

LUMBIER SIZE & GRADE MINUMUM REQUIREMENTS

X (WIDTH OF RAFTER SEAT CUT) SPF #3 OR

SEE TRUSS DESIGN - SOUTHEREN PINE MATERIAL

S20 RIDGE TENSION STRAP w/ 8 - 8d

OR 2X4 COLLAR TIE 3 - 16d OR 4 - .131 x3

-2X4 BLOCKING

To Truss / Rafter

10-10d or 12-10dx 11/2

To Other Member

To Column / Truss

2-10dx 11/2"

16-16d Sinker

9-8d or 7-10d

8-16d Sinkers

2-%" Bolts

18-16d

-2X4 VALLEY RAFTER

-SEE CRIPPLE, BRACING

4'-0" MAX SPACING

FRAMING 2x SYP @ 24" O.C.

N5 - TRUJSS UPLIFT CONNECTOR TABLE REV-25-AUG-03

SST catalog to meet truss uplift. Use fasteners as specified.

Connector

Uplift Uplifit
SPF SYYP

320 4555 H3

245 35₅₀ H5A

535 6000 H2.5A

620 7220 H10

850 9990 LTS12

1245 1450 HTS20

3655 42000 MGT

760 88\$5 SP4

1085 12665 LSTA18-24

1170 136₆₀ SPH4

1420 16550 CS16

1160 135₅₀ LTT19

1985 23110 LTTI31

3590 41775 HTT16

1975 23000 ABU66

2385 27775 HD2A

1265 14170 H16, H16-2

SPF SY/P Strap Connector

SPF SYPP Column Anchor

All connectors are Simpson Strongtie, uno. Select top and bottom connections from this table or

To Plate

10-10d or 12-10dx1 1/2"

To One Member

10-10dx11/2"

14-10d Sinker

12-10dx11/2"

%"x 16" AB

Studs Supporting Trusses: The builder is responsible for gravity loads, but you should put an extra 2x4 stud under truss bearing location

Manufacturer and product number are listed for example not endorsement. An equivalent device of the same or other manufacturer

installation instructitions must be followed to achieve rated loads. All connections exposed directly to the weather shall be hot dipped

can be substituted I for any devices listed in the example tables as long as it meets the required load capacities. Manufacturer's

galvanized after falsbrication. Loads are increased for wind duration. Strap uplift may be reduced proportionally to number of nails. See spec sheet for alternate nail sizes (10d=.84*16d, 10dx11½*=.80*10d, 10d=12d=16d sinker). SPF=.86*SYP

14-8d or 11-10d

To Foundation

2 PARALLEL 2X4 SPF #3

RAFTEER SPANS 20'-0" OR LESS 2X4 SYP #2

PURLIMS / LATERAL BRACING 2X4 SPF #2

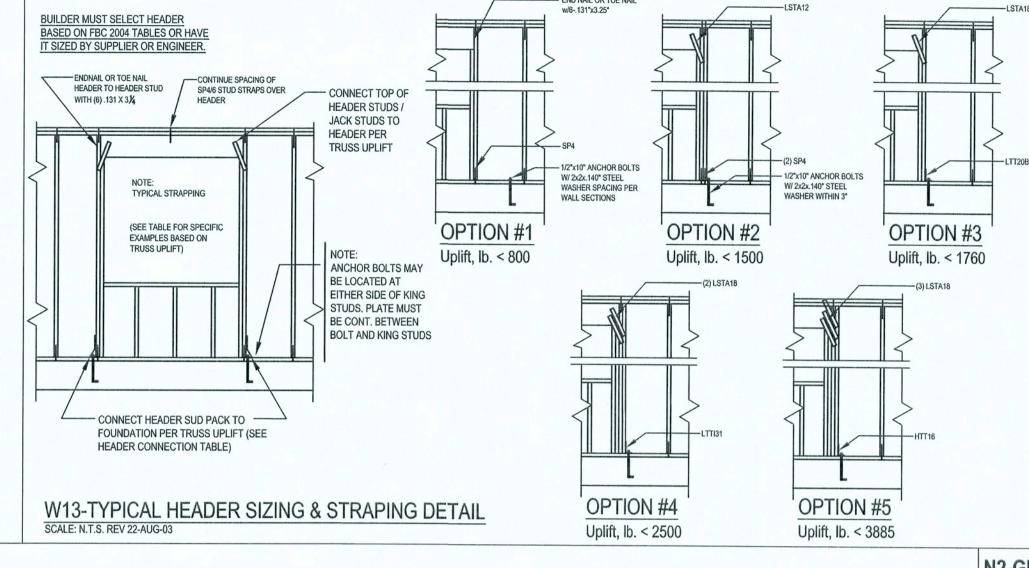
RIDGE BOARD

ELEEFPERS

RIDGGE BOAARD

RUS\S BELOW

CRIPPILES & BLOCKING



VALLEY ROOF PLAN MEMBER LEGEND

CRIPPLES 4'-0" O.C. FOR 20 psf (TL) AND 10 psf (TD) (TYP. SHINGLE ROOF) MAX

RAFTER TO SLEEPER OR BLOCKING 6 -16d OR 12 - .131 x 3" TOE NAILS

3 -16d OR 6 - .131 x 3" TOE NAILS

3 - 16d OR 6 - .131 x 3" FACE NAILS

3 -16d OR 6 - .131 x 3" TOE NAILS

3 -16d OR 6 - 131 x 3" TOF NAILS

-16d OR 6 - .131 x 3" NAILS

4 -16d OR 8 - .131 x 3" NAILS

-16d OR 6 - .131 x 3" END NAILS

3 -16d OR 6 - .131 x 3" FACE NAILS

3 -16d OR 6 - .131 x 3" FACE NAILS

- 16d OR 8 - .131 x 3" FACE NAILS EACH TRUSS

TRUSS UNDER VALLEY FRAMING

CONNECTION REQUIREMENT NOTES

CRIPPLE TO RIDGE OR RAFTER

RIDGE BOARD TO ROOF BLOCK

PURLIN TO TRUSS (IF CRIPPLE IS ATTACHED TO PURLIN)

6'-0" FOR 2X4, 9'-0" FOR 2X6 SPF #2 OR SYP #2

MINIMUM OF 8 - 8d COMMON WIRE NAILS.

-MAXIMUM WIND SPEED: 120 MPH - MAXIMUM MEAN ROOF HEIGHT: 30 FEET

-SPANS (DISTANCS BETWEEN HEELS) 40'-0" OR LESS - MAXIMUM VALLEY HEIGHT: 14'-0" OR LESS

- MAXIMUM TOTAL LOADING: 40 psf - MEETS FBC 2001/ASCE 7-98 WIND REQUIREMENTS

- EXPOSURE CATEGORY "B", I = 1.0, Kzt = 1.0

CRIPPLE, BRACING, & BLOCKING NOTES

GRADED LUMBER & BOX OR COMMON NAILS. NARROW EDGE OF CRIPPLE CAN FACE RIDGE OR RAFTER. AS LONG AS THE PROPER NUMBER OF NAILS ARE INSTALLED INTO RIDGE BOARD

MAXIMUM ROOF AREA PER SUPPORT 16ft2 IN ZONES 2 & 3 , 24ft2 IN ZONE 1. (EXAMPLE: 4'-0" O.C. X 4'-0" SPAN

16ft2 IN ZONES 2 & 3 , 2 4ft2 IN ZONE 1. (EXAMPLE: 4'-0" O.C. X 4'-0" SPAN = 16ft2 OR 2'-0" X 8'-0" SPAN = 16ft2)
PURLINS REQUIRED 2'-0" O.C. IF EXISTING SHEATHING IS REMOVED.
PURLINS SHOULD OVERLAP SHEATHING ONE TRUSS SPACING MINIMUM.
IN CASES THAT THIS IS IMPRACTICAL, OVERLAP SHEATHING A MINIMUM

OF 6", AND NAIL UPWARDS THROUGH SHEATHING INTO PURLIN WITH A

THIS DRAWING APPLIES TO VALLEYS WITH THE FOLLOWING CONDITIONS

-2X4 CONTINUOUS LATERAL BRACE (CLB) MIN. IS REQUIRED FOR CRIPPLES 5'-0" TO 10'-0" LONG NAILED W/2 - 10d NAILS OR 2X4 "T" OR SCAB BRACE NAILD TO FLAT EDGE OF CRIPPLE WITH 8d NAILS @ 8" O.C. "T" OR SCAB MUST BE 90% OF CRIPPLE LENGTH. CRIPPLES OVER 10'-0" LONG REQUIRE TWO CLB's OR BOTH FACES W/ "T" OR SCAB. USE STRESS CRADED LIMBERS".

RIDGE BOARD TO TRUSS

8 PURLIN TO TRUSS (TYP.)

TRUSS TO BLOCKING

0 CRIPPLE TO TRUSS

1 CRIPPLE TO PURLIN

GENERAL NOTES

MAXIMUM RAFTER SPANS

= = VALLEY RAFTER OR RIDGE

2X4 RAFTERS TO RIDGE

SLEEPER TO TRUSS

TRUSS

CRIPPLE

#5 < 3885 (3) LSTA18, 14-10d 3480 HTT16, 18-16d, **%**"x10" AB 41 Headir Spans Building Width / Truss Span (ft) Supporting Roof+Ceiling (20psf+20psf) NOTES: NJ = Number of jack studs required to support each end. Building width is measured perpendicular to the ridge. For widths between those shown, spans may be interpolated. Spans are based on uniform loads on

Load Bearing Header Sizing Methods (BY BUILDER)

5. Use one jack stud for every 3000 lb vertical loid.

connection) and stud to foundation (bottom conrection).

Jack Studs and King Studs (BY BUILDER)

Header Uplift Connections (BY BUILDER)

dividing by the length of the header.

Use supplier pubished data or Southern pine :pan tables.

3. For engineered lumber beams have suppliersengineer size beam.

4. Lookup jack studs from FBC 2004, Tables 23/8.3 A, B, & C, or 2308.5.

6. Total king plus jack studs = studs needed to be there if no opening was there.

Option # Uplift, lb. Top Connector Bottom Connector

w/6-.131"x3.25"

< 800 End nail or toe nail

7. Calculate the uplift at each end of the header by summing the moments of all truss uplifts and

SP4, 6-10dx1 1/2"

LSTA12, 10-10d 755 (2) SP4, 6-10dx11/2",1/2" AB 138

<1750 LSTA18, 14-10d 1055 LTT20B, 10-16d ½" AB 1</p>
<2500 (2) LSTA18, 14-10d 2110 LTTI31, 18-10d½"x10" AB 2</p>

8. Select header connections from table below o mfg. catalog to connect header to stud (top

. Determine header size from FBC 2004, Table; 2308.3 A, B, & C, or 2308.5.

N2-GENERAL NOTES:

CONCRETE: MINIMUM COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS SHALL BE F'C = 3000 PSI. WHERE EXCESS WATER IS ADDED TO THE CONCRETE SO THA" ITS SERVICABILITY IS DEGRADED, THE ATTAINMENT OF REQUIRED STRENGTH SHALL NOT RELEASE THE CONTRACTOR FROM PROVIDING SUCH MODIFICATIONS AS MAY BE REQUIRED BY THE ENGINEER TO PROVIDE A SERVICEABLE MEMBER OR SURFACE. ALL CONCRETE SHALL BE VIBRATED. NO REPAIR OFRUBBING OF CONCRETE SURFACES SHALL BE MADE PRIOR TO INSPECTION BY AND APPROVAL OF THE ENGINEER, OWNER OR HIS REPRESENTATIVE.

WELDED WIRE REINFORCED SLAB: 6" x 6" W1.4 x W1.4, FB = 85fSI, WELDED WIRE REINFORCEMENT FABRIC (W.W.M.) CONFORMING TO ASTM A185; LOCATED IN MIDLE OF THE SLAB; SUPPORTED WITH APPROVED MATERIALS OR SUPPORTS AT SPACINGS NOT TO EXCEED 3'.

FIBER CONCRETE SLAB: CONCRETE SLABS ON GROUND CONTAINING SYNTHETIC FIBER REINFORCEMENT. FIBER LENGTHS SHALL BE 1/2 INCH TO 2 INCHES IN LENGTH. DOSAGE AMOUNTS SHALL BE FROM 0.75 TO 1.5 POUNDS PER CUBIC YARD IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SYNTHETIC FIBERS SHALL COMPLY WITH ASTM C 1116. THE MANUFACTURER OR SUPPLIER SHALL PROVIDE CERTIFICATION OF COMPLIANCE WITH ASTM C 1116 WHEN REQUESTED BY THE BUILDING OFFICIAL.

CONTROL JOINTS: WHERE SPECIFIED, SAWN CONTROL JOINTS IN SLAB-ON-GRADE SHALL BE CUT IN ACCORDANCE WITH ACI 302. JOINTS SHALL BE CUT WITHIN 12 HOURS OF SLAB PLACEMENT. THE LENGTH / WIDTH RATIOS OF SLAB AREAS SHALL NOT EXCEED 1.5 AND TYPICAL SPACING OF CUTS TO BE 12FT. DO NOT CUT WWM OR REINFORCING STEEL. (RECOMMENDED LOCATION OF CONTROL JOINTS IS SUBJECT TO OWNER AND CONTRACTOR'S APPROVAL. THE CONTROL JONTS ARE NOT INTENDED TO PREVENT CRACKS BUT RATHER TO ENCOURAGE THE SLAB TO CRACK OILA GIVEN LINE.)

REBAR: ASTM A 615, GRADE 40, DEFORMED BARS, FY = 40 KSI.ALL LAPS SPLICES 40 * DB (25" FOR #5 BARS); UNO. ALL REINFORCEMENT SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI 315-95 WITH ACI 315-96 UNLESS NOTED OTHERWISE. ALL TENSION DE/ELOPMENT LENGTHS SHALL BE 23

STRUCTURAL CONNECTORS: MANUFACTURERS AND PRODUCT NUMBER FOR CONNECTORS, ANCHORS, AND REINFORCEMENT ARE LISTED FOR EXAMPLE NOT ENDORSEMENT. AN EQUIVALENT DEVICE OF THE SAME OR OTHER MANUFACTURER CAN BE SUBSTITUTED FOR ANY DEVICES LISTED IN THE EXAMPLE TABLES AS LONG AS IT MEETS THE REQUIRED LOAD CAPACITIES. MANUFACTURER'S INSTALLATION INSTRUCTIONS MUST BE FOLLOWED TO ACHIEVE RATED LOAD).

ANCHOR BOLTS: A-307 ANCHOR BOLTS WITH MINIMUM EMBEDMENT AS SPECIFIED IN DRAWINGS BUT NO LESS THAN 7" IN CONCRETE OR REINFORCED BOND BEAM OR 5" IN GROUTED CMU.

WASHERS: WASHERS USED WITH 1/2" BOLTS TO BE 2" x 2" x 9/64"; WITH 5/8" BOLTS TO BE 3" x 3" x 9/64"; WITH 3/4" BOLTS TO BE 3" x 3" x 9/64"; WITH 7/8" BOLTS TO BE 3"x 3" x 5/16"; NO.

NAILS: ALL NAILS ARE COMMON NAILS UNLESS OTHERWISE SPECIFIED OR ACCEPTED BY FBC TEST REPORTS AS HAVING EQUAL STRUCTURAL VALUES.

RETROFIT ROOF OVER FRAMING & BRACING DETAIL

4'-0" MAX SPACING

VALLEY ROOF PLAN

INSTALL BLOCKING UNDER RAFTER IF SLEEPERS ARE NOT USED.
INSTALL BLOCKING UNDER CRIPPLES IF CRIPPLES FALL BETWEEN LOWER TRUSS TOP CHORDS AND LATERAL BRACING IS NOT USED (WHERE NO SHEATHING IS APPLIED) (NOT REQUIRED IF SLEEPERS ARE USED) APPLY ALL NAILING IN ACCORDANCE TO NDS-1997 SECTION 12. NAILS ARE COMMON WIRE SECTION CUT PARALLEL TO VALLEY RAFTER

* ATTACHMENT CAN BE MADE DIRECTLY

BY CUTTING A 2" x 4" NOTCH IN SHEATHING

BEVEL RAFTER CUT AS REQ'D FOR PITCH

OR THROUGH PLYWOOD SHEATHING

N3-WINDLOAD ENGINEER'S SCOPE OF WORK: The wind load engineer is engineer of record for compliance of the **N4-WIND LOAD DESIGN DATA** structure to wind load requirements of FBC 2004, Section 1609. If trusses are used, the wind load engineer is not engineer of record for the trusses and did not design the trusses or delegate to the truss designer. (Wind loads are per FBC 2004, Section 1609 for enclosed simple diaphragm buildings with mean roof height less than 60' or the least horizontal dimension; not sited on the upper half of an unobstructed 60' high hill with BUILDER'S RESPONSIBILITY: The builder and owner are responsible for the following, which are specifically not par >10% slope.) of the wind load engineer's scope of work. Confirm that the foundation design & site conditions meet gravity load requirements (assume 1000 PSF bearing Basic Wind Speed 110 MPH capacity unless visual observation or soils test proves otherwise Wind Exposure Provide materials and construction techniques, which comply with FBC 2004 requirements for the stated wind Wind Importance Factor velocity and design pressures. **Building Category** Provide a continuous load path from roof to foundation. If you believe the plan omits a continuous load path connection, call the wind load engineer immediately. N/A (Enclosed) Verify the truss engineering includes truss design, placement plans, temporary and permanent bracing details, Building not in the high velocity hurricane zone russ-to-truss connections, and load reactions for all bearing locations. Building not in the wind-borne debris region 'Select uplift connections, walls, columns, and footings based on truss engineering bearing locations and reactions; < 30 ft including interior bearing walls. Size headers for gravity loads; headers sized by the builder for gravity loads will also satisfy wind loads. Roof Angle 10-45 degrees Components And Cladding Wind Pressures (FBC Table1609 B&C Zone Effective Wind Area (ft2) DOCUMENT CONTROL and PRIORITY: Structural requirements on S-1 control unless the building code or architectural sheets have more stringent requirements. Non-structural requirements on architectural sheets control. 10 Specific requirements take precedence over general requirements. Revision control is by the latest signature date and is the responsibility of the builder. 5 21.8 -29.1 18.5 -22.6 COPYRIGHTS AND PROPERTY RIGHTS: Mark Disosway, P.E. hereby expressly reserves Total Shear Wall Segments is common law copyrights and property right in these instruments of service. This document is -4"min for 8'-0"H wall 2'-10"min for 10'-0"H wall not to be reproduced, altered or copied in any form or manner without first the express written permission and consen Required 28.5' 22.5'
Actual 42.0' 57.0' of Mark Disosway.

All exterior walls are type II shear walls

of all wall segments with full height

ACTUAL SHEAR WALL length is the total

sheathing and width to height ratio greater than 1: 3.5 (plus special shear wall

segments if noted.) REQUIRED SHEAR

VALL length is from WFCM-2001, table

quivalent calculation) REV-27-Jun-03

7A & 3.17B with table 3.17E

adjustment for type II shear wall (or

Stated dimensions supercede scaled dimensions. Refer all questions to Mark Disosway, P.E. for resolution. Do not

proceed without clarification. WINDLOAD ENGINEER: Mark Disosway, PE No.53915

IMITATION: This design is valid for one building, at specified location.

ERTIFICATION: The attached plans and "Windload Engineering", sheet S-1, comply with FBC 2004, Section 1609 wind loads, to the best of my knowledge.

s drawing is not valid for construction unless raised seal is affixed.

WINDLOAD ENGINEERING

"EVERYTHING YOU NEED FOR YOUR BUILDING PERMIT" Mark Disosway P.E.

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Scott & Holly Zawoy Garage

Designer:

Sheet S-1 of 2 Sheets Windload Engineering Job # 511211

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