

GENERAL NOTES

- Continuous lateral support at the top of the beam is assumed.
- Minimum 3 inch end bearing or see BC CALC® software requirements.
- Bearing length specifications assume bearing across the full width of the beams and are based upon the glulam's allowable compression perpendicular to grain value.
- Table assumes uniform loading on worst case of simple or multiple beam span applications for all tables.
- Longer bearing lengths may be required depending upon support conditions, use BC CALC® sizing software for analysis.
- Multiple member beams require proper connection schedules.
- Dry-use conditions are assumed.
- It may be possible to exceed the limitations of this table by analyzing a specific application with the BC CALC® software.

Ridge Beam (see page 28)

- Deflection is limited to L/240 live load and L/180 total load.
- Table based upon either simple or continuous beam span conditions.

Floor Notes (see pages 25, 26, 29)

- Floor loads are 40 psf live load and 12 psf dead load. Floor live load has been reduced per area provisions in accordance with the model building codes.
- Floor joist spans may be either simple or continuous. Mid-span support of floor joists may vary up to 4'-0" from centerline of building.
- Deflection is limited to L/360 live load and L/240 total load, consult governing building code for local provisions.
- Tables assume a wall load of 100 plf (pages 26 and 29).
- Interior floor support may vary a maximum of 4 feet from centerline (page 29).

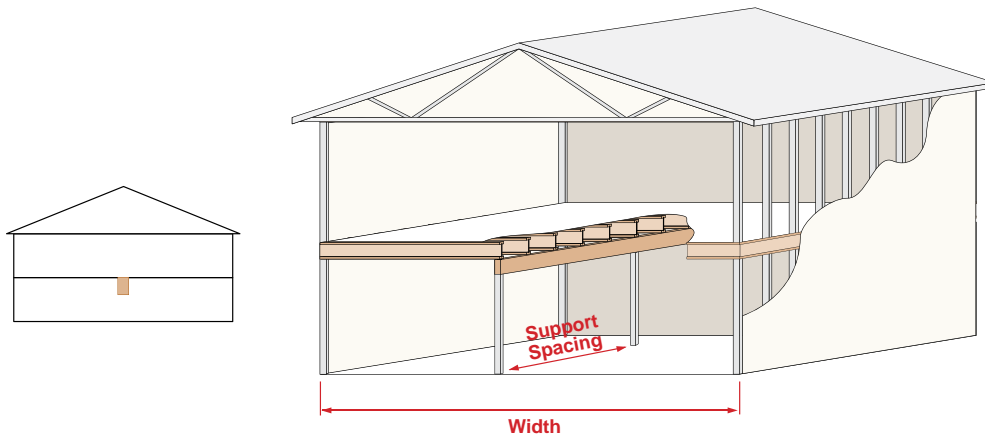
Roof Notes (see pages 27, 28 & 29)

- Always use roof live and dead loads that meet or exceed the required design loading.
- No roof load reductions have been taken.

Header (Roof) (see pages 27 & 29)

- Deflection is limited to L/240 live load and L/180 total load.
- Table assumes 2'-0" roof overhang.

One Floor Beam Span Tables

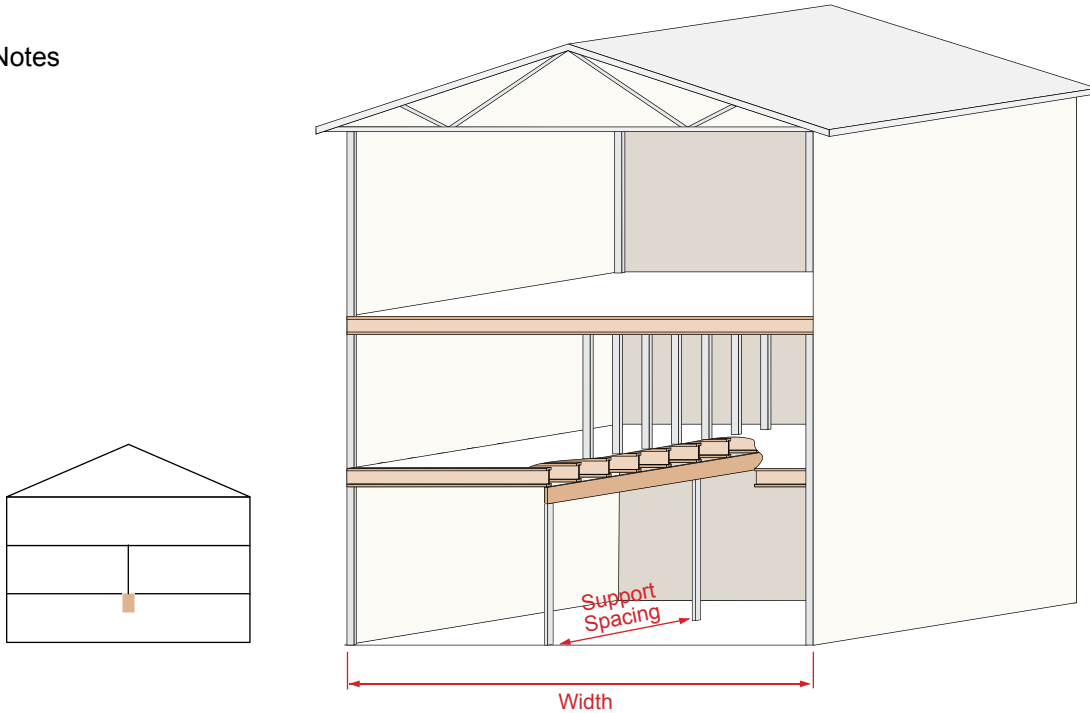


Required Beam Depths and Bearing Lengths [in]

Load Duration %	Floor Load [psf]		Beam Support Spacing [Feet]	Width of Building Segment [feet]											
	Live	Dead		KEY: Beam Breadth [in] X Beam Depth [in]		End Support / Intermediate Support Bearing Length Requirements [in]									
				24	28	32	36	40	44						
100%	40	12	12	3.125 x 13.5	2.4/5.8	3.125 x 15	2.7/6.8	3.125 x 16.5	3.1/7.7	3.125 x 16.5	3.5/8.7	3.125 x 18	3.9/9.6	3.125 x 18	4.3/10.6
				5.125 x 10.5	1.5/3.6	5.125 x 12	1.7/4.1	5.125 x 12	1.9/4.7	5.125 x 13.5	2.2/5.3	5.125 x 13.5	2.4/5.9	5.125 x 15	2.6/6.5
			14	3.125 x 16.5	2.7/6.8	3.125 x 18	3.2/7.9	3.125 x 18	3.6/9.0	5.125 x 15	2.5/6.2	5.125 x 16.5	2.8/6.9	5.125 x 16.5	3.1/7.6
				5.125 x 13.5	1.7/4.1	5.125 x 13.5	2.0/4.8	5.125 x 15	2.2/5.5	6.75 x 13.5	1.9/4.7	6.75 x 13.5	2.1/5.2	6.75 x 15	2.3/5.8
			16	3.5 x 18	3.1/7.7	5.125 x 15	2.2/5.5	5.125 x 16.5	2.5/6.3	5.125 x 16.5	2.9/7.1	5.125 x 18	3.2/7.9	5.125 x 18	3.5/8.6
				5.125 x 15	1.9/4.7	6.75 x 13.5	1.7/4.2	6.75 x 15	1.9/4.8	6.75 x 15	2.2/5.5	6.75 x 15	2.4/6.0	6.75 x 16.5	2.7/6.6
			18	5.125 x 16.5	2.2/5.3	5.125 x 18	2.5/6.2	5.125 x 18	2.9/7.1	5.125 x 19.5	3.2/8.0	5.125 x 19.5	3.6/8.8	5.125 x 21	3.9/9.7
				6.75 x 15	1.6/4.0	6.75 x 15	1.9/4.7	6.75 x 16.5	2.2/5.4	6.75 x 16.5	2.4/6.0	6.75 x 18	2.7/6.7	6.75 x 18	3.0/7.4
			20	5.125 x 18	2.3/5.8	5.125 x 19.5	2.8/6.9	5.125 x 19.5	3.2/7.9	5.125 x 21	3.6/8.8	5.125 x 21	4.0/9.8	5.125 x 22.5	4.8/11.9
				6.75 x 16.5	1.8/4.5	6.75 x 16.5	2.1/5.2	6.75 x 18	2.4/6.0	6.75 x 18	2.7/6.7	6.75 x 19.5	3.0/7.5	6.75 x 19.5	3.3/8.2
			22	5.125 x 19.5	2.6/6.3	5.125 x 21	3.1/7.6	5.125 x 22.5	3.5/8.6	5.125 x 22.5	3.9/9.7	5.125 x 24	4.3/10.8	6.75 x 22.5	3.6/9.0
				6.75 x 18	2.0/4.9	6.75 x 18	2.3/5.8	6.75 x 19.5	2.7/6.6	6.75 x 21	3.0/7.4	6.75 x 21	3.3/8.2		
			24	5.125 x 21	2.8/6.9	5.125 x 22.5	3.3/8.2	5.125 x 24	3.8/9.4	6.75 x 22.5	3.2/8	6.75 x 22.5	3.6/8.9	6.75 x 24	4.0/9.8
				6.75 x 19.5	2.2/5.4	6.75 x 19.5	2.5/6.3	6.75 x 21	2.9/7.2						

Two Floor Beam Span Tables

See General Notes on page 25.



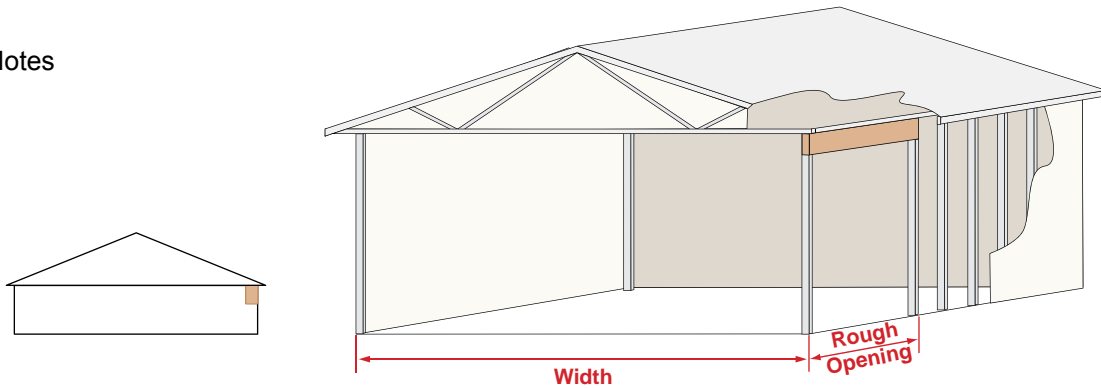
Required Beam Depths and Bearing Lengths [in]

Load Duration %	Floor Load [psf]		Beam Support Spacing [Feet]	Width of Building Segment [feet]											
	Live	Dead		KEY: Beam Breadth [in] X Beam Depth [in] End Support / Intermediate Support Bearing Length Requirements [in]											
				24	28	32	36	40	44						
100%	40	12	6	3.125 x 10.5	2.1 / 5.2	3.125 x 12	2.5 / 6.2	3.125 x 12	2.9 / 7.1	3.125 x 13.5	3.2 / 7.9	3.125 x 15	3.5 / 8.7	3.125 x 15	3.8 / 9.5
				5.125 x 9	1.5 / 3.2	5.125 x 9	1.5 / 3.8	5.125 x 9	1.8 / 4.3	5.125 x 10.5	2.0 / 4.8	5.125 x 10.5	2.2 / 5.3	5.125 x 10.5	2.4 / 5.8
			8	3.125 x 13.5	2.8 / 6.9	3.125 x 15	3.2 / 8	3.125 x 15	3.7 / 9.1	3.125 x 16.5	4.1 / 10.1	3.125 x 18	4.5 / 11.1	5.125 x 13.5	3.0 / 7.3
				5.125 x 10.5	1.7 / 4.2	5.125 x 12	2.0 / 4.9	5.125 x 12	2.3 / 5.6	5.125 x 12	2.5 / 6.2	5.125 x 13.5	2.7 / 6.8	6.75 x 12	2.3 / 5.6
			10	3.125 x 16.5	3.4 / 8.4	3.125 x 16.5	3.9 / 9.7	5.125 x 15	2.7 / 6.7	5.125 x 15	3.0 / 7.4	5.125 x 16.5	3.3 / 8.1	5.125 x 16.5	3.5 / 8.7
				5.125 x 12	2.1 / 5.2	5.125 x 13.5	2.4 / 6	6.75 x 12	2.1 / 5.1	6.75 x 13.5	2.3 / 5.6	6.75 x 13.5	2.5 / 6.1	6.75 x 15	2.7 / 6.6
			12	5.125 x 15	2.4 / 6	5.125 x 16.5	2.8 / 6.9	5.125 x 16.5	3.1 / 7.8	5.125 x 18	3.4 / 8.5	5.125 x 18	3.7 / 9.2	5.125 x 19.5	4.0 / 9.8
				6.75 x 13.5	1.9 / 4.6	6.75 x 13.5	2.1 / 5.3	6.75 x 15	2.4 / 5.9	6.75 x 15	2.6 / 6.5	6.75 x 16.5	2.8 / 7	6.75 x 16.5	3.0 / 7.5
			14	5.125 x 16.5	2.8 / 6.9	5.125 x 18	3.2 / 7.8	5.125 x 19.5	3.5 / 8.7	5.125 x 19.5	3.8 / 9.5	5.125 x 21	4.1 / 10.2	5.125 x 21	4.3 / 10.8
				6.75 x 15	2.1 / 5.2	6.75 x 16.5	2.4 / 6	6.75 x 16.5	2.7 / 6.6	6.75 x 18	2.9 / 7.2	6.75 x 18	3.1 / 7.7	6.75 x 19.5	3.3 / 8.2
			16	5.125 x 19.5	3.1 / 7.6	5.125 x 21	3.5 / 8.7	5.125 x 21	3.9 / 9.6	5.125 x 22.5	4.2 / 10.4	5.125 x 22.5	4.4 / 11	5.125 x 24	4.7 / 11.6
				6.75 x 16.5	2.4 / 5.8	6.75 x 18	2.7 / 6.6	6.75 x 19.5	2.9 / 7.3	6.75 x 19.5	3.2 / 7.9	6.75 x 21	3.4 / 8.4	6.75 x 21	3.5 / 8.8
			18	5.125 x 21	3.4 / 8.4	5.125 x 22.5	3.8 / 9.4	5.125 x 24	4.2 / 10.3	5.125 x 24	4.5 / 11.1	6.75 x 22.5	3.6 / 8.9	6.75 x 24	3.9 / 9.8
				6.75 x 19.5	2.6 / 6.4	6.75 x 19.5	2.9 / 7.2	6.75 x 21	3.2 / 7.9	6.75 x 22.5	3.4 / 8.4				

See General Notes on page 25.

Garage Door Header Roof Span Tables

See General Notes on page 25.



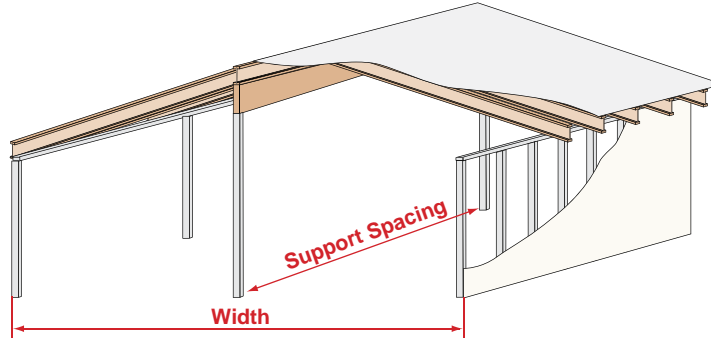
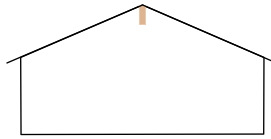
Required Beam Depths and Bearing Lengths [in]

Load Duration %	Roof Load [psf]		Width of Bldg Segment [Feet]	Clear Span [feet]											
	Live	Dead		KEY: Beam Breadth [in] X Beam Depth [in] End Support Length Requirements [in]											
				8'-3"		9'-3"		10'-0"		12'-0"		16'-3"		18'-3"	
125	20	15	24	3.125 x 6	1.5	3.125 x 7.5	1.5	3.125 x 7.5	1.5	3.125 x 9	1.5	3.125 x 12	2.0	3.125 x 13.5	2.3
				5.125 x 6	1.5	5.125 x 6	1.5	5.125 x 7.5	1.5	5.125 x 7.5	1.5	5.125 x 10.5	1.5	5.125 x 12	1.5
			30	3.125 x 7.5	1.5	3.125 x 7.5	1.5	3.125 x 9	1.5	3.125 x 10.5	1.8	3.125 x 13.5	2.4	3.125 x 15	2.7
				5.125 x 6	1.5	5.125 x 7.5	1.5	5.125 x 7.5	1.5	5.125 x 9	1.5	5.125 x 12	1.5	5.125 x 12	1.7
			36	3.125 x 7.5	1.5	3.125 x 9	1.7	3.125 x 9	1.8	3.125 x 10.5	2.1	3.125 x 15	2.9	3.125 x 16.5	3.2
				5.125 x 6	1.5	5.125 x 7.5	1.5	5.125 x 7.5	1.5	5.125 x 9	1.5	5.125 x 12	1.8	5.125 x 13.5	2.0
115	25	15	24	3.125 x 7.5	1.5	3.125 x 7.5	1.5	3.125 x 9	1.5	3.125 x 10.5	1.7	3.125 x 13.5	2.3	3.125 x 15	2.6
				5.125 x 6	1.5	5.125 x 6	1.5	5.125 x 7.5	1.5	5.125 x 9	1.5	5.125 x 10.5	1.5	5.125 x 12	1.6
			30	3.125 x 7.5	1.5	3.125 x 9	1.6	3.125 x 9	1.7	3.125 x 10.5	2.1	3.125 x 15	2.8	3.125 x 16.5	3.1
				5.125 x 6	1.5	5.125 x 7.5	1.5	5.125 x 7.5	1.5	5.125 x 9	1.5	5.125 x 12	1.7	5.125 x 13.5	1.9
			36	3.125 x 7.5	1.7	3.125 x 9	1.9	3.125 x 10.5	2.0	3.125 x 12	2.4	3.125 x 16.5	3.3	3.125 x 18	3.7
				5.125 x 7.5	1.5	5.125 x 7.5	1.5	5.125 x 7.5	1.5	5.125 x 9	1.5	5.125 x 12	2.0	5.125 x 13.5	2.3
115	30	15	24	3.125 x 7.5	1.5	3.125 x 9	1.5	3.125 x 9	1.6	3.125 x 10.5	1.9	3.125 x 13.5	2.6	3.125 x 16.5	2.9
				5.125 x 6	1.5	5.125 x 7.5	1.5	5.125 x 7.5	1.5	5.125 x 9	1.5	5.125 x 12	1.6	5.125 x 13.5	1.8
			30	3.125 x 9	1.6	3.125 x 9	1.8	3.125 x 10.5	2.0	3.125 x 12	2.3	3.125 x 15	3.1	3.125 x 18	3.5
				5.125 x 6	1.5	5.125 x 7.5	1.5	5.125 x 7.5	1.5	5.125 x 9	1.5	5.125 x 12	1.9	5.125 x 13.5	2.2
			36	3.125 x 9	1.9	3.125 x 10.5	2.1	3.125 x 10.5	2.3	3.125 x 12	2.7	3.125 x 16.5	3.7	3.125 x 18	4.1
				5.125 x 7.5	1.5	5.125 x 7.5	1.5	5.125 x 9	1.5	5.125 x 10.5	1.7	5.125 x 13.5	2.3	5.125 x 15	2.5
115	40	15	24	3.125 x 9	1.6	3.125 x 9	1.8	3.125 x 10.5	2.0	3.125 x 12	2.3	3.125 x 15	3.2	3.125 x 18	3.5
				5.125 x 6	1.5	5.125 x 7.5	1.5	5.125 x 7.5	1.5	5.125 x 9	1.5	5.125 x 12	1.9	5.125 x 13.5	2.2
			30	3.125 x 9	2.0	3.125 x 10.5	2.2	3.125 x 10.5	2.4	3.125 x 13.5	2.8	3.125 x 16.5	3.8	5.125 x 15	4.3
				5.125 x 7.5	1.5	5.125 x 7.5	1.5	5.125 x 9	1.5	5.125 x 10.5	1.8	5.125 x 13.5	2.3	6.75 x 13.5	2.0
			36	3.125 x 9	2.3	3.125 x 10.5	2.6	3.125 x 12	2.8	3.125 x 13.5	3.3	3.125 x 18	4.5	5.125 x 16.5	5.0
				5.125 x 7.5	1.5	5.125 x 9	1.6	5.125 x 9	1.7	5.125 x 10.5	2.1	5.125 x 15	2.8	6.75 x 15	2.4

See General Notes on page 25.

Ridge Beam Span Tables

See General Notes on page 25.



Vertical Holes for Wiring: When designing ridge beams where fixtures may be attached (ceiling fans or lights), a beam may be up-sized in width or depth to accommodate a single vertical hole. For example, if a 3 1/8" x 12" beam is structurally adequate from the table below, a single vertical hole may only be drilled in either a 3 1/8" x 13 1/2" or 5 1/8" x 12" beam in the same application. This provision only applies to the ridge beam table below. A single vertical hole may only be drilled in the middle 1/3rd of the span, the middle of the beam's cross-section, and be drilled straight in a craftsmanlike manner. Maximum vertical hole diameter is: 1/2" for 3 1/8" wide beams, 3/4" for 5 1/8", 6 3/4" and 8 3/4" beams. For other applications and/or sizes, contact Boise EWP Engineering.

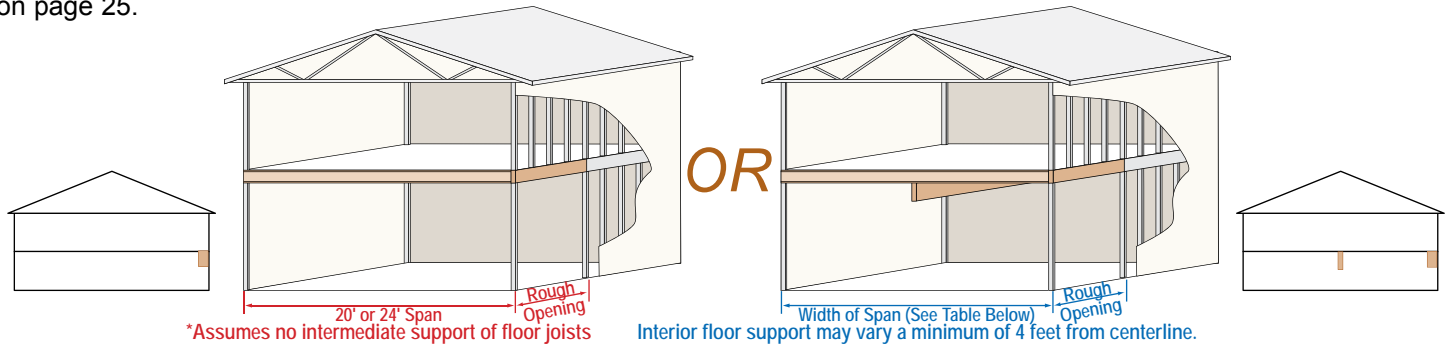
Required Beam Depths and Bearing Lengths [in]

Load Duration %	Roof Load [psf]		Width of Bldg Segment [Feet]	Ridge Beam Support Spacing [feet]							
	Live	Dead		KEY: Beam Breadth [in] X Beam Depth [in]		End Support/Intermediate Support Bearing Length Requirements [in]					
				12	16	20	24				
125	20	15	24	3.125 x 10.5	1.5 / 3.8	3.125 x 13.5	2.0 / 5	3.125 x 16.5	2.5 / 6.2	5.125 x 16.5	1.8 / 4.5
				5.125 x 9	1.5 / 3	5.125 x 10.5	1.5 / 3.1	5.125 x 13.5	1.6 / 3.8	6.75 x 15	1.5 / 3.5
			30	3.125 x 12	1.9 / 4.7	3.125 x 15	2.5 / 6.2	3.125 x 18	3.1 / 7.8	5.125 x 18	2.3 / 5.7
				5.125 x 9	1.5 / 3	5.125 x 12	1.6 / 3.8	5.125 x 15	1.9 / 4.7	6.75 x 16.5	1.8 / 4.3
			36	3.125 x 12	2.3 / 5.6	3.125 x 16.5	3.0 / 7.5	5.125 x 16.5	2.3 / 5.7	5.125 x 19.5	2.7 / 6.8
				5.125 x 10.5	1.5 / 3.5	5.125 x 13.5	1.9 / 4.6	6.75 x 15	1.8 / 4.3	6.75 x 18	2.1 / 5.2
115	25	15	24	3.125 x 12	1.7 / 4.2	3.125 x 15	2.3 / 5.6	3.125 x 18	2.8 / 7	5.125 x 18	2.1 / 5.1
				5.125 x 9	1.5 / 3	5.125 x 12	1.5 / 3.4	5.125 x 15	1.7 / 4.3	6.75 x 16.5	1.6 / 3.9
			30	3.125 x 12	2.1 / 5.3	3.125 x 16.5	2.8 / 7	5.125 x 16.5	2.2 / 5.3	5.125 x 19.5	2.6 / 6.4
				5.125 x 10.5	1.5 / 3.2	5.125 x 13.5	1.7 / 4.3	6.75 x 15	1.6 / 4	6.75 x 18	2 / 4.8
			36	3.125 x 13.5	2.6 / 6.3	3.125 x 18	3.4 / 8.4	5.125 x 18	2.6 / 6.4	5.125 x 22.5	3.1 / 7.6
				5.125 x 10.5	1.6 / 3.9	5.125 x 15	2.1 / 5.1	6.75 x 16.5	2 / 4.8	6.75 x 19.5	2.3 / 5.8
115	30	15	24	3.125 x 12	1.9 / 4.7	3.125 x 15	2.5 / 6.2	5.125 x 15	1.9 / 4.7	5.125 x 19.5	2.3 / 5.6
				5.125 x 10.5	1.5 / 3	5.125 x 12	1.5 / 3.8	6.75 x 13.5	1.5 / 3.6	6.75 x 16.5	1.7 / 4.3
			30	3.125 x 13.5	2.4 / 5.8	3.125 x 18	3.1 / 7.7	5.125 x 18	2.4 / 5.9	5.125 x 21	2.8 / 7
				5.125 x 10.5	1.5 / 3.6	5.125 x 13.5	1.9 / 4.7	6.75 x 15	1.8 / 4.5	6.75 x 18	2.2 / 5.4
			36	3.125 x 15	2.8 / 7	5.125 x 15	2.3 / 5.7	5.125 x 19.5	2.9 / 7.1	5.125 x 22.5	3.4 / 8.4
				5.125 x 12	1.7 / 4.3	6.75 x 13.5	1.8 / 4.3	6.75 x 16.5	2.2 / 5.4	6.75 x 21	2.6 / 6.4
115	40	15	24	3.125 x 13.5	2.3 / 5.6	3.125 x 16.5	3.0 / 7.4	5.125 x 16.5	2.3 / 5.6	5.125 x 21	2.7 / 6.7
				5.125 x 10.5	1.5 / 3.4	5.125 x 13.5	1.8 / 4.5	6.75 x 15	1.7 / 4.3	6.75 x 18	2.1 / 5.1
			30	3.125 x 15	2.8 / 7	5.125 x 15	2.3 / 5.6	5.125 x 19.5	2.8 / 7	5.125 x 22.5	3.4 / 8.4
				5.125 x 12	1.7 / 4.3	6.75 x 13.5	1.8 / 4.3	6.75 x 16.5	2.2 / 5.3	6.75 x 21	2.6 / 6.4
			36	3.125 x 16.5	3.4 / 8.4	5.125 x 16.5	2.7 / 6.8	5.125 x 21	3.4 / 8.4	6.75 x 22.5	3.1 / 7.7
				5.125 x 12	2.1 / 5.1	6.75 x 15	2.1 / 5.2	6.75 x 18	2.6 / 6.4		

See General Notes on page 25.

Roof and One Floor Span Tables

See General Notes on page 25.



Total load deflection limited to $\frac{5}{16}$ " for window considerations

Load Duration %	Roof Load [psf]		Width of Bldg Segment [Feet]	Clear Span [feet]					
	Live	Dead		KEY: Beam Breadth [in] X Beam Depth [in] End Support Length Requirements [in]					
				6'-3"		9'-3"		12'-3"	
125	20	15	24	3.125 x 7.5	1.8	3.125 x 12	2.4	3.125 x 16.5	3.1
				5.125 x 6	1.5	5.125 x 10.5	1.5	5.125 x 13.5	1.9
			30	3.125 x 7.5	1.9	3.125 x 12	2.8	3.125 x 16.5	3.7
				5.125 x 6	1.5	5.125 x 10.5	1.7	5.125 x 13.5	2.3
			36	3.125 x 7.5	2.2	3.125 x 12	3.2	3.125 x 18	4.2
				5.125 x 6	1.5	5.125 x 10.5	2.0	5.125 x 15	2.6
115	25	15	24	3.125 x 7.5	2.0	3.125 x 12	2.5	3.125 x 16.5	3.3
				5.125 x 6	1.5	5.125 x 10.5	1.6	5.125 x 13.5	2.0
			30	3.125 x 7.5	2.0	3.125 x 12	3.0	3.125 x 18	3.9
				5.125 x 6	1.5	5.125 x 10.5	1.8	5.125 x 15	2.4
			36	3.125 x 9	2.4	3.125 x 13.5	3.4	3.125 x 18	4.5
				5.125 x 7.5	1.5	5.125 x 10.5	2.1	5.125 x 15	2.8
115	30	15	24	3.125 x 9	2.2	3.125 x 12	2.7	3.125 x 16.5	3.5
				5.125 x 6	1.5	5.125 x 10.5	1.7	5.125 x 15	2.2
			30	3.125 x 9	2.2	3.125 x 12	3.2	3.125 x 18	4.2
				5.125 x 7.5	1.5	5.125 x 10.5	2.0	5.125 x 15	2.6
			36	3.125 x 9	2.5	3.125 x 13.5	3.7	3.125 x 18	4.8
				5.125 x 7.5	1.6	5.125 x 10.5	2.3	5.125 x 16.5	3.0
115	40	15	24	3.125 x 9	2.4	3.125 x 12	3.0	3.125 x 18	4.0
				5.125 x 7.5	1.5	5.125 x 10.5	1.9	5.125 x 15	2.4
			30	3.125 x 9	2.4	3.125 x 13.5	3.6	3.125 x 18	4.7
				5.125 x 7.5	1.5	5.125 x 10.5	2.2	5.125 x 16.5	2.9
			36	3.125 x 9	2.8	3.125 x 13.5	4.1	5.125 x 16.5	3.3
				5.125 x 7.5	1.7	5.125 x 12	2.5	6.75 x 15	2.6

See General Notes on page 25.

BOISE GLULAM® Beams Substitution Tables

BOISE GLULAM® — Steel W Shape Substitution Table

Floor Beam Applications (100%) Duration for BOISE GLULAM®

24F-V4 BOISE GLULAM® Equivalent Member

Span [ft]	W 6x9	W 8x10	W 12x14	W 12x16	W 12x19	W 10x 22	W 12x22	W 14x22	W 12x26	W 14x26	W16x26	W 12x30
10	3.125 x 10.5	3.125 x 13.5	3.125 x 18									
	5.125 x 9	5.125 x 10.5	5.125 x 13.5	5.125 x 15	5.125 x 16.5	5.125 x 16.5	5.125 x 18	5.125 x 19.5	5.125 x 21	5.125 x 22.5	5.125 x 24	5.125 x 24
12	3.125 x 10.5	3.125 x 13.5	3.125 x 18									
	5.125 x 9	5.125 x 10.5	5.125 x 13.5	5.125 x 15	5.125 x 16.5	5.125 x 16.5	5.125 x 18	5.125 x 19.5	5.125 x 21	5.125 x 21	5.125 x 22.5	5.125 x 22.5
14	3.125 x 10.5	3.125 x 13.5	3.125 x 18									
	5.125 x 9	5.125 x 10.5	5.125 x 13.5	5.125 x 15	5.125 x 16.5	5.125 x 16.5	5.125 x 18	5.125 x 19.5	5.125 x 21	5.125 x 21	5.125 x 22.5	5.125 x 22.5
16	3.125 x 10.5	3.125 x 13.5	3.125 x 18									
	5.125 x 9	5.125 x 10.5	5.125 x 15	5.125 x 15	5.125 x 16.5	5.125 x 16.5	5.125 x 18	5.125 x 19.5	5.125 x 21	5.125 x 21	5.125 x 22.5	5.125 x 22.5
18	3.125 x 10.5	3.125 x 13.5	3.125 x 18									
	5.125 x 9	5.125 x 10.5	5.125 x 15	5.125 x 16.5	5.125 x 16.5	5.125 x 16.5	5.125 x 18	5.125 x 19.5	5.125 x 21	5.125 x 21	5.125 x 22.5	5.125 x 22.5
20	3.125 x 10.5	3.125 x 13.5	3.125 x 18									
	5.125 x 9	5.125 x 10.5	5.125 x 15	5.125 x 16.5	5.125 x 18	5.125 x 16.5	5.125 x 18	5.125 x 19.5	5.125 x 21	5.125 x 21	5.125 x 22.5	5.125 x 22.5
22	3.125 x 10.5	3.125 x 13.5	3.125 x 18									
	5.125 x 9	5.125 x 10.5	5.125 x 15	5.125 x 16.5	5.125 x 18	5.125 x 16.5	5.125 x 19.5	5.125 x 19.5	5.125 x 21	5.125 x 21	5.125 x 22.5	5.125 x 22.5
24	3.125 x 10.5	3.125 x 13.5	3.125 x 18									
	5.125 x 9	5.125 x 10.5	5.125 x 16.5	5.125 x 16.5	5.125 x 18	5.125 x 16.5	5.125 x 19.5	5.125 x 21	5.125 x 21	5.125 x 21	5.125 x 22.5	5.125 x 21
26	3.125 x 10.5	3.125 x 13.5	3.125 x 18									
	5.125 x 9	5.125 x 10.5	5.125 x 16.5	5.125 x 16.5	5.125 x 18	5.125 x 16.5	5.125 x 19.5	5.125 x 21	5.125 x 21	5.125 x 21	5.125 x 22.5	5.125 x 21
28	3.125 x 10.5	3.125 x 13.5	3.125 x 18									
	5.125 x 9	5.125 x 10.5	5.125 x 16.5	5.125 x 16.5	5.125 x 18	5.125 x 16.5	5.125 x 19.5	5.125 x 21	5.125 x 21	5.125 x 21	5.125 x 22.5	5.125 x 21
30	3.125 x 10.5	3.125 x 13.5	3.125 x 18									
	5.125 x 9	5.125 x 10.5	5.125 x 16.5	5.125 x 16.5	5.125 x 18	5.125 x 16.5	5.125 x 19.5	5.125 x 21	5.125 x 21	5.125 x 21	5.125 x 22.5	5.125 x 21
32	3.125 x 10.5	3.125 x 13.5	3.125 x 18									
	5.125 x 9	5.125 x 10.5	5.125 x 16.5	5.125 x 16.5	5.125 x 18	5.125 x 16.5	5.125 x 19.5	5.125 x 21	5.125 x 21	5.125 x 21	5.125 x 22.5	5.125 x 21
34	3.125 x 10.5	3.125 x 13.5	3.125 x 18									
	5.125 x 9	5.125 x 10.5	5.125 x 16.5	5.125 x 16.5	5.125 x 18	5.125 x 16.5	5.125 x 19.5	5.125 x 21	5.125 x 21	5.125 x 21	5.125 x 22.5	5.125 x 21
36	3.125 x 10.5	3.125 x 13.5	3.125 x 18									
	5.125 x 9	5.125 x 10.5	5.125 x 16.5	5.125 x 16.5	5.125 x 18	5.125 x 16.5	5.125 x 19.5	5.125 x 21	5.125 x 21	5.125 x 21	5.125 x 22.5	5.125 x 21
38	3.125 x 10.5	3.125 x 13.5	3.125 x 18									
	5.125 x 9	5.125 x 10.5	5.125 x 16.5	5.125 x 16.5	5.125 x 18	5.125 x 16.5	5.125 x 19.5	5.125 x 21	5.125 x 21	5.125 x 21	5.125 x 24	5.125 x 21
40	3.125 x 10.5	3.125 x 13.5	3.125 x 18									
	5.125 x 9	5.125 x 10.5	5.125 x 16.5	5.125 x 16.5	5.125 x 18	5.125 x 16.5	5.125 x 19.5	5.125 x 21	5.125 x 21	5.125 x 21	5.125 x 24	5.125 x 21

NOTES

- Table intended for preliminary design only. Substitutions should always be approved by the project's design professional of record.
- Table assumes that original steel W section was sized properly, loading should always be verified.
- Table was developed by comparing allowable uniform load capacities due to the worst case control of bending, shear and deflection limits for simple span applications. Beam weights are considered.
- Deflection limited to L/360 for live load, based upon a live load/total load ratio of 0.8 (residential floor loading 40/10 psf).
- Steel W Section Allowable Design Values: $F_b = 0.66 \times 36$ ksi, $F_v = 0.4 \times 36$ ksi, MOE = 29×10^6 ksi (allowable stress design assumed).
- Steel Information - W Section Nomenclature: 1st number = approximate depth [in], 2nd number = weight per foot [lb/ft].

BOISE GLULAM® — Douglas Fir-Larch Solid Sawn Substitution Table

Floor Beam Applications (100%) Duration for BOISE GLULAM®

24F-V4 BOISE GLULAM® Equivalent Member

Span [ft]	4x6 Doug Fir-Larch		4x8 Doug Fir-Larch		4x10 Doug Fir-Larch		4x12 Doug Fir-Larch		6x8 Doug Fir-Larch		6x10 Doug Fir-Larch		6x12 Doug Fir-Larch	
	Select Structural	No. 1	Select Structural	No. 1	Select Structural	No. 1	Select Structural	No. 1	Select Structural	No. 1	Select Structural	No. 1	Select Structural	No. 1
10	3.125 x 6	3.125 x 6	3.125 x 7.5	3.125 x 7.5	3.125 x 9	3.125 x 9	3.125 x 9	3.125 x 9	3.125 x 9	3.125 x 9	3.125 x 10.5	3.125 x 10.5	3.125 x 10.5	3.125 x 10.5
									5.125 x 7.5	5.125 x 7.5	5.125 x 9	5.125 x 9	5.125 x 9	5.125 x 9
12	3.125 x 6	3.125 x 6	3.125 x 9	3.125 x 7.5	3.125 x 10.5	3.125 x 9	3.125 x 10.5	3.125 x 10.5	3.125 x 9	3.125 x 9	3.125 x 10.5	3.125 x 10.5	3.125 x 12	3.125 x 12
									5.125 x 7.5	5.125 x 7.5	5.125 x 9	5.125 x 9	5.125 x 10.5	5.125 x 10.5
14	3.125 x 6	3.125 x 6	3.125 x 9	3.125 x 7.5	3.125 x 10.5	3.125 x 9	3.125 x 12	3.125 x 10.5	3.125 x 9	3.125 x 9	3.125 x 12	3.125 x 10.5	3.125 x 13.5	3.125 x 12
									5.125 x 7.5	5.125 x 7.5	5.125 x 10.5	5.125 x 9	5.125 x 10.5	5.125 x 10.5
16	3.125 x 6	3.125 x 6	3.125 x 9	3.125 x 7.5	3.125 x 10.5	3.125 x 9	3.125 x 12	3.125 x 10.5	3.125 x 9	3.125 x 9	3.125 x 12	3.125 x 12	3.125 x 13.5	3.125 x 13.5
									5.125 x 7.5	5.125 x 7.5	5.125 x 10.5	5.125 x 10.5	5.125 x 12	5.125 x 12
18	3.125 x 6	3.125 x 6	3.125 x 9	3.125 x 7.5	3.125 x 10.5	3.125 x 10.5	3.125 x 12	3.125 x 10.5	3.125 x 9	3.125 x 9	3.125 x 12	3.125 x 12	3.125 x 13.5	3.125 x 13.5
									5.125 x 7.5	5.125 x 7.5	5.125 x 10.5	5.125 x 10.5	5.125 x 12	5.125 x 12
20	3.125 x 6	3.125 x 6	3.125 x 9	3.125 x 7.5	3.125 x 10.5	3.125 x 10.5	3.125 x 12	3.125 x 12	3.125 x 9	3.125 x 9	3.125 x 12	3.125 x 12	3.125 x 13.5	3.125 x 13.5
									5.125 x 7.5	5.125 x 7.5	5.125 x 10.5	5.125 x 10.5	5.125 x 12	5.125 x 12
22	3.125 x 6	3.125 x 6	3.125 x 9	3.125 x 7.5	3.125 x 10.5	3.125 x 10.5	3.125 x 12	3.125 x 12	3.125 x 9	3.125 x 9	3.125 x 12	3.125 x 12	3.125 x 13.5	3.125 x 13.5
									5.125 x 7.5	5.125 x 7.5	5.125 x 10.5	5.125 x 10.5	5.125 x 12	5.125 x 12
24	3.125 x 6	3.125 x 6	3.125 x 9	3.125 x 7.5	3.125 x 10.5	3.125 x 10.5	3.125 x 12	3.125 x 12	3.125 x 9	3.125 x 9	3.125 x 10.5	3.125 x 10.5	3.125 x 13.5	3.125 x 13.5
									5.125 x 7.5	5.125 x 7.5	5.125 x 10.5	5.125 x 10.5	5.125 x 12	5.125 x 12

NOTES

- Table intended for preliminary design only. Substitutions should always be approved by the project's design professional of record.
- Table was developed by comparing allowable uniform load capacities due to the worst case control of bending, shear and deflection limits for simple span applications.
- Table assumes that original solid sawn beam was sized properly, loading should always be verified.
- Deflection limited to L/360 for live load, based upon a live load/total load ratio of 0.8 (residential floor loading 40/10 psf).