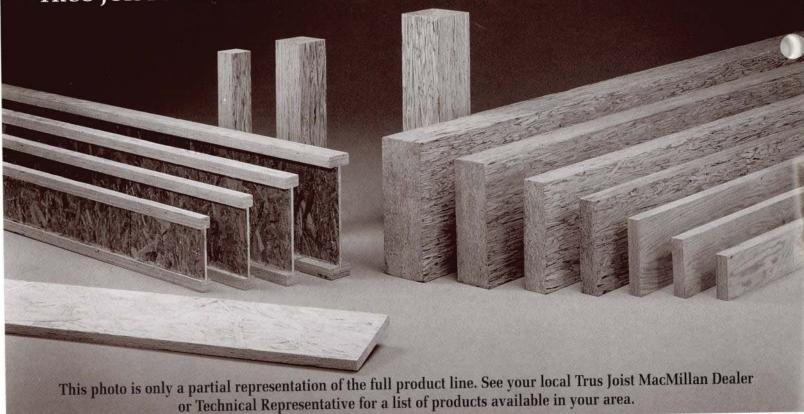


TRUS JOIST MACMILLAN'S FrameWorks BUILDING SYSTEM



FrameWorks® Building System

Trus Joist MacMillan's
FrameWorks® building system is
the benchmark of quality. When
integrated into the frame of the
house it significantly increases its
value and structural quality.

The FrameWorks® building system from Trus Joist MacMillan includes the company's complete line of engineered structural wood products – Silent Floor® brand floor and roof joists, TimberStrand® LSL rim board, Microllam® LVL headers and beams, and Parallam® PSL headers, beams and columns.

A Quality Building System for Quality Homes

Length and strength add a whole new dimension to structural systems with Trus Joist MacMillan's FrameWorks® building system. High quality structural products in lengths to 60 feet make for much faster, easier installation, with no length price premium.

Unparalleled Technical Support

Trus Joist MacMillan's goal is solid, durable, comfortable homes. Our strong technical support helps builders create quality structures. With TJ-Beam™ software, sizing solutions for Silent Floor® joists,

Microllam® LVL and Parallam® PSL are at your fingertips. Easy-to-use software provides fast solutions for sizing simple or multiple

span floor and roof members supporting uniform, triangular or point loading, with output that is clear, concise and easy to read. And our support doesn't stop there. Our dealers and distributors have

TJ-Xpert™ software to automatically track loads throughout the structure and develop material lists, framing plans and installation details.

Legacy Literature See Note on Front Cover

Specify Trus Joist MacMillan's FrameWorks® Building System

When you specify Trus Joist
MacMillan's FrameWorks® building
system, you are specifying quality
in every way. More importantly,
you are specifying a more sound,
durable and solid home. The Trus
Joist MacMillan FrameWorks® building system is innovative technology
designed to get the most from the
limited forest resource, plus the
best service and guarantee in the
business.

This guide contains specifications and details for single-family residential applications of these products in dry use, non-treated conditions. We hope you find it useful. If you have questions, are planning an unusual installation, or need information on a multi-family or commercial application, feel free to call the Trus Joist MacMillan representative nearest you.

CODE EVALUATIONS:

FHA 689, FHA 925, NER 119, NER 292 and NER 481

NOTE: NER Evaluation includes BOCA, ICBO and SBCCI.

A WORD ABOUT FLOOR PERFORMANCE

Floor performance is a very subjective issue that is influenced by many factors. Listed below are several suggestions that may help in the design of a floor system:

- · Deeper joists will reduce deflection.
- · Thicker floor sheathing and/or reducing the on-center spacing of the joists will improve load sharing.
- Adhesives that permanently bond the sheathing to the joists will improve the stiffness of the floor system, and will also prevent squeaks.
- · Directly applied ceilings, bridging, bottom chord stripping, or full depth blocking, will improve floor performance.
- · Framed partition walls, ceilings and other inherent random dead loads will dampen vibrations.
- Workmanship in the field is critical. Proper on-site storage of construction materials, full joist bearing, adequate and level supports, proper installation of the floor sheathing, and care in the fastening (nailing, adhesives, etc.) are most essential.

It is extremely difficult to predict how a floor may feel; therefore, careful consideration must be made when trying to meet a particular level of satisfaction. The perception and expectation of an end user are important in determining the acceptable level of performance for any floor system. Adequate floor performance may require utilization of any of these factors, or others, depending upon the specific application.



Trus Joist Mac Millan®

HOMEBUYER'S GUARANTEE

We guarantee that the Trus Joist MacMillan 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 floor or roof system develops squeaks or any other problem caused by such defects, and provided that your floor or roof system has 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.

Part of the FrameWorks® Building System

1-800-628-3997

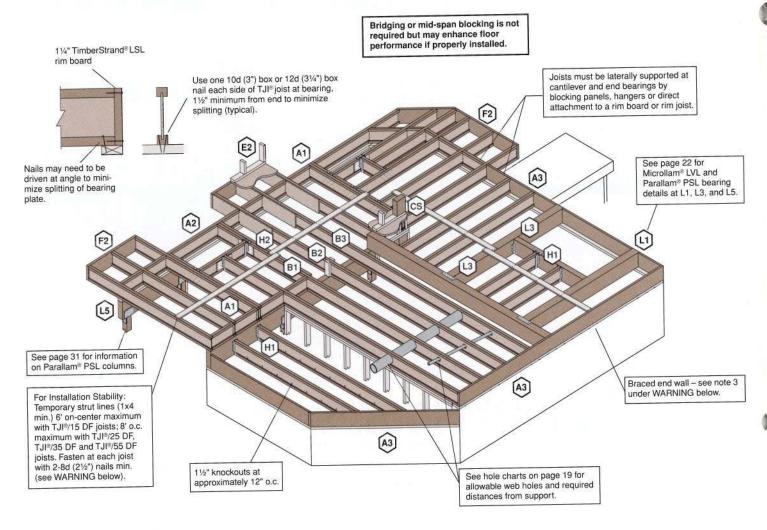
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Legacy Literature See Note on Front Cover

TYPICAL Silent Floor, SYSTEM





WARNING

JOISTS ARE UNSTABLE UNTIL BRACED LATERALLY

BRACING INCLUDES:

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



DO NOT stack building materials on unsheathed joists. Stack only over beams or walls. See note 4 below.

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.

- All blocking, hangers, rim boards and rim joists at the end supports of the TJI® joists must be completely installed and properly nailed.
- 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) nailed to the first 4 feet of joists at the end of the bay.
- Temporary strut lines of 1x4 (min.) 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 and one layer of unnailed sheathing.
- Sheathing must be totally attached to each TJI® joist before additional loads can be placed on the system.
- 5. Ends of cantilevers require strut lines on both the top and bottom flanges.
- The flanges must remain straight within a tolerance of ½" from the true alignment.

40 PSF LIVE LOAD, 10 PSF DEAD LOAD (12 PSF DEAD LOAD AT TJI®/55 DF JOISTS)

(Example: Single layer glue-nailed wood sheathing and direct applied ceiling)

L/360 LIVE LOAD DEFLECTION (Code Minimum)

JOIST	JOIST		O.C. SI	PACING		
DEPTH	SERIES	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.	
91/2"	TJI®/15 DF	18'-9"	17'-2"	16'-3"	15'-0"	
3/2	TJI®/25 DF	19'-7"	17'-11"	16'-11"	15'-9"	
P. Brillia	TJI®/15 DF	22'-4"	20'-5"	18'-10"	15'-0"	
117/8"	TJI®/25 DF	23'-4"	21'-4"	20'18	18'-9" (6)	
1178	TJI®/35 DF	25'-3"	23'-0"	SUBJUE	20'-2" (6)	
	TJI®/55 DF	28'-8"	26'-1"	24-9	22'-10"	
	TJI®/25 DF	26'-6"	24'-81	22'-10" (6)	18'-11" (6)	
14"	TJI®/35 DF	28'-8"	1880 CP	24'-7" (6)	21'-3" (6)	
	TJI [®] /55 DF	32'-6" D	295	27'-11"	25'-11"(5)(6	
F. 3	TJI®/25 DF	29'-5	526'-10" (6)	23'-9"(6)	18'-11" (6)	
16"	TJI [®] /35 DF	31'-9"	28'-11" (6)	26'-7"(6)	21'-3" (6)	
3 2 3	TJI®/55 DF	36'-0"	32'-9"	30'-10" (5)	26'-9" (5)(6)	

L/480 LIVE LOAD DEFLECTION

JOIST	JOIST	O.C. SPACING						
DEPTH	SERIES	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.			
91/2"	TJI®/15 DF	17'-0"	15'-6"	14'-8"	13'-7"			
972	TJI®/25 DF	17'-9"	16'-2"	15'-3"	14'-2"			
	TJI®/15 DF	20'-3"	18'-5"	17'-5"	15'-0"			
117/8"	TJI®/25 DF	21'-1"	19'-3"	18'-2"	16'-11"(6)			
1178	TJI®/35 DF	22'-10"	20'-9"	19'-7"	18'-2"			
	TJI®/55 DF	25'-11"	23'-7"	22'-2"	20'-7"			
	TJI®/25 DF	24'-0"	21'-10"	20'-7"(6)	18'-11"(6)			
14"	TJI®/35 DF	25'-11"	23'-7"	22'-2"	20'-8"(6)			
	TJI [®] /55 DF	29'-5"	26'-9"	25'-2"	23'-4"(5)			
	TJI®/25 DF	26'-7"	24'-3"	22'-10"(6)	18'-11"(6)			
16"	TJI®/35 DF	28'-8"	26'-1"	24'-7"(6)	21'-3"(6)			
	TJI®/55 DF	32'-6"	29'-7"	27'-10"	25'-10"(5)(

40 PSF LIVE LOAD, 22 PSF DEAD LOAD (24 PSF DEAD LOAD AT TJI®/55 DF JOISTS)

(Example: Single layer glue-nailed wood sheathing with 11/2" lightweight concrete and direct applied ceiling)

L/360 LIVE LOAD DEFLECTION (Code Minimum)

JOIST	JOIST		O.C. SI	PACING		
DEPTH	SERIES	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.	
91/2"	TJI®/15 DF	18'-7"	16'-8"	15'-2"	12'-1"	
372	TJI [®] /25 DF	19'-5"	17'-8"	16'-3"	12'-11"	
	TJI®/15 DF	22'-1"	18'-2"	15'-2"	12'-1"	
117/8"	TJI®/25 DF	23'-1"	20'-10"(6))	194000	15'-3"(6)	
1178	TJI®/35 DF	24'-11"	22'-9"(6)	OF 500	17'-2"(6)	
	TJI®/55 DF	28'-0"	25'-6"	24 0 (5)	21'-9"(5)(6	
	TJI®/25 DF	26'-3"(6)	221	19'-1"(6)	15'-3"(6)	
14"	TJI®/35 DF	28'-4"	185.90	21'-5"(6)	17'-2"(6)	
	TJI®/55 DF	31'-9"	23211"(5)	27'-2"(5)(6)	21'-9"(5)(6)	
	TJI [®] /25 DF	28'-10"(6)	22'-11"(6)	19'-1"(6)	15'-3"(6)	
16"	TJI®/35 DF	31'-4"(6)	25'-9"(6)	21'-5"(6)	17'-2"(6)	
7 3 3 3 3	TJI®/55 DF	35'-2"	32'-0"(5)(6)	27'-2"(5)(6)	21'-9"(5)(6)	

L/480 LIVE LOAD DEFLECTION

JOIST	JOIST	O.C. SPACING							
DEPTH	SERIES	12" o.c.	16" o.c.	19.2" o.c.	24" o.c. 12'-1"				
91/2"	TJI®/15 DF	17'-0"	15'-6"	14'-8"					
372	TJI®/25 DF	17'-9"	16'-2"	15'-3"	12'-11"				
	TJI®/15 DF	20'-3"	18'-2"	15'-2"	12'-1"				
117/8"	TJI®/25 DF	21'-1"	19'-3"	18'-2"(6)	15'-3"(6)				
1178	TJI®/35 DF	22'-10"	20'-9"	19'-7"(6)	17'-2"(6)				
3919()	TJI®/55 DF	25'-11"	23'-7"	22'-2"	20'-7"(5)				
	TJI®/25 DF	24'-0"	21'-10"(6)	19'-1"(6)	15'-3"(6)				
14"	TJI®/35 DF	25'-11"	23'-7"(6)	21'-5"(6)	17'-2"(6)				
Selle	TJI®/55 DF	29'-5"	26'-9"	25'-2"(5)	21'-9"(5)(6				
	TJI®/25 DF	26'-7"(6)	22'-11"(6)	19'-1"(6)	15'-3"(6)				
16"	TJI®/35 DF	28'-8"	25'-9"(6)	21'-5"(6)	17'-2"(6)				
	TJI®/55 DF	32'-6"	29'-7"(5)	27'-2"(5)(6)	21'-9"(5)(6				

Although the L/480 Live Load Deflection charts will usually provide better floor performance than the L/360 Live Load Deflection charts, the resulting performance still may not be adequate for your project. See page 3 for A WORD ABOUT FLOOR PERFORMANCE, or contact your Trus Joist MacMillan representative for assistance.

GENERAL NOTES:

- Span charts assume composite action with single layer of the appropriate span-rated, glue-nailed wood sheathing for deflection only.
 Spans shall be reduced 5" where sheathing panels are nailed only.
- Spans shown are clear distances between supports and reflect the most restrictive of simple or multiple span applications, based on uniformly loaded joists and include allowable increases for repetitive member use.
- 3. For loading conditions not shown, refer to allowable uniform load tables on page 15.

WEB STIFFENER REQUIREMENTS

End Bearings: Web stiffeners (see detail W on page 7) are not required at end bearings of TJI® floor joists listed in this guide except in hangers when the following conditions exist:

- 4. All Joists: Web stiffeners are required in hangers when the sides of the hanger do not laterally support the TJI® joist top flange. (See detail H1 on page 7.)
- 5. TJI®/55 DF Joists Only: Web stiffeners are required in hangers when the TJI®/55 DF joist span is greater than the spans shown in the following chart:

JOIST	40 P	SF LIVE LOAD,	12 PSF DEAD L	40 PSF LIVE LOAD, 24 PSF DEAD LOAD					
SERIES	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.	12" o.c.	16" o.c.	19.2" o.c.	24"o.c.	
TJI®/55 DF	Not Required	Not Required	28'-8"	22'-11"	Not Required	29'.0"	23'-3"		
				Section 1 1	HOLFIEGUIEG	20 0	23-3	18'-7"	

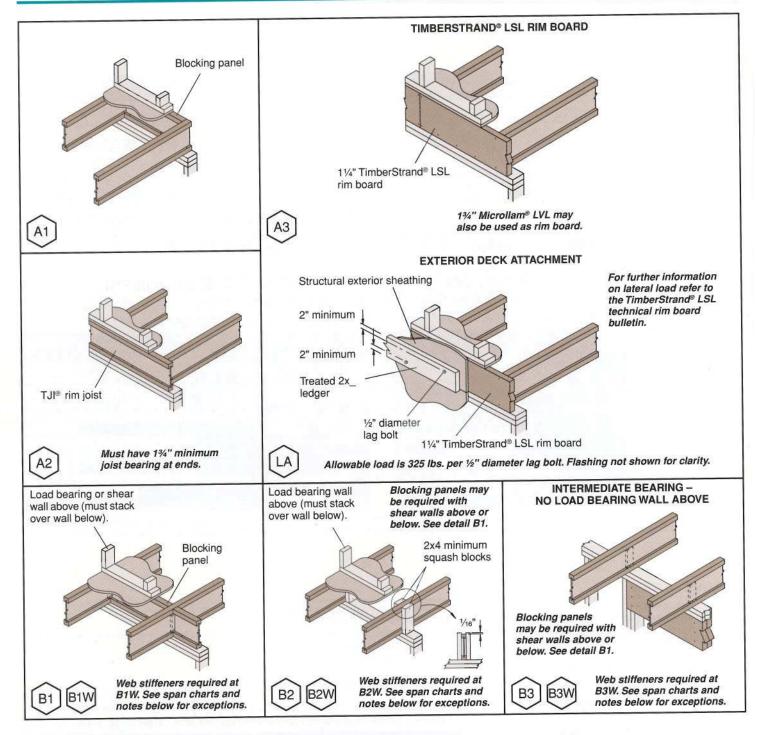
6. Intermediate Bearings: At intermediate supports where the joists are continuous span, web stiffeners are required only if the intermediate bearing width is less than 5¼" and the span on either side of the intermediate bearing is greater than the spans shown in the following chart:

JOIST	40 PS	F LIVE LOAD,	10 PSF DEAD LO	DAD*	40 PSF LIVE LOAD, 22 PSF DEAD LOAD**					
SERIES	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.	12"o.c.	16" o.c.	19.2" o.c.	24" o.c.		
TJI*/15 DF	W	B STIFFENER	S NOT REQUIRE	D	WEB STIFFENERS NOT REQUIRED					
TJI [®] /25 DF	Not Required	24'-3"	20'-2"	16'-1"	26'-1"	19'-6"	16'-3"	12'-11"		
TJI®/35 DF	Not Required	27'-8"	23'-1"	18'-5"	29'-9"	22'-4"	18'-7"	14'-10"		
TJI®/55 DF	Not Required	Not Required	Not Required	25'-8"	Not Required	31'-4"	26'-1"	20'-10"		

12 PSF Dead Load at TJI®/55 DF joists.

**24 PSF Dead Load at TJI®/55 DF joists

Long term deflection under dead load which includes the effect of creep, common to all wood members, has not been considered for any of the above applications. Shaded spans reflect initial dead load deflection exceeding 0.33", which may be unacceptable. For additional information contact your Trus Joist MacMillan representative.



GENERAL NOTES:

MINIMUM BEARING LENGTH

- 1¾" minimum bearing is required at joist ends.
- 3½" minimum bearing is required when joists are continuous over the support. 5¼" may be required for maximum capacity.

BLOCKING PANELS, RIM BOARDS OR RIM JOISTS

- Vertical load transfer at bearings must be checked for each application. Capacities of rim details shown are as follows:
- Details A1 and A2 provide 2000 plf vertical load transfer for each TJI[®] blocking panel or rim joist.
- Detail A3 provides 3450 plf vertical load transfer for each 1¼" TimberStrand® LSL rim board.
- Detail A3 provides 5145 plf vertical load transfer for each 1¾" Microllam® LVL rim board.
- Bracing complying with the code shall be carried to the foundation.

NAILING REQUIREMENTS

 Nail joists at bearings with 2-10d (3") box or 12d (3½") box nails (1 each side), 1½" minimum from end to minimize splitting.

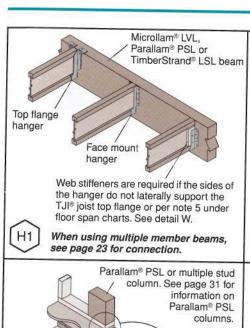
Nail TJI* joist blocking panels or TJI* rim joist to bearing plate with 10d (3") box nails at 6" on-center. Toe-nail TimberStrand* LSL or Microllam* LVL rim board to bearing plate with 10d (3") box nails at 6" on-center or 16d (3½") box nails at 12" on-center. When used for shear transfer, nail to bearing plate with same nailing schedule as the decking.

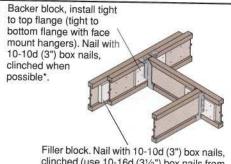
Nail 1¾" width (or less) rim board, rim joist or closure to TJI® joist with 2-10d (3") box nails, one each at top and bottom flange. Use 16d (3½") box nails with TJI®/35 DF rim joists. Toe-nail TJI®/55 DF joist to TJI®/55 DF rim joist with one 10d (3") box nail at each side of the top flange.

Attach 2x4 minimum squash blocks at details B2 and CS to TJI® joist with 2-10d (3") box nails, one
each at top and bottom flange.

WEB STIFFENER REQUIREMENTS

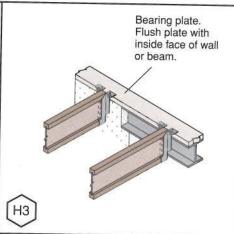
Web stiffeners are required if the sides of the hanger do not laterally support the TJI® joist top flange. Web stiffeners are also required for TJI®/25 DF and TJI®/35 DF joists per note 6 under floor span charts and are required for TJI®/55 DF joists per notes 5 and 6 under the floor span charts.





clinched (use 10-16d (31/2") box nails from each side with TJI®/55 DF joists).

* With top flange hangers, backer block required only when hanger load exceeds 250 pounds.



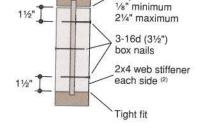
TJI®/55 DF JOISTS



TJI®/15 DF, TJI®/25 DF, TJI®/35 DF JOISTS

Gap: 1/8" minimum 21/4" maximum 3-8d (21/2") box nails, clinched Web stiffener each side (1):





(1) Web stiffener material shall be sheathing meeting the requirements of PS 1 or PRP-108 with face grain parallel to long axis.

(2) 2x4 construction grade or better.

THESE CONDITIONS ARE NOT PERMITTED

DO NOT cut holes too close to supports.

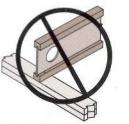
Solid block post loads from

above to bearing plate below.

2x4 minimum

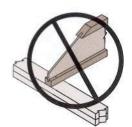
CS

squash blocks



Refer to hole charts on page 19 for minimum distance from bearing wall.

DO NOT bevel cut joist beyond inside face of wall.



DO NOT use solid-sawn dimension lumber for rim board or blocking.



Dimension lumber may shrink after installation.

DO NOT install hanger overhanging face of plate.



Flush bearing plate with inside face of wall or beam.

REFER TO PAGE 6 FOR GENERAL NOTES FOR DETAILS

FILLER AND BACKER BLOCK SIZES

	9½" or 11%" TJI®/15 DF	9½" or 11%" TJI®/25 DF	14" or 16" TJI®/25 DF	117/8" TJI®/35 DF	14" or 16" TJI®/35 DF	11%" TJI%55 DF	14" or 16" TJI®/55 DF
Filler Block* (Detail H2)	11/8" net	2x6	2x8	2x6+½" plywood	2x8+½" plywood	2-2x6	2-2x8
Cantilever Filler (Detail E4)	2x6 4'-0" long	2x6 4'-0" long	2x10 6'-0" long	2x6+½" plywood 4'-0" long	2x10+1/2" plywood 6'-0" long		OT .
Backer Block* Details F1or H2	½" or 5/8"	5/8" or 3/4"	5/8" or 3/4"	1" net	1" net	2x6	CABLE 2x8

er block length should accommodate required nailing without splitting.

LOAD BEARING CANTILEVER DETAILS

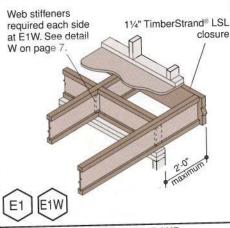
Proper detail selection for each specific application must be determined from tables on page 9 and 10.



TJI* joists may be cantilevered up to a maximum of 2'-0" when supporting roof load, but may require reinforcement. Consult tables on pages 9 and 10 to determine required reinforcement and details at right for methods of reinforcement.

GENERAL NOTES:

- %4" reinforcement refers to %4" CDX plywood or other 3/4" exterior grade 48/24 span-rated sheathing that is cut to match the full depth of the TJI® joist. Install with face grain horizontal. Reinforcing member must bear fully on the wall plate. Minimum wall plate width is 31/2 inches.
- Other cantilever conditions may be possible.
 Contact your Trus Joist MacMillan representative for assistance.

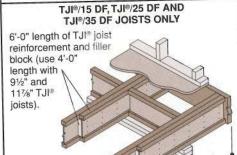


4'-0" length of 3/4"
reinforcement one
side at E2, both
re

Attach reinforcement to joist top
and bottom flanges with 8d (2½)

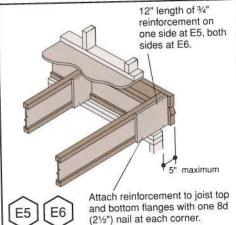
E2 E3

Attach reinforcement to joist top and bottom flanges with 8d (2½") nails at 6" o.c. When reinforcing both sides, stagger nails to avoid splitting.

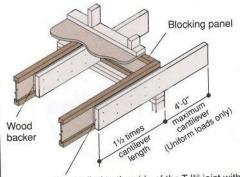


E4

Attach reinforcement to joist web with 3 rows 10d (3") nails at 6" o.c. clinched (use 2 rows with 9½" and 11½" TJI® joists).



NON-LOAD BEARING CANTILEVER DETAILS



2x_ nailed to the side of the TJI® joist with wood backer. Nail through the TJI® joist and backer into the 2x_ with 2 rows 10d (3") nails at 6" o.c. and clinch (use 16d (3½") nails with TJI®/55 DF joists).

TJI® joists must be protected from extended exposure to the weather.

Adjacent span adjacent loads of the span adjacent loads of

closure

11/4" TimberStrand® LSL

⅓ adjacent span (maximum) Example: 4'-0" (Uniform loads only)

TJI® joists may be cantilevered up to ½ the adjacent span if not supporting concentrated loads on the cantilever. Cantilevers exceeding 4 feet may require special consideration. Contact your Trus Joist MacMillan representative for assistance.

REFER TO PAGE 6 FOR GENERAL NOTES FOR DETAILS

Nailing of Sheathing to TJI® Joist Flanges and TimberStrand® LSL or Microllam® LVL Rim Boards

	(Closest O.C.	Spacing Per	Row	
Nail Size	TJI®/15 DF	TJI®/25 DF TJI®/35 DF TJI®/55 DF		TimberStrand® LSL	
8d (2½") box	21/2"	2"	3"	4"	
8d (2½") common	31/2"	2"	3"	4"	
10d (3"), 12d (31/4") box	3"	2"	4"	4"	
10d (3"), 12d (31/4") common	41/2"	3"	4"	4"	
16d (3½") common	N.A.	N.A.	8"	6"	

- Maximum spacing of nails is: 18" o.c. for TJI®/15 DF and TJI®/25 DF joists. 24" o.c. for TJI®/35 DF and TJI®/55 DF joists.
- If more than one row of nails is used, the rows must be offset at least ½" and staggered.
- 14 ga. staples may be substituted for 8d (2½") nails if minimum penetration of 1" into the TJI® joists or rim board is achieved.
- Chart also applies for the attachment of TJI[®] rim joists and blocking panels to the wall plate.

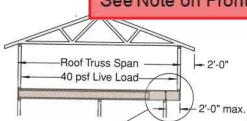
	ist Layout for
19.2" C	n-Center Spacing
	1 - 193/16"
	2 - 383/8"
	3 - 57 5/8"
	4 - 7613/16"
8'	5 - 96"
55	6 - 1153/16"
	7 - 1343/8"
	8 - 1535/8"
	9 - 17213/16"
16'	10 - 192"
0.557.8	11 - 2113/16"
	12 - 2303/8"
	13 - 2495/8"
	14 - 26813/16"
24'	15 - 288"

TJI® Joist Residential Load Bearing Cantilever Tables

TJI® JOIST LOAD BEARING 24" CANTILEVER TABLE

	Ro	oof Total		30 PS			40 P			50 P	VEF
		Load Joist	16"	19.2		16			" 16"		
	S	pacing 24'	o.c.	o.c.	0.0		. 0.0	. 0.0	. 0.0	. o.c	. o.c.
님	un	26'	0	0	0	0	1	1	0	1	X
91/2"TJI®/15 DF	Roof Truss Span	28'	0	0	1	0	1	1	1	1	X
<u>6</u>	nss	30'	0	0	1	0	1	1	1	1	X
F	I to	32'	0	0	1	0	1	X	1	X	X
91/2	Roc	34'	0	0	1	1	1	X	1	X	X
0,		36'	0	1	1	1	1	X	1	X	X
ш	-	24'	0	0	0	0	-0	1	0	1	1
2 D	par	26'	0	0	0	0	0	1	0	1	1
91/2" TJI®/25 DF	Roof Truss Span	28'	0	0	0	0	0	1	0	1	1
2	Tru	30'	0	0	0	0	0	1	1	1	X
= 2	oof	32'	0	0	1	0	1	1	1	1	X
6	-	36'	0	0	1	0	1	1	1	1	X
		26'	0	0	1	0	1	1	1	1	X
P	an	28'	0	0	1	0	1	1	1	1	1
15	Sp	30'	0	0	1	1	1	1	1	1	1
=	ssn.	32'	0	0	1	1	1	1	1	1	1
-	Roof Truss Span	34'	.0	1	1	1	1	1	1	1	X
1178" TJI®/15 DF	Roc	36'	0	1	1	1	1	1	1	1	X
100		38'	0	1	1	1	1	1	1	1	X
F	-	26'	0	0	0	0	0	W	0	W	1
1178" TJI®/25 DF	Roof Truss Span	28'	0	0	0	0	0	1	0	1	1
18/2	SS	30'	0	0	W	0	W	1	W	1	1
7	Tru	32'	0	0	W	0	W	1	W	1	1
8/2	oof	36'	0	0	W	0	W	1	W	1	1
=		38'	0	0	W 1	0 W	1	1	1	1	1
		26'	0	0	0	0	0	1 0	1 0	1 0	1
D	=	28'	0	0	0	0	0	W	0	W	1
1178" TJI®/35 DF	Roof Truss Span	30'	0	0	0	0	0	W	0	W	1
5	russ	32'	0	0	0	0	0	1	0	W	1
-	I to	34'	0	0	0	0	0	1	0	1	1
17/	Ro	36'	0	0	0	0	W	1	W	1	1
		38'	0	0	W	0	W	1	W	1	2
F	-	26'	0	0	0	0	0	0	0	0	0
1 20	Spai	28'	0	0	0	0	0	0	0	0	0
117%" TJI®/55 DF	Roof Truss Span	30'	0	0	0	0	0	0	0	0	0
7	F	34'	0	0	0	0	0	0	0	0	1
.8/2	300	36'	0	0	0	0	0	0	0	0	1
F		38'	0	0	0	0	0	0	0	0	1
		26'	0	0	0	0	0	W	0	W	1
	200	28'	0	0	0	0	0	1	0	1	1
14" TJI®/25 DF	Dan	30'	0	0	W	0	W	1	W	1	1
25	s S	32'	0	0	W	0	W	1	W	1	1
5	Roof Truss Span	34'	0	0	W	0	W	1	W	1	1
1	Doc	36'	0	0	W	0	1	1	1	1	1
14	Ä	38'	0	0	1	W	1	1	1	1	1
		40' 42'	0	W	1	W	1	1	1	1	1
		26'	0	0	0	W	0	0	0	1	1
		28'	0	0	0	0	0	W		0	1
HO.	an	30'	0	0	0	0	0	W	0	W	1
35 1	Sp	32'	0	0	0	0	0		0		1
/@I	nss	34'	0	0	0	0	0	1	0	W 1	1
7	of Tr	36'	0	0	0	0	W	1	W	1	1
14" TJI®/35 DF	Roof Truss Span	38'	0	0	W	0	W	1	W	1	1
		40'	0	0	W	0	W	1	W	1	1
		42'	0	0	W	0	W	1	1	1	1
94		26'	0	0	0	0	0	0	0	0	0
L	-	28'	0	0	0	0	0	0	0	0	0
2 D	Spar	30'	0	0	0	0	0	0	0	0	0
12/8	SS	32'	0	0	0	0	0	0	0	0	0
2	Tr	34'	0	0	0	0	0	0	0	0	0
14" TJI®/55 DF	Roof Truss Span	36'	0	0	0	0	0	0	0	0	1
-		40'	0	0	0	0	0	0	0	0	1
				~	U	U	U	U	4.1	1.7	

Legacy Literature See Note on Front Cover



TJI® joists may be cantilevered up to a maximum of 2'-0" when supporting roof load, but may require reinforcement. Consult table and refer to footnotes to determine required reinforcement. See details E1, E2, E3 and E4 on page 8 for methods of reinforcement (detail E4 not used with TJI®/55 DF joists).

Numbers in tables refer to footnotes below.

- 0. No reinforcement required.
- W. Web stiffener required each side of joist at bearing (detail E1 on page 8).
- 3/4" x 48" reinforcement required on one side of joist (detail E2 on page 8) or, double the joists (detail E4 on page 8). Detail E4 not used with TJI®/55 DF joists.
- 3/4" x 48" reinforcement required on both sides of joist (detail E3 on page 8) or, double the joists (detail E4 on page 8). Detail E4 not used with TJI®/55 DF joists.
- X. Will not work. Reduce spacing of joists and recheck on table.

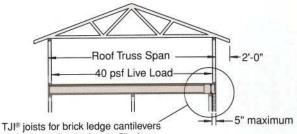
GENERAL NOTES:

- Assumes a 10 psf roof dead load and 60 plf wall load. Additional support may be required for other loadings.
- 3/4" reinforcement refers to 3/4" CDX plywood or other 3/4" exterior grade 48/24 span-rated sheathing that is cut to match the full depth of the joist. Install with face grain horizontal. Reinforcing member must bear fully on the wall plate. Minimum wall plate width is 31/2 inches.
- · Calculations assume a bearing stress of 480 psi.
- · Tables assume roof truss with 24" soffits.

		Roof Total Load		30 PSF			40 PSF	NO.	1660	50 PSF	100
		oist acing	16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.
		26'	0	0	0	0	0	W	0	W	1
	1000	28'	0	0	0	0	0	1	0	1	1
D	oan	30'	0	0	W	0	W	1	W	1	1
25	SS	32'	0	0	W	0	W	1	W	1	1
"TJI®/25 DF	Roof Truss Span	34'	0	0	W	0	W	1	W	1	1
	Tio	36'	0	0	W	0	1	1	1	1	1
16"	Ro	38'	0	0	1	W	1	1	1	1	1
		40'	0	W	1	W	1	1	1	1	1
53.94		42'	0	W	1	W	1	1	1	1	1
		26'	0	0	0	0	0	0	0	0	1
	I made	28'	0	0	0	0	0	W	0	W	1
0	pan	30'	0	0	0	0	0	W	0	W	1
35	SS	32'	0	0	0	0	0	1	0	W	1
16" TJI®/35 DF	Roof Truss Span	34'	0	0	0	0	0	1	0	1	1
-	ofT	36'	0	0	0	0	W	1	W	1	1
16	Ro	38'	0	0	W	0	W	1	W	1	1
	100	40'	0	0	W	0	W	1	W	1	1
		42'	0	0	W	0	W	1	1	1	1
		26'	0	0	0	0	0	0	0	0	0
11		28'	0	0	0	0	0	0	0	0	0
ō	pan	30'	0	0	0	0	0	0	0	0	0
52	S	32'	0	0	0	0	0	0	0	0	0
5	rus	34'	0	0	0	0	0	0	0	0	0
16" TJI®/55 DF	Roof Truss Span	36'	0	0	0	0	0	0	0	0	0
16	Ro	38'	0	0	0	0	0	0	0	0	0
		40'	0	0	0	0	0	0	0	0	1
		42'	0	0	0	0	0	0	0	0	1

TJI® JOIST LOAD BEARING CANTILEVER TABLE - BRICK LEDGE

		Total		30 PSF	Plant.	W.	40 PSF			50 PSF	
	Jo	ist	16"	19.2"	24"	16"	19.2"	24"	16"	19.2"	24"
	Spa	cing 24'	o.c. 0	0.0.	0.c.	0.0.	0.0.	o.c.	o.c.	0.C.	0.0.
F	=	26'	0	0	1	0	0	1	1	1	1
5 0	Roof Truss Span	28'	0	0	1	0	0	1	1	1	1
1/0	SS	30'	0	0	1	0	0	1	1	1	2
2	라	32'	0	1	1	0	1	1	1	1	2
91/2" TJI®/15 DF	foo	34'	0	1	1	0	1	-1	1	1	2
9	. Œ	36'	0	1	1	0	1	1	1	1	2
		24'	0	0	0	0	0	1	0	1	1
F	5	26'	0	0	0	0	0	1	0	1	1
91/2" TJI®/25 DF	Spa	28'	0	0	0	0	1	1	1	1	1
@/S	188	30'	0	0	1	0	1	1	1	1	1
7	E	32'	0	0	1	0	1	1	1	1	1
1/2	Roof Truss Span	34'	0	0	1	0	1	1	1	1	1
6	1	36'	0	0	1	1	1	1	1	1	2
	100	24'	0	0	0	0	0	1	1	1	1
P	an an	26'	0	0	1	0	0	1	1	1	1
15	Sp	28'	0	0	1	0	0	1	1	1	1
10	SSD	30'	0	0	1	0	0	1	1	1	2
F	Ť.	32'	0	1	1	0	1	1	1	1	2
117/8" TJI®/15 DF	Roof Truss Span	34'	0	1	1	0	1	1	1	1	2
-	0.3	36'	0	1	1	0	1	1	1	1	2
11		24'	0	0	0	0	0	1	0	1	1
1178" TJI®/25 DF	an	26'	0	0	0	0	0	1	0	1	1
/25	Roof Truss Span	28'	0	0	0	0	1	1	1	1	1
5	nss	30'	0	0	1	0	1	1	1	1	1
-	E	32'	0	0	1	0	1	1	1	1	1
17/8	Roc	34'	0	0	1	0	1	1	1	1	1
-		36'	0	0	1	1	1	1	1	1	2
IL.	SWIE	26'	0	0	0	0	0	1	0	0	0
0	Dan	28'	0	0	0	0	0	1	0	1	0
/35	SS	30'	0	0	0	0	0	1	0	1	0
117/8" TJI®/35 DF	Roof Truss Span	32'	0	0	0	0	0	1	0	1	0
-	L to	34'	0	0	0	0	1	1	1	1	1
17/6	Bo.	36'	0	0	1	0	1	1	1	1	2
Til		38'	0	0	1	0	1	1	1	1	2
4		26'	0	0	0	0	0	0	0	0	0
5 D	pan	28'	0	0	0	0	0	0	0	0	0
9/2	S	30'	0	0	0	0	0	0	0	0	0
2	l'rus	32'	0	0	0	0	0	0	0	0	1
117/8" TJI®/55 DF	Roof Truss Span	34'	0	0	0	0	0	0	0	0	1
117	8	36'	0	0	0	0	0	0	0	0	2
		38'	0	0	0	0	0	0	0	0	1
ш	-	24'	0	0	0	0	0	1	0	1	-
14" TJI®/25 DF	Roof Truss Span	26'	0	0	0	0	0	1	1	1	1
/25	SS	28'	0	0	0	0	1	1	1	1	1
3	Trus	30'	0	0	1	0	1	1	1	1	1
1	oof	32'	0	0	1	0	1	1	1	1	1
14	B	34'	0	0	1	1	1	1	1	1	2
-		36' 26'	0	0	0	0	0	1	0	0	0
ш	6	12000	0	0	0	0	0	1	0	1	0
2 D	Spa	30'	0	0	0	0	0	1	0	1	0
14" TJI®/35 DF	Roof Truss Span	30'	0	0	0	0	0	1	0	1	0
7	Tru	34'	0	0	0	0	1	1	1	1	1
-	poo	36'	0	0	1	0	1	1	1	1	
14	Œ.	38'	0	0	1	0	1	1	1	1	2
		26'	0	0	0	0	0	0	0	0	0
	1 2018	28'	0	0	0	0	0	0	0	0	0
ш	c	30'	0	0	0	0	0	0	0	0	0
2 D	Spa	30'	0	0	0	0	0	0	0	0	0
9/2	SS	34'	0	0	0	0	0	0	0	0	0
2	Roof Truss Span	36'	0	0	0	0	0	0	0	0	2
1000	oot	38'	0	0	0	0	0	0	0	0	2
=	-			0	U	0	0	0			-
14" TJI®/55 DF	, a	40'	0	0	0	0	0	0	0	0	2



TJI® joists for brick ledge cantilevers may be cantilevered up to 5" when supporting roof load, but may require reinforcement. Consult table and refer to footnotes to determine required reinforcement. See details E5 and E6 on page 8 for methods of reinforcement.

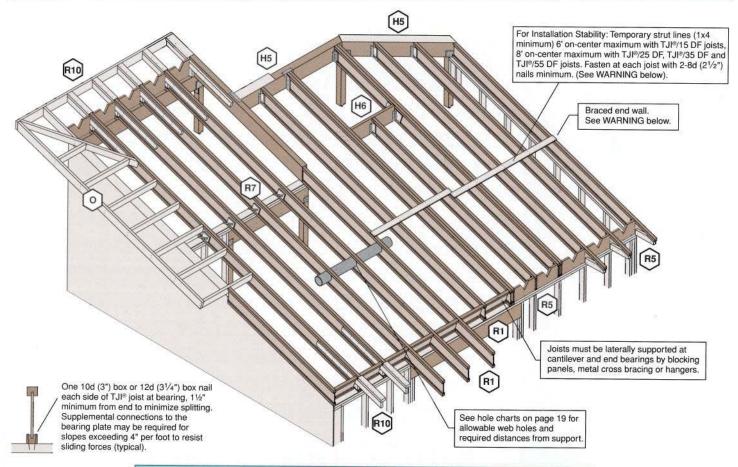
Numbers in tables refer to footnotes below.

- 0. No reinforcement required.
- ¾" x 12" reinforcement required on one side of joist. See detail E5 on page 8.
- ¾" x 12" reinforcement required on both sides of joist. See detail E6 on page 8.

GENERAL NOTES:

- Assumes a 10 psf roof dead load and 60 plf wall load. Additional support may be required for other loadings.
- ¾" reinforcement refers to ¾" CDX plywood or other ¾" exterior grade 48/24 span-rated sheathing that is cut to match the full depth of the joist. Install with face grain horizontal. Reinforcing member must bear fully on the wall plate. Minimum wall plate width is 3½ inches.
- · Calculations assume a bearing stress of 480 psi.
- Tables assume roof truss with 24" soffits.

		Total	348	30 PSF			40 PSF			50 PSF	
		oist icing	16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.
196	176.0	24'	0	0	0	0	0	1	0	1	1
DF	an	26'	0	0	0	0	0	1	0	1	1
52	Roof Truss Span	28'	0	0	0	0	1	1	1	1	1
TJI®/25	nss	30'	0	0	1	0	1	1	1	1	1
	Ė	32'	0	0	1	0	1	1	1	1	1
16"	300	34'	0	0	1	0	1	1	1	1	1
		36'	0	0	1	1	1	1	1	1	2
	house it	26'	0	0	0	0	0	1	0	0	0
DF	an	28'	0	0	0	0	0	1	0	1	0
35	Sp	30'	0	0	0	0	0	1	0	1	0
16" TJI®/35	Roof Truss Span	32'	0	0	0	0	0	1	0	1	0
7	ŧ	34'	0	0	0	0	1	1	1	1	1
9	90	36'	0	0	1	0	1	1	1	1	2
		38'	0	0	1	0	1	1	1	1	2
2 6		26'	0	0	0	0	0	0	0	0	0
	FIE S	28'	0	0	0	0	0	0	0	0	0
PF	an	30'	0	0	0	0	0	0	0	0	0
22	Sp	32'	0	0	0	0	0	0	0	0	0
1/80	nss	34'	0	0	0	0	0	0	0	0	_1
7	f.	36'	0	0	0	0	0	0	0	0	2
16" TJI®/55	Roof Truss Span	38'	0	0	0	0	0	0	0	0	2
	2	40'	0	0	0	0	0	0	0	0	2
	100	42'	0	0	0	0	0	0	0	0	2



WARNING Unbraced joists are unstable. See complete warning on page 4.

RESIDENTIAL ROOF SPAN CHART

Low Slope: 6"/12" or less. High Slope: Over 6"/12" through 12"/12".

				Day A.	SER IN	JONES IN	DES	SIGN LIV	E LOAD	(LL) At	ND DEA	D LOAD	(DL) IN	PSF	1000	The second	BU IL
				V OTE	NON-SNO	OW (125%)			man and				AREA (1		1. 18.50		
O.C. SPACING	DEPTH	SERIES	SLOPE	16LL 15DL	16LL 20DL	20LL 15DL	20LL 20DL	20LL 15DL	20LL 20DL	25LL 15DL	25LL 20DL	30LL 15DL	30LL 20DL	40LL 15DL	40LL 20DL	50LL 15DL	50LL 20DL
		TJI8/15 DF	LOW	N.A.	N.A.	20'-2"	19'-2"	20'-2"	19'-2"	19'-4"	18'-6"	18'-7"	17'-10"	17'-4"	16'-10"	16'-5"	15'-11"
	91/2"	101/13 DI	HIGH	18'-7"	17'-7"	18'-0"	17'-0"	18'-0"	17'-0"	17'-3"	16'-6"	16-8"	16'-0"	15'-8"	15'-1"	14'-11"	14'-5"
	3/2	TJI®/25 DF	LOW	N.A.	N.A.	21'-2"	20'-2"	21'-2"	20'-2"	20'-3"	19'-5"	19'-6"	18'-9"	18'-2"	17'-7"	17'-2"	16'-9"
		101/25 DF	HIGH	19'-6"	18'-5"	18'-10"	17'-10"	18'-10"	17'-10"	18'-2"	17'-3"	17'-6"	16'-9"	16'-6"	15'-10"	15'-7"	15'-1"
		TJI®/15 DF	LOW	N.A.	N.A.	24'-4"	23'-2"	24'-4"	23'-2"	23'-3"	22'-3"	22'-4"	21'-6"	20'-11"	20'-3"	19'-9"	19'-1"
	100	101715 01	HIGH	22'-5"	21'-2"	21'-8"	20'-6"	21'-8"	20'-6"	20'-10"	19'-10"	20'-1"	19'-3"	18'-11"	18'-3"	17'-11"	17'-4"
		TJI®/25 DF	LOW	N.A.	N.A.	25'-5"	24'-3"	25'-5"	24'-3"	24'-4"	23'-4"	23'-5"	22'-6"	21'-11"	21'-2"	20'-8"	19'-10"
	117/8"	101 /25 DI	HIGH	23'-6"	22'-2"	22'-8"	21'-6"	22'-8"	21'-6"	21'-10"	20'-9"	21'-1"	20'-2"	19'-10"	19'-1"	18'-10"	18'-2"
- 120000	1170	TJI®/35 DF	LOW	N.A.	N.A.	27'-8"	26'-4"	27'-8"	26'-4"	26'-5"	25'-4"	25'-5"	24'-6"	23'-9"	23'-0"	22'-6"	21'-10"
		101 /33 DI	HIGH	25'-7"	24'-1"	24'-8"	23'-4"	24'-8"	23'-4"	23'-9"	22'-7"	22'-11"	21'-11"	21'-6"	20'-9"	20'-5"	19'-9"
		TJI®/55 DF	LOW	N.A.	N.A.	31'-8"	30'-2"	31'-8"	30'-2"	30'-3"	29'-0"	29'-1"	28'-0"	27'-3"	26'-4"	25'-9"	25'-0"
16"		101 755 DI	HIGH	29'-3"	27'-7"	28'-3"	26'-9"	28'-3"	26'-9"	27'-2"	25'-10"	26'-2"	25'-1"	24'-8"	23'-9"	23'-5"	22'-8"
		TJI®/25 DF	LOW	N.A.	N.A.	29'-1"	27'-9"	29'-1"	27'-9"	27'-10"	26'-8"	26'-9"	25'-9"	25'-1"	23'-2"	21'-5"	19'-10"
		101 /20 01	HIGH	26'-10"	25'-4"	25'-11"	24'-7"	25'-11"	24'-7"	24'-11"	23'-9"	24'-1"	23'-1"	22'-8"	21'-10"	21'-6"	20'-8"
945 S S S S S S S S S S S S S S S S S S S	14"	TJI®/35 DF	LOW	N.A.	N.A.	31'-7"	30'-1"	31'-7"	30'-1"	30'-2"	28'-11"	29'-0"	27'-11"	27'-2"	26'-3"	25'-8"	22'-9"
	200	101700 51	HIGH	29'-2"	27'-6"	28'-2"	26'-8"	28'-2"	26'-8"	27'-1"	25'-9"	26'-2"	25'-0"	24'-7"	23'-8"	23'-4"	22'-7"
1		TJI®/55 DF	LOW	N.A.	N.A.	36'-0"	34'-4"	36'-0"	34'-4"	34'-6"	33'-0"	33'-2"	31'-11"	31'-0"	30'-0"	29'-4"	28'-6"
- ALSH N		101/100/01	HIGH	33'-4"	31'-5"	32'-2"	30'-6"	32'-2"	30'-6"	30'-11"	29'-5"	29'-10"	28'-7"	28'-1"	27'-0"	26'-8"	25'-10"
100000		TJI®/25 DF	LOW	N.A.	N.A.	32'-5"	30'-11"	32'-5"	30'-11"	31'-0"	29'-9"	29'-10"	27'-10"	25'-4"	23'-2"	21'-5"	19'-10"
B. P. Sale			HIGH	29'-11"	28'-3"	28'-11"	27'-5"	28'-11"	27'-5"	27'-10"	26'-6"	26'-10"	25'-8"	25'-3"	23'-8"	22'-8"	20'-8"
NO 20 10	16"	TJI®/35 DF	LOW	N.A.	N.A.	35'-1"	33'-5"	35'-1"	33'-5"	33'-7"	32'-2"	32'-3"	31'-1"	29'-0"	26'-6"	24'-6"	22'-9"
13 73		10000	HIGH	32'-5"	30'-6"	31'-4"	29'-8"	31'-4"	29'-8"	30'-1"	28'-8"	29'-1"	27'-10"	27'-4"	26'-4"	25'-11"	24'-7"
Sec. 11 1911		TJI®/55 DF	LOW	N.A.	N.A.	40'-0"	38'-1"	40'-0"	38'-1"	38'-4"	36'-8"	36'-10"	35'-5"	34'-5"	33'-4"	32'-7"	31'-8"
7 2 3 14	1		HIGH	37'-0"	34'-10"	35'-8"	33'-10"	35'-8"	33'-10"	34'-4"	32'-8"	33'-2"	31'-8"	31'-2"	30'-0"	29'-7"	28'-8"

See page 12 for applicable notes.

RESIDENTIAL ROOF SPAN CHART

Low Slope: 6"/12" or less.

High Slope: Over 6"/12" through 12"/12".

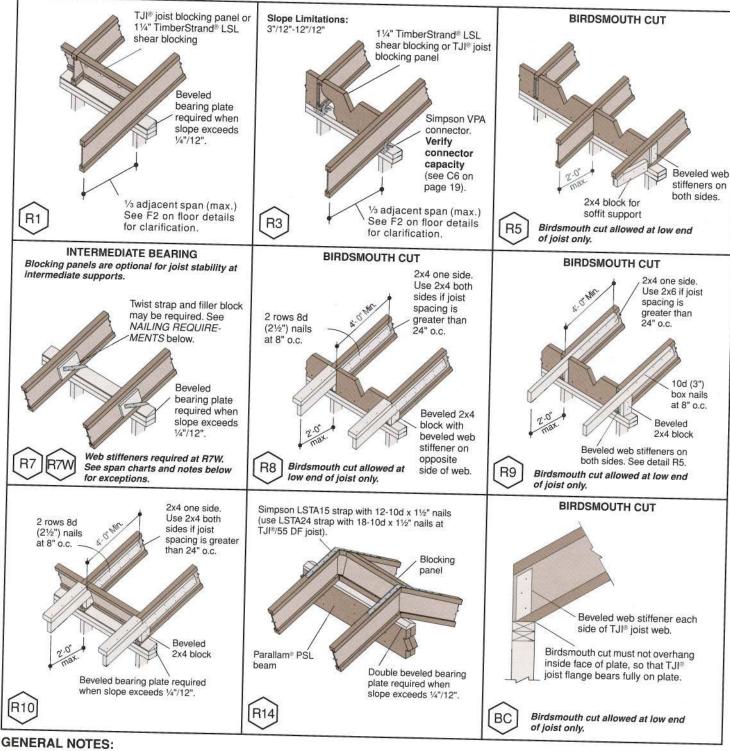
							Slope:	CNLLIVE	FLOAD	/III AN	DDEAD	LOAD (DL) IN F	SF			7
							DES	GN LIVE	LUAD	(LL) AIV	SNO	W LOAD A	RFA (11)	5%)	100	X OLD	BULL
					NON-SNO	Contract of the Contract of th	0011	0011	20LL	25LL	25LL	30LL	30LL	40LL	40LL	50LL	50LL
O.C.	DEDTIL	CEDIEC	SLOPE	16LL 15DL	16LL 20DL	20LL 15DL	20LL 20DL	20LL 15DL	20DL	15DL	20DL	15DL	20DL	15DL	20DL	15DL	20DL
PACING	DEPTH	SERIES	LOW	N.A.	N.A.	18'-11"	18'-0"	18'-11"	18'-0"	18'-1"	17'-4"	17'-5"	16'-9"	16'-3"	15'-9"	15'-5"	14'-11"
		TJI®/15 DF	HIGH	17'-6"	16'-6"	16'-11"	16'-0"	16'-11"	16'-0"	16'-3"	15'-6"	15'-8"	15'-0"	14'-9"	14'-2"	14'-0"	13'-6"
	91/2"		LOW	N.A.	N.A.	19'-10"	18'-11"	19'-10"	18'-11"	19'-0"	18'-2"	18'-3"	17'-7"	17'-1"	16'-6"	16'-2"	15'-8"
		TJI®/25 DF	HIGH	18'-4"	17'-3"	17'-9"	16'-9"	17'-9"	16'-9"	17'-0"	16'-3"	16'-5"	15'-9"	15'-5"	14'-11"	14'-8"	14'-2"
			LOW	N.A.	N.A.	22'-10"	21'-9"	22'-10"	21'-9"	21'-10"	20'-11"	21'-0"	20'-2"	19'-8"	18'-9"	18'-1"	16'-8"
		TJI8/15 DF	-	21'-1"	19'-10"	20'-4"	19'-3"	20'-4"	19'-3"	19'-7"	18'-8"	18'-11"	18'-1"	17'-9"	17'-1"	16'-10"	16'-4"
			HIGH	N.A.	N.A.	23'-11"	22'-9"	23'-11"	22'-9"	22'-10"	21'-11"	22'-0"	21'-2"	20'-7"	19'-4"	17'-10"	16'-6'
		TJI8/25 DF	100000000000000000000000000000000000000		20'-10"	21'-4"	20'-2"	21'-4"	20'-2"	20'-6"	19'-6"	19'-9"	18'-11"	18'-7"	17'-11"	17'-8"	17'-1"
	117/8"		HIGH	22'-1"	N.A.	25'-11"	24'-9"	25'-11"	24'-9"	24'-10"	23'-9"	23'-11"	23'-0"	22'-4"	21'-7"	20'-5"	18'-11
		TJI®/35 DF	LOW	N.A.	22'-7"	23'-2"	21'-11"	23'-2"	21'-11"	22'-3"	21'-2"	21'-6"	20'-7"	20'-3"	19'-6"	19'-2"	18'-7'
	1750000	- Committee of the Comm	HIGH	24'-0"	N.A.	29'-9"	28'-4"	29'-9"	28'-4"	28'-5"	27'-3"	27'-4"	26'-3"	25'-7"	24'-9"	24'-2"	23'-6
	1 197.0	TJI®/55 DF	LOW	N.A.			25'-1"	26'-6"	25'-1"	25'-6"	24'-3"	24'-7"	23'-6"	23'-2"	22'-3"	22'-0"	21'-3'
19.2"			HIGH	27'-6"	25'-10"	26'-6"	26'-0"	27'-4"	26'-0"	26'-2"	25'-0"	25'-2"	23'-2"	21'-1"	19'-4"	17'-10"	16'-6
10.2		TJI®/25 DF	LOW	N.A.	N.A.		23'-1"	24'-5"	23'-1"	23'-5"	22'-4"	22'-8"	21'-8"	21'-3"	19'-8"	18'-11"	17'-2
	12 3 15		HIGH	25'-3"	23'-9"	24'-5"	28'-2"	29'-7"	28'-2"	28'-4"	27'-2"	27'-3"	26'-2"	24'-1"	22'-1"	20'-6"	18'-1
	14"	TJI®/35 DF	LOW	N.A.	N.A.	29'-7"	25'-0"	26'-5"	25'-0"	25'-5"	24'-2"	24'-6"	23'-6"	23'-1"	22'-2"	21'-11"	20'-6
		District Control	HIGH	27'-5"	25'-10"	26'-5"			32'-3"	32'-5"	31'-0"	31'-2"	29'-11"	29'-1"	28'-2"	27'-6"	26'-9
		TJI®/55 DF	LOW	N.A.	N.A.	33'-10"	32'-3"	33'-10"	28'-7"	29'-1"	27'-8"	28'-0"	26'-10"	26'-4"	25'-5"	25'-0"	24'-3
		101 100 21	HIGH	31'-3"	29'-6"	30'-3"	28'-7"	Section 1	29'-0"	29'-0"	25'-10"	25'-10"	23'-2"	21'-1"	19'-4"	17'-10"	16'-6
	W 311	TJI®/25 DF	LOW	N.A.	N.A.	30'-6"	29'-0"	30'-6"		26'-2"	24'-11"	25'-3"	23'-1"	22'-0"	19'-8"	18'-11"	17'-2
	16"	101 /20 01	HIGH	28'-2"	26'-6"	27'-2"	25'-9"	27'-2"	25'-9"	31'-6"	29'-6"	29'-6"	26'-6"	24'-1"	22'-1"	20'-5"	18'-1
		TJI®/35 DF	LOW	N.A.	N.A.	32'-11"	31'-4"	32'-11"	31'-4"			27'-3"	26'-1"	25'-8"	23'-9"	22'-2"	20'-€
			HIGH	30'-5"	28'-8"	29'-5"	27'-10"	29'-5"	27'-10"	28'-3"	26'-11"	34'-7"	33'-3"	32'-4"	31'-4"	29'-6"	27'-5
		THE/SE DE	LOW	N.A.	N.A.	37'-7"	35'-10"	37'-7"	35'-10"	36'-0"		31'-2"	29'-9"	29'-3"	28'-2"	27'-9"	25'-7
		TJI®/55 DF	HIGH	34'-9"	32'-9"	33'-7"	31'-9"	33'-7"	31'-9"	32'-3"	30'-9"	16'-1"	15'-6"	15'-1"	14'-6"	13'-3"	12'-4
	1 19 1	T 118/45 DE	LOW	N.A.	N.A.	17'-6"	16'-8"	17'-6"	16'-8"	16'-9"	16'-1"		13'-10"	13'-8"	13'-2"	12'-11"	12'-6
		TJI ⁸ /15 DF	HIGH	16'-2"	15'-3"	15'-8"	14'-10"	15'-8"	14'-10"	15'-0"	14'-4"	14'-6"		15'-9"	15'-3"	14'-3"	13'-2
	91/2"	T HE OF DE	LOW	N.A.	N.A.	18'-5"	17'-6"	18'-5"	17'-6"	17'-7"	16'-10"	16'-11"	16'-3"	14'-4"	13'-9"	13'-7"	13'-
		TJI®/25 DF	HIGH	17'-0"	16'-0"	16'-5"	15'-6"	16'-5"	15'-6"	15'-9"	15'-0"	15'-3"	14'-7"	15'-8"	14'-5"	13'-3"	12'-
		T HOUSE DE	LOW	N.A.	N.A.	21'-1"	20'-1"	21'-1"	20'-1"	20'-2"	19'-3"	19'-3"	17'-3"	10000000	15'-6"	14'-5"	13'-4
		TJI®/15 DF	HIGH	19'-6"	18'-5"	18'-10	17'-10'	18'-10"	17'-10"	18'-1"	17'-3"	17'-6"	16'-9"	16'-5"	15'-5"	14'-3"	13'-2
	4 5 5 5 5		LOW	N.A.	N.A.	22'-1"	21'-1"	22'-1"	21'-1"	21'-2"	20'-3"	20'-4"	18'-6"	16'-10"	15'-9"	15'-1"	13'-8
		TJI®/25 DF	HIGH	20'-5"	19'-3"	19'-9"	18'-8"	19'-9"	18'-8"	19'-0"	18'-1"	18'-4"	17'-6"	17'-3"	1770 1770		15'-
	117/8"		LOW	N.A.	N.A.	24'-0"	22'-10'		22'-10"		22'-0"	22'-1"	21'-2"	19'-3"	17'-8"	16'-3"	15'-
	1000	TJI®/35 DF	HIGH	22'-3"	20'-11	" 21'-5"	20'-4"	21'-5"	20'-4"	20'-7"	19'-8"	19'-11"	19'-0"	18'-8"	17'-9"	111111111	21'-
			LOW	N.A.	N.A.	27'-6"		27'-6"	26'-2"	26'-4"	25'-2"	25'-4"	24'-4"	23'-8"	22'-10	20'-4"	19'-
	10000	TJI®/55 DF	HIGH	25'-5"	24'-0"	24'-7"	23'-3"	24'-7"	23'-3"	23'-7"	22'-6"	22'-9"	21'-9"	21'-5"	20'-7"		
24"			LOW	N.A.	N.A.	25'-4'	24'-1"	25'-4"	23'-2"	23'-2"	20'-7"	20'-7"	18'-6"	16'-10'	15'-5"		13'-
		TJI ⁸ /25 DF	HIGH	23'-5'	22'-0'	22'-7'	21'-5"	22'-7"	21'-5"	21'-8"	20'-2"	20'-11"	18'-6"	17'-7"	15'-9"	15'-1"	
	1000		LOW	N.A.	N.A.	27'-5'	26'-1"	27'-5"	26'-1"	26'-3"	23'-7"	23'-7"	21'-2"		17'-8"		
	14"	TJI®/35 DF		25'-4'	23'-11	" 24'-6'	23'-2"	24'-6"	23'-2"	23'-6"	22'-5"	22'-9"	21'-9"	20'-10'	200		
	1000		LOW	N.A.	N.A.		29'-10	" 31'-4"	29'-10	" 30'-0"		-	- Common Linear	THE RESERVE OF THE PARTY OF THE	-	TO STATE OF THE PARTY OF THE PA	-
	III DESCRIPTION	TJI®/55 DF	HIGH	-		-	26'-6'	28'-0"	26'-6"	26'-11	" 25'-7"	26'-0"			23'-5"		20'-
			LOW				25'-3'	26'-6"	23'-2"	23'-2'	20'-7"	20'-7"	_			THE RESERVE AND DESCRIPTION OF THE PERSON NAMED IN COLUMN TWO	-
	JE11 118	TJI®/25 DF	HIGH		_		The second second	25'-2"	22'-4"	23'-4'	20'-2"	21'-0"		-	1000	and the second second	_
	The state of		LOW				2000000		26'-6"	26'-6'	23'-7"	23'-7"	21'-2'	19'-3"	_		
	16"	TJI®/35 DF	HIGH	-	-					26'-2"	24'-11	" 25'-3"	22'-8'	20'-10	" 19'-0'		
	1 8 2 5		LOW		-					-	31'-10	" 32'-0"	30'-7'	27'-11	" 25'-7		_
The second secon		TJI®/55 DF	LOW	18.75.	14.74	1 4 11	-		-				" 27'-6'	26'-2"	23'-5'	22'-6'	20'-

GENERAL NOTES:

- Roof surface must be sloped 1/4" in 12" minimum to provide positive drainage.
- 2. Maximum deflection is limited to L/180 at total load, and L/240 at live load.
- 3. For loads not shown, refer to allowable uniform load tables on page 16.
- 4. Charts are based on a support beam or wall at the high end. Applications utilizing ridge boards are not covered by these charts.
- 5. Spans shown are horizontal clear distances between supports and reflect the most restrictive of simple or multiple span applications, based on uniformly loaded joists and include allowable increases for repetitive member use.

WEB STIFFENER REQUIREMENTS:

- 6. TJI®/15 DF, TJI®/25 DF and TJI®/35 DF joists: Web stiffeners are required if the sides of the hanger do not laterally support the TJI® joist top flange. Web stiffeners are also required at all sloped hanger and birdsmouth cut locations.
- 7. TJI®/55 DF joists: Web stiffeners are required at all hanger and birdsmouth cut locations.



MINIMUM BEARING LENGTH

- 1¾" minimum bearing is required at joist ends.
- 3½" minimum bearing is required when joists are continuous over the support.

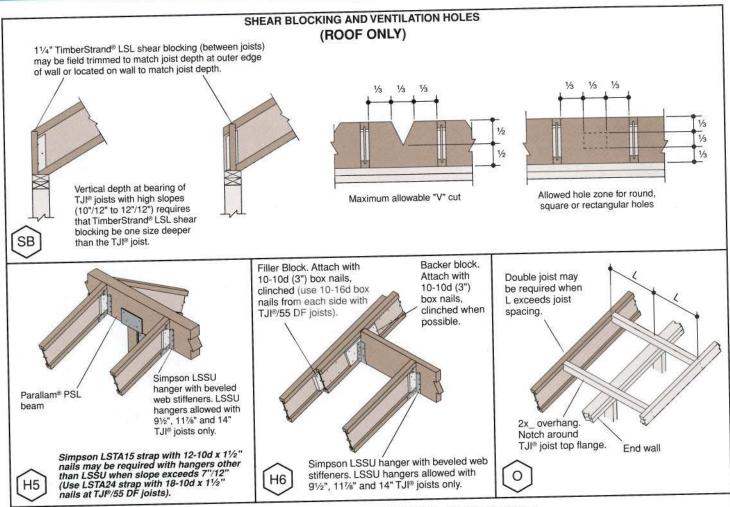
SLOPE/BEVEL PLATE CRITERIA

- Unless otherwise noted, all details are valid to maximum 12"/12" slope.
- A sloped bearing surface is required for all slopes exceeding $\frac{1}{4}$ " per foot for wood bearing surfaces. Where reaction allows, Simpson VPA connectors may be used in lieu of beveled bearing plate. See R3 for additional information. At the low end of joists a birdsmouth cut may be used without a beveled bearing surface. See detail BC.
- Slope seats for hangers are required when the roof slope exceeds $\ensuremath{\mathcal{V}}$ " per foot. Beveled web stiffeners are required at sloped seat hangers.
- Supplemental connections to the bearing plate may be required for sloped conditions beyond 4" per foot to resist sliding forces

Legacy Literature See Note on Front Cover

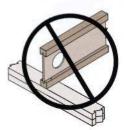
NAILING REQUIREMENTS

- Nail joists at end bearings with 2-10d (3") box or 12d (31/4") box nails (1 each side), 11/2" minimum from end to minimize splitting.
- Nail joists at intermediate bearings with:
- 2-10d (3") box or 12d (31/4") box nails (1 each side) when roof slope is less than 4" per foot.
- 4-10d (3") box or 12d (31/4") box nails (2 each side) when roof slope is from 4" per foot to 5" per foot.
- 4-10d (3") box or 12d (31/4") box nails (2 each side) plus a twist strap and filler block (see R7) when roof slope is greater than 5" per foot.
- Nail TJI® joist blocking panels to bearing plate with 10d (3") box nails at 6" on-center. Toe-nail TimberStrand® LSL shear blocking to bearing plate with 10d (3") box nails at 6" on-center or 16d (31/2") box nails at 12" oncenter. When used for shear transfer, nail to bearing plate with connections equivalent to decking nail schedule.



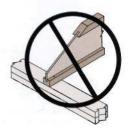
THESE CONDITIONS ARE NOT PERMITTED

DO NOT cut holes too close to supports



Refer to hole charts on page 19 for minimum distance from bearing wall.

DO NOT bevel cut joist beyond inside face of wall.



DO NOT overhang birdsmouth cut from inside face of plate.



TJI® joist flange must bear fully on the plate. See detail BC on page 13.

LATERAL SUPPORT TO PREVENT JOIST ROLLOVER

 All roof joists must be laterally supported at cantilever and end bearings to prevent joist rollover. Use TJI® joist blocking panels or TimberStrand® LSL shear blocking.

WEB STIFFENER REQUIREMENTS

- TJI®/15 DF, TJI®/25 DF and TJI®/35 DF Joists: Web stiffeners are required if the sides of the hanger do not laterally support the TJI® joist top flange. Web stiffeners are also required at all sloped hanger and birdsmouth cut locations.
- TJI®/55 DF Joists: Web stiffeners are required at all hanger and birdsmouth cut locations.

FILLER AND BACKER BLOCK SIZES

	9½" or 11 ⁷ / ₈ " TJI [®] /15 DF	9½" or 11¾" TJI [®] /25 DF	14" or 16" TJI®/25 DF	11%" TJI®/35 DF	14" or 16" TJI®/35 DF	117/6" TJI®/55 DF	14" or 16" TJI®/55 DF
Filler Block (Detail H6)	11/6" net	2x6	2x8	2x6+½" plywood	2x8+½" plywood	2-2x6	2-2x8
Backer Block (Detail H6)	½" or 5/8"	5/8" or 3/4"	5/8" or 3/4"	1" net	1" net	2x6	2x8

Filler and backer block length should accommodate required nailing without splitting.

Values shown are in pounds per lineal foot (PLF)

		TJI®/	15 DF	The same of	
JOIST	91/2" TJ	19/15 DF	117/8" T.	JI®/15 DF	JOIST
CLEAR SPAN (Ft.)	LIVE LOAD L/480	TOTAL LOAD	LIVE LOAD L/480	TOTAL LOAD	CLEAR SPAN (Ft.)
6		247		247	6
8		186		186	8
10	143	149		149	10
12	88	125		125	12
14	57	107	96	107	14
16	39	79	67	94	16
18	28	56	48	84	18
20	21	42	36	71	20
22	16	32	27	54	22

	A STATE OF THE PARTY OF THE PAR			TJI®/2	25 DF	Value Cons		STATE OF THE	
JOIST	91/2" TJ	18/25 DF	11%"T	JI ⁸ /25 DF	14" TJ	18/25 DF	16" TJ	1 ³⁰ /25 DF	JOIST
SPAN (Ft.)	LIVE LOAD L/480	TOTAL LOAD	LIVE LOAD L/480	TOTAL LOAD	LIVE LOAD L/480	TOTAL	LIVE LOAD L/480	TOTAL	CLEAR SPAN (Ft.)
6		264		264		264		264	6
8		199		199		199		199	8
10		160		160		160		160	10
12	100	134		134		134		134	12
14	65	115	109	115		115		115	14
16	45	90	76	101		101		101	16
18	32	65	54	89	80	89		89	18
20	24	48	41	81	59	81	80	81	20
22	18	36	31	62	45	73	62	73	22
24	14	29	24	48	35	67	48	67	24
26	11	23	19	38	28	56	39	62	26
28			15	31	23	46	31	58	28
30			13	26	19	38	26	51	30

			TJI®/	35 DF		No.	1
JOIST	111/8"T.	II [®] /35 DF	14" TJI	®/35 DF	16" TJI	®/35 DF	JOIST
CLEAR SPAN (Ft.)	LIVE LOAD L/480	TOTAL LOAD	LIVE LOAD L/480	TOTAL LOAD	LIVE LOAD L/480	TOTAL	CLEAR SPAN (Ft.)
6		302		302		302	6
8		228		228		228	8
10		183		183		183	10
12		153		153		153	12
14	1	131		131		131	14
16	95	115		115		115	16
18	68	102	99	102		102	18
20	51	92	74	92		92	20
22	39	78	57	84	77	84	22
24	30	61	44	77	60	77	24
26	24	49	35	71	48	71	26
28	20	39	29	57	39	66	28
30	16	32	24	47	32	62	30
32	14	27	20	39	27	53	32

			TJI®/	55 DF	and the same		
JOIST	11%"T	II®/55 DF	14" TJ	18/55 DF	16" TJ	18/55 DF	JOIST
SPAN (Ft.)	LIVE LOAD L/480	TOTAL LOAD	LIVE LOAD L/480	TOTAL	LIVE LOAD L/480	TOTAL	CLEAR SPAN (Ft.)
6		437*		437*		437*	6
8		329*	NICH E	329*		329*	8
10		265*		265*		265*	10
12		221*		221*		221*	12
14		190*		190*		190*	14
16	136	166*		166*		166*	16
18	99	148*	141*	148*		148*	18
20	74	133*	107	133*		133*	20
22	57	114*	82	121*	110*	121*	22
24	45	89	65	111*	87	111*	24
26	36	71	52	103*	69	103*	26
28	29	58	42	84	56	95*	28
30	24	47	35	69	47	89*	30
32	20	40	29	57	39	77*	32
34	17	33	24	48	33	65	34
36			20	41	28	56	36

*Joist reaction (simple span) exceeds 1200 lbs., web stiffeners are required at hanger

locations. Web stiffeners may be required for other conditions, see note 3 below.

GENERAL NOTES:

- 1. Load capacity assumes no composite action provided by sheathing.
- 2. These values reflect the most restrictive of simple span or multiple span applications.
- 3. Web stiffeners are required if the sides of the hanger do not laterally support the TJI® joist top flange. Web stiffeners are also required at all TJI®/55 DF joist hanger locations where joist reactions exceed 1200 pounds.

FLOOR JOIST SIZING:

- 4. To size a joist for use in a floor, it is necessary to check both live load and total load. When live load is not shown, total load will control.
- 5. Total Load column limits joist deflection to L/240. Live load column is based on joist deflection of L/480.
- 6. For live load deflection limits of L/360 (minimum code criteria), multiply value in live load column by 1.33. The resulting live load shall not exceed the total load shown.

PSFTO PLF CONVERSION TABLE

Load in pounds per lineal foot (PLF)

O.C.			- WHICK IN	LOAD IN LB	S. PER SQUARE	FOOT (PSF)	State		
SPACING	20	25	30	35	40	45	50	55	co
12"	20	25	30	35	40	45	50		60
16"	27	34	40	47	54	60		55	60
19.2"	32	40	48	56	activities.		67	/4	80
24"	40	50		27.20	64	72	80	88	96
-	40	30	60	70	80	90	100	110	120

Values shown are in pounds per lineal foot (PLF)

	1000	11 30	TJ18/1	15 DF		
Elizabeth Roman	91/2	"TJI®/15	DF	11%	"TJI®/1	5 DF
JOIST	TOTAL	LOAD	DEFL.	TOTAL	LOAD	DEFL
SPAN(6) (Ft.)	Snow 115%	Non- Snow 125%	L/240	Snow 115%	Non- Snow 125%	L/240
6	284	308		284	308	
8	213	232		213	232	
10	171	186		171	186	
12	143	156		143	156	
14	123	133	115	123	133	
16	98	105	79	108	117	
18	75	75	56	96	105	96
20	56	56	42	83	91	71
22	42	42	32	70	72	54
24	33	33	25	56	56	42
26	26	26	20	45	45	34
28				36	36	27
30				29	29	22

	THUS AND	Carre Contract	37 - 33			TJI®/2	25 DF		THE STREET	2000		IN T
BATTE I	91/2'	'TJI®/25	DF	117/8	"TJI®/2	5 DF	14"	TJI®/25	DF	16'	TJI®/25	DF
JOIST	TOTAL	LOAD	DEFL.	TOTAL	LOAD	DEFL.	TOTAL	LOAD	DEFL.	TOTAL	LOAD	DEFL
CLEAR SPAN ⁽⁶⁾ (Ft.)	Snow 115%	Non- Snow 125%	L/240	Snow 115%	Non- Snow 125%	L/240	Snow 115%	Non- Snow 125%	L/240	Snow 115%	Non- Snow 125%	L/240
6	303	330		303	330		303	330		303	330	
8	228	248		228	248		228	248		228	248	
10	183	200		183	200		183	200		183	200	
12	154	167		154	167		154	167		154	167	
14	132	143	131	132	143		132	143		132	143	
16	116	120	90	116	126		116	126		116	126	
18	86	86	65	102	111	109	102	111		102	111	
20	64	64	48	93	101	81	93	101		93	101	
22	48	48	36	81	82	62	83	91	91	83	91	
24	38	38	29	64	64	48	77	83	71	77	83	
26	30	30	23	51	51	38	71	75	56	71	77	77
28			-	41	41	31	61	61	46	66	72	62
30				34	34	26	50	50	38	62	67	51
32				28	28	21	41	41	31	56	56	42
34							35	35	26	47	47	35

		100		Т	JI®/35 D	F					
	117/8	"TJI®/3	5 DF	14"	TJI®/35	DF	16" TJI®/35 DF				
JOIST	TOTAL	LOAD	DEFL.	TOTAL	LOAD	LOAD DEFL.		TOTAL LOAD			
SPAN ⁽⁶⁾ (Ft.)	Snow 115%	Non- Snow 125%	L/240	Snow 115%	Non- Snow 125%	L/240	Snow 115%	Non- Snow 125%	L/240		
6	347	377		347	377		347	377			
8	262	285		262	285		262	285			
10	210	228		210	228		210	228			
12	175	191		175	191		175	191			
14	150	163		150	163		150	163			
16	132	143		132	143		132	143			
18	117	127		117	127		117	127			
20	105	115	102	105	115		105	115			
22	96	104	78	96	105		96	105			
24	81	81	61	88	96	89	88	96			
26	65	65	49	81	88	71	81	88			
28	52	52	39	75	76	57	75	82	78		
30	43	43	32	63	63	47	71	77	64		
32	36	36	27	52	52	39	66	71	53		
34	30	30	23	44	44	33	59	59	44		

		N INC	7/4	T	JI®/55 D	F	56.0	Wa Sar						
	117/8	"TJI®/5	5 DF	14"	TJI®/55	DF	16" TJI®/55 DF							
JOIST	TOTAL	LOAD	DEFL.	TOTAL	LOAD	DEFL.	TOTAL	LOAD	DEFL					
CLEAR SPAN ⁽⁶⁾ (Ft.)	Snow 115%	Non- Snow 125%	L/240	Snow 115%	Non- Snow 125%	L/240	Snow 115%	Non- Snow 125%	L/240					
6	502*	546*		502*	546*		502*	546*						
8	378*	411*		378*	411*		378*	411*						
10	304*	331*		304*	331*		304*	331*						
12	254*	276*		254*	276*		254*	276*						
14	218*	237*		218*	237*		218*	237*						
16	190*	207*		190*	207*		190*	207*						
18	170*	185*		170*	185*		170*	185*						
20	152*	166*	149*	152*	166*		152*	166*						
22	139*	151*	114*	139*	151*		139*	151*						
24	119*	119*	89	127*	138*	129*	127*	138*						
26	95*	95*	71	118*	128*	104*	118*	128*						
28	77	77	58	109*	112*	84	109*	118*	113					
30	63	63	47	92*	92*	69	102*	111*	93					
32	53	53	40	76*	76*	57	95*	103*	77					
34	44	44	33	64	64	48	87*	87*	65					
36	37	37	28	54	54	41	74*	74*	56					
38	32	32	24	47	47	35	63*	63*	47					
40	27	27	20	40	40	30	54	54	4					

^{*} Joist reaction (simple span) exceeds 1200 lbs., web stiffeners are required at hanger locations. Web stiffeners may be required for other conditions, see note 3 below.

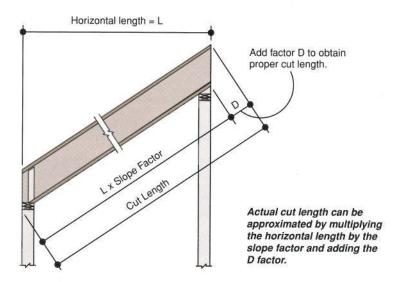
GENERAL NOTES:

- 1. Load capacity assumes no composite action provided by sheathing.
- 2. These values reflect the most restrictive of simple span or multiple span applications.
- Web stiffeners are required if the sides of the hanger do not laterally support the TJI® joist top flange. Web stiffeners are also required at all sloped hanger locations, all birdsmouth cut locations, and for TJI®/55 DF joists, at all hanger locations where joist reactions exceed 1200 pounds.

ROOF JOIST SIZING:

- Roof surface must be sloped ¼" in 12" minimum to provide positive drainage.
- 5. Total Load column limits joist deflection to L/180. For stiffer deflection criteria, check the L/240 column. Some codes may require an L/240 live load deflection limit; check the L/240 column at live load. Check your local code for roof deflection criteria.
- 6. For roof slopes greater than 2"/12", consideration must be given to the increased dead load and deflection caused by actual sloped length. Approximate this effect by multiplying the horizontal clear span by the slope factor from the SLOPE FACTOR TABLE on page 17 to determine the JOIST CLEAR SPAN.

TJI® JOIST CUT LENGTH CALCULATION



SLOPE		D FA	CTOR		
SLOPE	91/2"	117/8"	14"	16"	
2½ in 12	2"	21/2"	3"	33/8"	
3 in 12	23/8"	3"	31/2"	4"	
3½ in 12	27/8"	31/2"	41/8"	43/4"	
4 in 12	31/4"	4"	43/4"	53/8"	
4½ in 12	35/8"	41/2"	51/4"	6"	
5 in 12	4"	5"	57/8"	63/4"	
6 in 12	4¾"	6"	7"	8"	
7 in 12	55/8"	7"	81/4"	93/8"	
8 in 12	63/8"	8"	93/8"	103/4"	
9 in 12	71/8"	9"	101/2"	12"	
10 in 12	8"	10"	113/4"	13%"	
11 in 12	83/4"	11"	127/8"	143/4"	
12 in 12	91/2"	117/8"	14"	16"	

SLOPE FACTOR TABLE

SLOPE	FACTOR
2½ in 12	1.022
3 in 12	1.031
3½ in 12	1.042
4 in 12	1.054
4½ in 12	1.068
5 in 12	1.083
6 in 12	1.118
7 in 12	1.158
8 in 12	1.202
9 in 12	1.250
10 in 12	1.302
11 in 12	1.357
12 in 12	1.414

Material Weights

Include TJI® joist weights in dead load calculations - see chart on page 18 for joist weights.

Douglas Fir Sheathing*

(Based on 36 pcf for plywood, 40 pcf for OSB)

pased on bo per for pr	y WOOU, 40 J
½" plywood	1.5 ps
%" plywood	
3/4" plywood	2.3 ps
11/8" plywood	3.4 ps
½" OSB	1.7 ps
%" OSB	2.0 ps
3/4" OSB	2.5 ps
11/8" OSB	3.7 ps

Roofing Materials

Asphalt shingles	2.5 psf
Wood shingles	2.0 psf
Clay Tile 9.0 to	14.0 psf
Slate (%" thick)	15 psf

Roll or Batt Insulation

Rock Wool	(1"	thick)	0.2	psf
Glass Wool	(1"	thick)	0.1	psf

Floors

Hardwood (Nominal 1") 4.0 ps	sf
Concrete (1" thick)	
Regular 12.0 ps	sf
Lightweight 8.0 to 10.0 ps	sf
Sheet vinyl 0.5 ps	sf
Carpet and Pad 1.0 ps	sf
34" ceramic or quarry tile 10.0 ps	sf
Gypsum concrete (¾") 6.5 ps	sf
Cailings	

Ceilings		
Acoustical fiber tile	1.0p	S
1/2" gypsum board	2.2 p	os
5/8" gypsum board	2.8 p	os
Plaster (1" thick)	8.0 r	os

^{*} For southern pine weights, increase Douglas fir weights by 10%.

		B	ASIC PROPERT	IES		REACTION PROPERTIES					
Joist Series	Joist	Joist	Maximum Resistive	Joist Only	Maximum Vertical	Maximum End		ntermediate in (Lbs.)			
Certes	Depth (Inches)	Weight (Lbs./Ft.)	Moment (FtLbs.)	El x 10 ⁶ (ln. ² Lbs.)	Shear (Lbs.)	Reaction (Lbs.)	No Web Stiffeners	With Web Stiffeners			
TWALE	9½	1.9	2800	161	1120	945	1895	N.A.			
TJI®/15 DF	117/8	2.2	3715	280	1420	945	1895	N.A.			
	9½	2.2	3290	186	1120	1015	2030	N.A.			
- 115/0- 0-	117/8	2.4	4375	322	1420	1015	2030	2385			
TJI®/25 DF	14	2.6	5350	480	1710	1015	2030	2385			
	16	2.8	6270	663	1970	1015	2030	2385			
	111//8	2.9	5820	414	1420	1160	2320	2675			
TJI®/35 DF	14	3.0	7120	613	1710	1160	2320	2675			
	16	3.3	8350	841	1970	1160	2320	2675			
	117/8	3.9	8925	619	1925	1400	3355	3830			
TJI®/55 DF	14	4.2	10920	912	2125	1400	3355	3830			
	16	4.5	12810	1245	2330	1400	3355	3830			

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 NER-200 and these increases are reflected in span tables.
- The reaction values above are based on an assumed minimum bearing length of 13/4" at ends, 31/2" at intermediate supports.
- The following formula approximates the uniform load deflection of Δ (inches):

For TJI®/15 DF, TJI®/25 DF and TJI®/35 DF Joists

$$\Delta = \frac{22.5 \text{ WL}^4}{\text{El}} + \frac{2.67 \text{ WL}^2}{\text{d x } 10^5}$$

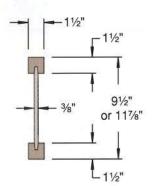
 $\mathbf{w} = \text{uniform load in pounds per lineal foot}$ $\mathbf{L} = \text{clear span in feet}$ For TJI®/55 DF Joists

$$\Delta = \frac{22.5 \text{ WL}^4}{\text{Fl}} + \frac{2.29 \text{ WL}^2}{\text{d x } 10^5}$$

d = out to out depth of the joist in inchesEI = value from table

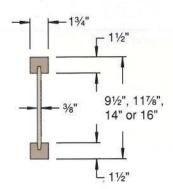
Southern pine (SP) TJI® joists may be directly substituted for the corresponding depth and series of Douglas fir (DF) TJI® joists listed within this guide.

PRODUCT DESCRIPTION



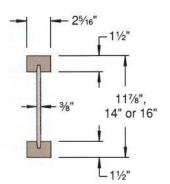
TJI®/15 DF Joists

Top and bottom flanges of
1½" x 1½" Microllam® LVL with
36" Performance Plus® web.

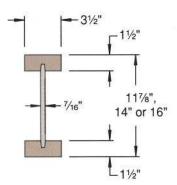


TJI®/25 DF Joists

Top and bottom flanges of 134" x 11/2" Microllam® LVL with 3/6" Performance Plus® web.



TJI®/35 DF Joists
Top and bottom flanges of 25/16" x 11/2" Microllam® LVL with %8" Performance Plus® web.



TJI®/55 DF Joists
Top and bottom flanges of 3½" x 1½" Microllam® LVL with 7/16" Performance Plus® web.

TJI® Joist Hole Charts - Round, Square and Rectangular Holes

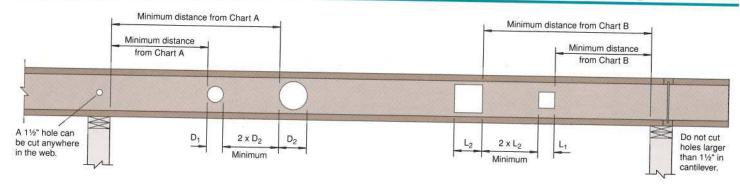


CHART A - ROUND HOLES

MINIMUM DISTANCE FROM INSIDE FACE OF ANY SUPPORT TO NEAREST EDGE OF HOLE

JOIST	JOIST					The Day	100	ROUND H	HOLE SIZ	E	19830-3	2 12 10			-
DEPTH	SERIES	2"	3"	4"	5"	6"	61/4"	7"	8"	85/8"	9"	10"	103/4"	400	1
91/2"	TJI®/15 DF	1'-0"	2'-0"	3'-6"	5'-0"	7'-0"	7'-6"			078			10%	12"	123/4"
5/2	TJI®/25 DF	1'-0"	2'-6"	4'-0"	6'-0"	7'-6"	8'-0"	0		2-0		_			_
117/8"	TJI [®] /15 DF	1'-0"	1'-0"	1'-0"	1'-6"	3'-0"	3'-6"	5'-0"	7'-0"	8'-6"		_		_	_
	TJI®/25 DF	1'-0"	1'-0"	2'-0"	3'-6"	5'-0"	5'-0"	6'-6"	8'-0"	9'-6"	25-0	_	_		_
	TJI®/35 DF	1'-0"	2'-0"	3'-6"	5'-0"	6'-6"	6'-6"	7'-6"	9'-6"	10'-6"		_	_	_	_
	TJI®/55 DF	1'-0"	2'-6"	3'-6"	5'-0"	6'-6"	7'-0"	8'-0"	9'-6"	11'-0"	-	_	_		_
	TJI [®] /25 DF	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	2'-0"	3'-6"	5'-0"	6'-0"	71.0"			_	-
14"	TJI®/35 DF	1'-0"	1'-0"	1'-0"	2'-0"	3'-6"	4'-0"	5'-0"	7'-0"	150000	7'-0"	8'-6"	10'-0"	_	
	TJI®/55 DF	1'-0"	1'-0"	2'-6"	3'-6"	5'-0"	5'-6"	6'-6"	100	8'-0"	8'-6"	10'-0"	11'-6"		_
	TJI®/25 DF	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	8'-0"	9'-0"	9'-6"	11'-0"	12'-6"	_	_
16"	TJI®/35 DF	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"		1'-6"	2'-6"	3'-6"	5'-6"	7'-0"	9'-6"	11'-0"
	TJI®/55 DF	1'-0"	1'-0"	1'-0"	1'-6"	3'-0"		1'-6"	3'-6"	4'-6"	5'-6"	7'-0"	8'-6"	11'-0"	12'-6"
		10000	, 0	1-0	1-0	3-0	3'-6"	4'-6"	6'-0"	7'-0"	7'-6"	9'-6"	10'-6"	12'-6"	14'-0"

CHART B - SQUARE OR RECTANGULAR HOLES

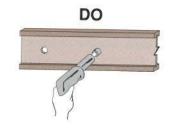
MINIMUM DISTANCE FROM INSIDE FACE OF ANY SUPPORT TO NEAREST EDGE OF HOLE

JOIST	JOIST				THE RES	SC	QUARE O	R RECTA	NGULAR	HOLES	IZF*	100000	6 W 1		11.
DEPTH	SERIES	2"	3"	4"	5"	6"	61/4"	7"	8"	85/8"	9"	10"	102/11	4011	
91/2"	TJI®/15 DF	1'-0"	2'-0"	4'-0"	6'-0"					078			10¾"	12"	123/4"
	TJI®/25 DF	1'-0"	2'-6"	4'-6"	6'-6"		_	_			_	_	1000	1000	-
117%"	TJI®/15 DF	1'-0"	1'-0"	2'-0"	4'-6"	7'-6"	7'-6"	8'-0"	9'-0"			_		2-2	-
	TJI®/25 DF	1'-0"	1'-6"	3'-6"	5'-6"	8'-0"	8'-6"	8'-6"	9'-6"		_		7F. 10	_	_
	TJI®/35 DF	1'-0"	2'-6"	4'-6"	6'-6"	9'-0"	9'-0"	9'-6"	9'-6"			_	-	_	_
	TJI®/55 DF	3'-6"	4'-6"	6'-0"	7'-6"	9'-6"	9'-6"	10'-0"	10'-6"		_	_	200	_	-
	TJI®/25 DF	1'-0"	1'-0"	1'-6"	4'-0"	6'-0"	6'-6"	8'-6"	10'-0"	10'-6"	441.00		_	-	-
14"	TJI8/35 DF	1'-0"	1'-0"	2'-6"	4'-6"	7'-0"	7'-6"	9'-6"	11'-0"	10'-6"	11'-0"	11'-6"	12'-0"		
	TJI®/55 DF	2'-6"	4'-0"	5'-6"	7'-6"	9'-0"	9'-6"	10'-6"		11'-0"	11'-6"	12'-0"	12'-6"	=	
3 33	TJI®/25 DF	1'-0"	1'-0"	1'-0"	1'-6"	4'-0"	4'-6"		12'-0"	12'-0"	12'-0"	13'-0"	13'-0"	-	3-0
16"	TJI®/35 DF	1'-0"	1'-0"	1'-0"	2'-6"	5'-0"		6'-6"	9'-6"	11'-0"	11'-6"	12'-6"	13'-0"	14'-0"	14'-6"
	TJI®/55 DF	1'-0"	2'-6"	4'-6"	6'-0"	0.00	5'-6"	7'-6"	10'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-6"	15'-0"
ootonoule	r holes based o			1000		8'-0"	8'-6"	10'-0"	12'-0"	13'-6"	13'-6"	14'-0"	14'-6"	15'-0"	16'-0"

Rectangular holes based on measurement of longest side.

GENERAL NOTES:

- 1. If more than one hole is to be cut in the web, the length of the uncut web between holes must be twice the length of the longest dimension of the largest adjacent hole. Holes may be located vertically anywhere within the web. 2. TJI® joists are manufactured with 11/2" perforated knockouts in the web at approximately 12" on-center along the length of the joist.
- 3. The distances in the hole charts are based on uniformly loaded joists using maximum loads shown for any of the tables listed within this guide. For other load conditions or hole configurations not included in these charts, contact your Trus Joist MacMillan representative.





Full depth rectangular holes are also possible. Contact your Trus Joist MacMillan representative for assistance.

TJI® Joist Residential Framing Connectors (Simpson Strong-Tie®)

C1 - TOP FLANGE SINGLE JOIST HANGER

DEPTH	JOIST	HANGER	
91/2"	TJI ⁹ /15 DF	ITT29.5	
972	TJI®/25 DF	ITT9.5(*)	
10	TJI%/15 DF	ITT211.88	
*****	TJI ⁸ /25 DF	ITT11.88(2)	
11%"	TJI ⁶ /35 DF	ITT3511.88(1)	
	TJI%55 DF	ITT411.88(1)(2)(3)	
×5	TJI 25 DF	ITT14	
14"	TJI*/35 DF	ITT3514(1)	
	TJI ⁶ /55 DF	ITT414(1)(2)(3)	
A COUNTY	TJI ⁰ /25 DF	ITT16(1)	
16"	TJI ⁹ /35 DF	MIT3516(4)	
100 mg	TJI*/55 DF	MIT416(4)(5)	

- Capacity with a TJI* joist header is 1050 lbs.
- (2) Capacities with Parallam® PSL and Microllam® LVL headers are 1300 lbs. and 1450 lbs. respectively.
- (3) Requires web stiffeners when joist reaction exceeds 1475 lbs
- (4) Capacity with a TJI* joist header is 1230 lbs.
- (5) Requires web stiffeners when joist reaction exceeds 1675 lbs.

C3 - FACE MOUNT SINGLE JOIST HANGER

DEPTH	JOIST	HANGER	
	TJI [®] /15 DF	IUT29(2)	
9½"	TJI*/25 DF	IUT9(5).	
100	TJI®/15 DF	IUT211(6)	
	TJI®/25 DF	IUT11	
11%"	TJI8/35 DF	IUT3512(3)	
	TJI ⁸ /55 DF	IUT412(3)(4)	
	TJI®/25 DF	IUT14	
14"	TJI®/35 DF	IUT3514	
	TJI8/55 DF	IUT414(4)	
1	TJI ⁸ /25 DF	IUT14(1)	
16"	TJI®/35 DF	(UT3514(1)	
	TJI8/55 DF	IUT414(1)	

- (1) Requires web stiffeners.
- (2) Capacity with a TJI® joist header is 730 lbs. (100%) or 910 lbs. (125%).
- (3) Capacity is 1110 lbs. (100%) or 1390 lbs. (125%).
- (4) Requires web stiffeners when joist reaction exceeds 1475 lbs.
- (5) Capacity is 890 lbs. (100%) or 1110 lbs. (125%).
- (6) Capacity with a TJI® joist header is 910 lbs. (100%) or 1140 lbs. (125%).

C5 - FACE MOUNT SKEWED 45° JOIST HANGER

JOIST	HANGER SUR210 or SUL210(1)		
9½" and 11%" TJI%15 DF			
91/2" and 117/6" TJI®/25 DF	SURI9 or SULI9(2)		
11%", 14" and 16" TJI 25 DF	SURI11 or SULI11		
11%" and 14" TJI% 35 DF	SURI3510/12 or SULI3510/12		
14" and 16" TJI"/35 DF	SURI3514/20 or SULI3514/2		
11%" TJI%55 DF	SUR410 or SUL410		
14" and 16" TJI*/55 DF	SUR414 or SUL414		

- All face mount, skewed joist hangers require web stiffeners.
- (1) Minimum of double TJI® joist header or single 134" Microllam® LVL or Parallam® PSL header required.
- (2) Capacity with TJI[®] joist header or single 1¾" Microllam[®] LVL or Parallam[®] PSL header is 895 lbs. (100%) or 1115 lbs. (125%).

C7 - VARIABLE SLOPE SEAT JOIST HANGER

JOIST	HANGER	
9½" TJI*/15 DF	LSSU28(1)(2)	
11%" TJI%/15 DF	LSSU210(1)(2)	
91/2"-14" TJI®/25 DF	LSSUI25(3)	
11%" and 14" TJI*/35 DF	LSSUI35(3)(5)	
11%" and 14" TJI*/55 DF	LSSU410(4)	

- · All variable slope seat joist hangers require web stiffeners.
- (1) Minimum of double TJI⁵ joist header or single 1¾" Microllam⁵ LVL or Parallam⁵ PSL header is required
- (2) Capacity when skewed is 885 lbs.
- (3) Capacity when skewed is 995 lbs. (100%) or 1065 lbs. (125%).
- (4) Requires 2" minimum header width
- (5) Non-skewed capacity is 1110 lbs. (100%) or 1390 lbs. (125%),

Hanger can be field adjusted for slopes and skews of up to 45 degrees

C2 - TOP FLANGE DOUBLE JOIST HANGER

DEDTU	JOIST	HANGER	MAXIMUM LOAD (LBS.)	
DEPTH			FLOOR	ROOF (125%)
91/2"	TJI%/15 DF	MIT29.5-2	1890(2)	2000(2)
9/2	TJI®/25 DF	MIT49.5	2000@	2000(2)
	TJI®/15 DF	MIT211.88-2	1890@	2000(2)
447.11	TJI [®] /25 DF	MIT411.88	2000(2)	2000(2)
117/8"	TJI®/35 DF	MIT3511.88-2	2000(2)	2000(2)
	TJI®/55 DF	WPI411.88-2(1)	3080(3)	3255(3)
77 100	TJI®/25 DF	MIT414	2000(2)	2000(2)
14"	TJI®/35 DF	MIT3514-2	2000(2)	2000@
	TJI®/55 DF	WPI414-2(1)	3080(3)	3255(3)
16"	TJI®/25 DF	MIT416	2000(2)	2000(2)
	TJI®/35 DF	WP3516-2	2550(3)	3190(3)
	TJI®/55 DF	WPI416-2(1)	3080(3)	3255(3)

- . Loads shown require 31/2" minimum header width.
- Requires web stiffeners
- (2) Capacity with a TJI® joist header is 1230 lbs.
- (3) Capacity with a TJI® joist header is 2030 lbs.

C4 - FACE MOUNT DOUBLE JOIST HANGER

DEPTH	JOIST	HANGER	MAXIMUM LOAD (LBS.)	
DEPIH			FLOOR	ROOF (125%)
91/6"	TJI ⁸ /15 DF	U210-2	1860	2330
91/2	TJI*/25 DF	U410	1860	2330
70110	TJI®/15 DF	U210-2	1860	2330
11%"	TJI®/25 DF	U410	1860	2330
	TJI [®] /35 DF	U3512-2	2130	2660
	TJI [®] /55 DF	HU412-2	2950	3685
	TJI*/25 DF	U414	2130	2660
14"	TJI®/35 DF	U3512-2	2130	2660
	TJI%/55 DF	HU414-2	3080	3850
16"	TJI®/25 DF	U414	2130	2660
	TJI®/35 DF	U3512-2	2130	2660
	TJI ⁹ /55 DF	HU414-2	3080	3850

 All face mount, double joist hangers require web stiffeners and a 2 minimum header width

C6 - VARIABLE SLOPE

VPA25

VPA35

VPA4

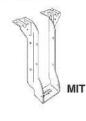
3"/12" through 12"/12".

SEAT CONNECTOR

TJI⁹/15 DF

TJI⁹/25 DF TJI%35 DF

TJI 55 DF



WP

WPI



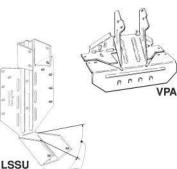
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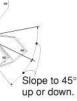


















GENERAL NOTES:

VPA connector may be used only on slopes of

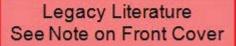
CONNECTOR | MAXIMUM LOAD (LBS.)

1050

1500

Some hangers shown have less capacity than that of the TJI® joists. For single joist applications beyond those shown in the span charts and all double joist applications, hanger capacity must be checked. Refer to applicable footnotes on tables C1 through C7.

- · Hanger capacities will need to be checked if hanger is supported from other than Trus Joist MacMillan products or Douglas fir-larch or southern pine species support members. Contact your Trus Joist MacMillan representative for assistance.
- · Hanger loads shown are the lesser of the joist(s) or hanger capacity.
- Hangers can only achieve maximum capacity if all nail holes are filled with the proper nails. Single joist hangers require 10d (3") common header and 10d x 11/2" joist nails except the LSSU410 which requires 16d (31/2") common header nails, and the SUR/L410 and SUR/L414 which require 10d (3") common joist nails. When used with a single TJI®/15 DF joist header, the IUT29 and IUT211 hangers require 10d x 11/2" header nails. Double joist hangers require 16d (31/2") common header and 10d x 1½" joist nails for top flange hangers and 10d (3") common joist nails for face mount hangers except the HU412-2 and HU414-2 which require 16d (3½") common joist nails. Top flange hangers supported by a TJI® joist header require 10d x 11/2" header and joist nails.
- In some cases, the hangers shown may have greater capacity when used in conjunction with certain supporting member categories or support member criteria.
- TJI® joist headers must be of the same number and size (joist depth and flange width) or greater than the joist(s) supported by the header.
- Leave 1/16" clearance between end of TJI® joist and support member or hanger.
- The hangers listed above are manufactured by Simpson Strong-Tie® Company, Inc. For additional information please refer to current Simpson Strong-Tie® Company, Inc. literature.



C1 - TOP FLANGE SINGLE JOIST HANGER

DEPTH	JOIST	HANGER
91/2"	TJI®/15 DF	THO15950
972	TJI®/25 DF	THO17950
SVEDE	TJI®/15 DF	THO15118
117/4"	TJI ⁹ /25 DF	THO17118
11/8	TJI®/35 DF	THO23118
111111111111111111111111111111111111111	TJI®/55 DF	THO35118 ⁽¹⁾
A	TJI [®] /25 DF	THO17140
14"	TJI®/35 DF	THO23140
	TJI*/55 DF	THO35140
	TJI*/25 DF	THO17160
16"	TJI®/35 DF	THO23160
	TJI®/55 DF	THO35160(1)

Minimum required header width is equal to the width of the

C3 – FACE MOUNT SINGLE JOIST HANGER

DEPTH	JOIST	HANGER	
91/2"	TJI*/15 DF	THF15925(3)	
3 /2	TJI*/25 DF	THF17925	
	TJI [®] /15 DF	THF15112(1)(3)	
1176"	TJI®/25 DF	THF17112	
1:178	TJI*/35 DF	THF23118	
- 50°74	TJI*/55 DF	THF35112(29/4)	
412	TJI®/25 DF	THF17140	
14"	TJI ⁹ /35 DF	THF23140	
	TJI [®] /55 DF	THF35140(2)	
	TJI*/25 DF	THF17157	
16"	TJI*/35 DF	THF23160	
	TJI*/55 DF	THF35157(2)	

Unless otherwise noted requires minimum single TJIs joist header or 11/4" Microllam® LVL, Parallam® PSL or TimberStrand® LSL header

- (1) Capacity is 1050 lbs. (125%).
- (2) Requires web stiffeners when joist reaction exceeds 1360 lbs.
- (3) Requires 13/4" Microllam® LVL, Parallam® PSL or TimberStrand® LSL header minimum.
- (4) Requires web stiffeners.

C5 - FACE MOUNT SKEWED 45° JOIST HANGER

JOIST	HANGER	
9½" TJI%/15 DF	SKH1520	
11%" TJI%/15 DF	SKH1524	
9½" TJI ⁶ /25 DF	SKH1720	
11%" - 16" TJI [®] /25 DF	SKH1724	
111%" - 16" TJI®/35 DF	SKH2324	
117/6" TJI®/55 DF	SKH410	
14" - 16" TJI%55 DF	SKH414	

All face mount, skewed joist hangers require web stiffeners and 1¾" minimum header width

C7 - VARIABLE SLOPE SEAT JOIST HANGER

JOIST	HANGER	
9½" TJI%15 DF	TMU26	
11%" TJI%15 DF	TMU26	
91/2"-16" TJI*/25 DF	TMU179	
11%" - 16" TJI®/35 DF	TMU23	
11%" - 16" TJI®/55 DF	TMI I48	

- All variable slope seat joist hangers require web stiffeners and 13/4" minimum header width.
- KANT-SAG® LSTI22 strap with 8-10d x 11/2" nails (per end) is required for slopes of 7"/12" or greater

Hanger can be field adjusted for slopes and skews of up to 45 degrees.

C2 - TOP FLANGE DOUBLE JOIST HANGER

DEPTH	JOIST	HANGER -	MAXIMUM LOAD (LBS.)	
			FLOOR	ROOF (125%)
91/2"	TJI*/15 DF	THO15950-2(1)(2)	1890	2360
272	TJIW25 DF	THO35950	2050	2050
	TJI®/15 DF	THO15118-2(1)(2)	1890	2360
11%"	TJI [®] /25 DF	THO35118	2050	2050
1178	TJI%/35 DF	THO23118-2(2)(3)	2550	3190
	TJI*/55 DF	PHM35118-2(3)	3080	3590
14"	TJI [®] /25 DF	THO35140	2230	2350
	TJI®/35 DF	THO23140-2(2)(3)	2550	3190
	TJI®/55 DF	PHM3514-2 ^[3]	3080	3590
16"	TJI®/25 DF	THO35160	2230	2350
	TJI®/35 DF	THO23160-2(2)(3)	2550	3190
	TJI®/55 DF	PHM3516-2(3)	3080	3590

- Unless otherwise noted loads shown require minimum double TJI* joist header or 1¾" Microllam® LVL, Parallam® PSL or TimberStrand® LSL header
- May not be used with a TJI[®] joist header. Requires 1¾" Microllam[®] LVL, Parallam[®] PSL or TimberStrand® LSL header minimum.
- (2) Requires web stiffeners.
- (3) May not be used with a TJI[®] joist header. Requires 2" Microllam[®] LVL, Parallam[®] PSL or TimberStrand[®] LSL header minimum.

C4 - FACE MOUNT **DOUBLE JOIST HANGER**

DEPTH	JOIST	HANGER	MAXIMUM LOAD (LBS.)	
STATE OF THE PARTY OF		MANGER	FLOOR	ROOF (125%)
91/6"	TJI9/15 DF	THF15925-2(1)	1355	1695
372	TJI=/25 DF	THF35925(1)	1345	1680
	TJI ⁹ /15 DF	THF15112-2(1)	1580	1975
117%"	TJI ⁹ /25 DF	THF35112	1790	2240
1178	TJI%/35 DF	THF23118-2(1)	1810	2260
	TJI ⁹ /55 DF	HD7120(1)(2)	2175	2720
	TJI [®] /25 DF	THF35140	2230	2790
14"	TJI®/35 DF	THF23140-2(1)	2240	2800
	TJI*/55 DF	HD7140(1)(2)	2720	3400
16"	TJI [®] /25 DF	THF35157	2230	2790
	TJI**/35 DF	THF23160-2(1)	2550	3190
	TJI®/55 DF	HD7140(1)(2)	2720	3400

- (1) Requires web stiffeners:
- (2) Requires 2" minimum header width.

C6 - VARIABLE SLOPE SEAT CONNECTOR

JOIST	CONNECTOR	MAXIMUM LOAD (LBS.)
TJI [®] /15 DF	TMP2	990
ISI / IS DF	TMPH2(2)	1440(1)
TJI®/25 DF	TMP175	1150
101-125 DF	TMPH175©	17200
TJI%35 DF	TMP23	1970
101735 DF	TMPH23 ⁽²⁾	1865(1)
TJI ⁹ /55 DF	TMP4	1970
101 755 DF	TMPH4(2)	2205(1)

TMP connectors may only be used on slopes of 1"/12" to 6"/12". TMPH connectors may only be used on slopes of 6"/12" to 12"/12".

- (1) May be used at end bearings only. (2) All TMPH connectors require web stiffeners.

GENERAL NOTES:

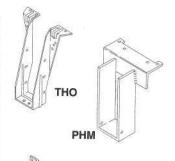
Some hangers shown have less capacity than that of the TJI® joists. For single joist applications beyond those shown in the span charts and all double joist applications, hanger capacity must be checked. Refer to applicable footnotes on tables C1 through C7.

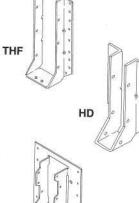
TMP TMPH

- Hanger capacities will need to be checked if hanger is supported from other than Trus Joist MacMillan products or Douglas fir-larch or southern pine species support members. Contact your Trus Joist MacMillan representative for assistance.
- Hanger loads shown are the lesser of the joist(s) or hanger capacity.
- · Hangers can only achieve maximum capacity if all nails holes are filled with the proper nails. In some cases, the hangers shown may have greater capacity when used in conjunction with certain supporting member categories or support mem-
- All face mount hangers require the following nails:

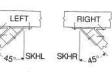
Header (support member) nails must be 10d (3") common for all single and double joists except the HD7120 and HD7140 which require 16d (31/2") common header nails. Joist nails must be 10d x 11/2" for all single joists except the SKH410 and SKH414 which require 16d (3½") common joist nails and the THF35112, THF35140 and THF35157 which require 10d (3") common joist nails. All double joists require 10d (3") common joist nails.

- All top flange hangers require the following nails:
- Header (support member) nails must be 10d x 11/2" for all single joists and 16d (31/2") common for all double joists except the THO15950-2 and THO15118-2 hangers which require 10d (3") common header nails and the double TJI®/25 DF series hangers which require 10d x 1½" header nails. Top flange hangers requiring 10d (3") common header nails, or greater, may not be used with TJI joist headers. Joist nails must be 10d x 11/2" for all single and double joists except the double TJI®/35 DF series hangers which require 10d (3") common joist nails.
- TJI® joist headers must be of the same number and size (joist depth and flange width) or greater than the joist(s) supported by the header.
- Leave ½6" clearance between end of TJI® joist and support member or hanger.
- The hangers listed above are manufactured by United Steel Products Company (KANT-SAG®). For additional information please refer to current KANT-SAG® literature.









TOP VIEW

⁽¹⁾ Requires web stiffeners when joist reaction exceeds 1360 lbs.



Microllam® laminated veneer lumber (LVL) is engineered with sheets of thin veneer structurally bonded together to make headers and beams which span much longer distances and support heavier loads than ordinary lumber. Microllam® LVL headers and beams are available in the following sizes:

Widths: 13/4"

epths

51/2", 71/4", 91/2", 117/8", 14", 16" and 18"

Parallam® parallel strand lumber (PSL) is made from long, thin strands of wood structurally bonded together in a patented microwave process to make large cross section beams and columns. Parallam® PSL headers and beams are available in the following sizes:

Widths:

Depths:

13/4", 211/16", 31/2", 51/4" and 7"

91/4", 91/2", 111/4", 117/8", 14", 16" and 18"

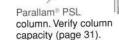
Parallam® PSL columns and posts are available in the following sizes: 3½" x 3½", 3½" x 5¼", 3½" x 7", 5½" x 7", 5½" x 5½", 5½" x 7" and 7" x 7"

EASTERN AND WESTERN SPECIES

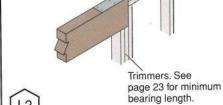
Microllam® LVL and Parallam® PSL headers, beams, columns and posts in this Specifier's Guide are designated as Eastern Species (ES) or Western Species (WS). Eastern Species may include southern pine or yellow poplar. Western Species may include Douglas fir, lodgepole pine, western hemlock or white fir.

BEARING DETAILS

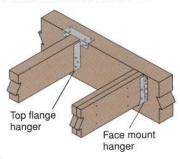




Strap per code if top plate is not continuous over header.



BEAM TO BEAM CONNECTION

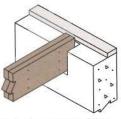




See Microllam® LVL & Parallam® PSL Framing Connectors on pages 28 & 29.

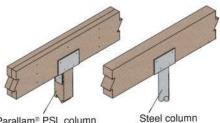
BEARING LENGTH IS EXTREMELY CRITICAL AND MUST BE CONSIDERED FOR EACH APPLICATION.

BEARING AT CONCRETE WALL



Protect wood from direct contact with concrete.

BEARING AT WOOD OR STEEL COLUMN



Parallam® PSL column with column cap

L5

verify column capacity (page 31) and bearing length (page 23).

CONNECTION OF MULTIPLE PIECES OF TOP LOADED BEAMS

1¾" Width Pieces:

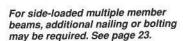
Minimum of 2 rows 16d (3½") nails at 12" o.c.
 Minimum of 3 rows 16d (3½")nails at 12" o.c.

for 14", 16" and 18" beams.

2¹¹/₁₆" or 3½" Width Pieces: • Minimum of 2 rows

½" bolts at 24" o.c. staggered.





GENERAL NOTES:

- Bearing length should never be less than 1½".
- · Bearing across the full width of the beam is required.
- · Beams require lateral support at bearing points.
- Lateral support of beam compression edge is required at intervals of 24" o.c. or closer.
- 1¾" x 16" and 1¾" x 18" beams are to be used in multiple member units only.

Multiple pieces of Microllam® LVL or Parallam® PSL can be nailed or bolted together to form a header or beam of the required size, up to a maximum width of 7 inches. For top-loaded beams, see detail L6 above. For side-loaded beams, see page 23.

MULTIPLE MEMBER CONNECTIONS FOR SIDE-LOADED BEAMS



ASSEMBLY B 3 pcs. 13/4"

ASSEMBLY C 4 pcs. 13/4"







ASSEMBLY G 2 pcs. 31/2"







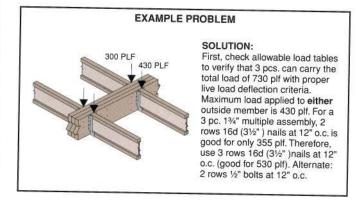








	Maximum Uniform Load applied to either outside member (lbs. per lin. ft.)										
		nnection®		d Connection(4)							
Multiple Assembly (see pictures)	2 rows 16d (3½") common wire at 12" o.c.	3 rows 16d (3½") common wire at 12" o.c.	2 rows 1/2"	2 rows ½" bolts at 12" o.c.							
A	470	705	505	1010							
B ⁽⁵⁾	355	530	380	760							
C(6)	NOT APP	LICABLE	340	680							
D	340	510	505	1010							
E(5)(6)	310	465	460	920							
F	NOT APP	LICABLE	780	1560							
G ⁽⁶⁾	NOT APP	LICABLE	860	1720							



GENERAL NOTES:

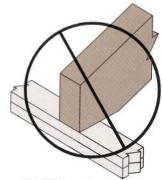
- 1. Verify adequacy of beam in uniform load tables, pages 25 and 26. Size assembly for the lowest grade member. Example: Two member assembly with 1¾" 1.8E ES or WS Microllam® LVL and 3½" 2.0E ES or WS Parallam® PSL would be sized from the 1¾" 1.8E ES or WS MICROLLAM® LVL tables, multiply value in table x 3.0 to verify beam capacity.
- 2. Values listed are for 100% stress level. Increase 15% for snow loaded roof conditions or 25% for non-snow roof conditions, where code allows.
- 3. Nailed Connection values may be doubled for 6" o.c. or tripled for 4" o.c. nail spacing.
- Bolts are to be material conforming to ASTM standard A307 (machine bolts). Bolt holes are to be the same diameter as the bolt, and located 2" from the top and bottom of the member. Washers should be used under head and nut.
- For a three-piece member, the nailing specified is from each side.
- 6. 7" wide beams should only be side-loaded when loads are applied to both sides of the members (to minimize rotation).
- 7. Beams wider than 7" require special consideration by the design professional.

BEARING LENGTH REQUIREMENTS

Reaction			Beam Widt	h	000000
(Pounds)	13/4"	213/16"	31/2"	51/4"	7"
1,000	1.50	1.50	1.50	1.50	1.50
2,000	2.00	1.50	1.50	1.50	1.50
3,000	2.75	1.75	1.50	1.50	1.50
4,000	3.75	2.50	2.00	1.50	1.50
5,000	4.50	3.00	2.25	1.50	1.50
6,000	5.50	3.50	2.75	2.00	1.50
7,000	6.25	4.25	3.25	2.25	1.75
8,000	7.25	4.75	3.75	2.50	2.00
9,000	8.00	5.25	4.00	2.75	2.00
10,000	9.00	5.75	4.50	3.00	2.25
11,000	9.75	6.50	5.00	3.25	2.50
12,000	10.75	7.00	5.50	3.75	2.75
13,000	11.50	7.50	5.75	4.00	3.00
14,000	12.50	8.25	6.25	4.25	3.25
15,000	13.25	8.75	6.75	4.50	3.50
16,000	14.25	9.25	7.25	4.75	3.75
17,000	15.00	9.75	7.50	5.00	3.75
18,000	16.00	10.50	8.00	5.50	4.00
19,000		11.00	8.50	5.75	4.25
20,000		11.50	9.00	6.00	4.50
21,000		12.25	9.25	6.25	4.75
22,000		12.75	9.75	6.50	5.00
23,000		13.25	10.25	6.75	5.25
24,000		13.75	10.75	7.25	5.50
25,000		14.50	11.00	7.50	5.50
26,000		15.00	11.50	7.75	5.75
27,000		15.50	12.00	8.00	6.00
28,000		110000000	12.50	8.25	6.25
29,000		WY D	12.75	8.50	6.50
30,000		1.00	13.25	9.00	6.75

GENERAL NOTES:

- Bearing length should never be less than 11/2".
- Bearing across the full width of the beam is required.
- Bearing lengths are based on 650 psi bearing stress for Western Species Microllam® LVL and Parallam® PSL beams, 750 psi bearing stress may be used for Eastern Species Microllam® LVL and Parallam® PSL beams (bearing stresses cannot be increased for duration of load). Bearing length may need to be increased if support member's allowable bearing stress is less.
- Beams require lateral support at bearing
- Lateral support of beam compression edge is required at intervals of 24" o.c. or closer.
- 1¾" x 16" and 1¾" x 18" beams are to be used in multiple member units only.



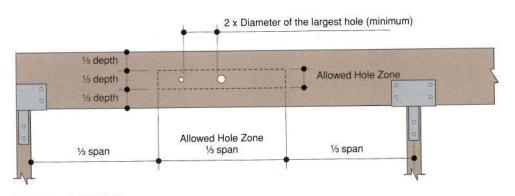
DO NOT overhang seat cuts on Microllam® LVL or Parallam® PSL beams from inside face of support member.

NAILS INSTALLED ON THE NARROW FACE

NAIL SIZE	Closest O.C. S	pacing per Row
	Microllam® LVL	Parallam® PSL
8d (21/2") common	3"	3"
10d (3") or 12d (31/4") common	4"	4"
16d (3½") common	8"	5"

If more than one row of nails is used the rows must be offset at least ½ inch.

ALLOWABLE HOLES (Uniformly Loaded Beams)





DO NOT cut, notch or drill holes in Microllam® LVL or Parallam® PSL except as indicated in chart and illustration.

GENERAL NOTES:

- The Allowed Hole Zone in this chart is suitable for uniformly loaded beams using maximum loads for any tables listed in this guide. For other load conditions or hole configurations, please contact your Trus Joist MacMillan representative.
- If more than one hole is to be cut in beam, the length of the uncut beam between holes must be a minimum of twice the diameter of the largest hole.
- · Rectangular holes are not allowed.
- · Holes in cantilevers require additional analysis.

BEAM DEPTH	MAXIMUM ROUND HOLE SIZE
51/2"	13/4"
71/4" through 18"	2"

FLOOR BEAM SIZING TABLE

GENERAL NOTES:

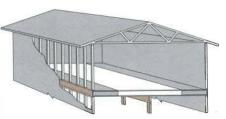
- Table assumes a residential floor loading of 40 psf live load and 12 psf dead load with beam deflection limited to L/360 at live load. For other loading conditions refer to allowable uniform load tables on page 25 or contact your Trus Joist MacMillan representative for assistance.
- Table assumes a continuous floor joist span and a simple or continuous beam span.
- Beam selections are based on the lower of 1.8E ES or WS Microllam® LVL or 2.0E ES or WS Parallam® PSL design values.
- Reduction in live load has been applied in accordance with UBC 2306, NBC 1115.1 and SBC 1203.2.
- Minimum beam support to be double trimmers (3" bearing) at ends and 7½" bearing at intermediate supports of continuous spans. In shaded areas, support beams with triple trimmers (4½" bearing) at ends and 11¼" bearing at intermediate supports of continuous spans. See page 31 for information on Parallam® PSL columns and posts.

 Beam widths of 3½" and 5½" may be one piece or multiple pieces as shown in the following chart:

	BEAM WIDTH								
BEAM DEPTH	31/2"	51/4"							
51/2" & 71/4"	Two 13/4"	Three 1¾"							
91/4"-18"	One 3½" or Two 1¾"	One 51/4" or Three 13/4" of One 31/2" & One 13/4"							

Multiple member beams must be properly connected together. See pages 22 and 23 for connection details.

Column	FLOOR JOIST SPAN Use ½ the sum of the joist spans on both sides of the beam.													
Spacing	11'	12'	13'	14'	15'	16'	17'	18'	20'					
10'	3½" x 9½"	3½" x 9½"	5¼" x 9½" 3½" x 11%"	3½" x 11%										
12'	3½" x 11%"	3½" x 11%"	3½" x 11%"	51/4" x 117/8" 31/2" x 14"	51/4" x 117/4" 31/2" x 14"	51/4" x 117/6" 31/2" x 14"	51/4" x 11//4" 31/2" x 14"	51/4" x 117/8" 31/2" x 14"	51/4" x 117/8					
14'	51/4" x 117/6" 31/2" x 14"	5¼" x 11%" 3½" x 14"	51/4" x 117/8" 31/2" x 14"	3½" x 14"	51/4" x 14" 31/2" x 16"	5¼" x 14" 3½" x 16"	51/4" x 14" 31/2" x 16"	51/4" x 14" 31/2" x 16"	51/4" x 14" 3'/6" x 16"					
16'	51/4" x 14" 31/2" x 16"	51/4" x 14" 31/2" x 16"	51/4" x 14" 31/2" x 16"	5¼" x 14" 3½" x 16"	5¼" x 14" 3½" x 16"	51/4" x 16" 31/2" x 18"	51/4" x 16" 31/2" x 18"	51/4" x 16" 31/2" x 18"	51/4" x 16" 31/2" x 18"					
18'	51/4" x 16" 31/2" x 18"	51/4" x 16" 31/2" x 18"	51/4" x 16" 31/2" x 18"	5½" x 16" 3½" x 18"	5¼" x 16" 3½" x 18"	5¼" x 16"	5¼" x 16"	5¼" x 18"	5¼" x 18"					
20'	51/4" x 16" 31/2" x 18"	51/4" x 16"	51/4" x 18"	5¼" x 18"	5¼" x 18"	51/4" x 18"	51/4" x 18"	5¼" x 18"						



Non-shaded portion indicates area of load on beam.

ALLOWABLE UNIFORM APPLIED LOAD - FLOOR (PLF)

GENERAL NOTES:

- Values shown are the maximum uniform loads, in pounds per lineal foot (plf), that can be applied to the beam in addition to its own weight.
- Tables are based on uniform loads and the most restrictive of simple or continuous span.
- Microllam® LVL and Parallam® PSL beams are made without camber; therefore, in addition to complying with the deflection limits of the applicable building code, other deflection considerations, such as long term deflection under sustained loads (including creep) and aesthetics, must be evaluated.
- Lateral support of beam compression edge is required at intervals of 24" o.c. or closer.
- 5. Lateral support of beams is required at bearing points.
- 6. Bearing area to be calculated for specific application; see table on page 23.

FLOOR BEAM SIZING

- To size a beam for use in a floor it is necessary to check both live load and total load. Make sure the selected beam will work in both columns. When no live load is shown, total load will control.
- Total load column limits deflection to L/240. Live load column is based on deflection of L/360. Check local code for other deflection criteria.
- For deflection limits of L/240 and L/480 multiply loads shown in live load column by 1.5 and 0.75 respectively. The resulting live load shall not exceed the total load shown.

134" 1.8E ES or WS MICROLLAM ® LVL

											beams	are to be nember i	used in	multiple
	One 13	4"x5½"	One 19	/4"x71/4"	One 19	4"x91/2"	One 13/	4"x11%"	One 1	3/4"x14"	One 1	4"x16"	One 1	4"x18"
SPAN (Ft)	LIVE LOAD L/360	TOTAL	LIVE LOAD L/360	TOTAL	LIVE LOAD L/360	TOTAL	LIVE LOAD L/360	TOTAL	LIVE LOAD L/360	TOTAL	LIVE LOAD L/360	TOTAL	LIVE LOAD L/360	TOTAL
6	275	410	594	763		1063		1424		1795		2193		2651
8	120	178	266	396	566	731		979		1207		1443		1701
10	63	91	140	207	304	451	566	708	883	909		1074		1251
12	37	52	83	120	181	267	341	490	539	667	775	855		988
14	23	32	53	75	116	169	220	325	351	488	510	627	703	782
16	16	21	35	49	78	113	150	219	241	354	351	478	488	596
18			25	34	56	78	107	154	172	251	252	370	351	469
20			18	24	41	56	78	112	127	183	186	272	261	378
22					31	41	59	83	96	137	142	204	199	289
24		1			24	31	46	63	74	105	110	157	155	223
26					19	23	36	48	59	81	87	123	123	175
28							29	38	47	64	70	97	99	139
30							24	30	39	51	57	78	81	112

Table is for one 1¾" beam. When properly connected together, double the values for two 1¾" beams, triple for three. See pages 22 and 23 for connection details.

3 1/2" 2.0E ES or WS PARALLAM ® PSL (For 1¾", 211/16", 51/4" and 7" beams, see multiplier below)

13/4"x16" and 13/4"x18"

												beams are to be used in multiple member units only.					
	One 31	2"x91/4"	One 31	2"x91/2"	One 31/	2"X111/4"	One 31/	2"x11%"	One 3	½"x14"	One 3	½"x16"	One 3	½"x18"			
SPAN (PL)	LIVE LOAD L/360	TOTAL	LIVE LOAD L/360	TOTAL	LIVE LOAD L/360	TOTAL LOAD	LIVE LOAD L/360	TOTAL	LIVE LOAD L/360	TOTAL	LIVE LOAD L/360	TOTAL	LIVE LOAD L/360	TOTAL			
6		2091		2163		2694		2898		3652		4463		5394			
8	1169	1470	1258	1517		1862		1991		2456		2935		3460			
10	627	930	676	1003	1084	1421	1258	1515		1848		2185		2545			
12	372	548	402	592	651	964	758	1093	1198	1480	1722	1738		2010			
14	238	347	257	376	420	617	490	722	781	1093	1132	1409	1561	1660			
16	161	232	174	251	285	416	334	488	535	788	781	1075	1084	1345			
18	114	161	123	175	203	292	237	343	382	558	560	822	781	1058			
20	84	115	90	125	149	211	174	249	282	407	414	604	580	850			
22	63	84	68	92	112	156	132	185	213	305	315	455	442	643			
24	49	63	53	69	87	118	102	140	166	233	244	349	344	496			
26	38	47	42	52	69	91	81	108	131	181	194	273	273	390			
28	31	36	33	40	55	70	65	84	105	143	156	216	220	310			
30	25	27	27	30	45	55	53	66	86	113	127	173	180	250			

Table can be used for 1¾", 21½6", 3½", 5½" or 7" width beams. Use the following multipliers to calculate the allowable load for each width:

134" width beam:
211/16" width beam:
31/2" width beam^(a):
51/4" width beam:
Use values in table x 0.50
Use values in table x 0.77
Use values in table
Use values in table x 1.50

7" width beam: Use values in table x 2.00

(a) Table is for one 3½" beam. When properly connected together, double the values for two 3½" beams. See pages 22 and 23 for connection details.

ALLOWABLE UNIFORM APPLIED LOAD - ROOF (PLF)

GENERAL NOTES:

- 1. Values shown are the maximum uniform loads, in pounds per lineal foot (plf), that can be applied to the beam in addition to its own weight.
- 2. Tables are based on uniform loads and the most restrictive of simple or continuous span.
- Total load column limits deflection to L/180. For stiffer deflection criteria check L/240 column at total load. Check local code for other deflection criteria.
- 4. Microllam® LVL and Parallam® PSL beams are made without camber; therefore, in addition to complying with the deflection limits of the applicable building code, other deflection considerations, such as ponding (positive drainage is essential), long term deflection under sustained loads (including creep) and aesthetics, must be evaluated.
- 5. Roof members shall either be sloped for drainage or designed to account for load and deflection as specified in the applicable building code.
- Lateral support of beam compression edge is required at intervals of 24" o.c. or closer.
- 7. Lateral support of beams is required at bearing points.
- 8. Bearing area to be calculated for specific application; see table on page 23.

13/4" 1.8E ES or WS MICROLLAM® LVL

74			· · · ·	<u> </u>		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,										1¾"x16" and 1¾"x18" beams are to b in multiple member units only.					
- 1		e 1¾"x5	17.0	00	e 1¾"x7	1/40	On	e 13/4"x9	1/5"	One	134"x11	7/8"	Or	ne 13/4"x1	4"	Or	ne 1¾"x"	16"	O	ne 1¾"x	18"
_	TOTAL	STATE OF THE PARTY OF	DEFL.		LOAD	DEFL.		LOAD	DEFL.	TOTAL	LOAD	DEFL.	TOTAL	LOAD	DEFL.	TOTAL	LOAD	DEFL.	TOTAL	LOAD	DEF
SPAN (Ft)	Snow 115%	Non- Snow 125%	L/240	Snow 115%	Non- Snow 125%	L/240	Snow 115%	Non- Snow 125%	L/240	Snow 115%	Non- Snow 125%	L/240	Snow 115%	Non- Snow 125%	L/240	Snow 115%	Non- Snow 125%	L/240	Snow 115%	Non- Snow 125%	L/24
6	540	547	412	878	954	890	1223	1330		1639	1782		2065	2245		2524	2744		3050	3316	
8	238	238	180	508	529	399	842	915	849	1126	1225		1389	1511		1660	1806		1957	2128	
10	123	123	94	277	277	210	537	584	456	815	886	849	1046	1138		1236	1344		1440	1566	
12	70	70	55	161	161	124	357	357	271	564	614	512	768	835	809	984	1070		1138	1238	
1000	44	44	35	101	101	79	227	227	174	413	435	331	562	612	527	722	786	764	900	980	
14		20	23	67	67	53	152	152	118	294	294	225	429	467	361	551	600	527	687	748	732
16	28	20	23	46	46	37	106	106	83	207	207	160	337	337	258	434	472	378	541	589	52
18				33	33	27	77	77	61	151	151	118	246	246	190	350	365	280	437	475	391
20		-		33	33	21	57	57	46	113	113	89	185	185	144	275	275	212	359	389	298
22								1,550	36	86	86	69	142	142	112	212	212	165	300	300	232
24							43	43		67	67	54	111	111	88	166	166	131	236	236	184
26							33	33	28	VARVA	52	44	88	88	71	132	132	105	189	189	148
28										52	No.	36	70	70	58	106	106	86	153	153	121
30										41	41		70	(5/195)	386.554	100000	11375-25	10000			-

Table is for one 1¾" beam. When properly connected together, double the values for two 1¾" beams, triple for three. See pages 22 and 23 for connection details.

31/2" 2.0E ES or WS PARALLAM® PSL (For 13/4", 211/16", 51/4" and 7" beams, see multiplier below)

12								0.5								1%"x16" and 1%"x18" beams are to be us multiple member units only.					sed in
	On	e 3½"x9	1/4"	On	e 31/2"x9	11/5"	One	e 3½"x1	11/4"	One	e 3½"x11	7/8"	0	ne 31/2"x	14"	Or	ne 3½"x1	16"	One 31/2"x18"		
	233	LOAD	DEFL.		LOAD	DEFL.	TOTAL	LOAD	DEFL.	TOTAL	LOAD	DEFL									
SPAN (PL)	Snow 115%	Non- Snow 125%	L/240	Snow 115%	Non- Snow 125%	L/240	Snow 115%	Non- Snow 125%	L/240												
6	2406	2616	DETO	2489	2706		3100	3371		3335	3626		4202	4569		5135	5583		6206	6747	
8	1692	1840	1754	1746	1899	1887	2143	2330		2291	2492	1	2827	3074		3378	3673		3982	4330	
10	1132	1231	940	1191	1295	1014	1636	1779	1626	1744	1896	1887	2128	2314		2515	2735		2929	3186	
12	734	734	558	793	793	603	1136	1236	977	1259	1369	1137	1705	1854	1798	2002	2177		2315	2518	
14	466	466	357	504	504	386	827	827	629	921	967	735	1260	1370	1171	1623	1766	1698	1912	2080	
10000	10.00	THE CONTRACT	242	338	338	262	558	558	428	654	654	501	961	1046	803	1239	1348	1171	1550	1686	1626
16	312	312	171	236	236	185	393	393	304	461	461	356	749	749	573	975	1061	840	1220	1328	1171
18	218	218		170	170	136	285	285	223	336	336	262	548	548	423	786	811	621	985	1072	870
20	157	157	125	130000	1,01,00	17.50	213	213	169	251	251	198	412	412	320	612	612	472	810	864	663
22	116	116	95	126	126	102				-	191	153	316	316	248	471	471	367	668	668	516
24	87	87	73	95	95	79	162	162	130	191	1.00	7	2000000	10000000	196	370	370	290	526	526	409
26	67	67	58	73	73	62	125	125	103	148	148	121	246	246			0.00.00		420	420	330
28	51	51	46	56	56	50	98	98	83	116	116	97	195	195	158	294	294	234		157.5	100
30	40	40	38	44	44	41	77	77	67	92	92	79	156	156	129	237	237	191	340	340	270

Table can be used for 1¾", 211/16", 31/2", 51/4" or 7" width beams. Use the following multipliers to calculate the allowable load for each width:

Use values in table x 0.50 13/4" width beam: Use values in table x 0.77 211/16" width beam: 31/2" width beam(a): Use values in table Use values in table x 1.50 51/4" width beam: Use values in table x 2.00 7" width beam:

⁽a) Table is for one 3½" beam. When properly connected together, double the values for two 3½" beams. See pages 22 and 23 for connection details.

GARAGE DOOR HEADER SIZING TABLE

For Single Story Applications

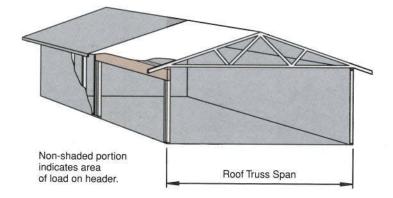
Roc	of Load		TA SAN	NON-SNO	OW (125%)		LIST STATE	SNOW (115%)								
(1	PSF)		20LL + 12DL			20LL + 25DI		LINE ITA	25LL + 12DL			30LL + 12DL				
	gh Door ing Size	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"			
	22'	5¼" x 5½" 3½" x 7¼" 21½6" x 9½" 1¾" x 9½"	5¼" x 9½" 3½" x 11%" 21½" x 11%" 1¾" x 14"	5¼" x 11%" 3½" x 14" 21½e" x 14"	3½" x 7½" 21½6" x 9½" 1¾" x 9½"	5¼" x 11%" 3½" x 14" 21½" x 14"	5¼" x 11½" 3½" x 14" 21¼6" x 16"	3½" x 7¼" 21¼6" x 9½" 1¾" x 9½"	3½" x 11½" 2½" x 14"	5¼" x 11½" 3½" x 14" 21½6" x 14"	3½" x 7½" 2½"6" x 9½" 1¾" x 9½"	5½" x 11½" 3½" x 14" 21½6" x 14"	51/4" x 117/8" 31/2" x 14" 211/16" x 16"			
ASSUMED	24'	3½" x 7¼" 21½6" x 9½" 1¾" x 9½"	3½" x 11½" 21½6" x 11½" 1¾" x 14"	5¼" x 11½" 3½" x 14" 21½6" x 14"	3½" x 7¼" 2½" x 9½" 1¾" x 9½"	5¼" x 11½" 3½" x 14" 21¼6" x 14"	3½" x 14" 211/16" x 16"	3½" x 7¼" 21½6" x 9½" 1¾" x 9½"	3½" x 11%" 21½" x 14"	5¼" x 11½" 3½" x 14" 21½" x 14"	3½" x 7¼" 21½6" x 9½" 1¾" x 9½"	51/4" x 117/6" 31/2" x 14" 211/46" x 14"	3½" x 14" 211/16" x 16"			
SOFFIT AS	26'	3½" x 7½" 21½6" x 9½" 1¾" x 9½"	3½" x 11½" 21½8" x 14"	51/4" x 117/8" 31/2" x 14" 211/16" x 14"	51/4" x 71/4" 31/2" x 91/2" 211/16" x 91/2" 13/4" x 117/8"	5¼" x 11½" 3½" x 14" 21½6" x 14"	5¼" x 14" 3½" x 16" 211½" x 16"	3½" x 7½" 21½6" x 9½" 1¾" x 9½"	5¼" x 11½" 3½" x 14" 21½6" x 14"	5¼" x 11½" 3½" x 14" 21½6" x 16"	3½" x 7¼" 2½" x 9½" 1¾" x 1½"	51/4" x 117/8" 31/2" x 14" 211/16" x 14"	51/4" x 14" 31/2" x 16" 211/46" x 16"			
24"	28'	3½" x 7¼" 21½6" x 9½" 1¾" x 9½"	3½" x 11¾" 21½6" x 14"	51/4" x 117/8" 31/2" x 14" 211/16" x 14"	5¼" x 7¼" 3½" x 9½" 2½" x 9½" 1¾" x 11¼"	5¼" x 11%" 3½" x 14" 21½" x 14"	5¼" x 14" 3½" x 16" 211/16" x 16"	3½" x 7½" 21½6" x 9½" 1¾" x 9½"	5¼" x 11½" 3½" x 14" 21½" x 14"	3½" x 14" 2"1/16" x 16"	5½" x 7½" 3½" x 9½" 2½"6" x 9½" 1¾" x 11%"	5¼" x 11½" 3½" x 14" 21½" x 14"	51/4" x 14" 31/2" x 16" 211/16" x 16"			
IN FEET WITH	30'	3½" x 7½" 21½" x 9½" 1¾" x 9½"	3½" x 11%" 21½6" x 14"	51/4" x 117/8" 31/2" x 14" 211/16" x 14"	5½" x 7½" 3½" x 9½" 2½" x 9½" 1¾" x 11½"	51/4" x 111//8" 31/2" x 14" 211/16" x 14"	5½" x 14" 3½" x 16" 21½6" x 16"	3½" x 7½" 2½" x 9½" 1¾" x 11½"	5¼" x 11½" 3½" x 14" 21½6" x 14"	51/4" x 14" 31/2" x 16" 211/16" x 16"	51/4" x 71/4" 31/2" x 91/2" 211/16" x 91/2"	5¼" x 11¾" 3½" x 14" 21½s" x 16"	51/4" x 14" 31/2" x 16"			
ISS SPAN IN	32'	3½" x 7½" 21½6" x 9½" 1¾" x 9½"	5¼" x 11%" 3½" x 14"	5¼" x 11%" 3½" x 14"	51/4" x 71/4" 31/2" x 91/2" 211/16" x 91/2"	51/4" x 117/8" 31/2" x 14"	51/4" x 14" 31/2" x 16"	51/4" x 71/4" 31/2" x 91/2" 211/16" x 91/2"	5¼" x 11¾" 3½" x 14"	51/4" x 14" 31/2" x 16"	134" x 1176" 51/4" x 71/4" 31/2" x 91/2" 211/16" x 91/2"	5¼" x 11%" 3½" x 14"	51/4" x 14" 31/2" x 16"			
ROOF TRUSS	34'	3½" x 7½" 2½" x 9½"	211/16" x 14" 51/4" x 117/6" 31/2" x 14"	21½6" x 16" 5¼" x 11½" 3½" x 14"	134" x 1176" 51/4" x 71/4" 31/2" x 91/2" 211/16" x 91/2"	211/16" x 16" 31/2" x 14"	5¼" x 14"	13/4" x 117/8" 51/4" x 71/4" 31/2" x 91/2"	2"1/16" x 14" 51/4" x 111/6" 31/2" x 14"	211/16" x 16" 51/4" x 14" 31/2" x 16"	1¾" x 11¾" 5¼" x 7¼" 3½" x 9½"	211/16" x 16" 51/4" x 117/6" 31/2" x 14"	51/4" x 14"			
œ	36'	1¾" x 9½" 3½" x 7¼" 21½" x 9½"	21½6" x 14" 5½" x 11½" 3½" x 14"	21½" x 16" 3½" x 14"	134" x 117/8" 51/4" x 71/4" 31/2" x 91/2"	211/16" x 16" 31/2" x 14"	3½" x 16" 5¼" x 14"	21½6" x 9½" 1¾" x 11½" 5¼" x 7¼" 3½" x 9½"	211/46" x 16" 51/4" x 117/8" 31/2" x 14"	211/16" x 16" 51/4" x 14"	21½6" x 9½" 18¼" x 11½" 5½" x 7½" 3½" x 9½"	21½6" x 16" 5½" x 14" 3½" x 16"	3½" x 16" 5¼" x 14"			
1939		1¾" x 9½"	211/16" x 14"	211/ia" x 16"	211/16" x 91/2" 13/4" x 117/6"	211/16" x 16"	3½" x 16"	211/16" x 91/2" 13/4" x 117/6"	211/16" x 16"	3½" x 16"	211/16" x 91/2" 13/4" x 117/8"	2 ¹¹ / ₁₆ " x 16"	3½" x 18"			

GENERAL NOTES:

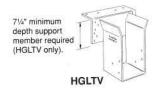
- Table assumes a simple span header supporting ½ of the total roof load.
- The header weight is accounted for in the table and does not need to be included in the dead load calculations.
- 3. Deflection limited to L/240 at live load or L/180 at total load.
- Header selections are based on the lower of 1.8E ES or WS Microllam® LVL or 2.0E ES or WS Parallam® PSL design values.
- Reduction in live load has been applied in accordance with UBC 2306, NBC 1110.2 and SBC 1203.6 for the header sizes listed in the non-snow (125%) columns.
- Minimum header support to be double trimmers (3" bearing).
 In shaded areas, support headers with triple trimmers (4½" bearing).
- For loading conditions not shown refer to allowable uniform load tables on page 26 or contact your Trus Joist MacMillan representative for assistance.
- Header widths of 3½" and 5½" may be one piece or multiple pieces as shown in the following chart:

	HEADER WIDTH				
HEADER DEPTH	31/2"	51/4"			
51/2" and 71/4"	Two 13/4"	Three 1¾"			
91/4"-18"	One 3½" or Two 1¾"	One 51/4" or Three 13/4" or One 31/2" & One 13/4"			

Multiple member headers must be properly connected together. See pages 22 and 23 for connection details.



Microllam® LVL & Parallam® PSL Framing Connectors (Simpson Strong-Tie®)













The minimum support for top flange hangers (except GLTV and HGLTV) is 211/16" or wider Microllam® LVL, Parallam® PSL, TimberStrand® LSL, glulam or 4x4 or larger solid-sawn lumber. The GLTV and HLTV hangers require 3½" minimum support width. The minimum support width for all face mount hangers is 2".

TOP FLANGE HANGERS

		SUPPORTED MEMBER DEPTH	HANGER	MAXIMUM LOAD
		91/4"	WPU1.81/9.25	
		The same of the sa	MIT9.5	
		91/2"	WPU1.81/9.5	
	3/4"	111/4"	WPU1.81/11.25	
	13/	117/8"	MIT11.88	
		1178	WPU1.81/11.88	
	1	14"	MIT1.81/14	
		14	WPU1.81/14	1
		91/4"	HWU2.75/9.25	
		374	GLTV2.75/9.25	1
		91/2"	HWU2.75/9.5	1
	3	372	GLTV2.75/9.5	
		111/4"	HWU2.75/11.25	-
	211/16"	11/4	GLTV2.75/11.25	
	211	117/8"	HWU2.75/11.88	1
	100	1170	GLTV2.75/11.88	_
9		14"	HWU2.75/14	
Т			GLTV2.75/14	
PT	189	16"	HWU2.75/16	1
3			GLTV2.75/16	⋖
ER		91/4"	HWU3.56/9.25	ш
AB			GLTV3.56/9.25	1 2
画		91/2"	HWU3.56/9.5	TABLE
0			GLTV3.59	F
TE		111/4"	HWU3.56/11.25	!!!
SUPPORTED MEMBER WIDTH		100000	GLTV3.56/11.25	SEE
РР	31/2"	117/8"	HWU3.56/11.88	
SU	3		GLTV3.511	-
		14"	HWU3.56/14	-
			GLTV3.514	-
18		16"	HWU3.56/16	
189		100	GLTV3.516	-
188		18"	HWU3.56/18	-
10	-		GLTV3.518	-
		91/4"	HWU5.50/9.25	
			GLTV5.50/9.25	-
	1	91/2"	HWU5.50/9.5	
			HGLTV5.59	-
		111/4"	HWU5.50/11.25	
	51/4"		GLTV5.50/11.25	
199	147	117/8"	HWU5.50/11.88	
18			HGLTV5.511	-
		14"	HWU5.50/14 HGLTV5.514	
		16"	HGLTV5.514	
		16"	HGLTV5.518	
		10	HULLI VO.DIO	

FACE MOUNT HANGERS

		SUPORTED MEMBER DEPTH	HANGER	MAXIMUM LOAD (LBS.)
		91/4" - 14"	HU9	3215(1)
	3/4"	111/4" - 14"	HU11	4020
Ŧ	W	14"	HU14	4540
SUPPORTED MEMBER WIDTH		91/4" - 14"	HU2.75/10	2410(1)
3	18	111/4" - 16"	HU2.75/12	2950(1)
出	211/18"	14" - 16" HU2.75/14		3215(1)
밁		16" HU2.75/16		3485(1)
		91/4" - 14"	HU410	2410(1)
	- 2	111/4" - 16"	HU412	2950(1)
삞	31/2"	4411 4011	HU414	3215(1)
8		14" - 18"	HU416	3485(1)
묘		91/4" - 117/8"	HU610	2410(1)
SE	= 4	91/2" - 14"	HU612	2950(1)
	51/4	111/8" - 18"	HU614	3215(1)
9		14" - 18"	HU616	3485(1)

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

GENERAL NOTES:

- Hanger capacity may be more or less than that of the supported member; therefore, both the hanger and Microllam® LVL, Parallam® PSL or TimberStrand® LSL capacities must be checked.
- Hanger capacities shown are based on the assumption that hanger is supported from Trus Joist MacMillan products or Douglas fir-larch or southern pine species support members. For other conditions, contact your Trus Joist MacMillan representative for assistance
- Hangers can only achieve their maximum capacity if all nail holes are filled with the proper nails. All hangers listed require 16d (3½") common header (support member) nails and 10d x 1½" nails into the supported member, except the HU410 through HU416 which require 10d (3") common nails into the supported member, and the GLTV, HGLTV and HU610 through HU616, which require 16d (3½") common nails into the supported member. In some cases, hangers have greater capacity when supported from certain member categories and with alternate nailing schedules.
- Leave ½6" clearance between end of Microllam® LVL, Parallam® PSL or TimberStrand® LSL and support member or hanger.

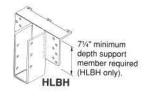
The hangers listed are manufactured by Simpson Strong-Tie® Company, Inc. For additional information, please refer to current Simpson Strong-Tie® Company, Inc. literature.

Table A - Maximum Load (Lbs.)

TOP FLANGE HANGER GLTV HGLTV	SUPPORT MEMBER (HEADER)										
	Microllam®			TimberStrand® LSL	Douglas fir-larch, southern pine						
GLTV	7500	6000	7400(1)	5750	7000						
HGLTV	10500	6000	7800(1)	7325	8665						
HWU	6000(2)	5500	5500	5500	6000(2)						
MIT	2650	2000	2000	2000	2500						
WPU	4490	4490	4490	4490	4165						

- Loads in Table A for all top flange hangers may not be increased for duration of load.
- GLTV and HGLTV require 3½" minimum width support member (header).
- (2) Load may be increased to 6335 lbs. for supported member widths of 3½" or less.

Microllam® LVL & Parallam® PSL Framing Connectors (KANT-SAG®)















The minimum support for top flange hangers is $3\frac{1}{2}$ " or wider Microllam® LVL, Parallam® PSL, TimberStrand® LSL, glulam or 4x4 or larger solid-sawn lumber . The minimum support width for all face mount hangers is 2".

TOP FLANGE HANGERS

		SUPPORTED MEMBER DEPTH	HANGER	MAXIMUM LOAD
		91/4"	PH17925	
	91/2"	974	BPH17925	
		PH1795		
	13	572	BPH1795	
	15.4	111/4"		
		11/4	BPH17112	
	100	1176"	PH17118	
10			BPH17118	
(3)		14"	PH1714	
18			BPH1714	
100		91/4"	BPH27925	
2			PHX27925	
38		91/2"	BPH2795	
			PHX2795	
14		111/4"	BPH27112	
3	211/16"		PHX27112	
	2	117/8"	BPH27118	
E			PHX27118	
0		14"	BPH2714 HLBH2714	
8			< <	
EF		16"	BPH2716	
M			HLBH2716	⊣ ∺
ME		91/4"	BPH35925	■ ¥
ED			LBH35925	4 E
R		91/2"	BPH3595 LBH3595	- !!!
PO			BPH35112	SEETABLE
SUPPORTED MEMBER WIDTH	=	111/4"	HLBH35112	
S	31/2"		BPH35118	-
		111/8"	HLBH35118	
			BPH3514	
8		14"	HLBH3514	-
		16"	HLBH3516	1
		18"	HLBH3518	1
			BPH52925	1
		91/4"	HLBH52925	
		01/10	BPH5295	
		91/2"	HLBH5295	
	51/4"	441711	BPH52112	1
		111/4"	HLBH52112	
		117/11	BPH52118	1
1		117/8"	HLBH52118	1
		14"	BPH5214	1
		14"	HLBH5214	1 1
		16"	HLBH5216	1 1
		18"	HLBH5218	1 1

1	Lega	y L	iterati	ure
See	Note	on	Front	Cover

FACE MOUNT HANGERS

		SUPPORTED MEMBER	HANGER	77.000	XIMUM D (LBS.)	
_		DEPTH		FLOOR	ROOF (125%)	
18		91/4" - 14"	THF17925	1345	1530	
I	=	111/4" - 14"	THF17112	1790	1870	
WIDTH	13/4"	31/4 - 19	HD17112	2720	3150	
3		14"	THF17140	2240	2800	
ER		14	HD1714	2990	3695	
/BI	=	91/4" - 14"	HD27925	2175	2680	
MEMBER	211/16"	111/4" - 16"	HD27112	2720	3400	
	2	14" - 16"	HD2714	2990	3740	
回	-	91/4" - 14"	THD410	5090	6365	
8	31/2	111/4" - 14"	THD412	6430	6650	
2		14" - 18"	THD414	7770	9715	
SUPPORTED		91/4" - 117/8"	THD610	5090	6365	
"	51/4	111/4" - 16"	THD612	6430	6650	
		14" - 18"	THD614	7770	9715	

GENERAL NOTES:

- Hanger capacity may be more or less than that of the supported member; therefore, both the hanger and Microllam® LVL, Parallam® PSL or TimberStrand® LSL capacities must be checked.
- Hanger capacities shown are based on the assumption that hanger is supported from Trus Joist MacMillan products or Douglas fir-larch or southern pine species support members. For other conditions, contact your Trus Joist MacMillan representative for assistance.
- Hangers can only achieve their maximum capacity if all nail holes are filled with the proper nails. All hangers listed require 16d (3½") common header (support member) nails and 10d x 1½" nails into the supported member, except the THF series which requires 10d (3") common header nails, the HD and THD series which require 10d (3") common nails into the supported member and the HLBH series which require 16d R.S. (9 gauge x 3½", hardened, threaded and bright) header nails supplied by KANT-SAG® and 16d (3½") common nails into the supported member.
- Leave 1/16" clearance between end of Microllam® LVL, Parallam® PSL or TimberStrand® LSL and support member or hanger.

The hangers listed are manufactured by United Steel Products Company (KANT-SAG®). For additional information, please refer to current KANT-SAG® literature.

Table A - Maximum Load (Lbs.)

		SUPPORT MEMBER (HEADER)							
TOP FLANGE HANGER	SUPPORTED MEMBER WIDTH	Microllam® LVL	Parallam® PSL	TimberStrand®	Douglas fir-larch, southern pine				
PH	13/4"	2600	2600	2440	2435				
PHX	211/16"	6015	5255	5755	4580				
	13/4"	3395	3395	3395	3000				
ВРН	211/16"	3395	3510	3775	3510				
	31/2" & 51/4"	3680	3510	3775	3510				
LBH	31/2"	6500	6400	6010	6400				
HLBH	31/2" & 51/4"	10620	7765(1)	9600	9600				

Loads in Table A for all top flange hangers assume 2 pieces of 1%" Microllam® LVL or TimberStrand® LSL, or a single piece of 3½" Parallam® PSL and may not be increased for duration of load.

⁽¹⁾ Capacity with a single piece 31/2" or wider Parallam® PSL header is 8350 lbs.

Microllam® LVL & Parallam® PSL Design Properties

Design values shown are for 100% load duration

13/4" 1.8E ES or WS MICROLLAM® LVL

DESIGN PROPERTY	DEPTH									
	51/2"	71/4"	91/2"	117/8"	14"	16"	18"			
Moment (ft. lbs.)	2,125	3,555	5,885	8,925	12,130	15,555	19,375			
Shear (lbs.)	1,830	2,410	3,160	3,950	4,655	5,320	5,985			
Moment of Inertia (in.4)	25	55	125	245	400	595	850			
Weight (lbs./lin. ft.)	2.8	3.7	4.8	6.0	7.1	8.1	9.1			

GENERAL NOTES:

- Lateral support of beam compression edge is required at intervals of 24" o.c. or closer.
- · See NER-481 for additional design information.
- Beam weights shown are for ES Microllam® LVL. For WS Microllam® LVL, reduce weights by 10%.

1.8E ES or WS MICROLLAM® LVL ALLOWABLE DESIGN STRESSES

Shear modulus of elasticity G = 112,500 psi

Modulus of elasticity E = 1.8 x 106 psi

Flexural stress F_b = 2600 psi⁽¹⁾

Compression perpendicular to grain

parallel to glue line $F_{c\perp} = 750 \text{ psi}^{(2)}$

Compression parallel to grain F_c|| = 2310 psi⁽³⁾

Horizontal shear perpendicular

to glue line $F_v = 285 \text{ psi}$

- (1) For 12-inch depth. For others, multiply by
- (2) F_{c⊥} shall not be increased for duration of load.
- (3) For 1.8E WS Microllam® LVL, Fc|| = 2460 psi.

134" 2.0E ES or WS PARALLAM® PSL

DESIGN PROPERTY	DEPTH								
	91/4"	91/2"	111/4"	117/8"	14"	16"	18"		
Moment (ft. lbs.)	6,210	6,530	8,985	9,950	13,580	17,475	21,830		
Shear (lbs.)	3,130	3,215	3,805	4,020	4,735	5,415	6,090		
Moment of Inertia (in.4)	115	125	210	245	400	595	850		
Weight (lbs./lin. ft.)	5.1	5.2	6.2	6.5	7.7	8.8	9.8		

211/16" 2.0E ES or WS PARALLAM® PSL

DESIGN PROPERTY	DEPTH									
	91/4"	91/2"	111/4"	117/8"	14"	16"	18"			
Moment (ft. lbs.)	9,535	10,025	13,800	15,280	20,855	26,840	33,530			
Shear (lbs.)	4,805	4,935	5,845	6,170	7,275	8,315	9,350			
Moment of Inertia (in.4)	175	190	320	375	615	915	1,305			
Weight (lbs./lin. ft.)	7.8	8.0	9.5	10.0	11.8	13.4	15.1			

31/2" 2.0E ES or WS PARALLAM® PSL

	DEPTH								
DESIGN PROPERTY	91/4"	91/2"	111/4"	111/8"	14"	16"	18"		
Moment (ft. lbs.)	12,415	13,055	17,970	19,900	27,160	34,955	43,665		
Shear (lbs.)	6,260	6,430	7,615	8,035	9,475	10,825	12,180		
Moment of Inertia (in.4)	230	250	415	490	800	1,195	1,700		
Weight (lbs./lin. ft.)	10.1	10.4	12.3	13.0	15.3	17.5	19.7		

51/4" 2.0E ES or WS PARALLAM® PSL

	DEPTH											
DESIGN PROPERTY	91/4"	91/2"	111/4"	117/8"	14"	16"	18"					
Moment (ft. lbs.)	18,625	19,585	26,955	29,855	40,740	52,430	65,495					
Shear (lbs.)	9,390	9,645	11,420	12,055	14,210	16,240	18,270					
Moment of Inertia (in.4)	345	375	625	735	1,200	1,790	2,550					
Weight (lbs./lin. ft.)	15.2	15.6	18.5	19.5	23.0	26.3	29.5					

7" 2.0E ES or WS PARALLAM® PSL

	DEPTH											
DESIGN PROPERTY	91/4"	91/2"	111/4"	117/8"	14"	16"	18"					
Moment (ft. lbs.)	24,830	26,115	35,940	39,805	54,325	69,905	87,325					
Shear (lbs.)	12,520	12,855	15,225	16,070	18,945	21,655	24,360					
Moment of Inertia (in.4)	460	500	830	975	1,600	2,390	3,400					
Weight (lbs./lin. ft.)	20.2	20.8	24.6	26.0	30.6	35.0	39.4					

2.0E ES or WS PARALLAM® PSL ALLOWABLE DESIGN STRESSES

Shear modulus of elasticity G = 125,000 psi

Modulus of elasticity E = 2.0 x 106 psi

Flexural stress $F_b = 2900 \text{ psi}^{(1)}$

Compression perpendicular to grain

parallel to wide face of strands F_{c⊥} = 650 psi⁽²⁾⁽³⁾

Compression parallel to grain F_c|| = 2900 psi

Horizontal shear perpendicular

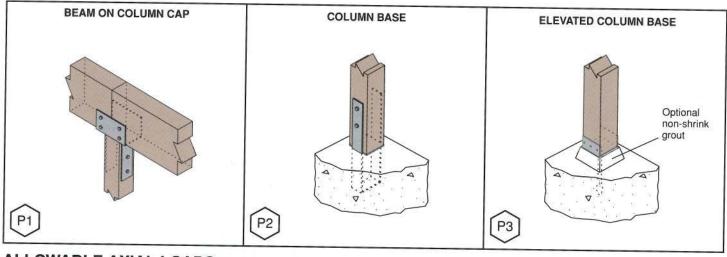
to wide face of strands F_v = 290 psi

- (1) For 12-inch depth. For others, multiply by
- (2) $F_{c\perp}$ shall not be increased for duration of load.
- (3) For 2.0E ES Parallam® PSL and 1¾" thick WS Parallam® PSL , F_{c⊥} = 750 psi.

GENERAL NOTES:

- Lateral support of beam compression edge is required at intervals of 24" o.c. or closer.
- See NER-292 for additional design information.
- Beam weights shown are for ES Parallam® PSL. For WS Parallam® PSL, reduce weights by 10%.
- ES indicates Eastern Species. Eastern Species may include southern pine or yellow poplar.
- WS indicates Western Species. Western Species may include Douglas fir, lodgepole pine, western hemlock or white fir.

CONNECTION DETAILS



ALLOWABLE AXIAL LOADS

EFFECTIVE COLUMN LENGTH®		ALLOWABLE AXIAL LOAD ON PARALLAM® PSL COLUMNS (In Pounds)																
		COLUMN SIZE																
	3½" x 3½"		3½" x 5¼"		3½" x 7"		51/4" x 51/4"			51/4" x 7"			7" x 7"					
	100%	115%	125%	100%	115%	125%	100%	115%	125%	100%	115%	125%	100%	115%	125%	100%	115%	125%
4'-0"	15,085	16,612	17,538													10070	11070	123/6
5'-0"	12,811	13,779	14,340	19,217	20,669	21,510				CO.								
6'-0"	10,598	11,202	11,551	15,897	16,804	17,326	21,196	22,405	23,101	33,300	36,685	38,743						
7'-0"	8,740	9,143	9,375	13,111	13,715	14,063	17,481	18.287	18,751	30,016	32,551	34.041	-					
8'-0"	7,270	7,553	7,716	10,905	11,330	11,574	14.539	15,106	15,432	26.655	28,499	29,565	35,540	37.998	39,420			
9'-0"	6,115	6,323	6,441	9,173	9,484	9,662	12.231	12.645	12.883	23,484	24,845	25.631	31,312	33,127	The state of the s			
10'-0"	5,203	5,359	5,449	7,805	8.039	8,173	10,407	10,718	10,897	20,667	21,703	22,300	27,556		34,175			
11'-0"	4,474	4,595	4,663	6,712	6.892	6,995	8.949	9,189	9.327	18,239	19.047	19.512	24,318	28,937	29,733			
12'-0"	3,885	3,979	4,033	5.827	5,969	6.050	7,770	7,959	8.067	16,166	16,810	17,180	1000000	25,395	26,016			
13'-0"	3,402	3,478	3.521	5,103	5,217	5.282	6.804	6.956	7,042	14.401	14,922		21,555	22,413	22,907			
14'-0"	3.003	3.064	3.099	4.504	4.596	4.649	6.005	6,129	6.199	To the second second		15,221	19,201	19,895	20,295			
15'-0"				1,001	4,000	4,045	0,003	0,129	0,199	12,893	13,320	13,566	17,190	17,760	The second second	34,168	35,796	36,736
16'-0"								- /		11,599	11,954	12,158	15,465	15,939		31,164	32,526	33,311
17'-0"										10,483	10,781	10,952	13,977	14,375	14,603	28,498	29,648	30,312
18'-0"										9,516	9,769	9,914	12,688	13,025	13,218	26,130	27,112	27,677
19'-0"										8,673	8,890	9,013	11,565	11,853	12,018	24,027	24,871	25,356
20'-0"										7,935	8,122	8,228	10,581	10,829	10,971	22,153	22,885	23,305
21'-0"										7,286	7,447	7,540	9,715	9,930	10,053	20,481	21,118	21,484
22'-0"										6,712	6,853	6,933	8,949	9,137	9,244	18,983	19,542	19,862
23'-0"																17,638	18,131	18,413
		-														16,427	16,863	17,113
24'-0"																15,333	15,722	15,944

GENERAL NOTES:

- Table applies to solid, one-piece column members used in dry service conditions.
- Loads shown have been adjusted to accommodate the worst case of the following eccentric conditions; 0.167 of column thickness (first dimension) or 0.167 of column width.
- Loads are based on simple axial loaded columns using the design provisions of the National Design Specification® for Wood Construction (NDS), 1991 edition. For side loads or other combined bending and axial loads see provisions of NDS, 1991 edition.
- Table assumes that the column is unbraced, except at the column ends and the effective column length is equal to the actual column length.

1.8E ES or WS PARALLAM® PSL ALLOWABLE DESIGN STRESSES (100% Load Duration)

Modulus of elasticity $E = 1.8 \times 10^6 \text{ psi}$

Flexural stress $F_b = 2400 \text{ psi}^{(1)}$

Compression parallel to grain | F_c|| = 2500 psi

(1) For 12-inch depth. For others, multiply by $\left[\frac{12}{d}\right]$ 0.111

rus Joist MacMillan now offers a product line that includes Western Species or Eastern Species products. Some of these products have different properties and capacities. The map below indicates the general distribution of each species, although some overlap may occur. To be sure the product you specify is readily available in your project's location, contact your local Trus Joist MacMillan representative, or call 1-800-628-3997 for the representative near you. The regional offices listed below represent over 175 technical representatives throughout North America.

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Canadian Division

Legacy Literature

See Note on Front Cover

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