

LP BuilderSeries[™] Treated-Engineered-Wood Lap Siding PR-N140 Louisiana-Pacific Corporation Revised February 24, 2021

Product: LP BuilderSeries[™] Treated-Engineered-Wood Lap Siding Louisiana-Pacific Corporation, 414 Union Street, Suite 2000, Nashville, TN 37219 (800) 450-6106 www.lpcorp.com

- 1. Basis of the product report:
 - 2021, 2018, 2015, and 2012 International Building Code: Section 104.11 Alternative materials
 - 2021, 2018, 2015, and 2012 International Residential Code: Section R104.11 Alternative materials
 - ASCE 7-16 and ASCE 7-10 Minimum Design Loads for Buildings and Other Structures
 - APA PRP-108 Performance Standards and Qualification Policy for Wood Structural Panels
 - APA Report T2021Q-01 and other qualification data.
- 2. Product description:

Louisiana-Pacific Corporation LP BuilderSeries[™] Treated-Engineered-Wood Lap Siding is an oriented strand board (OSB) overlaid with a resin treated paper and contains an embossed surface texture and the SmartLock[™] self-aligning feature. The siding is treated with Zinc Borate for decay and insect resistance. The efficacy of the preservative treatment of LP BuilderSeries Treated-Engineered-Wood Lap Siding is outside the scope of this report and the APA certification program. All edges are factory sealed with a primer.

LP BuilderSeries lap siding is available in the 5/16 Performance Category with a nominal width of 8 inches and in lengths up to 12 feet. The lap siding shall be installed horizontally.

3. Design properties:

Design wind loads for LP BuilderSeries lap siding when installed over the facer of structural insulated panels (SIPs) or wood structural panel (WSP) sheathing are listed in Tables 1a and 1b for the allowable wind speed and ultimate wind speed, respectively. Design wind loads for LP BuilderSeries lap siding when installed directly to wood studs with different nail sizes for the allowable wind speed and ultimate wind speed are shown in Tables 2a, 2b, 2c, and 2d, respectively.

4. Product installation:

LP BuilderSeries Treated-Engineered-Wood Lap Siding shall be installed in accordance with recommendations provided by the manufacturer (contact the manufacturer) and APA *Engineered Wood Construction Guide*, Form E30 (www.apawood.org/resource-library), as applicable. The maximum span shall not exceed the Span Rating of 16 o.c., as shown in the trademark. The LP BuilderSeries lap siding shall be permitted to be installed directly to wood studs or over the facer of SIPs or WSP sheathing.

5. Fire-resistant construction:

Wood structural panels that are not fire-retardant-treated have been shown to meet a Class III (or C) category for flame spread.

- 6. Limitations:
 - a) LP BuilderSeries Treated-Engineered-Wood Lap Siding used outdoors must be finished in accordance with recommendations provided by the manufacturer and APA *Engineered Wood Construction Guide*, Form E30 (see link above), as applicable.

- b) LP BuilderSeries[™] Treated-Engineered-Wood Lap Siding shall be installed horizontally with a span of 16 o.c. or less.
- c) The efficacy of the preservative treatment to the LP BuilderSeries Lap Siding is outside the scope of this report and the APA certification program.
- LP BuilderSeries Treated-Engineered-Wood Lap Siding is produced at Louisiana-Pacific Corporation facility at Dawson Creek, BC, under a quality assurance program audited by APA.
- e) This report is subject to re-examination in one year.
- 7. Identification:

LP BuilderSeries Treated-Engineered-Wood Lap Siding described in this report is identified by a label bearing the manufacturer's name (Louisiana-Pacific Corporation) and/or trademark, the APA assigned plant number (402 for the Dawson Creek, BC plant), the product Performance Category, the Span Rating, the Exposure Rating, the APA logo, the report number PR-N140, and a means of identifying the date of manufacture.

Table 1a.	LP BuilderSeries [™] Treated-Engineered-Wood Lap Siding Installed Horizontally to
	SIPs ⁽¹⁾ or WSP Sheathing ⁽⁵⁾ – Max. Allowable Wind Speed. $V_{asd}^{(2)}$

Minimum	Max. Bing Shank	Siding	Max. Allowable	Max. Allowable Wind Speed, $V_{asd}^{(4)}$ (mph)				
Performance	Nail Spacing ⁽³⁾ (inches)	Width (inches)	Wind Pressure (psf)	Wind Exposure Category				
Category				В	С	D		
E la C	8	8	80	170	150	140		
5/16	12	8	62	150	130	125		

For SI: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 0.447 m/s.

⁽¹⁾ The facer of the structural insulated panels (SIPs) shall be 7/16 Performance Category or thicker OSB sheathing meeting DOC PS 2 requirements.

(2) The tabulated values represent the capacity of the LP BuilderSeries Treated-Engineered-Wood Lap Siding installed in accordance with the requirements of this table. The tabulated wind speed shall not exceed the SIP capacity for wind load resistance.

(3) Fasteners shall be a hot dip galvanized ring shank nail, with a minimum shank diameter of 0.092 inch. Length shall be long enough to fully penetrate wood structural facer panel. One ring shank fastener located 3/4 inch from the top edge of the siding. Each successive course of lap siding must overlap a minimum of 1 inch.

⁽⁴⁾ Three-second-gust; based on wind pressures acting toward and away from building surfaces, at 30-ft height in Zone 5 with smallest effective area in accordance with Section R301.2.1 of the 2012 IRC.

⁽⁵⁾ Wood structural panel (WSP) sheathing shall be minimum 7/16 Performance Category OSB or Group 1 plywood meeting DOC PS 1 or DOC PS 2 requirements.

Table 1b.	LP BuilderSeries Treated-Engineered-Wood Lap Siding Installed Horizontally to
	SIPs ⁽¹⁾ or WSP Sheathing ⁽⁵⁾ – Max. Ultimate Wind Speed, Vult ⁽²⁾

Minimum	Max. Ring Shank	Siding	Max. Ultimate	Max. Ultimate Wind Speed, $V_{ult}^{(4)}$ (mph)		
Performance Category	Nail Spacing ⁽³⁾ (inches)	Width (inches)	Wind Pressure (psf)	Wind Exposure Category		
				В	С	D
E/16	8	8	133	200 ⁽⁶⁾	180	180
5/16	12	8	104	200(6)	170	160

For SI: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 0.447 m/s.

⁽¹⁾ The facer of the structural insulated panels (SIPs) shall be 7/16 Performance Category or thicker OSB sheathing meeting DOC PS 2 requirements.

(2) The tabulated values represent the capacity of the LP BuilderSeries Treated-Engineered-Wood Lap Siding installed in accordance with the requirements of this table. The tabulated wind speed shall not exceed the SIP capacity for wind load resistance.

(3) Fasteners shall be a hot dip galvanized ring shank nail, with a minimum shank diameter of 0.092 inch. Length shall be long enough to fully penetrate wood structural facer panel. One ring shank fastener located 3/4 inch from the top edge of the siding. Each successive course of lap siding must overlap a minimum of 1 inch.

(4) Three-second-gust; based on wind pressures acting toward and away from building surfaces, at 30-ft height in Zone 5 with smallest effective area in accordance with Chapter 26 of ASCE 7-16 and ASCE 7-10, Section R301.2.1 of the 2021, 2018, and 2015 IRC, and Section 1609.1.1 of the 2021, 2018, 2015, and 2012 IBC.

⁽⁵⁾ Wood structural panel (WSP) sheathing shall be minimum 7/16 Performance Category OSB or Group 1 plywood meeting DOC PS 1 or DOC PS 2 requirements.

(6) Table R301.2.1(1) of the 2021 IRC and Table R301.2(2) of the 2018 and 2015 IRC is limited to a maximum ultimate design wind speed, V_{ult}, of 180 mph.

Table 2a.	LP BuilderSeries™ Treated-Engineered-Wood Lap Siding Installed Horizontally
	Directly to Wood Studs with 0.113" Nails ⁽¹⁾ – Max. Allowable Wind Speed, Vasd ⁽²⁾

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Performance	Max. Stud	Siding	Max.	Max. Allowable Wind Speed, V _{asd} ⁽⁴⁾ (mph)							
	Category	(inches) (inches)	(inches)	Wind Pressure (psf)	Wind B	d Exposure Ca	tegory				
						0					
	5/16	16	8	76	170	145	130				

For **SI**: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 0.447 m/s.

(1) Fasteners shall be permitted to be substituted on a one-for-one basis if the fastener has a minimum overall allowable withdrawal capacity and allowable fastener head pull-through capacity of 62 lbf/fastener or greater based on the load duration factor of 1.6. The fastener shall meet or exceed the corrosion-resistance of hot dip galvanized steel wire nails meeting the requirements of ASTM A153, Class D.

(2) One fastener for each stud located 3/4 inch from the top edge of the siding. Each successive course of lap siding must overlap a minimum of 1 inch. Fasteners shall be a hot dip galvanized plain (smooth) shank nail, with a minimum shank diameter of 0.113 inch, and long enough to penetrate structural framing or wood structural panels and structural framing a minimum of 2 inches. Lap siding is not a bracing material.

⁽³⁾ Wall studs must have a minimum specific gravity of 0.42.

⁴⁾ Three-second-gust; based on wind pressures acting toward and away from building surfaces, at 30-ft height in Zone 5 with smallest effective area in accordance with Section R301.2.1 of the 2012 IRC.

Table 2b. LP BuilderSeries Treated-Engineered-Wood Lap Siding Installed Horizontally Directly to Wood Studs with 0.113" Nails⁽¹⁾ – Max. Ultimate Wind Speed, V_{ult}⁽²⁾

Performance	Max. Stud	Siding	Max. Ultimate	Max. Ultimate Wind Speed, V _{ult} ⁽⁴⁾ (mph)		
	Spacing ⁽³⁾ (inches)	Width (inches)	Width Wind (inches) Pressure (psf)	Wind Exposure Category		
Category				В	С	D
5/16	16	8	126	200 ⁽⁵⁾	180	170

For **SI**: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 0.447 m/s.

(1) Fasteners shall be permitted to be substituted on a one-for-one basis if the fastener has a minimum overall allowable withdrawal capacity and allowable fastener head pull-through capacity of 62 lbf/fastener or greater based on the load duration factor of 1.6. The fastener shall meet or exceed the corrosion-resistance of hot dip galvanized steel wire nails meeting the requirements of ASTM A153, Class D.

⁽²⁾ One fastener for each stud located 3/4 inch from the top edge of the siding. Each successive course of lap siding must overlap a minimum of 1 inch. Fasteners shall be a hot dip galvanized plain (smooth) shank nail, with a minimum shank diameter of 0.113 inch, and long enough to penetrate structural framing or wood structural panels and structural framing a minimum of 2 inches. Lap siding is not a bracing material.

⁽³⁾ Wall studs must have a minimum specific gravity of 0.42.

⁽⁴⁾ Three-second-gust; based on wind pressures acting toward and away from building surfaces, at 30-ft height in Zone 5 with smallest effective area in accordance with Chapter 26 of ASCE 7-16 and ASCE 7-10, Section R301.2.1 of the 2021, 2018, and 2015 IRC, and Section 1609.1.1 of the 2021, 2018, 2015, and 2012 IBC.

⁽⁵⁾ Table R301.2.1(1) of the 2021 IRC and Table R301.2(2) of the 2018 and 2015 IRC is limited to a maximum ultimate design wind speed, V_{ult} , of 180 mph.

Table 2c.	LP BuilderSeries [™] Treated-Engineered-Wood Lap Siding Installed Horizontally
	Directly to Wood Studs with 0.092" Nails – Max. Allowable Wind Speed, Vasd ⁽¹⁾

		Siding Width (inches)	Max.	Max. A	Allowable Wind	d Speed,	
Porformanco	Max. Stud Spacing ⁽²⁾ (inches)		Siding Allowable Width Wind	V _{asd} ⁽³⁾ (mph)			
Category				Wind Exposure Category		ategory	
			Pressure (psf)	В	С	D	
5/16	16	8	47	130	110	105	

For **SI**: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 0.447 m/s.

⁽¹⁾ One fastener for each stud located 3/4 inch from the top edge of the siding. Each successive course of lap siding must overlap a minimum of 1 inch. Fasteners shall be a hot dip galvanized plain (smooth) shank nail, with a minimum shank diameter of 0.092 inch, and long enough to penetrate structural framing or wood structural panels and structural framing a minimum of 1.5 inches. Lap siding is not a bracing material.

⁽²⁾ Wall studs must have a minimum specific gravity of 0.42.

(3) Three-second-gust; based on wind pressures acting toward and away from building surfaces, at 30-ft height in Zone 5 with smallest effective area in accordance with Section R301.2.1 of the 2012 IRC.

Table 2d.	LP BuilderSeries Treated-Engineered-Wood Lap Siding Installed Horizontally Directly
	to Wood Studs with 0.092" Nails – Max. Ultimate Wind Speed, Vult ⁽¹⁾

Dorformanco	Max. Stud	Siding	Max. Ultimate Wind Pressure (psf)	Max. Ultimate Wind Speed, V _{ult} ⁽³⁾ (mph)			
Catagory	Spacing ⁽²⁾ (inches)	Width (inches)		Wind Exposure Category			
Calegory				В	С	D	
5/16	16	8	78	170	150	140	

For **SI**: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 0.447 m/s.

⁽¹⁾ One fastener for each stud located 3/4 inch from the top edge of the siding. Each successive course of lap siding must overlap a minimum of 1 inch. Fasteners shall be a hot dip galvanized plain (smooth) shank nail, with a minimum shank diameter of 0.092 inch, and long enough to penetrate structural framing or wood structural panels and structural framing a minimum of 1.5 inches. Lap siding is not a bracing material.

⁽²⁾ Wall studs must have a minimum specific gravity of 0.42.

⁽³⁾ Three-second-gust; based on wind pressures acting toward and away from building surfaces, at 30-ft height in Zone 5 with smallest effective area in accordance with Chapter 26 of ASCE 7-16 and ASCE 7-10, Section R301.2.1 of the 2021, 2018, and 2015 IRC, and Section 1609.1.1 of the 2021, 2018, 2015, and 2012 IBC.

APA – The Engineered Wood Association is an approved national standards developer accredited by American National Standards Institute (ANSI). APA publishes ANSI standards and Voluntary Product Standards for wood structural panels and engineered wood products. APA is an accredited certification body under ISO/IEC 17065 by Standards Council of Canada (SCC), an accredited inspection agency under ISO/IEC 17020 by International Code Council (ICC) International Accreditation Service (IAS), and an accredited testing organization under ISO/IEC 17025 by IAS. APA is also an approved Product Certification Agency, Testing Laboratory, Quality Assurance Entity, and Validation Entity by the State of Florida, and an approved testing laboratory by City of Los Angeles.

APA - THE ENGINEERED WOOD ASSOCIATION

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