



## Report of Materials and Equipment Acceptance Division

NYC Department of Buildings  
280 Broadway, New York, NY 10007  
Patricia Lancaster, FAIA, Commissioner  
(212) 566-5000, TTY: (212) 566-4769

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 233-98-M Vol. 4

**Manufacturer:**

Anthony-Domfar, Inc., 1195 Peoples Road, Sault Ste. Marie,  
Ontario P60 3W7, Canada

D.F. Joist, 101 Fortune Street, Thunder Bay, Ontario P78 6R8,  
Canada

Georgia Pacific Corporation, 4300 Wildwood Parkway, First  
Floor, Atlanta, Georgia 30339

international Beams, Inc., 480, Rue Jocelyn-Bastille, C.P. 10,  
Pohenegamook, Quebec G0L 4J0

International Paper Company, Building Products Division,  
19953 US Highway 31, Thorsby, Alabama 35171

Jager Building Systems, Inc., 44 Simpson Road, Bolton,  
Ontario L7E 1Y4, Canada

Louisiana Pacific Corporation, 414 union St, Suite 1910,  
Nashville, TN 37219

Nexfor, Inc., 35 Mill Road, Juniper, New Brunswick E7L 1J3,  
Canada

Nordic Engineered Wood, 521 Chemin Merrill, C.P. 216,  
Chibougamau, Quebec G8P 2K7 Canada

Pacific Woodtech Corporation, 1850 Park Lane, Burlington,  
Washington 98233

Roseburg Forest Products, Post Office Box 1088, Roseburg,  
Oregon 97470

Standard Structures Incorporated, Post Office Box K, Santa  
Rosa, California 95402

Stark Truss Company, Inc., 109 Miles Avenue S.W., Canton,  
Ohio 44710

**Trade Name(s):**

APA PRI-I-Joists

**Product:**

Laminated Wooden I Beams

**Pertinent Code Section(s):** Article 7 Wood Section 27-617 through 27-624, Reference Standards RS 10, Section 27-133 Alternate or Equivalent Material.

**Test(s):** APA – The Engineered Wood Association PRP-108 Performance Standards and Policies for Structural Use Panels; and PRI-400 Performance Standards for APA EWS I Joists.

**Laboratory:** APA – The Engineered Wood Association, 7011 South 19<sup>th</sup> Street, Tacoma, WA 98466.

**Test Report(s):** PRI-400 Performance Standard for APA EWS I Joists, January 2004 (revised), prepared by APA – The Engineered Wood Association.  
PRI-400 Commentary Performance Standard for APA EWS I Joists, August 1999, prepared by APA – The Engineered Wood Association.  
PRP-108 Performance Standards and Qualification Policy for Structural Use Panels, June 2001 (revised).  
Quality Assurance Policy for APA EMS Performance – Rated I-Joists, March 30, 2004.  
Design Properties tables were sealed by Paul M. Wehner, New York State Professional Engineer License No. 75012-1.

## Description –

**Design Properties for APA EWS Performance-Rated I-Joists<sup>(a)</sup>**

Depth	Joist Designation	EI <sup>(b)</sup> 10 <sup>6</sup> lbf-in. <sup>2</sup>	M <sup>(c)</sup> lbf-ft	V <sup>(d)</sup> lbf	IR <sup>(e)</sup> lbf	ER <sup>(f)</sup> lbf	K <sup>(g)</sup> 10 <sup>6</sup> lbf
9-1/2"	PRI-20	145	2,520	1,120	1,700	830	4.94
	PRI-30	161	3,225	1,120	1,905	945	4.94
	PRI-40	193	2,735	1,120	2,160	1,080	4.94
	PRI-50	186	3,800	1,120	2,040	1,015	4.94
	PRI-60	231	3,780	1,120	2,160	1,080	4.94
11-7/8"	PRI-20	253	3,265	1,420	1,700	830	6.18
	PRI-30	280	4,170	1,420	1,905	945	6.18
	PRI-40	330	3,545	1,420	2,500	1,200	6.18
	PRI-50	322	4,915	1,420	2,040	1,015	6.18
	PRI-60	396	4,900	1,420	2,500	1,200	6.18
	PRI-70	420	6,595	1,420	2,335	1,160	6.18
	PRI-80	547	6,940	1,420	2,760	1,280	6.18
	PRI-90	604	8,770	1,925	3,355	1,400	6.18
14"	PRI-40	482	4,270	1,710	2,500	1,200	7.28
	PRI-50	480	5,860	1,710	2,040	1,015	7.28
	PRI-60	584	5,895	1,710	2,500	1,200	7.28
	PRI-70	613	7,865	1,710	2,335	1,160	7.28
	PRI-80	802	8,360	1,710	3,020	1,280	7.28
	PRI-90	881	10,460	2,125	3,355	1,400	7.28
16"	PRI-40	657	4,950	1,970	2,500	1,200	8.32
	PRI-50	663	6,715	1,970	2,040	1,015	8.32
	PRI-60	799	6,835	1,970	2,500	1,200	8.32
	PRI-70	841	9,010	1,970	2,335	1,160	8.32
	PRI-80	1,092	9,690	1,970	3,020	1,280	8.32
	PRI-90	1,192	11,985	2,330	3,355	1,400	8.32

<sup>(a)</sup> The tabulated values are design values for normal duration of load. All values, except for EI and K, shall be permitted to be adjusted for other load durations as permitted by the code.

<sup>(b)</sup> Bending stiffness (EI) of the I-joist.

<sup>(c)</sup> Moment capacity (M) of the I-joist, which shall not be increased by any code allowed repetitive member use factor.

<sup>(d)</sup> Shear capacity (V) of the I-joist.

<sup>(e)</sup> Intermediate reaction (IR) of the I-joist with a minimum bearing length of 3-1/2 inches without bearing stiffeners.

<sup>(f)</sup> End reaction (ER) of the I-joist with a minimum bearing length of 1-3/4 inches without bearing stiffeners. Higher end reactions are permitted. For a bearing length of 4 inches (5 inches for 14" and 16" PRI-50s), the end reaction may be set equal to the tabulated shear value. Interpolation of the end reaction between 1-3/4 and 4-inch (5-inch for 14" and 16" PRI-50s) bearing is permitted. For end reaction values over 1,550 lbf, bearing stiffeners are required with the exception of PRI-90, which requires bearing stiffeners when end reaction values exceed 1,885 lbf.

<sup>(g)</sup> Coefficient of shear deflection (K). For calculating uniform load and center-point load deflections of the I-joist in a simple-span application, use Eqs. 1 and 2.

$$\text{Uniform Load: } \delta = \frac{5\omega\ell^4}{384EI} + \frac{\omega\ell^2}{K} \quad [1]$$

$$\text{Center-Point Load: } \delta = \frac{P\ell^3}{48EI} + \frac{2P\ell}{K} \quad [2]$$

Where:  $\delta$  = calculated deflection (in.),  $\omega$  = uniform load (lbf/in.),  
 $P$  = concentrated load (lbf),  $\ell$  = design span (in.),  
 $EI$  = bending stiffness of the I-joist (lbf-in.<sup>2</sup>), and  
 $K$  = coefficient of shear deflection (lbf).



### Design Properties for APA EWS Performance-Rated I-Joists<sup>(a)</sup>

Depth	Joist Designation	EI <sup>(b)</sup> 10 <sup>6</sup> lbf-in. <sup>2</sup>	M <sup>(c)</sup> lbf-ft	V <sup>(d)</sup> lbf	IR <sup>(e)</sup> lbf	ER <sup>(f)</sup> lbf	K <sup>(g)</sup> 10 <sup>5</sup> lbf
9-1/2"	PRI-20	145	2,520	1,120	1,700	830	4.94
	PRI-30	161	3,225	1,120	1,905	945	4.94
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 P = concentrated load (lbf),  $\ell$  = design span (in.),  
 EI = bending stiffness of the I-joist (lbf-in.<sup>2</sup>), and  
 K = coefficient of shear deflection (lbf).



**Terms and Conditions:** That the above APA PRI I-Joists be accepted on condition that all uses, locations and installations shall comply with the applicable requirements of the New York City Building Code and Technical Policy and Procedure Notice #8, 1992, dated August 19, 1992 (attached) TPPN #2, 2000 dated July 24, 2000 (attached) and on further condition that:

1. All provisions of TPPN #8, 1992 and TPPN #2, 2000 for APA PRI I-Joists that are applicable for APA PRI I-Joists shall be complied with.
2. Structure designs using the APA PRI I-Joists shall conform to the manufacturer's specifications except that appropriate design load(s), deflection limitation(s) and other performance standards of the New York City Building Code shall apply.
3. The glue used shall not delaminate during a *fire*.
4. APA PRI I-Joists shall be used indoors.
5. When stored Out-of doors or exposed to wet weather conditions, during construction APA PRI I-Joists shall be inspected by the user for flange-web separation, swelling or warping and replaced if so damaged.
6. The size of any cutouts in the web of the joist shall not exceed the manufacturer's recommendations.
7. The cutting of opening for ducts, pipes, conduits etc. in APA PRI I-Joists shall be subject to a controlled inspection.
8. Firestopping shall be provided between the ceiling and the floor or roof above and shall be divided into approximately equal areas not greater than 500 square feet.
9. The building permit applicant shall notify the Fire Department of the proposed installation of APA PRI I-Joists prior to the Building Department issuance of a construction permit. Evidence of such notification shall be a certifying statement submitted on Form TR-1, Technical Report, reading as follows:

I hereby state that I have mailed a copy of this statement to the Fire Department Bureau of Fire, Technology Management Unit, as notification of the proposed installation of Wood I Beams at this location.

This statement shall be placed on the reverse side of the form in the lower right-hand box.

The copy of the completed Form TR-1 shall be mailed to:

Chief-In-Charge of the Bureau of Fire Prevention  
Fire Department  
Bureau of Fire Prevention  
Technology Management Unit  
9 MetroTech Center  
Brooklyn, New York 11201-3857

All shipments and deliveries of such equipment shall be provided with a metal tag suitably placed, certifying that the equipment shipped or delivered is equivalent to that tested and accepted for use, as provided for in Section 27-131 of the Building Code.

Final Acceptance April 25, 2006  
Examined by Donald [Signature]



DEPARTMENT OF BUILDINGS  
 EXECUTIVE OFFICES  
 60 HUDSON STREET, NEW YORK, N.Y. 10013  
 RUDOLPH J. RINALDI, Commissioner

RICHARD C. VISCONTI, A.I.A.  
 Assistant Commissioner  
 Technical Affairs

ISSUANCE # 367

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TECHNICAL  
 POLICY AND PROCEDURE NOTICE # 8 '92

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TO: Distribution  
 FROM: Richard C. Visconti, A.I.A. *Richard Visconti*  
 DATE: August 19, 1992  
 SUBJECT: Laminated Wood "I" Beams

PURPOSE: To interpret the requirements of the Administrative Code, Sections 27-617 and 27-620, pertaining to firestopping requirements per RS 10-8 and Inspection of Methods of Construction per Table 10-2 for laminated wood "I" beams used in fire resistance rated floor/roof-ceiling assemblies.

To establish a new administrative procedure for applicant notification to the Fire Department of proposed use of laminated wood "I" beams.

SPECIFICS:

1. Firestopping

Reference Standard RS 10-8, Section 9.2.1 - General Requirements for Firestopping states that, "the space between the ceiling and the floor or roof above shall be divided by providing firestopping where ceilings are suspended below solid joists or suspended from or attached directly to the bottom of open wood floor trusses in buildings of combustible construction."

The Department now interprets the requirement to comply with the firestopping provisions of Section 9.2.1 *et seq.* to include laminated wood "I" beam assemblies. Therefore, the space between the ceiling and the floor or roof above shall be divided into approximately equal areas not greater than 500 square feet.

Firestopping is subject to controlled inspection pursuant to Section 27-345.

2. Inspection of Methods of Construction

Table 10-2 - Operations on Structural Elements that shall be Subject to Controlled Inspection, lists the "Fabrication of glue-laminated assemblies and of plywood components."

The Department now interprets the requirement to comply with the controlled inspection provision of Table 10-2 to include laminated wood "I" beams. Therefore, the cutting of openings for ducts, pipes, conduit, etc. in laminated wood "I" beams shall be considered fabrication and, therefore, subject to controlled inspection.

3. Notification

The applicant shall be required to notify the Fire Department of the proposed installation of laminated wood "I" beams prior to the Department issuing a construction permit. Evidence of such notification shall be a certifying statement submitted on Form TR-1, Technical Report, reading as follows:

I hereby state that I have mailed a copy of this statement to the Fire Department, Bureau of Fire Prevention, Technology Management Unit, as notification of the proposed installation of laminated wood "I" beams at this location.

This statement shall be placed on the reverse side of the form in the lower right-hand box.

The copy of the completed Form TR-1 shall be mailed to:

Chief-in-Charge of the Bureau of Fire Prevention  
Fire Department  
Bureau of Fire Prevention  
Technology Management Unit  
250 Livingston Street  
Brooklyn, NY 11201-5884

cc: Chief John Hodgens



ISSUANCE #586

DEPARTMENT OF BUILDINGS

EXECUTIVE OFFICES  
60 HUDSON STREET, NEW YORK, N.Y. 10013-3394  
RICHARD C. VISCONTI, R.A., Acting Commissioner  
Website: [nyclink.org/buildings](http://nyclink.org/buildings)  
(212) 312-8000  
TTY (212) 312-8188

SATISH K. BABBAR, R.A.  
Acting Deputy Commissioner  
Technical Affairs  
(212) 312-8324  
Fax (212) 312-8319

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TECHNICAL  
POLICY AND PROCEDURE NOTICE #2/00

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TO: Distribution

FROM: Satish K. Babbar, R.A. 

DATE: July 24, 2000

SUBJECT: Semi-Controlled Inspection for Structural Light Gage Cold-Formed Steel,  
Plate Connected Wood Floor Trusses and Laminated Wood "I" Beams

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**EFFECTIVE:** Immediately

**SUPERCEDES:** Brooklyn Borough Memorandum by Borough Superintendent George E. Berger dated August 11, 1983.

**BACKGROUND:** There have been several structural failures involving lightweight floor construction. Professional inspection is needed during construction of buildings and other structures utilizing it in order to insure that the delivered members are not damaged or defective, the installation is proper and safeguards are taken to prevent failure.

**PURPOSE:** To set forth the requirements for the semi-controlled inspection of the construction, including size, quality, framing, erection and both temporary and permanent bracing of light gage cold-formed steel structural members, plate connected wood floor trusses and laminated wood "I" beams.

**REFERENCE:** Section 27-132(b) of the Administrative Code.

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**SPECIFICS:**

**REQUIREMENTS:** The plans submitted for approval/ acceptance/professional certification showing these members shall be complete including member sizes, positions, locations, permanent and temporary bracing, fasteners (location, type and spacing), stiffeners, connections, etc., as needed for the proper erection of the structure.

The construction of all light gage cold-formed steel structural members, plate connected wood floor trusses and laminated wood "I" beams shall be subject to semi-controlled inspection for size, quality, framing, erection and both temporary and permanent bracing, as set forth below.

**Size** Profiles used structurally shall conform to the specified dimension. Care shall be taken not to stretch, bend, or otherwise distort parts of the sections unless such forming is in the integral part of the design.

**Quality** All materials shall be clean, straight, and undamaged. Damaged members shall be discarded. Only BSA/MEA approved laminated wood "I" beams shall be used. Glue shall completely bond all laminated wood "I" beam surfaces being joined. Quality Control for the erection of all members shall be under the supervision of the professional designated to perform the semi-controlled inspection.

**Framing** Components may be cut by slitting, shearing, sawing, or flame cutting, as appropriate, in accordance with manufacturers' instructions and the design drawings. All punched holes and sheared or flame cut edges of material in members subject to calculated stress shall be clean and free from notches and burred edges. The approved/ accepted/professionally certified drawings shall be adhered to regarding member dimensions, locations, positions, beam separators, bearing surfaces and fasteners, including shear connectors, plate connectors, screws, bolts and welds, as applicable.

**Erection** Care shall be taken to avoid damage to members when erecting, loading, unloading and otherwise handling them.

**Bracing** Temporary bracing, shoring, jacks, etc. shall not be removed until the registered architect or professional engineer determines that they are no longer needed. Permanent bracing, web stiffeners, bridging, wind bracing, etc. shall be installed according to the approved/accepted/professionally certified drawings.

**INSPECTIONS AND REPORT TO BE SUBMITTED:** These inspections are to be performed by, or under the direct supervision of, licensed professional engineers or registered architects, who shall submit form(s) TR-1 indicating the following: "Semi-controlled inspection of light gage cold-formed steel structural members, plate connected wood floor trusses or laminated wood "I" beams (as applicable) per TPPN #2/00".

SKB:NJG:ng