SECTION 084115

ALUMINUM WINDOWS & STOREFRONTS SERIES IT600

PART 1 – GENERAL DESCRPTION

A. Work included: Furnish all necessary materials, labor, and equipment for the complete installation of aluminum framing as show on the drawings and specified herein.

1.01 QUALITY ASSURANCE

A. Drawings and specifications are based on the Series IT600 Thermal system as manufactured by U.S. Aluminum. Whenever substitute products are to be considered, supporting technical literature, samples, drawings, and performance data must be submitted 10 days prior to bid in order to make a valid comparison of the products involved. Test reports certified by an independent test laboratory must be made available upon request.

1.02 PERFORMANCE REQUIREMENTS

A. Air Infiltration: Shall be tested in accordance with ASTM E 283-91. Infiltration shall not exceed:

1. IT600 Storefront - .06 cfm/ft² @ 6.24 psf = (5.08 L/s/m²)
2. IT600 Pair of Doors – 1.00 cfm/ft² @ 6.24 psf = (5.08 L/s/m²)

B. Water Infiltration: Shall be tested in accordance with ASTM E331-93. No water penetration at test pressure of:

1. IT600 Storefront – 12 psf
2. IT600 Single Door – 12 psf (Water resistant threshold at single door only)

C. Structural Performance: Shall be tested in accordance with ASTM 330-96 and based on:

1. Maximum deflection of L/180 of the span.
2. Allowable stress with a safety factor of 1.65. The system shall perform to these criteria under a wind load of (Specify) psf.

3. IT600 Storefront
    a) Design 65 psf
    b) Structural +/- 97.5 psf
4. IT600 Pair of Doors
    a) Design 65 psf
    b) Structural +/- 97.5 psf

A. Forced Entry Resistance: Shall be tested with a 300 lb. force applied to the active door panel simultaneously with a 150 lb. force applied in both perpendicular directions to the 300 lb. force.

1. IT600 Pair of Doors

Large Missile Impact Test – Shall be tested in accordance with: Dade Country Protocols TAS 201-94 with a 9 lb. 2x4 traveling at 50 fps.

1. IG600 Storefront
2. IG600 Pair of Doors

Cycle Load Test – Shall be tested in accordance with: Dade Country Protocols TAS 201-94 for 9,000 cycles.

1. IG600 Storefront
2. IG600 Pair of Doors

Thermal Performance – IT600 storefront framing shall be tested in accordance with:

1. NFRC 100: Fenestration Product U-Factor.
2. NFRC 200: Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.
3. NFRC 500: Fenestration Product Condensation Resistance Values
4. AAMA 1503

PART 2 – PRODUCT MATERIALS

A. Extrusions shall be 6063-T5 alloy and temper (ASTM B221 alloy T5 temper). Fasteners, where exposed, shall be aluminum, stainless steel, or zinc plated steel

in accordance with ASTM A 164. Perimeter anchors shall be aluminum or steek, providing the steel is properly isolated from the aluminum. Glazing gaskets shall be E.P.D.M. elastomeric extrusions.

2.01 FINISH

A. Aluminum extrusions shall be given a caustic etch followed by an anodic oxide treatment to obtain #11 Clear anodic coating.

2.02 FABRICATION

A. The framing system shall provide for flush glazing on all sides with no projecting stops. Vertical and horizontal framing members shall have a nominal face dimension of 2-1/2" (63.5). Overall depth shall be 5" (127). Entrance framing members shall be compatible with glass framing in appearance. Provide for internal drainage of infiltrated water into an extruded aluminum subsill channel where it is drained to the exterior through weep slots.

2.03 GLAZING

A. Dade Country
   1. IG600 Storefront and IT600 Pair of Doors. 1-5/16" (33) Glazing must meet Impact and Cycle Testing requirements according to Local Building Codes.

2.04 SEALANTS

A. The faming system shall use Tremco Proglaze SSG or DOW 995 Structural Silicone to adhere glass to framing. All metal-to-metal joints shall use Tremco Spectrum II or DOW 795 Silicone. Door seal gaskets shall require small joint sealer.

PART 3 – EXECUTION INSTALLATION

A. All glass framing shall be sent in corrects locations as shown in the details and shall be level, square, plumb, and in alignment with the manufacture's installation instructions and approved shop drawings. All joints between

framing and the building structure shall be sealed in order to secure a watertight installation.

1.01 PROTECTION AND CLEANING

A. After installation, the General Contractor shall adequately protect exposed portions of aluminum surfaces from damage by grinding and polishing compounds, plaster, lime, acid, cement, or other contaminants. The General Contractor shall be responsible for final cleaning.

END OF SECTION