DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT Housing - Federal Housing Commissioner	Series and Series Number: **MATERIALS RELEASE NO:** 1263h (Supersedes issue dated November 6, 2018)
TO: DIRECTORS, SINGLE FAMILY HOCs **DIRECTORS, MULTIFAMILY HUBs**	**ISSUE DATE** June 26, 2023
	REVIEW DATE June 26, 2026

SUBJECT: **1. Product** James Hardie Exterior Siding and Soffit and Interior Wall Backerboard and Lining Board

2. Name and address of Manufacturer James Hardie Building Products, Inc.
10901 Elm Avenue
Fontana, CA 92337

USE:

Exterior wall coverings, exterior soffit covering of buildings, floor underlayment, and as backerboard.

DESCRIPTION:

James Hardie Building Products, Inc., panels are single-faced, cellulose fiber–reinforced cement (fiber-cement) panels. The products covered by this bulletin include:

- HardiePanel® (Prevail, Cempanel®) Siding
- Hardiflex ® Siding
- Harditex®Baseboard
- Hardiesoffit® Exterior Soffit Panel
- Cemsoffit® Exterior Soffit Panel
- ¼" Hardiebacker® EZ Grid®
- Hardiebacker® ProGrid™ Cement Boards
- ¼" Hardiebacker® Underlayment
- Hardiebacker® 500
- HardieShingle™ (New HardieShingle®) Panel
- HardiePlank™ (Cemplank®, Prevail™, and RFC®) Lap Siding
- Artisan Lap Siding®
- HardieShingle™ (New HardieShingle®) Individuals Shingles

REQUIREMENTS:

James Hardie Building Products, Inc., HardiePanel® (Prevail, Cempanel®) Siding, Hardiflex ® Siding, Harditex®Baseboard, Hardiesoffit® exterior soffit panel, Cemsoffit® exterior soffit panel, ¼" Hardiebacker® EZ Grid®, Hardiebacker® ProGrid™ Cement Boards, ¼" Hardiebacker® Underlayment, Hardiebacker® 500, HardieShingle™ (New HardieShingle®) Panel, HardiePlank™ (Cemplank®, Prevail™, and RFC®) Lap Siding, Artisan Lap Siding®, and HardieShingle™ (New HardieShingle®) Individuals Shingles shall all be in compliance with the 2021, 2018, 2015, 2012, 2009, and 2006 International Building Code (IBC) and International Residential Code (IRC). These named products (fiber-cement sheets) shall also comply with ASTM C1186 as Grade II, Type A.

In addition, HardiePanel® (Prevail, Cempanel®) Siding, Hardiflex ® Siding, and Harditex®Baseboard will be in compliance with the 2006 International Energy Conservation Code (IECC). These products shall be installed in accordance with the respective information of this bulletin.

Table 1 – Maximum Wind Speeds for Exposure Category (mph)[2]

Product	Minimum Product Thickness (in.)	Fastener Type[12]	Fastener Spacing (in.)	Frame Type	Stud Spacing (in.)	Building Height (ft.)	2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, Vasd[1,5,8]) EXPOSURE CATEGORY			2012 IBC and 2015 IBC/IRC (Ultimate Design Wind Speed, V_{ult}[6,7]), 2018 and 2021 IBC/IRC (Basic Design Wind Speed, V[9,10]) EXPOSURE CATEGORY		
							B	C	D	B	C	D
Hardiflex® HardiePanel®	¼	4d common, 1½-in long	8	2 x 4 wood[3]	16	20	105	-	-	136	-	-
						40	95	-	-	123	-	-
						60	85	-	-	110	-	-
Hardiflex® HardiePanel®	¼	4d common, 1½-in long	8	2 x 4 wood[3]	24	20	85	-	-	110	-	-
Hardiflex® HardiePanel®	¼	6d common, 2 in. long	6	2 x 4 wood[3]	16	20	137	116	-	177	150	-
						40	137	105	-	177	136	-
						60	137	105	-	177	136	-
Hardiflex® HardiePanel®	¼	No. 11 ga. x 1¼-in. long galvanized roofing nail	6	2 x 4 wood[3]	16	20	126	95	-	163	123	-
						40	121	95	-	156	123	-
Hardiflex® HardiePanel® Harditex®	¼	No. 11 ga. x 1¼-in. long galvanized roofing nail	6	2 x 4 wood[3]	24	20	95	-	-	123	-	-
						40	95	-	-	123	-	-
Hardiflex® HardiePanel® Harditex®	¼	No. 11 ga. x 1¼-in. long galvanized roofing nail	4 edge, 12 field	2 x 4 wood[3]	16	20	137	105	-	177	136	-
						40	137	105	-	177	136	-
						60	126	95	-	163	123	-
Hardiflex® HardiePanel®	5/16	0.091-in. shank x .225-in HD x 1½-in. long ring shank nail	4 edge, 8 field	2 x 4 wood[3]	16	20	112	98	90	145	127	116
						40	107	92	85	138	119	110
						60	101	88	-	130	114	-
Hardiflex® HardiePanel®	5/16	4d common, 1½-in long	8	2 x 4 wood[3]	16	40	126	95	-	163	123	-
Hardiflex® HardiePanel®	5/16	4d common, 1½-in long	8	2 x 4 wood[3]	24	20	105	-	-	136	-	-
						40	95	-	-	123	-	-

Table 1 – Maximum Wind Speeds for Exposure Category (mph)[2]
(Continued)

Product	Minimum Product Thickness (in.)	Fastener Type[12]	Fastener Spacing (in.)	Frame Type	Stud Spacing (in.)	Building Height (ft.)	2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, Vasd[1,5,8]) EXPOSURE CATEGORY			2012 IBC and 2015 IBC/IRC(Ultimate Design Wind Speed, V_{ult}[6,7]), 2018 and 2021 IBC/IRC (Basic Design Wind Speed, V[9,10]) EXPOSURE CATEGORY		
							B	C	D	B	C	D
Hardiflex® HardiePanel®	5/16	6d common, 2 in. long	4	2 x 4 wood[3]	16	0-15	181	164	149	234	212	192
						20	181	159	146	234	205	188
						40	174	148	137	225	191	177
						60	164	142	132	212	183	170
Hardiflex® HardiePanel®	5/16	6d common, 2 in. long	4	2 x 4 wood[3]	24	0-15	141	128	116	182	165	150
						20	141	124	113	182	160	146
						40	135	116	107	174	150	138
						60	128	111	103	165	143	133
Hardiflex® HardiePanel®	5/16	6d common, 2 in. long	6	2 x 4 wood[3]	16	0-15	144	130	118	186	168	152
						20	144	127	116	186	164	150
						40	138	118	109	178	152	141
						60	130	113	105	168	146	136
Hardiflex® HardiePanel®	5/16	6d common, 2 in. long	6	2 x 4 wood[3]	24	0-15	114	103	94	147	133	121
						20	114	101	92	147	130	119
						40	109	94	86	141	121	111
						60	103	90	-	133	116	-
Hardiflex® HardiePanel®	5/16	6d common, 2 in. long	6 edge, 12 field	2 x 4 wood[3]	16	40	137	105	-	177	136	-
						60	126	100	-	163	129	-
Hardiflex® HardiePanel®	5/16	0.091-in. shank x .225-in HD x 1½-in. long ring shank nail	3 edge, 8 field	2 x 4 wood[4]	16	20	126	95	-	163	123	-
						40	110	90	-	142	116	-
						60	100	85	-	129	110	-
HardiePanel®	5/16	No. 8 X 15/8 in. long X 0.375 in. HD ribbed wafer head screw	6" OC vertically / 12" OC horizontally	Attached to $^{7}/_{16}$" wood structural panel sheathing only	7/16" WSP attached per code	0-15	150	136	123	194	176	159
						20	150	132	120	194	170	155
						40	143	123	113	185	159	146
						60	136	118	109	176	152	141

Table 1 – Maximum Wind Speeds for Exposure Category (mph)[2]
(Continued)

Product	Minimum Product Thickness (in.)	Fastener Type[12]	Fastener Spacing (in.)	Frame Type	Stud Spacing (in.)	Building Height (ft.)	2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, Vasd[1,5,8]) EXPOSURE CATEGORY			2012 IBC and 2015 IBC/IRC(Ultimate Design Wind Speed, V_{ult}[6,7]), 2018 and 2021 IBC/IRC (Basic Design Wind Speed, V[9,10]) EXPOSURE CATEGORY		
							B	C	D	B	C	D
Hardiflex® HardiePanel®	¼	Min. No. 8 x 1-in. long x 0.323-in. HD ribbed bugle head screw	6	Min. No. 20 ga. (33 mil) X $3^5/_8$ in. x $1^3/_8$ in. metal C-stud	16	20	137	105	-	177	136	-
						40	126	105	-	163	136	-
						60	116	95	-	150	123	-
Hardiflex® HardiePanel®	¼	Min. No. 8 x 1-in. long x 0.323-in. HD ribbed bugle head screw	6	Min. No. 20 ga. (33 mil) X $3^5/_8$ in. x $1^3/_8$ in. metal C-stud	24	20	105	85	-	136	110	-
						40	95	-	-	123	-	-
Hardiflex® HardiePanel®	5/16	ET & F 0.10-in. knurled shank x 1½in. long x 0.25-in. HD pin fastener (AKN1000150NA)	4 edge, 8 field	Min. No. 20 ga. (33 mil) X $3^5/_8$ in. x $1^3/_8$ in. metal C-stud	16	15	153	139	127	198	179	164
						20	153	135	124	198	174	160
						40	147	126	116	190	163	150
						60	139	121	112	179	156	145
Hardiflex® HardiePanel®	5/16	ET & F 0.10-in. knurled shank x 1½in. long x 0.25-in. HD pin fastener (AKN1000150NA)	4 edge, 8 field	Min. No. 20 ga. (33 mil) X $3^5/_8$ in. x $1^3/_8$ in. metal C-stud	24	15	118	107	98	152	138	127
						20	118	104	95	152	134	123
						40	114	97	90	147	125	116
						60	107	93	87	138	120	112
HardiePanel®	5/16	No. 8 X 1.25" long X 0.323" HD ribbed bugle head screws	6" O.C.	Min. No. 20 ga. (33 mil) X $3^5/_8$ in. x $1^3/_8$ in. metal C-stud or 2 X 4 wood studs[3]	16	15	149	135	123	193	175	159
						20	149	132	120	193	170	155
						40	143	122	113	185	158	146
						60	135	117	109	175	152	141
HardiePanel®	5/16	No. 8 X 1.25"long X 0.323" HD ribbed bugle head screws	8" O.C.	Min. No. 20 ga. (33 mil) X $3^5/_8$ in. x $1^3/_8$ in. metal C-stud or 2 X 4 wood studs[3]	16	0-15	135	122	111	174	158	144
						20	135	119	109	174	154	140
						40	129	111	102	167	143	132
						60	122	106	99	158	137	127

Table 1 – Maximum Wind Speeds for Exposure Category (mph)[2]
(Continued)

Product	Minimum Product Thickness (in.)	Fastener Type[12]	Fastener Spacing (in.)	Frame Type	Framing Spacing (in.)	Building Height (ft.)	2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, Vasd[1,5,8,11]) EXPOSURE CATEGORY			2012 IBC and 2015 IBC/IRC(Ultimate Design Wind Speed, V_{ult}[6,7]), 2018 and 2021 IBC (Basic Design Wind Speed, V[9,10]) EXPOSURE CATEGORY		
							B	C	D	B	C	D
HardiePanel®	5/16	No. 8 X 1.25" long X 0.323" HD ribbed bugle head screws	10" O.C.	Min. No. 20 ga. (33 mil) X $3^5/_8$ in. x $1^3/_8$ in. metal C-stud or 2 X 4 wood studs[3]	16	0-15	127	115	105	164	149	135
						20	127	112	102	164	145	132
						40	122	104	96	157	134	124
						60	115	100	93	149	129	120
HardiePanel®	5/16	No. 8 X 1.25" long X 0.323" HD ribbed bugle head screws	12" O.C.	Min. No. 20 ga. (33 mil) X $3^5/_8$ in. x $1^3/_8$ in. metal C-stud or 2 X 4 wood studs[3]	16	0-15	121	110	100	157	142	129
						20	121	107	98	157	138	126
						40	116	100	92	150	128	119
						60	110	95	89	142	123	114
HardiePanel®	5/16	No. 8 X 1.25" long X 0.323" HD ribbed bugle head screws	8" O.C.	Min. No. 20 ga. (33 mil) X $3^5/_8$ in. x $1^3/_8$ in. metal C-stud or 2 X 4 wood studs[3]	24	0-15	107	97	88	138	125	114
						20	107	94	86	138	122	111
						40	103	88	81	133	113	105
						60	97	84	78	125	109	101
HardiePanel®	5/16	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x 3" (PART #650867)	12"x12" O.C.	Attached to 7/16" Wood Structural Panel sheathing only	7/16" WSP Sheathing attached per code	0-15	108	98	89	139	126	115
						20	108	95	87	139	123	112
						40	104	88	-	134	114	-
						60	98	-	-	126	-	-
HardiePanel®	5/16	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x 3" (PART #650867)	12"x8" O.C.	Attached to 7/16" Wood Structural Panel sheathing only	7/16" WSP Sheathing attached per code	0-15	127	115	105	164	149	135
						20	127	112	102	164	144	132
						40	122	104	96	157	134	124
						60	115	100	93	149	129	120

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

1. 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, GCp = -1.4.
2. Installation must be in accordance with the installation instructions contained within the installation section of this bulletin and the manufacturer's published installation instructions.
3. Values are for species of wood having a specific gravity of 0.42 or greater.
4. Values are for species of wood having a specific gravity of 0.36 or greater. [5]
5. Vasd = nominal design wind speed.
6. Vult = ultimate design wind speed
7. Wind speed design assumptions per Section 30.4, of ASCE 7-10: Kzt = 1, Kd = 0.85, GCpi = 0.18, GCp = -1.4.
8. 2015 and 2012 IBC Section 1609.3.1, Eqn. 16-33, $V_{asd} = V_{ult}\sqrt{0.6}$
9. V = basic design wind speed
10. Wind speed design assumptions per Section 30.3, of ASCE 7-16: K_{zt} = 1, Kd = 0.85, GCpi = 0.18, GCp = -1.4.
11. 2021 IBC Section 1609.3.1, Eqn. 16-17 and 2018 IBC Section 1609.3.1, Eqn. 16-33, $V_{asd} = V\sqrt{0.6}$
12. Smooth-shank stainless steel nails are outside of the scope of this bulletin.

Table 1 – Maximum Wind Speeds for Exposure Category (mph)[2]
(Continued)

Product	Minimum Product Thickness (in.)	Fastener Type[16]	Fastener Spacing (in.)	Frame Type	Furring Spacing (in.)	Building Height (ft.)	2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[1,5,8,15]) EXPOSURE CATEGORY			2012 IBC and 2015 IBC/IRC(Ultimate Design Wind Speed, V_{ult}[6,7]), 2018 and 2021 IBC/IRC (Basic Design Wind Speed, V[13,14]) EXPOSURE CATEGORY		
							B	C	D	B	C	D
HardiePanel®	5/16	No. 8 X 1.25" long X 0.323" HD ribbed bugle head screws	6" O.C. into furring only	2X4 wood or 20 ga. (33 mil) steel framing with 3/4" thick by 3.5" wide wood furring or 20 ga. (33 mil.) steel furring[9,10,11,12]	16	15	149	135	123	193	175	159
						20	149	132	120	193	170	155
						40	143	122	113	185	158	146
						60	135	117	109	175	152	141
HardiePanel®	5/16	No. 8 X 1.25"long X 0.323" HD ribbed bugle head screws	8" O.C. into furring only	2X4 wood or 20 ga. (33 mil) steel framing with 3/4" thick by 3.5" wide wood furring or 20 ga. (33 mil.) steel furring[9,10,11,12]	16	0-15	135	122	111	174	158	144
						20	135	119	109	174	154	140
						40	129	111	102	167	143	132
						60	122	106	99	158	137	127
HardiePanel®	5/16	No. 8 X 1.25" long X 0.323" HD ribbed bugle head screws	10" O.C. into furring only	2X4 wood or 20 ga. (33 mil) steel framing with 3/4" thick by 3.5" wide wood furring or 20 ga. (33 mil.) steel furring[9,10,11,12]	16	0-15	127	115	105	164	149	135
						20	127	112	102	164	145	132
						40	122	104	96	157	134	124
						60	115	100	93	149	129	120
HardiePanel®	5/16	No. 8 X 1.25" long X 0.323" HD ribbed bugle head screws	12" O.C. into furring only	2X4 wood or 20 ga. (33 mil) steel framing with 3/4" thick by 3.5" wide wood furring or 20 ga. (33 mil.) steel furring[9,10,11,12]	16	0-15	121	110	100	157	142	129
						20	121	107	98	157	138	126
						40	116	100	92	150	128	119
						60	110	95	89	142	123	114

Table 1 – Maximum Wind Speeds for Exposure Category (mph)[2]
(Continued)

Product	Minimum Product Thickness (in.)	Fastener Type[16]	Fastener Spacing (in.)	Frame Type	Furring Spacing (in.)	Building Height (ft.)	2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[1,5,8,15]) EXPOSURE CATEGORY			2012 IBC and 2015 IBC/IRC(Ultimate Design Wind Speed, V_{ult}[6,7]), 2018 and 2021 IBC/IRC (Basic Design Wind Speed, V[13,14]) EXPOSURE CATEGORY		
							B	C	D	B	C	D
HardiePanel®	5/16	No. 8 X 1.25" long X 0.323" HD ribbed bugle head screws	8" O.C. into furring only	2X4 wood or 20 ga. (33 mil) steel framing with 3/4" thick by 3.5" wide wood furring or 20 ga. (33 mil.) steel furring[9,10,11,12]	24	0-15	107	97	88	138	125	114
						20	107	94	86	138	122	111
						40	103	88	81	133	113	105
						60	97	84	78	125	109	101
HardiePanel®	5/16	0.090" shank X 0.215" HD x 1.5" long ring shanknail	6" O.C. into furring only	2X4 wood or 20 ga. (33 mil) steel framing with 3/4" thick by 3.5" wide wood furring[9,10,11]	16	0-15	143	130	118	185	168	152
						20	143	126	115	185	163	149
						40	137	117	108	177	151	140
						60	130	113	105	168	145	135

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

1. Wind speed design assumptions per Section 6.5, Method 2, of ASCE 7-05: I = 1.0, K_{zt} = 1, Kd = 0.85, GCpi = 0.18, GCp = -1.4.
2. Installation must be in accordance with the installation instructions contained within the installation section of this bulletin and the manufacturer's published installation instructions.
3. Values are for species of wood having a specific gravity of 0.42 or greater.
4. Values are for species of wood having a specific gravity of 0.36 or greater.
5. V_{asd} = nominal design wind speed.
6. V_{ult} = ultimate design wind speed.
7. Wind speed design assumptions per Section 30.4, of ASCE 7-10: K_{zt} = 1, Kd = 0.85, GCpi = 0.18, GCp = -1.4.
8. 2015 and 2012 IBC Section 1609.3.1, Eqn. 16-33, $V_{asd} = V_{ult} \sqrt{0.6}$.
9. Furring attachment to structural members (framing) or alternative furring width shall be designed by the project engineer.
10. Wood furring shall be preservative treated per AWPA.
11. Wood furring shall be specific gravity of 0.42 or greater per AFPA/NDS, or wood structural panel, conforming to DOC PS-1 or DOC PS-2 or APA PRP-108.
12. The design and attachment of steel furring shall be the responsibility of the project engineer.
13. V = basic design wind speed
14. Wind speed design assumptions per Section 30.3, of ASCE 7-16: K_{zt} = 1, Kd = 0.85, GCpi = 0.18, GCp = -1.4.
15. 2021 IBC Section 1609.3.1, Eqn. 16-17 and 2018 IBC Section 1609.3.1, Eqn. 16-33, $V_{asd} = V\sqrt{0.6}$
16. Smooth-shank stainless steel nails are outside of the scope of this bulletin.

Table 2 – Maximum Wind Speeds for Exposure Category (mph)[2]

Product	Product Dimensions (in.)		Fastener Type [9]	Fastener Spacing (in.)	Frame Type	Stud Spacing (in.)	Building Height[8] (ft.)	2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd} [1,4,7,12]) EXPOSURE CATEGORY			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[5,6]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[10,11]) EXPOSURE CATEGORY		
	Thick	Max. Width						B	C	D	B	C	D
Hardiesoffit®	¼	48	4d common, 1½-in long	8	2 x 4 wood[3]	16	0-15	111	100	91	143	130	118
							20	111	98	89	143	126	115
							40	106	91	-	137	117	-
							60	100	87	-	130	112	-
Hardiesoffit®	¼	48	4d common, 1½-in long	8	2 x 4 wood[3]	24	0-15	94	86	-	122	110	-
							20	94	-	-	122	-	-
							40	90	-	-	117	-	-
							60	86	-	-	110	-	-
Hardiesoffit®	¼	48	6d siding nail 0.092in shank x 2-in long x 0.235-in HD	4	2 x 4 wood[3]	24	0-15	139	126	114	179	162	147
							20	139	122	112	179	158	144
							40	133	114	105	172	147	135
							60	126	109	101	162	141	131
Hardiesoffit®	¼	16	0.083-in shank x 0.187" HD x $1^1/_2$— in long ring shank nail	8	2 x 4 wood[3]	16	0-15	185	168	152	239	217	197
							20	185	163	149	239	211	192
							40	177	152	140	229	196	181
							60	168	146	135	217	188	175
Hardiesoffit®	¼	16	0.083-in shank x 0.187" HD x $1^1/_2$— in long ring shank nail	8	2 x 4 wood[3]	24	0-15	186	169	153	240	218	198
							20	186	164	150	240	211	193
							40	178	152	141	230	197	182
							60	169	146	136	218	189	175
Hardiesoffit®	¼	24	0.083 shank x 0.187" HD x $1^1/_2$— in long ring shank nail	8	2 x 4 wood[3]	22.5 max	0-15	106	96	87	137	124	113
							20	106	93	85	137	121	110
							40	102	87	80	131	112	104
							60	96	83	-	124	108	-
Hardiesoffit®	¼	24	6d siding nail 0.092in shank x 2-in long x 0.235-in HD	4	2 x 4 wood[3]	24	0-15	144	131	119	186	169	153
							20	144	127	116	186	164	150
							40	138	118	109	178	152	141
							60	131	113	105	169	146	136

Table 2 – Maximum Wind Speeds for Exposure Category (mph)[2]

(Continued)

Product	Product Dimensions (in.)		Fastener Type [9]	Fastener Spacing (in.)	Frame Type	Stud Spacing (in.)	Building Height[8] (ft.)	2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd} [1,4,7,12]) EXPOSURE CATEGORY			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult} [5,6]), 2021 and 2018 IBC/IBC (Basic Design Wind Speed, V [10,11]) EXPOSURE CATEGORY		
	Thick	Max. Width						B	C	D	B	C	D
Hardiesoffit®	1/4	24	6d common nail 0.113in shank x 2-in long x 0.266-in HD	4	2 x 4 wood[3]	24	0-15 20 40 60	150 150 144 136	136 132 123 118	123 121 113 109	193 193 186 175	175 171 159 152	159 156 146 141
Hardiesoffit®	1/4	48	No 8 x 1-in long x 0.323 in HD ribbed bugle head screw	6	20 ga Min $3^5/_8$ in x $1^3/_8$ in metal C-stud	16	0-15 20 40 60	116 116 112 106	106 103 95 92	96 94 88 85	150 150 144 136	136 133 123 118	124 121 114 110
Hardiesoffit® VentedPlus™	1/4	24	ET&F shot pin .100" shank x 1.5" long x .250" HD	6	20 ga Min $3^5/_8$ in x $1^3/_8$ in metal C-stud	24	0-15 20 40 60	104 104 100 95	95 92 85 82	86 84 79 -	134 134 129 122	122 119 110 106	111 108 102 -
Hardiesoffit® VentedPlus™	1/4	24	6d siding nail .092" shank x 2.0" long x .222" HD	4	2 x 4 wood[3]	24	0-15 20 40 60	148 148 142 135	135 131 122 117	122 119 112 108	192 192 184 174	174 169 157 151	158 154 145 140
Hardiesoffit® VentedPlus™	1/4	24	6d common nail .113" shank x 2.0" long x .266" HD	4	2 x 4 wood[3]	24	0-15 20 40 60	162 162 156 147	147 143 133 128	134 130 123 118	209 209 201 190	190 185 172 165	172 168 158 153
Hardiesoffit® VentedPlus™	1/4	16	4d ring shank siding nail (.090-inch shank x .215 in. HD x 1-1/2 in. long	8	2 x 4 wood[3]	24	0-15 20 40 60	126 126 121 114	114 111 103 99	104 101 95 92	163 163 156 148	148 143 133 128	134 131 123 119

Table 2 – Maximum Wind Speeds for Exposure Category (mph)[2]

(Continued)

Product	Product Dimensions (in.)		Fastener Type [9]	Fastener Spacing (in.)	Frame Type	Stud Spacing (in.)	Building Height[8] (ft.)	2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd} [1,4,7,12]) EXPOSURE CATEGORY			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult} [5,6]), 2021 and 2018 IBC/IBC (Basic Design Wind Speed, V [10,11]) EXPOSURE CATEGORY		
	Thick	Max. Width						B	C	D	B	C	D
Hardiesoffit® VentedPlus™	1/4	16	4d ring shank siding nail (.090-inch shank x .215 in. HD x 1-1/2 in. long	8	2 x 4 wood[3]	16	0-15	141	128	116	182	165	150
							20	141	124	113	182	160	146
							40	135	116	107	175	149	138
							60	128	111	103	165	143	133
Hardiesoffit® VentedPlus™	1/4	16	4d ring shank siding nail (.090-inch shank x .215 in. HD x 1-1/2 in. long	8" o.c. on perimeter framing member only	2 x 4 wood[3]	16	0-15	108	98	89	140	127	115
							20	108	96	87	140	123	113
							40	104	89	82	134	115	106
							60	98	85	79	127	110	102
Hardiesoffit® VentedPlus™	1/4	24	4d ring shank siding nail (.090-inch shank x .215 in. HD x 1-1/2 in. long	8	2 x 4 wood[3]	24	0-15	110	100	90	142	129	117
							20	110	97	88	142	125	114
							40	105	90	83	136	116	107
							60	100	86	80	129	112	104

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

1. Wind speed design assumptions per Section 6.5, Method 2, of ASCE 7-05: I = 1.0, K_{zt} = 1, K_d = 0.85, GC_{pi} = 0.18, GC_p = -1.4.
2. Installation must be in accordance with the installation instructions contained within the installation section of this bulletin and the manufacturer's published installation instructions.
3. Values are for species of wood having a specific gravity of 0.42 or greater.
4. Vasd = nominal design wind speed.
5. Vult = ultimate design wind speed
6. Wind speed design assumptions per Section 30.4, of ASCE 7-10: K_{zt} = 1, K_d = 0.85, GC_{pi} = 0.18, GC_p = -1.4.
7. 2015 and 2012 IBC Section 1609.3.1, Eq. 16-33, $V_{asd}=V_{ult}\sqrt{0.6}$
8. Building height equals the mean roof height (in feet) of a building, except that eave height shall be used for roof angle Θ less than or equal to 10° (2-12 roof slope).
9. Smooth-shank stainless steel nails are outside of the scope of this bulletin.
10. V= basic design wind speed
11. Wind speed design assumptions per Section 30.3, of ASCE 7-16: K_{zt} = 1, K_d = 0.85, GC_{pi} = 0.18, GC_p = -1.4.
12. 2021 IBC Section 1609.3.1, Eqn. 16-17 and 2018 IBC Section 1609.3.1, Eqn 16-33, $V_{asd=}V\sqrt{0.6}$

TABLE 3—FASTENERS

PRODUCT	APPLICATION	FASTENER[1,2]	FASTENER SPACING
1/4“ HardieBacker® EZ Grid; 1/4“ HardieBacker® Underlayment; HardieBacker® ProGrid™; HardieBacker 500	Interior Wall: wood framing, tile finish	Minimum $1^1/_4$-inch-long (32 mm), corrosion-resistant (galvanized or stainless steel) roofing nails or minimum $1^1/_4$-inch-long (32 mm), No. 8 by 0.375-inch-headdiameter (9.5 mm), self-drilling, corrosion-resistant, ribbed wafer-head screws	8 inches on center along all supports
HardieBacker® 500	Exterior Wall: wood framing, tile finish	Minimum $1^3/_4$-inch-long (44 mm), corrosion-resistant (galvanized or stainless steel) roofing nails or minimum $1^1/_4$-inch-long (32 mm), No. 8 by 0.375-inch-headdiameter (9.5 mm), self-drilling, corrosion-resistant, ribbed wafer-head screws	8 inches on center along all supports
1/4” HardieBacker® Underlayment; HardieBacker® 500	Interior Wall: wood framing, paint or wallpaper finish	Minimum $1^3/_8$-inch-long (35 mm) gypsum board nails or minimum 1-inch-long (25.4 mm) No. 8 x 0.323-inch-head-diameter (8.2 mm), self-drilling, corrosion resistant, ribbed bugle-head screws	8 inches on center along all supports
1/4” HardieBacker® EZ Grid; 1/4“ HardieBacker® Underlayment; HardieBacker® ProGrid™; HardieBacker® 500	Interior Wall: steel framing, tile finish	Minimum $1^1/_4$-inch-long (32 mm), No. 8 by 0.375-inch-headdiameter (9.5 mm), self-drilling, corrosion-resistant, ribbed wafer-head screws	8 inches on center along all supports
HardieBacker 500	Exterior Wall: steel framing, tile finish	Minimum $1^1/_4$-inch-long (32 mm), No. 8 by 0.375-inch-headdiameter (9.5 mm), self-drilling, corrosion-resistant, ribbed wafer-head screws	8 inches on center along all supports
1/4” HardieBacker® Underlayment; HardieBacker® 500	Interior Wall: steel framing, paint or wallpaper finish	Minimum 1-inch-long (25.4 mm), No. 8 x 0.323-inch-headdiameter (8.2 mm), self-drilling, corrosion resistant, ribbed bugle-head screws	8 inches on center along all supports
1/4” HardieBacker® EZ Grid; 1/4” HardieBacker® Underlayment; HardieBacker® ProGrid™; HardieBacker® 500	Interior Flooring underlayment, tile finish	$1^1/_4$-inch-long (32 mm), corrosion-resistant (galvanized or stainless steel) roofing nails or minimum 1-inch-long (25.4 mm), No. 8 by 0.323-inch-headdiameter (8.2 mm), self-drilling, corrosion-resistant, ribbed bugle-head screws. To comply with ANSI A108.11, minimum $1^1/_4$-inch-long (32 mm), No. 8 by 0.375-inch-head-diameter (9.5 mm), self-drilling, corrosion resistant ribbed wafer-head screws must be used	8 inches edge, 8 inches field
1/4” HardieBacker® Underlayment	Interior Flooring underlayment, resilient floor finish	3d, corrosion-resistant, ring shank nails or No. 18 gage (0.0475-inch) corrosion-resistant staples with $^1/_4$-inch (6.4 mm) crowns	3 inches edge, 6 inches field[3]

For SI: 1 inch = 25.4 mm.

1. Screws into wood framing must be of sufficient length to penetrate at least 1 inch into wood members.
2. Screws into steel framing must be of sufficient length to penetrate the metal framing at least three full threads.
3. Fasteners must be in a random/staggered pattern in the field.

TABLE 4 —TRANSVERSE LOAD (WIND LOAD) RESISTANCE[1]

Product	Minimum Product thickness (In.)	Fastener Type[3, 4]	Fastener Spacing (In.)	Frame Type	Stud Spacing (In.)	Allowable positive and negative load[5]
HardieBacker® 500	13 /32	Minimum $1^1/_4$-inch-long (32 mm), No. 8 by 0.375-inch-head-diameter (9.5 mm), self-drilling, corrosion resistant, ribbed wafer-head screws	8	2X4 Wood[2]	16	91.9 psf (4400 Pa)
HardieBacker® 500	13 /32	No. 11 ga, x $1^3/_4$-inchlong (44 mm) galvanized roofing nails	8	2X4 Wood[2]	16	30.1 psf (1441 Pa)
HardieBacker® 500	13 /32	Minimum $1^1/_4$-inch-long (32 mm), No. 8 by 0.375-inch-head-diameter (9.5 mm), self-drilling, corrosion resistant, ribbed wafer-head screws	8	Min No. 20 ga. X $3^5/_8$ in. x $1^3/_8$ in. metal C-stud[3]	16	91.7 psf (4391 Pa)

For SI: 1 ft = 305 mm, 1 inch = 25.4 mm, 1 mph=0.44 m/s, 1 psf = 47.88 Pa

1. Installation must be in accordance with the installation instructions contained within the installation section in this bulletin and the manufacturer's published installation instructions.
2. Values are for species of wood having a specific gravity of .042 or greater.
3. Screws into steel framing must be of sufficient length to penetrate the metal framing at least three full threads.
4. Screws into wood framing must be of sufficient length to penetrate at least 1 inch into wood members.
5. Allowable load is based on a factor of safety of 3.0 applied to the ultimate load.

TABLE 5 – STANDARD NOMINAL PANEL, PLANK, AND SHINGLE DIMENSIONS

PRODUCT	WIDTH (INCHES)	LENGTH	THICKNESSES (INCHES)
HardiePlank® lap siding	4, 5 1/4, 6, 6 1/4, 7 1/4, 7 1/2, 8, 8 1/4, 9 1/4, 9 1/2 & 12	12, 14 feet	5/16
Artisan® lap siding,	5 1/4, 7 1/4, 8 1/4	12, 14 feet	5/8
Cemplank® lap siding	5 1/4, 6, 6 1/4, 7 1/4, 7 1/2, 8, 8 1/4, 9 1/2 & 12	12, 14 feet	5/16
Prevail™ lap siding	5 1/4, 6, 6 1/4, 7 1/4, 7 1/2, 8, 8 1/4, 9 1/2 & 12	12, 14 feet	5/16
RFC® lap siding	6 1/4, 7 1/2, 8 1/4, 9 1/2 & 12	12, 14 feet	5/16
New HardieShingle® 5-inch exposure (square & staggered edge)	48	14 inches	1/4
New HardieShingle® 7-inch exposure (square & staggered edge)	48	15 1/4, 15 7/8 inches	1/4
HardieShingle™ panel (square & staggered edge)	48	16 inches	1/4
HardieShingle™ panel (half round)	48	16, 19 inches	1/4
New HardieShingle® individual shingles 5-inch exposure	3 1/2, 4 1/2, 5 1/2, 7, 8 3/4	14 inches	1/4
New HardieShingle® individual shingles 7-inch exposure	4 3/16, 5 1/2, 6 3/4, 7 1/4, 10,	15 1/4 inches	1/4
HardieShingle™ individual shingles	6, 8, & 12	18 inches	1/4

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

TABLE 6 – "K" and "R" VALUES FOR FIBER-CEMENT PRODUCTS

PRODUCT THICKNESS[3] (INCH)	THERMAL CONDUCTANCE[1] K_{EFF} = (BTU/HR-FT^2-°F)/INCH	THERMAL RESISTANCE[1] R = 1/K_{EFF}	ACTUAL THERMAL CONDUCTANCE[2] (K_{EFF})	ACTUAL THERMAL RESISTANCE[2] (R)
1/4	1.95	0.51	7.80	0.13
5/16	2.07	0.48	6.62	0.15

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

1. Based on 1 inch of panel thickness.
2. Actual value for panel thickness shown.

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TABLE 7 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph)

PRODUCT	THICK (IN.)	FASTENER TYPE[13]	FASTENER SPACING (IN.)	FRAME TYPE[1]	STUD SPACING (IN.)	BLDG. HEIGHT (FT.)	2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[4,6,9,12]) EXPOSURE CATEGORY			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[7,8]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[10,11]) EXPOSURE CATEGORY		
							B	C	D	B	C	D
HardieShingle™ (New HardieShingle®) Panel (straight or half round installation)	1/4	0.090" shank x 0.215" HD x 1 1/2" long ring shank nail[5]	13.75	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached to framing per code	0-15	126	85	-	163	110	-
						20	121	85	-	156	110	-
						40	105	85	-	136	110	-
						60	95	-	-	123	-	-
HardieShingle™ (New HardieShingle®) Panel (staggered installation)	1/4	0.090" shank x 0.215" HD x 1 1/2" long ring shank nail[5]	13.75	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached to framing per code	0-15	105	85	-	136	110	-
						20	105	-	-	136	-	-
						40	95	-	-	123	-	-
						60	85	-	-	110	-	-
HardieShingle™ (New HardieShingle®) Panel	1/4	0.090" shank x 0.215" HD x 1 1/2" long ring shank nail[5]	8	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached to framing per code	0-15	158	143	130	204	185	168
						20	158	139	127	204	179	164
						40	152	130	120	196	168	155
						60	143	124	115	185	160	148
HardieShingle™ (New HardieShingle®) Panel	1/4	0.090" shank x 0.215" HD x 1 1/2" long ring shank nail[5]	6	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached to framing per code	0-15	172	156	142	222	201	183
						20	172	151	138	222	195	178
						40	165	141	130	213	182	168
						60	156	135	126	201	174	163
HardieShingle™ (New HardieShingle®) Panel	1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	7" exposure, nailed at 16" o.c. (horizontal) and 7" o.c. (vertical)	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached to framing per code	0-15	113	102	93	146	132	120
						20	113	100	91	146	129	117
						40	108	93	86	140	120	110
						60	102	89	-	132	115	-
HardieShingle™ (New HardieShingle®) Panel	1/4	0.083" shank x 0.187" HD x 1 1/2" long ring shank nail[2]	at each stud[3]	Nominal 2x4[1] or Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	168	137	116	217	177	150
						20	168	137	116	217	177	150
						40	168	126	105	217	163	136
						60	158	116	105	204	150	136
HardieShingle™ (New HardieShingle®) Panel	1/4	0.083" shank x 0.187" HD x 1 1/2" long ring shank nail[2]	at each stud[3]	Nominal 2x4[1] or Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	147	105	85	190	136	110
						20	137	100	85	177	129	110
						40	126	95	-	163	123	-
						60	116	89	-	150	115	-

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

1. Values are for species of wood having a specific gravity of 0.40 or greater.
2. 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.
3. For application to ASTM C90 concrete masonry unit 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.), Max System block nail (CP-C 832 W7-ICC, head diameter. = 0.30 in., shank diameter. = 0.15 in., length = 1.3 in.), Aerosmith SurePin block nail (head diameter = 0.30 in., shank diameter = 0.144 in., length = 1.25 in.), or Jaaco Nail Pro (NP145S head diameter = 0.30 in., shank diameter = 0.145 in., length = 1.25 in.) applied at the equivalent fastener or stud spacing.
4. 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., GCp=-1.4.
5. 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.
6. Vasd = nominal design wind speed.
7. Vult = ultimate design wind speed.
8. Wind speed design assumptions per Section 30.4, of ASCE 7-10: Kzt = 1, Kd = 0.85, GCpi = 0.18, GCp = -1.4.
9. 2015 and 2012 IBC Section 1609.3.1, Eqn. 16-33, $V_{asd}=V_{ult}\sqrt{0.6}$
10. V = basic design wind speed
11. Wind speed design assumptions per Section 30.3, of ASCE 7-16: Kzt = 1, Kd = 0.85, GCpi = 0.18, GCp = -1.4.
12. 2021 IBC Section 1609.3.1, Eqn. 16-17 and 2018 IBC Section 1609.3.1, Eqn. 16-33, $V_{asd} = V\sqrt{0.6}$
13. Smooth-shank stainless steel nails are outside of the scope of this report.

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph)

								2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12,15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
PRODUCT	PRODUCT DIMENSION (IN.)		FASTENER TYPE[4,16]	FASTENING METHOD[2]	FRAME TYPE[1,8]	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY			EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D	B	C	D
HardiePlank®	5/16	4	ET&F pin 0.100" x 1.5" x 0.25" HD	Face Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	168	168	147	217	217	190
							20	168	168	147	217	217	190
							40	168	158	137	217	204	177
							60	168	147	126	217	190	163
HardiePlank®	5/16	6	ET&F pin 0.100" x 1.5" x 0.25" HD	Face Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	168	168	147	217	217	190
							20	168	168	147	217	217	190
							40	168	158	137	217	204	177
							60	168	147	126	217	190	163
HardiePlank®	5/16	6 1/4	ET&F pin 0.100" x 1.5" x 0.25" HD	Face Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	168	168	147	217	217	190
							20	168	168	137	217	217	177
							40	168	158	137	217	204	177
							60	168	147	126	217	190	163
HardiePlank®	5/16	7 1/4 or 7 1/2	ET&F pin 0.100" x 1.5" x 0.25" HD	Face Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	168	158	126	217	204	163
							20	168	147	126	217	190	163
							40	168	137	121	217	177	156
							60	168	126	116	217	163	150
HardiePlank®	5/16	8	ET&F pin 0.100" x 1.5" x 0.25" HD	Face Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	168	147	126	217	190	163
							20	168	147	126	217	190	163
							40	168	137	116	217	177	150
							60	168	126	105	217	163	136
HardiePlank®	5/16	8 1/4	ET&F pin 0.100" x 1.5" x 0.25" HD	Face Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	168	147	126	217	190	163
							20	168	147	116	217	190	150
							40	168	131	116	217	169	150
							60	158	126	105	204	163	136
HardiePlank®	5/16	9 1/4 or 9 1/2	ET&F pin 0.100" x 1.5" x 0.25" HD	Face Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	168	137	116	217	177	150
							20	168	137	116	217	177	150
							40	158	126	105	204	163	136
							60	147	116	105	190	150	136
HardiePlank®	5/16	12	ET&F pin 0.100" x 1.5" x 0.25" HD	Face Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	145	131	119	187	169	154
							20	145	127	116	187	164	150
							40	139	119	110	179	154	142
							60	131	114	106	169	147	137
HardiePlank®	5/16	4	ET&F pin 0.100" x 1.5" x 0.25" HD	Face Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	160	137	116	207	177	150
							20	160	137	116	207	177	150
							40	154	121	105	199	156	136
							60	145	116	100	187	150	129
HardiePlank®	5/16	6	ET&F pin 0.100" x 1.5" x 0.25" HD	Face Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	160	137	116	207	177	150
							20	160	137	116	207	177	150
							40	154	121	105	199	156	136
							60	145	116	100	187	150	129

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

								2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12.15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
PRODUCT	PRODUCT DIMENSION (IN.)		FASTENER TYPE[4,16]	FASTENING METHOD[2]	FRAME TYPE[1,8]	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY			EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D	B	C	D
HardiePlank®	5/16	6 1/4	ET&F pin 0.100" x 1.5" x 0.25" HD	Face Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	160	137	116	207	177	150
							20	160	126	110	207	163	142
							40	147	121	105	190	156	136
							60	137	116	95	177	150	123
HardiePlank®	5/16	7 1/4 or 7 1/2	ET&F pin 0.100" x 1.5" x 0.25" HD	Face Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	160	116	100	207	150	129
							20	158	116	95	204	150	123
							40	137	105	89	177	136	115
							60	126	95	89	163	123	115
HardiePlank®	5/16	8	ET&F pin 0.100" x 1.5" x 0.25" HD	Face Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	160	116	95	207	150	123
							20	158	116	95	204	150	123
							40	137	105	89	177	136	115
							60	126	95	85	163	123	110
HardiePlank®	5/16	8 1/4	ET&F pin 0.100" x 1.5" x 0.25" HD	Face Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	158	116	95	204	150	123
							20	158	105	95	204	136	123
							40	137	100	85	177	129	110
							60	126	95	85	163	123	110
HardiePlank®	5/16	9 1/4 or 9 1/2	ET&F pin 0.100" x 1.5" x 0.25" HD	Face Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	147	105	85	190	136	110
							20	147	105	85	190	136	110
							40	126	95	85	163	123	110
							60	126	95	-	163	123	-
HardiePlank®	5/16	12	ET&F pin 0.100" x 1.5" x 0.25" HD	Face Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	106	96	87	137	124	112
							20	106	93	85	137	120	110
							40	102	87	-	132	112	-
							60	96	-	-	124	-	-
HardiePlank®	5/16	4	ET&F pin 0.100" x 1.5" x 0.313" HD	Blind Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	158	126	105	204	163	136
							20	158	121	100	204	156	129
							40	147	110	95	190	142	123
							60	137	105	95	177	136	123
HardiePlank®	5/16	6	ET&F pin 0.100" x 1.5" x 0.313" HD	Blind Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	158	126	105	204	163	136
							20	158	121	100	204	156	129
							40	147	110	95	190	142	123
							60	137	105	95	177	136	123
HardiePlank®	5/16	6 1/4	ET&F pin 0.100" x 1.5" x 0.313" HD	Blind Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	168	116	100	217	150	129
							20	158	116	95	204	150	123
							40	137	105	89	177	136	115
							60	126	100	85	163	129	110
HardiePlank®	5/16	7 1/4 or 7 1/2	ET&F pin 0.100" x 1.5" x 0.313" HD	Blind Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	147	105	85	190	136	110
							20	137	100	85	177	129	110
							40	121	89	-	156	115	-
							60	110	85	-	142	110	-

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

								2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12.15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
PRODUCT	PRODUCT DIMENSION (IN.)		FASTENER TYPE[4,16]	FASTENING METHOD[2]	FRAME TYPE[1,8]	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY			EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D	B	C	D
HardiePlank®	5/16	8	ET&F pin 0.100" x 1.5" x 0.313" HD	Blind Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	137	95	85	177	123	110
							20	126	95	-	163	123	-
							40	116	85	-	150	110	-
							60	105	85	-	136	110	-
HardiePlank®	5/16	8 1/4	ET&F pin 0.100" x 1.5" x 0.313" HD	Blind Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	137	95	-	177	123	-
							20	126	95	-	163	123	-
							40	116	85	-	150	110	-
							60	105	-	-	136	-	-
HardiePlank®	5/16	4	ET&F pin 0.100" x 1.5" x 0.313" HD	Blind Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	158	110	95	204	142	123
							20	147	105	85	190	136	110
							40	126	95	85	163	123	110
							60	121	95	-	156	123	-
HardiePlank®	5/16	6	ET&F pin 0.100" x 1.5" x 0.313" HD	Blind Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	158	110	95	204	142	123
							20	147	105	85	190	136	110
							40	126	95	85	163	123	110
							60	121	95	-	156	123	-
HardiePlank®	5/16	6 1/4	ET&F pin 0.100" x 1.5" x 0.313" HD	Blind Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	147	105	85	190	136	110
							20	137	100	85	177	129	110
							40	126	95	-	163	123	-
							60	105	89	-	136	115	-
HardiePlank®	5/16	7 1/4 or 7 1/2	ET&F pin 0.100" x 1.5" x 0.313" HD	Blind Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	137	95	85	177	123	110
							20	126	95	-	163	123	-
							40	116	85	-	150	110	-
							60	105	85	-	136	110	-
HardiePlank®	5/16	8	ET&F pin 0.100" x 1.5" x 0.313" HD	Blind Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	126	85	-	163	110	-
							20	116	85	-	150	110	-
							40	100	-	-	129	-	-
							60	95	-	-	123	-	-
HardiePlank®	5/16	8 1/4	ET&F pin 0.100" x 1.5" x 0.313" HD	Blind Nailed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	116	-	-	150	-	-
							20	105	-	-	136	-	-
							40	95	-	-	123	-	-
							60	85	-	-	110	-	-
HardiePlank®	5/16	5 1/4	6d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	170	170	158	219	219	204
							20	170	169	154	219	218	199
							40	170	157	145	219	203	187
							60	170	151	140	219	194	180
HardiePlank®	5/16	6 1/4	6d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	170	155	141	219	200	182
							20	170	151	138	219	195	178
							40	164	140	130	218	181	167
							60	155	135	125	207	174	161

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

								2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12.15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
PRODUCT	PRODUCT DIMENSION (IN.)		FASTENER TYPE[4,16]	FASTENING METHOD[2]	FRAME TYPE[1,8]	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY			EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D	B	C	D
HardiePlank®	5/16	7 1/4	6d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	156	142	129	202	183	166
							20	156	138	126	202	178	162
							40	150	128	118	193	165	153
							60	142	123	114	183	159	147
HardiePlank®	5/16	7 1/2	6d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	153	139	126	197	179	163
							20	153	135	123	197	174	159
							40	147	125	116	190	162	150
							60	139	120	112	179	155	144
HardiePlank®	5/16	8	6d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	147	134	121	190	172	157
							20	147	130	118	190	168	153
							40	141	121	111	182	156	144
							60	134	116	108	172	150	139
HardiePlank®	5/16	8 1/4	6d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	145	131	119	187	169	154
							20	145	127	116	187	165	150
							40	139	119	110	179	153	141
							60	131	114	106	169	147	136
HardiePlank®	5/16	9 1/4	6d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	135	123	111	175	158	144
							20	135	119	109	175	154	141
							40	130	111	102	168	143	132
							60	123	106	99	158	137	128
HardiePlank®	5/16	9 1/2	6d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	133	121	110	172	156	142
							20	133	117	107	172	152	138
							40	128	109	101	165	141	130
							60	121	105	97	156	135	126
HardiePlank®	5/16	5 1/4	6d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	156	142	129	201	183	166
							20	156	138	126	201	178	162
							40	150	128	118	193	165	153
							60	142	123	114	183	159	147
HardiePlank®	5/16	6 1/4	6d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	140	127	115	180	164	149
							20	140	123	112	180	159	145
							40	134	115	106	173	148	137
							60	127	110	102	164	142	132
HardiePlank®	5/16	7 1/4	6d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	127	116	105	165	149	136
							20	127	112	103	165	145	132
							40	122	105	97	158	135	125
							60	116	100	93	149	130	120
HardiePlank®	5/16	7 1/2	6d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	125	113	103	161	146	133
							20	125	110	100	161	142	130
							40	120	102	95	155	132	122
							60	113	98	91	146	127	118

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

								2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12,15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
PRODUCT	PRODUCT DIMENSION (IN.)		FASTENER TYPE[4,16]	FASTENING METHOD[2]	FRAME TYPE[1,8]	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY			EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D	B	C	D
HardiePlank®	5/16	8	6d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	120	109	99	155	141	128
							20	120	106	97	155	137	125
							40	115	99	91	149	127	117
							60	109	95	88	141	122	113
HardiePlank®	5/16	8 1/4	6d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	118	107	97	152	138	126
							20	118	104	95	152	134	123
							40	113	97	89	146	125	115
							60	107	93	86	138	120	111
HardiePlank®	5/16	9 1/4	6d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	110	100	91	142	129	117
							20	110	97	89	142	126	115
							40	106	91	-	137	117	-
							60	100	87	-	129	112	-
HardiePlank®	5/16	9 1/2	6d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	109	99	90	140	127	116
							20	109	96	87	140	124	113
							40	104	89	-	135	115	-
							60	99	85	-	127	110	-
HardiePlank®	5/16	5 1/4	8d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	170	170	170	219	219	219
							20	170	170	170	219	219	219
							40	170	170	170	219	219	219
							60	170	170	170	219	219	219
HardiePlank®	5/16	6 1/4	8d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	170	170	170	219	219	219
							20	170	170	170	219	219	219
							40	170	170	161	219	219	208
							60	170	168	156	219	217	201
HardiePlank®	5/16	7 1/4	8d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	170	170	160	219	219	207
							20	170	170	157	219	219	203
							40	170	160	147	219	207	190
							60	170	153	142	219	198	183
HardiePlank®	5/16	7 1/2	8d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	170	170	157	219	219	203
							20	170	168	154	219	217	199
							40	170	157	145	219	203	187
							60	170	150	139	219	194	179
HardiePlank®	5/16	8	8d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	170	167	151	219	216	195
							20	170	162	148	219	209	191
							40	170	151	139	219	195	179
							60	167	144	134	216	186	173
HardiePlank®	5/16	8 1/4	8d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	170	164	149	219	212	192
							20	170	159	145	219	205	187
							40	170	148	137	219	191	177
							60	164	142	132	212	183	170

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

								2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12,15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
PRODUCT	PRODUCT DIMENSION (IN.)		FASTENER TYPE[4,16]	FASTENING METHOD[2]	FRAME TYPE[1,8]	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY			EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D	B	C	D
HardiePlank®	5/16	9 1/4	8d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	169	153	139	218	198	179
							20	169	149	136	218	192	176
							40	162	138	128	209	178	165
							60	153	133	123	198	172	159
HardiePlank®	5/16	9 1/2	8d common	Face Nailed Through plank overlap	2X4 wood	16	0-15	166	151	137	214	195	177
							20	166	146	134	214	188	173
							40	159	136	126	205	176	163
							60	151	131	121	195	169	156
HardiePlank®	5/16	5 1/4	8d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	160	145	132	207	187	170
							20	160	141	129	207	182	167
							40	154	131	121	199	169	156
							60	145	126	117	187	163	151
HardiePlank®	5/16	6 1/4	8d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	160	145	132	207	187	170
							20	160	141	129	207	182	167
							40	154	131	121	199	169	156
							60	145	126	117	187	163	151
HardiePlank®	5/16	6 1/4	8d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	159	144	131	205	186	169
							20	159	140	128	205	181	165
							40	153	130	120	198	168	155
							60	144	125	116	186	161	150
HardiePlank®	5/16	7 1/2	8d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	156	141	128	201	182	165
							20	156	137	125	201	177	161
							40	150	128	118	194	165	152
							60	141	123	114	182	159	147
HardiePlank®	5/16	8	8d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	150	136	123	194	176	159
							20	150	132	121	194	170	156
							40	144	123	113	186	159	146
							60	136	118	109	176	152	141
HardiePlank®	5/16	8 1/4	8d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	147	134	121	190	173	156
							20	147	130	118	190	168	152
							40	141	121	111	182	156	143
							60	134	116	108	173	150	139
HardiePlank®	5/16	9 1/4	8d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	138	125	113	178	161	146
							20	138	121	111	178	156	143
							40	132	113	104	170	146	134
							60	125	108	101	161	139	130
HardiePlank®	5/16	9 1/2	8d common	Face Nailed Through plank overlap	2X4 wood	24	0-15	136	123	112	176	159	145
							20	136	120	109	176	155	141
							40	130	111	103	168	143	133
							60	123	107	99	159	138	128

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

PRODUCT	PRODUCT DIMENSION (IN.)		FASTENER TYPE[4,16]	FASTENING METHOD[2]	FRAME TYPE[1,8]	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12,15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
								EXPOSURE CATEGORY			EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D	B	C	D
HardiePlank®	5/16	4	No. 8-18, 1-5/8" long x 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	168	168	137	217	217	177
							20	168	158	137	217	204	177
							40	168	147	131	217	190	169
							60	168	137	126	217	177	163
HardiePlank®	5/16	6	No. 8-18, 1-5/8" long x 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	168	168	137	217	217	177
							20	168	158	137	217	204	177
							40	168	147	131	217	190	169
							60	168	137	126	217	177	163
HardiePlank®	5/16	6 1/4	No. 8-18, 1-5/8" long x 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	168	168	137	217	217	177
							20	168	158	137	217	204	177
							40	168	147	126	217	190	163
							60	168	137	121	217	177	156
HardiePlank®	5/16	7 1/4 or 7 1/2	No. 8-18, 1-5/8" long x 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	168	147	126	217	190	163
							20	168	147	121	217	190	156
							40	168	131	116	217	169	150
							60	168	126	105	217	163	136
HardiePlank®	5/16	8	No. 8-18, 1-5/8" long x 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	168	147	126	217	190	163
							20	168	147	121	217	190	156
							40	168	131	116	217	169	150
							60	158	126	105	204	163	136
HardiePlank®	5/16	8 1/4	No. 8-18, 1-5/8" long x 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	168	147	126	217	190	163
							20	168	137	121	217	177	156
							40	168	131	116	217	169	150
							60	158	121	105	204	156	136
HardiePlank®	5/16	9 1/4 or 9 1/2	No. 8-18, 1-5/8" long x 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	168	137	116	217	177	150
							20	168	131	110	217	169	142
							40	158	121	105	204	156	136
							60	147	116	100	190	150	129
HardiePlank®	5/16	12	No. 8-18, 1-5/8" long x 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	168	126	105	217	163	136
							20	168	121	95	217	156	123
							40	137	110	95	177	142	123
							60	137	105	89	177	136	115
HardiePlank®	5/16	4	No. 8-18, 1-5/8" long x 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	160	137	116	207	177	150
							20	160	137	116	207	177	150
							40	155	126	110	200	163	142
							60	145	116	105	187	150	136
HardiePlank®	5/16	6	No. 8-18, 1-5/8" long x 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	160	137	116	207	177	150
							20	160	137	116	207	177	150
							40	154	126	110	199	163	142
							60	145	116	105	187	150	136

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

								2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12,15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
PRODUCT	PRODUCT DIMENSION (IN.)		FASTENER TYPE[4,16]	FASTENING METHOD[2]	FRAME TYPE[1,8]	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY			EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D	B	C	D
HardiePlank®	5/16	6 1/4	No. 8-18, 1-5/8" long x 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	160	145	116	207	187	150
							20	160	141	110	207	182	142
							40	154	131	105	199	169	136
							60	145	126	100	187	163	129
HardiePlank®	5/16	7 1/4 or 7 1/2	No. 8-18, 1-5/8" long x 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	160	126	105	207	163	136
							20	160	121	105	207	156	136
							40	147	110	95	190	142	123
							60	137	105	95	177	136	123
HardiePlank®	5/16	8	No. 8-18, 1-5/8" long x 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	160	126	105	207	163	136
							20	160	121	100	207	156	129
							40	147	110	95	190	142	123
							60	137	105	89	177	136	115
HardiePlank®	5/16	8 1/4	No. 8-18, 1-5/8" long x 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	160	121	105	207	156	136
							20	160	121	100	207	156	129
							40	137	105	95	177	136	123
							60	131	100	89	169	129	115
HardiePlank®	5/16	9 1/4 or 9 1/2	No. 8-18, 1-5/8" long x 0.323" HD ribbed bugle head screw	Face Screwed	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	158	116	95	204	150	123
							20	158	110	95	204	142	123
							40	137	100	89	177	129	115
							60	126	95	85	163	123	110
HardiePlank®	5/16	5 1/4	No. 11 gauge, 1.25" long roofing nail	Blind Nailed Through top edge of plank	2X4 wood	16	0-15	163	148	134	210	191	173
							20	163	143	131	210	185	169
							40	156	133	123	202	172	159
							60	148	128	119	191	165	154
HardiePlank®	5/16	6 1/4	No. 11 gauge, 1.25" long roofing nail	Blind Nailed Through top edge of plank	2X4 wood	16	0-15	146	132	120	188	171	155
							20	146	128	117	188	166	151
							40	140	119	110	180	154	142
							60	132	115	106	171	148	137
HardiePlank®	5/16	7 1/4	No. 11 gauge, 1.25" long roofing nail	Blind Nailed Through top edge of plank	2X4 wood	16	0-15	133	121	110	172	156	142
							20	133	117	107	172	151	138
							40	128	109	101	165	141	130
							60	121	105	97	156	135	126
HardiePlank®	5/16	7 1/2	No. 11 gauge, 1.25" long roofing nail	Blind Nailed Through top edge of plank	2X4 wood	16	0-15	130	118	107	168	152	138
							20	130	115	105	168	148	135
							40	125	107	99	161	138	127
							60	118	102	95	152	132	123
HardiePlank®	5/16	8	No. 11 gauge, 1.25" long roofing nail	Blind Nailed Through top edge of plank	2X4 wood	16	0-15	125	114	103	162	147	133
							20	125	110	101	162	143	130
							40	120	103	95	155	133	122
							60	114	99	91	147	127	118

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

								2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12,15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
PRODUCT	PRODUCT DIMENSION (IN.)		FASTENER TYPE[4,16]	FASTENING METHOD[2]	FRAME TYPE[1,8]	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY			EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D	B	C	D
HardiePlank®	5/16	8 1/4	No. 11 gauge, 1.25" long roofing nail	Blind Nailed Through top edge of plank	2X4 wood	16	0-15	123	112	101	159	144	131
							20	123	108	99	159	140	128
							40	118	101	93	152	130	120
							60	112	97	90	144	125	116
HardiePlank®	5/16	9 1/4	No. 11 gauge, 1.25" long roofing nail	Blind Nailed Through top edge of plank	2X4 wood	16	0-15	115	104	95	148	135	122
							20	115	101	93	148	131	119
							40	110	94	87	142	122	112
							60	104	90	-	135	117	-
HardiePlank®	5/16	9 1/2	No. 11 gauge, 1.25" long roofing nail	Blind Nailed Through top edge of plank	2X4 wood	16	0-15	113	103	93	146	133	121
							20	113	100	91	146	129	118
							40	109	93	86	140	120	111
							60	103	89	-	133	115	107
HardiePlank®	5/16	5 1/4	No. 11 gauge, 1.25" long roofing nail	Blind Nailed Through top edge of plank	2X4 wood	24	0-15	133	121	110	172	156	141
							20	133	117	107	172	151	138
							40	128	109	101	165	141	130
							60	121	105	97	156	135	125
HardiePlank®	5/16	6 1/4	No. 11 gauge, 1.25" long roofing nail	Blind Nailed Through top edge of plank	2X4 wood	24	0-15	119	108	98	153	139	126
							20	119	105	96	153	135	124
							40	114	98	90	147	126	116
							60	108	94	87	139	121	112
HardiePlank®	5/16	7 1/4	No. 11 gauge, 1.25" long roofing nail	Blind Nailed Through top edge of plank	2X4 wood	24	0-15	108	98	89	140	127	115
							20	108	96	87	140	123	113
							40	104	89	-	134	115	-
							60	98	85	-	127	110	-
HardiePlank®	5/16	7 1/2	No. 11 gauge, 1.25" long roofing nail	Blind Nailed Through top edge of plank	2X4 wood	24	0-15	106	96	88	137	125	113
							20	106	94	86	137	121	110
							40	102	87	-	132	113	-
							60	96	-	-	125	108	-
HardiePlank®	5/16	8	No. 11 gauge, 1.25" long roofing nail	Blind Nailed Through top edge of plank	2X4 wood	24	0-15	102	93	-	132	120	-
							20	102	90	-	132	116	-
							40	98	-	-	127	-	-
							60	93	-	-	120	-	-
HardiePlank®	5/16	8 1/4	No. 11 gauge, 1.25" long roofing nail	Blind Nailed Through top edge of plank	2X4 wood	24	0-15	100	91	-	129	117	-
							20	100	88	-	129	114	-
							40	96	-	-	124	-	-
							60	91	-	-	117	-	-
HardiePlank®	5/16	9 1/4	No. 11 gauge, 1.25" long roofing nail	Blind Nailed Through top edge of plank	2X4 wood	24	0-15	94	85	-	121	110	-
							20	94	-	-	121	107	-
							40	90	-	-	116	-	-
							60	85	-	-	110	-	-

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

								2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12,15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
PRODUCT	PRODUCT DIMENSION (IN.)		FASTENER TYPE[4,16]	FASTENING METHOD[2]	FRAME TYPE[1,8]	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY			EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D	B	C	D
HardiePlank®	5/16	9 1/2	No. 11 gauge, 1.25" long roofing nail	Blind Nailed Through top edge of plank	2X4 wood	24	0-15	93	-	-	119	-	-
							20	93	-	-	119	-	-
							40	89	-	-	115	-	-
							60	-	-	-	-	-	-
HardiePlank®	5/16	5 1/4	No. 11 gauge, 1.75 inch long roofing Nail	Blind Nailed Through top edge of plank	2X4 wood	16	0-15	170	170	166	219	219	214
							20	170	170	162	219	219	209
							40	170	165	153	219	213	197
							60	170	158	147	219	205	190
HardiePlank®	5/16	6 1/4	No. 11 gauge, 1.75 inch long roofing Nail	Blind Nailed Through top edge of plank	2X4 wood	16	0-15	170	164	149	219	211	192
							20	170	159	145	219	205	187
							40	170	148	137	219	191	176
							60	164	142	132	211	183	170
HardiePlank®	5/16	7 1/4	No. 11 gauge, 1.75 inch long roofing Nail	Blind Nailed Through top edge of plank	2X4 wood	16	0-15	164	149	136	212	193	175
							20	164	145	132	212	187	171
							40	158	135	125	204	174	161
							60	149	129	120	193	167	155
HardiePlank®	5/16	7 1/2	No. 11 gauge, 1.75 inch long roofing Nail	Blind Nailed Through top edge of plank	2X4 wood	16	0-15	161	146	133	208	189	172
							20	161	142	130	208	183	167
							40	155	132	122	200	171	158
							60	146	127	118	189	164	152
HardiePlank®	5/16	8	No. 11 gauge, 1.75 inch long roofing Nail	Blind Nailed Through top edge of plank	2X4 wood	16	0-15	155	141	128	200	182	165
							20	155	137	125	200	176	161
							40	149	127	117	192	164	152
							60	141	122	113	182	157	146
HardiePlank®	5/16	8 1/4	No. 11 gauge, 1.75 inch long roofing Nail	Blind Nailed Through top edge of plank	2X4 wood	16	0-15	152	138	126	197	178	162
							20	152	134	123	197	173	158
							40	146	125	115	189	161	149
							60	138	120	111	178	155	144
HardiePlank®	5/16	9 1/4	No. 11 gauge, 1.75 inch long roofing Nail	Blind Nailed Through top edge of plank	2X4 wood	16	0-15	142	129	117	184	167	152
							20	142	126	115	184	162	148
							40	137	117	108	176	151	139
							60	129	112	104	167	145	134
HardiePlank®	5/16	9 1/2	No. 11 gauge, 1.75 inch long roofing Nail	Blind Nailed Through top edge of plank	2X4 wood	16	0-15	140	127	116	181	164	149
							20	140	124	113	181	160	146
							40	135	115	106	174	148	137
							60	127	110	102	164	142	132
HardiePlank®	5/16	5 1/4	No. 11 gauge, 1.75 inch long roofing Nail	Blind Nailed Through top edge of plank	2X4 wood	24	0-15	164	149	136	212	193	175
							20	164	145	132	212	187	171
							40	158	135	125	204	147	161
							60	149	129	120	193	167	155

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

								2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12,15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
PRODUCT	PRODUCT DIMENSION (IN.)		FASTENER TYPE[4,16]	FASTENING METHOD[2]	FRAME TYPE[1,8]	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY			EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D	B	C	D
HardiePlank®	5/16	6 1/4	No. 11 gauge, 1.75 inch long roofing Nail	Blind Nailed Through top edge of plank	2X4 wood	24	0-15	147	134	121	190	172	157
							20	147	130	118	190	168	153
							40	141	121	111	182	156	144
							60	134	116	108	172	150	139
HardiePlank®	5/16	7 1/4	No. 11 gauge, 1.75 inch long roofing Nail	Blind Nailed Through top edge of plank	2X4 wood	24	0-15	134	122	111	173	157	143
							20	134	118	108	173	153	140
							40	129	110	102	166	142	131
							60	122	106	98	157	136	127
HardiePlank®	5/16	7 1/2	No. 11 gauge, 1.75 inch long roofing Nail	Blind Nailed Through top edge of plank	2X4 wood	24	0-15	132	119	109	170	154	140
							20	132	116	106	170	150	137
							40	126	108	100	163	139	129
							60	119	104	96	154	134	124
HardiePlank®	5/16	8	No. 11 gauge, 1.75 inch long roofing Nail	Blind Nailed Through top edge of plank	2X4 wood	24	0-15	127	115	104	163	148	135
							20	127	112	102	163	144	132
							40	122	104	96	157	134	124
							60	115	100	93	148	129	120
HardiePlank®	5/16	8 1/4	No. 11 gauge, 1.75 inch long roofing Nail	Blind Nailed Through top edge of plank	2X4 wood	24	0-15	124	113	102	161	146	132
							20	124	110	100	161	142	129
							40	119	102	94	154	132	122
							60	113	98	91	146	126	117
HardiePlank®	5/16	9 1/4	No. 11 gauge, 1.75 inch long roofing Nail	Blind Nailed Through top edge of plank	2X4 wood	24	0-15	116	106	96	150	136	124
							20	116	103	94	150	133	121
							40	112	95	88	144	123	114
							60	106	92	85	136	118	110
HardiePlank®	5/16	9 1/2	No. 11 gauge, 1.75 inch long roofing Nail	Blind Nailed Through top edge of plank	2X4 wood	24	0-15	114	104	94	148	134	122
							20	114	101	92	148	130	119
							40	110	94	87	142	121	112
							60	104	90	-	134	116	-
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	217	217	177
							20	168	158	137	217	204	177
							40	168	147	126	217	190	163
							60	168	137	121	217	177	156
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	217	217	177
							20	168	158	137	217	204	177
							40	168	147	126	217	190	163
							60	168	137	121	217	177	156
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	217	204	183
							20	168	158	131	217	204	169
							40	168	147	126	217	190	163
							60	158	137	121	204	177	156

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

								2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12,15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
PRODUCT	PRODUCT DIMENSION (IN.)		FASTENER TYPE[4,16]	FASTENING METHOD[2]	FRAME TYPE[1,8]	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY			EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D	B	C	D
HardiePlank®	5/16	7 1/4 or 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	168	152	126	217	196	163
							20	168	147	116	217	190	150
							40	168	137	116	217	177	150
							60	158	126	110	204	163	142
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	168	147	116	217	190	150
							20	168	137	116	217	177	150
							40	158	126	105	204	163	136
							60	147	121	105	190	156	136
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	168	142	121	217	183	156
							20	168	137	116	217	177	150
							40	158	126	110	204	163	142
							60	147	116	105	190	150	136
HardiePlank®	5/16	9 1/4 or 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	168	137	116	217	177	150
							20	168	126	105	217	163	136
							40	158	116	105	204	150	136
							60	137	110	100	177	142	129
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	160	137	116	207	177	150
							20	160	131	110	207	169	142
							40	152	121	105	196	156	136
							60	145	116	100	187	150	129
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	160	137	116	207	177	150
							20	160	131	110	207	169	142
							40	152	121	105	196	156	136
							60	145	116	100	187	150	129
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	160	137	116	207	177	150
							20	160	131	105	207	169	136
							40	154	121	105	199	156	136
							60	145	116	100	187	150	129
HardiePlank®	5/16	7 1/4 or 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	160	126	105	207	163	136
							20	160	116	100	207	150	129
							40	147	105	89	190	136	115
							60	137	89	89	177	115	115
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	160	121	100	207	156	129
							20	158	116	100	204	150	129
							40	142	105	89	183	136	115
							60	131	100	89	169	129	115
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	160	121	100	207	156	129
							20	158	116	100	204	150	129
							40	142	105	89	183	136	115
							60	126	100	89	163	129	115

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

								2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12,15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
PRODUCT	PRODUCT DIMENSION (IN.)		FASTENER TYPE[4,16]	FASTENING METHOD[2]	FRAME TYPE[1,8]	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY			EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D	B	C	D
HardiePlank®	5/16	9 1/4 or 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	158	116	95	204	150	123
							20	147	105	89	190	136	115
							40	131	95	85	169	123	110
							60	121	89	85	156	115	110
HardiePlank®	5/16	5 1/4	6d-2 inch long X 0.092 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15	141	128	116	182	165	150
							20	141	124	114	182	160	147
							40	135	116	107	174	150	138
							60	128	111	103	165	143	133
HardiePlank®	5/16	6 1/4	6d-2 inch long X 0.092 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15	126	114	104	163	147	134
							20	126	111	102	163	143	132
							40	121	103	96	156	133	124
							60	114	99	92	147	128	119
HardiePlank®	5/16	7 1/4	6d-2 inch long X 0.092 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15	115	104	95	148	134	123
							20	115	102	93	148	132	120
							40	110	94	87	142	121	112
							60	104	91	-	134	117	-
HardiePlank®	5/16	7 1/2	6d-2 inch long X 0.092 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15	113	102	93	146	132	120
							20	113	99	91	146	128	117
							40	108	93	85	139	120	110
							60	102	89	-	132	115	-
HardiePlank®	5/16	8	6d-2 inch long X 0.092 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15	109	99	90	141	128	116
							20	109	96	87	141	124	112
							40	104	89	-	134	115	-
							60	99	85	-	128	110	-
HardiePlank®	5/16	8 1/4	6d-2 inch long X 0.092 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15	107	97	88	138	125	114
							20	107	94	86	138	121	111
							40	102	88	-	132	114	-
							60	97	-	-	125	-	-
HardiePlank®	5/16	9 1/4	6d-2 inch long X 0.092 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15	100	90	-	129	116	-
							20	100	88	-	129	114	-
							40	96	-	-	124	-	-
							60	90	-	-	116	-	-
HardiePlank®	5/16	9 1/2	6d-2 inch long X 0.092 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	16	0-15	98	89	-	127	115	-
							20	98	87	-	127	112	-
							40	94	-	-	121	-	-
							60	89	-	-	115	-	-

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

								2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12,15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
PRODUCT	**PRODUCT DIMENSION (IN.)**		**FASTENER TYPE[4,16]**	**FASTENING METHOD[2]**	**FRAME TYPE[1,8]**	**STUD SPACING (IN.)**	**BUILDING HEIGHT (FT.)**	**EXPOSURE CATEGORY**			**EXPOSURE CATEGORY**		
	THICK.	**WIDTH**						**B**	**C**	**D**	**B**	**C**	**D**
HardiePlank®	5/16	5 1/4	6d-2 inch long X 0.092 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15	115	104	95	148	134	123
							20	115	102	93	148	132	120
							40	110	94	87	142	121	112
							60	104	91	-	134	117	-
HardiePlank®	5/16	6 1/4	6d-2 inch long X 0.092 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15	103	93	-	133	120	-
							20	103	91	-	133	117	-
							40	99	-	-	128	-	-
							60	93	-	-	120	-	-
HardiePlank®	5/16	7 1/4	6d-2 inch long X 0.092 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15	94	85	-	121	110	-
							20	94	-	-	121	-	-
							40	90	-	-	116	-	-
							60	85	-	-	110	-	-
HardiePlank®	5/16	7 1/2	6d-2 inch long X 0.092 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15	92	-	-	119	-	-
							20	92	-	-	119	-	-
							40	88	-	-	114	-	-
							60	-	-	-	-	-	-
HardiePlank®	5/16	8	6d-2 inch long X 0.092 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15	89	-	-	115	-	-
							20	89	-	-	115	-	-
							40	85	-	-	110	-	-
							60	-	-	-	-	-	-
HardiePlank®	5/16	8 1/4	6d-2 inch long X 0.092 inch shank X 0.222 inch head diameter siding nail	Blind Nailed Through top edge of plank	2 x 4 wood	24	0-15	87	-	-	112	-	-
							20	87	-	-	112	-	-
							40	-	-	-	-	-	-
							60	-	-	-	-	-	-
HardiePlank®	5/16	≤8 1/4	0.092" shank X 0.222" HD X 2.5" long galv. nail	face nailed through plank overlap	2 x 4 wood	16	0-15	153	138	126	198	178	163
							20	153	135	123	198	174	159
							40	146	125	116	188	161	150
							60	138	120	112	178	155	145
HardiePlank®	5/16	9 1/4	0.092" shank X 0.222" HD X 2.5" long galv. nail	face nailed through plank overlap	2 x 4 wood	16	0-15	143	130	118	185	168	152
							20	143	126	115	185	163	148
							40	137	117	108	177	151	139
							60	130	113	105	168	146	136

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

								2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12,15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
PRODUCT	PRODUCT DIMENSION (IN.)		FASTENER TYPE[4,16]	FASTENING METHOD[2]	FRAME TYPE[1,8]	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY			EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D	B	C	D
HardiePlank®	5/16	9 1/2	0.092" shank X 0.222" HD X 2.5" long galv. nail	face nailed through plank overlap	2 x 4 wood	16	0-15	141	128	116	182	165	150
							20	141	124	113	182	160	146
							40	135	116	107	174	150	138
							60	128	111	103	165	143	133
HardiePlank®	5/16	12	0.092" shank X 0.222" HD X 2.5" long galv. nail	face nailed through plank overlap	2 x 4 wood	16	0-15	123	112	101	159	144	131
							20	123	108	99	159	140	128
							40	118	101	934	152	130	120
							60	112	97	90	144	125	116
HardiePlank®	5/16	≤8 1/4	8d ring shank box nail, 0.113" shank X 0.260" HD X 2.375" L	face nailed through plank overlap	2 x 4 wood[6]	16	0-15	203	184	167	262	238	216
							20	203	179	163	262	231	210
							40	194	166	153	250	214	198
							60	184	159	148	238	205	191
HardiePlank®	5/16	≤8 1/4	8d ring shank box nail, 0.113" shank X 0.260" HD X 2.375" L	face nailed through plank overlap	2 x 4 wood[6]	24	0-15	166	151	137	214	195	177
							20	166	146	134	214	188	173
							40	159	136	126	205	176	163
							60	151	131	121	195	169	156
HardiePlank®	5/16	≤8 1/4	0.092" shank X 0.222" HD X 2" long galv. nail	face nailed through plank overlap	2 x 4 wood[6]	16	0-15	151	137	125	195	177	161
							20	151	133	122	195	172	158
							40	145	124	115	187	160	148
							60	137	119	111	177	154	143
HardiePlank®	5/16	≤8 1/4	0.092" shank X 0.222" HD X 2.5" long galv. nail	face nailed through plank overlap	2 x 4 wood[6]	16	0-15	187	170	154	241	219	199
							20	187	165	151	241	213	195
							40	180	154	142	232	199	183
							60	170	147	137	219	190	177
HardiePlank®	5/16	5 1/4	No. 8 X 1-5/8" long X 0.375" HD ribbed wafer head screw[5]	blind screw through top edge of plank at 12 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	207	188	171	267	243	221
							20	207	183	167	267	236	216
							40	199	170	157	257	219	203
							60	188	163	152	243	210	196
HardiePlank®	5/16	6 1/4	No. 8 X 1-5/8" long X 0.375" HD ribbed wafer head screw[5]	blind screw through top edge of plank at 12 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	183	166	151	236	214	195
							20	183	161	147	236	208	190
							40	176	150	139	227	194	179
							60	166	144	134	214	186	173
HardiePlank®	5/16	7 1/4	No. 8 X 1-5/8" long X 0.375" HD ribbed wafer head screw[5]	blind screw through top edge of plank at 12 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	165	150	136	213	194	176
							20	165	145	133	213	187	172
							40	158	135	125	204	174	161
							60	150	130	120	194	168	155
HardiePlank®	5/16	8 1/4	No. 8 X 1-5/8" long X 0.375" HD ribbed wafer head screw[5]	blind screw through top edge of plank at 12 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	150	136	124	194	176	160
							20	150	133	121	194	172	156
							40	144	123	114	186	159	147
							60	136	118	110	176	152	142

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

PRODUCT	PRODUCT DIMENSION (IN.)		FASTENER TYPE[4,16]	FASTENING METHOD[2]	FRAME TYPE[1,8]	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12,15]) EXPOSURE CATEGORY			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14]) EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D	B	C	D
HardiePlank®	5/16	9 1/4	No. 8 X 1-5/8" long X 0.375" HD ribbed wafer head screw[5]	blind screw through top edge of plank at 12 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	139	126	114	179	163	147
							20	139	122	112	179	158	145
							40	133	114	105	172	147	136
							60	126	109	101	163	141	130
HardiePlank®	5/16	≤8 1/4	0.090" shank X 0.215" HD X 1.5" long ring shank nail[5]	blind nail through top edge of plank at 8 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	145	132	120	187	170	155
							20	145	128	117	187	165	151
							40	139	119	110	179	154	142
							60	132	114	106	170	147	137
HardiePlank®	5/16	≤8 1/4	0.090" shank X 0.215" HD X 1.5" long ring shank nail[5]	blind nail through top edge of plank at 6 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	166	150	137	214	194	177
							20	166	146	133	214	188	172
							40	159	136	125	205	176	161
							60	150	130	121	194	168	156
HardiePlank®	5/16	≤ 9 1/2	0.091" shank, 0.221" HD, 1.5" long ring shank nail[5]	Face Nailed through the overlap at 12" o.c.	Attached to 7/16" wood 7/16 structural panel sheathing only	7/16" WSP attached per code	0-15	100	91	-	129	117	-
							20	100	88	-	129	114	-
							40	96	-	-	124	-	-
							60	91	-	-	117	-	-
HardiePlank®	5/16	5 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 12 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	161	146	132	207	188	171
							20	161	142	129	207	183	167
							40	154	132	122	199	170	157
							60	146	126	117	188	163	152
HardiePlank®	5/16	5 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 16 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	146	133	120	189	171	156
							20	146	129	118	189	166	152
							40	140	120	111	181	155	143
							60	133	115	107	171	148	138
HardiePlank®	5/16	5 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 20 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	137	124	113	176	160	145
							20	137	120	110	176	156	142
							40	131	112	103	169	145	134
							60	124	108	100	160	139	129
HardiePlank®	5/16	5 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 24 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	130	118	107	168	152	138
							20	130	115	105	168	148	135
							40	125	107	99	161	138	127
							60	118	102	95	152	132	123
HardiePlank®	5/16	6 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867	blind nail through top edge of plank at 12 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	148	135	122	192	174	158
							20	148	131	119	192	169	154
							40	142	122	112	184	157	145
							60	135	117	108	174	151	140

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

								2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12,15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
PRODUCT	**PRODUCT DIMENSION (IN.)**		**FASTENER TYPE[4,16]**	**FASTENING METHOD[2]**	**FRAME TYPE[1,8]**	**STUD SPACING (IN.)**	**BUILDING HEIGHT (FT.)**	**EXPOSURE CATEGORY**			**EXPOSURE CATEGORY**		
	THICK.	**WIDTH**						**B**	**C**	**D**	**B**	**C**	**D**
HardiePlank®	5/16	6 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 16 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	134	122	111	173	157	143
							20	134	118	108	173	153	139
							40	129	110	102	166	142	131
							60	122	106	98	157	136	127
HardiePlank®	5/16	6 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 20 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	125	113	103	161	146	133
							20	125	110	100	161	142	130
							40	120	102	94	154	132	122
							60	113	98	91	146	127	118
HardiePlank®	5/16	6 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 24 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	118	107	97	152	138	126
							20	118	104	95	152	134	123
							40	113	97	89	146	125	115
							60	107	93	86	138	120	111
HardiePlank®	5/16	7 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 12 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	140	127	115	180	164	149
							20	140	123	113	180	159	145
							40	134	115	106	173	148	137
							60	127	110	102	164	142	132
HardiePlank®	5/16	7 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 16 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	125	114	103	162	147	134
							20	125	111	101	162	143	130
							40	120	103	95	155	133	123
							60	114	99	92	147	128	118
HardiePlank®	5/16	7 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 20 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	116	105	96	150	136	123
							20	116	102	93	150	132	121
							40	111	95	88	144	123	113
							60	105	91	-	136	118	-
HardiePlank®	5/16	7 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 24 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	109	99	90	141	128	116
							20	109	96	88	141	125	114
							40	105	90	-	136	116	-
							60	99	86	-	128	111	-
HardiePlank®	5/16	8 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 12 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	133	121	110	172	156	142
							20	133	117	107	172	152	138
							40	128	109	101	165	141	130
							60	121	105	97	156	135	126
HardiePlank®	5/16	8 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 16 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	119	108	98	154	139	127
							20	119	105	96	154	136	124
							40	114	98	90	147	126	116
							60	108	94	87	139	121	112

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

								2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12,15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
PRODUCT	**PRODUCT DIMENSION (IN.)**		**FASTENER TYPE[4,16]**	**FASTENING METHOD[2]**	**FRAME TYPE[1,8]**	**STUD SPACING (IN.)**	**BUILDING HEIGHT (FT.)**	**EXPOSURE CATEGORY**			**EXPOSURE CATEGORY**		
	THICK.	**WIDTH**						**B**	**C**	**D**	**B**	**C**	**D**
HardiePlank®	5/16	8 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 20 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	110	99	90	141	128	117
							20	110	97	88	141	125	114
							40	105	90	-	136	116	-
							60	99	86	-	128	111	-
HardiePlank®	5/16	8 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 24 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	103	93	-	133	120	-
							20	103	91	-	133	117	-
							40	99	-	-	127	-	-
							60	93	-	-	120	-	-
HardiePlank®	5/16	9 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 12 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	128	116	106	165	150	136
							20	128	113	103	165	146	133
							40	123	105	97	159	136	125
							60	116	101	94	150	130	121
HardiePlank®	5/16	9 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 16 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	114	103	94	147	133	121
							20	114	100	92	147	130	118
							40	109	93	86	141	121	111
							60	103	90	-	133	116	-
HardiePlank®	5/16	9 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 20 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	104	95	86	135	122	111
							20	104	92	-	135	119	-
							40	100	86	-	129	111	-
							60	95	-	-	122	-	-
HardiePlank®	5/16	9 1/4	HardieNail Studless Siding Fastener (TetraGrip), .117" x 1.125" x .3" (PART #650867)	blind nail through top edge of plank at 24 in. on center	Attached to 7/16" wood structural panel sheathing only	7/16" WSP attached per code	0-15	98	89	-	126	114	-
							20	98	86	-	126	111	-
							40	94	-	-	121	-	-
							60	89	-	-	114	-	-

TABLE 8 – MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

								2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12,15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
PRODUCT	PRODUCT DIMENSION (IN.)		FASTENER TYPE[4,16]	FASTENING METHOD[2]	FRAME TYPE[1,8]	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	EXPOSURE CATEGORY			EXPOSURE		
	THICK.	WIDTH						B	C	D	B	C	D
Artisan® Lap	5/8	5 1/4	0.092" shank X 0.225" HD X 2.25" long galv. Nail	blind nail through top edge of plank	2X4 Wood[7]	16	0-15	184	167	152	238	216	196
							20	184	162	148	238	209	191
							40	177	151	140	229	195	181
							60	167	145	135	216	187	174
Artisan® Lap	5/8	7 1/4	0.092" shank X 0.225" HD X 2.25" long galv. Nail	blind nail through top edge of plank	2X4 Wood[7]	16	0-15	135	122	111	174	158	143
							20	135	119	108	174	154	139
							40	129	111	102	167	143	132
							60	122	106	98	158	137	127
Artisan® Lap	5/8	8 1/4	0.092" shank X 0.225" HD X 2.25" long galv. Nail	blind nail through top edge of plank	2X4 Wood[7]	16	0-15	117	106	96	151	137	124
							20	117	103	94	151	133	121
							40	112	96	88	145	124	114
							60	106	92	85	137	119	110
Artisan® Lap	5/8	5 1/4	0.092" shank X 0.225" HD X 2.25" long galv. nail	blind nail through top edge of plank	2X4 Wood[7]	24	0-15	132	119	109	170	154	141
							20	132	116	106	170	150	137
							40	126	108	100	163	139	129
							60	119	104	96	154	134	124
Artisan® Lap	5/8	7 1/4	0.092" shank X 0.225" HD X 2.25" long galv. nail	blind nail through top edge of plank	2X4 Wood[7]	24	0-15	99	90	-	128	116	-
							20	99	87	-	128	112	-
							40	95	-	-	123	-	-
							60	90	-	-	116	-	-
Artisan® Lap	5/8	8 1/4	0.092" shank X 0.225" HD X 2.25" long galv. nail	blind nail through top edge of plank	2X4 Wood[7]	24	0-15	88	-	-	114	-	-
							20	88	-	-	114	-	-
							40	-	-	-	-	-	-
							60	-	-	-	-	-	-
Artisan® Lap	5/8	5 1/4	ET&F pin 0.100" x 1.5" x 0.313" HD	blind nail through top edge of plank	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	184	167	151	237	215	195
							20	184	162	148	237	209	191
							40	176	151	139	228	195	180
							60	167	145	134	215	187	173
Artisan® Lap	5/8	7 1/4	ET&F pin 0.100" x 1.5" x 0.313" HD	blind nail through top edge of plank	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	149	135	123	192	175	159
							20	149	131	120	192	170	155
							40	143	122	113	185	158	146
							60	135	117	109	175	151	141
Artisan® Lap	5/8	8 1/4	ET&F pin 0.100" x 1.5" x 0.313" HD	blind nail through top edge of plank	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	136	124	112	176	160	145
							20	136	120	110	176	155	142
							40	131	112	103	169	144	133
							60	124	107	100	160	138	129
Artisan® Lap	5/8	5 1/4	ET&F pin 0.100" x 1.5" x 0.313" HD	blind nail through top edge of plank	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	162	147	134	209	190	173
							20	162	143	131	209	185	169
							40	156	133	123	201	172	159
							60	147	128	119	190	165	153

TABLE 8—MAXIMUM WIND SPEEDS FOR EXPOSURE CATEGORY (mph) (Continued)

PRODUCT	PRODUCT DIMENSION (IN.)		FASTENER TYPE[4,16]	FASTENING METHOD[2]	FRAME TYPE[1,8]	STUD SPACING (IN.)	BUILDING HEIGHT (FT.)	2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[3,9,12,15])			2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[10,11]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[13,14])		
								EXPOSURE CATEGORY			EXPOSURE CATEGORY		
	THICK.	WIDTH						B	C	D	B	C	D
Artisan® Lap	5/8	7 1/4	ET&F pin 0.100" x 1.5" x 0.313" HD	blind nail through top edge of plank	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	134	122	111	174	158	143
							20	134	119	108	174	153	140
							40	129	110	102	167	142	131
							60	122	106	98	158	137	127
Artisan® Lap	5/8	8 1/4	ET&F pin 0.100" x 1.5" x 0.313" HD	blind nail through top edge of plank	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	128	116	106	165	150	136
							20	128	113	103	165	146	133
							40	123	105	97	159	136	125
							60	116	101	94	150	130	121
Artisan® Lap	5/8	5 1/4	No. 8 X 1-5/8" long X 0.323" HD ribbed bugle head screw	blind screw through top edge of plank	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	181	164	149	234	212	192
							20	181	159	146	234	205	188
							40	174	148	137	225	191	177
							60	164	142	132	212	183	170
Artisan® Lap	5/8	7 1/4	No. 8 X 1-5/8" long X 0.323" HD ribbed bugle head screw	blind screw through top edge of plank	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	157	142	129	203	183	167
							20	157	138	126	203	178	163
							40	150	128	119	194	165	154
							60	142	123	114	183	159	147
Artisan® Lap	5/8	8 1/4	No. 8 X 1-5/8" long X 0.323" HD ribbed bugle head screw	blind screw through top edge of plank	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	16	0-15	149	135	123	192	174	159
							20	149	131	120	192	169	155
							40	143	122	113	185	158	146
							60	135	117	109	174	151	141
Artisan® Lap	5/8	5 1/4	No. 8 X 1-5/8" long X 0.323" HD ribbed bugle head screw	blind screw through top edge of plank	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	180	163	148	232	210	191
							20	180	158	145	232	204	187
							40	172	147	136	222	190	176
							60	163	141	131	210	182	169
Artisan® Lap	5/8	7 1/4	No. 8 X 1-5/8" long X 0.323" HD ribbed bugle head screw	blind screw through top edge of plank	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	144	130	118	186	168	152
							20	144	127	116	186	164	150
							40	138	118	109	178	152	141
							60	130	113	105	168	146	136
Artisan® Lap	5/8	8 1/4	No. 8 X 1-5/8" long X 0.323" HD ribbed bugle head screw	blind screw through top edge of plank	Min. No. 20 ga. x 3.62" x 1.375" Metal C-stud	24	0-15	132	119	108	170	154	139
							20	132	116	106	170	150	137
							40	126	108	100	163	139	129
							60	119	104	96	154	134	124

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

1. Values are for species of wood having a specific gravity of 0.42 or greater, unless otherwise noted.
2. Face = Fastened through the overlapping plank. Blind = Fastened through the top edge of single plank.
3. Wind speed design assumptions per Section 6.5, Method 2, of ASCE 7-05: I = 1.0, K_{zt} = 1, K_d = 0.85, GC_{pi} = 0.18., GC_p=-1.4.
4. ET&F pin fasteners have knurled shanks.
5. Fastener length shall be sufficient to penetrate back side of the minimum 7/16" WSP sheathing by at least ¼" for nails or 3 full threads for screws.
6. Values are for species of wood having a specific gravity of 0.50 or greater.
7. Values are for species of wood having a specific gravity of 0.40 or greater.
8. Metal studs must be minimum Fy = 33 ksi.
9. V_{asd} = nominal design wind speed.
10. V_{ult} = ultimate design wind speed.
11. Wind speed design assumptions per Section 30.4, of ASCE 7-10: Kzt = 1, Kd = 0.85, GCpi = 0.18, GCp = -1.4.
12. 2015 and 2012 IBC Section 1609.3.1, Eqn. 16-33, $V_{asd}=V_{ult}\sqrt{0.6}$
13. V = basic design wind speed
14. Wind speed design assumptions per Section 30.3, of ASCE 7-16: K_{zt} = 1, Kd = 0.85, GCpi = 0.18, GCp = -1.4.
15. 2021 IBC Section 1609.3.1, Eqn. 16-17 and 2018 IBC Section 1609.3.1, Eqn. 16-33, $V_{asd} = V\sqrt{0.6}$
16. Smooth-shank nails are outside of the scope of this report.

TABLE 9—(V_{asd} 100 MPH; V_{ult} / V 129 MPH)[3] ALLOWABLE FASTENER SPACING (IN.)
JAMES HARDIE LAP SIDING FASTENED TO ASTM C90 CONCRETE MASONRY UNIT WALL[1,2,4,5]

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.

1. HardiePlank® Lap Siding fasteners must be ET&F Fastening Systems, Inc. ET&F block Nail (ET & F No. ASM-144-125, head diameter. = 0.30 in., shank diameter. = 0.144 in., length = 1.25-in. long), Max System block Nail (CP-C 832 W7-ICC, head diameter. = 0.30 in., shank diameter. = 0.145 in., length = 1.3 in.), Aerosmith SurePin block nail (head diameter = 0.30 in., shank diameter = 0.144 in., length = 1.25 in.), or Jaaco Nail Pro (NP145S head diameter = 0.30 in., shank diameter = 0.145 in., length = 1.25 in.).
2. Artisan® Lap Siding fasteners must be ET&F Fastening Systems, Inc. ET&F block Nail (ET & F No. ASM-144-150, head diameter. = 0.30 in., shank diameter. = 0.145 in., length = 1.5-in. long), Max System block Nail (CP-C 838 W7-ICC, head diameter. = 0.30 in., shank diameter. = 0.145 in., length = 1.5 in.), Aerosmith SurePin block Nail (head diameter = 0.30 in., shank diameter = 0.144 in., length = 1.5 in.), or Jaaco Nail Pro (NP145S head diameter = 0.30 in., shank diameter = 0.145 in., length = 1.5 in.).
3. Maximum nominal design wind speed (V_{asd}) shall be 100 mph. Maximum ultimate design wind speed (V_{ult}) and basic design wind speed (V) shall be 129 mph.
4. Interpolation of spacing to address building height and other plank widths is permitted.
5. The lap conceals the fasteners of the previous course (Blind Nailed).

TABLE 10—(V_{asd} 110 MPH; V_{ult} / V 142 MPH)[3]
ALLOWABLE FASTENER SPACING (IN.)
JAMES HARDIE LAP SIDING FASTENED TO ASTM C90 CONCRETE MASONRY UNIT WALL[1,2,4,5]

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.

1. HardiePlank® Lap Siding fasteners must be ET&F Fastening Systems, Inc. ET&F block Nail (ET & F No. ASM-144-125, head diameter. = 0.30 in., shank diameter. = 0.144 in., length = 1.25-in. long), Max System block Nail (CP-C 832 W7-ICC, head diameter. = 0.30 in., shank diameter. = 0.145 in., length = 1.3 in.), Aerosmith SurePin block nail (head diameter = 0.30 in., shank diameter = 0.144 in., length = 1.25 in.), or Jaaco Nail Pro (NP145S head diameter = 0.30 in., shank diameter = 0.145 in., length = 1.25 in.).
2. Artisan® Lap Siding fasteners must be ET&F Fastening Systems, Inc. ET&F block Nail (ET & F No. ASM-144-150, head diameter. = 0.30 in., shank diameter. = 0.145 in., length = 1.5-in. long), Max System block Nail (CP-C 838 W7-ICC, head diameter. = 0.30 in., shank diameter. = 0.145 in., length = 1.5 in.), Aerosmith SurePin block Nail (head diameter = 0.30 in., shank diameter = 0.144 in., length = 1.5 in.), or Jaaco Nail Pro (NP145S head diameter = 0.30 in., shank diameter = 0.145 in., length = 1.5 in.).
3. Maximum nominal design wind speed (V_{asd}) shall be 110 mph Maximum ultimate design wind speed (V_{ult}) and basic design wind speed (V) shall be 142 mph.
4. Interpolation to address building height and other plank widths is permitted.
5. The lap conceals the fasteners of the previous course (Blind Nailed).

TABLE 7—(V_{asd} 120 MPH; V_{ult} / V 155 MPH)[3]
ALLOWABLE FASTENER SPACING (IN.)
JAMES HARDIE LAP SIDING FASTENED TO ASTM C90 CONCRETE MASONRY UNIT WALL[1,3,4]

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.

1. HardiePlank® Lap Siding fasteners must be ET&F Fastening Systems, Inc. ET&F block Nail (ET & F No. ASM-144-125, head diameter. = 0.30 in., shank diameter. = 0.144 in., length = 1.25-in. long), Max System block Nail (CP-C 832 W7-ICC, head diameter. = 0.30 in., shank diameter. = 0.15 in., length = 1.3 in.). Aerosmith SurePin block nail (head diameter = 0.30 in., shank diameter = 0.144 in., length = 1.25 in.), or Jaaco Nail Pro (NP145S head diameter = 0.30 in., shank diameter = 0.145 in., length = 1.25 in.).
2. Artisan® Lap Siding fasteners must be ET&F Fastening Systems, Inc. ET&F block Nail (ET & F No. ASM-144-150, head diameter. = 0.30 in., shank diameter. = 0.145 in., length = 1.5-in. long), Max System block Nail (CP-C 838 W7-ICC, head diameter. = 0.30 in., shank diameter. = 0.145 in., length = 1.5 in.), Aerosmith SurePin block Nail (head diameter = 0.30 in., shank diameter = 0.144 in., length = 1.5 in.), or Jaaco Nail Pro (NP145S head diameter = 0.30 in., shank diameter = 0.145 in., length = 1.5 in.).
3. Maximum nominal design wind speed (V_{asd}) shall be 120 mph. Maximum ultimate design wind speed (V_{ult}) and basic design wind speed (V) shall be 155 mph.
4. Interpolation to address building height and other plank widths is permitted.
5. The lap conceals the fasteners of the previous course (Blind Nailed).

TABLE 11 —(V_{asd} 130 MPH; V_{ult} / V 168 MPH)[3] ALLOWABLE FASTENER SPACING (IN.) JAMES HARDIE LAP SIDING FASTENED TO ASTM C90 CONCRETE MASONRY UNIT WALL[1,2,4,5]

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.

1. HardiePlank® Lap Siding 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. = 0.144 in., length = 1.25-in. long), Max System block Nail (CP-C 832 W7-ICC, head diameter. = 0.30 in., shank diameter. = 0.145 in., length = 1.3 in.), Aerosmith SurePin block nail (head diameter = 0.30 in., shank diameter = 0.144 in., length = 1.25 in.), or Jaaco Nail Pro (NP145S head diameter = 0.30 in., shank diameter = 0.145 in., length = 1.25 in.).
2. Artisan® Lap Siding fasteners must be ET&F Fastening Systems, Inc. ET&F block Nail (ET & F No. ASM-144-150, head diameter. = 0.30 in., shank diameter. = 0.145 in., length = 1.5-in. long), Max System block Nail (CP-C 838 W7-ICC, head diameter. = 0.30 in., shank diameter. = 0.145 in., length = 1.5 in.), Aerosmith SurePin block Nail (head diameter = 0.30 in., shank diameter = 0.144 in., length = 1.5 in.), or Jaaco Nail Pro (NP145S head diameter = 0.30 in., shank diameter = 0.145 in., length = 1.5 in.).
3. Maximum nominal design wind speed shall be 130 mph. Maximum ultimate design wind speed (V_{ult}) and basic design wind speed (V) shall be 168 mph.
4. Interpolation to address building height and other plank widths is permitted.
5. The lap conceals the fasteners of the previous course (Blind Nailed).

TABLE 12—(V_{asd} 140 MPH; V_{ult}/ V 181 MPH)[3] ALLOWABLE FASTENER SPACING (IN.) JAMES HARDIE LAP SIDING FASTENED TO ASTM C90 CONCRETE MASONRY UNIT WALL[1,2,4,5]

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.

1. HardiePlank® Lap Siding fasteners must be ET&F Fastening Systems, Inc. ET&F block Nail (ET & F No. ASM-144-125, head diameter. = 0.30 in., shank diameter. = 0.144 in., length = 1.25-in. long), Max System block Nail (CP-C 832 W7-ICC, head diameter. = 0.30 in., shank diameter. = 0.15 in., length = 1.3 in.), Aerosmith SurePin block nail (head diameter = 0.30 in., shank diameter = 0.144 in., length = 1.25 in.), or Jaaco Nail Pro (NP145S head diameter = 0.30 in., shank diameter = 0.145 in., length = 1.25 in.).
2. Artisan® Lap Siding fasteners must be ET&F Fastening Systems, Inc. ET&F block Nail (ET & F No. ASM-144-150, head diameter. = 0.30 in., shank diameter. = 0.145 in., length = 1.5-in. long), Max System block Nail (CP-C 838 W7-ICC, head diameter. = 0.30 in., shank diameter. = 0.145 in., length = 1.5 in.), Aerosmith SurePin block Nail (head diameter = 0.30 in., shank diameter = 0.144 in., length = 1.5 in.), or Jaaco Nail Pro (NP145S head diameter = 0.30 in., shank diameter = 0.145 in., length = 1.5 in.).
3. Maximum nominal design wind speed shall be 140 mph. Maximum ultimate design wind speed (V_{ult}) and basic design wind speed (V) shall be 181 mph.
4. Interpolation to address building height and other plank widths is permitted.
5. The lap conceals the fasteners of the previous course (Blind Nailed).

TABLE 13—(V_{asd} 150 MPH; V_{ult} / V 194 MPH)[3] ALLOWABLE FASTENER SPACING (IN.) JAMES HARDIE LAP SIDING FASTENED TO ASTM C90 CONCRETE MASONRY UNIT WALL[1,2,4,5]

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.

1. HardiePlank® Lap Siding fasteners must be ET&F Fastening Systems, Inc. ET&F block Nail (ET & F No. ASM-144-125, head diameter. = 0.30 in., shank diameter. = 0.144 in., length = 1.25-in. long), Max System block Nail (CP-C 832 W7-ICC, head dia. = 0.30 in., shank dia. = 0.145 in., length = 1.3 in.), Aerosmith SurePin block nail (head diameter = 0.30 in., shank diameter = 0.144 in., length = 1.25 in.), or Jaaco Nail Pro (NP145S head diameter = 0.30 in., shank diameter = 0.145 in., length = 1.25 in.).
2. Artisan® Lap Siding fasteners must be ET&F Fastening Systems, Inc. ET&F block Nail (ET & F No. ASM-144-150, head diameter. = 0.30 in., shank diameter. = 0.144 in., length = 1.5-in. long), Max System block Nail (CP-C 838 W7-ICC, head diameter. = 0.30 in., shank diameter. = 0.145 in., length = 1.5 in.), Aerosmith SurePin block Nail (head diameter = 0.30 in., shank diameter = 0.144 in., length = 1.5 in.), or Jaaco NailPro (NP145S head diameter = 0.30 in., shank diameter = 0.145 in., length = 1.5 in.).
3. Maximum nominal design wind speed shall be 150 mph. Maximum ultimate design wind speed (V_{ult}) and basic design wind speed (V) shall be 194 mph.
4. Interpolation to address building height and other plank widths is permitted.
5. The lap conceals the fasteners of the previous course (Blind Nailed).

TABLE 14—ALLOWABLE BASIC WIND SPEEDS (mph) FOR HARDIESHINGLE™ (NEW HARDIESHINGLE™) INDIVIDUAL SHINGLE EXTERIOR WALL FINISH

Sheathing Type	Siding Fastener Type	Weather Exposure and Fastener Location	Height of Building (feet)	2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[1,2,5,8])		2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[3,4]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[6,7])	
				Exposure Category		Exposure Category	
				B	C	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	163	142
			20	126	105	163	136
			40	126	95	163	123
			60	126	89	163	115
		7 inch exposure 2 roofing nails 8 inches from butt edge	0-15	126	126	163	163
			20	126	121	163	156
			40	126	110	163	142
			60	126	105	163	136
		6 inch exposure 2 roofing nails 7 inches from butt edge	0-15	126	126	163	163
			20	126	126	163	163
			40	126	121	163	156
			60	126	116	163	150
		5 inch exposure 2 roofing nails 6 inches from butt edge	0-15	126	126	163	163
			20	126	126	163	163
			40	126	121	163	156
			60	126	116	163	150

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

1. 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, GCp = -1.4.
2. V_{asd} = nominal design wind speed.
3. V_{ult} = ultimate design wind speed.
4. Wind speed design assumptions per Section 30.4, of ASCE 7-10: Kzt = 1, Kd = 0.85, GCpi = 0.18, GCp = -1.4.
5. 2015 and 2012 IBC Section 1609.3.1, Eqn. 16-33, $V_{asd} = V_{ult}\sqrt{0.6}$
6. V = basic design wind speed
7. Wind speed design assumptions per Section 30.3, of ASCE 7-16: K_{zt} = 1, Kd = 0.85, GCpi = 0.18, GCp = -1.4.
8. 2021 IBC Section 1609.3.1, Eqn. 16-17 and 2018 IBC Section 1609.3.1, Eqn. 16-33, $V_{asd} = V\sqrt{0.6}$
9. Smooth-shank stainless steel nails are outside of the scope of this report.

TABLE 15—ALLOWABLE BASIC WIND SPEEDS (MPH) FOR HARDIESHINGLE™ (NEW HARDIESHINGLE™) INDIVIDUAL SHINGLE EXTERIOR WALL FINISH

Sheathing Type	Siding Fastener Type	Weather Exposure and Fastener Location	Height of Building (feet)	2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[1,2,5,8])		2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[3,4]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[6,7])	
				Exposure Category		Exposure Category	
				B	C	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	163	115
			20	126	89	163	115
			40	105	85	136	110
			60	100		129	
		7 inch exposure 2 siding nails 8 inches from butt edge	0-15	126	105	163	136
			20	126	100	163	129
			40	121	95	156	123
			60	116	89	150	115
		6 inch exposure 2 siding nails 7 inches from butt edge	0-15	126	116	163	150
			20	126	110	163	142
			40	126	105	163	136
			60	126	95	163	123
		5 inch exposure 2 siding nails 6 inches from butt edge	0-15	126	116	163	150
			20	126	110	163	142
			40	126	105	163	136
			60	126	95	163	123

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

1. 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, GCp = -1.4.
2. V_{asd} = nominal design wind speed.
3. V_{ult} = ultimate design wind speed.
4. Wind speed design assumptions per Section 30.4, of ASCE 7-10: Kzt = 1, Kd = 0.85, GCpi = 0.18, GCp = -1.4.
5. 2015 and 2012 IBC Section 1609.3.1, Eqn. 16-33, $V_{asd} = V_{ult}\sqrt{0.6}$
6. V = basic design wind speed
7. Wind speed design assumptions per Section 30.3, of ASCE 7-16: K_{zt} = 1, Kd = 0.85, GCpi = 0.18, GCp = -1.4.
8. 2021 IBC Section 1609.3.1, Eqn. 16-17 and 2018 IBC Section 1609.3.1, Eqn. 16-33, $V_{asd} = V\sqrt{0.6}$
9. Smooth-shank stainless steel nails are outside of the scope of this report.

TABLE 16—ALLOWABLE BASIC WIND SPEEDS (MPH) FOR HARDIESHINGLE™ (NEW HARDIESHINGLE™) INDIVIDUAL SHINGLE EXTERIOR WALL FINISH

				2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC (Basic Wind Speed, V_{asd}[1,2,5,8])		2015 IBC/IRC and 2012 IBC (Ultimate Design Wind Speed, V_{ult}[3,4]), 2021 and 2018 IBC/IRC (Basic Design Wind Speed, V[6,7])	
				Exposure Category		Exposure Category	
Sheathing Type	**Siding Fastener Type**	**Weather Exposure and Fastener Location**	**Height of Building (feet)**	**B**	**C**	**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, 3 nails for shingles greater than 8 in. wide, 2 nails for shingles 8 in. wide and narrower, 9 inches from drip	0-15	116	116	150	150
			20	110	110	142	142
			40	100	100	129	129
			60	95	95	123	123
		7 inch exposure 3 nails for shingles greater than 8 in. wide, 2 nails for shingles 8 in. wide and	0-15	126	126	163	163
			20	121	121	156	156
			40	110	110	142	142
			60	105	105	136	136
		6 inch exposure 3 nails for shingles greater than 8 in. wide, 2 nails for shingles 8 in. wide and	0-15	126	126	163	163
			20	126	126	163	163
			40	126	126	163	163
			60	121	121	156	156
		5 inch exposure 3 nails for shingles greater than 8 in. wide, 2 nails for shingles 8 in. wide and	0-15	126	126	163	163
			20	126	126	163	163
			40	126	126	163	163
			60	121	121	156	156

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

1. 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, GCp = -1.4.
2. V_{asd} = nominal design wind speed.
3. V_{ult} = ultimate design wind speed.
4. Wind speed design assumptions per Section 30.4, of ASCE 7-10: Kzt = 1, Kd = 0.85, GCpi = 0.18, GCp = -1.4.
5. 2015 and 2012 IBC Section 1609.3.1, Eqn. 16-33, $V_{asd} = V_{ult}\sqrt{0.6}$
6. V = basic design wind speed
7. Wind speed design assumptions per Section 30.3, of ASCE 7-16: K_{zt} = 1, Kd = 0.85, GCpi = 0.18, GCp = -1.4.
8. 2021 IBC Section 1609.3.1, Eqn. 16-17 and 2018 IBC Section 1609.3.1, Eqn. 16-33, $V_{asd} = V\sqrt{0.6}$
9. Smooth-shank stainless steel nails are outside of the scope of this report.

INSTALLATION:

1. Products: HardiePanel® (Prevail™, Cempanel®) panel siding, Hardiflex® panel siding and Harditex® Baseboard

1.1. The panels must be applied with the long dimension either parallel or perpendicular to framing.

1.2. Fasteners must be installed with a minimum $^3/_8$-inch (9.5 mm) edge distance and a minimum 2-inch (51 mm) clearance from corners.

1.3. Vertical joints must be fastened at abutting sheet edges.

1.4. Vertical joints must occur over framing or wood furring members except where the panels are installed and fastened to wood structural panel sheathing in accordance with the respective table above in this bulletin.

1.5. The vertical joints must be sealed with caulking covered with battens or must be designed to comply with 2021 and 2018 IBC Section 1402.2; and 2015, 2012, 2009, and 2006 IBC Section 1403.2; and IRC Section R703.1. For Hardiflex® Siding, the vertical joints must also be protected by PVC joint treatment, lumber battens, or sealant. For Harditex® Baseboard, the joints must also be sealed with a sealant or bedding compound, including any required joint reinforcing mesh or tape, specified by the coating or finish system manufacturer.

1.6. Horizontal joints must be flashed with Z-flashing and blocked with solid framing.

1.7. Where a specified level of wind resistance is required, the panel siding is attached to framing members, furring members, or wood structural panel sheathing, appropriately spaced, with fastener types, lengths, and spacing described in the respective table above in this bulletin.

2. Products: Hardiesoffit® and Cemsoffit® panels

2.1. Installation shall comply with this bulletin and the manufacturer's published installation instructions.

2.2. A copy of the manufacturer's published installation instructions and the evaluation report must be available at the job site during installation.

2.3. All panel edges must be supported by framing members. Framing must include a subfascia, blocking, and/or ledger board to provide a nailing base along the dimension of the soffit.

2.4. The panels must be installed with the long edge of the panel perpendicular to the joist framing and must be attached with fastener types, lengths, and spacings described in the respective table above in this bulletin.

2.5. Panels must be attached with corrosion-resistant fasteners installed with a minimum $^{3}/_{8}$-inch (9.5 mm) edge distance and minimum 2-inch (51 mm) clearance from corners.

3. Products: $^{1}/_{4}$" HardieBacker® EZ Grid®, HardieBacker® ProGrid™, and HardieBacker® 500, and $^{1}/_{4}$" HardieBacker® Underlayment

3.1. Interior Floors:

3.1.1. When $^{1}/_{4}$" HardieBacker® EZ Grid® HardieBacker® ProGrid™ , and HardieBacker® 500 Cement Board backer boards and ¼" HardieBacker® Underlayment are utilized as underlayment on floors, the subfloor assembly must consist of a minimum $^{5}/_{8}$-inch-thick (15.9 mm), Exposure 1, Group 2 or 3 species plywood, or equivalent thickness of subfloor, designed to limit the maximum out-of-plane deflection of the panel, including live and dead loads, to $^{1}/_{360}$ of the span, in accordance with the applicable code. [Use IBC Tables 2304.7(1), 2304.7(2), and 2015 IBC Table 2304.7(3) or 2012 and 2009 IBC Table 2304.7(3), and IBC Table 2304.7(4), and IRC Tables R503.1, R503.2.1.1(1), and R503.2.1.1(2) to tabulate the subfloor and subfloor/underlayment design load capacity.]

3.1.2. Joints in the backer boards must be provided where existing structural joints (building control joints) occur and where changes in direction occur, such as in L-shaped rooms. For large, tiled areas, joints must be provided in accordance with ANSI A108.01, Section 3.7.

3.1.3. The subfloor must be covered with a minimum $^{3}/_{32}$-inchthick (2.4 mm) latex, or acrylic-modified thinset setting material complying with ANSI A118.4, before installation of the backer boards on the subfloor.

3.1.4. Board joints must be in moderate contact, in a staggered brick pattern, and fastened before the setting material films over. Backer board edges must be staggered from subfloor joints, and four corners of the backer board sheets must not meet at one point. Backer board edges must be kept $^{1}/_{8}$ inch (3.2 mm) away from walls and cabinet bases, and the cut edges of the backer boards must be turned to the outside (towards walls and cabinet bases).

3.1.5. Fastener types and spacing must be as specified in the respective table above in this bulletin. Fasteners must be located a minimum of $^{3}/_{8}$ inch (9.5 mm) and a maximum of ¾ inch (19.1 mm) from board edges, and nominally two inches from corners.

3.2. Interior Walls (Tile Finish):

3.2.1. HardieBacker® 500, HardieBacker® ProGrid™ , $^{1}/_{4}$" HardieBacker® EZ Grid® and $^{1}/_{4}$" HardieBacker® Underlayments and backer boards are installed with the long dimension either vertical or horizontal to nominally 2-by-4 wood framing members or minimum No. 20 gage [0.0329-inch (0.84 mm)] minimum thickness metal framing members spaced a maximum of 16 inches (406 mm) on center with end joints staggered from adjacent courses in both vertical and horizontal applications.

3.2.2. All board edges of the $^{1}/_{4}$" HardieBacker® EZ Grid® and $^{1}/_{4}$" HardieBacker® Underlayment must be supported by framing. Vertical board edges of the HardieBacker® board must be supported by framing. To comply with ANSI A 108.11, framing members must be spaced a maximum of 16 inches (406 mm) on center as required by ANSI A 108.11.

3.2.3. Fasteners and fastener spacing must be as specified in the respective table above in this bulletin. Fasteners must be located at least $^{3}/_{8}$ inch (9.5 mm) from board edges and a minimum of two inches (51 mm) from corners.

3.2.4. Corner gaps must be filled with a silicone sealant compatible with fiber-cement backer board.

3.2.5. Backer boards must be placed with a minimum $^{1}/_{4}$-inch (6.4 mm) clearance from the floor surfaces and other horizontal tile termination locations, such as above tub edges. This gap must be free of adhesive and grout and must be filled with a flexible sealant. For large, tiled areas, movement joints must be provided in accordance with ANSI A108.01, Section 3.7.

3.2.6. Ceramic wall tiles complying with ANSI A137.1 must be applied over the backer board in accordance with ANSI A108, with flexible Type I mastic adhesives complying with ANSI A136.1, or acrylic or latex-modified thinset mortars complying with ANSI A118.4.

Prior to setting the tile, all backer board joints must be filled with the same mastic or mortar used to set the tiles. While the mastic or mortar is still wet, 2-inch-wide (51 mm), high-strength, coated, alkali-resistant, glass fiber reinforcing tape is embedded into the wet mastic or mortar, leveled, and allowed to thoroughly dry.

3.3. Interior Walls (Paint or Wallpaper Finish):

3.3.1. HardieBacker® 500 Cement Boards and 1/4" HardieBacker® Underlayment must be installed with the long dimension either vertical or horizontal over nominally 2-by-4 wood framing members or minimum No. 20 gage [0.0329 inch (0.84 mm)] minimum thickness metal framing members spaced a maximum of 16 inches (406 mm) on center, with end joints staggered from adjacent courses in both vertical and horizontal applications. Panel edges must be supported by framing.

3.3.2. Fastener types and spacing must be as specified in the respective table above in this bulletin. Fasteners must be located at least 3/8 inch (9.5 mm) from board edges, and a minimum of two inches (51 mm) from corners.

3.3.3. Panels must be placed with a minimum 1/4-inch (6.4 mm) clearance from the floor surface.

3.3.4. Metal or PVC corner angles must be attached with the above-described nails or screws placed approximately 12 inches (305 mm) on center.

Internal corners must be finished by filling with joint compound, working the joint tape into the joint, and applying a second coat of joint compound. A third coat of joint compound must be applied over the joint area.

External corners must be treated by filling the joint with joint compound and allowing it to dry thoroughly. Corrosion resistant metal or PVC corner angles must then be fastened to the corner, followed by a second coat of joint compound. When the second coat is completely dry, a third coat of joint compound must be applied over the joint area. Joint compound must be applied over all fastener heads in intermediate locations.

3.3.5. A flush-joint procedure must be used on backer board panels. Gypsum board joint compounds, complying with ASTM C474 and C475, must be troweled into the joints. Paper joint tape must be embedded into the wet joint compound and allowed to dry thoroughly.

A second coat of joint compound, approximately eight inches (203 mm) wide, must then be applied across the joint and allowed to dry. A third coat of joint compound, 10 inches (254 mm) wide, must be applied across the joint. Joint compound must also be applied over all fastener heads in intermediate locations.

3.3.7. Texturing may be applied to backer board panels similar to applications of texturing to gypsum wallboard. For surfaces to receive paint, drywall primer suitable for high moisture areas must be applied as recommended by the paint manufacturer. For surfaces to receive wallpaper, the backer board surface must be primed with a primer suitable for high-moisture areas as recommended by the wallpaper manufacturer.

3.4. Exterior Walls (Tile Finish):

3.4.1. HardieBacker® 500 cement backer boards must be installed over wood structural panel sheathing. A water-resistive barrier in accordance with the applicable code must be applied over the wood structural panel sheathing. A clear distance of six inches (152 mm) must be maintained between the backer board and the earth.

3.4.2. HardieBacker® 500 cement boards must be installed with the long dimension either vertical or horizontal to nominally 2-by-4 wood framing members or minimum No. 20 gage [0.0329 inch (0.84 mm) minimum thickness] metal framing members spaced at a maximum of 16 inches (406 mm) on center, with end joints staggered from adjacent courses. Vertical joints must be fastened at abutting sheet edges. Vertical board edges of the HardieBacker® 500 must occur over framing members.

3.4.3. Fasteners and fastener spacing must be as specified in the respective table above in this bulletin, and when a specified level of wind resistance is required, the HardieBacker® 500 cement board is attached to framing members, appropriately spaced, with fastener types, lengths and spacing as described in the respective table above in this bulletin.

3.4.4. Fasteners must be located at least $^{3}/_{8}$ inch (9.5 mm) from board edges and a minimum of two inches (51 mm) from corners. Corner gaps must be filled with a silicone sealant compatible with fiber-cement backer board. For large, tiled areas, movement joints must be provided in accordance with ANSI A108.01, Section 3.7.

3.4.5. Ceramic wall tiles complying with ANSI A137.1 must be applied over the backer board in accordance with ANSI A108, with acrylic or latex-modified thinset mortars complying with ANSI A118.4.

Prior to setting the tile, all backer board joints must be filled with the same mortar used to set the tiles. While the mortar is still wet, 2-inch-wide (51 mm), high-strength, coated, alkali-resistant, glass fiber reinforcing tape must be embedded into the wet mortar, leveled, and allowed too thoroughly dry.

3.4.6. Additional details in the manufacturer's installation instructions must be observed before and during installation.

4. Product: HardieShingle™ (New HardieShingle®) Panel

4.1. The panels must maintain a clear distance of six inches between the siding and earth.

4.2. Apply a water-resistive barrier in accordance with the applicable code when installing on wood or metal framing members or wood structural panel sheathing.

4.3. The panels must be fastened in accordance with the respective information in this bulletin.

4.4. A 1/8-inch 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.

4.5. Vertical joints must occur over framing and must be sealed with caulking or covered with battens.

4.6. Horizontal joints must be flashed with meal Z-flashing and occur over solid framing or wood structural panel sheathing.

5. Product: HardiePlank™ (Cemplank®, Prevail™, and RFC®) Lap Siding

5.1. The panels must maintain a clear distance of six inches between the siding and earth.

5.2. When installation is on wood or metal framing members, with or without structural panel 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 respective information of this bulletin.

5.3. Apply a water-resistive barrier in accordance with the applicable code.

5.4. The panels must be fastened in accordance with the respective information in this bulletin.

5.5. 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.

5.6. Vertical joints must occur over studs, except where there "off-stud splice device" is installed or where the planks are installed to wood structural panel sheathing complying with the applicable code and must be staggered on subsequent courses.

5.7. 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.

5.8. 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 non-perforated flashing complying with ASTM D226, Type I felt, or other approved flashing.

5.9. Trim and corners must be installed, and the siding must be finished in accordance with the manufacturer's application instructions.

5.10. A 1/8-inch 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.

5.11. Horizontal joints must be flashed with Z-flashing and occur over solid blocking or wood structural panel sheathing.

6. Product: Artisan Lap Siding®

6.1. The panels must maintain a clear distance of six inches between the siding and earth.

6.2. When installation is on wood or metal framing members, with or without structural panel 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 respective information of this bulletin.

6.3. A water-resistive barrier must be applied over wood or metal framing or wood structural panel sheathing in accordance with the applicable code.

6.4. Lap siding installed over walls constructed of concrete masonry units complying with ASTM C90 must be applied in accordance with the respective tables in this bulletin.

6.5. 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.

6.6. Vertical joints must be made off-stud by means of the tongue and groove joint. Tongue and groove joints may be located centrally between studs but no closer than four inches from the edge of a stud.

6.7. Nails must not be placed within two inches of the tongue and groove at the end of the planks.

6.8. Vertical joints must be staggered on subsequent courses. The plank must then be fastened to the framing with corrosion-resistant fasteners. Vertical joints between planks must be lightly butted and must be located over a strip of non-perforated flashing complying with ASTM D226, Type I felt, or other approved flashing.

6.9. Trim and corners must be installed, and the siding must be finished in accordance with the manufacturer's application instructions.

6.10. A 1/8-inch 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.

6.11. Horizontal joints must be flashed with Z-flashing and occur over solid blocking or wood structural panel sheathing.

7. Product: HardieShingle™ (New HardieShingle®) Individuals Shingles

7.1. The panels must maintain a clear distance of six inches between the siding and earth.

7.2. 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.

7.3. The nominally 1-1/4-inch-wide-by-1/4-inch-thick starter strip and a minimum 8-1/4-inch-wide HardiePlank™ (Cemplank®, Prevail™, and RFC®) lap siding starter course must be installed over the water-resistive barrier with the bottom of the starter strip and starter course even with the bottom of the bottom plate.

7.4. Shingles must be spaced a maximum of 1/4 inch apart, leaving a minimum side lap of 1-1/2 inches between the joints of successive courses.

7.5. Fasteners must be spaced a minimum of 3/4 inch and a maximum of 1 inch from shingle edges and must be positioned to be covered a nominal 1-1/4 inches by the succeeding shingle course.

7.6. Vertical joints must be made off-stud by means of the tongue and groove joint. Tongue and groove joints may be located centrally between studs but no closer than four inches from the edge of a stud.

7.7. For 12-inchwide shingles, the third nail must be installed mid-span of the shingle. Nails must secure shingles but must not be over-driven.

7.8. Trim and corners must be installed, and the siding must be finished in accordance with the manufacturer's application instructions.

7.9. A 1/8-inch 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.

7.10. Horizontal joints must be flashed with Z-flashing and occur over solid blocking or wood structural panel sheathing.

CERTIFICATION AND IDENTIFICATION:

James Hardie Building Products, Inc., shall certify that HardiePanel® (Prevail, Cempanel®) Siding, Hardiflex ® Siding, Harditex®Baseboard, Hardiesoffit® (Cemsoffit®) exterior claddings, and Hardiebacker 500® conform to the requirements of this Materials Release (MR). ICC Evaluation Services shall validate the manufacturer's certification that the HardiePanel® (Prevail, Cempanel®) Siding, Hardiflex ® Siding, Harditex®Baseboard, Hardiesoffit® (Cemsoffit®) exterior claddings, Hardiebacker 500®, HardieShingle™ (New HardieShingle®) Panel, HardiePlank™ (Cemplank®, Prevail™, and RFC®) Lap Siding, Artisan Lap Siding®, and HardieShingle™ (New HardieShingle®) Individuals Shingles meet the requirements of this MR. Each certified James Hardie Building Products, Inc., product named in this MR shall be marked with the following applicable information:

1. James Hardie Building Products, Inc.
2. Name of the product (HardiePanel® (Prevail, Cempanel®) Siding, Hardiflex® Siding, Harditex®Baseboard, Hardiesoffit® exterior soffit panel, Cemsoffit® Exterior Soffit Panel, ¼" Hardiebacker® EZ Grid®, Hardiebacker® ProGridTM Cement Boards, ¼" Hardiebacker® Underlayment, Hardiebacker® 500, HardieShingle™ (New HardieShingle®) Panel, HardiePlank™ (Cemplank®, Prevail™, and RFC®) Lap Siding, Artisan Lap Siding®, and HardieShingle™ (New HardieShingle®) Individuals Shingles).
3. The ICC Evaluation Services validation mark.
4. The manufacturer's conformance to this MR.
5. The date of manufacture.

MANUFACTURING LOCATIONS:

The product covered under this MR will be produced at the following plant(s):

James Hardie Building Products, Inc.
809 S. Woodrow Wilson
Plant City, FL 33566

James Hardie Building Products, Inc.
17 Unytite Drive
Peru, IL 61354

James Hardie Building Products, Inc.
820 Sparks Drive
Cleburne, TX 76031

James Hardie Building Products, Inc.
2425 Highway 77 N
Waxahachie, TX 75165

James Hardie Building Products, Inc.
1000 James Hardie Way
Pulaski, VA 24301

James Hardie Building Products, Inc.
18200 50th Avenue, East
Tacoma, WA 98446

James Hardie Building Products, Inc.
3000 Waltham Way
Sparks, NV 89434

James Hardie Building Products, Inc.
10901 Elm Avenue
Fontanta, CA 92337

James Hardie Building Products, Inc.
152 Belgium Way
Summerville, SC 29483

James Hardie Building Products, Inc
906 S Park Ln
Prattville, AL 36067

The contact persons for all matters concerning this Materials Release at James Hardie Building Products, Inc. shall be:

Chad Diercks
R&D Director – Core Products
James Hardie Building Products, Inc.
Email: chad.diercks@jameshardie.com

Benjamin Batres
Manager – Application Engineering
James Hardie Building Products
Email: Benjamin.Batres@jhresarchusa.com

WARRANTY:

James Hardie Building Products, Inc., warrants HardiePanel® (Prevail, Cempanel®) Siding, Hardiflex ® Siding, Harditex®Baseboard, Hardiesoffit® (Cemsoffit®) exterior claddings, Hardiebacker 500®, HardieShingle™ (New HardieShingle®) Panel, HardiePlank™ (Cemplank®, Prevail™, and RFC®) Lap Siding, Artisan Lap Siding®, and HardieShingle™ (New HardieShingle®) Individuals Shingles against faulty performance resulting from faulty materials or workmanship in the manufacturing process for a period of 30 years from the date of installation.

The manufacturer's warranty does not, in any way, relieve the builder of responsibility under the terms of the Builder's Warranty required by the National Housing Act or under any provisions applicable to any other housing program. A copy of the manufacturer's warranty shall be furnished by the builder to the owner upon completion of the property.

MANUFACTURER'S RESPONSIBILITIES:

Issuance of this MR commits the manufacturer to fulfill, as a minimum, the following:

1. Produce, label and certify the material or system in strict accordance with the terms of this MR.

2. Provide necessary corrective action in a timely manner for all cases of justified complaint, poor performance or failure reported by HUD.

3. When requested, provide the Office of Manufactured Housing Programs, HUD Headquarters, with a representative list of properties in which the material, product or system has been used, including complete addresses or descriptions of locations and dates of installation.

4. Inform HUD in advance of changes in production facilities, methods, design of the product, company name, ownership or mailing address.

EVALUATION:

This MR shall be valid for a period of three years from the date of initial issuance or most recent renewal or revision, whichever is later. The holder of this MR shall apply for a renewal or revision 90 days prior to the Review Date printed on this MR. Submittals for renewal or revision shall be sent to:

U. S. Department of Housing and Urban Development
Office of Manufactured Housing Programs
451 7th Street, SW, Room 9170
Washington, DC 20410-8000

Appropriate User Fee(s) for the TSP program can be submitted through the Pay.gov website at https://pay.gov/public/form/start/73881741

The holder of this MR may apply for revision at any time prior to the Review Date. Minor revisions may be in the form of a supplement to the MR.

If the Department determines that a proposed renewal or supplement constitutes a revision, the appropriate User Fee for a revision will need to be submitted in accordance with Code of Federal Regulations 24 CFR 200.934, "User Fee System for the Technical Suitability of Products Program," and current User Fee Schedule.

CANCELLATION:

Failure to apply for a renewal or revision shall constitute a basis for cancellation of this MR. HUD will notify the manufacturer or producer that the MR may be canceled when:

1. conditions under which the document was issued have changed so as to affect production of, or to compromise the integrity of the accepted material, product, or system,

2. the manufacturer has changed its organizational form without notifying HUD, or

3. the manufacturer has not complied with responsibilities it assumed as a condition of HUD's acceptance.

However, before cancellation, HUD will give the manufacturer a written notice of the specific reasons for cancellation, and the opportunity to present views on why the MR should not be canceled. No refund of fees will be made on a canceled document.

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This Materials Release is issued solely for the captioned firm and is not transferable to any person or successor entity.

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