



Trus Joist

A Weyerhaeuser Business

3073 DESIGN GUIDE

SLAB FORM SUPPORT

Featuring

- **TJI® Form-I™ Joists**
- **Cambered TJI® Form-I™ Joists**
- **Microllam® LVL and Parallam® PSL Form Beams and Post Shores**

- **Engineered quality in every piece**
- **Available in long lengths**
- **Durable for multiple reuse**
- **Uniform and flat forming surfaces**

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NEW
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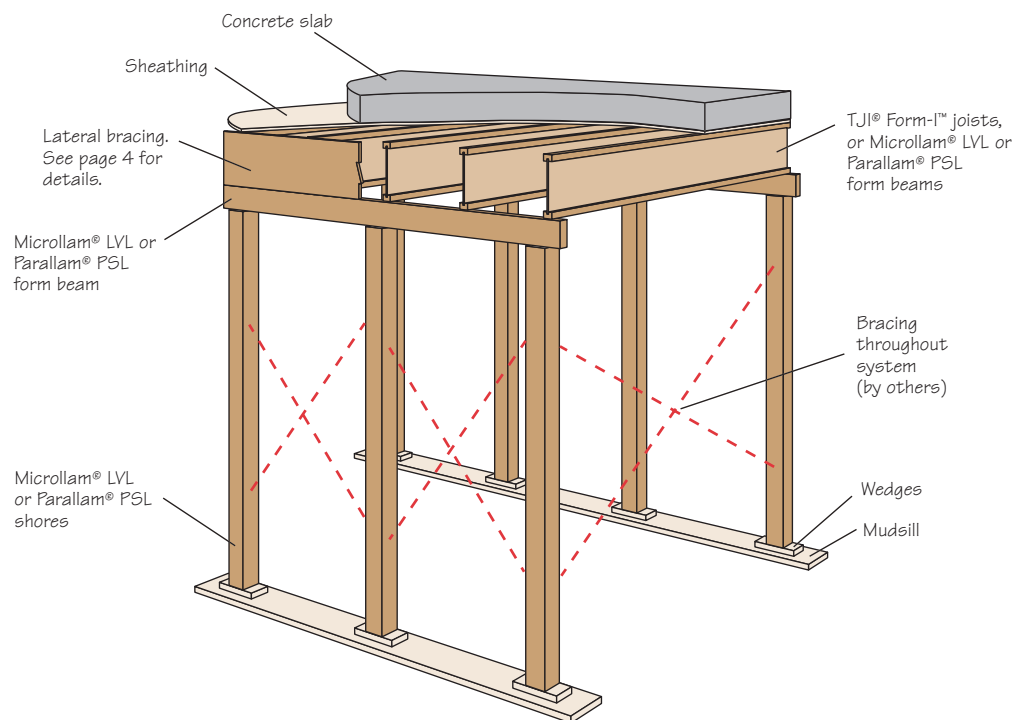


Industrial

Trus Joist

**Design Load = Concrete Load + 50 psf Live Load
+ 5 psf Form Load ≥ 100 psf**

Typical Slab Form Assembly



2.0E Parallam® PSL Form Beam Allowable Design Stresses⁽¹⁾ (Dry Use, 100% Load Duration)

Shear modulus of elasticity	$G = 125,000$ psi
Modulus of elasticity	$E = 2.0 \times 10^6$ psi
Flexural stress	$F_b = 2,900$ psi ⁽²⁾
Compression perpendicular to grain	$F_{cL} = 750$ psi ⁽³⁾
Compression parallel to grain	$F_{c } = 2,900$ psi
Horizontal shear parallel to grain	$F_v = 290$ psi

(1) Values shown are for new or like-new product.

(2) For 12" depth. For others, multiply by $\left[\frac{12}{d}\right]^{0.111}$

(3) F_{cL} shall not be increased for duration of load.

Design Properties

Depth	5¼" Width				7" Width			
	Moment (ft-lbs)	Shear (lbs)	El x 10 ⁶ (in. ² -lbs)	Weight (lbs/ft)	Moment (ft-lbs)	Shear (lbs)	El x 10 ⁶ (in. ² -lbs)	Weight (lbs/ft)
9¼"	20,950	10,560	623	15.2	27,935	14,085	831	20.2
9½"	22,035	10,850	675	15.6	29,380	14,465	900	20.8
11¾"	33,585	13,560	1,319	19.5	44,780	18,080	1,758	26.0
14"	45,835	15,985	2,161	23.0	61,115	21,315	2,881	30.6
16"	58,985	18,270	3,226	26.3	78,650	24,360	4,301	35.0
18"	73,685	20,555	4,593	29.5	98,245	27,405	6,124	39.4

▪ Values have been adjusted for wet use (no ground contact or saturated use) and construction load duration (125%).

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How To Use This Table

1. Calculate the total load and the concrete load (neglect beam weight) on the beam in pounds per linear foot (plf).
2. Locate a **Span** that meets or exceeds the required beam span. See **Span Definition** on page 4.
3. Scan horizontally to find the proper width and depth where both the concrete and total load capacities meet or exceed the actual loads.
4. Review bearing length requirements to ensure adequacy.
5. If the 5¼" beam is too deep or the **Min. End** or **Min. Int. Bearing** lengths are too long, select a 7" beam that may require less depth and less bearing length.

Parallam® PSL Form Beam (PLF)

Span	Conditions		5¼" Width						7" Width					
			9¼"	9½"	11⅞"	14"	16"	18"	9¼"	9½"	11⅞"	14"	16"	18"
8'	Simple	Concrete	1,735	1,866	3,928	5,293	5,289	5,286	2,313	2,488	5,237	7,057	7,053	7,048
		Total	2,836	2,983	5,034	5,293	5,289	5,286	3,782	3,978	6,712	7,057	7,053	7,048
	Continuous	Concrete	2,716	2,826	3,933	4,439	4,435	4,432	3,622	3,768	5,244	5,918	5,914	5,909
		Total	2,716	2,826	3,933	4,439	4,435	4,432	3,622	3,768	5,244	5,918	5,914	5,909
	Min. End Bearing (in.)		3.50	3.50	5.75	6.00	6.00	6.00	3.50	3.50	5.75	6.00	6.00	6.00
	Min. Int. Bearing (in.)		7.75	8.00	10.75	12.00	12.00	12.00	7.75	8.00	10.75	12.00	12.00	12.00
10'	Simple	Concrete	723	779	1,517	2,636	3,711	4,223	963	1,039	2,023	3,514	4,948	5,631
		Total	1,779	1,871	2,932	4,230	4,226	4,223	2,371	2,494	3,909	5,639	5,635	5,631
	Continuous	Concrete	1,255	1,352	2,549	3,512	3,508	3,505	1,673	1,803	3,399	4,682	4,678	4,673
		Total	1,718	1,807	2,795	3,512	3,508	3,505	2,291	2,410	3,726	4,682	4,678	4,673
	Min. End Bearing (in.)		3.50	3.50	4.25	6.00	6.00	6.00	3.50	3.50	4.25	6.00	6.00	6.00
	Min. Int. Bearing (in.)		6.25	6.50	9.75	12.00	12.00	12.00	6.25	6.50	9.75	12.00	12.00	12.00
12'	Simple	Concrete	350	378	712	1,202	1,840	2,502	467	504	950	1,602	2,454	3,337
		Total	1,216	1,279	1,955	2,770	3,518	3,514	1,622	1,706	2,606	3,693	4,690	4,686
	Continuous	Concrete	618	667	1,249	2,023	2,900	2,897	824	889	1,665	2,698	3,867	3,863
		Total	1,182	1,243	1,899	2,642	2,900	2,897	1,576	1,658	2,532	3,523	3,867	3,863
	Min. End Bearing (in.)		3.50	3.50	3.50	4.75	6.00	6.00	3.50	3.50	3.50	4.75	6.00	6.00
	Min. Int. Bearing (in.)		5.25	5.50	8.25	11.25	12.00	12.00	5.25	5.50	8.25	11.25	12.00	12.00
14'	Simple	Concrete	189	205	389	634	972	1,383	252	273	518	845	1,295	1,844
		Total	882	928	1,419	1,964	2,612	3,008	1,176	1,238	1,892	2,619	3,482	4,011
	Continuous	Concrete	338	365	690	1,106	1,639	2,282	450	486	920	1,474	2,185	3,043
		Total	861	906	1,385	1,905	2,459	2,467	1,148	1,207	1,846	2,540	3,279	3,290
	Min. End Bearing (in.)		3.50	3.50	3.50	4.00	5.25	6.00	3.50	3.50	3.50	4.00	5.25	6.00
	Min. Int. Bearing (in.)		5.25	5.25	7.00	9.50	12.00	12.00	5.25	5.25	7.00	9.50	12.00	12.00
16'	Simple	Concrete	111	120	229	367	558	813	148	160	306	490	743	1,084
		Total	668	703	1,075	1,471	1,938	2,491	890	937	1,434	1,961	2,584	3,322
	Continuous	Concrete	199	215	410	655	970	1,373	266	287	547	874	1,294	1,831
		Total	653	688	1,052	1,440	1,876	2,145	871	917	1,403	1,920	2,501	2,860
	Min. End Bearing (in.)		3.50	3.50	3.50	3.50	4.50	5.75	3.50	3.50	3.50	3.50	4.50	5.75
	Min. Int. Bearing (in.)		5.25	5.25	6.00	8.25	10.75	12.00	5.25	5.25	6.00	8.25	10.75	12.00
18'	Simple	Concrete	69	75	143	231	345	498	92	100	191	308	459	664
		Total	522	549	841	1,152	1,500	1,914	696	732	1,122	1,536	2,000	2,552
	Continuous	Concrete	125	135	259	415	611	864	167	180	345	554	815	1,153
		Total	512	539	825	1,130	1,465	1,850	682	718	1,100	1,507	1,953	2,467
	Min. End Bearing (in.)		3.50	3.50	3.50	3.50	4.00	5.00	3.50	3.50	3.50	3.50	4.00	5.00
	Min. Int. Bearing (in.)		5.25	5.25	5.50	7.50	9.50	11.75	5.25	5.25	5.50	7.50	9.50	11.75
20'	Simple	Concrete			94	152	224	324	60	65	126	203	298	431
		Total			675	925	1,194	1,521	558	587	900	1,233	1,592	2,028
	Continuous	Concrete	82	89	171	275	403	572	110	119	228	367	538	763
		Total	411	433	664	909	1,173	1,482	548	577	885	1,212	1,565	1,976
	Min. End Bearing (in.)		3.50	3.50	3.50	3.50	3.50	4.50	3.50	3.50	3.50	3.50	3.50	4.50
	Min. Int. Bearing (in.)		5.25	5.25	5.25	6.75	8.50	10.75	5.25	5.25	5.25	6.75	8.50	10.75

General Notes

- Table is based on:
 - Member oriented with load parallel to wide face of strands (beam orientation). See page 7.
 - Uniform loads.
 - More restrictive of simple or continuous span. Ratio of short span to long span should be greater than 0.4 to prevent uplift.
 - Wet use (no ground contact or saturated use) and **construction load duration (125%)**.
 - New or like-new product.
- Bearing lengths are based on $F_{CL} = 750$ psi.
- Concrete values are based on the more restrictive deflection of $L/360$ or $1/4"$.
- Beams must be laterally supported at the ends (see details on page 8) and every 24" (maximum) along the compression edge.
- Allowable loads generated from Trus Joist software may exceed the loads shown in this table because software reflects actual design conditions.

Microllam® LVL Form Beam Design Properties

Trus Joist ▪ Slab Form Support Design Guide 3073 ▪ June 2004

2.0E Microllam® LVL Form Beams Allowable Design Stresses⁽¹⁾ (Dry Use, 100% Load Duration)

- Shear modulus of elasticity $G = 125,000$ psi
- Modulus of elasticity $E = 2.0 \times 10^6$ psi
- Flexural stress $F_b = 2,750$ psi⁽²⁾
- Compression perpendicular to grain $F_{c\perp} = 750$ psi⁽³⁾
- Compression parallel to grain $F_{c\parallel} = 2,635$ psi
- Horizontal shear parallel to grain $F_v = 285$ psi

(1) Values shown are for new or like-new product.

(2) For 12" depth. For others, multiply by $\left[\frac{12}{d}\right]^{0.136}$

(3) $F_{c\perp}$ shall not be increased for duration of load.

Span Definition

Double Wale Assembly Site-Built or Factory-Assembled

Wood spacer strips: 2" wide or as required to avoid splitting. Thickness equal to threaded bolt diameter. Recess from end of waler to accommodate threaded bolts. See detail below.

Two rows of 16d (3 1/2") common nails at 12" on-center

Design Properties

Depth	1 1/2" Width				1 3/4" Width				2 1/2" Width				3 1/2" Width			
	Moment (ft-lbs)	Shear (lbs)	EI x 10 ⁶ (in. ² -lbs)	Weight (lbs/ft)	Moment (ft-lbs)	Shear (lbs)	EI x 10 ⁶ (in. ² -lbs)	Weight (lbs/ft)	Moment (ft-lbs)	Shear (lbs)	EI x 10 ⁶ (in. ² -lbs)	Weight (lbs/ft)	Moment (ft-lbs)	Shear (lbs)	EI x 10 ⁶ (in. ² -lbs)	Weight (lbs/ft)
3 1/2"	935	1,120	10	1.5	1,090	1,310	11	1.8	1,555	1,870	16	2.6	1,970	1,745	23	3.6
4"	1,195	1,285	14	1.8	1,395	1,495	17	2.0	1,995	2,140	24	2.9	2,795	2,995	34	4.1
5 1/2"	2,170	1,765	37	2.4	2,530	2,055	44	2.8	3,615	2,940	62	4.0	5,060	4,115	87	5.6
6"	2,550	1,925	49	2.6	2,975	2,245	57	3.1	4,250	3,205	81	4.4	5,950	4,490	113	6.1
7 1/4"	3,630	2,325	86	3.2	4,235	2,710	100	3.7	6,045	3,875	143	5.3	8,465	5,425	200	7.4
8"	4,360	2,565	115	3.5	5,085	2,995	134	4.1	7,265	4,275	192	5.8	10,170	5,985	269	8.2
9 1/4"	5,715	2,965	178	4.1	6,665	3,460	208	4.7	9,520	4,945	297	6.8	13,330	6,920	416	9.5
10"	6,605	3,205	225	4.4	7,710	3,740	263	5.1	11,010	5,345	375	7.3	15,415	7,480	525	10.2
11 1/4"	8,230	3,605	320	4.9	9,600	4,210	374	5.7	13,715	6,010	534	8.2	19,200	8,415	748	11.5

▪ Values have been adjusted for wet use (no ground contact or saturated use) and construction load duration (125%).

Microllam® LVL Form Beam Bearing and Lateral Support Details

Detail RRP: 3/4" plywood backing (P)

Detail RRL: Rectangular member (R) bearing on another rectangular member (R) with 1/4" TimberStrand® LSL rim board (L)

Detail RRX: metal cross bracing (X)

Detail RRB: Microllam® LVL solid blocking (B)

Detail RSP: 3/4" plywood backing

Detail RSL: 1/4" TimberStrand® LSL rim board

Detail RSX: Rectangular member (R) bearing on steel beam (S) with metal cross bracing (X)

Detail RSB: Microllam® LVL solid blocking

Microllam® LVL form beams must be laterally supported at the ends. The details shown illustrate acceptable lateral support options that correspond to details designated in TJ-Beam® Industrial Applications software.

How To Use These Tables

1. Calculate the total load and the concrete load (neglect beam weight) on the double wale in pounds per linear foot (plf).
2. Select the appropriate table.
3. Locate a **Span** that meets or exceeds the required beam span. See **Span Definition** on page 4.
4. Scan horizontally to find the proper width and depth where both the concrete and total load capacities meet or exceed the actual loads.
5. Review bearing length requirements to ensure adequacy.
6. If the selected double wale is too deep or the **Min. Bearing** length is too long, select a wider double wale that may require less depth and less bearing length.

Double 1½" Width (PLF)

Span	Conditions	5½"	6"	7¼"	8"	9¼"	10"	11¼"
6'	Concrete Load	554	707	1,189	1,547	2,436	3,258	4,931
	Total Load	1,075	1,265	1,801	2,165	3,014	3,767	5,009
	Min. Bearing (in.)	3.50	3.50	3.50	3.50	4.50	5.75	7.50
7'	Concrete Load	349	447	761	999	1,502	1,938	2,842
	Total Load	776	913	1,300	1,562	2,075	2,493	3,316
	Min. Bearing (in.)	3.50	3.50	3.50	3.50	3.75	4.50	5.75
8'	Concrete Load	228	293	503	664	991	1,250	1,841
	Total Load	585	689	981	1,180	1,547	1,809	2,357
	Min. Bearing (in.)	3.50	3.50	3.50	3.50	3.50	3.75	4.75
9'	Concrete Load			314	416	625	776	1,108
	Total Load			767	922	1,209	1,399	1,777
	Min. Bearing (in.)			3.50	3.50	3.50	3.50	4.00
10'	Concrete Load			206	273	413	514	712
	Total Load			615	739	970	1,123	1,399
	Min. Bearing (in.)			3.50	3.50	3.50	3.50	3.50
11'	Concrete Load					283	353	492
	Total Load					795	920	1,147
	Min. Bearing (in.)					3.50	3.50	3.50
12'	Concrete Load					200	250	350
	Total Load					664	768	958
	Min. Bearing (in.)					3.50	3.50	3.50

Double 1¾" Width (PLF)

Span	Conditions	5½"	6"	7¼"	8"	9¼"	10"	11¼"
6'	Concrete Load	646	825	1,387	1,805	2,842	3,801	5,753
	Total Load	1,255	1,476	2,102	2,526	3,516	4,394	5,843
	Min. Bearing (in.)	3.50	3.50	3.50	3.50	4.50	5.75	7.50
7'	Concrete Load	407	522	888	1,165	1,753	2,261	3,316
	Total Load	905	1,065	1,516	1,823	2,420	2,909	3,869
	Min. Bearing (in.)	3.50	3.50	3.50	3.50	3.75	4.50	5.75
8'	Concrete Load	266	342	587	775	1,157	1,458	2,148
	Total Load	683	804	1,145	1,376	1,805	2,111	2,750
	Min. Bearing (in.)	3.50	3.50	3.50	3.50	3.50	3.75	4.75
9'	Concrete Load		212	367	485	730	905	1,293
	Total Load		628	894	1,075	1,410	1,632	2,074
	Min. Bearing (in.)		3.50	3.50	3.50	3.50	3.50	4.00
10'	Concrete Load			240	319	482	600	831
	Total Load			717	863	1,132	1,310	1,632
	Min. Bearing (in.)			3.50	3.50	3.50	3.50	3.50
11'	Concrete Load				218	330	412	574
	Total Load				707	928	1,074	1,339
	Min. Bearing (in.)				3.50	3.50	3.50	3.50
12'	Concrete Load					234	292	408
	Total Load					774	896	1,117
	Min. Bearing (in.)					3.50	3.50	3.50

Double 2½" Width (PLF)

Span	Conditions	5½"	6"	7¼"	8"	9¼"	10"	11¼"
6'	Concrete Load	923	1,178	1,981	2,578	4,061	5,430	8,218
	Total Load	1,792	2,109	3,002	3,608	5,023	6,278	8,348
	Min. Bearing (in.)	3.50	3.50	3.50	3.50	4.50	5.75	7.50
7'	Concrete Load	582	746	1,269	1,664	2,504	3,230	4,737
	Total Load	1,293	1,521	2,166	2,604	3,458	4,156	5,527
	Min. Bearing (in.)	3.50	3.50	3.50	3.50	3.75	4.50	5.75
8'	Concrete Load	380	489	839	1,106	1,652	2,083	3,069
	Total Load	976	1,148	1,635	1,966	2,579	3,016	3,929
	Min. Bearing (in.)	3.50	3.50	3.50	3.50	3.50	3.75	4.75
9'	Concrete Load	236	304	524	693	1,042	1,293	1,847
	Total Load	762	896	1,278	1,536	2,015	2,331	2,962
	Min. Bearing (in.)	3.50	3.50	3.50	3.50	3.50	3.50	4.00
10'	Concrete Load		198	343	455	688	857	1,187
	Total Load		719	1,025	1,232	1,617	1,871	2,332
	Min. Bearing (in.)		3.50	3.50	3.50	3.50	3.50	3.50
11'	Concrete Load			234	311	472	589	819
	Total Load			840	1,010	1,326	1,534	1,912
	Min. Bearing (in.)			3.50	3.50	3.50	3.50	3.50
12'	Concrete Load				219	334	417	583
	Total Load				842	1,106	1,280	1,596
	Min. Bearing (in.)				3.50	3.50	3.50	3.50

General Notes

- Table is based on:
 - Member oriented with load parallel to glue lines (beam orientation). See page 7.
 - Uniform loads.
 - Simple spans.
 - Wet use (no ground contact or saturated use) and **construction load duration (125%)**.
 - New or like-new product.
- Bearing lengths based on $F_{cl} = 750$ psi.
- Concrete values are based on the more restrictive deflection of $L/360$ or $1/4"$.
- Beams must be laterally supported at the ends (see details on page 8) and every 24" (maximum) along compression edge.
- Allowable loads generated from Trus Joist software may exceed the loads shown in this table because software reflects actual design conditions.

Microllam® LVL Form Beam Load Table

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Microllam® LVL Form Beam (PLF)

Span	Conditions		1½" Width									1¾" Width									
			3½"	4"	5½"	6"	7¼"	8"	9¼"	10"	11¼"	3½"	4"	5½"	6"	7¼"	8"	9¼"	10"	11¼"	
4'	Simple	Concrete	264	384	907	1,136	2,032	3,020	3,033	3,033	3,033	308	448	1,058	1,325	2,371	3,523	3,539	3,539	3,538	
		Total	554	711	1,288	1,515	2,274	3,034	3,033	3,033	3,033	646	829	1,502	1,767	2,653	3,540	3,539	3,539	3,538	
	Continuous	Concrete	432	627	1,021	1,146	1,582	1,990	2,677	2,677	2,676	505	731	1,191	1,337	1,846	2,322	3,124	3,123	3,123	
		Total	507	650	1,021	1,146	1,582	1,990	2,677	2,677	2,676	591	759	1,191	1,337	1,846	2,322	3,124	3,123	3,123	
	Min. End Bearing (in.)		3.50	3.50	3.50	3.50	4.50	6.00	6.00	6.00	6.00	3.50	3.50	3.50	3.50	4.50	6.00	6.00	6.00	6.00	
	Min. Int. Bearing (in.)		5.25	5.25	5.25	5.50	7.50	9.00	12.00	12.00	12.00	5.25	5.25	5.25	5.50	7.50	9.00	12.00	12.00	12.00	
5'	Simple	Concrete	133	195	475	602	994	1,369	2,283	2,426	2,425	155	227	554	703	1,160	1,597	2,664	2,830	2,829	
		Total	341	438	794	934	1,330	1,687	2,409	2,426	2,425	398	511	926	1,090	1,551	1,968	2,810	2,830	2,829	
	Continuous	Concrete	224	328	740	832	1,068	1,253	1,649	1,890	2,097	261	382	863	970	1,246	1,462	1,924	2,205	2,446	
		Total	318	408	740	832	1,068	1,253	1,649	1,890	2,097	371	476	863	970	1,246	1,462	1,924	2,205	2,446	
	Min. End Bearing (in.)		3.50	3.50	3.50	3.50	3.50	4.25	6.00	6.00	6.00	3.50	3.50	3.50	3.50	3.50	4.25	6.00	6.00	6.00	
	Min. Int. Bearing (in.)		5.25	5.25	5.25	5.25	6.50	7.50	9.50	11.00	12.00	5.25	5.25	5.25	5.25	6.50	7.50	9.50	11.00	12.00	
6'	Simple	Concrete	75	111	277	353	594	773	1,218	1,629	2,020	88	130	323	412	693	902	1,421	1,901	2,357	
		Total	231	297	538	633	901	1,082	1,507	1,883	2,020	270	346	627	738	1,051	1,263	1,758	2,197	2,357	
	Continuous	Concrete	130	191	473	597	825	940	1,171	1,349	1,634	152	223	552	696	962	1,097	1,366	1,573	1,907	
		Total	218	280	507	597	825	940	1,171	1,349	1,634	254	326	592	696	962	1,097	1,366	1,573	1,907	
	Min. End Bearing (in.)		3.50	3.50	3.50	3.50	3.50	3.50	4.50	5.75	6.00	3.50	3.50	3.50	3.50	3.50	3.50	4.50	5.75	6.00	
	Min. Int. Bearing (in.)		5.25	5.25	5.25	5.25	6.00	7.00	8.50	9.50	11.50	5.25	5.25	5.25	5.25	6.00	7.00	8.50	9.50	11.50	
7'	Simple	Concrete		69	175	224	381	499	751	969	1,421	55	81	204	261	444	583	876	1,131	1,658	
		Total		214	388	456	650	781	1,037	1,247	1,658	194	249	452	532	758	911	1,210	1,454	1,935	
	Continuous	Concrete	82	121	303	387	618	743	923	1,037	1,254	95	141	353	452	721	867	1,076	1,210	1,463	
		Total	158	203	369	434	618	743	923	1,037	1,254	185	237	431	507	721	867	1,076	1,210	1,463	
	Min. End Bearing (in.)		3.50	3.50	3.50	3.50	3.50	3.50	3.75	4.50	5.75	3.50	3.50	3.50	3.50	3.50	3.50	3.75	4.50	5.75	
	Min. Int. Bearing (in.)		5.25	5.25	5.25	5.25	5.25	6.50	8.00	8.75	10.50	5.25	5.25	5.25	5.25	5.25	6.50	8.00	8.75	10.50	
8'	Simple	Concrete			114	147	252	332	496	625	921	35	53	133	171	294	387	578	729	1,074	
		Total			293	344	491	590	774	905	1,179	146	188	341	402	572	688	903	1,056	1,375	
	Continuous	Concrete	52	78	196	252	430	565	741	849	1,008	61	91	229	294	502	659	864	991	1,176	
		Total	120	154	280	330	470	565	741	849	1,008	140	180	327	385	548	659	864	991	1,176	
	Min. End Bearing (in.)		3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.75	4.75	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.75	4.75	
	Min. Int. Bearing (in.)		5.25	5.25	5.25	5.25	5.25	5.50	7.25	8.25	9.75	5.25	5.25	5.25	5.25	5.25	5.50	7.25	8.25	9.75	
10'	Simple	Concrete				59	103	137	206	257	356			54	69	120	159	241	300	416	
		Total				216	307	370	485	561	700			214	252	359	431	566	655	816	
	Continuous	Concrete			81	104	180	238	359	445	615			94	121	210	278	418	520	717	
		Total			177	208	297	357	469	542	676			206	243	346	417	547	633	789	
	Min. End Bearing (in.)				3.50	3.50	3.50	3.50	3.50	3.50	3.50			3.50	3.50	3.50	3.50	3.50	3.50	3.50	
	Min. Int. Bearing (in.)				5.25	5.25	5.25	5.25	5.75	6.75	8.50			5.25	5.25	5.25	5.25	5.75	6.75	8.50	
12'	Simple	Concrete						66	100	125	175					58	77	117	146	204	
		Total						253	332	384	479					245	295	387	448	559	
	Continuous	Concrete					87	116	177	220	307					59	102	136	206	257	358
		Total					204	246	322	373	465					167	238	286	376	435	543
	Min. End Bearing (in.)					3.50	3.50	3.50	3.50	3.50					3.50	3.50	3.50	3.50	3.50	3.50	
	Min. Int. Bearing (in.)					5.25	5.25	5.25	5.75	7.00					5.25	5.25	5.25	5.25	5.75	7.00	
14'	Simple	Concrete							54	68	95							63	79	111	
		Total							241	279	348							281	325	405	
	Continuous	Concrete						63	96	121	169					55	74	113	141	197	
		Total						179	235	272	339					173	209	274	317	396	
	Min. End Bearing (in.)						3.50	3.50	3.50	3.50					3.50	3.50	3.50	3.50	3.50	3.50	
	Min. Int. Bearing (in.)						5.25	5.25	5.25	6.00					5.25	5.25	5.25	5.25	6.00	6.00	

How To Use These Tables

1. Calculate the total load and the concrete load (neglect beam weight) on the beam in pounds per linear foot (plf).
2. Locate a **Span** that meets or exceeds the required beam span. See **Span Definition** on page 4.
3. Scan horizontally to find the proper width and depth where both the concrete and total load capacities meet or exceed the actual loads.
4. Review bearing length requirements to ensure adequacy.
5. If the selected beam is too deep or the **Min. End** or **Min. Int. Bearing** lengths are too long, select a wider beam that may require less depth and less bearing length.

General Notes

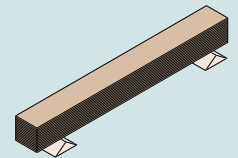
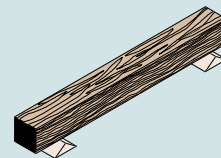
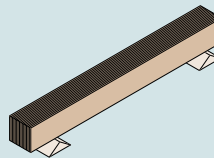
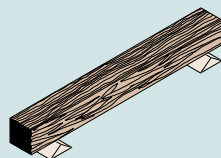
- Table is based on:
 - Member oriented with load parallel to glue lines (beam orientation). See page 7.
 - Uniform loads.
 - More restrictive of simple or continuous span. Ratio of short span to long span should be greater than 0.4 to prevent uplift.
 - Wet use (no ground contact or saturated use) and **construction load duration (125%)**.
 - New or like-new product.
- Bearing lengths are based on $F_{CL} = 750$ psi.
- Concrete values are based on the more restrictive deflection of $L/360$ or $1/4"$.
- Beams must be laterally supported at the ends (see details on page 8) and every 24" (maximum) along the compression edge.
- Allowable loads generated from Trus Joist software may exceed the loads shown in this table because software reflects actual design conditions.

Microllam® LVL Form Beam (PLF)

Span	Conditions		2½" Width									3½" Width									
			3½"	4"	5½"	6"	7¼"	8"	9¼"	10"	11¼"	3½"	4"	5½"	6"	7¼"	8"	9¼"	10"	11¼"	
6'	Simple	Concrete	126	186	462	589	991	1,289	2,030	2,715	3,367	176	260	646	825	1,387	1,805	2,842	3,801	4,714	
		Total	385	494	896	1,054	1,501	1,804	2,512	3,139	3,367	487	692	1,255	1,476	2,102	2,526	3,516	4,394	4,714	
	Continuous	Concrete	216	319	789	995	1,375	1,567	1,952	2,248	2,724	303	446	1,104	1,393	1,925	2,193	2,733	3,147	3,813	
		Total	363	466	845	995	1,375	1,567	1,952	2,248	2,724	459	653	1,184	1,393	1,925	2,193	2,733	3,147	3,813	
	Min. End Bearing (in.)		3.50	3.50	3.50	3.50	3.50	3.50	4.50	5.75	6.00	3.50	3.50	3.50	3.50	3.50	3.50	4.50	5.75	6.00	
	Min. Int. Bearing (in.)		5.25	5.25	5.25	5.25	6.00	7.00	8.50	9.50	11.50	5.25	5.25	5.25	5.25	6.00	7.00	8.50	9.50	11.50	
7'	Simple	Concrete	78	116	291	373	634	832	1,252	1,615	2,368	109	162	407	522	888	1,165	1,753	2,261	3,316	
		Total	278	356	646	761	1,083	1,302	1,729	2,078	2,764	351	499	905	1,065	1,516	1,823	2,420	2,909	3,869	
	Continuous	Concrete	136	201	505	646	1,031	1,239	1,538	1,728	2,090	191	282	707	904	1,443	1,734	2,153	2,419	2,927	
		Total	264	339	615	724	1,031	1,239	1,538	1,728	2,090	334	475	861	1,013	1,443	1,734	2,153	2,419	2,927	
	Min. End Bearing (in.)		3.50	3.50	3.50	3.50	3.50	3.50	3.75	4.50	5.75	3.50	3.50	3.50	3.50	3.50	3.50	3.75	4.50	5.75	
	Min. Int. Bearing (in.)		5.25	5.25	5.25	5.25	5.25	6.50	8.00	8.75	10.50	5.25	5.25	5.25	5.25	5.25	6.50	8.00	8.75	10.50	
8'	Simple	Concrete	51	75	190	245	420	553	826	1,042	1,534	71	105	266	342	587	775	1,157	1,458	2,148	
		Total	209	269	488	574	818	983	1,289	1,508	1,964	264	376	683	804	1,145	1,376	1,805	2,111	2,750	
	Continuous	Concrete	87	129	327	419	717	941	1,235	1,415	1,680	122	181	457	587	1,004	1,318	1,729	1,981	2,352	
		Total	200	257	467	550	783	941	1,235	1,415	1,680	253	360	654	770	1,096	1,318	1,729	1,981	2,352	
	Min. End Bearing (in.)		3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.75	4.75	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.75	4.75	
	Min. Int. Bearing (in.)		5.25	5.25	5.25	5.25	5.25	5.50	7.25	8.25	9.75	5.25	5.25	5.25	5.25	5.25	5.50	7.25	8.25	9.75	
9'	Simple	Concrete			118	152	262	347	521	647	924	44	65	165	212	367	485	730	905	1,293	
		Total			381	448	639	768	1,007	1,166	1,481	206	293	533	628	894	1,075	1,410	1,632	2,074	
	Continuous	Concrete	54	81	205	263	453	598	896	1,109	1,410	76	113	287	369	634	837	1,254	1,552	1,974	
		Total	157	202	366	431	615	739	970	1,122	1,410	198	282	513	604	861	1,035	1,357	1,570	1,974	
	Min. End Bearing (in.)		3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	
	Min. Int. Bearing (in.)		5.25	5.25	5.25	5.25	5.25	5.25	6.50	7.50	9.25	5.25	5.25	5.25	5.25	5.25	5.25	6.50	7.50	9.25	
10'	Simple	Concrete			77	99	172	228	344	428	594			107	139	240	319	482	600	831	
		Total			305	359	512	616	808	935	1,166			427	503	717	863	1,132	1,310	1,632	
	Continuous	Concrete	53	135	173	300	397	598	742	1,025		74	188	243	419	556	837	1,039	1,435		
		Total	162	295	347	495	595	781	904	1,127		227	413	486	693	833	1,094	1,265	1,577		
	Min. End Bearing (in.)		3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50		3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	
	Min. Int. Bearing (in.)		5.25	5.25	5.25	5.25	5.25	5.75	6.75	8.50		5.25	5.25	5.25	5.25	5.25	5.75	6.75	8.50		
12'	Simple	Concrete					82	110	167	209	291			51	66	115	154	234	292	408	
		Total					350	421	553	640	798			292	344	490	590	774	896	1,117	
	Continuous	Concrete			65	84	146	194	294	367	512			91	117	204	272	412	514	716	
		Total			202	238	340	409	537	622	775			283	334	476	573	752	871	1,086	
	Min. End Bearing (in.)			3.50	3.50	3.50	3.50	3.50	3.50	3.50			3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	
	Min. Int. Bearing (in.)			5.25	5.25	5.25	5.25	5.25	5.75	7.00			5.25	5.25	5.25	5.25	5.25	5.75	7.00		
14'	Simple	Concrete					59	90	113	159					62	83	126	158	222		
		Total					305	401	464	579					355	427	562	650	811		
	Continuous	Concrete					79	105	161	201	282					63	111	148	225	282	395
		Total					248	298	391	453	565					243	347	417	548	634	791
	Min. End Bearing (in.)					3.50	3.50	3.50	3.50	3.50					3.50	3.50	3.50	3.50	3.50	3.50	
	Min. Int. Bearing (in.)					5.25	5.25	5.25	5.25	6.00					5.25	5.25	5.25	5.25	5.25	6.00	
16'	Simple	Concrete						53	66	93							74	93	131		
		Total						304	352	439							425	492	614		
	Continuous	Concrete						62	95	119	167						65	87	133	167	234
		Total						226	297	344	429						263	316	416	482	601
	Min. End Bearing (in.)						3.50	3.50	3.50	3.50						3.50	3.50	3.50	3.50	3.50	
	Min. Int. Bearing (in.)						5.25	5.25	5.25	5.25						5.25	5.25	5.25	5.25	5.25	

See page 6 for General Notes and information on how to use this table.

Beam and Plank Orientation Diagrams

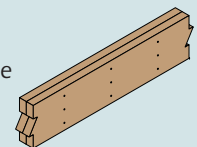


Beam Orientation
Load parallel to wide face of strand in Parallam® PSL;
parallel to glue line in Microllam® LVL.

Plank Orientation
Load perpendicular to wide face of strand in Parallam® PSL;
perpendicular to glue line in Microllam® LVL.

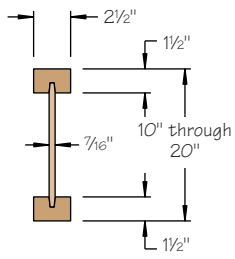
Multiple-Member Connection for Top-Loaded Beams

- Minimum of 2 rows 12d (0.148" x 3¼") nails at 12" on-center.
- Multiple pieces of Microllam® LVL can be nailed together to form a beam of the required size, up to a maximum width of 5¼". Beams wider than 5¼" require special consideration by the design professional.

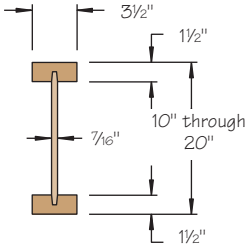


TJI® Form-I™ Joist Design Properties

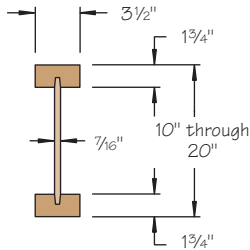
Trus Joist • Slab Form Support Design Guide 3073 • June 2004



TJI®/L65 Form-I™ Joist
Top and bottom flanges of 2 1/2" x 1 1/2" Microllam® LVL with 7/16" Performance Plus® web.



TJI®/L90 Form-I™ Joist
Top and bottom flanges of 3 1/2" x 1 1/2" Microllam® LVL with 7/16" Performance Plus® web.



TJI®/H90 Form-I™ Joist
Top and bottom flanges of 3 1/2" x 1 3/4" Microllam® LVL with 7/16" Performance Plus® web.

Design Properties

Depth	Weight (lbs/ft)	Moment (ft-lbs)	Shear (lbs)	EI x 10 ⁶ (in. ² -lbs)	Allowable Reaction (lb)	
					3 1/2" Bearing Length	5 1/4" Bearing Length
TJI®/L65						
10"	3.0	6,225	1,935	268	2,120	3,785
11 7/8"	3.3	7,595	2,165	405	2,120	3,785
14"	3.6	9,035	2,390	599	2,120	3,785
16"	3.9	10,360	2,620	822	2,120	3,785
18"	4.2	11,680	2,850	1,085	2,120	3,785
20" ⁽¹⁾	4.5	12,985	3,085	1,391	2,120	3,785
TJI®/L90						
10"	3.9	8,865	1,935	372	2,120	4,465
11 7/8"	4.2	10,805	2,165	559	2,120	4,465
14"	4.5	12,860	2,390	822	2,120	4,465
16"	4.7	14,755	2,620	1,121	2,120	4,465
18"	5.0	16,635	2,850	1,472	2,120	4,465
20" ⁽¹⁾	5.3	18,490	3,085	1,877	2,120	4,465
TJI®/H90						
10"	4.3	10,055	1,935	408	2,120	4,610
11 7/8"	4.6	12,330	2,165	618	2,120	4,610
14"	4.9	14,725	2,390	914	2,120	4,610
16"	5.2	16,950	2,620	1,250	2,120	4,610
18"	5.4	19,135	2,850	1,644	2,120	4,610
20" ⁽¹⁾	5.7	21,315	3,085	2,098	2,120	4,610

(1) All 20" depth TJI® joists require web stiffeners. See page 9 for fastening requirements.

- Values have been adjusted for wet use (no ground contact or saturated use) and **construction load duration (125%)**.
- Reaction values are based on an assumed minimum bearing length of 3 1/2" at the ends, 5 1/4" at intermediate supports.
- Values are for new or like-new product.
- The following formula approximates the uniform load deflection of Δ (inches):

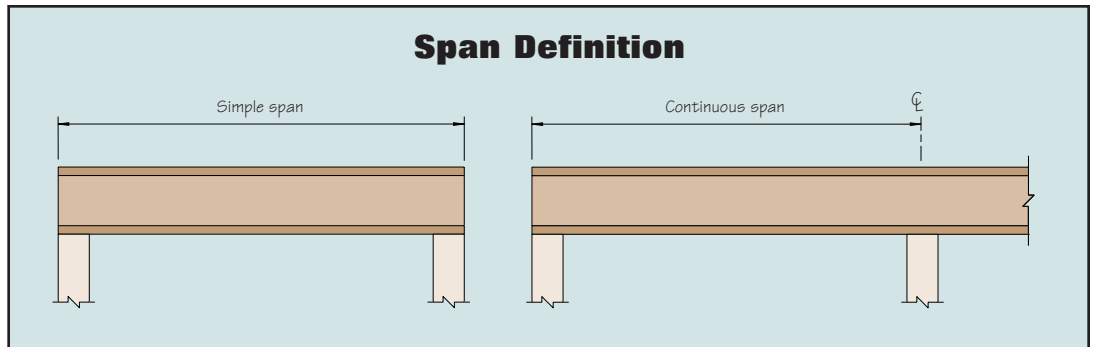
$$\Delta = \frac{22.5WL^4}{EI} + \frac{2.26WL^2}{d \times 10^5}$$

W = uniform load in pounds per linear foot

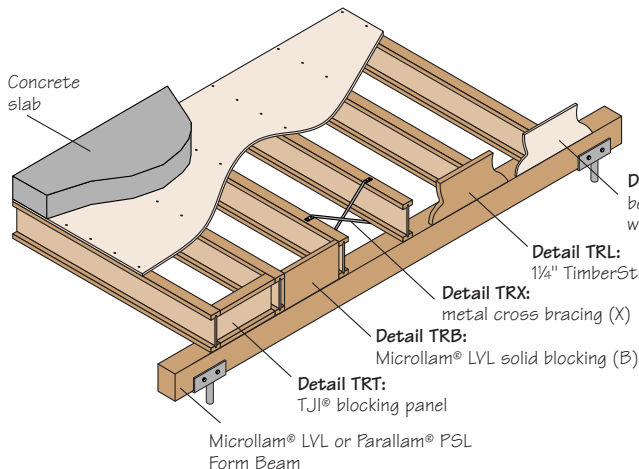
L = clear span in feet

d = out-to-out depth of the joist in inches

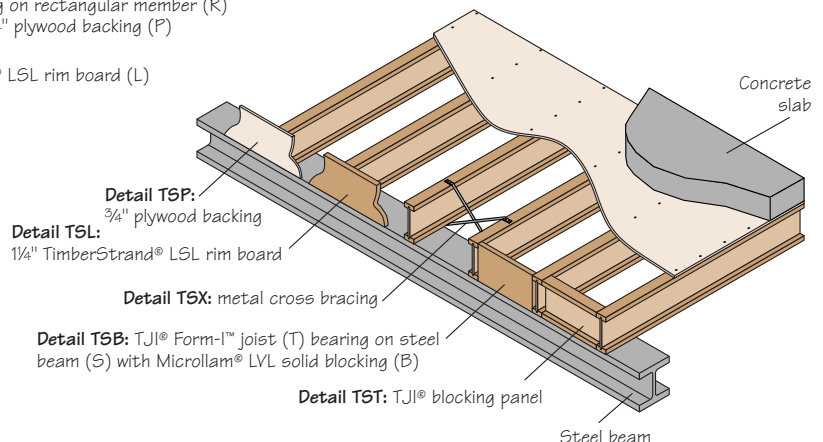
EI = value from table



TJI® Form-I™ Joist Bearing and Lateral Support Details

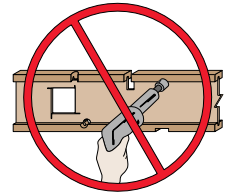
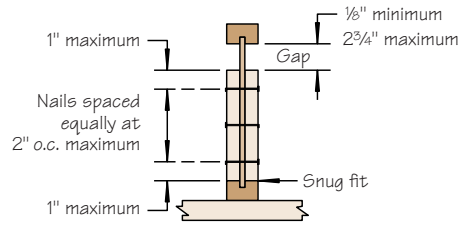


TJI® Form-I™ joists must be laterally supported at the ends. The details shown illustrate acceptable lateral support options that correspond to details designated in TJ-Beam® Industrial Applications software.



TJI®/L65 Form-I™ Joists

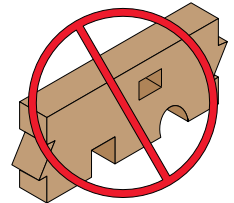
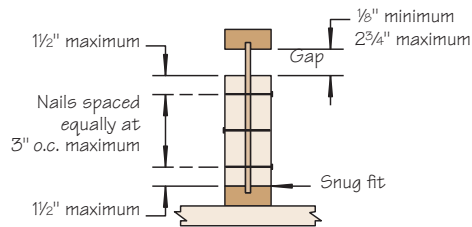
- Web stiffener material shall be sheathing meeting the requirements of PS 1 or PS 2 with face grain parallel to long axis.
- Minimum web stiffener size is 7/8" x 2 5/16".
- Use 8d (2 1/2") box nails minimum, spaced at 2" on-center maximum, clinched.



DO NOT
cut or notch TJI® Form-I™ joists

TJI®/L90 and H90 Form-I™ Joists

- Web stiffener material shall be 2x4 construction grade or better.
- Use 16d (3 1/2") box nails minimum, spaced at 3" on-center maximum.



DO NOT cut, notch or drill holes in Microllam® LVL or Parallam® PSL form beams or wales

Storage and Handling

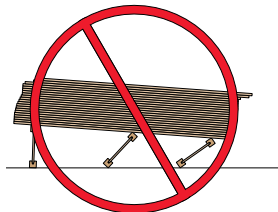
ERECTION BRACING

WARNING

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.

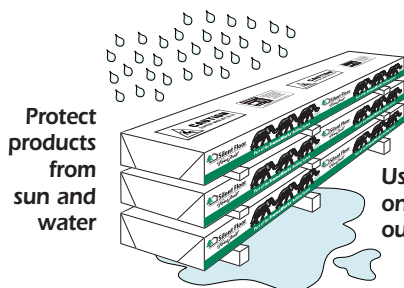


DO NOT allow workers to walk on joists until braced. Injury may result.



DO NOT stack construction materials on unbraced joists. Stack only over supports.

- All blocking, hangers, rim boards, and rim joists at the end supports of the TJI® Form-I™ joists must be completely installed and properly nailed.
- Sheathing must be totally attached to each TJI® joist before additional loads can be placed on the system.
- The flanges must remain straight within a tolerance of 1/2" from the true alignment.



Wrap is slippery when wet or icy

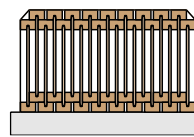
Use support blocks at 10' on-center to keep bundles out of mud and water

BUILD SAFELY

We at Trus Joist are committed to working safely and want to remind you to do the same. We encourage you to follow the recommendations of OSHA (www.osha.gov) in the U.S. or provincial regulations (www.canoshweb.org/en/) in Canada regarding:

- Personal protective equipment (PPE) for hands, feet, head, and eyes
- Fall protection
- Use of pneumatic nailers and other hand tools
- Forklift safety

Please adhere to the Trus Joist product installation details, including the installation of safety strut lines on unbraced floors and roofs.



Store joists in vertical orientation.



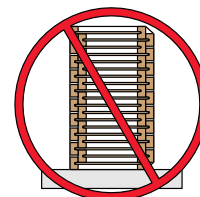
Use forklift to remove TJI® joists from truck.



DO NOT lift in the flat orientation.



DO NOT lift TJI® Form-I™ joists by top flange.



DO NOT store flat.

TJI® Form-I™ Joist (PLF)

Span	Conditions		TJI®/L65						TJI®/L90						TJI®/H90						
			10"	11 7/8"	14"	16"	18"	20"	10"	11 7/8"	14"	16"	18"	20"	10"	11 7/8"	14"	16"	18"	20"	
8'	Simple	Concrete	519	565	565	565	564	564	518	564	564	564	564	563	517	564	564	563	563	563	
		Total	519	565	565	565	564	564	518	564	564	564	564	563	517	564	564	563	563	563	
	Continuous	Concrete	412	459	459	459	458	458	410	462	513	528	528	528	409	461	512	542	541	541	
		Total	412	459	459	459	458	458	410	462	513	528	528	528	409	461	512	542	541	541	
	Min. End Bearing (in.)		3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	
	Min. Int. Bearing (in.)		6.00	7.00	7.00	7.00	7.00	7.00	5.25	5.50	6.75	7.00	7.00	7.00	5.25	5.25	6.25	7.00	7.00	7.00	
10'	Simple	Concrete	266	388	451	451	451	450	337	451	450	450	450	450	359	450	450	450	449	449	
		Total	408	452	451	451	451	450	407	451	450	450	450	450	407	450	450	450	449	449	
	Continuous	Concrete	324	364	364	364	364	363	322	362	403	419	419	418	322	362	402	429	429	429	
		Total	324	364	364	364	364	363	322	362	403	419	419	418	322	362	402	429	429	429	
	Min. End Bearing (in.)		3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	
	Min. Int. Bearing (in.)		6.00	7.00	7.00	7.00	7.00	7.00	5.25	5.25	6.50	7.00	7.00	7.00	5.25	5.25	6.25	7.00	7.00	7.00	
12'	Simple	Concrete	135	200	280	364	375	375	175	254	349	374	374	374	188	273	374	374	374	373	
		Total	336	376	375	375	375	375	335	375	375	374	374	374	335	374	374	374	374	373	
	Continuous	Concrete	231	301	302	301	301	301	266	298	331	347	346	346	265	298	329	355	355	355	
		Total	267	301	302	301	301	301	266	298	331	347	346	346	265	298	329	355	355	355	
	Min. End Bearing (in.)		3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	
	Min. Int. Bearing (in.)		5.75	7.00	7.00	7.00	7.00	7.00	5.25	5.25	6.50	7.00	7.00	7.00	5.25	5.25	6.00	7.00	7.00	7.00	
14'	Simple	Concrete	75	112	159	209	265	321	99	145	202	262	320	320	107	157	218	283	320	319	
		Total	267	322	321	321	321	321	285	321	320	320	320	320	284	320	320	320	320	319	
	Continuous	Concrete	131	192	257	257	257	256	171	246	281	296	295	295	184	253	280	303	303	302	
		Total	227	256	257	257	257	256	226	253	281	296	295	295	225	253	280	303	303	302	
	Min. End Bearing (in.)		3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	
	Min. Int. Bearing (in.)		5.75	7.00	7.00	7.00	7.00	7.00	5.25	5.25	6.50	7.00	7.00	7.00	5.25	5.25	6.00	7.00	7.00	7.00	
16'	Simple	Concrete		66	96	128	163	202	60	88	124	163	205	251	65	96	135	176	222	271	
		Total		247	281	280	280	247	278	280	280	279	279	279	247	278	279	279	279	279	
	Continuous	Concrete	79	116	166	219	223	223	105	152	213	258	257	257	113	165	231	264	264	263	
		Total	197	221	224	224	223	223	196	220	244	258	257	257	196	220	243	264	264	263	
	Min. End Bearing (in.)		3.50	3.50	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	
	Min. Int. Bearing (in.)		5.75	7.00	7.00	7.00	7.00	7.00	5.25	5.25	6.50	7.00	7.00	7.00	5.25	5.25	6.00	7.00	7.00	7.00	
18'	Simple	Concrete			60	82	105	131		57	80	106	134	166		62	87	115	146	180	
		Total			230	249	249	248		246	248	248	248	247		245	248	248	247	247	
	Continuous	Concrete	50	74	106	143	183	198	67	98	139	183	228	227	73	107	151	199	233	233	
		Total	154	189	198	198	198	198	173	194	215	228	228	227	173	194	215	234	233	233	
	Min. End Bearing (in.)		3.50	3.50	4.25	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	
	Min. Int. Bearing (in.)		5.25	6.50	7.00	7.00	7.00	7.00	5.25	5.25	6.25	7.00	7.00	7.00	5.25	5.25	6.00	7.00	7.00	7.00	
20'	Simple	Concrete				54	71	89			54	71	91	113			59	78	100	123	
		Total				213	223	223			223	223	222	222			223	222	222	222	
	Continuous	Concrete				96	124	155			94	125	159	196			103	136	173	209	
		Total				177	177	177			193	204	204	204			192	209	209	209	
	Min. End Bearing (in.)					4.25	4.00	4.00			4.00	4.00	4.00	4.00			4.00	4.00	4.00	4.00	
	Min. Int. Bearing (in.)					7.00	7.00	7.00			6.25	7.00	7.00	7.00			6.00	7.00	7.00	7.00	
22'	Simple	Concrete						62				50	64	80				55	70	87	
		Total						202				202	202	201				202	201	201	
	Continuous	Concrete							109				88	112	139				96	123	152
		Total							160				185	185	185				190	189	189
	Min. End Bearing (in.)							4.00				4.00	4.00	4.00				4.00	4.00	4.00	
	Min. Int. Bearing (in.)							7.00				7.00	7.00	7.00				7.00	7.00	7.00	

See Page 11 for information on how to use this table

General Notes

- Table is based on:
 - Uniform loads.
 - More restrictive of simple or continuous span. Ratio of short span to long span should be greater than 0.4 to prevent uplift.
 - Wet use (no ground contact or saturated use) and **construction load duration (125%)**.
 - New or like-new product.
- Concrete values are based on the more restrictive deflection of $L/360$ or $1/4"$.
- All joists 20" deep require web stiffeners at end and intermediate bearings. Shallower depth joists do not. See page 9 for attachment requirements. It may be possible to reduce the required bearing lengths by using web stiffeners; refer to TJ-Beam® Industrial Applications software.
- Joists must be laterally supported at the ends (see details on page 8) and every 24" (maximum) along compression edge.
- Allowable loads generated from Trus Joist software may exceed the loads shown in this table because software reflects actual design conditions.

Cambered TJI® Form-I™ Joist (PLF)

Span	Conditions	TJI®/L65						TJI®/L90						TJI®/H90					
		10"	11 7/8"	14"	16"	18"	20"	10"	11 7/8"	14"	16"	18"	20"	10"	11 7/8"	14"	16"	18"	20"
8'	Concrete Load	519	565	565	565	564	564	518	564	564	564	564	563	517	564	564	563	563	563
	Total Load	519	565	565	565	564	564	518	564	564	564	564	563	517	564	564	563	563	563
	Min. Bearing (in.)	3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00
10'	Concrete Load	342	451	451	451	451	450	407	451	450	450	450	450	407	450	450	450	449	449
	Total Load	408	451	451	451	451	450	407	451	450	450	450	450	407	450	450	450	449	449
	Min. Bearing (in.)	3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00
12'	Concrete Load	190	281	375	375	375	375	242	352	375	374	374	374	260	374	374	374	374	373
	Total Load	336	376	375	375	375	375	335	375	375	374	374	374	335	374	374	374	374	373
	Min. Bearing (in.)	3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00
14'	Concrete Load	116	173	245	321	321	320	151	221	308	320	320	320	163	239	320	320	320	319
	Total Load	251	321	321	321	321	320	285	321	320	320	320	320	284	320	320	320	320	319
	Min. Bearing (in.)	3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00
16'	Concrete Load	77	113	164	218	278	280	101	149	209	274	279	279	109	161	227	279	279	279
	Total Load	190	247	281	280	280	280	247	278	280	280	279	279	247	278	279	279	279	279
	Min. Bearing (in.)	3.50	3.50	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00
18'	Concrete Load	54	80	114	155	199	248	71	105	149	197	248	247	77	115	163	215	247	247
	Total Load	149	193	230	249	249	248	212	246	248	248	248	247	218	245	248	248	247	247
	Min. Bearing (in.)	3.50	3.50	3.50	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00
20'	Concrete Load		59	85	114	149	186	52	78	111	148	188	222	57	85	122	161	206	222
	Total Load		155	185	213	223	223	170	220	223	223	222	222	178	219	223	222	222	222
	Min. Bearing (in.)		3.50	3.50	3.75	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00	3.50	4.00	4.00	4.00	4.00	4.00
22'	Concrete Load			65	87	115	144		59	86	114	146	182		65	94	125	160	199
	Total Load			151	174	198	202		181	202	202	202	201		198	202	202	201	201
	Min. Bearing (in.)			3.50	3.50	4.00	4.00		3.50	4.00	4.00	4.00	4.00		4.00	4.00	4.00	4.00	4.00
24'	Concrete Load			51	69	90	114			68	91	117	146		51	75	100	128	160
	Total Load			126	145	164	184			182	185	185	184		172	185	184	184	184
	Min. Bearing (in.)			3.50	3.50	3.50	4.00			4.00	4.00	4.00	4.00		3.50	4.00	4.00	4.00	4.00
26'	Concrete Load				56	73	92				74	95	119			61	81	105	131
	Total Load				123	139	154				170	170	170			170	170	170	169
	Min. Bearing (in.)				3.50	3.50	3.50				4.00	4.00	4.00			4.00	4.00	4.00	4.00
28'	Concrete Load					60	76				61	79	99			50	67	87	109
	Total Load					119	132				151	157	157			150	157	157	157
	Min. Bearing (in.)					3.50	3.50				3.75	4.00	4.00			3.75	4.00	4.00	4.00
30'	Concrete Load					51	64				51	66	84				57	73	92
	Total Load					103	114				130	147	146				146	146	146
	Min. Bearing (in.)					3.50	3.50				3.50	4.00	4.00				4.00	4.00	4.00

How To Use These Tables

1. Calculate the total load and the concrete load (neglect beam weight) on the beam in pounds per linear foot (plf).
2. Locate a **Span** that meets or exceeds the required beam span. See **Span Definition** on page 4.
3. Scan horizontally to find the proper width and depth where both the concrete and total load capacities meet or exceed the actual loads.
4. Review bearing length requirements to ensure adequacy.

General Notes

- Table is based on:
 - Uniform loads.
 - Simple spans.
 - Fully-cambered joists. Camber will gradually be lost after multiple pours. Do not use this table for joists which have lost their camber.
 - Wet use (no ground contact or saturated use) and **construction load duration (125%)**.
 - New or like-new product.
- Cantilevers greater than 2' or more than 20% of the back span require further analysis. Contact your Trus Joist representative or use TJ-Beam® Industrial Applications software.
- Concrete loads are based on the more restrictive net downward deflection (total deflection minus camber) of either L/360 or 1/4".
- Cambered TJI® Form-I™ joists are manufactured with a radius of 2250'.
- All joists 20" deep require web stiffeners at end and intermediate bearings. Shallower depth joists do not. See page 9 for attachment requirements. It may be possible to reduce the required bearing lengths by using web stiffeners; refer to TJ-Beam® Industrial Applications software.
- Joists must be laterally supported at the ends (see details on page 8) and every 24" (maximum) along compression edge.
- Allowable loads generated from Trus Joist software may exceed the loads shown in this table because software reflects actual design conditions.

Microllam® LVL Post Shore Allowable Design Stresses⁽¹⁾ (Dry Use, 100% Load Duration)

Modulus of elasticity $E = 2.0 \times 10^6$ psi

Flexural stress $F_b = 2,750$ psi⁽²⁾

Compression parallel to grain $F_{cl} = 2,635$ psi

(1) Values shown are for new or like-new product.

(2) For 12" depth. For others, multiply by $\left[\frac{12}{d}\right]^{0.136}$

Parallam® PSL Post Shore Allowable Design Stresses⁽¹⁾ (Dry Use, 100% Load Duration)

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

Flexural stress $F_b = 2,400$ psi⁽²⁾

Compression parallel to grain $F_{cl} = 2,500$ psi

(1) Values shown are for new or like-new product.

(2) For 12" depth. For others, multiply by $\left[\frac{12}{d}\right]^{0.111}$

Shoring Allowable Loads (lbs)

Length	Microllam® LVL	Parallam® PSL		
	3½" x 3½"	4¼" x 4¼"	5¼" x 5¼"	7" x 7"
4'	17,730	25,890	42,390	79,310
5'	14,560	22,570	38,890	75,670
6'	11,720	19,120	34,860	71,380
7'	9,500	16,010	30,630	66,490
8'	7,810	13,450	26,600	61,170
9'	6,510	11,400	23,060	55,630
10'	5,500	9,750	20,060	50,200
11'	4,700	8,420	17,550	45,130
12'	4,060	7,330	15,460	40,590
13'		6,440	13,700	36,590
14'		5,700	12,200	33,050
15'		5,080	10,940	29,960
16'		4,550	9,850	27,270
17'		4,100	8,920	24,900
18'			8,110	22,820
19'			7,400	20,970
20'			6,780	19,330
21'				17,870
22'				16,570
23'				15,400
24'				14,340
25'				13,390
26'				12,530
27'				11,750
28'				11,040

General Notes

Table is based on:

- One piece column members.
- Bracing in both directions at the column ends.
- Effective column length is equal to the actual column length.
- Wet use (no ground contact or saturated use) and **construction load duration (125%)**.
- National Design Specification for Wood Construction® (NDS®) 2001.

- Allowable loads accommodate axial loads with 1/8 column width/thickness eccentricity. For other conditions, refer to the NDS®.
- Microllam® LVL and Parallam® PSL post shores are not intended for permanent structural use.



For more information about Trus Joist or to contact your nearest technical representative, call us toll-free:

1-800-423-5808
www.trusjoist.com



200 E. Mallard Drive (83706)
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Product Warranty

Trus Joist warrants that its concrete forming products will be free from manufacturing errors or defects in workmanship and material.

The above warranty is in lieu of all other warranties, express or implied. The implied warranties of merchantability and fitness for a particular purpose are excluded from this warranty. Consequential and indirect damages are hereby excluded.



200 E. Mallard Drive
Boise, Idaho 83706

Tom Denis
Tom Denis, President