Roseburg

1-Ply, 1.75" 2.3E 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)	182	351	759	1453	1556	-	-	-					
	Unfactored Load (TL)	271	524	1134	-	-	-	-	-					
	Total Factored Load	602	926	1300	1752	1812	2257	2428	3059					
	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					
8	Unfactored Load (LL)	79	154	340	672	723	1141	1316	2007					
	Unfactored Load (TL)	116	228	507	1004	1081	-	-	-					
	Total Factored Load	338	519	873	1233	1272	1561	1669	2059					
	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					
10	Unfactored Load (LL)	41	80	179	360	389	623	723	1128					
	Unfactored Load (TL)	59	118	266	536	579	930	1079	-					
	Total Factored Load	215	331	557	881	926	1192	1271	1551					
	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					
12	Unfactored Load (LL)	24	47	105	214	231	374	436	689					
	Unfactored Load (TL)	34	68	155	317	342	556	649	1027					
	Total Factored Load	149	229	386	610	641	882	976	1243					
	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					
14	Unfactored Load (LL)	15	30	67	137	148	241	282	449					
	Unfactored Load (TL)	20	42	97	201	218	357	417	667					
	Total Factored Load	109	167	282	447	470	646	715	975					
	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					
16	Unfactored Load (LL)	10	20	45	93	100	164	192	308					
	Unfactored Load (TL)	13	27	65	135	146	241	282	455					
	Total Factored Load	83	127	215	341	358	493	546	745					
	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					
18	Unfactored Load (LL)		14	32	66	71	116	136	220					
	Unfactored Load (TL)		19	45	94	102	170	199	323					
	Total Factored Load		100	169	268	282	388	430	587					
	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	2.8 / 7					
20	Unfactored Load (LL)		10	23	48	52	86	100	162					
	Unfactored Load (TL)		13	32	68	74	123	145	236					
	Total Factored Load		80	136	216	227	313	347	474					
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.7 / 4.2	1.9 / 4.6	2.5 / 6.3					
22	Unfactored Load (LL)			18	36	39	65	76	123					
	Unfactored Load (TL)			23	50	54	92	108	178					
	Total Factored Load			112	178	187	258	286	390					
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.8	1.7 / 4.2	2.3 / 5.7					
24	Unfactored Load (LL)			14	28	30	50	59	95					
	Unfactored Load (TL)			17	38	41	70	83	136					
	Total Factored Load			93	149	156	216	239	327					
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.5	1.5 / 3.9	2.1 / 5.3					
26	Unfactored Load (LL)			11	22	24	39	46	75					
	Unfactored Load (TL)			13	29	31	54	64	106					
	Total Factored Load			79	126	132	183	203	277					
	Min. end / Int. bearing			1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.2	1.5 / 3.6	1.9 / 4.8					
28	Unfactored Load (LL)				18	19	32	37	61					
	Unfactored Load (TL)				22	24	42	50	84					
	Total Factored Load				108	113	157	174	238					
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.3	1.8 / 4.5					
30	Unfactored Load (LL)				14	16	26	30	49					
	Unfactored Load (TL)				17	19	34	40	68					
	Total Factored Load				93	98	136	150	206					
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.1	1.7 / 4.2					
32	Unfactored Load (LL)				12	13	21	25	41					
	Unfactored Load (TL)				14	15	27	32	55					
	Total Factored Load				81	85	118	131	180					
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.6 / 3.9					
34	Unfactored Load (LL)				10	11	18	21	34					
	Unfactored Load (TL)				11	12	21	26	45					
	Total Factored Load				71	75	104	116	159					
	Min. end / Int. bearing				1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.7					
36	Unfactored Load (LL)						15	18	29					
	Unfactored Load (TL)						17	21	37					
	Total Factored Load						92	102	141					
	Min. end / Int. bearing						1.5 / 3	1.5 / 3	1.5 / 3.5					
38	Unfactored Load (LL)						13	15	24					
	Unfactored Load (TL)						14	17	30					
	Total Factored Load						82	91	125					
	Min. end / Int. bearing						1.5 / 3	1.5 / 3	1.5 / 3.3					
40	Unfactored Load (LL)						11	13	21					
	Unfactored Load (TL)						11	14	25					
	Total Factored Load						73	82	112					
	Min. end / Int. bearing						1.5 / 3	1.5 / 3	1.5 / 3.2					

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, 1.75" 2.3E 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)	365	703	1517	2905	3113	-	-	-	-	-	-	-	-
	Unfactored Load (TL)	543	1049	2269	-	-	-	-	-	-	-	-	-	-
	Total Factored Load	1204	1851	2600	3504	3624	4515	4856	6118	7475	9034	10843	12967	15495
	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)	158	307	680	1345	1447	2282	2632	4015	-	-	-	-	-
	Unfactored Load (TL)	232	456	1013	2008	2161	-	-	-	-	-	-	-	-
	Total Factored Load	675	1038	1746	2465	2544	3122	3338	4118	4921	5800	6768	7838	9027
	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)	82	160	359	721	777	1247	1447	2256	3198	-	-	-	-
	Unfactored Load (TL)	118	235	531	1073	1157	1860	2159	-	-	-	-	-	-
	Total Factored Load	430	662	1114	1762	1852	2384	2541	3101	3665	4269	4916	5613	6364
	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)	47	94	211	428	462	749	872	1378	1980	2705	3549	-	-
	Unfactored Load (TL)	67	135	310	634	685	1113	1297	2054	-	-	-	-	-
	Total Factored Load	297	458	771	1220	1283	1764	1952	2486	2918	3375	3858	4369	4911
	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)	30	59	134	274	296	482	563	898	1302	1796	2379	3052	3812
	Unfactored Load (TL)	41	84	195	402	435	713	834	1334	1938	2677	-	-	-
	Total Factored Load	217	335	564	894	940	1292	1431	1951	2423	2789	3173	3575	3997
	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)	20	40	90	185	200	328	384	616	898	1247	1664	2150	2705
	Unfactored Load (TL)	26	55	129	270	292	482	565	910	1332	1853	2477	-	-
	Total Factored Load	165	255	430	682	717	986	1092	1490	1916	2376	2693	3024	3368
	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)	14	28	64	131	142	233	273	439	644	898	1205	1565	1980
	Unfactored Load (TL)	17	37	89	188	204	339	398	646	951	1330	1788	2327	-
	Total Factored Load	129	200	338	536	564	777	860	1174	1510	1885	2299	2619	2909
	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)	10	21	47	96	104	171	200	324	476	667	898	1172	1489
	Unfactored Load (TL)	11	26	63	136	147	246	290	473	700	984	1329	1737	2211
	Total Factored Load	104	161	272	432	455	627	694	948	1219	1523	1858	2224	2559
	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)	8	15	35	73	78	129	152	246	362	508	686	898	1145
	Unfactored Load (TL)	8	18	46	100	109	184	216	355	528	745	1011	1327	1695
	Total Factored Load	85	132	224	356	374	516	571	780	1005	1255	1532	1833	2161
	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)	6	12	27	56	61	100	117	190	281	396	535	703	898
	Unfactored Load (TL)	5	13	34	75	82	140	165	273	407	577	785	1033	1325
	Total Factored Load	71	110	187	297	313	431	478	653	841	1051	1283	1537	1811
	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)		9	21	44	48	79	93	151	223	314	426	559	717
	Unfactored Load (TL)		9	25	58	63	108	128	213	319	454	620	819	1053
	Total Factored Load		93	158	252	265	365	405	554	714	893	1090	1305	1539
	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)		8	17	35	38	63	74	121	179	253	343	452	580
	Unfactored Load (TL)		6	19	45	49	85	101	169	254	363	497	658	848
	Total Factored Load		79	135	215	227	313	347	476	613	767	937	1122	1323
	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)			14	29	31	52	61	99	146	207	281	371	476
	Unfactored Load (TL)			14	35	38	67	80	135	205	293	403	536	692
	Total Factored Load			116	186	196	271	301	412	532	665	813	974	1149
	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)			11	24	26	43	50	82	121	171	233	307	396
	Unfactored Load (TL)			11	27	30	54	64	109	167	240	331	441	571
	Total Factored Load			101	162	171	237	263	360	465	582	712	853	1007
	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)			10	20	22	36	42	68	101	143	195	258	332
	Unfactored Load (TL)			8	21	23	43	52	89	137	198	274	366	476
	Total Factored Load			89	143	150	208	231	317	410	513	628	753	888
	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)			8	17	18	30	35	58	85	121	165	218	281
	Unfactored Load (TL)			5	17	18	35	42	73	113	165	229	307	400
	Total Factored Load			78	126	133	184	205	281	364	456	558	669	790
	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)				14	15	26	30	49	73	103	141	186	240
	Unfactored Load (TL)				13	14	28	34	61	94	138	193	259	338
	Total Factored Load				112	118	164	182	251	324	407	498	598	706
	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)				12	13	22	26	42	63	89	121	160	207
	Unfactored Load (TL)				10	11	22	28	50	79	116	163	220	288
	Total Factored Load				100	105	147	163	225	291	365	447	537	634
	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.
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

3-Ply, 1.75" 2.3E 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)	122	240	538	1081	1166	1870	2170	3383	4796	-	-	-	-
	Unfactored Load (TL)	177	353	797	1609	1736	2790	3238	-	-	-	-	-	-
	Total Factored Load	646	994	1671	2643	2778	3576	3812	4652	5497	6403	7374	8419	9546
	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)	71	140	316	642	693	1123	1308	2067	2970	4057	5324	-	-
	Unfactored Load (TL)	101	203	465	950	1027	1669	1946	3081	-	-	-	-	-
	Total Factored Load	446	687	1157	1830	1924	2645	2929	3729	4378	5062	5787	6554	7367
	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)	45	89	201	411	444	724	845	1347	1953	2693	3569	4579	5718
	Unfactored Load (TL)	61	126	292	603	653	1070	1251	2001	2908	4015	-	-	-
	Total Factored Load	326	502	846	1340	1410	1938	2146	2926	3635	4184	4759	5362	5995
	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)	30	60	136	278	301	492	576	923	1347	1870	2496	3225	4057
	Unfactored Load (TL)	39	82	194	404	438	723	847	1366	1998	2780	3716	-	-
	Total Factored Load	248	382	645	1022	1075	1480	1638	2235	2874	3564	4040	4536	5052
	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)	21	42	96	197	213	349	409	659	966	1347	1807	2348	2970
	Unfactored Load (TL)	26	56	134	282	306	509	597	969	1426	1996	2683	3491	-
	Total Factored Load	194	300	507	805	846	1165	1290	1761	2265	2828	3449	3929	4364
	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	31	70	144	156	257	301	486	714	1000	1347	1757	2233
	Unfactored Load (TL)	17	39	95	203	221	369	435	709	1050	1476	1993	2606	3316
	Total Factored Load	156	241	408	649	682	940	1041	1421	1829	2285	2787	3336	3839
	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	23	53	109	118	194	227	368	543	762	1029	1347	1717
	Unfactored Load (TL)	11	27	69	150	163	275	325	533	792	1118	1516	1990	2543
	Total Factored Load	127	198	335	533	561	773	857	1171	1507	1883	2297	2750	3241
	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	18	41	84	91	150	176	286	422	593	803	1054	1347
	Unfactored Load (TL)	7	19	51	113	123	209	248	409	610	865	1177	1550	1987
	Total Factored Load	106	165	280	446	469	647	717	980	1262	1577	1925	2305	2717
	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	14	32	66	72	118	139	226	334	471	638	839	1075
	Unfactored Load (TL)	5	13	38	87	94	162	192	319	479	681	930	1228	1579
	Total Factored Load	89	139	237	377	397	548	608	831	1071	1339	1635	1958	2309
	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	11	26	53	58	95	112	182	269	379	515	678	871
	Unfactored Load (TL)	2	9	28	67	73	127	151	253	381	544	745	987	1273
	Total Factored Load	76	118	202	323	340	470	521	713	920	1150	1405	1683	1985
	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)		9	21	43	47	77	91	148	219	310	422	556	714
	Unfactored Load (TL)		6	21	52	57	101	120	203	307	440	605	804	1038
	Total Factored Load		102	175	279	294	407	451	618	798	998	1219	1461	1724
	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)		8	17	36	39	64	75	122	182	257	349	461	593
	Unfactored Load (TL)		4	16	41	45	80	96	164	250	360	496	661	857
	Total Factored Load		88	152	244	256	355	394	540	698	873	1068	1280	1510
	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)		6	14	30	32	53	63	102	152	215	293	387	498
	Unfactored Load (TL)		2	12	32	35	64	78	134	205	297	411	549	714
	Total Factored Load		77	133	214	225	312	347	476	615	770	942	1129	1333
	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)			12	25	27	45	53	86	128	182	247	327	422
	Unfactored Load (TL)			8	25	28	52	63	110	170	247	343	460	599
	Total Factored Load			117	189	199	277	307	422	545	684	836	1003	1184
	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)			10	21	23	38	45	73	109	155	211	279	360
	Unfactored Load (TL)			5	19	22	42	51	91	142	207	289	388	507
	Total Factored Load			104	168	177	246	274	376	487	610	747	896	1059
	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	18	20	33	39	63	94	133	182	240	310
	Unfactored Load (TL)			3	15	17	34	42	75	119	175	245	330	432
	Total Factored Load			93	150	158	220	245	337	437	548	671	805	951
	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	16	17	28	33	55	81	115	157	208	269
	Unfactored Load (TL)			1	11	13	27	34	62	100	148	208	282	370
	Total Factored Load			83	135	142	198	220	304	393	494	605	727	859
	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	15	25	29	48	71	100	137	182	234
	Unfactored Load (TL)			0	8	9	22	27	52	84	125	178	242	318
	Total Factored Load			74	121	128	179	199	274	356	447	548	659	779
	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

Roseburg

4-Ply, 1.75" 2.3E 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)	163	320	717	1442	1555	2493	2893	4511	6395	-	-	-	-
	Unfactored Load (TL)	237	470	1062	2145	2314	3719	4318	-	-	-	-	-	-
	Total Factored Load	861	1325	2228	3523	3705	4768	5083	6202	7330	8537	9832	11225	12728
	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)	95	187	422	856	924	1497	1744	2756	3960	5410	7099	-	-
	Unfactored Load (TL)	134	271	619	1267	1369	2225	2594	4108	-	-	-	-	-
	Total Factored Load	595	916	1542	2440	2566	3527	3905	4972	5837	6750	7715	8738	9823
	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)	60	119	268	548	592	965	1127	1796	2604	3591	4759	6105	7624
	Unfactored Load (TL)	82	168	389	805	870	1427	1668	2668	3877	5354	-	-	-
	Total Factored Load	434	670	1129	1787	1879	2585	2862	3901	4847	5579	6346	7150	7994
	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)	40	80	181	371	401	656	768	1231	1796	2493	3328	4300	5410
	Unfactored Load (TL)	52	109	258	539	584	964	1129	1821	2665	3707	4954	-	-
	Total Factored Load	330	510	860	1363	1434	1973	2185	2979	3832	4752	5387	6048	6736
	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)	28	56	128	262	284	466	545	879	1287	1796	2409	3130	3960
	Unfactored Load (TL)	34	74	178	376	408	678	796	1292	1902	2661	3577	4655	-
	Total Factored Load	259	400	676	1073	1128	1553	1720	2347	3020	3771	4599	5238	5818
	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)	21	41	93	192	208	342	401	648	953	1334	1796	2343	2977
	Unfactored Load (TL)	23	51	127	271	294	493	580	946	1399	1967	2657	3474	4422
	Total Factored Load	208	322	544	865	910	1253	1388	1895	2439	3046	3716	4448	5119
	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)	16	31	70	145	157	259	303	491	724	1016	1372	1796	2290
	Unfactored Load (TL)	15	36	92	200	218	367	433	711	1056	1491	2022	2653	3390
	Total Factored Load	170	264	447	711	748	1031	1143	1561	2009	2510	3063	3667	4321
	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)	12	24	54	112	121	200	235	381	562	791	1071	1405	1796
	Unfactored Load (TL)	10	26	68	151	164	279	330	545	814	1153	1569	2067	2650
	Total Factored Load	141	219	373	594	625	862	956	1306	1682	2103	2566	3073	3622
	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)	9	19	43	88	96	158	185	301	445	627	851	1119	1433
	Unfactored Load (TL)	6	18	51	115	126	216	256	426	638	908	1240	1637	2105
	Total Factored Load	119	185	315	503	529	731	810	1108	1428	1786	2180	2611	3078
	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)	8	15	34	71	77	127	149	242	358	506	687	905	1161
	Unfactored Load (TL)	3	12	38	89	97	169	201	337	508	725	994	1316	1697
	Total Factored Load	101	158	270	431	453	627	695	951	1226	1534	1873	2244	2646
	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)	6	12	28	58	62	103	121	197	293	413	562	741	953
	Unfactored Load (TL)	1	8	28	69	76	134	160	270	409	587	806	1071	1385
	Total Factored Load	87	136	233	373	392	543	602	824	1063	1331	1626	1948	2298
	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)	5	10	23	48	52	85	100	163	242	342	466	615	791
	Unfactored Load (TL)	0	5	21	54	60	107	128	219	333	480	662	882	1142
	Total Factored Load	75	118	202	325	342	474	526	721	930	1165	1423	1706	2013
	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	1.6 / 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	19	40	43	71	84	136	202	286	390	515	664
	Unfactored Load (TL)		2	15	42	47	86	103	179	274	396	548	733	951
	Total Factored Load		103	177	285	300	417	462	635	820	1027	1256	1506	1777
	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)		7	16	33	36	60	71	115	171	242	330	436	562
	Unfactored Load (TL)		0	11	33	37	69	84	147	227	330	458	614	799
	Total Factored Load		90	156	252	266	369	410	563	727	911	1115	1338	1579
	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)		6	14	28	31	51	60	98	146	206	281	372	480
	Unfactored Load (TL)		-1	7	26	29	56	68	121	189	276	385	518	676
	Total Factored Load		80	139	224	236	328	365	502	649	814	996	1195	1411
	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	1.7 / 4.3	2.1 / 5.3	2.6 / 6.5	3.1 / 7.7	3.6 / 9.1
40	Unfactored Load (LL)		5	12	24	26	44	52	84	125	177	242	320	413
	Unfactored Load (TL)		-2	4	20	22	45	55	100	158	233	326	440	576
	Total Factored Load		71	124	200	211	294	326	450	582	730	894	1074	1268
	Min. end / Int. bearing		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.2	1.6 / 4	2 / 5	2.5 / 6.2	2.9 / 7.4	3.5 / 8.7
42	Unfactored Load (LL)			10	21	23	38	45	73	108	153	210	278	358
	Unfactored Load (TL)			2	15	17	36	45	83	133	197	277	376	493
	Total Factored Load			111	180	189	264	294	405	524	659	807	969	1145
	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)			9	18	20	33	39	63	94	134	183	242	313
	Unfactored Load (TL)			0	10	12	29	36	69	112	167	237	322	425
	Total Factored Load			99	162	171	238	265	366	475	596	731	879	1039
	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