Welcome to the SAFTI *FIRST*® Guide Specification System prepared as an aid to specifiers in preparing written construction documents. For specification assistance with specific product applications, please contact SAFTI *FIRST*®. To download an electronic copy, please visit www.safti.com.

SPECIFICATION
SECTION 08 88 13.13: FIRE-RATED ALUMINUM FRAMED ENTRANCES AND STOREFRONTS
GPX® Hurricane System

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Fire resistive hurricane rated glass and framing system.
   1. GPX® Hurricane fire resistive, hurricane rated framing system for exterior applications.
   2. Applications of fire rated framing includes:
      a. Vision lites in fire rated doors, full vision fire rated doors, sidelites, borrowed lites, windows, transoms and transparent walls with fire and hurricane requirements as specified.

B. Related Sections:
   1. Section 01 3323: Shop Drawings, Product Data and Samples.
   2. Section 08 80 00: Glazing.
   3. Section 08 88 00: Special Function Glazing
   4. Section 08 88 13: Fire-Rated Glazing
   5. Section 08 11 13: Hollow Metal Doors and Frames
   6. Section 08 11 16: Aluminum Doors and Frames
   7. Section 08 12 16.13: Fire-Rated Aluminum Frames
   8. Section 08 43 13.14: Fire-Rated Aluminum Storefronts
   9. Section 08 39 19: Airtight and Watertight Doors
   10. Section 08 88 19: Hurricane Resistant Glazing
   11. Section 08 71 00: Door Hardware

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM):
   1. ASTM E119: Methods for Fire Tests of Building Construction and Materials.
   2. ASTM E152: Methods of Fire Tests of Door Assemblies.
   3. ASTM E163: Methods for Fire Tests of Window Assemblies.

4. ASTM E2074: Standard Test Method for Fire Tests of Door Assemblies, including Positive Pressure Testing of Side-hinged and Pivoted Swinging Door Assemblies.
5. ASTM E2010-1: Standard Test for Positive Pressure of Fire Tests of Window Assemblies.
6. ASTM E283: Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors.
7. ASTM E331: Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
8. ASTM E547: Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference.
9. ASTM E330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
10. ASTM E1300: Standard Practice for Determining Load Resistance of Glass in Buildings.

B. Testing Application Standard (Miami Dade)
1. TAS 201: Large and Small Missile Test Standards.
2. TAS 202: Uniform Structural Load Standards.
3. TAS 203: Uniform Cyclic Pressure Test Standards. These are the Test Standards.

C. AAMA
1. AAMA 1302.5-76 and AAMA 1303.5-76 for Forced Entry Resistance.

D. National Fire Protection Association (NFPA):
1. NFPA 80: Fire Doors and Windows.
2. NFPA 251: Fire Tests of Building Construction and Materials.
3. NFPA 252: Fire Tests of Door Assemblies.
4. NFPA 257: Fire Tests of Window Assemblies.

E. Underwriters Laboratories, Inc. (UL):
1. UL 9: Standard for Safety of Fire Tests of Window Assemblies.
2. UL 10B: Standard for Safety of Fire Tests of Door Assemblies.
3. UL 10C: Standard for Safety of Positive Pressure Fire Tests of Door Assemblies.
4. UL 263: Fire Tests of Building Construction and Materials.
5. UL 752-2005: Standard for Safety for Bullet-Resisting Equipment.

F. Standard Council of Canada (ULC):
1. ULC Standard CAN4-S101: Fire Tests of Building Construction and Materials.
2. ULC Standard CAN4-S104: Fire Tests of Door Assemblies.
3. ULC Standard CAN4-S106: Fire Tests of Window Assemblies.

E. Consumer Product Safety Commission (CPSC):
1. CPSC 16 CFR 1201: Safety Standard for Architectural Glazing Materials.

F. Glass Association of North America (GANA)
   1. GANA – Glazing Manual.
   2. FGMA – Sealant Manual.

G. [American Recovery and Reinvestment Act
   1. Section 1605, Title XVI Buy American Provision]

H. [Insert building code used by Authority Having Jurisdiction]

1.03 SYSTEM DESCRIPTION

A. Performance Requirements:
   1. Fire Resistive Rating: must meet 45, 60, 90 or 120 minutes as specified.
   2. Fire Resistive Wall Assembly Certifications: must meet 45-120 minute fire resistive wall assembly requirements tested in accordance with ASTM E119, NFPA 251, UL 263 and ULC-S101.
   3. Fire Resistive Door Assembly Certifications: must meet 60-90 minute temperature rise door assembly requirements as tested in accordance with NFPA 252, UL 10B, UL 10C and CAN4S104. Must meet 250 degrees F/450 degrees F temperature rise door requirements.
   4. Fire Protective Door Assembly Certifications: must meet 20-45 minute fire protective door assembly requirements shall be tested in accordance with NFPA 80, NFPA 252, ASTM E152, ASTM E2074, UL 10B, UL 10C and CAN4-S104.
   5. Hurricane Rating: Must meet ASTM E283, ASTM E547, ASTM E330, ASTM E1300, TAS 201, TAS 202, TAS 203. Must meet a maximum design load of +/- 80 psf. Also meets FBC 1626.2 and complies with High Velocity Hurricane Zone (HVHZ) testing for Florida Building Code Approval.
   6. Must have Florida Product Approval FL163882 for walls and FL 16888 for single and pair doors.
   7. Must have UL Listing R25144 for wind resistant building components.
   8. Mast have Texas Department of Insurance Approvals CWSF-50 for Window/Walls and DR-798 for Single/Pair Doors. Must meet TDI’s criteria for windborne debris in Inland I and Seaward zones.
   9. Testing Laboratory: Fire test must be conducted by a nationally recognized independent testing laboratory.
   10. Glazing: glazing make up must be SuperLite II-XL with 9/16” DuPont Sentry Plus Laminated Glass. Dow Corning 995 to be used as the perimeter sealant when Florida Product Approval is required. Custom glazing options in addition to this make up is permitted.
   11. Max. Door opening sizes for FL and TX Approvals: must meet maximum sizes of 52-1/2 in. x 105-1/4 in. for single doors and 104-1/2 in. x 105-1/4 in. for pair doors.
   12. Max. Door opening sizes for UL Certification: must meet maximum sizes of 42 in. x 84 in. for single doors and 108 in. x 108 in. for pair doors.

B. Listings and Labels:
   1. Fire rated framing system shall be under current follow-up service by a nationally recognized independent laboratory approved by OSHA and maintain a current listing or certification. Assemblies shall be labeled in accordance with limits of listings.

C. Appearance:
   1. Wall/door assembly shall have a neat finished appearance with minimum joints at decorative cover intersections.

1.04 SUBMITTALS

A. Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedure Section.
   1. Shop Drawings: Submit shop drawings showing layout, profiles and product components.
   2. Samples: Submit samples for finishes, colors and textures.
   3. Technical Information: Submit latest edition of manufacturer's product data providing product descriptions, technical data and installation instructions.

1.05 DELIVERY, STORAGE AND HANDLING

A. General: Comply with Division1 Product Requirements Sections.

B. Ordering: Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.

C. Delivery: Deliver materials to specified destinations in manufacturer's or distributor's packaging undamaged, complete with installation instructions.

D. Storage and Protection: Store off ground, under cover, protected from weather and construction activities and at temperature conditions recommended by manufacturer.

1.06 FABRICATION DIMENSIONS

A. Field Measurements: Verify actual measurements for openings by field measurements before fabrication. Show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

1.07 WARRANTY

A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.

B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document. Manufacturer's warranty is not intended to limit other rights that the Owner may have under the Contract Documents.
   1. Warranty Period: 5 years from date of shipping.

PART 2 PRODUCTS

2.01 MANUFACTURERS – FIRE RESISTVE AND HURRICANE RATED (DOOR) (WALL ASSEMBLY)

A. Manufacturer: GPX® Hurricane System as manufactured and distributed by SAFTI *FIRST*® Fire Rated Glazing Solutions.
   1. Contact: 100 N Hill Drive, Suite 12, Brisbane, CA 94005; Telephone 888.653. 3333; email info@safti.com; Web site www.safti.com.

B. Fire resistive and hurricane rated glass and framing must be provided by a single-source, US manufacturer. Distributors of fire rated glass and framing are not to be considered as manufacturers. Materials for the project should be shipped together in the same shipment on the same truck.

C. Substitutions: No substitutions allowed.

2.02 MATERIALS – FRAMING

A. Fire resistive and hurricane rated framing system up to 120 minutes.

Properties:
1. Frame profile: Wall frame profile will have 3" at the perimeter and 5" at the intermediates. Door frame profile: 5" vertical stile, 5" head and 10" bottom rail (can be modified with AHJ approval.
2. Internal framing: Internal tube steel framing shall conform to ASTM A501. Formed steel retainers shall be galvanized conforming to ASTM A527.
3. Insulation: The framing system shall insulate against the effects of fire, smoke and heat transfer from either side. The perimeter of the framing system to the rough opening shall be firmly packed with mineral wool fire stop insulation or appropriately rated intumescent sealant.
4. Fasteners: Type recommended by manufacturer. No exposed fasteners allowed.
5. Framing covers: Offered in standard and custom finishes including high performance fluoropolymer finished by PPG®, clear anodized, bronze anodized, black anodized, Decoral, any species of wood veneer, ornamental metal, and more.
6. Glazing accessories: The glazing material perimeter shall be separated from the perimeter framing system with approved flame retardant glazing tape. The SuperLite® glazing panel shall be caulked continuously around the edge to the

tube steel frame utilizing neutral cure silicone. Silicone setting blocks recommended.
7. SAFTI *FIRST*® listing allows for doors by others.

2.03 MATERIALS – GLASS

A. Assemblies shall be glazed with SuperLite® II-XL with 9/16 in. Dupont Sentry Plus laminated glass. Dow Corning 995 to be used as the perimeter sealant when Florida Product Approval is required.

Properties:
1. Individual Lites shall be permanently identified with a listing mark.
2. Glazing material installed in “Hazardous Locations” (subject to human impact) shall be certified to meet the applicable requirements for fire rated assemblies referenced in ANSI Z97.1 Standard for Safety Glazing Materials Used In Buildings and/or CPSC 16 CFR 1201 Safety Standard for Architectural Glazing Materials.
3. Temperature rise on the unexposed side of glazing material shall be limited to 250 degrees Fahrenheit when required.
4. Visible daylight transmission: Varies by glazing type. Refer to SuperLite® product data for more information.
5. STC rating shall be a minimum of Varies by glazing type. Refer to SuperLite® product data for more information.
6. Pressure glazing is allowed.

B. Logo: Each piece of fire rated glazing shall be labeled with a permanent logo.

2.03 FABRICATION

A. Assemblies shall be furnished [knocked down for field assembly and will be glazed in the field][assembled (should configurations and job site conditions allow)] [unitized (should configurations and job site conditions allow)] .

B. Door assemblies shall be factory prepared for field mounting of hardware.

C. Fabrication Dimensions: Fabricate to approved dimensions. The general contractor shall guarantee dimensions within required tolerance. Obtain approved shop drawings prior to fabrication.

2.04 FINISHES

A. Comply with NAAMM’s “Metal Finishes Manual for Architectural and Metal Products” for recommendations for applying and designing finishes.

B. Covers shall be chemically cleaned and pretreated; then, finished with (choose one):

1. High Performance Coraflon Fluoropolymer Finish by PPG®. Solid color to be selected from SAFTI's Standard Color Chart. Mica, XL & Exotics are available at an additional charge.
2. Clear or Bronze Anodized.
3. Decoral® (specify color).
4. Ornamental metal (specify finish).
5. Wood veneer (natural finish standard).
6. Acrylic urethane custom color.
7. Other

C. Protect finishes on exposed surfaces from damage by applying strippable, temporary protective covering before shipping.

D. Variations in appearance of abutting or adjacent pieces are acceptable. Noticeable variations in the same piece are not acceptable.

2.05 DOOR HARDWARE FOR SINGLE AND PAIRED DOORS

A. Hardware shall be supplied with the fire door. Please call manufacturer for standard and custom hardware selections.

PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

A. Compliance: Comply with manufacturer's product data including product technical bulletins and installation instructions.

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 fire wall/door framing system. Do not proceed until such conditions are corrected.

3.03 INSTALLATION

A. Fire wall/door installation shall be by a licensed contractor and in strict accordance with the approved shop drawings.

3.04 CLEANING AND PROTECTION

A. Protect glass from contact with contaminating substances resulting from construction operations. Remove such substances by method approved by manufacturer.

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

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

D. Remove construction debris from project site and legally dispose of debris.

END OF SECTION

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