



Trus JoistTM

A Weyerhaeuser Business

SPECIFIER'S GUIDE

1.9E Microllam[®] LVL Headers and Beams

- ◆ Support heavier loads than comparably sized conventional glulam or sawn lumber products
- ◆ Consistent quality and uniformity for predictable performance
- ◆ Each piece is straight, strong, and true – resists bowing, shrinking, and twisting
- ◆ Covered by our Product Warranty against manufacturing defects for the life of the structure



1-800-628-3997

www.trusjoist.com

Microllam® LVL

An Integral Part of the FrameWorks® Building System

Microllam® laminated veneer lumber (LVL) is manufactured from thin sheets of veneer structurally bonded together to make headers and beams that span much longer distances and support heavier loads than ordinary lumber.

Microllam® LVL headers and beams are available in the following sizes:

Widths: 1 3/4" **Depths:** 5 1/2", 7 1/4", 9 1/4", 9 1/2", 11 1/4", 11 7/8", 14", 16", 18", and 20"

Some sizes may not be available in your region. Contact your local Trus Joist dealer or technical representative for availability.



The long spans and impressive strength of Microllam® LVL can make a difference in any floor or roof system.

The residential products in this brochure are primarily intended for use in single and multi-family dwellings. These products are readily available through our nationwide network of distributors and dealers.

For commercial applications such as retail stores, office buildings, schools, restaurants, hotels, nursing homes, etc., please refer to the COMMERCIAL PRODUCT MANUAL or Commercial Section of our STRUCTURAL PRODUCTS DESIGN MANUAL. Commercial products are typically designed, manufactured and sold by Trus Joist for each specific job.

For more information on any Trus Joist products, please call 1-800-628-3997.

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Code Evaluations: ICBO ES ER-4979, ICBO ES PFC-5676P, and FHA/HUD 925H

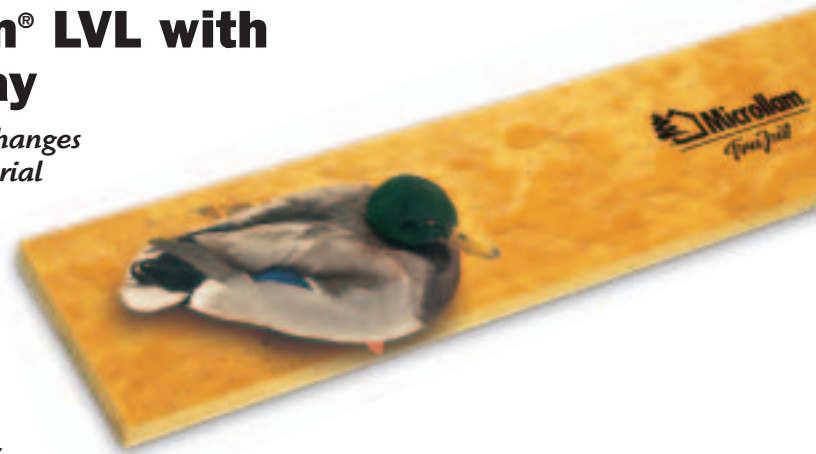
All Weather Gear: Microllam® LVL with Watershed™ Stability Overlay

You never know when weather might bring dramatic changes to your job site. But you can bring one important material that's dressed to weather any storm!

Like water off a duck's back, Trus Joist's proprietary Watershed™ overlay protects Microllam® LVL against cupping and swelling. Watershed™ is a high-density overlay that may be applied to Microllam® LVL manufactured at our eastern and southern plants. This resin-impregnated overlay bonds to the wood veneer, creating a barrier to moisture. When combined with a wax sealant on the ends and edges, it produces a protective layer like no other.

Our Watershed™ overlay promotes dimensional stability and protects Microllam® LVL from the elements throughout the construction phase. So request Microllam® LVL with Watershed™ overlay for your next project and be assured that your engineered lumber will stay consistent from start to finish.

For more information on Trus Joist's exclusive Watershed™ overlay, please contact your Trus Joist representative.



Design Properties

1.9E Microllam® LVL Allowable Design Stresses (100% Load Duration)

- Shear modulus of elasticity $G = 118,750 \text{ psi}$
- Modulus of elasticity $E = 1.9 \times 10^6 \text{ psi}$
- Flexural stress $F_b = 2,600 \text{ psi}^{(1)}$
- Tension Stress $F_t = 1,555 \text{ psi}^{(2)}$
- Compression perpendicular to grain $F_{c\perp} = 750 \text{ psi}^{(3)}$
- Compression parallel to grain $F_{c\parallel} = 2,510 \text{ psi}$
- Horizontal shear parallel to grain $F_v = 285 \text{ psi}$

- (1) For 12" depth. For others, multiply by $[\frac{12}{d}]^{0.136}$
- (2) F_t has been reduced to reflect the volume effects of length, width and thickness.
- (3) $F_{c\perp}$ shall not be increased for duration of load.

Microllam® LVL
is intended for dry-use applications



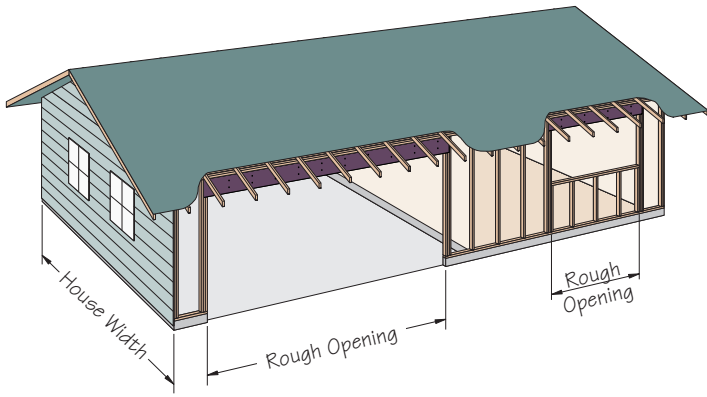
General Assumptions for Microllam® LVL

- Lateral support required at bearing and 24" on-center maximum.
- Bearing lengths are based on Microllam® LVL's bearing stress of 750 psi.
- No camber.
- All members 7 1/4" and less in depth are restricted to a maximum deflection of 5/16".
- Tables on pages 4–7 include reductions applied in accordance with code.
- 16", 18", and 20" beams require multiple plies.

See page 17 for multiple-member beam connections.

1 3/4" 1.9E Microllam® LVL Allowable Design Properties (100% Load Duration)

| Design Property | Depth | | | | | | | | | |
|---------------------------------------|--------|--------|--------|--------|---------|---------|--------|--------|--------|--------|
| | 5 1/2" | 7 1/4" | 9 1/4" | 9 1/2" | 11 1/4" | 11 7/8" | 14" | 16" | 18" | 20" |
| Moment (ft-lbs) | 2,125 | 3,555 | 5,600 | 5,885 | 8,070 | 8,925 | 12,130 | 15,555 | 19,375 | 23,580 |
| Shear (lbs) | 1,830 | 2,410 | 3,075 | 3,160 | 3,740 | 3,950 | 4,655 | 5,320 | 5,985 | 6,650 |
| Moment of Inertia (in. ⁴) | 24 | 56 | 115 | 125 | 208 | 244 | 400 | 597 | 851 | 1,167 |
| Weight (plf) | 2.8 | 3.7 | 4.7 | 4.8 | 5.7 | 6.1 | 7.1 | 8.2 | 9.2 | 10.2 |



How to Use This Table

1. Determine appropriate ROOF LOAD and HOUSE WIDTH.
2. Locate ROUGH OPENING.
3. Select Microllam® LVL header size.

Headers Supporting Roof

| | Roof Load (PSF) | House Width | Rough Opening | | | | | | | |
|-----------------------|-----------------|-------------|--|--|--|--|---|--------------------------------------|-------------------------------------|------------------------------|
| | | | 8'-0" | 9'-3" | 10'-0" | 12'-0" | 14'-0" | 16'-3" | 18'-3" | |
| Non-Snow Area 125% | 20LL + 15DL | 24'-0" | 1 3/4" x 9 1/4" 3 1/2" x 7 1/4" | 1 3/4" x 9 1/4" 5 1/4" x 7 1/4" | 1 3/4" x 9 1/4" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 11 1/4" | 3 1/2" x 11 7/8" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | |
| | | 30'-0" | 1 3/4" x 9 1/4" 5 1/4" x 7 1/4" | 1 3/4" x 9 1/4" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 7/8" | |
| | | 36'-0" | 1 3/4" x 9 1/4" 5 1/4" x 7 1/4" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 9 1/2" | 3 1/2" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 14" | |
| | 20LL + 20DL | 24'-0" | 1 3/4" x 9 1/4" 3 1/2" x 7 1/4" | 1 3/4" x 9 1/4" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 9 1/2" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/2" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" |
| | | 30'-0" | 1 3/4" x 9 1/4" 5 1/4" x 7 1/4" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/2" | 3 1/2" x 11 7/8" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" |
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| Snow Area 115% | 25LL + 15DL | 24'-0" | 1 3/4" x 9 1/4" 3 1/2" x 7 1/4" | 1 3/4" x 9 1/4" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 11 7/8" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | |
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| | | 36'-0" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 7/8" | 3 1/2" x 16" 5 1/4" x 14" | |
| | 30LL + 15DL | 24'-0" | 1 3/4" x 9 1/4" 5 1/4" x 7 1/4" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 11 7/8" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | |
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| | | 36'-0" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 14" | |
| | 40LL + 15DL | 24'-0" | 1 3/4" x 9 1/2" 3 1/2" x 9 1/4" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 11 7/8" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 7/8" | 3 1/2" x 16" 5 1/4" x 14" | |
| | | 30'-0" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 14" | |
| | | 36'-0" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 11 7/8" | 3 1/2" x 18" 5 1/4" x 14" | 3 1/2" x 20" 5 1/4" x 16" | |

General Notes

Table is based on:

- Uniform loads.
- More restrictive of simple or continuous span. Ratio of short span to long span should be greater than 0.4 to prevent uplift.
- Roof truss framing with 24" soffits.
- Deflection criteria of L/240 live load and L/180 total load.

Also see *General Assumptions* on page 3.

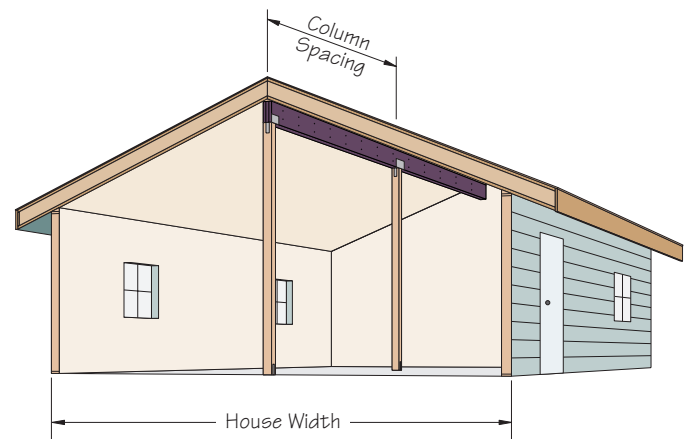
Bearing Requirements

Minimum header support to be 2 trimmers (3") at ends and 7 1/2" at continuous span supports.

Bold, italic header sizes require 3 trimmers (4 1/2") at ends and 11 1/4" at continuous span supports.

How to Use This Table

1. Determine appropriate ROOF LOAD and HOUSE WIDTH.
2. Locate COLUMN SPACING.
3. Select Microllam® LVL beam size.



Ridge Beams

| Roof Load (PSF) | | House Width | Column Spacing | | | | | | | | |
|-----------------------|-------------|-------------|-----------------|------------------|------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | | | 10'-0" | 12'-0" | 14'-0" | 16'-0" | 18'-0" | 20'-0" | 22'-0" | 24'-0" | |
| Non-Snow Area 125% | 20LL + 15DL | 24'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 9 1/4" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 11 7/8" | 3 1/2" x 14" | 3 1/2" x 16" | 3 1/2" x 16" | 3 1/2" x 16" |
| | | 30'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 14" | 3 1/2" x 16" | 3 1/2" x 16" | 3 1/2" x 16" | 3 1/2" x 18" |
| | | 36'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 14" | 3 1/2" x 14" | 3 1/2" x 16" | 3 1/2" x 18" | 3 1/2" x 18" | 3 1/2" x 18" |
| | 20LL + 20DL | 24'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 14" | 3 1/2" x 14" | 3 1/2" x 16" | 3 1/2" x 16" | 3 1/2" x 18" |
| | | 30'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 11 7/8" | 3 1/2" x 14" | 3 1/2" x 16" | 3 1/2" x 18" | 3 1/2" x 18" | 3 1/2" x 18" |
| | | 36'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 9 1/2" | 3 1/2" x 11 1/4" | 3 1/2" x 14" | 3 1/2" x 16" | 3 1/2" x 16" | 3 1/2" x 18" | 3 1/2" x 18" | 3 1/2" x 20" |
| Snow Area 115% | 25LL + 15DL | 24'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 14" | 3 1/2" x 14" | 3 1/2" x 16" | 3 1/2" x 16" | 3 1/2" x 18" |
| | | 30'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 11 7/8" | 3 1/2" x 14" | 3 1/2" x 16" | 3 1/2" x 18" | 3 1/2" x 18" | 3 1/2" x 18" |
| | | 36'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 9 1/2" | 3 1/2" x 11 1/4" | 3 1/2" x 14" | 3 1/2" x 16" | 3 1/2" x 18" | 3 1/2" x 20" | 3 1/2" x 20" | 5 1/4" x 18" |
| | 30LL + 15DL | 24'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 11 7/8" | 3 1/2" x 14" | 3 1/2" x 16" | 3 1/2" x 16" | 3 1/2" x 16" | 3 1/2" x 18" |
| | | 30'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 14" | 3 1/2" x 16" | 3 1/2" x 18" | 3 1/2" x 18" | 3 1/2" x 20" |
| | | 36'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 14" | 3 1/2" x 16" | 3 1/2" x 18" | 3 1/2" x 20" | 3 1/2" x 20" | 5 1/4" x 18" |
| | 40LL + 15DL | 24'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 14" | 3 1/2" x 14" | 3 1/2" x 16" | 3 1/2" x 18" | 3 1/2" x 18" | 3 1/2" x 20" |
| | | 30'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 11 7/8" | 3 1/2" x 14" | 3 1/2" x 16" | 3 1/2" x 18" | 3 1/2" x 20" | 5 1/4" x 16" | 5 1/4" x 18" |
| | | 36'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 14" | 3 1/2" x 16" | 3 1/2" x 18" | 3 1/2" x 20" | 5 1/4" x 18" | 5 1/4" x 18" | 5 1/4" x 20" |

General Notes

Table is based on:

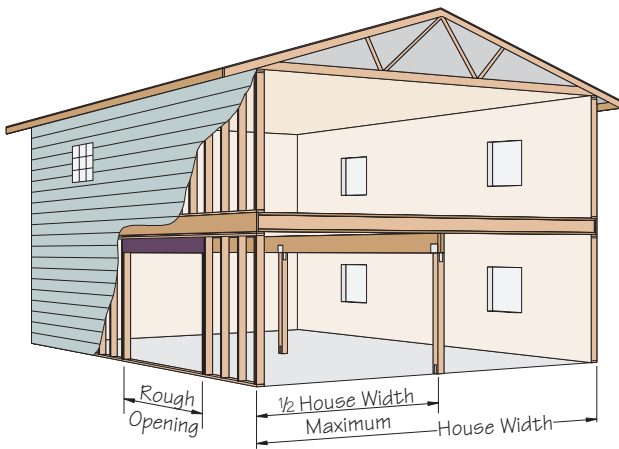
- Uniform loads.
- More restrictive of simple or continuous span. Ratio of short span to long span should be greater than 0.4 to prevent uplift.
- Deflection criteria of L/240 live load and L/180 total load.

Also see *General Assumptions* on page 3.

Bearing Requirements

Minimum header support to be 2 trimmers (3") at ends and 7 1/2" at continuous span supports.

Bold, italic beam sizes require 3 trimmers (4 1/2") at ends and 11 1/4" at continuous span supports.



How to Use This Table

1. Verify that floor loading of 40 psf live load and 12 psf dead load is adequate.
2. Determine appropriate LOAD and HOUSE WIDTH.
3. Locate ROUGH OPENING.
4. Select Microllam® LVL header size.

Headers Supporting Floor and Roof

| Load (PSF) | House Width | Rough Opening | | | | | | | |
|-----------------------|---------------------------|---------------|--|---|---|---|-------------------------------------|-------------------------------------|-------------------------------------|
| | | 8'-0" | 9'-3" | 10'-0" | 12'-0" | 14'-0" | 16'-3" | 18'-3" | |
| Non-Snow Area 125% | Roof Load 20LL + 15DL | 24'-0" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 11 7/8" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 9 1/2" | 3 1/2" x 11 7/8" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 7/8" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" |
| | | 30'-0" | 1 3/4" x 11 7/8" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 9 1/2" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 20" 5 1/4" x 16" |
| | Floor Load 40LL + 12DL | 36'-0" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/2" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" | 5 1/4" x 18" |
| | | 24'-0" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 11 1/4" | 3 1/2" x 11 7/8" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 7/8" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" |
| | Roof Load 20LL + 20DL | 30'-0" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 11 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 20" 5 1/4" x 18" |
| | | 36'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 7/8" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" | 5 1/4" x 18" |
| Snow Area 115% | Roof Load 25LL + 15DL | 24'-0" | 1 3/4" x 11 1/4" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 11 1/4" | 3 1/2" x 11 7/8" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 7/8" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" |
| | | 30'-0" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/2" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 20" 5 1/4" x 18" |
| | Floor Load 40LL + 12DL | 36'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 7/8" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 20" 5 1/4" x 16" | 5 1/4" x 18" |
| | | 24'-0" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 20" 5 1/4" x 18" |
| | Roof Load 30LL + 15DL | 30'-0" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/2" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" | 5 1/4" x 18" |
| | | 36'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 11 7/8" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 11 7/8" | 3 1/2" x 18" 5 1/4" x 14" | 5 1/4" x 16" | 5 1/4" x 18" |
| | Roof Load 40LL + 15DL | 24'-0" | 1 3/4" x 14" 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 20" 5 1/4" x 18" |
| | | 30'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 11 7/8" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 7/8" | 3 1/2" x 18" 5 1/4" x 14" | 5 1/4" x 16" | 5 1/4" x 18" |
| | Floor Load 40LL + 12DL | 36'-0" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 11 7/8" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" | 5 1/4" x 16" | 5 1/4" x 18" | 5 1/4" x 20" |

General Notes

Table is based on:

- Uniform loads.
- More restrictive of simple or continuous span. Ratio of short span to long span should be greater than 0.4 to prevent uplift.
- Roof truss framing with 24" soffits.
- Wall weights of 80 plf.
- Deflection criteria of L/360 live load and L/240 total load at floor.

Also see *General Assumptions* on page 3.

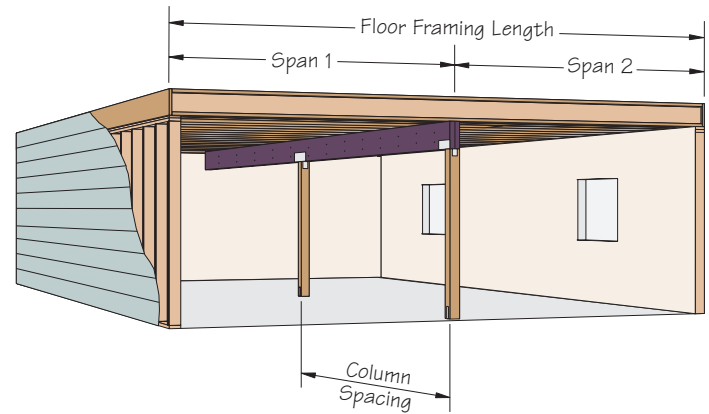
Bearing Requirements

Minimum header support to be 2 trimmers (3") at ends and 7 1/2" at continuous span supports.

Bold, italic header sizes require 3 trimmers (4 1/2") at ends and 11 1/4" at continuous span supports.

How to Use This Table

1. Determine appropriate FLOOR LOAD.
2. Find the FLOOR FRAMING LENGTH that meets or exceeds the sum of spans 1 and 2 for the supported floor joists. When floor joists are continuous span, spans 1 and 2 cannot be less than 40% of the FLOOR FRAMING LENGTH. If floor joists are simple span (not continuous over the Microllam® LVL beam), then the FLOOR FRAMING LENGTH may be taken as 80% of the sum of spans 1 and 2 of the floor joists.
3. Locate COLUMN SPACING.
4. Select Microllam® LVL beam size.



Floor Girder Beams

| Floor Load (PSF) | Floor Framing Length | Column Spacing | | | | | | | | |
|------------------|----------------------|---|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| | | 10'-0" | 12'-0" | 14'-0" | 16'-0" | 18'-0" | 20'-0" | 22'-0" | | |
| 40LL + 12DL | 20'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 20" 5 1/4" x 18" |
| | 24'-0" | 3 1/2" x 9 1/2" 5 1/4" x 9 1/4" | 3 1/2" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 20" 5 1/4" x 16" | 3 1/2" x 20" 5 1/4" x 18" |
| | 28'-0" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 11 7/8" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 7/8" | 3 1/2" x 14" 5 1/4" x 11 7/8" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 20" 5 1/4" x 18" | 5 1/4" x 18" |
| | 32'-0" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 14" | 3 1/2" x 20" 5 1/4" x 16" | 3 1/2" x 20" 5 1/4" x 18" | 5 1/4" x 20" |
| | 36'-0" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 20" 5 1/4" x 16" | 5 1/4" x 18" | 5 1/4" x 20" |
| | 40'-0" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/2" | 3 1/2" x 14" 5 1/4" x 11 7/8" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 20" 5 1/4" x 18" | 5 1/4" x 18" | 5 1/4" x 20" |
| | 44'-0" | 3 1/2" x 11 7/8" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 7/8" | 3 1/2" x 18" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 14" | 3 1/2" x 20" 5 1/4" x 16" | 5 1/4" x 18" | 5 1/4" x 20" | 5 1/4" x 20" | |
| 40LL + 20DL | 20'-0" | 3 1/2" x 9 1/4" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 20" 5 1/4" x 18" |
| | 24'-0" | 3 1/2" x 9 1/2" 5 1/4" x 9 1/4" | 3 1/2" x 11 7/8" 5 1/4" x 11 1/4" | 3 1/2" x 14" 5 1/4" x 11 7/8" | 3 1/2" x 14" 5 1/4" x 11 7/8" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 20" 5 1/4" x 16" | 5 1/4" x 18" |
| | 28'-0" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 11 7/8" | 3 1/2" x 16" 5 1/4" x 11 7/8" | 3 1/2" x 18" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 14" | 3 1/2" x 20" 5 1/4" x 16" | 5 1/4" x 18" | 5 1/4" x 20" |
| | 32'-0" | 3 1/2" x 11 1/4" 5 1/4" x 9 1/4" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 20" 5 1/4" x 16" | 5 1/4" x 18" | 5 1/4" x 20" |
| | 36'-0" | 3 1/2" x 11 7/8" 5 1/4" x 9 1/2" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 18" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 14" | 3 1/2" x 20" 5 1/4" x 16" | 5 1/4" x 18" | 5 1/4" x 20" | | |
| | 40'-0" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 11 7/8" | 3 1/2" x 18" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 14" | 3 1/2" x 20" 5 1/4" x 16" | 5 1/4" x 18" | 5 1/4" x 20" | | |
| | 44'-0" | 3 1/2" x 14" 5 1/4" x 11 1/4" | 3 1/2" x 16" 5 1/4" x 14" | 3 1/2" x 18" 5 1/4" x 16" | 3 1/2" x 18" 5 1/4" x 16" | 5 1/4" x 18" | 5 1/4" x 20" | 5 1/4" x 20" | | |

General Notes

Table is based on:

- Uniform loads.
- More restrictive of simple or continuous span. Ratio of short span to long span should be greater than 0.4 to prevent uplift.
- Deflection criteria of L/360 live load and L/240 total load.

Also see *General Assumptions on page 3.*

Bearing Requirements

Minimum beam support to be 2 trimmers (3") at ends and 7 1/2" at continuous span supports.

Bold, italic beam sizes require 3 trimmers (4 1/2") at ends and 11 1/4" at continuous span supports.



How to Use These Tables

1. Calculate total and live load (neglect beam weight) on the beam or header in pounds per linear foot (plf).
2. Select appropriate SPAN (center-to-center of bearing).
3. Scan horizontally to find the proper width and a depth that exceeds actual total and live loads.
4. Review bearing lengths to ensure adequacy.

Floor—100% (PLF)

| Span | Condition | 1 3/4" Width | | | | | | | 3 1/2" Width | | | | | |
|--------|-----------------------------|--------------|---------|---------|---------|---------|---------|----------|--------------|---------|---------|---------|---------|---------|
| | | 5 1/2" | 7 1/4" | 9 1/4" | 9 1/2" | 11 1/4" | 11 7/8" | 14" | 5 1/2" | 7 1/4" | 9 1/4" | 9 1/2" | 11 1/4" | 11 7/8" |
| 6' | Total Load | 432 | 762 | 1,027 | 1,062 | 1,324 | 1,424 | 1,794 | 864 | 1,525 | 2,055 | 2,125 | 2,648 | 2,848 |
| | Live Load L/360 | 290 | 626 | * | * | * | * | * | 580 | 1,253 | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.8/4.4 | 2.4/5.9 | 2.4/6.1 | 3.0/7.6 | 3.3/8.2 | 4.1/10.3 | 1.5/3.5 | 1.8/4.4 | 2.4/5.9 | 2.4/6.1 | 3.0/7.6 | 3.3/8.2 |
| 8' | Total Load | 146 | 326 | 695 | 731 | 915 | 978 | 1,207 | 292 | 652 | 1,391 | 1,462 | 1,830 | 1,956 |
| | Live Load L/360 | 126 | 280 | 555 | 597 | * | * | * | 253 | 561 | 1,110 | 1,195 | * | * |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.5/3.5 | 2.1/5.3 | 2.2/5.6 | 2.8/7.0 | 3.0/7.5 | 3.7/9.3 | 1.5/3.5 | 1.5/3.5 | 2.1/5.3 | 2.2/5.6 | 2.8/7.0 | 3.0/7.5 |
| 9'-6" | Total Load | 73 | 166 | 491 | 517 | 709 | 784 | 968 | 146 | 332 | 983 | 1,034 | 1,418 | 1,570 |
| | Live Load L/360 | * | * | 344 | 370 | 592 | 687 | * | * | * | 688 | 741 | 1,185 | 1,374 |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.5/3.5 | 1.8/4.5 | 1.9/4.7 | 2.6/6.5 | 2.9/7.2 | 3.5/8.8 | 1.5/3.5 | 1.5/3.5 | 1.8/4.5 | 1.9/4.7 | 2.6/6.5 | 2.9/7.2 |
| 10' | Total Load | 59 | 135 | 441 | 466 | 639 | 707 | 908 | 118 | 270 | 883 | 932 | 1,279 | 1,415 |
| | Live Load L/360 | * | * | 297 | 321 | 514 | 597 | * | * | * | 595 | 642 | 1,029 | 1,195 |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.5/3.5 | 1.7/4.3 | 1.8/4.5 | 2.5/6.1 | 2.7/6.8 | 3.5/8.7 | 1.5/3.5 | 1.5/3.5 | 1.7/4.3 | 1.8/4.5 | 2.5/6.1 | 2.7/6.8 |
| 12' | Total Load | | 64 | 260 | 281 | 442 | 489 | 666 | 54 | 128 | 521 | 563 | 885 | 979 |
| | Live Load L/360 | | * | 176 | 190 | 309 | 360 | 569 | * | * | 353 | 381 | 618 | 720 |
| | Min. End/Int. Bearing (in.) | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 2.0/5.1 | 2.3/5.7 | 3.1/7.7 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 2.0/5.1 | 2.3/5.7 |
| 14' | Total Load | | | 164 | 178 | 293 | 342 | 487 | | 66 | 329 | 357 | 586 | 685 |
| | Live Load L/360 | | | 113 | 122 | 199 | 232 | 370 | | * | 226 | 244 | 398 | 465 |
| | Min. End/Int. Bearing (in.) | | | 1.5/3.5 | 1.5/3.5 | 1.6/4.0 | 1.9/4.7 | 2.6/6.6 | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.6/4.0 | 1.9/4.7 |
| 16'-6" | Total Load | | | 100 | 108 | 180 | 211 | 342 | | | 200 | 217 | 360 | 422 |
| | Live Load L/360 | | | 69 | 75 | 123 | 145 | 232 | | | 139 | 151 | 247 | 290 |
| | Min. End/Int. Bearing (in.) | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 2.2/5.5 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 |
| 18'-6" | Total Load | | | 70 | 76 | 127 | 149 | 244 | | | 140 | 152 | 254 | 299 |
| | Live Load L/360 | | | 49 | 54 | 88 | 103 | 167 | | | 99 | 108 | 177 | 207 |
| | Min. End/Int. Bearing (in.) | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.8/4.4 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 |
| 20' | Total Load | | | 54 | 59 | 100 | 118 | 193 | | | 109 | 119 | 200 | 236 |
| | Live Load L/360 | | | 39 | 42 | 70 | 82 | 133 | | | 79 | 85 | 141 | 165 |
| | Min. End/Int. Bearing (in.) | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.8 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 |
| 24' | Total Load | | | | | 56 | 66 | 110 | | | 60 | 65 | 112 | 133 |
| | Live Load L/360 | | | | | 41 | 48 | 78 | | | 46 | 50 | 82 | 96 |
| | Min. End/Int. Bearing (in.) | | | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 |
| 28' | Total Load | | | | | | | 67 | | | | | 67 | 80 |
| | Live Load L/360 | | | | | | | 49 | | | | | 52 | 61 |
| | Min. End/Int. Bearing (in.) | | | | | | | 1.5/3.5 | | | | | 1.5/3.5 | 1.5/3.5 |

*Indicates TOTAL LOAD value controls.

General Notes

- Table is based on:
 - Uniform loads (beam weight considered) and the more restrictive of simple or continuous span.
 - Deflection criteria of L/240 total load and L/360 live load.
- For deflection limits of L/240 and L/480, multiply live load values by 1.5 and 0.75, respectively. The resulting load shall not exceed the total load shown.

Also see *General Assumptions* on page 3.



| Span | Condition | 3 1/2" Width | | | | 5 1/4" Width | | | | | | | | | |
|--------|-----------------------------|--------------|----------|----------|----------|--------------|---------|---------|---------|---------|---------|----------|----------|----------|----------|
| | | 14" | 16" | 18" | 20" | 5 1/2" | 7 1/4" | 9 1/4" | 9 1/2" | 11 1/4" | 11 7/8" | 14" | 16" | 18" | 20" |
| 6' | Total Load | 3,589 | 3,917 | 3,917 | 3,917 | 1,297 | 2,287 | 3,082 | 3,188 | 3,972 | 4,272 | 5,384 | 5,875 | 5,875 | 5,875 |
| | Live Load L/360 | * | * | * | * | 870 | 1879 | * | * | * | * | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 4.1/10.3 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.8/4.4 | 2.4/5.9 | 2.4/6.1 | 3.0/7.6 | 3.3/8.2 | 4.1/10.3 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 |
| 8' | Total Load | 2,414 | 2,885 | 2,932 | 2,932 | 438 | 978 | 2,086 | 2,193 | 2,745 | 2,935 | 3,621 | 4,328 | 4,399 | 4,399 |
| | Live Load L/360 | * | * | * | * | 380 | 842 | 1,666 | 1,792 | * | * | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 3.7/9.3 | 4.4/11.1 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.5/3.5 | 2.1/5.3 | 2.2/5.6 | 2.8/7.0 | 3.0/7.5 | 3.7/9.3 | 4.4/11.1 | 4.5/11.3 | 4.5/11.3 |
| 9'-6" | Total Load | 1,937 | 2,294 | 2,466 | 2,466 | 219 | 498 | 1,475 | 1,551 | 2,128 | 2,354 | 2,905 | 3,441 | 3,699 | 3,699 |
| | Live Load L/360 | * | * | * | * | * | * | 1,032 | 1,112 | 1,778 | 2,061 | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 3.5/8.8 | 4.2/10.5 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.5/3.5 | 1.8/4.5 | 1.9/4.7 | 2.6/6.5 | 2.9/7.2 | 3.5/8.8 | 4.2/10.5 | 4.5/11.3 | 4.5/11.3 |
| 10' | Total Load | 1,817 | 2,147 | 2,342 | 2,342 | 177 | 406 | 1,325 | 1,398 | 1,919 | 2,123 | 2,725 | 3,221 | 3,513 | 3,513 |
| | Live Load L/360 | * | * | * | * | * | * | 893 | 963 | 1,544 | 1,792 | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 3.5/8.7 | 4.1/10.3 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.5/3.5 | 1.7/4.3 | 1.8/4.5 | 2.5/6.1 | 2.7/6.8 | 3.5/8.7 | 4.1/10.3 | 4.5/11.2 | 4.5/11.2 |
| 12' | Total Load | 1,333 | 1,709 | 1,948 | 1,948 | 82 | 193 | 781 | 844 | 1,327 | 1,469 | 2,000 | 2,563 | 2,922 | 2,922 |
| | Live Load L/360 | 1,138 | 1,635 | * | * | * | * | 530 | 572 | 927 | 1,080 | 1,707 | 2,453 | * | * |
| | Min. End/Int. Bearing (in.) | 3.1/7.7 | 3.9/9.9 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 2.0/5.1 | 2.3/5.7 | 3.1/7.7 | 3.9/9.9 | 4.5/11.2 | 4.5/11.2 |
| 14' | Total Load | 975 | 1,253 | 1,563 | 1,667 | | 100 | 494 | 535 | 879 | 1,028 | 1,463 | 1,880 | 2,345 | 2,500 |
| | Live Load L/360 | 741 | 1,075 | 1,483 | * | | * | 339 | 366 | 597 | 697 | 1,112 | 1,613 | 2,225 | * |
| | Min. End/Int. Bearing (in.) | 2.6/6.6 | 3.4/8.5 | 4.2/10.5 | 4.5/11.3 | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.6/4.0 | 1.9/4.7 | 2.6/6.6 | 3.4/8.5 | 4.2/10.5 | 4.5/11.2 |
| 16'-6" | Total Load | 684 | 897 | 1,120 | 1,365 | | | 300 | 326 | 540 | 634 | 1,026 | 1,346 | 1,680 | 2,048 |
| | Live Load L/360 | 465 | 680 | 945 | 1,263 | | | 209 | 227 | 371 | 435 | 698 | 1,020 | 1,418 | 1,895 |
| | Min. End/Int. Bearing (in.) | 2.2/5.5 | 2.9/7.2 | 3.6/8.9 | 4.4/10.9 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 2.2/5.5 | 2.9/7.2 | 3.6/8.9 | 4.4/10.9 |
| 18'-6" | Total Load | 488 | 710 | 887 | 1,082 | | | 210 | 228 | 382 | 449 | 733 | 1,066 | 1,331 | 1,623 |
| | Live Load L/360 | 335 | 491 | 686 | 922 | | | 149 | 162 | 266 | 311 | 502 | 737 | 1,030 | 1,383 |
| | Min. End/Int. Bearing (in.) | 1.8/4.4 | 2.6/6.4 | 3.2/8.0 | 3.9/9.7 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.8/4.4 | 2.6/6.4 | 3.2/8.0 | 3.9/9.7 |
| 20' | Total Load | 387 | 573 | 756 | 922 | | | 164 | 178 | 300 | 354 | 580 | 860 | 1,134 | 1,384 |
| | Live Load L/360 | 267 | 393 | 550 | 741 | | | 119 | 128 | 212 | 248 | 401 | 590 | 826 | 1,112 |
| | Min. End/Int. Bearing (in.) | 1.5/3.8 | 2.2/5.6 | 3.0/7.4 | 3.6/9.0 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.8 | 2.2/5.6 | 3.0/7.4 | 3.6/9.0 |
| 24' | Total Load | 221 | 332 | 471 | 634 | | | 89 | 98 | 168 | 199 | 332 | 498 | 707 | 951 |
| | Live Load L/360 | 157 | 232 | 326 | 442 | | | 69 | 75 | 123 | 145 | 235 | 348 | 490 | 663 |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.6/4.0 | 2.2/5.6 | 3.0/7.5 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.6/4.0 | 2.2/5.6 | 3.0/7.5 |
| 28' | Total Load | 135 | 205 | 294 | 405 | | | 51 | 56 | 100 | 120 | 203 | 308 | 442 | 607 |
| | Live Load L/360 | 99 | 148 | 208 | 283 | | | 43 | 47 | 78 | 92 | 149 | 222 | 313 | 425 |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.5/3.5 | 1.7/4.2 | 2.3/5.7 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.7/4.2 | 2.3/5.7 |

*Indicates TOTAL LOAD value controls.



How to Use These Tables

1. Calculate total load (neglect beam weight) on the beam or header in pounds per linear foot (plf).
2. Select appropriate SPAN (center-to-center of bearing).
3. Scan horizontally to find the proper width and a depth that exceeds actual total load.
4. Review bearing length requirements to ensure adequacy.

Roof—Snow Load Area 115% (PLF)

| Span | Condition | 1 3/4" Width | | | | | | | 3 1/2" Width | | | | | |
|--------|-----------------------------|--------------|---------|---------|---------|---------|---------|----------|--------------|---------|---------|---------|---------|---------|
| | | 5 1/2" | 7 1/4" | 9 1/4" | 9 1/2" | 11 1/4" | 11 7/8" | 14" | 5 1/2" | 7 1/4" | 9 1/4" | 9 1/2" | 11 1/4" | 11 7/8" |
| 6' | Total Load | 451 | 877 | 1,182 | 1,223 | 1,523 | 1,638 | 1,961 | 902 | 1,755 | 2,365 | 2,446 | 3,047 | 3,277 |
| | Deflection L/240 | 435 | * | * | * | * | * | * | 870 | * | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 2.0/5.0 | 2.7/6.8 | 2.8/7.0 | 3.5/8.7 | 3.8/9.4 | 4.5/11.3 | 1.5/3.5 | 2.0/5.0 | 2.7/6.8 | 2.8/7.0 | 3.5/8.7 | 3.8/9.4 |
| 8' | Total Load | 146 | 326 | 800 | 841 | 1,053 | 1,126 | 1,389 | 292 | 652 | 1,601 | 1,682 | 2,106 | 2,252 |
| | Deflection L/240 | * | * | * | * | * | * | * | * | * | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.5/3.5 | 2.5/6.1 | 2.6/6.4 | 3.2/8.1 | 3.5/8.6 | 4.3/10.6 | 1.5/3.5 | 1.5/3.5 | 2.5/6.1 | 2.6/6.4 | 3.2/8.1 | 3.5/8.6 |
| 9'-6" | Total Load | 73 | 166 | 566 | 595 | 816 | 903 | 1,114 | 146 | 332 | 1,132 | 1,190 | 1,633 | 1,807 |
| | Deflection L/240 | * | * | 516 | 556 | * | * | * | * | * | 1,032 | 1,112 | * | * |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.5/3.5 | 2.1/5.2 | 2.2/5.4 | 3.0/7.4 | 3.3/8.2 | 4.1/10.2 | 1.5/3.5 | 1.5/3.5 | 2.1/5.2 | 2.2/5.4 | 3.0/7.4 | 3.3/8.2 |
| 10' | Total Load | 59 | 135 | 510 | 536 | 736 | 814 | 1,045 | 118 | 270 | 1,021 | 1,073 | 1,473 | 1,629 |
| | Deflection L/240 | * | * | 446 | 481 | * | * | * | * | * | 893 | 963 | * | * |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.5/3.5 | 2.0/4.9 | 2.1/5.2 | 2.8/7.1 | 3.1/7.8 | 4.0/10.0 | 1.5/3.5 | 1.5/3.5 | 2.0/4.9 | 2.1/5.2 | 2.8/7.1 | 3.1/7.8 |
| 12' | Total Load | | 64 | 348 | 371 | 509 | 564 | 767 | 54 | 128 | 697 | 742 | 1,019 | 1,128 |
| | Deflection L/240 | | * | 265 | 286 | 463 | 540 | * | * | * | 530 | 572 | 927 | 1,080 |
| | Min. End/Int. Bearing (in.) | | 1.5/3.5 | 1.6/4.0 | 1.7/4.3 | 2.4/5.9 | 2.6/6.5 | 3.5/8.9 | 1.5/3.5 | 1.5/3.5 | 1.6/4.0 | 1.7/4.3 | 2.4/5.9 | 2.6/6.5 |
| 14' | Total Load | | | 221 | 239 | 373 | 412 | 562 | | 66 | 443 | 479 | 745 | 825 |
| | Deflection L/240 | | | 169 | 183 | 298 | 348 | 556 | | 339 | 366 | 597 | 697 | |
| | Min. End/Int. Bearing (in.) | | | 1.5/3.5 | 1.5/3.5 | 2.0/5.0 | 2.2/5.6 | 3.0/7.6 | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 2.0/5.0 | 2.2/5.6 |
| 16'-6" | Total Load | | | 135 | 146 | 242 | 283 | 402 | | | 270 | 292 | 484 | 567 |
| | Deflection L/240 | | | 104 | 113 | 185 | 217 | 349 | | | 209 | 227 | 371 | 435 |
| | Min. End/Int. Bearing (in.) | | | 1.5/3.5 | 1.5/3.5 | 1.6/3.9 | 1.8/4.6 | 2.6/6.4 | | | 1.5/3.5 | 1.5/3.5 | 1.6/3.9 | 1.8/4.6 |
| 18'-6" | Total Load | | | 95 | 103 | 171 | 201 | 318 | | | 190 | 206 | 343 | 403 |
| | Deflection L/240 | | | 74 | 81 | 133 | 155 | 251 | | | 149 | 162 | 266 | 311 |
| | Min. End/Int. Bearing (in.) | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.7 | 2.3/5.7 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.7 |
| 20' | Total Load | | | 74 | 81 | 135 | 159 | 260 | | | 149 | 162 | 271 | 319 |
| | Deflection L/240 | | | 59 | 64 | 106 | 124 | 200 | | | 119 | 128 | 212 | 248 |
| | Min. End/Int. Bearing (in.) | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 2.0/5.1 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 |
| 24' | Total Load | | | | | 76 | 90 | 150 | | | 83 | 90 | 153 | 181 |
| | Deflection L/240 | | | | | 61 | 72 | 117 | | | 69 | 75 | 123 | 145 |
| | Min. End/Int. Bearing (in.) | | | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.6 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 |
| 28' | Total Load | | | | | | 55 | 92 | | | | 53 | 93 | 110 |
| | Deflection L/240 | | | | | | 46 | 74 | | | | 47 | 78 | 92 |
| | Min. End/Int. Bearing (in.) | | | | | | 1.5/3.5 | 1.5/3.5 | | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 |

*Indicates TOTAL LOAD value controls.

General Notes

Table is based on:

- Uniform loads (beam weight considered) and the more restrictive of simple or continuous span.
- Deflection criteria of L/180 total load. (For stiffer deflection criteria, L/240 values are also shown.)

Also see *General Assumptions* on page 3.



| Span | Condition | 3 1/2" Width | | | | 5 1/4" Width | | | | | | | | | |
|--------|-----------------------------|--------------|----------|----------|----------|--------------|---------|---------|---------|---------|---------|----------|----------|----------|----------|
| | | 14" | 16" | 18" | 20" | 5 1/2" | 7 1/4" | 9 1/4" | 9 1/2" | 11 1/4" | 11 7/8" | 14" | 16" | 18" | 20" |
| 6' | Total Load | 3,917 | 3,917 | 3,917 | 3,917 | 1,353 | 2,632 | 3,547 | 3,669 | 4,571 | 4,916 | 5,875 | 5,875 | 5,875 | 5,875 |
| | Deflection L/240 | * | * | * | * | 1,305 | * | * | * | * | * | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 2.0/5.0 | 2.7/6.8 | 2.8/7.0 | 3.5/8.7 | 3.8/9.4 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 |
| 8' | Total Load | 2,778 | 2,932 | 2,932 | 2,932 | 438 | 978 | 2,401 | 2,524 | 3,159 | 3,378 | 4,168 | 4,399 | 4,399 | 4,399 |
| | Deflection L/240 | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 4.3/10.6 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.5/3.5 | 2.5/6.1 | 2.6/6.4 | 3.2/8.1 | 3.5/8.6 | 4.3/10.6 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 |
| 9'-6" | Total Load | 2,229 | 2,466 | 2,466 | 2,466 | 219 | 498 | 1,698 | 1,785 | 2,450 | 2,710 | 3,344 | 3,699 | 3,699 | 3,699 |
| | Deflection L/240 | * | * | * | * | * | * | 1,548 | 1,669 | * | * | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 4.1/10.2 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.5/3.5 | 2.1/5.2 | 2.2/5.4 | 3.0/7.4 | 3.3/8.2 | 4.1/10.2 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 |
| 10' | Total Load | 2,091 | 2,342 | 2,342 | 2,342 | 177 | 406 | 1,531 | 1,610 | 2,209 | 2,444 | 3,137 | 3,513 | 3,513 | 3,513 |
| | Deflection L/240 | * | * | * | * | * | * | 1,339 | 1,444 | * | * | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 4.0/10.0 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.5/3.5 | 2.0/4.9 | 2.1/5.2 | 2.8/7.1 | 3.1/7.8 | 4.0/10.0 | 4.5/11.2 | 4.5/11.2 | 4.5/11.2 |
| 12' | Total Load | 1,535 | 1,948 | 1,948 | 1,948 | 82 | 193 | 1,046 | 1,113 | 1,529 | 1,692 | 2,303 | 2,922 | 2,922 | 2,922 |
| | Deflection L/240 | * | * | * | * | * | * | 795 | 859 | 1,391 | 1,620 | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 3.5/8.9 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.5/3.5 | 1.6/4.0 | 1.7/4.3 | 2.4/5.9 | 2.6/6.5 | 3.5/8.9 | 4.5/11.2 | 4.5/11.2 | 4.5/11.2 |
| 14' | Total Load | 1,124 | 1,444 | 1,667 | 1,667 | | 100 | 664 | 719 | 1,118 | 1,238 | 1,686 | 2,166 | 2,500 | 2,500 |
| | Deflection L/240 | 1,112 | * | * | * | | * | 509 | 550 | 896 | 1,046 | 1,669 | * | * | * |
| | Min. End/Int. Bearing (in.) | 3.0/7.6 | 3.9/9.7 | 4.5/11.3 | 4.5/11.3 | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 2.0/5.0 | 2.2/5.6 | 3.0/7.6 | 3.9/9.7 | 4.5/11.2 | 4.5/11.2 |
| 16'-6" | Total Load | 805 | 1,035 | 1,291 | 1,411 | | | 405 | 439 | 726 | 851 | 1,208 | 1,552 | 1,936 | 2,117 |
| | Deflection L/240 | 698 | 1,020 | * | * | | | 314 | 340 | 557 | 652 | 1,047 | 1,530 | * | * |
| | Min. End/Int. Bearing (in.) | 2.6/6.4 | 3.3/8.3 | 4.1/10.3 | 4.5/11.3 | | | 1.5/3.5 | 1.5/3.5 | 1.6/3.9 | 1.8/4.6 | 2.6/6.4 | 3.3/8.3 | 4.1/10.3 | 4.5/11.2 |
| 18'-6" | Total Load | 637 | 820 | 1,023 | 1,247 | | | 285 | 309 | 515 | 605 | 956 | 1,230 | 1,534 | 1,871 |
| | Deflection L/240 | 502 | 737 | * | * | | | 224 | 243 | 399 | 467 | 754 | 1,106 | * | * |
| | Min. End/Int. Bearing (in.) | 2.3/5.7 | 2.9/7.4 | 3.7/9.2 | 4.5/11.2 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.7 | 2.3/5.7 | 2.9/7.4 | 3.7/9.2 | 4.5/11.2 |
| 20' | Total Load | 520 | 699 | 872 | 1,064 | | | 224 | 243 | 406 | 478 | 781 | 1,048 | 1,309 | 1,596 |
| | Deflection L/240 | 401 | 590 | 826 | * | | | 178 | 193 | 318 | 372 | 602 | 885 | 1,239 | * |
| | Min. End/Int. Bearing (in.) | 2.0/5.1 | 2.7/6.8 | 3.4/8.5 | 4.1/10.3 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 2.0/5.1 | 2.7/6.8 | 3.4/8.5 | 4.1/10.3 |
| 24' | Total Load | 300 | 448 | 600 | 732 | | | 124 | 135 | 230 | 272 | 450 | 672 | 900 | 1,099 |
| | Deflection L/240 | 235 | 348 | 490 | 663 | | | 104 | 112 | 185 | 218 | 353 | 522 | 735 | 995 |
| | Min. End/Int. Bearing (in.) | 1.5/3.6 | 2.1/5.3 | 2.8/7.1 | 3.4/8.6 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.6 | 2.1/5.3 | 2.8/7.1 | 3.4/8.6 |
| 28' | Total Load | 185 | 279 | 399 | 533 | | | 73 | 80 | 139 | 166 | 278 | 419 | 599 | 799 |
| | Deflection L/240 | 149 | 222 | 313 | 425 | | | 65 | 71 | 117 | 138 | 224 | 333 | 470 | 638 |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.6/3.9 | 2.2/5.6 | 3.0/7.4 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.6/3.9 | 2.2/5.6 | 3.0/7.4 |

*Indicates TOTAL LOAD value controls.



How to Use These Tables

1. Calculate total load (neglect beam weight) on the beam or header in pounds per linear foot (plf).
2. Select appropriate SPAN (center-to-center of bearing).
3. Scan horizontally to find the proper width and a depth that exceeds actual total load.
4. Review bearing length requirements to ensure adequacy.

Roof—Non-Snow Load Area 125% (PLF)

| Span | Condition | 1 3/4" Width | | | | | | | 3 1/2" Width | | | | | |
|--------|-----------------------------|--------------|---------|---------|---------|---------|----------|----------|--------------|---------|---------|---------|---------|----------|
| | | 5 1/2" | 7 1/4" | 9 1/4" | 9 1/2" | 11 1/4" | 11 7/8" | 14" | 5 1/2" | 7 1/4" | 9 1/4" | 9 1/2" | 11 1/4" | 11 7/8" |
| 6' | Total Load | 451 | 954 | 1,285 | 1,329 | 1,656 | 1,781 | 1,961 | 902 | 1,908 | 2,571 | 2,659 | 3,313 | 3,563 |
| | Deflection L/240 | 435 | 939 | * | * | * | * | * | 870 | 1879 | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 2.2/5.5 | 2.9/7.4 | 3.1/7.6 | 3.8/9.5 | 4.1/10.2 | 4.5/11.3 | 1.5/3.5 | 2.2/5.5 | 2.9/7.4 | 3.1/7.6 | 3.8/9.5 | 4.1/10.2 |
| 8' | Total Load | 146 | 326 | 870 | 915 | 1,145 | 1,224 | 1,469 | 292 | 652 | 1,741 | 1,830 | 2,290 | 2,449 |
| | Deflection L/240 | * | * | 833 | 896 | * | * | * | * | * | 1,666 | 1,792 | * | * |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.5/3.5 | 2.7/6.7 | 2.8/7.0 | 3.5/8.8 | 3.8/9.4 | 4.5/11.3 | 1.5/3.5 | 1.5/3.5 | 2.7/6.7 | 2.8/7.0 | 3.5/8.8 | 3.8/9.4 |
| 9'-6" | Total Load | 73 | 166 | 616 | 647 | 888 | 982 | 1,212 | 146 | 332 | 1,232 | 1,294 | 1,776 | 1,965 |
| | Deflection L/240 | * | * | 516 | 556 | * | * | * | * | * | 1,032 | 1,112 | * | * |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.5/3.5 | 2.2/5.6 | 2.4/5.9 | 3.2/8.1 | 3.6/8.9 | 4.4/11.0 | 1.5/3.5 | 1.5/3.5 | 2.2/5.6 | 2.4/5.9 | 3.2/8.1 | 3.6/8.9 |
| 10' | Total Load | 59 | 135 | 555 | 583 | 801 | 886 | 1,137 | 118 | 270 | 1,110 | 1,167 | 1,602 | 1,772 |
| | Deflection L/240 | * | * | 446 | 481 | 772 | * | * | * | * | 893 | 963 | 1,544 | * |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.5/3.5 | 2.1/5.3 | 2.2/5.6 | 3.1/7.7 | 3.4/8.5 | 4.4/10.9 | 1.5/3.5 | 1.5/3.5 | 2.1/5.3 | 2.2/5.6 | 3.1/7.7 | 3.4/8.5 |
| 12' | Total Load | | 64 | 348 | 377 | 554 | 613 | 835 | 54 | 128 | 697 | 753 | 1,109 | 1,227 |
| | Deflection L/240 | | * | 265 | 286 | 463 | 540 | * | * | * | 530 | 572 | 927 | 1,080 |
| | Min. End/Int. Bearing (in.) | | 1.5/3.5 | 1.6/4.0 | 1.7/4.4 | 2.6/6.4 | 2.8/7.1 | 3.9/9.6 | 1.5/3.5 | 1.5/3.5 | 1.6/4.0 | 1.7/4.4 | 2.6/6.4 | 2.8/7.1 |
| 14' | Total Load | | | 221 | 239 | 392 | 449 | 611 | | 66 | 443 | 479 | 785 | 898 |
| | Deflection L/240 | | | 169 | 183 | 298 | 348 | 556 | | * | 339 | 366 | 597 | 697 |
| | Min. End/Int. Bearing (in.) | | | 1.5/3.5 | 1.5/3.5 | 2.1/5.3 | 2.4/6.1 | 3.3/8.3 | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 2.1/5.3 | 2.4/6.1 |
| 16'-6" | Total Load | | | 135 | 146 | 242 | 283 | 438 | | | 270 | 292 | 484 | 567 |
| | Deflection L/240 | | | 104 | 113 | 185 | 217 | 349 | | | 209 | 227 | 371 | 435 |
| | Min. End/Int. Bearing (in.) | | | 1.5/3.5 | 1.5/3.5 | 1.6/3.9 | 1.8/4.6 | 2.8/7.0 | | | 1.5/3.5 | 1.5/3.5 | 1.6/3.9 | 1.8/4.6 |
| 18'-6" | Total Load | | | 95 | 103 | 171 | 201 | 328 | | | 190 | 206 | 343 | 403 |
| | Deflection L/240 | | | 74 | 81 | 133 | 155 | 251 | | | 149 | 162 | 266 | 311 |
| | Min. End/Int. Bearing (in.) | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.7 | 2.4/5.9 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.7 |
| 20' | Total Load | | | 74 | 81 | 135 | 159 | 260 | | | 149 | 162 | 271 | 319 |
| | Deflection L/240 | | | 59 | 64 | 106 | 124 | 200 | | | 119 | 128 | 212 | 248 |
| | Min. End/Int. Bearing (in.) | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 2.0/5.1 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 |
| 24' | Total Load | | | | | 76 | 90 | 150 | | | 83 | 90 | 153 | 181 |
| | Deflection L/240 | | | | | 61 | 72 | 117 | | | 69 | 75 | 123 | 145 |
| | Min. End/Int. Bearing (in.) | | | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.6 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 |
| 28' | Total Load | | | | | | 55 | 92 | | | | 53 | 93 | 110 |
| | Deflection L/240 | | | | | | 46 | 74 | | | | 47 | 78 | 92 |
| | Min. End/Int. Bearing (in.) | | | | | | 1.5/3.5 | 1.5/3.5 | | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 |

*Indicates TOTAL LOAD value controls.

General Notes

Table is based on:

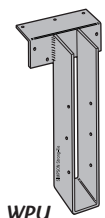
- Uniform loads (beam weight considered) and the more restrictive of simple or continuous span.
- Deflection criteria of L/180 total load. (For stiffer deflection criteria, L/240 values are also shown.)

Also see *General Assumptions* on page 3.

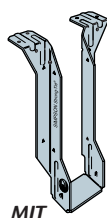


| Span | Condition | 3 1/2" Width | | | | 5 1/4" Width | | | | | | | | | |
|--------|-----------------------------|--------------|----------|----------|----------|--------------|---------|---------|---------|---------|----------|----------|----------|----------|----------|
| | | 14" | 16" | 18" | 20" | 5 1/2" | 7 1/4" | 9 1/4" | 9 1/2" | 11 1/4" | 11 7/8" | 14" | 16" | 18" | 20" |
| 6' | Total Load | 3,917 | 3,917 | 3,917 | 3,917 | 1,353 | 2,862 | 3,857 | 3,989 | 4,970 | 5,345 | 5,875 | 5,875 | 5,875 | 5,875 |
| | Deflection L/240 | * | * | * | * | 1305 | 2819 | * | * | * | * | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 2.2/5.5 | 2.9/7.4 | 3.1/7.6 | 3.8/9.5 | 4.1/10.2 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 |
| 8' | Total Load | 2,932 | 2,932 | 2,932 | 2,932 | 438 | 978 | 2,611 | 2,745 | 3,435 | 3,673 | 4,399 | 4,399 | 4,399 | 4,399 |
| | Deflection L/240 | * | * | * | * | * | * | 2,499 | 2,688 | * | * | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.5/3.5 | 2.7/6.7 | 2.8/7.0 | 3.5/8.8 | 3.8/9.4 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 |
| 9'-6" | Total Load | 2,425 | 2,466 | 2,466 | 2,466 | 219 | 498 | 1,847 | 1,942 | 2,664 | 2,948 | 3,637 | 3,699 | 3,699 | 3,699 |
| | Deflection L/240 | * | * | * | * | * | * | 1,548 | 1,669 | * | * | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 4.4/11.0 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.5/3.5 | 2.2/5.6 | 2.4/5.9 | 3.2/8.1 | 3.6/8.9 | 4.4/11.0 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 |
| 10' | Total Load | 2,275 | 2,342 | 2,342 | 2,342 | 177 | 406 | 1,666 | 1,751 | 2,403 | 2,659 | 3,412 | 3,513 | 3,513 | 3,513 |
| | Deflection L/240 | * | * | * | * | * | * | 1,339 | 1,444 | 2,317 | * | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 4.4/10.9 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.5/3.5 | 2.1/5.3 | 2.2/5.6 | 3.1/7.7 | 3.4/8.5 | 4.4/10.9 | 4.5/11.2 | 4.5/11.2 | 4.5/11.2 |
| 12' | Total Load | 1,670 | 1,948 | 1,948 | 1,948 | 82 | 193 | 1,046 | 1,130 | 1,663 | 1,840 | 2,505 | 2,922 | 2,922 | 2,922 |
| | Deflection L/240 | * | * | * | * | * | * | 795 | 859 | 1391 | 1620 | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 3.9/9.6 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.5/3.5 | 1.6/4.0 | 1.7/4.4 | 2.6/6.4 | 2.8/7.1 | 3.9/9.6 | 4.5/11.2 | 4.5/11.2 | 4.5/11.2 |
| 14' | Total Load | 1,223 | 1,571 | 1,667 | 1,667 | | 100 | 664 | 719 | 1,178 | 1,347 | 1,835 | 2,356 | 2,500 | 2,500 |
| | Deflection L/240 | 1,112 | * | * | * | | * | 509 | 550 | 896 | 1,046 | 1,669 | * | * | * |
| | Min. End/Int. Bearing (in.) | 3.3/8.3 | 4.2/10.6 | 4.5/11.3 | 4.5/11.3 | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 2.1/5.3 | 2.4/6.1 | 3.3/8.3 | 4.2/10.6 | 4.5/11.2 | 4.5/11.2 |
| 16'-6" | Total Load | 876 | 1,126 | 1,411 | 1,411 | | | 405 | 439 | 726 | 851 | 1,315 | 1,689 | 2,107 | 2,117 |
| | Deflection L/240 | 698 | 1,020 | * | * | | | 314 | 340 | 557 | 652 | 1,047 | 1,530 | * | * |
| | Min. End/Int. Bearing (in.) | 2.8/7.0 | 3.6/9.0 | 4.5/11.3 | 4.5/11.3 | | | 1.5/3.5 | 1.5/3.5 | 1.6/3.9 | 1.8/4.6 | 2.8/7.0 | 3.6/9.0 | 4.5/11.2 | 4.5/11.2 |
| 18'-6" | Total Load | 656 | 892 | 1,113 | 1,256 | | | 285 | 309 | 515 | 605 | 984 | 1,339 | 1,670 | 1,884 |
| | Deflection L/240 | 502 | 737 | 1,030 | * | | | 224 | 243 | 399 | 467 | 754 | 1,106 | 1,545 | * |
| | Min. End/Int. Bearing (in.) | 2.4/5.9 | 3.2/8.0 | 4.0/10.0 | 4.5/11.3 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.7 | 2.4/5.9 | 3.2/8.0 | 4.0/10.0 | 4.5/11.2 |
| 20' | Total Load | 520 | 761 | 950 | 1,158 | | | 224 | 243 | 406 | 478 | 781 | 1,142 | 1,425 | 1,737 |
| | Deflection L/240 | 401 | 590 | 826 | 1,112 | | | 178 | 193 | 318 | 372 | 602 | 885 | 1,239 | 1,669 |
| | Min. End/Int. Bearing (in.) | 2.0/5.1 | 3.0/7.4 | 3.7/9.2 | 4.5/11.2 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 2.0/5.1 | 3.0/7.4 | 3.7/9.2 | 4.5/11.2 |
| 24' | Total Load | 300 | 448 | 635 | 798 | | | 124 | 135 | 230 | 272 | 450 | 672 | 952 | 1,197 |
| | Deflection L/240 | 235 | 348 | 490 | 663 | | | 104 | 112 | 185 | 218 | 353 | 522 | 735 | 995 |
| | Min. End/Int. Bearing (in.) | 1.5/3.6 | 2.1/5.3 | 3.0/7.5 | 3.7/9.4 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.6 | 2.1/5.3 | 3.0/7.5 | 3.7/9.4 |
| 28' | Total Load | 185 | 279 | 399 | 547 | | | 73 | 80 | 139 | 166 | 278 | 419 | 599 | 820 |
| | Deflection L/240 | 149 | 222 | 313 | 425 | | | 65 | 71 | 117 | 138 | 224 | 333 | 470 | 638 |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.6/3.9 | 2.2/5.6 | 3.0/7.6 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.6/3.9 | 2.2/5.6 | 3.0/7.6 |

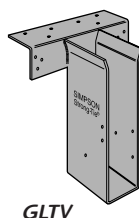
*Indicates TOTAL LOAD value controls.



WPU

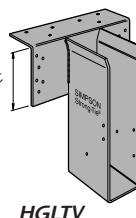


MIT

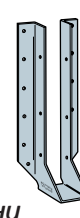


GLTV

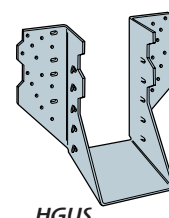
7/4" minimum depth support member required (HGLTV only)



HGLTV



HU



HGUS

Top Flange Hangers

| Supported Member Width | Supported Member Depth | Hanger | Nail Type | | Maximum Load (lbs) |
|------------------------|------------------------|----------------|-----------|--------------|--------------------|
| | | | Header | Joist | |
| 1 3/4" | 9 1/4" | WPU1.81/9.25 | 16d | 10d x 1 1/2" | 4,165 |
| | 9 1/2" | MIT9.5 | 16d | 10d x 1 1/2" | 1,565 |
| | | WPU1.81/9.5 | 16d | 10d x 1 1/2" | 4,165 |
| | 11 1/4" | WPU1.81/11.25 | 16d | 10d x 1 1/2" | 4,165 |
| | 11 7/8" | MIT11.88 | 16d | 10d x 1 1/2" | 1,565 |
| 3 1/2" | 14" | WPU1.81/14 | 16d | 10d x 1 1/2" | 4,165 |
| | 9 1/4" | GLTV3.56/9.25 | 16d | 16d | 4,260 |
| | 9 1/2" | GLTV3.59 | 16d | 16d | 4,260 |
| | 11 1/4" | GLTV3.56/11.25 | 16d | 16d | 4,260 |
| | 11 7/8" | GLTV3.511 | 16d | 16d | 4,260 |
| | 14" | GLTV3.514 | 16d | 16d | 4,260 |
| | 16" | GLTV3.516 | 16d | 16d | 4,260 |
| | 18" | GLTV3.518 | 16d | 16d | 4,260 |
| 5 1/4" | 20" | GLTV3.520 | 16d | 16d | 4,260 |
| | 9 1/4" | GLTV5.50/9.25 | 16d | 16d | 4,260 |
| | 9 1/2" | GLTV5.59 | 16d | 16d | 4,260 |
| | 11 1/4" | GLTV5.50/11.25 | 16d | 16d | 4,260 |
| | 11 7/8" | HGLTV5.511 | 16d | 16d | 6,000 |
| | 14" | HGLTV5.514 | 16d | 16d | 6,000 |
| | 16" | HGLTV5.516 | 16d | 16d | 6,000 |
| | 18" | HGLTV5.518 | 16d | 16d | 6,000 |
| 20" | HGLTV5.520 | 16d | 16d | 6,000 | |

• Maximum load for top flange hangers may not be increased for duration of load.

Face Mount Hangers

| Supported Member Width | Supported Member Depth | Hanger | Nail Type | | Maximum Load (lbs) |
|------------------------|------------------------|-------------|-----------|--------------|----------------------|
| | | | Header | Joist | |
| 1 3/4" | 9 1/4" – 9 1/2" | HU7 | 16d | 10d x 1 1/2" | 1,390 ⁽¹⁾ |
| | 11 1/4" – 14" | HU11 | 16d | 10d x 1 1/2" | 2,550 ⁽¹⁾ |
| | 14" | HU14 | 16d | 10d x 1 1/2" | 3,250 ⁽¹⁾ |
| 3 1/2" | 9 1/4" – 11 1/4" | HU48 | 16d | 10d | 1,160 |
| | 11 1/4" – 16" | HU412 | 16d | 10d | 1,855 ⁽¹⁾ |
| | | HGUS412 | 16d | 16d | 7,730 |
| | 14" – 20" | HU416 | 16d | 10d | 2,320 ⁽¹⁾ |
| 5 1/4" | 14" – 20" | HGUS414 | 16d | 16d | 8,185 |
| | | HU5.31/9 | 16d | 16d | 1,625 ⁽¹⁾ |
| | 9 1/4" – 11 7/8" | HU5.31/11 | 16d | 16d | 1,855 ⁽¹⁾ |
| | 9 1/2" – 14" | HU5.31/14 | 16d | 16d | 2,090 ⁽¹⁾ |
| | 11 7/8" – 18" | HGUS5.50/14 | 16d | 16d | 8,185 |

(1) Value may be increased for duration of load.

General Notes

The hangers listed are manufactured by Simpson Strong-Tie® Company, Inc. For additional information, refer to their literature.

Contact your Trus Joist representative for assistance with other hanger or support conditions.

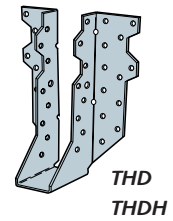
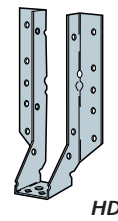
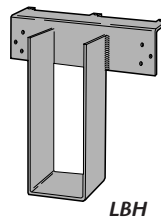
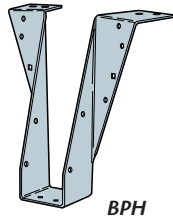
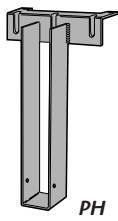
- Hanger capacity may be more or less than that of the supported member; therefore, both the hanger and the Microllam® LVL capacities must be checked.
- Leave 1/16" clearance (1/8" maximum) between the end of the supported member and the support member or hanger.

Header Assumptions

- Hangers supported by headers of Microllam® LVL, Parallam® PSL, TimberStrand® LSL, Douglas fir, southern pine or spruce-pine-fir.
- Top flange hangers supported by 6x6 minimum size headers.
- Face mount hangers supported by 2" minimum width headers.

Nailing Requirements

- Fill all round and positive angle nail holes with the proper nails.
- 10d x 1 1/2" nails are 9 gauge (0.148" diameter) by 1 1/2" long.
- 10d nails are 10d common (0.148" diameter) by 3" long.
- 16d nails are 16d common (0.162" diameter) by 3 1/2" long.



Top Flange Hangers

| Supported Member Width | Supported Member Depth | Hanger | Nail Type | | Maximum Load (lbs) |
|------------------------|------------------------|----------|--------------|--------------|--------------------|
| | | | Header | Joist | |
| 1 3/4" | 9 1/4" | PH17925 | 16d | 10d x 1 1/2" | 1,655 |
| | 9 1/2" | BPH1795 | 16d | 10d x 1 1/2" | 2,245 |
| | | PH1795 | 16d | 10d x 1 1/2" | 1,655 |
| | 11 1/4" | BPH17112 | 16d | 10d x 1 1/2" | 2,245 |
| | 11 7/8" | BPH17118 | 16d | 10d x 1 1/2" | 2,245 |
| | | PH17118 | 16d | 10d x 1 1/2" | 1,655 |
| 14" | BPH1714 | 16d | 10d x 1 1/2" | 2,245 | |
| 3 1/2" | 9 1/4" | LBH35925 | 16d R.S. | 16d | 6,010 |
| | 9 1/2" | LBH3595 | 16d R.S. | 16d | 6,010 |
| | 11 1/4" | LBH35112 | 16d R.S. | 16d | 6,010 |
| | 11 7/8" | LBH35118 | 16d R.S. | 16d | 6,010 |
| | 14" | LBH3514 | 16d R.S. | 16d | 6,010 |
| | 16" | LBH3516 | 16d R.S. | 16d | 6,010 |
| | 18" | LBH3518 | 16d R.S. | 16d | 6,010 |
| | 20" | LBH3520 | 16d R.S. | 16d | 6,010 |
| 5 1/4" | 9 1/4" | LBH52925 | 16d R.S. | 16d | 6,010 |
| | 9 1/2" | LBH5295 | 16d R.S. | 16d | 6,010 |
| | 11 1/4" | LBH52112 | 16d R.S. | 16d | 6,010 |
| | 11 7/8" | LBH52118 | 16d R.S. | 16d | 6,010 |
| | 14" | LBH5214 | 16d R.S. | 16d | 6,010 |
| | 16" | LBH5216 | 16d R.S. | 16d | 6,010 |
| | 18" | LBH5218 | 16d R.S. | 16d | 6,010 |
| | 20" | LBH5220 | 16d R.S. | 16d | 6,010 |

• Maximum load for top flange hangers may **not** be increased for duration of load.

Face Mount Hangers

| Supported Member Width | Supported Member Depth | Hanger | Nail Type | | Maximum Load (lbs) |
|------------------------|------------------------|---------|-----------|--------------|--------------------|
| | | | Header | Joist | |
| 1 3/4" | 9 1/4" – 11 1/4" | HD17925 | 16d | 10d x 1 1/2" | 2,105 |
| | 11 7/8" – 14" | HD17112 | 16d | 10d x 1 1/2" | 2,575 |
| | 14" | HD1714 | 16d | 10d x 1 1/2" | 2,955 |
| 3 1/2" | 9 1/4" – 14" | HD410 | 16d | 10d | 2,105 |
| | | THD410 | 16d | 10d | 4,445 |
| | 11 1/4" – 18" | HD412 | 16d | 10d | 2,575 |
| | | THD412 | 16d | 10d | 5,615 |
| | | HD414 | 16d | 10d | 2,810 |
| THD414 | 16d | 10d | 6,785 | | |
| 5 1/4" | 9 1/4" – 11 7/8" | HD5210 | 16d | 10d | 2,105 |
| | 11 1/4" – 18" | THD612 | 16d | 10d | 5,615 |
| | | THD614 | 16d | 10d | 6,785 |
| | 14" – 20" | THDH614 | 16d | 16d | 9,680 |

• Maximum load for face mount hangers may be increased for duration of load.

General Notes

The hangers listed are manufactured by United Steel Products Company. For additional information, refer to their literature.

Contact your Trus Joist representative for assistance with other hanger or support conditions.

- Hanger capacity may be more or less than that of the supported member; therefore, both the hanger and the Microllam® LVL capacities must be checked.
- Leave 1/16" clearance (1/8" maximum) between the end of the supported member and the support member or hanger.

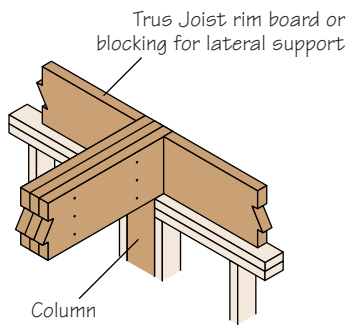
Header Assumptions

- Hangers supported by headers of Microllam® LVL, Parallam® PSL, TimberStrand® LSL, Douglas fir, southern pine or spruce-pine-fir.
- Top flange hangers supported by 6x6 minimum size headers.
- Face mount hangers supported by 2" minimum width headers.

Nailing Requirements

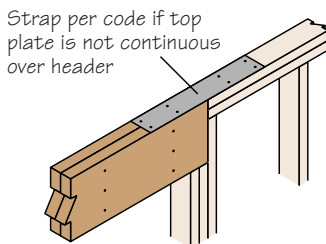
- Fill all round and dimple nail holes with the proper nails.
- 10d x 1 1/2" nails are 9 gauge (0.148" diameter) by 1 1/2" long.
- 10d nails are 10d common (0.148" diameter) by 3" long.
- 16d nails are 16d common (0.162" diameter) by 3 1/2" long.
- 16d R.S. nails are 9 gauge (0.148" diameter) by 3 1/2" long, ring-shank nails.

Bearing at Wall



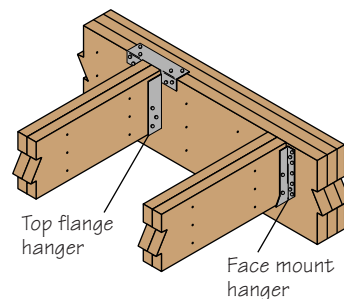
L1

Bearing for Door or Window Header



L2

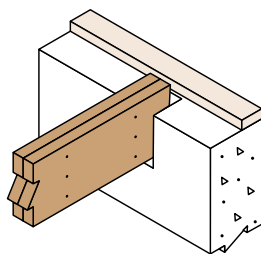
Beam to Beam Connection



L3

See Microllam® LVL FRAMING CONNECTORS on pages 14 and 15

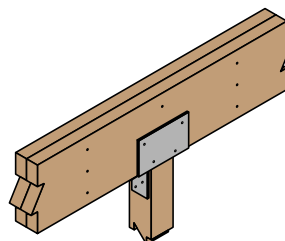
Bearing at Concrete Wall



L4

Protect wood from direct contact with concrete

Bearing at Column



L5

Verify Microllam® LVL beam bearing length below

Bearing Length Requirements

| Reaction (lbs) | Beam Width | | |
|----------------|------------|--------|--------|
| | 1 3/4" | 3 1/2" | 5 1/4" |
| 2,000 | 1 3/4" | 1 1/2" | 1 1/2" |
| 4,000 | 3 1/4" | 1 3/4" | 1 1/2" |
| 6,000 | 4 3/4" | 2 1/2" | 1 3/4" |
| 8,000 | 6 1/4" | 3 1/4" | 2 1/4" |
| 10,000 | 7 3/4" | 4" | 2 3/4" |
| 12,000 | | 4 3/4" | 3 1/4" |
| 14,000 | | 5 1/2" | 3 3/4" |
| 16,000 | | 6 1/4" | 4 1/4" |
| 18,000 | | 7" | 4 3/4" |
| 20,000 | | 7 3/4" | 5 1/4" |
| 22,000 | | | 5 3/4" |
| 24,000 | | | 6 1/4" |
| 26,000 | | | 6 3/4" |
| 28,000 | | | 7 1/4" |
| 30,000 | | | 7 3/4" |

Nails Installed on the Narrow Face

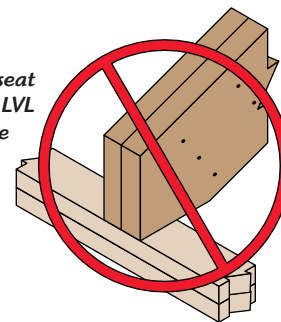
| Nail Size | Closest On-Center Spacing Per Row |
|---------------------------------|-----------------------------------|
| 8d (2 1/2") Common | 3" |
| 10d (3") or 12d (3 1/4") Common | 4" |
| 16d (3 1/2") Common | 8" |

• If more than one row of nails is used, the rows must be offset at least 1/2" and staggered.

General Notes

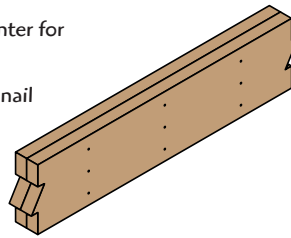
- Minimum bearing length: 1 1/2" at ends, 3 1/2" at intermediate supports.
- Full bearing width required.
- Bearing lengths for Microllam® LVL are based on a bearing stress of 750 psi.

DO NOT overhang seat cuts on Microllam® LVL beams beyond inside face of support member



1 3/4" Width Pieces:

- Minimum of 2 rows 12d (3 1/4") common nails at 12" on-center.
- Minimum of 3 rows 12d (3 1/4") common nails at 12" on-center for 14", 16", 18", and 20" beams.
- Nailed connections require an additional row of nails when nail size is smaller than specified above (minimum 0.128" x 3").
- Load must be applied evenly across entire beam width. Otherwise, use connections for side-loaded beams.



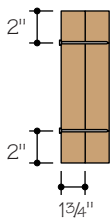
L6 Multiple pieces of Microllam® LVL can be nailed or bolted together to form a header or beam of the required size, up to a maximum width of 7"



Multiple-Member Connections for Side-Loaded Beams

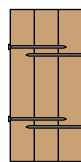
Assembly A

2 pcs. 1 3/4"



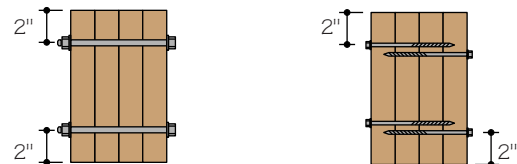
Assembly B

3 pcs. 1 3/4"



Assembly C

4 pcs. 1 3/4"



Maximum Uniform Load Applied to Either Outside Member (PLF)

| Multiple Assembly (see pictures) | Nailed Connection ⁽¹⁾⁽²⁾ | | Through-Bolted Connection ⁽³⁾ | | Structural Wood Screw Connection ⁽⁴⁾ | |
|----------------------------------|---|---|--|-------------------------------|---|--|
| | 2 Rows 12d (0.148" x 3.25") Common Wire at 12" o.c. | 3 Rows 12d (0.148" x 3.25") Common Wire at 12" o.c. | 2 Rows 1/2" Bolts at 24" o.c. | 2 Rows 1/2" Bolts at 12" o.c. | 2 Rows 1/4" x 3 1/2" Screw at 24" o.c. | 2 Rows 1/4" x 3 1/2" Screw at 12" o.c. |
| A | 470 | 705 | 505 | 1,015 | 500 | 995 |
| B | 355 | 530 | 380 | 760 | 375 | 745 |
| C | | | 340 | 680 | 330 ⁽⁵⁾ | 665 ⁽⁵⁾ |

(1) NAILED CONNECTION values may be doubled for 6" on-center or tripled for 4" on-center nail spacing.

(2) NAILED CONNECTION values require an additional row of nails when nail size is smaller than specified above (minimum 0.128" x 3").

(3) A307 bolts with washers required. Bolt holes to be 9/16" maximum.

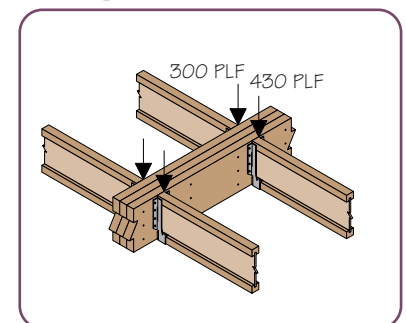
(4) Screws must have self-drilling tip and minimum bending yield strength of 217,000 psi. Lead holes may be required by local building official.

(5) 6" screws required.

General Notes

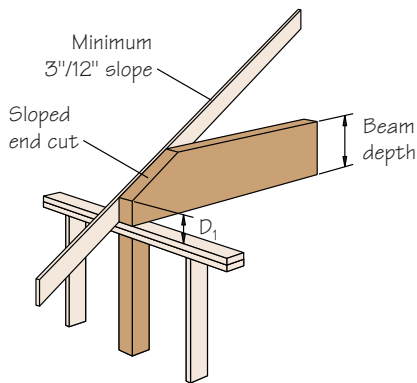
- Verify adequacy of beam in uniform load tables on pages 8-13.
- Values listed are for 100% stress level. Increase 15% for snow-loaded roof conditions or 25% for non-snow roof conditions, where code allows.
- Use specific gravity of 0.5 when designing connections.
- Beams wider than 7" require special consideration by the design professional.
- Connections are based on NDS® 2001.

Example Problem



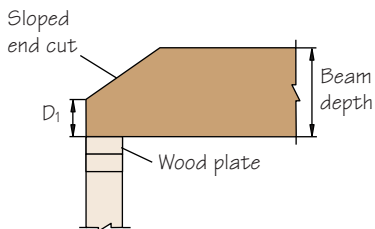
Solution:

First, check allowable load tables to verify that 3 pcs. can carry the total load of 730 plf with proper live load deflection criteria. Maximum load applied to either outside member is 430 plf. For a 3 pc. 1 3/4" multiple assembly, 2 rows 12d (3 1/4") nails at 12" on-center is good for only 355 plf. Therefore, use 3 rows 12d (3 1/4") nails at 12" on-center (good for 530 plf). Alternates: 2 rows 1/2" bolts or 1/4" x 3 1/2" screws at 12" on-center.

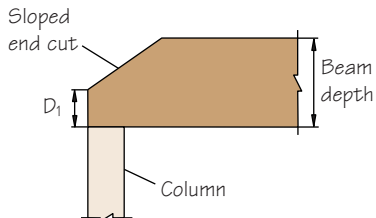


Tapered end cut detailed above is not allowed with TJI® joists

Wood Plate Connection



Column Connection



Allowable Reaction for 3 1/2" Microllam® LVL Beam Members⁽¹⁾ (lbs)

| Bearing | Beam Depth | D ₁ Outside Heel Height | | | | | | | | |
|----------------------------------|------------|------------------------------------|-------|--------|-------|--------|-------|--------|-------|-------|
| | | 4 1/2" | 5" | 5 1/2" | 6" | 6 1/2" | 7" | 7 1/2" | 8" | 10" |
| 3 1/2" Wood Plate ⁽²⁾ | 7 1/4" | 4,470 | 4,820 | 4,820 | 4,820 | | | | | |
| | 9 1/4" | 4,470 | 4,885 | 5,205 | 5,205 | 5,205 | 5,205 | 5,205 | 5,205 | |
| | 9 1/2" | 4,470 | 4,885 | 5,205 | 5,205 | 5,205 | 5,205 | 5,205 | 5,205 | |
| | 11 1/4" | 4,470 | 4,885 | 5,205 | 5,205 | 5,205 | 5,205 | 5,205 | 5,205 | 5,205 |
| | 11 7/8" | 4,470 | 4,885 | 5,205 | 5,205 | 5,205 | 5,205 | 5,205 | 5,205 | 5,205 |
| | 14" | | 4,885 | 5,205 | 5,205 | 5,205 | 5,205 | 5,205 | 5,205 | 5,205 |
| | 16" | | | | 5,205 | 5,205 | 5,205 | 5,205 | 5,205 | 5,205 |
| | 18" | | | | | 5,205 | 5,205 | 5,205 | 5,205 | 5,205 |
| 5 1/4" Wood Plate ⁽²⁾ | 7 1/4" | 4,820 | 4,820 | 4,820 | | | | | | |
| | 9 1/4" | 4,830 | 5,245 | 5,665 | 6,080 | 6,150 | 6,150 | 6,150 | | |
| | 9 1/2" | 4,830 | 5,245 | 5,665 | 6,080 | 6,320 | 6,320 | 6,320 | 6,320 | |
| | 11 1/4" | 4,830 | 5,245 | 5,665 | 6,080 | 6,495 | 6,910 | 7,325 | 7,480 | |
| | 11 7/8" | 4,830 | 5,245 | 5,665 | 6,080 | 6,495 | 6,910 | 7,325 | 7,740 | 7,810 |
| | 14" | 4,830 | 5,245 | 5,665 | 6,080 | 6,495 | 6,910 | 7,325 | 7,740 | 7,810 |
| | 16" | | | 5,665 | 6,080 | 6,495 | 6,910 | 7,325 | 7,740 | 7,810 |
| | 18" | | | | 6,080 | 6,495 | 6,910 | 7,325 | 7,740 | 7,810 |
| 3 1/2" Column ⁽³⁾ | 7 1/4" | 4,470 | 4,820 | 4,820 | 4,820 | | | | | |
| | 9 1/4" | 4,470 | 4,885 | 5,300 | 5,715 | 6,130 | 6,150 | 6,150 | 6,150 | |
| | 9 1/2" | 4,470 | 4,885 | 5,300 | 5,715 | 6,130 | 6,320 | 6,320 | 6,320 | |
| | 11 1/4" | 4,470 | 4,885 | 5,300 | 5,715 | 6,130 | 6,545 | 6,960 | 7,375 | 7,480 |
| | 11 7/8" | 4,470 | 4,885 | 5,300 | 5,715 | 6,130 | 6,545 | 6,960 | 7,375 | 7,895 |
| | 14" | | 4,885 | 5,300 | 5,715 | 6,130 | 6,545 | 6,960 | 7,375 | 9,040 |
| | 16" | | | | 5,715 | 6,130 | 6,545 | 6,960 | 7,375 | 9,040 |
| | 18" | | | | | 6,130 | 6,545 | 6,960 | 7,375 | 9,040 |

(1) For 1 3/4" and 5 1/4" beams multiply by 0.5 and 1.5, respectively.

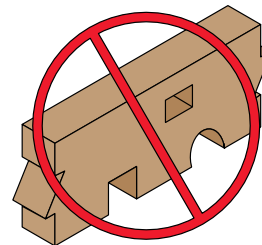
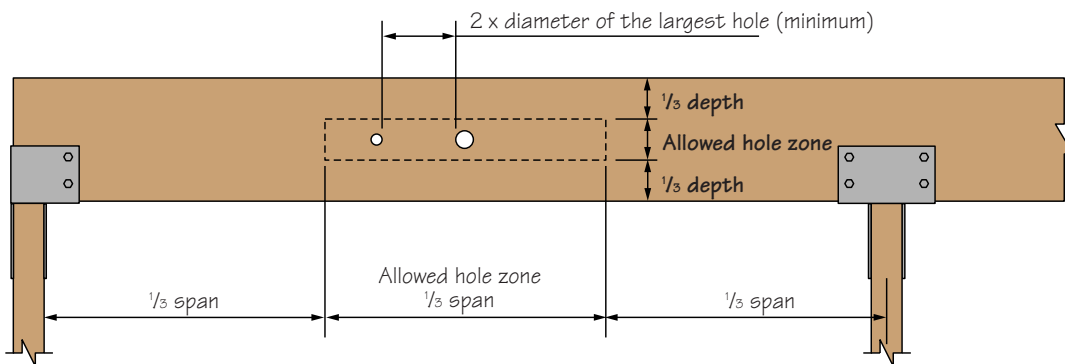
(2) Bearing lengths based on F_{c⊥} of 425 psi.

(3) Bearing lengths based on F_{c⊥} of 750 psi.

General Notes

- No increase for duration of load is permitted.
- No concentrated load within tapered cut.
- Table only considers downward loading. Contact your Trus Joist representative for assistance with uplift loading or other conditions.

Allowable Holes



General Notes

- Allowed hole zone suitable for uniformly loaded beams only.
- No rectangular holes.
- No holes in cantilevers.

| Beam Depth | Maximum Round Hole Size |
|---------------|-------------------------|
| 5 1/2" | 1 3/4" |
| 7 1/4" to 20" | 2" |

See illustration for allowed hole zone

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