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**DIVISION: 04 00 00—MASONRY**  
**Section: 04 71 00—Manufactured Brick Masonry**  
**04 73 00—Manufactured Stone Masonry**

**REPORT HOLDER:**

**ESR-2677**  
**Issued March 1, 2011**

**UNLIMITED DESIGNS dba ROCKY MOUNTAIN STONE**  
**780 NORTH WARM SPRINGS ROAD**  
**SALT LAKE CITY, UTAH 84116**  
**(801) 355-3221**  
[www.rockymountainstoneproducts.com](http://www.rockymountainstoneproducts.com)

**EVALUATION SUBJECT:**

**ROCKY MOUNTAIN STONE PRODUCTS**

1 **1.0 EVALUATION SCOPE**

2 **Compliance with the following codes:**

- 3 ▪ 2006 *International Building Code*<sup>®</sup> (IBC)
- 4 ▪ 2006 *International Residential Code*<sup>®</sup> (IRC)

5 **Properties evaluated:**

6 Veneer strength and durability

7 **2.0 USES**

8 Rocky Mountain Stone Products are used as an adhered, non-load-bearing exterior  
9 veneer on non-fire-resistance-rated wood-framed or light gage steel stud walls,  
10 concrete walls or concrete masonry walls.

11 **3.0 DESCRIPTION**

12 Rocky Mountain Stone Products are precast concrete products made to resemble  
13 natural stone in color and in texture. The concrete is composed of cement,  
14 aggregate, water, admixtures and coloring. The veneer units are molded and cured at  
15 the plant. The average saturated weight of the installed veneer units does not exceed  
16 15 pounds per square foot (73.2 kg/m<sup>2</sup>). Recognized patterns of veneer and accents  
17 are listed in Table 1.

## 18 **4.0 INSTALLATION**

### 19 **4.1 General**

20 Installation of Rocky Mountain Stone precast stone veneer must comply with this  
21 report, the manufacturer's published installation instructions, and the applicable code.  
22 The manufacturer's published installation instructions must be available at the jobsite  
23 at all times during installation. The veneer may be applied over backings of cement  
24 plaster, concrete or concrete masonry.

### 25 **4.2 Preparation of Backing:**

26 **4.2.1 Cement Plaster Backings:** Cement plaster backings may be applied over  
27 plywood, OSB or gypsum sheathing, supported by wood or steel studs; over open  
28 wood or steel studs; over concrete walls; and over concrete masonry walls, when  
29 installed as described in Sections 4.2.1.1 through 4.2.1.3.

30 **4.2.1.1 Installation over Sheathing:** For exterior installations, the cement plaster  
31 backing must be installed over two layers of a water-resistive barrier complying with  
32 IBC Sections 1404.2 and 2510.6 or IRC Sections R703.2 and R703.6.3, as  
33 applicable. Also, flashing must be installed as required by IBC Section 1405.3 or IRC  
34 Section R703.8, as applicable, and weep screeds must be installed at the bottom of  
35 the stone veneer. The weep screeds must comply with, and be installed in

36 accordance with, IBC Section 2512.1.2 or IRC Section R703.6.2.1, as applicable. In  
37 addition, the weep screeds must have holes with a minimum diameter of  $\frac{3}{16}$  inch (4.8  
38 mm) spaced at a maximum of 33 inches (838 mm) on center, as required by Section  
39 6.1.5.2 of ACI 530/ASCE 5/TMS 402, which is referenced in IBC Section 1405.9.

40  
41 Studs must be spaced no more than 16 inches (406 mm) on center. Lath must be a  
42 corrosion-resistant, self-furred, 2.5 lb/yd<sup>2</sup> (1.4 kg/m<sup>2</sup>) diamond mesh metal lath  
43 complying with ASTM C 847. The lath must be fastened to the wall framing in  
44 accordance with the minimum requirements of Section 7.10 of ASTM C 1063, and  
45 IRC Section R703.6.1, as applicable. In addition, fasteners must be spaced a  
46 maximum of 6 inches (152 mm) on center, must penetrate a minimum of 1 inch (25.4  
47 mm) into wood framing and must penetrate a minimum of  $\frac{3}{8}$  inch (9.5 mm) through  
48 steel framing. A scratch coat of Type N or S mortar (cement plaster) complying with  
49 ASTM C 926 must be applied over the lath to a minimum thickness of  $\frac{3}{8}$  inch (9.5  
50 mm). The scratch coat must be scored horizontally in accordance with the  
51 manufacturer's published installation instructions, and must be allowed to cure in  
52 accordance with IBC Section 2512.6, prior to the application of the veneer units.

53 **4.2.1.2 Installation over Open Studs:** For exterior installations, the cement plaster  
54 backing must be installed over two layers of a water-resistive barrier, flashing and  
55 weep screeds as described in Section 4.2.1.1. Studs must be spaced no more than  
56 16 inches (406 mm) on center. Lath must be a paper-backed, corrosion-resistant, 3.4  
57 lb/yd<sup>2</sup> (1.8 kg/m<sup>2</sup>),  $\frac{3}{8}$ -inch (9.5 mm) rib lath complying with ASTM C 847. The lath  
58 must be fastened to wall framing and the scratch coat applied as described in Section  
59 4.2.1.1.

60       **4.2.1.3 Installation over Concrete and Concrete Masonry:** The veneer units may  
61       be applied directly to concrete and concrete masonry backing without lath, provided  
62       the concrete or masonry surface is clean. Where lath is used, it must be corrosion-  
63       resistant metal lath complying with ASTM C 847, or 1.4 lb/yd<sup>2</sup> (0.760 kg/m<sup>2</sup>),  
64       corrosion-resistant, woven wire plaster base complying with ASTM C 1032. The lath  
65       must be fastened to the wall in accordance with Section 7.10 of ASTM C 1063, and  
66       IRC Section R703.6.1, as applicable. The fasteners must be spaced a maximum of 6  
67       inches (152 mm) on center vertically and 16 inches (406 mm) on center horizontally.  
68       The gravity load (shear) capacity and negative wind load (pull-out) capacity of the  
69       proprietary fasteners must be justified to the satisfaction of the code official. The  
70       scratch coat must be applied as described in Section 4.2.1.1.

71       **4.2.2 Concrete and Concrete Masonry Backing:** Concrete masonry and poured  
72       concrete wall surfaces must be prepared in accordance with Section 5.2 of ASTM C  
73       926, and IBC Section 2510.7, as applicable. Alternatively, a cement plaster backing  
74       may be installed as described in Section 4.2.1.3.

### 75       **4.3 Application of Veneer Units:**

76       Prior to the application of the veneer units, the scratch coat or other backing and the  
77       back of the veneer units must be moistened in accordance with the manufacturer's  
78       instructions. A minimum 1/2-inch-thick (12.7 mm) setting bed of Type N or S mortar  
79       must be applied to the back of the veneer units, and the veneer units must be  
80       pressed firmly in place, squeezing the mortar out around all veneer unit edges. Joints  
81       between veneer units must be grouted and tooled in accordance with the veneer  
82       manufacturer's published installation instructions.

## 83       **5.0 CONDITIONS OF USE**

84 The precast stone veneer described in this report complies with, or is a suitable  
85 alternative to what is specified in, those codes listed in Section 1.0 of this report,  
86 subject to the following conditions:

87 **5.1** Installation must comply with this report, the manufacturer's published  
88 installation instructions and the applicable code. In the event of a conflict  
89 between the manufacturer's published installation instructions and this report,  
90 this report governs.

91 **5.2** The use of the precast stone veneer is limited to installation on walls with  
92 cement plaster, concrete or concrete masonry backings.

93 **5.3** Expansion or control joints, used to limit the effect of differential movement of  
94 supports on the veneer system, are to be specified by the architect, designer  
95 or veneer manufacturer, in that order. Consideration must also be given to  
96 movement caused by temperature change, shrinkage, creep and deflection.

97 **5.4** In jurisdictions adopting the IBC, the supporting wall must be designed to  
98 support the installed weight of the veneer system, including veneer, setting  
99 bed and cement plaster backing, as applicable. At wall openings, the  
100 supporting members must be designed to limit deflection to  $1/600$  of the span of  
101 the supporting members.

102 **5.5** In jurisdictions adopting the IRC, where the seismic provisions of IRC Section  
103 R301.2.2 apply, the average weight of the wall supporting the precast stone  
104 veneer, including the weight of the veneer system, must be determined. When  
105 this weight exceeds the applicable limits of IRC Section R301.2.2.2.1, an  
106 engineered design of the wall construction must be performed in accordance  
107 with IRC Section R301.1.3.

108 **6.0 EVIDENCE SUBMITTED**

109 Data in accordance with the ICC-ES Acceptance Criteria for Precast Stone Veneer  
110 (AC51), dated February 2008.

111 **7.0 IDENTIFICATION**

112 Boxes of precast stone veneer units are identified with the manufacturer's name  
113 (Rocky Mountain Stone), the pattern name, the manufacturing date and location, and  
114 the evaluation report number (ESR-2677).

115 This evaluation report is subject to re-examination in one year.

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117

**TABLE 1—RECOGNIZED PRODUCTS**

<b>VENEER STYLE NAME</b>
Ashlar, Cascajo Villa, Castle, Cottage, Fieldstone, Kwik Fit, Mountain Ledge, Olympus Field, Olympus Ledge, Rubble Ledge, Rubble, Sandstone, Stream, Thin Brick, Mattone Brick