SECTION 08 56 23

BLAST- RESISTANT GLASS BLOCK WINDOWS/PANELS

PART 1. GENERAL

1.1. SECTION INCLUDES

A. Blast-Resistant Glass Block Systems

1.2. RELATED SECTIONS

A. Section 05 50 00 - Metal Fabrications: Steel channels, sills, lintels, and jambs.

B. Section 07 90 00 - Joint Sealers.

C. Section 09 90 00 - Paints and Coatings

1.3. REFERENCES

A. ASTM F-1642 - 04 Standard Method of Test for Glazing and Glazing Systems Subject to Air blast Loadings, as adapted by the U.S. Government GSA Test Standard Protocols

B. GSA TS01-2003-US General Services Administration Standard Test Method for Glazing and Window Systems Subject to Dynamic Overpressure Loadings

C. DoD UFC 4-010-01 - DoD Minimum Anti-terrorism Standards for Buildings

D. ASTM E283 -04 Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure and Temperature Differences Across the Specimen

E. ASTM E330 -02 Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform, Static Air Pressure Difference

F. ASTM E547 -00 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference

G. ASTM B209M -07 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.

H. ASTM C920 - 08 Standard Specification for Elastomeric Joint Sealants

1.4. QUALITY ASSURANCE

A. Manufacturer

1. Minimum of 10 years specialized experience in the manufacture of windows.

B. Direct Representation

1. The manufacturer shall provide a direct representative, not a manufacturer's representative, with full knowledge and experience of the products and systems incorporated in this project, to verify the installation of the contractor's work. Note: if applicable to the job.

1.5. SUBMITTALS

A. Submit under provisions of Section 01 30 00.

B. Product Data: Manufacturer's literature on each product to be used, including:

1. Preparation instructions and recommendations.

2. Storage and handling requirements and recommendations.

3. Written installation instructions.

C. Verification Samples:

1. Two glass block units of each type specified, showing size, design, and pattern faces as required for project.

2. Representative samples of assembly as required for project.

D. Test Reports

1. Submittal of test reports from independent laboratories indicating conformance to regulatory requirements shall be made available if required by architect.

1.6. DELIVERY, STORAGE, AND HANDLING

A. Handle panels in a manner which will prevent undue stress on component parts, sealants and structural members. Do not rack or torque, or cause load forces in an inappropriate manner.

1.7. PROJECT CONDITIONS

Maintain environmental conditions (temperature, humidity, and ventilation) within the limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.8. WARRANTY

A. Provide manufacturers limited 5-year warranty.

PART 2. PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Seves Glass Block Inc. 10576 Broadview Rd, Cleveland, Ohio 44147 440-627-6257 or 877-SEVES11 (877-738-3711) www.sevesglassblockinc.com sales@gbaproducts.com sevesglassblock.com

2.2. SYSTEM DESCRIPTION

A. Design Requirements

1. Blast-resistant system shall conform to the requirements specified for the items and shall be complete assemblies by a single manufacturer.

B. Performance Requirements

1. The system shall be Blast resistant to the threat level specified.

2.3. GLASS BLOCK

A. Basis for Design: Seves Glass Block THICKSET 90 Series and LightWise Architectural Series Patterns

1. THICKSET® 90 Clarity
2. THICKSET® 90 Nubio
3. THICKSET® 90 Endura

B. Physical Properties:

1. Nominal Size; Face: 8 inches (203mm) by 8 inches (203mm) by 4 inches (100mm) thick with ¾" thick faces
2. Installed Weight 24 lb./sq. ft
3. Thermal Conductance (U Value): 0.50 Btu/ hr. sq. ft deg F
4. Thermal Resistance (R Value): 2.00 deg F hr. sq. ft/Btu
5. Visible Light Transmission: 38%-70% (dependent on pattern)
6. Sound Transmission: STC 48
7. Edge Coating: White latex paint

2.4. ACCESSORIES

A. Sealant (caulk): Non-staining; waterproof mastic; silicone type meeting the requirements of ASTM C920

B. Aluminum 2-piece Channel System: Alloy and thickness per prescribed blast condition, anodized or powder coated as required.

C. Anchorage: Self-tapping screws and masonry anchors per prescribed blast condition and substrate

D. Shims: High impact type shims as required

PART 3. EXECUTION

3.1. EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. Notify architect of unsatisfactory preparation before proceeding.

C. Verify that channels for support at head, jambs and sills are properly installed.

3.2. PREPARATION

A. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3. INSTALLATION

A. Install Blast-Resistant Glass Black System in strict compliance with the manufacturers' specifications, sizing, anchorage charts and installation instructions including all materials, accessories workmanship and cleaning.

3.4. CLEANING

A. Remove excess sealant from glass surfaces immediately following application.

3.5. PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION