

**ICC-ES Evaluation Report****ESR-1501\***

Reissued June 1, 2011

*This report is subject to renewal June 1, 2013.*[www.icc-es.org](http://www.icc-es.org) | (800) 423-6587 | (562) 699-0543

A Subsidiary of the International Code Council®

**DIVISION: 07 00 00—THERMAL AND MOISTURE  
PROTECTION****Section: 07 31 13—Asphalt Shingles****REPORT HOLDER:****TAMKO BUILDING PRODUCTS, INC.**  
220 WEST FOURTH STREET  
JOPLIN, MISSOURI 64802  
(417) 624-6644  
[www.tamko.com](http://www.tamko.com)**EVALUATION SUBJECT:****TAMKO ASPHALT SHINGLES:  
ELITE GLASS-SEAL,  
HERITAGE 30 / HERITAGE,  
HERITAGE 50 / HERITAGE PREMIUM,  
HERITAGE® XL / HERITAGE WOODGATE AND  
HERITAGE® VINTAGE™****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2009 and 2006 *International Building Code*® (IBC)
- 2009 and 2006 *International Residential Code*® (IRC)
- 1997 *Uniform Building Code*™ (UBC)

**Properties evaluated:**

- Roof covering classification
- Wind resistance
- Weather resistance

**2.0 USES**

TAMKO asphalt shingles are used as roof coverings for new and existing roofs.

**3.0 DESCRIPTION****3.1 General:**

TAMKO asphalt shingles are roof covering materials complying with ASTM D3462 and are Class A roof coverings when installed as described in this report. The products are available as three-tab shingles (Elite Glass-Seal), and as laminated shingles (Heritage series) in standard and metric sizes. See Table 1 for product dimensions and Table 2 for manufacturing locations.

**3.2 Elite Glass-Seal Shingles:**

Elite Glass-Seal shingles are three-tab shingles manufactured with a single fiberglass mat coated on both

sides with asphalt and surfaced on the weather-exposed side with mineral granules.

**3.3 Heritage Shingles:**

Heritage 30 / Heritage, Heritage XL / Heritage Woodgate, Heritage 50 / Heritage Premium and Heritage Vintage shingles are laminated shingles manufactured with a double layer of fiberglass mat coated with asphalt on all sides and surfaced on the weather-exposed side with mineral granules.

**3.4 Shingle Starter:**

The starter course shingle consists of either TAMKO 10-inch starter, TAMKO Shingle Starter, or a self-sealing three-tab shingle. If self-sealing three-tab shingles are used, remove the exposed tab portion and install with factory-applied sealant adjacent to the eaves.

Heritage® Vintage™ requires a Heritage® Vintage™ starter to be installed over the first starter course at the eave edge.

**3.5 Hip and Ridge Shingles:**

Prefabricated hip and ridge shingles are available as 12 by 12 Hip & Ridge or 12<sup>1</sup>/<sub>4</sub> by 12 Hip & Ridge. As an alternative, Elite Glass-Seal shingles are cut into three 12-inch-by-12-inch or 12<sup>1</sup>/<sub>4</sub>-inch-by-12-inch (305 mm by 305 mm) hip and ridge shingles.

**3.6 Fasteners:**

Fasteners must be minimum No. 12 gage [0.105 inch (2.7 mm)], <sup>3</sup>/<sub>8</sub>-inch-diameter-head (9.5 mm), galvanized, stainless steel, aluminum or copper corrosion-resistant nails. Fasteners must be of sufficient length to penetrate into the sheathing <sup>3</sup>/<sub>4</sub> inch (19.1 mm), or through the sheathing, where the sheathing is less than <sup>3</sup>/<sub>4</sub> inch (19.1 mm) thick. Fasteners must comply with ASTM F1667.

**3.7 Sheathing:**

The roof deck must be code-complying, minimum <sup>3</sup>/<sub>8</sub>-inch-thick (9.5 mm), exterior plywood complying with DOC PS-1; rated sheathing complying with DOC PS-2; or solid sheathing using minimum nominally 1-by-6 lumber.

**3.8 Underlayment:**

Under the IBC or IRC, underlayment must comply with ASTM D226, Type I, ASTM D4869, Type I or ASTM D6757 as specified in IBC Section 1507.2.3 or IRC Section R905.2.3. Under the UBC, underlayment must comply with ASTM D226, Type I (Type 15) or Type II (Type 30).

**\*Revised April 2012**

### 3.9 Self-adhering Polymer Modified Bitumen Sheet:

The self-adhering polymer modified bitumen sheet must comply with ASTM D1970.

### 3.10 Asphalt Cement:

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

## 4.0 INSTALLATION

### 4.1 General:

TAMKO Asphalt Shingles must be installed in accordance with the applicable code, this report and the manufacturer's published installation instructions. The shingles must be installed in accordance with Section 1507.2 of the IBC, Section R905.2 of the IRC or Table 15-B-1 of the UBC, as applicable, except as noted in this report.

The manufacturer's published installation instructions must be available at all times on the jobsite during installation.

### 4.2 Underlayment and Ice Barriers:

Minimum roof slope must be 2:12. For roof slopes greater than 4:12, the roof deck must be covered with a minimum of one layer of underlayment as described in Section 3.8. For slopes between 2:12 and 4:12, two layers of the underlayment described in Section 3.8 are required. Underlayment application must be in accordance with IBC Section 1507.2.8 and IRC Section R905.2.7.

In areas where there has been a history of ice forming along the eaves, causing a backup of water, an ice barrier must be provided in accordance with IBC Section 1507.2.8.2 or IRC Section R905.2.7.1, as applicable.

Under the UBC, in severe climate areas subject to roof ice build-up, underlayment in accordance with UBC Table 15-B-1 must be provided.

### 4.3 Shingles:

A starter course as described in Section 3.4, must be attached to the eave edge using fasteners described in Section 3.6 and located 3 to 4 inches (76 to 102 mm) from the eave edge and spaced 1 inch (25.4 mm) and 12 inches (305 mm) from each end for a total of four fasteners per shingle. The starter strip must overhang the eave and rake edges by  $\frac{1}{4}$  to  $\frac{3}{8}$  inch (6.4 to 9.5 mm). The first course of field shingles must then be installed over the starter course. When roll roofing is used, the first course of shingles must be sealed down to the surface of the starter strip by applying adhesive cement in four spots equally spaced.

Shingles must be installed with vertical joints offset a minimum of 4 inches (102 mm) from adjacent courses. For roof slopes of 2:12 up to 21:12 (16.67% to 175 % slope), each shingle must be fastened to the roof deck using a minimum of four fasteners (five for Heritage Vintage), spaced as shown in Figure 1. For roof slopes over 21:12 (175 % slope), six fasteners (nine for Heritage Vintage) must be used, spaced as shown in Figure 1. Elite Glass-Seal series fasteners must be in a nail area between  $5\frac{1}{2}$  inches (140 mm) and  $6\frac{3}{4}$  inches (171 mm) or between  $5\frac{5}{8}$  inches and  $6\frac{7}{8}$  inches from the butt edge of the shingle. Heritage series fasteners must be located  $6\frac{1}{8}$  inches (157 mm) above the butt edge and 6 and  $11\frac{1}{2}$  inches (152 and 292 mm) above the butt edge for the Heritage Vintage shingles. Maximum exposure to the weather must be 5 inches or  $5\frac{1}{8}$  inches (127 mm) for Elite Glass-Seal, 5 inches for the Heritage Vintage shingles, and  $5\frac{5}{8}$  inches (143 mm) for the Heritage shingles.

In colder climates or wind regions where it is questionable whether the thermal-sealing adhesive will activate and seal the shingles, the shingles can be hand-sealed. For three-tab shingles, a 1-inch-diameter (25.4 mm) spot of asphalt cement complying with ASTM D4586, Type I, Class I, must be placed under the corner of each tab (two spots per tab). For laminated shingles, four evenly spaced 1-inch-diameter (25.4 mm) spots of cement must be placed under the exposed portion of the shingle, approximately 3 inches (76 mm) (5 inches (127 mm) for the Heritage Vintage shingles) above the butt edge.

### 4.4 Valley Construction and Other Flashing

Valleys must consist of woven, open valley or closed-cut construction and must be flashed in accordance with IBC Section 1507.2.9.2, IRC Section R905.2.8.2 or UBC Section 1508.2. Other flashings must be in accordance with IBC Sections 1503.2, 1507.2.9.1 and 1507.2.9.3, or IRC Sections R903.2, R905.2.8.1, R905.2.8.3 and R905.2.8.4, as applicable.

### 4.5 Hip and Ridge Application:

Hip and ridge shingles must be placed evenly over hips and ridges, and must be fastened to the roof deck using two fasteners, one located on either side of the shingle,  $5\frac{1}{2}$  inches (140 mm) or  $5\frac{5}{8}$  inches (143 mm) from the exposed end and 1 inch (25.4 mm) in from the edge. Fasteners must be  $\frac{1}{4}$  inch (6.4 mm) longer than those used in the field of the roof, as specified in Section 3.6 of this report. The hip and ridge shingles must be applied with a 5-inch (127 mm) or  $5\frac{1}{8}$ -inch (130 mm) exposure starting at the bottom of the hip or from the end of the ridge opposite the direction of the prevailing wind.

### 4.6 Roof Slope Limitation:

Minimum roof slopes must be 2:12 (16.67% slope) for Elite Glass-Seal and Heritage Series Shingles.

### 4.7 Reroofing:

The existing asphalt shingle roof covering must be inspected in accordance with the provisions and limitations of Section 1510 of the IBC, Section R907 of the IRC, or Sections 1515 and 1516 of the Appendix to Chapter 15 of the UBC, as applicable. Prior to the reroofing, hip and ridge covering must be removed. Except as noted in this section, the shingles must be installed in accordance with Sections 4.1 through 4.5 of this report. Fasteners must be of sufficient length to penetrate  $\frac{3}{4}$  inch (19.1mm) into the sheathing, or through the sheathing where the sheathing is less than  $\frac{3}{4}$  inch (19.1 mm) thick. Flashing and edging must comply with Section 4.4 and with the following, as applicable:

- IBC: Sections 1510.5 and 1510.6
- IRC: Sections R907.5 and R907.5
- UBC: Section 1520 of the Appendix to Chapter 15

### 4.8 Wind Resistance:

Under the IBC and IRC, the shingles have been tested for wind resistance in accordance with ASTM D3161 or ASTM D7158.

Shingles tested in accordance with ASTM D3161 are classified as Class F and qualify for use under the exception to Section 1507.2.7.1 of the 2009 IBC, the exception to Section R905.2.4.1 of the 2009 IRC, Section 1504.1.1 of the 2006 IRC or Section R905.2.4.1 of the 2006 IRC, as applicable.

Shingles tested in accordance with ASTM D7158 are classified as Class H and qualify for use in locations as

shown in Table 1507.2.7.1 (1) of the 2009 IBC and Table R905.2.4.1 (1) of the 2009 IRC, where the maximum basic wind speed is 150 mph (67 m/s) or less with an exposure category of B or C (ASCE 7) and a maximum building height of 60 feet (18.3 m). Installation must be in accordance with IBC Section 1507.2.7 or IRC Section R905.2.6, as applicable.

Under the UBC, the shingles are limited to installation in areas subject to a maximum basic wind speed (fastest mile) of 80 mph (129 km/h), on structures a maximum of 40 feet (12 192 mm) in height, in Exposure B areas.

**4.9 Roof Covering Classification:**

When installed on new construction in accordance with this report and the TAMKO Building Products, Inc. installation instructions, the shingles are a Class A roof covering. When the shingles are installed over existing roof coverings, the classification of the existing roof covering must not change.

**5.0 CONDITIONS OF USE**

The TAMKO Asphalt Shingles 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 products are manufactured, identified and installed in accordance with this report and the manufacturer’s installation instructions. The instructions within this report govern if there are any conflicts between the manufacturer’s instructions and this report.

**5.2** The products are manufactured at the locations listed in Table 2 of this report, under a quality control program with inspections by UL LLC (AA-668).

**6.0 EVIDENCE SUBMITTED**

**6.1** Manufacturer’s published installation instructions and product literature.

**6.2** For jurisdictions adopting the UBC, data in accordance with the ICC-ES Acceptance Criteria for Roofing Systems with Asphalt Shingles Made with Glass Felt (AC127), dated July 1999.

**6.3** Reports of testing in accordance with ASTM D3462, and ASTM D3161 Class F and UL 2390 (ASTM D7158 Class H).

**6.4** Quality control documentation.

**7.0 IDENTIFICATION**

Each package of TAMKO shingles must be identified by a label bearing the manufacturer’s name (TAMKO Building Products, Inc.), the product type, the manufacturing location, the Class A roof classification, ASTM D3161 Class F or UL 2390/ ASTM D7158 Class H, the installation instructions, the coverage, style, type and color of the product, the name of the inspection agency (UL LLC) and the evaluation report number (ESR-1501).

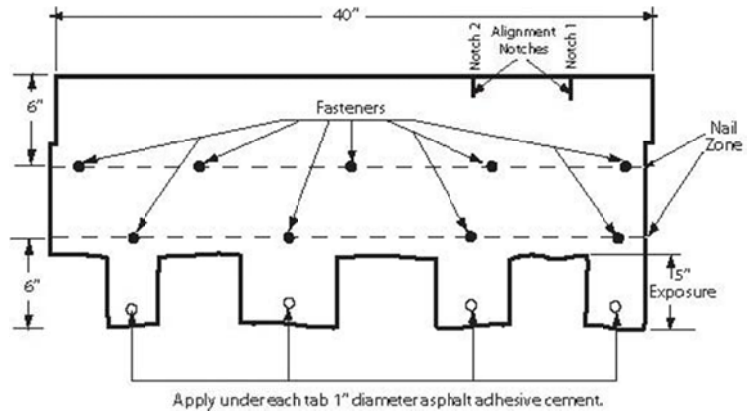
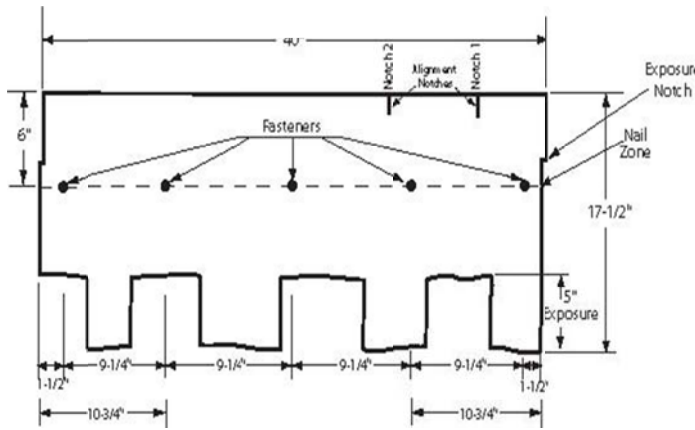
**TABLE 1—TAMKO PRODUCTS**

TYPE	PRODUCT NAME <sup>1</sup>	DIMENSIONS (height x width) (inches)
Three-tab shingle	Elite Glass-Seal	12 x 36 or 12 <sup>1</sup> / <sub>4</sub> x 36
	Heritage 30 / Heritage	13 <sup>1</sup> / <sub>4</sub> x 39 <sup>3</sup> / <sub>8</sub>
	Heritage 50 / Heritage Premium	13 <sup>1</sup> / <sub>4</sub> x 39 <sup>3</sup> / <sub>8</sub>
	Heritage XL / Heritage Woodgate	13 <sup>1</sup> / <sub>4</sub> x 39 <sup>3</sup> / <sub>8</sub>
	Heritage Vintage	17 <sup>1</sup> / <sub>2</sub> x 40
Hip and ridge shingle	Hip & Ridge	12 x 12 or 12 <sup>1</sup> / <sub>4</sub> x 12

For **SI**: 1 inch = 25.4 mm

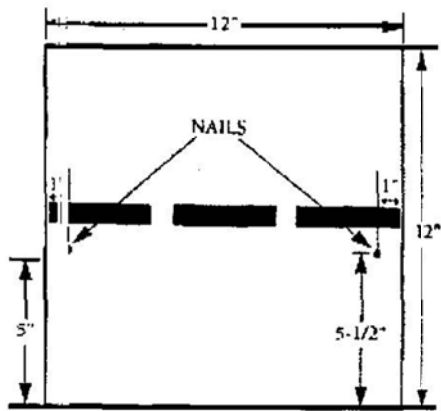
**TABLE 2—MANUFACTURING LOCATIONS**

MANUFACTURING PLANT	PRODUCT NAME
Phillipsburg, Kansas	Heritage 50 / Heritage Premium 12 x 12 Hip & Ridge Heritage Vintage Heritage 30 / Heritage
Dallas, Texas	Heritage 30 / Heritage Heritage XL / Heritage Woodgate Heritage 50 / Heritage Premium
Joplin, Missouri	Elite Glass-Seal 12 x 12 Hip & Ridge or 12 <sup>1</sup> / <sub>4</sub> x 12 Hip & Ridge

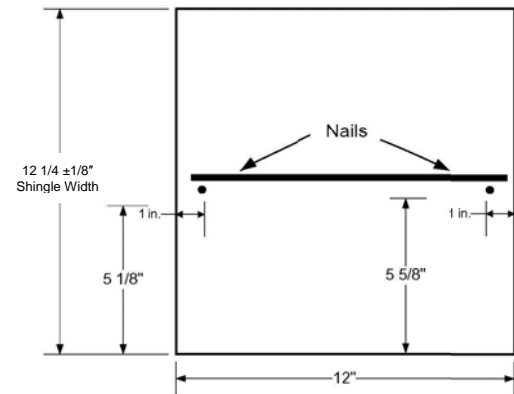


**HERITAGE VINTAGE  
(Standard Fastening Pattern)**

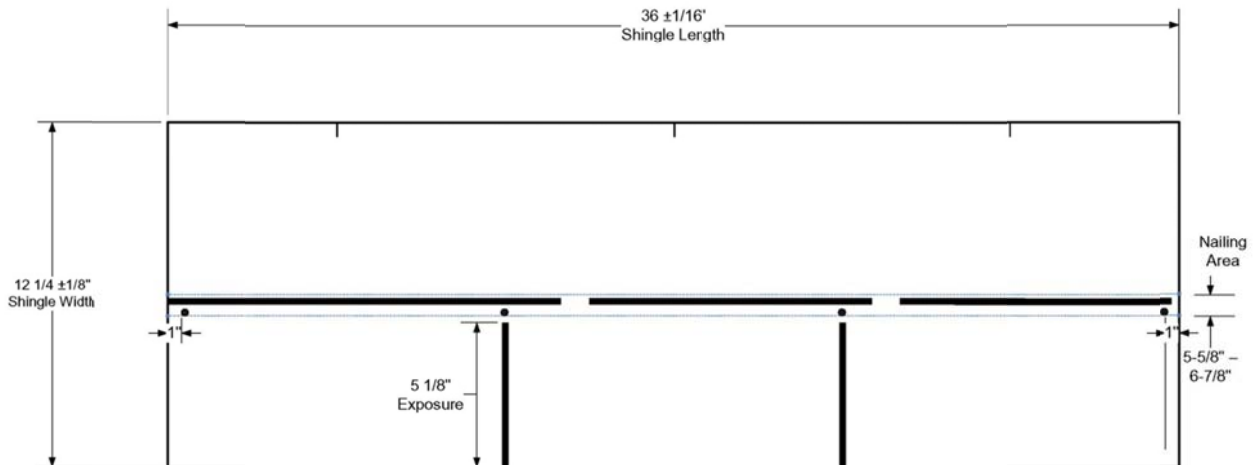
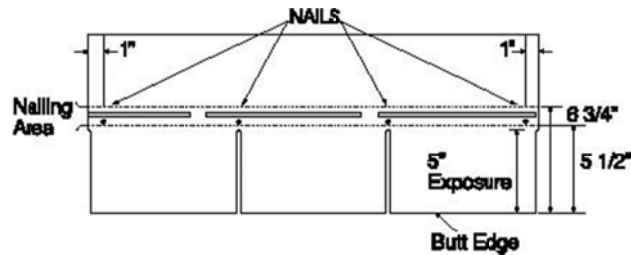
**HERITAGE VINTAGE  
(For roof slopes over 21:12)**



**12 X 12 HIP AND RIDGE**



**12 X 12 HIP AND RIDGE**



**ELITE GLASS-SEAL  
(For roof slopes 2:12 to 21:12)**

**FIGURE 1—TYPICAL FASTENING DETAILS**