

**SECTION 04 70 00**  
**MANUFACTURED MASONRY VENEER**

**PART 1 - GENERAL**

## 1.01 SUMMARY

- A. Section Includes: Portland cement based manufactured stone veneer and trim.
- B. Related Sections:
  - 1. 054000 - Cold Formed Metal Framing
  - 2. 061600 - Sheathing.
  - 3. 07 60 00–Flashing and Sheet Metal.
  - 4. 07 92 00–Joint Sealants.

## 1.02 REFERENCES

- A. American National Standards Institute (ANSI):
  - 1. ANSI A118.4 Specifications for Latex-Portland Cement Mortar.
- B. American Society for Testing and Materials (ASTM):
  - 1. [ASTM C 39](#) – Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
  - 2. [ASTM C 67](#) – Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile.
  - 3. [ASTM C 144](#) – Standard Specification for Aggregate for Masonry Mortar.
  - 4. [ASTM C 177](#) – Standard Test Method for Steady-State Head Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus.
  - 5. [ASTM C 207](#) – Standard Specification for Hydrated Lime for Masonry Purposes.
  - 6. [ASTM C 270](#) – Standard Specification for Mortar for Unit Masonry.
  - 7. [ASTM C 482](#) – Standard Test Method for Bond Strength of Ceramic Tile to Portland Cement.
  - 8. [ASTM C 567](#) – Standard Test Method for Determining Density of Structural Lightweight Concrete.
  - 9. [ASTM C 847](#) – Standard Specification for Metal Lath.
  - 10. [ASTM C 932](#) – Standard Specification for Surface-Applied Bonding Compounds for Exterior Plastering.
  - 11. [ASTM C 979](#) – Standard Specification for Pigments for Integrally Colored Concrete.
  - 12. [ASTM C 1032](#) – Standard Specification for Woven Wire Plaster Base.
  - 13. [ASTM C 1059](#) – Standard Specification for Latex Agents for Bonding Fresh To Hardened Concrete.
  - 14. [ASTM D 226](#) – Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
- C. City of Los Angeles: Research Report (LARR)
- D. International Code Council (ICC):
  - 1. ER Report.
  - 2. NES Report.

3. UBC Standard No. 14-1, Kraft Waterproof Building Paper.
4. UBC Standard 15-5–Roof Tile.

E. Underwriter's Laboratory (UL): Building Materials Directory.

### 1.03 SUBMITTALS

A. Reference Section 01 33 00–Submittal Procedures; submit following items:

1. Product Data.
2. Samples:
  - a. Standard sample board consisting of small-scale pieces of veneer units showing full range of textures and colors.
  - b. Full range of mortar colors.
3. Verification Samples: Following initial sample selection submit “laid-up” sample board using the selected stone and mortar materials and showing the full range of colors expected in the finished Work; minimum sample size: 3 by 3 feet (1 by 1 m).
4. Quality Assurance/Control Submittals:
  - a. Qualifications:
    - 1) Proof of manufacturer qualifications.
    - 2) Proof of installer qualifications.
  - b. Regulatory Requirements: Evaluation reports.
  - c. Veneer manufacturer’s installation instructions.
  - d. Installation instructions for other materials.
5. LEED® Submittals:
  - a. Credit MR 4.1, 4.2 Recycled Content: Provide percentage of recycled content (post- consumer and pre-consumer).
  - b. Credit MR 5.1, 5.2 Regional Materials:
    - 1) Provide distance between Project site and extraction site.
    - 2) Provide distance between Project site and final manufacturing location.

B. Closeout Submittals: Reference Section 01 78 00–Closeout Submittals; submit following items:

1. Maintenance Instructions.
2. Special Warranties.

### 1.04 QUALITY ASSURANCE

A. Qualifications:

1. Manufacturer Qualifications: Licensee of Eldorado Stone, LLC.
2. Installer Qualifications: Experienced mason familiar with installation procedures for manufactured veneer.

B. Certifications:

1. ICC Evaluation Service – Evaluation Report ER-3568.
2. NES Evaluation Service- Evaluation Report NER 602.
3. LARR – Research Report RR25589
4. HUD – Material Release Number 910
5. UL – Classification listing in Building Materials Directory: UL 546T (F8002).

C. Field Sample:

1. Prepare 4 by 4 foot ( 1200 by 1200 mm) sample at a location on the structure as selected by the Architect. Use approved selection sample materials and colors. Include all corner and trim pieces.
2. Obtain Architect's approval.
3. Protect and retain sample as a basis for approval of completed manufactured stone work. Approved sample may be incorporated into completed work.

#### 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Reference Section 01 66 00–Product Storage and Handling Requirements.
- B. Follow manufacturer's instructions.

#### 1.06 PROJECT/SITE CONDITIONS

- A. Environmental Requirements: When air temperature is 40 degrees F (4.5 degrees C) or below, consult local building code for Cold-Weather Construction requirements.

#### 1.07 WARRANTY

- A. Special Warranty: Manufacturer's standard warranty coverage against defects in materials when installed in accordance with manufacturer's installation instructions.

### **PART 2 - PRODUCTS**

#### 2.01 MANUFACTURER

- A. Eldorado Stone, LLC  
1370 Grand Ave., Bldg. B  
San Marcos, CA 92069  
Tel: (800) 925-1491  
Fax: (760) 736-8890  
E-Mail: [customerservice@eldoradostone.com](mailto:customerservice@eldoradostone.com)  
Website: [www.eldoradostone.com](http://www.eldoradostone.com)

1. Scott Lockwood – Architectural Sales Representative, O & G Industries, Inc., Masonry Division, Hancock Avenue, Bridgeport, CT 0660, Email [scottlockwood@ogind.com](mailto:scottlockwood@ogind.com):

- B. Product: Manufactured Masonry Veneer: “Top Rock”; Color: “Montana” manufactured with corner and trim pieces.
- C. Substitutions: None Allowed.

#### 2.02 MATERIALS

- A. Stone Veneer:
  1. Profile: Top Rock. Include matching corner pieces.
  2. Stone Accents: Wainscot Sills, Column Caps & Electrical Boxes.
    - a. Color: Buckskin, Ivory, Smoke or Taupe, Architect to select from manufacturers full selection. Location, as shown on Drawings.
    - b. Texture: Smooth.

- B. Veneer Unit properties: Precast veneer units consisting of portland cement, lightweight aggregates, and mineral oxide pigments.
  - 1. Compressive Strength: ASTM C 192 and ASTM C 39, 5 sample average: greater than 1,800 psi (12.4MPa).
  - 2. Shear Bond: ASTM C 482: 50 psi (345kPa).
  - 3. Water Absorption: UBC Standard 15-5: Less than 22 percent.
  - 4. Freeze-Thaw Test: ASTM C 67: Less than 3 percent weight loss and no disintegration.
  - 5. Thermal Resistance: ASTM C 177: 0.473 at 1.387 inches thick
- C. Moisture Barrier: ASTM D 226, Type 1, No. 15, non-perforated asphalt-saturated felt paper.
- D. Reinforcing: ASTM C 847, 2.5lb/yd<sup>2</sup> (1.4kg/m<sup>2</sup>) galvanized expanded metal lath complying with code agency requirements for the type of substrate over which stone veneer is installed.
- E. Mortar:
  - 1. Cement: Any cement complying with ASTM C 270.
  - 2. Lime: ASTM C 207.
  - 3. Sand: ASTM C 144, natural or manufactured sand.
  - 4. Color Pigment: ASTM C 979, mineral oxide pigments.
  - 5. Water: Potable.
  - 6. Pre-Packaged Latex-Portland Cement Mortar: ANSI A118.4.
- F. Bonding Agent: Exterior integral bonding agent meeting ASTM C 932
- G. Sealer: Water based silane or siloxane masonry sealer, clear.

### 2.03 MORTAR MIXES

- A. Standard Installation (Grouted Joints):
  - 1. Mix mortar in accordance with ASTM C 270, Type N or S or Eldorado Stone, LLC mortar preparation instructions.
    - a. Add color pigment in grout joint mortar in accordance with pigment manufacturer's instructions.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine substrates upon which work will be installed.
- B. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.
- C. Commencement of work by installer is acceptance of substrate.

### 3.02 PREPARATION

- A. Protection: Protect adjacent work from contact with mortar.
- B. Surface Preparation: Prepare substrate in accordance with manufacturer's installation instructions for the type of substrate being covered.

### 3.03 INSTALLATION

- A. Install and clean stone in accordance with manufacturer's installation instructions for Standard Installation (Grouted Joint) or Jointless/Dry-Stacked installation as specified above.
- B. Apply sealer in accordance with sealer manufacturer's installation instructions.

### 3.04 FIELD QUALITY CONTROL

- A. Manufacturer's Field Services: Manufacturer's Field Service Representative shall make two periodic site visits for installation consultation and inspection as requested by Owner.

### 3.05 CLEANING

- A. Reference Section 01 74 00—Cleaning and Waste Management.
- B. Remove protective coverings from adjacent work.
- C. Cleaning Veneer Units:
  - 1. Wash with soft bristle brush and water/granulated detergent solution.
  - 2. Rinse immediately with clean water.
- D. Removing Efflorescence:
  - 1. Allow veneer to dry thoroughly.
  - 2. Scrub with soft bristle brush and clean water.
  - 3. Rinse immediately with clean water; allow to dry
  - 4. If efflorescence is still visible, repeat above procedure using a solution of 1 part household vinegar and 5 parts water.
  - 5. Rinse immediately with clean water.

END OF SECTION