

SECTION 08 54 14

ULTREX® CLAD WOOD DOUBLE HUNG WINDOW

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Ultrex® clad wood double hung window complete with hardware, glazing, weather strip, insect screen, removable grilles, grilles-between-the glass, jamb extension, and standard or specified anchors, trim and attachments.
- B. Ultrex® clad wood double hung bay, bow window complete with hardware, glazing, weather strip, insect screen, removable grilles, grilles-between-the glass, simulated divided lite, jamb extension, head / seat board, and standard or specified anchors, trim and attachments.

1.2 RELATED SECTIONS

- A. Section 01 33 23—Submittal Procedures: Shop Drawings, Product Data, and Samples.
- B. Section 01 62 00—Product Options
- C. Section 01 65 00—Product Delivery
- D. Section 01 66 00—Storage and Handling requirements
- E. Section 01 71 00—Examination and Preparation
- F. Section 01 73 00—Execution
- G. Section 01 74 00—Cleaning and Waste Management
- H. Section 01 76 00—Protecting Installed Construction
- I. Section 06 22 00—Millwork: Wood trim other than furnished by window manufacturer
- J. Section 07 92 00—Joint Sealants: Sill sealant and perimeter caulking
- K. Section 09 90 00—Paints and Coatings: Paint or stain other than factory applied finish

1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. E 283: Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors.
 - 2. E 330: Standard Test Method for Structural Performance of Exterior Windows, Curtains Walls, and Doors by Uniform Static Air Pressure Difference.
 - 3. E 547: Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Cyclic Static Air Pressure Differential.
 - 4. E 774: Specification for Sealed Insulated Glass Units.
 - 5. E 1886: Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Storm Shutters Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials
 - 6. E 1996: Standard Specifications for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes
 - 7. C 1036: Standard Specification for Flat Glass.
- B. Window and Door Manufactures Association (WDMA): I.S.4: Industry Standard for Water Repellent Preservative Treatment for Millwork.
- C. Sealed Insulating Glass Manufactures Association / Insulating Glass Certification Council (SIGMA / IGCC).
- D. American Architectural Manufacturers Association / Window and Door Manufacturers Association (AAMA / WDMA):
 - 1. ANSI/AAMA/NWDA 101 / I.S.2-97: Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors.

2. 101/I.S. 2/NAFS-02: Voluntary Performance Specification for Windows, Skylights and Glass Doors.
3. AAMA/WDMA/CSA 101/I.S.2/A440-05: Standard/ Specification for windows, doors, and unit skylights.

- E. Window and Door Manufacturers Association (WDMA): Hallmark Certification Program.
- F. American Architectural Manufacturers Association (AAMA): 613: Voluntary Performance Requirements and Test Procedures for Organic Coatings on Plastic Profiles.
- G. National Fenestration Rating Council (NFRC): 101: Procedure for Determining Fenestration Product Thermal Properties.

1.4 SYSTEM DESCRIPTION

- A. Impact Zone 3 Certification Requirements:
1. Window Units shall be designed to comply with 101/I.S.2-97, 101/I.S. 2/NAFS-02, and 101/I.S.2/A440-05
 - a. Double Hung: H-LC +55/-65 rating
 - b. Transom: F-LC +55/-65 rating
 - c. Picture: F-LC +55/-65 rating
 2. Air leakage shall not exceed the following when tested at 1.57 psf according to ASTM E 283: 0.30 cfm per square foot of frame.
 3. No water penetration shall occur when units are tested at the following pressure according to ASTM E 547:
 - a. Double Hung: 8.25 psf
 - b. Transom: 8.25 psf
 - c. Picture: 8.25 psf
 4. Units shall be designed to comply with ASTM E330 for structural performance when tested at the following pressures:
 - a. Double Hung: +82.5/-97.5 psf
 - b. Transom: +82.5/-97.5 psf
 - c. Picture: +82.5/-97.5 psf
 5. Missile Impact at Missile Level D complies with ASTM E1886-05, ASTM E 1886-06, ASTM E1996-02, ASTM E1996-05, ASTM E1996-06.
 6. Impact Pressure Cycling at +55/-65 psf, complies with ASTM E1886-02, ASTM E1886-05, ASTM E1886-06, ASTM E1996-02, ASTM E1996-05, ASTM E1996-06.
 7. Thermal Unit "U" Value, .35 or less, complies with NFRC Certification.
 8. Forced Entry Resistance, complies with ASTM F588-04.

1.5 SUBMITTALS

- A. Shop Drawings: Submit shop drawings under provisions of Section 01 33 23.
- B. Product Data: Submit catalog data under provisions of Section 01 33 23.
- C. Samples:
1. Submit corner section under provisions of Section 01 33 23.
 2. Include glazing system, quality of construction, and specified finish.
- D. Quality Control Submittals: Submit manufacturer's certifications indicating compliance with specified performance and design requirements under provisions of Section 01 33 23.

1.6 QUALITY ASSURANCE

- A. Regulatory Requirements: Emergency Egress or Rescue: Comply with requirements for sleeping units of 2009 North Carolina Building Code.

1.7 DELIVERY

- A. Comply with provisions of Section 01 65 00.
- B. Deliver in original packaging and protect from weather.

1.8 STORAGE AND HANDLING

- A. Prime or seal wood surfaces, including surface to be concealed by wall construction, if more than thirty (30) days will expire between delivery and installation.
- B. Store window units in an upright position in a clean and dry storage area above ground and protect from weather under provisions of Section 01 66 00.

1.9 WARRANTY

- A. Windows shall be warranted to be free from defects in manufacturing, materials, and workmanship for a period of ten (10) years from purchase date.
- B. Window glass shall be warranted to be free from defects in manufacturing, materials and workmanship for period of twenty (20) years from the purchase date.

PART 2 PRODUCTS

2.1 MANUFACTURED UNITS

- A. Description: Ultrex® Double Hung (and related stationary or picture units) as manufactured by Integrity Windows and Doors, Fargo, North Dakota. Operating sash tilt to interior for cleaning or removal.
- B. Description: Ultrex® Double Hung Bay, Bow unit, (and related stationary or picture units) as manufactured by Integrity Windows and Doors, Fargo, North Dakota or Roanoke, Virginia.

2.2 FRAME DESCRIPTION

- A. Interior: Clear pine interior surfaces.
 - 1. Kiln dried to a moisture content no greater than twelve (12) percent at the time of fabrication.
 - 2. Water repellent preservative treated in accordance with ANSI / NWWDA I.S.4-94.
- B. Exterior: Fiberglass reinforced plastic (Ultrex®), 0.075 inch (2 mm) thick.
- C. Frame width: 4-9/16 inches (116 mm).

2.3 SASH DESCRIPTION

- A. Clear pine interior surfaces.
 - 1. Kiln dried to a moisture content no greater than twelve (12) percent at the time of fabrication.
 - 2. Water repellent preservative treated in accordance with ANSI / NWWDA I.S.4-94.
- B. Exterior: Pultruded reinforced fiberglass (Ultrex®), 0.070 – 0.075 inch (2 mm) thick.
- C. Composite sash thickness: 1-9/16 inches (40 mm).

2.4 GLAZING

- A. Select quality complying with ASTM C 1036. Insulating glass SIGMA/IGCC certified to performance level CBA when tested in accordance with ASTM E 774.
- B. Glazing method: 3/4 inch (19 mm) Insulated glass.
- C. Glass type: LoE² - 272® Argon gas

- D. Glazing seal: Silicone bedding at exterior and interior.
- E. Optional Impact glazing zone for winds up to 130 miles per hour. Glass is laminated insulated Low EII with Argon, consisting of annealed or tempered glass to the exterior and laminated glass to the interior. The laminated glass is made up of glass with either a SGP or PVB laminate layer between. The interior and exterior glazing compound is silicone , in a sandwich style glazing system.

2.5 FINISH

- A. Exterior: Factory baked on acrylic urethane. Color: Stone White
- B. Interior: White interior factory finish.

2.6 HARDWARE

- A. Balance System: Coil spring block and tackle with nylon cord and glass filled nylon shoe and steel locking clutch.
- B. Jamb Track: Pultruded extrusion.
- C. Lock: High pressure zinc die-cast cam lock and keeper. Finish: Phosphate coated and electrostatically painted.
 - 1. Color: White.
- D. Tilt latches: Spring loaded latches for release of sash located at checkrail.
 - 1. Color: White.

2.7 WEATHER STRIP

- A. Frame, sash stiles, and meeting rails, sealed with flexible bulb gasket. Bottom and top rails sealed with flexible leaf gasket.

2.8 JAMB EXTENSION

- A. Furnish jamb extension 6-9/16 (167 mm) factory installed for all but 2x8 Shear walls. Furnish jamb extensions in the field for 2x8 walls, shipped loose
- B. Finish: Bare wood; White interior factory finish.

2.9 INSECT SCREENS

- A. Factory installed full screen. Screen mesh, 18 by 16: Charcoal fiberglass.
- B. Aluminum frame finish: White

2.10 SIMULATED DIVIDED LITES (SDL)

- A. 7/8" (22 mm) wide. No internal spacer bar.
 - 1. Exterior muntins: Extruded Ultrex. Rectangular lite cut pattern per elevations.
 - a. Color: Stone White
- B. Interior muntins: White interior factory finish.

2.11 ACCESSORIES AND TRIM

- A. Installation Accessories:
 - 1. Factory installed vinyl nailing fin / drip cap at head and side jambs.
 - 2. Installation brackets: Brackets for 6-9/16 inch (167 mm) jambs.

3. Mullion kit: Standard mullion kit for field assembly of related units available in horizontal, vertical, round top over double hung and 2-wide and/or 2-high configurations. Kit includes: Instructions, aluminum pins, filler blocks, wood mullion tie, sealant foam tape, interior mullion trim, mull tee, related screws and nailing fin connectors.
4. Structural mullion kit: Structural mullion kit for field assembly of related units available in horizontal, vertical, round top over double hung and 2-wide and/or 2-high configurations. Kit includes: Instructions, reinforcement member, aluminum pins, filler blocks, wood mullion tie, sealant foam tape, interior mullion trim, mull tee, related screws, nailing fin connectors and structural brackets.
5. Installation clips standard with nailing fin on impact glazed windows.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verification of Conditions: Before Installation, verify openings are plumb, square, and of proper dimension as required in Section 01 71 00. Report frame defects or unsuitable conditions to the General Contractor before proceeding.
- B. Acceptance of Conditions: Beginning of installation confirms acceptance of existing conditions.

3.2 INSTALLATION

- A. Comply with Section 01 73 00.
- B. Assemble and install window unit according to manufacturer's instructions and reviewed shop drawings.
- C. Install sealant and related backing materials at perimeter of unit or assembly in accordance with Section 07 92 00 Joint Sealants. Do not use expansive foam sealant.
- D. Install accessory items as required.
- E. Use finish nails to apply wood trim and mouldings.

3.3 CLEANING

- A. Remove visible labels and adhesive residue according to manufacturer's instructions.
- B. Leave windows and glass in a clean condition. Final cleaning as required in Section 01 74 00.

3.4 PROTECTING INSTALLED CONSTRUCTION

- A. Comply with Section 01 76 00.
- B. Protect windows from damage by chemicals, solvents, paint, or other construction operations that may cause damage.

END OF SECTION