

STORM WALL™



Specifications

Hurricane (Impact) Resistant Curtain Walls • Series IW3250

SECTION 08 44 13 ALUMINUM CURTAIN WALL SYSTEMS

I. GENERAL DESCRIPTION

Work included: Furnish all necessary materials, labor, and equipment for the complete installation of aluminum framing as shown on the drawings and specified herein. *(Specifier Note: It is suggested that related items such as aluminum entrance doors, glass, and sealants be included whenever possible.)*

Work not included: Structural support of the framing system, interior closures, trim. *(Specifier list other exclusions).*
Related Work Specified Elsewhere: *(Specifier list).*

QUALITY ASSURANCE

Drawings and specifications are based on the Series IW3250 Dry Glazed Curtain Wall 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.

PERFORMANCE REQUIREMENTS

Air Infiltration: Shall be tested in accordance with Dade County Protocol PA 202-94 and ASTM E 283-91 (99).

- IW3250 Storm Wall™/Curtain Wall Infiltration shall not exceed .06 cfm per square foot (.003 m³/sm²) fixed area when tested at 6.24 psf (300 Pa).
- IG500/IG600 Storm Front™ Entrance Doors Infiltration shall not exceed 1.00 cfm per square foot at 6.24 psf (300 Pa).

Water Infiltration: Shall be tested in accordance with Dade County Protocol PA 202-94 and ASTM E 331-93. No water penetration at test pressure of:

- IW3250 Curtain Wall - 15 psf
- IG500/IG600 Pair of Doors - 12 psf (Water resistant threshold)

Structural Performance: Shall be tested in Accordance with Dade County Protocol PA 220-94 and ASTM 330-96 and based on:

- Maximum deflection of L/175 of the span. [3/4" (19.1) max.]
- Allowable stress with a safety factor of 1.65. The system shall perform to this criteria under a wind load of *(Specify)* psf.
- IW3250 Curtain Wall Design 44 psf (131 mph) Structural ± 66 psf (161mph)
- IG500/IG600 Pair of Doors Design 44 psf (131 mph) Structural ± 66 psf (161 mph)

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 as per the Dade County Protocol PA 220-94.

Large Missile Impact Test: Shall be tested in accordance with Dade County Protocol PA 201-94 with a 9 lb. 2x4 traveling at 50 fps.

Small Missile Impact Test: Shall be tested in accordance with Dade County Protocol PA 201-94 with 10-2 gram steel ball bearings traveling 130 fps.

Cycle Load Test: Shall be tested in accordance with Dade County Protocol PA 201-94 for 9,000 cycles.

- IW3250 Curtain Wall
- IG500/IG600 Pair of Doors

Testing Procedures: ASTM 283, E 331, and E 330 - Laboratory performance testing. AAMA 503-08 - Newly installed curtain walls. AAMA 511-08 - Installed curtain walls after six months.

II. PRODUCTS MATERIALS

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 steel, providing the steel is properly isolated from the aluminum. Glazing gaskets shall be E.P.D.M. elastomeric extrusions.

FINISH

All exposed framing surfaces shall be free of scratches and other serious blemishes. Aluminum extrusions shall be given a caustic etch followed by an anodic oxide treatment to obtain... *(Specify one of the following):*

- ___ #11 Clear anodic coating
- ___ #22 Dark Bronze anodic coating
- ___ #33 Black anodic coating

A Fluoropolymer paint coating conforming with the requirements of AAMA 2605. Color shall be *(Specify a U.S. Aluminum standard color).*

FABRICATION

All mullions and horizontals shall have flexible (PVC) thermal break material located on exterior side of glass plane. Exterior glazing seal gasket shall be secured by extruded aluminum pressure plates fastened to main grid members. Provisions shall be made at all sealed horizontals to weep moisture accumulation to the exterior. A cover shall be snapped over pressure plate to show only a sharp, uninterrupted exterior profile. Framing members shall provide for straight-in glazing on all sides, with through sight lines and no projecting stops or face joints. Vertical and horizontal framing members shall have a nominal width of 2-1/2" (63.5). Back members depth of system shall be 5" (127). System shall provide for two-piece horizontal framing so that all fasteners at intersection horizontal and vertical members will be concealed. There shall be no exposed fasteners at perimeter sections. 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.

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Glazing

- IW3250 Curtain Wall
- Large missile test - 7/16" (11) heat strengthened glass with 0.100" Sentry Glas® Plus by Dupont®.
- Small missile test - 7/16" (11) heat strengthened glass with 0.090" Butacite® PVB by Dupont®.
- 1-3/16" (30) Laminated Impact Glazing
- IG500/IG600 Pair of Doors
- Large missile test - 9/16" (14) heat strengthened glass with 0.090" Sentry Glas® Plus by Dupont®.

Sealants

The IG500/IG600 entrance doors shall use DOW 995 structural silicone to adhere glass to the door sash.

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

III. EXECUTION INSTALLATION

All glass framing shall be set in correct location as shown in the details and shall be level, square, plumb, and in alignment with other work in accordance with the manufacturer's installation instructions and approved shop drawings. All joints between

PROTECTION AND CLEANING

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.



Project: Puerto Rico Convention Center, San Juan, PR