SECTION 08 5113
ALUMINUM HUNG WINDOWS

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Install window units as described in Contract Documents.

B. Related Sections:
   1. Section 01 6000: Windows specified in this Section furnished by Owner. This Section establishes quality of materials for information of Contractor, Architect, and Owner's Representatives.
   2. Section 05 7500: Decorative Formed Metal between pairs of windows.
   3. Section 07 9213: Quality of sealant and backer rod.
   4. Section 08 4113: Windows formed of storefront material.
   5. Section 08 8100: Quality of glass glazing.

1.2 REFERENCES

A. American Architectural Manufacturers Association / American National Standards Institute:

B. American Architectural Manufacturers Association:

1.3 SYSTEM DESCRIPTION

A. Design Requirements:
   1. Comply with minimum test requirements of ANSI / AAMA 101 for classification of specified window in following:
      a. Air infiltration.
      c. Uniform structural load.
   2. ANSI / AAMA 101 classification DH-C45 minimum for hung windows, tested at 4 feet wide by 7 feet high minimum.

B. Performance Requirements:
   1. Meet following thermal performance:
      a. Condensation Resistance Factor (CRF) of 48 minimum when tested in accordance with AAMA 1503.
      b. Thermal Transmittance of 0.65 maximum when tested in accordance with AAMA 1503.

1.4 SUBMITTALS

A. Product Data:
   1. Manufacturer's literature or cut sheet.
   2. Literature on glazing.
   3. Color and finish selection.
B. Quality Assurance / Control:
   1. Manufacturer's published installation instructions for windows, flashing, and sealants.

1.5 QUALITY ASSURANCE

A. Pre-Installation Conference: Before installing windows, review Manufacturer's submitted installation requirements and install first window, including flashing and sealant, to demonstrate standard for installation of remaining windows.

1.6 WARRANTY

A. Provide written non-prorated manufacturer's warranty including:
   1. 10 years for seal failure.
   2. 2 years for failure of operating hardware.
   3. 2 years on stress cracks related to fabrication or installation problems.

PART 2 - PRODUCTS

2.1 MANUFACTURED UNITS

A. Windows:
   1. Factory glazed.
   2. Weatherstripped.
   3. Thermally broken system with poured-in-place and de-bridged structural thermal break.
   4. Flanged for installation in framed buildings; Non-flanged for installation in masonry buildings.
      Installation method shall not require drilling into frame.
   5. Outside window surfaces cleanable from inside building.
   6. Finish And Color:
      a. Meet requirements of AAMA 603.8 for baked-on organic coating.
      b. Category Four Approved Color. See Section 01 6000 for definitions of Categories.
         1) White.
   7. Glazing Characteristics:
      a. Obscure interior pane with pattern on surface 3 and Clear exterior pane with Low E treatment on surface 2.
   10. Screens: Extruded aluminum frames with mitered corners and 18 x 14 mesh with 0.013 inch diameter aluminum wire or fiberglass.
   11. Category One Approved VMR Product. See Section 01 6000 for definitions of Categories.

2.2 ACCESSORIES

A. Flashing:
   2. Type Two Acceptable Products:
      a. Flexwrap by duPont Tyvek, Wilmington, DE www.tyvek.com..
f. BR20XL or Ice & Water Guard Window Sealing Tapes by Protecto Wrap, Denver, CO [www.protectowrap.com].
g. Rufco-Shield Window & Door Flashing by Raven Industries, Sioux Falls, SD [www.ravenind.com].
h. Polyken butyl adhesive flashing tape by Tyco Adhesives, Norwood, MA [www.tycoadhesives.com].
i. Equal as approved by Architect before installation. See Section 01 6000.

B. Anchoring Devices:
   1. Aluminum or stainless steel.
   2. Other corrosion-resistant or insulated anchors as specifically approved by Architect in writing before use.

2.3 SOURCE QUALITY CONTROL

A. When delivered to Project site, windows shall bear permanent label stating model of window and Manufacturer's name, or AAMA label.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install windows after installation of air infiltration barrier. Integrate air infiltration barrier, flashing, and sealants as required to provide weather tight installation and comply with Manufacturer's instructions.

B. Set window frame plumb, level, and in alignment. Secure window properly in opening.

C. Apply specified sealant between window frame and building wall at building interior. Trim off excess sealant.

D. Avoid direct contact between aluminum and adjacent steel work by insulating with materials equal to 3M's EC 1202 tape, if materials are in pressure contact, or with bituminous paint, if pressure between surfaces cannot be maintained.

3.2 FIELD QUALITY CONTROL

A. Inspections:
   1. Notify Architect when windows are to be delivered to Project site to allow opportunity for Architect's inspection before installation.
   2. After installation of windows and before installation of exterior wall finish, inspect windows and compare to installation standard accepted at Pre-Installation Conference.

3.3 ADJUSTING

A. After windows are in place, installer shall adjust hardware and ventilators to operate smoothly and be weather tight when closed.

3.4 CLEANING

A. After installation, clean interior and exterior metal surfaces of windows and accessories of mortar, plaster, paint, and other contaminants. Maintain protection and provide final cleaning.