NORTH

GRAPHIC SCALE

APRIL 17, 2019

APPROVALS

SITE IMPROVEMENT PLAN

NOTES:

NOTES:

NOTES:

STONE ROAD 60' (C.H. 8)

SUMMIT COUNTY
PORTAGE COUNTY

Randy Bright

16X20 WOODSHED

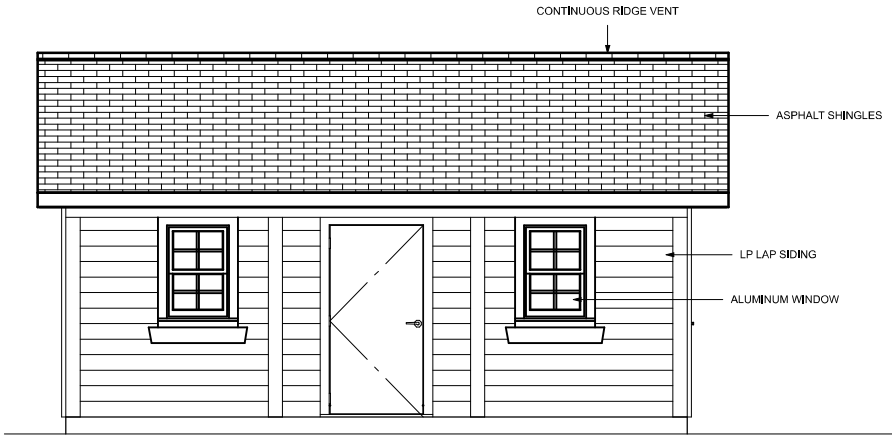
May 2021

DRAWING INDEX:

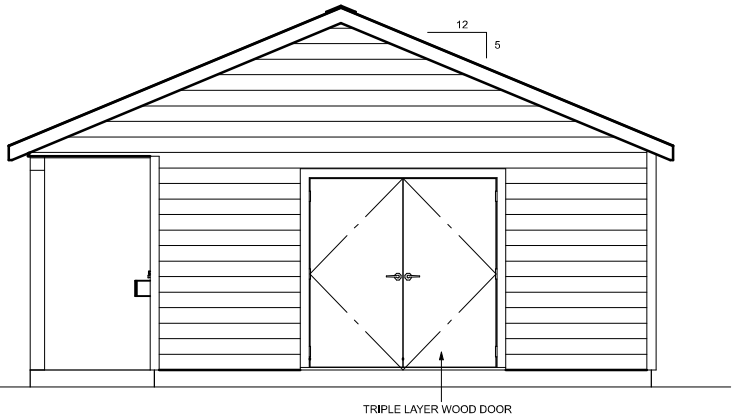
DRAWINGS PROVIDED BY: Weaver Barns

Hudson OH

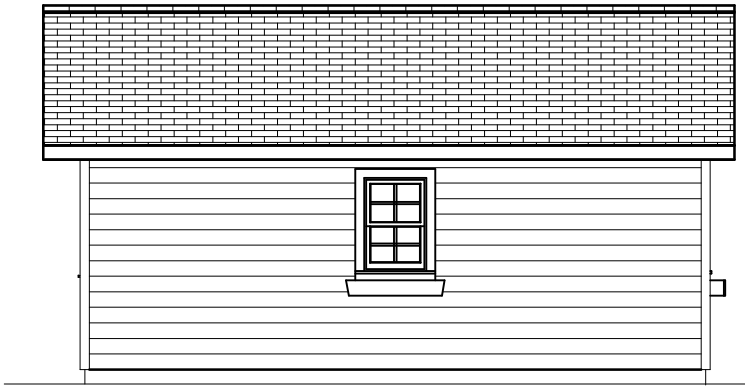
Randy Bright



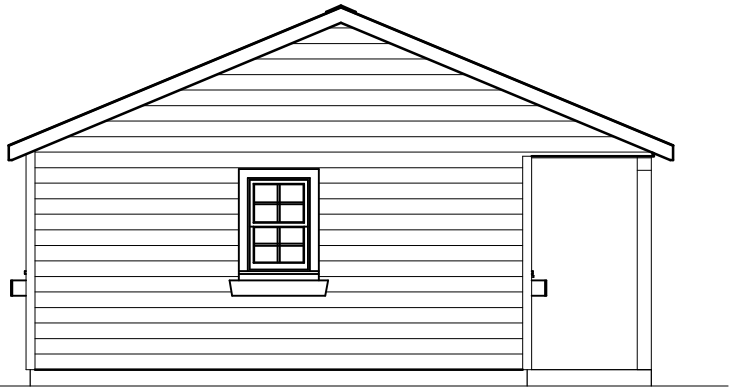
FRONT EXTERIOR ELEVATION



RIGHT EXTERIOR ELEVATION



REAR EXTERIOR ELEVATION



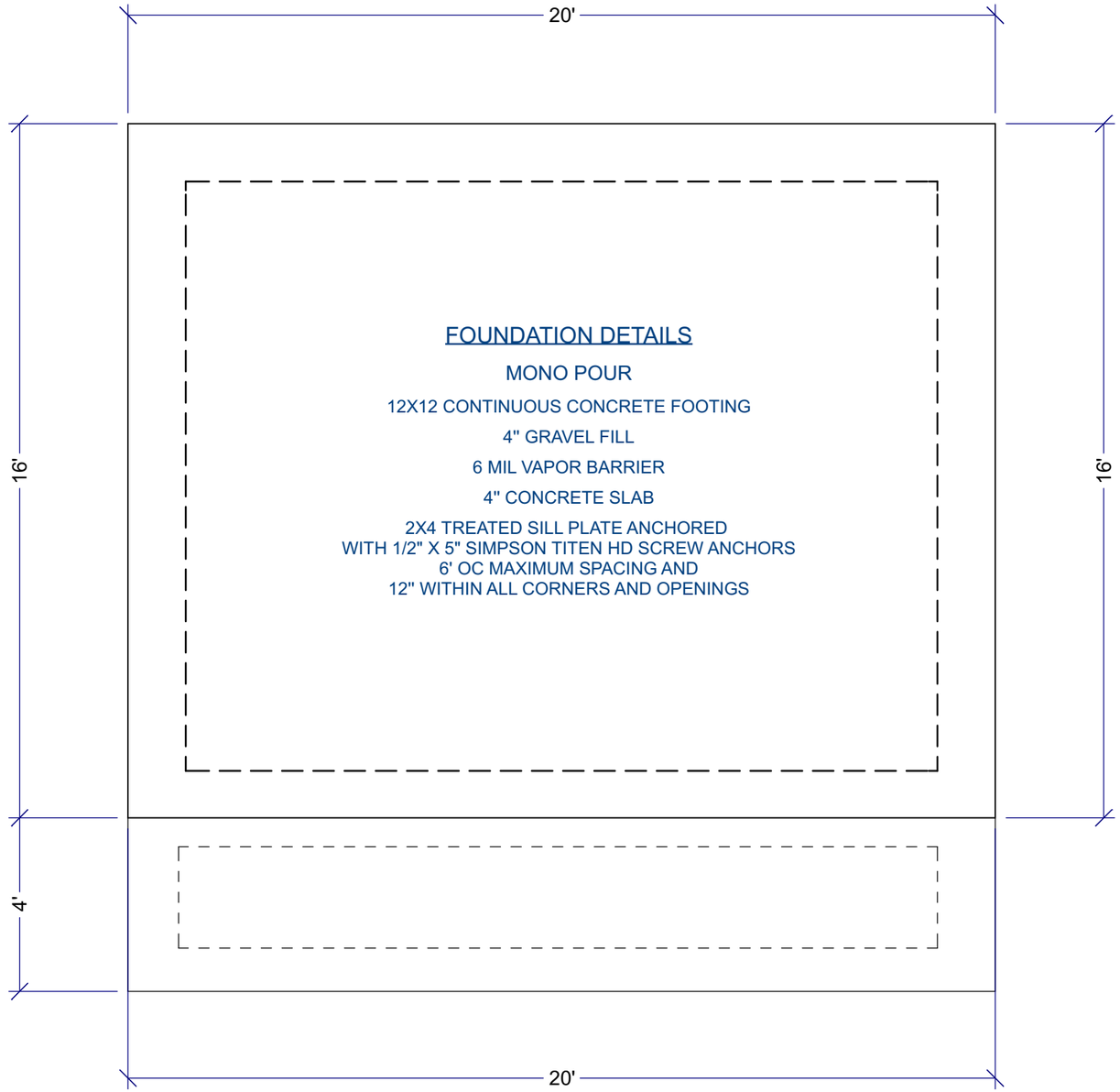
LEFT EXTERIOR ELEVATION

DRAWINGS PROVIDED BY: Weaver Barns

ELEVATIONS

Randy Bright
6290 Stone Rd
Hudson OH 44236

REVISED:	
5/28/2021	
DRAWN BY:	
A.T.	
SHEET SIZE:	
11" X 17"	
SCALE:	
1/4" = 1'	
SHEET:	
A-1	

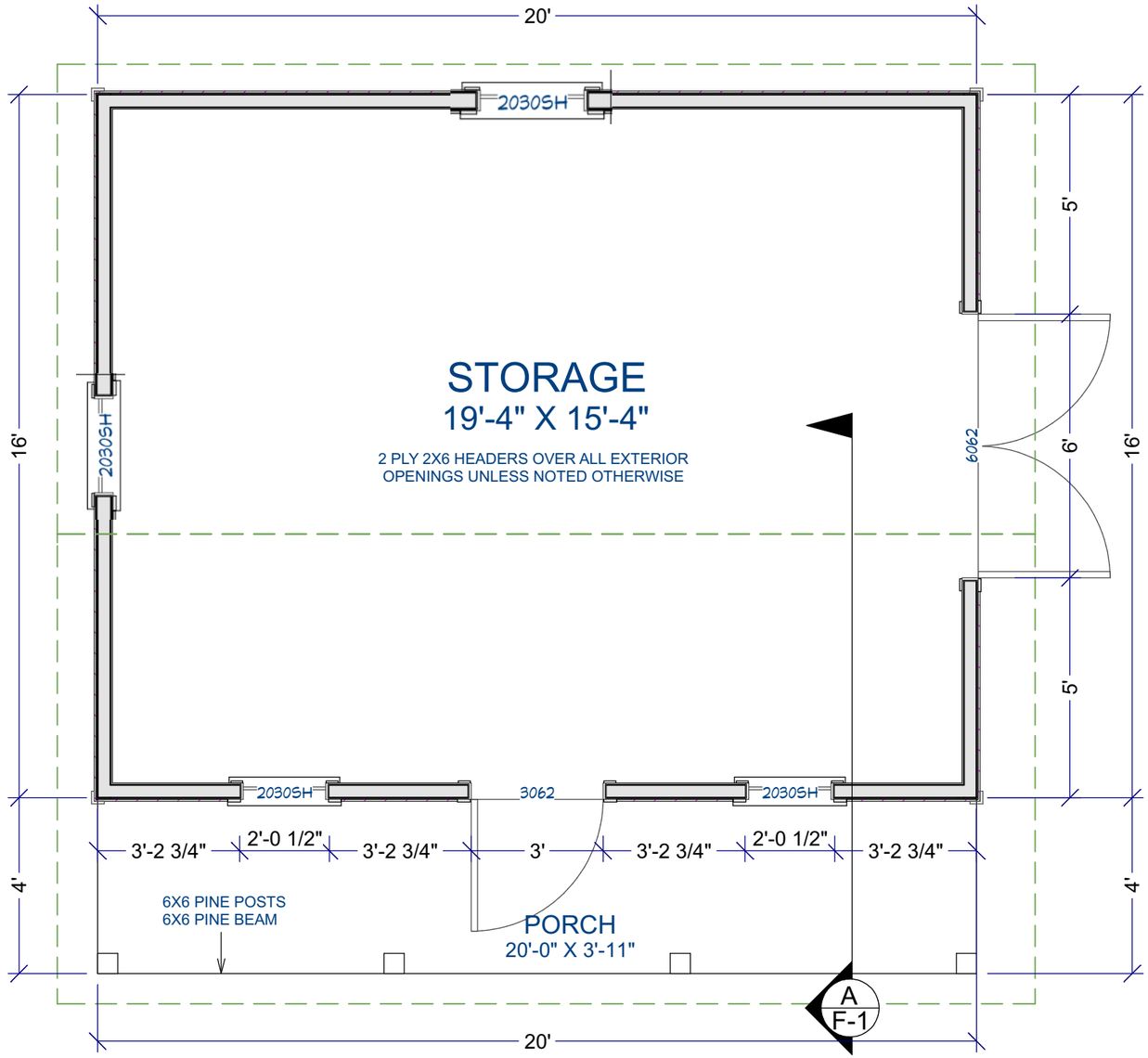


DRAWINGS PROVIDED BY:
Weaver Barns

FOUNDATION PLAN

Randy Bright
6290 Stone Rd
Hudson OH 44236

REVISED:	
5/10/2021	
DRAWN BY:	
A.T.	
SHEET SIZE:	
11'' X 17''	
SCALE:	
5/16" = 1'	
SHEET:	
A-2	

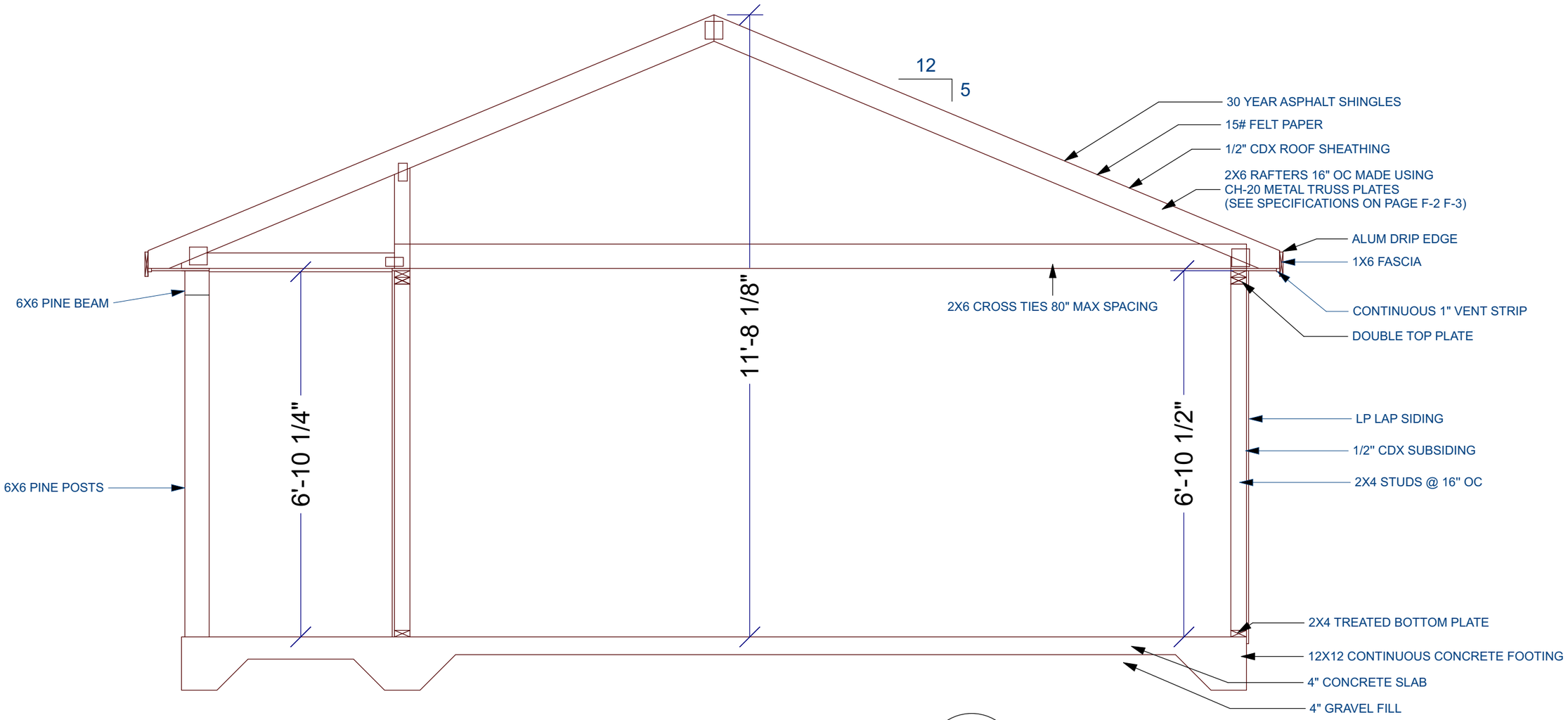


DRAWINGS PROVIDED BY:
Weaver Barns

FIRST FLOOR PLAN

Randy Bright
6290 Stone Rd
Hudson OH 44236

REVISED:
5/10/2021
DRAWN BY:
A.T.
SHEET SIZE:
11'' X 17''
SCALE:
5/16" = 1'
SHEET:
A-3



FRAMING SECTION

SCALE: 1/2" = 1'

A
F-1

DRAWINGS PROVIDED BY: Weaver Barns

CROSS SECTIONS

Randy Bright
6290 Stone Rd
Hudson OH 44236

REVISED:
5/10/2021

DRAWN BY:
A.T.

SHEET SIZE:
11'' X 17''

SHEET:
F-1

OAKRIDGE®
Shingles

TOTAL PROTECTION ROOFING SYSTEM

TOTAL PROTECTION. TOTAL CONFIDENCE.®

SEAL. DEFEND. BREATHE.

Oakridge® Shingles

Make it your own.

When does a house become a home? When the place you live in begins to reflect the life you're living. When every change, both big and small, makes it more and more your own. Choosing a new roof is your opportunity to make a major impact on the look of your home — and we're here to help. Owens Corning has been a leader in the building materials industry for over 75 years. So you can be confident that your new roof will enhance and help protect your home for years to come.

The Right Choice.®

Oakridge® Shingles are The Right Choice® for long-lasting performance and striking beauty. In addition to a wide range of inviting, popular colors, they also offer:

- Limited Lifetime Warranty*/‡ (for as long as you own your home)
- 110/130** MPH Wind Resistance Limited Warranty*
- StreakGuard™ Protection with a 10-year Algae Resistance Limited Warranty.*

Your home is your canvas.

At Owens Corning Roofing, we're always looking for ways to help you express your sense of style through your home, which is why we've expanded the Oakridge® color palette with these inspiring selections.

Oakridge® Shingles are specially designed to provide a unique blend of artistry and craftsmanship that will give your home a look that is anything but ordinary. Blacks and grays are rich and warm, earth tones capture the vibrancy of nature's brightest hues, and bold color combinations help enhance a wide variety of exterior accents and landscaping. Plus, every Oakridge® Shingle features great contrast and color depth to add drama and curb appeal to your entire home.

Aged Cedar†

Oakridge® Shingle Colors

Brownwood†

Chateau Green†
Not Available in Service Area 1 (see map).

Desert Tan†

Driftwood†

Estate Gray†

Onyx Black†

Shasta White†

Sierra Gray†

Teak†
Not Available in Service Area 1 (see map).

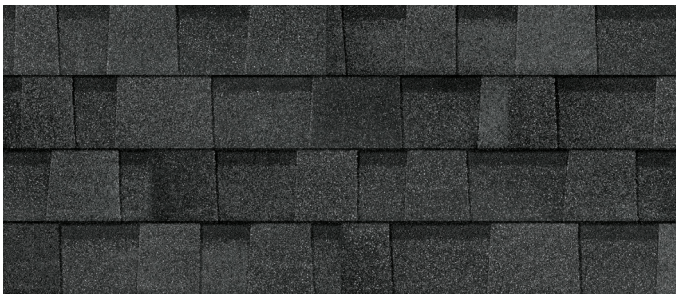
Enhanced colors and bold designs.

Aged Cedar†

Flagstone†

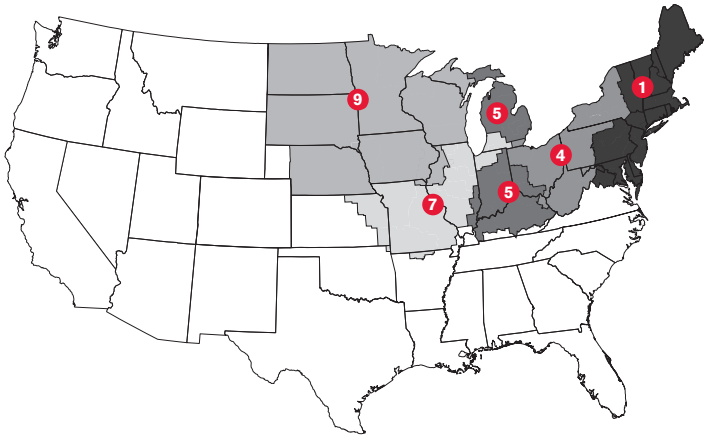
Peppermill Gray†

Sand Castle†



Twilight Black†

Color Availability Map



ENERGY STAR® is for roofs too.

Similar to the energy-efficient appliances in your home, roofing products can help provide energy-saving qualities. Owens Corning® Oakridge® Roofing Shingles in Shasta White can help reduce your heating and cooling bills when installed properly. These shingles reflect solar energy, helping to decrease the amount of heat transferred to a home's interior — and the amount of air conditioning needed to keep it comfortable. Actual savings will vary based on geographic location and individual building characteristics. Call 1-800-GET-PINK® or 1-888-STAR-YES for more information.

Product Attributes

Warranty Length*

Limited Lifetime‡ (for as long as you own your home)

Wind Resistance Limited Warranty*

110/130** MPH

Algae Resistance Limited Warranty*

10 Years

TRU PROtection® Non-Prorated Limited Warranty* Period

10 Years

Product Specifications

Size	13¼" x 39⅜"
Application Exposure	5⅝"
Shingles per Bundle	Not less than 20
Average Shingle Count per 3 Bundles	64
Average Coverage per 3 Bundles	98.4 sq. ft.

Applicable Standards and Codes

ASTM D228

ASTM D3018 (Type 1)

ASTM D3161 (Class F Wind Resistance)

ASTM D3462

ASTM D7158 (Class H Wind Resistance)

ASTM E108/UL 790 (Class A Fire Resistance)

ICC-ES AC438#

PRI ER 1378E01

Shasta White color meets ENERGY STAR® requirements for initial solar reflectance of 0.25 and 3-year aged solar reflectance of 0.15; 2013 California Building Energy Efficiency Standards, Title 24, Part 6 requirements; rated by the Cool Roof Rating Council (CRRC).

The perfect finishing touch.

Owens Corning® Roofing Hip & Ridge Shingles do more than just deliver added protection to the most vulnerable areas of your roof — they enhance the roofline and help define the character of your entire home.

Don't accept a generic substitute. Be sure to choose the right Owens Corning® Roofing Hip & Ridge style and specially matched color to provide the perfect finishing touch to your new roof.

Peppermill Gray†

Desert Tan†

Total Protection Roofing System®^

TOTAL PROTECTION SIMPLIFIED™

Owens Corning® Total Protection Roofing System®^ integrates engineered Owens Corning® components that work together to address these three primary performance areas, critical to a high-performance roof, while also making it easy to understand the importance of each. **With Owens Corning, it's easy to confidently deliver total protection, beauty and peace of mind.**

SEAL.

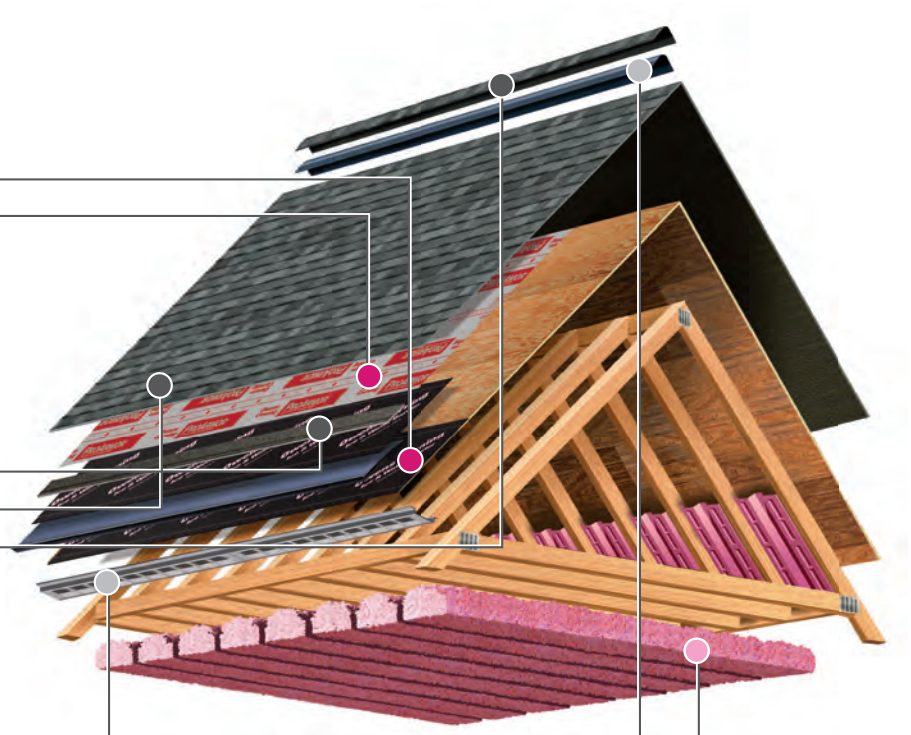
SELF-ADHERED ICE
& WATER BARRIER
SYNTHETIC UNDERLAYMENT

DEFEND.

STARTER SHINGLES
LAMINATE SHINGLES
HIP & RIDGE SHINGLES

BREATHE.

INTAKE VENTS
EXHAUST VENTS



+ COMFORT.

PINK® FIBERGLAS™
BLOWN-IN
ATTIC INSULATION

Home sweet home.

Owens Corning Roofing wants to help make your purchase of a new roof a positive experience. Not only can we help you choose the right shingle and roofing system components, but we can also help you select the right contractor for the job. Don't worry — we know this is a big decision. We're here to help you feel confident about choosing our roofing products. After all, we're America's most trusted roofing brand†† for a reason.

Flagstone†

Want design assistance or more information about Owens Corning® Roofing products? Or want to find an Owens Corning Roofing Preferred Contractor network member?

It's easy to reach us:

1-800-GET-PINK®
www.owenscorning.com/roofing

* See actual warranty for complete details, limitations and requirements.

** 110 MPH is standard with 4-nail application. 130 MPH is applicable only with 6-nail application and Owens Corning® Starter Shingle products application along eaves and rakes in accordance with installation instructions.

† Owens Corning strives to accurately reproduce photographs of shingles. Due to manufacturing variances, the limitations of the printing process and the variations in natural lighting, actual shingle colors and granule blends may vary from the photo. The pitch of your roof can also impact how a shingle looks on your home. We suggest that you view a roofing display or several shingles to get a better idea of the actual color. To accurately judge your shingle and color choice, we recommend that you view it on an actual roof with a pitch similar to your own roof prior to making your final selection. Color availability subject to change without notice. Ask your professional roofing contractor for samples of colors available in your area.

‡ 40-year Limited Warranty on commercial projects.

†† 2018 Roofing Brand Awareness Study by Owens Corning Roofing and Asphalt LLC.

\# International Code Council Evaluation Services Acceptance Criteria for Alternative Asphalt Shingles.

ENERGY STAR and the ENERGY STAR mark are registered trademarks of the U.S. Environmental Protection Agency.

^ Excludes non-Owens Corning® roofing products such as flashing, fasteners, pipe boots and wood decking

Shingles are algae resistant to help control the growth of algae and discoloration.

For patent information, please visit www.owenscorning.com/patents.

OWENS CORNING ROOFING AND ASPHALT, LLC
ONE OWENS CORNING PARKWAY
TOLEDO, OHIO, USA 43659

1-800-GET-PINK®
www.owenscorning.com/roofing

Pub. No. 10017748-F. Printed in U.S.A. October 2019.

Owens Corning Roofing Platinum and Preferred Contractors are independent contractors and are not affiliates of Owens Corning.

(Brookville, Kearny, Medina, Minneapolis, Summit)

APA PRODUCT REPORT®

www.apawood.org

LP® SmartSide® Strand Substrate **PR-N124**
Treated-Engineered-Wood Lap, Panel, and Vertical Siding
Louisiana-Pacific Corporation Revised July 2, 2020

Product: LP® SmartSide® Strand Substrate Treated-Engineered-Wood Lap, Panel, and Vertical Siding
Louisiana-Pacific Corporation, 414 Union Street, Suite 2000, Nashville, TN 37219
(800) 450-6106
www.lpcorp.com

1. Basis of the product report:
   - 2018, 2015, 2012, and 2009 International Building Code: Section 104.11 Alternative materials
   - 2018, 2015, 2012, and 2009 International Residential Code: Section R104.11 Alternative materials
   - ANSI/AWC SDPWS-2015 Special Design Provisions for Wind and Seismic
   - ASCE 7-16, ASCE 7-10, and ASCE 7-05 Minimum Design Loads for Buildings and Other Structures
   - APA PRP-108 Performance Standards and Qualification Policy for Structural-Use Panels
   - NES Evaluation Protocol for Determination of Flood-Resistance Properties of Building Elements
   - APA Reports R&D 87Q-1, T87Q-45, T91Q-11, T91Q-20, T97Q-4, T97Q-10, T98Q-13, T98Q-17, T99Q-23, T2008Q-12, T2008P-73, T2008P-74, T2009Q-54, T2011Q-59, T2012P-22, T2015Q-38, T2015Q-39, T2017P-03, and T2018P-05, and other qualification data.

2. Product description:
   Louisiana-Pacific Corporation (LP®) SmartSide® Strand Substrate Treated-Engineered-Wood Lap, Panel, and Vertical Siding is overlaid with a resin treated paper and is available with either a smooth or embossed surface texture. The 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. All edges are factory sealed with a primer.

   LP SmartSide lap siding is available in 3/8 and 7/16 Performance Categories, in nominal widths of 5, 6, 7, 8, 9-1/2, and 12 inches and in lengths up to 16 feet. The lap siding may be installed horizontally or vertically.

   LP SmartSide panel siding is available in 3/8, 7/16 and 19/32 Performance Categories, 4 feet in width, and up to 18 feet in length. The 3/8 Performance Category panels are available without grooves or with grooves spaced 8 inches on center. The 7/16 and 19/32 Performance Category panels are available without grooves or with grooves spaced either 4 or 8 inches on center. Minimum thicknesses at the groove and shiplap are documented in the plant Quality Manual.

   LP SmartSide Vertical Siding is a narrow width panel siding and is available in 3/8 Performance Category, nominal width of 16 inches, and in 16-foot lengths. The vertical siding can only be installed vertically.

3. Design properties:
   Allowable racking shear values for LP SmartSide Strand Substrate panel siding are listed in Table 1. For 3/8 Performance Category panels nailed at shiplap edges, use 5/16

Performance Category shear values. For 7/16 and 19/32 Performance Category panel sidings nailed at shiplap edges, use 3/8 Performance Category shear values. Design wind loads for LP SmartSide Strand Substrate lap and panel siding are listed in Tables 2 and 3, respectively. Design wind loads for LP SmartSide Strand Substrate lap and panel siding when installed over the facer of structural insulated panels (SIPs) and wood structural panel (WSP) sheathing are listed in Tables 4 and 5, respectively. Design wind loads for LP SmartSide Strand Substrate Vertical Siding and lap siding applied vertically are listed in Table 6.

4. Product installation:
LP SmartSide Strand Substrate Treated-Engineered-Wood Lap, Panel, and Vertical Siding shall be installed in accordance with recommendations provided by the manufacturer (www.lpcorp.com/products/siding/lp-smartside-trim-siding/) and APA *Engineered Wood Construction Guide*, Form E30 (www.apawood.org/resource-library), as applicable. The maximum span shall be in accordance with the Span Rating shown in the trademark. The LP SmartSide Strand Substrate lap and panel siding shall be permitted to be installed over the facer of structural insulated panels (SIPs) and WSP sheathing in accordance with Tables 4 and 5, respectively.

LP SmartSide lap siding, when installed vertically, shall be installed over a minimum 7/16 Performance Category wood structural panel sheathing meeting DOC PS1 or DOC PS2 requirements, and shall be covered by a batten at the siding joint or shall be overlapped with another vertical lap siding in accordance with the recommendations provided by the manufacturer, as shown in Figures 1 through 4. Lap siding installed vertically can only span one floor plate-to-plate. Each vertical application shall not span beyond one floor to ceiling distance, or one floor to top of gable distance.

LP SmartSide Vertical Siding shall be installed over a minimum 7/16 Performance Category wood structural sheathing meeting DOC PS1 or DOC PS2 requirements, and shall be covered by a batten at the panel joint in accordance with the recommendations provided by the manufacturer, as shown in Figures 2, 5, and 6. Vertical Siding can only span one floor plate-to-plate. Each vertical application shall not span beyond one floor to ceiling distance, or one floor to top of gable distance.

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 in APA *Fire-Rated Systems*, Form W305 (see link above).

6. Flood resistance evaluation:
Selected properties critical to flood resistance of 3/8 and 7/16 Performance Category panel siding, including uniform loads, concentrated static loads, concentrated hard body and soft body impact loads, fastener performance, wall racking resistance, edge thickness swell, linear expansion, hygroscopicity, exterior bond performance and large panel and small specimen bending properties were evaluated at a 16 o.c. Span Rating in accordance with *NES Evaluation Protocol for Determination of Flood-Resistance Properties of Building Elements*. Test results in the dry (as-received) condition and after moisture cycling in accordance with the NES protocol were compared to the requirements specified in ICC Evaluation Service (ICC-ES) *Acceptance Criteria for Treated-Engineered-Wood Siding* (AC321).

7. Limitations:
   a) LP SmartSide Strand Substrate Treated-Engineered-Wood Lap, Panel, and Vertical Siding used outdoors must be finished in accordance with recommendations provided

by the manufacturer (see link above) and APA *Engineered Wood Construction Guide*, Form E30 (see link above).

b) The efficacy of the preservative treatment of the LP SmartSide siding is outside the scope of this report and the APA certification program.

c) LP SmartSide Strand Substrate Treated-Engineered-Wood panel siding is flood resistant on the properties listed in Section 6. This evaluation applies to 3/8 and 7/16 Performance Category panel siding at a 16 o.c. Span Rating.

d) LP SmartSide Strand Substrate Treated-Engineered-Wood Lap and Panel Siding is produced at Louisiana-Pacific Corporation facilities at Dawson Creek, BC, Hayward, WI, Newberry, MI, Tomahawk, WI, Two Harbors, MN, and Swan Valley, MB, and LP SmartSide Strand Substrate Treated-Engineered-Wood Vertical Siding is produced at Louisiana-Pacific Corporation facility at Tomahawk, WI, under a quality assurance program audited by APA.

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

8. Identification:
LP SmartSide Strand Substrate Treated-Engineered-Wood Lap, Panel, and Vertical 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, 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-N124, and a means of identifying the date of manufacture.

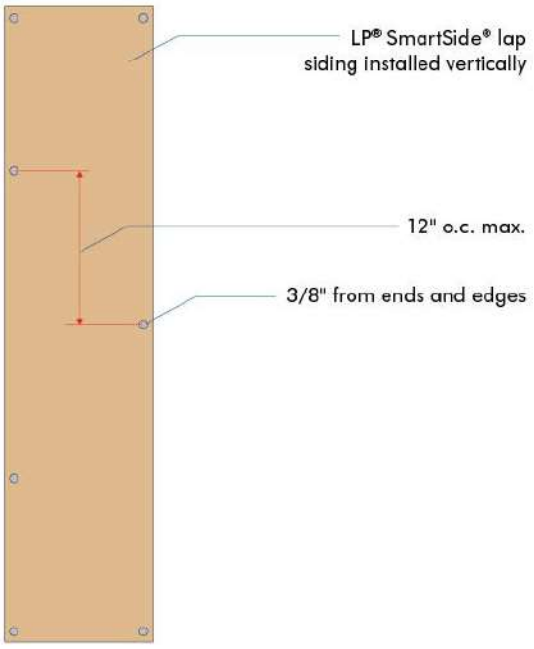


Figure 1. Lap siding installed vertically

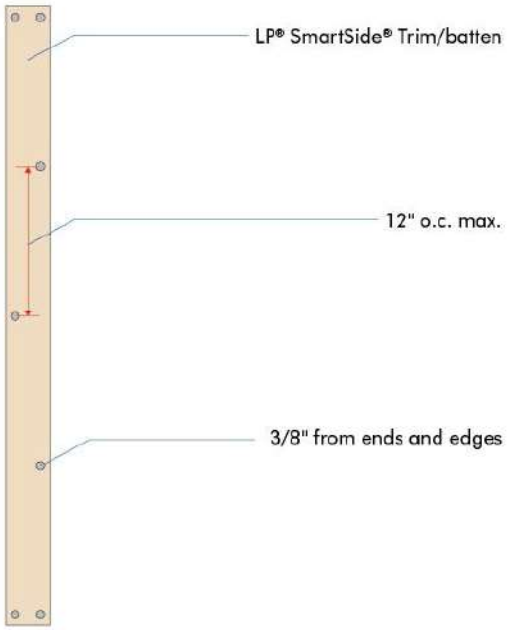


Figure 2. LP SmartSide Trim/Batten

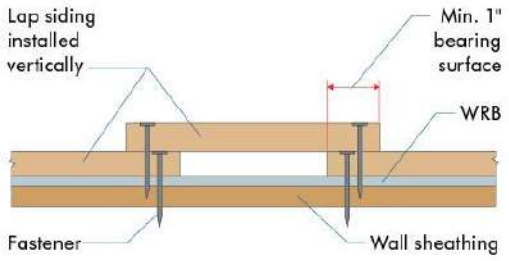


Figure 3. Lap siding attachment detail

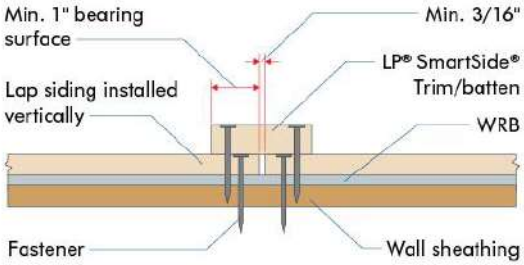


Figure 4. LP SmartSide Trim/Batten attachment detail

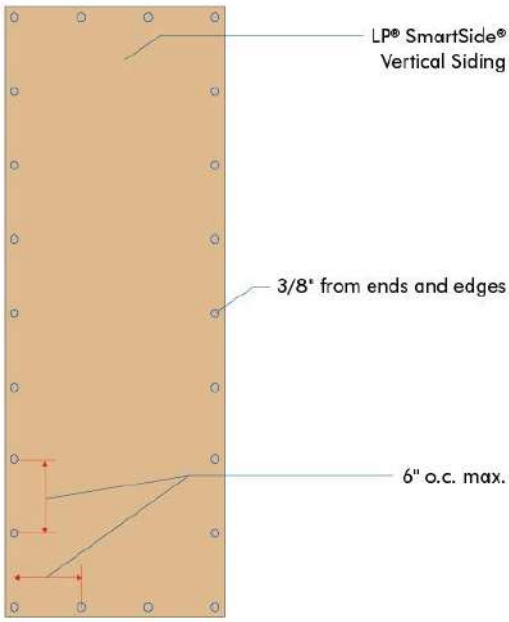


Figure 5. Vertical Siding

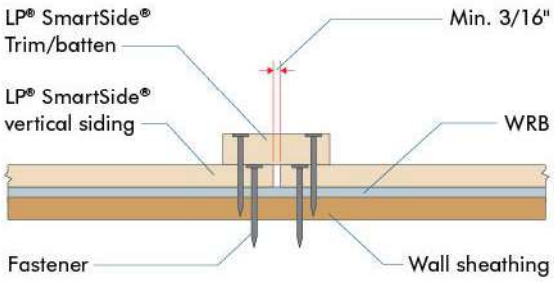


Figure 6. Vertical Siding attachment detail

Table 1. Allowable Racking Shear (plf) for LP SmartSide Strand Substrate Treated-Engineered-Wood Panel Siding Shear Walls with Framing of Douglas-Fir-Larch or Southern Pine for Wind or Seismic Loading[1,2,3]

Performance Category	Min. Nail Penetration in Framing (inches)	Panels Applied Directly to Framing					Panels Applied Over Max. 5/8-inch Gypsum Sheathing				
		Nail Size (common or galvanized box)[7,8]	Nail Spacing at Panel Edges (inches)				Nail Size (common or galvanized box)[7,8]	Nail Spacing at Panel Edges (inches)			
			6	4	3	2[4]		6	4	3	2[4]
5/16[5,6]	1-1/4	6d	180	270	350	450	8d	180	270	350	450
3/8[5,6]			200	300	390	510		200	300	390	510
3/8[5,6]	1-1/2	8d	220	320	410	530	10d	260	380	490[4]	640
7/16[5]			240	350	450	585		260	380	490[4]	640
19/32[5]	1-5/8	10d	340	510	665[4]	870	-	-	-	-	-

For **SI**: 1 inch = 25.4 mm, 1 plf = 14.6 N/m.

(1) For framing of other species: (a) find specific gravity for species of lumber in the National Design Specification for Wood Construction (NDS); (b) find shear value from table for nails size; (c) multiply value by 0.82 for species with specific gravity greater than or equal to 0.42 but less than 0.49, or 0.65 for species with specific gravity less than 0.42.

(2) All panel edges must be backed with 2-inch nominal or wider framing. Panels must be installed with the long dimension oriented in the vertical direction. Space nails 6 inches o.c. along intermediate framing members for 3/8 and 7/16 Performance Category panels installed on studs spaced 24 inches o.c. For other conditions and panel performance categories, space nails 12 inches o.c. on intermediate supports.

(3) For shear loads of normal or permanent load duration, the values in the table shall be multiplied by 0.63 or 0.56, respectively. For wind load applications, the values in the table shall be permitted to be multiplied by 1.4.

(4) Framing at panel edges must be 3 inches nominal or wider and nails must be staggered where nails are spaced 2 inches o.c., and where 10d nails having penetration into framing of more than 1-5/8 inches are spaced 3 inches or less, o.c. **Exception:** Unless otherwise required, 2-inch nominal framing may be used where full nailing surface is available and nails are staggered.

(5) Except as noted in Footnote 7, panel thickness at point of nailing at panel edges determines applicable shear values, except that 3/8 Performance Category panels nailed at shiplap edges use 5/16 Performance Category shear values, and 7/16 and 19/32 Performance Category panel sidings nailed at shiplap edges use 3/8 Performance Category shear values.

(6) Shiplap edges must be double-nailed; one nail must be placed in the underlap and a second nail must be placed in the overlap at the nail spacing specified for the applicable shear value.

(7) Fasteners must not be installed in panel siding grooves in the field of the panel siding or when the panel siding grooves occur at cut edges of the panel siding.

(8) Fastener dimensions are as specified in ASTM F1667.

Table 2a. Lap Siding Installed Horizontally with 0.113" Nails[1] – **Max. Allowable Wind Speed, V_{asd}[2]**

Performance Category	Max. Stud Spacing[3] (inches)	Siding Width (inches)	Max. Allowable Wind Pressure (psf)	Max. Allowable Wind Speed, V_{asd}[4] (mph)		
				Wind Exposure Category		
				B	C	D
3/8	16	5	80	170	150	140
		6	80	170	150	140
		7	80	170	150	140
		8	74	170	145	130
		9.5	61	150	130	120
		12	47	130	110	105
7/16	16	6	80	170	150	140
		7	80	170	150	140
		8	74	170	145	130
		9.5	65	150	130	125
		12	47	130	110	105
	24	6	69	150	140	130
		7	58	150	130	110
		8	49	140	120	110
		9.5	41	125	105	100
		12	31	110	90	85

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-dipped 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 dipped 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 6 of ASCE 7-05, Section R301.2.1 of the 2009 and 2012 IRC, and Section 1609.1.1 of the 2009 IBC.

Table 2b. Lap Siding Installed Horizontally with 0.113" Nails[1] – **Max. Ultimate Wind Speed, V_{ult}[2]**

Performance Category	Max. Stud Spacing[3] (inches)	Siding Width (inches)	Max. Ultimate Wind Pressure (psf)	Max. Ultimate Wind Speed, V_{ult}[4] (mph)		
				Wind Exposure Category		
				B	C	D
3/8	16	5	133	200[5]	180	180
		6	133	200[5]	180	180
		7	133	200[5]	180	180
		8	123	200[5]	180	160
		9.5	102	200[5]	160	150
		12	79	180	150	140
7/16	16	6	133	200[5]	180	180
		7	133	200[5]	180	180
		8	123	200[5]	180	160
		9.5	102	200[5]	160	150
		12	79	180	150	140
	24	6	115	200[5]	180	160
		7	96	180	160	150
		8	85	180	150	140
		9.5	68	160	140	130
		12	52	140	120	110

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-dipped 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 dipped 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 2018 and 2015 IRC, and Section 1609.1.1 of the 2018, 2015, and 2012 IBC.

(5) 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. Lap Siding Installed Horizontally with 0.092" Nails – **Max. Allowable Wind Speed, V_{asd}**[1]

Performance Category	Max. Stud Spacing[2] (inches)	Siding Width (inches)	Max. Allowable Wind Pressure (psf)	Max. Allowable Wind Speed, V_{asd}[3] (mph)		
				Wind Exposure Category		
				B	C	D
3/8	16	5	78	170	150	130
		6	63	150	130	125
		7	52	145	120	110
		8	45	130	110	105
		9.5	37	120	100	90
		12	28	105	90	-
7/16	16	6	63	150	130	125
		7	52	145	120	110
		8	45	130	110	105
		9.5	37	120	100	90
		12	28	105	90	-
	24	6	42	130	110	100
		7	35	120	100	90
		8	30	110	90	85
		9.5	25	100	85	-
		12	19	85	-	-

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 dipped 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 6 of ASCE 7-05, Section R301.2.1 of the 2009 and 2012 IRC, and Section 1609.1.1 of the 2009 IBC.

Table 2d. Lap Siding Installed Horizontally with 0.092" Nails – **Max. Ultimate Wind Speed, V_{ult}**[1]

Performance Category	Max. Stud Spacing[2] (inches)	Siding Width (inches)	Max. Ultimate Wind Pressure (psf)	Max. Ultimate Wind Speed, V_{ult}[3] (mph)		
				Wind Exposure Category		
				B	C	D
3/8	16	5	131	200[4]	180	180
		6	104	200[4]	160	160
		7	87	180	160	140
		8	75	160	140	130
		9.5	61	150	130	120
		12	47	140	115	-
7/16	16	6	104	200[4]	160	160
		7	87	180	160	140
		8	75	160	140	130
		9.5	61	150	130	120
		12	47	140	115	-
	24	6	70	160	140	130
		7	58	150	130	120
		8	50	140	120	110
		9.5	41	130	110	-
		12	32	110	-	-

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 dipped 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 2018 and 2015 IRC, and Section 1609.1.1 of the 2018, 2015, and 2012 IBC.

(4) 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 3a. Panel Siding Installed Vertically with 0.113" Nails – **Max. Allowable Wind Speed, V_{asd}**

Performance Category	Max. Stud Spacing[2] (inches)	Fastener Spacing[1] (inches o.c.)		Max. Allowable Wind Pressure (psf)	Max. Allowable Wind Speed, V_{asd}[3] (mph)		
					Wind Exposure Category		
		Edges	Field		B	C	D
3/8	16	6	12	43	130	110	100
			6	80	170	150	140
	24	6	12	29	105	90	-
			6	58	150	130	110
7/16	16	6	12	43	130	110	100
			6	80	170	150	140
	24	6	12	29	105	90	-
			6	58	150	130	110
19/32	16	6	12	43	130	110	100
			6	80	170	150	140
	24	6	12	29	105	90	-
			6	58	150	130	110

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

(1) Fasteners shall be a hot dipped 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.

(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 6 of ASCE 7-05, Section R301.2.1 of the 2009 and 2012 IRC, and Section 1609.1.1 of the 2009 IBC.

Table 3b. Panel Siding Installed Vertically with 0.113" Nails – **Max. Ultimate Wind Speed, V_{ult}**

Performance Category	Max. Stud Spacing[2] (inches)	Fastener Spacing[1] (inches o.c.)		Max. Ultimate Wind Pressure (psf)	Max. Ultimate Wind Speed, V_{ult}[3] (mph)		
					Wind Exposure Category		
		Edges	Field		B	C	D
3/8	16	6	12	72	160	140	130
			6	133	200[4]	180	180
	24	6	12	48	140	115	-
			6	96	180	160	150
7/16	16	6	12	72	160	140	130
			6	133	200[4]	180	180
	24	6	12	48	140	115	-
			6	96	180	160	150
19/32	16	6	12	72	160	140	130
			6	133	200[4]	180	180
	24	6	12	48	140	115	-
			6	96	180	160	150

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

(1) Fasteners shall be a hot dipped 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

(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 2018 and 2015 IRC, and Section 1609.1.1 of the 2018, 2015, and 2012 IBC.

(4) 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 3c. Panel Siding Installed Vertically with 0.092" Nails – **Max. Allowable Wind Speed, V_{asd}**

Performance Category	Max. Stud Spacing[2] (inches)	Fastener Spacing[1] (inches o.c.)		Max. Allowable Wind Pressure	Max. Allowable Wind Speed, V_{asd}[3] (mph)		
					Wind Exposure Category		
		Edges	Field		B	C	D
3/8	16	6	12	26	100	85	-
			6	52	145	120	110
	24	6	12	17	85	-	-
			6	35	120	100	90
7/16	16	6	12	26	100	85	-
			6	52	145	120	110
	24	6	12	17	85	-	-
			6	35	120	100	90
19/32	16	6	12	26	100	85	-
			6	52	145	120	110
	24	6	12	17	85	-	-
			6	35	120	100	90

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

(1) Fasteners shall be a hot dipped 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. **Configuration cannot be used for lateral bracing due to nail size.**

(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 6 of ASCE 7-05, Section R301.2.1 of the 2009 and 2012 IRC, and Section 1609.1.1 of the 2009 IBC.

Table 3d. Panel Siding Installed Vertically with 0.092" Nails – **Max. Ultimate Wind Speed, V_{ult}**

Performance Category	Max. Stud Spacing[2] (inches)	Fastener Spacing[1] (inches o.c.)		Max. Ultimate Wind Pressure (psf)	Max. Ultimate Wind Speed, V_{ult}[3] (mph)		
					Wind Exposure Category		
		Edges	Field		B	C	D
3/8	16	6	12	44	130	110	-
			6	87	180	160	140
	24	6	12	29	-	-	-
			6	58	150	130	120
7/16	16	6	12	44	130	110	-
			6	87	180	160	140
	24	6	12	29	-	-	-
			6	58	150	130	120
19/32	16	6	12	44	130	110	-
			6	87	180	160	140
	24	6	12	29	-	-	-
			6	58	150	130	120

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

(1) Fasteners shall be a hot dipped 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. **Configuration cannot be used for lateral bracing due to nail size.**

(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 2018 and 2015 IRC, and Section 1609.1.1 of the 2018, 2015, and 2012 IBC.

(4) 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 4a. Lap Siding Installed Horizontally to SIPs[1] or WSP Sheathing[5] – **Max. Allowable Wind Speed, V_{asd}[2]**

Minimum Performance Category	Max. Ring Shank Nail Spacing[3] (inches)	Siding Width (inches)	Max. Allowable Wind Pressure (psf)	Max. Allowable Wind Speed, V_{asd}[4] (mph)		
				Wind Exposure Category		
				B	C	D
3/8	8	5	80	170	150	140
		6	80	170	150	140
		7	80	170	150	140
		8	80	170	150	140
		9.5	77	170	150	130
		12	60	150	130	120
3/8	12	5	80	170	150	140
		6	80	170	150	140
		7	73	170	145	130
		8	62	150	130	125
		9.5	51	145	120	110
		12	40	125	105	90

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 PS2 requirements.

(2) The tabulated values represent the capacity of the LP 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 dipped 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 6 of ASCE 7-05, Section R301.2.1 of the 2009 and 2012 IRC, and Section 1609.1.1 of the 2009 IBC.

(5) Wood structural panel (WSP) sheathing shall be minimum 7/16 Performance Category OSB or Group 1 plywood meeting DOC PS1 or DOC PS2 requirements.

Table 4b. Lap Siding Installed Horizontally to SIPs[1] or WSP Sheathing[6] – **Max. Ultimate Wind Speed, V_{ult}[2]**

Minimum Performance Category	Max. Ring Shank Nail Spacing[3] (inches)	Siding Width (inches)	Max. Ultimate Wind Pressure (psf)	Max. Ultimate Wind Speed, V_{ult}[4] (mph)		
				Wind Exposure Category		
				B	C	D
3/8	8	5	133	200[5]	180	180
		6	133	200[5]	180	180
		7	133	200[5]	180	180
		8	133	200[5]	180	180
		9.5	129	200[5]	180	170
		12	99	200[5]	170	150
3/8	12	5	133	200[5]	180	180
		6	133	200[5]	180	180
		7	121	200[5]	180	170
		8	104	200[5]	170	160
		9.5	86	180	150	140
		12	66	160	140	120

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 PS2 requirements.

(2) The tabulated values represent the capacity of the LP 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 dipped 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 2018 and 2015 IRC, and Section 1609.1.1 of the 2018, 2015, and 2012 IBC.

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

(6) Wood structural panel (WSP) sheathing shall be minimum 7/16 Performance Category OSB or Group 1 plywood meeting DOC PS1 or DOC PS2 requirements.

Table 5a. Panel Siding Installed Vertically to SIPs[1] or WSP Sheathing[5] – **Max. Allowable Wind Speed, V_{asd}[2]**

Performance Category	Maximum Ring Shank Nail Spacing[3] (inches o.c.)		Maximum Allowable Wind Pressure (psf)	Max. Allowable Wind Speed, V_{asd}[4] (mph)		
				Wind Exposure Category		
	Vertical	Horizontal		B	C	D
3/8	8	8	80	170	150	140
	10	10	52	145	120	110
	12	12	36	120	100	90
	16	16	20	90	-	-
7/16	8	8	80	170	150	140
	10	10	52	145	120	110
	12	12	36	120	100	90
	16	16	20	90	-	-
19/32	8	8	80	170	150	140
	10	10	52	145	120	110
	12	12	36	120	100	90
	16	16	20	90	-	-

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 PS2 requirements.

(2) The tabulated values represent the capacity of the LP Panel 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 dipped 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. Ring shank nails fastened in a grid as specified.

(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 6 of ASCE 7-05, Section R301.2.1 of the 2009 and 2012 IRC, and Section 1609.1.1 of the 2009 IBC.

(5) Wood structural panel (WSP) sheathing shall be minimum 7/16 Performance Category OSB or Group 1 plywood meeting DOC PS1 or DOC PS2 requirements.

Table 5b. Panel Siding Installed Vertically to SIPs[1] or WSP Sheathing[6] – **Max. Ultimate Wind Speed, V_{ult}[2]**

Performance Category	Maximum Ring Shank Nail Spacing[3] (inches o.c.)		Maximum Ultimate Wind Pressure (psf)	Max. Allowable Wind Speed, V_{ult}[4] (mph)		
				Wind Exposure Category		
	Vertical	Horizontal		B	C	D
3/8	8	8	133	200[5]	180	180
	10	10	87	180	160	140
	12	12	61	150	130	120
	16	16	34	120	-	-
7/16	8	8	133	200[5]	180	180
	10	10	87	180	160	140
	12	12	61	150	130	120
	16	16	34	120	-	-
19/32	8	8	133	200[5]	180	180
	10	10	87	180	160	140
	12	12	61	150	130	120
	16	16	34	120	-	-

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 PS2 requirements.

(2) The tabulated values represent the capacity of the LP Panel 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 dipped 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. Ring shank nails fastened in a grid as specified.

(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 2018 and 2015 IRC, and Section 1609.1.1 of the 2018, 2015, and 2012 IBC.

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

(6) Wood structural panel (WSP) sheathing shall be minimum 7/16 Performance Category OSB or Group 1 plywood meeting DOC PS1 or DOC PS2 requirements.

Table 6a. Vertical Siding or Lap Siding Installed Vertically – **Max. Allowable Wind Speed, V_{asd}[1]**

Perf. Category	Siding Type	Siding Width (inches)	Fastener Edge Spacing (inches o.c.)	Max. Allowable Wind Pressure (psf)	Max. Allowable Wind Speed, V_{asd}[6] (mph)		
					Wind Exposure Category		
					B	C	D
3/8	Vertical Siding	16[2]	6[4]	80	170	150	140
	Lap Siding Installed Vertically	5[3]	12[5]	80	170	150	140
		6[3]		72	170	145	130
		7[3]		62	150	130	120
		8[3]		54	145	125	110
		9.5[3]		46	130	110	105
		12[3]		36	120	100	90
7/16	Lap Siding Installed Vertically	6[3]	12[5]	72	170	145	130
		7[3]		62	150	130	120
		8[3]		54	145	125	110
		9.5[3]		46	130	110	105
		12[3]		36	120	100	90

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

(1) Siding shall be installed over 7/16 Performance Category or thicker wood structural panel sheathing meeting DOC PS1 or DOC PS2 requirements.

(2) Vertical Siding installed in accordance with Figures 2, 5, and 6.

(3) Lap Siding installed vertically in accordance with Figure 1 through 4.

(4) Fasteners must be ring shank nails with a minimum shank diameter of 0.092 inch. Length shall be long enough to fully penetrate wood structural panel wall sheathing. Fasteners must be spaced a maximum of 6 inches o.c. along the siding perimeter in accordance with Figures 5 and 6.

(5) Fasteners must be ring shank nails with a minimum shank diameter of 0.092 inch. Length shall be long enough to fully penetrate wood structural panel wall sheathing. Fasteners must be spaced a maximum of 12 inches o.c. along alternating edges of the length of the trim/batten in accordance with Figures 1 and 4.

(6) 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 6 of ASCE 7-05, Section R301.2.1 of the 2009 and 2012 IRC, and Section 1609.1.1 of the 2009 IBC.

Table 6b. Vertical Siding or Lap Siding Installed Vertically - **Max. Ultimate Wind Speed, V_{ult}**[1]

Perf. Category	Siding Type	Siding Width (inches)	Fastener Edge Spacing (inches o.c.)	Max. Ultimate Wind Pressure (psf)	Max. Ultimate Wind Speed, V_{ult}[6] (mph)		
					Wind Exposure Category		
					B	C	D
3/8	Vertical Siding	16[2]	6[4]	133	200	180	180
	Lap Siding Installed Vertically	5[3]	12[5]	133	200	180	180
		6[3]		120	200	180	160
		7[3]		103	200	160	160
		8[3]		90	180	160	150
		9.5[3]		76	160	150	130
		12[3]		60	150	130	120
7/16	Lap Siding Installed Vertically	6[3]	12[5]	120	200	180	160
		7[3]		103	200	160	160
		8[3]		90	180	160	150
		9.5[3]		76	160	150	130
		12[3]		60	150	130	120

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

(1) Siding shall be installed over 7/16 Performance Category or thicker wood structural panel sheathing meeting DOC PS1 or DOC PS2 requirements.

(2) Vertical Siding installed in accordance with Figures 2, 5, and 6.

(3) Lap Siding installed vertically in accordance with Figure 1 through 4.

(4) Fasteners must be ring shank nails with a minimum shank diameter of 0.092 inch. Length shall be long enough to fully penetrate wood structural panel wall sheathing. Fasteners must be spaced a maximum of 6 inches o.c. along the siding perimeter in accordance with Figures 2, 5, and 6.

(5) Fasteners must be ring shank nails with a minimum shank diameter of 0.092 inch. Length shall be long enough to fully penetrate wood structural panel wall sheathing. Fasteners must be spaced a maximum of 12 inches o.c. along alternating edges of the length of the batten in accordance with Figures 1 and 4.

(6) 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 2018 and 2015 IRC, and Section 1609.1.1 of the 2018, 2015, and 2012 IBC.

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