

SECTION 07 42 43.05 – COMPOSITE STONE WALL PANELS – ADHESIVE 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. Flame spread rating: Class A, tested to ASTM E84.

B. Manufacturer Qualifications: Minimum [5] [] 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 20 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.
- 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. Structural Silicone Setting System:
 - 1. Structural silicone: SikaTack Panel 50 System by Sika Corporation.
 - 2. Cellular foam adhesive tape: Type and size recommended by composite stone panel manufacturer.
 - 3. Adhesion promoter: Type recommended by composite stone panel manufacturer.
 - 4. Setting blocks: Silicone, 80 to 90 Shore A durometer, size recommended by composite stone 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