

# Structural Design Values

(ALL VALUES IN PSI)  
(MOE IN MILLIONS  
OF PSI)

## Redwood

GRADE	BENDING F <sub>b</sub>	TENSION F <sub>t</sub>	SHEAR F <sub>v</sub>	COMPRESION PERPENDICULAR	COMPRESION PARALLEL	MODULUS OF ELASTICITY (MOE)
<b>REDWOOD</b>						
DIMENSION LUMBER (2"-4" THICK BY 2" AND WIDER) (OG = OPEN GRAIN)						
CLEAR STRUCTURAL	1750	1000	160	650	1850	1.4
SELECT STRUCTURAL	1350	800	160	650	1500	1.4
SELECT STRUCTURAL OG	1100	625	160	425	1100	1.1
NO. 1	975	575	160	650	1200	1.3
NO. 1 OG	775	450	160	425	900	1.1
NO. 2	925	525	160	650	950	1.2
NO. 2 OG	725	425	160	425	700	1.0
NO. 3	525	300	160	650	550	1.1
NO. 3 OG	425	250	160	425	400	0.9
CONSTRUCTION	825	475	160	425	925	0.9
STANDARD	450	275	160	425	725	0.9
UTILITY	225	125	160	425	475	0.8
STUD	575	350	160	425	450	0.9
TIMBERS (5"X5" AND LARGER)						
CLEAR STRUCTURAL	1850	1250	145	650	1650	1.3
SELECT STRUCTURAL	1400	950	145	650	1200	1.3
SELECT STRUCTURAL OG	1100	750	145	420	900	1.0
NO. 1	1200	800	145	650	1050	1.3
NO. 1 OG	950	650	145	420	800	1.0
NO. 2	1000	525	145	650	900	1.1
NO. 2 OG	750	400	145	420	650	0.9
<b>WESTERN CEDARS</b>						
DIMENSION LUMBER						
SELECT STRUCTURAL	1000	600	155	425	1000	1.1
NO. 1	725	425	155	425	825	1.0
NO. 2	700	425	155	425	650	1.0
NO. 3	400	250	155	425	375	0.9
CONSTRUCTION	800	475	155	425	850	0.9
STANDARD	450	275	155	425	650	0.8
UTILITY	225	125	155	425	425	0.8
STUD	550	325	155	425	400	0.9
TIMBERS						
SELECT STRUCTURAL	1100	725	140	425	925	1.0
NO. 1	875	600	140	425	800	1.0
NO. 2	550	350	140	425	550	0.8
<b>DOUGLAS-FIR</b>						
TIMBERS						
SELECT STRUCTURAL	1600	950	170	625	1100	1.6
NO. 1	1350	675	170	625	925	1.6
NO.2	875	425	170	625	600	1.3

## Western Cedars

(Western Red Cedar,  
Incense Cedar,  
Alaska Cedar,  
Port Orford Cedar)

## Douglas-fir

### Contact:

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