

## SECTION 11456

### COUNTERTOPS – ecoX™

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Countertops
- B. Bar tops
- C. Vanity tops
- D. Table tops
- E. Reception counters
- F. Cash/back wraps
- G. Transaction counters
- H. Service counters
- I. Displays
- J. Work stations
- K. Shelves
- L. Vanity tops with integral sinks
- M. Fireplace hearths, mantels and surrounds

##### 1.2 RELATED DOCUMENTS

- A. General Conditions, Supplementary Conditions and Division 1 – General requirements apply to Work of this Section.
- B. Section 05500 - Metal Fabrications
- C. Section 06114 – Wood Blocking
- D. Section 06200 – Finish Carpentry
- E. Section 06410 – Custom Cabinets
- F. Section 07900 – Joint Sealants
- G. Section 09300 – Tile
- H. Section 15400 – Plumbing Fixtures

##### 1.3 REFERENCES

- A. ASTM C150 - Specification for Portland cement
- B. ASTM C979 - Specification for Coloring Pigments for Integrally Pigmented Concrete



3001-103 spring forest road  
raleigh nc 27616

p: 919.790.1749  
f: 919.790.1750

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## 1.4 SUBMITTALS

- A. Product data: Submit manufacturer's data sheets including:
  - 1. Product specifications.
  - 2. Storage and handling instructions.
  - 3. Installation guidelines.
  - 4. Care and maintenance instructions.
- B. Shop Drawings: Submit for approval the following:
  - 1. Copies of shop drawings showing dimensions, component sizes, edge profiles, exposed faces, arrangement of joints, support structure and annotation of finished precast concrete types and their location.
  - 2. Unless otherwise shown on contract drawings:
    - a. Provide standard color.
    - b. Provide 1.5" thickness.
    - c. Provide standard eased edge.
- C. Samples: If colors are indicated on drawings, submit at minimum a 2-3/4" square sample of each selected color. Sample will be representative of the general range of variations in appearance characteristics (i.e. color, texture, porosity and finish.)

## 1.5 QUALITY ASSURANCE

- A. Reference Standards: Comply with applicable provisions and recommendations of the following, except as otherwise shown or specified.
- B. Installer Qualifications: A company who employs experienced precast concrete, solid surfacing, stone or agglomerate fabricators/installers who are skilled in installing counter tops, table tops or miscellaneous elements that are similar in material, design and extent to that indicated for this project and whose installations have a record of successful in-service performance.

## 1.6 DELIVERY, STORAGE AND HANDLING

- A. Handle and transport precast concrete surfaces in position consistent with their shape and design and to prevent chipping, breakage, soiling or other damage. Consult with manufacturer for recommended handling procedures.
- B. Storage:
  - 1. Store all units off ground and in a manner to prevent cracking, distortion, warping, staining or other physical damage.
  - 2. Store all units in a clean, dry and room temperature area. Units should not be stored in direct sunlight or exposed to intense freeze/thaw conditions.
  - 3. Provide protective coverings to prevent physical damage or staining following installation for duration of project.



## 1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity and ventilation) within limits recommended by manufacturer and reference standards for optimum results from commencement of installation to final use.
- B. Field verified dimensions or templates of supporting structures and other adjacent elements should be forwarded to manufacturer prior to commencement of manufacturing.

## PART 2 PRODUCTS

### 2.1 MANUFACTURER

- A. Acceptable Manufacturer: Meld USA, Inc., 3001 Spring Forest Road, Suite 103, Raleigh, North Carolina, 27616. Contact: Michael Bustin, President sales & marketing. Tel: 919.790.1749. Fax 919.790.1750. Toll free 866.515.6353. Email: [info@meldUSA.com](mailto:info@meldUSA.com). Web site: [www.meldUSA.com](http://www.meldUSA.com).
- B. Substitutions: Not permitted.

### 2.2 MATERIALS

- A. General: ecoX™ - a proprietary eco-sensitive surfacing material comprised of up to 70% of post-consumer and post-industrial recycled materials and cement.
  - 1. Physical properties:
    - a. Compressive Strength: Conform to ASTM C14
    - b. Flexural Strength: Conform to ASTM C293
    - c. Tensile Strength: Conform to ASTM C-19
    - d. Weight: 136 +/- lbs. per cubic foot on average.
    - e. Thickness: Slabs 1.5" standard or as indicated on construction drawings.
  - 2. Raw Materials:
    - a. Portland cement - Type I, white and/or gray, ASTM C 150
    - b. Proprietary blend of post-consumer and post-industrial recycled materials.
    - c. Colors - Inorganic iron oxide pigments, ASTM C 979
    - d. Water – Clean, fresh and potable.
  - 3. Accessories:
    - a. Manufacturer's protective, low VOC penetrating sealer.



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## 2.3 COLOR AND FINISH

- A. Match sample approved by Architect.
- B. Exposed surfaces, unless otherwise specified, shall exhibit that of the approved sample.
- C. Variation:
  - 1. Variations in color, texture and porosity are expected. Match color and finish of approved sample to the best of the manufacturer's ability subjected to similar aging and weathering conditions when viewed in direct daylight at a 7 foot distance.

## 2.4 REINFORCING

- A. Synthetic fiber reinforcing.
  - 1. Reinforce units when necessary for safe handling and structural integrity.
  - 2. Reinforcement shall be synthetic fiber.
  - 3. Area of reinforcement in unit shall be three dimensionally dispersed, randomly throughout the entire concrete matrix.

## 2.5 MANUFACTURING

- A. Manufacturing and finishing:
  - 1. Manufacture precast concrete specialties to dimensions and configurations indicated on drawings.
  - 2. Cast in appropriate openings for integrated components. Obtain templates or dimensional requirements from manufacturer of each component.
  - 3. Cure and finish concrete to achieve physical properties.
  - 4. Grind and hone exposed surface smooth.
  - 5. Seal exposed faces and edges of precast concrete with minimum two coats of approved concrete penetrating sealer.

## 2.6 RELATED MATERIALS

- A. Supports – Structural supports (wood, steel or other) to be designed by a licensed structural engineer and installed by a qualified contractor at the expense of the Owner unless otherwise noted.



## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify that all substrates, supports and cabinets are smooth, clean, square, plumb and level within acceptable tolerances and are ready to receive finished concrete surfaces. Do not proceed with installation until subsurface conditions are acceptable.

### 3.2 PREPARATION

- A. Protect surrounding work from damage.
- B. Vacuum clean surfaces and remove objects that may interfere with installation.
- C. Prepare subsurface for adhesive installation.

### 3.3 TOLERANCES

- A. Units to be fabricated within a tolerance of approximate +/- 1/8".
- B. Set unit within plane of adjacent unit unless noted otherwise on the architectural drawings.

### 3.4 INSTALLATION

- A. All precast concrete surfaces shall be installed in accordance with manufacturer's recommendations. Please contact manufacturer for specific installation procedures.

### 3.5 SEAMING

- A. Seam Size:
  - 1. Joints between units shall be 1/8" +/- unless noted otherwise on the architectural drawings.
- B. Joint material:
  - 1. Use a pigmented siliconized latex or clear urethane joint sealant as required. The use of a pigmented latex or epoxy cementitious grout can also be used. Apply per manufacturer's specifications.
  - 2. Joint sealant may shrink therefore reapplication may be necessary following initial installation.



- C. Location of joints:
  - 1. As shown on approved shop drawings.
  - 2. Unless otherwise shown: at areas recommended by manufacturer.

### **3.6 SHIPPING & UNCRATING**

- A. Meld USA's proprietary Concrete in a Box™ packaging & shipping technology to be utilized where deemed necessary.
- B. All cast concrete components will be shipped to the job-site unless prior arrangements are made.
- C. Each pallet may weigh in excess of 2000+/- lb. 100% recycled cardboard packages may weigh in excess of 400 +/- lb. Arrangements should be made to unload pallets from delivery truck with a forklift or similar material handling equipment.
- D. All units should be handled with care, kept vertical and carried on their ends (similar to glass).
- E. Units should be kept covered and stored in a cool and temperature stable area. This allows the units to slowly acclimate to ambient temperature thus minimizing the risk of warping or curling.

### **3.7 CLEANING**

- A. At completion of work, remove all dirt and blemishes from exposed surfaces using a non abrasive, non ammoniated and non chlorinated cleaning solution. Warm water and soap or a neutral cleanser is recommended.

### **3.8 INSPECTION AND ACCEPTANCE**

- A. Efflorescence is not cause for rejection.
- B. Color and textural differences are not cause for rejection.
- C. Hairline cracking is not cause for rejection.

### **3.9 PROTECTION**

- A. Protect newly installed finished concrete surfaces from impact, vibration, heavy hammering, soiling (food products and chemicals) and all other damages until final acceptance.

**END OF SECTION**



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