SECTION 081163.23 - ALUMINUM SCREEN AND STORM DOORS

Includes medium and heavy duty units complete with standard hardware. Door frames are not included.

1. GENERAL
   * + 1. SUMMARY
          1. Section Includes:

Commercial type aluminum storm and screen doors.

* + - 1. SUBMITTALS
         1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
         2. Manufacturer’s installation instructions shall be provided along with product data.
         3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
         4. Product Data: for each type and size of doors.

Catalog sheets, specifications, and installation instructions for door units.

* + - * 1. Shop Drawings: for screen and storm doors.

Include plans, elevations, sections, and details; hardware; and attachments to other work.

* + - * 1. Samples: For each screen and storm door type.

Include samples of hardware and accessories involving color selection.

Retain subparagraph below for larger installations.

One complete door unit. This sample will be returned and if approved may be used in the Work.

Retain subparagraph below for smaller installations.

Corner section of frame and each type sash insert; 12 inch x 12 inch minimum.

* + - * 1. Product Schedule: For aluminum terrace doors**.[ Use same designations indicated on Drawings**.]
        2. Quality Control Submittals:

Sample Warranty: For manufacturer's special warranty.

* + - * 1. Contract Closeout Submittals

Maintenance Data: For finishes, weather stripping, operable panels, and operating hardware to include in maintenance manuals.

* + - 1. WARRANTY

When warranties are required, verify with Director’s Representative that warranties stated in this article are not less than remedies available to Director’s Representative under prevailing local laws.

* + - * 1. Manufacturer's Special Warranty: Manufacturer agrees to repair or replace components of aluminum storm and screen doors that fail in materials or workmanship within specified warranty period.

Failures include, but are not limited to, the following:

Failure to meet performance requirements.

Structural failures including excessive deflection.

Most manufacturers exclude condensation from their warranties; add requirement for condensation to first subparagraph below if available.

Excessive water leakage or air infiltration.

Faulty operation of movable panels and hardware.

Deterioration of metals, metal finishes, and other materials beyond normal weathering.

**<Insert failure modes>.**

Verify available warranties and warranty periods.

Warranty Period:

Aluminum Screen and Storm Doors: [**Three**] [**Five**] <**Insert number**> years from date of Substantial Completion.

1. PRODUCTS
   * + 1. MANUFACTURERS

Review with Kane Manufacturing Corp ([www.kanescreens.com](http://www.kanescreens.com)) for most appropriate screen product based on project.

* + - * 1. Basis-of-Design Screen Product: Subject to compliance with requirements, provide **<Kane Manufacturing Corp; product name or designation>** or equal.
        2. Source Limitations: Obtain aluminum screen and storm doors from single source from single manufacturer.
      1. MATERIALS
         1. Aluminum extrusions; 6063-T52.

Select type of duty below.

* + - * 1. Stiles and Rails: Extruded tubular aluminum with integral spline groove, of the following minimum dimensions:

Use subparagraph below for heavy duty.

Heavy Duty: 1-1/8 inches x 3-1/2 inches; 1/8 inch wall thickness, weight 1.272 lb/ft.

Provide 7 inch deep bottom rail with 3/32 inch thick toe plates integrally fastened to both sides of rail.

Use subparagraph below for medium duty.

Medium Duty: 7/8 inch x 2-1/2 inches; 3/32 inch wall thickness; weight .73 lb/ft.

Fabricate stiles and rails with inert gas welded corners and intersections. Prepare frames for concealed fasteners to retain insert sash. Grind all welds smooth.

* + - * 1. Screen and Storm Inserts:

Frames: Extruded tubular aluminum, 7/16 inch x 1 inch with integral spline grooves, frame corners electric flash welded and ground smooth.

Splines: Vinyl.

Retain subparagraph below for medium duty.

Screening: Aluminum mesh, 18 x 14, 0.013 inch wire diameter, black or charcoal color finish; FS RR-W-365, Type VII.

Retain subparagraph below for high duty.

Screening: Stainless steel mesh, 16 x 16 mesh, 0.018 inch wire diameter.

* + - 1. ACCESSORIES

Guards below available for both door panels, edit accordingly. Delete paragraph below if none.

* + - * 1. Guards: Rectangularly woven aluminum guards fabricated of 5/16 inch x .062 inch hard drawn, round edge, flat aluminum wire. Provide guards for lower door panels only.
      1. GLAZING

Retain second option in "Glass and Glazing" paragraph below if glass and glazing requirements are indicated in Section 088000 "Glazing." Revise for custom glass or glazing requirements if available from selected manufacturers.

* + - * 1. Glass and Glazing: Manufacturer's standard glazing system that produces weathertight seal. **[Comply with requirements for windborne-debris resistance.] [Comply with requirements indicated in Section 088000 "Glazing."] <Insert glazing requirements.>**

Delete "Glass," "Safety Glazing Labeling," "Tint," and “Insulating-Glass Units” subparagraphs below if retaining third option in "Glass and Glazing" paragraph above.

Glass: ASTM C1036, Type 1, q3, Category II safety glass complying with testing requirements in 16 CFR 1201.

Retain "Safety Glazing Labeling" subparagraph below if applicable and if labeling is required. Not all manufacturers participate in third-party testing programs.

Safety Glazing Labeling: Permanently mark safety glazing with certification label of **[the SGCC] [the SGCC or another certification agency acceptable to authorities having jurisdiction] [or] [the manufacturer]**. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.

Tint: [**Clear**] [**Gray**] [**Bronze**] [**Green**] <**Insert tint**>.

Delete "Insulating-Glass Units" subparagraph below if using monolithic glazing. Retain option in "Insulating-Glass Units" subparagraph below after verifying that manufacturers obtain glass units from glass manufacturers that participate in the International Glass Certification Council program.

* + - * 1. Insulating-Glass Units: ASTM E2190[, certified through IGCC as complying with requirements of IGCC].

Filling: Fill space between glass lites with [**air**] [**argon**].

Low-E Coating: [**Manufacturer's standard**] [**Pyrolytic on second surface**] [**Sputtered on second surface**] [**Sputtered on third surface**] [**Sputtered on second or third surface**] <**Insert coating**>.

Retain subparagraph below for standard or custom size doors.

* + - * 1. Plastic Glazing: comply with 16 CFR 1201, Category II.

Labeling: Permanently mark plastic glazing with certification label of an agency acceptable to authorities having jurisdiction. Label shall indicate manufacturer's name, type of plastic, thickness, and safety glazing standard with which plastic glazing complies.

Plastic Glazing: Transparent acrylic sheet; ASTM D4802, [**Category A-1 (cell cast)**] [**Category A-2 (continuously cast)**] [**or**] [**Category B-1 (continuously manufactured)**], Finish 1 (smooth or polished), Type UVF (UV filtering).

Retain "Nominal Thickness" subparagraph below if thickness is not indicated on Drawings.

Nominal Thickness: **[0.093 inch] [0.118 inch] [0.177 inch] [0.236 inch] <Insert dimension>.**

Color: **[Colorless] [As selected by Director’s Representative from manufacturer's full range] <Insert color>.**

* + - 1. HARDWARE

Coordinate hardware for operation indicated on the Drawings. Confirm with Section 087100.

* + - * 1. Hardware: Manufacturer's standard solid brass hardware.

Finish: US26D (satin chrome finish); door closers, silver bronze paint.

Door Stop: steel spring and chain crash stop with vinyl cover, cast end brackets. Fasten to door with brass through bolts, cap nuts and washers.

Acceptable Product: H.B. Ives 115B26D or approved equal.

* + - 1. GENERAL FINISH REQUIREMENTS
         1. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
         2. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
         3. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
      2. ALUMINUM FINISHES

"Baked-Enamel or Powder-Coat Finish" paragraph below references AAMA standard for pigmented organic coating on extrusions and panels.

* + - * 1. Baked-Enamel or Powder-Coat Finish: AAMA 2603 except with a minimum dry film thickness of 1.5 mils. Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.

Color and Gloss: [**As indicated by manufacturer's designations] [Match Director’s Representative's sample] [As selected by Director’s Representative from manufacturer's full range] <Insert color and gloss**>.

* + - 1. FABRICATION
         1. Fabricate storm and screen doors in sizes indicated. Include a complete system for assembling components and anchoring doors.
         2. Fabricate storm and screen doors that are reglazable without dismantling panel framing.
         3. Weather Stripping: Provide full-perimeter weather stripping for each door panel.
         4. Weep Holes: Provide weep holes and internal drainage passages to conduct infiltrating water to exterior.
         5. Complete fabrication, assembly, finishing, hardware application, and other work in the factory to greatest extent possible. Disassemble components only as necessary for shipment and installation.
         6. Factory-Glazed Fabrication: Glaze doors in the factory where practical and possible for applications indicated.

1. EXECUTION
   * + 1. EXAMINATION
          1. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of Work.
          2. Verify rough opening dimensions, levelness of threshold substrate, and operational clearances.
          3. Proceed with installation only after unsatisfactory conditions have been corrected.

Revise paragraph below for renovation of existing building or construction of new building.

* + - * 1. Verify governing door dimensions with [**existing frame**] [**opening dimensions**]before door fabrication.
      1. INSTALLATION
         1. Comply with Drawings, Shop Drawings, and manufacturer's written instructions for installing doors, hardware, accessories, and other components.
         2. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.
         3. Prepare frames for hardware.
      2. ADJUSTING, CLEANING, AND PROTECTION
         1. Lubricate hardware and moving parts.
         2. Adjust operating panels to provide a tight fit at contact points and weather stripping for smooth operation, without binding, and a weathertight closure. Adjust hardware for proper alignment, smooth operation, and proper latching without unnecessary force or excessive clearance.
         3. Clean exposed surfaces immediately after installing doors. Avoid damaging protective coatings and finishes. Remove nonpermanent labels, excess sealants, glazing materials, dirt, and other substances.
         4. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.
         5. Protect door surfaces from contact with contaminating substances resulting from construction operations. If contaminating substances contact door surfaces, remove contaminants immediately according to manufacturer's written instructions.
         6. Refinish or replace doors with damaged finishes.
         7. Replace damaged components.

END OF SECTION 081163.23