



524 CLEVELAND BLVD. #230
CALDWELL, IDAHO 83605
(208) 453-6512

Completed by: JDJ
Review/Check: KKJ

Project Name: Joras Residence
SRE Project #: 2023-6515
City and State: Donnelly, Idaho

Structural Calculations

Project Title: Joras Residence

Location: Donnelly, Idaho

Job #: 2023-6515



Prepared in accordance with 2018 IBC. Calculations expire by: 1/16/2025



SITE SPECIFIC DESIGN CRITERIA:

Snow Criteria:

| | | |
|---------------------------|----------------|-----------|
| Roof Load (P_f) | 150 psf | |
| Ground Load (P_g) | 150 psf | |
| Exposure Factor (C_e) | 1.0 | Partially |
| Thermal Factor (C_t) | 1.0 | Typical |
| Importance (I_s) | 1.0 | |

Wind Criteria:

| | | |
|---------------------------|----------------|--------------|
| Wind Speed (V_3) | 115 mph | |
| Wind Exposure | C | Open Terrain |
| Wind Importance (I_w) | 1.0 | |
| Building Category | II | |

Seismic Criteria:

| | | |
|-------------------------------|-------------|----------------------|
| Site Class | D | Stiff Soil |
| S_s | 0.48 | F_a 1.42 |
| S_1 | 0.15 | F_v 2.22 |
| S_{D1} | 0.45 | S_{D1} 0.22 |
| Risk Category | II | Other |
| Seismic Importance (I_E) | 1.0 | |
| Seismic Design Category (SDC) | D | |

Seismic Criteria (continued):

| Wall Material | Design Base Shear | Response Coeff., R | |
|---------------|-------------------|--------------------|-----------|
| OSB | .08Wp | 6.5 | Typ @ Ext |
| GYP | .27Wp | 2 | Typ @ Int |
| Cant. Col. | .36Wp | 1.5 | |

Soil Criteria:

| | |
|---------------|-----------------|
| Brg. Strength | 1500 psf |
|---------------|-----------------|

STRUCTURE SPECIFIC DESIGN CRITERIA:

Live Loads:

| | |
|-----------------|---------------|
| Typ Residential | 40 psf |
| Garage (P.V.) | 50 psf |
| Sleeping Area's | 30 psf |

Roof Dead Loads:

| | |
|--------------|---------------|
| Deck | 1.5 |
| Insulation | 2.0 |
| Roofing | 3.0 |
| Joist | 2.5 |
| Ceiling | 3.0 |
| Misc | 4.5 |
| TOTAL | 17 psf |

Roof not engineered for Tile, Slate or Concrete.

Exterior Wall Dead Loads:

| | |
|--------------|---------------|
| Studs | 2.0 |
| Siding | 2.5 |
| Insulation | 0.5 |
| Gyp. Board | 2.5 |
| Sheathing | 1.5 |
| Misc | 3.0 |
| TOTAL | 12 psf |

Wall not engineered for Stucco.

Floor Dead Loads:

| | |
|--------------|---------------|
| Deck | 2.5 |
| Joist | 2.0 |
| Ceiling | 2.0 |
| Flooring | 2.5 |
| Misc | 3.0 |
| TOTAL | 12 psf |

Floor not engineered for concrete overlay.

Interior Wall Dead Loads:

| | |
|--------------|--------------|
| Studs | 2.0 |
| Gyp. Board | 2.5 |
| Misc | 3.0 |
| TOTAL | 8 psf |

Deck Dead Load

| | |
|--------------|---------------|
| Decking | 4.4 |
| Joist | 2.0 |
| | 0.0 |
| Misc | 3.0 |
| TOTAL | 10 psf |

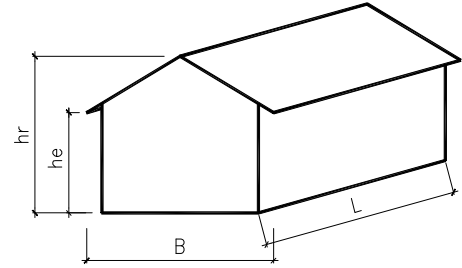
Deck not engineered for hot tub loading.
Deck not engineered for concrete overlay.



WIND ANALYSIS: Low-rise Building - Based on IBC / ASCE 7

INPUT DATA

| | | | | | |
|--|------------|-------|--|-----|--|
| Exposure category (B, C or D, ASCE 7-16 26.7.3) | | C | | | |
| Importance factor (ASCE 7-16 Table 1.5-2) | $I_w =$ | 1.00 | for all Category | | |
| Basic wind speed (ASCE 7-16 26.5.1 or 2018 IBC) | $V =$ | 115 | mph | | |
| Topographic factor (ASCE 7-16 26.8 & Table 26.8-1) | $K_{zt} =$ | 1.00 | Flat | | |
| Building height to ridge | $h_r =$ | 34.75 | ft | | |
| Building height to eave | $h_e =$ | 19.25 | ft | | |
| Building width | $B =$ | 42.50 | ft | | |
| Building length | $L =$ | 41.00 | ft | | |
| Overhang sloped width | $O_h =$ | 3.00 | ft | | |
| Effective area of components (or Solar Panel area) | $A =$ | 27.0 | ft ² , <== Overhang? (Yes or No): | Yes | |
| Enclosed? (Y/N) | | y | | | |



ANALYSIS

Velocity pressure

$$q_h = 0.00256 K_z K_{zt} K_d K_e V^2 = 27.65 \text{ psf}$$

where: q_h = velocity pressure at mean roof height, h. (Eq. 26.10-1 page 268)

K_z = velocity pressure exposure coefficient evaluated at height, h, (Tab. 26.10-1, pg. 268) = **0.96**

K_d = wind directionality factor. (Tab. 26.6-1, for building, page 266) = **0.85**

h = mean roof height = **27.00 ft**

K_e = ground elevation factor. (**1.0** per Sec. 26.9, page 268) **< 60 ft, [Satisfactory]** (ASCE 7-16 26.2.1)

< Min (L, B), [Satisfactory] (ASCE 7-16 26.2.2)

Design pressures for MWFRS

$$p = q_h [(G C_{pf}) - (G C_{pi})]$$

where: p = pressure in appropriate zone. (Eq. 28.3-1, page 311).

$p_{min} = 16 \text{ psf}$ (ASCE 7-16 28.3.4)

$G C_{pf}$ = product of gust effect factor and external pressure coefficient, see table below. (Fig. 28.3-1, page 312 & 313)

$G C_{pi}$ = product of gust effect factor and internal pressure coefficient. (Tab. 26.13-1, Enclosed Building, page 271)

= **0.18** or **-0.18**

a = width of edge strips, Fig 28.3-1, page 312, $\text{MAX}[\text{MIN}(0.1B, 0.1L, 0.4h), \text{MIN}(0.04B, 0.04L), 3]$ = **4.10 ft**

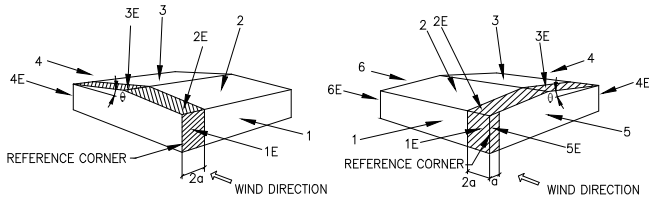
Net Pressures (psf), Basic Load Cases

| Surface | Roof angle q = 35.31 | | | Roof angle q = 35.31 | | |
|---------|----------------------|-----------------|-----------------|----------------------|-----------------|-----------------|
| | $G C_{pf}$ | Net Press. W/ | | $G C_{pf}$ | Net Press. W/ | |
| | | (+ $G C_{pi}$) | (- $G C_{pi}$) | | (+ $G C_{pi}$) | (- $G C_{pi}$) |
| 1 | 0.56 | 10.51 | 20.46 | -0.45 | -17.42 | -7.46 |
| 2 | 0.21 | 0.83 | 10.78 | -0.69 | -24.05 | -14.10 |
| 3 | -0.43 | -16.86 | -6.91 | -0.37 | -15.21 | -5.25 |
| 4 | -0.37 | -15.21 | -5.25 | -0.45 | -17.42 | -7.46 |
| 5 | | | | 0.40 | 6.08 | 16.04 |
| 6 | | | | -0.29 | -12.99 | -3.04 |
| 1E | 0.69 | 14.10 | 24.05 | -0.48 | -18.25 | -8.29 |
| 2E | 0.27 | 2.49 | 12.44 | -1.07 | -34.56 | -24.61 |
| 3E | -0.53 | -19.63 | -9.68 | -0.53 | -19.63 | -9.68 |
| 4E | -0.48 | -18.25 | -8.29 | -0.48 | -18.25 | -8.29 |
| 5E | | | | 0.61 | 11.89 | 21.84 |
| 6E | | | | -0.43 | -16.86 | -6.91 |

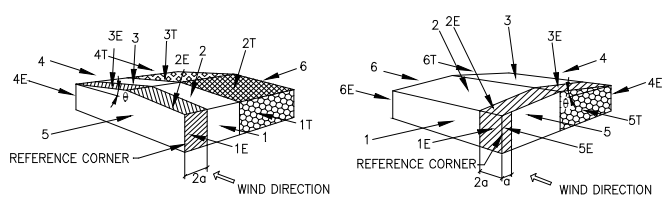
Net Pressures (psf), Torsional Load Cases

| Surface | Roof angle q = 35.31 | | |
|---------|----------------------|-----------------|-----------------|
| | $G C_{pf}$ | Net Press. W/ | |
| | | (+ $G C_{pi}$) | (- $G C_{pi}$) |
| 1T | 0.56 | 2.63 | 5.11 |
| 2T | 0.21 | 0.21 | 2.70 |
| 3T | -0.43 | -4.22 | -1.73 |
| 4T | 0.00 | -3.80 | -1.31 |
| Surface | Roof angle q = 0.00 | | |
| | $G C_{pf}$ | Net Press. W/ | |
| | | (+ $G C_{pi}$) | (- $G C_{pi}$) |
| 5T | 0.40 | 1.52 | 4.01 |
| 6T | -0.29 | -3.25 | -0.76 |

+ / - Wind Pressure 59%



Load Case A (Transverse) Load Case B (Longitudinal)
Basic Load Cases



Load Case A (Transverse) Load Case B (Longitudinal)
Torsional Load Cases

Design pressures for components and cladding

$p = q_h [(G C_p) - (G C_{pi})]$

where: p = pressure on component. (Eq. 30.3-1, pg 33)

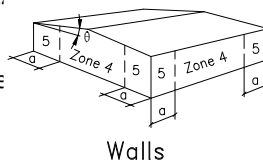
$p_{min} = 16.00$ psf (ASCE 7-16 30.2.2)

$G C_p = 1.00$ external pressure coefficient
see table below. (ASCE 7-16 30.3.2)

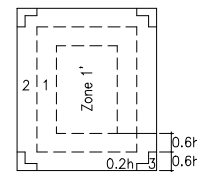
$q = 35.31$ °

$p_{overhang} = -95.38$ psf

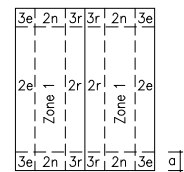
(ASCE 7-16 28.3.3)



Walls



Roof $\theta \leq 7^\circ$



Roof $\theta > 7^\circ$

| Comp. & Cladding Coeffs. | Effective Area (ft ²) | Zone 1 | | Zone 1' | | Zone 2 | | Zone 2e | | Zone 2n | | Zone 2r | |
|-----------------------------------|-----------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------|------------------|
| | | GC _p | -GC _p | GC _p | -GC _p | GC _p | -GC _p | GC _p | -GC _p | GC _p | -GC _p | GC _p | -GC _p |
| | 602 | 0.30 | -0.80 | 0.30 | -0.80 | 0.30 | -1.80 | 0.30 | -0.80 | 0.30 | -1.00 | 0.30 | -1.00 |
| Effective Area (ft ²) | Zone 3 | | Zone 3e | | Zone 3r | | Zone 4 | | Zone 5 | | | | |
| | GC _p | -GC _p | GC _p | -GC _p | GC _p | -GC _p | GC _p | -GC _p | GC _p | -GC _p | | | |
| 27 | 0.30 | -1.80 | 0.30 | -1.80 | 0.30 | -1.80 | 0.99 | -1.09 | 0.99 | -1.38 | | | |

| Comp. & Cladding Pressures | Zone 1 | | Zone 1' | | Zone 2 | | Zone 2e | | Zone 2n | | Zone 2r | |
|----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------------------|----------|
| | Positive | Negative | Positive | Negative | Positive | Negative | Positive | Negative | Positive | Negative | Positive | Negative |
| | 3.32 | -17.14 | 3.32 | -17.14 | 3.32 | -44.79 | 3.32 | -17.14 | 3.32 | -22.67 | 3.32 | -22.67 |
| | Zone 3 | | Zone 3e | | Zone 3r | | Zone 4 | | Zone 5 | | (Max Pressure 44.79 psf) | |
| Positive | Negative | Positive | Negative | Positive | Negative | Positive | Negative | Positive | Negative | | | |
| 3.32 | -44.79 | 3.32 | -44.79 | 3.32 | -44.79 | 22.38 | -25.15 | 22.38 | -33.15 | | | |

| LOAD CASE 'A' FACTORED LOADS | |
|--|-----------------|
| $0.6 * W_r = (Z_2 + Z_3) * 0.6 =$ | 10.6 psf |
| $0.6 * W_{rE} = (Z_{2E} + Z_{3E}) * 0.6 =$ | 13.3 psf |
| $0.6 * W_w = (Z_1 + Z_4) * 0.6 =$ | 15.4 psf |
| $0.6 * W_{wE} = (Z_{1E} + Z_{4E}) * 0.6 =$ | 19.4 psf |

| LOAD CASE 'B' FACTORED LOADS | |
|--|-----------------|
| $0.6 * W_r = (Z_2 + Z_3) * 0.6 =$ | 5.3 psf |
| $0.6 * W_{rE} = (Z_{2E} + Z_{3E}) * 0.6 =$ | 9.0 psf |
| $0.6 * W_w = (Z_5 + Z_6) * 0.6 =$ | 11.4 psf |
| $0.6 * W_{wE} = (Z_{5E} + Z_{6E}) * 0.6 =$ | 17.3 psf |

| ROOF COMPONENTS FACTORED LOAD | |
|-------------------------------|-----------------|
| $0.6 * Z_{r,c\&c} =$ | 13.6 psf |

| WALL COMPONENTS FACTORED LOAD | |
|-------------------------------|-----------------|
| $0.6 * Z_{w,c\&c} =$ | 15.1 psf |



OSB SEISMIC LOADING ANALYSIS

IBC / ASCE 7: Equivalent Lateral Force (ELF) Procedure:

INPUT DATA

Typical floor height: $h = 9$ ft
 Typical floor weight: $w_x = 29.6$ kips
 Number of floors: $n = 2$
 Importance factor (ASCE 11.5.1): $I_e = 1.00$
 Design spectral response: $S_{DS} = 0.45$ g
 $S_{D1} = 0.22$ g
 Mapped spectral resp.: $S_1 = 0.15$ g
 Period Parameter, C_t :
 (ASCE Tab 12.8-2): $C_t = 0.020$
 Resp. coefficient: (ASCE
 Tab. 12.2.1): $R = 6.5$
 Seismic design category: SDC = D
 $h_n = 34.8$ ft

DESIGN SUMMARY

$C_s = 1.2 * S_{DS} / (R / I_e) = 0.0833$ <= Applicable
 Period Parameter, $x = 0.75$, ASCE Tab 12.8-2
 Period: $T_a = C_t (h_n)^x = 0.29$ sec, ASCE 12.8.2.1
 $C_s < S_{D1} / [(R / I_e) T_a] = 0.1160$, ASCE Tab 12.8.1.1 <= Not Applicable
 $C_s > 0.044 S_{DS} I_e = 0.0199$, ASCE Tab 12.8.1.1 <= Not Applicable
 $C_s > 0.5 S_1 / (R / I_e) = 0.0112$, ASCE Tab 12.8.1.1 <= Not Applicable
 $k = 1.41$, (ASCE 12.8.3, page 91)
 $V = C_s W = 0.0833$ W
 $0.7 * V = 0.0583$ W
 $W = 59$ kips, total

SEISMIC COMPONENT & ANCHORING ANALYSIS

Out-of-plane seismic force for wall design (ASCE 7, Sec.12.11.1)

$$w_{1, seismic} = MAX(0.4 I S_{DS} W_p, 0.1 W_p) = 0.2 W_p = 0.2 \text{ psf} \quad \leq \text{USE FOR DIAPHRAGMS}$$

Where: $W_p = 1.0$ psf, $I_e = 1.00$
 (CBC / IBC Tab. 1604.5 & ASCE 7 Tab. 1.5-2)

Out-of-plane seismic force for anchorage design

For seismic design category A & B, any diaphragm (ASCE 7 Sec. 12.11.2)

$$F_{anch, seismic} = MAX \left[0.4 S_{DS} I W_p \frac{(h+h_p)^2}{2h}, 0.1 W_p \frac{(h+h_p)^2}{2h}, 400 S_{DS} I, F_{min} \right] =$$

Where: $F_{min} = 0.13$ plf, $1.69 W_p = 180$ plf (Horizontal) <= Not Applicable
 (ASCE 7 Sec. 12.11.2 & 11.7.3)

For seismic design category C and above, flexible diaphragm (ASCE 7 Sec. 12.11.2.1)

$$F_{anch, seismic} = MAX \left[0.8 S_{DS} I W_p \frac{(h+h_p)^2}{2h}, 0.1 W_p \frac{(h+h_p)^2}{2h}, 400 S_{DS} I, F_{min} \right] =$$

$$= 3.39 W_p = 180 \text{ plf (Horizontal)} \quad \leq \text{Applicable}$$

For connections (ASCE 7 Sec. 12.11.2.1)

$$F_{conn, seismic} = MAX [0.133 S_{DS} w_p, 0.5 w_p] = 0.5 W_p = 0.5 \text{ plf (Horizontal)}$$



GYP SEISMIC LOADING ANALYSIS

IBC / ASCE 7: Equivalent Lateral Force (ELF) Procedure:

INPUT DATA

Typical floor height: $h = 9$ ft
 Typical floor weight: $w_x = 29.6$ kips
 Number of floors: $n = 2$
 Importance factor (ASCE 11.5.1): $I_e = 1.00$
 Design spectral response: $S_{DS} = 0.45$ g
 $S_{D1} = 0.22$ g
 Mapped spectral resp.: $S_1 = 0.15$ g
 Period Parameter, C_t :
 (ASCE Tab 12.8-2): $C_t = 0.020$
 Resp. coefficient: (ASCE
 Tab. 12.2.1): $R = 2$
 Seismic design category: $SDC = D$
 $h_n = 34.8$ ft

DESIGN SUMMARY

$C_s = 1.2 * S_{DS} / (R / I_e) = 0.2707$ <= Applicable
 Period Parameter, $x = 0.75$, ASCE Tab 12.8-2
 Period: $T_a = C_t (h_n)^x = 0.29$ sec, ASCE 12.8.2.1
 $C_s < S_{D1} / [(R / I_e) T_a] = 0.3771$, ASCE Tab 12.8.1.1 <= Not Applicable
 $C_s > 0.044 S_{DS} I_e = 0.0199$, ASCE Tab 12.8.1.1 <= Not Applicable
 $C_s > 0.5 S_1 / (R / I_e) = 0.0365$, ASCE Tab 12.8.1.1 <= Not Applicable
 $k = 1.41$, (ASCE 12.8.3, page 91)
 $V = C_s W = 0.2707$ W
 $0.7 * V = 0.1895$ W
 $W = 59$ kips, total

SEISMIC COMPONENT & ANCHORING ANALYSIS

Out-of-plane seismic force for wall design (ASCE 7, Sec.12.11.1)

$$w_{1, seismic} = MAX(0.4 I S_{DS} W_p, 0.1 W_p) = 0.2 W_p = 0.2 \text{ psf} \quad \leq \text{USE FOR DIAPHRAGMS}$$

Where: $W_p = 1.0$ psf, $I_e = 1.00$
 (CBC / IBC Tab. 1604.5 & ASCE 7 Tab. 1.5-2)

Out-of-plane seismic force for anchorage design

For seismic design category A & B, any diaphragm (ASCE 7 Sec. 12.11.2)

$$F_{anch, seismic} = MAX \left[0.4 S_{DS} I W_p \frac{(h+h_p)^2}{2h}, 0.1 W_p \frac{(h+h_p)^2}{2h}, 400 S_{DS} I, F_{min} \right] =$$

Where: $F_{min} = 0.13$ plf, $1.69 W_p = 180$ plf (Horizontal) <= Not Applicable
 (ASCE 7 Sec. 12.11.2 & 11.7.3)

For seismic design category C and above, flexible diaphragm (ASCE 7 Sec. 12.11.2.1)

$$F_{anch, seismic} = MAX \left[0.8 S_{DS} I W_p \frac{(h+h_p)^2}{2h}, 0.1 W_p \frac{(h+h_p)^2}{2h}, 400 S_{DS} I, F_{min} \right] =$$

$$= 3.39 W_p = 180 \text{ plf (Horizontal)} \quad \leq \text{Applicable}$$

For connections (ASCE 7 Sec. 12.11.2.1)

$$F_{conn, seismic} = MAX [0.133 S_{DS} w_p, 0.5 w_p] = 0.5 W_p = 0.5 \text{ plf (Horizontal)}$$



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Review/Check: KKJ

Project Name: Joras Residence
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City and State: Donnelly, Idaho

WIND / SEISMIC SHEAR FORCE CALCULATIONS:

From ASCE 7-16 Wind & Seismic Loading Analysis

| Wall Line | Roof / Floor | | | | | | Wall | | | | | Load above | | *C _s (W/p) | = | Loading | | |
|-----------|------------------|---------------|------------------------|-------------|-------------|------------------|---------------|--------------|---------------------|-----------------------|----------|-------------|-------------------|-----------------------|------|----------------------|-----------------|--|
| | Wind Force (psf) | Diaph. Weight | Wr, We truss trib (ft) | Area W (ft) | Area L (ft) | Wind Force (psf) | Wall DL (psf) | Wall ht (ft) | wall line dist (ft) | Upr. Flr Wall ht (ft) | Wind (#) | Seismic (#) | Wind Force (kips) | | | Seismic Force (kips) | Lateral Control | |
| X1-3 | 12.3 | 55 | 5.3 | 12.9 | 6.0 | 18.0 | 12.0 | 3.0 | 12.9 | | | | 0.06 | = | 0.59 | 0.15 | Wind | |
| X2-3 | 12.3 | 55 | 5.3 | 12.9 | 6.0 | 18.0 | 12.0 | 3.0 | 12.9 | | | | 0.06 | = | 0.59 | 0.15 | Wind | |
| Y1-3 | 12.4 | 55 | 5.3 | 12.0 | 12.9 | 18.1 | 12.0 | 9.0 | 12.0 | | | | 0.06 | = | 0.89 | 0.32 | Wind | |
| X1-2 | 12.1 | 55 | 15.5 | 14.9 | 32.0 | 17.6 | 12.0 | 9.0 | 14.9 | 0.0 | 0 | 0 | 0.06 | = | 1.99 | 0.85 | Wind | |
| X2-2 | 0.0 | 18 | 0.0 | 14.9 | 32.0 | 17.6 | 8.0 | 9.0 | 14.9 | 5.5 | 0.59 | 0.15 | 0.19 | = | 4.68 | 3.32 | Wind | |
| | 0.0 | 18 | 0.0 | 26.1 | 37.0 | 16.7 | 8.0 | 9.0 | 26.1 | 5.5 | 0.59 | 0.15 | 0.19 | = | | | | |
| X3-2 | 11.5 | 55 | 15.5 | 26.1 | 37.0 | 16.7 | 12.0 | 9.0 | 26.1 | 0.0 | 0 | 0 | 0.06 | = | 3.29 | 1.70 | Wind | |
| Y1-2 | 11.2 | 55 | 15.5 | 37.0 | 41.0 | 16.3 | 12.0 | 9.0 | 37.0 | 0 | 0 | 0 | 0.06 | = | 4.57 | 2.64 | Wind | |
| Y2-2 | 0.0 | 18 | 0.0 | 37.0 | 41.0 | 16.3 | 12.0 | 9.0 | 37.0 | 5.5 | 0.89 | 0.32 | 0.06 | = | 3.90 | 1.35 | Wind | |
| X1-1 | 0.0 | 18 | 0.0 | 17.0 | 42.5 | 17.3 | 12.0 | 9.0 | 17.0 | 5.5 | 1.99 | 0.85 | 0.06 | = | 3.46 | 1.34 | Wind | |
| X2-1 | 0.0 | 18 | 0.0 | 17.0 | 42.5 | 17.3 | 8.0 | 9.0 | 17.0 | 5.5 | 2.34 | 1.66 | 0.19 | = | 8.16 | 6.63 | Wind | |
| | 0.0 | 18 | 0.0 | 24.0 | 37.0 | 16.8 | 8.0 | 9.0 | 24.0 | 5.5 | 2.34 | 1.66 | 0.19 | = | | | | |
| X3-1 | 0.0 | 18 | 0.0 | 24.0 | 37.0 | 16.8 | 12.0 | 9.0 | 24.0 | 5.5 | 3.29 | 1.70 | 0.06 | = | 5.31 | 2.32 | Wind | |
| Y1-1 | 0.0 | 18 | 0.0 | 42.5 | 41.0 | 16.2 | 12.0 | 9.0 | 42.5 | 5.5 | 4.57 | 2.64 | 0.06 | = | 8.01 | 3.83 | Wind | |
| Y2-1 | 0.0 | 18 | 0.0 | 42.5 | 41.0 | 16.2 | 12.0 | 9.0 | 42.5 | 5.5 | 3.90 | 1.35 | 0.06 | = | 7.34 | 2.53 | Wind | |



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SHEAR WALL CALCULATIONS:

| | | X1-3 | X2-3 | Y1-3 | X1-2 | X2-2 | X3-2 |
|--|--|------------|------------|------------|------------|------------|------------|
| Shear Wall Forces | | | | | | | |
| Number of Panels | | 1 | 1 | 1 | 1 | 1 | 1 |
| Total length of wall | | 8.00 ft | 8.00 ft | 12.88 ft | 32.00 ft | 37.00 ft | 37.00 ft |
| Total length of shear wall | L = | 6.50 ft | 6.50 ft | 12.88 ft | 26.38 ft | 31.50 ft | 4.00 ft |
| Total length of full ht seg. | L _w = | 2.57 ft | 2.57 ft | 6.33 ft | 12.83 ft | 25.16 ft | 4.00 ft |
| height of shear wall | H = | 3.00 ft | 3.00 ft | 10.30 ft | 17.10 ft | 9.00 ft | 10.00 ft |
| Maximum opening height | H' = | 0.00 ft | 0.00 ft | 5.00 ft | 17.10 ft | 9.00 ft | 0.00 ft |
| Total force at top of wall | V ₁ = | 593 lbs | 593 lbs | 885 lbs | 1987 lbs | 4676 lbs | 3294 lbs |
| Self weight | W _{DL self} = | 36 plf | 36 plf | 124 plf | 205 plf | 108 plf | 120 plf |
| Applied dead load | W _{DL above} = | 152 plf | 152 plf | 60 plf | 60 plf | 60 plf | 60 plf |
| Prefered OSB thickness | in | 7/16 | 7/16 | 7/16 | 7/16 | 7/16 | 7/16 |
| Prefered Gyp thickness | in | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| Wall Connected to Concrete | y/n = | N | N | N | N | N | Y |
| Shear Wall Segments | | | | | | | |
| | | 2.57 | 2.57 | 3.17 | 5.25 | 5.00 | 4.00 |
| | | | | 3.17 | 7.58 | 12.58 | |
| | | | | | | 7.58 | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Shear Transfer to Concrete | | | | | | | |
| | T = | Not Req'd | Not Req'd | 336 lbs | 1063 lbs | 364 lbs | 8018 lbs |
| | | | | | | | 12" O.C. |
| Provide: | | | | | | | A1 |
| Min # of 1/2 Anchor Bolts | | | | | | | (4) Min |
| Load From Above | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | | Perp. Wall | S1 | Perp. Wall | HD5 |
| Shear Resisting System | | | | | | | |
| Force Calculated | | 230.87 | 230.87 | 172.16 | 313.97 | 260.64 | 823.38 |
| | | OSB | OSB | OSB | OSB | OSB | OSB |
| Min Shear Wall Segment: | | 0.86 ft | 0.86 ft | 2.94 ft | 4.89 ft | 2.57 ft | 2.86 ft |
| Provide: | V _a = | SW1 | SW1 | SW1 | SW1 | SW1 | SW4 |
| | | | | | | | |
| Min Shear Wall Segment: | | | | | | | |
| Provide: | V _a = | | | | | | |
| Blocking / Nailing Framing Attachment | | | | | | | |
| Blocking Unit Shear | | 74 plf | 74 plf | 69 plf | 62 plf | 126 plf | 89 plf |
| Blocking | | NONE | NONE | NONE | NONE | NONE | NONE |
| Nailing | | See SCHED | See SCHED | See SCHED | See SCHED | See SCHED | See SCHED |
| Unit Base Shear | | | | | | | |
| % of full height segments | %fh = L _w /L = | 0.395 | 0.395 | 0.492 | 0.486 | 0.799 | 1.000 |
| % of maximum opening height | %oh = H'/H = | 0.000 | 0.000 | 0.485 | 1.000 | 1.000 | 0.000 |
| Shear cap adj factor | SCAF = | 1.00 | 1.00 | 0.81 | 0.49 | 0.71 | 1.00 |
| Unit base shear | v _{base} V ₁ /L _w = | 231 plf | 231 plf | 140 plf | 155 plf | 186 plf | 823 plf |
| Effective unit base shear | v _{req} = v _{base} /SCAF = | 231 plf | 231 plf | 172 plf | 314 plf | 261 plf | 823 plf |
| Ovrtrn. mo. Ttl. length of wall | OTM = | 1.8 k-ft | 1.8 k-ft | 11.2 k-ft | 68.9 k-ft | 59.0 k-ft | 32.9 k-ft |
| Shear wall adjustment factor | | | | | | | |
| Resist moment total L. of wall | RM = | 4.0 k-ft | 4.0 k-ft | 15.2 k-ft | 92.1 k-ft | 83.1 k-ft | 1.4 k-ft |
| | r = | 1.0000 | 1.0000 | 0.6661 | 0.4864 | 0.7987 | 1.0000 |
| | C ₀ = | 2.5292 | 2.5292 | 0.8118 | 0.4933 | 0.7130 | 1.0000 |



524 CLEVELAND BLVD. #230
CALDWELL, IDAHO 83605
(208) 453-6512

Completed by: JDJ
Review/Check: KKJ

Project Name: Joras Residence
SRE Project #: 2023-6515
City and State: Donnelly, Idaho

SHEAR WALL CALCULATIONS:

| | | Y1-2 | Y2-2 | X1-1 | X2-1 | X2-1 | X2-1 |
|--|--|-------------------|------------------|------------------|------------------|------------------|------------------|
| Shear Wall Forces | | | | | | | |
| Number of Panels | | 1 | 1 | 1 | 1 | 1 | 1 |
| Total length of wall | | 41.00 ft | 41.00 ft | 42.50 ft | 42.50 ft | 42.50 ft | 42.50 ft |
| Total length of shear wall | L = | 25.50 ft | 29.00 ft | 42.50 ft | 4.50 ft | 23.60 ft | 42.50 ft |
| Total length of full ht seg. | L _w = | 20.50 ft | 16.00 ft | 17.92 ft | 4.50 ft | 23.60 ft | 8.17 ft |
| height of shear wall | H = | 9.00 ft | 9.00 ft | 9.00 ft | 9.00 ft | 9.00 ft | 9.00 ft |
| Maximum opening height | H' = | 9.00 ft | 3.00 ft | 6.70 ft | 0.00 ft | 0.00 ft | 0.00 ft |
| Total force at top of wall | V ₁ = | 4571 lbs | 3902 lbs | 3462 lbs | 1013 lbs | 5313 lbs | 1839 lbs |
| Self weight | W _{DL self} = | 108 plf | 108 plf | 108 plf | 108 plf | 108 plf | 108 plf |
| Applied dead load | W _{DL above} = | 140 plf | 68 plf | 68 plf | 68 plf | 68 plf | 98 plf |
| Prefered OSB thickness | in | 7/16 | 7/16 | 7/16 | 7/16 | 7/16 | 7/16 |
| Prefered Gyp thickness | in | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| Wall Connected to Concrete | y/n = | N | N | Y | Y | Y | Y |
| Shear Wall Segments | | | | | | | |
| | | 8.50 | 4.00 | 2.96 | 4.50 | 23.60 | 8.17 |
| | | 4.00 | 4.00 | 4.00 | | | |
| | | 4.00 | 4.00 | 4.00 | | | |
| | | 4.00 | 4.00 | 4.00 | | | |
| | | | | 2.96 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Shear Transfer to Concrete | | | | | | | |
| | T = | 431 lbs | Not Req'd | Not Req'd | 1789 lbs | 780 lbs | Not Req'd |
| | | | | 72" O.C. | 48" O.C. | 48" O.C. | 72" O.C. |
| Provide: | | | | Code Min. | A4 | A4 | Code Min. |
| Min # of 1/2 Anchor Bolts | | | | (4) Min | (2) Min | (6) Min | (2) Min |
| Load From Above | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Holddown | | Perp. Wall | | | HD1 | HD1 | |
| Shear Resisting System | | | | | | | |
| Force Calculated | | 310.39 | 243.90 | 330.97 | 225.12 | 225.12 | 225.12 |
| | | OSB | OSB | OSB | OSB | Gyp. | Gyp. |
| Min Shear Wall Segment: | | 2.57 ft | 2.57 ft | 2.57 ft | 2.57 ft | 4.50 ft | 4.50 ft |
| Provide: Va = | | SW1 | SW1 | SW1 | SW1 | SWD | SWD |
| | | | | | | | |
| Min Shear Wall Segment: | | | | | | | |
| Provide: Va = | | | | | | | |
| Blocking / Nailing Framing Attachment | | | | | | | |
| Blocking Unit Shear | | 111 plf | 95 plf | 81 plf | 24 plf | 125 plf | 43 plf |
| Blocking | | NONE | NONE | NONE | NONE | NONE | NONE |
| Nailing | | See SCHED | See SCHED | See SCHED | See SCHED | See SCHED | See SCHED |
| Unit Base Shear | | | | | | | |
| % of full height segments | %fh = L _w /L = | 0.804 | 0.552 | 0.422 | 1.000 | 1.000 | 0.192 |
| % of maximum opening height | %oh = H'/H = | 1.000 | 0.333 | 0.744 | 0.000 | 0.000 | 0.000 |
| Shear cap adj factor | SCAF = | 0.72 | 1.00 | 0.58 | 1.00 | 1.00 | 1.00 |
| Unit base shear | v _{base} V ₁ /L _w = | 223 plf | 244 plf | 193 plf | 225 plf | 225 plf | 225 plf |
| Effective unit base shear | v _{req} =v _{base} /SCAF = | 310 plf | 244 plf | 331 plf | 225 plf | 225 plf | 225 plf |
| Ovrtrn. mo. Ttl. length of wall | OTM = | 57.3 k-ft | 35.1 k-ft | 53.4 k-ft | 9.1 k-ft | 47.8 k-ft | 16.5 k-ft |
| Shear wall adjustment factor | | | | | | | |
| Resist moment total L. of wall | RM = | 80.7 k-ft | 74.0 k-ft | 159.0 k-ft | 1.8 k-ft | 49.0 k-ft | 186.0 k-ft |
| | r = | 0.8039 | 0.7869 | 0.4948 | 1.0000 | 1.0000 | 1.0000 |
| | C ₀ = | 0.7183 | 1.0000 | 0.5837 | 1.0000 | 1.0000 | 5.2039 |



524 CLEVELAND BLVD. #230
 CALDWELL, IDAHO 83605
 (208) 453-6512

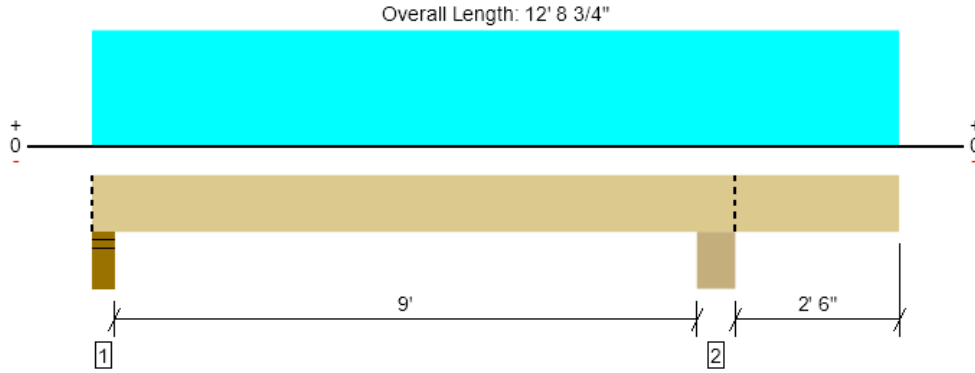
Completed by: JDJ
 Review/Check: KKJ

Project Name: Joras Residence
 SRE Project #: 2023-6515
 City and State: Donnelly, Idaho

SHEAR WALL CALCULATIONS:

| | | X3-1 | Y1-1 | | Y2-1 | | |
|--|--|------------------|------------|--|-------------|--|--|
| Shear Wall Forces | | | | | | | |
| Number of Panels | | 1 | 1 | | 1 | | |
| Total length of wall | | 42.50 ft | 41.00 ft | | 41.00 ft | | |
| Total length of shear wall | L = | 28.00 ft | 41.00 ft | | 24.00 ft | | |
| Total length of full ht seg. | L _w = | 12.05 ft | 25.50 ft | | 24.00 ft | | |
| height of shear wall | H = | 9.00 ft | 9.00 ft | | 9.00 ft | | |
| Maximum opening height | H' = | 8.00 ft | 9.00 ft | | 9.00 ft | | |
| Total force at top of wall | V ₁ = | 5308 lbs | 8012 lbs | | 7344 lbs | | |
| Self weight | w _{DL self} = | 108 plf | 108 plf | | 108 plf | | |
| Applied dead load | w _{DL above} = | 140 plf | 97 plf | | 174 plf | | |
| Prefered OSB thickness | in | 7/16 | 7/16 | | 7/16 | | |
| Prefered Gyp thickness | in | 1/2 | 1/2 | | 1/2 | | |
| Wall Connected to Concrete | y/n = | Y | Y | | Y | | |
| Shear Wall Segments | | | | | | | |
| | | 5.67 | 2.75 | | 24.00 | | |
| | | 6.38 | 2.75 | | | | |
| | | | 5.00 | | | | |
| | | | 5.00 | | | | |
| | | | 10.00 | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Shear Transfer to Concrete | | | | | | | |
| | T = | 3545 lbs | 912 lbs | | 727 lbs | | |
| 1/2 Anchor Bolts @ | | 60" O.C. | 60" O.C. | | 36" O.C. | | |
| Provide: | | A5 | A5 | | A3 | | |
| Min # of 1/2 Anchor Bolts | | (6) Min | (8) Min | | (8) Min | | |
| Load From Above | | 0.00 | 0.00 | | 0.00 | | |
| Holddown | | HD3 | HD1 | | HD1 | | |
| Shear Resisting System | | | | | | | |
| Force Calculated | | 859.19 | 551.77 | | 306.00 | | |
| | | OSB | OSB | | OSB | | |
| Min Shear Wall Segment: | | 2.57 ft | 2.57 ft | | 2.57 ft | | |
| Provide: | V _a = | SW4 | SW2 | | SW1 | | |
| | | | | | | | |
| Min Shear Wall Segment: | | | | | | | |
| Provide: | V _a = | | | | | | |
| | | | | | | | |
| Blocking / Nailing Framing Attachment | | | | | | | |
| Blocking Unit Shear | | 125 plf | 195 plf | | 179 plf | | |
| Blocking | | NONE | B1 | | NONE | | |
| Nailing | | See SCHED | T1 | | T1 | | |
| Unit Base Shear | | | | | | | |
| % of full height segments | %fh = L _w /L = | 0.430 | 0.622 | | 1.000 | | |
| % of maximum opening height | %oh = H'/H = | 0.889 | 1.000 | | 1.000 | | |
| Shear cap adj factor | SCAF = | 0.51 | 0.57 | | 1.00 | | |
| Unit base shear | v _{base} V ₁ /L _w = | 441 plf | 314 plf | | 306 plf | | |
| Effective unit base shear | v _{req} = v _{base} /SCAF = | 859 plf | 552 plf | | 306 plf | | |
| Ovrtrn. mo. of shrt. pnl | OTM = | 22.5 k-ft | 126.6 k-ft | | 66.1 k-ft | | |
| Shear wall adjustment factor | | | | | | | |
| Resist moment of shrt panel | RM = | 4.0 k-ft | 172.3 k-ft | | 81.1 k-ft | | |
| | r = | 0.4593 | 0.6220 | | 1.0000 | | |
| | C ₀ = | 0.5129 | 0.5694 | | 1.0000 | | |

Roof, Beam 1
1 piece(s) 8 x 10 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|----------------------|---------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 5953 @ 4" | 25781 (5.50") | Passed (23%) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Shear (lbs) | 4935 @ 8' 8" | 9286 | Passed (53%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 12504 @ 4' 10 1/8" | 12974 | Passed (96%) | 1.15 | 1.0 D + 1.0 S (Alt Spans) |
| Live Load Defl. (in) | 0.208 @ 5' 1/16" | 0.476 | Passed (L/549) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Total Load Defl. (in) | 0.231 @ 4' 11 15/16" | 0.634 | Passed (L/493) | -- | 1.0 D + 1.0 S (Alt Spans) |

System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------|----------|-------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Stud wall - DF | 5.50" | 5.50" | 1.50" | 657 | 5296 | 5953 | Blocking |
| 2 - Column - DF | 9.25" | 9.25" | 2.12" | 1141 | 8785 | 9927 | Blocking |

• Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 12' 9" o/c | |
| Bottom Edge (Lu) | 12' 9" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Snow (1.15) | Comments |
|-----------------------|-----------------------|-----------------|-------------|-------------|--------------|
| 0 - Self Weight (PLF) | 0 to 12' 8 3/4" | N/A | 18.0 | -- | |
| 1 - Uniform (PSF) | 0 to 12' 8 3/4" (Top) | 7' 3" | 17.0 | 150.0 | Default Load |

Weyerhaeuser Notes

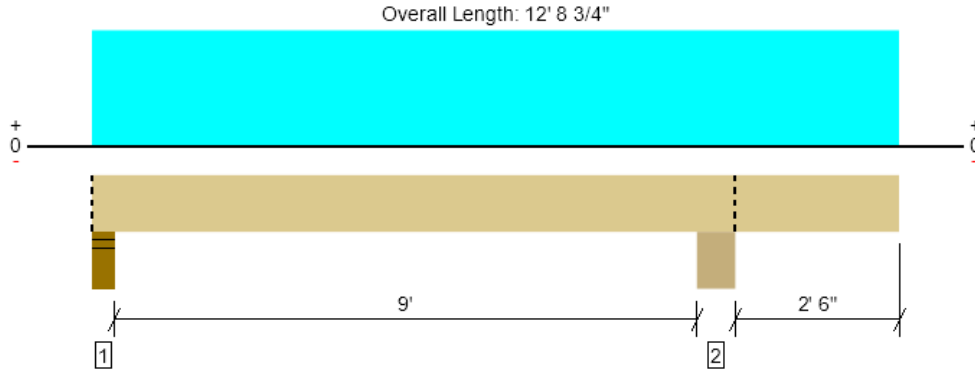
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Roof, Beam 2
1 piece(s) 8 x 12 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|----------------------|---------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 9006 @ 4" | 25781 (5.50") | Passed (35%) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Shear (lbs) | 7155 @ 8' 6" | 11241 | Passed (64%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 18919 @ 4' 10 1/8" | 21387 | Passed (88%) | 1.15 | 1.0 D + 1.0 S (Alt Spans) |
| Live Load Defl. (in) | 0.178 @ 5' 1 1/16" | 0.476 | Passed (L/642) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Total Load Defl. (in) | 0.197 @ 4' 11 15/16" | 0.634 | Passed (L/578) | -- | 1.0 D + 1.0 S (Alt Spans) |

System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Lumber grading provisions must be extended over the length of the member per NDS 4.2.5.5.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|-------|----------|-------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Stud wall - DF | 5.50" | 5.50" | 1.92" | 971 | 8035 | 9006 | Blocking |
| 2 - Column - DF | 9.25" | 9.25" | 3.20" | 1687 | 13329 | 15016 | Blocking |

• Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 12' 9" o/c | |
| Bottom Edge (Lu) | 12' 9" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Snow (1.15) | Comments |
|-----------------------|-----------------------|-----------------|-------------|-------------|--------------|
| 0 - Self Weight (PLF) | 0 to 12' 8 3/4" | N/A | 21.9 | -- | |
| 1 - Uniform (PSF) | 0 to 12' 8 3/4" (Top) | 11' | 17.0 | 150.0 | Default Load |

Weyerhaeuser Notes

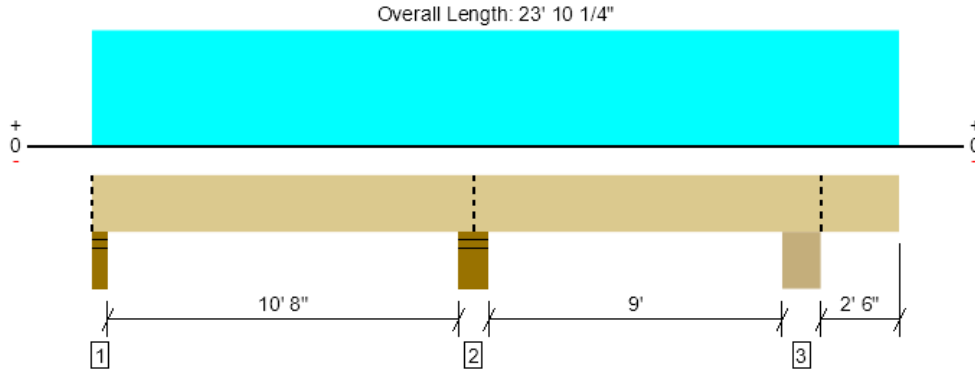
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Roof, Copy of Beam 3
1 piece(s) 8 x 22 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|---------------------|---------------|-----------------|------|-----------------------------|
| Member Reaction (lbs) | 29130 @ 11' 3 3/8" | 33984 (7.25") | Passed (86%) | -- | 1.0 D + 1.0 S (Adj Spans) |
| Shear (lbs) | 10645 @ 9' 2 1/4" | 21016 | Passed (51%) | 1.15 | 1.0 D + 1.0 S (Adj Spans) |
| Moment (Ft-lbs) | -30158 @ 11' 3 3/8" | 70067 | Passed (43%) | 1.15 | 1.0 D + 1.0 S (Adj Spans) |
| Live Load Defl. (in) | 0.043 @ 5' 3 3/4" | 0.555 | Passed (L/999+) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Total Load Defl. (in) | 0.048 @ 5' 3 1/2" | 0.740 | Passed (L/999+) | -- | 1.0 D + 1.0 S (Alt Spans) |

System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Lumber grading provisions must be extended over the length of the member per NDS 4.2.5.5.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|-------|----------|-------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Stud wall - DF | 3.75" | 3.75" | 2.35" | 1241 | 9791 | 11032 | Blocking |
| 2 - Stud wall - DF | 7.25" | 7.25" | 6.21" | 3357 | 25773 | 29130 | Blocking |
| 3 - Column - DF | 9.25" | 9.25" | 3.54" | 1851 | 14723 | 16574 | Blocking |

• Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 23' 10" o/c | |
| Bottom Edge (Lu) | 23' 10" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Snow (1.15) | Comments |
|-----------------------|------------------------|-----------------|-------------|-------------|--------------|
| 0 - Self Weight (PLF) | 0 to 23' 10 1/4" | N/A | 40.8 | -- | |
| 1 - Uniform (PSF) | 0 to 23' 10 1/4" (Top) | 13' 6" | 17.0 | 150.0 | Default Load |

Weyerhaeuser Notes

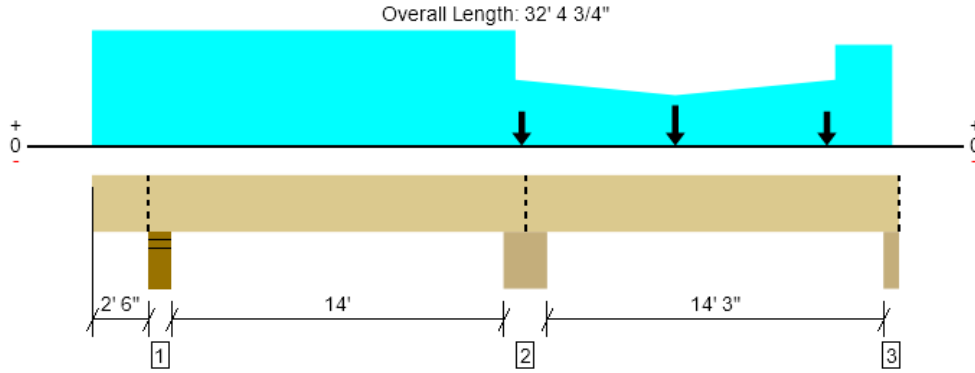
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Roof, Copy of Beam 3
1 piece(s) 8 x 22 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|---------------------|----------------|-----------------|------|-----------------------------|
| Member Reaction (lbs) | 48271 @ 17' 4 3/4" | 49219 (10.50") | Passed (98%) | -- | 1.0 D + 1.0 S (Adj Spans) |
| Shear (lbs) | 17988 @ 15' 2" | 21016 | Passed (86%) | 1.15 | 1.0 D + 1.0 S (Adj Spans) |
| Moment (Ft-lbs) | -66284 @ 17' 4 3/4" | 70067 | Passed (95%) | 1.15 | 1.0 D + 1.0 S (Adj Spans) |
| Live Load Defl. (in) | 0.138 @ 9' 5 9/16" | 0.733 | Passed (L/999+) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Total Load Defl. (in) | 0.149 @ 9' 5 1/16" | 0.978 | Passed (L/999+) | -- | 1.0 D + 1.0 S (Alt Spans) |

System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Lumber grading provisions must be extended over the length of the member per NDS 4.2.5.5.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|-------|----------|-------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Stud wall - DF | 5.50" | 5.50" | 5.22" | 2680 | 21788 | 24468 | Blocking |
| 2 - Column - DF | 10.50" | 10.50" | 10.30" | 6011 | 42260 | 48271 | Blocking |
| 3 - Column - DF | 3.75" | 3.75" | 3.35" | 1966 | 13737 | 15703 | Blocking |

• Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 32' 5" o/c | |
| Bottom Edge (Lu) | 31' 11" o/c | |

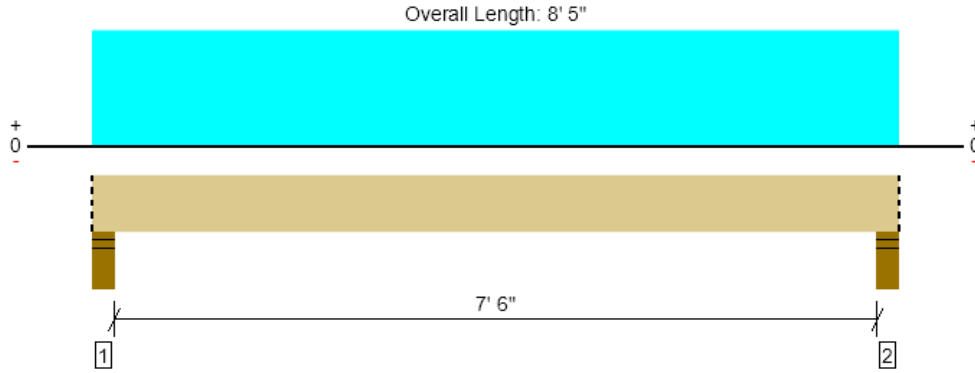
•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Snow (1.15) | Comments |
|-----------------------|-----------------------------|-----------------|-------------|-------------|-----------------------------------|
| 0 - Self Weight (PLF) | 0 to 32' 4 3/4" | N/A | 40.8 | -- | |
| 1 - Uniform (PSF) | 0 to 17' (Top) | 16' | 17.0 | 150.0 | Default Load |
| 2 - Uniform (PSF) | 17' to 32' 1 1/2" (Top) | 7' | 17.0 | 150.0 | Default Load |
| 3 - Tapered (PSF) | 17' to 23' 5" (Top) | 2' 2" to 0 | 17.0 | 150.0 | Default Load |
| 4 - Tapered (PSF) | 23' 5" to 29' 10" (Top) | 0 to 2' 2" | 17.0 | 150.0 | Default Load |
| 5 - Uniform (PSF) | 29' 10" to 32' 1 1/2" (Top) | 7' | 17.0 | 150.0 | Default Load |
| 6 - Point (lb) | 23' 5" (Front) | N/A | 781 | 5223 | Linked from: Beam 9, Support 1 |
| 7 - Point (lb) | 29' 6" (Front) | N/A | 810 | 4460 | Linked from: Beam 6,10, Support 2 |
| 8 - Point (lb) | 17' 3" (Front) | N/A | 810 | 4460 | Linked from: Beam 6,10, Support 2 |

| | |
|---|-----------|
| ForteWEB Software Operator | Job Notes |
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Roof, Beam 4
1 piece(s) 6 x 12 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|---------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 7798 @ 4" | 18906 (5.50") | Passed (41%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 5173 @ 1' 5" | 8244 | Passed (63%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 13912 @ 4' 2 1/2" | 15684 | Passed (89%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.120 @ 4' 2 1/2" | 0.387 | Passed (L/774) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.135 @ 4' 2 1/2" | 0.517 | Passed (L/690) | -- | 1.0 D + 1.0 S (All Spans) |

System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Lumber grading provisions must be extended over the length of the member per NDS 4.2.5.5.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------|----------|-------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Stud wall - DF | 5.50" | 5.50" | 2.27" | 854 | 6944 | 7798 | Blocking |
| 2 - Stud wall - DF | 5.50" | 5.50" | 2.27" | 854 | 6944 | 7798 | Blocking |

• Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 8' 5" o/c | |
| Bottom Edge (Lu) | 8' 5" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Snow (1.15) | Comments |
|-----------------------|------------------|-----------------|-------------|-------------|--------------|
| 0 - Self Weight (PLF) | 0 to 8' 5" | N/A | 16.0 | -- | |
| 1 - Uniform (PSF) | 0 to 8' 5" (Top) | 11' | 17.0 | 150.0 | Default Load |

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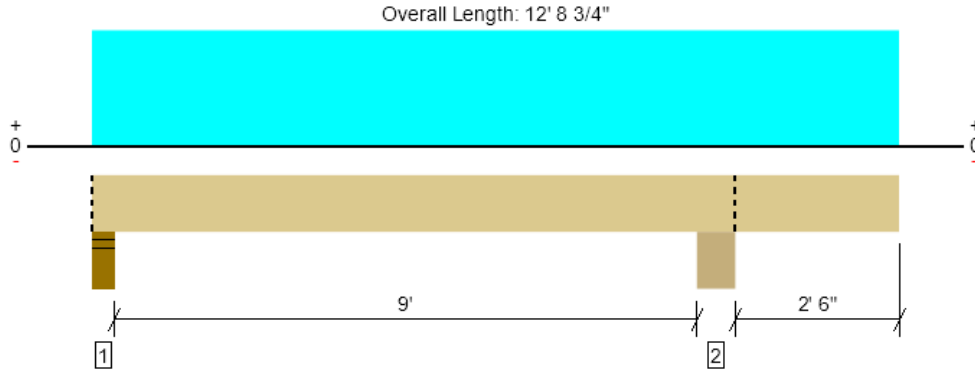
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| | |
|---|-----------|
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| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Roof, Beam 5
1 piece(s) 8 x 12 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|----------------------|---------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 7792 @ 4" | 25781 (5.50") | Passed (30%) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Shear (lbs) | 6191 @ 8' 6" | 11241 | Passed (55%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 16367 @ 4' 10 1/8" | 21387 | Passed (77%) | 1.15 | 1.0 D + 1.0 S (Alt Spans) |
| Live Load Defl. (in) | 0.153 @ 5' 1 1/16" | 0.476 | Passed (L/744) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Total Load Defl. (in) | 0.171 @ 4' 11 15/16" | 0.634 | Passed (L/668) | -- | 1.0 D + 1.0 S (Alt Spans) |

System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Lumber grading provisions must be extended over the length of the member per NDS 4.2.5.5.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|-------|----------|-------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Stud wall - DF | 5.50" | 5.50" | 1.66" | 853 | 6939 | 7792 | Blocking |
| 2 - Column - DF | 9.25" | 9.25" | 2.77" | 1481 | 11512 | 12993 | Blocking |

• Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 12' 9" o/c | |
| Bottom Edge (Lu) | 12' 9" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Snow (1.15) | Comments |
|-----------------------|-----------------------|-----------------|-------------|-------------|--------------|
| 0 - Self Weight (PLF) | 0 to 12' 8 3/4" | N/A | 21.9 | -- | |
| 1 - Uniform (PSF) | 0 to 12' 8 3/4" (Top) | 9' 6" | 17.0 | 150.0 | Default Load |

Weyerhaeuser Notes

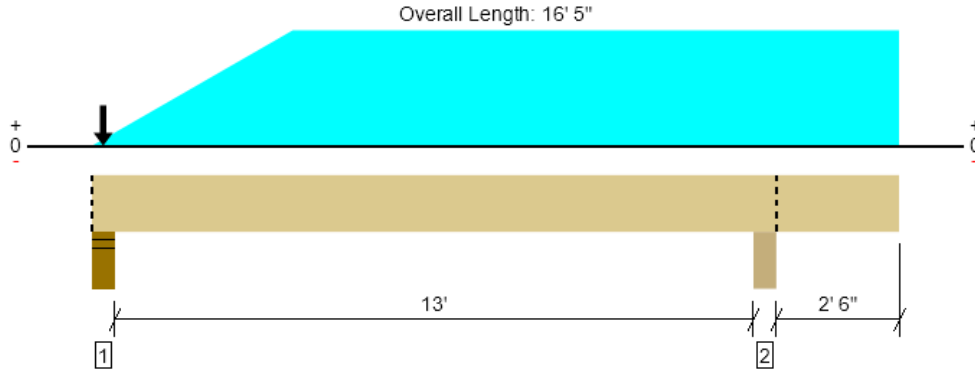
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Roof, Beam 9
1 piece(s) 8 x 14 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|--------------------|---------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 10587 @ 13' 8 1/4" | 25781 (5.50") | Passed (41%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 6050 @ 12' 4" | 13196 | Passed (46%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 22440 @ 7' 1/8" | 29090 | Passed (77%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.253 @ 7' 1/8" | 0.668 | Passed (L/632) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.287 @ 7' | 0.890 | Passed (L/558) | -- | 1.0 D + 1.0 S (All Spans) |

System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Lumber grading provisions must be extended over the length of the member per NDS 4.2.5.5.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------|----------|-------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Stud wall - DF | 5.50" | 5.50" | 1.50" | 781 | 5223 | 6004 | Blocking |
| 2 - Column - DF | 5.50" | 5.50" | 2.26" | 1301 | 9286 | 10587 | Blocking |

• Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 16' 5" o/c | |
| Bottom Edge (Lu) | 16' 5" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Snow (1.15) | Comments |
|-----------------------|-----------------------|-----------------|-------------|-------------|-----------------------------------|
| 0 - Self Weight (PLF) | 0 to 16' 5" | N/A | 25.6 | -- | |
| 1 - Tapered (PSF) | 0 to 4' 1" (Top) | 0 to 3' 3" | 17.0 | 150.0 | Default Load |
| 2 - Tapered (PSF) | 0 to 4' 1" (Top) | 0 to 3' 3" | 17.0 | 150.0 | Default Load |
| 3 - Uniform (PSF) | 4' 1" to 16' 5" (Top) | 6' 6" | 17.0 | 150.0 | Default Load |
| 4 - Point (lb) | 2 3/4" (Top) | N/A | 72 | 357 | Linked from: Beam 7, 8, Support 2 |

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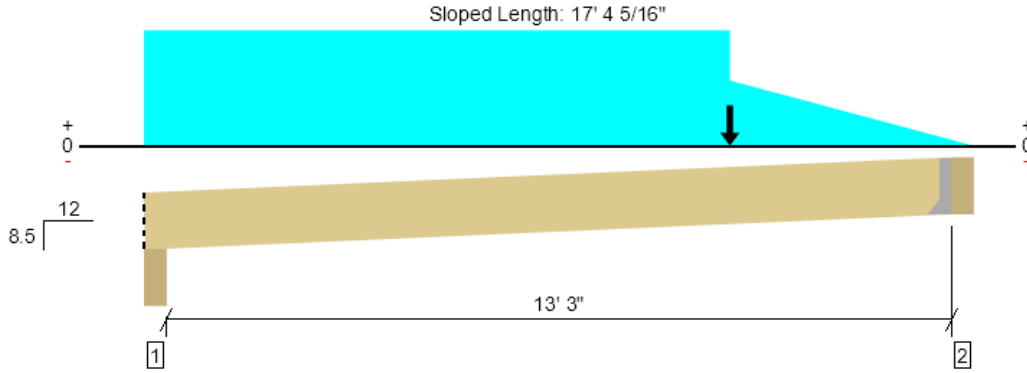
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|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Roof, Beam 6,10
1 piece(s) 6 x 16 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Member Length : 17' 8 9/16"

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|---------------------|--------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 5228 @ 13' 8 1/2" | 5228 (1.52") | Passed (100%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 5501 @ 1' 6 1/8" | 11111 | Passed (50%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 22189 @ 6' 11 9/16" | 27694 | Passed (80%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.333 @ 6' 11 7/8" | 0.820 | Passed (L/591) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.390 @ 6' 11 7/8" | 1.093 | Passed (L/504) | -- | 1.0 D + 1.0 S (All Spans) |

System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 8.5/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Lumber grading provisions must be extended over the length of the member per NDS 4.2.5.5.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|-------------------------------|----------------|---------------------|----------|-------------------------|------|----------|-----------------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Beam - DF | 5.50" | 5.50" | 2.04" | 1025 | 6002 | 7027 | Blocking |
| 2 - Hanger on 15 1/2" DF beam | 5.50" | Hanger ¹ | 1.52" | 810 | 4460 | 5270 | See note ¹ |

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.
- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 16' 10" o/c | |
| Bottom Edge (Lu) | 16' 10" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | | |
|-------------------------------|---------------------|-------------|---------------|----------------|------------------|-------------|--|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories | |
| 2 - Face Mount Hanger | Connector not found | N/A | N/A | N/A | N/A | | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

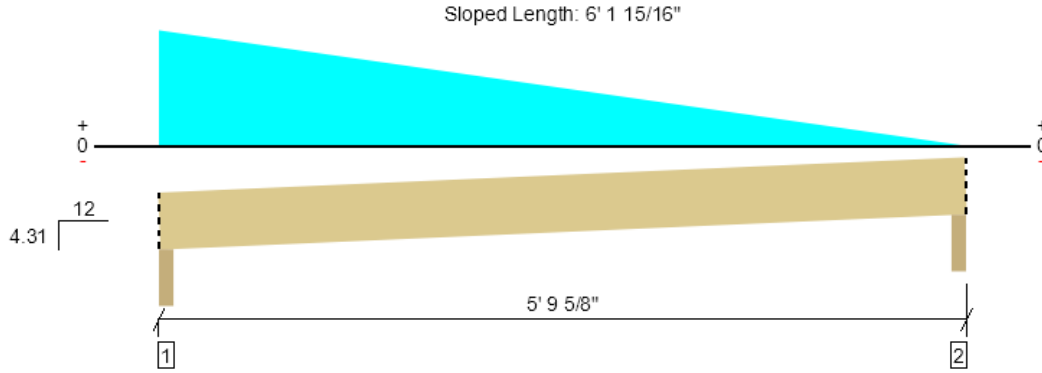
| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Snow (1.15) | Comments |
|-----------------------|------------------|-----------------|-------------|-------------|-----------------------------------|
| 0 - Self Weight (PLF) | 0 to 13' 8 1/2" | N/A | 21.6 | -- | |
| 1 - Tapered (PSF) | 10' 1" to 14' 2" | 3' 3" to 0 | 17.0 | 150.0 | Default Load |
| 2 - Uniform (PSF) | 0 to 10' 1" | 5' 9" | 17.0 | 150.0 | Default Load |
| 3 - Point (lb) | 10' 1" | N/A | 123 | 745 | Linked from: Beam 7, 8, Support 1 |

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|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Roof, Beam 7, 8
1 piece(s) 4 x 10 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Member Length : 6' 5 5/16"

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|--------------------|--------------|-----------------|------|-----------------------------|
| Member Reaction (lbs) | 868 @ 2" | 5206 (3.50") | Passed (17%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 460 @ 1' 3/16" | 4468 | Passed (10%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 854 @ 2' 6 1/8" | 5740 | Passed (15%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.011 @ 2' 9 9/16" | 0.290 | Passed (L/999+) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.013 @ 2' 9 5/8" | 0.387 | Passed (L/999+) | -- | 1.0 D + 1.0 S (All Spans) |

System : Roof
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 4.31/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|-------------------------|----------------|-----------|----------|-------------------------|------|----------|-------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Beveled Plate - SPF | 3.50" | 3.50" | 1.50" | 123 | 745 | 868 | Blocking |
| 2 - Beveled Plate - SPF | 3.50" | 3.50" | 1.50" | 72 | 357 | 429 | Blocking |

• Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 6' 2" o/c | |
| Bottom Edge (Lu) | 6' 2" o/c | |

•Maximum allowable bracing intervals based on applied load.

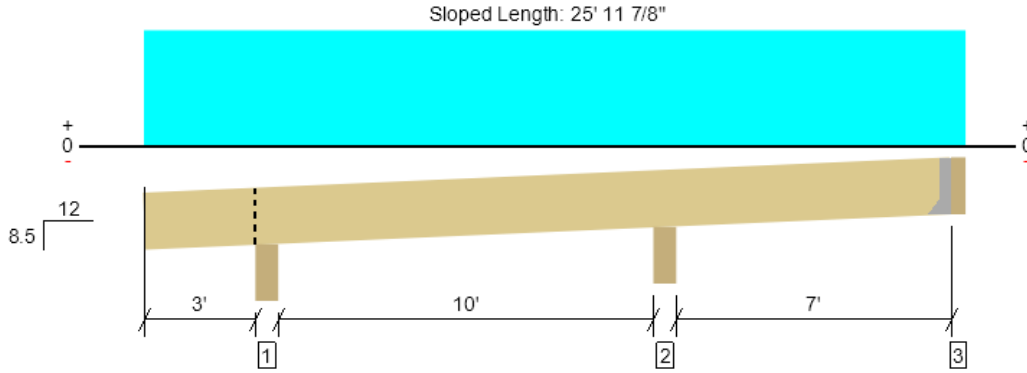
| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Snow (1.15) | Comments |
|-----------------------|-----------------|-----------------|-------------|--------------|------------------------------|
| 0 - Self Weight (PLF) | 0 to 5' 9 5/8" | N/A | 8.2 | -- | |
| 1 - Tapered (PLF) | 0 to 5' 9 5/8" | N/A | 46.8 to 0.0 | 380.3 to 0.0 | Generated from Roof Geometry |

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| | |
|---|-----------|
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| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Roof, Rafter 4
1 piece(s) 6 x 10 DF No.1 @ 32" OC



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Member Length : 26' 2 5/16"

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|---------------------|--------------|-----------------|------|-----------------------------|
| Member Reaction (lbs) | 1290 @ 20' 11" | 5156 (1.50") | Passed (25%) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Shear (lbs) | 2287 @ 12' 9 3/4" | 6810 | Passed (34%) | 1.15 | 1.0 D + 1.0 S (Adj Spans) |
| Moment (Ft-lbs) | -4505 @ 13' 8 1/4" | 10703 | Passed (42%) | 1.15 | 1.0 D + 1.0 S (Adj Spans) |
| Live Load Defl. (in) | 0.131 @ 8' 1 3/4" | 0.641 | Passed (L/999+) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Total Load Defl. (in) | 0.144 @ 8' 1 13/16" | 0.854 | Passed (L/999+) | -- | 1.0 D + 1.0 S (Alt Spans) |

System : Roof
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 8.5/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Lumber grading provisions must be extended over the length of the member per NDS 4.2.5.5.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|------------------------------|----------------|---------------------|----------|-------------------------|------|----------|-----------------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Beveled Plate - DF | 5.50" | 5.50" | 1.50" | 449 | 3281 | 3730 | Blocking |
| 2 - Beveled Plate - DF | 5.50" | 5.50" | 1.50" | 583 | 4372 | 4955 | None |
| 3 - Hanger on 9 1/2" DF beam | 3.50" | Hanger ¹ | 1.50" | 143 | 1276 | 1420 | See note ¹ |

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.
- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 25' 8" o/c | |
| Bottom Edge (Lu) | 25' 8" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | | |
|-------------------------------|-------------|-------------|---------------|----------------|------------------|-------------|--|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories | |
| 3 - Face Mount Hanger | HU68X SLD35 | 2.50" | N/A | 14-10dx1.5 | 6-10d | | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

| Vertical Load | Location (Side) | Spacing | Dead (0.90) | Snow (1.15) | Comments |
|-------------------|-----------------|---------|-------------|-------------|--------------|
| 1 - Uniform (PSF) | 0 to 21' 2 1/2" | 32" | 17.0 | 150.0 | Default Load |

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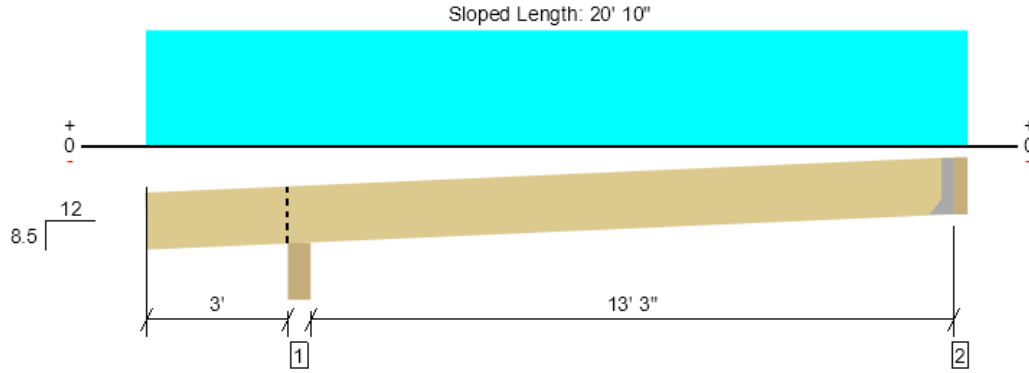
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Roof, Rafter 5
1 piece(s) 6 x 10 DF No.1 @ 32" OC



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Member Length : 21' 7/16"

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|--------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 2971 @ 16' 8 1/2" | 5156 (1.50") | Passed (58%) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Shear (lbs) | 2848 @ 4' 1 1/4" | 6810 | Passed (42%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 9691 @ 10' 2 1/4" | 10703 | Passed (91%) | 1.15 | 1.0 D + 1.0 S (Alt Spans) |
| Live Load Defl. (in) | 0.661 @ 10' 7/16" | 0.826 | Passed (L/300) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Total Load Defl. (in) | 0.746 @ 10' 1/2" | 1.101 | Passed (L/266) | -- | 1.0 D + 1.0 S (Alt Spans) |

System : Roof
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 8.5/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Upward deflection on left cantilever exceeds overhang deflection criteria.
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Upward deflection on left cantilever exceeds 0.4".
- Lumber grading provisions must be extended over the length of the member per NDS 4.2.5.5.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|------------------------------|----------------|---------------------|----------|-------------------------|------|----------|-----------------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Beveled Plate - DF | 5.50" | 5.50" | 1.50" | 575 | 4142 | 4718 | Blocking |
| 2 - Hanger on 9 1/2" DF beam | 3.50" | Hanger ¹ | 1.50" | 366 | 2735 | 3101 | See note ¹ |

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.
- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 20' 6" o/c | |
| Bottom Edge (Lu) | 20' 6" o/c | |

- Maximum allowable bracing intervals based on applied load.

Connector: Simpson Strong-Tie

| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories |
|-----------------------|--------------|-------------|---------------|----------------|------------------|-------------|
| 2 - Face Mount Hanger | HU610X SLD35 | 2.50" | N/A | 18-16d | 8-16d | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

| Vertical Load | Location (Side) | Spacing | Dead (0.90) | Snow (1.15) | Comments |
|-------------------|-----------------|---------|-------------|-------------|--------------|
| 1 - Uniform (PSF) | 0 to 17' | 32" | 17.0 | 150.0 | Default Load |

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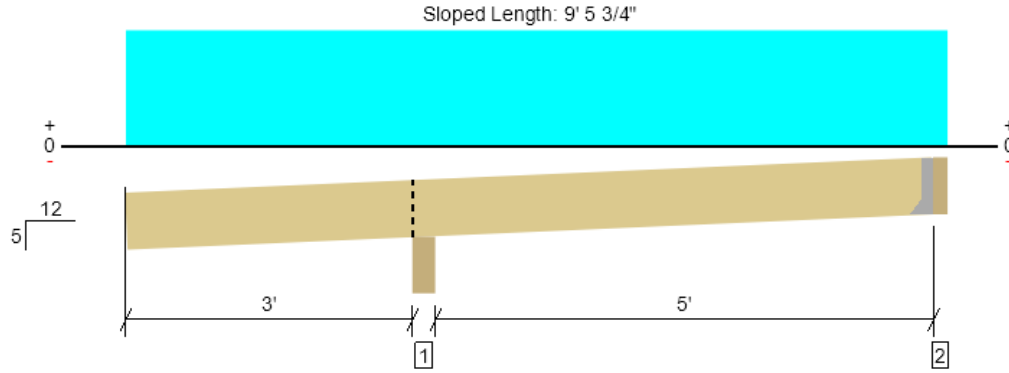
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Roof, Rafter 6
1 piece(s) 6 x 8 DF No.2 @ 24" OC



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Member Length : 9' 5 1/16"

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|--------------|------------------|------|-----------------------------|
| Member Reaction (lbs) | 694 @ 8' 5 1/2" | 5156 (1.50") | Passed (13%) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Shear (lbs) | 945 @ 4' 7/16" | 5376 | Passed (18%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | -1756 @ 3' 2 3/4" | 3706 | Passed (47%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.081 @ 0 | 0.350 | Passed (2L/999+) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Total Load Defl. (in) | 0.088 @ 0 | 0.466 | Passed (2L/958) | -- | 1.0 D + 1.0 S (Alt Spans) |

System : Roof
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 5/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Left cantilever length exceeds 1/3 member length or 1/2 back span length. Additional bracing should be considered.
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|------------------------------|----------------|---------------------|----------|-------------------------|------|----------|-----------------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Beveled Plate - DF | 5.50" | 5.50" | 1.50" | 252 | 2052 | 2304 | Blocking |
| 2 - Hanger on 7 1/2" DF beam | 3.50" | Hanger ¹ | 1.50" | 69 | 722 | 792 | See note ¹ |

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.
- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 9' 2" o/c | |
| Bottom Edge (Lu) | 9' 2" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | |
|-------------------------------|------------|-------------|---------------|----------------|------------------|-------------|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories |
| 2 - Face Mount Hanger | U66X SLD22 | 2.00" | N/A | 8-10dx1.5 | 4-10d | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

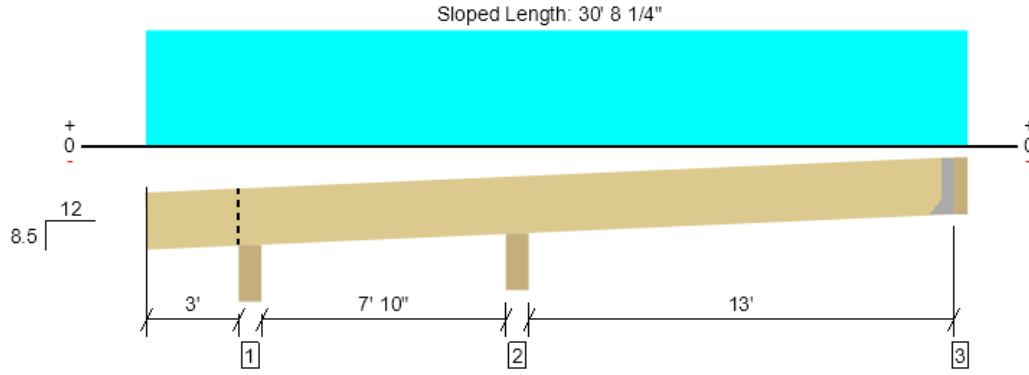
| Vertical Load | Location (Side) | Spacing | Dead (0.90) | Snow (1.15) | Comments |
|-------------------|-----------------|---------|-------------|-------------|--------------|
| 1 - Uniform (PSF) | 0 to 8' 9" | 24" | 17.0 | 150.0 | Default Load |

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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Roof, Rafter 1
1 piece(s) 6 x 10 DF No.1 @ 32" OC



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Member Length : 30' 10 11/16"

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|--------------------|--------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 2521 @ 24' 9" | 5156 (1.50") | Passed (49%) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Shear (lbs) | 3172 @ 12' 4 3/4" | 6810 | Passed (47%) | 1.15 | 1.0 D + 1.0 S (Adj Spans) |
| Moment (Ft-lbs) | -7378 @ 11' 6 1/4" | 10703 | Passed (69%) | 1.15 | 1.0 D + 1.0 S (Adj Spans) |
| Live Load Defl. (in) | 0.407 @ 18' 7 3/4" | 0.811 | Passed (L/478) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Total Load Defl. (in) | 0.460 @ 18' 7 7/8" | 1.081 | Passed (L/423) | -- | 1.0 D + 1.0 S (Alt Spans) |

System : Roof
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 8.5/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Lumber grading provisions must be extended over the length of the member per NDS 4.2.5.5.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|------------------------------|----------------|---------------------|----------|-------------------------|------|----------|-----------------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Beveled Plate - DF | 5.50" | 5.50" | 1.50" | 339 | 2766 | 3105 | Blocking |
| 2 - Beveled Plate - SPF | 5.50" | 5.50" | 2.16" | 735 | 5454 | 6189 | None |
| 3 - Hanger on 9 1/2" DF beam | 3.50" | Hanger ¹ | 1.50" | 315 | 2336 | 2651 | See note ¹ |

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.
- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 30' 4" o/c | |
| Bottom Edge (Lu) | 30' 4" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | |
|-------------------------------|--------------|-------------|---------------|----------------|------------------|-------------|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories |
| 3 - Face Mount Hanger | HU610X SLD35 | 2.50" | N/A | 18-10d | 8-10d | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

| Vertical Load | Location (Side) | Spacing | Dead (0.90) | Snow (1.15) | Comments |
|-------------------|-----------------|---------|-------------|-------------|--------------|
| 1 - Uniform (PSF) | 0 to 25' 1/2" | 32" | 17.0 | 150.0 | Default Load |

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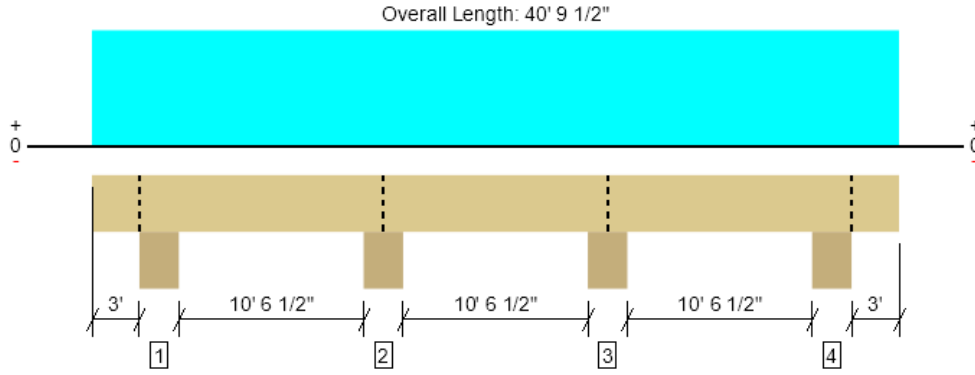
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| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Roof, Beam 17
1 piece(s) 8 x 12 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|---------------------|---------------|-----------------|------|-----------------------------|
| Member Reaction (lbs) | 13015 @ 14' 8 3/4" | 44531 (9.50") | Passed (29%) | -- | 1.0 D + 1.0 S (Adj Spans) |
| Shear (lbs) | 5326 @ 13' 4 1/2" | 11241 | Passed (47%) | 1.15 | 1.0 D + 1.0 S (Adj Spans) |
| Moment (Ft-lbs) | -13625 @ 14' 8 3/4" | 21387 | Passed (64%) | 1.15 | 1.0 D + 1.0 S (Adj Spans) |
| Live Load Defl. (in) | 0.122 @ 8' 9 7/16" | 0.567 | Passed (L/999+) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Total Load Defl. (in) | 0.133 @ 8' 9 3/8" | 0.756 | Passed (L/999+) | -- | 1.0 D + 1.0 S (Alt Spans) |

System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Lumber grading provisions must be extended over the length of the member per NDS 4.2.5.5.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|-----------------|----------------|-----------|----------|-------------------------|-------|----------|-------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Column - DF | 9.50" | 9.50" | 1.92" | 1058 | 7956 | 9014 | Blocking |
| 2 - Column - DF | 9.50" | 9.50" | 2.78" | 1468 | 11547 | 13015 | Blocking |
| 3 - Column - DF | 9.50" | 9.50" | 2.78" | 1468 | 11547 | 13015 | Blocking |
| 4 - Column - DF | 9.50" | 9.50" | 1.92" | 1058 | 7956 | 9014 | Blocking |

• Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 40' 10" o/c | |
| Bottom Edge (Lu) | 40' 10" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Snow (1.15) | Comments |
|-----------------------|-----------------------|-----------------|-------------|-------------|--------------|
| 0 - Self Weight (PLF) | 0 to 40' 9 1/2" | N/A | 21.9 | -- | |
| 1 - Uniform (PSF) | 0 to 40' 9 1/2" (Top) | 6' | 17.0 | 150.0 | Default Load |

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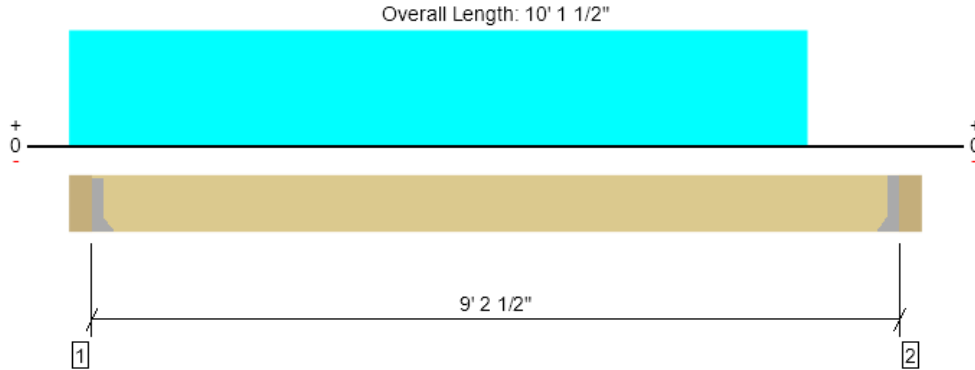
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| | |
|---|-----------|
| ForteWEB Software Operator | Job Notes |
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Roof, Beam 18
1 piece(s) 8 x 8 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|--------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 2343 @ 5' 1/2" | 7031 (1.50") | Passed (33%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 2021 @ 1' 1" | 7331 | Passed (28%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 5326 @ 5' 1/16" | 8086 | Passed (66%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.167 @ 5' 7/16" | 0.460 | Passed (L/660) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.192 @ 5' 7/16" | 0.614 | Passed (L/576) | -- | 1.0 D + 1.0 S (All Spans) |

System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.
- This product has a square cross section. The analysis engine has checked both edge and plank orientations to allow for either installation.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|------------------------------|----------------|---------------------|----------|-------------------------|------|----------|-----------------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Hanger on 7 1/2" DF beam | 5.50" | Hanger ¹ | 1.50" | 321 | 2252 | 2572 | See note ¹ |
| 2 - Hanger on 7 1/2" DF beam | 5.50" | Hanger ¹ | 1.50" | 250 | 1630 | 1880 | See note ¹ |

- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 9' 3" o/c | |
| Bottom Edge (Lu) | 9' 3" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | | |
|-------------------------------|---------------------|-------------|---------------|----------------|------------------|-------------|--|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories | |
| 1 - Face Mount Hanger | Connector not found | N/A | N/A | N/A | N/A | | |
| 2 - Face Mount Hanger | Connector not found | N/A | N/A | N/A | N/A | | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Snow (1.15) | Comments |
|-----------------------|----------------------|-----------------|-------------|-------------|--------------|
| 0 - Self Weight (PLF) | 5 1/2" to 9' 8" | N/A | 14.3 | -- | |
| 1 - Uniform (PSF) | 0 to 8' 7 1/2" (Top) | 3' | 17.0 | 150.0 | Default Load |

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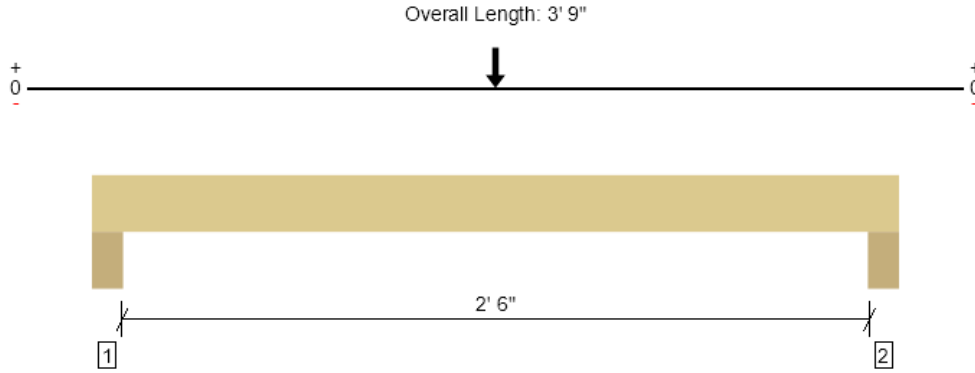
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Roof, HDR 5
1 piece(s) 5 1/2" x 18" 24F-V4 DF Glulam



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|--------------------|---------------|-----------------|------|-----------------------------|
| Member Reaction (lbs) | 24181 @ 6" | 26813 (7.50") | Passed (90%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 20107 @ 2' 1 1/2" | 20114 | Passed (100%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Pos Moment (Ft-lbs) | 33209 @ 1' 10 1/2" | 68310 | Passed (49%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.007 @ 1' 10 1/2" | 0.092 | Passed (L/999+) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.008 @ 1' 10 1/2" | 0.138 | Passed (L/999+) | -- | 1.0 D + 1.0 S (All Spans) |

System : Wall
Member Type : Header
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Critical positive moment adjusted by a volume/size factor of 1.00 that was calculated using length L = 2' 9".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|------------------|----------------|-----------|----------|-------------------------|-------|----------|-------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Trimmer - DF | 7.50" | 7.50" | 6.76" | 3051 | 21130 | 24181 | None |
| 2 - Trimmer - DF | 7.50" | 7.50" | 6.76" | 3051 | 21130 | 24181 | None |

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 3' 9" o/c | |
| Bottom Edge (Lu) | 3' 9" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location | Tributary Width | Dead (0.90) | Snow (1.15) | Comments |
|-----------------------|------------|-----------------|-------------|-------------|--|
| 0 - Self Weight (PLF) | 0 to 3' 9" | N/A | 24.1 | -- | |
| 1 - Point (lb) | 1' 10 1/2" | N/A | 6011 | 42260 | Linked from: Copy of Beam 3, Support 2 |

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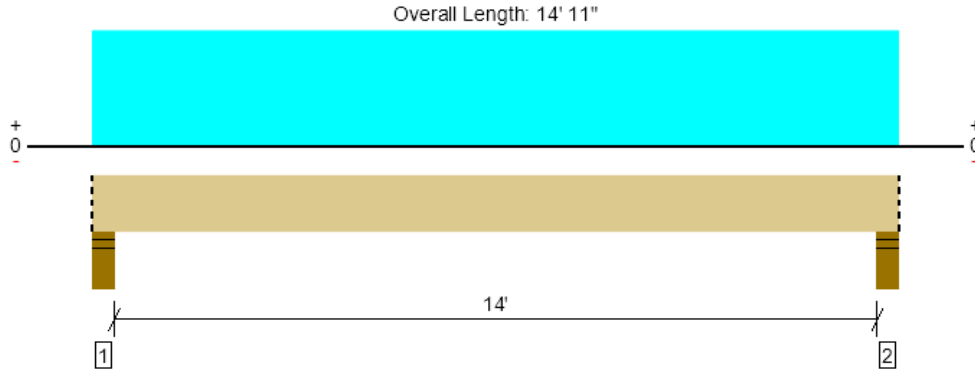
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| | |
|---|-----------|
| ForteWEB Software Operator | Job Notes |
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Roof, Beam 32
1 piece(s) 6 3/4" x 12" 24F-V4 DF Glulam



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|---------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 10734 @ 4" | 23203 (5.50") | Passed (46%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 8635 @ 1' 5 1/2" | 16457 | Passed (52%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Pos Moment (Ft-lbs) | 36531 @ 7' 5 1/2" | 37260 | Passed (98%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.676 @ 7' 5 1/2" | 0.712 | Passed (L/253) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.763 @ 7' 5 1/2" | 0.950 | Passed (L/224) | -- | 1.0 D + 1.0 S (All Spans) |

System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Critical positive moment adjusted by a volume/size factor of 1.00 that was calculated using length L = 14' 3".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------|----------|-------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Stud wall - DF | 5.50" | 5.50" | 2.54" | 1225 | 9509 | 10734 | Blocking |
| 2 - Stud wall - DF | 5.50" | 5.50" | 2.54" | 1225 | 9509 | 10734 | Blocking |

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 14' 11" o/c | |
| Bottom Edge (Lu) | 14' 11" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Snow (1.15) | Comments |
|-----------------------|--------------------|-----------------|-------------|-------------|--------------|
| 0 - Self Weight (PLF) | 0 to 14' 11" | N/A | 19.7 | -- | |
| 1 - Uniform (PSF) | 0 to 14' 11" (Top) | 8' 6" | 17.0 | 150.0 | Default Load |

Weyerhaeuser Notes

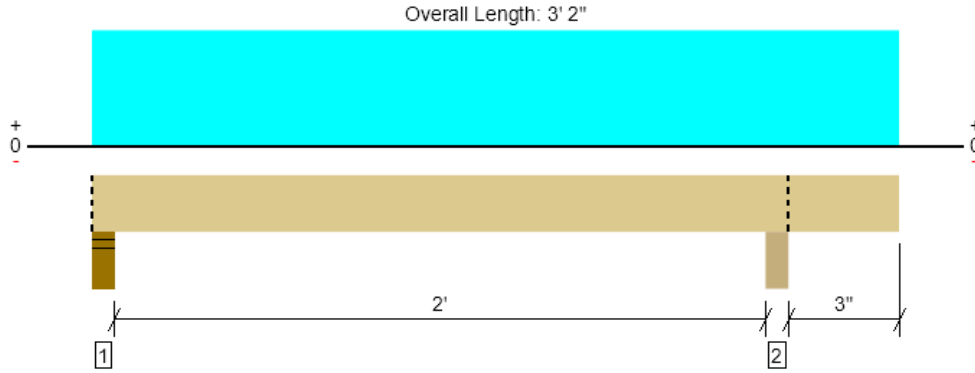
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| | |
|---|-----------|
| ForteWEB Software Operator | Job Notes |
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Roof, Beam 41
1 piece(s) 8 x 8 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|---------------------|---------------|-----------------|------|-----------------------------|
| Member Reaction (lbs) | 2445 @ 2' 8 1/4" | 25781 (5.50") | Passed (9%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 574 @ 1' 1" | 7331 | Passed (8%) | 1.15 | 1.0 D + 1.0 S (Alt Spans) |
| Moment (Ft-lbs) | 948 @ 1' 5 13/16" | 8086 | Passed (12%) | 1.15 | 1.0 D + 1.0 S (Alt Spans) |
| Live Load Defl. (in) | 0.002 @ 1' 6" | 0.118 | Passed (L/999+) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Total Load Defl. (in) | 0.002 @ 1' 5 15/16" | 0.157 | Passed (L/999+) | -- | 1.0 D + 1.0 S (Alt Spans) |

System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.
- This product has a square cross section. The analysis engine has checked both edge and plank orientations to allow for either installation.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------|----------|-------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Stud wall - DF | 5.50" | 5.50" | 1.50" | 232 | 1895 | 2127 | Blocking |
| 2 - Column - DF | 5.50" | 5.50" | 1.50" | 271 | 2174 | 2445 | Blocking |

• Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 3' 2" o/c | |
| Bottom Edge (Lu) | 3' 2" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Snow (1.15) | Comments |
|-----------------------|------------------|-----------------|-------------|-------------|--------------|
| 0 - Self Weight (PLF) | 0 to 3' 2" | N/A | 14.3 | -- | |
| 1 - Uniform (PSF) | 0 to 3' 2" (Top) | 8' 6" | 17.0 | 150.0 | Default Load |

Weyerhaeuser Notes

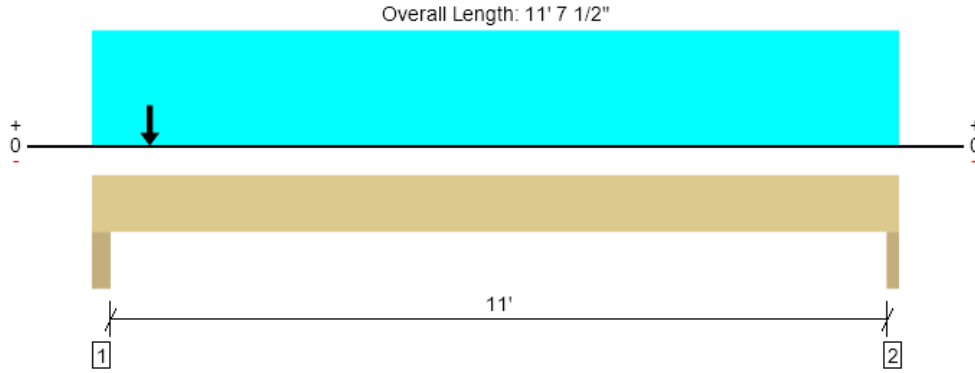
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Roof, HDR 1
1 piece(s) 8 3/4" x 12" 24F-V4 DF Glulam



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|--------------------|---------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 23296 @ 3" | 25594 (4.50") | Passed (91%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 13742 @ 1' 4 1/2" | 21333 | Passed (64%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Pos Moment (Ft-lbs) | 31082 @ 5' 5 5/16" | 48300 | Passed (64%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.280 @ 5' 9 1/16" | 0.375 | Passed (L/482) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.319 @ 5' 9" | 0.563 | Passed (L/423) | -- | 1.0 D + 1.0 S (All Spans) |

System : Wall
Member Type : Header
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Critical positive moment adjusted by a volume/size factor of 1.00 that was calculated using length L = 11' 3".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|------------------|----------------|-----------|----------|-------------------------|-------|----------|-------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Trimmer - DF | 4.50" | 4.50" | 4.10" | 3279 | 20017 | 23296 | None |
| 2 - Trimmer - DF | 3.00" | 3.00" | 1.84" | 1241 | 9238 | 10478 | None |

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 11' 8" o/c | |
| Bottom Edge (Lu) | 11' 8" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location | Tributary Width | Dead (0.90) | Snow (1.15) | Comments |
|-----------------------|-----------------|-----------------|-------------|-------------|--|
| 0 - Self Weight (PLF) | 0 to 11' 7 1/2" | N/A | 25.5 | -- | |
| 1 - Uniform (PSF) | 0 to 11' 7 1/2" | 10' | 17.0 | 150.0 | Default Load |
| 2 - Point (lb) | 10" | N/A | 2247 | 11817 | Linked from: Timber truss 2, Support 2 |

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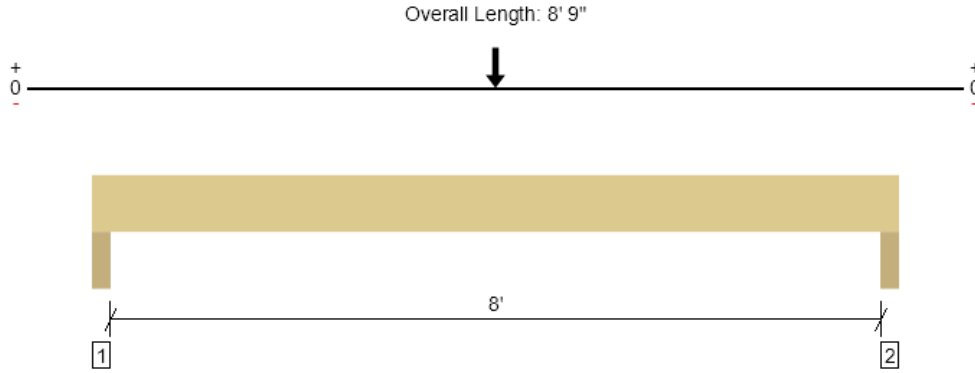
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Roof, HDR 2

1 piece(s) 6 3/4" x 16 1/2" 24F-V4 DF Glulam



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|---------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 14683 @ 3" | 19744 (4.50") | Passed (74%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 14636 @ 1' 9" | 22628 | Passed (65%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Pos Moment (Ft-lbs) | 60311 @ 4' 4 1/2" | 70445 | Passed (86%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.115 @ 4' 4 1/2" | 0.275 | Passed (L/864) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.130 @ 4' 4 1/2" | 0.412 | Passed (L/761) | -- | 1.0 D + 1.0 S (All Spans) |

System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2018
 Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Critical positive moment adjusted by a volume/size factor of 1.00 that was calculated using length L = 8' 3".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|------------------|----------------|-----------|----------|-------------------------|-------|----------|-------------|
| | Total | Available | Required | Dead | Snow | Factored | |
| 1 - Trimmer - DF | 4.50" | 4.50" | 3.35" | 1797 | 12887 | 14683 | None |
| 2 - Trimmer - DF | 4.50" | 4.50" | 3.35" | 1797 | 12887 | 14683 | None |

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 8' 9" o/c | |
| Bottom Edge (Lu) | 8' 9" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location | Tributary Width | Dead (0.90) | Snow (1.15) | Comments |
|-----------------------|------------|-----------------|-------------|-------------|--|
| 0 - Self Weight (PLF) | 0 to 8' 9" | N/A | 27.1 | -- | |
| 1 - Point (lb) | 4' 4 1/2" | N/A | 3357 | 25773 | Linked from: Copy of Beam 3, Support 2 |

Weyerhaeuser Notes

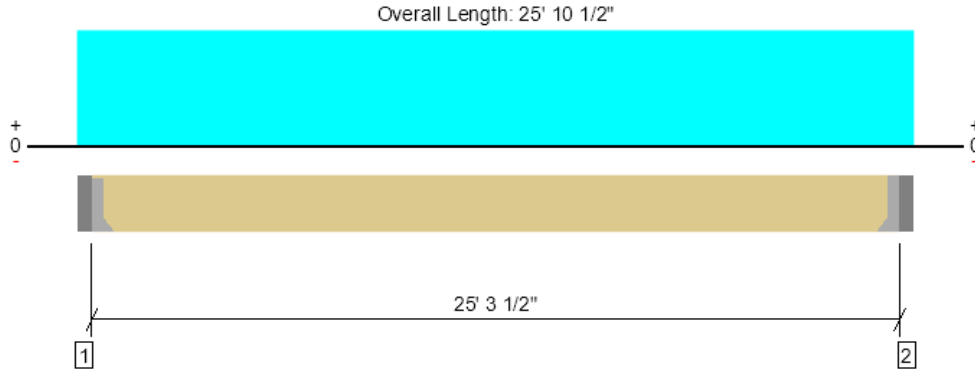
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| | |
|---|-----------|
| ForteWEB Software Operator | Job Notes |
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, BEAM 19
1 piece(s) 8 x 24 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|---------------------|---------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 10681 @ 3 1/2" | 10681 (2.28") | Passed (100%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 9027 @ 2' 3" | 22971 | Passed (39%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 67537 @ 12' 11 1/4" | 82879 | Passed (81%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.532 @ 12' 11 1/4" | 0.632 | Passed (L/570) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.599 @ 12' 11 1/4" | 1.265 | Passed (L/507) | -- | 1.0 D + 1.0 S (All Spans) |

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Lumber grading provisions must be extended over the length of the member per NDS 4.2.5.5.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|------------------------|----------------|---------------------|----------|-------------------------|------------|------|----------|-----------------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Hanger on concrete | 3.50" | Hanger ¹ | 2.28" | 1212 | 2588 | 9703 | 10915 | See note ¹ |
| 2 - Hanger on concrete | 3.50" | Hanger ¹ | 2.28" | 1212 | 2588 | 9703 | 10915 | See note ¹ |

- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 25' 4" o/c | |
| Bottom Edge (Lu) | 25' 4" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | | |
|-------------------------------|---------------------|-------------|---------------|----------------|------------------|-------------|--|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories | |
| 1 - Face Mount Hanger | Connector not found | N/A | N/A | N/A | N/A | | |
| 2 - Face Mount Hanger | Connector not found | N/A | N/A | N/A | N/A | | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-----------------------|--------------------------|-----------------|-------------|-------------------|-------------|--------------|
| 0 - Self Weight (PLF) | 3 1/2" to 25' 7" | N/A | 44.7 | -- | -- | |
| 1 - Uniform (PSF) | 0 to 25' 10 1/2" (Front) | 5' | 10.0 | 40.0 | 150.0 | Default Load |

Weyerhaeuser Notes

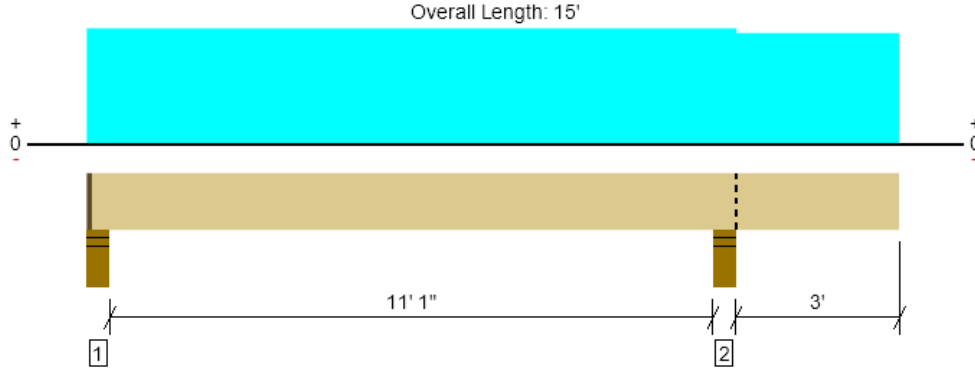
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| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, Beam 11
1 piece(s) 6 3/4" x 13 1/2" 24F-V4 DF Glulam



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|---------------------|---------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 18323 @ 11' 9 1/4" | 23203 (5.50") | Passed (79%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 9502 @ 10' 5" | 18514 | Passed (51%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Pos Moment (Ft-lbs) | 29538 @ 5' 9 9/16" | 47157 | Passed (63%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Neg Moment (Ft-lbs) | -9886 @ 11' 9 1/4" | 36350 | Passed (27%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.232 @ 5' 11 3/4" | 0.286 | Passed (L/592) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.273 @ 5' 11 9/16" | 0.572 | Passed (L/502) | -- | 1.0 D + 1.0 S (All Spans) |

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Overhang deflection criteria: LL (2L/480) and TL (2L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Critical positive moment adjusted by a volume/size factor of 1.00 that was calculated using length L = 10' 11 1/8".
- Critical negative moment adjusted by a volume/size factor of 1.00 that was calculated using length L = 4' 1 1/4".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------------|-------|----------|------------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Stud wall - DF | 5.50" | 4.25" | 2.67" | 1844 | 242/-14 | 9627 | 11470 | 1 1/4" Rim Board |
| 2 - Stud wall - DF | 5.50" | 5.50" | 4.34" | 3066 | 376 | 15257 | 18323 | Blocking |

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.
- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 14' 11" o/c | |
| Bottom Edge (Lu) | 14' 11" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-----------------------|------------------|-----------------|-------------|-------------------|-------------|--------------|
| 0 - Self Weight (PLF) | 1 1/4" to 15' | N/A | 22.1 | -- | -- | |
| 1 - Uniform (PSF) | 0 to 15' (Front) | 1' | 12.0 | 40.0 | - | Default Load |
| 2 - Uniform (PSF) | 0 to 15' (Back) | 3' | 17.0 | - | 150.0 | Default Load |
| 3 - Uniform (PSF) | 0 to 12' (Top) | 8' | 17.0 | - | 150.0 | Default Load |
| 4 - Uniform (PSF) | 0 to 15' (Top) | 9' | 12.0 | - | - | wall |
| 5 - Uniform (PSF) | 12' to 15' (Top) | 7' 6" | 17.0 | - | 150.0 | Default Load |

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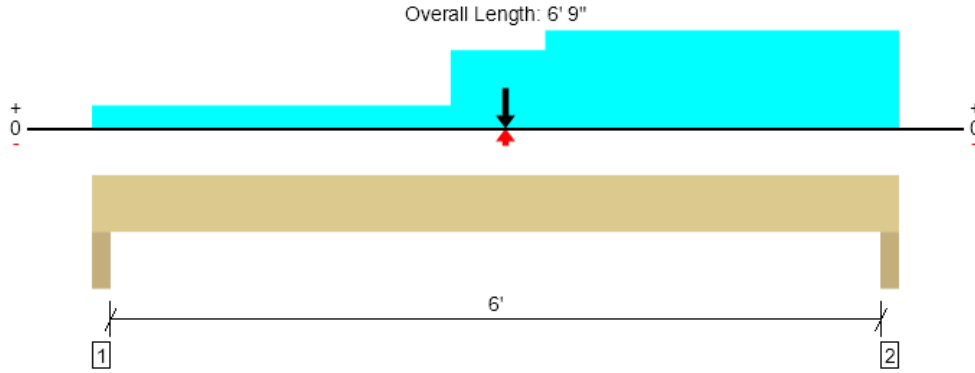
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, HDR 10

1 piece(s) 5 1/2" x 10 1/2" 24F-V4 DF Glulam



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) [Group] |
|-----------------------|-------------------|---------------|----------------|------|-------------------------------------|
| Member Reaction (lbs) | 8994 @ 6' 6" | 16088 (4.50") | Passed (56%) | -- | 1.0 D + 1.0 S (All Spans) [1] |
| Shear (lbs) | 7675 @ 5' 6" | 11733 | Passed (65%) | 1.15 | 1.0 D + 1.0 S (All Spans) [1] |
| Pos Moment (Ft-lbs) | 21679 @ 3' 5 1/2" | 23244 | Passed (93%) | 1.15 | 1.0 D + 1.0 S (All Spans) [1] |
| Live Load Defl. (in) | 0.112 @ 3' 5" | 0.208 | Passed (L/669) | -- | 1.0 D + 1.0 S (All Spans) [1] |
| Total Load Defl. (in) | 0.133 @ 3' 5" | 0.313 | Passed (L/565) | -- | 1.0 D + 1.0 S (All Spans) [1] |

System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2018
 Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Critical positive moment adjusted by a volume/size factor of 1.00 that was calculated using length L = 6' 3".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|------------------|----------------|-----------|----------|-------------------------|------------|------|----------|-------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Trimmer - DF | 4.50" | 4.50" | 2.08" | 1138 | 405 | 6286 | 7423 | None |
| 2 - Trimmer - DF | 4.50" | 4.50" | 2.52" | 1377 | 1093 | 7616 | 8994 | None |

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 6' 9" o/c | |
| Bottom Edge (Lu) | 6' 9" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location | Tributary Width | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-----------------------|--------------------|-----------------|-------------|-------------------|-------------|---------------------------------|
| 0 - Self Weight (PLF) | 0 to 6' 9" | N/A | 14.0 | -- | -- | |
| 1 - Uniform (PSF) | 3' 9 1/2" to 6' 9" | 5' 6 1/2" | 12.0 | 40.0 | - | Default Load |
| 2 - Uniform (PSF) | 3' to 6' 9" | 4' | 10.0 | 40.0 | 150.0 | Default Load |
| 3 - Uniform (PSF) | 0 to 6' 9" | 2' | 17.0 | - | 150.0 | Snow |
| 4 - Point (lb) | 3' 5 1/2" | N/A | 1844 | 242/-14 | 9627 | Linked from: Beam 11, Support 1 |

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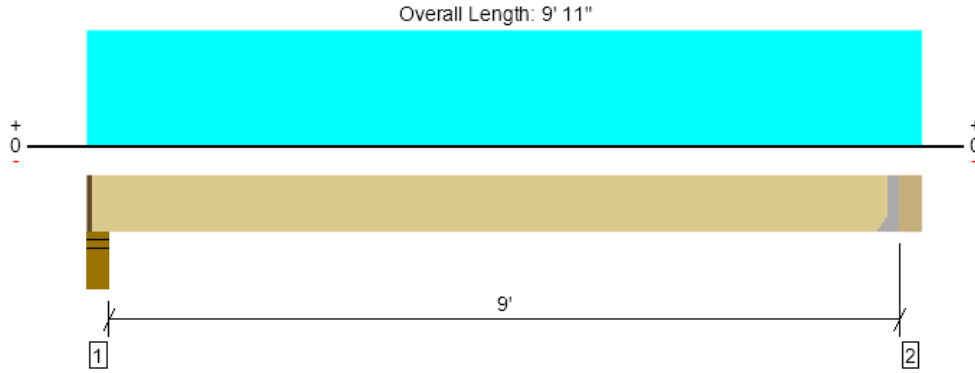
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, Beam 12
1 piece(s) 6 x 8 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|--------------------|--------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 2064 @ 9' 5 1/2" | 5156 (1.50") | Passed (40%) | -- | 1.0 D + 1.0 L (All Spans) |
| Shear (lbs) | 1782 @ 8' 10" | 4675 | Passed (38%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Moment (Ft-lbs) | 4709 @ 4' 10 3/4" | 5156 | Passed (91%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Live Load Defl. (in) | 0.171 @ 4' 10 3/4" | 0.228 | Passed (L/639) | -- | 1.0 D + 1.0 L (All Spans) |
| Total Load Defl. (in) | 0.228 @ 4' 10 3/4" | 0.456 | Passed (L/480) | -- | 1.0 D + 1.0 L (All Spans) |

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|------------------------------|----------------|---------------------|----------|-------------------------|------------|----------|-----------------------|
| | Total | Available | Required | Dead | Floor Live | Factored | |
| 1 - Stud wall - DF | 5.50" | 4.25" | 1.50" | 549 | 1665 | 2214 | 1 1/4" Rim Board |
| 2 - Hanger on 7 1/2" DF beam | 5.50" | Hanger ¹ | 1.50" | 560 | 1707 | 2267 | See note ¹ |

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.
- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 9' 4" o/c | |
| Bottom Edge (Lu) | 9' 4" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | | |
|-------------------------------|-------|-------------|---------------|----------------|------------------|-------------|--|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories | |
| 2 - Face Mount Hanger | HUC68 | 2.50" | N/A | 14-16d | 6-16d | | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

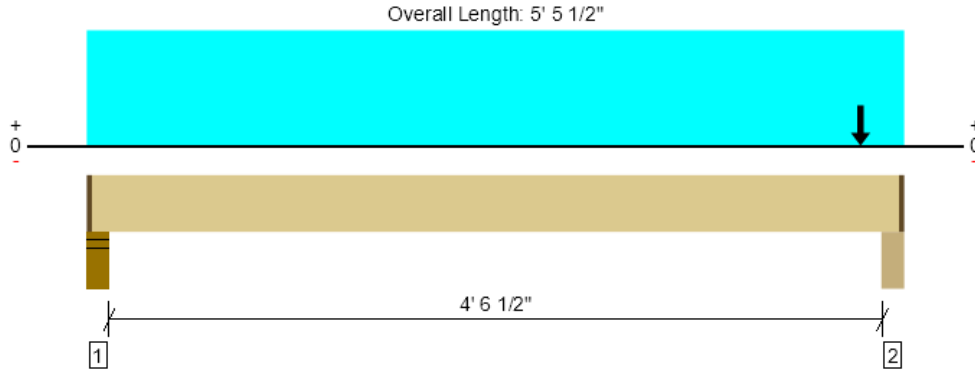
| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Comments |
|-----------------------|---------------------|-----------------|-------------|-------------------|--------------|
| 0 - Self Weight (PLF) | 1 1/4" to 9' 5 1/2" | N/A | 10.4 | -- | |
| 1 - Uniform (PSF) | 0 to 9' 11" (Front) | 8' 6" | 12.0 | 40.0 | Default Load |

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| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, Beam 13
1 piece(s) 6 x 8 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|---------------|----------------|------|-------------------------------------|
| Member Reaction (lbs) | 6001 @ 5' 1 1/2" | 14609 (4.25") | Passed (41%) | -- | 1.0 D + 0.75 L + 0.75 S (All Spans) |
| Shear (lbs) | 3238 @ 1' 1" | 5376 | Passed (60%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 5647 @ 2' 8 3/4" | 5930 | Passed (95%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.063 @ 2' 8 3/4" | 0.120 | Passed (L/909) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.075 @ 2' 8 3/4" | 0.240 | Passed (L/762) | -- | 1.0 D + 1.0 S (All Spans) |

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------------|------|----------|------------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Stud wall - DF | 5.50" | 4.25" | 1.50" | 865 | 109 | 4503 | 5368 | 1 1/4" Rim Board |
| 2 - Column - DF | 5.50" | 4.25" | 1.75" | 1425 | 1816 | 4503 | 6165 | 1 1/4" Rim Board |

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 5' 3" o/c | |
| Bottom Edge (Lu) | 5' 3" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-----------------------|------------------------|-----------------|-------------|-------------------|-------------|---------------------------------|
| 0 - Self Weight (PLF) | 1 1/4" to 5' 4 1/4" | N/A | 10.4 | -- | -- | |
| 1 - Uniform (PSF) | 0 to 5' 5 1/2" (Front) | 11' | 17.0 | - | 150.0 | Snow |
| 2 - Uniform (PSF) | 0 to 5' 5 1/2" (Top) | 9' | 12.0 | - | - | wall |
| 3 - Uniform (PSF) | 0 to 5' 5 1/2" (Front) | 1' | 12.0 | 40.0 | - | Floor |
| 4 - Point (lb) | 5' 2" (Back) | N/A | 560 | 1707 | - | Linked from: Beam 12, Support 2 |

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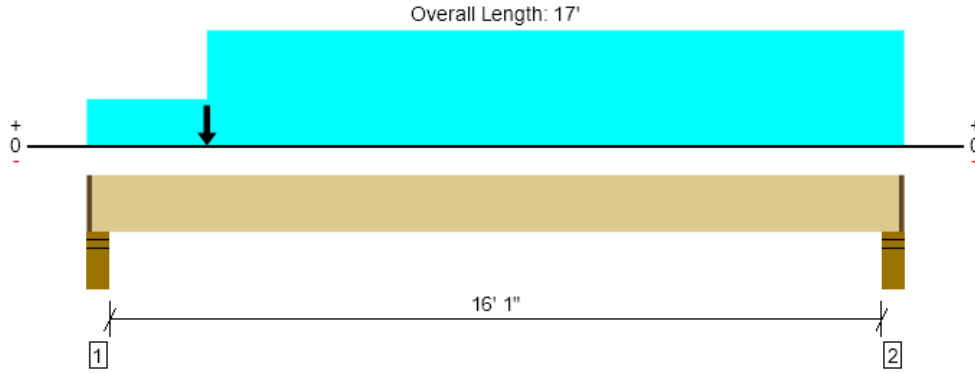
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| | |
|---|-----------|
| ForteWEB Software Operator | Job Notes |
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, Beam 14
1 piece(s) 8 3/4" x 18" 24F-V4 DF Glulam



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|---------------------|---------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 19811 @ 4" | 23242 (4.25") | Passed (85%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 18909 @ 1' 11 1/2" | 31999 | Passed (59%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Pos Moment (Ft-lbs) | 74399 @ 8' 1 7/8" | 101439 | Passed (73%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.411 @ 8' 4 15/16" | 0.408 | Passed (L/477) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.472 @ 8' 4 7/8" | 0.817 | Passed (L/415) | -- | 1.0 D + 1.0 S (All Spans) |

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Critical positive moment adjusted by a volume/size factor of 0.93 that was calculated using length L = 16' 4".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------------|-------|----------|------------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Stud wall - DF | 5.50" | 4.25" | 3.62" | 2886 | 1141 | 16971 | 19858 | 1 1/4" Rim Board |
| 2 - Stud wall - DF | 5.50" | 4.25" | 3.28" | 2284 | 389 | 15881 | 18164 | 1 1/4" Rim Board |

• Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 16' 10" o/c | |
| Bottom Edge (Lu) | 16' 10" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-----------------------|-----------------------|-----------------|-------------|-------------------|-------------|-----------------------------------|
| 0 - Self Weight (PLF) | 1 1/4" to 16' 10 3/4" | N/A | 38.3 | -- | -- | |
| 1 - Uniform (PSF) | 0 to 17' (Front) | 1' | 12.0 | 40.0 | - | Default Load |
| 2 - Uniform (PSF) | 2' 6" to 17' (Top) | 10' | 17.0 | - | 150.0 | Snow |
| 3 - Uniform (PSF) | 0 to 17' (Back) | 2' | 17.0 | - | 150.0 | Snow |
| 4 - Uniform (PSF) | 0 to 2' 6" (Top) | 8' 6" | 12.0 | 40.0 | - | Default Load |
| 5 - Point (lb) | 2' 6" (Top) | N/A | 1025 | - | 6002 | Linked from: Beam 6,10, Support 1 |

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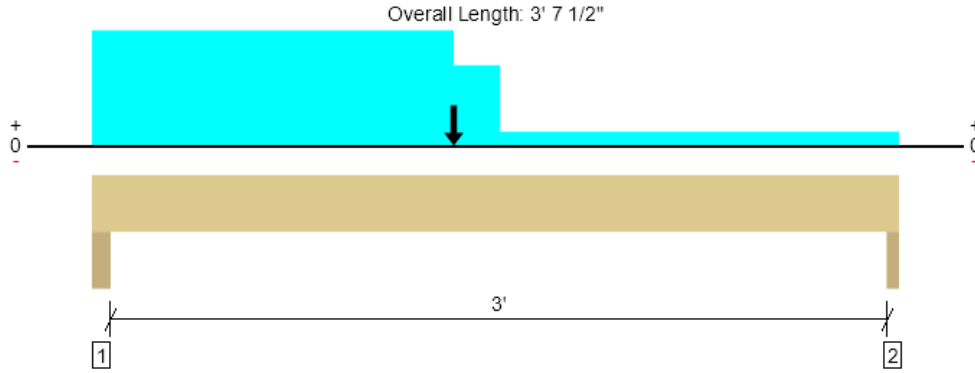
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| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, HDR 11

1 piece(s) 5 1/2" x 9 1/2" 24F-V4 DF Glulam



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|---------------|-----------------|------|-----------------------------|
| Member Reaction (lbs) | 8275 @ 3' 6" | 10725 (3.00") | Passed (77%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 10803 @ 1' 2" | 10615 | Passed (102%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Pos Moment (Ft-lbs) | 15143 @ 1' 7 1/2" | 19028 | Passed (80%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.028 @ 1' 9 5/8" | 0.081 | Passed (L/999+) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.033 @ 1' 9 5/8" | 0.162 | Passed (L/999+) | -- | 1.0 D + 1.0 S (All Spans) |

System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2018
 Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Critical positive moment adjusted by a volume/size factor of 1.00 that was calculated using length L = 3' 3".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|------------------|----------------|-----------|----------|-------------------------|------------|-------|----------|-------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Trimmer - DF | 4.50" | 4.50" | 3.32" | 1560 | 885 | 10312 | 11872 | None |
| 2 - Trimmer - DF | 3.00" | 3.00" | 2.31" | 1062 | 320 | 7213 | 8275 | None |

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 3' 8" o/c | |
| Bottom Edge (Lu) | 3' 8" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location | Tributary Width | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-----------------------|----------------|-----------------|-------------|-------------------|-------------|---------------------------------|
| 0 - Self Weight (PLF) | 0 to 3' 7 1/2" | N/A | 12.7 | -- | -- | |
| 1 - Uniform (PSF) | 0 to 1' 7 1/2" | 8' 1/2" | 12.0 | 40.0 | - | Default Load |
| 2 - Uniform (PSF) | 0 to 1' 10" | 4' | 10.0 | 40.0 | 150.0 | Default Load |
| 3 - Uniform (PSF) | 0 to 3' 7 1/2" | 1' | 17.0 | - | 150.0 | Roof |
| 4 - Point (lb) | 1' 7 1/2" | N/A | 2284 | 389 | 15881 | Linked from: Beam 14, Support 2 |

Weyerhaeuser Notes

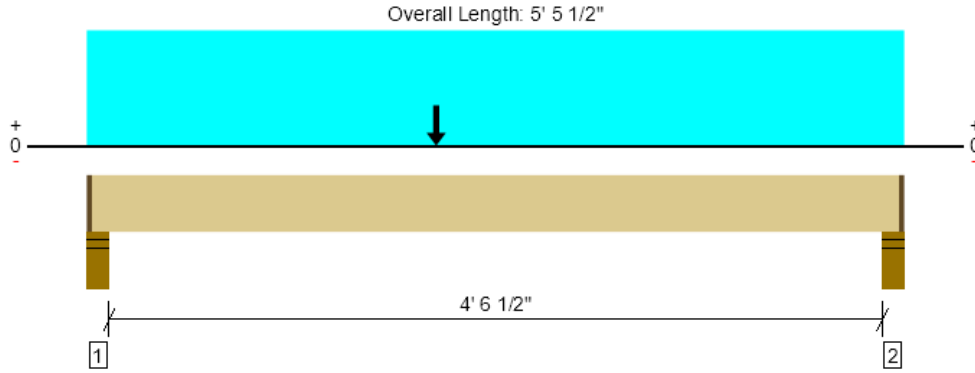
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|--|-----------|
| Jed Jones 1/29/24 Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, Beam 15
 1 piece(s) 6 3/4" x 10 1/2" 24F-V4 DF Glulam



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|---------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 14175 @ 4" | 17930 (4.25") | Passed (79%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 14134 @ 1' 4" | 14399 | Passed (98%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Pos Moment (Ft-lbs) | 28269 @ 2' 4" | 28527 | Passed (99%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.069 @ 2' 8 1/4" | 0.120 | Passed (L/836) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.079 @ 2' 8 1/4" | 0.240 | Passed (L/727) | -- | 1.0 D + 1.0 S (All Spans) |

System : Floor
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2018
 Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Critical positive moment adjusted by a volume/size factor of 1.00 that was calculated using length L = 4' 9 1/2".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------------|-------|----------|------------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Stud wall - DF | 5.50" | 4.25" | 3.36" | 1866 | 146 | 12311 | 14177 | 1 1/4" Rim Board |
| 2 - Stud wall - DF | 5.50" | 4.25" | 2.41" | 1362 | 146 | 8819 | 10182 | 1 1/4" Rim Board |

• Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 5' 3" o/c | |
| Bottom Edge (Lu) | 5' 3" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-----------------------|------------------------|-----------------|-------------|-------------------|-------------|-------------------------------|
| 0 - Self Weight (PLF) | 1 1/4" to 5' 4 1/4" | N/A | 17.2 | -- | -- | |
| 1 - Uniform (PSF) | 0 to 5' 5 1/2" (Front) | 1' 4" | 12.0 | 40.0 | - | Default Load |
| 2 - Point (lb) | 2' 4" (Top) | N/A | 3051 | - | 21130 | Linked from: HDR 5, Support 1 |

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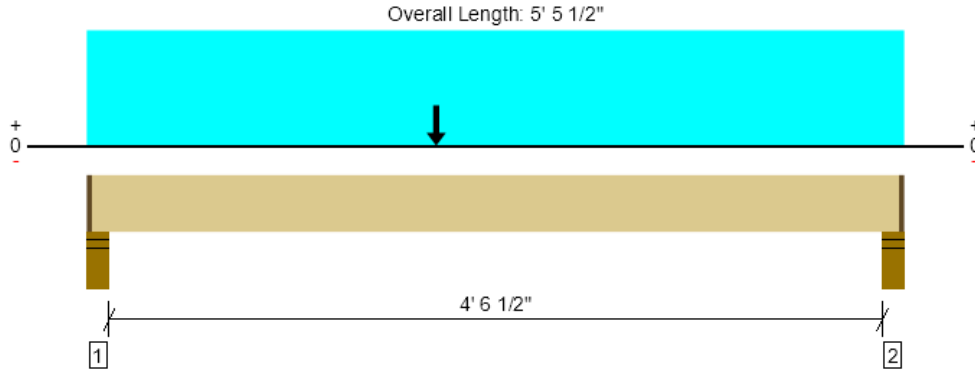
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| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, Beam 16
 1 piece(s) 6 3/4" x 10 1/2" 24F-V4 DF Glulam



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|---------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 14175 @ 4" | 17930 (4.25") | Passed (79%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 14134 @ 1' 4" | 14399 | Passed (98%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Pos Moment (Ft-lbs) | 28269 @ 2' 4" | 28527 | Passed (99%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.069 @ 2' 8 1/4" | 0.120 | Passed (L/836) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.079 @ 2' 8 1/4" | 0.240 | Passed (L/727) | -- | 1.0 D + 1.0 S (All Spans) |

System : Floor
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2018
 Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Critical positive moment adjusted by a volume/size factor of 1.00 that was calculated using length L = 4' 9 1/2".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------------|-------|----------|------------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Stud wall - DF | 5.50" | 4.25" | 3.36" | 1866 | 146 | 12311 | 14177 | 1 1/4" Rim Board |
| 2 - Stud wall - DF | 5.50" | 4.25" | 2.41" | 1362 | 146 | 8819 | 10182 | 1 1/4" Rim Board |

• Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 5' 3" o/c | |
| Bottom Edge (Lu) | 5' 3" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-----------------------|------------------------|-----------------|-------------|-------------------|-------------|-------------------------------|
| 0 - Self Weight (PLF) | 1 1/4" to 5' 4 1/4" | N/A | 17.2 | -- | -- | |
| 1 - Uniform (PSF) | 0 to 5' 5 1/2" (Front) | 1' 4" | 12.0 | 40.0 | - | Default Load |
| 2 - Point (lb) | 2' 4" (Top) | N/A | 3051 | - | 21130 | Linked from: HDR 5, Support 2 |

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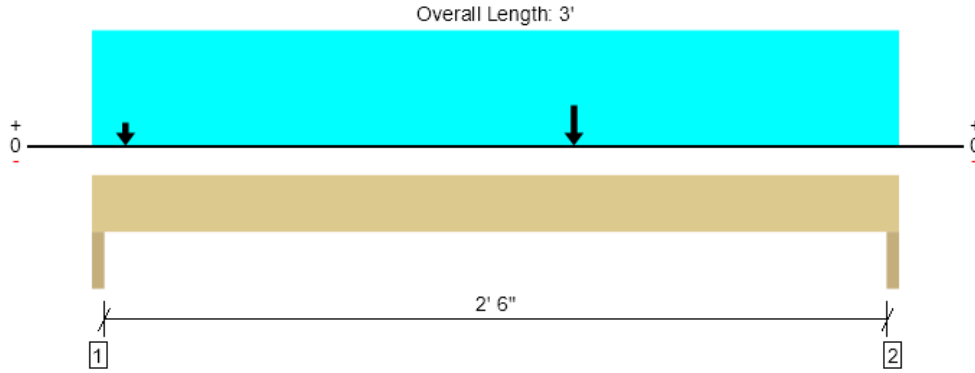
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| ForteWEB Software Operator | Job Notes |
|--|-----------|
| Jed Jones 1/29/24 Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, HDR 6
1 piece(s) 3 1/2" x 9" 24F-V4 DF Glulam



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|--------------|-----------------|------|-----------------------------|
| Member Reaction (lbs) | 6327 @ 2' 10 1/2" | 6825 (3.00") | Passed (93%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 6222 @ 2' | 6400 | Passed (97%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Pos Moment (Ft-lbs) | 6779 @ 1' 9 1/2" | 10868 | Passed (62%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.016 @ 1' 6 3/8" | 0.069 | Passed (L/999+) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.019 @ 1' 6 3/8" | 0.138 | Passed (L/999+) | -- | 1.0 D + 1.0 S (All Spans) |

System : Wall
Member Type : Header
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Critical positive moment adjusted by a volume/size factor of 1.00 that was calculated using length L = 2' 9".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|------------------|----------------|-----------|----------|-------------------------|------------|------|----------|-------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Trimmer - DF | 3.00" | 3.00" | 2.62" | 1743 | 2151 | 3474 | 5962 | None |
| 2 - Trimmer - DF | 3.00" | 3.00" | 2.78" | 982 | 571 | 5345 | 6327 | None |

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 3' o/c | |
| Bottom Edge (Lu) | 3' o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location | Tributary Width | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-----------------------|-----------|-----------------|-------------|-------------------|-------------|---------------------------------|
| 0 - Self Weight (PLF) | 0 to 3' | N/A | 7.7 | -- | -- | |
| 1 - Uniform (PSF) | 0 to 3' | 8' 1/2" | 12.0 | 40.0 | - | Default Load |
| 2 - Point (lb) | 1' 9 1/2" | N/A | 1362 | 146 | 8819 | Linked from: Beam 15, Support 2 |
| 3 - Point (lb) | 1 1/2" | N/A | 1050 | 1611 | - | Linked from: Beam 34, Support 2 |

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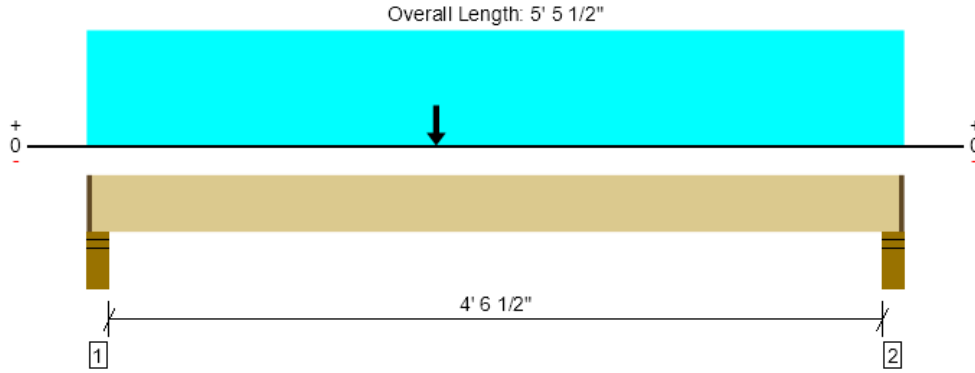
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| | |
|---|-----------|
| ForteWEB Software Operator | Job Notes |
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, Beam 34
1 piece(s) 8 x 8 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|---------------|-----------------|------|-----------------------------|
| Member Reaction (lbs) | 3617 @ 4" | 19922 (4.25") | Passed (18%) | -- | 1.0 D + 1.0 L (All Spans) |
| Shear (lbs) | 3535 @ 1' 1" | 6375 | Passed (55%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Moment (Ft-lbs) | 7029 @ 2' 4" | 7031 | Passed (100%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Live Load Defl. (in) | 0.033 @ 2' 8 1/4" | 0.120 | Passed (L/999+) | -- | 1.0 D + 1.0 L (All Spans) |
| Total Load Defl. (in) | 0.055 @ 2' 8 1/4" | 0.240 | Passed (L/999+) | -- | 1.0 D + 1.0 L (All Spans) |

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.
- This product has a square cross section. The analysis engine has checked both edge and plank orientations to allow for either installation.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------------|----------|------------------|
| | Total | Available | Required | Dead | Floor Live | Factored | |
| 1 - Stud wall - DF | 5.50" | 4.25" | 1.50" | 1433 | 2191 | 3624 | 1 1/4" Rim Board |
| 2 - Stud wall - DF | 5.50" | 4.25" | 1.50" | 1050 | 1611 | 2661 | 1 1/4" Rim Board |

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 1' 2" o/c | |
| Bottom Edge (Lu) | 5' 3" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Comments |
|-----------------------|------------------------|-----------------|-------------|-------------------|---------------------------------|
| 0 - Self Weight (PLF) | 1 1/4" to 5' 4 1/4" | N/A | 14.3 | -- | |
| 1 - Uniform (PSF) | 0 to 5' 5 1/2" (Front) | 1' 4" | 12.0 | 40.0 | Default Load |
| 2 - Point (lb) | 2' 4" (Top) | N/A | 2321 | 3511 | Linked from: Beam 29, Support 1 |

Weyerhaeuser Notes

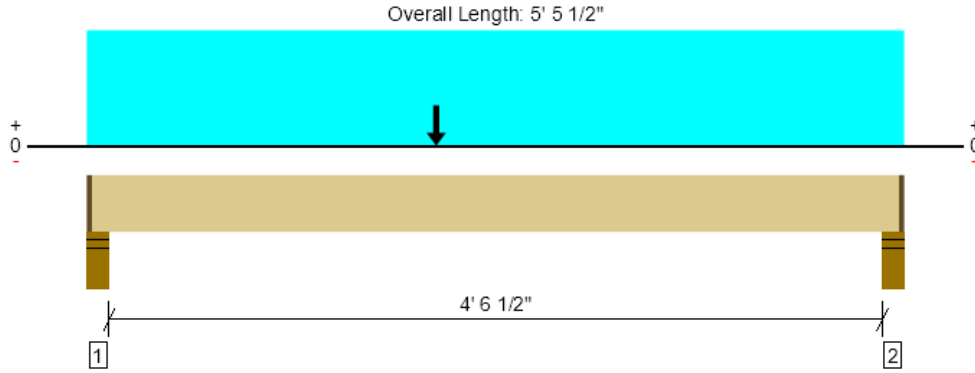
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| | |
|---|-----------|
| ForteWEB Software Operator | Job Notes |
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, Beam 33
1 piece(s) 5 1/8" x 9" 24F-V4 DF Glulam



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|---------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 6325 @ 4" | 13613 (4.25") | Passed (46%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 6295 @ 1' 2 1/2" | 9371 | Passed (67%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Pos Moment (Ft-lbs) | 12583 @ 2' 4" | 15913 | Passed (79%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.065 @ 2' 8 1/4" | 0.120 | Passed (L/888) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.074 @ 2' 8 1/4" | 0.240 | Passed (L/781) | -- | 1.0 D + 1.0 S (All Spans) |

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Critical positive moment adjusted by a volume/size factor of 1.00 that was calculated using length L = 4' 9 1/2".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------------|------|----------|------------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Stud wall - DF | 5.50" | 4.25" | 1.97" | 787 | 146 | 5540 | 6327 | 1 1/4" Rim Board |
| 2 - Stud wall - DF | 5.50" | 4.25" | 1.50" | 584 | 146 | 3969 | 4553 | 1 1/4" Rim Board |

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 5' 3" o/c | |
| Bottom Edge (Lu) | 5' 3" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-----------------------|------------------------|-----------------|-------------|-------------------|-------------|---------------------------------|
| 0 - Self Weight (PLF) | 1 1/4" to 5' 4 1/4" | N/A | 11.2 | -- | -- | |
| 1 - Uniform (PSF) | 0 to 5' 5 1/2" (Front) | 1' 4" | 12.0 | 40.0 | - | Default Load |
| 2 - Point (lb) | 2' 4" (Top) | N/A | 1225 | - | 9509 | Linked from: Beam 32, Support 2 |

Weyerhaeuser Notes

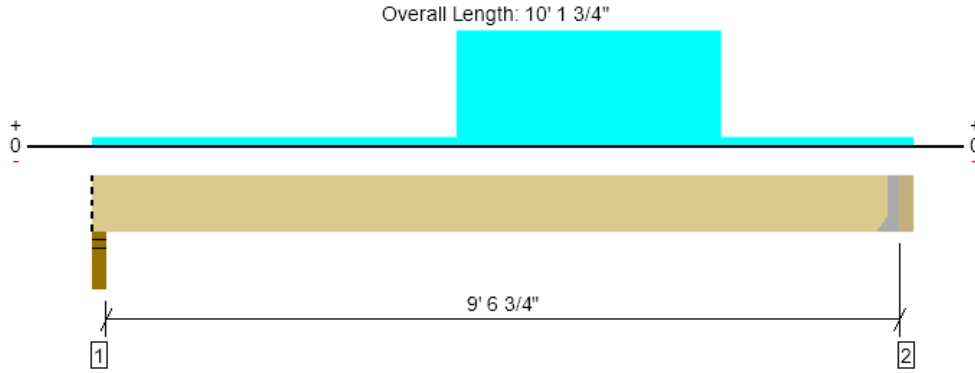
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| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, Beam 30
1 piece(s) 8 x 8 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|--------------------|--------------|-----------------|------|-----------------------------|
| Member Reaction (lbs) | 2072 @ 9' 10 1/4" | 7031 (1.50") | Passed (29%) | -- | 1.0 D + 1.0 L (All Spans) |
| Shear (lbs) | 2020 @ 9' 2 3/4" | 6375 | Passed (32%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Moment (Ft-lbs) | 6101 @ 5' 8 5/8" | 7031 | Passed (87%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Live Load Defl. (in) | 0.099 @ 5' 2 5/16" | 0.242 | Passed (L/999+) | -- | 1.0 D + 1.0 L (All Spans) |
| Total Load Defl. (in) | 0.224 @ 5' 2 9/16" | 0.484 | Passed (L/520) | -- | 1.0 D + 1.0 L (All Spans) |

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.
- This product has a square cross section. The analysis engine has checked both edge and plank orientations to allow for either installation.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|------------------------------|----------------|---------------------|----------|-------------------------|------------|----------|-----------------------|
| | Total | Available | Required | Dead | Floor Live | Factored | |
| 1 - Stud wall - DF | 3.50" | 3.50" | 1.50" | 766 | 677 | 1444 | Blocking |
| 2 - Hanger on 7 1/2" DF beam | 3.50" | Hanger ¹ | 1.50" | 1151 | 941 | 2092 | See note ¹ |

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.
- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 9' 10" o/c | |
| Bottom Edge (Lu) | 9' 10" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | | |
|-------------------------------|---------------------|-------------|---------------|----------------|------------------|-------------|--|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories | |
| 2 - Face Mount Hanger | Connector not found | N/A | N/A | N/A | N/A | | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Comments |
|-----------------------|-------------------------|-----------------|-------------|-------------------|--------------|
| 0 - Self Weight (PLF) | 0 to 9' 10 1/4" | N/A | 14.3 | -- | |
| 1 - Uniform (PSF) | 0 to 10' 1 3/4" (Front) | 1' 4" | 12.0 | 40.0 | Default Load |
| 2 - Uniform (PSF) | 4' 7" to 7' 9" (Top) | 8' 6" | 60.0 | 40.0 | Floor |

Weyerhaeuser Notes

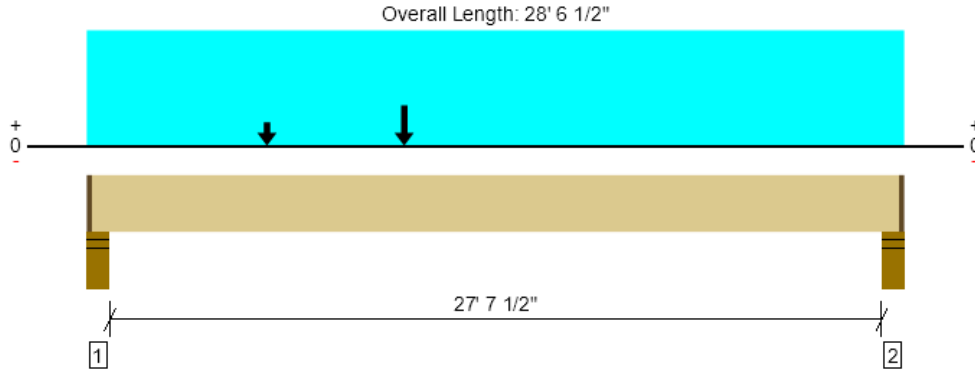
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, Beam 27
 1 piece(s) 6 3/4" x 24" 24F-V4 DF Glulam



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|----------------------|---------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 14736 @ 4" | 17930 (4.25") | Passed (82%) | -- | 1.0 D + 1.0 L (All Spans) |
| Shear (lbs) | 13203 @ 2' 5 1/2" | 28620 | Passed (46%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Pos Moment (Ft-lbs) | 109143 @ 11' 1" | 114351 | Passed (95%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Live Load Defl. (in) | 0.696 @ 13' 11" | 0.697 | Passed (L/481) | -- | 1.0 D + 1.0 L (All Spans) |
| Total Load Defl. (in) | 1.028 @ 13' 10 5/16" | 1.394 | Passed (L/325) | -- | 1.0 D + 1.0 L (All Spans) |

System : Floor
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2018
 Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Critical positive moment adjusted by a volume/size factor of 0.88 that was calculated using length L = 27' 10 1/2".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------------|----------|------------------|
| | Total | Available | Required | Dead | Floor Live | Factored | |
| 1 - Stud wall - DF | 5.50" | 4.25" | 3.49" | 4884 | 9916 | 14800 | 1 1/4" Rim Board |
| 2 - Stud wall - DF | 5.50" | 4.25" | 2.87" | 3702 | 8463 | 12165 | 1 1/4" Rim Board |

• Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 19' 11" o/c | |
| Bottom Edge (Lu) | 28' 4" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Comments |
|-----------------------|-------------------------|-----------------|-------------|-------------------|---------------------------------|
| 0 - Self Weight (PLF) | 1 1/4" to 28' 5 1/4" | N/A | 39.4 | -- | |
| 1 - Uniform (PSF) | 0 to 28' 6 1/2" (Front) | 5' 3/4" | 12.0 | 40.0 | Default Load |
| 2 - Uniform (PSF) | 0 to 28' 6 1/2" (Back) | 6' 8 1/2" | 12.0 | 40.0 | Default Load |
| 3 - Point (lb) | 6' 3 1/2" (Front) | N/A | 1151 | 941 | Linked from: Beam 30, Support 2 |
| 4 - Point (lb) | 11' 1" (Top) | N/A | 2288 | 3999 | Linked from: Beam 29, Support 2 |

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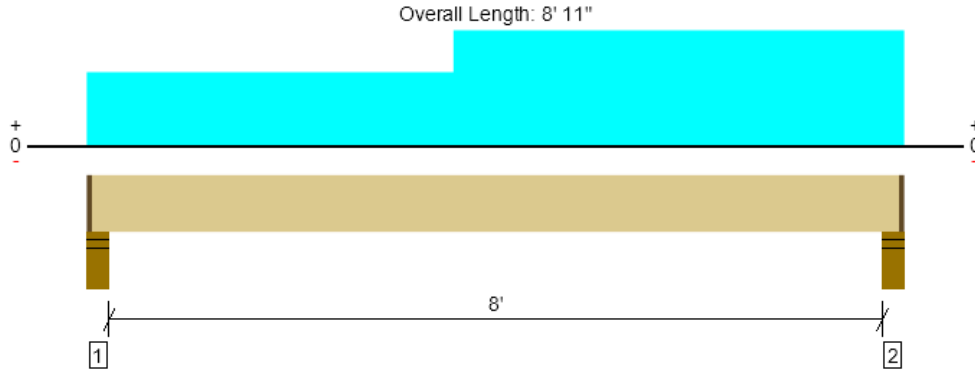
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|--|-----------|
| Jed Jones 1/29/24 Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, Beam 28
1 piece(s) 6 x 8 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|--------------------|---------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 1953 @ 8' 7" | 14609 (4.25") | Passed (13%) | -- | 1.0 D + 1.0 L (All Spans) |
| Shear (lbs) | 1483 @ 7' 10" | 4675 | Passed (32%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Moment (Ft-lbs) | 3534 @ 4' 9" | 5156 | Passed (69%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Live Load Defl. (in) | 0.104 @ 4' 6 5/16" | 0.206 | Passed (L/955) | -- | 1.0 D + 1.0 L (All Spans) |
| Total Load Defl. (in) | 0.138 @ 4' 6 5/16" | 0.412 | Passed (L/716) | -- | 1.0 D + 1.0 L (All Spans) |

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------------|----------|------------------|
| | Total | Available | Required | Dead | Floor Live | Factored | |
| 1 - Stud wall - DF | 5.50" | 4.25" | 1.50" | 403 | 1193 | 1596 | 1 1/4" Rim Board |
| 2 - Stud wall - DF | 5.50" | 4.25" | 1.50" | 497 | 1505 | 2002 | 1 1/4" Rim Board |

• Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 8' 9" o/c | |
| Bottom Edge (Lu) | 8' 9" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Comments |
|-----------------------|---------------------|-----------------|-------------|-------------------|--------------|
| 0 - Self Weight (PLF) | 1 1/4" to 8' 9 3/4" | N/A | 10.4 | -- | |
| 1 - Uniform (PSF) | 0 to 8' 11" (Front) | 5' 9" | 12.0 | 40.0 | Default Load |
| 2 - Uniform (PSF) | 4' to 8' 11" (Back) | 3' 3 1/2" | 12.0 | 40.0 | Default Load |

Weyerhaeuser Notes

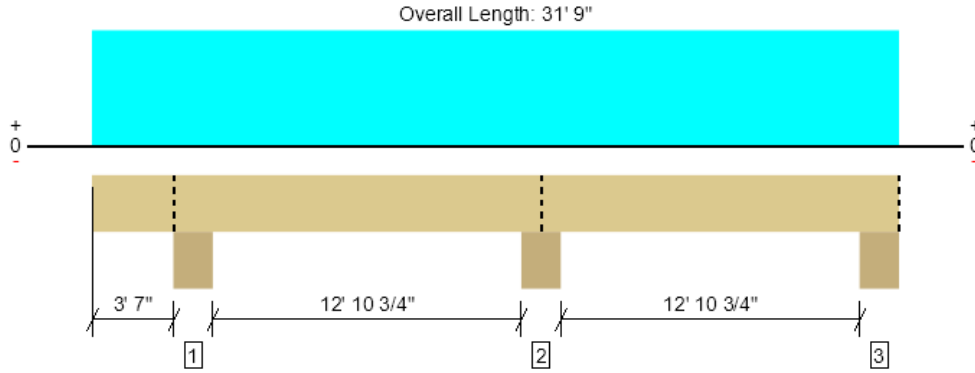
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| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, Beam 31
1 piece(s) 8 x 12 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-----------------------|---------------|----------------|------|-------------------------------------|
| Member Reaction (lbs) | 16169 @ 17' 8" | 44531 (9.50") | Passed (36%) | -- | 1.0 D + 1.0 S (Adj Spans) |
| Shear (lbs) | 6858 @ 19' 1/4" | 11241 | Passed (61%) | 1.15 | 1.0 D + 1.0 S (Adj Spans) |
| Moment (Ft-lbs) | -21484 @ 17' 8" | 21387 | Passed (100%) | 1.15 | 1.0 D + 1.0 S (Adj Spans) |
| Live Load Defl. (in) | 0.261 @ 24' 10 5/16" | 0.335 | Passed (L/617) | -- | 1.0 D + 0.75 L + 0.75 S (Alt Spans) |
| Total Load Defl. (in) | 0.279 @ 24' 10 11/16" | 0.671 | Passed (L/578) | -- | 1.0 D + 0.75 L + 0.75 S (Alt Spans) |

System : Floor
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Overhang deflection criteria: LL (2L/480) and TL (2L/240).
- Upward deflection on left cantilever exceeds overhang deflection criteria.
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Lumber grading provisions must be extended over the length of the member per NDS 4.2.5.5.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|-----------------|----------------|-----------|----------|-------------------------|------------|-------|----------|-------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Column - DF | 9.50" | 9.50" | 2.15" | 808 | 2564 | 9249 | 10057 | Blocking |
| 2 - Column - DF | 9.50" | 9.50" | 3.45" | 1315 | 4066 | 14854 | 16169 | Blocking |
| 3 - Column - DF | 9.50" | 9.50" | 1.50" | 476 | 1607/-212 | 5628 | 6104 | Blocking |

• Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 31' 9" o/c | |
| Bottom Edge (Lu) | 6" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-----------------------|-------------------|-----------------|-------------|-------------------|-------------|--------------|
| 0 - Self Weight (PLF) | 0 to 31' 9" | N/A | 21.9 | -- | -- | |
| 1 - Uniform (PSF) | 0 to 31' 9" (Top) | 6' | 10.0 | 40.0 | 150.0 | Default Load |

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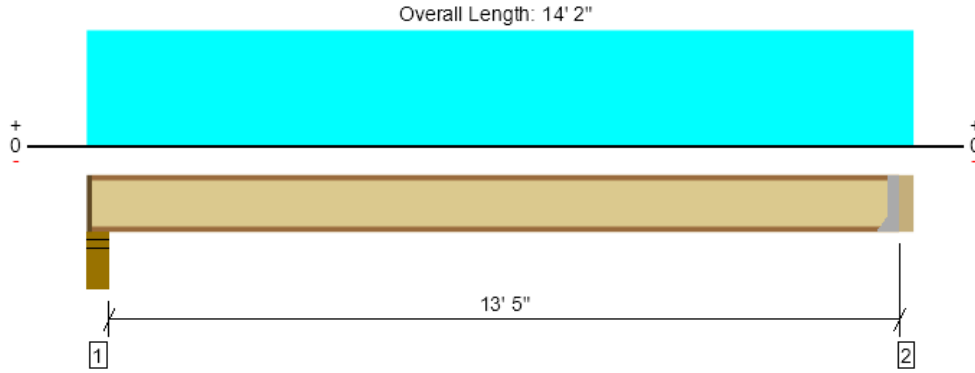
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| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, Joists 4
1 piece(s) 11 7/8" TJI @ 210 @ 24" OC



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|--------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 702 @ 13' 10 1/2" | 1005 (1.75") | Passed (70%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Shear (lbs) | 702 @ 13' 10 1/2" | 1655 | Passed (42%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Moment (Ft-lbs) | 2369 @ 7' 1 1/2" | 3795 | Passed (62%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Live Load Defl. (in) | 0.179 @ 7' 1 1/2" | 0.338 | Passed (L/904) | -- | 1.0 D + 1.0 L (All Spans) |
| Total Load Defl. (in) | 0.233 @ 7' 1 1/2" | 0.675 | Passed (L/695) | -- | 1.0 D + 1.0 L (All Spans) |
| TJ-Pro™ Rating | 42 | 40 | Passed | -- | -- |

System : Floor
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- A structural analysis of the deck has not been performed.
- Deflection analysis is based on composite action with a single layer of 23/32" Weyerhaeuser Edge™ Panel (24" Span Rating) that is glued and nailed down.
- Additional considerations for the TJ-Pro™ Rating include: None.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|-------------------------------|----------------|---------------------|------------------------|-------------------------|------------|----------|-----------------------|
| | Total | Available | Required | Dead | Floor Live | Factored | |
| 1 - Stud wall - DF | 5.50" | 4.25" | 1.75" | 171 | 570 | 741 | 1 1/4" Rim Board |
| 2 - Hanger on 11 7/8" DF beam | 3.50" | Hanger ¹ | 1.75" / - ² | 169 | 563 | 732 | See note ¹ |

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.
- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.
- ² Required Bearing Length / Required Bearing Length with Web Stiffeners

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 4' 9" o/c | |
| Bottom Edge (Lu) | 13' 9" o/c | |

- TJI joists are only analyzed using Maximum Allowable bracing solutions.
- Maximum allowable bracing intervals based on applied load.

Connector: Simpson Strong-Tie

| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories |
|-----------------------|---------------|-------------|---------------|----------------|------------------|-------------|
| 2 - Face Mount Hanger | IUS2.06/11.88 | 2.00" | N/A | 10-10dx1.5 | 2-Strong-Grip | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

| Vertical Load | Location | Spacing | Dead (0.90) | Floor Live (1.00) | Comments |
|-------------------|-------------|---------|-------------|-------------------|--------------|
| 1 - Uniform (PSF) | 0 to 14' 2" | 24" | 12.0 | 40.0 | Default Load |

Weyerhaeuser Notes

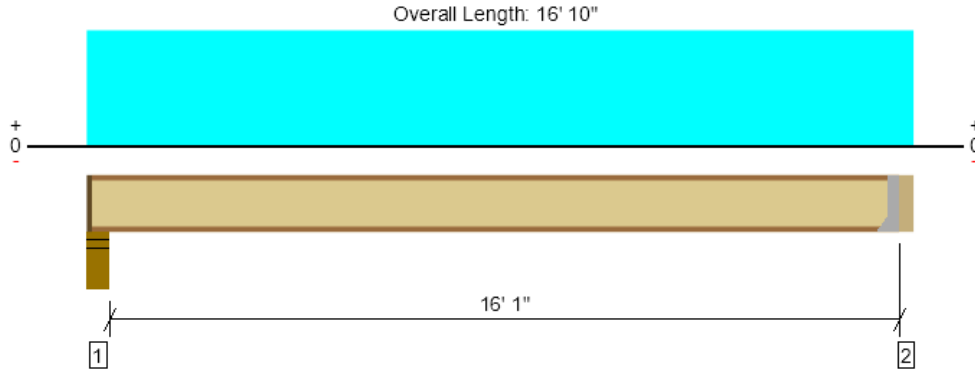
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| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, Joist 7
1 piece(s) 11 7/8" TJI® 210 @ 19.2" OC



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|--------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 673 @ 16' 6 1/2" | 1005 (1.75") | Passed (67%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Shear (lbs) | 673 @ 16' 6 1/2" | 1655 | Passed (41%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Moment (Ft-lbs) | 2718 @ 8' 5 1/2" | 3795 | Passed (72%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Live Load Defl. (in) | 0.286 @ 8' 5 1/2" | 0.404 | Passed (L/679) | -- | 1.0 D + 1.0 L (All Spans) |
| Total Load Defl. (in) | 0.371 @ 8' 5 1/2" | 0.808 | Passed (L/522) | -- | 1.0 D + 1.0 L (All Spans) |
| TJ-Pro™ Rating | 41 | 40 | Passed | -- | -- |

System : Floor
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- A structural analysis of the deck has not been performed.
- Deflection analysis is based on composite action with a single layer of 23/32" Weyerhaeuser Edge™ Panel (24" Span Rating) that is glued and nailed down.
- Additional considerations for the TJ-Pro™ Rating include: 1/2" Gypsum ceiling.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|-------------------------------|----------------|---------------------|------------------------|-------------------------|------------|----------|-----------------------|
| | Total | Available | Required | Dead | Floor Live | Factored | |
| 1 - Stud wall - DF | 5.50" | 4.25" | 1.75" | 162 | 541 | 704 | 1 1/4" Rim Board |
| 2 - Hanger on 11 7/8" DF beam | 3.50" | Hanger ¹ | 1.75" / - ² | 161 | 536 | 697 | See note ¹ |

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.
- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.
- ² Required Bearing Length / Required Bearing Length with Web Stiffeners

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 4' 5" o/c | |
| Bottom Edge (Lu) | 16' 5" o/c | |

- TJI joists are only analyzed using Maximum Allowable bracing solutions.
- Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | | |
|-------------------------------|---------------|-------------|---------------|----------------|------------------|-------------|--|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories | |
| 2 - Face Mount Hanger | IUS2.06/11.88 | 2.00" | N/A | 10-10dx1.5 | 2-Strong-Grip | | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

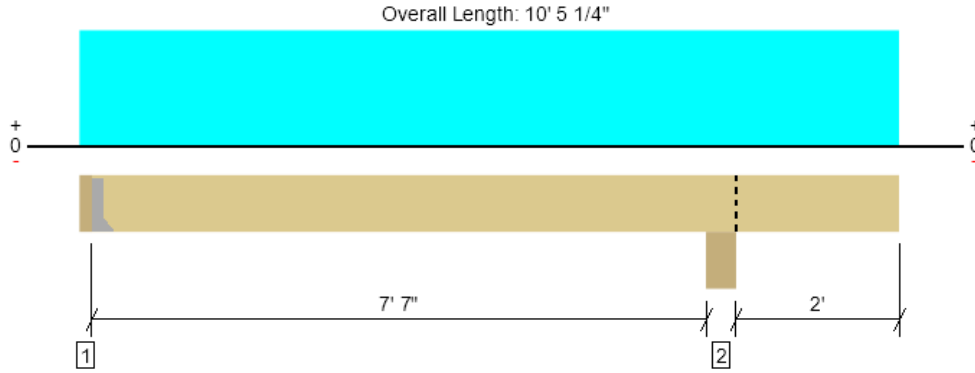
| Vertical Load | Location | Spacing | Dead (0.90) | Floor Live (1.00) | Comments |
|-------------------|--------------|---------|-------------|-------------------|--------------|
| 1 - Uniform (PSF) | 0 to 16' 10" | 19.2" | 12.0 | 40.0 | Default Load |

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| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | 1/29/24 |



Upper Floor, Deck Joist 2
1 piece(s) 2 x 10 DF No.2 @ 16" OC



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|---------------------|--------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 803 @ 3" | 1406 (1.50") | Passed (57%) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Shear (lbs) | 684 @ 7' 3/4" | 1915 | Passed (36%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 1511 @ 4' 1 11/16" | 2334 | Passed (65%) | 1.15 | 1.0 D + 1.0 S (Alt Spans) |
| Live Load Defl. (in) | 0.099 @ 4' 1 11/16" | 0.197 | Passed (L/959) | -- | 1.0 D + 1.0 S (Alt Spans) |
| Total Load Defl. (in) | 0.105 @ 4' 1 5/8" | 0.394 | Passed (L/905) | -- | 1.0 D + 1.0 S (Alt Spans) |
| TJ-Pro™ Rating | N/A | N/A | N/A | -- | N/A |

System : Floor
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Overhang deflection criteria: LL (2L/480) and TL (2L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- A 15% increase in the moment capacity has been added to account for repetitive member usage.
- Applicable calculations are based on NDS.
- No composite action between deck and joist was considered in analysis.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|--------------------------------|----------------|---------------------|----------|-------------------------|------------|------|----------|-----------------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Hanger on 9 1/4" DF Ledger | 3.00" | Hanger ¹ | 1.50" | 51 | 224/-5 | 805 | 856 | See note ¹ |
| 2 - Beam - DF | 7.25" | 7.25" | 1.50" | 88 | 351 | 1316 | 1404 | Blocking |

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.
- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 7' 11" o/c | |
| Bottom Edge (Lu) | 10' 2" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | |
|-------------------------------|-------|-------------|---------------|----------------|------------------|-------------|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories |
| 1 - Face Mount Hanger | LUS28 | 1.75" | N/A | 6-10dx1.5 | 3-10d | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

| Vertical Load | Location (Side) | Spacing | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-------------------|-----------------|---------|-------------|-------------------|-------------|--------------|
| 1 - Uniform (PSF) | 0 to 10' 5 1/4" | 16" | 10.0 | 40.0 | 150.0 | Default Load |

Weyerhaeuser Notes

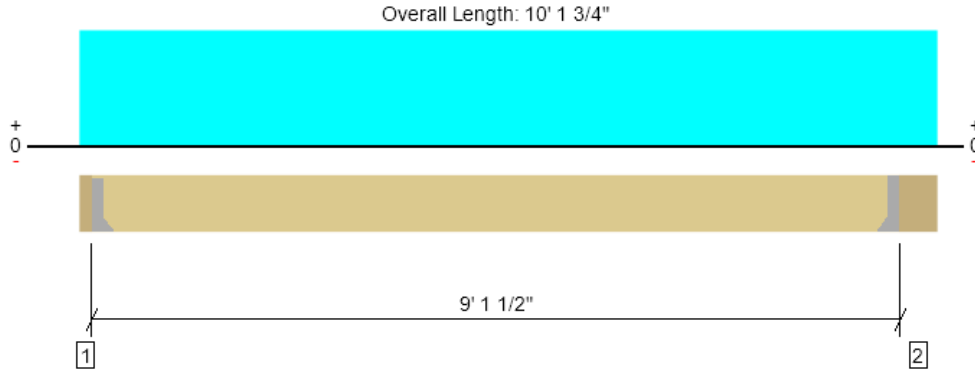
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, Deck Joist 1
1 piece(s) 2 x 10 DF No.2 @ 16" OC



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|--------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 973 @ 3" | 1406 (1.50") | Passed (69%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 809 @ 1' 1/4" | 1915 | Passed (42%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 2220 @ 4' 9 3/4" | 2334 | Passed (95%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.197 @ 4' 9 3/4" | 0.228 | Passed (L/556) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.210 @ 4' 9 3/4" | 0.456 | Passed (L/521) | -- | 1.0 D + 1.0 S (All Spans) |
| TJ-Pro™ Rating | N/A | N/A | N/A | -- | N/A |

System : Floor
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- A 15% increase in the moment capacity has been added to account for repetitive member usage.
- Applicable calculations are based on NDS.
- No composite action between deck and joist was considered in analysis.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|--------------------------------|----------------|---------------------|----------|-------------------------|------------|------|----------|-----------------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Hanger on 9 1/4" DF Ledger | 3.00" | Hanger ¹ | 1.50" | 64 | 257 | 962 | 1027 | See note ¹ |
| 2 - Hanger on 9 1/4" DF beam | 9.25" | Hanger ¹ | 1.50" | 71 | 284 | 1067 | 1138 | See note ¹ |

- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 2' 9" o/c | |
| Bottom Edge (Lu) | 9' 2" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | | |
|-------------------------------|-------|-------------|---------------|----------------|------------------|-------------|--|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories | |
| 1 - Face Mount Hanger | LUS28 | 1.75" | N/A | 6-10dx1.5 | 3-10d | | |
| 2 - Face Mount Hanger | LUS28 | 1.75" | N/A | 6-10dx1.5 | 3-10d | | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

| Vertical Load | Location (Side) | Spacing | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-------------------|-----------------|---------|-------------|-------------------|-------------|--------------|
| 1 - Uniform (PSF) | 0 to 10' 1 3/4" | 16" | 10.0 | 40.0 | 150.0 | Default Load |

Weyerhaeuser Notes

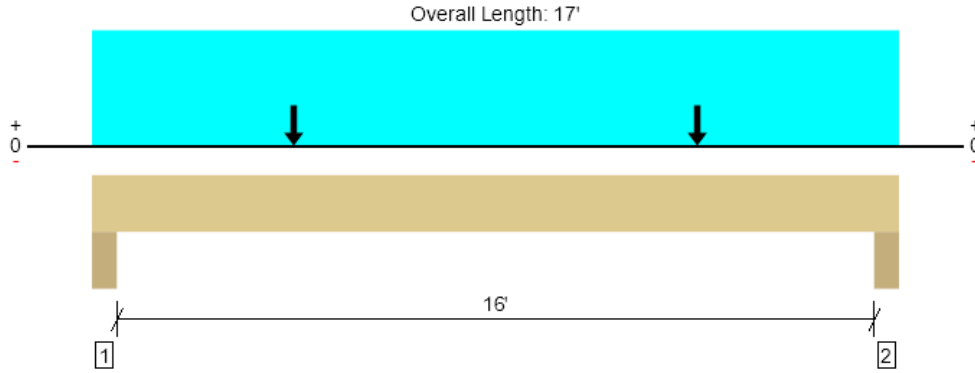
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Upper Floor, HDR 13
1 piece(s) 5 1/2" x 21" 24F-V4 DF Glulam



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|---------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 21840 @ 4 1/2" | 21450 (6.00") | Passed (102%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 19946 @ 2' 3" | 23466 | Passed (85%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Pos Moment (Ft-lbs) | 84690 @ 8' 6" | 89566 | Passed (95%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.486 @ 8' 6" | 0.542 | Passed (L/401) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.565 @ 8' 6" | 0.813 | Passed (L/345) | -- | 1.0 D + 1.0 S (All Spans) |

System : Wall
Member Type : Header
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Critical positive moment adjusted by a volume/size factor of 0.96 that was calculated using length L = 16' 3".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|------------------|----------------|-----------|----------|-------------------------|------------|-------|----------|-------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Trimmer - DF | 6.00" | 6.00" | 6.11" | 3109 | 3839 | 18731 | 21840 | None |
| 2 - Trimmer - DF | 6.00" | 6.00" | 6.11" | 3109 | 3839 | 18731 | 21840 | None |

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 14' o/c | |
| Bottom Edge (Lu) | 17' o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location | Tributary Width | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-----------------------|----------|-----------------|-------------|-------------------|-------------|-------------------------------|
| 0 - Self Weight (PLF) | 0 to 17' | N/A | 28.1 | -- | -- | |
| 1 - Uniform (PSF) | 0 to 17' | 4' 7" | 10.0 | 40.0 | 150.0 | Default Load |
| 2 - Uniform (PSF) | 0 to 17' | 6' 8 1/2" | 12.0 | 40.0 | - | Default Load |
| 3 - Point (lb) | 4' 3" | N/A | 1797 | - | 12887 | Linked from: HDR 2, Support 1 |
| 4 - Point (lb) | 12' 9" | N/A | 1797 | - | 12887 | Linked from: HDR 2, Support 2 |

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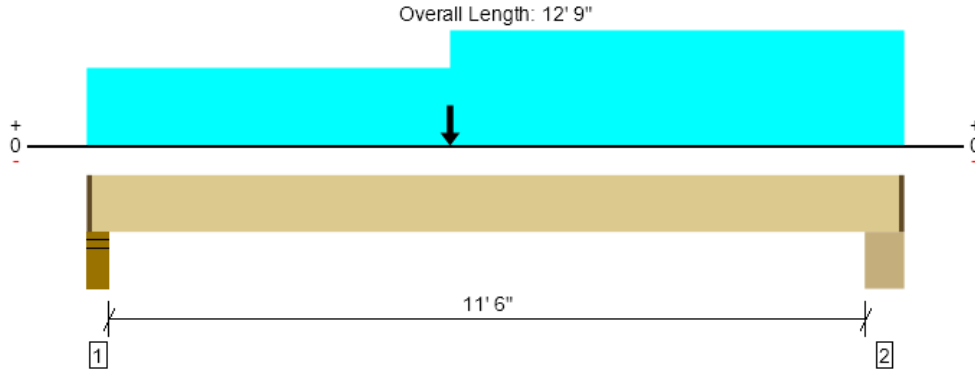
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Loft, Beam 29
1 piece(s) 8 x 14 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|--------------------|---------------|-----------------|------|-----------------------------|
| Member Reaction (lbs) | 5787 @ 4" | 19922 (4.25") | Passed (29%) | -- | 1.0 D + 1.0 L (All Spans) |
| Shear (lbs) | 5108 @ 1' 7" | 11475 | Passed (45%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Moment (Ft-lbs) | 23775 @ 5' 8" | 25296 | Passed (94%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Live Load Defl. (in) | 0.124 @ 6' 2 7/16" | 0.294 | Passed (L/999+) | -- | 1.0 D + 1.0 L (All Spans) |
| Total Load Defl. (in) | 0.213 @ 6' 2 1/16" | 0.587 | Passed (L/661) | -- | 1.0 D + 1.0 L (All Spans) |

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Lumber grading provisions must be extended over the length of the member per NDS 4.2.5.5.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------------|----------|------------------|
| | Total | Available | Required | Dead | Floor Live | Factored | |
| 1 - Stud wall - DF | 5.50" | 4.25" | 1.50" | 2321 | 3511 | 5832 | 1 1/4" Rim Board |
| 2 - Column - DF | 9.50" | 8.25" | 1.50" | 2288 | 3999 | 6287 | 1 1/4" Rim Board |

• Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 12' 7" o/c | |
| Bottom Edge (Lu) | 12' 7" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Comments |
|-----------------------|-----------------------|-----------------|-------------|-------------------|---------------------------------|
| 0 - Self Weight (PLF) | 1 1/4" to 12' 7 3/4" | N/A | 25.6 | -- | |
| 1 - Uniform (PSF) | 0 to 5' 8" (Top) | 8' 4" | 12.0 | 40.0 | Default Load |
| 2 - Uniform (PSF) | 5' 8" to 12' 9" (Top) | 12' 4" | 12.0 | 40.0 | Default Load |
| 3 - Point (lb) | 5' 8" (Top) | N/A | 2673 | 2126 | Linked from: Beam 35, Support 1 |

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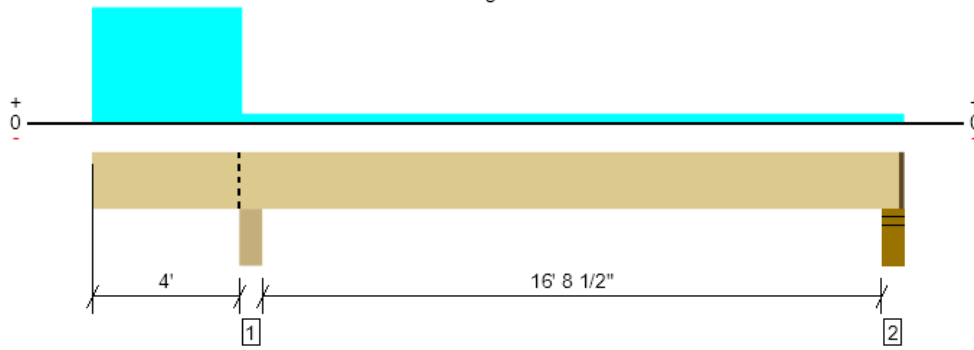
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| | |
|---|-----------|
| ForteWEB Software Operator | Job Notes |
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Loft, Beam 35
2 piece(s) 1 3/4" x 14" 2.OE Microllam® LVL

Overall Length: 21' 7 1/2"



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|---------------|-----------------|------|-----------------------------|
| Member Reaction (lbs) | 4799 @ 4' 2 3/4" | 12031 (5.50") | Passed (40%) | -- | 1.0 D + 1.0 L (All Spans) |
| Shear (lbs) | 2547 @ 2' 10" | 9310 | Passed (27%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Moment (Ft-lbs) | -8018 @ 4' 2 3/4" | 24258 | Passed (33%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Live Load Defl. (in) | 0.108 @ 0 | 0.211 | Passed (2L/936) | -- | 1.0 D + 1.0 L (All Spans) |
| Total Load Defl. (in) | 0.237 @ 0 | 0.423 | Passed (2L/428) | -- | 1.0 D + 1.0 L (All Spans) |

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Overhang deflection criteria: LL (2L/480) and TL (2L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------------|----------|------------------|
| | Total | Available | Required | Dead | Floor Live | Factored | |
| 1 - Beam - DF | 5.50" | 5.50" | 2.19" | 2673 | 2126 | 4799 | Blocking |
| 2 - Stud wall - DF | 5.50" | 4.25" | 1.50" | -11 | 473/-186 | 462/-197 | 1 1/4" Rim Board |

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.
- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 21' 6" o/c | |
| Bottom Edge (Lu) | 21' 6" o/c | |

- Maximum allowable bracing intervals based on applied load.

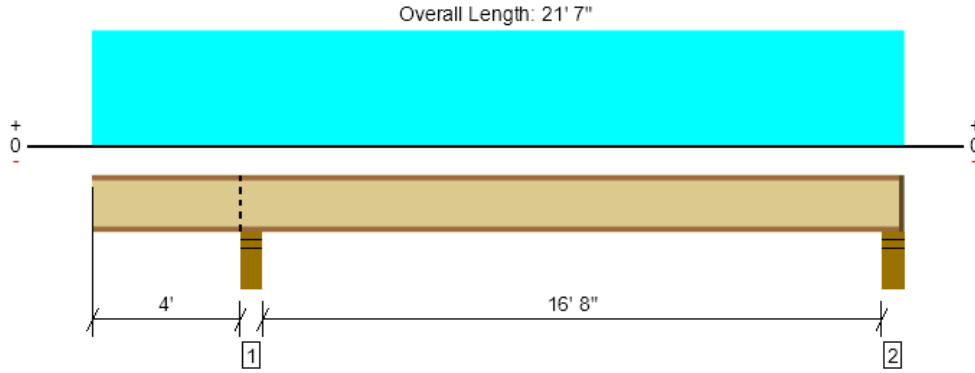
| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Comments |
|-----------------------|--------------------------|-----------------|-------------|-------------------|--------------|
| 0 - Self Weight (PLF) | 0 to 21' 6 1/4" | N/A | 14.3 | -- | |
| 1 - Uniform (PSF) | 4' to 21' 7 1/2" (Front) | 1' 4" | 12.0 | 40.0 | Default Load |
| 2 - Uniform (PSF) | 0 to 4' (Front) | 8" | 12.0 | 40.0 | Default Load |
| 3 - Uniform (PSF) | 0 to 4' (Back) | 8' 6" | 60.0 | 40.0 | Default Load |

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| | |
|---|-----------|
| ForteWEB Software Operator | Job Notes |
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | 1/29/24 |



Loft, Joist 9
1 piece(s) 14" TJI® 210 @ 16" OC



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|---------------------|--------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 599 @ 21' 2 1/2" | 1460 (3.50") | Passed (41%) | 1.00 | 1.0 D + 1.0 L (Alt Spans) |
| Shear (lbs) | 584 @ 4' 5 1/2" | 1945 | Passed (30%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Moment (Ft-lbs) | 2428 @ 12' 10 1/16" | 4490 | Passed (54%) | 1.00 | 1.0 D + 1.0 L (Alt Spans) |
| Live Load Defl. (in) | 0.207 @ 12' 8 5/8" | 0.424 | Passed (L/986) | -- | 1.0 D + 1.0 L (Alt Spans) |
| Total Load Defl. (in) | 0.261 @ 12' 9 1/8" | 0.849 | Passed (L/781) | -- | 1.0 D + 1.0 L (Alt Spans) |
| TJ-Pro™ Rating | 49 | 40 | Passed | -- | -- |

System : Floor
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Overhang deflection criteria: LL (2L/480) and TL (2L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- A structural analysis of the deck has not been performed.
- Deflection analysis is based on composite action with a single layer of 23/32" Weyerhaeuser Edge™ Panel (24" Span Rating) that is glued and nailed down.
- Additional considerations for the TJ-Pro™ Rating include: None.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------------|----------|------------------|
| | Total | Available | Required | Dead | Floor Live | Factored | |
| 1 - Stud wall - DF | 5.50" | 5.50" | 3.50" | 212 | 706 | 918 | Blocking |
| 2 - Stud wall - DF | 5.50" | 4.25" | 1.75" | 133 | 473/-23 | 606 | 1 1/4" Rim Board |

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.
- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 5' 2" o/c | |
| Bottom Edge (Lu) | 8' 8" o/c | |

- TJI joists are only analyzed using Maximum Allowable bracing solutions.
- Maximum allowable bracing intervals based on applied load.

| Vertical Load | Location | Spacing | Dead (0.90) | Floor Live (1.00) | Comments |
|-------------------|-------------|---------|-------------|-------------------|--------------|
| 1 - Uniform (PSF) | 0 to 21' 7" | 16" | 12.0 | 40.0 | Default Load |

Weyerhaeuser Notes

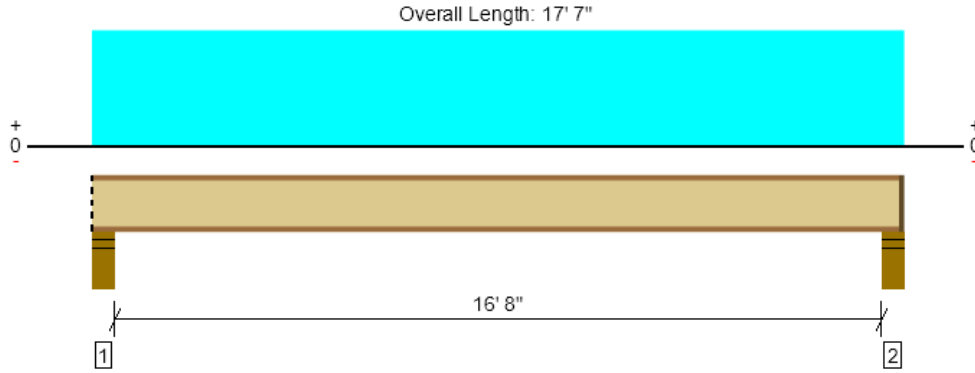
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| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Loft, Joist 8
1 piece(s) 14" TJI® 210 @ 16" OC



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|--------------|-----------------|------|-----------------------------|
| Member Reaction (lbs) | 610 @ 4 1/2" | 1460 (3.50") | Passed (42%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Shear (lbs) | 578 @ 5 1/2" | 1945 | Passed (30%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Moment (Ft-lbs) | 2456 @ 8' 9 1/2" | 4490 | Passed (55%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Live Load Defl. (in) | 0.200 @ 8' 9 1/2" | 0.421 | Passed (L/999+) | -- | 1.0 D + 1.0 L (All Spans) |
| Total Load Defl. (in) | 0.260 @ 8' 9 1/2" | 0.842 | Passed (L/776) | -- | 1.0 D + 1.0 L (All Spans) |
| TJ-Pro™ Rating | 50 | 40 | Passed | -- | -- |

System : Floor
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- A structural analysis of the deck has not been performed.
- Deflection analysis is based on composite action with a single layer of 23/32" Weyerhaeuser Edge™ Panel (24" Span Rating) that is glued and nailed down.
- Additional considerations for the TJ-Pro™ Rating include: None.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------------|----------|------------------|
| | Total | Available | Required | Dead | Floor Live | Factored | |
| 1 - Stud wall - DF | 5.50" | 5.50" | 1.75" | 141 | 469 | 610 | Blocking |
| 2 - Stud wall - DF | 5.50" | 4.25" | 1.75" | 141 | 469 | 610 | 1 1/4" Rim Board |

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.
- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 5' 2" o/c | |
| Bottom Edge (Lu) | 17' 6" o/c | |

- TJI joists are only analyzed using Maximum Allowable bracing solutions.
- Maximum allowable bracing intervals based on applied load.

| Vertical Load | Location | Spacing | Dead (0.90) | Floor Live (1.00) | Comments |
|-------------------|-------------|---------|-------------|-------------------|--------------|
| 1 - Uniform (PSF) | 0 to 17' 7" | 16" | 12.0 | 40.0 | Default Load |

Weyerhaeuser Notes

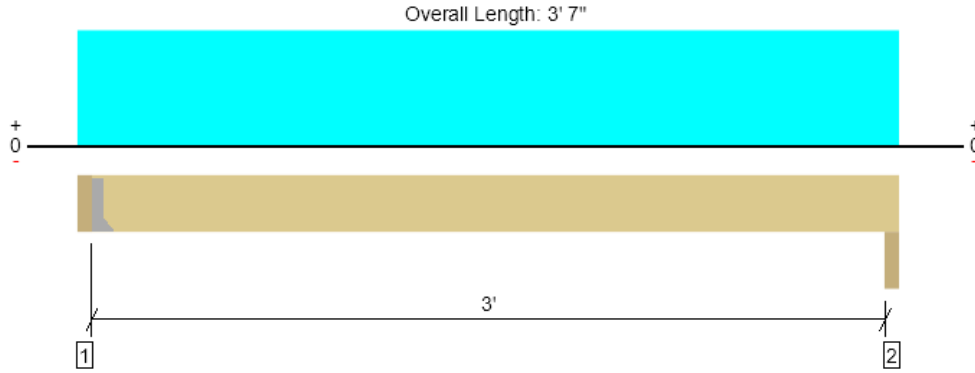
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Main Floor, Beam 20
1 piece(s) 4 x 4 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|--------------------|--------------|-----------------|------|-----------------------------|
| Member Reaction (lbs) | 567 @ 3 1/2" | 3281 (1.50") | Passed (17%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 461 @ 7" | 1691 | Passed (27%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 443 @ 1' 10 1/4" | 1027 | Passed (43%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.034 @ 1' 10 1/4" | 0.104 | Passed (L/999+) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.037 @ 1' 10 1/4" | 0.156 | Passed (L/999+) | -- | 1.0 D + 1.0 S (All Spans) |

System : Floor
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.
- This product has a square cross section. The analysis engine has checked both edge and plank orientations to allow for either installation.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|-------------------------------|----------------|---------------------|----------|-------------------------|------------|------|----------|-----------------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Hanger on 3 1/2" SPF beam | 3.50" | Hanger ¹ | 1.50" | 47 | 167 | 626 | 672 | See note ¹ |
| 2 - Column - SPF | 3.50" | 3.50" | 1.50" | 44 | 156 | 584 | 628 | None |

- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 3' 4" o/c | |
| Bottom Edge (Lu) | 3' 4" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | | |
|-------------------------------|-------|-------------|---------------|----------------|------------------|-------------|--|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories | |
| 1 - Face Mount Hanger | LUS44 | 2.00" | N/A | 4-10dx1.5 | 2-10d | | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-----------------------|------------------|-----------------|-------------|-------------------|-------------|--------------|
| 0 - Self Weight (PLF) | 3 1/2" to 3' 7" | N/A | 3.1 | -- | -- | |
| 1 - Uniform (PSF) | 0 to 3' 7" (Top) | 2' 3" | 10.0 | 40.0 | 150.0 | Default Load |

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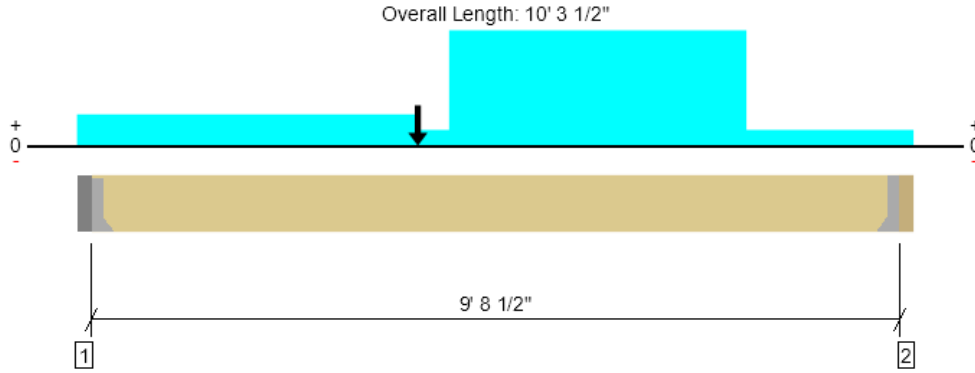
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| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Main Floor, Beam 21
1 piece(s) 4 x 10 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|--------------------|--------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 1901 @ 10' | 3281 (1.50") | Passed (58%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 1833 @ 9' 2 3/4" | 4468 | Passed (41%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 5877 @ 5' 2 15/16" | 5740 | Passed (102%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.224 @ 5' 2 3/8" | 0.324 | Passed (L/519) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.244 @ 5' 2 5/16" | 0.485 | Passed (L/478) | -- | 1.0 D + 1.0 S (All Spans) |

System : Floor
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|------------------------------|----------------|---------------------|----------|-------------------------|------------|------|----------|-----------------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Hanger on concrete | 3.50" | Hanger ¹ | 1.50" | 153 | 440 | 1651 | 1804 | See note ¹ |
| 2 - Hanger on 9 1/4" DF beam | 3.50" | Hanger ¹ | 1.50" | 160 | 471 | 1764 | 1924 | See note ¹ |

- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 6" o/c | |
| Bottom Edge (Lu) | 9' 9" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | |
|-------------------------------|---------------------|-------------|---------------|----------------|------------------|-------------|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories |
| 1 - Face Mount Hanger | Connector not found | N/A | N/A | N/A | N/A | |
| 2 - Face Mount Hanger | LUS410 | 2.00" | N/A | 8-16d | 6-16d | |

• Refer to manufacturer notes and instructions for proper installation and use of all connectors.

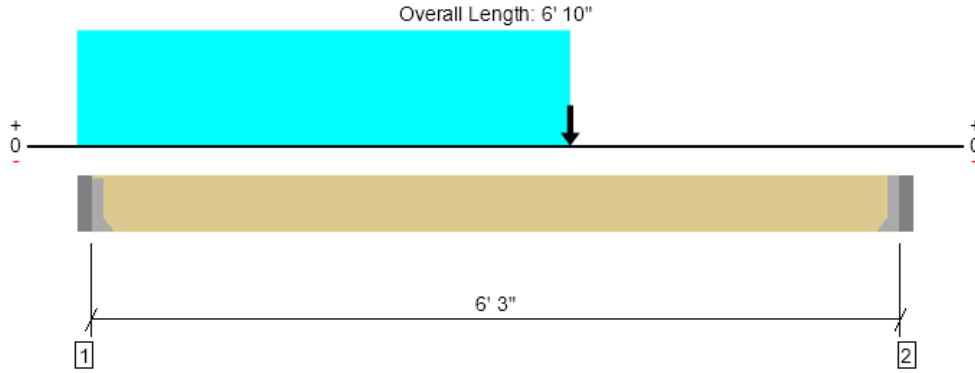
| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-----------------------|-----------------------|-----------------|-------------|-------------------|-------------|---------------------------------|
| 0 - Self Weight (PLF) | 3 1/2" to 10' | N/A | 8.2 | -- | -- | |
| 1 - Uniform (PSF) | 0 to 10' 3 1/2" (Top) | 6" | 10.0 | 40.0 | 150.0 | Default Load |
| 2 - Uniform (PSF) | 0 to 4' 2 1/2" (Top) | 6" | 10.0 | 40.0 | 150.0 | Default Load |
| 3 - Uniform (PSF) | 4' 7" to 8' 2" (Top) | 3' 2" | 10.0 | 40.0 | 150.0 | Default Load |
| 4 - Point (lb) | 4' 2 1/2" (Front) | N/A | 47 | 167 | 626 | Linked from: Beam 20, Support 1 |

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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| | |
|---|-----------|
| ForteWEB Software Operator | Job Notes |
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | 1/29/24 |



Main Floor, Beam 22
1 piece(s) 4 x 10 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|--------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 2895 @ 3' 1/2" | 3281 (1.50") | Passed (88%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 2272 @ 1' 3/4" | 4468 | Passed (51%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 5184 @ 3' 10 1/2" | 5740 | Passed (90%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.080 @ 3' 4 3/4" | 0.208 | Passed (L/937) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.087 @ 3' 4 3/4" | 0.313 | Passed (L/862) | -- | 1.0 D + 1.0 S (All Spans) |

System : Floor
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|------------------------|----------------|---------------------|----------|-------------------------|------------|------|----------|-----------------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Hanger on concrete | 3.50" | Hanger ¹ | 1.50" | 236 | 772 | 2892 | 3128 | See note ¹ |
| 2 - Hanger on concrete | 3.50" | Hanger ¹ | 1.50" | 176 | 499 | 1872 | 2047 | See note ¹ |

- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 6' 3" o/c | |
| Bottom Edge (Lu) | 6' 3" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | |
|-------------------------------|---------------------|-------------|---------------|----------------|------------------|-------------|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories |
| 1 - Face Mount Hanger | Connector not found | N/A | N/A | N/A | N/A | |
| 2 - Face Mount Hanger | Connector not found | N/A | N/A | N/A | N/A | |

• Refer to manufacturer notes and instructions for proper installation and use of all connectors.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-----------------------|----------------------|-----------------|-------------|-------------------|-------------|---------------------------------|
| 0 - Self Weight (PLF) | 3' 1/2" to 6' 6 1/2" | N/A | 8.2 | -- | -- | |
| 1 - Uniform (PSF) | 0 to 4' (Top) | 5' | 10.0 | 40.0 | 150.0 | Default Load |
| 2 - Point (lb) | 4' (Front) | N/A | 160 | 471 | 1764 | Linked from: Beam 21, Support 2 |

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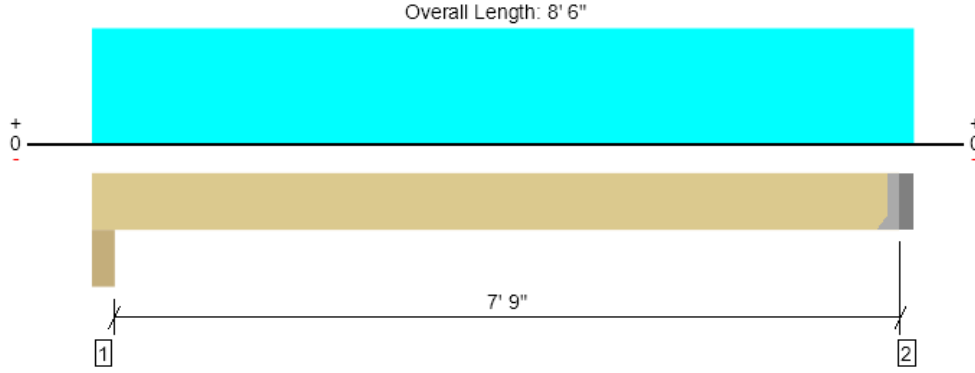
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| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Main Floor, Beam 23, 26
1 piece(s) 6 x 8 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|--------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 2561 @ 8' 2 1/2" | 5156 (1.50") | Passed (50%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 2155 @ 7' 7" | 5376 | Passed (40%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 5042 @ 4' 3 1/4" | 5930 | Passed (85%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.168 @ 4' 3 1/4" | 0.262 | Passed (L/563) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.182 @ 4' 3 1/4" | 0.394 | Passed (L/519) | -- | 1.0 D + 1.0 S (All Spans) |

System : Floor
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|------------------------|----------------|---------------------|----------|-------------------------|------------|------|----------|-----------------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Column - DF | 5.50" | 5.50" | 1.50" | 215 | 683 | 2563 | 2778 | None |
| 2 - Hanger on concrete | 3.50" | Hanger ¹ | 1.50" | 210 | 677 | 2538 | 2748 | See note ¹ |

- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 8' 3" o/c | |
| Bottom Edge (Lu) | 8' 3" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | |
|-------------------------------|---------------------|-------------|---------------|----------------|------------------|-------------|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories |
| 2 - Face Mount Hanger | Connector not found | N/A | N/A | N/A | N/A | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

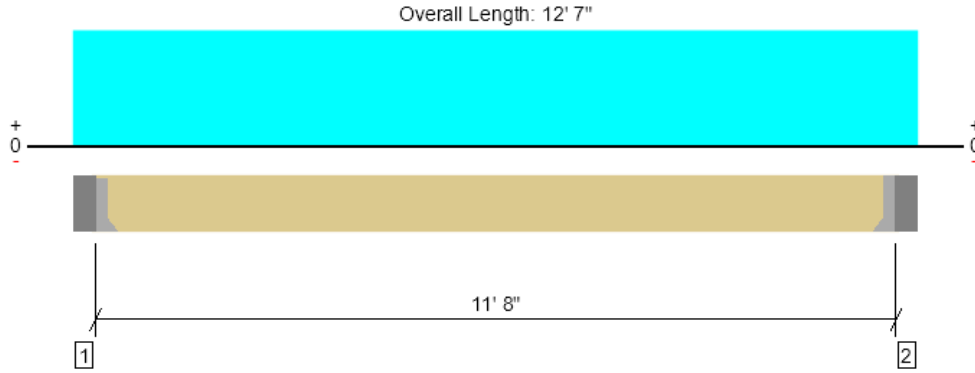
| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-----------------------|------------------|-----------------|-------------|-------------------|-------------|--------------|
| 0 - Self Weight (PLF) | 0 to 8' 2 1/2" | N/A | 10.4 | -- | -- | |
| 1 - Uniform (PSF) | 0 to 8' 6" (Top) | 4' | 10.0 | 40.0 | 150.0 | Default Load |

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| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Main Floor, Beam 24, 25
1 piece(s) 6 x 12 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|--------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 3827 @ 5' 1/2" | 5156 (1.50") | Passed (74%) | -- | 1.0 D + 1.0 S (All Spans) |
| Shear (lbs) | 3198 @ 1' 5" | 8244 | Passed (39%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Moment (Ft-lbs) | 11162 @ 6' 3 1/2" | 15684 | Passed (71%) | 1.15 | 1.0 D + 1.0 S (All Spans) |
| Live Load Defl. (in) | 0.224 @ 6' 3 1/2" | 0.389 | Passed (L/624) | -- | 1.0 D + 1.0 S (All Spans) |
| Total Load Defl. (in) | 0.245 @ 6' 3 1/2" | 0.583 | Passed (L/571) | -- | 1.0 D + 1.0 S (All Spans) |

System : Floor
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Lumber grading provisions must be extended over the length of the member per NDS 4.2.5.5.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|------------------------|----------------|---------------------|----------|-------------------------|------------|------|----------|-----------------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Hanger on concrete | 5.50" | Hanger ¹ | 1.50" | 345 | 1007 | 3775 | 4120 | See note ¹ |
| 2 - Hanger on concrete | 5.50" | Hanger ¹ | 1.50" | 345 | 1007 | 3775 | 4120 | See note ¹ |

- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 11' 8" o/c | |
| Bottom Edge (Lu) | 11' 8" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | | |
|-------------------------------|---------------------|-------------|---------------|----------------|------------------|-------------|--|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories | |
| 1 - Face Mount Hanger | Connector not found | N/A | N/A | N/A | N/A | | |
| 2 - Face Mount Hanger | Connector not found | N/A | N/A | N/A | N/A | | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-----------------------|-----------------------|-----------------|-------------|-------------------|-------------|--------------|
| 0 - Self Weight (PLF) | 5' 1/2" to 12' 1 1/2" | N/A | 16.0 | -- | -- | |
| 1 - Uniform (PSF) | 0 to 12' 7" (Top) | 4' | 10.0 | 40.0 | 150.0 | Default Load |

Weyerhaeuser Notes

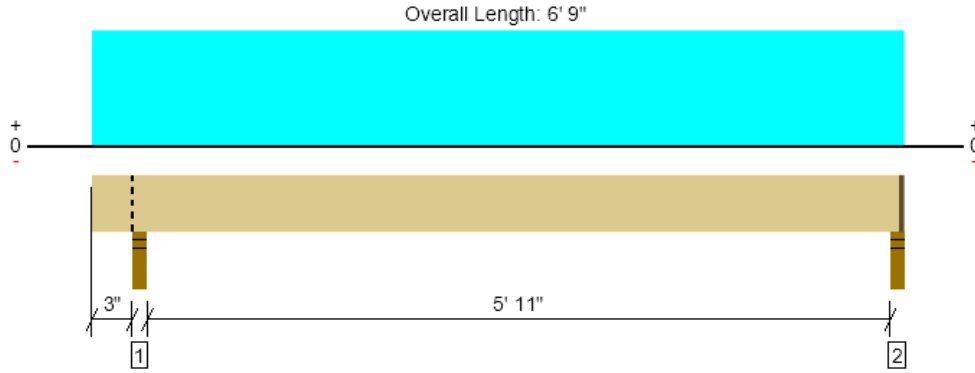
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| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Main Floor, Beam 36
2 piece(s) 1 3/4" x 9 1/2" 2.0E Microllam® LVL



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|--------------------|--------------|-----------------|------|-----------------------------|
| Member Reaction (lbs) | 2967 @ 6' 7" | 4922 (2.25") | Passed (60%) | -- | 1.0 D + 1.0 L (Alt Spans) |
| Shear (lbs) | 2045 @ 5' 8" | 6318 | Passed (32%) | 1.00 | 1.0 D + 1.0 L (Alt Spans) |
| Moment (Ft-lbs) | 4492 @ 3' 5 15/16" | 11775 | Passed (38%) | 1.00 | 1.0 D + 1.0 L (Alt Spans) |
| Live Load Defl. (in) | 0.046 @ 3' 5 7/8" | 0.155 | Passed (L/999+) | -- | 1.0 D + 1.0 L (Alt Spans) |
| Total Load Defl. (in) | 0.077 @ 3' 5 7/8" | 0.309 | Passed (L/959) | -- | 1.0 D + 1.0 L (Alt Spans) |

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Overhang deflection criteria: LL (2L/480) and TL (2L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------------|----------|------------------|
| | Total | Available | Required | Dead | Floor Live | Factored | |
| 1 - Stud wall - DF | 3.50" | 3.50" | 1.51" | 1337 | 1961 | 3298 | Blocking |
| 2 - Stud wall - DF | 3.50" | 2.25" | 1.50" | 1239 | 1826 | 3064 | 1 1/4" Rim Board |

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.
- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 6' 8" o/c | |
| Bottom Edge (Lu) | 6' 8" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Comments |
|-----------------------|--------------------|-----------------|-------------|-------------------|--------------|
| 0 - Self Weight (PLF) | 0 to 6' 7 3/4" | N/A | 9.7 | -- | |
| 1 - Uniform (PSF) | 0 to 6' 9" (Front) | 1' | 12.0 | 40.0 | Default Load |
| 2 - Uniform (PSF) | 0 to 6' 9" (Top) | 13' | 12.0 | 40.0 | Floor |
| 3 - Uniform (PSF) | 0 to 6' 9" (Top) | 17' | 12.0 | - | wall |

Weyerhaeuser Notes

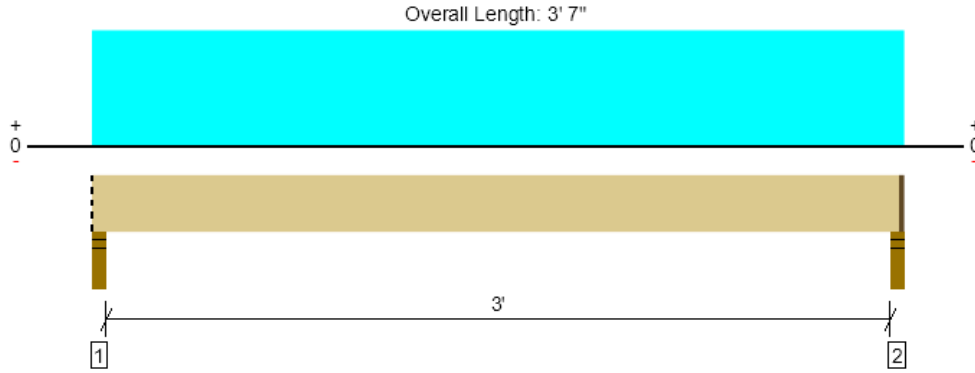
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Main Floor, Beam 37
1 piece(s) 4 x 6 DF No.1



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|--------------|-----------------|------|-----------------------------|
| Member Reaction (lbs) | 952 @ 3' 5" | 4922 (2.25") | Passed (19%) | -- | 1.0 D + 1.0 L (All Spans) |
| Shear (lbs) | 587 @ 9" | 2310 | Passed (25%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Moment (Ft-lbs) | 744 @ 1' 9 1/2" | 1912 | Passed (39%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Live Load Defl. (in) | 0.013 @ 1' 9 1/2" | 0.081 | Passed (L/999+) | -- | 1.0 D + 1.0 L (All Spans) |
| Total Load Defl. (in) | 0.017 @ 1' 9 1/2" | 0.162 | Passed (L/999+) | -- | 1.0 D + 1.0 L (All Spans) |

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------------|----------|------------------|
| | Total | Available | Required | Dead | Floor Live | Factored | |
| 1 - Stud wall - DF | 3.50" | 3.50" | 1.50" | 240 | 770 | 1010 | Blocking |
| 2 - Stud wall - DF | 3.50" | 2.25" | 1.50" | 239 | 770 | 1010 | 1 1/4" Rim Board |

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.
- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 3' 6" o/c | |
| Bottom Edge (Lu) | 3' 6" o/c | |

- Maximum allowable bracing intervals based on applied load.

| Vertical Loads | Location (Side) | Tributary Width | Dead (0.90) | Floor Live (1.00) | Comments |
|-----------------------|------------------|-----------------|-------------|-------------------|--------------|
| 0 - Self Weight (PLF) | 0 to 3' 5 3/4" | N/A | 4.9 | -- | |
| 1 - Uniform (PSF) | 0 to 3' 7" (Top) | 10' 9" | 12.0 | 40.0 | Default Load |

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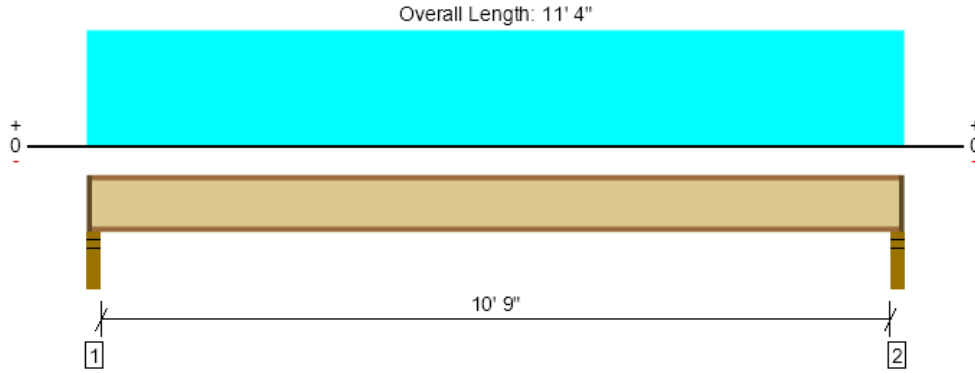
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| | |
|---|-----------|
| ForteWEB Software Operator | Job Notes |
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Main Floor, Joist 3

1 piece(s) 9 1/2" TJI® 110 @ 24" OC



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|--------------|----------------|------|-----------------------------|
| Member Reaction (lbs) | 579 @ 2 1/2" | 1041 (2.25") | Passed (56%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Shear (lbs) | 559 @ 3 1/2" | 1220 | Passed (46%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Moment (Ft-lbs) | 1549 @ 5' 8" | 2500 | Passed (62%) | 1.00 | 1.0 D + 1.0 L (All Spans) |
| Live Load Defl. (in) | 0.147 @ 5' 8" | 0.273 | Passed (L/893) | -- | 1.0 D + 1.0 L (All Spans) |
| Total Load Defl. (in) | 0.191 @ 5' 8" | 0.546 | Passed (L/687) | -- | 1.0 D + 1.0 L (All Spans) |
| TJ-Pro™ Rating | 45 | 40 | Passed | -- | -- |

System : Floor
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2018
 Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- A structural analysis of the deck has not been performed.
- Deflection analysis is based on composite action with a single layer of 23/32" Weyerhaeuser Edge™ Panel (24" Span Rating) that is glued and nailed down.
- Additional considerations for the TJ-Pro™ Rating include: None.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | Accessories |
|--------------------|----------------|-----------|----------|-------------------------|------------|----------|------------------|
| | Total | Available | Required | Dead | Floor Live | Factored | |
| 1 - Stud wall - DF | 3.50" | 2.25" | 1.75" | 136 | 453 | 589 | 1 1/4" Rim Board |
| 2 - Stud wall - DF | 3.50" | 2.25" | 1.75" | 136 | 453 | 589 | 1 1/4" Rim Board |

• Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 4' o/c | |
| Bottom Edge (Lu) | 11' 2" o/c | |

- TJI joists are only analyzed using Maximum Allowable bracing solutions.
- Maximum allowable bracing intervals based on applied load.

| Vertical Load | Location | Spacing | Dead (0.90) | Floor Live (1.00) | Comments |
|-------------------|-------------|---------|-------------|-------------------|--------------|
| 1 - Uniform (PSF) | 0 to 11' 4" | 24" | 12.0 | 40.0 | Default Load |

Weyerhaeuser Notes

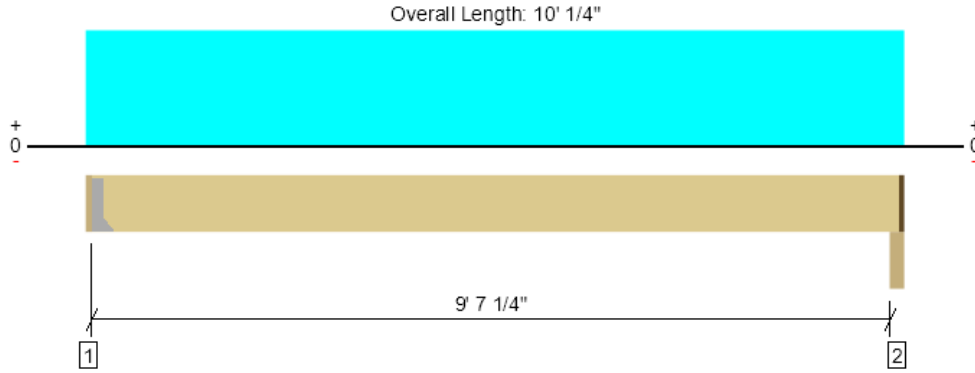
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|--|-----------|
| Jed Jones 1/29/24 Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Main Floor, Deck Joist 4
1 piece(s) 2 x 8 DF No.2 @ 12" OC



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|--------------------|--------------|----------------|------|-------------------------------------|
| Member Reaction (lbs) | 466 @ 1 1/2" | 1406 (1.50") | Passed (33%) | -- | 1.0 D + 0.75 L + 0.75 S (All Spans) |
| Shear (lbs) | 408 @ 8 3/4" | 1501 | Passed (27%) | 1.15 | 1.0 D + 0.75 L + 0.75 S (All Spans) |
| Moment (Ft-lbs) | 1129 @ 4' 11 5/8" | 1564 | Passed (72%) | 1.15 | 1.0 D + 0.75 L + 0.75 S (All Spans) |
| Live Load Defl. (in) | 0.224 @ 4' 11 5/8" | 0.242 | Passed (L/518) | -- | 1.0 D + 0.75 L + 0.75 S (All Spans) |
| Total Load Defl. (in) | 0.250 @ 4' 11 5/8" | 0.484 | Passed (L/465) | -- | 1.0 D + 0.75 L + 0.75 S (All Spans) |
| TJ-Pro™ Rating | N/A | N/A | N/A | -- | N/A |

System : Floor
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- A 15% increase in the moment capacity has been added to account for repetitive member usage.
- Applicable calculations are based on NDS.
- No composite action between deck and joist was considered in analysis.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|--------------------------------|----------------|---------------------|----------|-------------------------|------------|------|----------|-----------------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Hanger on 7 1/4" DF Ledger | 1.50" | Hanger ¹ | 1.50" | 50 | 199 | 373 | 478 | See note ¹ |
| 2 - Beam - DF | 3.50" | 2.25" | 1.50" | 51 | 202 | 379 | 486 | 1 1/4" Rim Board |

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.
- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 8' 4" o/c | |
| Bottom Edge (Lu) | 9' 10" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | | |
|-------------------------------|-------|-------------|---------------|----------------|------------------|-------------|--|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories | |
| 1 - Face Mount Hanger | LUS28 | 1.75" | N/A | 6-10dx1.5 | 3-10d | | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

| Vertical Load | Location (Side) | Spacing | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-------------------|-----------------|---------|-------------|-------------------|-------------|--------------|
| 1 - Uniform (PSF) | 0 to 10' 1/4" | 12" | 10.0 | 40.0 | 75.0 | Default Load |

Weyerhaeuser Notes

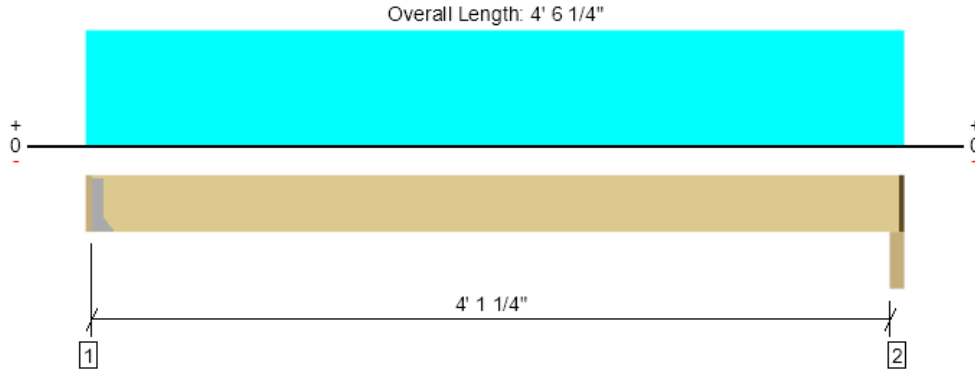
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

| ForteWEB Software Operator | Job Notes |
|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |



Main Floor, Deck Joist 3
1 piece(s) 2 x 8 DF No.2 @ 16" OC



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

| Design Results | Actual @ Location | Allowed | Result | LDF | Load: Combination (Pattern) |
|-----------------------|-------------------|--------------|-----------------|------|-------------------------------------|
| Member Reaction (lbs) | 269 @ 1 1/2" | 1406 (1.50") | Passed (19%) | -- | 1.0 D + 0.75 L + 0.75 S (All Spans) |
| Shear (lbs) | 191 @ 8 3/4" | 1501 | Passed (13%) | 1.15 | 1.0 D + 0.75 L + 0.75 S (All Spans) |
| Moment (Ft-lbs) | 281 @ 2' 2 5/8" | 1564 | Passed (18%) | 1.15 | 1.0 D + 0.75 L + 0.75 S (All Spans) |
| Live Load Defl. (in) | 0.010 @ 2' 2 5/8" | 0.105 | Passed (L/999+) | -- | 1.0 D + 0.75 L + 0.75 S (All Spans) |
| Total Load Defl. (in) | 0.012 @ 2' 2 5/8" | 0.209 | Passed (L/999+) | -- | 1.0 D + 0.75 L + 0.75 S (All Spans) |
| TJ-Pro™ Rating | N/A | N/A | N/A | -- | N/A |

System : Floor
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- A 15% increase in the moment capacity has been added to account for repetitive member usage.
- Applicable calculations are based on NDS.
- No composite action between deck and joist was considered in analysis.

| Supports | Bearing Length | | | Loads to Supports (lbs) | | | | Accessories |
|--------------------------------|----------------|---------------------|----------|-------------------------|------------|------|----------|-----------------------|
| | Total | Available | Required | Dead | Floor Live | Snow | Factored | |
| 1 - Hanger on 7 1/4" DF Ledger | 1.50" | Hanger ¹ | 1.50" | 30 | 118 | 222 | 285 | See note ¹ |
| 2 - Beam - DF | 3.50" | 2.25" | 1.50" | 31 | 123 | 230 | 295 | 1 1/4" Rim Board |

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.
- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

| Lateral Bracing | Bracing Intervals | Comments |
|------------------|-------------------|----------|
| Top Edge (Lu) | 4' 4" o/c | |
| Bottom Edge (Lu) | 4' 4" o/c | |

•Maximum allowable bracing intervals based on applied load.

| Connector: Simpson Strong-Tie | | | | | | | |
|-------------------------------|-------|-------------|---------------|----------------|------------------|-------------|--|
| Support | Model | Seat Length | Top Fasteners | Face Fasteners | Member Fasteners | Accessories | |
| 1 - Face Mount Hanger | LUS28 | 1.75" | N/A | 6-10dx1.5 | 3-10d | | |

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

| Vertical Load | Location (Side) | Spacing | Dead (0.90) | Floor Live (1.00) | Snow (1.15) | Comments |
|-------------------|-----------------|---------|-------------|-------------------|-------------|--------------|
| 1 - Uniform (PSF) | 0 to 4' 6 1/4" | 16" | 10.0 | 40.0 | 75.0 | Default Load |

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|---|-----------|
| Jed Jones Snake River Engineering (208) 453-6512 jed@snakeriverengineering.com | |





524 CLEVELAND BLVD. #230
CALDWELL, IDAHO 83605
(208) 453-6512

Completed by: JDJ
Review/Check: KKJ

Project Name: Joras Residence
SRE Project #: 2023-6515
City and State: Donnelly, Idaho

Beam Calculations

| | Additional Drift | Roof | Floor | Deck | Wall | Total Load | Total Load |
|------------------|------------------|-------|-------|------|------|------------|------------|
| Trib | 0.0 | 3.5 | 0 | 0 | 3.33 | | 624.5 plf |
| Dead Load | - | 59.5 | 0.0 | 0.0 | 40.0 | 99.5 plf | |
| Live / Snow Load | 0 | 525.0 | 0.0 | 0.0 | - | 525.0 plf | |

| Description: | 3.0 ft Opening | 4.0 ft Opening | 4.3 ft Opening | | | | |
|----------------|-----------------------|-----------------------|-----------------------|--|--|--|--|
| Header Callout | (2)2x6 DF-L No. 2 | (2)2x6 DF-L No. 2 | (2)2x6 DF-L No. 2 | | | | |
| Trimmers | (1) 2x6 DF-L No. 2 | (1) 2x6 DF-L No. 2 | (1) 2x6 DF-L No. 2 | | | | |

| Wood Design | | | | | | | |
|-------------|---------|---------|---------|--|--|--|--|
| Species | DF-L | DF-L | DF-L | | | | |
| Grade | No. 2 | No. 2 | No. 2 | | | | |
| Width | 3.00 in | 3.00 in | 3.00 in | | | | |
| Depth | 5.50 in | 5.50 in | 5.50 in | | | | |

| Reaction | | | | | | | |
|-----------|---------|-----------|-----------|--|--|--|--|
| Dead Load | 149 lbs | 199 lbs | 211 lbs | | | | |
| Live Load | 788 lbs | 1,050 lbs | 1,116 lbs | | | | |

| Load | | | | | | | |
|------|--------|--------|--------|--|--|--|--|
| lu | 3.0 ft | 4.0 ft | 4.3 ft | | | | |
| le | 6.2 ft | 7.9 ft | 8.3 ft | | | | |

| Adjustment Factors | | | | | | | |
|--------------------|------|------|------|--|--|--|--|
| Cd | 1.15 | 1.15 | 1.15 | | | | |
| CF | 1.3 | 1.3 | 1.3 | | | | |

| Material Properties | | | | | | | |
|---------------------|---------------|---------------|---------------|--|--|--|--|
| Fb | 900 psi | 900 psi | 900 psi | | | | |
| Fv | 180 psi | 180 psi | 180 psi | | | | |
| E | 1,600,000 psi | 1,600,000 psi | 1,600,000 psi | | | | |
| Emin | 580,000 psi | 580,000 psi | 580,000 psi | | | | |

| Calculated Prop. | | | | | | | |
|------------------|-----------------------|-----------------------|-----------------------|--|--|--|--|
| A | 16.50 in ² | 16.50 in ² | 16.50 in ² | | | | |
| I | 41.59 in ⁴ | 41.59 in ⁴ | 41.59 in ⁴ | | | | |
| S | 15.13 in ³ | 15.13 in ³ | 15.13 in ³ | | | | |
| RB | 6.73 | 7.61 | 7.80 | | | | |
| Emin' | 580,000 psi | 580,000 psi | 580,000 psi | | | | |
| FbE | 15,357 psi | 12,021 psi | 11,431 psi | | | | |
| Fb* | 1,346 psi | 1,346 psi | 1,346 psi | | | | |
| CL | 1 | 1 | 1 | | | | |

| Shear and Moment | | | | | | | |
|------------------|-------------|--------------|--------------|--|--|--|--|
| M | 8,430 lb-in | 14,987 lb-in | 16,919 lb-in | | | | |
| V | 937 lbs | 1,249 lbs | 1,327 lbs | | | | |

| Stress | | | | | | | |
|-----------|-----------|-----------|-----------|--|--|--|--|
| fb | 557 psi | 991 psi | 1,119 psi | | | | |
| Fb' | 1,339 psi | 1,337 psi | 1,337 psi | | | | |
| fb/Fb' | 0.42 | 0.74 | 0.84 | | | | |
| fv | 85 psi | 114 psi | 121 psi | | | | |
| Fv' | 207 psi | 207 psi | 207 psi | | | | |
| fv/Fv' | 0.41 | 0.55 | 0.58 | | | | |
| Max Ratio | 0.42 | 0.74 | 0.84 | | | | |
| | Pass | Pass | Pass | | | | |

| Deflection | | | | | | | |
|------------|---------|---------|---------|--|--|--|--|
| ΔTL | 0.02 in | 0.05 in | 0.07 in | | | | |
| | L/2,105 | L/888 | L/740 | | | | |
| ΔLL | 0.01 in | 0.05 in | 0.06 in | | | | |
| | L/2,504 | L/1,056 | L/881 | | | | |
| | Pass | Pass | Pass | | | | |



524 CLEVELAND BLVD. #230
CALDWELL, IDAHO 83605
(208) 453-6512

Completed by: JDJ
Review/Check: KKJ

Project Name: Joras Residence
SRE Project #: 2023-6515
City and State: Donnelly, Idaho

Beam Calculations

| | Additional Drift | Roof | Floor | Deck | Wall | Total Load | Total Load |
|------------------|------------------|-------|-------|------|------|------------|------------|
| Trib | 0.0 | 5.125 | 0 | 0 | 3.33 | | |
| Dead Load | - | 87.1 | 0.0 | 0.0 | 40.0 | 127.1 plf | 895.8 plf |
| Live / Snow Load | 0 | 768.8 | 0.0 | 0.0 | - | 768.8 plf | |

| Description: | 2.0 ft Opening | | | | | | |
|----------------|-----------------------|--|--|--|--|--|--|
| Header Callout | (2)2x6 DF-L No. 2 | | | | | | |
| Trimmers | (1) 2x6 DF-L No. 2 | | | | | | |

| Wood Design | | | | | | | |
|-------------|---------|--|--|--|--|--|--|
| Species | DF-L | | | | | | |
| Grade | No. 2 | | | | | | |
| Width | 3.00 in | | | | | | |
| Depth | 5.50 in | | | | | | |

| Reaction | | | | | | | |
|-----------|---------|--|--|--|--|--|--|
| Dead Load | 127 lbs | | | | | | |
| Live Load | 769 lbs | | | | | | |

| Load | | | | | | | |
|------|--------|--|--|--|--|--|--|
| lu | 2.0 ft | | | | | | |
| le | 4.1 ft | | | | | | |

| Adjustment Factors | | | | | | | |
|--------------------|------|--|--|--|--|--|--|
| Cd | 1.15 | | | | | | |
| CF | 1.3 | | | | | | |

| Material Properties | | | | | | | |
|---------------------|---------------|--|--|--|--|--|--|
| Fb | 900 psi | | | | | | |
| Fv | 180 psi | | | | | | |
| E | 1,600,000 psi | | | | | | |
| Emin | 580,000 psi | | | | | | |

| Calculated Prop. | | | | | | | |
|------------------|-------------|--|--|--|--|--|--|
| A | 16.50 in^2 | | | | | | |
| I | 41.59 in^4 | | | | | | |
| S | 15.13 in^3 | | | | | | |
| RB | 5.50 | | | | | | |
| Emin' | 580,000 psi | | | | | | |
| FbE | 23,036 psi | | | | | | |
| Fb* | 1,346 psi | | | | | | |
| CL | 1 | | | | | | |

| Shear and Moment | | | | | | | |
|------------------|-------------|--|--|--|--|--|--|
| M | 5,375 lb-in | | | | | | |
| V | 896 lbs | | | | | | |

| Stress | | | | | | | |
|-----------|-----------|--|--|--|--|--|--|
| fb | 355 psi | | | | | | |
| Fb' | 1,341 psi | | | | | | |
| fb/Fb' | 0.26 | | | | | | |
| fv | 81 psi | | | | | | |
| Fv' | 207 psi | | | | | | |
| fv/Fv' | 0.39 | | | | | | |
| Max Ratio | 0.39 | | | | | | |
| | Pass | | | | | | |

| Deflection | | | | | | | |
|------------|---------|--|--|--|--|--|--|
| ΔTL | 0.00 in | | | | | | |
| | L/4,953 | | | | | | |
| ΔLL | 0.00 in | | | | | | |
| | L/5,771 | | | | | | |
| | Pass | | | | | | |



524 CLEVELAND BLVD. #230
CALDWELL, IDAHO 83605
(208) 453-6512

Completed by: JDJ
Review/Check: KKJ

Project Name: Joras Residence
SRE Project #: 2023-6515
City and State: Donnelly, Idaho

Beam Calculations

| | Additional Drift | Roof | Floor | Deck | Wall | Total Load | Total Load |
|------------------|------------------|-------|-------|------|------|------------|-------------|
| Trib | 0.0 | 6 | 0 | 0 | 3.33 | | |
| Dead Load | - | 102.0 | 0.0 | 0.0 | 40.0 | 142.0 plf | 1,042.0 plf |
| Live / Snow Load | 0 | 900.0 | 0.0 | 0.0 | - | 900.0 plf | |

| Description: | 6.5 ft Opening | | | | | | | |
|----------------|-----------------------|--|--|--|--|--|--|--|
| Header Callout | (2)9.5 LVL 2.0E | | | | | | | |
| Trimmers | (2) 2x6 DF-L No. 2 | | | | | | | |

| Wood Design | | | | | | | |
|-------------|---------|--|--|--|--|--|--|
| Species | LVL | | | | | | |
| Grade | 2.0E | | | | | | |
| Width | 3.50 in | | | | | | |
| Depth | 9.50 in | | | | | | |

| Reaction | | | | | | | |
|-----------|-----------|--|--|--|--|--|--|
| Dead Load | 461 lbs | | | | | | |
| Live Load | 2,925 lbs | | | | | | |

| Load | | | | | | | |
|------|---------|--|--|--|--|--|--|
| lu | 6.5 ft | | | | | | |
| le | 13.0 ft | | | | | | |

| Adjustment Factors | | | | | | | |
|--------------------|------|--|--|--|--|--|--|
| Cd | 1.15 | | | | | | |
| CF | 1.1 | | | | | | |

| Material Properties | | | | | | | |
|---------------------|---------------|--|--|--|--|--|--|
| Fb | 2,900 psi | | | | | | |
| Fv | 285 psi | | | | | | |
| E | 2,000,000 psi | | | | | | |
| Emin | 1,016,535 psi | | | | | | |

| Calculated Prop. | | | | | | | |
|------------------|---------------|--|--|--|--|--|--|
| A | 33.25 in^2 | | | | | | |
| I | 250.07 in^4 | | | | | | |
| S | 52.65 in^3 | | | | | | |
| RB | 10.99 | | | | | | |
| Emin' | 1,016,535 psi | | | | | | |
| FbE | 10,106 psi | | | | | | |
| Fb* | 3,669 psi | | | | | | |
| CL | 1 | | | | | | |

| Shear and Moment | | | | | | | |
|------------------|--------------|--|--|--|--|--|--|
| M | 66,034 lb-in | | | | | | |
| V | 3,386 lbs | | | | | | |

| Stress | | | | | | | |
|-----------|-----------|--|--|--|--|--|--|
| fb | 1,254 psi | | | | | | |
| Fb' | 3,571 psi | | | | | | |
| fb/Fb' | 0.35 | | | | | | |
| fv | 153 psi | | | | | | |
| Fv' | 328 psi | | | | | | |
| fv/Fv' | 0.47 | | | | | | |
| Max Ratio | 0.47 | | | | | | |
| | Pass | | | | | | |

| Deflection | | | | | | | |
|------------|---------|--|--|--|--|--|--|
| ΔTL | 0.08 in | | | | | | |
| | L/932 | | | | | | |
| ΔLL | 0.07 in | | | | | | |
| | L/1,079 | | | | | | |
| | Pass | | | | | | |



524 CLEVELAND BLVD. #230
CALDWELL, IDAHO 83605
(208) 453-6512

Completed by: JDJ
Review/Check: KKJ

Project Name: Joras Residence
SRE Project #: 2023-6515
City and State: Donnelly, Idaho

Beam Calculations

| | Additional Drift | Roof | Floor | Deck | Wall | Total Load | Total Load |
|------------------|------------------|--------|-------|------|------|-------------|-------------|
| Trib | 0.0 | 8 | 0 | 0 | 3.33 | | |
| Dead Load | - | 136.0 | 0.0 | 0.0 | 40.0 | 176.0 plf | 1,376.0 plf |
| Live / Snow Load | 0 | 1200.0 | 0.0 | 0.0 | - | 1,200.0 plf | |

| Description: | 2.0 ft Opening | | | | | | |
|----------------|-----------------------|--|--|--|--|--|--|
| Header Callout | (2)2x6 DF-L No. 2 | | | | | | |
| Trimmers | (1) 2x6 DF-L No. 2 | | | | | | |

| Wood Design | | | | | | | |
|-------------|---------|--|--|--|--|--|--|
| Species | DF-L | | | | | | |
| Grade | No. 2 | | | | | | |
| Width | 3.00 in | | | | | | |
| Depth | 5.50 in | | | | | | |

| Reaction | | | | | | | |
|-----------|-----------|--|--|--|--|--|--|
| Dead Load | 176 lbs | | | | | | |
| Live Load | 1,200 lbs | | | | | | |

| Load | | | | | | | |
|------|--------|--|--|--|--|--|--|
| lu | 2.0 ft | | | | | | |
| le | 4.1 ft | | | | | | |

| Adjustment Factors | | | | | | | |
|--------------------|------|--|--|--|--|--|--|
| Cd | 1.15 | | | | | | |
| CF | 1.3 | | | | | | |

| Material Properties | | | | | | | |
|---------------------|---------------|--|--|--|--|--|--|
| Fb | 900 psi | | | | | | |
| Fv | 180 psi | | | | | | |
| E | 1,600,000 psi | | | | | | |
| Emin | 580,000 psi | | | | | | |

| Calculated Prop. | | | | | | | |
|------------------|-----------------------|--|--|--|--|--|--|
| A | 16.50 in ² | | | | | | |
| I | 41.59 in ⁴ | | | | | | |
| S | 15.13 in ³ | | | | | | |
| RB | 5.50 | | | | | | |
| Emin' | 580,000 psi | | | | | | |
| FbE | 23,036 psi | | | | | | |
| Fb* | 1,346 psi | | | | | | |
| CL | 1 | | | | | | |

| Shear and Moment | | | | | | | |
|------------------|-------------|--|--|--|--|--|--|
| M | 8,256 lb-in | | | | | | |
| V | 1,376 lbs | | | | | | |

| Stress | | | | | | | |
|-----------|-----------|--|--|--|--|--|--|
| fb | 546 psi | | | | | | |
| Fb' | 1,341 psi | | | | | | |
| fb/Fb' | 0.41 | | | | | | |
| fv | 125 psi | | | | | | |
| Fv' | 207 psi | | | | | | |
| fv/Fv' | 0.60 | | | | | | |
| Max Ratio | 0.60 | | | | | | |
| | Pass | | | | | | |

| Deflection | | | | | | | |
|------------|---------|--|--|--|--|--|--|
| ΔTL | 0.01 in | | | | | | |
| | L/3,224 | | | | | | |
| ΔLL | 0.01 in | | | | | | |
| | L/3,697 | | | | | | |
| | Pass | | | | | | |



524 CLEVELAND BLVD. #230
 CALDWELL, IDAHO 83605
 (208) 453-6512

Completed by: JDJ
 Review/Check: KKJ

Project Name: Joras Residence
 SRE Project #: 2023-6515
 City and State: Donnelly, Idaho

Beam Calculations

| | Additional Drift | Roof | Floor | Deck | Wall | Total Load | Total Load |
|------------------|------------------|--------|-------|------|------|-------------|-------------|
| Trib | 0.0 | 10 | 0 | 0 | 3.33 | | |
| Dead Load | - | 170.0 | 0.0 | 0.0 | 40.0 | 210.0 plf | 1,710.0 plf |
| Live / Snow Load | 0 | 1500.0 | 0.0 | 0.0 | - | 1,500.0 plf | |

| Description: | 2.0 ft Opening | | | | | | |
|----------------|-----------------------|--|--|--|--|--|--|
| Header Callout | (2)2x6 DF-L No. 2 | | | | | | |
| Trimmers | (1) 2x6 DF-L No. 2 | | | | | | |

| Wood Design | | | | | | | |
|-------------|---------|--|--|--|--|--|--|
| Species | DF-L | | | | | | |
| Grade | No. 2 | | | | | | |
| Width | 3.00 in | | | | | | |
| Depth | 5.50 in | | | | | | |

| Reaction | | | | | | | |
|-----------|-----------|--|--|--|--|--|--|
| Dead Load | 210 lbs | | | | | | |
| Live Load | 1,500 lbs | | | | | | |

| Load | | | | | | | |
|------|--------|--|--|--|--|--|--|
| lu | 2.0 ft | | | | | | |
| le | 4.1 ft | | | | | | |

| Adjustment Factors | | | | | | | |
|--------------------|------|--|--|--|--|--|--|
| Cd | 1.15 | | | | | | |
| CF | 1.3 | | | | | | |

| Material Properties | | | | | | | |
|---------------------|---------------|--|--|--|--|--|--|
| Fb | 900 psi | | | | | | |
| Fv | 180 psi | | | | | | |
| E | 1,600,000 psi | | | | | | |
| Emin | 580,000 psi | | | | | | |

| Calculated Prop. | | | | | | | |
|------------------|-----------------------|--|--|--|--|--|--|
| A | 16.50 in ² | | | | | | |
| I | 41.59 in ⁴ | | | | | | |
| S | 15.13 in ³ | | | | | | |
| RB | 5.50 | | | | | | |
| Emin' | 580,000 psi | | | | | | |
| FbE | 23,036 psi | | | | | | |
| Fb* | 1,346 psi | | | | | | |
| CL | 1 | | | | | | |

| Shear and Moment | | | | | | | |
|------------------|--------------|--|--|--|--|--|--|
| M | 10,260 lb-in | | | | | | |
| V | 1,710 lbs | | | | | | |

| Stress | | | | | | | |
|-----------|-----------|--|--|--|--|--|--|
| fb | 678 psi | | | | | | |
| Fb' | 1,341 psi | | | | | | |
| fb/Fb' | 0.51 | | | | | | |
| fv | 155 psi | | | | | | |
| Fv' | 207 psi | | | | | | |
| fv/Fv' | 0.75 | | | | | | |
| Max Ratio | 0.75 | | | | | | |
| | Pass | | | | | | |

| Deflection | | | | | | | |
|------------|---------|--|--|--|--|--|--|
| ΔTL | 0.01 in | | | | | | |
| | L/2,595 | | | | | | |
| ΔLL | 0.01 in | | | | | | |
| | L/2,958 | | | | | | |
| | Pass | | | | | | |



524 CLEVELAND BLVD. #230
CALDWELL, IDAHO 83605
(208) 453-6512

Completed by: JDJ
Review/Check: KKJ

Project Name: Joras Residence
SRE Project #: 2023-6515
City and State: Donnelly, Idaho

Beam Calculations

| | Additional Drift | Roof | Floor | Deck | Wall | Total Load | Total Load |
|------------------|------------------|-------|-------|-------|------|-------------|-------------|
| Trib | 0.0 | 3.5 | 5.6 | 4 | 3.33 | | |
| Dead Load | - | 59.5 | 67.2 | 40.0 | 40.0 | 206.7 plf | 1,555.7 plf |
| Live / Snow Load | 0 | 525.0 | 224.0 | 600.0 | - | 1,349.0 plf | |

| Description: | 6.0 ft Opening | | | | | | | |
|----------------|-----------------------|--|--|--|--|--|--|--|
| Header Callout | (2) 9.5 LVL 2.0E | | | | | | | |
| Trimmers | (2) 2x6 DF-L No. 2 | | | | | | | |

| Wood Design | | | | | | | |
|-------------|---------|--|--|--|--|--|--|
| Species | LVL | | | | | | |
| Grade | 2.0E | | | | | | |
| Width | 3.50 in | | | | | | |
| Depth | 9.50 in | | | | | | |

| Reaction | | | | | | | |
|-----------|-----------|--|--|--|--|--|--|
| Dead Load | 620 lbs | | | | | | |
| Live Load | 4,047 lbs | | | | | | |

| Load | | | | | | | |
|------|---------|--|--|--|--|--|--|
| lu | 6.0 ft | | | | | | |
| le | 12.2 ft | | | | | | |

| Adjustment Factors | | | | | | | |
|--------------------|------|--|--|--|--|--|--|
| Cd | 1.15 | | | | | | |
| CF | 1.1 | | | | | | |

| Material Properties | | | | | | | |
|---------------------|---------------|--|--|--|--|--|--|
| Fb | 2,900 psi | | | | | | |
| Fv | 285 psi | | | | | | |
| E | 2,000,000 psi | | | | | | |
| Emin | 1,016,535 psi | | | | | | |

| Calculated Prop. | | | | | | | |
|------------------|------------------------|--|--|--|--|--|--|
| A | 33.25 in ² | | | | | | |
| I | 250.07 in ⁴ | | | | | | |
| S | 52.65 in ³ | | | | | | |
| RB | 10.64 | | | | | | |
| Emin' | 1,016,535 psi | | | | | | |
| FbE | 10,784 psi | | | | | | |
| Fb* | 3,669 psi | | | | | | |
| CL | 1 | | | | | | |

| Shear and Moment | | | | | | | |
|------------------|--------------|--|--|--|--|--|--|
| M | 84,006 lb-in | | | | | | |
| V | 4,667 lbs | | | | | | |

| Stress | | | | | | | |
|-----------|-----------|--|--|--|--|--|--|
| fb | 1,596 psi | | | | | | |
| Fb' | 3,580 psi | | | | | | |
| fb/Fb' | 0.45 | | | | | | |
| fv | 211 psi | | | | | | |
| Fv' | 328 psi | | | | | | |
| fv/Fv' | 0.64 | | | | | | |
| Max Ratio | 0.64 | | | | | | |
| | Pass | | | | | | |

| Deflection | | | | | | | |
|------------|---------|--|--|--|--|--|--|
| ΔTL | 0.09 in | | | | | | |
| | L/794 | | | | | | |
| ΔLL | 0.08 in | | | | | | |
| | L/915 | | | | | | |
| | Pass | | | | | | |



524 CLEVELAND BLVD. #230
 CALDWELL, IDAHO 83605
 (208) 453-6512

Completed by: JDJ
 Review/Check: KKJ

Project Name: Joras Residence
 SRE Project #: 2023-6515
 City and State: Donnelly, Idaho

Beam Calculations

| | Additional Drift | Roof | Floor | Deck | Wall | Total Load | Total Load |
|------------------|------------------|--------|-------|------|------|-------------|-------------|
| Trib | 0.0 | 10 | 0.5 | 0 | 3.33 | | |
| Dead Load | - | 170.0 | 6.0 | 0.0 | 40.0 | 216.0 plf | 1,736.0 plf |
| Live / Snow Load | 0 | 1500.0 | 20.0 | 0.0 | - | 1,520.0 plf | |

| Description: | 2.5 ft Opening | 3.0 ft Opening | | | | | |
|----------------|-----------------------|-----------------------|--|--|--|--|--|
| Header Callout | (2)2x6 DF-L No. 2 | (2)2x8 DF-L No. 2 | | | | | |
| Trimmers | (1) 2x6 DF-L No. 2 | (1) 2x6 DF-L No. 2 | | | | | |

| Wood Design | | | | | | | |
|-------------|---------|---------|--|--|--|--|--|
| Species | DF-L | DF-L | | | | | |
| Grade | No. 2 | No. 2 | | | | | |
| Width | 3.00 in | 3.00 in | | | | | |
| Depth | 5.50 in | 7.25 in | | | | | |

| Reaction | | | | | | | |
|-----------|-----------|-----------|--|--|--|--|--|
| Dead Load | 270 lbs | 324 lbs | | | | | |
| Live Load | 1,900 lbs | 2,280 lbs | | | | | |

| Load | | | | | | | |
|------|--------|--------|--|--|--|--|--|
| lu | 2.5 ft | 3.0 ft | | | | | |
| le | 5.2 ft | 6.2 ft | | | | | |

| Adjustment Factors | | | | | | | |
|--------------------|------|------|--|--|--|--|--|
| Cd | 1.15 | 1.15 | | | | | |
| CF | 1.3 | 1.2 | | | | | |

| Material Properties | | | | | | | |
|---------------------|---------------|---------------|--|--|--|--|--|
| Fb | 900 psi | 900 psi | | | | | |
| Fv | 180 psi | 180 psi | | | | | |
| E | 1,600,000 psi | 1,600,000 psi | | | | | |
| Emin | 580,000 psi | 580,000 psi | | | | | |

| Calculated Prop. | | | | | | | |
|------------------|-----------------------|-----------------------|--|--|--|--|--|
| A | 16.50 in ² | 21.75 in ² | | | | | |
| I | 41.59 in ⁴ | 95.27 in ⁴ | | | | | |
| S | 15.13 in ³ | 26.28 in ³ | | | | | |
| RB | 6.15 | 7.73 | | | | | |
| Emin' | 580,000 psi | 580,000 psi | | | | | |
| FbE | 18,429 psi | 11,650 psi | | | | | |
| Fb* | 1,346 psi | 1,242 psi | | | | | |
| CL | 1 | 1 | | | | | |

| Shear and Moment | | | | | | | |
|------------------|--------------|--------------|--|--|--|--|--|
| M | 16,275 lb-in | 23,435 lb-in | | | | | |
| V | 2,170 lbs | 2,604 lbs | | | | | |

| Stress | | | | | | | |
|-----------|-----------|-----------|--|--|--|--|--|
| fb | 1,076 psi | 892 psi | | | | | |
| Fb' | 1,340 psi | 1,235 psi | | | | | |
| fb/Fb' | 0.80 | 0.72 | | | | | |
| fv | 197 psi | 180 psi | | | | | |
| Fv' | 207 psi | 207 psi | | | | | |
| fv/Fv' | 0.95 | 0.87 | | | | | |
| Max Ratio | 0.95 | 0.87 | | | | | |
| | Pass | Pass | | | | | |

| Deflection | | | | | | | |
|------------|---------|---------|--|--|--|--|--|
| ΔTL | 0.02 in | 0.02 in | | | | | |
| | L/1,309 | L/1,734 | | | | | |
| ΔLL | 0.02 in | 0.02 in | | | | | |
| | L/1,494 | L/1,981 | | | | | |
| | Pass | Pass | | | | | |



524 CLEVELAND BLVD. #230
 CALDWELL, IDAHO 83605
 (208) 453-6512

Completed by: JDJ
 Review/Check: KKJ

Project Name: Joras Residence
 SRE Project #: 2023-6515
 City and State: Donnelly, Idaho

Beam Calculations

| | Additional Drift | Roof | Floor | Deck | Wall | Total Load | Total Load |
|------------------|------------------|------|-------|------|------|------------|------------|
| Trib | 0.0 | 0 | 8.25 | 0 | 3.33 | | |
| Dead Load | - | 0.0 | 99.0 | 0.0 | 40.0 | 139.0 plf | 469.0 plf |
| Live / Snow Load | 0 | 0.0 | 330.0 | 0.0 | - | 330.0 plf | |

| Description: | 2.5 ft Opening | 3.0 ft Opening | | | | | |
|----------------|-----------------------|-----------------------|--|--|--|--|--|
| Header Callout | (2)2x6 DF-L No. 2 | (2)2x6 DF-L No. 2 | | | | | |
| Trimmers | (1) 2x6 DF-L No. 2 | (1) 2x6 DF-L No. 2 | | | | | |

| Wood Design | | | | | | | |
|-------------|---------|---------|--|--|--|--|--|
| Species | DF-L | DF-L | | | | | |
| Grade | No. 2 | No. 2 | | | | | |
| Width | 3.00 in | 3.00 in | | | | | |
| Depth | 5.50 in | 5.50 in | | | | | |

| Reaction | | | | | | | |
|-----------|---------|---------|--|--|--|--|--|
| Dead Load | 174 lbs | 208 lbs | | | | | |
| Live Load | 413 lbs | 495 lbs | | | | | |

| Load | | | | | | | |
|------|--------|--------|--|--|--|--|--|
| lu | 2.5 ft | 3.0 ft | | | | | |
| le | 5.2 ft | 6.2 ft | | | | | |

| Adjustment Factors | | | | | | | |
|--------------------|------|------|--|--|--|--|--|
| Cd | 1.15 | 1.15 | | | | | |
| CF | 1.3 | 1.3 | | | | | |

| Material Properties | | | | | | | |
|---------------------|---------------|---------------|--|--|--|--|--|
| Fb | 900 psi | 900 psi | | | | | |
| Fv | 180 psi | 180 psi | | | | | |
| E | 1,600,000 psi | 1,600,000 psi | | | | | |
| Emin | 580,000 psi | 580,000 psi | | | | | |

| Calculated Prop. | | | | | | | |
|------------------|-----------------------|-----------------------|--|--|--|--|--|
| A | 16.50 in ² | 16.50 in ² | | | | | |
| I | 41.59 in ⁴ | 41.59 in ⁴ | | | | | |
| S | 15.13 in ³ | 15.13 in ³ | | | | | |
| RB | 6.15 | 6.73 | | | | | |
| Emin' | 580,000 psi | 580,000 psi | | | | | |
| FbE | 18,429 psi | 15,357 psi | | | | | |
| Fb* | 1,346 psi | 1,346 psi | | | | | |
| CL | 1 | 1 | | | | | |

| Shear and Moment | | | | | | | |
|------------------|-------------|-------------|--|--|--|--|--|
| M | 4,397 lb-in | 6,331 lb-in | | | | | |
| V | 586 lbs | 703 lbs | | | | | |

| Stress | | | | | | | |
|-----------|-----------|-----------|--|--|--|--|--|
| fb | 291 psi | 419 psi | | | | | |
| Fb' | 1,340 psi | 1,339 psi | | | | | |
| fb/Fb' | 0.22 | 0.31 | | | | | |
| fv | 53 psi | 64 psi | | | | | |
| Fv' | 207 psi | 207 psi | | | | | |
| fv/Fv' | 0.26 | 0.31 | | | | | |
| Max Ratio | 0.26 | 0.31 | | | | | |
| | Pass | Pass | | | | | |

| Deflection | | | | | | | |
|------------|---------|---------|--|--|--|--|--|
| ΔTL | 0.01 in | 0.01 in | | | | | |
| | L/4,844 | L/2,803 | | | | | |
| ΔLL | 0.00 in | 0.01 in | | | | | |
| | L/6,884 | L/3,984 | | | | | |
| | Pass | Pass | | | | | |



524 CLEVELAND BLVD. #230
CALDWELL, IDAHO 83605
(208) 453-6512

Completed by: JDJ
Review/Check: KKJ

Project Name: Joras Residence
SRE Project #: 2023-6515
City and State: Donnelly, Idaho

TALL WALL CALCULATIONS:

This spreadsheet is used for designing a stud wall according to the NDS.

Description:

| | 9' Tall Wall | King Stud (16' Max Opening) | 9' Trimmer | King Stud (6' Max Opening) | 9' Trimmer | 26.5' Wind Beam |
|--|----------------------|--------------------------------|----------------------|-------------------------------|----------------------|----------------------|
| Type: | 2x Lumber (2"-4") | 2x Lumber (2"-4") | 2x Lumber (2"-4") | 2x Lumber (2"-4") | 2x Lumber (2"-4") | Glulam |
| Species: | DF-L | DF-L | DF-L | DF-L | DF-L | DF/DF |
| Grade: | No. 2 | No. 2 | No. 2 | No. 2 | No. 2 | 24F - V4 |
| Nominal width, t = | (1) 2 | (2) 2 | (3) 2 | (1) 2 | (1) 2 | 5.5 |
| Actual width = | 1.50 in | 3.00 in | 4.50 in | 1.50 in | 1.50 in | 5.50 in |
| Nominal depth, d = | 6 | 6 | 6 | 6 | 6 | 12 |
| Actual depth = | 5.50 in | 5.50 in | 5.50 in | 5.50 in | 5.50 in | 16.00 in |
| Span, L = | 9.000 ft | 9.000 ft | 9.000 ft | 9.000 ft | 9.000 ft | 26.500 ft |
| w/o Plates | 8.750 ft | 8.750 ft | 8.750 ft | 8.750 ft | 8.750 ft | 26.500 ft |
| Stud spacing, s = | 16 in | 106 in | 16 in | 46 in | 16 in | 240 in |
| Lat. Pressure, w _{wind} = | 15.09 psf | 15.09 psf | 5.00 psf | 15.09 psf | 5.00 psf | 15.09 psf |
| Axial load, P = | 5030 lbs | 50 lbs | 14164 lbs | 50 lbs | 4811 lbs | 32070 lbs |
| Eccentricity, e = | 0 in | 0 in | 0 in | 0 in | 0 in | 0 in |
| K _{c,E} = | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| c = | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| w = | 20.1 plf | 133.6 plf | 6.7 plf | 58.2 plf | 6.7 plf | 301.8 plf |
| F _b | 900 psi | 900 psi | 900 psi | 900 psi | 900 psi | 900 psi |
| F _v | 180 psi | 180 psi | 180 psi | 180 psi | 180 psi | 180 psi |
| F _{c-prll} | 1,350 psi | 1,350 psi | 1,350 psi | 1,350 psi | 1,350 psi | 1,350 psi |
| F _{c-perp} | 625 psi | 625 psi | 625 psi | 625 psi | 625 psi | 625 psi |
| C _d | 1.60 | 1.60 | 1.15 | 1.60 | 1.15 | 1.60 |
| C _{F,Fb} | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.00 |
| C _{F,Fcprll} | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.00 |
| C _r | 1.15 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| C _p | 0.47 | 0.47 | 0.60 | 0.47 | 0.60 | 0.53 |
| C _H | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 6.00 |
| C _b | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.00 |
| E | 1,600,000 psi | 1,600,000 psi | 1,600,000 psi | 1,600,000 psi | 1,600,000 psi | 1,850,000 psi |
| E _{min} | 580,000 psi | 580,000 psi | 580,000 psi | 580,000 psi | 580,000 psi | 580,000 psi |
| Allowable Stress: | | | | | | |
| F' _b = F _b C _d C _F C _r | 2153 psi | 1872 psi | 1346 psi | 1872 psi | 1346 psi | 1440 psi |
| F' _v = F _v C _d C _H | 288 psi | 288 psi | 207 psi | 288 psi | 207 psi | 1728 psi |
| F' _c = F _c C _d C _F | 2376 psi | 2376 psi | 1708 psi | 2376 psi | 1708 psi | 2160 psi |
| F' _{cE} = (K _{cE} E')/(l/d)2 | 1317 psi | 1317 psi | 1317 psi | 1317 psi | 1317 psi | 1405 psi |
| F' _c = F _c C _d C _F C _p | 1118 psi | 1118 psi | 1017 psi | 1118 psi | 1017 psi | 1146 psi |
| F' _{c-perp} = F _{c-perp} C _b | 668 psi | 668 psi | 668 psi | 668 psi | 668 psi | 625 psi |
| E' = E | 1600000 psi | 1600000 psi | 1600000 psi | 1600000 psi | 1600000 psi | 1850000 psi |
| F _{bE} = | 2712 psi | 10847 psi | 24405 psi | 2712 psi | 2712 psi | 4138 psi |
| Slenderness Ratio: | < 50 OK | < 50 OK | < 50 OK | < 50 OK | < 50 OK | < 50 OK |
| R _b = | 16 | 8 | 5 | 16 | 16 | 13 |
| Bending: | < F' _b OK | < F' _b OK | < F' _b OK | < F' _b OK | < F' _b OK | < F' _b OK |
| M = w L ² /8 + P e/12 = | 193 ft-lbs | 1279 ft-lbs | 64 ft-lbs | 557 ft-lbs | 64 ft-lbs | 26490 ft-lbs |
| f _b = M/S = | 306 psi | 1014 psi | 34 psi | 883 psi | 101 psi | 1355 psi |
| S = | 8 in ³ | 15 in ³ | 23 in ³ | 8 in ³ | 8 in ³ | 235 in ³ |
| Shear: | < F' _v OK | < F' _v OK | < F' _v OK | < F' _v OK | < F' _v OK | < F' _v OK |
| V = w L/2 = | 88 lbs | 584 lbs | 29 lbs | 254 lbs | 29 lbs | 200 lbs |
| f _v = 1.5 V/A = | 16 psi | 53 psi | 2 psi | 46 psi | 5 psi | 3 psi |
| A = | 8 in ² | 17 in ² | 25 in ² | 8 in ² | 8 in ² | 88 in ² |
| Compression: | < F' _c OK | < F' _c OK | < F' _c OK | < F' _c OK | < F' _c OK | < F' _c OK |
| f _c = P/A = | 610 psi | 3 psi | 572 psi | 6 psi | 583 psi | 364 psi |
| Compression (perp.): | < F' _c OK | < F' _c OK | < F' _c OK | < F' _c OK | < F' _c OK | < F' _c OK |
| f _{c-perp} = P/A = | 610 psi | 3 psi | 572 psi | 6 psi | 583 psi | 364 psi |
| Combined: | < 1.0 OK | | | | | |
| ((f _c /F' _c)2 + (f _b /F' _b (1-(f _c /F' _c E))) = | 0.56 | | | | | |
| Deflection: | > 180 OK | > 180 OK | > 180 OK | > 180 OK | > 180 OK | > 180 OK |
| D = 22.5 w L ⁴ /E' I = | 0.08 in | 0.26 in | 0.01 in | 0.23 in | 0.03 in | 0.96 in |
| I = | 21 in ⁴ | 42 in ⁴ | 62 in ⁴ | 21 in ⁴ | 21 in ⁴ | 1877 in ⁴ |
| SPAN / | 1317 | 397 | 11921 | 456 | 3974 | 330 |



524 CLEVELAND BLVD. #230
CALDWELL, IDAHO 83605
(208) 453-6512

Completed by: JDJ
Review/Check: KKJ

Project Name: Joras Residence
SRE Project #: 2023-6515
City and State: Donnelly, Idaho

TALL WALL CALCULATIONS:

This spreadsheet is used for designing a stud wall according to the NDS.

| Description: | King Stud (26.5' Max Opening) | 20.5' Tall Wall | 20.5' Trimmer | King Stud (6' Max Opening) | King Stud (3' Max Opening) | King Stud (3' Max Opening) |
|--|----------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| | Type: | 2x Lumber (2"-4") | 2x Lumber (2"-4") | 2x Lumber (2"-4") | 2x Lumber (2"-4") | 2x Lumber (2"-4") |
| Species: | DF-L | DF-L | DF-L | DF-L | DF-L | DF-L |
| Grade: | No. 2 | No. 2 | No. 2 | No. 2 | No. 2 | No. 2 |
| Nominal width, t = | (3) 2 | (2) 2 | (1) 2 | (6) 2 | (2) 2 | (3) 2 |
| Actual width = | 4.50 in | 3.00 in | 1.50 in | 9.00 in | 3.00 in | 4.50 in |
| Nominal depth, d = | 6 | 6 | 6 | 6 | 6 | 6 |
| Actual depth = | 5.50 in | 5.50 in | 5.50 in | 5.50 in | 5.50 in | 5.50 in |
| Span, L = | 11.000 ft | 20.500 ft | 20.500 ft | 20.500 ft | 17.250 ft | 19.000 ft |
| w/o Plates | 10.750 ft | 20.250 ft | 20.250 ft | 20.250 ft | 17.000 ft | 18.750 ft |
| Stud spacing, s = | 169 in | 16 in | 16 in | 46 in | 28 in | 28 in |
| Lat. Pressure, w _{wind} = | 15.09 psf | 15.09 psf | 5.00 psf | 15.09 psf | 15.09 psf | 15.09 psf |
| Axial load, P = | 50 lbs | 668 lbs | 1278 lbs | 50 lbs | 50 lbs | 50 lbs |
| Eccentricity, e = | 0 in | 0 in | 0 in | 0 in | 0 in | 0 in |
| K _{CE} = | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| c = | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| w = | 212.8 plf | 20.1 plf | 6.7 plf | 58.2 plf | 35.5 plf | 35.5 plf |
| F _b | 900 psi | 900 psi | 900 psi | 900 psi | 900 psi | 900 psi |
| F _v | 180 psi | 180 psi | 180 psi | 180 psi | 180 psi | 180 psi |
| F _{c-prll} | 1,350 psi | 1,350 psi | 1,350 psi | 1,350 psi | 1,350 psi | 1,350 psi |
| F _{c-perp} | 625 psi | 625 psi | 625 psi | 625 psi | 625 psi | 625 psi |
| C _d | 1.60 | 1.60 | 1.15 | 1.60 | 1.60 | 1.60 |
| C _{F,Fb} | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 |
| C _{F,Fcprll} | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| C _r | 1.00 | 1.15 | 1.00 | 1.00 | 1.00 | 1.00 |
| C _p | 0.33 | 0.10 | 0.14 | 0.10 | 0.14 | 0.12 |
| C _H | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 6.00 |
| C _b | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| E | 1,600,000 psi | 1,600,000 psi | 1,600,000 psi | 1,600,000 psi | 1,600,000 psi | 1,600,000 psi |
| E _{min} | 580,000 psi | 580,000 psi | 580,000 psi | 580,000 psi | 580,000 psi | 580,000 psi |
| Allowable Stress: | | | | | | |
| F' _b = F _b C _d C _F C _r | 1872 psi | 2153 psi | 1346 psi | 1872 psi | 1872 psi | 1872 psi |
| F' _v = F _v C _d C _H | 288 psi | 288 psi | 207 psi | 288 psi | 288 psi | 1728 psi |
| F' _c = F _c C _d C _F | 2376 psi | 2376 psi | 1708 psi | 2376 psi | 2376 psi | 2376 psi |
| F' _{CE} = (K _{CE} E')/(l/d)2 | 873 psi | 246 psi | 246 psi | 246 psi | 349 psi | 287 psi |
| F' _c = F _c C _d C _F C _p | 793 psi | 240 psi | 238 psi | 240 psi | 338 psi | 279 psi |
| F' _{c-perp} = F _{c-perp} C _b | 668 psi | 668 psi | 668 psi | 668 psi | 668 psi | 668 psi |
| E' = E | 1600000 psi | 1600000 psi | 1600000 psi | 1600000 psi | 1600000 psi | 1600000 psi |
| F _{bE} | 19865 psi | 4687 psi | 1172 psi | 42182 psi | 5583 psi | 11389 psi |
| Slenderness Ratio: | < 50 OK | < 50 OK | < 50 OK | < 50 OK | < 50 OK | < 50 OK |
| R _b | 6 | 12 | 24 | 4 | 11 | 8 |
| Bending: | < F'_b OK | < F'_b OK | < F'_b OK | < F'_b OK | < F'_b OK | < F'_b OK |
| M = w L ² /8 + P e/12 | 3074 ft-lbs | 1031 ft-lbs | 342 ft-lbs | 2981 ft-lbs | 1283 ft-lbs | 1561 ft-lbs |
| f _b = M/S | 1626 psi | 818 psi | 542 psi | 788 psi | 1018 psi | 826 psi |
| S = | 23 in ³ | 15 in ³ | 8 in ³ | 45 in ³ | 15 in ³ | 23 in ³ |
| Shear: | < F'_v OK | < F'_v OK | < F'_v OK | < F'_v OK | < F'_v OK | < F'_v OK |
| V = w L/2 | 1144 lbs | 204 lbs | 68 lbs | 589 lbs | 302 lbs | 141 lbs |
| f _v = 1.5 V/A | 69 psi | 19 psi | 12 psi | 18 psi | 27 psi | 9 psi |
| A = | 25 in ² | 17 in ² | 8 in ² | 50 in ² | 17 in ² | 25 in ² |
| Compression: | < F'_c OK | < F'_c OK | < F'_c OK | < F'_c OK | < F'_c OK | < F'_c OK |
| f _c = P/A | 2 psi | 40 psi | 155 psi | 1 psi | 3 psi | 2 psi |
| Compression (perp.): | < F'_c OK | < F'_c OK | < F'_c OK | < F'_c OK | < F'_c OK | < F'_c OK |
| f _{c-perp} = P/A | 2 psi | 40 psi | 155 psi | 1 psi | 3 psi | 2 psi |
| Combined: | < 1.0 OK | < 1.0 OK | < 1.0 OK | < 1.0 OK | < 1.0 OK | < 1.0 OK |
| (f _c /F' _c)2 + (f _b /[F' _b (1-(f _c /F' _c E)]) = | | 0.48 | | | | |
| Deflection: | ≥ 180 OK | ≥ 180 OK | ≥ 180 OK | ≥ 180 OK | ≥ 180 OK | ≥ 180 OK |
| D = 22.5 w L ⁴ /E' I = | 0.64 in | 1.14 in | 0.76 in | 1.10 in | 1.00 in | 0.99 in |
| I = | 62 in ⁴ | 42 in ⁴ | 21 in ⁴ | 125 in ⁴ | 42 in ⁴ | 62 in ⁴ |
| SPAN / | 201 | 212 | 321 | 221 | 203 | 227 |



524 CLEVELAND BLVD. #230
 CALDWELL, IDAHO 83605
 (208) 453-6512

Completed by: JDJ
 Review/Check: KKJ

Project Name: Joras Residence
 SRE Project #: 2023-6515
 City and State: Donnelly, Idaho

Individual Footing Design

Program: Continuous Footing

Soil Bearing Pressure: 1500psf

| <i>Roof</i> | | | |
|-------------|------------|-----------|----------|
| Roof Dead | (17psf) | (3.5ft) | = 60plf |
| Snow Live | (150psf) | (3.5ft) | = 525plf |

| <i>Upper Floor</i> | | | |
|--------------------|-----------|-----------|----------|
| Floor Dead | (12psf) | (8.0ft) | = 96plf |
| Floor Live | (40psf) | (8.0ft) | = 320plf |

| <i>Main Floor</i> | | | |
|-------------------|-----------|-----------|---------|
| Floor Dead | (12psf) | (1.0ft) | = 12plf |
| Floor Live | (40psf) | (1.0ft) | = 40plf |

| <i>Deck Floor</i> | | | |
|-------------------|------------|-----------|-----------|
| Floor Dead | (12psf) | (7.4ft) | = 89plf |
| Snow Live | (150psf) | (7.4ft) | = 1106plf |

| <i>Misc</i> | | | |
|-------------|------------|-------------------|----------|
| Wall Load: | (12psf) | (29.0ft) | = 347plf |
| Conc Stem: | (145pcf) | (2 x .5ft) | = 145plf |
| Misc Load: | (.0ft) | (.0ft) (.0ft) | = plf |

2380plf

| | | | | |
|--------------------|------------|-----------|--------------|-----------|
| Use Footing Width: | 24 | x | 8 | in |
| W/ | (2) | #4 | Cont. | |



524 CLEVELAND BLVD. #230
 CALDWELL, IDAHO 83605
 (208) 453-6512

Completed by: JDJ
 Review/Check: KKJ

Project Name: Joras Residence
 SRE Project #: 2023-6515
 City and State: Donnelly, Idaho

Individual Footing Design

Program: Continuous Footing

Soil Bearing Pressure: 1500psf

| <i>Roof</i> | | | |
|-------------|------------|-----------|----------|
| Roof Dead | (17psf) | (5.0ft) | = 85plf |
| Snow Live | (150psf) | (5.0ft) | = 750plf |

| <i>Main Floor</i> | | | |
|-------------------|-----------|-----------|----------|
| Floor Dead | (12psf) | (5.1ft) | = 61plf |
| Floor Live | (40psf) | (5.1ft) | = 203plf |

| <i>Misc</i> | | | |
|-------------|------------|-------------------|----------|
| Wall Load: | (12psf) | (19.0ft) | = 228plf |
| Conc Stem: | (145pcf) | (2 x .5ft) | = 145plf |
| Misc Load: | (.0ft) | (.0ft) (.0ft) | = plf |

1269plf

| | | | | |
|--------------------|------------|-----------|--------------|-----------|
| Use Footing Width: | 12 | x | 8 | in |
| w/ | (2) | #4 | Cont. | |



524 CLEVELAND BLVD. #230
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 (208) 453-6512

Completed by: JDJ
 Review/Check: KKJ

Project Name: Joras Residence
 SRE Project #: 2023-6515
 City and State: Donnelly, Idaho

Individual Footing Design

Program: Continuous Footing

Soil Bearing Pressure: 1500psf

| <i>Roof</i> | | | |
|-------------|------------|-----------|----------|
| Roof Dead | (17psf) | (6.0ft) | = 102plf |
| Snow Live | (150psf) | (6.0ft) | = 900plf |

| <i>Main Floor</i> | | | |
|-------------------|-----------|-----------|----------|
| Floor Dead | (12psf) | (4.8ft) | = 58plf |
| Floor Live | (40psf) | (4.8ft) | = 192plf |

| <i>Misc</i> | | | |
|-------------|------------|-------------------|----------|
| Wall Load: | (12psf) | (19.0ft) | = 228plf |
| Conc Stem: | (145pcf) | (2 x .5ft) | = 145plf |
| Misc Load: | (.0ft) | (.0ft) (.0ft) | = plf |

1432plf

| | | | | |
|--------------------|------------|----------|-----------|--------------|
| Use Footing Width: | 16 | x | 8 | in |
| w/ | (2) | | #4 | Cont. |



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 SRE Project #: 2023-6515
 City and State: Donnelly, Idaho

Individual Footing Design

Program: Continuous Footing

Soil Bearing Pressure: 1500psf

| <i>Roof</i> | | | |
|-------------|------------|------------|-----------|
| Roof Dead | (17psf) | (10.0ft) | = 170plf |
| Snow Live | (150psf) | (10.0ft) | = 1500plf |

| <i>Upper Floor</i> | | | |
|--------------------|-----------|-----------|---------|
| Floor Dead | (12psf) | (1.0ft) | = 12plf |
| Floor Live | (40psf) | (1.0ft) | = 40plf |

| <i>Misc</i> | | | |
|-------------|------------|-------------------|----------|
| Wall Load: | (12psf) | (19.0ft) | = 228plf |
| Conc Stem: | (145pcf) | (2 x .5ft) | = 145plf |
| Misc Load: | (.0ft) | (.0ft) (.0ft) | = plf |

2055plf

| | | | | |
|--------------------|-----------|------------|-----------|--------------|
| Use Footing Width: | 18 | x | 8 | in |
| w/ | | (2) | #4 | Cont. |



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Completed by: JDJ
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Project Name: Joras Residence
 SRE Project #: 2023-6515
 City and State: Donnelly, Idaho

Individual Footing Design

Program: Continuous Footing

Soil Bearing Pressure: 1500psf

| <i>Roof</i> | | | |
|-------------|------------|------------|-----------|
| Roof Dead | (17psf) | (14.1ft) | = 240plf |
| Snow Live | (150psf) | (14.1ft) | = 2115plf |

| <i>Upper Floor</i> | | | |
|--------------------|-----------|-----------|---------|
| Floor Dead | (12psf) | (2.0ft) | = 24plf |
| Floor Live | (40psf) | (2.0ft) | = 80plf |

| <i>Main Floor</i> | | | |
|-------------------|-----------|-----------|----------|
| Floor Dead | (12psf) | (3.8ft) | = 45plf |
| Floor Live | (40psf) | (3.8ft) | = 150plf |

| <i>Misc</i> | | | |
|-------------|------------|-------------------|----------|
| Wall Load: | (12psf) | (19.0ft) | = 228plf |
| Conc Stem: | (145pcf) | (2 x .5ft) | = 145plf |
| Misc Load: | (.0ft) | (.0ft) (.0ft) | = plf |

2796plf

| | | | | |
|--------------------|------------|-----------|--------------|-----------|
| Use Footing Width: | 24 | x | 8 | in |
| w/ | (2) | #4 | Cont. | |



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 SRE Project #: 2023-6515
 City and State: Donnelly, Idaho

Individual Footing Design

Program: Continuous Footing

Soil Bearing Pressure: 1500psf

| <i>Roof</i> | | | |
|-------------|------------|------------|-----------|
| Roof Dead | (17psf) | (10.4ft) | = 176plf |
| Snow Live | (150psf) | (10.4ft) | = 1556plf |

| <i>Upper Floor</i> | | | |
|--------------------|-----------|-----------|---------|
| Floor Dead | (12psf) | (1.0ft) | = 12plf |
| Floor Live | (40psf) | (1.0ft) | = 40plf |

| <i>Main Floor</i> | | | |
|-------------------|-----------|-----------|----------|
| Floor Dead | (12psf) | (3.8ft) | = 45plf |
| Floor Live | (40psf) | (3.8ft) | = 150plf |

| <i>Misc</i> | | | |
|-------------|------------|-------------------|----------|
| Wall Load: | (12psf) | (19.0ft) | = 228plf |
| Conc Stem: | (145pcf) | (2 x .5ft) | = 145plf |
| Misc Load: | (.0ft) | (.0ft) (.0ft) | = plf |

2162plf

| | | | | |
|--------------------|------------|-----------|--------------|-----------|
| Use Footing Width: | 24 | x | 8 | in |
| w/ | (2) | #4 | Cont. | |



524 CLEVELAND BLVD. #230
 CALDWELL, IDAHO 83605
 (208) 453-6512

Completed by: JDJ
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Project Name: Joras Residence
 SRE Project #: 2023-6515
 City and State: Donnelly, Idaho

Pad Footing Design Capacities

| Soil Bearing (1500 psf) | | | | | Min. Column Size | | |
|-------------------------|---|----|----------|-----------|------------------|----|---------|
| Dimensions (Inches) | | | Capacity | # of Bars | | | |
| 84 | x | 84 | x | 14 | 64,300 lbs | 10 | 8. sq. |
| 72 | x | 72 | x | 12 | 47,500 lbs | 8 | 3.5 sq. |
| 66 | x | 66 | x | 12 | 39,750 lbs | 8 | 3.5 sq. |
| 60 | x | 60 | x | 10 | 33,450 lbs | 6 | 3.5 sq. |
| 54 | x | 54 | x | 10 | 27,000 lbs | 5 | 3.5 sq. |
| 48 | x | 48 | x | 8 | 21,500 lbs | 4 | 3.5 sq. |
| 42 | x | 42 | x | 8 | 16,500 lbs | 4 | 3.5 sq. |
| 36 | x | 36 | x | 8 | 12,000 lbs | 4 | 3.5 sq. |
| 30 | x | 30 | x | 8 | 8,350 lbs | 3 | 3.5 sq. |
| 24 | x | 24 | x | 8 | 5,300 lbs | 2 | 3.5 sq. |
| 18 | x | 18 | x | 8 | 2,900 lbs | 2 | 3.5 sq. |

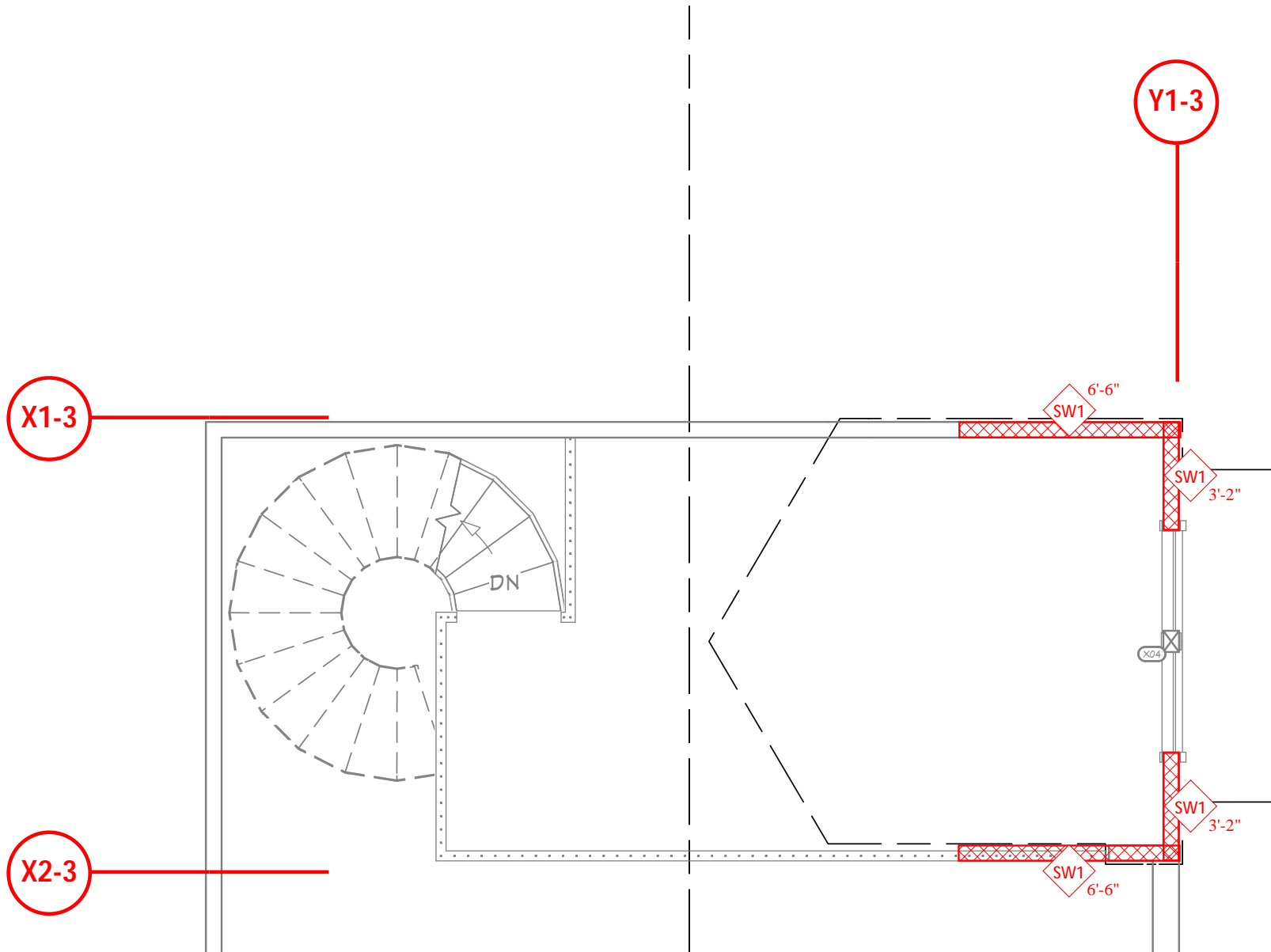
Bars to be 3 1/2" from bottom of pad. Evenly space in both directions.



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City and State: Donnelly, Idaho

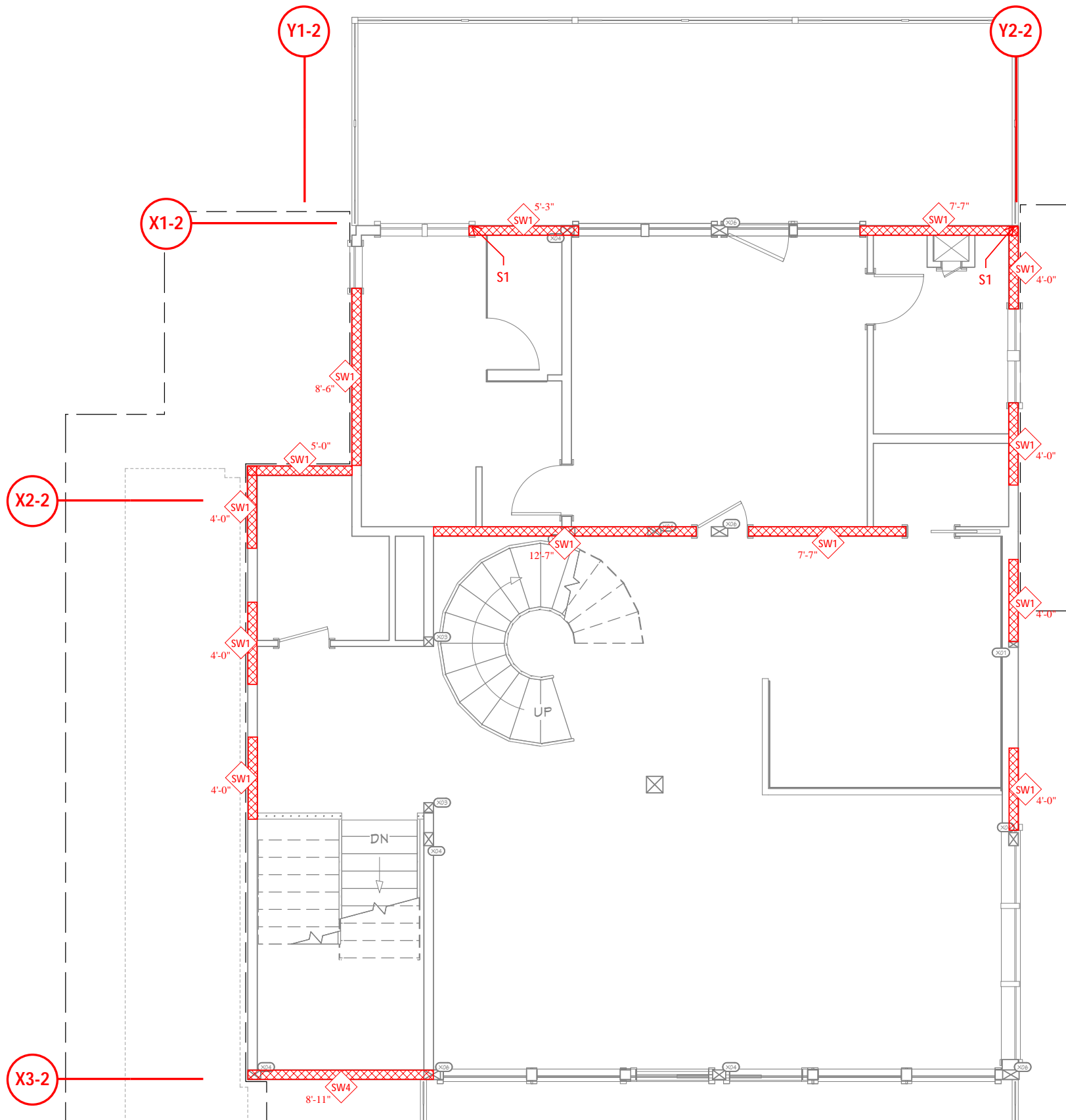


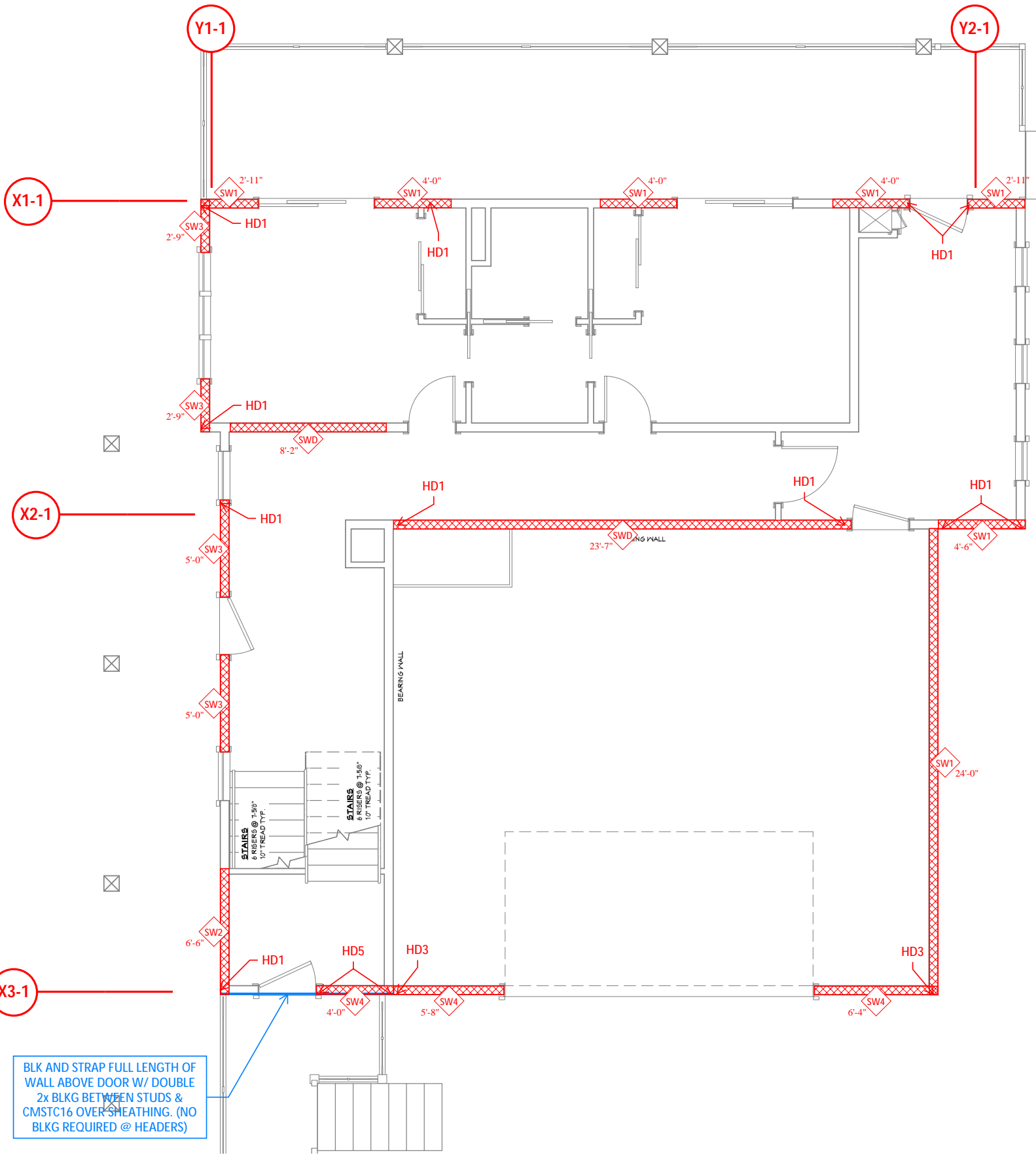


524 CLEVELAND BLVD. #230
CALDWELL, IDAHO 83605
(208) 453-6512

Completed by: JDJ
Review/Check: KKJ

Project Name: Joras Residence
SRE Project #: 2023-6515
City and State: Donnelly, Idaho



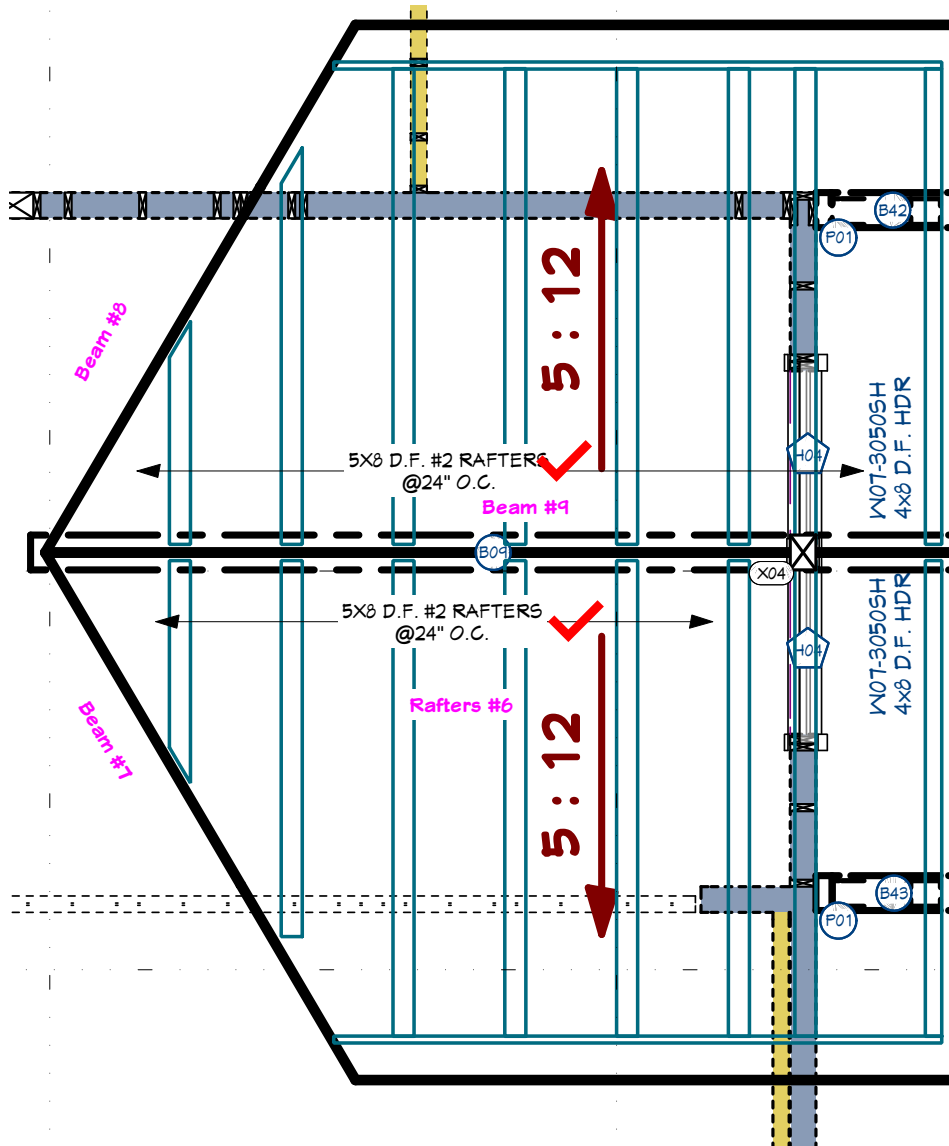




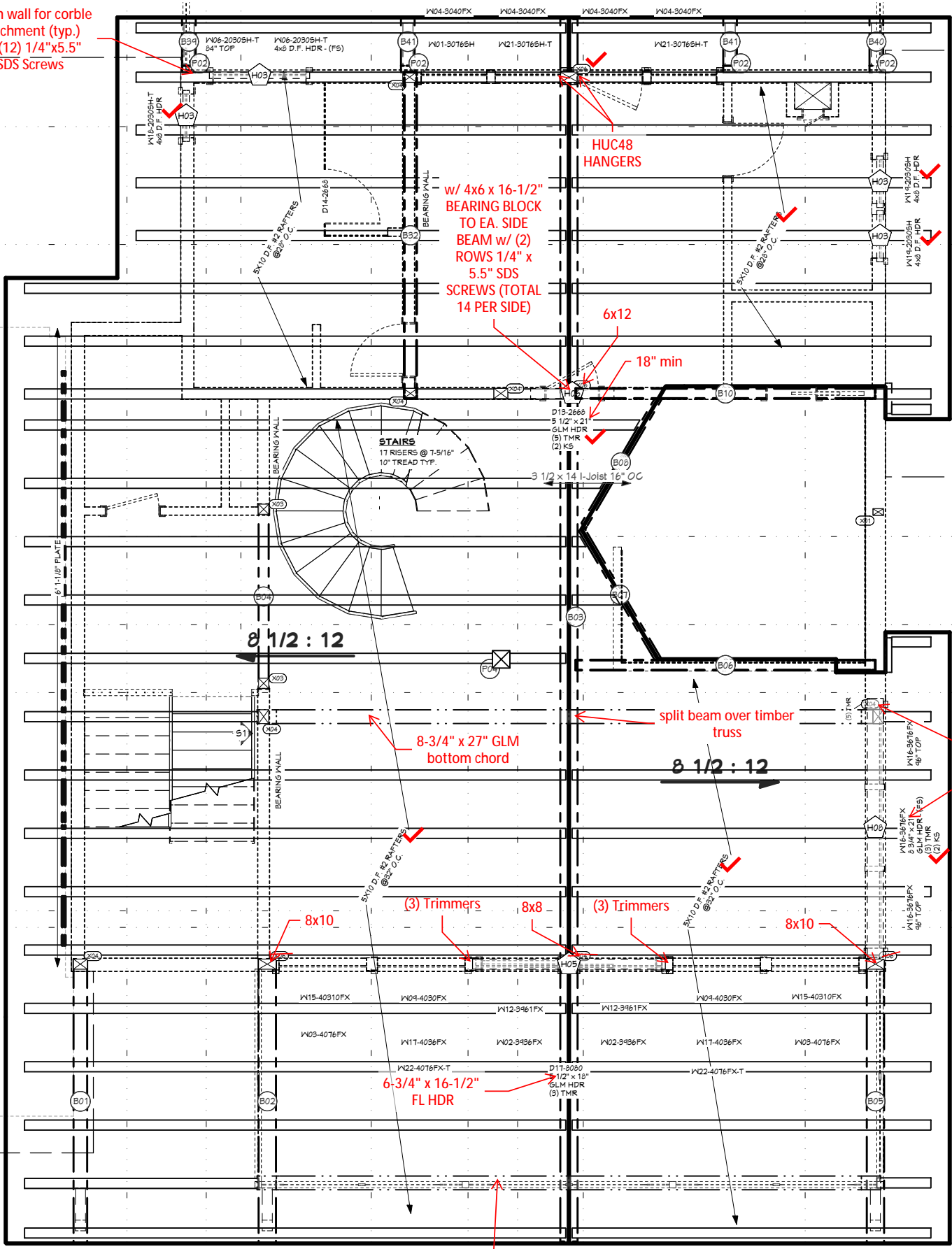
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4x6 in wall for corble attachment (typ.) w/ (12) 1/4"x5.5" SDS Screws



w/ 4x6 x 16-1/2" BEARING BLOCK TO EA. SIDE BEAM w/ (2) ROWS 1/4" x 5.5" SDS SCREWS (TOTAL 14 PER SIDE)

HUC48 HANGERS

6x12

18" min

STAIRS
17 RISERS @ 1-5/16"
10" TREAD TYP.

3 1/2" x 14" Joist 16" OC

8 1/2 : 12

8-3/4" x 27" GLM bottom chord

split beam over timber truss

8 1/2 : 12

cont. bearing to foundation (typ.)

12" min.

8x10

(3) Trimmers

8x8

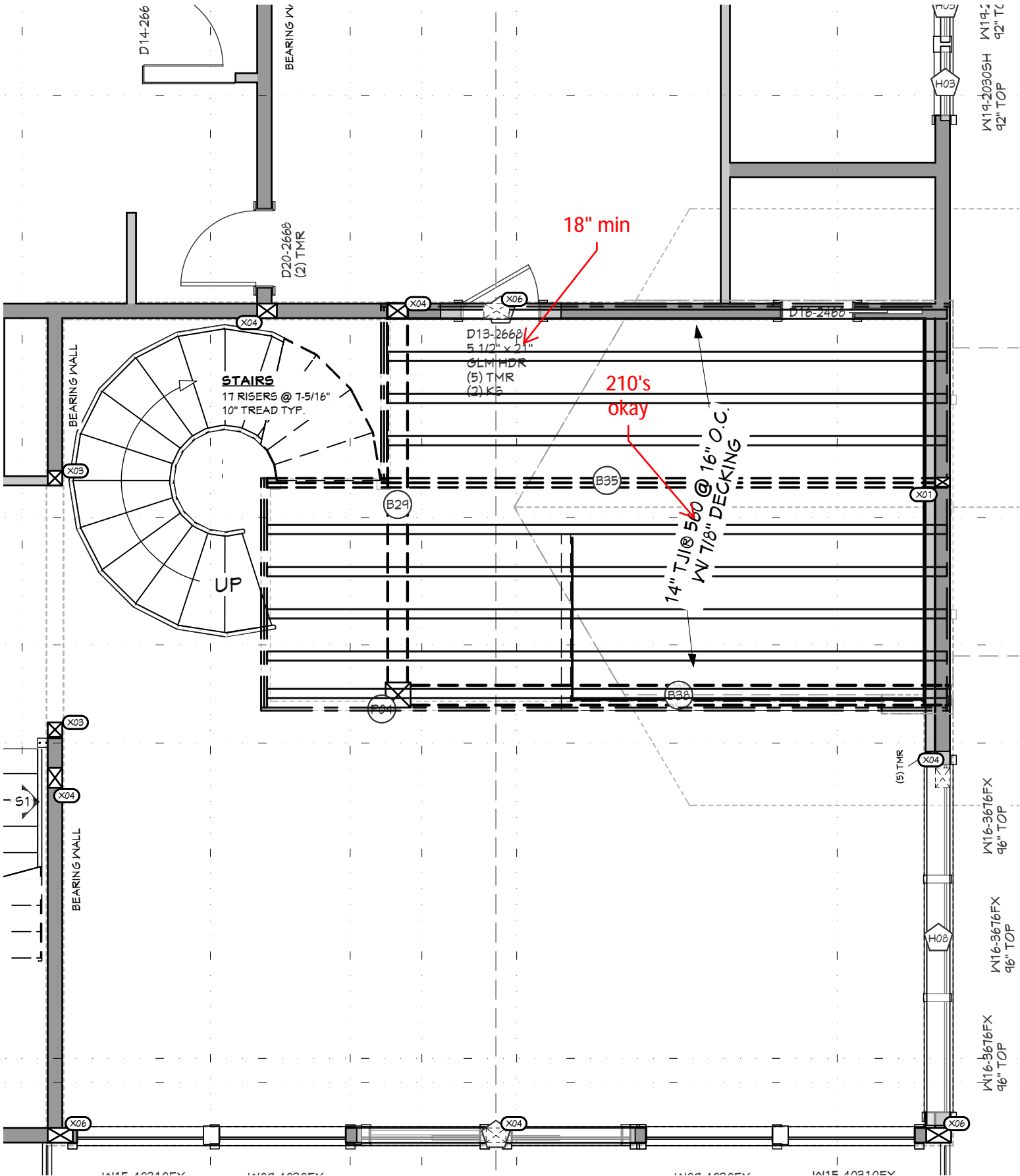
(3) Trimmers

8x10

6-3/4" x 16-1/2" FL HDR

8-3/4" x 21" GLM bottom chord

1/29/24



D14-266

BEARING W

D20-2666
(2) TMR

18" min

D13-2668
5 1/2" x 3 1/4"
GLM HDR
(5) TMR
(2) K5

210's
okay

14" TJI @ 560 @ 16" O.C.
w/ 7/8" DECKING

STAIRS
17 RISERS @ 7-5/16"
10" TREAD TYP.

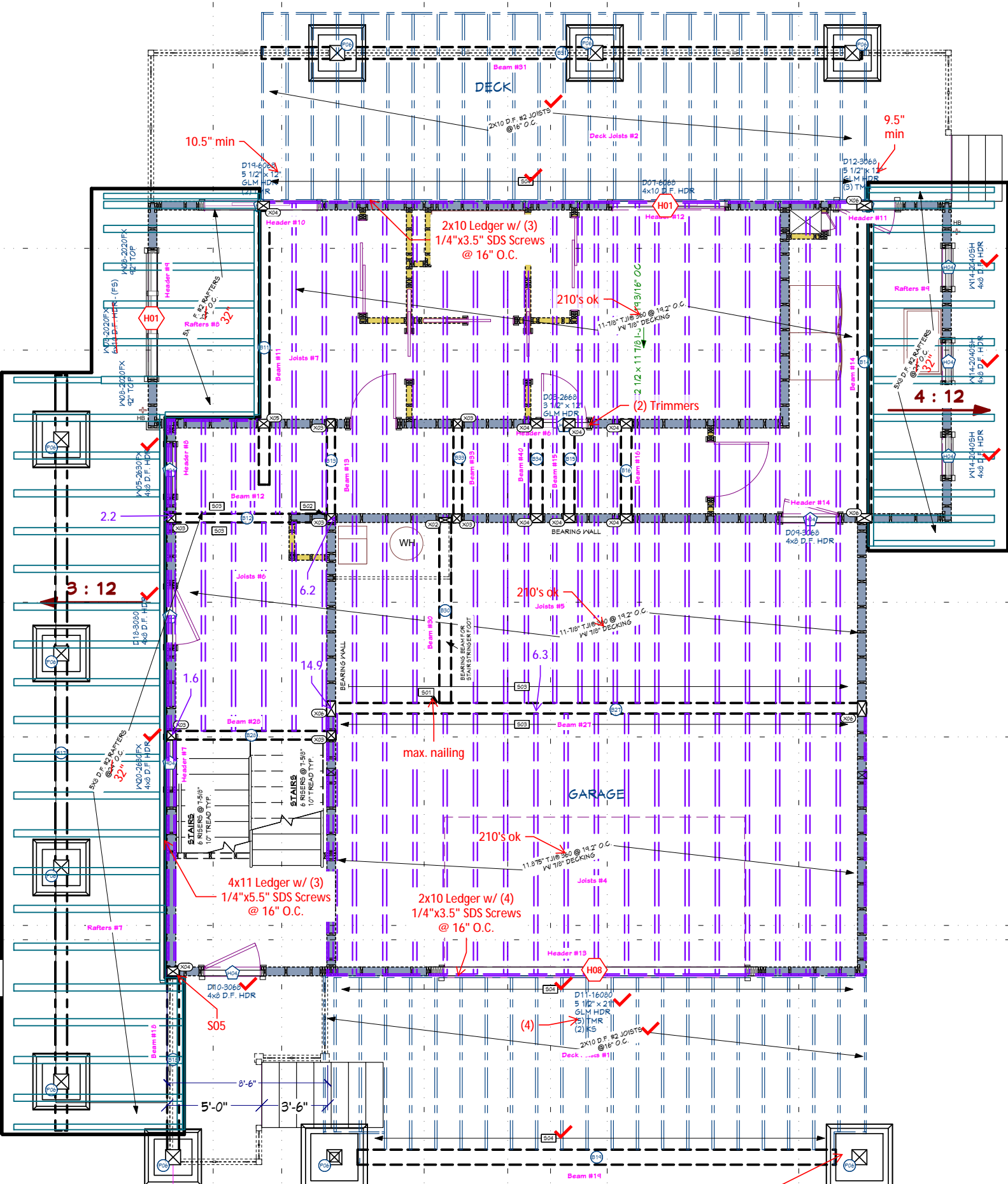
UP

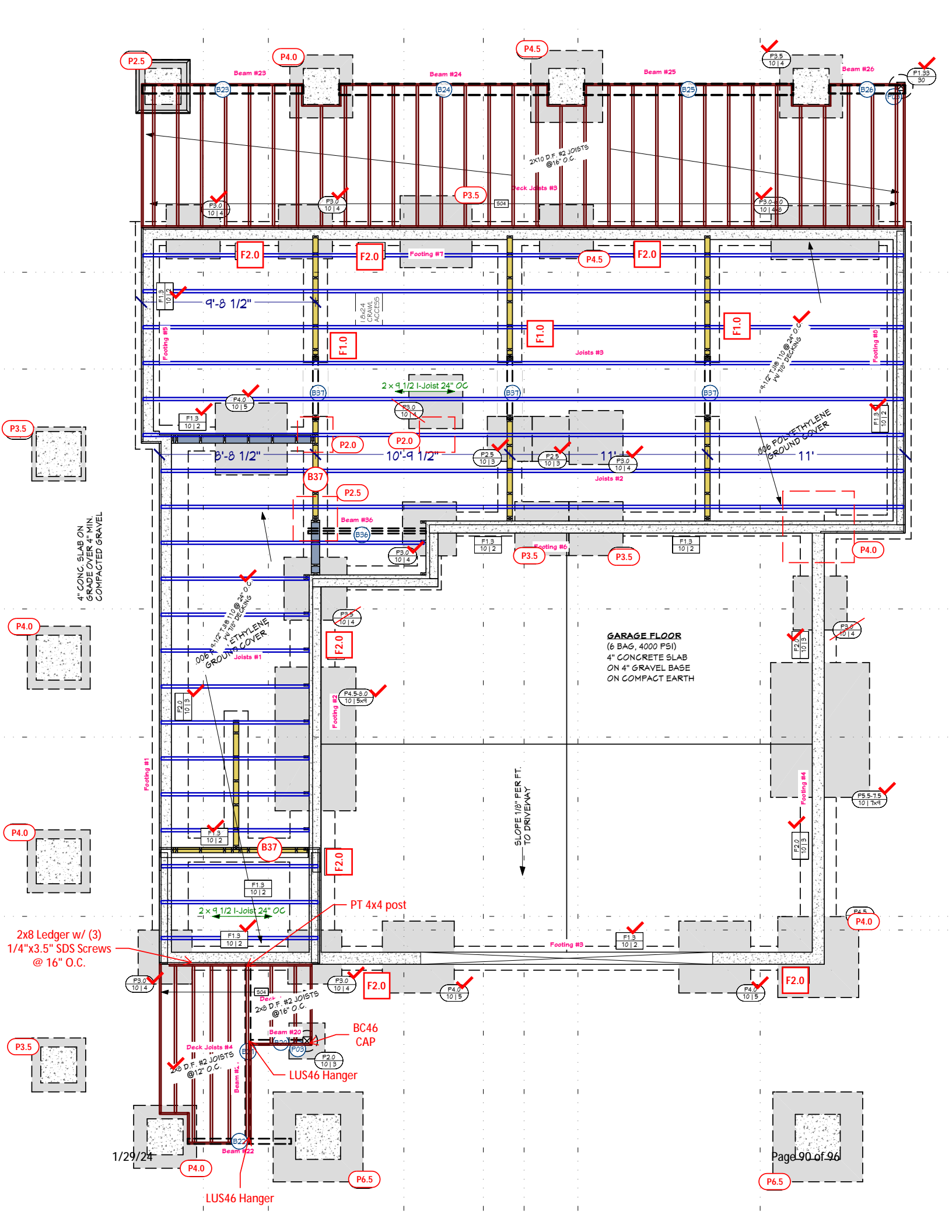
W19-20305H 92" TOP

W16-36T6FX 96" TOP

W16-36T6FX 96" TOP

W16-36T6FX 96" TOP





W110-3040FX 202 1/8" TOP W111-3065FX 231 7/16" TOP W111-3065FX 231 7/16" TOP W110-3040FX 202 1/8" TOP

(3) KING STUDS

W04-3040FX 150" TOP W04-3040FX 150" TOP W04-3040FX 150" TOP W04-3040FX 150" TOP

W06-2030SH-T 84" TOP W06-2030SH-T 84" TOP
4x8 D.F. HDR - (F5)

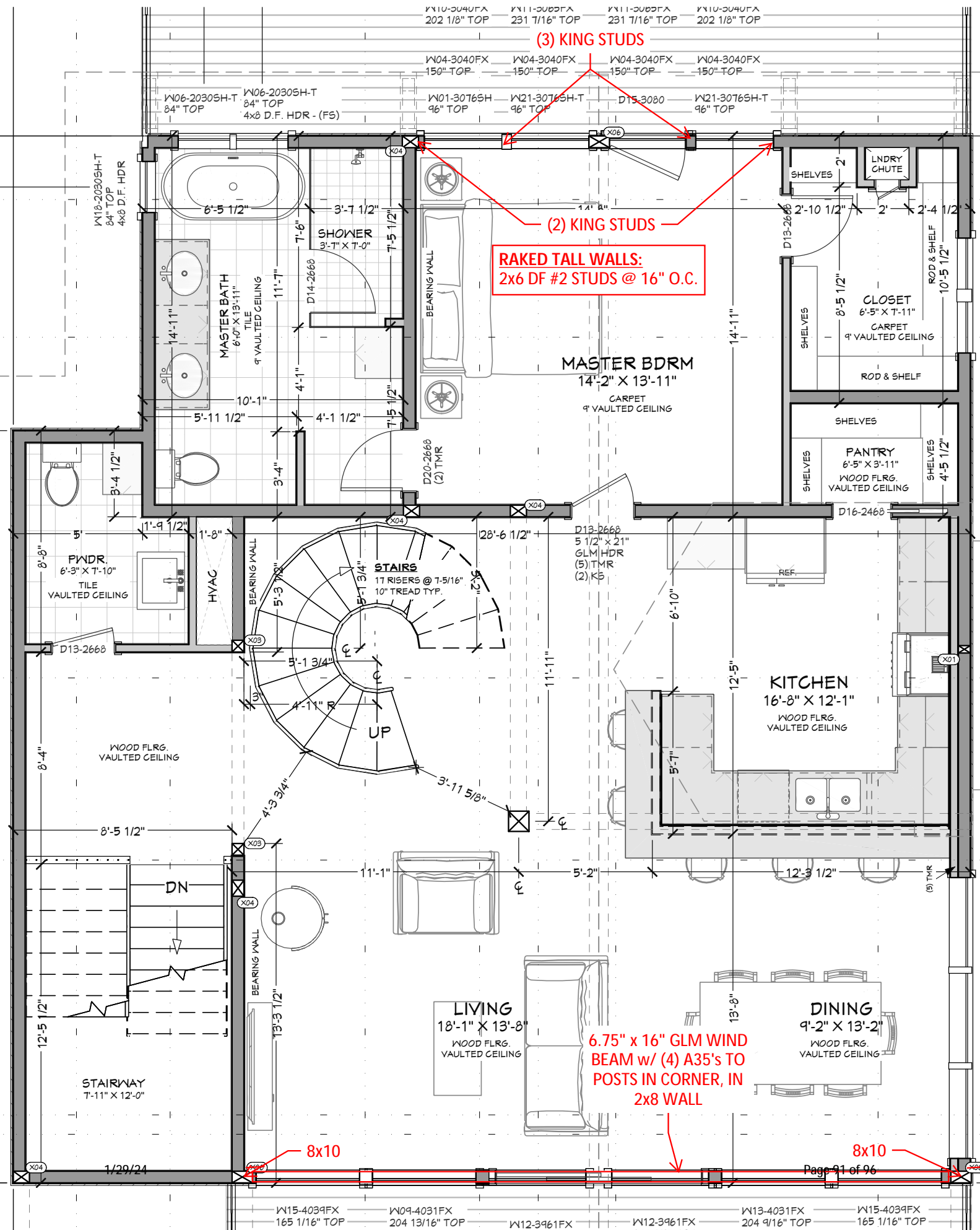
W01-3076SH 96" TOP W21-3076SH-T 96" TOP D15-3080 W21-3076SH-T 96" TOP

W18-2030SH-T 84" TOP
4x8 D.F. HDR

(2) KING STUDS

**RAKED TALL WALLS:
2x6 DF #2 STUDS @ 16" O.C.**

**MASTER BDRM
14'-2" X 13'-11"**
CARPET
9" VAULTED CEILING



**MASTER BATH
6'-0" X 13'-11"**
TILE
9" VAULTED CEILING

**SHOWER
3'-7" X 7'-0"**

SHELVES 2
LNDRY CHUTE
2'-10 1/2" 2' 2'-4 1/2"

SHELVES 8'-5 1/2"
**CLOSET
6'-5" X 7'-11"**
CARPET
9" VAULTED CEILING
ROD & SHELF
10'-5 1/2"

SHELVES
**PANTRY
6'-5" X 3'-11"**
WOOD FLRG.
VAULTED CEILING
SHELVES 4'-5 1/2"

**STAIRS
17 RISERS @ 7-5/16"
10" TREAD TYP.**

**KITCHEN
16'-8" X 12'-1"**
WOOD FLRG.
VAULTED CEILING

**LIVING
18'-1" X 13'-8"**
WOOD FLRG.
VAULTED CEILING

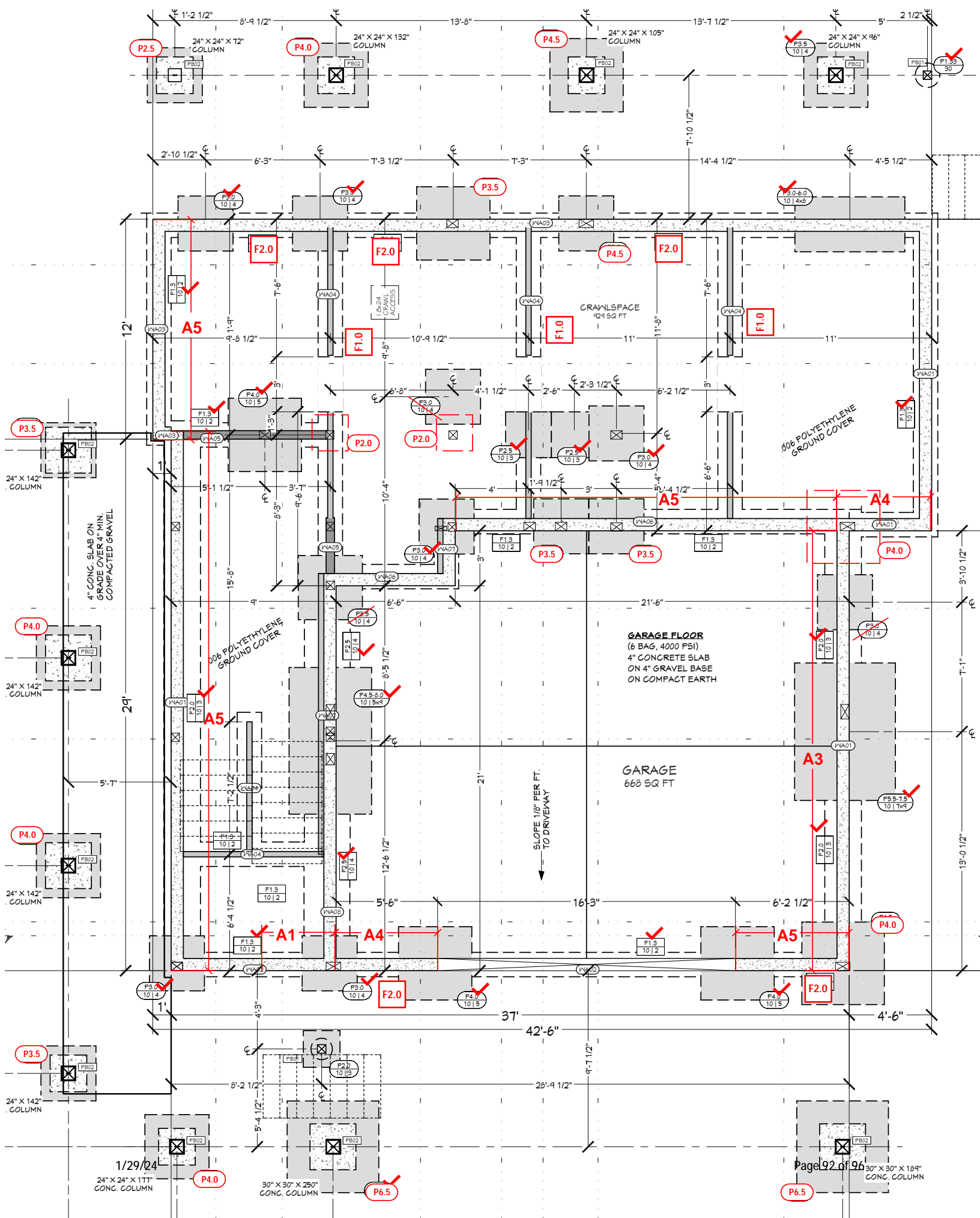
**DINING
9'-2" X 13'-2"**
WOOD FLRG.
VAULTED CEILING

**6.75" x 16" GLM WIND
BEAM w/ (4) A35's TO
POSTS IN CORNER, IN
2x8 WALL**

8x10

8x10

W15-4039FX 165 1/16" TOP W09-4031FX 204 13/16" TOP W12-3961FX W12-3961FX W13-4031FX 204 9/16" TOP W15-4039FX 165 1/16" TOP



P2.5

P4.0

P4.5

P3.5

F1.3

P3.5

P4.0

P4.0

P3.5

P4.0

P3.5

F2.0

F2.0

P4.5

F2.0

F1.0

F1.0

F1.0

F1.3

P2.0

P2.0

P2.5

P2.5

P3.0

F1.3

P4.0

F2.0

F3.0

P3.5

P4.5

P3.5

P3.5

F2.0

P3.0

F1.3

F1.3

A4

F1.3

F1.3

F2.0

P4.0

P3.0

P3.0

F2.0

P4.0

P4.0

P4.0

F2.0

P4.0

P4.0

P2.0

P6.5

P6.5

P6.5

P6.5

4" CONC. SLAB ON GRADE OVER 4" MIN. COMPACTED GRAVEL

006 POLYETHYLENE GROUND COVER

GARAGE FLOOR
(6 BAG, 4000 PSI)
4" CONCRETE SLAB
ON 4" GRAVEL BASE
ON COMPACT EARTH

GARAGE
668 SQ FT

SLOPE 1/8" PER FT.
TO DRIVEWAY

CRAWLSPACE
424 SQ FT

006 POLYETHYLENE
GROUND COVER

1/29/24
24" X 24" X 117"
CONC. COLUMN

30" X 30" X 250"
CONC. COLUMN

30" X 30" X 184"
CONC. COLUMN



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BEAM SCHEDULE

| NO. | FLR. | PLY(S) | NOTES | CTR. LG +/- | MIN BRG | T.O. BEAM | B.O. BEAM | CALC # |
|-----|------|--------|---|-------------|----------|-------------|-------------|--------|
| B01 | 2 | 1 | (B-01) 7 1/2 X 17 1/2 D.F. #1 x 10" min. | 13' | | 16'-4 7/8" | 14'-11 3/8" | 1 |
| B02 | 2 | 1 | (B-02) 9 1/2 X 21 1/2 D.F. #1 8x12 min. | 13' | | 22'-6" | 20'-8 1/2" | 2 |
| B03 | 2 | 1 | (B-03) 9 1/2 X 23 1/2 D.F. #1 8x22 min. | 55'-10 3/8" | | 32'-1 5/8" | 30'-2 1/8" | 3 |
| B04 | 2 | 1 | (B-04) 5 1/2 X 21 1/2 D.F. #1 x 12" min. | 8'-5 1/4" | | 22'-5 7/8" | 20'-8 3/8" | 4 |
| B05 | 2 | 1 | (B-05) 9 1/2 X 21 1/2 D.F. #1 8x12 min. | 13' | | 22'-2 7/8" | 20'-5 3/8" | 5 |
| B06 | 2 | 1 | (B-06) 5 1/2 X 23 1/2 D.F. #1 x 16" min. | 16'-9 1/4" | | 32'-11 5/8" | 31'-0 1/8" | 6 |
| B07 | 2 | 1 | (B-07) 3 1/2 X 10 1/2 D.F. #1 ✓ | 7'-4 1/2" | | 32'-9" | 31'-10 1/2" | 7 |
| B08 | 2 | 1 | (B-08) 3 1/2 X 10 1/2 D.F. #1 ✓ | 7'-2 1/4" | | 32'-8 3/8" | 31'-9 7/8" | 8 |
| B09 | 3 | 1 | (B-09) 8X14 D.F. #1 ✓ | 16'-6" | | 31'-11 3/8" | 30'-9 7/8" | 9 |
| B10 | 2 | 1 | (B-10) 5 1/2 X 23 1/2 D.F. #1 x 16" min. | 16'-9 1/4" | | 32'-11 5/8" | 31'-0 1/8" | 10 |
| B11 | 1 | 1 | (B-11) 6 3/4 X 18 GLULAM x 13.5" min. | 14'-6" | | 10'-7" | 9'-1" | 11 |
| B12 | 1 | 1 | (B-12) 6X12 D.F. #1 ✓ | 8'-5 1/2" | | 10'-0 5/8" | 9'-1 1/8" | 12 |
| B13 | 1 | 1 | (B-13) 5 1/8 X 10 1/2 GLULAM 6x8 DF #2 min. | 5'-5 1/2" | | 9'-11 1/2" | 9'-1" | 13 |
| B14 | 1 | 1 | (B-14) 8 3/4 X 22 GLULAM x 18" GLM min. | 17' | | 10'-11" | 9'-1" | 14 |
| B15 | 1 | 1 | (B-15) 6 3/4 X 10 1/2 GLULAM ✓ | 5'-5 1/4" | | 9'-11 1/2" | 9'-1" | 15 |
| B16 | 1 | 1 | (B-16) 6 3/4 X 10 1/2 GLULAM ✓ | 5'-5 1/4" | | 9'-11 1/2" | 9'-1" | 16 |
| B17 | 1 | 1 | (B-17) 8X12 D.F. #1 ✓ | 39'-11 3/4" | | 9'-1 1/4" | 8'-1 3/4" | 17 |
| B18 | 1 | 1 | (B-18) 8X8 D.F. #1 ✓ | 9'-10 1/4" | | 10'-1 3/4" | 9'-6 1/4" | 18 |
| B19 | 1 | 1 | (B-19) 9 1/2 X 19 1/2 D.F. #1 8x24 min. | 25'-3 3/4" | | 10'-0 3/4" | 8'-5 1/4" | 19 |
| B20 | 0 | 1 | (B-20) 4X8 D.F. #1 ✓ | 3'-4 3/8" | | 3'-7 5/8" | 3'-0 3/8" | 20 |
| B21 | 0 | 1 | (B-21) 4X8 D.F. #1 4x10 min. | 9'-8 1/2" | | 3'-7 5/8" | 3'-0 3/8" | 21 |
| B22 | 0 | 1 | (B-22) 4X10 D.F. #1 ✓ | 5'-9 1/8" | | 3'-7 5/8" | 2'-10 3/8" | 22 |
| B23 | 0 | 1 | (B-23) 6X12 D.F. #1 x 8" min. | 8'-11 1/2" | | -0'-10 3/8" | -1'-9 7/8" | 23 |
| B24 | 0 | 1 | (B-24) 6X12 D.F. #1 ✓ | 11'-7 7/8" | | -0'-10 3/8" | -1'-9 7/8" | 24 |
| B25 | 0 | 1 | (B-25) 6X12 D.F. #1 ✓ | 11'-7 3/4" | | -0'-10 3/8" | -1'-9 7/8" | 25 |
| B26 | 0 | 1 | (B-26) 6X12 D.F. #1 x 8" min. | 4'-2 3/4" | | -0'-10 3/8" | -1'-9 7/8" | 26 |
| B27 | 1 | 1 | (B-27) 6 3/4 X 27 GLULAM x 24" min. | 28'-6 1/2" | | 10'-1" | 7'-10" | 27 |
| B28 | 1 | 1 | (B-28) 6X14 D.F. #1 x 8" min. | 8'-11" | | 10'-1" | 8'-11 1/2" | 28 |
| B29 | 2 | 1 | (B-29) 8X14 D.F. #1 ✓ | 12'-8 1/2" | | 19'-3" | 18'-1 1/2" | 29 |
| B30 | 1 | 1 | (B-30) 8X12 D.F. #1 x 8" min. | 9'-9 1/2" | | 10'-1" | 9'-1 1/2" | 30 |
| B31 | 1 | 1 | (B-31) 8X14 D.F. #1 8x12 min. | 32' | | 9'-3 1/2" | 8'-2" | 31 |
| B32 | 2 | 1 | (B-32) 6 3/4 X 21 GLULAM x 12" min. | 14'-11" | | 26'-10 3/8" | 25'-1 3/8" | 32 |
| B33 | 1 | 1 | (B-33) 5 1/2 X 12 GLULAM ✓ | 5'-5 1/4" | | 10'-1" | 9'-1" | 33 |
| B34 | 1 | 1 | (B-34) 7 1/2 X 12 D.F. #1 x 8" min. | 5'-5 1/4" | | 10'-1" | 9'-1" | 34 |
| B35 | 2 | 2 | (B-35) 1 3/4 X 14 MICROLLAM LVL ✓ | 21'-6 1/8" | | 20'-5" | 19'-3" | 35 |
| B36 | 0 | 2 | (B-36) 1 3/4 X 9 1/2 MICROLLAM LVL ✓ | 6'-6 5/8" | | -0'-0 3/4" | -0'-10 1/4" | 36 |
| B37 | 0 | 3 | (B-01CS) 4X8 D.F. #1 (CRAWL SPACE HDRS) | 3'-6" | 4x6 min. | -0'-10 1/4" | -1'-5 1/2" | 1CS |
| B38 | 2 | 1 | (B-01F) 8X14 D.F. #1 (COSMETIC) | 17'-1 7/8" | | 19'-3" | 18'-1 1/2" | 1F |
| B39 | 2 | 1 | (B-01KB) 8X14 D.F. #1 x 8" min. | 2'-2 1/2" | | 19'-8" | 18'-6 1/2" | 1KB |
| B40 | 2 | 1 | (B-01KB) 8X14 D.F. #1 x 8" min. | 2'-2 1/2" | | 22'-0 1/4" | 20'-10 3/4" | 1KB |
| B41 | 2 | 2 | (B-01KB) 8X14 D.F. #1 x 8" min. | 2'-2 1/2" | | 26'-9 1/8" | 25'-7 5/8" | 1KB |
| B42 | 3 | 1 | (B-01KB) 8X14 D.F. #1 x 8" min. | 2'-2 1/2" | | 29'-4 7/8" | 28'-3 3/8" | 1KB |
| B43 | 3 | 1 | (B-01KB) 8X14 D.F. #1 x 8" min. | 2'-2 1/2" | | 29'-5" | 28'-3 1/2" | 1KB |

HEADER SCHEDULE

| NO. | TYPE |
|-----|------------------------|
| H01 | (1) 3 1/2 X 12 GLM |
| H02 | (1) 3 1/2 X 7 1/8 D.F. |
| H03 | (1) 4X10 D.F. |
| H04 | (1) 4X8 D.F. |
| H05 | (1) 5 1/2 X 11 3/8 GLM |
| H06 | (1) 5 1/2 X 12 GLM |
| H07 | (1) 5 1/2 X 18 GLM |
| H08 | (1) 5 1/2 X 21 GLM |
| H09 | (1) 6X10 D.F. |
| H10 | (1) 8 3/4 X 21 GLM |

* ALL BEARING TO HAVE SOLID BEARING TO FOUNDATION

BEARING SCHEDULE

| NO. | BEARING AREA (X) |
|-----|------------------|
| X01 | 3 1/2" X 5 1/2" |
| X02 | 3" X 7 1/2" |
| X03 | 5 1/2" X 5 1/2" |
| X04 | 5 1/2" X 7 1/2" |
| X05 | 5 1/2" X 7 1/4" |
| X06 | 5 1/2" X 9 1/2" |

POST SCHEDULE

| NO. | QTY | FLR. | NOTES |
|-----|-----|------|---------------|
| P01 | 2 | 3 | 4X8 D.F. #2 |
| P02 | 4 | 2 | 4X8 D.F. #2 |
| P03 | 2 | 0 | 6X6 D.F. #2 |
| P04 | 1 | 2 | 10X10 D.F. #2 |
| P05 | 1 | 0 | 10X10 D.F. #2 |
| P06 | 10 | 1 | 10X10 D.F. #2 |

HANGER SCHEDULE

| CALLOUT | MODEL | TOP NAILS | SEAT LG. | MEMBER NAILS | FACE NAILS |
|---------|---------------|---------------|----------|-----------------|--------------------|
| S01 | HU810 ✓ | N/A | 2.50" | (6) 0.162 X 3.5 | (14) 0.162 X 3.5 |
| S02 | HUCQ610-SDS ✓ | N/A | 2.50" | (6) 1/4 X 2.5 | (12) 1/4 X 2.5 SDS |
| S03 | ITS237/11.88 | (6) 0.148 X 3 | 2.00" | N/A | (10) 0.148 X 3 |
| S04 | LUS28 ✓ | N/A | 1.75" | 3-10D | 6-10DX1.5 |

2.06 —
 S05 HUC810



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| PAD FOOTING SCHEDULE | | | |
|----------------------|-----------------|-------------------------|-----|
| CALLOUT | FOOTING SIZE | REINFORCEMENT | QTY |
| P1.33 10 30 | 16" DIA X 30" | SEE POST FOOTING DETAIL | 1 |
| P2.0 10 3 | 24" X 24" X 10" | (3) #4 REBAR E.W. | 1 |
| P2.5 10 3 | 30" X 30" X 10" | (3) #4 REBAR E.W. | 2 |
| P3.0 10 4 | 36" X 36" X 10" | (4) #4 REBAR E.W. | 14 |
| P3.0-6.0 10 4x8 | 36" X 72" X 10" | (4X8) #4 REBAR GRID | 1 |
| P3.5 10 4 | 42" X 42" X 10" | (4) #4 REBAR E.W. | 6 |
| P4.0 10 5 | 48" X 48" X 10" | (5) #4 REBAR E.W. | 5 |
| P4.5 10 5 | 54" X 54" X 10" | (5) #4 REBAR E.W. | 1 |
| P4.5-8.0 10 5x9 | 54" X 96" X 10" | (5X9) #4 REBAR GRID | 1 |
| P5.5 10 7 | 66" X 66" X 10" | (7) #4 REBAR E.W. | 2 |
| P5.5-7.5 10 7x9 | 66" X 90" X 10" | (7X9) #4 REBAR GRID | 1 |
| P5.0 | 60"x60"x10" | (6) #4 REBAR E.W. | |
| P6.5 | 78"x78"x12" | (9) #4 REBAR E.W. | |

| CONTINUOUS FOOTING SCHEDULE (ALL FOOTINGS "F1.3" UNO) | | |
|--|--------------|--------------------|
| CALLOUT | FOOTING SIZE | REINFORCEMENT |
| F1.3 10 2 | 16" X 10" | (2) #4 CONT. REBAR |
| F2.0 10 3 | 24" X 10" | (3) #4 CONT. REBAR |
| F2.5 10 4 | 30" X 10" | (4) #4 CONT. REBAR |



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OSB SHEAR WALL SCHEDULE:

| MARK | SHEATHING | SIDES OF WALL | SHEET NAILING PERIMETER / FIELD | | SHEET STAPLING PERIMETER / FIELD | BLKG | NAILING (UNO) BOTTOM PLATE INTO RIM |
|------|-----------------|---------------|---------------------------------|----------------------------------|----------------------------------|------|-------------------------------------|
| SW1 | 7/16" APA RATED | 1 | 8d @ 6 / 12 | OR | 16ga x 1-1/2" @ 3 / 12 | YES | (2) 16d NAILS PER 16" BAY |
| SW2 | 7/16" APA RATED | 1 | 8d @ 4 / 12 | OR | 16ga x 1-1/2" @ 2 / 12 | YES | (3) 16d NAILS PER 16" BAY |
| SW3 | 7/16" APA RATED | 1 | 8d @ 3 / 12 | | | YES | (4) 16d NAILS PER 16" BAY |
| SW4 | 7/16" APA RATED | 1 | 8d @ 2 / 12 | (4x STUDS @ SHEATHING PERIMETER) | | YES | (4) SDS SCREWS PER 16" BAY |

GYP. SHEAR WALL SCHEDULE:

| | | | | | | | |
|-----|-----------------|---|-------------------|--|--|----|---------------------------|
| SWD | 1/2" GYP. BOARD | 2 | 5d COOLER @ 6 / 6 | | | NO | (2) 16d NAILS PER 16" BAY |
|-----|-----------------|---|-------------------|--|--|----|---------------------------|

TYP. NOTES:

- 1 ALL SHEATHING PANEL EDGES SHALL BE BLOCKED UNO
- 2 PROVIDE SAME NAILING PATTERN ABOVE AND BELOW OPENINGS AS ADJACENT SHEAR PANEL.
- 3 ALL EXTERIOR WALLS SHALL BE SHEARWALL "SW1" WITHOUT BLKG UNO
- 4 FASTEN GABLE/RIM TO SHEAR WALLS BELOW W/ 10d TOENAILS @ 12" O.C. UNO
- 5 FASTEN TRUSS HEELS TO SHEAR WALLS W/ H2.5A AND (2) 10d TOENAILS @ EACH
- 6 GYP BOARD SHEAR WALLS MAY BE SUBSTITUTED WITH AN SW1 SHEAR WALL @ CONTRACTOR'S OPTION
- 7 WALL SHEATHING CAN BE APPLIED TO EITHER SIDE OF THE WALL. (UNLESS NOTED OTHERWISE)

GABLE / DRAG TRUSS OR RIM KEY NOTES:

| | | |
|----|---|--|
| T1 | - | ATTACH GABLE / DRAG TRUSS OR RIM TO TOP PLATE W/ 10d TOENAILS @ 6" O.C., EDGE NAIL SHEATHING ABOVE TO TRUSS OR RIM |
|----|---|--|



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HOLDOWN SCHEDULE:

| MARK | STRAP TYPE | STRAP FASTENERS | # OF STUDS | | ANCHOR BOLT TYPE | # OF STUDS | ANCHOR BOLT FASTENERS |
|------|------------------------------|---------------------|------------|----|---|------------|-------------------------|
| HD1 | LSTD8 OR LSTD8RJ W/ RIM | (20) 16d SINKERS | 2 | OR | DTT2Z W/1/2"Øx10" | 2 | (8) 1/4"x1-1/2" SDS |
| HD3 | STHD14 OR STHD14RJ W/ RIM | (30) 16d SINKERS | 2 | OR | HDU5-SDS2.5 W/ SB5/8x24 OR PAB5 @ INT. PONY WALLS | 2 | (14) 1/4"x2-1/2" SDS |

STRAP SCHEDULE:

(STRAP / ALL THREAD TO CLEAR SPAN ACROSS RIM TO WALL BELOW)

| MARK | STRAP TYPE | STRAP FASTENERS | # OF STUDS | | BOLT TYPE | # OF STUDS | BOLT FASTENERS |
|------|------------|---------------------|------------|----|------------------------------------|------------|-------------------------|
| S1 | MSTC28 | (16) 16d SINKERS | 2 | OR | DTT2Z W/ 1/2"Ø ALL THREAD | 2 | (8) 1/4"x1-1/2" SDS |
| S3 | MSTC52 | (48) 16d SINKERS | 2 | OR | HDU5-SDS2.5 W/ 5/8"Ø ALL THREAD | 2 | (14) 1/4"x2-1/2" SDS |

ANCHOR BOLT KEY NOTES:

| | | |
|----|---|-------------------------------|
| A1 | - | 1/2"Ø ANCHOR BOLTS @ 12" O.C. |
| A3 | - | 1/2"Ø ANCHOR BOLTS @ 36" O.C. |
| A4 | - | 1/2"Ø ANCHOR BOLTS @ 48" O.C. |
| A5 | - | 1/2"Ø ANCHOR BOLTS @ 60" O.C. |