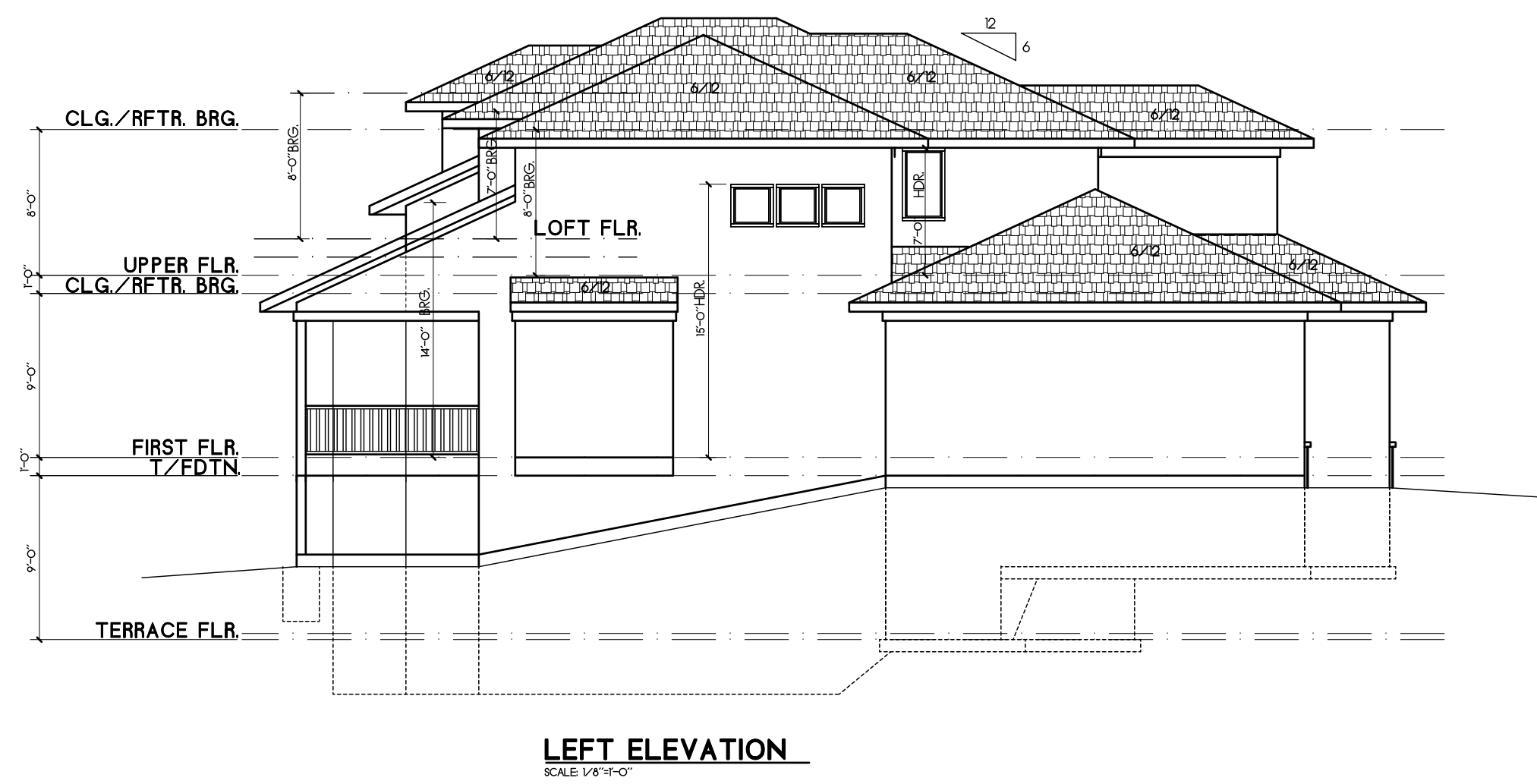
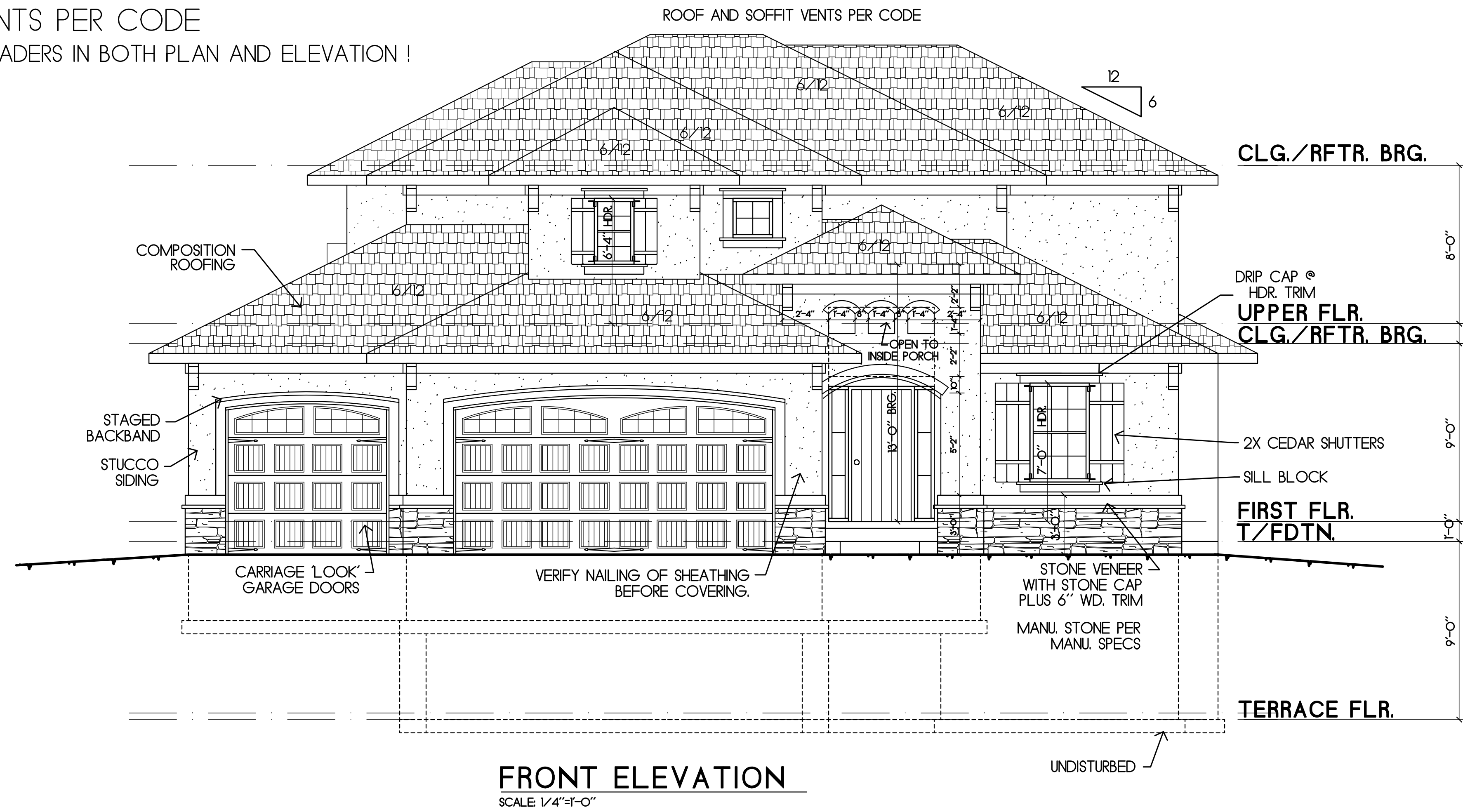
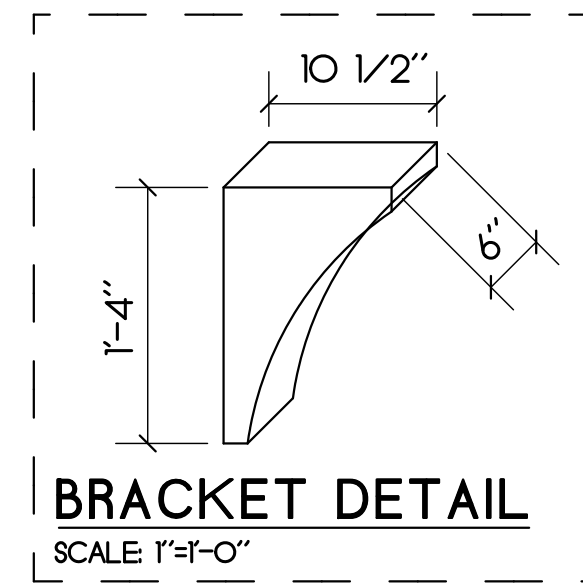


ROOF AND SOFFIT VENTS PER CODE
 VERIFY WALL BEARING HEIGHTS AND WINDOW HEADERS IN BOTH PLAN AND ELEVATION !



RELEASE FOR CONSTRUCTION
 AS NOTED FOR PLAN REVIEW
 DEVELOPMENT SERVICES
 LEE'S SUMMIT, MISSOURI
 11/09/2021

SQUARE FOOTAGE SUMMARY:

MAIN FLOOR FINISH	1608 SF
UPPER FLOOR FINISH	1158 SF
LOWER FINISH AREA	0 SF
LOWER FLOOR SLAB	1536 SF
GARAGE AREA	720 SF
GARAGE SLAB	660 SF
FRONT PORCH	28 SF
REAR DECK	92 SF

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 EXPANDED STRATOGA
 2613 SW HOOK FARM LANE, LEE'S SUMMIT, MO

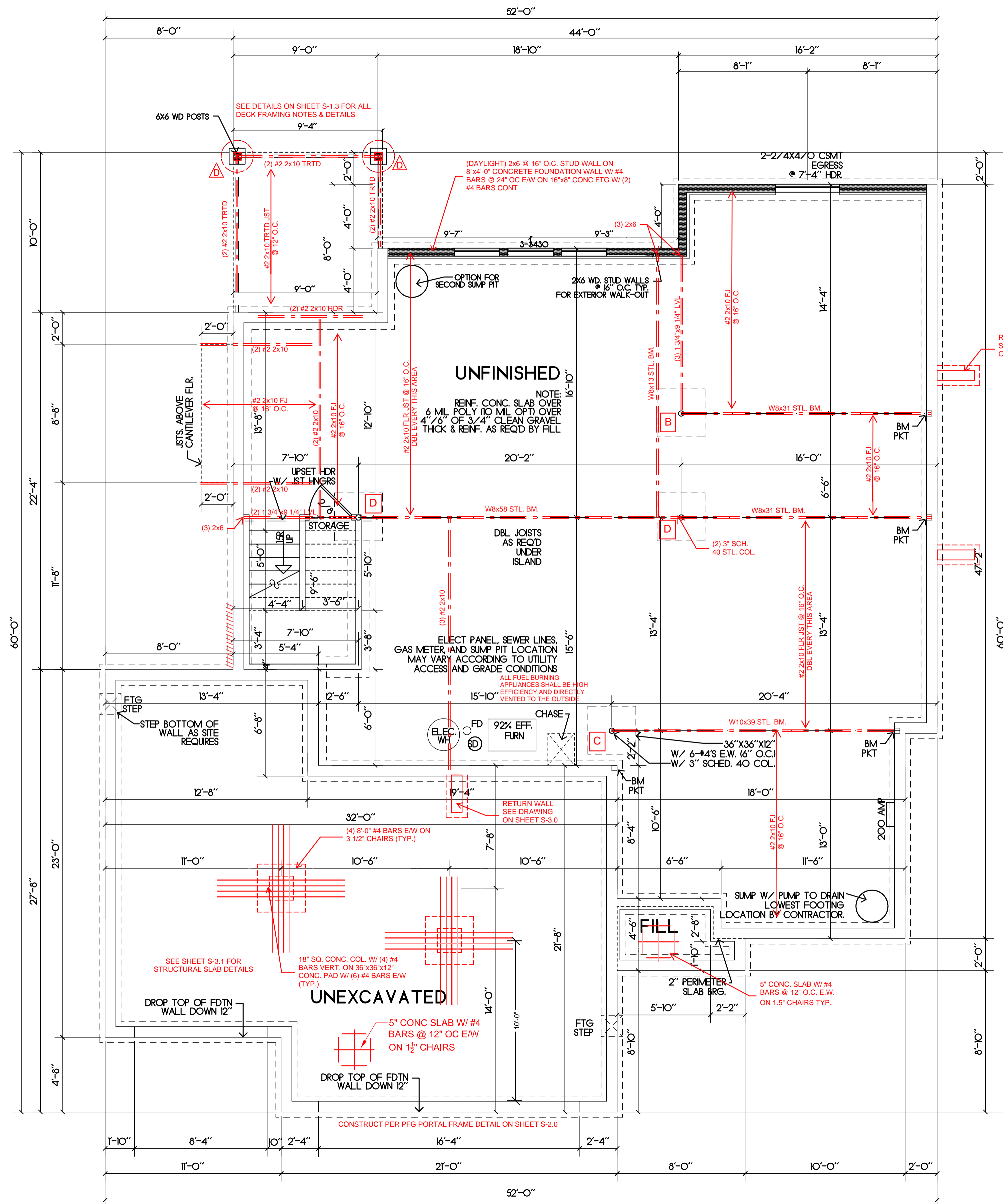
STRUCTURAL DETAILS & NOTES

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S-0.1



LOWER FLOOR PLAN

SCALE 1/4"=1'-0"

NO FINISH AREA= O SF
POST & BEAM STRUCTURE

ADAPT FDTN WALL HTS FOR SITE TOPO
VERIFY WALL BEARING HEIGHTS AND WINDOW HEADERS IN BOTH PLAN AND ELEVATION !

DECK PIER SCHEDULE

- ▲ MIN. 6X6 TRTD/CDR POST ON 12" CONC PIER WITH USP PAU 66 BASE OR = (117# MAX)
- ▲ MIN. 6X6 TRTD/CDR POST ON 16" CONC PIER WITH USP PAU 66 BASE OR = (205# MAX)
- ▲ MIN. 6X6 TRTD/CDR POST ON 18" CONC PIER WITH USP PAU 66 BASE OR = (264# MAX)
- ▲ MIN. 6X6 TRTD/CDR POST ON 24" CONC PIER WITH USP PAU 66 BASE OR = (471# MAX)

COLUMN PAD SCHEDULE

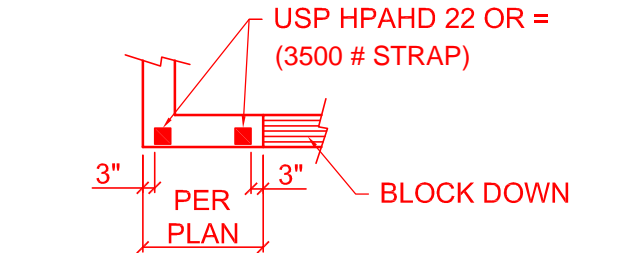
- A 3" SCH. 40 STL. COL. ON 30"x30"x12" CONC. PAD W/ (5) #4 BARS E.W. (9.4K MAX.)
- B 3" SCH. 40 STL. COL. ON 36"x36"x12" CONC. PAD W/ (6) #4 BARS E.W. (13.5K MAX.)
- C 3 1/2" SCH. 40 STL. COL. ON 42"x42"x14" CONC. PAD W/ (7) #4 BARS E.W. (18.4K MAX.)
- D 3 1/2" SCH. 40 STL. COL. ON 48"x48"x16" CONC. PAD W/ (8) #4 BARS E.W. (24K MAX.)
- E 3 1/2" SCH. 40 STL. COL. ON 54"x54"x18" CONC. PAD W/ (9) #4 BARS E.W. (30.4K MAX.)
- F 3 1/2" SCH. 40 STL. COL. ON 60"x60"x18" CONC. PAD W/ (10) #4 BARS E.W. (37.5K MAX.)

NOTES:
1. COLUMN AND PIER PAD SIZES SHOWN ARE FOR MAX. COLUMN HEIGHT OF 10'-0" TALL.
2. COLUMN AND PIER PAD SIZES SHOWN ARE BASED ON AN ASSUMED 1500 PSF. THIS IS THE CAPACITY REQUIRED BY A.H.J. UNDERLINED GENERAL NOTES ON S-1.0 FOR MORE DETAILS.
3. ALL STEEL COLUMNS SHALL BE ISOLATED FROM SLABS WITH APPROVED ISOLATION DEVICE OR JOINT.

GENERAL NOTES:

- WINDOW SHALL HAVE FALL PROTECTION PER IRC 312.2.4
- HOUSE WILL BE PROVIDED WITH A "UFER" GROUND PER IRC SECTION 3605.1.5
- OVERHEAD GARAGE DOORS MUST MEET DASHA REQUIREMENTS SEE DETAIL SHEET S-1.0
- ALL HEADERS NOT LABELED SHALL BE MIN (2) #2-2X10 DFL
- DBL ALL JST UNDER ISLAND
- SOILS IN THIS AREA COMMONLY HAVE A VERY HIGH SHRINK SWELL CAPACITY. OUR FIRM RECOMMENDS ALL SITES BE EVALUATED BY A GEOTECHNICAL FIRM PRIOR TO PLACEMENT OF FOUNDATIONS
- PROVIDE CARBON MONOXIDE AND SMOKE DETECTORS PER IRC REQUIREMENTS
- ANY PORTION OF THESE PRINTS ISSUED WITHOUT A MIN. OF S-1.0 - S-4.0 SHALL NOT BE CONSIDERED A COMPLETE SET OF CONSTRUCTION DOCUMENTS
- ICE AND WATER SHIELD AS REQUIRED PER IRC

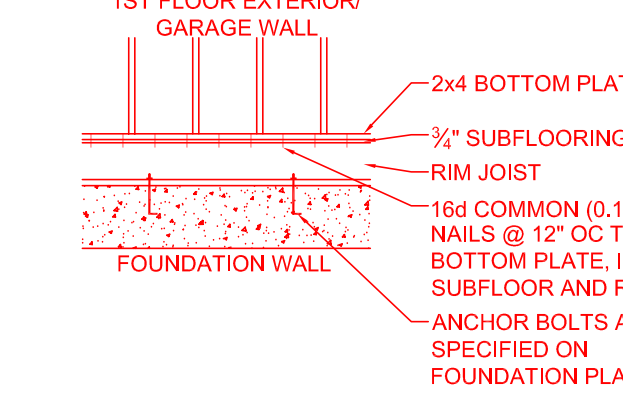
TYPICAL TIE DOWN AT NARROW WALL



BRACED WALLS:

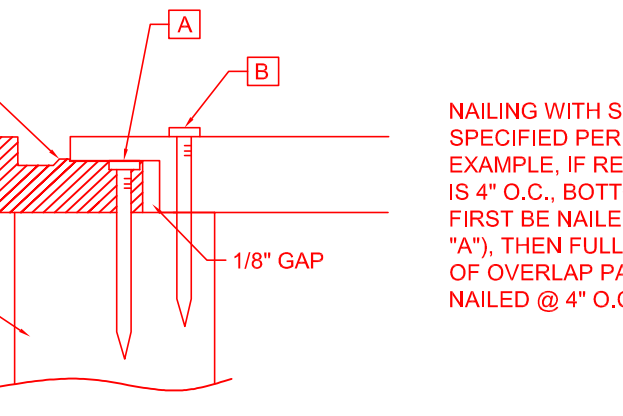
- SEE CALCULATIONS ON SHEET S-2.0, PER ASCET-10 REQUIREMENTS AS ALLOWED BY IRC 2018 R301.2.1
- ALL EXTERIOR WALLS SHALL BE SHEATHED PER ANY ONE OF THE FOLLOWING OPTIONS:
-7/16" APA-RATED PLYWOOD/OSB WITH 8d NAILS @ 6" O.C. AT EDGES AND @ 12" O.C. IN THE FIELD
-7/16" SHIPLAP PANEL SHEATHING (I.E. LP SMARTSIDE OR EQUIVALENT) WITH 8d NAILS @ 6" O.C. AT EDGES AND @ 12" O.C. IN THE FIELD
-3/8" SHIPLAP PANEL SHEATHING (I.E. LP SMARTSIDE OR EQUIVALENT) WITH 6d NAILS @ 4" O.C. AT EDGES AND @ 12" O.C. IN THE FIELD
- INTERIOR BRACED WALL LOCATIONS ONLY SHOWN WHEN REQUIRED BY ADDITIONAL BRACING SECTION CALCULATIONS ON SHEET S-2.0

1ST FLOOR EXTERIOR GARAGE WALL



FOUNDATION ANCHORING NOTES

- MIN. 1/2" ANCHOR BOLTS SHALL BE INSTALLED @ 36" O.C. MAX AND WITHIN 6"-12" FROM THE END OF EACH SECTION OF SILL PLATE ALONG ENTIRE PERIMETER OF FOUNDATION



3/8" APA REQUIRED NAILING PATTERN FOR SHIPLAP PANEL SHEATHING

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11666 W. 75TH STREET
SHAWNEE, KS 66214
WWW.HDENGINEERS.COM
913.631.2222
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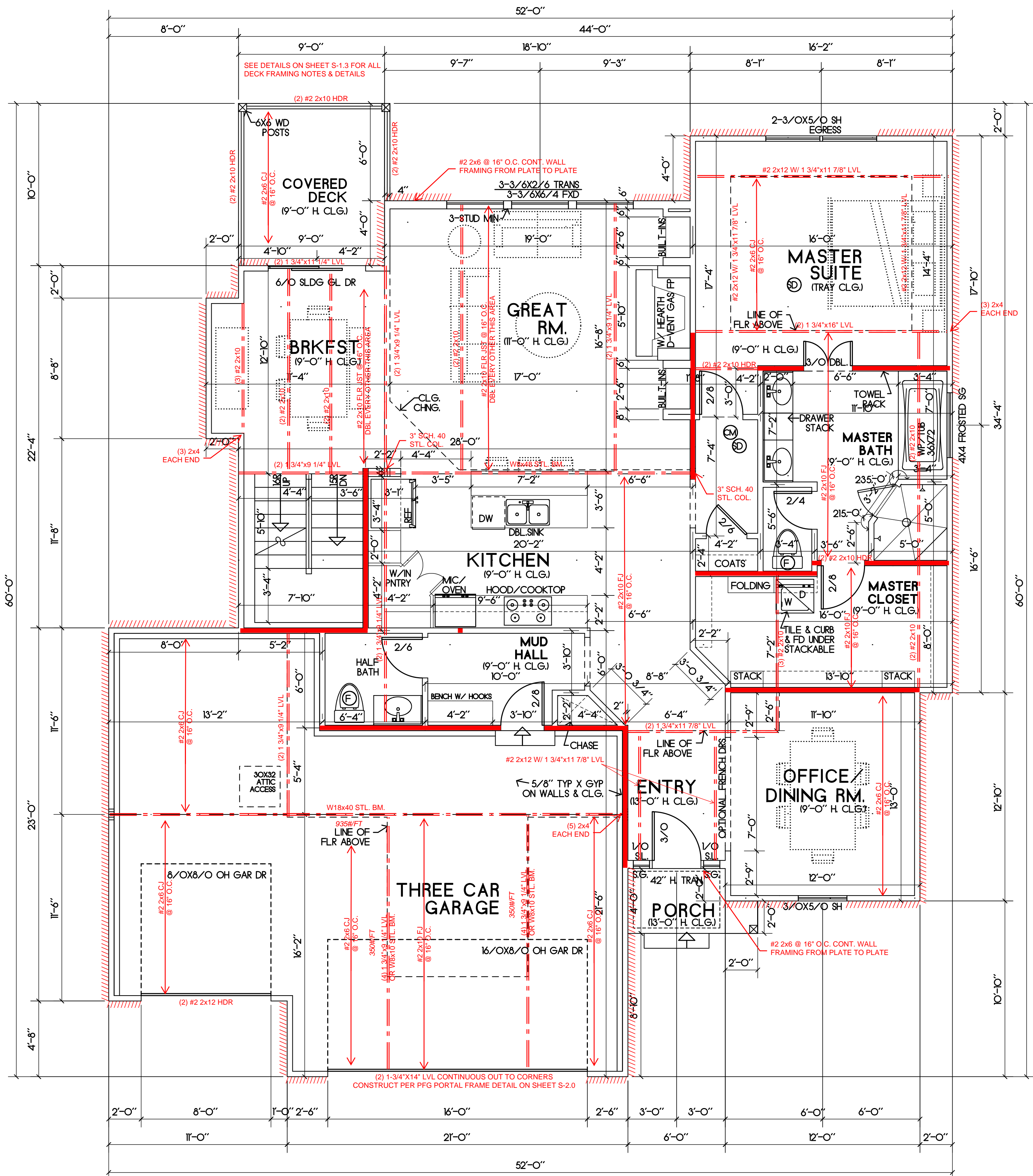
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2613 SW HOOK FARM LANE. LEE'S SUMMIT, MO

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S-0.2



MAIN FLOOR PLAN
SCALE 1/4"=1'-0" AREA= 1,608 SF

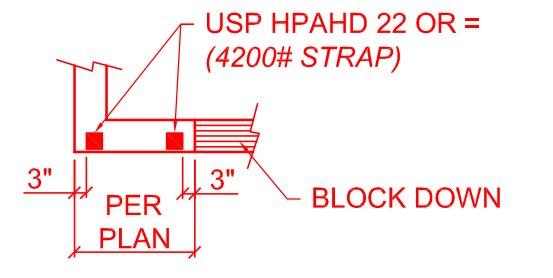
NOTE: 2X6 STUDS AT ANY WALL TALLER THAN 12' TALL

VERIFY WALL BEARING HEIGHTS AND WINDOW HEADERS IN BOTH PLAN AND ELEVATION!

- LOAD BEARING WALL
- LOAD BEARING BEAM
- SMOKE DETECTOR
- CARBON MONOXIDE SENSOR

GENERAL NOTES:
 - WINDOW SHALL HAVE FALL PROTECTION PER IRC 312.2.4
 - HOUSE WILL BE PROVIDED WITH A "UFER" GROUND PER IRC SECTION 3608.1.5
 - OVERHEAD GARAGE DOORS MUST MEET DASMA REQUIREMENTS SEE DETAIL SHEET S-1.0
 - ALL HEADERS NOT LABELED SHALL BE MIN (2) #2-2X10 DFL
 - DBL ALL LIST UNDER ISLAND
 - SOILS IN THIS AREA COMMONLY HAVE A VERY HIGH SHRINK SWELL CAPACITY. OUR FIRM RECOMMENDS ALL SITES BE EVALUATED BY A GEOTECHNICAL FIRM PRIOR TO PLACEMENT OF FOUNDATIONS
 - PROVIDE CARBON MONOXIDE AND SMOKE DETECTORS PER IRC REQUIREMENTS
 - ANY PORTION OF THESE PRINTS ISSUED WITHOUT A MIN. OF S-1.0 - S-4.0 SHALL NOT BE CONSIDERED A COMPLETE SET OF CONSTRUCTION DOCUMENTS
 - ICE AND WATER SHIELD AS REQUIRED PER IRC

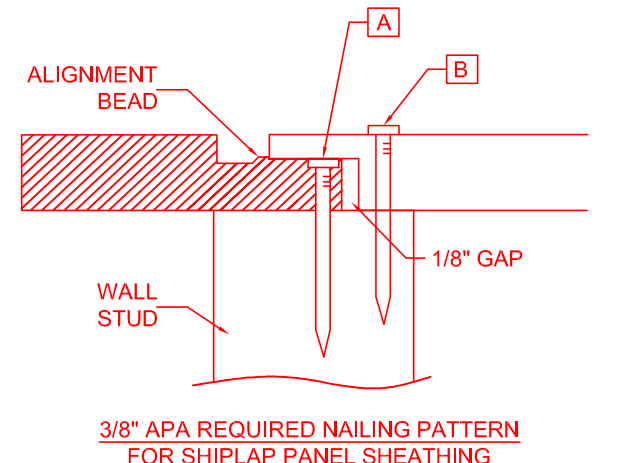
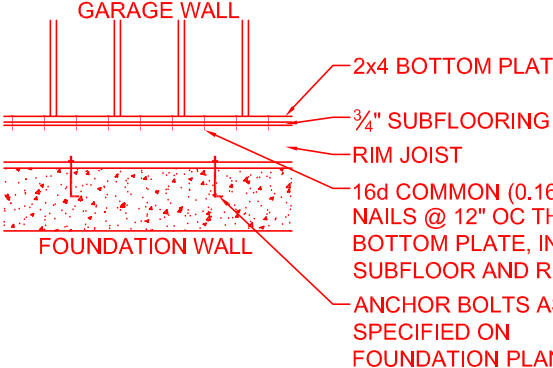
TYPICAL TIE DOWN AT NARROW WALL



BRACED WALLS:

SEE CALCULATIONS ON SHEET S-2.0, PER ASC7-10 REQUIREMENTS AS ALLOWED BY IRC 2018 R301.2.1
 ALL EXTERIOR WALLS SHALL BE SHEATHED PER ANY ONE OF THE FOLLOWING OPTIONS:
 - 7/16" APA-RATED PLYWOOD/OSB WITH 8d NAILS @ 6" O.C. AT EDGES AND @ 12" O.C. IN THE FIELD
 - 7/16" SHIPLAP PANEL SHEATHING (I.E. LP SMARTSIDE OR EQUIVALENT) WITH 8d NAILS @ 6" O.C. AT EDGES AND @ 12" O.C. IN THE FIELD
 - 3/8" SHIPLAP PANEL SHEATHING (I.E. LP SMARTSIDE OR EQUIVALENT) WITH 8d NAILS @ 4" O.C. AT EDGES AND @ 12" O.C. IN THE FIELD

INTERIOR BRACED WALL LOCATIONS ONLY SHOWN



NAILING WITH SPACING AS SPECIFIED PER PLAN. FOR EXAMPLE, IF REQUIRED SPACING IS 4" O.C., BOTTOM LAP SHALL FIRST BE NAILED AT 4" O.C. (NAIL "A"), THEN FULL DEPTH SECTION OF OVERLAP PANEL SHALL BE NAILED @ 4" O.C. (NAIL "B")



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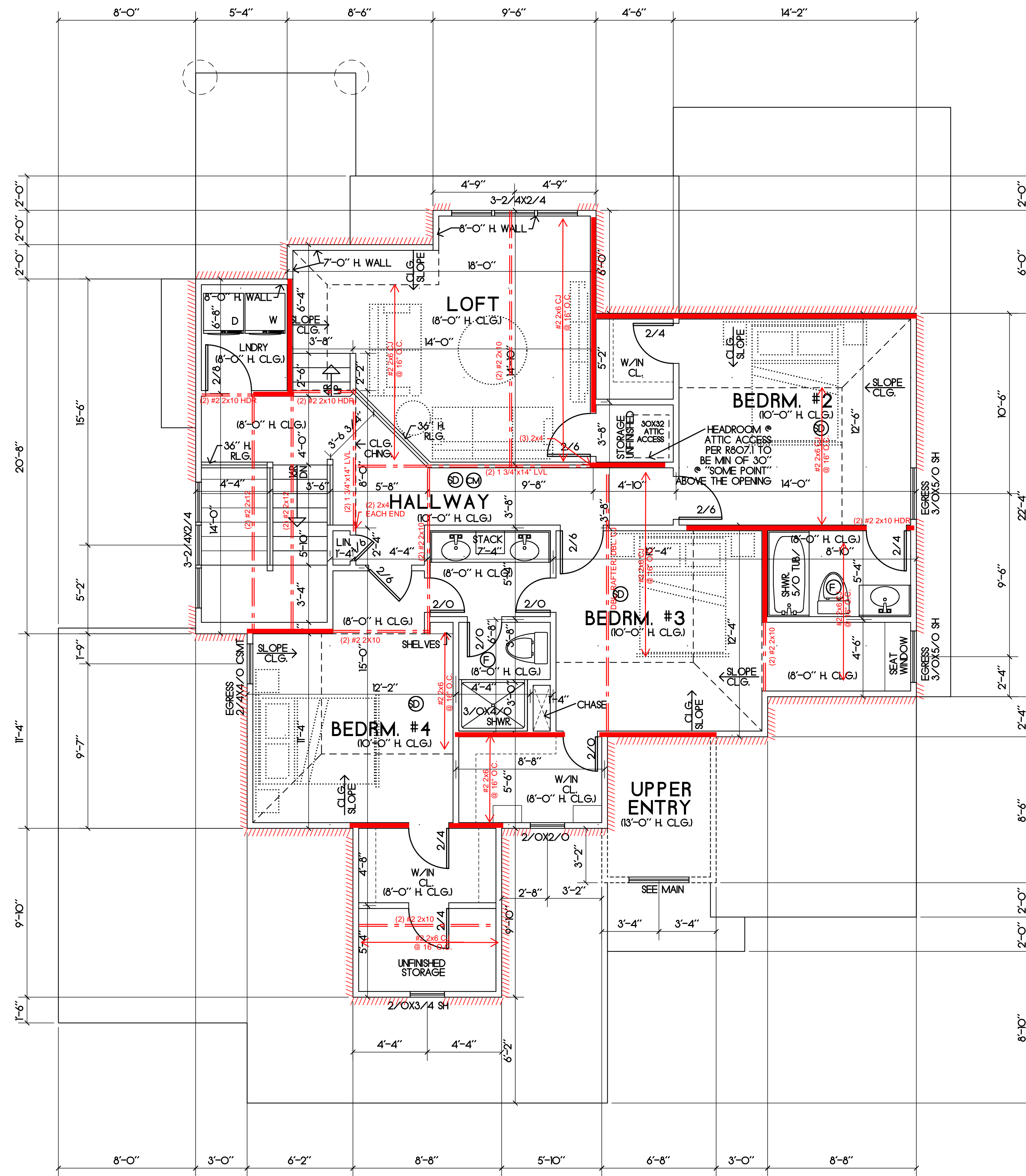
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PLANS DRAWN BY OTHERS

S-0.3



UPPER FLOOR PLAN
SCALE 1/4"=1'-0"
AREA= 1,158 SF

VERIFY WALL BEARING HEIGHTS AND WINDOW HEADERS IN BOTH PLAN AND ELEVATION !

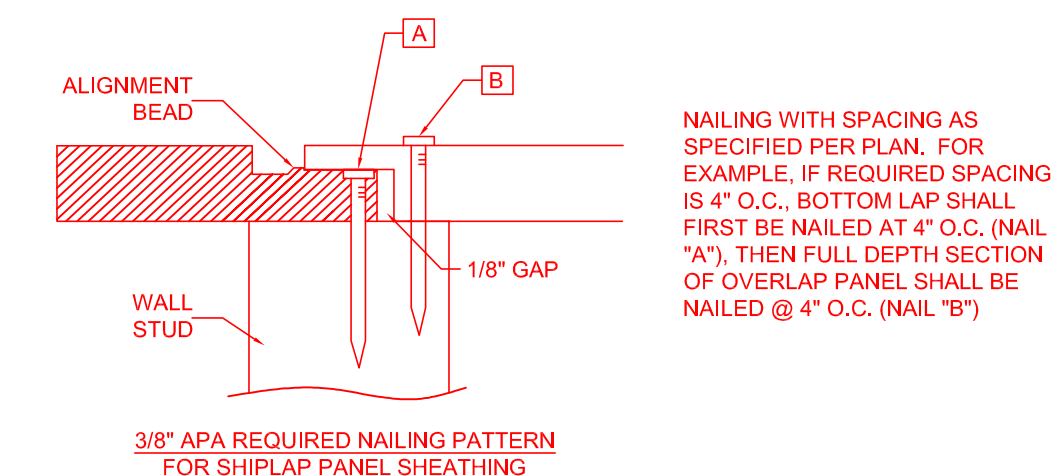
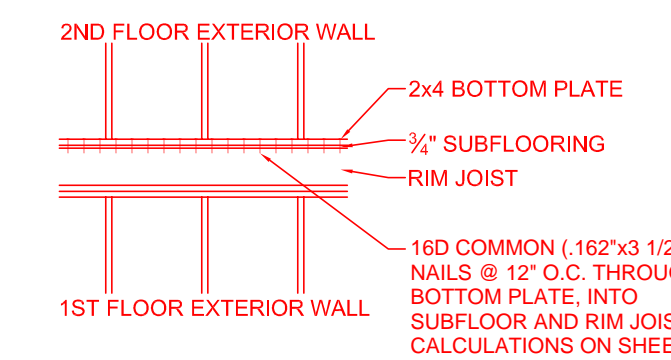
- - LOAD BEARING WALL
- - - - - - LOAD BEARING BEAM
- SD - SMOKE DETECTOR
- CO - CARBON MONOXIDE SENSOR

GENERAL NOTES:
 -WINDOW SHALL HAVE FALL PROTECTION PER IRC 312.2.4
 -HOUSE WILL BE PROVIDED WITH A "UFER" GROUND PER IRC SECTION 3608.1.5
 -OVERHEAD GARAGE DOORS MUST MEET DASHA REQUIREMENTS SEE DETAIL SHEET S-1.0
 -ALL HEADERS NOT LABELED SHALL BE MIN (2) #2-2X10 DFL
 -DBL ALL JST UNDER ISLAND
 -SOILS IN THIS AREA COMMONLY HAVE A VERY HIGH SHRINK SWELL CAPACITY, OUR FIRM RECOMMENDS ALL SITES BE EVALUATED BY A GEOTECHNICAL FIRM PRIOR TO PLACEMENT OF FOUNDATIONS
 -PROVIDE CARBON MONOXIDE AND SMOKE DETECTORS PER IRC REQUIREMENTS
 -ANY PORTION OF THESE PRINTS ISSUED WITHOUT A MIN. OF S-1.0 - S-4.0 SHALL NOT BE CONSIDERED A COMPLETE SET OF CONSTRUCTION DOCUMENTS
 -INSTALL W8X15 STEEL BEAM MIN. UNDER ALL F.P. WALLS/HEARTHES (THAT WILL RECEIVE ROCKY) UNLESS NOTED AS A LARGER BEAM. ANY STONE OVER 2" DEEP, NOTIFY ENG. TO VERIFY LOADS
 -FOUNDATION SHALL BE CONSTRUCTED PER JOHNSON COUNTY RESIDENTIAL FOUNDATION GUIDELINE. SEE ATTACHED
 -ICE AND WATER SHIELD AS REQUIRED PER IRC

BRACED WALLS:
 SEE CALCULATIONS ON SHEET S-2.0. PER ASC7-10 REQUIREMENTS AS ALLOWED BY IRC 2018 R301.2.1

ALL EXTERIOR WALLS SHALL BE SHEATHED PER ANY ONE OF THE FOLLOWING OPTIONS:
 -7/16" APA-RATED PLYWOOD/OSB WITH 8d NAILS @ 6" O.C. AT EDGES AND @ 12" O.C. IN THE FIELD
 -7/16" SHIPLAP PANEL SHEATHING (I.E. LP SMARTSIDE OR EQUIVALENT) WITH 8d NAILS @ 6" O.C. AT EDGES AND @ 12" O.C. IN THE FIELD
 -3/8" SHIPLAP PANEL SHEATHING (I.E. LP SMARTSIDE OR EQUIVALENT) WITH 8d NAILS @ 4" O.C. AT EDGES AND @ 12" O.C. IN THE FIELD

INTERIOR BRACED WALL LOCATIONS ONLY SHOWN WHEN REQUIRED BY ADDITIONAL BRACING SECTION OF CALCULATIONS ON SHEET S-2.0



SECOND FLOOR PLAN NOTES



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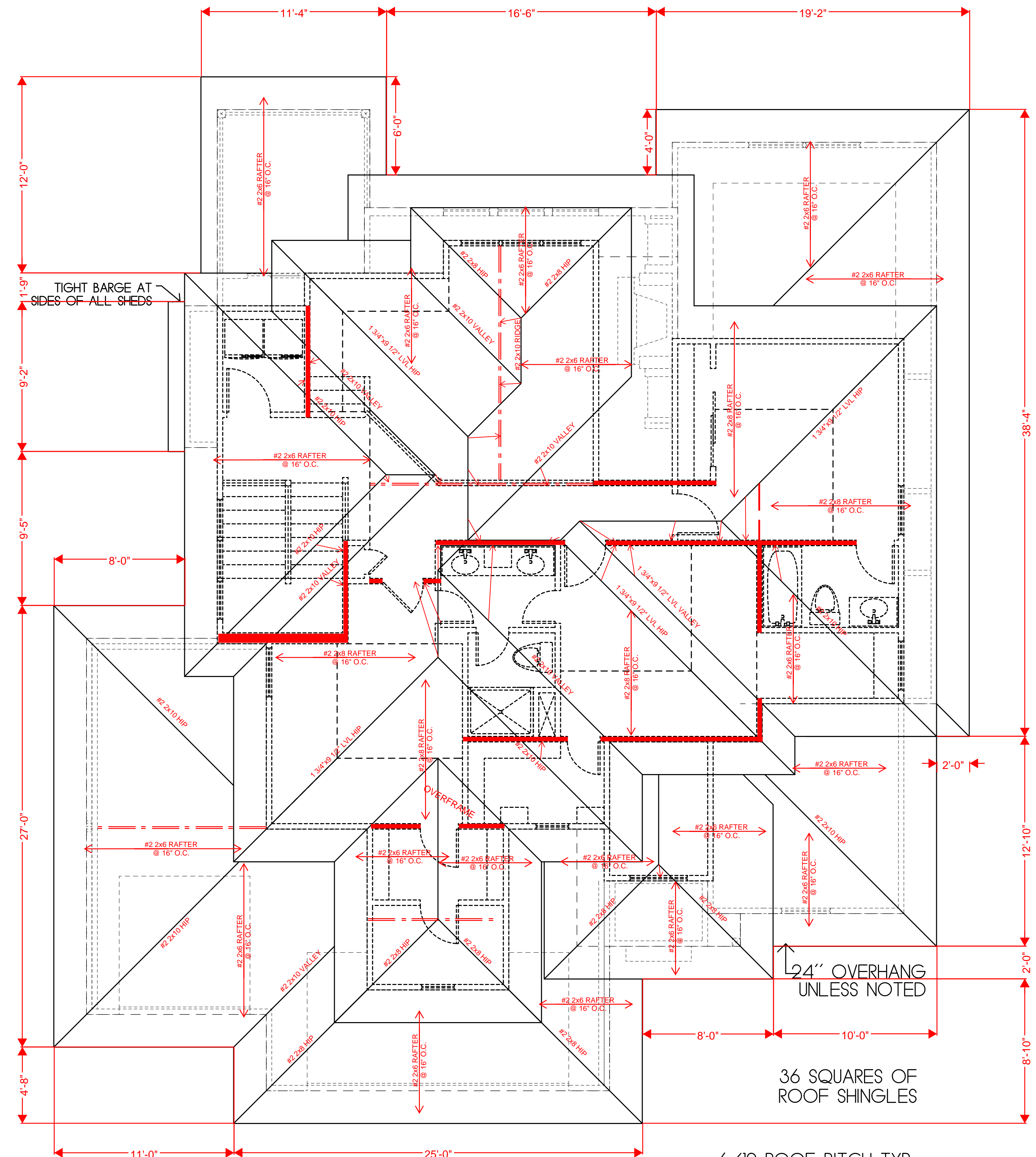
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ROOF FRAMING PLAN
SCALE 1/4"=1'-0"

NOTES

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

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

CODE MINIMUM

RAFTERS	SPACING	MAX HORIZONTAL CLEARSPAN
#2-2x6	@24" O.C.	11'-11"
#2-2x6	@16" O.C.	14'-1"
#2-2x8	@24" O.C.	15'-1"
#2-2x8	@16" O.C.	18'-5"
#2-2x10	@24" O.C.	18'-5"
#2-2x10	@16" O.C.	22'-6"

NOTE: CODE MINIMUM L/240 DEFLECTION

GREATER THAN CODE

RAFTERS	SPACING	MAX HORIZONTAL CLEARSPAN
#2-2x6	@24" O.C.	8'-6"
#2-2x6	@16" O.C.	9'-8"
#2-2x8	@24" O.C.	11'-3"
#2-2x8	@16" O.C.	12'-9"
#2-2x10	@24" O.C.	14'-3"
#2-2x10	@16" O.C.	16'-3"

DEFLECTION = L/360 LIVE LOAD, L/240 TOTAL LOAD
VAULTS TO BE 2x10 DEPTH

ALL RIDGES, HIPs, AND VALLEYS NOT MARKED SHALL BE (1)
NOMINAL SIZE LARGER THAN THE INTERSECTING RAFTERS

PURLINS ARE 2x6 MIN.
PURLIN STRUTS ARE AT 4'-0" O.C.
PURLIN STRUTS SHALL BE INSTALLED AT NOT LESS
THAN A 45 DEGREE ANGLE WITH THE HORIZONTAL
ALL PURLIN STRUTS SHALL HAVE A MAXIMUM UNBRACED
LENGTH OF 8'-0"
PURLIN STRUTS SHALL BE CONSTRUCTED IN A "T"
CONFIGURATION AND PER THE FOLLOWING CHART

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

SEE DETAILS 1, 5, 6, 7, 11, 12, 13, & 14 ON S-1.2
FOR ROOF FRAMING AND INSULATION OPTIONS

- PURLIN
- LOAD BEARING WALL
- LOAD BEARING BEAM/ GIRDER PER PLAN

24" OVERHANG
UNLESS NOTED

36 SQUARES OF
ROOF SHINGLES

6/12 ROOF PITCH TYP.
UNLESS NOTED



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EXPANDED STRATOGA
2613 SW HOOK FARM LANE, LEE'S SUMMIT, MO

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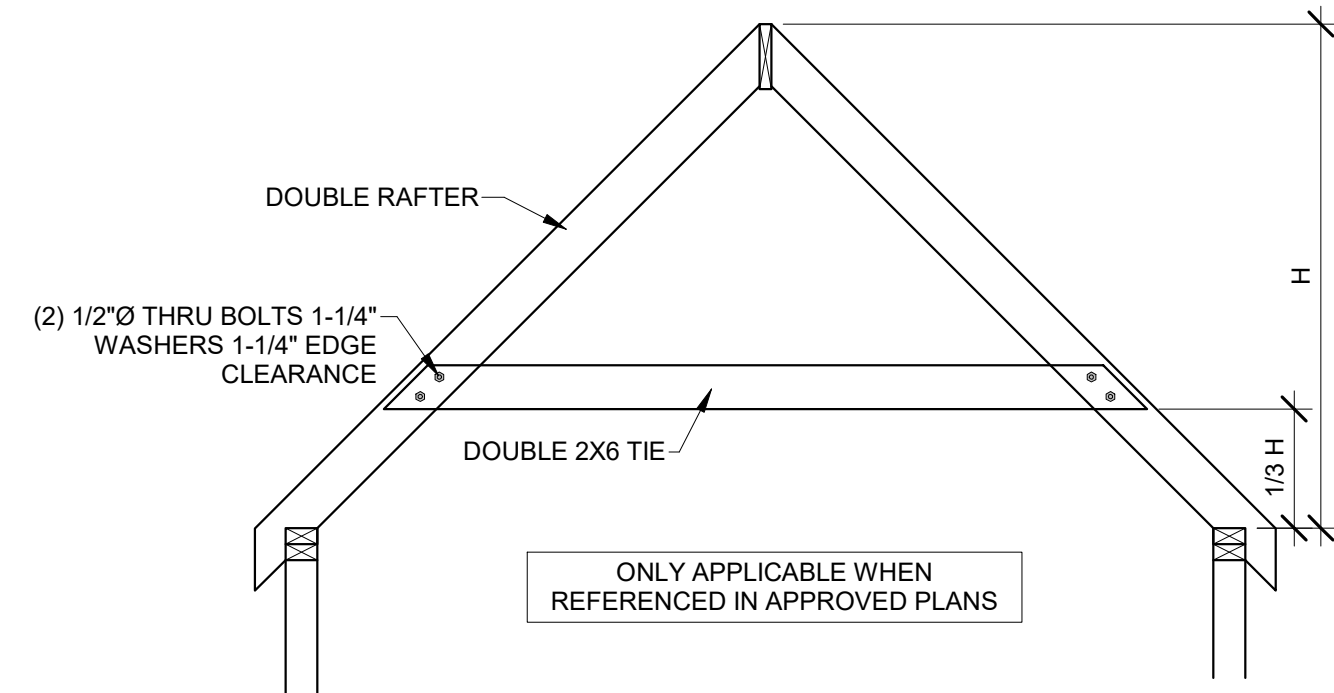
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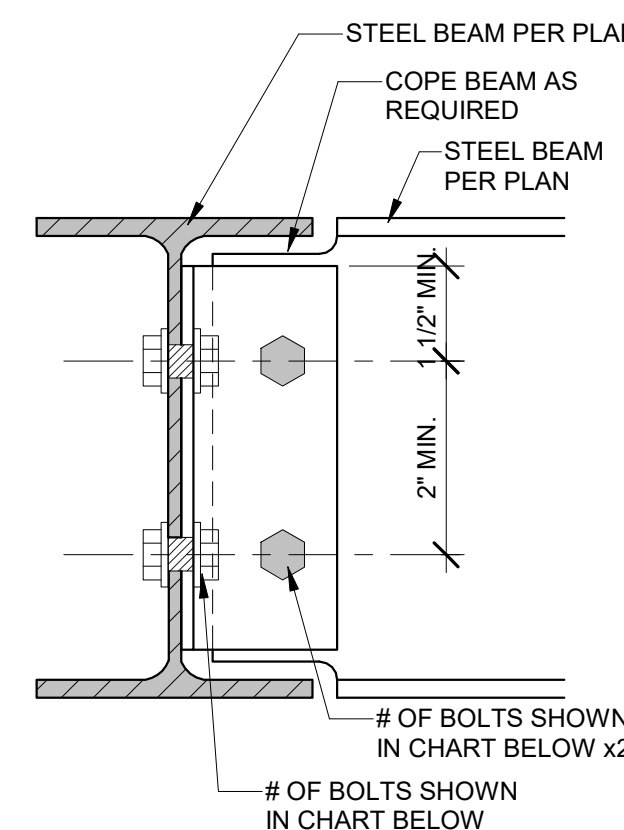
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S-0.5



11 HIP SUPPORT FRAME
3/8" = 1'-0"

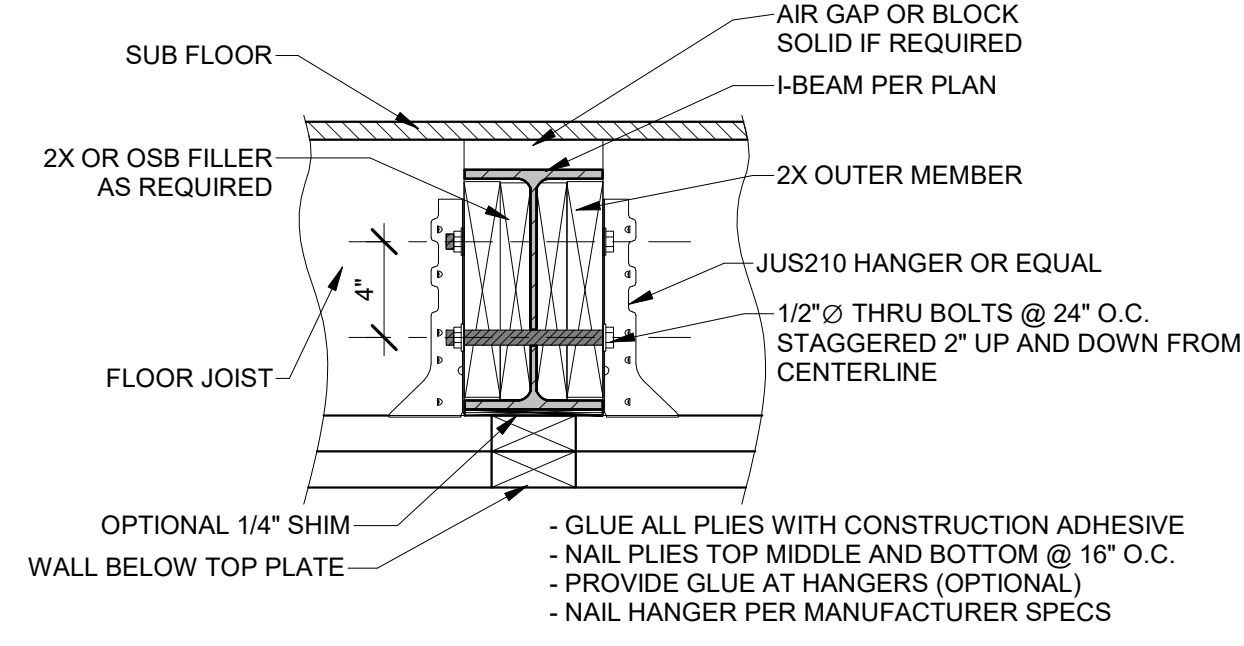


10 BEAM TO GIRDER CONNECTION
3" = 1'-0"

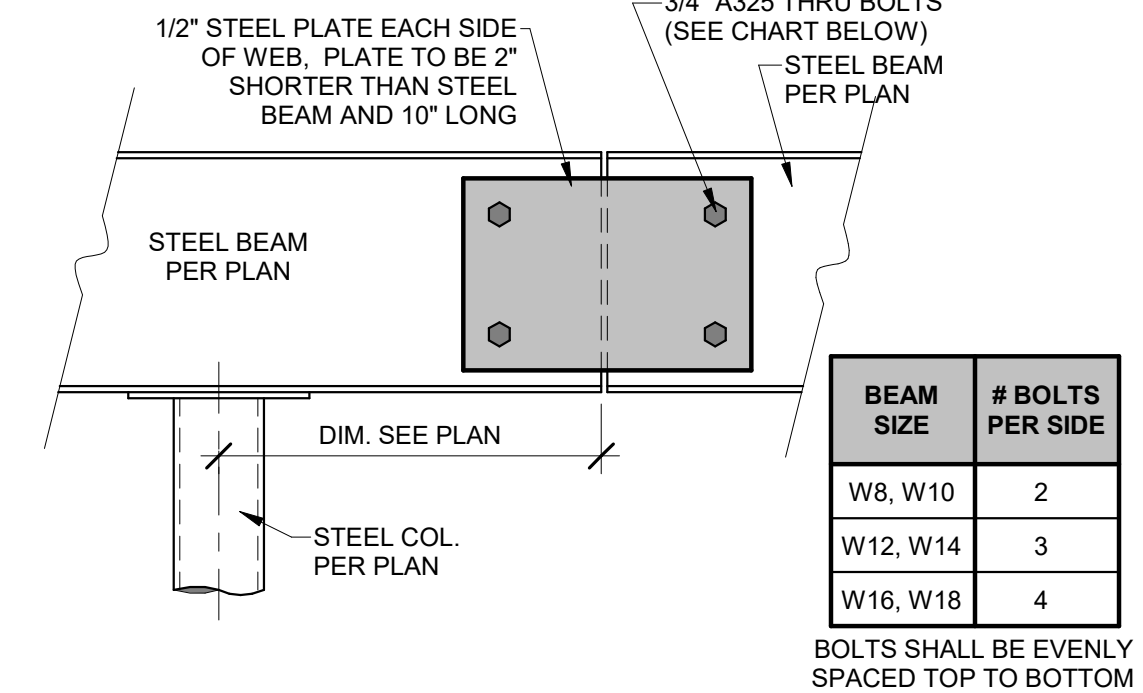
BEAM CONNECTION SCHEDULE

BEAM SIZE	# OF BOLT IN CONNECTION
W8, W10	2
W12, W14	3
W16, W18	4

NOTES:
1. NUMBER OF BOLTS DETERMINED BY SMALLER OF TWO BEAMS BEING CONNECTED
2. ALL BOLTS, 3/4" DIAMETER A325-N, UNO
3. FULL PERIMETER 1/4" FILLET WELD MAY BE SUBSTITUTED FOR EITHER OR BOTH BOLTED CONNECTIONS



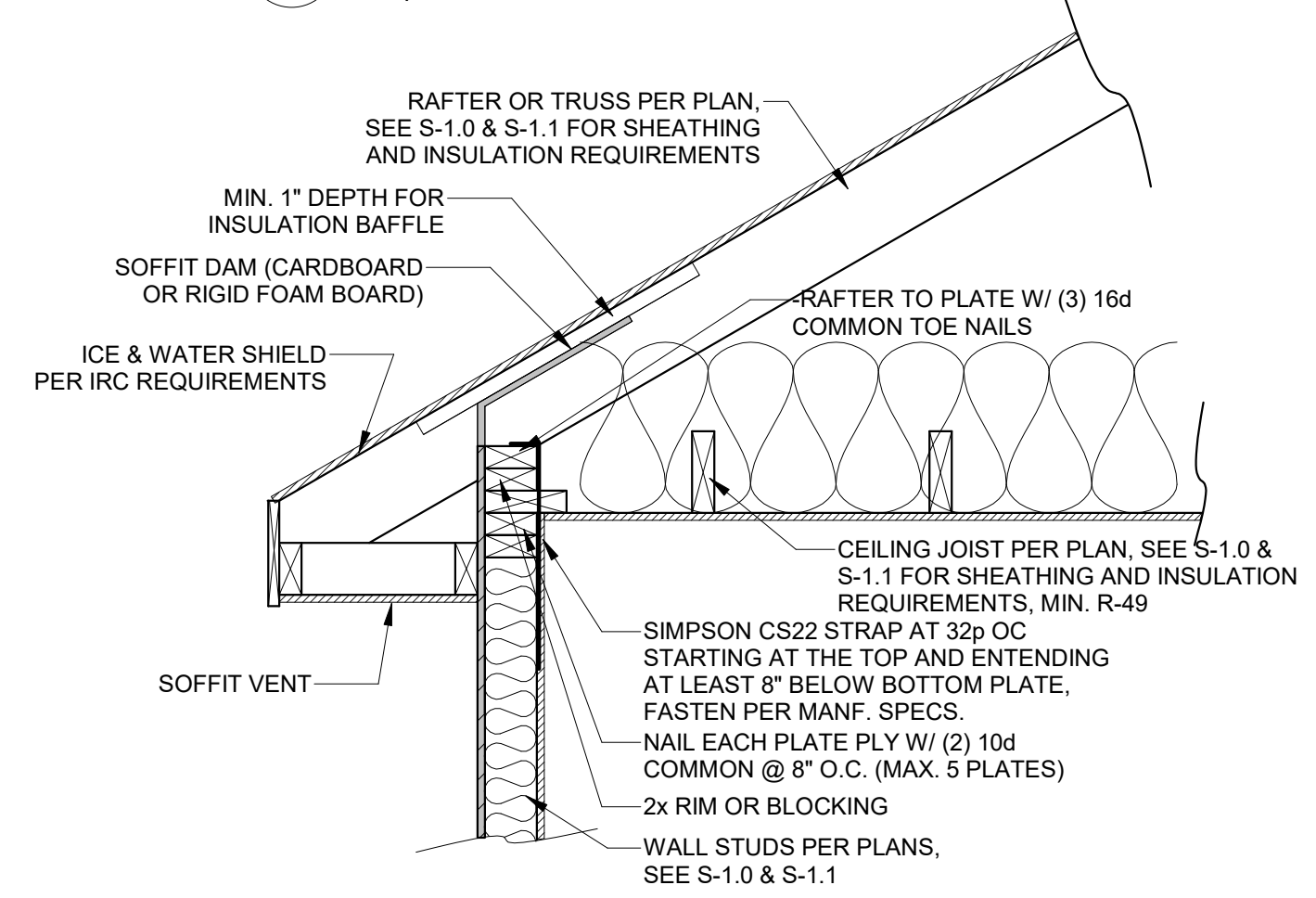
8 UPSET STEEL BEAM DETAIL
1 1/2" = 1'-0"



9 STEEL BEAM SPLICE DETAIL
1 1/2" = 1'-0"

BEAM SIZE	# BOLTS PER SIDE
W8, W10	2
W12, W14	3
W16, W18	4

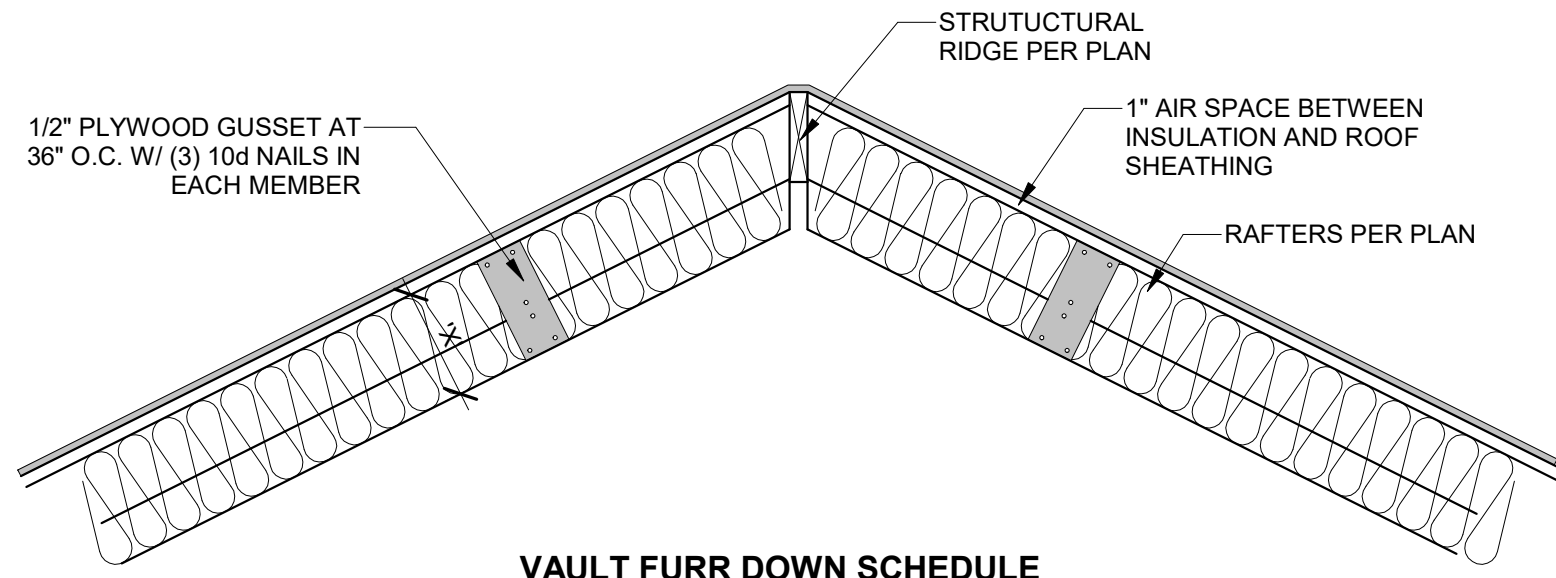
BOLTS SHALL BE EVENLY SPACED TOP TO BOTTOM



7 OPTION 4 RAFTER BEARING
1" = 1'-0"

HIP/VALLEY ALLOWABLE SPAN TABLE

TYPE	MAX. UNSUPPORTED SPAN				
	2x8	2x10	2x12	1 3/4"x9 1/2" LVL	1 3/4"x11 7/8" LVL
HIP RAFTER	11'-3"	13'-3"	15'-2"	15'-8"	18'-2"
VALLEY RAFTER	8'-11"	10'-6"	12'-0"	13'-2"	15'-3"

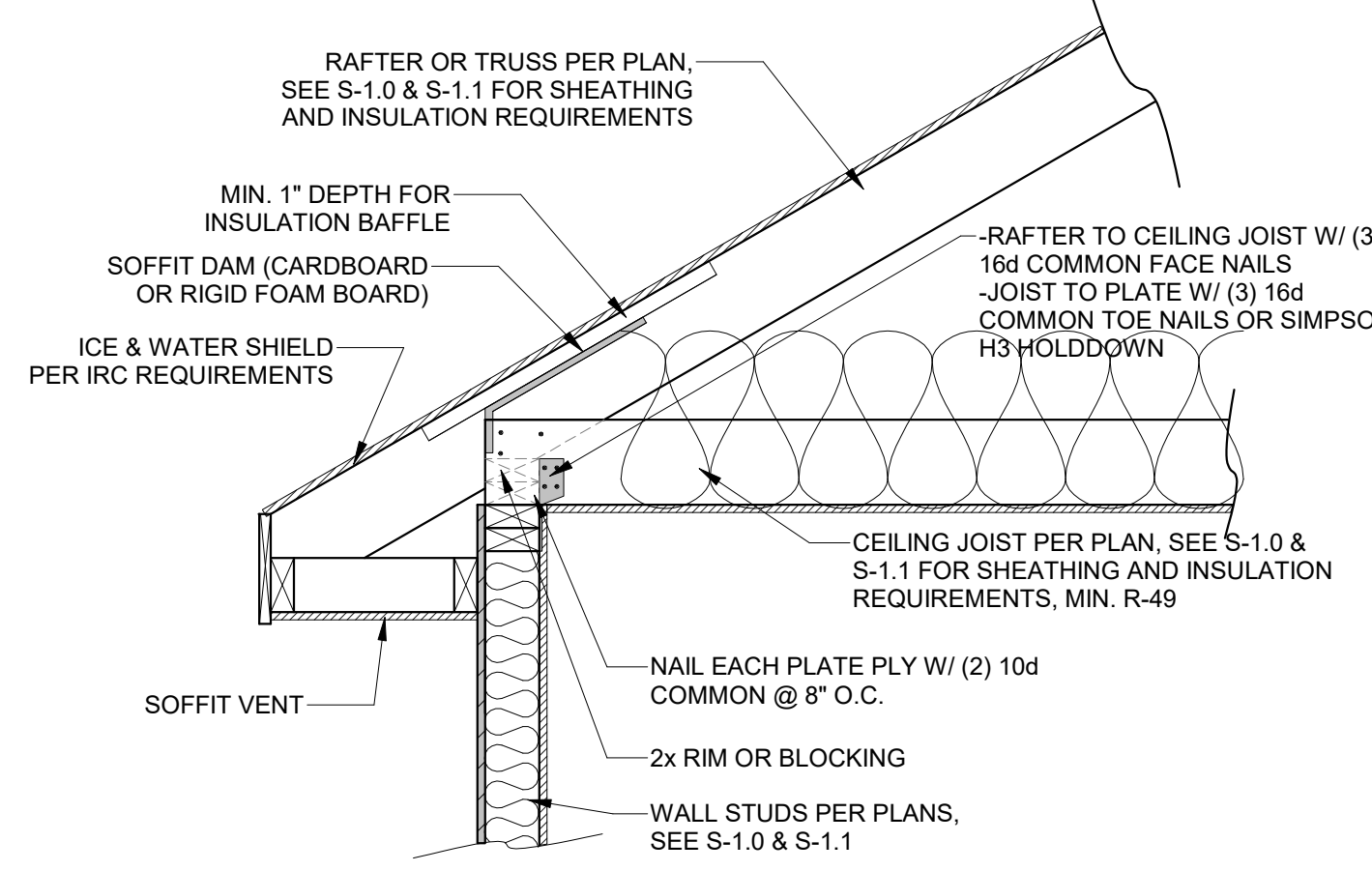


14 VAULTED RAFTER INSULATION
3/4" = 1'-0"

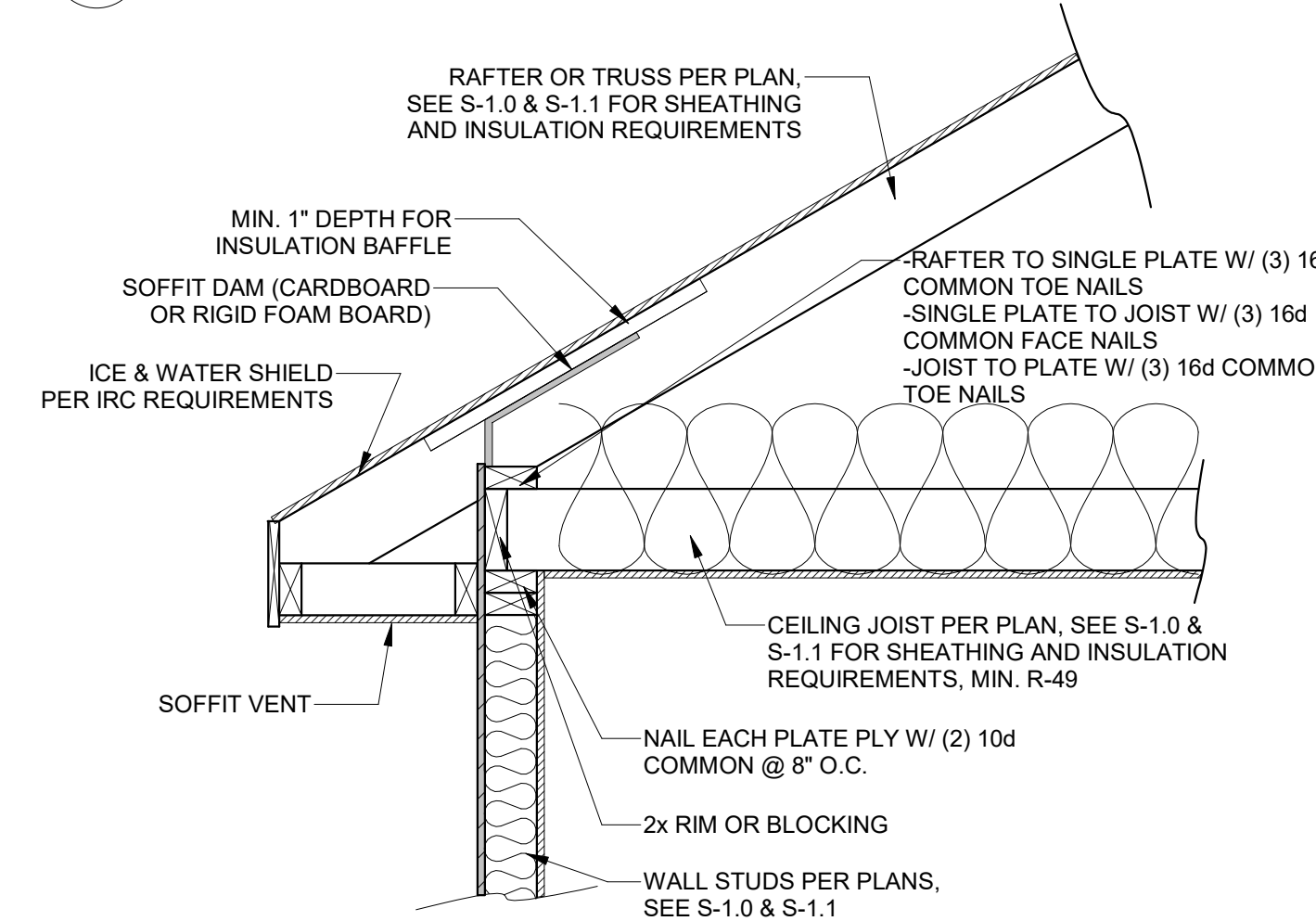
VAULT FURR DOWN SCHEDULE

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	2x2

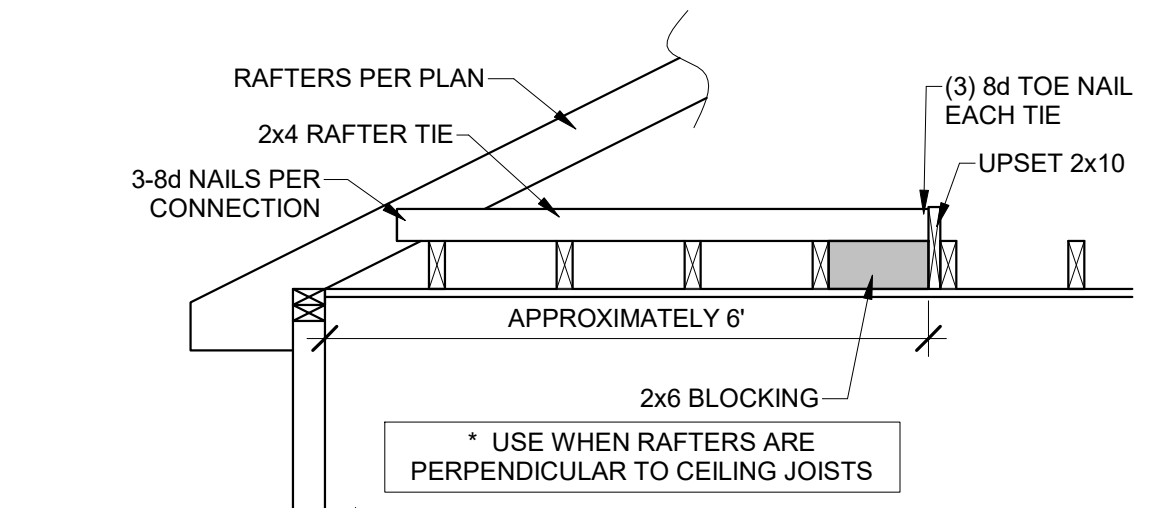
NOTES:
1. ALL VAULTS SHALL BE FURRED DOWN WITH 2x FRAMING TO THE REQUIRED DEPTH OF INSULATION, PLUS 1" AIR SPACE.
2. R-38C REQUIRED = 11" WITH AIR SPACE.
3. ALL VAULTED RAFTERS SHALL BE MIN. #2 2x6 DFL @ 16" O.C. OR PER ROOF PLAN.



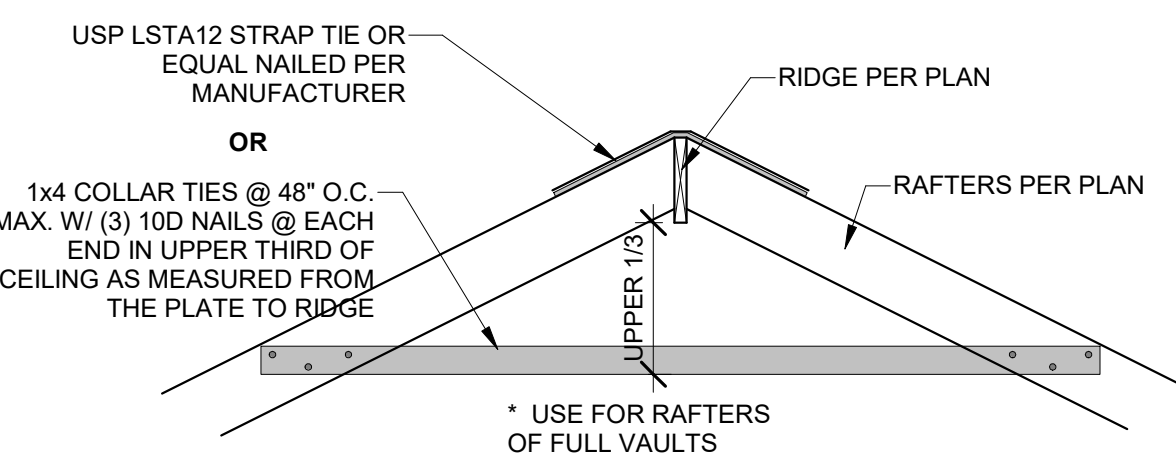
6 OPTION 3 RAFTER BEARING
1" = 1'-0"



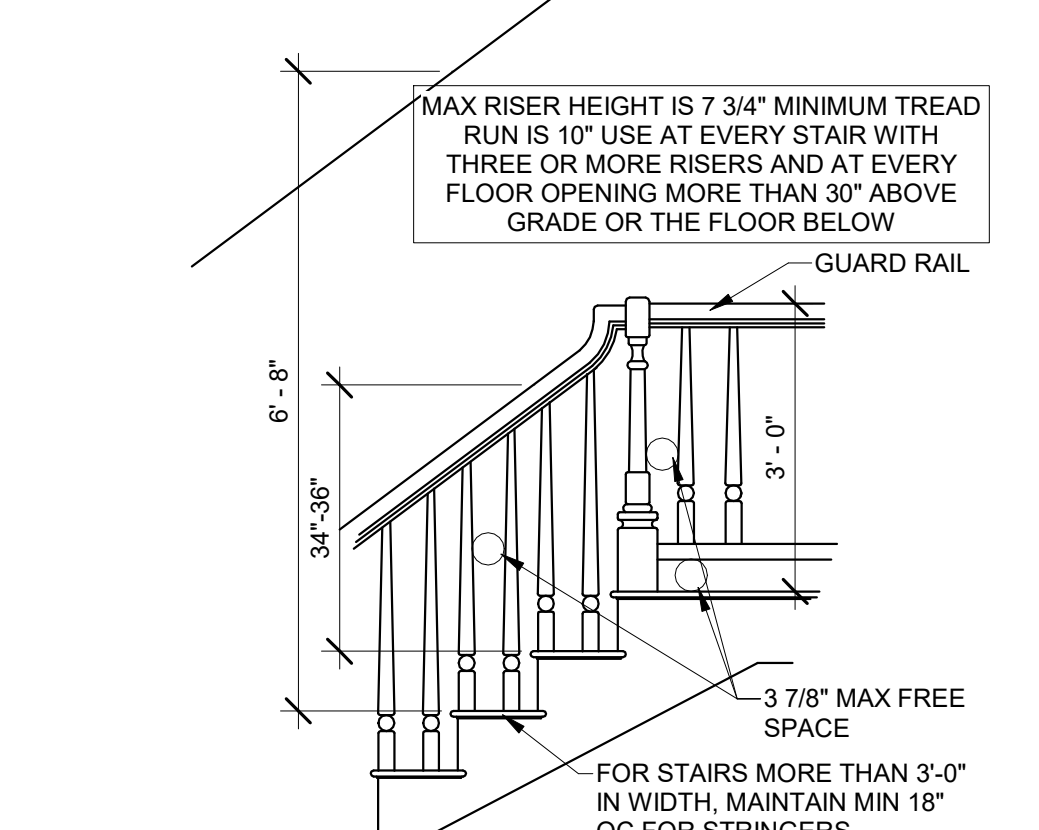
5 OPTION 2 RAFTER BEARING
1" = 1'-0"
THIS OPTION NOT AVAILABLE IN KC, MO



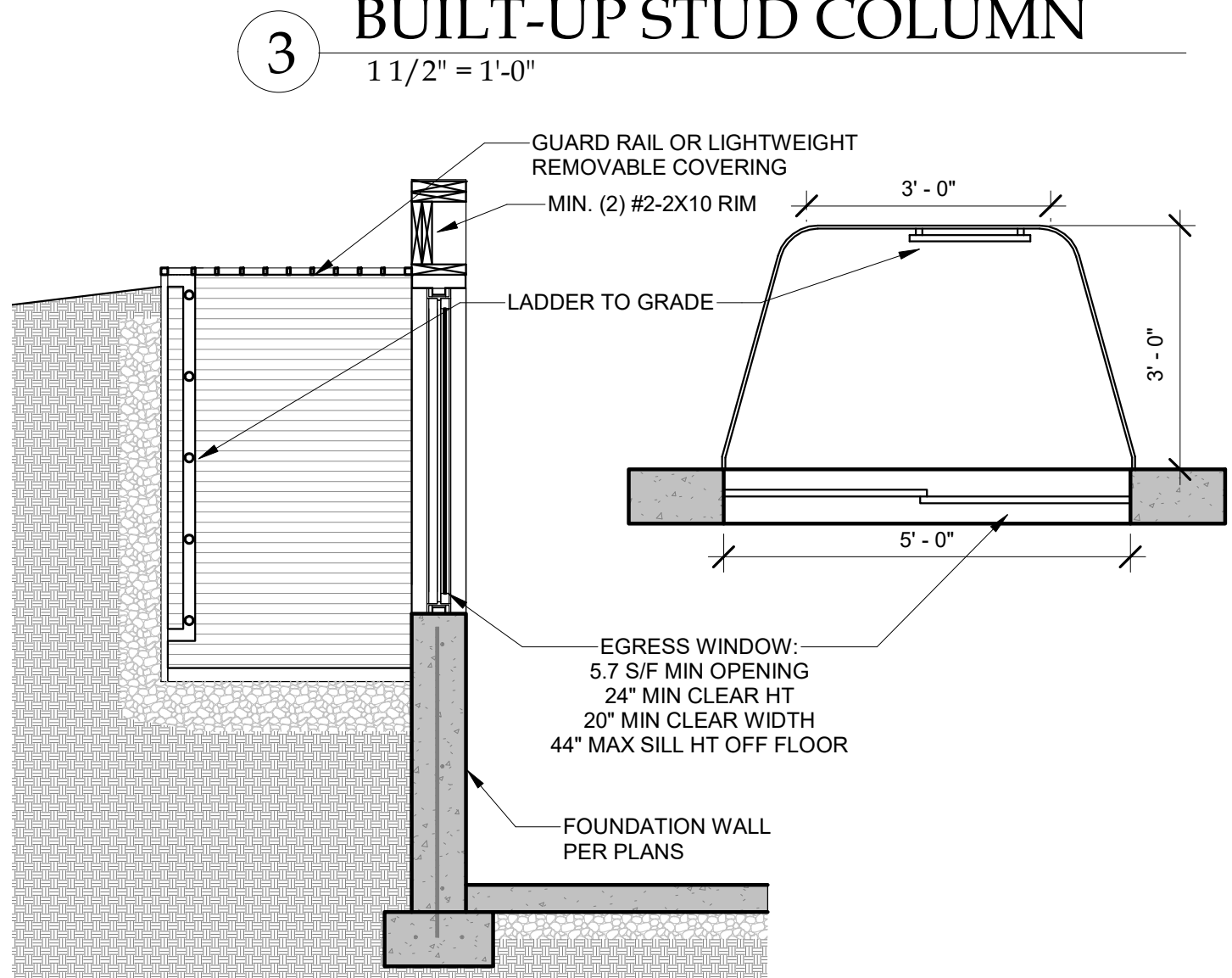
12 RAFTER TIE CONNECTION
1/2" = 1'-0"



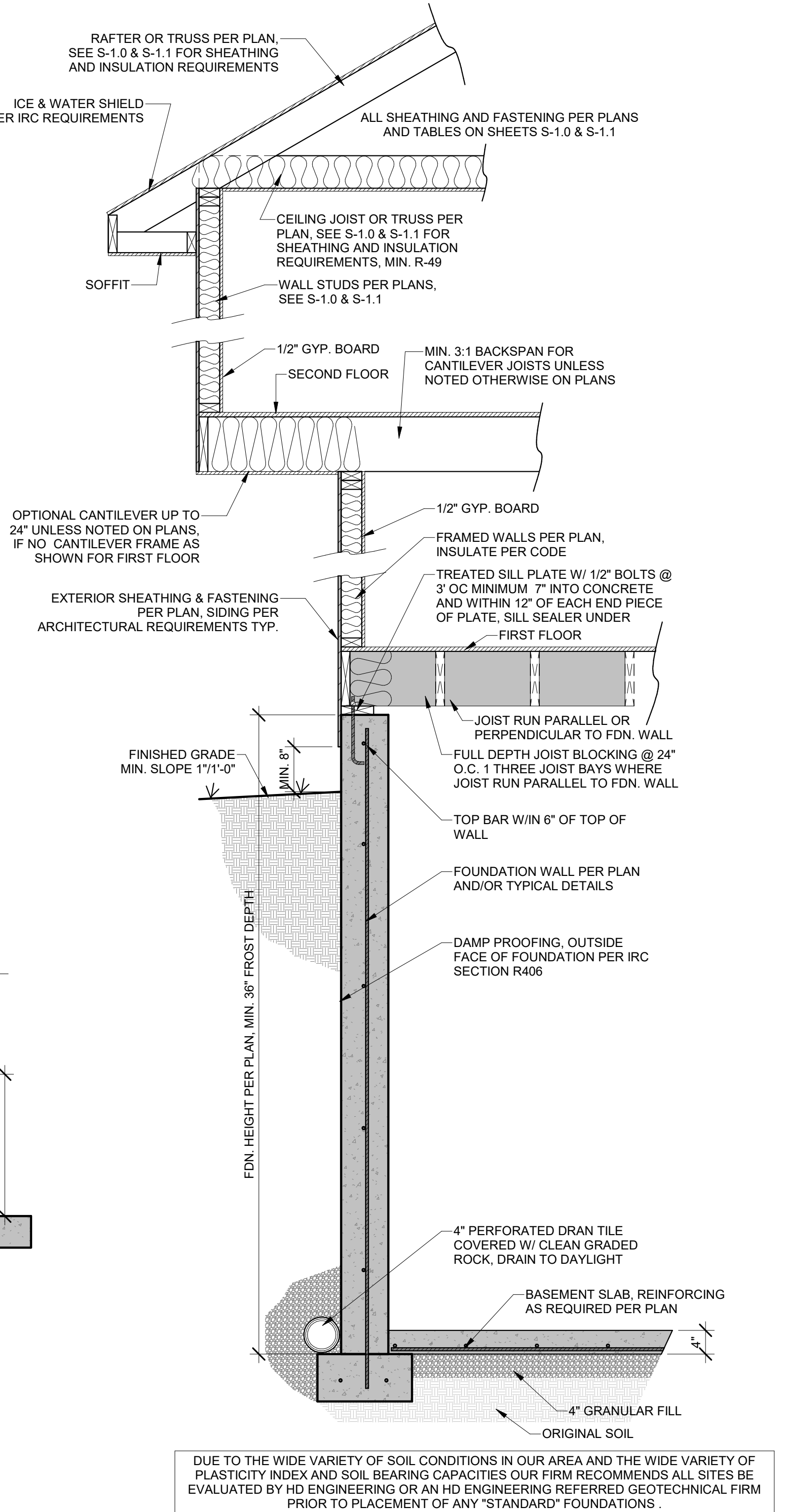
13 RIDGE SUPPORT
1/2" = 1'-0"



4 STAIR/RAIL DETAIL
1/2" = 1'-0"



3 BUILT-UP STUD COLUMN
1 1/2" = 1'-0"



1 TYPICAL WALL SECTION
3/4" = 1'-0"

2 EGRESS WINDOW SECTION
1/2" = 1'-0"

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STRUCTURAL DETAILS & NOTES

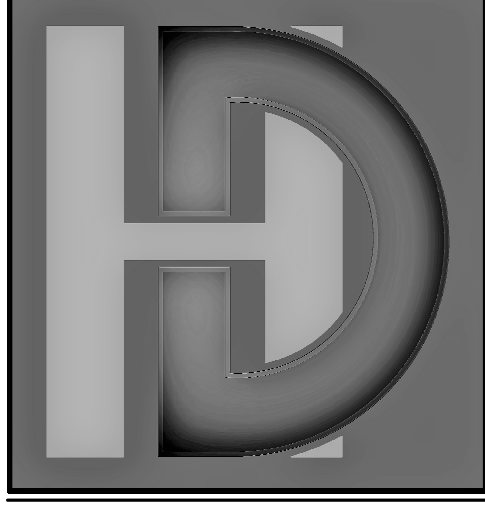
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FRAMING SECTIONS

S-1.2



SAB HOMES, INC.
 EXPANDED STRATOGA
 2613 SW HOOK FARM LANE, LEE'S SUMMIT, MO

STRUCTURAL DETAILS & NOTES

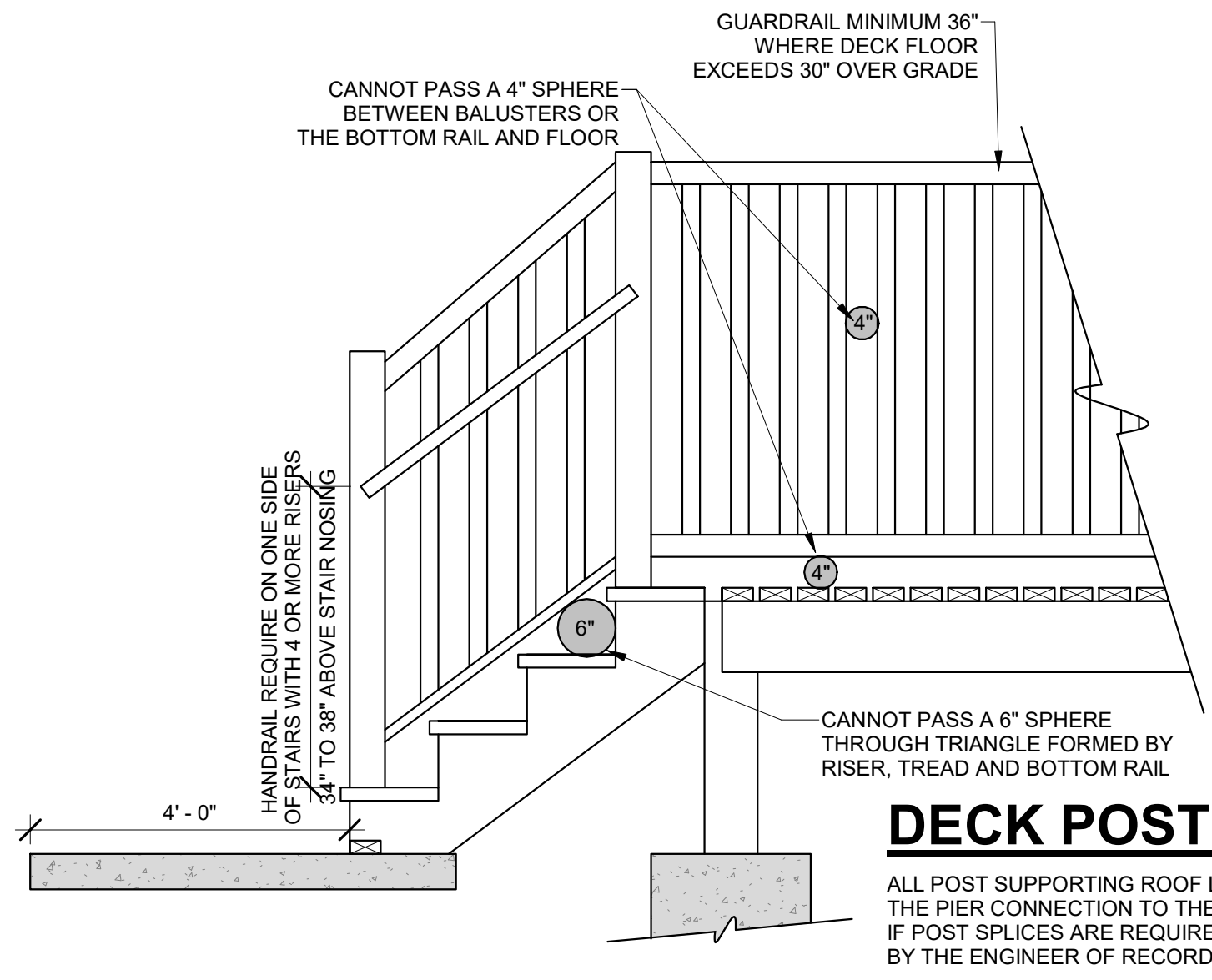
HD#:

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DECK DETAILS

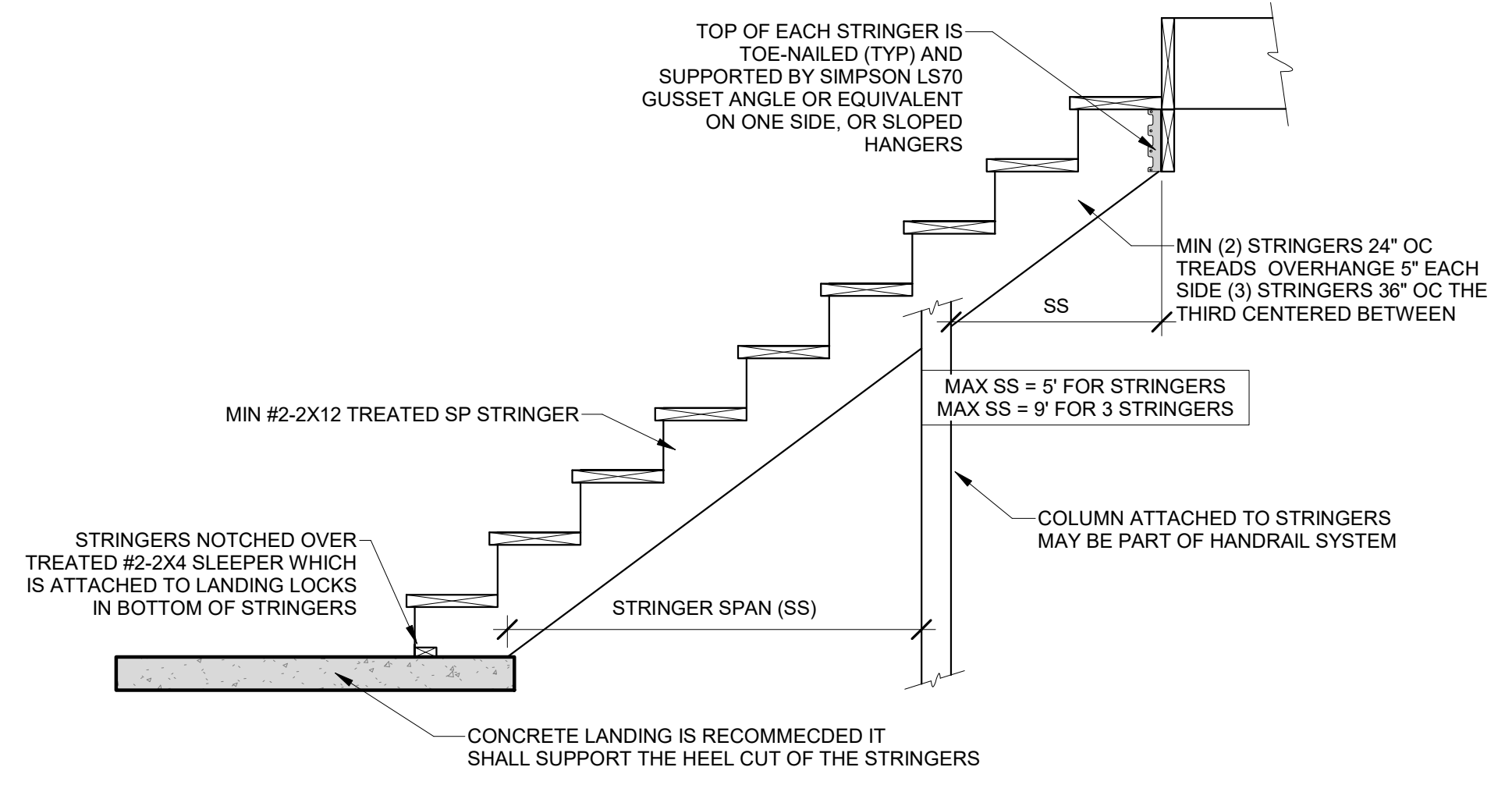
S-1.3



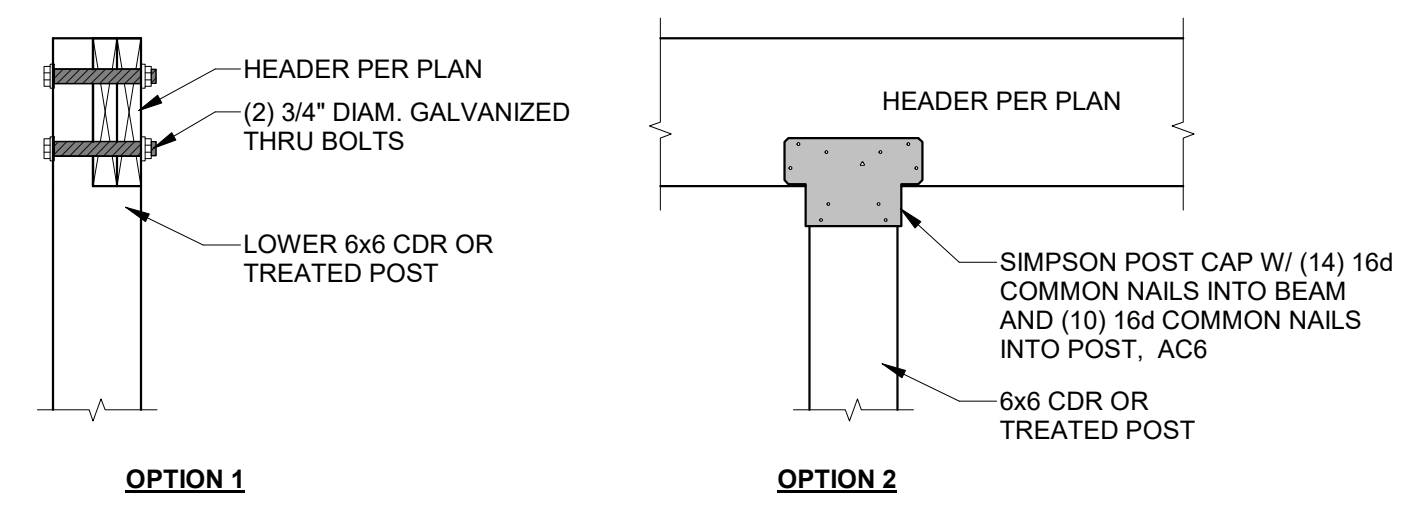
8 GUARD RAIL
 1/2" = 1'-0"

DECK POST NOTE

ALL POST SUPPORTING ROOF LOADS SHALL BE CONTINUOUS FROM THE PIER CONNECTION TO THE ROOF SUPPORTING STRUCTURE. IF POST SPLICES ARE REQUIRED THE SPLICE SHALL BE ENGINEERED BY THE ENGINEER OF RECORD FOR THE PROJECT.



9 STAIR STRINGER DETAIL
 1/2" = 1'-0"



7 ROOF LEVEL INTERIOR BEAM TO COLUMN
 1" = 1'-0"

TABLE IRC2018 R507.9.1.3(1)
DECK LEDGER CONNECTION TO BAND JOIST
 (DECK LIVE LOAD = 40 PSF, DECK HEAD LOAD = 10 PSF, SNOW LOAD ≤ 40 PSF)

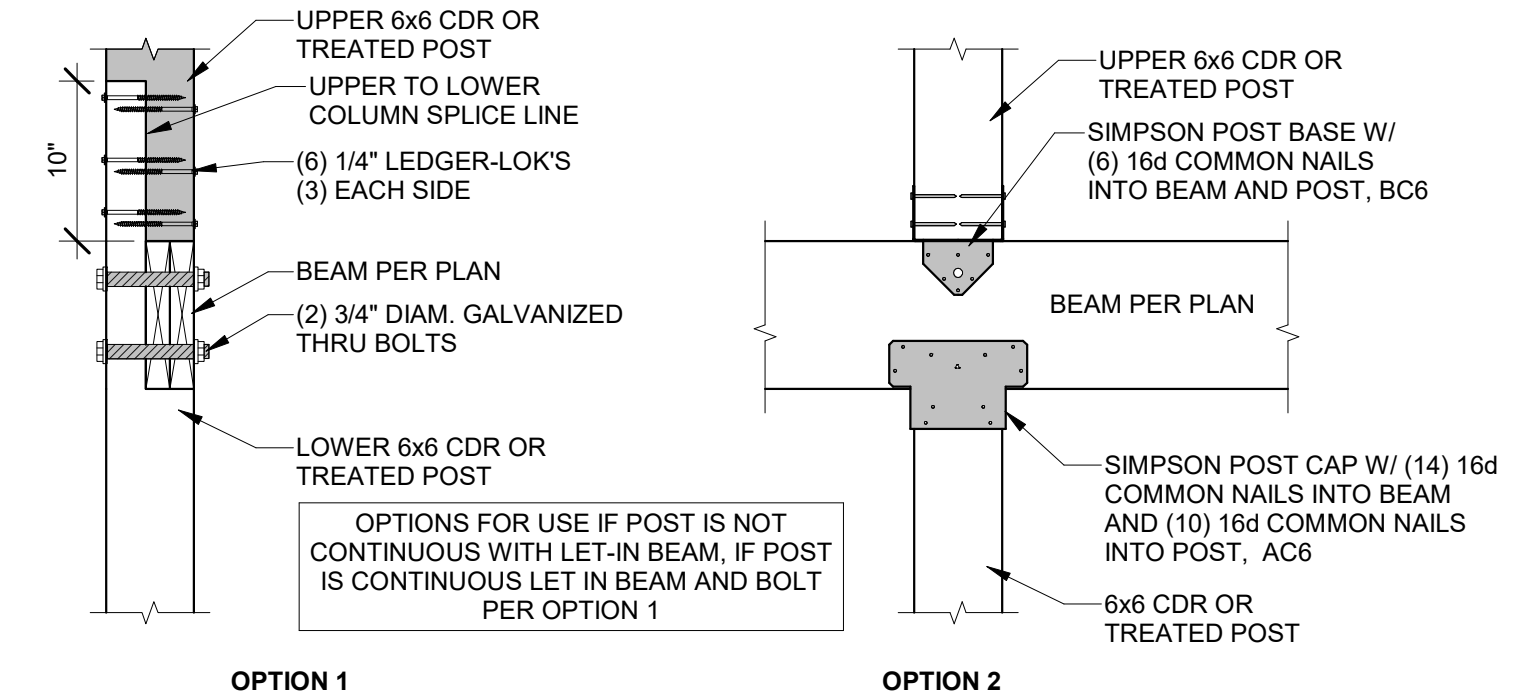
JOIST SPAN	6' AND LESS	6'-1" TO 8'	8'-1" TO 10'	10'-1" TO 12'	12'-1" TO 14'	14'-1" TO 16'	16'-1" TO 18'
CONNECTION DETAILS	ON-CENTER SPACING OF FASTENERS ^{a, b}						
1/2" LAG SCREW WITH 15/32" MAX. SHEATHING ^{c, d}	30	23	18	15	13	11	10
1/2" DIAM. BOLT WITH 15/32" MAX. SHEATHING ^d	36	36	34	29	24	21	19
1/2" DIAM. BOLT WITH 15/32" MAX. SHEATHING & 1/2" STACKED WASHERS ^e	36	36	29	24	21	18	16

For SI: 1 inch = 25.4mm, 1 foot = 304.8mm, 1 pound per square foot = 0.0479 kPa
 a. Ledges shall be flashed in accordance with Section R703.4 to prevent water from contacting the house band joist.
 b. Snow load shall not be assumed to act concurrently with live load.
 c. The tip of the lag screw shall fully extend beyond the inside face of the band joist.
 d. Sheathing shall be wood structural panel or solid sawn lumber.
 e. Sheathing shall be permitted to be wood structural panel, gypsum board, fiberboard lumber or foam sheathing. Up to 1/2" thickness of stacked washers shall be permitted to substitute for you to 1/2" of allowable sheathing thickness where combined with wood structural panel or lumbers sheathing.

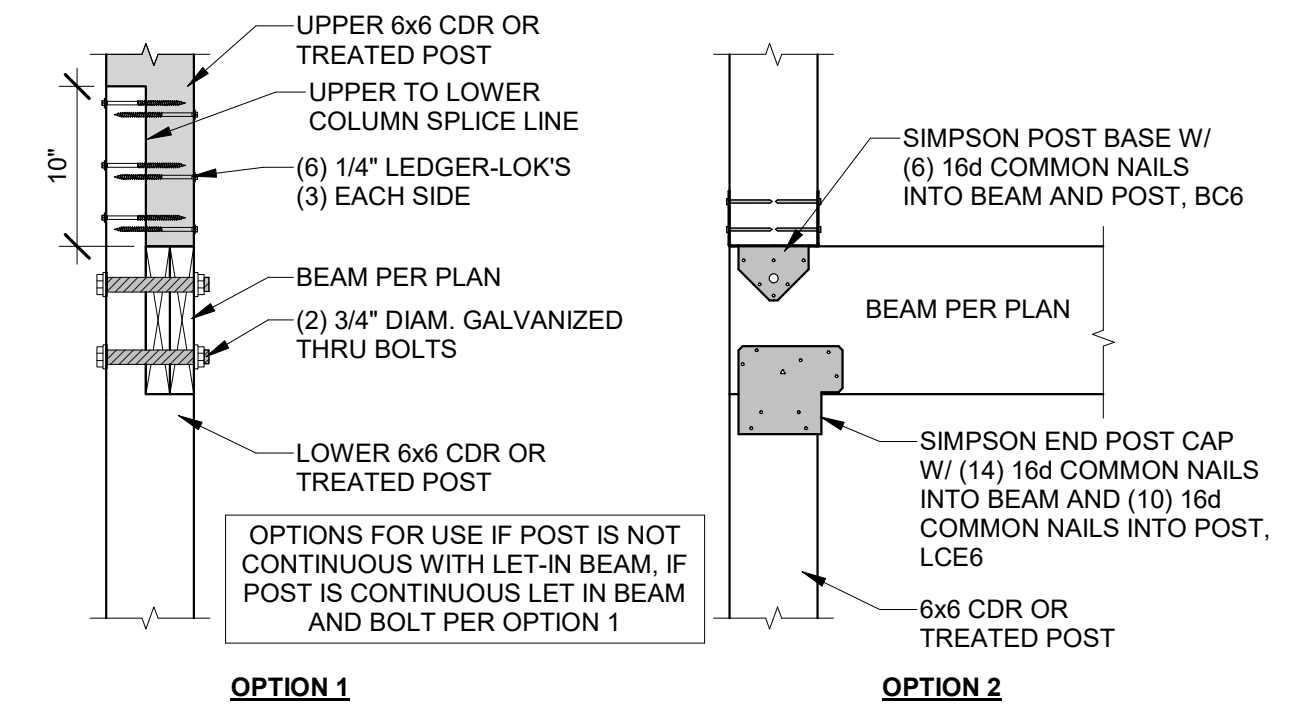
TABLE IRC2018 R507.9.1.3(2)
PLACEMENT OF LAG SCREWS AND BOLT IN DECK LEDGERS AND BAND JOISTS

MINIMUM END AND EDGE DISTANCES AND SPACING BETWEEN ROWS				
	TOP EDGE	BOTTOM EDGE	ENDS	ROW SPACING
LEDGER ^a	2 inches ^d	3/4 inches	2 inches ^b	1 5/8 inches ^b
BAND JOIST ^c	3/4 inches	2 inches	2 inches	1 5/8 inches ^b

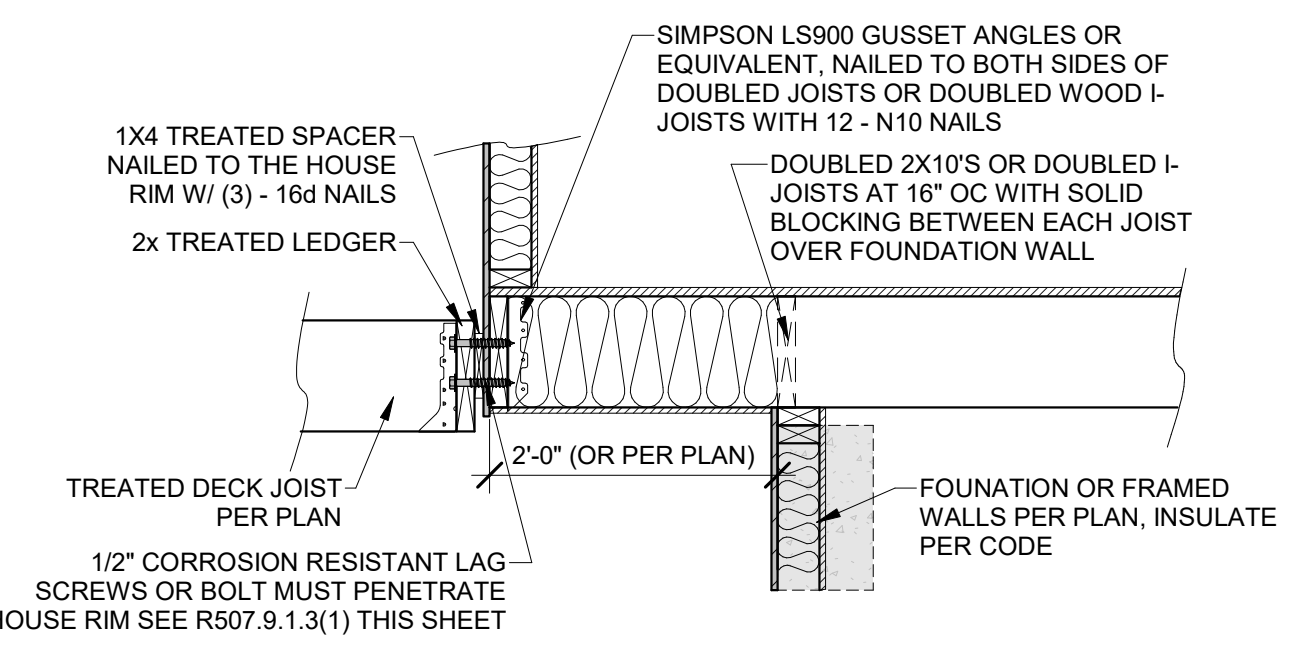
For SI: 1 inch = 25.4mm.
 a. Lag screws or bolts shall be staggered from the top to the bottom along the horizontal run of the deck ledger in accordance with Figure R507.9.1.3(1)
 b. Maximum: 5 inches
 c. For engineered rim joists, the manufacturer's recommendations shall govern.
 d. The minimum distances from bottom row of lag screws or bolts to the top of the ledger shall be in accordance with Figure R507.9.1.3(1)



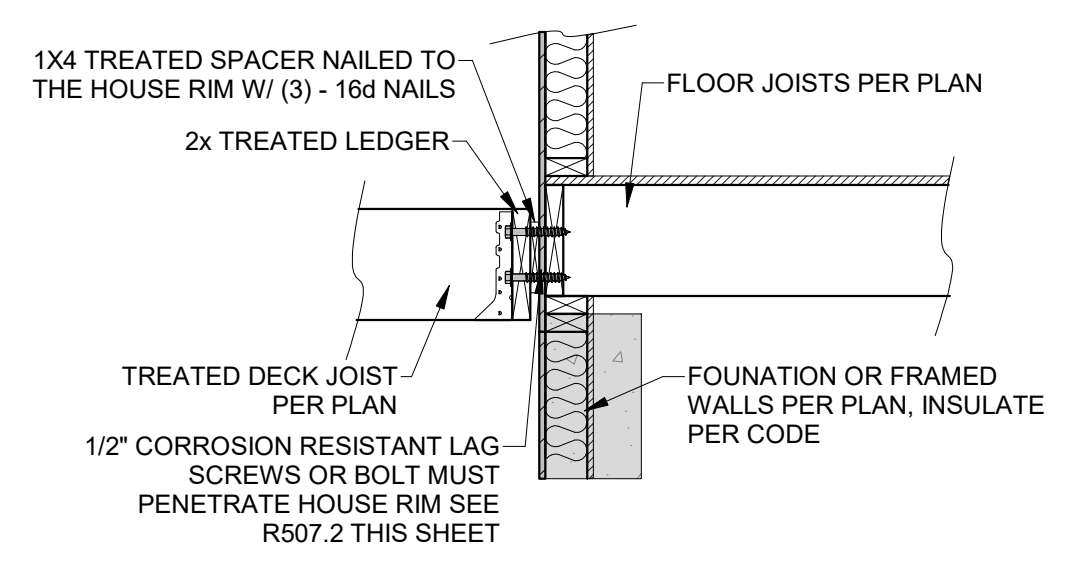
6 DECK LEVEL INTERIOR BEAM TO COLUMN
 1" = 1'-0"



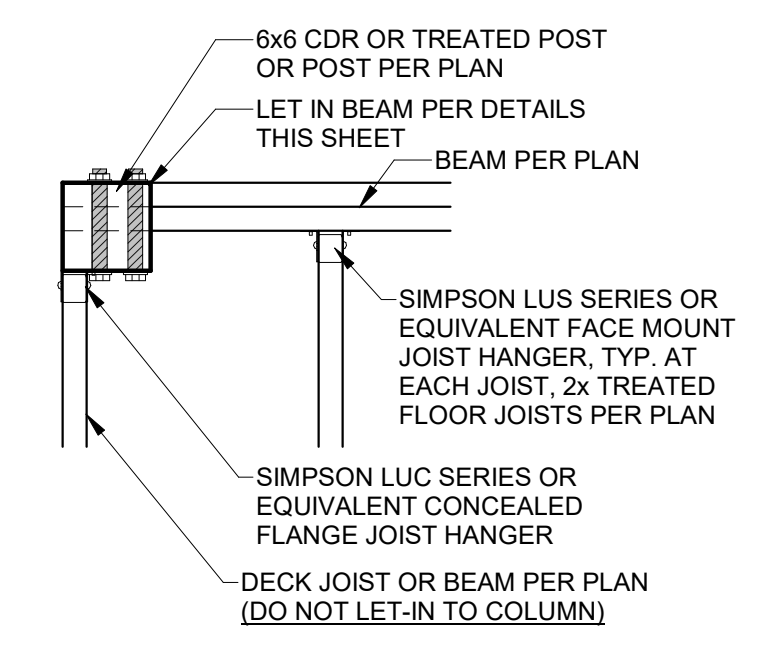
5 DECK LEVEL EXTERIOR BEAM TO COLUMN
 1" = 1'-0"



4 DECK LEDGER TO CANTILEVER
 3/4" = 1'-0"



2 DECK LEDGER ATTACHMENT
 3/4" = 1'-0"



1 DECK CORNER COLUMN
 1" = 1'-0"

RESIDENTIAL SEISMIC & WIND ANALYSIS

LOCATION	DEAD LOAD (psf)	AREA (ft²)	WEIGHT (lbs.)
ROOF	10	2942	29420
CEILING	10	2585	25850
SECOND FLOOR	15	1150	17250
FIRST FLOOR	15	1000	15000
SECOND FLOOR EXT. WALL DL	WALL LENGTH (ft)	WALL HEIGHT (ft)	WALL UNIT WT. (psf)
FIRST FLOOR EXT. WALL DL	173.4	9	15792
FIRST FLOOR INT. PARTITION WALL DL	DEAD LOAD (psf)	AREA (ft²)	WEIGHT (lbs.)
	6	900	5400

PROJECTED AREAS (WIND DESIGN PER 118 MPH 3-SECOND GUST, EXPOSURE C AND MEAN ROOF HEIGHT = 30 FT ASSUMED)			
FRONT-TO-BACK		SIDE-TO-SIDE	
SLOPED ROOF	AREA	LOAD	AREA
VERT. ROOF	542	2.87	1550
2ND	414	5.87	2424
1ST	320	1.51	483
CUMULATIVE		CUMULATIVE	
151		276	
151		5478	
151		8848	
151		15476	

LOCATION	From ASCE7 (Eq. 12.8-1)	V (ft/s)
2ND FLOOR	140	140
1ST FLOOR	140	140

SEISMIC SHEAR	ALLOWABLE SHEAR (WLF)	Code Reference
Exterior (Option #4)	220	AFAPA SDPWS Table 4.3A
Interior	60	per IBC, Table 2306.4.4
Interior	325	

SEISMIC	WIND
2ND FLOOR	75
1ST FLOOR	81

EXTERIOR STRUCTURAL WALL LENGTHS (ft.) & RESISTANCES		
2ND FLOOR FRONT-TO-BACK	75	21000
2ND FLOOR SIDE-TO-SIDE	55	15400
1ST FLOOR FRONT-TO-BACK	81	22800
1ST FLOOR SIDE-TO-SIDE	73	20440

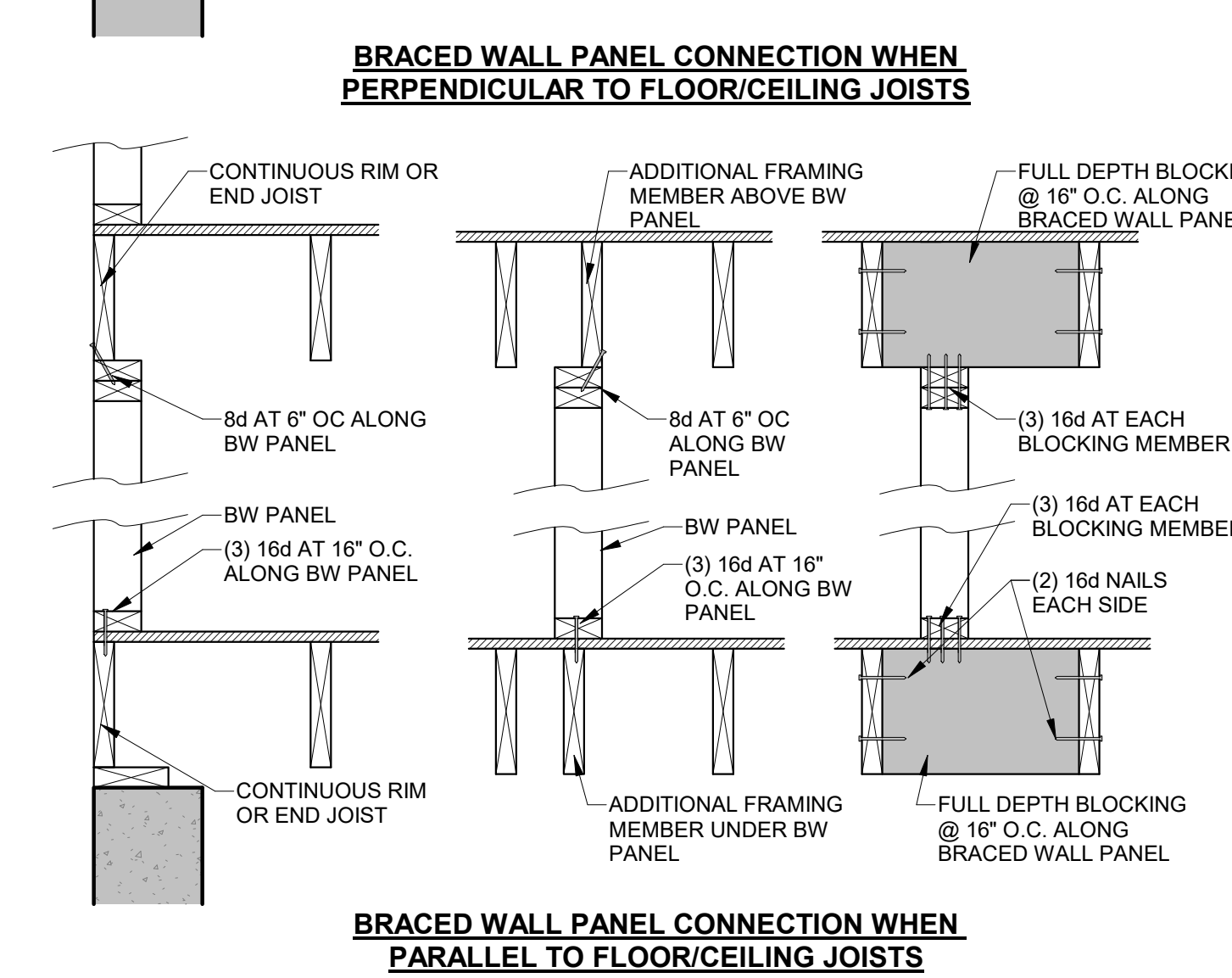
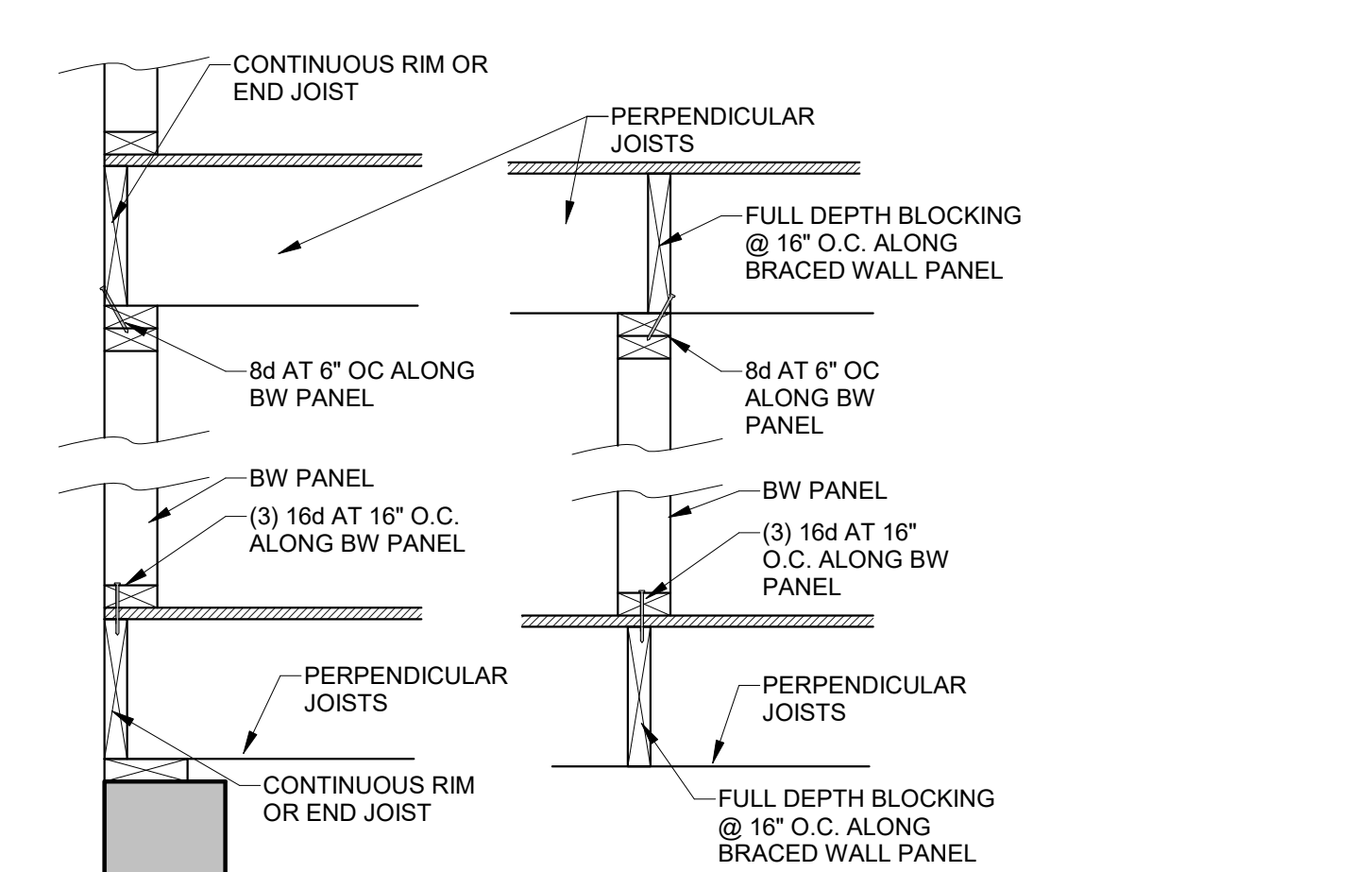
RESISTANCE REQUIRED IN ADDITION TO RESISTANCE PROVIDED BY EXTERIOR WALLS**	OK?	
2ND FLOOR FRONT-TO-BACK	0	YES
2ND FLOOR SIDE-TO-SIDE	0	YES
1ST FLOOR FRONT-TO-BACK	0	YES
1ST FLOOR SIDE-TO-SIDE	0	YES

WIND UPLIFT ANALYSIS									
ROOF PITCH (MAX)	DEGREES	PITCH OF 8 OR LESS: ECH-13.3, E-7.2, G-3.2	ASCE 7						
0	26.6		LENGTH (FT.)	PRESSURE (PSF)	LINEAL FT. OF CH	UPLIFT PER FT. (LBS)	15.96	234	16.88
OVERHANG	1		TOTAL AREA (FT²)	ZONE E AREA (FT²)	ZONE G AREA (FT²)	PRESSURE ZN. E (PSF)	PRESSURE ZN. G (PSF)	TOTAL FORCE (LBS)	FORCE PER LINEAL FT. @ PERIMETER (LBS)
MAIN ROOF**			328	197.76	1930.24	15.12	10.5	41402	178.5

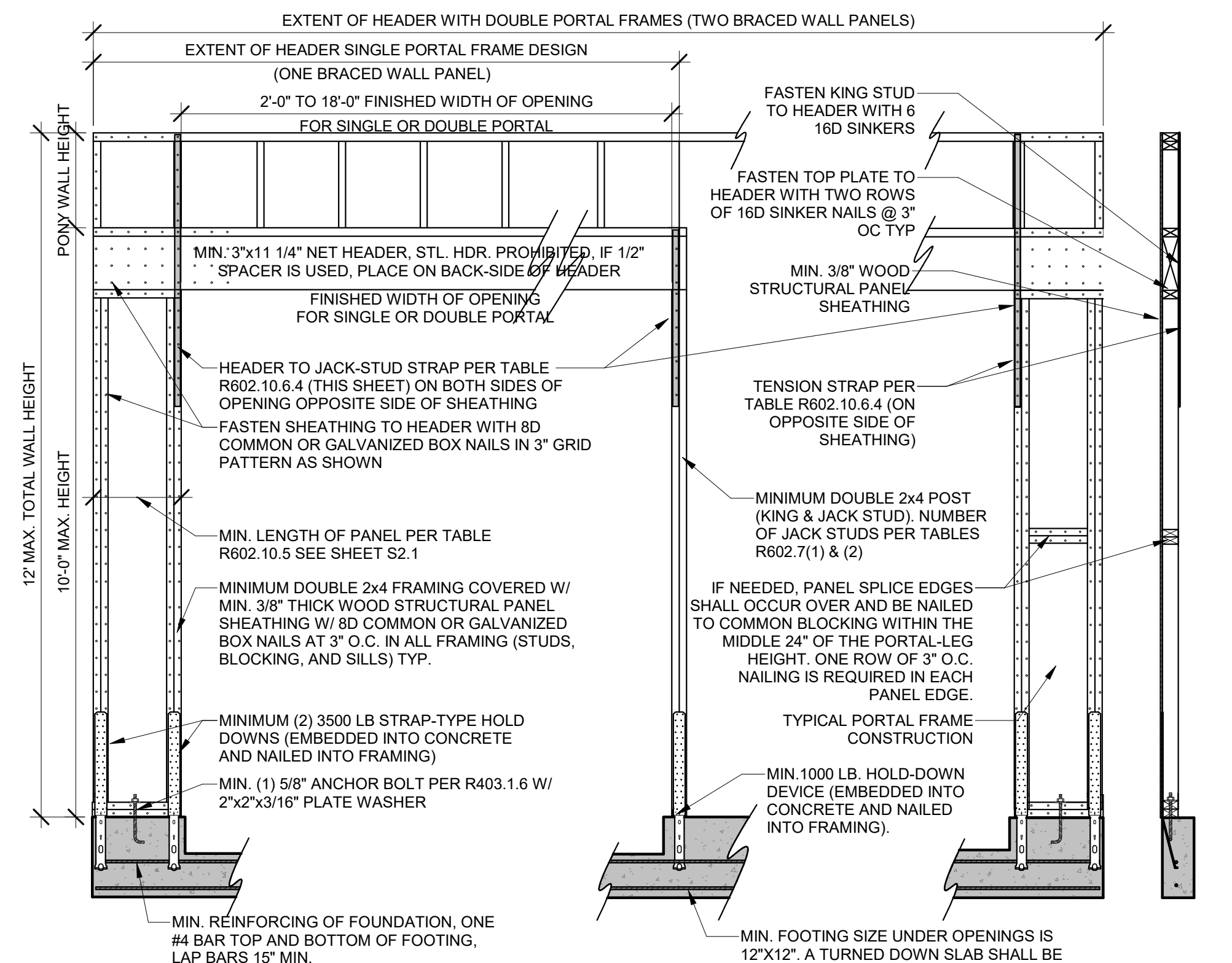
NOTE FOR CONSTRUCTION: THE CONTINUOUS STRUCTURAL PANEL SHEATHING BRACING METHOD REQUIRES USE OF THE ABOVE TABLE FOR SHEATHINGS OF THE ENTIRE STRUCTURE. IN ADDITION, FRAMING MEMBERS SHALL BE @ 16" O.C. MAX. UNBLOCKED, AND W/ SHEATHING APPLIED DIRECTLY TO FRAMING MEMBERS.

NOTE FOR DESIGN: ALL WALLS USED IN THE CALCULATION OF THE RESISTANCE FOR THIS STRUCTURE SHALL HAVE A MINIMUM UNINTERRUPTED HEIGHT OF 6'-0" AND LENGTH OF 2'-0". ALLOWABLE RESISTANCES HAVE BEEN INPT AND INCREASED BY 40% FOR WIND LOADS, PER VALUES IN 2012 IBC SECTION 2305 AND AFAPA SDPWS TABLE 4.3A. FOR EXAMPLE, 7/16" APA-RATED PLYWOOD/OSB WITH 8d @ 6" & 1/2" HAS A SEISMIC SHEAR VALUE OF 220 A WIND SHEAR VALUE OF 3300FT-40% GREATER THAN THAT OF SEISMIC.

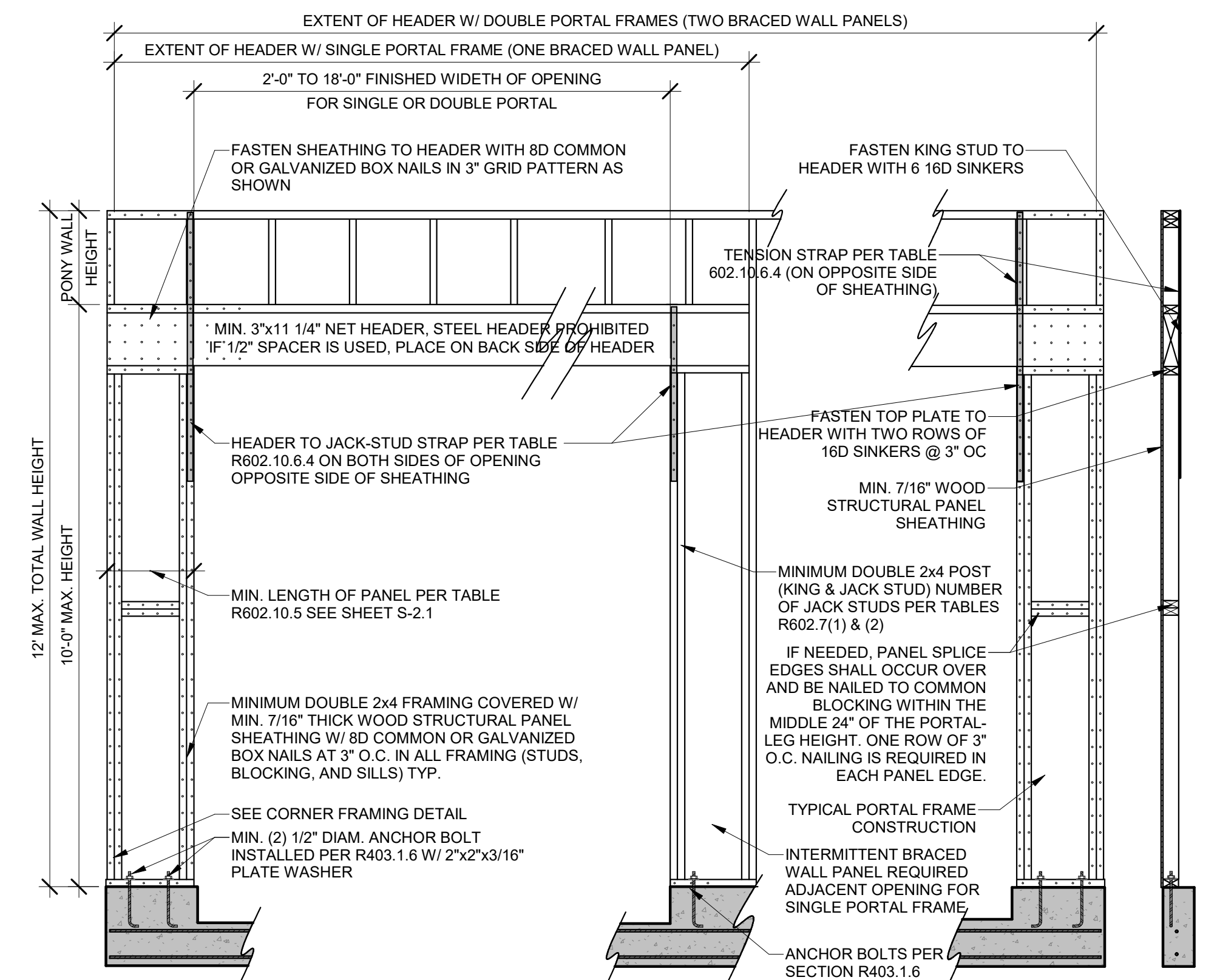
NOTE: SOIL SITE CLASS ASSUMED TO BE CLASS D. IF SITE CONDITIONS ARE DETERMINED TO BE CLASS E OR F, CONSULT ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.



3 BRACED WALL PANEL CONNECTIONS
1" = 1'-0"

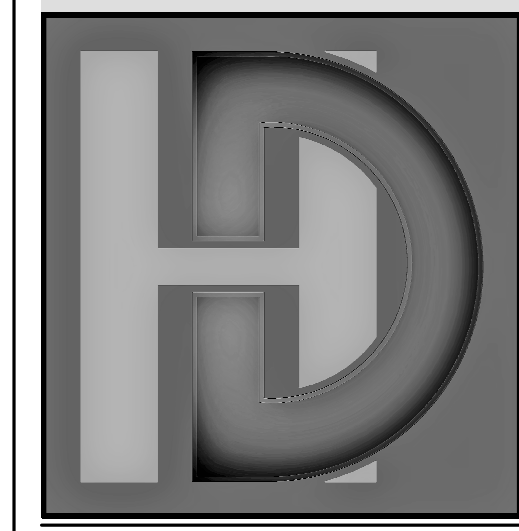


1 PFH PORTAL FRAME W/ HOLD DOWNS (R602.10.6.2)
1/2" = 1'-0"



2 PFG PORTAL FRAME W/OUT HOLD DOWNS (R602.10.6.3)
1/2" = 1'-0"

HD ENGINEERING & DESIGN, INC
11686 W. 75TH STREET
SHAWNEE, KS 66214
WWW.HDENGINEERS.COM
913.631.2222
SERVICE@HDENGINEERS.COM



SAB HOMES, INC.
EXPANDED STRATOGA
2613 SW HOOK FARM LANE, LEE'S SUMMIT, MO

STRUCTURAL DETAILS & NOTES

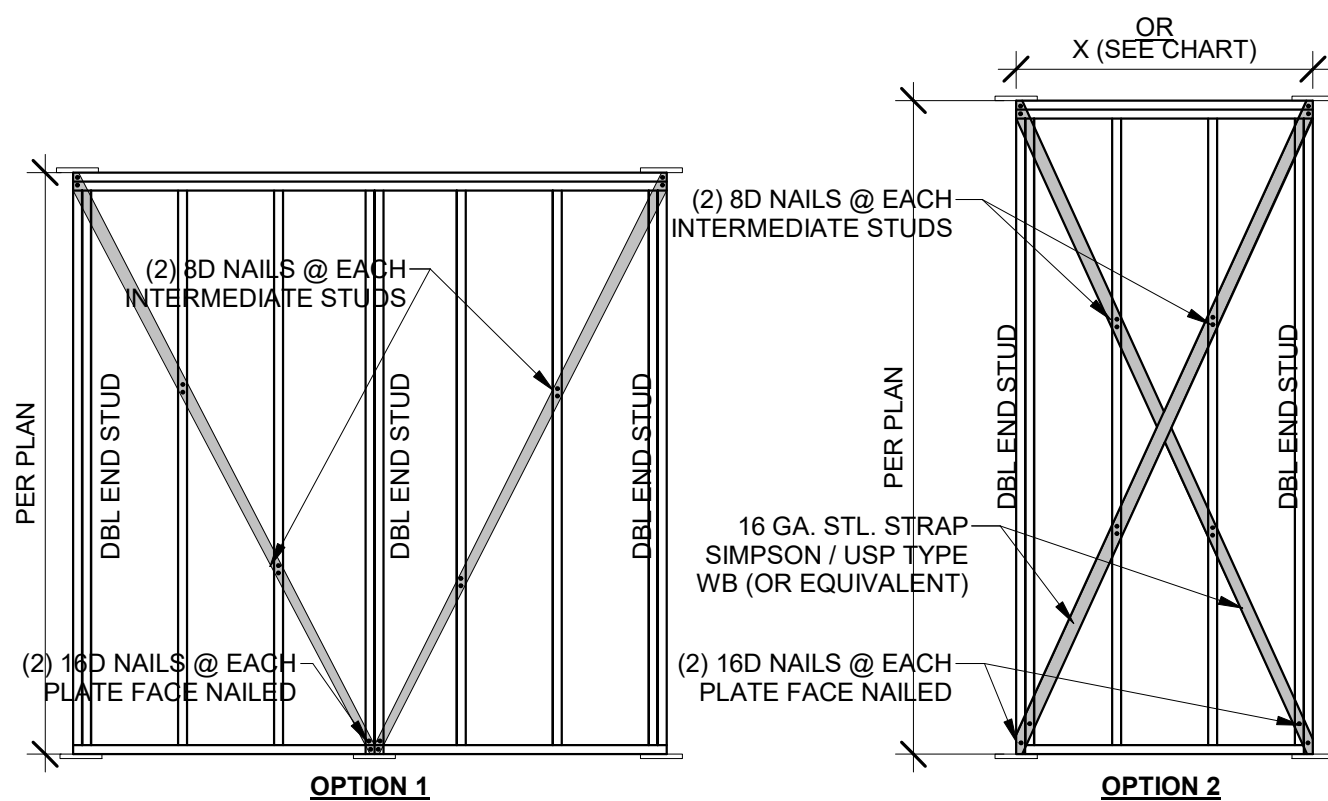
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BRACED WALL NOTES & DETAILS

S-2.0

TENSION STRAP CAPACITY REQUIRED FOR RESISTING WIND PRESSURES PERPENDICULAR TO METHOD PFH, PFG AND CS-PF BRACED WALL PANELS IRC2018 TABLE R602.10.6.4



BRACED WALL PANEL LENGTH BASED ON WALL HEIGHT FOR IRC LIB		
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	---

6 LIB BRACING
3/8" = 1'-0"

TABLE R602.10.5 MINIMUM LENGTH OF BRACED WALL PANELS

METHOD (SEE TABLE R602.10.4)	MINIMUM LENGTH (INCHES) ^a					CONTRIBUTING LENGTH (INCHES)	
	8 FEET	9 FEET	10 FEET	11 FEET	12 FEET		
DWB,WSP,SFB,PBS,PCP,HPS,BV-WSP	48	48	48	53	58	ACTUAL ^b	
GB	48	48	48	53	58	DOUBLE SIDED = ACTUAL SINGLE SIDED = .5xACTUAL	
LIB	55	62	69	NP	NP	ACTUAL ^b	
ABW	SDC A, B, AND C ULTIMATE DESIGN WIND SPEED <140	28	32	34	38	42	48
	SDC D, D ₁ , D ₂ ULTIMATE DESIGN WIND SPEED <140	32	32	34	NP	NP	
PFH	SUPPORTING ROOF ONLY	16	16	16	NOTE C	NOTE C	48
	SPTNG. ONE STORY & ROOF	24	24	24	NOTE C	NOTE C	
PFG	24	27	30	NOTE D	NOTE D	1.5 x ACTUAL ^b	
CS-G	24	27	30	33	36	ACTUAL ^b	
CS-PF	16	18	20	NOTE E	NOTE E	ACTUAL ^b	
CS-WSP, CS-SFB	ADJACENT CLEAR OPENING HEIGHT (INCHES)						ACTUAL ^b
	≤64	24	27	30	33	36	
	68	26	27	30	33	36	
	72	27	27	30	33	36	
	76	30	29	30	33	36	
	80	32	30	30	33	36	
	84	35	32	32	33	36	
	88	38	35	33	33	36	
	92	43	37	35	35	36	
	96	48	41	38	36	36	
	100	-	44	40	38	38	
	104	-	49	43	40	39	
	108	-	54	46	43	41	
	112	-	-	50	45	43	
	116	-	-	55	48	45	
	120	-	-	60	52	48	
124	-	-	-	56	51		
128	-	-	-	61	54		
132	-	-	-	66	58		
136	-	-	-	-	62		
140	-	-	-	-	66		
144	-	-	-	-	72		

a. LINEAR INTERPOLATION SHALL BE PERMITTED.
 b. USE THE ACTUAL LENGTH WHEN IT IS GREATER THAN OR EQUAL TO THE MINIMUM LENGTH.
 c. MAX. HEADER HEIGHT FOR PFH IS 10' IN ACCORDANCE WITH R602.10.6.2. WALL HEIGHT MAY BE INCREASED TO 12' WITH PONY WALL.
 d. MAX. OPENING HEIGHT FOR PFG IS 10' IN ACCORDANCE WITH R602.10.6.3. WALL HEIGHT MAY BE INCREASED TO 12' WITH PONY WALL.
 e. MAX. OPENING HEIGHT FOR CS-PF IS 10' IN ACCORDANCE WITH R602.10.6.4. WALL HEIGHT MAY BE INCREASED TO 12' WITH PONY WALL.

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

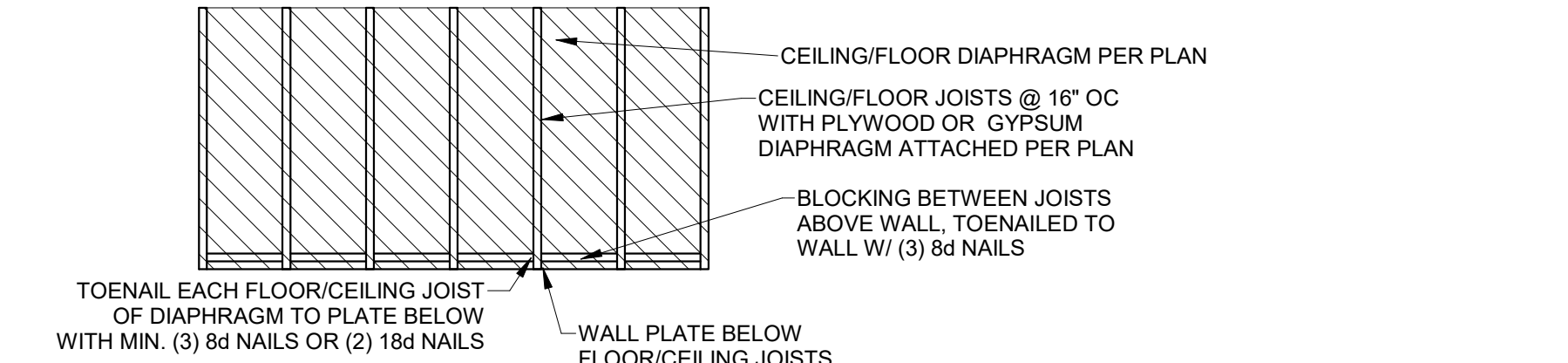
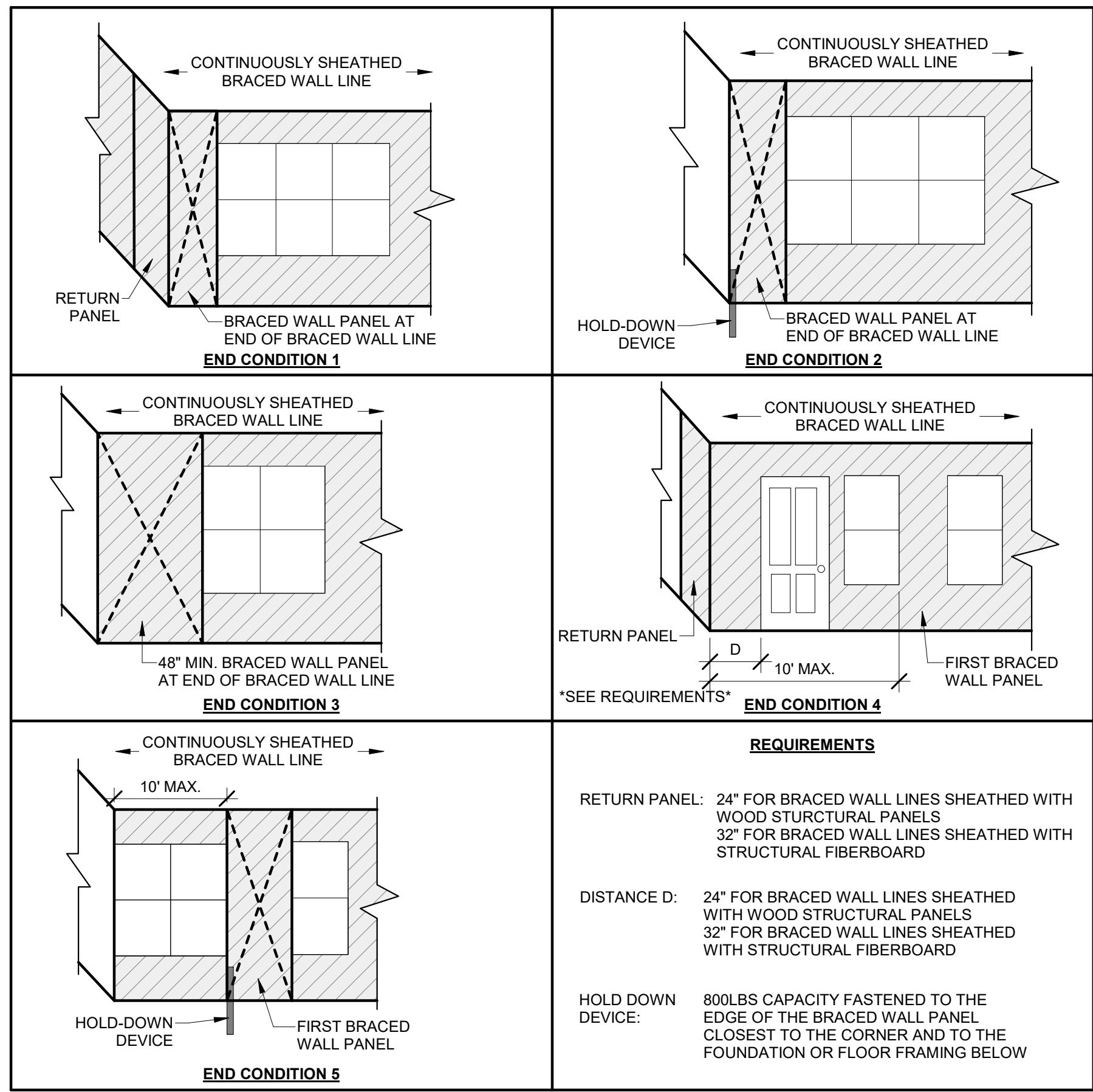
EXTERIOR BRACED WALL METHOD: (SEE ON THIS SHEET)
WSP METHOD
WOOD STRUCTURAL PANEL SHEATHING WITH A THICKNESS NOT LESS THAN 3/8" WITH MINIMUM SPAN RATING OF 24/0 FOR 16" O.C. STUD SPACING WITH 8d COMMON NAILS @ 6" O.C. EDGES AND 12" O.C. FIELD OR SHEATHING THICKNESS NOT LESS THAN 7/16" WITH MINIMUM SPAN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

INTERIOR BRACED WALLS (SEE ON THIS SHEET)
GB METHOD:
1/2" MINIMUM GYPSUM BOARD OVER STUDS SPACED @ 24" MAXIMUM FASTENED W/ #6- 1 1/4" TYPE "W" OR "S" DRYWALL SCREWS @ 7" O.C. EDGES AND FIELD (MIN. 4'-0" SECTION FOR BOTH SIDES) OR
LIB METHOD:
1x4 WOOD FASTENED W/ (3) 8d COMMON NAILS OR SIMPSON / USP 16 GA. TYPE WB (OR EQUIVALENT) STL. X-BRACE(S) @ 45° TO 60° ANGLES, MAXIMUM 16" O.C. STUDS FASTENED PER MANUF. SPECS.

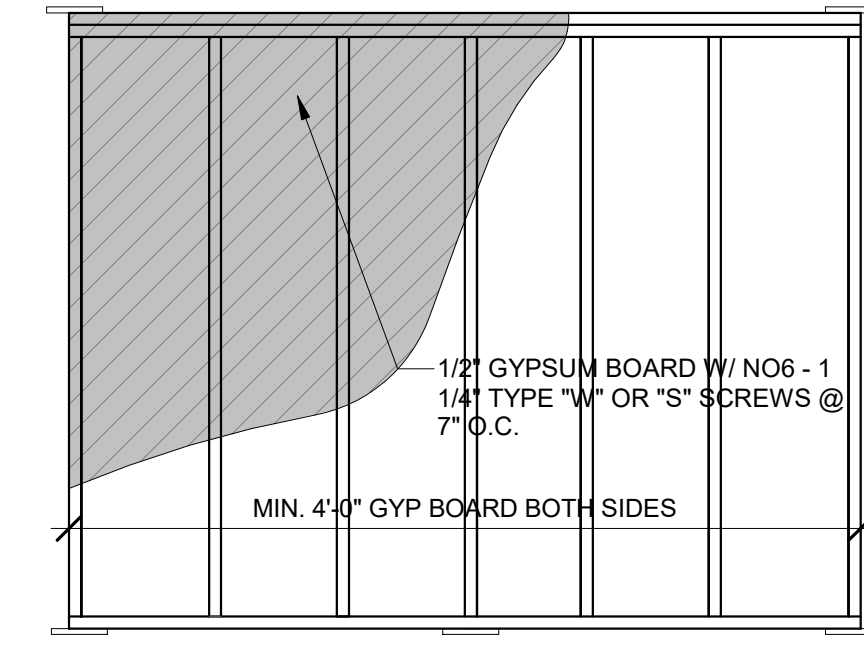
MINIMUM WALL STUD FRAMING NOMINAL SIZE & GRADE	MAX. PONY WALL HEIGHT (FEET)	MAX. TOTAL WALL HEIGHT (FEET)	MAX. OPENING WIDTH (FEET)	TENSION STRAP CAPACITY REQUIRED (POUNDS) ^a	
				ULTIMATE DESIGN WIND SPEED V (MPH)	
				115	115
				EXPOSURE B	EXPOSURE C
2X4 NO. 2 GRADE	0	10	18	1,000	1,000
			9	1,000	1,000
			16	1,025	2,500
			18	1,275	2,850
			9	1,000	1,875
			16	2,175	4,125
	2	10	18	2,500	DR
			9	1,500	3,175
			16	3,375	DR
			18	3,975	DR
			9	2,750	DR
			12	3,775	DR
2X6 STUD GRADE	2	12	9	1,000	2,025
			16	2,150	3,675
			18	2,550	DR
			9	1,750	3,125
			16	2,400	DR
			18	3,800	DR
	4	12	9	1,500	3,175
			16	3,375	DR
			18	3,975	DR
			9	2,750	DR
			12	3,775	DR
			18	3,800	DR

a. DR = DESIGN REQUIRED
 b. STRAP SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

END WALL CONDITIONS FOR CONTINUOUSLY SHEATHED BRACED WALL LINES

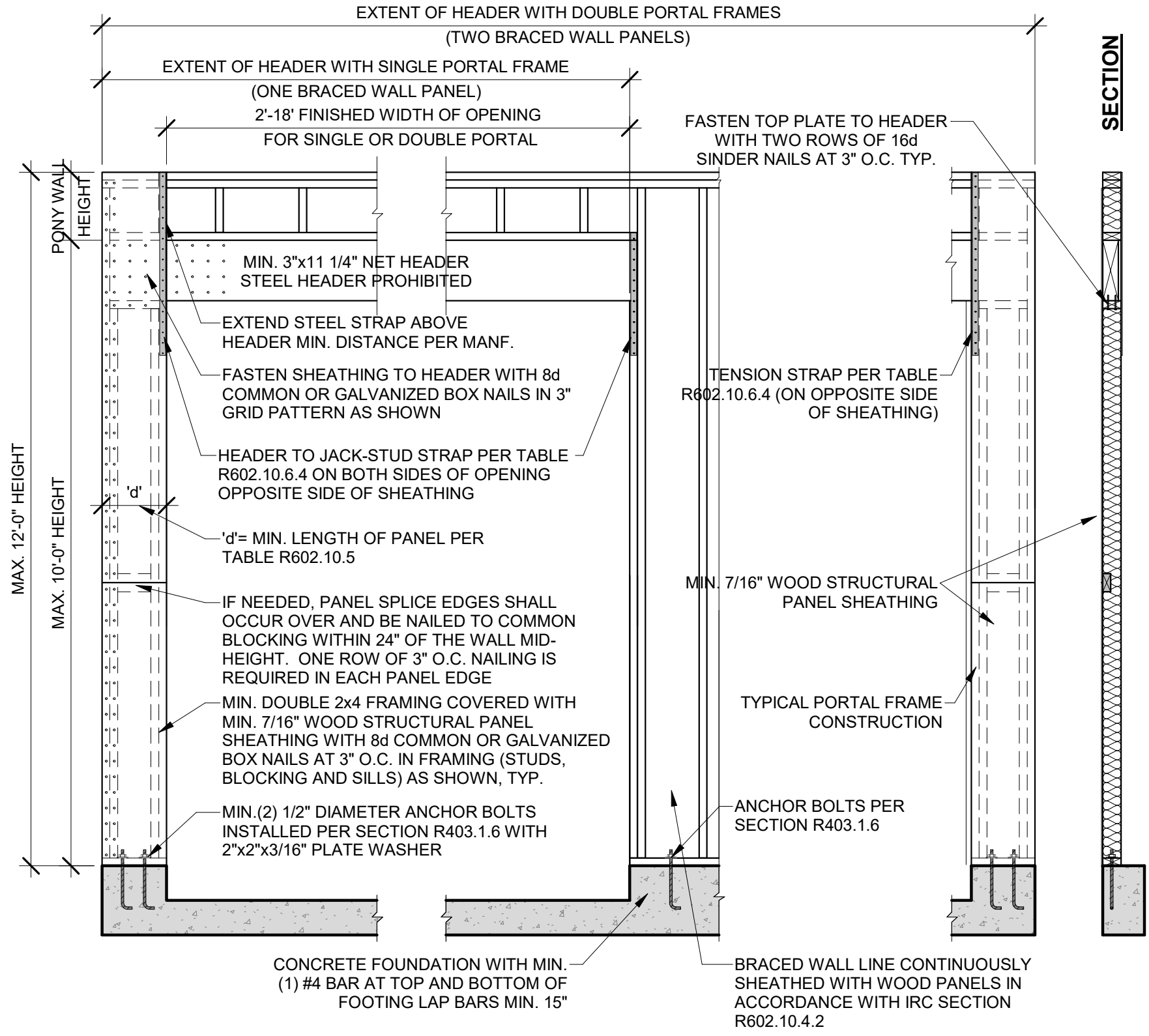


1 DIAPHRAGM CONNECTION TO INTERIOR WALL
3/8" = 1'-0"

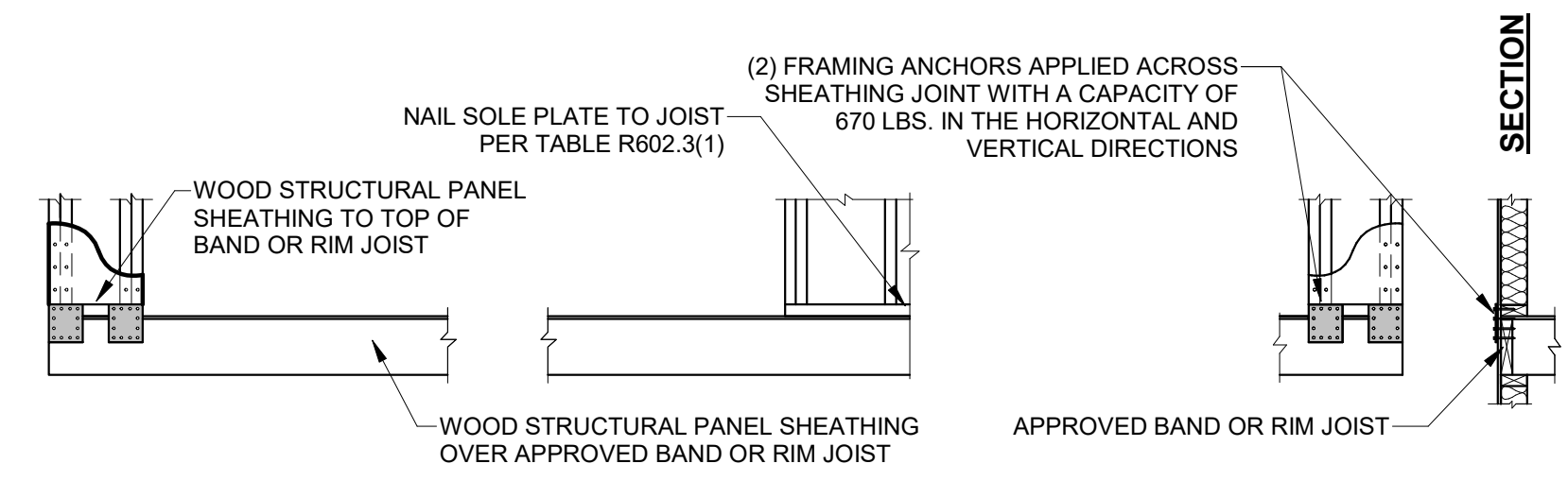


5 GB BRACING
1/2" = 1'-0"

FRONT ELEVATION

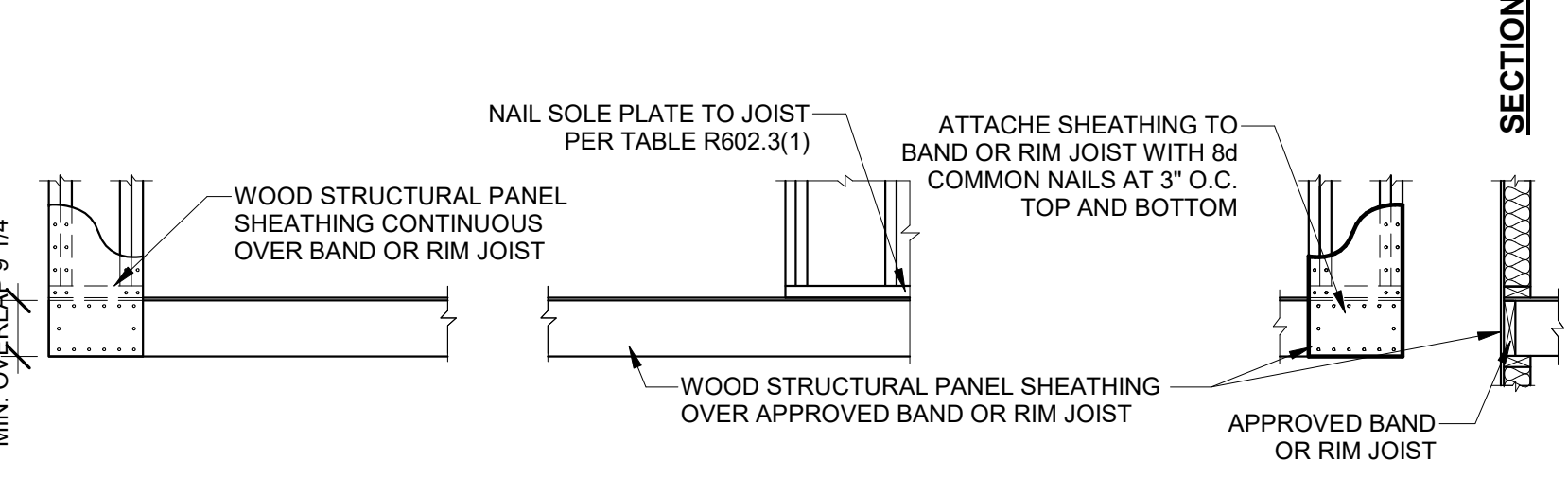


OVER CONCRETE OR MASONRY BLOCK FOUNDATION



OVER RAISED WOOD FLOOR - FRAMING ANCHOR OPTION

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



OVER RAISED WOOD FLOOR - OVERLAP OPTION

(WHEN PORTAL SHEATHING LAPS OVER BAND OR RIM JOIST)

4 CS-PF
1/2" = 1'-0"

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 11656 W. 75TH STREET
 SHAWNEE, KS 66214
 WWW.HDENGINEERS.COM
 913.631.2222
 SERVICE@HDENGINEERS.COM



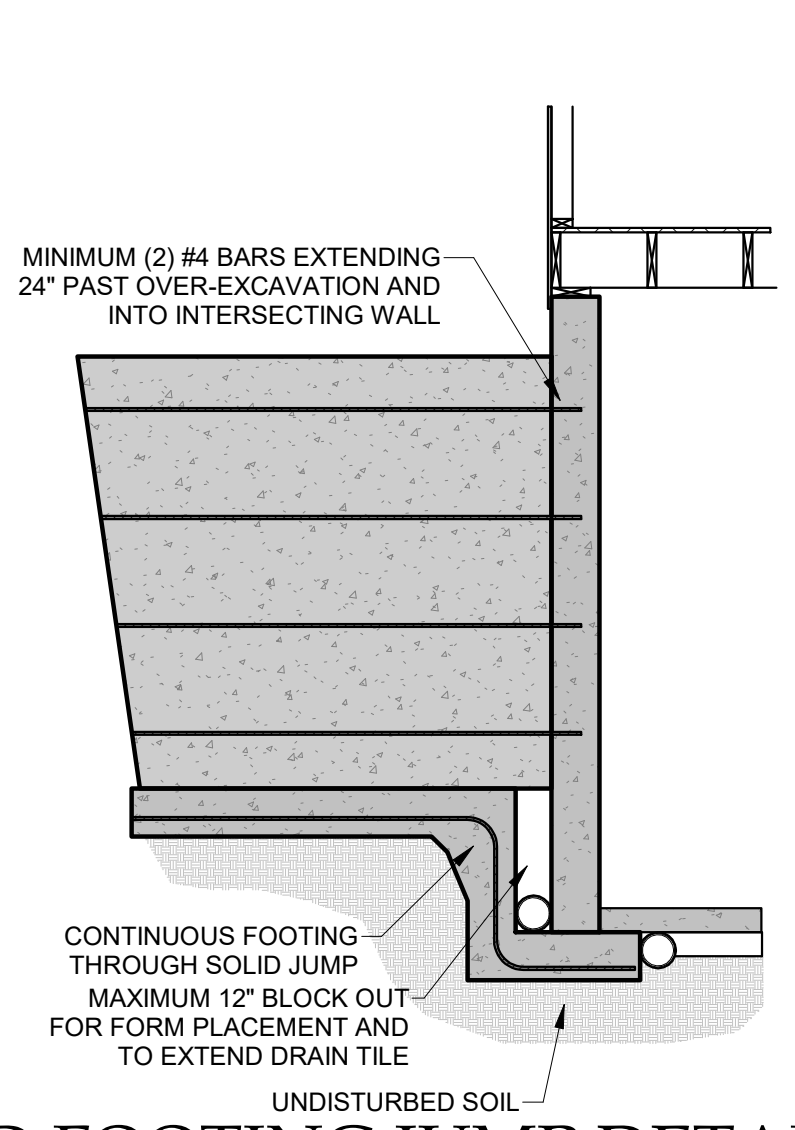
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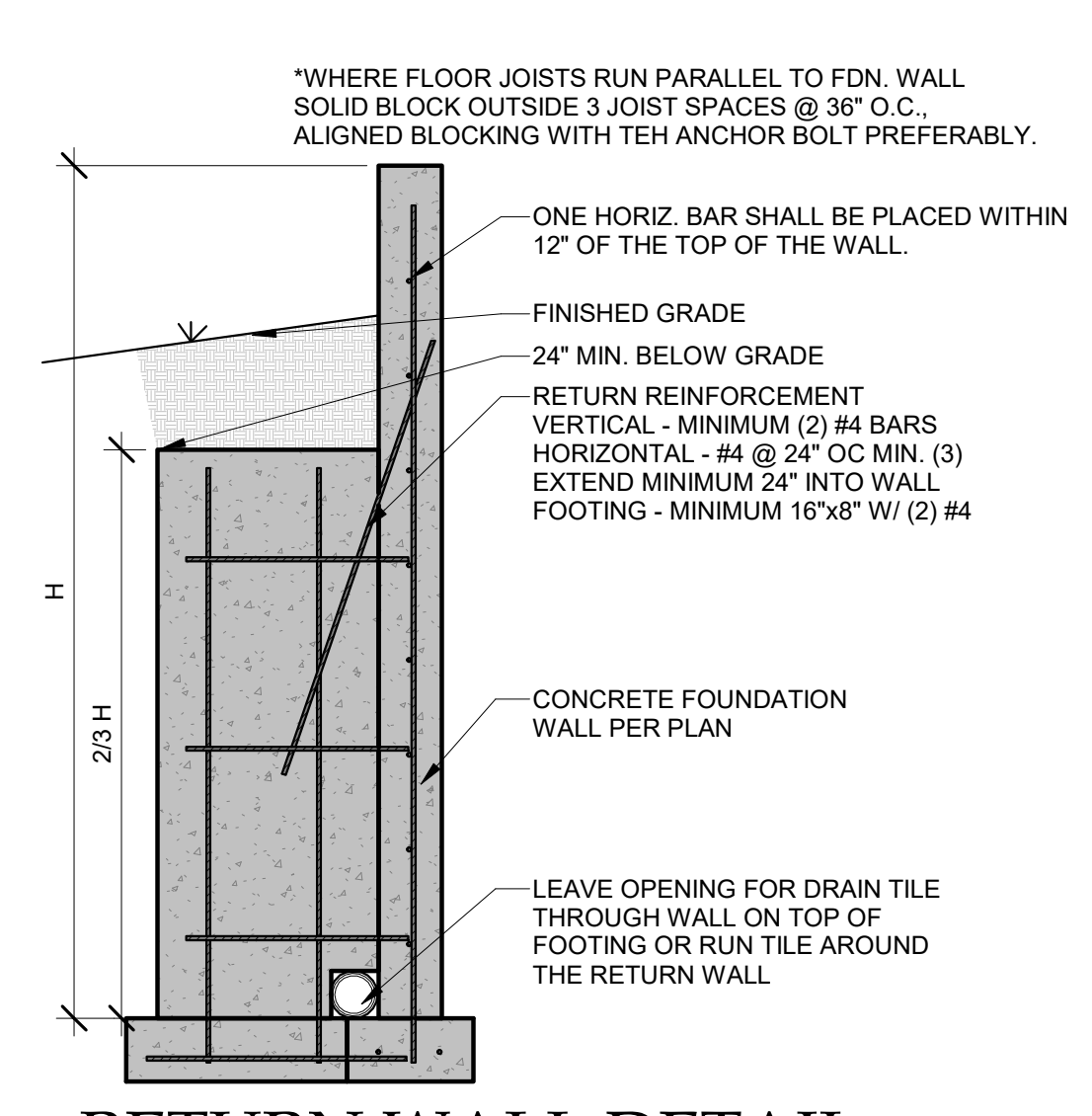
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BRACED WALLS NOTES & DETAILS

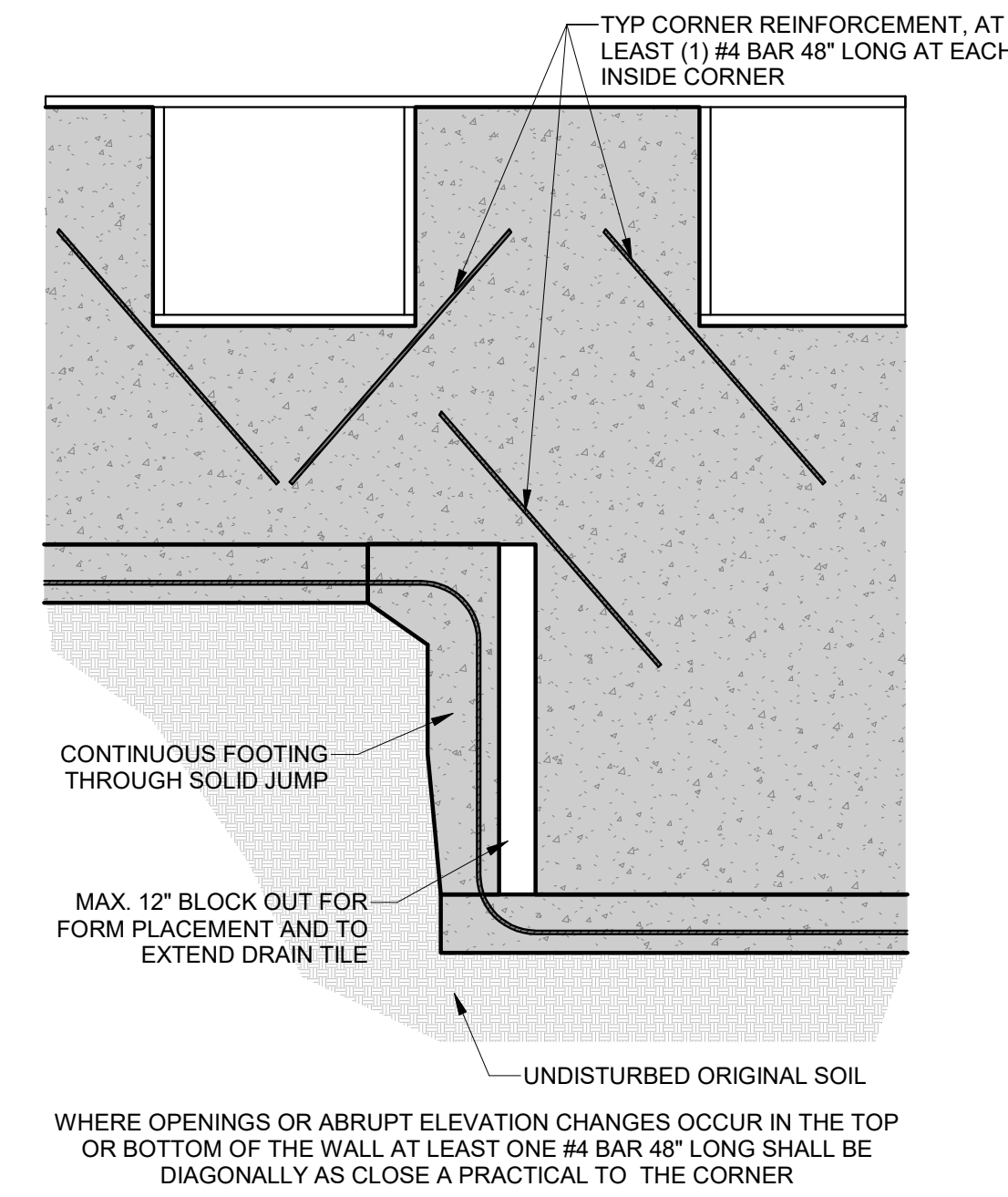
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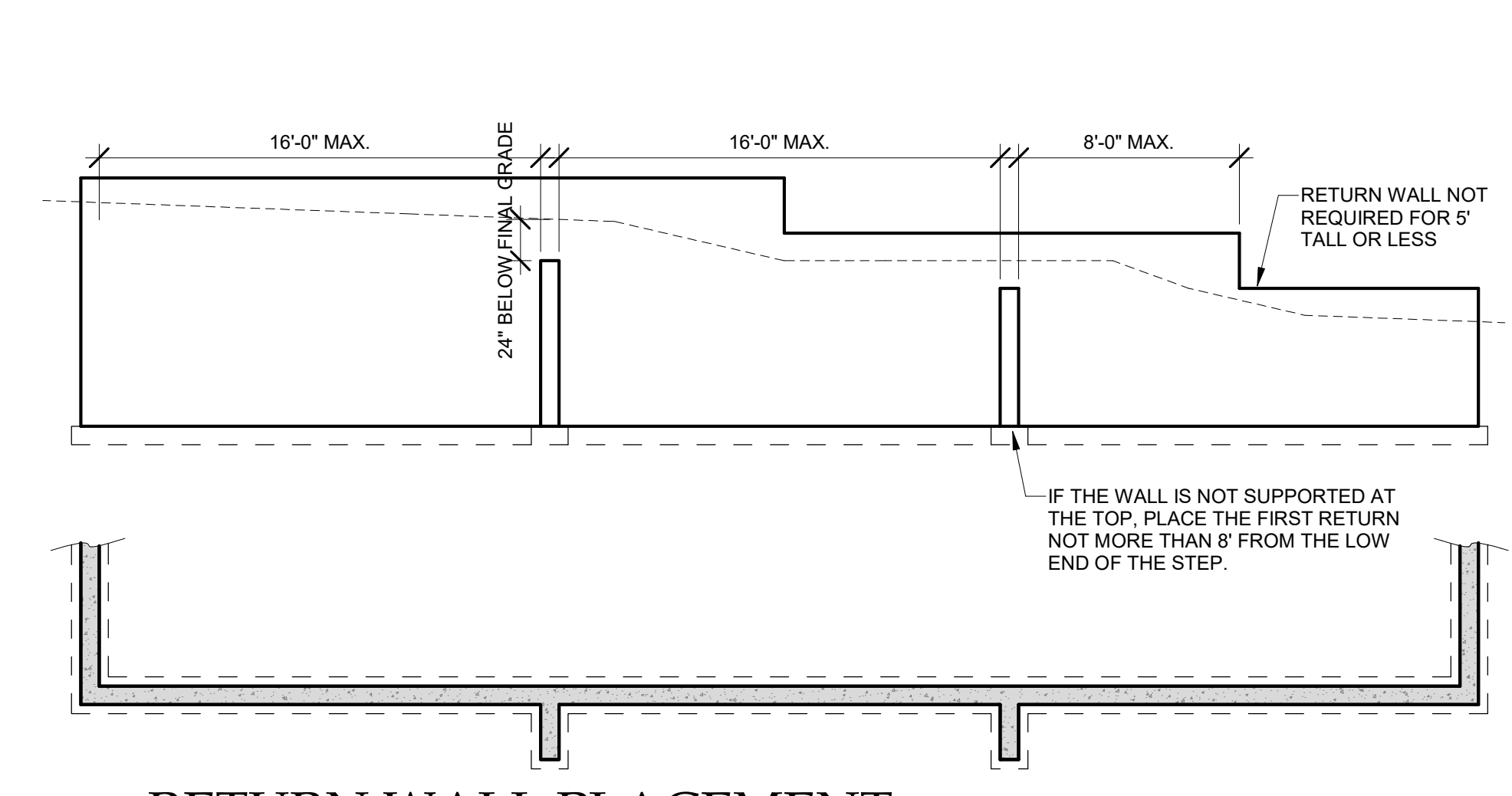
1 SOLID FOOTING JUMP DETAIL
3/8" = 1'-0"



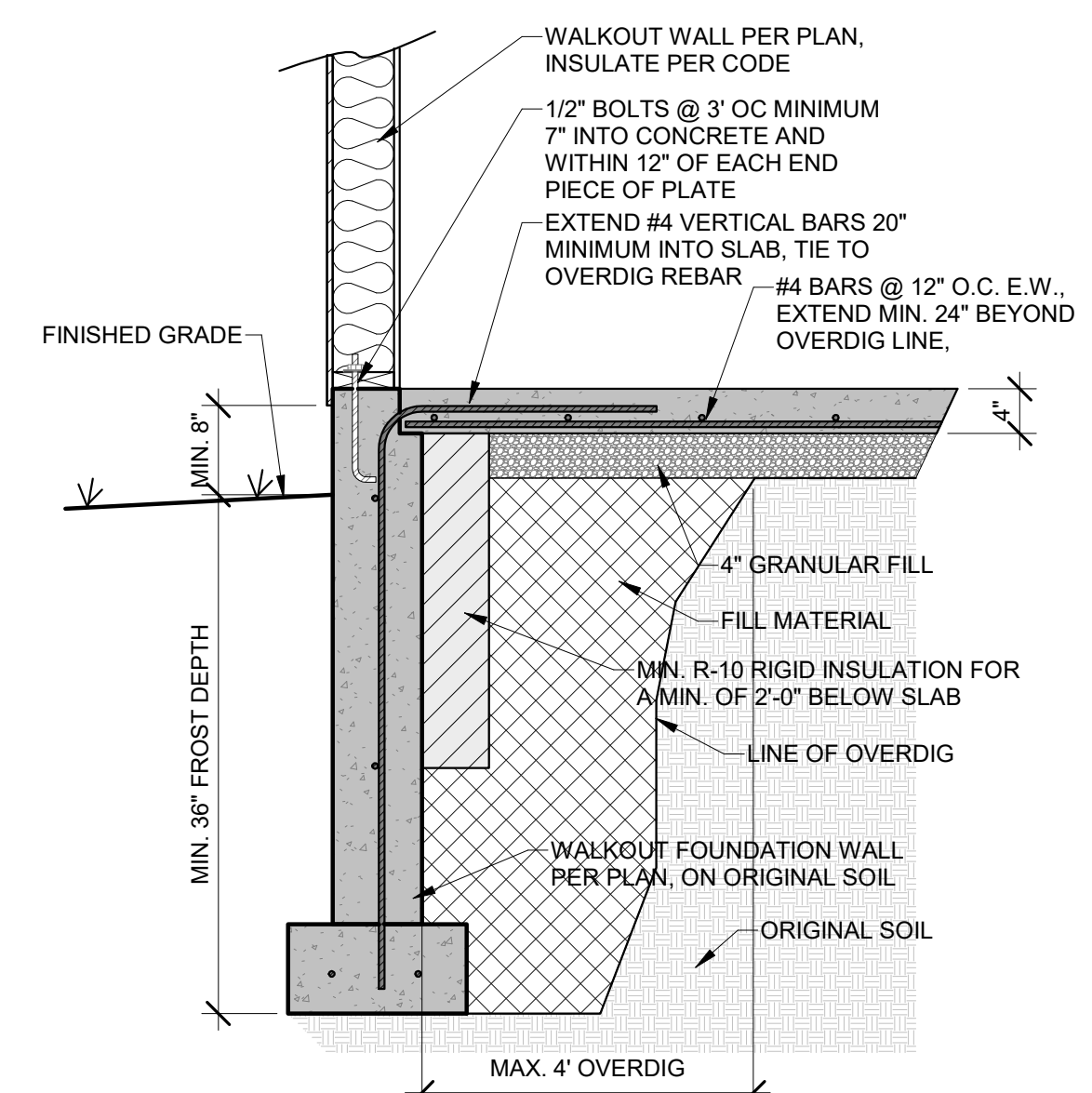
2 RETURN WALL DETAIL
1/2" = 1'-0"



3 REINFORCEMENT AT CORNERS AND STEPS
1/2" = 1'-0"

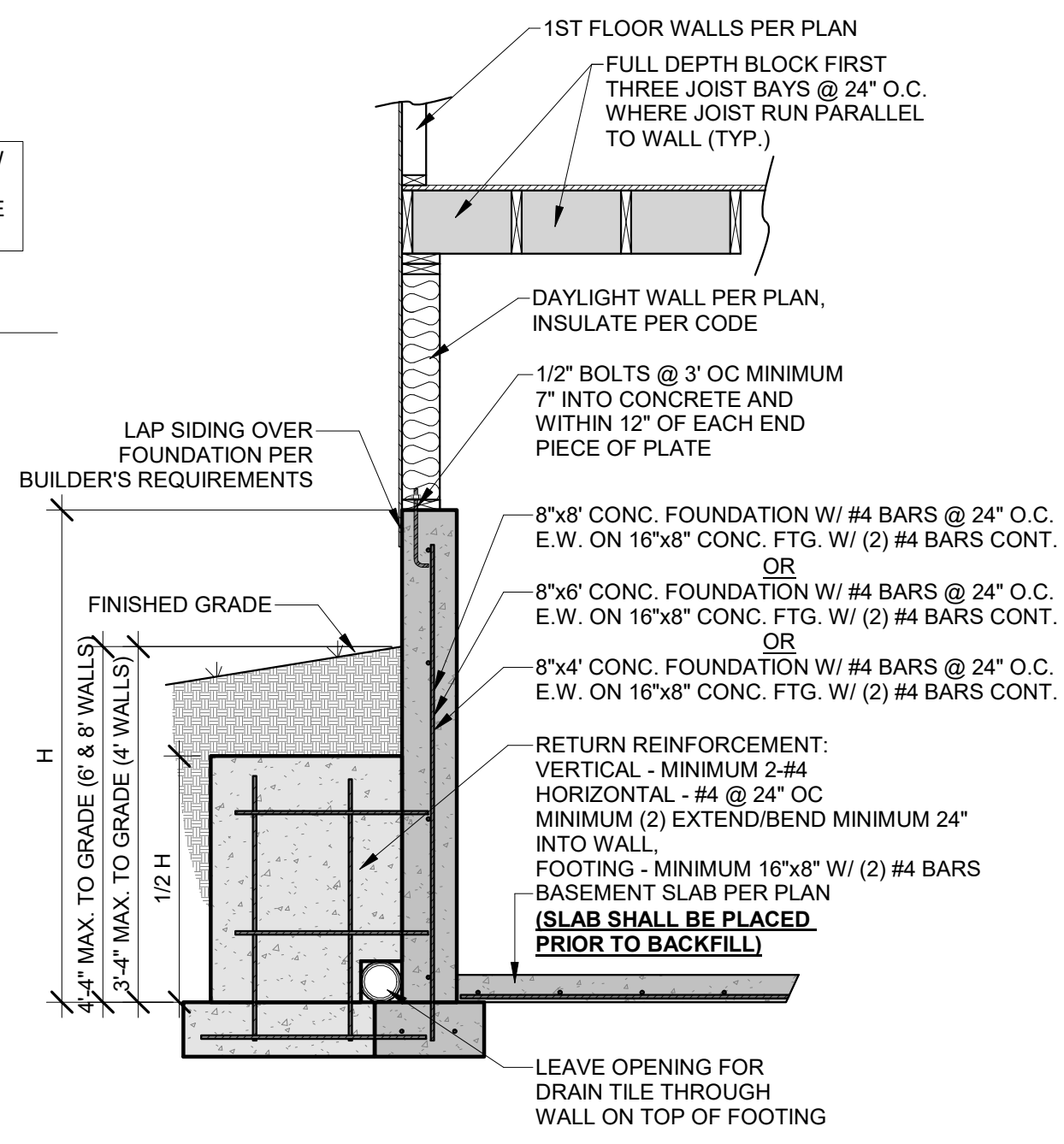


4 RETURN WALL PLACEMENT
3/16" = 1'-0"



6 WALKOUT DETAIL
3/4" = 1'-0"

IMPORTANT NOTE:
ANY SLAB WITH GREATER THAN 2' OF GRADED ROCK OR 8' OF FILL SOIL BELOW SHALL BE DESIGNED AS STRUCTURAL PER PLAN. OUR FIRM SHOULD BE CONTACTED IMMEDIATELY FOR DESIGN RECOMMENDATIONS. DESIGN MUST BE COMPLETED PRIOR TO PLACEMENT OF PIERS OR FOOTINGS.



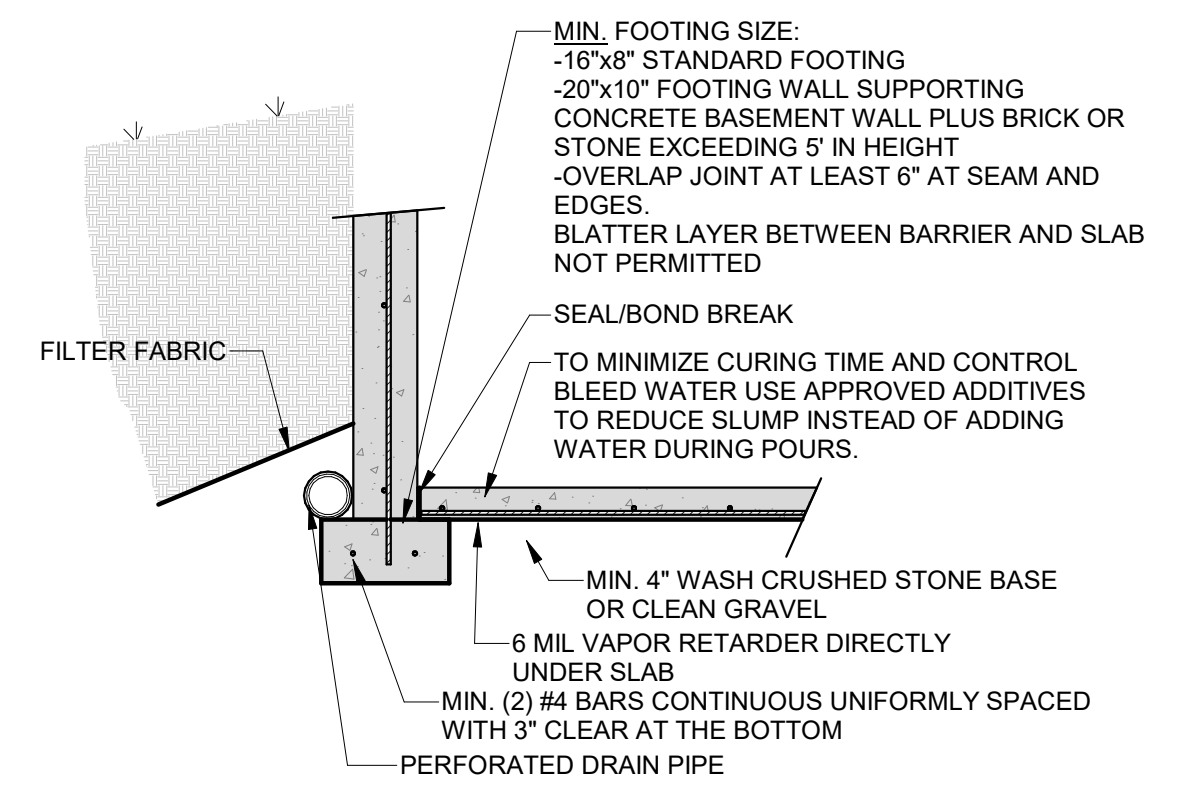
5 UNRESTRAINED FOUNDATION WALL
1/2" = 1'-0"

8"x4", 8"x6", AND 8"x8" DAYLIGHT FOUNDATION
IF SLAB IS NOT PLACED PRIOR TO BACKFILL CONTRACTOR IS RESPONSIBLE FOR BRACING THE FOUNDATION AS REQUIRED

CONCRETE STRENGTH	8" THICK WALL		10" THICK WALL		
	8'	9'	8'	9'	10'
3000 PSI/ 40 KSI	16	12	24	16	12
3500 PSI/ 40 KSI	16	12	24	24	12
3000 PSI/ 60 KSI	24	16	24	20	16
3500 PSI/ 60 KSI	24	16	24	24	16

HORIZONTAL REINFORCEMENT**	4'-#4		5'-#4		6'-#4	
	4'-#4	5'-#4	4'-#4	5'-#4	6'-#4	6'-#4
ONE BAR 12" FROM TOP OF WALL; MAX. SPACING 24" O.C.	4-#4	5-#4	4-#4	5-#4	6-#4	6-#4

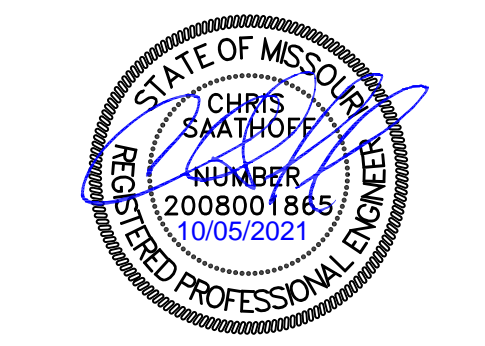
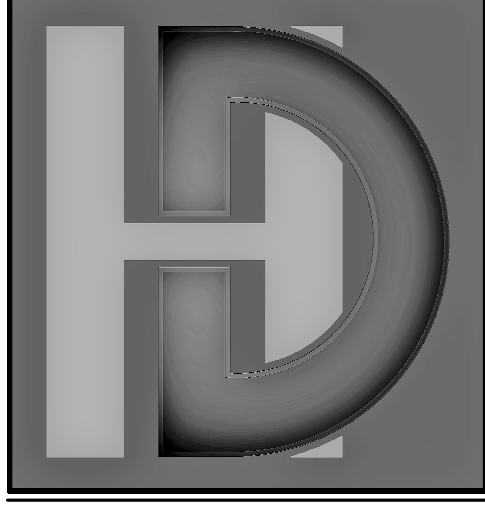
* CONCRETE SHALL HAVE AIR ENTRAINMENT OF 5-7%.
* MINIMUM REQUIREMENT FOR VERTICAL REBAR IN PLAIN CONCRETE WALLS IS #4 @ 36" ON CENTER (ACI 332).
* VERTICAL BARS SHALL BE CONTINUED UP TO WITHIN 8" OF THE TOP OF THE WALL.
* REBAR SHALL BE POSITIONED AT THE TENSION FACE OF THE WALL (2" FROM THE INSIDE FACE).
* REINFORCEMENT SHALL LAP A MINIMUM OF 24 INCHES AT ENDS, SPLICES, AND AROUND CORNERS.
** #4 BARS @ 24" ON CENTER.
** #4 BAR WITHIN 12 OF TOP AND BOTTOM OF WALL.
** MINIMUM GRADE 40 (40ksi) STEEL (PER ACI 332).
** HORIZONTAL REINFORCEMENT SHALL BE INSTALLED ON THE COMPRESSION SIDE (SOIL SIDE) OF THE VERTICAL REINFORCEMENT



7 FOUNDATION FOOTINGS
1/2" = 1'-0"

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HD ENGINEERING & DESIGN, INC.
11666 W. 75TH STREET
SHAWNEE, KS 66214
WWW.HDENGINEERS.COM
913.631.2222
SERVICE@HDENGINEERS.COM



SAB HOMES, INC.
EXPANDED STRATOGA
2613 SW HOOK FARM LANE. LEE'S SUMMIT, MO

STRUCTURAL DETAILS & NOTES

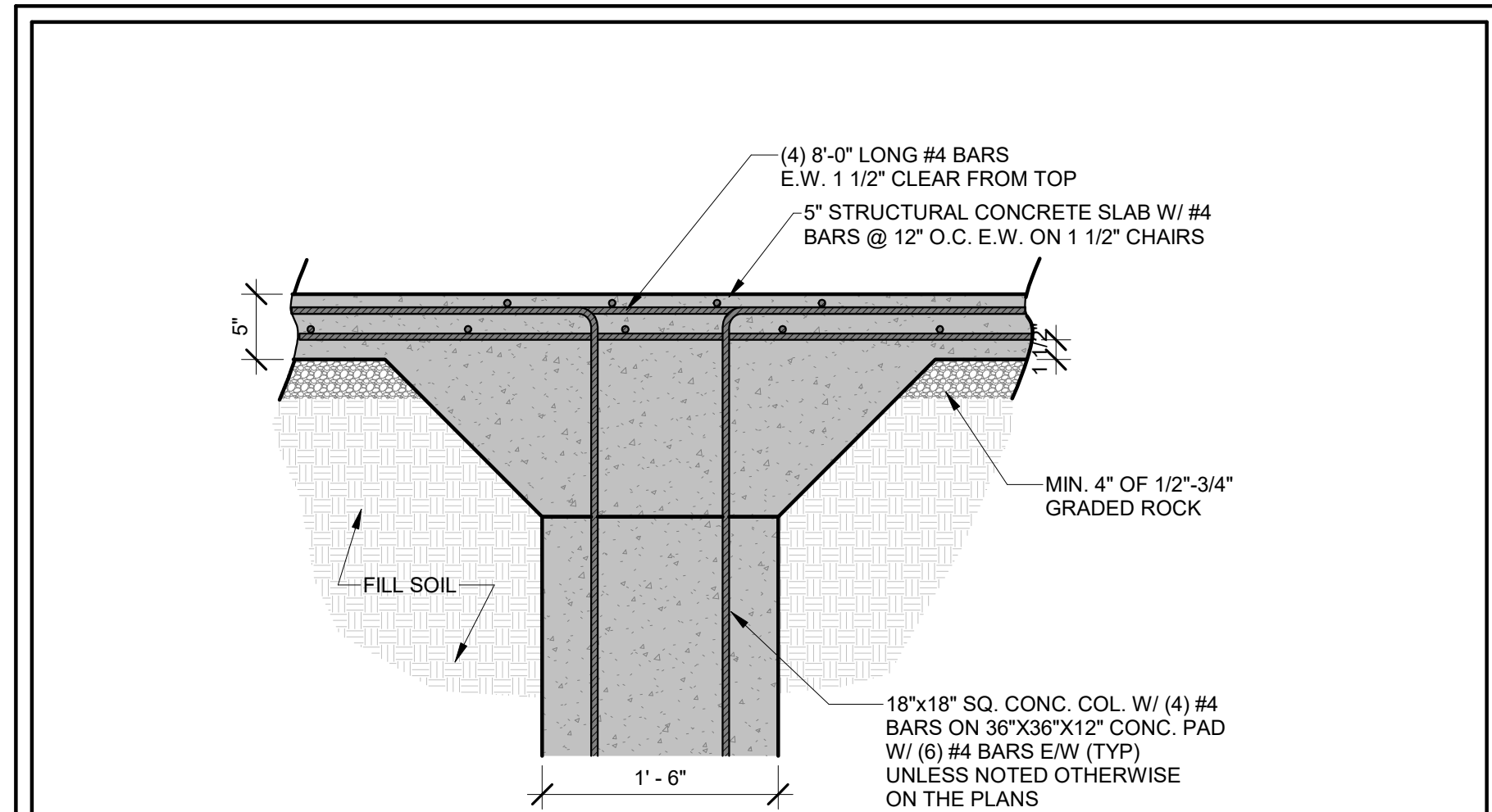
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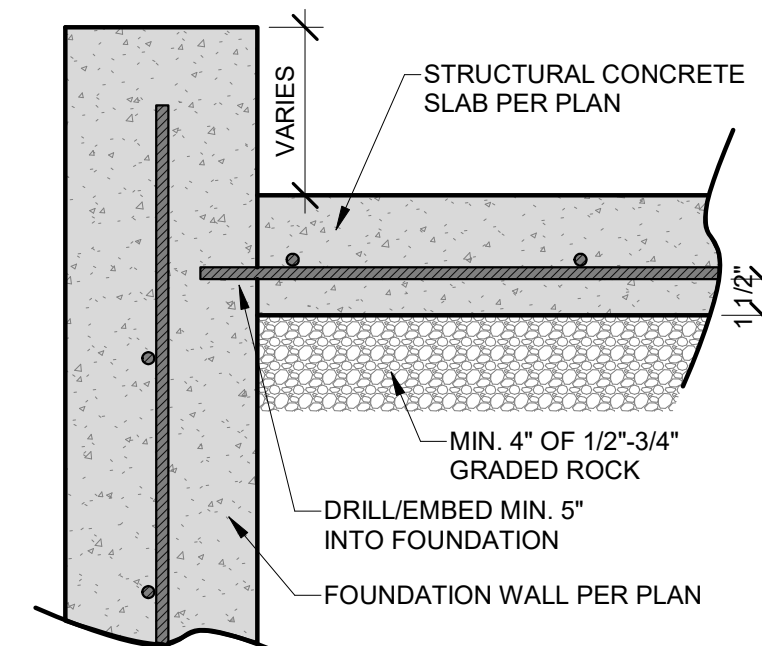
CONCRETE DETAILS

S-3.0

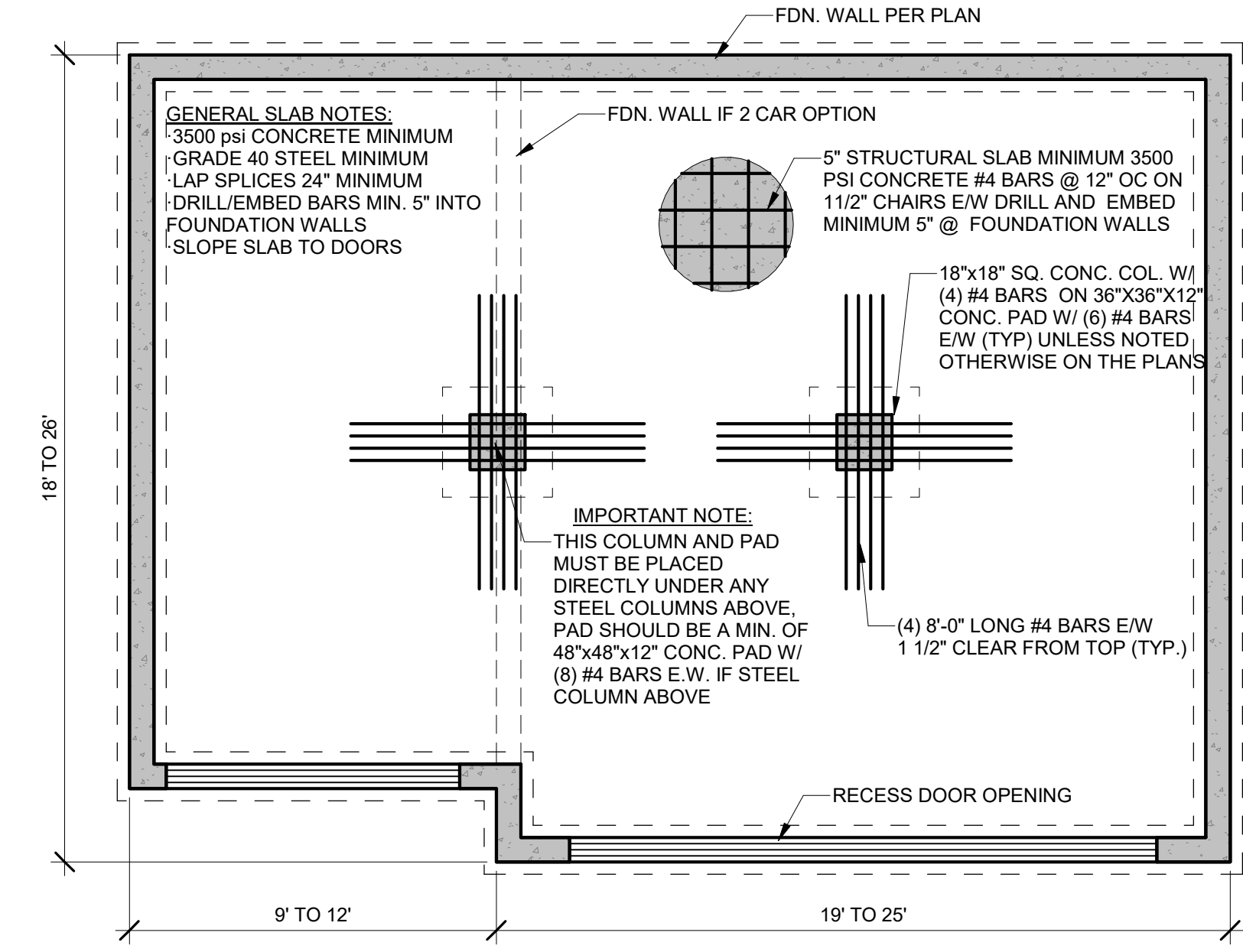
DETAILS PROVIDED ARE DERIVED FROM JOHNSON COUNTY RESIDENTIAL FOUNDATION GUIDELINE



7 GARAGE SLAB COLUMN DETAIL
 1" = 1'-0"

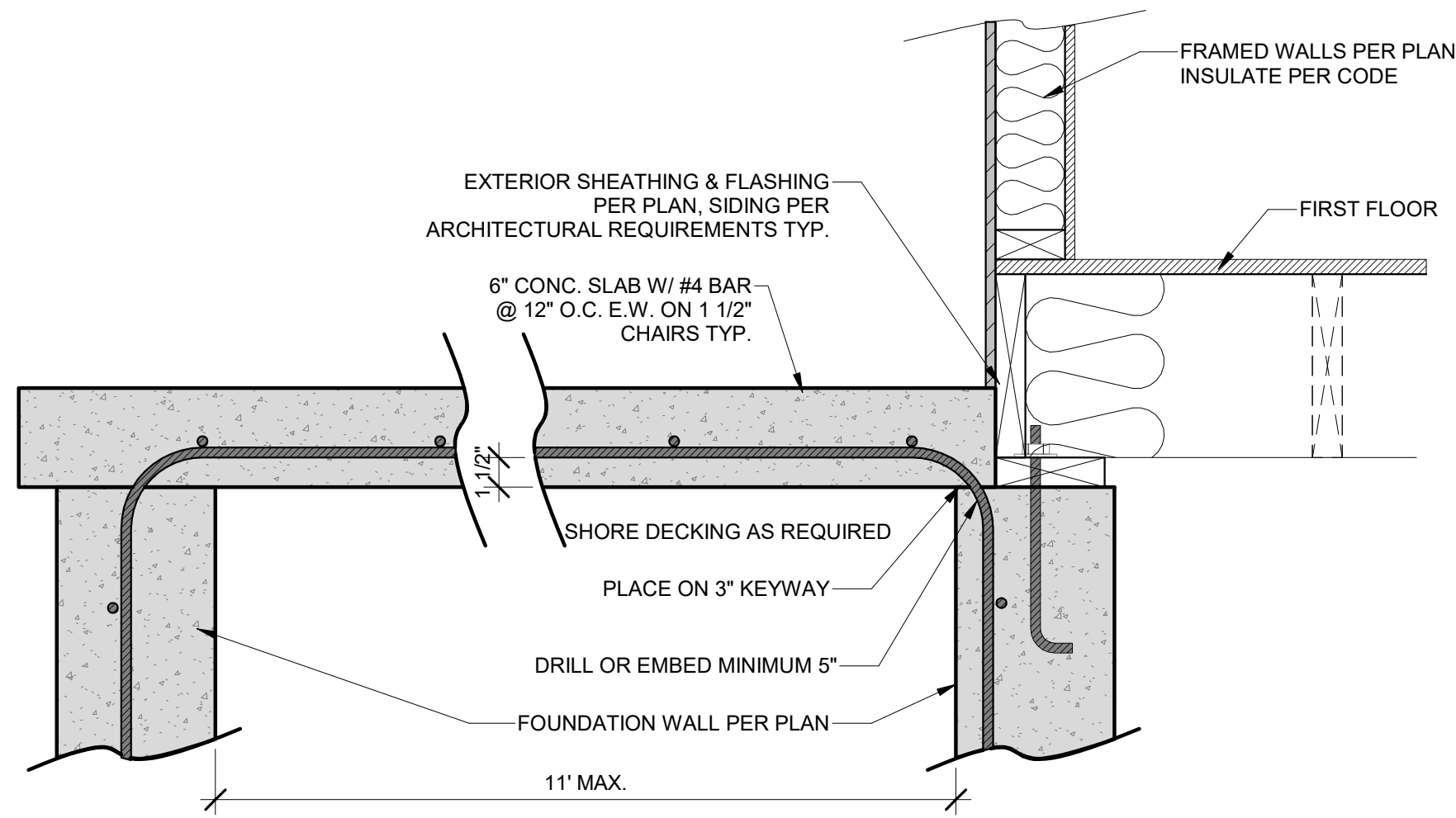


8 STRUCTURAL SLAB/ WALL
 1 1/2" = 1'-0"



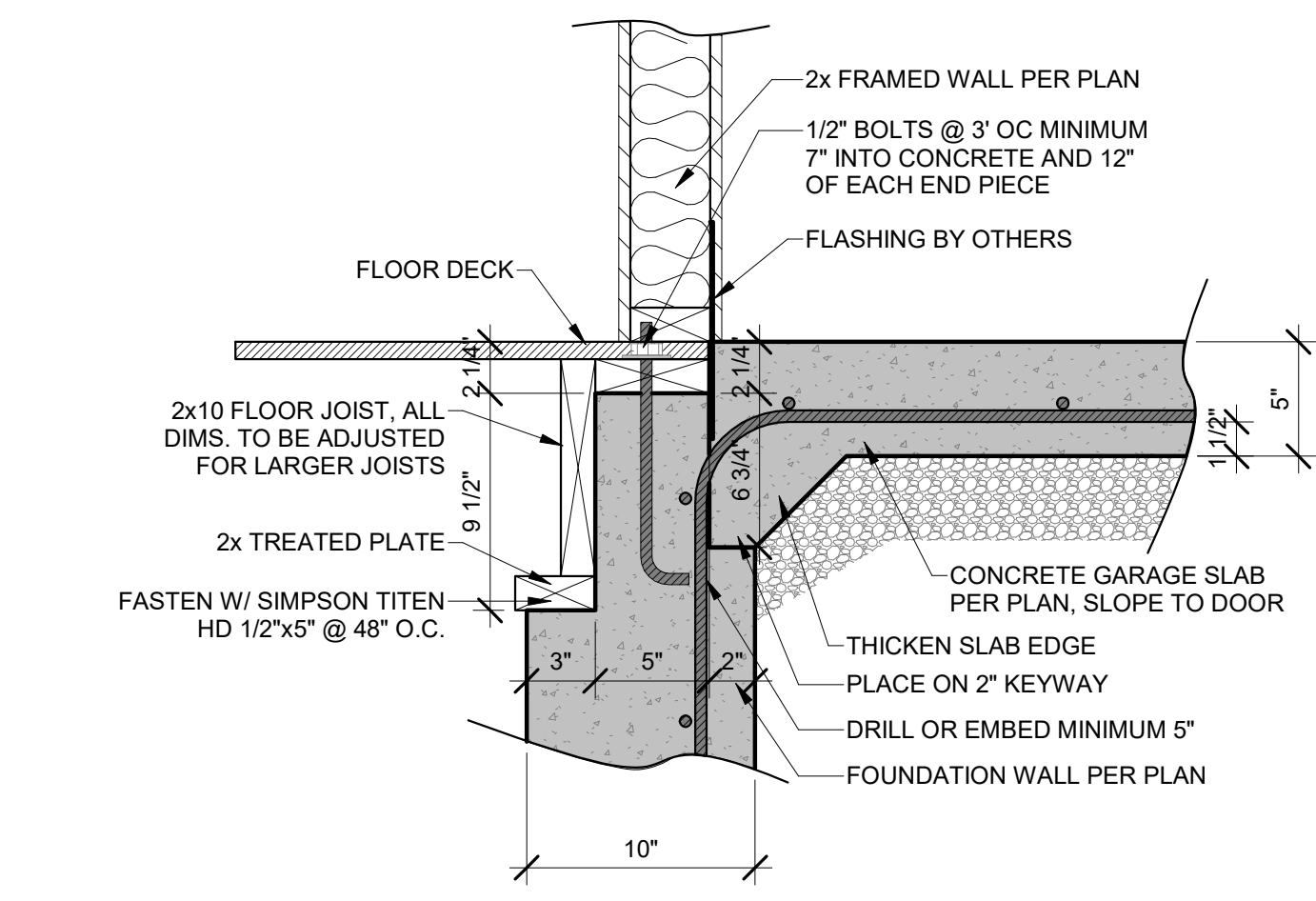
9 TYPICAL GARAGE SLAB
 1/4" = 1'-0"

HD ENGINEERING STRUCTURAL GARAGE SLAB DETAILS

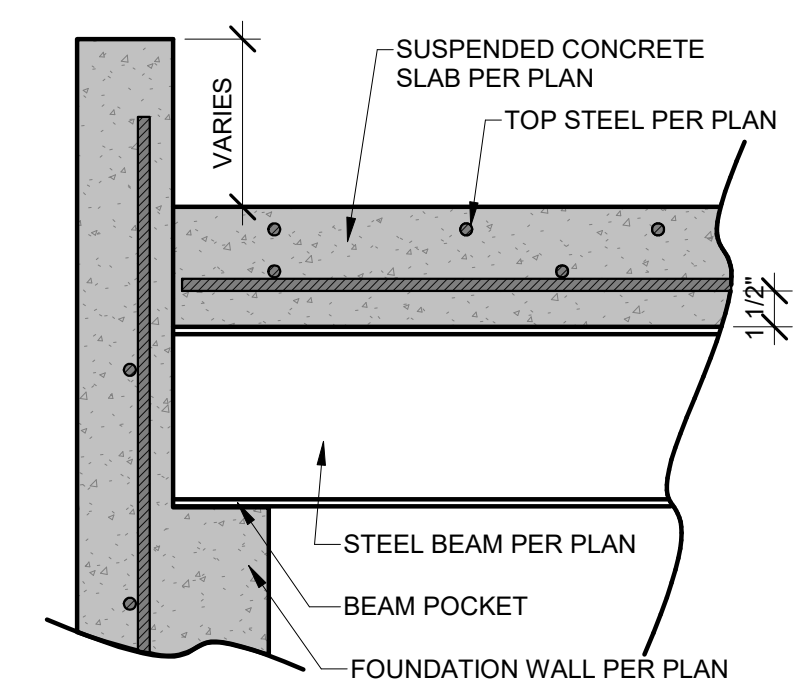


6 SUSPENDED PORCH STOOP SLAB
 1 1/2" = 1'-0"

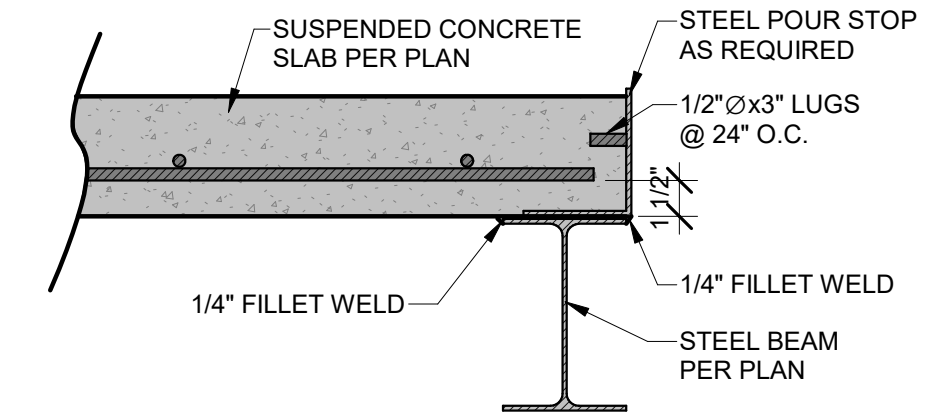
FOR SUSPENDED SLABS A MAXIMUM OF 10' ABOVE FLOOR BELOW: TEMPORARY SHORING WALLS SHALL BE PLACED AT A MAXIMUM OF 4' O.C./#2-2X4 STUDS AT 16" O.C. W/ TOP AND BOTTOM PLATE. WALL TO HAVE CONTINUOUS DIAGONAL BRACING. LATERAL BRACING TO BE RUN FROM WALL TO WALL AT MID HEIGHT 4' ON CENTER. SHORING TO REMAIN IN PLACE FOR AT LEAST 21 DAYS.



10 ZERO ENTRY GARAGE DETAIL
 1 1/2" = 1'-0"

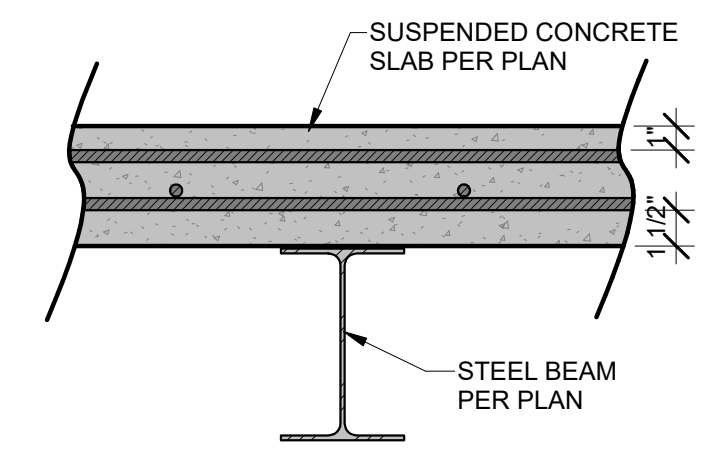


1 SUSPENDED SLAB BEAM/WALL CONNECTION
 1 1/2" = 1'-0"

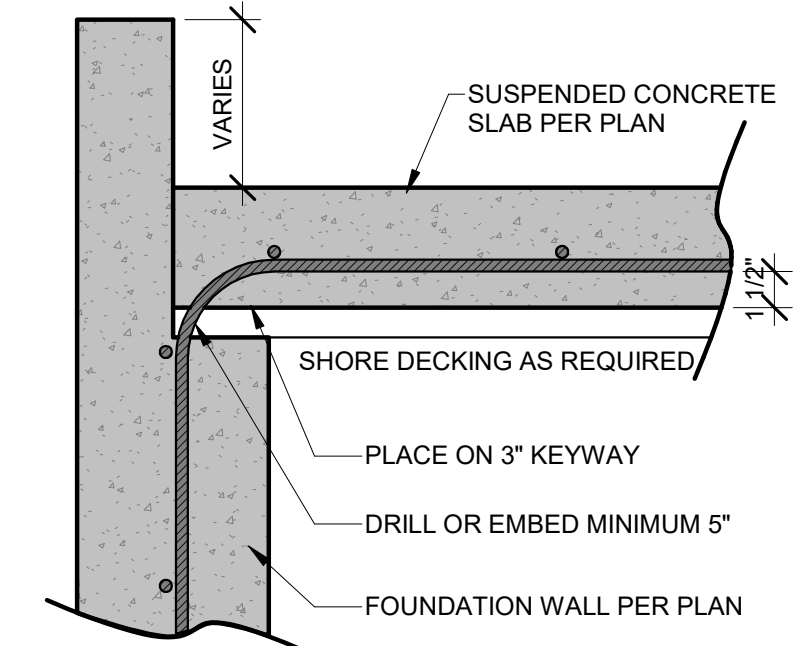


2 SUSPENDED SLAB POUR STOP
 1 1/2" = 1'-0"

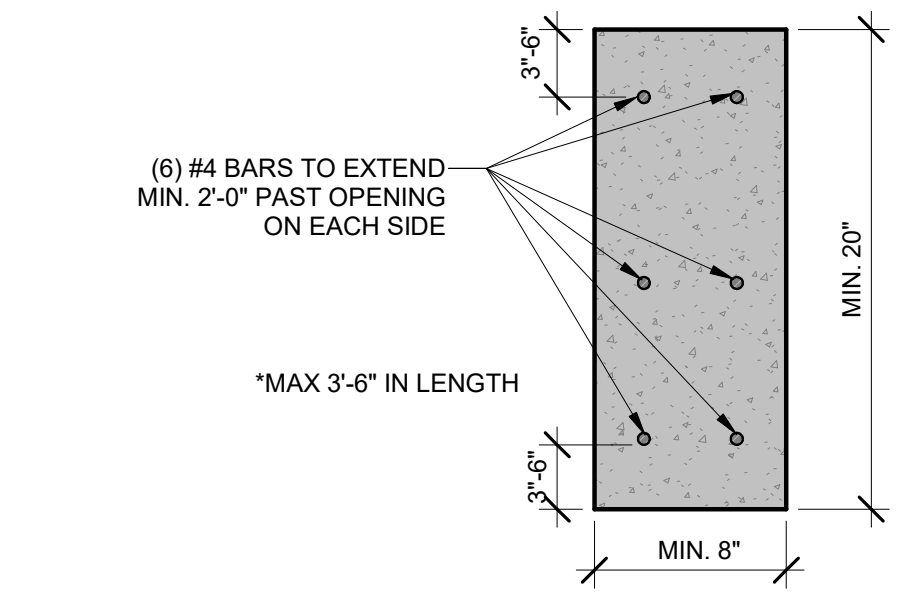
*FASTEN STEEL ANGLE TO BEAM W/ TEK SCREWS OR 2"x1/4" FILLET WELD @ 12" O.C.



3 SUSPENDED SLAB/STEEL BEAM CROSS SECTION
 1 1/2" = 1'-0"

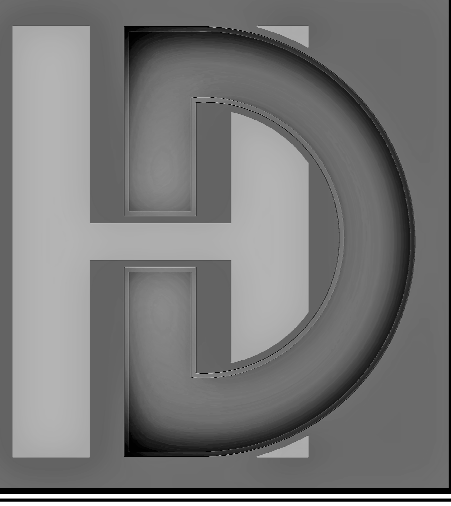


4 SUSPENDED SLAB/WALL CONNECTION
 1 1/2" = 1'-0"



5 CONCRETE HEADER DETAIL
 1 1/2" = 1'-0"

IMPORTANT NOTE:
 FOR SUSPENDED SLABS A MAXIMUM OF 10' ABOVE FLOOR BELOW: TEMPORARY SHORING WALLS SHALL BE PLACED AT A MAXIMUM OF 4' O.C./#2-2X4 STUDS AT 16" O.C. W/ TOP AND BOTTOM PLATE. WALL TO HAVE CONTINUOUS DIAGONAL BRACING. LATERAL BRACING TO BE RUN FROM WALL TO WALL AT MID HEIGHT 4' ON CENTER. SHORING TO REMAIN IN PLACE FOR AT LEAST 21 DAYS.
 ANY CAST IN PLACE SLABS FORMED MORE THAN 10' ABOVE THE FLOOR BELOW SHALL HAVE A SITE SPECIFIC SHORING DESIGN DONE. OUR FIRM SHOULD BE CONSULTED FOR THIS DESIGN ONCE FOUNDATION WALLS ARE IN PLACE TO EVALUATE ALL FIELD CONDITIONS. IT SHOULD BE NOTED THAT FAILURE TO HAVE AN ADEQUATE SHORING DESIGN CAN RESULT IN FORM COLAPSE AND/OR CATASTROPHIC FAILURE.



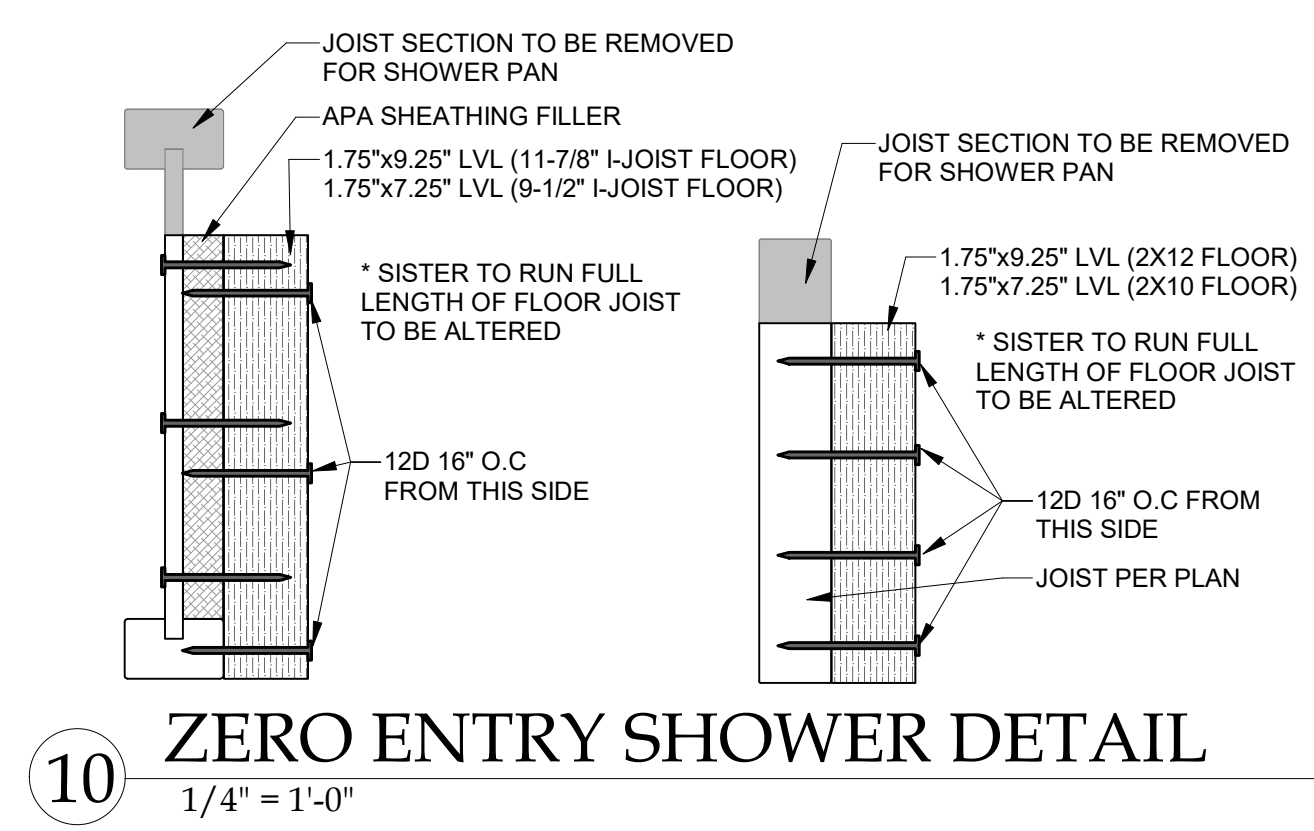
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 EXPANDED STRATOGA
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 STRUCTURAL DETAILS & NOTES

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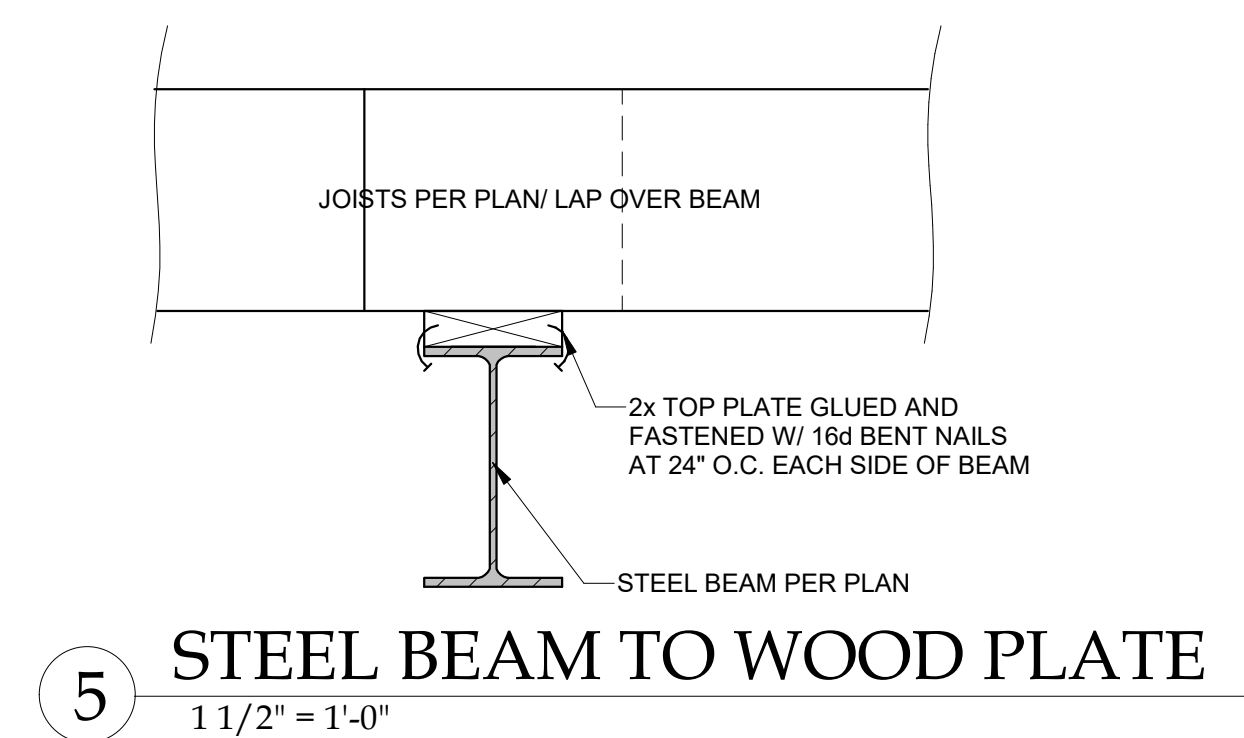
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SUSPENDED SLAB DETAILS

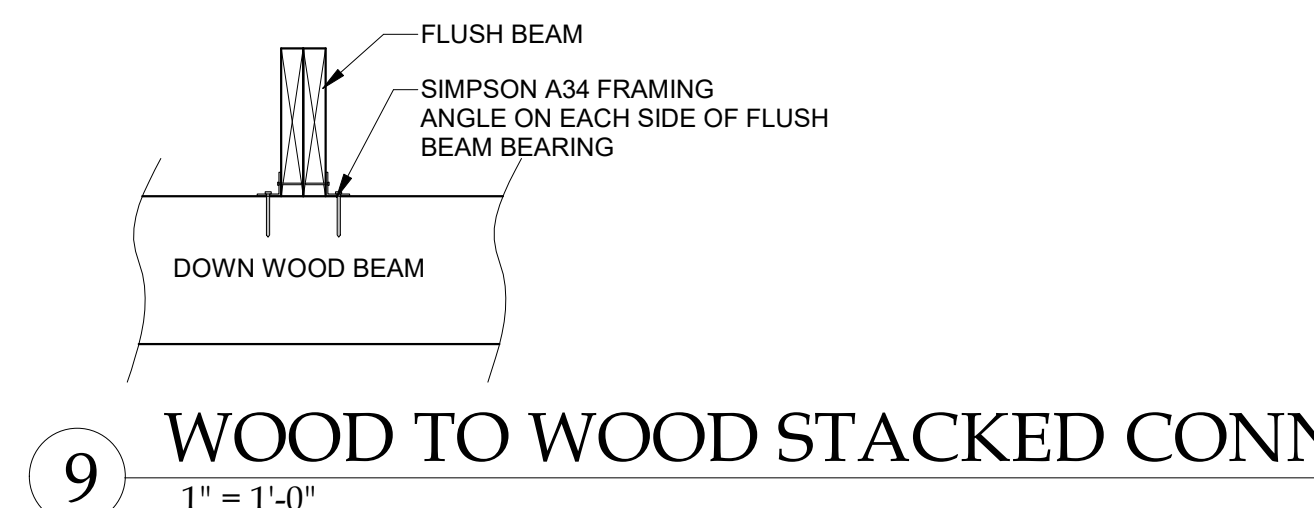
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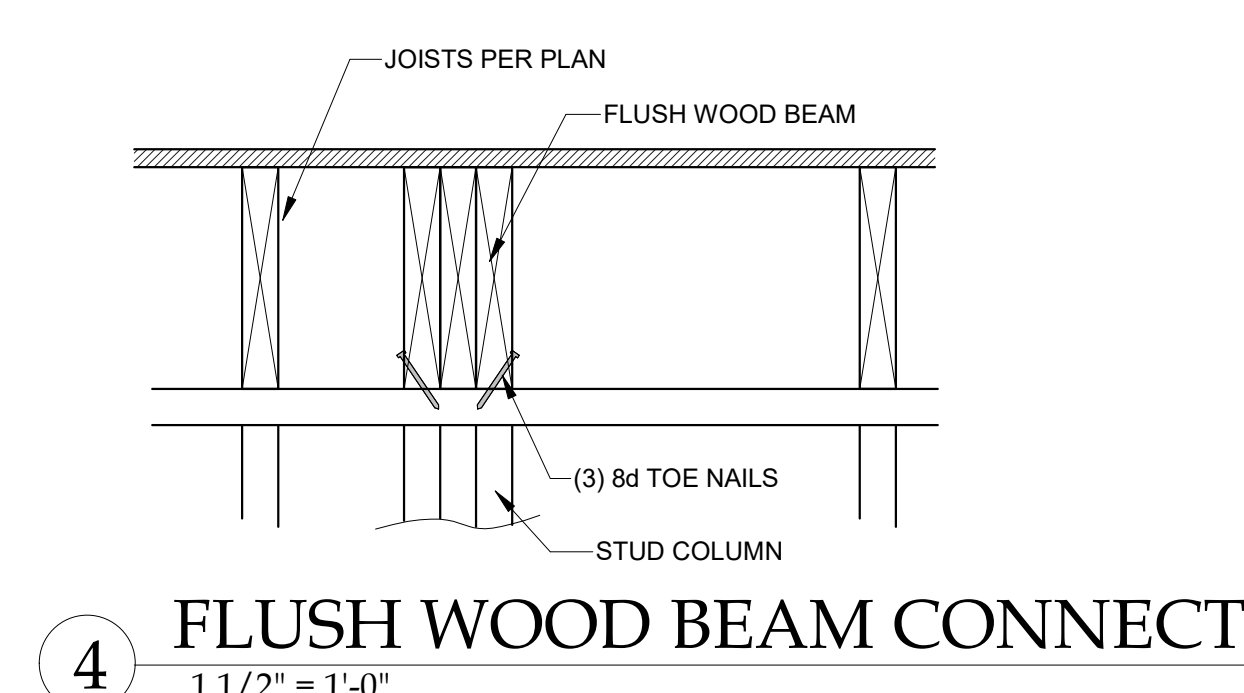
10 ZERO ENTRY SHOWER DETAIL
1/4" = 1'-0"



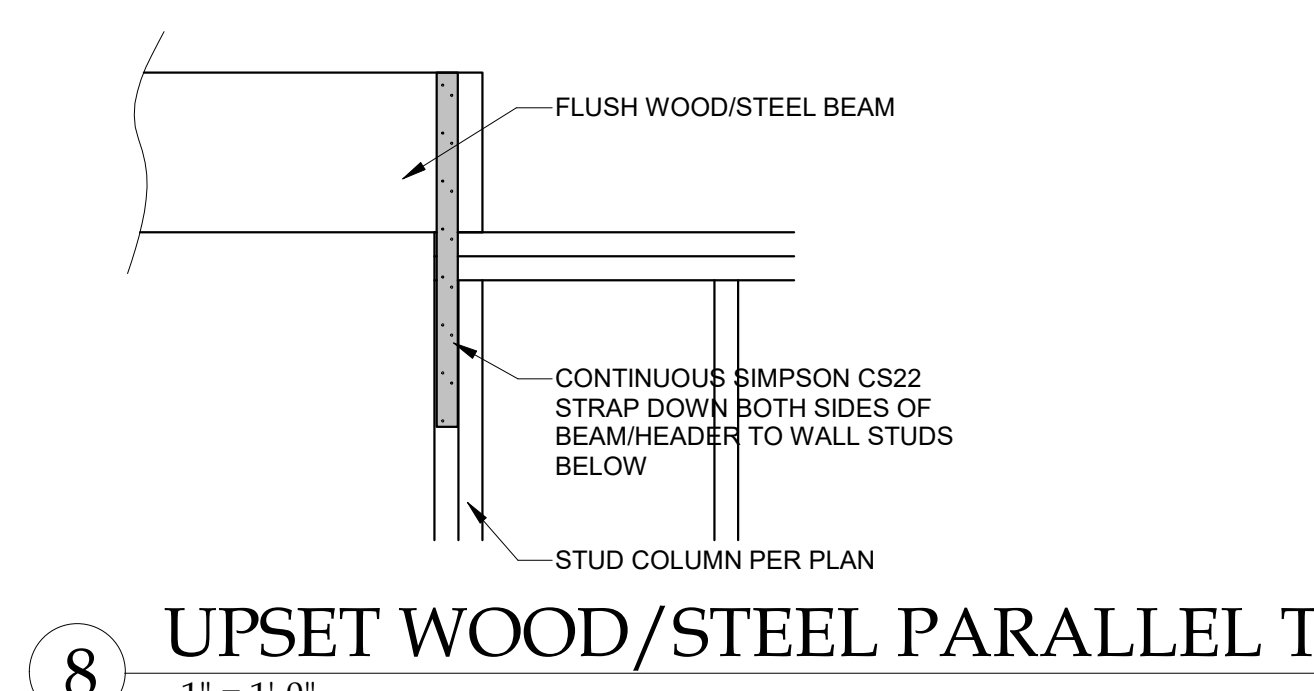
5 STEEL BEAM TO WOOD PLATE
1 1/2" = 1'-0"



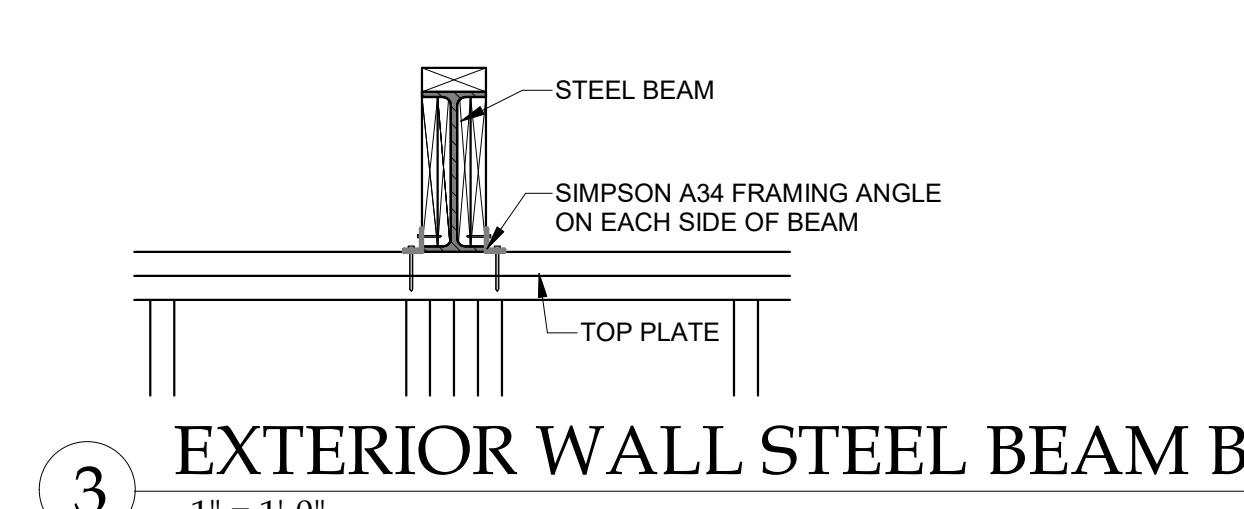
9 WOOD TO WOOD STACKED CONNECTION
1" = 1'-0"



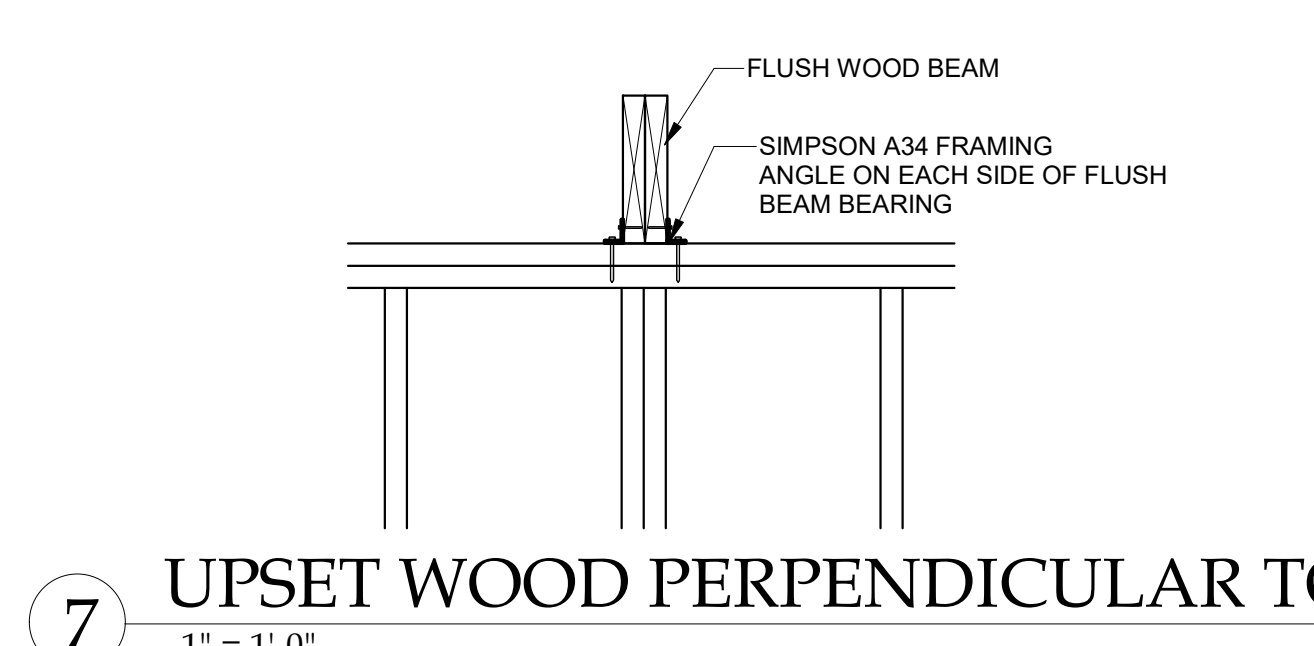
4 FLUSH WOOD BEAM CONNECTION
1 1/2" = 1'-0"



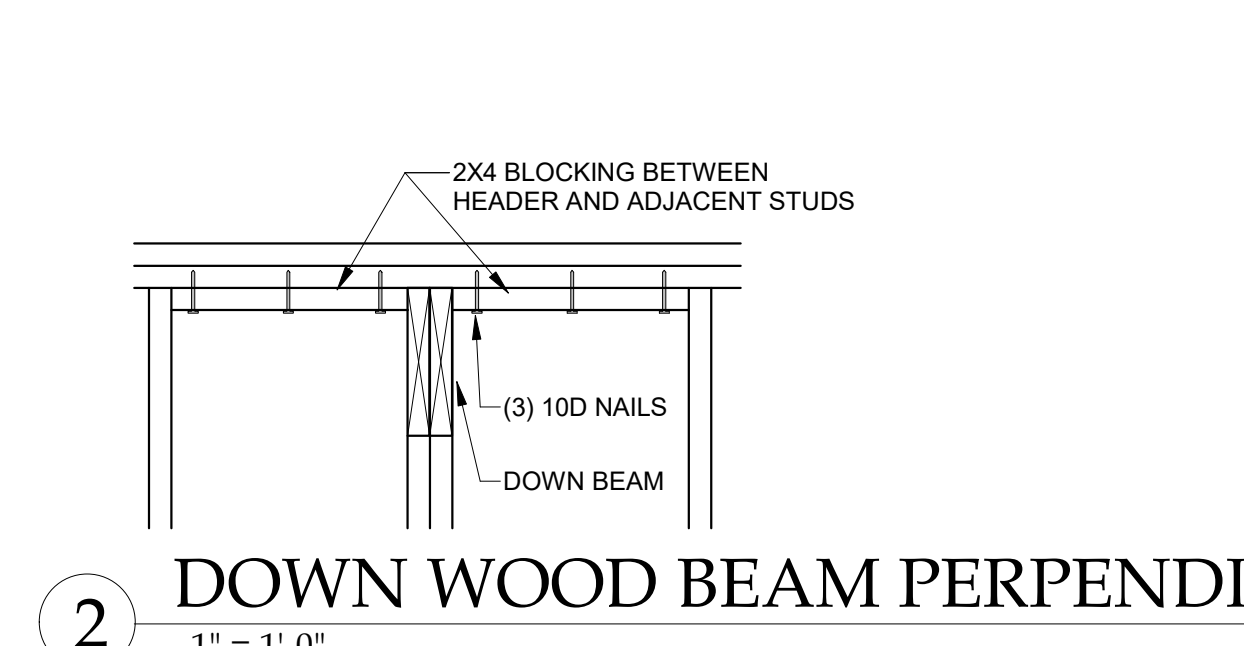
8 UPSET WOOD/STEEL PARALLEL TO WALL
1" = 1'-0"



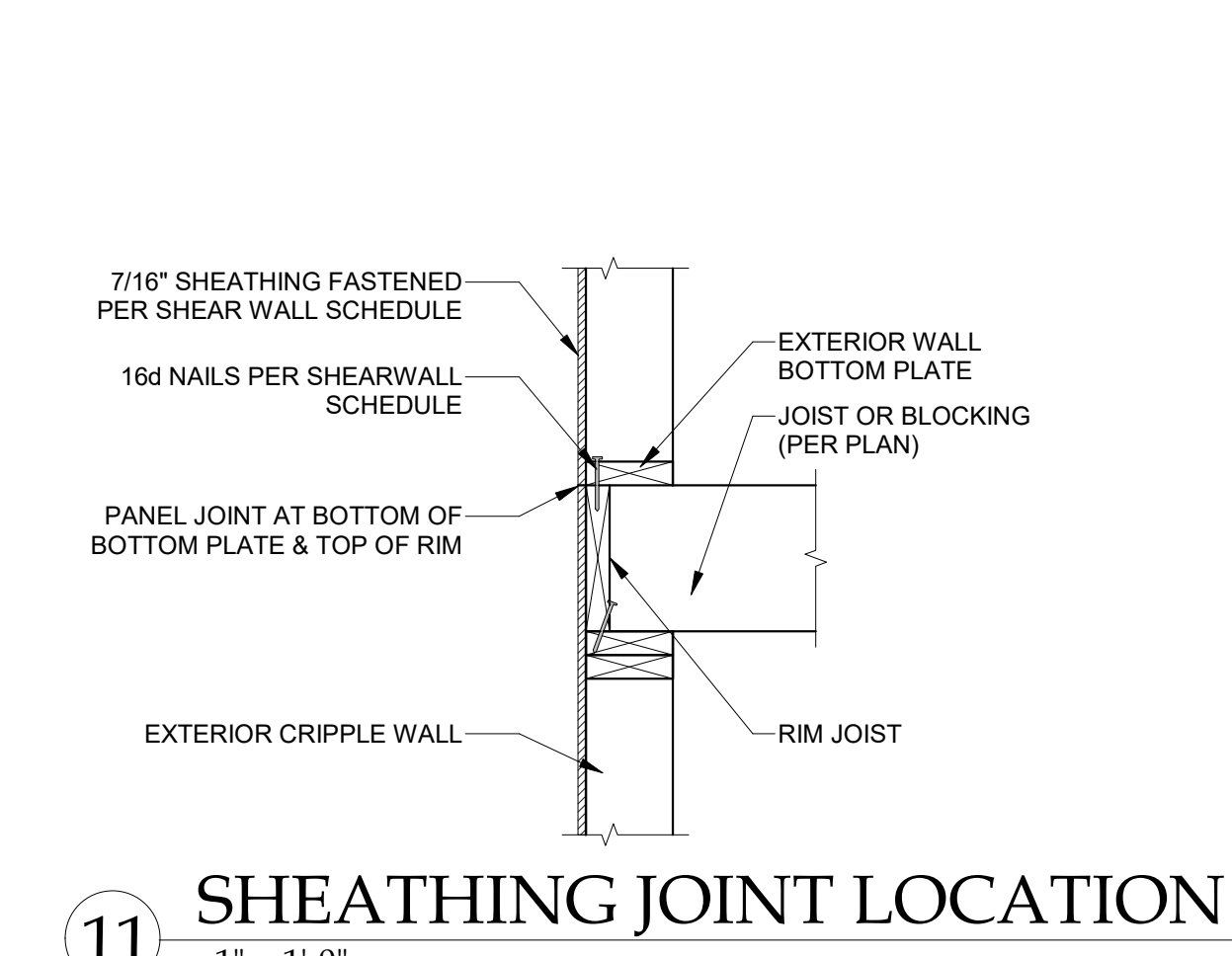
3 EXTERIOR WALL STEEL BEAM BEARING
1" = 1'-0"



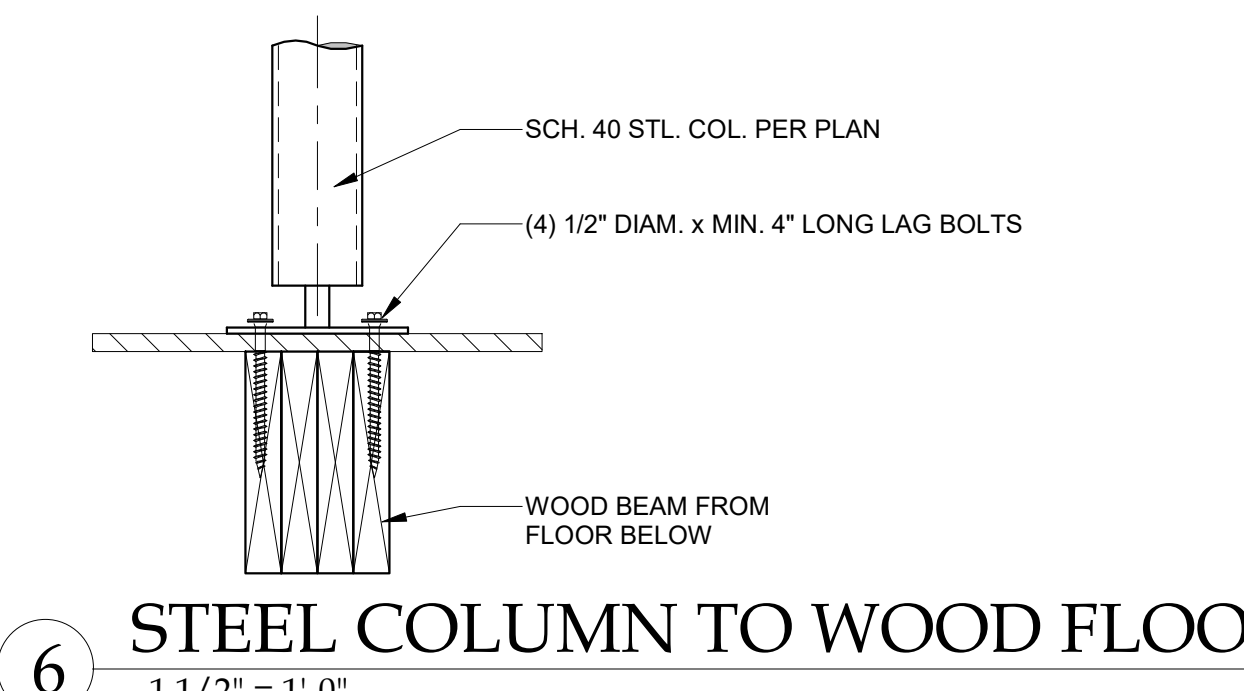
7 UPSET WOOD PERPENDICULAR TO WALL
1" = 1'-0"



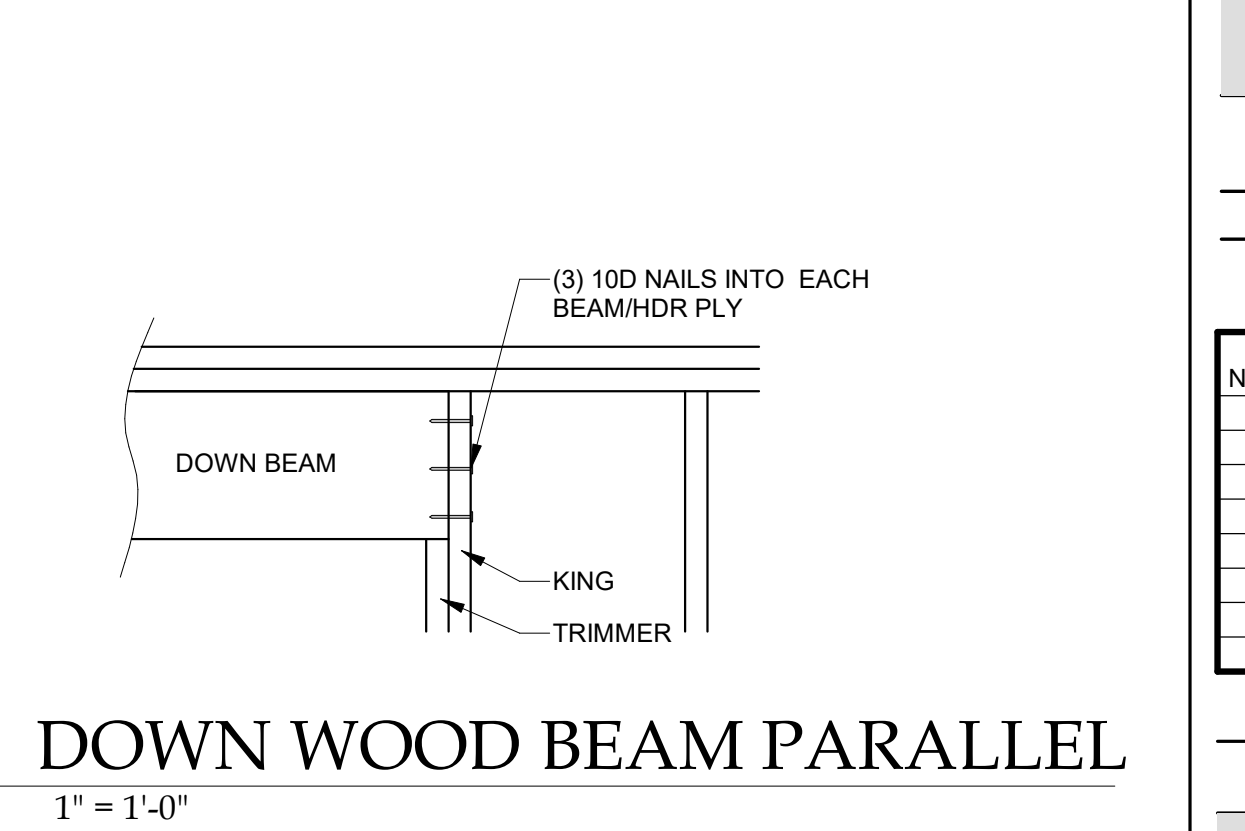
2 DOWN WOOD BEAM PERPENDICULAR
1" = 1'-0"



11 SHEATHING JOINT LOCATION
1" = 1'-0"



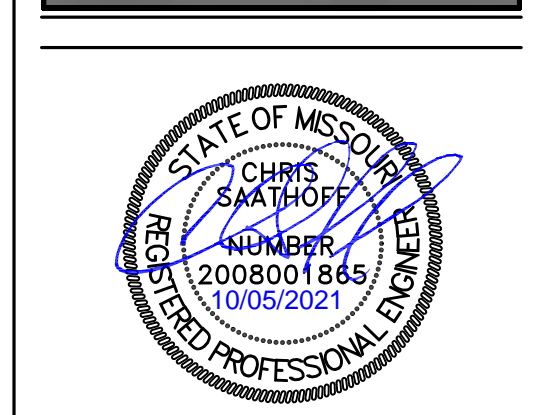
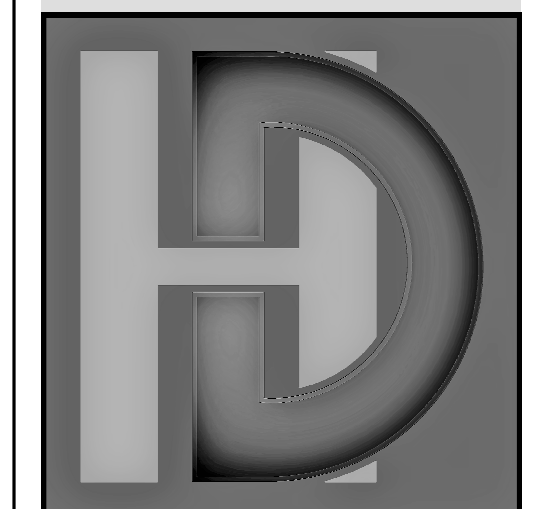
6 STEEL COLUMN TO WOOD FLOOR
1 1/2" = 1'-0"



1 DOWN WOOD BEAM PARALLEL
1" = 1'-0"

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GENERAL DETAILS

S-4.0