SECTION 08 35 13 Folding Doors

Part 1 – General

1.01 Summary
- A. Section includes:
  1. Thermally Broken Bi-Folding Aluminum Door with operation up to 52' wide and 10' tall.

1.02 References
- A. American Architectural Manufacturers Association (AAMA)
- B. American Society for Testing and Materials (ASTM)
- C. Aluminum Association (AA)

1.03 System Description
- A. General: In addition to requirements shown or specified, comply with:
  1. Applicable provisions of AAMA Aluminum Storefront and Entrance Manual for design, materials, fabrication and installation of component parts.
- B. Design Requirements: Arcadia 10000 Oasis Series Bi-Folding Aluminum Door is a single source package of door, doorframe and hardware that is engineered to allow doors in both directions to be folded to the side of an opening.
- C. Performance Requirements: System performance of 39" x 120" panel. Each assembly shall be tested by a recognized testing laboratory or agency in accordance with specified test methods.
  1. Air Infiltration: 1.6 PSF (25 MPH) ASTM E 283 (Weather Resistant Sill Only/Non-ADA)
  2. Water Infiltration: 5.4 PSF ASTM E 547 (Weather Resistant Sill Only/Non-ADA with Outswing Application)
  3. Uniform Load Deflection: + -30.0 PSF ASTM E 330
  4. Uniform Load Overload: + -45.0 PSF ASTM E 330
  5. Forced Entry Top & Bottom of Stile 3" above lock AAMA 1304-02
  6. Overall DP Rating: DP 30

1.04 Quality Assurance
- A. Single Source Responsibility:
  1. Obtain entrances, storefronts, ribbon walls, window walls, curtain walls, window systems, and finish through one source from a single manufacturer.
- B. Provide test reports from AAMA accredited laboratories certifying the performances as specified in 1.03.

1.05 Warranty
- A. System, folding system hardware, and weatherstripping shall be warranted against failure and/or deterioration of metals due to manufacturing process for a period of ten (10) years.
- B. Locking Hardware shall be warranted for a period of (5) years.

Part 2 – Products

2.01 Manufacturers
- A. Acceptable Manufacturers:
  1. Arcadia, Inc., 2301 E Vernon, Vernon, CA. Telephone 323/269-7300, Fax 323/269-7390.
- B. Acceptable Products:
  1. Arcadia, Inc., 10000 Oasis Series Bi-Folding Aluminum Door, 2-1/4" (panel thickness)
     a. Vertical stile: 3-1/2 inches.
     b. Top rail: 3-1/2 inches.
     c. Bottom rail: 3-1/2 inches.
     d. Glazing Insert: Snap-in type for _____ (1", 1-1/8" or 1-1/2") infill.

2.02 Materials and Accessories
- A. Door members: Extruded 6063-T6 aluminum alloy (ASTM B221 – Alloy G.S. 10aT5).
- B. Screws, fastening devices, and internal components: Aluminum, stainless steel, or zinc plated steel in accordance with ASTM A-164 shall be aluminum or steel, providing the steel is properly isolated from aluminum.

2.02 Glazing Gasket (compression-type design).

2.03 Hardware
- A. Hardware for 10000 Series Bi-Folding Aluminum Door shall be furnished and installed by the manufacturer and shall include the following standard hardware
- B. Hardware system carrying capacity to be 220 lbs. per panel.
  1. Weatherstripping: Q-Lon seals at the top inner and outer edge of door panels or on frame for sealing between panels and between panel/frame. Exterior bottom door panel blade sweep.
  2. Sill track: Aluminum (Clear or Bronze Anodize) standard weathered engineered weeping thermally broken threshold, or non-weathered ADA Ramp Sill, and ADA Flush Guide Sill options
  3. Stainless Steel Roller Guide Spindle
  4. Guide Channel: aluminum
  5. Top Guide Carrier/Hanger
  6. Two Point Locking Hardware on folding panels, pull handle(s)
  7. Four Point Locking Hardware with Lever Lock on Main Entry Panel
  8. Magnetic Door Stop for entry swing panel and for stacking of folding panels.

2.04 Finish
- A. Finish all exposed areas of aluminum and components as indicated.
  1. An Architectural Class I color anodic coating conforming to AA-M12C22A44.
     a. Anodized finish color shall be Colornodic _____. (AB1 Light Champagne, AB2 Champagne, AB3 Light Bronze, AB4 Medium Bronze, AB5 Standard Medium Bronze, AB6 Dark Bronze, AB7 Standard Dark Bronze, AB8 Black.)

(or)
  1. An Architectural Class I anodic coating conforming to AA-AA-M12C22A41.
     a. Anodize finish color shall be Colornodic _____ (#11 Clear)

(or)
  1. Fluorocarbon Coating: AAMA 2605.2.
     a. Resin: 70% PVDF Kynar 500/Hylar 5000.
     b. Substrate: cleaned and pretreated with chromium phosphate.
     c. Primer: Manufacturer's standard resin base compatible coating. Dry film thickness.
        (a) Extrusion: Minimum 0.20 mil.
     d. Color Coat: 70% PVDF, dry film thickness.
        (a) Extrusion: 1.0 mil.
     e. Color: As selected by Architect.
     f. Acceptable Coatings Manufacturers:
        (a) PPG Industries, Inc.
        (b) Sherwin Williams

2.05 Fabrication
- A. Stiles and rails shall be tubular sections accurately joined, flush and hairline at corners with heavy concealed reinforcement brackets secured with machine bolts. Exposed screws not permitted.
- B. Swing/stacking direction: Outswing (or inswing) opening unit.
- C. Define as window systems for net frame heights 72" or less.

2.06 Accessories
- A. Optional manufacturer's non-integral nail fin

Part 3 – Execution

3.01 Examinations
- A. Examine conditions and verify substrate conditions are acceptable for product installation.

3.02 Erection
- A. The maximum deflection of the header with the live load shall not exceed the lesser of L/720 of the span and ¼". Structural support for lateral loads (both windload and when the panels are stacked open) must be provided.

3.03 Installation
- A. Install in accordance with approved shop drawings and manufacturers installation instructions.
- B. Installer to provide adequate anchorage devices and to securely fit frame in place, absolutely level, straight, plumb and square. Install frame in proper elevation, plane and location, and in proper alignment with other work. Head section of frame must be installed with a 1/8" upward crown at the center of the opening.
- C. Ensure doors are adjusted at the time of installation for proper operation.
- D. Protect installed product from construction activities, particularly thresholds and floor channels.

3.04 Field Quality Control
- A. Contractor's responsibility to make all necessary final adjustments to attain normal operation of each door and its mechanical hardware.

END OF SECTION