Roseburg

1-Ply, 1.5" 2.1E true RigidLam LVL - Standard Term - Floor/Roof (PLF) L/360 LL L/240 TL Douglas-fir

ALLOWABLE UNIFORM LOAD - POUNDS PER LINEAL FOOT (Limit States Design)

Span (ft)	Depth =	4.375"	5.5"	7.25"	9.25"	9.5"	11.25"	11.875"	14"	16"	18"	20"	22"	24"
6	Unfactored Load (LL)	143	275	594	1137	1218	1864	-						
	Unfactored Load (TL)	212	410	888	-	-	-	-						
	Total Factored Load	516	793	1114	1502	1553	1935	2081						
	Min. end / Int. bearing	1.5 / 3	1.5 / 3.6	2 / 5.1	2.8 / 6.9	2.9 / 7.1	3.6 / 8.9	3.8 / 9.6						
8	Unfactored Load (LL)	62	120	266	526	566	893	1030						
	Unfactored Load (TL)	91	178	396	786	845	1335	-						
	Total Factored Load	289	445	748	1056	1090	1338	1431						
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.8 / 4.6	2.6 / 6.5	2.7 / 6.7	3.3 / 8.2	3.5 / 8.8						
10	Unfactored Load (LL)	32	63	140	282	304	488	566						
	Unfactored Load (TL)	46	92	208	419	452	727	844						
	Total Factored Load	184	284	477	755	794	1022	1089						
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3.7	2.3 / 5.8	2.4 / 6.1	3.1 / 7.8	3.3 / 8.4						
12	Unfactored Load (LL)	19	37	83	168	181	293	341						
	Unfactored Load (TL)	26	53	121	248	268	435	507						
	Total Factored Load	127	196	330	523	550	756	837						
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3.1	1.9 / 4.8	2 / 5.1	2.8 / 7	3.1 / 7.7						
14	Unfactored Load (LL)	12	23	53	107	116	189	220						
	Unfactored Load (TL)	16	33	76	157	170	279	326						
	Total Factored Load	93	143	242	383	403	554	613						
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.7 / 4.1	1.7 / 4.4	2.4 / 6	2.6 / 6.6						
16	Unfactored Load (LL)	8	16	35	73	78	128	150						
	Unfactored Load (TL)	10	21	50	105	114	188	221						
	Total Factored Load	71	109	184	292	307	423	468						
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.6	1.5 / 3.8	2.1 / 5.2	2.3 / 5.8						
18	Unfactored Load (LL)		11	25	51	56	91	107						
	Unfactored Load (TL)		14	35	73	80	132	155						
	Total Factored Load		86	145	230	242	333	369						
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3.2	1.5 / 3.4	1.9 / 4.6	2.1 / 5.1						
20	Unfactored Load (LL)			18	38	41	67	78						
	Unfactored Load (TL)			25	53	57	96	113						
	Total Factored Load			117	185	195	269	297						
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.7 / 4.2	1.9 / 4.6						
22	Unfactored Load (LL)			14	28	31	51	59						
	Unfactored Load (TL)			18	39	42	71	84						
	Total Factored Load			96	152	160	221	245						
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.8	1.7 / 4.2						
24	Unfactored Load (LL)			11	22	24	39	46						
	Unfactored Load (TL)			13	29	32	54	64						
	Total Factored Load			80	127	134	185	205						
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.5	1.5 / 3.9						
26	Unfactored Load (LL)				17	19	31	36						
	Unfactored Load (TL)				22	24	42	50						
	Total Factored Load				108	113	157	174						
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3.2	1.5 / 3.6						
28	Unfactored Load (LL)				14	15	25	29						
	Unfactored Load (TL)				17	19	33	39						
	Total Factored Load				92	97	134	149						
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.3						
30	Unfactored Load (LL)				11	12	20	24						
	Unfactored Load (TL)				13	15	26	31						
	Total Factored Load				80	84	116	129						
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.1						
32	Unfactored Load (LL)					10	17	20						
	Unfactored Load (TL)					11	21	25						
	Total Factored Load					73	102	113						
	Min. end / Int. bearing					1.5 / 3	1.5 / 3	1.5 / 3						
34	Unfactored Load (LL)						14	16						
	Unfactored Load (TL)						16	20						
	Total Factored Load						89	99						
	Min. end / Int. bearing						1.5 / 3	1.5 / 3						
36	Unfactored Load (LL)						12	14						
	Unfactored Load (TL)						13	16						
	Total Factored Load						79	88						
	Min. end / Int. bearing						1.5 / 3	1.5 / 3						
38	Unfactored Load (LL)						10	12						
	Unfactored Load (TL)						11	13						
	Total Factored Load						70	78						
	Min. end / Int. bearing						1.5 / 3	1.5 / 3						
40	Unfactored Load (LL)													
	Unfactored Load (TL)													
	Total Factored Load													
	Min. end / Int. bearing													

Notes:

1. The values shown are the maximum uniform unfactored and factored loads in pounds per linear foot that can be applied to the beam. The weight of the beam has been deducted from the Total Unfactored Load (TL) and Total Factored Load.
2. Bearing lengths are in inches based on the compression perpendicular to grain resistance of the LVL beam. For bearing on other wood materials, the bearing resistance of the supporting material should be checked.
3. The tabulated values are for simple span or for continuous span beams.
4. Design span is the clear span between supports plus one half of the required bearing at each end.
5. The table is for standard term loading and dry service conditions.
6. Lateral support at points of bearing and continuous lateral support for top of beam must be provided to prevent rotation or lateral displacement.
7. Calculations have been carried out in accordance with CSA O86-14.
8. 1-1/2" thick LVL members 14" and deeper and 1-3/4" thick LVL members 16" and deeper must be a minimum of 2 plies unless designed by a design professional.
9. See Roseburg EWP Design Guide for information regarding the connection of multiple-ply members and installation guidelines.
10. Allowable loads shown for multiple ply LVL members are also applicable to factory glued LVL beams with the same thickness as the combined multiple plies.

Directions for use of Table:

1. Determine the total factored load, unfactored live load and unfactored total load.
2. Choose a span that meets or exceeds the actual design span (centre to centre of bearing).
3. Scan from left to right within the span row to find a cell where: the L/360 (LL) load exceeds the unfactored live load; the L/240 (TL) load exceeds the unfactored total load; the factored total load resistance exceeds the factored total load. All four rows including minimum bearing must be checked. Where no unfactored loads are shown, total factored load will govern.
4. If the selected beam is too deep or the bearing length is too long, resize the beam using a wider member.
5. For an L/480 live load deflection limit, multiply the tabulated L/360 (LL) loads by 0.75. For an L/180 total load limit, multiply the tabulated L/240 (TL) loads by 1.33.

Nov. 2020

Roseburg

2-Ply, 1.5" 2.1E true RigidLam LVL - Standard Term - Floor/Roof (PLF) L/360 LL L/240 TL Douglas-fir

ALLOWABLE UNIFORM LOAD - POUNDS PER LINEAL FOOT (Limit States Design)

Span (ft)	Depth =	4.375"	5.5"	7.25"	9.25"	9.5"	11.25"	11.875"	14"	16"	18"	20"	22"	24"
6	Unfactored Load (LL)	285	550	1187	2274	2436	3729	-	-	-	-	-	-	-
	Unfactored Load (TL)	425	820	1775	-	-	-	-	-	-	-	-	-	-
	Total Factored Load	1032	1587	2229	3003	3106	3870	4162	5244	6408	7744	9294	11114	13282
	Min. end / Int. bearing	1.5 / 3	1.5 / 3.6	2 / 5.1	2.8 / 6.9	2.9 / 7.1	3.6 / 8.9	3.8 / 9.6	4.8 / 12	5.9 / 14.7	7.1 / 17.8	8.5 / 21.3	10.2 / 25.5	12.2 / 30.5
8	Unfactored Load (LL)	123	241	532	1052	1132	1786	2060	3142	-	-	-	-	-
	Unfactored Load (TL)	181	357	793	1571	1691	2670	-	-	-	-	-	-	-
	Total Factored Load	579	890	1496	2113	2181	2676	2861	3529	4218	4972	5801	6719	7738
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.8 / 4.6	2.6 / 6.5	2.7 / 6.7	3.3 / 8.2	3.5 / 8.8	4.3 / 10.8	5.2 / 12.9	6.1 / 15.2	7.1 / 17.8	8.2 / 20.6	9.5 / 23.7
10	Unfactored Load (LL)	64	125	281	564	608	976	1132	1765	2502	3371	-	-	-
	Unfactored Load (TL)	92	184	415	839	905	1455	1689	2637	-	-	-	-	-
	Total Factored Load	369	568	955	1510	1588	2043	2178	2658	3141	3659	4214	4811	5455
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3.7	2.3 / 5.8	2.4 / 6.1	3.1 / 7.8	3.3 / 8.4	4.1 / 10.2	4.8 / 12	5.6 / 14	6.5 / 16.2	7.4 / 18.4	8.4 / 20.9
12	Unfactored Load (LL)	37	73	165	335	362	586	682	1079	1550	2117	2778	3528	-
	Unfactored Load (TL)	52	106	242	495	535	870	1014	1607	2312	-	-	-	-
	Total Factored Load	255	393	661	1046	1100	1512	1674	2131	2501	2893	3307	3745	4210
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3.1	1.9 / 4.8	2 / 5.1	2.8 / 7	3.1 / 7.7	3.9 / 9.8	4.6 / 11.5	5.3 / 13.3	6.1 / 15.2	6.9 / 17.2	7.8 / 19.4
14	Unfactored Load (LL)	23	46	105	214	232	378	441	703	1019	1405	1862	2389	2983
	Unfactored Load (TL)	32	65	152	314	340	557	652	1043	1516	2094	-	-	-
	Total Factored Load	186	287	484	766	805	1108	1226	1672	2077	2391	2720	3064	3426
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.7 / 4.1	1.7 / 4.4	2.4 / 6	2.6 / 6.6	3.6 / 9	4.5 / 11.2	5.1 / 12.9	5.9 / 14.6	6.6 / 16.5	7.4 / 18.4
16	Unfactored Load (LL)	16	31	71	145	157	257	300	482	703	976	1302	1683	2117
	Unfactored Load (TL)	20	42	100	210	228	376	441	711	1042	1449	1937	2506	-
	Total Factored Load	141	218	369	584	614	845	936	1277	1642	2037	2309	2592	2887
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.6	1.5 / 3.8	2.1 / 5.2	2.3 / 5.8	3.2 / 7.9	4 / 10.1	5 / 12.5	5.7 / 14.2	6.4 / 16	7.1 / 17.8
18	Unfactored Load (LL)	11	22	50	103	111	182	213	344	504	703	943	1225	1550
	Unfactored Load (TL)	13	29	69	147	159	265	311	505	743	1040	1398	1820	2306
	Total Factored Load	111	171	290	460	484	666	737	1006	1294	1616	1971	2245	2494
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.2	1.5 / 3.4	1.9 / 4.6	2.1 / 5.1	2.8 / 7	3.6 / 9	4.5 / 11.2	5.5 / 13.7	6.2 / 15.6	6.9 / 17.3
20	Unfactored Load (LL)	8	16	37	75	81	134	157	254	373	522	703	917	1165
	Unfactored Load (TL)	9	20	49	106	115	192	226	369	546	769	1038	1358	1729
	Total Factored Load	89	138	233	371	390	537	595	812	1045	1306	1593	1906	2194
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.7 / 4.2	1.9 / 4.6	2.5 / 6.3	3.2 / 8.1	4 / 10.1	4.9 / 12.3	5.9 / 14.7	6.8 / 16.9
22	Unfactored Load (LL)	6	12	28	57	61	101	119	192	283	398	537	703	896
	Unfactored Load (TL)	6	14	36	78	85	143	169	277	412	582	790	1037	1325
	Total Factored Load	73	113	192	305	321	442	490	669	861	1076	1313	1572	1852
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.8	1.7 / 4.2	2.3 / 5.7	2.9 / 7.4	3.7 / 9.2	4.5 / 11.2	5.3 / 13.4	6.3 / 15.7
24	Unfactored Load (LL)		9	21	44	47	78	92	149	220	310	419	550	703
	Unfactored Load (TL)		10	26	58	64	109	128	212	317	450	613	807	1035
	Total Factored Load		94	160	255	268	370	410	560	721	901	1100	1317	1552
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.5	1.5 / 3.9	2.1 / 5.3	2.7 / 6.7	3.4 / 8.4	4.1 / 10.3	4.9 / 12.3	5.8 / 14.4
26	Unfactored Load (LL)		7	17	35	37	62	72	118	174	246	333	438	561
	Unfactored Load (TL)		7	19	45	49	84	99	166	249	354	484	639	822
	Total Factored Load		79	135	216	227	313	347	475	612	765	934	1119	1319
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.2	1.5 / 3.6	1.9 / 4.8	2.5 / 6.2	3.1 / 7.8	3.8 / 9.5	4.5 / 11.3	5.3 / 13.3
28	Unfactored Load (LL)			13	28	30	50	58	95	140	198	269	354	454
	Unfactored Load (TL)			14	34	37	65	78	131	198	283	387	514	662
	Total Factored Load			116	185	194	269	298	408	526	657	803	962	1134
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.3	1.8 / 4.5	2.3 / 5.8	2.9 / 7.2	3.5 / 8.8	4.2 / 10.5	4.9 / 12.4
30	Unfactored Load (LL)			11	23	24	40	47	77	115	162	220	290	373
	Unfactored Load (TL)			11	27	29	52	62	105	159	228	314	418	540
	Total Factored Load			100	160	168	233	258	353	456	570	697	835	985
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.1	1.7 / 4.2	2.2 / 5.4	2.7 / 6.7	3.3 / 8.2	3.9 / 9.8	4.6 / 11.5
32	Unfactored Load (LL)			9	19	20	33	39	64	95	134	182	241	310
	Unfactored Load (TL)			8	21	23	41	49	85	129	187	258	343	445
	Total Factored Load			87	139	147	203	225	309	399	499	610	731	863
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.6 / 3.9	2 / 5.1	2.5 / 6.3	3.1 / 7.7	3.7 / 9.2	4.3 / 10.8
34	Unfactored Load (LL)			8	16	17	28	33	53	79	112	153	202	260
	Unfactored Load (TL)			6	16	18	33	40	69	106	154	213	285	371
	Total Factored Load			76	122	129	179	198	272	351	440	538	645	762
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.7	1.9 / 4.8	2.4 / 5.9	2.9 / 7.2	3.5 / 8.7	4.1 / 10.2
36	Unfactored Load (LL)				13	14	23	28	45	67	95	129	171	220
	Unfactored Load (TL)				12	14	26	32	56	88	128	178	239	311
	Total Factored Load				108	114	158	176	241	312	391	478	573	677
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.5	1.8 / 4.5	2.2 / 5.6	2.7 / 6.8	3.3 / 8.2	3.8 / 9.6
38	Unfactored Load (LL)				11	12	20	23	38	57	81	110	146	188
	Unfactored Load (TL)				9	11	21	26	46	73	107	149	201	263
	Total Factored Load				96	101	141	156	215	278	349	427	512	605
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.3	1.7 / 4.3	2.1 / 5.3	2.6 / 6.5	3.1 / 7.7	3.6 / 9.1
40	Unfactored Load (LL)				10	10	17	20	33	49	69	95	125	162
	Unfactored Load (TL)				7	8	17	21	38	61	90	126	171	224
	Total Factored Load				86	90	126	140	193	249	313	383	460	544
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.2	1.6 / 4	2 / 5	2.5 / 6.2	2.9 / 7.4	3.5 / 8.7

Notes:

1. The values shown are the maximum uniform unfactored and factored loads in pounds per linear foot that can be applied to the beam. The weight of the beam has been deducted from the Total Unfactored Load (TL) and Total Factored Load.
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Directions for use of Table:

1. Determine the total factored load, unfactored live load and unfactored total load.
2. Choose a span that meets or exceeds the actual design span (centre to centre of bearing).
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4. If the selected beam is too deep or the bearing length is too long, resize the beam using a wider member.
5. For an L/480 live load deflection limit, multiply the tabulated L/360 (LL) loads by 0.75. For an L/180 total load limit, multiply the tabulated L/240 (TL) loads by 1.33.

Nov. 2020

Roseburg

3-Ply, 1.5" 2.1E true RigidLam LVL - Standard Term - Floor/Roof (PLF) L/360 LL L/240 TL Douglas-fir

ALLOWABLE UNIFORM LOAD - POUNDS PER LINEAL FOOT (Limit States Design)

Span (ft)	Depth =	4.375"	5.5"	7.25"	9.25"	9.5"	11.25"	11.875"	14"	16"	18"	20"	22"	24"
10	Unfactored Load (LL)	96	188	421	846	912	1464	1698	2648	3754	5056	-	-	-
	Unfactored Load (TL)	138	276	623	1258	1357	2182	2533	3955	-	-	-	-	-
	Total Factored Load	553	852	1432	2265	2382	3065	3268	3987	4712	5488	6321	7216	8183
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3.7	2.3 / 5.8	2.4 / 6.1	3.1 / 7.8	3.3 / 8.4	4.1 / 10.2	4.8 / 12	5.6 / 14	6.5 / 16.2	7.4 / 18.4	8.4 / 20.9
12	Unfactored Load (LL)	56	110	248	503	543	879	1024	1618	2325	3175	4167	5292	-
	Unfactored Load (TL)	78	158	363	743	803	1305	1521	2410	3468	-	-	-	-
	Total Factored Load	382	589	991	1569	1650	2268	2510	3196	3752	4339	4960	5617	6315
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3.1	1.9 / 4.8	2 / 5.1	2.8 / 7	3.1 / 7.7	3.9 / 9.8	4.6 / 11.5	5.3 / 13.3	6.1 / 15.2	6.9 / 17.2	7.8 / 19.4
14	Unfactored Load (LL)	35	70	158	322	347	566	661	1054	1529	2108	2793	3583	4475
	Unfactored Load (TL)	48	98	228	471	510	836	978	1565	2274	3140	-	-	-
	Total Factored Load	279	430	726	1149	1208	1662	1840	2508	3116	3586	4079	4596	5139
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.7 / 4.1	1.7 / 4.4	2.4 / 6	2.6 / 6.6	3.6 / 9	4.5 / 11.2	5.1 / 12.9	5.9 / 14.6	6.6 / 16.5	7.4 / 18.4
16	Unfactored Load (LL)	24	47	106	218	235	385	450	723	1054	1464	1953	2524	3175
	Unfactored Load (TL)	30	64	151	316	342	564	662	1067	1562	2174	2906	3760	-
	Total Factored Load	212	328	553	876	922	1268	1404	1915	2463	3055	3463	3888	4330
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.6	1.5 / 3.8	2.1 / 5.2	2.3 / 5.8	3.2 / 7.9	4 / 10.1	5 / 12.5	5.7 / 14.2	6.4 / 16	7.1 / 17.8
18	Unfactored Load (LL)	17	33	75	154	167	273	320	516	756	1054	1414	1837	2325
	Unfactored Load (TL)	20	43	104	220	239	397	466	757	1115	1560	2097	2730	3458
	Total Factored Load	166	257	435	690	725	999	1106	1509	1941	2424	2956	3367	3740
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.2	1.5 / 3.4	1.9 / 4.6	2.1 / 5.1	2.8 / 7	3.6 / 9	4.5 / 11.2	5.5 / 13.7	6.2 / 15.6	6.9 / 17.3
20	Unfactored Load (LL)	12	24	55	113	122	201	235	380	559	783	1054	1375	1748
	Unfactored Load (TL)	13	30	74	158	172	288	339	554	820	1153	1558	2037	2593
	Total Factored Load	133	207	350	556	585	806	892	1218	1568	1958	2389	2859	3291
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.7 / 4.2	1.9 / 4.6	2.5 / 6.3	3.2 / 8.1	4 / 10.1	4.9 / 12.3	5.9 / 14.7	6.8 / 16.9
22	Unfactored Load (LL)	9	18	41	85	92	152	178	288	425	596	806	1054	1344
	Unfactored Load (TL)	9	21	53	117	127	214	253	416	618	873	1185	1555	1988
	Total Factored Load	109	169	287	457	481	663	734	1003	1292	1614	1969	2357	2778
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.8	1.7 / 4.2	2.3 / 5.7	2.9 / 7.4	3.7 / 9.2	4.5 / 11.2	5.3 / 13.4	6.3 / 15.7
24	Unfactored Load (LL)	7	14	32	66	71	117	138	223	330	464	629	825	1054
	Unfactored Load (TL)	5	14	39	88	95	163	192	319	476	675	919	1211	1553
	Total Factored Load	91	141	240	382	402	554	614	840	1082	1352	1650	1976	2328
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.5	1.5 / 3.9	2.1 / 5.3	2.7 / 6.7	3.4 / 8.4	4.1 / 10.3	4.9 / 12.3	5.8 / 14.4
26	Unfactored Load (LL)	6	11	25	52	56	93	109	177	261	368	500	657	841
	Unfactored Load (TL)	3	10	29	67	73	126	149	248	373	531	726	959	1233
	Total Factored Load	76	119	203	323	340	470	521	712	918	1148	1401	1678	1979
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.2	1.5 / 3.6	1.9 / 4.8	2.5 / 6.2	3.1 / 7.8	3.8 / 9.5	4.5 / 11.3	5.3 / 13.3
28	Unfactored Load (LL)		9	20	42	45	74	87	142	210	297	403	531	681
	Unfactored Load (TL)		7	22	51	56	98	117	196	297	424	581	770	993
	Total Factored Load		101	173	277	291	403	447	611	788	986	1204	1443	1701
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.3	1.8 / 4.5	2.3 / 5.8	2.9 / 7.2	3.5 / 8.8	4.2 / 10.5	4.9 / 12.4
30	Unfactored Load (LL)		7	16	34	37	61	71	116	172	243	330	435	559
	Unfactored Load (TL)		4	16	40	44	78	93	157	239	343	471	627	810
	Total Factored Load		87	150	239	252	349	387	530	684	856	1045	1253	1477
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.1	1.7 / 4.2	2.2 / 5.4	2.7 / 6.7	3.3 / 8.2	3.9 / 9.8	4.6 / 11.5
32	Unfactored Load (LL)		6	13	28	30	50	59	96	142	201	273	361	464
	Unfactored Load (TL)		2	12	31	34	62	74	127	194	280	386	515	668
	Total Factored Load		76	130	209	220	305	338	463	598	749	915	1097	1294
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.6 / 3.9	2 / 5.1	2.5 / 6.3	3.1 / 7.7	3.7 / 9.2	4.3 / 10.8
34	Unfactored Load (LL)			11	23	25	42	49	80	119	168	229	303	390
	Unfactored Load (TL)			8	24	27	49	60	103	159	231	320	428	556
	Total Factored Load			114	183	193	268	297	408	527	660	807	968	1142
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.7	1.9 / 4.8	2.4 / 5.9	2.9 / 7.2	3.5 / 8.7	4.1 / 10.2
36	Unfactored Load (LL)			9	20	21	35	41	68	100	142	194	256	330
	Unfactored Load (TL)			6	18	21	39	48	85	131	192	267	358	467
	Total Factored Load			101	162	171	237	263	362	468	586	717	860	1015
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.5	1.8 / 4.5	2.2 / 5.6	2.7 / 6.8	3.3 / 8.2	3.8 / 9.6
38	Unfactored Load (LL)			8	17	18	30	35	58	85	121	165	219	282
	Unfactored Load (TL)			3	14	16	32	39	70	109	160	224	302	394
	Total Factored Load			89	144	152	211	234	322	417	523	640	768	907
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.3	1.7 / 4.3	2.1 / 5.3	2.6 / 6.5	3.1 / 7.7	3.6 / 9.1
40	Unfactored Load (LL)			7	14	16	26	30	49	73	104	142	188	243
	Unfactored Load (TL)			2	11	12	25	31	57	91	135	189	256	336
	Total Factored Load			79	129	136	189	210	289	374	470	575	690	815
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.2	1.6 / 4	2 / 5	2.5 / 6.2	2.9 / 7.4	3.5 / 8.7
42	Unfactored Load (LL)			6	12	13	22	26	43	64	90	123	163	210
	Unfactored Load (TL)			0	8	9	20	25	47	76	114	161	218	287
	Total Factored Load			71	115	122	170	189	260	337	423	519	623	736
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.9	1.9 / 4.8	2.3 / 5.9	2.8 / 7	3.3 / 8.2
44	Unfactored Load (LL)				11	12	19	23	37	55	78	107	142	184
	Unfactored Load (TL)				5	6	16	20	39	64	96	137	187	247
	Total Factored Load				104	110	153	170	235	305	383	470	565	668
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.7	1.8 / 4.6	2.2 / 5.6	2.7 / 6.7	3.1 / 7.9

Notes:

1. The values shown are the maximum uniform unfactored and factored loads in pounds per linear foot that can be applied to the beam. The weight of the beam has been deducted from the Total Unfactored Load (TL) and Total Factored Load.
2. Bearing lengths are in inches based on the compression perpendicular to grain resistance of the LVL beam. For bearing on other wood materials, the bearing resistance of the supporting material should be checked.
3. The tabulated values are for simple span or for continuous span beams.
4. Design span is the clear span between supports plus one half of the required bearing at each end.
5. The table is for standard term loading and dry service conditions.
6. Lateral support at points of bearing and continuous lateral support for top of beam must be provided to prevent rotation or lateral displacement.
7. Calculations have been carried out in accordance with CSA O86-14.
8. 1-1/2" thick LVL members 14" and deeper and 1-3/4" thick LVL members 16" and deeper must be a minimum of 2 plies unless designed by a design professional.
9. See Roseburg EWP Design Guide for information regarding the connection of multiple-ply members and installation guidelines.
10. Allowable loads shown for multiple ply LVL members are also applicable to factory glued LVL beams with the same thickness as the combined multiple plies.

Directions for use of Table:

1. Determine the total factored load, unfactored live load and unfactored total load.
2. Choose a span that meets or exceeds the actual design span (centre to centre of bearing).
3. Scan from left to right within the span row to find a cell where: the L/360 (LL) load exceeds the unfactored live load; the L/240 (TL) load exceeds the unfactored total load; the factored total load resistance exceeds the factored total load. All four rows including minimum bearing must be checked. Where no unfactored loads are shown, total factored load will govern.
4. If the selected beam is too deep or the bearing length is too long, resize the beam using a wider member.
5. For an L/480 live load deflection limit, multiply the tabulated L/360 (LL) loads by 0.75. For an L/180 total load limit, multiply the tabulated L/240 (TL) loads by 1.33.

Nov. 2020

Roseburg

4-Ply, 1.5" 2.1E true RigidLam LVL - Standard Term - Floor/Roof (PLF) L/360 LL L/240 TL Douglas-fir

ALLOWABLE UNIFORM LOAD - POUNDS PER LINEAL FOOT (Limit States Design)

Span (ft)	Depth =	4.375"	5.5"	7.25"	9.25"	9.5"	11.25"	11.875"	14"	16"	18"	20"	22"	24"
10	Unfactored Load (LL)	128	251	561	1128	1217	1951	2264	3530	5005	6742	-	-	-
	Unfactored Load (TL)	185	367	830	1678	1810	2909	3378	5273	-	-	-	-	-
	Total Factored Load	738	1135	1910	3020	3175	4087	4357	5316	6283	7317	8428	9622	10910
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3.7	2.3 / 5.8	2.4 / 6.1	3.1 / 7.8	3.3 / 8.4	4.1 / 10.2	4.8 / 12	5.6 / 14	6.5 / 16.2	7.4 / 18.4	8.4 / 20.9
12	Unfactored Load (LL)	74	146	330	670	723	1172	1365	2157	3099	4234	5556	7056	-
	Unfactored Load (TL)	105	211	484	990	1070	1740	2029	3213	4624	-	-	-	-
	Total Factored Load	510	785	1322	2092	2199	3023	3347	4262	5003	5786	6613	7490	8420
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3.1	1.9 / 4.8	2 / 5.1	2.8 / 7	3.1 / 7.7	3.9 / 9.8	4.6 / 11.5	5.3 / 13.3	6.1 / 15.2	6.9 / 17.2	7.8 / 19.4
14	Unfactored Load (LL)	47	93	210	429	463	755	882	1406	2038	2811	3724	4778	5966
	Unfactored Load (TL)	64	130	304	628	680	1115	1304	2086	3032	4187	-	-	-
	Total Factored Load	372	574	967	1532	1611	2215	2453	3344	4154	4782	5439	6128	6852
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.7 / 4.1	1.7 / 4.4	2.4 / 6	2.6 / 6.6	3.6 / 9	4.5 / 11.2	5.1 / 12.9	5.9 / 14.6	6.6 / 16.5	7.4 / 18.4
16	Unfactored Load (LL)	32	62	142	290	314	514	601	963	1406	1951	2604	3365	4234
	Unfactored Load (TL)	40	85	201	421	456	753	882	1423	2083	2899	3875	5013	-
	Total Factored Load	283	437	737	1169	1229	1691	1872	2554	3284	4073	4617	5184	5774
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.6	1.5 / 3.8	2.1 / 5.2	2.3 / 5.8	3.2 / 7.9	4 / 10.1	5 / 12.5	5.7 / 14.2	6.4 / 16	7.1 / 17.8
18	Unfactored Load (LL)	22	44	100	205	222	365	427	688	1008	1406	1886	2450	3099
	Unfactored Load (TL)	26	57	138	293	318	529	621	1009	1486	2080	2797	3640	4611
	Total Factored Load	222	343	580	919	967	1331	1475	2012	2588	3232	3942	4490	4987
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.2	1.5 / 3.4	1.9 / 4.6	2.1 / 5.1	2.8 / 7	3.6 / 9	4.5 / 11.2	5.5 / 13.7	6.2 / 15.6	6.9 / 17.3
20	Unfactored Load (LL)	16	32	73	150	163	268	314	507	746	1044	1406	1834	2330
	Unfactored Load (TL)	17	39	98	211	229	384	452	738	1093	1537	2077	2716	3457
	Total Factored Load	178	276	467	741	780	1074	1190	1624	2091	2611	3185	3812	4388
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.7 / 4.2	1.9 / 4.6	2.5 / 6.3	3.2 / 8.1	4 / 10.1	4.9 / 12.3	5.9 / 14.7	6.8 / 16.9
22	Unfactored Load (LL)	12	24	55	113	123	202	237	384	566	795	1074	1406	1792
	Unfactored Load (TL)	11	28	71	156	169	286	337	554	824	1164	1579	2074	2650
	Total Factored Load	146	226	383	609	641	884	979	1338	1722	2152	2626	3143	3704
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.8	1.7 / 4.2	2.3 / 5.7	2.9 / 7.4	3.7 / 9.2	4.5 / 11.2	5.3 / 13.4	6.3 / 15.7
24	Unfactored Load (LL)	9	19	42	88	95	157	184	298	440	619	838	1100	1406
	Unfactored Load (TL)	7	19	52	117	127	217	257	425	635	900	1226	1615	2070
	Total Factored Load	121	188	320	509	536	739	819	1120	1442	1802	2200	2634	3105
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.5	1.5 / 3.9	2.1 / 5.3	2.7 / 6.7	3.4 / 8.4	4.1 / 10.3	4.9 / 12.3	5.8 / 14.4
26	Unfactored Load (LL)	7	15	33	69	75	124	145	236	348	491	666	876	1122
	Unfactored Load (TL)	4	13	39	89	97	168	199	331	497	708	967	1278	1644
	Total Factored Load	102	159	270	431	454	627	694	950	1224	1530	1869	2238	2638
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.2	1.5 / 3.6	1.9 / 4.8	2.5 / 6.2	3.1 / 7.8	3.8 / 9.5	4.5 / 11.3	5.3 / 13.3
28	Unfactored Load (LL)	6	12	27	55	60	99	116	189	280	396	538	708	908
	Unfactored Load (TL)	2	9	29	69	75	131	156	262	395	565	775	1027	1325
	Total Factored Load	87	135	231	369	389	537	596	815	1051	1315	1606	1924	2268
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.3	1.8 / 4.5	2.3 / 5.8	2.9 / 7.2	3.5 / 8.8	4.2 / 10.5	4.9 / 12.4
30	Unfactored Load (LL)	5	10	22	45	49	81	95	155	229	324	440	580	746
	Unfactored Load (TL)	0	6	21	53	58	103	124	210	318	457	628	835	1080
	Total Factored Load	74	116	199	319	336	465	516	707	912	1141	1394	1670	1970
	Min. end / Int. bearing	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.1	1.7 / 4.2	2.2 / 5.4	2.7 / 6.7	3.3 / 8.2	3.9 / 9.8	4.6 / 11.5
32	Unfactored Load (LL)		8	18	37	40	67	78	128	189	268	365	481	619
	Unfactored Load (TL)		3	16	41	45	82	99	169	259	373	515	687	891
	Total Factored Load		101	174	278	293	406	450	618	797	998	1220	1463	1726
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.6 / 3.9	2 / 5.1	2.5 / 6.3	3.1 / 7.7	3.7 / 9.2	4.3 / 10.8
34	Unfactored Load (LL)		7	15	31	34	56	65	107	158	224	305	403	520
	Unfactored Load (TL)		1	11	32	35	66	79	138	212	308	426	570	741
	Total Factored Load		88	152	245	258	357	396	544	703	880	1076	1291	1523
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.7	1.9 / 4.8	2.4 / 5.9	2.9 / 7.2	3.5 / 8.7	4.1 / 10.2
36	Unfactored Load (LL)		6	13	26	28	47	55	90	134	189	258	341	440
	Unfactored Load (TL)		0	7	25	28	53	64	113	175	256	356	477	622
	Total Factored Load		78	134	216	228	316	351	482	623	781	956	1147	1353
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.5	1.8 / 4.5	2.2 / 5.6	2.7 / 6.8	3.3 / 8.2	3.8 / 9.6
38	Unfactored Load (LL)			11	22	24	40	47	77	114	161	220	291	376
	Unfactored Load (TL)			5	19	21	42	52	93	146	214	299	402	526
	Total Factored Load			119	192	202	281	313	430	556	698	854	1025	1210
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.3	1.7 / 4.3	2.1 / 5.3	2.6 / 6.5	3.1 / 7.7	3.6 / 9.1
40	Unfactored Load (LL)			9	19	21	34	40	66	98	139	189	251	324
	Unfactored Load (TL)			2	14	16	34	42	77	121	180	252	341	447
	Total Factored Load			106	172	181	252	280	385	499	626	767	920	1087
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.2	1.6 / 4	2 / 5	2.5 / 6.2	2.9 / 7.4	3.5 / 8.7
42	Unfactored Load (LL)			8	17	18	30	35	57	85	120	164	217	280
	Unfactored Load (TL)			0	10	12	27	33	63	102	152	214	291	383
	Total Factored Load			95	154	162	226	252	347	450	565	692	831	982
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.9	1.9 / 4.8	2.3 / 5.9	2.8 / 7	3.3 / 8.2
44	Unfactored Load (LL)			7	14	16	26	30	50	74	105	143	189	245
	Unfactored Load (TL)			-1	7	8	21	27	52	85	128	183	249	329
	Total Factored Load			85	139	146	204	227	314	407	511	627	753	890
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.7	1.8 / 4.6	2.2 / 5.6	2.7 / 6.7	3.1 / 7.9

Notes:

1. The values shown are the maximum uniform unfactored and factored loads in pounds per linear foot that can be applied to the beam. The weight of the beam has been deducted from the Total Unfactored Load (TL) and Total Factored Load.
2. Bearing lengths are in inches based on the compression perpendicular to grain resistance of the LVL beam. For bearing on other wood materials, the bearing resistance of the supporting material should be checked.
3. The tabulated values are for simple span or for continuous span beams.
4. Design span is the clear span between supports plus one half of the required bearing at each end.
5. The table is for standard term loading and dry service conditions.
6. Lateral support at points of bearing and continuous lateral support for top of beam must be provided to prevent rotation or lateral displacement.
7. Calculations have been carried out in accordance with CSA O86-14.
8. 1-1/2" thick LVL members 14" and deeper and 1-3/4" thick LVL members 16" and deeper must be a minimum of 2 plies unless designed by a design professional.
9. See Roseburg EWP Design Guide for information regarding the connection of multiple-ply members and installation guidelines.
10. Allowable loads shown for multiple ply LVL members are also applicable to factory glued LVL beams with the same thickness as the combined multiple plies.

Directions for use of Table:

1. Determine the total factored load, unfactored live load and unfactored total load.
2. Choose a span that meets or exceeds the actual design span (centre to centre of bearing).
3. Scan from left to right within the span row to find a cell where: the L/360 (LL) load exceeds the unfactored live load; the L/240 (TL) load exceeds the unfactored total load; the factored total load resistance exceeds the factored total load. All four rows including minimum bearing must be checked. Where no unfactored loads are shown, total factored load will govern.
4. If the selected beam is too deep or the bearing length is too long, resize the beam using a wider member.
5. For an L/480 live load deflection limit, multiply the tabulated L/360 (LL) loads by 0.75. For an L/180 total load limit, multiply the tabulated L/240 (TL) loads by 1.33.

Nov. 2020