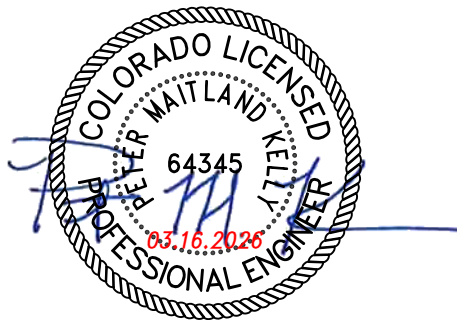




Steamboat Basecamp
Phase II
1901 Curve Plaza
Steamboat Springs, CO 80487

Structural Calculations



Prepared by: KL&A
Date: 03/13/2026

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- A-100. GEOTECHNICAL REPORT (FOR REFERENCE ONLY)**

Calculation Package

100. BASIS OF DESIGN

Calculation Package

100 Basis of Design Calculation Index:

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Calculation Package

100. NARRATIVE

The project is a 5-story multi-family residential building located at the intersection of Shield Drive and Curve Court in Steamboat Springs, CO. The building is approximately 50,000 square feet total. The roof framing is plywood sheathing spanning to wood roof trusses and girders bearing on wood stud bearing walls. The floor framing is plywood sheathing spanning to wood floor trusses and joists bearing on wood stud bearing walls. The foundation system is continuous shallow footings under bearing walls and isolated pad footings under columns. The lateral force resisting system consists of light framed wood walls sheathed with structural panels and concrete block masonry walls at the elevator core.

The following sections provide detailed calculations and descriptions of the structural systems for this project.

This project was designed in accordance with the 2021 International Building Code and Routt County Regional Building Department 2021 IBC Code Amendments.

The following is an overview of the loading used in the design of the structure and the key parameters used to derive the loads.

A. Dead Loads

Detailed information regarding self-weight and superimposed dead load (e.g. MEP, Finishes, insulation, etc.) for each loading case can be found in Section 101. A graphical summary of the extents of applied dead loads can be found in the load keys in the drawing documents.

B. Live Loads

Detailed information regarding live loads for each loading case can be found in Section 101. A graphical summary of the extents of applied live loads can be found in the load keys in the drawing documents. The following typical live loads were used in the design of the structure.

Residential	40 psf
Balconies & Decks	60 psf
Exit Ways	100 psf
Assembly Areas – Other	100 psf

C. Snow Loads

Detailed information regarding snow loading, including flat roof snow loading, drifting, sliding, and unbalanced snow loading] can be found in Section 102. All snow loads on the

Calculation Package

structure have been calculated in accordance with the 2018 International Building Code and ASCE7-16. The ground snow load value of 105psf used for design is in accordance with the local building department. The loads keys in the drawing documents show a graphical summary of the design snow loading used for the project.

D. Wind Loads:

Detailed information regarding wind loading, including MWFRS loads as well as Components and Cladding pressures can be found in Section 103. Ultimate Level Wind speed for design is in accordance with the 2018 Amendments to the Building and Fire Code for Routt County. Wind loads on the structure have been calculated in accordance with the 2018 International Building Code and ASCE 7-16 based on the following criteria:

Enclosure classification	Enclosed
Risk category	II
Wind speed	115 mph (Ultimate)
Wind directionality factor, K_d	0.85
Exposure category	C
Topographic factor, K_{zt}	1.0
Building flexibility	Flexible
Gust effect factor, G	0.85
Internal pressure coefficient	± 0.18

Resulting wind loads:

Wind base shear:	
East/West	161 kips
North/South	184 kips

E. Seismic Loads:

Detailed information regarding seismic loads can be found in Section 104. Seismic loads on the structure have been calculated based on the Routt County Building Department 2021 IBC Code Amendments. The Routt County Building Department has specified to utilize ASCE 7-22 hazard map data for with ASCE 7-16 and IBC 2021 parameters. The seismic loads have been determined based on following criteria:

S_s	0.300
S_1	0.060
Site class	C
Period	0.433 seconds
Period determination	Approx per ASCE 7
Long period, T_L	4 seconds
Seismic force resisting system	Intermediate Reinforced Masonry Shear Wall
Response modification factor, R	3.5

Calculation Package

Overstrength factor, Ω_o	2
Deflection amplification factor	2.25
Importance factor, I_e	1.00

Resulting Seismic Base Shear:

East/West	106 kips
North/South	106 kips

F. Soil Loads and Capacities

Geotechnical criteria for design is based on the report provided by Brian D. Len, P.E. (PE#25750) of NorthWest Colorado Consultants, Inc., dated December 26, 2025. A complete copy of the geotechnical report can be found in appendix A-100 of this calculation package. Minimum frost depth per Routt County Regional Building Department 2021 IBC Code Amendments is 48 inches. The following is a summary of the geotechnical design parameters:

Spread Footings:

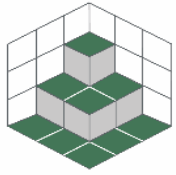
Allowable bearing pressure	3 ksf
Soil Modulus of Subgrade Reaction	200 pci

Lateral Soil Pressure:

Active soil pressure	45 psf/ft
At-Rest soil pressure	55 psf/ft
Passive soil pressure	250 psf/ft

Calculation Package

101. DEAD AND LIVE LOADS



KL&A
Engineers & Builders

Title **Basecamp II** Date **02 22 26** Job no. **25336**

Subject **Flat Loads** By **CGC** Sheet of

Governing Code: ASCE 7- 16

Load Key

Load #	Description of Load	Self Weight	Superimposed Loads			Partition Load? ASCE7-16 4.3.2	Notes
			Dead Load	Live Load	Snow Load		
1	Load 1 - Typical Residential Floor	7	35	40	0	No	
2	Load 2 - Typical Balcony	6	40	60	0	No	
3	Load 3 - Typical Roof	7	20	20	104	No	
4	Load 4 - Stair/Commons	6	35	100	0	No	
5	Load 5 - Loft	5	25	40	0	0	

Load 1 - Typical Residential Floor

Total Superimposed Dead Load: 35 PSF
Total Self Weight Dead Load: 7 PSF

Live Load: **Total Live Load:** 40 PSF

Residential	=	
Partition Loading?	=	40 PSF
Live Load Reduction Category	=	0 PSF

Snow Load: **Total Live Load:** 0 PSF
 Balanced Snow Load or Roof Live Load 0 PSF
 Do you want to use the snow load to calculate the seismic story weight? Yes
 Seismic Snow 0

Special Load: **Total Live Load:** PSF
 =
 Note - this does not appear on the Load Key Summary

Superimposed Dead Load:

Load Template	Typical Multifamily Residential Floor	
Category	Allowance Notes	PSF
Non-Structural Wall Allowance	Interior walls including studs and gypsum board	7.0
Floor/Roof Finish Allowance	Carpet or Wood Flooring	3.0
Topping Slab Allowance	Assumes 1 1/2" Gypcrete Topping	15.0
Mech Allowance	--	4.0
Ceiling Finishes Allowance	Includes Furring system & Gypsum Board Ceiling	5.0
Photo-Voltaic Allowance	--	0.0
Misc Allowance	--	1.0

Deck/Slab Self Weight:

Category	Type	Thickness (in)	PSF
Wood	Plywood Floor Sheathing	0.75	2.3
			0.0
User Input Load			

Framing Self Weight:

Category	Member	Spacing (in)	PSF
Open Web Truss	TJM Open Web Truss	24	4.3
			0.0
User Input Load			

Custom Self Weight:

Description	PSF

Load 2 - Typical Balcony

Total Superimposed Dead Load: 40 PSF
Total Self Weight Dead Load: 6 PSF

Live Load: **Total Live Load:** 60 PSF

Residential	=		60	PSF
Partition Loading?	=	No	60	PSF
Live Load Reduction Category		Floor	0	PSF

Snow Load: 0 PSF
 Balanced Snow Load or Roof Live Load 0 PSF
 Do you want to use the snow load to calculate the seismic story weight? No
 Seismic Snow 0

Special Load: = PSF
 Note - this does not appear on the Load Key Summary

Superimposed Dead Load:

Load Template	Custom	
Category	Allowance Notes	PSF
Non-Structural Wall Allowance	--	0.0
Floor/Roof Finish Allowance	--	0.0
Topping Slab Allowance	--	37.5
Mech Allowance	Included in Ceiling Finishes Allowance	0.0
Ceiling Finishes Allowance	--	2.2
Photo-Voltaic Allowance	--	0.0
Misc Allowance	--	0.0

Deck/Slab Self Weight:

Category	Type	Thickness (in)	PSF
Wood	Plywood Floor Sheathing	0.75	2.3
			0.0
User Input Load			

Framing Self Weight:

Category	Member	Spacing (in)	PSF
DFL	2x12	16	3.3
			0.0
User Input Load			

Custom Self Weight:

Description	PSF

Load 3 - Typical Roof

Total Superimposed Dead Load: 20 PSF
Total Self Weight Dead Load: 7 PSF

Live Load:

[Live Load Type]		=
Partition Loading?	No	=
Live Load Reduction Category	Roof	

Total Live Load: 20 PSF
20 PSF
0 PSF

Snow Load:

Balanced Snow Load or Roof Live Load
 Do you want to use the snow load to calculate the seismic story weight?
 Seismic Snow

104 PSF
Yes
 21

Special Load:

=
 Note - this does not appear on the Load Key Summary

PSF

Superimposed Dead Load:

Load Template	Typical SF Residential Roof	
Category	Allowance Notes	PSF
Non-Structural Wall Allowance	--	0.0
Floor/Roof Finish Allowance	Includes Roofing, Waterproofing & Insulation	7.0
Topping Slab Allowance	0	0.0
Mech Allowance	--	4.0
Ceiling Finishes Allowance	Includes Furring system & Gypsum Board Ceiling	5.0
Photo-Voltaic Allowance	--	0.0
Misc Allowance	--	4.0

Deck/Slab Self Weight:

	Category	Type	Thickness (in)	PSF
	Wood	Plywood Floor Sheathing	0.625	1.9
				0.0
User Input Load				

Framing Self Weight:

	Category	Member	Spacing (in)	PSF
	Open Web Truss	TJM Open Web Truss	24	4.3
				0.0
User Input Load				

Custom Self Weight:

Description	PSF



Load 4 - Stair/Commons

Total Superimposed Dead Load: 35 PSF
Total Self Weight Dead Load: 6 PSF

Live Load:

Corridors serving Public Rooms	=
Partition Loading?	No
Live Load Reduction Category	Assembly

Total Live Load: 100 PSF
 100 PSF
 0 PSF

Snow Load:

Balanced Snow Load or Roof Live Load
 Do you want to use the snow load to calculate the seismic story weight?
 Seismic Snow

0 PSF
 Yes
 0

Special Load:

[Empty Box] =
 Note - this does not appear on the Load Key Summary

[Empty Box] PSF

Superimposed Dead Load:

Load Template	Typical Multifamily Residential Floor	
Category	Allowance Notes	PSF
Non-Structural Wall Allowance	Interior walls including studs and gypsum board	7.0
Floor/Roof Finish Allowance	Carpet or Wood Flooring	3.0
Topping Slab Allowance	Assumes 1 1/2" Gypcrete Topping	15.0
Mech Allowance	--	4.0
Ceiling Finishes Allowance	Includes Furring system & Gypsum Board Ceiling	5.0
Photo-Voltaic Allowance	--	0.0
Misc Allowance	--	1.0

Deck/Slab Self Weight:

Category	Type	Thickness (in)	PSF
Wood	Plywood Floor Sheathing	0.75	2.3
			0.0
User Input Load			

Framing Self Weight:

Category	Member	Spacing (in)	PSF
DFL	2x10	16	2.8
			0.0
User Input Load			

Custom Self Weight:

Description	PSF
[Empty Box]	



Load 5 - Loft

Total Superimposed Dead Load: 25 PSF
Total Self Weight Dead Load: 5 PSF

Live Load:

[Live Load Type]	=
Partition Loading?	=
Live Load Reduction Category	

Total Live Load: 40 PSF
 40 PSF
 0 PSF

Snow Load:

Balanced Snow Load or Roof Live Load
 Do you want to use the snow load to calculate the seismic story weight?
 Seismic Snow

0 PSF
 Yes
 0

Special Load:

[Special Load] =
 Note - this does not appear on the Load Key Summary

[Special Load] PSF

Superimposed Dead Load:

Load Template	Typical SF Residential W/O Topping	
Category	Allowance Notes	PSF
Non-Structural Wall Allowance	Interior walls including studs and gypsum board	4.0
Floor/Roof Finish Allowance	Carpet, Wood, or Tile Flooring	10.0
Topping Slab Allowance	--	0.0
Mech Allowance	--	4.0
Ceiling Finishes Allowance	Includes Furring system & Gypsum Board Ceiling	5.0
Photo-Voltaic Allowance	--	0.0
Misc Allowance	--	2.0

Deck/Slab Self Weight:

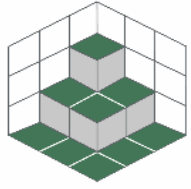
Category	Type	Thickness (in)	PSF
Wood	Plywood Floor Sheathing	0.625	1.9
			0.0
User Input Load			

Framing Self Weight:

Category	Member	Spacing (in)	PSF
DFL	2x12	24	2.2
			0.0
User Input Load			

Custom Self Weight:

Description	PSF



KL&A
Engineers & Builders

Title Basecamp II Date 02 22 26 Job no. 25336
Subject Wall Loads By CGC Sheet of

Wall Summary

Load #	Description of Load	Self Weight (psf)	Superimposed Dead Load (psf)	Notes
1	Wall 1 - Interior Wall	4	6	
2	Wall 2 - Exterior Wall	3	13	
3	Wall 3 - 8" CMU	78	0	



Wall 1 - Interior Wall

Total Superimposed Dead Load: 6 PSF
Total Self Weight Dead Load: 4 PSF

Superimposed Dead Load:

Category	Material	Thickness (in)	PSF
Covered Finishes	Gypsum Board	0.625	2.8
Covered Finishes	Gypsum Board	0.625	2.8
			0.0
			0.0
User Input Load			
User Input Load			

Framing Self Weight:

Category	Member	Spacing (in)	PSF
DFL	2x6	16	1.7
			0.0
User Input Loads			

Solid Wall/Sheathing Self Weight:

Category	Type	Thickness (in)	PSF
Wood Sheathing	Wood Sheathing	0.75	2.3
CMU	Type	Grout Spacing	Block Size
			PSF
			0.0
Category	Type	Thickness (in)	PSF
User Input Loads			

Custom Self Weight:

Description	PSF



Wall 2 - Exterior Wall

Total Superimposed Dead Load: 13 PSF
Total Self Weight Dead Load: 3 PSF

Superimposed Dead Load:

Category	Material	Thickness (in)	PSF
Visual Finishes	Metal Siding	0.875	1.0
Covered Finishes	Gypsum Board	2.5	11.0
Covered Finishes	Typical rigid Insulation	2	0.5
Covered Finishes			0.0
			0.0
User Input Load			
User Input Load			

Framing Self Weight:

Category	Member	Spacing (in)	PSF
DFL	2x6	16	1.7
			0.0
User Input Loads			

Solid Wall/Sheathing Self Weight:

Category	Type	Thickness (in)	PSF
Wood Sheathing	Wood Sheathing	0.5	1.5
CMU	Type	Grout Spacing	Block Size
			0.0
Category	Type	Thickness (in)	PSF
User Input Loads			

Custom Self Weight:

Description	PSF



Wall 3 - 8" CMU

Total Superimposed Dead Load: 0 PSF
Total Self Weight Dead Load: 78 PSF

Superimposed Dead Load:

Category	Material	Thickness (in)	PSF
			0.0
			0.0
			0.0
			0.0
			0.0
User Input Load			
User Input Load			

Framing Self Weight:

Category	Member	Spacing (in)	PSF
			0.0
			0.0
User Input Loads			

Solid Wall/Sheathing Self Weight:

Category	Type	Thickness (in)	PSF
			0.0
CMU	Type	Grout Spacing	Block Size
	Lightweight	Solid Grouted	8"
			78.0
Category	Type	Thickness (in)	PSF
User Input Loads			

Custom Self Weight:

Description	PSF

Calculation Package

102. SNOW LOADS

KL&A Engineers & Builders1717 Washington Ave
Golden, CO

JOB TITLE Basecamp II

JOB NO. 25336

SHEET NO.

CALCULATED BY

DATE

CHECKED BY

DATE

Snow Loads : ASCE 7- 16

Nominal Snow Forces

Roof slope = 22.6 deg
 Horiz. eave to ridge dist (W) = 55.0 ft
 Roof length parallel to ridge (L) = 121.0 ft

Type of Roof Hip and gable w/ trussed systems

Ground Snow Load Pg = 104.0 psf

Risk Category = II

Importance Factor I = 1.0

Roof R value Rroof = 0

Thermal Factor Ct = 1.000

Exposure Factor Ce = 1.00

Pf = 0.7*Ce*Ct*I*Pg = 72.8 psf

Unobstructed Slippery Surface no

Sloped-roof Factor Cs = 1.00

Balanced Snow Load = **72.8 psf**

Rain on Snow Surcharge Angle 1.10 deg

Code Maximum Rain Surcharge 5.0 psf

Rain on Snow Surcharge = 0.0 psf

Ps plus rain surcharge = 72.8 psf

Minimum Snow Load Pm = 0.0 psf

Uniform Roof Design Snow Load = **72.8 psf**Near ground level surface balanced snow load = **104.0 psf**

Design overhang portions for 2Pf (145.6 psf) if unventilated roof with Rroof <30 or ventilated roof with Rroof <20

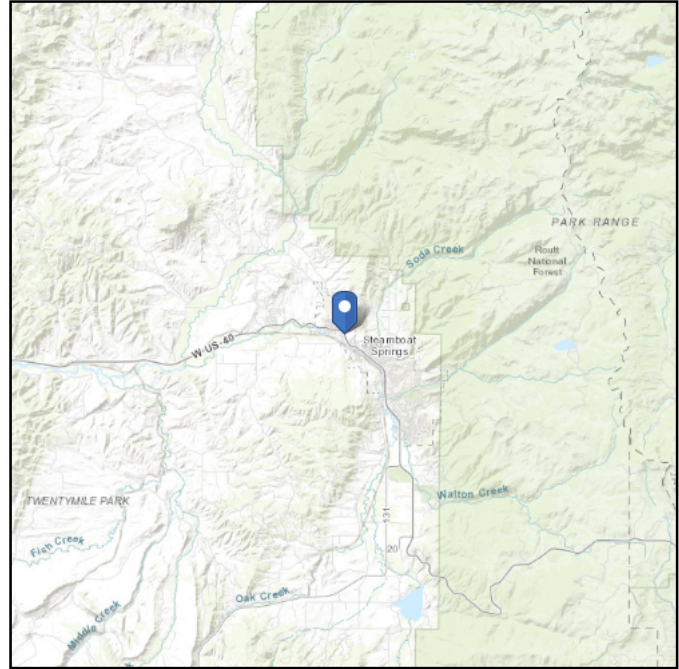
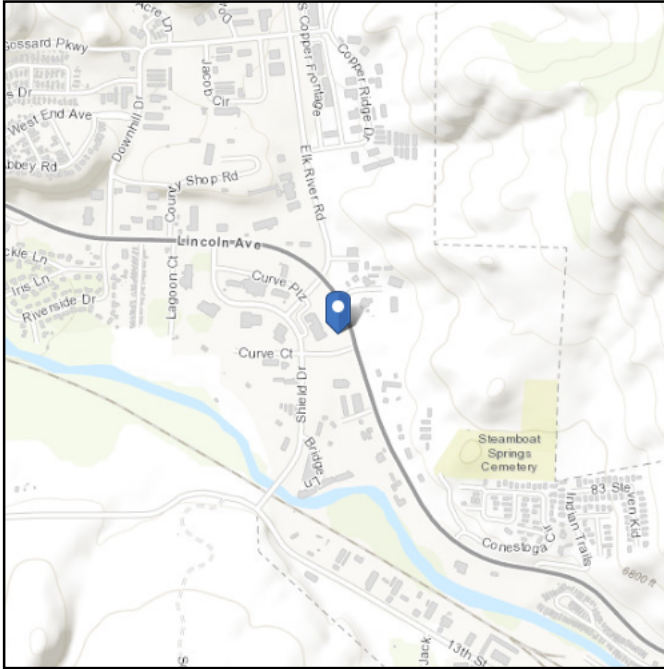
NOTE: Alternate spans of continuous beams shall be loaded with half the design roof snow load so as to produce the greatest possible effect - see code for loading diagrams and exceptions for gable roofs

ASCE Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: C - Very Dense
Soil and Soft Rock

Latitude: 40.500378
Longitude: -106.855531
Elevation: 6670.619347035928 ft
(NAVD 88)



Snow

Results:

Mapped Elevation:

Data Source:

Date Accessed: Sun Mar 15 2026

In "Case Study" areas, site-specific case studies are required to establish ground snow loads. Extreme local variations in ground snow loads in these areas preclude mapping at this scale.

Ground snow load determination for such sites shall be based on an extreme value statistical analysis of data available in the vicinity of the site using a value with a 2 percent annual probability of being exceeded (50-year mean recurrence interval).

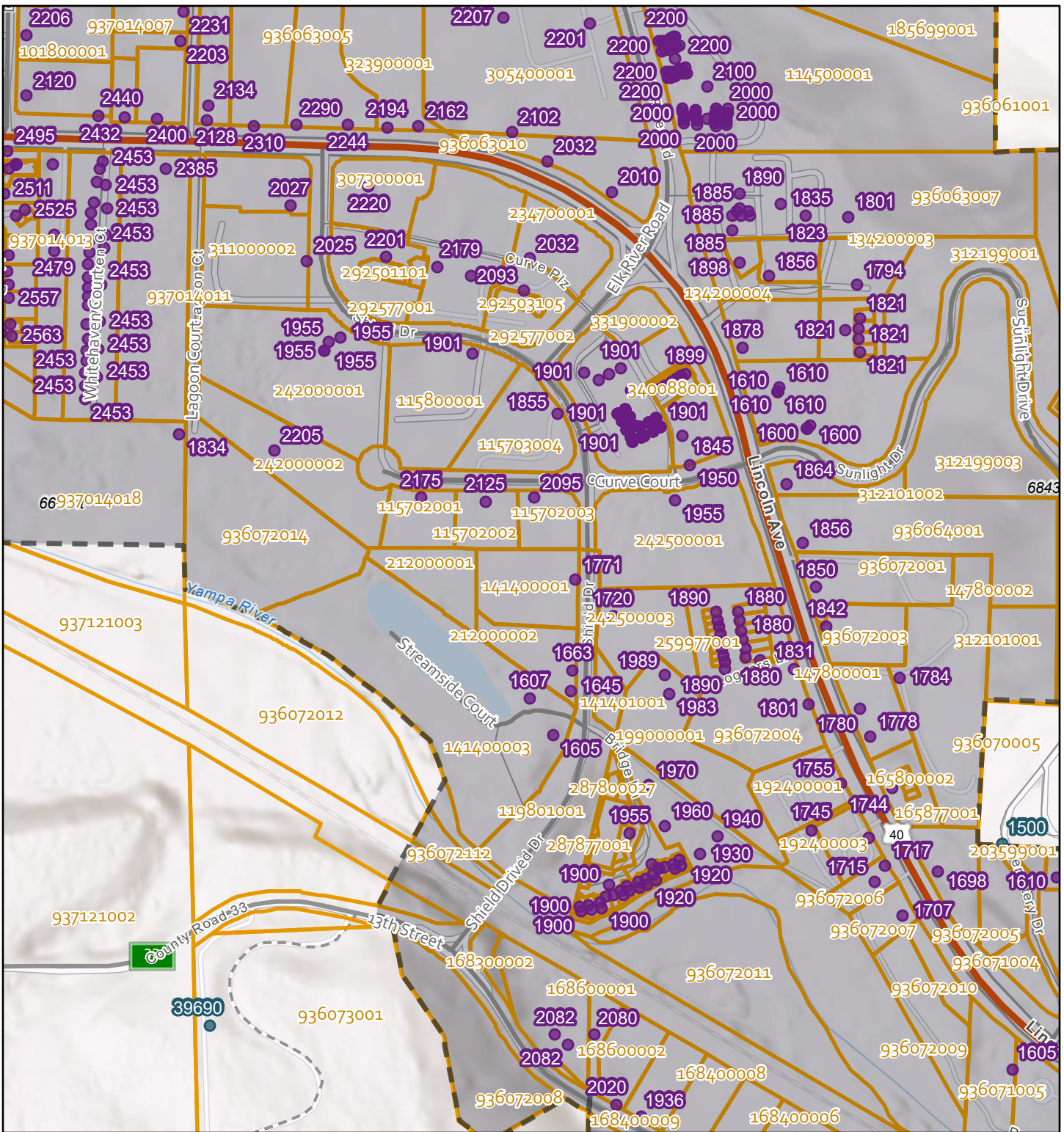
Statutory requirements of the Authority Having Jurisdiction are not included. Site is outside ASCE/SEI 7-16, Table 7.2-2 boundaries. For ground snow loads in this area, see SEAC Snow Load Committee. (2016). [Colorado Design Snow Loads](#), Structural Engineers Association of Colorado.

Snow load values are mapped to a 0.5 mile resolution. This resolution can create a mismatch between the mapped elevation and the site-specific elevation in topographically complex areas. Engineers should consult the local authority having jurisdiction in locations where the reported 'elevation' and 'mapped elevation' differ significantly from each other.

**REFER TO ROUTT COUNTY
SNOW LOAD MAPPER RESULTS,
FOLLOWING PAGES**



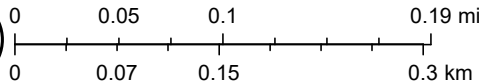
ArcGIS Web Map



3/15/2026, 3:33:48 PM

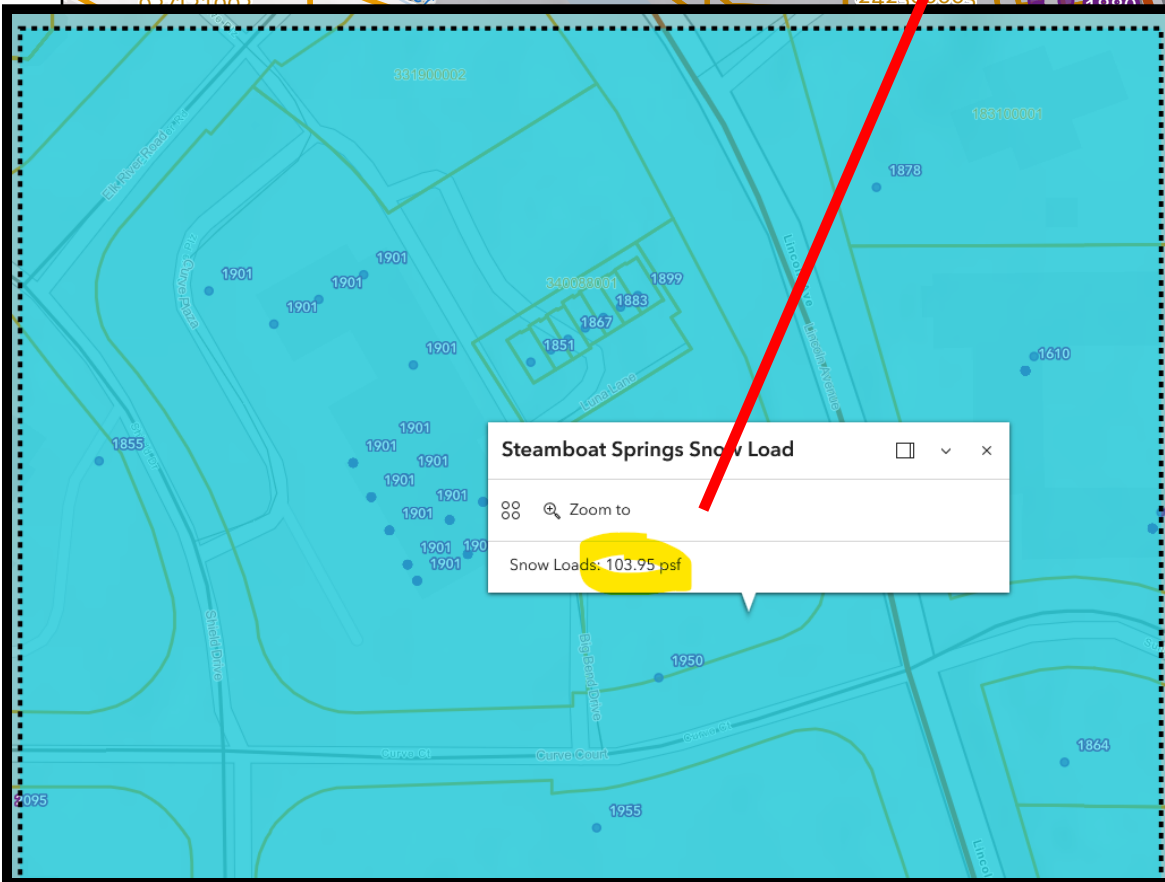
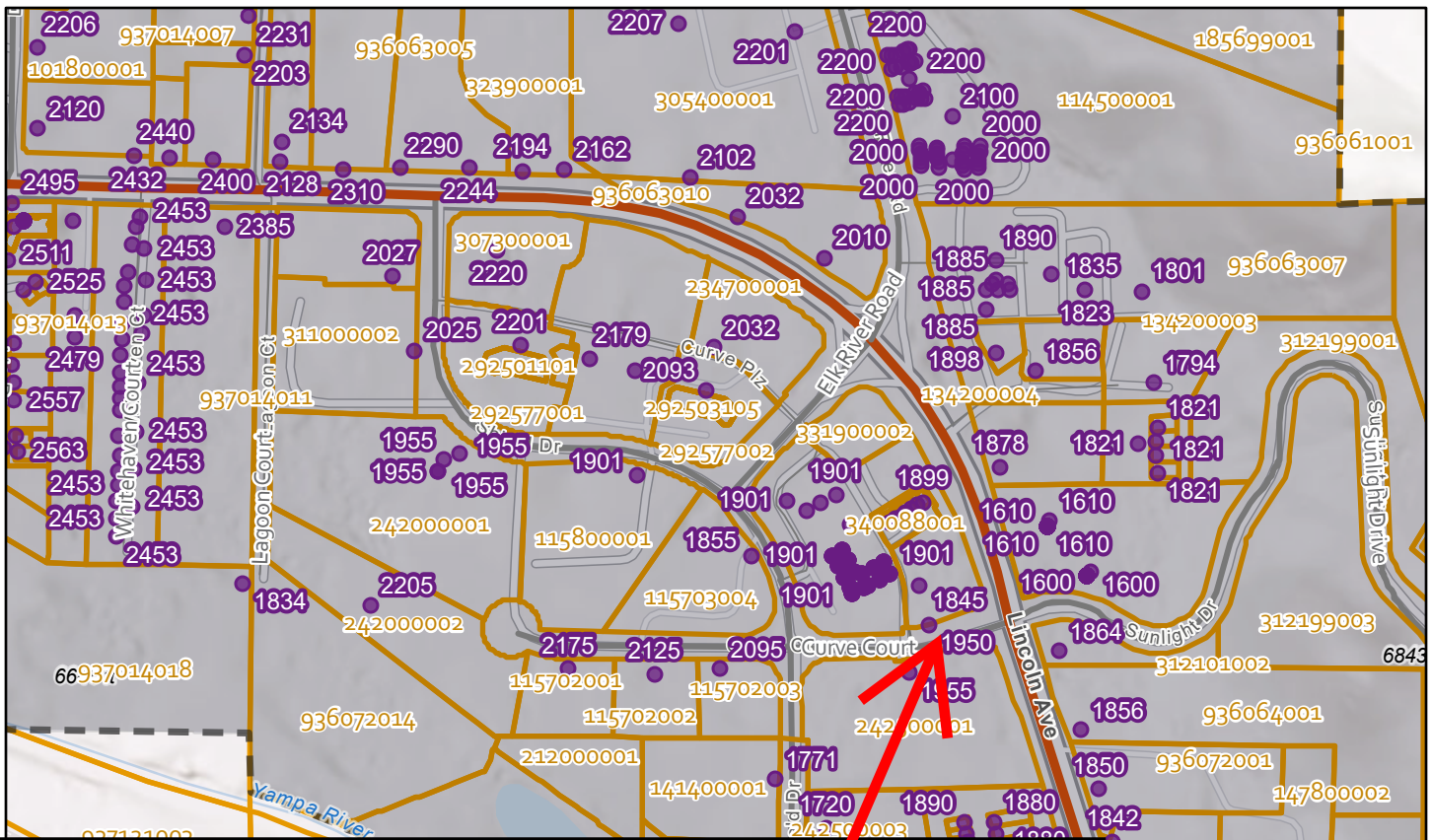
1:7,298

- Routt County Addresses
- Addresses City of Steamboat Springs
- Routt County Boundary
- Town Boundaries
- Parcels
- Road Centerlines
- Highway
- Primary, Local
- Private
- Private, Backcountry, Other Roads City of Steamboat Springs
- Highway
- Primary, Local
- Private
- World_Hillshade



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, NASA, NGA, USGS, FEMA

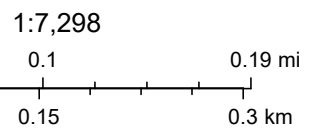
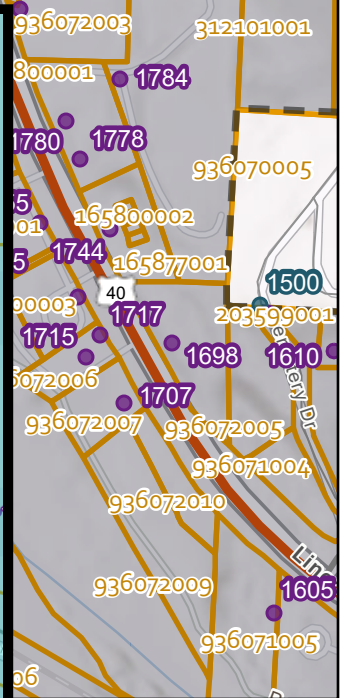
ArcGIS Web Map



Steamboat Springs Snow Load

🔍 Zoom to

Snow Loads: 103.95 psf

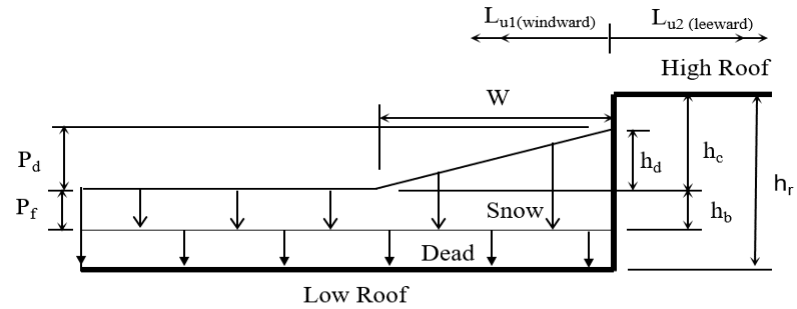


- Town Boundaries
- Parcels
- Road Centerlines
- Highway
- Primary, Local
- Private
- World_Hillshade

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, NASA, NGA, USGS, FEMA

Governing Code: ASCE 7-16

$C_e =$	1.0	
$I_s =$	1.0	
$p_g =$	104	psf
Minimum Snow Load =		psf



Drift No.	C_t	Slope (deg)	Surface Type	L_{u1}	L_{u2}	h_r	p_f	p_{govern}	p_s	h_b	h_d	w	p_d
				(ft)	(ft)	(ft)	(psf)	(psf)	(psf)	(ft)	(ft)	(ft)	(psf)
1	1.00	0	All Other Surfaces	52.3	8.3	4.0	72.8	72.80	72.80	2.65	1.35	10.84	37.28
2	1.00	0	All Other Surfaces	77.3	4.0		72.8	72.80	72.80	2.65		#VALUE!	
3													
4													
5													
6													
7													
8													
9													
10													

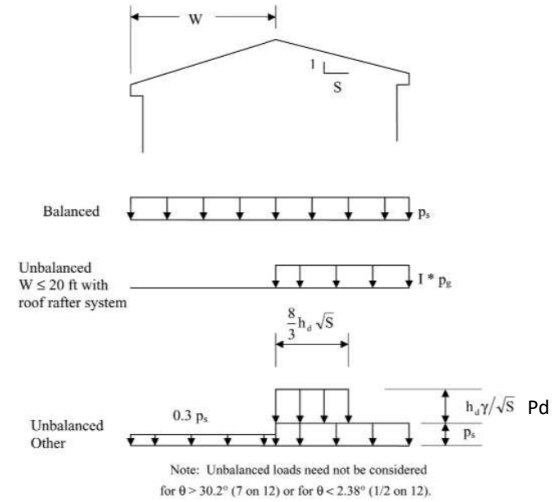


Title: **Basecamp II**
 Date: 02 22 2026
 By: CGC

Job No.: **25336**

Governing Code: ASCE 7-16

$C_e =$	1.0	
$I_s =$	1.0	
$p_g =$	104	psf
Minimum Snow Load =	20	psf



Drift No.	C_t	Slope	Surface Type	W	S	p_s	h_d	γ	Lu	Pd
		(ratio)		(ft)						
1	1.00	5.00 / 12	All Other Surfaces	21.7	2.40	72.80	2.42	27.52	9.99	42.97
2	1.00	5.00 / 12	All Other Surfaces	11.0	2.40	72.80	2.31	27.52	9.56	41.10
3										
4										
5										
6										
7										
8										
9										
10										

Calculation Package

103. WIND LOADS

Wind Loads :

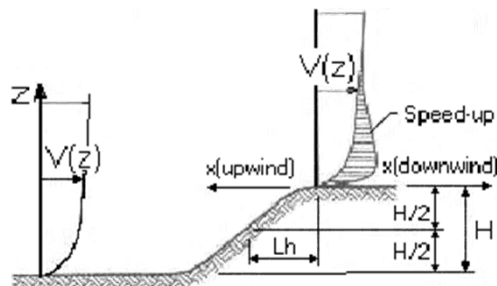
ASCE 7- 16

Ultimate Wind Speed	115 mph
Nominal Wind Speed	89.1 mph
Risk Category	II
Exposure Category	C
Enclosure Classif.	Enclosed Building
Internal pressure	+/-0.18
Bldg Directionality (Kd)	0.85
Kh MWFRS<=60	1.138
Kh all other	1.138
Type of roof	Gable

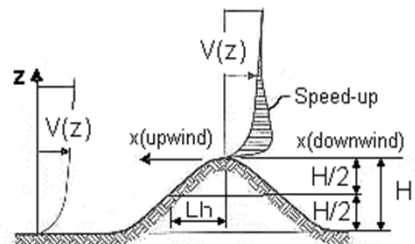
Topographic Factor (Kzt)

Topography	Flat
Hill Height (H)	0.0 ft
Half Hill Length (Lh)	0.0 ft
Actual H/Lh =	0.00
Use H/Lh =	0.00
Modified Lh =	0.0 ft
From top of crest: x =	0.0 ft
Bldg up/down wind?	downwind

H < 15ft; exp C
∴ Kzt=1.0



ESCARPMENT



2D RIDGE or 3D AXISYMMETRICAL HILL

H/Lh = 0.00	K ₁ = 0.000
x/Lh = 0.00	K ₂ = 0.000
z/Lh = 0.00	K ₃ = 1.000

At Mean Roof Ht:

$K_{zt} = (1 + K_1 K_2 K_3)^2 = 1.00$

Gust Effect Factor

h =	60.3 ft
B =	110.0 ft
/z (0.6h) =	36.2 ft

Flexible structure if natural frequency < 1 Hz (T > 1 second).
If building h/B > 4 then may be flexible and should be investigated.
h/B = 0.55

G = 0.85 Using rigid structure default

Rigid Structure

\bar{e} =	0.20
ℓ =	500 ft
Z _{min} =	15 ft
c =	0.20
g _Q , g _v =	3.4
L _z =	509.3 ft
Q =	0.87
I _z =	0.20
G =	0.86 use G = 0.85

Flexible or Dynamically Sensitive Structure

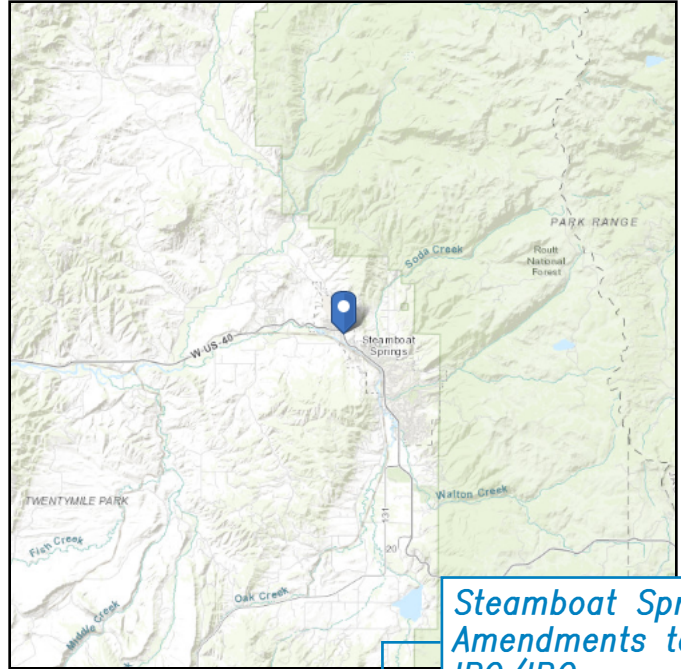
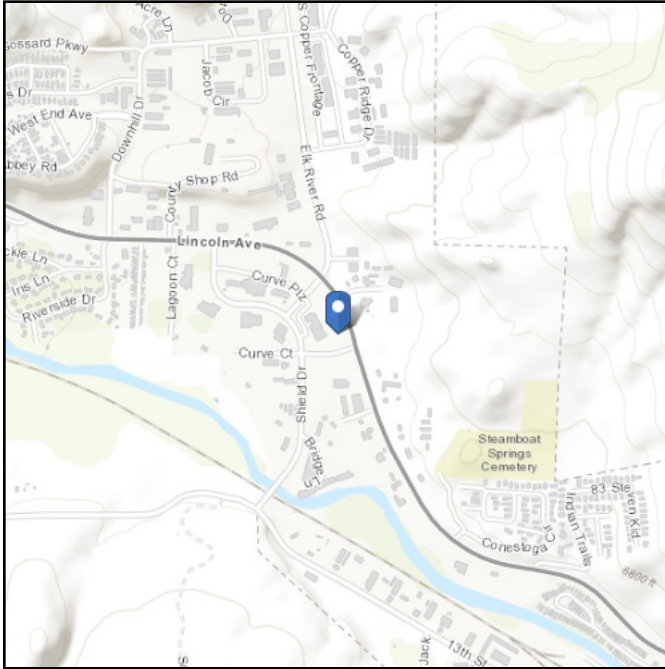
Natural Frequency (η ₁) =	0.7 Hz		
Damping ratio (β) =	0.01		
/b =	0.650		
/α =	0.154		
V _z =	111.2		
N ₁ =	3.21		
R _n =	0.067		
R _h =	0.414	η = 1.746	h = 60.3 ft
R _B =	0.265	η = 3.185	
R _L =	0.082	η = 11.730	
g _R =	4.104		
R =	0.646		
G _f =	1.008		

ASCE Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: C - Very Dense Soil and Soft Rock

Latitude: 40.500378
Longitude: -106.855531
Elevation: 6670.619347035928 ft (NAVD 88)



*Steamboat Springs
Amendments to
IRC/IBC*

Wind

Results:

Wind Speed
10-year MRI
25-year MRI
50-year MRI
100-year MRI

115mph
~~106 Vmph~~
76 Vmph
83 Vmph
88 Vmph
92 Vmph

- Climate Zone 7
- Wind Speed - 115 MPH (ultimate design wind speed)
- Topographic Effects - No
- Seismic Design Category - C for all One Family or Two Family Dwellings, and Townhomes under the IRC.
- Subject to Damage by Weathering - Severe
- Subject to Damage by Frost line Depth - 48 inches (1220mm)
- Subject to Damage by Termite - None to slight
- Subject to Damage by Decay - None to slight

Data Source:

ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2

Date Accessed:

Sun Mar 15 2026

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is not in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2.

Wind Loads - MWFRS all h (Except for Open Buildings)

Base pressure (qh) = **25.7 psf** Kh = 1.138 GCpi = +/-0.18
 Roof Angle (θ) = 22.6 deg Bldg dim parallel to ridge = 121.0 ft G = 0.85
 Roof tributary area: Bldg dim normal to ridge = 110.0 ft qi = qh
 Wind normal to ridge =(h/2)*L: 3648 sf h = 60.3 ft
 Wind parallel to ridge =(h/2)*L: 3317 sf ridge ht = 63.3 ft

Ultimate Wind Surface Pressures (psf)

Surface	Wind Normal to Ridge				Dist.*	Wind Parallel to Ridge			
	L/B = 0.91		h/L = 0.55			L/B = 1.10		h/L = 0.50	
	Cp	qhGCp	w/+qiGCpi	w/-qhGCpi		Cp	qhGCp	w/+qiGCpi	w/-qhGCpi
Windward Wall (WW)	0.80	17.5	see table below			0.80	17.5	see table below	
Leeward Wall (LW)	-0.50	-10.9	-15.6	-6.3		-0.48	-10.5	-15.1	-5.9
Side Wall (SW)	-0.70	-15.3	-19.9	-10.7		-0.70	-15.3	-19.9	-10.7
Leeward Roof (LR)	-0.60	-13.1	-17.7	-8.5		Included in windward roof			
Neg Windward Roof pressure	-0.37	-8.1	-12.7	-3.5	0 to h/2*	-0.90	-19.7	-24.3	-15.0
Pos/min Windward Roof press.	0.09	1.9	-2.7	6.5	h/2 to h*	-0.90	-19.7	-24.3	-15.0
					h to 2h*	-0.50	-10.9	-15.6	-6.3
					> 2h*	-0.30	-6.6	-11.2	-1.9
					Min press.	-0.18	-3.9	-8.6	0.7

*Horizontal distance from windward edge

Windward roof overhangs : 17.5 psf (upward : add to qhGCp windward roof pressure)

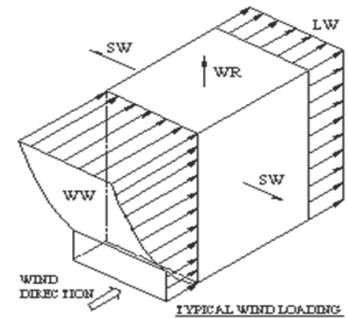
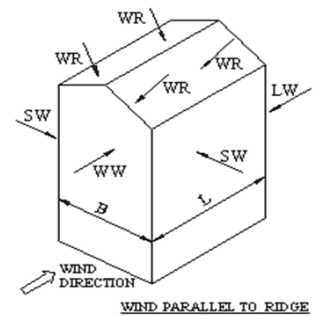
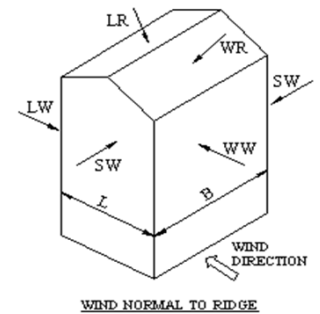
Parapet

z	Kz	Kzt	qp (psf)
56.5 ft	1.122	1.00	25.4

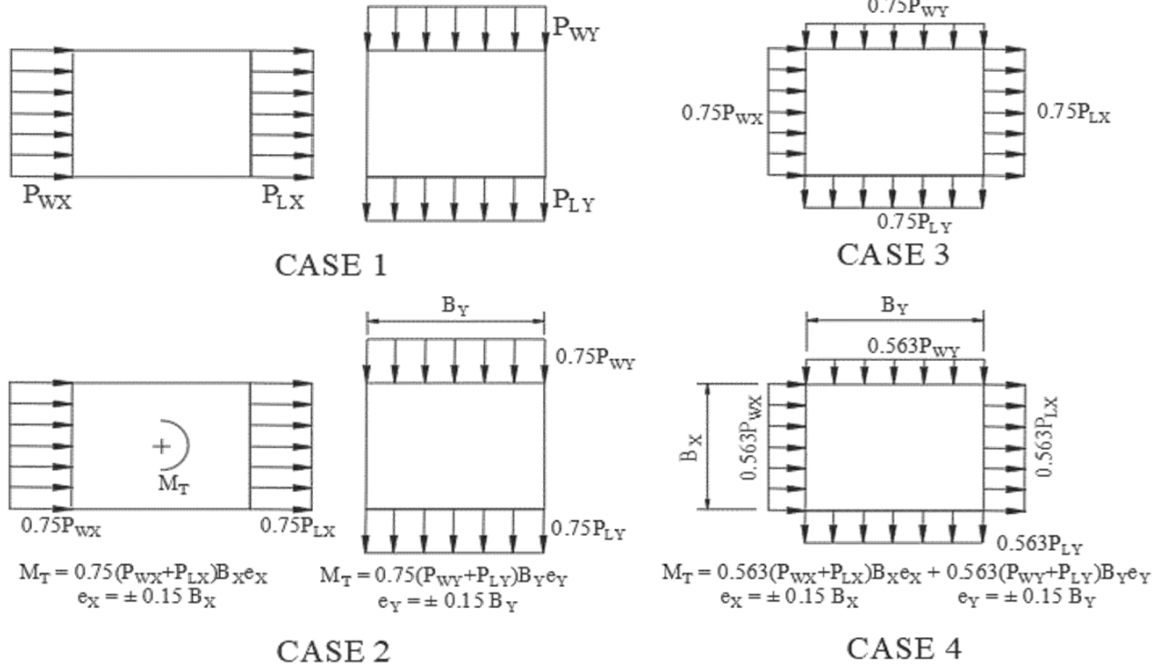
Windward parapet: 38.1 psf (GCpn = +1.5)
 Leeward parapet: -25.4 psf (GCpn = -1.0)

Windward Wall Pressures at "z" (psf)

z	Kz	Kzt	Windward Wall			Combined WW + LW	
			qzGCp	w/+qiGCpi	w/-qhGCpi	Wind Normal to Ridge	Wind Parallel to Ridge
0 to 15'	0.85	1.00	13.0	8.4	17.7	24.0	23.5
21.0 ft	0.91	1.00	14.0	9.4	18.6	24.9	24.5
31.5 ft	0.99	1.00	15.3	10.6	19.9	26.2	25.7
42.0 ft	1.05	1.00	16.2	11.6	20.8	27.1	26.7
52.5 ft	1.11	1.00	17.0	12.4	21.6	27.9	27.5
h= 60.3 ft	1.14	1.00	17.5	12.9	22.1	28.4	28.0
60.0 ft	1.14	1.00	17.5	12.8	22.1	28.4	28.0
h= 60.3 ft	1.14	1.00	17.5	12.9	22.1	28.4	28.0
ridge = 63.3 ft	1.15	1.00	17.7	13.0	22.3	28.6	28.2



NOTE: ASCE 7 requires the application of full and partial loading of the wind pressures per the 4 cases below.



Wind Forces at Floors

Total Floors above grade = 2
 T/Fdn (dist below grade) = 2.0 ft

Building dimension (parallel with ridge) = 121.0 ft
 Building dimension (normal to ridge) = 110.0 ft
 L is the building dimension parallel to the wind direction

$e = 18.15$ ft
 $e = 16.50$ ft

Level	Elevation Above Grade (ft)	Height of Centroid to Fdn (ft)	Wind Normal to Ridge						Wind Parallel to Ridge			
			L	B	Area (sf)	Applied Force (k)	Story Shear (k)	Overturning Moment (k')	Area	Applied Force (k)	Story Shear (k)	Overturning Moment (k')
Equip, etc	66.00	68.00	wind on equip, screenwalls, etc =						0			
Parapet	56.50	0.00							0.0			
T/Ridge	67.20	66.60	110.0	121.0	629.2	9.4			286.0	8.1		
Roof	62.00	64.00	110.0	121.0	1,331.0	38.0	49.4	32.5	1,210.0	34.0	42.1	21.1 Roof
2	40.00	42.00	110.0	121.0	2,541.0	68.5	117.9	1,119.4	2,310.0	61.3	103.4	947.3 2
1	20.00	22.00	110.0	121.0	2,420.0	60.0	177.9	3,478.2	2,200.0	53.6	157.0	3,015.2 1
GRD		2.00							7,037.0			
FDN		0.00							7,392.8			
									6,154.7 GRD			
									6,468.7 FDN			

Ultimate Wind Pressures

Wind Loads - Components & Cladding : Alternate design 60'<h<90'

Base pressure (qh) = 25.7 psf	Kh = 1.138	400.0 ft	30.0 ft
Minimum parapet ht = 1.0 ft	h = 60.3 ft	400.0 ft	
Roof Angle (θ) = 22.6 deg	a = 11.0 ft	400.0 ft	
Type of roof = Gable	GCpi = +/-0.18		
	qi = qh = 25.7 psf		

Roof

Area	Surface Pressure (psf)								350 sf	User input	
	2 sf	4 sf	10 sf	20 sf	50 sf	100 sf	150 sf	300 sf		50 sf	200 sf
Negative Zone 1 & 2e	-43.20	-43.20	-43.20	-43.20	-37.1	-32.5	-29.8	-25.2	-25.2	-37.1	-27.9
Negative Zone 2n, 2r & 3e	-68.90	-68.90	-68.90	-60.40	-49.1	-40.5	-35.5	-35.5	-35.5	-49.1	-35.5
Negative Zone 3r	-97.20	-97.20	-80.40	-67.70	-50.9	-50.9	-50.9	-50.9	-50.9	-50.9	-50.9
Positive All Zones	22.60	20.80	18.40	16.60	16.0	16.0	16.0	16.0	16.0	16.0	16.0
Overhang Zone 1 & 2e	-51.40	-51.40	-51.40	-51.40	-49.7	-48.4	-47.6	-46.3	-46.3	-49.7	-47.1
Overhang Zone 2n & 2r	-77.20	-77.20	-77.20	-71.90	-64.9	-59.7	-56.6	-56.6	-56.6	-64.9	-56.6
Overhang Zone 3e	-92.60	-92.60	-92.60	-80.10	-63.5	-51.0	-43.7	-43.7	-43.7	-63.5	-43.7
Overhang Zone 3r	-120.90	-120.90	-98.50	-81.50	-59.2	-59.2	-59.2	-59.2	-59.2	-59.2	-59.2

Overhang pressures in the table above assume an internal pressure coefficient (Gcpi) of 0.0
 Overhang soffit pressure equals adj wall pressure (which includes internal pressure of 4.6 psf)

Parapet

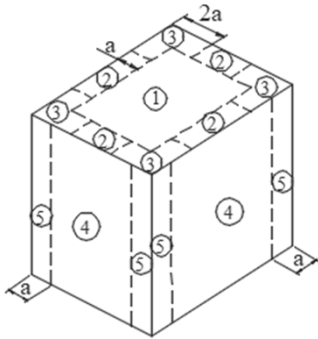
qp = 25.4 psf

Solid Parapet Pressure	Surface Pressure (psf)						500 sf	User input
	4 sf	10 sf	20 sf	50 sf	150 sf	300 sf		50 sf
CASE A: Zone 2e :	63.4	63.4	62.1	54.3	44.9	39.0	38.1	54.3
Zone 2n, 2r & 3e :	88.8	88.8	79.0	66.1	50.5	49.2	48.2	66.1
Zone 3r :	116.7	100.1	86.2	67.9	65.8	64.4	63.4	67.9
CASE B: Interior zone :	-53.3	-53.3	-50.6	-47.0	-42.7	-40.0	-38.1	-47.0
Corner zone :	-60.9	-60.9	-56.8	-51.5	-45.1	-41.0	-38.1	-51.5

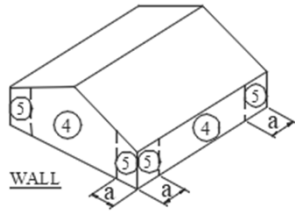
Walls

Area	GCp +/- GCpi				Surface Pressure at h				User input	
	10 sf	100 sf	200 sf	500 sf	10 sf	100 sf	200 sf	500 sf	20 sf	50 sf
Negative Zone 4	-1.28	-1.10	-1.05	-0.98	-32.9	-28.4	-27.0	-25.2	-31.6	-29.7
Negative Zone 5	-1.58	-1.23	-1.12	-0.98	-40.6	-31.6	-28.8	-25.2	-37.9	-34.3
Positive Zone 4 & 5	1.18	1.00	0.95	0.88	30.3	25.8	24.4	22.6	29.0	27.2

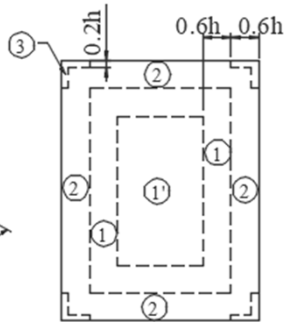
Location of C&C Wind Pressure Zones - ASCE 7-16



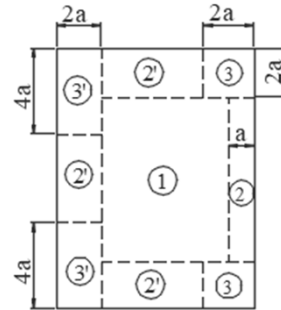
Roofs w/ $\theta \leq 10^\circ$
 and all walls
 $h > 60'$



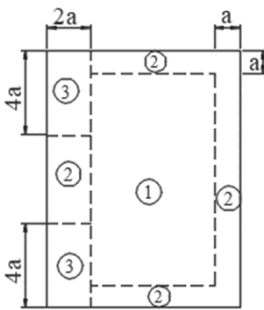
Walls $h \leq 60'$
 & alt design $h < 90'$



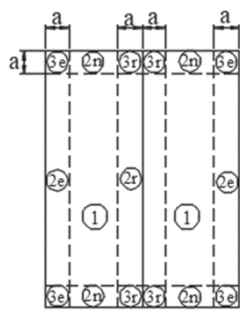
Multispan Gable & Sawtooth $\leq 10^\circ$
 and Gable $\theta \leq 7$ degrees &
 Monoslope ≤ 3 degrees
 $h \leq 60'$ & alt design $h < 90'$



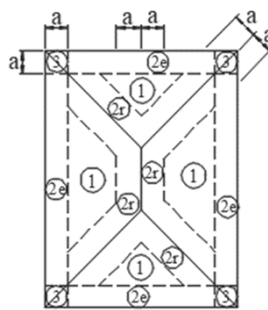
Monoslope roofs
 $3^\circ < \theta \leq 10^\circ$
 $h \leq 60'$ & alt design $h < 90'$



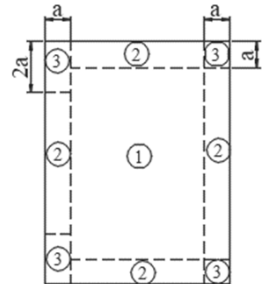
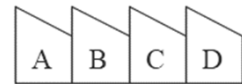
Monoslope roofs
 $10^\circ < \theta \leq 30^\circ$
 $h \leq 60'$ & alt design $h < 90'$



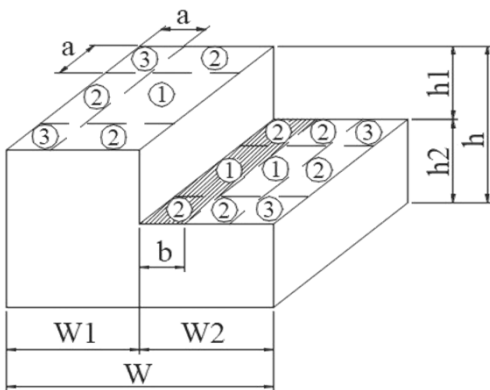
Multispan Gable $> 10^\circ$
 & Gable $7^\circ < \theta \leq 45^\circ$



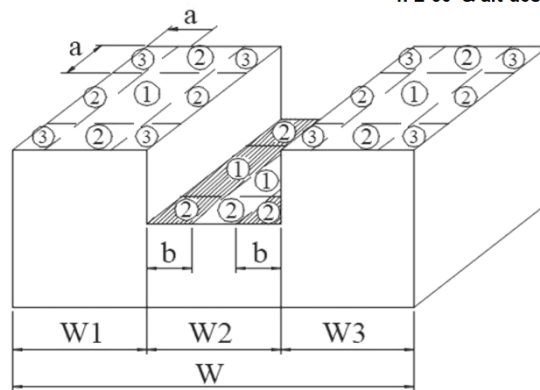
Hip $7^\circ < \theta \leq 27^\circ$



Sawtooth $10^\circ < \theta \leq 45^\circ$
 $h \leq 60'$ & alt design $h < 90'$



Stepped roofs $\theta \leq 3^\circ$
 $h \leq 60'$ & alt design $h < 90'$



Note: The hatched area indicates where roof positive pressures are equal to the adjacent wall positive pressure.

Note: The stepped roof zones above are as shown in ASCE 7-16. Prior editions didn't show zones, but the notes sent you to the low slope gable figure. The note in ASCE 7-16 still sends you to the low slope gable figure, but for some reason the zones shown are per editions prior to ASCE 7-16. Therefore, the above zones may be a code mistake and the correct zone locations may be per the low slope gable roof shown at the top of this page.

Calculation Package

104. SEISMIC LOADS

Seismic Loads:

IBC 2021

Strength Level Forces

Risk Category : II
 Importance Factor (Ie) : 1.00
 Site Class : C

Ss (0.2 sec) = 0.30 g Fa = 1.300
 S1 (1.0 sec) = 0.06 g Fv = 1.500

Sms = 0.390 0.300
 Sm1 = 0.083 0.072

S_{DS} = 0.200
 S_{D1} = 0.048

Site specific ground motion analysis performed:

Design Category = B
 Design Category = A

Seismic Design Category = **B**
 Redundancy Coefficient ρ = 1.00
 Number of Stories: 5

Structure Type: Light Frame

Horizontal Struct Irregularities: 2) Reentrant Corners
 Vertical Structural Irregularities: No vertical Irregularity

Flexible Diaphragms: Yes

Building System: **Bearing Wall Systems**

Seismic resisting system: **Intermediate reinforced masonry shear walls**

System Structural Height Limit: **Height not limited**
 Actual Structural Height (hn) = 60.3 ft

DESIGN COEFFICIENTS AND FACTORS

Response Modification Coefficient (R) = 3.5
 Over-Strength Factor (Ωo) = 2
 Deflection Amplification Factor (Cd) = 2.25

To = 0.2(Sd1/Sds) = 0.048
 Ts = Sd1/Sds = 0.240
 Long Period Transition Period (TL) = 4 sec

S_{DS} = 0.200
 S_{D1} = 0.048

Seismic Load Effect (E) = Eh +/- Ev = ρ QE +/- 0.2S_{DS} D = Qe +/- 0.000D QE = horizontal seismic force
 Special Seismic Load Effect (Em) = Emh +/- Ev = Ωo QE +/- 0.2S_{DS} D = &G40&"Qe 0.040D D = dead load

ALLOWABLE STORY DRIFT

Structure Type: All other structures

Allowable story drift Δa = 0.020hsx where hsx is the story height below level x

PERMITTED ANALYTICAL PROCEDURES

Index Force Analysis - Method Not Permitted (only applies to Seismic Category A)

Model & Seismic Response Analysis - Permitted (see code for procedure)

Equivalent Lateral-Force (ELF) Analysis - Permitted

Building period coef. (C_T) = 0.020 Cu = 1.70
 Approx fundamental period (Ta) = C_Th_n^x = 0.433 sec x = 0.75 Tmax = CuTa = 0.736 sec
 User calculated fundamental period = T = 0.433 sec

Seismic response coef. (Cs) = Sds/I/R = 0.057
 need not exceed Cs = Sd1 I /RT = 0.032
 but not less than Cs = 0.044Sds*I = 0.010
 USE Cs = 0.032

Design Base Shear V = 0.032W

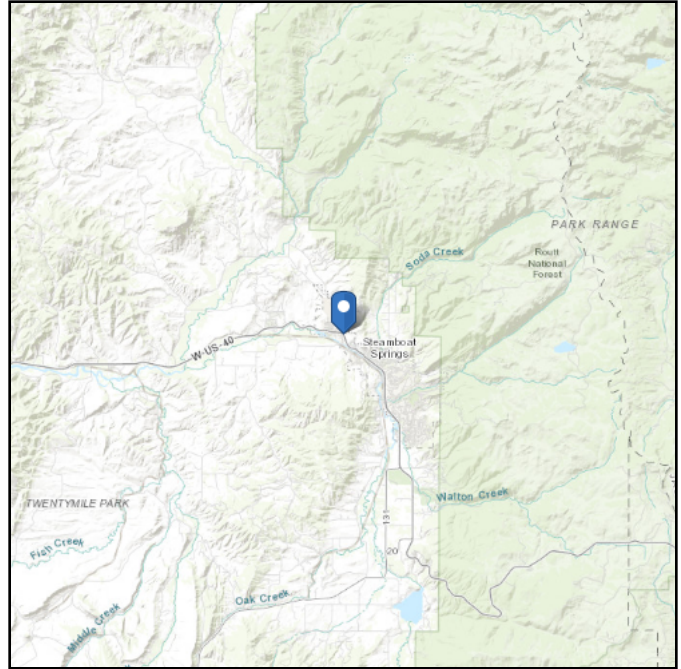
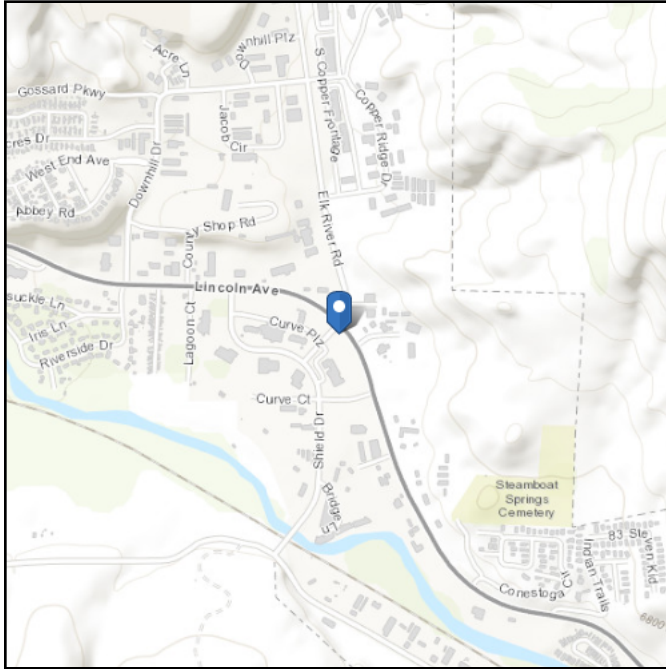


ASCE Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-22
Risk Category: II
Soil Class: C - Very Dense Soil and Soft Rock

Latitude: 40.501621
Longitude: -106.856113
Elevation: 6669.092667095342 ft (NAVD 88)

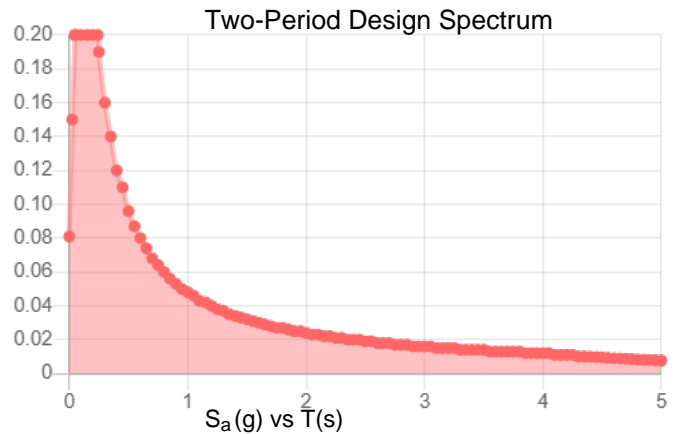
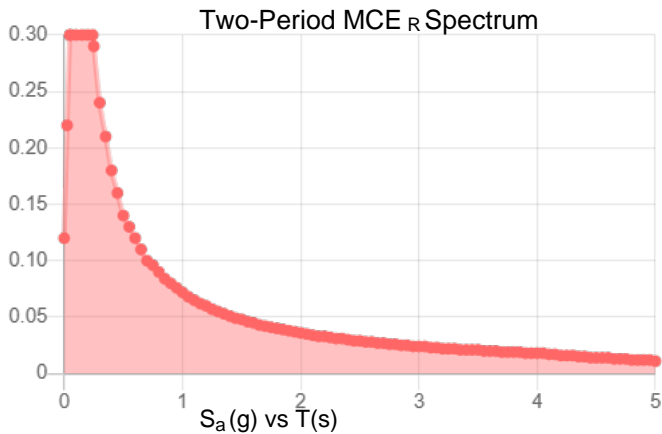
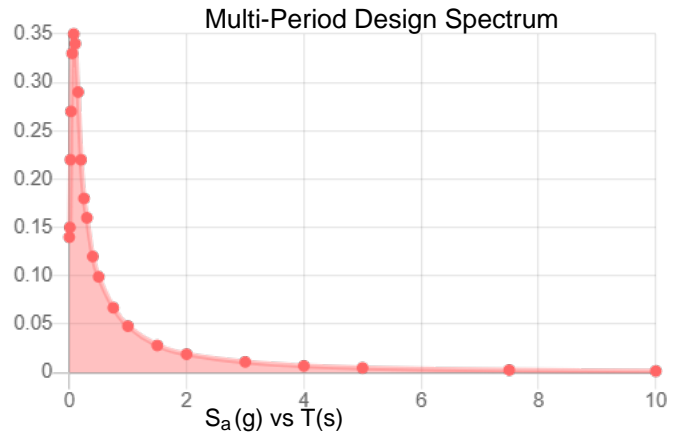
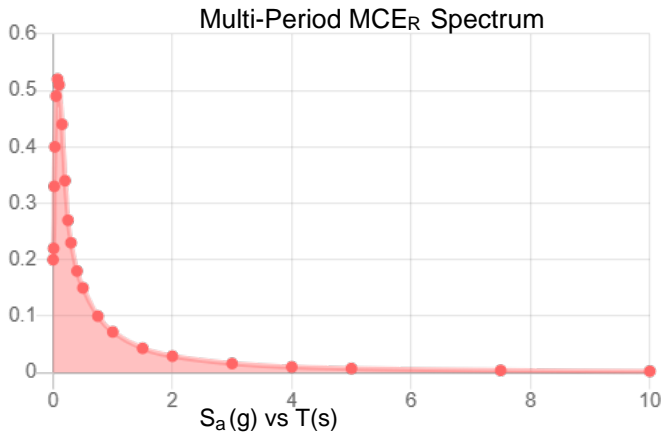


Site Soil Class: C - Very Dense Soil and Soft Rock

Results:

PGA _M :	0.18	T _L :	4
S _{MS} :	0.3	S _S :	0.3
S _{M1} :	0.072	S ₁ :	0.055
S _{DS} :	0.2	V _{S30} :	530
S _{D1} :	0.048		

Seismic Design Category: B



MCE_R Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.

Design Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.



Proudly Serving Rural Routt County * City of Steamboat Springs * Town of Hayden * Town of Oak Creek * Town of Yampa * Routt County School Districts

2021 ICC Building Code Policy Amendment for Seismic Design Category

Policy Effective Date: 06/25/2024 for all Jurisdictions Throughout Routt County Served by Routt County Building Department

The Routt County Regional Building Department has composed a Seismic Design Category Policy Amendment to the Currently Adopted ICC 2021 International Residential Code known as the (2021 IRC) and the 2021 International Building Code known as (2021 IBC). This Policy may also be used retroactively for any projects that were permitted in the past under the 2018 International Residential Code or the 2018 International Building Codes. If an applicant chooses to utilize this Policy on any Building Permits that are already Issued and under construction, then it will be the applicant and Design Professionals responsibilities to submit a full addendum of construction plans along with a narrative composed explaining the changes being requested, and new structural plans documenting the changes to the Seismic Design Category. The new ASCE 7-22 Hazard Map and the 2024 IRC Seismic Design Category Maps have effectively reduced our Seismic Design Categories locally throughout Colorado, but also throughout the State of Colorado.

2021 IRC Policy Code Amendment to Table R301.2(1) Climate and Geographic Design Criteria is Amended to Read as follows.

All Buildings shall be designed in accordance with the attached ICC 2024 International Residential Building Code Section R301.2.2.1 Determination of Seismic Design Category and figure R301.2.2.1(1) for Routt County Colorado. In Addition ASCE 7-22 Hazard Map shall be used as the reference map for all Seismic Design values as required or as needed by the Design Professional.

2021 IBC Section 1613 Earthquake Loads is hereby amended to read as follows:

All buildings or structures shall be designed in accordance with the attached ICC 2024 International Building Code Section 1613 Earthquake Loads in combination with ASCE 7-22 Hazard Map.

Documents Attached Are:

- ICC 2024 International Residential Building Code Section R301.2.2.1
- ICC 2024 International Building Code Section 1613 Earthquake Loads

Sincerely,

A handwritten signature in black ink that reads 'Todd Carr'.

Todd Carr, Building Official
Routt County Building Department

Routt County Regional Building Department

136 6th Street, Ste 201, Steamboat Springs, CO 80487 PH: 970-870-5566 Fax 970-870-5489 Email: Building@co.routt.co.us

CHAPTER 3 BUILDING PLANNING

R301.2.2.1 Determination of seismic design category.

Buildings shall be assigned a seismic design category in accordance with Figures R301.2.2.1(1) through R301.2.2.1(7), except as otherwise required by Section R401.4.

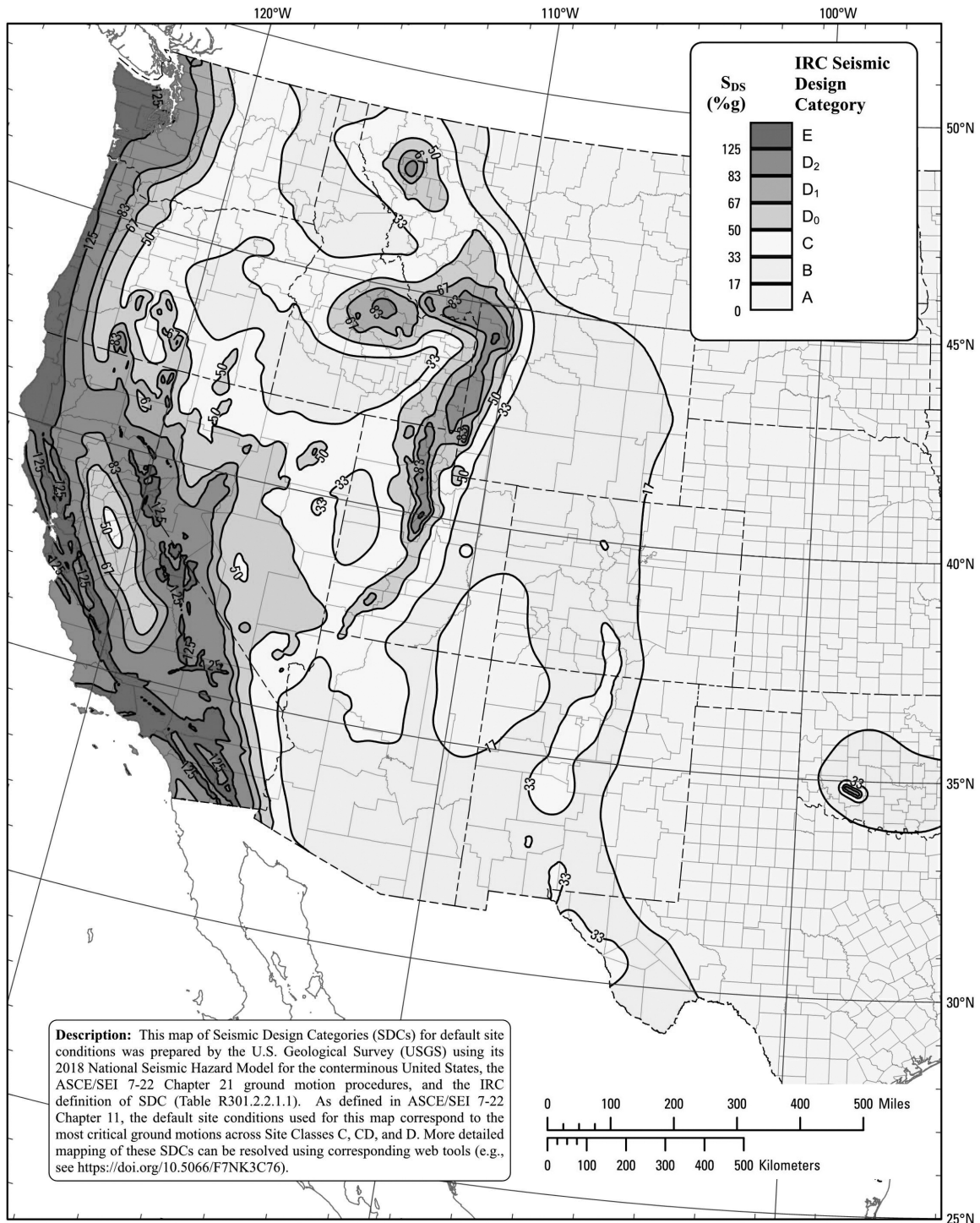


FIGURE R301.2.2.1(1)
SEISMIC DESIGN CATEGORIES FOR DEFAULT SITE CONDITIONS FOR THE CONTERMINOUS UNITED STATES (WESTERN)^a

a. The seismic design categories and corresponding short-period design spectral response accelerations, S_{DS} ,

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SEISMIC DESIGN CATEGORY DETERMINATION

CALCULATED S_{DS}	SEISMIC DESIGN CATEGORY
$S_{DS} \leq 0.17g$	A
$0.17g < S_{DS} \leq 0.33g$	B
$0.33g < S_{DS} \leq 0.50g$	C
$0.50g < S_{DS} \leq 0.67g$	D ₀
$0.67g < S_{DS} \leq 0.83g$	D ₁
$0.83g < S_{DS} \leq 1.25g$	D ₂
$1.25g < S_{DS}$	E

R301.2.2.1.2 Alternative determination of Seismic Design Category E.

Buildings located in *Seismic Design Category E* in accordance with [Figures R301.2.2.1\(1\)](#) through [R301.2.2.1\(7\)](#) are permitted to be reclassified as being in *Seismic Design Category D₂* provided that one of the following is done:

1. A more detailed evaluation of the *seismic design category* is made in accordance with the provisions and maps of the [International Building Code](#). Buildings located in *Seismic Design Category E* in accordance with [Table R301.2.2.1.1](#), but located in *Seismic Design Category D* in accordance with the [International Building Code](#), shall be permitted to be designed using the *Seismic Design Category D₂* requirements of this code.
2. Buildings located in *Seismic Design Category E* that conform to **all** of the following additional restrictions are permitted to be constructed in accordance with the provisions for *Seismic Design Category D₂* of this code:
 - 2.1. All exterior shear wall lines or *braced wall panels* are in one plane vertically from the foundation to the uppermost *story*.
 - 2.2. Floors shall not cantilever past the *exterior walls*.
 - 2.3. The *building* is within the requirements of [Section R301.2.2.6](#) for being considered as regular.

CHAPTER 16 STRUCTURAL DESIGN

SECTION 1613 EARTHQUAKE LOADS

1613.1 Scope.

Every structure, and portion thereof, including nonstructural components that are permanently attached to *structures* and their supports and attachments, shall be designed and constructed to resist the effects of earthquake motions in accordance with Chapters 11, 12, 13, 15, 17 and 18 of [ASCE 7](#), as applicable. The *seismic design category* for a *structure* is permitted to be determined in accordance with [Section 1613](#) or [ASCE 7](#).

Exceptions:

1. Detached one- and two-family *dwellings*, assigned to *Seismic Design Category* A, B or C.
2. The *seismic force-resisting system* of wood-frame *buildings* that conform to the provisions of [Section 2308](#) are not required to be analyzed as specified in this section.
3. Agricultural storage *structures* intended only for incidental human occupancy.
4. *Structures* that require special consideration of their response characteristics and environment that are not addressed by this code or [ASCE 7](#) and for which other regulations provide seismic criteria, such as vehicular bridges, electrical transmission towers, hydraulic *structures*, buried utility lines and their appurtenances and nuclear reactors.
5. References within [ASCE 7](#) to Chapter 14 shall not apply, except as specifically required herein.
6. *Temporary structures* complying with [Section 3103.6.1.4](#).

1613.2 Determination of seismic design category.

Structures shall be assigned to a *seismic design category* based on one of the following methods unless the authority having *jurisdiction* or geotechnical data determines that *Site Class* DE, E or F soils are present at the site:

1. Based on the structure *risk category* using [Figures 1613.2\(1\) through 1613.2\(7\)](#).
2. Determined in accordance with [ASCE 7](#).

Where *Site Class* DE, E or F soils are present, the *seismic design category* shall be determined in accordance with [ASCE 7](#).

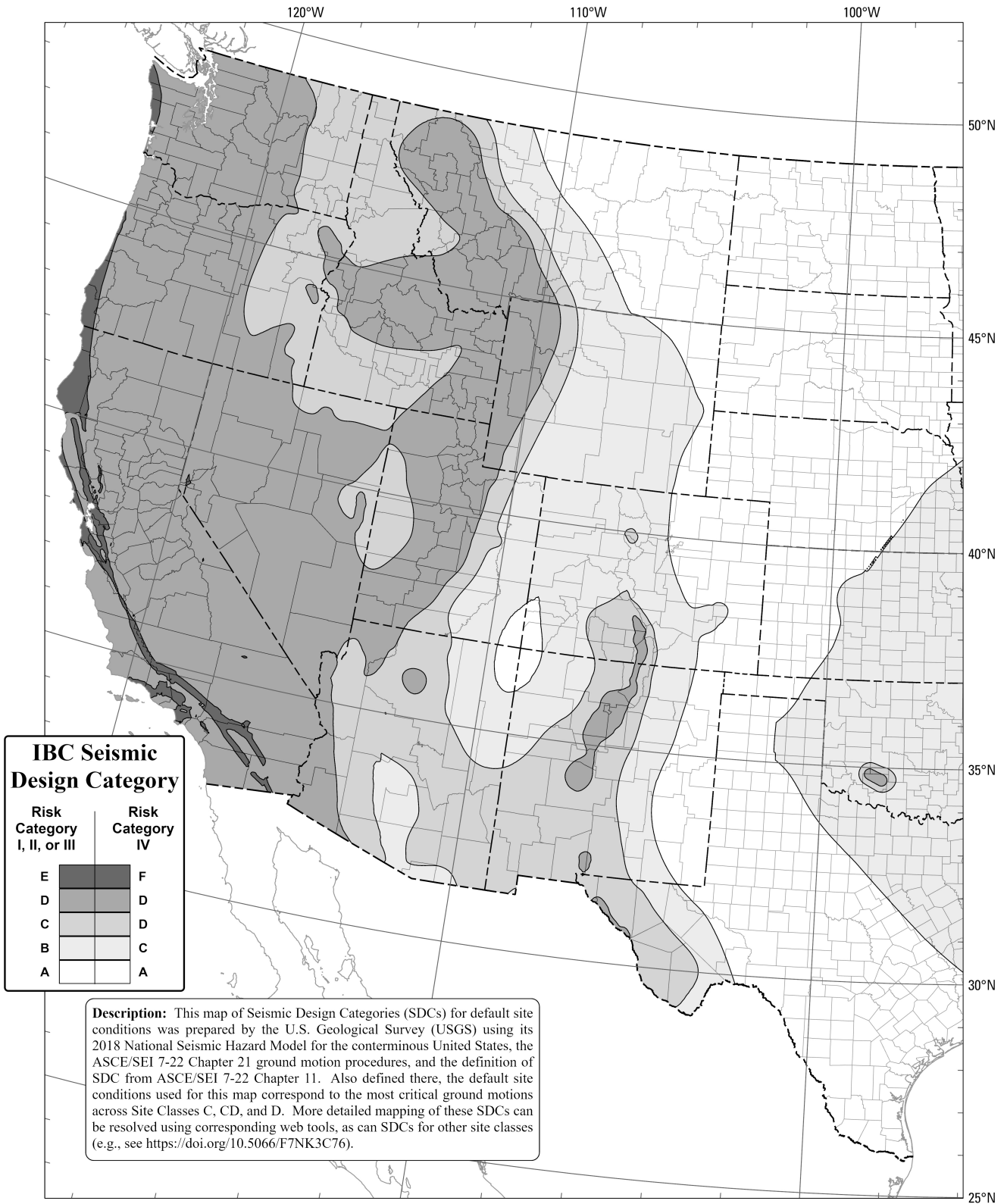


FIGURE 1613.2(1)
SEISMIC DESIGN CATEGORIES FOR DEFAULT SITE CONDITIONS FOR THE CONTERMINOUS UNITED STATES (WESTERN)

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200. FOUNDATIONS

Calculation Package

200 Foundation Calculation Index:

Narrative	200
Foundation Finite Element Analysis	201

Calculation Package

200. NARRATIVE

The foundation system for this structure is spread and continuous footings for both the gravity and lateral systems based on the criteria summarized in Section 100 and shown in detail in the Geotechnical report included in Appendix A-100.

Gravity and lateral loads to the foundation were determined using hand calculations and in house spreadsheets based on loads as prescribed by section 100. A summary of gravity and lateral foundation demands is included in Section 201 of these calculations.

Gravity and lateral foundation elements were analyzed using RAM Concept. Reference Section 201 of these calculations for detailed analysis of foundation elements. Additionally, a summary report is included which indicates the soil bearing pressures and strength demands for the foundation elements.

Calculation Package

201. FOUNDATION FINITE ELEMENT ANALYSIS

Materials

Concrete Mix

Mix Name	Density (pcf)	Density For Loads (pcf)	f'ci (psi)	f'c (psi)	f'ci (psi)	f'cu (psi)	Poissons Ratio	Thermal Exp. Coeff	Ec Calc	User Eci (psi)	User Ec (psi)
3000 psi	150	150	3000	3000	3725	3725	0.2	5.556e-6	Code	2500000	3000000
4000 psi	150	150	3000	4000	3725	4975	0.2	5.556e-6	Code	2500000	3000000
5000 psi	150	150	3000	5000	3725	6399	0.2	5.556e-6	Code	2500000	3000000
6000 psi	150	150	3000	6000	3725	7450	0.2	5.556e-6	Code	2500000	3000000

PT Systems

System Name	Strand	Duct	Anchor	fse (ksi)	Long-Term Losses (ksi)	Min Radius (feet)
1/2" Unbonded	1/2" 7-Wire Strand	1/2" Unbonded Sheathing	Monostrand Anchor	175	22	6
0.6" Unbonded	0.6" 7-Wire Strand	0.6" Unbonded Sheathing	Monostrand Anchor	175	22	8
1/2" Bonded Flat Duct	1/2" 7-Wire Strand	1/2" Bonded Flat Duct	Flat Duct Anchor	175	22	6
0.6" Bonded Flat Duct	0.6" 7-Wire Strand	0.6" Bonded Flat Duct	Flat Duct Anchor	175	22	8

Strand Materials

Strand Name	Aps (in ²)	Eps (ksi)	fpy (ksi)	fpu (ksi)
1/2" 7-Wire Strand	0.153	28000	243	270
0.6" 7-Wire Strand	0.217	28000	243	270

Duct Systems

Duct Name	Type	Shape	Material	Duct Height (inches)	Duct Width (inches)	Max Strands Per Duct	Wobble Friction (1/feet)	Angular Friction (1/radians)
1/2" Unbonded Sheathing	unbonded	Round	Tightly Sheathed	0.5	0.5	1	0.0014	0.07
0.6" Unbonded Sheathing	unbonded	Round	Tightly Sheathed	0.6	0.6	1	0.0014	0.07
1/2" Bonded Flat Duct	bonded	Flat	Corrugated Plastic	1	3	5	0.0002	0.14
0.6" Bonded Flat Duct	bonded	Flat	Corrugated Plastic	1	3	4	0.0002	0.14

Anchor Systems

Anchor Name	Type	Jacking Stress (ksi)	Anchor Friction	Seating Distance (inches)
Monostrand Anchor	Monostrand	216	0	0.25
Flat Duct Anchor	Flat Multi-Plane	216	0.02	0.25

Materials (2)

Reinforcing Bars

<i>Bar Name</i>	<i>As (in²)</i>	<i>Es (ksi)</i>	<i>Fy (ksi)</i>	<i>Coating</i>	<i>Straight Ld/Db</i>	<i>90 Hook Ld/Db</i>	<i>180 Hook Ld/Db</i>
#3	0.11	29000	60	None	Code	Code	Code
#4	0.2	29000	60	None	Code	Code	Code
#5	0.31	29000	60	None	Code	Code	Code
#6	0.44	29000	60	None	Code	Code	Code
#7	0.6	29000	60	None	Code	Code	Code
#8	0.79	29000	60	None	Code	Code	Code
#9	1	29000	60	None	Code	Code	Code
#10	1.27	29000	60	None	Code	Code	Code
#11	1.56	29000	60	None	Code	Code	Code

SSR Systems

<i>SSR System Name</i>	<i>Stud Area (in²)</i>	<i>Head Area (in²)</i>	<i>Min Clear Head Spacing (inches)</i>	<i>Specified Stud Spacing (inches)</i>	<i>Fy (ksi)</i>	<i>Stud Spacing Rounding Increment (inches)</i>	<i>Min Studs Per Rail</i>	<i>System Type</i>
3/8" SSR	0.11	1.11	0.5	infinite	50	0.25	2	Rail
1/2" SSR	0.196	1.96	0.5	infinite	50	0.25	2	Rail
5/8" SSR	0.307	3.07	0.5	infinite	50	0.25	2	Rail
3/4" SSR	0.442	4.42	0.5	infinite	50	0.25	2	Rail

Loadings

<i>Loading Name</i>	<i>Type</i>	<i>Analysis</i>	<i>On-Pattern Factor</i>	<i>Off-Pattern Factor</i>
Self-Dead Loading	Self-Weight	Normal	1	1
Balance Loading	Balance	Normal	1	1
Hyperstatic Loading	Hyperstatic	Hyperstatic	1	1
Temporary Construction (At Stressing) Loading	Stressing Dead	Normal	1	1
Other Dead Loading	Dead	Normal	1	1
Live (Reducible) Loading	Live (Reducible)	Normal	1	0
Live (Unreducible) Loading	Live (Unreducible)	Normal	1	0
Live (Storage) Loading	Live (Storage)	Normal	1	0
Live (Parking) Loading	Live (Parking)	Normal	1	0
Live (Roof) Loading	Live (Roof)	Normal	1	0
Snow Loading	Service Snow	Normal	1	1
Ultimate Wind North Loading	Ultimate Wind 1	Normal	1	1
Ultimate Wind East Loading	Ultimate Wind 2	Normal	1	1
Ultimate Seismic North Loading	Ultimate Seismic 1	Normal	1	1
Ultimate Seismic East Loading	Ultimate Seismic 2	Normal	1	1

Load Combinations

All Dead LC

Active Design Criteria: <none>

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Other Dead Loading	1

Dead + Balance LC

Active Design Criteria: <none>

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1

Initial Service LC

Active Design Criteria: Initial Service Design

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1.13
Temporary Construction (At Stressing) Loading	1

Service LC: D + L

Active Design Criteria: User Minimum Design, Code Minimum Design, Service Design, Soil Bearing Design

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1
Live (Reducible) Loading	1
Live (Unreducible) Loading	1
Live (Storage) Loading	1
Live (Parking) Loading	1

Service LC: D

Active Design Criteria: User Minimum Design, Code Minimum Design, Service Design, Soil Bearing Design

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1

Load Combinations (2)

Service LC: D + Lr

Active Design Criteria: User Minimum Design, Code Minimum Design, Service Design, Soil Bearing Design

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1
Live (Roof) Loading	1

Service LC: D + S

Active Design Criteria: User Minimum Design, Code Minimum Design, Service Design, Soil Bearing Design

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1
Snow Loading	1

Service LC: D + 0.75L + 0.75Lr

Active Design Criteria: User Minimum Design, Code Minimum Design, Service Design, Soil Bearing Design

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1
Live (Reducible) Loading	0.75
Live (Unreducible) Loading	0.75
Live (Storage) Loading	0.75
Live (Parking) Loading	0.75
Live (Roof) Loading	0.75

Service LC: D + 0.75L + 0.75S

Active Design Criteria: User Minimum Design, Code Minimum Design, Service Design, Soil Bearing Design

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1
Live (Reducible) Loading	0.75
Live (Unreducible) Loading	0.75
Live (Storage) Loading	0.75
Live (Parking) Loading	0.75
Snow Loading	0.75

Load Combinations (3)

Service Wind LC: D + 0.6W

Active Design Criteria: Soil Bearing Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: 0.6

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1

Service Wind LC: D - 0.6W

Active Design Criteria: Soil Bearing Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: -0.6

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1

Service Wind LC: D + 0.75L + 0.75Lr + 0.45W

Active Design Criteria: Soil Bearing Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: 0.45

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1
Live (Reducible) Loading	0.75
Live (Unreducible) Loading	0.75
Live (Storage) Loading	0.75
Live (Parking) Loading	0.75
Live (Roof) Loading	0.75

Service Wind LC: D + 0.75L + 0.75Lr - 0.45W

Active Design Criteria: Soil Bearing Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: -0.45

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1
Live (Reducible) Loading	0.75
Live (Unreducible) Loading	0.75
Live (Storage) Loading	0.75
Live (Parking) Loading	0.75
Live (Roof) Loading	0.75

Load Combinations (4)

Service Wind LC: $D + 0.75L + 0.75S + 0.45W$

Active Design Criteria: Soil Bearing Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: 0.45

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1
Live (Reducible) Loading	0.75
Live (Unreducible) Loading	0.75
Live (Storage) Loading	0.75
Live (Parking) Loading	0.75
Snow Loading	0.75

Service Wind LC: $D + 0.75L + 0.75S - 0.45W$

Active Design Criteria: Soil Bearing Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: -0.45

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1
Live (Reducible) Loading	0.75
Live (Unreducible) Loading	0.75
Live (Storage) Loading	0.75
Live (Parking) Loading	0.75
Snow Loading	0.75

Service Wind LC: $0.6D + 0.6W$

Active Design Criteria: Soil Bearing Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: 0.6

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	0.6
Balance Loading	1
Other Dead Loading	0.6

Service Wind LC: $0.6D - 0.6W$

Active Design Criteria: Soil Bearing Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: -0.6

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	0.6
Balance Loading	1
Other Dead Loading	0.6

Load Combinations (5)

Service Seismic LC: D + 0.7E

Active Design Criteria: Soil Bearing Design

Analysis: Zero-Tension

Key Lateral Loading: Seismic-Ultimate Standard Factor: 0.7

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1

Service Seismic LC: D - 0.7E

Active Design Criteria: Soil Bearing Design

Analysis: Zero-Tension

Key Lateral Loading: Seismic-Ultimate Standard Factor: -0.7

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1

Service Seismic LC: D + 0.75L + 0.75S + 0.525E

Active Design Criteria: Soil Bearing Design

Analysis: Zero-Tension

Key Lateral Loading: Seismic-Ultimate Standard Factor: 0.525

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1
Live (Reducible) Loading	0.75
Live (Unreducible) Loading	0.75
Live (Storage) Loading	0.75
Live (Parking) Loading	0.75
Snow Loading	0.75

Service Seismic LC: D + 0.75L + 0.75S - 0.525E

Active Design Criteria: Soil Bearing Design

Analysis: Zero-Tension

Key Lateral Loading: Seismic-Ultimate Standard Factor: -0.525

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1
Live (Reducible) Loading	0.75
Live (Unreducible) Loading	0.75
Live (Storage) Loading	0.75
Live (Parking) Loading	0.75
Snow Loading	0.75

Load Combinations (6)

Service Seismic LC: 0.6D + 0.7E

Active Design Criteria: Soil Bearing Design

Analysis: Zero-Tension

Key Lateral Loading: Seismic-Ultimate Standard Factor: 0.7

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	0.6
Balance Loading	1
Other Dead Loading	0.6

Service Seismic LC: 0.6D - 0.7E

Active Design Criteria: Soil Bearing Design

Analysis: Zero-Tension

Key Lateral Loading: Seismic-Ultimate Standard Factor: -0.7

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	0.6
Balance Loading	1
Other Dead Loading	0.6

Sustained Service LC

Active Design Criteria: Sustained Service Design

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1
Balance Loading	1
Other Dead Loading	1
Live (Reducible) Loading	0.5
Live (Unreducible) Loading	0.5
Live (Storage) Loading	1
Live (Parking) Loading	0.5
Live (Roof) Loading	0.5

Factored LC: 1.4D

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1.4
Hyperstatic Loading	1
Other Dead Loading	1.4

Factored LC: 0.9D

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	0.9
Hyperstatic Loading	1
Other Dead Loading	0.9

Load Combinations (7)

Factored LC: $1.2D + 1.6L + 0.5Lr$

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1.2
Hyperstatic Loading	1
Other Dead Loading	1.2
Live (Reducible) Loading	1.6
Live (Unreducible) Loading	1.6
Live (Storage) Loading	1.6
Live (Parking) Loading	1.6
Live (Roof) Loading	0.5

Factored LC: $1.2D + 1.6L + 0.5S$

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1.2
Hyperstatic Loading	1
Other Dead Loading	1.2
Live (Reducible) Loading	1.6
Live (Unreducible) Loading	1.6
Live (Storage) Loading	1.6
Live (Parking) Loading	1.6
Snow Loading	0.5

Factored LC: $0.9D + 1.6L + 0.5Lr$

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	0.9
Hyperstatic Loading	1
Other Dead Loading	0.9
Live (Reducible) Loading	1.6
Live (Unreducible) Loading	1.6
Live (Storage) Loading	1.6
Live (Parking) Loading	1.6
Live (Roof) Loading	0.5

Load Combinations (8)

Factored LC: $0.9D + 1.6L + 0.5S$

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	0.9
Hyperstatic Loading	1
Other Dead Loading	0.9
Live (Reducible) Loading	1.6
Live (Unreducible) Loading	1.6
Live (Storage) Loading	1.6
Live (Parking) Loading	1.6
Snow Loading	0.5

Factored LC: $1.2D + f1L + 1.6Lr$

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1.2
Hyperstatic Loading	1
Other Dead Loading	1.2
Live (Reducible) Loading	0.5
Live (Unreducible) Loading	1
Live (Storage) Loading	1
Live (Parking) Loading	1
Live (Roof) Loading	1.6

Factored LC: $1.2D + f1L + 1.6S$

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1.2
Hyperstatic Loading	1
Other Dead Loading	1.2
Live (Reducible) Loading	0.5
Live (Unreducible) Loading	1
Live (Storage) Loading	1
Live (Parking) Loading	1
Snow Loading	1.6

Load Combinations (9)

Factored LC: $0.9D + f1L + 1.6Lr$

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

<u>Loading</u>	<u>Standard Factor</u>
Self-Dead Loading	0.9
Hyperstatic Loading	1
Other Dead Loading	0.9
Live (Reducible) Loading	0.5
Live (Unreducible) Loading	1
Live (Storage) Loading	1
Live (Parking) Loading	1
Live (Roof) Loading	1.6

Factored LC: $0.9D + f1L + 1.6S$

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

<u>Loading</u>	<u>Standard Factor</u>
Self-Dead Loading	0.9
Hyperstatic Loading	1
Other Dead Loading	0.9
Live (Reducible) Loading	0.5
Live (Unreducible) Loading	1
Live (Storage) Loading	1
Live (Parking) Loading	1
Snow Loading	1.6

Factored Wind LC: $1.2D + f1L + 0.5Lr + 1.0W$

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: 1

<u>Loading</u>	<u>Standard Factor</u>
Self-Dead Loading	1.2
Hyperstatic Loading	1
Other Dead Loading	1.2
Live (Reducible) Loading	0.5
Live (Unreducible) Loading	1
Live (Storage) Loading	1
Live (Parking) Loading	1
Live (Roof) Loading	0.5

Load Combinations (10)

Factored Wind LC: $1.2D + f1L + 0.5Lr - 1.0W$

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: -1

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1.2
Hyperstatic Loading	1
Other Dead Loading	1.2
Live (Reducible) Loading	0.5
Live (Unreducible) Loading	1
Live (Storage) Loading	1
Live (Parking) Loading	1
Live (Roof) Loading	0.5

Factored Wind LC: $1.2D + f1L + 0.5S + 1.0W$

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: 1

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1.2
Hyperstatic Loading	1
Other Dead Loading	1.2
Live (Reducible) Loading	0.5
Live (Unreducible) Loading	1
Live (Storage) Loading	1
Live (Parking) Loading	1
Snow Loading	0.5

Factored Wind LC: $1.2D + f1L + 0.5S - 1.0W$

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: -1

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1.2
Hyperstatic Loading	1
Other Dead Loading	1.2
Live (Reducible) Loading	0.5
Live (Unreducible) Loading	1
Live (Storage) Loading	1
Live (Parking) Loading	1
Snow Loading	0.5

Load Combinations (11)

Factored Wind LC: $1.2D + 1.6Lr + 0.5W$

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: 0.5

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1.2
Hyperstatic Loading	1
Other Dead Loading	1.2
Live (Roof) Loading	1.6

Factored Wind LC: $1.2D + 1.6Lr - 0.5W$

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: -0.5

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1.2
Hyperstatic Loading	1
Other Dead Loading	1.2
Live (Roof) Loading	1.6

Factored Wind LC: $1.2D + 1.6S + 0.5W$

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: 0.5

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1.2
Hyperstatic Loading	1
Other Dead Loading	1.2
Snow Loading	1.6

Factored Wind LC: $1.2D + 1.6S - 0.5W$

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: -0.5

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1.2
Hyperstatic Loading	1
Other Dead Loading	1.2
Snow Loading	1.6

Load Combinations (12)

Factored Wind LC: 0.9D + W

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: 1

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	0.9
Hyperstatic Loading	1
Other Dead Loading	0.9

Factored Wind LC: 0.9D - W

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

Key Lateral Loading: Wind-Ultimate Standard Factor: -1

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	0.9
Hyperstatic Loading	1
Other Dead Loading	0.9

Factored Seismic LC: 1.2D + f1L + 0.2S + E

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

Key Lateral Loading: Seismic-Ultimate Standard Factor: 1

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1.2
Hyperstatic Loading	1
Other Dead Loading	1.2
Live (Reducible) Loading	0.5
Live (Unreducible) Loading	1
Live (Storage) Loading	1
Live (Parking) Loading	1
Snow Loading	0.2

Factored Seismic LC: 1.2D + f1L + 0.2S - E

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

Key Lateral Loading: Seismic-Ultimate Standard Factor: -1

<i>Loading</i>	<i>Standard Factor</i>
Self-Dead Loading	1.2
Hyperstatic Loading	1
Other Dead Loading	1.2
Live (Reducible) Loading	0.5
Live (Unreducible) Loading	1
Live (Storage) Loading	1
Live (Parking) Loading	1
Snow Loading	0.2

Load Combinations (13)

Factored Seismic LC: 0.9D + E

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

Analysis: Zero-Tension

Key Lateral Loading: Seismic-Ultimate Standard Factor: 1

<u>Loading</u>	<u>Standard Factor</u>
Self-Dead Loading	0.9
Hyperstatic Loading	1
Other Dead Loading	0.9

Factored Seismic LC: 0.9D - E

Active Design Criteria: User Minimum Design, Code Minimum Design, Strength Design, Ductility Design

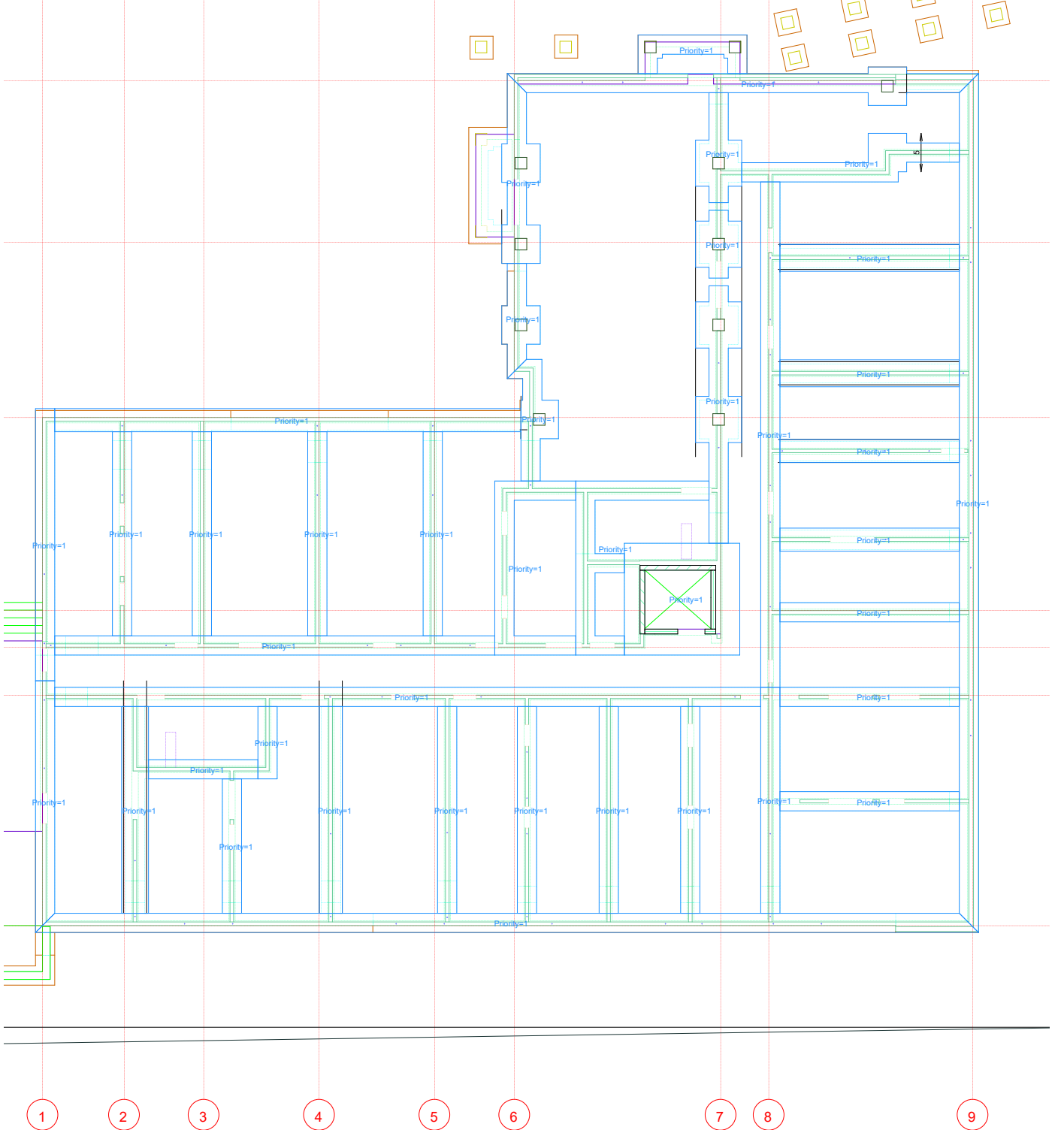
Analysis: Zero-Tension

Key Lateral Loading: Seismic-Ultimate Standard Factor: -1

<u>Loading</u>	<u>Standard Factor</u>
Self-Dead Loading	0.9
Hyperstatic Loading	1
Other Dead Loading	0.9

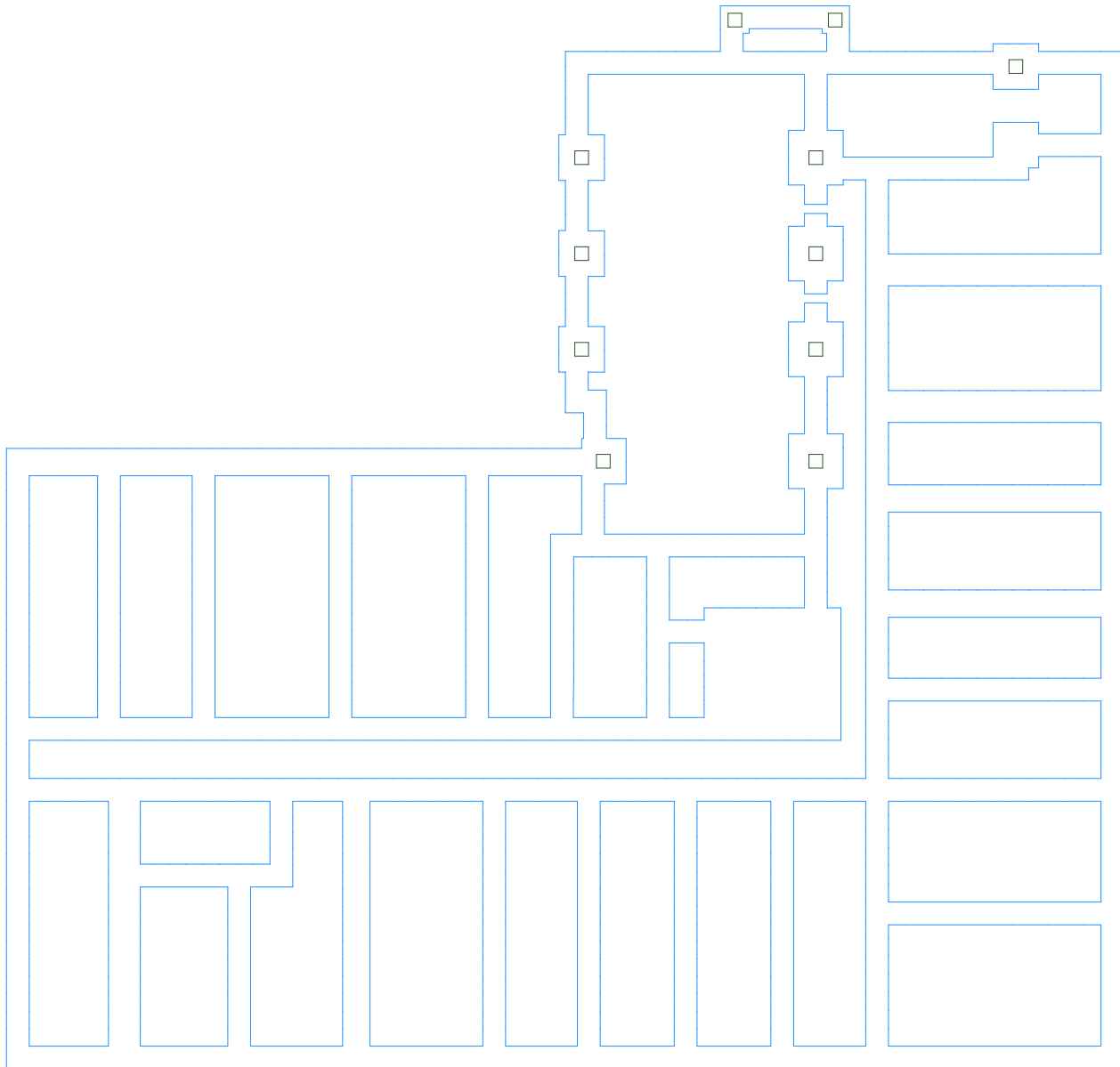
Mesh Input: Standard Plan

Mesh Input: Beams; Beam Priorities; Slab Areas; Slab Area Priorities; Slab Openings; Slab Opening Priorities; Point Supports; Point Support Icons; Line Supports; Line Support Icons; Walls Above; Walls Below; Columns Above; Columns Below; Point Springs; Point Spring Icons; Point Spring Values
Drawing Import: User Notes; User Lines; User Dimensions; S-FNDN-HDLN; A-FLOR-HDLN; A-WALL-PATT; A-WALL-HDLN; S-GRID-IDEN; A-GLAZ; Defpoints; S-COLS; S-COLS-SYMB; A-DETL; S-COLS-HDLN; S-GRID; G-IMPT; S-FNDN; A-DOOR; A-WALL-D-A-FLOR;
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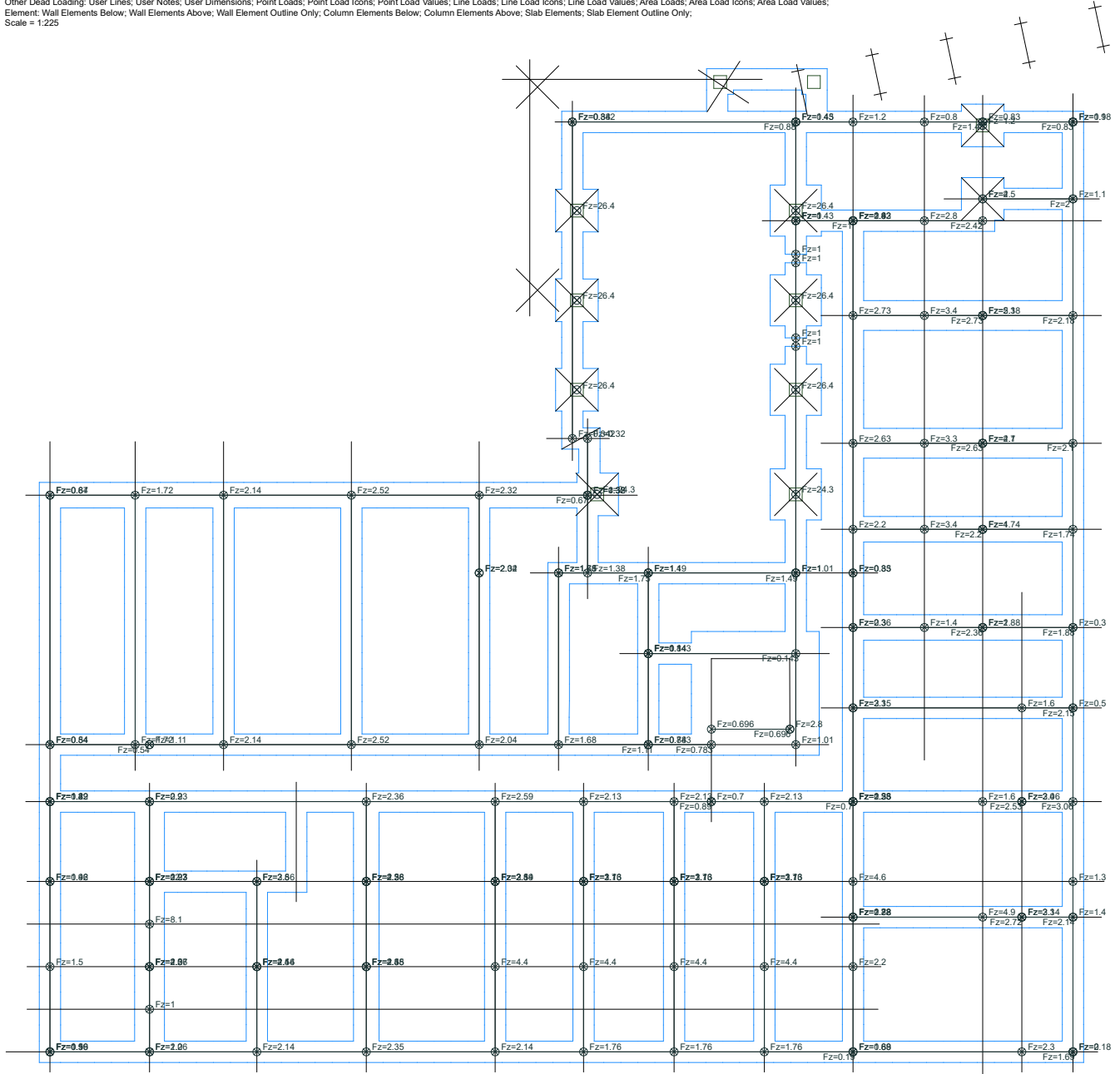
Self-Dead Loading: All Loads Plan

Self-Dead Loading: User Lines; User Notes; User Dimensions; Point Loads; Point Load Icons; Point Load Values; Line Loads; Line Load Icons; Line Load Values; Area Loads; Area Load Icons; Area Load Values;
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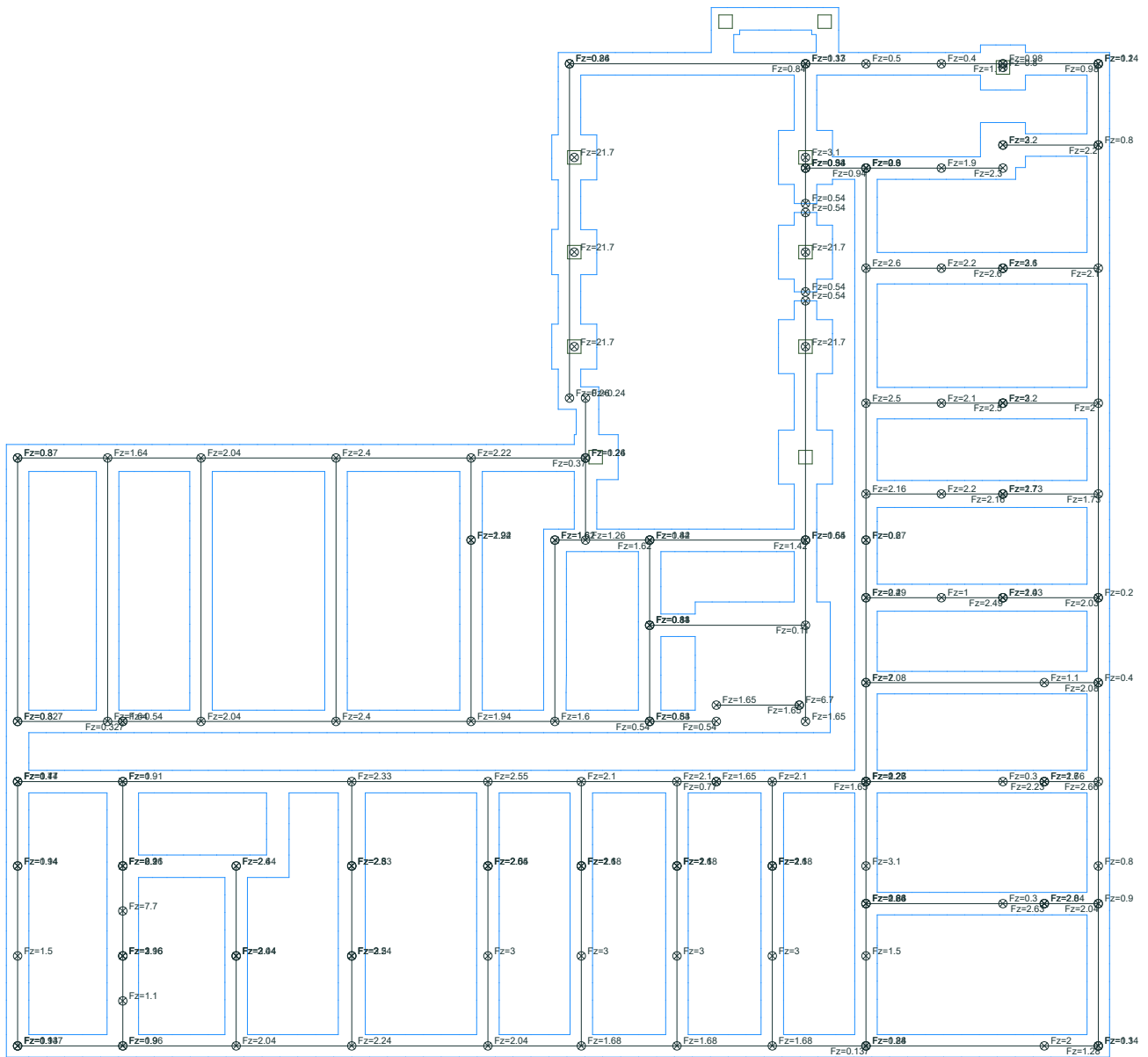
Other Dead Loading: All Loads Plan

Other Dead Loading: User Lines; User Notes; User Dimensions; Point Loads; Point Load Icons; Point Load Values; Line Loads; Line Load Icons; Line Load Values; Area Loads; Area Load Icons; Area Load Values;
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Scale = 1.225



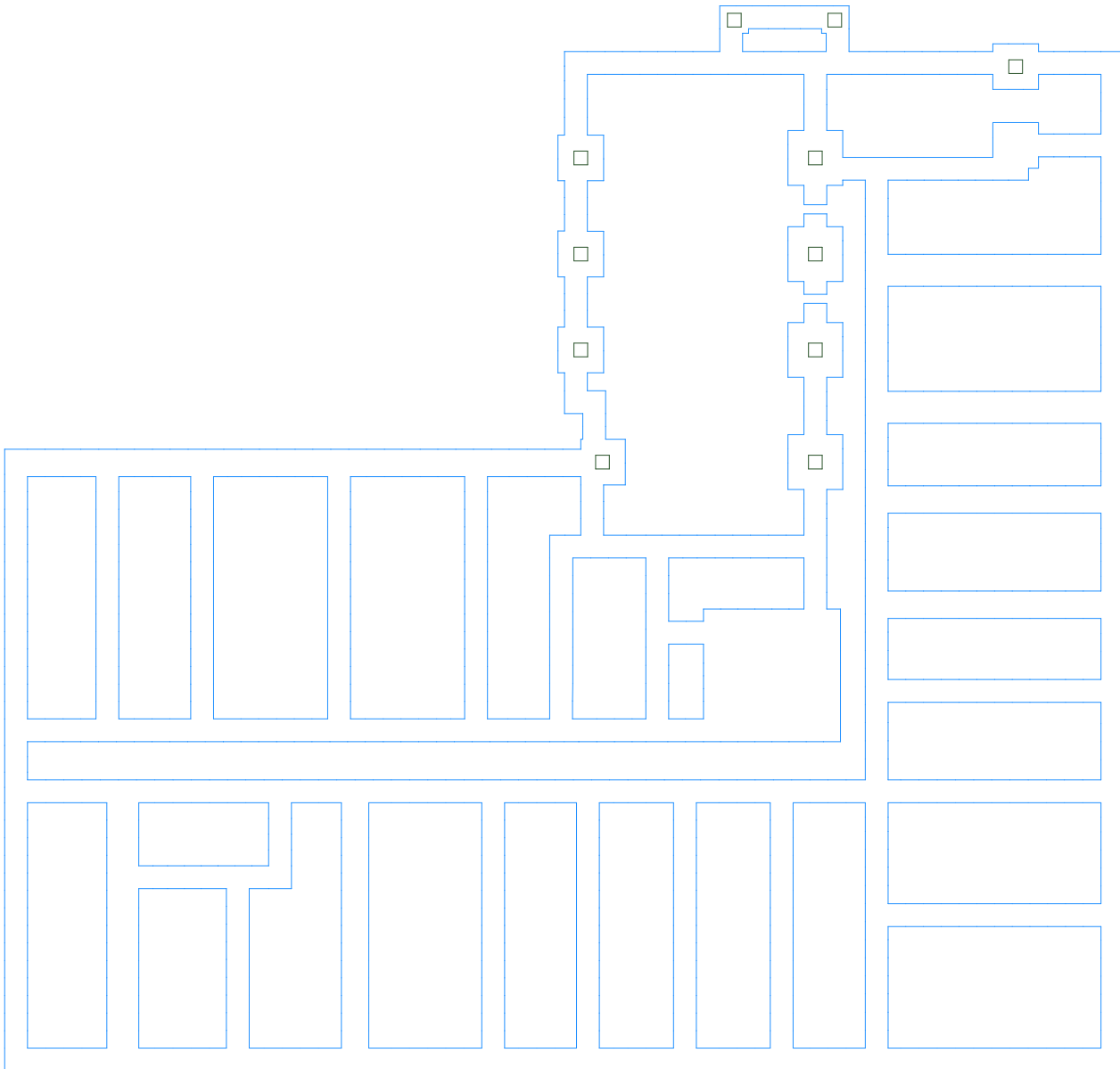
Live (Unreducible) Loading: All Loads Plan

Live (Unreducible) Loading; User Lines; User Notes; User Dimensions; Point Loads; Point Load Icons; Point Load Values; Line Loads; Line Load Icons; Line Load Values; Area Loads; Area Load Icons; Area Load Values;
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 Scale = 1.225



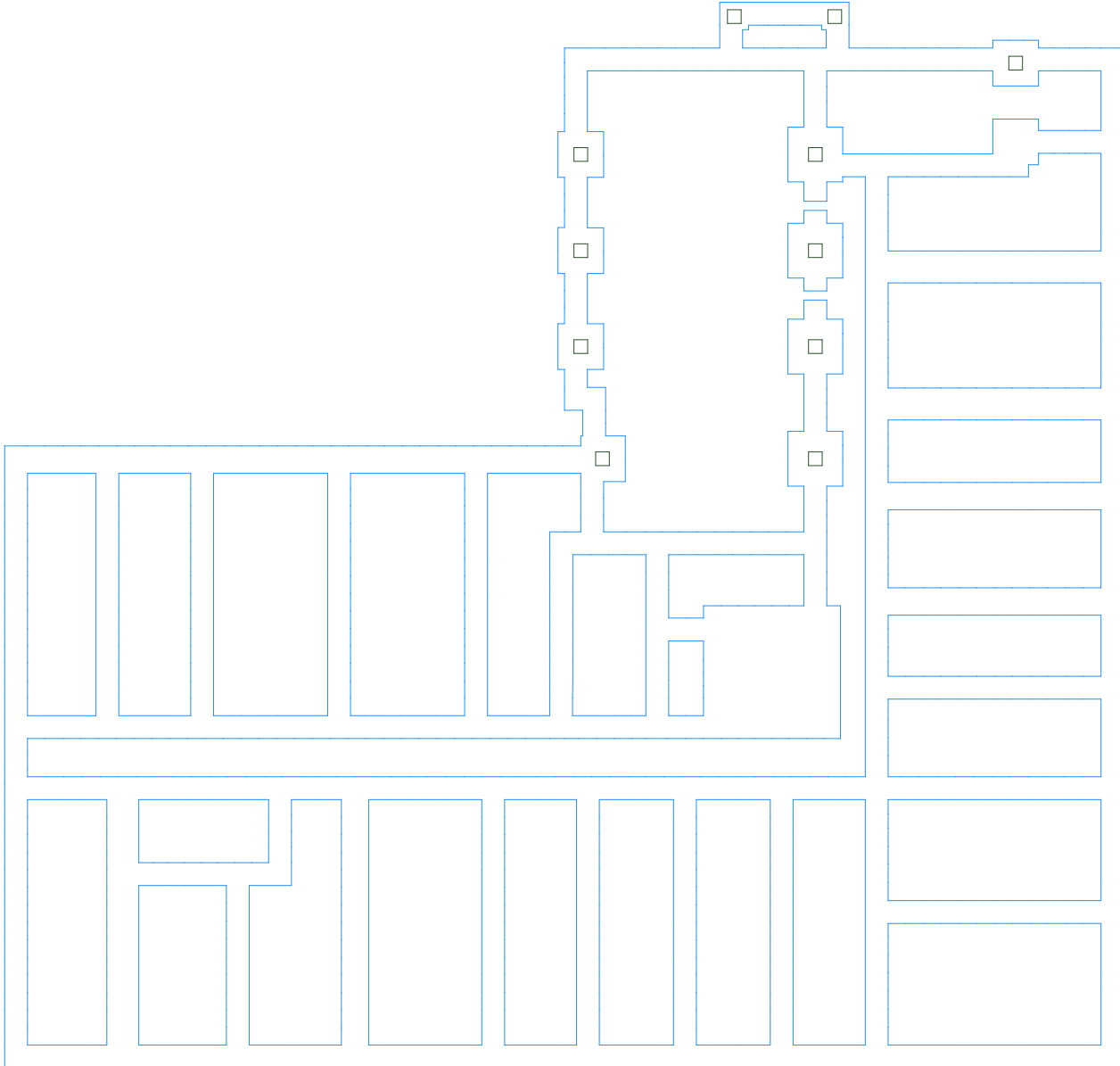
Live (Storage) Loading: All Loads Plan

Live (Storage) Loading: User Lines; User Notes; User Dimensions; Point Loads; Point Load Icons; Point Load Values; Line Loads; Line Load Icons; Line Load Values; Area Loads; Area Load Icons; Area Load Values;
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Scale = 1:225



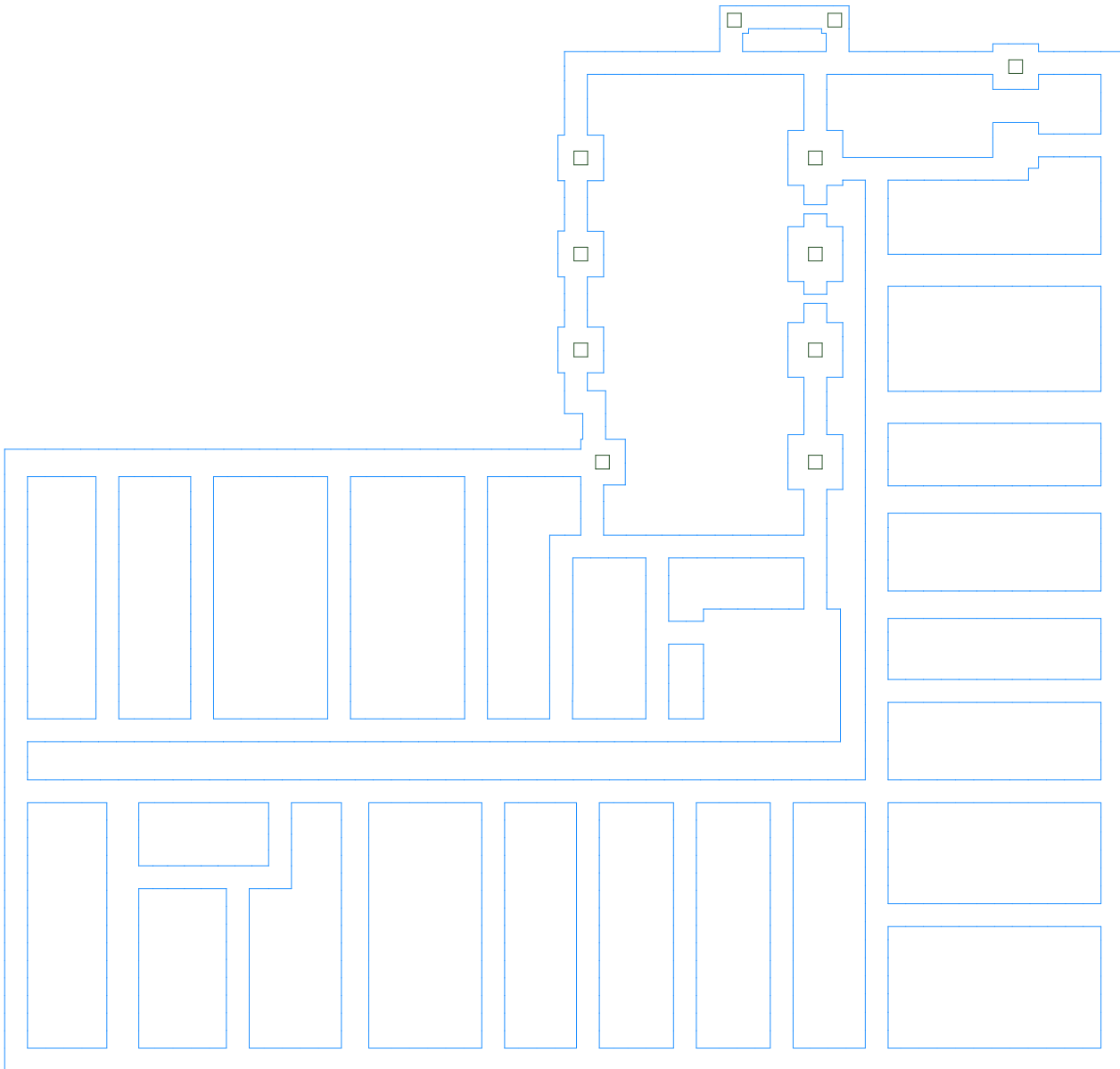
Live (Parking) Loading: All Loads Plan

Live (Parking) Loading: User Lines; User Notes; User Dimensions; Point Loads; Point Load Icons; Point Load Values; Line Loads; Line Load Icons; Line Load Values; Area Loads; Area Load Icons; Area Load Values;
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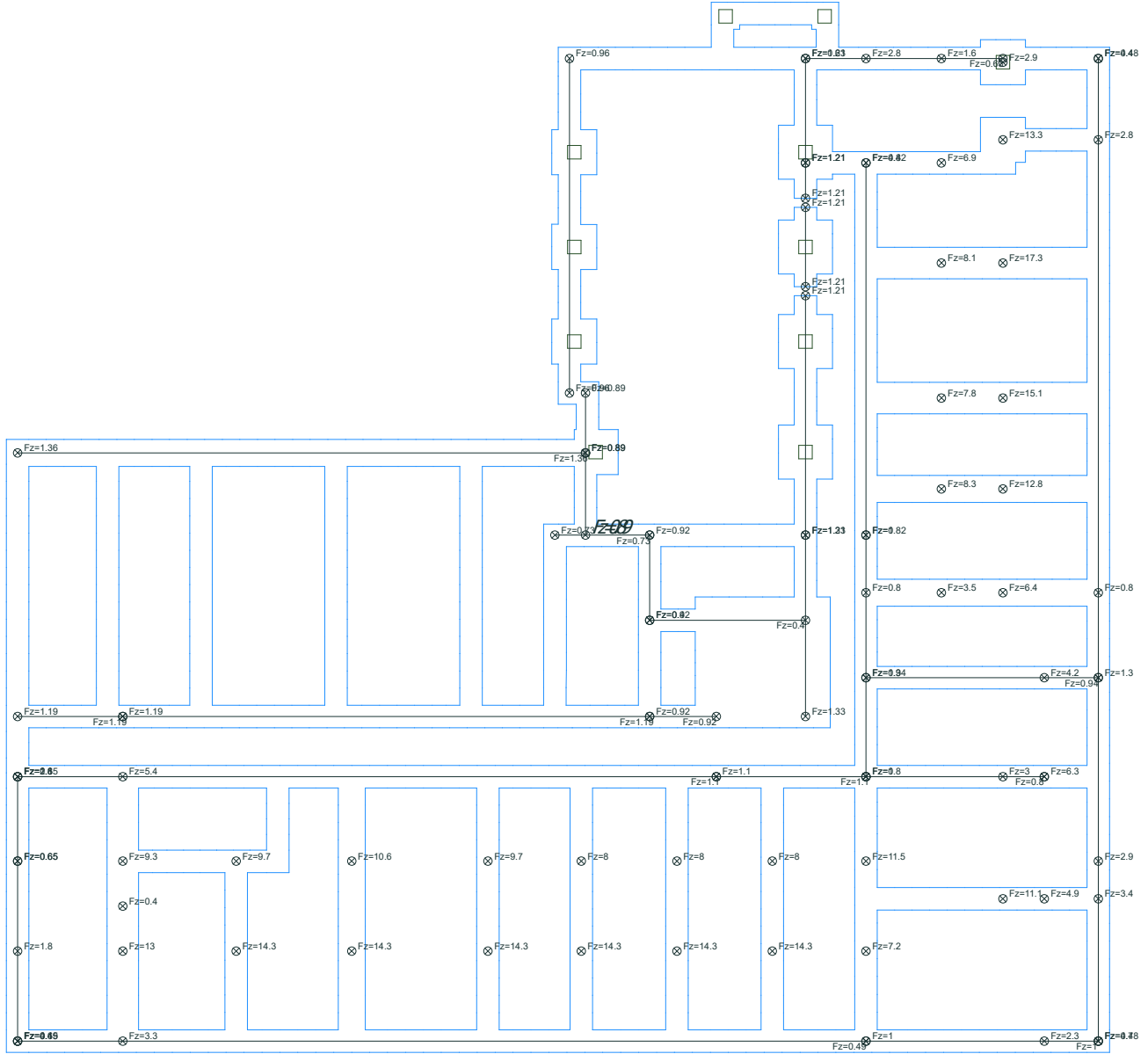
Live (Roof) Loading: All Loads Plan

Live (Roof) Loading: User Lines; User Notes; User Dimensions; Point Loads; Point Load Icons; Point Load Values; Line Loads; Line Load Icons; Line Load Values; Area Loads; Area Load Icons; Area Load Values;
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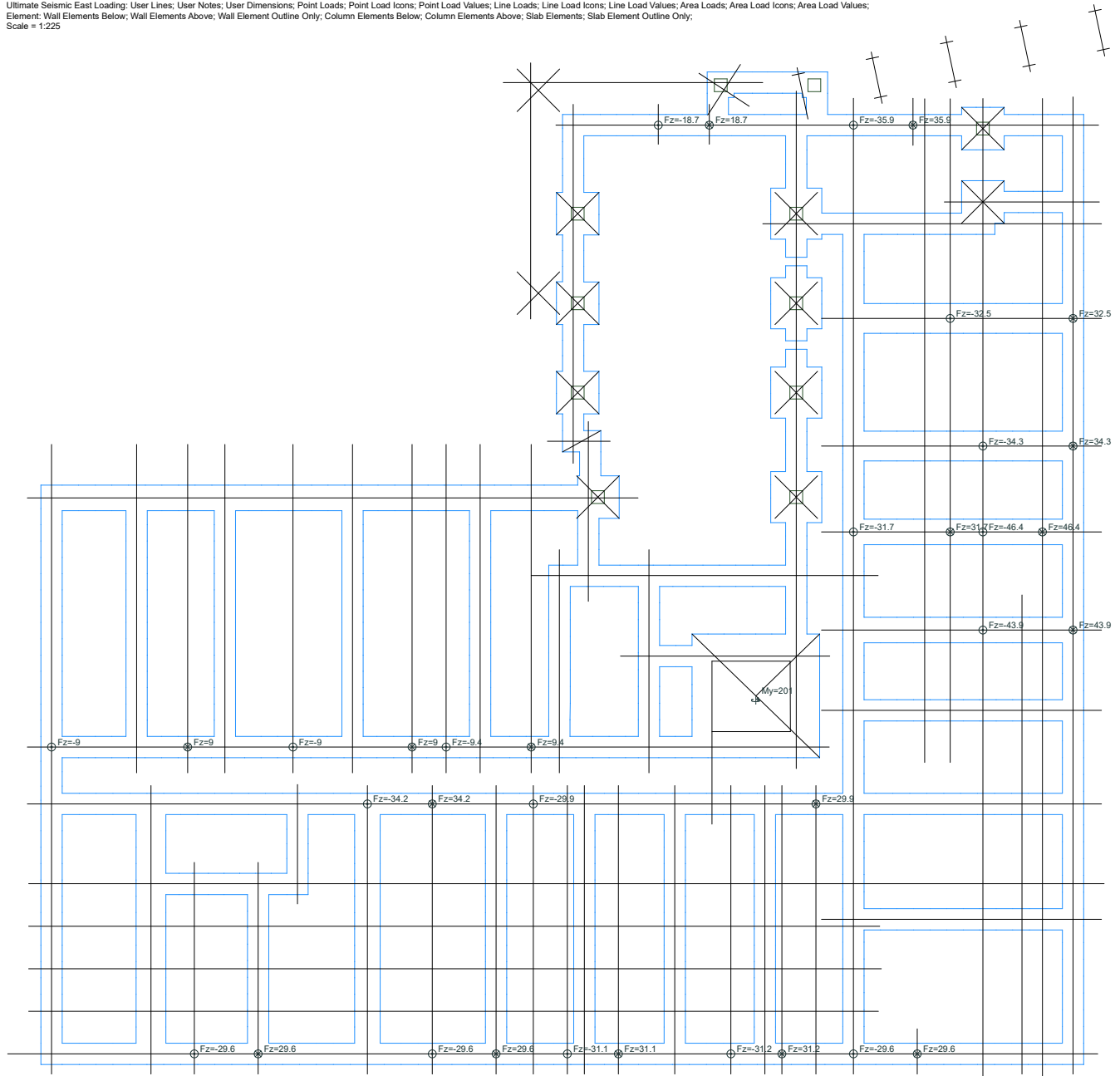
Snow Loading: All Loads Plan

Snow Loading: User Lines; User Notes; User Dimensions; Point Loads; Point Load Icons; Point Load Values; Line Loads; Line Load Icons; Line Load Values; Area Loads; Area Load Icons; Area Load Values;
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Scale = 1.225



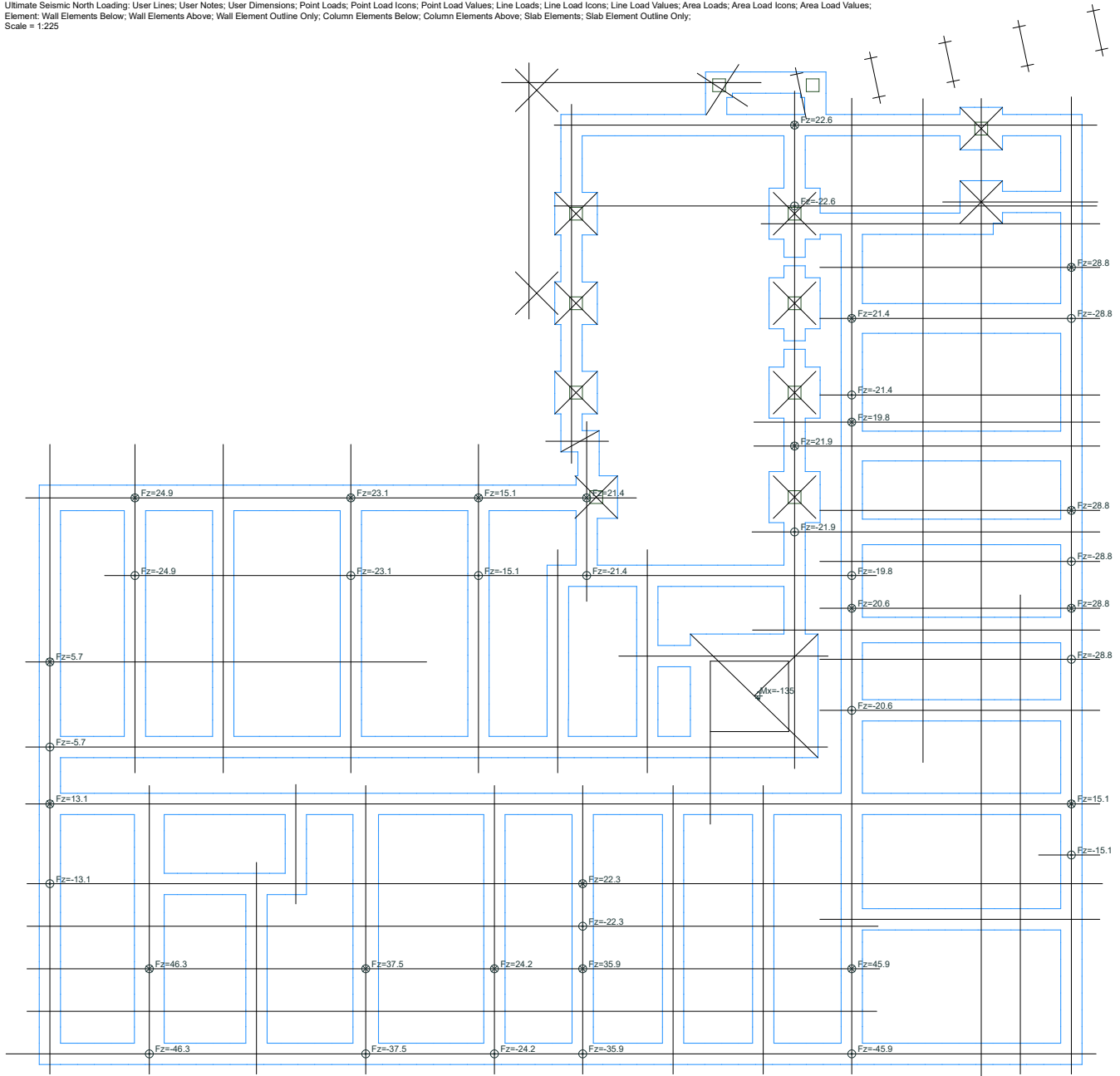
Ultimate Seismic East Loading: All Loads Plan

Ultimate Seismic East Loading: User Lines; User Notes; User Dimensions; Point Loads; Point Load Icons; Point Load Values; Line Loads; Line Load Icons; Line Load Values; Area Loads; Area Load Icons; Area Load Values;
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Scale = 1.225



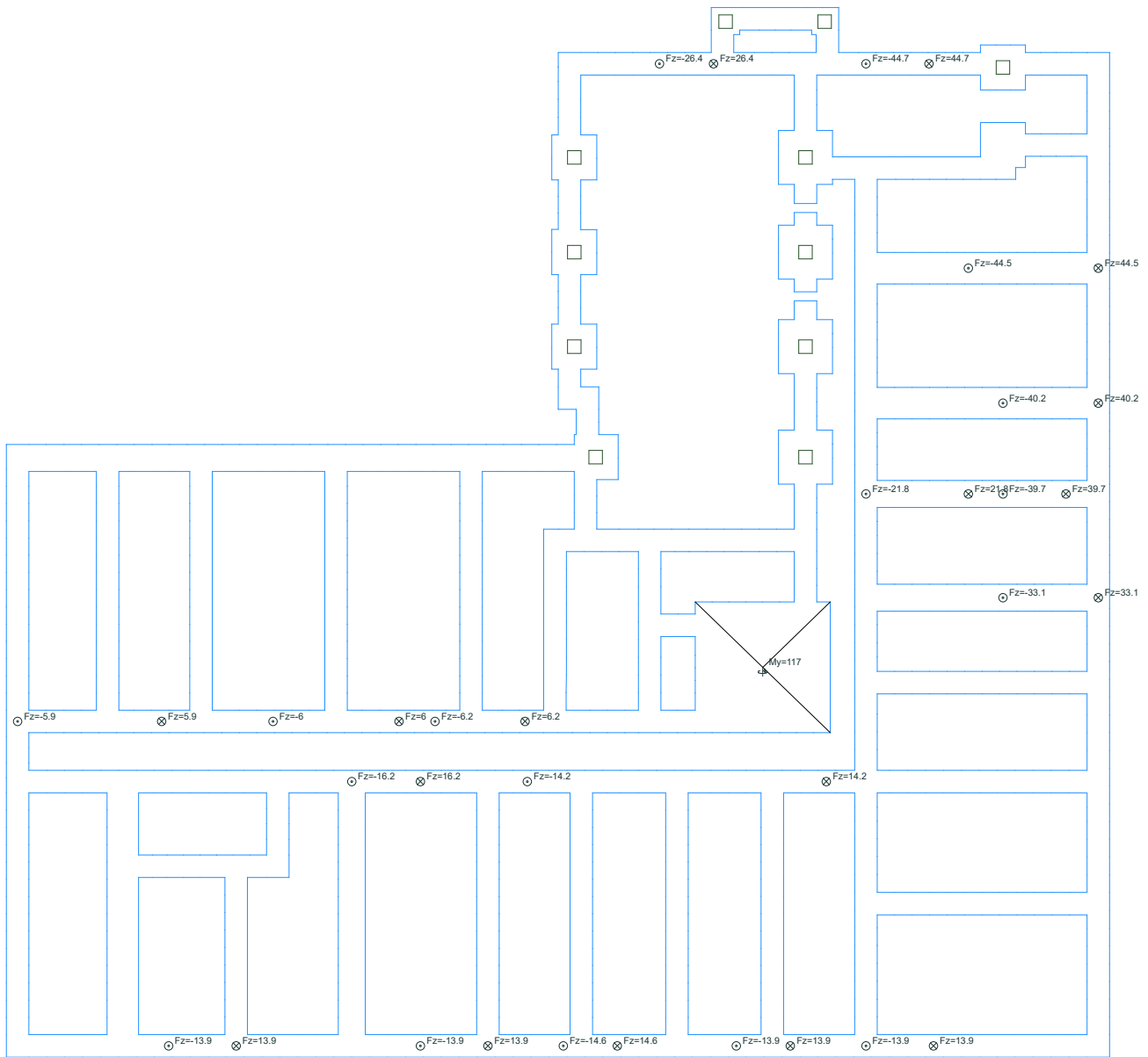
Ultimate Seismic North Loading: All Loads Plan

Ultimate Seismic North Loading: User Lines; User Notes; User Dimensions; Point Loads; Point Load Icons; Point Load Values; Line Loads; Line Load Icons; Line Load Values; Area Loads; Area Load Icons; Area Load Values;
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Scale = 1.225



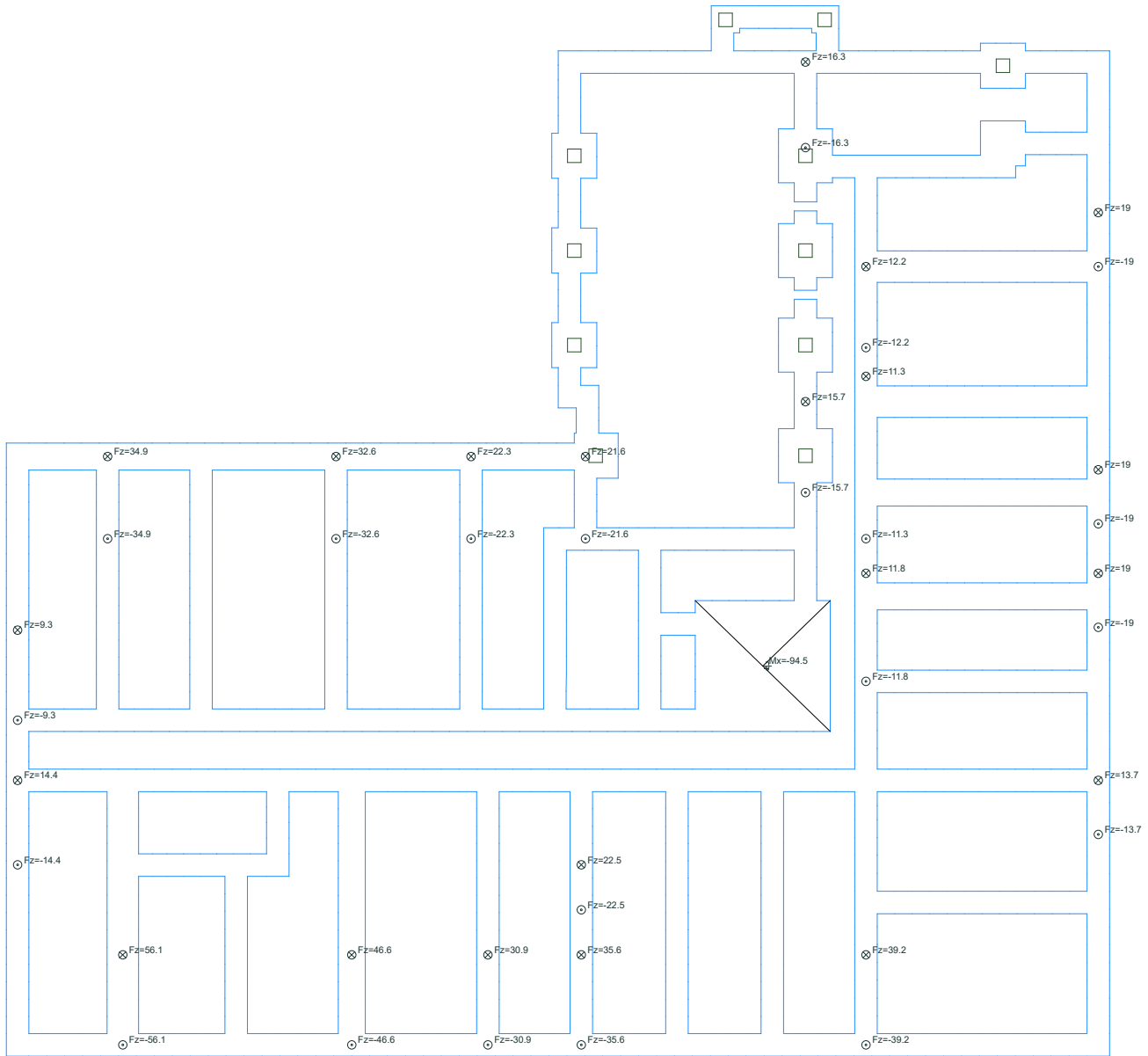
Ultimate Wind East Loading: All Loads Plan

Ultimate Wind East Loading: User Lines; User Notes; User Dimensions; Point Loads; Point Load Icons; Point Load Values; Line Loads; Line Load Icons; Line Load Values; Area Loads; Area Load Icons; Area Load Values;
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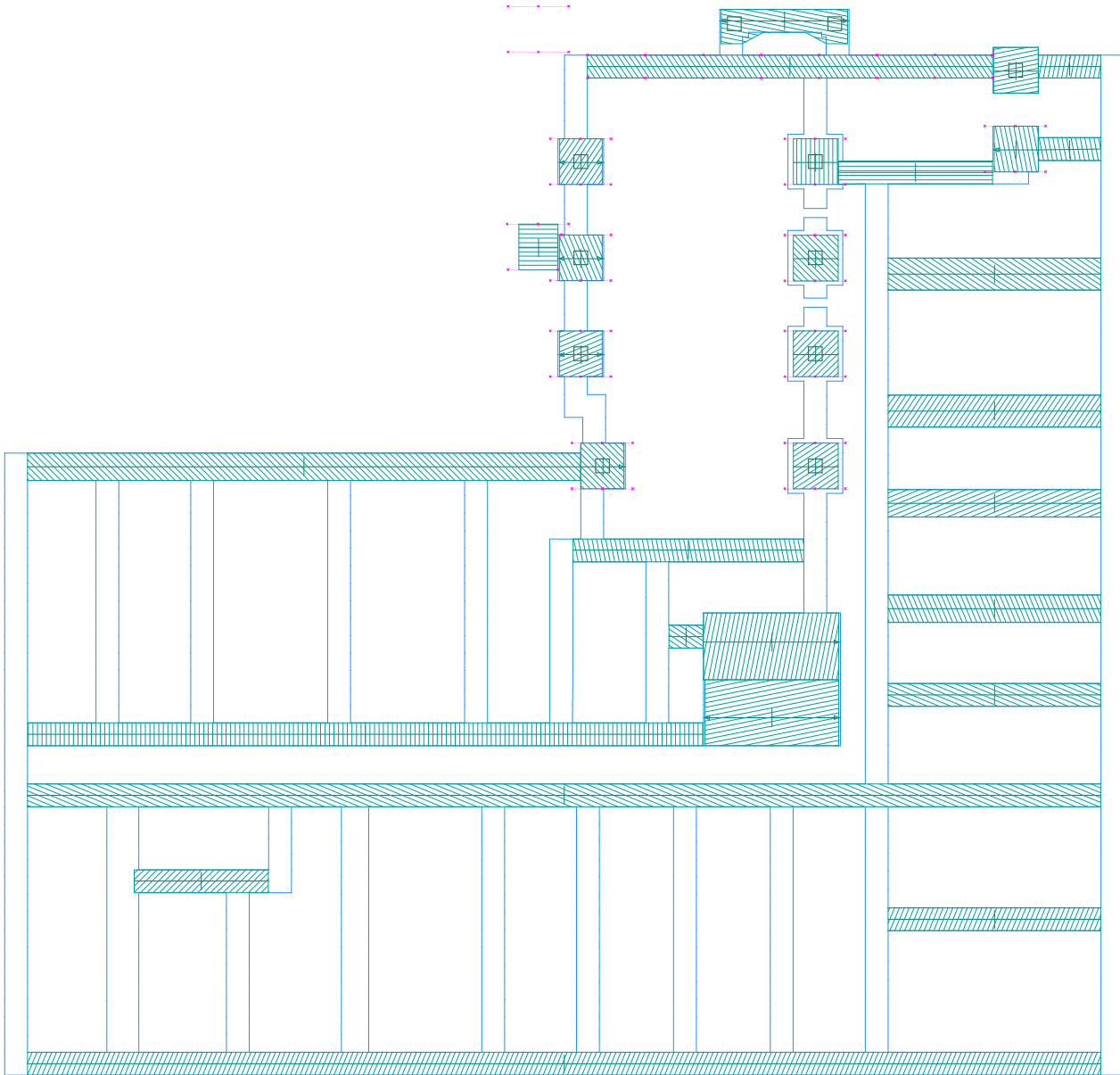
Ultimate Wind North Loading: All Loads Plan

Ultimate Wind North Loading: User Lines; User Notes; User Dimensions; Point Loads; Point Load Icons; Point Load Values; Line Loads; Line Load Icons; Line Load Values; Area Loads; Area Load Icons; Area Load Values;
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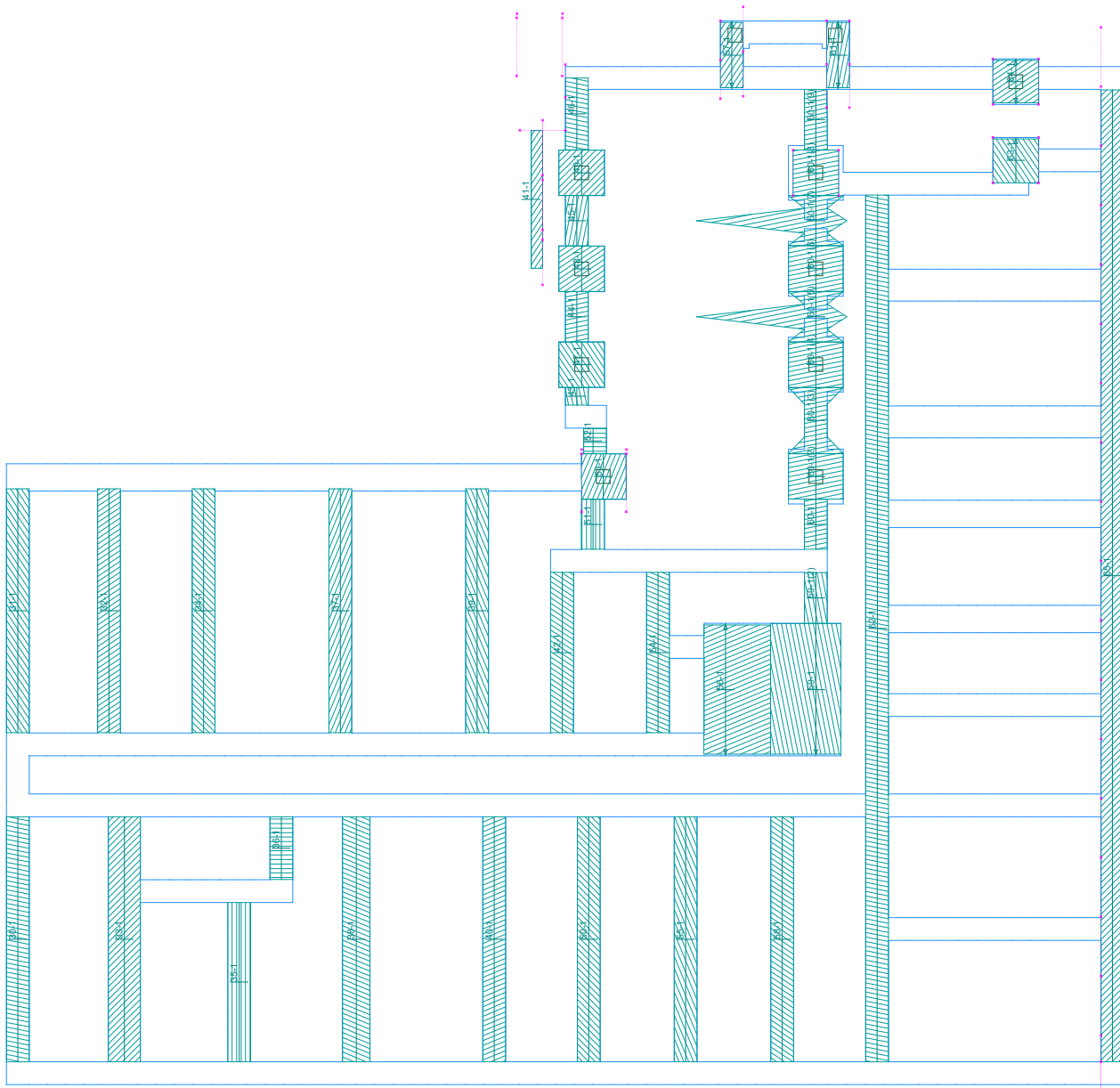
Design Strip: Latitude Design Spans Plan

Design Strip: Latitude Span Boundaries; Latitude SSs; Latitude DSs; Latitude Strip Boundaries; Latitude SSSs; SSS Hatching; Latitude Deflection Checks; User Notes; User Dimensions;
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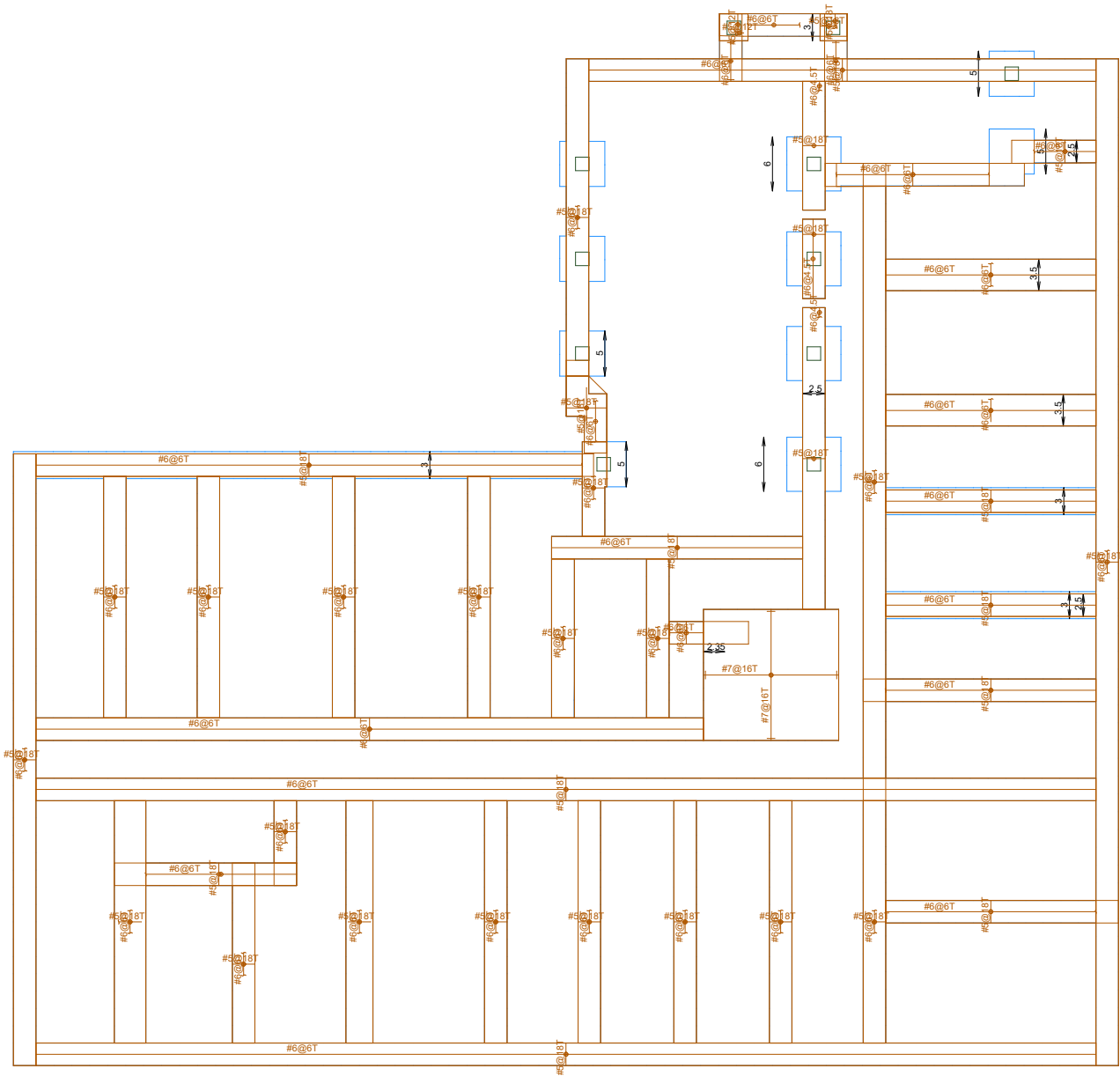
Design Strip: Longitude Design Spans Plan

Design Strip: Longitude Span Boundaries; Longitude SS; SS Numbers; Longitude DS; DS Numbers; Longitude Strip Boundaries; Longitude SSSs; SSS Hatching; Longitude Deflection Checks; User Dimensions;
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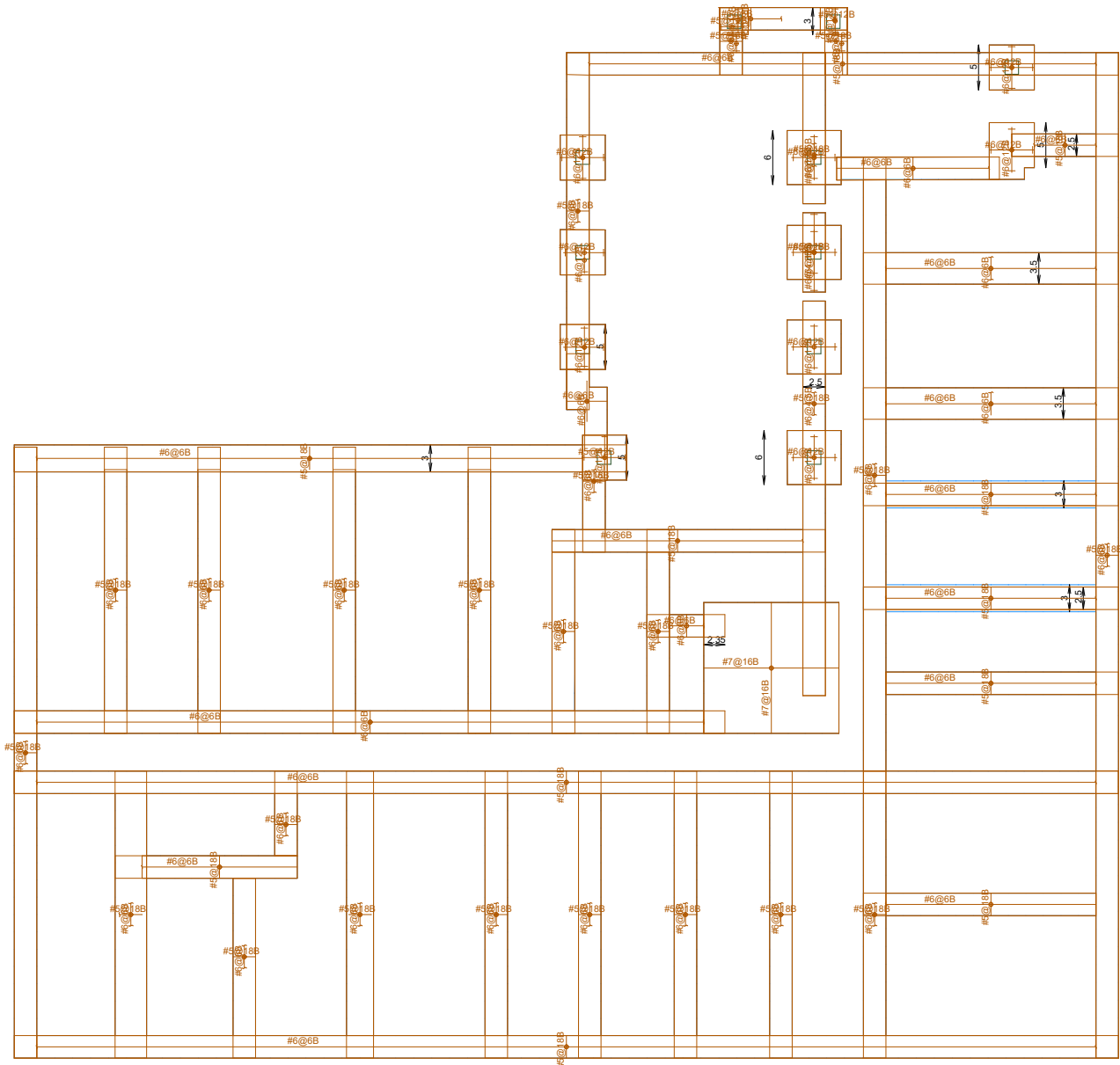
Reinforcement: Top Bars Plan

Reinforcement: Latitude User Concentrated Reinf.; Longitude User Concentrated Reinf.; Latitude Program Concentrated Reinf.; Longitude Program Concentrated Reinf.; Top Face Concentrated Reinf.; Both Faces Concentrated Reinf.; Concentrated Reinf. Descriptions; Concentrated Reinf. Extent; L Element: Wall Elements Above; Wall Elements Below; Wall Element Outline Only; Column Elements Above; Column Elements Below; Slab Elements: Slab Element Outline Only;
Scale = 1.225



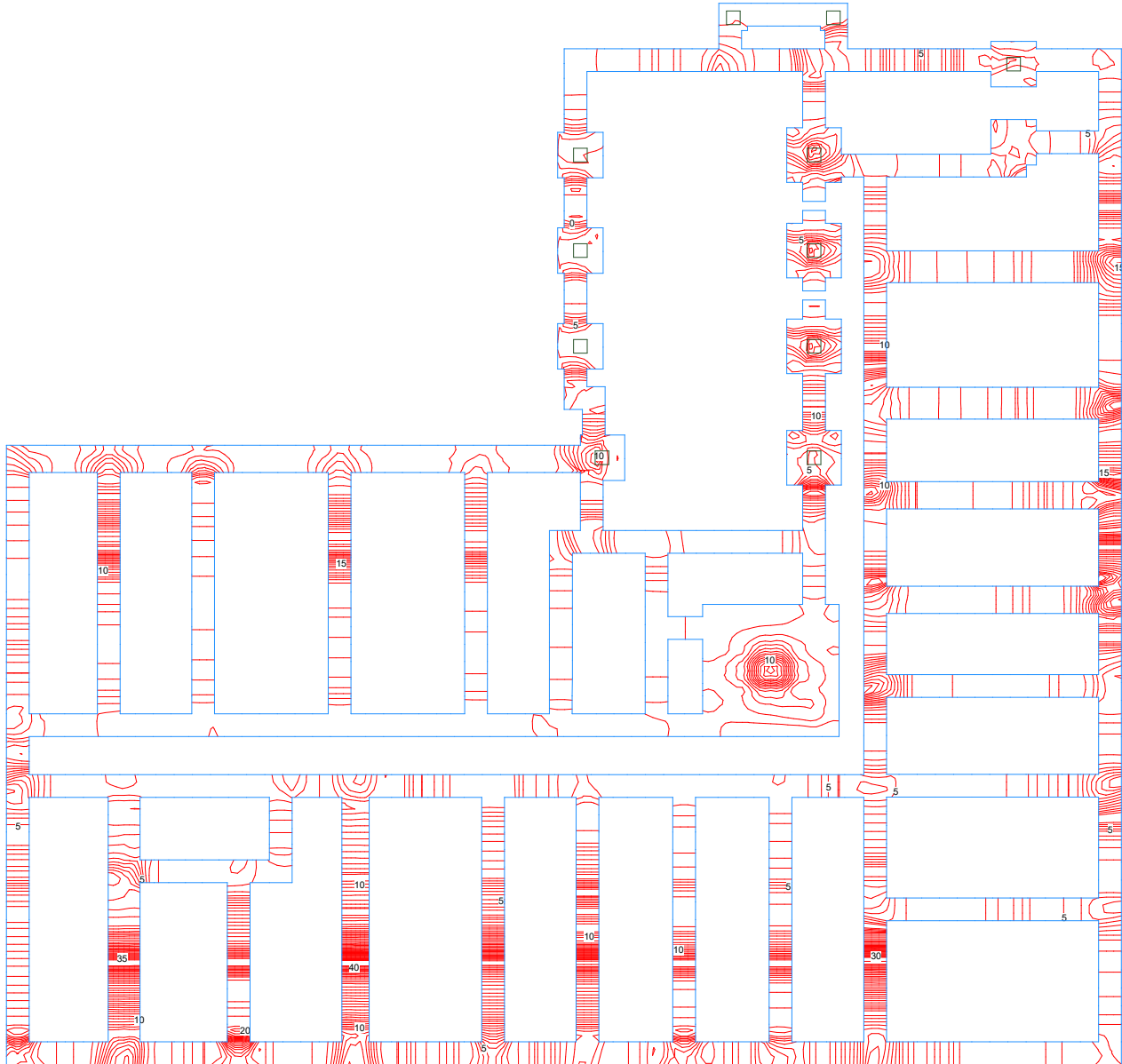
Reinforcement: Bottom Bars Plan

Reinforcement: Latitude User Concentrated Reinf.; Longitude User Concentrated Reinf.; Latitude Program Concentrated Reinf.; Longitude Program Concentrated Reinf.; Bottom Face Concentrated Reinf.; Both Faces Concentrated Reinf.; Concentrated Reinf. Descriptions; Concentrated Reinf. Exter
Element: Wall Elements Above; Wall Elements Below; Wall Element Outline Only; Column Elements Above; Column Elements Below; Slab Elements; Slab Element Outline Only;
Scale = 1.225



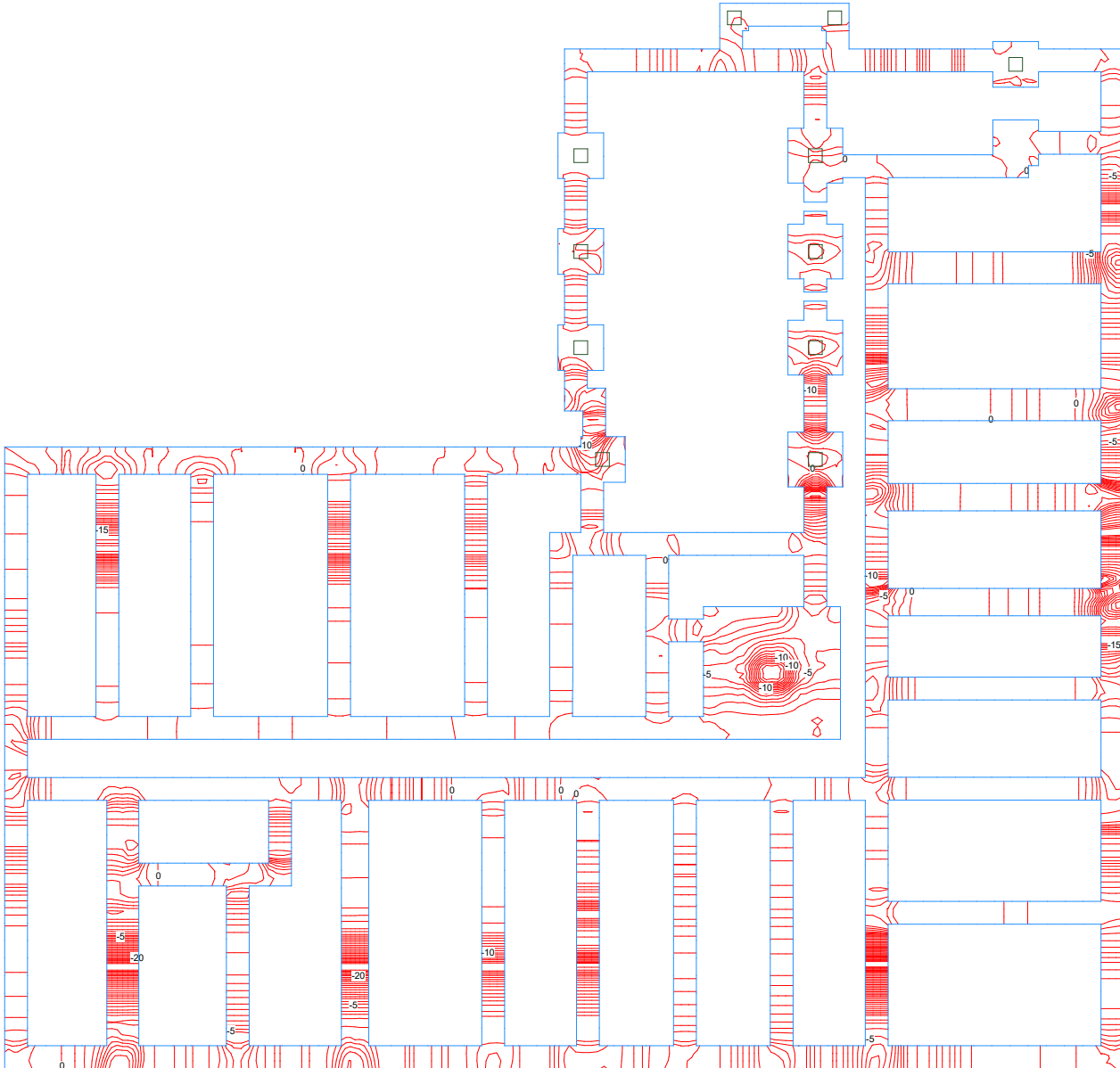
Strength Design: Max Mx Plan

Strength Design: User Lines; User Notes; User Dimensions; Latitude Span Designs; Longitude Span Designs; Latitude DS Designs; Longitude DS Designs; PC Designs;
Element: Wall Elements Below; Wall Elements Above; Wall Element Outline Only; Column Elements Below; Column Elements Above; Slab Elements; Slab Element Outline Only;
Scale = 1.225
Strength Design - Bending Moment Plot (Maximum Values) (X-Axis Direction)
One Contour = 1 Kips
Min Value = -2.429 Kips @ (207.61.24) Max Value = 40.35 Kips @ (183.9.-0.2618)



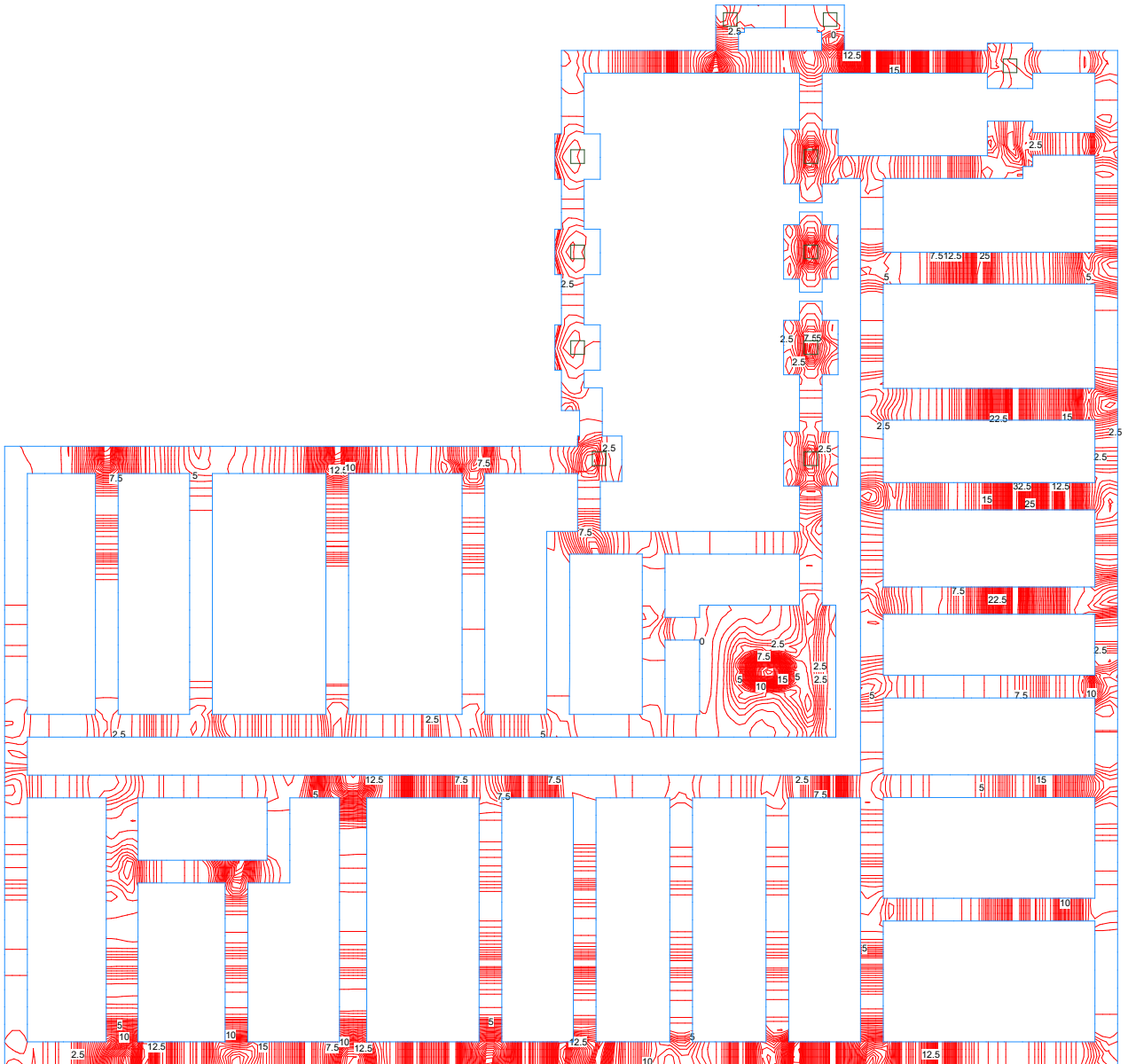
Strength Design: Min Mx Plan

Strength Design: User Lines; User Notes; User Dimensions; Latitude Span Designs; Longitude Span Designs; Latitude DS Designs; Longitude DS Designs; PC Designs;
Element: Wall Elements Below; Wall Elements Above; Wall Element Outline Only; Column Elements Below; Column Elements Above; Slab Elements; Slab Element Outline Only;
Scale = 1.225
Strength Design - Bending Moment Plot (Minimum Values) (X-Axis Direction)
One Contour = 1 Kips
Min Value = -37.42 Kips @ (238.3,0.0105) Max Value = 5.009 Kips @ (170.8,-0.1585)



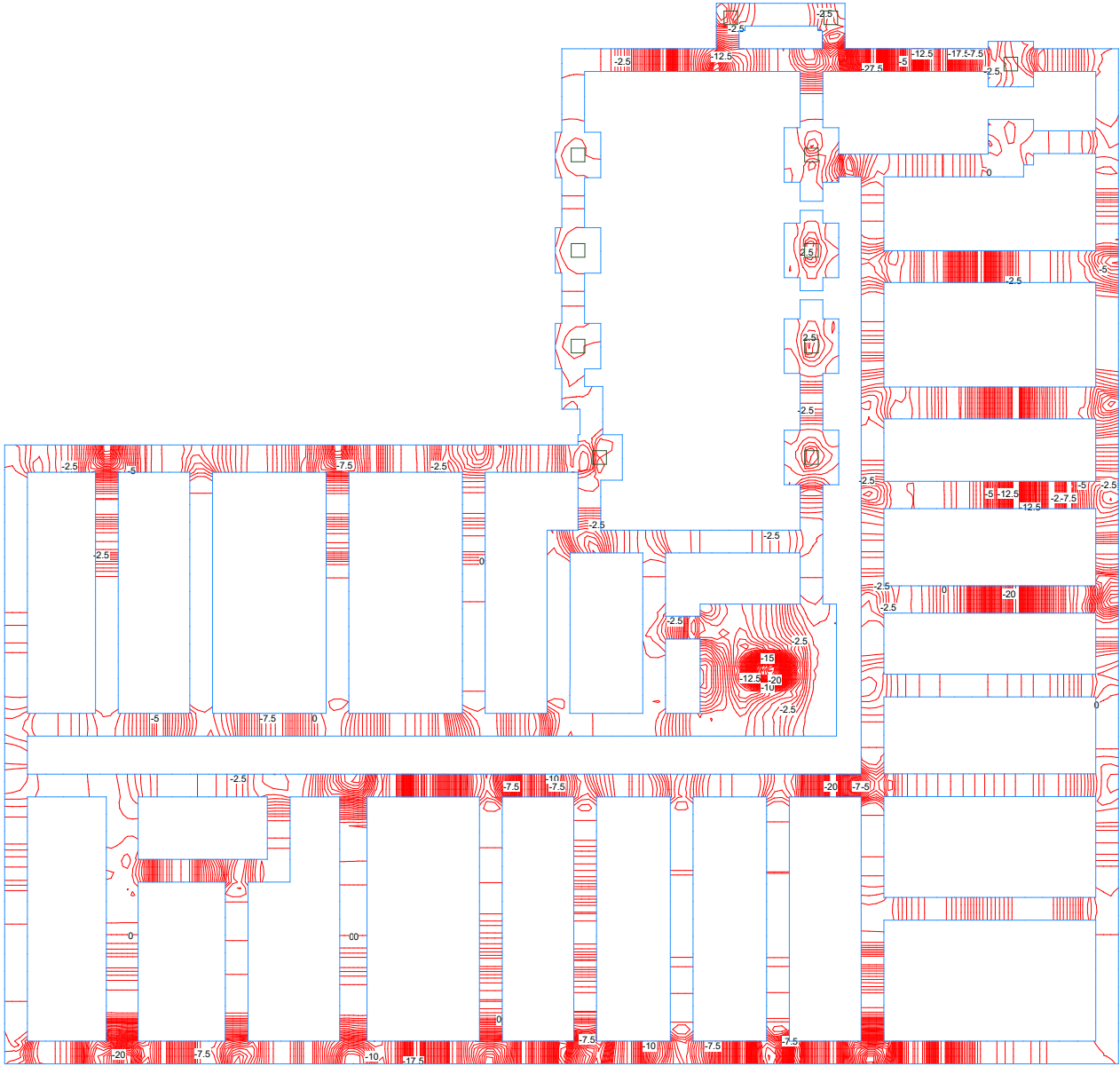
Strength Design: Max My Plan

Strength Design: User Lines; User Notes; User Dimensions; Latitude Span Designs; Longitude Span Designs; Latitude DS Designs; Longitude DS Designs; PC Designs;
Element: Wall Elements Below; Wall Elements Above; Wall Element Outline Only; Column Elements Below; Column Elements Above; Slab Elements; Slab Element Outline Only;
Scale = 1.225
Strength Design - Bending Moment Plot (Maximum Values) (Y-Axis Direction)
One Contour = 0.5 Kips
Min Value = -2.294 Kips @ (162.8,11.09) Max Value = 34.69 Kips @ (255.4,49.7)



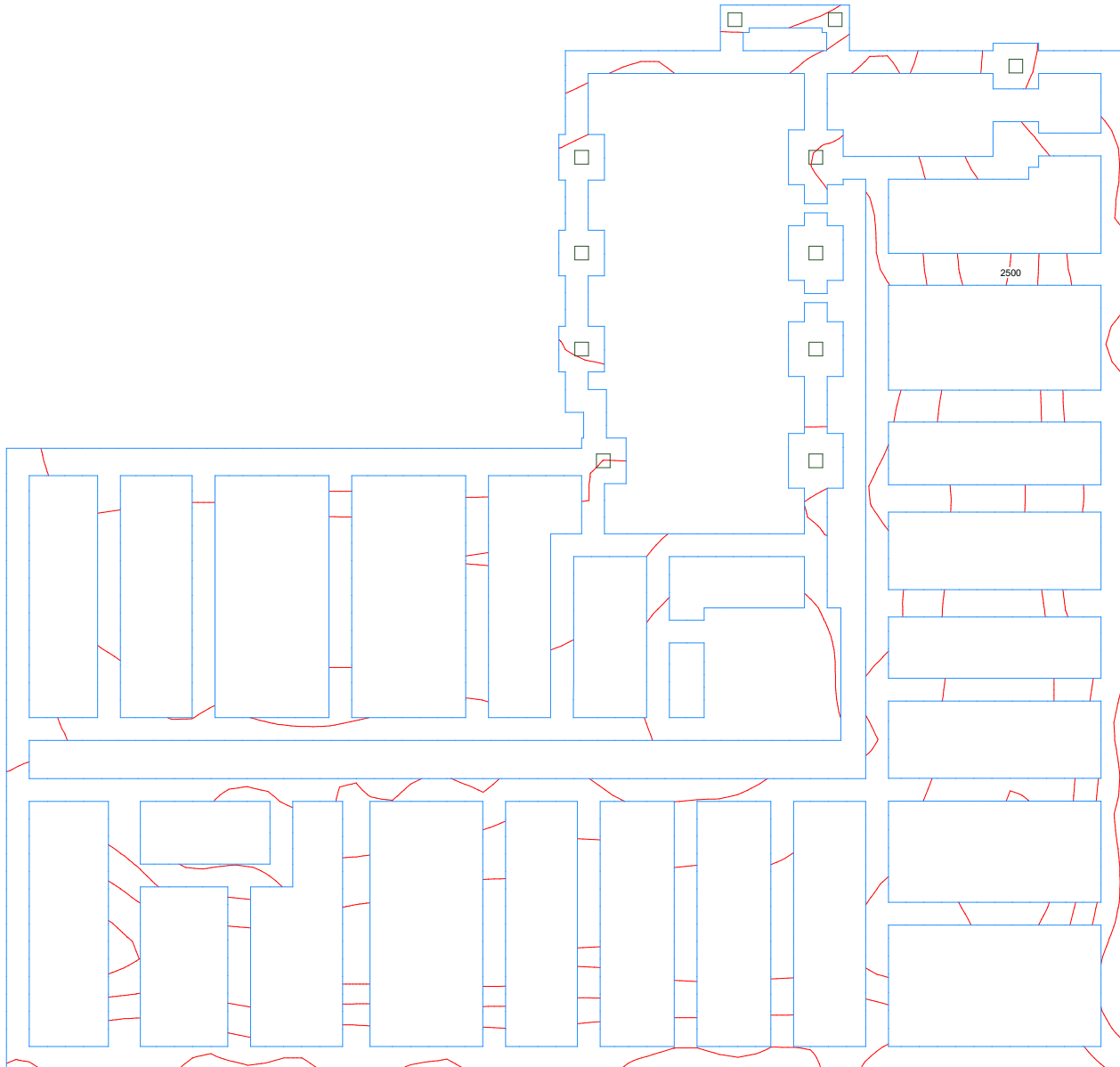
Strength Design: Min My Plan

Strength Design: User Lines; User Notes; User Dimensions; Latitude Span Designs; Longitude Span Designs; Latitude DS Designs; Longitude DS Designs; PC Designs;
Element: Wall Elements Below; Wall Elements Above; Wall Element Outline Only; Column Elements Below; Column Elements Above; Slab Elements; Slab Element Outline Only;
Scale = 1.225
Strength Design - Bending Moment Plot (Minimum Values) (Y-Axis Direction)
One Contour = 0.5 Kips
Min Value = -29.28 Kips @ (239.7,100.3) Max Value = 5.044 Kips @ (259.1,20.49)



Soil Bearing Design: Max Soil Bearing Pressure Plan

Soil Bearing Design: User Lines; User Notes; User Dimensions; Latitude Span Designs; Longitude Span Designs; Latitude DS Designs; Longitude DS Designs; PC Designs;
Element: Wall Elements Below; Wall Elements Above; Wall Element Outline Only; Column Elements Below; Column Elements Above; Slab Elements; Slab Element Outline Only;
Scale = 1.225
Soil Bearing Design - Area Spring Vertical Reactions Plot (Maximum Values)
One Contour = 500 psf
Min Value = 209.4 psf @ (227.7,105.3) Max Value = 2873 psf @ (196.3,0.6985)



Soil Bearing Design: Min Soil Bearing Pressure Plan

Soil Bearing Design: User Lines; User Notes; User Dimensions; Latitude Span Designs; Longitude Span Designs; Latitude DS Designs; Longitude DS Designs; PC Designs;
Element: Wall Elements Below; Wall Elements Above; Wall Element Outline Only; Column Elements Below; Column Elements Above; Slab Elements; Slab Element Outline Only;
Scale = 1.225
Soil Bearing Design - Area Spring Vertical Reactions Plot (Minimum Values)
One Contour = 20 psf
Min Value = -188.2 psf @ (266.6,54.28) Max Value = 860.4 psf @ (254.4,4.417)



300. FLOOR AND ROOF FRAMING

Calculation Package

300 Floor and Roof Framing Calculation Index:

Narrative	300
Framing Design	301

Calculation Package

300. NARRATIVE

Floors and roofs for the structure are composed of open web wood trusses on wood bearing walls with wood or steel beams when needed. The following is a discussion of the design of these elements.

Floor Framing:

A typical floor of this structure consists of 3/4" T&G OSB/plywood floor sheathing over wood framing. At the dwelling units, the floor framing consists of 16" premanufactured wood trusses and LVL beams. Steel beams are used to support walls and floor framing above the Level 1 commons space. At the corridors and stair landings the floor framing consists of 2x Douglas Fir-Larch sawn wood lumber. Lofts above the Level 5 units are framed with wood I-Joist and LVL framing. The design of this system is detailed below.

A. Sheathing

The floor sheathing is designed using APA load span tables. For the maximum typical span of 24"oc, 3/4" floor sheathing was selected.

B. Framing

- Design of premanufactured wood trusses and girders are delegated to the truss supplier.
- Wood beams are designed using Forte based on ASD. Deflections are limited to L/360 live load and L/240 total load. A representative design of the framing is provided where indicated in the index below. The steel beam was designed based on LRFD loads using Risa 3-D.

Roof Framing

The roofs for this structure are 5/8" T&G OSB/plywood roof sheathing over wood framing. At the main roof, the roof framing consists of 18" premanufactured wood roof trusses with rigid insulation sloped to drain. At the 5:12 sloped high roofs, framing consists of wood I-Joist and LVL framing. The design of this system is detailed below.

A. Sheathing

The roof sheathing was designed using APA load span tables. For the maximum typical span of 24"oc, 5/8" floor sheathing was selected.

B. Framing

- Design of premanufactured wood trusses and girders are delegated to the truss supplier
- Wood beams are designed using Forte based on ASD. Deflections are limited to L/360 live load and L/240 total load. A representative design of the framing is provided where indicated in the index below.

Calculation Package

301. FRAMING DESIGN

THE STRUCTURAL ENGINEER'S SEAL ON THIS DRAWING INDICATES THAT THE INFORMATION SHOWN AND THE CALCULATIONS PERTAINING TO THAT INFORMATION HAVE BEEN PREPARED BY QUALIFIED PEOPLE UNDER THE DIRECTION OF THE ENGINEER-OF-RECORD. THE SEAL DOES NOT IMPLY RESPONSIBILITY FOR INFORMATION PREPARED BY OTHERS NOR FOR ANY INFORMATION NOT SHOWN ON THIS DRAWING AND SUCH RESPONSIBILITY IS SPECIFICALLY DISCLAIMED. ON PHASED PROJECTS, DRAWINGS THAT ARE ISSUED BUT NOT SEALED SHALL BE CONSIDERED TO BE PRELIMINARY IN NATURE AND ARE ISSUED FOR INFORMATION ONLY.

THESE DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS ON THE PROJECT TO CLEARLY DEFINE ALL OF THE REQUIREMENTS FOR THE CONSTRUCTION. WHERE CONFLICTS OCCUR CONTACT ARCHITECT FOR CLARIFICATION.

ISSUE:
PROJECT STATUS

PRELIMINARY - NOT FOR CONSTRUCTION

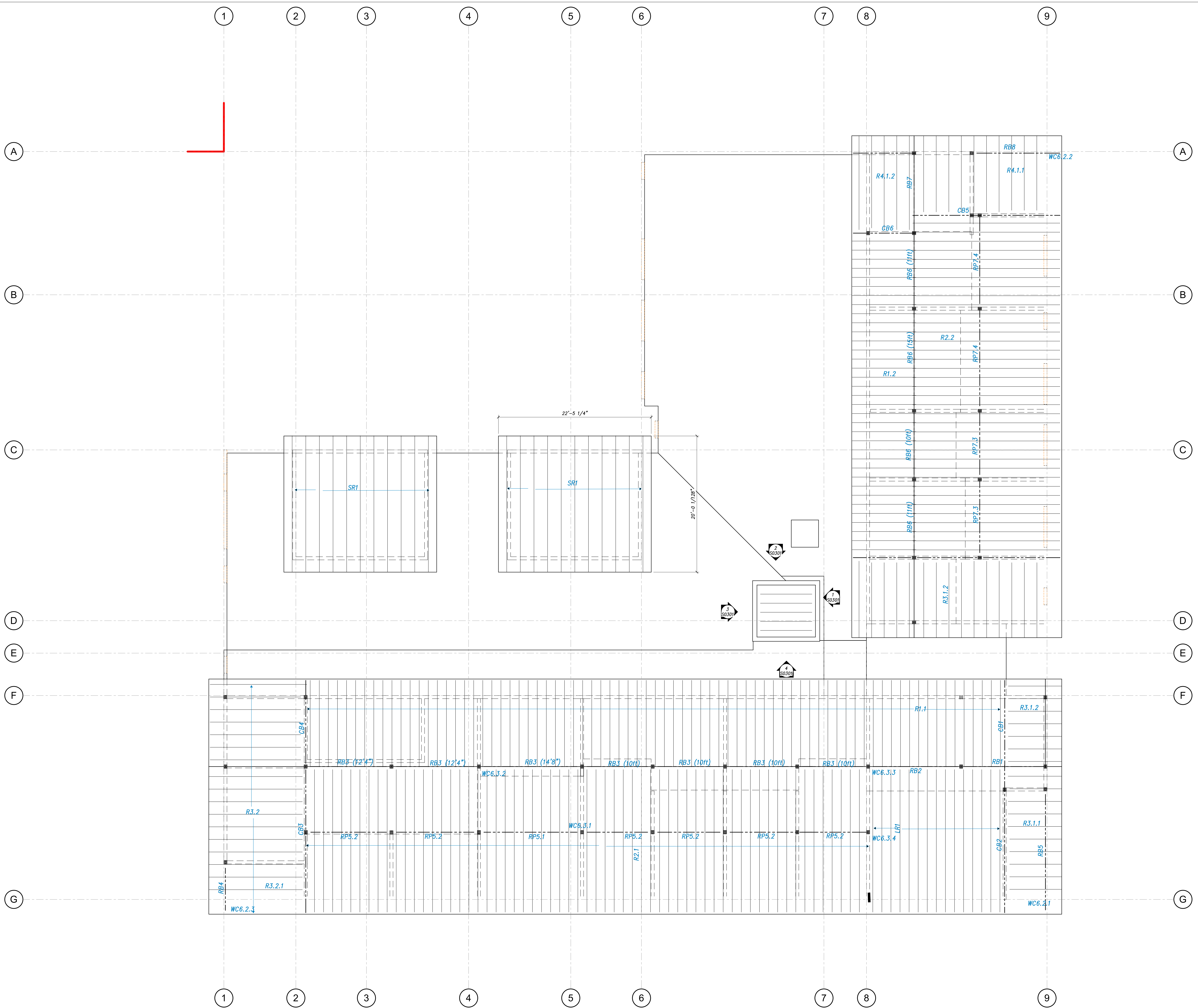
THESE DRAWINGS ARE INCOMPLETE AND ARE MISSING INFORMATION THEY ARE INTENDED FOR PRELIMINARY USE ONLY.

STEAMBOAT BASECAMP II
 STEAMBOAT BASECAMP, LOT 2
 STEAMBOAT SPRINGS, CO 80487

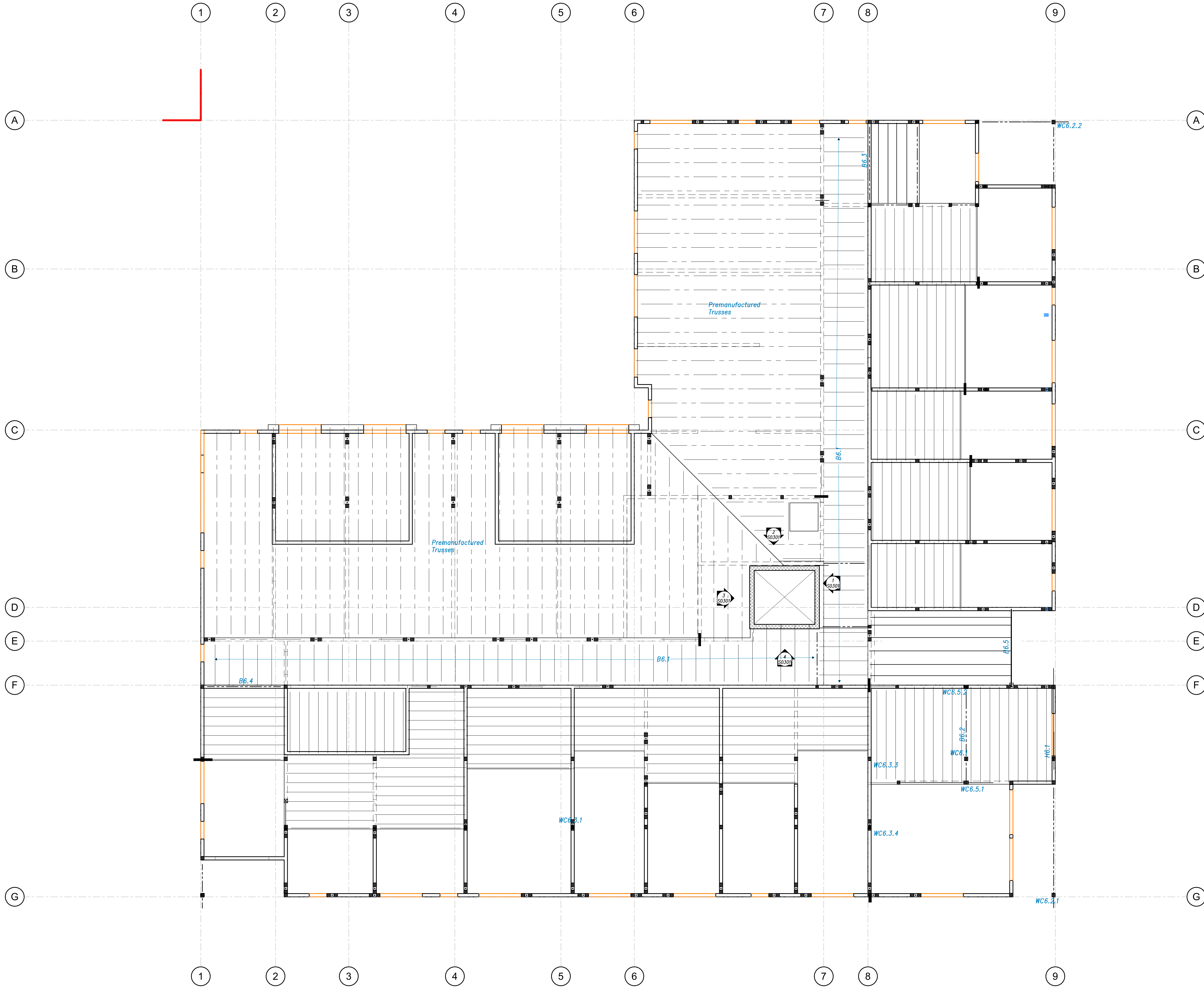
PROJECT NO:
DRAWN BY: Author
CHECKED BY: Checker
REVISIONS: 1 Date 1 Revision 1

SHEET TITLE:
Load Track Level High Roof

SXX9



1/27/2026 11:05:49 AM



THE STRUCTURAL ENGINEER'S SEAL ON THIS DRAWING INDICATES THAT THE INFORMATION SHOWN AND THE CALCULATIONS PERTAINING TO THAT INFORMATION HAVE BEEN PREPARED BY QUALIFIED PEOPLE UNDER THE DIRECTION OF THE ENGINEER-OF-RECORD. THE SEAL DOES NOT IMPLY RESPONSIBILITY FOR INFORMATION PREPARED BY OTHERS NOR FOR ANY INFORMATION NOT SHOWN ON THIS DRAWING AND SUCH RESPONSIBILITY IS SPECIFICALLY DISCLAIMED. ON PHASED PROJECTS, DRAWINGS THAT ARE ISSUED BUT NOT SEALED SHALL BE CONSIDERED TO BE PRELIMINARY IN NATURE AND ARE ISSUED FOR INFORMATION ONLY.

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ISSUE:
PROJECT STATUS

PRELIMINARY - NOT FOR CONSTRUCTION

THESE DRAWINGS ARE INCOMPLETE AND ARE MISSING INFORMATION. THEY ARE INTENDED FOR PRELIMINARY USE ONLY.

STEAMBOAT BASECAMP II
 STEAMBOAT BASECAMP II
 BASECAMP, LOT 2
 STEAMBOAT SPRINGS, CO 80487

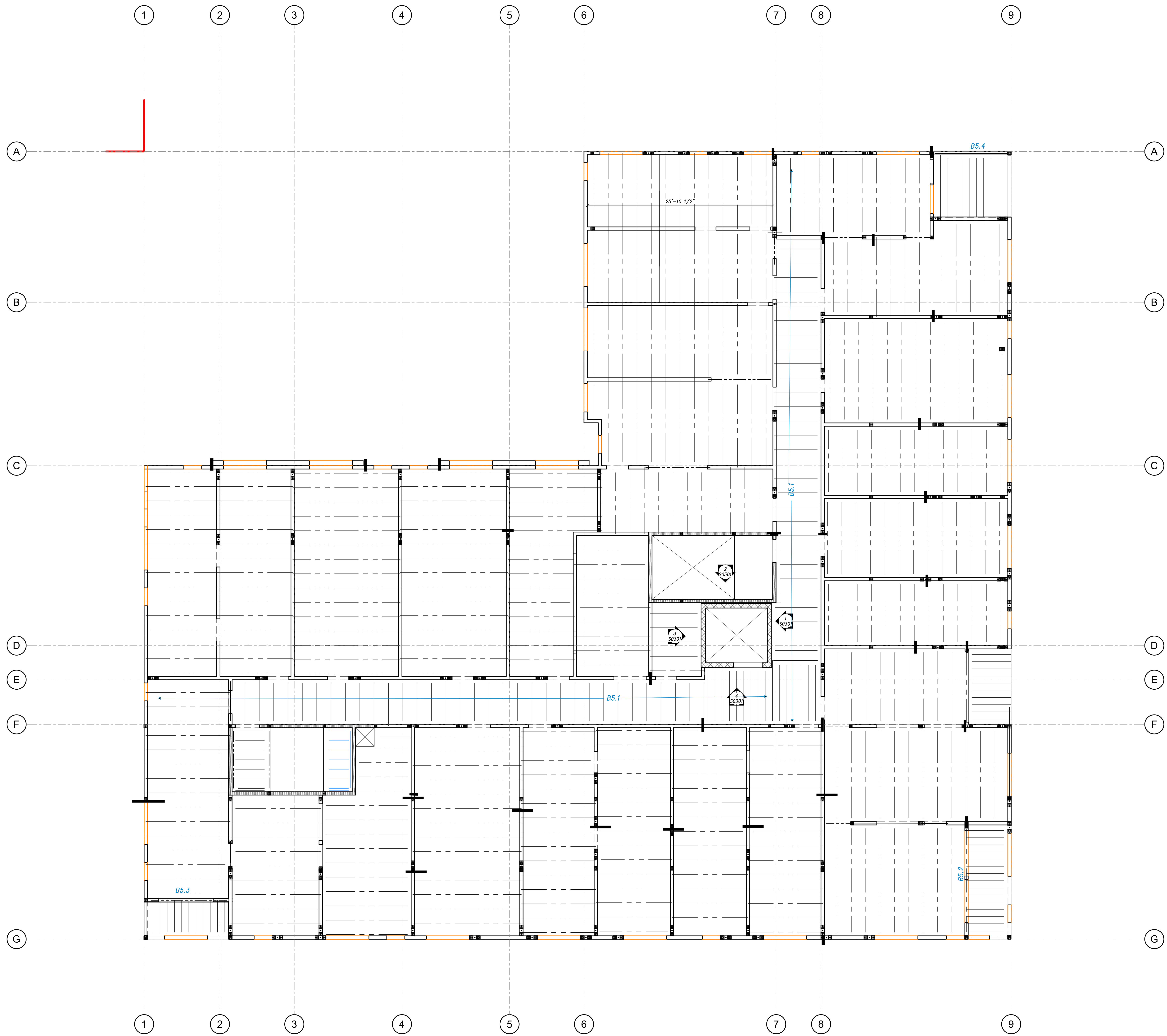
PROJECT NO:
 DRAWN BY: Author
 CHECKED BY: Checker
 REVISIONS:

SHEET TITLE:
 Load Track Level Roof

SXX8

1/27/2026 11:05:48 AM

1 LOAD TRACKING ROOF
 SKXB 3/16" = 1'-0"



THE STRUCTURAL ENGINEER'S SEAL ON THIS DRAWING INDICATES THAT THE INFORMATION SHOWN AND THE CALCULATIONS PERTAINING TO THAT INFORMATION HAVE BEEN PREPARED BY QUALIFIED PEOPLE UNDER THE DIRECTION OF THE ENGINEER-OF-RECORD. THE SEAL DOES NOT IMPLY RESPONSIBILITY FOR INFORMATION PREPARED BY OTHERS NOR FOR ANY INFORMATION NOT SHOWN ON THIS DRAWING AND SUCH RESPONSIBILITY IS SPECIFICALLY DISCLAIMED. ON PHASED PROJECTS, DRAWINGS THAT ARE ISSUED BUT NOT SEALED SHALL BE CONSIDERED TO BE PRELIMINARY IN NATURE AND ARE ISSUED FOR INFORMATION ONLY.

THESE DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS ON THE PROJECT TO CLEARLY DEFINE ALL OF THE REQUIREMENTS FOR THE CONSTRUCTION. WHERE CONFLICTS OCCUR CONTACT ARCHITECT FOR CLARIFICATION.

ISSUE:
PROJECT STATUS

PRELIMINARY - NOT FOR CONSTRUCTION

THESE DRAWINGS ARE INCOMPLETE AND ARE MISSING INFORMATION. THEY ARE INTENDED FOR PRELIMINARY USE ONLY.

**STEAMBOAT
 BASECAMP II**
 BASECAMP, LOT 2
 STEAMBOAT
 SPRINGS, CO 80487

PROJECT NO:
 DRAWN BY: Author
 CHECKED BY: Checker
 REVISIONS:

SHEET TITLE:
 Load Track Level 5

SXX7

THE STRUCTURAL ENGINEER'S SEAL ON THIS DRAWING INDICATES THAT THE INFORMATION SHOWN AND THE CALCULATIONS PERTAINING TO THAT INFORMATION HAVE BEEN PREPARED BY QUALIFIED PEOPLE UNDER THE DIRECTION OF THE ENGINEER-OF-RECORD. THE SEAL DOES NOT IMPLY RESPONSIBILITY FOR INFORMATION PREPARED BY OTHERS NOR FOR ANY INFORMATION NOT SHOWN ON THIS DRAWING AND SUCH RESPONSIBILITY IS SPECIFICALLY DISCLAIMED. ON PHASED PROJECTS, DRAWINGS THAT ARE ISSUED BUT NOT SEALED SHALL BE CONSIDERED TO BE PRELIMINARY IN NATURE AND ARE ISSUED FOR INFORMATION ONLY.

THESE DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS ON THE PROJECT TO CLEARLY DEFINE ALL OF THE REQUIREMENTS FOR THE CONSTRUCTION, WHERE CONFLICTS OCCUR CONTACT ARCHITECT FOR CLARIFICATION.

ISSUE:
 PROJECT STATUS

PRELIMINARY - NOT FOR CONSTRUCTION

THESE DRAWINGS ARE INCOMPLETE AND ARE MISSING INFORMATION THEY ARE INTENDED FOR PRELIMINARY USE ONLY.

STEAMBOAT BASECAMP II
 STEAMBOAT BASECAMP II
 BASECAMP, LOT 2
 STEAMBOAT SPRINGS, CO 80487

PROJECT NO:
 DRAWN BY: Author
 CHECKED BY: Checker
 REVISIONS:

SHEET TITLE:
 Load Track Level 4

SXX6



1 LOAD TRACKING LEVEL 4
 SXX6 3/16" = 1'-0"

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ISSUE:
PROJECT STATUS

PRELIMINARY - NOT FOR CONSTRUCTION

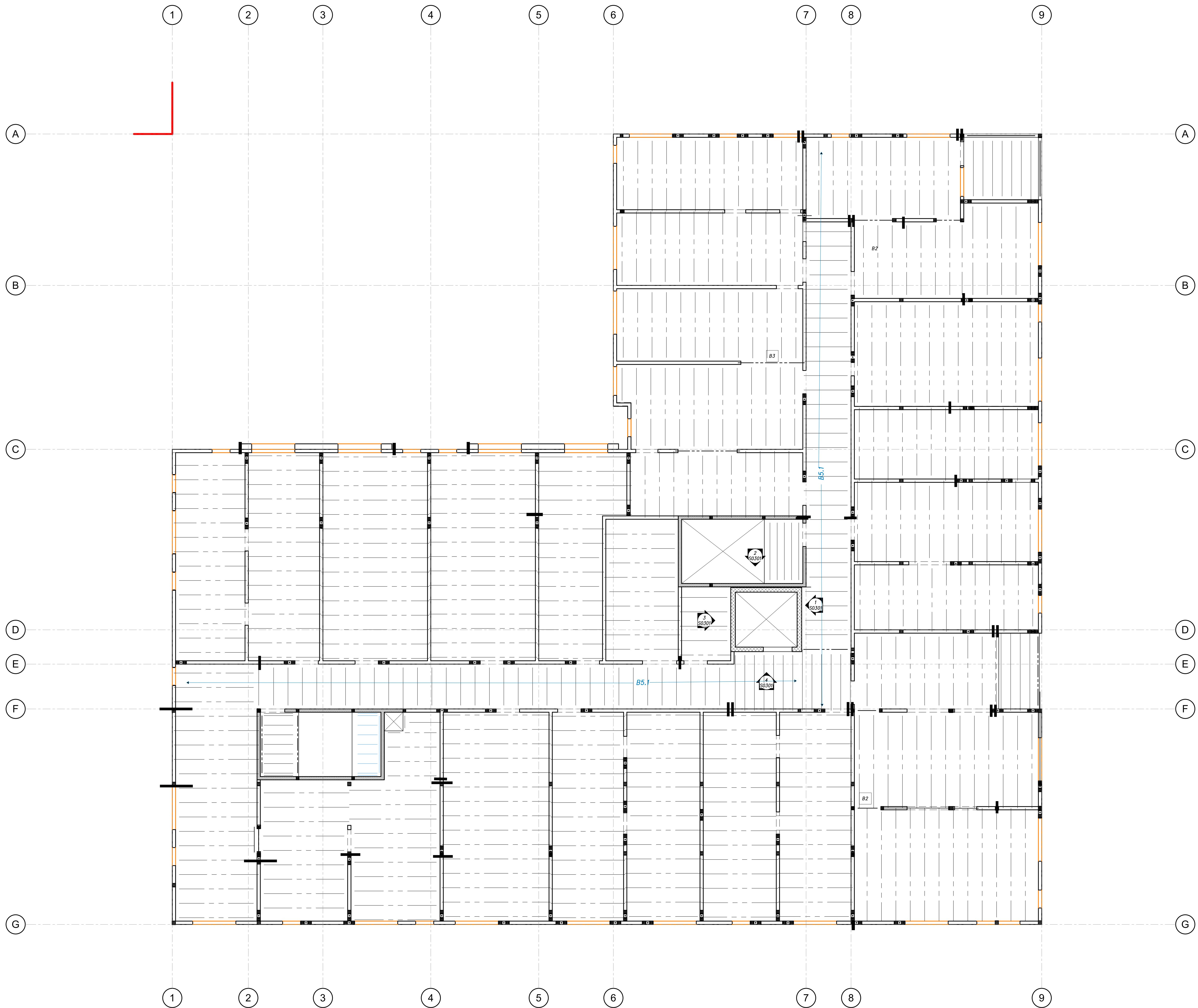
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STEAMBOAT BASECAMP II
 STEAMBOAT BASECAMP, LOT 2
 STEAMBOAT SPRINGS, CO 80487

PROJECT NO:
 DRAWN BY: Author
 CHECKED BY: Checker
 REVISIONS:

SHEET TITLE:
Load Track Level 3

SXX5



THE STRUCTURAL ENGINEER'S SEAL ON THIS DRAWING INDICATES THAT THE INFORMATION SHOWN AND THE CALCULATIONS PERTAINING TO THAT INFORMATION HAVE BEEN PREPARED BY QUALIFIED PEOPLE UNDER THE DIRECTION OF THE ENGINEER-OF-RECORD. THE SEAL DOES NOT IMPLY RESPONSIBILITY FOR INFORMATION PREPARED BY OTHERS NOR FOR ANY INFORMATION NOT SHOWN ON THIS DRAWING AND SUCH RESPONSIBILITY IS SPECIFICALLY DISCLAIMED. ON PHASED PROJECTS, DRAWINGS THAT ARE ISSUED BUT NOT SEALED SHALL BE CONSIDERED TO BE PRELIMINARY IN NATURE AND ARE ISSUED FOR INFORMATION ONLY.

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ISSUE:
 PROJECT STATUS

**PRELIMINARY - NOT
 FOR CONSTRUCTION**

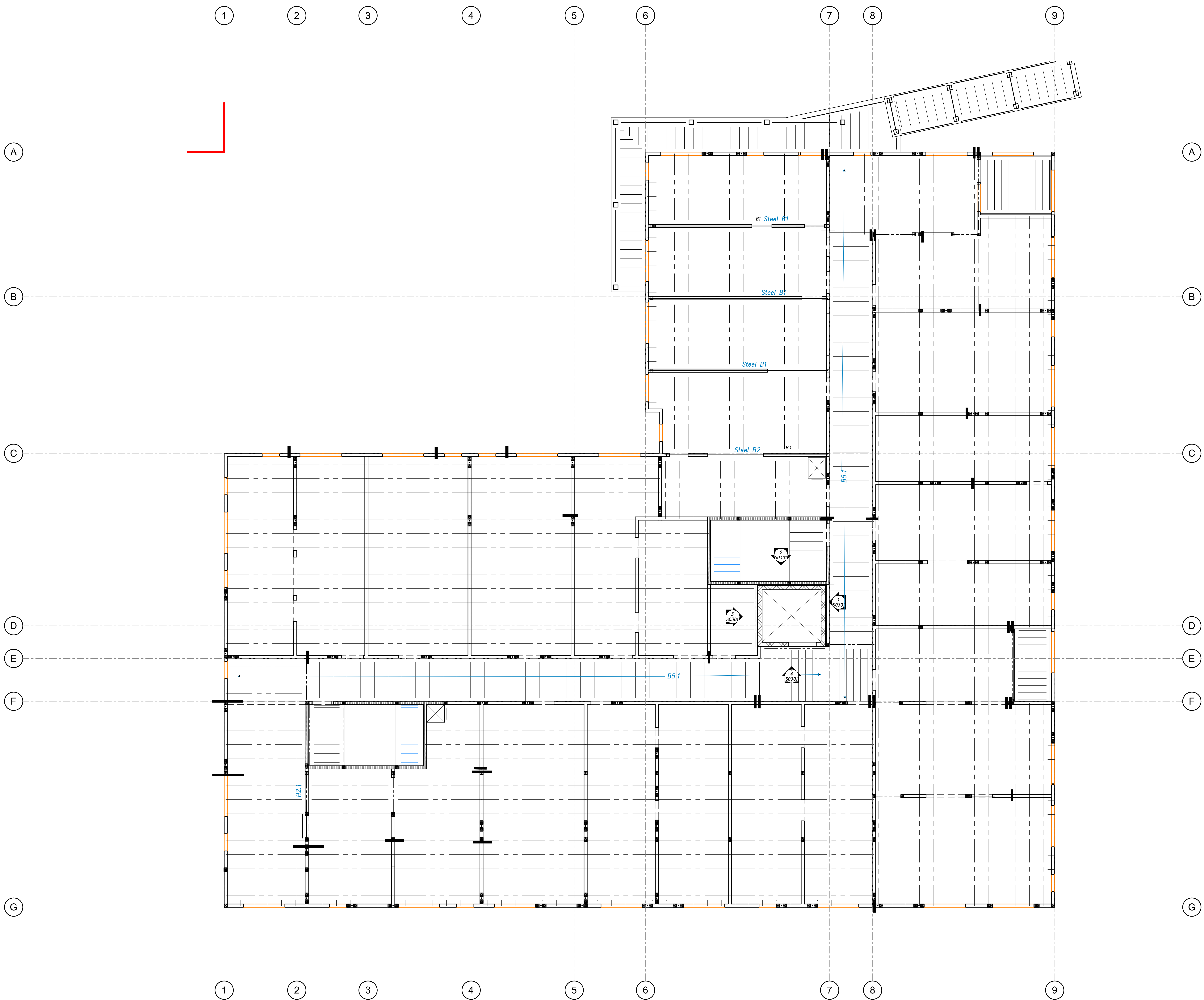
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**STEAMBOAT
 BASECAMP II**
 BASECAMP, LOT 2
 STEAMBOAT
 SPRINGS, CO 80487

PROJECT NO:
 DRAWN BY: Author
 CHECKED BY: Checker
 REVISIONS:

SHEET TITLE:
 Load Track Level 2

SXX22



Level 1			
Member Name	Results (Max UTIL %)	Current Solution	Comments
Roof: Drop Beam	Passed (86% ΔL)	1 piece(s) 6 3/4" x 10 1/2" 24F-V4 DF Glulam	
Level 2			
Member Name	Results (Max UTIL %)	Current Solution	Comments
Elevator/Stair landing	Passed (57% R)	1 piece(s) 2 x 10 DF No.2 @ 24" OC	
H2.1	Passed (89% R)	3 piece(s) 1 3/4" x 16" 2.0E Microllam® LVL	
H2.2	Passed (79% R)	3 piece(s) 1 3/4" x 16" 2.0E Microllam® LVL	
Roof: Joist - Canopy 2x8s	Passed (85% M)	1 piece(s) 2 x 8 DF No.2 @ 16" OC	
Roof: Flush Beam - Canopy (2)2x10 Cantilever	Passed (32% M)	1 piece(s) 2 x 10 DF No.2	
Level 4			
Member Name	Results (Max UTIL %)	Current Solution	Comments
B4.1	Passed (46% R)	3 piece(s) 1 3/4" x 9 1/2" 2.0E Microllam® LVL	
Level 5			
Member Name	Results (Max UTIL %)	Current Solution	Comments
Deck Joists	Passed (84% M)	1 piece(s) 2 x 12 DF No.2 @ 16" OC	
LVL Deck Joists	Passed (66% ΔL)	1 piece(s) 1 3/4" x 7 1/4" 2.0E Microllam® LVL @ 24" OC	
B5.1 Corridor framing	Passed (68% M)	1 piece(s) 2 x 10 DF No.2 @ 24" OC	
B5.3 SW Deck ledger	Passed (40% R)	3 piece(s) 1 3/4" x 16" 2.0E Microllam® LVL	
B5.4 NE Deck ledger	Passed (58% R)	3 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL	
Level roof			
Member Name	Results (Max UTIL %)	Current Solution	Comments
B6.1 Corridor framing	Passed (46% R)	1 piece(s) 2 x 10 DF No.2 @ 24" OC	
B6.2: SE Mezzanine Beam	Passed (101% R)	3 piece(s) 1 3/4" x 16" 2.0E Microllam® LVL	
B6.3: NE Mezzanine Beam	Passed (39% ΔL)	2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL	
B6.4: SW Mezzanine Beam	Passed (40% ΔL)	2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL	
B6.5: Roof Beam	Failed (94% ΔL)	2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL	Multiple Failures/Errors

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



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File Name: Basecamp II

Level High Roof			
Member Name	Results (Max UTIL %)	Current Solution	Comments
SR1: Shed Roof	Passed (82% M)	1 piece(s) 11 7/8" TJI@ 360 @ 24" OC	
LR1: Long Rafter	Passed (85% R)	1 piece(s) 11 7/8" TJI@ 560 @ 16" OC	Web Stiffeners Required
R1.1: South Short Rafter	Passed (82% R)	1 piece(s) 11 7/8" TJI@ 210 @ 16" OC	
R1.2: East Short Rafter	Passed (50% R)	1 piece(s) 11 7/8" TJI@ 210 @ 16" OC	
R2.1: W/ PURLIN	Passed (74% R)	1 piece(s) 11 7/8" TJI@ 210 @ 16" OC	
R2.2: East W/ PURLIN	Passed (72% R)	1 piece(s) 11 7/8" TJI@ 210 @ 16" OC	
R3.1.1: SE Outlooker	Passed (45% R)	1 piece(s) 11 7/8" TJI@ 210 @ 24" OC	
R3.1.2: Outlooker	Passed (45% R)	1 piece(s) 11 7/8" TJI@ 210 @ 24" OC	
R3.2: SW Outlooker	Failed (99% R)	1 piece(s) 11 7/8" TJI@ 210 @ 24" OC	An excessive uplift of -590 lbs at support located at 2' 5 3/4" failed this product.
R3.2.1: SW Outlooker	Failed (99% R)	1 piece(s) 11 7/8" TJI@ 210 @ 24" OC	An excessive uplift of -590 lbs at support located at 2' 5 3/4" failed this product.
R4.1.1: NW Outlooker	Passed (75% R)	1 piece(s) 11 7/8" TJI@ 210 @ 24" OC	Web Stiffeners Required
R4.1.2: NW Outlooker	Passed (98% R)	1 piece(s) 11 7/8" TJI@ 210 @ 24" OC	Web Stiffeners Required
R5.1: East Outlooker	Failed (81% R)	1 piece(s) 11 7/8" TJI@ 210 @ 24" OC	An excessive uplift of -525 lbs at support located at 2' 5 3/4" failed this product.
CB1: SE Cant beam	Passed (45% R)	2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL	
CB2: SE Cant beam	Failed (83% R)	2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL	Multiple Failures/Errors
CB3: SW Cant beam	Passed (91% R)	2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL	
CB4: SW Cant beam	Passed (85% R)	2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL	
CB5: NE Cant beam	Failed (77% R)	2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL	Multiple Failures/Errors
RB1: SE Ridge Beam	Passed (81% R)	3 piece(s) 1 3/4" x 16" 2.0E Microllam® LVL	
RB2: SE Ridge Beam	Passed (98% R)	3 piece(s) 1 3/4" x 16" 2.0E Microllam® LVL	
RB3: South Intermediate Ridge Beams	Passed (93% M)	3 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL	
RB4: SW Dropped Terrace Beam	Failed (53% R)	2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL	An excessive uplift of -1742 lbs at support located at 2' 9 3/4" failed this product.
RB5: SE Dropped Terrace Beam	Passed (100% R)	2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL	
RB6: East Intermediate Ridge Beams	Passed (41% R)	3 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL	
RB7: East Ridge Beam	Passed (25% R)	3 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL	
RB8: NE Dropped Terrace Beam	Passed (97% R)	2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL	
RP5.1: South PURLIN 15'	Failed (95% R)	1 piece(s) 6 3/4" x 13 1/2" 24F-V4 DF Glulam	Multiple Failures/Errors
RP5.2: South PURLIN 12'	Failed (81% R)	1 piece(s) 6 3/4" x 13 1/2" 24F-V4 DF Glulam	Multiple Failures/Errors
RP7.3: East PURLIN 11'	Failed (72% R)	1 piece(s) 6 3/4" x 13 1/2" 24F-V4 DF Glulam	Multiple Failures/Errors
RP7.4: East PURLIN 14.5'	Failed (95% R)	1 piece(s) 6 3/4" x 13 1/2" 24F-V4 DF Glulam	Multiple Failures/Errors
Ladder Frame Rafter	Passed (85% M)	1 piece(s) 11 7/8" TJI@ 210 @ 24" OC	Web Stiffeners Required

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



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File Name: Basecamp II

General Calcs			
Member Name	Results (Max UTIL %)	Current Solution	Comments
HDR1: 3' Header	Passed (30% M)	3 piece(s) 2 x 6 DF No.2	
HDR1.1: 3' Header ROOF	Passed (77% M)	3 piece(s) 2 x 6 DF No.2	
SPH1.1	Passed (95% f.)	2 piece(s) 2 x 6 DF No.2	
HDR2: 6' Header	Passed (24% M)	3 piece(s) 2 x 6 DF No.2	
HDR3.1: 6' Header 7.25FT ROOF	Passed (61% R)	3 piece(s) 2 x 12 DF No.2	
HDR3.2: UNIQUE H6.1	Passed (87% M)	3 piece(s) 2 x 12 DF No.2	
HDR3.3: 6' Header	Passed (52% R)	3 piece(s) 2 x 12 DF No.2	
SPH3.1: King Studs	Passed (68% f.)	3 piece(s) 2 x 6 DF No.2	
SPH3.2: King Studs	Passed (57% f.)	3 piece(s) 2 x 6 DF No.2	
H4: 6' Header	Passed (86% R)	3 piece(s) 1 3/4" x 7 1/4" 2.0E Microllam® LVL	
H3.2: 6' Header	Passed (102% R)	3 piece(s) 2 x 12 DF No.2	
HDR5.1: Scheduled Header 3'	Passed (79% M)	3 piece(s) 2 x 8 DF No.2	
HDR5.2: Scheduled Header 3'	Passed (91% M)	3 piece(s) 2 x 8 DF No.2	
HDR3: 6.5' Header	Passed (95% M)	3 piece(s) 2 x 12 DF No.2	
HDR6: Scheduled Header 3'	Passed (85% M)	3 piece(s) 2 x 12 DF No.2	

FortewEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

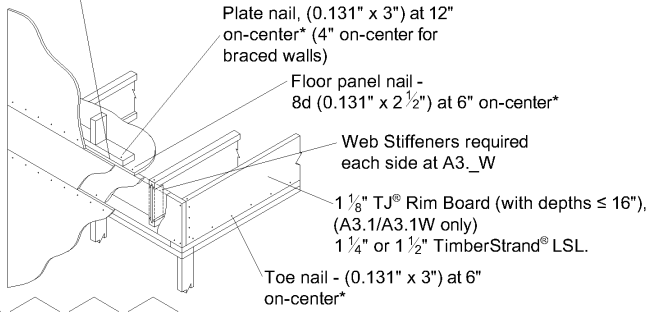


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File Name: Basecamp II

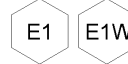
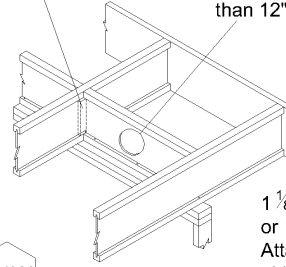
When sheathing thickness exceeds $\frac{7}{8}$ "
trim sheathing tongue at rim board



* For A3.1-A3.3 installation specifications see Rim Board Details and Installation in *Weyerhaeuser Installation Guide for Floor and Roof Framing*, TJ-9001.

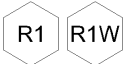
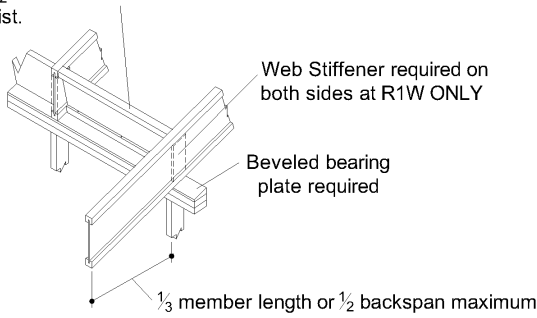
Web stiffeners required on both sides at E1W ONLY

8" diameter maximum hole for 11 $\frac{7}{8}$ " - 24" deep blocking panels; 6" diameter maximum for blocking panels 9 $\frac{1}{2}$ " deep or shorter than 12" long. **Do not cut flanges.**



Shear blocking:

1 $\frac{1}{8}$ " TJ® Rim Board (with depths ≤ 16"),
1 $\frac{1}{4}$ " or 1 $\frac{1}{2}$ " TimberStrand® LSL
or TJ® joist.

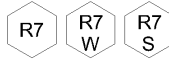
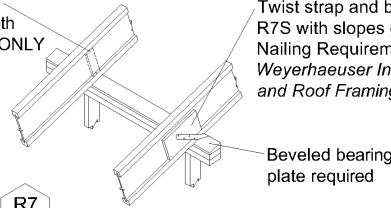


INTERMEDIATE BEARING

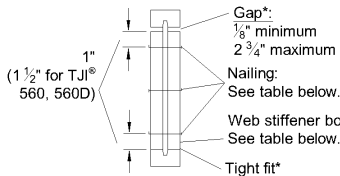
Blocking panels or shear blocking may be specified for joist stability at intermediate supports

Web stiffeners required on both sides at R7W ONLY

Twist strap and backer block required at R7S with slopes greater than 3:12. See Nailing Requirements at Bearing in *Weyerhaeuser Installation Guide for Floor and Roof Framing*, TJ-9001.



WEB STIFFENER ATTACHMENT



* With point load from above, and no support below, install web stiffener tight to top flange (gap at bottom flange)

TJ® Joist Series	Depth (in.)	Minimum Web Stiffener Size	Nailing Requirements		
			Type	Number Nails	
				End	Intermediate
110	All	$\frac{5}{8}$ " x $2\frac{5}{16}$ " ⁽¹⁾	8d (0.113" x 2 $\frac{1}{2}$ ")	3	3
210	All	$\frac{3}{4}$ " x $2\frac{5}{16}$ " ⁽¹⁾			
230 & 360	All	$\frac{7}{8}$ " x $2\frac{5}{16}$ " ⁽¹⁾			
560	All	2x4 ⁽²⁾	16d (0.135" x 3 $\frac{1}{2}$ ")		
560D	18"	2x4 ⁽²⁾	16d	4	4
	20"		5	5	
	22" ⁽³⁾		6	11	
	24" ⁽³⁾		6	13	

(1) PS1 or PS2 sheathing, face grain vertical
(2) Construction grade or better
(3) Web stiffeners are always required for 22" and 24" TJ® 560D Joists



ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



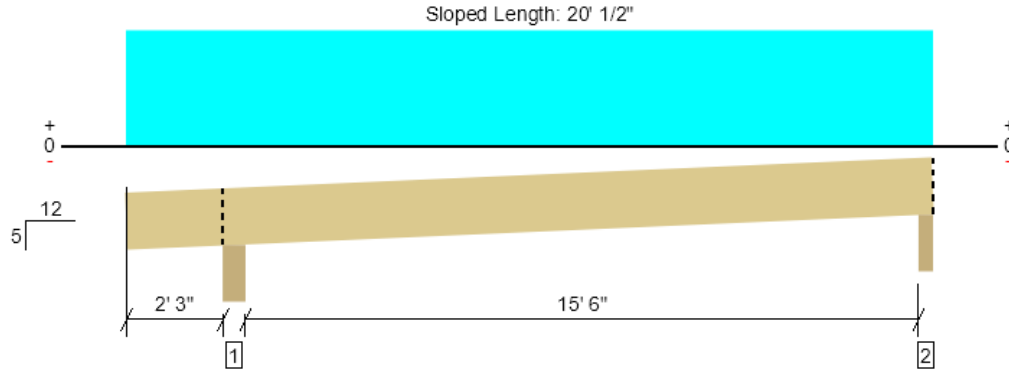
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File Name: Basecamp II

Level 1, Roof: Drop Beam

1 piece(s) 6 3/4" x 10 1/2" 24F-V4 DF Glulam



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern) [Group]
Member Reaction (lbs)	5701 @ 18' 4"	10041 (3.50")	Passed (57%)	--	1.0 D + 1.0 S (Alt Spans) [1]
Shear (lbs)	5065 @ 3' 6 3/16"	14399	Passed (35%)	1.15	1.0 D + 1.0 S (All Spans) [1]
Pos Moment (Ft-lbs)	21784 @ 10' 6 5/16"	28527	Passed (76%)	1.15	1.0 D + 1.0 S (Alt Spans) [1]
Neg Moment (Ft-lbs)	-2197 @ 2' 5 3/4"	21990	Passed (10%)	1.15	1.0 D + 1.0 S (All Spans) [1]
Live Load Defl. (in)	0.740 @ 10' 5 1/4"	0.859	Passed (L/279)	--	1.0 D + 1.0 S (Alt Spans) [1]
Total Load Defl. (in)	0.980 @ 10' 5 3/8"	1.145	Passed (L/210)	--	1.0 D + 1.0 S (Alt Spans) [1]

Member Length : 20' 4 7/8"
 System : Roof
 Member Type : Drop Beam
 Building Use : Residential
 Building Code : IBC 2021
 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).
- Upward deflection on left cantilever exceeds overhang deflection criteria.
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Volume factor of 1.00 was calculated for positive bending using length L = 16' 10 15/16".
- Volume factor of 1.00 was calculated for negative bending using length L = 3' 1 1/4".
- Upward deflection on left cantilever exceeds 0.4".
- 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)				
	Total	Available	Required	Dead	Floor Live	Snow	Factored	Accessories
1 - Beveled Plate - SPF	5.50"	5.50"	2.44"	1903	1277/-48	5676	7579	Blocking
2 - Beveled Plate - SPF	3.50"	3.50"	1.99"	1418	975/-36	4282	5701	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)	20' 1" o/c	
Bottom Edge (Lu)	20' 1" o/c	

- Maximum allowable bracing intervals based on applied load.
- Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 18' 6"	N/A	17.2	--	--	
1 - Uniform (PLF)	0 to 18' 6" (Front)	N/A	148.5	120.5/-4.5	535.5	Linked from: Ladder Frame Rafter, Support 2

• Side loads are assumed to not induce cross-grain tension.

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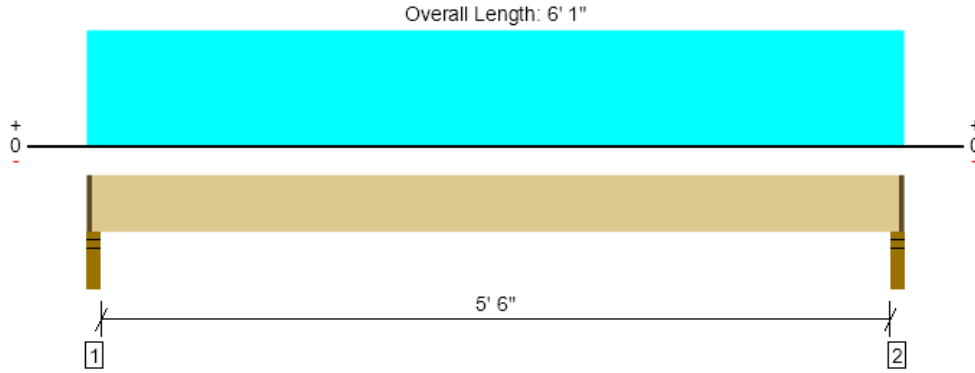
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

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301-1  Weyerhaeuser

Level 2, Elevator/Stair landing
1 piece(s) 2 x 10 DF No.2 @ 24" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	823 @ 2 1/2"	1434 (2.25")	Passed (57%)	--	1.0 D + 1.0 L (All Spans)
Shear (lbs)	554 @ 1' 3/4"	1665	Passed (33%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	1124 @ 3' 1/2"	2029	Passed (55%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.029 @ 3' 1/2"	0.142	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.041 @ 3' 1/2"	0.283	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
TJ-Pro™ Rating	N/A	N/A	N/A	--	N/A

Member Length : 5' 10 1/2"
 System : Floor
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 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	Factored	
1 - Stud wall - SPF	3.50"	2.25"	1.50"	243	608	852	1 1/4" Rim Board
2 - Stud wall - SPF	3.50"	2.25"	1.50"	243	608	852	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' 11" o/c	
Bottom Edge (Lu)	5' 11" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Load	Location (Side)	Spacing	Dead (0.90)	Floor Live (1.00)	Comments
1 - Uniform (PSF)	0 to 6' 1"	24"	40.0	100.0	Default Load

Weyerhaeuser Notes

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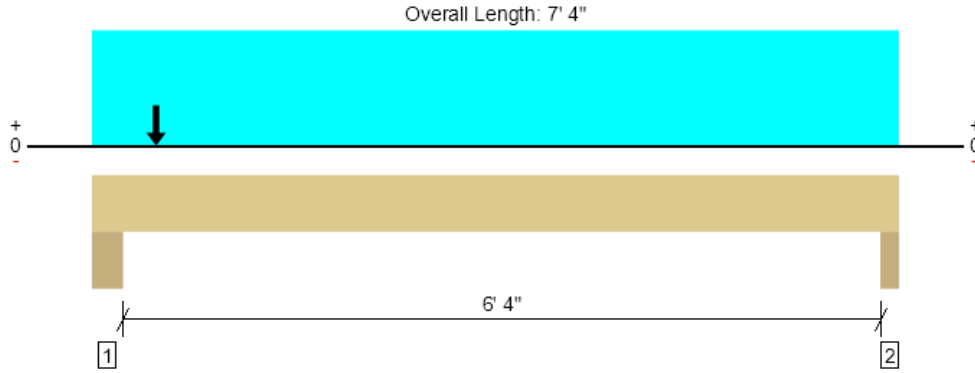
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



Level 2, H2.1

3 piece(s) 1 3/4" x 16" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	15776 @ 7' 1"	17719 (4.50")	Passed (89%)	--	1.0 D + 1.0 L (All Spans)
Shear (lbs)	8167 @ 1' 11 1/2"	15960	Passed (51%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	24132 @ 3' 9 1/2"	46671	Passed (52%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.042 @ 3' 9 1/2"	0.219	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.086 @ 3' 9 1/2"	0.329	Passed (L/923)	--	1.0 D + 1.0 L (All Spans)

Member Length : 7' 4"
 System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/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	Roof Live	Snow	Factored	
1 - Trimmer - DF	7.50"	7.50"	6.46"	12275	8190	2462	9333	25417	None
2 - Trimmer - DF	4.50"	4.50"	4.01"	8126	7650	--	--	15776	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	7' 4" o/c	
Bottom Edge (Lu)	7' 4" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location	Tributary Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 7' 4"	N/A	24.5	--	--	--	
1 - Point (lb)	7"	N/A	3575	--	2462	9333	
2 - Uniform (PLF)	0 to 7' 4"	N/A	2270.0	2160.0	--	--	

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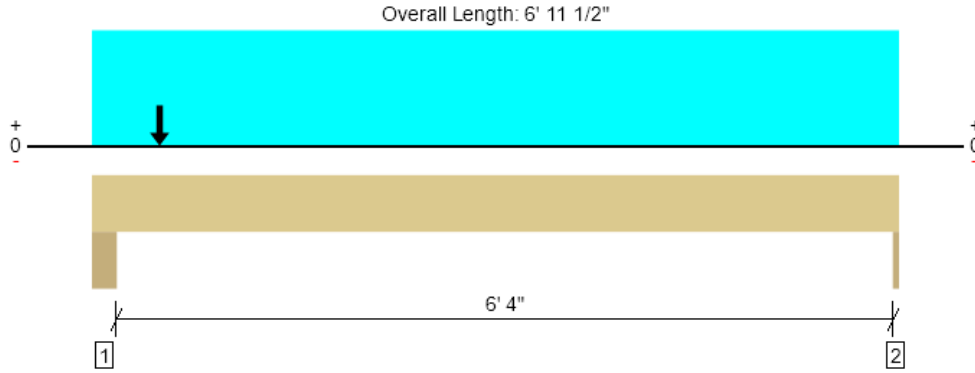
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



Level 2, H2.2

3 piece(s) 1 3/4" x 16" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	18025 @ 4 1/2"	22838 (6.00")	Passed (79%)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
Shear (lbs)	2186 @ 1' 10"	15960	Passed (14%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	5926 @ 3' 4 15/16"	46671	Passed (13%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.012 @ 3' 5 3/4"	0.219	Passed (L/999+)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
Total Load Defl. (in)	0.022 @ 3' 6 5/16"	0.329	Passed (L/999+)	--	1.0 D + 0.75 L + 0.75 S (All Spans)

Member Length : 6' 11 1/2"
 System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/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	Snow	Factored	
1 - Trimmer - SPF	6.00"	6.00"	4.74"	5990	4770	11276	18025	None
2 - Trimmer - SPF	1.50"	1.50"	1.50"	1633	1710	368	3344	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	7' o/c	
Bottom Edge (Lu)	7' 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' 11 1/2"	N/A	24.5	--	--	
1 - Uniform (PSF)	0 to 6' 11 1/2"	12' 3"	35.0	40.0	--	Default Load
2 - Point (lb)	7"	N/A	4470	3071	11644	

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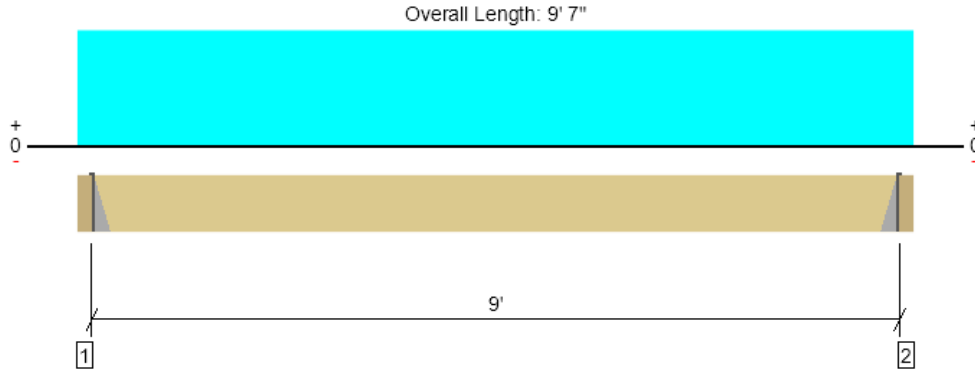
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ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



Level 2, Roof: Joist - Canopy 2x8s
1 piece(s) 2 x 8 DF No.2 @ 16" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	594 @ 3 1/2"	1406 (1.50")	Passed (42%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	514 @ 10 3/4"	1501	Passed (34%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	1337 @ 4' 9 1/2"	1564	Passed (85%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.189 @ 4' 9 1/2"	0.300	Passed (L/573)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.256 @ 4' 9 1/2"	0.450	Passed (L/422)	--	1.0 D + 1.0 S (All Spans)

Member Length : 9'
 System : Roof
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD
 Member Pitch : 0/12

- Deflection criteria: LL (L/360) 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.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Hanger on 7 1/4" DF beam	3.50"	Hanger ¹	1.50"	166	466	633	See note ¹
2 - Hanger on 7 1/4" DF beam	3.50"	Hanger ¹	1.50"	166	466	633	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)	5' 11" o/c	
Bottom Edge (Lu)	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 - Top Mount Hanger	THA29	2.25"	4-10d	6-10d	4-10d		
2 - Top Mount Hanger	THA29	2.25"	4-10d	6-10d	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 9' 7"	16"	26.0	73.0	Default Load

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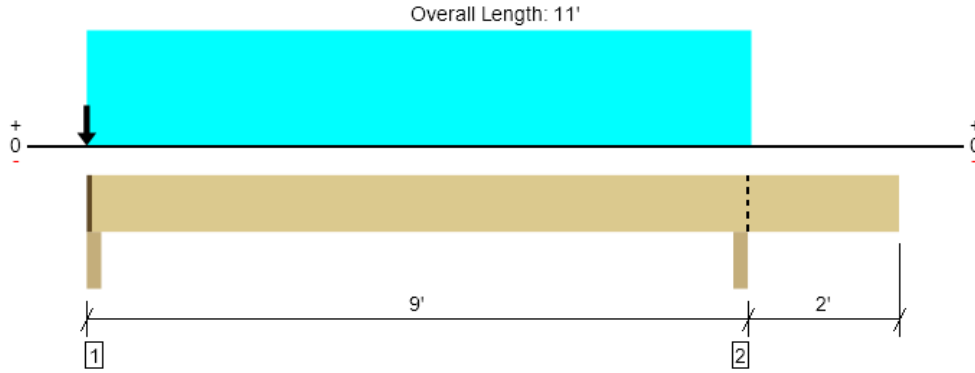
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Level 2, Roof: Flush Beam - Canopy (2)2x10 Cantilever
1 piece(s) 2 x 10 DF No.2



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	305 @ 2"	1434 (2.25")	Passed (21%)	--	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	239 @ 7' 11 1/4"	1915	Passed (12%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	652 @ 4' 5 15/16"	2029	Passed (32%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.039 @ 4' 6 1/8"	0.290	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.056 @ 4' 6 1/16"	0.434	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 10' 10 3/4"
 System : Roof
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD
 Member Pitch : 0/12

- Deflection criteria: LL (L/360) and TL (L/240).
- Overhang deflection criteria: LL (2L/360) and TL (2L/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	Roof Live	Snow	Factored	
1 - Beam - SPF	3.50"	2.25"	1.50"	171	60	438	609	1 1/4" Rim Board
2 - Beam - SPF	3.50"	3.50"	1.50"	102	60	219	320	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)	10' 11" o/c	
Bottom Edge (Lu)	10' 11" o/c	

- Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	1 1/4" to 11'	N/A	3.5	--	--	
1 - Uniform (PSF)	0 to 9' (Top)	8"	26.0	20.0	73.0	Default Load
2 - Point (lb)	0 (Front)	N/A	78	--	219	

- Side loads are assumed to not induce cross-grain tension.

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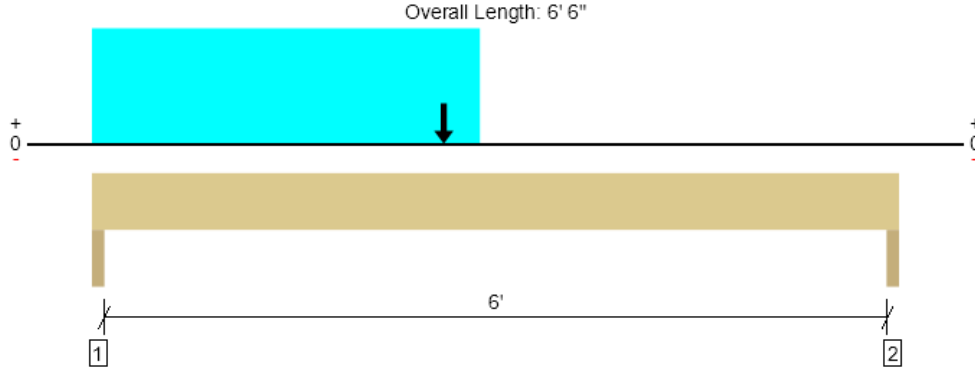
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Level 4, B4.1

3 piece(s) 1 3/4" x 9 1/2" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	5402 @ 1' 1/2"	11813 (3.00")	Passed (46%)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
Shear (lbs)	3893 @ 1' 1/2"	10898	Passed (36%)	1.15	1.0 D + 0.75 L + 0.75 S (All Spans)
Moment (Ft-lbs)	8826 @ 2' 10"	20312	Passed (43%)	1.15	1.0 D + 0.75 L + 0.75 S (All Spans)
Live Load Defl. (in)	0.037 @ 2' 10"	0.125	Passed (L/999+)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
Total Load Defl. (in)	0.090 @ 2' 10"	0.313	Passed (L/834)	--	1.0 D + 0.75 L + 0.75 S (All Spans)

Member Length : 6' 6"
 System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD

- Deflection criteria: LL (L/600) and TL (L/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	Roof Live	Snow	Factored	
1 - Trimmer - DF	3.00"	3.00"	1.50"	2980	821	770	2410	5402	None
2 - Trimmer - DF	3.00"	3.00"	1.50"	1525	627	230	721	2537	None

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

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location	Tributary Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 6' 6"	N/A	14.5	--	--	--	
1 - Uniform (PLF)	0 to 3' 1 1/2"	N/A	683.0	--	320.0	1002.0	Default Load
2 - Point (lb)	2' 10"	N/A	2276	1448	--	--	

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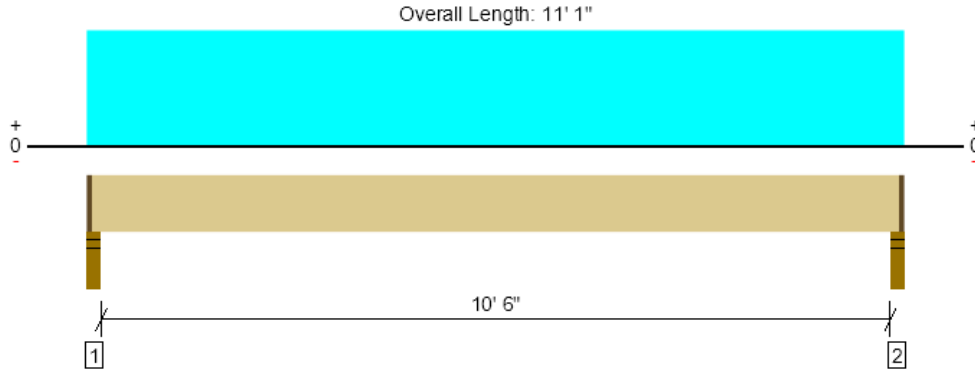
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ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



Level 5, Deck Joists

1 piece(s) 2 x 12 DF No.2 @ 16" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1013 @ 2 1/2"	1434 (2.25")	Passed (71%)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
Shear (lbs)	804 @ 1' 2 3/4"	2329	Passed (35%)	1.15	1.0 D + 0.75 L + 0.75 S (All Spans)
Moment (Ft-lbs)	2650 @ 5' 6 1/2"	3138	Passed (84%)	1.15	1.0 D + 0.75 L + 0.75 S (All Spans)
Live Load Defl. (in)	0.136 @ 5' 6 1/2"	0.267	Passed (L/941)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
Total Load Defl. (in)	0.191 @ 5' 6 1/2"	0.533	Passed (L/672)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
TJ-Pro™ Rating	N/A	N/A	N/A	--	N/A

Member Length : 10' 10 1/2"
 System : Floor
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 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	Wind	Factored	
1 - Stud wall - SPF	3.50"	2.25"	1.59"	296	443	539	-443	1033/-89	1 1/4" Rim Board
2 - Stud wall - SPF	3.50"	2.25"	1.59"	296	443	539	-443	1033/-89	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' 5" o/c	
Bottom Edge (Lu)	10' 11" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Load	Location (Side)	Spacing	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Wind (1.60)	Comments
1 - Uniform (PSF)	0 to 11' 1"	16"	40.0	60.0	73.0	-60.0	Default Load

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ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

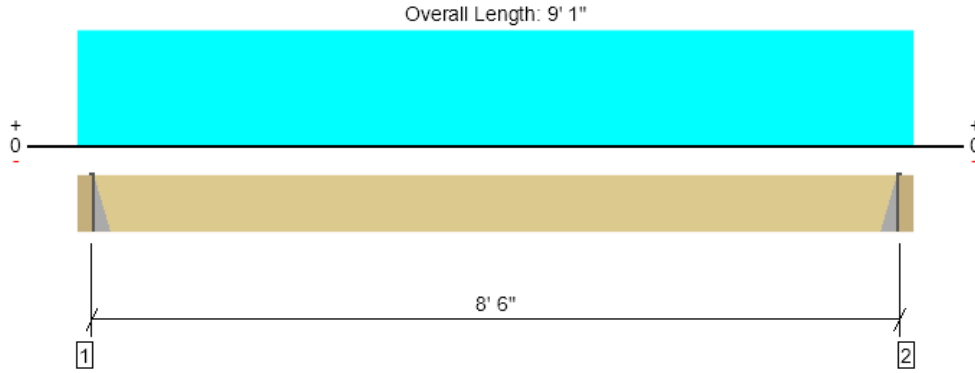


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Level 5, LVL Deck Joists

1 piece(s) 1 3/4" x 7 1/4" 2.0E Microllam® LVL @ 24" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1188 @ 3 1/2"	1969 (1.50")	Passed (60%)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
Shear (lbs)	1019 @ 10 3/4"	2772	Passed (37%)	1.15	1.0 D + 0.75 L + 0.75 S (All Spans)
Moment (Ft-lbs)	2524 @ 4' 6 1/2"	4255	Passed (59%)	1.15	1.0 D + 0.75 L + 0.75 S (All Spans)
Live Load Defl. (in)	0.187 @ 4' 6 1/2"	0.283	Passed (L/546)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
Total Load Defl. (in)	0.262 @ 4' 6 1/2"	0.425	Passed (L/390)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
TJ-Pro™ Rating	49	40	Passed	--	--

Member Length : 8' 6"
 System : Floor
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- A 4% increase in the moment capacity has been added to account for repetitive member usage.
- 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	Snow	Factored	
1 - Hanger on 7 1/4" DF beam	3.50"	Hanger ¹	1.50"	363	545	663	1269	See note ¹
2 - Hanger on 7 1/4" DF beam	3.50"	Hanger ¹	1.50"	363	545	663	1269	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' 6" o/c	
Bottom Edge (Lu)	8' 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
1 - Top Mount Hanger	BA1.81/7.25	3.00"	6-10dx1.5	4-10dx1.5	2-10dx1.5	
2 - Top Mount Hanger	BA1.81/7.25	3.00"	6-10dx1.5	4-10dx1.5	2-10dx1.5	

- 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 9' 1"	24"	40.0	60.0	73.0	Default Load

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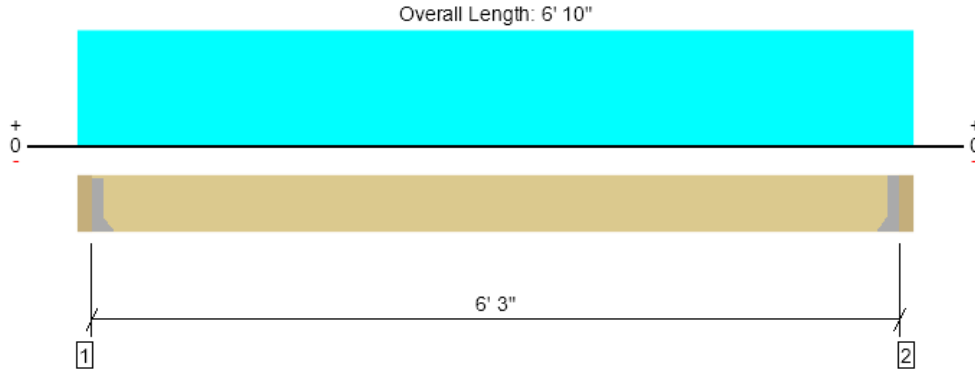
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



3/16/2026 3:42:07 PM UTC
 ForteWEB v4.0, Engine: V8.4.5.1, Data: V25.26.55.57
 File Name: Basecamp II

Level 5, B5.1 Corridor framing
1 piece(s) 2 x 10 DF No.2 @ 24" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	887 @ 3 1/2"	1406 (1.50")	Passed (63%)	--	1.0 D + 1.0 L (All Spans)
Shear (lbs)	669 @ 1' 3/4"	1665	Passed (40%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	1387 @ 3' 5"	2029	Passed (68%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.043 @ 3' 5"	0.156	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.062 @ 3' 5"	0.313	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
TJ-Pro™ Rating	N/A	N/A	N/A	--	N/A

Member Length : 6' 3"
 System : Floor
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 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	Factored	
1 - Hanger on 9 1/4" DF beam	3.50"	Hanger ¹	1.50"	287	683	970	See note ¹
2 - Hanger on 9 1/4" DF beam	3.50"	Hanger ¹	1.50"	287	683	970	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	LU28	1.50"	N/A	8-10d	6-10dx1.5		
2 - Face Mount Hanger	LU28	1.50"	N/A	8-10d	6-10dx1.5		

- 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)	Comments
1 - Uniform (PSF)	0 to 6' 10"	24"	42.0	100.0	Trib Area = 12sqft

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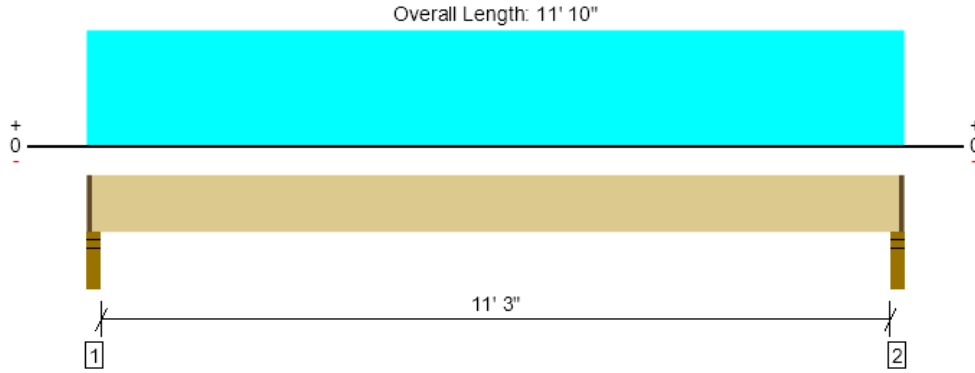
ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



3/16/2026 3:42:07 PM UTC
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 File Name: Basecamp II

Level 5, B5.3 SW Deck ledger

3 piece(s) 1 3/4" x 16" 2.OE Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1991 @ 2"	5020 (2.25")	Passed (40%)	--	1.0 D + 1.0 L (All Spans)
Shear (lbs)	1470 @ 1' 7 1/2"	15960	Passed (9%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	5662 @ 5' 11"	46671	Passed (12%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.024 @ 5' 11"	0.287	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.045 @ 5' 11"	0.575	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)

Member Length : 11' 7 1/2"
 System : Floor
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD

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

Supports	Bearing Length			Loads to Supports (lbs)			
	Total	Available	Required	Dead	Floor Live	Factored	Accessories
1 - Stud wall - SPF	3.50"	2.25"	1.50"	959	1065	2024	1 1/4" Rim Board
2 - Stud wall - SPF	3.50"	2.25"	1.50"	959	1065	2024	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)	11' 8" o/c	
Bottom Edge (Lu)	11' 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)	1 1/4" to 11' 8 3/4"	N/A	24.5	--	
1 - Uniform (PSF)	0 to 11' 10" (Front)	3'	46.0	60.0	Default Load

• Side loads are assumed to not induce cross-grain tension.

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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
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

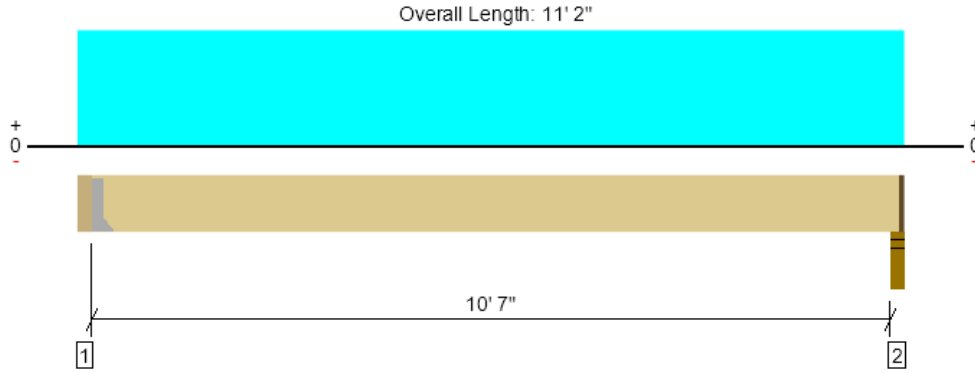


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 File Name: Basecamp II

Level 5, B5.4 NE Deck ledger

3 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	3414 @ 3 1/2"	5906 (1.50")	Passed (58%)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
Shear (lbs)	2783 @ 1' 3 3/8"	13622	Passed (20%)	1.15	1.0 D + 0.75 L + 0.75 S (All Spans)
Moment (Ft-lbs)	9139 @ 5' 7 3/4"	30788	Passed (30%)	1.15	1.0 D + 0.75 L + 0.75 S (All Spans)
Live Load Defl. (in)	0.097 @ 5' 7 3/4"	0.268	Passed (L/999+)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
Total Load Defl. (in)	0.146 @ 5' 7 3/4"	0.535	Passed (L/882)	--	1.0 D + 0.75 L + 0.75 S (All Spans)

Member Length : 10' 9 1/4"
 System : Floor
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/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	Snow	Wind	Factored	
1 - Hanger on 11 7/8" DF beam	3.50"	Hanger ¹	1.50"	1201	1440	1752	-1440	3595/-143	See note ¹
2 - Stud wall - DF	3.50"	2.25"	1.50"	1178	1408	1713	-1408	3518/-138	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)	10' 9" o/c	
Bottom Edge (Lu)	10' 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	HU612	2.50"	N/A	22-16d	8-16d	

- 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)	Wind (1.60)	Comments
0 - Self Weight (PLF)	3 1/2" to 11' 3/4"	N/A	18.2	--	--	--	
1 - Uniform (PSF)	0 to 11' 2" (Front)	4' 3"	46.0	60.0	73.0	-60.0	Default Load

- Side loads are assumed to not induce cross-grain tension.

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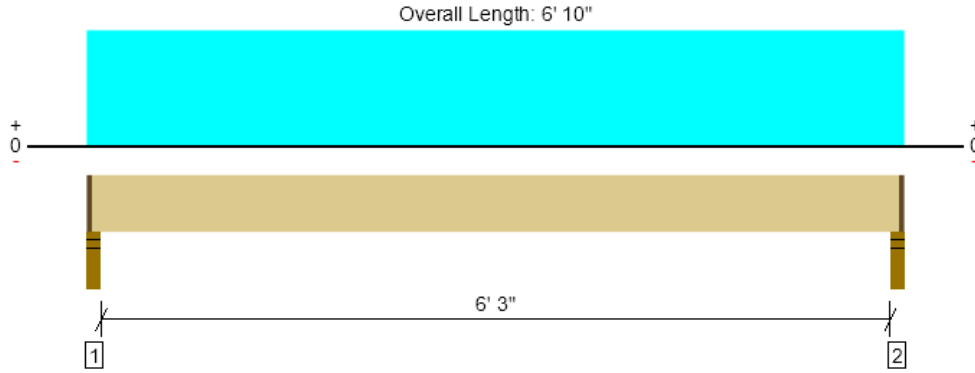
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



3/16/2026 3:42:07 PM UTC
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 File Name: Basecamp II

Level roof, B6.1 Corridor framing
1 piece(s) 2 x 10 DF No.2 @ 24" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	656 @ 2 1/2"	1434 (2.25")	Passed (46%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	466 @ 1' 3/4"	1915	Passed (24%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	1019 @ 3' 5"	2334	Passed (44%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.035 @ 3' 5"	0.160	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.048 @ 3' 5"	0.321	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)
TJ-Pro™ Rating	N/A	N/A	N/A	--	N/A

Member Length : 6' 7 1/2"
 System : Floor
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 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	Roof Live	Snow	Wind	Factored	
1 - Stud wall - SPF	3.50"	2.25"	1.50"	178	137	499	-294	677/-70	1 1/4" Rim Board
2 - Stud wall - SPF	3.50"	2.25"	1.50"	178	137	499	-294	677/-70	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)	6' 8" o/c	
Bottom Edge (Lu)	6' 8" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Load	Location (Side)	Spacing	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
1 - Uniform (PSF)	0 to 6' 10"	24"	26.0	20.0	73.0	-43.0	Trib Area = 12sqft

Weyerhaeuser Notes

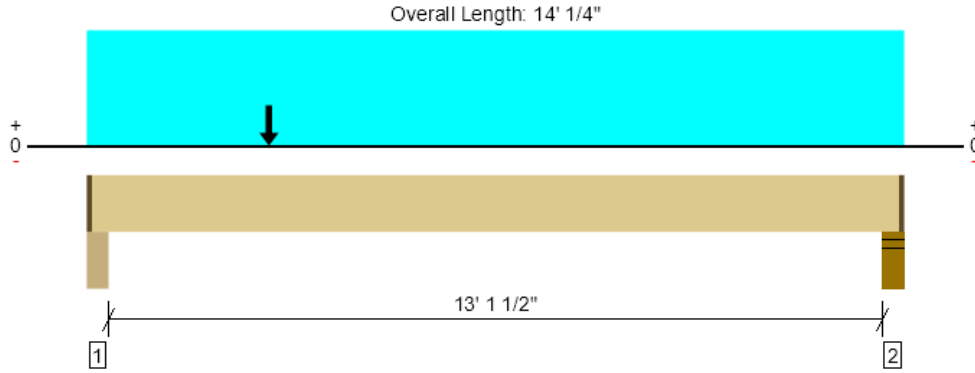
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ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



Level roof, B6.2: SE Mezzanine Beam
3 piece(s) 1 3/4" x 16" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	15986 @ 3 3/4"	15750 (4.00")	Passed (101%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	15887 @ 1' 9 1/4"	18354	Passed (87%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	44691 @ 3' 1 1/2"	53672	Passed (83%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.235 @ 6' 2 1/8"	0.334	Passed (L/683)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.343 @ 6' 2 1/2"	0.669	Passed (L/468)	--	1.0 D + 1.0 S (All Spans)

Member Length : 13' 9 3/4"
 System : Floor
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/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	Roof Live	Snow	Factored	
1 - Column - PSL	5.25"	4.00"	4.00"	4876	280	2925	11114	15990	1 1/4" Rim Board
2 - Stud wall - DF	5.50"	4.25"	1.50"	1603	281	779	2959	4563	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)	6' 4" o/c	
Bottom Edge (Lu)	13' 10" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	1 1/4" to 13' 11"	N/A	24.5	--	--	--	
1 - Uniform (PSF)	0 to 14' 1/4" (Top)	1'	35.0	40.0	--	--	Default Load
2 - Point (lb)	3' 1 1/2" (Top)	N/A	5650	--	3704	14073	Linked from: WC6.1: SE Loft Column, Support 1

• Side loads are assumed to not induce cross-grain tension.

Weyerhaeuser Notes

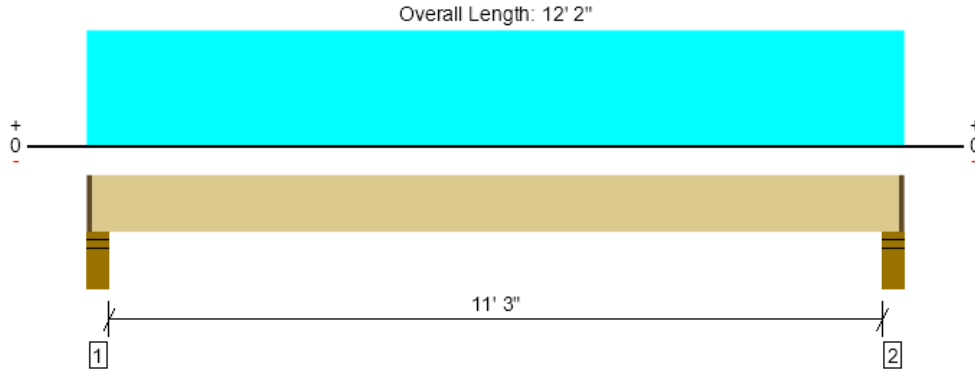
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ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



Level roof, B6.3: NE Mezzanine Beam
2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	2207 @ 4"	6322 (4.25")	Passed (35%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	1711 @ 1' 5 3/8"	9081	Passed (19%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	6102 @ 6' 1"	20525	Passed (30%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.112 @ 6' 1"	0.287	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.166 @ 6' 1"	0.575	Passed (L/833)	--	1.0 D + 1.0 S (All Spans)

Member Length : 11' 11 1/2"
 System : Floor
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/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	Roof Live	Snow	Factored	
1 - Stud wall - SPF	5.50"	4.25"	1.50"	723	122	420	1521	2244	1 1/4" Rim Board
2 - Stud wall - SPF	5.50"	4.25"	1.50"	723	122	420	1521	2244	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' o/c	
Bottom Edge (Lu)	12' o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	1 1/4" to 12' 3/4"	N/A	12.1	--	--	--	
1 - Uniform (PLF)	0 to 12' 2" (Front)	N/A	107.0	20.0	69.0	250.0	Default Load

• Side loads are assumed to not induce cross-grain tension.

Weyerhaeuser Notes

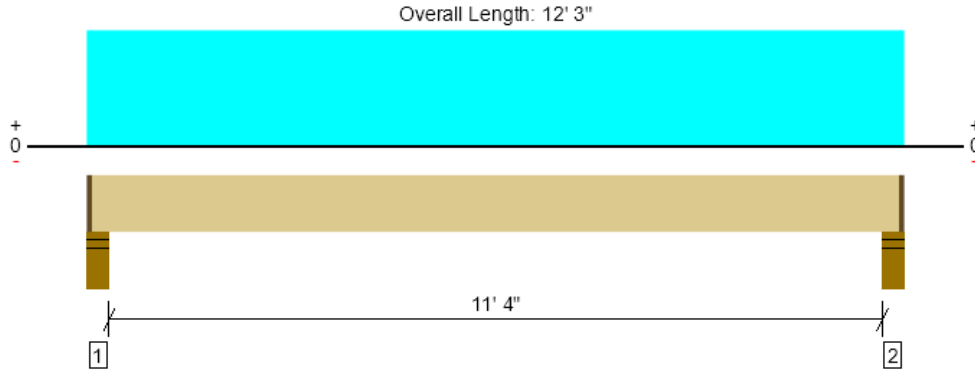
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



Level roof, B6.4: SW Mezzanine Beam
2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	2222 @ 4"	6322 (4.25")	Passed (35%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	1726 @ 1' 5 3/8"	9081	Passed (19%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	6191 @ 6' 1 1/2"	20525	Passed (30%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.115 @ 6' 1 1/2"	0.290	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.170 @ 6' 1 1/2"	0.579	Passed (L/817)	--	1.0 D + 1.0 S (All Spans)

Member Length : 12' 1/2"
 System : Floor
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/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	Roof Live	Snow	Factored	
1 - Stud wall - SPF	5.50"	4.25"	1.50"	728	123	423	1531	2260	1 1/4" Rim Board
2 - Stud wall - SPF	5.50"	4.25"	1.50"	728	123	423	1531	2260	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' 1" o/c	
Bottom Edge (Lu)	12' 1" o/c	

- Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	1 1/4" to 12' 1 3/4"	N/A	12.1	--	--	--	
1 - Uniform (PLF)	0 to 12' 3" (Front)	N/A	107.0	20.0	69.0	250.0	Default Load

- Side loads are assumed to not induce cross-grain tension.

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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
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

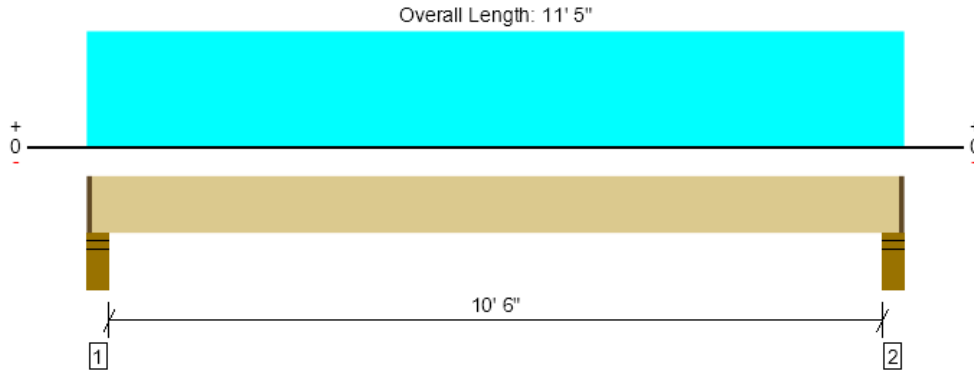


Level roof, B6.5: Roof Beam

2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL

An excessive uplift of -1124 lbs at support located at 4" failed this product.

An excessive uplift of -1124 lbs at support located at 11' 1" failed this product.



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	5616 @ 4"	6322 (4.25")	Passed (89%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	4269 @ 1' 5 3/8"	9081	Passed (47%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	14476 @ 5' 8 1/2"	20525	Passed (71%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.254 @ 5' 8 1/2"	0.269	Passed (L/508)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.348 @ 5' 8 1/2"	0.538	Passed (L/370)	--	1.0 D + 1.0 S (All Spans)

Member Length : 11' 2 1/2"
 System : Floor
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD

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

Supports	Bearing Length			Loads to Supports (lbs)					
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored	Accessories
1 - Stud wall - SPF	5.50"	4.25"	3.78"	1552	1142	4167	-3425	5719/-1124	1 1/4" Rim Board
2 - Stud wall - SPF	5.50"	4.25"	3.78"	1552	1142	4167	-3425	5719/-1124	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)	9' o/c	
Bottom Edge (Lu)	11' 3" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	1 1/4" to 11' 3 3/4"	N/A	12.1	--	--	--	
1 - Uniform (PLF)	0 to 11' 5" (Front)	N/A	260.0	200.0	730.0	-600.0	Default Load

• Side loads are assumed to not induce cross-grain tension.

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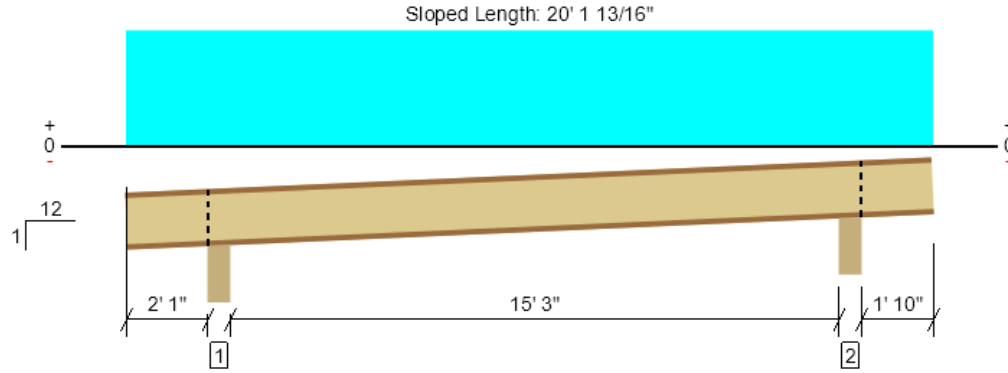
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Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



Level High Roof, SR1: Shed Roof
1 piece(s) 11 7/8" TJI@ 360 @ 24" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	2032 @ 2' 3 3/4"	3462 (5.25")	Passed (59%)	1.15	1.0 D + 1.0 S (Adj Spans)
Shear (lbs)	1423 @ 2' 6 1/2"	1961	Passed (73%)	1.15	1.0 D + 1.0 S (Adj Spans)
Moment (Ft-lbs)	5812 @ 10' 2 1/4"	7107	Passed (82%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.539 @ 10' 2 1/16"	0.788	Passed (L/351)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.724 @ 10' 2 1/16"	1.051	Passed (L/261)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 20' 2 13/16"
 System : Roof
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD
 Member Pitch : 1/12

- 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.
- -425 lbs uplift at support located at 2' 3 3/4". Strapping or other restraint may be required.
- -414 lbs uplift at support located at 18' 1/4". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories	Details
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored		
1 - Beveled Plate - SPF	5.50"	5.50"	3.50"	532	411	1499	-1240	2032/-425	Blocking	R1
2 - Beveled Plate - SPF	5.50"	5.50"	3.50"	516	399	1455	-1206	1971/-414	Blocking	R1

• 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' 8" o/c	
Bottom Edge (Lu)	8' 3" o/c	

- TJI joists are only analyzed using Maximum Allowable bracing solutions.
- Maximum allowable bracing intervals based on applied load.
- Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

Vertical Load	Location	Spacing	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
1 - Uniform (PSF)	0 to 20' 1"	24"	26.0	20.0	73.0	-60.0	Default Load

• Distributed wind loads are applied perpendicular to the slope of the member.

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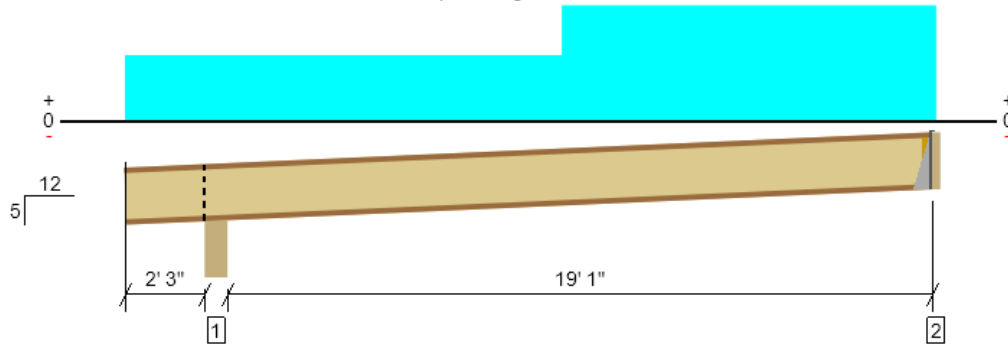
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



Level High Roof, LR1: Long Rafter
1 piece(s) 11 7/8" TJI@ 560 @ 16" OC

Sloped Length: 23' 9 7/16"



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1692 @ 21' 9 1/2"	2001 (1.75")	Passed (85%)	1.15	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	1692 @ 21' 9 1/2"	2358	Passed (72%)	1.15	1.0 D + 1.0 S (Alt Spans)
Moment (Ft-lbs)	7549 @ 12' 10 3/8"	10925	Passed (69%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.807 @ 12' 3 15/16"	1.046	Passed (L/311)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	1.042 @ 12' 3 9/16"	1.395	Passed (L/241)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 24' 1/4"
 System : Roof
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 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).
- Upward deflection on left cantilever exceeds overhang deflection criteria.
- Allowed moment does not reflect the adjustment for the beam stability factor.
- -362 lbs uplift at support located at 2' 5 3/4". Strapping or other restraint may be required.
- -291 lbs uplift at support located at 21' 9 1/2". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories	Details
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored		
1 - Beveled Plate - SPF	5.50"	5.50"	3.50"	462	328	1336	-1066	1798/-362	Blocking	R1
2 - Hanger on 11 7/8" SPF beam	2.00"	Hanger ¹	- / 1.75" ²	360	258	1348	7/-844	1707/-291	See note ¹ , Web Stiffeners	W

- 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.
- ² Required Bearing Length / Required Bearing Length with Web Stiffeners

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	6' 3" o/c	
Bottom Edge (Lu)	13' 4" o/c	

- TJI joists are only analyzed using Maximum Allowable bracing solutions.
- Maximum allowable bracing intervals based on applied load.
- Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

Connector: Simpson Strong-Tie						
Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories
2 - Top 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	Spacing	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
1 - Uniform (PSF)	0 to 11' 10 1/2"	16"	26.0	20.0	73.0	-65.0	Default Load
2 - Uniform (PSF)	11' 10 1/2" to 21' 10 1/2"	16"	26.0	20.0	114.0	-65.0	

- Distributed wind loads are applied perpendicular to the slope of the member.

ForteWEB Software Operator	Job Notes
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301-311 Weyerhaeuser

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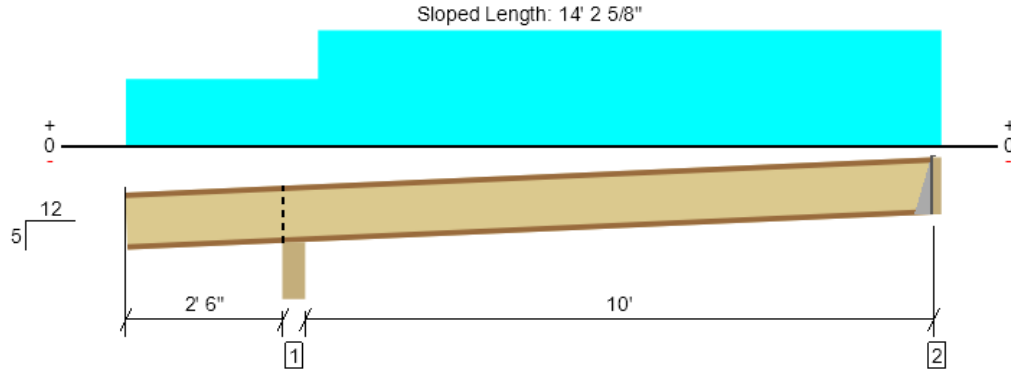
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

301-32 Weyerhaeuser



Level High Roof, R1.1: South Short Rafter
1 piece(s) 11 7/8" TJI@ 210 @ 16" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	951 @ 12' 11 1/2"	1156 (1.75")	Passed (82%)	1.15	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	957 @ 3' 1 1/2"	1903	Passed (50%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	2354 @ 8' 1/8"	4364	Passed (54%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.170 @ 7' 10 9/16"	0.554	Passed (L/780)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.208 @ 7' 10 3/4"	0.739	Passed (L/640)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 14' 5 3/8"
 System : Roof
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 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).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- -209 lbs uplift at support located at 2' 8 3/4". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories	Details
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored		
1 - Beveled Plate - SPF	5.50"	5.50"	3.50"	308	219	1070	-657	1378/-209	Blocking	R1
2 - Hanger on 11 7/8" SPF beam	2.00"	Hanger ¹	1.75" / 1.75" ²	184	136	799	16/-422	983/-143	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.
- 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)	8' 8" o/c	

- TJI joists are only analyzed using Maximum Allowable bracing solutions.
- Maximum allowable bracing intervals based on applied load.
- Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

Connector: Simpson Strong-Tie

Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories
2 - Top 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	Spacing	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
1 - Uniform (PSF)	0 to 3' 1 1/2"	16"	26.0	20.0	73.0	-60.0	Default Load
2 - Uniform (PSF)	3' 1 1/2" to 13' 1 1/2"	16"	26.0	20.0	116.0	-60.0	Added 43 psf of snow

- Distributed wind loads are applied perpendicular to the slope of the member.

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



301-833-3333

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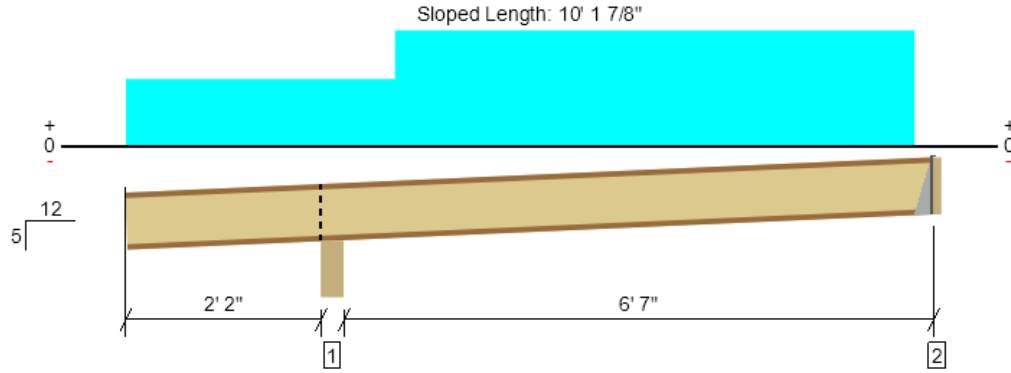
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ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

301-34 Weyerhaeuser



Level High Roof, R1.2: East Short Rafter
1 piece(s) 11 7/8" TJI@ 210 @ 16" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	577 @ 9' 2 1/2"	1156 (1.75")	Passed (50%)	1.15	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	603 @ 2' 7 1/2"	1903	Passed (32%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	985 @ 6'	4364	Passed (23%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.041 @ 5' 10 1/8"	0.369	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.050 @ 5' 10 3/8"	0.492	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 10' 4 5/8"
 System : Roof
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 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).
- Allowed moment does not reflect the adjustment for the beam stability factor.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories	Details
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored		
1 - Beveled Plate - SPF	5.50"	5.50"	3.50"	234	166	761	-498	995/-158	Blocking	R1
2 - Hanger on 11 7/8" SPF beam	2.00"	Hanger ¹	1.75" / 1.75" ²	104	80	472	34/-256	577/-91	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.
- ² Required Bearing Length / Required Bearing Length with Web Stiffeners

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	7' 6" 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.
- Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

Connector: Simpson Strong-Tie						
Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories
2 - Top 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	Spacing	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
1 - Uniform (PSF)	0 to 3' 1 1/2"	16"	26.0	20.0	73.0	-60.0	Default Load
2 - Uniform (PSF)	3' 1 1/2" to 9'	16"	26.0	20.0	116.0	-60.0	Added 43 psf of snow

- Distributed wind loads are applied perpendicular to the slope of the member.

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



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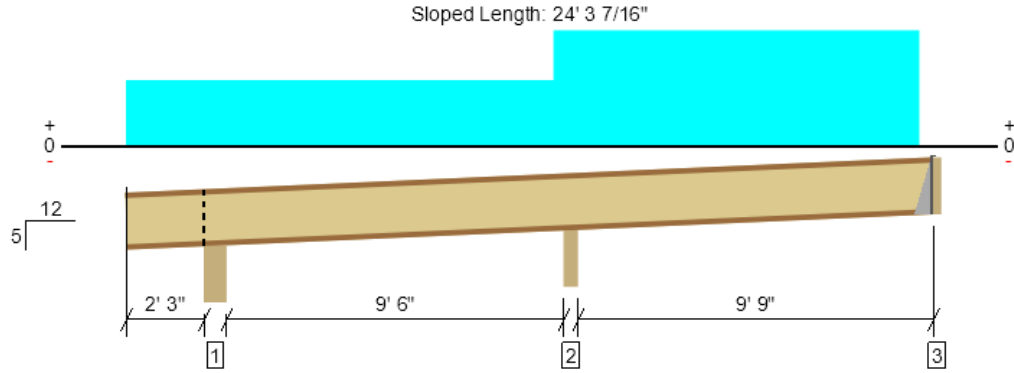
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ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

301-36 Weyerhaeuser



Level High Roof, R2.1: W/ PURLIN
1 piece(s) 11 7/8" TJI@ 210 @ 16" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1989 @ 12' 4 1/4"	2672 (3.50")	Passed (74%)	1.15	1.0 D + 1.0 S (Adj Spans)
Shear (lbs)	1048 @ 12' 6"	1903	Passed (55%)	1.15	1.0 D + 1.0 S (Adj Spans)
Moment (Ft-lbs)	-1916 @ 12' 4 1/4"	4364	Passed (44%)	1.15	1.0 D + 1.0 S (Adj Spans)
Live Load Defl. (in)	0.110 @ 17' 7 7/8"	0.357	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.132 @ 17' 8 1/2"	0.536	Passed (L/977)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 24' 6 3/16"
 System : Roof
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD
 Member Pitch : 5/12

- Deflection criteria: LL (L/360) and TL (L/240).
- Overhang deflection criteria: LL (2L/360) and TL (2L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- -226 lbs uplift at support located at 2' 5 3/4". Strapping or other restraint may be required.
- -374 lbs uplift at support located at 12' 4 1/4". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories	Details
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored		
1 - Beveled Plate - SPF	5.50"	5.50"	3.50"	247	183	653	-623	900/-226	Blocking	R1
2 - Beveled Plate - SPF	3.50"	3.50"	3.50"	446	323	1543	-1070	1989/-374	None	R7S
3 - Hanger on 11 7/8" SPF beam	2.00"	Hanger ¹	1.75" / 1.75" ²	129	100	580	53/-350	708/-133	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.
- ² Required Bearing Length / Required Bearing Length with Web Stiffeners

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	5' 11" o/c	
Bottom Edge (Lu)	5' 4" o/c	

- TJI joists are only analyzed using Maximum Allowable bracing solutions.
- Maximum allowable bracing intervals based on applied load.
- Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

Connector: Simpson Strong-Tie						
Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories
3 - Top 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	Spacing	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
1 - Uniform (PSF)	0 to 11' 10 1/2"	16"	26.0	20.0	73.0	-65.0	Default Load
2 - Uniform (PSF)	11' 10 1/2" to 21' 10 1/2"	16"	26.0	20.0	114.0	-65.0	

- Distributed wind loads are applied perpendicular to the slope of the member.

FortewEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



3/16/2026 3:42:07 PM UTC
 FortewEB v4.0, Engine: V8.4.5.1, Data: V25.26.55.57
 File Name: Basecamp II

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

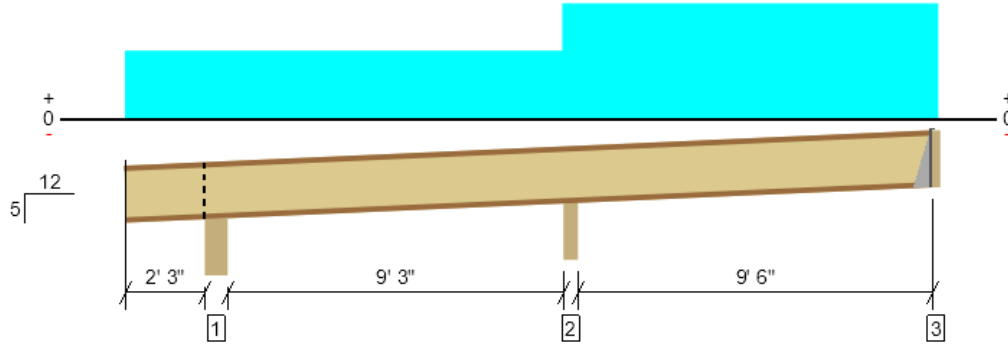
ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

301-88 Weyerhaeuser



Level High Roof, R2.2: East W/ PURLIN
1 piece(s) 11 7/8" TJI@ 210 @ 16" OC

Sloped Length: 23' 8 15/16"



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1926 @ 12' 1 1/4"	2672 (3.50")	Passed (72%)	1.15	1.0 D + 1.0 S (Adj Spans)
Shear (lbs)	1018 @ 12' 3"	1903	Passed (53%)	1.15	1.0 D + 1.0 S (Adj Spans)
Moment (Ft-lbs)	-1818 @ 12' 1 1/4"	4364	Passed (42%)	1.15	1.0 D + 1.0 S (Adj Spans)
Live Load Defl. (in)	0.102 @ 17' 3 3/8"	0.348	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.122 @ 17' 3 15/16"	0.522	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 23' 11 11/16"
 System : Roof
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD
 Member Pitch : 5/12

- Deflection criteria: LL (L/360) and TL (L/240).
- Overhang deflection criteria: LL (2L/360) and TL (2L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- -318 lbs uplift at support located at 12' 1 1/4". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)						Accessories	Details
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored			
1 - Beveled Plate - SPF	5.50"	5.50"	3.50"	244	181	644	-567	888/-194	Blocking	R1	
2 - Beveled Plate - SPF	3.50"	3.50"	3.50"	434	315	1491	-964	1926/-318	None	R7S	
3 - Hanger on 11 7/8" SPF beam	2.00"	Hanger ¹	1.75" / 1.75" ²	143	110	639	38/-354	782/-126	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.
- ² Required Bearing Length / Required Bearing Length with Web Stiffeners

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

- TJI joists are only analyzed using Maximum Allowable bracing solutions.
- Maximum allowable bracing intervals based on applied load.
- Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

Connector: Simpson Strong-Tie						
Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories
3 - Top 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	Spacing	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
1 - Uniform (PSF)	0 to 11' 10 1/2"	16"	26.0	20.0	73.0	-60.0	Default Load
2 - Uniform (PSF)	11' 10 1/2" to 21' 10 1/2"	16"	26.0	20.0	114.0	-60.0	

- Distributed wind loads are applied perpendicular to the slope of the member.

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



301-399-8900

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 ForteWEB v4.0, Engine: V8.4.5.1, Data: V25.26.55.57
 File Name: Basecamp II

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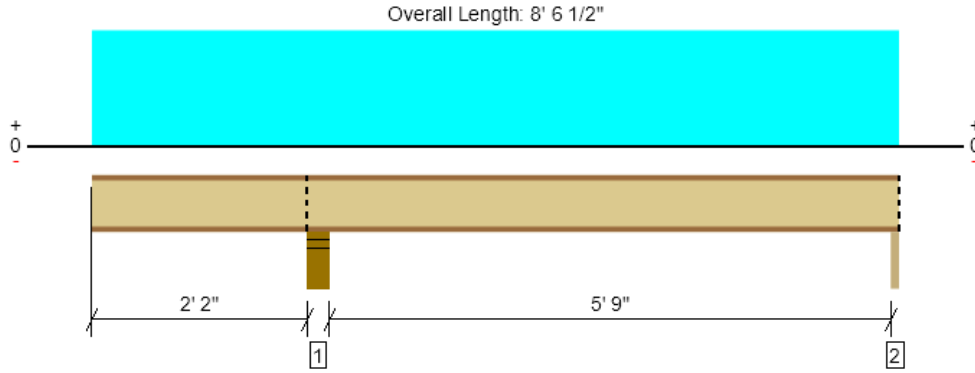
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

301-40 Weyerhaeuser



Level High Roof, R3.1.1: SE Outlooker
1 piece(s) 11 7/8" TJI@ 210 @ 24" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	558 @ 8' 5 1/2"	1230 (2.00")	Passed (45%)	1.15	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	602 @ 2' 7 1/2"	1903	Passed (32%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	739 @ 5' 8 11/16"	4364	Passed (17%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.023 @ 5' 6 5/16"	0.303	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.031 @ 5' 6 11/16"	0.404	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 8' 6 1/2"
 System : Roof
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 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.
- -241 lbs uplift at support located at 2' 4 3/4". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored	
1 - Stud wall - SPF	5.50"	5.50"	3.50"	307	236	861	-708	1168/-241	Blocking
2 - Beam - SPF	2.00"	2.00"	1.75"	137	115	420	57/-374	558/-142	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' 7" o/c	
Bottom Edge (Lu)	8' 7" o/c	

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

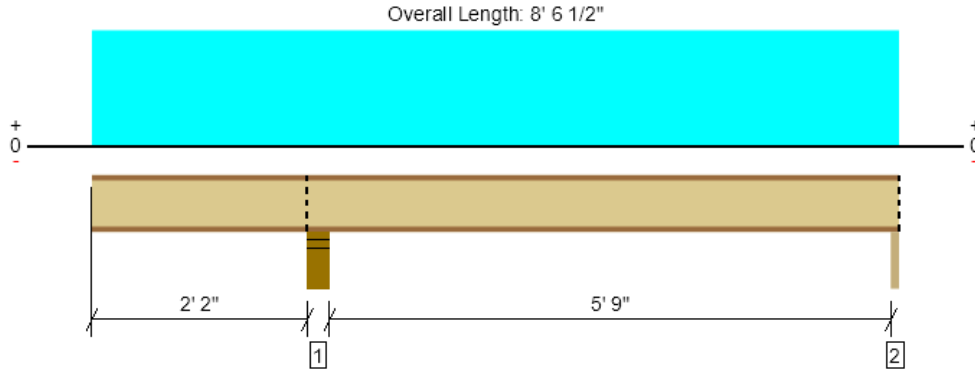
Vertical Load	Location	Spacing	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
1 - Uniform (PSF)	0 to 8' 6 1/2"	24"	26.0	20.0	73.0	-60.0	Default Load

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ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



Level High Roof, R3.1.2: Outlooker
1 piece(s) 11 7/8" TJI@ 210 @ 24" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	558 @ 8' 5 1/2"	1230 (2.00")	Passed (45%)	1.15	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	602 @ 2' 7 1/2"	1903	Passed (32%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	739 @ 5' 8 11/16"	4364	Passed (17%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.023 @ 5' 6 5/16"	0.303	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.031 @ 5' 6 11/16"	0.404	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 8' 6 1/2"
 System : Roof
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 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.
- -241 lbs uplift at support located at 2' 4 3/4". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored	
1 - Stud wall - SPF	5.50"	5.50"	3.50"	307	236	861	-708	1168/-241	Blocking
2 - Beam - SPF	2.00"	2.00"	1.75"	137	115	420	57/-374	558/-142	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' 7" o/c	
Bottom Edge (Lu)	8' 7" 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)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
1 - Uniform (PSF)	0 to 8' 6 1/2"	24"	26.0	20.0	73.0	-60.0	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
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

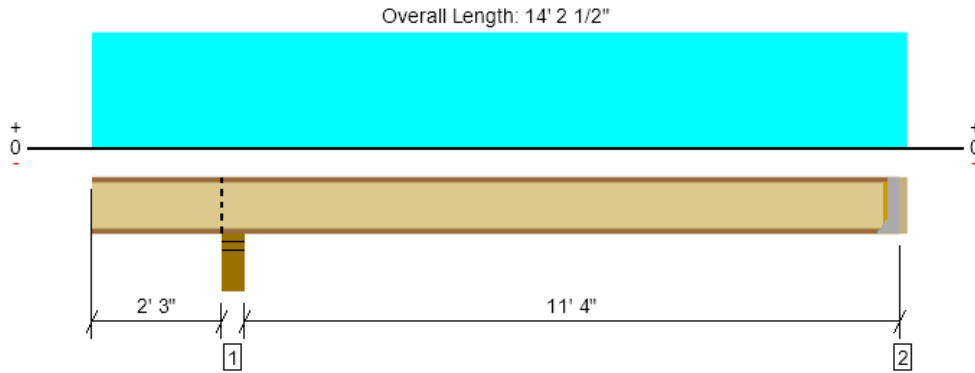


301-42Weyerhaeuser

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 ForteWEB v4.0, Engine: V8.4.5.1, Data: V25.26.55.57
 File Name: Basecamp II

Level High Roof, R3.2: SW Outlooker
1 piece(s) 11 7/8" TJI@ 210 @ 24" OC

An excessive uplift of -590 lbs at support located at 2' 5 3/4" failed this product.



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

Design Results	Actual @ Location	Allowed	Result	LDf	Load: Combination (Pattern)
Member Reaction (lbs)	1145 @ 14' 1/2"	1156 (1.75")	Passed (99%)	1.15	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	1145 @ 14' 1/2"	1903	Passed (60%)	1.15	1.0 D + 1.0 S (Alt Spans)
Moment (Ft-lbs)	3215 @ 8' 5 1/8"	4364	Passed (74%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.229 @ 8' 3 5/8"	0.578	Passed (L/606)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.304 @ 8' 3 13/16"	0.771	Passed (L/457)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 14' 1/2"
 System : Roof
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 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.
- -420 lbs uplift at support located at 14' 1/2". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories	Details
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored		
1 - Stud wall - SPF	5.50"	5.50"	3.50"	443	341	1296	-1427	1739/-590	Blocking	--
2 - Hanger on 11 7/8" SPF beam	2.00"	Hanger ¹	1.75" / - ²	295	233	884	17/-996	1179/-420	See note ¹	W

- 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.
- ² Required Bearing Length / Required Bearing Length with Web Stiffeners

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	4' o/c	
Bottom Edge (Lu)	6' 10" 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	HU2.1/9	2.50"	N/A	14-10dx1.5	6-10dx1.5	Web Stiffeners

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

Vertical Load	Location	Spacing	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
1 - Uniform (PSF)	0 to 14' 2 1/2"	24"	26.0	20.0	76.0	-83.7	Trib A: 28.5ft^2

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

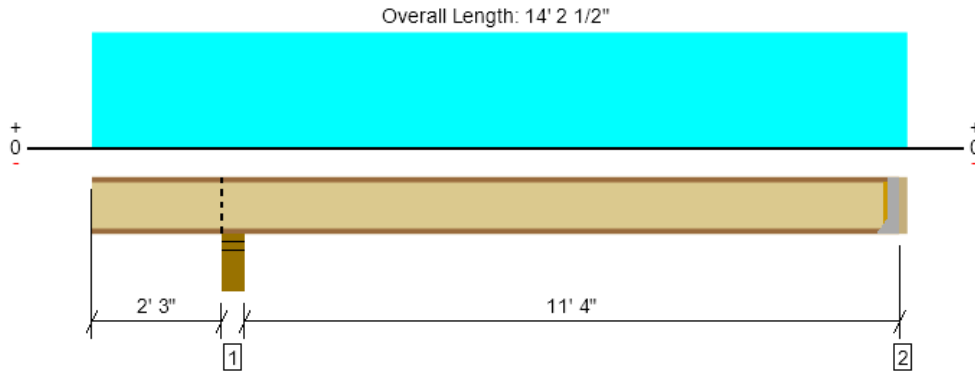
ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



3/16/2026 3:42:07 PM UTC
 ForteWEB v4.0, Engine: V8.4.5.1, Data: V25.26.55.57
 File Name: Basecamp II

Level High Roof, R3.2.1: SW Outlooker
1 piece(s) 11 7/8" TJI@ 210 @ 24" OC

An excessive uplift of -590 lbs at support located at 2' 5 3/4" failed this product.



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1145 @ 14' 1/2"	1156 (1.75")	Passed (99%)	1.15	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	1145 @ 14' 1/2"	1903	Passed (60%)	1.15	1.0 D + 1.0 S (Alt Spans)
Moment (Ft-lbs)	3215 @ 8' 5 1/8"	4364	Passed (74%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.229 @ 8' 3 5/8"	0.578	Passed (L/606)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.304 @ 8' 3 13/16"	0.771	Passed (L/457)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 14' 1/2"
 System : Roof
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 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.
- -420 lbs uplift at support located at 14' 1/2". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories	Details
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored		
1 - Stud wall - SPF	5.50"	5.50"	3.50"	443	341	1296	-1427	1739/-590	Blocking	--
2 - Hanger on 11 7/8" SPF beam	2.00"	Hanger ¹	1.75" / - ²	295	233	884	17/-996	1179/-420	See note ¹	W

- 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.
- ² Required Bearing Length / Required Bearing Length with Web Stiffeners

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	4' o/c	
Bottom Edge (Lu)	6' 10" 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	HU2.1/9	2.50"	N/A	14-10dx1.5	6-10dx1.5	Web Stiffeners

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

Vertical Load	Location	Spacing	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
1 - Uniform (PSF)	0 to 14' 2 1/2"	24"	26.0	20.0	76.0	-83.7	Trib A: 28.5ft^2

Weyerhaeuser Notes

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

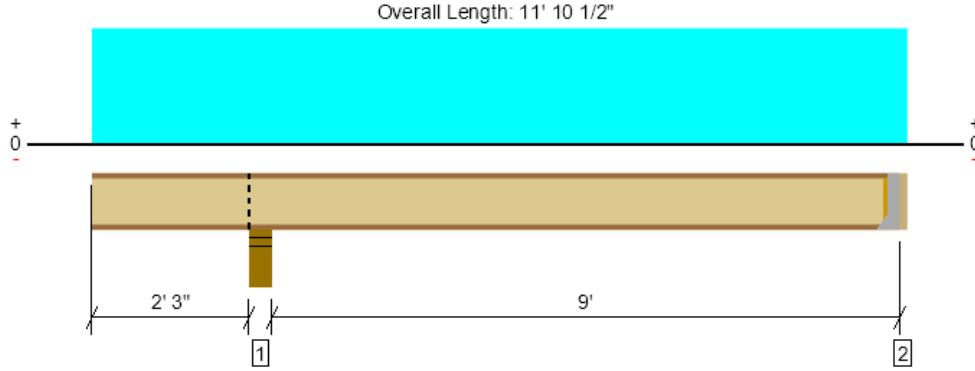
ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



301-44 Weyerhaeuser

3/16/2026 3:42:07 PM UTC
 ForteWEB v4.0, Engine: V8.4.5.1, Data: V25.26.55.57
 File Name: Basecamp II

Level High Roof, R4.1.1: NW Outlooker
1 piece(s) 11 7/8" TJI@ 210 @ 24" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	872 @ 11' 8 1/2"	1156 (1.75")	Passed (75%)	1.15	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	882 @ 2' 8 1/2"	1903	Passed (46%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	1920 @ 7' 3 5/8"	4364	Passed (44%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.097 @ 7' 1 7/8"	0.461	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.129 @ 7' 2 1/16"	0.615	Passed (L/857)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 11' 8 1/2"
 System : Roof
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 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.
- -419 lbs uplift at support located at 2' 5 3/4". Strapping or other restraint may be required.
- -280 lbs uplift at support located at 11' 8 1/2". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories	Details
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored		
1 - Stud wall - DF	5.50"	5.50"	3.50"	386	297	1084	-1084	1470/-419	Blocking	--
2 - Hanger on 11 7/8" LVL beam	2.00"	Hanger ¹	1.75" / - ²	231	185	674	24/-698	905/-280	See note ¹	W

- 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.
- ² Required Bearing Length / Required Bearing Length with Web Stiffeners

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	5' 4" 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.

Connector: Simpson Strong-Tie

Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories
2 - Face Mount Hanger	HU2.1/9	2.50"	N/A	14-10dx1.5	6-10dx1.5	Web Stiffeners

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

Vertical Load	Location	Spacing	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
1 - Uniform (PSF)	0 to 11' 10 1/2"	24"	26.0	20.0	73.0	-73.0	Trib A: 28.5ft ²

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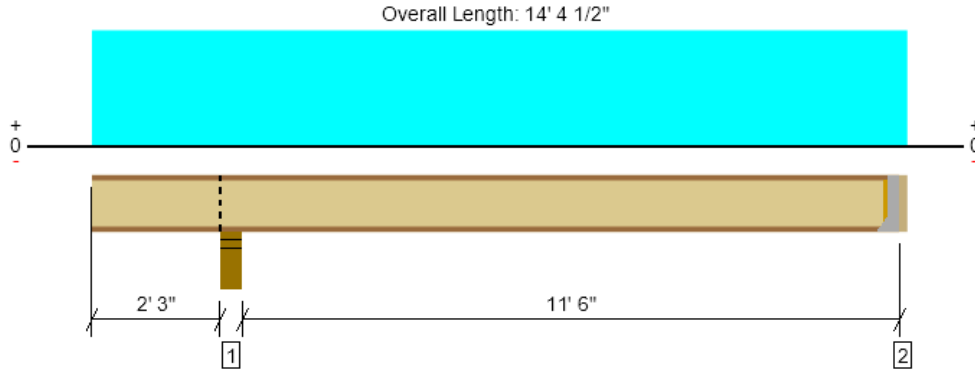
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



3/16/2026 3:42:07 PM UTC
 ForteWEB v4.0, Engine: V8.4.5.1, Data: V25.26.55.57
 File Name: Basecamp II

Level High Roof, R4.1.2: NW Outlooker
1 piece(s) 11 7/8" TJI@ 210 @ 24" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1128 @ 14' 2 1/2"	1156 (1.75")	Passed (98%)	1.15	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	1128 @ 14' 2 1/2"	1903	Passed (59%)	1.15	1.0 D + 1.0 S (Alt Spans)
Moment (Ft-lbs)	3216 @ 8' 6 1/8"	4364	Passed (74%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.232 @ 8' 4 5/8"	0.586	Passed (L/607)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.311 @ 8' 4 13/16"	0.782	Passed (L/453)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 14' 2 1/2"
 System : Roof
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 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.
- -485 lbs uplift at support located at 2' 5 3/4". Strapping or other restraint may be required.
- -348 lbs uplift at support located at 14' 2 1/2". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories	Details
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored		
1 - Stud wall - DF	5.50"	5.50"	3.50"	447	344	1256	-1256	1704/-485	Blocking	--
2 - Hanger on 11 7/8" LVL beam	2.00"	Hanger ¹	1.75" / - ²	300	236	861	14/-881	1161/-348	See note ¹	W

- 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.
- ² Required Bearing Length / Required Bearing Length with Web Stiffeners

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	4' o/c	
Bottom Edge (Lu)	7' 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	HU2.1/9	2.50"	N/A	14-10dx1.5	6-10dx1.5	Web Stiffeners

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

Vertical Load	Location	Spacing	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
1 - Uniform (PSF)	0 to 14' 4 1/2"	24"	26.0	20.0	73.0	-73.0	Trib A: 28.5ft ²

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

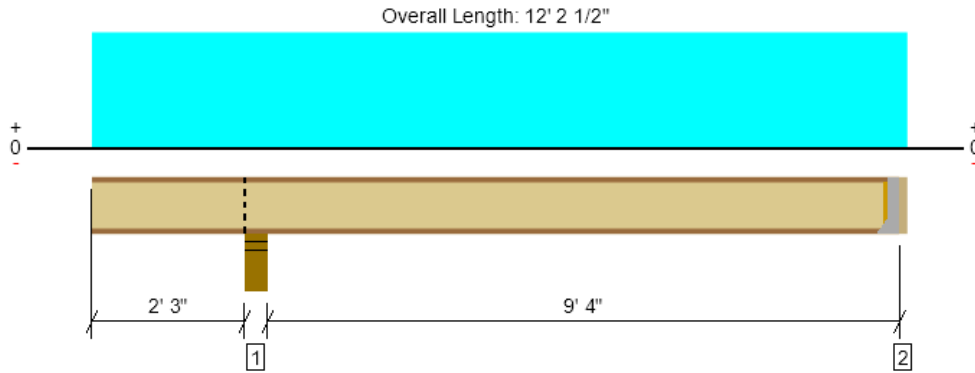
ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



3/16/2026 3:42:07 PM UTC
 ForteWEB v4.0, Engine: V8.4.5.1, Data: V25.26.55.57
 File Name: Basecamp II

Level High Roof, R5.1: East Outlooker
1 piece(s) 11 7/8" TJI@ 210 @ 24" OC

An excessive uplift of -525 lbs at support located at 2' 5 3/4" failed this product.



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	934 @ 12' 1/2"	1156 (1.75")	Passed (81%)	1.15	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	948 @ 2' 8 1/2"	1903	Passed (50%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	2139 @ 7' 5 9/16"	4364	Passed (49%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.115 @ 7' 3 13/16"	0.478	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.151 @ 7' 4"	0.637	Passed (L/758)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 12' 1/2"
 System : Roof
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 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.
- -353 lbs uplift at support located at 12' 1/2". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories	Details
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored		
1 - Stud wall - SPF	5.50"	5.50"	3.50"	394	303	1152	-1269	1547/-525	Blocking	--
2 - Hanger on 11 7/8" SPF beam	2.00"	Hanger ¹	1.75" / - ²	241	191	728	26/-828	968/-353	See note ¹	W

- 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.
- ² Required Bearing Length / Required Bearing Length with Web Stiffeners

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	5' o/c	
Bottom Edge (Lu)	8' 2" 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	HU2.1/9	2.50"	N/A	14-10dx1.5	6-10dx1.5	Web Stiffeners

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

Vertical Load	Location	Spacing	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
1 - Uniform (PSF)	0 to 12' 2 1/2"	24"	26.0	20.0	76.0	-83.7	Trib A: 28.5ft^2

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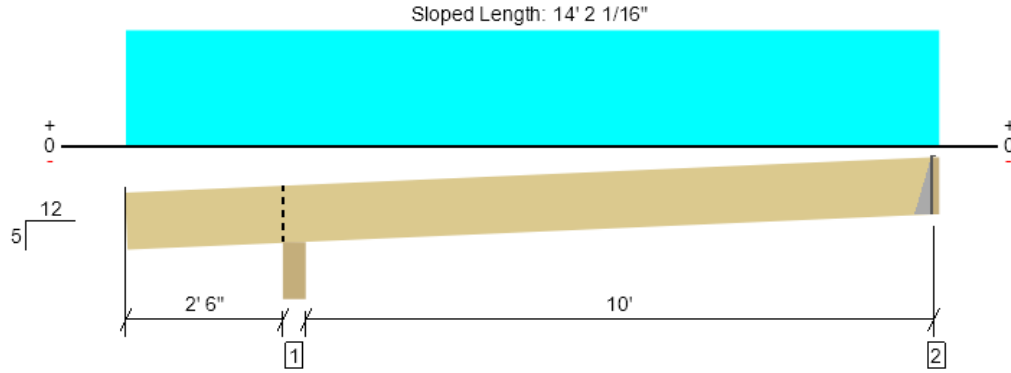
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



3/16/2026 3:42:07 PM UTC
 ForteWEB v4.0, Engine: V8.4.5.1, Data: V25.26.55.57
 File Name: Basecamp II

Level High Roof, CB1: SE Cant beam
2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern) [Group]
Member Reaction (lbs)	1787 @ 12' 11 1/2"	3938 (1.50")	Passed (45%)	--	1.0 D + 1.0 S (Alt Spans) [8]
Shear (lbs)	1589 @ 3' 10 7/16"	9081	Passed (17%)	1.15	1.0 D + 1.0 S (All Spans) [1]
Moment (Ft-lbs)	4360 @ 8' 15/16"	20525	Passed (21%)	1.15	1.0 D + 1.0 S (Alt Spans) [1]
Live Load Defl. (in)	0.079 @ 7' 10 7/8"	0.554	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans) [1]
Total Load Defl. (in)	0.110 @ 7' 11 1/8"	0.739	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans) [1]

Member Length : 14' 5 3/8"
 System : Roof
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2021
 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).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- -588 lbs uplift at support located at 2' 8 3/4". Strapping or other restraint may be required.
- -400 lbs uplift at support located at 12' 11 1/2". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored	
1 - Beveled Plate - SPF	5.50"	5.50"	1.87"	884	581	2123	-1863	3007/-588	Blocking
2 - Hanger on 11 7/8" SPF beam	1.50"	Hanger ¹	1.50"	522	358	1308	54/-1189	1831/-400	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)	14' o/c	
Bottom Edge (Lu)	14' o/c	

- Maximum allowable bracing intervals based on applied load.
- Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

Connector: Simpson Strong-Tie						
Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories
2 - Top 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)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	0 to 12' 11 1/2"	N/A	12.1	--	--	--	
1 - Uniform (PSF)	0 to 13' 1" (Front)	8"	28.2	20.0	73.0	-60.0	Default Load
2 - Uniform (PLF)	0 to 13' 1" (Front)	N/A	68.5	57.5	210.0	28.5/-187.0	Linked from: R3.1: Outlooker, Support 2

- Distributed wind loads are applied perpendicular to the slope of the member.
- Side loads are assumed to not induce cross-grain tension.

ForteWEB Software Operator	Job Notes
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ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

301-49 Weyerhaeuser

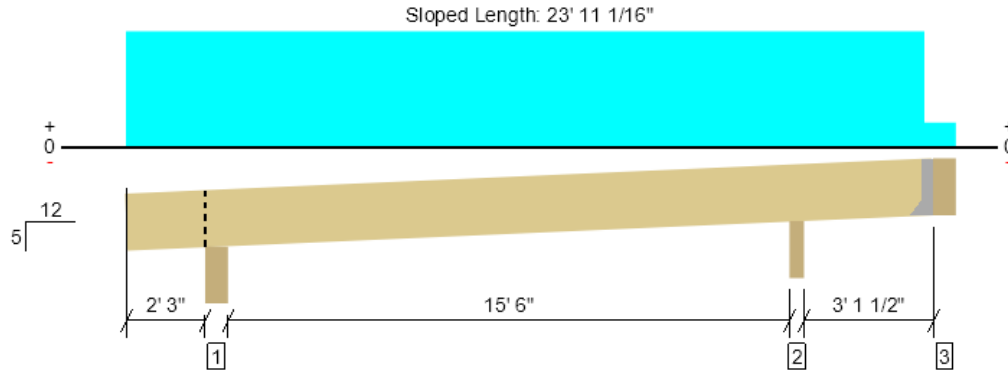


Level High Roof, CB2: SE Cant beam

2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL

An excessive uplift of -1423 lbs at support located at 18' 4 1/4" failed this product.

An excessive uplift of -2467 lbs at support located at 21' 7 1/2" failed this product.



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern) [Group]
Member Reaction (lbs)	6907 @ 18' 4 1/4"	8294 (3.50")	Passed (83%)	--	1.0 D + 1.0 S (Adj Spans) [1]
Shear (lbs)	3068 @ 19' 4 15/16"	9081	Passed (34%)	1.15	1.0 D + 1.0 S (Adj Spans) [1]
Moment (Ft-lbs)	-9350 @ 18' 4 1/4"	20525	Passed (46%)	1.15	1.0 D + 1.0 S (Adj Spans) [1]
Live Load Defl. (in)	0.241 @ 9' 6 13/16"	0.573	Passed (L/858)	--	1.0 D + 1.0 S (Alt Spans) [8]
Total Load Defl. (in)	0.337 @ 9' 6 15/16"	0.860	Passed (L/612)	--	1.0 D + 1.0 S (Alt Spans) [8]

Member Length : 23' 10 1/16"
 System : Roof
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD
 Member Pitch : 5/12

- Deflection criteria: LL (L/360) and TL (L/240).
- Overhang deflection criteria: LL (2L/360) and TL (2L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- -648 lbs uplift at support located at 2' 5 3/4". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored	Accessories
1 - Beveled Plate - DF	5.50"	5.50"	1.50"	972	640	2338	-2053	3310/-648	Blocking
2 - Beveled Plate - DF	3.50"	3.50"	2.91"	2005	1342	4902	-4377	6907/-1423	None
3 - Hanger on 11 7/8" DF beam	5.50"	Hanger ¹	1.50"	-656	-496	-1812	1794/-425	683/-2467	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)	21' 10" o/c	
Bottom Edge (Lu)	15' 11" o/c	

- Maximum allowable bracing intervals based on applied load.
- Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

Connector: Simpson Strong-Tie						
Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories
3 - 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)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	0 to 21' 7 1/2"	N/A	12.1	--	--	--	
1 - Uniform (PSF)	0 to 22' 1" (Front)	8"	28.2	20.0	73.0	-60.0	Default Load
2 - Uniform (PLF)	0 to 21' 5" (Front)	N/A	68.5	57.5	210.0	28.5/-187.0	Linked from: R3.1: Outlooker, Support 2

- Distributed wind loads are applied perpendicular to the slope of the member.
- Side loads are assumed to not induce cross-grain tension.

FortewEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



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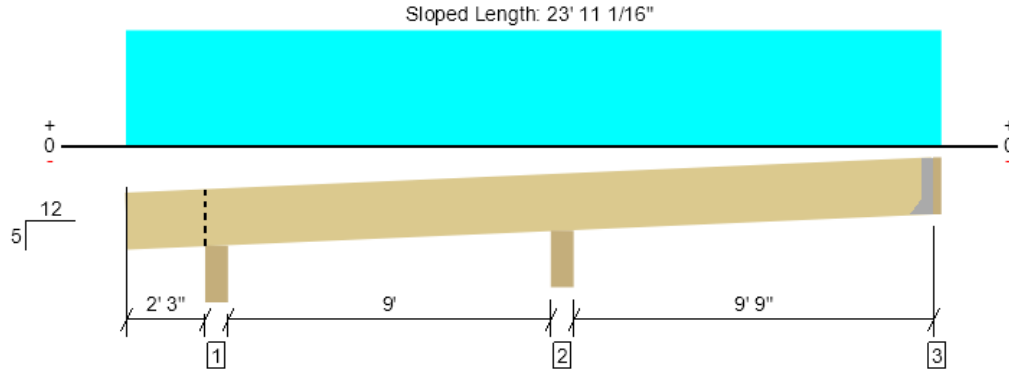
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

301-5 Weyerhaeuser



Level High Roof, CB3: SW Cant beam
2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	8076 @ 11' 11 1/4"	8863 (5.50")	Passed (91%)	--	1.0 D + 1.0 S (Adj Spans)
Shear (lbs)	3397 @ 13' 15/16"	9081	Passed (37%)	1.15	1.0 D + 1.0 S (Adj Spans)
Moment (Ft-lbs)	-7738 @ 11' 11 1/4"	20525	Passed (38%)	1.15	1.0 D + 1.0 S (Adj Spans)
Live Load Defl. (in)	0.096 @ 17' 4 1/16"	0.360	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.127 @ 17' 4 11/16"	0.541	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 24' 1 7/8"
 System : Roof
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD
 Member Pitch : 5/12

- Deflection criteria: LL (L/360) and TL (L/240).
- Overhang deflection criteria: LL (2L/360) and TL (2L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- -247 lbs uplift at support located at 2' 5 3/4". Strapping or other restraint may be required.
- -347 lbs uplift at support located at 11' 11 1/4". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored	
1 - Beveled Plate - SPF	5.50"	5.50"	2.79"	1215	870	3287	-1626	4502/-247	Blocking
2 - Beveled Plate - SPF	5.50"	5.50"	5.01"	2229	1547	5847	-2808	8076/-347	None
3 - Hanger on 11 7/8" SPF beam	2.00"	Hanger ¹	1.50"	768	561	2119	87/-1060	2887/-176	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)	23' 9" o/c	
Bottom Edge (Lu)	19' 5" o/c	

- Maximum allowable bracing intervals based on applied load.
- Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

Connector: Simpson Strong-Tie						
Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories
3 - Face Mount Hanger	HHUS410X SLD22	3.00"	N/A	30-10d	10-10d	

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

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	0 to 21' 11"	N/A	12.1	--	--	--	
1 - Uniform (PSF)	0 to 22' 1" (Front)	8"	24.9	20.0	73.0	-36.0	Uplift based on 139psf
2 - Uniform (PLF)	0 to 22' 1" (Front)	N/A	147.5	116.5	442.0	-207.0	

- Distributed wind loads are applied perpendicular to the slope of the member.
- Side loads are assumed to not induce cross-grain tension.

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



301-527-2000

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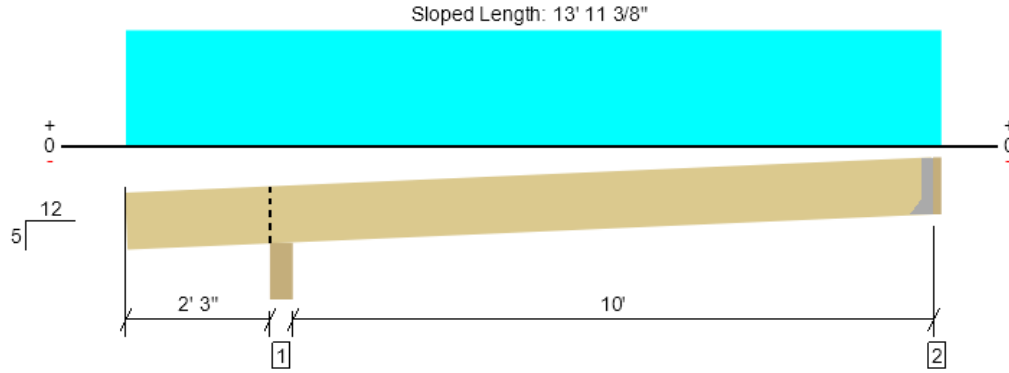
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

301-53 Weyerhaeuser



Level High Roof, CB4: SW Cant beam
2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	3355 @ 12' 8 1/2"	3938 (1.50")	Passed (85%)	--	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	2912 @ 3' 7 7/16"	9081	Passed (32%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	8257 @ 7' 9 7/16"	20525	Passed (40%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.153 @ 7' 7 3/4"	0.369	Passed (L/870)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.208 @ 7' 7 15/16"	0.554	Passed (L/638)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 14' 2 1/8"
 System : Roof
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD
 Member Pitch : 5/12

- Deflection criteria: LL (L/360) and TL (L/240).
- Overhang deflection criteria: LL (2L/360) 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	Roof Live	Snow	Wind	Factored	
1 - Beveled Plate - SPF	5.50"	5.50"	3.34"	1507	1025	3873	-564	5381	Blocking
2 - Hanger on 11 7/8" SPF beam	2.00"	Hanger ¹	1.50"	946	666	2518	10/-378	3464	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)	13' 9" o/c	
Bottom Edge (Lu)	13' 9" o/c	

- Maximum allowable bracing intervals based on applied load.
- Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

Connector: Simpson Strong-Tie							
Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories	
2 - Face Mount Hanger	HHUS410X SLD22	3.00"	N/A	30-16d	10-16d		

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

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	0 to 12' 8 1/2"	N/A	12.1	--	--	--	
1 - Uniform (PSF)	0 to 12' 10 1/2" (Front)	8"	24.9	20.0	73.0	-42.9	Default Load
2 - Uniform (PLF)	0 to 12' 10 1/2" (Front)	N/A	147.5	116.5	442.0	-42.9	

- Distributed wind loads are applied perpendicular to the slope of the member.
- Side loads are assumed to not induce cross-grain tension.

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



301-54

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Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

301-55 Weyerhaeuser

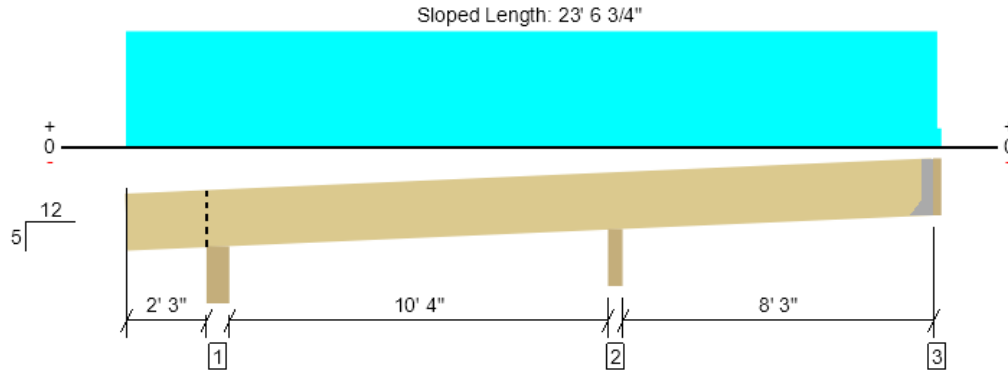


Level High Roof, CB5: NE Cant beam

2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL

An excessive uplift of -1074 lbs at support located at 2' 5 3/4" failed this product.

An excessive uplift of -1731 lbs at support located at 13' 2 1/4" failed this product.



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern) [Group]
Member Reaction (lbs)	6383 @ 13' 2 1/4"	8294 (3.50")	Passed (77%)	--	1.0 D + 1.0 S (Adj Spans) [1]
Shear (lbs)	2802 @ 12' 1 9/16"	9081	Passed (31%)	1.15	1.0 D + 1.0 S (Adj Spans) [1]
Moment (Ft-lbs)	-6151 @ 13' 2 1/4"	20525	Passed (30%)	1.15	1.0 D + 1.0 S (Adj Spans) [1]
Live Load Defl. (in)	0.052 @ 0	0.200	Passed (2L/999+)	--	1.0 D + 0.6 W (Alt Spans) [8]
Total Load Defl. (in)	0.118 @ 7' 5 1/8"	0.580	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans) [1]

Member Length : 23' 9 1/2"
 System : Roof
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD
 Member Pitch : 5/12

- Deflection criteria: LL (L/360) and TL (L/240).
- Overhang deflection criteria: LL (0.2") and TL (2L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- -640 lbs uplift at support located at 21' 7". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored	
1 - Beveled Plate - DF	5.50"	5.50"	1.65"	1108	769	2804	-2898	3911/-1074	Blocking
2 - Beveled Plate - DF	3.50"	3.50"	2.69"	1814	1254	4569	-4700	6383/-1731	None
3 - Hanger on 11 7/8" LVL beam	2.00"	Hanger ¹	1.50"	463	366	1332	336/-1529	1795/-640	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)	23' 5" o/c	
Bottom Edge (Lu)	23' 5" o/c	

- Maximum allowable bracing intervals based on applied load.
- Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

Connector: Simpson Strong-Tie						
Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories
3 - Face Mount Hanger	LSSR410Z	1.88"	N/A	22-16dx2.5	18-16dx2.5	

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

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	0 to 21' 7"	N/A	12.1	--	--	--	
1 - Uniform (PSF)	0 to 21' 9" (Front)	8"	24.9	20.0	73.0	-60.0	Default Load
2 - Uniform (PLF)	0 to 21' 8" (Front)	N/A	115.5	92.5	337.0	12.0/-349.0	Linked from: R4.1.1: NW Outlooker, Support 2

- Distributed wind loads are applied perpendicular to the slope of the member.
- Side loads are assumed to not induce cross-grain tension.

FortewEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



301-560 Meyerhaeuser

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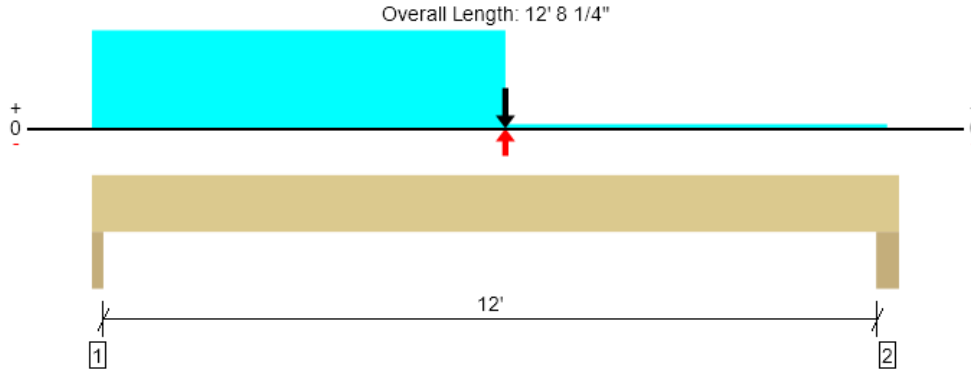
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

301-57 Weyerhaeuser



Level High Roof, RB1: SE Ridge Beam
3 piece(s) 1 3/4" x 16" 2.OE Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern) [Group]
Member Reaction (lbs)	8720 @ 1' 1/4"	10828 (2.75")	Passed (81%)	--	1.0 D + 1.0 S (All Spans) [1]
Shear (lbs)	6241 @ 1' 6 3/4"	18354	Passed (34%)	1.15	1.0 D + 1.0 S (All Spans) [1]
Moment (Ft-lbs)	23058 @ 5' 5 15/16"	53672	Passed (43%)	1.15	1.0 D + 1.0 S (All Spans) [1]
Live Load Defl. (in)	0.138 @ 5' 11 5/16"	0.408	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans) [1]
Total Load Defl. (in)	0.194 @ 5' 11 7/16"	0.613	Passed (L/757)	--	1.0 D + 1.0 S (All Spans) [1]

Member Length : 12' 8 1/4"
 System : Roof
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD
 Member Pitch : 0/12

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

Supports	Bearing Length			Loads to Supports (lbs)					
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored	Accessories
1 - Column - DF	2.75"	2.75"	2.21"	2482	1648	6238	-2608	8720/-76	None
2 - Column - DF	5.50"	5.50"	1.50"	1266	780	2936	-1573	4202/-184	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	12' 8" o/c	
Bottom Edge (Lu)	12' 8" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	0 to 12' 8 1/4"	N/A	24.5	--	--	--	
1 - Uniform (PSF)	0 to 6' 6" (Top)	15'	28.2	20.0	76.0	-27.0	
2 - Uniform (PSF)	6' 6" to 12' 6" (Top)	1'	28.2	20.0	76.0	-60.0	
3 - Point (lb)	6' 6" (Front)	N/A	522	358	1308	54/-1189	Linked from: CB1: SE Cant beam, Support 2

• Side loads are assumed to not induce cross-grain tension.

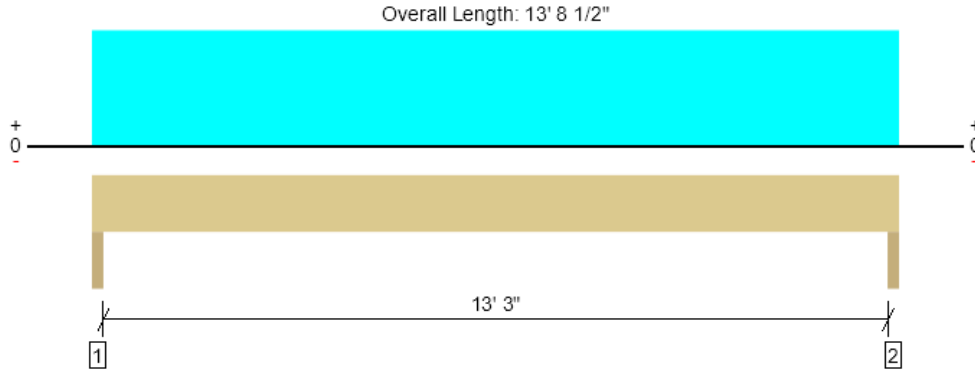
Member Notes
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



Level High Roof, RB2: SE Ridge Beam
3 piece(s) 1 3/4" x 16" 2.OE Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	10569 @ 1 1/4"	10828 (2.75")	Passed (98%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	8160 @ 1' 6 3/4"	18354	Passed (44%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	35129 @ 6' 10 1/4"	53672	Passed (65%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.263 @ 6' 10 1/4"	0.450	Passed (L/617)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.370 @ 6' 10 1/4"	0.675	Passed (L/438)	--	1.0 D + 1.0 S (All Spans)

Member Length : 13' 8 1/2"
 System : Roof
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD
 Member Pitch : 0/12

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

Supports	Bearing Length			Loads to Supports (lbs)					
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored	Accessories
1 - Column - DF	2.75"	2.75"	2.68"	3064	2056	7505	-2776	10569	None
2 - Column - DF	2.75"	2.75"	2.68"	3064	2056	7505	-2776	10569	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	9' 2" o/c	
Bottom Edge (Lu)	13' 9" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	0 to 13' 8 1/2"	N/A	24.5	--	--	--	
1 - Uniform (PSF)	0 to 13' 8 1/2" (Top)	15'	28.2	20.0	73.0	-27.0	Uplift Trib area = 170ft^2

• Side loads are assumed to not induce cross-grain tension.

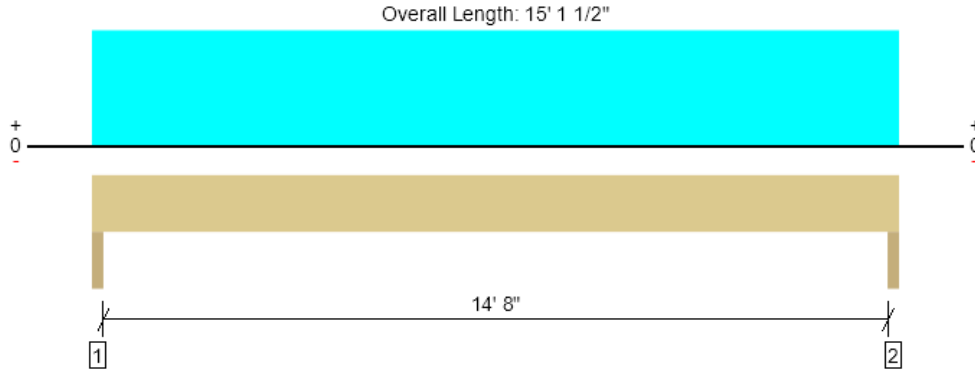
Member Notes
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ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



Level High Roof, RB3: South Intermediate Ridge Beams
3 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	7788 @ 1 1/4"	10828 (2.75")	Passed (72%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	6533 @ 1' 2 5/8"	13622	Passed (48%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	28644 @ 7' 6 3/4"	30788	Passed (93%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.593 @ 7' 6 3/4"	0.746	Passed (L/302)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.836 @ 7' 6 3/4"	0.994	Passed (L/214)	--	1.0 D + 1.0 S (All Spans)

Member Length : 15' 1 1/2"
 System : Roof
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2021
 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.
- -277 lbs uplift at support located at 1 1/4". Strapping or other restraint may be required.
- -277 lbs uplift at support located at 15' 1/4". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored	
1 - Column - DF	2.75"	2.75"	1.98"	2268	1513	5521	-2730	7788/-277	None
2 - Column - DF	2.75"	2.75"	1.98"	2268	1513	5521	-2730	7788/-277	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	5' 8" o/c	
Bottom Edge (Lu)	15' 2" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	0 to 15' 1 1/2"	N/A	18.2	--	--	--	
1 - Uniform (PSF)	0 to 15' 1 1/2" (Top)	10'	28.2	20.0	73.0	-36.1	WIND UPLIFT TRIB AREA = 143 SQFT

• Side loads are assumed to not induce cross-grain tension.

Member Notes

(converted from: Roof Drop Beam)

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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
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

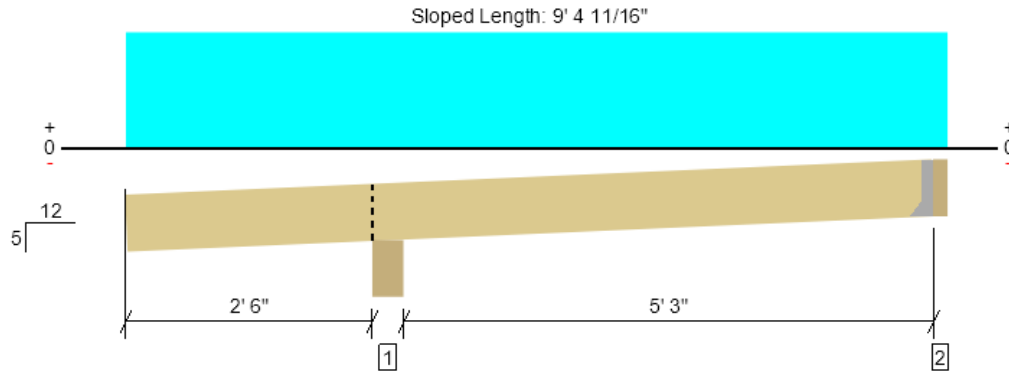


301-60 Weyerhaeuser

3/16/2026 3:42:07 PM UTC
 ForteWEB v4.0, Engine: V8.4.5.1, Data: V25.26.55.57
 File Name: Basecamp II

Level High Roof, RB4: SW Dropped Terrace Beam
2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL

An excessive uplift of -1742 lbs at support located at 2' 9 3/4" failed this product.



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	2096 @ 8' 4 1/2"	3938 (1.50")	Passed (53%)	--	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	2042 @ 4' 7/16"	9081	Passed (22%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	-3564 @ 2' 9 3/4"	20525	Passed (17%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.032 @ 0	0.305	Passed (2L/999+)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.039 @ 0	0.406	Passed (2L/999+)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 9' 5 13/16"
 System : Roof
 Member Type : Drop Beam
 Building Use : Residential
 Building Code : IBC 2021
 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).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- -962 lbs uplift at support located at 8' 4 1/2". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored	
1 - Column - SPF	7.50"	7.50"	2.07"	1596	1075	4085	-4498	5681/-1742	Blocking
2 - Hanger on 11 7/8" SPF beam	3.50"	Hanger ¹	1.50"	589	463	1761	299/-2193	2349/-962	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' 1" o/c	
Bottom Edge (Lu)	9' 1" o/c	

- Maximum allowable bracing intervals based on applied load.
- Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

Connector: Simpson Strong-Tie						
Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories
2 - Face Mount Hanger	HHUS48X SLD22	3.00"	N/A	22-10d	8-10d	

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

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	0 to 8' 4 1/2"	N/A	12.1	--	--	--	
1 - Uniform (PLF)	0 to 8' 8" (Front)	N/A	221.5	170.5	648.0	-713.5	Linked from: R3.2.1: SW Outlooker, Support 1

- Distributed wind loads are applied perpendicular to the slope of the member.
- Side loads are assumed to not induce cross-grain tension.

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ForteWEB Software Operator	Job Notes
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301-62 Weyerhaeuser

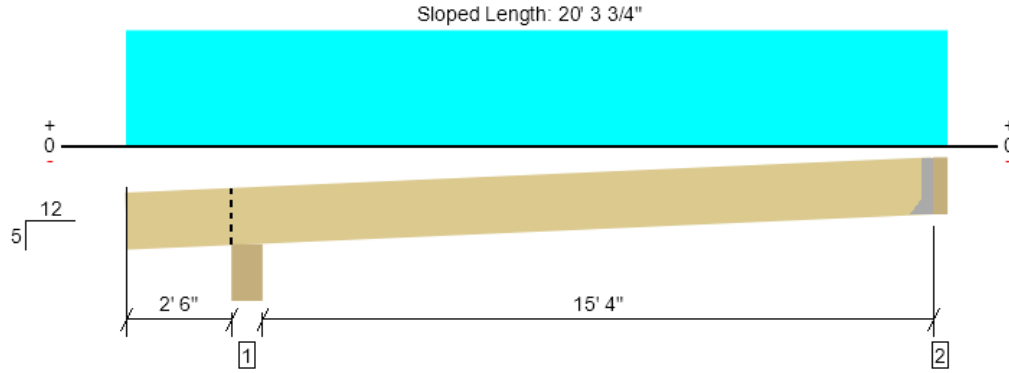


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ForteWEB v4.0, Engine: V8.4.5.1, Data: V25.26.55.57

File Name: Basecamp II

Level High Roof, RB5: SE Dropped Terrace Beam
2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	4672 @ 18' 5 1/2"	4672 (1.78")	Passed (100%)	--	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	4178 @ 4' 7/16"	9081	Passed (46%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	17891 @ 10' 9 9/16"	20525	Passed (87%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.707 @ 10' 8 1/8"	0.847	Passed (L/288)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.990 @ 10' 8 5/16"	1.130	Passed (L/205)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 20' 4 7/8"
 System : Roof
 Member Type : Drop Beam
 Building Use : Residential
 Building Code : IBC 2021
 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).
- 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".
- -948 lbs uplift at support located at 2' 9 3/4". Strapping or other restraint may be required.
- -738 lbs uplift at support located at 18' 5 1/2". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)						Accessories
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored		
1 - Column - SPF	7.50"	7.50"	2.42"	1954	1285	4687	-3533	6641/-948	Blocking	
2 - Hanger on 11 7/8" SPF beam	3.50"	Hanger ¹	1.78"	1403	943	3439	-2633	4842/-738	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)	5' 9" o/c	
Bottom Edge (Lu)	20' o/c	

- Maximum allowable bracing intervals based on applied load.
- Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

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)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	0 to 18' 5 1/2"	N/A	12.1	--	--	--	
1 - Uniform (PLF)	0 to 18' 9" (Front)	N/A	153.5	118.0	430.5	-324.5	Trib area = 100

- Distributed wind loads are applied perpendicular to the slope of the member.
- Side loads are assumed to not induce cross-grain tension.

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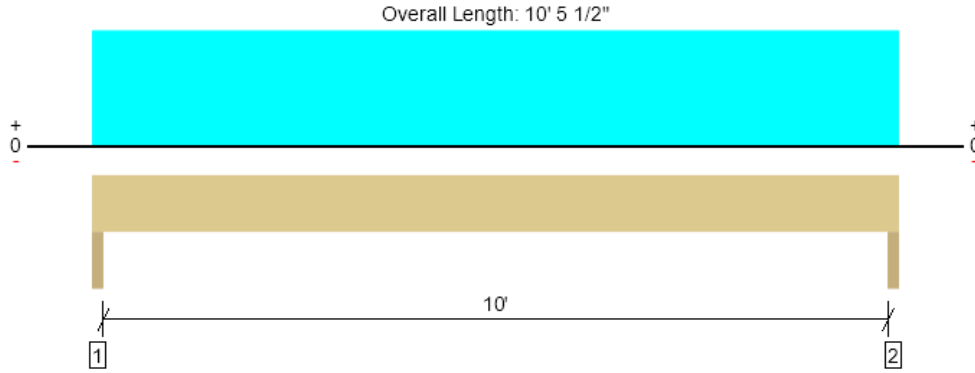
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

301-64 Weyerhaeuser



Level High Roof, RB6: East Intermediate Ridge Beams
3 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	4459 @ 1 1/4"	10828 (2.75")	Passed (41%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	3420 @ 1' 2 5/8"	13622	Passed (25%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	11200 @ 5' 2 3/4"	30788	Passed (36%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.117 @ 5' 2 3/4"	0.512	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.165 @ 5' 2 3/4"	0.683	Passed (L/744)	--	1.0 D + 1.0 S (All Spans)

Member Length : 10' 5 1/2"
 System : Roof
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2021
 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.
- -767 lbs uplift at support located at 1 1/4". Strapping or other restraint may be required.
- -767 lbs uplift at support located at 10' 4 1/4". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored	
1 - Column - DF	2.75"	2.75"	1.50"	1310	863	3149	-2588	4459/-767	None
2 - Column - DF	2.75"	2.75"	1.50"	1310	863	3149	-2588	4459/-767	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	10' 6" o/c	
Bottom Edge (Lu)	10' 6" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	0 to 10' 5 1/2"	N/A	18.2	--	--	--	
1 - Uniform (PSF)	0 to 10' 5 1/2" (Top)	8' 3"	28.2	20.0	73.0	-60.0	

• Side loads are assumed to not induce cross-grain tension.

Member Notes
(converted from: Roof Drop Beam)

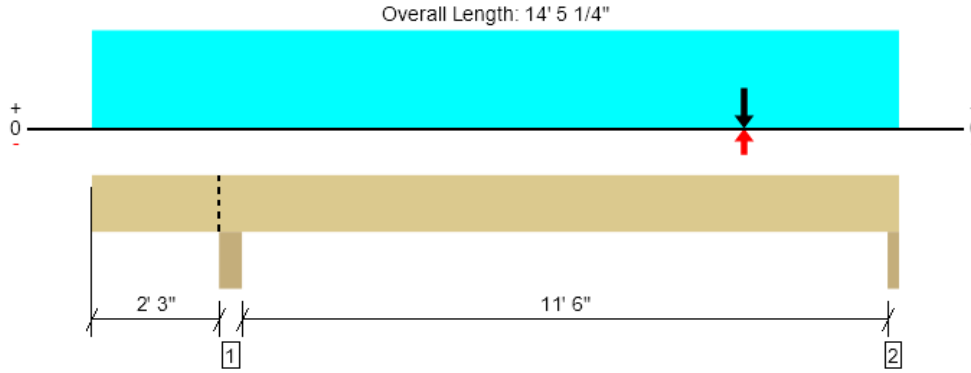
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ForteWEB Software Operator	Job Notes
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 File Name: Basecamp II

Level High Roof, RB7: East Ridge Beam
3 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern) [Group]
Member Reaction (lbs)	2683 @ 14' 4"	10828 (2.75")	Passed (25%)	--	1.0 D + 1.0 S (Alt Spans) [1]
Shear (lbs)	2414 @ 13' 2 5/8"	13622	Passed (18%)	1.15	1.0 D + 1.0 S (Alt Spans) [1]
Moment (Ft-lbs)	6483 @ 10' 4 15/16"	30788	Passed (21%)	1.15	1.0 D + 1.0 S (Alt Spans) [1]
Live Load Defl. (in)	0.085 @ 8' 9 1/16"	0.593	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans) [1]
Total Load Defl. (in)	0.121 @ 8' 8 15/16"	0.790	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans) [1]

Member Length : 14' 5 1/4"
 System : Roof
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2021
 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.
- -380 lbs uplift at support located at 2' 5 3/4". Strapping or other restraint may be required.
- -672 lbs uplift at support located at 14' 4". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored	
1 - Column - DF	5.50"	5.50"	1.50"	750	429	1565	-1384	2315/-380	Blocking
2 - Column - DF	2.75"	2.75"	1.50"	789	520	1894	31/-1909	2683/-672	None

• 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' 5" o/c	
Bottom Edge (Lu)	14' 5" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	0 to 14' 5 1/4"	N/A	18.2	--	--	--	
1 - Uniform (PSF)	0 to 14' 5 1/4" (Top)	2'	28.2	20.0	73.0	-60.0	
2 - Point (lb)	11' 8" (Front)	N/A	463	366	1332	336/-1529	Linked from: CBS: NE Cant beam, Support 3

• Side loads are assumed to not induce cross-grain tension.

Member Notes
(converted from: Roof Drop Beam)

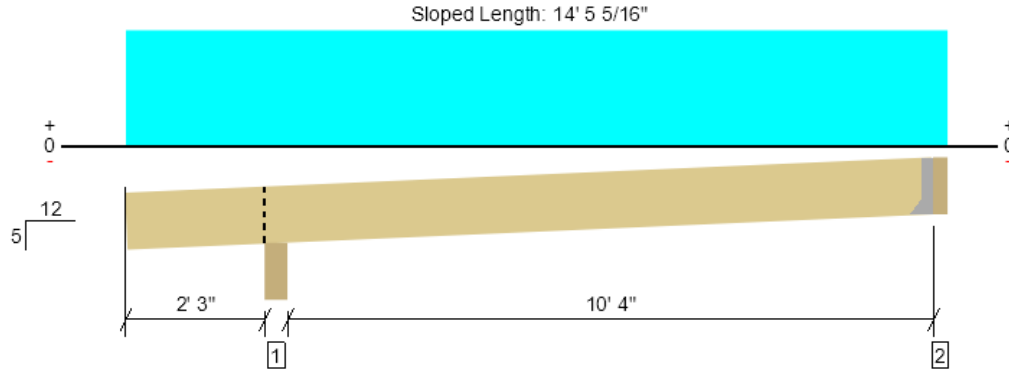
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ForteWEB Software Operator	Job Notes
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Level High Roof, RB8: NE Dropped Terrace Beam
2 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	3822 @ 13' 1/2"	3938 (1.50")	Passed (97%)	--	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	3325 @ 3' 7 7/16"	9081	Passed (37%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	9728 @ 7' 11 3/8"	20525	Passed (47%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.184 @ 7' 9 11/16"	0.572	Passed (L/748)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.260 @ 7' 9 7/8"	0.763	Passed (L/529)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 14' 6 1/2"
 System : Roof
 Member Type : Drop Beam
 Building Use : Residential
 Building Code : IBC 2021
 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).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- -951 lbs uplift at support located at 2' 5 3/4". Strapping or other restraint may be required.
- -704 lbs uplift at support located at 13' 1/2". Strapping or other restraint may be required.

Supports	Bearing Length			Loads to Supports (lbs)					Accessories
	Total	Available	Required	Dead	Roof Live	Snow	Wind	Factored	
1 - Column - SPF	5.50"	5.50"	2.20"	1856	1147	4188	-3442	6044/-951	Blocking
2 - Hanger on 11 7/8" SPF beam	3.50"	Hanger ¹	1.50"	1209	773	2823	-2382	4032/-704	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)	14' 2" o/c	
Bottom Edge (Lu)	14' 2" o/c	

- Maximum allowable bracing intervals based on applied load.
- Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

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)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	0 to 13' 1/2"	N/A	12.1	--	--	--	
1 - Uniform (PSF)	0 to 13' 4" (Top)	7' 1 1/2"	28.2	20.0	73.0	-60.0	

- Distributed wind loads are applied perpendicular to the slope of the member.
- Side loads are assumed to not induce cross-grain tension.

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



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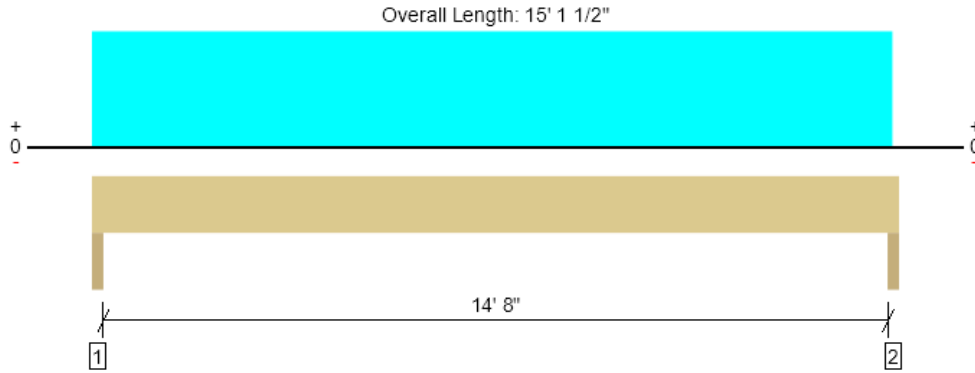
301-68 Weyerhaeuser



Level High Roof, RP5.1: South PURLIN 15'
1 piece(s) 6 3/4" x 13 1/2" 24F-V4 DF Glulam

An excessive uplift of -2023 lbs at support located at 1 1/4" failed this product.

An excessive uplift of -1994 lbs at support located at 15' 1/4" failed this product.



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	11448 @ 1 1/4"	12066 (2.75")	Passed (95%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	9398 @ 1' 4 1/4"	18514	Passed (51%)	1.15	1.0 D + 1.0 S (All Spans)
Pos Moment (Ft-lbs)	42103 @ 7' 6 3/4"	46917	Passed (90%)	1.15	1.0 D + 1.0 S (All Spans)
Neg Moment (Ft-lbs)	-7440 @ 7' 6 3/4"	50317	Passed (15%)	1.60	0.6 D + 0.6 W (All Spans)
Live Load Defl. (in)	0.517 @ 7' 6 3/4"	0.746	Passed (L/346)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.677 @ 7' 6 3/4"	0.994	Passed (L/264)	--	1.0 D + 1.0 S (All Spans)

Member Length : 15' 1 1/2"
 System : Roof
 Member Type : Drop Beam
 Building Use : Residential
 Building Code : IBC 2021
 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.
- Volume factor of 0.99 was calculated for positive bending using length L = 14' 11".
- Volume factor of 0.99 was calculated for negative bending using length L = 14' 11".
- 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	Roof Live	Snow	Wind	Factored	
1 - Column - DF	2.75"	2.75"	2.61"	2697	1832	8751	-6069	11448/-2023	None
2 - Column - DF	2.75"	2.75"	2.57"	2662	1807	8631	-5985	11293/-1994	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	15' 1" o/c	
Bottom Edge (Lu)	15' 1" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	0 to 15' 1 1/2"	N/A	22.1	--	--	--	
1 - Uniform (PLF)	0 to 15' (Top)	N/A	334.5	242.3	1157.3	-802.5	Linked from: R2: W/ PURLIN, Support 2

• Side loads are assumed to not induce cross-grain tension.

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

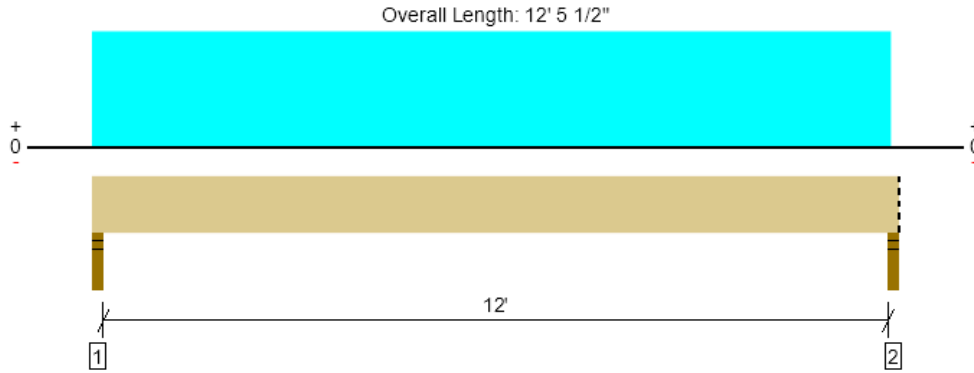
ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



Level High Roof, RP5.2: South PURLIN 12'
1 piece(s) 6 3/4" x 13 1/2" 24F-V4 DF Glulam

An excessive uplift of -1666 lbs at support located at 1 1/4" failed this product.

An excessive uplift of -1637 lbs at support located at 12' 4 1/4" failed this product.



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	9430 @ 1 1/4"	11602 (2.75")	Passed (81%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	7380 @ 1' 4 1/4"	18514	Passed (40%)	1.15	1.0 D + 1.0 S (All Spans)
Pos Moment (Ft-lbs)	28397 @ 6' 2 3/4"	47157	Passed (60%)	1.15	1.0 D + 1.0 S (All Spans)
Neg Moment (Ft-lbs)	-5018 @ 6' 2 3/4"	50574	Passed (10%)	1.60	0.6 D + 0.6 W (All Spans)
Live Load Defl. (in)	0.235 @ 6' 2 3/4"	0.613	Passed (L/625)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.308 @ 6' 2 3/4"	0.817	Passed (L/477)	--	1.0 D + 1.0 S (All Spans)

Member Length : 12' 5 1/2"
 System : Roof
 Member Type : Drop Beam
 Building Use : Residential
 Building Code : IBC 2021
 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.
- Volume factor of 1.00 was calculated for positive bending using length L = 12' 3".
- Volume factor of 1.00 was calculated for negative bending using length L = 12' 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	Roof Live	Snow	Wind	Factored	
1 - Stud wall - DF	2.75"	2.75"	2.24"	2222	1509	7209	-4999	9430/-1666	None
2 - Stud wall - DF	2.75"	2.75"	2.20"	2187	1484	7088	-4915	9275/-1637	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' 6" o/c	
Bottom Edge (Lu)	12' 6" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	0 to 12' 5 1/2"	N/A	22.1	--	--	--	
1 - Uniform (PLF)	0 to 12' 4" (Top)	N/A	334.5	242.3	1157.3	-802.5	Linked from: R2: W/ PURLIN, Support 2

• Side loads are assumed to not induce cross-grain tension.

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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
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

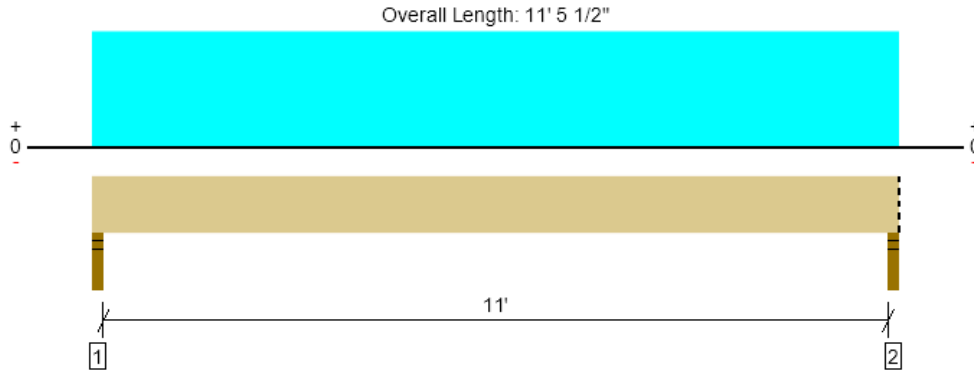


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 File Name: Basecamp II

Level High Roof, RP7.3: East PURLIN 11'
1 piece(s) 6 3/4" x 13 1/2" 24F-V4 DF Glulam

An excessive uplift of -1290 lbs at support located at 1 1/4" failed this product.

An excessive uplift of -1290 lbs at support located at 11' 4 1/4" failed this product.



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	8398 @ 1 1/4"	11602 (2.75")	Passed (72%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	6413 @ 1' 4 1/4"	18514	Passed (35%)	1.15	1.0 D + 1.0 S (All Spans)
Pos Moment (Ft-lbs)	23191 @ 5' 8 3/4"	47157	Passed (49%)	1.15	1.0 D + 1.0 S (All Spans)
Neg Moment (Ft-lbs)	-3563 @ 5' 8 3/4"	50574	Passed (7%)	1.60	0.6 D + 0.6 W (All Spans)
Live Load Defl. (in)	0.162 @ 5' 8 3/4"	0.563	Passed (L/834)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.212 @ 5' 8 3/4"	0.750	Passed (L/637)	--	1.0 D + 1.0 S (All Spans)

Member Length : 11' 5 1/2"
 System : Roof
 Member Type : Drop Beam
 Building Use : Residential
 Building Code : IBC 2021
 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.
- Volume factor of 1.00 was calculated for positive bending using length L = 11' 3".
- Volume factor of 1.00 was calculated for negative bending 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	Roof Live	Snow	Wind	Factored	
1 - Stud wall - DF	2.75"	2.75"	1.99"	1992	1354	6407	-4142	8398/-1290	None
2 - Stud wall - DF	2.75"	2.75"	1.99"	1992	1354	6407	-4142	8398/-1290	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)	11' 6" o/c	
Bottom Edge (Lu)	11' 6" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	0 to 11' 5 1/2"	N/A	22.1	--	--	--	
1 - Uniform (PLF)	0 to 11' 5 1/2" (Front)	N/A	325.5	236.3	1118.3	-723.0	Linked from: R2.2: East W/ PURLIN, Support 2

• Side loads are assumed to not induce cross-grain tension.

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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
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

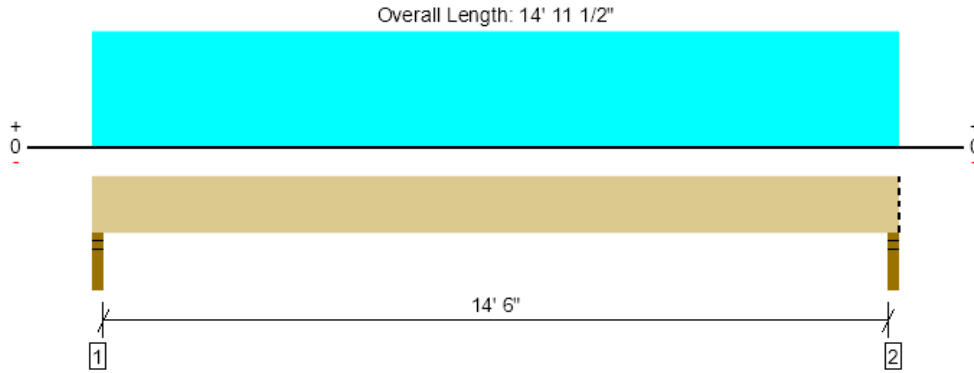


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 File Name: Basecamp II

Level High Roof, RP7.4: East PURLIN 14.5'
1 piece(s) 6 3/4" x 13 1/2" 24F-V4 DF Glulam

An excessive uplift of -1684 lbs at support located at 1 1/4" failed this product.

An excessive uplift of -1684 lbs at support located at 14' 10 1/4" failed this product.



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	10964 @ 1 1/4"	11602 (2.75")	Passed (95%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	8979 @ 1' 4 1/4"	18514	Passed (48%)	1.15	1.0 D + 1.0 S (All Spans)
Pos Moment (Ft-lbs)	39866 @ 7' 5 3/4"	46969	Passed (85%)	1.15	1.0 D + 1.0 S (All Spans)
Neg Moment (Ft-lbs)	-6125 @ 7' 5 3/4"	50373	Passed (12%)	1.60	0.6 D + 0.6 W (All Spans)
Live Load Defl. (in)	0.478 @ 7' 5 3/4"	0.738	Passed (L/370)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.627 @ 7' 5 3/4"	0.983	Passed (L/282)	--	1.0 D + 1.0 S (All Spans)

Member Length : 14' 11 1/2"
 System : Roof
 Member Type : Drop Beam
 Building Use : Residential
 Building Code : IBC 2021
 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.
- Volume factor of 1.00 was calculated for positive bending using length L = 14' 9".
- Volume factor of 1.00 was calculated for negative bending using length L = 14' 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	Roof Live	Snow	Wind	Factored	
1 - Stud wall - DF	2.75"	2.75"	2.60"	2600	1767	8364	-5407	10964/-1684	None
2 - Stud wall - DF	2.75"	2.75"	2.60"	2600	1767	8364	-5407	10964/-1684	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)	15' o/c	
Bottom Edge (Lu)	15' o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
0 - Self Weight (PLF)	0 to 14' 11 1/2"	N/A	22.1	--	--	--	
1 - Uniform (PLF)	0 to 14' 11 1/2" (Front)	N/A	325.5	236.3	1118.3	-723.0	Linked from: R2.2: East W/ PURLIN, Support 2

• Side loads are assumed to not induce cross-grain tension.

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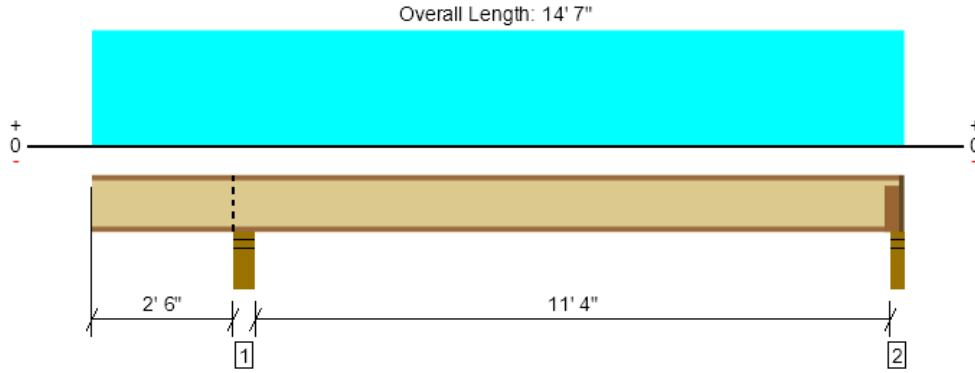
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301-73



Weyerhaeuser

Level High Roof, Ladder Frame Rafter
1 piece(s) 11 7/8" TJI® 210 @ 24" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1344 @ 14' 4 1/2"	1714 (2.25")	Passed (78%)	1.15	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	1300 @ 14' 3 1/2"	1903	Passed (68%)	1.15	1.0 D + 1.0 S (Alt Spans)
Moment (Ft-lbs)	3712 @ 8' 9"	4364	Passed (85%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.228 @ 8' 7 1/4"	0.291	Passed (L/612)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.290 @ 8' 7 7/16"	0.582	Passed (L/482)	--	1.0 D + 1.0 S (Alt Spans)
TJ-Pro™ Rating	51	40	Passed	--	--

Member Length : 14' 5 3/4"
 System : Floor
 Member Type : Joist
 Building Use : Residential
 Building Code : IBC 2021
 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	Details
	Total	Available	Required	Dead	Floor Live	Snow	Factored		
1 - Stud wall - SPF	5.50"	5.50"	3.50"	461	355	1618	2080	Blocking	E1
2 - Stud wall - SPF	3.50"	2.25"	1.75"	297	241/-9	1071	1368	1 1/4" Rim Board, Web Stiffeners	A3W

- 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' 8" o/c	
Bottom Edge (Lu)	8' o/c	

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

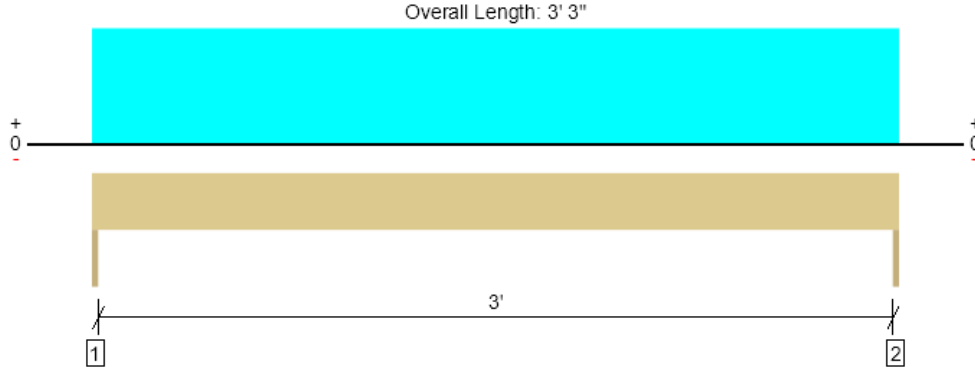
Vertical Load	Location	Spacing	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 14' 7"	24"	26.0	20.0	91.2	Default Load

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ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



General Calcs, HDR1: 3' Header
3 piece(s) 2 x 6 DF No.2



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	810 @ 0	4219 (1.50")	Passed (19%)	--	1.0 D + 1.0 L (All Spans)
Shear (lbs)	519 @ 7"	2970	Passed (17%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	658 @ 1' 7 1/2"	2212	Passed (30%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.006 @ 1' 7 1/2"	0.108	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.013 @ 1' 7 1/2"	0.162	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)

Member Length : 3' 3"
 System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2021
 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)			
	Total	Available	Required	Dead	Floor Live	Factored	Accessories
1 - Trimmer - DF	1.50"	1.50"	1.50"	420	390	810	None
2 - Trimmer - DF	1.50"	1.50"	1.50"	420	390	810	None

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

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location	Tributary Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 3' 3"	N/A	6.3	--	
1 - Uniform (PSF)	0 to 3' 3"	6'	42.0	40.0	Default Load

Weyerhaeuser Notes

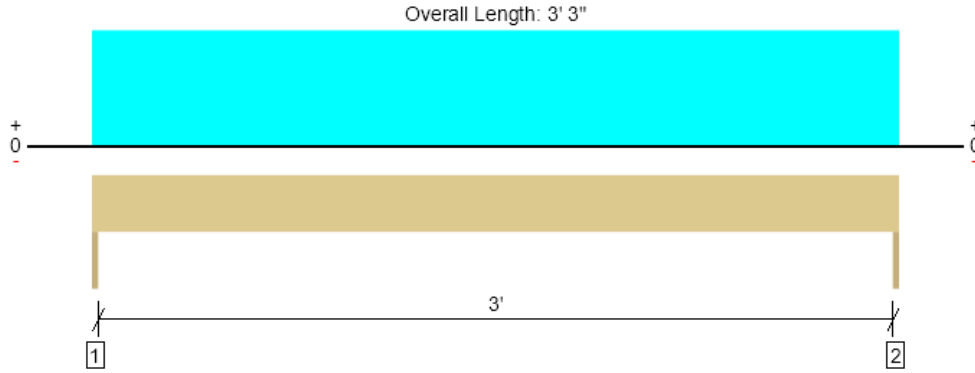
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ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



General Calcs, HDR1.1: 3' Header ROOF
3 piece(s) 2 x 6 DF No.2



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	2423 @ 0	4219 (1.50")	Passed (57%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	1553 @ 7"	3416	Passed (45%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	1969 @ 1' 7 1/2"	2544	Passed (77%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.028 @ 1' 7 1/2"	0.108	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.038 @ 1' 7 1/2"	0.162	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)

Member Length : 3' 3"
 System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2021
 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	Snow	Factored	
1 - Trimmer - DF	1.50"	1.50"	1.50"	644	1779	2423	None
2 - Trimmer - DF	1.50"	1.50"	1.50"	644	1779	2423	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	3' 3" o/c	
Bottom Edge (Lu)	3' 3" 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' 3"	N/A	6.3	--	
1 - Uniform (PSF)	0 to 3' 3"	15'	26.0	73.0	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
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	

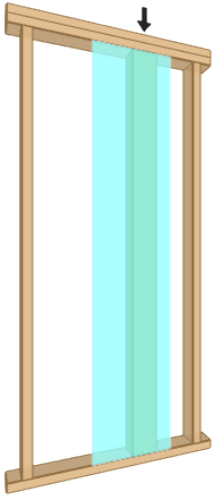


General Calcs, SPH1.1
2 piece(s) 2 x 6 DF No.2

Wall Height: 9'

Member Height: 8' 7 1/2"

Tributary Width: 1'



Drawing is Conceptual

Design Results	Actual	Allowed	Result	LDF	Load: Combination
Slenderness	32	50	Passed (64%)	--	--
Compression (lbs)	4116	4314	Passed (95%)	1.15	1.0 D + 0.75 L + 0.75 S
Plate Bearing (lbs)	4116	7013	Passed (59%)	--	1.0 D + 0.75 L + 0.75 S
Lateral Reaction (lbs)	65	--	--	1.60	1.0 D + 0.6 W
Lateral Shear (lbs)	58	3168	Passed (2%)	1.60	1.0 D + 0.6 W
Lateral Moment (ft-lbs)	140 @ mid-span	2313	Passed (6%)	1.60	1.0 D + 0.6 W
Total Deflection (in)	0.02 @ mid-span	0.86	Passed (L/5252)	--	1.0 D + 0.6 W
Bending/Compression	0.93	1	Passed (93%)	1.60	1.0 D + 0.45 W + 0.75 L + 0.75 S

- Wall deflection criteria: TL (L/120)
- Input axial load eccentricity for the design is zero
- Applicable calculations are based on NDS.
- The column stability factor (Kf = 0.6) applied to this design assumes nailed built-up columns per NDS section 15.3.3. For Weyerhaeuser ELP products refer to the U.S. Wall Guide for multiple-member connection requirements.

Supports	Type	Material
Top	Dbl 2X	Spruce-Pine-Fir
Base	2X	Spruce-Pine-Fir

System : Wall
 Member Type : Column
 Building Code : IBC 2021
 Design Methodology : ASD

Max Unbraced Length	Comments
8'	

Lateral Connections				
Supports	Connector	Type/Model	Quantity	Connector Nailing
Top	Nails	8d (0.113" x 2 1/2") (Toe)	2	N/A
Base	Nails	8d (0.113" x 2 1/2") (Toe)	2	N/A

- Nailed connection at the top of the member is assumed to be nailed through the bottom 2x plate prior to placement of the top 2x of the double top plate assembly.

Vertical Loads	Tributary Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Point (lb)	N/A	420	390	--	LEVEL 3
2 - Point (lb)	N/A	420	390	--	LEVEL 4
3 - Point (lb)	N/A	420	390	--	LEVEL 5
4 - Point (lb)	N/A	644	--	1779	ROOF

Lateral Load	Location	Tributary Width	Wind (1.60)	Comments
1 - Uniform (PSF)	Full Length	1'	25.1	

- ASCE/SEI 7 Sec. 30.4: Exposure Category (B), Mean Roof Height (33'), Topographic Factor (1.0), Wind Directionality Factor (0.85), Basic Wind Speed (115), Risk Category(II), Wind Zone (4), GCpi (+/- 0.18), Effective Wind Area determined using full member span and trib. width.
- IBC Table 1604.3, footnote f: Deflection checks are performed using 42% of this lateral wind load.

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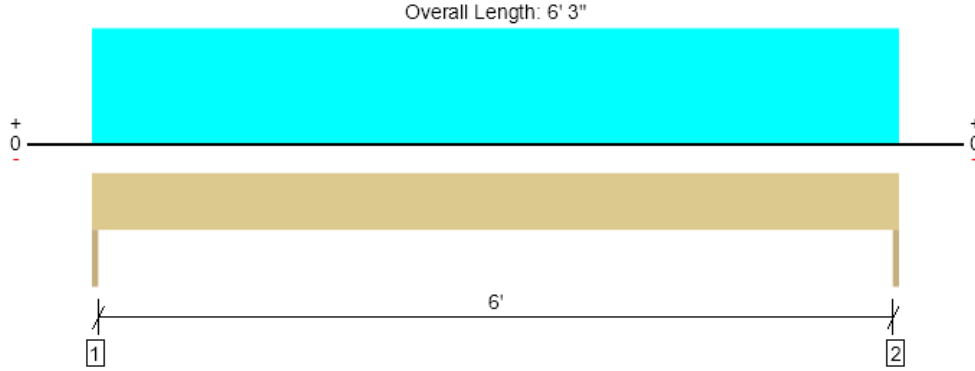
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



301-77

General Calcs, HDR2: 6' Header
3 piece(s) 2 x 6 DF No.2



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	340 @ 0	4219 (1.50")	Passed (8%)	--	1.0 D + 1.0 L (All Spans)
Shear (lbs)	276 @ 7"	2970	Passed (9%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	531 @ 3' 1 1/2"	2212	Passed (24%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.017 @ 3' 1 1/2"	0.208	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.037 @ 3' 1 1/2"	0.313	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)

Member Length : 6' 3"
 System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2021
 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)			
	Total	Available	Required	Dead	Floor Live	Factored	Accessories
1 - Trimmer - DF	1.50"	1.50"	1.50"	184	156	340	None
2 - Trimmer - DF	1.50"	1.50"	1.50"	184	156	340	None

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.

Vertical Loads	Location	Tributary Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 6' 3"	N/A	6.3	--	
1 - Uniform (PSF)	0 to 6' 3"	1' 3"	42.0	40.0	Default Load

Weyerhaeuser Notes

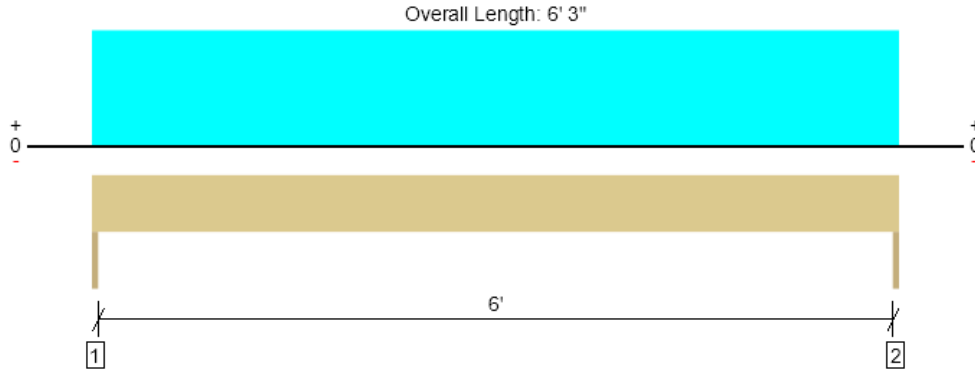
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ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



General Calcs, HDR3.1: 6' Header 7.25FT ROOF
3 piece(s) 2 x 12 DF No.2



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	2569 @ 0	4219 (1.50")	Passed (61%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	1696 @ 1' 3/4"	6986	Passed (24%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	4014 @ 3' 1 1/2"	8187	Passed (49%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.023 @ 3' 1 1/2"	0.208	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.033 @ 3' 1 1/2"	0.313	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)

Member Length : 6' 3"
 System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2021
 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	Snow	Factored	
1 - Trimmer - DF	1.50"	1.50"	1.50"	744	1825	2569	None
2 - Trimmer - DF	1.50"	1.50"	1.50"	744	1825	2569	None

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.

Vertical Loads	Location	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 6' 3"	N/A	12.8	--	
1 - Uniform (PSF)	0 to 6' 3"	8'	28.2	73.0	Default Load

Weyerhaeuser Notes

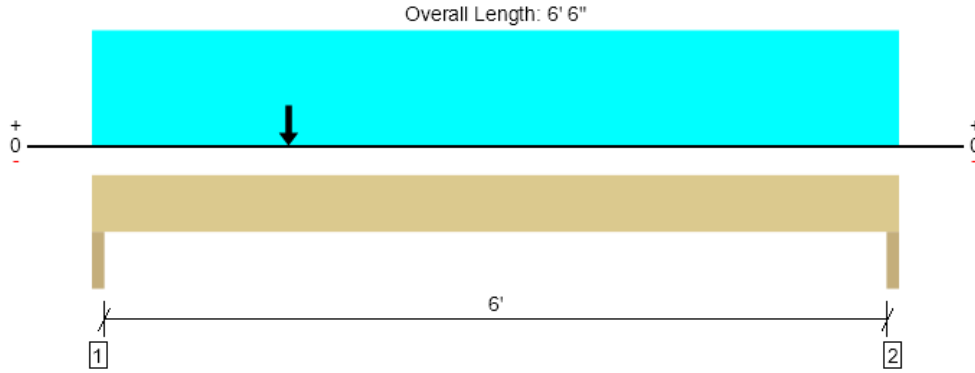
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



General Calcs, HDR3.2: UNIQUE H6.1
3 piece(s) 2 x 12 DF No.2



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	5450 @ 1' 1/2"	8438 (3.00")	Passed (65%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	4636 @ 1' 2 1/4"	6986	Passed (66%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	7114 @ 1' 9 7/8"	8187	Passed (87%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.041 @ 3' 7/8"	0.208	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.056 @ 3' 3/4"	0.313	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)

Member Length : 6' 6"
 System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2021
 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	Snow	Factored	
1 - Trimmer - SPF	3.00"	3.00"	1.94"	1484	3967	5450	None
2 - Trimmer - SPF	3.00"	3.00"	1.50"	808	2401	3209	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	6' 6" o/c	
Bottom Edge (Lu)	6' 6" 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 6' 6"	N/A	12.8	--	
1 - Uniform (PLF)	0 to 6' 6"	N/A	145.0	528.0	Default Load
2 - Point (lb)	1' 7"	N/A	1266	2936	

Weyerhaeuser Notes

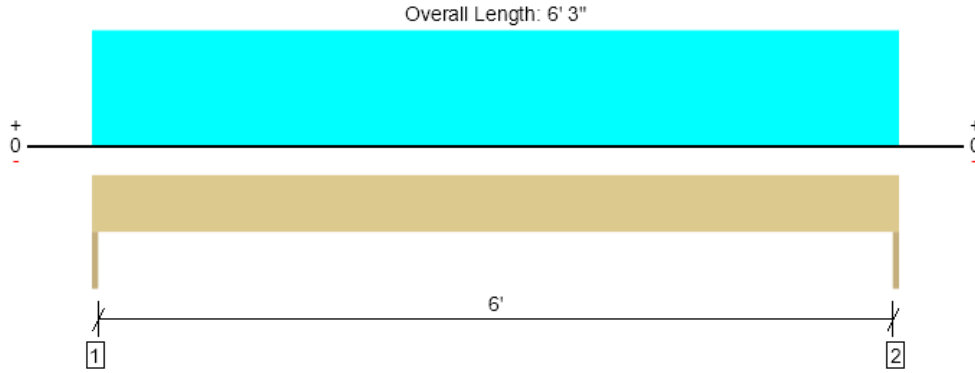
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ForteWEB Software Operator	Job Notes
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General Calcs, HDR3.3: 6' Header
3 piece(s) 2 x 12 DF No.2



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	2178 @ 0	4219 (1.50")	Passed (52%)	--	1.0 D + 1.0 L (All Spans)
Shear (lbs)	1437 @ 1' 3/4"	6075	Passed (24%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	3402 @ 3' 1 1/2"	7119	Passed (48%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.013 @ 3' 1 1/2"	0.208	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.028 @ 3' 1 1/2"	0.313	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)

Member Length : 6' 3"
 System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2021
 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)			
	Total	Available	Required	Dead	Floor Live	Factored	Accessories
1 - Trimmer - DF	1.50"	1.50"	1.50"	1178	1000	2178	None
2 - Trimmer - DF	1.50"	1.50"	1.50"	1178	1000	2178	None

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.

Vertical Loads	Location	Tributary Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 6' 3"	N/A	12.8	--	
1 - Uniform (PSF)	0 to 6' 3"	8'	45.5	40.0	Default Load

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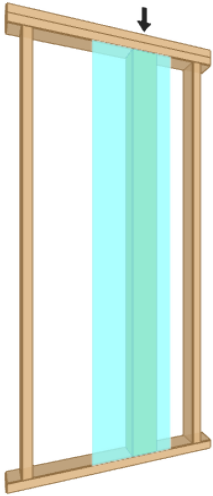
General Calcs, SPH3.1: King Studs

3 piece(s) 2 x 6 DF No.2

Wall Height: 9'

Member Height: 8' 7 1/2"

Tributary Width: 1'



Drawing is Conceptual

Design Results	Actual	Allowed	Result	LDF	Load: Combination
Slenderness	21	50	Passed (43%)	--	--
Compression (lbs)	8721	12891	Passed (68%)	1.15	1.0 D + 0.75 L + 0.75 S
Plate Bearing (lbs)	8721	15469	Passed (56%)	--	1.0 D + 0.75 L + 0.75 S
Lateral Reaction (lbs)	65	--	--	1.60	1.0 D + 0.6 W
Lateral Shear (lbs)	58	4752	Passed (1%)	1.60	1.0 D + 0.6 W
Lateral Moment (ft-lbs)	140 @ mid-span	3513	Passed (4%)	1.60	1.0 D + 0.6 W
Total Deflection (in)	0.01 @ mid-span	0.86	Passed (L/7879)	--	1.0 D + 0.6 W
Bending/Compression	0.44	1	Passed (44%)	1.60	1.0 D + 0.45 W + 0.75 L + 0.75 S

- Wall deflection criteria: TL (L/120)
- Input axial load eccentricity for the design is zero
- Applicable calculations are based on NDS.
- The column stability factor (Kf = 0.6) applied to this design assumes nailed built-up columns per NDS section 15.3.3. For Weyerhaeuser ELP products refer to the U.S. Wall Guide for multiple-member connection requirements.

Supports	Type	Material
Top	Dbl 2X	Douglas Fir-Larch
Base	2X	Douglas Fir-Larch

System : Wall
 Member Type : Column
 Building Code : IBC 2021
 Design Methodology : ASD

Max Unbraced Length	Comments
8'	

Lateral Connections				
Supports	Connector	Type/Model	Quantity	Connector Nailing
Top	Nails	8d (0.113" x 2 1/2") (Toe)	2	N/A
Base	Nails	8d (0.113" x 2 1/2") (Toe)	2	N/A

- Nailed connection at the top of the member is assumed to be nailed through the bottom 2x plate prior to placement of the top 2x of the double top plate assembly.

Vertical Loads	Tributary Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Point (lb)	N/A	1178	1000	--	level 3
2 - Point (lb)	N/A	1178	1000	--	level 4
3 - Point (lb)	N/A	1178	1000	--	level 5
4 - Point (lb)	N/A	946	--	2655	

Lateral Load	Location	Tributary Width	Wind (1.60)	Comments
1 - Uniform (PSF)	Full Length	1'	25.1	

- ASCE/SEI 7 Sec. 30.4: Exposure Category (B), Mean Roof Height (33'), Topographic Factor (1.0), Wind Directionality Factor (0.85), Basic Wind Speed (115), Risk Category(II), Wind Zone (4), GCpi (+/- 0.18), Effective Wind Area determined using full member span and trib. width.
- IBC Table 1604.3, footnote f: Deflection checks are performed using 42% of this lateral wind load.

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ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



301-82

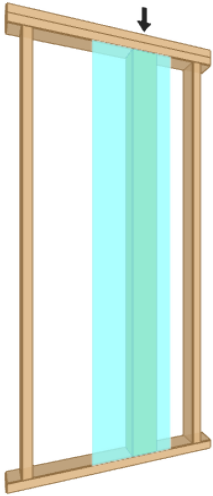
General Calcs, SPH3.2: King Studs

3 piece(s) 2 x 6 DF No.2

Wall Height: 9'

Member Height: 8' 7 1/2"

Tributary Width: 1'



Drawing is Conceptual

Design Results	Actual	Allowed	Result	LDF	Load: Combination
Slenderness	21	50	Passed (43%)	--	--
Compression (lbs)	7331	12891	Passed (57%)	1.15	1.0 D + 0.75 L + 0.75 S
Plate Bearing (lbs)	7331	15469	Passed (47%)	--	1.0 D + 0.75 L + 0.75 S
Lateral Reaction (lbs)	65	--	--	1.60	1.0 D + 0.6 W
Lateral Shear (lbs)	58	4752	Passed (1%)	1.60	1.0 D + 0.6 W
Lateral Moment (ft-lbs)	140 @ mid-span	3513	Passed (4%)	1.60	1.0 D + 0.6 W
Total Deflection (in)	0.01 @ mid-span	0.86	Passed (L/7879)	--	1.0 D + 0.6 W
Bending/Compression	0.32	1	Passed (32%)	1.60	1.0 D + 0.45 W + 0.75 L + 0.75 S

- Wall deflection criteria: TL (L/120)
- Input axial load eccentricity for the design is zero
- Applicable calculations are based on NDS.
- The column stability factor (Kf = 0.6) applied to this design assumes nailed built-up columns per NDS section 15.3.3. For Weyerhaeuser ELP products refer to the U.S. Wall Guide for multiple-member connection requirements.

Supports	Type	Material
Top	Dbl 2X	Douglas Fir-Larch
Base	2X	Douglas Fir-Larch

System : Wall
 Member Type : Column
 Building Code : IBC 2021
 Design Methodology : ASD

Max Unbraced Length	Comments
8'	

Lateral Connections

Supports	Connector	Type/Model	Quantity	Connector Nailing
Top	Nails	8d (0.113" x 2 1/2") (Toe)	2	N/A
Base	Nails	8d (0.113" x 2 1/2") (Toe)	2	N/A

- Nailed connection at the top of the member is assumed to be nailed through the bottom 2x plate prior to placement of the top 2x of the double top plate assembly.

Vertical Loads	Tributary Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	N/A	2980	821	770	2410	level 5/roof
2 - Point (lb)	N/A	1178	1000	--	--	level 4

Lateral Load	Location	Tributary Width	Wind (1.60)	Comments
1 - Uniform (PSF)	Full Length	1'	25.1	

- ASCE/SEI 7 Sec. 30.4: Exposure Category (B), Mean Roof Height (33'), Topographic Factor (1.0), Wind Directionality Factor (0.85), Basic Wind Speed (115), Risk Category(II), Wind Zone (4), GCpi (+/- 0.18), Effective Wind Area determined using full member span and trib. width.
- IBC Table 1604.3, footnote f: Deflection checks are performed using 42% of this lateral wind load.

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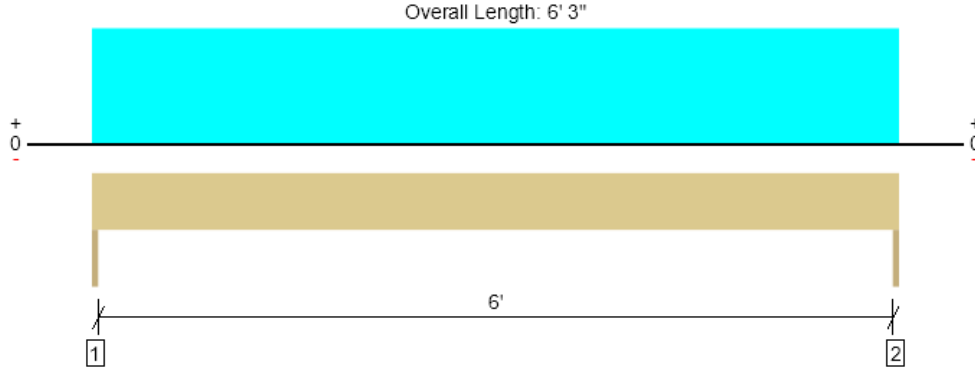
ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



301-83

General Calcs, H4: 6' Header

3 piece(s) 1 3/4" x 7 1/4" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	5098 @ 0	5906 (1.50")	Passed (86%)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
Shear (lbs)	3908 @ 8 3/4"	8317	Passed (47%)	1.15	1.0 D + 0.75 L + 0.75 S (All Spans)
Moment (Ft-lbs)	7966 @ 3' 1 1/2"	12273	Passed (65%)	1.15	1.0 D + 0.75 L + 0.75 S (All Spans)
Live Load Defl. (in)	0.111 @ 3' 1 1/2"	0.208	Passed (L/677)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
Total Load Defl. (in)	0.192 @ 3' 1 1/2"	0.313	Passed (L/390)	--	1.0 D + 0.75 L + 0.75 S (All Spans)

Member Length : 6' 3"
 System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2021
 Design Methodology : ASD

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

Supports	Bearing Length			Loads to Supports (lbs)				
	Total	Available	Required	Dead	Floor Live	Snow	Factored	Accessories
1 - Trimmer - DF	1.50"	1.50"	1.50"	2157	1891	2031	5098	None
2 - Trimmer - DF	1.50"	1.50"	1.50"	2157	1891	2031	5098	None

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.

Vertical Loads	Location	Tributary Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 6' 3"	N/A	11.1	--	--	
1 - Uniform (PLF)	0 to 6' 3"	N/A	679.0	605.0	650.0	Default Load

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

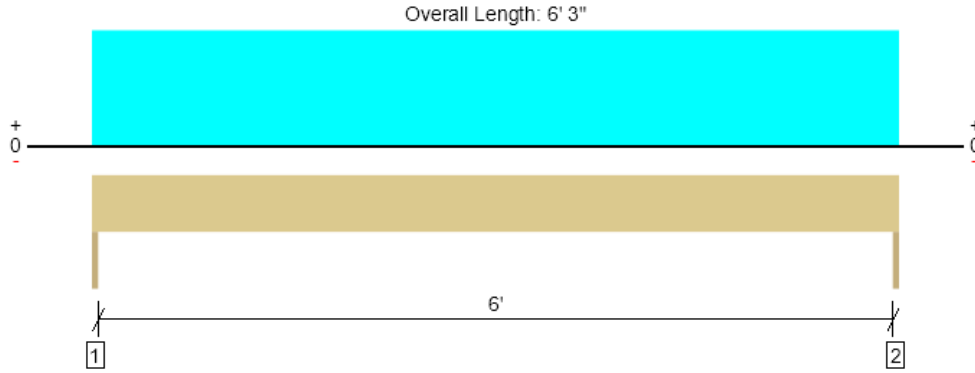
ForteWEB Software Operator	Job Notes
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301-84 Weyerhaeuser

3/16/2026 3:42:07 PM UTC
 ForteWEB v4.0, Engine: V8.4.5.1, Data: V25.26.55.57
 File Name: Basecamp II

General Calcs, H3.2: 6' Header
3 piece(s) 2 x 12 DF No.2



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	4303 @ 0	4219 (1.50")	Passed (102%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	2840 @ 1' 3/4"	6986	Passed (41%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	6724 @ 3' 1 1/2"	8187	Passed (82%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.039 @ 3' 1 1/2"	0.208	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.055 @ 3' 1 1/2"	0.313	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)

Member Length : 6' 3"
 System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2021
 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 - Trimmer - SPF	1.50"	1.50"	1.50"	1281	156	3023	4303	None
2 - Trimmer - SPF	1.50"	1.50"	1.50"	1281	156	3023	4303	None

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.

Vertical Loads	Location	Tributary Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 6' 3"	N/A	12.8	--	--	
1 - Uniform (PSF)	0 to 6' 3"	1' 3"	42.0	40.0	--	Default Load
2 - Uniform (PSF)	0 to 6' 3"	13' 3"	26.0	--	73.0	

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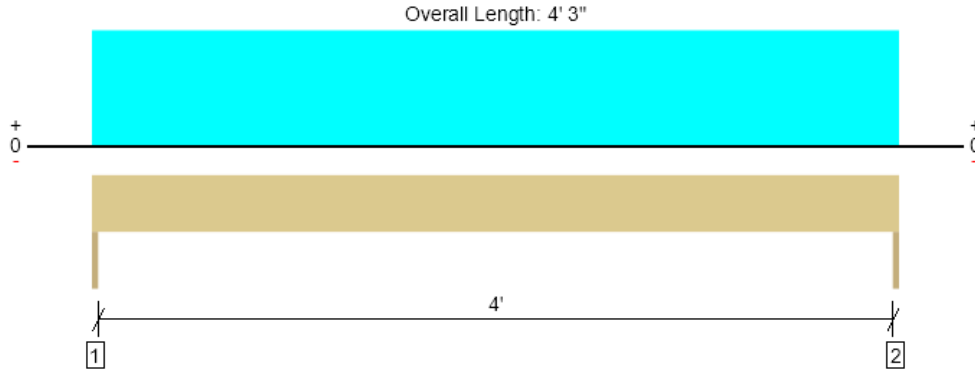
ForteWEB Software Operator	Job Notes
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301-851-8511 Weyerhaeuser

3/16/2026 3:42:07 PM UTC
 ForteWEB v4.0, Engine: V8.4.5.1, Data: V25.26.55.57
 File Name: Basecamp II

Level 2, HDR5.1: Scheduled Header 3'
3 piece(s) 2 x 8 DF No.2



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	2631 @ 0	4219 (1.50")	Passed (62%)	--	1.0 D + 1.0 L (All Spans)
Shear (lbs)	1728 @ 8 3/4"	3915	Passed (44%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	2796 @ 2' 1 1/2"	3548	Passed (79%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.019 @ 2' 1 1/2"	0.142	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.040 @ 2' 1 1/2"	0.213	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)

Member Length : 4' 3"
 System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2021
 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)			
	Total	Available	Required	Dead	Floor Live	Factored	Accessories
1 - Trimmer - SPF	1.50"	1.50"	1.50"	1356	1275	2631	None
2 - Trimmer - SPF	1.50"	1.50"	1.50"	1356	1275	2631	None

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

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location	Tributary Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 4' 3"	N/A	8.3	--	
1 - Uniform (PSF)	0 to 4' 3"	15'	42.0	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

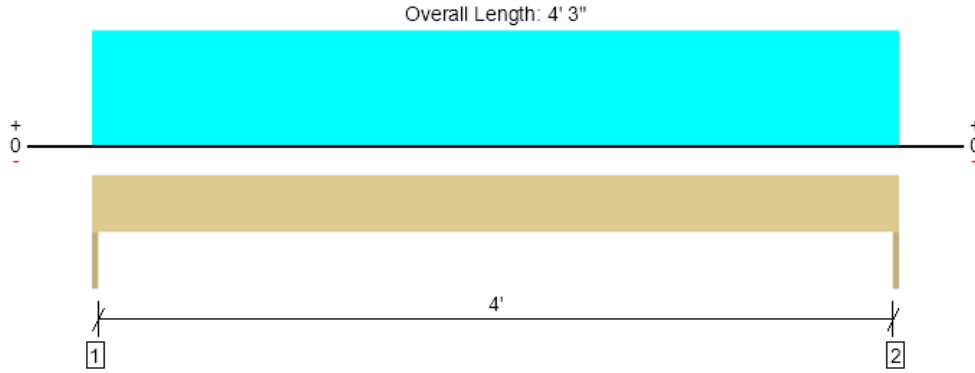
ForteWEB Software Operator	Job Notes
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301-866-0600 Weyerhaeuser

3/16/2026 3:42:07 PM UTC
 ForteWEB v4.0, Engine: V8.4.5.1, Data: V25.26.55.57
 File Name: Basecamp II

General Calcs, HDR5.2: Scheduled Header 3'
3 piece(s) 2 x 8 DF No.2



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	3489 @ 0	4219 (1.50")	Passed (83%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	2292 @ 8 3/4"	4502	Passed (51%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	3707 @ 2' 1 1/2"	4080	Passed (91%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.039 @ 2' 1 1/2"	0.142	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.053 @ 2' 1 1/2"	0.213	Passed (L/968)	--	1.0 D + 1.0 S (All Spans)

Member Length : 4' 3"
 System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2021
 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)				
	Total	Available	Required	Dead	Roof Live	Snow	Factored	Accessories
1 - Trimmer - SPF	1.50"	1.50"	1.50"	929	701	2560	3489	None
2 - Trimmer - SPF	1.50"	1.50"	1.50"	929	701	2560	3489	None

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

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location	Tributary Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 4' 3"	N/A	8.3	--	--	
1 - Uniform (PSF)	0 to 4' 3"	16' 6"	26.0	20.0	73.0	Default Load

Weyerhaeuser Notes

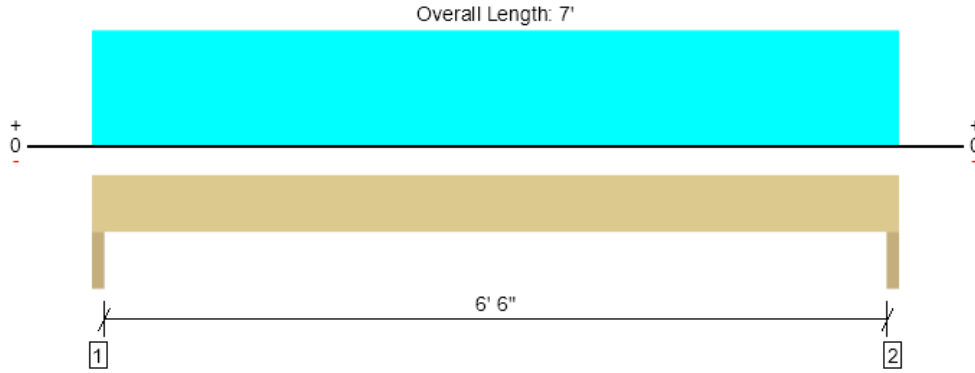
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
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General Calcs, HDR3: 6.5' Header
3 piece(s) 2 x 12 DF No.2



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	4766 @ 1' 1/2"	8438 (3.00")	Passed (56%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	3149 @ 1' 2 1/4"	6986	Passed (45%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	7756 @ 3' 6"	8187	Passed (95%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.055 @ 3' 6"	0.225	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.074 @ 3' 6"	0.338	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)

Member Length : 7'
 System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2021
 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	Snow	Factored	
1 - Trimmer - DF	3.00"	3.00"	1.69"	1259	3507	4766	None
2 - Trimmer - DF	3.00"	3.00"	1.69"	1259	3507	4766	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	6' 3" o/c	
Bottom Edge (Lu)	7' 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 7'	N/A	12.8	--	
1 - Uniform (PLF)	0 to 7'	N/A	347.0	1002.0	Default Load

Weyerhaeuser Notes

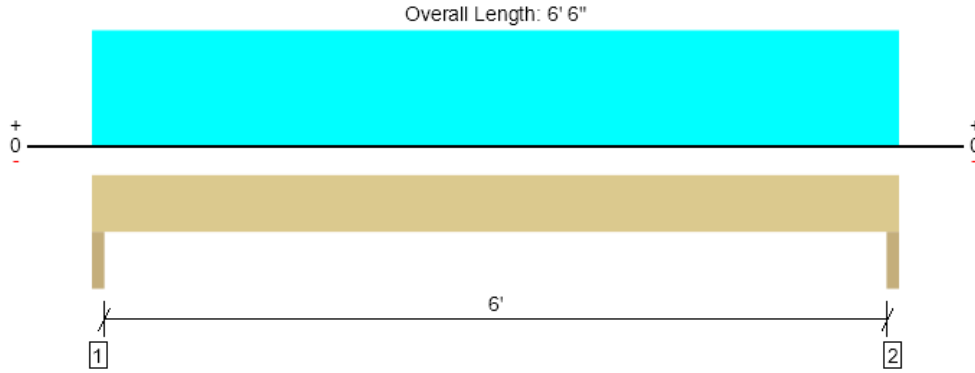
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ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



General Calcs, HDR6: Scheduled Header 3'
3 piece(s) 2 x 12 DF No.2



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	4039 @ 1' 1/2"	8438 (3.00")	Passed (48%)	--	1.0 D + 1.0 L (All Spans)
Shear (lbs)	2563 @ 1' 2 1/4"	6075	Passed (42%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	6068 @ 3' 3"	7119	Passed (85%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.024 @ 3' 3"	0.208	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.050 @ 3' 3"	0.313	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)

Member Length : 6' 6"
 System : Wall
 Member Type : Header
 Building Use : Residential
 Building Code : IBC 2021
 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)			
	Total	Available	Required	Dead	Floor Live	Factored	Accessories
1 - Trimmer - SPF	3.00"	3.00"	1.50"	2089	1950	4039	None
2 - Trimmer - SPF	3.00"	3.00"	1.50"	2089	1950	4039	None

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

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location	Tributary Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 6' 6"	N/A	12.8	--	
1 - Uniform (PSF)	0 to 6' 6"	15'	42.0	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
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Project Title:
 Engineer:
 Project ID:
 Project Descr:

Steel Beam

Project File: basecamp ii.ec6

LIC# : KW-06017163, Build:20.26.02.18

KL&A, INC.

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DESCRIPTION: B1 - Above common area (Load from load tracking)

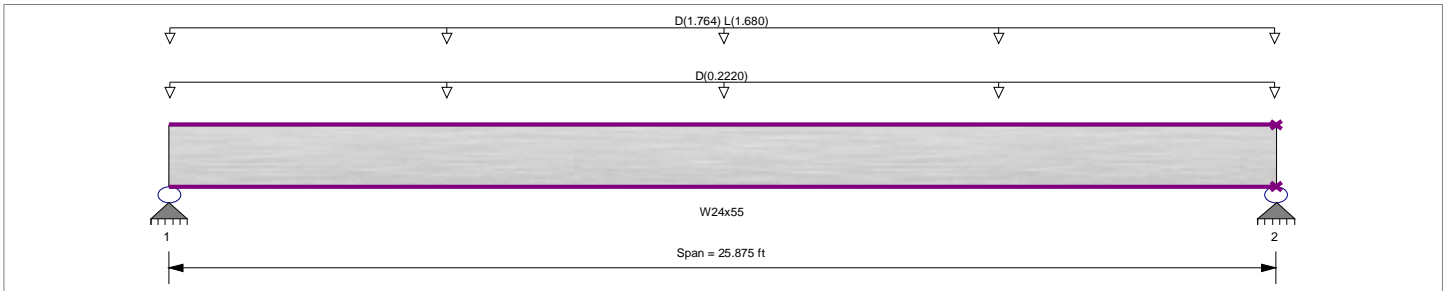
Code References

Governing Code : IBC 2024
 Referenced Design Standard(s) : AISC 360-22
 Load Combination Set : ASCE 7-22 / IBC 2024

Material Properties

Analysis Method Load Resistance Factor Design
 Beam Bracing : Beam is Fully Braced against lateral-torsional buckling
 Bending Axis : Major Axis Bending

Fy : Steel Yield : 50.0 ksi
 E: Modulus : 29,000.0 ksi



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
 Uniform Load : D = 0.0060 ksf, Tributary Width = 37.0 ft, (4 floors of 9.25ft walls)
 Uniform Load : D = 1.764, L = 1.680 k/ft, Tributary Width = 1.0 ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	0 : 1	Maximum Shear Stress Ratio =	0 : 1
Section used for this span		Section used for this span	
Mu : Applied	0 k-ft	Vu : Applied	0 k
Mn * Phi : Allowable	0 k-ft	Vn * Phi : Allowable	0 k
Load Combination		Load Combination	
Span # where maximum occurs	1	Location of maximum on span	0 ft
Span # where maximum occurs		Span # where maximum occurs	1
Maximum Deflection			
Max Downward Transient Deflection	0.434 in Ratio = 714 >=360	Span: 1 : L Only	
Max Upward Transient Deflection	0 in Ratio = 0 <360	n/a	
Max Downward Total Deflection	0.963 in Ratio = 322 >=180	Span: 1 : +D+L	
Max Upward Total Deflection	0 in Ratio = 0 <180	n/a	

Maximum Forces & Stresses for Load Combinations

Load Combination	Segment Length	Span #	Max Stress Ratios		Summary of Moment Values						Summary of Shear Values				
			M	V	max Mu +	max Mu -	Mu Max	Mnx	Phi*Mnx	Cb	Rm	VuMax	Vnx	Phi*Vnx	
+1.40D															
Dsgn. L = 25.88 ft		1	0.476	0.147	239.13		239.13	558.33	502.50	1.00	1.00	36.97	279.66	251.69	
+1.20D+1.60L															
Dsgn. L = 25.88 ft		1	0.856	0.264	429.93		429.93	558.33	502.50	1.00	1.00	66.46	279.66	251.69	
+1.20D+L															
Dsgn. L = 25.88 ft		1	0.688	0.212	345.57		345.57	558.33	502.50	1.00	1.00	53.42	279.66	251.69	
+1.20D															
Dsgn. L = 25.88 ft		1	0.408	0.126	204.97		204.97	558.33	502.50	1.00	1.00	31.69	279.66	251.69	
+0.90D															
Dsgn. L = 25.88 ft		1	0.306	0.094	153.73		153.73	558.33	502.50	1.00	1.00	23.76	279.66	251.69	

Overall Maximum Deflections

Span	Load Combination	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
1	+D+L	0.9630	13.011		0.0000	0.000

Vertical Reactions

Support notation : Far left is #'

Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	48.140	48.140
Max Upward from Load Combinations	48.140	48.140 301-90
Max Upward from Load Cases	26.405	26.405

Project Title:
Engineer:
Project ID:
Project Descr:

Steel Beam

Project File: basecamp ii.ec6

LIC# : KW-06017163, Build:20.26.02.18

KL&A, INC.

(c) ENERCALC, LLC 1982-2026

DESCRIPTION: B1 - Above common area (Load from load tracking)

Vertical Reactions

Support notation : Far left is #

Values in KIPS

Load Combination	Support 1	Support 2
D Only	26.405	26.405
+D+L	48.140	48.140
+D+0.750L	42.707	42.707
+0.60D	15.843	15.843
L Only	21.735	21.735

Project Title:
 Engineer:
 Project ID:
 Project Descr:

Steel Beam

Project File: basecamp ii.ec6

LIC# : KW-06017163, Build:20.26.02.18

KL&A, INC.

(c) ENERCALC, LLC 1982-2026

DESCRIPTION: B2 - Above common area (Load from load tracking)

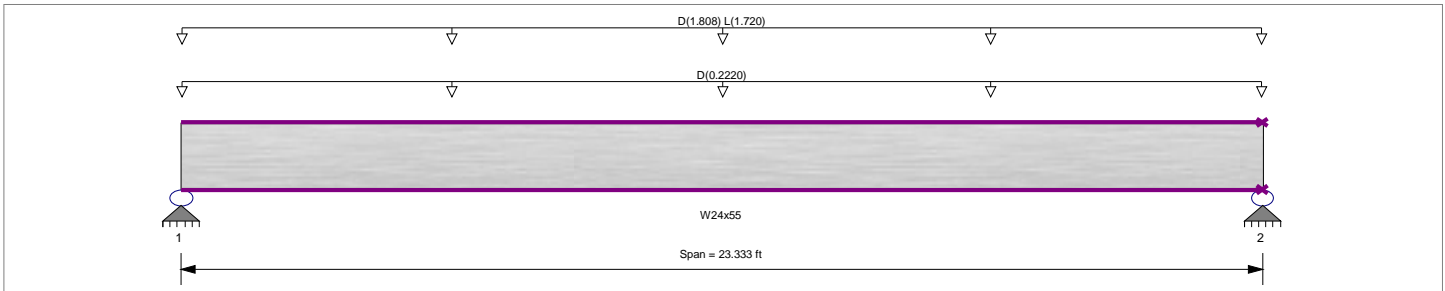
Code References

Governing Code : IBC 2024
 Referenced Design Standard(s) : AISC 360-22
 Load Combination Set : ASCE 7-22 / IBC 2024

Material Properties

Analysis Method Load Resistance Factor Design
 Beam Bracing : Beam is Fully Braced against lateral-torsional buckling
 Bending Axis : Major Axis Bending

Fy : Steel Yield : 50.0 ksi
 E: Modulus : 29,000.0 ksi



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
 Uniform Load : D = 0.0060 ksf, Tributary Width = 37.0 ft, (4 floors of 9.25ft walls)
 Uniform Load : D = 1.808, L = 1.720 k/ft, Tributary Width = 1.0 ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	0.712 : 1	Maximum Shear Stress Ratio =	0.244 : 1
Section used for this span	W24x55	Section used for this span	W24x55
Mu : Applied	357.564 k-ft	Vu : Applied	61.297 k
Mn * Phi : Allowable	502.500 k-ft	Vn * Phi : Allowable	251.694 k
Load Combination	+1.20D+1.60L	Load Combination	+1.20D+1.60L
Span # where maximum occurs	Span # 1	Location of maximum on span	0.000 ft
Span # where maximum occurs	Span # 1	Span # where maximum occurs	Span # 1
Maximum Deflection			
Max Downward Transient Deflection	0.294 in Ratio = 951 >=360	Span: 1 : L Only	n/a
Max Upward Transient Deflection	0 in Ratio = 0 <360		n/a
Max Downward Total Deflection	0.651 in Ratio = 430 >=180	Span: 1 : +D+L	n/a
Max Upward Total Deflection	0 in Ratio = 0 <180		n/a

Maximum Forces & Stresses for Load Combinations

Load Combination	Segment Length	Span #	Max Stress Ratios		Summary of Moment Values						Summary of Shear Values				
			M	V	max Mu +	max Mu -	Mu Max	Mnx	Phi*Mnx	Cb	Rm	VuMax	Vnx	Phi*Vnx	
+1.40D															
Dsgn. L = 23.33 ft		1	0.395	0.135	198.65		198.65	558.33	502.50	1.00	1.00	34.05	279.66	251.69	
+1.20D+1.60L															
Dsgn. L = 23.33 ft		1	0.712	0.244	357.56		357.56	558.33	502.50	1.00	1.00	61.30	279.66	251.69	
+1.20D+L															
Dsgn. L = 23.33 ft		1	0.572	0.196	287.33		287.33	558.33	502.50	1.00	1.00	49.26	279.66	251.69	
+1.20D															
Dsgn. L = 23.33 ft		1	0.339	0.116	170.27		170.27	558.33	502.50	1.00	1.00	29.19	279.66	251.69	
+0.90D															
Dsgn. L = 23.33 ft		1	0.254	0.087	127.71		127.71	558.33	502.50	1.00	1.00	21.89	279.66	251.69	

Overall Maximum Deflections

Span	Load Combination	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
1	+D+L	0.6512	11.733		0.0000	0.000

Vertical Reactions

Support notation : Far left is #'

Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	44.392	44.392
Max Upward from Load Combinations	44.392	44.392 301-92
Max Upward from Load Cases	24.325	24.325

Project Title:
Engineer:
Project ID:
Project Descr:

Steel Beam

Project File: basecamp ii.ec6

LIC# : KW-06017163, Build:20.26.02.18

KL&A, INC.

(c) ENERCALC, LLC 1982-2026

DESCRIPTION: B2 - Above common area (Load from load tracking)

Vertical Reactions

Support notation : Far left is #

Values in KIPS

Load Combination	Support 1	Support 2
D Only	24.325	24.325
+D+L	44.392	44.392
+D+0.750L	39.375	39.375
+0.60D	14.595	14.595
L Only	20.067	20.067

400. COLUMNS AND BEARING WALLS

Calculation Package

400 Columns and Walls Calculation Index:

Narrative	400
Column Design Summary	401
Base Plate Design	402
Wall Key Plans	403
Wall Design Summary	404

Calculation Package

400. NARRATIVE

The columns for this structure are typically wood stud packs. Typical structural walls are wood bearing walls and CMU walls. See Section 500 for information pertaining to the lateral design of the columns and walls.

Column Design

Wood gravity columns were designed based on ASD loads using an in-house design spreadsheet. The typical unbraced lengths of the columns were 10.5 feet. The steel columns were HSS columns and designed based on LRFD loads with RISA 3D. Base plates were designed for the same loads as the columns. Base plates were designed using an in-house spreadsheet. Reference Sections 401 through 404 for detailed information regarding column loading and design.

Wall Design

Structural gravity walls were designed based on the ultimate load combinations. Typical structural walls are 2x6 DFL No2 @16"OC. The walls were designed using an in-house spreadsheet. Reference Sections 403 through 404 for detailed information regarding wall loading and design.

Calculation Package

401. COLUMN DESIGN SUMMARY



THE STRUCTURAL ENGINEER'S SEAL ON THIS DRAWING INDICATES THAT THE INFORMATION SHOWN AND THE CALCULATIONS PERTAINING TO THAT INFORMATION HAVE BEEN PREPARED BY QUALIFIED PEOPLE UNDER THE DIRECTION OF THE ENGINEER-OF-RECORD. THE SEAL DOES NOT IMPLY RESPONSIBILITY FOR INFORMATION PREPARED BY OTHERS NOR FOR ANY INFORMATION NOT SHOWN ON THIS DRAWING AND SUCH RESPONSIBILITY IS SPECIFICALLY DISCLAIMED. ON PHASED PROJECTS, DRAWINGS THAT ARE ISSUED BUT NOT SEALED SHALL BE CONSIDERED TO BE PRELIMINARY IN NATURE AND ARE ISSUED FOR INFORMATION ONLY.

THESE DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS ON THE PROJECT TO CLEARLY DEFINE ALL OF THE REQUIREMENTS FOR THE CONSTRUCTION. WHERE CONFLICTS OCCUR CONTACT ARCHITECT FOR CLARIFICATION.

ISSUE:
PROJECT STATUS

PRELIMINARY - NOT FOR CONSTRUCTION

THESE DRAWINGS ARE INCOMPLETE AND ARE MISSING INFORMATION THEY ARE INTENDED FOR PRELIMINARY USE ONLY.

STEAMBOAT BASECAMP II
BASECAMP, LOT 2
STEAMBOAT SPRINGS, CO 80487

PROJECT NO:
 DRAWN BY: Author
 CHECKED BY: Checker
 REVISIONS:

SHEET TITLE:
 Load Track Level 1

SXX21



THE STRUCTURAL ENGINEER'S SEAL ON THIS DRAWING INDICATES THAT THE INFORMATION SHOWN AND THE CALCULATIONS PERTAINING TO THAT INFORMATION HAVE BEEN PREPARED BY QUALIFIED PEOPLE UNDER THE DIRECTION OF THE ENGINEER-OF-RECORD. THE SEAL DOES NOT IMPLY RESPONSIBILITY FOR INFORMATION PREPARED BY OTHERS NOR FOR ANY INFORMATION NOT SHOWN ON THIS DRAWING AND SUCH RESPONSIBILITY IS SPECIFICALLY DISCLAIMED. ON PHASED PROJECTS, DRAWINGS THAT ARE ISSUED BUT NOT SEALED SHALL BE CONSIDERED TO BE PRELIMINARY IN NATURE AND ARE ISSUED FOR INFORMATION ONLY.

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ISSUE:
PROJECT STATUS

PRELIMINARY - NOT FOR CONSTRUCTION

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STEAMBOAT BASECAMP II
 BASECAMP, LOT 2
 STEAMBOAT SPRINGS, CO 80487

PROJECT NO:
 DRAWN BY: Author
 CHECKED BY: Checker
 REVISIONS:

SHEET TITLE:
Load Track Level 2

SXX22

THE STRUCTURAL ENGINEER'S SEAL ON THIS DRAWING INDICATES THAT THE INFORMATION SHOWN AND THE CALCULATIONS PERTAINING TO THAT INFORMATION HAVE BEEN PREPARED BY QUALIFIED PEOPLE UNDER THE DIRECTION OF THE ENGINEER-OF-RECORD. THE SEAL DOES NOT IMPLY RESPONSIBILITY FOR INFORMATION PREPARED BY OTHERS NOR FOR ANY INFORMATION NOT SHOWN ON THIS DRAWING AND SUCH RESPONSIBILITY IS SPECIFICALLY DISCLAIMED. ON PHASED PROJECTS, DRAWINGS THAT ARE ISSUED BUT NOT SEALED SHALL BE CONSIDERED TO BE PRELIMINARY IN NATURE AND ARE ISSUED FOR INFORMATION ONLY.

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ISSUE:
PROJECT STATUS

PRELIMINARY - NOT FOR CONSTRUCTION

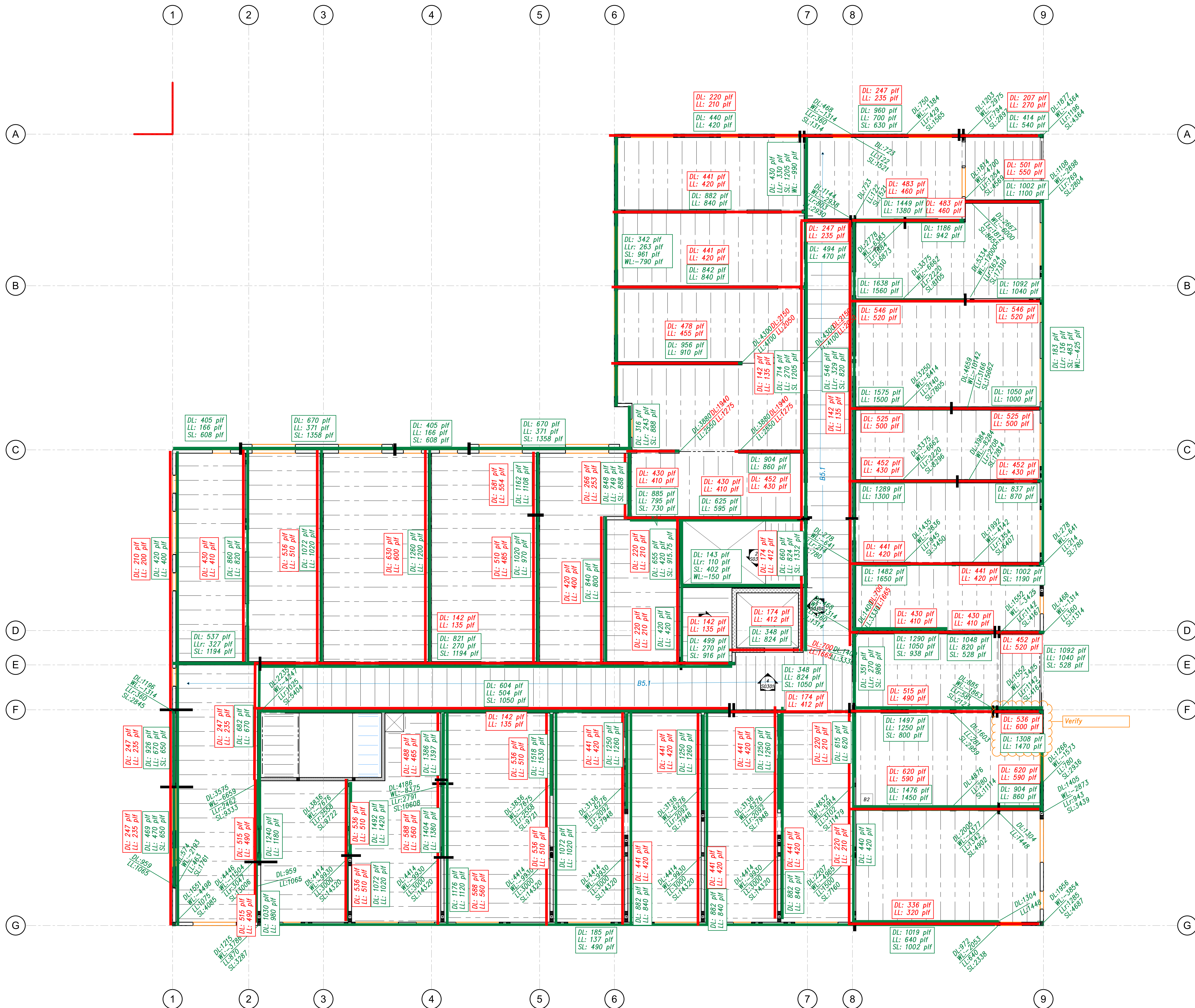
THESE DRAWINGS ARE INCOMPLETE AND ARE MISSING INFORMATION THEY ARE INTENDED FOR PRELIMINARY USE ONLY.

STEAMBOAT BASECAMP II
BASECAMP, LOT 2
STEAMBOAT SPRINGS, CO 80487

PROJECT NO:
DRAWN BY: Author
CHECKED BY: Checker
REVISIONS:

SHEET TITLE:
Load Track Level 3

SXX5



THE STRUCTURAL ENGINEER'S SEAL ON THIS DRAWING INDICATES THAT THE INFORMATION SHOWN AND THE CALCULATIONS PERTAINING TO THAT INFORMATION HAVE BEEN PREPARED BY QUALIFIED PEOPLE UNDER THE DIRECTION OF THE ENGINEER-OF-RECORD. THE SEAL DOES NOT IMPLY RESPONSIBILITY FOR INFORMATION PREPARED BY OTHERS NOR FOR ANY INFORMATION NOT SHOWN ON THIS DRAWING AND SUCH RESPONSIBILITY IS SPECIFICALLY DISCLAIMED. ON PHASED PROJECTS, DRAWINGS THAT ARE ISSUED BUT NOT SEALED SHALL BE CONSIDERED TO BE PRELIMINARY IN NATURE AND ARE ISSUED FOR INFORMATION ONLY.

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ISSUE:
PROJECT STATUS

PRELIMINARY - NOT FOR CONSTRUCTION

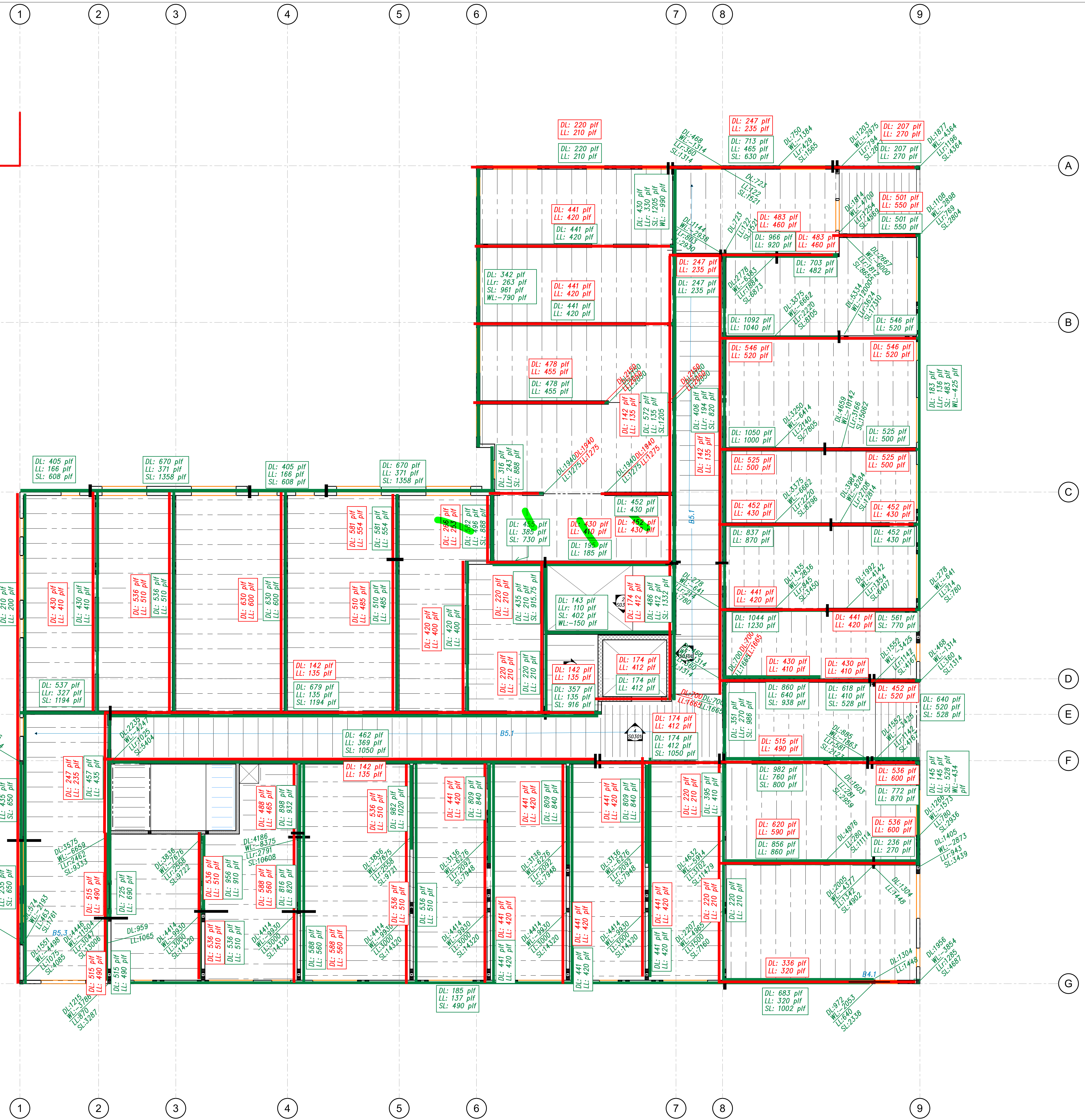
THESE DRAWINGS ARE INCOMPLETE AND ARE MISSING INFORMATION THEY ARE INTENDED FOR PRELIMINARY USE ONLY.

STEAMBOAT BASECAMP II
BASECAMP, LOT 2
STEAMBOAT SPRINGS, CO 80487

PROJECT NO:
DRAWN BY: Author
CHECKED BY: Checker
REVISIONS:

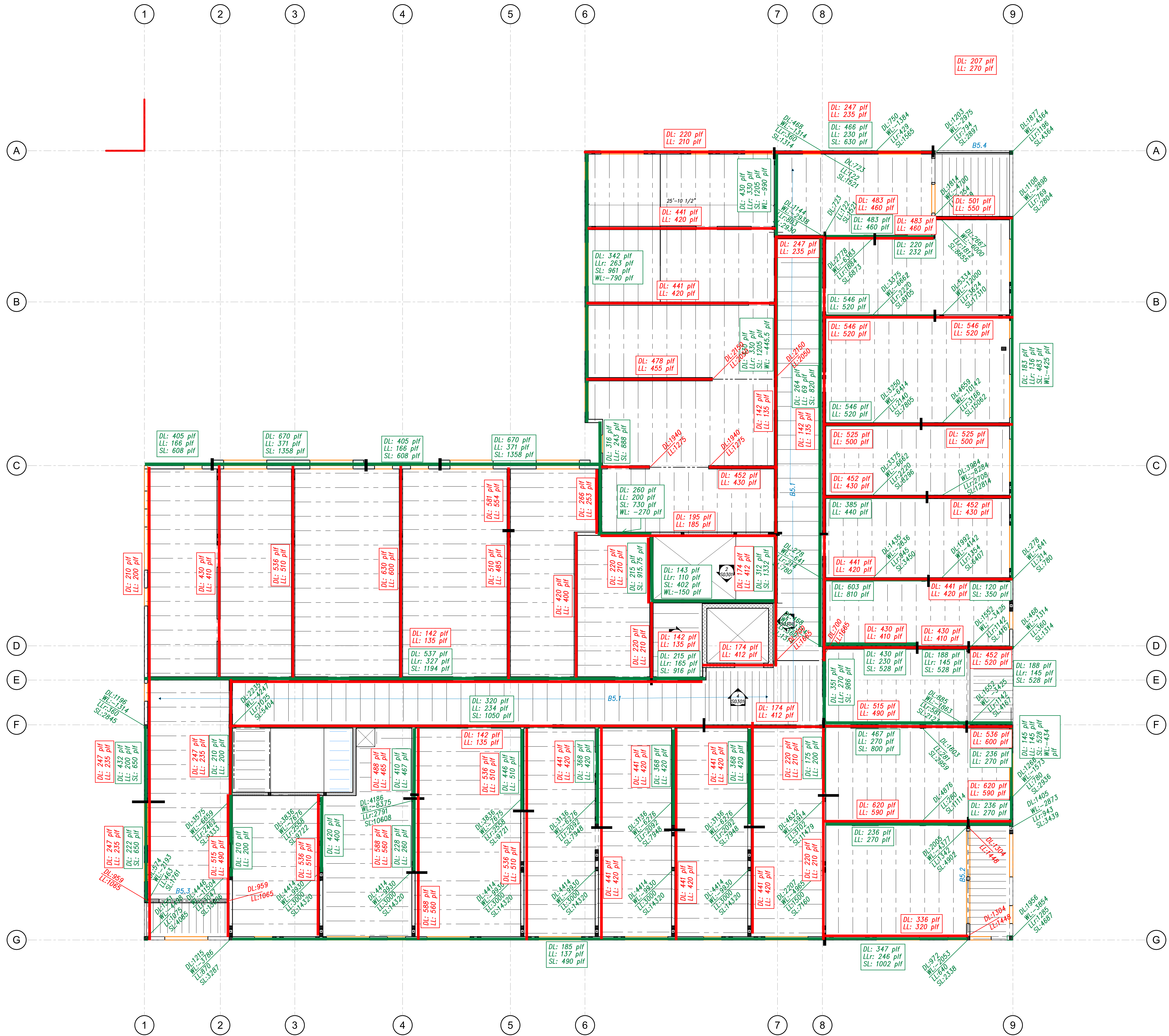
SHEET TITLE:
Load Track Level 4

SXX6



1 LOAD TRACKING LEVEL 4
 SXX6 3/16" = 1'-0"

1/27/2026 11:05:45 AM



THE STRUCTURAL ENGINEER'S SEAL ON THIS DRAWING INDICATES THAT THE INFORMATION SHOWN AND THE CALCULATIONS PERTAINING TO THAT INFORMATION HAVE BEEN PREPARED BY QUALIFIED PEOPLE UNDER THE DIRECTION OF THE ENGINEER-OF-RECORD. THE SEAL DOES NOT IMPLY RESPONSIBILITY FOR INFORMATION PREPARED BY OTHERS NOR FOR ANY INFORMATION NOT SHOWN ON THIS DRAWING AND SUCH RESPONSIBILITY IS SPECIFICALLY DISCLAIMED. ON PHASED PROJECTS, DRAWINGS THAT ARE ISSUED BUT NOT SEALED SHALL BE CONSIDERED TO BE PRELIMINARY IN NATURE AND ARE ISSUED FOR INFORMATION ONLY.

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ISSUE:
PROJECT STATUS

PRELIMINARY - NOT FOR CONSTRUCTION

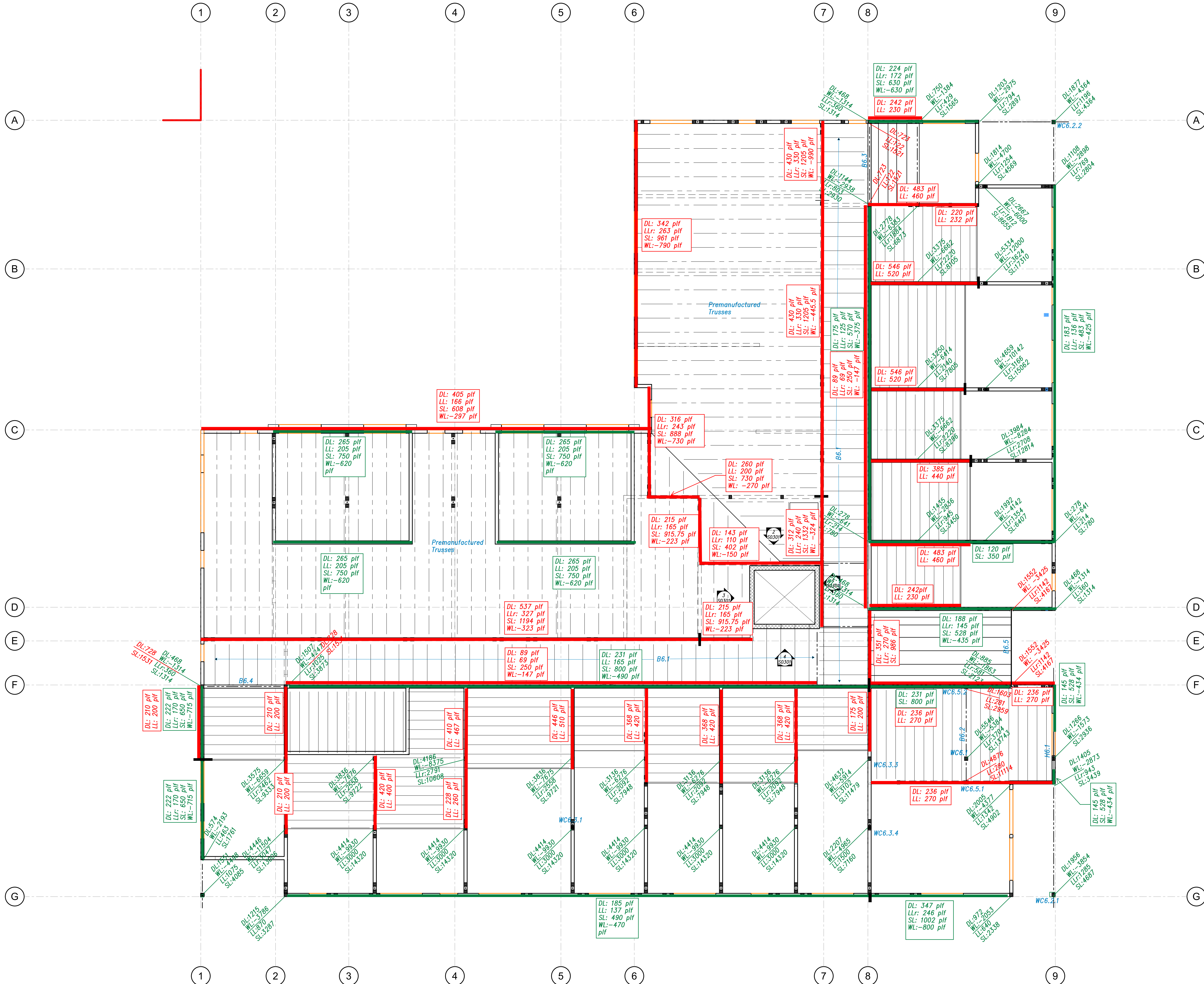
THESE DRAWINGS ARE INCOMPLETE AND ARE MISSING INFORMATION THEY ARE INTENDED FOR PRELIMINARY USE ONLY.

STEAMBOAT BASECAMP II
BASECAMP, LOT 2
STEAMBOAT SPRINGS, CO 80487

PROJECT NO:
DRAWN BY: Author
CHECKED BY: Checker
REVISIONS:

SHEET TITLE:
Load Track Level 5

SXX7



THE STRUCTURAL ENGINEER'S SEAL ON THIS DRAWING INDICATES THAT THE INFORMATION SHOWN AND THE CALCULATIONS PERTAINING TO THAT INFORMATION HAVE BEEN PREPARED BY QUALIFIED PEOPLE UNDER THE DIRECTION OF THE ENGINEER-OF-RECORD. THE SEAL DOES NOT IMPLY RESPONSIBILITY FOR INFORMATION PREPARED BY OTHERS NOR FOR ANY INFORMATION NOT SHOWN ON THIS DRAWING AND SUCH RESPONSIBILITY IS SPECIFICALLY DISCLAIMED. ON PHASED PROJECTS, DRAWINGS THAT ARE ISSUED BUT NOT SEALED SHALL BE CONSIDERED TO BE PRELIMINARY IN NATURE AND ARE ISSUED FOR INFORMATION ONLY.

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ISSUE:
PROJECT STATUS

PRELIMINARY - NOT FOR CONSTRUCTION

THESE DRAWINGS ARE INCOMPLETE AND ARE MISSING INFORMATION THEY ARE INTENDED FOR PRELIMINARY USE ONLY.

STEAMBOAT BASECAMP II
 BASECAMP, LOT 2
 STEAMBOAT SPRINGS, CO 80487

PROJECT NO:
 DRAWN BY: Author
 CHECKED BY: Checker
 REVISIONS:

SHEET TITLE:
 Load Track Level Roof

SXX8

Steel Column

Project File: basecamp ii.ec6

LIC# : KW-06017163, Build:20.26.02.18

KL&A, INC.

(c) ENERCALC, LLC 1982-2026

DESCRIPTION: B1 columns

Code References

Governing Code : IBC 2024
 Referenced Design Standard(s) : AISC 360-22
 Load Combinations Used : ASCE 7-22 / IBC 2024

General Information

Steel Section Name : HSS5x5x1/4	Overall Column Height	8.666 ft
Analysis Method : Load Resistance Factor	Top & Bottom Fixity	Top & Bottom Pinned
Steel Stress Grade	Brace condition :	
Fy : Steel Yield 50.0 ksi	Fully braced against buckling ABOUT X-X Axis	
E : Elastic Bending Modulus 29,000.0 ksi	Fully braced against buckling ABOUT Y-Y Axis	

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Column self weight included : 135.363 lbs * Dead Load Factor
 AXIAL LOADS . . .
 Axial Load at 8.666 ft, Xecc = 2.0 in, D = 27.492, L = 13.377 k

DESIGN SUMMARY

Bending & Shear Check Results

PASS Max. Axial+Bending Stress Ratio = **0.5624** : 1
 Load Combination +1.20D+1.60L
 Location of max.above base 8.608 ft
 At maximum location values are . . .
 Pu 54.556 k
 0.9 * Pn 193.50 k
 Mu-x 0.0 k-ft
 0.9 * Mn-x : 28.538 k-ft
 Mu-y -9.005 k-ft
 0.9 * Mn-y : 28.538 k-ft

Maximum Load Reactions . .
 Top along X-X 0.7860 k
 Bottom along X-X 0.7860 k
 Top along Y-Y 0.0 k
 Bottom along Y-Y 0.0 k

Maximum Load Deflections . . .
 Along Y-Y 0.0 in at 0.0ft above base
 for load combination :
 Along X-X -0.1233 in at 5.060ft above base
 for load combination :+D+L

PASS Maximum Shear Stress Ratio **0.02320** : 1
 Load Combination +1.20D+1.60L
 Location of max.above base 0.0 ft
 At maximum location values are . . .
 Vu : Applied 1.046 k
 Vn * Phi : Allowable 45.096 k

Load Combination Results

Load Combination	Maximum Axial + Bending Stress Ratios				Cb _x	Cb _y	K _x L _x /R _x	K _y L _y /R _y	Maximum Shear Ratios		
	Stress Ratio	Status	Location	Stress Ratio					Status	Location	
+1.40D	0.323	PASS	8.61 ft	1.00	1.00	0.00	0.00	0.016	PASS	0.00 ft	
+1.20D+1.60L	0.562	PASS	8.61 ft	1.00	1.00	0.00	0.00	0.023	PASS	0.00 ft	
+1.20D+L	0.480	PASS	8.61 ft	1.00	1.00	0.00	0.00	0.020	PASS	0.00 ft	
+1.20D	0.277	PASS	8.61 ft	1.00	1.00	0.00	0.00	0.014	PASS	0.00 ft	
+0.90D	0.208	PASS	8.61 ft	1.00	1.00	0.00	0.00	0.011	PASS	0.00 ft	

Maximum Reactions

Note: Only non-zero reactions are listed.

Load Combination	Axial (k)	Rx (k)		Ry (k)		Mx (k-ft)		My (k-ft)	
	@ Base	@ Base	@ Top	@ Base	@ Top	@ Base	@ Top	@ Base	@ Top
D Only	27.627	0.529	-0.529						
+D+L	41.004	0.786	-0.786						
+D+0.750L	37.660	0.722	-0.722						
+0.60D	16.576	0.317	-0.317						
L Only	13.377	0.257	-0.257						

Extreme Reactions

Item	Extreme Value	Axial (k)	Rx (k)		Ry (k)		Mx (k-ft)		My (k-ft)	
		@ Base	@ Base	@ Top	@ Base	@ Top	@ Base	@ Top	@ Base	@ Top
Axial, Base Max		41.004								
Axial, Base Min		13.377								

Project Title:
 Engineer:
 Project ID:
 Project Descr:

Steel Column

Project File: basecamp ii.ec6

LIC# : KW-06017163, Build:20.26.02.18

KL&A, INC.

(c) ENERCALC, LLC 1982-2026

DESCRIPTION: B1 columns

Extreme Reactions

Item	Extreme Value	Axial (k)		Rx (k)		Ry (k)		Mx (k-ft)		My (k-ft)	
		@ Base		@ Base	@ Top	@ Base	@ Top	@ Base	@ Top	@ Base	@ Top
Rx, Base Max				0.786							
Rx, Base Min				0.257							
Rx, Top Max					-0.257						
Rx, Top Min					-0.786						
Ry, Base Max											
Ry, Base Min											
Ry, Top Max											
Ry, Top Min											

Maximum Deflections for Load Combinations

Load Combination	Max. Deflection in X dir	Distance	Max. Deflection in Y dir	Distance
D Only	-0.0829 in	5.060 ft	0.000 in	0.000 ft
+D+L	-0.1233 in	5.060 ft	0.000 in	0.000 ft
+D+0.750L	-0.1132 in	5.060 ft	0.000 in	0.000 ft
+0.60D	-0.0498 in	5.060 ft	0.000 in	0.000 ft
L Only	-0.0403 in	5.060 ft	0.000 in	0.000 ft

Steel Section Properties : HSS5x5x1/4

Depth	=	5.000 in	I xx	=	16.00 in^4	J	=	25.800 in^4
Design Thick	=	0.233 in	S xx	=	6.41 in^3			
Width	=	5.000 in	R xx	=	1.930 in			
Wall Thick	=	0.250 in	Zx	=	7.610 in^3			
Area	=	4.300 in^2	I yy	=	16.000 in^4	C	=	10.500 in^3
Weight	=	15.620 plf	S yy	=	6.410 in^3			
			R yy	=	1.930 in			
Ycg	=	0.000 in						

Steel Column

Project File: basecamp ii.ec6

LIC# : KW-06017163, Build:20.26.02.18

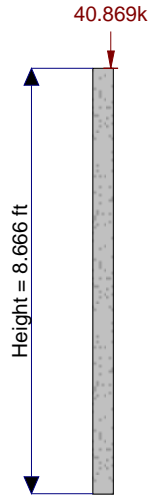
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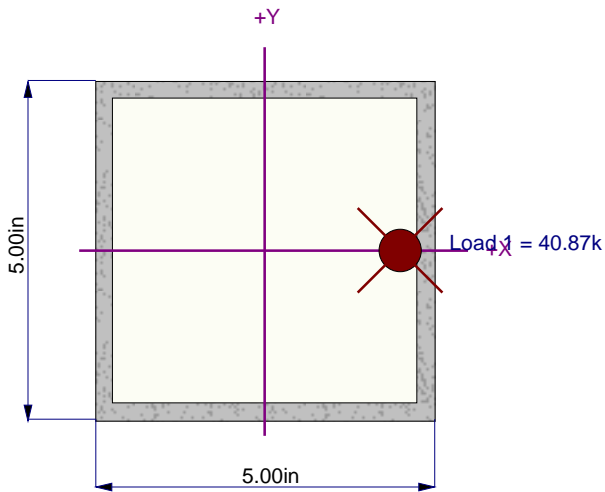
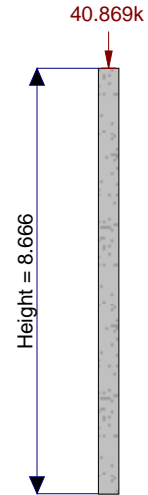
DESCRIPTION: B1 columns

Sketches

My Loads - Looking along Y-Y Axis



Mx Loads - Looking along X-X Axis



Level 1			
Member Name	Results (Max UTIL %)	Current Solution	Comments
WC1.1.1	Failed (130% f_{ep})	4 piece(s) 2 x 6 DF No.2	
Level 5			
Member Name	Results (Max UTIL %)	Current Solution	Comments
WC5.3.1	Passed (96% f_{ep})	4 piece(s) 2 x 6 DF No.2	
Level roof			
Member Name	Results (Max UTIL %)	Current Solution	Comments
WC6.1: SE Loft Column	Passed (70% B/C)	1 piece(s) 8 x 8 DF No.2	
WC6.2.2: Terrace post	Passed (89% f_c)	1 piece(s) 6 x 6 DF No.2	
WC6.2.3: Terrace post	Passed (46% B/C)	1 piece(s) 6 x 6 DF No.2	
WC6.3.1	Passed (82% f_{ep})	1 piece(s) 5 1/4" x 7" 1.8E Parallam® PSL	
WC6.3.2	Passed (79% B/C)	4 piece(s) 2 x 6 DF No.2	
WC6.3.3	Failed (107% B/C)	4 piece(s) 2 x 6 DF No.2	
WC6.3.4	Passed (42% B/C)	1 piece(s) 5 1/4" x 7" 1.8E Parallam® PSL (Plank)	
WC6.5.1:SE	Failed (103% B/C)	4 piece(s) 2 x 6 DF No.2	
WC6.5.2:SE	Passed (43% f_{ep})	3 piece(s) 2 x 6 DF No.2	
General Calcs			
Member Name	Results (Max UTIL %)	Current Solution	Comments
SPH1.1	Passed (95% f_c)	2 piece(s) 2 x 6 DF No.2	
SPH3.1: King Studs	Passed (68% f_c)	3 piece(s) 2 x 6 DF No.2	
SPH3.2: King Studs	Passed (57% f_c)	3 piece(s) 2 x 6 DF No.2	

ForteWEB Software Operator	Job Notes
Cameron Gill-Cox KL&A (720) 361-1275 cgillcox@klaa.com	



3/16/2026 2:59:14 PM UTC

ForteWEB v4.0

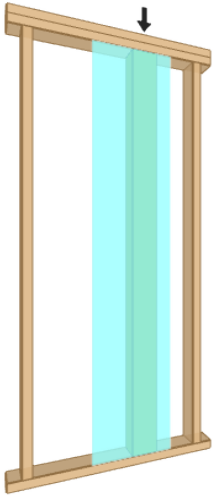
File Name: Basecamp II

Level 1, WC1.1.1
4 piece(s) 2 x 6 DF No.2

Wall Height: 9' 3"

Member Height: 8' 10 1/2"

Tributary Width: 1'



Drawing is Conceptual

Design Results	Actual	Allowed	Result	LDF	Load: Combination
Slenderness	19	50	Passed (39%)	--	--
Compression (lbs)	18180	22433	Passed (81%)	1.00	1.0 D + 1.0 L
Plate Bearing (lbs)	18180	14025	Failed (130%)	--	1.0 D + 1.0 L
Lateral Reaction (lbs)	67	--	--	1.60	1.0 D + 0.6 W
Lateral Shear (lbs)	60	6336	Passed (1%)	1.60	1.0 D + 0.6 W
Lateral Moment (ft-lbs)	148 @ mid-span	4701	Passed (3%)	1.60	1.0 D + 0.6 W
Total Deflection (in)	0.01 @ mid-span	0.89	Passed (L/9677)	--	1.0 D + 0.6 W
Bending/Compression	0.35	1	Passed (35%)	1.60	1.0 D + 0.45 W + 0.75 L + 0.75 S

- Wall deflection criteria: TL (L/120)
- Input axial load eccentricity for the design is zero
- Applicable calculations are based on NDS.
- The column stability factor (Kf = 0.6) applied to this design assumes nailed built-up columns per NDS section 15.3.3. For Weyerhaeuser ELP products refer to the U.S. Wall Guide for multiple-member connection requirements.

Supports	Type	Material
Top	Dbl 2X	Spruce-Pine-Fir
Base	2X	Spruce-Pine-Fir

System : Wall
 Member Type : Column
 Building Code : IBC 2021
 Design Methodology : ASD

Max Unbraced Length	Comments
8'	

Lateral Connections

Supports	Connector	Type/Model	Quantity	Connector Nailing
Top	Nails	8d (0.113" x 2 1/2") (Toe)	2	N/A
Base	Nails	8d (0.113" x 2 1/2") (Toe)	2	N/A

- Nailed connection at the top of the member is assumed to be nailed through the bottom 2x plate prior to placement of the top 2x of the double top plate assembly.

Vertical Load	Tributary Width	Dead (0.90)	Floor Live (1.00)	Comments
1 - Point (lb)	N/A	9180	9000	Trib Area = 225

Lateral Load	Location	Tributary Width	Wind (1.60)	Comments
1 - Uniform (PSF)	Full Length	1'	25.0	

- ASCE/SEI 7 Sec. 30.4: Exposure Category (B), Mean Roof Height (33'), Topographic Factor (1.0), Wind Directionality Factor (0.85), Basic Wind Speed (115), Risk Category(II), Wind Zone (4), GCpi (+/- 0.18), Effective Wind Area determined using full member span and trib. width.
- IBC Table 1604.3, footnote f: Deflection checks are performed using 42% of this lateral wind load.

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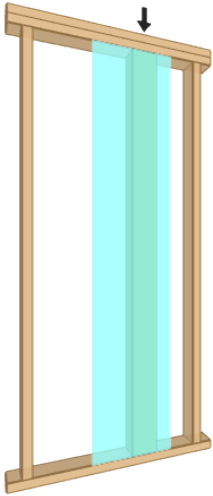


Level 5, WC5.3.1
4 piece(s) 2 x 6 DF No.2

Wall Height: 9'

Member Height: 8' 7 1/2"

Tributary Width: 1'



Drawing is Conceptual

Design Results	Actual	Allowed	Result	LDF	Load: Combination
Slenderness	19	50	Passed (38%)	--	--
Compression (lbs)	19721	24348	Passed (81%)	1.15	1.0 D + 1.0 S
Plate Bearing (lbs)	19721	20625	Passed (96%)	--	1.0 D + 1.0 S
Lateral Reaction (lbs)	65	--	--	1.60	1.0 D + 0.6 W
Lateral Shear (lbs)	58	6336	Passed (1%)	1.60	1.0 D + 0.6 W
Lateral Moment (ft-lbs)	140 @ mid-span	4701	Passed (3%)	1.60	1.0 D + 0.6 W
Total Deflection (in)	0.01 @ mid-span	0.86	Passed (L/10505)	--	1.0 D + 0.6 W
Bending/Compression	0.35	1	Passed (35%)	1.60	1.0 D + 0.45 W + 0.75 L + 0.75 S

- Wall deflection criteria: TL (L/120)
- Input axial load eccentricity for the design is zero
- Applicable calculations are based on NDS.
- Bearing shall be on a metal plate or strap, or on other equivalently durable, rigid, homogeneous material with sufficient stiffness to distribute applied load.
- The column stability factor (Kf = 0.6) applied to this design assumes nailed built-up columns per NDS section 15.3.3. For Weyerhaeuser ELP products refer to the U.S. Wall Guide for multiple-member connection requirements.

Supports	Type	Material
Top	Dbf 2X	Douglas Fir-Larch
Base	2X	Douglas Fir-Larch

System : Wall
 Member Type : Column
 Building Code : IBC 2021
 Design Methodology : ASD

Max Unbraced Length	Comments
8'	

Lateral Connections				
Supports	Connector	Type/Model	Quantity	Connector Nailing
Top	Nails	8d (0.113" x 2 1/2") (Toe)	2	N/A
Base	Nails	8d (0.113" x 2 1/2") (Toe)	2	N/A

- Nailed connection at the top of the member is assumed to be nailed through the bottom 2x plate prior to placement of the top 2x of the double top plate assembly.

Vertical Load	Tributary Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Point (lb)	N/A	4659	80	15062	Default Load

Lateral Load	Location	Tributary Width	Wind (1.60)	Comments
1 - Uniform (PSF)	Full Length	1'	25.1	

- ASCE/SEI 7 Sec. 30.4: Exposure Category (B), Mean Roof Height (33'), Topographic Factor (1.0), Wind Directionality Factor (0.85), Basic Wind Speed (115), Risk Category(II), Wind Zone (4), GCpi (+/- 0.18), Effective Wind Area determined using full member span and trib. width.
- IBC Table 1604.3, footnote f: Deflection checks are performed using 42% of this lateral wind load.

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Level roof, WC6.1: SE Loft Column

1 piece(s) 8 x 8 DF No.2

Post Height: 7' 8"



Design Results	Actual	Allowed	Result	LDF	Load: Combination
Slenderness	12	50	Passed (25%)	--	--
Compression (lbs)	19614	41865	Passed (47%)	1.15	1.0 D + 1.0 S
Base Bearing (lbs)	19614	42188	Passed (46%)	--	1.0 D + 1.0 S
Bending/Compression	0.70	1	Passed (70%)	1.15	1.0 D + 1.0 S

- Input axial load eccentricity for this design is 16.67% of applicable member side dimension.
- Applicable calculations are based on NDS.

Supports	Type	Material
Base	Beam	Microllam® LVL

Member Type : Free Standing Post
 Building Code : IBC 2021
 Design Methodology : ASD

Max Unbraced Length	Comments
Full Member Length	No bracing assumed.

Drawing is Conceptual

Vertical Loads	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	3064	2056	7814	Default Load
2 - Point (lb)	2477	1648	6259	

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Level roof, WC6.2.2: Terrace post

1 piece(s) 6 x 6 DF No.2

Post Height: 11'



Design Results	Actual	Allowed	Result	LDF	Load: Combination
Slenderness	24	50	Passed (48%)	--	--
Compression (lbs)	13911	15706	Passed (89%)	1.25	1.0 D + 1.0 Lr
Base Bearing (lbs)	13911	898425	Passed (2%)	--	1.0 D + 1.0 Lr
Bending/Compression	N/A	1	Passed (N/A)	--	N/A

- Input axial load eccentricity for the design is zero
- Applicable calculations are based on NDS.

Supports	Type	Material
Base	Plate	Steel

Member Type : Free Standing Post
 Building Code : IBC 2021
 Design Methodology : ASD

Max Unbraced Length	Comments
Full Member Length	No bracing assumed.

Drawing is Conceptual

Vertical Loads	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Wind (1.60)	Comments
1 - Point (lb)	2072	1285	4883	-1000	
2 - Point (lb)	4554	6000	--	--	

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