

**LP[®] SmartSide[®] and LP[®] SmartSide[®] ExpertFinish[®] Soffit and
Rated Sheathing/Ceiling Deck and**

PR-N117

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LP[®] SmartSide[®] and LP[®] SmartSide[®] ExpertFinish[®]

Treated-Engineered-Wood Nickel Gap Lap as porch ceiling or soffit

Louisiana-Pacific Corporation

Product: LP[®] SmartSide[®] and LP[®] SmartSide[®] ExpertFinish[®] Soffit and Rated Sheathing/Ceiling Deck and LP[®] SmartSide[®] and LP[®] SmartSide[®] ExpertFinish[®] Treated-Engineered-Wood Nickel Gap Lap

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1. Basis of the product report:

- 2024 International Building Code (IBC): Sections 104.2.3 Alternative materials
- 2021, 2018, and 2015 International Building Code (IBC): Section 104.11 Alternative materials
- 2024 International Residential Code (IRC): Sections R104.2.2 Alternative materials
- 2021, 2018, and 2015 International Residential Code (IRC): Section R104.11 Alternative materials
- DOC PS 2-18 Performance Standard for Wood Structural Panels
- APA PRP-108 Performance Standards and Qualification Policy for Wood Structural Panels
- 2021 and 2015 ANSI/AWC Special Design Provisions for Wind and Seismic (SDPWS) recognized in the 2024 and 2021, 2018 and 2015 IBC, respectively.
- ASCE 7-22, ASCE 7-16, and ASCE 7-10 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 (LP[®]) SmartSide[®] and LP[®] SmartSide[®] ExpertFinish[®] Soffit and Rated Sheathing/Ceiling Deck panels and LP[®] SmartSide[®] and LP[®] SmartSide[®] ExpertFinish[®] Treated-Engineered-Wood Nickel Gap Lap 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 and LP SmartSide ExpertFinish 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, 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 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.

LP® SmartSide® and LP® SmartSide® ExpertFinish® Nickel Gap Lap Siding is treated with Zinc Borate for decay and insect resistance. The efficacy of the preservative treatment of the LP SmartSide siding is outside the scope of this report and the APA certification program. The lap siding includes shiplap edges, which results in a flat siding profile when installed, and is available in 1/2 Performance Category with a nominal width of 8 inches and in lengths up to 16 feet. Refer to the manufacturer's application instructions on soffits for details on the Nickel Gap Lap Siding installed as porch ceiling or soffit.

3. Design properties:

Design wind loads for vented and non-vented LP SmartSide Soffit products are listed in Table 1 and 2, respectively, based on the design procedures in ASCE 7-22.

Design wind loads for LP SmartSide and LP SmartSide ExpertFinish Nickel Gap Lap Siding used as porch ceiling or soffit are listed in Table 3 based on the design procedures in ASCE 7-22.

4. Product installation:

LP SmartSide Soffit and Rated Sheathing/Ceiling Deck shall be installed in accordance with the recommendations provided by the manufacturer ([Product Literature | LP Building Solutions](#)) and APA *Engineered Wood Construction Guide*, Form E30 (www.apawood.org/resource-library).

LP SmartSide and LP SmartSide ExpertFinish Nickel Gap Lap Siding shall be installed in accordance with the recommendations provided by the manufacturer ([Product Literature | LP Building Solutions](#))

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 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 and LP SmartSide ExpertFinish 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 and LP SmartSide ExpertFinish 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 and LP SmartSide ExpertFinish Soffit must be finished in accordance with recommendations provided by the manufacturer and APA *Engineered Wood Construction Guide*, Form E30 (see links above).
- d) The efficacy of the preservative treatment of the LP SmartSide and LP SmartSide ExpertFinish Treated-Engineered-Wood Nickel Gap Lap is outside the scope of this report and the APA certification program.
- e) LP SmartSide and LP SmartSide ExpertFinish Soffit and Rated Sheathing/Ceiling Deck panels and LP SmartSide and LP SmartSide ExpertFinish Treated-Engineered-Wood Nickel Gap Lap are produced at Louisiana-Pacific Corporation facilities in Dawson Creek, BC, Hayward, WI, Houlton, ME, Newberry, MI, Sagola, MI, Swan Valley, MB, Tomahawk, WI, and Two Harbors, MN, 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.

f) This report is subject to re-examination in one year.

7. Identification:

LP® SmartSide® and LP® SmartSide® ExpertFinish® 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, 368 for the Houlton, ME plant, 416 for the Newberry, MI plant, 407 for the Sagola, MI plant, 457 for the Swan Valley, MB plant, 435 for the Tomahawk, WI plant, or 399 for the Two Harbors, MN 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. **Maximum V_{ult} or V for vented^(a) LP® SmartSide® and LP® SmartSide® ExpertFinish® Soffit^(b)**

Minimum Nail Diameter ^(c) (inches)	Min. Nail Penetration in Framing (inches)	Performance Category	Support Spacing ^(d) (in.)	Panel Nail Spacing		Maximum Ultimate Wind Pressure (psf)	Maximum V_{ult} or V ^(e) (mph)		
				Edges (in. o.c.)	Field (in. o.c.)		Wind Exposure Category		
							B	C	D
0.092	1.5	3/8	24	6	12	29	105	90	NP ^(g)
					6	58	150	130	120
0.113	2.0	3/8 & 7/16	24	6	12	49	140	120	110
					6	98	200 ^(f)	170 ^(h)	150 ^(h)
0.113	1.9	19/32	24	6	12	45	130	115	105
					6	91	180	160	150
					4	136	200 ^(f)	200 ^(f)	200 ^(f)

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

- (a) Available vented area of 5 inches² per linear foot of soffit or 10 inches² per linear foot of soffit.
- (b) Panels shall be applied with strength axis across supports.
- (c) Fasteners shall be a hot-dip galvanized (ASTM A153) or equivalent, plain (smooth) shank nails. Fastener dimensions are as specified in ASTM F1667.
- (d) Supporting framing must have a minimum specific gravity of 0.42.
- (e) 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 7-22, ASCE 7-16, and ASCE 7-10, Section R301.2.1 of the 2024 through 2015 IRC, and Section 1609.1.1 of the 2024 through 2015 IBC.
- (f) Table R301.2.1(1) of the 2024 and 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.
- (g) Not permitted.
- (h) Limited by panel capacity, use 19/32 vented soffit with 4-inch field nailing for 180 mph wind speed.

Table 2. **Maximum V_{ult} or V for non-vented LP® SmartSide® and LP® SmartSide® ExpertFinish® Soffit^(a)**

Minimum Nail Diameter ^(b) (inches)	Min. Nail Penetration in Framing (inches)	Performance Category	Support Spacing ^(c) (in.)	Panel Nail Spacing		Maximum Ultimate Wind Pressure (psf)	Maximum V_{ult} or V ^(d) (mph)		
				Edges (in. o.c.)	Field (in. o.c.)		Wind Exposure Category		
							B	C	D
0.092	1.5	3/8	24	6	12	29	105	90	NP ^(f)
					6	58	150	130	120
0.113	2.1	3/8	24	6	12	51	140	120	110
					6	101	200 ^(e)	170	150
					4	124	200 ^(e)	180	170 ^(g)
0.113	2.0	7/16	24	6	12	49	140	120	110
					6	98	200 ^(e)	170	150
					4	147	200 ^(e)	200 ^(e)	180
0.113	1.9	19/32	24	6	12	45	130	115	105
					6	91	180	160	150
					4	136	200 ^(e)	200 ^(e)	180

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) Fasteners shall be a hot-dip galvanized (ASTM A153) or equivalent, plain (smooth) shank nails. Fastener dimensions are as specified in ASTM F1667.
- (c) Supporting framing must have a minimum specific gravity of 0.42.
- (d) 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 7-22, ASCE 7-16, and ASCE 7-10, Section R301.2.1 of the 2024 through 2015 IRC, and Section 1609.1.1 of the 2024 through 2015 IBC.
- (e) Table R301.2.1(1) of the 2024 and 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.
- (f) Not permitted.
- (g) Limited by panel capacity, use 7/16 or greater non-vented soffit for 180 mph wind speed.

Table 3. Maximum V_{ult} or V_{LP} ® SmartSide® and LP® SmartSide® ExpertFinish® Nickel Gap Lap Siding used as porch ceiling or soffit^(a)

Minimum Nail Diameter ^(b) (inches)	Min. Nail Penetration in Framing (inches)	Support Spacing ^(c) (in.)	Lap Nailing ^(d)	Maximum Ultimate Wind Pressure (psf)	Maximum V_{ult} or $V^{(e)}$ (mph)		
					Wind Exposure Category		
					B	C	D
0.092	1.4	24	Shiplap	40	120	105	95
			Intermediate	80	180	150	140
0.113	2.0	24	Shiplap	71	170	140	130
			Intermediate	133	200 ^(f)	180	180

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

- ^(a) ½ Performance Category Nickel Gap Lap siding shall be installed following manufacturer’s recommendations.
- ^(b) Fasteners shall be a hot-dip galvanized (ASTM A153) or equivalent, plain (smooth) shank nails. Fastener dimensions are as specified in ASTM F1667. Assumed penetration depth of fastener into framing is the nail length minus 0.5-inches.
- ^(c) Supporting framing must have a minimum specific gravity of 0.42.
- ^(d) Shiplap edge nailing is one nail driven through the shiplap edge at top and bottom of lap siding. Intermediate nailing is one additional nail driven at the center of the width, following the manufacturer’s recommendations.
- ^(e) 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 7-22, ASCE 7-16, and ASCE 7-10, Section R301.2.1 of the 2024 through 2015 IRC, and Section 1609.1.1 of the 2024 through 2015 IBC.
- ^(f) Table R301.2.1(1) of the 2024 and 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.

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