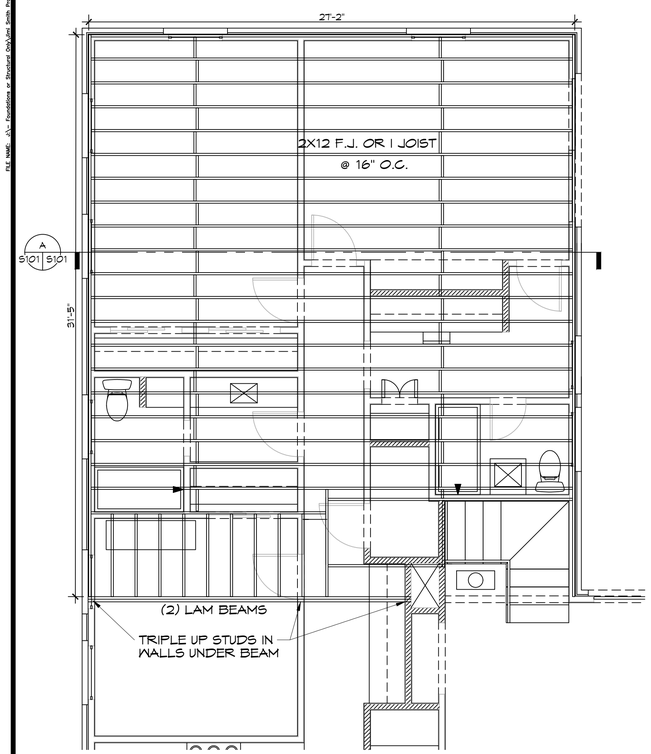
DESIGN CRITERIA

THE CONSTRUCTION FOR SAID RESIDENCE, WHERE Vult WIND SPEED IS 140 MILES PER HOUR AND Vasd WIND SPEED IS 130 MPH, WIND EXPOSURE ZONE C, 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 IECC) AND STATE AMENDMENTS ADOPTED JULY 1, 2023.

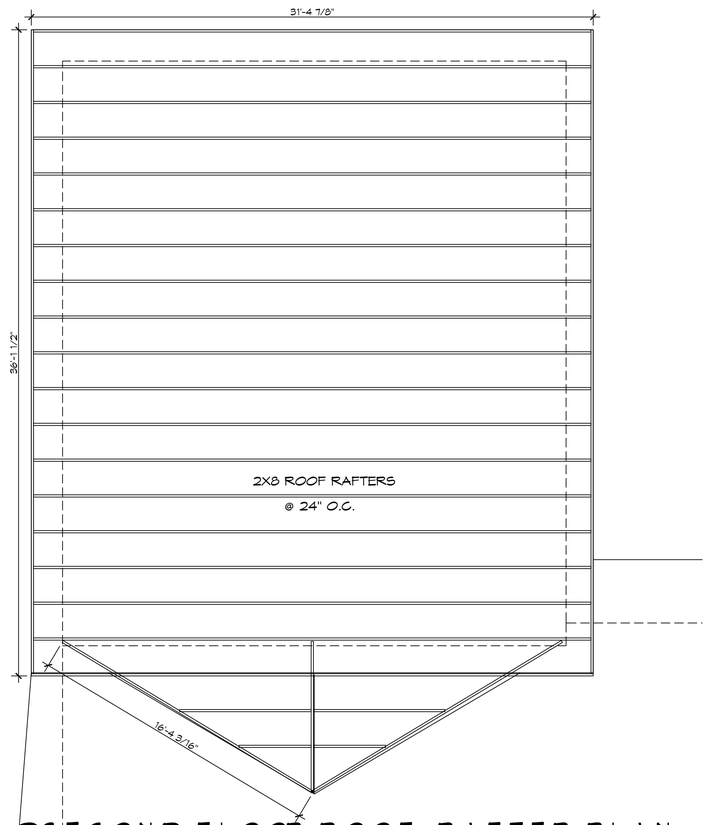
ROOF NOTES

1. ALL JOIST SPANS,HEADERS AND GIRDERS REVIEWED AS #2 SOUTHERN YELLOW PINE.
2. ANY CHANGES IN THE SPECIES OR GRADE SHALL CONFORM TO THE APPROPRIATE SPAN TABLES, FLOOR JOIST CHAPTER 5, RAFTERS & CEILING JOIST CHAPTER 8, UNLESS NOTED ON THE CONSTRUCTION PLANS.
3. ALL JOIST, BEAMS, HEADERS, HIPS, VALLEYS, AND PURLINS SHALL BE SUPPORTED AND BRACED TO LOAD BEARING WALLS AS REQUIRED BY THE INTERNATIONAL RESIDENTIAL BUILDING CODE.
4. ALL SHALL BE SIZED FOR SPAN AND FOR ALL LOADS THAT WILL BE APPLIED.
5. CEILING JOISTS SPANS ARE BASED ON INTERNATIONAL RESIDENTIAL CODE (I.R.C.) SOUTHERN YELLOW PINE #2 LUMBER SPANS.
6. HEADER SIZES SHOULD BE BASED ON I.R.C. - TABLE R502.5
7. DESIGN AND LAYOUT OF TRIM JOISTS TO BE PROVIDED BY TRIM JOIST MANUFACTURER.
8. ALL LUMBER TO BE #2 SOUTHERN PINE.
9. TRIPLE UP ALL STUDS AT END OF BEAMS.

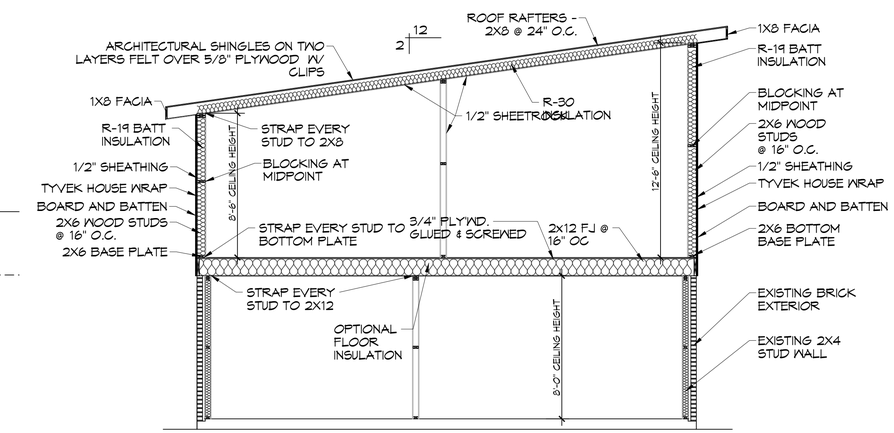
NOTE :PRE ENGINEERED LVL BEAM & GLUE LAM SHALL BE SIZED PER MANUFACTURER RECOMMENDATION



1 SECOND FLOOR FRAMING PLAN
SCALE: 1/4"= 1'-0"



2 SECOND FLOOR ROOF RAFTER PLAN
SCALE: 1/4"= 1'-0"



A S101 S101 SECOND FLOOR FRAMING SECTION
SCALE: 1/2" = 1'-0"

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5540 Lake Sawyer Trail
Slidell, LA 70458

#	DESCRIPTION	DATE

REVISIONS

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STATE OF LOUISIANA
BRIAN A. MISTICH
License No. 30187
PROFESSIONAL ENGINEER

HOUSE FRAMING PLAN

J I M I S M I T H

6356 PRATT DRIVE
NEW ORLEANS, LA 70122

DATE: 07-02-2025
JOB No:
DRAWN BY: CK-D
CHECKED BY: BAM

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SHEET TITLE:
SECOND FLOOR FRAMING PLAN AND CEILING JOIST PLAN AND SECTION

DRAWING NUMBER:

S101

SHEET No: 1 of 2

FILE NAME: J:_Foundations w Structural Only\Jimi Smith Pratt Drive NOLA\House Only\S103 - House Ceiling Joist Plan.dwg PLOT DATE & TIME: Wednesday, July 2, 2025 3:18:46 AM

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"X20 GAGE STRAP
ROOF ASSEMBLY TO WALL ASSEMBLY	16" OC	16	407	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

NOTE: A MINIMUM OF ONE ANCHOR BOLT SHALL BE PROVIDED WITHIN 6 TO 12 INCHES OF EACH END OF EACH PLATE

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
UPLIFT LOADS	4 STORY	48 INCHES ON CENTER W/3X3X1/4" WASHER

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

WFCM 2015 TABLE 3.23C

	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
HEADER SPAN (FEET)	NUMBER OF FULL HEIGHT STUD REQUIRED AT EACH END OF THE HEADER		
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

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

HEADER SUPPORTING	HEADER SPAN (FT)	ROOF SPAN (FEET)											
		12 FEET				24 FEET				36 FEET			
		HEADER WIDTH											
		3"	4.5"	5"	6.5"	3"	4.5"	5"	6.5"	3"	4.5"	5"	6"
		NUMBER OF JACK STUDS REQUIRED AT EACH END OF THE HEADER											
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
	14	2	1	1	1	3	2	2	2	4	3	3	2
	16	2	2	1	1	3	2	2	2	4	3	3	2
TWO FLOORS (CENTER BEARING)	2	1	1	1	1	1	1	1	1	2	1	1	1
	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

HEADER WIDTH - 3" (2-2x), 4.5" (3-2x), 5", 6.5" (4-2x) EACH W/ 1/2" PLYWOOD SPACER BETWEEN

TABLE S601.6 - JACK STUD REQ - EXTERIOR LOADBEARING WALLS

WFCM 2021 TABLE 3.22F

		ROOF LIVE LOAD 20 PSF				ROOF LIVE LOAD 30 PSF			
		3"	4.5"	5"	6.5"	3"	4.5"	5"	6.5"
		NUMBER OF JACK STUDS REQUIRED							
ROOF AND CEILING	2	1	1	1	1	1	1	1	1
	4	1	1	1	1	1	1	1	1
	6	2	1	1	1	2	1	1	1
	8	2	2	2	1	2	2	2	1
	10	3	2	2	2	3	2	2	2
	12	3	2	2	2	3	2	2	2
	14	4	3	2	2	4	3	2	2
	16	4	3	3	2	4	3	3	2
ROOF, CEILING, AND ONE CENTER BEARING FLOOR	2	1	1	1	1	1	1	1	1
	4	2	1	1	1	2	1	1	1
	6	2	2	2	1	3	2	2	2
	8	3	2	2	2	3	2	2	2
	10	4	3	2	2	4	3	3	2
	12	4	3	3	2	5	3	3	3
	14	5	4	3	3	5	4	3	3
	16	6	4	4	3	6	4	4	3

HEADER WIDTH - 3" (2-2x), 4.5" (3-2x), 5", 6.5" (4-2x) EACH W/ 1/2" PLYWOOD SPACER BETWEEN

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

OPAQUE ELEMENTS		ASSEMBLY MAXIMUM	INSULATION MIN. R-VALUE
ROOFS	INSULATION ENTIRELY ABOVE DECK	U-0.048	R-20.0 c.i.
	METAL BUILDING	U-0.065	R-19
	ATTIC AND OTHER	U-0.027	R-38
WALLS, ABOVE GRADE	MASS	U-0.151	R-5.7 c.i.
	METAL BUILDING	U-0.113	R-13.0
	STEEL-FRAMED	U-0.124	R-13.0
	WOOD-FRAMED AND OTHER	U-0.089	R-13.0
FLOORS	MASS	U-0.107	R6-3 c.i.
	STEEL JOIST	U-0.052	R-19.0
	WOOD FRAMED AND OTHER	U-0.051	R-19.0
SLAB-ON-GRADE	UN-HEATED	F-0.730	NR
OPAQUE DOORS	SWINGING	U-0.700	NR
	NON-SWINGING	U-1.450	NR

METAL ROOF APPLICATION & FASTENING NOTES

1. INSTALL 26 GAUGE METAL ROOF PER MANUFACTURES 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 33 STEEL STRAP SHALL BE NAILED TO THE WALL STUDS AND HAVE A MINIMUM EMBEDMENT OF 7 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 Z450 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	E	F
		MAX NAIL SPACING FOR 8d COMMON NAILS OR 10d BOX NAILS (INCHES OC)	
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

140 MPH WIND - EXPOSURE "B" TYPICAL
E = NAIL SPACING AT PANEL EDGES, INCHES.
F = NAIL SPACING AT INTERMEDIATE SUPPORTS IN THE PANEL FIELD, INCHES.

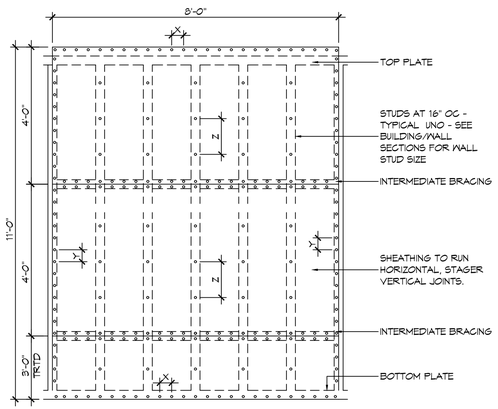
TABLE S601.1 - WALL SHEATHING AND CLADDING REQUIREMENT - WIND LOAD EXP "B"

SHEATHING LOCATION	RAFTER / TRUSS SPACING	E	F
		MAX NAIL SPACING FOR 8d COMMON NAILS OR 10d BOX NAILS (INCHES OC)	
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

140 MPH WIND - EXPOSURE "B" TYPICAL
E = NAIL SPACING AT PANEL EDGES, INCHES.
F = NAIL SPACING AT INTERMEDIATE SUPPORTS IN THE PANEL FIELD, INCHES.

DESIGN CRITERIA

THE CONSTRUCTION FOR SAID RESIDENCE, WHERE Vult WIND SPEED IS 140 MILES PER HOUR AND Vasd WIND SPEED IS 130 MPH, WIND EXPOSURE ZONE C, 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 IECC) AND STATE AMENDMENTS ADOPTED JULY 1, 2023.



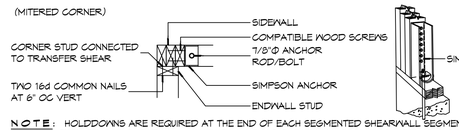
NAIL SPACING
X = 4" OC
Y = 4" OC
Z = 12" OC

X = PLATE EDGE NAIL SPACING
Y = LONG EDGE NAIL SPACING
Z = FIELD NAIL SPACING

INTERIOR SHEATHING
1/2"PLYWOOD EACH FACE STAGGERED 48" OC. W/8d NAILS @4" O.C. FASTENING @ PANEL EDGES 8d NAILS @12" O.C. FASTENING @ INTERMEDIATE MEMBERS.

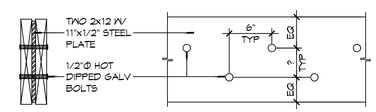
EXTERIOR SHEATHING
5/8"PLYWOOD EACH FACE STAGGERED 48" OC. W/8d NAILS @4" O.C. FASTENING @ PANEL EDGES 8d NAILS @12" O.C. FASTENING @ INTERMEDIATE MEMBERS.

H SHEAR WALL EXTERIOR SHEATHING NAILING PATTERN

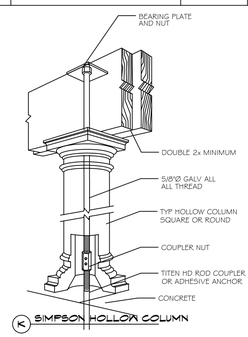


NOTE: HOLDDOWNS ARE REQUIRED AT THE END OF EACH SEGMENTED SHEARWALL SEGMENT OR AT THE EACH END OF A PERFORATED SHEARWALL. WHEN FULL HEIGHT SHEARWALL SEGMENTS MEET AT A CORNER, A SINGLE HOLDDOWN SHALL BE PERMITTED TO BE USED TO RESIST THE OVERTURNING FORCES IN BOTH DIRECTIONS WHEN THE CORNER FRAMING IN THE ADJOINING WALLS IS FASTENED TOGETHER TO TRANSFER THE UPLIFT LOAD.

G CORNER HOLDDOWN

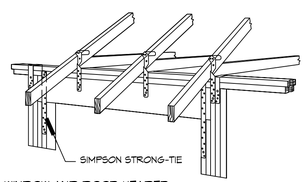


F FLITCH BEAM

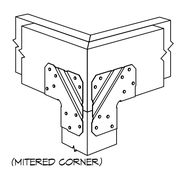


K SIMPSON HOLLOW COLUMN

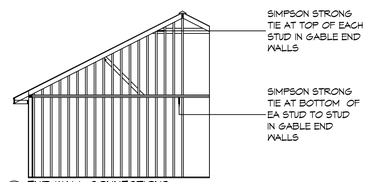
K SIMPSON MSTAM36



N WINDOW AND DOOR HEADER

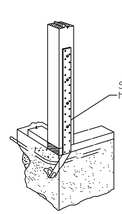


M POST TO BEAM

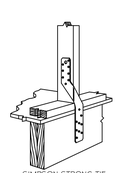


L END WALL CONNECTIONS

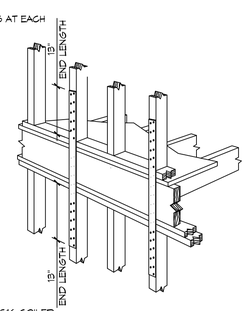
NOTE: SPACE NAILS AT EACH NAIL HOLE



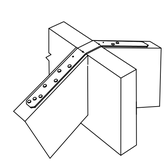
K CORNER HOLD DOWN



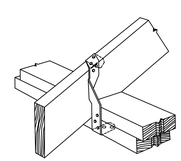
J STUD TO BAND JOIST



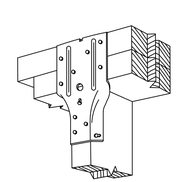
H FLOOR TO FLOOR



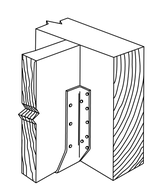
G RIDGE BEAM/BOARD



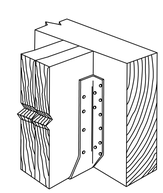
F TOP PLATE TO RAFTER



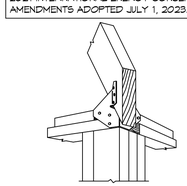
E STUD TO TOP PLATE



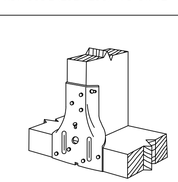
D FLOOR JOIST



C DBL FLOOR JOIST



B HIP RAFTER



A STUD TO SILL PLATE

TYPICAL CONNECTION DETAILS

SCALE: NTS

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REVISIONS

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HOUSE FRAMING PLAN
J - M - S M I T H
6356 PRATT DRIVE
NEW ORLEANS, LA 70122

JOB No:	
DATE:	07-02-2025
DRAWN BY:	BAM
CHECKED BY:	CKD

SHEET TITLE:
TYPICAL CONNECTION DETAILS, SCHEDULES, AND NOTES

DRAWING NUMBER:
S102

SHEET No: 2 of 2