SECTION 081400

WOOD AND CLAD DOORS

(ANDERSEN® ARCHITECTURAL ARCH & SPRINGLINE PATIO DOORS, SIDELIGHTS)

PART 1 - GENERAL

SPECIFIER NOTE: DATA CONTAINED IN THIS GUIDE SPEC IS ACCURATE AS OF NOVEMBER 2010. DUE TO ONGOING PRODUCT CHANGES, THIS DATA MAY CHANGE OVER TIME. CONSULT MANUFACTURER FOR COMPLETE PRODUCT DETAILS.

1.1 SUMMARY

A. Section Includes:

SPECIFIER NOTE: RETAIN PROJECT-REQUIRED ITEMS TYPE BELOW. DELETE ITEMS NOT REQUIRED.

1. Inswing arch and Springline™ patio door.
2. Outswing arch and Springline™ patio door.
3. Sidelights.

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.

1.2 ACTION SUBMITTALS

A. Product Data: Manufacturer's product data and installation guides.

B. Sustainable Building Submittals:

SPECIFIERS NOTE: RETAIN SUBPARAGRAPH BELOW AND ENERGY PERFORMANCE CERTIFICATION PARAGRAPH IN QUALITY ASSURANCE ARTICLE IF WOOD DOORS ARE REQUIRED TO BE CERTIFIED.

1. Energy Performance:
   a. Provide NFRC 100 Certified performance values meeting or exceeding values specified in Performance Criteria Article.

SPECIFIERS NOTE: RETAIN SUBPARAGRAPH BELOW AND RECYCLED CONTENT CERTIFICATION PARAGRAPH AND "FOREST CERTIFICATION" PARAGRAPH IN QUALITY ASSURANCE ARTICLE IF WOOD DOORS ARE REQUIRED TO BE CERTIFIED.

2. Recycled Content.
   a. Provide third party certified values in percent by weight of recycled content per ISO 14021 Standard for each product specified.
   b. Provide statement indicating total cost for each product containing recycled content.

SPECIFIERS NOTE: RETAIN SUBPARAGRAPH BELOW IF WOOD DOORS ARE REQUIRED TO BE QUALIFIED FOR REGIONAL MATERIALS.

3. Regional Materials.
   a. Provide door manufacturer's Product Data for regional materials within [**500**] miles of project location, indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material.
   b. Provide statement indicating cost for each product containing regional material and the fraction by weight that is considered regional material.

SPECIFIERS NOTE: RETAIN PARAGRAPH BELOW IF DOORS ARE REQUIRED TO BE CERTIFIED FOR INDOOR AIR QUALITY.

4. Indoor Environmental Quality.
   a. Provide third party certification that door materials used on project, including factory applied finishes, meet indoor air quality standards for low emitting materials under California CA Section 01350 Specifications.

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

D. Color Samples: Selection and verification samples, including the following:
   1. Hardware: Samples indicating typical finish on door hardware.
   2. Cladding: Color Samples of aluminum cladding.

1.3 INFORMATIONAL SUBMITTALS

A. Quality Assurance/Control Submittals:
   1. Performance Data: Manufacturer's published performance data for specified products.

1.4 CLOSEOUT SUBMITTALS

A. Warranty documents specified herein.

B. 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.

1.5 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.

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

B. Certifications:
   1. National Fenestration Rating Council (NFRC). Products shall be certified and labeled for U-Factor, Solar Heat Gain Coefficient (SHGC), and Visible Transmittance per NFRC 100 and 200 Procedures. Unique glass types that are special ordered may not apply, check with Manufacturer.
   2. Window and Door Manufacturers Association (WDMA). Products shall be certified and labeled per WDMA Hallmark Certification Program to the AAMA/WDMA/CSA 101/I.S.2/A440 industry standard.
   3. Insulating Glass Units: Provide insulating glass units permanently marked with certification label of Insulating Glass Certification Council (IGCC) indicating compliance.

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

4. 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

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

C. Pre-Installation Meetings: Pre-Installation Meetings: Conduct meeting at Project site to comply with requirements in Division 01 Section – Project Management and Coordination.

SPECIFIER NOTE: ARTICLE BELOW SHOULD INCLUDE SPECIFIC PROTECTION AND ENVIRONMENTAL CONDITIONS REQUIRED DURING STORAGE. COORDINATE ARTICLE BELOW WITH DIVISION 01 PRODUCT REQUIREMENTS SECTION.

1.6 DELIVERY, STORAGE, AND HANDLING

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

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

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

D. 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.

1.7 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 per 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 OR BOND COVERING THE WORK OF THIS SECTION.

1.8 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 Corporation
      100 4th Ave. N.
      Bayport, MN 55003-1096.
      Phone: (800) 299-9029.
      Fax: (800) 752-9230.
      E-mail: technicalsupport@andersenwindows.com.
      www.andersenwindows.com.
      Local Contact: <Specify contact information provided by local Andersen representative.>

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.

2.2 PERFORMANCE CRITERIA

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 AAMA/WDMA/CSA 101/I.S.2/A440.
   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.>

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/WDMA/CSA 101/I.S.2/A440, 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.>
   2.

2.3 MANUFACTURED UNITS

A. Proprietary Products/Systems:
   1. Andersen® Architectural Arch & Springline™ Patio Door and Sidelights.

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

   2. 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.

2.4 MATERIALS

A. Frame and Panel Members: Fabricated from wood species approved in WDMA Industry Standard I.S.4, treated with a water-repellent wood preservative.
   1. Interior Wood Species: Provide panels in the following species. Bond exterior and interior sash components with adhesive.

SPECIFIER NOTE: IF PROJECT REQUIRES WOOD ON BOTH INTERIOR AND EXTERIOR, DELETE PARAGRAPH ABOVE AND RETAIN PARAGRAPH BELOW.

   2. Interior and Exterior Wood Species: Provide panels in the following species. Bond exterior and interior sash components with adhesive.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED WOOD TYPE BELOW. DELETE WOOD TYPES NOT REQUIRED.

      a. Species: Pine.
      b. Species: Oak.
      c. Species: Cherry.
      d. Species: Mahogany.
      e. Species: Maple.
      f. Species: Alder.
      g. Species: Fir.
   3. Painted Color (Pine):
      a. Color: White.
      b. Color: Birch Bark.
      c. Color: Prime.

B. Glazing Beads: Silicone glazing bead on glazed panels.

SPECIFIER NOTE: IF PROJECT REQUIRES WOOD ON BOTH INTERIOR AND EXTERIOR, DELETE THE FOLLOWING ALUMINUM CLADDING PARAGRAPH AND SUBPARAGRAPHS BELOW.

C. Aluminum Cladding: Heavy-duty, 0.050 inch (1.27 mm) thick 6063-T5 aluminum exterior cladding, with finish per AAMA 2605, over wood frames.

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

   1. Cladding Color: White.
   2. Cladding Color: Sandtone.
   3. Cladding Color: Terratone®.
   4. Cladding Color: Forest Green.
   5. Cladding Color: Birch Bark.
   6. Cladding Color: Black.

7. Cladding Color: Blue Spruce.
8. Cladding Color: Canvas.
9. Cladding Color: Cocoa Bean.
10. Cladding Color: Coral Green.
11. Cladding Color: Dark Bronze.
12. Cladding Color: Dark Chestnut.
13. Cladding Color: Dark Ivy.
14. Cladding Color: Driftwood.
15. Cladding Color: Dove Gray.
16. Cladding Color: Midnight Blue.
17. Cladding Color: Prairie Grass.
18. Cladding Color: Red Rock.
19. Cladding Color: River Rock.
20. Cladding Color: Slate.
21. Cladding Color: Terra Cotta.

D. Weatherstripping:
1. Weatherseals: Vinyl-wrapped foam.
2. Jamb and Sill Seals: Manufacturer's vinyl cap designed to provide water-tight seals at jambs and sills.
3. Sweeps and Drip Edge: Provide vinyl sweep and aluminum drip edge on panel bottom.

E. Fastener Covers: Aluminum extrusion with coating complying with AAMA 2605.

F. Inswing Sill: Thermally broken extruded aluminum. Provide sills with vinyl threshold. Provide sills designed to drain moisture to exterior.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED PROFILE AND COLOR BELOW. DELETE PROFILES AND COLORS NOT REQUIRED.

1. Standard sill with Dark Bronze painted finish.
2. Standard sill with Gray painted finish.

SPECIFIER NOTE: RETAIN OPTION BELOW IF REQUIRED FOR PROJECT.

3. Interior Insert: Wood veneered vinyl insert finished to match door panel and frame.

G. Outswing Sill: Thermally broken extruded aluminum. Provide sills with interior wood threshold and compression foam weatherseal. Provide sills designed to drain moisture to exterior.

SPECIFIER NOTE: RETAIN PROJECT REQUIRED PROFILE AND COLOR BELOW. DELETE PROFILES AND COLORS NOT REQUIRED.

1. Standard sill with Dark Bronze finish.
2. Standard sill with Mill finish.
3. Wood Threshold and Trim: Provide wood threshold and trim in the following species, finished to match door panel and frame.

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

a. Species: Oak.
b. Species: Maple.

2.5 GLAZING

A. General: Tempered 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. Provide dual sealed units consisting of silicone foam spacer with hot butyl seal.

SPECIFIER NOTE: RETAIN CERTIFICATION REQUIREMENTS PARAGRAPH ABOVE OR BELOW.

B. General: Tempered 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. Provide dual sealed units consisting of silicone foam spacer with hot butyl seal.

SPECIFIER NOTE: SELECT BETWEEN THE FOLLOWING STANDARD GLAZING OPTIONS FOR ARCHITECTURAL DOORS. CONSULT ANDERSEN CORPORATION FOR ADDITIONAL GLAZING OPTIONS INCLUDING PATTERNED GLASS. IN ADDITION TO COMPLYING WITH SAFETY GLAZING REQUIREMENTS, TEMPERED GLASS MAY BE REQUIRED BECAUSE OF DOOR SIZE AND WIND LOAD. CONSULT ANDERSEN CORPORATION FOR ASSISTANCE IN SELECTING APPROPRIATE GLAZING TYPE. MONOLITHIC IMPACT GLAZING IS TESTED TO MIAMI-DADE PROTOCOL; CONTACT A LOCAL REPRESENTATIVE FOR ADDITIONAL INFORMATION.

SPECIFIER NOTE: SELECT BETWEEN THE TWO IMPACT RESISTANT GLASS TYPES IF IMPACT RESISTANT GLAZING REQUIRED.

C. Monolithic Impact Glass:
   1. Currently not available on this product

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

   2. Color: Clear.
   3. Color: Gray tinted.

D. Insulating Impact Resistant Glass:
   1. Currently not available on this product.

SPECIFIER NOTE: RETAIN SUBPARAGRAPH ABOVE FOR STANDARD LOW-E COATING. RETAIN SUBPARAGRAPH BELOW FOR LOW-E SUN COATING.

   2. High-Performance™ Low-E4® Sun Glass: Magnetron sputtering vapor deposition (MSVD) Low-E coating applied to the No. 2 surface.
   3. Filling: Fill space between glass lites with argon gas blend.

E. Dual-Pane Insulating Glass Units:
   1. 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.

SPECIFIER NOTE: WHERE PATTERNED GLASS IS REQUIRED FOR PROJECT, DELETE PARAGRAPH ABOVE AND RETAIN PARAGRAPH BELOW WITH APPROPRIATE PATTERNED GLASS TYPE. DELETE TYPES NOT REQUIRED FOR PROJECT.

   2. Glass: Tempered insulating glass units consisting of an outboard lite of clear tempered glass conforming to ASTM C1048, Type 1, Class 1, q3, Kind FT and the following patterned glass:
      a. Inboard Pattern Glass Lite:
         1) Cascade.
         2) Fern.
         3) Obsure.
         4) Reed.
      b. Air Space: 1/2 inch (76 mm).
   3. Filling: Fill space between glass lites with argon gas blend.

F. High-Performance™ Low-E4® Argon Gas Blend Filled Insulating Glass Units:
   1. 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.

2. Magnetron sputtering vapor deposition (MSVD) TiO2 coating applied to the No. 1 surface.
3. High-Performance Low-E4 Glass Coating: Magnetron sputtering vapor deposition (MSVD) Low-E coating applied to the 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.

G. High-Performance Low-E4 Sun Glass, Low SHGC, Argon Gas Blend Filled Insulating Glass Units:
1. 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.
2. Magnetron sputtering vapor deposition (MSVD) TiO2 coating applied to the No. 1 surface.
3. High-Performance Low-E4 Sun Glass Coating: Magnetron sputtering vapor deposition (MSVD) Low-E coating applied to the 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.

H. SmartSun™ Low-E Glass, Low SHGC, Argon Gas Blend Filled Insulating Glass Units:
a. 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.

SPECIFIER NOTE: WHERE PATTERNED GLASS IS REQUIRED FOR PROJECT, DELETE PARAGRAPH ABOVE AND RETAIN PARAGRAPH BELOW WITH APPROPRIATE PATTERNED GLASS TYPE. DELETE TYPES NOT REQUIRED FOR PROJECT.

b. Glass: Tempered insulating glass units consisting of an outboard lite of clear tempered glass conforming to ASTM C1048, Type 1, Class 1, q3, Kind FT and the following patterned glass:
c. Inboard Pattern Glass Lite:
1) Cascade.
2) Fern.
3) Obscure.
4) Reed.
d. Air Space: 1/2 inch (76 mm).
e. SmartSun Low-E Glass Coating: Magnetron sputtering vapor deposition (MSVD) Low-E coating applied to the No. 2 surface.
f. Filling: Fill space between glass lites with argon gas blend.

I. High-Performance Low-E4 SmartSun Glass, Low SHGC, Argon Gas Blend Filled Insulating Glass Units:
a. 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.

SPECIFIER NOTE: WHERE PATTERNED GLASS IS REQUIRED FOR PROJECT, DELETE PARAGRAPH ABOVE AND RETAIN PARAGRAPH BELOW WITH APPROPRIATE PATTERNED GLASS TYPE. DELETE TYPES NOT REQUIRED FOR PROJECT.

b. Glass: Tempered insulating glass units consisting of an outboard lite of clear tempered glass conforming to ASTM C1048, Type 1, Class 1, q3, Kind FT and the following patterned glass:
c. Inboard Pattern Glass Lite:
1) Cascade.
2) Fern.
3) Obscure.
4) Reed.
d. Air Space: 1/2 inch (76 mm).
e. Magnetron sputtering vapor deposition (MSVD) TiO2 coating applied to the No. 1 surface.

f. High-Performance™ Low-E4® Sun Glass Coating: Magnetron sputtering vapor deposition (MSVD) Low-E coating applied to the No. 2 surface.
g. Filling: Fill space between glass lites with argon gas blend.
h. Protective removable polyolefin film applied to glass surfaces No. 1 and No. 4.

SPECIFIER NOTE: CONTACT AN ANDERSEN CORPORATION REPRESENTATIVE FOR DECORATIVE ART GLASS PANEL DESIGN OPTIONS.

J. Decorative Art Glass: Hand-assembled art glass panels sized to match unit glass opening. Decorative art glass panels sandwiched between 2 lites of tempered glass to form a triple insulating unit. Available in the following came finish. Came joints joined with lead-free solder.
1. Patterns: <Select from standard patterns.>
2. Background Glass: <Select from standard color palettes.>
3. Design Glass: <Select from standard color palettes.>

SPECIFIER NOTE: RETAIN ONE OF THE FOLLOWING CAMING TYPES BELOW.

4. Caming: Antique finish.
5. Caming: Patina finish.
6. Caming: Nickel finish.
7. Caming: Brass finish.
8. Caming: Zinc finish.

2.6 HARDWARE

SPECIFIER NOTE: SELECT BETWEEN HINGE OPTION ABOVE AND BELOW. PLAIN BEARING STYLE HINGE PROVIDED AS STANDARD.

A. Outswing Hinges: 5-knuckle ball bearing style hinge with the following finish:

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

1. Finish: White.
2. Finish: Satin nickel.
3. Finish: Oil rubbed bronze.

B. Inswing Hinges: Adjustable 3-knuckle style hinge with the following finish:

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

1. Finish: White.
2. Finish: Satin nickel.
3. Finish: Oil rubbed bronze.
4. Finish: Bright Brass.
5. Finish: Antique Brass.
6. Finish: Polished Chrome.
7. Finish: Brushed Chrome.
8. Finish: Distressed Bronze.
9. Finish: Distressed Nickel.
10. Finish: Gold Dust.
11. Finish: Black.

C. Locks: Stainless steel locking mechanism consisting of lever handle operated latch and 3-point deadbolt lock mechanism. 3-point locking mechanism consists of thumb turn operated 0.787 inch (20 mm) metal deadbolt, which when projected, locks 2 additional hook bolts engaging active panel.

1. Provide 6-pin keyed cylinder and thumb turn at interior.

D. Shoot Bolt Strike: Manufacturer's standard adjustable strike plate with stainless steel finish:

E. Lever Handle Trim: Provide the following trim style and finish where indicated:

SPECIFIER NOTE: SELECT BETWEEN THE FOLLOWING HARDWARE STYLES.

1. Newbury® Hardware: Forged brass thumb turn and operating handle pull with the following finish:

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

a. Finish: Bright Brass.
b. Finish: Antique Brass.
c. Finish: Polished Chrome.
d. Finish: Brushed Chrome.
e. Finish: Oil Rubbed Bronze.
f. Finish: Satin Nickel.

2. Covington™ Hardware: Forged brass thumb turn and operating handle pull with the following finish:

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

a. Finish: Bright Brass.
b. Finish: Antique Brass.
c. Finish: Oil Rubbed Bronze.

3. Whitmore®: Forged brass thumb turn and operating handle pull with the following finish:

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

a. Finish: Bright Brass.
b. Finish: Antique Brass.
c. Finish: Oil Rubbed Bronze.
d. Finish: Satin Nickel.

4. Encino® Hardware: Forged brass thumb turn and operating handle pull with the following finish:

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

a. Finish: Distressed Bronze.
b. Finish: Distressed Nickel.

5. Yuma® Hardware: Forged brass thumb turn and operating handle pull with the following finish:

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

a. Finish: Distressed Bronze.
b. Finish: Distressed Nickel.

6. Anvers® Hardware: Forged brass thumb turn and operating handle pull with the following finish:

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

a. Finish: Bright Brass.
b. Finish: Oil Rubbed Bronze.
c. Finish: Satin Nickel.

7. Tribeca® Hardware: Cast zinc dichromate thumb turn and lever handle trim with powder coated painted finish in the following color:

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

a. Color: White.
b. Color: Stone.

8. Albany® Hardware: Cast zinc dichromate thumb turn and lever handle trim with powder coated painted finish in the following color:

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

a. Color: Gold Dust.
b. Color: White.
c. Color: Black.
d. Color: Stone.

2.7 ACCESSORIES

A. Interior Extension Jambs: Wood members machined from clear or veneered finger joined material, approved in AAMA/NWWDA 101/I.S.2. Pre-drill extension jambs for application.

2.8 GRILLES

SPECIFIER NOTE: COORDINATE SPECIFICATIONS FOR GRILLE MATERIAL OF ADJACENT UNIT FOR JOINED UNITS OF DIFFERENT TYPES. REFER TO *ANDERSEN® DIVIDED LIGHT PATTERN GUIDE* FOR AVAILABLE DIVIDED LIGHT PATTERNS AND DETAILS. EXTERIOR AND INTERIOR COLORS CAN BE DIFFERENT COLORS. RETAIN PROJECT REQUIRED GRILLE PATTERN SUBPARAGRAPH BELOW AND DELETE SUBPARAGRAPHS NOT REQUIRED. FULL DIVIDED LIGHT AND FINELIGHT GRILLES ARE NOT AVAILABLE FOR IMPACT RESISTANT GLAZED PRODUCTS.

A. Simulated Divided Light Grilles: Fixed exterior and interior grilles in pattern indicated on Drawings.
1. Fixed Grilles: Profiled wood grilles applied with adhesive tape to interior glass surface.
2. Species and Finish: Match door frames.

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

3. Width: 3/4 inch (19 mm).
4. Width: 7/8 inch (22 mm).
5. Width: 1-1/8 inch (29 mm).
6. Width: 2-1/4 inch (57mm

B. Removable Interior Grilles: Provide removable, pine 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.

1. Exterior Facing: Pine with White painted finish.
2. Exterior Facing: Maple with White painted finish.
3. Exterior Facing: Oak with White painted finish.
4. Exterior Facing: Cherry with White painted finish.
5. Exterior Facing. Mahogany with White painted finish.
6. Exterior Facing. Adler with White painted finish.
7. Exterior Facing. Fir with White painted finish.

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

8. Interior Facing: Unfinished pine.

9. Interior Facing: White painted pine.

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

10. Width: 3/4 inch (19 mm).
11. Width: 7/8 inch (22 mm).
12. Width: 1-1/8 inch (29 mm).

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

SPECIFIER NOTE: RETAIN PROJECT REQUIRED FINISH SUBPARAGRAPH BELOW. DELETE SUBPARAGRAPHS NOT REQUIRED. SPECIFY IF INTERIOR COLOR IS DIFFERENT THAN EXTERIOR COLOR.

2. Exterior and Interior Surface: Match exterior finish.
3. Width: 3/4 inch (19 mm).

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

4. Width: 1 inch (25 mm).

D. Grille Pattern: Provide grilles in pattern indicated below unless indicated otherwise:

SPECIFIER NOTE: RETAIN GRILLE PATTERN BELOW AS REQUIRED FOR PROJECT AND DELETE PATTERNS NOT REQUIRED:

1. Colonial.
2. Prairie.
3. Renaissance.
4. Custom design as indicated on Drawings.

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

SPECIFIER NOTE: DESCRIBE ITEMS THAT ARE SHOP MANUFACTURED, FABRICATED, OR ASSEMBLED BEFORE DELIVERY TO THE SITE.

2.9 FABRICATION

A. Preservative Treatment: Treat wood frame members and interior glazing stops after machining with a water repellent preservative per WDMA I.S.4.

B. Frame Components:
1. Attached extruded aluminum frame cover to wood frame.
2. Factory-applied fluropolymer coating (1.5 mil primer and 1.5 mil top coat minimum dry film thickness) to exterior exposed surfaces of aluminum components.

C. Door Panels:
1. Stiles and Top and Bottom Rails: Finger-jointed and edge glued wood core, 1 3/4 inches (44 mm) thick before milling. Provide solid wood edge strips and veneered interior surfaces and aluminum cladding on exterior surfaces.

SPECIFIER NOTE: RETAIN PARAGRAPH ABOVE FOR STANDARD ALUMINUM CLAD UNITS. RETAIN PARAGRAPH BELOW FOR ALL WOOD UNITS.

2. Stiles and Top and Bottom Rails: Finger-jointed and edge glued wood core, 1 3/4 inches (44 mm) thick before milling. Provide solid wood edge strips and veneered exterior and interior surfaces.

3. Corner Fastening:
   a. Door Units: Mortise and tenon joints secured with lag bolts and water-resistant adhesive.
4. Door Panel Finishes:

SPECIFIER NOTE: RETAIN PROJECT REQUIRED INTERIOR DOOR PANEL FINISH SUBPARAGRAPH BELOW AND DELETE SUBPARAGRAPHS NOT REQUIRED.

   a. Interior Facing: Unfinished Maple.
   b. Interior Facing: Unfinished Pine.
   c. Interior Facing: Unfinished Oak.
   d. Interior Facing: Unfinished Mahogany.
   e. Interior Facing: Unfinished Cherry.
   f. Interior Facing: Unfinished Alder.
   g. Interior Facing: Unfinished Fir.
   h. Interior Facing: White painted finish.
   i. Interior Facing: Birch Bark painted finish.
   j. Interior Facing: Prime painted.

D. Weatherstripping: Factory-applied to full perimeter of frame.

E. Glazing: Factory-glazed with silicone glazing sealant applied to exterior glazing stops.

PART 3 - EXECUTION

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

3.1 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 (76 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.

3.2 INSTALLATION

A. General:

1. Comply with instructions and recommendations of unit manufacturer.
2. Remove unit components, parts, accessories, and installation guides from carton.
3. Inspect unit components and verify that components are not damaged and that parts are included before disposing of carton.
4. Shop-assemble multiple units before installation per manufacturer's installation guides.

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

5. Field-assemble multiple units before installation per manufacturer's installation guides.

B. Interface With Other Work:
1. Perform installation per Manufacturer's instructions.
2. Install units 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. Install drip cap at head of single units and joined assemblies.
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 Section 079200 – Joint Sealants.
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 weatherstrip for smooth operation and weather tight closure.

SPECIFIER NOTE: SPECIFY THE 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.

3.3 FIELD TESTING

SPECIFIER NOTE: COORDINATE ARTICLE BELOW WITH CONDITIONS OF THE CONTRACT AND WITH DIVISION 01 QUALITY CONTROL. TESTING EQUIPMENT SHALL BE CALIBRATED PER SECTION 9 OF ASTM E1105: STANDARD TEST METHOD FOR FIELD DETERMINATION OF WATER PENETRATION OF INSTALLED EXTERIOR WINDOWS, SKYLIGHTS, DOORS AND CURTAIN WALLS, BY UNIFORM OR CYCLIC STATIC AIR PRESSURE DIFFERENCE, WHERE THE WATER TEST PRESSURE SHALL BE RUN AT 2/3 (0.667) OF THE WATER TEST PRESSURE USED TO ACHIEVE THE PRODUCTS RATED DESIGN PRESSURE. THE NUMBERS OF PRODUCTS TESTED SHALL BE AGREED AND WRITTEN IN THE PROJECT SPECIFICATION AND SHALL NOT EXCEED 1 PERCENT OF THE TOTAL NUMBER OF OPENINGS UNLESS AGREED UPON FIELD TESTING.

A. General: If applicable, test units per with the following procedures:
1. Inspect units and verify installation per Manufacturer's instructions.
2. For products installed less than 6 months, comply with AAMA 502-08 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors, Procedure B.
3. For products installed longer than 6 months, comply with AAMA 511-08: Voluntary Guideline for Forensic Water Penetration Testing of Fenestration Products. If test indicates that field testing of units is necessary, test product as indicated in paragraph 1 above.
4. Do not proceed with installation of additional units until unacceptable conditions are corrected.

3.4 CLEANING

A. Clean units using cleaning material and methods specifically recommended by door 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 site.

END OF SECTION