



**Boise Cascade®**

**LIMIT STATES DESIGN  
CANADA**



# **EASTERN SPECIFIER GUIDE VERSA-LAM® 2.1E 3100**

CCMC Report Number 12472-R VERSA-LAM®

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[www.BC.com](http://www.BC.com)

**High Performance Floor & Roof Systems**



**Makes Designing Homes Easier**

**Architects, engineers, and designers trust Boise Cascade's Engineered Wood Products to provide a better system for framing floors, roofs and walls.**

It's the SIMPLE FRAMING SYSTEM®, featuring beams, joists, studs, columns and rim boards that work together as a system, so you spend less time cutting and fitting. In fact, the SIMPLE FRAMING SYSTEM® uses fewer pieces and longer lengths than conventional framing, so you'll complete jobs in less time.

**You'll Build Better Homes with the SIMPLE FRAMING SYSTEM®**

Now it's easier than ever to design and build better floor systems. When you specify the SIMPLE FRAMING SYSTEM®, your clients will have fewer problems with squeaky floors and ceiling gypsum board cracks. The SIMPLE FRAMING SYSTEM® also means overall better floor, roof and wall framing than dimension lumber allows.

**Better Framing Doesn't Have to Cost More**

Boise Cascade EWP SIMPLE FRAMING SYSTEM® often costs less than conventional framing methods when the resulting reduced labor and materials waste are considered. There's less sorting and cost associated with disposing of waste because you order

only what you need. Although our longer lengths help your clients get the job done faster, they cost no more.

**Environmentally Sound**

As an added bonus, floor, roof and wall systems built with Boise Cascade Joists require about half the number of trees as those built with dimension lumber. This helps you design a home both you and future generations will be proud to own.

**What Makes the SIMPLE FRAMING SYSTEM® So Simple?**

**Floor and Roof Framing with Boise Cascade Joists**

Light in weight, but heavy-duty, Boise Cascade Joists have a better strength/ weight ratio than dimension lumber. Knockouts can be removed for cross-ventilation and wiring.

**Ceilings Framed with Boise Cascade Joists**

The consistent size of Boise Cascade Joists helps keep gypsum board flat and free of unsightly nail pops and ugly shadows, while keeping finish work to a minimum.

**VERSA-LAM® Beams for Floor and Roof Framing**

These highly-stable beams are free of the large-scale defects that plague dimension beams. The result is quieter, flatter floors (no camber) and no shrinkage-related call-backs.

**VERSA-STUD® and VERSA-LAM® Columns for Wall Framing**

VERSA-STUD® laminated veneer lumber wall framing is engineered for the high quality builder who wants . . .

- Stronger walls to resist wind loads.
- Stiffer walls for a solid feel.
- Straight walls for a high quality finish.

**Boise Cascade Rimboard**

Boise Cascade EWP offer several engineered rimboard products regionally, including BC RIM BOARD® OSB, VERSA-RIM®, VERSA-STRAND™ 0.8 (check supplier or Boise Cascade EWP representative for availability). These products work with Alljoist® and BCI® Joists to provide a solid connection at the critical floor/wall intersection.

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## 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® Architectural Specifications

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

**Materials:** Southern Pine veneer, laminated in a press with all grain parallel with the length of the member. Glue used in lamination is phenol formaldehyde and isocyanate exterior type adhesive which comply with CSA O112 standards. All adhesives are compliant to NBCC 2015 and CCMC requirements for dry use structural applications.

**Design:** The VERSA-LAM® beams shall be sized and detailed to fit the dimensions and loads indicated on the plans. All designs are in accordance with allowable values developed with ASTM D5456 and CSA O86-14 and listed in the Canadian Construction Materials Center CCMC 12472-R report and section properties based upon standard engineering principles. Verification of design of the 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 supplier.

**Fabrication:** The VERSA-LAM® beams shall be manufactured in a plant evaluated for fabrication by the CCMC under the supervision of a third-party inspection agency listed by the CCMC.

**Storage:** The 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.

**Installation:** The VERSA-LAM® beams are to be installed in accordance with the plans and Boise Cascade Engineered Wood Products 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:** The design shall be based on CSA O86-14 and the National Building Code of Canada. The VERSA-LAM® beams shall be evaluated by the CCMC evaluation service.

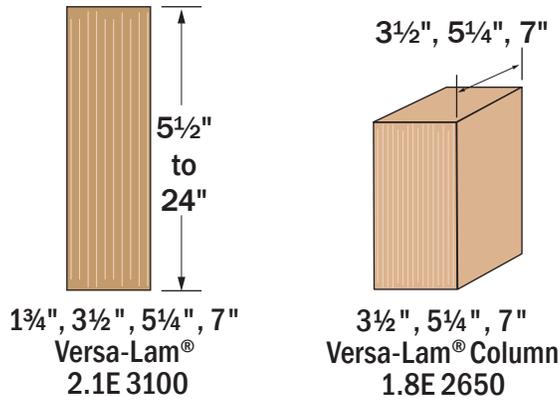
## Boise Cascade Chain-Of-Custody Certifications

Boise Cascade Engineered Wood Products has a proven track record of providing quality wood products and a nationwide building materials distribution network for our customers, helping them to enhance their own businesses.

Boise Cascade Engineered Wood Products build better homes with stronger, stiffer floors using only wood purchased in compliance with a number of green building programs. Take a moment to view our sustainability certification site at <http://www.bc.com/sustainability/certification-audits/> or view our green brochure at [www.bc.com/inst11](http://www.bc.com/inst11).

Boise Cascade Engineered Wood Products throughout North America can now be ordered FSC® Chain-of-Custody (COC) certified, enabling homebuilders to achieve LEED® points residential and commercial green building programs including LEED for Homes and LEED for New Construction. Boise Cascade Engineered Wood Products are available as PEFC® Chain-of-Custody certified, SFI® Chain-of-Custody certified and SFI® Fiber-Sourcing certified, as well as NAHB Research Center Green Approved, enabling homebuilders to also obtain green building points through the Green Building Standards.

# Product Profiles



## Design Properties

Width (in)	Depth (in)	Size Factor	Weight (lb/ft)	Factored Shear Resistance (Joist), $V_r$ (lb)	Factored Bending Resistance (Joist), $M_r$ (lb-ft)	Moment of Inertia (in <sup>4</sup> )	Modulus of Elasticity, $E_{true}$ (x10 <sup>6</sup> psi)	Modulus of Elasticity, $E_{apparent}$ (x10 <sup>6</sup> psi)	Specified Bending Strength (Joist), $f_b$ (psi)	Specified Shear Strength (Joist), $f_v$ (psi)	Specified Compression Parallel to Grain, $f_c$ (psi)	Specified Compression Perpendicular to Grain, $f_{cp}$ (psi)
<b>VERSALAM® COLUMN 1.8E 2650 DESIGN PROPERTIES</b>												
3 1/2	3 1/2	1.15	3.5	3,896	3,011	13	1.8	1.7	4,900	530	4,790	1,365
	5 1/4	1.10	5.3	5,843	6,477	42						
	7	1.06	7.1	7,791	11,153	100						
5 1/4	5 1/4	1.10	7.9	8,765	9,716	63						
	7	1.06	10.6	11,687	16,729	150						
	7	1.06	12.6	15,582	22,305	200						
<b>VERSALAM® 2.1E 3100 DESIGN PROPERTIES</b>												
1 3/4	5 1/2	1.09	2.8	3,061	4,135	24	2.1	2.0	5,730	530	4,790	1,365
	7 1/4	1.06	3.7	4,035	6,968	56						
	9 1/4	1.03	4.7	5,148	11,039	115						
	9 1/2	1.03	4.8	5,287	11,610	125						
	11 1/4	1.01	5.7	6,261	15,978	208						
	11 7/8	1.00	6.1	6,608	17,696	244						
	14	0.98	7.1	7,791	24,150	400						
	16	0.97	8.2	8,904	31,079	597						
	18	0.96	9.2	10,017	38,822	851						
20	0.94	10.2	11,130	47,371	1,167							
3 1/2	5 1/2	1.09	5.6	6,122	8,270	49	2.1	2.0	5,730	530	4,790	1,365
	7 1/4	1.06	7.4	8,069	13,936	111						
	9 1/4	1.03	9.4	10,295	22,079	231						
	9 1/2	1.03	9.7	10,574	23,220	250						
	11 1/4	1.01	11.5	12,521	31,956	415						
	11 7/8	1.00	12.1	13,217	35,392	488						
	14	0.98	14.3	15,582	48,300	800						
	16	0.97	16.3	17,808	62,157	1,195						
	18	0.96	18.4	20,034	77,645	1,701						
20	0.94	20.4	22,260	94,742	2,333							
5 1/4	5 1/2	1.09	8.4	9,182	12,405	73	2.1	2.0	5,730	530	4,790	1,365
	7 1/4	1.06	11.1	12,104	20,903	167						
	9 1/4	1.03	14.2	15,443	33,118	346						
	9 1/2	1.03	14.5	15,860	34,829	375						
	11 1/4	1.01	17.2	18,782	47,934	623						
	11 7/8	1.00	18.2	19,825	53,088	733						
	14	0.98	21.4	23,373	72,451	1,201						
	16	0.97	24.5	26,712	93,236	1,792						
	18	0.96	27.6	30,051	116,467	2,552						
20	0.94	30.6	33,390	142,113	3,500							

**NOTES:**

- Repetitive member factor has not been applied to the Factored Bending Resistance.
- Size factors have been applied to the Factored Bending Resistance.
- VERSA-LAM® Specific Gravity for fasteners design = 0.5

- Specified compression perpendicular to grain on plank orientation (plate) is 819 psi.
- Fiber stress bending value shall be multiplied by the depth factor,  $(12/d)^{1/9}$  where d = member depth [in]

# Uniform Load Table

## VERSA-LAM® 2.1E 3100 Allowable Uniform Load (lbs/ft)

Design Span [ft]	Beam Thickness	1¾" - 1 Ply							
	Beam Depth	7¼"	9¼"	9½"	11¼"	11⅞"	14"	16"	18"
6' - 0"	Unfactored Live Load for L / 360 [plf]	692	1326	1420	2175	-	-	-	-
	Unfactored Total Load for L / 240 [plf]	1035	-	-	-	-	-	-	-
	Factored Total Load, Wf [plf]	1276	1720	1778	2216	2383	3003	3670	4435
	Bearing Lengths [End / Intermediate] - SPF Plate [in]	3.75 / 9	5 / 12	5 / 12.5	6.25 / 15.5	6.75 / 16.75	8.5 / 21	10.25 / 25.75	12.5 / 31
	Bearing Lengths [End / Intermediate] - beam [in]	2.25 / 5.25	2.75 / 7	3 / 7	3.5 / 8.75	3.75 / 9.5	4.75 / 12	6 / 14.5	7 / 17.5
8' - 0"	Unfactored Live Load for L / 360 [plf]	310	613	660	1041	1201	1832	-	-
	Unfactored Total Load for L / 240 [plf]	462	915	985	-	-	-	-	-
	Factored Total Load, Wf [plf]	866	1209	1248	1532	1638	2021	2415	2847
	Bearing Lengths [End / Intermediate] - SPF Plate [in]	3.25 / 8.25	4.5 / 11.25	4.75 / 11.75	5.75 / 14.25	6.25 / 15.25	7.75 / 19	9 / 22.5	10.75 / 26.5
	Bearing Lengths [End / Intermediate] - beam [in]	2 / 4.75	2.75 / 6.5	2.75 / 6.75	3.25 / 8.25	3.5 / 8.75	4.25 / 10.75	5.25 / 12.75	6 / 15
10' - 0"	Unfactored Live Load for L / 360 [plf]	163	329	354	569	660	1029	1459	1966
	Unfactored Total Load for L / 240 [plf]	241	488	527	848	984	-	-	-
	Factored Total Load, Wf [plf]	552	877	922	1170	1247	1522	1798	2095
	Bearing Lengths [End / Intermediate] - SPF Plate [in]	2.75 / 6.5	4.25 / 10.25	4.5 / 10.75	5.5 / 13.75	6 / 14.5	7.25 / 17.75	8.5 / 21	9.75 / 24.5
	Bearing Lengths [End / Intermediate] - beam [in]	1.5 / 3.75	2.5 / 5.75	2.5 / 6.25	3.25 / 7.75	3.5 / 8.25	4 / 10	4.75 / 12	5.5 / 13.75
12' - 0"	Unfactored Live Load for L / 360 [plf]	96	195	210	341	398	629	904	1234
	Unfactored Total Load for L / 240 [plf]	140	288	311	506	591	936	1347	-
	Factored Total Load, Wf [plf]	382	607	638	880	975	1219	1432	1656
	Bearing Lengths [End / Intermediate] - SPF Plate [in]	2.25 / 5.5	3.5 / 8.5	3.75 / 9	5 / 12.5	5.5 / 13.75	7 / 17.25	8 / 20	9.25 / 23.25
	Bearing Lengths [End / Intermediate] - beam [in]	1.5 / 3.5	2 / 5	2.25 / 5.25	3 / 7	3.25 / 7.75	4 / 9.75	4.5 / 11.25	5.25 / 13.25
14' - 0"	Unfactored Live Load for L / 360 [plf]	61	124	135	220	257	409	594	819
	Unfactored Total Load for L / 240 [plf]	88	182	197	324	379	607	883	1220
	Factored Total Load, Wf [plf]	279	444	467	644	714	976	1189	1368
	Bearing Lengths [End / Intermediate] - SPF Plate [in]	2 / 4.75	3 / 7.25	3.25 / 7.75	4.25 / 10.5	4.75 / 11.75	6.5 / 16	7.75 / 19.5	9 / 22.5
	Bearing Lengths [End / Intermediate] - beam [in]	1.5 / 3.5	1.75 / 4.25	1.75 / 4.5	2.5 / 6	2.75 / 6.75	3.75 / 9	4.5 / 11	5.25 / 12.75
16' - 0"	Unfactored Live Load for L / 360 [plf]	41	84	91	149	175	280	409	569
	Unfactored Total Load for L / 240 [plf]	58	122	132	218	256	414	606	844
	Factored Total Load, Wf [plf]	213	339	356	492	545	745	960	1165
	Bearing Lengths [End / Intermediate] - SPF Plate [in]	1.75 / 4	2.75 / 6.5	2.75 / 6.75	3.75 / 9.25	4.25 / 10.25	5.75 / 14	7.25 / 18	8.75 / 21.75
	Bearing Lengths [End / Intermediate] - beam [in]	1.5 / 3.5	1.5 / 3.75	1.5 / 3.75	2.25 / 5.25	2.5 / 5.75	3.25 / 8	4.25 / 10.25	5 / 12.25
18' - 0"	Unfactored Live Load for L / 360 [plf]		59	64	106	124	200	293	409
	Unfactored Total Load for L / 240 [plf]		85	92	153	180	293	432	605
	Factored Total Load, Wf [plf]		266	280	387	429	587	757	947
	Bearing Lengths [End / Intermediate] - SPF Plate [in]		2.25 / 5.75	2.5 / 6	3.25 / 8.25	3.75 / 9	5 / 12.5	6.5 / 16	8 / 20
	Bearing Lengths [End / Intermediate] - beam [in]		1.5 / 3.5	1.5 / 3.5	2 / 4.75	2.25 / 5.25	3 / 7	3.75 / 9	4.5 / 11.25
20' - 0"	Unfactored Live Load for L / 360 [plf]		43	47	78	91	147	217	304
	Unfactored Total Load for L / 240 [plf]		61	66	111	131	214	318	447
	Factored Total Load, Wf [plf]		214	226	312	346	474	611	764
	Bearing Lengths [End / Intermediate] - SPF Plate [in]		2 / 5	2.25 / 5.5	3 / 7.5	3.25 / 8.25	4.5 / 11.25	5.75 / 14.25	7.25 / 18
	Bearing Lengths [End / Intermediate] - beam [in]		1.5 / 3.5	1.5 / 3.5	1.75 / 4.25	2 / 4.75	2.5 / 6.25	3.25 / 8	4.25 / 10.25
22' - 0"	Unfactored Live Load for L / 360 [plf]				58	69	112	165	231
	Unfactored Total Load for L / 240 [plf]				82	97	161	239	338
	Factored Total Load, Wf [plf]				256	284	390	503	630
	Bearing Lengths [End / Intermediate] - SPF Plate [in]				2.75 / 6.75	3 / 7.5	4 / 10	5.25 / 13	6.5 / 16.25
	Bearing Lengths [End / Intermediate] - beam [in]				1.5 / 3.75	1.75 / 4.25	2.25 / 5.75	3 / 7.25	3.75 / 9.25
24' - 0"	Unfactored Live Load for L / 360 [plf]				45	53	86	128	180
	Unfactored Total Load for L / 240 [plf]				62	74	123	184	261
	Factored Total Load, Wf [plf]				214	238	326	421	527
	Bearing Lengths [End / Intermediate] - SPF Plate [in]				2.5 / 6	2.75 / 6.75	3.75 / 9.25	4.75 / 11.75	6 / 14.75
	Bearing Lengths [End / Intermediate] - beam [in]				1.5 / 3.5	1.5 / 3.75	2.25 / 5.25	2.75 / 6.75	3.5 / 8.5
26' - 0"	Unfactored Live Load for L / 360 [plf]					42	68	101	143
	Unfactored Total Load for L / 240 [plf]					57	95	144	205
	Factored Total Load, Wf [plf]					201	276	357	447
	Bearing Lengths [End / Intermediate] - SPF Plate [in]					2.5 / 6.25	3.5 / 8.5	4.5 / 11	5.5 / 13.75
	Bearing Lengths [End / Intermediate] - beam [in]					1.5 / 3.5	2 / 4.75	2.5 / 6.25	3.25 / 7.75
28' - 0"	Unfactored Live Load for L / 360 [plf]						55	81	115
	Unfactored Total Load for L / 240 [plf]						75	114	164
	Factored Total Load, Wf [plf]						237	306	384
	Bearing Lengths [End / Intermediate] - SPF Plate [in]						3.25 / 7.75	4 / 10	5.25 / 12.75
	Bearing Lengths [End / Intermediate] - beam [in]						1.75 / 4.5	2.25 / 5.75	3 / 7.25
30' - 0"	Unfactored Live Load for L / 360 [plf]							45	66
	Unfactored Total Load for L / 240 [plf]							60	92
	Factored Total Load, Wf [plf]							205	266
	Bearing Lengths [End / Intermediate] - SPF Plate [in]							3 / 7.25	3.75 / 9.5
	Bearing Lengths [End / Intermediate] - beam [in]							1.75 / 4.25	2.25 / 5.25

**NOTES:**

- Factored Total Load values are limited by shear or moment. Total Load values are given by the beam capacity in addition to its own weight.
- Unfactored Live Load values are limited by deflection equal to L / 360. For deflections limited to L / 480, multiply live load values by 0.75 (recommended for less vibration).
- All 3 loading cases must be checked. Where a Live Load value is not shown, the Factored Total Load value will control.
- Table values represent the most restrictive of simple or continuous span beams applications and assume an uniform loading. Span is measured center to center of the supports. Analyze continuous span beams with the BC CALC® software if the length of any span is less than half the length of an adjacent span.
- Table values assume that lateral support is provided at each support and continuously along the compression edge of the beam.
- Table values for Minimum Required Bearing Lengths are based on the compression design value perpendicular to grain for the beam and the Total Factored Load value shown. Other design considerations, such as a weaker support material, may warrant longer bearing lengths. Table values assume that support is provided across the full width of the beam.
- For 2-ply, 3-ply or 4-ply beams; double, triple or quadruple the Factored Total Load, Unfactored Live and Total Load values. Minimum Required Bearing Lengths remain the same for any number of plies.
- 1¾ inch members deeper than 14 inches are recommended to be used as multiple-member beams. Refer to pages 22-23 for connection details.
- This table was designed to apply to a broad range of applications. It may be possible to exceed the limitations of this table by analyzing a specific application with the BC CALC® software.

# Floor Beam Span Tables - One Storey

Multiple Ply 1 3/4" **VERSA-LAM® 2.1E 3100** or Solid **VERSA-LAM® 2.1E 3100**

Live Load of 40 psf

Dead Load of 15 psf

L/360

Beam Depth	9.5"			11.875"			14"			16"			18"		
	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply
<b>6</b>	14' - 6"	16' - 9"	18' - 5"	18' - 2"	20' - 11"	23' - 1"	21' - 5"	24' - 8"	27' - 2"	24' - 6"	28' - 2"	31' - 0"	27' - 7"	31' - 8"	34' - 9"
End/Int bearing SPF Plate (in)	1.7 / 4.1	1.5 / 3.5	1.5 / 3.5	2.1 / 5.1	1.6 / 3.9	1.5 / 3.5	2.4 / 5.9	1.9 / 4.6	1.5 / 3.8	2.7 / 6.8	2.1 / 5.2	1.8 / 4.3	3.1 / 7.6	2.4 / 5.9	2 / 4.8
End/Int bearing Member (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	1.6 / 3.8	1.5 / 3.5	1.5 / 3.5	1.8 / 4.3	1.5 / 3.5	1.5 / 3.5
<b>8</b>	13' - 2"	15' - 2"	16' - 9"	16' - 6"	18' - 11"	20' - 11"	19' - 5"	22' - 4"	24' - 8"	22' - 2"	25' - 6"	28' - 2"	25' - 0"	28' - 9"	31' - 8"
End/Int bearing SPF Plate (in)	2 / 4.9	1.5 / 3.8	1.5 / 3.5	2.5 / 6.1	1.9 / 4.7	1.6 / 3.9	2.9 / 7.2	2.2 / 5.5	1.9 / 4.6	3.3 / 8.2	2.5 / 6.3	2.1 / 5.2	3.7 / 9.2	2.9 / 7.1	2.4 / 5.9
End/Int bearing Member (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	1.7 / 4.1	1.5 / 3.5	1.5 / 3.5	1.9 / 4.6	1.5 / 3.6	1.5 / 3.5	2.1 / 5.2	1.6 / 4	1.5 / 3.5
<b>10</b>	12' - 2"	14' - 0"	15' - 6"	15' - 3"	17' - 6"	19' - 4"	18' - 0"	20' - 8"	22' - 10"	20' - 7"	23' - 8"	26' - 1"	23' - 1"	26' - 7"	29' - 4"
End/Int bearing SPF Plate (in)	2.3 / 5.6	1.8 / 4.3	1.5 / 3.6	2.8 / 7	2.2 / 5.4	1.8 / 4.5	3.3 / 8.3	2.6 / 6.4	2.1 / 5.3	3.8 / 9.5	2.9 / 7.3	2.4 / 6	4.3 / 10.6	3.3 / 8.2	2.7 / 6.8
End/Int bearing Member (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.6 / 4	1.5 / 3.5	1.5 / 3.5	1.9 / 4.7	1.5 / 3.6	1.5 / 3.5	2.2 / 5.4	1.7 / 4.1	1.5 / 3.5	2.4 / 6	1.9 / 4.6	1.6 / 3.8
<b>12</b>	11' - 5"	13' - 2"	14' - 6"	14' - 4"	16' - 6"	18' - 2"	16' - 10"	19' - 5"	21' - 5"	19' - 3"	22' - 2"	24' - 3"	21' - 8"	25' - 0"	27' - 7"
End/Int bearing SPF Plate (in)	2.6 / 6.3	2 / 4.9	1.7 / 4.1	3.2 / 7.9	2.5 / 6.1	2.1 / 5.1	3.8 / 9.3	2.9 / 7.2	2.4 / 5.9	4.3 / 10.7	3.3 / 8.2	2.7 / 6.8	4.8 / 12	3.7 / 9.2	3.1 / 7.6
End/Int bearing Member (in)	1.5 / 3.6	1.5 / 3.5	1.5 / 3.5	1.8 / 4.5	1.5 / 3.5	1.5 / 3.5	2.1 / 5.3	1.7 / 4.1	1.5 / 3.5	2.4 / 6	1.9 / 4.6	1.6 / 3.8	2.7 / 6.8	2.1 / 5.2	1.8 / 4.3
<b>14</b>	10' - 10"	12' - 6"	13' - 9"	13' - 7"	15' - 7"	17' - 3"	16' - 0"	18' - 5"	20' - 4"	18' - 3"	21' - 1"	23' - 3"	20' - 7"	23' - 8"	26' - 2"
End/Int bearing SPF Plate (in)	2.8 / 7	2.2 / 5.4	1.8 / 4.5	3.5 / 8.7	2.7 / 6.7	2.3 / 5.6	4.2 / 10.3	3.2 / 7.9	2.7 / 6.6	4.7 / 11.8	3.7 / 9.1	3 / 7.5	5.3 / 13.2	4.1 / 10.2	3.4 / 8.4
End/Int bearing Member (in)	1.6 / 4	1.5 / 3.5	1.5 / 3.5	2 / 4.9	1.6 / 3.8	1.5 / 3.5	2.4 / 5.8	1.8 / 4.5	1.5 / 3.7	2.7 / 6.7	2.1 / 5.1	1.7 / 4.2	3 / 7.5	2.3 / 5.8	1.9 / 4.8
<b>16</b>	10' - 4"	11' - 11"	13' - 2"	12' - 11"	14' - 11"	16' - 6"	15' - 3"	17' - 7"	19' - 5"	17' - 5"	20' - 1"	22' - 2"	19' - 7"	22' - 7"	25' - 0"
End/Int bearing SPF Plate (in)	3.1 / 7.6	2.4 / 5.9	2 / 4.9	3.8 / 9.5	3 / 7.3	2.5 / 6.1	4.5 / 11.2	3.5 / 8.6	2.9 / 7.2	5.2 / 12.8	4 / 9.9	3.3 / 8.2	5.8 / 14.4	4.5 / 11.1	3.7 / 9.2
End/Int bearing Member (in)	1.8 / 4.3	1.5 / 3.5	1.5 / 3.5	2.2 / 5.4	1.7 / 4.2	1.5 / 3.5	2.6 / 6.3	2 / 4.9	1.7 / 4.1	2.9 / 7.2	2.3 / 5.6	1.9 / 4.6	3.3 / 8.1	2.5 / 6.3	2.1 / 5.2
<b>18</b>	9' - 11"	11' - 5"	12' - 8"	12' - 5"	14' - 4"	15' - 10"	14' - 7"	16' - 10"	18' - 8"	16' - 9"	19' - 3"	21' - 4"	18' - 10"	21' - 8"	24' - 0"
End/Int bearing SPF Plate (in)	3.3 / 8.2	2.6 / 6.3	2.1 / 5.3	4.1 / 10.3	3.2 / 7.9	2.7 / 6.6	4.9 / 12.1	3.8 / 9.3	3.1 / 7.7	5.6 / 13.8	4.3 / 10.7	3.6 / 8.8	6.3 / 15.6	4.8 / 12	4 / 9.9
End/Int bearing Member (in)	1.9 / 4.7	1.5 / 3.6	1.5 / 3.5	2.4 / 5.8	1.8 / 4.5	1.5 / 3.7	2.8 / 6.8	2.1 / 5.3	1.8 / 4.4	3.2 / 7.8	2.4 / 6	5-Feb	3.5 / 8.8	2.7 / 6.8	2.3 / 5.6
<b>20</b>	9' - 7"	11' - 0"	12' - 2"	11' - 11"	13' - 9"	15' - 3"	14' - 1"	16' - 3"	18' - 0"	16' - 1"	18' - 7"	20' - 7"	18' - 1"	20' - 11"	23' - 1"
End/Int bearing SPF Plate (in)	3.6 / 8.8	2.7 / 6.8	2.3 / 5.6	4.4 / 11	3.4 / 8.5	2.8 / 7	5.2 / 13	4 / 10	3.3 / 8.3	6 / 14.8	4.6 / 11.4	3.8 / 9.5	6.7 / 16.7	5.2 / 12.8	4.3 / 10.6
End/Int bearing Member (in)	2 / 5	1.6 / 3.8	1.5 / 3.5	2.5 / 6.2	1.9 / 4.8	1.6 / 4	3 / 7.3	2.3 / 5.6	1.9 / 4.7	3.4 / 8.4	2.6 / 6.4	2.2 / 5.4	3.8 / 9.4	2.9 / 7.2	2.4 / 6

Live Load of 40 psf

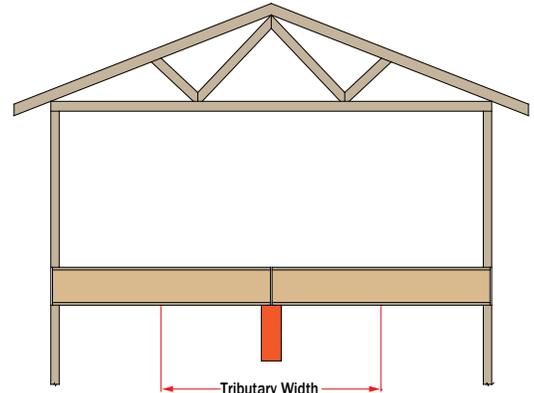
Dead Load of 25 psf

L/360

Beam Depth	9.5"			11.875"			14"			16"			18"		
	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply
<b>6</b>	14' - 0"	16' - 1"	17' - 8"	17' - 6"	20' - 0"	22' - 0"	20' - 7"	23' - 7"	25' - 10"	23' - 6"	26' - 10"	29' - 5"	26' - 5"	30' - 2"	33' - 0"
End/Int bearing SPF Plate (in)	1.8 / 4.5	1.5 / 3.5	1.5 / 3.5	2.3 / 5.6	1.8 / 4.3	1.5 / 3.6	2.7 / 6.6	2.1 / 5.1	1.7 / 4.2	3 / 7.5	2.3 / 5.8	1.9 / 4.7	3.4 / 8.5	2.6 / 6.4	2.2 / 5.3
End/Int bearing Member (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 / 3.7	1.5 / 3.5	1.5 / 3.5	1.7 / 4.3	1.5 / 3.5	1.5 / 3.5	1.9 / 4.8	1.5 / 3.7	1.5 / 3.5
<b>8</b>	12' - 9"	14' - 7"	16' - 1"	15' - 11"	18' - 3"	20' - 0"	18' - 9"	21' - 5"	23' - 7"	21' - 4"	24' - 5"	26' - 10"	24' - 0"	27' - 6"	30' - 2"
End/Int bearing SPF Plate (in)	2.2 / 5.5	1.7 / 4.2	1.5 / 3.5	2.8 / 6.8	2.1 / 5.2	1.8 / 4.3	3.2 / 8	2.5 / 6.1	2.1 / 5.1	3.7 / 9.1	2.8 / 7	2.3 / 5.8	4.1 / 10.2	3.2 / 7.8	2.6 / 6.4
End/Int bearing Member (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.6 / 3.9	1.5 / 3.5	1.5 / 3.5	1.8 / 4.5	1.5 / 3.5	1.5 / 3.5	2.1 / 5.2	1.6 / 3.9	1.5 / 3.5	2.3 / 5.8	1.8 / 4.4	1.5 / 3.7
<b>10</b>	11' - 9"	13' - 6"	14' - 11"	14' - 9"	16' - 11"	18' - 7"	17' - 4"	19' - 11"	21' - 11"	19' - 10"	22' - 9"	25' - 0"	22' - 3"	25' - 6"	28' - 1"
End/Int bearing SPF Plate (in)	2.6 / 6.3	2 / 4.8	1.6 / 4	3.2 / 7.9	2.4 / 6	2 / 5	3.7 / 9.3	2.9 / 7.1	2.4 / 5.9	4.3 / 10.6	3.3 / 8.1	2.7 / 6.7	4.8 / 11.9	3.7 / 9.1	3 / 7.5
End/Int bearing Member (in)	1.5 / 3.6	1.5 / 3.5	1.5 / 3.5	1.8 / 4.5	1.5 / 3.5	1.5 / 3.5	2.1 / 5.2	1.6 / 4	1.5 / 3.5	2.4 / 6	1.9 / 4.6	1.5 / 3.8	2.7 / 6.7	2.1 / 5.1	1.7 / 4.2
<b>12</b>	11' - 1"	12' - 9"	14' - 0"	13' - 10"	15' - 11"	17' - 6"	16' - 4"	18' - 9"	20' - 7"	18' - 7"	21' - 4"	23' - 6"	20' - 11"	24' - 0"	26' - 5"
End/Int bearing SPF Plate (in)	2.9 / 7.1	2.2 / 5.5	1.8 / 4.5	3.6 / 8.9	2.8 / 6.8	2.3 / 5.6	4.2 / 10.4	3.2 / 8	2.7 / 6.6	4.8 / 11.9	3.7 / 9.1	3 / 7.5	5.4 / 13.4	4.1 / 10.2	3.4 / 8.5
End/Int bearing Member (in)	1.6 / 4	1.5 / 3.5	1.5 / 3.5	2 / 5	1.6 / 3.9	1.5 / 3.5	2.4 / 5.9	1.8 / 4.5	1.5 / 3.7	2.7 / 6.7	2.1 / 5.2	1.7 / 4.3	3.1 / 7.6	2.3 / 5.8	1.9 / 4.8
<b>14</b>	10' - 6"	12' - 1"	13' - 4"	13' - 1"	15' - 1"	16' - 8"	15' - 5"	17' - 9"	19' - 7"	17' - 8"	20' - 3"	22' - 4"	19' - 10"	22' - 10"	25' - 1"
End/Int bearing SPF Plate (in)	3.2 / 7.9	2.4 / 6	2 / 5	4 / 9.8	3 / 7.5	2.5 / 6.2	4.6 / 11.5	3.6 / 8.9	3 / 7.3	5.3 / 13.2	4.1 / 10.1	3.4 / 8.4	6 / 14.8	4.6 / 11.3	3.8 / 9.4
End/Int bearing Member (in)	1.8 / 4.4	1.5 / 3.5	1.5 / 3.5	2.2 / 5.5	1.7 / 4.3	1.5 / 3.5	2.6 / 6.5	2 / 5	1.7 / 4.1	3 / 7.4	2.3 / 5.7	1.9 / 4.7	3.4 / 8.4	2.6 / 6.4	2.2 / 5.3
<b>16</b>	10' - 0"	11' - 6"	12' - 9"	12' - 6"	14' - 5"	15' - 11"	14' - 9"	17' - 0"	18' - 9"	16' - 10"	19' - 5"	21' - 4"	18' - 11"	21' - 9"	24' - 0"
End/Int bearing SPF Plate (in)	3.5 / 8.6	2.7 / 6.6	2.2 / 5.5	4.3 / 10.7	3.3 / 8.2	2.8 / 6.8	5.1 / 12.6	3.9 / 9.7	3.2 / 8	5.8 / 14.4	4.4 / 11	3.7 / 9.1	6.5 / 16.1	5 / 12.4	4.1 / 10.2
End/Int bearing Member (in)	2 / 4.8	1.5 / 3.7	1.5 / 3.5	2.4 / 6	1.9 / 4.6	1.6 / 3.9	2.9 / 7.1	2.2 / 5.5	1.8 / 4.5	3.3 / 8.1	2.5 / 6.2	2.1 / 5.2	3.7 / 9.1	2.8 / 7	2.3 / 5.8
<b>18</b>	9' - 7"	11' - 1"	12' - 3"	12' - 0"	13' - 10"	15' - 3"	14' - 2"	16' - 4"	18' - 0"	16' - 2"	18' - 7"	20' - 6"	18' - 2"	20' - 11"	23' - 1"
End/Int bearing SPF Plate (in)	3.7 / 9.2	2.9 / 7.1	2.4 / 5.9	4.6 / 11.5	3.6 / 8.9	3 / 7.4	5.5 / 13.6	4.2 / 10.4	3.5 / 8.6	6.2 / 15.5	4.8 / 11.9	4 / 9.9	7 / 17.4	5.4 / 13.4	4.5 / 11.1
End/Int bearing Member (in)	2.1 / 5.2	1.6 / 4	1.5 / 3.5	2.6 / 6.5	2 / 5	1.7 / 4.2	3.1 / 7.7	2.4 / 5.9	2 / 4.9	3.5 / 8.8	2.7 / 6.7	2.3 / 5.6	4 / 9.8	3.1 / 7.6	2.5 / 6.3
<b>20</b>	9' - 3"	10' - 8"	11' - 9"	11' - 7"	13' - 4"	14' - 9"	13' - 8"	15' - 9"	17' - 4"	15' - 7"	17' - 11"	19' - 10"	17' - 6"	20' - 2"	22' - 3"
End/Int bearing SPF Plate (in)	4 / 9.9	3.1 / 7.6	2.6 / 6.3	5 / 12.3	3.8 / 9.5	3.2 / 7.9	5.8 / 14.5	4.5 / 11.2	3.7 / 9.3	6.7 / 16.6	5.1 / 12.8	4.3 / 10.6	7.5 / 18.7	5.8 / 14.3	4.8 / 11.9
End/Int bearing Member (in)	2.3 / 5.6	1.8 / 4.3	1.5 / 3.6	2.8 / 7	2.2 / 5.4	1.8 / 4.5	3.3 / 8.2	2.6 / 6.3	2.1 / 5.2	3.8 / 9.4	2.9 / 7.2	2.4 / 6	4.2 / 10.5	3.3 / 8.1	2.7 / 6.7

**NOTES:**

- This table has been established using a Live Load deflection equal to L / 360 and a Total Load deflection limit equal to L / 240.
- This table assumes uniform loads and simple floor joists spans. When the floor joists are continuous over the VERSA-LAM® LVL beam, multiply the tributary width by 1.25 and always select the value closer to the higher tributary width.  
*Example : Tributary width of 14 feet multiply by 1.25 = 17'-6".*  
Hence, select 18 feet for new tributary width.
- Table values assume that lateral support is provided at each support and continuously along the compression edge of the beam.
- Table values are based on SPF specified compression strength perpendicular to grain for plate of 769 psi.
- Minimum bearing lengths required are based on a minimum bearing width equal to or greater than the width of the supported beam.
- Table values represent the most restrictive of simple or continuous span beam applications. Span is measured center to center of the supports.
- Analyze continuous span beams with BC CALC® software if the length of any span is less than half the length of the adjacent span.



## Multiple Ply 1 3/4" VERSA-LAM® 2.1E 3100 or Solid VERSA-LAM® 2.1E 3100

**Live Load of 40 psf**

**Dead Load of 15 psf**

**L/480**

Beam Depth	9.5"			11.875"			14"			16"			18"		
	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply
<b>6</b>	13' - 2"	15' - 2"	16' - 9"	16' - 6"	18' - 11"	20' - 11"	19' - 5"	22' - 4"	24' - 8"	22' - 2"	25' - 6"	28' - 2"	25' - 0"	28' - 9"	31' - 8"
End/Int bearing SPF Plate (in)	1.5 / 3.7	1.5 / 3.5	1.5 / 3.5	1.9 / 4.6	1.5 / 3.5	1.5 / 3.5	2.2 / 5.4	1.7 / 4.1	1.5 / 3.5	2.5 / 6.2	1.9 / 4.7	1.6 / 3.9	2.8 / 6.9	2.2 / 5.3	1.8 / 4.4
End/Int bearing Member (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	1.5 / 3.5	1.5 / 3.5	1.6 / 3.9	1.5 / 3.5	1.5 / 3.5
<b>8</b>	11' - 11"	13' - 9"	15' - 2"	14' - 11"	17' - 2"	18' - 11"	17' - 7"	20' - 3"	22' - 4"	20' - 1"	23' - 1"	25' - 6"	22' - 7"	26' - 0"	28' - 9"
End/Int bearing SPF Plate (in)	1.8 / 4.4	1.5 / 3.5	1.5 / 3.5	2.2 / 5.5	1.7 / 4.2	1.5 / 3.5	2.6 / 6.5	2 / 5	1.7 / 4.1	3 / 7.4	2.3 / 5.7	1.9 / 4.7	3.4 / 8.3	2.6 / 6.4	2.2 / 5.3
End/Int bearing Member (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 / 3.7	1.5 / 3.5	1.5 / 3.5	1.7 / 4.2	1.5 / 3.5	1.5 / 3.5	1.9 / 4.7	1.5 / 3.6	1.5 / 3.5
<b>10</b>	11' - 0"	12' - 8"	14' - 0"	13' - 9"	15' - 11"	17' - 6"	16' - 3"	18' - 9"	20' - 8"	18' - 7"	21' - 5"	23' - 8"	20' - 11"	24' - 1"	26' - 7"
End/Int bearing SPF Plate (in)	2.1 / 5.1	1.6 / 3.9	1.5 / 3.5	2.6 / 6.4	2 / 4.9	1.7 / 4.1	3 / 7.5	2.3 / 5.8	1.9 / 4.8	3.5 / 8.6	2.7 / 6.6	2.2 / 5.5	3.9 / 9.6	3 / 7.4	2.5 / 6.1
End/Int bearing Member (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.6	1.5 / 3.5	1.5 / 3.5	1.7 / 4.2	1.5 / 3.5	1.5 / 3.5	2 / 4.8	1.5 / 3.7	1.5 / 3.5	2.2 / 5.4	1.7 / 4.2	1.5 / 3.5
<b>12</b>	10' - 4"	11' - 11"	13' - 2"	12' - 11"	14' - 11"	16' - 6"	15' - 3"	17' - 7"	19' - 5"	17' - 5"	20' - 1"	22' - 2"	19' - 7"	22' - 7"	25' - 0"
End/Int bearing SPF Plate (in)	2.3 / 5.7	1.8 / 4.4	1.5 / 3.7	2.9 / 7.2	2.2 / 5.5	1.9 / 4.6	3.4 / 8.4	2.6 / 6.5	2.2 / 5.4	3.9 / 9.6	3 / 7.4	2.5 / 6.2	4.4 / 10.8	3.4 / 8.3	2.8 / 6.9
End/Int bearing Member (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.7 / 4.1	1.5 / 3.5	1.5 / 3.5	1.9 / 4.8	1.5 / 3.7	1.5 / 3.5	2.2 / 5.4	1.7 / 4.2	1.5 / 3.5	2.5 / 6.1	1.9 / 4.7	1.6 / 3.9
<b>14</b>	9' - 9"	11' - 3"	12' - 6"	12' - 3"	14' - 1"	15' - 7"	14' - 5"	16' - 8"	18' - 5"	16' - 6"	19' - 0"	21' - 1"	18' - 7"	21' - 5"	23' - 8"
End/Int bearing SPF Plate (in)	2.6 / 6.3	2 / 4.9	1.7 / 4.1	3.2 / 7.9	2.5 / 6.1	2.1 / 5.1	3.8 / 9.3	2.9 / 7.2	2.4 / 6	4.3 / 10.6	3.3 / 8.2	2.8 / 6.8	4.8 / 12	3.7 / 9.2	3.1 / 7.6
End/Int bearing Member (in)	1.5 / 3.6	1.5 / 3.5	1.5 / 3.5	1.8 / 4.5	1.5 / 3.5	1.5 / 3.5	2.1 / 5.3	1.7 / 4.1	1.5 / 3.5	2.4 / 6	1.9 / 4.6	1.6 / 3.9	2.7 / 6.8	2.1 / 5.2	1.8 / 4.3
<b>16</b>	9' - 4"	10' - 9"	11' - 11"	11' - 8"	13' - 6"	14' - 11"	13' - 9"	15' - 11"	17' - 7"	15' - 9"	18' - 2"	20' - 1"	17' - 8"	20' - 5"	22' - 7"
End/Int bearing SPF Plate (in)	2.8 / 6.9	2.2 / 5.3	1.8 / 4.4	3.5 / 8.6	2.7 / 6.6	2.2 / 5.5	4.1 / 10.1	3.2 / 7.8	2.6 / 6.5	4.7 / 11.6	3.6 / 8.9	3 / 7.4	5.2 / 13	4 / 10	3.4 / 8.3
End/Int bearing Member (in)	1.6 / 3.9	1.5 / 3.5	1.5 / 3.5	2 / 4.9	1.5 / 3.8	1.5 / 3.5	2.3 / 5.7	1.8 / 4.4	1.5 / 3.7	2.6 / 6.5	2.1 / 5.1	1.7 / 4.2	3 / 7.4	2.3 / 5.7	1.9 / 4.7
<b>18</b>	8' - 11"	10' - 4"	11' - 5"	11' - 2"	12' - 11"	14' - 4"	13' - 2"	15' - 3"	16' - 10"	15' - 1"	17' - 5"	19' - 3"	17' - 0"	19' - 7"	21' - 8"
End/Int bearing SPF Plate (in)	3 / 7.4	2.3 / 5.7	1.9 / 4.8	3.7 / 9.3	2.9 / 7.2	2.4 / 6	4.4 / 10.9	3.4 / 8.4	2.8 / 7	5 / 12.5	3.9 / 9.6	3.2 / 8	5.7 / 14.1	4.4 / 10.8	3.6 / 9
End/Int bearing Member (in)	1.7 / 4.2	1.5 / 3.5	1.5 / 3.5	2.1 / 5.3	1.7 / 4.1	1.5 / 3.5	2.5 / 6.2	1.9 / 4.8	1.6 / 4	2.9 / 7.1	2.2 / 5.4	1.8 / 4.5	3.2 / 7.9	2.5 / 6.1	2.1 / 5.1
<b>20</b>	8' - 7"	9' - 11"	11' - 0"	10' - 9"	12' - 5"	13' - 9"	12' - 8"	14' - 8"	16' - 3"	14' - 6"	16' - 9"	18' - 7"	16' - 4"	18' - 11"	20' - 11"
End/Int bearing SPF Plate (in)	3.2 / 8	2.5 / 6.1	2.1 / 5.1	4 / 9.9	3.1 / 7.7	2.6 / 6.4	4.7 / 11.7	3.6 / 9	3 / 7.5	5.4 / 13.4	4.2 / 10.3	3.5 / 8.6	6 / 15	4.7 / 11.6	3.9 / 9.6
End/Int bearing Member (in)	1.8 / 4.5	1.5 / 3.5	1.5 / 3.5	2.3 / 5.6	1.8 / 4.3	1.5 / 3.6	2.7 / 6.6	2.1 / 5.1	1.7 / 4.2	3 / 7.5	2.4 / 5.8	2 / 4.8	3.4 / 8.5	2.7 / 6.6	2.2 / 5.4

**Live Load of 40 psf**

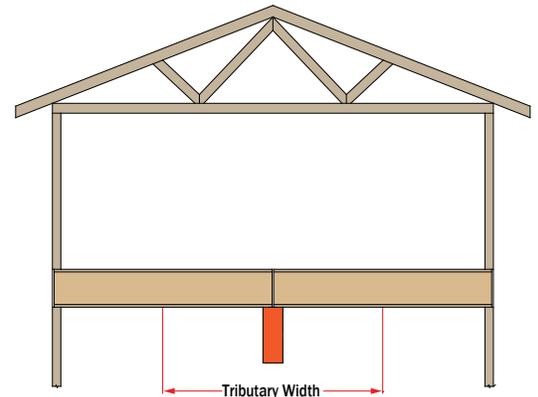
**Dead Load of 25 psf**

**L/480**

Beam Depth	9.5			11.875			14			16			18		
	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply
<b>6</b>	13' - 2"	15' - 2"	16' - 9"	16' - 6"	18' - 11"	20' - 11"	19' - 5"	22' - 4"	24' - 8"	22' - 2"	25' - 6"	28' - 2"	25' - 0"	28' - 9"	31' - 8"
End/Int bearing SPF Plate (in)	1.7 / 4.2	1.5 / 3.5	1.5 / 3.5	2.1 / 5.3	1.7 / 4.1	1.5 / 3.5	2.5 / 6.2	1.9 / 4.8	1.6 / 4	2.9 / 7.1	2.2 / 5.5	1.8 / 4.5	3.2 / 8	2.5 / 6.1	2.1 / 5.1
End/Int bearing Member (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	1.6 / 4	1.5 / 3.5	1.5 / 3.5	1.8 / 4.5	1.5 / 3.5	1.5 / 3.5
<b>8</b>	11' - 11"	13' - 9"	15' - 2"	14' - 11"	17' - 2"	18' - 11"	17' - 7"	20' - 3"	22' - 4"	20' - 1"	23' - 1"	25' - 6"	22' - 7"	26' - 0"	28' - 9"
End/Int bearing SPF Plate (in)	2.1 / 5.1	1.6 / 3.9	1.5 / 3.5	2.6 / 6.4	2 / 4.9	1.7 / 4.1	3 / 7.5	2.3 / 5.8	1.9 / 4.8	3.5 / 8.6	2.7 / 6.6	2.2 / 5.5	3.9 / 9.7	3 / 7.4	2.5 / 6.1
End/Int bearing Member (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.6	1.5 / 3.5	1.5 / 3.5	1.7 / 4.3	1.5 / 3.5	1.5 / 3.5	2 / 4.9	1.5 / 3.7	1.5 / 3.5	2.2 / 5.5	1.7 / 4.2	1.5 / 3.5
<b>10</b>	11' - 0"	12' - 8"	14' - 0"	13' - 9"	15' - 11"	17' - 6"	16' - 3"	18' - 9"	20' - 8"	18' - 7"	21' - 5"	23' - 8"	20' - 11"	24' - 1"	26' - 7"
End/Int bearing SPF Plate (in)	2.4 / 5.9	1.8 / 4.5	1.5 / 3.8	3 / 7.4	2.3 / 5.7	1.9 / 4.7	3.5 / 8.7	2.7 / 6.7	2.2 / 5.5	4 / 9.9	3.1 / 7.6	2.6 / 6.3	4.5 / 11.2	3.5 / 8.6	2.9 / 7.1
End/Int bearing Member (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.7 / 4.2	1.5 / 3.5	1.5 / 3.5	2 / 4.9	1.5 / 3.8	1.5 / 3.5	2.3 / 5.6	1.8 / 4.3	1.5 / 3.6	2.6 / 6.3	2 / 4.9	1.6 / 4
<b>12</b>	10' - 4"	11' - 11"	13' - 2"	12' - 11"	14' - 11"	16' - 6"	15' - 3"	17' - 7"	19' - 5"	17' - 5"	20' - 1"	22' - 2"	19' - 7"	22' - 7"	25' - 0"
End/Int bearing SPF Plate (in)	2.7 / 6.6	2.1 / 5.1	1.7 / 4.2	3.3 / 8.3	2.6 / 6.4	2.1 / 5.3	3.9 / 9.8	3 / 7.5	2.5 / 6.2	4.5 / 11.2	3.5 / 8.6	2.9 / 7.1	5 / 12.5	3.9 / 9.7	3.2 / 8
End/Int bearing Member (in)	1.5 / 3.8	1.5 / 3.5	1.5 / 3.5	1.9 / 4.7	1.5 / 3.6	1.5 / 3.5	2.2 / 5.5	1.7 / 4.3	1.5 / 3.5	2.6 / 6.3	2 / 4.9	1.6 / 4	2.9 / 7.1	2.2 / 5.5	1.8 / 4.5
<b>14</b>	9' - 9"	11' - 3"	12' - 6"	12' - 3"	14' - 1"	15' - 7"	14' - 5"	16' - 8"	18' - 5"	16' - 6"	19' - 0"	21' - 1"	18' - 7"	21' - 5"	23' - 8"
End/Int bearing SPF Plate (in)	3 / 7.3	2.3 / 5.7	1.9 / 4.7	3.7 / 9.2	2.9 / 7.1	2.4 / 5.9	4.3 / 10.8	3.4 / 8.3	2.8 / 6.9	5 / 12.3	3.8 / 9.5	3.2 / 7.9	5.6 / 13.9	4.3 / 10.7	3.6 / 8.9
End/Int bearing Member (in)	1.7 / 4.2	1.5 / 3.5	1.5 / 3.5	2.1 / 5.2	1.6 / 4	1.5 / 3.5	2.5 / 6.1	1.9 / 4.7	1.6 / 3.9	2.8 / 7	2.2 / 5.4	1.8 / 4.5	3.2 / 7.8	2.4 / 6	2 / 5
<b>16</b>	9' - 4"	10' - 9"	11' - 11"	11' - 8"	13' - 6"	14' - 11"	13' - 9"	15' - 11"	17' - 7"	15' - 9"	18' - 2"	20' - 1"	17' - 8"	20' - 5"	22' - 7"
End/Int bearing SPF Plate (in)	3.2 / 8	2.5 / 6.2	2.1 / 5.1	4 / 10	3.1 / 7.7	2.6 / 6.4	4.7 / 11.8	3.7 / 9.1	3 / 7.5	5.4 / 13.4	4.2 / 10.3	3.5 / 8.6	6.1 / 15.1	4.7 / 11.6	3.9 / 9.7
End/Int bearing Member (in)	1.8 / 4.5	1.5 / 3.5	1.5 / 3.5	2.3 / 5.6	1.8 / 4.4	1.5 / 3.6	2.7 / 6.6	2.1 / 5.1	1.7 / 4.3	3.1 / 7.6	2.4 / 5.8	2 / 4.9	3.4 / 8.5	2.7 / 6.6	2.2 / 5.5
<b>18</b>	8' - 11"	10' - 4"	11' - 5"	11' - 2"	12' - 11"	14' - 4"	13' - 2"	15' - 3"	16' - 10"	15' - 1"	17' - 5"	19' - 3"	17' - 0"	19' - 7"	21' - 8"
End/Int bearing SPF Plate (in)	3.5 / 8.6	2.7 / 6.6	2.2 / 5.5	4.3 / 10.8	3.3 / 8.3	2.8 / 6.9	5.1 / 12.7	3.9 / 9.8	3.3 / 8.1	5.8 / 14.5	4.5 / 11.2	3.7 / 9.3	6.5 / 16.3	5 / 12.5	4.2 / 10.4
End/Int bearing Member (in)	2 / 4.9	1.5 / 3.8	1.5 / 3.5	2.5 / 6.1	1.9 / 4.7	1.6 / 3.9	2.9 / 7.2	2.2 / 5.5	1.9 / 4.6	3.3 / 8.2	2.6 / 6.3	2.1 / 5.2	3.7 / 9.2	2.9 / 7.1	2.4 / 5.9
<b>20</b>	8' - 7"	9' - 11"	11' - 0"	10' - 9"	12' - 5"	13' - 9"	12' - 8"	14' - 8"	16' - 3"	14' - 6"	16' - 9"	18' - 7"	16' - 4"	18' - 11"	20' - 11"
End/Int bearing SPF Plate (in)	3.7 / 9.2	2.9 / 7.1	2.4 / 5.9	4.6 / 11.5	3.6 / 8.9	3 / 7.4	5.5 / 13.6	4.2 / 10.5	3.5 / 8.7	6.2 / 15.5	4.8 / 11.9	4 / 9.9	7 / 17.4	5.4 / 13.4	4.5 / 11.2
End/Int bearing Member (in)	2.1 / 5.2	1.6 / 4	1.5 / 3.5	2.6 / 6.5	2 / 5	1.7 / 4.2	3.1 / 7.7	2.4 / 5.9	2 / 4.9	3.5 / 8.7	2.7 / 6.7	2.3 / 5.6	4 / 9.8	3.1 / 7.6	2.6 / 6.3

**NOTES:**

- This table has been established using a Live Load deflection equal to L / 480 and a Total Load deflection limit equal to L / 240.
- This table assumes uniform loads and simple floor joists spans. When the floor joists are continuous over the VERSA-LAM® LVL beam, multiply the tributary width by 1.25 and always select the value closer to the higher tributary width.  
**Example : Tributary width of 14 feet multiply by 1.25 = 17'-6".**  
Hence, select 18 feet for new tributary width.
- Table values assume that lateral support is provided at each support and continuously along the compression edge of the beam.
- Table values are based on SPF specified compression strength perpendicular to grain for plate of 769 psi.
- Minimum bearing lengths required are based on a minimum bearing width equal to or greater than the width of the supported beam.
- Table values represent the most restrictive of simple or continuous span beam applications. Span is measured center to center of the supports.
- Analyze continuous span beams with BC CALC® software if the length of any span is less than half the length of the adjacent span.



# Floor Beam Span Tables - Two Storeys

Multiple Ply 1 3/4" VERSA-LAM® 2.1E 3100 or Solid VERSA-LAM® 2.1E 3100

Live Load of 40 psf

Dead Load of 15 psf

L/360

Beam Depth	9.5"			11.875"			14"			16"			18"			
	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	
<b>6</b>	11' - 3"	12' - 11"	14' - 3"	14' - 1"	16' - 2"	17' - 10"	16' - 7"	19' - 1"	21' - 0"	18' - 11"	21' - 9"	23' - 11"	21' - 4"	24' - 5"	26' - 11"	
End/Int bearing SPF Plate (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	1.5 / 3.5	1.6 / 4	1.5 / 3.5	1.6 / 4	1.8 / 4.5	1.5 / 3.7
End/Int bearing Member (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	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5
<b>8</b>	10' - 4"	11' - 10"	13' - 1"	12' - 10"	14' - 10"	16' - 4"	15' - 2"	17' - 5"	19' - 3"	17' - 4"	19' - 11"	21' - 11"	19' - 6"	22' - 5"	24' - 8"	
End/Int bearing SPF Plate (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.7	1.5 / 3.5	1.5 / 3.8	1.8 / 4.3	1.5 / 3.6	1.7 / 4.3	2 / 4.9	1.7 / 4.1	2 / 4.8	2.2 / 5.5	1.9 / 4.6	
End/Int bearing Member (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	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5
<b>10</b>	9' - 7"	11' - 0"	12' - 2"	11' - 11"	13' - 9"	15' - 3"	14' - 1"	16' - 3"	17' - 11"	16' - 1"	18' - 7"	20' - 6"	18' - 1"	20' - 10"	23' - 0"	
End/Int bearing SPF Plate (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.7	1.7 / 4.3	1.5 / 3.5	1.8 / 4.4	2 / 5	1.7 / 4.2	2 / 5	2.3 / 5.7	1.9 / 4.7	2.3 / 5.6	2.6 / 6.4	2.2 / 5.3	
End/Int bearing Member (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	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5
<b>12</b>	8' - 11"	10' - 4"	11' - 5"	11' - 2"	12' - 11"	14' - 4"	13' - 2"	15' - 3"	16' - 10"	15' - 1"	17' - 5"	19' - 3"	17' - 0"	19' - 7"	21' - 8"	
End/Int bearing SPF Plate (in)	1.5 / 3.5	1.6 / 3.8	1.5 / 3.5	1.7 / 4.2	1.9 / 4.8	1.6 / 4	2 / 4.9	2.3 / 5.6	1.9 / 4.7	2.3 / 5.6	2.6 / 6.4	2.2 / 5.4	2.5 / 6.3	2.9 / 7.2	2.4 / 6	
End/Int bearing Member (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	1.5 / 3.6	1.5 / 3.5	1.5 / 3.6	1.7 / 4.1	1.5 / 3.5	
<b>14</b>	8' - 5"	9' - 9"	10' - 10"	10' - 7"	12' - 3"	13' - 7"	12' - 6"	14' - 5"	16' - 0"	14' - 3"	16' - 6"	18' - 3"	16' - 1"	18' - 7"	20' - 7"	
End/Int bearing SPF Plate (in)	1.5 / 3.7	1.7 / 4.2	1.5 / 3.5	1.9 / 4.6	2.1 / 5.3	1.8 / 4.4	2.2 / 5.4	2.5 / 6.2	2.1 / 5.2	2.5 / 6.2	2.9 / 7.1	2.4 / 5.9	2.8 / 6.9	3.2 / 8	2.7 / 6.6	
End/Int bearing Member (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	1.6 / 4	1.5 / 3.5	1.6 / 4	1.8 / 4.5	1.5 / 3.8	
<b>16</b>	7' - 8"	9' - 4"	10' - 4"	9' - 7"	11' - 8"	12' - 11"	11' - 3"	13' - 9"	15' - 3"	12' - 10"	15' - 9"	17' - 5"	14' - 6"	17' - 8"	19' - 7"	
End/Int bearing SPF Plate (in)	1.5 / 3.8	1.9 / 4.6	1.6 / 3.8	1.9 / 4.7	2.3 / 5.8	1.9 / 4.8	2.3 / 5.6	2.7 / 6.8	2.3 / 5.6	2.6 / 6.3	3.1 / 7.7	2.6 / 6.4	2.9 / 7.1	3.5 / 8.7	2.9 / 7.2	
End/Int bearing Member (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	1.6 / 3.8	1.5 / 3.5	1.5 / 3.6	1.8 / 4.4	1.5 / 3.6	1.6 / 4	2 / 4.9	1.7 / 4.1	
<b>18</b>	7' - 0"	8' - 11"	9' - 11"	8' - 8"	11' - 2"	12' - 5"	10' - 3"	13' - 2"	14' - 7"	11' - 9"	15' - 1"	16' - 9"	13' - 2"	17' - 0"	18' - 10"	
End/Int bearing SPF Plate (in)	1.6 / 3.9	2 / 5	1.7 / 4.1	2 / 4.8	2.5 / 6.2	2.1 / 5.2	2.3 / 5.7	3 / 7.3	2.5 / 6.1	2.6 / 6.5	3.4 / 8.3	2.8 / 6.9	3 / 7.3	3.8 / 9.4	3.2 / 7.8	
End/Int bearing Member (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	1.7 / 4.1	1.5 / 3.5	1.5 / 3.7	1.9 / 4.7	1.6 / 3.9	1.7 / 4.1	2.2 / 5.3	1.8 / 4.4	
<b>20</b>	6' - 5"	8' - 7"	9' - 7"	8' - 0"	10' - 9"	11' - 11"	9' - 5"	12' - 8"	14' - 1"	10' - 10"	14' - 6"	16' - 1"	12' - 2"	16' - 4"	18' - 1"	
End/Int bearing SPF Plate (in)	1.6 / 4	2.2 / 5.3	1.8 / 4.4	2 / 5	2.7 / 6.6	2.2 / 5.5	2.4 / 5.8	3.2 / 7.8	2.6 / 6.5	2.7 / 6.7	3.6 / 8.9	3 / 7.4	3 / 7.5	4 / 10	3.4 / 8.4	
End/Int bearing Member (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	1.8 / 4.4	1.5 / 3.7	1.5 / 3.8	2 / 5	1.7 / 4.2	1.7 / 4.2	2.3 / 5.7	1.9 / 4.7	

Live Load of 40 psf

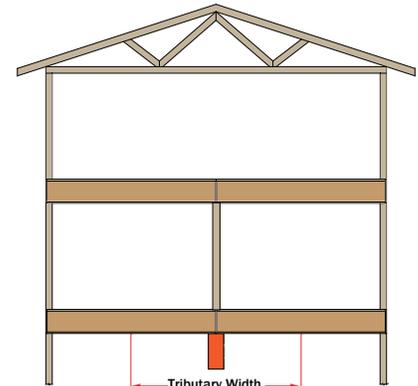
Dead Load of 25 psf

L/360

Beam Depth	9.5"			11.875"			14"			16"			18"		
	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply
<b>6</b>	10' - 8"	12' - 4"	13' - 7"	13' - 4"	15' - 5"	16' - 11"	15' - 9"	18' - 1"	19' - 11"	18' - 0"	20' - 8"	22' - 9"	20' - 3"	23' - 3"	25' - 7"
End/Int bearing SPF Plate (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	1.6 / 3.9	1.5 / 3.5	1.6 / 3.9	1.8 / 4.4	1.5 / 3.7	1.8 / 4.3	2 / 5	1.7 / 4.1
End/Int bearing Member (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	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5
<b>8</b>	9' - 9"	11' - 3"	12' - 5"	12' - 2"	14' - 0"	15' - 6"	14' - 4"	16' - 7"	18' - 3"	16' - 5"	18' - 11"	20' - 10"	18' - 6"	21' - 3"	23' - 5"
End/Int bearing SPF Plate (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.6 / 4	1.5 / 3.5	1.7 / 4.1	1.9 / 4.7	1.6 / 3.9	1.9 / 4.7	2.2 / 5.4	1.8 / 4.5	2.1 / 5.3	2.5 / 6.1	2 / 5
End/Int bearing Member (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	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5
<b>10</b>	9' - 1"	10' - 5"	11' - 7"	11' - 4"	13' - 1"	14' - 5"	13' - 4"	15' - 5"	17' - 0"	15' - 3"	17' - 7"	19' - 5"	17' - 2"	19' - 9"	21' - 10"
End/Int bearing SPF Plate (in)	1.5 / 3.5	1.5 / 3.8	1.5 / 3.5	1.7 / 4.1	1.9 / 4.7	1.6 / 3.9	1.9 / 4.8	2.2 / 5.5	1.9 / 4.6	2.2 / 5.5	2.5 / 6.3	2.1 / 5.2	2.5 / 6.1	2.8 / 7	2.4 / 5.8
End/Int bearing Member (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	1.5 / 3.6	1.5 / 3.5	1.5 / 3.5	1.6 / 4	1.5 / 3.5
<b>12</b>	8' - 6"	9' - 10"	10' - 11"	10' - 8"	12' - 3"	13' - 7"	12' - 7"	14' - 6"	16' - 0"	14' - 4"	16' - 7"	18' - 4"	16' - 2"	18' - 7"	20' - 7"
End/Int bearing SPF Plate (in)	1.5 / 3.7	1.7 / 4.2	1.5 / 3.5	1.9 / 4.6	2.1 / 5.3	1.8 / 4.4	2.2 / 5.4	2.5 / 6.2	2.1 / 5.2	2.5 / 6.1	2.9 / 7.1	2.4 / 5.9	2.8 / 6.9	3.2 / 8	2.7 / 6.6
End/Int bearing Member (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	1.6 / 4	1.5 / 3.5	1.6 / 3.9	1.8 / 4.5	1.5 / 3.7
<b>14</b>	7' - 7"	9' - 4"	10' - 4"	9' - 5"	11' - 8"	12' - 11"	11' - 2"	13' - 9"	15' - 3"	12' - 9"	15' - 9"	17' - 5"	14' - 4"	17' - 8"	19' - 7"
End/Int bearing SPF Plate (in)	1.6 / 3.8	1.9 / 4.7	1.6 / 3.9	1.9 / 4.7	2.4 / 5.8	2 / 4.9	2.3 / 5.6	2.8 / 6.9	2.3 / 5.7	2.6 / 6.4	3.2 / 7.8	2.6 / 6.5	2.9 / 7.2	3.6 / 8.8	3 / 7.3
End/Int bearing Member (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	1.6 / 3.9	1.5 / 3.5	1.5 / 3.6	1.8 / 4.4	1.5 / 3.7	1.6 / 4	2 / 5	1.7 / 4.1
<b>16</b>	6' - 10"	8' - 11"	9' - 11"	8' - 6"	11' - 2"	12' - 4"	10' - 0"	13' - 2"	14' - 7"	11' - 5"	15' - 0"	16' - 8"	12' - 11"	16' - 11"	18' - 8"
End/Int bearing SPF Plate (in)	1.6 / 3.9	2.1 / 5.1	1.7 / 4.3	2 / 4.9	2.6 / 6.4	2.2 / 5.3	2.3 / 5.7	3 / 7.5	2.5 / 6.2	2.6 / 6.5	3.5 / 8.6	2.9 / 7.1	3 / 7.4	3.9 / 9.6	3.2 / 8
End/Int bearing Member (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.6	1.5 / 3.5	1.5 / 3.5	1.7 / 4.2	1.5 / 3.5	1.5 / 3.7	2 / 4.8	1.6 / 4	1.7 / 4.2	2.2 / 5.4	1.8 / 4.5
<b>18</b>	6' - 2"	8' - 7"	9' - 6"	7' - 9"	10' - 8"	11' - 10"	9' - 2"	12' - 7"	14' - 0"	10' - 5"	14' - 5"	16' - 0"	11' - 9"	16' - 3"	18' - 0"
End/Int bearing SPF Plate (in)	1.6 / 4	2.2 / 5.5	1.9 / 4.6	2 / 5	2.8 / 6.9	2.3 / 5.7	2.4 / 5.9	3.3 / 8.1	2.7 / 6.7	2.7 / 6.7	3.7 / 9.2	3.1 / 7.7	3.1 / 7.6	4.2 / 10.4	3.5 / 8.6
End/Int bearing Member (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.6 / 3.9	1.5 / 3.5	1.5 / 3.5	1.9 / 4.6	1.6 / 3.8	1.6 / 3.8	2.1 / 5.2	1.8 / 4.4	1.7 / 4.3	2.4 / 5.9	2 / 4.9
<b>20</b>	5' - 9"	7' - 11"	9' - 2"	7' - 2"	9' - 11"	11' - 5"	8' - 5"	11' - 9"	13' - 6"	9' - 8"	13' - 5"	15' - 5"	10' - 10"	15' - 1"	17' - 4"
End/Int bearing SPF Plate (in)	1.7 / 4.1	2.3 / 5.7	2 / 4.9	2.1 / 5.1	2.9 / 7.1	2.5 / 6.1	2.4 / 6	3.4 / 8.4	2.9 / 7.2	2.8 / 6.9	3.8 / 9.5	3.3 / 8.2	3.1 / 7.7	4.3 / 10.7	3.7 / 9.3
End/Int bearing Member (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.6 / 4	1.5 / 3.5	1.5 / 3.5	1.9 / 4.7	1.7 / 4.1	1.6 / 3.9	2.2 / 5.4	1.9 / 4.7	1.8 / 4.4	2.5 / 6.1	2.1 / 5.2

**NOTES:**

- This table has been established using a Live Load deflection equal to L / 360 and a Total Load deflection limit equal to L / 240.
- This table assumes uniform loads and simple floor joists spans. When the floor joists are continuous over the VERSA-LAM LVL beam, multiply the tributary width by 1.25 and always select the value closer to the higher tributary width.  
**Example : Tributary width of 14 feet multiply by 1.25 = 17'-6".**  
Hence, select 18 feet for new tributary width.
- Table values assume that lateral support is provided at each support and continuously along the compression edge of the beam.
- Table values are based on SPF specified compression strength perpendicular to grain for plate of 769 psi.
- Minimum bearing lengths required are based on a minimum bearing width equal to or greater than the width of the supported beam.
- Table values represent the most restrictive of simple or continuous span beam applications. Span is measured center to center of the supports.
- Analyze continuous span beams with BC CALC® software if the length of any span is less than half the length of the adjacent span.
- Table values assume an interior wall dead load of 80 pif.
- Multi-ply members may be substituted with solid section beams.



## Multiple Ply 1 3/4" VERSA-LAM® 2.1E 3100 or Solid VERSA-LAM® 2.1E 3100

**Live Load of 40 psf**

**Dead Load of 15 psf**

**L/480**

Beam Depth		9.5"			11.875"			14"			16"			18"			
		2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	
Tributary Width [ft]	<b>6</b>	10' - 4"	11' - 11"	13' - 2"	12' - 11"	14' - 11"	16' - 6"	15' - 3"	17' - 7"	19' - 5"	17' - 5"	20' - 1"	22' - 2"	19' - 7"	22' - 7"	25' - 0"	
	End/Int bearing SPF Plate (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	1.5 / 3.7	1.5 / 3.5	1.5 / 3.6	1.7 / 4.2	1.5 / 3.5	
	End/Int bearing Member (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	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5
	<b>8</b>	9' - 4"	10' - 9"	11' - 11"	11' - 8"	13' - 6"	14' - 11"	13' - 9"	15' - 11"	17' - 7"	15' - 9"	18' - 2"	20' - 1"	17' - 8"	20' - 5"	22' - 7"	
	End/Int bearing SPF Plate (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	1.6 / 3.9	1.5 / 3.5	1.6 / 3.9	1.8 / 4.5	1.5 / 3.7	1.8 / 4.4	2 / 5	1.7 / 4.2	
	End/Int bearing Member (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	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5
	<b>10</b>	8' - 7"	9' - 11"	11' - 0"	10' - 9"	12' - 5"	13' - 9"	12' - 8"	14' - 8"	16' - 3"	14' - 6"	16' - 9"	18' - 7"	16' - 4"	18' - 11"	20' - 11"	
	End/Int bearing SPF Plate (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.6 / 3.9	1.5 / 3.5	1.6 / 3.9	1.8 / 4.5	1.5 / 3.8	1.8 / 4.5	2.1 / 5.2	1.8 / 4.3	2 / 5	2.4 / 5.8	2 / 4.8	
	End/Int bearing Member (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	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5
	<b>12</b>	8' - 1"	9' - 4"	10' - 4"	10' - 1"	11' - 8"	12' - 11"	11' - 11"	13' - 9"	15' - 3"	13' - 7"	15' - 9"	17' - 5"	15' - 3"	17' - 8"	19' - 7"	
	End/Int bearing SPF Plate (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.8	1.8 / 4.3	1.5 / 3.6	1.8 / 4.4	2.1 / 5.1	1.7 / 4.2	2 / 5	2.4 / 5.8	2 / 4.8	2.3 / 5.7	2.6 / 6.5	2.2 / 5.4	
	End/Int bearing Member (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	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.7	1.5 / 3.5	
	<b>14</b>	7' - 7"	8' - 10"	9' - 9"	9' - 6"	11' - 0"	12' - 3"	11' - 3"	13' - 0"	14' - 5"	12' - 10"	14' - 11"	16' - 6"	14' - 5"	16' - 9"	18' - 7"	
	End/Int bearing SPF Plate (in)	1.5 / 3.5	1.6 / 3.8	1.5 / 3.5	1.7 / 4.1	1.9 / 4.8	1.6 / 4	2 / 4.9	2.3 / 5.6	1.9 / 4.7	2.2 / 5.5	2.6 / 6.4	2.2 / 5.3	2.5 / 6.2	2.9 / 7.2	2.4 / 6	
	End/Int bearing Member (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	1.5 / 3.6	1.5 / 3.5	1.5 / 3.5	1.7 / 4.1	1.5 / 3.5	
	<b>16</b>	7' - 3"	8' - 5"	9' - 4"	9' - 1"	10' - 6"	11' - 8"	10' - 8"	12' - 5"	13' - 9"	12' - 3"	14' - 2"	15' - 9"	13' - 9"	16' - 0"	17' - 8"	
	End/Int bearing SPF Plate (in)	1.5 / 3.6	1.7 / 4.2	1.5 / 3.5	1.8 / 4.5	2.1 / 5.2	1.8 / 4.3	2.1 / 5.3	2.5 / 6.1	2.1 / 5.1	2.4 / 6	2.8 / 7	2.4 / 5.8	2.7 / 6.8	3.2 / 7.9	2.6 / 6.5	
	End/Int bearing Member (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	1.6 / 4	1.5 / 3.5	1.6 / 3.8	1.8 / 4.4	1.5 / 3.7	
	<b>18</b>	6' - 11"	8' - 1"	8' - 11"	8' - 8"	10' - 1"	11' - 2"	10' - 3"	11' - 11"	13' - 2"	11' - 8"	13' - 7"	15' - 1"	13' - 2"	15' - 3"	17' - 0"	
	End/Int bearing SPF Plate (in)	1.6 / 3.9	1.8 / 4.5	1.5 / 3.7	2 / 4.8	2.3 / 5.6	1.9 / 4.7	2.3 / 5.7	2.7 / 6.6	2.2 / 5.5	2.6 / 6.5	3 / 7.5	2.5 / 6.3	2.9 / 7.3	3.4 / 8.5	2.9 / 7.1	
End/Int bearing Member (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 / 3.7	1.5 / 3.5	1.5 / 3.7	1.7 / 4.3	1.5 / 3.6	1.7 / 4.1	1.9 / 4.8	1.6 / 4		
<b>20</b>	6' - 5"	7' - 9"	8' - 7"	8' - 0"	9' - 8"	10' - 9"	9' - 5"	11' - 5"	12' - 8"	10' - 10"	13' - 1"	14' - 6"	12' - 2"	14' - 9"	16' - 4"		
End/Int bearing SPF Plate (in)	1.6 / 4	1.9 / 4.8	1.6 / 4	2 / 5	2.4 / 6	2 / 5	2.4 / 5.8	2.8 / 7	2.4 / 5.9	2.7 / 6.7	3.2 / 8	2.7 / 6.7	3 / 7.5	3.6 / 9	3 / 7.5		
End/Int bearing Member (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	1.6 / 4	1.5 / 3.5	1.5 / 3.8	1.9 / 4.6	1.5 / 3.8	1.7 / 4.2	2.1 / 5.1	1.7 / 4.3		

**Live Load of 40 psf**

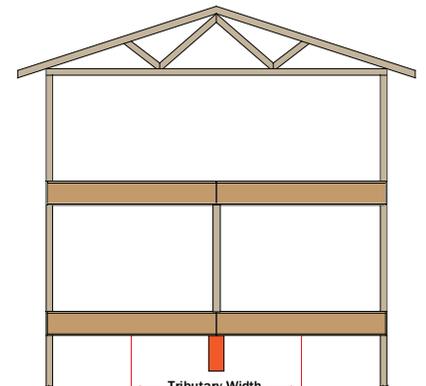
**Dead Load of 25 psf**

**L/480**

Beam Depth		9.5"			11.875"			14"			16"			18"		
		2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply
Tributary Width [ft]	<b>6</b>	10' - 4"	11' - 11"	13' - 2"	12' - 11"	14' - 11"	16' - 6"	15' - 3"	17' - 7"	19' - 5"	17' - 5"	20' - 1"	22' - 2"	19' - 7"	22' - 7"	25' - 0"
	End/Int bearing SPF Plate (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 / 3.8	1.5 / 3.5	1.8 / 4.3	1.5 / 3.6	1.7 / 4.2	2 / 4.9	1.6 / 4	
	End/Int bearing Member (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	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5
	<b>8</b>	9' - 4"	10' - 9"	11' - 11"	11' - 8"	13' - 6"	14' - 11"	13' - 9"	15' - 11"	17' - 7"	15' - 9"	18' - 2"	20' - 1"	17' - 8"	20' - 5"	22' - 7"
	End/Int bearing SPF Plate (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.6 / 3.9	1.5 / 3.5	1.6 / 4	1.9 / 4.6	1.5 / 3.8	1.8 / 4.5	2.1 / 5.2	1.8 / 4.3	2.1 / 5.1	2.4 / 5.8	2 / 4.9
	End/Int bearing Member (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	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5
	<b>10</b>	8' - 7"	9' - 11"	11' - 0"	10' - 9"	12' - 5"	13' - 9"	12' - 8"	14' - 8"	16' - 3"	14' - 6"	16' - 9"	18' - 7"	16' - 4"	18' - 11"	20' - 11"
	End/Int bearing SPF Plate (in)	1.5 / 3.5	1.5 / 3.6	1.5 / 3.5	1.6 / 3.9	1.8 / 4.5	1.5 / 3.7	1.9 / 4.6	2.1 / 5.3	1.8 / 4.4	2.1 / 5.2	2.4 / 6	2 / 5	2.4 / 5.8	2.7 / 6.7	2.3 / 5.6
	End/Int bearing Member (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	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5
	<b>12</b>	8' - 1"	9' - 4"	10' - 4"	10' - 1"	11' - 8"	12' - 11"	11' - 11"	13' - 9"	15' - 3"	13' - 7"	15' - 9"	17' - 5"	15' - 3"	17' - 8"	19' - 7"
	End/Int bearing SPF Plate (in)	1.5 / 3.5	1.6 / 4	1.5 / 3.5	1.8 / 4.3	2 / 5	1.7 / 4.2	2.1 / 5.1	2.4 / 5.9	2 / 4.9	2.4 / 5.8	2.7 / 6.7	2.3 / 5.6	2.6 / 6.5	3.1 / 7.6	2.5 / 6.3
	End/Int bearing Member (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	1.6 / 3.8	1.5 / 3.5	1.5 / 3.7	1.7 / 4.3	1.5 / 3.6
	<b>14</b>	7' - 7"	8' - 10"	9' - 9"	9' - 5"	11' - 0"	12' - 3"	11' - 2"	13' - 0"	14' - 5"	12' - 9"	14' - 11"	16' - 6"	14' - 4"	16' - 9"	18' - 7"
	End/Int bearing SPF Plate (in)	1.6 / 3.8	1.8 / 4.4	1.5 / 3.7	1.9 / 4.7	2.2 / 5.5	1.9 / 4.6	2.3 / 5.6	2.6 / 6.5	2.2 / 5.4	2.6 / 6.4	3 / 7.4	2.5 / 6.2	2.9 / 7.2	3.4 / 8.4	2.8 / 7
	End/Int bearing Member (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 / 3.7	1.5 / 3.5	1.5 / 3.6	1.7 / 4.2	1.5 / 3.5	1.6 / 4	1.9 / 4.7	1.6 / 3.9
	<b>16</b>	6' - 10"	8' - 5"	9' - 4"	8' - 6"	10' - 6"	11' - 8"	10' - 0"	12' - 5"	13' - 9"	11' - 5"	14' - 2"	15' - 9"	12' - 11"	16' - 0"	17' - 8"
	End/Int bearing SPF Plate (in)	1.6 / 3.9	2 / 4.8	1.6 / 4	2 / 4.9	2.4 / 6	2 / 5	2.3 / 5.7	2.9 / 7.1	2.4 / 5.9	2.6 / 6.5	3.3 / 8.1	2.7 / 6.7	3 / 7.4	3.7 / 9.1	3.1 / 7.6
	End/Int bearing Member (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	1.6 / 4	1.5 / 3.5	1.5 / 3.7	1.9 / 4.6	1.6 / 3.8	1.7 / 4.2	2.1 / 5.1	1.7 / 4.3
	<b>18</b>	6' - 2"	8' - 1"	8' - 11"	7' - 9"	10' - 1"	11' - 2"	9' - 2"	11' - 11"	13' - 2"	10' - 5"	13' - 7"	15' - 1"	11' - 9"	15' - 3"	17' - 0"
	End/Int bearing SPF Plate (in)	1.6 / 4	2.1 / 5.2	1.8 / 4.3	2 / 5	2.6 / 6.5	2.2 / 5.4	2.4 / 5.9	3.1 / 7.6	2.6 / 6.4	2.7 / 6.7	3.5 / 8.7	2.9 / 7.3	3.1 / 7.6	3.9 / 9.8	3.3 / 8.2
End/Int bearing Member (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.7	1.5 / 3.5	1.5 / 3.5	1.8 / 4.3	1.5 / 3.6	1.6 / 3.8	2 / 4.9	1.7 / 4.1	1.7 / 4.3	2.2 / 5.5	1.9 / 4.6	
<b>20</b>	5' - 9"	7' - 9"	8' - 7"	7' - 2"	9' - 8"	10' - 9"	8' - 5"	11' - 5"	12' - 8"	9' - 8"	13' - 1"	14' - 6"	10' - 10"	14' - 9"	16' - 4"	
End/Int bearing SPF Plate (in)	1.7 / 4.1	2.3 / 5.6	1.9 / 4.6	2.1 / 5.1	2.8 / 6.9	2.3 / 5.8	2.4 / 6	3.3 / 8.2	2.8 / 6.8	2.8 / 6.9	3.8 / 9.3	3.1 / 7.8	3.1 / 7.7	4.2 / 10.5	3.5 / 8.7	
End/Int bearing Member (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.6 / 3.9	1.5 / 3.5	1.5 / 3.5	1.9 / 4.6	1.6 / 3.9	1.6 / 3.9	2.1 / 5.3	1.8 / 4.4	1.8 / 4.4	2.4 / 5.9	2 / 4.9	

**NOTES:**

- This table has been established using a Live Load deflection equal to L / 480 and a Total Load deflection limit equal to L / 240.
- This table assumes uniform loads and simple floor joists spans. When the floor joists are continuous over the VERSA-LAM® LVL beam, multiply the tributary width by 1.25 and always select the value closer to the higher tributary width.  
**Example : Tributary width of 14 feet multiply by 1.25 = 17'-6".**  
Hence, select 18 feet for new tributary width.
- Table values assume that lateral support is provided at each support and continuously along the compression edge of the beam.
- Table values are based on SPF specified compression strength perpendicular to grain for plate of 769 psi.
- Minimum bearing lengths required are based on a minimum bearing width equal to or greater than the width of the supported beam.
- Table values represent the most restrictive of simple or continuous span beam applications. Span is measured center to center of the supports.
- Analyze continuous span beams with BC CALC® software if the length of any span is less than half the length of the adjacent span.
- Table values assume an interior wall dead load of 80 pf.



# Ridge Beam Span Tables

Multiple Ply 1 3/4" VERSA-LAM® 2.1E 3100 or Solid VERSA-LAM® 2.1E 3100

Snow Load of 20 psf

Dead Load of 15 psf

L/240

Beam Depth	9.5"			11.875"			14"			16"			18"		
	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply
<b>20</b>	15'-2"	17'-5"	19'-1"	19'-0"	21'-8"	23'-10"	22'-4"	25'-6"	28'-0"	25'-6"	29'-1"	31'-11"	28'-8"	32'-8"	35'-9"
End/Int bearing SPF Plate (in)	1.8/4.4	1.5/3.5	1.5/3.5	2.2/5.4	1.7/4.2	1.5/3.5	2.6/6.4	2/4.9	1.6/4	2.9/7.3	2.3/5.6	1.9/4.6	3.3/8.2	2.5/6.2	2.1/5.1
End/Int bearing Member (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	1.5/3.6	1.5/3.5	1.5/3.5	1.7/4.1	1.5/3.5	1.5/3.5	1.9/4.6	1.5/3.5	1.5/3.5
<b>24</b>	14'-4"	16'-5"	18'-0"	17'-10"	20'-5"	22'-5"	21'-0"	24'-1"	26'-5"	24'-0"	27'-5"	30'-1"	27'-0"	30'-10"	33'-9"
End/Int bearing SPF Plate (in)	2/4.9	1.5/3.8	1.5/3.5	2.5/6.1	1.9/4.7	1.6/3.9	2.9/7.2	2.2/5.5	1.8/4.5	3.3/8.2	2.5/6.3	2.1/5.2	3.7/9.2	2.8/7	2.3/5.8
End/Int bearing Member (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	1.7/4.1	1.5/3.5	1.5/3.5	1.9/4.7	1.5/3.6	1.5/3.5	1.9/4.6	1.5/3.5	1.5/3.5
<b>28</b>	13'-7"	15'-7"	17'-1"	16'-11"	19'-5"	21'-4"	20'-0"	22'-10"	25'-1"	22'-10"	26'-1"	28'-8"	25'-7"	29'-4"	32'-2"
End/Int bearing SPF Plate (in)	2.2/5.4	1.7/4.2	1.5/3.5	2.7/6.8	2.1/5.2	1.7/4.3	3.2/8	2.5/6.1	2/5	3.7/9.1	2.8/7	2.3/5.7	4.1/10.2	3.2/7.8	2.6/6.4
End/Int bearing Member (in)	1.5/3.5	1.5/3.5	1.5/3.5	1.6/3.8	1.5/3.5	1.5/3.5	1.8/4.5	1.5/3.5	1.5/3.5	2.1/5.1	1.6/3.9	1.5/3.5	2.3/5.8	1.8/4.4	1.5/3.6
<b>32</b>	13'-0"	14'-11"	16'-5"	16'-2"	18'-7"	20'-5"	19'-1"	21'-10"	24'-1"	21'-9"	25'-0"	27'-5"	24'-6"	28'-1"	30'-10"
End/Int bearing SPF Plate (in)	2.4/5.9	1.9/4.6	1.5/3.8	3/7.4	2.3/5.7	1.9/4.7	3.5/8.7	2.7/6.7	2.2/5.5	4/9.9	3.1/7.6	2.5/6.3	4.5/11.2	3.4/8.5	2.8/7
End/Int bearing Member (in)	1.5/3.5	1.5/3.5	1.5/3.5	1.7/4.2	1.5/3.5	1.5/3.5	2/4.9	1.5/3.8	1.5/3.5	2.3/5.6	1.8/4.3	1.5/3.6	2.6/6.3	2/4.8	1.6/4
<b>36</b>	12'-5"	14'-4"	15'-9"	15'-7"	17'-10"	19'-8"	18'-4"	21'-0"	23'-2"	20'-11"	24'-0"	26'-5"	23'-6"	27'-0"	29'-8"
End/Int bearing SPF Plate (in)	2.6/6.4	2/4.9	1.7/4.1	3.2/8	2.5/6.1	2.1/5.1	3.8/9.4	2.9/7.2	2.4/6	4.3/10.7	3.3/8.2	2.7/6.8	4.9/12.1	3.7/9.2	3.1/7.6
End/Int bearing Member (in)	1.5/3.6	1.5/3.5	1.5/3.5	1.8/4.5	1.5/3.5	1.5/3.5	2.2/5.3	1.7/4.1	1.5/3.5	2.5/6.1	1.9/4.7	1.6/3.8	2.8/6.8	2.1/5.2	1.8/4.3
<b>40</b>	12'-0"	13'-10"	15'-2"	15'-0"	17'-3"	19'-0"	17'-8"	20'-4"	22'-4"	20'-2"	23'-2"	25'-6"	22'-8"	26'-0"	28'-8"
End/Int bearing SPF Plate (in)	2.8/6.9	2.1/5.3	1.8/4.4	3.5/8.6	2.7/6.6	2.2/5.4	4.1/10.1	3.1/7.7	2.6/6.4	4.6/11.5	3.6/8.8	2.9/7.3	5.2/12.9	4/9.9	3.3/8.2
End/Int bearing Member (in)	1.6/3.9	1.5/3.5	1.5/3.5	2/4.8	1.5/3.7	1.5/3.5	2.3/5.7	1.8/4.4	1.5/3.6	2.6/6.5	2/5	1.7/4.1	3/7.3	2.3/5.6	1.9/4.6

Snow Load of 40 psf

Dead Load of 15 psf

L/240

Beam Depth	9.5"			11.875"			14"			16"			18"		
	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply
<b>20</b>	13'-4"	15'-3"	16'-9"	16'-7"	19'-0"	20'-11"	19'-7"	22'-5"	24'-8"	22'-4"	25'-7"	28'-1"	25'-1"	28'-9"	31'-7"
End/Int bearing SPF Plate (in)	2.5/6.2	1.9/4.7	1.6/3.9	3.1/7.7	2.4/5.9	2/4.8	3.6/9	2.8/6.9	2.3/5.7	4.1/10.3	3.2/7.9	2.6/6.5	4.7/11.6	3.6/8.8	2.9/7.3
End/Int bearing Member (in)	1.5/3.5	1.5/3.5	1.5/3.5	1.8/4.3	1.5/3.5	1.5/3.5	2.1/5.1	1.6/3.9	1.5/3.5	2.4/5.8	1.8/4.4	1.5/3.7	2.6/6.5	2/5	1.7/4.1
<b>24</b>	12'-6"	14'-4"	15'-10"	15'-7"	17'-11"	19'-9"	18'-5"	21'-1"	23'-3"	21'-0"	24'-1"	26'-6"	23'-7"	27'-1"	29'-9"
End/Int bearing SPF Plate (in)	2.8/6.9	2.2/5.3	1.8/4.4	3.5/8.6	2.7/6.6	2.2/5.5	4.1/10.2	3.1/7.8	2.6/6.4	4.7/11.6	3.6/8.9	3/7.3	5.2/13	4/10	3.3/8.2
End/Int bearing Member (in)	1.6/3.9	1.5/3.5	1.5/3.5	2/4.9	1.5/3.7	1.5/3.5	2.3/5.7	1.8/4.4	1.5/3.6	2.7/6.6	2/5	1.7/4.1	3/7.4	2.3/5.6	1.9/4.7
<b>28</b>	11'-10"	13'-7"	15'-0"	14'-10"	17'-0"	18'-9"	17'-5"	20'-0"	22'-1"	19'-11"	22'-10"	25'-2"	22'-5"	25'-8"	28'-3"
End/Int bearing SPF Plate (in)	3.1/7.7	2.4/5.9	2/4.9	3.9/9.6	3/7.3	2.5/6.1	4.5/11.2	3.5/8.6	2.9/7.1	5.2/12.8	4/9.8	3.3/8.1	5.8/14.4	4.4/11	3.7/9.1
End/Int bearing Member (in)	1.8/4.3	1.5/3.5	1.5/3.5	2.2/5.4	1.7/4.1	1.5/3.5	2.6/6.4	2/4.9	1.6/4	2.9/7.3	2.3/5.6	1.9/4.6	3.3/8.1	2.5/6.2	2.1/5.2
<b>32</b>	11'-4"	13'-0"	14'-4"	14'-2"	16'-3"	17'-11"	16'-7"	19'-2"	21'-1"	18'-9"	21'-10"	24'-1"	21'-0"	24'-7"	27'-1"
End/Int bearing SPF Plate (in)	3.4/8.4	2.6/6.4	2.2/5.3	4.2/10.4	3.2/8	2.7/6.6	4.9/12.2	3.8/9.4	3.1/7.8	5.6/13.8	4.3/10.7	3.6/8.9	6.2/15.4	4.9/12.1	4/10
End/Int bearing Member (in)	1.9/4.7	1.5/3.6	1.5/3.5	2.4/5.9	1.8/4.5	1.5/3.7	2.8/6.9	2.2/5.3	1.8/4.4	3.2/7.8	2.5/6.1	2/5	3.5/8.7	2.8/6.8	2.3/5.6
<b>36</b>	10'-10"	12'-6"	13'-9"	13'-5"	15'-7"	17'-3"	15'-7"	18'-5"	20'-3"	17'-9"	21'-0"	23'-2"	19'-9"	23'-7"	26'-0"
End/Int bearing SPF Plate (in)	3.6/9	2.8/6.9	2.3/5.7	4.5/11.1	3.5/8.6	2.9/7.2	5.2/12.9	4.1/10.2	3.4/8.4	5.9/14.7	4.7/11.6	3.9/9.6	6.6/16.4	5.2/13	4.3/10.8
End/Int bearing Member (in)	2.1/5.1	1.6/3.9	1.5/3.5	2.5/6.3	2/4.9	1.9/4.1	3/7.3	2.3/5.7	1.9/4.8	3.3/8.3	2.2/5.4	3.7/9.2	3/7.4	2.5/6.1	2.1/5.1
<b>40</b>	10'-3"	12'-1"	13'-4"	12'-8"	15'-1"	16'-7"	14'-10"	17'-9"	19'-7"	16'-10"	20'-3"	22'-4"	18'-9"	22'-9"	25'-1"
End/Int bearing SPF Plate (in)	3.8/9.5	3/7.4	2.5/6.2	4.7/11.7	3.7/9.3	3.1/7.7	5.5/13.6	4.4/10.9	3.6/9	6.2/15.5	5/12.4	4.1/10.3	6.9/17.3	5.6/14	4.7/11.6
End/Int bearing Member (in)	2.2/5.4	1.7/4.2	1.5/3.5	2.7/6.6	2.1/5.2	1.8/4.3	3.1/7.7	2.5/6.2	2.1/5.1	3.5/8.7	2.8/7	2.4/5.8	3.9/9.7	3.2/7.9	2.6/6.5

Snow Load of 60 psf

Dead Load of 15 psf

L/240

Beam Depth	9.5"			11.875"			14"			16"			18"		
	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply	2 - ply	3 - ply	4 - ply
<b>20</b>	12'-1"	13'-10"	15'-3"	15'-1"	17'-4"	19'-1"	17'-9"	20'-5"	22'-5"	20'-4"	23'-3"	25'-7"	22'-10"	26'-2"	28'-9"
End/Int bearing SPF Plate (in)	3.1/7.7	2.4/5.9	2/4.9	3.9/9.6	3/7.4	2.5/6.1	4.6/11.3	3.5/8.7	2.9/7.2	5.2/12.9	4/9.9	3.3/8.2	5.8/14.5	4.5/11.1	3.7/9.2
End/Int bearing Member (in)	1.8/4.4	1.5/3.5	1.5/3.5	2.2/5.4	1.7/4.2	1.5/3.5	2.6/6.4	2/4.9	1.7/4.1	2.9/7.3	2.3/5.6	1.9/4.6	3.3/8.2	2.5/6.3	2.1/5.2
<b>24</b>	11'-4"	13'-0"	14'-4"	14'-1"	16'-3"	17'-11"	16'-6"	19'-2"	21'-2"	18'-8"	21'-11"	24'-1"	20'-10"	24'-7"	27'-1"
End/Int bearing SPF Plate (in)	3.5/8.7	2.7/6.7	2.2/5.5	4.3/10.8	3.3/8.3	2.8/6.9	5.1/12.6	3.9/9.8	3.3/8.1	5.7/14.2	4.5/11.1	3.7/9.2	6.4/15.9	5/12.5	4.2/10.3
End/Int bearing Member (in)	2/4.9	1.5/3.8	1.5/3.5	2.5/6.1	1.9/4.7	1.6/3.9	2.9/7.1	2.2/5.5	1.9/4.6	3.2/8	2.5/6.3	2.1/5.2	3.6/9	2.9/7.1	2.4/5.8
<b>28</b>	10'-7"	12'-4"	13'-8"	13'-1"	15'-5"	17'-0"	15'-3"	18'-2"	20'-1"	17'-4"	20'-9"	22'-11"	19'-4"	23'-4"	25'-9"
End/Int bearing SPF Plate (in)	3.8/9.4	3/7.4	2.5/6.1	4.7/11.6	3.7/9.2	3.1/7.6	5.5/13.6	4.4/10.8	3.6/8.9	6.2/15.4	5/12.3	4.1/10.2	6.9/17.2	5.6/13.8	4.6/11.5
End/Int bearing Member (in)	2.2/5.3	1.7/4.2	1.5/3.5	2.7/6.6	2.1/5.2	1.8/4.3	3.1/7.7	2.5/6.1	2.1/5.1	3.5/8.7	2.8/7	2.3/5.8	3.9/9.7	3.2/7.8	2.6/6.5
<b>32</b>	9'-11"	11'-10"	13'-0"	12'-3"	14'-9"	16'-3"	14'-3"	17'-5"	19'-2"	16'-2"	19'-10"	21'-11"	18'-1"	22'-4"	24'-7"
End/Int bearing SPF Plate (in)	4.1/10.1	3.2/8	2.7/6.7	5/12.5	4/10	3.3/8.3	5.8/14.5	4.7/11.8	3.9/9.8	6.6/16.5	5.4/13.5	4.5/11.1	7.4/18.4	6.1/15.1	5/12.5
End/Int bearing Member (in)	2.3/5.7	1.8/4.5	1.5/3.8	2.8/7	2.3/5.7	1.9/4.7	3.3/8.2	2.7/6.7	2.2/5.5	3.7/9.3	3.1/7.6	2.5/6.3	4.2/10.4	3.4/8.5	2.9/7.1
<b>36</b>	9'-3"	11'-4"	12'-6"	11'-6"	14'-2"	15'-8"	13'-6"	16'-8"	18'-5"	15'-3"	19'-1"	21'-0"	17'-1"	21'-3"	23'-8"
End/Int bearing SPF Plate (in)	4.3/10.6	3.5/8.7	2.9/7.2	5.3/13.2	4.4/10.8	3.6/9	6.2/15.4	5.1/12.7	4.2/10.5	7/17.5	5.8/14.5	4.8/12	7.8/19.5	6.5/16.2	5.4/13.5
End/Int bearing Member (in)	2.4/6	2/4.9	1.7/4.1	3/7.5	2.5/6.1	2.1/5.1	3.5/8.7	2.9/7.2	2.4/6	4/9.9	3.3/8.2	2.7/6.8	4.4/11	3.7/9.2	3.1/7.6
<b>40</b>	8'-5"	10'-11"	12'-1"	12'-5"	15'-7"	17'-8"	15'-1"	18'-5"	21'-9"	18'-2"	21'-4"	24'-2"	16'-0"	20'-2"	22'-10"
End/Int bearing SPF Plate (in)	4.3/10.8	3.7/9.3	3.1/7.7	5.4/13.4	4.7/11.6	3.9/9.6	6.4/15.8	5.4/13.5	4.6/11.3	7.2/18	6.2/15.3	5.2/12.9	8.1/20.3	6.9/17.1	5.8/14.5
End/Int bearing Member (in)	2.5/6.1	2.1/5.3	1.8/4.4	3.1/7.6	2.6/6.5	2.2/5.4	3.6/8.9	3.1/7.6	2.6/6.4	4.1/10.2	3.5/8.6	2.9/7.3	4.6/11.4	3.9/9.7	3.3/8.2

**NOTES:**

- This table has been established using a Live Load deflection equal to L / 240 and a Total Load deflection limit equal to L / 180.
- This table assumes a maximum roof slope of 12/12.
- This table assumes uniform loads and simple span roof joists.
- Table values assume that lateral support is provided at each support and continuously along the compression edge of the beam.
- Table values are based on SPF specified compression strength perpendicular to grain for plate of 769 psi.
- Minimum bearing lengths required are based on a minimum bearing width equal to or greater than the width of the supported beam.
- Table values represent the most

# Ridge Beam Span Tables

## Multiple Ply 1 3/4" VERSA-LAM® 2.1E 3100 or Solid VERSA-LAM® 2.1E 3100

**Snow Load of 20 psf**

**Dead Load of 15 psf**

**L/360**

Beam Depth	9.5"			11.875"			14"			16"			18"		
	2-ply	3-ply	4-ply	2-ply	3-ply	4-ply	2-ply	3-ply	4-ply	2-ply	3-ply	4-ply	2-ply	3-ply	4-ply
<b>20</b>	15'-2"	17'-5"	19'-1"	19'-0"	21'-8"	23'-10"	22'-4"	25'-6"	28'-0"	25'-6"	29'-1"	31'-11"	28'-8"	32'-8"	35'-9"
End/Int bearing SPF Plate (in)	1.8 / 4.4	1.5 / 3.5	1.5 / 3.5	2.2 / 5.4	1.7 / 4.2	1.5 / 3.5	2.6 / 6.4	2 / 4.9	1.6 / 4	2.9 / 7.3	2.3 / 5.6	1.9 / 4.6	3.3 / 8.2	2.5 / 6.2	2.1 / 5.1
End/Int bearing Member (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 / 3.6	1.5 / 3.5	1.5 / 3.5	1.7 / 4.1	1.5 / 3.5	1.5 / 3.5	1.9 / 4.6	1.5 / 3.5	1.5 / 3.5
<b>24</b>	14'-4"	16'-5"	18'-0"	17'-10"	20'-5"	22'-5"	21'-0"	24'-1"	26'-5"	24'-0"	27'-5"	30'-1"	27'-0"	30'-10"	33'-9"
End/Int bearing SPF Plate (in)	2 / 4.9	1.5 / 3.8	1.5 / 3.5	2.5 / 6.1	1.9 / 4.7	1.6 / 3.9	2.9 / 7.2	2.2 / 5.5	1.8 / 4.5	3.3 / 8.2	2.5 / 6.3	2.1 / 5.2	3.7 / 9.2	2.8 / 7	2.3 / 5.8
End/Int bearing Member (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	1.7 / 4.1	1.5 / 3.5	1.5 / 3.5	1.9 / 4.7	1.5 / 3.6	1.5 / 3.5	2.1 / 5.2	1.6 / 4	1.5 / 3.5
<b>28</b>	13'-7"	15'-7"	17'-1"	16'-11"	19'-5"	21'-4"	20'-0"	22'-10"	25'-1"	22'-10"	26'-1"	28'-8"	25'-7"	29'-4"	32'-2"
End/Int bearing SPF Plate (in)	2.2 / 5.4	1.7 / 4.2	1.5 / 3.5	2.7 / 6.8	2.1 / 5.2	1.7 / 4.3	3.2 / 8	2.5 / 6.1	2 / 5	3.7 / 9.1	2.8 / 7	2.3 / 5.7	4.1 / 10.2	3.2 / 7.8	2.6 / 6.4
End/Int bearing Member (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.6 / 3.8	1.5 / 3.5	1.5 / 3.5	1.8 / 4.5	1.5 / 3.5	1.5 / 3.5	2.1 / 5.1	1.6 / 3.9	1.5 / 3.5	2.3 / 5.8	1.8 / 4.4	1.5 / 3.6
<b>32</b>	13'-0"	14'-11"	16'-5"	16'-2"	18'-7"	20'-5"	19'-1"	21'-10"	24'-1"	21'-10"	25'-0"	27'-5"	24'-6"	28'-1"	30'-10"
End/Int bearing SPF Plate (in)	2.4 / 5.9	1.9 / 4.6	1.5 / 3.8	3 / 7.4	2.3 / 5.7	1.9 / 4.7	3.5 / 8.7	2.7 / 6.7	2.2 / 5.5	4 / 9.9	3.1 / 7.6	2.5 / 6.3	4.5 / 11.2	3.4 / 8.5	2.8 / 7
End/Int bearing Member (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.7 / 4.2	1.5 / 3.5	1.5 / 3.5	2 / 4.9	1.5 / 3.8	1.5 / 3.5	2.3 / 5.6	1.8 / 4.3	1.5 / 3.6	2.6 / 6.3	2 / 4.8	1.6 / 4
<b>36</b>	12'-5"	14'-4"	15'-9"	15'-7"	17'-10"	19'-8"	18'-4"	21'-0"	23'-2"	20'-11"	24'-0"	26'-5"	23'-6"	27'-0"	29'-8"
End/Int bearing SPF Plate (in)	2.6 / 6.4	2 / 4.9	1.7 / 4.1	3.2 / 8	2.5 / 6.1	2.1 / 5.1	3.8 / 9.4	2.9 / 7.2	2.4 / 6	4.3 / 10.7	3.3 / 8.2	2.7 / 6.8	4.9 / 12.1	3.7 / 9.2	3.1 / 7.6
End/Int bearing Member (in)	1.5 / 3.6	1.5 / 3.5	1.5 / 3.5	1.8 / 4.5	1.5 / 3.5	1.5 / 3.5	2.2 / 5.3	1.7 / 4.1	1.5 / 3.5	2.5 / 6.1	1.9 / 4.7	1.6 / 3.8	2.8 / 6.8	2.1 / 5.2	1.8 / 4.3
<b>40</b>	12'-0"	13'-10"	15'-2"	15'-0"	17'-3"	19'-0"	17'-8"	20'-4"	22'-4"	20'-2"	23'-2"	25'-6"	22'-9"	26'-0"	28'-8"
End/Int bearing SPF Plate (in)	2.8 / 6.9	2.1 / 5.3	1.8 / 4.4	3.5 / 8.6	2.7 / 6.6	2.2 / 5.4	4.1 / 10.1	3.1 / 7.7	2.6 / 6.4	4.6 / 11.5	3.6 / 8.8	2.9 / 7.3	5.2 / 12.9	4 / 9.9	3.3 / 8.2
End/Int bearing Member (in)	1.6 / 3.9	1.5 / 3.5	1.5 / 3.5	2 / 4.8	1.5 / 3.7	1.5 / 3.5	2.3 / 5.7	1.8 / 4.4	1.5 / 3.6	2.6 / 6.5	2 / 5	1.7 / 4.1	3 / 7.3	2.3 / 5.6	1.9 / 4.6

**Snow Load of 40 psf**

**Dead Load of 15 psf**

**L/360**

Beam Depth	9.5"			11.875"			14"			16"			18"		
	2-ply	3-ply	4-ply	2-ply	3-ply	4-ply	2-ply	3-ply	4-ply	2-ply	3-ply	4-ply	2-ply	3-ply	4-ply
<b>20</b>	12'-2"	14'-0"	15'-6"	15'-3"	17'-6"	19'-4"	18'-0"	20'-8"	22'-10"	20'-7"	23'-8"	26'-1"	23'-1"	26'-7"	29'-4"
End/Int bearing SPF Plate (in)	2.3 / 5.6	1.8 / 4.3	1.5 / 3.6	2.8 / 7	2.2 / 5.4	1.8 / 4.5	3.3 / 8.3	2.6 / 6.4	2.1 / 5.3	3.8 / 9.5	2.9 / 7.3	2.4 / 6	4.3 / 10.6	3.3 / 8.2	2.7 / 6.8
End/Int bearing Member (in)	1.5 / 3.5	1.5 / 3.5	1.5 / 3.5	1.6 / 4	1.5 / 3.5	1.5 / 3.5	1.9 / 4.7	1.5 / 3.6	1.5 / 3.5	2.2 / 5.4	1.7 / 4.1	1.5 / 3.5	2.4 / 6	1.9 / 4.6	1.6 / 3.8
<b>24</b>	11'-5"	13'-2"	14'-7"	14'-4"	16'-6"	18'-2"	16'-10"	19'-5"	21'-5"	19'-3"	22'-2"	24'-6"	21'-8"	25'-0"	27'-7"
End/Int bearing SPF Plate (in)	2.6 / 6.3	2 / 4.9	1.7 / 4.1	3.2 / 7.9	2.5 / 6.1	2.1 / 5.1	3.8 / 9.3	2.9 / 7.2	2.4 / 5.9	4.3 / 10.7	3.3 / 8.2	2.7 / 6.8	4.8 / 12	3.7 / 9.2	3.1 / 7.6
End/Int bearing Member (in)	1.5 / 3.6	1.5 / 3.5	1.5 / 3.5	1.8 / 4.5	1.5 / 3.5	1.5 / 3.5	2.1 / 5.3	1.7 / 4.1	1.5 / 3.5	2.4 / 6	1.9 / 4.6	1.6 / 3.8	2.7 / 6.8	2.1 / 5.2	1.8 / 4.3
<b>28</b>	10'-10"	12'-6"	13'-9"	13'-7"	15'-7"	17'-3"	16'-0"	18'-5"	20'-4"	18'-3"	21'-1"	23'-3"	20'-7"	23'-8"	26'-2"
End/Int bearing SPF Plate (in)	2.8 / 7	2.2 / 5.4	1.8 / 4.5	3.5 / 8.7	2.7 / 6.7	2.3 / 5.6	4.2 / 10.3	3.2 / 7.9	2.7 / 6.6	4.7 / 11.8	3.7 / 9.1	3 / 7.5	5.3 / 13.2	4.1 / 10.2	3.4 / 8.4
End/Int bearing Member (in)	1.6 / 4	1.5 / 3.5	1.5 / 3.5	2 / 4.9	1.6 / 3.8	1.5 / 3.5	2.4 / 5.8	1.8 / 4.5	1.5 / 3.7	2.7 / 6.7	2.1 / 5.1	1.7 / 4.2	3 / 7.5	2.3 / 5.8	1.9 / 4.8
<b>32</b>	10'-4"	11'-11"	13'-2"	12'-11"	14'-11"	16'-6"	15'-3"	17'-7"	19'-5"	17'-5"	20'-1"	22'-2"	19'-7"	22'-7"	25'-0"
End/Int bearing SPF Plate (in)	3.1 / 7.6	2.4 / 5.9	2 / 4.9	3.8 / 9.5	3 / 7.3	2.5 / 6.1	4.5 / 11.2	3.5 / 8.6	2.9 / 7.2	5.2 / 12.8	4 / 9.9	3.3 / 8.2	5.8 / 14.4	4.5 / 11.1	3.7 / 9.2
End/Int bearing Member (in)	1.8 / 4.3	1.5 / 3.5	1.5 / 3.5	2.2 / 5.4	1.7 / 4.2	1.5 / 3.5	2.6 / 6.3	2 / 4.9	1.7 / 4.1	2.9 / 7.2	2.3 / 5.6	1.9 / 4.6	3.3 / 8.1	2.5 / 6.3	2.1 / 5.2
<b>36</b>	9'-11"	11'-5"	12'-8"	12'-5"	14'-4"	15'-10"	14'-7"	16'-10"	18'-8"	16'-9"	19'-3"	21'-4"	18'-10"	21'-8"	24'-0"
End/Int bearing SPF Plate (in)	3.3 / 8.2	2.6 / 6.3	2.1 / 5.3	4.1 / 10.3	3.2 / 7.9	2.7 / 6.6	4.9 / 12.1	3.8 / 9.3	3.1 / 7.7	5.6 / 13.8	4.3 / 10.7	3.6 / 8.8	6.3 / 15.6	4.8 / 12	4 / 9.9
End/Int bearing Member (in)	1.9 / 4.7	1.5 / 3.6	1.5 / 3.5	2.4 / 5.8	1.8 / 4.5	1.5 / 3.7	2.8 / 6.8	2.1 / 5.3	1.8 / 4.4	3.2 / 7.8	2.4 / 6	2 / 5	3.5 / 8.8	2.7 / 6.8	2.3 / 5.6
<b>40</b>	9'-7"	11'-0"	12'-2"	11'-11"	13'-9"	15'-3"	14'-1"	16'-3"	18'-0"	16'-1"	18'-7"	20'-7"	18'-1"	20'-11"	23'-1"
End/Int bearing SPF Plate (in)	3.6 / 8.8	2.7 / 6.8	2.3 / 5.6	4.4 / 11	3.4 / 8.5	2.8 / 7	5.2 / 13	4 / 10	3.3 / 8.3	6 / 14.8	4.6 / 11.4	3.8 / 9.5	6.7 / 16.7	5.2 / 12.8	4.3 / 10.6
End/Int bearing Member (in)	2 / 5	1.6 / 3.8	1.5 / 3.5	2.5 / 6.2	1.9 / 4.8	1.6 / 4	3 / 7.3	2.3 / 5.6	1.9 / 4.7	3.4 / 8.4	2.6 / 6.4	2.2 / 5.4	3.8 / 9.4	2.9 / 7.2	2.4 / 6

**Snow Load of 60 psf**

**Dead Load of 15 psf**

**L/360**

Beam Depth	9.5"			11.875"			14"			16"			18"		
	2-ply	3-ply	4-ply	2-ply	3-ply	4-ply	2-ply	3-ply	4-ply	2-ply	3-ply	4-ply	2-ply	3-ply	4-ply
<b>20</b>	10'-7"	12'-2"	13'-6"	13'-3"	15'-3"	16'-10"	15'-7"	18'-0"	19'-10"	17'-10"	20'-7"	22'-8"	20'-1"	23'-1"	25'-7"
End/Int bearing SPF Plate (in)	2.7 / 6.8	2.1 / 5.2	1.8 / 4.3	3.4 / 8.4	2.6 / 6.5	2.2 / 5.4	4 / 9.9	3.1 / 7.6	2.6 / 6.3	4.6 / 11.3	3.5 / 8.7	2.9 / 7.2	5.1 / 12.7	4 / 9.8	3.3 / 8.1
End/Int bearing Member (in)	1.6 / 3.8	1.5 / 3.5	1.5 / 3.5	1.9 / 4.8	1.5 / 3.7	1.5 / 3.5	2.3 / 5.6	1.8 / 4.3	1.5 / 3.6	2.6 / 6.4	2 / 4.9	1.7 / 4.1	2.9 / 7.2	2.2 / 5.5	1.9 / 4.6
<b>24</b>	9'-11"	11'-5"	12'-8"	12'-5"	14'-4"	15'-10"	14'-7"	16'-10"	18'-8"	16'-9"	19'-3"	21'-4"	18'-10"	21'-8"	24'-0"
End/Int bearing SPF Plate (in)	3.1 / 7.6	2.4 / 5.8	2 / 4.9	3.8 / 9.5	2.9 / 7.3	2.5 / 6.1	4.5 / 11.2	3.5 / 8.6	2.9 / 7.1	5.1 / 12.7	4 / 9.8	3.3 / 8.1	5.8 / 14.3	4.4 / 11	3.7 / 9.2
End/Int bearing Member (in)	1.7 / 4.3	1.5 / 3.5	1.5 / 3.5	2.2 / 5.4	1.7 / 4.1	1.5 / 3.5	2.6 / 6.3	2 / 4.9	1.6 / 4	2.9 / 7.2	2.2 / 5.5	1.9 / 4.6	3.3 / 8.1	2.5 / 6.2	2.1 / 5.2
<b>28</b>	9'-4"	10'-10"	12'-0"	11'-9"	13'-7"	15'-0"	13'-10"	16'-0"	17'-8"	15'-10"	18'-3"	20'-2"	17'-10"	20'-7"	22'-9"
End/Int bearing SPF Plate (in)	3.4 / 8.4	2.6 / 6.5	2.2 / 5.4	4.2 / 10.5	3.3 / 8.1	2.7 / 6.7	5 / 12.3	3.8 / 9.5	3.2 / 7.9	5.7 / 14.1	4.4 / 10.8	3.6 / 9	6.4 / 15.8	4.9 / 12.2	4.1 / 10.1
End/Int bearing Member (in)	1.9 / 4.7	1.5 / 3.7	1.5 / 3.5	2.4 / 5.9	1.9 / 4.6	1.5 / 3.8	2.8 / 7	2.2 / 5.4	1.8 / 4.5	3.2 / 7.9	2.5 / 6.1	2.1 / 5.1	3.6 / 8.9	2.8 / 6.9	2.3 / 5.7
<b>32</b>	8'-11"	10'-4"	11'-5"	11'-2"	12'-11"	14'-4"	13'-2"	15'-3"	16'-10"	15'-1"	17'-5"	19'-3"	17'-0"	19'-7"	21'-8"
End/Int bearing SPF Plate (in)	3.7 / 9.1	2.8 / 7	2.4 / 5.8	4.6 / 11.4	3.5 / 8.8	2.9 / 7.3	5.4 / 13.4	4.2 / 10.3	3.5 / 8.6	6.2 / 15.3	4.8 / 11.8	4 / 9.8	6.9 / 17.2	5.3 / 13.3	4.4 / 11
End/Int bearing Member (in)	2.1 / 5.2	1.6 / 4	1.5 / 3.5	2.6 / 6.4	2 / 5	1.7 / 4.1	3.1 / 7.6	2.4 / 5.8	2 / 4.9	3.5 / 8.7	2.7 / 6.7	2.2 / 5.5	3.9 / 9.7	3 / 7.5	2.5 / 6.2
<b>36</b>	8'-7"	9'-11"	11'-0"	10'-9"	12'-5"	13'-9"	12'-8"	14'-7"	16'-2"	14'-5"	16'-9"	18'-6"	16'-3"	18'-10"	20'-10"
End/Int bearing SPF Plate (in)	4 / 9.8	3.1 / 7.6	2.6 / 6.3	4.9 / 12.3	3.8 / 9.5	3.2 / 7.9	5.8 / 14.5	4.5 / 11.2	3.7 / 9.3	6.6 / 16.5	5.1 / 12.7	4.3 / 10.6	7.5 / 18.6	5.8 / 14.3	4.8 / 11.9
End/Int bearing Member (in)	2.3 / 5.6	1.7 / 4.3	1.5 / 3.6	2.8 / 6.9	2.2 / 5.4	1.8 / 4.5	3.3 / 8.2	2.6 / 6.3	2.1 / 5.2	3.8 / 9.3	2.9 / 7.2	2.4 / 6	4.2 / 10.5	3.3 / 8.1	2.7 / 6.7
<b>40</b>	8'-3"	9'-7"	10'-7"	10'-4"	11'-11"	13'-3"	12'-2"	14'-1"	15'-7"	13'-1"	15'-1"	17'-10"	15'-8"	18'-1"	20'-1"
End/Int bearing SPF Plate (in)	4.2 / 10.5	3.3 / 8.1	2.7 / 6.8	5.3 / 13.1	4.1 / 10.1	3.4 / 8.4	6.2 / 15.5	4.8 / 11.9	4 / 9.9	7.1 / 17.7					

# Header Span Tables - Roof Only

Multiple Ply 1 3/4" VERSA-LAM® 2.1E 3100 or Solid VERSA-LAM® 2.1E 3100

Snow Load of 20 psf

Dead Load of 15 psf

L/240

Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply
<b>20</b>	8' - 3"	9' - 6"	10' - 11"	12' - 6"	13' - 11"	15' - 11"	14' - 4"	16' - 5"	16' - 11"	19' - 4"	17' - 10"	20' - 5"	21' - 0"	24' - 1"	24' - 0"	27' - 5"	27' - 0"	30' - 10"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	2.0	1.5	2.1	1.6	2.4	1.9	2.8	2.1	3.1	2.4
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.8	1.5
<b>24</b>	7' - 10"	9' - 0"	10' - 4"	11' - 11"	13' - 3"	15' - 2"	13' - 7"	15' - 7"	16' - 1"	18' - 5"	16' - 11"	19' - 5"	20' - 0"	22' - 10"	22' - 10"	26' - 1"	25' - 7"	29' - 4"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.9	1.5	1.9	1.5	2.2	1.7	2.4	1.8	2.8	2.1	3.2	2.4	3.5	2.7
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.8	1.5	2.0	1.5
<b>28</b>	7' - 6"	8' - 7"	9' - 11"	11' - 4"	12' - 7"	14' - 6"	13' - 0"	14' - 11"	15' - 4"	17' - 7"	16' - 2"	18' - 7"	19' - 1"	21' - 10"	21' - 9"	25' - 0"	24' - 6"	28' - 0"
End bearing SPF Plate (in)	1.5	1.5	1.6	1.5	2.1	1.6	2.1	1.6	2.5	1.9	2.6	2.0	3.1	2.4	3.5	2.7	3.9	3.0
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	2.0	1.5	2.2	1.7
<b>32</b>	7' - 2"	8' - 3"	9' - 6"	10' - 11"	12' - 1"	13' - 11"	12' - 5"	14' - 4"	14' - 9"	16' - 11"	15' - 7"	17' - 10"	18' - 4"	21' - 0"	20' - 11"	24' - 0"	23' - 6"	27' - 0"
End bearing SPF Plate (in)	1.5	1.5	1.8	1.5	2.3	1.7	2.3	1.8	2.7	2.1	2.9	2.2	3.4	2.6	3.9	3.0	4.3	3.3
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.6	1.5	1.9	1.5	2.2	1.7	2.5	1.9
<b>36</b>	6' - 11"	8' - 0"	9' - 2"	10' - 6"	11' - 8"	13' - 5"	12' - 0"	13' - 10"	14' - 3"	16' - 4"	15' - 0"	17' - 3"	17' - 8"	20' - 4"	20' - 2"	23' - 2"	22' - 8"	26' - 0"
End bearing SPF Plate (in)	1.5	1.5	1.9	1.5	2.4	1.9	2.5	1.9	3.0	2.3	3.1	2.4	3.7	2.8	4.2	3.2	4.7	3.6
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.8	1.5	2.1	1.6	2.4	1.8	2.7	2.0
<b>40</b>	6' - 3"	7' - 9"	8' - 10"	10' - 2"	11' - 4"	13' - 0"	11' - 7"	13' - 4"	13' - 9"	15' - 10"	14' - 6"	16' - 8"	17' - 1"	19' - 8"	19' - 7"	22' - 5"	22' - 0"	25' - 3"
End bearing SPF Plate (in)	1.6	1.5	2.1	1.6	2.6	2.0	2.7	2.1	3.2	2.4	3.3	2.6	3.9	3.0	4.5	3.4	5.0	3.9
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	1.9	1.5	2.2	1.7	2.5	2.0	2.9	2.2

Snow Load of 40 psf

Dead Load of 15 psf

L/240

Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply
<b>20</b>	7' - 3"	8' - 4"	9' - 6"	10' - 11"	12' - 2"	14' - 0"	12' - 6"	14' - 4"	14' - 9"	17' - 0"	15' - 7"	17' - 11"	18' - 5"	21' - 1"	21' - 0"	24' - 1"	23' - 7"	27' - 1"
End bearing SPF Plate (in)	1.5	1.5	1.8	1.5	2.3	1.8	2.3	1.8	2.8	2.1	2.9	2.2	3.4	2.6	3.9	3.0	4.4	3.4
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	1.9	1.5	2.2	1.7	2.5	1.9
<b>24</b>	6' - 10"	7' - 11"	9' - 0"	10' - 5"	11' - 6"	13' - 3"	11' - 10"	13' - 7"	14' - 0"	16' - 1"	14' - 10"	17' - 0"	17' - 5"	20' - 0"	19' - 11"	22' - 10"	22' - 5"	25' - 8"
End bearing SPF Plate (in)	1.6	1.5	2.0	1.6	2.6	2.0	2.7	2.0	3.1	2.4	3.3	2.5	3.9	3.0	4.4	3.4	5.0	3.8
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	1.9	1.5	2.2	1.7	2.5	1.9	2.8	2.2
<b>28</b>	6' - 6"	7' - 6"	8' - 8"	9' - 11"	11' - 0"	12' - 8"	11' - 4"	13' - 0"	13' - 5"	15' - 5"	14' - 2"	16' - 3"	16' - 7"	19' - 2"	18' - 9"	21' - 10"	21' - 0"	24' - 7"
End bearing SPF Plate (in)	1.7	1.5	2.3	1.8	2.9	2.2	3.0	2.3	3.5	2.7	3.7	2.8	4.3	3.3	4.9	3.8	5.4	4.3
End bearing Member (in)	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	2.0	1.5	2.1	1.6	2.4	1.9	2.8	2.2	3.1	2.4
<b>32</b>	6' - 3"	7' - 3"	8' - 3"	9' - 6"	10' - 7"	12' - 2"	10' - 10"	12' - 6"	12' - 9"	14' - 9"	13' - 5"	15' - 7"	15' - 7"	18' - 5"	17' - 9"	21' - 0"	19' - 9"	23' - 7"
End bearing SPF Plate (in)	1.9	1.5	2.5	1.9	3.2	2.4	3.2	2.5	3.8	2.9	4.0	3.1	4.6	3.6	5.2	4.2	5.9	4.7
End bearing Member (in)	1.5	1.5	1.5	1.5	1.8	1.5	1.8	1.5	2.2	1.7	2.3	1.8	2.6	2.1	3.0	2.4	3.3	2.6
<b>36</b>	6' - 1"	7' - 0"	8' - 0"	9' - 2"	10' - 0"	11' - 9"	10' - 3"	12' - 1"	12' - 1"	14' - 3"	12' - 8"	15' - 1"	14' - 10"	17' - 9"	16' - 10"	20' - 3"	18' - 9"	22' - 9"
End bearing SPF Plate (in)	2.1	1.6	2.7	2.1	3.4	2.6	3.4	2.7	4.0	3.2	4.2	3.4	4.9	4.0	5.6	4.5	6.2	5.1
End bearing Member (in)	1.5	1.5	1.5	1.5	1.9	1.5	2.0	1.5	2.3	1.8	2.4	1.9	2.8	2.2	3.2	2.6	3.5	2.9
<b>40</b>	5' - 10"	6' - 9"	7' - 7"	8' - 11"	9' - 7"	11' - 4"	9' - 10"	11' - 8"	11' - 6"	13' - 10"	12' - 1"	14' - 7"	14' - 2"	17' - 2"	16' - 0"	19' - 7"	17' - 11"	22' - 1"
End bearing SPF Plate (in)	2.2	1.7	2.8	2.2	3.6	2.8	3.7	2.9	4.3	3.4	4.5	3.6	5.2	4.2	5.9	4.8	6.6	5.4
End bearing Member (in)	1.5	1.5	1.6	1.5	2.0	1.6	2.1	1.7	2.4	2.0	2.6	2.1	3.0	2.4	3.4	2.8	3.7	3.1

Snow Load of 60 psf

Dead Load of 15 psf

L/240

Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply	2 - ply	3 - ply						
<b>20</b>	6' - 7"	7' - 6"	8' - 8"	9' - 11"	11' - 0"	12' - 8"	11' - 4"	13' - 0"	13' - 5"	15' - 5"	14' - 1"	16' - 3"	16' - 6"	19' - 2"	18' - 8"	21' - 11"	20' - 10"	24' - 7"
End bearing SPF Plate (in)	1.7	1.5	2.2	1.7	2.8	2.2	2.9	2.3	3.4	2.7	3.6	2.8	4.2	3.3	4.8	3.7	5.3	4.2
End bearing Member (in)	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	2.0	1.5	2.1	1.6	2.4	1.9	2.7	2.1	3.0	2.4
<b>24</b>	6' - 2"	7' - 2"	8' - 2"	9' - 5"	10' - 4"	12' - 0"	10' - 7"	12' - 4"	12' - 5"	14' - 8"	13' - 1"	15' - 5"	15' - 3"	18' - 2"	17' - 4"	20' - 9"	19' - 4"	23' - 4"
End bearing SPF Plate (in)	1.9	1.5	2.5	2.0	3.2	2.5	3.3	2.6	3.8	3.0	4.0	3.2	4.7	3.7	5.3	4.3	5.9	4.8
End bearing Member (in)	1.5	1.5	1.5	1.5	1.8	1.5	1.9	1.5	2.2	1.7	2.3	1.8	2.7	2.1	3.0	2.4	3.4	2.7
<b>28</b>	5' - 11"	6' - 10"	7' - 8"	9' - 0"	9' - 8"	11' - 6"	9' - 11"	11' - 10"	11' - 7"	14' - 0"	12' - 3"	14' - 9"	14' - 3"	17' - 5"	16' - 2"	19' - 10"	18' - 1"	22' - 4"
End bearing SPF Plate (in)	2.2	1.7	2.8	2.2	3.5	2.8	3.6	2.8	4.2	3.4	4.4	3.5	5.1	4.2	5.8	4.7	6.5	5.3
End bearing Member (in)	1.5	1.5	1.6	1.5	2.0	1.6	2.0	1.6	2.4	1.9	2.5	2.0	2.9	2.4	3.3	2.7	3.7	3.0
<b>32</b>	5' - 7"	6' - 7"	7' - 3"	8' - 8"	9' - 1"	11' - 0"	9' - 4"	11' - 4"	11' - 0"	13' - 5"	11' - 6"	14' - 2"	13' - 6"	16' - 8"	15' - 3"	19' - 1"	17' - 1"	21' - 3"
End bearing SPF Plate (in)	2.3	1.8	3.0	2.4	3.7	3.0	3.8	3.1	4.5	3.7	4.7	3.9	5.5	4.6	6.2	5.2	7.0	5.8
End bearing Member (in)	1.5	1.5	1.7	1.5	2.1	1.7	2.2	1.8	2.6	2.1	2.7	2.2	3.1	2.6	3.5	2.9	3.9	3.3
<b>36</b>	5' - 3"	6' - 4"	6' - 10"	8' - 4"	8' - 8"	10' - 8"	8' - 10"	10' - 11"	10' - 5"	12' - 11"	10' - 11"	13' - 8"	12' - 9"	15' - 11"	14' - 6"	18' - 1"	16' - 2"	20' - 2"
End bearing SPF Plate (in)	2.5	2.0	3.2	2.6	4.0	3.3	4.1	3.4	4.8	4.0	5.0	4.2	5.9	4.9	6.7	5.5	7.4	6.2
End bearing Member (in)	1.5	1.5	1.8	1.5	2.3	1.9	2.3	1.9	2.7	2.3	2.9	2.4	3.3	2.8	3.8	3.1	4.2	3.5
<b>40</b>	5' - 0"	6' - 1"	6' - 6"	8' - 1"	8' - 3"	10' - 3"	8' - 5"	10' - 7"	9' - 11"	12' - 5"	10' - 5"	13' - 10"	12' - 2"	15' - 3"	13' - 10"	17' - 3"	15' - 5"	19' - 3"
End bearing SPF Plate (in)	2.6	2.1	3.4	2.8	4.2	3.5	4.3	3.6	5.1	4.2	5.3	4.5	6.2	5.2	7.1	5.9	7.9	6.6
End bearing Member (in)	1.5	1.5	1.9	1.6	2.4	2.0	2.5	2.1	2.9	2.4	3.0	2.5	3.5	2.9	4.0	3.3	4.5	3.7

**NOTES:**

## Multiple Ply 1 3/4" VERSA-LAM® 2.1E 3100 or Solid VERSA-LAM® 2.1E 3100

**Snow Load of 20 psf**

**Dead Load of 15 psf**

**L/360**

Beam Depth		5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
		2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply
<b>House Width [ft]</b>	<b>20</b>	7'-6"	8'-7"	9'-11"	11'-4"	12'-7"	14'-5"	12'-11"	14'-10"	15'-4"	17'-7"	16'-2"	18'-6"	19'-0"	21'-9"	21'-9"	24'-10"	24'-5"	27'-11"
	End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	<b>24</b>	7'-1"	8'-2"	9'-4"	10'-9"	11'-11"	13'-9"	12'-3"	14'-1"	14'-6"	16'-8"	15'-4"	17'-7"	18'-1"	20'-8"	20'-8"	23'-8"	23'-2"	26'-6"
	End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.7	1.5	1.7	1.5	2.0	1.6	2.1	1.6	2.5	1.9	2.9	2.2	3.2	2.5
	End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.5
	<b>28</b>	6'-9"	7'-10"	8'-11"	10'-3"	11'-5"	13'-1"	11'-9"	13'-6"	13'-11"	15'-11"	14'-8"	16'-10"	17'-3"	19'-10"	19'-9"	22'-7"	22'-2"	25'-5"
	End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.9	1.5	1.9	1.5	2.3	1.7	2.4	1.8	2.8	2.1	3.2	2.4	3.6	2.7
	End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.8	1.5	2.0	1.6
	<b>32</b>	6'-6"	7'-6"	8'-7"	9'-11"	11'-0"	12'-7"	11'-3"	12'-11"	13'-4"	15'-4"	14'-1"	16'-2"	16'-7"	19'-0"	18'-11"	21'-9"	21'-3"	24'-5"
	End bearing SPF Plate (in)	1.5	1.5	1.6	1.5	2.0	1.6	2.1	1.6	2.5	1.9	2.6	2.0	3.1	2.4	3.5	2.7	3.9	3.0
	End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	2.0	1.5	2.2	1.7
	<b>36</b>	6'-3"	7'-3"	8'-3"	9'-6"	10'-7"	12'-2"	10'-10"	12'-6"	12'-10"	14'-9"	13'-7"	15'-7"	16'-0"	18'-4"	18'-3"	21'-0"	20'-6"	23'-7"
	End bearing SPF Plate (in)	1.5	1.5	1.7	1.5	2.2	1.7	2.3	1.8	2.7	2.1	2.8	2.2	3.3	2.6	3.8	2.9	4.2	3.3
	End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.9	1.5	2.2	1.7	2.4	1.9
	<b>40</b>	6'-1"	7'-0"	8'-0"	9'-3"	10'-3"	11'-9"	10'-6"	12'-1"	12'-5"	14'-4"	13'-1"	15'-1"	15'-6"	17'-9"	17'-8"	20'-4"	19'-10"	22'-10"
	End bearing SPF Plate (in)	1.5	1.5	1.9	1.5	2.4	1.8	2.4	1.9	2.9	2.2	3.0	2.3	3.6	2.7	4.1	3.1	4.6	3.5
	End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	2.0	1.6	2.3	1.8	2.6	2.0

**Snow Load of 40 psf**

**Dead Load of 15 psf**

**L/360**

Beam Depth		5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
		2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply
<b>House Width [ft]</b>	<b>20</b>	6'-6"	7'-6"	8'-7"	9'-11"	11'-0"	12'-8"	11'-4"	13'-0"	13'-5"	15'-4"	14'-1"	16'-3"	16'-8"	19'-1"	19'-0"	21'-10"	21'-4"	24'-6"
	End bearing SPF Plate (in)	1.5	1.5	1.6	1.5	2.1	1.6	2.1	1.6	2.5	1.9	2.6	2.0	3.1	2.4	3.5	2.7	4.0	3.0
	End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	2.0	1.6	2.3	1.7
	<b>24</b>	6'-2"	7'-2"	8'-2"	9'-5"	10'-5"	12'-0"	10'-9"	12'-4"	12'-8"	14'-7"	13'-5"	15'-5"	15'-9"	18'-2"	18'-0"	20'-8"	20'-3"	23'-3"
	End bearing SPF Plate (in)	1.5	1.5	1.9	1.5	2.3	1.8	2.4	1.9	2.8	2.2	3.0	2.3	3.5	2.7	4.0	3.1	4.5	3.5
	End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	2.0	1.5	2.3	1.8	2.6	2.0
	<b>28</b>	5'-11"	6'-10"	7'-10"	9'-0"	9'-11"	11'-5"	10'-3"	11'-9"	11'-9"	12'-11"	12'-9"	14'-8"	15'-1"	17'-4"	17'-2"	19'-9"	19'-4"	22'-3"
	End bearing SPF Plate (in)	1.6	1.5	2.1	1.6	2.6	2.0	2.7	2.1	3.2	2.4	3.3	2.6	3.9	3.0	4.5	3.4	5.0	3.9
	End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	1.9	1.5	2.2	1.7	2.5	2.0	2.8	2.2
	<b>32</b>	5'-8"	6'-6"	7'-6"	8'-7"	9'-7"	11'-0"	9'-10"	11'-4"	11'-7"	13'-5"	12'-3"	14'-1"	14'-5"	16'-8"	16'-6"	19'-0"	18'-7"	21'-4"
	End bearing SPF Plate (in)	1.7	1.5	2.3	1.7	2.9	2.2	2.9	2.3	3.5	2.7	3.6	2.8	4.3	3.3	4.9	3.8	5.5	4.2
	End bearing Member (in)	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	2.0	1.5	2.1	1.6	2.4	1.9	2.8	2.1	3.1	2.4
	<b>36</b>	5'-5"	6'-4"	7'-2"	8'-4"	9'-2"	10'-7"	9'-5"	10'-11"	11'-2"	12'-11"	11'-10"	13'-7"	13'-11"	16'-0"	15'-11"	18'-4"	17'-11"	20'-7"
	End bearing SPF Plate (in)	1.9	1.5	2.4	1.9	3.1	2.4	3.2	2.5	3.7	2.9	4.0	3.0	4.6	3.6	5.3	4.1	6.0	4.6
	End bearing Member (in)	1.5	1.5	1.5	1.5	1.8	1.5	1.8	1.5	2.1	1.6	2.2	1.7	2.6	2.0	3.0	2.3	3.4	2.6
	<b>40</b>	5'-3"	6'-1"	7'-0"	8'-0"	8'-11"	10'-3"	9'-2"	10'-6"	10'-10"	12'-6"	11'-5"	13'-2"	13'-6"	15'-6"	15'-5"	17'-9"	17'-4"	19'-11"
	End bearing SPF Plate (in)	2.0	1.5	2.6	2.0	3.3	2.6	3.4	2.6	4.0	3.1	4.2	3.3	5.0	3.8	5.7	4.4	6.4	4.9
	End bearing Member (in)	1.5	1.5	1.5	1.5	1.9	1.5	1.9	1.5	2.3	1.8	2.4	1.9	2.8	2.2	3.2	2.5	3.6	2.8

**Snow Load of 60 psf**

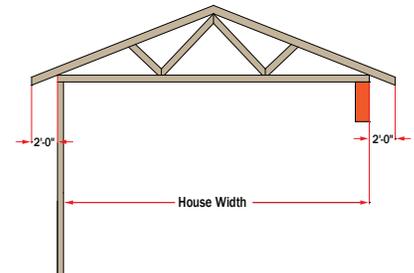
**Dead Load of 15 psf**

**L/360**

Beam Depth		5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
		2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply
<b>House Width [ft]</b>	<b>20</b>	5'-9"	6'-7"	7'-7"	8'-9"	9'-8"	11'-2"	9'-11"	11'-5"	11'-9"	13'-7"	12'-5"	14'-4"	14'-7"	16'-10"	16'-9"	19'-3"	18'-10"	21'-8"
	End bearing SPF Plate (in)	1.5	1.5	2.0	1.5	2.5	1.9	2.6	2.0	3.0	2.3	3.2	2.5	3.8	2.9	4.3	3.3	4.8	3.7
	End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.8	1.5	2.1	1.7	2.4	1.9	2.7	2.1
	<b>24</b>	5'-5"	6'-3"	7'-2"	8'-3"	9'-2"	10'-7"	9'-4"	10'-10"	11'-1"	12'-10"	11'-9"	13'-7"	13'-10"	16'-0"	15'-10"	18'-3"	17'-10"	20'-7"
	End bearing SPF Plate (in)	1.7	1.5	2.2	1.7	2.8	2.2	2.9	2.2	3.4	2.7	3.6	2.8	4.3	3.3	4.9	3.7	5.5	4.2
	End bearing Member (in)	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	2.0	1.5	2.1	1.6	2.4	1.9	2.8	2.1	3.1	2.4
	<b>28</b>	5'-2"	6'-0"	6'-10"	7'-10"	8'-8"	10'-1"	8'-11"	10'-4"	10'-7"	12'-3"	11'-2"	12'-11"	13'-2"	15'-3"	15'-1"	17'-5"	17'-0"	19'-7"
	End bearing SPF Plate (in)	1.9	1.5	2.5	1.9	3.1	2.4	3.2	2.5	3.8	2.9	4.0	3.1	4.7	3.7	5.4	4.2	6.1	4.7
	End bearing Member (in)	1.5	1.5	1.5	1.5	1.8	1.5	1.8	1.5	2.2	1.7	2.3	1.8	2.7	2.1	3.1	2.4	3.4	2.7
	<b>32</b>	4'-11"	5'-9"	6'-6"	7'-7"	8'-4"	9'-8"	8'-7"	9'-11"	10'-2"	11'-9"	10'-9"	12'-5"	12'-8"	14'-7"	14'-5"	16'-9"	16'-3"	18'-10"
	End bearing SPF Plate (in)	2.1	1.6	2.7	2.1	3.4	2.7	3.5	2.7	4.2	3.2	4.4	3.4	5.2	4.0	5.9	4.6	6.6	5.1
	End bearing Member (in)	1.5	1.5	1.5	1.5	2.0	1.5	2.0	1.6	2.4	1.8	2.5	1.9	2.9	2.3	3.3	2.6	3.8	2.9
	<b>36</b>	4'-9"	5'-6"	6'-3"	7'-3"	8'-0"	9'-3"	8'-3"	9'-7"	9'-9"	11'-4"	10'-4"	11'-11"	12'-2"	14'-1"	13'-11"	16'-1"	15'-8"	18'-1"
	End bearing SPF Plate (in)	2.2	1.7	2.9	2.3	3.7	2.9	3.8	3.0	4.5	3.5	4.8	3.7	5.6	4.3	6.4	4.9	7.2	5.6
	End bearing Member (in)	1.5	1.5	1.7	1.5	2.1	1.6	2.2	1.7	2.6	2.0	2.7	2.1	3.2	2.5	3.6	2.8	4.1	3.2
	<b>40</b>	4'-7"	5'-4"	6'-1"	7'-0"	7'-9"	9'-0"	7'-11"	9'-3"	9'-5"	10'-11"	10'-0"	11'-6"	11'-9"	13'-7"	13'-5"	15'-7"	15'-1"	17'-6"
	End bearing SPF Plate (in)	2.4	1.9	3.1	2.4	4.0	3.1	4.1	3.2	4.8	3.7	5.1	3.9	6.0	4.6	6.9	5.3	7.7	6.0
	End bearing Member (in)	1.5	1.5	1.8	1.5	2.3	1.8	2.3	1.8	2.7	2.1	2.9	2.2	3.4	2.6	3.9	3.0	4.4	3.4

**NOTES:**

- This table has been established using a Live Load deflection equal to L / 360 and a Total Load deflection limit equal to L / 240.
- This table assumes a maximum roof slope of 12/12 and a 24" soffit.
- This table assumes uniform loads and simple span headers.
- Table values are based on SPF specified compression strength perpendicular to grain for plate of 769 psi.
- Minimum bearing lengths required are based on a minimum bearing width equal to or greater than the width of the supported beam.
- Span is measured center to center of the supports.
- Table values assume that lateral support is provided at each support and continuously along the compression edge of the beam.



# Header Span Tables - Roof + One Storey (No Center Bearing)

Multiple Ply 1¾" VERSA-LAM® 2.1E 3100 or Solid VERSA-LAM® 2.1E 3100

Snow Load of 20 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/360

Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2 - ply	3 - ply																
<b>20</b>	5'-7"	6'-5"	7'-5"	8'-6"	9'-5"	10'-10"	9'-8"	11'-2"	11'-5"	13'-2"	12'-1"	13'-11"	14'-3"	16'-5"	16'-3"	18'-9"	18'-4"	21'-1"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>24</b>	5'-3"	6'-1"	7'-0"	8'-1"	8'-11"	10'-3"	9'-2"	10'-7"	10'-10"	12'-6"	11'-5"	13'-2"	13'-6"	15'-7"	15'-5"	17'-9"	17'-4"	20'-0"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.9	1.5	2.2	1.7	2.4	1.9
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>28</b>	5'-0"	5'-10"	6'-8"	7'-8"	8'-6"	9'-10"	8'-9"	10'-1"	10'-4"	11'-11"	10'-11"	12'-7"	12'-10"	14'-10"	14'-8"	17'-0"	16'-6"	19'-1"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.8	1.5	2.1	1.6	2.4	1.8	2.7	2.1
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>32</b>	4'-10"	5'-7"	6'-4"	7'-4"	8'-2"	9'-5"	8'-4"	9'-8"	9'-11"	11'-5"	10'-5"	12'-1"	12'-4"	14'-3"	14'-1"	16'-3"	15'-10"	18'-4"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.9	1.5	2.0	1.5	2.3	1.8	2.6	2.0	2.9	2.3
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>36</b>	4'-8"	5'-5"	6'-2"	7'-1"	7'-10"	9'-1"	8'-1"	9'-4"	9'-6"	11'-0"	10'-1"	11'-8"	11'-10"	13'-9"	13'-7"	15'-8"	15'-2"	17'-8"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.7	1.5	1.7	1.5	2.0	1.6	2.1	1.6	2.5	1.9	2.8	2.2	3.1	2.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.8	1.5
<b>40</b>	4'-3"	5'-2"	5'-11"	6'-10"	7'-7"	8'-9"	7'-9"	9'-0"	9'-2"	10'-8"	9'-9"	11'-3"	11'-5"	13'-3"	12'-11"	15'-2"	14'-5"	17'-1"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.8	1.5	1.8	1.5	2.1	1.7	2.3	1.8	2.6	2.1	3.0	2.3	3.3	2.6
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.9	1.5

Snow Load of 40 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/360

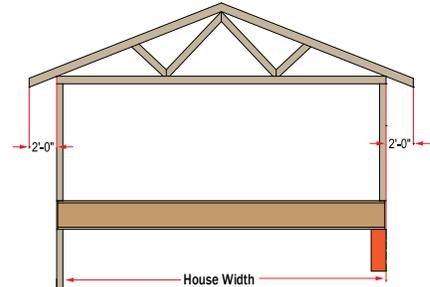
Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2 - ply	3 - ply																
<b>20</b>	5'-3"	6'-0"	6'-11"	8'-0"	8'-10"	10'-2"	9'-0"	10'-5"	10'-9"	12'-4"	11'-4"	13'-1"	13'-4"	15'-4"	15'-3"	17'-7"	17'-2"	19'-9"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.7	1.5	1.7	1.5	2.0	1.6	2.1	1.6	2.5	1.9	2.8	2.2	3.2	2.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.8	1.5
<b>24</b>	4'-11"	5'-9"	6'-6"	7'-6"	8'-4"	9'-7"	8'-7"	9'-11"	10'-2"	11'-8"	10'-8"	12'-4"	12'-7"	14'-7"	14'-5"	16'-8"	16'-3"	18'-9"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.9	1.5	1.9	1.5	2.3	1.8	2.4	1.9	2.8	2.2	3.2	2.5	3.6	2.8
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.8	1.5	2.1	1.6
<b>28</b>	4'-8"	5'-5"	6'-3"	7'-2"	7'-11"	9'-2"	8'-2"	9'-5"	9'-8"	11'-2"	10'-2"	11'-9"	12'-0"	13'-11"	13'-8"	15'-10"	15'-4"	17'-10"
End bearing SPF Plate (in)	1.5	1.5	1.7	1.5	2.1	1.6	2.1	1.7	2.5	2.0	2.7	2.1	3.1	2.4	3.6	2.8	4.0	3.1
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	2.0	1.6	2.3	1.8
<b>32</b>	4'-6"	5'-3"	5'-11"	6'-11"	7'-7"	8'-10"	7'-10"	9'-0"	9'-3"	10'-8"	9'-9"	11'-4"	11'-5"	13'-4"	12'-11"	15'-3"	14'-5"	17'-1"
End bearing SPF Plate (in)	1.5	1.5	1.8	1.5	2.3	1.8	2.3	1.8	2.8	2.1	2.9	2.3	3.4	2.7	3.8	3.0	4.3	3.4
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	1.9	1.5	2.2	1.7	2.4	1.9
<b>36</b>	4'-4"	5'-0"	5'-9"	6'-8"	7'-3"	8'-6"	7'-6"	8'-8"	8'-9"	10'-4"	9'-3"	10'-11"	10'-10"	12'-10"	12'-3"	14'-8"	13'-8"	16'-6"
End bearing SPF Plate (in)	1.5	1.5	1.9	1.5	2.5	1.9	2.5	2.0	3.0	2.3	3.1	2.4	3.6	2.9	4.1	3.3	4.6	3.7
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.8	1.5	2.1	1.6	2.3	1.9	2.6	2.1
<b>40</b>	4'-2"	4'-10"	5'-6"	6'-5"	6'-11"	8'-2"	7'-1"	8'-5"	8'-4"	9'-11"	8'-10"	10'-6"	10'-3"	12'-5"	11'-8"	14'-2"	13'-1"	15'-11"
End bearing SPF Plate (in)	1.6	1.5	2.1	1.6	2.6	2.1	2.7	2.1	3.1	2.5	3.3	2.6	3.8	3.1	4.3	3.5	4.8	3.9
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	1.9	1.5	2.2	1.8	2.5	2.0	2.7	2.2

Snow Load of 60 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/360

Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2 - ply	3 - ply																
<b>20</b>	4'-10"	5'-8"	6'-5"	7'-5"	8'-3"	9'-6"	8'-5"	9'-9"	10'-0"	11'-7"	10'-7"	12'-3"	12'-6"	14'-5"	14'-3"	16'-6"	16'-1"	18'-7"
End bearing SPF Plate (in)	1.5	1.5	1.7	1.5	2.1	1.7	2.2	1.7	2.6	2.0	2.7	2.1	3.2	2.5	3.7	2.8	4.1	3.2
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.8	1.5	2.1	1.6	2.3	1.8
<b>24</b>	4'-7"	5'-4"	6'-1"	7'-0"	7'-9"	9'-0"	7'-11"	9'-3"	9'-5"	10'-11"	10'-0"	11'-6"	11'-9"	13'-7"	13'-5"	15'-7"	15'-1"	17'-6"
End bearing SPF Plate (in)	1.5	1.5	1.9	1.5	2.4	1.9	2.5	1.9	2.9	2.3	3.1	2.4	3.6	2.8	4.1	3.2	4.6	3.6
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.8	1.5	2.1	1.6	2.4	1.8	2.6	2.0
<b>28</b>	4'-4"	5'-1"	5'-9"	6'-8"	7'-4"	8'-6"	7'-7"	8'-9"	8'-11"	10'-5"	9'-5"	11'-0"	11'-1"	12'-11"	12'-7"	14'-9"	14'-1"	16'-8"
End bearing SPF Plate (in)	1.6	1.5	2.1	1.6	2.7	2.1	2.7	2.1	3.2	2.5	3.4	2.6	4.0	3.1	4.5	3.5	5.0	4.0
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	1.9	1.5	2.3	1.8	2.6	2.0	2.9	2.3
<b>32</b>	4'-2"	4'-10"	5'-6"	6'-5"	7'-0"	8'-2"	7'-3"	8'-5"	8'-6"	9'-11"	8'-11"	10'-6"	10'-6"	12'-4"	11'-10"	14'-2"	13'-3"	15'-11"
End bearing SPF Plate (in)	1.7	1.5	2.3	1.8	2.9	2.3	3.0	2.3	3.5	2.7	3.7	2.9	4.3	3.4	4.9	3.9	5.4	4.3
End bearing Member (in)	1.5	1.5	1.5	1.5	1.7	1.5	1.7	1.5	2.0	1.6	2.1	1.6	2.4	1.9	2.8	2.2	3.1	2.5
<b>36</b>	4'-0"	4'-8"	5'-3"	6'-2"	6'-8"	7'-10"	6'-10"	8'-1"	8'-1"	9'-6"	8'-6"	10'-1"	9'-11"	11'-11"	11'-3"	13'-7"	12'-7"	15'-3"
End bearing SPF Plate (in)	1.9	1.5	2.5	1.9	3.1	2.4	3.2	2.5	3.7	3.0	3.9	3.1	4.6	3.7	5.2	4.2	5.8	4.7
End bearing Member (in)	1.5	1.5	1.5	1.5	1.8	1.5	1.8	1.5	2.1	1.7	2.2	1.8	2.6	2.1	2.9	2.4	3.3	2.7
<b>40</b>	3'-9"	4'-6"	4'-11"	5'-11"	6'-4"	7'-7"	6'-6"	7'-9"	7'-8"	9'-2"	8'-1"	9'-9"	9'-5"	11'-5"	10'-9"	13'-1"	12'-0"	14'-9"
End bearing SPF Plate (in)	2.0	1.6	2.6	2.1	3.3	2.6	3.3	2.7	4.0	3.2	4.2	3.3	4.8	3.9	5.5	4.5	6.1	5.0
End bearing Member (in)	1.5	1.5	1.5	1.5	1.9	1.5	1.9	1.5	2.2	1.8	2.4	1.9	2.8	2.2	3.1	2.5	3.5	2.9

**NOTES:**

- This table has been established using a Live Load deflection equal to L / 360 and a Total Load deflection limit equal to L / 240.
- This table assumes a maximum roof slope of 12/12 and a 24" soffit.
- This table assumes uniform loads and simple span headers.
- Table values assume that lateral support is provided at each support and continuously along the compression edge of the beam.
- Table values are based on SPF specified compression strength perpendicular to grain for plate of 769 psi.
- Minimum bearing lengths required are based on a minimum bearing width equal to or greater than the width of the supported beam.
- Span is measured center to center of the supports.
- Table values assume an exterior wall dead load of 100 pf.



## Multiple Ply 1 3/4" VERSA-LAM® 2.1E 3100 or Solid VERSA-LAM® 2.1E 3100

**Snow Load of 20 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/480**

Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2 - ply	3 - ply																
<b>20</b>	5'-5"	6'-3"	7'-1"	8'-2"	9'-1"	10'-6"	9'-4"	10'-9"	11'-1"	12'-9"	11'-8"	13'-6"	13'-9"	15'-11"	15'-9"	18'-2"	17'-8"	20'-5"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>24</b>	5'-1"	5'-10"	6'-8"	7'-9"	8'-6"	9'-10"	8'-9"	10'-2"	10'-5"	12'-0"	11'-0"	12'-8"	12'-11"	14'-11"	14'-9"	17'-1"	16'-8"	19'-3"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>28</b>	4'-9"	5'-7"	6'-4"	7'-4"	8'-1"	9'-4"	8'-4"	9'-7"	9'-10"	11'-5"	10'-5"	12'-0"	12'-3"	14'-2"	14'-0"	16'-3"	15'-9"	18'-3"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>32</b>	4'-7"	5'-4"	6'-0"	7'-0"	7'-9"	8'-11"	7'-11"	9'-2"	9'-5"	10'-11"	9'-11"	11'-6"	11'-8"	13'-7"	13'-5"	15'-6"	15'-1"	17'-5"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>36</b>	4'-5"	5'-1"	5'-10"	6'-9"	7'-5"	8'-7"	7'-7"	8'-10"	9'-0"	10'-5"	9'-6"	11'-0"	11'-3"	13'-0"	12'-10"	14'-11"	14'-5"	16'-9"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>40</b>	4'-3"	4'-11"	5'-7"	6'-6"	7'-2"	8'-3"	7'-4"	8'-6"	8'-8"	10'-1"	9'-2"	10'-8"	10'-10"	12'-7"	12'-4"	14'-4"	13'-11"	16'-2"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

**Snow Load of 40 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/480**

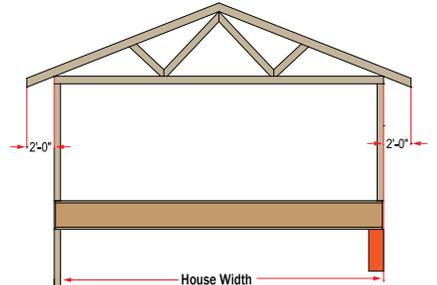
Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2 - ply	3 - ply																
<b>20</b>	4'-11"	5'-8"	6'-6"	7'-5"	8'-4"	9'-6"	8'-6"	9'-9"	10'-1"	11'-7"	10'-8"	12'-3"	12'-7"	14'-5"	14'-5"	16'-6"	16'-2"	18'-7"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>24</b>	4'-8"	5'-4"	6'-2"	7'-0"	7'-10"	9'-0"	8'-1"	9'-3"	9'-7"	10'-11"	10'-1"	11'-7"	11'-11"	13'-8"	13'-7"	15'-7"	15'-4"	17'-7"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>28</b>	4'-5"	5'-1"	5'-10"	6'-9"	7'-6"	8'-7"	7'-8"	8'-10"	9'-1"	10'-5"	9'-7"	11'-0"	11'-4"	13'-0"	13'-0"	14'-10"	14'-7"	16'-9"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>32</b>	4'-3"	4'-10"	5'-7"	6'-5"	7'-2"	8'-3"	7'-4"	8'-5"	8'-9"	10'-0"	9'-3"	10'-7"	10'-11"	12'-6"	12'-5"	14'-3"	14'-0"	16'-0"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>36</b>	4'-1"	4'-8"	5'-5"	6'-2"	6'-11"	7'-11"	7'-1"	8'-2"	8'-5"	9'-8"	8'-11"	10'-2"	10'-6"	12'-0"	12'-0"	13'-9"	13'-6"	15'-5"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>40</b>	3'-11"	4'-6"	5'-3"	6'-0"	6'-8"	7'-8"	6'-10"	7'-10"	8'-2"	9'-4"	8'-7"	9'-10"	10'-2"	11'-7"	11'-7"	13'-3"	13'-1"	14'-11"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

**Snow Load of 60 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/480**

Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2 - ply	3 - ply																
<b>20</b>	4'-5"	5'-1"	5'-10"	6'-9"	7'-5"	8'-7"	7'-7"	8'-10"	9'-0"	10'-5"	9'-6"	11'-0"	11'-3"	13'-0"	12'-10"	14'-11"	14'-5"	16'-9"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>24</b>	4'-1"	4'-9"	5'-5"	6'-4"	7'-0"	8'-1"	7'-2"	8'-4"	8'-6"	9'-10"	8'-11"	10'-5"	10'-7"	12'-3"	12'-1"	14'-0"	13'-7"	15'-9"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>28</b>	3'-11"	4'-7"	5'-2"	6'-0"	6'-7"	7'-8"	6'-9"	7'-11"	8'-1"	9'-4"	8'-6"	9'-10"	10'-0"	11'-8"	11'-5"	13'-4"	12'-11"	15'-0"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>32</b>	3'-9"	4'-4"	4'-11"	5'-9"	6'-4"	7'-4"	6'-6"	7'-6"	7'-8"	8'-11"	8'-1"	9'-5"	9'-7"	11'-2"	10'-11"	12'-9"	12'-4"	14'-4"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>36</b>	3'-7"	4'-2"	4'-9"	5'-6"	6'-0"	7'-1"	6'-2"	7'-3"	7'-4"	8'-7"	7'-9"	9'-1"	9'-2"	10'-8"	10'-6"	12'-3"	11'-10"	13'-9"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>40</b>	3'-5"	4'-0"	4'-7"	5'-4"	5'-10"	6'-9"	6'-0"	7'-0"	7'-1"	8'-3"	7'-6"	8'-9"	8'-10"	10'-4"	10'-1"	11'-9"	11'-4"	13'-3"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

**NOTES:**

- This table has been established using a Live Load deflection equal to L / 480 and a Total Load deflection limit equal to L / 240.
- This table assumes a maximum roof slope of 12/12 and a 24" soffit.
- This table assumes uniform loads and simple span headers.
- Table values assume that lateral support is provided at each support and continuously along the compression edge of the beam.
- Table values are based on SPF specified compression strength perpendicular to grain for plate of 769 psi.
- Minimum bearing lengths required are based on a minimum bearing width equal to or greater than the width of the supported beam.
- Span is measured center to center of the supports.
- Table values assume an exterior wall dead load of 100 pf.



# Header Span Tables - Roof + One Storey (Center Bearing)

Multiple Ply 1<sup>3</sup>/<sub>4</sub>" VERSA-LAM® 2.1E 3100 or Solid VERSA-LAM® 2.1E 3100

Snow Load of 20 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/360

Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply
<b>20</b>	6'-2"	7'-1"	8'-2"	9'-4"	10'-5"	11'-11"	10'-8"	12'-3"	12'-7"	14'-6"	13'-4"	15'-4"	15'-8"	18'-0"	17'-11"	20'-7"	20'-2"	23'-2"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>24</b>	5'-10"	6'-9"	7'-9"	8'-11"	9'-10"	11'-4"	10'-1"	11'-8"	12'-0"	13'-10"	12'-8"	14'-7"	14'-11"	17'-2"	17'-0"	19'-7"	19'-2"	22'-0"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.8	1.5	2.1	1.6	2.4	1.8	2.7	2.0
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>28</b>	5'-7"	6'-5"	7'-5"	8'-6"	9'-5"	10'-10"	9'-8"	11'-2"	11'-5"	13'-2"	12'-1"	13'-11"	14'-3"	16'-5"	16'-3"	18'-9"	18'-4"	21'-1"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.6	1.5	1.6	1.5	1.9	1.5	2.0	1.5	2.3	1.8	2.6	2.0	3.0	2.3
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>32</b>	5'-4"	6'-2"	7'-1"	8'-2"	9'-1"	10'-5"	9'-4"	10'-9"	11'-0"	12'-8"	11'-7"	13'-5"	13'-8"	15'-9"	15'-8"	18'-0"	17'-7"	20'-3"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.7	1.5	1.7	1.5	2.1	1.6	2.2	1.7	2.5	2.0	2.9	2.2	3.2	2.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.9	1.5
<b>36</b>	5'-2"	6'-0"	6'-10"	7'-11"	8'-9"	10'-1"	9'-0"	10'-4"	10'-7"	12'-3"	11'-2"	12'-11"	13'-3"	15'-3"	15'-1"	17'-5"	17'-0"	19'-7"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.8	1.5	1.9	1.5	2.2	1.7	2.3	1.8	2.8	2.1	3.1	2.4	3.5	2.7
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.8	1.5	2.0	1.6
<b>40</b>	5'-0"	5'-9"	6'-7"	7'-8"	8'-5"	9'-9"	8'-8"	10'-0"	10'-3"	11'-10"	10'-10"	12'-6"	12'-9"	14'-9"	14'-7"	16'-10"	16'-5"	18'-11"
End bearing SPF Plate (in)	1.5	1.5	1.6	1.5	2.0	1.5	2.0	1.6	2.4	1.8	2.5	1.9	3.0	2.3	3.4	2.6	3.8	2.9
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.9	1.5	2.2	1.7

Snow Load of 40 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/360

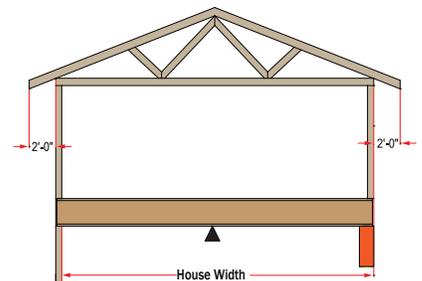
Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply
<b>20</b>	5'-8"	6'-6"	7'-6"	8'-7"	9'-6"	11'-0"	9'-9"	11'-3"	11'-7"	13'-4"	12'-3"	14'-1"	14'-5"	16'-7"	16'-6"	18'-11"	18'-6"	21'-4"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.8	1.5	1.8	1.5	2.2	1.7	2.3	1.8	2.7	2.1	3.1	2.4	3.4	2.7
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	2.0	1.5
<b>24</b>	5'-4"	6'-2"	7'-1"	8'-2"	9'-0"	10'-5"	9'-3"	10'-8"	11'-0"	12'-8"	11'-7"	13'-5"	13'-8"	15'-9"	15'-8"	18'-0"	17'-7"	20'-3"
End bearing SPF Plate (in)	1.5	1.5	1.6	1.5	2.0	1.6	2.1	1.6	2.5	1.9	2.6	2.0	3.1	2.4	3.5	2.7	3.9	3.0
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	2.0	1.5	2.2	1.7
<b>28</b>	5'-1"	5'-11"	6'-9"	7'-10"	8'-8"	10'-0"	8'-10"	10'-3"	10'-6"	12'-1"	11'-1"	12'-9"	13'-1"	15'-1"	14'-11"	17'-3"	16'-10"	19'-4"
End bearing SPF Plate (in)	1.5	1.5	1.8	1.5	2.3	1.8	2.3	1.8	2.7	2.1	2.9	2.2	3.4	2.6	3.9	3.0	4.4	3.4
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	1.9	1.5	2.2	1.7	2.5	1.9
<b>32</b>	4'-11"	5'-8"	6'-6"	7'-6"	8'-3"	9'-7"	8'-6"	9'-10"	10'-1"	11'-8"	10'-8"	12'-3"	12'-6"	14'-6"	14'-4"	16'-7"	16'-1"	18'-7"
End bearing SPF Plate (in)	1.5	1.5	2.0	1.5	2.5	1.9	2.6	2.0	3.0	2.3	3.2	2.5	3.7	2.9	4.3	3.3	4.8	3.7
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.8	1.5	2.1	1.6	2.4	1.9	2.7	2.1
<b>36</b>	4'-9"	5'-6"	6'-3"	7'-3"	8'-0"	9'-3"	8'-2"	9'-6"	9'-8"	11'-3"	10'-3"	11'-10"	12'-1"	14'-0"	13'-10"	16'-0"	15'-5"	17'-11"
End bearing SPF Plate (in)	1.6	1.5	2.1	1.6	2.7	2.1	2.8	2.1	3.3	2.5	3.4	2.7	4.0	3.1	4.6	3.6	5.2	4.0
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.9	1.5	2.0	1.5	2.3	1.8	2.6	2.0	2.9	2.3
<b>40</b>	4'-7"	5'-4"	6'-0"	7'-0"	7'-9"	8'-11"	7'-11"	9'-2"	9'-5"	10'-10"	9'-11"	11'-6"	11'-8"	13'-6"	13'-2"	15'-5"	14'-9"	17'-4"
End bearing SPF Plate (in)	1.7	1.5	2.3	1.8	2.9	2.2	3.0	2.3	3.5	2.7	3.7	2.9	4.3	3.4	4.9	3.8	5.5	4.3
End bearing Member (in)	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	2.0	1.5	2.1	1.6	2.5	1.9	2.8	2.2	3.1	2.4

Snow Load of 60 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/360

Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply
<b>20</b>	5'-3"	6'-1"	6'-11"	8'-0"	8'-10"	10'-2"	9'-1"	10'-6"	10'-9"	12'-5"	11'-4"	13'-1"	13'-5"	15'-6"	15'-4"	17'-8"	17'-3"	19'-11"
End bearing SPF Plate (in)	1.5	1.5	1.8	1.5	2.3	1.8	2.4	1.8	2.8	2.1	2.9	2.3	3.4	2.7	3.9	3.0	4.4	3.4
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	2.0	1.5	2.2	1.7	2.5	1.9
<b>24</b>	4'-11"	5'-9"	6'-6"	7'-7"	8'-4"	9'-8"	8'-7"	9'-11"	10'-2"	11'-9"	10'-9"	12'-5"	12'-8"	14'-7"	14'-5"	16'-9"	16'-3"	18'-10"
End bearing SPF Plate (in)	1.6	1.5	2.0	1.6	2.6	2.0	2.7	2.1	3.1	2.4	3.3	2.6	3.9	3.0	4.4	3.4	5.0	3.9
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	1.9	1.5	2.2	1.7	2.5	2.0	2.8	2.2
<b>28</b>	4'-8"	5'-5"	6'-2"	7'-2"	7'-11"	9'-2"	8'-2"	9'-5"	9'-8"	11'-2"	10'-2"	11'-10"	12'-0"	13'-11"	13'-9"	15'-11"	15'-6"	17'-11"
End bearing SPF Plate (in)	1.7	1.5	2.3	1.8	2.9	2.2	2.9	2.3	3.5	2.7	3.7	2.8	4.3	3.3	4.9	3.8	5.5	4.3
End bearing Member (in)	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	2.0	1.5	2.1	1.6	2.5	1.9	2.8	2.2	3.1	2.4
<b>32</b>	4'-6"	5'-2"	5'-11"	6'-11"	7'-7"	8'-9"	7'-9"	9'-0"	9'-3"	10'-8"	9'-9"	11'-4"	11'-6"	13'-4"	13'-1"	15'-3"	14'-8"	17'-2"
End bearing SPF Plate (in)	1.9	1.5	2.5	1.9	3.1	2.4	3.2	2.5	3.8	2.9	4.0	3.1	4.7	3.7	5.4	4.2	6.0	4.7
End bearing Member (in)	1.5	1.5	1.5	1.5	1.8	1.5	1.8	1.5	2.2	1.7	2.3	1.8	2.7	2.1	3.0	2.4	3.4	2.7
<b>36</b>	4'-4"	5'-0"	5'-8"	6'-7"	7'-3"	8'-5"	7'-6"	8'-8"	8'-10"	10'-3"	9'-4"	10'-10"	11'-0"	12'-10"	12'-5"	14'-8"	13'-11"	16'-6"
End bearing SPF Plate (in)	2.0	1.6	2.7	2.1	3.4	2.6	3.5	2.7	4.1	3.2	4.3	3.4	5.1	3.9	5.7	4.5	6.4	5.1
End bearing Member (in)	1.5	1.5	1.5	1.5	1.9	1.5	2.0	1.5	2.3	1.8	2.5	1.9	2.9	2.2	3.2	2.6	3.6	2.9
<b>40</b>	4'-2"	4'-10"	5'-6"	6'-5"	7'-0"	8'-2"	7'-3"	8'-5"	8'-6"	9'-11"	9'-0"	10'-6"	10'-6"	12'-4"	11'-11"	14'-2"	13'-3"	15'-11"
End bearing SPF Plate (in)	2.2	1.7	2.8	2.2	3.6	2.8	3.7	2.9	4.4	3.4	4.6	3.6	5.4	4.2	6.1	4.8	6.8	5.4
End bearing Member (in)	1.5	1.5	1.6	1.5	2.1	1.6	2.1	1.6	2.5	1.9	2.6	2.0	3.0	2.4	3.4	2.7	3.8	3.1

**NOTES:**

- This table has been established using a Live Load deflection equal to L / 360 and a Total Load deflection limit equal to L / 240.
- This table assumes a maximum roof slope of 12/12 and a 24" soffit.
- This table assumes uniform loads and simple span headers.
- Table values assume that lateral support is provided at each support and continuously along the compression edge of the beam.
- Table values are based on SPF specified compression strength perpendicular to grain for plate of 769 psi.
- Minimum bearing lengths required are based on a minimum bearing width equal to or greater than the width of the supported beam.
- Span is measured center to center of the supports.
- Table values assume an exterior wall dead load of 100 pf.



## Multiple Ply 1 3/4" VERSA-LAM® 2.1E 3100 or Solid VERSA-LAM® 2.1E 3100

**Snow Load of 20 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/480**

Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply
<b>20</b>	6'-2"	7'-1"	8'-1"	9'-4"	10'-4"	11'-11"	10'-8"	12'-3"	12'-7"	14'-6"	13'-4"	15'-4"	15'-8"	18'-0"	17'-11"	20'-7"	20'-2"	23'-2"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>24</b>	5'-10"	6'-8"	7'-8"	8'-10"	9'-9"	11'-3"	10'-0"	11'-7"	11'-11"	13'-9"	12'-7"	14'-6"	14'-10"	17'-1"	16'-11"	19'-6"	19'-1"	22'-0"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.8	1.5	2.1	1.6	2.4	1.8	2.6	2.0
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>28</b>	5'-6"	6'-4"	7'-3"	8'-5"	9'-3"	10'-9"	9'-7"	11'-0"	11'-4"	13'-1"	11'-11"	13'-9"	14'-1"	16'-3"	16'-1"	18'-7"	18'-1"	20'-11"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.8	1.5	1.9	1.5	2.3	1.8	2.6	2.0	2.9	2.3
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>32</b>	5'-3"	6'-1"	6'-11"	8'-0"	8'-11"	10'-3"	9'-1"	10'-6"	10'-10"	12'-6"	11'-5"	13'-2"	13'-6"	15'-7"	15'-5"	17'-9"	17'-4"	20'-0"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.7	1.5	1.7	1.5	2.0	1.6	2.1	1.6	2.5	1.9	2.8	2.2	3.2	2.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.8	1.5
<b>36</b>	5'-1"	5'-10"	6'-8"	7'-9"	8'-6"	9'-10"	8'-9"	10'-2"	10'-5"	12'-0"	11'-0"	12'-8"	12'-11"	14'-11"	14'-9"	17'-1"	16'-8"	19'-3"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.8	1.5	1.8	1.5	2.2	1.7	2.3	1.8	2.7	2.1	3.1	2.4	3.5	2.7
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	2.0	1.5
<b>40</b>	4'-10"	5'-8"	6'-5"	7'-5"	8'-3"	9'-6"	8'-5"	9'-9"	10'-0"	11'-7"	10'-7"	12'-3"	12'-6"	14'-5"	14'-3"	16'-6"	16'-1"	18'-7"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.9	1.5	2.0	1.5	2.3	1.8	2.5	1.9	2.9	2.2	3.3	2.5	3.7	2.9
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.9	1.5	2.1	1.6

**Snow Load of 40 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/480**

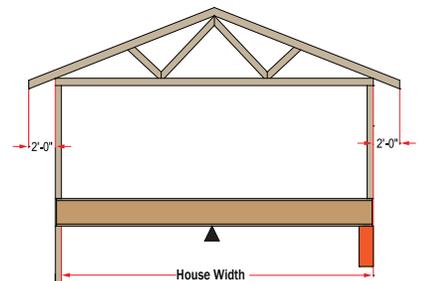
Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply
<b>20</b>	5'-3"	6'-1"	6'-11"	8'-0"	8'-11"	10'-3"	9'-1"	10'-6"	10'-10"	12'-6"	11'-5"	13'-2"	13'-6"	15'-7"	15'-5"	17'-9"	17'-4"	20'-0"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.7	1.5	1.7	1.5	2.0	1.6	2.1	1.7	2.5	2.0	2.9	2.2	3.2	2.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.8	1.5
<b>24</b>	5'-0"	5'-9"	6'-7"	7'-7"	8'-4"	9'-8"	8'-7"	9'-11"	10'-2"	11'-9"	10'-9"	12'-5"	12'-8"	14'-8"	14'-6"	16'-9"	16'-4"	18'-11"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.9	1.5	1.9	1.5	2.3	1.8	2.4	1.9	2.8	2.2	3.2	2.5	3.6	2.8
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.9	1.5	2.1	1.6
<b>28</b>	4'-9"	5'-6"	6'-3"	7'-3"	8'-0"	9'-3"	8'-2"	9'-6"	9'-8"	11'-3"	10'-3"	11'-10"	12'-1"	14'-0"	13'-10"	16'-0"	15'-6"	18'-0"
End bearing SPF Plate (in)	1.5	1.5	1.7	1.5	2.1	1.6	2.2	1.7	2.5	2.0	2.7	2.1	3.2	2.4	3.6	2.8	4.0	3.1
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	2.0	1.6	2.3	1.8
<b>32</b>	4'-6"	5'-3"	5'-11"	6'-11"	7'-7"	8'-10"	7'-10"	9'-1"	9'-3"	10'-9"	9'-9"	11'-4"	11'-6"	13'-4"	13'-2"	15'-3"	14'-10"	17'-2"
End bearing SPF Plate (in)	1.5	1.5	1.8	1.5	2.3	1.8	2.3	1.8	2.8	2.2	2.9	2.3	3.4	2.7	3.9	3.0	4.4	3.4
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	2.0	1.5	2.2	1.7	2.5	1.9
<b>36</b>	4'-4"	5'-0"	5'-9"	6'-8"	7'-4"	8'-6"	7'-6"	8'-9"	8'-11"	10'-4"	9'-5"	10'-11"	11'-1"	12'-10"	12'-8"	14'-8"	14'-3"	16'-6"
End bearing SPF Plate (in)	1.5	1.5	1.9	1.5	2.5	1.9	2.5	2.0	3.0	2.3	3.2	2.5	3.7	2.9	4.2	3.3	4.8	3.7
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.8	1.5	2.1	1.6	2.4	1.9	2.7	2.1
<b>40</b>	4'-2"	4'-10"	5'-6"	6'-5"	7'-1"	8'-2"	7'-3"	8'-5"	8'-7"	10'-0"	9'-1"	10'-6"	10'-8"	12'-5"	12'-3"	14'-2"	13'-9"	16'-0"
End bearing SPF Plate (in)	1.6	1.5	2.1	1.6	2.6	2.1	2.7	2.1	3.2	2.5	3.4	2.6	4.0	3.1	4.5	3.5	5.1	4.0
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	1.9	1.5	2.3	1.8	2.6	2.0	2.9	2.2

**Snow Load of 60 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/480**

Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply
<b>20</b>	4'-9"	5'-6"	6'-3"	7'-3"	8'-0"	9'-3"	8'-2"	9'-6"	9'-8"	11'-3"	10'-3"	11'-10"	12'-1"	14'-0"	13'-10"	16'-0"	15'-6"	18'-0"
End bearing SPF Plate (in)	1.5	1.5	1.6	1.5	2.1	1.6	2.1	1.7	2.5	1.9	2.6	2.1	3.1	2.4	3.5	2.7	4.0	3.1
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	2.0	1.6	2.3	1.8
<b>24</b>	4'-5"	5'-2"	5'-10"	6'-10"	7'-6"	8'-8"	7'-8"	8'-11"	9'-2"	10'-7"	9'-8"	11'-2"	11'-5"	13'-2"	13'-0"	15'-1"	14'-8"	17'-0"
End bearing SPF Plate (in)	1.5	1.5	1.8	1.5	2.3	1.8	2.4	1.9	2.8	2.2	3.0	2.3	3.5	2.7	4.0	3.1	4.5	3.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	2.0	1.6	2.3	1.8	2.6	2.0
<b>28</b>	4'-3"	4'-11"	5'-7"	6'-6"	7'-2"	8'-3"	7'-4"	8'-6"	8'-8"	10'-1"	9'-2"	10'-8"	10'-10"	12'-7"	12'-4"	14'-4"	13'-11"	16'-2"
End bearing SPF Plate (in)	1.6	1.5	2.0	1.6	2.6	2.0	2.7	2.1	3.1	2.4	3.3	2.6	3.9	3.0	4.4	3.4	5.0	3.9
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	1.9	1.5	2.2	1.7	2.5	2.0	2.8	2.2
<b>32</b>	4'-0"	4'-8"	5'-4"	6'-2"	6'-10"	7'-11"	7'-0"	8'-2"	8'-4"	9'-8"	8'-9"	10'-2"	10'-4"	12'-0"	11'-10"	13'-9"	13'-4"	15'-5"
End bearing SPF Plate (in)	1.7	1.5	2.2	1.7	2.8	2.2	2.9	2.3	3.4	2.7	3.6	2.8	4.2	3.3	4.8	3.8	5.4	4.2
End bearing Member (in)	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	1.9	1.5	2.1	1.6	2.4	1.9	2.7	2.1	3.1	2.4
<b>36</b>	3'-10"	4'-6"	5'-1"	5'-11"	6'-6"	7'-7"	6'-9"	7'-10"	8'-0"	9'-3"	8'-5"	9'-9"	9'-11"	11'-6"	11'-4"	13'-2"	12'-9"	14'-10"
End bearing SPF Plate (in)	1.8	1.5	2.4	1.9	3.0	2.4	3.1	2.4	3.7	2.9	3.9	3.0	4.6	3.6	5.2	4.1	5.9	4.6
End bearing Member (in)	1.5	1.5	1.5	1.5	1.7	1.5	1.8	1.5	2.1	1.6	2.2	1.7	2.6	2.0	3.0	2.3	3.3	2.6
<b>40</b>	3'-9"	4'-4"	4'-11"	5'-9"	6'-4"	7'-4"	6'-6"	7'-6"	7'-8"	8'-11"	8'-1"	9'-5"	9'-7"	11'-2"	10'-11"	12'-9"	12'-4"	14'-4"
End bearing SPF Plate (in)	2.0	1.5	2.6	2.0	3.3	2.5	3.3	2.6	3.9	3.1	4.2	3.2	4.9	3.8	5.6	4.4	6.3	4.9
End bearing Member (in)	1.5	1.5	1.5	1.5	1.9	1.5	1.9	1.5	2.2	1.8	2.4	1.8	2.8	2.2	3.2	2.5	3.6	2.8

**NOTES:**

- This table has been established using a Live Load deflection equal to L / 480 and a Total Load deflection limit equal to L / 240.
- This table assumes a maximum roof slope of 12/12 and a 24" soffit.
- This table assumes uniform loads and simple span headers.
- Table values assume that lateral support is provided at each support and continuously along the compression edge of the beam.
- Table values are based on SPF specified compression strength perpendicular to grain for plate of 769 psi.
- Minimum bearing lengths required are based on a minimum bearing width equal to or greater than the width of the supported beam.
- Span is measured center to center of the supports.
- Table values assume an exterior wall dead load of 100 pf.



# Header Span Tables - Roof + Two Storeys (Center Bearing)

Multiple Ply 1¾" VERSA-LAM® 2.1E 3100 or Solid VERSA-LAM® 2.1E 3100

Snow Load of 20 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/360

Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2 - ply	3 - ply																
<b>20</b>	5'-5"	6'-3"	7'-2"	8'-3"	9'-2"	10'-7"	9'-5"	10'-10"	11'-1"	12'-10"	11'-9"	13'-7"	13'-10"	16'-0"	15'-10"	18'-3"	17'-9"	20'-6"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>24</b>	5'-2"	6'-0"	6'-10"	7'-10"	8'-8"	10'-0"	8'-11"	10'-4"	10'-7"	12'-3"	11'-2"	12'-11"	13'-2"	15'-2"	15'-0"	17'-4"	16'-11"	19'-6"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>28</b>	4'-11"	5'-8"	6'-6"	7'-6"	8'-4"	9'-7"	8'-6"	9'-10"	10'-1"	11'-8"	10'-8"	12'-4"	12'-7"	14'-7"	14'-4"	16'-7"	16'-2"	18'-8"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.7	1.5	2.1	1.6	2.3	1.8	2.6	2.0
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>32</b>	4'-9"	5'-3"	6'-3"	7'-3"	8'-0"	9'-3"	8'-2"	9'-6"	9'-8"	11'-3"	10'-3"	11'-10"	12'-1"	14'-0"	13'-10"	16'-0"	15'-6"	18'-0"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	1.9	1.5	2.2	1.7	2.6	2.0	2.9	2.2
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>36</b>	4'-7"	5'-3"	6'-0"	7'-0"	7'-8"	8'-11"	7'-11"	9'-2"	9'-4"	10'-10"	9'-11"	11'-5"	11'-8"	13'-6"	13'-3"	15'-5"	14'-10"	17'-4"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	2.0	1.5	2.1	1.6	2.4	1.9	2.8	2.2	3.1	2.4
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.8	1.5
<b>40</b>	4'-5"	5'-1"	5'-10"	6'-9"	7'-5"	8'-7"	7'-8"	8'-10"	9'-1"	10'-6"	9'-6"	11'-1"	11'-2"	13'-1"	12'-8"	14'-11"	14'-2"	16'-9"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.7	1.5	1.8	1.5	2.1	1.6	2.2	1.7	2.6	2.0	2.9	2.3	3.3	2.6
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.9	1.5

Snow Load of 40 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/360

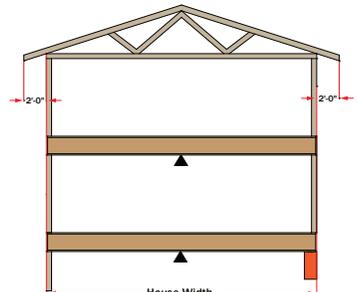
Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2 - ply	3 - ply																
<b>20</b>	5'-1"	5'-11"	6'-9"	7'-9"	8'-7"	9'-11"	8'-10"	10'-2"	10'-5"	12'-1"	11'-0"	12'-9"	13'-0"	15'-0"	14'-10"	17'-2"	16'-9"	19'-4"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	2.0	1.5	2.1	1.6	2.4	1.9	2.8	2.1	3.1	2.4
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.8	1.5
<b>24</b>	4'-10"	5'-7"	6'-5"	7'-5"	8'-2"	9'-5"	8'-4"	9'-8"	9'-11"	11'-6"	10'-6"	12'-1"	12'-4"	14'-3"	14'-1"	16'-4"	15'-10"	18'-4"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.8	1.5	1.9	1.5	2.2	1.7	2.4	1.8	2.8	2.1	3.2	2.4	3.5	2.7
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.8	1.5	2.0	1.6
<b>28</b>	4'-7"	5'-4"	6'-1"	7'-1"	7'-9"	9'-0"	8'-0"	9'-3"	9'-6"	11'-0"	10'-0"	11'-7"	11'-9"	13'-8"	13'-5"	15'-7"	15'-0"	17'-7"
End bearing SPF Plate (in)	1.5	1.5	1.6	1.5	2.1	1.6	2.1	1.6	2.5	1.9	2.6	2.0	3.1	2.4	3.5	2.7	3.9	3.1
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	2.0	1.6	2.2	1.7
<b>32</b>	4'-5"	5'-2"	5'-10"	6'-9"	7'-6"	8'-8"	7'-8"	8'-11"	9'-1"	10'-6"	9'-7"	11'-1"	11'-2"	13'-1"	12'-8"	15'-0"	14'-2"	16'-10"
End bearing SPF Plate (in)	1.5	1.5	1.8	1.5	2.2	1.7	2.3	1.8	2.7	2.1	2.9	2.2	3.3	2.6	3.8	3.0	4.2	3.3
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.6	1.5	1.9	1.5	2.1	1.7	2.4	1.9
<b>36</b>	4'-3"	4'-11"	5'-8"	6'-6"	7'-2"	8'-4"	7'-4"	8'-7"	8'-7"	10'-2"	9'-1"	10'-9"	10'-7"	12'-8"	12'-0"	14'-5"	13'-5"	16'-3"
End bearing SPF Plate (in)	1.5	1.5	1.9	1.5	2.4	1.9	2.5	1.9	2.9	2.3	3.0	2.4	3.6	2.8	4.0	3.2	4.5	3.6
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.7	1.5	2.0	1.6	2.3	1.8	2.5	2.1
<b>40</b>	4'-1"	4'-9"	5'-5"	6'-4"	6'-10"	8'-1"	7'-0"	8'-4"	8'-3"	9'-10"	8'-8"	10'-4"	10'-1"	12'-3"	11'-6"	14'-0"	12'-10"	15'-9"
End bearing SPF Plate (in)	1.6	1.5	2.0	1.6	2.6	2.0	2.6	2.1	3.1	2.5	3.2	2.6	3.8	3.0	4.3	3.5	4.8	3.9
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	1.8	1.5	2.1	1.7	2.4	2.0	2.7	2.2

Snow Load of 60 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/360

Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2 - ply	3 - ply																
<b>20</b>	4'-10"	5'-7"	6'-4"	7'-4"	8'-2"	9'-5"	8'-4"	9'-8"	9'-11"	11'-5"	10'-5"	12'-1"	12'-4"	14'-3"	14'-1"	16'-3"	15'-10"	18'-4"
End bearing SPF Plate (in)	1.5	1.5	1.7	1.5	2.1	1.6	2.2	1.7	2.6	2.0	2.7	2.1	3.2	2.5	3.6	2.8	4.1	3.1
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	2.1	1.6	2.3	1.8
<b>24</b>	4'-7"	5'-4"	6'-0"	7'-0"	7'-9"	8'-11"	7'-11"	9'-2"	9'-5"	10'-10"	9'-11"	11'-6"	11'-7"	13'-6"	13'-2"	15'-6"	14'-9"	17'-5"
End bearing SPF Plate (in)	1.5	1.5	1.9	1.5	2.4	1.9	2.5	1.9	2.9	2.3	3.1	2.4	3.6	2.8	4.1	3.2	4.5	3.6
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.7	1.5	2.0	1.6	2.3	1.8	2.6	2.0
<b>28</b>	4'-4"	5'-1"	5'-9"	6'-8"	7'-4"	8'-6"	7'-6"	8'-9"	8'-10"	10'-5"	9'-4"	11'-0"	10'-11"	12'-11"	12'-4"	14'-9"	13'-10"	16'-7"
End bearing SPF Plate (in)	1.6	1.5	2.1	1.6	2.7	2.1	2.7	2.1	3.2	2.5	3.4	2.6	3.9	3.1	4.4	3.5	4.9	4.0
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	1.9	1.5	2.2	1.8	2.5	2.0	2.8	2.3
<b>32</b>	4'-2"	4'-10"	5'-6"	6'-5"	6'-11"	8'-2"	7'-1"	8'-5"	8'-4"	9'-11"	8'-10"	10'-6"	10'-3"	12'-4"	11'-8"	14'-2"	13'-0"	15'-11"
End bearing SPF Plate (in)	1.7	1.5	2.3	1.8	2.9	2.3	2.9	2.3	3.4	2.7	3.6	2.9	4.2	3.4	4.8	3.9	5.3	4.3
End bearing Member (in)	1.5	1.5	1.5	1.5	1.6	1.5	1.7	1.5	2.0	1.6	2.1	1.6	2.4	1.9	2.7	2.2	3.0	2.5
<b>36</b>	3'-11"	4'-8"	5'-2"	6'-2"	6'-7"	7'-10"	6'-9"	8'-1"	7'-11"	9'-6"	8'-4"	10'-1"	9'-9"	11'-11"	11'-1"	13'-7"	12'-5"	15'-3"
End bearing SPF Plate (in)	1.9	1.5	2.4	1.9	3.1	2.4	3.1	2.5	3.7	3.0	3.9	3.1	4.5	3.7	5.1	4.2	5.7	4.7
End bearing Member (in)	1.5	1.5	1.5	1.5	1.7	1.5	1.8	1.5	2.1	1.7	2.2	1.8	2.6	2.1	2.9	2.4	3.2	2.7
<b>40</b>	3'-8"	4'-6"	4'-10"	5'-11"	6'-2"	7'-7"	6'-4"	7'-9"	7'-6"	9'-2"	7'-11"	9'-9"	9'-4"	11'-5"	10'-7"	13'-1"	11'-10"	14'-9"
End bearing SPF Plate (in)	1.9	1.6	2.5	2.1	3.2	2.6	3.3	2.7	3.9	3.2	4.1	3.3	4.8	3.9	5.4	4.5	6.0	5.0
End bearing Member (in)	1.5	1.5	1.5	1.5	1.8	1.5	1.9	1.5	2.2	1.8	2.3	1.9	2.7	2.2	3.1	2.5	3.4	2.9

**NOTES:**

- This table has been established using a Live Load deflection equal to L / 360 and a Total Load deflection limit equal to L / 240.
- This table assumes a maximum roof slope of 12/12 and a 24" soffit.
- This table assumes uniform loads and simple span headers.
- Table values assume that lateral support is provided at each support and continuously along the compression edge of the beam.
- Table values are based on SPF specified compression strength perpendicular to grain for plate of 769 psi.
- Minimum bearing lengths required are based on a minimum bearing width equal to or greater than the width of the supported beam.
- Span is measured center to center of the supports.
- Table values assume an exterior wall dead load of 100 pcf.



## Multiple Ply 1 3/4" VERSA-LAM® 2.1E 3100 or Solid VERSA-LAM® 2.1E 3100

**Snow Load of 20 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/480**

Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply
<b>20</b>	5'-5"	6'-3"	7'-1"	8'-2"	9'-1"	10'-6"	9'-4"	10'-9"	11'-1"	12'-9"	11'-8"	13'-6"	13'-9"	15'-11"	15'-9"	18'-2"	17'-8"	20'-5"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>24</b>	5'-1"	5'-10"	6'-8"	7'-9"	8'-6"	9'-10"	8'-9"	10'-2"	10'-5"	12'-0"	11'-0"	12'-8"	12'-11"	14'-11"	14'-9"	17'-1"	16'-8"	19'-3"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>28</b>	4'-9"	5'-7"	6'-4"	7'-4"	8'-1"	9'-4"	8'-4"	9'-7"	9'-10"	11'-5"	10'-5"	12'-0"	12'-3"	14'-2"	14'-0"	16'-3"	15'-9"	18'-3"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>32</b>	4'-3"	5'-4"	6'-0"	7'-0"	7'-9"	8'-11"	7'-11"	9'-2"	9'-5"	10'-11"	9'-11"	11'-6"	11'-8"	13'-7"	13'-5"	15'-6"	15'-1"	17'-5"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>36</b>	4'-5"	5'-1"	5'-10"	6'-9"	7'-5"	8'-7"	7'-7"	8'-10"	9'-0"	10'-5"	9'-6"	11'-0"	11'-3"	13'-0"	12'-10"	14'-11"	14'-5"	16'-9"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>40</b>	4'-3"	4'-11"	5'-7"	6'-6"	7'-2"	8'-3"	7'-4"	8'-6"	8'-8"	10'-1"	9'-2"	10'-8"	10'-10"	12'-7"	12'-4"	14'-4"	13'-11"	16'-2"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

**Snow Load of 40 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/480**

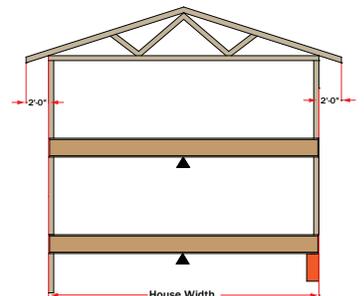
Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply
<b>20</b>	4'-9"	5'-7"	6'-4"	7'-4"	8'-1"	9'-4"	8'-4"	9'-7"	9'-10"	11'-5"	10'-5"	12'-0"	12'-3"	14'-2"	14'-0"	16'-3"	15'-9"	18'-3"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>24</b>	4'-6"	5'-3"	5'-11"	6'-11"	7'-7"	8'-10"	7'-10"	9'-1"	9'-3"	10'-9"	9'-9"	11'-4"	11'-6"	13'-4"	13'-2"	15'-3"	14'-10"	17'-2"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>28</b>	4'-3"	5'-0"	5'-8"	6'-7"	7'-3"	8'-4"	7'-5"	8'-7"	8'-9"	10'-2"	9'-3"	10'-9"	10'-11"	12'-8"	12'-6"	14'-6"	14'-1"	16'-4"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>32</b>	4'-1"	4'-9"	5'-5"	6'-3"	6'-11"	8'-0"	7'-1"	8'-3"	8'-5"	9'-9"	8'-10"	10'-3"	10'-5"	12'-2"	11'-11"	13'-10"	13'-5"	15'-7"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>36</b>	3'-11"	4'-7"	5'-2"	6'-0"	6'-7"	7'-8"	6'-9"	7'-11"	8'-1"	9'-4"	8'-6"	9'-10"	10'-0"	11'-8"	11'-5"	13'-4"	12'-11"	15'-0"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>40</b>	3'-9"	4'-5"	5'-0"	5'-10"	6'-4"	7'-5"	6'-6"	7'-7"	7'-9"	9'-0"	8'-2"	9'-6"	9'-8"	11'-3"	11'-0"	12'-10"	12'-5"	14'-5"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

**Snow Load of 60 psf Roof Dead Load of 15 psf Floor Live Load of 40 psf Floor Dead Load of 15 psf L/480**

Beam Depth	5.5"		7.25"		9.25"		9.5"		11.25"		11.875"		14"		16"		18"	
	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply	2-ply	3-ply
<b>20</b>	4'-5"	5'-1"	5'-10"	6'-9"	7'-5"	8'-7"	7'-7"	8'-10"	9'-0"	10'-5"	9'-6"	11'-0"	11'-3"	13'-0"	12'-10"	14'-11"	14'-5"	16'-9"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>24</b>	4'-1"	4'-9"	5'-5"	6'-4"	7'-0"	8'-1"	7'-2"	8'-4"	8'-6"	9'-10"	8'-11"	10'-5"	10'-7"	12'-3"	12'-1"	14'-0"	13'-7"	15'-9"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>28</b>	3'-11"	4'-7"	5'-2"	6'-0"	6'-7"	7'-8"	6'-9"	7'-11"	8'-1"	9'-4"	8'-6"	9'-10"	10'-0"	11'-8"	11'-5"	13'-4"	12'-11"	15'-0"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>32</b>	3'-9"	4'-4"	4'-11"	5'-9"	6'-4"	7'-4"	6'-6"	7'-6"	7'-8"	8'-11"	8'-1"	9'-5"	9'-7"	11'-2"	10'-11"	12'-9"	12'-4"	14'-4"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>36</b>	3'-7"	4'-2"	4'-9"	5'-6"	6'-0"	7'-1"	6'-2"	7'-3"	7'-4"	8'-7"	7'-9"	9'-1"	9'-2"	10'-8"	10'-6"	12'-3"	11'-10"	13'-9"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>40</b>	3'-5"	4'-0"	4'-7"	5'-4"	5'-10"	6'-9"	6'-0"	7'-0"	7'-1"	8'-3"	7'-6"	8'-9"	8'-10"	10'-4"	10'-1"	11'-9"	11'-4"	13'-3"
End bearing SPF Plate (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
End bearing Member (in)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

**NOTES:**

- This table has been established using a Live Load deflection equal to L / 480 and a Total Load deflection limit equal to L / 240.
- This table assumes a maximum roof slope of 12/12 and a 24" soffit.
- This table assumes uniform loads and simple span headers.
- Table values assume that lateral support is provided at each support and continuously along the compression edge of the beam.
- Table values are based on SPF specified compression strength perpendicular to grain for plate of 769 psi.
- Minimum bearing lengths required are based on a minimum bearing width equal to or greater than the width of the supported beam.
- Span is measured center to center of the supports.
- Table values assume an exterior wall dead load of 100 pf.

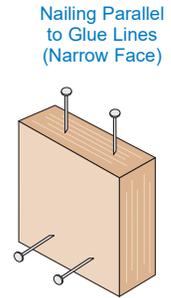


# Closest Allowable Nail Spacing

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

**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).
- Offset and stagger nail rows from floor sheathing and wall sole plate.



Nailing Perpendicular to Glue Lines (Wide Face)

## Scarf Cut

### Two-Ply 1 3/4" or 3 1/2" VERSA-LAM® 2.1E 3100

Maximum Factored Reaction for 3 1/2" Wood Plate										
Depth (in)	Scarf Cut Slope (___/12)	Heel Height - dh								
		4 1/2"	5"	5 1/2"	6"	6 1/2"	7"	7 1/2"	8"	10"
7 1/4	3	5,971	6,624	7,520	7,533					
	6	7,533								
9 1/4	3		6,527	7,082	7,533	7,533	7,533	7,533		
	6		7,076	7,533	7,533	7,533	7,533			
	9		7,533	7,533	7,533					
	12		7,533	7,533						
9 1/2	3			6,527	7,082	7,533	7,533	7,533	7,533	
	6			6,943	7,533	7,533	7,533	7,533		
	9			7,533	7,533	7,533				
	12			7,533	7,533					
11 1/4	3				7,533	7,533	7,533	7,533	7,533	
	6				7,499	7,533	7,533	7,533	7,533	
	9				7,533	7,533	7,533	7,533		
	12				7,533	7,533				
11 1/8	3					7,533	7,533	7,533	7,533	
	6					7,533	7,533	7,533	7,533	
	9					7,533	7,533	7,533		
	12					7,533	7,533			
14	3								7,533	7,533
	6								7,533	7,533
	9								7,533	7,533
	12								7,533	7,533
16	3									7,533
	6									7,533
	9									7,533
	12									7,533
18	3									7,533
	6									7,533
	9									7,533
	12									7,533
20	9									7,533
	12									7,533

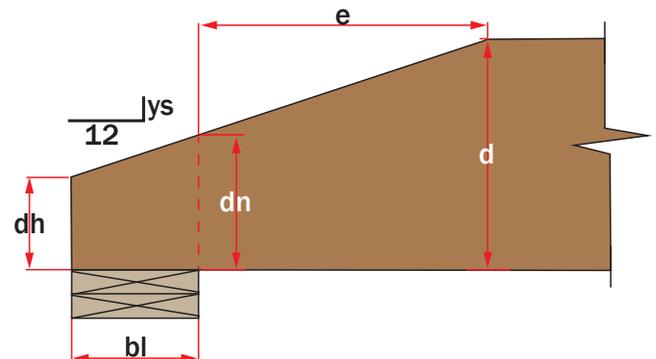
Maximum Factored Reaction for 5 1/4" Wood Plate										
Depth (in)	Scarf Cut Slope (___/12)	Heel Height - dh								
		4 1/2"	5"	5 1/2"	6"	6 1/2"	7"	7 1/2"	8"	10"
7 1/4	3	6,474	7,435	7,929						
	6	8,049								
9 1/4	3	6,457	7,013	7,568	8,123	9,100	9,806	10,179	10,276	
	6	8,868	9,506	9,930	10,175	10,272				
	9	10,160	10,260							
	12									
9 1/2	3	6,457	7,013	7,568	8,123	8,934	9,800	10,315	10,537	
	6	8,795	9,529	10,037	10,356	10,519				
	9	10,355	10,501							
	12									
11 1/4	3	6,457	7,013	7,568	8,123	8,679	9,234	9,790	10,706	
	6	7,915	8,669	9,827	10,723	11,300	11,300	11,300	11,300	
	9	11,109	11,300	11,300	11,300	11,300	11,300			
	12	11,300	11,300	11,300						
11 1/8	3	6,457	7,013	7,568	8,123	8,679	9,234	9,790	10,345	11,300
	6	7,915	8,471	9,347	10,471	11,300	11,300	11,300	11,300	
	9	11,118	11,300	11,300	11,300	11,300	11,300	11,300		
	12	11,300	11,300	11,300	11,300	11,300				
14	3	6,457	7,013	7,568	8,123	8,679	9,234	9,790	10,345	11,300
	6	7,915	8,471	9,026	9,582	10,137	11,134	11,300	11,300	11,300
	9	10,121	11,300	11,300	11,300	11,300	11,300	11,300	11,300	11,300
	12	11,300	11,300	11,300	11,300	11,300	11,300	11,300	11,300	11,300
16	3	6,457	7,013	7,568	8,123	8,679	9,234	9,790	10,345	11,300
	6	7,915	8,471	9,026	9,582	10,137	10,692	11,248	11,300	11,300
	9	9,373	9,929	11,015	11,300	11,300	11,300	11,300	11,300	11,300
	12	11,300	11,300	11,300	11,300	11,300	11,300	11,300	11,300	11,300
18	3	6,457	7,013	7,568	8,123	8,679	9,234	9,790	10,345	11,300
	6	7,915	8,471	9,026	9,582	10,137	10,692	11,248	11,300	11,300
	9	9,373	9,929	10,484	11,040	11,300	11,300	11,300	11,300	11,300
	12	11,300	11,300	11,300	11,300	11,300	11,300	11,300	11,300	11,300
20	3	6,457	7,013	7,568	8,123	8,679	9,234	9,790	10,345	11,300
	6	7,915	8,471	9,026	9,582	10,137	10,692	11,248	11,300	11,300
	9	9,373	9,929	10,484	11,040	11,300	11,300	11,300	11,300	11,300
	12	10,831	11,300	11,300	11,300	11,300	11,300	11,300	11,300	11,300

**NOTES:**

- Tabulated values are based on the factored bearing resistance of 615 psi and a beam width of 3 1/2".
- Downward loading conditions only. For uplift loading contact Boise Cascade EWP representative.
- K<sub>b</sub> = 1.0
- Holes or concentrated loads are not allowed within the taper cut.
- The scarf cut length should not exceed (1/3) Span, where the scarf cut length (e + bl) = (d - dh)\*A.

Scarf Cut Slope (___/12)	A
3	4.00
6	2.00
9	1.33
12	1.00

- For 1 3/4", 5 1/4", and 7" beams, multiply the 3 1/2" values by 0.5, 1.5, and 2.0, respectively.



## Two-Ply 1¾" or 3½" VERSA-LAM® 2.1E 3100

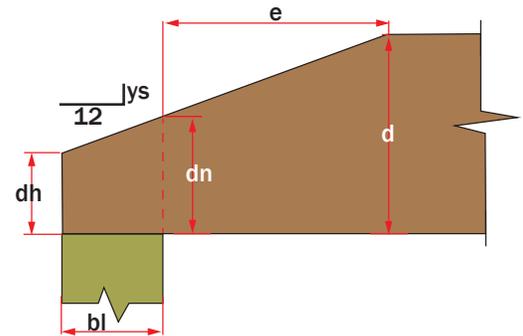
Maximum Factored Reaction for 3½" Column										
Depth (in)	Scarf Cut Slope (L/12)	Heel Height - dh								
		4½"	5"	5½"	6"	6½"	7"	7½"	8"	10"
7¼	3	5,971	6,624	7,520	7,963					
	6	7,699								
9¼	3	5,971	6,527	7,082	7,637	8,193	9,209	9,870	10,205	
	6	7,076	8,219	9,050	9,631	10,007	10,212			
	9	9,337	9,763	10,045	10,209					
	12	10,059	10,202	10,268						
9½	3	5,971	6,527	7,082	7,637	8,193	9,064	9,882	10,358	
	6	6,943	8,064	9,002	9,676	10,133	10,411	10,539		
	9	9,381	9,871	10,209	10,422	10,531				
	12	10,241	10,423	10,523						
11¼	3	5,971	6,527	7,082	7,637	8,193	8,748	9,304	9,859	12,440
	6	6,943	7,499	8,054	8,986	10,074	10,911	11,537	11,985	
	9	8,960	9,945	10,717	11,314	11,765	12,091	12,312	12,443	
	12	11,031	11,509	11,873	12,140	12,324	12,438	12,491		
11⅞	3	5,971	6,527	7,082	7,637	8,193	8,748	9,304	9,859	12,783
	6	6,943	7,499	8,054	8,609	9,653	10,712	11,537	12,163	13,189
	9	8,501	9,683	10,628	11,378	11,964	12,413	12,744	12,974	
	12	11,107	11,703	12,172	12,532	12,801	12,992	13,115	13,178	
14	3	5,971	6,527	7,082	7,637	8,193	8,748	9,304	9,859	12,081
	6	6,943	7,499	8,054	8,609	9,165	9,720	10,276	11,437	13,377
	9	7,915	8,471	9,260	10,591	11,695	12,607	13,356	13,377	13,377
	12	10,554	11,599	12,467	13,185	13,377	13,377	13,377	13,377	13,377
16	3	5,971	6,527	7,082	7,637	8,193	8,748	9,304	9,859	12,081
	6	6,943	7,499	8,054	8,609	9,165	9,720	10,276	10,831	13,377
	9	7,915	8,471	9,026	9,582	10,137	11,520	12,725	13,377	13,377
	12	8,887	10,423	11,726	12,834	13,377	13,377	13,377	13,377	13,377
18	3	5,971	6,527	7,082	7,637	8,193	8,748	9,304	9,859	12,081
	6	6,943	7,499	8,054	8,609	9,165	9,720	10,276	10,831	13,053
	9	7,915	8,471	9,026	9,582	10,137	10,692	11,248	12,414	13,377
	12	8,887	9,443	9,998	11,548	12,886	13,377	13,377	13,377	13,377
20	3	5,971	6,527	7,082	7,637	8,193	8,748	9,304	9,859	12,081
	6	6,943	7,499	8,054	8,609	9,165	9,720	10,276	10,831	13,053
	9	7,915	8,471	9,026	9,582	10,137	10,692	11,248	11,803	13,377
	12	8,887	9,443	9,998	10,554	11,109	12,670	13,377	13,377	13,377

**NOTES:**

- Tabulated values are based on the factored bearing resistance of 1092 psi and a beam width of 3½".
- Downward loading conditions only. For uplift loading contact Boise Cascade EWP representative.
- $K_b = 1.0$
- Holes or concentrated loads are not allowed within the taper cut.
- The scarf cut length should not exceed (1/3) Span, where the scarf cut length  $(e + bl) = (d - dh) * A$ .

Scarf Cut Slope (L/12)	A
3	4.00
6	2.00
9	1.33
12	1.00

- For 1¾", 5¼", and 7" beams, multiply the 3½" values by 0.5, 1.5, and 2.0, respectively.



## Minimum Bearing Length Per Bearing Width

VERSA-LAM® Minimum End bearing length per bearing width (in)				
Total Factored Reaction (lb)	Bearing width (in)			
	1¾	3½	5¼	7
2,000	1½	1½	1½	1½
4,000	2¼	1½	1½	1½
6,000	3¼	1¾	1½	1½
8,000	4¼	2¼	1½	1½
10,000	5¼	2¾	1¾	1½
12,000	6½	3¼	2¼	1¾
14,000	7½	3¾	2½	2
16,000	8½	4¼	3	2¼
18,000		4¾	3¼	2½
20,000		5¼	3½	2¾
22,000		6	4	3
24,000		6½	4¼	3¼
26,000		7	4¾	3½
28,000		7½	5	3¾
30,000		8	5¼	4
32,000		8½	5¾	4¼
34,000			6	4½
36,000			6½	4¾
38,000			6¾	5
40,000			7	5¼

VERSA-LAM® Minimum Intermediate bearing length per bearing width (in)				
Total Factored Reaction (lb)	Bearing width (in)			
	1¾	3½	5¼	7
4,000	3½	3½	3½	3½
8,000	4¼	3½	3½	3½
12,000	6½	3½	3½	3½
16,000	8½	4¼	3½	3½
20,000	10½	5¼	3½	3½
24,000	12¾	6½	4¼	3½
28,000	14¾	7½	5	3¾
32,000	16¾	8½	5¾	4¼
36,000		9½	6½	4¾
40,000		10½	7	5¼
44,000		11¾	7¾	6
48,000		12¾	8½	6½
52,000		13¾	9¼	7
56,000		14¾	10	7½
60,000		15¾	10½	8
64,000		16¾	11¼	8½
68,000			12	9
72,000			12¾	9½
76,000			13½	10
80,000			14	10½

**NOTES:**

- Tabulated required bearing lengths are based on a bearing width equal to or greater than the width of the supported member
- Lateral support at bearings should be provided to prevent lateral displacement or rotation
- Member bearing lengths are based on a Factored Bearing Resistance of 1092 psi

# Multiple Beam Connections - Uniform Side Loads

Rows	Depth Range	Spacing				
		3 1/2" (2 plies)	5 1/4" (3 plies)	5 1/4" (2 plies)	7" (3 plies)	
Maximum Factored <b>Uniform Load (PLF)</b> Applied to Either Outside Member						
3.5" Common Wire Nails (16d)						
2	7 1/4" to 18"	24"	434	325	325	289
	12"	6"	867	650	650	578
		6"	1734	1301	1301	1156
3	11 1/8" to 24"	24"	650	488	488	434
	12"	6"	1301	976	976	867
		6"	2602	1951	1951	1734
4	14" to 24"	24"	867	650	650	578
	12"	6"	1734	1301	1301	1156
		6"	3469	2602	2602	2312

Rows	Depth Range	Spacing				
		3 1/2" (2 plies)	5 1/4" (3 plies)	7" (2 plies)	7" (4 plies)	
Maximum Factored <b>Uniform Load (PLF)</b> Applied to Either Outside Member						
SDW22338 SDW22500 SDW22634 SDW22634						
2	7 1/4" to 18"	24"	680	623	1140	553
	12"	6"	1360	1245	2280	1107
		6"	2720	2490	4560	2213
3	11 1/8" to 24"	24"	1020	934	1710	830
	12"	6"	2040	1868	3420	1660
		6"	4080	3735	6840	3320
4	14" to 24"	24"	1360	1245	2280	1107
	12"	6"	2720	2490	4560	2213
		6"	5440	4980	9120	4427

Rows	Depth Range	Spacing				
		3 1/2" (2 plies)	5 1/4" (3 plies)	7" (2 plies)	7" (4 plies)	
Maximum Factored <b>Uniform Load (PLF)</b> Applied to Either Outside Member						
SDS 1/4"x3.5" SDS 1/4"x3.5" SDS 1/4"x6" SDS 1/4"x6"						
2	7 1/4" to 18"	24"	610	458	610	520
	12"	6"	1220	915	1220	1040
		6"	2440	1830	2440	2080
3	11 1/8" to 24"	24"	915	686	915	780
	12"	6"	1830	1373	1830	1560
		6"	3660	2745	3660	3120
4	14" to 24"	24"	1220	915	1220	1040
	12"	6"	2440	1830	2440	2080
		6"	4880	3660	4880	4160

Rows	Depth Range	Spacing				
		3 1/2" (2 plies)	5 1/4" (3 plies)	7" (2 plies)	7" (4 plies)	
Maximum Factored <b>Uniform Load (PLF)</b> Applied to Either Outside Member						
3/8" TrussLok 5" TrussLok 6 3/4" TrussLok 6 3/4" TrussLok						
2	7 1/4" to 18"	24"	864	675	849	600
	12"	6"	1,728	1,350	1,698	1,200
		6"	3,456	2,700	3,396	2,400
3	11 1/8" to 24"	24"	1,296	1,013	1,274	900
	12"	6"	2,592	2,025	2,547	1,800
		6"	5,184	4,050	5,094	3,600
4	14" to 24"	24"	1,728	1,350	1,698	1,200
	12"	6"	3,456	2,700	3,396	2,400
		6"	6,912	5,400	6,792	4,800

Rows	Depth Range	Spacing						
		3 1/2" (2 plies)	5 1/4" (3 plies)	5 1/4" (2 plies)	7" (3 plies)	7" (2 plies)	7" (4 plies)	
Maximum Factored <b>Uniform Load (PLF)</b> Applied to Either Outside Member								
1/2" Bolts								
2	7 1/4" to 11 1/8"	12"	1560	1170	1755	1560	3120	1040
		6"	3120	2340	3510	3120	6240	2080
3	11 1/8" to 24"	12"	2340	1755	2632	2340	4680	1560
		6"	4680	3510	5265	4680	9360	3120

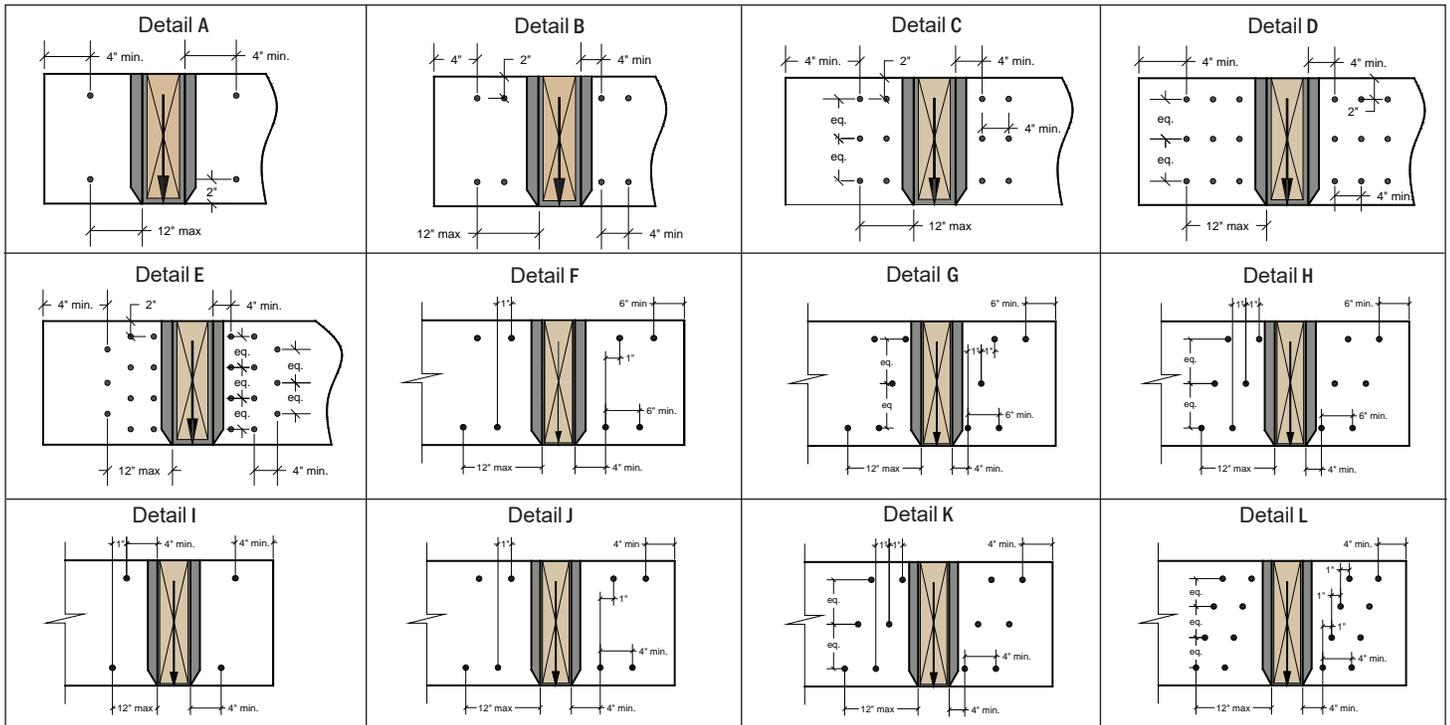
**NOTES**

- Design values apply to common bolts that conform to ASTM A307 Grades A&B, SAE J429 Grades 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 minimum edge distance for SDS/TrussLok screws and bolts shall be 2". The minimum end distance for SDS/TrussLok screws and bolts shall be 4", except for SDW screws where the end distance should not be less than 6". Bolt holes shall not be greater than 1/16 of the bolt diameter.
- When 3 1/2" sinker nails (16d) are used, multiply the maximum factored uniform load for the 3.5" common wire nails by 0.87 factor.
- When 3 1/4" pneumatic gun nails 0.122" diameter (10d) are used, multiply the maximum factored uniform load for the 3.5" common wire nails by 0.61 factor.
- The nail schedules shown apply to both sides of a 3-member beam.
- 4-ply beams must be loaded from both sides. Lesser side shall be no less than 25% of the opposite side.
- Beams wider than 7" must be designed by the professional engineer of record.
- An equivalent specific gravity of 0.5 may be used when designing specific connections with VERSA-LAM®. Connection design is based on CSA O86-14.
- Refer to current technical literature from FastenMaster TrussLok and Simpson Strong-Tie to confirm information herein has not been superseded.
- Other fasteners may also be used to connect multiple VERSA-LAM® BEAMS. Contact Boise Cascade EWP Engineering for further information.

VERSA-LAM® 2.1E 3100 - 1¾"							
Maximum Factored Point Load Applied to Either Outside Member (lbs)							
Connector Type	Number of Connectors	Min. Beam Depth (in)	Max. Beam Depth (in)	2-ply	3-ply	4-ply	Detail
3½" (16d) Common Wire Nail (0.160" x 3½")	4	7¼	18	1 734	1 301	-	A
	8	7¼	18	3 469	2 602	-	B
	12	9¼	18	5 203	3 902	-	C
	18	9¼	18	7 805	5 853	-	D
	22	11⅞	18	9 539	7 154	-	E
3⅜" TrussLok <sup>(4)</sup>	8	7¼	18	6912	-	-	F
	10	9¼	18	8640	-	-	G
	12	9¼	18	10368	-	-	H
5" TrussLok <sup>(4)</sup>	8	7¼	18	-	5400	-	F
	10	9¼	18	-	6750	-	G
	12	9¼	18	-	8100	-	H
6¾" TrussLok <sup>(4)</sup>	8	7¼	18	-	-	4800	F
	10	9¼	18	-	-	6000	G
	12	9¼	18	-	-	7200	H
SDW 22338	8	7¼	18	5 440	-	-	F
	10	9¼	18	6 800	-	-	G
	12	9¼	18	8 160	-	-	H
SDW 22500	8	7¼	18	-	4 980	-	F
	10	9¼	18	-	6 225	-	G
	12	9¼	18	-	7 470	-	H
SDW 22634	8	7¼	18	-	-	4 427	F
	10	9¼	18	-	-	5 533	G
	12	9¼	18	-	-	6 640	H
SDS ¼ X 6 <sup>(5)</sup>	4	7¼	18	-	-	2 080	I
	8	7¼	18	-	-	4 160	J
	12	9¼	18	-	-	6 240	K
	16	11⅞	18	-	-	8 320	L

**NOTES**

- When 3¼" sinker nails (16d) are used, multiply the maximum factored side load for the 3.5" common wire nails by 0.87 factor.
- When 3¼" pneumatic gun nails 0.122" diameter (10d) are used, multiply the maximum factored side load for the 3.5" common wire nails by 0.61 factor.
- Nailed 3-ply members must be fastened on both sides.
- The minimum end distance for FastenMaster TrussLok screws shall be 4", rather than the 6" as shown on the details.
- SDS screws must be applied on both sides.
- An equivalent specific gravity of 0.5 may be used when designing specific connections with VERSA-LAM®. Connection design is based on CSA O86-14.
- USP WS screws may also be used to connect multiple VERSA-LAM® beams. Contact Boise Cascade EWP Engineering for further information.
- Refer to current technical literature from FastenMaster TrussLok and Simpson Strong-Tie to confirm information herein has not been superseded.



## Multiple Beam Connections – Top Loads

VERSA-LAM® 2.1E 3100 - 1¾"				
Depth (in)	Number of plies			
	2	3	4	
5½	2 rows of 16d Common Wire Nails at 12" o.c.	2 rows of 16d Common Wire Nails at 12" o.c.	N/A	
7¼ to 11⅞	2 rows of 16d Common Wire Nails at 12" o.c.	2 rows of 16d Common Wire Nails at 12" o.c.	2 rows of ½" Bolts at 24" o.c.	2 rows of SDS ¼ x 6 screws at 24" o.c. (both sides)
14 to 18	3 rows of 16d Common Wire Nails at 12" o.c.	3 rows of 16d Common Wire Nails at 12" o.c.	2 rows of ½" Bolts at 24" o.c.	2 rows of SDS ¼ x 6 screws at 24" o.c. (both sides)
20 to 24	4 rows of 16d Common Wire Nails at 12" o.c.	4 rows of 16d Common Wire Nails at 12" o.c.	3 rows of ½" Bolts at 24" o.c.	3 rows of SDS ¼ x 6 screws at 24" o.c. (both sides)

**NOTE**

\* Load is applied evenly across the entire member width.

<p><b>Bearing at concrete/masonry walls</b></p> <p><b>B01</b></p>	<p><b>Bearing for door or window header</b></p> <p><b>B02</b></p>	<p><b>Beam to beam connector</b></p> <p><b>B03</b></p>
<p><b>Bearing at column</b></p> <p><b>B04</b></p>	<p><b>Slope seat cut</b></p> <p><b>B06</b></p>	<p><b>Bevel cut</b></p> <p><b>B07</b></p>
<p><b>Beam to concrete/masonry walls</b></p> <p><b>B08</b></p>	<p><b>Bearing framing into wall</b></p> <p><b>B09</b></p>	<p><b>DO NOT drill, notch, cut or alter VERSA-LAM® beams</b></p>

**NOTES**

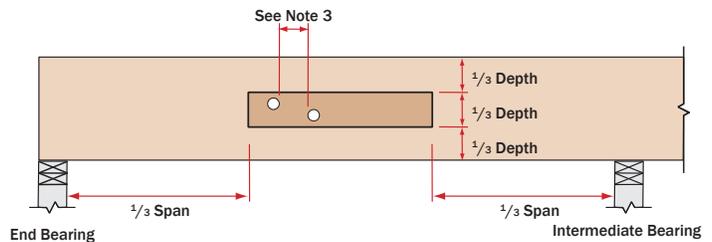
- Minimum of 1/2" air space between beam and wall pocket or adequate barrier must be provided between beam and concrete/masonry.
- Adequate bearing shall be provided. If not shown on plans, please refer to load tables in your region's Specifier Guide.
- VERSA-LAM® beams are intended for interior applications only and should be kept as dry as possible during construction.
- Continuous lateral support of top and bottom of beam shall be provided (side or top bearing framing).

## 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
5½"	¾"
7¼"	1"
Greater than 7¼"	2"



6. These limitations apply to holes drilled for plumbing or wiring access only. The size and location of holes drilled for fasteners are under the regulations of the CSA O86-14 Engineering Design in Wood.
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 Cascade EWP Engineering.

VERSA-LAM® 1.8E 2650							
Solid Column							
Unsupported length of column (ft)	Column Size (inches)						
	3½ x 3½	3½ x 5¼	3½ x 7	5¼ x 5¼	5¼ x 7	7 x 7	
4	22,560	33,840	45,120	59,523	79,364	111,530	
4½	20,924	31,386	41,848	57,572	76,762	109,595	
5	19,287	28,930	38,573	55,433	73,910	107,409	
5½	17,694	26,541	35,389	53,148	70,864	104,986	
6	16,179	24,269	32,359	50,760	67,680	102,350	
6½	14,761	22,142	29,522	48,312	64,416	99,525	
7	13,450	20,175	26,900	45,845	61,127	96,544	
7½	12,247	18,371	24,494	43,395	57,860	93,437	
8	11,151	16,725	22,153	40,990	54,653	90,239	
8½	10,153	15,230	20,165	38,654	51,538	86,982	
9	9,249	13,873	18,363	36,403	48,538	83,695	
9½	8,430	12,645	16,732	34,250	45,667	80,408	
10	7,688	11,531	15,255	32,202	42,936	77,146	
10½	7,015	10,476	13,917	30,262	40,350	73,929	
11	6,405	9,565	12,707	28,431	37,908	70,777	
11½	5,853	8,739	11,609	26,708	35,610	67,702	
12	5,351	7,991	10,615	25,088	33,451	64,717	
14	3,771	5,632	7,482	19,561	26,081	53,799	
16				15,311	20,414	44,601	
18				12,040	15,996	36,996	
20				9,519	12,648	30,749	

VERSA-LAM® 2.1E 3100 (1¾")							
Built-up Column							
Unsupported length of column (ft)	Column Size (inches)						
	3½ x 5½	3½ x 7¼	5¼ x 5½	5¼ x 7¼	7 x 7¼	7 x 9¼	
4	23,429	30,884	40,494	53,379	74,473	95,018	
4½	21,873	28,833	39,330	51,844	73,365	93,604	
5	20,285	26,739	38,035	50,137	72,099	91,989	
5½	18,713	24,667	36,632	48,287	70,683	90,182	
6	17,194	22,664	35,143	46,326	69,125	88,194	
6½	15,753	20,765	33,597	44,287	67,438	86,042	
7	14,406	18,989	32,017	42,204	65,637	83,744	
7½	13,158	17,234	30,427	40,109	63,741	81,325	
8	12,011	15,726	28,849	38,028	61,768	78,807	
8½	10,962	14,347	27,299	35,984	59,736	76,215	
9	10,005	13,090	25,791	33,997	57,665	73,573	
9½	9,134	11,948	24,335	32,078	55,574	70,904	
10	8,305	10,909	22,940	30,238	53,478	68,231	
10½	7,588	9,967	21,608	28,483	51,394	65,571	
11	6,937	9,111	20,344	26,817	49,333	62,943	
11½	6,345	8,333	19,147	25,239	47,309	60,359	
12	5,808	7,627	18,017	23,749	45,329	57,833	
14	4,110	5,397	14,123	18,617	37,978	48,454	
16				14,628	31,665	40,400	
18				11,497	26,377	33,653	
20				9,114	21,994	28,062	

**NOTES:**

- The maximum factored axial loads assume a maximum eccentricity of either 1/8 of column width or 1/8 of column depth, whichever is worse.
- The effective column length is equal to the actual column length. The column is assumed to be unbraced laterally except at the column ends.
- These values are for preliminary design only. Final design should include a complete analysis, including the bearing capacity of the foundation supporting the column. When the column is used in a wall system, review bearing resistance requirements to ensure adequacy.
- The column is subjected to a simple axial load.
- P - Δ effect was included in the analysis.
- Built-up columns shall be fastened with nails, screws or bolts as shown below.
- Slenderness ratios were calculated using the overall dimensions of the composite member.

## VERSA-STUD® & VERSA-LAM® Column Details

### Multiple Ply Stud Connections

Thickness (in)	Number of plies	Fastener type	Fastener diameter (in)	Fastener length (in)	Min. end distance (in)	Min. edge distance (in)			
1¾	2	Common Nail 3½" (16d)	0.162	3½	4.0	2.0			
		SDW 22338	0.220	3¾					
		3¾" TrussLok	0.228	3¾					
	3	SDS ¼ x 3½	0.250	3½					
		Common Nail 5" (40d)	0.225	5					
		5" TrussLok	0.228	5					
	4	SDW 22500	0.220	5					
		½" dia. Bolts	0.500	7					
		SDW 22634	0.220	6¾					
			6¾" TrussLok	0.228			6¾		
			SDS ¼ x 6 (on both sides)	0.250			6		

**NOTE:**  
The number of rows of fasteners should be as follows:

Stud/column depth	Rows of fasteners (staggered)
3½"	1
5½"	2
7¼"	2
9¼"	3
9½"	3
11¼"	3
11¾"	3
14"	4

### Column to Top Plate

### Column to Bottom Plate

### Header to Column

# BC FRAMER® CADD Framing Software

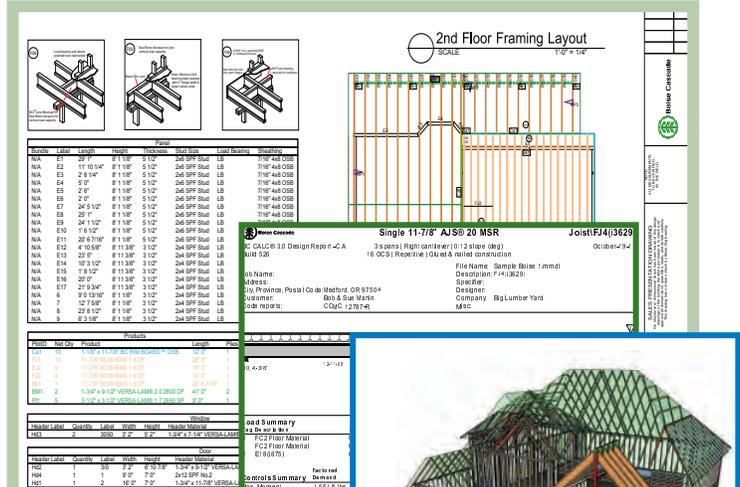
BC FRAMER® is an easy-to-use, stand-alone computer-aided drafting program with 3D capability designed to quickly create floor and roof framing layouts.

Draw walls, add framing areas, locate beams and rough openings, define cross-sections and on-center spacing. In minutes, BC FRAMER® frames your layout, builds a piece and price report, creates a framing drawing with schedule, all using Boise Cascade Engineered Wood Products.

Easy-to-use editing and drawing tools allow flexibility when modifying members and adding details, symbols and accessories.

Training classes for BC FRAMER® are provided at Boise Cascade EWP training centers.

For questions, comments or a free demonstration CD visit our website at [www.BC.com/ewp](http://www.BC.com/ewp) or email us at [EWPSupport@BC.com](mailto:EWPSupport@BC.com). Information can also be obtained at 800-405-5969.



**TECHNICAL SPECS**  
This program is designed to work on stand-alone computers.

**Recommended Hardware Specifications:**  
**CPU:** Quad Core 64 bit Intel i7 Processor (4th Generation or Newer)  
**L2 Cache:** 3MB/Core  
**RAM:** 8GB (12.0 – 16GB highly recommended for designing large structures)  
**Video:** Full support for DirectX 9; Single monitor 512MB; Dual monitor 1GB (Resolution 1366x768 Minimum)  
**Free Storage:** 80GB (average 6,000-8,000 jobs)  
**Operating Systems:** Windows 7 (Professional Edition 64-bit), and Windows 8 (Professional Edition 64-bit), Windows 10 (Pro or Enterprise Edition 64-bit)\*  
 \*Apple Mac or Windows Emulator not supported

Improvements in capacity or speed of these components will yield better performance.

# BC CALC® Sizing Software

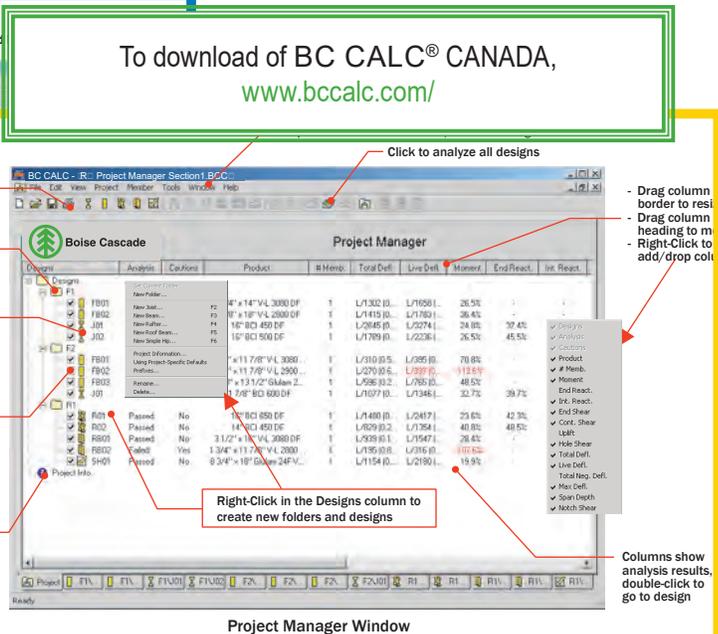
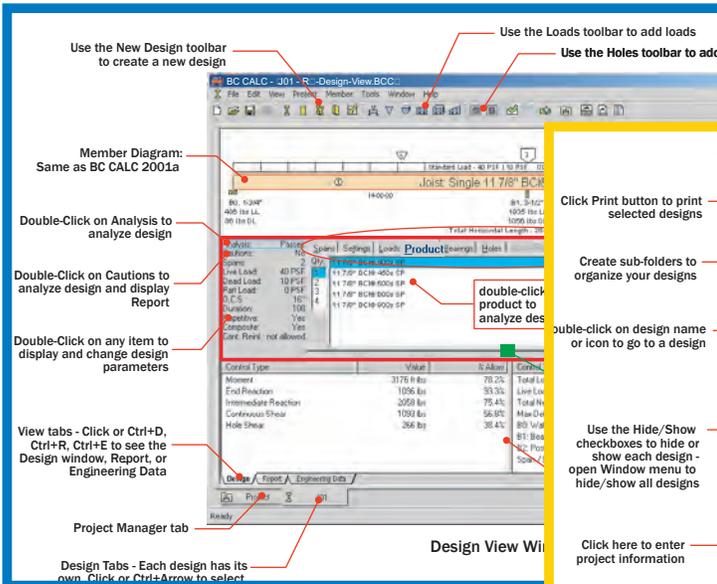
BC CALC® is Boise Cascade EWP sizing software for Boise Cascade Joists and VERSA-LAM® Beams.

BC CALC® is simple to use, yet flexible enough to analyze most joist and beam applications. Span, load and hole information entered by the user is analyzed by the program to correctly size Boise Cascade EWP. A comprehensive Help File menu is included in the program.

BC CALC® is available to designers, architects and engineers on CD-ROM or by download at

[www.bccalc.com/](http://www.bccalc.com/)

Hardware requirements include Pentium® Processor with a recommended minimum of 1GB RAM. For questions or concerns regarding BC CALC®, call 800-405-5969 or email [EWPSupport@BC.com](mailto:EWPSupport@BC.com)



CEILING		Pounds Per Square Foot [PSF]
Acoustical fiber tile <sup>(1)</sup>		1
Suspended steel channel system <sup>(1)</sup>		2
Suspended wood channel system		2.5
2x8 ceiling joists @ 16" o.c., R-49 insulation, ½" gypsum board		7
1" Plaster		8
½" gypsum board		2.2
¾" gypsum board		2.75
ROOF		Pounds Per Square Foot [PSF]
Fiberglass shingles		3
Asphalt shingles <sup>(1)</sup>		2
Wood shingles <sup>(1)</sup>		3
Spanish clay tile <sup>(1)</sup>		19
Concrete roof tile		12
Lightweight clay tile		6
Composition Roofing:		
Three-ply ready roofing <sup>(1)</sup>		1
Four-ply felt and gravel <sup>(1)</sup>		5.5
Five-ply felt and gravel <sup>(1)</sup>		6
20 gage metal deck <sup>(1)</sup>		2.5
18 gage metal deck <sup>(1)</sup>		3
0.05" thick polyvinyl chloride polymer membrane <sup>(4)</sup>		0.35
1" fiberglass batt insulation		0.04
1" loose fiberglass insulation		0.04
1" loose cellulose insulation		0.14
1" rigid insulation <sup>(1)</sup>		1.5
Blowing wool insulation R-38 (16" deep)		0.62
¾" slate <sup>(1)</sup>		7
¼" slate <sup>(1)</sup>		10
Single-ply (no ballast) <sup>(1)</sup>		0.7
Single-ply (ballasted)		11
Dry gravel <sup>(1)</sup>		8.7
2x8 rafters @ 16" o.c., fiberglass shingles, 15# felt, ¾" sheathing		8
Skylight: metal frame w/ ¾" wire glass <sup>(1)</sup>		8
FLOOR		Pounds Per Square Foot [PSF]
1" reinforced regular weight concrete		12.5
1" plain lightweight concrete <sup>(1)</sup>		8
7/16" cementitious backerboard		3
Ceramic or quarry tile (¾") on ½" mortar bed <sup>(1)</sup>		16
Ceramic or quarry tile (¾") on 1" mortar bed <sup>(1)</sup>		23
1" mortar bed		12
1" slate <sup>(1)</sup>		15
¾" marble tile		6
¾" ceramic floor tile		4.7
Hardwood flooring, 7/7-in <sup>(1)</sup>		4
¼" linoleum or asphalt tile <sup>(1)</sup>		1
BCI®/AJS® joists @ 16" o.c., ¾" sheathing, ½" gypsum board		10
¾" Gyp-Crete topping		6.5
Carpet & Pad		2.0
Waterproofing Membranes		
Bituminous, smooth surface <sup>(1)</sup>		1.5
Liquid applied <sup>(1)</sup>		1
MISCELLANEOUS		Pounds Per Square Foot [PSF]
1" of sand		8
1" of water		5.2
Hay: baled, dry <sup>(2)</sup>		15 PCF
Straw: baled, dry <sup>(2)</sup>		8 PCF
Saturated soil (garden/landscaped roof)		135 PCF
Grand piano		1000 LBS
Hot Tub (tub & water weight)		150
Acrylic soaking tub - 2 person - 80 gallon capacity (tub & water weight) <sup>(5)</sup>		40

SHEATHING		Pounds Per Square Foot [PSF]
11/32" or ¾" Plywood – OSB <sup>(3)</sup>		1.0 – 1.2
15/32" or ½" Plywood – OSB <sup>(3)</sup>		1.4 – 1.7
19/32" or 5/8" Plywood – OSB <sup>(3)</sup>		1.8 – 2.1
23/32" or ¾" Plywood – OSB <sup>(3)</sup>		2.2 – 2.5
7/8" Plywood – OSB <sup>(3)</sup>		2.6 – 2.9
1 1/8" Plywood – OSB <sup>(3)</sup>		3.3 – 3.6
½" cementitious backerboard		3
1 ½" softwood T & G decking		4.6
FRAMING		Pounds Per Square Foot [PSF]
2x4 @ 16" o.c.		1.1
2x6 @ 16" o.c.		1.7
2x8 @ 16" o.c.		2.2
2x10 @ 16" o.c.		2.9
2x12 @ 16" o.c.		3.5
BCI® 4500s, 5000 or 5000s @ 12" o.c.		2.0 – 2.9
BCI® 4500s, 5000 or 5000s @ 16" o.c.		1.5 – 2.2
BCI® 4500s, 5000 or 5000s @ 19.2" o.c.		1.3 – 1.8
BCI® 4500s, 5000 or 5000s @ 24" o.c.		1.0 – 1.5
BCI® 6000 or 6000s @ 12" o.c.		2.2 – 3.4
BCI® 6000 or 6000s @ 16" o.c.		1.7 – 2.6
BCI® 6000 or 6000s @ 19.2" o.c.		1.4 – 2.1
BCI® 6000 or 6000s @ 24" o.c.		1.1 – 1.7
BCI® 60, 60s, 6500 or 6500s @ 12" o.c.		2.3 – 3.8
BCI® 60, 60s, 6500 or 6500s @ 16" o.c.		1.7 – 2.9
BCI® 60, 60s, 6000 or 6500s @ 19.2" o.c.		1.4 – 2.4
BCI® 60, 60s, 6500 or 6500s @ 24" o.c.		1.2 – 1.9
BCI® 90 or 90s @ 12" o.c.		3.9 – 4.9
BCI® 90 or 90s @ 16" o.c.		2.9 – 3.7
BCI® 90 or 90s @ 19.2" o.c.		2.4 – 3.1
BCI® 90 or 90s @ 24" o.c.		1.9 – 2.5
AJS® 140, 150, 190 or 20 @ 12" o.c.		2.2 – 3.3
AJS® 140, 150, 190 or 20 @ 16" o.c.		1.7 – 2.5
AJS® 140, 150, 190 or 20 @ 19.2" o.c.		1.4 – 2.1
AJS® 140, 150, 190 or 20 @ 24" o.c.		1.1 – 1.7
AJS® 24, 25 or 30 @ 12" o.c.		3.1 – 3.9
AJS® 24, 25 or 30 @ 16" o.c.		2.3 – 2.9
AJS® 24, 25 or 30 @ 19.2" o.c.		1.9 – 2.4
AJS® 24, 25 or 30 @ 24" o.c.		1.6 – 2.0
AJS® 24 FMJ @ 12" o.c.		3.4 – 4.3
AJS® 24 FMJ @ 16" o.c.		2.6 – 3.2
AJS® 24 FMJ @ 19.2" o.c.		2.1 – 2.7
AJS® 24 FMJ @ 24" o.c.		1.7 – 2.1
WALL		Pounds Per Square Foot [PSF]
5/16" x 7 1/2" fiber cement lap siding		3
4" clay brick <sup>(1)</sup>		39
¼" ceramic wall tile		3.1
1 3/4" Cultured Stone®		12
2x4 studs @ 16" o.c., 5/8" gypsum, insulation, 3/8" siding <sup>(1)</sup>		11
2x6 studs @ 16" o.c., 5/8" gypsum, insulation, 3/8" siding <sup>(1)</sup>		12
Wood or steel studs, ½" gypsum board each side <sup>(1)</sup>		8
Exterior stud walls w/ brick veneer <sup>(1)</sup>		48
Windows: glass, frame and sash <sup>(1)</sup>		8
Stucco		10
Log Wall: 10" diameter		26
Glass Block:		
4" Thick - standard (hollow)		20
3" Thick - standard (hollow)		16
4" Thick - thin face		30
3" Thick - solid glass block		40

(2) National Farm Building Code (Canada) 1995. Value in pounds per cubic foot (PCF), multiply by maximum height to obtain PSF.

(3) Approximate Engineering Dead Load Weight of Wood Structural Panels, APA EWS TT-019, 1998.

(4) Duro-Last® General Specifications, Duro-Last® Roofing, Inc. 2005

(5) Kohler® Specification Sheet K-1160-GLA 02/25/2018.

Information from Tech Note GE-1 r03/2018 valid for 2 years past publish date

**Include at least 1.5 psf in all dead load summations to account for incidentals such as plumbing, ducts, light fixtures, etc.**

(1) Minimum Design Loads for Buildings and Other Structures, ASCE 7-05 Table C3.1-1a.

# FASTER. STRONGER. EASIER.



## Boise Cascade®

### Lifetime Guaranteed Quality and Performance

Boise Cascade warrants its BCI® Joist, VERSA-LAM®, and ALLJOIST® products to comply with our specifications, to be free from defects in material and workmanship, and to meet or exceed our performance specifications for the normal and expected life of the structure when correctly stored, installed and used according to our Installation Guide.

For information about  
Boise Cascade's Engineered Wood Products, visit our website at  
[www.BC.com/ewp](http://www.BC.com/ewp)

CCMC Report Number 12472-R VERSA-LAM®

LIMIT STATES DESIGN  
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