

18" and 20" TJI[®] 360 • TJI[®] 560 Joists



LIMITED
AVAILABILITY

Featuring Silent Floor[®] Joists for Residential Applications

- ▶ Environmentally Responsible
- ▶ Uniform and Predictable
- ▶ Resists Bowing, Twisting, and Shrinking
- ▶ Lightweight for Fast Installation
- ▶ Significantly Reduces Callbacks
- ▶ Available in Long Lengths
- ▶ Product Warranty



Why choose the Silent Floor® joist? Here's why so many specifiers and builders do:



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The residential products in this guide are intended for use in single-family dwellings and are readily available through our nationwide network of distributors and dealers. For information on using these products in multi-family dwellings, refer to *TJI® Joists for Multi-Family Applications* (Reorder 2040).

For commercial applications such as retail stores, office buildings, schools, restaurants, hotels, nursing homes, etc., please refer to the **COMMERCIAL PRODUCT MANUAL** or 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 product, please call **1-800-628-3997**.

**Code Evaluations: ICC-ES Legacy Report ER-4979
and ICC ESR-1153**

EASY INSTALLATION— no surprises on the job or later on.

The same precision engineering that keeps a floor strong and quiet also makes it easier to install. The natural defects found in sawn lumber are engineered out, and dimensional stability is manufactured in.

And, at about half the weight of ordinary lumber joists, TJI® joists can be installed in a fraction of the time.

PRODUCT AVAILABILITY— our nation-wide distribution system ensures on-time delivery.

With seven TJI® joist manufacturing plants and over 70 distribution centers located strategically across North America, we make specifying, purchasing, and installing Silent Floor® joists a hassle-free experience.

DESIGN FLEXIBILITY— longer lengths for endless design options.

Silent Floor® joists are not limited by the dimensions or inconsistencies of ordinary sawn lumber. Longer uninterrupted spans with joists that won't bow, twist, or shrink means you have more design freedom than ever before.

INTEGRITY— guaranteed for the lifetime of the structure.

Builders appreciate our lifetime guarantee as much as home-owners do. After 30 years and more than three million homes, we at Trus Joist have so much confidence in our Silent Floor® joists that we guarantee them for the life of the home.



HOMEBUYER'S GUARANTEE

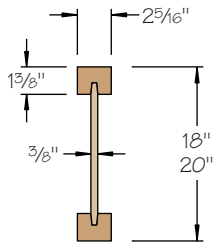
We guarantee that the Trus Joist products used in your home have been manufactured to precise tolerances and are free from defects in materials and workmanship. In the unlikely event that your Silent Floor® joist develops squeaks or any other problem caused by such defects, and provided that your floor joists have been properly installed, we will promptly remedy that problem at no cost to you.

In addition, if you call us with a problem that you believe may be caused by our products, our representative will contact you within one business day to evaluate the problem and help solve it. Guaranteed.

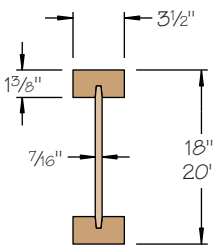
This guarantee is effective for the life of your home.

1-800-628-3997

Not all products are available in all markets. Contact your Trus Joist representative for information.



TJI® 360 joists



TJI® 560 joists

L/480 Live Load Deflection

Depth	TJI®	40 PSF Live Load / 10 PSF Dead Load			40 PSF Live Load / 25 PSF Dead Load		
		16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.
18"	360	28'-8"	26'-10" ⁽¹⁾	21'-5" ⁽¹⁾	24'-9" ⁽¹⁾	20'-7" ⁽¹⁾	16'-6" ⁽¹⁾
	560	32'-5"	30'-7" ⁽¹⁾	25'-2" ⁽¹⁾	29'-1"⁽¹⁾	24'-2" ⁽¹⁾	19'-4" ⁽¹⁾
20"	360	31'-0" ⁽¹⁾	26'-10" ⁽¹⁾	21'-5" ⁽¹⁾	24'-9" ⁽¹⁾	20'-7" ⁽¹⁾	16'-6" ⁽¹⁾
	560	35'-1"	31'-6" ⁽¹⁾	25'-2" ⁽¹⁾	29'-1" ⁽¹⁾	24'-2" ⁽¹⁾	19'-4" ⁽¹⁾

L/360 Live Load Deflection (Minimum Criteria per Code)

Depth	TJI®	40 PSF Live Load / 10 PSF Dead Load			40 PSF Live Load / 25 PSF Dead Load		
		16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.
18"	360	31'-9" ⁽¹⁾	26'-10" ⁽¹⁾	21'-5" ⁽¹⁾	24'-9" ⁽¹⁾	20'-7" ⁽¹⁾	16'-6" ⁽¹⁾
	560	35'-11" ⁽¹⁾	31'-6" ⁽¹⁾	25'-2" ⁽¹⁾	29'-1"⁽¹⁾	24'-2" ⁽¹⁾	19'-4" ⁽¹⁾
20"	360	32'-3" ⁽¹⁾	26'-10" ⁽¹⁾	21'-5" ⁽¹⁾	24'-9" ⁽¹⁾	20'-7" ⁽¹⁾	16'-6" ⁽¹⁾
	560	37'-10" ⁽¹⁾	31'-6" ⁽¹⁾	25'-2" ⁽¹⁾	29'-1" ⁽¹⁾	24'-2" ⁽¹⁾	19'-4" ⁽¹⁾

Long term deflection under dead load, which includes the effect of creep, has not been considered. **Bold italic spans** reflect initial dead load deflection exceeding 0.33".

(1) Web stiffeners are required at intermediate supports of continuous span joists when the intermediate bearing length is **less** than 5/4" and the span on either side of the intermediate bearing is greater than the following spans:

TJI®	40 PSF Live Load / 10 PSF Dead Load			40 PSF Live Load / 25 PSF Dead Load		
	16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.
360	29'-4"	24'-5"	19'-6"	22'-7"	18'-9"	15'-0"
560	35'-10"	29'-10"	23'-10"	27'-7"	22'-11"	18'-4"

How to Use These Tables

1. Determine the appropriate live load deflection criteria.
2. Identify the live and dead load condition.
3. Select on-center spacing.
4. Scan down the column until you meet or exceed the span of your application.
5. Select TJI® joist and depth.

Live load deflection is not the only factor that affects how a floor will perform. To more accurately predict floor performance, use our TJI-Pro™ Rating system.

General Notes

- Tables are based on:
 - Uniform loads.
 - More restrictive of simple or continuous span.
 - Clear distance between supports (1 3/4" minimum end bearing).
- Assumed composite action with a single layer of 24" on-center span-rated, glue-nailed floor panels for deflection only. **Spans shall be reduced 6" when floor panels are nailed only.**
- Spans generated from Trus Joist software may exceed the spans shown in these tables because software reflects actual design conditions.
- For loading conditions not shown, refer to software or to load tables on page 10.

Design Properties

Design Properties (100% Load Duration)

Depth	TJI®	Basic Properties				Reaction Properties		
		Joist Weight (lbs/ft)	Maximum Resistive Moment ⁽¹⁾ (ft-lbs)	Joist Only EI x 10 ⁶ (lbs-in. ²)	Maximum Vertical Shear (lbs)	1 1/4" End Reaction (lbs)	3 1/2" Intermediate Reaction (lbs)	
						No Web Stiffeners	With Web Stiffeners	
18"	360	3.7	9,465	1,085	2,425	1,080	2,460	2,815
	560	4.8	14,550	1,631	3,030	1,265	3,000	3,475
20"	360	4.0	10,515	1,376	2,660	1,080	2,460	2,815
	560	5.1	16,165	2,064	3,345	1,265	3,000	3,475

(1) **Caution:** Do not increase joist moment design properties by a repetitive member use factor.

General Notes

- Design reaction includes all loads on the joist. Design shear is computed at the face of supports including all loads on the span(s). Allowable shear may sometimes be increased at interior supports in accordance with ICC ESR-1153 and these increases are reflected in span tables.
- The following formulas approximate the uniform load deflection of Δ (inches):

For TJI® 360 Joists

$$\Delta = \frac{22.5 wL^4}{EI} + \frac{2.67 wL^2}{d \times 10^5}$$

For TJI® 560 Joists

$$\Delta = \frac{22.5 wL^4}{EI} + \frac{2.29 wL^2}{d \times 10^5}$$

w = uniform load in pounds per linear foot
 L = span in feet
 d = out-to-out depth of the joist in inches
 EI = value from table above

TJI® joists are intended for dry-use applications

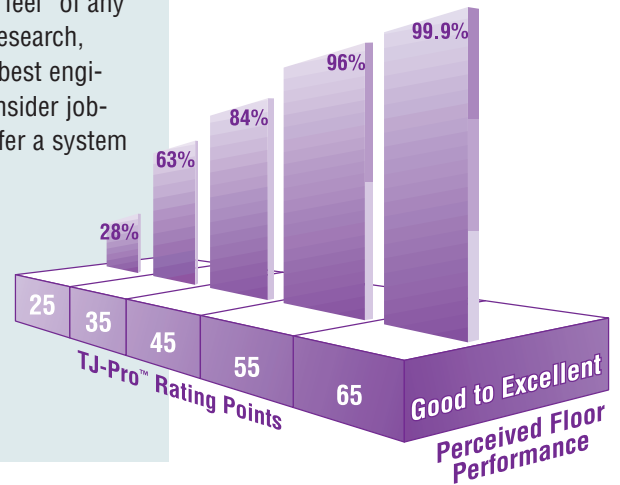
IT'S ABOUT CHOICE—

The TJ-Pro™ Rating System is a sophisticated computer model for predicting floor performance and evaluating the relationship between the cost and the “feel” of any given floor system. Its methodology is based on extensive laboratory research, more than one million installations, and the combined expertise of the best engineers in the field. TJ-Pro™ Rating goes beyond deflection criteria to consider job-specific needs and expectations. In many cases, TJ-Pro™ Rating will offer a system that improves performance while actually reducing costs!

TJ-PRO™ RATING SYSTEM FEATURES:

- Works as part of Trus Joist’s TJ-Beam® and TJ-Xpert® software.
- Provides a new method for accurately predicting floor performance.
- Takes perceptions of the homeowner into account.
- Provides cost comparison.

How do most people perceive a floor assembly with a TJ-Pro™ Rating of 45 points? 84% find it good to excellent and 16% find it marginal to unacceptable.



Allowable Holes

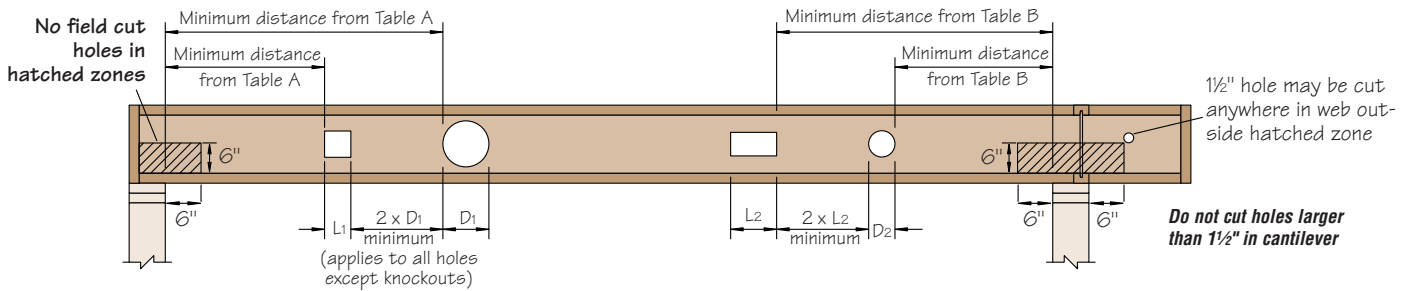


Table A—End Support
Minimum distance from edge of hole to inside face of nearest end support

Depth	TJI®	● Round Hole Size						■ Square or Rectangular Hole Size							
		4"	6"	8"	10"	12"	15"	17"	4"	6"	8"	10"	12"	15"	17"
18"	360	1'-0"	1'-0"	1'-0"	2'-0"	5'-0"	10'-0"	1'-0"	1'-0"	5'-0"	10'-0"	11'-0"	13'-6"		
	560	1'-0"	1'-0"	1'-0"	1'-0"	5'-0"	11'-0"	1'-0"	1'-6"	6'-6"	11'-0"	12'-0"	14'-6"		
20"	360	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	7'-0"	10'-6"	1'-0"	1'-0"	2'-6"	8'-0"	11'-6"	14'-0"	15'-6"
	560	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	7'-0"	11'-0"	1'-0"	1'-0"	4'-0"	9'-6"	12'-6"	14'-6"	15'-6"

Table B—Intermediate or Cantilever Support
Minimum distance from edge of hole to inside face of nearest intermediate or cantilever support

Depth	TJI®	● Round Hole Size						■ Square or Rectangular Hole Size							
		4"	6"	8"	10"	12"	15"	17"	4"	6"	8"	10"	12"	15"	17"
18"	360	1'-0"	1'-0"	3'-0"	6'-0"	9'-0"	15'-0"		1'-0"	4'-0"	9'-0"	14'-6"	16'-6"	19'-6"	
	560	1'-0"	1'-0"	2'-0"	6'-0"	10'-0"	16'-6"		1'-0"	6'-0"	11'-6"	16'-6"	18'-0"	20'-0"	
20"	360	1'-0"	1'-0"	1'-0"	3'-0"	6'-0"	11'-0"	15'-6"	1'-0"	1'-6"	7'-0"	12'-6"	16'-6"	19'-0"	21'-0"
	560	1'-0"	1'-0"	1'-0"	1'-6"	5'-6"	12'-0"	16'-0"	1'-0"	3'-0"	8'-6"	14'-0"	17'-6"	19'-6"	20'-6"

Rectangular holes based on measurement of longest side.

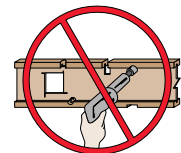
How to Use These Tables

1. Using Table A (end support) and/or Table B (intermediate or cantilever support), determine the hole shape/size and select the TJI® joist and depth.
2. Scan horizontally until you intersect the the correct hole size column.
3. Measurement shown is minimum distance from edge of hole to support.
4. Place the hole so that the required minimum distance from the end **and** the intermediate or cantilever support is maintained.

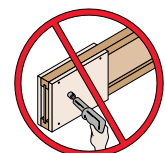
General Notes

- Holes may be located vertically anywhere within the web. Leave 1/8" of web (minimum) at top and bottom of hole.
- Knockouts are located in web at approximately 12" on-center; they do not affect hole placement.
- For simple span (5' minimum) uniformly loaded joists meeting the requirements of this guide, one maximum size round hole may be located at the center of the joist span **provided no other holes occur in the joist.**
- Distances are based on the maximum uniform loads shown in this guide. For other load conditions or hole configurations use TJ-Beam® software or contact your Trus Joist representative.

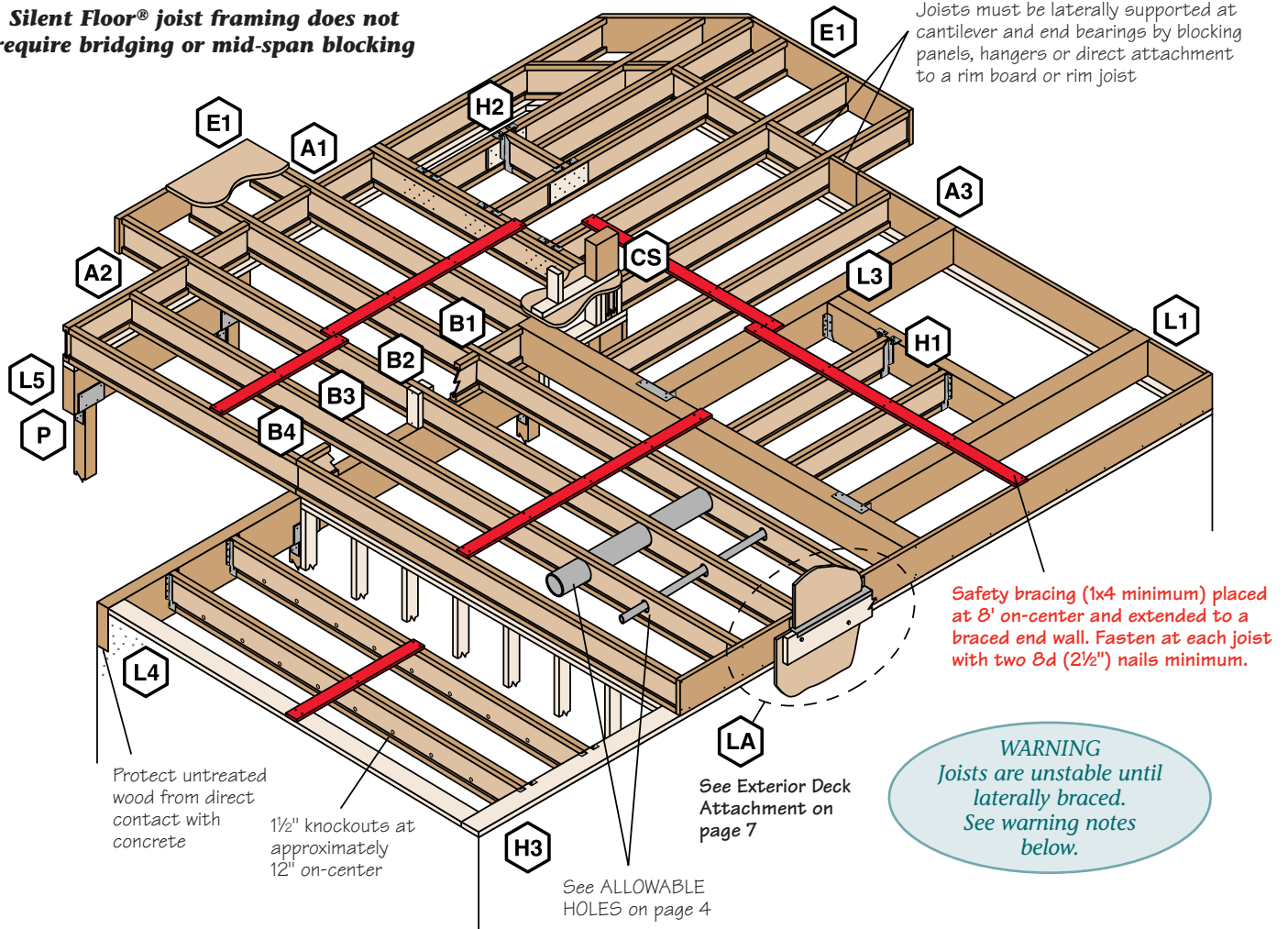
DO NOT cut or notch flange



DO NOT cut holes in cantilever reinforcement



Silent Floor® joist framing does not require bridging or mid-span blocking




DO NOT allow workers to walk on joists until braced. INJURY MAY RESULT.



DO NOT stack building materials on unsheathed joists. Stack only over beams or walls.

WARNING

Joists are unstable until braced laterally

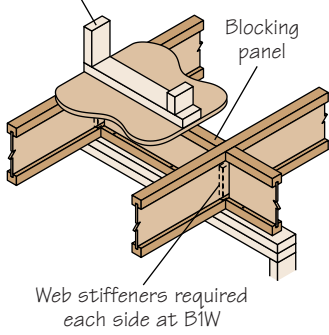
Bracing Includes:

- Blocking
- Hangers
- Rim Board
- Sheathing
- Rim Joist
- Strut Lines

WARNING NOTES: Lack of concern for proper bracing during construction can result in serious accidents. Under normal conditions if the following guidelines are observed, accidents will be avoided.

1. All blocking, hangers, rim boards, and rim joists at the end supports of the TJI® joists must be completely installed and properly nailed.
2. Lateral strength, like a braced end wall or an existing deck, must be established at the ends of the bay. This can also be accomplished by a temporary or permanent deck (sheathing) fastened to the first 4 feet of joists at the end of the bay.
3. Safety bracing lines of 1x4 (minimum) must be nailed to a braced end wall or sheathed area as in note 2 and to each joist. Without this bracing, buckling sideways or rollover is highly probable under light construction loads—like a worker or one layer of unnailed sheathing.
4. Sheathing must be totally attached to each TJI® joist before additional loads can be placed on the system.
5. Ends of cantilevers require safety bracing on both the top and bottom flanges.
6. The flanges must remain straight within a tolerance of 1/2" from true alignment.

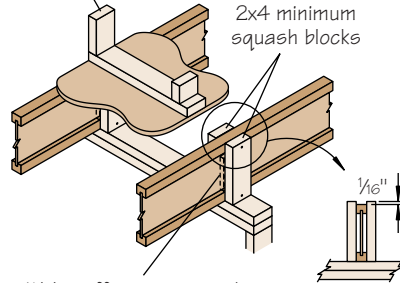
Load bearing or shear wall above
(must stack over wall below)



Web stiffeners required
each side at B1W

B1 **B1W**

Load bearing wall above
(must stack over wall below)

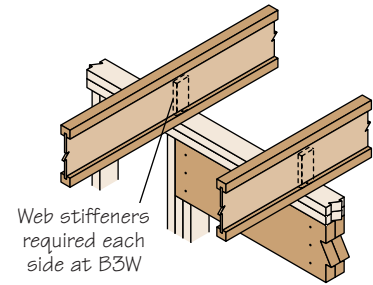


Web stiffeners required
each side at B2W

B2 **B2W**

Blocking panels may be required
with shear walls above or below—
see detail B1

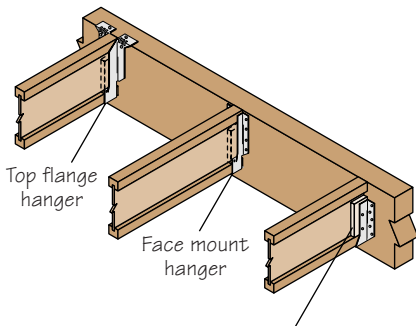
**Intermediate Bearing –
No Load Bearing Wall Above**



Web stiffeners
required each
side at B3W

B3 **B3W**

Blocking panels may be required
with shear walls above or below—
see detail B1



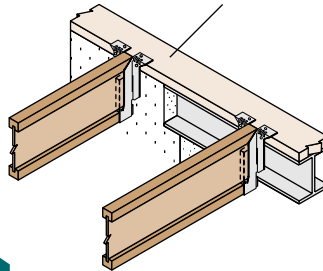
Top flange
hanger

Face mount
hanger

Web stiffeners required if sides of
hanger do not laterally support at
least 3/8" of TJI® joist top flange

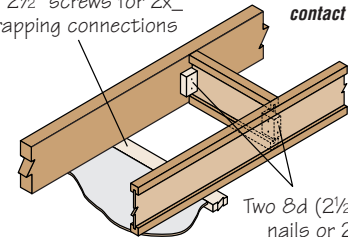
H1

Bearing plate:
Flush plate with inside
face of wall or beam



H3

Two 2 1/2" screws for 2x_ strapping connections

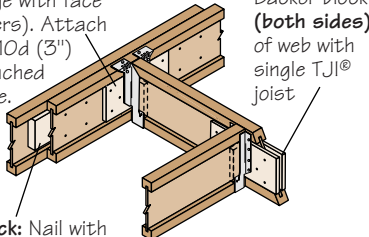


Apply subfloor
adhesive to all
contact surfaces

Applications shown in this guide do not require
blocking, strapping, or a directly applied ceiling;
however, backspan bracing of cantilever applications
is required when specified by software

PB1

Backer block: Install tight
to top flange (tight to
bottom flange with face
mount hangers). Attach
with fifteen 10d (3")
box nails, clinched
when possible.



Backer block
(both sides)
of web with
single TJI®
joist

Filler block: Nail with
fifteen 10d (3") box nails, clinched. Use fifteen 16d
(3 1/2") box nails from each side with TJI® 560 joists.

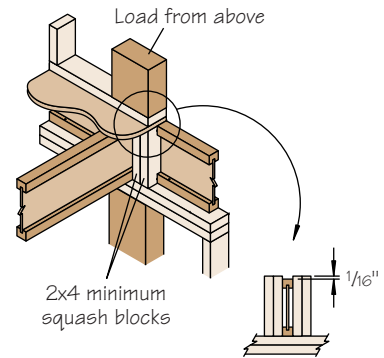
With top flange hangers, backer block
required only for downward loads exceeding
250 lbs or for uplift conditions

H2

**Filler and Backer Block
Sizes**

TJI®	360	560
Depth	18" or 20"	18" or 20"
Filler Block* (Detail H2)	2x12 + 1/2" sheathing	Two 2x12
Backer Block* (Detail F1 or H2)	1" net	2x12

* If necessary, increase filler and backer block height
for face mount hangers and maintain 1/8" gap at top
of joist; see detail W. Filler and backer block dimen-
sions should accommodate required nailing without
splitting.



2x4 minimum
squash blocks

Use 2x4 minimum squash blocks to transfer
load around TJI® joist

CS

**Fastening of Floor Panels to TJI® Joist
Flanges and Trus Joist Rim Board**

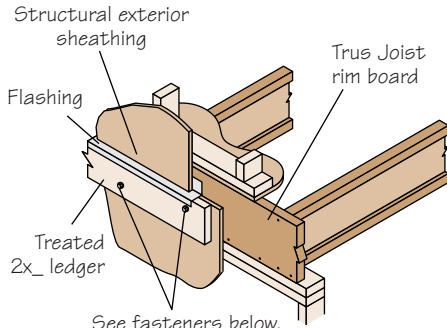
Nail Size	Closest On-Center Spacing per Row	
	TJI®	Trus Joist Rim Board
	360 and 560	1 1/4"
8d (2 1/2") box	2"	4"
8d (2 1/2") common	2"	4"
10d (3"), 12d (3 1/4") box	2"	4"
10d (3"), 12d (3 1/4") common	3"	4"
16d (3 1/2") common	4"	6"(1)

(1) Can be reduced to 4" on-center with maximum nail penetration of 1 3/8" into the narrow edge.

General Notes

- Maximum spacing of nails is 24" on-center.
- If more than one row of nails is used, the rows must be offset at least 1/2" and staggered.
- 14 ga. staples may be substituted for 8d (2 1/2") nails if minimum penetration of 1" is achieved.
- Table also applies for the attachment of TJI® rim joists and blocking panels to the wall plate.

Exterior Deck Attachment



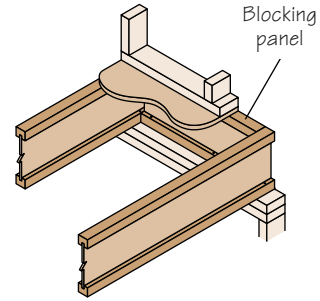
See fasteners below.
Maintain 2" distance (minimum) from edge of ledger to fastener.

LA

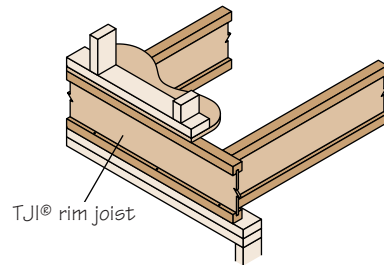
Fastener	Allowable Load (lbs) ⁽¹⁾	
	1 1/4" Rim Board	
3/8" lag bolt	400	
1/2" lag bolt	475	

(1) Allowable load determined in accordance with AC 124.

• Corrosion-resistant fasteners required for wet-service applications.



A1



A2

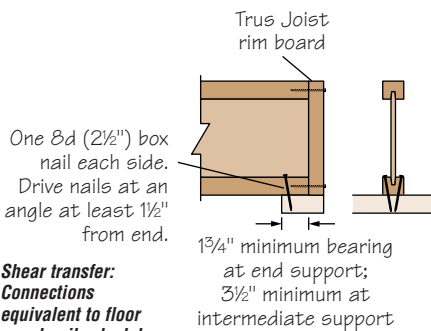
Vertical Load Transfer at Bearing

Allowable Uniform Vertical Loads (PLF)	
TJI® rim joist or blocking	1,550
Trus Joist rim board or blocking	3,450

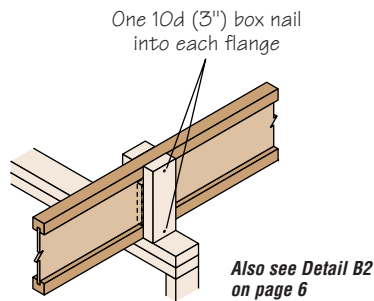
• Loads may not be increased for duration of load.

TJI® Joist Nailing Requirements at Bearing

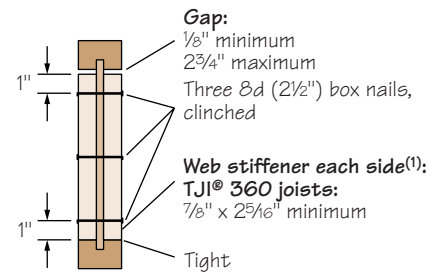
TJI® Joist to Bearing Plate



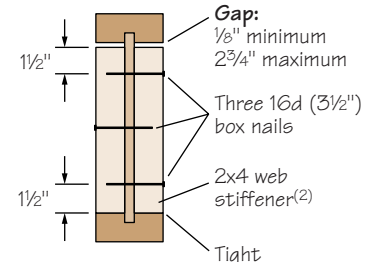
Squash Blocks to TJI® Joist (Load bearing wall above)



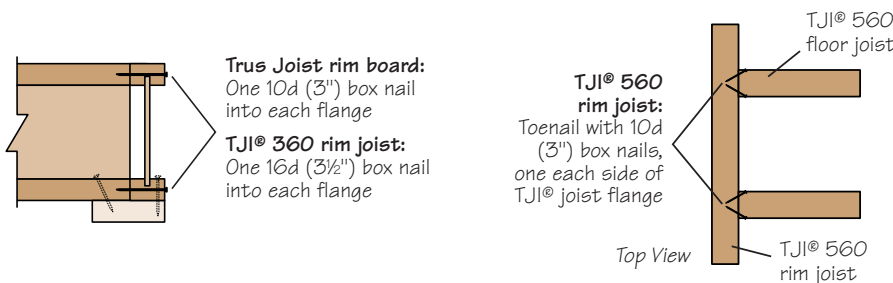
Web Stiffener Attachment



TJI® 560 joists only



Rim to TJI® Joist



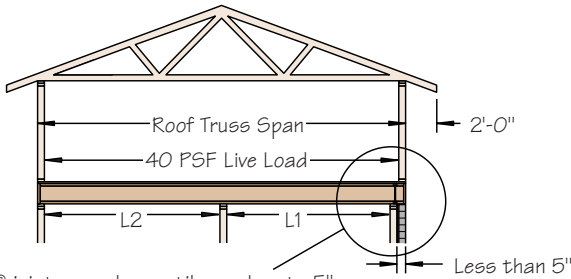
W

(1) Web stiffener material shall be PS1 or PS2 sheathing, face grain vertical

(2) 2x4 construction grade or better

Cantilevers less than 5" (Brick Ledge)

(See Section A of Cantilever Table on page 9)

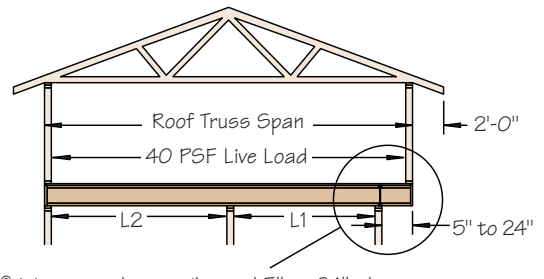


TJI® joists may be cantilevered up to 5" when supporting roof load, assuming:

- simple or continuous span
- $L1 \leq L2$

Cantilevers 5" to 24"

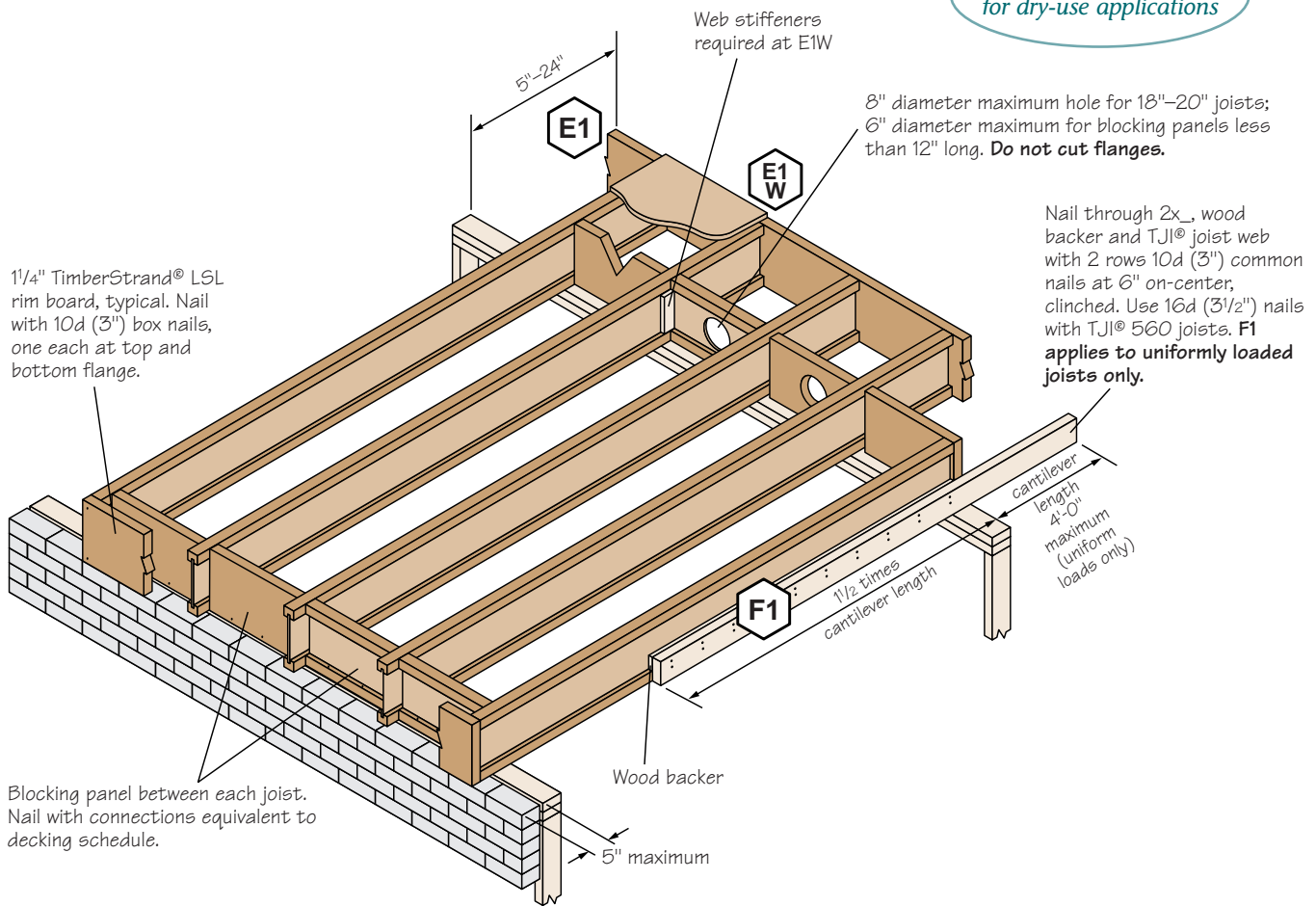
(See Section B of Cantilever Table on page 9)



TJI® joists may be cantilevered 5" to 24" when supporting roof load, assuming:

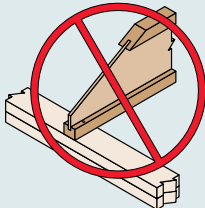
- simple or continuous span
- $L1 \leq L2$

TJI® joists are intended for dry-use applications



These Conditions Are NOT Permitted

DO NOT bevel cut joist beyond inside face of wall

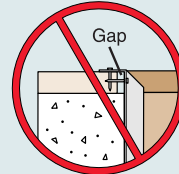


DO NOT use sawn lumber for rim board or blocking



Sawn lumber may shrink after installation

DO NOT install hanger overhanging face of plate or beam



Flush bearing plate with inside face of wall or beam

Cantilever Reinforcement

Depth	TJI®	Roof Truss Span	Section A: Cantilevers less than 5" (Brick Ledge)									Section B: Cantilevers 5" to 24"											
			Roof Total Load									Roof Total Load											
			35 PSF			45 PSF			55 PSF			35 PSF			45 PSF			55 PSF					
			On-center Joist Spacing									On-center Joist Spacing											
			16"	19.2"	24"	16"	19.2"	24"	16"	19.2"	24"	16"	19.2"	24"	16"	19.2"	24"	16"	19.2"	24"			
18" 20"	360	24'			X			X		X	X												
		26'			X			X	X		X	X										E1W	
		28'			X			X	X	X	X	X											E1W
		30'		X	X			X	X	X	X	X											E1W
		32'		X	X	X	X	X	X	X	X	X											E1W
		34'		X	X	X	X	X	X	X	X	X											E1W
		36'		X	X	X	X	X	X	X	X	X			E1W			X					E1W
		38'	X	X	X	X	X	X	X	X	X	X			E1W			X					E1W
		40'	X	X	X	X	X	X	X	X	X	X			E1W			E1W	X				X
18" 20"	560	24'						X			X												
		26'						X			X	X											
		28'			X			X			X	X											
		30'			X			X	X		X	X											
		32'			X			X	X	X	X	X											
		34'			X			X	X	X	X	X											E1W
		36'		X	X			X	X	X	X	X											E1W
		38'		X	X	X	X	X	X	X	X	X											E1W
		40'		X	X	X	X	X	X	X	X	X											E1W

How to Use This Table

1. Identify TJI® joist and depth.
2. Locate the ROOF TRUSS SPAN (horizontal) that meets or exceeds your condition.
3. Identify the cantilever condition (less than 5" or 5" to 24") and locate the ROOF TOTAL LOAD and ON-CENTER JOIST SPACING for your application.
4. Scan down to find the appropriate cantilever detail and refer to drawing on page 8:
 - Blank cells indicate no reinforcement is required
 - X indicates cantilever will not work. Use TJ-Beam® or TJ-Xpert® software or reduce spacing of joists and recheck table.

General Notes

- Tables are based on:
 - 15 psf roof dead load on a horizontal projection.
 - 80 plf exterior wall load with 3'-0" maximum width window or door openings. For larger openings, or multiple 3'-0" width openings spaced less than 6'-0" on-center, additional joists beneath the opening's trimmers may be required.
 - More restrictive of simple or continuous span.
 - Roof truss with 24" soffits.
- Designed for 2x4 and 2x6 plate widths.
- For conditions beyond the scope of this table, including cantilevers longer than 24", use our TJ-Beam® or TJ-Xpert® software.

Floor—100% (PLF)

Depth	TJI®	Joist Clear Span													
		6'		8'		10'		12'		14'		16'		18'	
		Live Load L/480	Total Load	Live Load L/480	Total Load	Live Load L/480	Total Load	Live Load L/480	Total Load	Live Load L/480	Total Load	Live Load L/480	Total Load	Live Load L/480	Total Load
18"	360	*	320	*	241	*	193	*	162	*	139	*	121	*	108
	560	*	390	*	294	*	236	*	197	*	169	*	148	*	132
20"	360	*	320	*	241	*	193	*	162	*	139	*	121	*	108
	560	*	390	*	294	*	236	*	197	*	169	*	148	*	132

Floor—100% (PLF)

Depth	TJI®	Joist Clear Span											
		20'		22'		24'		26'		28'		30'	
		Live Load L/480	Total Load	Live Load L/480	Total Load	Live Load L/480	Total Load	Live Load L/480	Total Load	Live Load L/480	Total Load	Live Load L/480	Total Load
18"	360	*	97	*	88	76	81	61	75				
	560	*	119	*	108	*	99	89	91	72	85	60	79
20"	360	*	97	*	88	*	81	*	75				
	560	*	119	*	108	*	99	*	91	*	85	75	79

*Indicates TOTAL LOAD value controls.

How to Use These Tables

1. Calculate actual total and live load in pounds per linear foot (plf).
2. Select appropriate JOIST CLEAR SPAN.
3. Scan down the column to find a TJI® joist that meets or exceeds actual total and live loads.



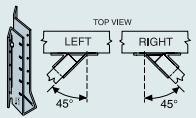
General Notes


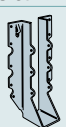
- Tables are based on:
 - Uniform loads.
 - No composite action provided by sheathing.
 - More restrictive of simple or continuous span.
- TOTAL LOAD limits joist deflection to L/240.
- LIVE LOAD is based on joist deflection of L/480.
- If a live load deflection limit of L/360 is desired, multiply value in LIVE LOAD column by 1.33. The resulting live load shall not exceed the TOTAL LOAD shown.



PSF to PLF Conversions


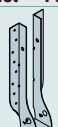
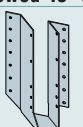
O.C. Spacing	Load in Pounds Per Square Foot (PSF)								
	20	25	30	35	40	45	50	55	60
	Load in Pounds Per Linear Foot (PLF)								
12"	20	25	30	35	40	45	50	55	60
16"	27	34	40	47	54	60	67	74	80
19.2"	32	40	48	56	64	72	80	88	96
24"	40	50	60	70	80	90	100	110	120

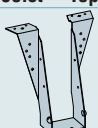
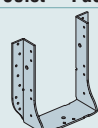
Single Joist—Top Flange						Single Joist—Face Mount				Face Mount Skewed 45° Joist Hanger			
													
Depth	TJI®	Hanger	Capacity (lbs)	Nailing		Hanger	Capacity (lbs)	Nailing		Hanger	Capacity (lbs)	Nailing	
				Header	Joist			Header	Joist			Header	Joist
18"	360	MIT3518	1,260	10d	10d x 1½"	MIU2.37/18	1,260	10d	10d x 1½"	SURI/LI3514/20	1,355	16d	10d x 1½"
	560	MIT418	1,460	10d	10d x 1½"	MIU418	1,460	10d	10d x 1½"	SUR/L414	1,460	16d	10d x 1½"
20"	360	MIT3520	1,260	10d	10d x 1½"	MIU2.37/20	1,260	10d	10d x 1½"	SURI/LI3514/20	1,355	16d	10d x 1½"
	560	MIT420	1,460	10d	10d x 1½"	MIU420	1,460	10d	10d x 1½"	SUR/L414	1,460	16d	10d x 1½"

Double Joist—Top Flange						Double Joist—Face Mount			
									
Depth	TJI®	Hanger	Capacity (lbs)	Nailing		Hanger	Capacity (lbs)	Nailing	
				Header	Joist			Header	Joist
18"	360	WP3518-2	2,525	16d	10d x 1½"	MIU4.75/18	2,525	16d	10d x 1½"
	560	WPI418-2	2,925	16d	10d x 1½"	HU414-2	2,680	16d	16d
20"	360	WP3520-2	2,525	16d	10d x 1½"	MIU4.75/20	2,525	16d	10d x 1½"
	560	WPI420-2	2,925	16d	10d x 1½"	HU414-2	2,680	16d	16d

Hanger information on this page was provided by either Simpson Strong-Tie™ or USP Structural Connectors™. For additional information, please refer to their literature.

Framing Connectors (USP Structural Connectors™)

Single Joist—Top Flange						Single Joist—Face Mount				Face Mount Skewed 45° Joist Hanger ⁽¹⁾			
													
Depth	TJI®	Hanger	Capacity (lbs)	Nailing		Hanger	Capacity (lbs)	Nailing		Hanger	Capacity (lbs)	Nailing	
				Header	Joist			Header	Joist			Header	Joist
18"	360	THO23180	1,230	10d	10d x 1½"	THF23180	1,260	10d	10d x 1½"	SKH2324L/R	1,110	10d	10d x 1½"
	560	THO35180	1,430	10d	10d x 1½"	THF17157-2	1,460	10d	10d	SKH418L/R	1,460	16d	10d
20"	360	THO23200	1,230	10d	10d x 1½"	THF23180	1,260	10d	10d x 1½"	THF23140-SK45L/R	1,260	10d	10d x 1½"
	560	THO35200	1,430	10d	10d x 1½"	THF17157-2	1,460	10d	10d	SKH418L/R	1,460	16d	10d

Double Joist—Top Flange						Double Joist—Face Mount			
									
Depth	TJI®	Hanger	Capacity (lbs)	Nailing		Hanger	Capacity (lbs)	Nailing	
				Header	Joist			Header	Joist
18"	360	THO23180-2	2,765	16d	10d	THF23160-2	2,470	10d	10d
	560	BPH7118	3,185	16d	10d	HD7160	2,810	16d	10d
20"	360	THO23200-2	2,765	16d	10d	THF23160-2	2,470	10d	10d
	560	BPH7120	3,185	16d	10d	HD7160	2,810	16d	10d

General Notes

- Bold italic** hangers require web stiffeners.
- Capacities will vary with different nailing criteria or other support conditions; contact your Trus Joist representative for assistance.
- Hanger capacities shown are either joist bearing capacity or hanger capacity—whichever is less. Joist end reaction must be checked to ensure it does not exceed the capacity shown in the tables.
- All capacities are for downward loads at 100% duration of load.
- Fill all round, dimple, and positive angle nail holes.
- Use sloped seat hangers and beveled web stiffeners when TJI® joist slope exceeds ¼" per foot.
- Leave ⅛" clearance (⅛" maximum) between the end of the supported joist and the header or hanger.

Support Requirements

- Support material assumed to be Trus Joist structural composite lumber or sawn lumber (Douglas fir, southern pine, or spruce-pine-fir species).
- Minimum support width for single- and double-joist top mount hangers is 3".
- Minimum support width for face mount hangers with 10d and 16d nails is 1¼" and 2", respectively.

Footnote:

1. Miter cut is required at end of joist.

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Unparalleled Technical Support

Our goal is to help you build solid, durable, and comfortable homes by providing strong technical support to specifiers, dealers, and builders located throughout North America. With a staff of over 175 Trus Joist technical representatives, we are uniquely prepared to train our partners in providing comprehensive specification and installation. We enhance our training with cutting edge automation tools; these products include:

TJ-Beam® software

produces single-member sizing options in floor and roof applications for TJI® joists, Microllam® LVL, TimberStrand® LSL and Parallam® PSL beams, headers, and columns.

TJ-Xpert® software

tracks vertical loads throughout the structure and develops sizing solutions, material lists, framing plans, and installation details.

TJ-YardMate™ software

produces inventory solutions and cut lists for each home package with the least amount of cutting and waste.

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Rim Board,
Headers, Columns, and
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Beams and
Columns



Headers and
Beams

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Trus Joist warrants that its products will be free from manufacturing errors or defects in workmanship and material. In addition, provided the product is correctly installed and used, the company warrants the adequacy of its design for the normal and expected life of the building.



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