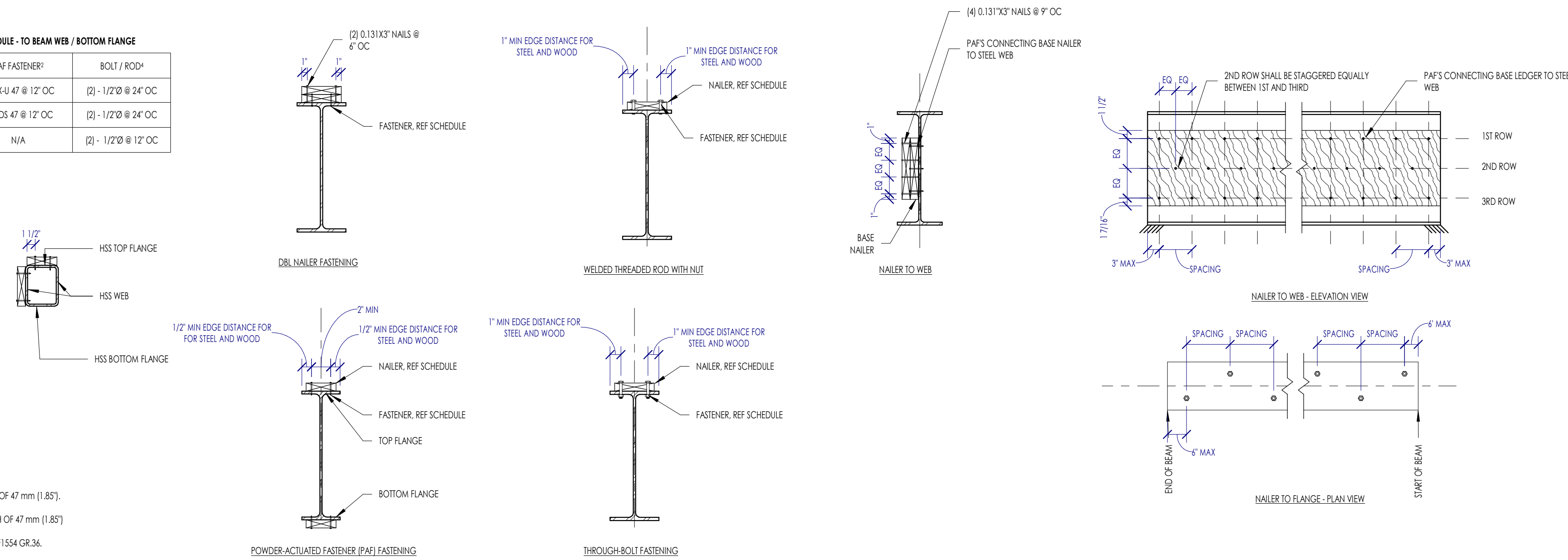
2C S4.0 TYPICAL LVL MULTIPLE PLY FASTENING REQUIREMENTS

FASTENER SCHEDULE - TO BEAM TOP FLANGE			FASTENER SCHEDULE - TO BEAM WEB / BOTTOM FLANGE		
l _e (ft)	PAF FASTENER	BOLT / ROD*	l _e (ft)	PAF FASTENER	BOLT / ROD*
≤ 0.35	X-41 @ 12" OC	1/2" Ø @ 24" OC	≤ 0.35	(1) - X-41 @ 12" OC	(2) - 1/2" Ø @ 24" OC
0.35 < l _e ≤ 0.44	D5-47 @ 12" OC	1/2" Ø @ 24" OC	0.35 < l _e ≤ 0.44	(1) - D5-47 @ 12" OC	(2) - 1/2" Ø @ 24" OC
l _e > 0.44	N/A	1/2" Ø @ 12" OC	l _e > 0.44	N/A	(2) - 1/2" Ø @ 12" OC

NAILER SCHEDULE - TO BEAM FLANGE		NAILER SCHEDULE - TO BEAM WEB	
b (ft)	NAILER SIZE	d (in)	NAILER SIZE
≤ 5.5	2x4	≤ 5	2x4
5.5 < b ≤ 7.25	2x6	5 < d ≤ 6.75	2x6
7.25 < b	2x8	6.75 < d ≤ 8.75	2x8
		8.75 < d ≤ 10.75	2x10
		10.75 < d ≤ 15	(2) - 2x8
		15 < d ≤ 19	(2) - 2x10
		19 < d ≤ 23	(2) - 2x12
		d > 23	(3) - 2x8

NOTES:
1. ALL FASTENERS SHALL BE STAGGERED.
2. FASTENER DESCRIPTIONS, ALL FASTENERS ARE POWDER-ACTUATED FASTENERS MFR'D BY HELIX, INC.
A. 80147
B. 80147
C. UNIVERSAL UNDRILLED SHANK FASTENER WITH A SHANK DIAMETER OF 0.157" AND A SHANK LENGTH OF 47 mm (1.85")
D. 80147
E. HEAVY DUTY SMOOTH SHANK FASTENER WITH A SHANK DIAMETER OF 0.177" AND A SHANK LENGTH OF 47 mm (1.85")
3. FASTENER INSTALLATION SHALL FOLLOW ALL SPECIFICATIONS PER THE MFR.
4. THROUGH BOLTS SHALL BE GALVANNEED ASTM A507 BOLTS. THROUGH BOLTS SHALL BE GALVANNEED ASTM F1554 GR.36.

4A S4.0 WOOD NAILER TO TOP OF STRUCTURAL STEEL



2A S4.0 TYPICAL NAILING BUILT UP BEAMS, GIRDERS & HEADERS

NOTES:
1. UNLESS NOTED OTHERWISE ON PLAN, REFER TO THE FOLLOWING DETAILS FOR THE SUPPORT FRAMING:
A. SUPPORT FOR HEADERS IN EXTERIOR WALLS 4C/S4.0
B. SUPPORT FOR HEADERS IN INTERIOR WALLS 3B/S4.1
C. SUPPORT FOR BEAMS & GIRDERS SUPPORTED BY WALL - REFERENCE BEAM SCHEDULE

TYPICAL WOOD FRAMING DETAILS

RENOVATION
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DUDDLEY
Structural: Dudley
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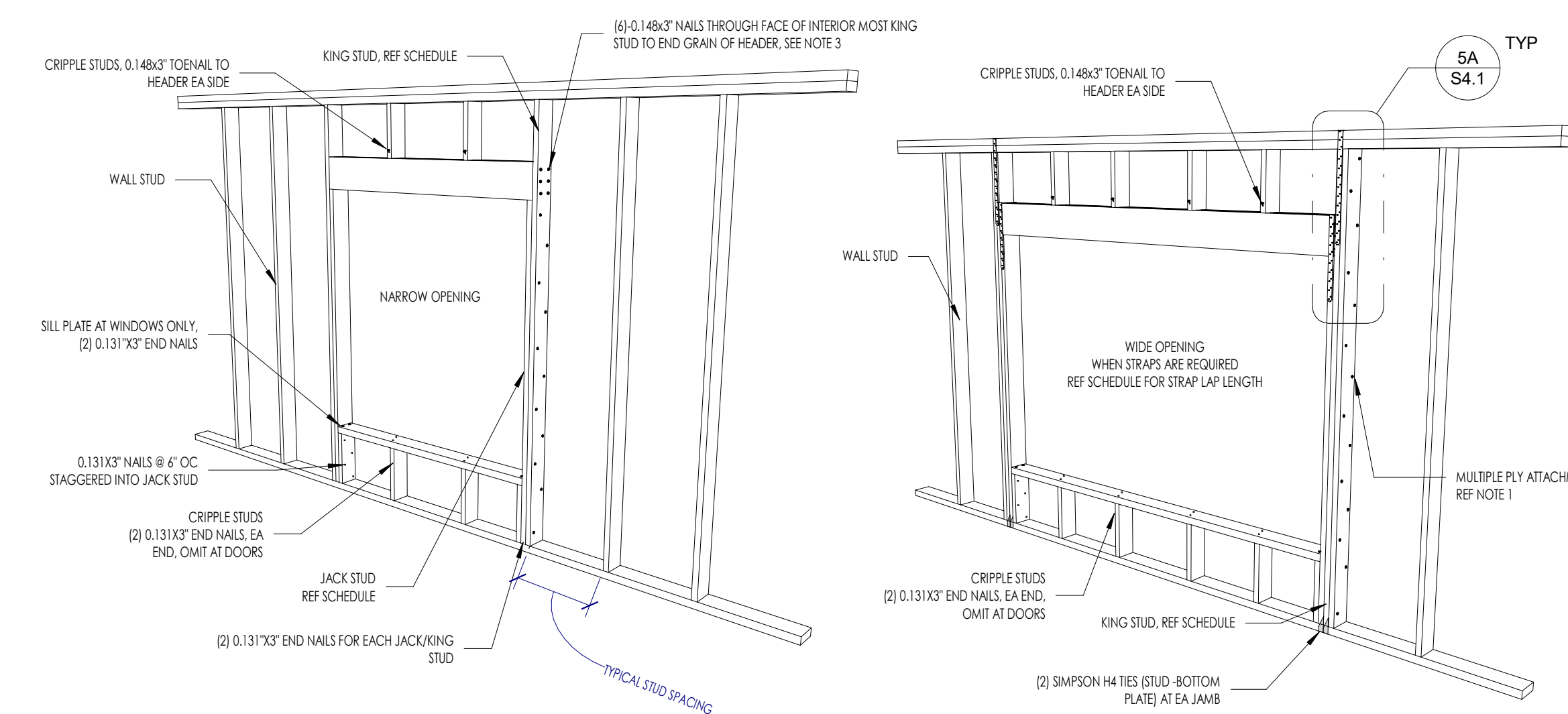
amc
ENGINEERS
MEP: AMC Engineers
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Burnet, TX 78611
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S4.0



2x4 STUD WALL

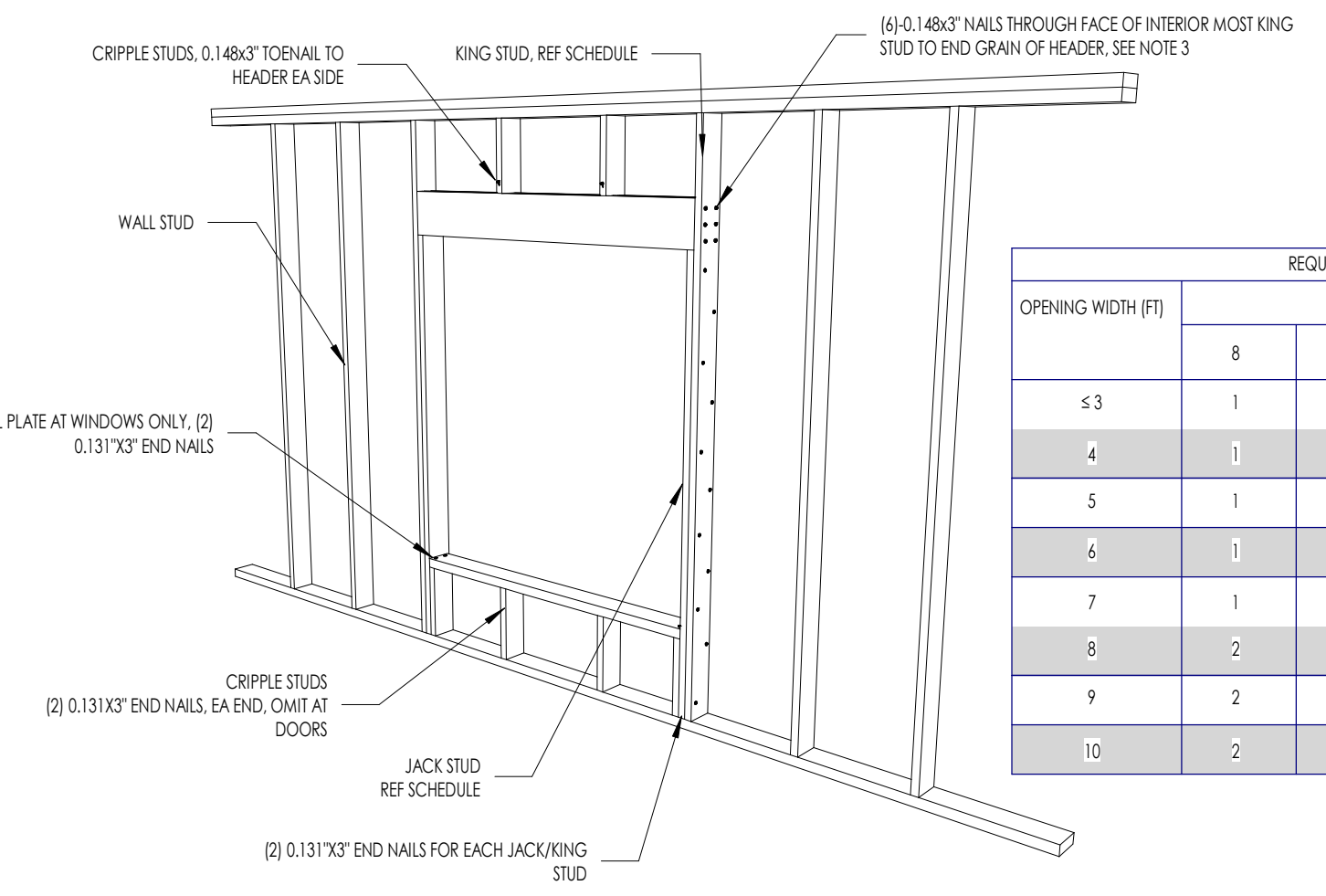
OPENING WIDTH (FT)	REQUIRED NO. OF KING STUDS				NO. JACK STUDS	STRAP LAP LENGTH (IN)
	8	9	10	12		
≤3	1	1	1	2	2	1
4	1	1	2	2	2	1
5	2	2	2	3	3	1
6	2	2	3	3	3	1
7	2	2	3	3	4x6	1
8	3	3	3	4x6	4x6	2
9	3	3	4x6	4x6	4x6	2
10	3	3	4x6	4x6	4x6	2

2x6 STUD WALL

OPENING WIDTH (FT)	REQUIRED NO. OF KING STUDS				NO. JACK STUDS	STRAP LAP LENGTH (IN)
	8	9	10	12		
≤3	1	1	1	1	1	N/R
4	1	1	1	1	1	N/R
5	1	1	1	1	2	1
6	1	1	1	2	2	1
7	1	1	2	2	2	1
8	1	1	2	2	2	2
9	1	2	2	2	2	2
10	1	2	2	2	3	2

NOTES:
1. MULTIPLE PILES MUST BE ATTACHED PER THE MECHANICALLY LAMINATED BUILT-UP COLUMN, NAILED DETAIL.
2. TABLE IS BASED OFF A HORIZONTAL WIND PRESSURE OF 20 PSF AND GRAVITY LOADING OF 200 PLF.
3. WALLS MUST BE CENTERED ON THE INDIVIDUAL PILES OF THE HEADER.
4. N/R = NOT REQUIRED. IF N/R, THEN REFERENCE NARROW OPENING DIAGRAM FOR CONNECTION REQUIREMENTS, OTHERWISE REFERENCE THE WIDE OPENING DIAGRAM.

4C TYPICAL EXTERIOR OPENING FRAMING



LOAD BEARING WALL

OPENING WIDTH (FT)	REQUIRED NO. OF KING STUDS				NO. JACK STUDS
	8	9	10	12	
≤3	1	1	1	1	1
4	1	1	1	1	1
5	1	1	2	2	1
6	1	1	2	2	1
7	1	1	2	2	3
8	2	2	3	3	2
9	2	2	3	3	2
10	2	2	3	3	2

NON-LOAD BEARING WALL

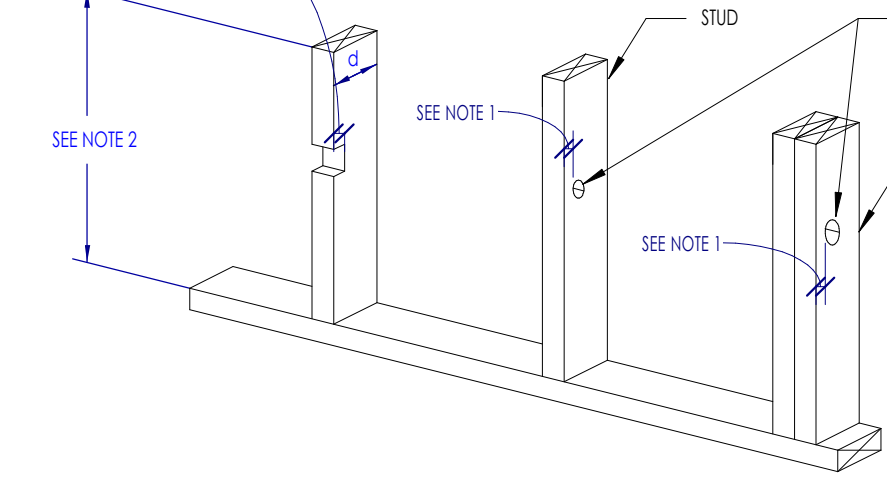
OPENING WIDTH (FT)	REQUIRED NO. OF KING STUDS				NO. JACK STUDS	HEADER SIZE
	8	9	10	12		
≤3	1	1	1	1	1	2x4 STUD WALL / 2x6 STUD WALL
4	1	1	1	1	1	2x4 STUD WALL / 2x6 STUD WALL
5	1	1	1	2	2	2x4 STUD WALL / 2x6 STUD WALL
6	1	1	2	2	2	2x4 STUD WALL / 2x6 STUD WALL
7	1	1	2	2	3	2x4 STUD WALL / 2x6 STUD WALL
8	2	2	2	3	3	2x10H / 3x10H
9	2	2	3	3	3	2x10H / 3x10H
10	2	2	3	3	3	2x10H / 3x10H

NOTES:
1. LOAD BEARING WALLS AND ASSOCIATED HEADERS ARE INDICATED ON PLAN.

5B TYPICAL INTERIOR OPENING FRAMING

ALLOWABLE NOTCHING AND BORING SCHEDULE

STUD SIZE	MAX HOLE Ø	MAX NOTCH
2x4	2"	1.318"
2x6	3.114"	2.3116"
DBL-2x4	2"	1.318"
DBL-2x6	3.114"	2.3116"

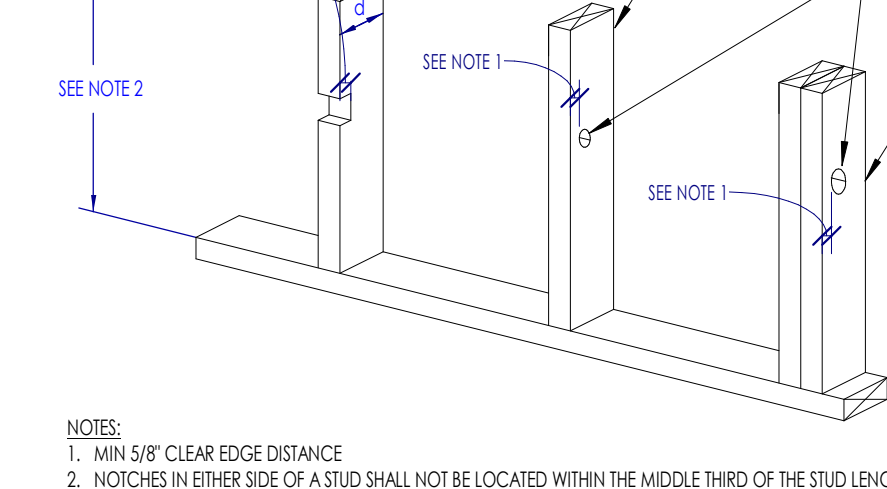


NOTES:
1. MIN 5/8" CLEAR EDGE DISTANCE.
2. NOTCHES IN EITHER SIDE OF A STUD SHALL NOT BE LOCATED WITHIN THE MIDDLE THIRD OF THE STUD LENGTH.
3. NOTCHES AND BORINGS SHALL NOT OCCUR IN THE SAME CROSS SECTION.

2B ALLOWABLE STUD NOTCHING AND BORING IN INTERIOR NON-LOAD BEARING WALLS

ALLOWABLE NOTCHING AND BORING SCHEDULE

STUD SIZE	MAX HOLE Ø	MAX NOTCH
2x4	1.318"	1.318"
2x6	2.3116"	1.318"
DBL-2x4	2"	1.318"
DBL-2x6	3.114"	1.318"



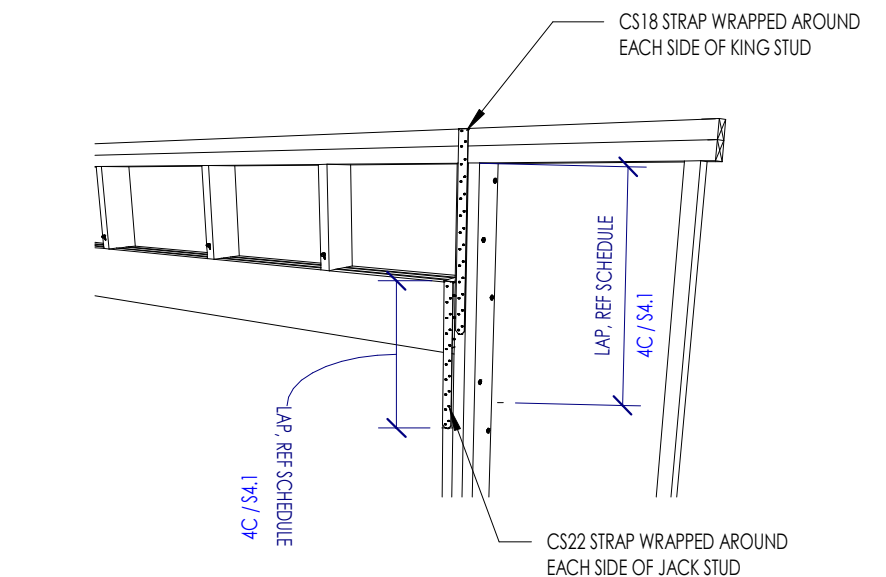
NOTES:
1. MIN 5/8" CLEAR EDGE DISTANCE.
2. NOTCHES IN EITHER SIDE OF A STUD SHALL NOT BE LOCATED WITHIN THE MIDDLE THIRD OF THE STUD LENGTH.
3. NOTCHES AND BORINGS SHALL NOT OCCUR IN THE SAME CROSS SECTION.

1B ALLOWABLE STUD NOTCHING AND BORING IN EXTERIOR & LOAD BEARING WALLS

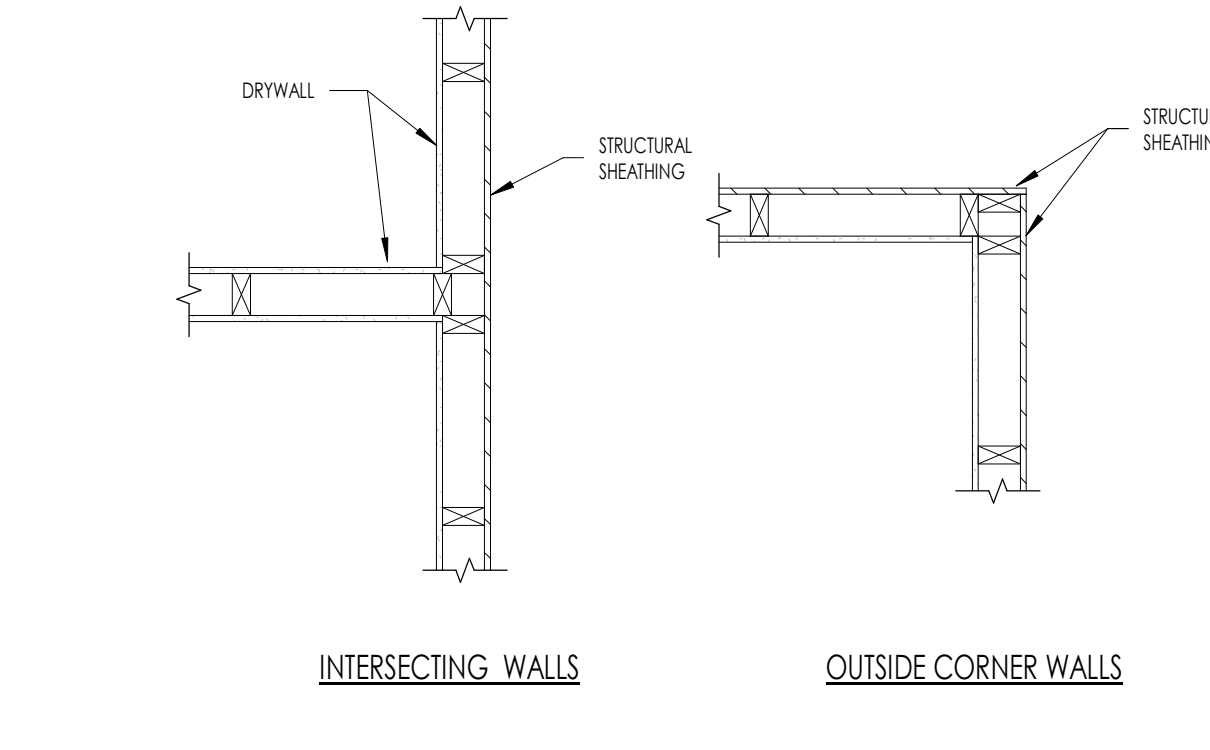
MECHANICALLY LAMINATED BUILT-UP COLUMN (STUD PACK) - NAILED

BUILT-UP SECTION	NAIL SIZE	SPACING	NO. ROWS	NOTES
(2) 2x4	0.131 x 2"	6"	1	STAGGERED
(2) 2x6	0.131 x 3"	8"	2	
(3) 2x4	0.131 x 4"	6"	1	STAGGERED
(3) 2x6	0.131 x 4"	8"	2	

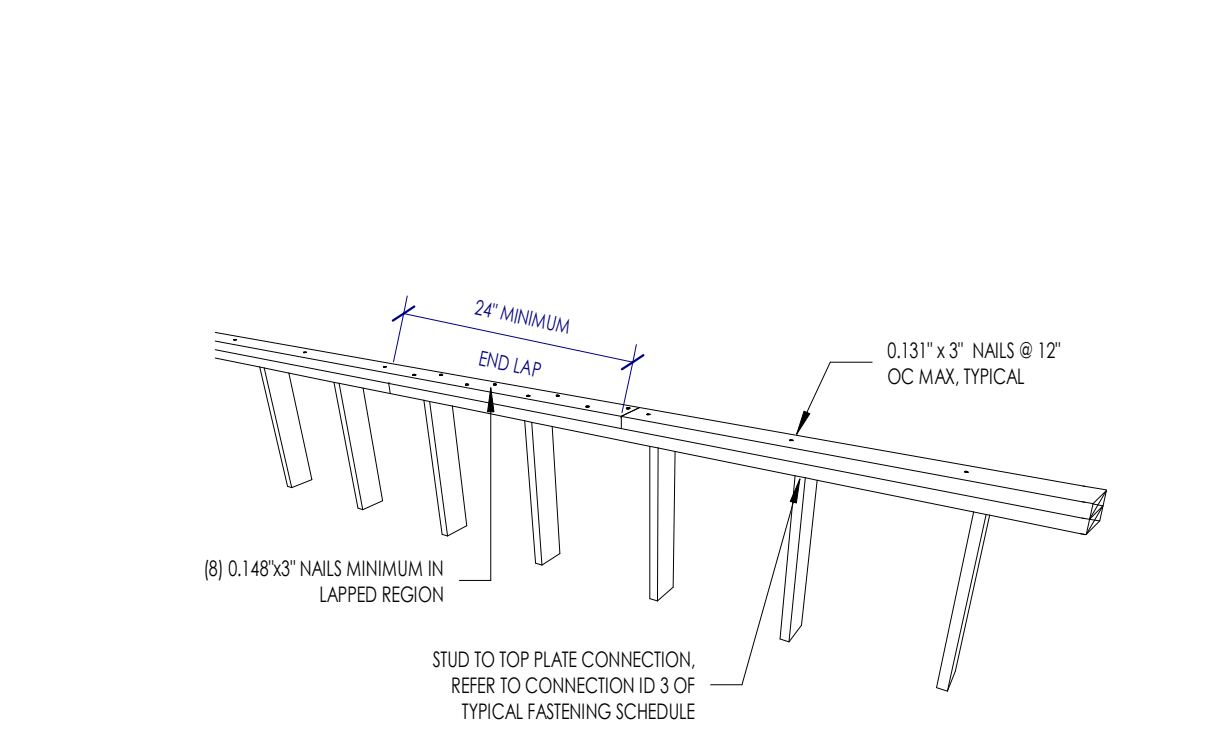
NOTES:
1. END DISTANCE: THE FIRST FASTENERS SHALL BE LOCATED 2" FROM THE END OF THE COLUMN ON EACH END.
2. EDGE DISTANCE: 3x4'S EDGE DISTANCES 1 1/2"



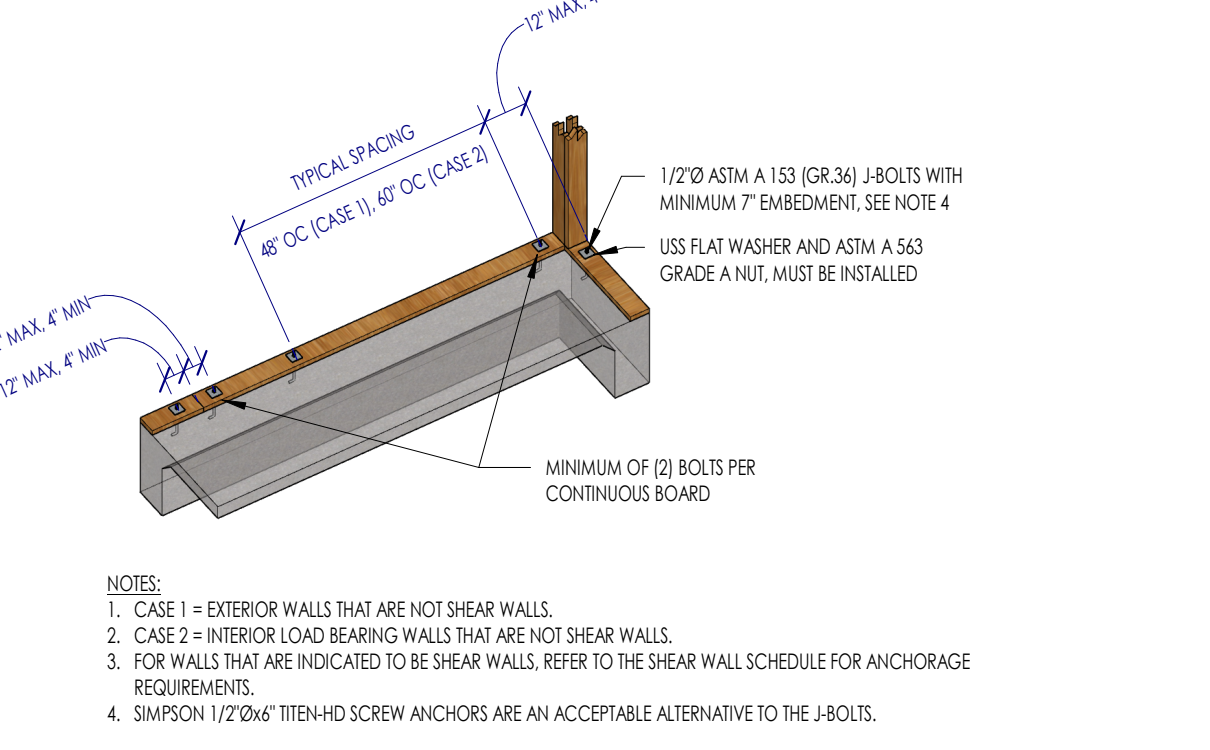
5A TYPICAL STRAP AT WIDE EXTERIOR OPENINGS



4A TYPICAL CORNER AND INTERSECTION WALL STUDS (NOT AT SHEAR WALL)



3A TYPICAL LOAD BEARING / SHEAR WALL DOUBLE TOP PLATE SPLICE

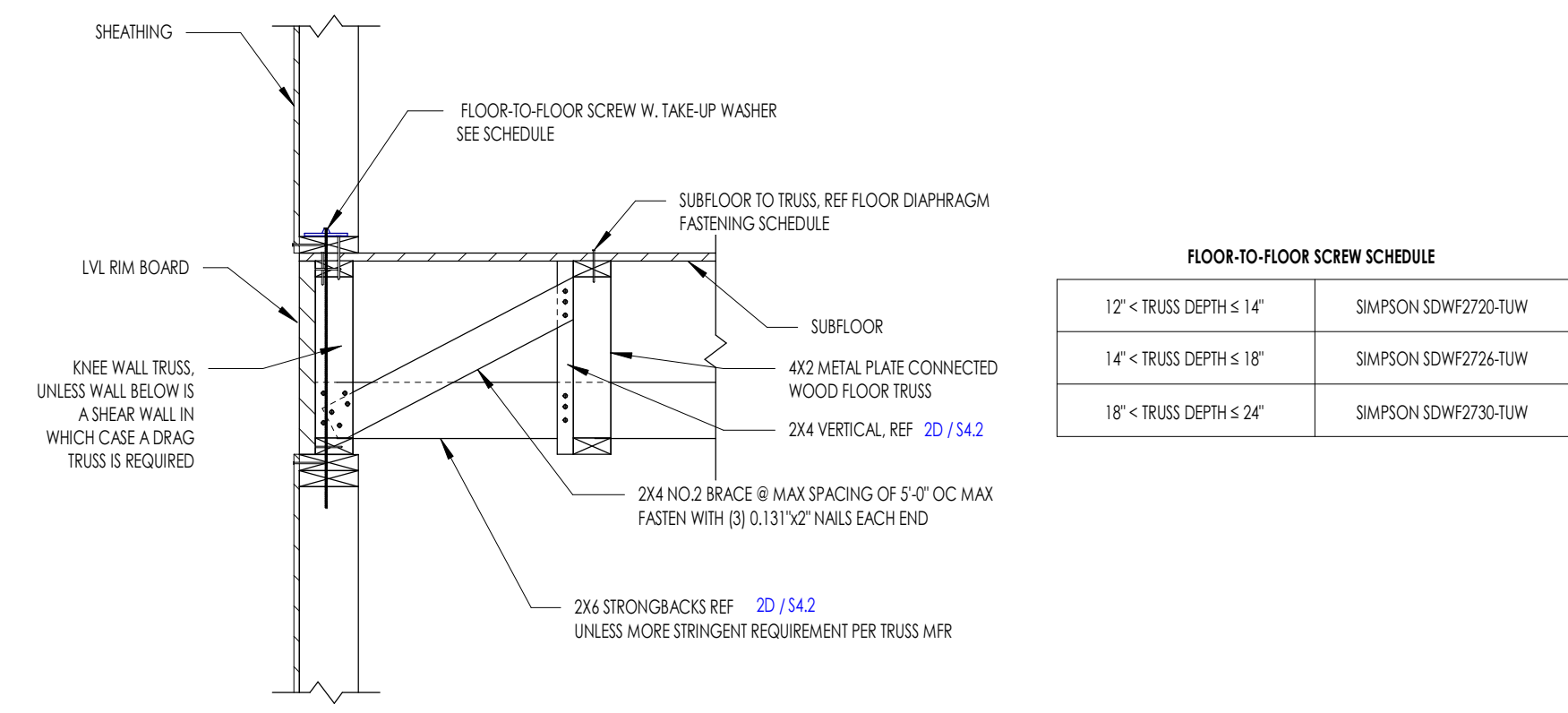


2A TYPICAL BOTTOM PLATE ANCHORAGE

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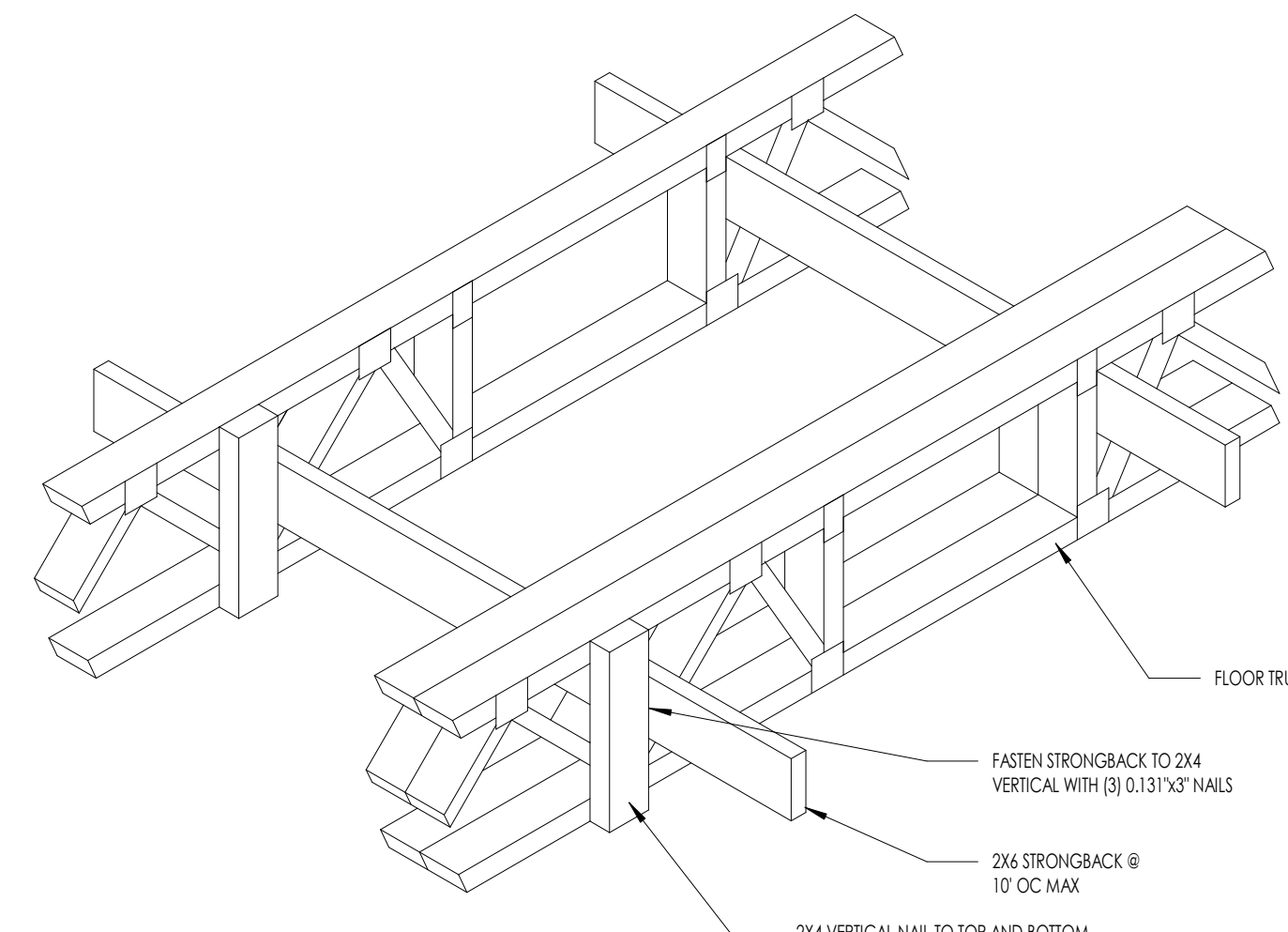


FLOOR-TO-FLOOR SCREW SCHEDULE

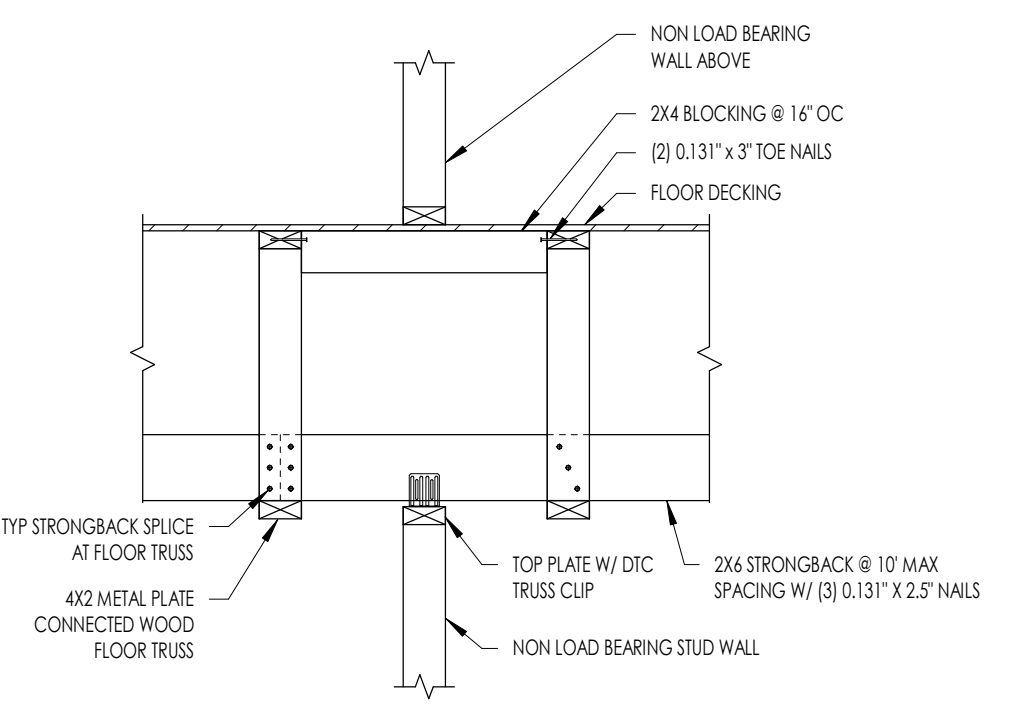
12" x TRUSS DEPTH x 14"	SIMPSON SDWF2720-TUM
14" x TRUSS DEPTH x 18"	SIMPSON SDWF2724-TUM
18" x TRUSS DEPTH x 24"	SIMPSON SDWF2730-TUM

NOTES:
1. REFERENCE GENERAL NOTES FOR WOOD SHRINKAGE NOTES AND SPECIFICATIONS. IF THE FRAMING HAS A MC HIGHER THAN 135 WHEN THE SHEATHING IS APPLIED, IT MAY LEAD TO BUCKLING OF THE SHEATHING AND/OR THE CLADDING. CONTRACTOR TO QC FRAMING MC PRIOR TO INSTALLING WALL SHEATHING.

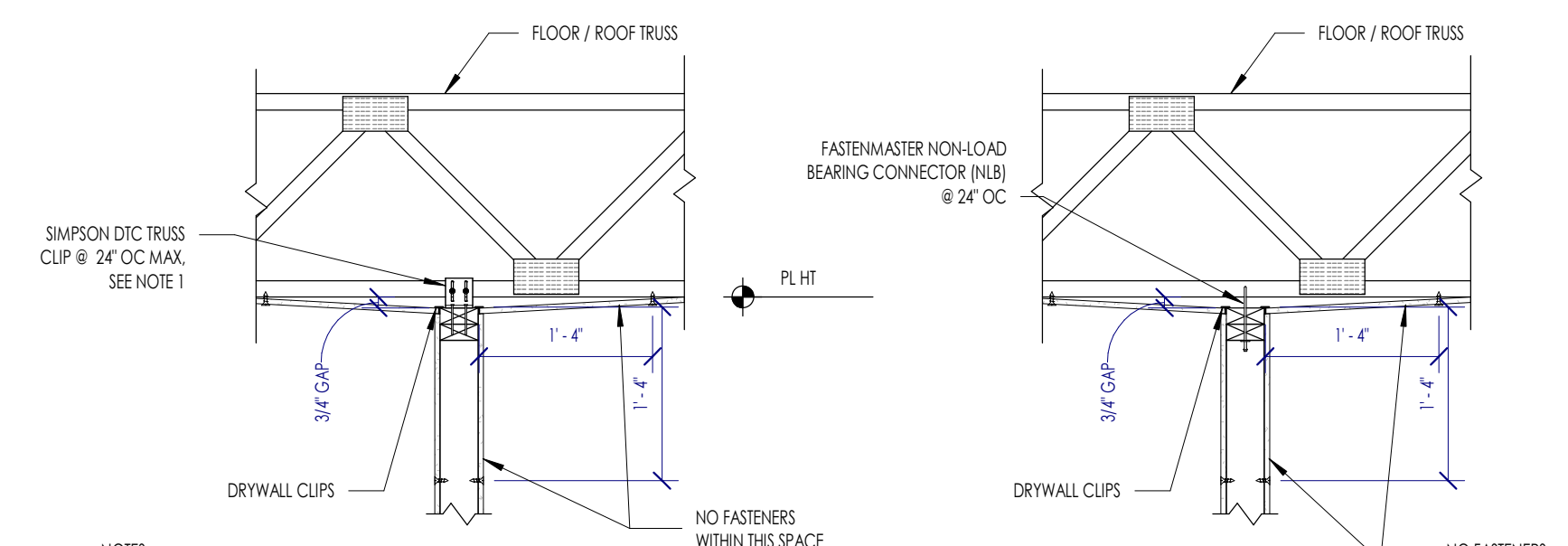
4D S4.2 TYPICAL FLOOR TRUSS PARALLEL TO EXTERIOR WALL - MULTI-STORY



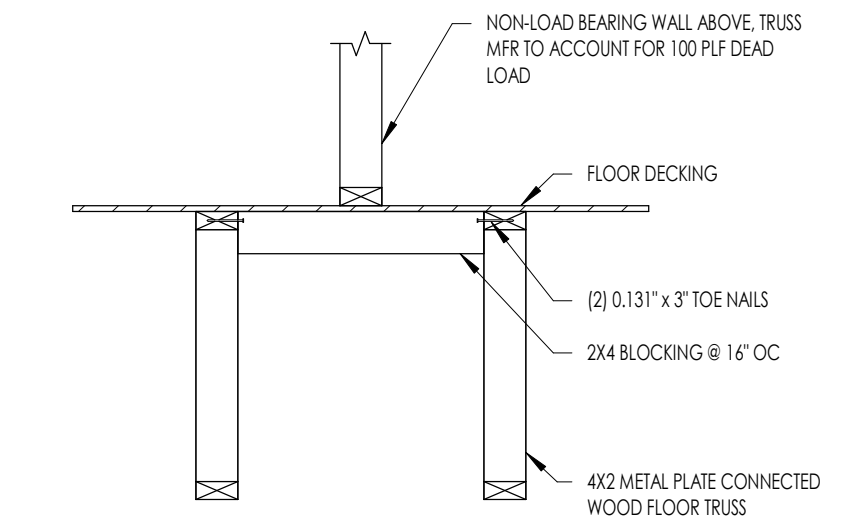
2D S4.2 TYPICAL TRUSS STRONGBACK



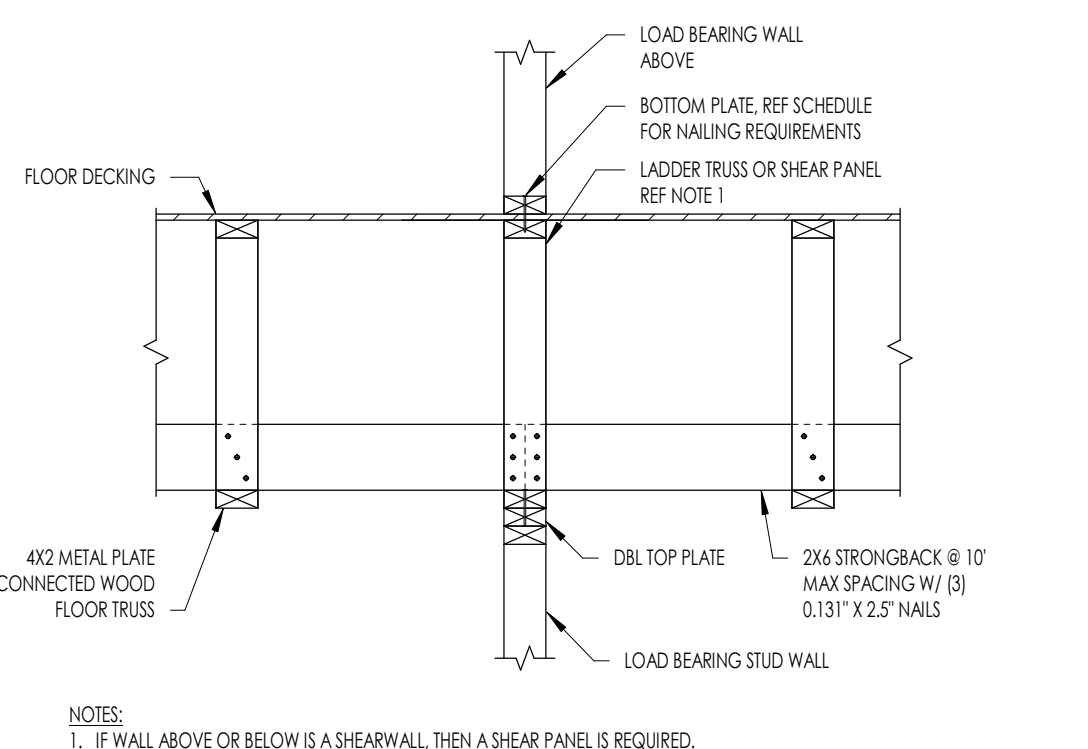
5C S4.2 TYPICAL NON-LOAD BEARING WALL PARALLEL TO FLOOR TRUSSES



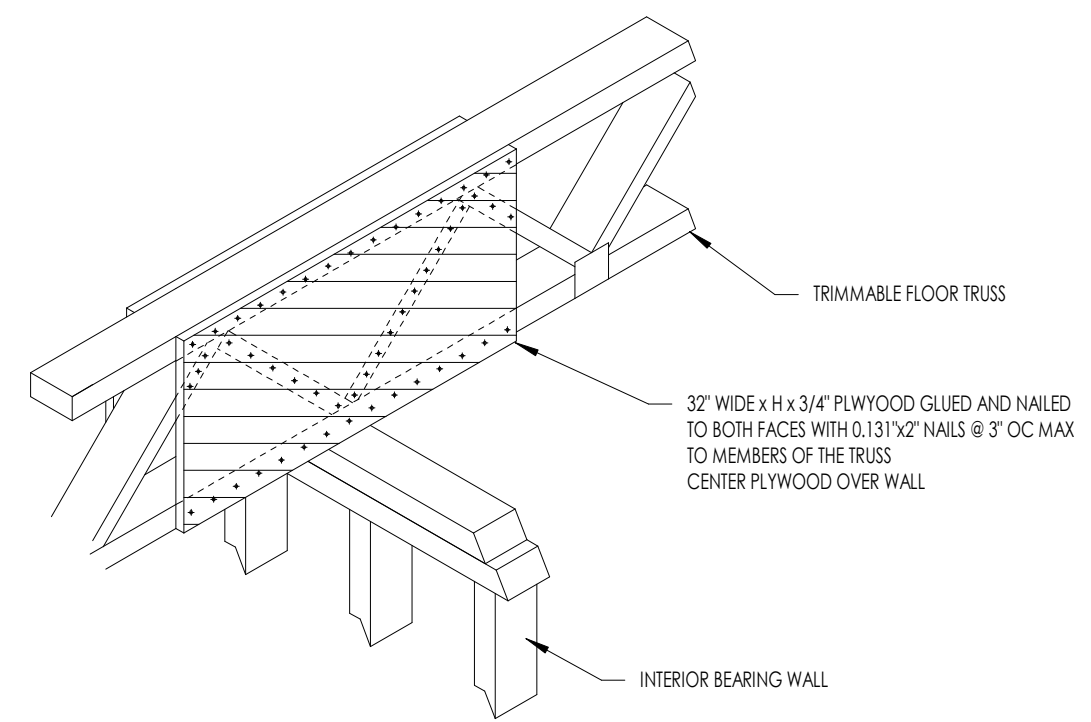
4C S4.2 TYPICAL NON-LOAD BEARING WALL ATTACHMENT TO PERPENDICULAR FLOOR TRUSS



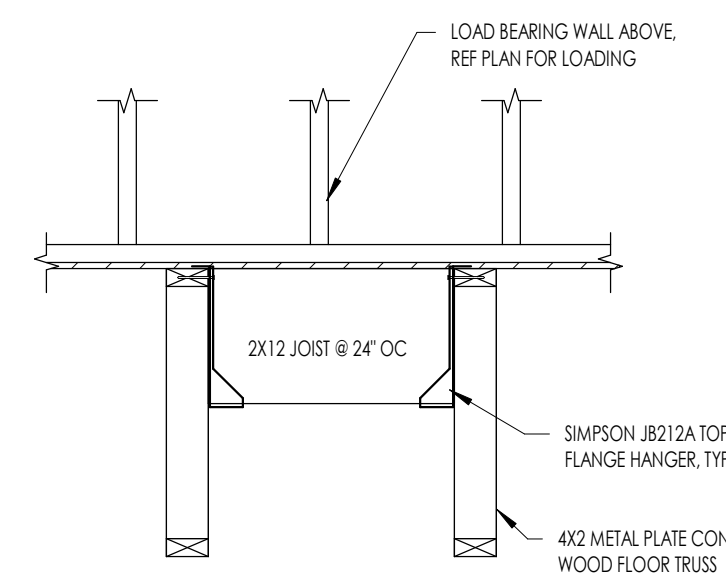
2C S4.2 TYPICAL NON-LOAD BEARING WALL PARALLEL TO FLOOR TRUSS



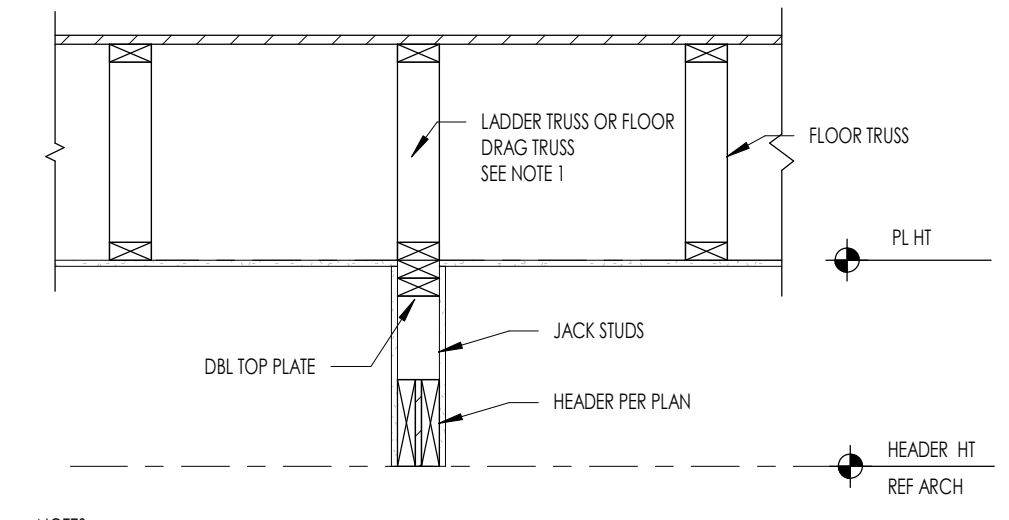
1C S4.2 TYPICAL LOAD BEARING WALL PARALLEL TO FLOOR TRUSSES



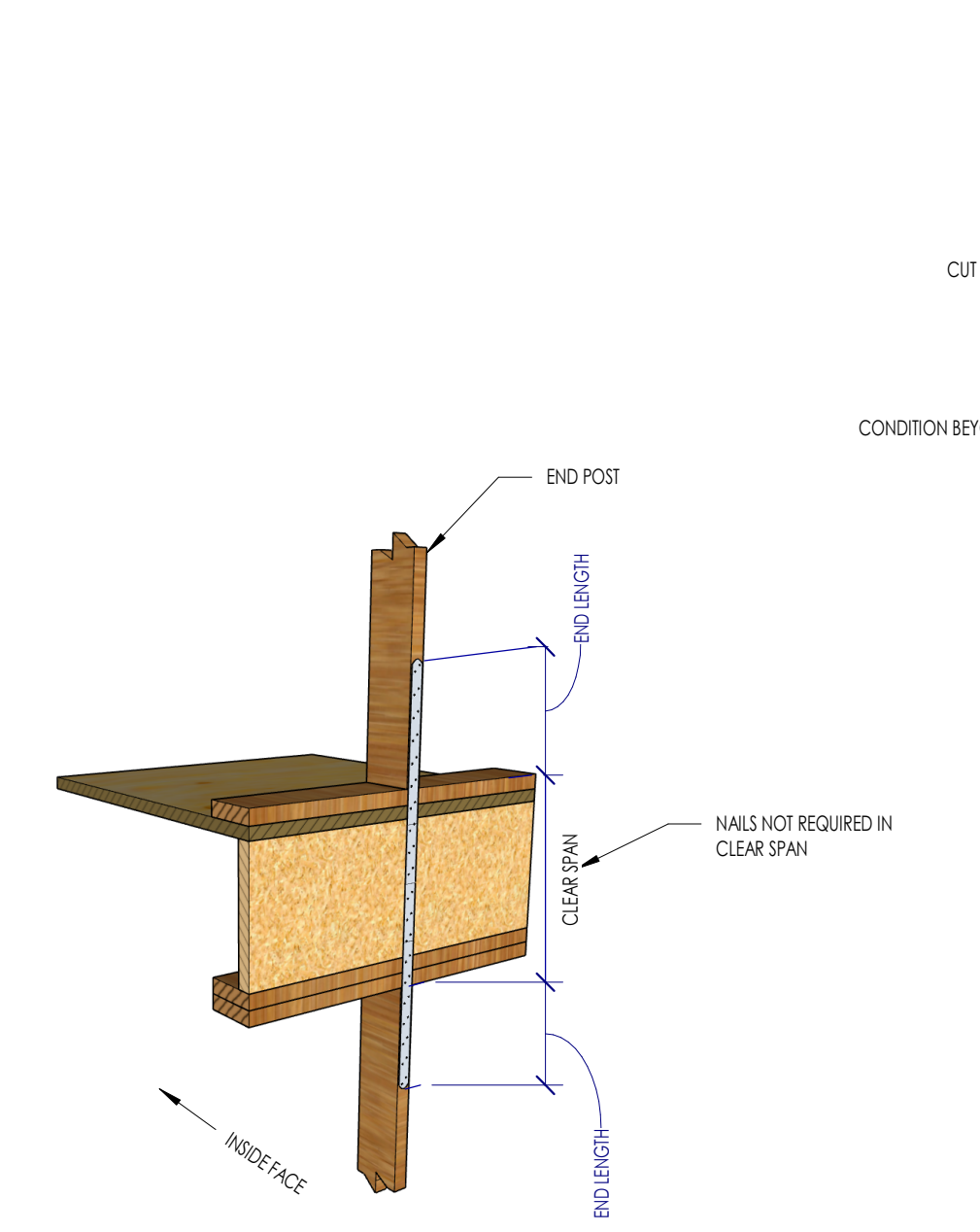
1B S4.2 TYPICAL TRIMMABLE TRUSS STIFFENING AT INTERIOR SUPPORT



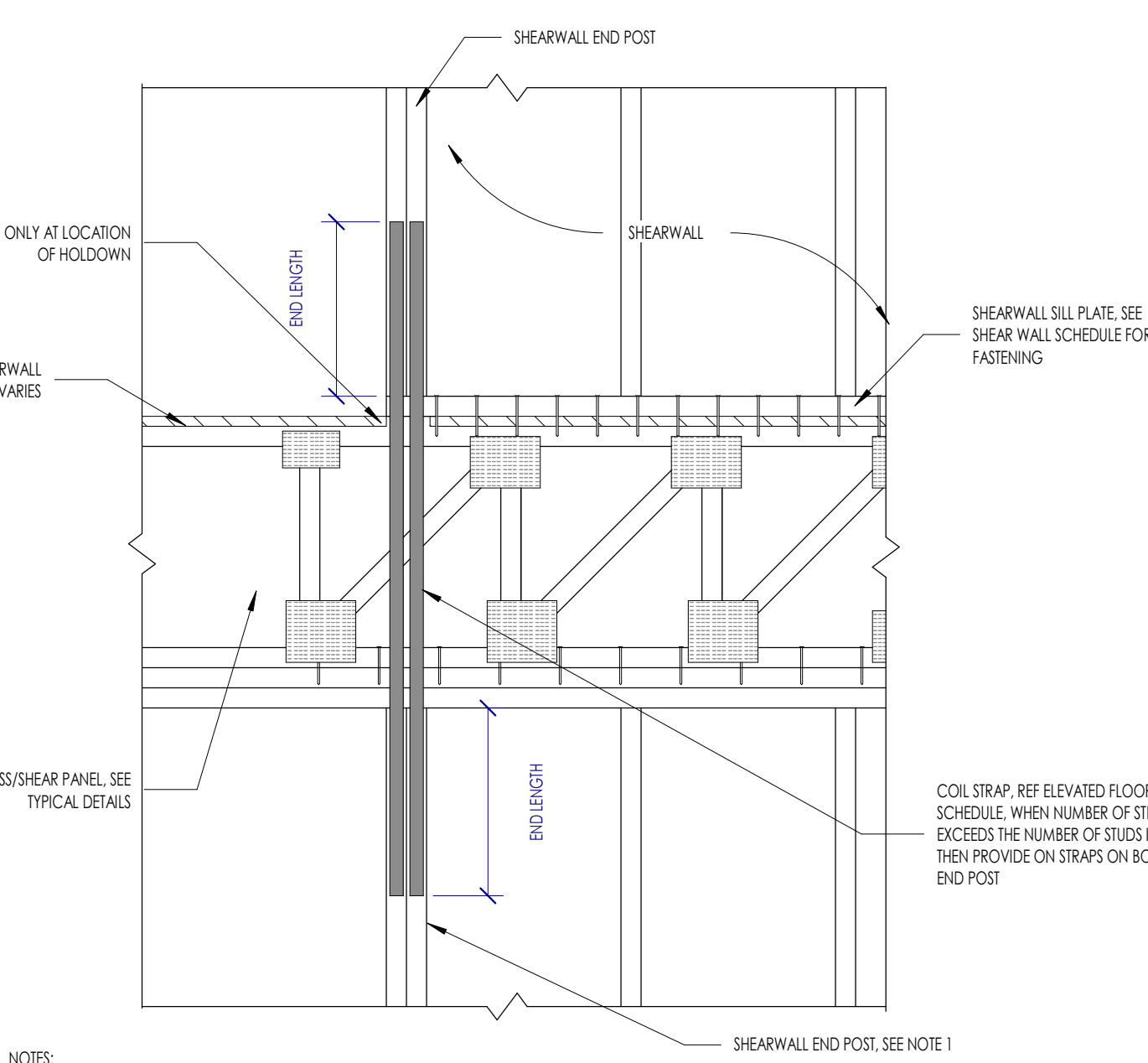
3B S4.2 TYPICAL LOAD BEARING WALL PERP. TO FLOOR TRUSS



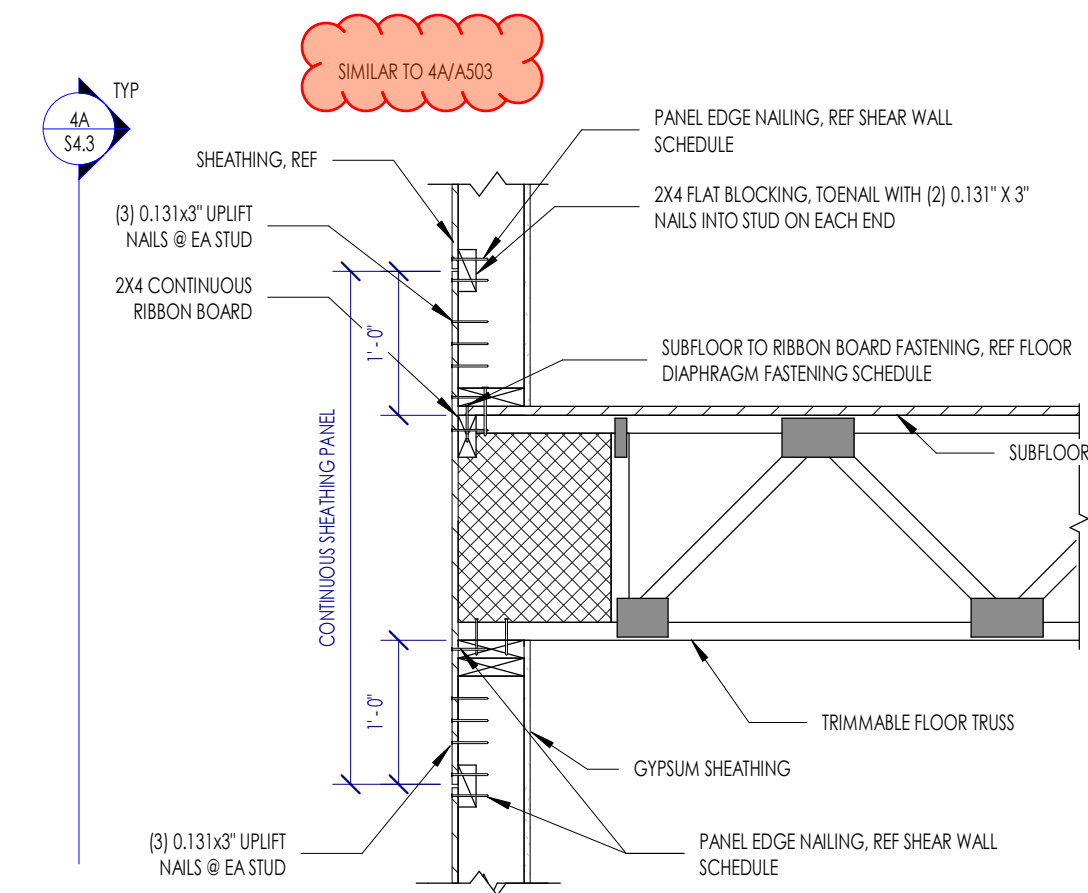
2B S4.2 TYPICAL LOAD BEARING HEADER PARALLEL TO FLOOR TRUSSES



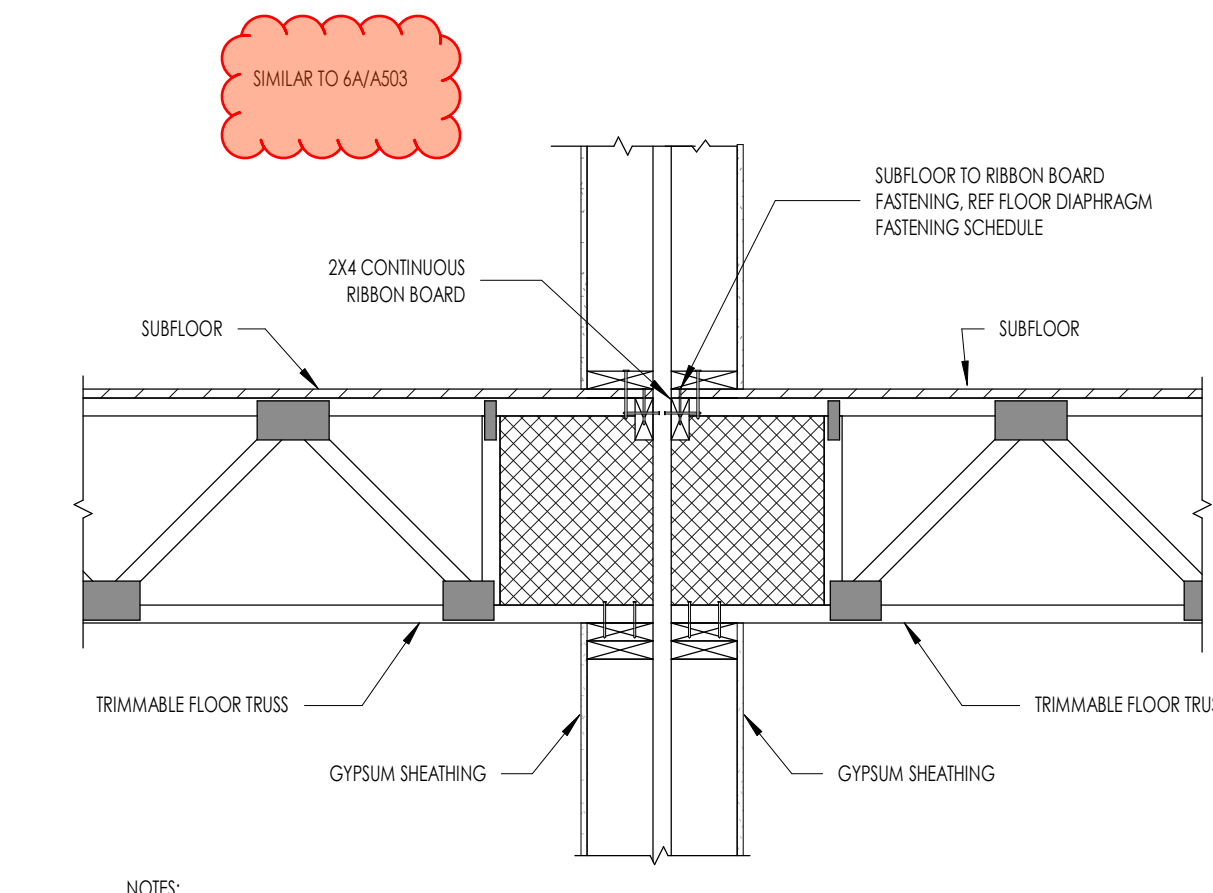
6A S4.2 TYPICAL SHEARWALL HOLDDOWN AT ELEVATED FLOOR



HOLDDOWN AT INTERIOR SHEAR WALL



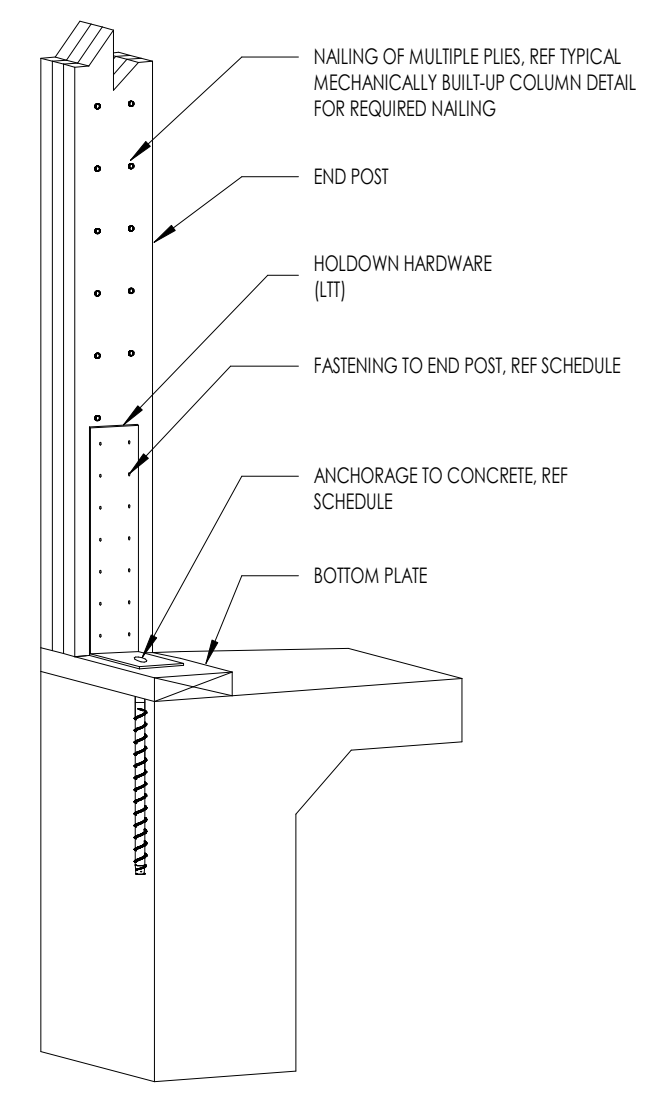
3A S4.2 061760 FLOOR - TRIMMABLE TRUSS BOTTOM CHORD BEARING ON EXTERIOR WALL



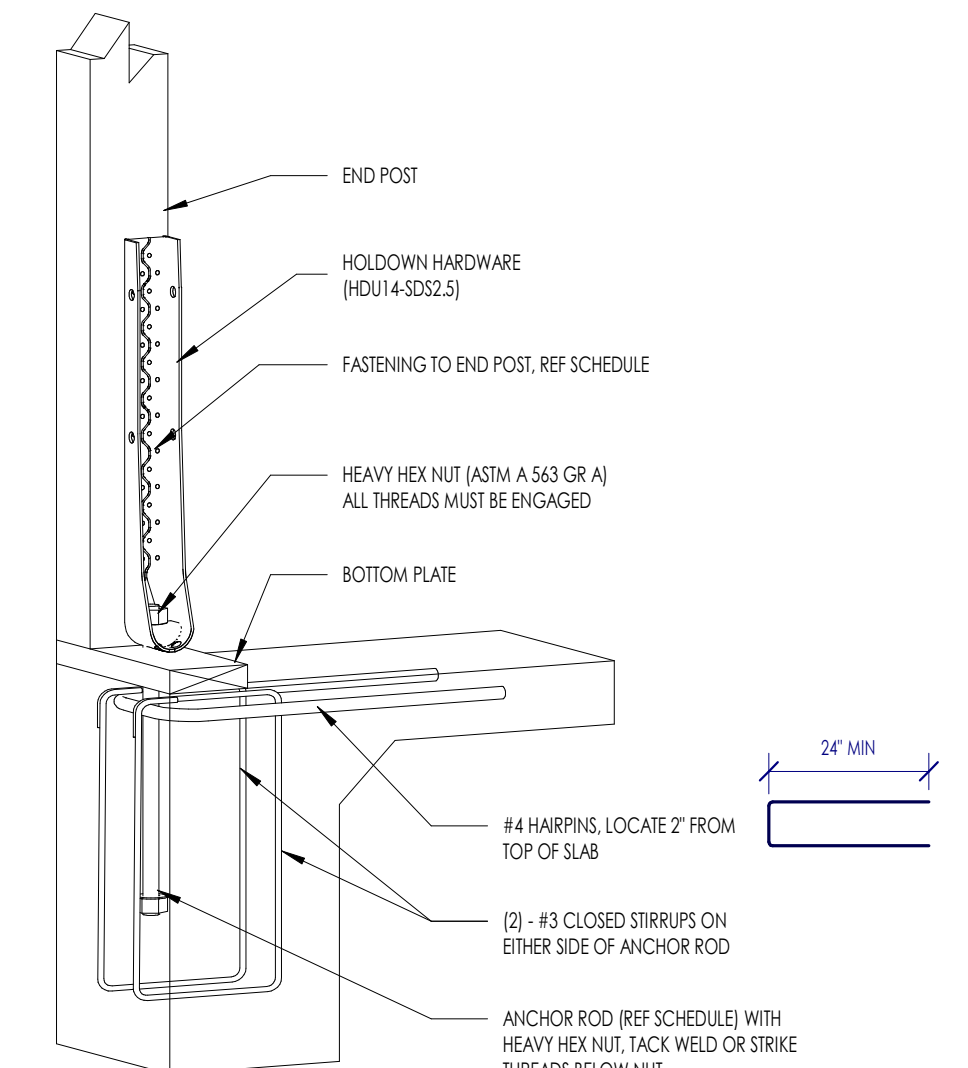
2A S4.2 TYPICAL INTERIOR BOTTOM CHORD BEARING AT PARTY WALL

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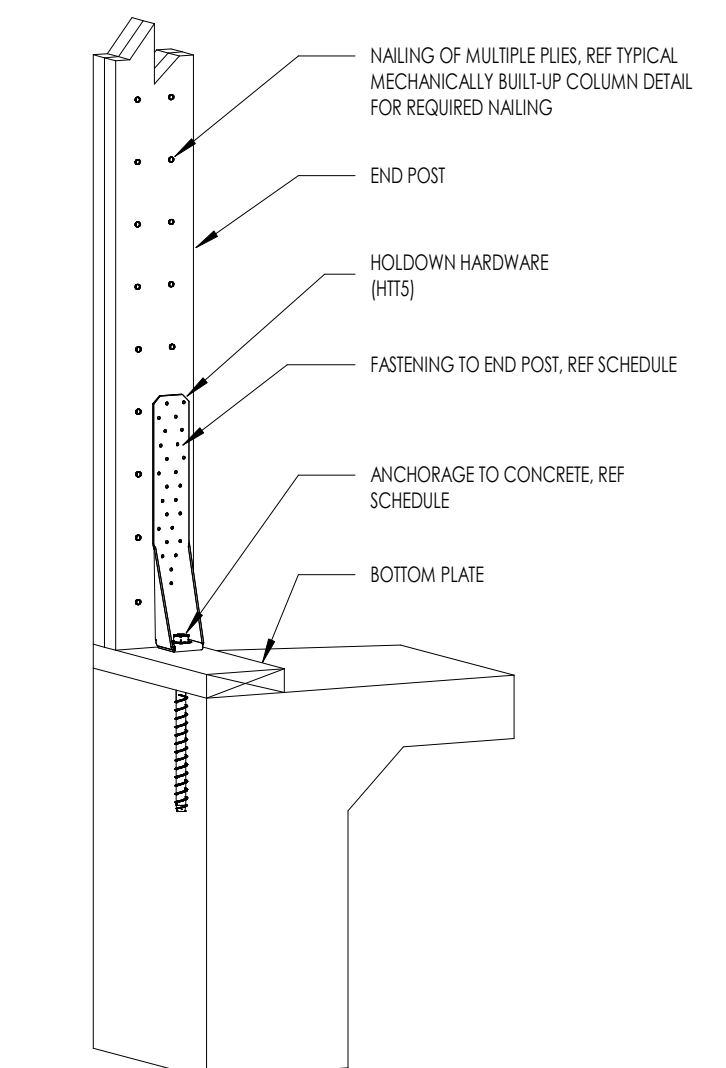
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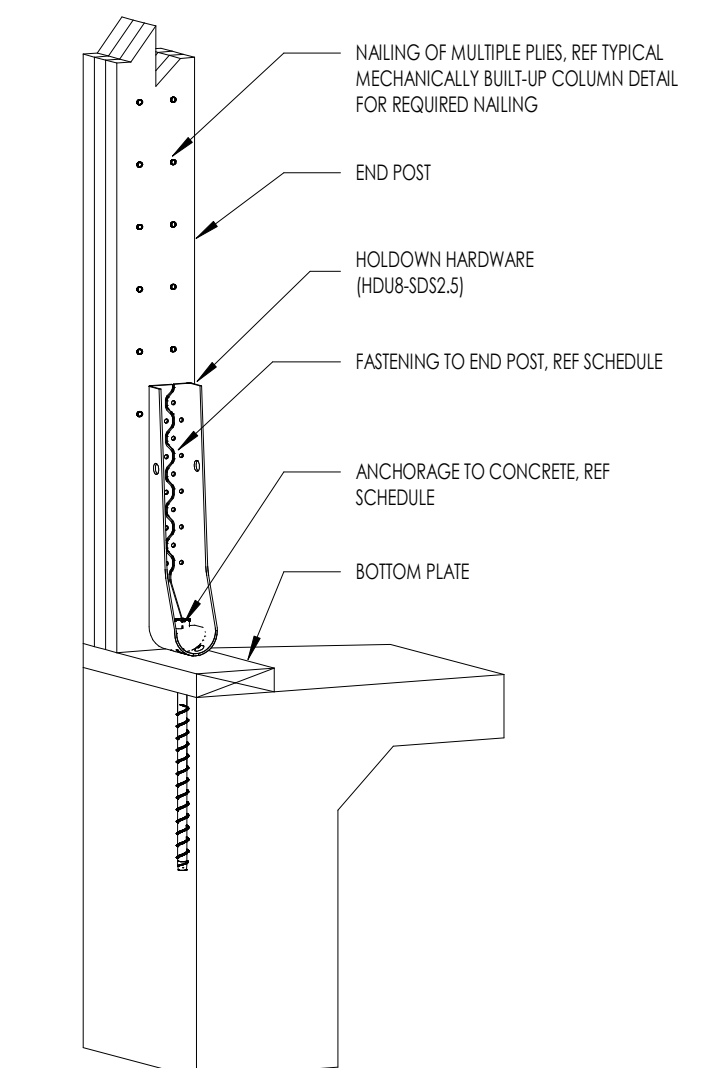
5D S4.3 LIT HOLDOWN



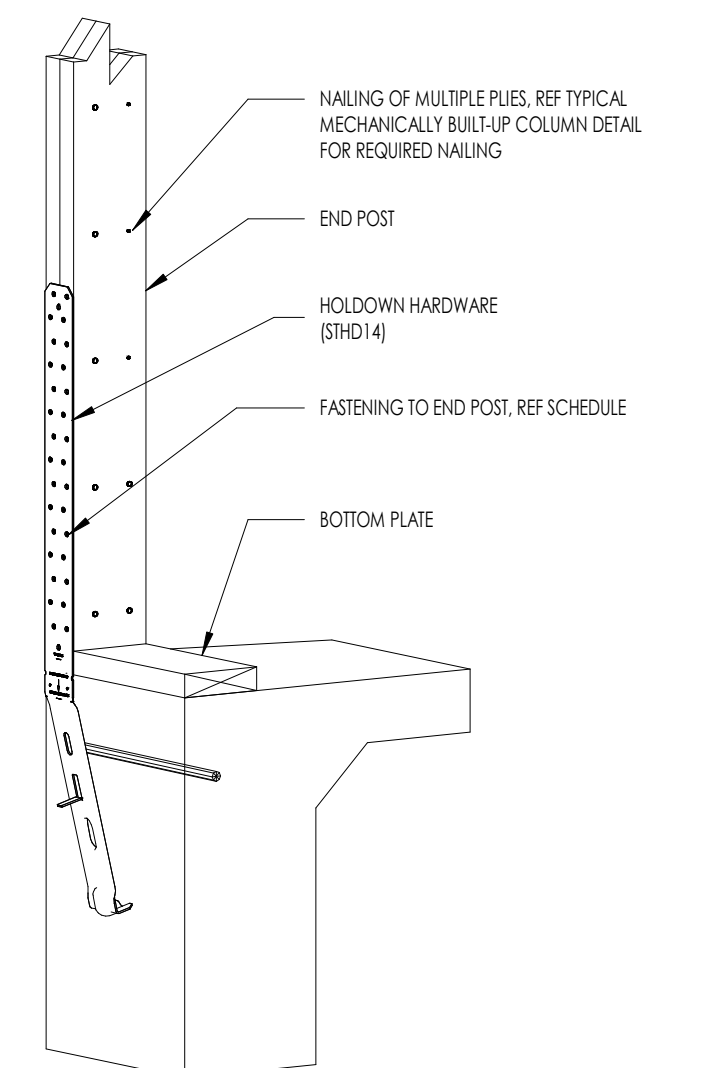
4D S4.3 HDU14-SDS2.5 HOLDOWN



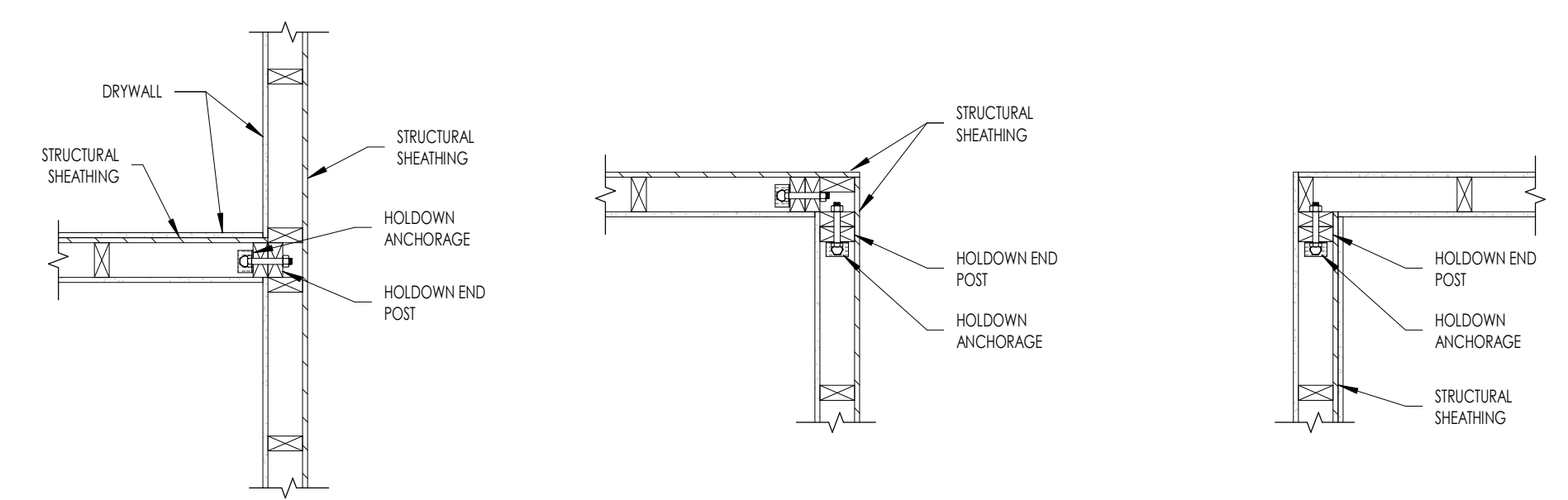
3D S4.3 HTS HOLDOWN



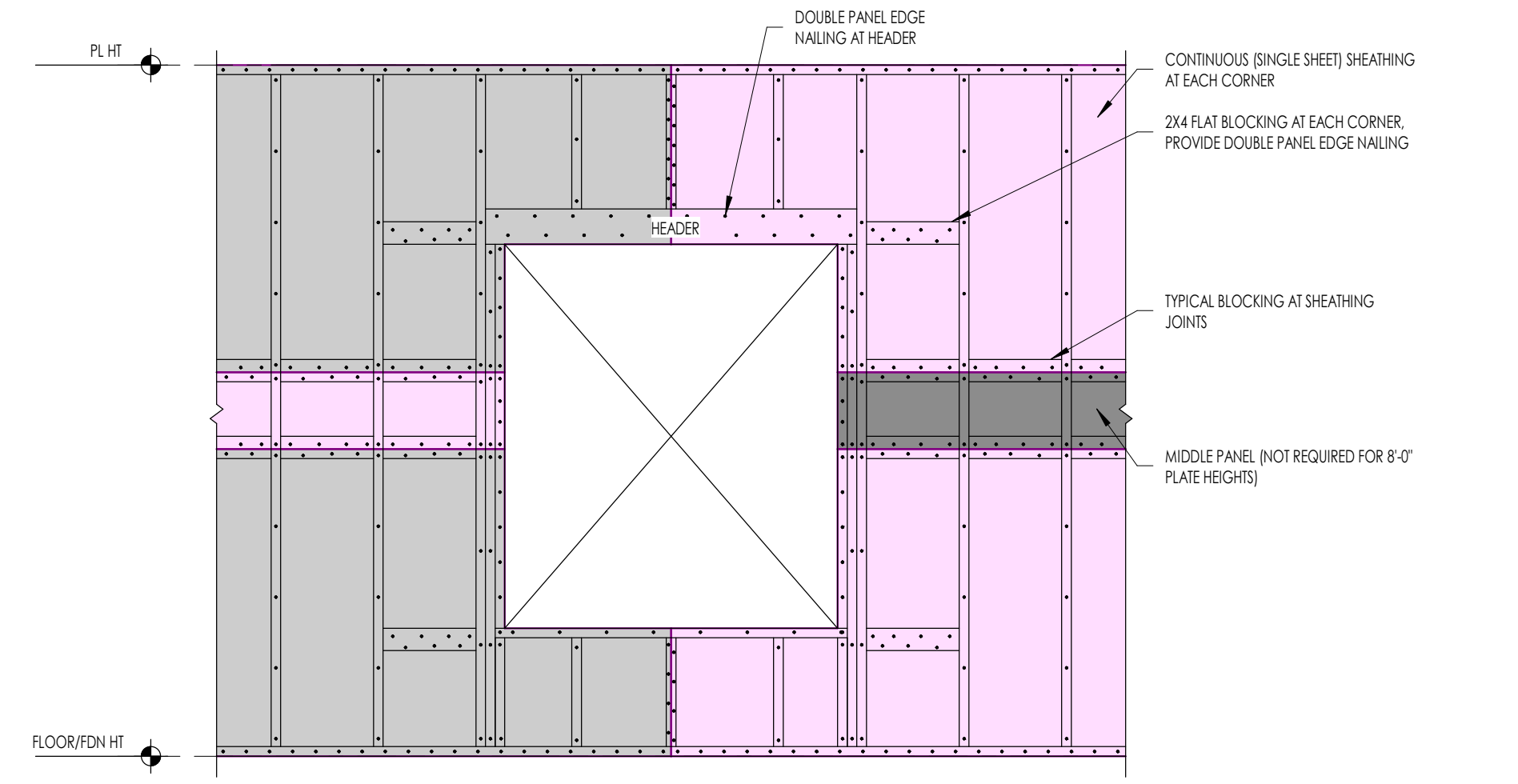
2D S4.3 HDU8-SDS2.5 HOLDOWN



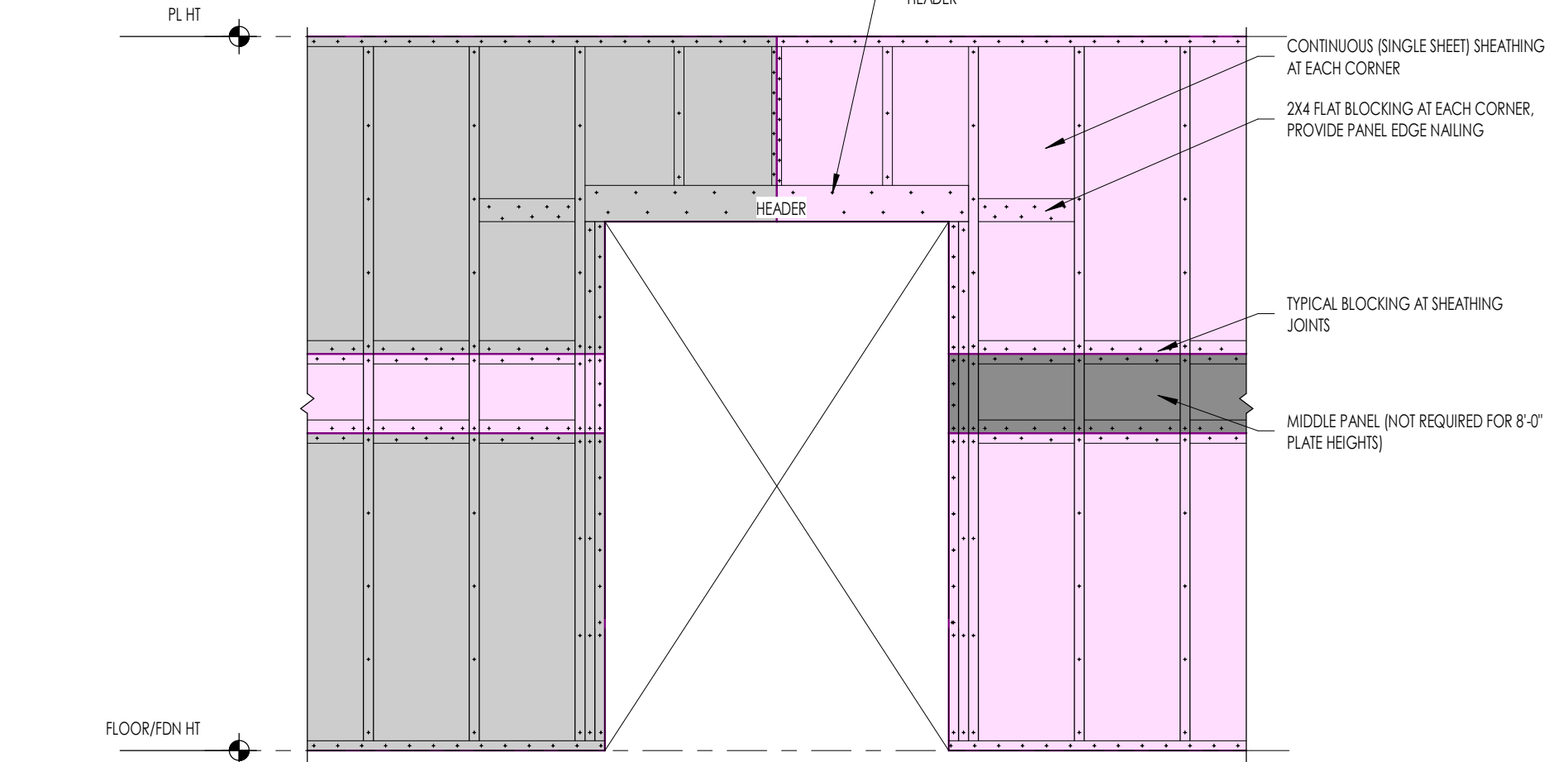
1D S4.3 STHD14 HOLDOWN



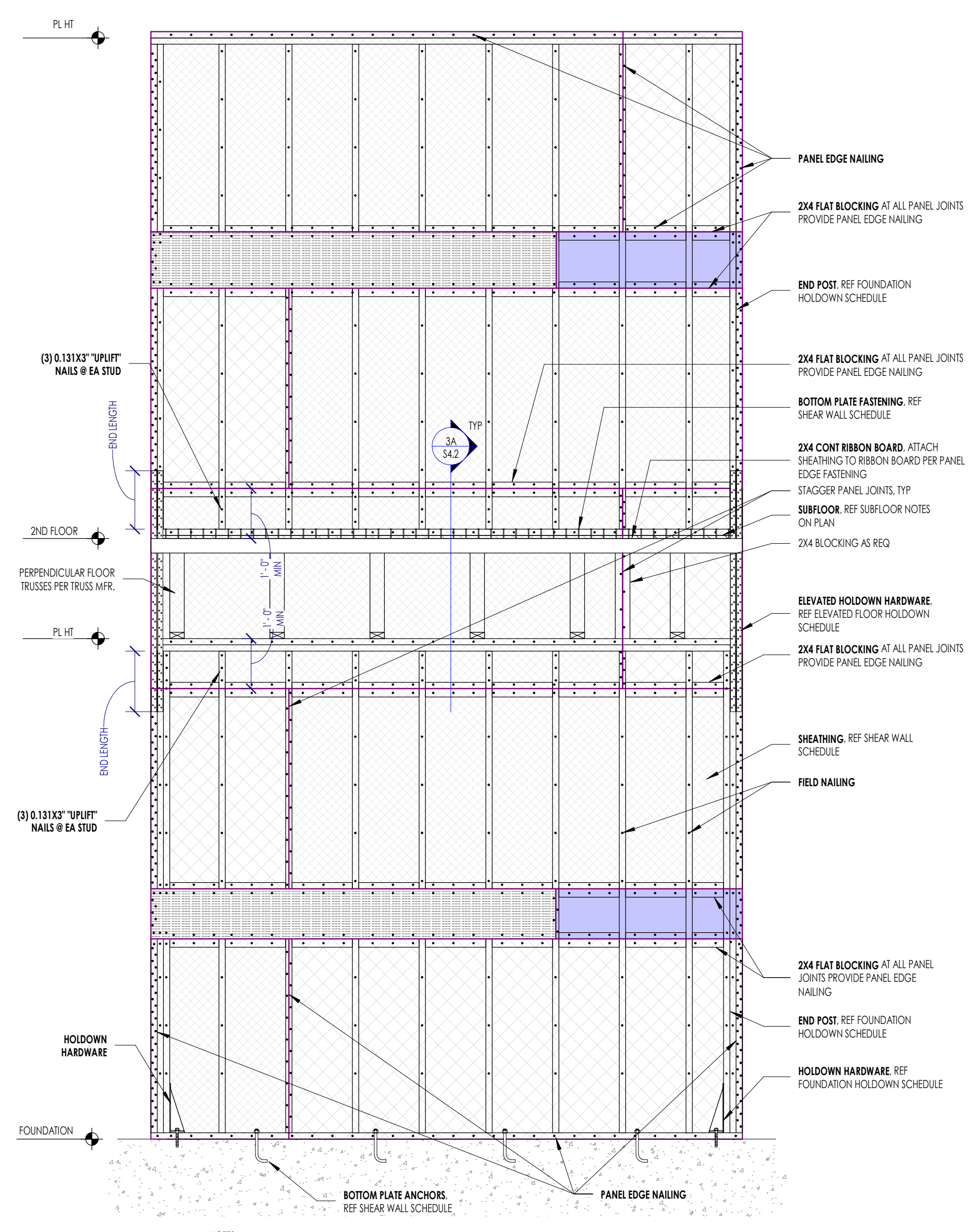
6C S4.3 SHEAR WALL - END POST CONFIGURATIONS



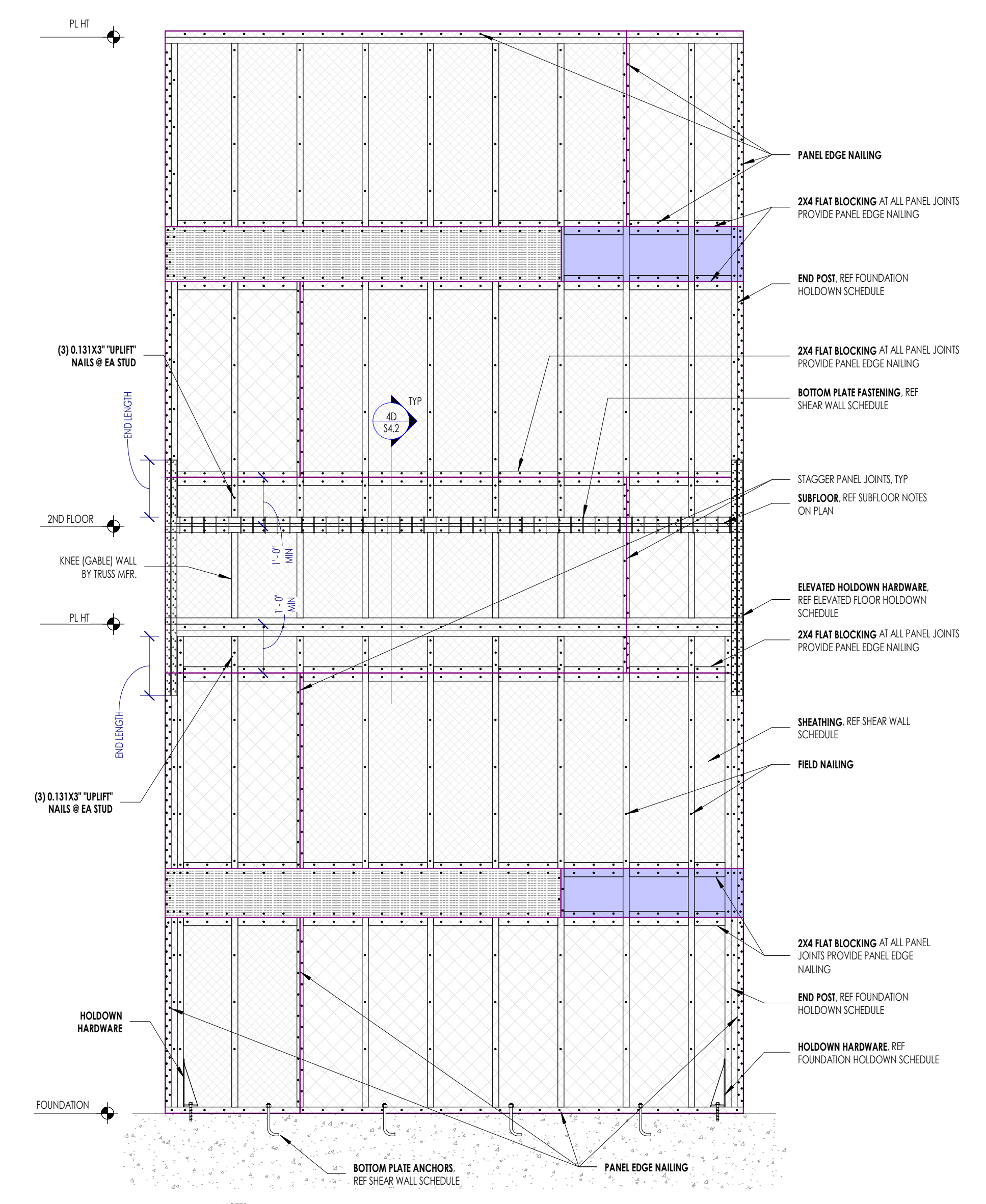
6B S4.3 SHEARWALL - FORCE TRANSFER AROUND OPENING



6A S4.3 SHEARWALL - FORCE TRANSFER AROUND OPENING (DOOR)



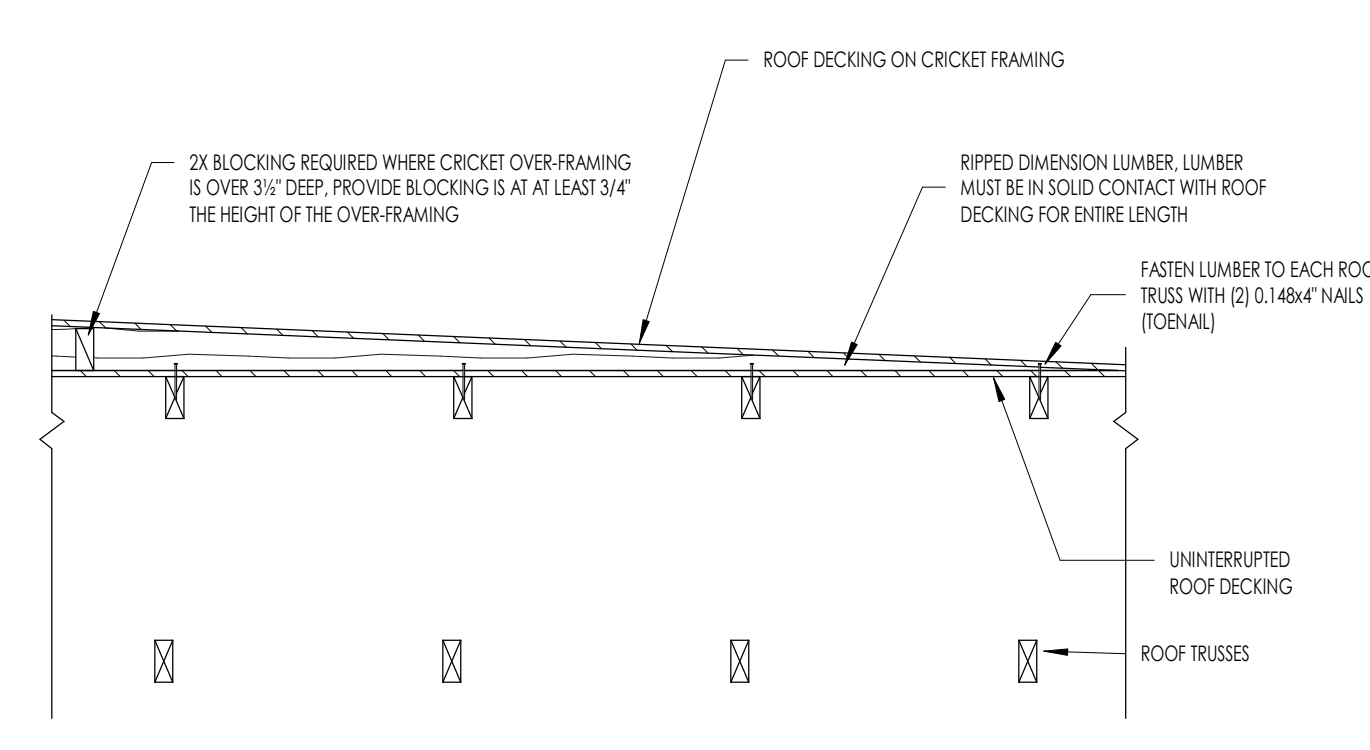
4A S4.3 TYPICAL MULTIPLE STORY SHEARWALL FRAMING AND FASTENING, TRUSSES PERPENDICULAR



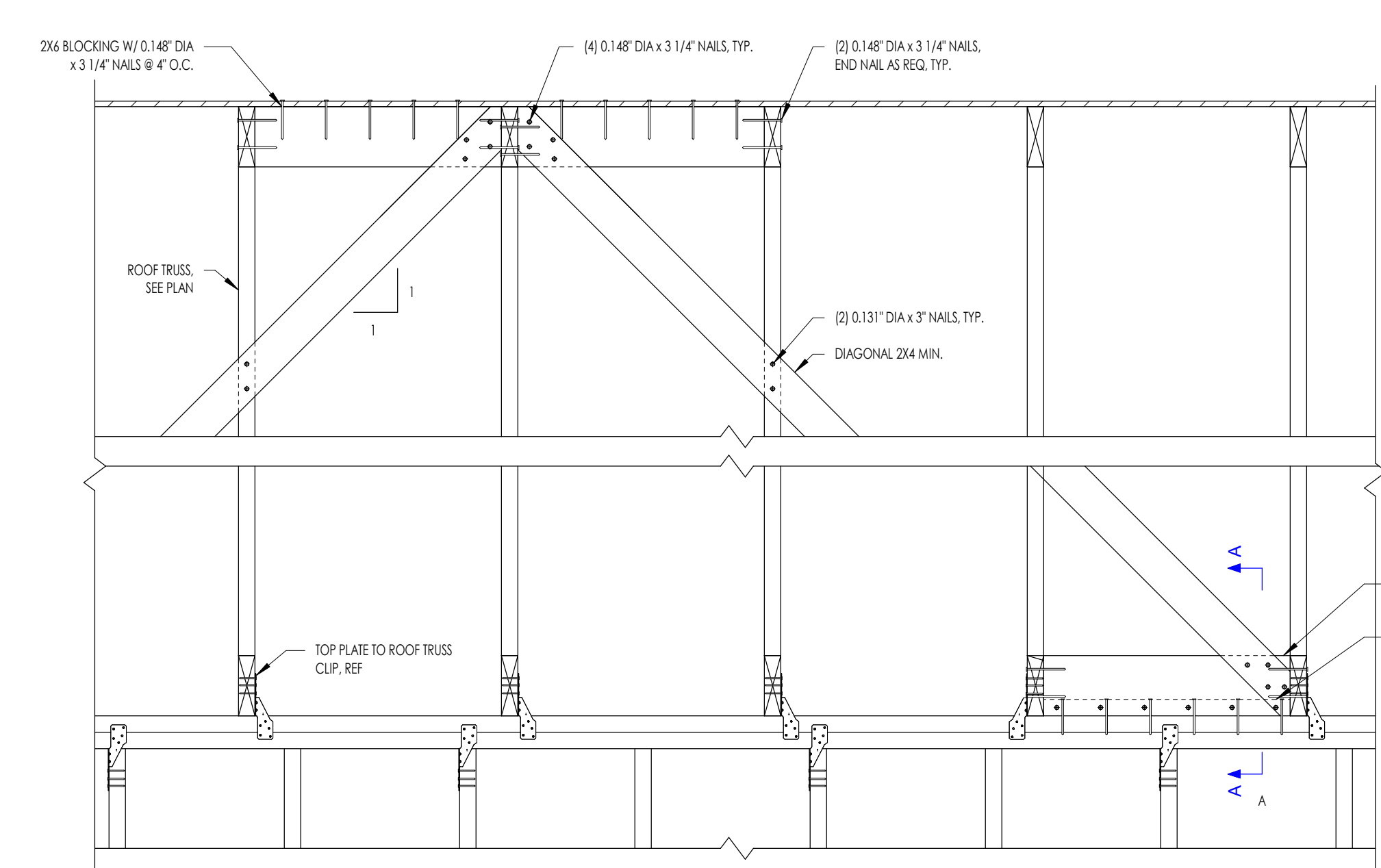
2A S4.3 TYPICAL MULTIPLE STORY SHEARWALL FRAMING AND FASTENING, TRUSSES PARALLEL

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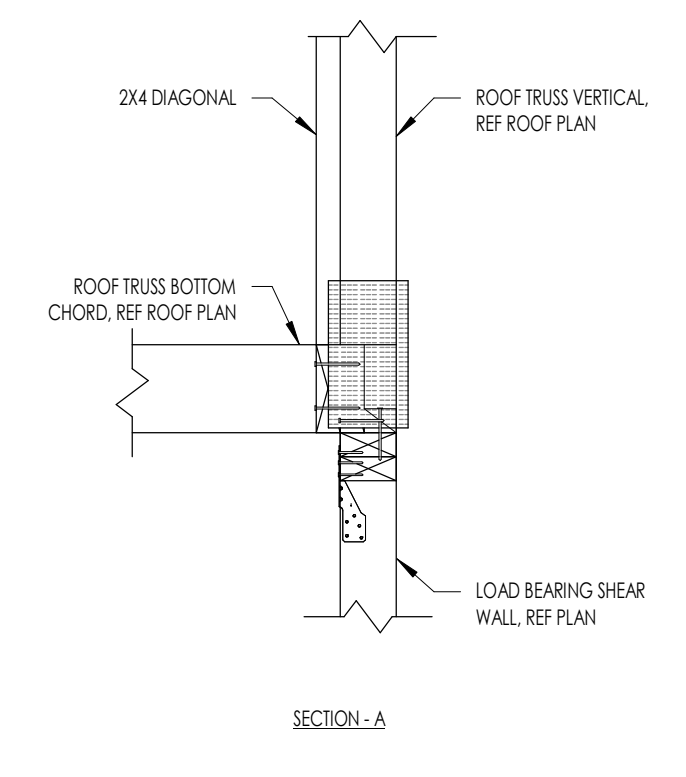
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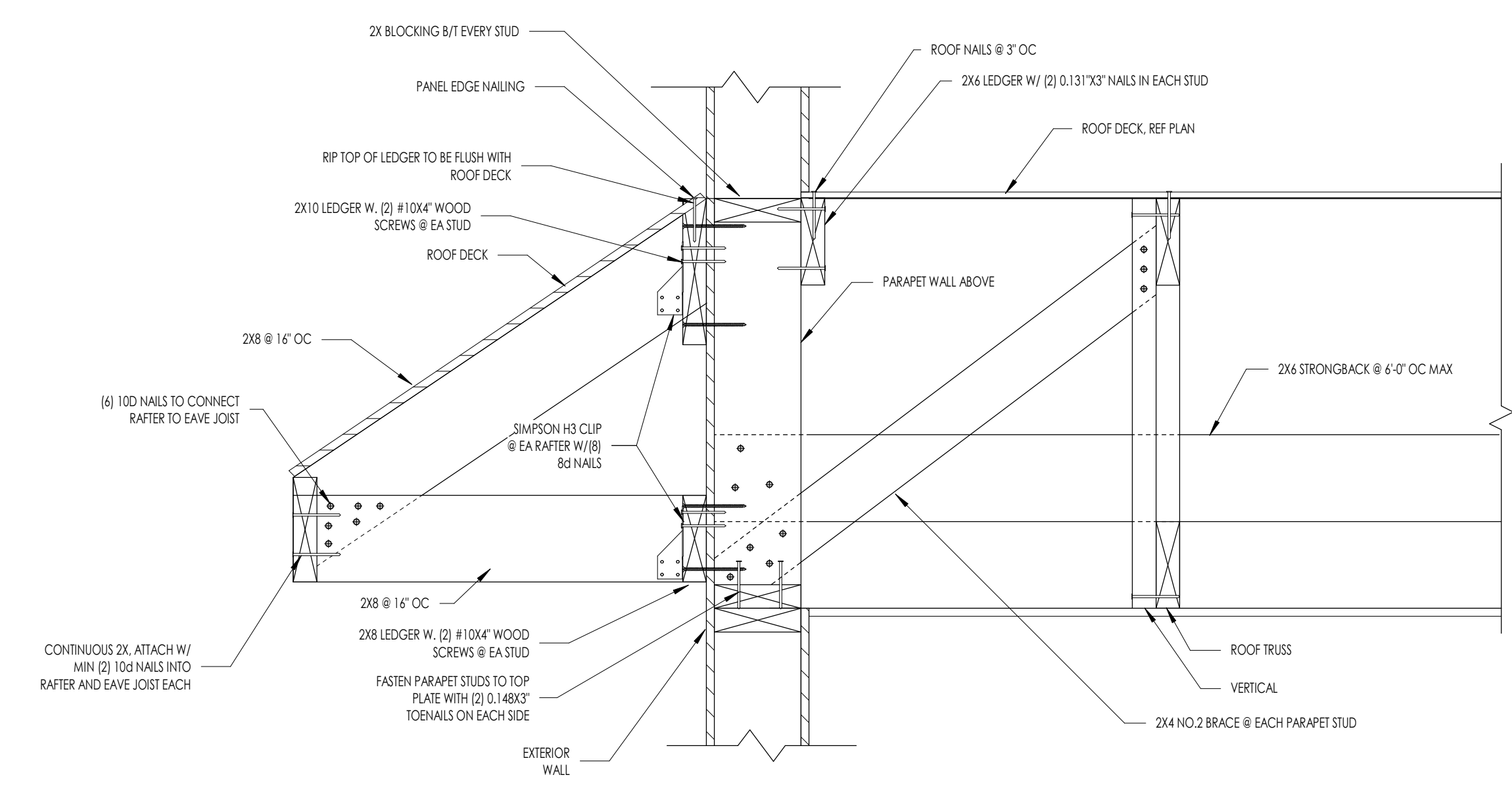
6A S4.4 TYPICAL CRICKET FRAMING AT ROOF



5A S4.4 061760 ROOF - BRACING AT INTERIOR SHEAR WALL



2A S4.4 ROOF - RAFTER ATTACHMENT INTO WALL



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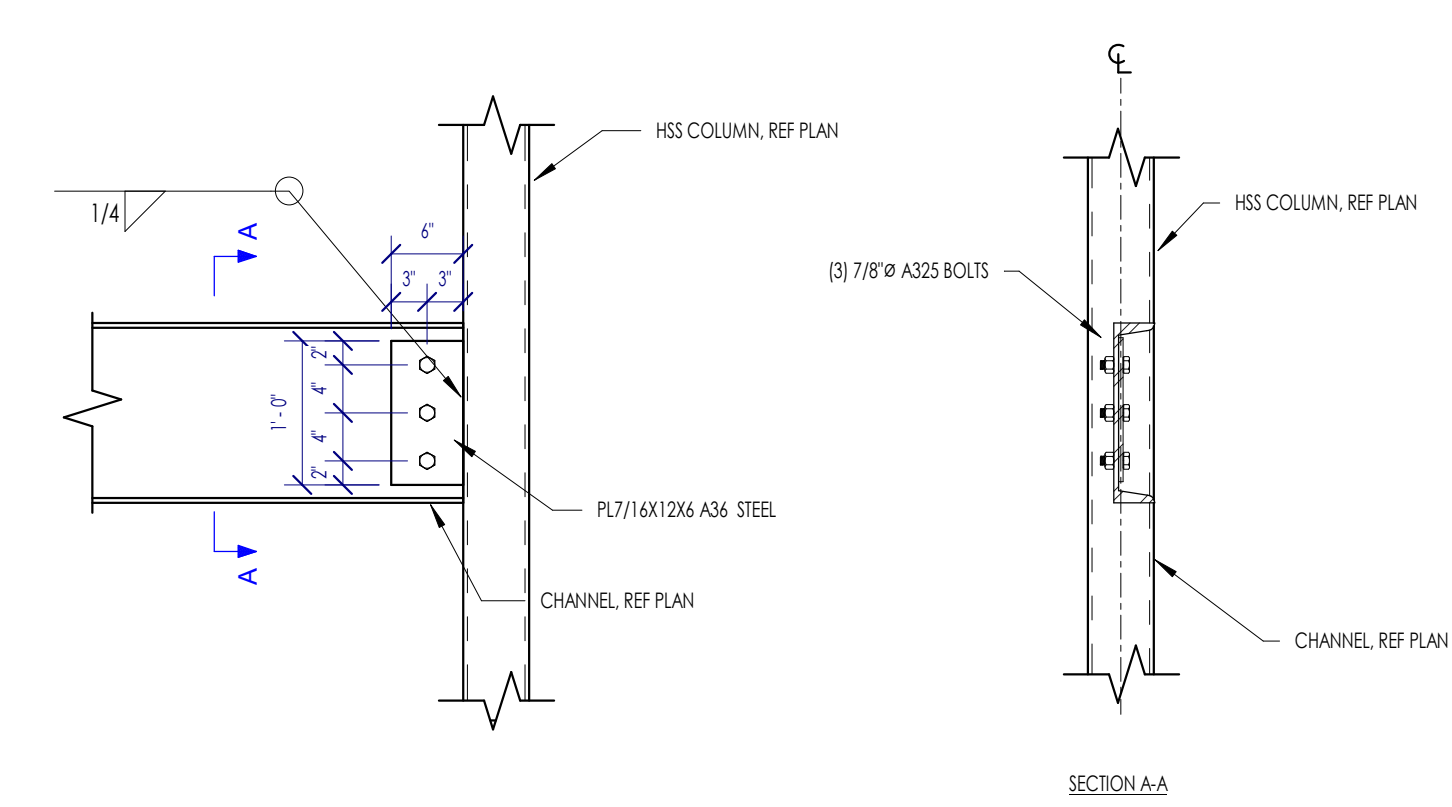
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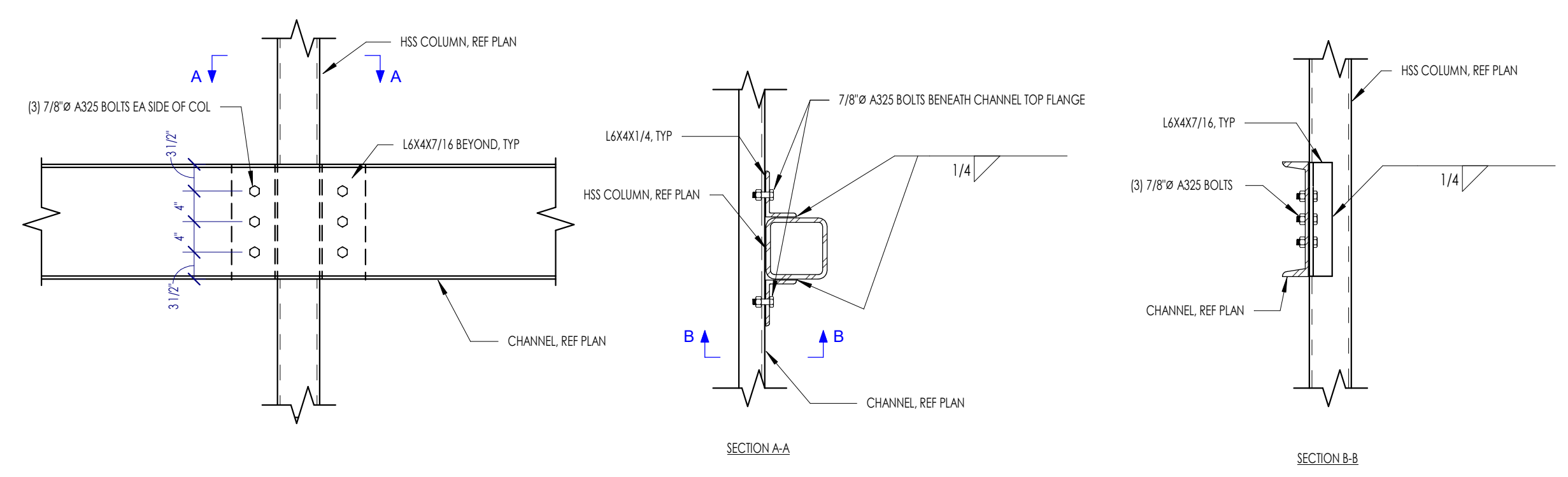
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S4.4

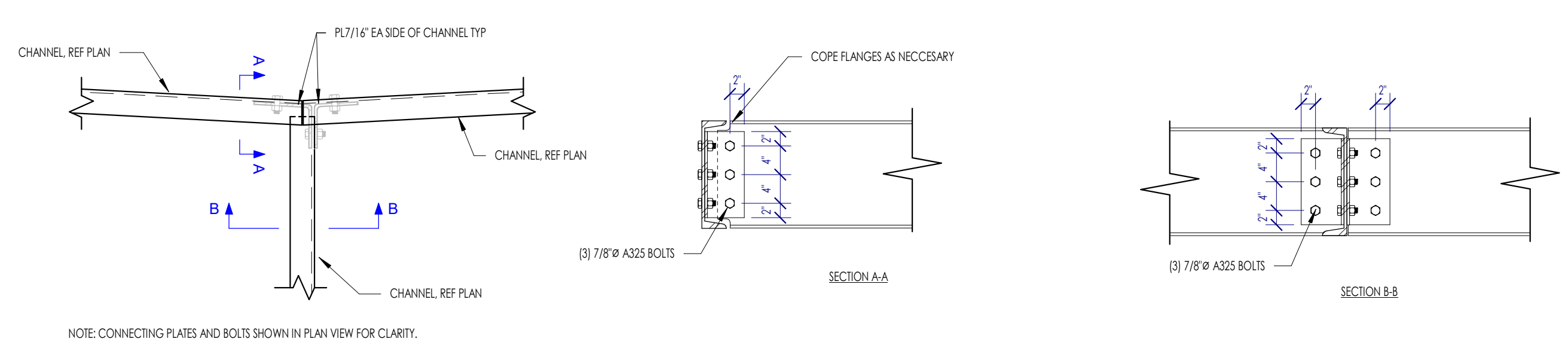
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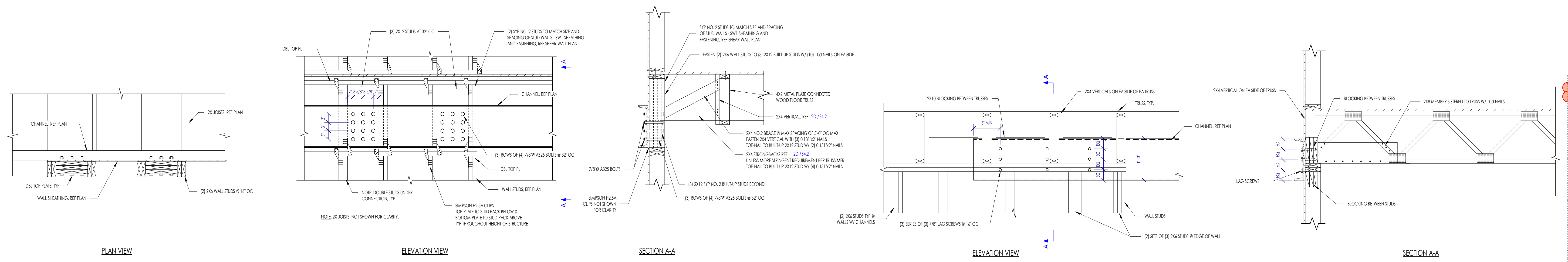
1C S4.5 CHANNEL TO HSS COLUMN CONNECTION - ALIGNED



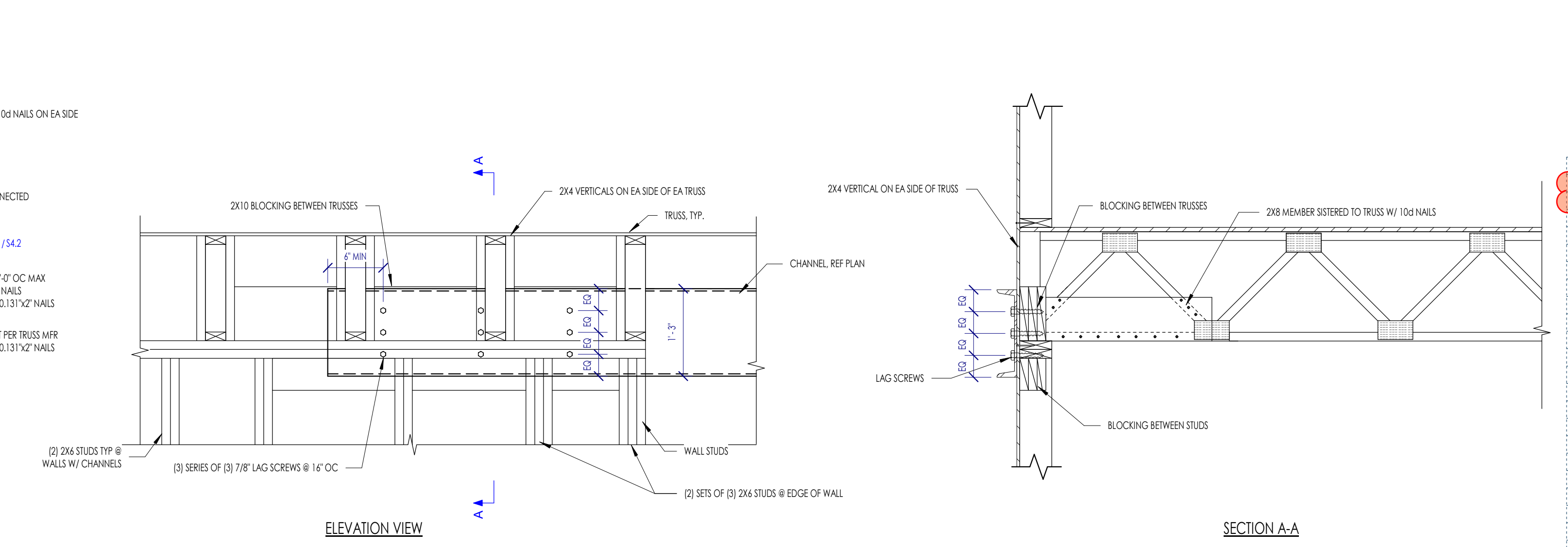
3B S4.5 CHANNEL TO HSS COLUMN CONNECTION - ECCENTRIC



6B S4.5 TYPICAL CHANNEL CONNECTION AT BALCONY1



6A S4.5 TYPICAL CHANNEL TO WALL STUD BOLTED CONNECTIONX



3A S4.5 TYPICAL CHANNEL TO WALL STUD CONNECTION

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