



### ZEMENT STONE, INC.

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## MANUFACTURED STONE VENEER

### CSI Section:

04 73 00 Manufactured Stone Masonry

### 1.0 RECOGNITION

Zement Stone Manufactured Stone Veneer has been evaluated for use as a wall covering in compliance with Section 1405.2 of the IBC and Section R703.7 of the IRC over exterior walls of wood studs, cold-formed steel framing or concrete masonry. The veneer has been evaluated for composition, strength, durability, thermal resistance and installation. The Zement Stone Manufactured Stone Veneer is recognized as a satisfactory alternative to the weather coverings prescribed in the following codes and regulations:

- 2015, 2012, 2009, and 2006 International Building Code® (IBC)
- 2015, 2012, 2009, and 2006 International Residential Code® (IRC)

### 2.0 LIMITATIONS

Use of Zement Stone Manufactured Stone Veneer recognized in this report is subject to the following limitations:

2.1 “Expansion or control joints used to limit the effect of differential movement of precast stone veneer supports shall be specified by the architect, designer or veneer manufacturer, in that order. Consideration shall be given to movement caused by temperature changes, shrinkage, creep and deflection.” [AC51]

2.2 “For installation in accordance with the IBC, supporting wall construction shall be designed to support the weight of the veneer system. Horizontal framing members, such as lintels and headers, which support precast stone veneer, shall be designed to limit deflection to  $\frac{1}{600}$  of the span.” [AC51]

2.3 “In jurisdictions adopting the IRC, where the seismic provisions of Section R301.2.2 apply, the average weight of the wall supporting the precast stone veneer, including the weight of the veneer system, shall be determined. When this

weight exceeds the applicable limits of IRC Section 301.2.2.2.1, an engineered design of the wall construction shall be performed in accordance with IRC Section R301.1.3.” [AC51]

2.4 “When installed on exterior stud walls, the veneer units shall be installed a minimum of 4 inches (102 mm) above the earth, or a minimum of 2 inches (51 mm) above paved areas, or a minimum of ½ inch (12 mm) above exterior walking surfaces, which are supported by the same foundation that supports the exterior wall” in accordance with 2015 and 2012 IBC Section 1405.10.1.3 or 2015 and 2012 IRC Section R703.12.1, as applicable.

2.5 Zement Stone Manufactured Stone Veneer is produced in Littleton, Colorado.

### 3.0 PRODUCT USE

3.1 The backing for Zement Stone “adhered veneer shall be of concrete, masonry, steel framing or wood framing.” [Section 1404.4 of the IBC] The veneer units shall be adhered to cement plaster, concrete or concrete masonry backings. Lath, lath accessories, and fasteners shall be corrosion-resistant, as applicable.

3.2 Zement Stone Manufactured Stone Veneer shall be installed in accordance with Section 1405.10.1 of the IBC, Section R703.12 of the IRC, as applicable, ASTM C1780 and the report holder’s published installation instructions: where there is a conflict, the more restrictive shall govern. The manufacturer’s installation instructions shall be available at the jobsite during veneer application.

3.3 Zement Stone Manufactured Stone Veneer units may be applied over the assemblies described in Table 1 of this report when installed in accordance with the referenced code sections and this report.

### 4.0 PRODUCT DESCRIPTION

4.1 Zement Stone Manufactured Stone Veneer units are manufactured concrete products formed to resemble natural stone or brick in both texture and color. The individual masonry veneer units shall have a minimum thickness of 1½ inches (38.1 mm) and a maximum thickness of 2⅝ inches (67 mm). The masonry units shall have an average minimum compressive strength of 1,800 psi (12.4 MPa). The installed products “average saturated weight shall not exceed 15 pounds per square foot (73 kg/m²)” [AC51]. The recognized veneer styles are listed in Table 2 of this report.

The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.





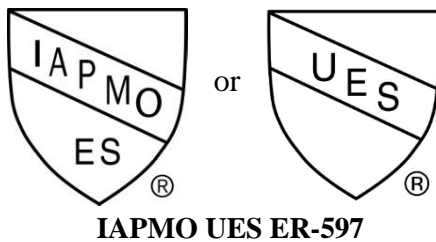
**TABLE 2 – Recognized Veneer Style Names**

Euro Cobble, Stack Stone, Field Stone Texture, Blend, Limestone, Savannah Ledge, River Rock, Weathered Edge, Savannah Blend, Easy Fit Texture, Castle Stone, Limestone Texture, Sandstone Texture, Cobble Texture, Thin Brick Texture

**4.2** The veneer, at an average thickness of 0.687 inches (17.5 mm), has an average thermal resistance (R-value) of 0.95 hr·ft<sup>2</sup>·°F/Btu (0.167 K·m<sup>2</sup>/W) when tested in accordance with ASTM C518.

### 5.0 IDENTIFICATION

Boxes of Zement Stone Manufactured Stone Veneer are identified with the manufacturer’s name, the pattern/style name, manufacturing date, manufacturing location, and evaluation report number (ER-597). Either IAPMO UES Mark of Conformity may also be used as shown below:



### 7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on Zement Stone Manufactured Stone Veneer to assess its conformance to the codes and standards shown in Section 1.0 of this report and documents the product’s certification. The Manufactured Stone Veneer is produced at locations noted in Section 2.5 of this report under a quality control program with periodic inspection under the surveillance of IAPMO UES.

For additional information about this evaluation report please visit [www.uniform-es.org](http://www.uniform-es.org) or email at [info@uniform-es.org](mailto:info@uniform-es.org)

### 6.0 SUBSTANTIATING DATA

**6.1** Data in accordance with the ICC-ES Acceptance Criteria for Precast Stone Veneer (AC51), approved January 2016. Test reports are from laboratories in compliance with ISO/IEC 17025.

**6.2** Manufacturer’s descriptive literature and installation instructions.

**6.3** Reports of Thermal Transmission Properties testing in accordance with ASTM C518.



**TABLE 1 – Application of Masonry Veneer Units**

Item	Code Section	Notes
1. Cement Plaster	IBC Section 1405.10.1; 2015 IRC Section R703.7.2 (2012, 2009 and 2006 IRC Section 703.6.2)	½-inch to ¾-inch scratch coat of Type S mortar complying with ASTM C270, scored horizontally in accordance with IBC Section 2512.6.
2. Water Resistive Barrier	IBC Section 1405.10.1.1; 2015 IRC Section R703.7.3 (2012, 2009, and 2006 IRC Section R703.6.3)	
3. Flashing	IBC Section 1405.4 (2006 IBC Section 1405.3) and Section 1405.10.1.2; 2015 IRC Section R703.4 (2012, 2009 and 2006 IRC Section R703.8) and IRC Section R703.12.2 (2006 IRC Section R703.8)	
4. Weep Screed	IBC Section 1405.10.1.2; IRC Section R703.12.1 (2009 IRC Section R703.6.2.1); and TMS 402-13 Section 12.1.6.2 (TMS 402-11 Section 6.1.6.2, ACI 530 Section 6.1.5.2)	
5. Lath and Fasteners	IBC Section 2510.3 (ASTM C926 and ASTM C1063); 2015 IRC Section R703.7.1 (2012, 2009 and 2006 IRC Section R703.6.1)	For proprietary fasteners, shear and pull out capacities shall be justified to the satisfaction of the authority having jurisdiction (AHJ).
6. Over Wood Based or Gypsum Sheathing Supported by Steel or Wood Framing	See <b>Items 1, 2, 3, 4 and 5</b> and <b>Notes</b>	<b>Items 1, 2, 3, 4 and 5</b> with framing spaced at 16 inches on-center maximum, lath shall be 2.5 lb/yd <sup>2</sup> self-furring diamond metal lath complying with ASTM C847 or 1.4 lb/yd <sup>2</sup> galvanized woven wire mesh complying with ASTM C1032, fastened in accordance with the requirements of ASTM C1063, Section 7.10.2, and Section R703.6.1 of the IRC with fasteners spaced a maximum of 6 inches on-center.
7. Over Concrete or Concrete Masonry	Prepare surfaces in accordance with IBC Section 2510.7 and Section 5.2 of ASTM C926.	<b>Items 1, 3, 4, 5 and 6</b> except with metal lath complying with ASTM C847; or 1.4 lb/yd <sup>2</sup> woven wire plaster base complying with ASTM C1032. The veneer may also be adhered to backings of clean concrete masonry without lath, in accordance with Section 2510.7 of the IBC and Section 5.2 of the ASTM C926.
8. Mortar Application of Veneer Units	2015 IBC Section 2103.2.4 (2012 and 2009 IBC Section 2103.9, 2006 IBC Section 2103.8)	Nominal ½-inch thick setting bed of Type S mortar applied to the back of the veneer units in accordance with Zement Stone installation instructions.

SI conversions: 1 inch = 25.4 mm, 1 lb/yd<sup>2</sup> = 0.54 kg/m<sup>2</sup>