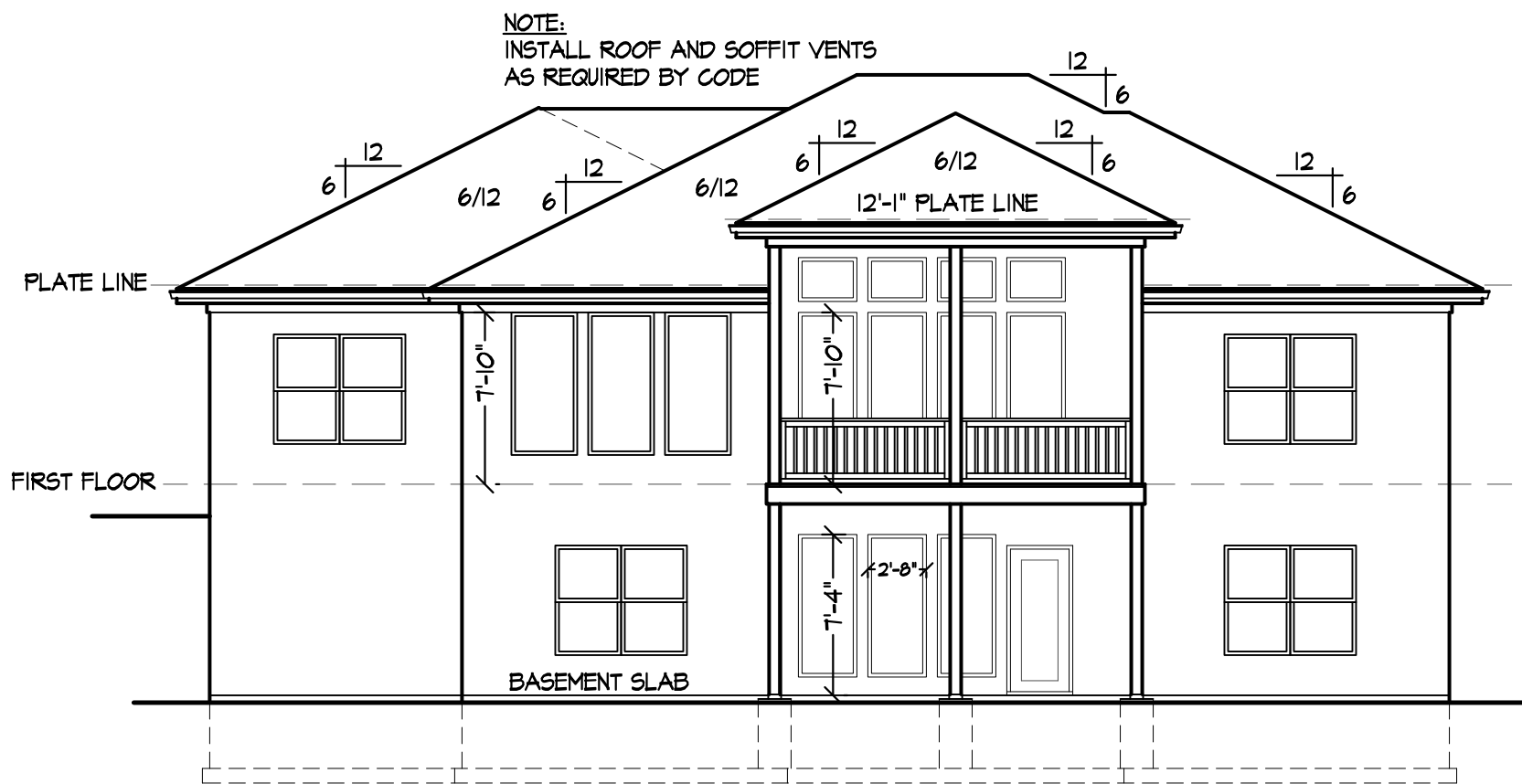
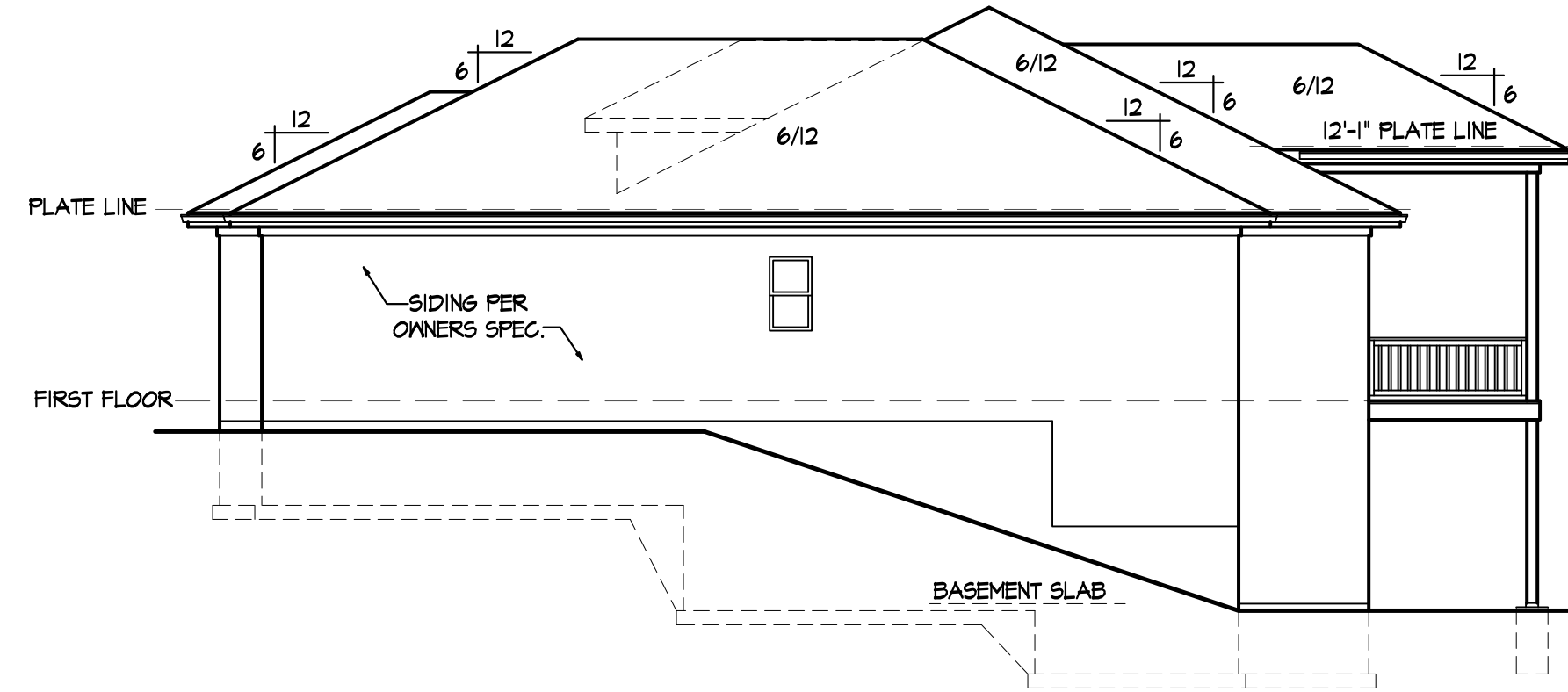


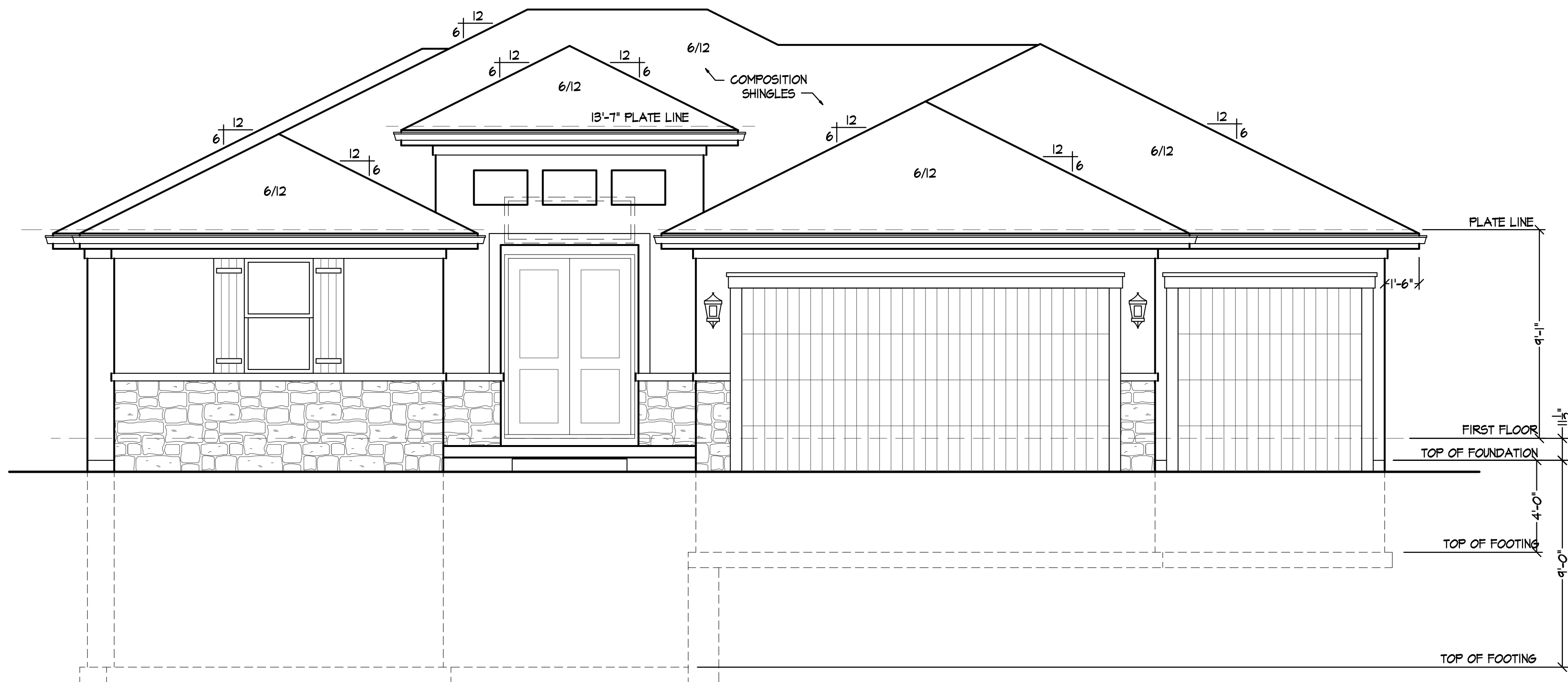
LEFT ELEVATION
SCALE: 1/8" = 1'-0"



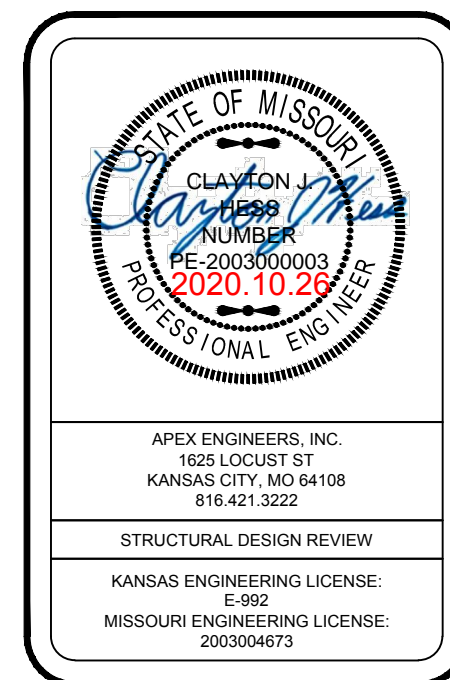
REAR ELEVATION
SCALE: 1/8" = 1'-0"



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



FRONT ELEVATION
SCALE: 1/4" = 1'-0"



DISCLAIMER
ACTUAL PLANS AND ELEVATIONS MAY VARY
FROM ARCHITECTURAL DRAWINGS.
DUE TO TERRAIN/BACKFILL PROCESSES.
FRONT ELEVATIONS ARE ARCHITECTURAL
DRAWINGS AND MAY VARY DUE TO
MATERIAL AVAILABILITY.

NOTE:
PLANS DESIGNED PER IRC AS
ADOPTED BY GOVERNING JURISDICTION

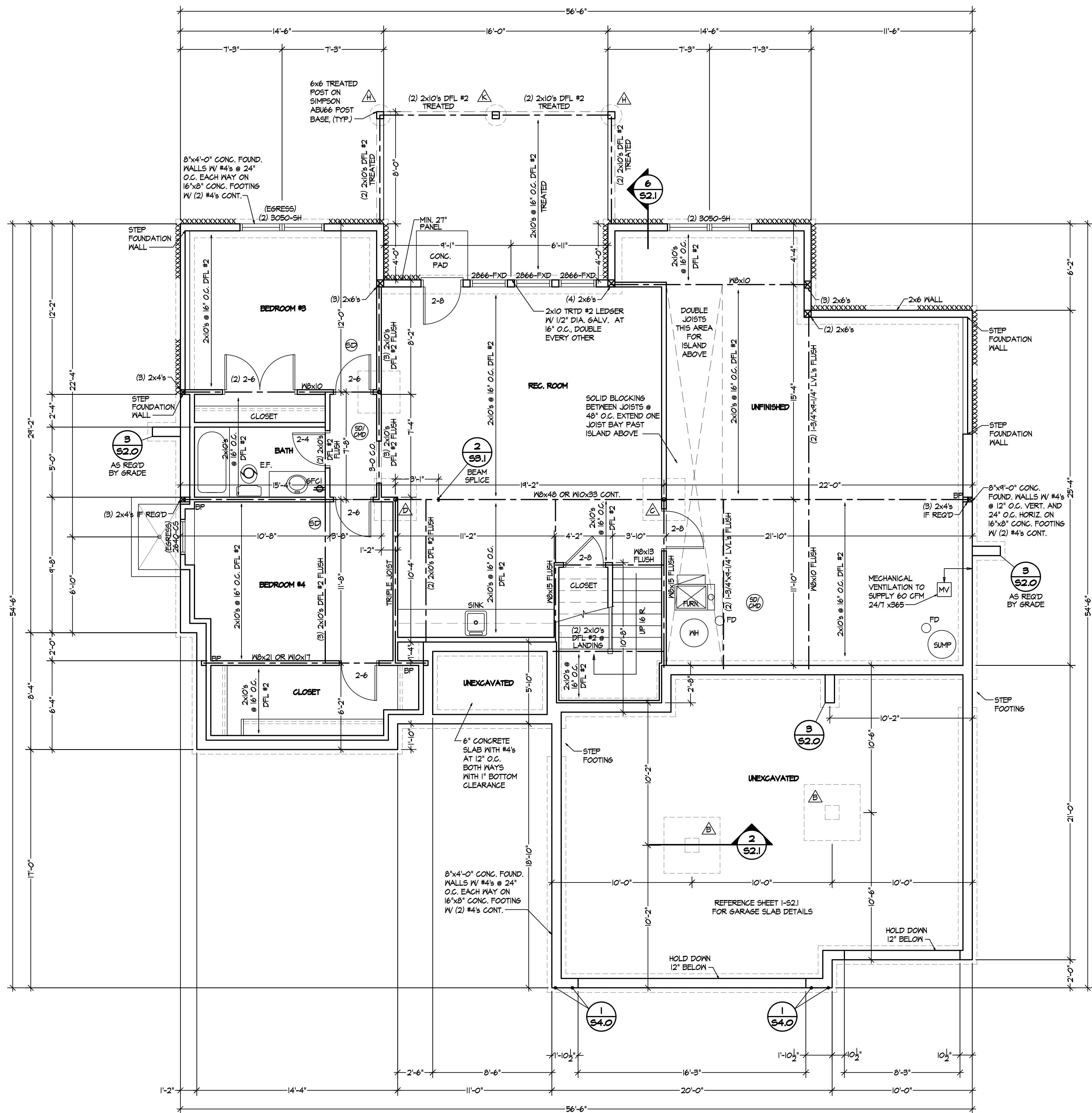
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A
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LOWER LEVEL PLAN
SCALE: 1/4" = 1'-0"

BRACED WALL METHODOLOGY
CONTINUOUS EXTERIOR SHEATHING PER MSP METHOD (BELOW)
UNLESS OTHERWISE NOTED ON THE PLAN

XXXX EXTERIOR BRACED WALLS:

MSP METHOD: WOOD STRUCTURAL PANEL SHEATHING WITH A THICKNESS NOT LESS THAN 3/8" WITH MINIMUM SPAN RATINGS OF 24/0 FOR 16" O.C. STUD SPACING WITH 6d COMMON NAILS AT 6" OC EDGES AND 12" OC FIELD OR SHEATHING THICKNESS NOT LESS THAN 1/4" WITH MINIMUM SPAN RATINGS OF 24" FOR 24" OC SPACING WITH 8d COMMON NAILS AT 6" OC EDGES AND 12" OC IN FIELD.
(NOTE: FRAMING MEMBERS 16" OC MAX UNBLOCKED, AND WITH SHEATHING APPLIED DIRECTLY TO FRAMING MEMBERS)

////// INTERIOR BRACED WALLS (REF. 2-54.0).

GB METHOD: 1/2" MIN. GYPSUM BOARD OVER STUDS SPACED 24" MAX. FASTENED WITH NO. 6 - 1/2" TYPE 'W' OR 'S' DRYWALL SCREWS AT 1" OC EDGES AND FIELD (MIN. 4'-0" SECTION FOR BOTH SIDES.)

OR

LIB METHOD: 1x4 WOOD FASTENED WITH (3) 8d COMMON NAILS OR SIMPSON / USP 16 GA. TYPE MB (OR EQUAL) STL. X-BRACE(S) AT 45° TO 60° ANGLES, MAXIMUM 16" O.C. STUD FASTENED PER MANUFACTURER'S SPECIFICATIONS.

XXXX = EXTERIOR BRACED WALLS
////// = INTERIOR BRACED WALLS (REF. 2/54.0)
EC = END CONDITION (REF. 2/54.1) FOR CONTINUOUS SHEATHED BRACED WALL END CONDITIONS

STRUCTURAL NOTES:

- ALL UNMARKED HEADERS MIN (2) #2-2x10
- ALL HEADERS AND BEAMS MIN #2
- GRADE DFL. (OR EQ.)
- BEARING WALL

COLUMN & PIER PAD SCHEDULE (REF. 5/52.0)				
COLUMN MARK	PAD SIZE	REINFORCEMENT	COLUMN SIZE	COLUMN TYPE
A	30" x 30" x 12"	(4) #4 BAR E.W.	9" NOMINAL	SCHEDULE 40 STEEL PIPE (1/2" = 36 LBS/MIN)
B	36" x 36" x 12"	(4) #4 BAR E.W.	9" NOMINAL	
C	42" x 42" x 12"	(5) #4 BAR E.W.	9" NOMINAL	
D	48" x 48" x 12"	(6) #4 BAR E.W.	9" NOMINAL	
E	54" x 54" x 16"	(8) #4 BAR E.W.	3 1/2" NOMINAL	
F	60" x 60" x 16"	(10) #4 BAR E.W.	3 1/2" NOMINAL	

1. COLUMN & PAD SIZES SHOWN ARE FOR MAXIMUM COLUMN HEIGHT OF 10'-0", REQUIRES SEPARATE ENGR'D DESIGN IF GREATER THAN 10'-0" TALL.
2. COLUMN & PIER PAD SIZES SHOWN ARE BASED ON AN ASSUMED MINIMUM ALLOWABLE SOIL BEARING CAPACITY OF 2,000 PSF.

COLUMN & PIER SCHEDULE		
MARK	COLUMN SIZE	PIER DIA.
A	6x6	12"
B	6x6	16"
C	6x6	18"
D	6x6	24"
E	6x6	28"

1. ALL PIERS TO BEAR ON ORIGINAL UNDISTURBED SOIL OF 2,000 PSF BEARING CAPACITY OR FILL COMPACTED AND TESTED TO CONFORM TO THE RECOMMENDATIONS OF A GEOTECHNICAL ENGINEER.
2. PIERS SHALL EXTEND BELOW THE FROST LINE, MIN. DEPTH OF 36" BELOW GRADE.
3. POST SHALL BE TREATED OR CEDAR WITH SIMPSON ABL66 POST BASE

- DETAIL REFERENCES
- | | | | |
|-----------|---|-----------|--|
| 1
52.0 | TYPICAL FOUNDATION WALL DETAIL | 2
52.1 | STRUCTURAL GARAGE SLAB PIER PAD DETAIL |
| 2
52.0 | TYPICAL 'UNRESTRAINED' FOUNDATION WALL DETAIL | 3
52.1 | STRUCTURAL GARAGE SLAB / WALL SECTION |
| 3
52.0 | TYPICAL DEAD MAN DETAIL | 6
52.1 | TYPICAL OVERDIG DETAIL AT BASEMENT SLAB |
| 4
52.0 | FOUNDATION WALL JUMP DETAIL | 1
54.0 | ALTERNATE BRACED WALL PANEL DETAIL |
| 5
52.0 | COLUMN PAD DETAIL | 1
54.0 | APA NARROW WALL BRACING METHOD WITHOUT HOLD-DOWNS ALT. |
| 1
52.1 | TYPICAL STRUCTURAL GARAGE SLAB PLAN | A | COLUMN AND PIER PAD SCHEDULE (SHEET 52.0) |

ALL WINDOWS SIZES ARE EXPRESSED
IN FEET AND INCHES TO THE UNIT
SIZE.

NOTE:
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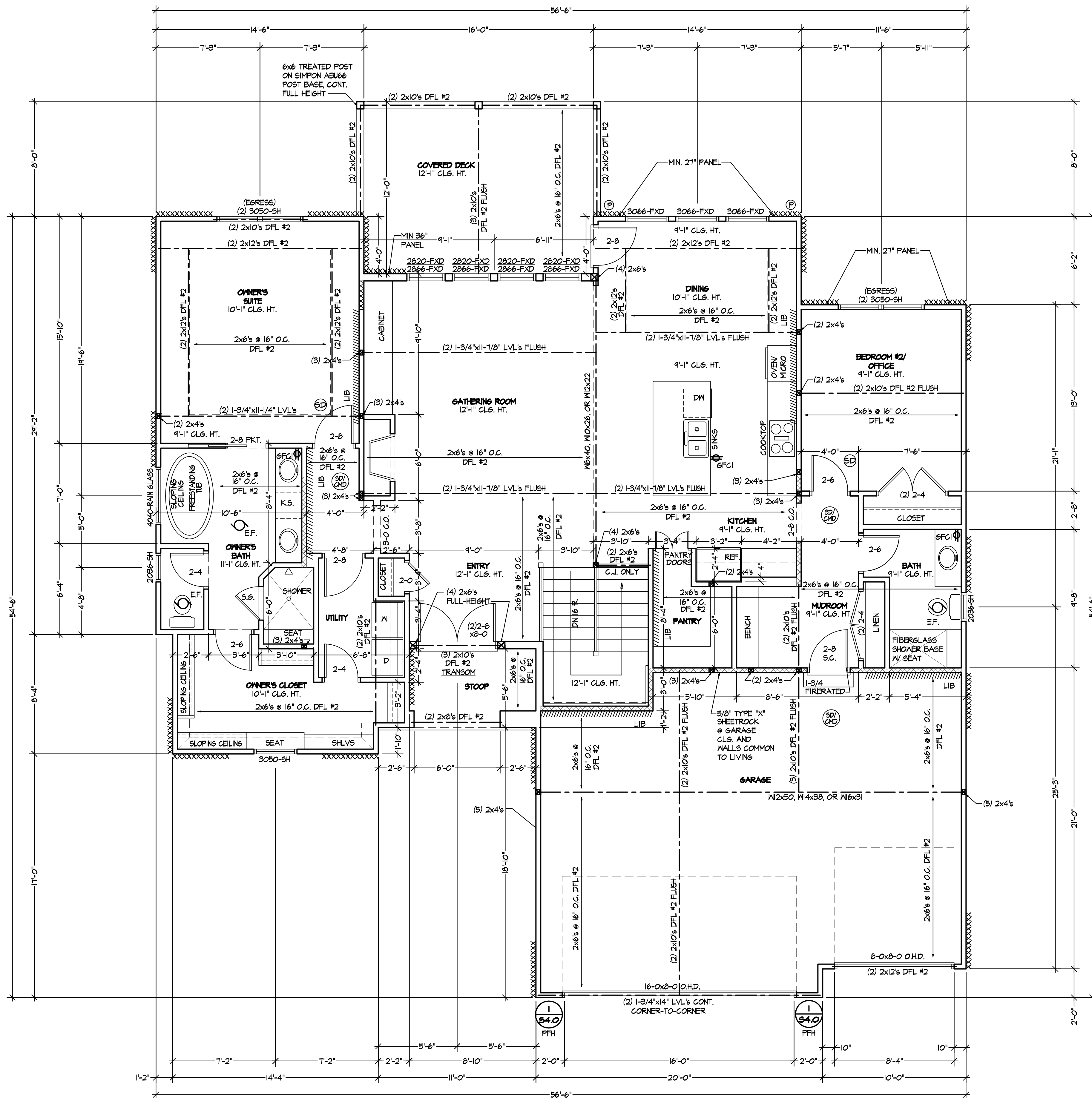
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FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

BRACED WALL METHODOLOGY
CONTINUOUS EXTERIOR SHEATHING PER MEP METHOD (BELOW)
UNLESS OTHERWISE NOTED ON THE PLAN

XXXX EXTERIOR BRACED WALLS:

MEP METHOD: WOOD STRUCTURAL PANEL SHEATHING WITH A THICKNESS NOT LESS THAN 3/8" WITH
MINIMUM SPAN RATINGS OF 24/0 FOR 16" OC STUD SPACINGS WITH 6d COMMON
NAILS AT 6" OC EDGES AND 12" OC FIELD OR SHEATHING THICKNESS NOT LESS
THAN 3/8" WITH MINIMUM SPAN RATINGS OF 24/0 FOR 24" OC SPACINGS WITH 8d
COMMON NAILS AT 6" OC EDGES AND 12" OC IN FIELD.
(NOTE: FRAMING MEMBERS 16" OC HAVE UNLOGGED, AND WITH SHEATHING APPLIED DIRECTLY TO FRAMING MEMBERS)

//// INTERIOR BRACED WALLS (REF 2-54.0):

GB METHOD: 1/2" MIN. GYPSUM BOARD OVER STUDS SPACED 24" MAX. FASTENED WITH
No 6 - 1/4" TYPE W OR S DRYWALL SCREWS AT 1" OC EDGES AND FIELD
(MIN. 4'-0" SECTION FOR BOTH SIDES)

OR

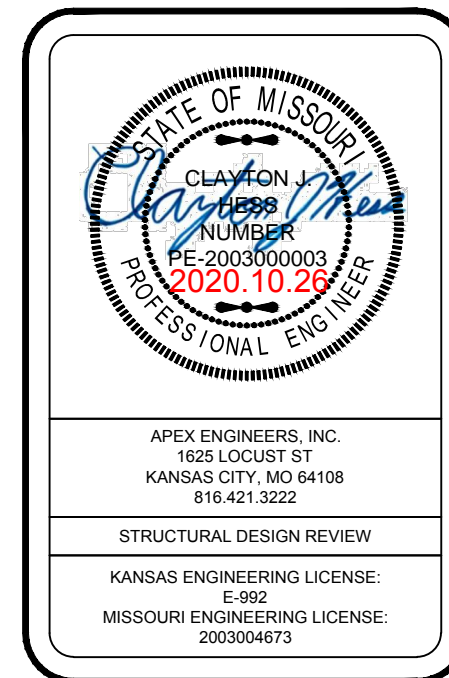
LIB METHOD: 1x4 WOOD FASTENED WITH (3) 8d COMMON NAILS OR SIMPSON / USP 16 GA. TYPE
MB (OR EQUAL) STL. X-BRACE(S) AT 45° TO 60° ANGLES, MAXIMUM 16" OC. STUD
FASTENED PER MANUFACTURER'S SPECIFICATIONS.

XXXX = EXTERIOR BRACED WALLS

//// = INTERIOR BRACED WALLS (REF 2-54.0)

EC = END CONDITION (REF 2/54.1) FOR CONTINUOUS SHEATHED BRACED WALL END CONDITIONS

STRUCTURAL NOTES:
- ALL UNMARKED HEADERS MIN (2) #2-2x10
- ALL HEADERS AND BEAMS MIN #2
GRADE DFL (OR EQ.)
- BEARING WALL



FIRST FLOOR	1751 SQ. FT.
LOWER LEVEL	1009 SQ. FT.
TOTAL	2760 SQ. FT.
UNFINISHED BASEMENT	711 SQ. FT.
COVERED DECK	200 SQ. FT.
GARAGE	639 SQ. FT.

*ALL WINDOWS TO HAVE U = 0.35 OR LESS.

ALL WINDOWS SIZES ARE EXPRESSED
IN FEET AND INCHES TO THE UNIT
SIZE.

NOTE:
PLANS DESIGNED PER IRC AS
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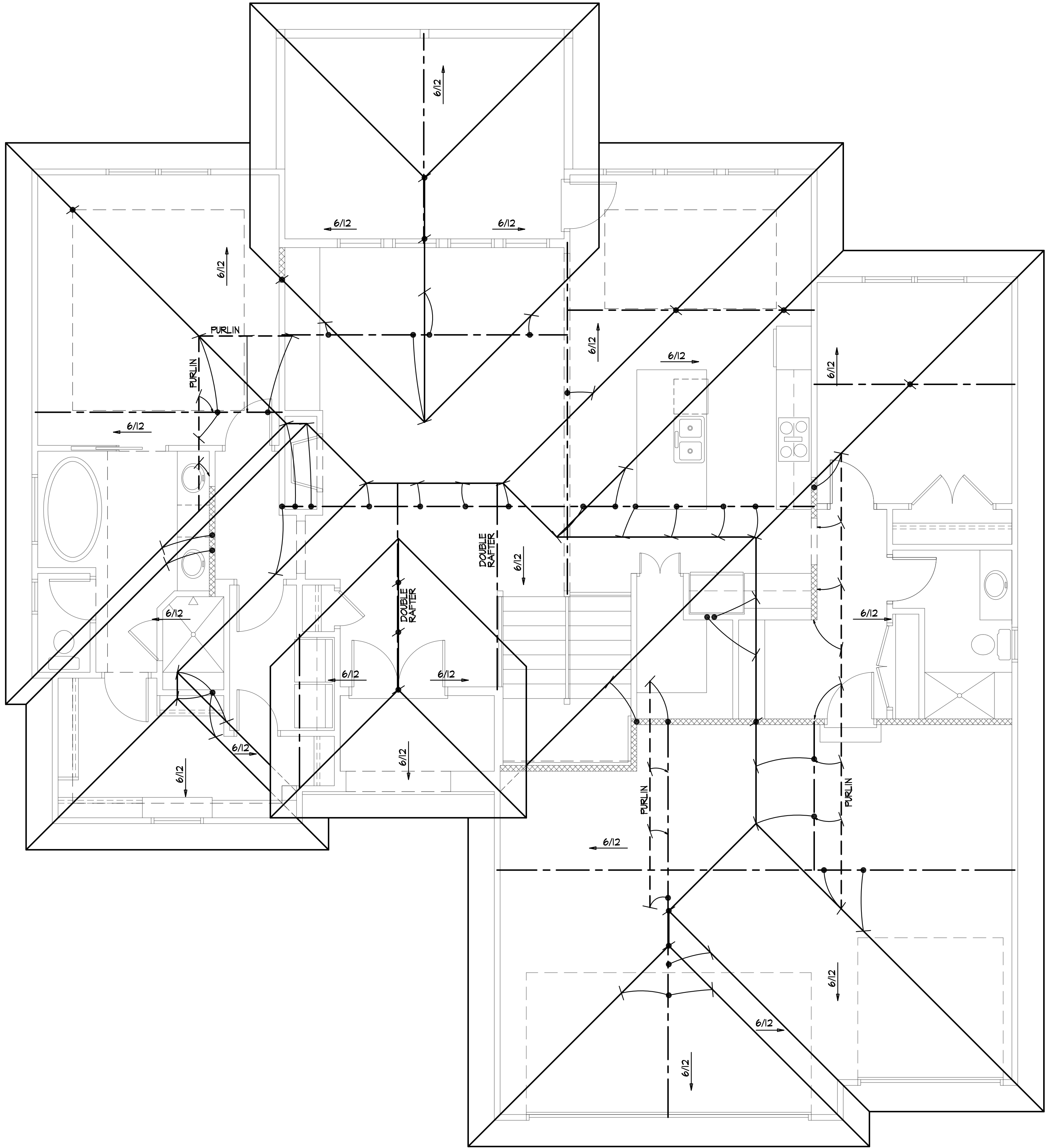
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ROOF PLAN
SCALE: 1/4" = 1'-0"

ROOF FRAMING NOTES

ROOF DESIGNED FOR LIGHT ROOF COVERING
30psf TOTAL LOAD (10psf DL, 20psf LL (SL))

ROOF SYSTEM IS DESIGNED TO MEET REQUIREMENTS OF
IRC 802

*RAFTERS (HEM-FIR, DOUG-FIR, OR EQUAL):
SEE SPAN CHARTS BELOW

CODE MINIMUM

RAFTERS	SPACING	MAX HORIZONTAL CLEARSPAN
#2-2x6	AT 24" OC	11'-7"
#2-2x6	AT 16" OC	14'-2"
#2-2x8	AT 24" OC	14'-8"
#2-2x8	AT 16" OC	17'-11"
#2-2x10	AT 24" OC	17'-10"
#2-2x10	AT 16" OC	21'-11"

NOTE: CODE MINIMUM ALLOWS FOR A RAFTER DEFLECTION OF L/180 TOTAL LOAD

HIGHER PERFORMANCE

RAFTERS	SPACING	MAX HORIZONTAL CLEARSPAN
#2-2x6	AT 24" OC	8'-6"
#2-2x6	AT 16" OC	9'-4"
#2-2x8	AT 24" OC	11'-3"
#2-2x8	AT 16" OC	12'-4"
#2-2x10	AT 24" OC	14'-3"
#2-2x10	AT 16" OC	16'-3"

APEX ENGINEERS, INC. RECOMMENDED DEFLECTION =
L/960 LIVE LOAD, L/240 TOTAL LOAD

*RIDGE BOARDS ARE (UNLESS OTHERWISE NOTED)
#2-2x10 UP TO 9:12 PITCH
#2-2x12 OVER 9:12 PITCH

*ALL HIP AND VALLEYS ARE (UNLESS OTHERWISE NOTED)
#2-2x10 UP TO 9:12 PITCH
#2-2x12 OVER 9:12 PITCH

*PURLINS ARE 2x6 MIN

- PURLIN STRUTS ARE AT 4'-0" OC
- PURLIN STRUTS SHALL BE INSTALLED AT NOT LESS THAN A 45 DEGREE ANGLE WITH THE HORIZONTAL
- ALL PURLIN STRUTS SHALL HAVE A MAX UNBRACED LENGTH OF 8'-0"
- PURLIN STRUTS SHALL BE CONSTRUCTED IN A "I" CONFIGURATION AND PER THE FOLLOWING CHART:

PURLIN STRUT	MAX PURLIN STRUT LENGTH
(2)2x4	8'-0"
(1)2x4 AND (1)2x6	12'-0"
(1)2x6 AND (1)2x8	20'-0"
(2)2x6 AND (1)2x8	30'-0"
CONSULT ARCH ENGR	>30'-0"

*EACH END OF STRUT SHALL BE FASTENED WITH MIN (3)8d OR (2)16d NAILS

*RIDGE BRACERS ARE SAME AS PURLIN BRACES-SPACING, SIZE, CONFIGURATION, AND INSTALLATION (SEE PURLIN BRACE NOTES ABOVE)

*HIP AND VALLEY BRACES ARE THE SAME AS PURLIN SIZE, CONFIGURATION, AND INSTALLATION (SEE PURLIN BRACE NOTES ABOVE)

— = ROOF BRACE/STRUT (PER CHART)
— SLASH IS TOP END OF BRACE
— CIRCLE IS BOTTOM END OF BRACE

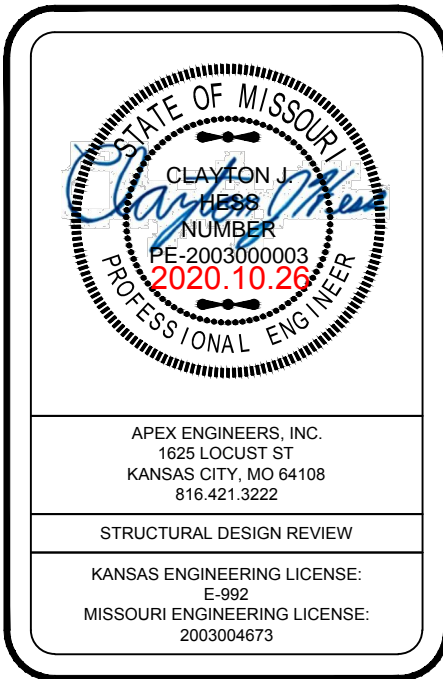
— = PURLIN STRUTS AT 48" OC (PER CHART) U.N.O.
— SLASH IS TOP END OF BRACE
— ARROW IS BEARING LOCATION

— DENOTES BEARING WALL
- - - DENOTES PURLIN
- - - DENOTES BEARING STRUCTURE

STRUCTURAL NOTES:

- ALL UNMARKED HEADERS MIN (2)#2-2x10
- ALL HEADERS AND BEAMS MIN #2
- GRADE DFL (OR EQ.)
- [Hatched Box] = BEARING WALL

1. THIS IS AN ENGINEERED ROOF STRUCTURE DESIGNED FOR COMPLIANCE WITH IRC 802.3, BUILD AS SHOWN WITH NO DEVIATIONS.
2. ALL HIP AND VALLEY BRACES ARE THE SAME AS PURLIN SIZE, CONFIGURATION, AND INSTALLATION (SEE PURLIN BRACE NOTES ABOVE)
3. SHEAR AT BEARING WITH MIN 5 1/2" DEPTH DOES NOT CONTROL DESIGN. FOR VALLEYS REF 4/S3.2



NOTE:
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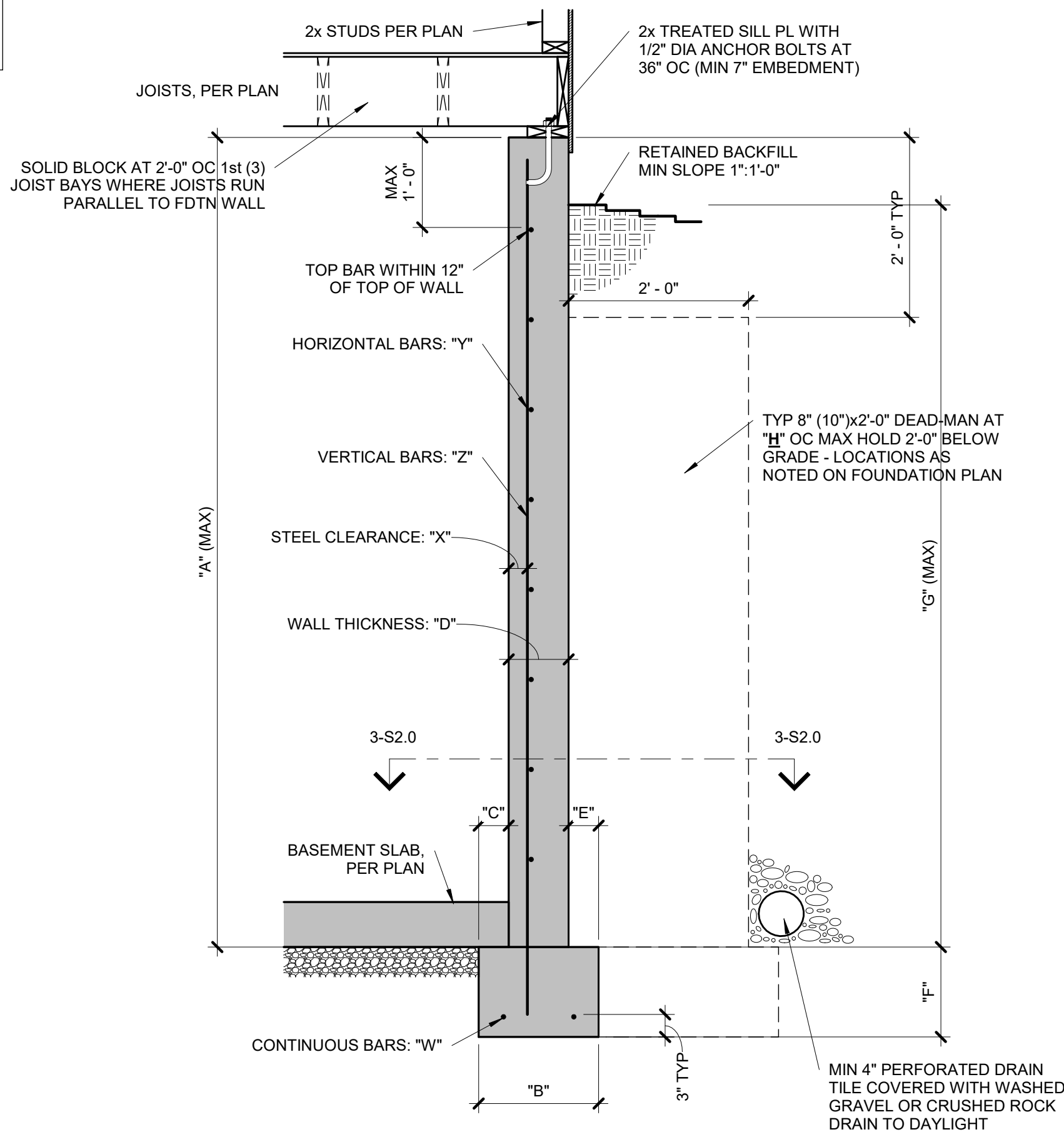
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CONCRETE DIMENSIONS

"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
8'-0"	1'-4"	4"	8"	4"	8"	7'-6"	20'-0"
9'-0"	1'-4"	4"	8"	4"	8"	8'-6"	20'-0"
10'-0"	1'-8"	5"	10"	5"	10"	9'-6"	20'-0"

REINFORCING BARS (GRADE 40 BARS)

"W"	"X"	"Y"	"Z"
(2) #4	2 1/2"	#4 BARS AT 24" OC	#4 BARS AT 24" OC
(2) #4	2 1/2"	#4 BARS AT 24" OC	#4 BARS AT 24" OC
(2) #4	2 1/2"	#4 BARS AT 18" OC	#4 BARS AT 18" OC

NOTES:

- DIMENSION SHOWN IS FOR MAXIMUM UNINTERRUPTED WALL PANEL LENGTH BEFORE A DEAD-MAN SHALL BE INSTALLED. NOTE, A MINIMUM 2'-0" RETURN OR OFFSET IN THE FOUNDATION WALL SHALL SUBSTITUTE AS A DEAD-MAN AND/OR BREAK IN THE WALL PANEL LENGTH.
- VERTICAL REINFORCING STEEL TO EXTEND TO WITHIN 8" OF TOP WALL. MINIMUM (1) #4 HORIZONTAL BAR WITHIN 12" OF TOP AND BOTTOM OF WALL.
- BURIED CONCRETE FOUNDATION WALLS UP TO 9'-0" TALL MAY BE 8" NOMINAL THICKNESS WITH #4 BARS AT 24" OC BOTH WAYS OVER 16"x8" CONCRETE FOOTINGS WITH (2) #4 BARS CONTINUOUS, UNLESS OTHERWISE REQUIRED BY ENGINEERING REPORT BASED ON ACTUAL SITE CONDITIONS.
- WALL WILL NOT ACHIEVE FULL STRENGTH UNTIL FIRST FLOOR DECK AND BASEMENT SLAB HAVE BEEN PLACED.

TYPICAL FOUNDATION WALL

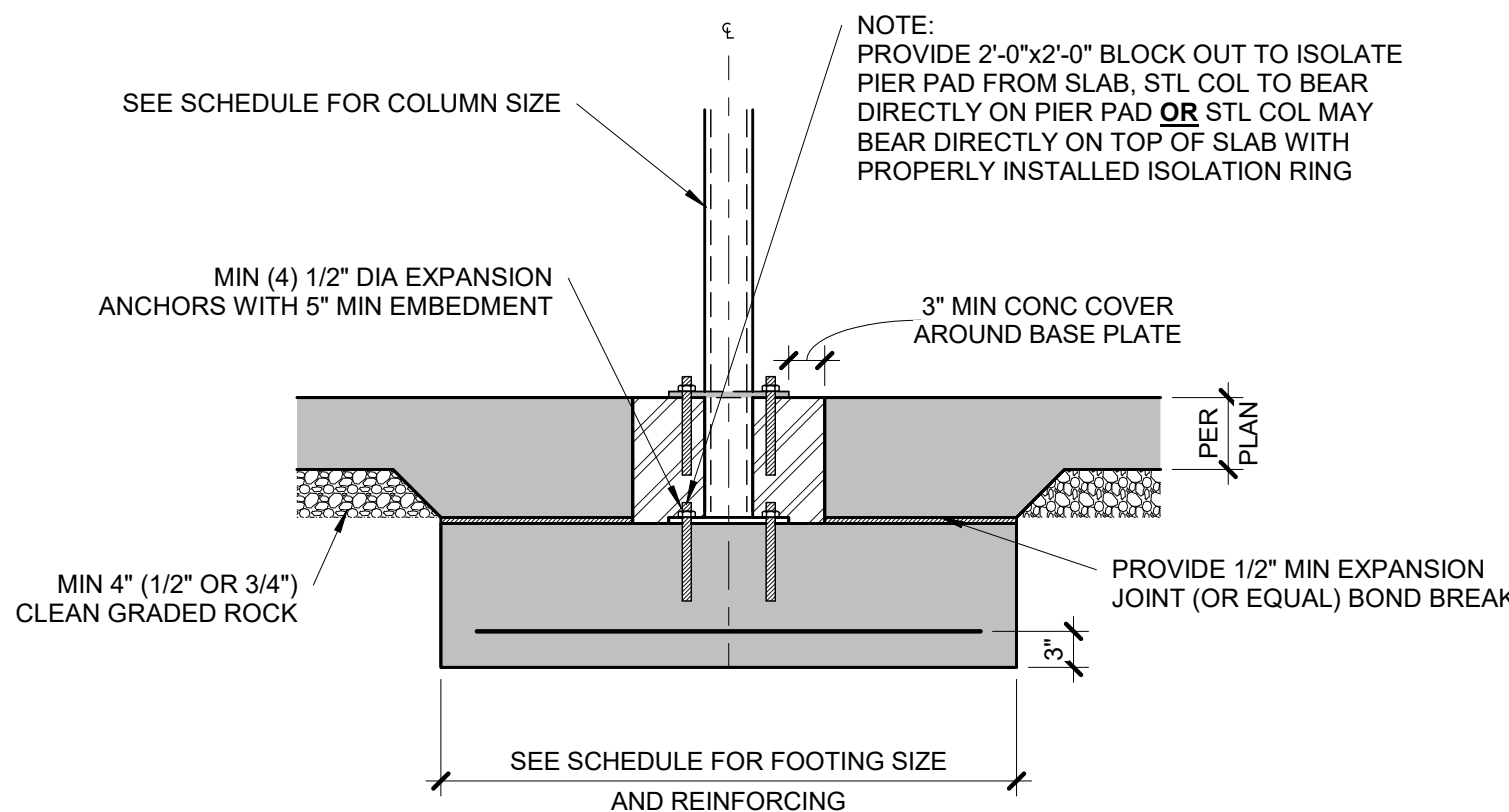
1 DETAIL

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

COLUMN AND PIER PAD SCHEDULE

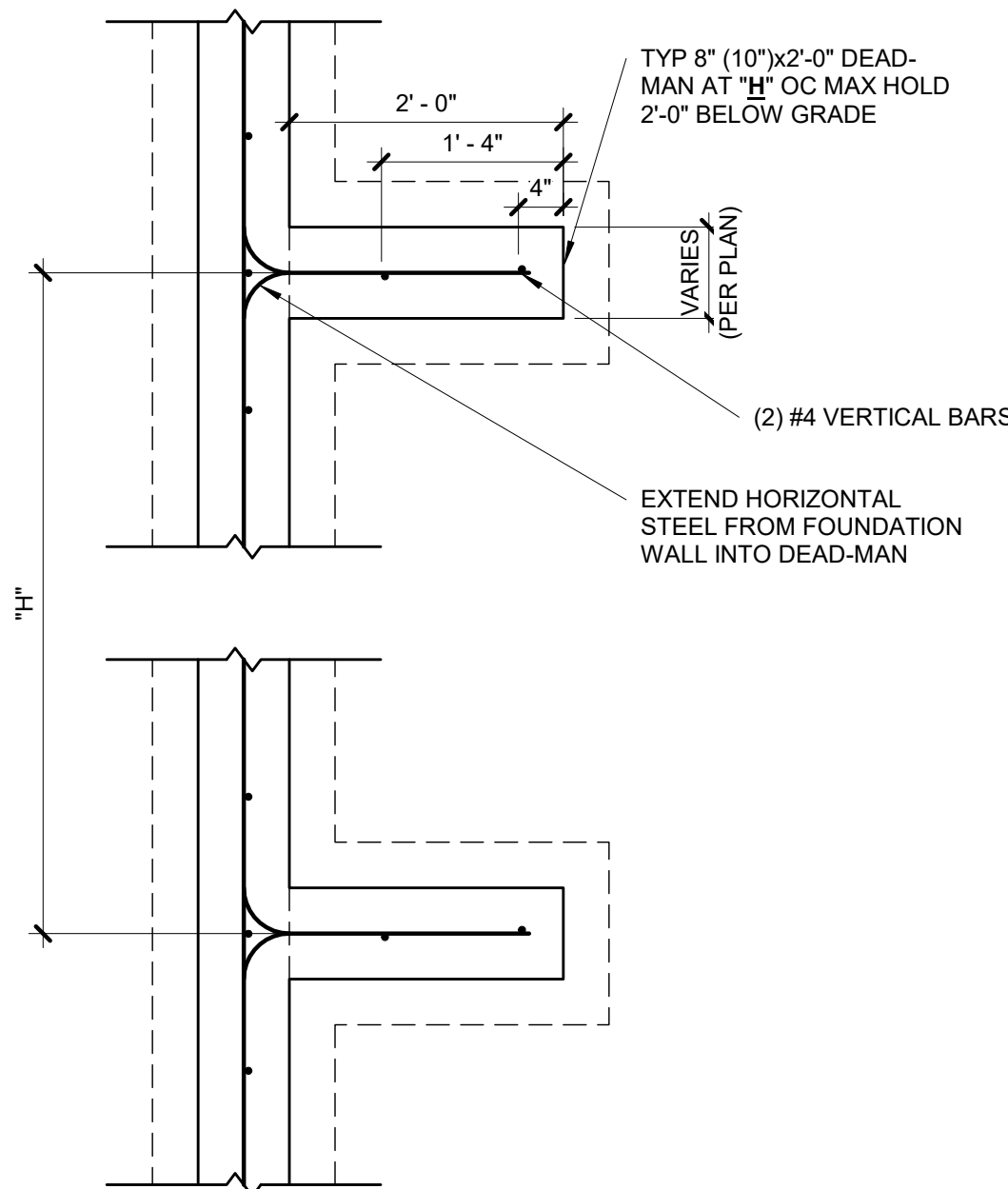
COLUMN MARK	PAD SIZE	REINFORCING	COL SIZE	COL TYPE
A	30"x30"x12"	(4) #4 BARS E-W	3" NOMINAL	SCHEDULE 40 STEEL COLUMN (F _y = 58 ksi MIN)
B	36"x36"x12"	(4) #4 BARS E-W	3" NOMINAL	
C	42"x42"x12"	(5) #4 BARS E-W	3" NOMINAL	
D	48"x48"x12"	(6) #4 BARS E-W	3" NOMINAL	
E	54"x54"x16"	(8) #4 BARS E-W	3 1/2" NOMINAL (4" OD)	
F	60"x60"x16"	(10) #4 BARS E-W	3 1/2" NOMINAL (4" OD)	

- NOTES:
- COLUMN AND PIER PAD SIZES SHOWN ARE FOR MAXIMUM COLUMN HEIGHT OF 10'-0". REQUIRES SEPERATE ENGINEERED DESIGN IF GREATER THAN 10'-0"
 - COLUMN AND PIER PAD SIZES SHOWN ARE BASED ON AN ASSUMED MINIMUM ALLOWABLE SOIL BEARING CAPACITY OF 2,000 PSF.



5 COLUMN PAD DETAIL

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

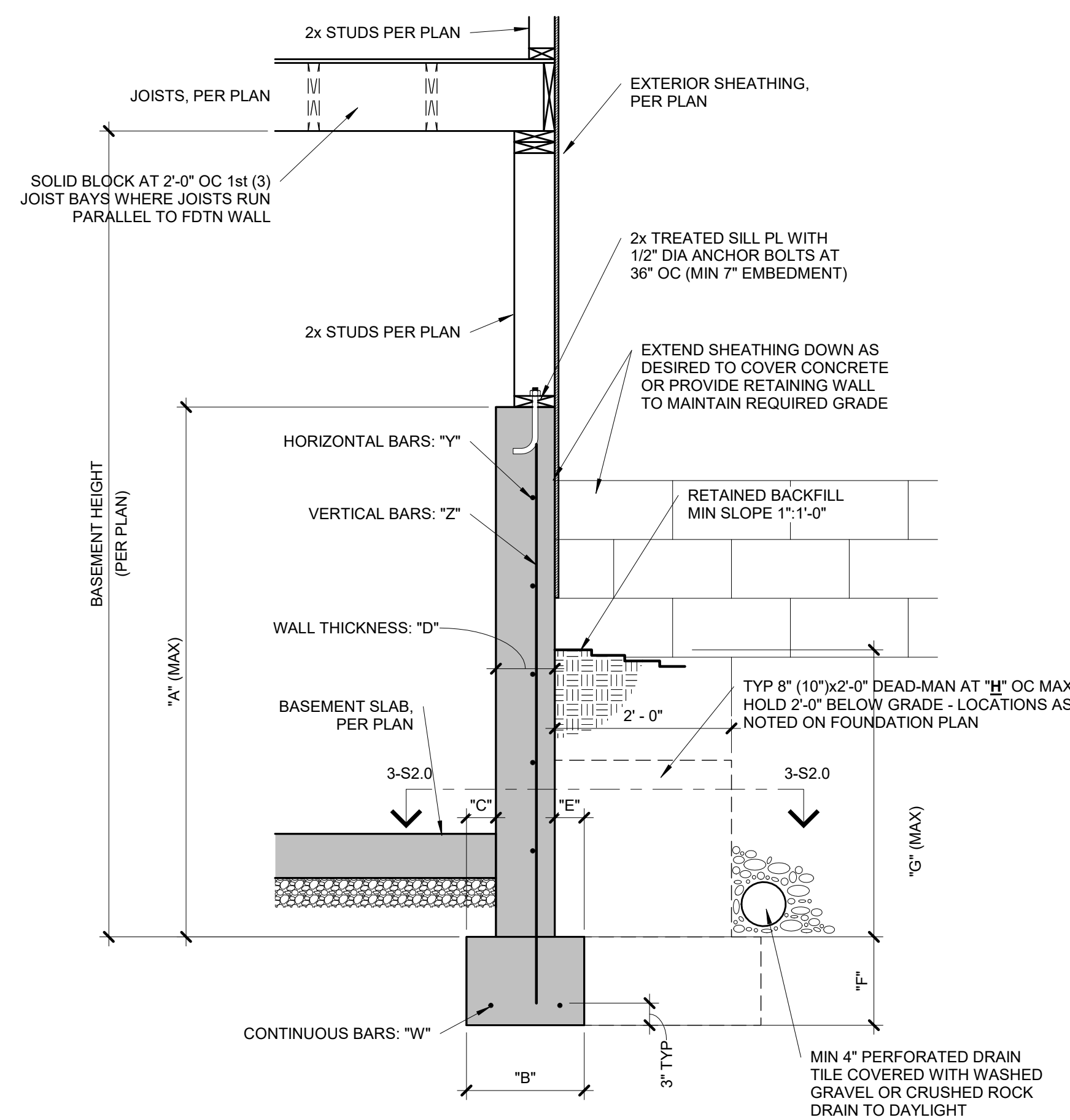


NOTES:

- MIN 3000 PSI FOOTING COMPRESSIVE CONCRETE STRENGTH.
- MIN 3000 PSI WALL COMPRESSIVE CONCRETE STRENGTH.
- AIR ENTRAINED BETWEEN 5% & 7% OF CONCRETE VOLUME.
- GRADE 40 REINFORCING STEEL UNLESS OTHERWISE NOTED.
- LAP SPLICES 24" MIN.
- WALL SHALL BE BACK-FILLED WITH CLEAN, LEAN CLAY (OR BETTER) LOW VOLUME CHANGE MATERIAL. ON-SITE MATERIAL MAY BE USED IF DEEMED ACCEPTABLE BY THE GEOTECHNICAL ENGINEER.
- ASSUMED 2,000 PSF BEARING (TO BE VERIFIED BY GEOTECHNICAL ENGINEER).

3 TYPICAL DEAD-MAN SECTION

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



CONCRETE DIMENSIONS

"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
4'-0"	1'-4"	4"	8"	4"	8"	3'-4"	20'-0"
6'-0"	1'-4"	4"	8"	4"	8"	4'-4"	20'-0"
9'-0"	1'-8"	5"	8"	4"	8"	4'-4"	20'-0"

REINFORCING BARS (GRADE 40 BARS)

"W"	"X"	"Y"	"Z"
(2) #4	N/A	#4 BARS AT 24" OC	#4 BARS AT 24" OC
(2) #4	N/A	#4 BARS AT 24" OC	#4 BARS AT 24" OC
(2) #4	N/A	#4 BARS AT 24" OC	#4 BARS AT 24" OC

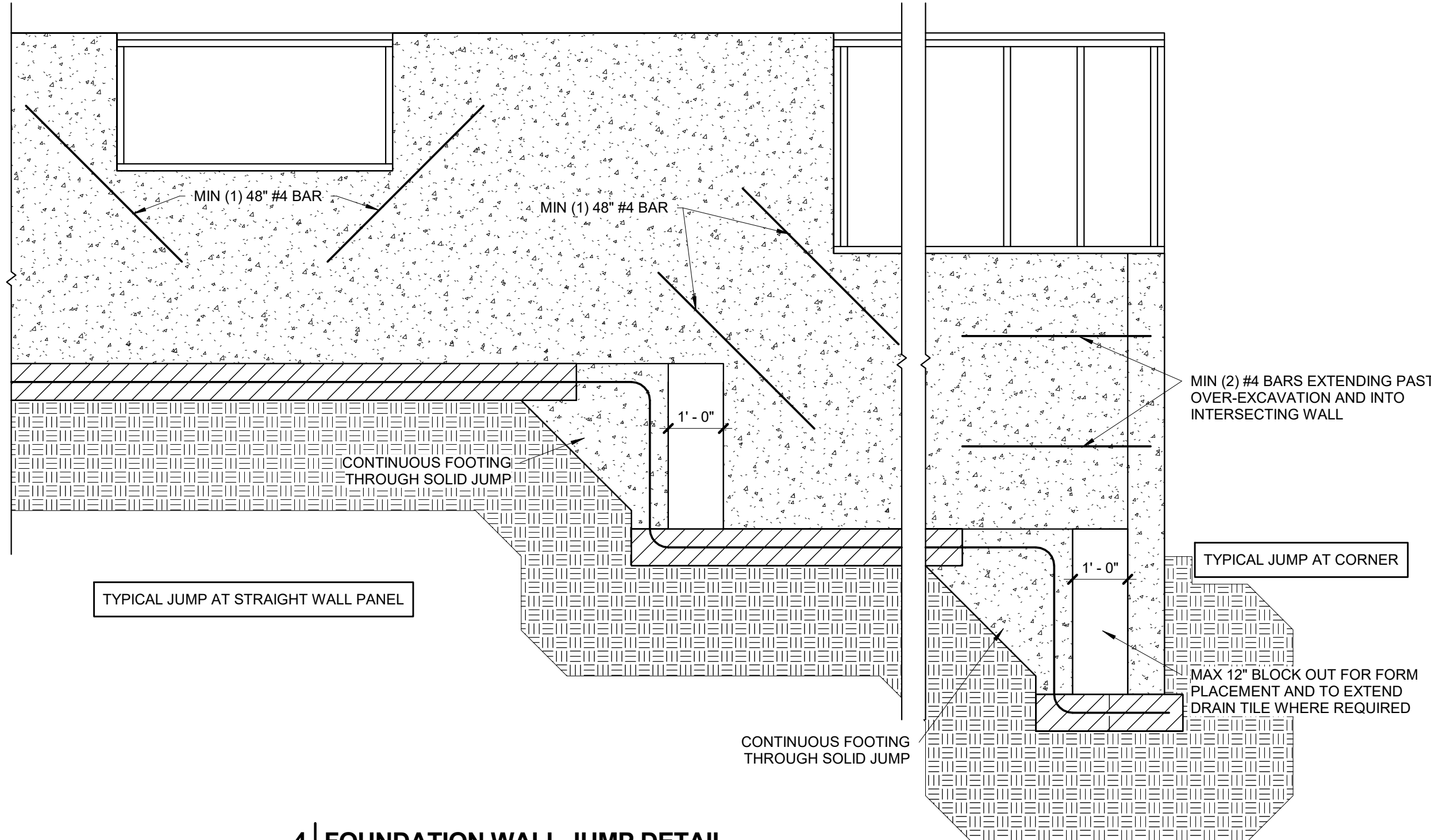
NOTES:

- DIMENSION SHOWN IS FOR MAXIMUM UNINTERRUPTED WALL PANEL LENGTH BEFORE A DEAD-MAN SHALL BE INSTALLED. NOTE, A MINIMUM 2'-0" RETURN OR OFFSET IN THE FOUNDATION WALL SHALL SUBSTITUTE AS A DEAD-MAN AND/OR BREAK IN THE WALL PANEL LENGTH.
- VERTICAL REINFORCING STEEL TO EXTEND TO WITHIN 8" OF TOP WALL. MINIMUM (1) #4 HORIZONTAL BAR WITHIN 12" OF TOP AND BOTTOM OF WALL.
- THE BASEMENT SLAB IS AN INTEGRAL PART OF THE 'UNRESTRAINED' FOUNDATION WALL DESIGN THEREFORE, IF THE WALL IS BACKFILLED PRIOR TO PLACEMENT OF THE BASEMENT SLAB, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY BRACING THE WALL UNTIL THE BASEMENT SLAB HAS BEEN PLACED.

TYPICAL 'UNRESTRAINED'

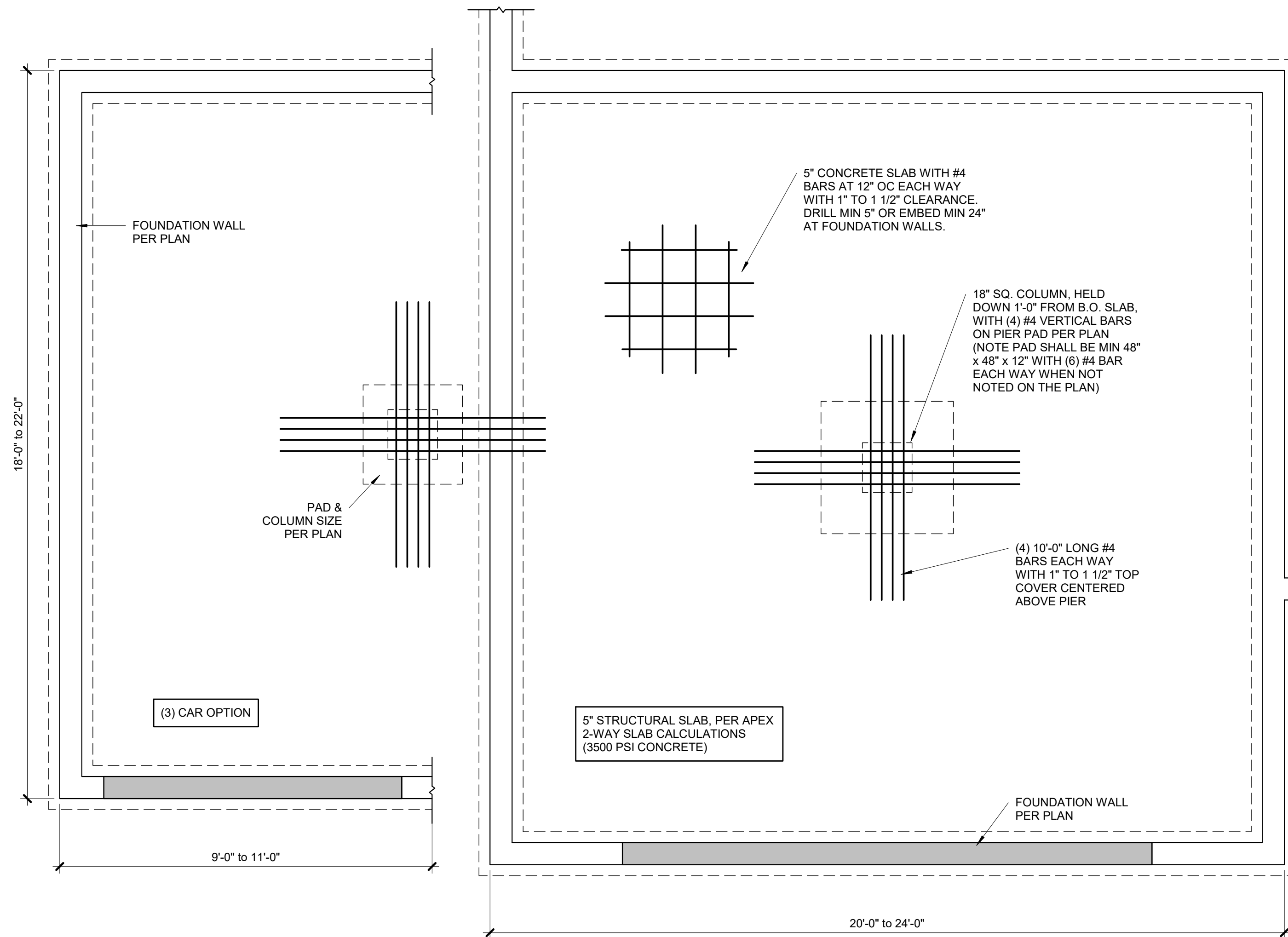
2 FOUNDATION WALL DETAIL

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

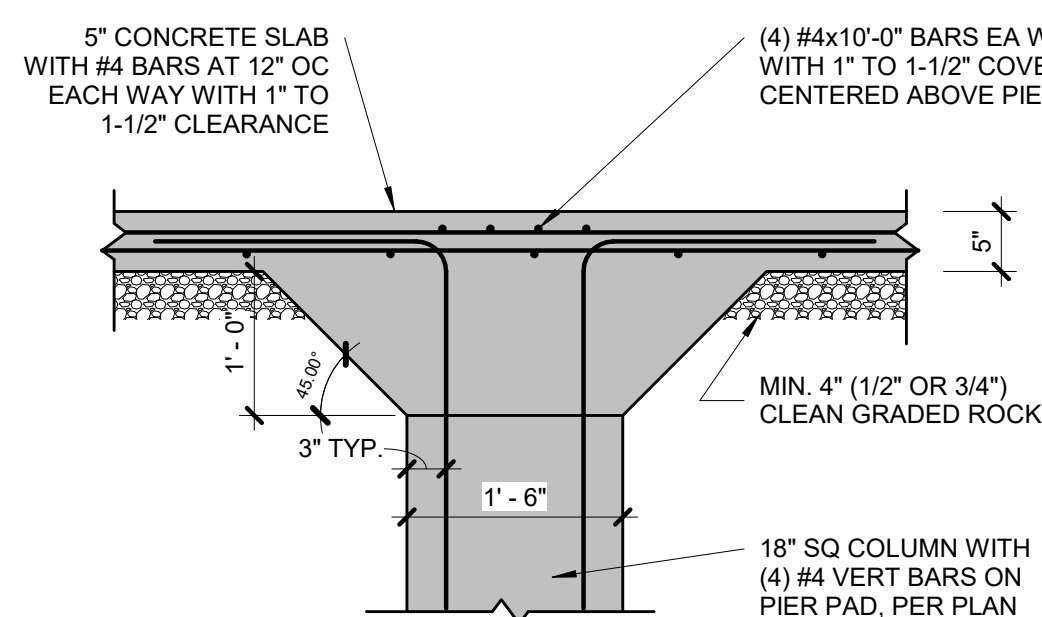


4 FOUNDATION WALL JUMP DETAIL

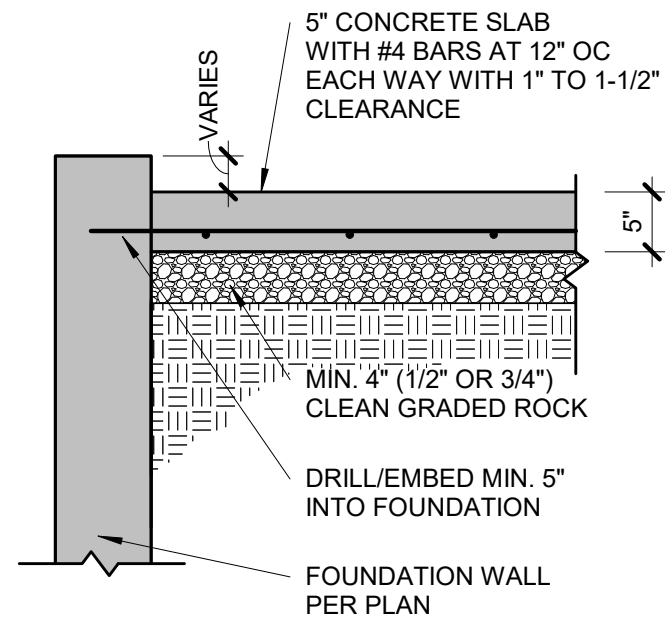
S2.0 1/2" = 1'-0"



1
TYPICAL STRUCTURAL GARAGE
SLAB PLAN
S2.1 3/4" = 1'-0"

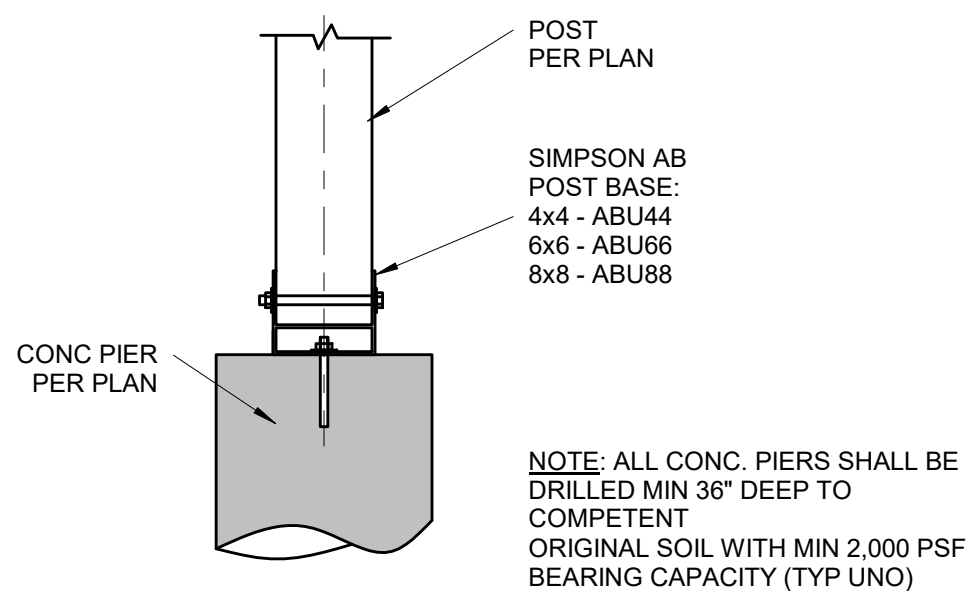


2
STRUCTURAL GARAGE SLAB PIER
PAD DETAIL
S2.1 3/4" = 1'-0"



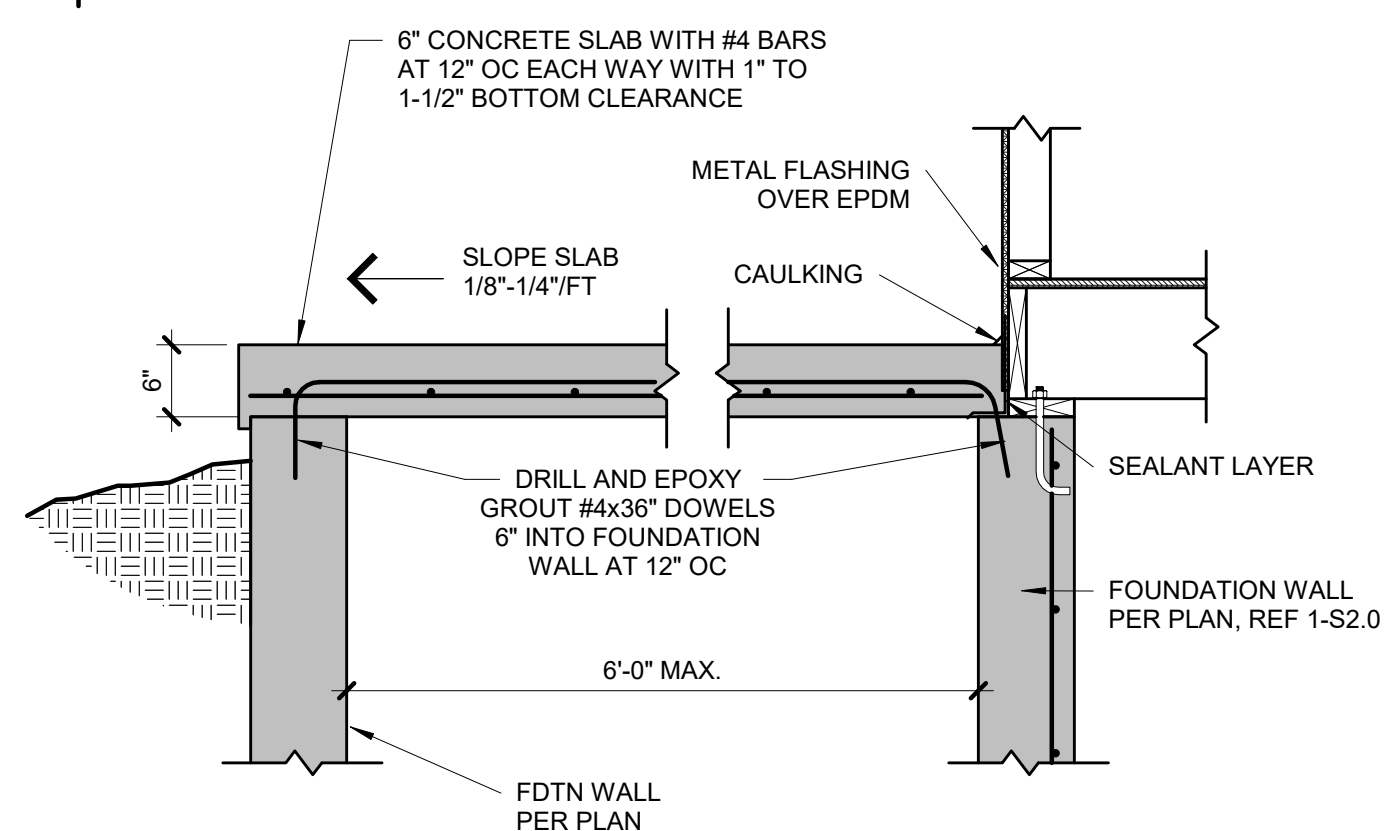
3
STRUCTURAL GARAGE
SLAB/WALL SECTION
S2.1 3/4" = 1'-0"

PIER SCHEDULE		
COLUMN MARK	COL SIZE	PIER DIAMETER
G	PER PLAN	12"
H	PER PLAN	16"
J	PER PLAN	18"
K	PER PLAN	24"
L	PER PLAN	28"



NOTE: ALL CONC. PIERS SHALL BE DRILLED MIN 36" DEEP TO COMPETENT ORIGINAL SOIL WITH MIN 2,000 PSF BEARING CAPACITY (TYP UNO)

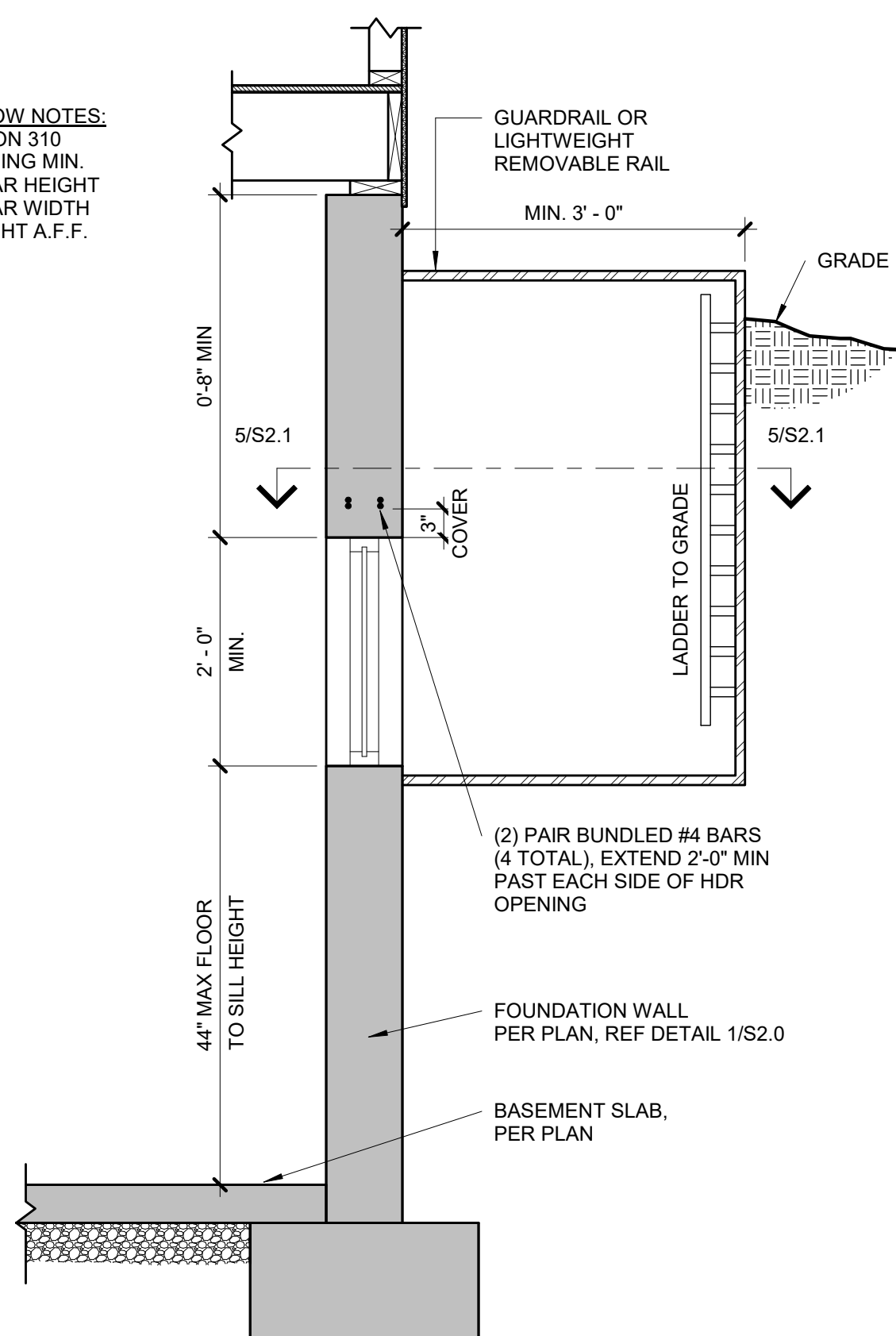
8
POST BASE DETAIL
S2.1 3/4" = 1'-0"



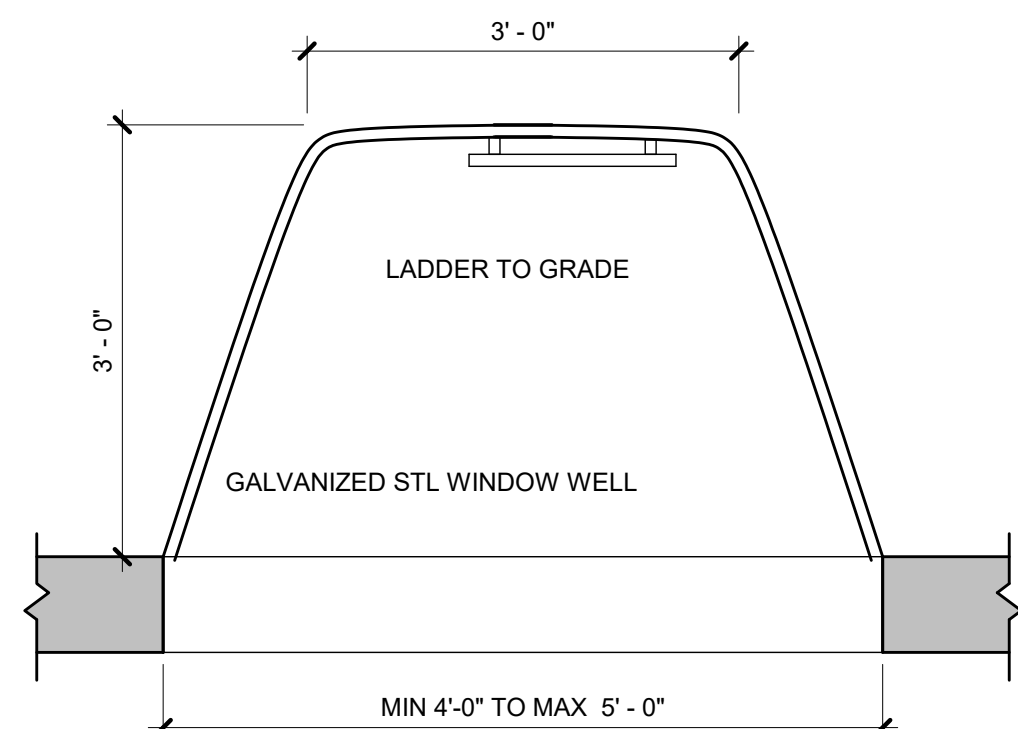
FORMWORK OPTIONS:
1. PROVIDE VULCRAFT 2VLI (OR EQUAL) CORRUGATED DECKING (SHORE AT MID-SPAN DURING CONSTRUCTION), OR
2. PLYWOOD FORMS WITH EXPANDABLE BAR JOISTS OR TEMPORARY FRAMED WALLS BY CONTRACTOR.

7
SUSPENDED PORCH STOOP
DETAIL
S2.1 3/4" = 1'-0"

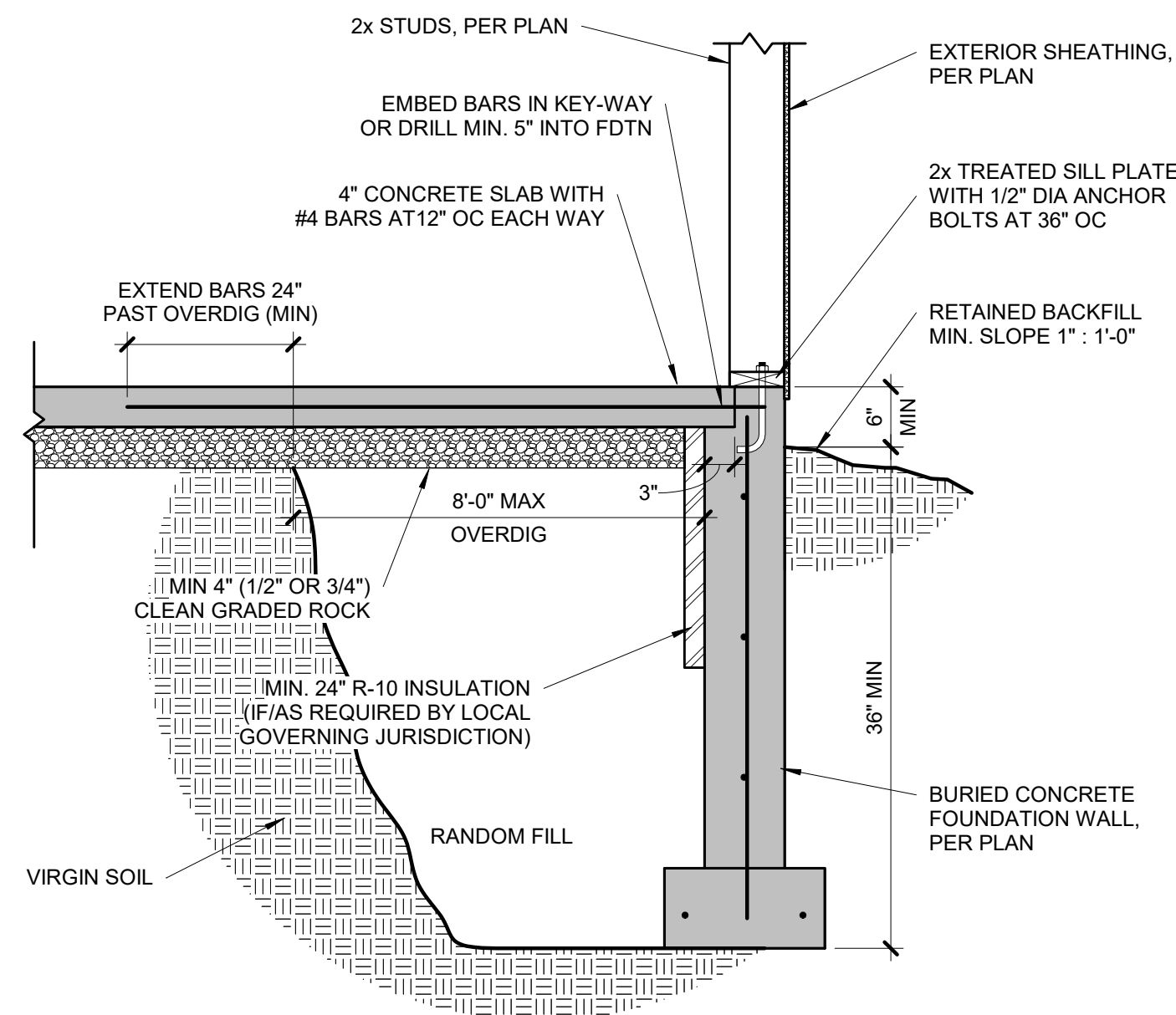
EGRESS WINDOW NOTES:
PER IRC SECTION 310
1. 5.7 S.F. OPENING MIN.
2. 24" MIN. CLEAR HEIGHT
3. 20" MIN. CLEAR WIDTH
4. 44" MAX HEIGHT A.F.F.



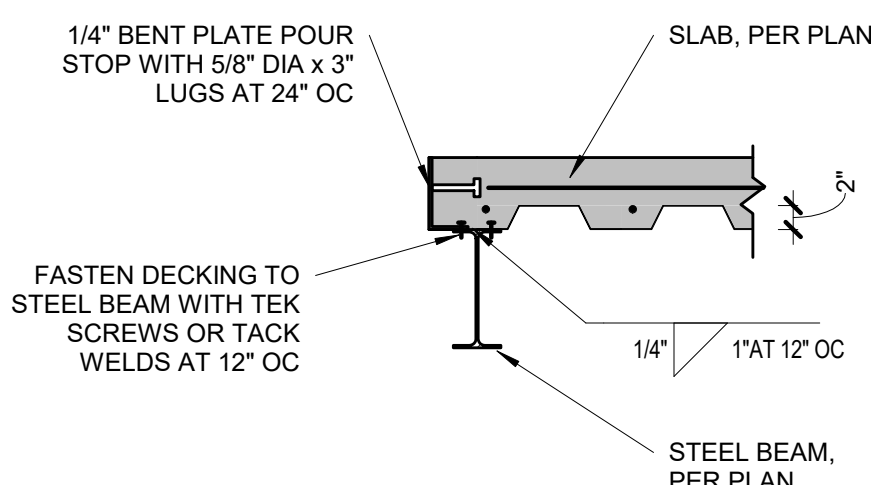
4
TYPICAL EGRESS WINDOW
SECTION DETAIL
S2.1 3/4" = 1'-0"



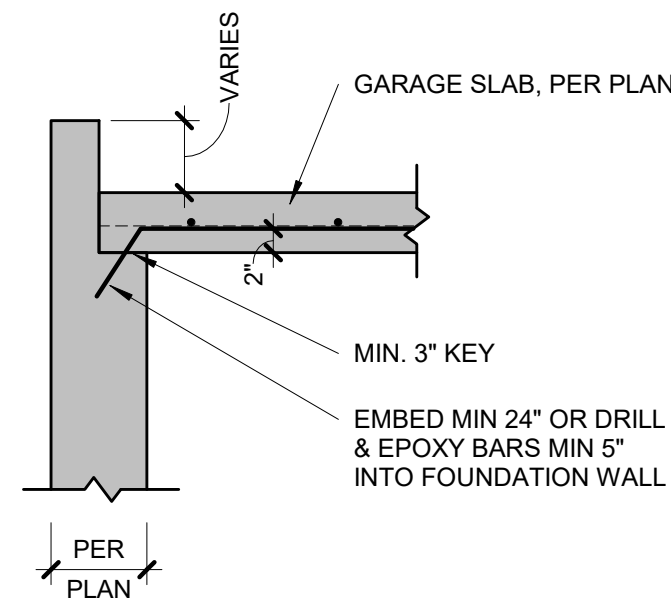
5
TYPICAL EGRESS WINDOW PLAN
S2.1 3/4" = 1'-0"



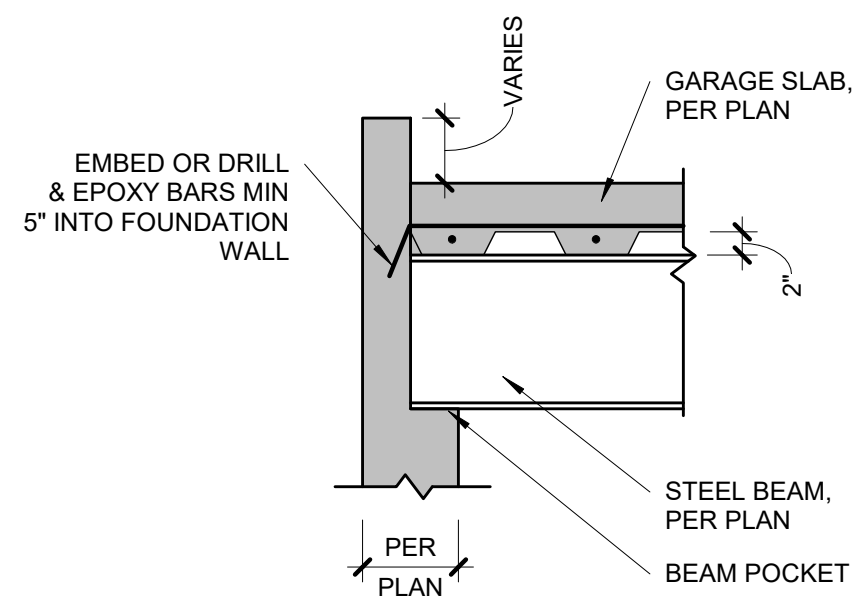
6
TYPICAL OVERDIG DETAIL AT
BASEMENT SLAB
S2.1 3/4" = 1'-0"



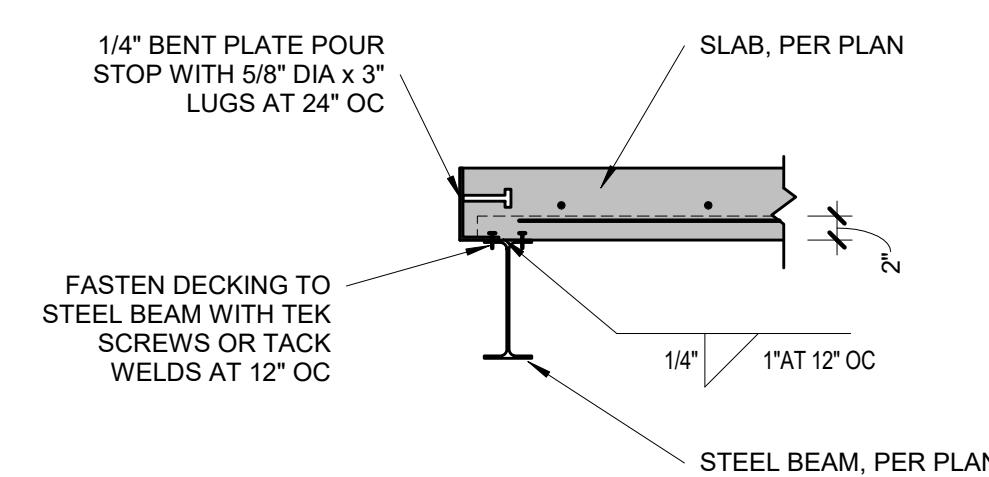
9
POUR STOP DETAIL
S2.1 3/4" = 1'-0"



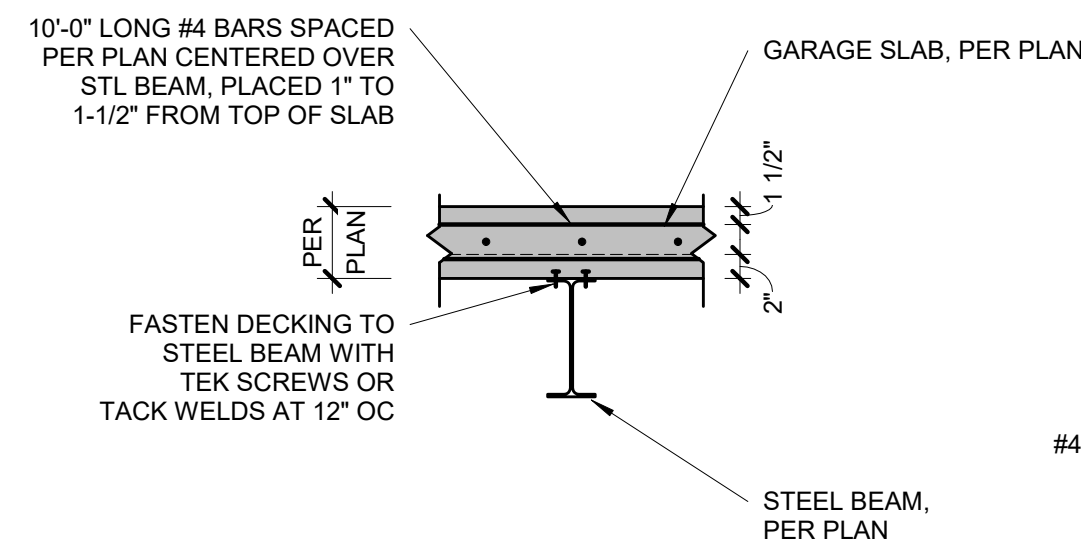
10
GARAGE SLAB BEARING
S2.1 3/4" = 1'-0"



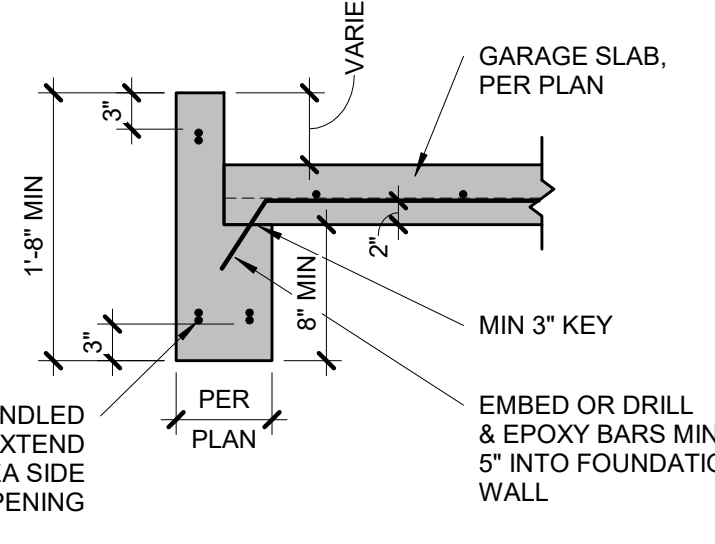
11
GARAGE SLAB BEAM BEARING
S2.1 3/4" = 1'-0"



12
POUR STOP DETAIL
S2.1 3/4" = 1'-0"



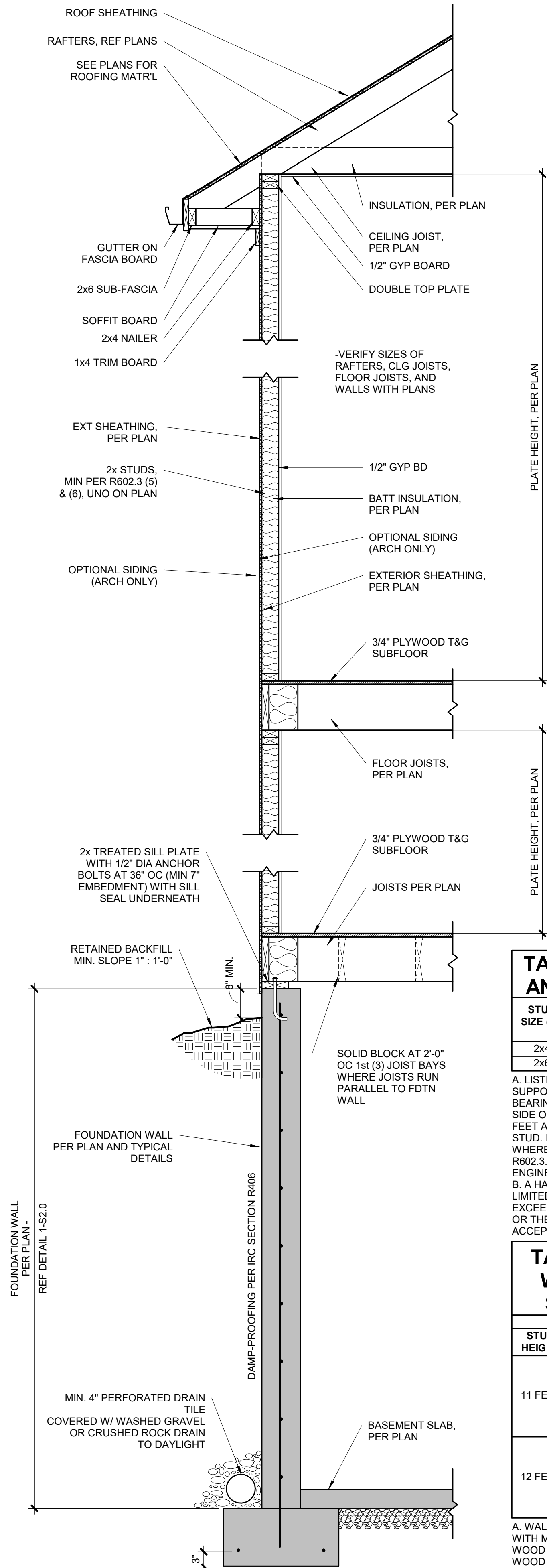
13
GARAGE SLAB BEAM BEARING
S2.1 3/4" = 1'-0"



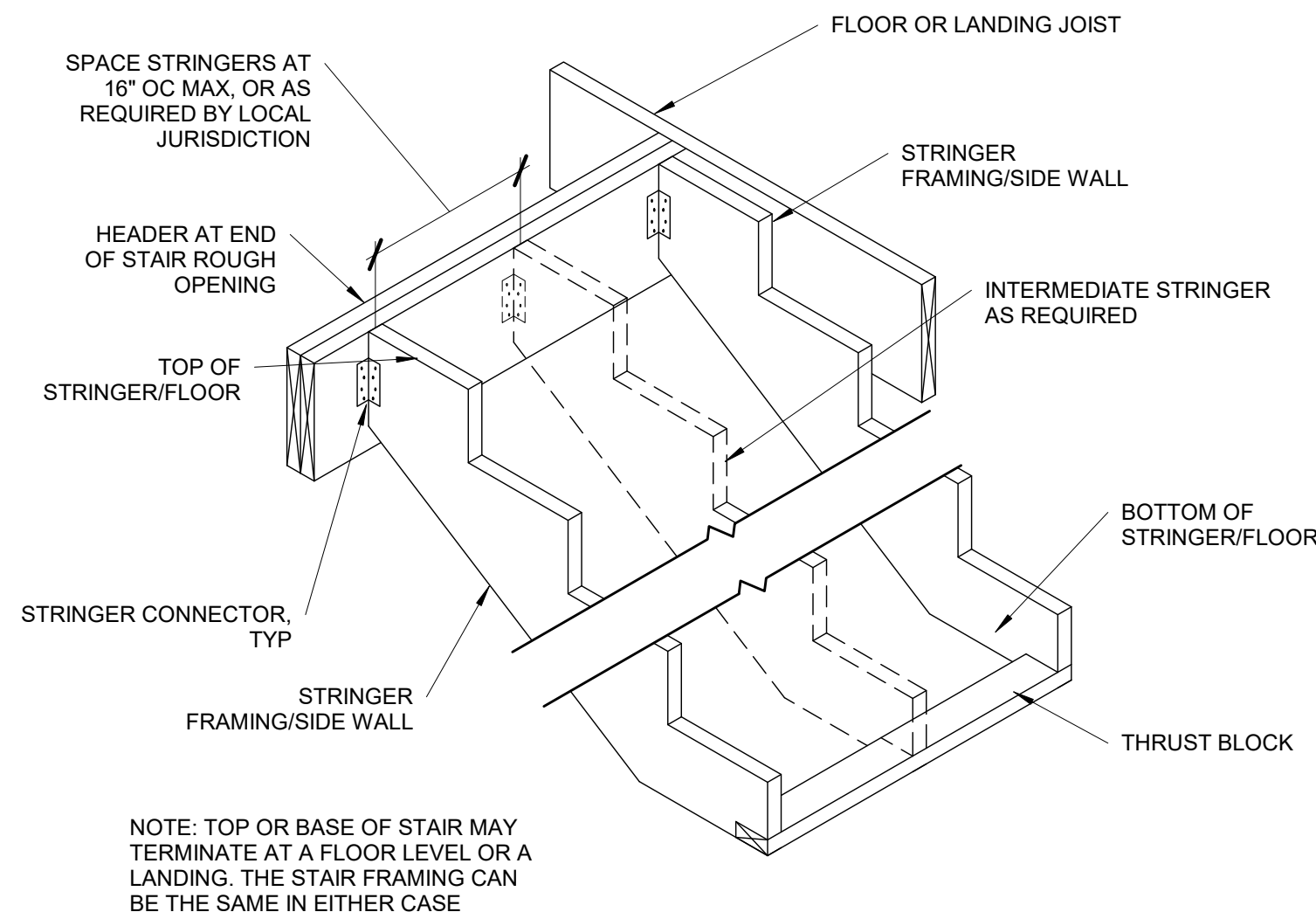
14
CONCRETE HEADER DETAIL
S2.1 3/4" = 1'-0"

TYPICAL SUSPENDED SLAB DETAIL

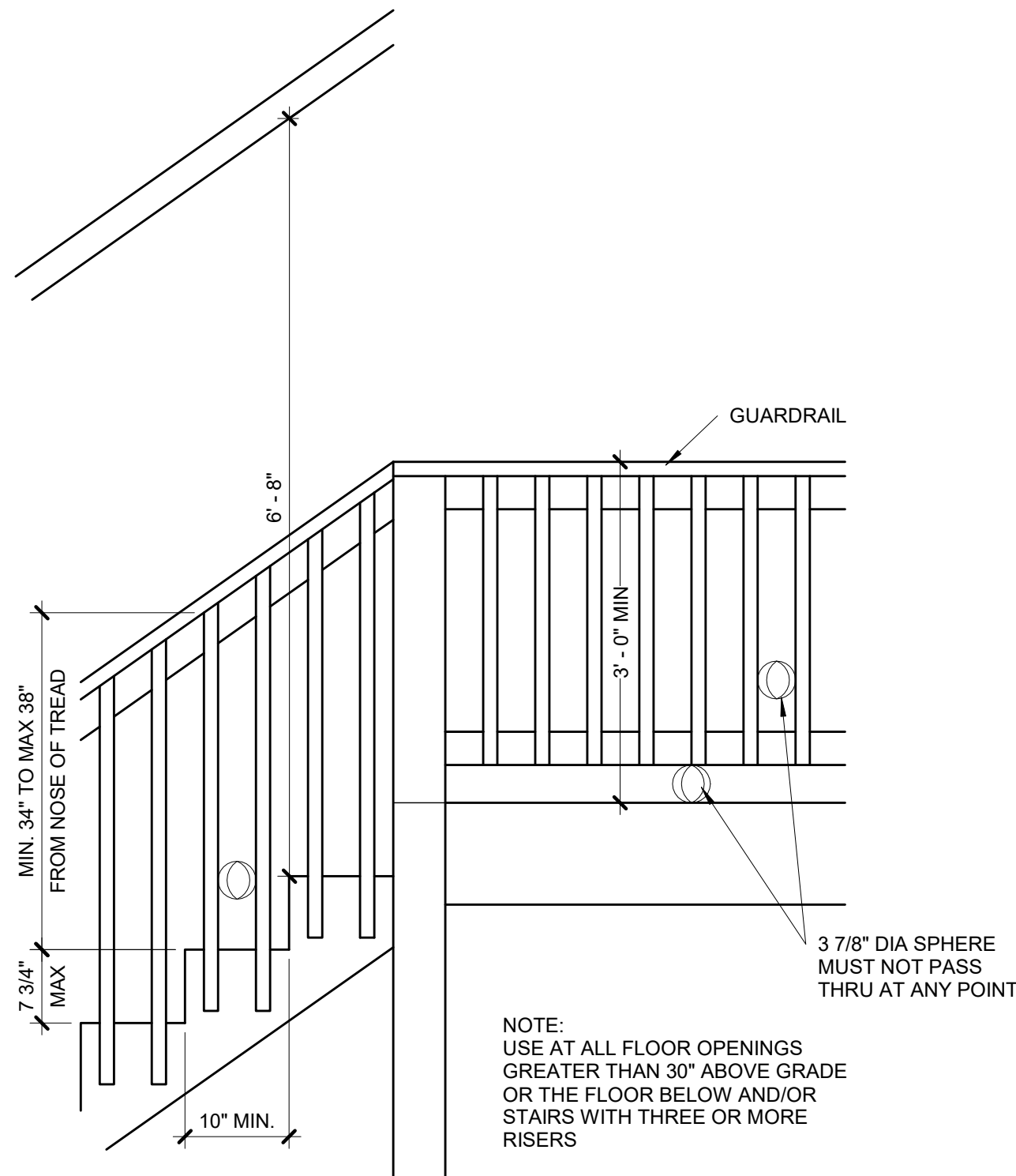
STEEL DECKING NOTES:
• MINIMUM 1-1/2" BEARING
• FASTEN TO SUPPORT STEEL WITH 5/8" VISIBLE PUDDLE WELDS AT EDGE RIBS AND 12" CENTERS ALONG END BEARING
• FASTEN SIDE LAPS AND PERIMETER EDGES AT 36" CENTERS WITH #10 TEK SCREWS OR 5/8" PUDDLE WELDS
• MAX UNSUPPORTED CONSTRUCTION SPAN 6'-0", UNO ON PLANS BY APEX



12 | TYPICAL WALL CROSS-SECTION
S3.0 | 3/4" = 1'-0"



11 | TYPICAL STRINGER DETAIL
S3.0 | 3/4" = 1'-0"



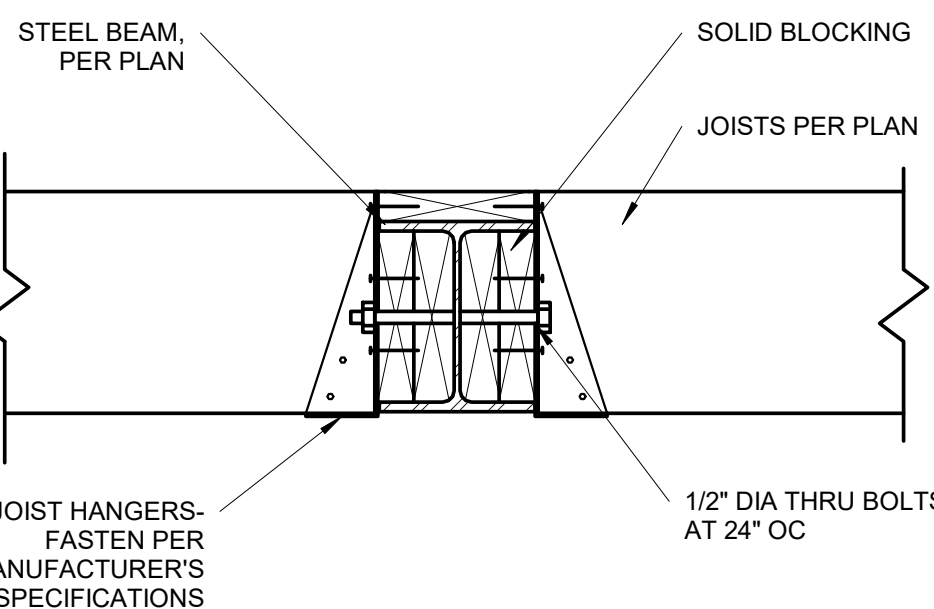
10 | TYPICAL STAIR/RAIL DETAIL
S3.0 | 3/4" = 1'-0"

TABLE R602.3 (5) - SIZE, HEIGHT, AND SPACING OF WOOD STUDS					
STUD SIZE (IN)	LATERALLY UNSUPPORTED STUD HEIGHT*	STRUCTURE SUPPORTED			
		ROOF ONLY	ROOF AND (1) FLOOR	ROOF AND (2) FLOORS	
2x4	10 FEET	24" OC*	16" OC*	N/A	
2x6	10 FEET	24" OC	24" OC	16" OC	

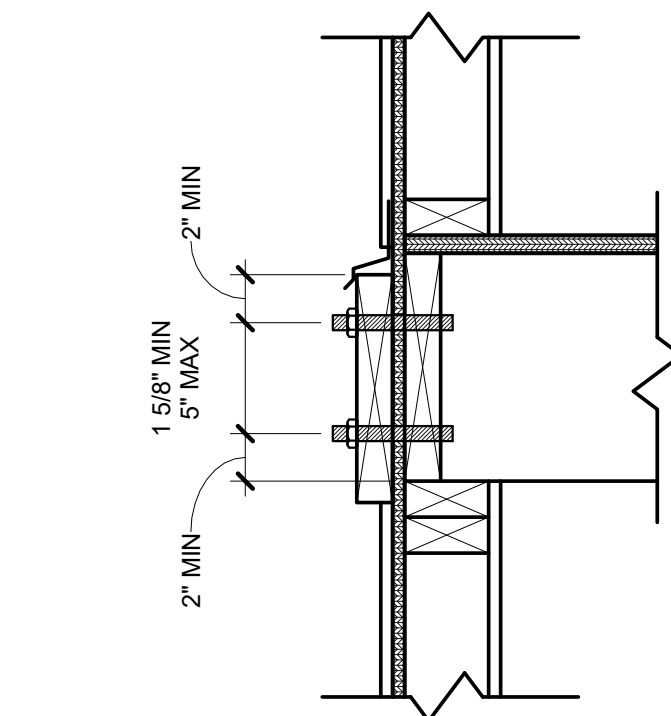
A. LISTED HEIGHTS ARE DISTANCES BETWEEN POINTS OF LATERAL SUPPORT PLACED PERPENDICULAR TO THE PLANE OF THE WALL. BEARING WALLS SHALL BE SHEATHED ON NOT LESS THAN ONE SIDE OR BRIDGING SHALL BE INSTALLED NOT GREATER THAN 4 FEET APART MEASURED VERTICALLY FROM EITHER END OF THE STUD. INCREASES IN UNSUPPORTED HEIGHT ARE PERMITTED WHERE IN THE COMPLIANCE WITH EXCEPTION 2 OF SECTION R602.3.1 OR DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE.
B. A HABITABLE ATTIC ASSEMBLY SUPPORTED BY 2x4 STUDS IS LIMITED TO A ROOF SPAN OF 32 FEET. WHERE THE ROOF SPAN EXCEEDS 32 FEET, THE WALL STUDS SHALL BE INCREASED TO 2x6 OR THE STUDS SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE.

TABLE R602.3 (6) - ALTERNATE WOOD BEARING WALL STUD SIZE, HEIGHT AND SPACING					
ULTIMATE DESIGN WIND SPEED = 115 MPH					
STUD HEIGHT	SUPPORTING	STUD SPACING	MAX ROOF/FLOOR SPAN,		
			12 FEET	24 FEET	
11 FEET	ROOF ONLY	12 IN	2x4	2x4	
		16 IN	2x4	2x4	
		24 IN	2x6	2x6	
		24 IN	2x6	2x6	
12 FEET	ROOF AND ONE FLOOR	12 IN	2x4	2x4	
		16 IN	2x4	2x6	
		24 IN	2x6	2x6	
		24 IN	2x6	2x6	

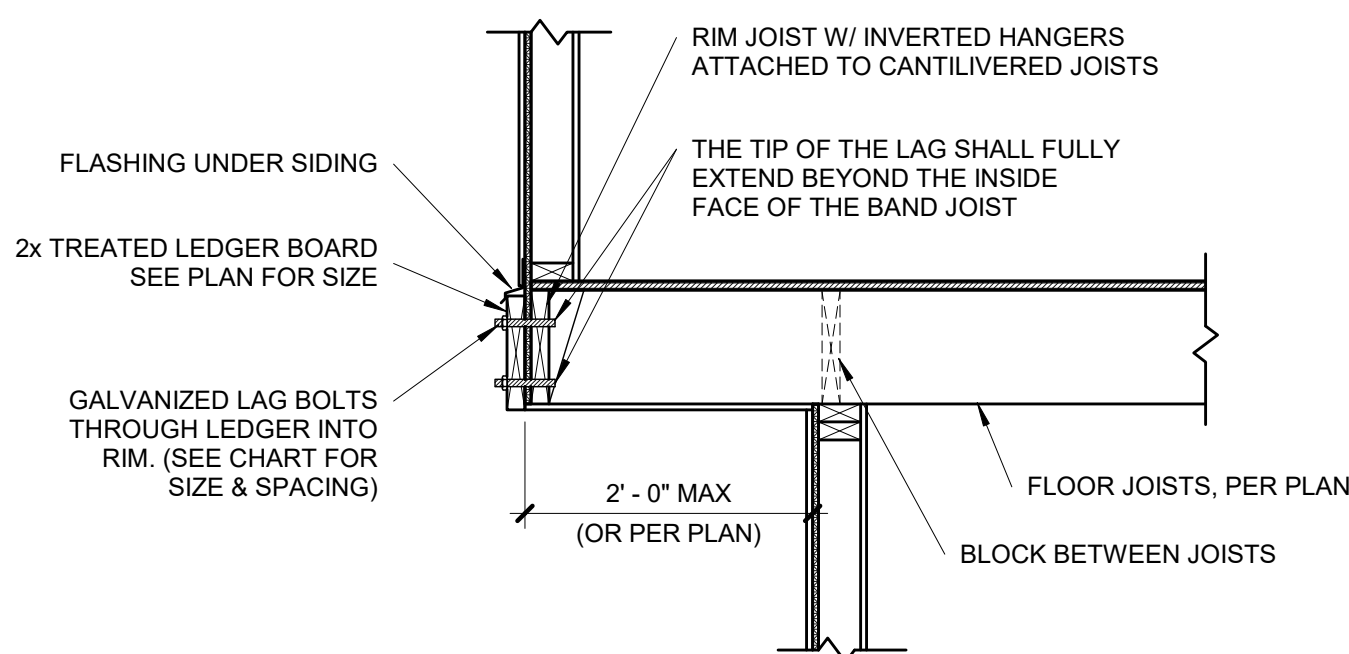
A. WALL STUDS NOT EXCEEDING 16" OC SHALL BE SHEATHED WITH MINIMUM 1/2" GYPSUM BOARD ON THE INTERIOR AND 3/8" WOOD STRUCTURAL PANEL SHEATHING ON THE EXTERIOR. WOOD STRUCTURAL PANEL SHEATHING SHALL BE ATTACHED WITH 8d (2.5" x 0.131") NAILS NOT GREATER THAN 6" OC ALONG PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS, AND ALL PANEL JOINTS SHALL OCCUR OVER STUDS OR BLOCKING.
B. THE MAXIMUM SPAN IS APPLICABLE TO BOTH SINGLE AND MULTIPLE SPAN ROOF AND FLOOR CONDITIONS. THE ROOF ASSEMBLY SHALL NOT CONTAIN A HABITABLE ATTIC.



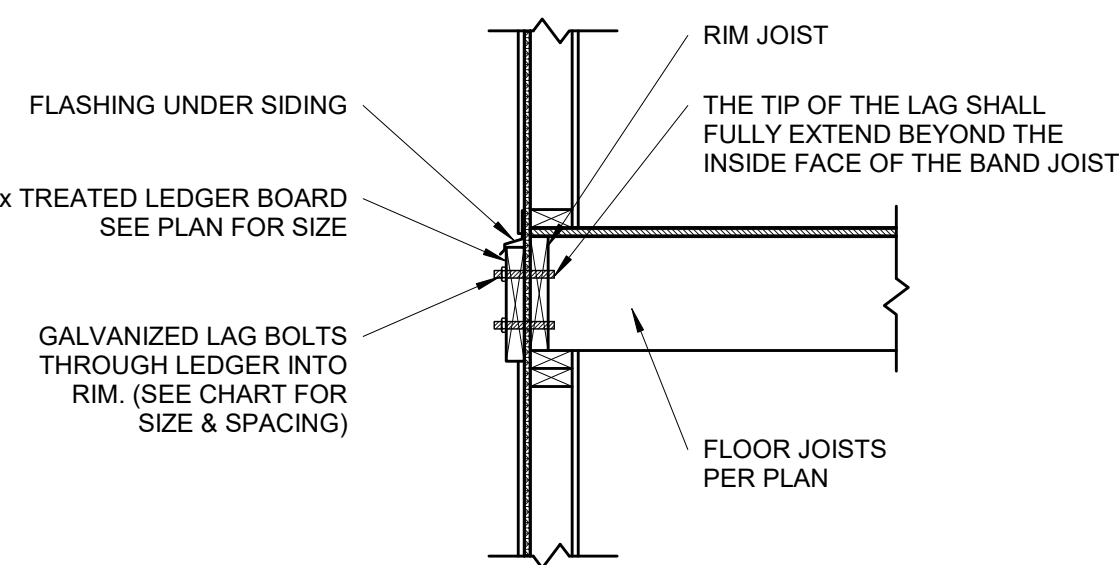
9 | UPSET STEEL BEAM/JOIST CONNECTION
S3.0 | 1 1/2" = 1'-0"



8 | LEDGER FASTENER PLACEMENT
S3.0 | 1 1/2" = 1'-0"



7 | TYPICAL CANTILEVER FRAMING WITH DECK ATTACHMENT
S3.0 | 3/4" = 1'-0"

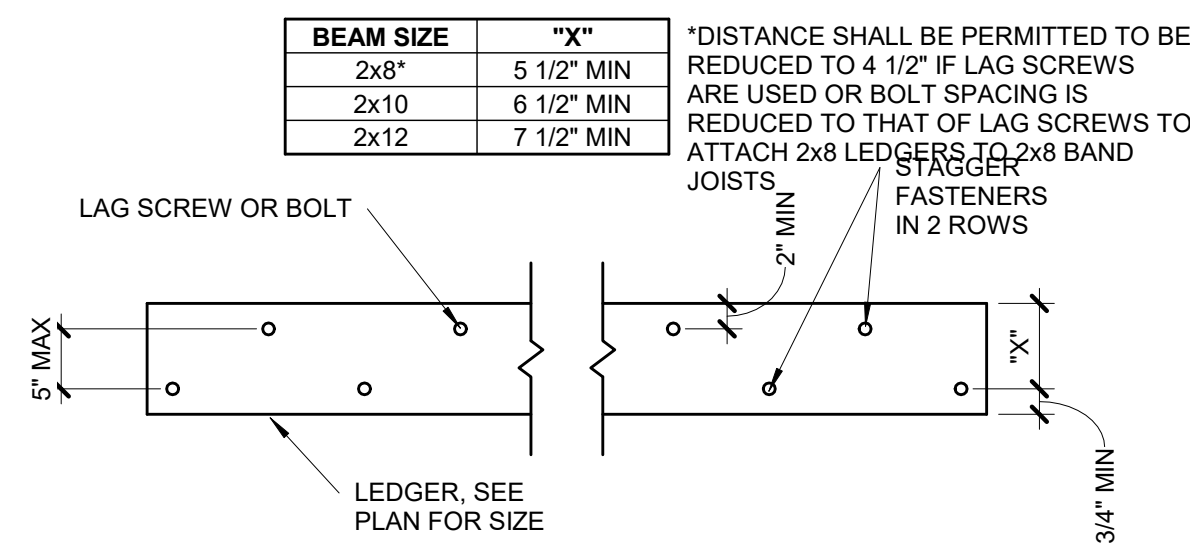


DECK LEDGER ATTACHMENT CHART

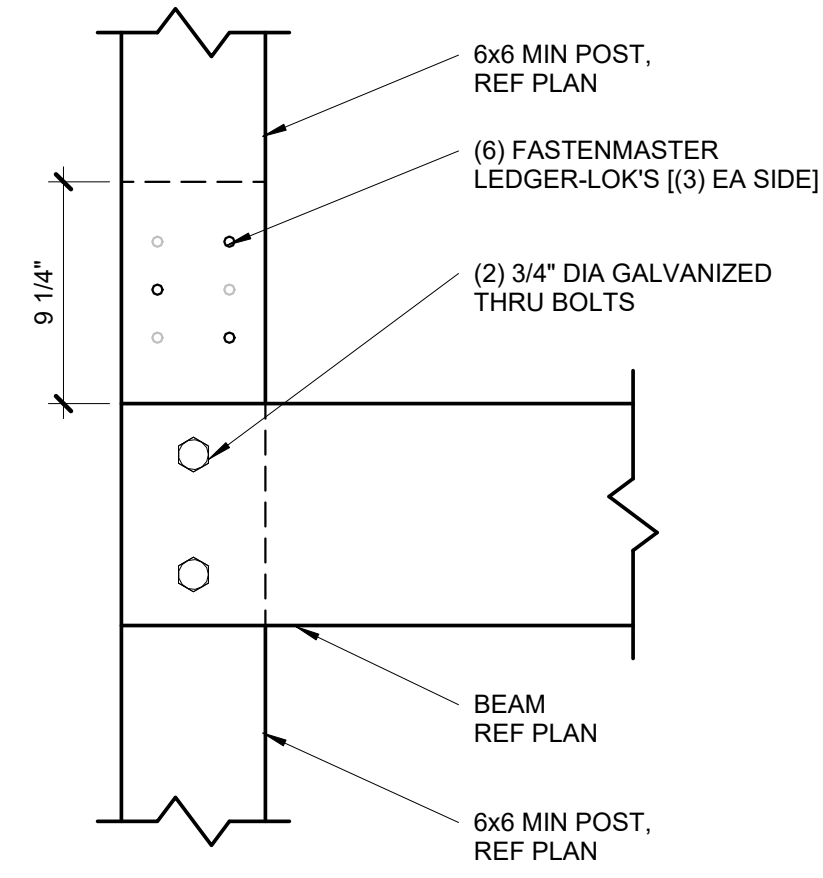
DECK JOIST SPAN	1/2" DIA LAG SPACING	EQUIVALENT SPACING FOR 16" OC JOIST BAYS
UP TO 10'-0"	16" OC	N/A
10'-1" TO 12'-0"	15" OC	16" OC DBL EVERY OTHER
12'-1" TO 14'-0"	13" OC	16" OC DBL EVERY OTHER
14'-1" TO 16'-0"	11" OC	16" OC DBL EVERY JOIST BAY
16'-1" TO 18'-0"	10" OC	16" OC DBL EVERY JOIST BAY

NOTE: CHART IS APPLICABLE ONLY WHEN DECK IS SHOWN ON APPROVED PLAN

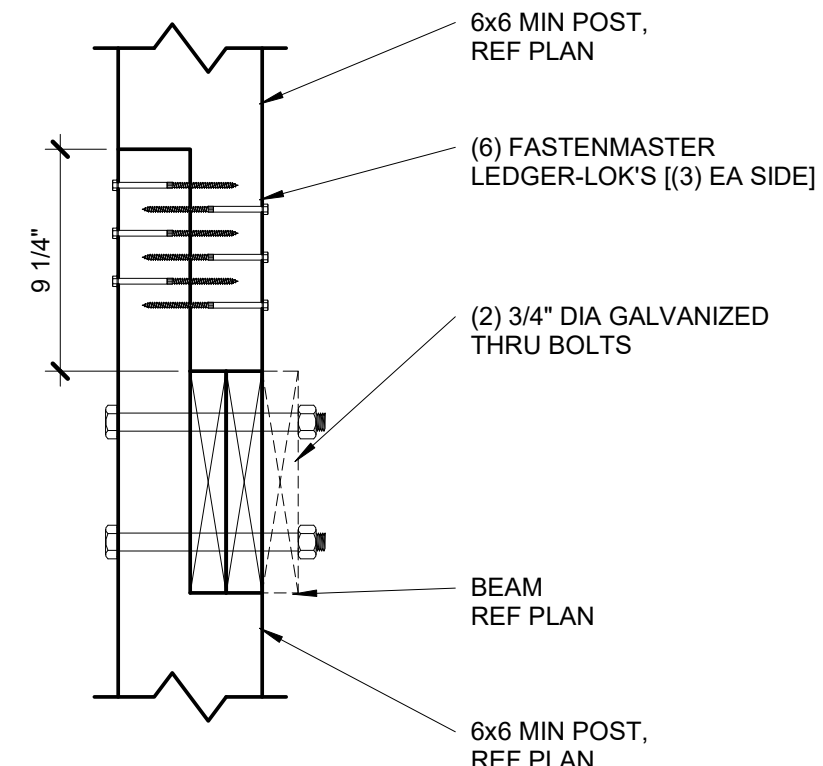
6 | TYPICAL LEDGER ATTACHMENT
S3.0 | 3/4" = 1'-0"



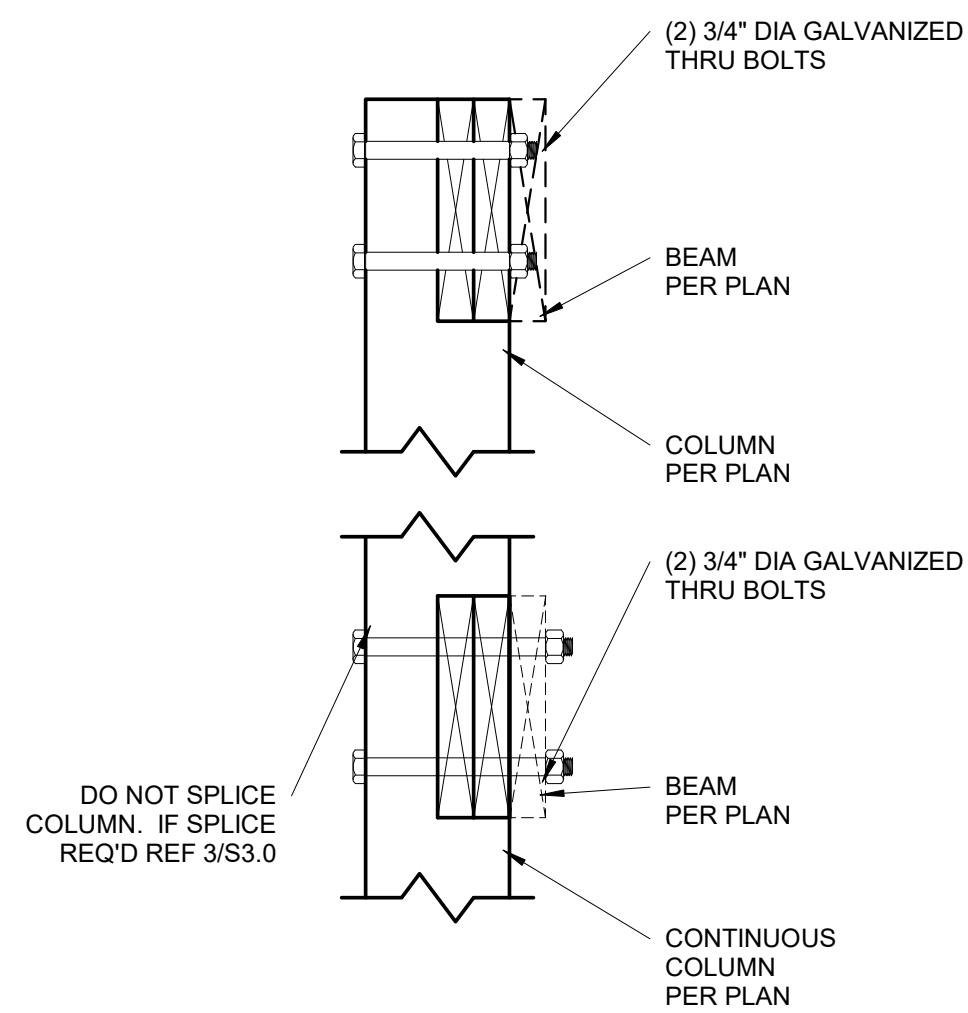
5 | TYPICAL LEDGER BOLT SPACING
S3.0 | 3/4" = 1'-0"



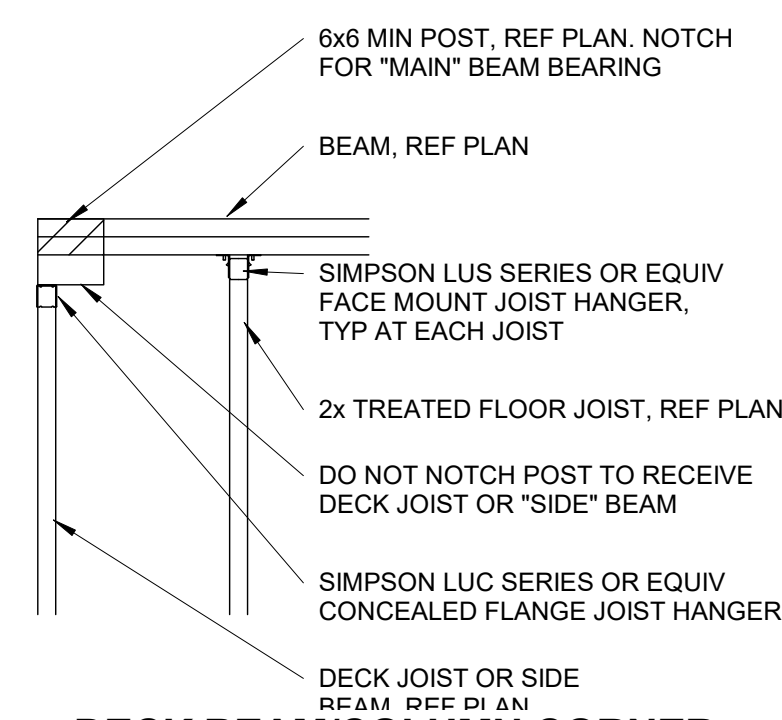
4 | SPliced DECK COLUMN CONNECTION
S3.0 | 1 1/2" = 1'-0"



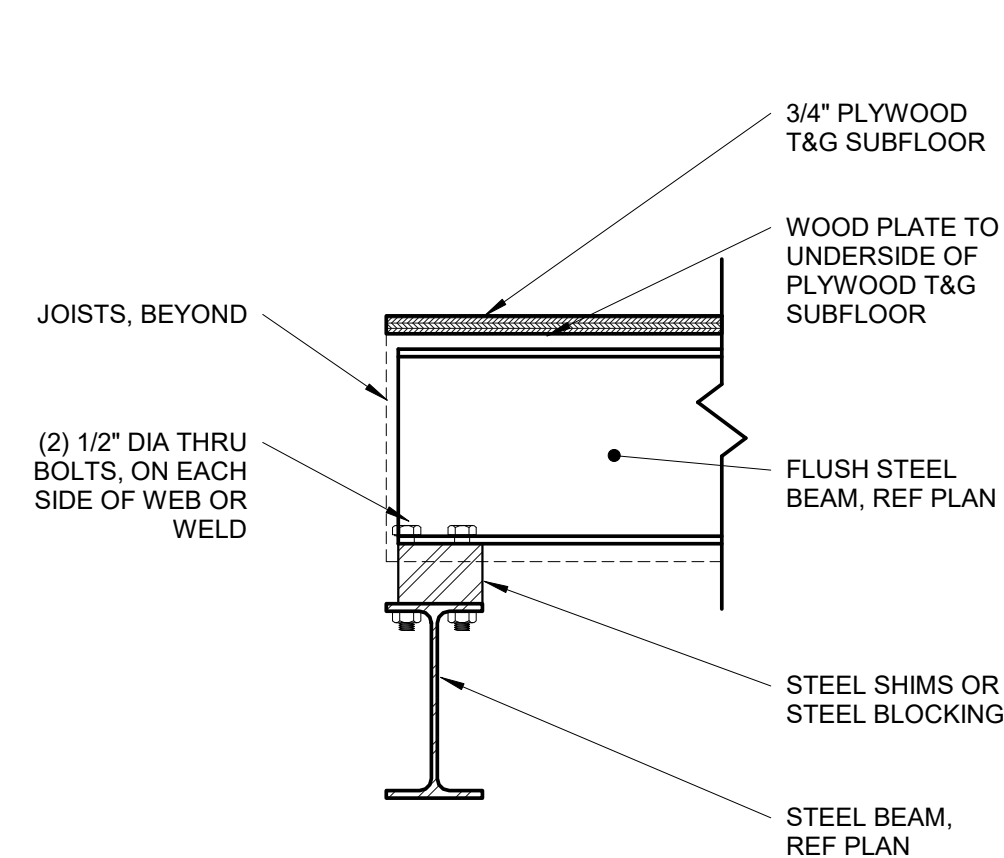
3 | SPliced DECK COLUMN CONNECTION
S3.0 | 1 1/2" = 1'-0"



2 | DECK BEAM/COLUMN CONNECTION
S3.0 | 1 1/2" = 1'-0"

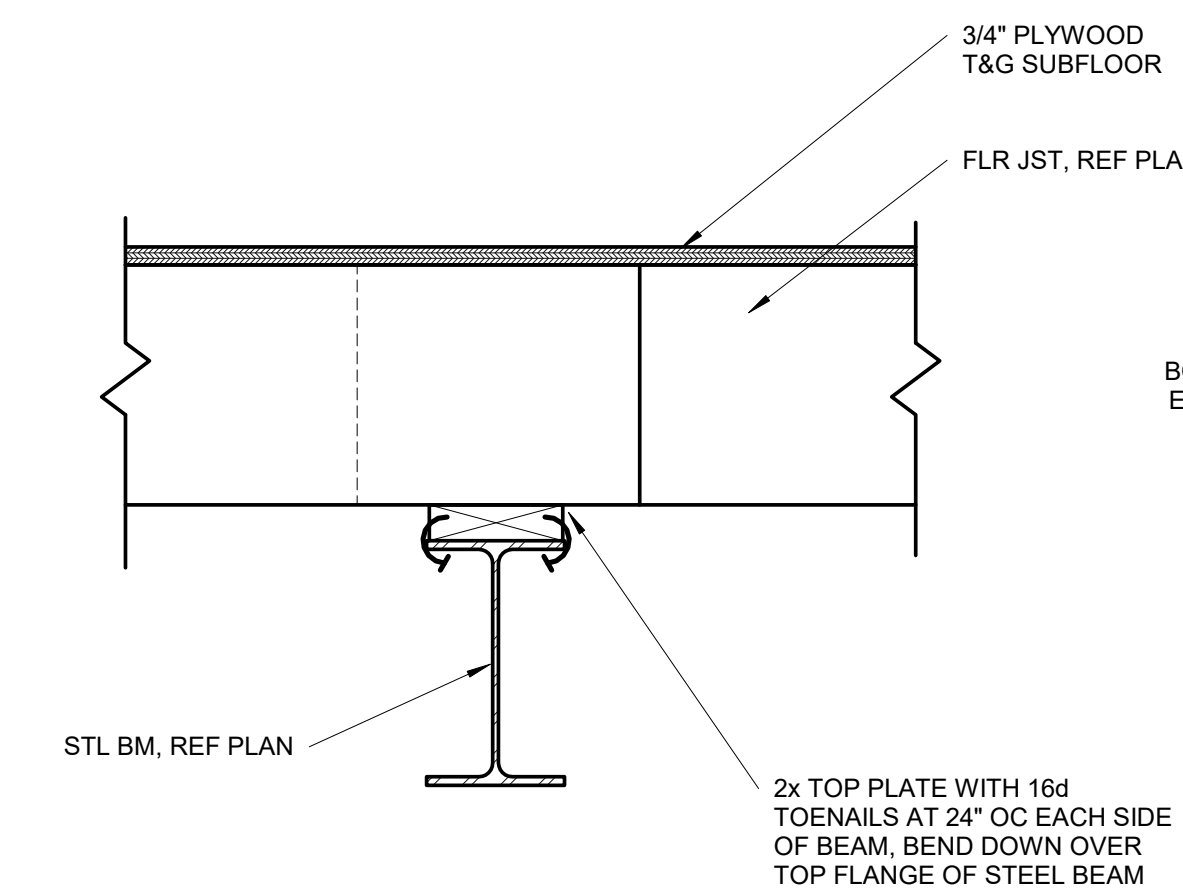


1 | DECK BEAM/COLUMN CORNER CONDITION
S3.0 | 3/4" = 1'-0"



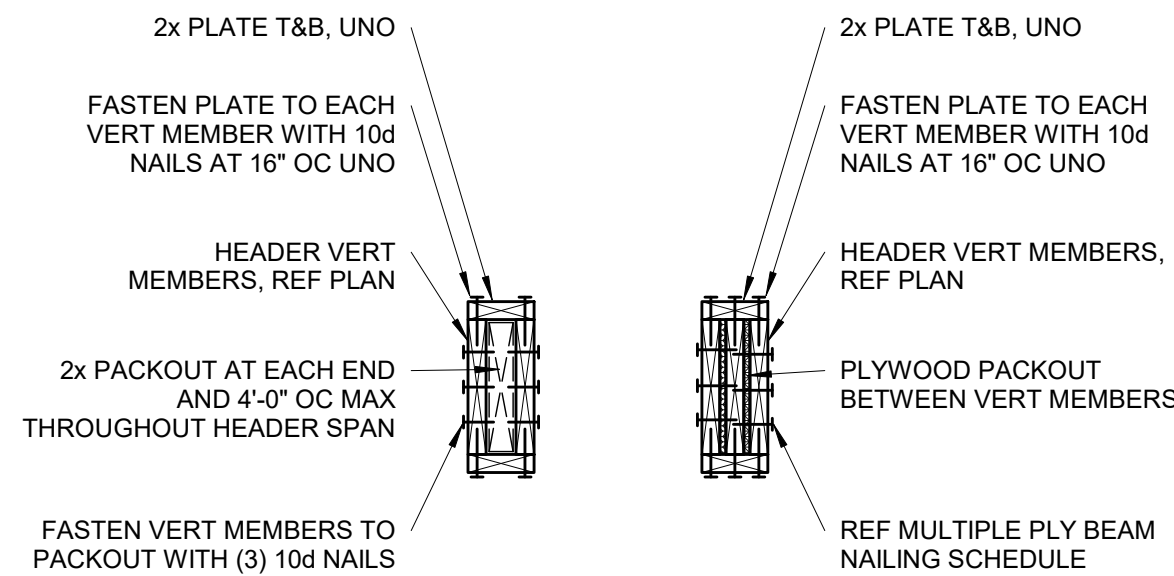
9 FLUSH STEEL BEAM TO STEEL BEAM

S3.1 1 1/2" = 1'-0"



8 WOOD PLATE TO STEEL BEAM CONNECTION

S3.1 1 1/2" = 1'-0"



11 TYPICAL WOOD HEADER DETAIL

S3.1 NOT TO SCALE

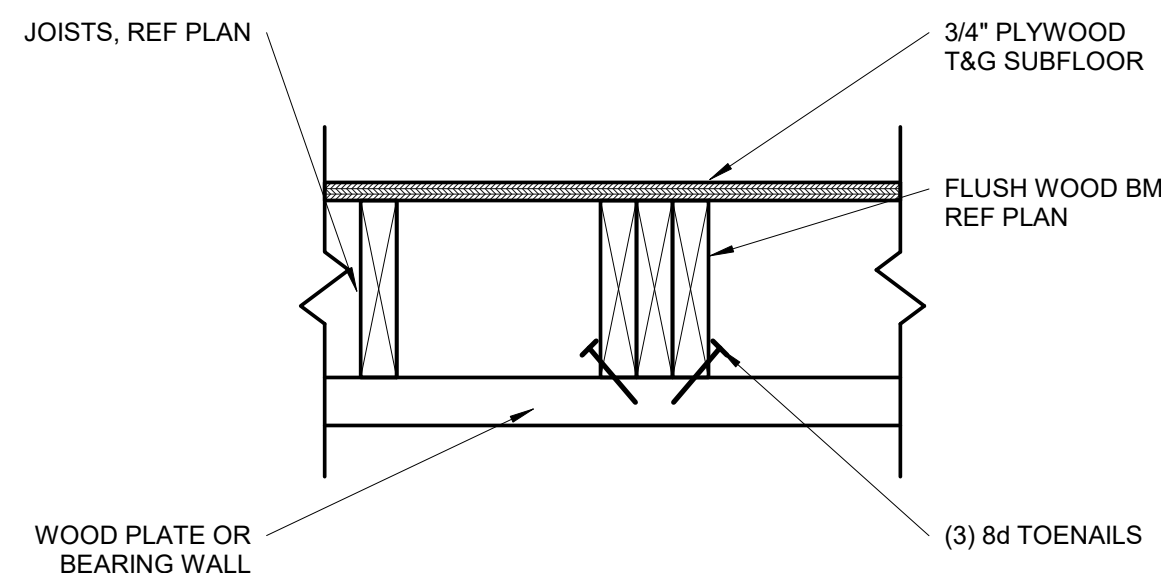
2 - PLY	3 - PLY	4 - PLY
(3) ROWS OF 16d x 5-1/2" NAILS AT 6" OC	(3) ROWS OF 16d x 5-1/2" NAILS AT 4" OC	(2) ROWS OF 1/2" DIA. A307 THRU-BOLTS AT 12" OC STAGGERED
NOTES: 1. NAILING SHOWN APPLIES UNLESS SPECIFICALLY NOTED IN DETAILS. 2. SPACE NAILS EVENLY THROUGHOUT DEPTH OF BEAM.		

10 MULTIPLE PLY BEAM NAILING SCHEDULE

S3.1 NOT TO SCALE

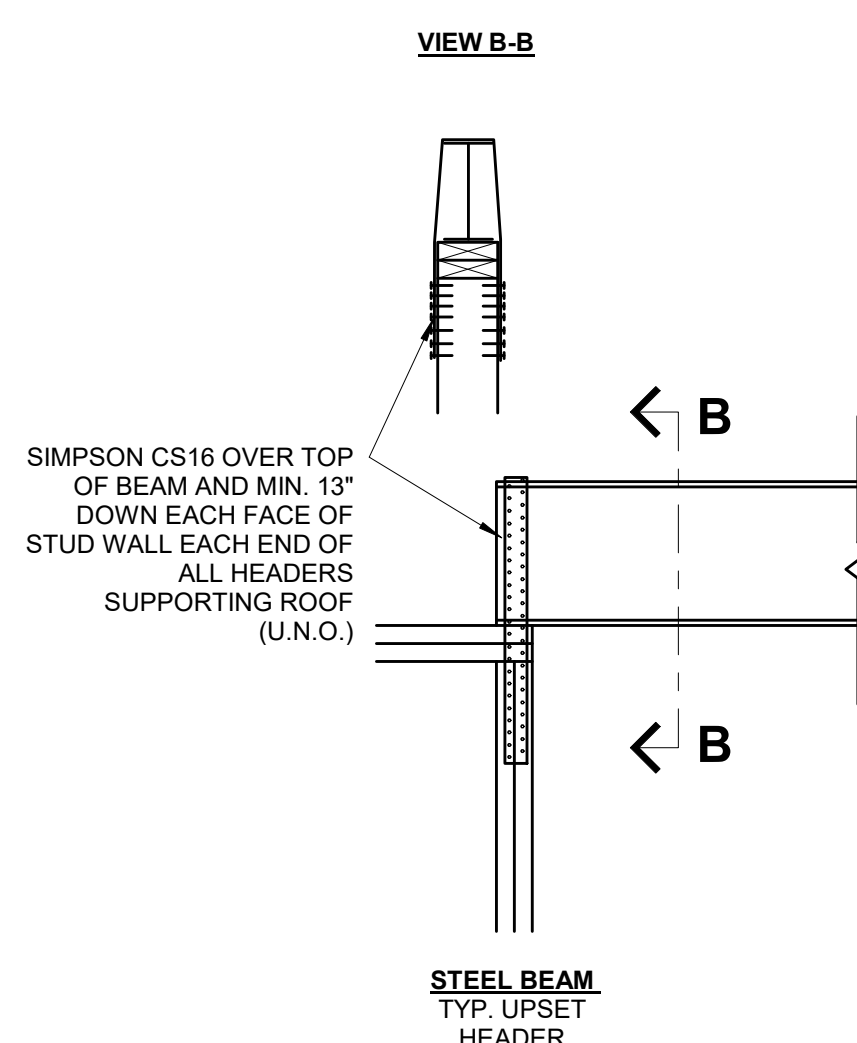
7 FLUSH STEEL BEAM CONNECTION

S3.1 1 1/2" = 1'-0"



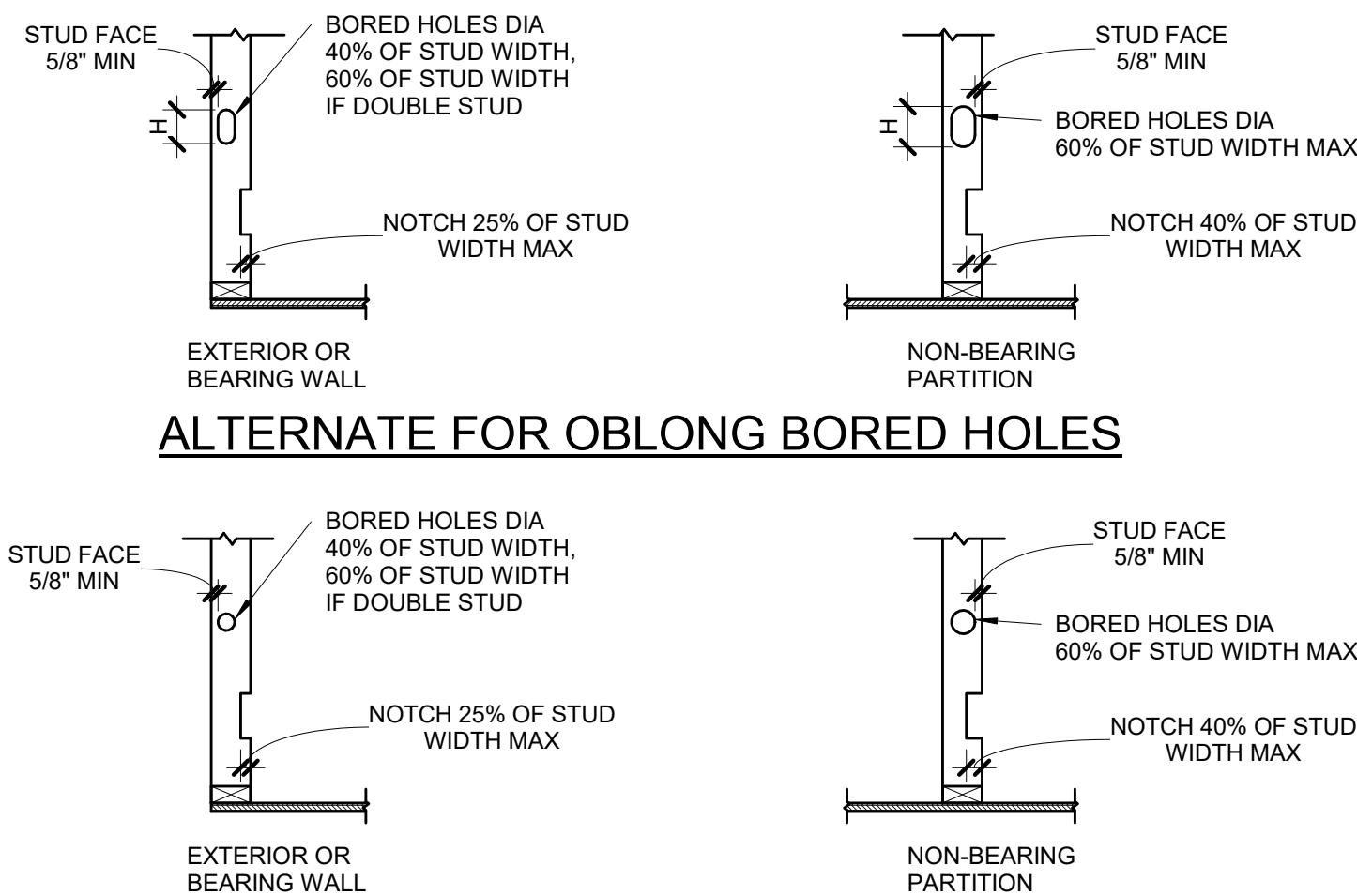
6 FLUSH WOOD BEAM CONNECTION

S3.1 1 1/2" = 1'-0"



5 ROOF SUPPORTING BEAM HOLD DOWN

S3.1 3/4" = 1'-0" (COMPLIANCE WITH IRC R802.11)



ALTERNATE FOR OBLONG BORED HOLES

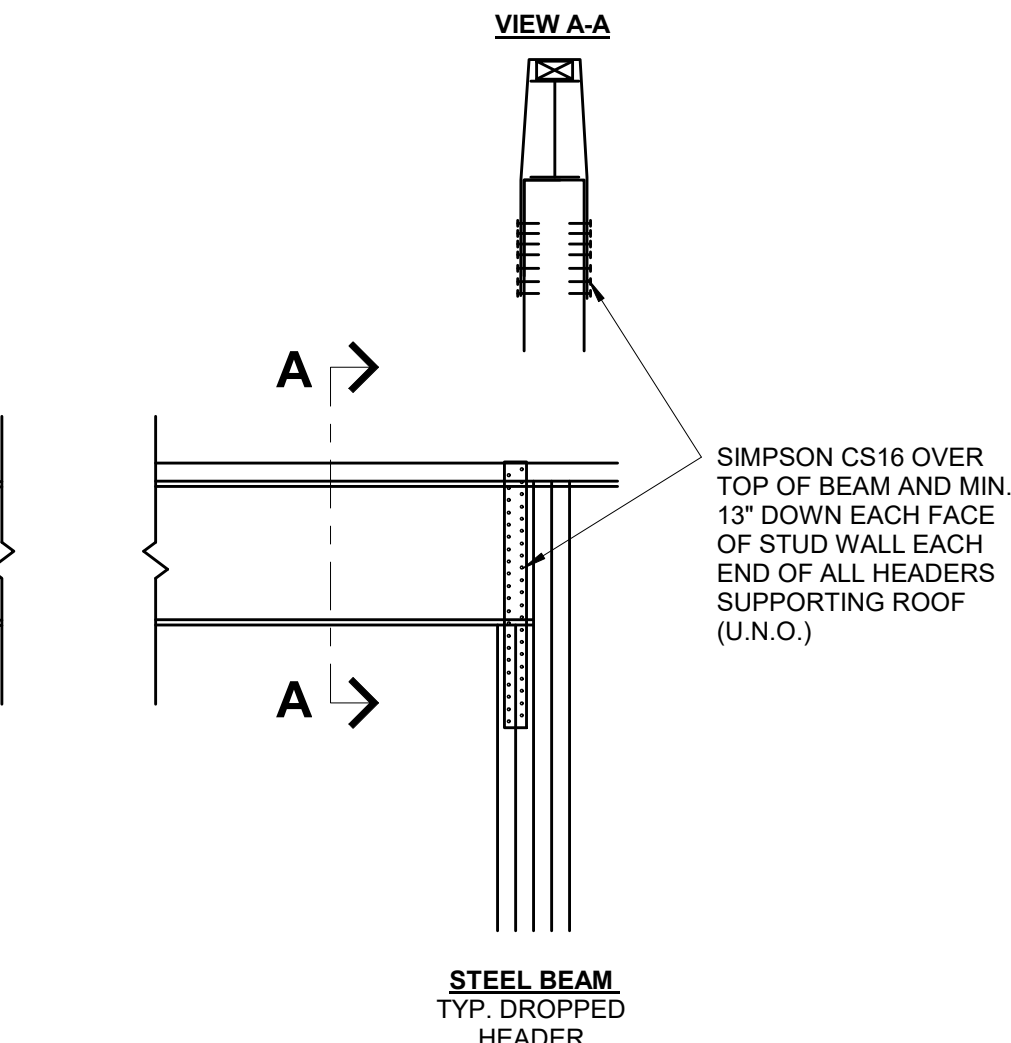
WALL SIZE	BORED HOLE SIZE		WALL NOTCH	
	STUDS LOAD BEARING OR EXTERIOR WALL	NON LOAD BEARING WALL	LOAD BEARING WALL	NON LOAD BEARING WALL
2x4	1 3/8"	60%	2 1/8"	7/8"
(2) 2x4	-	2 1/8"	7/8"	1 3/8"
2x6	2 1/4"	2 1/8"	3 15/16"	1 3/8"
(2) 2x6	-	3 5/16"	1 3/8"	2 1/4"
2x8	2 7/8"	-	4 3/8"	1 13/16"
(2) 2x8	-	4 3/8"	4 3/8"	2 7/8"

PLATES:
TOP AND BOTTOM PLATE HOLE, CUT OR NOTCH THAT IS 50% MORE OF WIDTH MUST BE REPAIRED USING 16 GA (MIN) METAL TIE THAT IS AT LEAST 1-1/2" WIDE IF WALL IS A SHEAR WALL IT MUST BE REPAIRED USING HARDY FRAME SADDLE (HFS).

NOTE:
SEE SECTION R602.6 AND FIGURES R602.6.1 AND R602.6.2

4 DRILLING & NOTCHING DETAIL

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



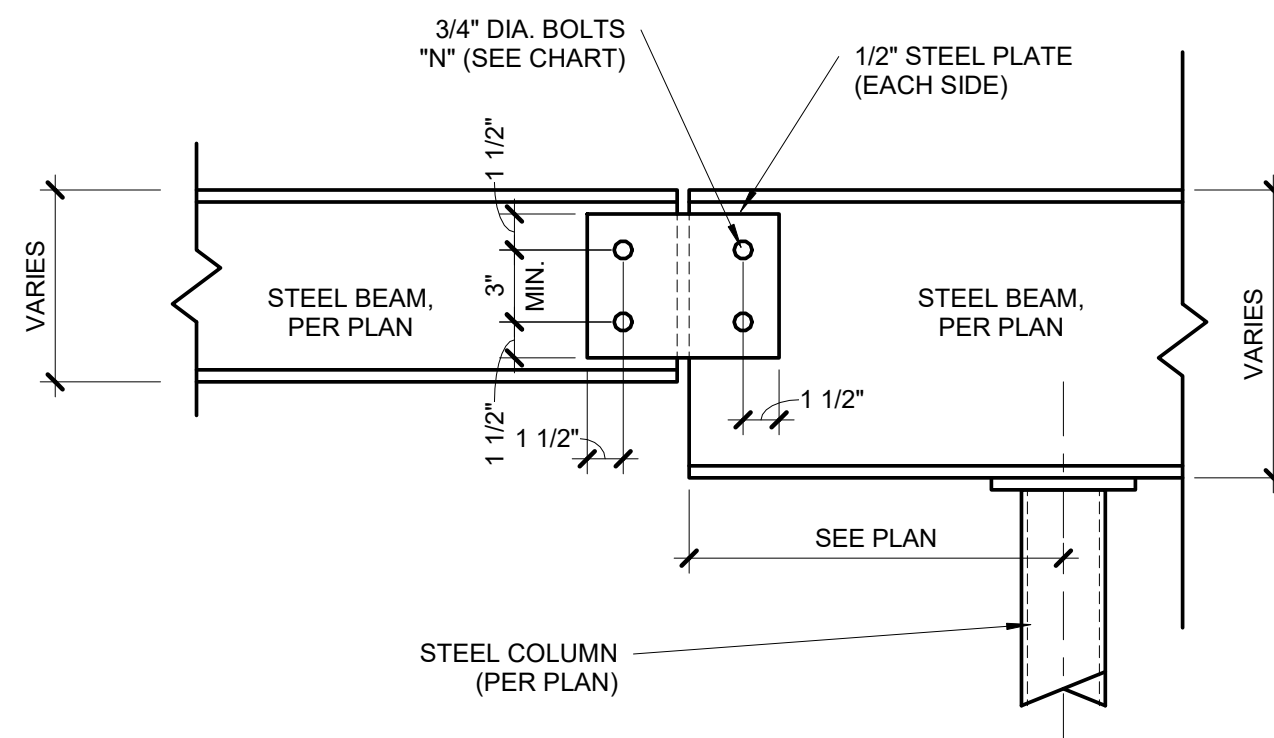
3 BEAM TO GIRDER CONNECTION

S3.1 1 1/2" = 1'-0"

BEAM CONNECTION SCHEDULE

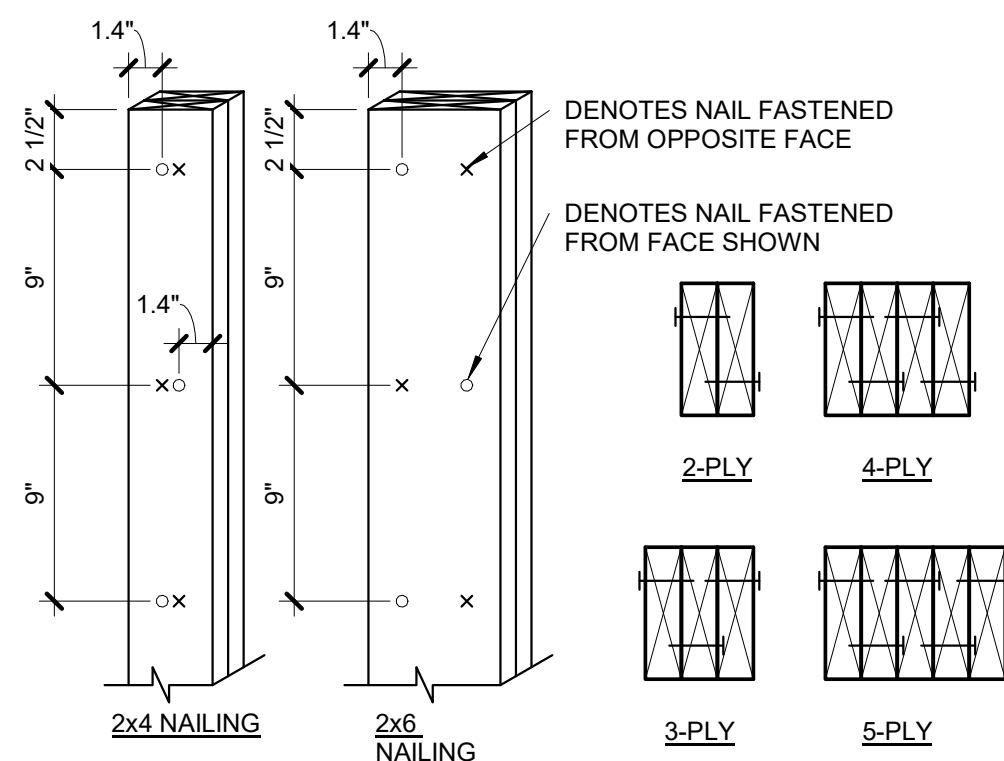
BEAM SIZE	# OF BOLTS "N"	# OF BOLTS "M"
W8, W10	2	4
W12, W14	3	6
W16, W18	4	8

NOTES:
1. THESE CONNECTIONS ARE TYPICAL, UNO.
2. NUMBER OF BOLTS IN UPSET BEAM CONNECTIONS DETERMINED BY SMALLER OF TWO BEAMS AT CONNECTION.
3. ALL AROUND 1/4" FILLET WELD MAY BE SUBSTITUTED FOR EITHER BOLTED CONNECTION.
4. ALL BOLTS, 3/4" DIAMETER, A325-N, UNO.



2 BEAM SPLICE DETAIL

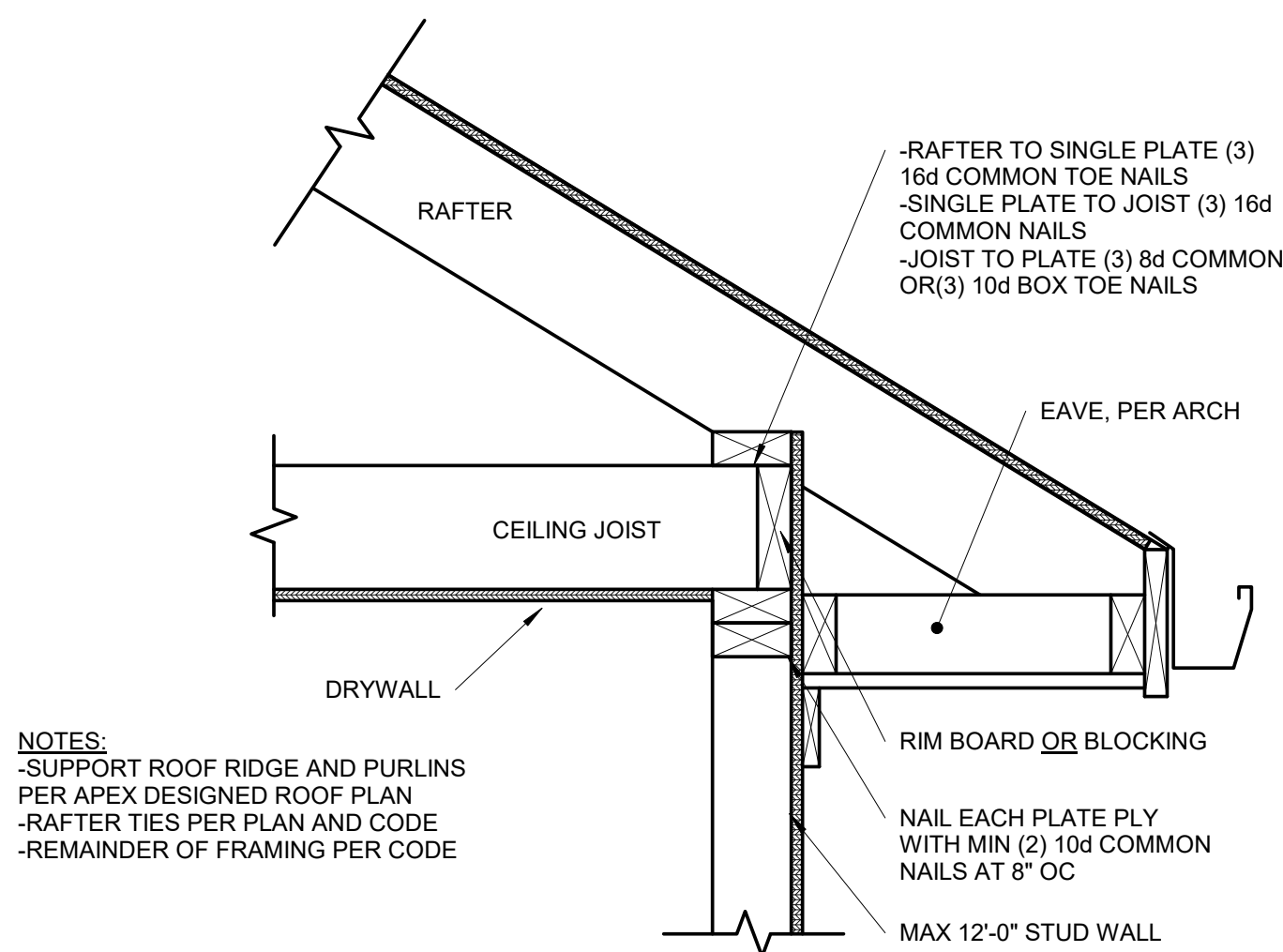
S3.1 1 1/2" = 1'-0"



NOTES:
1. EACH 2x PLY SHALL BE FASTENED WITH (1) ROW OF 10d NAILS AT 9" OC, ALTERNATING SIDE TO SIDE.
2. 1.4" MIN EDGE DISTANCE, AND STARTING 2 1/2" FROM EACH END. EXTEND FULL AREA OF COLUMN AS SOLID BLOCKING THROUGH JOIST BAYS AND WALLS TO LOAD-BEARING BEAM/WALL BELOW.

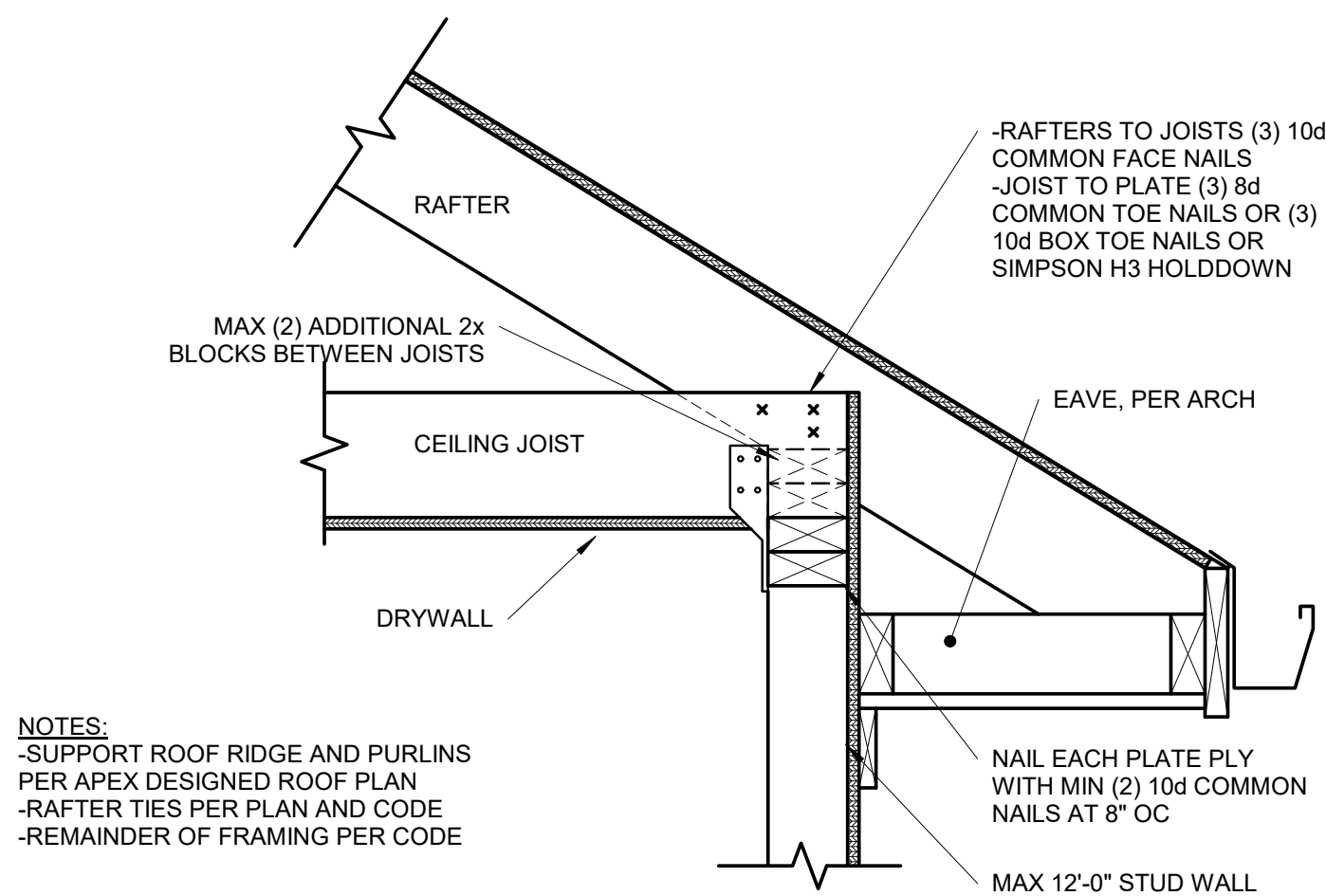
1 BUILT-UP STUD COLUMN

S3.1 1 1/2" = 1'-0"



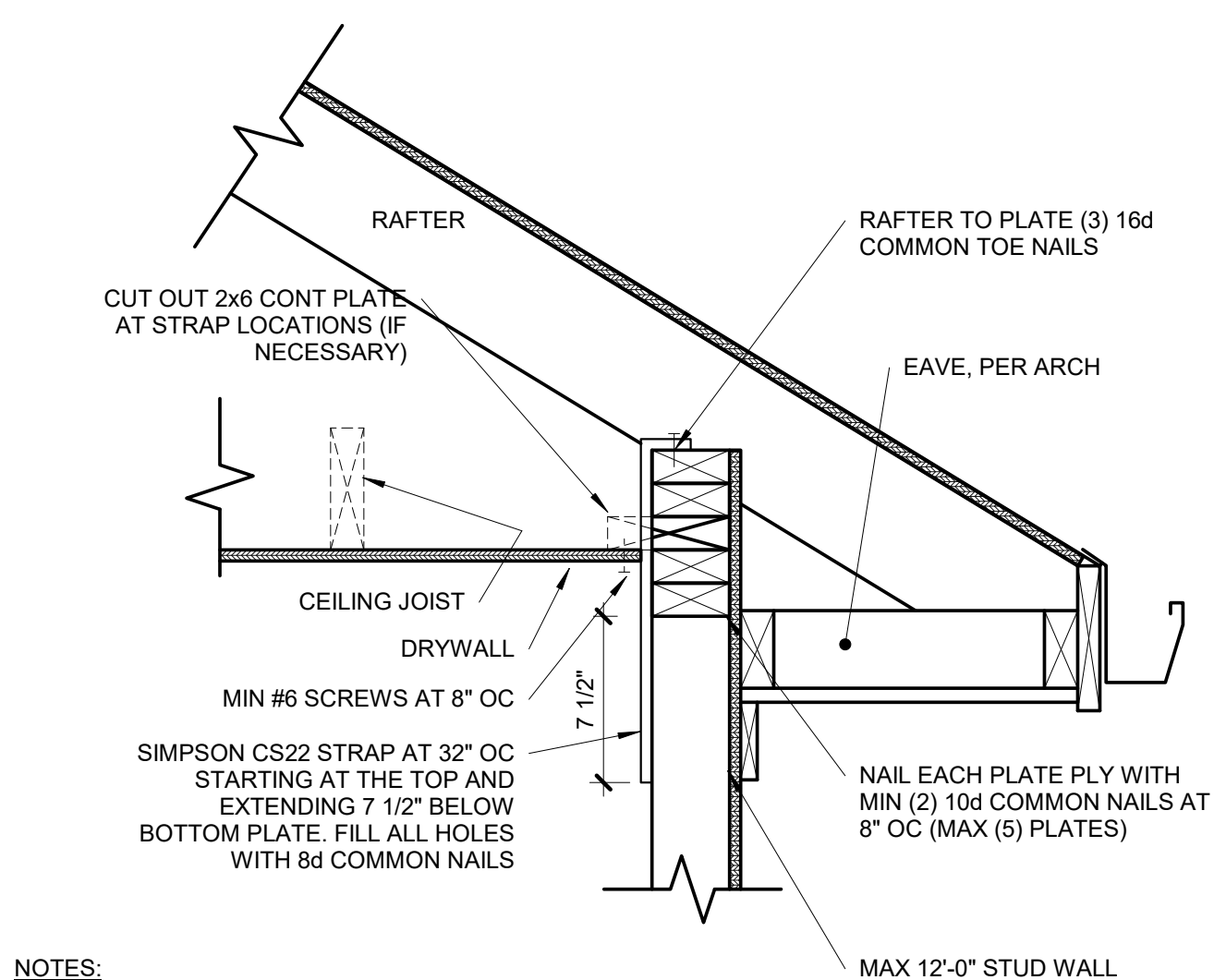
8 | OPTIONAL RAFTER BEARING

S3.2 1 1/2" = 1'-0"



7 | OPTIONAL RAFTER BEARING

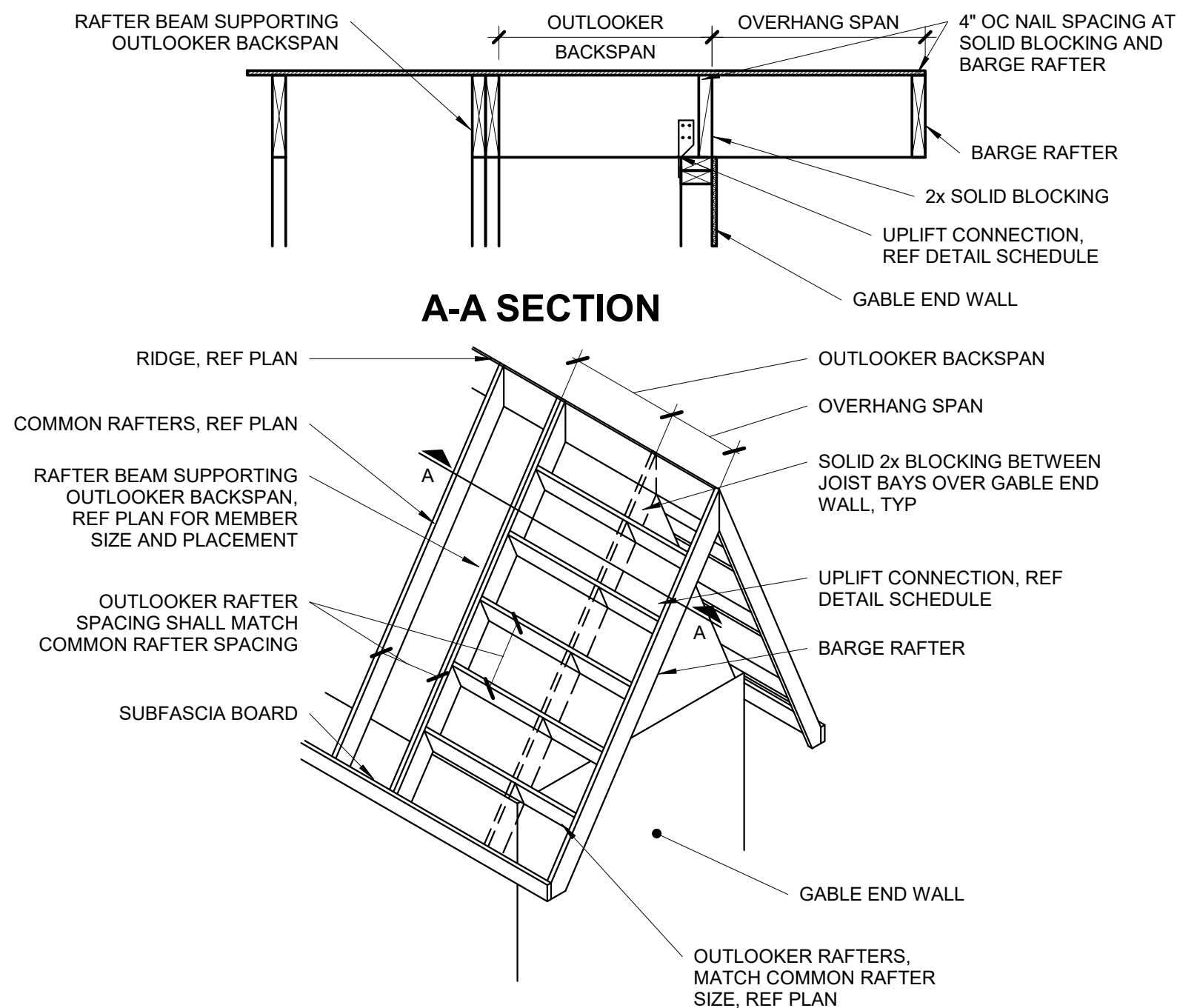
S3.2 1 1/2" = 1'-0"



6 | OPTIONAL RAFTER BEARING

S3.2 1 1/2" = 1'-0"

UPLIFT CONNECTION SCHEDULE			
OVERHANG SPAN: 1'-1" TO 1'-9"			
RAFTER SPACING	UPLIFT CONNECTOR	EXPOSURE B	EXPOSURE C
12" OC	SIMPSON H2.5A	(1) AT 24" OC	(1) AT 24" OC
16" OC	SIMPSON H2.5A	(1) AT 32" OC	(1) AT 16" OC
24" OC	SIMPSON H2.5A	(1) AT 24" OC	(1) AT 24" OC
OVERHANG SPAN: 1'-10" TO 2'-6"			
RAFTER SPACING	UPLIFT CONNECTOR	EXPOSURE B	EXPOSURE C
12" OC	SIMPSON H2.5A	(1) AT 12" OC	(1) AT 12" OC
16" OC	SIMPSON H2.5A	(1) AT 16" OC	(2) AT 16" OC
24" OC	SIMPSON H2.5A	(2) AT 24" OC	(2) AT 24" OC
OVERHANG SPAN: 2'-7" TO 3'-9"			
RAFTER SPACING	UPLIFT CONNECTOR	EXPOSURE B	EXPOSURE C
12" OC	SIMPSON H2.5A	(2) AT 12" OC	(2) AT 12" OC
16" OC	SIMPSON H2.5A	(2) AT 16" OC	(2) AT 16" OC
24" OC	SIMPSON H2.5A	(2) AT 24" OC	N/A

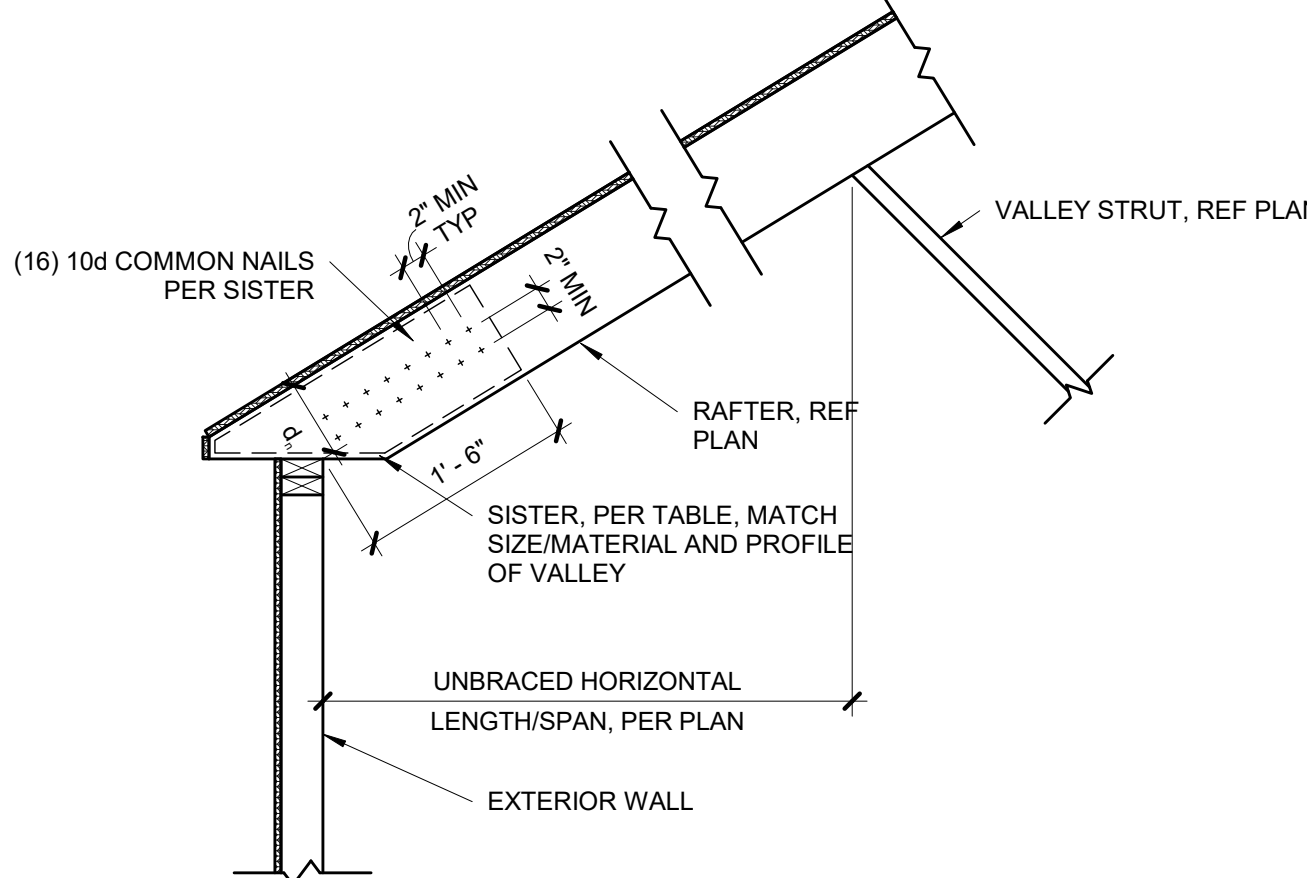


5 | OUTLOOKER RAFTERS ROOF FRAMING

S3.2 NOT TO SCALE

REQUIRED NUMBER OF SISTER PLIES									
LIGHT ROOF									
2x VALLEY					LVL VALLEY				
# OF SISTER PLIES	RAFTER SIZE				# OF SISTER PLIES	RAFTER SIZE			
	2x6	2x8	2x10			2x6	2x8	2x10	
0	4'-8"	6'-2"	7'-11"		0	8'-8"	11'-5"	14'-7"	
1	9'-5"	*	*		1	*	*	*	
2	*	N/A	N/A		2	N/A	N/A	N/A	
HEAVY ROOF									
2x VALLEY					LVL VALLEY				
# OF SISTER PLIES	RAFTER SIZE				# OF SISTER PLIES	RAFTER SIZE			
	2x6	2x8	2x10			2x6	2x8	2x10	
0	3'-6"	4'-7"	5'-11"		0	6'-6"	8'-7"	10'-11"	
1	7'-1"	9'-3"	*		1	13'-1"	*	*	
2	*	*	N/A		2	*	N/A	N/A	

- *VALLEYS OF A LENGTH GREATER THAN THAT FOUND IN THE CELL ABOVE ARE CONTROLLED BY BENDING. APPLY THE NUMBER OF SISTER PLIES CORRESPONDING TO THIS ROW.
- THIS TABLE IS INTENDED TO BE USED IN CONJUNCTION WITH THE STAMPED, ENGINEERED PLANS AS THEY ARE DRAWN BY APEX. BRACING LOCATIONS SHALL DETERMINE HORIZONTAL UNSUPPORTED SPAN FROM VALLEY BEARING AND BE USED TO DETERMINE THE NUMBER OF SISTERS REQUIRED. BRACING LOCATIONS ARE **NOT** TO BE INFERRED USING THIS TABLE.
 - TABLE VALUES ARE BASED ON A DEPTH OF MEMBER REMAINING, *d*, EQUAL TO THE DEPTH OF THE RAFTERS. IF *d* IS OBSERVED TO BE LESS THAN THE DEPTH OF THE RAFTER, THE VALLEY WILL NEED TO BE EITHER REPLACED OR ANALYZED BY APEX. TABLE VALUES ARE VALID FOR TAPERED CUTS ONLY, REF DETAIL 4/S3.2.
 - IF MULTI-PLY VALLEY IS SPECIFIED ON PLAN TREAT EACH ADDITIONAL PLY AS A SISTER PLY WHEN LOOKING UP MAX SPAN.
 - MAX 14'-0" HORIZONTAL RAFTER SPAN IN BOTH DIRECTIONS FROM VALLEY.
 - ALL HIPs ARE DESIGNED TO BE CONTROLLED BY BENDING. SHEAR AT BEARING WITH MIN 5 1/2" DEPTH DOES NOT CONTROL DESIGN.

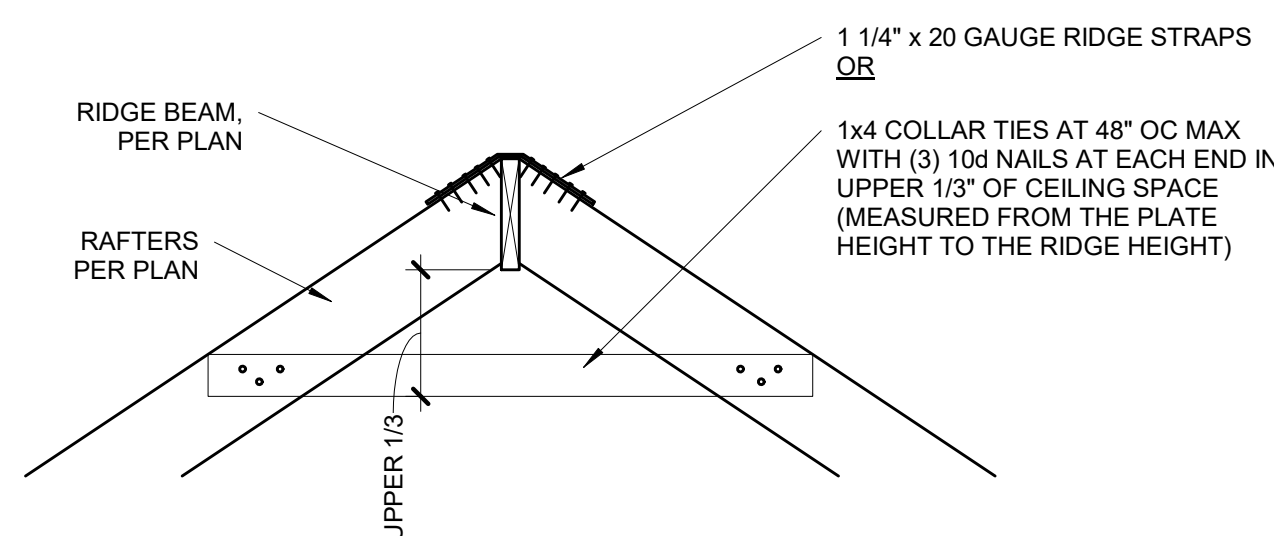


4 | TAPERED VALLEY

S3.2 3/4" = 1'-0"

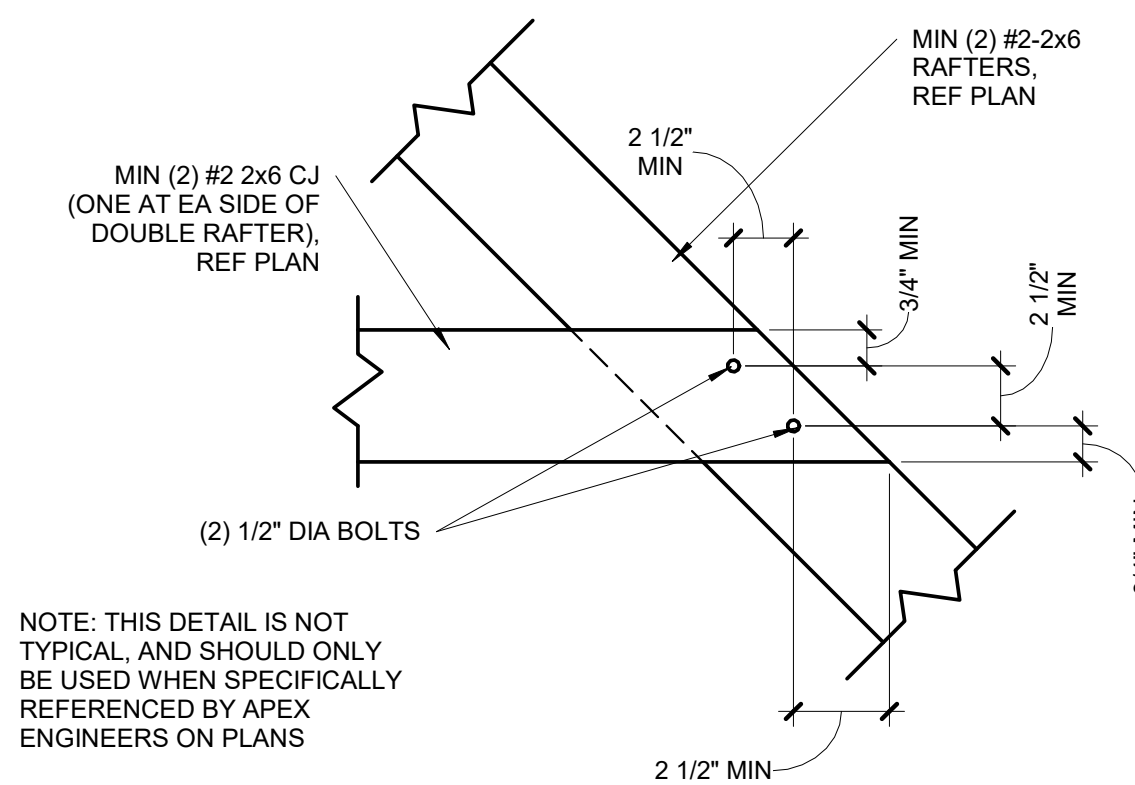
OVERHANG SPAN	MIN BACKSPAN LENGTH
≤1'-0"	1'-0"
1'-1" to 2'-0"	EQUALS OVERHANG SPAN
≥2'-1"	OVERHANG SPAN x2

NOTES:
-CHART IS ONLY APPLICABLE IF NO
RAFTER BEAM SHOWN ON PLAN.
-CONTACT EOR IF OVERHANG LENGTH
EXCEEDS CHART OPTIONS.



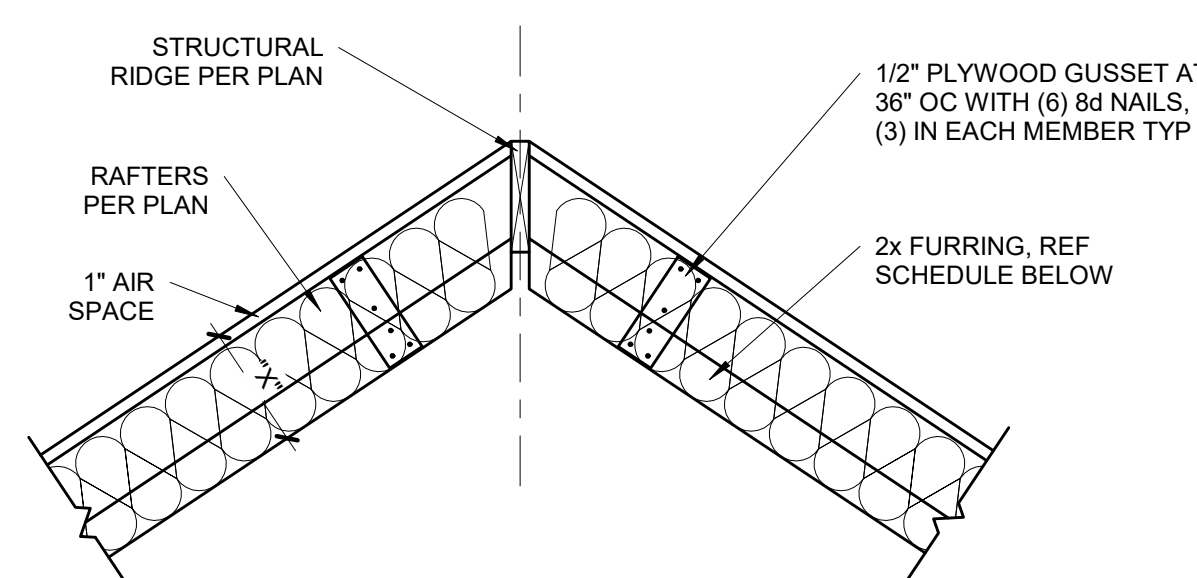
3 | RIDGE BEAM DETAIL

S3.2 3/4" = 1'-0"



2 | BOLTED RAFTER HIP CONNECTION

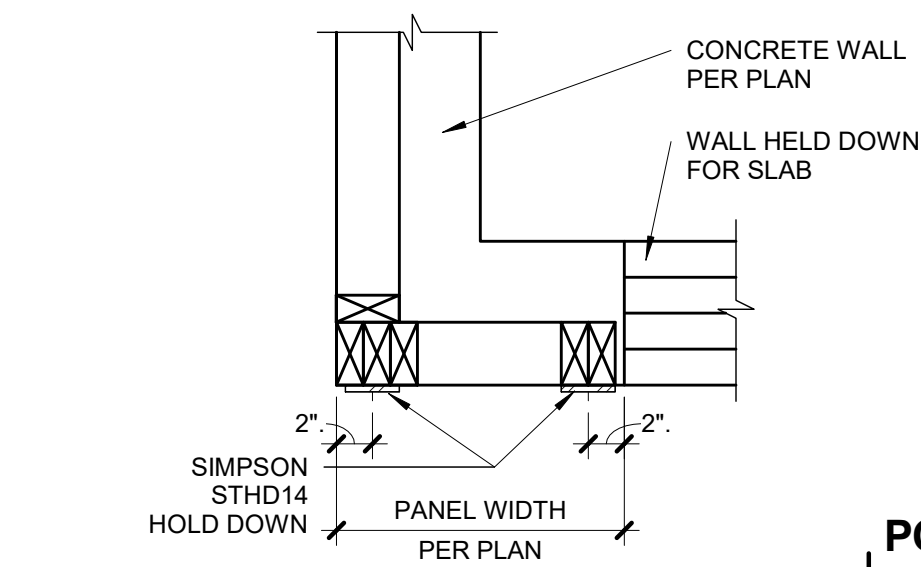
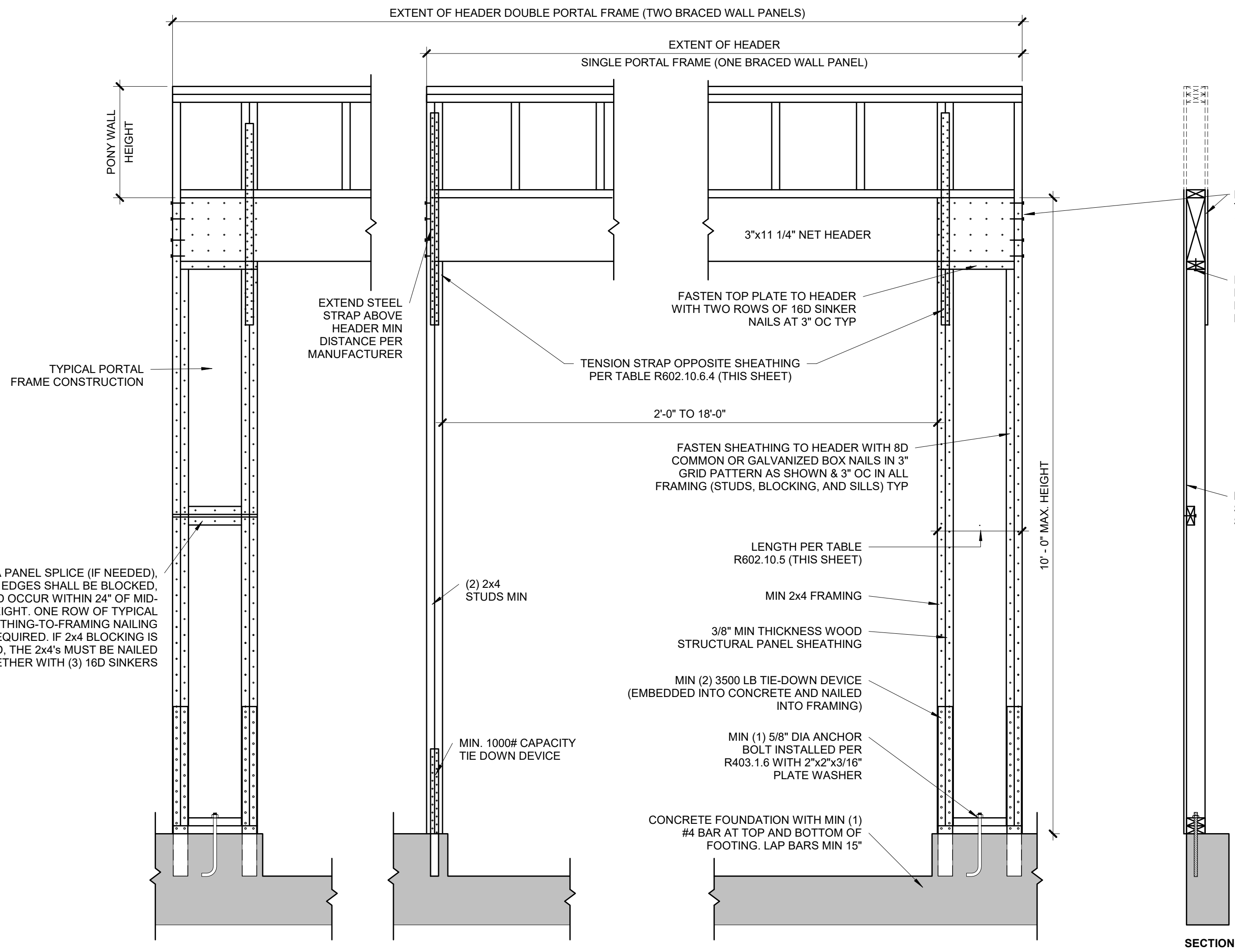
S3.2 1 1/2" = 1'-0"



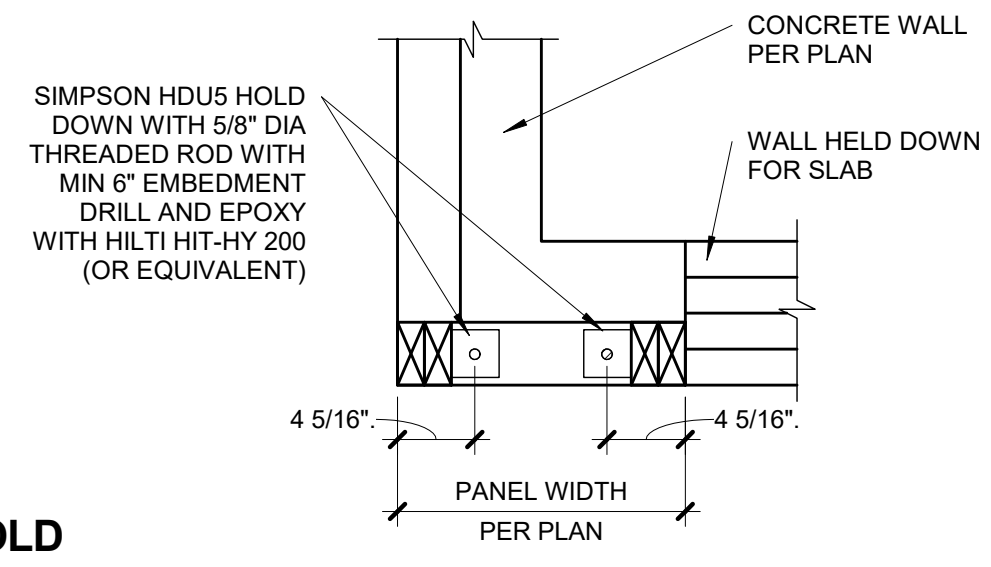
FURR OUT SCHEDULE			
RAFTER SIZE	R-30C INSULATION (X= 9 1/4")	R-38C INSULATION (X=11 1/4")	
2x6	2x6	2x8	
2x8	2x4	2x6	
2x10	NOT REQUIRED	2x4	
2x12	NOT REQUIRED	REQUIRED	
NOTES: 1. ALL VAULTED RAFTERS SHALL BE #2-2x6 DF-L, MINIMUM, AT 16" OC, PER SPAN CHART, UNLESS NOTED OTHERWISE. 2. ALL VAULTS SHALL BE FURRED DOWN WITH 2x FRAMING TO THE REQUIRED DEPTH OF INSULATION, PLUS 1" AIR SPACE. 3. R-30C INSULATION = 8 1/4" THICK 4. R-38C INSULATION = 10 1/4" THICK 5. INSULATION REQUIREMENTS MAY BE REDUCED TO R30 IF ROOF/CEILING ASSEMBLY DOES NOT ALLOW SUFFICIENT SPACE BUT IS LIMITED TO VAULTED CEILING AREAS THAT ARE LESS THAN 500 SQUARE FEET OR 20 PERCENT OF THE TOTAL INSULATED CEILING AREA, WHICHEVER IS LESS. (PER N1102.2.2)			

1 | VAULTED RAFTER INSULATION

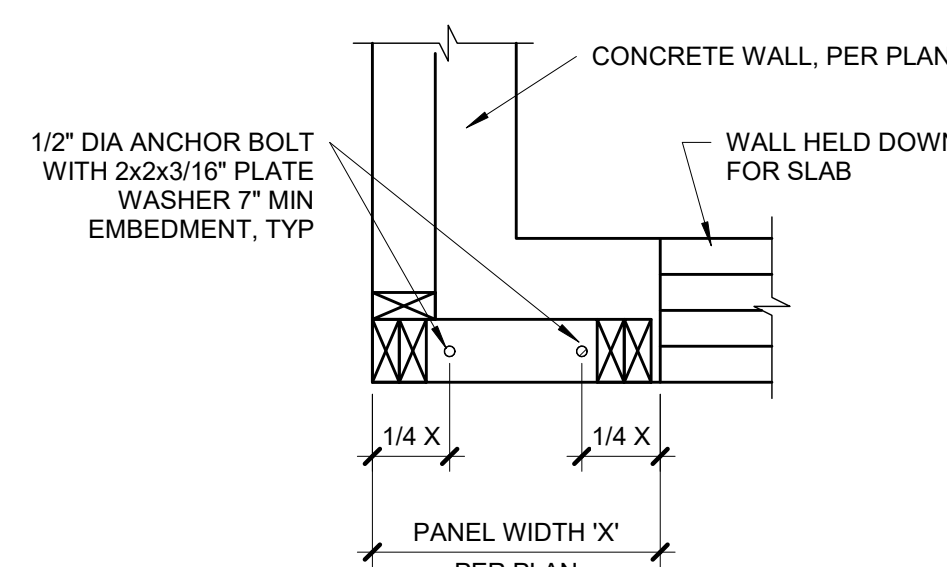
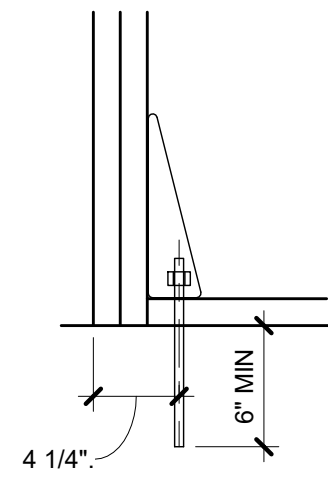
S3.2 3/4" = 1'-0"



PLAN VIEW - ALTERNATE BRACED WALL PANEL



PLAN VIEW - ALTERNATE BRACED WALL PANEL DRILL AND EPOXY OPTION



PLAN VIEW - APA NARROW WALL BRACING METHOD WITHOUT HOLD-DOWNS

PORTAL FRAME AT GARAGE DOOR WITHOUT HOLD DOWNS (METHOD PFG)

1
S4.0
ALT 3/4" = 1'-0" (ALT ALLOWED AT GARAGE DOOR ONLY) (PER IRC R602.10.6.3)

TABLE R602.10.5 (PARTIAL)						
METHOD	MINIMUM LENGTH OF BRACED WALL PANELS					
	MIN LENGTH (INCHES)					
	8 FEET	9 FEET	10 FEET	11 FEET	12 FEET	
SUPPORTING ROOF ONLY	16	16	16	16	16	
ONE STORY AND ROOF	24	24	24	24	24	
PFG	24	27	30	30	30	

NOTE: MAX HEADER HEIGHT IS 10'-0", BUT WALL HEIGHT SHALL BE PERMITTED TO BE INCREASED TO 12'-0" WITH PONY WALL.

TABLE R602.10.6.4				
TENSION CAPACITY STRAP TABLE				
MIN WALL STUD FRAMING NOMINAL SIZE AND GRADE	MAX PONY WALL HEIGHT (FEET)	MAX TOTAL WALL HEIGHT (FEET)	MAX OPENING WIDTH (FEET)	TENSION STRAP CAPACITY REQ (LBS)
2x4 #2 GRADE	0	10	18	1,000
			9	1,000
			16	1,025
			18	1,275
			9	1,000
	2	10	16	2,175
			18	2,500
			9	1,500
			16	3,375
			18	3,975
2x6 STUD GRADE	4	12	9	2,750
			16	3,775
			18	4,000
			9	1,000
			16	2,150
	2	12	18	2,550
			9	1,750
			16	2,400
			18	3,800
			18	3,800

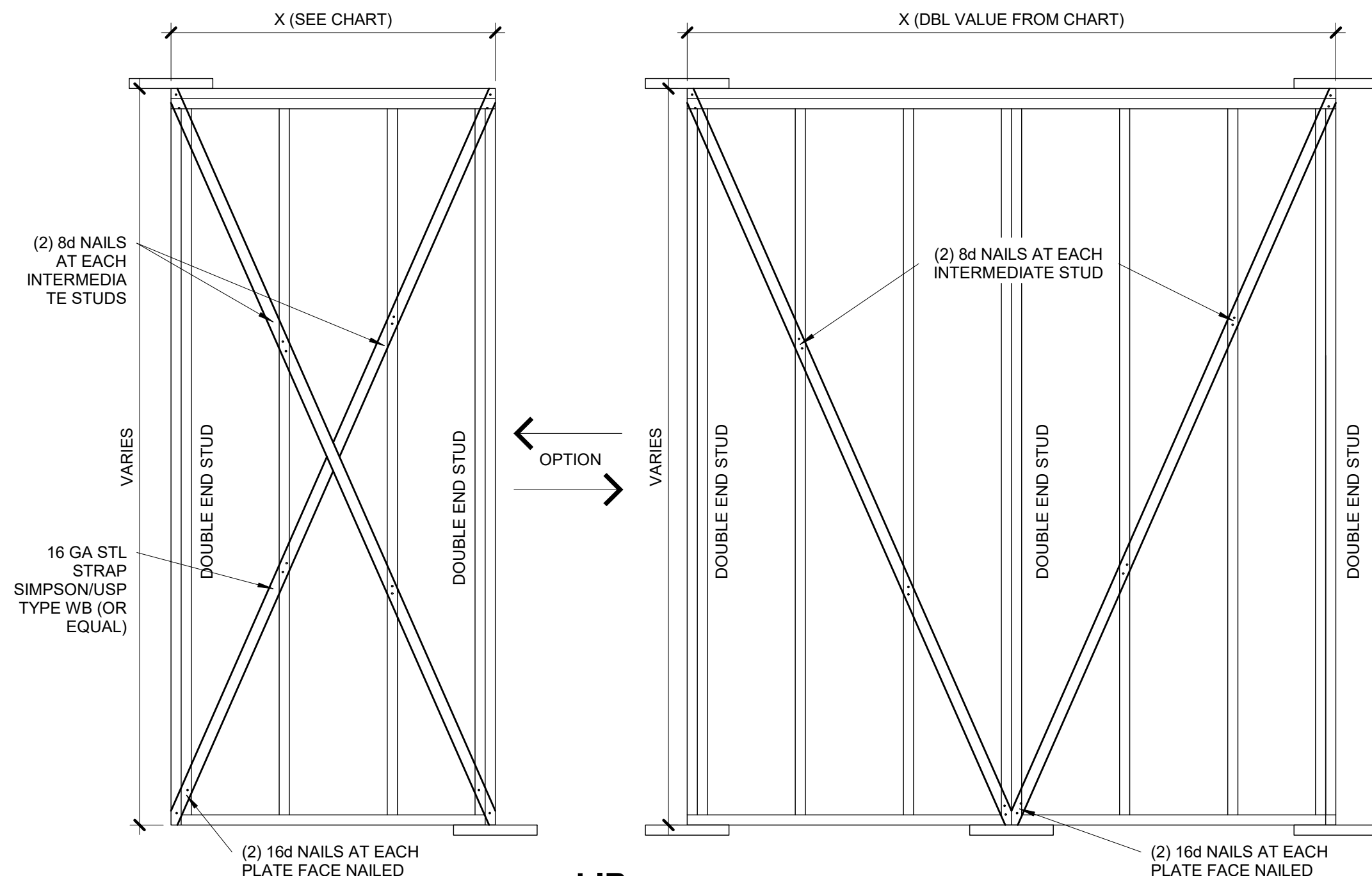
BRACED WALL METHODOLOGY
CONTINUOUS EXTERIOR SHEATHING (CS-WSP) PER WSP METHOD (BELOW) UNLESS OTHERWISE NOTED ON THE PLAN

XXXX EXTERIOR BRACED WALLS:
WSP METHOD:
WOOD STRUCTURAL PANEL SHEATHING WITH A THICKNESS NOT LESS THAN 3/8" WITH MINIMUM SPAN RATING OF 24/0 FOR 16" OC STUD SPACING WITH 6d COMMON NAILS AT 6" OC EDGES AND 12" OC FIELD OR SHEATHING THICKNESS NOT LESS THAN 7/16" WITH MINIMUM SPAN RATING OF 24/16 FOR 24" OC SPACING WITH 8d COMMON NAILS AT 6" OC EDGES AND 12" OC IN FIELD.
(NOTE: FRAMING MEMBERS 16" OC MAX UNBLOCKED, AND WITH SHEATHING APPLIED DIRECTLY TO FRAMING MEMBERS)

///// INTERIOR BRACED WALLS (REF 2/S4.0):
GB METHOD:
1/2" MIN GYPSUM BOARD OVER STUDS SPACED 24" MAX FASTENED WITH #6 - 1 1/4" TYPE "W" OR "S" DRYWALL SCREWS AT 7" OC EDGES AND FIELD (MIN. 4'-0" SECTION FOR BOTH SIDES).
OR
LIB METHOD:
1/4" WOOD FASTENED WITH (3) 8d COMMON NAILS OR SIMPSON / USP 16 GA TYPE WB (OR EQUAL) STL X-BRACE(S) AT 45° TO 60° ANGLES, MAXIMUM 16" OC STUD FASTENED PER MANUFACTURER'S SPECIFICATIONS.

BRACED WALL PANEL SCHEDULE			
WALL HEIGHT	MIN WALL LENGTH (X)	MAX WALL LENGTH (X)	
8'-0"	4'-7"	8'-0"	
9'-0"	5'-2"	9'-0"	
10'-0"	5'-9"	10'-0"	
11'-0"	NP	-	
12'-0"	NP	-	

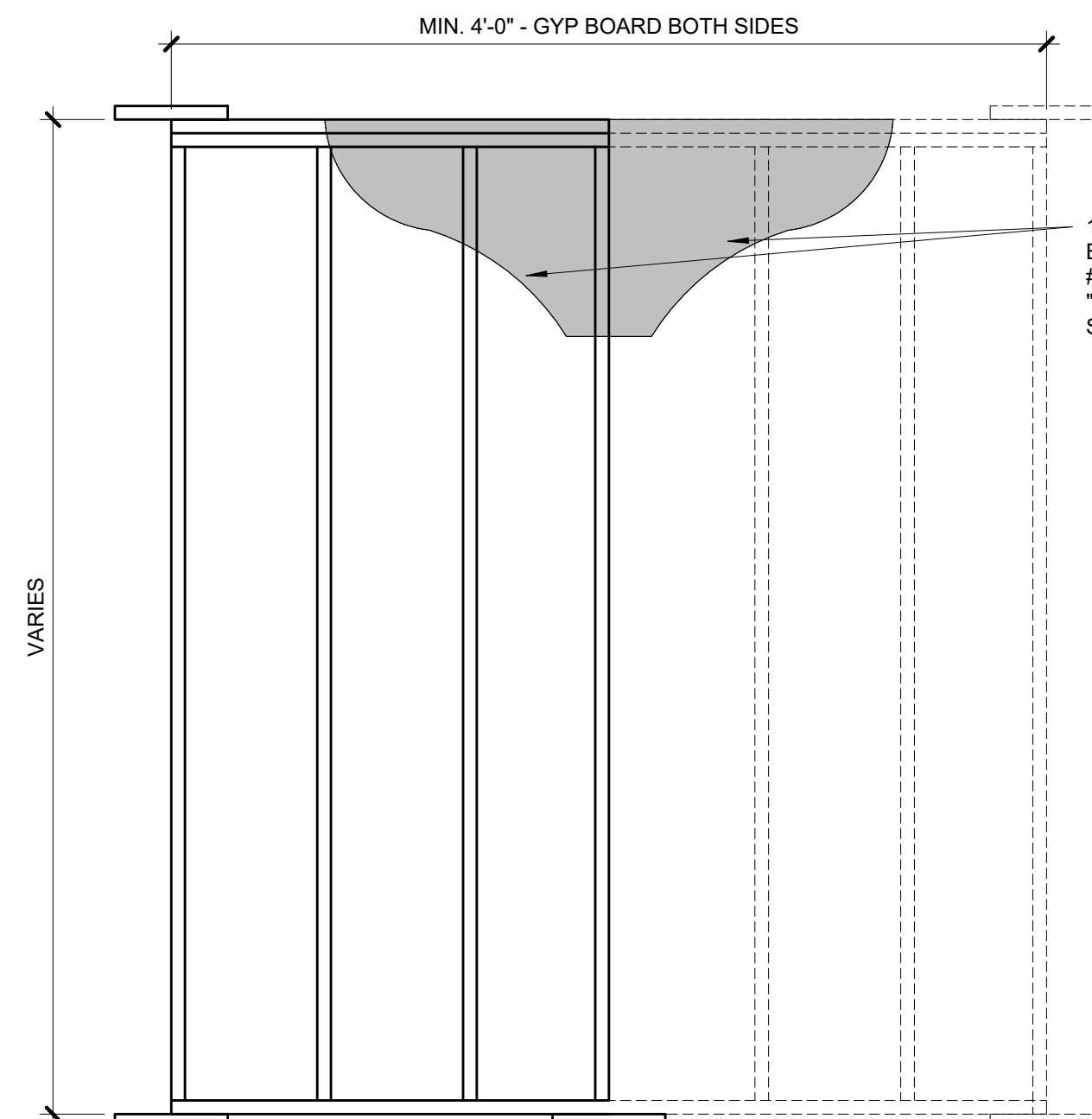
NOTE: BRACED WALL PANEL LENGTHS BASED ON WALL HEIGHT FOR IRC, LIB



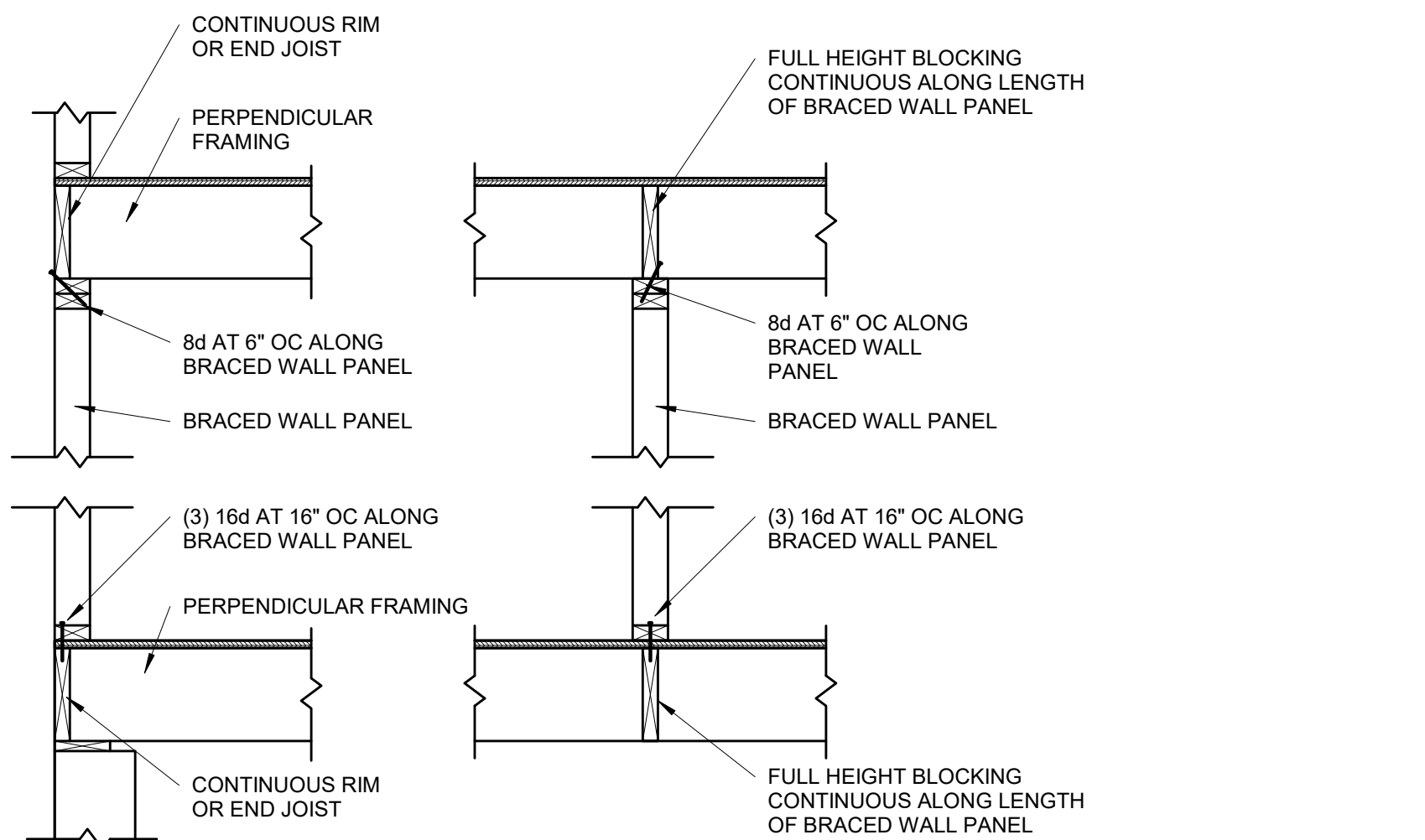
LIB

BRACED WALL PANEL-IRC
2 METHODS LIB AND GB

S4.0 3/4" = 1'-0"



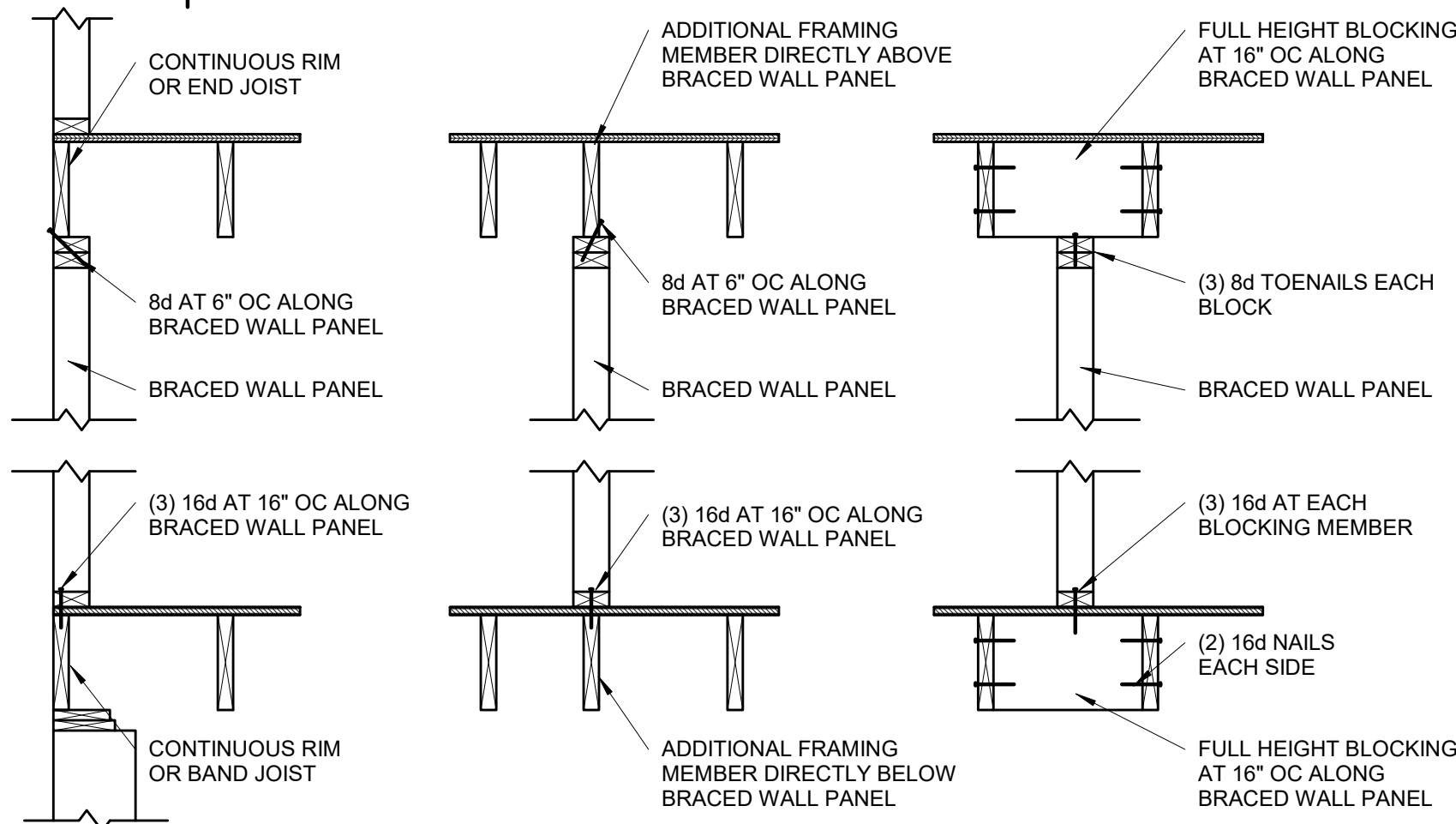
GB



**BRACED WALL PANEL
CONNECTION WHEN
PERPENDICULAR TO
FLOOR/CEILING FRAMING**

S4.1

3/4" = 1'-0"

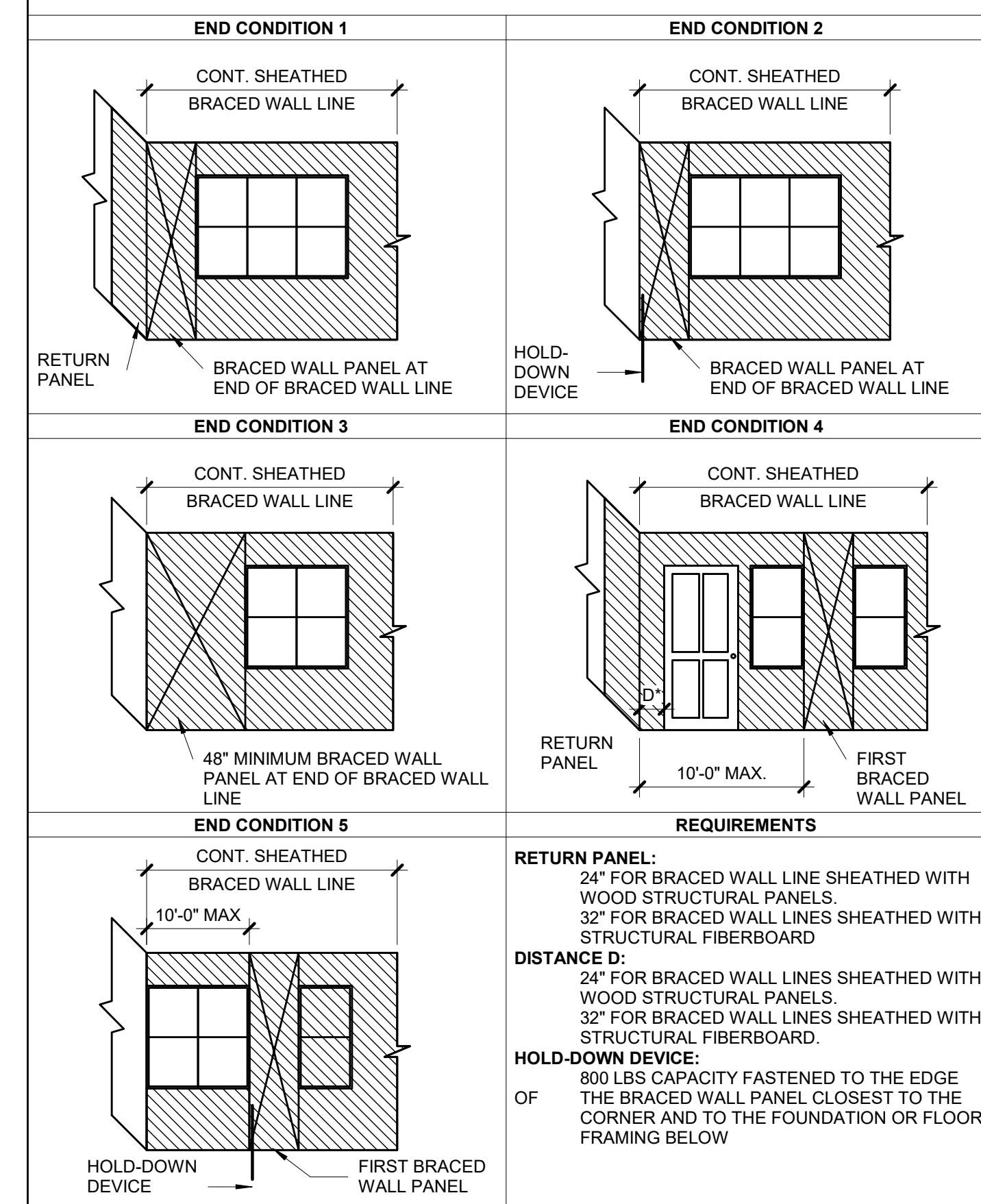


**BRACED WALL PANEL
CONNECTION WHEN PARALLEL
TO FLOOR/CEILING FRAMING**

S4.1

3/4" = 1'-0"

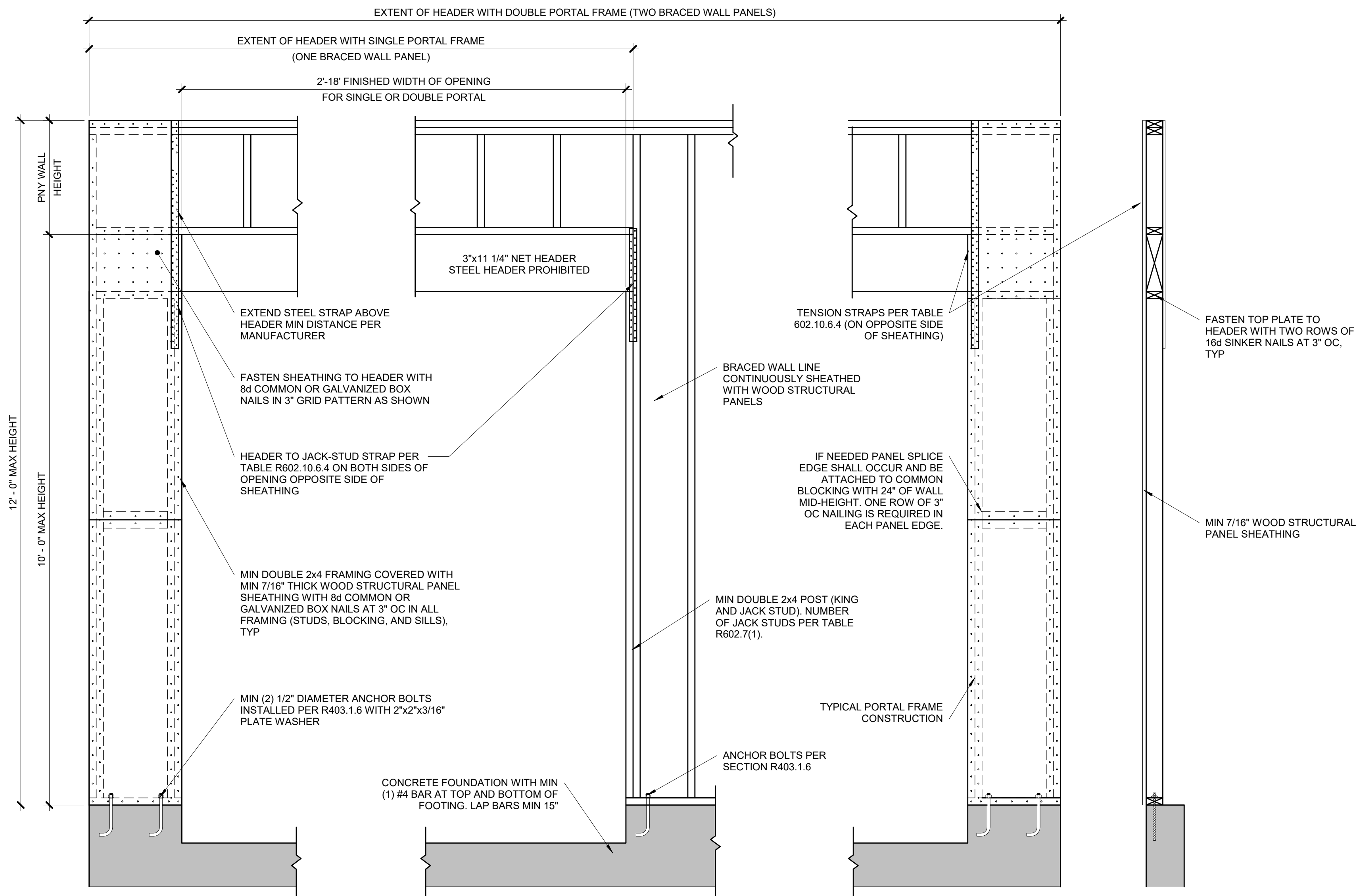
CONT. SHEATHED BRACED WALL END CONDITIONS



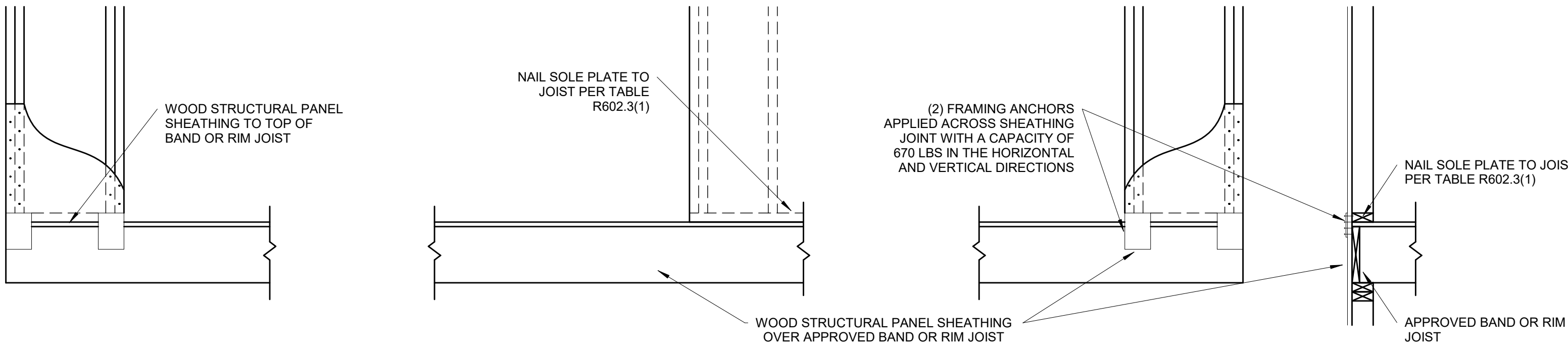
**CONTINUOUS SHEATHED BRACED
WALL END CONDITIONS**

S4.1

NOT TO SCALE (COMPLIANCE WITH IRC R602.10.7)

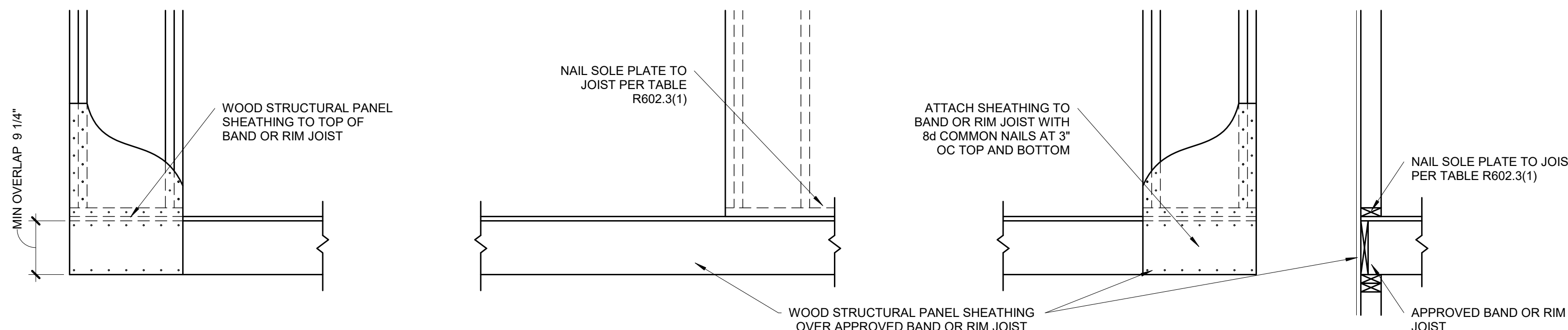


OVER CONCRETE OR MASONRY BLOCK FOUNDATION



OVER RAISE WOOD FLOOR - FRAMING ANCHOR OPTION

(WHEN PORTAL SHEATHING DOES NOT LAP OVER BAND OR RIM JOIST)



OVER RAISE WOOD FLOOR - OVERLAP OPTION

(WHEN PORTAL SHEATHING LAPS OVER BAND OR RIMBOARD)

**BRACED WALL PANEL-IRC
METHOD CS-PF CONTINUOUSLY
SHEATHED PORTAL FRAME
PANEL CONSTRUCTION**

S4.1

3/4" = 1'-0"

(PER IRC R602.10.6.4)