SECTION 08 52 00

WOOD WINDOWS

(ANDERSEN® 200 SERIES NARROLINE® DOUBLE-HUNG, TRANSOM AND CIRCLE TOP™ WINDOWS)

PART 1 - GENERAL

SPECIFIER NOTE: DATA CONTAINED IN THIS GUIDE SPEC IS ACCURATE AS OF AUGUST 2007. DUE TO ONGOING PRODUCT CHANGES, THIS DATA MAY CHANGE OVER TIME. CONSULT MANUFACTURER FOR COMPLETE PRODUCT DETAILS.

1.1 SUMMARY

A. Section Includes:
   1. Vinyl clad wood windows in the following styles:

SPECIFIER NOTE: RETAIN STYLE BELOW AND DELETE STYLES NOT REQUIRED FOR PROJECT.

      a. Double-Hung.
      b. Transom.
      c. Circle Top™ Window.

SPECIFIER NOTE: ARTICLE BELOW SHOULD BE RESTRICTED TO STATEMENTS DESCRIBING DESIGN OF PERFORMANCE REQUIREMENTS AND FUNCTIONAL (NOT DIMENSIONAL) TOLERANCES OF A COMPLETE SYSTEM. LIMIT DESCRIPTIONS FOR COMPOSITE AND OPERATIONAL PROPERTIES REQUIRED TO LINK COMPONENTS OF A SYSTEM TOGETHER AND TO INTERFACE WITH OTHER SYSTEMS.

1.2 SYSTEM DESCRIPTION

SPECIFIER NOTE: MANUFACTURER RECOMMENDS REFERRING TO WEBSITE FOR MOST CURRENT PRODUCT PERFORMANCE DATA. RETAIN, EDIT, OR DELETE LANGUAGE BELOW TO SUIT PROJECT REQUIREMENTS. REFER TO WWW.ANDERSENWINDOWS.COM FOR PERFORMANCE INFORMATION.

A. Performance Requirements: Provide products/systems that have been manufactured, fabricated, and installed to the following performance criteria:
   1. Comply with ANSI/AAMA/NWWDA 101/I.S.2.
   2. Performance Class: <Specify performance class.>
   3. Performance Grade: <Specify performance grade.>
   4. U-Factor (NFRC 100): <Specify U-Factor.>
   5. Solar Heat Gain Coefficient (SHGC) (NFRC 200) : <Specify SHGC.>
   6. Outdoor-Indoor Transmission Class (OITC) (ASTM E90) : <Specify OITC.>
   7. Sound Transmission Class (STC) (ASTM E90) : <Specify STC.>

SPECIFIER NOTE: MANUFACTURER RECOMMENDS REFERRING TO WEBSITE DESIGN PRESSURE ESTIMATOR FOR ADDITIONAL WIND LOAD INFORMATION. RETAIN, EDIT, OR DELETE LANGUAGE BELOW TO SUIT PROJECT REQUIREMENTS

B. Structural Requirements: Provide products/systems capable of withstanding wind loads based on testing units representative of those indicated for Project that pass AAMA/NWWDA 101/I.S.2/NAFS, Uniform Structural Load Test:

1. Design Wind Loads: Determine design wind loads applicable to Product from basic wind speed indicated in miles per hour (meters per second) at 33 feet (10 meters) above grade, according to ASCE, Section 6, based upon mean roof heights indicated on Drawings.
   a. Basic Wind Speed: <Specify wind speed.>
   b. Importance Factor: <Specify importance factor.>
   c. Exposure Category: <Specify exposure category.>
   d. Wind Load Requirement: <Specify design pressure requirement.>

SPECIFIER NOTE: ARTICLE BELOW INCLUDES SUBMITTAL OF RELEVANT DATA TO BE FURNISHED BY CONTRACTOR BEFORE, DURING OR AFTER CONSTRUCTION. COORDINATE THIS ARTICLE WITH THE ARCHITECT'S AND CONTRACTOR'S DUTIES AND RESPONSIBILITIES IN CONDITIONS OF THE CONTRACT AND DIVISION 01 SUBMITTAL PROCEDURES SECTION.

1.3 SUBMITTALS

A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 01 Submittal Procedures Section.

B. Product Data: Submit manufacturer's product data and installation guides.

C. Shop Drawings: Provide drawings indicating direction of operable parts, typical jamb, head and sill conditions, and special mullion reinforcement details.

D. Color Samples: Submit selection and verification samples, including the following:
   1. Hardware: Submit samples indicating typical finish on window hardware.
   2. Vinyl Cladding: Submit color Samples of vinyl cladding.

E. Contract Closeout Submittals: Submit the following:
   1. Warranty documents specified herein.

F. Owner's Manual: Bound manual clearly identified with project name, location, and completion date. Identify type and size of units installed. Provide recommendations for periodic inspections, care, and maintenance. Identify common causes of damage with instructions for temporary repair.

SPECIFIER NOTE: ARTICLE BELOW SHOULD INCLUDE STATEMENTS OF PREREQUISITES, STANDARDS, LIMITATIONS AND CRITERIA THAT ESTABLISH AN OVERALL LEVEL OF QUALITY FOR PRODUCTS AND WORKMANSHIP FOR THIS SECTION. COORDINATE ARTICLE BELOW WITH DIVISION 01 QUALITY ASSURANCE SECTION.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Utilize an installer having demonstrated experience on projects of similar size and complexity.

SPECIFIER NOTE: PARAGRAPH BELOW SHOULD LIST OBLIGATIONS FOR COMPLIANCE WITH SPECIFIC CODE REQUIREMENTS PARTICULAR TO THIS SECTION. GENERAL STATEMENTS TO COMPLY WITH A PARTICULAR CODE ARE TYPICALLY ADDRESSED IN CONDITIONS OF THE CONTRACT AND DIVISION 01 REGULATORY REQUIREMENTS SECTIONS. REPETITIVE STATEMENTS SHOULD BE AVOIDED.

B. Regulatory Requirements and Approvals: <Specify applicable requirements of regulatory agencies.>

C. Certifications:
   1. Insulating Glass Units: Provide insulating glass units permanently marked with certification label of Insulating Glass Certification Council (IGCC) indicating compliance with ASTM E2190.

SPECIFIER NOTE: RETAIN CERTIFICATION LABEL REQUIREMENTS PARAGRAPH ABOVE OR BELOW.

2. Insulating Glass Units: Provide insulating glass units permanently marked with certification label of Insulating Glass Manufacturers Association of Canada (IGMAC) indicating compliance with CAN/CGSB or ASTM E2190.

SPECIFIER NOTE: RETAIN PARAGRAPH BELOW IF PREINSTALLATION MEETING IS REQUIRED.

D. Preinstallation Meetings: <Specify requirements for preinstallation meeting.>

SPECIFIER NOTE: IN ARTICLE BELOW, STATE PHYSICAL OR ENVIRONMENTAL LIMITATIONS OR CRITERIA FOR INSTALLATION SUCH AS WEATHER, TEMPERATURE, HUMIDITY, VENTILATION OR ILLUMINATION REQUIRED FOR PROPER INSTALLATION OR APPLICATION.

1.5 DELIVERY, STORAGE, AND HANDLING

A. General: Comply with Division 01 Product Requirements Section.

B. Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.

C. Delivery: Deliver materials in manufacturer's original unopened, undamaged containers with identification labels intact.

D. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

E. Store materials and accessories off ground, under cover, and protected from weather and construction activities.

SPECIFIER NOTE: IN ARTICLE BELOW, STATE PHYSICAL OR ENVIRONMENTAL LIMITATIONS OR CRITERIA FOR INSTALLATION SUCH AS WEATHER, TEMPERATURE, HUMIDITY, VENTILATION OR ILLUMINATION REQUIRED FOR PROPER INSTALLATION OR APPLICATION.

1.6 PROJECT/SITE CONDITIONS

A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication. Record measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

B. Install units in accordance with manufacturer's safety and weather requirements.

SPECIFIER NOTE: COORDINATE ARTICLE BELOW WITH CONDITIONS OF THE CONTRACT AND WITH DIVISION 01 CLOSEOUT SUBMITTALS (WARRANTY) SECTION. USE THIS ARTICLE TO REQUIRE SPECIAL OR EXTENDED WARRANTY OF BOND COVERING THE WORK OF THIS SECTION.

1.7 WARRANTY

A. Project Warranty: Refer to Conditions of the Contract for project Warranty provisions.

SPECIFIER NOTE: COORDINATE ARTICLE BELOW WITH MANUFACTURER'S WARRANTY REQUIREMENTS. VISIT THE ANDERSEN WEBSITE FOR A COMPLETE DESCRIPTION OF THE STANDARD LIMITED WARRANTY INCLUDING EXCLUSIONS AND LIMITATIONS.

B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard limited warranty document. Manufacturer's limited warranty is in addition to, and not a limitation of, other rights Owner may have under contract documents.

PART 2 - PRODUCTS

SPECIFIER NOTE: RETAIN ARTICLE BELOW FOR PROPRIETARY METHOD SPECIFICATION. ADD PRODUCT ATTRIBUTES, PERFORMANCE CHARACTERISTICS, MATERIAL STANDARDS, AND DESCRIPTIONS AS APPLICABLE. USE OF SUCH PHRASES AS "OR EQUAL" OR "OR APPROVED EQUAL" OR SIMILAR PHRASES MAY CAUSE AMBIGUITY IN SPECIFICATIONS. SUCH PHRASES REQUIRE VERIFICATION (PROCEDURAL, LEGAL AND REGULATORY) AND ASSIGNMENT OF RESPONSIBILITY FOR DETERMINING "OR EQUAL" PRODUCTS.

2.1 MANUFACTURER

A. Provide products from the following manufacturer:
   1. Andersen Windows, Inc.
   2. 100 4th Ave. N.
   3. Bayport, MN 55003-1096.
   4. Phone: (800) 299-9029.
   5. Fax: (800) 752-9230.
   6. E-mail: technicalsupport@andersenwindows.com.
   7. www.andersenwindows.com.
   8. Local Contact: <Specify contact information provided by local Andersen representative.>

2.2 MANUFACTURED UNITS

A. Proprietary Products/Systems: Vinyl clad double-hung wood windows, including the following:
   1. Andersen® 200 Series Narroline® Double-Hung Windows.
   2. Andersen® 200 Series Narroline® Transom Windows.
   3. Andersen® 200 Series Narroline® Circle Top™ Windows.

SPECIFIER NOTE: RETAIN, EDIT, OR DELETE PRODUCT OPTION LANGUAGE BELOW TO SUIT PROJECT REQUIREMENTS.

B. Product/System Options:
   1. Narroline® Transom units.
   2. Narroline® 30 degree and 45 degree angle Bay Window units.
      a. Provide head and seat boards for the following wall thickness:

SPECIFIER NOTE: RETAIN ONE OF THE WALL THICKNESSES BELOW AND DELETE THICKNESSES NOT REQUIRED FOR PROJECT.

         1) Wall Thickness: 5-1/4 inch (133 mm).
         2) Wall Thickness: 6-9/16 inch (167 mm).
         3) Wall Thickness: 7-1/8 inch (181 mm).
      b. Provide jamb extensions for the following wall thickness:

SPECIFIER NOTE: RETAIN ONE OF THE WALL THICKNESSES BELOW AND DELETE THICKNESSES NOT REQUIRED FOR PROJECT.

         1) Wall Thickness: 5-1/4 inch (133 mm).
         2) Wall Thickness: 6-9/16 inch (167 mm).
         3) Wall Thickness: 7-1/8 inch (181 mm).
      c. Prefinished white interior.

SPECIFIER NOTE: EDIT ARTICLE BELOW TO SUIT PROJECT REQUIREMENTS. IF SUBSTITUTIONS ARE PERMITTED, EDIT TEXT BELOW. ADD TEXT TO REFER TO DIVISION 01 PROJECT REQUIREMENTS (PRODUCT SUBSTITUTIONS PROCEDURES) SECTION.

   3. Substitutions: No substitutions permitted.

SPECIFIER NOTE: SPECIFY MATERIALS TO BE FURNISHED. THIS ARTICLE MAY BE OMITTED AND THE MATERIALS CAN BE INCLUDED WITH THE DESCRIPTION OF A MANUFACTURED UNIT, EQUIPMENT, COMPONENT, OR ACCESSORY.

2.3 MATERIALS

A. Frame and Sash: Fabricated from wood species approved in WDMA Industry Standard I.S.2 and treated according to WDMA I.S.4.

B. Vinyl Cladding: Rigid vinyl (PVC) complying with requirements of ASTM D4216, in the following color:

SPECIFIER NOTE: RETAIN PROJECT REQUIRED COLOR BELOW. DELETE COLOR NOT REQUIRED.

1. Color: White.
2. Color: Sandtone.

C. Weatherstripping:
1. Double-Hung Horizontal Weatherstripping: Gasket type, vinyl covered foam in top and bottom rails.
2. Check Rail Weatherstripping: Compressible bulb covered with low friction plastic coating secured to filled polypropylene base, with end felt pads around parting stops.
3. Double-Hung Unit Vertical Weatherstripping: Polypropylene channels in contact with ribs in jamb liners.
4. Transom Unit Weatherstripping: Vinyl covered foam at full perimeter of sash.

D. Hardware:
1. Double-Hung Window Hardware:

SPECIFIER NOTE: SELECT BETWEEN THE FOLLOWING SASH LOCK OPTIONS DELETE SUBPARAGRAPHS NOT USED.

a. Classic Series™ Hardware Locks: Injection molded, glass reinforced, polyester sash locks in the following integral color.
1) Color: Stone.

SPECIFIER NOTE: RETAIN HARDWARE LOCK COLOR ABOVE OR BELOW. STONE COLOR IS STANDARD ON ALL UNITS EXCEPT UNITS WITH PREFINISHED WHITE INTERIOR.

2) Color: White.

SPECIFIER NOTE: THE FOLLOWING ESTATE™ HARDWARE LOCKS ARE FIELD APPLIED.

b. Estate™ Hardware Locks: Solid forged brass handle and base with glass reinforced polyester locking cam with the following finish.

SPECIFIER NOTE: RETAIN ONE OF THE FOLLOWING HARDWARE LOCK FINISHES BELOW. DELETE COLORS NOT REQUIRED.

1) Finish: Bright Brass.
2) Finish: Antique Brass.
3) Finish: Polished Chrome.
4) Finish: Brushed Chrome.
5) Finish: Oil Rubbed Bronze.
6) Finish: Satin Nickel.
7) Finish: Distressed Bronze.
8) Finish: Distressed Nickel.

2. Sash Lift: Provide one (1) hand lift per window unit.

SPECIFIER NOTE: IF OPTIONAL SASH LIFTS ARE REQUIRED, RETAIN SUBPARAGRAPH ABOVE OR BELOW. SASH LIFTS ARE NOT AVAILABLE FOR IMPACT RESISTANT PRODUCTS.

3. Sash Lift: Provide 2 finger lifts per window unit.
   a. Hand Lift: Classic Series™ hardware, zinc die cast with baked powder coated finish on chromate protective coating in the following color:

SPECIFIER NOTE: DELETE COLOR BELOW NOT REQUIRED FOR PROJECT.

      1) Color: Stone.
      2) Color: White.
   b. Hand Lift: Estate™ hardware, solid brass hardware with the following finish:

SPECIFIER NOTE: RETAIN ONE OF THE FOLLOWING HARDWARE LOCK COLORS BELOW. DELETE COLORS NOT REQUIRED.

      1) Finish: Bright Brass.
      2) Finish: Antique Brass.
      3) Finish: Polished Chrome.
      4) Finish: Brushed Chrome.
      5) Finish: Oil rubbed Bronze.
      6) Finish: Satin Nickel.
      7) Finish: Distressed Bronze.
      8) Finish: Distressed Nickel.
   c. Finger Lift: Classic Series™ hardware, zinc cast with baked, powder coated finish on chromate protective coating in the following color:

SPECIFIER NOTE: DELETE COLOR BELOW NOT REQUIRED FOR PROJECT.

      1) Color: Stone.
      2) Color: White.
   d. Finger Lift: Estate™ hardware, solid brass with the following finish:

SPECIFIER NOTE: RETAIN ONE OF THE FOLLOWING HARDWARE LOCK COLORS BELOW. DELETE COLORS NOT REQUIRED.

      1) Finish: Bright Brass.
      2) Finish: Antique Brass.
      3) Finish: Polished Chrome.
      4) Finish: Brushed Chrome.
      5) Finish: Oil Rubbed Bronze.
      6) Finish: Satin Nickel.
      7) Finish: Distressed Bronze.
      8) Finish: Distressed Nickel.
4. Balances: Fit top and bottom sash with spring power balances to ensure easy operation.

2.4 GLAZING

A. General: Insulating glass units certified through the Insulating Glass Certification Council as conforming to the requirements of IGCC. Provide dual sealed units consisting of polyisobutylene primary seal and silicone secondary seal. Provide metal spacers with bent or soldered corners.

SPECIFIER NOTE: RETAIN CERTIFICATION REQUIREMENTS PARAGRAPH ABOVE OR BELOW.

B. General: Insulating glass units certified through the Insulating Glass Manufacturers Association of Canada (IGMAC) conforming to the requirements of Canadian General Standards Board CAN/CGSB

12.8 or ASTM E2190. Provide dual sealed units consisting of polyisobutylene primary seal and silicone secondary seal. Provide metal spacers with bent or soldered corners.

SPECIFIER NOTE: SELECT BETWEEN THE FOLLOWING STANDARD GLAZING OPTIONS. CONSULT ANDERSEN CORPORATION FOR ADDITIONAL GLAZING OPTIONS. IN ADDITION TO COMPLYING WITH SAFETY GLAZING REQUIREMENTS, TEMPERED GLASS MAY BE REQUIRED BECAUSE OF WINDOW SIZE AND WIND LOAD. CONSULT ANDERSEN CORPORATION FOR ASSISTANCE IN SELECTING APPROPRIATE GLAZING TYPE.

C. Dual-Pane Insulating Glass Units:
   1. Glass: Insulating glass units consisting of 2 lites of clear annealed glass conforming to ASTM C1036, Type 1, Class 1, q3.

SPECIFIER NOTE: RETAIN SUBPARAGRAPH ABOVE FOR NON-TEMPERED INSULATING GLASS UNITS. SELECT SUBPARAGRAPH BELOW FOR TEMPERED INSULATING GLASS UNITS. RETAIN FILLING SUBPARAGRAPH WITH EITHER PARAGRAPH.

   2. Glass: Insulating glass units consisting of 2 lites of clear tempered glass conforming to ASTM C1048, Type 1, Class 1, q3, Kind FT where indicated on Drawings and as required by window manufacturer.
   3. Filling: Fill space between glass lites with air.
   4. Protective removable polyolefin film applied to glass surfaces No. 1 and No. 4.

D. High-Performance™ Low-E Glass, Argon Blend Filled Insulating Glass Units:
   1. Glass: Insulating glass units consisting of an outboard lite of clear annealed glass conforming to ASTM C1036, Type 1, Class 1, q3 and an inboard lite of clear heat strengthened glass conforming to ASTM C1048, Type 1, Class 1, q3, Kind HS.

SPECIFIER NOTE: RETAIN SUBPARAGRAPH ABOVE FOR NON-TEMPERED INSULATING GLASS UNITS. SELECT SUBPARAGRAPH BELOW FOR TEMPERED INSULATING GLASS UNITS.

   2. Glass: Tempered insulating glass units consisting of an outboard and inboard lite of clear tempered glass conforming to ASTM C1048, Type 1, Class 1, q3, Kind FT.
   3. Low-E Coating: Magnetron sputtering vapor deposition (MSVD) Low-E coating applied to No. 2 surface.
   4. Filling: Fill space between glass lites with argon gas blend.
   5. Protective removable polyolefin film applied to glass surfaces No. 1 and No. 4.

2.5 JOINING SYSTEMS

SPECIFIER NOTE: ANDERSEN WINDOWS STRONGLY RECOMMENDS CONSULTATION WITH AN EXPERIENCED STRUCTURAL ENGINEER, ARCHITECT, OR CONTRACTOR AND A LOCAL ANDERSEN REPRESENTATIVE WHEN SPECIFYING ANDERSEN JOINING SYSTEMS. CONSULT AN ANDERSEN REPRESENTATIVE FOR JOINING OPTIONS WHEN JOINING IMPACT RESISTANT WINDOW PRODUCTS.

A. Wood Non-Reinforced Joining:
   1. Non-reinforced join with PVC spacer.

B. Steel Reinforced Joining: .
   1. Reinforcing: Provide 4 inch by 3/16 inch (100 mm by 4.8 mm) thick hot rolled steel plate conforming to ASTM A36 with zinc plating and yellow chromate conversion coat. Pre drill holes for attachment to window frames and end brackets.
   2. End Brackets: 16 gage (1.6 mm) galvanized bent metal gusset plates.
   3. Provide corrosion resistant coating as recommended by window manufacturer and provided by window installer for treating cut end and drilled holes at steel reinforcement members.

C. Head Flashing: 6 inches (152 mm) long sheet vinyl.

1. Color: Match unit exterior color.

D. Silicone Sealant: Silicone sealant recommended by window manufacturer.

E. Provide vinyl trim strip with each joining method used.
   1. Color: Match unit exterior color.

SPECIFIER NOTE: SPECIFY SUBORDINATE OR SECONDARY ITEMS THAT AID AND ASSIST PRIMARY PRODUCTS SPECIFIED ABOVE OR ARE NECESSARY FOR PREPARATION OR INSTALLATION OF THOSE ITEMS.

2.6 ACCESSORIES

SPECIFIER NOTE: COORDINATE SPECIFICATIONS FOR GRILLE MATERIAL OF ADJACENT UNIT FOR JOINED UNITS OF DIFFERENT TYPES. STANDARD GRILLE WIDTH IS 3/4 INCH (19.1 MM). CONSULT AN ANDERSEN REPRESENTATIVE FOR GRILLE OPTIONS AS OPTIONS VARY. SELECT BETWEEN REMOVABLE INTERIOR, STATIONARY EXTERIOR, AND INTERIOR OR FINELIGHT GRILLES.

A. Grilles:

SPECIFIER NOTE: REFER TO ANDERSEN® DIVIDED LIGHT PATTERN GUIDE FOR AVAILABLE DIVIDED LIGHT PATTERNS AND DETAILS. EXTERIOR AND INTERIOR COLORS CAN BE DIFFERENT. RETAIN PROJECT REQUIRED GRILLE PATTERN SUBPARAGRAPH BELOW AND DELETE SUBPARAGRAPHS NOT REQUIRED.

1. Simulated Divided Light Grilles: Fixed exterior grilles with fixed or removable interior grilles where indicated on Drawings.
   a. Exterior Grille: Provide Fibrex® material exterior grilles where indicated on Drawings. Install grilles on exterior of glass with continuous adhesive tape to simulate true divided light muntin bars in the following color:
      1) Color: White.
      2) Color: Sandtone.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED INTERIOR GRILLE SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

   b. Fixed Interior Grille: Provide profiled wood grilles applied with adhesive tape to interior glass surface.
      1) Grille Type: Unfinished Maple.
      2) Grille Type: Prefinished white Maple.
   c. Removable Interior Grilles: Provide removable, hardwood maple divided light grilles where indicated on Drawings. Install removable grilles against interior glass, attached with metal fasteners or integral tabs to sash.
      1) Grille Type: Unfinished Maple.
      2) Grille Type: Prefinished Maple.
         a) Color: White.
         b) Color: Sandtone.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED GRILLE WIDTH SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

   d. Width: 3/4 inch (19.1 mm).
   e. Width: 7/8 inch (22 mm).
   f. Width: 1-1/8 inch (29 mm).
   g. Pattern as indicated on Drawings.

2. Removable Interior Grilles: Provide removable, hardwood maple divided light grilles where indicated on Drawings. Install removable grilles against interior glass, attached with metal fasteners or integral tabs to sash. Provide dual face profile to give muntin bar appearance from both interior and exterior.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED EXTERIOR FACING SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

a. Exterior Facing: Maple grille with White color painted finish.
b. Exterior Facing: Maple grille with Sandtone color painted finish.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED INTERIOR FACING SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

c. Interior Facing: Unfinished Maple.
d. Interior Facing: White Painted maple interior.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED GRILLE WIDTH SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

e. Width: 3/4 inch (19.1 mm).
f. Width: 7/8 inch (22 mm).
g. Width: 1-1/8 inch (29 mm).
h. Pattern as indicated on Drawings.

3. Finelight™ Grilles: Provide contour profile aluminum muntin bars permanently mounted within insulating glass unit where indicated on Drawings.
   a. Grille Intersections: ABS concealed plastic connectors with nylon end keepers.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED FINISH SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

b. Exterior and Interior Surface: White color painted finish.
c. Exterior and Interior Surface: Sandtone color painted finish.
d. Width: 3/4 inch (19.1 mm).

SPECIFIER NOTE: RETAIN REQUIRED GRILLE WIDTH ABOVE OR BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

e. Width: 1 inch (25.4 mm).
f. Pattern as indicated on Drawings.

SPECIFIER NOTE: SELECT BETWEEN STANDARD OR TRUSCENE® INSECT SCREEN OPTIONS.

B. Insect Screens: Provide venting sash with an insect screen, including attachment hardware.
   1. Frames: 0.024 inch (0.61 mm) rolled aluminum frame with chromate conversion coating. Provide matching corner locks and latch retainers.
   2. Insect Screen Cloth: 18 by 16 aluminum mesh, gunmetal finish.
   3. Frame Finish: High-bake polyester finish in the following color:

SPECIFIER NOTE: RETAIN PROJECT REQUIRED FRAME FINISH SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

a. Frame Finish: White.
b. Frame Finish: Sandtone.

C. TruScene® Insect Screen: Provide venting sash with an insect screen, including attachment hardware.
   1. Frames: 0.024 (0.61 mm) inch rolled aluminum frame.

2. Frame Finish: High-bake polyester finish in the following color:

SPECIFIER NOTE: RETAIN PROJECT REQUIRED FRAME FINISH SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

a. Frame Finish: White.
b. Frame Finish: Sandtone..

3. Insect Screen Cloth: 25 by 25 micro fine stainless steel wire with a polyester non-reflective coating.

D. Combination Window (Storm and Insect Screen): Provide venting sash with combination storm panel and insect screen, including attachment hardware.

1. Frames: 0.024 inch (0.61 mm) aluminum frame with rigid vinyl tracks.
2. Storm Panel and Insect Screen Frames: 0.024 inch (0.61 mm) rolled aluminum frame with chromate conversion coating. Provide matching corner locks and latch retainers.
3. Insect Screen Cloth: 18 by 16 aluminum mesh, gunmetal finish.
4. Frame Finish: High-bake polyester finish in the following color:

SPECIFIER NOTE: RETAIN PROJECT REQUIRED FRAME FINISH SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED.

a. Frame Finish: White.
b. Frame Finish: Sandtone.

E. Sill Stop: Prefinished wood pieces machined from clear material.

F. Sill Stool: Wood members machined from clear material or veneered finger joined material approved in ANSI/AAMA/NWWDA 101/I.S.2.

SPECIFIER NOTE: SPECIFY THE FOLLOWING PARAGRAPH FOR IMPROVED DESIGN PRESSURE PERFORMANCE.

G. High Profile Sill Stop: Prefinished wood pieces machined from clear material.

H. Exterior Trim and Casing: Where indicated on Drawings, provide vinyl sheathed plywood in the following thickness, conforming to NIST Voluntary Product Standards P.S.1 and rigid vinyl channels.

1. Thickness: 1/2 inch (12.7 mm).

SPECIFIER NOTE: RETAIN THICKNESS ABOVE OR BELOW.

2. Thickness: 3/4 inch (19 mm).
3. Color: Match window framing.
4. Andersen® Vinyl Trim Board: 0.043 inch (1.09 mm) thick vinyl with lightly textured surface laminated with adhesive to 3/4 inch (19 mm) thick plywood.

SPECIFIER NOTE: RETAIN SUBPARAGRAPH ABOVE FOR ANDERSEN VINYL TRIM BOARD. RETAIN SUBPARAGRAPH BELOW FOR VINYL LAMINATED BOARD.

5. Vinyl Laminated Board: 0.045 inch (1.14 mm) thick vinyl with smooth surface laminated with adhesive to 1/2 inch (12.7 mm) thick plywood.
6. Trim Channels: Rigid vinyl extrusions furnished by window manufacturer for use on same product line.
7. Support Mullion Trim: 2 inch (51 mm) wide wood filler and vinyl trim strip.
   a. Color: Match window unit exterior color.

SPECIFIER NOTE: DESCRIBE ITEMS THAT SHALL BE SHOP MANUFACTURED, FABRICATED, OR ASSEMBLED BEFORE BEING DELIVERED TO SITE.

2.7 FABRICATION

A. Preservative Treatment: Treat wood sash and frame members after machining with a water repellent preservative in accordance with WDMA I.S.4.

B. Frame Units: Treated wood core of outer frame member encased in 0.031 inch (0.79 mm) thick seamless vinyl extrusion. Sill consists of treated wood core encased in seamless vinyl extrusion.

C. Jamb and Head Liners:

SPECIFIER NOTE: RETAIN OPTION IN PARAGRAPH BELOW IF PROJECT HAS TRANSOM UNITS.

1. Double-Hung <And Transom> Units: 0.030 inch (0.76 mm) thick, rigid vinyl extrusions secured to wood members by barbed legs or screws.
2. Stationary Picture Units: 0.030 inch (0.76 mm) thick rigid vinyl extrusions secured to wood members by barbed legs. Design units to allow removal of sash for replacement or maintenance.

SPECIFIER NOTE: "FLEXICRON' IS A REGISTERD TRADEMARK OF PPG INDUSTRIES, INC.

D. Sash: Treat sash members with preservative, water repellent, conductive solution in accordance with WDMA I.S.4.
   1. Double-Hung and Transom Sash:
      a. Stabilizer Coating: Apply minimum 1.5 mil dry thickness primer to surfaces to be top coated.
      b. Finish Coating: Apply minimum 1.5 mil dry thickness Flexacron® finish coat over stabilized exterior <and interior> surfaces.

E. Glazing: Factory glaze with high quality glazing sealant and snap-in rigid vinyl glazing bead.

F. Side-Jamb Clips: 1-1/2 inch by 3 inch (38 mm by 76 mm) galvanized pre-punched, 300 series stainless sheet metal clip.

G. Factory-apply weatherstripping.

PART 3 - EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

A. Comply with instructions and recommendations of window manufacturer.

SPECIFIER NOTE: SPECIFY ACTIONS TO PHYSICALLY DETERMINE THAT CONDITIONS ARE ACCEPTABLE TO RECEIVE PRIMARY PRODUCTS OF SPECIFICATION SECTION.

3.2 EXAMINATION

A. Site Verification of Conditions: Verify that site conditions are acceptable for installation of units, including the following:
   1. Concrete surfaces are dry and free of excess mortar, rocks, sand, and other construction debris.
   2. Masonry openings are square and dimensions are correct.

SPECIFIER NOTE: RETAIN SUBPARAGRAPH BELOW FOR WOOD FRAMING. RETAIN SUBPARAGRAPH ABOVE FOR MASONRY CONSTRUCTION.

   3. Rough openings are square and dimensions are correct.
   4. Sill plates are level.

SPECIFIER NOTE: DELETE THE FOLLOWING SUBPARAGRAPH IS NO WOOD FRAMING ON PROJECT.

5. Wood frame walls are dry, clean, sound, and well nailed or glued, free of voids and without offsets at joints.
6. Nail heads are driven flush with surfaces in openings and within 3 inches (75 mm) of rough opening.

B. Do not proceed with installation of units until unacceptable conditions are corrected.

SPECIFIER NOTE: COORDINATE ARTICLE BELOW WITH MANUFACTURER'S RECOMMENDED INSTALLATION REQUIREMENTS.

3.3 INSTALLATION

A. General:
1. Remove unit components, parts, accessories, and installation guides from carton.
2. Inspect unit components and verify that components are not damaged and that parts are included before disposing of carton.
3. Shop-assemble multiple units before installation in accordance with manufacturer's installation guides.

SPECIFIER NOTE: RETAIN SUBPARAGRAPH ABOVE FOR SHOP-ASSEMBLED UNITS. RETAIN SUBPARAGRAPH BELOW FOR FIELD-ASSEMBLED UNITS.

4. Field-assemble multiple units before installation in accordance with manufacturer's installation guides.

B. Interface With Other Work:
1. Perform installation in accordance with Manufacturer's instructions.
2. Install unit level, plumb, square, true to line, without distortion, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction.
3. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.
4. Install insulation in shim space around unit perimeter to maintain continuity of building insulation. Do not overfill.
5. Hold back exterior siding or other finish materials from edge of unit to allow for expansion and contraction and installation of proper joint sealant with backing materials. Seal perimeter of unit after exterior finish is applied per requirements of Division 07 "Joint Sealants" Section.
6. Finish interior units per requirements specified in related sections. Refer to, and comply with, additional requirements in manufacturer's installation guides.
7. Install optional hardware and unit accessories after cleaning.

SPECIFIER NOTE: SPECIFY ALLOWABLE VARIATIONS BELOW.

C. Site Tolerances:
1. Adjust operation, insect screens, hardware, and accessories for a tight fit at contact points and weatherstripping for smooth operation and weathertight closure.

SPECIFIER NOTE: SPECIFY FINAL ACTIONS REQUIRED TO CLEAN INSTALLED EQUIPMENT OR OTHER COMPLETED WORK TO PROPERLY FUNCTION OR PERFORM. COORDINATE ARTICLE BELOW WITH DIVISION 01 EXECUTION REQUIREMENTS (CLEANING) SECTION AND SPECIFIC PROJECT REQUIREMENTS.

3.4 CLEANING

A. Clean units using cleaning material and methods specifically recommended by window manufacturer.

B. Remove excess sealants, glazing materials, dirt, and other substances.

C. Avoid damaging protective coatings and finishes.

D. Protect unit surfaces from masonry cleaning solution that could damage insulation glass panels or hardware.

E. Remove debris from work site and properly dispose of debris.

SPECIFIER NOTE: SPECIFY PROVISIONS FOR PROTECTING WORK AFTER INSTALLATION BUT PRIOR TO ACCEPTANCE BY THE OWNER. COORDINATE ARTICLE BELOW WITH DIVISION 01 EXECUTION REQUIREMENTS SECTION.

3.5 PROTECTION

A. Protect installed work from damage due to subsequent construction activity on the site.

END OF SECTION