

# ICC-ES Evaluation Report

**ESR-2290**

Reissued March 1, 2012

*This report is subject to renewal March 1, 2014.*[www.icc-es.org](http://www.icc-es.org) | (800) 423-6587 | (562) 699-0543

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**DIVISION: 07 00 00—THERMAL AND MOISTURE  
PROTECTION****Section: 07 46 46—Fiber-Cement Siding****REPORT HOLDER:****JAMES HARDIE BUILDING PRODUCTS, INC.**  
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[chad.diercks@jameshardie.com](mailto:chad.diercks@jameshardie.com)**EVALUATION SUBJECT:****HARDIESHINGLE™ PANELS, HARDIEPLANK™ LAP  
SIDING, AND HARDIESHINGLE™ INDIVIDUAL  
SHINGLES****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2009 *International Building Code*® (2009 IBC)
- 2009 *International Residential Code*® (2009 IRC)
- 2006 *International Building Code*® (2006 IBC)
- 2006 *International Residential Code*® (2006 IRC)

**Properties evaluated:**

- Weather protection
- Structural
- Types I, II, III, and IV (noncombustible) construction
- Fire-resistance-rated construction
- Thermal resistance

**2.0 USES**

James Hardie fiber-cement panels, plank lap siding, and cladding shingles are used as exterior wall covering. The products comply with IBC Sections 1404.10 and IRC Section R703.10. The products comply with IBC Sections 1404.10 and IRC Section R703.10. The products may be used on exterior walls required to be of Type I, II, III or IV construction (IBC).

**3.0 DESCRIPTION****3.1 General:**

The exterior sidings are single-faced, cellulose fiber-reinforced cement (fiber-cement) products. Exterior sidings are identified as HardieShingle™ panels, HardiePlank™ (Cemplank®, Sentry™ and RFC®) lap siding, and HardieShingle™ individual shingles.

The products comply with ASTM C 1186, as Grade II, Type A; have a flame-spread index of 0 and a smoke-developed index of 5 when tested in accordance with ASTM E 84; and are classified as noncombustible when tested in accordance with ASTM E 136. Thermal conductance (K) and resistance (R) values for the products are as shown in Table 2 of this report, based on testing in accordance with ASTM C 177.

**3.2 Siding:**

HardieShingle™ panels, HardiePlank™ (Cemplank®, Sentry™ and RFC®) lap siding, and HardieShingle™ individual shingles are supplied either unprimed or primed for subsequent application of a compatible primer and/or exterior-grade top coat. Nominal product dimensions are noted in Table 1.

The products are available in a variety of finish textures. HardieShingle™ panels are offered in three configurations: half-round, staggered-edge, and square-edge.

**3.3 Fasteners:**

Fastener type and spacing must be as shown in the tables of this report. Fasteners must be corrosion-resistant steel.

**4.0 DESIGN AND INSTALLATION****4.1 Design:**

**Walls:** The maximum basic wind speeds for positive or negative transverse load resistance of HardieShingle™ panels, HardiePlank™ (Cemplank®, Sentry™ and RFC®) lap siding, and HardieShingle™ individual shingles are presented in Tables 3 through 13.

**4.2 Installation:**

**4.2.1 General:** Installation must comply with this report, and a copy of this report must be available at all times on the jobsite during installation. All products may be cut to shape on-site by the score-and-snap method using a score-and-snap knife, a hand guillotine or a handsaw utilizing a carbide blade. A clear distance of 6 inches (152 mm) must be maintained between the siding and the earth. Unless otherwise noted in this report, the products must be installed in accordance with 2009 IBC Sections 1405.16 and 1405.17; 2009 IRC Section R703.10; 2006 IBC Sections 1405.15, 1405.16 and 1405.17; or 2006 IRC Section R703.10, as applicable.

**4.2.2 HardieShingle™ Panels:** When installation is on wood or metal framing members, with or without solid wood sheathing, a water-resistive barrier must be applied over the wood or metal framing members or solid wood sheathing in accordance with the applicable code. The panels must be fastened in accordance with the provisions of Table 4 of this report.

A  $\frac{1}{8}$ -inch (3.2 mm) gap must be left at locations where the siding butts against door and window trim and at internal or external corners; such gaps must be flashed in accordance with the applicable code, then caulked. Vertical joints must occur over framing members and must be sealed with caulking or covered with battens. Horizontal joints must be flashed with metal Z-flashing and occur over solid blocking or wood structural panel sheathing.

#### 4.2.3 HardiePlank™ (Cemplank®, Sentry™ and RFC®)

**Lap Siding:** When installation is on wood or metal framing members, with or without solid wood sheathing, the lap siding must be fastened either through the overlapping planks (face nailed) or through the top edge of single planks (blind nailed) in accordance with the provisions of Table 4 of this report. A water-resistive barrier must be applied over wood or metal framing members or solid wood sheathing in accordance with the applicable code. Lap siding installed over walls constructed of concrete masonry units complying with ASTM C 90 must be applied in accordance with Tables 5 through 10. The lap siding requires the use of a starter strip to set the first course on the proper angle and to create a drip edge.

Vertical joints must occur over studs, except where the “off-stud splice device” is installed or where the planks are installed to solid wood sheathing complying with the applicable code, and must be staggered on subsequent courses. Where the “off-stud splice device” is installed, the splice device’s bottom lip must be placed over the adjacent solid course of planks. The plank must then be fastened to the framing with corrosion-resistant fasteners. The abutting plank must be positioned and fastened into place ensuring that the lower edges of the two planks align. The metal device must be located centrally over the vertical joint.

Vertical joints between planks must be lightly butted or gapped and must be protected by one of the following methods: (a) sealed with caulking in accordance with the caulk manufacturer’s published gapping requirements and caulking application instructions; or (b) covered with an H-section joint cover; or (c) located over a strip of nonperforated flashing complying with ASTM D 226, Type I felt, or other approved flashing. Trim and corners must be installed and the siding must be finished in accordance with the manufacturer’s application instructions. A  $\frac{1}{8}$ -inch (3.2 mm) gap must be left at locations where the siding butts against door and window trim and at internal or external corners; such gaps must be flashed in accordance with the applicable code, then caulked. Horizontal joints must be flashed with Z-flashing and occur over solid blocking or solid wood sheathing.

**4.2.4 HardieShingle™ Individual Shingles:** When installed on solid wood sheathing, the cladding shingles are fastened in accordance with the provisions of either Table 11, 12, or 13 of this report. A water-resistive barrier in accordance with the applicable code must be applied over the wood-based sheathing substrate to which the shingles are attached.

The individual shingles require the use of a starter strip to set the first course on the proper angle and to create a drip edge. The nominally  $1\frac{1}{4}$ -inch-wide-by- $\frac{1}{4}$ -inch-thick (31.8 mm by 6.4 mm) starter strip and a minimum  $8\frac{1}{4}$ -inch-wide (210 mm) HardiePlank™ (Cemplank®, Sentry™ and RFC®) lap siding starter course are installed over the water-resistive barrier with the bottom of the starter strip and starter course even with the bottom of the bottom plate. Shingles are spaced a maximum of  $\frac{1}{4}$  inch (6.4 mm) apart, leaving a minimum side lap of  $1\frac{1}{2}$  inches (38 mm) between the joints of successive courses. Fasteners must be spaced a minimum of  $\frac{3}{4}$  inch (19 mm) and a maximum

of 1 inch (25.4 mm) from shingle edges and must be positioned to be covered a nominal  $1\frac{1}{4}$  inches (32 mm) by the succeeding shingle course; for 12-inch-wide (305 mm) shingles, the third nail (see Table 14) must be installed mid-span of the shingle. Nails must secure shingles but must not be over-driven. Trim and corners must be installed and the shingles must be finished in accordance with the manufacturer’s application instructions. A  $\frac{1}{8}$ -inch (3.2 mm) gap must be left at the manufacturer’s application instructions. A  $\frac{1}{8}$ -inch (3.2 mm) gap must be left at locations where the shingle butts against door and window trim and at internal or external corners; such gaps must be flashed in accordance with the applicable code, then caulked. Horizontal joints must be flashed with Z-flashing.

#### 4.3 Fire-resistance-rated Wall Assembly (HardiePlank™ Lap Siding):

The asymmetrical, load-bearing, one-hour fire-resistance-rated wall assembly must consist of nominally 2-by-4 wood studs spaced a maximum of 24 inches (610 mm) on center, with two top plates and a single bottom plate. One layer of  $\frac{5}{8}$ -inch-thick (15.9), Type X, gypsum wallboard complying with ASTM C 36 or ASTM C 1396, 48 inches (1219 mm) wide, must be applied vertically to the interior face of the studs and secured with minimum  $1\frac{3}{4}$ -inch-long (44 mm) cup-head gypsum wallboard nails, spaced 7 inches (178 mm) on center at board edges and intermediate framing members. All board joints must be backed by framing. The  $\frac{5}{8}$ -inch-thick (15.9 mm), Type X, gypsum wallboard joints and nail heads must be finished in accordance with ASTM C 840 or GA216. The exterior face of the wall must be covered with one layer of  $\frac{1}{2}$ -inch-thick (12.7 mm), Type X, water-resistant core treated gypsum sheathing complying with ASTM C 36 or ASTM C 1396 and one layer of maximum 12-inch-wide (305 mm) HardiePlank™ (Cemplank®, Sentry™ and RFC®) lap siding lapped a minimum of  $1\frac{1}{4}$  inches (32 mm). The  $\frac{1}{2}$ -inch-thick (12.7 mm), Type X, water-resistant core-treated gypsum sheathing must be applied vertically to the exterior side of the framing members with vertical edges staggered 24 inches (610 mm) from the joints on the opposite side. All board joints must be backed by framing. The  $\frac{1}{2}$ -inch-thick (12.7 mm), Type X, water-resistant core-treated gypsum sheathing must be fastened to the framing members with  $1\frac{3}{4}$ -inch-long (44 mm) roofing nails spaced 7 inches (178 mm) on center in the field and 4 inches (102 mm) on center along the perimeter of each board. The outer layer of  $\frac{5}{16}$ -inch-thick (7.5 mm), minimum 12-inch-wide (305 mm) HardiePlank™ (Cemplank®, Sentry™ and RFC®) lap siding must be applied over the  $\frac{1}{2}$ -inch-thick (12.7 mm), Type X, water-resistant core-treated gypsum sheathing by attaching  $1\frac{1}{2}$ -inch-wide (38 mm) HardiePlank™ (Cemplank®, Sentry™ and RFC®) starter strips through the gypsum sheathing into the bottom plate and 12-inch-wide (305 mm) HardiePlank™ (Cemplank®, Sentry™ and RFC®) lap siding applied horizontally with a minimum nominally  $1\frac{1}{4}$ -inch (32 mm) head lap, and fastening with a single 6d corrosion-resistant common nail driven through the lapped planks into each stud.

The axial load must be the lesser of the following, provided structural consideration for axial, flexural and bearing perpendicular-to-grain stresses is in accordance with ANSI/AF&PA NDS-2005 (IBC or IRC):

1. Maximum 100 percent of full allowable axial compressive design load permitted for the wood species.
2. Maximum allowable wood axial stress of  $0.78 F_c$ , which must not exceed  $0.78 F'_c$  at a slenderness ratio  $l_e/d$  of 33.

**5.0 CONDITIONS OF USE**

The HardieShingle™ panels, HardiePlank™ (Cemplank®, Sentry™ and RFC®) lap siding, and HardieShingle™ individual shingles described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 James Hardie® Building Products, Inc, products listed in this report must be installed in accordance with this report and the manufacturer’s published installation instructions. In the event of a conflict between this report and the manufacturer’s instructions, this report governs.
- 5.2 HardieShingle™ panels, HardiePlank™ (Cemplank®, Sentry™ and RFC®) lap siding, and HardieShingle™ individual shingles must be installed on exterior walls braced in accordance the applicable code.
- 5.3 Design wind speeds applied to James Hardie® sidings described in this report must be determined in accordance with the applicable code and must be less than those shown in the wind speed tables in this report.
- 5.4 The sidings must be installed over a code-complying water-resistive barrier and as noted in this report.
- 5.5 For use in fire-resistance-rated construction, installation must be in accordance with Section 4.3.
- 5.6 Flashing must be installed at all penetrations and terminations in accordance with the applicable code.

5.7 The products are manufactured at the following locations, with quality control inspections by Intertek Testing Services, Inc. (AA-690):

- Cleburne, Texas
- Peru, Illinois
- Plant City, Florida
- Pulaski, Virginia
- Sparks, Nevada
- Tacoma, Washington
- Waxahachie, Texas

**6.0 EVIDENCE SUBMITTED**

Data in accordance with the ICC-ES Acceptance Criteria for Fiber Cement Siding Used as Exterior Wall Siding (AC90), dated November 2005 (editorially revised January 2011).

**7.0 IDENTIFICATION**

Pallets of the JamesHardie® Building Products, Inc., HardieShingle™ panels, HardiePlank™ (Cemplank®, Sentry™ and RFC®) lap siding, and HardieShingle™ individual shingles must carry a label bearing the manufacturer’s name and telephone number, the product name, the name of the inspection agency (Intertek Testing Services NA Ltd)., and the evaluation report number (ESR-2290).

**TABLE 1—STANDARD NOMINAL PANEL, PLANK AND SHINGLE DIMENSIONS**

PRODUCT	WIDTH (INCHES)	LENGTH	THICKNESSES (INCHES)
HardiePlank® lap siding	4, 5 <sup>1</sup> / <sub>4</sub> , 6, 6 <sup>1</sup> / <sub>4</sub> , 7 <sup>1</sup> / <sub>4</sub> , 7 <sup>1</sup> / <sub>2</sub> , 8, 8 <sup>1</sup> / <sub>4</sub> , 9 <sup>1</sup> / <sub>4</sub> , 9 <sup>1</sup> / <sub>2</sub> & 12	12, 14 feet	<sup>5</sup> / <sub>16</sub>
Cemplank® lap siding	5 <sup>1</sup> / <sub>4</sub> , 6, 6 <sup>1</sup> / <sub>4</sub> , 7 <sup>1</sup> / <sub>4</sub> , 7 <sup>1</sup> / <sub>2</sub> , 8, 8 <sup>1</sup> / <sub>4</sub> , 9 <sup>1</sup> / <sub>4</sub> & 12	12, 14 feet	<sup>5</sup> / <sub>16</sub>
RFC® lap siding	6 <sup>1</sup> / <sub>4</sub> , 7 <sup>1</sup> / <sub>2</sub> , 8 <sup>1</sup> / <sub>4</sub> , 9 <sup>1</sup> / <sub>2</sub> & 12	12, 14 feet	<sup>5</sup> / <sub>16</sub>
HardieShingle™ panel (square & staggered edge)	48	16 inches	<sup>1</sup> / <sub>4</sub>
HardieShingle™ panel (half round)	48	16, 19 inches	<sup>1</sup> / <sub>4</sub>
HardieShingle™ individual shingles	6, 8, & 12	18 inches	<sup>1</sup> / <sub>4</sub>

For **SI**: 1 inch = 25.4 mm, 1 ft = 305 mm.

**TABLE 2—“K” and “R” VALUES FOR FIBER-CEMENT PRODUCTS**

PRODUCT THICKNESS <sup>3</sup> (INCH)	THERMAL CONDUCTANCE <sup>1</sup> K <sub>EFF</sub> = (BTU/HR-FT <sup>2</sup> -°F)/INCH	THERMAL RESISTANCE <sup>1</sup> R = 1/K <sub>EFF</sub>	ACTUAL THERMAL CONDUCTANCE <sup>2</sup> (K <sub>EFF</sub> )	ACTUAL THERMAL RESISTANCE <sup>2</sup> (R)
<sup>1</sup> / <sub>4</sub>	1.95	0.51	7.80	0.13
<sup>5</sup> / <sub>16</sub>	2.07	0.48	6.62	0.15

For **SI**: 1 inch = 25.4 mm, 1 Btu/h-ft<sup>2</sup>-°F = 5.678 W/m<sup>2</sup>-K.

<sup>1</sup>Based on 1 inch of panel thickness.  
<sup>2</sup>Actual value for panel thickness shown.

TABLE 3—MAXIMUM BASIC WIND SPEED (3-second gust) (mph)

PRODUCT	THICK. (IN.)	FASTENER TYPE	FASTENER SPACING (IN.)	FRAME TYPE <sup>1</sup>	STUD SPACING (IN.)	BLDG. HEIGHT (FT.)	EXPOSURE CATEGORY		
							B	C	D
HardieShingle™ Panel straight or half round Installation	1/4	0.083" shank ×0.187" HD x 1 1/2" long ring shank nail	13.75	Attached to 7/16" OSB sheathing only	OSB attached to framing per code	0-15 20 40 60	126	85	-
							121	85	-
							105	85	-
							95	-	-
HardieShingle™ Panel Staggered Installation	1/4	0.083" shank ×0.187" HD x 1 1/2" long ring shank nail	13.75	Attached to 7/16" OSB sheathing only	OSB attached to framing per code	0-15 20 40 60	105	85	-
							105	-	-
							95	-	-
							85	-	-
HardieShingle™ Panel	1/4	0.083" shank ×0.187" HD x 1 1/2" long ring shank nail <sup>2</sup>	at each stud <sup>3</sup>	Nominal 2 × 4 <sup>1</sup> or Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15 20 40 60	168	137	116
							168	137	116
							168	126	105
							158	116	105
HardieShingle™ Panel	1/4	0.083" shank ×0.187" HD x 1 1/2" long ring shank nail <sup>2</sup>	at each stud <sup>3</sup>	Nominal 2 × 4 <sup>1</sup> or Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15 20 40 60 100	147	105	85
							137	100	85
							126	95	-
							116	89	-
						100	95	-	

For S1: 1 foot = 305 mm, 1 inch = 25.4 mm, 1 mph – 0.44 m/s.

<sup>1</sup>Values are for species of wood having a specific gravity of 0.40 or greater.

<sup>2</sup>For application to metal framing members, fasteners must be ET & F Fastening Systems, Inc. ET&F Panelfast® nail, ET & F No. AGS-100-0150, head diameter = 0.313 in., shank diameter = 0.100 in., length = 1.5 in. Metal studs must be maximum Fy = 33 ksi.

<sup>3</sup>For application to ASTM C 90 concrete masonry wall, fasteners must be either ET & F Fastening Systems, Inc. ET&F block nail (ET & F No. ASM-144-0125, head dia. = 0.30 in., shank dia. = 0.14 in., length = 1.25 in.) or Max System block nail (CP-C 832 W7-ICC, head dia. = 0.30 in., shank dia. = 0.15 in., length = 1.3 in.) applied at the equivalent fastener or stud spacing.

<sup>4</sup>Wind speed design assumptions per Section 6.5, Method 2, of ASCE 7-05: I = 1.0, Kzt = 1, Kd = 0.85, Gcpi = 0.18. Pressure Coefficient of 1.58 for height ≤ 60 feet and 1.98 for height > 60 feet.

<sup>5</sup>For application to wood framing or wood-based sheathing, the minimum fastener penetration must be 1 inch into framing or the sheathing thickness as applicable.

TABLE 4—MAXIMUM WIND SPEED (mph)<sup>3</sup>

PRODUCT	PRODUCT (IN.)		FASTENER TYPE <sup>4</sup>	FASTENING METHOD <sup>2</sup>	FRAME TYPE <sup>1</sup>	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D
HardiePlank®	5/16	4	ET & F pin 0.100" × 1.5" × 0.25" HD	Face Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	168	168	147
							20	168	168	147
							40	168	158	137
							60	168	147	126
HardiePlank®	5/16	6	ET & F pin 0.100" × 1.5" × 0.25" HD	Face Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	168	168	147
							20	168	168	147
							40	168	158	137
							60	168	147	126
HardiePlank®	5/16	6 1/4	ET & F pin 0.100" × 1.5" × 0.25" HD	Face Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	168	168	147
							20	168	168	137
							40	168	158	137
							60	168	147	126
HardiePlank®	5/16	7 1/4 or 7 1/2	ET & F pin 0.100" × 1.5" × 0.25" HD	Face Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	168	158	126
							20	168	147	126
							40	168	137	121
							60	168	126	116
HardiePlank®	5/16	8	ET & F pin 0.100" × 1.5" × 0.25" HD	Face Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	168	147	126
							20	168	147	126
							40	168	137	116
							60	168	126	105
HardiePlank®	5/16	8 1/4	ET & F pin 0.100" × 1.5" × 0.25" HD	Face Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	168	147	126
							20	168	147	116
							40	168	131	116
							60	158	126	105
HardiePlank®	5/16	9 1/4 9 1/2	ET & F pin 0.100 × 1.5" × 0.25" HD	Face Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	168	137	116
							20	168	137	116
							40	158	126	105
							60	147	116	105
HardiePlank®	5/16	12	ET & F pin 0.100" × 1.5" × 0.25" HD	Face Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	145	131	119
							20	145	127	116
							40	139	119	110
							60	131	114	106
						100	109	96	90	

TABLE 4—MAXIMUM WIND SPEED (mph)<sup>3</sup> (Continued)

PRODUCT	PRODUCT (IN.)		FASTENER TYPE <sup>4</sup>	FASTENING METHOD <sup>2</sup>	FRAME TYPE <sup>1</sup>	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D
HardiePlank®	5/16	4	ET & F pin 0.100" × 1.5" × 0.25" HD	Face Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	160	137	116
							20	160	137	116
							40	154	121	105
							60	145	116	100
HardiePlank®	5/16	6	ET & F pin 0.100" × 1.5" × 0.25" HD	Face Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	160	137	116
							20	160	137	116
							40	154	121	105
							60	145	116	100
HardiePlank®	5/16	6 1/4	ET & F pin 0.100" × 1.5" × 0.25" HD	Face Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	160	137	116
							20	160	126	110
							40	147	121	105
							60	137	116	95
HardiePlank®	5/16	7 1/4 7 1/2	ET & F pin 0.100" × 1.5" × 0.25" HD	Face Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	160	116	100
							20	158	116	95
							40	137	105	89
							60	126	95	89
HardiePlank®	5/16	8	ET & F pin 0.100" × 1.5" × 0.25" HD	Face Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	160	116	95
							20	158	116	95
							40	137	105	89
							60	126	95	85
HardiePlank®	5/16	8 1/4	ET & F pin 0.100" × 1.5" × 0.25" HD	Face Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	158	116	95
							20	158	105	95
							40	137	100	85
							60	126	95	85
HardiePlank®	5/16	9 1/4 9 1/2	ET & F pin 0.100" × 1.5" × 0.25" HD	Face Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	147	105	85
							20	147	105	85
							40	126	95	85
							60	126	95	-
HardiePlank®	5/16	12	ET & F pin 0.100" × 1.5" × 0.25" HD	Face Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	106	96	87
							20	106	93	85
							40	102	87	-
							60	96	-	-
HardiePlank®	5/16	4	ET & F Panelfast 0.100" × 1.5" × 0.313" HD	Blind Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	158	126	105
							20	158	121	100
							40	147	110	95
							60	137	105	95
HardiePlank®	5/16	6	ET & F Panelfast 0.100" × 1.5" × 0.313" HD	Blind Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	158	126	105
							20	158	121	100
							40	147	110	95
							60	137	105	95
HardiePlank®	5/16	6 1/4	ET & F Panelfast 0.100" × 1.5" × 0.313" HD	Blind Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	168	116	100
							20	158	116	95
							40	137	105	89
							60	126	100	85
HardiePlank®	5/16	7 1/4 7 1/2	ET & F Panelfast 0.100" × 1.5" × 0.313" HD	Blind Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	147	105	85
							20	137	100	85
							40	121	89	-
							60	110	85	-
HardiePlank®	5/16	8	ET & F Panelfast 0.100" × 1.5" × 0.313" HD	Blind Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	137	95	85
							20	126	95	-
							40	116	85	-
							60	105	85	-
HardiePlank®	5/16	8 1/4	ET & F Panelfast 0.100" × 1.5" × 0.313" HD	Blind Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	137	95	-
							20	126	95	-
							40	116	85	-
							60	105	-	-
HardiePlank®	5/16	4	ET & F Panelfast 0.100" × 1.5" × 0.313" HD	Blind Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	158	110	95
							20	147	105	85
							40	126	95	85
							60	121	95	-
HardiePlank®	5/16	6	ET & F Panelfast 0.100" × 1.5" × 0.313" HD	Blind Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	158	110	95
							20	147	105	85
							40	126	95	85
							60	121	95	-
HardiePlank®	5/16	6 1/4	ET & F Panelfast 0.100" × 1.5" × 0.313" HD	Blind Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	147	105	85
							20	137	100	85
							40	126	95	-
							60	105	89	-
HardiePlank®	5/16	6 1/4	ET & F Panelfast 0.100" × 1.5" × 0.313" HD	Blind Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	147	105	85
							20	137	100	85
							40	126	95	-
							60	105	89	-

TABLE 4—MAXIMUM WIND SPEED (mph)<sup>3</sup> (Continued)

PRODUCT	PRODUCT (IN.)		FASTENER TYPE <sup>4</sup>	FASTENING METHOD <sup>2</sup>	FRAME TYPE <sup>1</sup>	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D
HardiePlank®	5/16	7 1/4 7 1/2	ET & F Panelfast 0.100" × 1.5" × 0.313" HD	Blind Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	137	95	85
							20	126	95	-
							40	116	85	-
							60	105	85	-
HardiePlank®	5/16	8	ET & F Panelfast 0.100" × 1.5" × 0.313" HD	Blind Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	126	85	-
							20	116	85	-
							40	100	-	-
							60	95	-	-
HardiePlank®	5/16	8 1/4	ET & F Panelfast 0.100" × 1.5" × 0.313" HD	Blind Nailed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	116	-	-
							20	105	-	-
							40	95	-	-
							60	85	-	-
HardiePlank®	5/16	5.25	6d common <sup>1</sup>	Face Nailed Through plank overlap	2X4 wood	16	0-15	170	170	163
							20	170	170	159
							40	170	162	149
							60	170	155	144
							100	148	131	123
HardiePlank®	5/16	6.25	6d common <sup>1</sup>	Face Nailed Through plank overlap	2X4 wood	16	0-15	170	160	145
							20	170	156	142
							40	169	145	134
							60	160	139	129
							100	133	117	110
HardiePlank®	5/16	7.25	6d common <sup>1</sup>	Face Nailed Through plank overlap	2X4 wood	16	0-15	161	146	133
							20	161	142	130
							40	155	132	122
							60	146	127	118
							100	121	107	101
HardiePlank®	5/16	7.5	6d common <sup>1</sup>	Face Nailed Through plank overlap	2X4 wood	16	0-15	158	143	130
							20	158	139	127
							40	151	129	120
							60	143	124	115
							100	119	105	99
HardiePlank®	5/16	8	6d common <sup>1</sup>	Face Nailed Through plank overlap	2X4 wood	16	0-15	152	138	125
							20	152	134	122
							40	146	125	115
							60	138	120	111
							100	114	101	95
HardiePlank®	5/16	8.25	6d common <sup>1</sup>	Face Nailed Through plank overlap	2X4 wood	16	0-15	149	135	123
							20	149	131	120
							40	143	122	113
							60	135	117	109
							100	112	99	93
HardiePlank®	5/16	9.25	6d common <sup>1</sup>	Face Nailed Through plank overlap	2X4 wood	16	0-15	139	127	115
							20	139	123	112
							40	134	114	106
							60	127	110	102
							100	105	93	87
HardiePlank®	5/16	9.5	6d common <sup>1</sup>	Face Nailed Through plank overlap	2X4 wood	16	0-15	137	125	113
							20	137	121	111
							40	132	113	104
							60	125	108	100
							100	103	91	86
HardiePlank®	5/16	5.25	6d common <sup>1</sup>	Face Nailed Through plank overlap	2X4 wood	24	0-15	161	146	133
							20	161	142	130
							40	155	132	122
							60	146	127	118
							100	121	107	101
HardiePlank®	5/16	6.25	6d common <sup>1</sup>	Face Nailed Through plank overlap	2X4 wood	24	0-15	144	131	119
							20	144	127	116
							40	138	118	109
							60	131	113	105
							100	108	96	90
HardiePlank®	5/16	7.25	6d common <sup>1</sup>	Face Nailed Through plank overlap	2X4 wood	24	0-15	131	119	108
							20	131	116	106
							40	126	108	100
							60	119	103	96
							100	99	88	-

TABLE 4—MAXIMUM WIND SPEED (mph)<sup>3</sup> (Continued)

PRODUCT	PRODUCT (IN.)		FASTENER TYPE <sup>4</sup>	FASTENING METHOD <sup>2</sup>	FRAME TYPE <sup>1</sup>	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D
HardiePlank®	5/16	7.5	6d common <sup>1</sup>	Face Nailed Through plank overlap	2X4 wood	24	0-15	129	117	106
							20	129	114	104
							40	124	106	98
							60	117	101	94
							100	97	86	-
HardiePlank®	5/16	8	6d common <sup>1</sup>	Face Nailed Through plank overlap	2X4 wood	24	0-15	124	113	102
							20	124	109	100
							40	119	102	94
							60	113	98	91
							100	93	-	-
HardiePlank®	5/16	8.25	6d common <sup>1</sup>	Face Nailed Through plank overlap	2X4 wood	24	0-15	122	111	100
							20	122	107	98
							40	117	100	2
							60	111	96	89
							100	91	-	-
HardiePlank®	5/16	9.25	6d common <sup>1</sup>	Face Nailed Through plank overlap	2X4 wood	24	0-15	114	103	94
							20	114	100	92
							40	109	93	86
							60	103	90	-
							100	86	-	-
HardiePlank®	5/16	9.5	6d common <sup>1</sup>	Face Nailed Through plank overlap	2X4 wood	24	0-15	112	102	93
							20	112	99	90
							40	108	92	-
							60	102	88	-
							100	-	-	-
HardiePlank®	5/16	5.25	8d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	170	170	170
							20	170	170	170
							40	170	170	170
							60	170	170	170
							100	170	159	149
HardiePlank®	5/16	6.25	8d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	170	170	170
							20	170	170	170
							40	170	170	161
							60	170	168	156
							100	160	142	133
HardiePlank®	5/16	7.25	8d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	170	170	160
							20	170	170	157
							40	170	160	147
							60	170	153	142
							100	146	130	122
HardiePlank®	5/16	7.5	8d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	170	170	157
							20	170	168	154
							40	170	157	145
							60	170	150	139
							100	143	127	119
HardiePlank®	5/16	8	8d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	170	167	151
							20	170	162	148
							40	170	151	139
							60	167	144	134
							100	138	122	115
HardiePlank®	5/16	8.25	8d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	170	164	149
							20	170	159	145
							40	170	148	137
							60	164	142	132
							100	135	120	113
HardiePlank®	5/16	9.25	8d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	169	153	139
							20	169	149	136
							40	162	138	128
							60	153	133	123
							100	127	112	105
HardiePlank®	5/16	9.5	8d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	166	151	137
							20	166	146	134
							40	159	136	126
							60	151	131	121
							100	125	111	104
HardiePlank®	5/16	5.25	8d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	160	145	132
							20	160	141	129
							40	154	131	121
							60	145	126	117
							100	135	119	112

TABLE 4—MAXIMUM WIND SPEED (mph)<sup>3</sup> (Continued)

PRODUCT	PRODUCT (IN.)		FASTENER TYPE <sup>4</sup>	FASTENING METHOD <sup>2</sup>	FRAME TYPE <sup>1</sup>	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D
HardiePlank®	5/16	6.25	8d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	160	145	132
							20	160	141	129
							40	154	131	121
							60	145	126	117
100	131	116	109							
HardiePlank®	5/16	7.25	8d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	159	144	131
							20	159	140	128
							40	153	130	120
							60	144	125	116
100	119	106	99							
HardiePlank®	5/16	7.5	8d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	156	141	128
							20	156	137	125
							40	150	128	118
							60	141	123	114
100	117	104	97							
HardiePlank®	5/16	8	8d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	150	136	123
							20	150	132	121
							40	144	123	113
							60	136	118	109
100	113	100	94							
HardiePlank®	5/16	8.25	8d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	147	134	121
							20	147	130	118
							40	141	121	111
							60	134	116	108
100	111	98	92							
HardiePlank®	5/16	9.25	8d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	138	125	113
							20	138	121	111
							40	132	113	104
							60	125	108	101
100	103	92	86							
HardiePlank®	5/16	9.5	8d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	136	123	112
							20	136	120	109
							40	130	111	103
							60	123	107	99
100	102	90	-							
HardiePlank®	5/16	4	No. 8-18 × 1 5/8" long × 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	168	168	137
							20	168	158	137
							40	168	147	131
							60	168	137	126
HardiePlank®	5/16	6	No. 8 × 1 5/8" long × 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	168	168	137
							20	168	158	137
							40	168	147	131
							60	168	137	126
HardiePlank®	5/16	6 1/4	No. 8 × 1 5/8" long × 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	168	168	137
							20	168	158	137
							40	168	147	126
							60	168	137	121
HardiePlank®	5/16	7 1/4 7 1/2	No. 8 × 1 5/8" long × 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	168	147	126
							20	168	147	121
							40	168	131	116
							60	168	126	105
HardiePlank®	5/16	8	No. 8 × 1 5/8" long × 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	168	147	126
							20	168	147	121
							40	168	131	116
							60	158	126	105
HardiePlank®	5/16	8 1/4	No. 8 × 1 5/8" long × 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	168	147	126
							20	168	137	121
							40	168	131	116
							60	158	121	105
HardiePlank®	5/16	9 1/4 9 1/2	No. 8 × 1 5/8" long × 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	168	137	116
							20	168	131	110
							40	158	121	105
							60	147	116	100

TABLE 4—MAXIMUM WIND SPEED (mph)<sup>3</sup> (Continued)

PRODUCT	PRODUCT (IN.)		FASTENER TYPE <sup>4</sup>	FASTENING METHOD <sup>2</sup>	FRAME TYPE <sup>1</sup>	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D
HardiePlank®	5/16	12	No. 8 × 1 5/8" long × 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	16	0-15	168	126	105
							20	168	121	95
							40	137	110	95
							60	137	105	89
HardiePlank®	5/16	4	No. 8 × 1 5/8" long × 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	160	137	116
							20	160	137	116
							40	155	126	110
							60	145	116	105
HardiePlank®	5/16	6	No. 8 × 1 5/8" long × 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	160	137	116
							20	160	137	116
							40	154	126	110
							60	145	116	105
HardiePlank®	5/16	6 1/4	No. 8 × 1 5/8" long × 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	160	145	116
							20	160	141	110
							40	154	131	105
							60	145	126	100
HardiePlank®	5/16	7 1/4 7 1/2	No. 8 × 1 5/8" long × 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	160	126	105
							20	160	121	105
							40	147	110	95
							60	137	105	95
HardiePlank®	5/16	8	No. 8 × 1 5/8" long × 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	160	126	105
							20	160	121	100
							40	147	110	95
							60	137	105	89
HardiePlank®	5/16	8 1/4	No. 8 × 1 5/8" long × 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	160	121	105
							20	160	121	100
							40	137	105	95
							60	131	100	89
HardiePlank®	5/16	9 1/4 9 1/2	No. 8 × 1 5/8" long × 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. × 3.62" × 1.375" Metal C-stud	24	0-15	158	116	95
							20	158	110	95
							40	137	100	89
							60	126	95	85
HardiePlank®	5/16	5.25	No. 11 gauge 1.25 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	16	0-15	168	152	138
							20	168	148	135
							40	161	138	127
							60	152	132	123
HardiePlank®	5/16	6.25	No. 11 gauge 1.25 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	16	0-15	150	136	124
							20	150	132	121
							40	144	123	114
							60	136	118	110
HardiePlank®	5/16	7.25	No. 11 gauge 1.25 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	16	0-15	137	124	113
							20	137	121	110
							40	132	112	104
							60	124	108	100
HardiePlank®	5/16	7.5	No. 11 gauge 1.25 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	16	0-15	134	122	111
							20	134	118	108
							40	129	110	102
							60	122	106	98
HardiePlank®	5/16	8	No. 11 gauge 1.25 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	16	0-15	129	117	106
							20	129	114	104
							40	124	106	98
							60	117	102	94
HardiePlank®	5/16	8.25	No. 11 gauge 1.25 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	16	0-15	127	115	105
							20	127	112	102
							40	122	104	96
							60	115	100	93
							100	95	-	-

TABLE 4—MAXIMUM WIND SPEED (mph)<sup>3</sup> (Continued)

PRODUCT	PRODUCT (IN.)		FASTENER TYPE <sup>4</sup>	FASTENING METHOD <sup>2</sup>	FRAME TYPE <sup>1</sup>	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D
HardiePlank®	5/16	9.25	No. 11 gauge 1.25 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	16	0-15	119	108	98
							20	119	105	96
							40	114	97	90
							60	108	93	87
							100	89	-	-
HardiePlank®	5/16	9.5	No. 11 gauge 1.25 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	16	0-15	117	106	96
							20	117	103	94
							40	112	96	88
							60	106	92	85
							100	88	-	-
HardiePlank®	5/16	5.25	No. 11 gauge 1.25 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	24	0-15	137	124	113
							20	137	121	110
							40	132	112	104
							60	124	108	100
							100	103	91	86
HardiePlank®	5/16	6.25	No. 11 gauge 1.25 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	24	0-15	122	111	101
							20	122	108	99
							40	118	100	93
							60	111	96	90
							100	92	-	-
HardiePlank®	5/16	7.25	No. 11 gauge 1.25 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	24	0-15	112	101	92
							20	112	99	90
							40	107	92	-
							60	101	88	-
							100	-	-	-
HardiePlank®	5/16	7.5	No. 11 gauge 1.25 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	24	0-15	110	99	90
							20	110	97	88
							40	105	90	-
							60	99	86	-
							100	-	-	-
HardiePlank®	5/16	8	No. 11 gauge 1.25 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	24	0-15	106	96	87
							20	106	93	-
							40	101	87	-
							60	96	-	-
							100	-	-	-
HardiePlank®	5/16	8.25	No. 11 gauge 1.25 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	24	0-15	104	94	85
							20	104	91	-
							40	99	-	-
							60	94	-	-
							100	-	-	-
HardiePlank®	5/16	9.25	No. 11 gauge 1.25 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	24	0-15	97	88	-
							20	97	85	-
							40	93	-	-
							60	88	-	-
							100	-	-	-
HardiePlank®	5/16	9.5	No. 11 gauge 1.25 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	24	0-15	95	87	-
							20	95	-	-
							40	92	-	-
							60	87	-	-
							100	-	-	-
HardiePlank®	5/16	5.25	No. 11 gauge 1.75 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	16	0-15	170	170	169
							20	170	170	165
							40	170	168	155
							60	170	161	150
							100	154	136	128
HardiePlank®	5/16	6.25	No. 11 gauge 1.75 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	16	0-15	170	166	151
							20	170	161	147
							40	170	150	139
							60	166	144	134
							100	137	122	114
HardiePlank®	5/16	7.25	No. 11 gauge 1.75 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	16	0-15	167	152	138
							20	167	147	135
							40	160	137	127
							60	152	132	122
							100	126	111	104
HardiePlank®	5/16	7.5	No. 11 gauge 1.75 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	16	0-15	164	149	135
							20	164	144	132
							40	157	134	124
							60	149	129	120
							100	123	109	102
HardiePlank®	5/16	8	No. 11 gauge 1.75 inch roofing Nail	Blind Nailed Through top edge of plank	2 × 4 wood	16	0-15	157	143	130
							20	157	139	127
							40	151	129	119
							60	143	124	115
							100	118	105	98

TABLE 4—MAXIMUM WIND SPEED (mph)<sup>3</sup> (Continued)

PRODUCT	PRODUCT (IN.)		FASTENER TYPE <sup>4</sup>	FASTENING METHOD <sup>2</sup>	FRAME TYPE <sup>1</sup>	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D
HardiePlank®	5/16	8.25	No. 11 gauge 1.75 inch roofing Nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15	155	140	128
							20	155	136	125
							40	148	127	117
							60	140	122	113
							100	116	103	97
HardiePlank®	5/16	9.25	No. 11 gauge 1.75 inch roofing Nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15	145	131	119
							20	145	128	117
							40	139	119	110
							60	131	114	106
							100	109	96	90
HardiePlank®	5/16	9.5	No. 11 gauge 1.75 inch roofing Nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15	143	129	118
							20	143	126	115
							40	137	117	108
							60	129	112	104
							100	107	95	89
HardiePlank®	5/16	5.25	No. 11 gauge 1.75 inch roofing Nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15	160	145	132
							20	160	141	129
							40	154	131	121
							60	145	126	117
							100	126	111	104
HardiePlank®	5/16	6.25	No. 11 gauge 1.75 inch roofing Nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15	150	136	123
							20	150	132	120
							40	143	123	113
							60	136	118	109
							100	112	100	93
HardiePlank®	5/16	7.25	No. 11 gauge 1.75 inch roofing Nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15	136	124	112
							20	136	120	110
							40	131	112	103
							60	124	107	100
							100	102	91	85
HardiePlank®	5/16	7.5	No. 11 gauge 1.75 inch roofing Nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15	134	121	110
							20	134	118	108
							40	128	110	101
							60	121	105	98
							100	100	89	-
HardiePlank®	5/16	8	No. 11 gauge 1.75 inch roofing Nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15	129	117	106
							20	129	113	104
							40	123	106	97
							60	117	101	94
							100	97	86	-
HardiePlank®	5/16	8.25	No. 11 gauge 1.75 inch roofing Nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15	126	115	104
							20	126	111	102
							40	121	104	96
							60	115	99	92
							100	95	-	-
HardiePlank®	5/16	9.25	No. 11 gauge 1.75 inch roofing Nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15	118	107	97
							20	118	104	95
							40	113	97	90
							60	107	93	86
							100	89	-	-
HardiePlank®	5/16	9.5	No. 11 gauge 1.75 inch roofing Nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15	116	106	96
							20	116	103	94
							40	112	95	88
							60	106	92	85
							100	87	-	-
HardiePlank®	5/16	4	No. 8 x 1 1/4 in. long x 0.375 in. HD ribbed waferhead screws	Blind Screwed	Min. No. 20 ga. X 3.62" x 1.375" Metal C-stud	16	0-15	168	168	137
							20	168	158	137
							40	168	147	126
							60	168	137	121
HardiePlank®	5/16	6	No. 8 x 1 1/4 in. long x 0.375 in. HD ribbed waferhead screws	Blind Screwed	Min. No. 20 ga. X 3.62" x 1.375" Metal C-stud	16	0-15	168	168	137
							20	168	158	137
							40	168	147	126
							60	168	137	121
HardiePlank®	5/16	6 1/4	No. 8 x 1 1/4 in. long x 0.375 in. HD ribbed waferhead screws	Blind Screwed	Min. No. 20 ga. X 3.62" x 1.375" Metal C-stud	16	0-15	168	158	142
							20	168	158	131
							40	168	147	126
							60	158	137	121

TABLE 4—MAXIMUM WIND SPEED (mph)<sup>3</sup> (Continued)

PRODUCT	PRODUCT (IN.)		FASTENER TYPE <sup>4</sup>	FASTENING METHOD <sup>2</sup>	FRAME TYPE <sup>1</sup>	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D
HardiePlank®	5/16	7 1/4 7 1/2	No. 8 x 1 1/4 in. long x 0.375 in. HD ribbed waferhead screws	Blind Screwed	Min. No. 20 ga. X 3.62" x 1.375" Metal C-stud	16	0-15 20 40 60	168 168 168 158	152 147 137 126	126 116 116 110
HardiePlank®	5/16	8	No. 8 x 1 1/4 in. long x 0.375 in. HD ribbed waferhead screws	Blind Screwed	Min. No. 20 ga. X 3.62" x 1.375" Metal C-stud	16	0-15 20 40 60	168 168 158 147	147 137 126 121	116 116 105 105
HardiePlank®	5/16	8 1/4	No. 8 x 1 1/4 in. long x 0.375 in. HD ribbed waferhead screws	Blind Screwed	Min. No. 20 ga. X 3.62" x 1.375" Metal C-stud	16	0-15 20 40 60	168 168 158 147	142 137 126 116	121 116 110 105
HardiePlank®	5/16	9 1/4 9 1/2	No. 8 x 1 1/4 in. long x 0.375 in. HD ribbed waferhead screws	Blind Screwed	Min. No. 20 ga. X 3.62" x 1.375" Metal C-stud	16	0-15 20 40 60	168 168 158 137	137 126 116 110	116 105 105 100
HardiePlank®	5/16	4	No. 8 x 1 1/4 in. long x 0.375 in. HD ribbed waferhead screws	Blind Screwed	Min. No. 20 ga. X 3.62" x 1.375" Metal C-stud	24	0-15 20 40 60	160 160 152 145	137 131 121 116	116 110 105 100
HardiePlank®	5/16	6	No. 8 x 1 1/4 in. long x 0.375 in. HD ribbed waferhead screws	Blind Screwed	Min. No. 20 ga. X 3.62" x 1.375" Metal C-stud	24	0-15 20 40 60	160 160 152 145	137 131 121 116	116 110 105 100
HardiePlank®	5/16	6 1/4	No. 8 x 1 1/4 in. long x 0.375 in. HD ribbed waferhead screws	Blind Screwed	Min. No. 20 ga. X 3.62" x 1.375" Metal C-stud	24	0-15 20 40 60	160 160 154 145	137 131 121 116	116 105 105 100
HardiePlank®	5/16	7 1/4 7 1/2	No. 8 x 1 1/4 in. long x 0.375 in. HD ribbed waferhead screws	Blind Screwed	Min. No. 20 ga. X 3.62" x 1.375" Metal C-stud	24	0-15 20 40 60	160 160 147 137	126 116 105 89	105 100 89 89
HardiePlank®	5/16	8	No. 8 x 1 1/4 in. long x 0.375 in. HD ribbed waferhead screws	Blind Screwed	Min. No. 20 ga. X 3.62" x 1.375" Metal C-stud	24	0-15 20 40 60	160 158 142 131	121 116 105 100	100 89 89 89
HardiePlank®	5/16	8 1/4	No. 8 x 1 1/4 in. long x 0.375 in. HD ribbed waferhead screws	Blind Screwed	Min. No. 20 ga. X 3.62" x 1.375" Metal C-stud	24	0-15 20 40 60	160 158 142 126	121 116 105 100	100 89 89 89
HardiePlank®	5/16	9 1/4 9 1/2	No. 8 x 1 1/4 in. long x 0.375 in. HD ribbed waferhead screws	Blind Screwed	Min. No. 20 ga. X 3.62" x 1.375" Metal C-stud	24	0-15 20 40 60	158 147 131 121	116 105 95 89	95 89 85 85
HardiePlank®	5/16	5.25	6d-2 inch long X 0.093 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15 20 40 60 100	141 141 135 128 106	128 124 116 111 94	116 114 107 103 88
HardiePlank®	5/16	6.25	6d-2 inch long X 0.093 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15 20 40 60 100	126 126 121 114 95	114 111 103 99 -	104 102 96 92 -
HardiePlank®	5/16	7.25	6d-2 inch long X 0.093 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15 20 40 60 100	115 115 110 104 86	104 102 94 91 -	95 93 87 - -

TABLE 4—MAXIMUM WIND SPEED (mph)<sup>3</sup> (Continued)

PRODUCT	PRODUCT (IN.)		FASTENER TYPE <sup>4</sup>	FASTENING METHOD <sup>2</sup>	FRAME TYPE <sup>1</sup>	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D
HardiePlank®	5/16	7.5	6d-2 inch long X 0.093 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15 20 40 60	113 113 108 102	102 99 93 89	93 91 85 -
HardiePlank®	5/16	8	6d-2 inch long X 0.093 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15 20 40 60	109 109 104 99	99 96 89 85	90 87 - -
HardiePlank®	5/16	8.25	6d-2 inch long X 0.093 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15 20 40 60	107 107 102 97	97 94 88 -	88 86 - -
HardiePlank®	5/16	9.25	6d-2 inch long X 0.093 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15 20 40 60	100 100 96 90	90 88 - -	- - - -
HardiePlank®	5/16	9.5	6d-2 inch long X 0.093 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15 20 40 60	98 98 94 89	89 87 - -	- - - -
HardiePlank®	5/16	5.25	6d-2 inch long X 0.093 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15 20 40 60	115 115 110 104	104 102 94 91	95 93 87 -
HardiePlank®	5/16	6.25	6d-2 inch long X 0.093 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15 20 40 60	103 103 99 93	93 91 - -	- - - -
HardiePlank®	5/16	7.25	6d-2 inch long X 0.093 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15 20 40 60	94 94 90 85	85 - - -	- - - -
HardiePlank®	5/16	7.5	6d-2 inch long X 0.093 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15 20 40	92 92 88	- - -	- - -
HardiePlank®	5/16	8	6d-2 inch long X 0.093 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15 20 40	89 89 85	- - -	- - -
HardiePlank®	5/16	8.25	6d-2 inch long X 0.093 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15 20	87 87	- -	- -
HardiePlank®	5/16	≤ 9 1/2	0.091" shank, 0.221" HD, 1.5" long corrosion resistant Nail	Face Nailed through the overlap @ 12" o.c.	7/16" thick APA rated OSB sheathing	-	0-15 20 40 60	131 126 105 100	95 89 85 -	- - - -

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 mph = 0.44 m/s.

<sup>1</sup>Values are for species of wood having a specific gravity of 0.42 or greater, unless otherwise noted.

<sup>2</sup>Face = Fastened through the overlapping plank. Blind = Fastened through the top edge of single plank.

<sup>3</sup>Wind speed design assumptions per Section 6.5, Method 2, of ASCE 7-05: I = 1.0, K<sub>zt</sub> = 1, K<sub>d</sub> = 0.85, G<sub>cpi</sub> = 0.18. Pressure Coefficient of 1.58 for height ≤ 60 feet and 1.98 for height > 60 feet.

<sup>4</sup>ET&F pin fasteners have knurled shanks.

**TABLE 5—(100 MPH)<sup>2</sup>  
ALLOWABLE FASTENER SPACING (IN.)  
HARDIEPLANK® LAP SIDING FASTENED TO ASTM C 90 CONCRETE BLOCK WALL<sup>1,3,4</sup>**

Building Height (feet)	≤6 1/2-inch wide			7 1/4- & 7 1/2-inch wide			8- & 8 1/4-inch wide			9 1/4- & 9 1/2-inch wide		
	Exposure			Exposure			Exposure			Exposure		
	B	C	D	B	C	D	B	C	D	B	C	D
0-15	24	24	24	24	24	24	24	24	21	24	23	19
20	24	24	24	24	24	23	24	24	20	24	21	18
30	24	24	24	24	24	21	24	22	19	24	20	17
40	24	24	23	24	24	20	24	21	18	24	19	16
50	24	24	22	24	22	19	24	20	17	24	18	15
60	24	24	22	24	22	19	24	19	17	23	17	15

For **SI**: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 mph = 0.44 m/s.

<sup>1</sup>Fasteners must be ET&F Fastening Systems, Inc. ET&F block Nail (ET & F No. ASM-144-125, head dia. = 0.30 in., shank dia. = 0.14 in., length = 1.25-in. long) or Max System block Nail (CP-C 832 W7-ICC, head dia. = 0.30 in., shank dia. = 0.15 in., length = 1.3 in.).

<sup>2</sup>Maximum basic wind speed must be 100 mph.

<sup>3</sup>Interpolation of spacing to address building height and other plank widths is permitted.

<sup>4</sup>The lap conceals the fasteners of the previous course (Blind Nailed).

**TABLE 6—(110 MPH)<sup>2</sup>  
ALLOWABLE FASTENER SPACING (IN.)  
HARDIEPLANK® LAP SIDING FASTENED TO ASTM C 90 CONCRETE BLOCK WALL<sup>1,3,4</sup>**

Building Height (feet)	≤6 1/2-inch wide			7 1/4- & 7 1/2-inch wide			8- & 8 1/4-inch wide			9 1/4- & 9 1/2-inch wide		
	Exposure			Exposure			Exposure			Exposure		
	B	C	D	B	C	D	B	C	D	B	C	D
0-15	24	24	22	24	24	19	24	21	17	23	19	15
20	24	24	21	24	22	18	24	20	16	23	18	15
30	24	24	20	24	20	17	24	18	15	23	16	14
40	24	22	19	24	19	16	24	17	15	21	15	13
50	24	21	18	24	18	16	22	16	14	20	14	12
60	24	20	18	23	18	15	21	16	14	19	14	12

For **SI**: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 mph = 0.44 m/s.

<sup>1</sup>Fasteners must be ET&F Fastening Systems, Inc. ET&F block Nail (ET & F No. ASM-144-125, head dia. = 0.30 in., shank dia. = 0.14 in., length = 1.25-in. long) or Max System block Nail (CP-C 832 W7-ICC, head dia. = 0.30 in., shank dia. = 0.15 in., length = 1.3 in.).

<sup>2</sup>Maximum basic wind speed must be 110 mph.

<sup>3</sup>Interpolation to address building height and other plank widths is permitted.

<sup>4</sup>The lap conceals the fasteners of the previous course (Blind Nailed).

**TABLE 7—(120 MPH)<sup>2</sup>  
ALLOWABLE FASTENER SPACING (IN.)  
HARDIEPLANK® LAP SIDING FASTENED TO ASTM C 90 CONCRETE BLOCK WALL<sup>1,3,4</sup>**

Building Height (feet)	≤6 1/2-inch wide			7 1/4- & 7 1/2-inch wide			8- & 8 1/4-inch wide			9 1/4- & 9 1/2-inch wide		
	Exposure			Exposure			Exposure			Exposure		
	B	C	D	B	C	D	B	C	D	B	C	D
0-15	24	23	19	24	20	17	21	18	15	19	16	13
20	24	22	18	24	19	16	21	17	14	19	15	12
30	24	20	17	24	17	15	21	15	13	19	14	12
40	24	19	16	22	16	14	20	14	12	18	13	11
50	24	18	16	21	16	13	18	14	12	17	12	11
60	23	17	15	20	15	13	18	13	11	16	12	10

For **SI**: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 mph = 0.44 m/s.

<sup>1</sup>Fasteners must be ET&F Fastening Systems, Inc. ET&F block Nail (ET & F No. ASM-144-125, head dia. = 0.30 in., shank dia. = 0.14 in., length = 1.25-in. long) or Max System block Nail (CP-C 832 W7-ICC, head dia. = 0.30 in., shank dia. = 0.15 in., length = 1.3 in.).

<sup>2</sup>Maximum basic wind speed must be 120 mph.

<sup>3</sup>Interpolation to address building height and other plank widths is permitted.

<sup>4</sup>The lap conceals the fasteners of the previous course (Blind Nailed).

**TABLE 8—(130 MPH)<sup>2</sup>  
ALLOWABLE FASTENER SPACING (IN.)  
HARDIEPLANK® LAP SIDING FASTENED TO ASTM C 90 CONCRETE BLOCK WALL<sup>1,3,4</sup>**

Building Height (feet)	≤6 1/2-inch wide			7 1/4- & 7 1/2-inch wide			8- & 8 1/4-inch wide			9 1/4- & 9 1/2-inch wide		
	Exposure			Exposure			Exposure			Exposure		
	B	C	D	B	C	D	B	C	D	B	C	D
0-15	24	20	16	21	17	14	18	15	12	16	14	11
20	24	19	15	21	16	13	18	14	12	16	13	11
30	24	17	14	21	15	12	18	13	11	16	12	10
40	22	16	14	19	14	12	17	12	11	15	11	9
50	21	15	13	18	13	11	16	12	10	14	11	9
60	20	15	13	17	13	11	15	11	10	13	10	9

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 mph = 0.44 m/s.

<sup>1</sup>Fasteners must be ET&F Fastening Systems, Inc. ET&F block Nail (ET & F No. ASM-144-125, head dia. = 0.30 in., shank dia. = 0.14 in., length = 1.25-in. long) or Max System block Nail (CP-C 832 W7-ICC, head dia. = 0.30 in., shank dia. = 0.15 in., length = 1.3 in.).

<sup>2</sup>Maximum basic wind speed must be 130 mph.

<sup>3</sup>Interpolation to address building height and other plank widths is permitted.

<sup>4</sup>The lap conceals the fasteners of the previous course (Blind Nailed).

**TABLE 9—(140 MPH)<sup>2</sup>  
ALLOWABLE FASTENER SPACING (IN.)  
HARDIEPLANK® LAP SIDING FASTENED TO ASTM C 90 CONCRETE BLOCK WALL<sup>1,3,4</sup>**

Building Height (feet)	≤6 1/2-inch wide			7 1/4- & 7 1/2-inch wide			8- & 8 1/4-inch wide			9 1/4- & 9 1/2-inch wide		
	Exposure			Exposure			Exposure			Exposure		
	B	C	D	B	C	D	B	C	D	B	C	D
0-15	21	17	14	18	15	12	16	13	11	14	12	10
20	21	16	13	18	14	12	16	12	10	14	11	9
30	21	15	12	18	13	11	16	11	10	14	10	9
40	19	14	12	16	12	10	15	11	9	13	9	8
50	18	13	11	15	11	10	14	10	9	12	9	8
60	17	13	11	15	11	10	13	10	9	12	9	8

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 mph = 0.44 m/s.

<sup>1</sup>Fasteners must be ET&F Fastening Systems, Inc. ET&F block Nail (ET & F No. ASM-144-125, head dia. = 0.30 in., shank dia. = 0.14 in., length = 1.25-in. long) or Max System block Nail (CP-C 832 W7-ICC, head dia. = 0.30 in., shank dia. = 0.15 in., length = 1.3 in.).

<sup>2</sup>Maximum basic wind speed must be 140 mph.

<sup>3</sup>Interpolation to address building height and other plank widths is permitted.

<sup>4</sup>The lap conceals the fasteners of the previous course (Blind Nailed).

**TABLE 10 (150 MPH)<sup>2</sup>  
ALLOWABLE FASTENER SPACING (IN.)  
HARDIEPLANK® LAP SIDING FASTENED TO ASTM C 90 CONCRETE BLOCK WALL<sup>1,3,4</sup>**

Building Height (feet)	≤6 1/2-inch wide			7 1/4- & 7 1/2-inch wide			8- & 8 1/4-inch wide			9 1/4- & 9 1/2-inch wide		
	Exposure			Exposure			Exposure			Exposure		
	B	C	D	B	C	D	B	C	D	B	C	D
0-15	18	15	12	16	13	11	14	11	9	12	10	8
20	18	14	12	16	12	10	14	11	9	12	10	8
30	18	13	11	16	11	9	14	10	8	12	9	7
40	16	12	10	14	10	9	13	9	8	11	8	7
50	15	12	10	13	10	9	12	9	8	11	8	7
60	15	11	10	13	10	8	11	8	7	10	8	7

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 mph = 0.44 m/s.

<sup>1</sup>Fasteners must be ET&F Fastening Systems, Inc. ET&F block Nail (ET & F No. ASM-144-125, head dia. = 0.30 in., shank dia. = 0.14 in., length = 1.25-in. long) or Max System block Nail (CP-C 832 W7-ICC, head dia. = 0.30 in., shank dia. = 0.15 in., length = 1.3 in.).

<sup>2</sup>Maximum basic wind speed must be 150 mph.

<sup>3</sup>Interpolation to address building height and other plank widths is permitted.

<sup>4</sup>The lap conceals the fasteners of the previous course (Blind Nailed).

**TABLE 11—ALLOWABLE BASIC WIND SPEEDS (mph) FOR HardieShingle™ INDIVIDUAL SHINGLE EXTERIOR WALL FINISH<sup>1</sup>**

Sheathing Type	Siding Fastener Type	Weather Exposure and Fastener Location	Height of Building (feet)	Exposure Category	
				B	C
Minimum 15/32 inch thick plywood complying with DOC PS 1-95	Min. 0.121 in. shank x 0.371 in. HD x 1 1/4 in. long corrosion resistant roofing Nail	8 inch exposure 2 roofing nails 9 inches from butt edge	0-15	126	110
			20	126	105
			40	126	95
			60	126	89
			100	95	
		7 inch exposure 2 roofing nails 8 inches from butt edge	0-15	126	126
			20	126	121
			40	126	110
			60	126	105
6 inch exposure 2 roofing nails 7 inches from butt edge	0-15	126	126		
	20	126	126		
	40	126	121		
	60	126	116		
	100	121	100		

For **SI**: 1 foot = 305 mm, 1 inch = 25.4 mm, 1 mph = 0.44 m/s.

<sup>1</sup>Table values are based on an importance factor of 1.0.

**TABLE 12—ALLOWABLE BASIC WIND SPEEDS (MPH) FOR HARDIESHINGLE™ INDIVIDUAL SHINGLE EXTERIOR WALL FINISH<sup>1</sup>**

Sheathing Type	Siding Fastener Type	Weather Exposure and Fastener Location	Height of Building (feet)	Exposure Category	
				B	C
Minimum 7/16 inch thick OSB sheathing complying with DOC-PS 2-95	Min. 0.091 in. shank x 0.221 in. HD x 1 1/2 in. long corrosion resistant siding Nail	8 inch exposure 2 siding nails 9 inches from butt edge	0-15	126	89
			20	126	89
			40	105	85
			60	100	
		7 inch exposure 2 siding nails 8 inches from butt edge	0-15	126	105
			20	126	100
			40	121	95
		6 inch exposure 2 siding nails 7 inches from butt edge	60	116	89
			0-15	126	116
20	126		110		
40	126		105		
60	126		95		
100	100	85			

For **SI**: 1 foot = 305 mm, 1 inch = 25.4 mm, 1 mph = 0.44 m/s.

<sup>1</sup>Table values are based on an importance factor of 1.0.

**TABLE 13—ALLOWABLE BASIC WIND SPEEDS (MPH) FOR HARDIESHINGLE™ INDIVIDUAL SHINGLE EXTERIOR WALL FINISH<sup>1</sup>**

Sheathing Type	Siding Fastener Type	Weather Exposure and Fastener Location	Height of Building (feet)	Exposure Category	
				B	C
Minimum 7/16 inch thick OSB sheathing complying with DOC-PS 2-95	Min. 0.091 in. shank x 0.221 in. HD x 1 1/2 in. long corrosion resistant siding Nail	8 in. exposure 3 siding nails per 12 in. wide, 9 in. from butt edge, 2 siding nails per 6 & 8 in. wide	0-15	116	116
			20	110	110
			40	100	100
			60	95	95
		7 in. exposure 3 siding nails per 12 in. wide, 8 inches from butt edge, 2 siding nails per 6 & 8 in. wide	0-15	126	126
			20	121	121
			40	110	110
		6 in. exposure 3 siding nails per 12 in. wide, 7 inches from butt edge, 2 siding nails per 6 & 8 in. wide	60	105	105
			0-15	126	126
20	126		126		
40	126		126		
60	121		121		
100	85	85			

For **SI**: 1 foot = 305 mm, 1 inch = 25.4 mm, 1 mph = 0.44 m/s.

<sup>1</sup>Table values are based on an importance factor of 1.0.

**ICC-ES Evaluation Report****ESR-2290 Supplement**

Reissued March 1, 2012

*This report is subject to renewal March 1, 2014.*[www.icc-es.org](http://www.icc-es.org) | (800) 423-6587 | (562) 699-0543

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**DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**  
**Section: 07 46 46—Fiber-Cement Siding****REPORT HOLDER:****JAMES HARDIE BUILDING PRODUCTS, INC.**  
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[chad.diercks@jameshardie.com](mailto:chad.diercks@jameshardie.com)**EVALUATION SUBJECT:****HARDIESHINGLE™ PANELS, HARDIEPLANK™ LAP SIDING, AND HARDIESHINGLE™ INDIVIDUAL SHINGLES****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2007 *California Building Code* (2007 CBC)
- 2010 *California Building Code* (2010 CBC)

**Properties evaluated:**

- Weather protection
- Structural
- Types I, II, III, and IV (noncombustible) construction
- Fire-resistance-rated construction
- Thermal resistance

**2.0 PURPOSE OF THIS SUPPLEMENT**

This supplement is issued to indicate that the fiber-cement panels, lap siding and cladding shingles described in the master report ESR-2290 are noncombustible materials and may be used where ignition-resistant construction is required by Section 704A.3 of the 2007 *California Building Code* (CBC) or Section 707A.3 of the 2010 CBC, provided installation is in accordance with the master report and the applicable requirements of Sections 1405.15, 1405.16, and 1405.17 of the 2007 CBC or Sections 1405.16 and 1405.17 of the 2010 CBC, as applicable.

The exterior wall coverings may be used in the construction of new buildings located in Fire Hazard Severity Zone within State Responsibility Areas or any Wildland-Urban Interface Fire Area, as permitted in Section 701A.3 of the 2007 and 2010 CBC.

The products recognized in this supplement have not been evaluated for compliance with the *International Wildland-Urban Interface Code*®.

This supplement expires concurrently with the master report reissued on March 1, 2012.