

**SIZE ADJUSTED DESIGN STRESSES (PSI) FOR VISUALLY GRADED DOUGLAS FIR-LARCH LUMBER**

**California Building Code 2007 Edition (CBC), NDS 2005**

Surfaced-Dry Condition (19% Moisture Content)

SIZE W x D	GRADE	Extreme Fiber Stress in Bending $F_b'$				Tension Parallel to Grain $F_t'$	Hori- zontal Shear $F_v'$	Compression		Modulus of Elasticity	
		Basic	Basic +15% Rep	Basic +25% Dur	Basic +15%+25%			Perpen- dictular $F_c' \perp$	Parallel to Grain $F_c' //$		
										E'	$E'_{min}$
2 x 4	SS	2250	2587	2812	3234	1500	180	625	1955	1,900,000	690,000
	#1+	1800	2070	2250	2587	1200	180	625	1782	1,800,000	660,000
	#1	1500	1725	1875	2156	1013	180	625	1725	1,700,000	620,000
	#2	1350	1552	1687	1940	862	180	625	1552	1,600,000	580,000
	#3	787	905	983	1131	487	180	625	891	1,400,000	510,000
2 x 6	SS	1950	2242	2437	2803	1300	180	625	1870	1,900,000	690,000
	#1+	1560	1794	1950	2242	1040	180	625	1705	1,800,000	660,000
	#1	1300	1495	1625	1868	877	180	625	1650	1,700,000	620,000
	#2	1170	1345	1462	1681	747	180	625	1485	1,600,000	580,000
	#3	682	784	852	980	422	180	625	852	1,400,000	510,000
2 x 8	SS	1800	2070	2250	2587	1200	180	625	1785	1,900,000	690,000
	#1+	1440	1656	1800	2070	960	180	625	1627	1,800,000	660,000
	#1	1200	1380	1500	1725	810	180	625	1575	1,700,000	620,000
	#2	1080	1242	1350	1552	690	180	625	1417	1,600,000	580,000
	#3	630	724	787	905	390	180	625	813	1,400,000	510,000
2 x 10	SS	1650	1897	2062	2371	1100	180	625	1700	1,900,000	690,000
	#1+	1320	1518	1650	1897	880	180	625	1550	1,800,000	660,000
	#1	1100	1265	1375	1581	742	180	625	1500	1,700,000	620,000
	#2	990	1138	1237	1423	632	180	625	1350	1,600,000	580,000
	#3	577	663	721	829	357	180	625	775	1,400,000	510,000
2 x 12	SS	1500	1725	1875	2156	1000	180	625	1700	1,900,000	690,000
	#1+	1200	1380	1500	1725	800	180	625	1550	1,800,000	660,000
	#1	1000	1150	1250	1437	675	180	625	1500	1,700,000	620,000
	#2	900	1035	1125	1293	575	180	625	1350	1,600,000	580,000
	#3	525	603	656	754	325	180	625	775	1,400,000	510,000
2 x 14	SS	1350	1552	1687	1940	900	180	625	1530	1,900,000	690,000
	#1+	1080	1242	1350	1552	720	180	625	1395	1,800,000	660,000
	#1	900	1035	1125	1293	607	180	625	1350	1,700,000	620,000
	#2	810	931	1012	1164	517	180	625	1215	1,600,000	580,000
	#3	472	542	590	678	292	180	625	697	1,400,000	510,000
4 x 4	SS	2250	2587	2812	3234	1500	180	625	1955	1,900,000	690,000
	#1+	1800	2070	2250	2587	1200	180	625	1782	1,800,000	660,000
	#1	1500	1725	1875	2156	1012	180	625	1725	1,700,000	620,000
	#2	1350	1552	1687	1940	862	180	625	1552	1,600,000	580,000
4 x 6	SS	1950	2242	2437	2803	1300	180	625	1870	1,900,000	690,000
	#1+	1560	1794	1950	2242	1040	180	625	1705	1,800,000	660,000
	#1	1300	1495	1625	1868	877	180	625	1650	1,700,000	620,000
	#2	1170	1345	1462	1681	747	180	625	1485	1,600,000	580,000
4 x 8	SS	1950	2242	2437	2803	1200	180	625	1785	1,900,000	690,000
	#1+	1560	1794	1950	2242	960	180	625	1627	1,800,000	660,000
	#1	1300	1495	1625	1868	810	180	625	1575	1,700,000	620,000
	#2	1170	1345	1462	1681	690	180	625	1417	1,600,000	580,000
4 x 10	SS	1800	2070	2250	2587	1100	180	625	1700	1,900,000	690,000
	#1+	1440	1656	1800	2070	880	180	625	1550	1,800,000	660,000
	#1	1200	1380	1500	1725	742	180	625	1500	1,700,000	620,000
	#2	1080	1242	1350	1552	632	180	625	1350	1,600,000	580,000

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

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		Basic	Basic +15% Rep	Basic +25% Dur	Basic +15%+25%			Perpen- dictular $F_c' \perp$	Parallel to Grain $F_c' //$	$E'$	$E'_{min}$
4 x 12	SS	1650	1897	2062	2371	1000	180	625	1700	1,900,000	690,000
	#1+	1320	1518	1650	1897	800	180	625	1550	1,800,000	660,000
	#1	1100	1265	1375	1581	675	180	625	1500	1,700,000	620,000
	#2	990	1138	1237	1423	575	180	625	1350	1,600,000	580,000
4 x 14	SS	1500	1725	1875	2156	900	180	625	1530	1,900,000	690,000
	#1+	1200	1380	1500	1725	720	180	625	1395	1,800,000	660,000
	#1	1000	1150	1250	1437	607	180	625	1350	1,700,000	620,000
	#2	900	1035	1125	1293	517	180	625	1215	1,600,000	580,000
4 x 16	SS	1500	1725	1875	2156	900	180	625	1530	1,900,000	690,000
	#1+	1200	1380	1500	1725	720	180	625	1395	1,800,000	660,000
	#1	1000	1150	1250	1437	607	180	625	1350	1,700,000	620,000
	#2	900	1035	1125	1293	517	180	625	1215	1,600,000	580,000
6 x 6	SS	1500		1875		1000	170	625	1150	1,600,000	580,000
	#1	1200		1500		825	170	625	1000	1,600,000	580,000
	#2	750		937		475	170	625	700	1,300,000	470,000
6 or 8 x 8	SS	1500		1875		1000	170	625	1150	1,600,000	580,000
	#1	1200		1500		825	170	625	1000	1,600,000	580,000
	#2	750		937		475	170	625	700	1,300,000	470,000
6 x 10	SS	1600		2000		950	170	625	1100	1,600,000	580,000
	#1	1350		1687		675	170	625	925	1,600,000	580,000
	#2	875		1093		425	170	625	600	1,300,000	470,000
8 x 10	SS	1500		1875		1000	170	625	1150	1,600,000	580,000
	#1	1200		1500		825	170	625	1000	1,600,000	580,000
	#2	750		937		475	170	625	700	1,300,000	470,000
6 or 8 x 12	SS	1600		2000		950	170	625	1100	1,600,000	580,000
	#1	1350		1687		675	170	625	925	1,600,000	580,000
	#2	875		1093		425	170	625	600	1,300,000	470,000
6 or 8 x 14	SS	1579		1973		950	170	625	1100	1,600,000	580,000
	#1	1332		1665		675	170	625	925	1,600,000	580,000
	#2	863		1078		425	170	625	600	1,300,000	470,000
6 or 8 x 16	SS	1555		1943		950	170	625	1100	1,600,000	580,000
	#1	1312		1640		675	170	625	925	1,600,000	580,000
	#2	850		1062		425	170	625	600	1,300,000	470,000
6 or 8 x 18	SS	1534		1917		950	170	625	1100	1,600,000	580,000
	#1	1294		1617		675	170	625	925	1,600,000	580,000
	#2	839		1048		425	170	625	600	1,300,000	470,000
6 or 8 x 20	SS	1515		1893		950	170	625	1100	1,600,000	580,000
	#1	1279		1598		675	170	625	925	1,600,000	580,000
	#2	829		1036		425	170	625	600	1,300,000	470,000
6 or 8 x 22	SS	1499		1873		950	170	625	1100	1,600,000	580,000
	#1	1265		1581		675	170	625	925	1,600,000	580,000
	#2	820		1025		425	170	625	600	1,300,000	470,000
6 or 8 x 24	SS	1484		1855		950	170	625	1100	1,600,000	580,000
	#1	1252		1565		675	170	625	925	1,600,000	580,000
	#2	812		1015		425	170	625	600	1,300,000	470,000

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