**OVERSIZED FIXED FLOOD WINDOW FROM FLOODPROOFING.COM®
3-PART SPECIFICATIONS**

**PART 1 GENERAL**

**1.01 SUMMARY**

A. This document provides specifications for the FENEX® Oversized Fixed Flood Window. Below are typical applications for this product:

1. Hurricane-resistant building envelope protection: Large Missile Impact Level D.

2. Passive Dry-Floodproofing solution: Flood Barrier for Opening Barrier Applications.

**1.02 RELATED SECTIONS**

A. Section 08 01 00: Operation and Maintenance of Openings

B. Section 08 06 00: Schedules for Openings.

C. Section 08 12 00: Metal Frames.

D. Section 08 43 00: Storefronts.

E. Section 08 44 00 Curtainwall and Glazed Assemblies

F. Section 08 46 00 Window Wall Assemblies

G. Section 08 55 00 Pressure-Resistant Windows

H. Section 08 81 00 Glass and Glazing

I. Section 08 88 00 Special Function Glazing

**1.03 REFERENCES**

A. American Society for Testing and Materials (ASTM):

1. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

2. ASTM A240 - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.

3. ASTM A276 – Standard Specification for Stainless Steel Bars and Shapes.

4. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings.

5. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.

6. ASTM C1115 – Standard Specification for Dense Elastomeric Silicone Rubber Gaskets and Accessories.

7. ASTM E2203 - Standard Specification for Dense Thermoplastic Elastomers Used for Compression Seals, Gaskets, Setting Blocks, Spacers and Accessories.

8. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass.

9. ASTM C162 - Standard Terminology of Glass and Glass Products.

10. ASTM C1036 (Q3) - Standard Specification for Flat Glass.

11. ASTM C1172 - Standard Specification for Laminated Architectural Flat Glass.

12. ASTM C1376 – Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass.

13. ASTM C1464 - Standard Specification for Bent Glass.

14. ASTM E2188 - Standard Test Method for Insulating Glass Unit Performance.

15. IGMA/IGCC Certification & Testing for Insulating Glass Units ASTM 2190.

16. ASTM E283 - Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors.

17. ASTM E331 - Standard Test Method for Metal Curtain Walls and Doors by Uniform Static Air Pressure Difference.

18. ASTM E330 - Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

19. ASTM 1886 – Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.

20. ASTM 1996 – Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Windborne Debris in Hurricanes.

B. American Architectural Manufacturers Association (AAMA):

1. AAMA 101/I.S.2/A440 – NAFS – North American Fenestration Standard/Specifications for Windows, Doors and Skylights

2. AAMA 501 – Methods of Test for Exterior Walls.

C. Consumer Product Safety Commission (CPSC):

1. CPSC 16 CFR 1201 – Safety Standard for Architectural Glazing Materials.

D. American National Standards Institute (ANSI):

1. ANSI Z97.1 - Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test.

E. Aluminum Design Manual (ADM) 2015

F. American Institute of Steel Construction (AISC):

1. Steel Design Guide 27: Structural Stainless Steel.

G. Glass Association of North America (GANA):

1. GANA Glazing Manual.

H. Flat Glass Marketing Association:

1. FGMA Sealant Manual.

I. FM Global:

1. ANSI/FM Approvals 2510-2020 (Sept. 2020) - Flood Barriers For Opening Barrier Applications.

J. UL Standards

1. UL 972 Standard for Safety Burglary Resisting Glazing Material

K. EN standard (European Standard)

1. EN 356 European Standard for Glass in Building: Security glazing – testing and classification of resistance against manual attack.

 **1.04 SUBMITTALS**

A. Documentation: TBD.

B. Waterproofing: the installer is responsible for supplying compatible waterproofing around the perimeter of the system and the host structure substrate according to specifications and shop drawings.

C. Installation: Install per details in shop drawings and guidelines in PART 3 – EXECUTION.

D. Glazing: glass specifications and samples.

E. Engineering: Mockup drawings and calculations.

F. Framework finish: Material samples for color and texture identification.

G. Shop Drawings: Provide site-specific drawings with floor plans, product elevations, and attachment details.

**1.05 QUALITY ASSURANCE**

A. Sealants: Sealant Manufacturer to perform pull tests for sealant/substrate

compatibility.

B. Installer: FENEX, LLC. or prequalified installer by FENEX LLC.

C. Manufacturer: FENEX, LLC. exclusively.

D. Distributor: Floodproofing.com

 19 Mantua Road, NJ 08061

 1-800-507-0865

 info@floodproofing.com

**1.06 DELIVERY, STORAGE AND HANDLING**

A. General: Comply with Division 1 Product Requirements Sections.

B. Ordering: Comply with the manufacturer’s ordering instructions and lead times.

C. Delivery: Deliver materials to designated site locations.

D. Storage and Protection: Store under cover, sheltered from weather and construction activities.

**1.07 FABRICATION DIMENSIONS**

A. Field Measurements: Contractor to provide the openings with the dimensions.

**1.08 WARRANTY**

A. Product Warranty: Refer to Conditions of the FENEX LLC. warranty for project warranty provisions.

**PART 2 PRODUCTS**

**2.01 PRODUCTS**

A. Manufacturers and Distributors:

1. Manufacturer: FENEX, LLC. exclusively.

2. Distributor: Floodproofing.com

 19 Mantua Road, NJ 08061

 1-800-507-0865

 info@floodproofing.com

B. Description:

Aluminum or stainless-steel fixed frame for passive flood mitigation and/or hurricane impact protection (Missile Level D) applications. Captured frame and structurally glazed configurations are available.

Certified FM Approvals Flood Barrier for Opening Flood Barrier Applications (Model FX- FW-01) for systems up to 90.67 Sq.ft.

Florida Product Approval FL# 20700.2 for sizes up to 132 Sq.ft for the State of Florida & Texas. Approved for use within and outside the High Velocity Hurricane Zone (HVHZ).

ANSI/FM Approvals 2510-2020 (Hydrostatic and Impact) tested system for sizes up to 220 Sq.ft.

C. Performance:

1. Air Infiltration: Tested per ASTM E283 and TAS 202 @ 6.24 P.S.F. (no infiltration).

2. Water Infiltration: ASTM E331, AAMA 501, and TAS 202 - 18 P.S.F.

3. Structural: ASTM E330, AAMA 501, and TAS 202 - Design Pressure +/- 120 P.S.F.

4. Hurricane Impact: ASTM 1996 and TAS 201 up to missile level “A”, “B”, “C”, & “D”

5. Cycling: ASTM 1886 and TAS 203 (9,000 cycles) 120 P.S.F.

6. Hydrostatic and Impact Flood Mitigation per ANSI/FM Approvals 2510 Section 4.3:

a. Up to 10 ft Static Water Test for captured and structurally glazed configurations.

b. Dynamic Impact Log Tested.

7. Enhanced security glazing: UL 972, EN 356 level 1-5 – superior security rating may be viable depending on glass composition.

D. Materials – Framing, Glass, Hardware, Gaskets, Structural and Weather Sealants:

1. Frame:

a. Aluminum: 6061-T6 or 6005-T5 or 6005-T6 Structural Extruded Aluminum ASTM B 221.

b. Stainless Steel: 304 or 316 Structural Stainless-Steel ASTM A240.

2. Glass: CPSC 16 CFR 1201 - ANSI Z97.1 - ASTM E1300 - ASTM C1048

a. (1-1/16”) 1/2" H.S. or F.T. + 0.090" SG + 1/2" H.S. or F.T.

b. (1-7/16”) 1/2" H.S. or F.T. + 0.090" SG + 1/2" H.S. or F.T + 0.090" SG + 1/4" H.S. or F.T.

c. (2-7/16”) 1/2" H.S. or F.T. + 0.090" SG + 1/4" H.S. or F.T. + 1/2" Air Space + 1/2" H.S. or F.T. + 0.090" SG + 1/2" H.S. or F.T.

• Glass to be Heat-Strengthened (H.S.) or Fully Tempered (F.T.).

• Alternate glass compositions may be available upon request.

• Heat-treated glass optical quality observations:

• FENEX sources glass from first-rate manufacturers to provide the best optical quality; however, all heat-treated glass products inherently may exhibit roll distortion, which can be exacerbated by the viewing angle.

• Heat-treated glass tends to exhibit more distortion than annealed glass, particularly when the units are laminated.

• In the heat-treated glass, a strain pattern or iridescence that is typically not visible may become noticeable under specific lighting conditions. This phenomenon is not a defect but rather an acceptable characteristic of heat-strengthened and fully tempered glass. It should not be confused with discoloration (ASTM C 1048).

• Roller wave orientation will depend on panel sizes.

3. Frame assembly

a. Welded or mechanically attached with screws (410 Stainless Steel Self Drilling Screws) from the factory.

4. Gaskets: Comply with ASTM C864, C1105 and E2203.

5. Sealants:

a. Structural sealant: TREMCO Proglaze® II or DOWSIL™ 983 Structural Glazing Sealant.

b. Perimeter weatherproofing sealant: TREMCO Spectrem® 2 Silicone, DOWSIL™ 795 Silicone Building Sealant or equivalent. Installer to verify compatibility with host structure substrate material.

c. Structural Glazing Tape: Tremco SGT921 or similar.

E. Finishes:

1. Aluminum: Powder coatings AAMA 2604 or 2605 Kynar or equivalent.

2. Stainless Steel: Mill or polished finish.

**PART 3 EXECUTION**

**3.01 MANUFACTURER’S INSTRUCTIONS**

A. Compliance: Comply with manufacturer’s product data including product technical bulletins and installation instructions per FENEX Installation & Maintenance Manual.

**3.02 EXAMINATION**

A. Site Verification of Conditions: Verify substrate conditions, have been previously installed under other sections, and are acceptable for product installation in accordance with manufacturer’s instructions. Openings shall be plumb, square, and within allowable tolerances. The Architect/Engineer shall be notified of any conditions that jeopardize the integrity of the proposed framing system. Do not proceed until such conditions are corrected.

B. For flood, compatible product on the substrate has to be used to comply with recommended and tested qualification

**3.03 INSTALLATION**

A. Installation shall be by a prequalified licensed contractor and in strict accordance with the approved shop drawings. Verify compatibility for all products used for installation.

**3.04 CLEANING AND PROTECTION**

A. Protect glass from contact with contaminating substances resulting from construction operations.

B. Wash glass on both faces not more than four days prior to the date scheduled for inspections intended to establish the date of Substantial Completion. Wash glass by the method recommended by the glass manufacturer.

C. Remove temporary coverings and protection of adjacent work areas.

**END OF SECTION**

**Please feel free to copy and paste the below graphics into your plans.**

