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EVALUATION REPORT

DECRA Roofing Systems, Inc.
 1230 Railroad Street,
 Corona, CA 92882

Evaluation Report D30800.12.09-R1
FL9759-R3
Date of Issuance: 12/17/2009
Revision 1: 10/26/2011

SCOPE:

This Evaluation Report is issued under Rule 9N-3 and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code. The product described herein has been designed to comply with the 2010 Florida Building Code sections noted herein.

DESCRIPTION: DECRA Stone Coated Steel Roofing Systems

LABELING: Each unit shall bear labeling in accordance with the requirements the Accredited Quality Assurance Agency noted herein.

CONTINUED COMPLIANCE: This Evaluation Report is valid until such time as the named product(s) changes, the referenced Quality Assurance documentation changes, or provisions of the Code that relate to the product change. Acceptance of this Evaluation Report by the named client constitutes agreement to notify Robert Nieminen, P.E. if the product changes or the referenced Quality Assurance documentation changes. Trinity|ERD requires a complete review of this Evaluation Report relative to updated Code requirements with each Code Cycle.

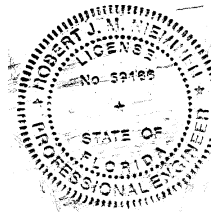
ADVERTISEMENT: The Evaluation Report number preceded by the words "Trinity | ERD Evaluated" may be displayed in advertising literature. If any portion of the Evaluation Report is displayed, then it shall be done in its entirety.

INSPECTION: Upon request, a copy of this entire Evaluation Report shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This Evaluation Report consists of pages 1 through 4, plus a 20-page Appendix.

Prepared by:

Robert J.M. Nieminen, P.E.
 Florida Registration No. 59166, Florida DCA ANE1983



The facsimile seal appearing was authorized by Robert Nieminen, P.E. on 10/26/2011. This does not serve as an electronically signed document. Signed, sealed hardcopies have been transmitted to the Product Approval Administrator and to the named client.

CERTIFICATION OF INDEPENDENCE:

1. Exterior Research & Design, LLC. d/b/a Trinity | ERD does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products it evaluates.
2. Exterior Research & Design, LLC. d/b/a Trinity | ERD is not owned, operated or controlled by any company manufacturing or distributing products it evaluates.
3. Robert Nieminen, P.E. does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the evaluation reports are being issued.
4. Robert Nieminen, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.

ROOFING SYSTEMS EVALUATION:

1. SCOPE:

Product Category: Roofing

Sub-Category: Non-Structural Metal Roofing

Compliance Statement: DECRA Stone Coated Steel Roofing Systems, as produced by DECRA Roofing Systems, Inc., have demonstrated compliance with the following sections of the Florida Building Code through testing in accordance with the following Standards. Compliance is subject to the Installation Requirements and Limitations / Conditions of Use set forth herein.

2. STANDARDS:

<u>Section</u>	<u>Property</u>	<u>Standard</u>	<u>Year</u>
1504.3.1	Wind	UL 1897	2004
1504.3.2, 2214.3, 2222.4.6	Wind	UL 580	2006
1518.9.1, 1523.6.5.2.4.1	Wind	TAS 125	2003

3. REFERENCES:

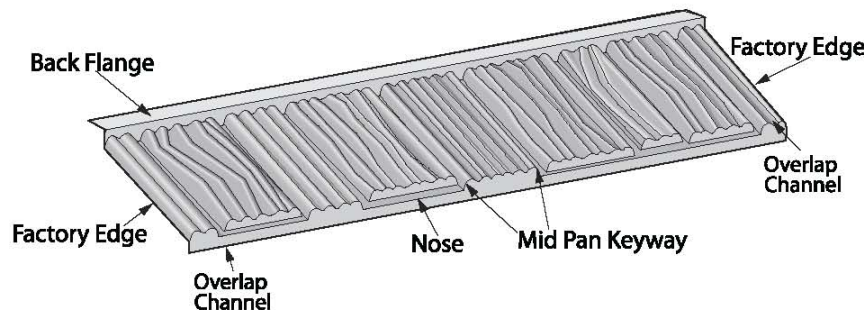
<u>Entity</u>	<u>Examination</u>	<u>Reference</u>	<u>Date</u>
UL (TST 1740)	Wind Uplift	06NK07480	04/12/2006
UL (TST 1740)	Wind Uplift	06NK17480	04/13/2006
UL (TST 1740)	Wind Uplift	06NK07480	05/02/2009
Metal suppliers	Metal Physicals	Mill Certs	Current
UL (QUA 1743)	Quality Assurance	Service Confirmation	Exp. 10/06/2013

4. PRODUCT DESCRIPTION:

The following DECRA non-structural metal roof panels are mechanically attached to Approved substrate, as outlined in the Limitations / Conditions of Use herein.

- **DECRA Shake** are 0.0179-inch thick aluminum-zinc alloy coated, formed steel panels with a ceramic coated stone granular finish that are mechanically attached to batten systems over approved roof decks. DECRA Shake measures 14-5/8 x 53 inches with installed exposure of 12-5/8 x 51 inches.

DECRA Shake (installed on battens)



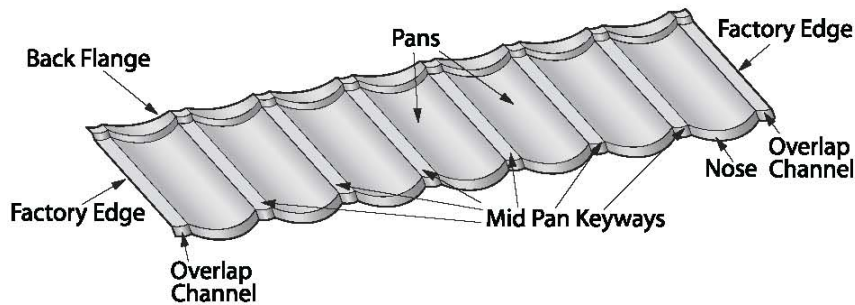
Installed Exposure: 12-5/8" x 51"

Panels per Square: 22.4

Installed Weight: 150 lbs./sq.

- **DECRA Tile** are 0.0179-inch thick aluminum-zinc alloy coated, formed steel panels with a ceramic coated stone granular finish that are mechanically attached to batten systems over approved roof decks. DECRA Tile measures 16½ x 52 inches with installed exposure of 14½ x 50 inches.

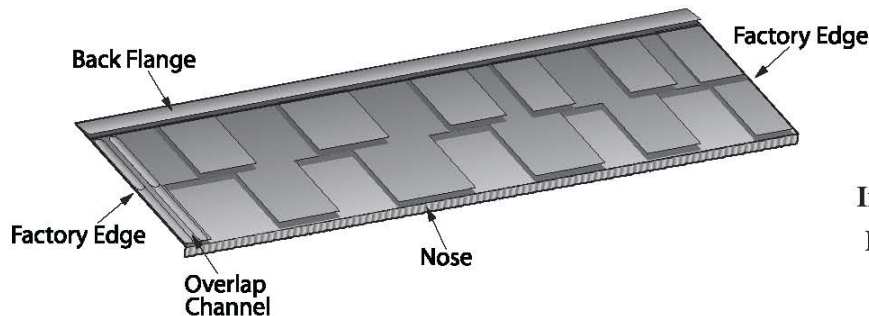
DECRA Tile (installed on battens)



Installed Exposure: 14-1/2" x 50"
Panels per Square: 20
Installed Weight: 150 lbs./sq.

- **DECRA Shingle Plus** are 0.017-inch thick aluminum-zinc alloy coated, formed steel panels with a ceramic coated stone granular finish that are mechanically attached to batten systems over approved roof decks. Shingle Plus measures 17½ x 52 inches with installed exposure of 14½ x 50 inches.

DECRA Shingle Plus (installed on battens)



Installed Exposure: 14-1/2" x 50"
Panels per Square: 20
Installed Weight: 150 lbs./sq.

5. LIMITATIONS:

- 5.1 This evaluation report is not for use in HVHZ.
- 5.2 Refer to a current Roofing Materials Directory or ASTM E108/UL790 report from an accredited laboratory for fire ratings of this product.
- 5.3 The minimum roof slope per manufacturer's installation instructions is 3:12. Slope shall not be less than that set forth in 2010 FBC 1507.5.2. See 5.3.1 below.
- 5.3.1 If the roof deck is covered with a Florida Statewide Approved low-slope roof system, meeting all Chapter 15 requirements for use below 3:12 slope, then DECRA Stone Coated Steel Roofing Systems may be installed below 3:12 roof slope atop the Approved roof system, provided the applicable attachment requirements for the system in Appendix 1 are maintained.
- 5.4 Sheet materials used to produce the panels shall comply with 2010 FBC Section 1507.5.4.

- 5.5 Unless otherwise noted in Appendix 1, roof decking and its attachment shall be specified and installed to meet project design criteria to the satisfaction of the AHJ. This evaluation is limited to the roof panels and the connections to the deck. The structural adequacy of all structural components (beams, columns, purlins and roof deck etc.) shall be verified by the structural plans examiner of the building department.
- 5.6 Appendix 1 outlines attachment requirements for design wind pressure resistance. "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads. Refer to FBC 1609.1.5 for determination of design wind pressures. The MDP for the selected assembly shall meet or exceed the design wind pressure requirements for the project for each pressure zone of the roof.
- 5.6.1 Reference to "OK" indicates the system performance exceeds requirements for that pressure zone. Reference to "NO" indicates additional testing or rational analysis by a qualified design professional is required to address that particular pressure zone.
- 5.7 For existing roof decks, fasteners shall be tested in the existing deck for withdrawal resistance. A qualified design professional shall review the data for comparison to the minimum requirements for the system.
- 5.8 Perimeter and ridge details shall be designed and installed to resist the wind load requirements of 2010 FBC Chapter 16.
- 5.9 All products in the roof assembly shall have quality assurance audit in accordance with the 2010 FBC and F.A.C. Rule 9N-3.

6. INSTALLATION:

- 6.1 DECRA Stone Coated Steel Roofing Systems shall be installed in accordance with DECRA Roofing Systems, Inc. published installation instructions, subject to the Limitations / Conditions of Use noted herein.
- 6.2 System attachment requirements for wind load resistance are set forth in Appendix 1.

7. BUILDING PERMIT REQUIREMENTS:

As required by the Building Official or Authority Having Jurisdiction in order to properly evaluate the installation of this product.

8. MANUFACTURING PLANTS:

Contact the named QA entity for manufacturing facilities covered by F.A.C. Rule 9N-3 QA requirements.

9. QUALITY ASSURANCE ENTITY:

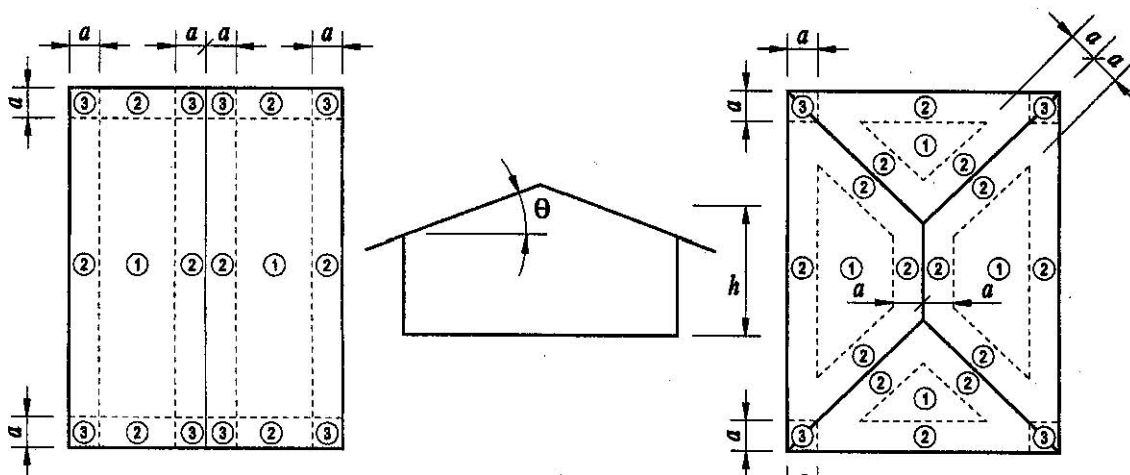
Underwriters Laboratories – QUA1743; (414) 248-6409; karen.buchmann@us.ul.com

- THE 20-PAGES THAT FOLLOW FORM PART OF THIS EVALUATION REPORT -

APPENDIX 1: ATTACHMENT REQUIREMENTS FOR DESIGN WIND PRESSURE RESISTANCE:

Table	Application Method	System	MDP (Max Design Pressure)	Page
A-1	Wood Battens w/ Four (4) Screws per Panel	1	-86.0 psf	3-5
A-2	Wood Battens w/ Seven (7) Screws per Panel	2	-153.6 psf	6-8
B-1	Steel Battens w/ Four (4) Screws per Panel	3	-59.75 psf	9-11
B-2	Steel Battens w/ Seven (7) Screws per Panel	4	-116.0 psf	12-14
C-1	Wood Counter-Battens w/ Four (4) Screws per Panel	6	-78.5 psf	15-17
C-2	Wood Counter-Battens w/ Seven (7) Screws per Panel	7	-146.0 psf	18-20

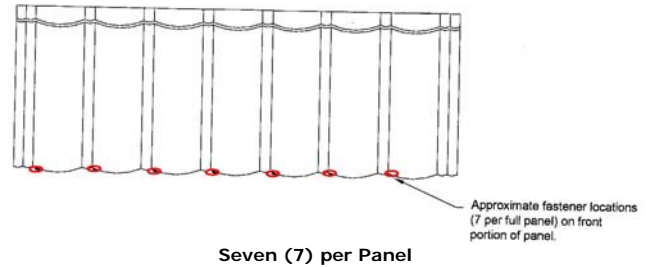
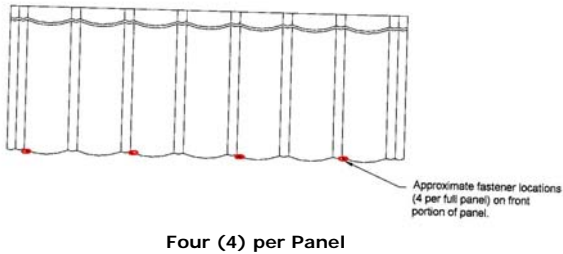
1. Unless otherwise noted, roof deck shall be specified and installed in accordance with FBC requirements to the satisfaction of the AHJ, but not less than minimum 15/32" plywood attached with minimum 8d by 2-3/8" long smooth shank nails spaced 6" o.c. at board edges and 6" o.c. at center supports spaced maximum 24" o.c. In re-roofing or recover the above attachment shall be in addition to the existing attachment
2. Unless otherwise noted herein, fire barrier and/or underlayment materials may be any that meet DECRA minimum requirements, the QA requirements of F.A.C. Rule 9N-3 and 2010 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. Refer to FBC 1609.1.5 for determination of design wind pressures.
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 in accordance with 2010 FBC 1609.1.5.
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, GC_{Pi} = ± 0.18), no load combinations (K_a = 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.



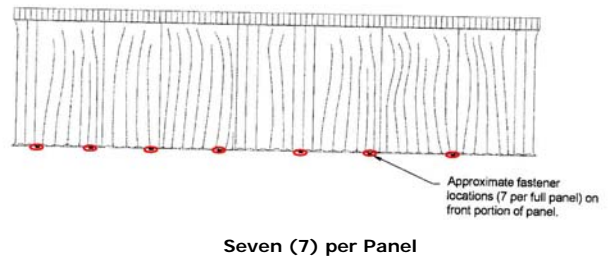
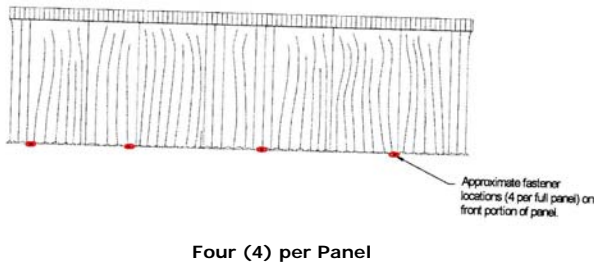
8. For existing decks, fasteners shall be tested in the existing deck for withdrawal resistance in accordance with TAS 105 or ANSI/SPRI FX-1. A qualified design professional shall review the data for comparison to the minimum requirements for the system.
9. For installation over a fire barrier and/or 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 1-inch.
10. Panel fasteners shall be corrosion resistant.

11. The panel attachment configurations for DECRA Tile, Shake or Shingle Plus noted herein call for either four (4) or seven (7) fasteners per panel. Fastener placement for these configurations are outlined below.

DECRA Tile



DECRA Shake



DECRA Shingle Plus

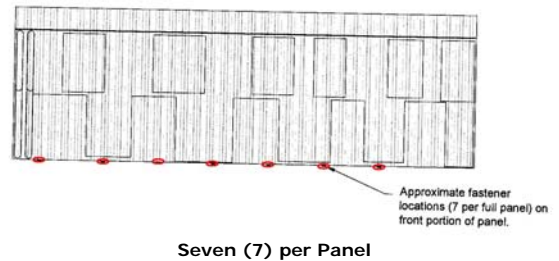
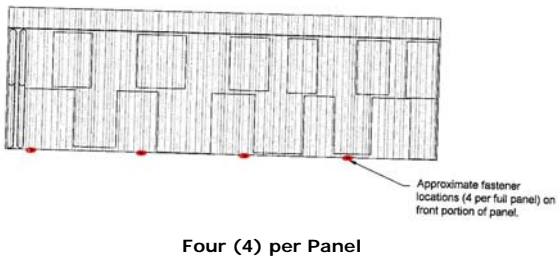


TABLE A-1: DECRA Shake, Tile or Shingle Plus (over Wood Battens w/ Four Screws per Panel)								
WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off)								
System No.	Deck (See Note 1)	Fire Barrier / Underlay	Battens			Panel Attachment		MDP (psf)
			Type	Fasteners	Attachment	Fasteners	Attachment	
1.	Min. 15/32" APA rated CDX plywood over wood supports spaced max. 24" o.c.	See Note 2	Nominal 2 x 2 inch wood spaced 12-5/8" o.c. for Shake or 14 1/2-inch o.c. for Tile or Shingle Plus	No. 9 x 3 1/2" long coated all purpose steel exterior wood screws	One (1) screw at each intersection with joists, max. 24" o.c.	No. 8 x min. 1 1/2" long hex head screws	Four (4) per panel	-86.0

Table A-1a: System No. 1: DECRA Shake, Tile or Shingle Plus (over Wood Battens with Four Screws per Panel)											
Exposure B for Slope Range 7° < slope ≤ 27° (1.5:12 < pitch ≤ 6.1:12)											
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (mph)									
		110	115	120	130	140	150	160	180	200	
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3	OK	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3	OK	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO	NO
	3 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO	NO

Table A-1b: System No. 1: DECRA Shake, Tile or Shingle Plus (over Wood Battens with Four Screws per Panel)											
Exposure B for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)											
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (mph)									
		110	115	120	130	140	150	160	180	200	
0 < h ≤ 30	1	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK	NO
30 < h ≤ 40	1	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK	NO
40 < h ≤ 50	1	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK	NO
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK	NO

Table A-1c: System No. 1: DECRA Shake, Tile or Shingle Plus (over Wood Battens with Four Screws per Panel) Exposure C for Slope Range $7^\circ \leq \text{slope} < 27^\circ$ ($1.5:12 < \text{pitch} \leq 6.1:12$)										
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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	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
$15 < h \leq 20$	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	NO	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	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
$30 < h \leq 40$	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	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	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
$50 < h \leq 60$	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	NO	NO	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3 Overhang	OK	OK	NO	NO	NO	NO	NO	NO	NO

Table A-1d: System No. 1: DECRA Shake, Tile or Shingle Plus (over Wood Battens with Four Screws per Panel) Exposure C for Slope Range $27^\circ < \text{slope} < 45^\circ$ ($6.1:12 < \text{pitch} \leq 12:12$)										
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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	NO	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	NO	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	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	NO
	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	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO

Table A-1e: System No. 1: DECRA Shake, Tile or Shingle Plus (over Wood Battens with Four Screws per Panel) Exposure D for Slope Range 7° ≤ slope < 27° (1.5:12 < pitch ≤ 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	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	OK	NO	NO	NO	NO	NO	NO
15 < h ≤ 20	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
20 < 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	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
50 < h ≤ 60	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	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	NO	NO	NO	NO	NO
	3 Overhang	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table A-1f: System No. 1: DECRA Shake, Tile or Shingle Plus (over Wood Battens with Four Screws per Panel) Exposure D for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	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	NO	NO
15 < h ≤ 20	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	NO	NO
20 < 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	OK	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-2: DECRA Shake, Tile or Shingle Plus (over Wood Battens with Seven Screws per Panel)
WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off)

System No.	Deck (See Note 1)	Fire Barrier / Underlay	Battens			Panel Attachment		MDP (psf)
			Type	Fasteners	Attachment	Fasteners	Attachment	
2.	Min. 15/32" APA rated CDX plywood over wood supports spaced max. 24" o.c.	See Note 2	Nominal 2 x 2 inch wood spaced 12-5/8" o.c. for Shake or 14½-inch o.c. for Tile or Shingle Plus	<u>At Joists:</u> No. 9 x 3½" long coated all purpose steel exterior wood screws <u>Btwn Joists:</u> No. 8 x 2½" long coated all purpose steel exterior wood screws	<u>At Joists:</u> Two (2) screws at each intersection with joists, max. 24" o.c. <u>Btwn Joists:</u> One (1) screw between joists.	No. 8 x min. 1½" long hex head screws	Seven (7) per panel	-153.5

Table A-2a System No. 2: DECRA Shake, Tile or Shingle Plus (over Wood Battens with Seven Screws per Panel)
Exposure B for Slope Range 7° < slope ≤ 27° (1.5:12 < pitch ≤ 6.1:12)

Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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	OK
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	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	OK	OK
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	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	OK	OK
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
	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	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO

Table A-2b: System No. 2: DECRA Shake, Tile or Shingle Plus (over Wood Battens with Seven Screws per Panel)
Exposure B for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)

Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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	OK
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	OK

Table A-2c: System No. 2: DECRA Shake, Tile or Shingle Plus (over Wood Battens with Seven Screws per Panel)
Exposure C for Slope Range $7^\circ \leq \text{slope} < 27^\circ$ ($1.5:12 < \text{pitch} \leq 6.1:12$)

Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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	OK	OK
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3 Overhang	OK	OK	OK	OK	OK	OK	OK	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	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	OK	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	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	OK	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	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	OK	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	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	OK	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	OK
	3	OK	OK	OK	OK	OK	OK	OK	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO

Table A-2d: System No. 2: DECRA Shake, Tile or Shingle Plus (over Wood Battens with Seven Screws per Panel)
Exposure C for Slope Range $27^\circ < \text{slope} < 45^\circ$ ($6.1:12 < \text{pitch} \leq 12:12$)

Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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	OK
$15 < h \leq 20$	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	OK
$20 < h \leq 30$	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	OK
$30 < h \leq 40$	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	OK	OK
$40 < h \leq 50$	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	OK	OK
$50 < h \leq 60$	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	OK	OK

Table A-2e: System No. 2: DECRA Shake, Tile or Shingle Plus (over Wood Battens with Seven Screws per Panel) Exposure D for Slope Range $7^\circ \leq \text{slope} < 27^\circ$ ($1.5:12 < \text{pitch} \leq 6.1:12$)										
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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	OK	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3 Overhang	OK	OK	OK	OK	OK	OK	OK	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	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
$20 < h \leq 30$	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	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	OK	OK	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	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
$40 < h \leq 50$	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
$50 < h \leq 60$	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 A-2f: System No. 2: DECRA Shake, Tile or Shingle Plus (over Wood Battens with Seven Screws per Panel) Exposure D for Slope Range $27^\circ < \text{slope} \leq 45^\circ$ ($6.1:12 < \text{pitch} \leq 12:12$)										
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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	OK
$15 < h \leq 20$	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	OK
$20 < h \leq 30$	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	OK
$30 < h \leq 40$	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	OK	OK
$40 < h \leq 50$	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	OK	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	OK	NO

TABLE B-1: DECRA Shake, Tile or Shingle Plus (over Steel Battens w/ Four Screws per Panel)
WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off)

System No.	Deck (See Note 1)	Fire Barrier / Underlay	Battens			Panel Attachment		MDP (psf)
			Type	Fasteners	Attachment	Fasteners	Attachment	
3.	Min. 15/32" APA rated CDX plywood over wood supports spaced max. 24" o.c.	See Note 2	Min. 2.5" x 7/8" steel spaced 12-5/8" o.c. for Shake or 14 1/2-inch o.c. for Tile or Shingle Plus	At Joists: No. 8 x 2 1/2" long hex head steel screws Btwn Joists: No. 8 x 1 1/2" long hex head steel screws	At Joists: Two (2) screws at each intersection with joists, max. 24" o.c. Btwn Joists: One (1) set of two (2) screws between joists.	No. 8 x min. 1 1/2" long hex head screws	Four (4) per panel	-59.75

Table B-1a: System No. 3: DECRA Shake, Tile or Shingle Plus (over Steel Battens with Four Screws per Panel)
Exposure B for Slope Range 7° < slope ≤ 27° (1.5:12 < pitch ≤ 6.1:12)

Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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. 3: DECRA Shake, Tile or Shingle Plus (over Steel Battens with Four Screws per Panel)
Exposure B for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)

Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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. 3: DECRA Shake, Tile or Shingle Plus (over Steel Battens with Four Screws per Panel) Exposure C for Slope Range 7° ≤ slope < 27° (1.5:12 < pitch ≤ 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 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 ≤ 20	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	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	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	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 ≤ 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 ≤ 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 ≤ 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. 3: DECRA Shake, Tile or Shingle Plus (over Steel Battens with Four Screws per Panel) Exposure C for Slope Range 27° < slope < 45° (6.1:12 < pitch ≤ 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 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 ≤ 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 ≤ 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 ≤ 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 ≤ 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 ≤ 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. 3: DECRA Shake, Tile or Shingle Plus (over Steel Battens with Four Screws per Panel) Exposure D for Slope Range $7^\circ \leq \text{slope} < 27^\circ$ ($1.5:12 < \text{pitch} \leq 6.1:12$)										
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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	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
$15 < h \leq 20$	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
$20 < h \leq 30$	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
$30 < h \leq 40$	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 B-1f: System No. 3: DECRA Shake, Tile or Shingle Plus (over Steel Battens with Four Screws per Panel) Exposure D for Slope Range $27^\circ < \text{slope} \leq 45^\circ$ ($6.1:12 < \text{pitch} \leq 12:12$)										
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (mph)								
		110	115	120	130	140	150	160	180	200
$0 < h \leq 15$	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
$15 < h \leq 20$	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	NO	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	NO	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 B-2: DECRA Shake, Tile or Shingle Plus (over Steel Battens with Seven Screws per Panel)
WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off)

System No.	Deck (See Note 1)	Fire Barrier / Underlay	Battens			Panel Attachment		MDP (psf)
			Type	Fasteners	Attachment	Fasteners	Attachment	
4.	Min. 15/32" APA rated CDX plywood over wood supports spaced max. 24" o.c.	See Note 2	Min. 2.5" x 7/8" steel spaced 12-5/8" o.c. for Shake or 14 1/2-inch o.c. for Tile or Shingle Plus	At Joists: No. 8 x 2 1/2" long hex head steel screws Btwn Joists: No. 8 x 1 1/2" long hex head steel screws	At Joists: Two (2) screws at each intersection with joists, max. 24" o.c. Btwn Joists: Three (3) sets of two (2) screws equally spaced between joists (6" o.c.)	No. 8 x min. 1 1/2" long hex head screws	Seven (7) per panel	-116.0

Table B-2a System No. 4: DECRA Shake, Tile or Shingle Plus (over Steel Battens with Seven Screws per Panel)
Exposure B for Slope Range 7° < slope ≤ 27° (1.5:12 < pitch ≤ 6.1:12)

Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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	OK	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	OK	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3 Overhang	OK	OK	OK	OK	OK	OK	OK	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	OK	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3 Overhang	OK	OK	OK	OK	OK	OK	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	OK
	3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO

Table B-2b: System No. 4: DECRA Shake, Tile or Shingle Plus (over Steel Battens with Seven Screws per Panel)
Exposure B for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)

Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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	OK
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	OK

Table B-2c: System No. 4: DECRA Shake, Tile or Shingle Plus (over Steel Battens with Seven Screws per Panel) Exposure C for Slope Range 7° ≤ slope < 27° (1.5:12 < pitch ≤ 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 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	OK
	3 Overhang	OK	OK	OK	OK	OK	OK	NO	NO	NO
15 < h ≤ 20	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
20 < 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	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	OK	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	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
40 < h ≤ 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	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
50 < h ≤ 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	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

Table B-2d: System No. 4: DECRA Shake, Tile or Shingle Plus (over Steel Battens with Seven Screws per Panel) Exposure C for Slope Range 27° < slope < 45° (6.1:12 < pitch ≤ 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 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	OK
15 < h ≤ 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	OK
20 < 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	NO
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	NO
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-2e: System No. 4: DECRA Shake, Tile or Shingle Plus (over Steel Battens with Seven Screws per Panel) Exposure D for Slope Range 7° ≤ slope < 27° (1.5:12 < pitch ≤ 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 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	OK	NO	NO	NO	NO
15 < h ≤ 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	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
20 < h ≤ 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 ≤ 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 ≤ 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 ≤ 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-2f: System No. 4: DECRA Shake, Tile or Shingle Plus (over Steel Battens with Seven Screws per Panel) Exposure D for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 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 ≤ 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 ≤ 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 ≤ 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 ≤ 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 ≤ 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 C-1: DECRA Shake, Tile or Shingle Plus (over Wood Counter-Battens & Battens w/ Four Screws per Panel)
WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off) or RECOVER

System No.	Deck (See Note 1)	Fire Barrier / Underlay	Battens						Panel Attachment		MDP (psf)
			Counter Battens (Parallel with Slope)			Horizontal Battens			Fasteners	Attachment	
			Type	Fasteners	Attach	Type	Fasteners	Attach			
5.	Min. 15/32" APA rated CDX plywood over wood supports spaced max. 24" o.c.	See Note 2	Nominal 1 x 4 inch wood centered over joists, max. 24" o.c.	No. 16 x 3/4" smooth shank box nails	12" o.c.	Nominal 2 x 2 inch wood spaced 12-5/8" o.c. for Shake or 14 1/2-inch o.c. for Tile or Shingle Plus	No. 9 x 3 1/2" long coated all purpose steel exterior wood screws	One (1) screw at each intersection with joists, max. 24" o.c.	No. 8 x min. 1 1/2" long hex head screws	Four (4) per panel	-78.5

Table C-1a: System No. 5: DECRA Shake, Tile or Shingle Plus (over Wood Counter-Battens & Battens with Four Screws per Panel)
Exposure B for Slope Range 7° < slope ≤ 27° (1.5:12 < pitch ≤ 6.1:12)

Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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	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	OK	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	OK	NO
	3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	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	OK	OK	NO
	3	OK	OK	OK	OK	OK	OK	NO	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	3 Overhang	OK	OK	OK	OK	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	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

Table C-1b: System No. 5: DECRA Shake, Tile or Shingle Plus (over Wood Counter-Battens & Battens with Four Screws per Panel)
Exposure B for Slope Range 27° < slope < 45° (6.1:12 < pitch < 12:12)

Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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	NO
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	NO
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	NO	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	NO	NO

Table C-1c: System No. 5: DECRA Shake, Tile or Shingle Plus (over Wood Counter-Battens & Battens with Four Screws per Panel) Exposure C for Slope Range 7° < slope < 27° (1.5:12 < pitch ≤ 6.1:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 15	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
15 < h ≤ 20	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
20 < 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	OK	NO	NO	NO
	3 Overhang	OK	OK	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	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	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	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
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 C-1d: System No. 5: DECRA Shake, Tile or Shingle Plus (over Wood Counter-Battens & Battens with Four Screws per Panel) Exposure C for Slope Range 27° < slope < 45° (6.1:12 < pitch ≤ 12:12)										
Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 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	NO	NO
15 < h ≤ 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	NO	NO
20 < 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	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	NO
	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 C-1e: System No. 5: DECRA Shake, Tile or Shingle Plus
(over Wood Counter-Battens & Battens with Four Screws per Panel)
Exposure D for Slope Range $7^\circ < \text{slope} < 27^\circ$ (1.5:12 < pitch \leq 6.1:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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	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
$15 < h \leq 20$	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	NO	NO	NO
	3	OK	OK	OK	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
$20 < h \leq 30$	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
$30 < h \leq 40$	1	OK	OK	OK	OK	OK	OK	OK	OK	NO
	2	OK	OK	OK	OK	OK	NO	NO	NO	NO
	3	OK	OK	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
$40 < h \leq 50$	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
$50 < h \leq 60$	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 C-1f: System No. 5: DECRA Shake, Tile or Shingle Plus
(over Wood Counter-Battens & Battens with Four Screws per Panel)
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	Basic Wind Speed (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	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	OK	NO
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	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	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
$40 < h \leq 50$	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
$50 < h \leq 60$	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	NO	NO	NO	NO	NO

TABLE C-2: DECRA Shake, Tile or Shingle Plus (over Wood Counter-Battens & Battens with Seven Screws per Panel)
WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off) or RECOVER

System No.	Deck (See Note 1)	Fire Barrier / Underlay	Battens						Panel Attachment		MDP (psf)
			Counter Battens (Parallel with Slope)			Horizontal Battens			Fasteners	Attachment	
			Type	Fasteners	Attach	Type	Fasteners	Attach			
6.	Min. 15/32" APA rated CDX plywood over wood supports spaced max. 24" o.c.	See Note 2	Nominal 1 x 4 inch wood centered over joists, max. 24" o.c.	No. 16 x 3/4" smooth shank box nails	7" o.c.	Nominal 2 x 2 inch wood spaced 12-5/8" o.c. for Shake or 14 1/2-inch o.c. for Tile or Shingle Plus	No. 9 x 3 1/2" long coated all purpose steel exterior wood screws	Two (2) screws at each intersection with joists, max. 24" o.c.	No. 8 x min. 1 1/2" long hex head screws	Seven (7) per panel	-146.0

Table C-2a System No. 6: DECRA Shake, Tile or Shingle Plus (over Wood Counter-Battens & Battens with Seven Screws per Panel)
Exposure B for Slope Range 7° < slope ≤ 27° (1.5:12 < pitch ≤ 6.1:12)

Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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	OK
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
30 < h ≤ 40	3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	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	OK
40 < h ≤ 50	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2	OK	OK	OK	OK	OK	OK	OK	OK	OK
50 < h ≤ 60	3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	1	OK	OK	OK	OK	OK	OK	OK	OK	OK

Table C-2b: System No. 6: DECRA Shake, Tile or Shingle Plus (over Wood Counter-Battens & Battens with Seven Screws per Panel)
Exposure B for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)

Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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
30 < h ≤ 40	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
	1	OK	OK	OK	OK	OK	OK	OK	OK	OK
40 < h ≤ 50	2 & 3	OK	OK	OK	OK	OK	OK	OK	OK	OK
	2 & 3 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
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	OK

**Table C-2c: System No. 6: DECRA Shake, Tile or Shingle Plus
(over Wood Counter-Battens & Battens with Seven Screws per Panel)
Exposure C for Slope Range $7^\circ < \text{slope} < 27^\circ$ (1.5:12 < pitch \leq 6.1:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (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	OK	OK
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3 Overhang	OK	OK	OK	OK	OK	OK	OK	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	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	OK	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	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	OK	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	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
$40 < h \leq 50$	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	OK	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	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

**Table C-2d: System No. 6: DECRA Shake, Tile or Shingle Plus
(over Wood Counter-Battens & Battens with Seven Screws per Panel)
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	Basic Wind Speed (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	OK
$15 < h \leq 20$	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	OK
$20 < h \leq 30$	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	OK
$30 < h \leq 40$	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	OK	OK
$40 < h \leq 50$	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	OK	OK
$50 < h \leq 60$	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	OK	OK

**Table C-2e: System No. 6: DECRA Shake, Tile or Shingle Plus
(over Wood Counter-Battens & Battens with Seven Screws per Panel)
Exposure D for Slope Range 7° < slope < 27° (1.5:12 < pitch ≤ 6.1:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 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	OK	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	OK
	3 Overhang	OK	OK	OK	OK	OK	OK	OK	NO	NO
15 < h ≤ 20	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	OK	NO	NO
20 < 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	NO	NO
	2 Overhang	OK	OK	OK	OK	OK	OK	OK	OK	NO
	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	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	OK	OK	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	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	OK	OK	NO	NO	NO

**Table C-2f: System No. 6: DECRA Shake, Tile or Shingle Plus
(over Wood Counter-Battens & Battens with Seven Screws per Panel)
Exposure D for Slope Range 27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)**

Mean Roof Height (ft)	Roof Pressure Zone	Basic Wind Speed (mph)								
		110	115	120	130	140	150	160	180	200
0 < h ≤ 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	OK
15 < h ≤ 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	OK
20 < 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	NO
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