



NYC Department of Buildings
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Patricia Lancaster, FAIA, Commissioner
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Report of Materials and Equipment Acceptance Division

Pursuant to Administrative Code Section 27-131, the following equipment or material has been found acceptable for use subject to the terms and conditions contained herein.

MEA 213-07-E

Manufacturer: Pacific Woodtech Corporation, 1850 Park Lane,
Burlington, WA 98233

Trade Name(s): Pacific Woodtech

Product: Laminated veneer lumber (LVL)

Pertinent Code Section(s): 27-617 thru 27-624 & Reference Standard RS 10

Prescribed Test(s): ASTM D 5456

Laboratory: APA – The Engineered Wood Association

Test Report(s): APA Reports T99P-18, T99P-19, T99P-20, T2001P-52
and T2006P-10

Description: Pacific Woodtech manufactures and private-labels laminated veneer lumber (LVL). All private-labeled Pacific Woodtech LVL has the properties described in this report and shall bear the stamps described in the **Terms and Conditions** at the end of this report.

Pacific Woodtech LVL is a structural composite lumber consisting of laminated wood veneers with grain parallel to the length of the member. An exterior-type adhesive, complying with the durability requirements of ASTM D 2559, is used to bond the veneers in a lay-up pattern specified in the approved quality control manual. Pacific Woodtech LVL billets are pressed to thicknesses from $\frac{3}{4}$ inches to $3\frac{1}{2}$ inches, ripped to widths from $1\frac{3}{4}$ inches to 24 inches, and cross-cut to lengths up to $66\frac{1}{2}$ feet.

TABLE 1 – ALLOWABLE DESIGN PROPERTIES FOR PACIFIC WOODTECH LVL [psi]⁽¹⁾

Design Property		1.5E Grade	1.8E Grade	2.0E Grade
Flexural Stress, $F_b^{(6)(7)}$	beam ⁽²⁾⁽⁴⁾	2250	2750	3100
	plank ⁽³⁾⁽⁵⁾	2250	2750	3100
Modulus of Elasticity, E	beam ⁽²⁾	1500000	1800000	2000000
	plank ⁽³⁾	1500000	1800000	2000000
Horizontal Shear, $F_v^{(7)}$	beam ⁽²⁾	230	285	285
	plank ⁽³⁾	150	150	150
Compression Perpendicular to Grain, $F_{c\perp}$	beam ⁽²⁾	750	850	850
	plank ⁽³⁾	450	450	450
Tension Parallel to Grain, $F_t^{(7)(8)}$		1500	1950	2100
Compression Parallel to Grain, $F_c^{(7)}$		1950	2300	2750

1. The tabulated design properties apply to protected, dry service conditions.
2. Beam values apply to members loaded and supported on faces showing the narrow edge of all veneers, typically the narrow faces of the member.
3. Plank values apply to members loaded and supported on faces showing the face of one veneer, typically the wide faces of the member.
4. The tabulated flexural stress for the beam orientation is based on a reference depth of 12 inches. For other depths (d inches), the tabulated flexural stress for beam orientation shall be adjusted by multiplying by a size factor of $(12/d)^{1/5}$ as shown below:

Depth [inches]	1¾	3½	5½	9½	11 7/8	14	16	18	24
Multiply by	1.47	1.28	1.17	1.05	1.00	0.97	0.94	0.92	0.87

Use the factor for 1¾ inches for shallower depths. The size factor shall be cumulative with duration-of-load and repetitive-member adjustment factors.

5. The tabulated flexural stress for the plank orientation is based on a reference depth of 1¾ inches. For other depths (d inches), the tabulated flexural stress for beam orientation shall be adjusted by multiplying by a size factor of $(1.75/d)^{1/5}$ as shown below:

Depth (inches)	1¾	2	2½	3½
Multiply by	1.00	0.97	0.93	0.87

Use the factor for 1¾ inches for shallower depths. The size factor shall be cumulative with duration-of-load and repetitive-member adjustment factors.

6. The tabulated flexural stresses are permitted to be increased by 4 percent for repetitive members as provided in the code.
7. The tabulated design stresses are permitted to be adjusted for duration of load as provided in the code.
8. The tabulated tension parallel to grain stress is based on a reference gage length of 4 feet. For longer lengths (L feet), the tabulated tension parallel to grain stress shall be adjusted by multiplying by a factor of $(4/L)^{1/10}$.

TABLE – 2 EQUIVALENT SPECIFIC GRAVITY FOR CONNECTION DESIGN

Connection Type	Face	Edge
Nail – Withdrawal	0.50	0.47
Nail – Lateral	0.50	0.50
Bolt – Lateral	0.50	N. A.

Face: member faces showing the face of one veneer, typically the wide faces of the member

Edge: member faces showing the narrow edge of all veneers, typically the narrow faces of the member

TABLE 3 – MINIMUM EDGE FASTENER SPACING

PW LVL Dimensions	Fastener	Minimum Spacing [inches]
Minimum ¾ inches thick and 3½ inches deep	8d Nail	3
	10d Nail	4
	12d Nail	4
	16d Nail	Not Permitted
	14 Gage Staple	4
Minimum 1¼ inches thick and 3 ½ inches deep	10d Nail	4
	12d Nail	4
	16d Nail	6 ⁽¹⁾
	14 Gage Staple	4

(1) May be 4" when nailing through bottom wall plate and sheathing (maximum 1 3/8" penetration).

Terms and Conditions: The Pacific Woodtech LVL, as described above, is accepted on the condition that:

1. All uses, locations and installations shall comply with the applicable requirements of the New York City Building Code.
2. Structures designed using Pacific Woodtech LVL shall conform to the manufacturer's design provisions and specifications as listed in the above tables, except that appropriate design load(s), deflection limitations(s) and other performance standards of the New York City Building Code shall apply.
3. Pacific Woodtech LVL, when stored out-of-doors or exposed to wet weather conditions during construction, shall be inspected by the user for separating, swelling or warping, and replaced if so damaged. Pacific Woodtech LVL shall not be used where a maximum moisture content exceeding 19% will result.
4. Beams less than 1 ½ inches thick shall be firestopped every 500 square feet in floor construction.
5. The adhesive used shall not delaminate during a fire.

6. Pacific Woodtech LVL shall be identified with a stamp noting the name of the manufacturer (Pacific Woodtech), the plant number (1047), the product trade name, the production date, the grade and the name of the quality control agency (APA EWS).
7. Pacific Woodtech LVL shall be for interior use only and stamped "INTERIOR" and "MEA 213-07-E".
8. All shipments and deliveries of such material shall be provided with a permanent marking, suitably placed, certifying that the material shipped or delivered is equivalent to that tested and accepted for use, as provided in Section 27-131 of the Building Code.

Final Acceptance September 7, 2007.
Examined by Donald [Signature]