

CANTILEVER RESIDENTIAL ROOF BEAMS (L/180)

California Building Code 2007 Edition (CBC), NDS 2005

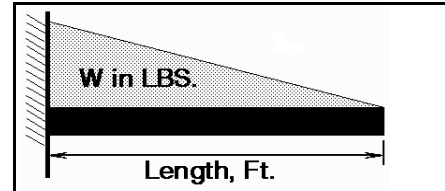
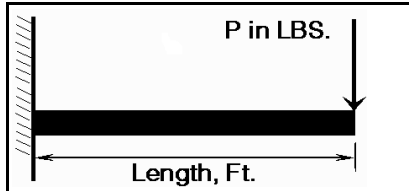
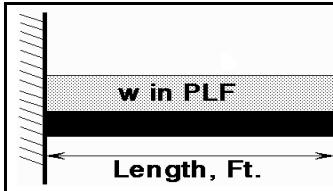
Lumber: Douglas Fir-Larch, Surfaced-Dry condition (19% maximum moisture content).

Design Criteria: Strength: Based on allowable bending stresses and shear stresses for Dead + Live loads.

25% Stress increase included due to duration of load.

Deflection: Based on L/180 for Dead plus Live load.

- NOTES:** 1. Horizontal shear at "d" distance from support controls design in area left of solid line. (*Bold Italics*)
 2. Deflection controls design in area right of double line. (**Bold**)
 3. Bending stress controls design in area between solid and double lines.



SIZES		ALLOWABLE UNIFORM LOAD (PLF)							ALLOWABLE END POINT LOAD (LBS)							ALLOWABLE TRIANGULAR LOAD (LBS)						
		LENGTH (FEET) OF CANTILEVER							LENGTH (FEET) OF CANTILEVER							LENGTH (FEET) OF CANTILEVER						
W x D	GRADE	4	6	8	10	12	14	16	4	6	8	10	12	14	16	4	6	8	10	12	14	16
4 x 4	SS	115	34	14	7	4	3	2	172	76	43	27	19	14	11	859	382	215	137	95	70	54
4 x 4	#1+	109	32	14	7	4	3	2	163	72	41	26	18	13	10	814	362	204	130	90	66	51
4 x 4	#1	103	30	13	7	4	2	2	154	68	38	25	17	13	10	769	342	192	123	85	63	48
4 x 4	#2	96	29	12	6	4	2	2	145	64	36	23	16	12	9	724	322	181	116	80	59	45
4 x 6	SS	445	132	56	28	16	10	7	667	296	167	107	74	54	42	2688	1482	834	534	371	272	208
4 x 6	#1+	358	125	53	27	16	10	7	632	281	158	101	70	52	39	2151	1404	790	505	351	258	197
4 x 6	#1	299	118	50	25	15	9	6	597	265	149	95	66	49	37	1792	1195	746	477	332	244	186
4 x 6	#2	269	111	47	24	14	9	6	538	250	140	90	62	46	35	1613	1075	702	449	312	229	176
4 x 8	SS	779	302	127	65	38	24	16	1528	679	382	244	170	125	95	4671	3114	1910	1222	849	624	477
4 x 8	#1+	623	277	121	62	36	23	15	1246	643	362	232	161	118	90	3737	2491	1809	1158	804	591	452
4 x 8	#1	519	231	114	58	34	21	14	1038	607	342	219	152	112	85	3114	2076	1557	1093	759	558	427
4 x 8	#2	467	208	107	55	32	20	13	934	572	322	206	143	105	80	2803	1868	1401	1029	715	525	402
4 x 10	SS	1170	520	264	135	78	49	33	2340	1410	793	508	353	259	198	7019	4679	3509	2538	1763	1295	991
4 x 10	#1+	936	416	234	128	74	47	31	1872	1248	751	481	334	245	188	5615	3743	2808	2246	1670	1227	939
4 x 10	#1	780	347	195	121	70	44	30	1560	1040	710	454	315	232	177	4679	3119	2340	1872	1560	1159	887
4 x 10	#2	702	312	175	112	66	42	28	1404	936	668	427	297	218	167	4211	2808	2106	1685	1404	1091	835
4 x 12	SS	1586	705	397	244	141	89	59	3172	2115	1427	913	634	466	357	9517	6345	4758	3807	3171	2330	1784
4 x 12	#1+	1269	564	317	203	134	84	56	2538	1692	1269	865	601	441	338	7614	5076	3807	3045	2538	2175	1690
4 x 12	#1	1057	470	264	169	117	79	53	2115	1410	1057	817	567	417	319	6345	4230	3172	2538	2115	1813	1586
4 x 12	#2	952	423	238	152	106	75	50	1903	1269	952	761	534	392	300	5710	3807	2855	2284	1903	1631	1428
4 x 14	SS	2000	889	500	320	222	145	97	4000	2667	2000	1492	1036	761	583	12001	8001	6001	4801	4000	3429	2914
4 x 14	#1+	1600	711	400	256	178	131	92	3200	2134	1600	1280	982	721	552	9601	6401	4801	3840	3200	2743	2400
4 x 14	#1	1333	593	333	213	148	109	83	2667	1778	1333	1067	889	681	521	8001	5334	4000	3200	2667	2286	2000
4 x 14	#2	1200	533	300	192	133	98	75	2400	1600	1200	960	800	641	491	7201	4801	3600	2880	2400	2057	1800
4 x 16	SS	2650	1178	662	424	294	216	148	5299	3533	2650	2120	1580	1161	889	15898	10599	7949	6359	5299	4542	3974
4 x 16	#1+	2120	942	530	339	236	173	132	4239	2826	2120	1696	1413	1100	842	12718	8479	6359	5087	4239	3634	3180
4 x 16	#1	1766	785	442	283	196	144	110	3533	2355	1766	1413	1178	1009	795	10599	7066	5299	4239	3533	3028	2650
4 x 16	#2	1590	707	397	254	177	130	99	3180	2120	1590	1272	1060	908	748	9539	6359	4769	3815	3180	2725	2385
6 x 6	SS	542	174	74	38	22	14	9	883	392	221	141	98	72	55	3250	1961	1103	706	490	360	276
6 x 6	#1	433	174	74	38	22	14	9	867	392	221	141	98	72	55	2600	1733	1103	706	490	360	276
6 x 8	SS	1007	442	186	95	55	35	23	2014	995	559	358	249	183	140	6042	4028	2797	1790	1243	913	699
6 x 8	#1	806	358	186	95	55	35	23	1611	995	559	358	249	183	140	4834	3223	2417	1790	1243	913	699
6 x 10	SS	1724	766	379	194	112	71	47	3447	2021	1137	728	505	371	284	10341	6894	5171	3639	2527	1856	1421
6 x 10	#1	1454	646	364	194	112	71	47	2908	1939	1137	728	505	371	284	8725	5817	4363	3490	2527	1856	1421
6 x 12	SS	2526	1122	631	344	199	125	84	5051	3367	2017	1291	896	659	504	15154	10102	7577	6061	4482	3293	2521
6 x 12	#1	2131	947	533	341	199	125	84	4262	2841	2017	1291	896	659	504	12786	8524	6393	5114	4262	3293	2521
6 x 14	SS	3435	1527	859	550	322	203	136	6870	4580	3263	2088	1450	1065	816	20361	13739	10304	8243	6870	5327	4079
6 x 14	#1	2897	1288	724	464	322	203	136	5795	3863	2897	2088	1450	1065	816	17385	11590	8692	6954	5795	4967	4079
6 x 16	SS	4459	1982	1115	713	488	307	206	8918	5945	4459	3161	2195	1613	1235	26344	17836	13377	10702	8918	7644	6173
6 x 16	#1	3762	1672	941	602	418	307	206	7524	5016	3762	3010	2195	1613	1235	22573	15049	11287	9029	7524	6450	5643
6 x 18	SS	5365	2492	1402	897	623	442	296	11215	7476	5607	4486	3159	2321	1777	33644	22429	16822	13457	11215	9612	8411
6 x 18	#1	4730	2102	1182	757	526	386	296	9460	6307	4730	3784	3153	2321	1777	28380	18920	14190	11352	9460	8109	7095
6 x 20	SS	6397	3056	1719	1100	764	561	410	13752	9168	6876	5501	4370	3211	2458	41256	27504	20628	16502	13752	11787	10314
6 x 20	#1	5805	2580	1451	929	645	474	363	11610	7740	5805	4644	3870	3211	2458	34829	23219	17415	13932	11610	9951	8707
8 x 8	SS	1373	603	254	130	75	47	32	2747	1356	763	488	339	249	191	8240	5493	3815	2441	1695	1246	954
8 x 8	#1	1099	488	254	130	75	47	32	2197	1356	763	488	339	249	191	6592	4395	3296	2441	1695	1246	954
8 x 10	SS	2203	979	517	265	153	96	65	4407	2756	1551	992	689	506	388	13220	8813	6610	4962	3446	2531	1938
8 x 10	#1	1763	783	441	265	153	96	65	3525	2350	1551	992	689	506	388	10576	7051	5288	4230	3446	2531	1938
8 x 12	SS	3444	1531	861	469	272	171	115	6888	4592	2750	1760	1222	898	688	20664	13776	10332	8266	6112	4490	3438
8 x 12	#1	2906	1292	726	465	272	171	115	5812	3875	2750	1760	1222	898	688	17435	11624	8718	6974	5812	4490	3438
8 x 14	SS	4684	2082	1171	749	439	277	185	9368	6245	4449	2848	1978	1453	1112	27766	18735	14051	11241	9368	7264	5562
8 x 14	#1	3951	1756	988	632	439	277	185	7902	5268	3951	2848	1978	1453	1112	23707	15804	11853	9483	7902	6773	5562
8 x 16	SS	6081	2702	1520	973	665	419	281	12161	8107	6081	4310	2993	2199	1684	35923	24322	18242	14593	12161	10424	8418
8 x 16	#1	5130	2280	1283	821	570	419	281	10261	6840	5130	4104	2993	2199	1684	30782	20521	15391	12313	10261	8795	7696

**DIVISION OF BUILDING AND SAFETY
 COUNTY OF VENTURA**

BUILDING OFFICIAL: *Jim MacDonald*

B & S
 STD **B-26**

DATE: 01/01/08