
SECTION 08 53 00

VINYL WINDOWS AND GLAZED DOORS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Provide polyvinyl chloride (PVC) windows and PVC glazed doors, with integral flashing, glass, glazing materials, hardware, and accessories as required for complete, weathertight installation.
- B. Related Sections:
 - 1. Section 07 90 00: Perimeter joint sealers and back-up material.
 - 2. Section 08 44 10: Aluminum window walls including entry and deck doors.

1.2 REFERENCES

- A. American Architectural Manufacturers Association (AAMA) and Window and Door Manufacturers Association (WDMA), AAMA/WDMA 101/I.S. 2, Voluntary Specifications for Aluminum, Vinyl (PVC), and Wood Window and Glass Doors.
- B. Glass Association of North America (GANA): Glazing Manual.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturers' literature including test results indicating compliance with design criteria.
- B. Shop Drawings: Indicate pertinent dimensioning, general construction, component connections and locations, anchor methods and locations.
- C. Samples: Furnish samples of vinyl finish and of glass.
- D. Test Reports: Include laboratory test results for STC and OITC rating of units.

1.4 QUALITY ASSURANCE

- A. Sustainability Requirements: Comply with CALGreen requirements including those relative to energy efficiency.
- B. Full Size Sample: Furnish full size sample of typical window including glass system, as specified and in approved finish.
 - 1. Approved window may be used in Project where undamaged.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Stack units on edge on wood strips above ground.

1.6 WARRANTY

- A. Extended Correction Period: Extend correction period to two years.
 - 1. Provide for correcting failure of Sound Transmission Coefficient rating (STC).
 - 2. Provide for correcting failure of insulating glass. Failure includes signs of moisture on interior surfaces of insulated glass units and bond failure of laminated glass.
 - 3. Repair or replace systems and materials which fail to perform as intended.
- B. Manufacturer's Warranty: Submit manufacturer's warranty including special manufacturer services as required for manufacturer's warranty.
 - 1. Period: 20 years.
 - 2. Manufacturer's warranty shall not detract from requirements of extended correction period nor from Owner's rights under implied and expressed warranties regardless of wording of manufacturer's warranty.

PART 2 - PRODUCTS**2.1 MANUFACTURERS**

- A. Milgard Manufacturing, Inc.
- B. Jeld-Wen Windows and Doors.
- C. Substitutions: Refer to Section 01 25 00.

2.2 MATERIALS

- A. Section Includes: Provide polyvinyl chloride (PVC) windows and PVC glazed doors, with integral flashing, glass, glazing materials, hardware, and accessories.
 - 1. Manufacturer: Provide each type of window and door by single manufacturer. Provide all windows and doors by single manufacturer where all types are available from approved manufacturer.
 - 2. Standards: Conform to AAMA/WDMA 101/I.S.2, types as indicated.
 - 3. Performance Class: Provide AAMA/WDMA 101/I.S.2 performance class as required to comply with wind loads as listed in Chapter 16 of applicable code.
- B. Regulatory Requirements: Comply with applicable codes.
 - 1. Safety Glass: Comply with applicable codes, CPSC 16 CFR 1201, and pass ANSI Z97.1.

2. Energy: Comply with California Energy Commission requirements regarding energy performance of windows and doors.
 - a. Manufacturer shall be responsible for providing information required by authorities necessary to verify conformance.
 - b. Entire assembly, including glass and glazing, shall be certified by National Fenestration Rating Council (NFRC) and shall bear NFRC Label indicating energy performance technical information.
- C. Performance Criteria: Comply with applicable codes and AAMA 101 for each type of window and door specified, but no less than as required for Light Commercial Performance Class (LC-50).
 1. Structural: Withstand code required wind loads on exterior and on interior when tested in accordance with ASTM E330, without breakage, failure, or malfunction of operation.
 2. Forced Entry: Provide systems conforming to ASTM F588 for windows and F842 for doors, Performance Level 10 or AAMA 1302.5 and 1303.5 where at ground floor and at areas accessible from decks and accessible rooftops.
 3. Welded Corner Test: Test weld seam in accordance with test method specified in ANSI/AAMA 101, Appendix A.
 4. Acoustical Ratings: Provide windows that have been tested under ASTM E90 with minimum Sound Transmission Class (STC) rating and Outdoor Indoor Transmission Class (OITC) ratings as indicated on Drawings.
- D. Vinyl Windows and Glazed Vinyl Doors: Provide units meeting requirements of Architectural Aluminum Manufacturers Association (AAMA) 101 Certification Program.
 1. Basis of Design: Milgard/Style Line Series 6111.
 2. Vinyl: PVC extrusions complying with ASTM D4726 and AAMA 303; basic sizes, shapes and profiles shown.
 - a. Color: Premium color as indicated, as selected by Architect where not indicated.
- E. Glass: Insulated glass units consisting of organically sealed panes of glass enclosing a hermetically sealed dehydrated air space with minus 20-degree F dew point.
 1. Performance: Certified to ASTM E2190 by Insulating Glass Certification Council.
 2. System: Manufacturer's standard dual seal system compatible with glazing system, and including spacers, desiccant, and standard corner construction.
 3. Glass: Each glass lite to be nominal 1/4" thick or thicker.
 - a. Typical Windows: ASTM C1036, select glazing quality clear glass at typical windows, ASTM C1048, Kind FT select glazing quality fully tempered safety glass where required by applicable codes and regulations.

- b. Doors and Where Safety Glass is Required: ASTM C1048, Kind FT, fully tempered select glazing quality glass complying with Uniform Building Code Standard 24-2 and ANSI Z97.1, safety glazing.
 - c. Low E Coating: High performance low emissivity coating comparable to PPG/SolarBan 67 on No. 2 surface.
- 4. Total Unit Thickness: 1".
- F. Glazing Materials: Manufacturer standard type to suit locations and applications.
- G. Miscellaneous Materials:
 - 1. Fasteners: Anodized aluminum or non-magnetic stainless steel of type not causing electrolytic action or corrosion; provide flush Phillips flat-head or allen screws where exposed.
 - 2. Finish exposed aluminum fasteners to match aluminum work.
 - 3. Brackets and Reinforcements: Aluminum wherever possible, where steel units are required for higher strength or other unavoidable necessity, hot-dip galvanize after fabrication; ASTM A123 G-90.
 - 4. Bituminous Paint: Cold applied asphalt mastic complying with SSPC-Paint 12, compounded for 30-mil thickness per coat.
- H. Weatherstripping: Manufacturer's standard weatherstripping complying with ANSI/AAMA 101.
- I. Hardware: Manufacturer's standard secure hardware as approved by Architect; fabricated from aluminum, stainless steel, or corrosion resistant material compatible with vinyl windows and doors; conform to AAMA 101 requirements.
 - 1. Operable Units: Deadlock latch mechanism, constructed to prevent accidental lockout and accidental damage if closed in locked position;
 - a. Include feature to permit locking sliding doors and operable windows in 5" open position.
 - 2. Finish: White baked enamel or match BHMA 626 (US26D), satin finished chromium plated.
- J. Screens: Provide manufacturer's standard plastic screens for sliding doors, conforming to ASTM D3656 and ANSI/SMA 2006; frames finished to match doors; screen color as approved.

2.3 FABRICATION

- A. Fabricate units to allow for proper installation; provide for thermal movement and slope and weep sills for drainage.
 - 1. Supplement frame sections with internal reinforcement where required for structural rigidity.
 - 2. Permit internal drainage weep holes and channels to direct moisture to exterior; provide internal drainage of glazing spaces to exterior through weep holes.

- B. Provide anchorage devices to securely and rigidly fit windows in place; arrange anchors to conceal from view in finished installation.
- C. Accurately fit together joints and weld corners; match components ensuring continuity of line and design; ensure joints and connections are flush, hairline and weatherproof.
- D. Glass Installation: Comply with requirements in GANA "Glazing Manual"; glass shall not touch metal.
- E. Protect materials with manufacturer-approved methods.
- F. Provide slotted head-fin in nail on frame to allow for deflection.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces of openings and verify dimensions.
 - 1. Verify openings and adjoining materials are ready to receive windows.
- B. Installation of units constitutes acceptance of existing conditions.

3.2 INSTALLATION

- A. Install units in strict compliance with manufacturer's recommendations and installation instructions; anchor securely in place.
- B. Install work plumb, straight, square, level and in their proper elevation, plane and location, and in proper alignment with other work.
 - 1. Tolerances: Maximum variation from level or from plumb 0.06" within any 3'-0" length, non-cumulative.
- C. Adjust hardware for proper operation.
- D. Repair or replace damaged components, cracked and broken glass.
- E. Touch-up of damaged finishes is permitted only where touch-up matches original material and is not visible from 3'-0"; replace broken glass.

3.3 CLEANING

- A. Clean windows and doors including glazing using methods recommended by window manufacturer; minimum wash down with solution of mild detergent in warm water applied with soft, clean cloths.
 - 1. Take care to remove dirt from corners.
 - 2. Wipe surfaces clean.

3.4 PROTECTION

- A. Protect units and glazing from damage from construction operations and from vandalism.
- B. Remove and replace glass that is broken, chipped, cracked, abraded or damaged during construction period, including natural causes, accidents and vandalism.

END OF SECTION