TABLE: DF-C6 **THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION**

DOUGLAS FIR - LARCH **GLUED LAMINATED TIMBER CONVERSION TABLES**

Dry Service Conditions

Simple Span, Uniformly Loaded

Glulam Design Values:	F_{bx}, psi	E_x, psi
	2,400	1,800,000

LAMINATED VENEER LUMBER CONVERSIONS

LVL Design Values:	F_b, psi	E, psi
	2,950	2,000,000

LVL SECTIONS [pieces] thickness x depth	GLULAM SECTIONS, width (in.) x depth (in.)			
	ROOF BEAMS NON-SNOW LOAD Load Duration Factor = 1.25		FLOOR BEAMS Load Duration Factor = 1.00	
[2pcs] 1 3/4 x 9 1/4	3 1/8 x 10 1/2	5 1/8 x 9	3 1/8 x 10 1/2	5 1/8 x 9
[2pcs] 1 3/4 x 9 1/2	3 1/8 x 10 1/2	5 1/8 x 9	3 1/8 x 10 1/2	5 1/8 x 9
[2pcs] 1 3/4 x 11-1/4	3 1/8 x 12	5 1/8 x 10 1/2	3 1/8 x 13 1/2	5 1/8 x 10 1/2
[2pcs] 1 3/4 x 11-7/8	3 1/8 x 13 1/2	5 1/8 x 10 1/2	3 1/8 x 13 1/2	5 1/8 x 12
[2pcs] 1 3/4 x 14	3 1/8 x 15	5 1/8 x 12	3 1/8 x 16 1/2	5 1/8 x 13 1/2
[3pcs] 1 3/4x9 1/2	3 1/8 x 12	5 1/8 x 10 1/2	3 1/8 x 12	5 1/8 x 10 1/2
[3pcs] 1 3/4x11 7/8	3 1/8 x 13 1/2	5 1/8 x 10 1/2	3 1/8 x 12	5 1/8 x 10 1/2
[3pcs] 1 3/4x14	3 1/8 x 15	5 1/8 x 12	3 1/8 x 15	5 1/8 x 12
[3pcs] 1 3/4x16	3 1/8 x 16 1/2	5 1/8 x 12	3 1/8 x 15	5 1/8 x 13 1/2
[3pcs] 1 3/4x18	3 1/8 x 19 1/2	5 1/8 x 15	3 1/8 x 18	5 1/8 x 15

Table Specifications:

These sizes are for **dry service condition** of use.

Roof beam sections are compared on the basis of equivalent **bending resistance only**.

Floor beam sections are compared on the basis of equivalent **stiffness (EI) only**.

Glued laminated timber beam sizes are based on a **span to depth ratio, L/d, of 21**. When the span to depth ratio is different, sizes should be determined by engineering calculations.

Glulam sizes shown should also be checked for shear, deflection and other applicable strength properties and design considerations. For determining glulam roof beam sizes, the bending design value, F_b, was adjusted by the volume factor.

The LVL F_b is adjusted by $C_f = 12/d^{x}$ for member depths > 12 in. where $x = 0.133$

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