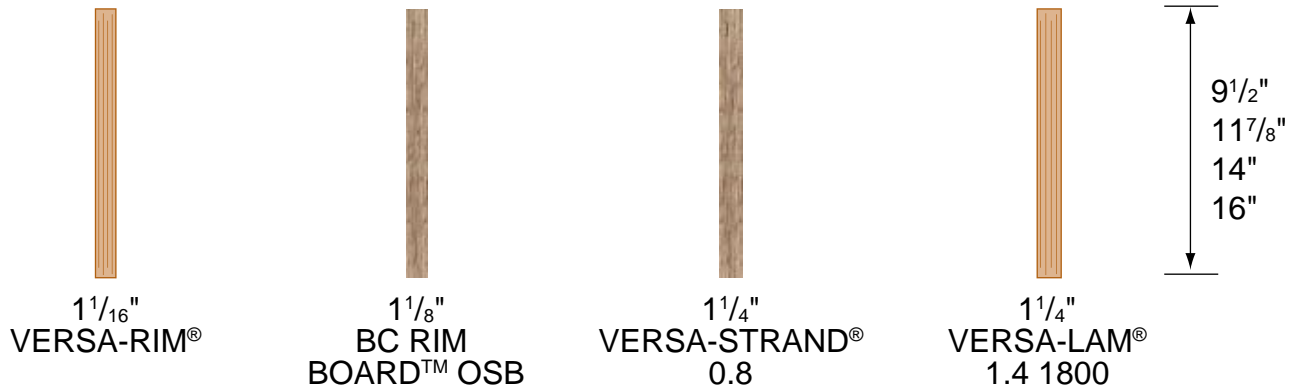


Boise Rimboard Product Profiles



*18 inch and 20 inch deep rimboard are special order products, contact local supplier or Boise representative for product availability.

<p>Perpendicular See chart for vertical load capacity.</p> <p>When used for shear transfer, nail to bearing plate with the same nailing capacity as required by the horizontal diaphragm schedule.</p>	<p>Parallel See chart for vertical load capacity.</p> <p>When used for shear transfer, nail to bearing plate with the same nailing capacity as required by the horizontal diaphragm schedule.</p>	<p>Exterior wood sheathing</p> <p>1/2" dia through bolts (ASTM A307 Grades A&B, SAE J429 Grades 1 or 2, or higher) with washers and nuts or 1/2" dia lag screws (full penetration) 350 lb capacity per fastener</p> <p>Treated Ledger - Use only fasteners that are approved for use with corresponding wood treatment.</p> <p>Boise Rimboard</p> <p>Design of moisture control by others (only structural components shown above)</p>
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Boise Rimboard Properties

Product	Vertical Load Capacity		Maximum Floor Diaphragm Lateral Capacity [lb/ft]	Allowable Design Values			
	Uniform [plf]	Point [lb]		Flexural Stress [lb/in ²]	Modulus of Elasticity [lb/in ²]	Horizontal Shear [lb/in ²]	Compression Perpendicular to Grain [lb/in ²]
1 1/16" VERSA-RIM ⁽¹⁾	4250	3700	205	Only to be used in rimboard applications			
1 1/8" BC RIM BOARD™ OSB ⁽²⁾	4850	3500	200	Limited span capabilities, see note 2			
1 1/4" VERSA-STRAND™ 0.8 ⁽³⁾	5700	5900	240 w/ 8d common nails @ 6" o.c. 330 w/ 8d common nails @ 4" o.c.	1130	800,000	355	1415
1 1/4" VERSA-LAM® 1.4 1800 ⁽¹⁾	3250	2250	Permitted per building code for all nominal 2" thick framing floor diaphragms	1800	1,400,000	225	525

Product	Closest Allowable Nail Spacing - Narrow Face [in]					
	8d Box	8d Common	10d & 12d Box	16d Box	10d, 12d Common & 16d Sinker	16d Common
1 1/16" VERSA-RIM ⁽¹⁾	3	4	4	4	6	6
1 1/8" BC RIM BOARD™ OSB ⁽²⁾	3	3	See note 2 for nailing information			
1 1/4" VERSA-STRAND™ 0.8 ⁽³⁾	4	4	4	4	4	6
1 1/4" VERSA-LAM® 1.4 1800 ⁽¹⁾	3	3	3	3	4	6

Notes

1. See ICC ESR 1040 for further product information.
2. See Performance Rated Rim Boards, APA EWS #W345F for further product information (Rim Board Plus grade).
3. See ICBO evaluation report ER-5901 for further product information.

An Introduction to VERSA-LAM® Products



When you specify VERSA-LAM® laminated veneer headers/beams, you are building quality into your design. They are excellent as floor and roof framing supports or as headers for doors, windows and garage doors and columns.

Because they have no camber, VERSA-LAM® LVL products provide flatter, quieter floors, and consequently, the builder can expect happier customers with significantly fewer call backs.

VERSA-LAM® Beam Architectural Specifications

Scope: This work includes the complete furnishing and installation of all VERSA-LAM® beams as shown on the drawings, herein specified and necessary to complete the work.

Materials: Douglas Fir-Larch veneers, laminated in a press with all grain parallel with the length of the member. Glues used in lamination are phenol formaldehyde and isocyanate exterior-type adhesives which comply with ASTM D2559.

Design: VERSA-LAM® beams shall be sized and detailed to fit the dimensions and loads indicated on the plans. All designs shall be in accordance with allowable values developed in accordance with ASTM D5456 and listed in the governing code evaluation service's report and

section properties based upon standard engineering principles. Verification of design of the VERSA-LAM® beams by complete calculations shall be available upon request.

Drawings: Additional drawings showing layout and detail necessary for determining fit and placement in the buildings are (are not) to be provided by the supplier.

Fabrication: VERSA-LAM® beams shall be manufactured in a plant evaluated for fabrication by the governing code evaluation service and under the supervision of a third-party inspection agency listed by the corresponding evaluation service.

Storage and Installation: VERSA-LAM® beams, if stored prior to erection, shall be stored on stickers spaced a maximum of 15 ft. apart. Beams shall be stored on a dry, level surface and protected from the weather. They shall be handled with care so they are not damaged.

VERSA-LAM® beams are to be installed in accordance with the plans and Boise EWP's Installation Guide. Temporary construction loads which cause stresses beyond design limits are not permitted. Erection bracing shall be provided to assure adequate lateral support for the individual beams and the entire system until the sheathing material has been applied.

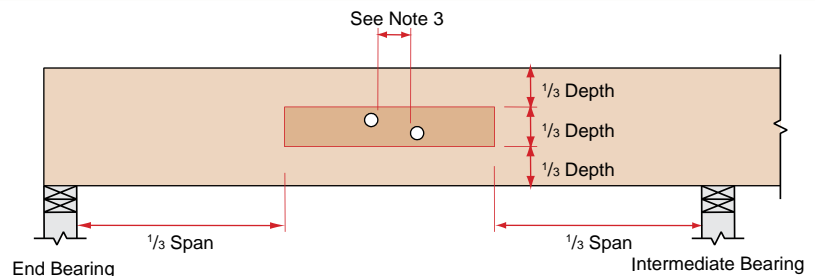
Codes: VERSA-LAM® beams shall be evaluated by a model code evaluation service.

Allowable Holes in VERSA-LAM® Beams

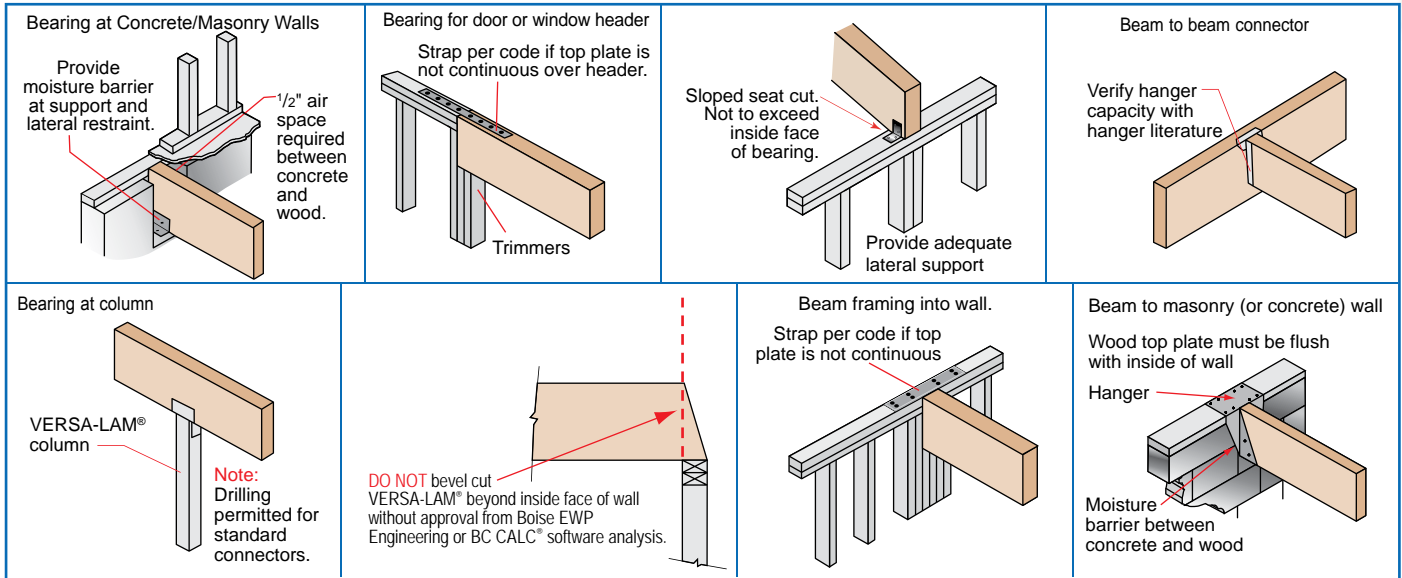
Notes

1. Square and rectangular holes are not permitted.
2. Round holes may be drilled or cut with a hole saw anywhere within the shaded area of the beam.
3. The horizontal distance between adjacent holes must be at least two times the size of the larger hole.
4. Do not drill more than three access holes in any four foot long section of beam.
5. The maximum round hole diameter permitted is:

Beam Depth	Max. Hole Diameter
5 1/2"	3/4"
7 1/4"	1"
9 1/4" and greater	2"



6. These limitations apply to holes drilled for plumbing or wiring access only. The size and location of holes drilled for fasteners are governed by the provisions of the *National Design Specification® for Wood Construction*.
7. Beams deflect under load. Size holes to provide clearance where required.
8. This hole chart is valid for beams supporting uniform load only. For beams supporting concentrated loads or for beams with larger holes, contact Boise EWP Engineering.



Multiple Member Connectors

Side-Loaded Applications

Number of Members	Maximum Uniform Side Load [plf]							
	Nailed		1/2" Dia. Through Bolt ⁽¹⁾			5/8" Dia. Through Bolt ⁽¹⁾		
	2 rows 16d Sinkers @ 12" o.c.	3 rows 16d Sinkers @ 12" o.c.	2 rows @ 24" o.c. staggered	2 rows @ 12" o.c. staggered	2 rows @ 6" o.c. staggered	2 rows @ 24" o.c. staggered	2 rows @ 12" o.c. staggered	2 rows @ 6" o.c. staggered
1 3/4" VERSA-LAM® (Depths of 18" and less)								
2	470	705	505	1010	2020	560	1120	2245
3 ⁽²⁾	350	525	375	755	1515	420	840	1685
4 ⁽³⁾	use bolt schedule		335	670	1345	370	745	1495
3 1/2" VERSA-LAM®								
2 ⁽³⁾	use bolt schedule		855	1715	N/A	1125	2250	N/A

- Design values apply to common bolts that conform to ANSI/ASME standard B18.21-1981 (ASTM A307 Grades A&B, SAE J429 Grades 1 or 2, or higher). A washer not less than a standard cut washer shall be between the wood and the bolt head and between the wood and the nut. The distance from the edge of the beam to the bolt holes must be at least 2" for 1/2" bolts and 2 1/2" for 5/8" bolts. Bolt holes shall be the same diameter as the bolt.
- The nail schedules shown apply to both sides of a three member beam.
- 7" wide beams must be top-loaded or loaded from both sides.

Top-Loaded Applications

For top-loaded beams and beams with side loads with less than those shown:

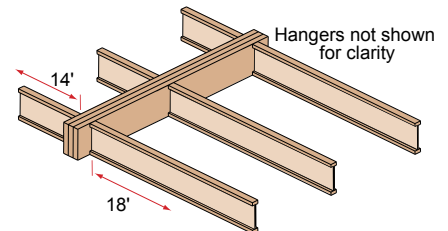
Ply	Depth	Nailing	Maximum Uniform Load From One Side
(2) 1 3/4" plies	Depth 11 7/8" & less	2 rows 16d box/sinker nails @ 12" o.c.	400 plf
	Depth 14" - 18"	3 rows 16d box/sinker nails @ 12" o.c.	600 plf
(3) 1 3/4" plies ⁽²⁾	Depth 11 7/8" & less	2 rows 16d box/sinker nails @ 12" o.c.	300 plf
	Depth 14" - 18"	3 rows 16d box/sinker nails @ 12" o.c.	450 plf
(4) 1 3/4" plies	Depth 18" & less	2 rows 1/2" bolts @ 24" o.c., staggered	335 plf
(2) 3 1/2" plies	Depth 18" & less	2 rows 1/2" bolts @ 24" o.c., staggered	855 plf
	Depth 20" - 24"	3 rows 1/2" bolts @ 24" o.c., staggered every 8"	1285 plf

- Beams wider than 7" must be designed by the engineer of record.
- All values in these tables may be increased by 15% for snow-load roofs and by 25% for non-snow load roofs where the building code allows.
- Use allowable load tables or BC CALC® software to size beams.
- An equivalent specific gravity of 0.5 may be used when designing specific connections with VERSA-LAM®.
- Connection values are based upon the 2001 NDS.
- FastenMaster TrussLok, Simpson Strong-Tie SDS, and USP WS screws may also be used to connect multiple member VERSA-LAM® beams, contact Boise EWP Engineering for further information.**

Designing Connections for Multiple VERSA-LAM® Members

When using multiple ply VERSA-LAM® beams to create a wider member, the connection of the plies is as critical as determining the beam size. When side loaded beams are not connected properly, the inside plies do not support their share of the load and thus the load-carrying capacity of the full member decreases significantly. The following is an example of how to size and connect a multiple-ply VERSA-LAM® floor beam.

Given: Beam shown below is supporting residential floor load (40 psf live load, 10 psf dead load) and is spanning 16'-0". Beam depth is limited to 14".



Find: A multiple 1 3/4" ply VERSA-LAM® that is adequate to support the design loads and the member's proper connection schedule.

- Calculate the tributary width that beam is supporting:
 $14' / 2 + 18' / 2 = 16'$
- Use PLF tables on pages 28-30 of WSG or BC CALC® to size beam.
A Triple VERSA-LAM® 2.0 2800 1 3/4" x 14" is found to adequately support the design loads.
- Calculate the maximum plf load from one side (the right side in this case).
 $\text{Max. Side Load} = (18' / 2) \times (40 + 10 \text{ psf}) = 450 \text{ plf}$
- Go to the Multiple Member Connection Table, Side-Loaded Applications, 1 3/4" VERSA-LAM®, 3 members
- The proper connection schedule must have a capacity greater than the max. side load:

Nailed: 3 rows 16d sinkers @ 12" o.c.:
525 plf is greater than 450 plf **OK**
Bolts: 1/2" diameter 2 rows @ 12" staggered:
755 plf is greater than 450 plf **OK**

VERSA-LAM® Floor Load Tables

VERSA-LAM® 2.0 2800 and 2.0 3100 (100% Load Duration)

KEY TO TABLE	Top Figure	- Allowable Total Load [plf]
	Middle Figure	- Allowable Live Load [plf]
	Bottom Figures	- Minimum Required Bearing Length at End / Intermediate Supports [inches]

Span [ft]	1 1/4" VERSA-LAM® 2.0 2800 ⁽¹⁾						3 1/2" VERSA-LAM® 2.0 3100						5 1/4" VERSA-LAM® 2.0 3100						7" VERSA-LAM® 2.0 3100					
	7 1/4"	9 1/2"	11 7/8"	14"	16" ⁽²⁾	18" ⁽²⁾	7 1/4"	9 1/2"	11 7/8"	14"	16"	18"	9 1/2"	11 7/8"	14"	16"	18"	20"	11 7/8"	14"	16"	18"	20"	24"
6	763	1063	1425	1796	2194	2652	1526	2127	2850	3591	4388	5304	3190	4275	5387	6583	7956	9549	5700	7183	8777	10608	12732	18197
	762	-	-	-	-	-	1525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.8/3	2.4/3.1	3.3/4.1	4.1/5.1	5/6.3	6.1/7.6	1.8/3	2.4/3.1	3.3/4.1	4.1/5.1	5/6.3	6.1/7.6	2.4/3.1	3.3/4.1	4.1/5.1	5/6.3	6.1/7.6	7.3/9.1	3.3/4.1	4.1/5.1	5/6.3	6.1/7.6	7.3/9.1	10.4/13
8	470	746	979	1208	1444	1702	958	1493	1958	2416	2887	3404	2239	2938	3624	4331	5106	5958	3917	4832	5775	6808	7944	10597
	322	724	-	-	-	-	643	1447	-	-	-	-	2171	-	-	-	-	-	-	-	-	-	-	-
	1.5/3	2.3/3	3/3.8	3.7/4.6	4.4/5.5	5.2/6.5	1.5/3	2.3/3	3/3.8	3.7/4.6	4.4/5.5	5.2/6.5	2.3/3	3/3.8	3.7/4.6	4.4/5.5	5.2/6.5	6.1/7.6	3/3.8	3.7/4.6	4.4/5.5	5.2/6.5	6.1/7.6	8.1/10.1
10	244	500	745	909	1075	1252	487	1103	1491	1819	2150	2504	1654	2236	2728	3225	3756	4326	2981	3638	4299	5008	5768	7467
	165	370	724	-	-	-	329	741	1447	-	-	-	1111	2171	-	-	-	-	2894	-	-	-	-	-
	1.5/3	1.9/3	2.9/3.6	3.5/4.4	4.1/5.2	4.8/6	1.5/3	2.1/3	2.9/3.6	3.5/4.4	4.1/5.2	4.8/6	2.1/3	2.9/3.6	3.5/4.4	4.1/5.2	4.8/6	5.5/6.9	2.9/3.6	3.5/4.4	4.1/5.2	4.8/6	5.5/6.9	7.2/8.9
11	182	412	630	809	953	1105	365	826	1331	1618	1906	2211	1240	1997	2428	2858	3316	3803	2662	3237	3811	4422	5071	6505
	124	278	544	-	-	-	247	557	1087	-	-	-	835	1631	-	-	-	-	2175	-	-	-	-	-
	1.5/3	1.7/3	2.7/3.3	3.4/4.3	4/5	4.7/5.8	1.5/3	1.7/3	2.8/3.5	3.4/4.3	4/5	4.7/5.8	1.7/3	2.8/3.5	3.4/4.3	4/5	4.7/5.8	5.4/6.7	2.8/3.5	3.4/4.3	4/5	4.7/5.8	5.4/6.7	6.9/8.6
12	140	317	528	722	856	989	279	635	1171	1457	1711	1979	952	1757	2186	2567	2968	3393	2343	2915	3422	3958	4524	5760
	95	214	419	686	-	-	191	429	837	1372	-	-	643	1256	2058	-	-	-	1675	2745	-	-	-	-
	1.5/3	1.5/3	2.4/3.1	3.3/4.2	3.9/4.9	4.6/5.7	1.5/3	1.5/3	2.7/3.4	3.4/4.2	3.9/4.9	4.6/5.7	1.5/3	2.7/3.4	3.4/4.2	3.9/4.9	4.6/5.7	5.2/6.5	2.7/3.4	3.4/4.2	3.9/4.9	4.6/5.7	5.2/6.5	6.6/8.3
13	109	249	449	614	776	895	218	497	977	1325	1552	1791	746	1466	1988	2328	2686	3062	1955	2651	3104	3581	4083	5168
	75	169	329	540	-	-	150	337	659	1079	-	-	506	988	1619	-	-	-	1317	2159	-	-	-	-
	1.5/3	1.5/3	2.3/3	3.1/3.8	3.9/4.8	4.5/5.6	1.5/3	1.5/3	2.4/3.1	3.3/4.1	3.9/4.8	4.5/5.6	1.5/3	2.4/3.1	3.3/4.1	3.9/4.8	4.5/5.6	5.1/6.4	2.4/3.1	3.3/4.1	3.9/4.8	4.5/5.6	5.1/6.4	6.5/8.1
14	87	198	387	529	682	817	174	396	780	1172	1420	1635	595	1171	1759	2130	2452	2789	1561	2345	2840	3270	3719	4686
	60	135	264	432	645	-	120	270	527	864	1290	-	405	791	1296	1935	-	-	1055	1728	2580	-	-	-
	1.5/3	1.5/3	2.1/3	2.9/3.6	3.7/4.6	4.4/5.5	1.5/3	1.5/3	2.1/3	3.2/4	3.8/4.8	4.4/5.5	1.5/3	2.1/3	3.2/4	3.8/4.8	4.4/5.5	5/6.3	2.1/3	3.2/4	3.8/4.8	4.4/5.5	5/6.3	6.3/7.9
15	70	160	316	460	593	741	140	321	632	1020	1309	1504	481	949	1530	1963	2256	2561	1265	2039	2617	3008	3415	4285
	49	110	214	351	524	-	98	220	429	703	1049	1493	329	643	1054	1573	2240	-	858	1405	2098	2987	-	-
	1.5/3	1.5/3	1.8/3	2.7/3.3	3.4/4.3	4.3/5.4	1.5/3	1.5/3	1.8/3	2.9/3.7	3.8/4.7	4.3/5.4	1.5/3	1.8/3	2.9/3.7	3.8/4.7	4.3/5.4	4.9/6.2	1.8/3	2.9/3.7	3.8/4.7	4.3/5.4	4.9/6.2	6.2/7.7
16	57	131	260	403	520	651	114	263	519	856	1153	1392	394	779	1284	1730	2088	2367	1039	1712	2306	2784	3156	3947
	40	90	177	289	432	615	80	181	353	579	864	1230	271	530	868	1296	1846	-	707	1158	1728	2461	-	-
	1.5/3	1.5/3	1.6/3	2.5/3.1	3.2/4	4/5	1.5/3	1.5/3	1.6/3	2.6/3.3	3.6/4.4	4.3/5.4	1.5/3	1.6/3	2.6/3.3	3.6/4.4	4.3/5.4	4.9/6.1	1.6/3	2.6/3.3	3.6/4.4	4.3/5.4	4.9/6.1	6.1/7.6
17	-	109	216	356	460	575	94	218	431	711	1020	1276	327	647	1067	1530	1914	2200	862	1423	2040	2552	2933	3658
	-	75	147	241	360	513	67	151	295	483	720	1026	226	442	724	1081	1539	2111	589	965	1441	2052	2814	-
	-	1.5/3	1.5/3	2.3/3	3/3.8	3.8/4.7	1.5/3	1.5/3	1.5/3	2.3/3	3.3/4.2	4.2/5.2	1.5/3	1.5/3	2.3/3	3.3/4.2	4.2/5.2	4.8/6	1.5/3	2.3/3	3.3/4.2	4.2/5.2	4.8/6	6/7.5
18	-	91	181	299	409	512	78	182	362	597	896	1136	273	542	896	1344	1704	2055	723	1195	1792	2273	2740	3408
	-	64	124	203	303	432	56	127	248	407	607	864	191	372	610	910	1296	1778	496	813	1214	1728	2371	-
	-	1.5/3	1.5/3	2.1/3	2.9/3.6	3.6/4.5	1.5/3	1.5/3	1.5/3	2.1/3	3.1/3.9	4/4.9	1.5/3	1.5/3	2.1/3	3.1/3.9	4/4.9	4.8/5.9	1.5/3	2.1/3	3.1/3.9	4/4.9	4.8/5.9	5.9/7.4
19	-	77	153	253	367	459	66	153	306	506	760	1018	230	459	759	1140	1527	1866	612	1012	1519	2036	2488	3189
	-	54	105	173	258	367	48	108	211	346	516	735	162	316	519	774	1102	1512	422	691	1032	1470	2016	-
	-	1.5/3	1.5/3	1.9/3	2.7/3.4	3.4/4.2	1.5/3	1.5/3	1.5/3	1.9/3	2.8/3.5	3.7/4.7	1.5/3	1.5/3	1.9/3	2.8/3.5	3.7/4.7	4.6/5.7	1.5/3	1.9/3	2.8/3.5	3.7/4.7	4.6/5.7	5.8/7.3
20	-	65	130	216	325	413	55	130	261	432	649	917	196	391	648	974	1376	1682	521	864	1299	1835	2242	2997
	-	46	90	148	221	315	41	93	181	296	442	630	139	271	445	664	945	1296	362	593	885	1260	1728	2987
	-	1.5/3	1.5/3	1.7/3	2.5/3.2	3.2/4	1.5/3	1.5/3	1.5/3	1.7/3	2.5/3.2	3.6/4.4	1.5/3	1.5/3	1.7/3	2.5/3.2	3.6/4.4	4.3/5.4	1.5/3	1.7/3	2.5/3.2	3.6/4.4	4.3/5.4	5.8/7.2
22	-	48	97	161	242	340	-	96	193	321	484	694	144	290	482	726	1041	1385	386	643	969	1388	1847	2614
	-	35	68	111	166	237	-	70	136	223	332	473	104	204	334	499	710	974	272	445	665	947	1299	2244
	-	1.5/3	1.5/3	1.5/3	2.1/3	2.9/3.6	-	1.5/3	1.5/3	1.5/3	2.1/3	3/3.7	1.5/3	1.5/3	1.5/3	2.1/3	3/3.7	3.9/4.9	1.5/3	1.5/3	2.1/3	3/3.7	3.9/4.9	5.6/7
24	-	36	73	122	185	265	-	72	146	245	370	531	108	220	367	555	796	1098	293	489	739	1061	1464	2189
	-	27	52	86	128	182	-	54	105	172	256	365	80	157	257	384	547	750	209	343	512	729	1000	1728
	-	1.5/3	1.5/3	1.5/3	1.8/3	2.5/3.1	-	1.5/3	1.5/3	1.5/3	1.8/3	2.5/3.1	1.5/3	1.5/3	1.5/3	1.8/3	2.5/3.1	3.4/4.3	1.5/3	1.5/3	1.8/3	2.5/3.1	3.4/4.3	5.1/6.4
26	-	-	-	95	144	207	-	55	113	190	288	414	82	169	285	432	621	858	226	380	575	828	1144	1859
	-	-	-	67	101	143	-	42	82	135	201	287	63	124	202	302	430	590	165	270	403	574	787	1359
	-	-	-	1.5/3	1.5/3	2.1/3	-	1.5/3	1.5/3	1.5/3	2.1/3	2.1/3	1.5/3	1.5/3	1.5/3	1.5/3	2.1/3	2.9/3.7	1.5/3	1.5/3	1.5/3	2.1/3	2.9/3.7	4.7/5.9
28	-	-	-	75	114	164	-	-	88	149	227	328	63	132	224	341	492	682	176	299	455	656	909	1589
	-	-	-	54	81	115	-	-	66	108	161	230	51	99	162	242	344	472	132	216	322	459	630	1088
	-	-	-	1.5/3	1.5/3	1.8/3	-	-	1.5/3	1.5/3	1.8/3	1.5/3	1.5/3	1.5/3	1.8/3	2.5/3.1	1.5/3	1.5/3	1.5/3	1.5/3	1.8/3	2.5/3.1	4.4/5.4	
30	-	-	-	60	91	132	-	-	70	119	182	264	-	105	179	273	396	549	139	238	365	528	773	1284
	-	-	-	44	66	93	-	-	54	88														

VERSA-LAM® Roof Load Tables

VERSA-LAM® 2.0 2800 and 2.0 3100 (115% Load Duration)

KEY TO TABLE	Top Figure - Allowable Total Load [plf]
	Middle Figure - Allowable Live Load [plf]
	Bottom Figures - Minimum Required Bearing Length at End / Intermediate Supports [inches]

Span [ft]	1 3/4" VERSA-LAM® 2.0 2800 ⁽¹⁾						3 1/2" VERSA-LAM® 2.0 3100						5 1/4" VERSA-LAM® 2.0 3100						7" VERSA-LAM® 2.0 3100					
	7 1/4"	9 1/2"	11 7/8"	14"	16 ⁽²⁾	18 ⁽²⁾	7 1/4"	9 1/2"	11 7/8"	14"	16"	18"	9 1/2"	11 7/8"	14"	16"	18"	20"	11 7/8"	14"	16"	18"	20"	24"
6	878	1224	1640	2066	2524	3051	1756	2447	3279	4132	5049	6102	3671	4919	6198	7573	9153	10985	6558	8264	10098	12204	14647	20933
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	2/3	2.8/3.5	3.8/4.7	4.7/5.9	5.8/7.2	7/8.7	2/3	2.8/3.5	3.8/4.7	4.7/5.9	5.8/7.2	7/8.7	2.8/3.5	3.8/4.7	4.7/5.9	5.8/7.2	7/8.7	8.4/10.5	3.8/4.7	4.7/5.9	5.8/7.2	7/8.7	8.4/10.5	12/15
	541	859	1127	1390	1661	1958	1198	1718	2254	2780	3323	3917	2577	3381	4171	4984	5875	6856	4508	5561	6645	7834	9141	12193
10	1.7/3	2.6/3.3	3.5/4.3	4.3/5.3	5.1/6.4	6/7.5	1.8/3	2.6/3.3	3.5/4.3	4.3/5.3	5.1/6.4	6/7.5	2.6/3.3	3.5/4.3	4.3/5.3	5.1/6.4	6/7.5	7/8.7	3.5/4.3	4.3/5.3	5.1/6.4	6/7.5	7/8.7	9.3/11.7
	326	576	858	1047	1237	1441	652	1276	1716	2094	2474	2882	1913	2574	3140	3711	4323	4979	3431	4187	4949	5764	6638	8594
11	244	475	725	932	1097	1272	488	1053	1532	1863	2194	2545	1579	2299	2795	3290	3817	4378	3065	3726	4387	5090	5837	7487
	186	418	-	-	-	-	371	835	-	-	-	-	1253	-	-	-	-	-	-	-	-	-	-	-
12	1.5/3	2/3	3.1/3.8	3.9/4.9	4.6/5.8	5.4/6.7	1.5/3	2.2/3	3.2/4	3.9/4.9	4.6/5.8	5.4/6.7	2.2/3	3.2/4	3.9/4.9	4.6/5.8	5.4/6.7	6.2/7.7	3.2/4	3.9/4.9	4.6/5.8	5.4/6.7	6.2/7.7	7.9/9.9
	187	398	609	831	985	1139	375	849	1349	1678	1970	2278	1274	2023	2517	2955	3417	3906	2697	3356	3940	4556	5208	6631
13	143	322	-	-	-	-	286	643	1256	-	-	-	965	1884	-	-	-	-	2512	-	-	-	-	-
	15/3	1.8/3	2.8/3.5	3.8/4.8	4.5/5.7	5.2/6.6	1.5/3	2/3	3.1/3.9	3.9/4.8	4.5/5.7	5.2/6.6	2/3	3.1/3.9	3.9/4.8	4.5/5.7	5.2/6.6	6/7.5	3.1/3.9	3.9/4.8	4.5/5.7	5.2/6.6	6/7.5	7.6/9.5
14	147	333	518	708	894	1031	293	666	1147	1526	1787	2062	999	1721	2289	2681	3092	3525	2295	3052	3574	4123	4701	5950
	112	253	494	-	-	-	225	506	988	-	-	-	759	1482	-	-	-	-	1976	-	-	-	-	-
15	1.5/3	1.7/3	2.6/3.2	3.5/4.4	4.5/5.6	5.1/6.4	1.5/3	1.7/3	2.9/3.6	3.8/4.8	4.5/5.6	5.1/6.4	1.7/3	2.9/3.6	3.8/4.8	4.5/5.6	5.1/6.4	5.9/7.3	2.9/3.6	3.8/4.8	4.5/5.6	5.1/6.4	5.9/7.3	7.4/9.3
	117	266	446	609	785	941	234	532	988	1350	1635	1883	797	1482	2025	2453	2824	3212	1976	2701	3271	3765	4283	5395
16	90	203	396	-	-	-	180	405	791	1296	-	-	608	1187	1944	-	-	-	1582	2593	-	-	-	-
	1.5/3	1.5/3	2.4/3	3.3/4.1	4.2/5.3	5.1/6.3	1.5/3	1.5/3	2.7/3.3	3.6/4.5	4.4/5.5	5.1/6.3	1.5/3	2.7/3.3	3.6/4.5	4.4/5.5	5.1/6.3	5.8/7.2	2.7/3.3	3.6/4.5	4.4/5.5	5.1/6.3	5.8/7.2	7.3/9.1
17	94	215	388	530	683	854	189	431	847	1175	1507	1732	646	1270	1762	2261	2598	2949	1694	2349	3014	3464	3932	4934
	73	165	322	527	-	-	146	329	643	1054	-	-	494	965	1581	-	-	-	1286	2108	-	-	-	-
18	1.5/3	1.5/3	2.2/3	3.1/3.8	3.9/4.9	4.9/6.2	1.5/3	1.5/3	2.5/3.1	3.4/4.2	4.3/5.4	5/6.2	1.5/3	2.5/3.1	3.4/4.2	4.3/5.4	5/6.2	5.7/7.1	2.5/3.1	3.4/4.2	4.3/5.4	5/6.2	5.7/7.1	7.1/8.9
	77	177	340	465	599	749	154	353	696	1031	1328	1603	530	1044	1546	1993	2405	2726	1392	2062	2657	3207	3635	4545
19	60	136	265	434	-	-	121	271	530	868	1296	-	407	795	1303	1944	-	-	1060	1737	2593	-	-	-
	1.5/3	1.5/3	2.1/3	2.9/3.6	3.7/4.6	4.6/5.8	1.5/3	1.5/3	2.2/3	3.2/4	4.1/5.1	4.9/6.2	1.5/3	2.2/3	3.2/4	4.1/5.1	4.9/6.2	5.6/7	2.2/3	3.2/4	4.1/5.1	4.9/6.2	5.6/7	7/8.7
20	64	147	289	411	530	663	128	293	578	912	1175	1470	440	868	1368	1763	2204	2534	1157	1823	2350	2939	3379	4213
	50	113	221	362	-	-	101	226	442	724	1081	-	339	663	1086	1621	-	-	884	1448	2161	-	-	-
21	1.5/3	1.5/3	1.9/3	2.7/3.4	3.5/4.3	4.3/5.4	1.5/3	1.5/3	1.9/3	3/3.7	3.9/4.8	4.8/6	1.5/3	1.9/3	3/3.7	3.9/4.8	4.8/6	5.5/6.9	1.9/3	3/3.7	3.9/4.8	4.8/6	5.5/6.9	6.9/8.6
	53	123	243	366	472	590	106	246	486	801	1047	1309	368	728	1201	1570	1964	2367	971	1601	2093	2618	3156	3925
22	42	95	186	305	455	-	85	191	372	610	910	1296	286	558	915	1366	1944	-	744	1220	1821	2593	-	-
	1.5/3	1.5/3	1.7/3	2.6/3.2	3.3/4.1	4.1/5.1	1.5/3	1.5/3	1.7/3	2.8/3.5	3.6/4.5	4.5/5.7	1.5/3	1.7/3	2.8/3.5	3.6/4.5	4.5/5.7	5.5/6.8	1.7/3	2.8/3.5	3.6/4.5	4.5/5.7	5.5/6.8	6.8/8.5
23	-	104	206	328	423	529	90	208	411	679	938	1173	311	617	1018	1407	1760	2150	823	1358	1876	2347	2867	3674
	-	81	158	259	387	-	72	162	316	519	774	1102	243	475	778	1161	1653	-	633	1037	1548	2204	-	-
24	-	1.5/3	1.5/3	2.4/3	3.1/3.9	3.9/4.9	1.5/3	1.5/3	2.5/3.1	3.4/4.3	4.3/5.4	1.5/3	1.5/3	2.5/3.1	3.4/4.3	4.3/5.4	5.3/6.6	1.5/3	2.5/3.1	3.4/4.3	4.3/5.4	5.3/6.6	6.7/8.4	
	-	88	176	290	381	477	76	177	351	580	845	1057	265	527	870	1267	1586	1938	702	1160	1690	2115	2584	3453
25	-	69	136	222	332	473	62	139	271	445	664	945	208	407	667	996	1418	-	543	889	1327	1890	-	-
	-	1.5/3	1.5/3	2.3/3	3/3.7	3.7/4.6	1.5/3	1.5/3	1.5/3	2.3/3	3.3/4.1	4.1/5.1	1.5/3	1.5/3	2.3/3	3.3/4.1	4.1/5.1	5/6.2	1.5/3	2.3/3	3.3/4.1	4.1/5.1	5/6.2	6.7/8.3
26	-	65	131	216	314	393	55	131	261	433	650	871	196	392	649	976	1307	1597	522	866	1301	1742	2129	3012
	-	52	102	167	249	355	46	104	204	334	499	710	157	306	501	748	1065	1461	408	668	997	1420	1948	-
27	-	1.5/3	1.5/3	1.9/3	2.7/3.4	3.4/4.2	1.5/3	1.5/3	1.9/3	2.8/3.5	3.7/4.6	1.5/3	1.5/3	1.9/3	2.8/3.5	3.7/4.6	4.5/5.7	1.5/3	1.9/3	2.8/3.5	3.7/4.6	4.5/5.7	6.4/8	
	-	-	99	165	249	329	-	99	199	330	498	713	148	298	496	747	1069	1337	397	661	995	1426	1783	2524
28	-	-	79	129	192	273	-	80	157	257	384	547	121	236	386	576	820	1125	314	515	768	1094	1500	-
	-	-	1.5/3	1.6/3	2.3/3	3.1/3.8	-	1.5/3	1.5/3	1.6/3	2.3/3	3.3/4.2	1.5/3	1.5/3	1.6/3	2.3/3	3.3/4.2	4.2/5.2	1.5/3	1.6/3	2.3/3	3.3/4.2	4.2/5.2	5.9/7.3
29	-	-	77	129	194	279	-	76	154	257	388	557	114	231	386	583	836	1136	308	515	777	1115	1514	2144
	-	-	62	101	151	215	-	63	124	202	302	430	95	185	304	453	645	885	247	405	604	860	1180	2039
30	-	-	1.5/3	1.5/3	2/3	2.8/3.6	-	1.5/3	1.5/3	1.5/3	2/3	2.8/3.6	1.5/3	1.5/3	1.5/3	2/3	2.8/3.6	3.8/4.8	1.5/3	1.5/3	2/3	2.8/3.6	3.8/4.8	5.4/6.8
	-	-	61	102	154	221	-	59	121	203	308	443	88	182	305	462	664	918	242	407	616	886	1224	1843
31	-	-	49	81	121	172	-	51	99	162	242	344	76	148	243	363	517	709	198	324	484	689	945	1633
	-	-	1.5/3	1.5/3	1.7/3	2.4/3.1	-	1.5/3	1.5/3	1.7/3	2.4/3.1	1.5/3	1.5/3	1.5/3	1.7/3	2.4/3.1	3.4/4.2	1.5/3	1.5/3	1.7/3	2.4/3.1	3.4/4.2	5/6.3	
32	-	-	-	82	124	179	-	-	97	163	248	357	70	145	245	372	536	741	193	326	496	714	988	1600
	-	-	-	66	98	140	-	-	80	132	197	280	62	121	198	295	420	576	161	263	393	560	768	1327
33	-	-	-	1.5/3	1.5/3	2.1/3	-	-	1.5/3	1.5/3	1.5/3	2.1/3	1.5/3	1.5/3	1.5/3	1.5/3	2.1/3	2.9/3.7	1.5/3	1.5/3	1.5/3	2.1/3	2.9/3.7	4.7/5.9

- (1) For 2-ply, 3-ply or 4-ply beams; double, triple or quadruple Allowable Total Load and Allowable Live Load values. Minimum Required Bearing Lengths remain the same for any number of plies.
- (2) 1 3/4 inch members deeper than 14 inches are to be used as multiple-member beams only.
- Total Load values are limited by shear, moment or deflection equal to L/240. Total Load values are the capacity of the beam in addition to its own weight.
- Live Load values are limited by def

VERSA-LAM® Roof Load Tables

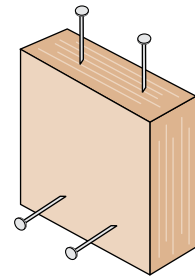
VERSA-LAM® 2.0 2800 and 2.0 3100 (125% Load Duration)

KEY TO TABLE	Top Figure - Allowable Total Load [plf]
	Middle Figure - Allowable Live Load [plf]
	Bottom Figures - Minimum Required Bearing Length at End / Intermediate Supports [inches]

Span [ft]	1 1/4" VERSA-LAM® 2.0 2800 ⁽¹⁾						3 1/2" VERSA-LAM® 2.0 3100						5 1/4" VERSA-LAM® 2.0 3100						7" VERSA-LAM® 2.0 3100							
	7 1/4"	9 1/2"	11 7/8"	14"	16" ⁽²⁾	18" ⁽²⁾	7 1/4"	9 1/2"	11 7/8"	14"	16"	18"	9 1/2"	11 7/8"	14"	16"	18"	20"	11 7/8"	14"	16"	18"	20"	24"		
6	955	1330	1783	2246	2745	3317	1909	2661	3565	4492	5489	6634	3991	5348	6738	8234	9951	11943	7131	8984	10978	13268	15924	22757		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
8	2.2/3	3.1/3.8	4.1/5.1	5.1/6.4	6.3/7.9	7.6/9.5	2.2/3	3.1/3.8	4.1/5.1	5.1/6.4	6.3/7.9	7.6/9.5	3.1/3.8	4.1/5.1	5.1/6.4	6.3/7.9	7.6/9.5	9.1/11.4	4.1/5.1	5.1/6.4	6.3/7.9	7.6/9.5	9.1/11.4	13/16.3		
	588	934	1225	1512	1806	2129	1280	1868	2451	3023	3613	4259	2802	3676	4535	5419	6388	7454	4901	6047	7226	8518	9939	13257		
10	482	-	-	-	-	-	965	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	1.8/3	2.9/3.6	3.8/4.7	4.6/5.8	5.5/6.9	6.5/8.1	2/3	2.9/3.6	3.8/4.7	4.6/5.8	5.5/6.9	6.5/8.1	2.9/3.6	3.8/4.7	4.6/5.8	5.5/6.9	6.5/8.1	7.6/9.5	3.8/4.7	4.6/5.8	5.5/6.9	6.5/8.1	7.6/9.5	10.1/12.7		
11	326	626	933	1138	1345	1567	652	1387	1866	2277	2691	3134	2081	2799	3415	4036	4701	5414	3732	4554	5381	6268	7219	9345		
	247	556	-	-	-	-	494	1111	-	-	-	-	1667	-	-	-	-	-	-	-	-	-	-	-		
12	1.5/3	2.4/3	3.6/4.5	4.4/5.5	5.2/6.4	6/7.5	1.5/3	2.7/3.3	3.6/4.5	4.4/5.5	5.2/6.4	6/7.5	2.7/3.3	3.6/4.5	4.4/5.5	5.2/6.4	6/7.5	6.9/8.6	3.6/4.5	4.4/5.5	5.2/6.4	6/7.5	6.9/8.6	8.9/11.2		
	244	517	789	1013	1193	1384	488	1105	1667	2026	2386	2768	1657	2500	3039	3578	4151	4761	3333	4052	4771	5535	6348	8141		
13	186	418	-	-	-	-	371	835	1631	-	-	-	1253	2446	-	-	-	-	3262	-	-	-	-	-		
	1.5/3	2.2/3	3.3/4.2	4.3/5.3	5/6.3	5.8/7.3	1.5/3	2.3/3	3.5/4.4	4.3/5.3	5/6.3	5.8/7.3	2.3/3	3.5/4.4	4.3/5.3	5/6.3	5.8/7.3	6.7/8.4	3.5/4.4	4.3/5.3	5/6.3	5.8/7.3	6.7/8.4	8.6/10.7		
14	187	425	662	904	1071	1239	375	849	1467	1825	2142	2478	1274	2200	2737	3214	3716	4248	2934	3650	4285	4955	5664	7211		
	143	322	628	-	-	-	286	643	1256	-	-	-	965	1884	-	-	-	-	2512	-	-	-	-	-		
15	1.5/3	2/3	3.1/3.8	4.2/5.2	4.9/6.2	5.7/7.1	1.5/3	2/3	3.4/4.2	4.2/5.3	4.9/6.2	5.7/7.1	2/3	3.4/4.2	4.2/5.3	4.9/6.2	5.7/7.1	6.5/8.1	3.4/4.2	4.2/5.3	4.9/6.2	5.7/7.1	6.5/8.1	8.3/10.4		
	147	333	563	770	972	1121	293	666	1248	1660	1944	2242	999	1872	2490	2916	3363	3834	2496	3320	3888	4485	5112	6471		
16	112	253	494	-	-	-	225	506	988	1619	-	-	759	1482	2429	-	-	-	1976	3238	-	-	-	-		
	1.5/3	1.7/3	2.8/3.5	3.8/4.8	4.8/6.1	5.6/7	1.5/3	1.7/3	3.1/3.9	4.1/5.2	4.8/6.1	5.6/7	1.7/3	3.1/3.9	4.1/5.2	4.8/6.1	5.6/7	6.4/8	3.1/3.9	4.1/5.2	4.8/6.1	5.6/7	6.4/8	8.1/10.1		
17	117	266	485	663	854	1024	234	532	1044	1469	1779	2048	797	1566	2203	2668	3071	3494	2088	2938	3558	4095	4658	5868		
	90	203	396	648	-	-	180	405	791	1296	-	-	608	1187	1944	-	-	-	1582	2593	-	-	-	-		
18	1.5/3	1.5/3	2.6/3.3	3.6/4.5	4.6/5.7	5.5/6.9	1.5/3	1.5/3	2.8/3.5	4/4.9	4.8/6	5.5/6.9	1.5/3	2.8/3.5	4/4.9	4.8/6	5.5/6.9	6.3/7.8	2.8/3.5	4/4.9	4.8/6	5.5/6.9	6.3/7.8	7.9/9.9		
	94	215	422	576	743	929	189	431	847	1278	1639	1884	646	1270	1917	2459	2826	3208	1694	2556	3279	3768	4278	5367		
19	73	165	322	527	-	-	146	329	643	1054	1573	-	494	965	1581	2360	-	-	1286	2108	3146	-	-	-		
	1.5/3	1.5/3	2.4/3.1	3.3/4.2	4.3/5.4	5.4/6.7	1.5/3	1.5/3	2.5/3.1	3.7/4.6	4.7/5.9	5.4/6.8	1.5/3	2.5/3.1	3.7/4.6	4.7/5.9	5.4/6.8	6.2/7.7	2.5/3.1	3.7/4.6	4.7/5.9	5.4/6.8	6.2/7.7	7.7/9.7		
20	77	177	348	506	652	815	154	353	696	1122	1445	1744	530	1044	1682	2168	2616	2966	1392	2243	2890	3488	3954	4944		
	60	136	265	434	648	-	121	271	530	868	1296	-	407	795	1303	1944	-	-	1060	1737	2593	-	-	-		
21	1.5/3	1.5/3	2.2/3	3.1/3.9	4/5	5/6.3	1.5/3	1.5/3	2.2/3	3.5/4.3	4.4/5.6	5.4/6.7	1.5/3	2.2/3	3.5/4.3	4.4/5.6	5.4/6.7	6.1/7.6	2.2/3	3.5/4.3	4.4/5.6	5.4/6.7	6.1/7.6	7.6/9.5		
	64	147	289	447	577	721	128	293	578	953	1278	1599	440	868	1429	1918	2398	2757	1157	1905	2557	3198	3676	4583		
22	50	113	221	362	540	-	101	226	442	724	1081	1539	339	663	1086	1621	2308	-	884	1448	2161	3078	-	-		
	1.5/3	1.5/3	1.9/3	2.9/3.7	3.8/4.7	4.7/5.9	1.5/3	1.5/3	1.9/3	3.1/3.9	4.2/5.2	5.2/6.5	1.5/3	1.9/3	3.1/3.9	4.2/5.2	5.2/6.5	6/7.5	1.9/3	3.1/3.9	4.2/5.2	5.2/6.5	6/7.5	7.5/9.4		
23	53	123	243	398	514	642	106	246	486	801	1139	1424	368	728	1201	1708	2137	2575	971	1601	2278	2849	3434	4270		
	42	95	186	305	455	-	85	191	372	610	910	1296	286	558	915	1366	1944	-	744	1220	1821	2593	-	-		
24	1.5/3	1.5/3	1.7/3	2.8/3.5	3.6/4.5	4.5/5.6	1.5/3	1.5/3	1.7/3	2.8/3.5	4/4.9	4.9/6.2	1.5/3	1.7/3	2.8/3.5	4/4.9	4.9/6.2	5.9/7.4	1.7/3	2.8/3.5	4/4.9	4.9/6.2	5.9/7.4	7.4/9.2		
	-	104	206	339	460	576	90	208	411	679	1018	1277	311	617	1018	1527	1915	2339	823	1358	2036	2553	3119	3997		
25	-	88	176	290	415	519	76	177	351	580	871	1151	265	527	870	1306	1726	2109	702	1160	1741	2301	2812	3757		
	-	81	158	259	387	551	72	162	316	519	774	1102	243	475	778	1161	1653	2268	633	1037	1548	2204	3024	-		
26	-	1.5/3	1.5/3	2.5/3.1	3.4/4.2	4.2/5.3	1.5/3	1.5/3	1.5/3	2.5/3.1	3.7/4.7	4.7/5.8	1.5/3	1.5/3	2.5/3.1	3.7/4.7	4.7/5.8	5.7/7.1	1.5/3	2.5/3.1	3.7/4.7	4.7/5.8	5.7/7.1	7.3/9.1		
	-	69	136	222	332	473	62	139	271	445	664	945	208	407	667	996	1418	1944	543	889	1327	1890	2593	-		
27	-	1.5/3	1.5/3	2.3/3	3.2/4	4/5	1.5/3	1.5/3	1.5/3	2.3/3	3.4/4.2	4.4/5.6	1.5/3	1.5/3	2.3/3	3.4/4.2	4.4/5.6	5.4/6.8	1.5/3	2.3/3	3.4/4.2	4.4/5.6	5.4/6.8	7.2/9		
	-	65	131	216	325	427	55	131	261	433	650	930	196	392	649	976	1396	1738	522	866	1301	1861	2317	3278		
28	-	52	102	167	249	355	46	104	204	334	499	710	157	306	501	748	1065	1461	408	668	997	1420	1948	-		
	-	1.5/3	1.5/3	1.9/3	2.8/3.5	3.6/4.6	1.5/3	1.5/3	1.5/3	1.9/3	2.8/3.5	4/5	1.5/3	1.5/3	1.9/3	2.8/3.5	4/5	4.9/6.2	1.5/3	1.9/3	2.8/3.5	4/5	4.9/6.2	7/8.7		
29	-	-	99	165	249	356	-	99	199	330	498	713	148	298	496	747	1069	1456	397	661	995	1426	1942	2747		
	-	-	79	129	192	273	-	80	157	257	384	547	121	236	386	576	820	1125	314	515	768	1094	1500	2593		
30	-	-	1.5/3	1.6/3	2.3/3	3.3/4.2	-	1.5/3	1.5/3	1.6/3	2.3/3	3.3/4.2	1.5/3	1.5/3	1.6/3	2.3/3	3.3/4.2	4.5/5.6	1.5/3	1.6/3	2.3/3	3.3/4.2	4.5/5.6	6.4/8		
	-	-	77	129	194	279	-	76	154	257	388	557	114	231	386	583	836	1153	308	515	777	1115	1537	2335		
31	-	-	62	101	151	215	-	63	124	202	302	430	95	185	304	453	645	885	247	405	604	860	1180	2039		
	-	-	1.5/3	1.5/3	2/3	2.8/3.6	-	1.5/3	1.5/3	2/3	2.8/3.6	1.5/3	1.5/3	2/3	2.8/3.6	1.5/3	1.5/3	2/3	2.8/3.6	1.5/3	1.5/3	2/3	2.8/3.6	1.5/3	1.5/3	2/3
32	-	-	61	102	154	221	-	59	121	203	308	443	88	182	305	462	664	918	242	407	616	886	1224	2007		
	-	-	49	81	121	172	-	51	99	162	242	344	76	148	243	363	517	709	198	324	484	689	945	1633		
33	-	-	1.5/3	1.5/3	1.7/3	2.4/3.1	-	1.5/3	1.5/3	1.7/3	2.4/3.1	1.5/3	1.5/3	1.7/3	2.4/3.1	3.4/4.2	1.5/3	1.5/3	1.7/3	2.4/3.1	3.4/4.2	4.5/5.6	5.5/6.8			
	-	-	-	82	124	179	-	-	97	163																

Closest Allowable Nail Spacing

Nailing Parallel to Glue Lines (Narrow Face)



Nailing Perpendicular to Glue Lines (Wide Face)

Nailing Notes

- For 1 3/4" thickness and greater, 2 rows of nails (such as for a metal strap) are allowed (use 1/2" minimum offset between rows and stagger nails).

VERSA-LAM® & VERSA-RIM® Products										
Nail Size	Nailing Parallel to Glue Lines (Narrow Face) ⁽¹⁾								Nailing Perpendicular to Glue Lines (Wide Face)	
	VERSA-RIM® 1 1/8"		VERSA-LAM® 1.4 1800 Rimboard 1 1/4"		VERSA-LAM® 1 3/4" & 2 5/8"		VERSA-LAM® 3 1/2" & Wider		All Products	
	O.C. [inches]	End [inches]	O.C. [inches]	End [inches]	O.C. [inches]	End [inches]	O.C. [inches]	End [inches]	O.C. [inches]	End [inches]
8d Box	3	1 1/2	3	1 1/2	2	1	2	1/2	2	1/2
8d Common	4	3	3	2	3	2	2	1	2	1
10d & 12d Box	4	3	3	2	3	2	2	1	2	1
16d Box	4	3	3	2	3	2	2	1	2	1
10d & 12d Common	6	4	4	3	4	3	2	2	2	2
16d Sinker	6	4	4	3	4	3	2	2	2	2
16d Common	6	4	6	4	6	3	2	2	2	2

- Offset and stagger nail rows from floor sheathing and wall sole plate.
- Simpson Strong-Tie A35 and LPT4 connectors may be attached to the side VERSA-LAM®/VERSA-RIM®. Use nails as specified by Simpson Strong-Tie.

VERSA-LAM® Design Values

Grade	Width [in]	Depth [in]	Weight [lb/ft]	Allowable Shear [lb]	Allowable Moment [ft-lb]	Moment of Inertia [in ⁴]
2.0 2800	1 3/4	5 1/2	2.5	1829	2245	24.3
		7 1/4	3.3	2411	3783	55.6
		9 1/4	4.2	3076	5994	115.4
		9 1/2	4.3	3159	6304	125.0
		11 1/4	5.1	3741	8675	207.6
		11 7/8	5.3	3948	9608	244.2
		14	6.3	4655	13112	400.2
		16	7.2	5320	16874	597.3
2.0 2800	2 5/8	5 1/2	3.7	2743	3368	36.4
		7 1/4	4.9	3616	5675	83.4
		9 1/4	6.2	4613	8991	173.1
		9 1/2	6.4	4738	9455	187.6
		11 1/4	7.6	5611	13013	311.5
		11 7/8	8.0	5923	14412	366.3
		14	9.4	6983	19669	600.3
		16	10.8	7980	25311	896.0
2.0 3100	3 1/2	5 1/2	4.9	3658	4971	48.5
		7 1/4	6.5	4821	8377	111.1
		9 1/4	8.3	6151	13272	230.8
		9 1/2	8.5	6318	13958	250.1
		11 1/4	10.1	7481	19210	415.3
		11 7/8	10.7	7897	21275	488.4
		14	12.6	9310	29035	800.3
		16	14.4	10640	37364	1194.7
2.0 3100	5 1/4	5 1/4	7.1	5237	6830	63.3
		5 1/2	7.4	5486	7457	72.8
		7 1/4	9.8	7232	12566	166.7
		9 1/4	12.5	9227	19908	346.3
		9 1/2	12.8	9476	20937	375.1
		11 1/4	15.2	11222	28814	622.9
		11 7/8	16.0	11845	31913	732.6
		14	18.9	13965	43552	1200.5
		16	21.6	15960	56046	1792.0
		18	24.3	17955	70011	2551.5
		20	27.0	19950	85428	3500.0
		24	32.4	23940	120549	6048.0

Grade	Width [in]	Depth [in]	Weight [lb/ft]	Allowable Shear [lb]	Allowable Moment [ft-lb]	Moment of Inertia [in ⁴]
2.0 3100	7	9 1/4	16.6	12303	26544	461.7
		9 1/2	17.1	12635	27916	500.1
		11 1/4	20.2	14963	38419	830.6
		11 7/8	21.4	15794	42550	976.8
		14	25.2	18620	58069	1600.7
		16	28.8	21280	74728	2389.3
		18	32.4	23940	93348	3402.0
		20	36.0	26600	113904	4666.7
VERSA-LAM® 1.4 1800 (Rimboard & Stair Stringers)	1 1/4	9 1/2	3.2	2256	4985	89.3
		11 7/8	4.0	2820	7598	174.4
		14	4.7	3325	10369	285.8
		16	5.4	3800	13344	426.7
		18	6.1	4275	16669	607.5
		20	6.7	4750	20340	833.3

Design Property	VERSA-LAM® Beams		VERSA-LAM® Columns	VERSA-STUD®	Rimboard / Stair Stringers
	1 3/4" & 2 5/8"	3 1/2" & Wider			
Grade	2.0 2800	2.0 3100	1.7 2650	1.7 2400	1.4 1800
Modulus of Elasticity E (x 10 ⁶ psi) ⁽¹⁾	2.0	2.0	1.7	1.7	1.4
Bending F _b (psi) ⁽²⁾⁽³⁾	2800	3100	2650	2400	1800
Horizontal Shear F _v (psi) ⁽²⁾⁽⁴⁾	285	285	285	285	225
Tension Parallel to Grain F _t (psi) ⁽²⁾⁽⁵⁾	2150	2150	1650	1650	1250
Compression Parallel to Grain F _c (psi) ⁽²⁾	3000	3000	3000	3000	2500
Compression Perpendicular to Grain F _{c⊥} (psi) ⁽¹⁾⁽⁶⁾	750	750	750	750	525
Equivalent Specific Gravity for Fastener Design (SG)	0.5	0.5	0.5	0.5	0.42

- This value cannot be adjusted for load duration.
 - This value is based upon a load duration of 100% and may be adjusted for other load durations.
 - Fiber stress bending value shall be multiplied by the depth factor, (12/d)^{1/8} where d = member depth [in].
 - Stress applied perpendicular to the glue lines.
 - Tension value shall be multiplied by a length factor, (4/L)^{1/8} where L = member length [ft]. Use L = 4 for members less than four feet long.
 - Stress applied parallel to the glue lines.
- * Design properties are limited to dry conditions of use where the maximum moisture content of the material will not exceed 19%.

VERSA-LAM® Columns

The same properties that make VERSA-LAM® beams great, also make them highly suitable for wood columns. In VERSA-LAM® columns, you'll find none of the deep checks, cracks or twists that can plague solid wood columns.

VERSA-LAM® 1.7 2650 Columns

Column Length [ft]	Allowable Axial Load (lb)																	
	3 1/2" x 3 1/2"			3 1/2" x 5 1/4"			3 1/2" x 7"			5 1/4" x 5 1/4"			5 1/4" x 7"			7" x 7"		
	100%	115%	125%	100%	115%	125%	100%	115%	125%	100%	115%	125%	100%	115%	125%	100%	115%	125%
4	14,530	15,870	16,680	21,800	23,820	25,040	29,080	31,780	33,390									
5	12,050	12,880	13,370	18,090	19,350	20,090	24,140	25,800	26,790									
6	9,860	10,400	10,710	14,800	15,610	16,090	19,740	20,830	21,470	32,690	35,710	37,530						
7	8,110	8,480	8,690	12,170	12,740	13,060	16,240	16,980	17,420	28,940	31,150	32,440						
8	6,740	7,010	7,160	10,120	10,520	10,760	13,510	14,040	14,350	25,360	26,980	27,930	33,846	36,000	37,270			
9	5,670	5,870	5,980	8,520	8,820	8,990	11,370	11,760	11,990	22,180	23,400	24,110	29,600	31,230	32,180			
10	4,830	4,980	5,070	7,260	7,480	7,610	9,680	9,980	10,150	19,450	20,390	20,940	25,950	27,210	27,950			
11	4,160	4,270	4,340	6,250	6,420	6,520	8,330	8,560	8,700	17,130	17,880	18,310	22,870	23,870	24,440			
12	3,610	3,700	3,760	5,430	5,560	5,640	7,240	7,420	7,530	15,170	15,770	16,120	20,250	21,040	21,510			
13	3,170	3,240	3,280	4,760	4,870	4,930	6,350	6,490	6,580	13,510	14,000	14,280	18,030	18,680	19,050			
14	2,800	2,850	2,890	4,200	4,290	4,340	5,600	5,720	5,790	12,090	12,490	12,720	16,140	16,670	16,980	32,430	33,920	34,800
15										10,880	11,210	11,400	14,520	14,970	15,220	29,540	30,800	31,510
16										9,830	10,110	10,270	13,120	13,500	13,710	26,980	28,040	28,660
17										8,930	9,160	9,300	11,910	12,230	12,410	24,720	25,630	26,140
18										8,140	8,340	8,450	10,860	11,130	11,290	22,710	23,490	23,950
19										7,440	7,620	7,720	9,940	10,170	10,300	20,930	21,610	22,000
20										6,840	6,990	7,070	9,120	9,330	9,440	19,340	19,930	20,280
21										6,300	6,430	6,500	8,400	8,580	8,680	17,920	18,440	18,740
22																16,650	17,100	17,370
23																15,500	15,910	16,140
24																14,470	14,830	15,030

Allowable Design Stresses

Modulus of Elasticity: $E = 1.7 \times 10^6$ psi

Flexural Stress: $F_b = 2650(12/d)^{1/9}$ psi

Compression Parallel to Grain: $F_{c||} = 3000$ psi

Compression Perpendicular to Grain: $F_{c\perp} = 450$ psi

Tension Parallel to Grain: $F_t = 1650$ psi

Notes

- 1) Table assumes that the column is braced at column ends only. Effective column length is equal to actual column length.
- 2) Allowable loads are based upon one-piece (solid) column members used in dry service conditions. Contact project's design professional of record or Boise EWP Engineering for multi-piece column design.
- 3) Allowable loads are based on an eccentricity value equal to 0.167 multiplied by either the column thickness or width (worst case).
- 4) Allowable loads are based on axial loaded columns using the design provisions of the National Design Specification for Wood Construction (NDS), 2001 edition. For side or other combined bending and axial loads, see provisions of NDS, 2001 edition.
- 5) Load values are not shown for short lengths due to loads exceeding common connector capacities. Load values are not shown for longer lengths if the controlling slenderness ratio exceeds 50 (per NDS).
- 6) Lateral loads (wind loading) are not considered in this table.

VERSA-STUD®

Allowable Design Values - 5 1/2" Depth

Product	Bending F_b [psi]	Compression Parallel to Grain F_c [psi]	Modulus of Elasticity E [psi]	Horizontal Shear F_v [psi]
1.7 2400 VERSA-STUD® 1 1/2" x 5 1/2"	2720	3000	1,700,000	285
Douglas-Fir # 2 Grade 2x6	1345	1350	1,600,000	180
Spruce Pine Fir (North) # 1 / 2 Grade 2x6	1310	1150	1,400,000	135
Hem-Fir # 2 Grade 2x6	1270	1300	1,300,000	150
Western Woods # 2 Grade 2x6	1010	900	1,000,000	135

Notes:

- Design values are for loads applied to the narrow face of the studs.
- Dimension Lumber values taken from 2001 Edition, *NDS Design Values for Wood Construction* (per 2003 IBC/IRC).
- Repetitive member and size factors have been applied.
- Additional VERSA-STUD® Bending Values: 3 1/2" depth = 2860 psi, 7 1/4" depth = 2635 psi.