



**ENVIRONMENTAL MATERIALS LLC,
DBA ENVIRONMENTAL STONWORKS**
6300 East Stapleton Drive South
Denver, Colorado 80216
(303) 309-3040
www.estoneworks.com

CLIPSTONE MORTARLESS STONE VENEER

CSI Section:

04 73 00 Manufactured Stone Masonry
04 20 00 Unit Masonry

1.0 RECOGNITION

Environmental StoneWorks Clipstone Mortarless Stone Veneer recognized in this report has been evaluated for use as a nonstructural mechanically fastened exterior wall covering. The strength, durability and transverse wind load resistance properties of the Clipstone Mortarless Stone Veneer comply with the intent of the provisions of the following codes and regulations:

- 2018, 2015, and 2012 International Building Code® (IBC)
- 2018, 2015, and 2012 International Residential Code® (IRC)
- 2020 Florida Building Code—Building - attached Supplement
- 2020 Florida Building Code—Residential - attached Supplement

2.0 LIMITATIONS

Use of the Clipstone Mortarless Stone Veneer recognized in this report is subject to the following limitations:

2.1 The veneer shall be installed in accordance with this evaluation report, the applicable code, and the manufacturer’s published installation instructions. If there are any conflicts between the manufacturer’s published installation instructions and this report, the most restrictive governs.

2.2 Installation is limited to use on exterior walls of buildings of Type V-B construction in accordance with the IBC, and to construction permitted by the IRC, as applicable.

2.3. Installation is limited to walls with wood framing and solid wood-based structural panel sheathing capable of supporting the imposed loads. Sheathing shall be covered with a water-resistive barrier, as required by the applicable code.

2.4 The supporting wall shall be designed to support the installed weight of the veneer system. In jurisdictions adopting the IBC the supporting horizontal members shall be designed to limit deflection to $1/600$ of the span of the supporting members at wall openings.

2.5 Where the seismic provisions of IRC Section R301.2.2 apply, the average weight of the wall supporting the veneer, including the weight of the veneer system, shall be determined. An engineered design of the wall construction shall be performed in accordance with IRC Sections R301.1.3 when the weight exceeds the applicable limits of 2018 IRC Section R301.2.2.2 (2015 and 2012 IRC Section R301.2.2.2.1).

2.6 Clipstone is manufactured in St. George, UT; Denver, CO; North Branch, MN; and Orwigsburg, PA.

3.0 PRODUCT USE

3.1 General: Environmental StoneWorks Clipstone Mortarless Stone Veneer is used as a nonstructural mechanically fastened exterior wall covering on non-fire-resistance-rated wood-framed walls. The veneer is an alternative to anchored masonry veneer described in 2018 IBC Section 1404.6 (2015 and 2012 IBC Section 1405.6) and 2018 IRC Section R703.8 (2012 IRC Section R703.7).

3.2 Design: Clipstone Mortarless Stone Veneer is limited to installations where the maximum transverse wind load, positive or negative, does not exceed 35 psf (1.67 kPa).

3.3 Installation: The Clipstone Mortarless Stone Veneer units shall be installed over solid wood-based sheathing (plywood or OSB) attached to wood stud framing. Sheathing shall be minimum $7/16$ -inch-thick (11.1 mm) Exposure 1 OSB complying with DOC PS-2 or $15/32$ -inch-thick (12 mm) exterior-grade plywood complying with DOC PS-1. Sheathing shall be covered with a water-resistive barrier as required by 2018 IBC Section 1403.2 (2015 and 2012 IBC Section 1404.2) or IRC Section R703.2, as applicable. The manufacturer’s published installation instructions shall be available on the jobsite and strictly adhered to at all times during installation.

Clipstone units are installed using two minimum No. 8 x $1\frac{1}{4}$ -inch-long (31.7 mm) Philips head lath screws per embedded mounting clip. The screws are installed through the formed eyelets at the top of each mounting clip.





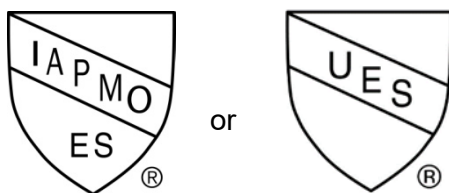
4.0 PRODUCT DESCRIPTION

The Clipstone Mortarless Stone Veneer is a precast concrete product manufactured to resemble natural stone in both texture and color, in ProStack and Ledgestone patterns. Each veneer unit has metal mounting clips embedded into the stone. The composition of the product includes cement, aggregate, water, admixtures, and color, placed in molds and cured at the plant. The installed product average weight when saturated does not exceed 15 pounds per square foot (73.2 kg/m²). The veneer unit thicknesses range from 1½ to 2⁵/₈ inches (38.1 mm to 66.7 mm). Individual veneer pieces are 1½ or 3½ inches (38.1 mm or 88.9 mm) wide and between 6½ and 19 inches (165 mm and 483 mm) long. Veneer units up to 16 inches (406 mm) in length have one embedded mounting clip. Veneer units longer than 16 inches (406 mm) have two embedded mounting clips. Metal mounting clips are formed from 0.120-inch-diameter (3.04 mm) steel wire complying with ASTM A641 steel and have a G90 galvanized coating. Use of the veneer units is limited to Type V-B non-fire-resistance-rated building construction under the IBC and one- and two-family dwellings in accordance with the IRC.

5.0 IDENTIFICATION

Boxes of Clipstone Mortarless Stone Veneer units are identified with the manufacturer's name (Environmental Stoneworks) and address, the product name, the IAPMO Uniform ES Mark of Conformity, and the evaluation report number (ER-383).

Either Mark of Conformity may be used as shown below:



IAPMO UES ER-383

6.0 SUBSTANTIATING DATA

Testing was performed by laboratories in compliance with ISO/IEC 17025.

6.1 Data in accordance with the ASTM C1364, ASTM C1670, and TMS 504.

6.2 Manufacturer's descriptive literature and installation instructions.

6.3 Reports of Transverse Load tests in accordance with ASTM E330.

6.4 Reports of Concentrated Load tests in accordance with ASTM E72 Section 13.

6.5 Reports of Mechanical Fasteners in Wood tests in accordance with ASTM D1761.

6.6 Reports of physical properties testing in accordance with ASTM C1670.

7.0 REFERENCE CODE SECTIONS

7.1 International Building Code®:

7.1.1 Section 104.11 - Alternative materials, design and methods of construction and equipment.

7.1.1.1 Section 1403.4 – Masonry.
(2015 and 2012 IBC Section 1404.4 – Masonry.)

7.1.1.2 Section 1404.6 – Anchored masonry veneer.
(2015 and 2012 IBC Section 1405.6)

7.2 International Residential Code®:

7.2.1 Section R104.11-Alternative materials, design and methods of construction and equipment.

7.2.1.1 Section R703.3 – Wall covering nominal thickness and attachments.
(2012 IRC Section R703.4 – Attachments.)

7.2.1.2 Section R703.8 – Anchored stone and masonry veneer, general.

8.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on Environmental StoneWorks Clipstone Mortarless Stone Veneer to assess conformance to the codes shown in Section 1.0 of this report and serves as documentation of the product certification. The Clipstone Veneer units are manufactured at the locations noted in Section 2.6 of this report under a quality assurance program with periodic inspections under the surveillance of IAPMO UES.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org



FLORIDA SUPPLEMENT

**ENVIRONMENTAL MATERIALS LLC,
DBA ENVIRONMENTAL STONWORKS
6300 East Stapleton Drive South
Denver, Colorado 80216
(303) 309-3040
www.estoneworks.com**

CLIPSTONE MORTARLESS STONE VENEER

CSI Sections:

- 04 73 00 Manufactured Stone Masonry
- 04 20 00 Unit Masonry

1.0 RECOGNITION

Environmental StoneWorks Clipstone Mortarless Stone Veneer evaluated in IAPMO UES ER-383 is a satisfactory alternative exterior wall covering in accordance with the following codes and regulations:

- 2020 Florida Building Code—Building
- 2020 Florida Building Code—Residential

Use of the Environmental StoneWorks Clipstone Mortarless Stone Veneer for compliance with the high-velocity hurricane zone provisions of the Florida Building Code—Building and Florida Building Code—Residential has not been evaluated and is outside the scope of this evaluation report.

2.0 SUMMARY

The Environmental StoneWorks Clipstone Mortarless Stone Veneer described in IAPMO UES ER-383 complies with or is a suitable alternative exterior wall covering to those specified in the codes listed in Section 1.0 of this supplement, subject to the following conditions:

2.1 Design requirements shall be determined in accordance with the applicable code.

2.2 Installation requirements shall be in accordance with those specified for the 2018 International Building Code or International Residential Code, as applicable, in IAPMO UES ER-383 as modified by this supplement.

2.3 Installation of Environmental StoneWorks Clipstone Mortarless Stone Veneer shall provide for a clear inspection space in accordance with Florida Building Code—Building Sections 1403.8 and 2114.2 or Florida Building Code—Residential Section R318.4, as applicable.

2.4 Verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission (or the building official when the report holder does not possess an approval by the Commission), to provide oversight and determine that the products are being manufactured as described in this evaluation report to establish continual product performance shall be provided for products falling under Section (5)(d) of Florida Rule 61G20-3.008.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org