

# Allowable Loads for Master Plank in Pounds per Lineal Foot - Load Duration Factor of 1.25 Construction Loads

Clear Opening	1-3/4"										3-1/2"										5-1/4"															
	9/4		9/2		11/4		11/8		14		16		18		20		24		9/4		9/2		11/4		11/8		14		16		18		20		24	
	9/4	9/2	11/4	11/8	14	16	18	20	24	Depth (in.)	9/4	9/2	11/4	11/8	14	16	18	20	24	Depth (in.)	9/4	9/2	11/4	11/8	14	16	18	20	24	Depth (in.)						
6'	1734	1822	2492	2752	3559	4475	5594	6993	10130	3469	3644	4984	5505	7118	8949	11188	13986	20261	5203	5467	7625	8257	10677	13424	16782	20980	33576									
	4.5	4.5	6	6	9	10.5	13.5	18	27	4.5	4.5	6	6	9	10.5	13.5	18	27	4.5	4.5	6	6	9	10.5	13.5	18	27									
7'	1273	1338	1830	2023	2743	3441	4194	5084	7441	2547	2676	3660	4045	5487	6881	8388	10168	14881	3820	4014	6135	6610	8386	10322	12582	15252	22376									
	4.5	4.5	4.5	6	7.5	9	12	13.5	21	4.5	4.5	4.5	6	7.5	9	12	13.5	21	4.5	4.5	6	6	7.5	9	12	13.5	21									
8'	974	1024	1400	1548	2099	2688	3343	3993	5592	1948	2047	2800	3095	4198	5376	6686	7986	11184	2923	3071	4832	5341	6903	8384	10062	11980	16776									
	3	3	4.5	4.5	6	9	10.5	12	18	3	3	4.5	4.5	6	9	10.5	12	18	3	3	4.5	4.5	6	7.5	9	10.5	12	18								
9'	769	808	1105	1222	1658	2123	2640	3209	4472	1538	1616	2211	2444	3315	4246	5281	6418	8944	2307	2424	3815	4217	5721	7057	8382	9862	13416									
	3	3	4.5	4.5	6	7.5	9	10.5	15	3	3	4.5	4.5	6	7.5	9	10.5	15	3	3	4.5	4.5	6	7.5	9	12	15									
10'	622	654	895	989	1342	1718	2137	2598	3642	1245	1308	1789	1978	2684	3437	4275	5196	7283	1867	1962	3088	3414	4631	5931	7182	8380	11176									
	3	3	4.5	4.5	6	6	7.5	10.5	13.5	3	3	4.5	4.5	6	6	7.5	10.5	13.5	3	3	4.5	4.5	6	7.5	9	10.5	15									
11'	485	526	739	817	1108	1419	1765	2146	3008	970	1051	1477	1633	2216	2839	3531	4292	6016	1455	1577	2550	2819	3825	4899	6093	7284	9576									
	3	3	3	3	4.5	4.5	6	7.5	9	3	3	3	3	4.5	4.5	6	7.5	9	3	3	4.5	4.5	6	7.5	9	10.5	13.5									
12'	373	404	620	686	930	1192	1482	1802	2526	746	808	1240	1371	1861	2383	2965	3604	5053	1119	1212	2018	2367	3212	4114	5117	6220	8376									
	1.5	3	3	3	4.5	6	7.5	7.5	12	1.5	3	10.5	11.93	18.61	23.83	29.65	36.04	50.53	1.5	3	3	3	4.5	4.5	6	7.5	9	12								
13'	293	317	528	584	792	1015	1262	1535	2152	585	634	1056	1167	1584	2029	2525	3069	4303	878	951	1585	1865	2735	3503	4358	5297	7426									
	1.5	1.5	3	3	4.5	4.5	6	7.5	10.5	1.5	1.5	3	3	4.5	4.5	6	7.5	10.5	1.5	1.5	3	3	4.5	4.5	6	7.5	9	12								
14'	234	253	422	497	682	874	1088	1322	1854	467	507	844	994	1365	1748	2175	2644	3708	701	760	1267	1491	2356	3018	3755	4565	6400									
	1.5	1.5	3	3	4.5	4.5	6	7.5	9	1.5	1.5	3	3	4.5	4.5	6	7.5	9	1.5	1.5	3	3	4.5	4.5	6	7.5	10.5									
15'	189	205	343	403	594	761	947	1151	1614	379	411	685	807	1187	1521	1893	2302	3228	568	616	1028	1210	1988	2627	3268	3974	5572									
	1.5	1.5	3	3	4.5	6	6	9	1.5	1.5	3	3	4.5	6	6	9	1.5	1.5	3	3	4.5	4.5	6	7.5	10.5											
16'	155	169	282	332	521	668	831	1011	1418	311	337	563	663	1042	1336	1662	2021	2835	466	506	845	995	1636	2307	2870	3490	4894									
	1.5	1.5	1.5	3	3	4.5	4.5	6	9	1.5	1.5	1.5	3	3	4.5	4.5	6	9	1.5	1.5	1.5	3	3	4.5	6	7.5	9									
17'	129	140	234	276	454	591	736	895	1255	258	280	468	552	908	1182	1471	1789	2510	387	420	702	827	1361	2037	2541	3089	4333									
	1.5	1.5	1.5	3	3	4.5	4.5	6	7.5	1.5	1.5	1.5	3	3	4.5	4.5	6	7.5	1.5	1.5	1.5	3	3	4.5	6	6	9									
18'	108	117	197	232	382	527	655	797	1118	217	235	393	463	763	1053	1311	1594	2237	325	352	590	695	1145	1713	2264	2753	3862									
	1.5	1.5	1.5	1.5	3	4.5	4.5	6	7.5	1.5	1.5	1.5	1.5	3	4.5	4.5	6	7.5	1.5	1.5	1.5	1.5	3	4.5	6	6	9									
19'	92	99	167	196	324	472	588	715	1003	183	199	333	393	647	944	1175	1430	2006	275	298	500	589	971	1454	2030	2469	3464									
	1.5	1.5	1.5	1.5	3	3	4.5	6	7.5	1.5	1.5	1.5	1.5	3	3	4.5	6	7.5	1.5	1.5	1.5	1.5	3	4.5	4.5	6	7.5									
20'	78	85	142	168	277	415	530	644	904	156	170	285	336	554	830	1060	1289	1809	234	254	427	503	831	1245	1777	2226	3124									
	1.5	1.5	1.5	1.5	3	3	4.5	4.5	7.5	1.5	1.5	1.5	1.5	3	3	4.5	4.5	7.5	1.5	1.5	1.5	1.5	3	3	4.5	6	7.5									
21'	67	73	122	144	238	358	480	584	819	134	146	245	289	477	715	960	1168	1639	201	218	367	433	715	1073	1533	2017	2831									
	1.5	1.5	1.5	1.5	3	3	4.5	4.5	6	1.5	1.5	1.5	1.5	3	3	4.5	4.5	6	1.5	1.5	1.5	1.5	3	3	4.5	6	7.5									
22'	58	63	106	125	207	310	437	531	746	116	126	212	250	414	621	874	1063	1492	174	189	318	375	620	931	1331	1830	2577									
	1.5	1.5	1.5	1.5	3	3	4.5	4.5	6	1.5	1.5	1.5	1.5	3	3	4.5	4.5	6	1.5	1.5	1.5	1.5	3	3	4.5	4.5	7.5									
23'	50	55	92	109	180	271	387	486	682	101	109	184	218	361	542	775	971	1364	151	164	277	327	541	813	1162	1599	2356									
	1.5	1.5	1.5	1.5	3	3	4.5	6	1.5	1.5	1.5	1.5	3	3	4.5	6	1.5	1.5	1.5	1.5	3	3	4.5	4.5	7.5											
24'	44	48	81	95	158	238	340	445	625	88	95	161	191	316	476	680	891	1251	132	143	242	286	475	713	1021	1405	2162									
	1.5	1.5	1.5	1.5	3	3	4.5	6	1.5	1.5	1.5	1.5	3	3	4.5	6	1.5	1.5	1.5	1.5	3	3	4.5	4.5	6											
25'	38	42	71	84	139	210	300	410	576	77	84	142	168	279	420	601	820	1152	115	125	213	252	418	629	901	1241	1990									
	1.5	1.5	1.5	1.5	3	3	4.5	6	1.5	1.5	1.5	1.5	3	3	4.5	6	1.5	1.5	1.5	1.5	3	3	4.5	4.5	6											
26'	34	37	63	74	123	186	266	367	532	68	74	125	148	247	372	533	734	1064	101	110	188	223	370	558	799	1101	1838									
	1.5	1.5	1.5	1.5	3	3	4.5	6	1.5	1.5	1.5	1.5	3	3	4.5	6	1.5	1.5	1.5	1.5	3	3	4.5	4.5	6											
27'	30	33	56	66	110	165	237	327	493	60	65	111	132	219	331	474	654	985	90	98	167	197	329	496	711	981	1703									
	1.5	1.5	1.5	1.5	3	3	4.5	1.5	1.5	1.5	1.5	3	3	4.5	1.5	1.5	1.5	3	4.5	1.5	1.5	1.5	1.5	3	3	4.5	4.5	6								
28'	26	29	49	59	98	148	212	292	457	53	58	99	117	196	295	424	585	915	79	86	148	176	294	443	636	877	1527									
	1.5	1.5	1.5	1.5	3	3	4.5	1.5	1.5	1.5	1.5	3	3	4.5	1.5	1.5	1.5	3	4.5	1.5	1.5	1.5	1.5	3	3	4.5	4.5	6								
29'	23	26	44	52	88	132	190	262	426	47	51	88	105	175	265	380	525	852	70	77	132	157	263	397	571	787	1372									
	1.5	1.5	1.5	1.5	3	3	4.5	1.5	1.5	1.5	1.5	3	3	4.5	1.5	1.5	1.5	3	4.5	1.5	1.5	1.5	1.5	3	3	4.5	4.5	6								
30'	21	23	39	47	79	119	171	236	397	42	46	79	94	157	238	342	473	795	63	69	118	141	236	357	514	709	1237									
	1.5	1.5	1.5	1.5	3	3	4.5	1.5	1.5	1.5	1.5	3	3	4.5	1.5	1.5	1.5	3	4.5	1.5	1.5	1.5	1.5	3	3	4.5	4.5	6								
32'	17	18	32	38	64	97	140	194	338	33	36	64	76	128	194	280	387	676	50	55	96	114	192	292	420	581	1015									
	1.5	1.5	1.5	1.5	3	3	4.5	1.5	1.5	1.5	1.5	3	3	4.5	1.5	1.5	1.5	3	4.5	1.5	1.5	1.5	1.5	3	3											

## Notes for the following Allowable PLF Load Tables (pages 11-13):

1. Floor Systems are designed using  $LDF=1.0$ . The Live Load Deflection Limit is  $1/360$  and the Total Load Deflection Limit is  $1/240$ .
2. Roof Systems are designed using  $LDF=1.15$  or  $1.25$ . The Live Load Deflection Limit is  $1/240$  and the Total Load Deflection Limit is  $1/180$ .
3. The top line of each table indicates the allowable load carrying capacity in pounds per lineal foot (plf) with a deflection limit based on the total load and includes the weight of the member. (blue)
4. The middle line of each table indicates the allowable load carrying capacity in pounds per lineal foot (plf) with a deflection limit based on the live load. (green)
5. The bottom line of each table indicates the bearing length in inches: 1.5" is one trimmer, 3.0" is two trimmers, 4.5" is three trimmers, etc. (red)
6. Each table shows spans from 6 to 32 feet and includes information for 1-ply, 2-ply and 3-ply conditions.
7. Values provided are the maximum uniform loads in pounds per lineal foot (plf) that can be applied to the beam in addition to its own weight. Allowable plf loads are based on the minimum bearing length required to carry the load. This required bearing length is then converted to the least number of 1.5"-wide trimmers that can be used.
8. Interpolation between clear openings is permitted.
9. For live load deflection factors of  $L/180$  and  $L/360$ , multiply the Maximum Live Load figure (row 2) by 1.333 and 0.667, respectively. The result shall not exceed the total load.
10. Design span is assumed to be the clear opening plus  $1/2$  the actual required bearing length at each end.
11. The bearing lengths show the number of trimmers required at each end of the header or beam based on the maximum plf loads. Shorter bearing lengths may be required with lighter loads, and longer bearing lengths may be required because of the material on which the header or beam is bearing.
12. These tables are for gravity loads only. Consult a professional engineer for wind and seismic load analysis and design.
13. All tables are based on uniform load conditions. Any concentrated load applications must be analyzed separately or converted to an equivalent uniform load.
14. The compression edge of the header or beam must be laterally supported at intervals of 24" or less. In addition, lateral support must be provided at bearing points.
15. Allowable total and live plf loads used to select a header or beam must be equal to or greater than the actual plf loads applied.