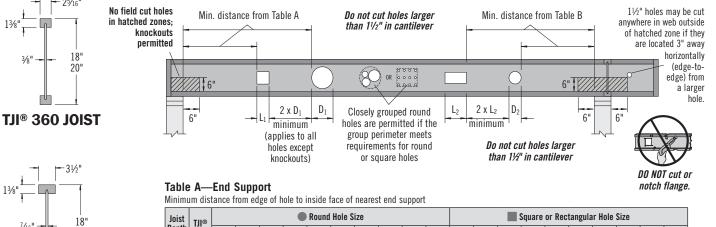


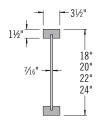
DEEP DEPTH TRUS JOIST® TJI® 360, 560, & 560D JOIST INSTALLATION GUIDE

ALLOWABLE HOLES—TJI® JOISTS



TJI® 560 JOIST

20'



TJI[®] 560D JOIST

TJI® joists and products in this guide are intended for dry-use applications.

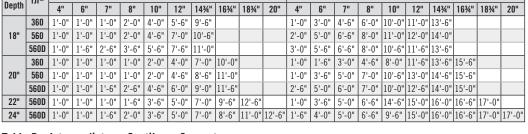


Table B—Intermediate or Cantilever Support

Minimum distance from edge of hole to inside face of nearest intermediate or cantilever support

Joist TJI®		Round Hole Size					Square or Rectangular Hole Size														
Depth		4"	6"	7"	8"	10"	12"	14¾"	16¾"	18¾"	20"	4"	6"	7"	8"	10"	12"	14¾"	16¾"	18¾"	20"
	360	1'-0"	1'-0"	1'-6"	3'-0"	6'-0"	9'-0"	14'-6"				1'-0"	4'-0"	6'-6"	9'-0"	14'-6"	16'-6"	19'-0"			
18"	560	1'-0"	1'-0"	1'-0"	2'-0"	6'-0"	10'-0"	15'-6"				1'-0"	6'-0"	8'-6"	11'-6"	16'-6"	18'-0"	19'-6"			
	560D	1'-0"	1'-0"	2'-6"	4'-6"	7'-6"	11'-0"	16'-6"				3'-0"	7'-6"	9'-6"	11'-6"	16'-0"	17'-0"	19'-0"			
	360	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	6'-0"	11'-0"	15'-0"			1'-0"	1'-6"	4'-0"	7'-0"	12'-6"	16'-6"	19'-0"	20'-6"		
20"	560	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	5'-6"	11'-6"	15'-6"			1'-0"	3'-0"	6'-0"	8'-6"	14'-0"	17'-6"	19'-0"	20'-6"		
	560D	1'-0"	1'-0"	1'-0"	1'-0"	4'-6"	8'-6"	13'-6"	17'-0"	1		1'-0"	5'-6"	8'-0"	10'-0"	15'-0"	18'-0"	19'-6"	20'-6"		
22"	560D	1'-0"	2'-6"	3'-6"	4'-6"	6'-6"	8'-0"	11'-0"	14'-6"	17'-6"		3'-6"	6'-6"	8'-6"	10'-0"	19'-0"	20'-0"	21'-0"	21'-6"	22'-0"	
24"	560D	2'-6"	4'-0"	5'-0"	5'-6"	7'-0"	8'-6"	11'-0"	13'-6"	16'-0"	17'-6"	5'-0"	7'-6"	9'-0"	10'-6"	14'-0"	20'-0"	21'-0"	21'-6"	22'-0"	22'-0"

- Leave 1/8" of web (minimum) at top and bottom of hole. DO NOT cut or notch joist flanges.
- Tables are based on maximum uniform load tables in current design literature.
- For simple span (5' minimum), uniformly loaded joists used in residential applications, one maximum size round hole may be located at the center of the joist span provided that no other holes occur in the joist.
- Knockouts are located in web at approximately 12" on-center; they do not affect hole placement.

IMPORTANT: PLEASE READ CAREFULLY!

WARNING: JOISTS ARE UNSTABLE UNTIL BRACED LATERALLY

BRACING INCLUDES: Blocking, Hangers, Rim Board, Sheathing, Rim Joist, Strut Lines







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

beams or walls.

DO NOT walk on joists that are lying flat.

1.888.453.8358

Lack of proper bracing during construction can result in serious accidents. Observe the following guidelines:

- 1. Properly install all blocking, hangers, rim boards, and rim joists at TJI® joist end supports.
- 2. Establish a permanent deck (sheathing), fastened to the first 4 feet of joists at the end of the bay or braced end wall.
- 3. Safety bracing of 1x4 (minimum) must be nailed to a braced end wall or sheathed area and to each joist.
- 4. Sheathing must be completely 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 1/2" from true alignment.

La Seguridad Ante Todo **ADVERTENCIA** Por Favor Lea Cuidadosamente

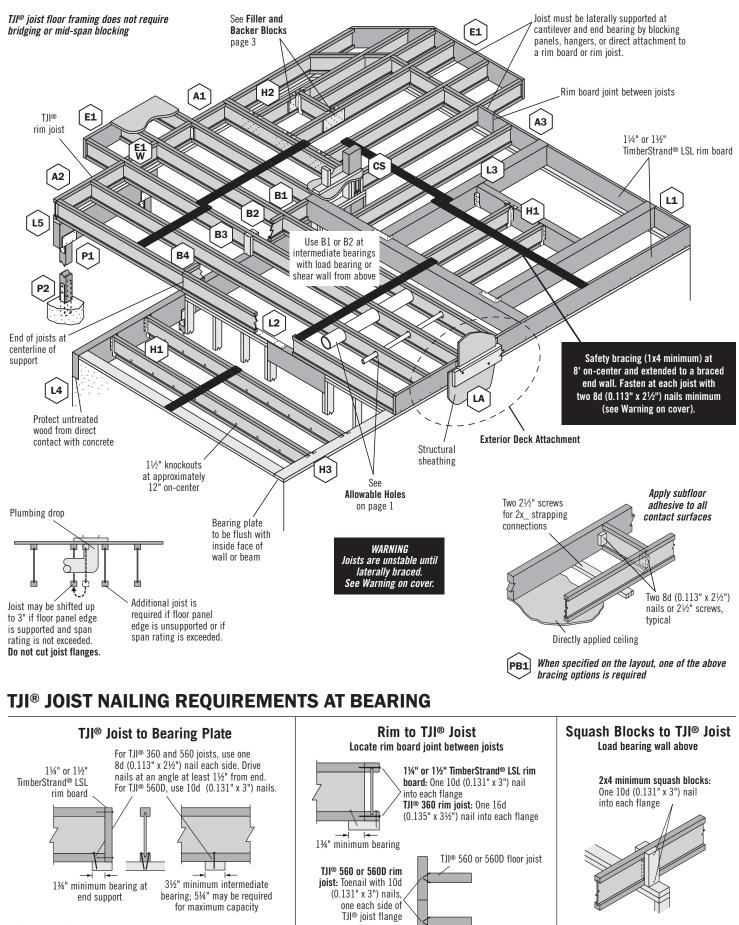
- · Las viguetas son inestables hasta que sean reforzadas lateralmente. Vea la
- guía de instalaciones **antes** de instalar las viguetas TJI®. No camine sobre las viguetas hasta que sean apuntaladas
- No ponga materiales de construcción sobre las viguetas TJI® antes de instalar el triplay. Ponga materials únicamente sobre vigas o muros.



- Les solives non contreventées latéralement sont instables. Voir le guide
- d'installation avant la pose des solives TJI®. Ne pas circuler sur les solives TJI® avant qu'elles ne soient adéquatement
- contreventées. Risque de blessure.
- Ne pas empilées des matériaux sur des solives avant d'avoir installé les sous-plancher. Les entreposer temporairement au-dessus des poutres et murs.



TJI® JOIST FLOOR FRAMING

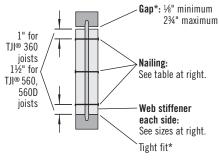


∼ TJI® 560 or 560D rim joist

Top View

Shear transfer nailing: At minimum, use connections equivalent to floor panel nailing schedule

WEB STIFFENERS

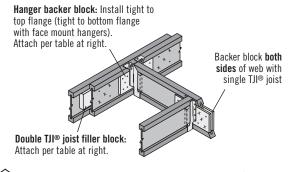


	2/1 110/0110
1" for TJI® 360 joists 1½" for	Nailing:
TJI® 560, 560D	See table at right.
joists \	Web stiffener each side: See sizes at right. Tight fit*

\sim	* With a point load from above and no support
<	
Ŵ	below, install web stiffener tight to top flange
\sim	(ren et hettem flenne)

(gap at bottom flange)

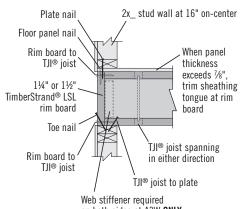
FILLER AND BACKER BLOCKS



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

RIM BOARD

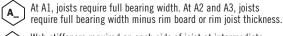
H2



on both sides at A3W ONLY

At a minimum, attach TimberStrand® LSL rim board to bearing A3 plate with connections equivalent to decking schedule.

Javelin® Software Framing Plans



_w

Web stiffeners required on each side of joist at intermediate bearings. Refer to your Javelin® framing plan.

Bearing requirements as shown on the Javelin® framing plan are job specific and supersede minimum bearing requirements listed.

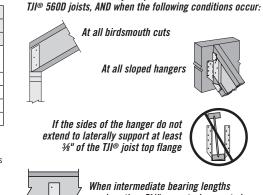
Web Stiffener Requirements

		Min. Web	Nailing Requirements				
TJI®	Depth (in.)	Stiffener	Tuno	# of	Nails		
	()	Size	Туре	End	Int.		
360	All	1 x 25∕16"(1) x 25∕16"(1)	8d (0.113" x 2½")	3	3		
560	All	2x4 ⁽²⁾	16d (0.135" x 3½")	3	3		
	18"			4	4		
560D	20"	2x4 ⁽²⁾	101/0105801/8	5	5		
360D	22"(3)	ZX4 ⁽²⁾	16d (0.135" x 3½")	6	11		
	24"(3)			6	13		

(1) PS1 or PS2 sheathing, face grain vertical

(2) Construction grade or better

(3) Web stiffeners are always required for 22" and 24" TJI® 560D joists



Web stiffeners are always required for 22" and 24"

are less than 51/4" except where noted on framing plan

Filler and Backer Block Sizes⁽¹⁾

TJI®	Depth	Туре	Filler/Backer	Nail ⁽²⁾		
101	Doptil	iyhe	Size	Size	Quantity	
360	18"-20"	Filler ⁽³⁾	2x12 + ½" sheathing	(0.131'' x 3'')	15	
300	10 -20	Backer	7⁄%" or 1" net	(0.131'' x 3'')	15	
560	18"-20"	Filler ⁽³⁾	Two 2x12	(0.131'' x 3½'')	32	
000	10 -20	Backer	2x12	(0.131''x 3'')	15	
560D	22"–24"	Filler ⁽³⁾	Four ¾" x 15" sheathing	(0.131'' x 3½'')	50	
J00D	22 -24	Backer	Two ¾" x 15" sheathing	(0.131'' x 3'')	15	

1) If necessary, increase filler and backer block height for face mount hangers and maintain 1/8" gap at top of joist. See detail W on page 3. Filler and backer block dimensions should accommodate required nailing without splitting. The suggested minimum length is 24" for filler and 12" for backer blocks.

(2) Clinch nails when possible.

(3) For filler block connections, drive nails from alternating sides.

FASTENER SPACING

Fastenings into TJI[®] Joist Flanges (Wide Face) and TimberStrand[®] LSL Rim Board (Edge)

	Closest On-Center Spacing per Row				
Nail Size	TJI® 360, 560	TimberStrand® LSL Rim Board			
	and 560D ⁽¹⁾⁽²⁾	1¼"	1½"		
8d (0.113" x 2½"), 8d (0.131" x 2½") 10d (0.128" x 3"), 12d (0.128" x 3¼")	3"	4"	3"		
10d (0.148" x 3"), 12d (0.148" x 3¼"), 16d (0.135 x 3½")	4 ^{"(3)}	4"	3"		
16d (0.162" x 3½")	6"	6" ⁽⁴⁾	6 ^{"(4)}		
(0.131 x 3''-3½'')	3"	4"	3"		

(1) Stagger nails when using 4" on-center spacing and maintain 3/4" joist and panel edge distance. One row of fasteners is permitted (two at abutting panel edges) for diaphragms. Fastener spacing for TJI® joists in diaphragm applications cannot be less than shown in table. When fastener spacing for blocking is less than spacing shown above, rectangular blocking must be used in lieu of TJI® joists.

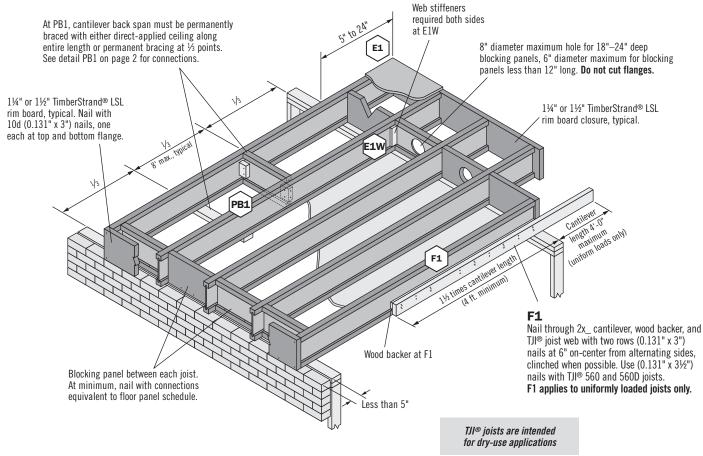
(2) For non-diaphragm applications, multiple rows of fasteners are permitted if the rows are offset at least ½" and staggered. (3) Can be reduced to 3" on-center for light gauge steel straps with 10d (0.148" x 11/2") nails

(4) Can be reduced to 4" on-center if nail penetration into the narrow edge is no more than 11/4" (to avoid splitting).

General Notes

- Maximum spacing of nails is 18" on-center for TJI[®] joists.
- 14 ga. staples may be substituted for 8d (0.113" x 2½") nails if minimum penetration of 1" into the TJI® joist or rim board is achieved.
- Table also applies for the attachment of TJI® rim joists and blocking panels to the wall plate.
- Weyerhaeuser recommends using a subfloor adhesive that has been qualified as a Class 1/8 in., Type P/O subfloor adhesive in accordance with ASTM D3498-12.

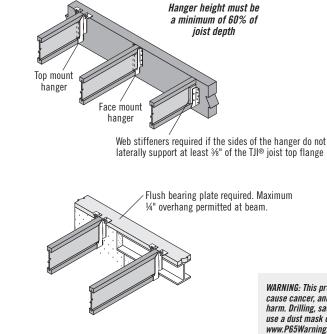
CANTILEVERS



FRAMING CONNECTORS

Approved Hangers

- The following manufacturers are approved to supply hangers for Trus Joist[®] products: – Simpson Strong-Tie Co., Inc.: 1-800-999-5099
- Mitek, Inc.: 1-800-328-5934
- Hanger design loads differ by support type and may exceed the capacity of the support and/or supported member. Contact your Weyerhaeuser representative or refer to Weyerhaeuser software.



Nailing Requirements

- Fill all round, dimple, and positive angle holes with the proper nails. Hanger nails are usually a heavier gauge because of the higher loads they need to carry.
- Unless specified otherwise, full capacity of straps or connectors can only be achieved if the following nail penetration is provided:

	Face Mount	Top Mount
10d (0.148" x 1½")	1½" minimum	1½" minimum
10d (0.148" x 3")	1½" minimum, clinched	3" minimum
16d (0.162" x 3½")	1¾" minimum, clinched	3½" minimum

Top mount hangers should be fastened to TJI[®] joist headers with 10d (0.148" x 1½") nails. Fasten face mount hangers to 3½" or wider TJI[®] joist headers with 10d (0.148" x 3") or 16d (0.162" x 3½") nails.

Connector Installation and Squeak Prevention Tips

- Nails must be completely set.
- Leave 1/16" clearance between the member and the support member or hanger.
- Joist to beam connections require hangers; do not toenail.
- Install the supported member tight to the bottom of the hanger. Reduce squeaks by adding subfloor adhesive to the hanger seat.
- On Simpson Strong-Tie[®] VPA connectors, bend the bottom flange tabs over and nail to TJI[®] joist bottom flange.

WARNING: This product can expose you to chemicals including wood dust which are known to the State of California to cause cancer, and methanol, which are known to the State of California to cause birth defects or other reproductive harm. Drilling, sawing, sanding or machining wood products can expose you to wood dust. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov and www.P65Warnings.ca.gov/wood.

H1

MULTIPLE-MEMBER BEAMS

Multiple-Member Connections for Top-Loaded Beams

Load must be applied evenly across entire beam width. Otherwise, use connections for side-loaded beams.

Piece	# of	Fastener								
Width	Plies	Type ⁽¹⁾	Min. Length	Placement	# Rows	O.C. Spacing				
		10d nails 3"			3(2)	12"				
	2	12d—16d nails	3¼"	One face	2(2)	12				
		Screws	33⁄8" or 3½"		2	24"				
		10d nails	3"	Both faces	3(2)	12"				
		12d—16d nails	3¼"	DOLIT TACES	2 ⁽²⁾	12				
	3	Screws	33⁄8" or 31⁄2"	Both faces	2	24"				
1¾"		SCIEWS	5"	One face	L 2	24				
		1⁄2" bolts ⁽⁴⁾	6"	-	2	24"				
		10d nails ⁽³⁾	3"	One face	3(2)	12"				
		$12d-16d \text{ nails}^{(3)}$	3¼"	(per ply)	2(2)	12				
	4	Screws	5" or 6"	Both faces	2	24"				
		SCIEWS	6¾"	One face	2	24				
		1/2" bolts ⁽⁴⁾	8"	-	2	24"				
		Screws	5" or 6"	Both faces	2	24"				
3½"	2	SCIEWS	6¾"	One face	2	24				
		1⁄2" bolts ⁽⁴⁾	8"	_	2	24"				

(1) 10d nails are 0.128"-0.131" diameter; 12d-16d nails are 0.148"-0.162" diameter; screws are SDS, WS, or SDW22.

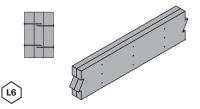
(2) An additional row of nails is required with depths of 14"-20".

(3) When connecting 4-ply members, nail each ply to the other and offset nail rows by 2" from rows in the ply below.

(4) Washers required. Bolt holes to be 9/16" maximum. 91/4" minimum beam depth.

When fasteners are required on both sides, stagger fasteners on the second side so they fall halfway between fasteners on the first side.

Bearing length is extremely critical and must be considered for each application. See your Javelin® framing plan.



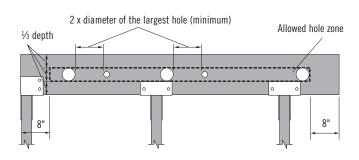
Multiple pieces can be nailed or bolted together to form a header or beam of the required size, up to a maximum width of 7"

Multiple-Member Connections for Side-Loaded Beams

 Additional nailing or bolting may be required with side-loaded multiple-member beams. Refer to current product literature.

ALLOWABLE HOLES—BEAMS, HEADERS, AND WALL STUDS

1.55E TimberStrand® LSL Headers and Beams



- Allowed hole zone suitable for headers and beams with uniform and/or concentrated loads anywhere along the member.
- Round holes only.
- No holes in headers or beams in plank orientation.

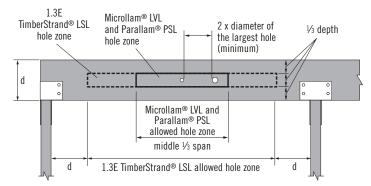
1.55E TimberStrand® LSL

Header or Beam Depth	Max. Round Hole Size
91⁄2"	3"
111⁄8"	35⁄8"
14"-16"	45⁄8"

See allowed hole zone above.



Other Trus Joist® Headers and Beams



- Allowed hole zone suitable for headers and beams with uniform loads only.
- No holes in cantilevers.
- Round holes only.
- No holes in headers or beams in plank orientation.

DO NOT cut, notch, or drill holes in headers or beams except as indicated in the illustrations and tables.

Header or Beam Depth	Max. Round Hole Size
43⁄8"	1"
51⁄2"	13⁄4"
7¼"-20"	2"

See allowed hole zone above.

TimberStrand® LSL Wall Studs

One notch may be cut anywhere except the middle ¼ of the length of the stud or column. Holes may be drilled along the length of the stud or column but must be at least ¾" from the edge.

 %" minimum edge distance

 Maximum diameter: 13%" for 3½"

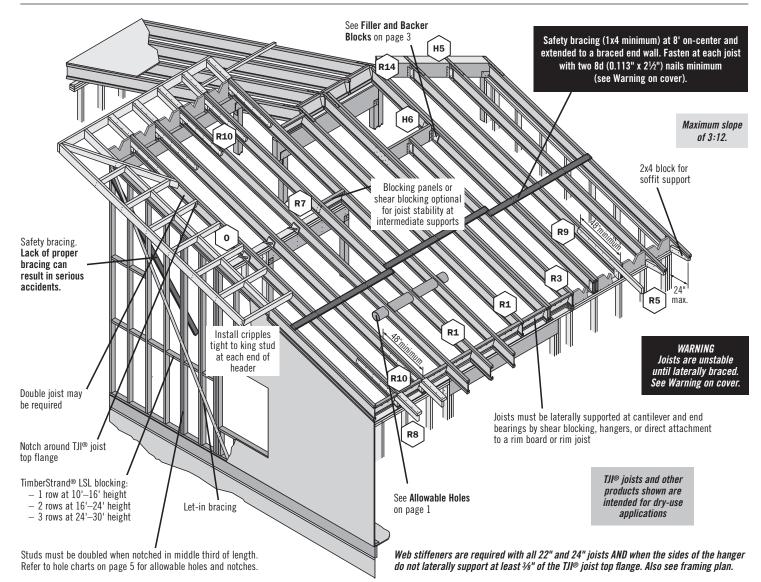
 thick walls (11%" in Canada);

 23%e" for 5½"-11%"

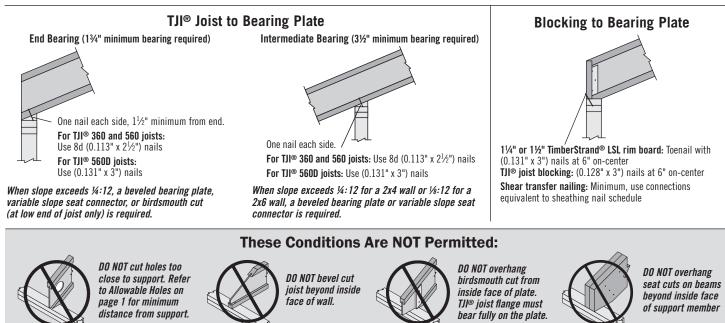
 (11%e" in Canada);

 (11%e" in Canada)

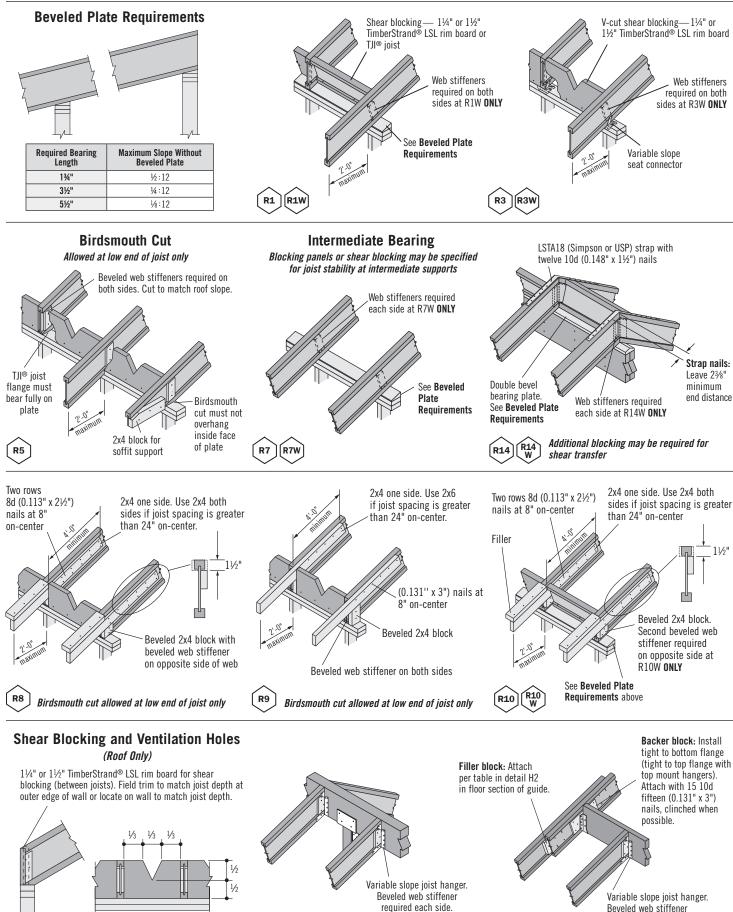
ROOF FRAMING (Maximum slope: 3:12)



TJI® JOIST NAILING REQUIREMENTS AT BEARING



ROOF FRAMING (Maximum slope: 3:12)



Additional blocking may be required for

H5

shear transfer

Maximum allowable V-cut

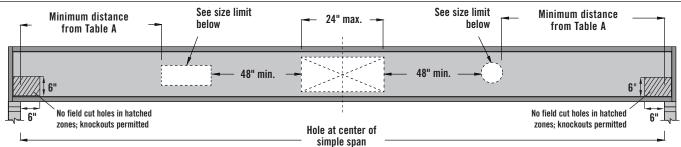
SB

For filler and backer block sizes, see H2 table in floor section of guide.

H6

required each side

MAXIMUM MID-SPAN HOLE (TJI® 360 & TJI® 560 JOISTS)



Store and handle TJI® joists in vertical

orientation (wrapped)

General Notes

- Simple span (8' minimum) uniformly loaded joist only. Not for use for in applications that have code mandated concentrated load
- requirements.
- 24" wide hole (maximum) located at center of span.
- Leave ¼" of web (minimum) at top and bottom of hole.
 Two (2) additional holes may be added to the inist arguide
- Two (2) additional holes may be added to the joist provided:
 Additional holes are a minimum of 48" (edge to edge) from middle hole.
- Additional holes are a minimum of 48° (edge to edge) from initiale hole.
 Rectangular: longest dimension is less than or equal to 0.65 x web depth.
- Circular: diameter is less than or equal 0.75×1000 km s
- Web depth (in.) = joist depth (in.) 2.75".
- See Table A for proper hole placement from end bearing for additional holes.

PRODUCT STORAGE

Protect products from sun and water.

CAUTION: Wrap is slippery when wet or icy.



Align stickers (2x3 or larger) directly over support blocks.

Use support blocks (6x6 or larger) at 10' on-centre to keep products out of mud and water.

OUR GUARANTEE



for copies of this and other Trus Joist[®] Engineered Wood Product warranties.



CONTACT US

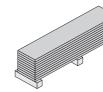
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MAXIMUM HOLE AT MID-SPAN For TJI® 360 and TJI® 560 Joists

Depth	TJI®	Maximum Hole Size (height x length)
18"	360	13" x 24"
10	560	15" x 24"
20"	360	15" x 24"
20	560	17" x 24"



Store and handle Parallam[®] PSL, Microllam[®] LVL, and TimberStrand[®] LSL in flat orientation (wrapped)

contact your Weyerhaeuser representative or call 1-888-453-8358		
CODE EVALUATIONS, See		
TJI® Joists	ICC-ES ESR-1153	CCMC 13132-R
TimberStrand® LSL	ICC-ES ESR-1387	CCMC 12627-R
Parallam® PSL	ICC-ES ESR-1387	CCMC 11161-R
Microllam® LVL	ICC-ES ESR-1387	CCMC 08675-R
TimberStrand® LSL Rim Board	ICC-ES ESR-1387	CCRR 0222C

For conditions not shown in this guide, or other assistance,



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BUILD SAFELY

We at Weyerhaeuser are committed to working safely and want to remind you to do the same. We encourage you to follow the recommendations of OSHA (osha.gov) in the U.S. or provincial regulations (canoshweb.org/en/) in Canada regarding: - Personal protective equipment (PPE) for hands,

- feet, head, and eyes
- Fall protection
- Use of pneumatic nailers and other hand toolsForklift safety

Please adhere to the Weyerhaeuser product installation details, including the installation of safety bracing on unsheathed floors and roofs.

Have a damaged joist or beam?

File a damage report online for prompt service from your regional technical office. Scan the QR code with your smartphone or go to *weyerhaeuser.com/woodproducts/support*

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