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Selected Tables from Weyerhaeuser  
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# DESIGN PROPERTIES

## Allowable Design Properties<sup>(1)</sup> (100% Load Duration)

Grade	Width	Design Property	Depth												
			4 <sup>3</sup> / <sub>8</sub> "	5 <sup>1</sup> / <sub>2</sub> "	5 <sup>1</sup> / <sub>2</sub> " Plank Orientation	7 <sup>1</sup> / <sub>4</sub> "	8 <sup>5</sup> / <sub>8</sub> "	9 <sup>1</sup> / <sub>4</sub> "	9 <sup>1</sup> / <sub>2</sub> "	11 <sup>1</sup> / <sub>4</sub> "	11 <sup>3</sup> / <sub>8</sub> "	14"	16"	18"	20"
<b>TimberStrand® LSL</b>															
1.3E	3 <sup>1</sup> / <sub>2</sub> "	Moment (ft-lbs)	1,735	2,685	1,780	4,550	6,335	7,240		10,520					
		Shear (lbs)	4,085	5,135	1,925	6,765	8,050	8,635		10,500					
		Moment of Inertia (in. <sup>4</sup> )	24	49	20	111	187	231		415					
		Weight (plf)	4.5	5.6	5.6	7.4	8.8	9.4		11.5					
1.55E	1 <sup>3</sup> / <sub>4</sub> "	Moment (ft-lbs)						4,950	5,210	7,195	7,975	10,920	14,090		
		Shear (lbs)						3,345	3,435	4,070	4,295	5,065	5,785		
		Moment of Inertia (in. <sup>4</sup> )						115	125	208	244	400	597		
		Weight (plf)						5.1	5.2	6.2	6.5	7.7	8.8		
	3 <sup>1</sup> / <sub>2</sub> "	Moment (ft-lbs)						9,905	10,420	14,390	15,955	21,840	28,180		
		Shear (lbs)						6,690	6,870	8,140	8,590	10,125	11,575		
		Moment of Inertia (in. <sup>4</sup> )						231	250	415	488	800	1,195		
		Weight (plf)						10.1	10.4	12.3	13	15.3	17.5		
<b>Microllam® LVL</b>															
1.9E	1 <sup>3</sup> / <sub>4</sub> "	Moment (ft-lbs)		2,125		3,555		5,600	5,885	8,070	8,925	12,130	15,555	19,375	23,580
		Shear (lbs)		1,830		2,410		3,075	3,160	3,740	3,950	4,655	5,320	5,985	6,650
		Moment of Inertia (in. <sup>4</sup> )		24		56		115	125	208	244	400	597	851	1,167
		Weight (plf)		2.8		3.7		4.7	4.8	5.7	6.1	7.1	8.2	9.2	10.2
<b>Parallam® PSL</b>															
2.0E	2 <sup>1</sup> / <sub>16</sub> "	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. <sup>4</sup> )						175	192	319	375	615	917	1,305	
		Weight (plf)						7.8	8.0	9.5	10.0	11.8	13.4	15.1	
	3 <sup>1</sup> / <sub>2</sub> "	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. <sup>4</sup> )						231	250	415	488	800	1,195	1,701	
		Weight (plf)						10.1	10.4	12.3	13.0	15.3	17.5	19.7	
	5 <sup>1</sup> / <sub>4</sub> "	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. <sup>4</sup> )						346	375	623	733	1,201	1,792	2,552	
		Weight (plf)						15.2	15.6	18.5	19.5	23.0	26.3	29.5	
	7"	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. <sup>4</sup> )						462	500	831	977	1,601	2,389	3,402	
		Weight (plf)						20.2	20.8	24.6	26.0	30.6	35.0	39.4	

(1) For product in beam orientation, unless otherwise noted.

## TimberStrand® LSL Grade Verification

TimberStrand® LSL is available in more than one grade. The product will be stamped with its grade information, as shown in the examples below. With the 1.55E TimberStrand® LSL Beam, larger holes can be drilled through the beam. See **Allowable Holes** on page 36.


1.3E
WINDOW & DOOR HEADER




ROUND HOLE ZONE
NO holes within 8" of beam ends

1.55E  
HUD 1265  
CCMC 12627-R  
ICCES ESR-1387

43
05-30-04-1

## Design Stresses

Grade	Orientation	G Shear Modulus of Elasticity (psi)	E Modulus of Elasticity (psi)	F <sub>b</sub> Flexural Stress <sup>(1)</sup> (psi)	F <sub>t</sub> Tension Stress <sup>(2)</sup> (psi)	F <sub>cL</sub> Compression Perpendicular to Grain <sup>(3)</sup> (psi)	F <sub>c  </sub> Compression Parallel to Grain (psi)	F <sub>v</sub> Horizontal Shear Parallel to Grain (psi)	SG Equivalent Specific Gravity <sup>(4)</sup>
<b>TimberStrand® LSL</b>									
<b>1.3E</b>	Beam/Column	81,250	1.3 x 10 <sup>6</sup>	1,700	1,075	680	1,400	400	0.50 <sup>(5)</sup>
	Plank	81,250	1.3 x 10 <sup>6</sup>	1,900 <sup>(6)</sup>	1,075	435	1,400	150	0.50 <sup>(5)</sup>
<b>1.55E</b>	Beam	96,875	1.55 x 10 <sup>6</sup>	2,325	1,070 <sup>(7)</sup>	800	2,050	310 <sup>(7)</sup>	0.50 <sup>(5)</sup>
<b>Microllam® LVL</b>									
<b>1.9E</b>	Beam	118,750	1.9 x 10 <sup>6</sup>	2,600	1,555	750	2,510	285	0.50
<b>Parallam® PSL</b>									
<b>1.8E</b>	Column	N.A.	1.8 x 10 <sup>6</sup>	2,400	N.A.	N.A.	2,500	N.A.	0.50
<b>2.0E</b>	Beam	125,000	2.0 x 10 <sup>6</sup>	2,900	2,025	750	2,900	290	0.50

(1) For 12" depth. For other depths, multiply F<sub>b</sub> by the appropriate factor as follows:

- For TimberStrand® LSL, multiply by  $\left[\frac{12}{d}\right]^{0.092}$
- For Microllam® LVL, multiply by  $\left[\frac{12}{d}\right]^{0.136}$
- For Parallam® PSL, multiply by  $\left[\frac{12}{d}\right]^{0.111}$

(2) F<sub>t</sub> has been adjusted to reflect the volume effects for most standard applications.

(3) F<sub>cL</sub> shall not be increased for duration of load.

(4) For lateral connection design only.

(5) Specific gravity of 0.58 may be used for bolts installed perpendicular to face and loaded perpendicular to grain.

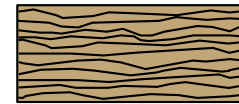
(6) Value shown is for thickness up to 3½".

(7) Value shown accounts for large hole capabilities. See **Allowable Holes** on page 36.

**Beam**



**Plank**



**Column**



## General Assumptions for iLevel™ Trus Joist® Residential Beams

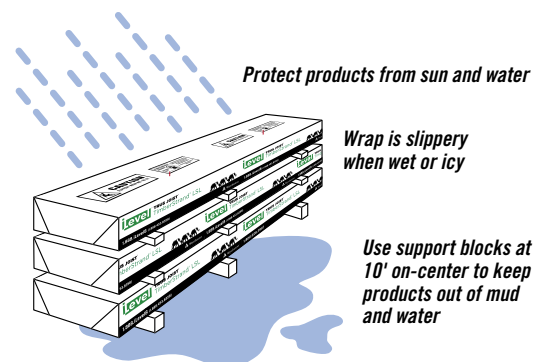
- Lateral support is required at bearing and along the span at 24" on-center, maximum.
- Bearing lengths are based on each product's bearing stress for applicable grade and orientation.
- All members 7¼" and less in depth are restricted to a maximum deflection of ¼".
- Beams that are 1¾" x 16" and deeper require multiple plies.
- No camber.
- Tables on pages 8-15 include load reductions applied in accordance with code.

For applications not covered in this brochure, contact your iLevel representative.

See pages 38 and 39 for multiple-member beam connections.

**TimberStrand® LSL,  
Microllam® LVL, and untreated  
Parallam® PSL are intended for  
dry-use, untreated applications**

## Product Storage



# FLOOR LOAD TABLES

## How to Use This Table

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

Also see **General Notes** on page 17.

## TimberStrand® LSL: Floor—100% (PLF)

Span	Condition	1.3E Grade						
		3½" Width						5½" Plank Orientation
		4¾"	5½"	7¼"	8⅝"	9¼"	11¼"	3½"
3'	Total Load	1,538	2,382	4,037	5,624	6,428	7,128	1,210
	Live Load L/360	1,420	*	*	*	*	*	*
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.8	2.5/6.4	3.6/8.9	4.1/10.1	4.5/11.3	1.5/3.5
4'	Total Load	863	1,337	2,268	3,160	3,611	5,249	814
	Live Load L/360	652	1,215	*	*	*	*	547
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.9/4.8	2.7/6.7	3.0/7.6	4.4/11.1	1.5/3.5
5'	Total Load	517	854	1,449	2,019	2,308	3,355	426
	Live Load L/360	348	662	1,399	*	*	*	288
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.8	2.1/5.3	2.4/6.1	3.5/8.8	1.5/3.5
6'	Total Load	305	590	1,004	1,399	1,599	2,326	248
	Live Load L/360	206	397	857	1,367	*	*	169
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.4	2.0/5.1	2.9/7.4	1.5/3.5
7'	Total Load	172	337	735	1,026	1,172	1,706	138
	Live Load L/360	132	256	560	904	1,092	*	107
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.8	1.7/4.3	2.5/6.3	1.5/3.5
8'	Total Load	100	198	443	783	895	1,303	79
	Live Load L/360	89	174	384	626	759	1,290	72
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.8	2.2/5.5	1.5/3.5
9'-6"	Total Load		98	225	553	632	921	
	Live Load L/360		*	*	386	470	811	
	Min. End/Int. Bearing (in.)		1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.9/4.7	
10'	Total Load		79	183	492	569	830	
	Live Load L/360		*	*	334	407	704	
	Min. End/Int. Bearing (in.)		1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.4	
12'	Total Load			86	288	353	573	
	Live Load L/360			*	198	241	423	
	Min. End/Int. Bearing (in.)			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.7	
14'	Total Load				181	222	397	
	Live Load L/360				126	154	272	
	Min. End/Int. Bearing (in.)				1.5/3.5	1.5/3.5	1.5/3.5	
16'-6"	Total Load				108	134	242	
	Live Load L/360				78	95	169	
	Min. End/Int. Bearing (in.)				1.5/3.5	1.5/3.5	1.5/3.5	
18'-6"	Total Load				75	93	170	
	Live Load L/360				56	68	121	
	Min. End/Int. Bearing (in.)				1.5/3.5	1.5/3.5	1.5/3.5	
20'	Total Load				57	72	133	
	Live Load L/360				44	54	96	
	Min. End/Int. Bearing (in.)				1.5/3.5	1.5/3.5	1.5/3.5	
24'	Total Load						73	
	Live Load L/360						56	
	Min. End/Int. Bearing (in.)						1.5/3.5	
28'	Total Load							
	Live Load L/360							
	Min. End/Int. Bearing (in.)							

\* Indicates **Total Load** value controls.

General Notes

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

Also see *How to Use this Table* on page 16 and *General Assumptions* on page 5.

TimberStrand® LSL: Floor—100% (PLF) *continued*

Span	Condition	The 1.55E TimberStrand® LSL Beam								
		1¾" Width			3½" Width			5¼" Width (2- or 3-ply)		
		9½"	11⅞"	14"	9½"	11⅞"	14"	9½"	11⅞"	14"
3'	Total Load	3,166	4,192	4,192	6,332	8,384	8,384	9,499	12,577	12,577
	Live Load L/360	*	*	*	*	*	*	*	*	*
	Min. End/Int. Bearing (in.)	3.4/8.5	4.5/11.3	4.5/11.3	3.4/8.5	4.5/11.3	4.5/11.3	3.4/8.5	4.5/11.3	4.5/11.3
4'	Total Load	2,006	2,836	3,142	4,012	5,673	6,284	6,018	8,510	9,427
	Live Load L/360	*	*	*	*	*	*	*	*	*
	Min. End/Int. Bearing (in.)	2.9/7.2	4.1/10.2	4.5/11.3	2.9/7.2	4.1/10.2	4.5/11.3	2.9/7.2	4.1/10.2	4.5/11.3
5'	Total Load	1,467	2,004	2,512	2,934	4,009	5,024	4,401	6,014	7,537
	Live Load L/360	*	*	*	*	*	*	*	*	*
	Min. End/Int. Bearing (in.)	2.6/6.6	3.6/9.0	4.5/11.3	2.6/6.6	3.6/9.0	4.5/11.3	2.6/6.6	3.6/9.0	4.5/11.3
6'	Total Load	1,152	1,549	1,952	2,305	3,098	3,904	3,458	4,648	5,857
	Live Load L/360	1,048	*	*	2,097	*	*	3,146	*	*
	Min. End/Int. Bearing (in.)	2.5/6.2	3.3/8.3	4.2/10.5	2.5/6.2	3.3/8.3	4.2/10.5	2.5/6.2	3.3/8.3	4.2/10.5
7'	Total Load	845	1,262	1,570	1,691	2,524	3,141	2,536	3,786	4,711
	Live Load L/360	699	1,250	*	1,399	2,501	*	2,098	3,752	*
	Min. End/Int. Bearing (in.)	2.1/5.3	3.2/7.9	3.9/9.9	2.1/5.3	3.2/7.9	3.9/9.9	2.1/5.3	3.2/7.9	3.9/9.9
8'	Total Load	646	990	1,313	1,292	1,981	2,626	1,938	2,971	3,939
	Live Load L/360	487	886	*	974	1,773	*	1,462	2,660	*
	Min. End/Int. Bearing (in.)	1.9/4.7	2.8/7.1	3.8/9.4	1.9/4.7	2.8/7.1	3.8/9.4	1.9/4.7	2.8/7.1	3.8/9.4
9'-6"	Total Load	448	700	960	897	1,401	1,920	1,346	2,101	2,880
	Live Load L/360	302	560	870	605	1,121	1,740	907	1,681	2,610
	Min. End/Int. Bearing (in.)	1.5/3.9	2.4/6.0	3.3/8.2	1.5/3.9	2.4/6.0	3.3/8.2	1.5/3.9	2.4/6.0	3.3/8.2
10'	Total Load	387	631	865	775	1,263	1,731	1,162	1,894	2,597
	Live Load L/360	261	487	760	523	974	1,520	785	1,462	2,280
	Min. End/Int. Bearing (in.)	1.5/3.5	2.3/5.7	3.1/7.8	1.5/3.5	2.3/5.7	3.1/7.8	1.5/3.5	2.3/5.7	3.1/7.8
12'	Total Load	228	434	599	456	868	1,198	685	1,302	1,797
	Live Load L/360	155	293	464	311	587	928	467	881	1,393
	Min. End/Int. Bearing (in.)	1.5/3.5	1.9/4.7	2.6/6.5	1.5/3.5	1.9/4.7	2.6/6.5	1.5/3.5	1.9/4.7	2.6/6.5
14'	Total Load	144	278	438	288	556	876	433	834	1,314
	Live Load L/360	99	189	302	199	379	605	299	569	907
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.6	2.2/5.6	1.5/3.5	1.5/3.6	2.2/5.6	1.5/3.5	1.5/3.6	2.2/5.6
16'-6"	Total Load	87	170	277	174	341	554	262	512	831
	Live Load L/360	61	118	189	123	236	379	185	354	569
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.7/4.2	1.5/3.5	1.5/3.5	1.7/4.2	1.5/3.5	1.5/3.5	1.7/4.2
18'-6"	Total Load	60	120	197	121	241	395	182	362	592
	Live Load L/360	44	84	136	88	169	273	132	254	410
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
20'	Total Load		94	156	94	189	312	142	284	468
	Live Load L/360		67	109	70	135	218	105	202	327
	Min. End/Int. Bearing (in.)		1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
24'	Total Load		52	88	50	105	177	76	158	265
	Live Load L/360		39	64	40	79	128	61	118	192
	Min. End/Int. Bearing (in.)		1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
28'	Total Load			53		62	107		93	160
	Live Load L/360			40		50	81		75	122
	Min. End/Int. Bearing (in.)			1.5/3.5		1.5/3.5	1.5/3.5		1.5/3.5	1.5/3.5

\* Indicates Total Load value controls.

# FLOOR LOAD TABLES

## How to Use This Table

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

Also see **General Notes** on page 19.

## 1.9E Microllam® LVL: Floor—100% (PLF)

Span	Condition	1¾" Width							3½" Width (2-ply)					
		5½"	7¼"	9¼"	9½"	11¼"	11½"	14"	5½"	7¼"	9¼"	9½"	11¼"	11½"
6'	Total Load	432	762	1,027	1,062	1,324	1,424	1,794	864	1,525	2,055	2,125	2,648	2,848
	Live Load L/360	290	626	*	*	*	*	*	580	1,253	*	*	*	*
	Min. End/Int. Bearing (in.)	1.5/3.5	1.8/4.4	2.4/5.9	2.4/6.1	3.0/7.6	3.3/8.2	4.1/10.3	1.5/3.5	1.8/4.4	2.4/5.9	2.4/6.1	3.0/7.6	3.3/8.2
8'	Total Load	146	326	695	731	915	978	1,207	292	652	1,391	1,462	1,830	1,956
	Live Load L/360	126	280	555	597	*	*	*	253	561	1,110	1,195	*	*
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	2.1/5.3	2.2/5.6	2.8/7.0	3.0/7.5	3.7/9.3	1.5/3.5	1.5/3.5	2.1/5.3	2.2/5.6	2.8/7.0	3.0/7.5
9'-6"	Total Load	73	166	491	517	709	784	968	146	332	983	1,034	1,418	1,570
	Live Load L/360	*	*	344	370	592	687	*	*	*	688	741	1,185	1,374
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.8/4.5	1.9/4.7	2.6/6.5	2.9/7.2	3.5/8.8	1.5/3.5	1.5/3.5	1.8/4.5	1.9/4.7	2.6/6.5	2.9/7.2
10'	Total Load	59	135	441	466	639	707	908	118	270	883	932	1,279	1,415
	Live Load L/360	*	*	297	321	514	597	*	*	*	595	642	1,029	1,195
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.7/4.3	1.8/4.5	2.5/6.1	2.7/6.8	3.5/8.7	1.5/3.5	1.5/3.5	1.7/4.3	1.8/4.5	2.5/6.1	2.7/6.8
12'	Total Load		64	260	281	442	489	666	54	128	521	563	885	979
	Live Load L/360		*	176	190	309	360	569	*	*	353	381	618	720
	Min. End/Int. Bearing (in.)		1.5/3.5	1.5/3.5	1.5/3.5	2.0/5.1	2.3/5.7	3.1/7.7	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	2.0/5.1	2.3/5.7
14'	Total Load			164	178	293	342	487		66	329	357	586	685
	Live Load L/360			113	122	199	232	370		*	226	244	398	465
	Min. End/Int. Bearing (in.)			1.5/3.5	1.5/3.5	1.6/4.0	1.9/4.7	2.6/6.6		1.5/3.5	1.5/3.5	1.5/3.5	1.6/4.0	1.9/4.7
16'-6"	Total Load			100	108	180	211	342			200	217	360	422
	Live Load L/360			69	75	123	145	232			139	151	247	290
	Min. End/Int. Bearing (in.)			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	2.2/5.5			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
18'-6"	Total Load			70	76	127	149	244			140	152	254	299
	Live Load L/360			49	54	88	103	167			99	108	177	207
	Min. End/Int. Bearing (in.)			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.4			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
20'	Total Load			54	59	100	118	193			109	119	200	236
	Live Load L/360			39	42	70	82	133			79	85	141	165
	Min. End/Int. Bearing (in.)			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.8			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
22'	Total Load					74	87	144			80	87	148	175
	Live Load L/360					53	62	101			59	64	106	125
	Min. End/Int. Bearing (in.)					1.5/3.5	1.5/3.5	1.5/3.5			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
24'	Total Load					56	66	110			60	65	112	133
	Live Load L/360					41	48	78			46	50	82	96
	Min. End/Int. Bearing (in.)					1.5/3.5	1.5/3.5	1.5/3.5			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
26'	Total Load							51					86	102
	Live Load L/360							38					65	76
	Min. End/Int. Bearing (in.)							1.5/3.5					1.5/3.5	1.5/3.5
28'	Total Load							67					67	80
	Live Load L/360							49					52	61
	Min. End/Int. Bearing (in.)							1.5/3.5					1.5/3.5	1.5/3.5
30'	Total Load							54					52	62
	Live Load L/360							40					42	50
	Min. End/Int. Bearing (in.)							1.5/3.5					1.5/3.5	1.5/3.5

\*Indicates Total Load value controls.

## General Notes

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

Also see *How to Use This Table* on page 18 and *General Assumptions* on page 5.

## 1.9E Microllam® LVL: Floor—100% (PLF) *continued*

Span	Condition	3½" Width (2-ply)				5¼" Width (3-ply)									
		14"	16"	18"	20"	5½"	7¼"	9¼"	9½"	11¼"	11½"	14"	16"	18"	20"
6'	Total Load	3,589	3,917	3,917	3,917	1,297	2,287	3,082	3,188	3,972	4,272	5,384	5,875	5,875	5,875
	Live Load L/360	*	*	*	*	870	1,879	*	*	*	*	*	*	*	*
	Min. End/Int. Bearing (in.)	4.1/10.3	4.5/11.3	4.5/11.3	4.5/11.3	1.5/3.5	1.8/4.4	2.4/5.9	2.4/6.1	3.0/7.6	3.3/8.2	4.1/10.3	4.5/11.3	4.5/11.3	4.5/11.3
8'	Total Load	2,414	2,885	2,932	2,932	438	978	2,086	2,193	2,745	2,935	3,621	4,328	4,399	4,399
	Live Load L/360	*	*	*	*	380	842	1,666	1,792	*	*	*	*	*	*
	Min. End/Int. Bearing (in.)	3.7/9.3	4.4/11.1	4.5/11.3	4.5/11.3	1.5/3.5	1.5/3.5	2.1/5.3	2.2/5.6	2.8/7.0	3.0/7.5	3.7/9.3	4.4/11.1	4.5/11.3	4.5/11.3
9'-6"	Total Load	1,937	2,294	2,466	2,466	219	498	1,475	1,551	2,128	2,354	2,905	3,441	3,699	3,699
	Live Load L/360	*	*	*	*	*	*	1,032	1,112	1,778	2,061	*	*	*	*
	Min. End/Int. Bearing (in.)	3.5/8.8	4.2/10.5	4.5/11.3	4.5/11.3	1.5/3.5	1.5/3.5	1.8/4.5	1.9/4.7	2.6/6.5	2.9/7.2	3.5/8.8	4.2/10.5	4.5/11.3	4.5/11.3
10'	Total Load	1,817	2,147	2,342	2,342	177	406	1,325	1,398	1,919	2,123	2,725	3,221	3,513	3,513
	Live Load L/360	*	*	*	*	*	*	893	963	1,544	1,792	*	*	*	*
	Min. End/Int. Bearing (in.)	3.5/8.7	4.1/10.3	4.5/11.3	4.5/11.3	1.5/3.5	1.5/3.5	1.7/4.3	1.8/4.5	2.5/6.1	2.7/6.8	3.5/8.7	4.1/10.3	4.5/11.2	4.5/11.2
12'	Total Load	1,333	1,709	1,948	1,948	82	193	781	844	1,327	1,469	2,000	2,563	2,922	2,922
	Live Load L/360	1,138	1,635	*	*	*	*	530	572	927	1,080	1,707	2,453	*	*
	Min. End/Int. Bearing (in.)	3.1/7.7	3.9/9.9	4.5/11.3	4.5/11.3	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	2.0/5.1	2.3/5.7	3.1/7.7	3.9/9.9	4.5/11.2	4.5/11.2
14'	Total Load	975	1,253	1,563	1,667		100	494	535	879	1,028	1,463	1,880	2,345	2,500
	Live Load L/360	741	1,075	1,483	*		*	339	366	597	697	1,112	1,613	2,225	*
	Min. End/Int. Bearing (in.)	2.6/6.6	3.4/8.5	4.2/10.5	4.5/11.3		1.5/3.5	1.5/3.5	1.5/3.5	1.6/4.0	1.9/4.7	2.6/6.6	3.4/8.5	4.2/10.5	4.5/11.2
16'-6"	Total Load	684	897	1,120	1,365			300	326	540	634	1,026	1,346	1,680	2,048
	Live Load L/360	465	680	945	1,263			209	227	371	435	698	1,020	1,418	1,895
	Min. End/Int. Bearing (in.)	2.2/5.5	2.9/7.2	3.6/8.9	4.4/10.9			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	2.2/5.5	2.9/7.2	3.6/8.9	4.4/10.9
18'-6"	Total Load	488	710	887	1,082			210	228	382	449	733	1,066	1,331	1,623
	Live Load L/360	335	491	686	922			149	162	266	311	502	737	1,030	1,383
	Min. End/Int. Bearing (in.)	1.8/4.4	2.6/6.4	3.2/8.0	3.9/9.7			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.4	2.6/6.4	3.2/8.0	3.9/9.7
20'	Total Load	387	573	756	922			164	178	300	354	580	860	1,134	1,384
	Live Load L/360	267	393	550	741			119	128	212	248	401	590	826	1,112
	Min. End/Int. Bearing (in.)	1.5/3.8	2.2/5.6	3.0/7.4	3.6/9.0			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.8	2.2/5.6	3.0/7.4	3.6/9.0
22'	Total Load	289	432	611	759			120	131	223	263	434	648	916	1,138
	Live Load L/360	202	298	419	566			89	97	160	187	304	448	629	850
	Min. End/Int. Bearing (in.)	1.5/3.5	1.9/4.7	2.6/6.6	3.3/8.2			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.9/4.7	2.6/6.6	3.3/8.2
24'	Total Load	221	332	471	634			89	98	168	199	332	498	707	951
	Live Load L/360	157	232	326	442			69	75	123	145	235	348	490	663
	Min. End/Int. Bearing (in.)	1.5/3.5	1.6/4.0	2.2/5.6	3.0/7.5			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.6/4.0	2.2/5.6	3.0/7.5
26'	Total Load	172	259	370	506			67	74	129	153	258	389	555	760
	Live Load L/360	124	183	259	351			54	59	97	114	186	275	388	527
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.9/4.8	2.6/6.5			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.9/4.8	2.6/6.5
28'	Total Load	135	205	294	405			51	56	100	120	203	308	442	607
	Live Load L/360	99	148	208	283			43	47	78	92	149	222	313	425
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.7/4.2	2.3/5.7			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.7/4.2	2.3/5.7
30'	Total Load	108	164	237	327					78	94	162	247	356	491
	Live Load L/360	81	120	170	232					63	75	122	181	256	348
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.7	2.0/5.0					1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.7	2.0/5.0

\*Indicates Total Load value controls.

# FLOOR LOAD TABLES

## How to Use This Table

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

Also see **General Notes** on page 21.

## 2.0E Parallam® PSL: Floor—100% (PLF)

Span	Condition	2 <sup>1</sup> / <sub>16</sub> " Width							3 <sup>1</sup> / <sub>2</sub> " Width						
		9 <sup>1</sup> / <sub>4</sub> "	9 <sup>1</sup> / <sub>2</sub> "	11 <sup>1</sup> / <sub>4</sub> "	11 <sup>3</sup> / <sub>8</sub> "	14"	16"	18"	9 <sup>1</sup> / <sub>4</sub> "	9 <sup>1</sup> / <sub>2</sub> "	11 <sup>1</sup> / <sub>4</sub> "	11 <sup>3</sup> / <sub>8</sub> "	14"	16"	18"
8'	Total Load	1,129	1,166	1,430	1,529	1,887	2,254	2,254	1,469	1,517	1,861	1,990	2,456	2,933	2,933
	Live Load L/360	898	966	*	*	*	*	*	1,169	1,257	*	*	*	*	*
	Min. End/Int. Bearing (in.)	2.3/5.6	2.3/5.8	2.9/7.1	3.1/7.6	3.8/9.4	4.5/11.3	4.5/11.3	2.3/5.6	2.3/5.8	2.9/7.1	3.1/7.6	3.8/9.4	4.5/11.3	4.5/11.3
9'-6"	Total Load	827	881	1,160	1,238	1,514	1,793	1,896	1,076	1,147	1,510	1,611	1,970	2,333	2,467
	Live Load L/360	556	600	959	1,111				724	780	1,248	1,446	*	*	*
	Min. End/Int. Bearing (in.)	2.0/4.9	2.1/5.2	2.8/6.9	2.9/7.3	3.6/9.0	4.3/10.6	4.5/11.3	2.0/4.9	2.1/5.2	2.8/6.9	2.9/7.3	3.6/9.0	4.3/10.6	4.5/11.3
10'	Total Load	714	771	1,091	1,164	1,420	1,678	1,800	930	1,003	1,420	1,514	1,848	2,184	2,342
	Live Load L/360	481	519	833	966	*	*	*	626	675	1,084	1,257	*	*	*
	Min. End/Int. Bearing (in.)	1.8/4.5	1.9/4.8	2.7/6.8	2.9/7.3	3.5/8.9	4.2/10.5	4.5/11.3	1.8/4.5	1.9/4.8	2.7/6.8	2.9/7.3	3.5/8.9	4.2/10.5	4.5/11.3
12'	Total Load	421	455	741	839	1,137	1,335	1,497	548	592	964	1,092	1,480	1,738	1,949
	Live Load L/360	286	308	500	582	921	1,323		372	401	651	758	1,198	1,721	*
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	2.2/5.6	2.5/6.3	3.4/8.5	4.0/10.0	4.5/11.3	1.5/3.5	1.5/3.5	2.2/5.6	2.5/6.3	3.4/8.5	4.0/10.0	4.5/11.3
14'	Total Load	266	288	474	554	840	1,083	1,276	347	375	616	721	1,093	1,409	1,660
	Live Load L/360	183	197	322	376	600	870	1,200	238	257	419	489	780	1,132	1,561
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.7/4.2	2.0/4.9	3.0/7.4	3.8/9.5	4.5/11.2	1.5/3.5	1.5/3.5	1.7/4.2	2.0/4.9	3.0/7.4	3.8/9.5	4.5/11.3
16'-6"	Total Load	162	175	291	341	553	775	971	210	228	379	444	720	1,009	1,263
	Live Load L/360	113	122	200	234	376	550	765	147	159	260	305	490	716	995
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.6	2.3/5.8	3.2/8.1	4.0/10.1	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.6	2.3/5.8	3.2/8.1	4.0/10.1
18'-6"	Total Load	113	123	206	242	395	583	769	147	160	268	315	514	759	1,000
	Live Load L/360	80	87	143	168	271	397	555	105	113	186	218	352	517	722
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.9/4.7	2.7/6.8	3.6/9.0	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.9/4.7	2.7/6.8	3.6/9.0
20'	Total Load	88	96	162	191	312	464	653	115	125	210	248	407	603	850
	Live Load L/360	64	69	114	133	216	318	445	83	90	148	174	281	414	579
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.6/4.0	2.4/5.9	3.3/8.3	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.6/4.0	2.4/5.9	3.3/8.3
22'	Total Load	64	70	120	141	234	349	494	84	91	156	184	304	454	642
	Live Load L/360	48	52	86	101	164	241	339	63	68	112	131	213	314	441
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	2.0/4.9	2.8/6.9	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	2.0/4.9	2.8/6.9
24'	Total Load		52	90	107	179	268	381	62	68	118	140	232	349	496
	Live Load L/360		40	66	78	127	187	264	48	52	86	102	165	244	343
	Min. End/Int. Bearing (in.)		1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.7/4.2	2.4/5.9	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.7/4.2	2.4/5.9
26'	Total Load			69	82	139	209	299		51	90	107	180	272	389
	Live Load L/360			52	61	100	148	209		41	68	80	130	193	272
	Min. End/Int. Bearing (in.)			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.6	2.0/5.1		1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.6	2.0/5.1
28'	Total Load			54	64	109	166	238			70	84	142	216	310
	Live Load L/360			42	49	80	119	169			55	64	105	155	219
	Min. End/Int. Bearing (in.)			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.4			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.4
30'	Total Load				50	87	133	192			55	66	113	173	249
	Live Load L/360				40	65	97	138			44	52	85	127	179
	Min. End/Int. Bearing (in.)				1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.9			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.9
32'	Total Load										52	91	140	203	
	Live Load L/360										43	70	105	148	
	Min. End/Int. Bearing (in.)										1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	

\* Indicates Total Load value controls.



General Notes

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

Also see *How to Use This Table* on page 20 and *General Assumptions* on page 5.

2.OE Parallam® PSL: Floor—100% (PLF) *continued*

Span	Condition	5¼" Width							7" Width						
		9¼"	9½"	11¼"	11⅞"	14"	16"	18"	9¼"	9½"	11¼"	11⅞"	14"	16"	18"
8'	Total Load	2,204	2,275	2,792	2,985	3,683	4,400	4,400	2,939	3,034	3,723	3,981	4,912	5,866	5,866
	Live Load L/360	1,753	1,886	*	*	*	*	*	2,338	2,515	*	*	*	*	*
	Min. End/Int. Bearing (in.)	2.3/5.6	2.3/5.8	2.9/7.1	3.1/7.6	3.8/9.4	4.5/11.3	4.5/11.3	2.3/5.6	2.3/5.8	2.9/7.1	3.1/7.6	3.8/9.4	4.5/11.3	4.5/11.3
9'-6"	Total Load	1,614	1,720	2,265	2,416	2,955	3,500	3,700	2,153	2,294	3,020	3,222	3,940	4,667	4,934
	Live Load L/360	1,086	1,171	1,872	2,170	*	*	*	1,448	1,561	2,496	2,893	*	*	*
	Min. End/Int. Bearing (in.)	2.0/4.9	2.1/5.2	2.8/6.9	2.9/7.3	3.6/9.0	4.3/10.6	4.5/11.3	2.0/4.9	2.1/5.2	2.8/6.9	2.9/7.3	3.6/9.0	4.3/10.6	4.5/11.3
10'	Total Load	1,395	1,505	2,130	2,271	2,772	3,276	3,514	1,860	2,006	2,841	3,029	3,696	4,369	4,685
	Live Load L/360	940	1,013	1,626	1,886	*	*	*	1,253	1,351	2,168	2,515	*	*	*
	Min. End/Int. Bearing (in.)	1.8/4.5	1.9/4.8	2.7/6.8	2.9/7.3	3.5/8.9	4.2/10.5	4.5/11.3	1.8/4.5	1.9/4.8	2.7/6.8	2.9/7.3	3.5/8.9	4.2/10.5	4.5/11.3
12'	Total Load	822	888	1,446	1,639	2,220	2,607	2,923	1,096	1,184	1,928	2,185	2,960	3,476	3,898
	Live Load L/360	558	602	976	1,137	1,797	2,582	*	744	803	1,302	1,516	2,396	3,443	*
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	2.2/5.6	2.5/6.3	3.4/8.5	4.0/10.0	4.5/11.3	1.5/3.5	1.5/3.5	2.2/5.6	2.5/6.3	3.4/8.5	4.0/10.0	4.5/11.3
14'	Total Load	520	563	925	1,082	1,639	2,113	2,490	694	751	1,233	1,443	2,186	2,818	3,320
	Live Load L/360	357	386	629	734	1,171	1,698	2,342	476	514	839	979	1,561	2,264	3,122
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.7/4.2	2.0/4.9	3.0/7.4	3.8/9.5	4.5/11.3	1.5/3.5	1.5/3.5	1.7/4.2	2.0/4.9	3.0/7.4	3.8/9.5	4.5/11.3
16'-6"	Total Load	316	342	568	667	1,080	1,514	1,895	421	457	758	889	1,440	2,019	2,526
	Live Load L/360	220	238	391	457	735	1,074	1,493	294	318	521	610	980	1,432	1,991
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.6	2.3/5.8	3.2/8.1	4.0/10.1	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.6	2.3/5.8	3.2/8.1	4.0/10.1
18'-6"	Total Load	221	240	402	473	771	1,138	1,501	295	320	536	630	1,028	1,518	2,001
	Live Load L/360	157	170	280	328	529	776	1,084	210	227	373	437	705	1,035	1,445
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.9/4.7	2.7/6.8	3.6/9.0	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.9/4.7	2.7/6.8	3.6/9.0
20'	Total Load	172	187	316	372	610	905	1,275	230	250	421	497	814	1,207	1,700
	Live Load L/360	125	135	223	261	422	621	869	167	180	297	348	563	828	1,159
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.6/4.0	2.4/5.9	3.3/8.3	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.6/4.0	2.4/5.9	3.3/8.3
22'	Total Load	126	137	234	277	457	681	964	168	183	312	369	609	909	1,285
	Live Load L/360	94	102	168	197	320	472	662	126	136	224	263	426	629	883
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	2.0/4.9	2.8/6.9	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	2.0/4.9	2.8/6.9
24'	Total Load	94	103	177	210	349	523	744	125	137	236	280	465	698	992
	Live Load L/360	73	79	130	153	248	366	515	97	105	173	204	331	488	687
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.7/4.2	2.4/5.9	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.7/4.2	2.4/5.9
26'	Total Load	71	77	135	161	271	409	584	94	103	181	215	361	545	779
	Live Load L/360	57	62	102	120	196	290	409	76	83	137	161	261	387	545
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.6	2.0/5.1	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.6	2.0/5.1
28'	Total Load	54	59	105	126	213	324	465	72	79	140	168	285	432	620
	Live Load L/360	46	50	82	97	157	233	329	61	66	110	129	210	311	439
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.4	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.4
30'	Total Load			82	99	170	260	374	54	60	110	132	226	346	499
	Live Load L/360			67	79	128	190	269	50	54	89	105	171	254	359
	Min. End/Int. Bearing (in.)			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.9	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.9
32'	Total Load			64	78	136	210	305			86	104	182	280	406
	Live Load L/360			55	65	106	157	223			74	87	141	210	297
	Min. End/Int. Bearing (in.)			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5

\* Indicates Total Load value controls.

# NON-SNOW ROOF LOAD TABLES

## How to Use This Table

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

Also see **General Notes** on page 29.

## TimberStrand® LSL: Roof—Non-Snow Load Area 125% (PLF)

Span	Condition	1.3E Grade						
		3½" Width						5½" Plank Orientation
		4¾"	5½"	7¼"	8⅝"	9¼"	11¼"	3½"
3'	Total Load	1,924	2,979	5,048	7,033	7,128	7,128	1,514
	Deflection L/240 / L/360	*/1,420	*/2,548	*/4,885	*/*	*/*	*/*	*/1,224
	Min. End/Int. Bearing (in.)	1.5/3.5	1.9/4.7	3.2/8.0	4.4/11.1	4.5/11.3	4.5/11.3	1.5/3.5
4'	Total Load	1,080	1,673	2,836	3,952	4,516	5,343	1,084
	Deflection L/240 / L/360	978/652	*/1,215	*/2,477	*/3,765	*/4,423	*/*	820/547
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	2.4/6.0	3.3/8.3	3.8/9.5	4.5/11.3	1.5/3.5
5'	Total Load	648	1,069	1,813	2,526	2,887	4,197	534
	Deflection L/240 / L/360	522/348	993/662	*/1,399	*/2,189	*/2,605	*/4,154	432/288
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.9/4.8	2.7/6.7	3.0/7.6	4.4/11.1	1.5/3.5
6'	Total Load	318	615	1,256	1,752	2,002	2,911	259
	Deflection L/240 / L/360	309/206	596/397	*/857	*/1,367	*/1,641	*/2,692	254/169
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.6/4.0	2.2/5.5	2.5/6.3	3.7/9.2	1.5/3.5
7'	Total Load	172	337	743	1,285	1,468	2,135	138
	Deflection L/240 / L/360	*/132	*/256	*/560	*/904	*/1,092	*/1,828	*/107
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.9/4.8	2.2/5.4	3.2/7.9	1.5/3.5
8'	Total Load	100	198	443	981	1,122	1,632	79
	Deflection L/240 / L/360	*/89	*/174	*/384	939/626	*/759	*/1,290	*/72
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.7/4.2	1.9/4.8	2.8/6.9	1.5/3.5
9'-6"	Total Load		98	225	693	793	1,154	
	Deflection L/240 / L/360		*/*	*/*	580/386	706/470	*/811	
	Min. End/Int. Bearing (in.)		1.5/3.5	1.5/3.5	1.5/3.5	1.6/4.0	2.3/5.8	
10'	Total Load		79	183	625	714	1,040	
	Deflection L/240 / L/360		*/*	*/*	501/334	611/407	*/704	
	Min. End/Int. Bearing (in.)		1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.8	2.2/5.5	
12'	Total Load			86	387	474	719	
	Deflection L/240 / L/360			*/*	297/198	362/241	634/423	
	Min. End/Int. Bearing (in.)			1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.6	
14'	Total Load				244	300	525	
	Deflection L/240 / L/360				189/126	232/154	409/272	
	Min. End/Int. Bearing (in.)				1.5/3.5	1.5/3.5	1.6/3.9	
16'-6"	Total Load				147	182	327	
	Deflection L/240 / L/360				117/78	143/95	254/169	
	Min. End/Int. Bearing (in.)				1.5/3.5	1.5/3.5	1.5/3.5	
18'-6"	Total Load				102	127	231	
	Deflection L/240 / L/360				83/56	102/68	182/121	
	Min. End/Int. Bearing (in.)				1.5/3.5	1.5/3.5	1.5/3.5	
20'	Total Load				80	99	181	
	Deflection L/240 / L/360				66/44	81/54	145/96	
	Min. End/Int. Bearing (in.)				1.5/3.5	1.5/3.5	1.5/3.5	
24'	Total Load					53	101	
	Deflection L/240 / L/360					47/31	84/56	
	Min. End/Int. Bearing (in.)					1.5/3.5	1.5/3.5	
28'	Total Load						60	
	Deflection L/240 / L/360						53/35	
	Min. End/Int. Bearing (in.)						1.5/3.5	

\* Indicates **Total Load** value controls.

## General Notes

- Table is based on:
  - Uniform loads (beam weight considered) and the more restrictive of simple or continuous span.
  - Deflection criteria of L/180 total load. For stiffer deflection criteria, use L/240 values for total load deflection.
- For door and window applications, iLevel recommends using the L/360 value for a live load deflection limit and the L/240 value for a total load limit.

Also see *How to Use This Table* on page 28 and *General Assumptions* on page 5.

## TimberStrand® LSL: Roof—Non-Snow Load Area 125% (PLF) *continued*

Span	Condition	The 1.55E TimberStrand® LSL Beam								
		1¾" Width			3½" Width			5¼" Width (2- or 3-ply)		
		9½"	11⅞"	14"	9½"	11⅞"	14"	9½"	11⅞"	14"
3'	Total Load	3,959	4,192	4,192	7,918	8,384	8,384	11,877	12,577	12,577
	Deflection L/240 / L/360	*/*	*/*	*/*	*/*	*/*	*/*	*/*	*/*	*/*
	Min. End/Int. Bearing (in.)	4.2/10.6	4.5/11.3	4.5/11.3	4.2/10.6	4.5/11.3	4.5/11.3	4.2/10.6	4.5/11.3	4.5/11.3
4'	Total Load	2,508	3,142	3,142	5,017	6,284	6,284	7,526	9,427	9,427
	Deflection L/240 / L/360	*/*	*/*	*/*	*/*	*/*	*/*	*/*	*/*	*/*
	Min. End/Int. Bearing (in.)	3.6/9.0	4.5/11.3	4.5/11.3	3.6/9.0	4.5/11.3	4.5/11.3	3.6/9.0	4.5/11.3	4.5/11.3
5'	Total Load	1,835	2,507	2,512	3,670	5,015	5,024	5,506	7,522	7,537
	Deflection L/240 / L/360	*/1,658	*/*	*/*	*/3,316	*/*	*/*	*/4,975	*/*	*/*
	Min. End/Int. Bearing (in.)	3.3/8.2	4.5/11.2	4.5/11.3	3.3/8.2	4.5/11.2	4.5/11.3	3.3/8.2	4.5/11.2	4.5/11.3
6'	Total Load	1,442	1,938	2,092	2,884	3,876	4,184	4,326	5,814	6,277
	Deflection L/240 / L/360	*/1,048	*/1,831	*/*	*/2,097	*/3,662	*/*	*/3,146	*/5,493	*/*
	Min. End/Int. Bearing (in.)	3.1/7.8	4.2/10.4	4.5/11.3	3.1/7.8	4.2/10.4	4.5/11.3	3.1/7.8	4.2/10.4	4.5/11.3
7'	Total Load	1,058	1,579	1,792	2,116	3,158	3,584	3,174	4,737	5,377
	Deflection L/240 / L/360	1,049/699	*/1,250	*/*	2,098/1,399	*/2,501	*/*	3,148/2,098	*/3,752	*/*
	Min. End/Int. Bearing (in.)	2.7/6.6	4.0/9.9	4.5/11.3	2.7/6.6	4.0/9.9	4.5/11.3	2.7/6.6	4.0/9.9	4.5/11.3
8'	Total Load	809	1,239	1,567	1,618	2,479	3,134	2,427	3,719	4,702
	Deflection L/240 / L/360	731/487	*/886	*/1,352	1,462/974	*/1,773	*/2,705	2,193/1,462	*/2,660	*/4,058
	Min. End/Int. Bearing (in.)	2.3/5.8	3.6/8.9	4.5/11.3	2.3/5.8	3.6/8.9	4.5/11.3	2.3/5.8	3.6/8.9	4.5/11.3
9'-6"	Total Load	572	877	1,202	1,144	1,754	2,404	1,716	2,631	3,606
	Deflection L/240 / L/360	453/302	840/560	*/870	907/605	1,681/1,121	*/1,740	1,361/907	2,522/1,681	*/2,610
	Min. End/Int. Bearing (in.)	2.0/4.9	3.0/7.5	4.1/10.3	2.0/4.9	3.0/7.5	4.1/10.3	2.0/4.9	3.0/7.5	4.1/10.3
10'	Total Load	515	791	1,084	1,031	1,582	2,168	1,547	2,373	3,253
	Deflection L/240 / L/360	392/261	731/487	*/760	785/523	1,462/974	*/1,520	1,178/785	2,193/1,462	*/2,280
	Min. End/Int. Bearing (in.)	1.9/4.7	2.8/7.1	3.9/9.8	1.9/4.7	2.8/7.1	3.9/9.8	1.9/4.7	2.8/7.1	3.9/9.8
12'	Total Load	306	547	750	612	1,094	1,501	918	1,642	2,252
	Deflection L/240 / L/360	233/155	440/293	696/464	467/311	881/587	1,393/928	700/467	1,322/881	2,089/1,393
	Min. End/Int. Bearing (in.)	1.5/3.5	2.4/5.9	3.3/8.1	1.5/3.5	2.4/5.9	3.3/8.1	1.5/3.5	2.4/5.9	3.3/8.1
14'	Total Load	194	373	549	388	746	1,098	582	1,119	1,648
	Deflection L/240 / L/360	149/99	284/189	453/302	299/199	569/379	907/605	448/299	854/569	1,361/907
	Min. End/Int. Bearing (in.)	1.5/3.5	1.9/4.7	2.8/7.0	1.5/3.5	1.9/4.7	2.8/7.0	1.5/3.5	1.9/4.7	2.8/7.0
16'-6"	Total Load	118	230	372	236	460	744	354	690	1,116
	Deflection L/240 / L/360	92/61	177/118	284/189	185/123	354/236	569/379	277/185	532/354	854/569
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	2.2/5.6	1.5/3.5	1.5/3.5	2.2/5.6	1.5/3.5	1.5/3.5	2.2/5.6
18'-6"	Total Load	83	163	265	166	326	531	249	489	797
	Deflection L/240 / L/360	66/44	127/84	205/136	132/88	254/169	410/273	198/132	381/254	615/410
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.8/4.5	1.5/3.5	1.5/3.5	1.8/4.5	1.5/3.5	1.5/3.5	1.8/4.5
20'	Total Load	64	128	210	129	257	421	194	385	631
	Deflection L/240 / L/360	52/35	101/67	163/109	105/70	202/135	327/218	157/105	304/202	491/327
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.6/3.9	1.5/3.5	1.5/3.5	1.6/3.9	1.5/3.5	1.5/3.5	1.6/3.9
24'	Total Load		72	120	71	145	241	106	217	361
	Deflection L/240 / L/360		59/39	96/64	61/40	118/79	192/128	91/61	177/118	288/192
	Min. End/Int. Bearing (in.)		1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
28'	Total Load			73		87	147	61	130	221
	Deflection L/240 / L/360			61/40		75/50	122/81	58/38	112/75	183/122
	Min. End/Int. Bearing (in.)			1.5/3.5		1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5

\* Indicates Total Load value controls.

# NON-SNOW ROOF LOAD TABLES

## How to Use This Table

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

Also see **General Notes** on page 31.

## 1.9E Microllam® LVL: Roof—Non-Snow Load Area 125% (PLF)

Span	Condition	1¾" Width							3½" Width (2 ply)					
		5½"	7¼"	9¼"	9½"	11¼"	11½"	14"	5½"	7¼"	9¼"	9½"	11¼"	11½"
6'	Total Load	451	954	1,285	1,329	1,656	1,781	1,961	902	1,908	2,571	2,659	3,313	3,563
	Deflection L/240	435	939	*	*	*	*	*	870	1,879	*	*	*	*
	Min. End/Int. Bearing (in.)	1.5/3.5	2.2/5.5	2.9/7.4	3.1/7.6	3.8/9.5	4.1/10.2	4.5/11.3	1.5/3.5	2.2/5.5	2.9/7.4	3.1/7.6	3.8/9.5	4.1/10.2
8'	Total Load	146	326	870	915	1,145	1,224	1,469	292	652	1,741	1,830	2,290	2,449
	Deflection L/240	*	*	833	896	*	*	*	*	*	1,666	1,792	*	*
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	2.7/6.7	2.8/7.0	3.5/8.8	3.8/9.4	4.5/11.3	1.5/3.5	1.5/3.5	2.7/6.7	2.8/7.0	3.5/8.8	3.8/9.4
9'-6"	Total Load	73	166	616	647	888	982	1,212	146	332	1,232	1,294	1,776	1,965
	Deflection L/240	*	*	516	556	*	*	*	*	*	1,032	1,112	*	*
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	2.2/5.6	2.4/5.9	3.2/8.1	3.6/8.9	4.4/11.0	1.5/3.5	1.5/3.5	2.2/5.6	2.4/5.9	3.2/8.1	3.6/8.9
10'	Total Load	59	135	555	583	801	886	1,137	118	270	1,110	1,167	1,602	1,772
	Deflection L/240	*	*	446	481	772	*	*	*	*	893	963	1,544	*
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	2.1/5.3	2.2/5.6	3.1/7.7	3.4/8.5	4.4/10.9	1.5/3.5	1.5/3.5	2.1/5.3	2.2/5.6	3.1/7.7	3.4/8.5
12'	Total Load		64	348	377	554	613	835	54	128	697	753	1,109	1,227
	Deflection L/240		*	265	286	463	540	*	*	*	530	572	927	1,080
	Min. End/Int. Bearing (in.)		1.5/3.5	1.6/4.0	1.7/4.4	2.6/6.4	2.8/7.1	3.9/9.6	1.5/3.5	1.5/3.5	1.6/4.0	1.7/4.4	2.6/6.4	2.8/7.1
14'	Total Load			221	239	392	449	611		66	443	479	785	898
	Deflection L/240			169	183	298	348	556		*	339	366	597	697
	Min. End/Int. Bearing (in.)			1.5/3.5	1.5/3.5	2.1/5.3	2.4/6.1	3.3/8.3		1.5/3.5	1.5/3.5	1.5/3.5	2.1/5.3	2.4/6.1
16'-6"	Total Load			135	146	242	283	438			270	292	484	567
	Deflection L/240			104	113	185	217	349			209	227	371	435
	Min. End/Int. Bearing (in.)			1.5/3.5	1.5/3.5	1.6/3.9	1.8/4.6	2.8/7.0			1.5/3.5	1.5/3.5	1.6/3.9	1.8/4.6
18'-6"	Total Load			95	103	171	201	328			190	206	343	403
	Deflection L/240			74	81	133	155	251			149	162	266	311
	Min. End/Int. Bearing (in.)			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.7	2.4/5.9			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.7
20'	Total Load			74	81	135	159	260			149	162	271	319
	Deflection L/240			59	64	106	124	200			119	128	212	248
	Min. End/Int. Bearing (in.)			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	2.0/5.1			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
22'	Total Load			55	59	101	119	195			110	119	202	238
	Deflection L/240			44	48	80	93	152			89	97	160	187
	Min. End/Int. Bearing (in.)			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.7/4.2			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
24'	Total Load					76	90	150			83	90	153	181
	Deflection L/240					61	72	117			69	75	123	145
	Min. End/Int. Bearing (in.)					1.5/3.5	1.5/3.5	1.5/3.6			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
26'	Total Load					59	70	117			63	69	118	140
	Deflection L/240					48	57	93			54	59	97	114
	Min. End/Int. Bearing (in.)					1.5/3.5	1.5/3.5	1.5/3.5			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
28'	Total Load						55	92				53	93	110
	Deflection L/240						46	74				47	78	92
	Min. End/Int. Bearing (in.)						1.5/3.5	1.5/3.5				1.5/3.5	1.5/3.5	1.5/3.5
30'	Total Load							74					73	88
	Deflection L/240							61					63	75
	Min. End/Int. Bearing (in.)							1.5/3.5					1.5/3.5	1.5/3.5

\*Indicates Total Load value controls.

## General Notes

- Table is based on:
  - Uniform loads (beam weight considered) and the more restrictive of simple or continuous span.
  - Deflection criteria of L/180 total load. For stiffer deflection criteria, use L/240 values for total load deflection.

Also see **How to Use This Table** on page 30 and **General Assumptions** on page 5.

## 1.9E Microllam® LVL: Roof—Non-Snow Load Area 125% (PLF) *continued*

Span	Condition	3½" Width (2-ply)				5¼" Width (3-ply)									
		14"	16"	18"	20"	5½"	7¼"	9¼"	9½"	11¼"	11½"	14"	16"	18"	20"
6'	Total Load	3,917	3,917	3,917	3,917	1,353	2,862	3,857	3,989	4,970	5,345	5,875	5,875	5,875	5,875
	Deflection L/240	*	*	*	*	1,305	2,819	*	*	*	*	*	*	*	*
	Min. End/Int. Bearing (in.)	4.5/11.3	4.5/11.3	4.5/11.3	4.5/11.3	1.5/3.5	2.2/5.5	2.9/7.4	3.1/7.6	3.8/9.5	4.1/10.2	4.5/11.3	4.5/11.3	4.5/11.3	4.5/11.3
8'	Total Load	2,932	2,932	2,932	2,932	438	978	2,611	2,745	3,435	3,673	4,399	4,399	4,399	4,399
	Deflection L/240	*	*	*	*	*	*	2,499	2,688	*	*	*	*	*	*
	Min. End/Int. Bearing (in.)	4.5/11.3	4.5/11.3	4.5/11.3	4.5/11.3	1.5/3.5	1.5/3.5	2.7/6.7	2.8/7.0	3.5/8.8	3.8/9.4	4.5/11.3	4.5/11.3	4.5/11.3	4.5/11.3
9'-6"	Total Load	2,425	2,466	2,466	2,466	219	498	1,847	1,942	2,664	2,948	3,637	3,699	3,699	3,699
	Deflection L/240	*	*	*	*	*	*	1,548	1,669	*	*	*	*	*	*
	Min. End/Int. Bearing (in.)	4.4/11.0	4.5/11.3	4.5/11.3	4.5/11.3	1.5/3.5	1.5/3.5	2.2/5.6	2.4/5.9	3.2/8.1	3.6/8.9	4.4/11.0	4.5/11.3	4.5/11.3	4.5/11.3
10'	Total Load	2,275	2,342	2,342	2,342	177	406	1,666	1,751	2,403	2,659	3,412	3,513	3,513	3,513
	Deflection L/240	*	*	*	*	*	*	1,339	1,444	2,317	*	*	*	*	*
	Min. End/Int. Bearing (in.)	4.4/10.9	4.5/11.3	4.5/11.3	4.5/11.3	1.5/3.5	1.5/3.5	2.1/5.3	2.2/5.6	3.1/7.7	3.4/8.5	4.4/10.9	4.5/11.2	4.5/11.2	4.5/11.2
12'	Total Load	1,670	1,948	1,948	1,948	82	193	1,046	1,130	1,663	1,840	2,505	2,922	2,922	2,922
	Deflection L/240	*	*	*	*	*	*	795	859	1,391	1,620	*	*	*	*
	Min. End/Int. Bearing (in.)	3.9/9.6	4.5/11.3	4.5/11.3	4.5/11.3	1.5/3.5	1.5/3.5	1.6/4.0	1.7/4.4	2.6/6.4	2.8/7.1	3.9/9.6	4.5/11.2	4.5/11.2	4.5/11.2
14'	Total Load	1,223	1,571	1,667	1,667		100	664	719	1,178	1,347	1,835	2,356	2,500	2,500
	Deflection L/240	1,112	*	*	*		*	509	550	896	1,046	1,669	*	*	*
	Min. End/Int. Bearing (in.)	3.3/8.3	4.2/10.6	4.5/11.3	4.5/11.3		1.5/3.5	1.5/3.5	1.5/3.5	2.1/5.3	2.4/6.1	3.3/8.3	4.2/10.6	4.5/11.2	4.5/11.2
16'-6"	Total Load	876	1,126	1,411	1,411			405	439	726	851	1,315	1,689	2,107	2,117
	Deflection L/240	698	1,020	*	*			314	340	557	652	1,047	1,530	*	*
	Min. End/Int. Bearing (in.)	2.8/7.0	3.6/9.0	4.5/11.3	4.5/11.3			1.5/3.5	1.5/3.5	1.6/3.9	1.8/4.6	2.8/7.0	3.6/9.0	4.5/11.2	4.5/11.2
18'-6"	Total Load	656	892	1,113	1,256			285	309	515	605	984	1,339	1,670	1,884
	Deflection L/240	502	737	1,030	*			224	243	399	467	754	1,106	1,545	*
	Min. End/Int. Bearing (in.)	2.4/5.9	3.2/8.0	4.0/10.0	4.5/11.3			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.7	2.4/5.9	3.2/8.0	4.0/10.0	4.5/11.2
20'	Total Load	520	761	950	1,158			224	243	406	478	781	1,142	1,425	1,737
	Deflection L/240	401	590	826	1,112			178	193	318	372	602	885	1,239	1,669
	Min. End/Int. Bearing (in.)	2.0/5.1	3.0/7.4	3.7/9.2	4.5/11.2			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	2.0/5.1	3.0/7.4	3.7/9.2	4.5/11.2
22'	Total Load	391	581	782	954			165	179	303	357	586	872	1,173	1,431
	Deflection L/240	304	448	629	850			134	145	240	281	456	672	944	1,275
	Min. End/Int. Bearing (in.)	1.7/4.2	2.5/6.3	3.4/8.4	4.1/10.2			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.7/4.2	2.5/6.3	3.4/8.4	4.1/10.2
24'	Total Load	300	448	635	798			124	135	230	272	450	672	952	1,197
	Deflection L/240	235	348	490	663			104	112	185	218	353	522	735	995
	Min. End/Int. Bearing (in.)	1.5/3.6	2.1/5.3	3.0/7.5	3.7/9.4			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.6	2.1/5.3	3.0/7.5	3.7/9.4
26'	Total Load	234	351	499	677			95	103	178	211	351	527	749	1,015
	Deflection L/240	186	275	388	527			82	88	146	172	279	413	583	790
	Min. End/Int. Bearing (in.)	1.5/3.5	1.8/4.6	2.6/6.4	3.5/8.6			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.6	2.6/6.4	3.5/8.6
28'	Total Load	185	279	399	547			73	80	139	166	278	419	599	820
	Deflection L/240	149	222	313	425			65	71	117	138	224	333	470	638
	Min. End/Int. Bearing (in.)	1.5/3.5	1.6/3.9	2.2/5.6	3.0/7.6			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.6/3.9	2.2/5.6	3.0/7.6
30'	Total Load	148	225	323	444			57	62	110	132	223	338	484	666
	Deflection L/240	122	181	256	348			53	58	95	112	183	271	384	522
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	2.0/4.9	2.7/6.6			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	2.0/4.9	2.7/6.6

\* Indicates Total Load value controls.

# NON-SNOW ROOF LOAD TABLES

## How to Use This Table

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

Also see **General Notes** on page 33.

## 2.OE Parallam® PSL: Roof—Non-Snow Load Area 125% (PLF)

Span	Condition	2 <sup>11</sup> / <sub>16</sub> " Width							3 <sup>1</sup> / <sub>2</sub> " Width						
		9 <sup>1</sup> / <sub>4</sub> "	9 <sup>1</sup> / <sub>2</sub> "	11 <sup>1</sup> / <sub>4</sub> "	11 <sup>7</sup> / <sub>8</sub> "	14"	16"	18"	9 <sup>1</sup> / <sub>4</sub> "	9 <sup>1</sup> / <sub>2</sub> "	11 <sup>1</sup> / <sub>4</sub> "	11 <sup>7</sup> / <sub>8</sub> "	14"	16"	18"
8'	Total Load	1,414	1,459	1,790	1,914	2,254	2,254	2,254	1,839	1,899	2,330	2,491	2,933	2,933	2,933
	Deflection L/240	1,347	1,450	*	*	*	*	*	1,753	1,886	*	*	*	*	*
	Min. End/Int. Bearing (in.)	2.8/7.0	2.9/7.3	3.6/8.9	3.8/9.5	4.5/11.3	4.5/11.3	4.5/11.3	2.8/7.0	2.9/7.3	3.6/8.9	3.8/9.5	4.5/11.3	4.5/11.3	4.5/11.3
9'-6"	Total Load	1,049	1,103	1,453	1,550	1,895	1,895	1,895	1,365	1,436	1,890	2,017	2,467	2,467	2,467
	Deflection L/240	835	900	1,439	*	*	*	*	1,086	1,171	1,872	*	*	*	*
	Min. End/Int. Bearing (in.)	2.5/6.2	2.6/6.5	3.4/8.6	3.7/9.2	4.5/11.3	4.5/11.3	4.5/11.3	2.5/6.2	2.6/6.5	3.4/8.6	3.7/9.2	4.5/11.3	4.5/11.3	4.5/11.3
10'	Total Load	946	995	1,367	1,457	1,778	1,800	1,800	1,231	1,295	1,778	1,896	2,314	2,342	2,342
	Deflection L/240	722	779	1,249	1,450	*	*	*	940	1,013	1,626	1,886	*	*	*
	Min. End/Int. Bearing (in.)	2.4/5.9	2.5/6.2	3.4/8.5	3.6/9.1	4.4/11.1	4.5/11.3	4.5/11.3	2.4/5.9	2.5/6.2	3.4/8.5	3.6/9.1	4.4/11.1	4.5/11.3	4.5/11.3
12'	Total Load	564	609	949	1,052	1,425	1,497	1,497	734	793	1,235	1,369	1,854	1,949	1,949
	Deflection L/240	429	463	750	874	1,381	*	*	558	602	976	1,137	1,797	*	*
	Min. End/Int. Bearing (in.)	1.7/4.3	1.8/4.6	2.9/7.1	3.2/7.9	4.3/10.7	4.5/11.3	4.5/11.3	1.7/4.3	1.8/4.6	2.9/7.1	3.2/7.9	4.3/10.7	4.5/11.3	4.5/11.3
14'	Total Load	358	387	635	742	1,053	1,281	1,281	466	504	826	966	1,370	1,667	1,667
	Deflection L/240	274	296	483	564	900	*	*	357	386	629	734	1,171	*	*
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	2.2/5.6	2.6/6.5	3.7/9.2	4.5/11.3	4.5/11.3	1.5/3.5	1.5/3.5	2.2/5.6	2.6/6.5	3.7/9.2	4.5/11.3	4.5/11.3
16'-6"	Total Load	218	236	391	459	741	973	1,085	284	308	509	597	965	1,266	1,412
	Deflection L/240	169	183	300	351	565	825	*	220	238	391	457	735	1,074	*
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.6/4.1	1.9/4.8	3.1/7.7	4.0/10.1	4.5/11.3	1.5/3.5	1.5/3.5	1.6/4.1	1.9/4.8	3.1/7.7	4.0/10.1	4.5/11.3
18'-6"	Total Load	153	166	277	326	530	771	965	200	217	361	424	690	1,003	1,256
	Deflection L/240	121	131	215	252	406	596	833	157	170	280	328	529	776	1,084
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.9	2.5/6.2	3.6/9.0	4.5/11.2	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.9	2.5/6.2	3.6/9.0	4.5/11.3
20'	Total Load	120	131	219	258	421	623	823	157	170	285	335	548	810	1,071
	Deflection L/240	96	104	171	200	324	477	668	125	135	223	261	422	621	869
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	2.1/5.4	3.2/7.9	4.2/10.4	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	2.1/5.4	3.2/7.9	4.2/10.4
22'	Total Load	89	96	163	192	316	470	663	115	126	212	250	411	611	863
	Deflection L/240	72	78	129	151	246	362	509	94	102	168	197	320	472	662
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.5	2.6/6.6	3.7/9.3	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.5	2.6/6.6	3.7/9.3
24'	Total Load	67	73	124	146	242	362	513	87	95	161	191	315	471	668
	Deflection L/240	56	60	100	117	190	281	396	73	79	130	153	248	366	515
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.8	2.2/5.6	3.1/7.9	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.8	2.2/5.6	3.1/7.9
26'	Total Load	51	55	96	113	189	284	404	66	72	124	148	246	369	525
	Deflection L/240	44	47	79	92	150	223	314	57	62	102	120	196	290	409
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.9/4.8	2.7/6.8	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.9/4.8	2.7/6.8
28'	Total Load			75	89	149	226	322	51	56	97	116	195	294	420
	Deflection L/240			63	74	121	179	253	46	50	82	97	157	233	329
	Min. End/Int. Bearing (in.)			1.5/3.5	1.5/3.5	1.5/3.5	1.7/4.2	2.3/5.9	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.7/4.2	2.3/5.9
30'	Total Load			59	71	120	182	261			77	92	156	236	339
	Deflection L/240			51	60	98	146	207			67	79	128	190	269
	Min. End/Int. Bearing (in.)			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.6	2.1/5.1			1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.6	2.1/5.1
32'	Total Load										61	74	126	192	277
	Deflection L/240										55	65	106	157	223
	Min. End/Int. Bearing (in.)										1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.5

\* Indicates Total Load value controls.

## General Notes

- Table is based on:
  - Uniform loads (beam weight considered) and the more restrictive of simple or continuous span.
  - Deflection criteria of L/180 total load. For stiffer deflection criteria, use L/240 values for total deflection.

Also see **How to Use This Table** on page 32 and **General Assumptions** on page 5.

## 2.OE Parallam® PSL: Roof—Non-Snow Load Area 125% (PLF) *continued*

Span	Condition	5¼" Width							7" Width						
		9¼"	9½"	11¼"	11⅞"	14"	16"	18"	9¼"	9½"	11¼"	11⅞"	14"	16"	18"
8'	Total Load	2,759	2,848	3,494	3,737	4,400	4,400	4,400	3,679	3,798	4,660	4,983	5,866	5,866	5,866
	Deflection L/240	2,630	2,830	*	*	*	*	*	3,507	3,773	*	*	*	*	*
	Min. End/Int. Bearing (in.)	2.8/7.0	2.9/7.3	3.6/8.9	3.8/9.5	4.5/11.3	4.5/11.3	4.5/11.3	2.8/7.0	2.9/7.3	3.6/8.9	3.8/9.5	4.5/11.3	4.5/11.3	4.5/11.3
9'-6"	Total Load	2,048	2,154	2,836	3,025	3,700	3,700	3,700	2,731	2,872	3,781	4,034	4,934	4,934	4,934
	Deflection L/240	1,630	1,757	2,808	*	*	*	*	2,173	2,342	3,745	*	*	*	*
	Min. End/Int. Bearing (in.)	2.5/6.2	2.6/6.5	3.4/8.6	3.7/9.2	4.5/11.3	4.5/11.3	4.5/11.3	2.5/6.2	2.6/6.5	3.4/8.6	3.7/9.2	4.5/11.3	4.5/11.3	4.5/11.3
10'	Total Load	1,847	1,942	2,668	2,844	3,471	3,514	3,514	2,462	2,590	3,557	3,792	4,628	4,685	4,685
	Deflection L/240	1,410	1,520	2,439	2,830	*	*	*	1,880	2,027	3,252	3,773	*	*	*
	Min. End/Int. Bearing (in.)	2.4/5.9	2.5/6.2	3.4/8.5	3.6/9.1	4.4/11.1	4.5/11.3	4.5/11.3	2.4/5.9	2.5/6.2	3.4/8.5	3.6/9.1	4.4/11.1	4.5/11.3	4.5/11.3
12'	Total Load	1,101	1,190	1,853	2,053	2,781	2,923	2,923	1,468	1,586	2,471	2,738	3,708	3,898	3,898
	Deflection L/240	837	904	1,464	1,706	2,696	*	*	1,116	1,205	1,953	2,274	3,595	*	*
	Min. End/Int. Bearing (in.)	1.7/4.3	1.8/4.6	2.9/7.1	3.2/7.9	4.3/10.7	4.5/11.3	4.5/11.3	1.7/4.3	1.8/4.6	2.9/7.1	3.2/7.9	4.3/10.7	4.5/11.3	4.5/11.3
14'	Total Load	699	756	1,240	1,449	2,055	2,501	2,501	932	1,008	1,653	1,933	2,741	3,335	3,335
	Deflection L/240	535	579	943	1,102	1,757	*	*	714	772	1,258	1,469	2,342	*	*
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	2.2/5.6	2.6/6.5	3.7/9.2	4.5/11.3	4.5/11.3	1.5/3.5	1.5/3.5	2.2/5.6	2.6/6.5	3.7/9.2	4.5/11.3	4.5/11.3
16'-6"	Total Load	426	462	764	896	1,447	1,899	2,118	569	616	1,019	1,195	1,930	2,532	2,824
	Deflection L/240	331	358	587	686	1,103	1,611	*	441	477	782	915	1,470	2,148	*
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.6/4.1	1.9/4.8	3.1/7.7	4.0/10.1	4.5/11.3	1.5/3.5	1.5/3.5	1.6/4.1	1.9/4.8	3.1/7.7	4.0/10.1	4.5/11.3
18'-6"	Total Load	300	325	542	637	1,035	1,505	1,884	400	434	723	849	1,381	2,007	2,512
	Deflection L/240	236	256	420	492	794	1,164	1,626	315	341	560	656	1,058	1,553	2,168
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.9	2.5/6.2	3.6/9.0	4.5/11.3	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.9	2.5/6.2	3.6/9.0	4.5/11.3
20'	Total Load	235	255	427	503	822	1,216	1,607	314	340	570	671	1,096	1,621	2,143
	Deflection L/240	188	203	334	392	633	931	1,304	250	271	446	523	845	1,242	1,739
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	2.1/5.4	3.2/7.9	4.2/10.4	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	2.1/5.4	3.2/7.9	4.2/10.4
22'	Total Load	173	189	318	375	617	917	1,295	231	252	425	501	823	1,223	1,727
	Deflection L/240	141	153	252	296	480	708	994	189	204	337	395	640	944	1,325
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.5	2.6/6.6	3.7/9.3	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.5	2.6/6.6	3.7/9.3
24'	Total Load	130	142	242	286	473	707	1,002	174	190	323	382	631	942	1,336
	Deflection L/240	109	118	195	229	372	550	773	146	158	260	306	496	733	1,031
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.8	2.2/5.6	3.1/7.9	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.8	2.2/5.6	3.1/7.9
26'	Total Load	100	109	187	222	369	554	788	133	145	249	296	492	739	1,051
	Deflection L/240	86	93	154	181	294	435	613	115	124	205	241	392	580	818
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.9/4.8	2.7/6.8	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.9/4.8	2.7/6.8
28'	Total Load	77	84	146	174	292	441	630	102	112	195	232	390	588	840
	Deflection L/240	69	75	123	145	236	350	494	92	100	165	194	315	467	659
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.7/4.2	2.3/5.9	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.7/4.2	2.3/5.9
30'	Total Load	60	65	116	138	234	355	509	80	87	154	184	312	473	679
	Deflection L/240	56	61	101	118	193	286	404	75	81	134	158	257	381	539
	Min. End/Int. Bearing (in.)	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.6	2.1/5.1	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.6	2.1/5.1
32'	Total Load		51	92	111	189	289	416	62	68	123	148	253	385	555
	Deflection L/240		50	83	97	159	236	334	62	67	111	130	212	315	446
	Min. End/Int. Bearing (in.)		1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.5

\* Indicates Total Load value controls.

## ABOUT THIS GUIDE

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

For information on using these products in multi-family dwellings, contact your iLevel representative.

For commercial applications such as retail stores, office buildings, schools, restaurants, hotels, and nursing homes, please refer to the *iLevel Trus Joist® Commercial TJI® L65, L90, H90 Joists Specifier's Guide* (Reorder #COM-2000). Commercial products are typically designed, manufactured, and sold for each specific job.

For more information on any iLevel® product, please call **1-888-453-8358**.

## Design Properties (100% Load Duration)

Depth	TJI®	Basic Properties				Reaction Properties		
		Joist Weight (lbs/ft)	Maximum Resistive Moment <sup>(1)</sup> (ft-lbs)	Joist Only EI x 10 <sup>6</sup> (in. <sup>2</sup> -lbs)	Maximum Vertical Shear (lbs)	1¾" End Reaction (lbs)	3½" Intermediate Reaction (lbs)	
							No Web Stiffeners	With Web Stiffeners
9½"	110	2.3	2,380	140	1,220	885	1,935	N.A.
	210	2.6	2,860	167	1,330	980	2,145	N.A.
	230	2.7	3,175	183	1,330	1,035	2,410	N.A.
11½"	110	2.5	3,015	238	1,560	885	1,935	2,295
	210	2.8	3,620	283	1,655	980	2,145	2,505
	230	3.0	4,015	310	1,655	1,035	2,410	2,765
	360	3.0	6,180	419	1,705	1,080	2,460	2,815
	560	4.0	9,500	636	2,050	1,265	3,000	3,475
14"	110	2.8	3,565	351	1,860	885	1,935	2,295
	210	3.1	4,280	415	1,945	980	2,145	2,505
	230	3.3	4,755	454	1,945	1,035	2,410	2,765
	360	3.3	7,335	612	1,955	1,080	2,460	2,815
	560	4.2	11,275	926	2,390	1,265	3,000	3,475
16"	210	3.3	4,895	566	2,190	980	2,145	2,505
	230	3.5	5,440	618	2,190	1,035	2,410	2,765
	360	3.5	8,405	830	2,190	1,080	2,460	2,815
	560	4.5	12,925	1,252	2,710	1,265	3,000	3,475

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

*TJI® joists are intended for dry-use applications*

## General Notes

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

For  
TJI® 110, 210, 230, and 360 Joists

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

For  
TJI® 560 Joists

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

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

## Material Weights

(Include TJI® weights in dead load calculations—see **Design Properties** table at left for joist weights)

### Floor Panels

#### Southern Pine

½" plywood	1.7
⅝" plywood	2.0 psf
¾" plywood	2.5 psf
1⅛" plywood	3.8 psf
½" OSB	1.8 psf
⅝" OSB	2.2 psf
¾" OSB	2.7 psf
⅞" OSB	3.1 psf
1⅛" OSB	4.1 psf

*Based on: Southern pine – 40 pcf for plywood, 44 pcf for OSB*

### Roofing

Asphalt shingles	2.5 psf
Wood shingles	2.0 psf
Clay tile	9.0 to 14.0 psf
Slate (¾" thick)	15.0 psf

### Roll or Batt Insulation (1" thick):

Rock wool	0.2 psf
Glass wool	0.1 psf

### Floor Finishes

Hardwood (nominal 1")	4.0 psf
Sheet vinyl	0.5 psf
Carpet and pad	1.0 psf
¾" ceramic or quarry tile	10.0 psf

### Concrete:

Regular (1")	12.0 psf
Lightweight (1")	8.0 to 10.0 psf
Gypsum concrete (¾")	6.5 psf

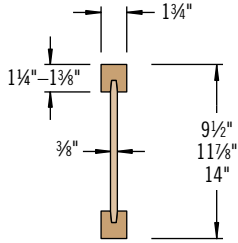
### Ceilings

Acoustical fiber tile	1.0 psf
½" gypsum board	2.2 psf
⅝" gypsum board	2.8 psf
Plaster (1" thick)	8.0 psf

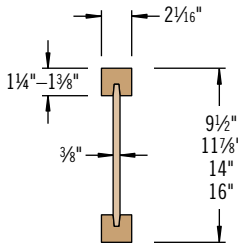
Code Evaluations: See ICC ES ESR-1153 and ICC ES ESR-1387



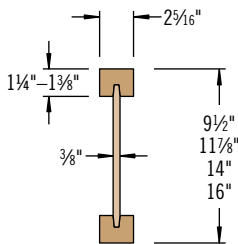
Not all products are available in all markets. Contact your iLevel representative for information.



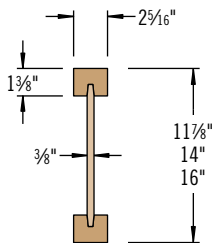
**TJI® 110 Joists**



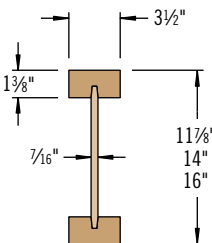
**TJI® 210 Joists**



**TJI® 230 Joists**



**TJI® 360 Joists**



**TJI® 560 Joists**

## L/480 Live Load Deflection

Depth	TJI®	40 PSF Live Load / 10 PSF Dead Load				40 PSF Live Load / 20 PSF Dead Load			
		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.
9 1/2"	110	16'-5"	15'-0"	14'-2"	13'-2"	16'-5"	15'-0"	13'-11"	12'-5"
	210	17'-3"	15'-9"	14'-10"	13'-10"	17'-3"	15'-9"	14'-10"	13'-8"
	230	17'-8"	16'-2"	15'-3"	14'-2"	17'-8"	16'-2"	15'-3"	14'-2"
11 7/8"	110	19'-6"	17'-10"	16'-10"	15'-5" <sup>(1)</sup>	19'-6"	17'-3"	15'-8"	14'-0" <sup>(1)</sup>
	210	20'-6"	18'-8"	17'-8"	16'-5"	20'-6"	18'-8"	17'-3"	15'-5" <sup>(1)</sup>
	230	21'-0"	19'-2"	18'-1"	16'-10"	21'-0"	19'-2"	18'-1"	16'-3" <sup>(1)</sup>
	360	22'-11"	20'-11"	19'-8"	18'-4"	22'-11"	20'-11"	19'-8"	17'-10" <sup>(1)</sup>
	560	26'-1"	23'-8"	22'-4"	20'-9"	26'-1"	23'-8"	22'-4"	20'-9" <sup>(1)</sup>
14"	110	22'-2"	20'-3"	18'-9"	16'-9" <sup>(1)</sup>	21'-8"	18'-9"	17'-1" <sup>(1)</sup>	14'-7" <sup>(1)</sup>
	210	23'-3"	21'-3"	20'-0"	18'-4" <sup>(1)</sup>	23'-3"	20'-7"	18'-9" <sup>(1)</sup>	16'-2" <sup>(1)</sup>
	230	23'-10"	21'-9"	20'-6"	19'-1"	23'-10"	21'-8"	19'-9"	17'-1" <sup>(1)</sup>
	360	26'-0"	23'-8"	22'-4"	20'-9" <sup>(1)</sup>	26'-0"	23'-8"	22'-4" <sup>(1)</sup>	17'-10" <sup>(1)</sup>
	560	29'-6"	26'-10"	25'-4"	23'-6"	<b>29'-6"</b>	<b>26'-10"</b>	25'-4" <sup>(1)</sup>	20'-11" <sup>(1)</sup>
16"	210	25'-9"	23'-6"	22'-0" <sup>(1)</sup>	19'-5" <sup>(1)</sup>	25'-5"	22'-0" <sup>(1)</sup>	20'-1" <sup>(1)</sup>	16'-2" <sup>(1)</sup>
	230	26'-5"	24'-1"	22'-9"	20'-7" <sup>(1)</sup>	<b>26'-5"</b>	23'-2"	21'-2" <sup>(1)</sup>	17'-1" <sup>(1)</sup>
	360	28'-9"	26'-3"	24'-8" <sup>(1)</sup>	21'-5" <sup>(1)</sup>	<b>28'-9"</b>	26'-3" <sup>(1)</sup>	22'-4" <sup>(1)</sup>	17'-10" <sup>(1)</sup>
	560	32'-8"	29'-8"	28'-0"	25'-2" <sup>(1)</sup>	<b>32'-8"</b>	<b>29'-8"</b>	26'-3" <sup>(1)</sup>	20'-11" <sup>(1)</sup>

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

Depth	TJI®	40 PSF Live Load / 10 PSF Dead Load				40 PSF Live Load / 20 PSF Dead Load			
		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.
9 1/2"	110	18'-2"	16'-7"	15'-3"	13'-8"	17'-8"	15'-3"	13'-11"	12'-5"
	210	19'-1"	17'-5"	16'-6"	15'-0"	19'-1"	16'-9"	15'-4"	13'-8"
	230	19'-7"	17'-11"	16'-11"	15'-9"	19'-7"	17'-8"	16'-1"	14'-5"
11 7/8"	110	21'-7"	18'-11"	17'-3"	15'-5" <sup>(1)</sup>	19'-11"	17'-3"	15'-8"	14'-0" <sup>(1)</sup>
	210	22'-8"	20'-8"	18'-11"	16'-10"	21'-10"	18'-11"	17'-3"	15'-5" <sup>(1)</sup>
	230	23'-3"	21'-3"	19'-11"	17'-9"	<b>23'-0"</b>	19'-11"	18'-2"	16'-3" <sup>(1)</sup>
	360	25'-4"	23'-2"	21'-10"	20'-4" <sup>(1)</sup>	<b>25'-4"</b>	<b>23'-2"</b>	<b>21'-10"<sup>(1)</sup></b>	17'-10" <sup>(1)</sup>
	560	28'-10"	26'-3"	24'-9"	23'-0"	<b>28'-10"</b>	<b>26'-3"</b>	<b>24'-9"</b>	20'-11" <sup>(1)</sup>
14"	110	23'-9"	20'-6"	18'-9"	16'-9" <sup>(1)</sup>	21'-8"	18'-9"	17'-1" <sup>(1)</sup>	14'-7" <sup>(1)</sup>
	210	25'-8"	22'-6"	20'-7"	18'-4" <sup>(1)</sup>	23'-9"	20'-7"	18'-9" <sup>(1)</sup>	16'-2" <sup>(1)</sup>
	230	26'-4"	23'-9"	21'-8"	19'-4" <sup>(1)</sup>	<b>25'-0"</b>	21'-8"	19'-9"	17'-1" <sup>(1)</sup>
	360	28'-9"	26'-3"	24'-9" <sup>(1)</sup>	21'-5" <sup>(1)</sup>	<b>28'-9"</b>	<b>26'-3"<sup>(1)</sup></b>	22'-4" <sup>(1)</sup>	17'-10" <sup>(1)</sup>
	560	32'-8"	29'-9"	28'-0"	25'-2" <sup>(1)</sup>	<b>32'-8"</b>	<b>29'-9"</b>	<b>26'-3"<sup>(1)</sup></b>	20'-11" <sup>(1)</sup>
16"	210	27'-10"	24'-1"	22'-0" <sup>(1)</sup>	19'-5" <sup>(1)</sup>	25'-5"	22'-0" <sup>(1)</sup>	20'-1" <sup>(1)</sup>	16'-2" <sup>(1)</sup>
	230	29'-2"	25'-5"	23'-2"	20'-7" <sup>(1)</sup>	<b>26'-9"</b>	23'-2"	21'-2" <sup>(1)</sup>	17'-1" <sup>(1)</sup>
	360	31'-10"	29'-0"	26'-10" <sup>(1)</sup>	21'-5" <sup>(1)</sup>	<b>31'-10"</b>	<b>26'-10"<sup>(1)</sup></b>	22'-4" <sup>(1)</sup>	17'-10" <sup>(1)</sup>
	560	36'-1"	32'-11"	31'-0" <sup>(1)</sup>	25'-2" <sup>(1)</sup>	<b>36'-1"</b>	<b>31'-6"<sup>(1)</sup></b>	26'-3" <sup>(1)</sup>	20'-11" <sup>(1)</sup>

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

TJI®	40 PSF Live Load / 10 PSF Dead Load				40 PSF Live Load / 20 PSF Dead Load			
	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.
110	N.A.	N.A.	N.A.	15'-4"	N.A.	N.A.	16'-0"	12'-9"
210	N.A.	N.A.	21'-4"	17'-0"	N.A.	21'-4"	17'-9"	14'-2"
230	N.A.	N.A.	N.A.	19'-2"	N.A.	N.A.	19'-11"	15'-11"
360	N.A.	N.A.	24'-5"	19'-6"	N.A.	24'-5"	20'-4"	16'-3"
560	N.A.	N.A.	29'-10"	23'-10"	N.A.	29'-10"	24'-10"	19'-10"

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

## How to Use These Tables

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

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

## General Notes

- Tables are based on:
  - Uniform loads.
  - More restrictive of simple or continuous span.
  - Clear distance between supports (1/4" minimum end bearing).
- Assumed composite action with a single layer of 24" on-center span-rated, glue-nailed floor panels for deflection only. **Spans shall be reduced 6" when floor panels are nailed only.**
- Spans generated from iLevel® software may exceed the spans shown in these tables because software reflects actual design conditions.
- For loading conditions not shown, refer to software or to the load table on page 5.

## Floor—100% (PLF)

Depth	TJI®	Joist Clear Span																	
		8'		10'		12'		14'		16'		18'		20'		22'		24'	
		Live Load L/480	Total Load	Live Load L/480	Total Load	Live Load L/480	Total Load	Live Load L/480	Total Load	Live Load L/480	Total Load	Live Load L/480	Total Load	Live Load L/480	Total Load	Live Load L/480	Total Load	Live Load L/480	Total Load
9½"	110	*	190	127	152	77	127	50	95										
	210	*	210	147	169	90	141	59	114	40	81								
	230	*	236	159	190	98	158	64	126	44	88								
11⅞"	110	*	190	*	152	*	127	83	109	57	92								
	210	*	210	*	169	*	141	97	121	67	106	48	87						
	230	*	236	*	190	*	158	105	136	73	119	52	97	39	78				
	360	*	241	*	193	*	162	136	139	95	121	69	108	51	97	39	78		
	560	*	294	*	236	*	197	*	169	138	148	101	132	76	119	58	108	45	91
14"	110	*	190	*	152	*	127	*	109	83	95	59	85						
	210	*	210	*	169	*	141	*	121	96	106	69	94	51	84				
	230	*	236	*	190	*	158	*	136	104	119	75	106	56	93	43	77		
	360	*	241	*	193	*	162	*	139	*	121	98	108	73	97	56	88	44	81
	560	*	294	*	236	*	197	*	169	*	148	*	132	107	119	83	108	65	99
16"	210	*	210	*	169	*	141	*	121	*	106	93	94	69	85	53	77		
	230	*	236	*	190	*	158	*	136	*	119	100	106	75	95	57	87		
	360	*	241	*	193	*	162	*	139	*	121	*	108	*	97	75	88	59	81
	560	*	294	*	236	*	197	*	169	*	148	*	132	*	119	*	108	86	99

\* Indicates that **Total Load** value controls.

## How to Use This Table

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

## General Notes

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

## PSF to PLF Conversions

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



**DO NOT walk on joists until braced.**  
INJURY MAY RESULT.



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



**DO NOT walk on joists that are lying flat.**

## WARNING

**Joists are unstable until braced laterally**

**Bracing Includes:**

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

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

1. All blocking, hangers, rim boards, and rim joists at the end supports of the TJI® joists must be completely installed and properly nailed.
2. Lateral strength, like a braced end wall or an existing deck, must be established at the ends of the bay. This can also be accomplished by a temporary or permanent deck (sheathing) fastened to the first 4 feet of joists at the end of the bay.
3. Safety bracing of 1x4 (minimum) must be nailed to a braced end wall or sheathed area (as in note 2) and to each joist. Without this bracing, buckling sideways or rollover is highly probable under light construction loads—such as a worker or one layer of unnailed sheathing.
4. Sheathing must be completely attached to each TJI® joist before additional loads can be placed on the system.
5. Ends of cantilevers require safety bracing on both the top and bottom flanges.
6. The flanges must remain straight within a tolerance of ½" from true alignment.

## Roof—115% and 125% Load Duration (PLF) 6'–16'

Depth	TJI®	Roof Joist Horizontal Clear Span																	
		6'			8'			10'			12'			14'			16'		
		Total Load		Defl.	Total Load		Defl.	Total Load		Defl.	Total Load		Defl.	Total Load		Defl.	Total Load		Defl.
		Snow 115%	Non-Snow 125%	Live Load L/240	Snow 115%	Non-Snow 125%	Live Load L/240	Snow 115%	Non-Snow 125%	Live Load L/240	Snow 115%	Non-Snow 125%	Live Load L/240	Snow 115%	Non-Snow 125%	Live Load L/240	Snow 115%	Non-Snow 125%	Live Load L/240
9½"	110	289	314	*	218	237	*	175	190	*	146	159	155	109	118	101	83	91	69
	210	321	349	*	242	263	*	194	211	*	162	176	*	131	142	118	100	108	81
	230	360	392	*	272	295	*	218	237	*	182	198	196	145	158	128	112	118	88
11⅞"	110	289	314	*	218	237	*	175	190	*	146	159	*	125	136	*	106	115	*
	210	321	349	*	242	263	*	194	211	*	162	176	*	139	151	*	122	132	*
	230	360	392	*	272	295	*	218	237	*	182	198	*	156	170	*	137	149	146
	360	368	400	*	277	301	*	223	242	*	186	202	*	159	173	*	140	152	*
	560	449	488	*	338	368	*	272	295	*	227	246	*	195	212	*	170	185	*
14"	110	289	314	*	218	237	*	175	190	*	146	159	*	125	136	*	110	119	*
	210	321	349	*	242	263	*	194	211	*	162	176	*	139	151	*	122	132	*
	230	360	392	*	272	295	*	218	237	*	182	198	*	156	170	*	137	149	*
	360	368	400	*	277	301	*	223	242	*	186	202	*	159	173	*	140	152	*
	560	449	488	*	338	368	*	272	295	*	227	246	*	195	212	*	170	185	*
16"	210	321	349	*	242	263	*	194	211	*	162	176	*	139	151	*	122	132	*
	230	360	392	*	272	295	*	218	237	*	182	198	*	156	170	*	137	149	*
	360	368	400	*	277	301	*	223	242	*	186	202	*	159	173	*	140	152	*
	560	449	488	*	338	368	*	272	295	*	227	246	*	195	212	*	170	185	*

## Roof—115% and 125% Load Duration (PLF) 18'–28'

Depth	TJI®	Roof Joist Horizontal Clear Span																	
		18'			20'			22'			24'			26'			28'		
		Total Load		Defl.	Total Load		Defl.	Total Load		Defl.	Total Load		Defl.	Total Load		Defl.	Total Load		Defl.
		Snow 115%	Non-Snow 125%	Live Load L/240	Snow 115%	Non-Snow 125%	Live Load L/240	Snow 115%	Non-Snow 125%	Live Load L/240	Snow 115%	Non-Snow 125%	Live Load L/240	Snow 115%	Non-Snow 125%	Live Load L/240	Snow 115%	Non-Snow 125%	Live Load L/240
9½"	110																		
	210	77	77	58															
	230	84	84	63															
11⅞"	110	84	91	82															
	210	101	109	96	82	89	71												
	230	112	121	105	91	98	78	75	79	59									
	360	124	135	*	112	122	103	102	105	78	82	82	61						
	560	152	165	*	137	148	*	124	135	117	114	122	91	97	97	73	79	79	59
14"	110	98	106	*	80	87	*												
	210	108	118	*	97	105	103	80	87	79									
	230	122	132	*	107	117	112	89	96	86	75	81	67						
	360	124	135	*	112	122	*	102	111	*	93	101	88	86	94	70	76	76	57
	560	152	165	*	137	148	*	124	135	*	114	124	*	105	114	104	98	106	85
16"	210	108	118	*	97	106	*	89	96	*	77	83	*						
	230	122	132	*	110	119	*	100	108	*	85	93	90		79	72			
	360	124	135	*	112	122	*	102	111	*	93	101	*	86	94	*	80	87	76
	560	152	165	*	137	148	*	124	135	*	114	124	*	105	114	*	98	106	*

\* Indicates that **Total Load** value controls.

## Slope Factors

Slope	2½ in 12	3 in 12	3½ in 12	4 in 12	4½ in 12	5 in 12	6 in 12	7 in 12	8 in 12	9 in 12	10 in 12	11 in 12	12 in 12
Factor	1.021	1.031	1.042	1.054	1.068	1.083	1.118	1.158	1.202	1.250	1.302	1.357	1.414

## How to Use These Tables

- Calculate actual total load in pounds per linear foot (plf).
- Select appropriate **Roof Joist Horizontal Clear Span**. For slopes greater than 2" in 12", approximate the increased dead load by multiplying the joist horizontal clear span by the **Slope Factor** above.
- Scan down the column to find a TJI® joist that meets or exceeds actual total load. **Total Load** values are limited to deflection of L/180. For stiffer deflection criteria, use the **Live Load L/240** values.

## General Notes

- Tables are based on:
  - Uniform loads.
  - No composite action provided by sheathing.
  - More restrictive of simple or continuous span.
  - Minimum roof surface slope of ¼" in 12".
- Total Load** limits joist deflection to L/180.