



SECTION 08 88 65

TORNADO RESISTANT WINDOW

PART 1. GENERAL

1.1. SECTION INCLUDES

- A. Tornado Resistant Prefabricated Laminated Glass Block Window System

1.2. RELATED SECTIONS

- A. Section 04 20 00 – Unit Masonry
- B. Section 05 50 00 - Metal Fabrications: Steel channels, sills, lintels, and jambs.
- C. Section 00 79 00 - Joint Sealants

1.3. REFERENCES

- A. ASTM A123 - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- B. ASTM A1011 - Standard Specification for Steel, Sheet, and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.
- C. ASTM C920 - Standard Specification for Joint Sealants.

1.4. TEST METHODS

- A. FEMA 361, Section 6 Performance Criteria for Debris. Federal Emergency Management Agency. Second Edition, August 2008.
- B. ICC/NSSA 500-2008, Standard for the Design and Construction of Storm Shelters.
- C. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference.

- D. ASTM E283 - 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 E547 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference.

1.5. QUALITY ASSURANCE

- A. Manufacturer
 - 1. Minimum of 10 years specialized experience in the manufacture of windows
- B. Direct Representation
 - 1. The manufacturer shall have available a direct representative with full knowledge and experience of the product and systems for technical assistance.

1.6. SUBMITTALS

- A. Submit under provisions of Section 01 30 00.
- B. Manufacturer's literature on each product used
- C. Verification Samples:
 - 1. Two glass block units of each type specified, showing size, design, and pattern of faces as required for project.
 - 2. Representative samples of assembly as required for project.
- D. Test Reports
 - 1. Test report from certified lab documenting testing of air pressures and missile impact for windows as described in FEMA 361, Section 6 Second Edition, August 2008, ICC/NSSA 500-2008 and ASTM E 330-02 - Pass

1.7. 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.

1.8. PROJECT CONDITIONS

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

1.9. WARRANTY

- A. Provide manufacturers limited 5-year warranty.

PART 2. PRODUCTS

2.1. MANUFACTURERS

- A. Acceptable Manufacturer: Seves Glass Block Inc, which is located at 10576 Broadview Road, Broadview Heights, Ohio 44147; sevesglassblock.com

2.2. GLASS BLOCK PREFABRICATED SYSTEM

- A. Glass Block: Seves Laminated VISTABRIK solid glass block.

1. Pattern: Clear or Stippled
2. Sandblast (special order): one or two interior faces
3. Size: 8 inch by 8-inch nominal (standard); other sizes (specialorder)

- B. Basis for Design

1. Seves LightWise® Architectural Tornado Resistant Glass Block Window

- C. Performance Requirements

1. Resistance to UV light transmission: 99%
2. Visible Light Transmission of 50% to 80%.

2.3. STEEL GRID

- A. Stainless or Carbon steel 0.25" thick face plate; 11 gauge (0.120") stainless or carbon steelfins welded to face plate.

2.4. ACCESSORIES

- A. Sealant: Type meeting requirements of ASTM C920.
- B. Fasteners and anchors: Per current manufacturer's recommendations.

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 the opening is plumb and square and meets dimensional requirements

3.2. PREPARATION

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

3.3. INSTALLATION

- A. Install Tornado Resistant Prefabricated Laminated Glass Block Window 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 and frame immediately following application.

3.5. PROTECTION

- A. Protect installed products until completion of project.

END OF SECTION