DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
SECTION: 07 31 13— ASPHALT SHINGLES

REPORT HOLDER:
CERTAINTED CORPORATION

EVALUATION SUBJECT:
CERTAINTED ASPHALT SHINGLES

“2014 Recipient of Prestigious Western States Seismic Policy Council (WSSPC) Award in Excellence”
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1.0 EVALUATION SCOPE
Compliance with the following codes:
- 2013 Abu Dhabi International Building Code (ADIBC)†

†The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

Properties evaluated:
- Weather resistance
- Fire classification
- Wind resistance

2.0 USES
The CertainTeed asphalt shingles described in this report are alternatives to asphalt shingles complying with IBC Section 1507.2 and IRC Section R905.2, and are Class A roof coverings when installed as described in this report.

3.0 DESCRIPTION
3.1 General:
CertainTeed asphalt shingles are available as three-tab, four-tab, no cut-out and laminated asphalt shingle roof covering materials, and have been qualified for wind resistance as noted in Section 4.3. See Table 1 and Figure 1 for recognized product names, shingle types, manufacturing locations, overall dimensions, installed weights, maximum exposure to the weather, and fastening details. The shingles are self-sealing by means of adhesive strips located on either the weather side or the underside. See Figure 1 for adhesive strip location for field shingles and Starter Strip shingles.

3.2 Three-tab Shingles, Four-tab Shingles and No Cut-out Shingles:

Three-tab, four-tab and no cut-out shingles are composed of a single layer of fiberglass mat, impregnated and coated with asphalt on both sides, and surfaced with mineral roofing granules on the weather side and a mineral release agent on the back side.

3.3 Laminated Shingles:
Laminated shingles, including two-layer laminated, three-layer laminated and tri-laminated laminated shingles, are composed of multiple thicknesses of coated and surfaced fiberglass mat, cut and bonded together in different patterns. The weather side is surfaced with mineral roofing granules, and the back side is surfaced with a mineral release agent.

3.4 Accessory Shingles:

3.4.1 Hip and Ridge Shingles: Hip and ridge shingles are factory-made shingles to be used for covering hips and ridges. The hip and ridge shingles are composed of the same materials as the roof shingles. Some of the hip and ridge shingles have perforations that extend from the top of the cut-out to the top of the shingle, which facilitate the tearing of the shingle into three or four equal pieces. Others are manufactured as single hip and ridge units.

3.4.2 Starter Strip Shingles: Starter Strip shingles are factory-made shingles to be used as the starter course (under the first course of roof shingles). The Starter Strip shingles are composed of the same materials as the roof shingles. The shingles are supplied in 7-inch-by-36-inch-long (178 by 914 mm); 10-inch-by-36-inch-long (254 by 914 mm); or 7-inch-by-39 1/8-inch-long (178 by 1000 mm) strips. As an alternative to factory-made starter strips, starter strips can be formed by removing the lower tab portions of the factory-made shingles, except in the case of the Presidential Shake and Presidential Shake TL shingles. For Presidential Shake and Presidential Shake TL shingles, the Presidential Starter shingles consist of one 13 1/4-inch-wide-by-40-inch-long (337 mm by 1016 mm) base shingle and one 11 1/4-inch-wide-by-40-inch-long (286 mm by 1016 mm) base shingle.

3.5 Fasteners:

Fasteners must comply with ASTM F1667 and must be minimum No. 12 gage [0.105-inch-diameter (2.67 mm)] shank, 1/8-inch-diameter-head (9.5 mm), galvanized steel, stainless steel, aluminum or copper roofing nails. Fasteners must be of sufficient length to penetrate into the...
sheathing \( \frac{3}{4} \) inch (19.1 mm), or through the sheathing, whichever is less.

### 3.6 Underlayment:

Under the 2018, 2015, 2012 and 2009 IBC, the roof underlayment must be in accordance with Section 1507.2.3. Under the 2018 and 2015 IRC, the roof underlayment must be in accordance with Section R905.1.1 and Table R905.1.1(1). Under the 2012 and 2009 IRC, the roof underlayment must be in accordance with Section R905.2.3. The roof underlayment must comply with ASTM D226 Type I or Type II, ASTM D4869 Type I or Type II, ASTM D6757 or ASTM D1970. As an alternative, a roof underlayment recognized in a current ICC-ES evaluation report as complying with AC160 or AC188 may be used, provided it is recognized as being intended for use with Class A asphalt shingles. In areas where there has been a history of ice forming along the eaves causing a backup of water, ice dam protection in accordance with 2018 IBC Section 1507.2.8.1 [2015, 2012 and 2009 IBC Section 1507.2.8.2] or 2018 and 2015 IRC Section R905.2.7 [2012 and 2009 IRC Section R905.2.7.1] must be provided.

### 3.7 Asphalt Cement:

Asphalt roofing cement must comply with ASTM D4586, Type I, Class I, or Type II, Class I.

### 4.0 INSTALLATION

#### 4.1 New construction:

- **4.1.1 General:** When installed on new construction in accordance with this section, the shingles are a Class A roof covering. The shingles must be installed in accordance with IBC Section 1507.2 or IRC Section R905.2, except as noted in this report. The roof deck must be code-complying, minimum \( \frac{3}{16} \)-inch-thick (9.5 mm), exterior-grade plywood; \( \frac{1}{4} \)-inch-thick (11.1 mm) oriented strand board (OSB); or nominally 1-inch-by-6-inch (25 by 152 mm) lumber installed as solid sheathing conforming to 2018 and 2015 IBC Section 2304.8.2 and 2308.7.10 [2012 and 2009 IBC Section 2304.7.2 or 2308.10.8]. Minimum roof slope must be 2:12 (16.7%). The maximum roof slope must be as stated in Section 4.1.2 of this report. Installation instructions are included as part of the identification label attached to each bundle of shingles. (See Section 7.0.) The roof underlayment must be as described in Section 3.6 of this report, and applied in accordance with 2018 IBC Table 1507.1.1(2) [2015, 2012 and 2009 IBC Section 1507.2.8], or 2018 and 2015 IRC Section R905.1.1, Tables R905.1.1(2) and R905.1.1(3) and Section R905.2.3, or 2012 and 2009 IRC Section R905.2.7, as applicable.

#### 4.1.2 Application:

- **4.1.2.1 Eave and Rake Edges of the Roof:**
  - **4.1.2.1.1 Roof Slopes of 2:12 to 21:12 (16.7% to 175%):** Starter Strip shingles must be attached to the eave edges with four or five fasteners, equally spaced along the nail line as shown in Figure 1. The Starter Strip shingles must overhang the eave and rake edges by \( \frac{1}{2} \) to \( \frac{3}{4} \) inch (12.7 to 19.1 mm).
  - **4.1.2.1.2 Roof Slopes Greater than 21:12 (175%):** Starter Strip shingles must be attached to the eave edges with four or five fasteners, equally spaced along the nail line as shown in Figure 1. The Starter Strip shingles must overhang the eave and rake edges by \( \frac{1}{2} \) to \( \frac{3}{4} \) inch (12.7 to 19.1 mm).

#### 4.1.2.2 Field of the Roof:

- **4.1.2.2.1** The first course of field shingles must be installed over the starter course. Each course of shingles must be offset from the preceding course as specified in Table 1. Fastening details, including number and location of fasteners, and maximum exposure to the weather, are described in Table 1 and Figure 1.

- Methods of fastening for roof slopes of 2:12 (16.7%) to 21:12 (175%) and for roof slopes greater than 21:12 (175%) are as shown in Figure 1 for the standard and high-wind applications. For slopes greater than 21:12 (175%), the shingles must also be hand-sealed as described in Section 4.1.2.4.

#### 4.1.2.3 High Wind Fastening:

- **4.1.2.3.1 2018, 2015 and 2012 IBC:** When the roof is installed in applications where the ultimate design wind speed, \( V_{\text{ult}} \), is 140 mph (224 km/hr) or greater.

- **4.1.2.3.2 2009 IBC:** When the roof is installed in applications where the basic wind speed is 110 mph (177 km/h) or greater.

- **4.1.2.3.3 2018 and 2015 IRC:** When the roof is installed in applications where the ultimate design wind speed, \( V_{\text{ult}} \), is 140 mph (224 km/hr) or greater.

- **4.1.2.3.4 2012 and 2009 IRC:** When the roof is installed in areas where the basic wind speed is 110 mph (177 km/h) or greater.

#### 4.1.2.4 Shingle Sealing:

- **4.1.2.4.1** In colder climates or wind regions where it is questionable whether the factory-applied adhesive will activate and seal the shingles, the shingles must be hand-sealed to the satisfaction of the code official. Hand-sealing must consist of applying a minimum of four 1-inch-diameter (25.4 mm) spots of asphalt roofing cement to the unexposed surface of the underlying course of shingles, equally spaced across each shingle. For three-tab and four-tab shingles, one spot of asphalt roofing cement must be placed under each corner of each tab (two spots per tab); the tab must then be pressed into the cement. For no cut-out shingles and laminated shingles, four equally spaced spots of asphalt roofing cement must be placed under the exposed portion of the shingle; the shingle must then be pressed into the cement.

#### 4.1.2.5 Hip and Ridge Shingles:

- **4.1.2.5.1** Hip and ridge shingles must be placed evenly over hips and ridges (or over shingle-over ridge vents), and fastened to the roof deck with two fasteners, located on either side of the shingle, along the nail line as shown in Figure 1.

#### 4.1.3 Valley Construction and other Flashing:

- **4.1.3.1** For open valleys, corrosion-resistant metal valley flashing must be centered and placed vertically in the valley over the smooth-surfaced roof roofing, or specialty underlayment.

- Corrosion-resistant metal valley flashing must be as follows:
  - **2018, 2015, 2012 and 2009 IBC:** A minimum of 24 inches (610 mm) wide, complying with 2018 IBC Table 1507.2.8.2 [2015, 2012 and 2009 IBC Table 1507.2.9.2].
  - **IRC:** A minimum of 24 inches (610 mm) wide, complying with IRC Table R905.2.8.2.
Other flashing must be in accordance with IBC Sections 1503.2 and 2018 IBC Section 1507.2.8 [2015, 2012 and 2009 IBC Section 1507.2.9] or IRC Sections R903.2 and R905.2.8, as applicable.

4.2 Installation-Reroofing:
When installed over existing Class A or Class C asphalt shingle roofs in accordance with this section (Section 4.2), the shingle products are recognized as Class A roof coverings. The existing asphalt shingle roof covering must be inspected in accordance with provisions and limitations of 2018 and 2015 IBC 1511 [2012 and 2009 IBC Section 1510] or 2018 and 2015 IRC Section R908 [2012 and 2009 IRC Section R907], as applicable. Prior to the reroofing, hip and ridge covering must be removed, and a single layer of ASTM D226, Type II, nonperforated, felt underlayment must be installed over the existing asphalt shingles. Except as noted in this section, the shingles must be installed in accordance with Section 4.1 of this report. Fasteners must be of sufficient length to penetrate 3/4 inch (19.1 mm) into the sheathing, or through the sheathing, whichever is less. Valley flashing and other flashings must comply with Section 4.1.3 of this report and the following, as applicable:

- IBC: 2018 and 2015 IBC Sections 1511.5 and 1511.6 [2012 and 2009 IBC Sections 1510.5 and 1510.6].
- IRC: 2018 and 2015 IRC Sections R908.5 and R908.6 [2012 and 2009 IRC Sections R907.5 and R907.6].

The following asphalt shingles may be installed over existing wood shingle roofs provided all of the conditions specified above are met:


4.3 Wind Resistance:
CertainTeed asphalt shingles have been tested in accordance with ASTM D7158 and are classified as Class H. They qualify for use in locations as shown in 2018 and 2015 IBC Table 1504.1.1 [2012 and 2009 IBC Table 1507.2.7.1 (1)] and 2018 and 2015 IRC Table R905.2.4.1 [2012 and 2009 IRC Table R905.2.4.1 (1)]. Installation must be in accordance with 2018 IBC Section 1507.2.6 [2015, 2012 and 2009 IBC Section 1507.2.7] or IRC Section R905.2.6, as applicable.

5.0 CONDITIONS OF USE

The CertainTeed Asphalt Shingle Roof Covering Systems described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 The shingles must be manufactured, identified, and installed in accordance with the applicable codes, this report, and the manufacturer’s published installation instructions. If there is a conflict between the manufacturer’s published installation instructions and this report, this report governs.

5.2 The products are manufactured in Avery, Ohio (AV); Ennis, Texas (EN); Fremont, California (FR); Jonesburg, Missouri (JB); Norwood, Massachusetts (NW); Oxford, North Carolina (OX); Peachtree City, Georgia (PT); Portland, Oregon (PO); Shakopee, Minnesota (SH); Shreveport, Louisiana (SP); and Wilmington, California (WI), under a quality-control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Alternative Asphalt Roofing Shingles (AC438), dated June 2017 (editorially revised August 2018).

7.0 IDENTIFICATION

7.1 Each bundle of shingles bears a label with the name and address of the CertainTeed Corporation manufacturing plant; the product brand name; the Class A roof classification; the installation instructions; the evaluation report number (ESR-3537); and a reference indicating compliance with ASTM D7158. Additionally, each bundle of shingles is marked with the area of the roof surface covered and the style, type and color of the product.

7.2 The report holder’s contact information is the following:

CERTAINTEED CORPORATION
20 MOORES ROAD
MALVERN, PENNSYLVANIA 19355
(610) 893-6096
www.certainteed.com
### TABLE 1—PRODUCT DESCRIPTIONS AND MANUFACTURING LOCATIONS

<table>
<thead>
<tr>
<th>PRODUCTS</th>
<th>SHINGLE TYPE</th>
<th>PLANT LOCATION</th>
<th>PLANT DESIGNATION</th>
<th>DIMENSIONS (width x height)</th>
<th>MAXIMUM EXPOSURE TO THE WEATHER (inches)</th>
<th>LOCATION OF NAIL &quot;LINE&quot; (distance above shingle butt) (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grand Manor</td>
<td>3-Layer Laminated</td>
<td>Oxford, NC</td>
<td>OX</td>
<td>36 x 18</td>
<td>8</td>
<td>8 3/8</td>
</tr>
<tr>
<td>Carriage House</td>
<td>2-Layer Laminated</td>
<td>Oxford, NC</td>
<td>OX</td>
<td>36 x 18</td>
<td>8</td>
<td>8 3/8</td>
</tr>
<tr>
<td>Presidential Shake TL</td>
<td>Tri-Laminate</td>
<td>Fremont, CA; Shakopee, MN</td>
<td>FR SH</td>
<td>40 x 14 1/4</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Presidential Shake</td>
<td>Laminated</td>
<td>Fremont, CA; Shakopee, MN</td>
<td>FR SH</td>
<td>40 x 14 1/4</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Presidential IR</td>
<td>Laminated Impact Resistant</td>
<td>Shakopee, MN</td>
<td>SH</td>
<td>40 x 14 1/4</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Presidential Solaris</td>
<td>Laminated</td>
<td>Fremont, CA</td>
<td>FR</td>
<td>40 x 14 1/4</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Presidential TL Solaris</td>
<td>Tri-Laminate</td>
<td>Fremont, CA</td>
<td>FR</td>
<td>40 x 14 1/4</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Landmark TL</td>
<td>Tri-Laminate</td>
<td>Fremont, CA; Oxford, NC</td>
<td>FR OX</td>
<td>40 x 13 1/4</td>
<td>5 5/8</td>
<td>6 1/8</td>
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<tr>
<td>Landmark Premium</td>
<td>Laminated (Metric)</td>
<td>Avery, OH; Norwood, MA; Oxford, NC; Peachtree City, GA; Portland, OR; Shakopee, MN; Shreveport, LA; Wilmington, CA</td>
<td>AV NW OX PT PO SH SP WI</td>
<td>38 7/8 x 13 1/4</td>
<td>5 5/8</td>
<td>6 1/8</td>
</tr>
<tr>
<td>Landmark Solaris</td>
<td>Laminated (Metric)</td>
<td>Peachtree, GA; Portland, OR; Wilmington, CA</td>
<td>PT PO WI</td>
<td>38 7/8 x 13 1/4</td>
<td>5 5/8</td>
<td>6 1/8</td>
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<tr>
<td>Landmark Solaris IR</td>
<td>Laminated (Metric) Impact Resistant</td>
<td>Peachtree, GA</td>
<td>PT</td>
<td>38 7/8 x 13 1/4</td>
<td>5 5/8</td>
<td>6 1/8</td>
</tr>
<tr>
<td>Landmark Pro</td>
<td>Laminated (Metric)</td>
<td>Avery, OH; Ennis, TX; Jonesburg, MO; Norwood, MA; Oxford, NC; Peachtree City, GA; Portland, OR; Shakopee, MN; Shreveport, LA; Wilmington, CA</td>
<td>AV EN JB NW OX PT PO SH SP WI</td>
<td>38 7/8 x 13 1/4</td>
<td>5 5/8</td>
<td>6 1/8</td>
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<td>Landmark Pro Solaris</td>
<td>Laminated (Metric)</td>
<td>Wilmington, CA</td>
<td>WI</td>
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<td>6 1/8</td>
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<td>Landmark IR</td>
<td>Laminated (Metric) Impact Resistant</td>
<td>Shreveport, LA</td>
<td>SP</td>
<td>38 7/8 x 13 1/4</td>
<td>5 5/8</td>
<td>6 1/8</td>
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<tr>
<td>Landmark</td>
<td>Laminated (Metric)</td>
<td>Avery, OH; Ennis, TX; Jonesburg, MO; Norwood, MA; Oxford, NC; Peachtree City, GA; Portland, OR; Shakopee, MN; Shreveport, LA; Wilmington, CA</td>
<td>AV EN JB NW OX PT PO SH SP WI</td>
<td>38 7/8 x 13 1/4</td>
<td>5 5/8</td>
<td>6 1/8</td>
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<tr>
<td>XT-30</td>
<td>3-Tab (Metric)</td>
<td>Portland, OR</td>
<td>PO</td>
<td>39 5/8 x 13 1/4</td>
<td>5 5/8</td>
<td>6 1/8</td>
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<tr>
<td>XT-30</td>
<td>3-Tab (Standard)</td>
<td>Avery, OH; Oxford, NC; Shakopee, MN</td>
<td>AV OX SH</td>
<td>36 x 12</td>
<td>5</td>
<td>5 5/8</td>
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<tr>
<td>XT-30 IR</td>
<td>3-Tab (Standard) Impact Resistant</td>
<td>Shreveport, LA</td>
<td>SP</td>
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<td>5 5/8</td>
</tr>
<tr>
<td>XT-25</td>
<td>3-Tab (Metric)</td>
<td>Portland, OR; Avery, OH</td>
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<td>6 1/8</td>
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<tr>
<td>XT-25</td>
<td>3-Tab (Standard)</td>
<td>Avery, OH; Norwood, MA; Oxford, MN; Shakopee, MN; Shreveport, LA</td>
<td>AV NW OX SH SP</td>
<td>36 x 12</td>
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<td>5 5/8</td>
</tr>
<tr>
<td>CT-20</td>
<td>3-Tab (Metric)</td>
<td>Portland, OR</td>
<td>OR</td>
<td>39 5/8 x 13 1/4</td>
<td>5 5/8</td>
<td>6 1/8</td>
</tr>
</tbody>
</table>

For SI: 1 inch = 25.4 mm.
TABLE 1—PRODUCT DESCRIPTIONS AND MANUFACTURING LOCATIONS (Continued)

<table>
<thead>
<tr>
<th>PRODUCTS1</th>
<th>SHINGLE TYPE</th>
<th>PLANT LOCATION</th>
<th>PLANT DESIGNATION</th>
<th>DIMENSIONS (width x height) (inches)</th>
<th>MAXIMUM EXPOSURE TO THE WEATHER (inches)</th>
<th>LOCATION OF NAIL &quot;LINE&quot;2 (distance above shingle butt) (inches)</th>
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<tbody>
<tr>
<td>CT-20</td>
<td>3-Tab (Standard)</td>
<td>Oxford, NC</td>
<td>OX</td>
<td>36 x 12</td>
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<td>5 5/8</td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td>Laminated (Metric)</td>
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<td>PO</td>
<td>38 3/4 x 13 1/4</td>
<td>5 5/8</td>
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<td>Independence</td>
<td>3-Tab Laminated (Standard)</td>
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<td>5 5/8</td>
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<td>Hatteras</td>
<td>4-Tab</td>
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<td>OX</td>
<td>36 x 18</td>
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<td>9 7/8</td>
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<td>Highland Slate</td>
<td>4-Tab</td>
<td>Oxford, NC</td>
<td>OX</td>
<td>36 x 18</td>
<td>8</td>
<td>9 7/8</td>
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<td>Highland Slate IR</td>
<td>4-Tab Impact Resistant</td>
<td>Oxford, NC</td>
<td>OX</td>
<td>36 x 18</td>
<td>8</td>
<td>9 7/8</td>
</tr>
<tr>
<td>NorthGate</td>
<td>Laminated (Metric), Impact resistant</td>
<td>Portland, OR</td>
<td>PO</td>
<td>38 3/4 x 13 1/4</td>
<td>5 5/8</td>
<td>6 1/8</td>
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<tr>
<td>Patriot</td>
<td>No Cutout</td>
<td>Portland, OR Avery, OH Norwood, MA</td>
<td>PO</td>
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<td>6 1/8</td>
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<td>Arcadia Shake</td>
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<td>Fremont, CA</td>
<td>FR</td>
<td>37 3/4 x 19 3/4</td>
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<td>9 8/3</td>
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<td>4-Tab Laminated</td>
<td>Oxford, NC</td>
<td>OX</td>
<td>36 x 18</td>
<td>8</td>
<td>8%</td>
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<tr>
<td>Belmont IR</td>
<td>4-Tab Laminated Impact Resistant</td>
<td>Oxford, NC</td>
<td>OX</td>
<td>36 x 18</td>
<td>8</td>
<td>8%</td>
</tr>
</tbody>
</table>

For SI: 1 inch = 25.4 mm.

NOTES:
1. Includes algae-resistant (AR) versions.
2. Nail "Line" - Distance from lowermost lowest edge of shingle to target nail location.
3. Shingle butt location varies up to 1 inch. Dimensions shown for shingle height and nail "line" location are averages.

TABLE 1—PRODUCT DESCRIPTIONS AND MANUFACTURING LOCATIONS (Continued)

<table>
<thead>
<tr>
<th>PRODUCTS</th>
<th>SHINGLE TYPE</th>
<th>PLANT LOCATION</th>
<th>PLANT DESIGNATION</th>
<th>DIMENSIONS (width x height) (inches)</th>
<th>MAXIMUM EXPOSURE TO THE WEATHER (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shangle Ridge</td>
<td>Hip and Ridge</td>
<td>Oxford, NC</td>
<td>OX</td>
<td>12 x 18</td>
<td>8</td>
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<td>Cedar Crest</td>
<td>Hip and Ridge</td>
<td>Oxford, NC</td>
<td>OX</td>
<td>12 x 18</td>
<td>8</td>
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<tr>
<td>Cedar Crest IR</td>
<td>Hip and Ridge Impact Resistant</td>
<td>Oxford, NC</td>
<td>OX</td>
<td>12 x 18</td>
<td>8</td>
</tr>
<tr>
<td>Mountain Ridge</td>
<td>Hip and Ridge</td>
<td>Fremont, CA</td>
<td>FR</td>
<td>8 x 12 &amp; 10 x 12</td>
<td>8</td>
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<tr>
<td>NorthGate Ridge</td>
<td>Hip and Ridge, Impact Resistant</td>
<td>Portland, OR</td>
<td>PO</td>
<td>9 3/4 x 13 1/4</td>
<td>5 5/8</td>
</tr>
<tr>
<td>Shadow Ridge</td>
<td>Hip and Ridge (Standard)</td>
<td>Avery, OH Norwood, MA Oxford, NC Shakopee, MN</td>
<td>AV</td>
<td>12 x 12</td>
<td>5</td>
</tr>
<tr>
<td>Solaris Hip and Ridge Accessory</td>
<td>Hip and Ridge</td>
<td>Portland, OR</td>
<td>PO</td>
<td>9 3/4 x 13 1/4</td>
<td>5 5/8</td>
</tr>
<tr>
<td>Solaris Accessory</td>
<td>Hip and Ridge</td>
<td>Portland, OR</td>
<td>PO</td>
<td>13 3/4 x 13 1/4</td>
<td>5 5/8</td>
</tr>
<tr>
<td>Solaris Accessory IR</td>
<td>Hip and Ridge, Impact Resistant</td>
<td>Portland, OR</td>
<td>PO</td>
<td>13 3/4 x 13 1/4</td>
<td>5 5/8</td>
</tr>
<tr>
<td>Presidential Starter</td>
<td>Starter Shingle</td>
<td>Portland, OR Fremont, CA</td>
<td>OR</td>
<td>40 x 13 1/4, bottom layer; 40 x 11 1/4, top layer</td>
<td>4 (top layer)</td>
</tr>
<tr>
<td>Presidential Starter IR</td>
<td>Starter Shingle</td>
<td>Portland, OR Fremont, CA</td>
<td>OR</td>
<td>40 x 13 1/4, bottom layer; 38 x 11 1/4, top layer</td>
<td>4 (top layer)</td>
</tr>
<tr>
<td>High Performance Starter</td>
<td>Starter Shingle</td>
<td>Oxford, NC</td>
<td>OX</td>
<td>36 x 10</td>
<td>n/a</td>
</tr>
<tr>
<td>Swiftstart</td>
<td>Starter Shingle</td>
<td>Shakopee, MN</td>
<td>SH</td>
<td>38 3/4 x 7 3/8</td>
<td>n/a</td>
</tr>
<tr>
<td>Universal Starter</td>
<td>Starter Shingle</td>
<td>Avery, OH Oxford, NC Shakopee, MN Shreveport, LA</td>
<td>AV</td>
<td>36 x 7</td>
<td>n/a</td>
</tr>
</tbody>
</table>

ACCESORIES
For SI: 1 inch = 25.4 mm.

**FIGURE 1—SHINGLE PROFILES AND FASTENER PATTERNS**
**PRESIDENTIAL/PRESIDENTIAL TL SHINGLES**

- Standard & high wind nailing pattern - five nails per shingle.
- Roofing Cement under shingle.

**METRIC LAMINATES - SEALANT BACK/TAPE BACK**

- Nailing area for "low and standard" slopes (from 2:12 to 21:12).
  - Nail between upper & lower nail lines (as shown above).
  - Standard & high wind nailing pattern - four nails per shingle.
  - Sealant on back.

**METRIC LAMINATES - SEALANT BACK/TAPE FRONT**

- Nailing area for "low and standard" slopes (from 2:12 to 21:12).
  - Nail between upper & lower nail lines (as shown above).
  - Standard & high wind nailing pattern - four nails per shingle.
  - Sealant on back.

**LANDMARK TL SHINGLES**

- Standard & high wind nailing pattern - four nails per shingle.
- Roofing Cement under shingle.

**FIGURE 1—SHINGLE PROFILES AND FASTENER PATTERNS (Continued)**
FIGURE 1—SHINGLE PROFILES AND FASTENER PATTERNS (Continued)

**CARRIAGE HOUSE SHINGLES**
- Standard & high wind nailing pattern - five nails per shingle.
- For roof slopes greater than 21:12 (175%).

**GRAND MANOR SHINGLES**
- Standard & high wind nailing pattern - five nails per shingle.
- Roofing Cement under shingle.
- For roof slopes greater than 21:12 (175%).

**HIGHLAND SLATE SHINGLES**
- Roofing Cement under shingle.

**HATTERAS SHINGLES**
- Standard & high wind nailing pattern - five nails per shingle.
- Roofing Cement under shingle.
- For roof slopes greater than 21:12 (175%).
FIGURE 1—SHINGLE PROFILES AND FASTENER PATTERNS (Continued)
FIGURE 1—SHINGLE PROFILES AND FASTENER PATTERNS (Continued)
FIGURE 1—SHINGLE PROFILES AND FASTENER PATTERNS (Continued)

Standard nailing pattern for all slopes from 2/12 (16.7%) up to and exceeding 21/12 (175%) & for high wind application.