Code Compliance Research Report
CCRR-0283

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DIVISION: 07 – THERMAL AND MOISTURE PROTECTION
Section: 07 31 00 – Shingles and Shakes

REPORT HOLDER:
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REPORT SUBJECT: REVIA™ SYNTHETIC ROOFING SHINGLES:

- **REVIA™ PERFORMANCE ARCHITECTURAL SYNTHETIC ROOFING SHINGLES**
- **REVIA™ DESIGNER SLATE ESTATE SERIES SYNTHETIC ROOFING SHINGLES**
- **REVIA™ DESIGNER SLATE AMERICAN BLEND SYNTHETIC ROOFING SHINGLES**
- **REVIA™ HAND SPLIT SHAKE SHINGLES**
- **REVIA™ CLASSIC SLATE SHINGLES**

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

- 2021, 2018 and 2015 *International Building Code®* (IBC)
- 2021, 2018 and 2015 *International Residential Code®* (IRC)
- 2020 *Florida Building Code* and *Florida Building Code - Residential*, *Including High Velocity Hurricane Zone* (see Section 9)

NOTE: This report references the most recent code editions noted. Section numbers in earlier versions may differ.

1.2 *REVIA Synthetic Roofing Shingles* have been evaluated for the following properties:

- Fire Classification
- Weather Resistance
- Wind Resistance
- Durability
- Impact Resistance

1.3 *REVIA Synthetic Roofing Shingles* have been evaluated for the following uses:

- Alternative to standard asphalt roofing shingles or slate roofing, providing a Class A fire-rated roof covering when installed according to the manufacturer's instructions and this report.

2.0 STATEMENT OF COMPLIANCE

REVIA Synthetic Roofing Shingles comply with the Codes listed in Section 1.1, for the properties stated in Section 1.2, and uses stated in Section 1.3, when installed as described in this report, including Conditions of Use stated in Section 6.0.

3.0 DESCRIPTION

REVIA Synthetic Roofing Shingles are non-asphaltic, granular-free, single-piece products molded from a proprietary blend of synthetic polymer materials to simulate an architectural asphalt, or slate shingle. The nominal size of each shingle is 39-3/8 inches long x 14 inches wide. Shingles and slate shingles are manufactured in various colors. See Figures 1, 2, 3, 4, and 5.

4.0 PERFORMANCE CHARACTERISTICS

4.1 Fire Classification: *REVIA Synthetic Roofing Shingles* are classified as a Class A roof covering for combustible decks in accordance with IBC Section 1505.1 and IRC R902.1 when used in conjunction with an underlayment that complies with ASTM D226, Type II. See Section 5.2.1 for underlayment installation.

4.2 Wind Resistance:

4.2.1 When installed in accordance with this report, *REVIA Synthetic Roofing Shingles* are classified as Class H in accordance with ASTM D7158 and Class F in accordance with ASTM D3161 for use with design wind speeds in accordance with IBC 1504.1 (Table 1504.1.1) or R905.2 (Table R905.2.4.1).

4.2.2 *REVIA Synthetic Roofing Shingles* meet the requirements of TAS-107 as defined in the 2020 *Florida Building Code – Residential* R905.2.6.1.

4.3 Other Performance Characteristics:

4.3.1 Wind and Wind-Driven Rain – *REVIA Synthetic Roofing Shingles* meet the requirements of TAS 100 for the HVHZ as defined in the 2020 *Florida Building Code*.

4.3.2 *REVIA Synthetic Roofing Shingles* meet the material testing requirements of TAS-110 for products in the HVHZ as defined in the 2020 *Florida Building Code* – Section 1523.1.

4.3.3 Impact Resistance - *REVIA Synthetic Roofing Shingles* are classified as a Class 4 roof covering in accordance with ANSI / FM 4473 and UL 2218.

5.0 INSTALLATION

5.1 *REVIA Synthetic Roofing Shingles* must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report.

5.2 The shingles must be installed on solid sheathing and a minimum slope of 3:12. Solid sheathing must be a minimum of 15/32 inch thick exterior grade plywood, 7/16 inch thick Oriented Strand Board (OSB), or nominal 1 inch thick lumber. Sheathing must be adequate and fastened to resist the wind loads as specified by IBC Section 1609 or IRC Section R301.2 for components and cladding.

5.3 Underlayment must be installed in accordance with applicable Code requirements. In areas where the average daily temperature in January is 25 °F or less, or where there is a possibility of ice forming along the eaves and causing a backup of water, an ice barrier is required per IBC 1507.2.8.2 or IRC R905.1.2. Acceptable ice barrier consists of at least two layers of underlayment cemented together, or of a self-adhering polymer-modified bitumen sheet. The ice barrier must extend from the eaves edge to a point 24 inches inside the exterior wall line of the building.

5.4 The shingles must be installed starting with a row of *REVIA* Starter Shingles (see Figure 2). The starter shingles must extend 3/8 inch over the eaves and rakes and must be installed with six fasteners installed per the manufacturer's instructions.

5.5 The shingles are installed using a minimum 6-1/2 inch diagonal offset. Shingles are secured to the sheathing using a minimum six fasteners per shingle, installed between dashed "Nail Between Lines" marked on each shingle. Fasteners must be sufficient length to allow 3/4 inch penetration of the sheathing.

5.6 Hips, ridges, and valleys must be flashed as specified in the manufacturer's published installation instructions.

5.7 Flashing and edge materials shall meet the minimum requirements of IBC Section 1503.2 and 1507.2.8 or IRC Section R905.2.8.

5.8 Reroofing requires that existing roof covering and underlayment must be completely removed, and damaged sheathing replaced prior to installing *REVIA Synthetic Roofing Shingles.*

6.0 CONDITIONS OF USE

6.1 *REVIA Synthetic Roofing Shingles* must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation. In the event of a conflict, this report governs.

6.2 Compatibility of the supporting construction materials with all fasteners are subject to approval by the Code Official.

6.3 *REVIA Synthetic Roofing Shingles* are manufactured under a quality control program with inspections by Intertek Testing Services NA, Inc.

7.0 SUPPORTING EVIDENCE

7.1 Manufacturer's drawings and installation instructions.

7.2 Reports of tests of roof coverings demonstrating compliance with ASTM E108, ASTM D3161, ASTM D7158, UL 2218-10, ANSI/FM 4473-11.

7.3 Reports of wind and wind-driven rain resistance tests of roof coverings demonstrating compliance with 2020 *Florida Building Code*, Standards TAS-100, TAS-107, and TAS-110.

7.4 Data in accordance with ICC-ES AC513, Alternative Strip Shingle Steep-slope Roof Coverings, dated October 2021 (editorially revised April 2022).

7.5 Reports of testing in accordance with ICC-ES AC07, dated Feb 2014 (editorially revised April 2018), including fire classification, weathering, and retention of fire-retardant qualities.

7.6 Reports of testing in accordance with ICC-ES AC438, dated June 2017, including fire classification, tear resistance, pliability, fastener pull-through, wind resistance, temperature cycling, and wind-driven rain.

7.7 Intertek Listing Report for "Fwave LLC" at www.bpdirectory.intertek.com (reference Spec ID 44045).

7.8 Documentation of an Intertek approved quality control system for the manufacturing of products recognized in this report.

8.0 IDENTIFICATION

The *REVIA Synthetic Roofing Shingles* are identified with the:

- Name of the report holder (Fwave LLC), address and telephone number, and the product name (*REVIA Synthetic Shingles*)
- Statement "Install on solid sheathing, min slope 3:12"
- Reference these standards on the label:
  - Fire Classification: ASTM E108 Class A
  - Wind Resistance: ASTM D3161, Class F; ASTM D7158, Class H
  - Impact Resistance: ANSI/FM4473 Class 4; UL2218, Class 4
- "See CCRR-0283 at https://bpdirectory.intertek.com"
- Intertek Mark (example shown below), including the Code Compliance Research Report number, CCRR-0283.

CODE COMPLIANCE
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9.0 FLORIDA BUILDING CODE

9.1 Scope of Evaluation: The *REVIA Synthetic Roofing Shingles* were evaluated for compliance with the 2020 *Florida Building Code, including Section 1512, High velocity Hurricane Zones - General.*

9.2 Conclusion: The *REVIA Synthetic Roofing Shingles* described in Sections 2.0 through 7.0 of this Research Report, comply with the 2020 *Florida Building Code*:

- The shingles have been evaluated for compliance with the High-Velocity Hurricane Zone provisions of the 2020 *Florida Building Code*
- Intertek is an approved evaluation entity and quality assurance entity pursuant to Florida Statute 553.842 – *Product Evaluation and Approval*

10.0 CODE COMPLIANCE RESEARCH REPORT USE

10.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

10.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

10.3 Reference to the https://bpdirectory.intertek.com is recommended to ascertain the current version and status of this report.

TABLE 1 – CODE REFERENCES (SECTIONS)

Property	2021 IBC	2021 IRC	2020 FBC	2020 FBC Residential
Alternative Materials	104.11	R104.11	104.11	R101.2
Fire Classification	1505.1	R902.1	1505.1	R902.1
Wind Resistance	1504.1	R905.2.4.1	1507.2.7.1	R905.2.6.1
HVHZ	--	--	1512.2.2, 1518.7	R905.2.6.1

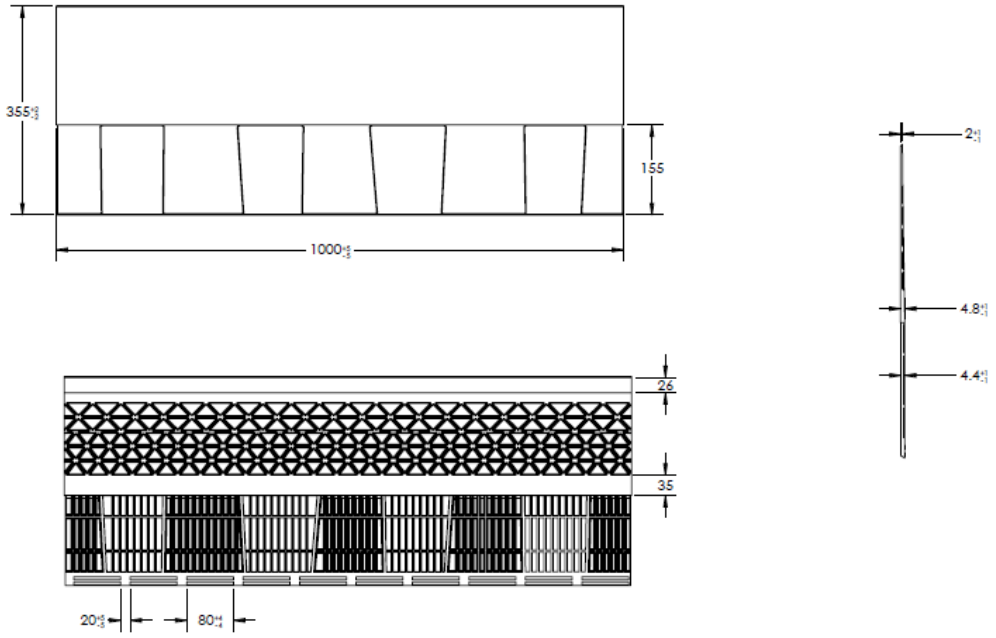


FIGURE 1 – *REVIA PERFORMANCE ARCHITECTURAL ROOFING SHINGLE* - FRONT, PROFILE, BACK, AND DETAILS

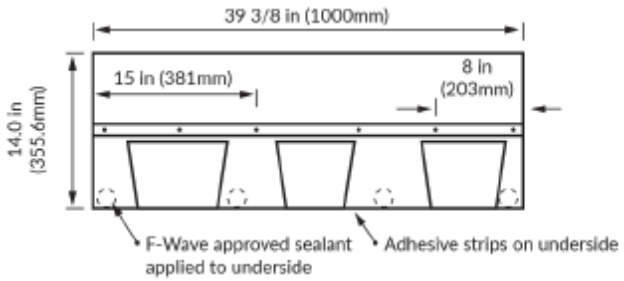


FIGURE 2 - ***REVIA ROOFING SHINGLE STARTER PIECE***

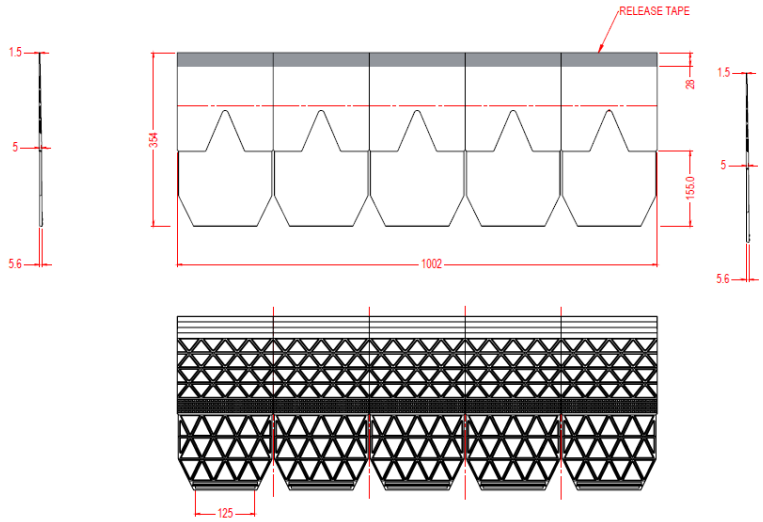


FIGURE 3 - ***REVIA DESIGNER SLATE ESTATE SERIES SHINGLE - PROFILE, FRONT, BACK***

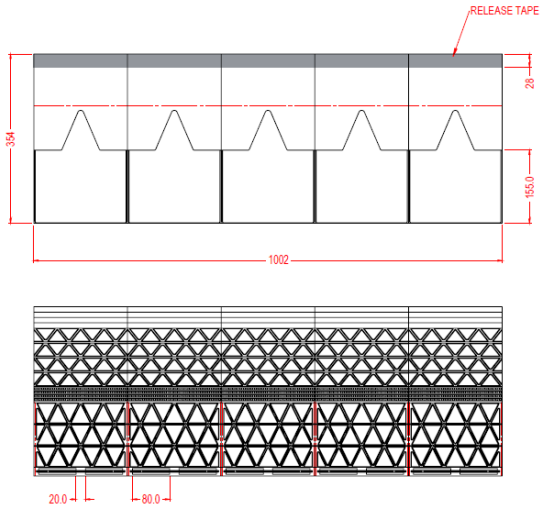
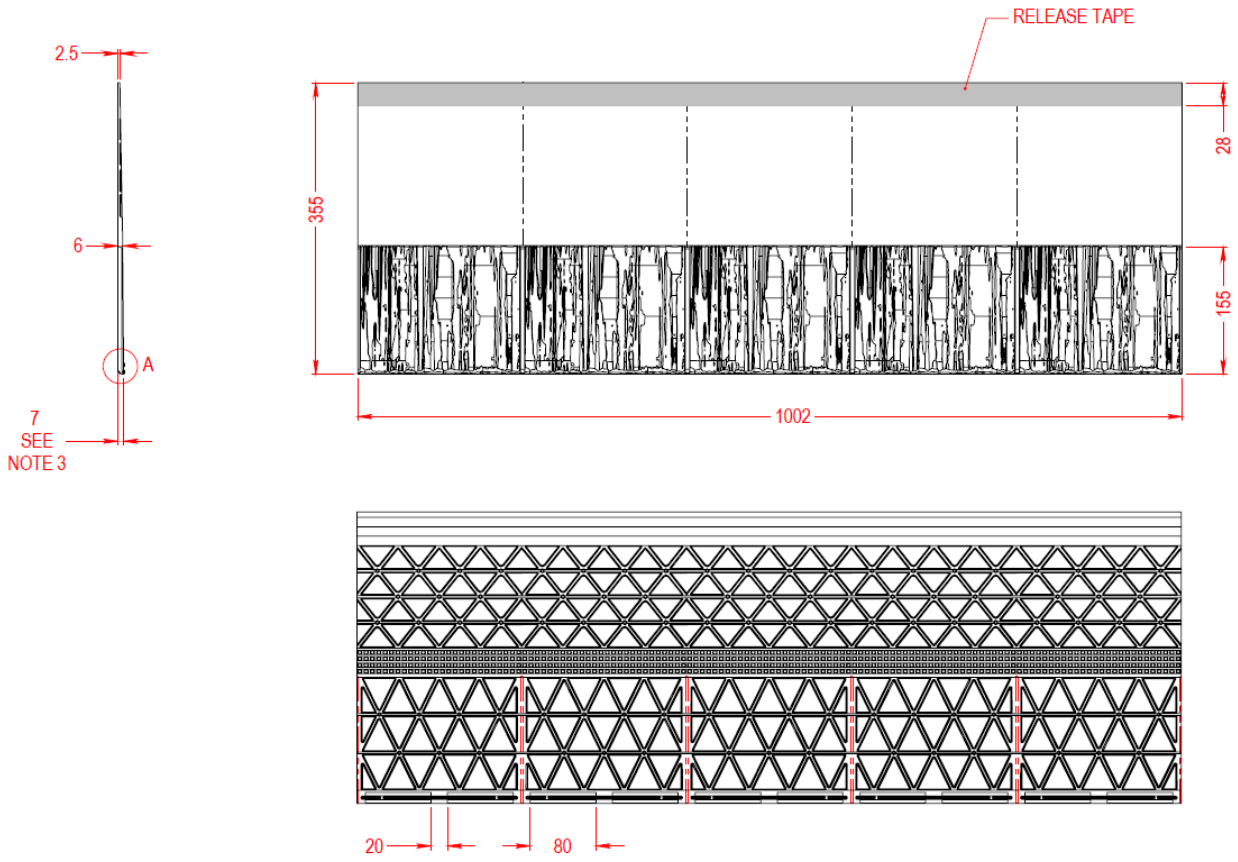
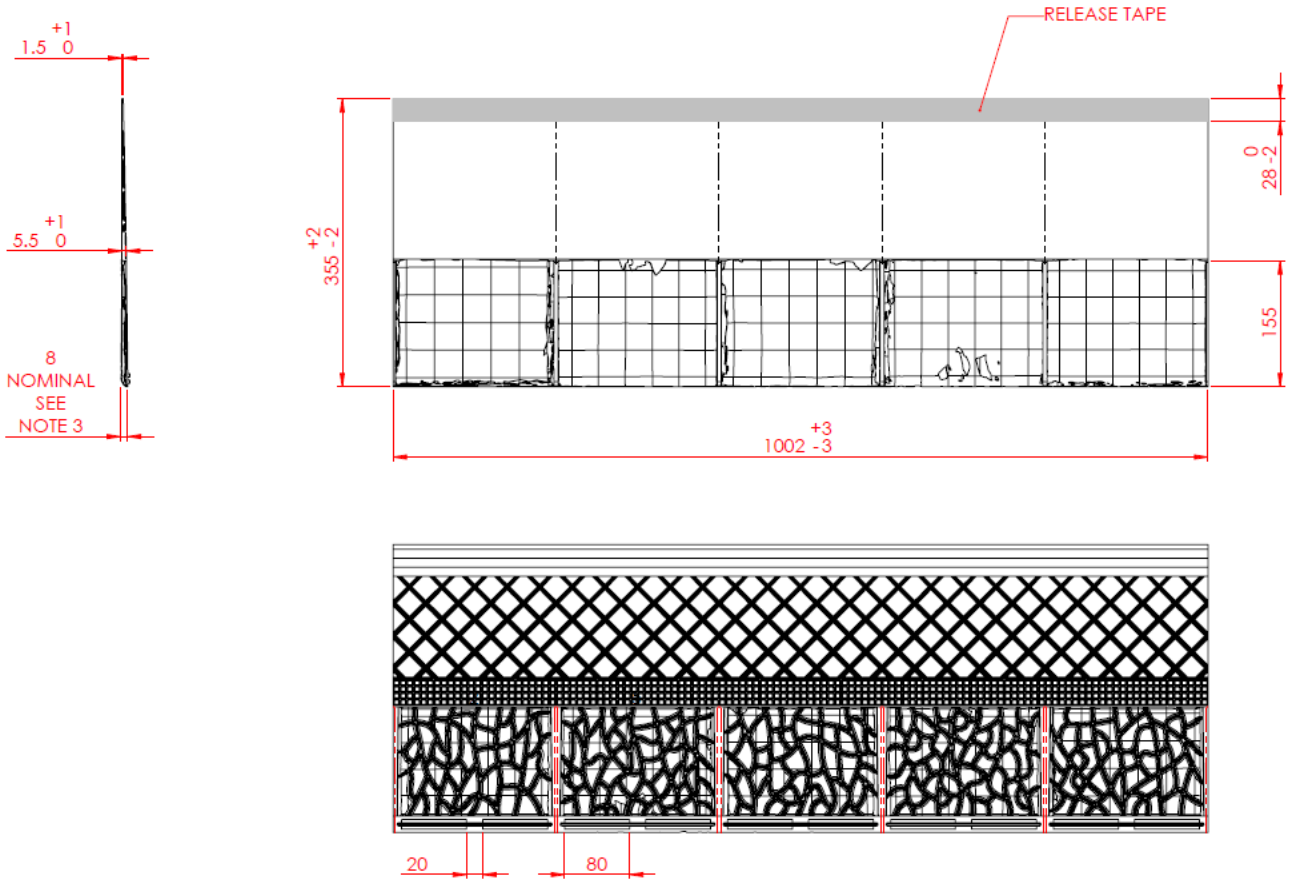


FIGURE 4 - ***REVIA DESIGNER SLATE AMERICAN BLEND SHINGLE - PROFILE, FRONT, BACK***



NOTE:
1. PRODUCT SHOWN IS IN ITS UNTRIMMED FORM
2. GLUE DIMENSIONS ARE TO BE MEASURED AFTER APPLICATION, WHILST GLUE IS HOT
3. PRODUCT THICKNESS CAN VARY DUE TO SHAKE PATTERN

FIGURE 5 – *REVIA HAND SPLIT SHAKE SHINGLES* - FRONT, PROFILE, BACK, AND DETAILS



NOTE:
1. PRODUCT SHOWN IS IN ITS UNTRIMMED FORM
2. GLUE DIMENSIONS ARE TO BE MEASURED AFTER APPLICATION, WHILST GLUE IS HOT
3. PRODUCT THICKNESS CAN VARY DUE TO CLASSIC SLATE PATTERN

FIGURE 6 – *REVIA CLASSIC SLATE SHINGLES* - FRONT, PROFILE, BACK, AND DETAILS

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