

SECTION 08 51 69.11**ALUMINUM STORM WINDOWS****PART 1 - GENERAL****1.1 DESCRIPTION:**

- A. Aluminum storm windows shall be triple track self storing type of sizes shown, complete with frame, sash, hardware, glass closures, and related components and accessories as shown and specified.
- B. Window opening sizes shown are approximate. Before fabricating storm windows, measure each opening to determine its exact size.

1.2 RELATED WORK:

- A. Color of Finish: Section 09 06 00, SCHEDULE FOR FINISHES.
- B. Glazing: Section 08 80 00, GLAZING.

1.3 PERFORMANCE REQUIREMENTS:

- A. Air Infiltration: With sash closed and latched, test the window in accordance with ASTM E283 for air infiltration, which will not exceed 2.06 cubic m/h per meter (0.37 cubic ft/min per foot) of operable sash when subjected to static air pressure of 75 Pa (1.57 lb ft/sq.ft).
- B. Water Drainage: Test window in accordance with ASTM E331, except pressure drop shall be zero, and test duration shall be three minutes. Unit is acceptable if no water runs over interior edge of sloped test-buck sill.
- C. Uniform Load: Test window in accordance with ASTM E330. Subject the window separately to any exterior uniform load of 480 Pa (10 lbf/sq.ft), and an interior load of 240 Pa (5 lbf/sq.ft). Maintain each load for 10 seconds. At conclusion of tests there shall be no evidence of breakage and test unit shall operate freely.

1.4 SUBMITTALS

- A. In accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES, furnish the following:
- B. Shop Drawings: Indicate elevations of units, full-size sections, thicknesses and gages of metal, fastenings, methods of installations and anchorage, size and space of anchors, methods of glazing, locations of operating hardware, mullion details, method and material of weatherstripping, method of attaching screens, details of installation, and connections with other work.
- C. Manufacturer's Certificates: Stating that windows meet performance

requirements specified.

1.5 APPLICABLE PUBLICATIONS:

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. Federal Specification (Fed. Spec.):
 - 1. A-A-55615 Shield, Expansion (Wood Screw and Lag Bolt Self-Threading Anchors)
 - 2. L-S-125B Screening, Insect, Nonmetallic.
 - 3. TT-P-645A Primer, Paint, Zinc-Molybdate Type
- C. American Society for Testing and Materials (ASTM):
 - 1. B221-06 Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes
 - 2. C920-05 Elastomeric Joint Sealants
 - 3. E283-04 Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors
 - 4. E330-02 Structural Performance of Exterior Windows, Curtain Walls, and Doors Under the Influence of Wind Loads
 - 5. E331-00 Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference
- D. American National Standard Institute and American Architectural Manufacturers Association (ANSI/AAMA):
 - 1. 2605-05 Superior Performing Organic Coatings on Architectural Aluminum Extrusions and Panels
- E. National Association of Architectural Metal Manufacturers (NAAMM):
 - 1. Amp 500 Series Metal Finishes Manual

PART 2 - PRODUCTS

2.1 MATERIAL:

- A. Aluminum, Extruded: ASTM B221. Aluminum alloy used for color coating shall be as required to produce specified color. Colors for sheet aluminum shall not deviate more than color of extrusion samples.
- B. Fasteners: Except as otherwise specified, screws, bolts, nuts, rivets and other fastening devices incorporated in windows shall be of aluminum, stainless steel or other noncorrosive material compatible with aluminum which will provide required strength at connections. Plated or coated materials (except for glazing clips) will not be acceptable.
 - 1. Where type, size or spacing of fastenings for securing window accessories or equipment to building construction is not shown or

specified, use expansion or toggle bolts or screws, as best suited to construction material. Provide such bolts or screws minimum 6 mm (1/4-inch) in diameter.

2. Expansion Bolts (Shields): Fed. Spec. A-A-55615, except lead, fiber and plastic shields are not acceptable. Furnish bolts and screws required.

C. Color: Exposed fasteners to match window frame.

D. Insect Screening: Fed. Spec. L-S-125, 18 x 18 mesh.

E. Sealant: ASTM C920.

2.2 STORM WINDOW:

A. Storm window units shall be aluminum triple-track, self storing,, combination storm-and- screen type, factory glazed. Units shall have both glazed sash, and screen sash housed in window frame.

B. Storm units shall be designed to provide a rigid unit in place, to permit all sash to be removed from the inside, and to lock into the open and closed positions. Sash units that rattle when operated or when subjected to wind conditions are not acceptable.

2.3 FABRICATION:

A. Glazed sash shall have aluminum frames, removable vinyl glazing inserts, interlocking meeting rails, and weather stripped edge at inside contact with the unit frame.

B. Screen sash shall have aluminum frames, screening removable splines of aluminum or vinyl, covering the opening formed when the glazed sash are in the open position.

C. Frames shall be of extruded aluminum section, with minimum nominal material thickness of 1 mm (0.045 inch).

1. Provide interlocking scribe piece of the same material as the frame at bottom edge.

D. Hardware: Manufacturer's standard hardware securely attached, easily accessible and operable, and capable of being removed without use of special tools.

2.4 FINISH:

A. In accordance with NAAMM AMP 500 series.

1. Color: Custom color as selected by VA.

B. Fluorocarbon Finish: AAMA 2605.

C. Hardware: Finish hardware exposed when window is in the closed position shall match the window color.

PART 3 - EXECUTION

3.1 INSTALLATION:

- A. Install storm windows plumb, square, level, and in alignment and securely fastened to adjacent construction in accordance with window manufacturer's recommendations.
 - 1. After installation, adjust sash and hardware, so as to operate silently and smoothly without binding.
 - 2. Caulk joints between perimeter of interior face of storm window frames and adjoining construction with sealant.

3.2 ADJUSTING AND CLEANING:

- A. Adjust movable sash and equipment to operate easily and properly free of defects before acceptance of work.
- B. Clean interior and exterior metal surfaces of storm window. Wash all glass clean.

3.3 REPLACEMENT:

- A. Stained, discolored, abraded or damaged storm windows, that cannot be repaired to meet approval of VA, shall be replaced at no additional cost to the Government.

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