Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including MasterFormat, SectionFormat, and PageFormat, as described in The Project Resource Manual—CSI Manual of Practice, Fifth Edition.

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all “Specifier Notes” after editing this section.

Section numbers are from MasterFormat 2010 Edition.

SECTION 03 41 16 Precast Concrete Slabs
SECTION 03 48 00 Precast Concrete Specialties
SECTION 12 36 13 Concrete Countertops

CONCRETE COUNERTOP

Specifier Notes: This section covers Merge Design products. Consult Merge Design for assistance in editing this section for the specific application.

PART 1 GENERAL

1.1 SECTION INCLUDES
A. Countertops

1.2 REFERENCES

Specifier Notes: List standards referenced in this section, complete with designations and titles. This article does not require compliance with standards, but is merely a listing of those used.

A. ASTM Testing Standards:
   1. ASTM C150 – Specification for Portland cement
   2. ASTM C33 – Specification for concrete aggregates

1.3 SUBMITTALS
A. Product Data: Submit manufacturer’s product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.
B. **Shop Drawings**: Submit manufacturer’s shop drawings, including plans and elevations, indicating overall dimensions, component sizes, edge profiles, exposed faces, arrangement of joints, cutouts, support structure and annotation of finished eco-sensitive concrete products/surfaces and their location.

C. **Samples**: Submit manufacturer’s samples of materials, finishes, and colors. Sample will be representative of the general range of variations in appearance characteristics (i.e. color, texture, porosity, aggregate distribution and finish).

D. **Warranty**: Manufacturer’s standard warranty.

### 1.4 QUALITY ASSURANCE

A. **Manufacturer’s Qualifications**: Manufacturer regularly engaged in manufacture of concrete products since 1996.

B. **Product Support**: Products are supported with complete engineering drawings and design patents where applicable.

C. **Base Worth**: An installed base of products worth nearly twenty million dollars.

D. **Production**: Orders are usually filled within a 45-day schedule.

E. **Facility Operator**: ISFA certified fabricators.

### 1.5 DELIVERY, STORAGE, AND HANDLING

A. **Delivery**: Handle and transport precast eco-sensitive 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, on edge 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 immediately following installation for the duration of project.

C. **Handling**: Protect materials and finish during handling and installation to prevent damage.

### 1.6 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.

### 1.7 WARRANTY

A. **Warranty Information**:
   - Products will be free from manufacturing defects for a period of one year from the date of invoice.
   - The warranty does not apply to damage resulting from accident, heat alteration, misuse, tampering, negligence or abuse.
   - Merge Design shall, at its option, repair, replace, or refund the purchase price of any items found defective upon inspection by an authorized Merge Design service representative.
   - Purchasers should be aware that normal use of these high quality products can result in superficial damage affecting the finish. Scratches, nicks, staining, warping and dents are to be considered normal wear and tear, and are not the responsibility of the manufacturer.

### PART 2 PRODUCTS

#### 2.1 MANUFACTURER
2.2 COUNTERTOPS
A. Countertops:
B. Size:
   1. Slabs:
      a. 108” length x 60” deep x 1-1/2” thick
      b. Custom size: _________________
   2. Finished countertop:
      a. Custom size: _________________
C. Material:
   1. extremeconcrete ®
   2. Xposed
   3. ecoX
   4. micro

2.3 MATERIAL
A. Concrete:
   1. Portland cement: Type I, white and/or gray, ASTM C150
   2. Fine aggregates: Recycled aggregate, ASTM C 33
   3. Colors: Inorganic iron oxide pigments, ASTM C979
   4. Water: Clean, fresh and potable.
B. Physical properties:
   1. Density: 132 lbs/ft³ (16.5 lbs/ft² at 1-1/2” thick)
   2. Compressive strength: Conform to ASTM C109
      a. ecoX: 10,000 psi
      b. micro: 10,000 psi
      c. Xposed: 10,000 psi
      d. eXtremeconcrete®: 11,250 psi
   3. Flexural Strength: Conform to ASTM C78

2.4 RECYCLED CONTENT

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2.5 FINISHES
A. Provide color/texture as specified or match sample approved by Architect.
B. Exposed surfaces, unless otherwise specified, shall exhibit that of the approved sample.
C. Variation: All products are hand-made with recycled materials therefore variation in color, texture, porosity, aggregate distribution and finish of actual product should be expected. Slight anomalies are inherent character traits of eco-sensitive concrete surfaces and products.

Specifier Notes: Consult Merge Design for selection of standard colors and availability of custom colors.

D. Color: _______________
2.6 **REINFORCING**
A. Fiber reinforcing:
   1. Reinforce units when necessary for safe handling and structural integrity.
   2. Reinforcement shall be fibrous.
   3. Area of reinforcement in unit shall be dispersed three-dimensionally, randomly throughout the eco-sensitive concrete matrix.

2.7 **MANUFACTURING**
A. Manufacturing and finishing:
   1. Manufacture eco-sensitive concrete specialties to dimensions and configurations indicated on drawings.
   2. Cast or cut 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 manufacturer’s recommended sealer.

2.8 **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.
B. Notify Architect of conditions that would adversely affect installation or subsequent use.
C. Do not begin installation until unacceptable conditions are corrected.

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: Joints between units shall be 1/16” +/- 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. All cast concrete components will be shipped to the job-site unless prior arrangements are made.
B. Each pallet may weigh in excess of 2000 +/- lb. 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.
C. All units should be handled with care, kept vertical and carried on their ends (similar to glass).
D. 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.
B. Do not use harsh cleaning materials or methods that could damage finish.

3.8 INSPECTION AND ACCEPTANCE
A. The following are NOT cause for rejection: Efflorescence, hairline cracking, slight anomalies, and color, textural or porosity differences.

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