

**LP[®] SmartSide[®] Strand Substrate
Soffit and Rated Sheathing/Ceiling Deck
Louisiana-Pacific Corporation**

PR-N117

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Product: LP[®] SmartSide[®] Strand Substrate Soffit and Rated Sheathing/Ceiling Deck
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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
 - DOC PS 2-18 Performance Standard for Wood Structural Panels
 - APA PRP-108 Performance Standards and Qualification Policy for Structural-Use Panels
 - 2021, 2015, and 2008 ANSI/AWC Special Design Provisions for Wind and Seismic (SDPWS) recognized in the 2021, 2018 and 2015, and 2012 IBC, respectively.
 - ASCE 7-16, ASCE 7-10, and ASCE 7-05 Minimum Design Loads for Buildings and Other Structures
 - APA Reports T92Q-17, T92Q-22, T94Q-17, T2000Q-21, T2007P-37, T2015Q-40, and T2015Q-41, and other qualification data
2. Product description:

Louisiana-Pacific Corporation SmartSide[®] Strand Substrate Soffit and Rated Sheathing/Ceiling Deck panels are made with strands of various wood species and strand classifications in accordance with the in-plant manufacturing standard approved by APA, overlaid with a resin treated paper, and available with either a smooth or embossed surface texture. LP SmartSide Strand Substrate Soffit and Rated Sheathing/Ceiling Deck panels are available in 3/8, 7/16 and 19/32 Performance Categories. They are available as 4x8-foot or 4x9-foot panels or cut to 12, 16 or 24-inch widths, and in lengths up to 16 feet. The panels are treated with Zinc Borate for fungal decay and termite resistance. The efficacy of the preservative treatment is outside the scope of this report and the APA certification program. The soffit panels are intended for use as closed soffits at a 24 o.c. Span Rating with the panel strength axis perpendicular to supports. The Rated Sheathing/Ceiling Deck panels are intended for use as open soffits at a 24/16 Span Rating with the panel strength axis perpendicular to supports.

Vented soffit products are available in a 3/8 Performance Category, widths of 8, 12, 16 or 24 inches, and 16 feet in length. Refer to the manufacturer's application instructions for details on the configuration of the vented soffits products.
3. Design properties:

Design wind loads for vented and non-vented LP SmartSide Strand Substrate Soffit products are listed in Tables 1 and 2 based on the design procedures in ASCE 7-05, and ASCE 7-10 and ASCE 7-16, respectively.
4. Product installation:

LP SmartSide Strand Substrate Soffit and Rated Sheathing/Ceiling Deck shall be installed in accordance with the recommendations provided by the manufacturer (<https://lpcorp.com/resources/product-literature/installation-instructions/lp-smartside-soffit-application-instructions-english>) and APA *Engineered Wood Construction Guide*, Form E30

(www.apawood.org/resource-library). The maximum span shall be in accordance with the Span Rating shown in the trademark for the intended application.

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. Unless otherwise specified, fire-resistant construction shall be in accordance with the recommendations provided in *APA Fire-Rated Systems*, Form W305 (see link above). Vented soffit products have not been evaluated for fire rating.
6. Limitations:
 - a) LP SmartSide Strand Substrate Soffit panels shall be used only as closed soffits at a 24 inches o.c. Span Rating with the panel strength axis perpendicular to supports.
 - b) LP SmartSide Strand Substrate Rated Sheathing/Ceiling Deck panels shall be used only for open soffits or sheathing at a 24/16 Span Rating (refer to trademark) with the panel strength axis perpendicular to supports.
 - c) LP SmartSide Strand Substrate Soffit must be finished in accordance with recommendations provided by the manufacturer and *APA Engineered Wood Construction Guide*, Form E30 (see links above).
 - d) LP SmartSide Strand Substrate Soffit and Rated Sheathing/Ceiling Deck panels are produced at Louisiana-Pacific Corporation facilities in Dawson Creek, BC, Hayward, WI, Newberry, MI, Tomahawk, WI, Two Harbors, MN, and Swan Valley, MB under a quality assurance program audited by APA. The efficacy of the preservative treatment is outside the scope of this report and the APA certification program.
 - e) This report is subject to re-examination in one year.
7. Identification:
LP SmartSide Strand Substrate Soffit and Rated Sheathing/Ceiling Deck panels described in this report are 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, 357 for the Hayward, WI plant, 416 for the Newberry, MI plant, 435 for the Tomahawk, WI plant, 399 for the Two Harbors, MN plant, or 457 for the Swan Valley, MB plant), the product Performance Category, the Span Rating, the Exposure Rating, the APA logo, the report number PR-N117, and a means of identifying the date of manufacture.

Table 1. Max. nominal (allowable) design wind speed, V_{asd} , (mph – 3-second gust) permitted for vented & non-vented LP® SmartSide Strand Substrate Soffit^(a)

Minimum Nail Size ^(d)	Performance Category	Support Spacing ^(b) (in.)	Panel Nail Spacing		Maximum Allowable Wind Pressure (psf)	Maximum Nominal (Allowable) Wind Speed, V_{asd} ^(c) (mph)			
			Edges (in. o.c.)	Field (in. o.c.)		Wind Exposure Category			
						B	C	D	
6d box (0.099" x 2.0")	3/8	16	6	12	31	110	90	85	
				6	62	150	130	120	
		24	6	12	21	90	NP ^(e)	NP ^(e)	
				6	42	130	110	100	
8d box (0.113" x 2.5")		16	6	12	46	130	110	105	
				6	92	170	150	150	
		24	6	12	31	110	90	85	
				6	59	150	130	120	
8d box (0.113" x 2.5")	7/16	16	6	12	45	130	110	105	
				6	89	170	150	145	
		24	6	12	30	110	90	85	
				6	59	150	130	120	
8d box (0.113" x 2.5")		19/32	16	6	12	41	130	110	100
					6	82	170	150	140
			24	6	12	27	105	90	NP ^(e)
					6	55	150	125	110
10d box (0.128" x 3.0")	16		6	12	58	150	130	120	
				6	116	170	170	150	
	24		6	12	39	125	105	90	
				6	77	170	150	130	

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

- (a) Panels shall be applied with strength axis across supports.
- (b) Supporting framing must have a minimum specific gravity of 0.42.
- (c) Table is based on wind pressures acting toward and away from building surfaces, at 30-ft height in Zone 5 with smallest effective area per Chapter 6 of ASCE 7-05, and Section R301.2.1 of the 2012 IRC.
- (d) Fasteners shall be a hot-dipped galvanized (ASTM A153) or equivalent, plain (smooth) shank nails. Fastener dimensions are as specified in ASTM F1667.
- (e) NP = Not permitted.

Table 2. Max. ultimate design wind speed, V_{ult} , (mph – 3-second gust) permitted for vented & non-vented LP® SmartSide Strand Substrate Soffit^(a)

Minimum Nail Size ^(e)	Performance Category	Support Spacing ^(b) (in.)	Panel Nail Spacing		Maximum Ultimate Wind Pressure (psf)	Maximum Ultimate Design Wind Speed, V_{ult} ^(c) (mph)			
			Edges (in. o.c.)	Field (in. o.c.)		Wind Exposure Category			
						B	C	D	
6d box (0.099" x 2.0")	3/8	16	6	12	52	140	120	110	
				6	104	200 ^(d)	160	160	
		24	6	12	35	115	NP ^(f)	NP ^(f)	
				6	69	160	140	130	
8d box (0.113" x 2.5")		16	6	12	77	160	150	130	
				6	153	200 ^(d)	200 ^(d)	180	
		24	6	12	51	140	120	110	
				6	99	200	160	150	
8d box (0.113" x 2.5")	7/16	16	6	12	74	160	140	130	
				6	149	200 ^(d)	200 ^(d)	180	
		24	6	12	50	140	120	110	
				6	99	200 ^(d)	160	150	
8d box (0.113" x 2.5")		19/32	16	6	12	69	160	140	130
					6	137	200 ^(d)	200 ^(d)	180
			24	6	12	46	130	115	NP ^(f)
					6	92	180	160	150
10d box (0.128" x 3.0")	16		6	12	96	180	160	150	
				6	193	200 ^(d)	200 ^(d)	200 ^(d)	
	24		6	12	64	160	130	120	
				6	128	200 ^(d)	180	160	

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

- (a) Panels shall be applied with strength axis across supports.
- (b) Supporting framing must have a minimum specific gravity of 0.42.
- (c) Table is based on wind pressures acting toward and away from building surfaces, at 30-ft height in Zone 5 with smallest effective area per 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 through 2012 IBC.
- (d) 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.
- (e) Fasteners shall be a hot-dipped galvanized (ASTM A153) or equivalent, plain (smooth) shank nails. Fastener dimensions are as specified in ASTM F1667.
- (f) NP = Not permitted.

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