SECTION 04 23 00
GLASS UNIT MASONRY

PART 1 GENERAL

1.1 RELATED DOCUMENTS
- A. The provisions of the general Conditions, Supplementary Conditions, and the Sections included under Division 1, General Requirements, are included as a part of this Section.

1.2 SECTION INCLUDES
- A. Exterior located glass masonry units
- B. Mortar bed and pointing mortar and sealant
- C. Perimeter treatment

1.3 REFERENCES
- A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Galvanized) Coatings on Iron and Steel Products
- B. ASTM C270 - Standard Specification for Mortar for Unit Masonry
- C. ASTM C780 - Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry
- D. FBC - Florida Building Code
- E. ASCE 7 – Minimum Design Loads for Buildings and other Structures.

1.4 SUBMITTALS
- A. Submit under provisions of Section 01 33 00.
- B. Product Data: Provide data for glass units and accessories.
- C. Samples: Submit two glass units and two curved units illustrating size variation, color, design, and face pattern.
- D. Manufacturer's Installation Instructions: Indicate special procedures, positioning of reinforcement, perimeter conditions requiring special attention.
- E. Provide current FBC Product Approval System indicating compliance with both ASCE 7 and Large Missile Impact Testing (Small Missile Impact Testing if installed over 30' AFF)

1.5 QUALIFICATIONS
- A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum 3-years documented experience.
- B. Installer: Company specializing in performing the work of this section with minimum 3-years documented experience and approved by manufacturer.

1.6 MOCKUP
- A. Provide mockup of glass units, reinforcement, and mortar under provisions of Section 01 40 00.
- B. Construct mockup, 2' long x 3' high, which includes glass units with head, jamb, and sill conditions: perimeter chase and construction.
- C. Locate where directed.
- D. Mockup may remain as part of the work.

1.7 DELIVERY, STORAGE, AND HANDLING
- A. Deliver, store, protect, and handle products to site under provisions of Section 01 60 00.
- B. Accept glass units on site on pallets; inspect for damage.

1.8 ENVIRONMENTAL REQUIREMENTS
- A. Maintain materials and surrounding air temperature to minimum 40°F prior to, during, and 48 hours after completion of masonry work.

B. Maintain materials and surrounding air temperature to minimum 90°F (32°C) prior to, during, and 48 hours after completion of masonry work.

1.9 FIELD MEASUREMENTS

A. Verify that field measurements are as indicated on shop drawings.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Glass block system shall be the product of Pittsburgh Corning Corporation or approved equal.
B. Owner will consider requests for substitutions in accordance with provisions of Section 01 60 00.

2.2 GLASS BLOCKS

A. Glass block system shall be “THICKSET” Series block, hollow, 3-7/8" inches thick, with a Polyvinyl butyral edge coating with the following design values:
   1. Thermal Conductance (U Value): 0.51 Btu/hr sq ft deg F (2.9 W/sq m K)
   2. Thermal Resistance (R Value): 1.96°F hr sq ft/Btu (0.35 (K sq m)/W)
   3. Visible Light Transmission: 75%.
   4. Shading Coefficient: 0.65
   5. Pattern: As selected by the Architect.
   6. Face Size: 8" (203 mm) x 8" (203 mm), nominal; sound transmission: 48
   7. Weight Installed With Mortar: 30-lb/sq ft (146 kg/sq m)
B. Framing: Framed and anchored with the “KWiK’N EZ” Silicone System to meet FBC Product Approval System including wind loading to comply with ASCE 7 and Large Missile Impact Testing.

2.3 ACCESSORIES

A. Sealant (caulk): Provide non-staining; waterproof mastic; silicone type.
B. Integral Type Water-Repellant: Stearate type as recommended by block manufacturer.
C. External Type Waterproofed: Water based saline sealer, as recommended by block manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that openings are ready to receive work.

3.2 PREPARATION

A. Clean glass units of substances that may impair bond with sealant.
B. Establish and protect lines, levels, and coursing.
C. Protect elements surrounding the work of this section from damage or disfiguration.

3.3 INSTALLATION

A. Erect glass units and accessories in accordance with manufacturer's instructions.
B. Locate and secure perimeter metal chase.
C. Coat sill under units with asphalt emulsion as a bond breaker, and allow material to dry.
D. Set panel anchors in sealant bed directly over coating.
E. Provide full sealant joints. Furrowing not permitted. Remove excess sealant.
F. Maintain uniform joint width of ¼".
G. Place panel reinforcement per the approved FBC Product Approval System.
H. Place sealant in joints in accordance with Section 07 92 00, and tool surface to a concave profile.

I. Remove excess sealant.

3.4 TOLERANCES

A. Variation From Joint Width: Plus ⅛" and minus 0"
B. Maximum Variation from Plane of Unit to Adjacent Unit: 1/32"
C. Maximum Variation of Panel from Plane: ⅛"

3.5 CLEANING

A. Clean work under provisions of 01 77 00.
B. Do not scratch or deface units.

3.6 PROTECTION OF FINISHED WORK

A. Protect finished work under provisions of Section 01 50 00.
B. Maintain protective boards at exposed external corners. Provide protection without damaging completed work.

END OF SECTION