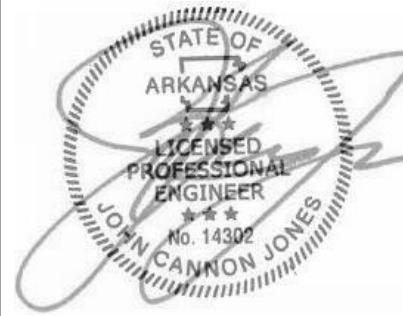
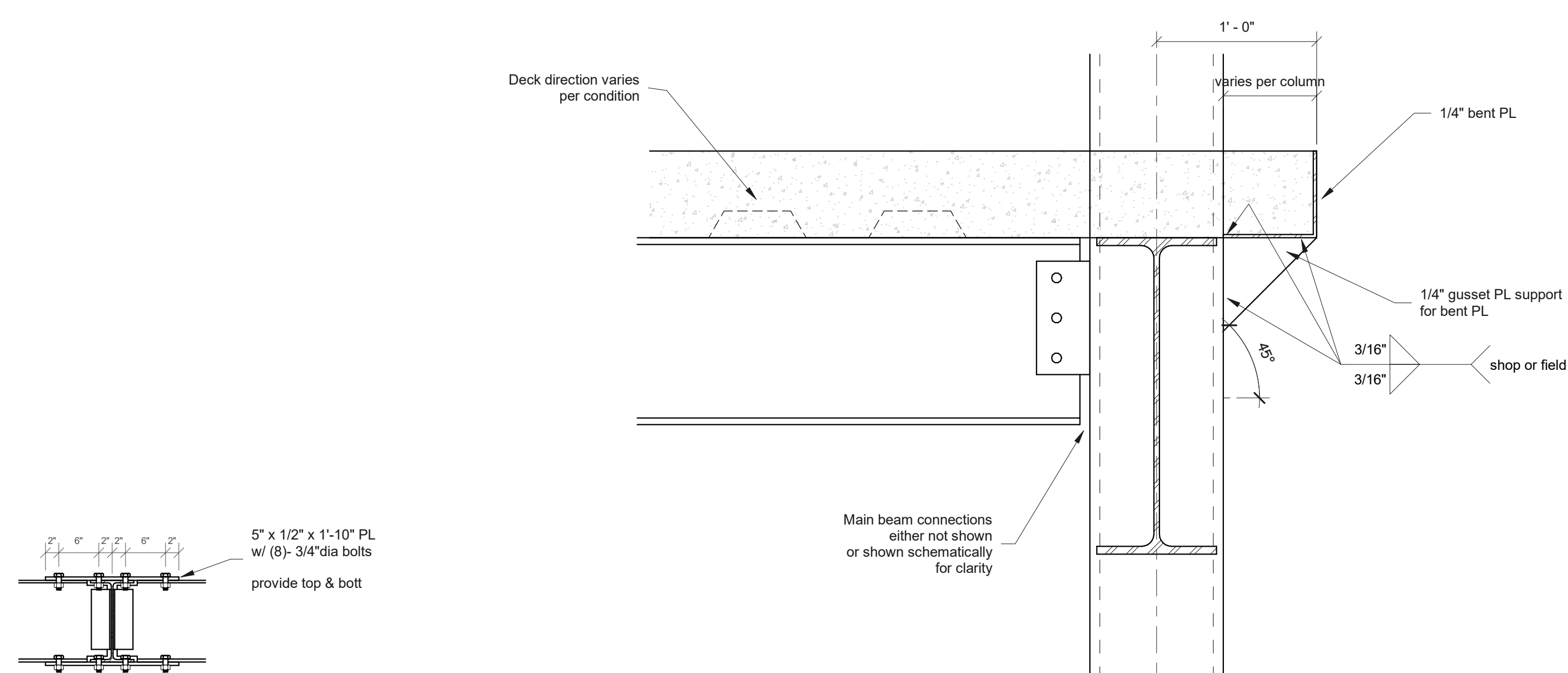




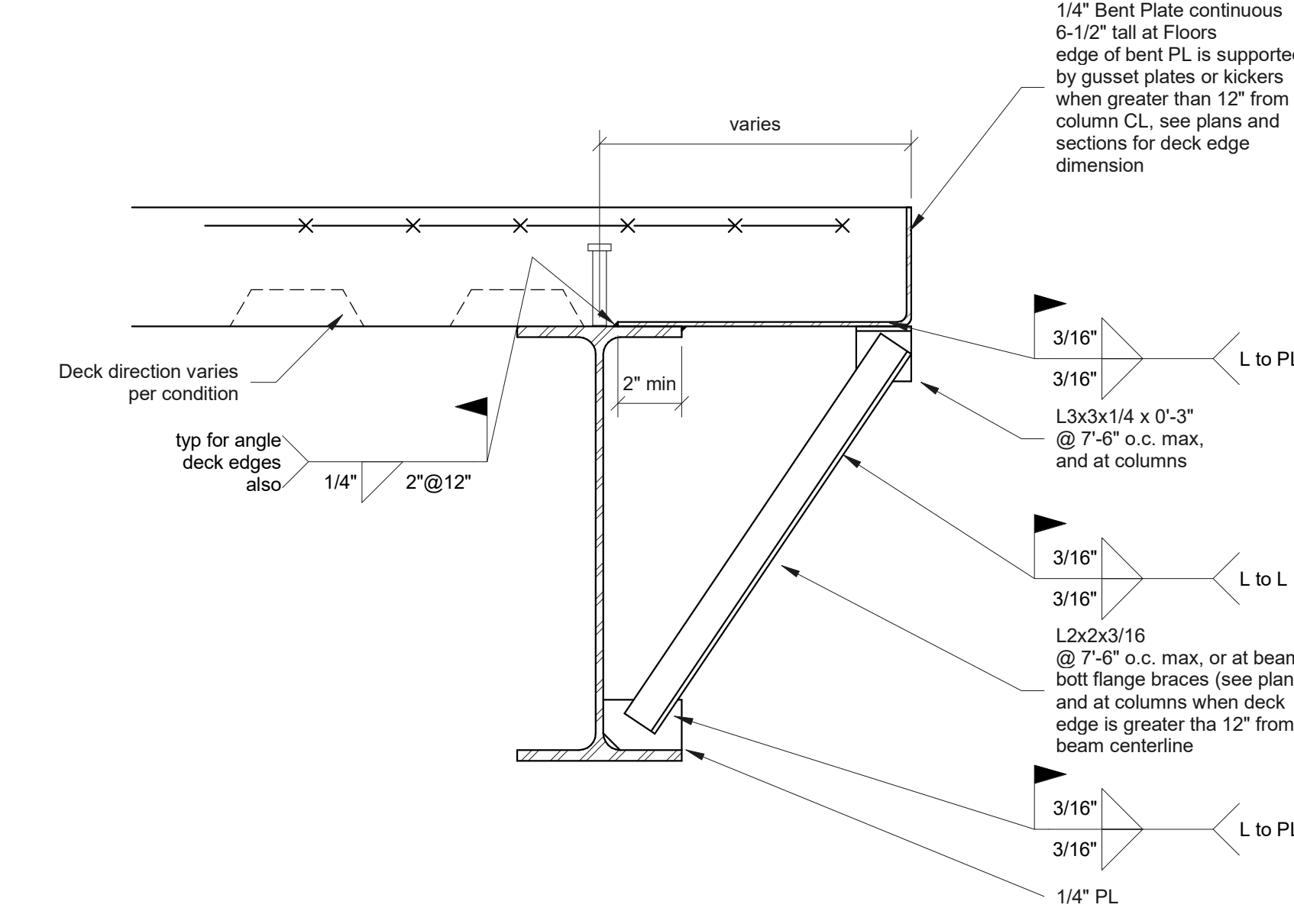
CALVARY CHURCH
CALVARY CHURCH FACILITY ADDITION
BENTONVILLE, AR

JOHN JONES, PE, SE
STRUCTURAL ENGINEER
128 18TH STREET NORTH
PELL CITY, ALABAMA
205-884-5334

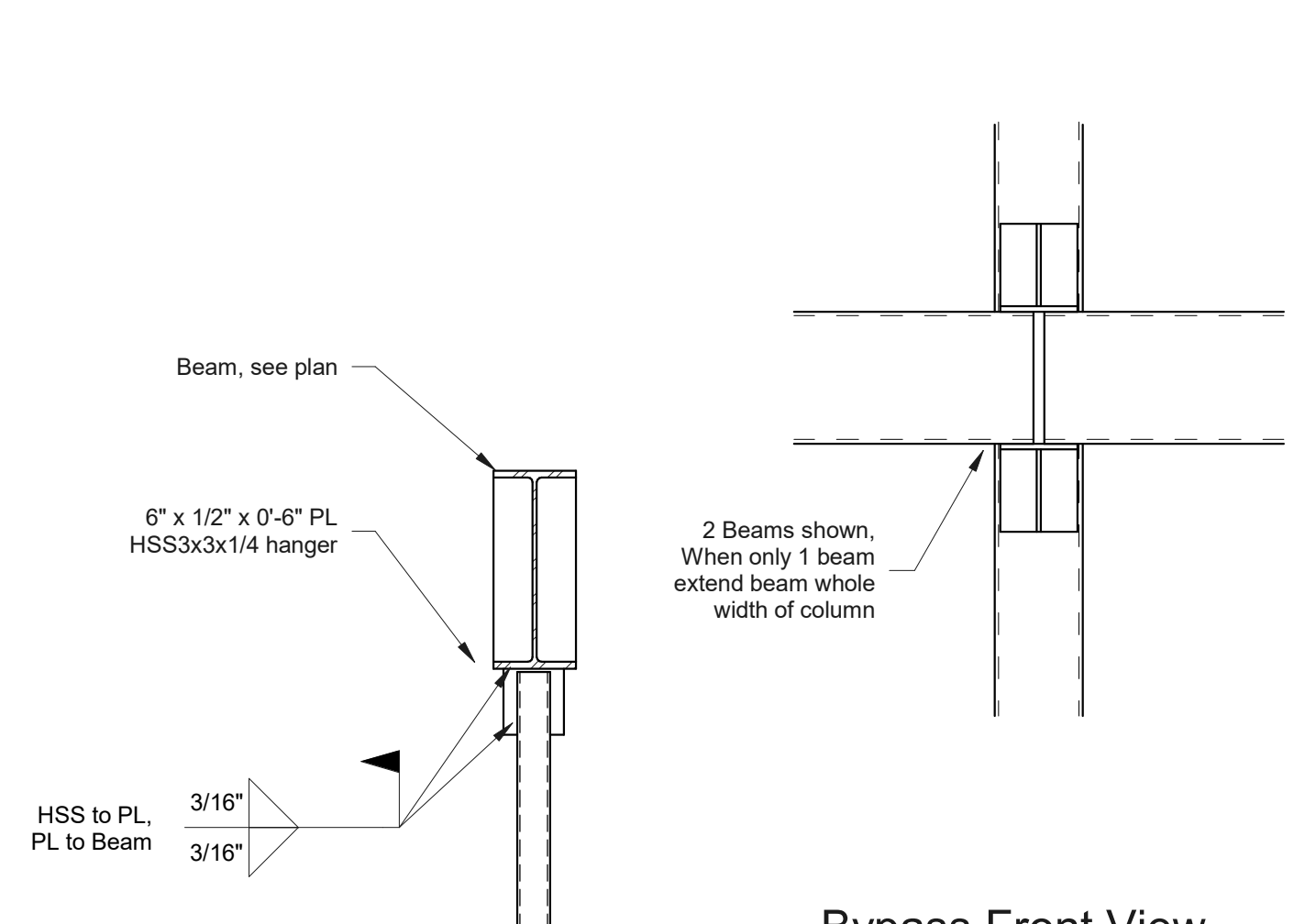
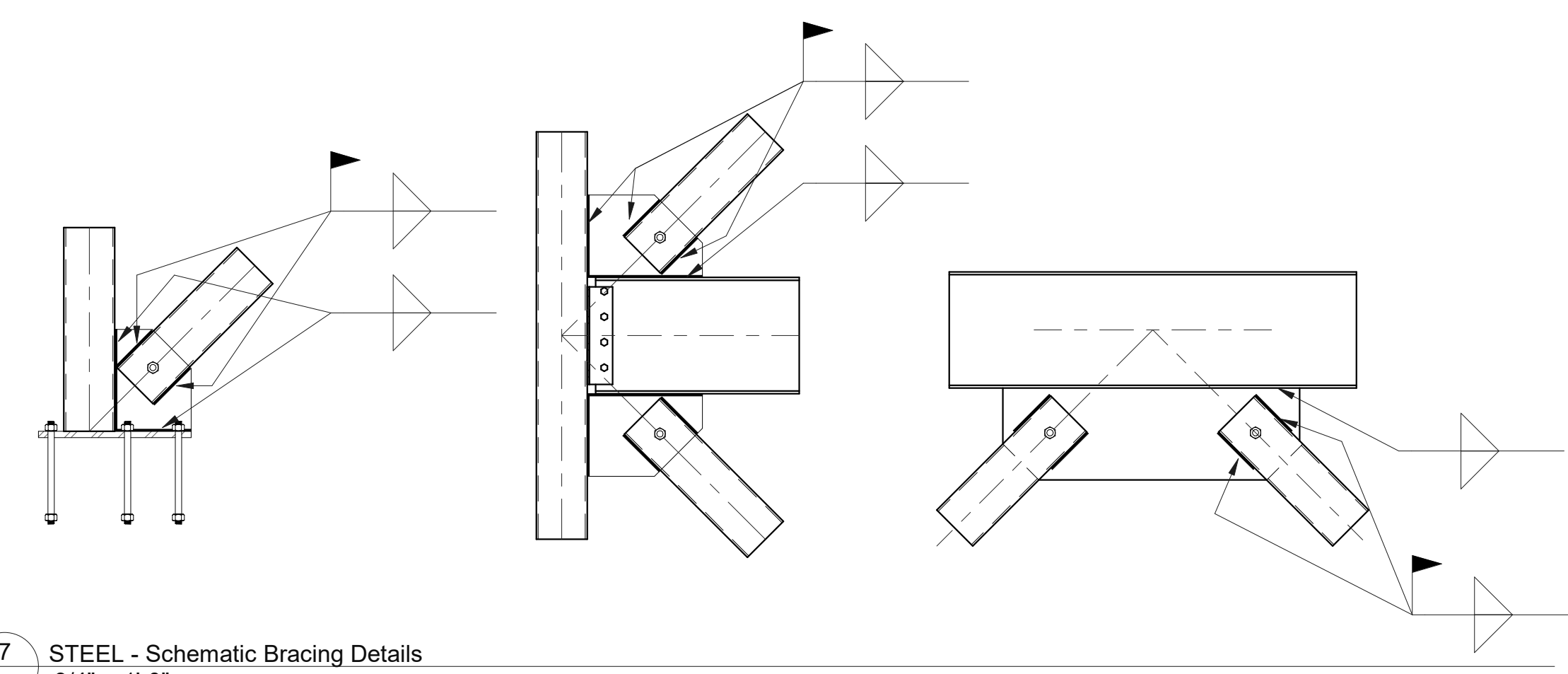


13
S0.04 STEEL - Moment Connection Beam to Beam
3/4" = 1'-0"

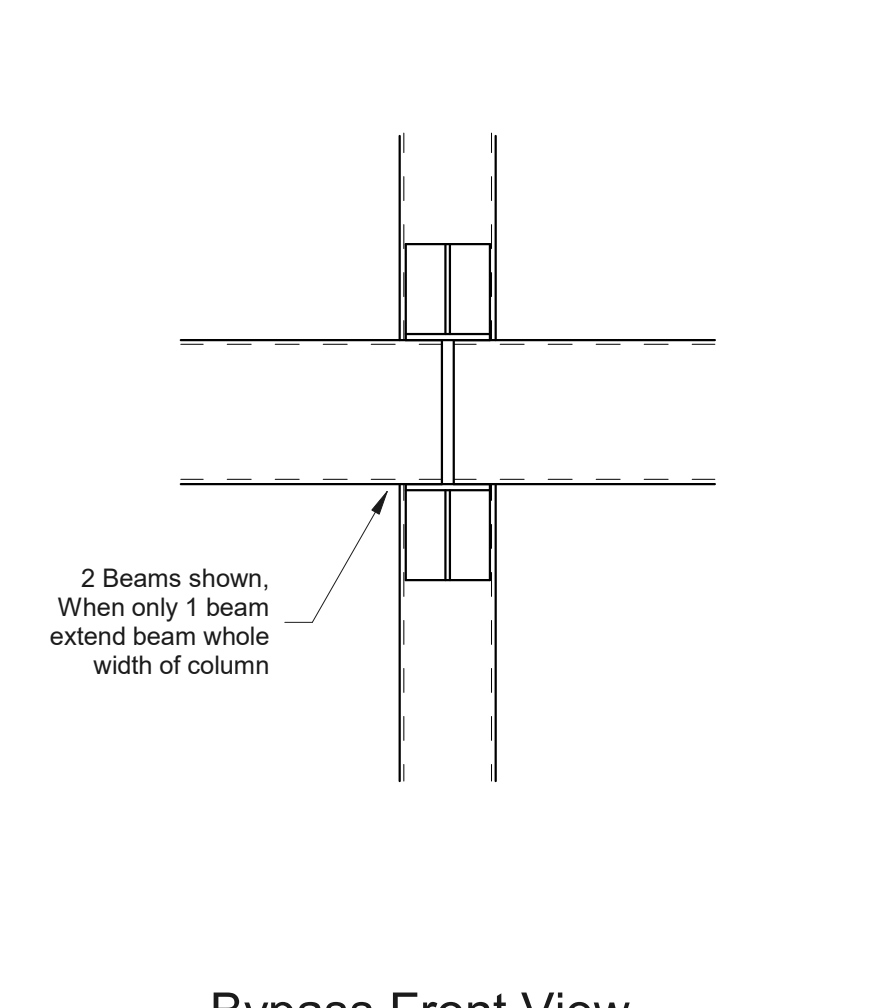
11
S0.04 STEEL - Floor Slab Edge Bent Plate
1 1/2" = 1'-0"



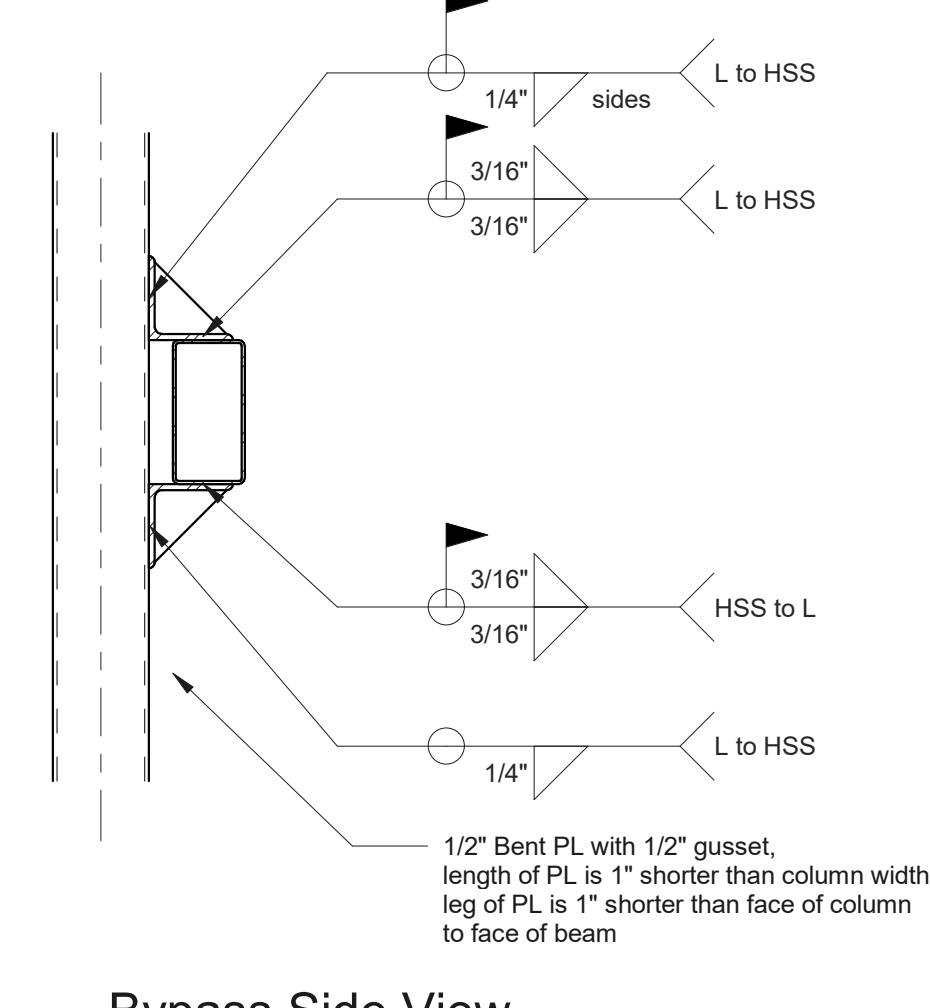
7
S0.04 STEEL - Schematic Bracing Details
3/4" = 1'-0"



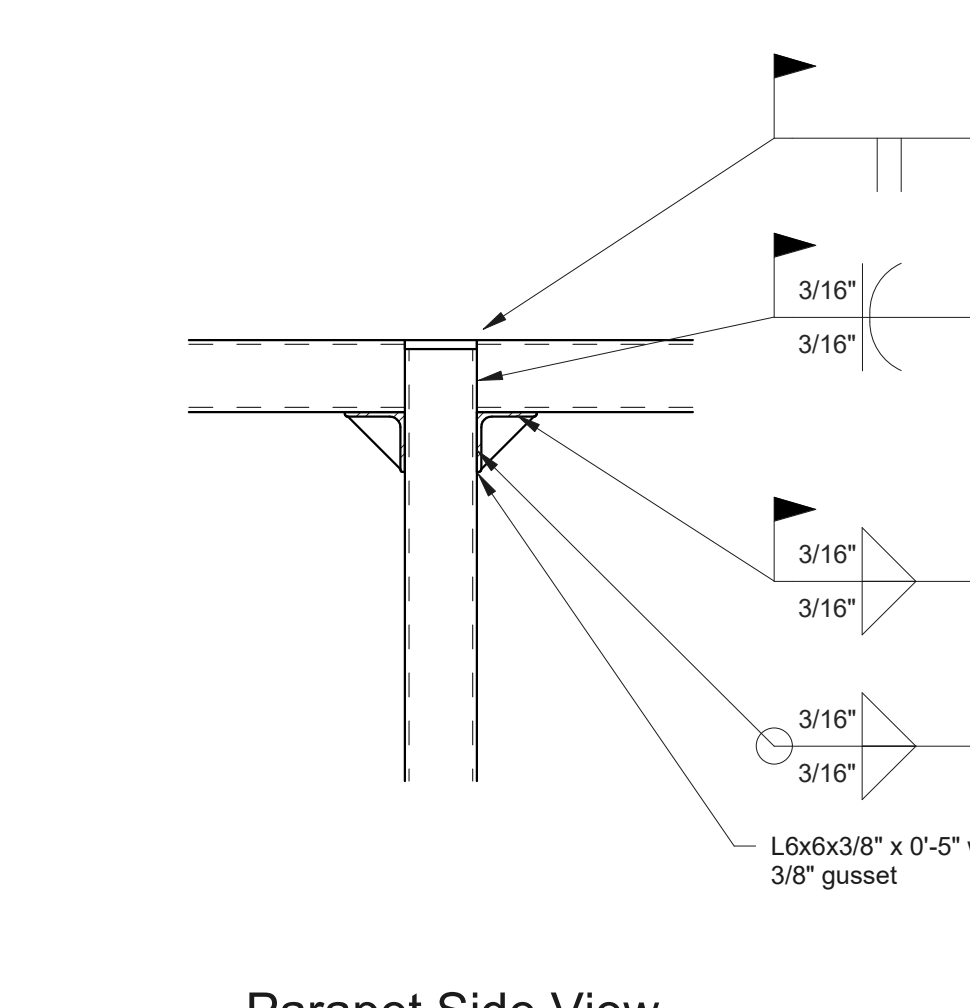
10
S0.04 STEEL - Hanger Column
3/4" = 1'-0"



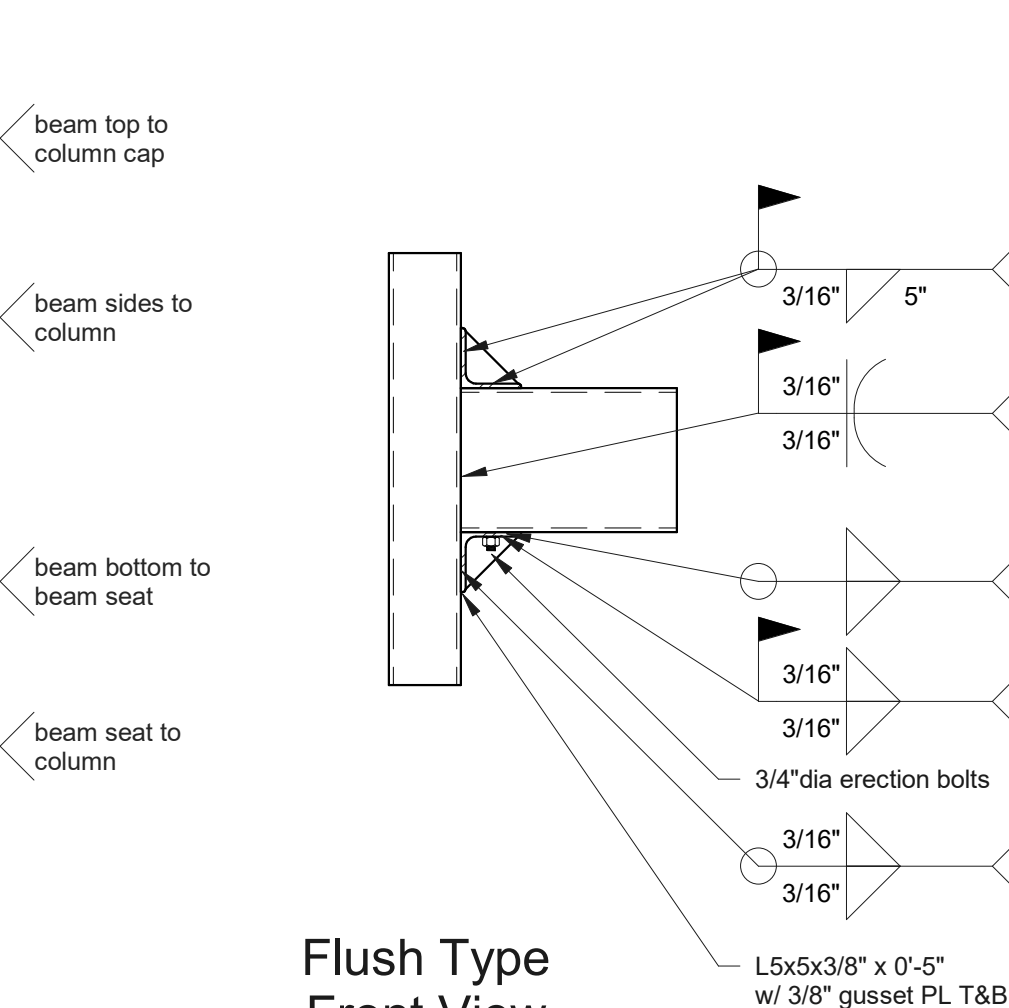
9
S0.04 STEEL - Tube Beam to Tube Column Connection
3/4" = 1'-0"



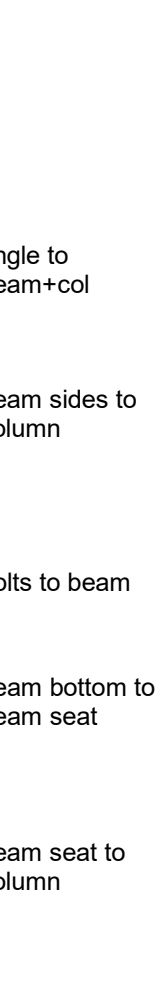
Bypass Front View



Bypass Side View



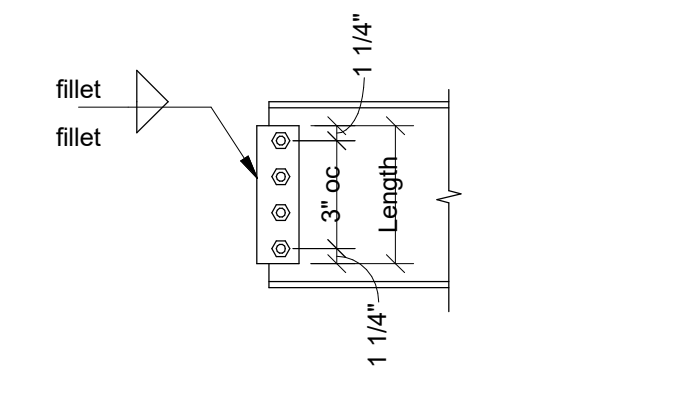
Parapet Side View



Flush Type Front View

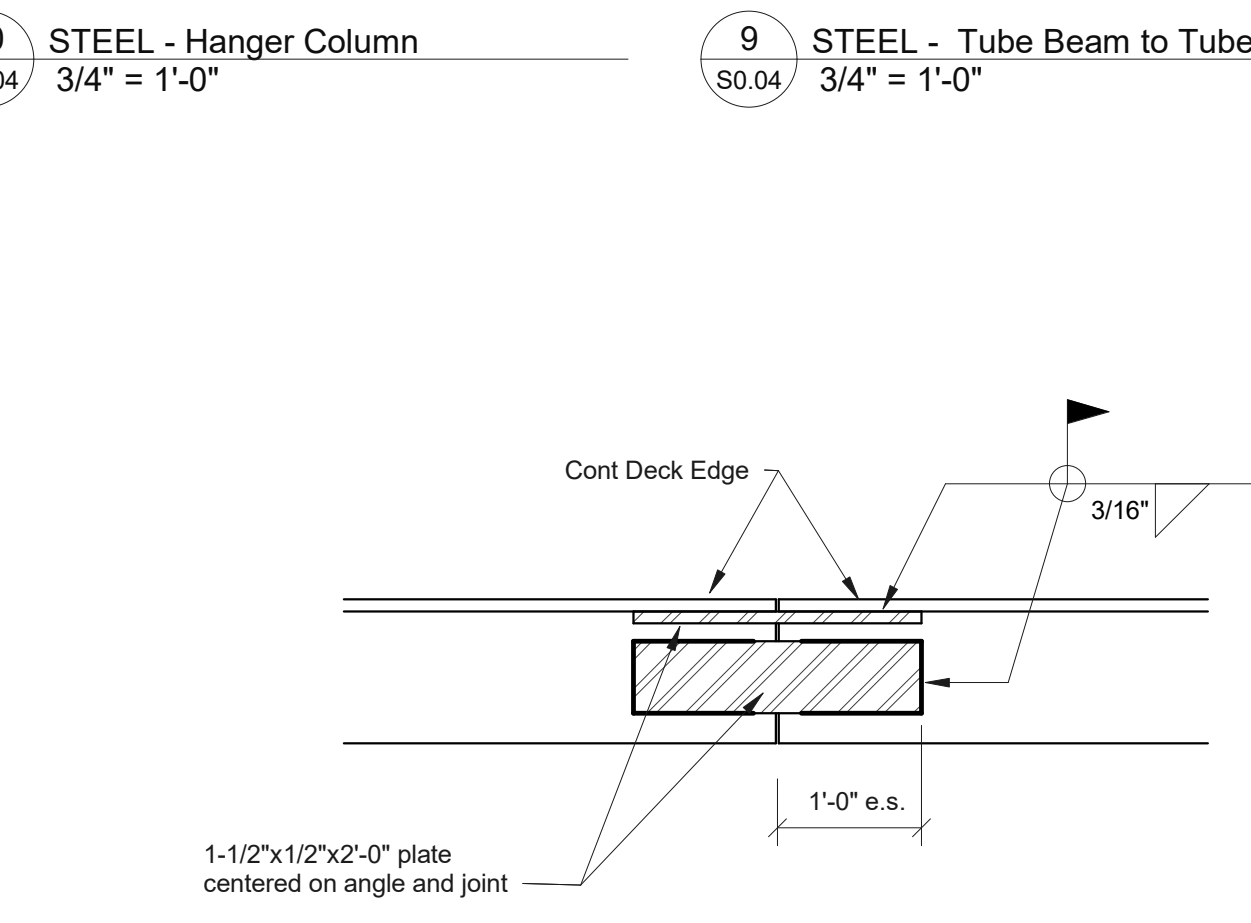
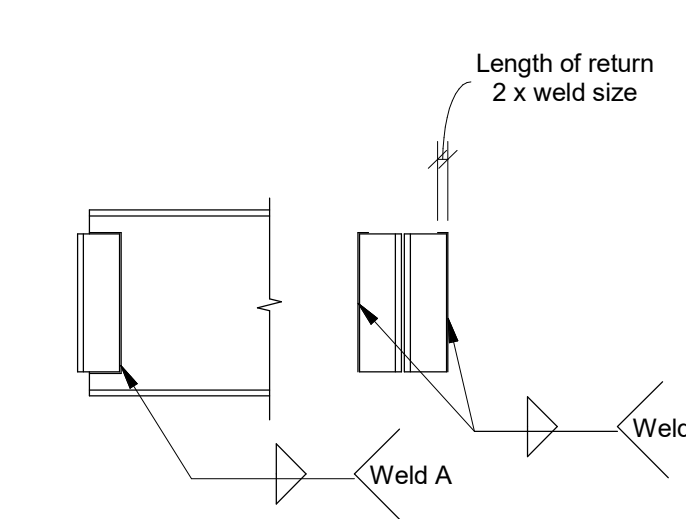
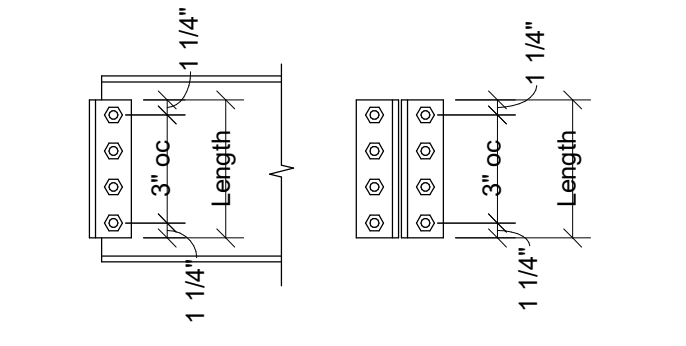
Beam to Column Single Shear Plate Connection Schedule					
Min Beam Depth	Max end reaction	Length	# of bolts	Plate thickness	Fillet weld size
W10	16.7k	5-1/2"	2	5/16"	3/16"
W12, W14	31.9k	8-1/2"	3	5/16"	3/16"
W16	43.4k	11-1/2"	4	5/16"	3/16"
W18	53.5k	14-1/2"	5	5/16"	3/16"
W21	76.3k	17-1/2"	6	3/8"	1/4"
W24	85.5k	20-1/2"	7	3/8"	1/4"
W27	99.4k	20-1/2"	7	7/16"	5/16"
W30	115k	23-1/2"	8	7/16"	5/16"
W33	130k	26-1/2"	9	7/16"	5/16"
W36	145k	29-1/2"	10	7/16"	5/16"
W40	159k	32-1/2"	11	7/16"	5/16"

- Use this table for Wide Flange Beams to HSS Columns
- Loads are ASD
- Bolts are 3/4" dia Group A ASTM F3125 Gr A325 in standard or short-slotted holes transverse to direction of load with threads Excluded from shear plane. More than 5 bolts must have short-slotted holes.
- Plate is A36 and welds are E-70XX electrodes
- Beam reactions that exceed the max reaction in this table will use the Double Angle Frame Connection Schedule below.

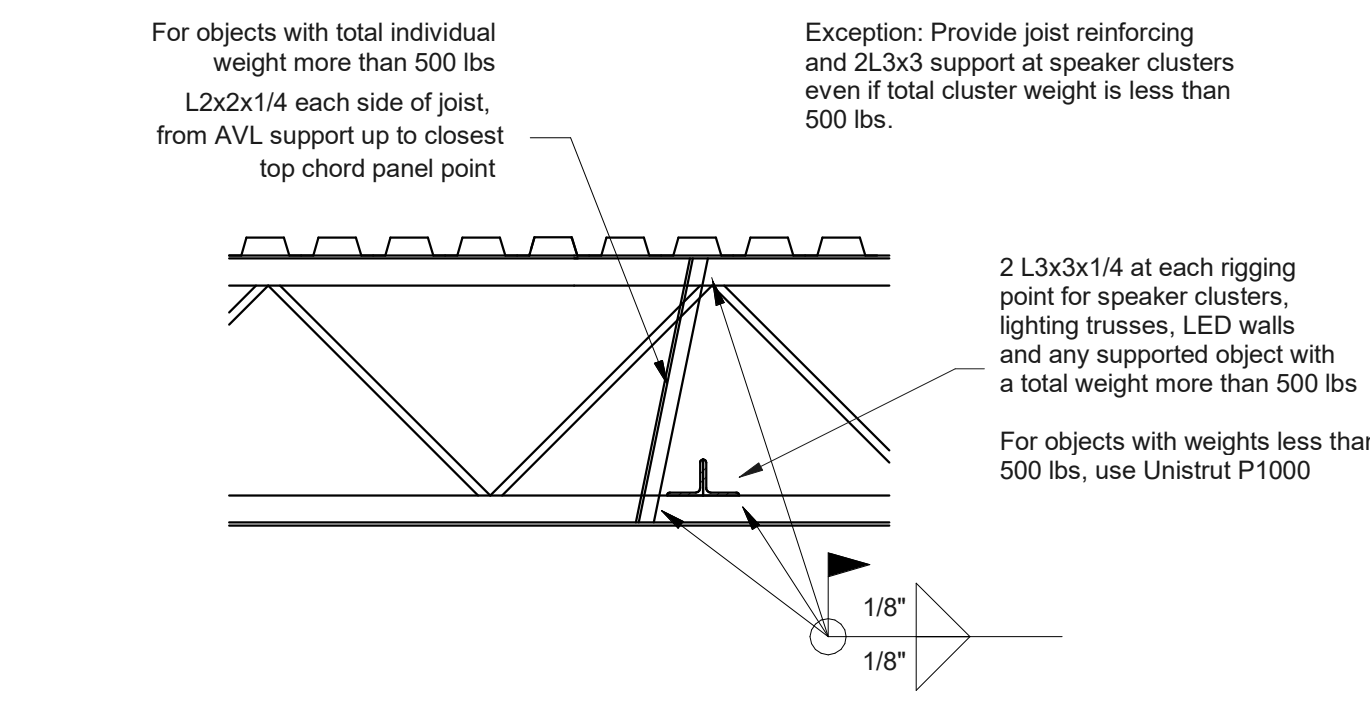


Beam Double Angle Shear Connection Schedule						
Min Beam Depth	Max end reaction	Length	rows of bolts	Angle thickness	Weld A fillet size	Weld B fillet size
W10	14.6k	5-1/2"	2	1/4"	3/16"	1/4"
W12, W14	32.1k	8-1/2"	3	1/4"	3/16"	1/4"
W16	53.3k	11-1/2"	4	1/4"	3/16"	1/4"
W18	76.4k	14-1/2"	5	1/4"	3/16"	1/4"
W21	125k	17-1/2"	6	5/16"	1/4"	5/16"
W24	145k	20-1/2"	7	5/16"	1/4"	5/16"
W27	156k	20-1/2"	7	3/8"	1/4"	5/16"
W30	189k	23-1/2"	8	3/8"	1/4"	5/16"
W33	216k	26-1/2"	9	3/8"	5/16"	5/16"
W36	246k	29-1/2"	10	3/8"	5/16"	5/16"
W40	271k	32-1/2"	11	3/8"	5/16"	5/16"

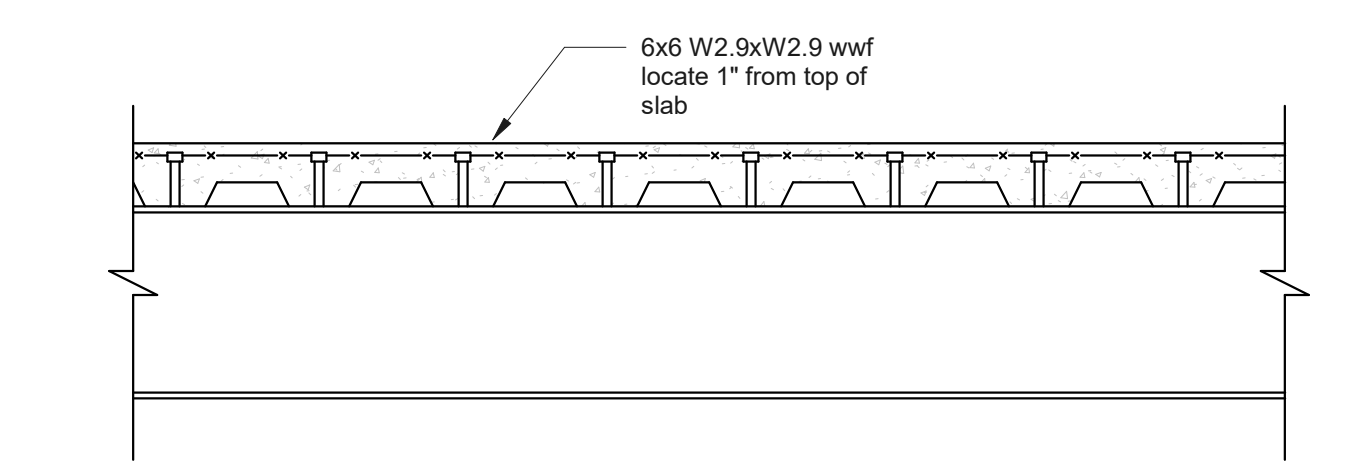
- Use this table for Wide Flange Beams to Wide Flange Columns or other Beams
- Loads are ASD
- Bolts are 3/4" dia Group A ASTM F3125 Gr A325 in standard or short-slotted holes transverse to direction of load with threads Excluded from shear plane.
- Angles are A36 and welds are E-70XX electrodes
- Beam reactions that exceed the max reaction in this table will be designed by steel fabricator and submit signed/sealed calculations prepared by a Professional Engineer licensed in the State of the Project



5
S0.04 STEEL - Perimeter Deck Angle Splice
3/4" = 1'-0"

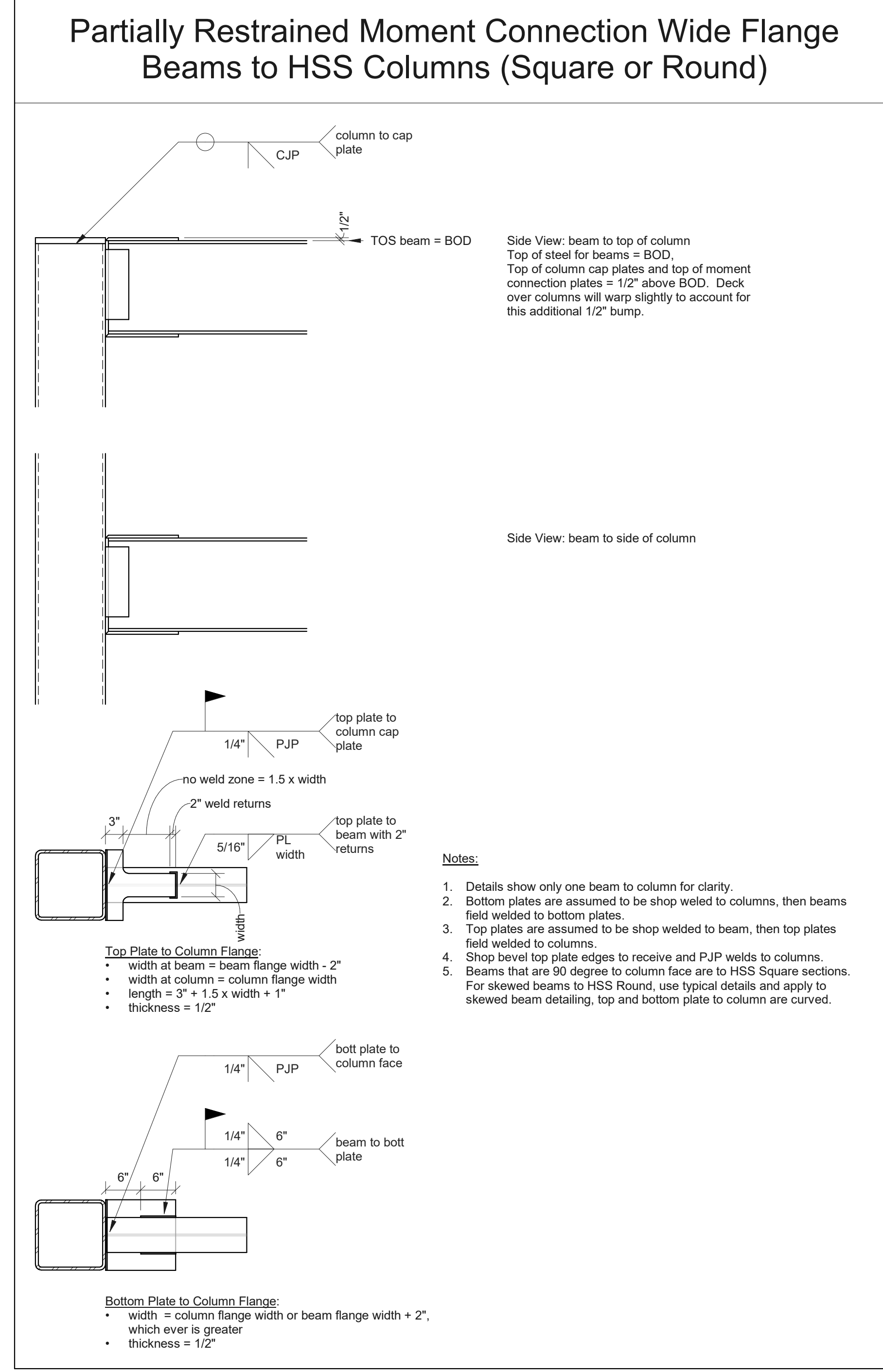


2
S0.04 STEEL - AVL Support
3/4" = 1'-0"



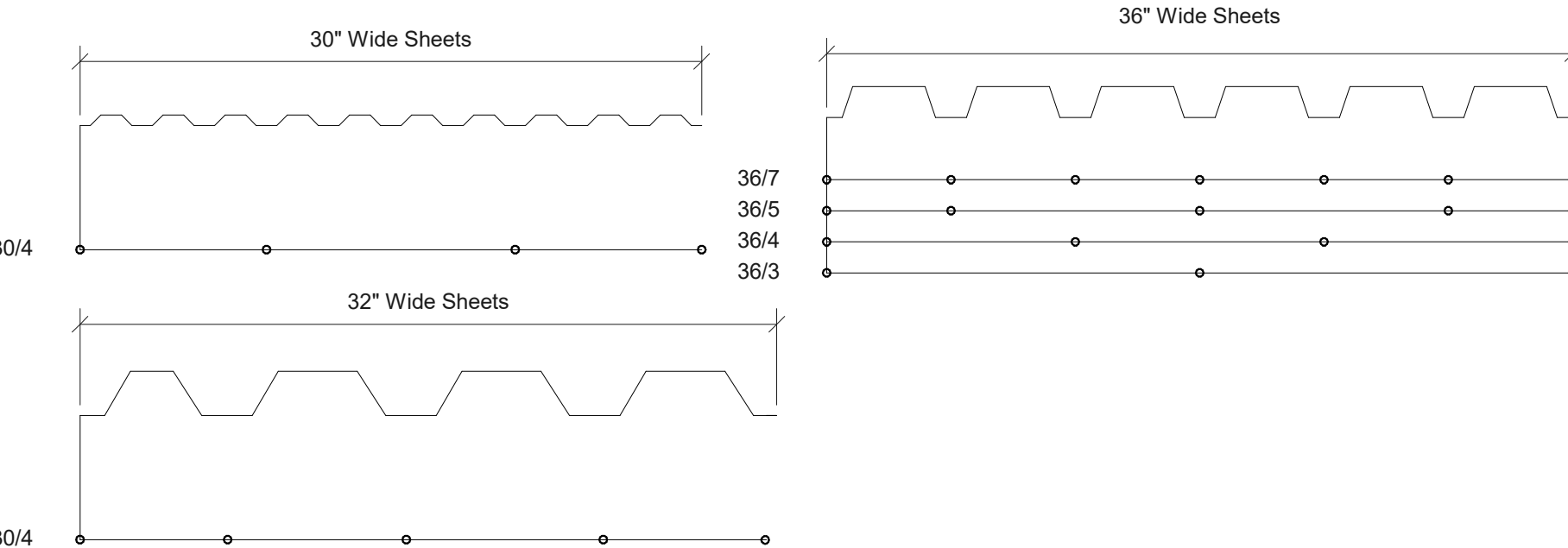
- Notes:
- Floor construction is 4-1/2" of normal weight concrete on 2"x 18 gage composite metal deck (total thickness 6-1/2"). Shear studs are 3/4" dia x 4-1/2" tall.
 - Number of headed studs are noted thus (30) on the framing plans. If only one number is shown the studs are equally spaced over the length of the beam. If more than one number is shown the studs are spaced between beam connections.
 - Beams noted this [c=3/4"] are to be cambered to the value shown in the brackets.

12
S0.04 STEEL - Composite Beam
3/4" = 1'-0"

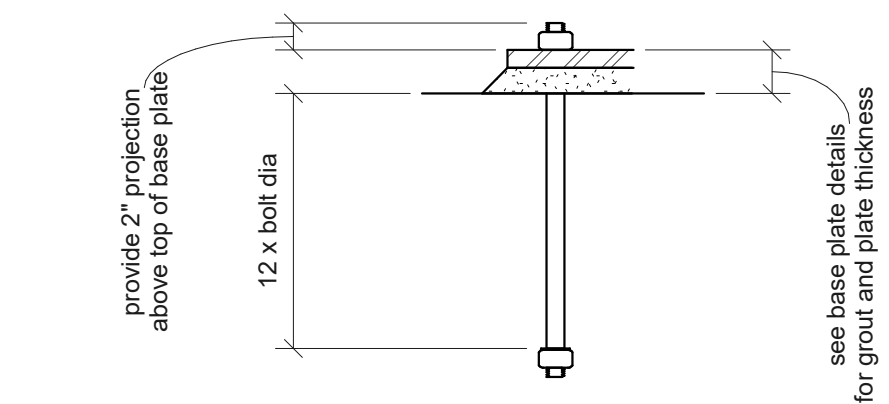


4
S0.04 STEEL - Beam Shear Connection Schedule
3/4" = 1'-0"

Metal Deck Attachment Schedule				
Area	Deck	Support Fastener/Pattern	Perimeter Fastener/Pattern	Sidelap Fastener/Pattern
Roof on K-series Joists, Wide Flange, and HSS beams	1.5B x 22ga 1.5B x 20ga painted, 50 ksi 3-span	5/8" dia spot weld 36/4	5/8" dia spot weld @ 6" o.c.	#10 tek screws @ 24" o.c.
Floor on CFS joists	0.6C x 28ga galvanized 50 ksi 3-span	#10 TEK screw 30/4	#10 TEK screw @ 6" o.c.	#10 tek screws @ 18" o.c.
Floor on Wide Flange Beams	2VLI x 18ga galvanized 50 ksi 3-span	headed stud per quantity, 5/8" dia spot weld at 30/4 in flutes without headed studs	5/8" dia spot weld @ 6" o.c.	#10 tek screws @ 12" o.c.
Roof on HSS beams	3.0N galvanized 50 ksi 3-span	5/8" dia spot weld 32/5	5/8" dia spot weld @ 6" o.c.	PunchLok hidden



3
S0.04 STEEL - Metal Deck Attachment
3/4" = 1'-0"



1
S0.04 STEEL - Anchor Bolt
1 1/2" = 1'-0"

6
S0.04 STEEL - Moment Connection to HSS Columns1
3/4" = 1'-0"