

SECTION 08420

ALUMINUM STOREFRONT SYSTEM

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Provide all necessary materials, labor, and equipment for the complete installation of the aluminum storefront framing system as shown on the drawings and specified herein.

1.02 SUMMARY

- A. Section includes: Aluminum Storefront System:
 - 1. Storefront System: YES 40 Storefront System by YYK AP America, Inc.
- B. Related Sections:
 - 1. 08410 - Aluminum Swing Entrances.
 - 2. 08800 - Glass and Glazing.

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide aluminum storefront systems that comply with performance requirements indicated.
 - 1. Air Infiltration: Completed storefront systems shall have 0.015 cfm/ft² maximum allowable infiltration when tested in accordance with ASTM E 283 at differential static pressure of 6.24 sf (299 Pa).
 - 2. Water Infiltration: No uncontrolled water other than condensation on indoor face of any component when tested in accordance with ASTM E 331 at test pressure differential of 10.3psf (479 Pa). Water test to be performed immediately after design pressure test.
 - 3. Deflection: Maximum allowable deflection in any member when tested in accordance with ASTM E 330 with allowable stress in accordance with AA Specifications for Aluminum Structures.
 - a. Without Horizontal: L/175 or 3/4" maximum.
 - b. With Horizontal: L/175 or L/240 + 1/4" for spans greater than 13'-6" but less than 40'-0".
 - 4. Thermal Movement: Provide for thermal movement caused by 180 degrees F surface temperature, without causing buckling stresses on glass, joint seal

failure, undue stress on structural elements, damaging loads on fasteners, reduction of performance, or detrimental effects.

1.04 SUBMITTALS

- A. General: Prepare, review, approve, and submit specified submittals in accordance with Section 01340 and the following.
- B. Product Data: Submit product data for each storefront series specified.
- C. Shop Drawings: Submit shop drawings showing layout, profiles, and product components, including anchorage, accessories, and finish colors.
- D. Quality Assurance / Control Submittals:
 - 1. Test Reports: Submit certified test reports showing compliance with specified performance characteristics and physical properties.
 - 2. Installer Qualification Data: Submit installer qualification data.

1.05 PRODUCT CONDITIONS / SITE CONDITIONS

- A. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements, fabrication schedule with construction progress to avoid construction delays.

1.06 WARRANTY

- A. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under the Contract Documents.
 - 1. Warranty Period: 3 years for materials commencing on Date of Substantial Completion.
 - 2. Warranty Period: 20 years for Kynar finish commencing on Date of Substantial Completion.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers:

1. YKK AP America, Inc.
2. TRACO Windows and Doors.
3. Accepted equivalent.

A. Basis of Design: The model YES 40 Storefront System by YKK AP America, Inc is the basis of quality standard or accepted equal.

1. Mullion and perimeter framing shall be a two-part construction consisting of gutter and face sections. Designed to permit unobstructed face glazing with through sight lines and no projecting stops. All exterior face members will be seamless. All vertical and horizontal framing members shall have a nominal face dimension of 2-3/4. Overall depth shall be 5-inches. Glass pocket of 5/8-inch wide, with resilient elastomeric gaskets.
2. All assemblies shall be secured internally by means of face clips of special form, in such a manner as to be positively held against accidental disassembly in the event of glass breakage. Face clips shall be such a design as to provide a non-reversible snap action, and prevent metal to metal contact of the face and gutter sections.
3. Components: Manufacturer's standard extruded aluminum mullions, entrance doors, framing, and indicated shapes including mullion "T" anchors, perimeter anchor fillers.
4. Glazing: Manufacturer's standard glazing stops with EPDM glazing gaskets.

2.02 MATERIALS

A. Extrusions: ASTM B 221, 6063-T5 Aluminum Alloy.

B. Aluminum Sheet:

1. Clear anodized to match windows: ASTM B 209, 3003-H14 Aluminum Alloy, 0.080 inch minimum thickness.

2.03 ACCESSORIES

A. Manufacturer's Standard Accessories:

1. Fasteners: Zinc plated steel concealed fasteners; hardened aluminum alloys or AISI 300 series stainless steel exposed fasteners, countersunk, finish to match aluminum color.
2. Perimeter Sealant: Non-skinning type, AAMA 803.3.
3. Glazing: By means of EPDM glazing gaskets designed to lock into gasket reglet.

2.04 RELATED MATERIALS

- A. Aluminum Swing Doors: Section 08410, Aluminum Swing Doors.

2.05 FABRICATION

- A. Shop Assembly: Fabricate and assemble units with joints only at intersection of aluminum members with hairline joints; rigidly secure, and sealed in accordance with manufacturer's recommendations.

2.06 FINISH AND COLOR

- A. Anodized: NAAMM AA-C2241, Class I, minimum 0.7 mils, natural aluminum color.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. General: Install manufacturer's system in accordance with shop drawings, and within specified tolerances and to withstand wind forces specified.
 - 1. Shim and brace aluminum system before anchoring to structure.
 - 2. Provide sill flashing at exterior storefront wall systems. Extend extruded flashing continuous with splice joints; set in continuous beads of sealant and weeped.
 - 3. Verify curtain wall and storefront system allows water entering system to be collected in gutters and weeped to exterior. Verify weep holes are open and metal joints are sealed in accordance with the manufacturer's instructions.
 - 4. Seal metal to metal in storefront system joints using sealant recommended by system manufacturer.
- B. Method of attachment: Provide size and number of fasteners as indicated in the Product Control Notice of Acceptance.
- C. Protect aluminum members in contact with masonry surfaces from contact with lime, mortar, cement, acids, and other harmful contaminants.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions.

3.03 PREPARATION

- A. Adjacent Surfaces Protection: Protect adjacent work areas and finish surfaces from damage during product installation.
 - 1. Aluminum Surface Protection: Protect aluminum surfaces from contact with lime, mortar, cement, acids, and other harmful contaminants.

3.04 FIELD QUALITY CONTROL

- A. Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service consisting of product use recommendations and periodic site visit for inspection of product installation in accordance with manufacturer's instructions.
- B. Field Test: Conduct field test to determine water tightness of curtain wall system. Conduct test in accordance with NAAMM FC-1 at locations selected by A/E.
 - 1. Perform minimum of two tests. Perform test in Owner's or A/E's presence.

3.05 ADJUSTING AND CLEANING

- A. Adjusting: Adjust operating items as recommended by manufacturer.
- B. Cleaning: The General Contractor shall clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance, and remove construction debris from project site. Legally dispose of debris.
- C. Protection: The General Contractor shall protect the installed product's finish surfaces from damage during construction.

END OF SECTION