

TABLE S601.7 - UPLIFT CONNECTIONS - 140 MPH WINDS EXP "B"
WFCM 2015 TABLE 3.2

CONNECTION	FRAMING SPACING (INCHES)	ROOF SPAN (FEET)	UPLIFT	LATERAL	SHEAR	NUMBER OF 8d COMMON NAILS OR 10d BOX NAILS IN EACH END OF 1-1/4" X 20 GAGE STRAP
ROOF ASSEMBLY TO WALL ASSEMBLY	16" OC	16	401	292	152R	4
WALL ASSEMBLY TO FOUNDATION	16" OC	16	224	219	436	4

TABLE S601.8 - SILL OR BOTTOM PLATE TO FOUNDATION CONNECTIONS RESISTING UPLIFT LOADS - 140 MPH WIND EXP "B"
WFCM 2015 TABLE 3.2C

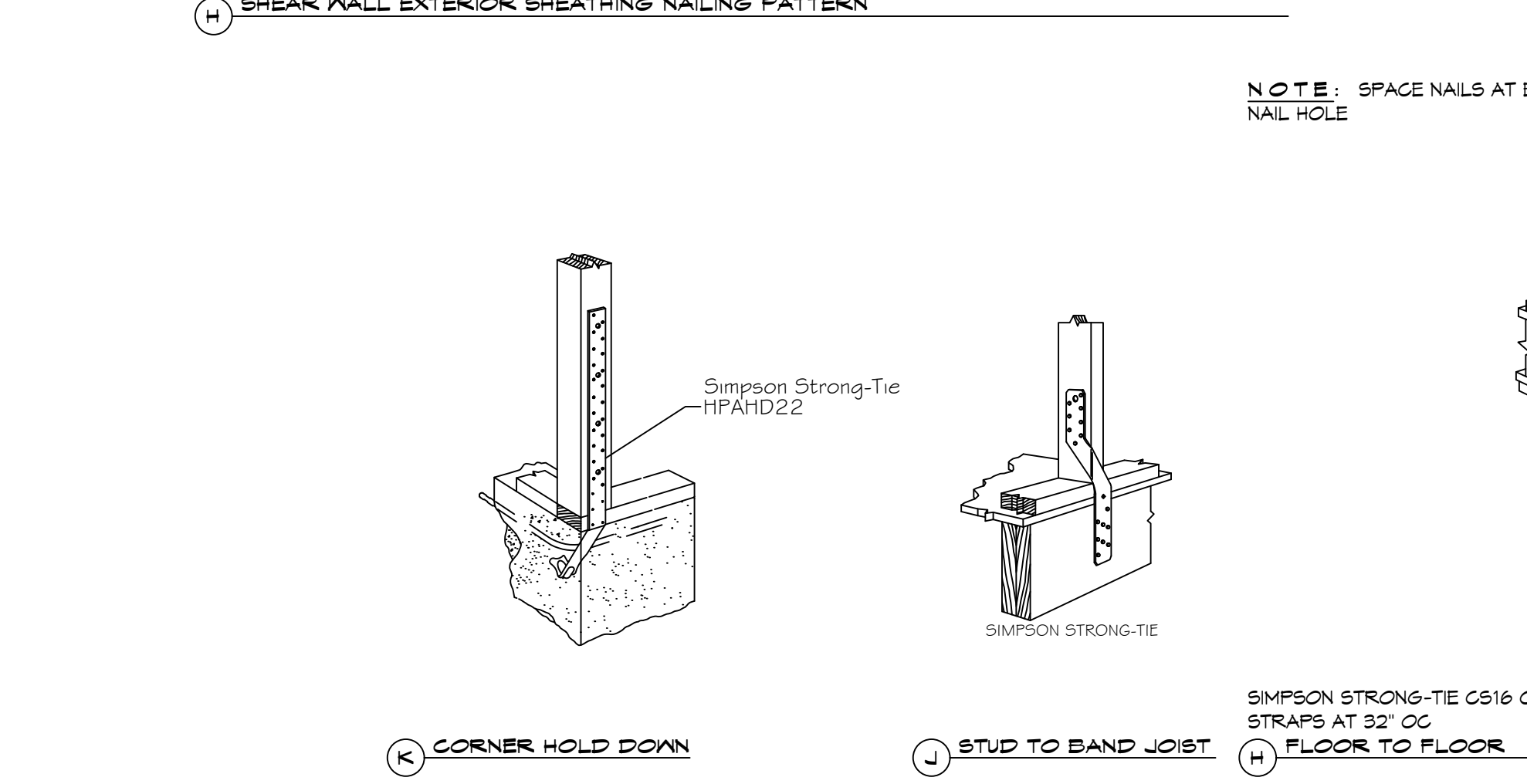
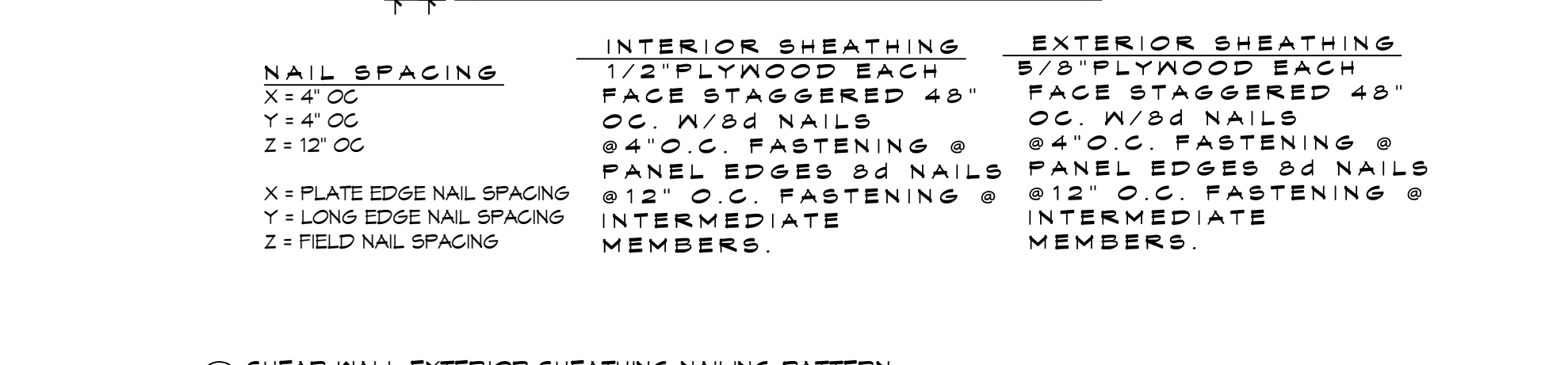
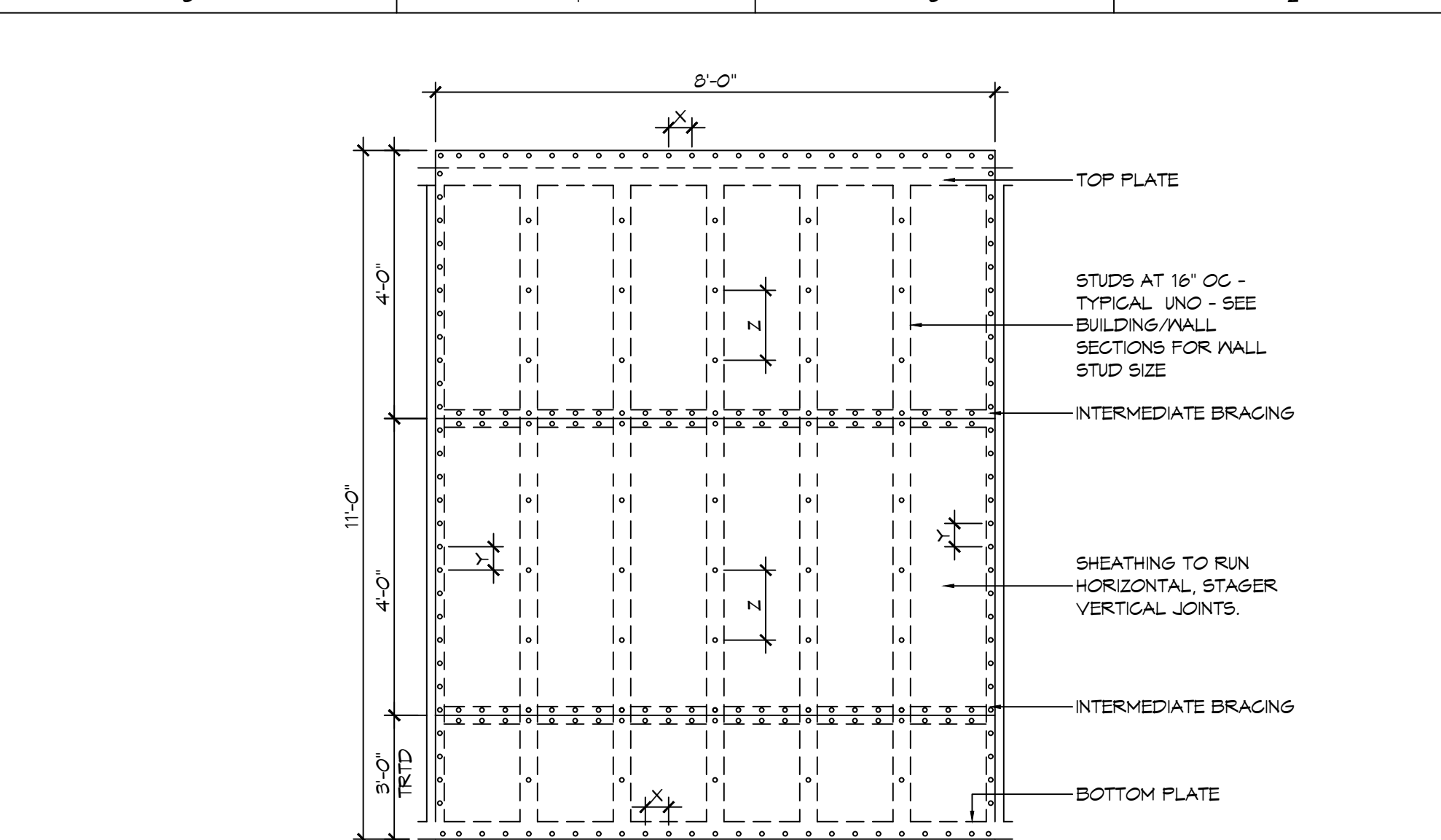
BOTTOM PLATE TO FOUNDATION ANCHOR BOLT CONNECTION RESISTING	FOUNDATION SUPPORTING	MAXIMUM ANCHOR BOLT SPACING (INCHES)	
		8' END ZONES	INTERIOR ZONES
UPLIFT LOADS	1 - 3 STORIES	25 INCHES ON CENTER	30 INCHES ON CENTER

TABLE S601.9 - SILL OR BOTTOM PLATE TO FOUNDATION CONNECTIONS RESISTING SHEAR LOADS - 140 MPH WIND EXP "B"
WFCM 2015 TABLE 3.2B

BOTTOM PLATE TO FOUNDATION ANCHOR BOLT CONNECTION RESISTING	FOUNDATION SUPPORTING	MAXIMUM ANCHOR BOLT SPACING (INCHES)	
		5/8" Ø ANCHOR BOLTS	48 INCHES ON CENTER W/3X3X1/4" WASHER
UPLIFT LOADS	4 STORY		

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
WFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2



TYPICAL CONNECTION DETAILS
SCALE: NTS

TABLE S601.5 - JACK STUD REQ - INT LOADBEARING WALLS

HEADER SUPPORTING	HEADER SPAN (FT)	ROOF SPAN (FEET)											
		12 FEET				24 FEET				36 FEET			
		3"	4.5"	5"	6.5"	3"	4.5"	5"	6.5"	3"	4.5"	5"	6"
ONE FLOOR ONLY (CENTER BEARING)	2	1	1	1	1	1	1	1	1	1	1	1	1
	4	1	1	1	1	1	1	1	1	1	1	1	1
	6	1	1	1	1	1	1	1	1	2	1	1	1
	8	1	1	1	1	2	1	1	1	2	2	2	1
	10	1	1	1	1	2	2	1	1	3	2	2	2
	12	1	1	1	1	2	2	2	1	3	2	2	2
TWO FLOORS (CENTER BEARING)	2	2	2	1	1	3	2	2	2	4	3	3	2
	4	1	1	1	1	2	1	1	1	3	2	2	2
	6	2	1	1	1	3	2	2	2	4	3	2	2
	8	2	2	1	1	3	2	2	2	5	3	3	3
	10	2	2	2	1	4	3	3	2	6	4	4	3
	12	3	2	2	2	5	3	3	3	7	5	4	4
14	3	2	2	2	6	4	4	3	8	5	5	4	
16	4	3	2	2	6	4	4	3	9	6	6	5	

TABLE S601.6 - JACK STUD REQ - EXTERIOR LOADBEARING WALLS
WFCM 2021 TABLE 3.22F

HEADER WIDTH - 3" (2-2x), 4.5" (3-2x), 5", 6.5" (4-2x) EACH 1/2" PLYWOOD SPACER BETWEEN	ROOF LIVE LOAD 20 PSF				ROOF LIVE LOAD 30 PSF			
	3"	4.5"	5"	6.5"	3"	4.5"	5"	6.5"
ROOF AND CEILING	2	1	1	1	1	1	1	1
	4	1	1	1	1	1	1	1
	6	2	1	1	1	2	1	1
	8	2	2	2	1	2	2	1
	10	3	2	2	2	3	2	2
	12	3	2	2	2	3	2	2
ROOF, CEILING, AND ONE CENTER BEARING FLOOR	2	1	1	1	1	1	1	1
	4	2	1	1	1	2	1	1
	6	2	2	2	1	3	2	2
	8	3	2	2	2	3	2	2
	10	4	3	2	2	4	3	2
	12	4	3	3	2	5	3	3
14	5	4	3	3	5	4	3	
16	6	4	4	3	6	4	3	

TABLE S601.1 - ROOF SHEATHING ATTACHMENT REQUIREMENT - WIND LOAD EXP "B"

SHEATHING LOCATION	RAFTER / TRUSS SPACING	MAX NAIL SPACING FOR 8d COMMON NAILS OR 10d BOX NAILS (INCHES OC)	
		E	F
INTERIOR ZONE	12" OC	6	12
	16" OC	6	12
	24" OC	6	12
PERIMETER EDGE ZONE	12" OC	6	6
	16" OC	4	4
	24" OC	3	3

TABLE S601.1 - WALL SHEATHING AND CLADDING REQUIREMENT - WIND LOAD EXP "B"

SHEATHING LOCATION	RAFTER / TRUSS SPACING	MAX NAIL SPACING FOR 8d COMMON NAILS OR 10d BOX NAILS (INCHES OC)	
		E	F
INTERIOR ZONE	12" OC	6	12
	16" OC	6	12
	24" OC	6	6
PERIMETER EDGE ZONE	12" OC	6	12
	16" OC	6	12
	24" OC	6	6

DESIGN CRITERIA

THE CONSTRUCTION FOR SAID RESIDENCE, WHERE WIND SPEED IS 140 MILES PER HOUR AND V₅₀ WIND SPEED IS 130 MPH, WIND EXPOSURE ZONE G, IS DESIGNED IN ACCORDANCE WITH: AMERICAN FOREST AND PAPER ASSOCIATION (AF&PA) WOOD FRAME CONSTRUCTION MANUAL FOR ONE AND TWO FAMILY DWELLINGS (WFCM) 2001 EDITION AS WELL AS THE INTERNATIONAL RESIDENTIAL CODE (IRC) 2021 EDITION. STRUCTURE SHALL BE BUILT TO THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE (2021 IEC) AND STATE AMENDMENTS ADOPTED JULY 1, 2023.

TABLE S601.3 - NAILING SCHEDULE
WFCM 2015 TABLE 3.1

DESCRIPTION	NUMBER OF COMMON NAILS	NUMBER OF BOX NAILS	SPACING
HEADER TO HEADER (FACE NAILED)	16d	16d	16" OC EDGES

TABLE S601.4 - BUILDING ENVELOPE REQUIREMENTS

ROOFS	OPAQUE ELEMENTS		INSULATION MIN. R-VALUE
	INSULATION ENTIRELY ABOVE DECK	ASSEMBLY MAXIMUM	
METAL BUILDING	U-0.048	R-20.0 c.i.	
	U-0.065	R-19	
	U-0.027	R-30	
ATTIC AND OTHER	U-0.151	R-5.7 c.i.	
	U-0.113	R-19.0	
WALLS, ABOVE GRADE	U-0.124	R-13.0	
	U-0.089	R-19.0	
	U-0.107	R-6.3 c.i.	
FLOORS	U-0.052	R-19.0	
	U-0.051	R-19.0	
	U-0.130	NR	
SLAB-ON-GRADE	U-0.100	NR	
	U-1.450	NR	

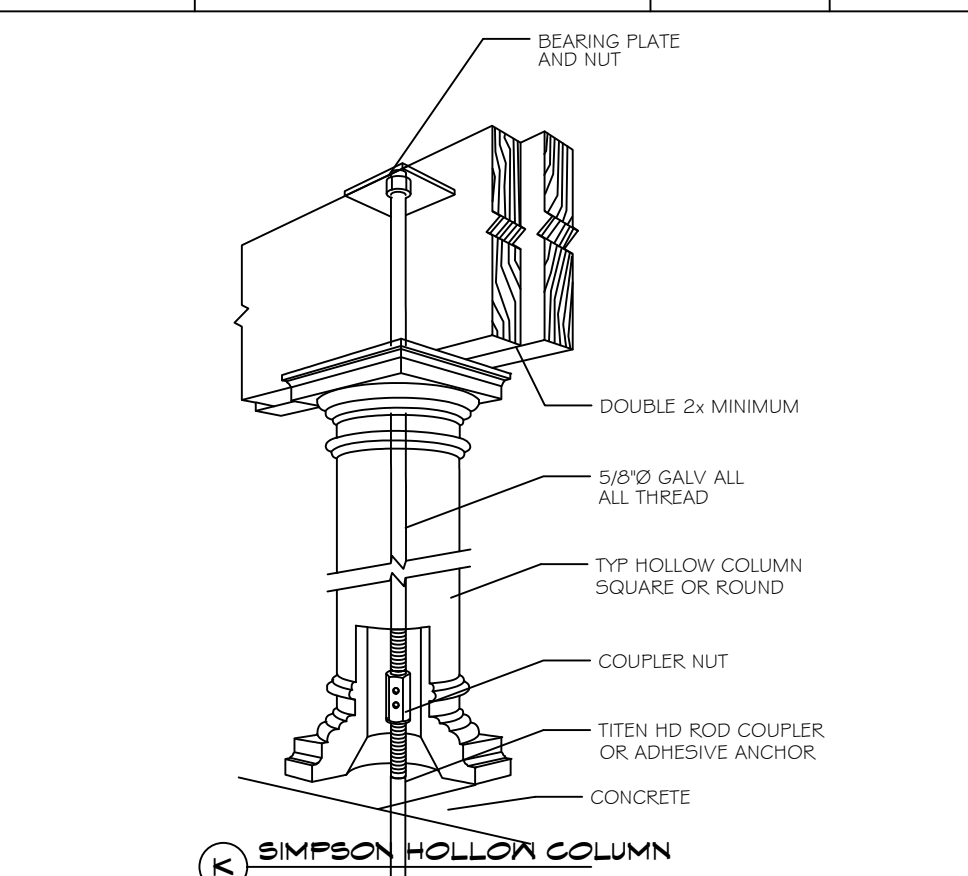


TABLE S601.1 - WALL SHEATHING AND CLADDING REQUIREMENT - WIND LOAD EXP "B"

SHEATHING LOCATION	RAFTER / TRUSS SPACING	MAX NAIL SPACING FOR 8d COMMON NAILS OR 10d BOX NAILS (INCHES OC)	
		E	F
INTERIOR ZONE	12" OC	6	12
	16" OC	6	12
	24" OC	6	6
PERIMETER EDGE ZONE	12" OC	6	12
	16" OC	6	12
	24" OC	6	6

DESIGN CRITERIA

THE CONSTRUCTION FOR SAID RESIDENCE, WHERE WIND SPEED IS 140 MILES PER HOUR AND V₅₀ WIND SPEED IS 130 MPH, WIND EXPOSURE ZONE G, IS DESIGNED IN ACCORDANCE WITH: AMERICAN FOREST AND PAPER ASSOCIATION (AF&PA) WOOD FRAME CONSTRUCTION MANUAL FOR ONE AND TWO FAMILY DWELLINGS (WFCM) 2001 EDITION AS WELL AS THE INTERNATIONAL RESIDENTIAL CODE (IRC) 2021 EDITION. STRUCTURE SHALL BE BUILT TO THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE (2021 IEC) AND STATE AMENDMENTS ADOPTED JULY 1, 2023.

METAL ROOF APPLICATION & FASTENING NOTES

1. INSTALL 26 GAUGE METAL ROOF PER MANUFACTURER'S RECOMMENDATIONS FOR 140 MPH WIND SPEED.

GENERAL UPLIFT CONNECTION NOTES

ROOF ASSEMBLY TO WALL ASSEMBLY: UPLIFT CONNECTIONS SHALL BE FROM RAFTER OR TRUSS TO WALL STUD. WHEN RAFTERS OR TRUSSES ARE NOT LOCATED DIRECTLY ABOVE STUDS, RAFTERS SHALL BE ATTACHED TO THE WALL PLATE AND THE WALL TOP PLATE SHALL BE ATTACHED TO THE WALL STUD WITH UPLIFT CONNECTIONS. UPLIFT CONNECTIONS SHALL BE IN ACCORDANCE WITH TABLE S601.10.

WALL ASSEMBLY TO WALL ASSEMBLY: STORY TO STORY UPLIFT CONNECTIONS FROM UPPER STORY WALL STUD TO LOWER STORY WALL STUD. WHEN UPPER STORY WALL STUDS ARE NOT LOCATED DIRECTLY ABOVE LOWER WALL STUDS, THE STUDS SHALL BE ATTACHED TO A COMMON MEMBER IN THE FLOOR ASSEMBLY BY UPLIFT CONNECTIONS. UPLIFT CONNECTIONS SHALL BE IN ACCORDANCE WITH TABLE S601.11.

WALL ASSEMBLY TO FOUNDATION: FIRST FLOOR WALL STUDS SHALL BE CONNECTED TO THE FOUNDATION, SILL PLATE, OR BOTTOM PLATE. A MINIMUM OF A 1-1/4" X 20 GA. ASTM A653 GRADE 88 STEEL STRAP SHALL BE NAILED TO THE WALL STUD AND HAVE A MINIMUM EMBEDMENT OF 1 INCHES IN CONCRETE FOUNDATIONS AND SLABS-ON-GRADE, 15 INCHES IN MASONRY BLOCK FOUNDATIONS, OR BE LAPPED UNDER THE BOTTOM PLATE, 3 INCH SQUARE WASHERS SHALL BE USED ON THE ANCHOR BOLTS AND ANCHOR BOLT SPACINGS SHALL NOT EXCEED THE REQUIREMENTS. STEEL STRAPS EMBEDDED IN OR IN CONTACT WITH SLAB-ON-GRADE OR MASONRY BLOCK FOUNDATIONS SHALL BE HOT-DIPPED GALV. AFTER FABRICATION, OR MANUF. FROM G185 OR 2450 GALV. STL. CONNECTIONS SHALL BE IN ACCORDANCE WITH TABLE S601.12.

TABLE S601.1 - ROOF SHEATHING ATTACHMENT REQUIREMENT - WIND LOAD EXP "B"

SHEATHING LOCATION	RAFTER / TRUSS SPACING	MAX NAIL SPACING FOR 8d COMMON NAILS OR 10d BOX NAILS (INCHES OC)	
		E	F
INTERIOR ZONE	12" OC	6	12
	16" OC	6	12
	24" OC	6	12
PERIMETER EDGE ZONE	12" OC	6	6
	16" OC	4	4
	24" OC	3	3

TABLE S601.1 - WALL SHEATHING AND CLADDING REQUIREMENT - WIND LOAD EXP "B"

SHEATHING LOCATION	RAFTER / TRUSS SPACING	MAX NAIL SPACING FOR 8d COMMON NAILS OR 10d BOX NAILS (INCHES OC)	
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INTERIOR ZONE	12" OC	6	12
	16" OC	6	12
	24" OC	6	6
PERIMETER EDGE ZONE	12" OC	6	12
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HOUSE FRAMING PLAN

SHEET TITLE: TYPICAL CONNECTION DETAILS, SCHEDULES, AND NOTES

DRAWING NUMBER: **S104**

DATE: 02-12-2025
JOB No: 10122
DRAWN BY: CKD
CHECKED BY: BAK

SHEET No: 4 of 4