

**SECTION 07 42 43.04 – COMPOSITE STONE WALL PANELS – FACE ATTACHED**

**PART 1 GENERAL**

1.1 ADMINISTRATIVE REQUIREMENTS

A. Pre-Installation Conference:

1. Attendance: [Architect,] [Owner,] [Contractor,] [Construction Manager,] [Design/Builder] installer, and related trades.
2. Review: Project conditions, manufacturer requirements, delivery and storage, staging and sequencing, and protection of completed work.

1.2 SUBMITTALS

A. Action Submittals:

1. Shop Drawings: Illustrate products, installation, and relationship to adjacent construction.
2. Product Data: Manufacturer's descriptive data and product attributes.
3. Samples: [Selection samples.] [Verification samples.]

B. Informational Submittals:

1. Certificate of Compliance: Certification that installed products meet specified design and performance requirements.

C. Closeout Submittals:

1. Maintenance Data.
2. Extra materials: [ ] panels in [ ] x [ ] size.

1.3 QUALITY ASSURANCE

A. Regulatory Requirements:

1. Fire propagation characteristics: Panels tested and approved for use in NFPA 285 rated wall assembly.
2. Flame spread rating: Class A, tested to ASTM E84.

B. Manufacturer Qualifications: Minimum [20] [ ] years' experience in manufacture of composite stone wall panels.

C. Fabricator and Installer Qualifications:

1. Minimum [3] [ ] years' experience in work of this Section.
2. Approved by composite stone wall panel manufacturer.

D. Mockup: [One full size panel.] [ ] full size panels.] Approved mockup [may] [may not] remain as part of the Work.

1.4 SYSTEM DESCRIPTION

A. Design Requirements:

1. Live and dead loads in accordance with Building Code.
2. Minimum wind pressures in accordance with [ASCE 7,] [Building Code,] [ ], with maximum allowable deflection of [L/240] [L/360] [ ], tested in accordance with ASTM E1592].
3. Movement caused by an ambient temperature range of [120] [ ] degrees F and a surface temperature range of [160] [ ] degrees F.
4. System design to be performed by qualified professional engineer licensed in State of [ ].

1.5 WARRANTY

- A. Manufacturer's 60 year warranty against structural failure of composite stone wall panels.

**PART 2 PRODUCTS**

**2.1 MANUFACTURERS**

- A. Contract Documents are based on Steni by Omnis Panels, LLC, [www.omnisusa.com](http://www.omnisusa.com).
- B. Substitutions: [Refer to Division 01.] [Not permitted.]

**2.2 MATERIALS**

- A. Composite Stone Wall Panels:
  - 1. Source: Steni Color.
  - 2. Description: Fiberglass-reinforced composite stone sheets with electron beam-cured acrylic coating on exterior face.
  - 3. Panel thickness: Nominally 1/4 inch.
  - 4. Flexural strength: Minimum 30 N/sq mm, tested to CSTB Method.
  - 5. Tensile strength: Minimum 15 N/sq mm, tested to ISO/R 527-66.
  - 6. Thermal conductivity: 0.55 W/(M k), tested to SINTEF NBI.
  - 7. Thermal expansion: 0.021 to 0.026 mm/(m k), tested to SINTEF NBI at minus 20 to plus 65 degrees C.
  - 8. Hard/soft body impact: Category 1, tested to EAD 090062.
  - 9. Surface hardness: Ball impression 250 N, permanent impression, 0.14 mm, tested to NT Build 059.
  - 10. Moisture absorption: Tested to ASTM D570, 1 m deep at 25 degrees C and 100 percent relative humidity.
    - a. After 24 hours: ca 0.5 percent.
    - b. After 28 days: ca 2.0 percent.
  - 11. Color: [\_\_\_\_.] [To be selected from manufacturer's full color range.]
  - 12. Texture: [High gloss.] [Matte.] [Half matte.]
- B. Subframing: Aluminum, [mill finish with primer.] [Anodized.] [Painted.] [Powder coated.]

\*\*\*\* OR \*\*\*\*

- C. Subframing: Steel, [galvanized with primer.] [Painted.] [Powder coated.]

\*\*\*\* OR \*\*\*\*

- D. Subframing: Wood, [primed.] [covered in EPDM foil tape.]

**2.3 ACCESSORIES**

- A. Fasteners: Stainless steel, type and size recommended by composite stone wall panel manufacturer.

**2.4 FABRICATION**

- A. Fabricate panels in accordance with manufacturer's instructions and approved Shop Drawings.
- B. Shop fabricate panels to greatest extent possible.
- C. Pre-drill fastener holes.
- D. Prepare special shapes and cutouts.
- E. Miter edges where indicated.

F. Prefabricate outside corners.

PART 3 **EXECUTION**

3.1 INSTALLATION

A. Install composite stone wall panels in accordance with manufacturer's instructions and approved Shop Drawings.

END OF SECTION