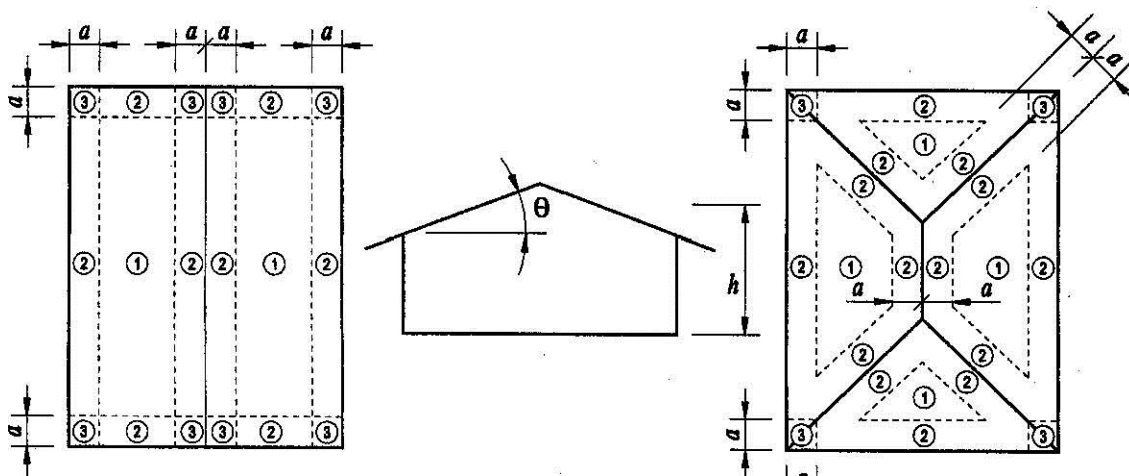


**APPENDIX 1: ATTACHMENT REQUIREMENTS FOR DESIGN WIND PRESSURE RESISTANCE:**

Table	Application Method	System	MDP (Max Design Pressure)	Page
A-1	AstonWood, Stonecrest Slate or Stonecrest Tile	1	-22.5 psf	2-4
A-2	AstonWood, Stonecrest Slate or Stonecrest Tile	2	-52.5 psf	4-6
A-3	AstonWood, Stonecrest Slate or Stonecrest Tile	3	-60.0 psf	7-9
B-1	AstonWood, Stonecrest Slate or Stonecrest Tile	4	-60.0 psf	10-12
B-2	AstonWood, Stonecrest Slate or Stonecrest Tile	5	-99.0 psf	13-15

1. The roof system evaluation herein pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction. Load resistance of the roof deck shall be documented through proper codified and/or FBC Approval documentation.
2. Unless otherwise noted herein, fire barrier and/or underlayment materials may be any that meets FBC Table 1507.1.1, TAMKO minimum requirements, the QA requirements of F.A.C. Rule 61G20-3 and FBC 1505 when installed with the roof cover.
3. "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads, and reflects the ultimate passing pressure divided by 2 (the 2 to 1 margin of safety per FBC 1504.9 has already been applied). Refer to FBC 1609 for determination of design wind loads.
4. Tables are based on roof cladding design wind pressure requirements for gabled/hipped roofs in accordance with ASCE 7-10, multiplied by 0.6 for allowable loads ( $P_{asd}$ ).
5. Tables are limited to projects having gable or hip roofs with a mean roof height between 0 and 60 feet, slopes between 7° and 45° (1.5:12 to 12:12 pitch), enclosed buildings (Internal Pressure Coefficient,  $GCP_i = \pm 0.18$ ), no load combinations ( $K_d = 1$ ) and site conditions and location of the structure do not meet all conditions specified in Section 26.8.1 of ASCE 7-10 ( $K_{zt} = 1.0$ ). Analysis for buildings falling outside these constraints shall be on a project-by-project basis by a Florida Registered PE.
6. Reference to "OK" indicates the system performance exceeds project requirements for that pressure zone. Reference to "NO" indicates additional testing or rational analysis by a Florida Registered PE is required to address that particular pressure zone.
7. The dimension of Zones 2 and 3 (perimeters and corners) shall be defined as 10% of the least horizontal plan-view dimension or 40% of the mean roof height, whichever is smaller, but not less than either 4% of the least horizontal plan-view dimension or 3 feet, as outlined in Figures 30.4-2B and 30.4-2C of ASCE 7-10.



8. For existing decks, fasteners shall be tested in the existing deck for withdrawal resistance in accordance with ANSI/SPRI FX-1 or Testing Application Standard TAS 105. A qualified design professional shall review the data for comparison to the minimum requirements for the system.
9. For installation over a fire barrier and/or existing asphalt shingles, panel fasteners that engage the roof deck shall be of sufficient length to penetrate the underside of the roof deck by not less than 3/4-inch.
10. Panel fasteners shall be corrosion resistant.

**TABLE A-1: AstonWood, Stonecrest Slate or Stonecrest Tile  
WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off)**

System No.	Deck (See Note 1)	Fire Barrier	Underlay	Panel Attachment			MDP (psf)
				Clips	Clip Placement	Fasteners	
1.	Min. 15/32" APA rated plywood	(Optional) See Note 2	Minimum ASTM D226, Type II or FBC Approved equivalent or TW Metal & Tile Underlayment or TW Underlayment	Five (5) 26 ga. x 1½" wide x 2- <sup>1</sup> / <sub>8</sub> " long "Standard Tamko Clip" per shingle	One (1) positioned at the middle along the width at one end. Four (4) at upslope-edge spaced 3", 16", 24" and 36" from right end.	One (1) #10-8 x min. 1-inch screw (See Note 9) per clip	-22.5

**Table A-1a: System No. 1: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -22.5 psf)  
Exposure B for Slope Range 7° < slope ≤ 27° (1.5:12 < pitch ≤ 6.1:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

**Table A-1b: System No. 1: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -22.5 psf)  
Exposure B for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 & 3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 & 3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 & 3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 & 3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 & 3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 & 3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 & 3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 & 3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

**Table A-1c: System No. 1: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -22.5 psf)  
Exposure C for Slope Range 7° ≤ slope < 27° (1.5:12 < pitch ≤ 6.1:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	1	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
15 < h ≤ 20	1	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
20 < h ≤ 30	1	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

**Table A-1d: System No. 1: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -22.5 psf)  
Exposure C for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	1	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 & 3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 & 3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
15 < h ≤ 20	1	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 & 3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 & 3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
20 < h ≤ 30	1	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 & 3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 & 3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

**Table A-1e: System No. 1: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -22.5 psf)  
Exposure D for Slope Range 7° ≤ slope < 27° (1.5:12 < pitch ≤ 6.1:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	1	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
15 < h ≤ 20	1	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

**TABLE A-2: AstonWood, Stonecrest Slate or Stonecrest Tile  
WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off)**

System No.	Deck (See Note 1)	Fire Barrier	Underlay	Panel Attachment			MDP (psf)
				Clips	Clip Placement	Fasteners	
2.	Min. 15/32" APA rated plywood	(Optional) See Note 2	TW Metal & Tile Underlayment or TW Underlayment	Five (5) 26 ga. x 1¼" wide x 2- <sup>3</sup> / <sub>8</sub> " long "Standard Tamko Clip" per shingle	One (1) positioned at the middle along the width at one end. Four (4) at upslope-edge spaced 3", 16", 24" and 36" from right end.	One (1) Min. 11 ga. x min. 1½-inch ring shank nail (See Note 9) per clip	-52.5

**Table A-2a System No. 2: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -52.5 psf)  
Exposure B for Slope Range 7° < slope ≤ 27° (1.5:12 < pitch ≤ 6.1:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

**Table A-2b: System No. 2: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -52.5 psf)  
Exposure B for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO

Table A-2c: System No. 2: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -52.5 psf) Exposure C for Slope Range $7^\circ \leq \text{slope} < 27^\circ$ (1.5:12 < pitch $\leq$ 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - $V_{ult}$ (mph)								
		110	115	120	130	140	150	160	180	200
$0 < h \leq 15$	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$15 < h \leq 20$	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$20 < h \leq 30$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$30 < h \leq 40$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$40 < h \leq 50$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
$50 < h \leq 60$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table A-2d: System No. 2: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -52.5 psf) Exposure C for Slope Range $27^\circ < \text{slope} \leq 45^\circ$ (6.1:12 < pitch $\leq$ 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - $V_{ult}$ (mph)								
		110	115	120	130	140	150	160	180	200
$0 < h \leq 15$	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
$15 < h \leq 20$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
$20 < h \leq 30$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
$30 < h \leq 40$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
$40 < h \leq 50$	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
$50 < h \leq 60$	1	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO

Table A-2e: System No. 2: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -52.5 psf) Exposure D for Slope Range 7° ≤ slope < 27° (1.5:12 < pitch ≤ 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
15 < h ≤ 20	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
20 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table A-2f: System No. 2: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -52.5 psf) Exposure D for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
15 < h ≤ 20	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
20 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 & 3 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 & 3 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 & 3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 & 3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO

**TABLE A-3: AstonWood, Stonecrest Slate or Stonecrest Tile  
WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off)**

System No.	Deck (See Note 1)	Fire Barrier	Underlay	Panel Attachment			MDP (psf)
				Clips	Clip Placement	Fasteners	
3.	Min. 15/32" APA rated plywood	(Optional) See Note 2	TW Metal & Tile Underlayment or TW Underlayment	Five (5) 26 ga. x 1¼" wide x 2-7/8" long "Standard Tamko Clip" per shingle	One (1) positioned at the middle along the width at one end. Four (4) at upslope-edge spaced 3", 16", 24" and 36" from right end.	One (1) #10-8 x min. 1-inch screw (See Note 9) per clip	-60.0

**Table A-3a: System No. 3: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf)  
Exposure B for Slope Range 7° < slope ≤ 27° (1.5:12 < pitch ≤ 6.1:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO

**Table A-3b: System No. 3: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf)  
Exposure B for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO

Table A-3c: System No. 3: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf) Exposure C for Slope Range $7^\circ \leq \text{slope} < 27^\circ$ (1.5:12 < pitch $\leq$ 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - $V_{ult}$ (mph)								
		110	115	120	130	140	150	160	180	200
0 < h $\leq$ 15	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO
15 < h $\leq$ 20	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
20 < h $\leq$ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
30 < h $\leq$ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
40 < h $\leq$ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
50 < h $\leq$ 60	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table A-3d: System No. 3: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf) Exposure C for Slope Range $27^\circ < \text{slope} \leq 45^\circ$ (6.1:12 < pitch $\leq$ 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - $V_{ult}$ (mph)								
		110	115	120	130	140	150	160	180	200
0 < h $\leq$ 15	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
15 < h $\leq$ 20	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
20 < h $\leq$ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
30 < h $\leq$ 40	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
40 < h $\leq$ 50	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
50 < h $\leq$ 60	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO



Table A-3e: System No. 3: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf) Exposure D for Slope Range 7° ≤ slope < 27° (1.5:12 < pitch ≤ 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
15 < h ≤ 20	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
20 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table A-3f: System No. 3: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf) Exposure D for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
15 < h ≤ 20	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
20 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO

**TABLE B-1: AstonWood, Stonecrest Slate or Stonecrest Tile  
WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off)**

System No.	Deck (See Note 1)	Fire Barrier	Underlay	Panel Attachment			MDP (psf)
				Clips	Clip Placement	Fasteners	
4.	Min. 15/32" APA rated plywood	(Optional) See Note 2	Minimum ASTM D226, Type II or FBC Approved equivalent or TW Metal & Tile Underlayment or TW Underlayment	Five (5) 26 ga. x 1 1/4" wide x 2-1/8" long "Standard Tamko Clip" per shingle	One (1) positioned at the middle along the width at one end. Four (4) at upslope-edge spaced 4", 11", 26" and 37" from right end.	One (1) #10-8 x min. 1 1/2-inch screw (See Note 9) per clip	-60.0

**Table B-1a: System No. 4: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf)  
Exposure B for Slope Range 7° < slope ≤ 27° (1.5:12 < pitch ≤ 6.1:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO

**Table B-1b: System No. 4: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf)  
Exposure B for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO

Table B-1c: System No. 4: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf) Exposure C for Slope Range $7^\circ \leq \text{slope} < 27^\circ$ (1.5:12 < pitch $\leq$ 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - $V_{ult}$ (mph)								
		110	115	120	130	140	150	160	180	200
0 < h $\leq$ 15	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	OK	NO	NO	NO	NO	NO	NO	NO	NO
15 < h $\leq$ 20	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
20 < h $\leq$ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
30 < h $\leq$ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
40 < h $\leq$ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
50 < h $\leq$ 60	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table B-1d: System No. 4: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf) Exposure C for Slope Range $27^\circ < \text{slope} \leq 45^\circ$ (6.1:12 < pitch $\leq$ 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - $V_{ult}$ (mph)								
		110	115	120	130	140	150	160	180	200
0 < h $\leq$ 15	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
15 < h $\leq$ 20	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
20 < h $\leq$ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
30 < h $\leq$ 40	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
40 < h $\leq$ 50	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
50 < h $\leq$ 60	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO

Table B-1e: System No. 4: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf) Exposure D for Slope Range 7° ≤ slope < 27° (1.5:12 < pitch ≤ 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
15 < h ≤ 20	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	OK	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
20 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	OK	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2	OK	OK	OK	NO	NO	NO	NO	NO	NO
	3	NO	NO	NO	NO	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table B-1f: System No. 4: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -60.0 psf) Exposure D for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
15 < h ≤ 20	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
20 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 & 3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 & 3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 & 3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO

**TABLE B-2: AstonWood, Stonecrest Slate or Stonecrest Tile  
WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off)**

System No.	Deck (See Note 1)	Fire Barrier	Underlay	Panel Attachment			MDP (psf)
				Clips	Clip Placement	Fasteners	
5.	Min. 15/32" APA rated plywood	(Optional) See Note 2	TW Metal & Tile Underlayment or TW Underlayment	Five (5) 26 ga. x 1¼" wide x 2-1/8" long "Standard Tamko Clip" per shingle	One (1) positioned at the middle along the width at one end. Four (4) at upslope-edge spaced 4", 11", 26" and 37" from right end.	One (1) #10-8 x min. 1½-inch screw (See Note 9) per clip	-99.0

**Table B-2a: System No. 5: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -99.0 psf)  
Exposure B for Slope Range 7° < slope ≤ 27° (1.5:12 < pitch ≤ 6.1:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO

**Table B-2b: System No. 5: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -99.0 psf)  
Exposure B for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - V <sub>ult</sub> (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO

Table B-2c: System No. 5: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -99.0 psf) Exposure C for Slope Range $7^\circ \leq \text{slope} < 27^\circ$ (1.5:12 < pitch $\leq$ 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - $V_{ult}$ (mph)								
		110	115	120	130	140	150	160	180	200
0 < h $\leq$ 15	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
15 < h $\leq$ 20	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
20 < h $\leq$ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
30 < h $\leq$ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
40 < h $\leq$ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
50 < h $\leq$ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO

Table B-2d: System No. 5: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -99.0 psf) Exposure C for Slope Range $27^\circ < \text{slope} \leq 45^\circ$ (6.1:12 < pitch $\leq$ 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - $V_{ult}$ (mph)								
		110	115	120	130	140	150	160	180	200
0 < h $\leq$ 15	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
15 < h $\leq$ 20	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
20 < h $\leq$ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
30 < h $\leq$ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO
40 < h $\leq$ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO
50 < h $\leq$ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO

Table B-2e: System No. 5: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -99.0 psf) Exposure D for Slope Range $7^\circ \leq \text{slope} < 27^\circ$ (1.5:12 < pitch $\leq$ 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - $V_{ult}$ (mph)								
		110	115	120	130	140	150	160	180	200
$0 < h \leq 15$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	NO	NO	NO	NO	NO
$15 < h \leq 20$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
$20 < h \leq 30$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	OK	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	NO	NO	NO	NO	NO	NO
$30 < h \leq 40$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
$40 < h \leq 50$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO
$50 < h \leq 60$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO

Table B-2f: System No. 5: AstonWood, Stonecrest Slate or Stonecrest Tile (MDP = -99.0 psf) Exposure D for Slope Range $27^\circ < \text{slope} \leq 45^\circ$ (6.1:12 < pitch $\leq$ 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Ultimate Design Wind Speed - $V_{ult}$ (mph)								
		110	115	120	130	140	150	160	180	200
$0 < h \leq 15$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
$15 < h \leq 20$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
$20 < h \leq 30$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
$30 < h \leq 40$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
$40 < h \leq 50$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
$50 < h \leq 60$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO