



January, 1993

1993 ERRATA/ADDENDUM

to

February, 1992 Edition of

*DESIGN VALUES FOR JOISTS AND RAFTERS***Add the following to TABLE W-1 DESIGN VALUES FOR JOISTS AND RAFTERS
VISUALLY GRADED LUMBER**

Species ¹	Compression design value perpendicular to grain, psi “F _{c⊥} ”	Species ¹	Compression design value perpendicular to grain, psi “F _{c⊥} ”
Aspen	265	Red Oak	820
Beech-Birch-Hickory	715	Redwood	
Cottonwood	320	Clear Structural, Select	650
Douglas Fir-Larch	625	Structural, No.1, No.2, No.3	
Douglas Fir-Larch (North)	625	Open grain, Stud, Construction,	425
Douglas Fir-South	520	Standard, Utility	
Eastern Hemlock-Tamarack	555	Southern Pine	
Eastern Softwoods	335	Dense	660
Eastern White Pine	350	Select Structural, No.1, No.2,	565
Hem-Fir	405	No.3, Stud, Construction,	
Hem-Fir (North)	370	Standard, Utility	
Mixed Maple	620	Non-Dense	480
Mixed Oak	800	Spruce-Pine-Fir	425
Mixed Southern Pine	565	Spruce-Pine-Fir (South)	335
Northern Red Oak	885	Western Cedars	425
Northern Species	350	Western Woods	335
Northern White Cedar	370	White Oak	800
Red Maple	615	Yellow Poplar	420

1. Design values apply to all grades for the species listed unless otherwise indicated in the table above.

**1995 ADDENDUM to February, 1992 Edition of
DESIGN VALUES FOR JOISTS AND RAFTERS**

Revise as follows:

**TABLE W-2 DESIGN VALUES FOR JOISTS AND RAFTERS
MECHANICALLY GRADED LUMBER**

These “F_b” values are for use where repetitive members are spaced not more than 24 inches. For wider spacing, the “F_b” values shall be reduced 13%.

Values for surfaced dry or surfaced green lumber apply at 19% maximum moisture content in use.

Grade Designation	Size Classification	Design values in Bending, "F _b "			Modulus of Elasticity E	Grading Rules Agency	
		Normal Duration	Snow Loading	7-Day Loading			
MACHINE STRESS RATED (MSR) LUMBER							
900f-1.0E	2" & less in thickness	1040	1190	1290	1,000,000	WCLIB, WWPA	
1200f-1.2E		1380	1590	1730	1,200,000	NLGA, SPIB, WCLIB, WWPA	
1250f-1.4E		<u>1440</u>	<u>1650</u>	<u>1800</u>	<u>1,400,000</u>	WCLIB	
1350f-1.3E		1550	1790	1940	1,300,000	NLGA, SPIB, WCLIB, WWPA	
1400f-1.2E		<u>1610</u>	<u>1850</u>	<u>2010</u>	<u>1,200,000</u>	NLGA, SPIB	
1450f-1.3E		1670	1920	2080	1,300,000	NLGA, WCLIB, WWPA	
1500f-1.3E		2" & wider	1730	1980	2160	1,300,000	SPIB
1500f-1.4E			1730	1980	2160	1,400,000	NLGA, SPIB, WCLIB, WWPA
1600f-1.4E			<u>1840</u>	<u>2120</u>	<u>2300</u>	<u>1,400,000</u>	NLGA, SPIB
1650f-1.3E			<u>1900</u>	<u>2180</u>	<u>2370</u>	<u>1,300,000</u>	NLGA
1650f-1.4E			1900	2180	2370	1,400,000	SPIB
1650f-1.5E			1900	2180	2370	1,500,000	NLGA, SPIB, WCLIB, WWPA
1650f-1.6E			<u>1900</u>	<u>2180</u>	<u>2370</u>	<u>1,600,000</u>	WCLIB
1800f-1.5E			2070	2380	2590	1,500,000	NLGA, SPIB
1800f-1.6E			2070	2380	2590	1,600,000	NLGA, SPIB, WCLIB, WWPA
1950f-1.5E			2240	2580	2800	1,500,000	SPIB
1950f-1.7E		2240	2580	2800	1,700,000	NLGA, SPIB, WWPA	
2000f-1.6E		<u>2300</u>	<u>2650</u>	<u>2880</u>	<u>1,600,000</u>	NLGA, SPIB	
2100f-1.8E		2420	2780	3020	1,800,000	NLGA, SPIB, WCLIB, WWPA	
2250f-1.6E		2" & wider	2590	2980	3230	1,600,000	SPIB
2250f-1.7E			<u>2590</u>	<u>2980</u>	<u>3230</u>	<u>1,700,000</u>	NLGA, SPIB
2250f-1.8E			<u>2590</u>	<u>2980</u>	<u>3230</u>	<u>1,800,000</u>	NLGA
2250f-1.9E			2590	2980	3230	1,900,000	NLGA, SPIB, WWPA
2400f-1.7E			2760	3170	3450	1,700,000	SPIB
2400f-1.8E			<u>2760</u>	<u>3170</u>	<u>3450</u>	<u>1,800,000</u>	NLGA, SPIB
2400f-2.0E			2760	3170	3450	2,000,000	NLGA, SPIB, WCLIB, WWPA
2500f-2.2E			<u>2880</u>	<u>3310</u>	<u>3590</u>	<u>2,200,000</u>	WCLIB
2550f-2.1E			2930	3370	3670	2,100,000	NLGA, SPIB, WWPA
2700f-2.0E			<u>3110</u>	<u>3570</u>	<u>3880</u>	<u>2,000,000</u>	WCLIB
2700f-2.2E		3110	3570	3880	2,200,000	NLGA, SPIB, WCLIB, WWPA	
2850f-2.3E		3280	3770	4100	2,300,000	NLGA, SPIB, WWPA	
3000f-2.4E		3450	3970	4310	2,400,000	NLGA, SPIB	
3150f-2.5E		3620	4170	4530	2,500,000	SPIB	
3300f-2.6E	3800	4360	4740	2,600,000	SPIB		
900f-1.2E	2" & less in thickness	1040	1190	1290	1,200,000	NLGA, WCLIB	
1200f-1.5E		1380	1590	1730	1,500,000	NLGA, WCLIB	
1350f-1.8E		<u>1550</u>	<u>1790</u>	<u>1940</u>	<u>1,800,000</u>	NLGA	
1500f-1.8E		1730	1980	2160	1,800,000	WCLIB	
1800f-2.1E		2070	2380	2590	2,100,000	NLGA, WCLIB	
MACHINE EVALUATED LUMBER (MEL)							
M-10	2" & less in thickness	1610	1850	2010	1,200,000	NLGA, SPIB	
M-11		1780	2050	2230	1,500,000	NLGA, SPIB	
M-12		1840	2120	2300	1,600,000	NLGA, SPIB	
M-13		1840	2120	2300	1,400,000	NLGA, SPIB	
M-14		2070	2380	2590	1,700,000	NLGA, SPIB	
M-15		2070	2380	2590	1,500,000	NLGA, SPIB	
M-16		2070	2380	2590	1,500,000	SPIB	
M-17		2240	2580	2800	1,700,000	SPIB	
M-18		2300	2650	2880	1,800,000	NLGA, SPIB	
M-19		2300	2650	2880	1,600,000	NLGA, SPIB	
M-20		2300	2650	2880	1,900,000	SPIB	
M-21		2650	3040	3310	1,900,000	NLGA, SPIB	
M-22		2700	3110	3380	1,700,000	NLGA, SPIB	
M-23		2760	3170	3450	1,800,000	NLGA, SPIB	
M-24		3110	3570	3880	1,900,000	NLGA, SPIB	
M-25		3160	3640	3950	2,200,000	NLGA, SPIB	
M-26		3220	3700	4030	2,000,000	NLGA, SPIB	
M-27		3450	3970	4310	2,100,000	SPIB	

TABLE W1-FOOTNOTES

Revise Table W-1 Footnotes as follows:

1. When dimension lumber is used where moisture content will exceed 19% for an extended time period, F_b shall be multiplied by 0.85 if F_b exceeds 1150 psi, ~~and~~ E shall be multiplied by 0.9, and F_c^{\wedge} shall be multiplied by 0.67.
2. Following is a list of agencies . . .

National Lumber Grades Authority (NLGA)

~~260 1055 W. Hastings Street, Vancouver, BC, Canada V6E 2E9~~

103, 4400 Dominion Street, Burnaby, BC, Canada V5G 4G3

TABLE W2-FOOTNOTES

Add Table W-2 Footnotes as follows:

1. Design values for compression perpendicular to grain, F_c^{\wedge} , are identical to the design values given in Table W1 for visually graded lumber of the appropriate species. When the " F_c^{\wedge} " values shown on the grade stamp differ from the values shown in Table W1, the values shown on the grade stamp shall be used for design.
2. For any given bending design value, F_b , the average modulus of elasticity, E , design value may vary depending upon species, timber source or other variables. The " E " values included in the " F_b - E " grade designations in Table W2 are those usually associated with each " F_b " level. Grade stamps may show higher or lower values if machine rating indicates the assignment is appropriate. When the " E " value shown on a grade stamp differs from the values in Table W2, the values shown on the grade stamp shall be used for design. The tabulated " F_b " value associated with the designated " F_b " value shall be used for design.