



SECTION 08 44 13.50

ALUMINUM FIXED WINDOW WALLS

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PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Aluminum window walls (Series 600).

1.2 RELATED SECTIONS

- A. Section 06 10 00 - Rough Carpentry.
- B. Section 06 20 00 - Finish Carpentry.
- C. Section 07 90 00 - Joint Protection.
- D. Section 08 32 13 - Sliding Aluminum-Framed Glass Doors.
- E. Section 08 35 13.13 - Accordion Folding Doors.

1.3 REFERENCES

- A. Aluminum Anodizers Council (AAC):
 - 1. AAC Class 1 -Anodized Architectural Aluminum Coatings.
- B. American Architectural Manufacturers Association (AAMA):
 - 1. AAMA/WDMA/CSA/101/I.S.2/A440 - North American Fenestration Standard/Specification for windows, doors, and skylights.
 - 2. AAMA 611.98 - Voluntary Specification for Anodized Architectural Aluminum.
 - 3. AAMA 2605 - Voluntary Specifications, Performance Requirements and Test Procedures for Pigmented for High Performance Organic Coatings on Aluminum Extrusions and Panels.
- C. American National Standards Institute (ANSI):
 - 1. ANSI Z97.1 - Safety Performance Specifications and Methods of Test for Safety Glazing Material Used in Buildings.
- D. ASTM International (ASTM):
 - 1. ASTM C1036 - Standard Specification for Flat Glass.
 - 2. ASTM E 283 - Test Method for Rate of Air Leakage through Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
 - 3. ASTM E 330 - Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

4. ASTM E 547 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Cyclic Static Air Pressure Differential.
 5. ASTM E774 - Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units.
- E. California Code of Regulations:
1. California Building Standards Code Title 24.
- F. Consumer Product Safety Commission (CPSC):
1. CPSC 16CFR-1201 - Safety Standard for Architectural Glazing Materials.
- G. National Fenestration Rating Council (NFRC):
1. NFRC 100 - Procedure for Determining Fenestration Product U-factors.
 2. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
 2. Storage and handling requirements and recommendations.
 3. Installation methods.
- C. Shop Drawings: Include outside net frame dimensioning, typical head, side jamb, sill and panel details and type of glazing material per vertical plan and elevations view drawings.
- D. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (152 mm) square, representing actual product, color, and patterns.
- E. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- F. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic checking and adjustment of cable tension and periodic cleaning and maintenance of all railing and infill components.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Provide complete system by a single source manufacturer with at least 5 years documented experience.
- B. Installer Qualifications: Installer with documented experienced in the installation of manufacturer's products specified.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
1. Finish areas designated by Architect.
 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
 3. Remodel mock-up area as required to produce acceptable work.
- D. Pre-Installation Meetings: Conduct pre-installation meetings to verify project requirements, substrate conditions, construction documents, details and manufacturer's warranty requirements.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials in manufacturer's original, unopened, undamaged rolls/pallets with identification labels intact.
- B. Storage and Protection: Protect stored product from damage. Store products upright in dry, well ventilated area out of direct sunlight, under cover, protected from weather, moisture and excessive dryness and construction activities.

1.7 SEQUENCING

- A. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.
- B. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.9 WARRANTY

- A. Provide manufacturer's standard limited warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Western Architectural Openings, which is located at: 2200 E. Riverview Dr.; Phoenix, AZ 85034; Toll Free Tel: 877-268-1300; Fax: 602-243-3119; Email: [request info \(\)](mailto:request info ()); Web: <https://www.westernao.com/>
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 ALUMINUM WINDOW WALLS

- A. Basis of Design: Series 600: Aluminum Window Walls as manufactured by Western Architectural Openings.
 - 1. Aluminum window wall including frames and glazing to sizes indicated on the Drawings.
 - 2. Performance Requirements:
 - a. Air Infiltration Per ASTM E 283: 0.00 cfm/sf at test pressure of 1.57 psf.
 - b. Water Infiltration Per ASTM E 547: no water penetration at 7.52 psf.
 - c. Uniform Load Deflection Per ASTM E 330: 50.13 psf.
 - d. Uniform Load Structural Per ASTM E 330: 75.19 psf.
 - e. Overall Design Pressure Rating: DP 50.
 - f. Certifications:
 - 1) AAMA/WDMA/CSA/101/I.S.2/A440-11, CW-PG50.
 - a) Up to 60 x 120 inches (1524 x 3048 mm). Includes a design pressure of 50 lbs per sq ft (2.39 kN per sq m), the equivalent of 140 mph (62.59 m per sec) winds.
 - 2) NFRC 100 for U-factor.
 - 3) NFRC 200 for Solar Heat Gain Coefficient (SHGC) and Visible

- Transmittance (VT).
- 4) NFRC-tested verified compliance with California Title 24 requirements.
- 3. Frame and Panels:
 - a. Panels: Extruded aluminum stile, 6063-T6, and rail panels with standard one lite.
 - 1) Panel Width: 60 inches (1524 mm) maximum.
 - 2) Panel Height: 120 inches (3048 mm) maximum.
 - 3) Direct Set: 1.50 in (38 mm).
 - b. Frames and Sills: Extruded aluminum.
 - 1) Standard Base Sill: 0.75 inch (19 mm) tall. Used around perimeter of fixed windows.
 - 2) High Base Sill: 1.5 inch (38.1 mm) tall.
 - 3) Nail Fin: Extruded aluminum 1 inch (25 mm) from the exterior.
 - 4) Frame Width (inches / mm): 4.5 inch (114.3mm).
 - 5) Thermally broken.
 - c. Stops: Glazing secured with extruded aluminum snap-in stops, removable for glazing and reglazing.
 - 1) Standard Stop: Stepped profile with removable stops for re-glazes and weep holes at the base. Available in multiple dimensions. Accommodates glass sizes from 3/16, 1/4, 3/8, 3/4, 7/8, and 1 inch (5, 6, 9, 19, 22.2, and 25.4 mm) overall.
 - 2) Flush Stop: Even with exterior of frame, with weep holes at the base. Looks like typical storefront. Used exclusively with 1 inch (25 mm) overall glass.
 - d. Construction:
 - 1) Frame members fitted and mechanically joined at corners with stainless steel screws.
 - 2) Steel reinforced mull cavities for additional strength and support.
 - e. Weatherstripping:
 - 1) Interior: Black closed cell foam tape.
 - 2) Exterior: Black, non-stretch extruded vinyl on the exterior.
- 4. Glass: All glass to comply with safety glazing requirements of ANSI Z97.1 and CPSC 16CFR 1201.
 - a. Glazing: Argon Filled with LowE coating on No. 2 surface, from Cardinal Glass Industries.
 - 1) Glazing Type: LoE-270 all-climate coated glass.
 - 2) Glazing Type: LoE-366 high performance glass.
 - 3) Glazing Type: LoE-340 laminated, solar, and glare control glass.
 - 4) Glazing Type: As determined by the Architect.
 - 5) Glazing Type: _____.
 - 6) Enhanced Low-E Coating Used with Glazing Type Above: LoE-i89 enhanced winter performance glass.
 - 7) Overall Thickness: 3/4 inch (19 mm).
 - 8) Overall Thickness: 7/8 inch (22.2 mm).
 - 9) Overall Thickness: 1 inch (25 mm).
 - 10) Overall Thickness: As determined by the Architect.
 - 11) U-Factor: 0.31 for dual-pane glass with E366, argon, i89
 - 12) U-Factor: 0.35 for standard low-E, argon.
 - 13) U-Factor: As determined by the Architect.
 - 14) U-Factor: _____.
- 5. Aluminum Finish:
 - a. Provide same finish on inside and outside.
 - 1) Anodized Finish AAC - Class 1 Color: Satin.

- a) Per AAMA 611.98.
- 2) Anodized Finish AAC - Class 1 Color: Dark bronze.
 - a) Per AAMA 611.98.
- 3) Paint Finish per AAMA - 2605 minimum.
 - a) Color: Hillside bronze.
 - b) Color: Bison beige.
 - c) Color: Navajo white.
 - d) Color: Briar.
 - e) Color: Stonish beige.
 - f) Color: Autumn night.
 - g) Color: Warmtone.
 - h) Color: Cinnamon toast.
 - i) Color: Western white.
 - j) Color: As determined by the Architect.
 - k) Color: _____.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.
- B. Verify dimensions of openings fit net frame dimensions of door system. Verify openings are level, plumb, and square, with no unevenness.
- C. Commencement of installation constitutes acceptance of conditions.

3.2 INSTALLATION

- A. Install products in strict accordance with manufacturer's instructions, recommendations, and approved submittals.
- B. Flash and waterproof the perimeter of the opening and frame.
- C. Securely fit frame, level, straight, plumb and square. Install frame in proper elevation, plane and location, and in proper alignment with other work.

3.3 PROTECTION

- A. Protect installed products until completion of project.
- B. Protect thresholds and floor channels from construction traffic.
- C. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION