Purpose and Applications: This guide specification covers Andersen® E-Series Gliding and Hinged Patio Doors. These patio doors are suitable for new construction, remodeling or replacement applications.

Product Features: E-Series patio door products are extruded aluminum clad wood and each product is made to exact specifications. There are 50 standard exterior colors, 7 anodized finishes and custom colors available in various shapes and sizes to create dramatic window combinations. Wood interiors in 10 species, 12 finish options, between-the-glass blinds, shades and grilles are available. Yale Assure Lock is available on E-series hinged patio doors and allows remote lock and unlocking of this door when properly configured with Z-Wave® compatible systems.

This Document: This guide specification document is provided by Andersen Corporation as a technical support tool incident to the sale of its products. Andersen Corporation is solely responsible for its content. This document should be reviewed and edited to suit Project requirements by a qualified design professional. Performance values expressed in this document may vary based on size, configuration and specified options. Product data contained in this guide specification is accurate as of the date of issue indicated above. Due to ongoing product changes, this data may change over time. Consult manufacturer for complete product information.

Contact Information: Contact manufacturer for more information on this or other products made by Andersen Corporation: Andersen Windows, Inc., Andersen Service Center, 100 Fourth Ave North, Bayport, MN 55003-1096. Telephone: (800) 299-9029.

Website: <http://www.andersenwindows.com/for-professionals>

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Editor Note: Edit document to suit Project requirements and specifier practice. Specifier notes are shown in blue text like this. Optional text [**is shown in bold with brackets like this**]. Locations where language for Project-specific requirements is to be inserted are shown like this: <**insert language**>. Remove specifier notes and unused optional text in final version of the specification document.

Editor Note: The Construction Specifications Institute (CSI) recommends and supports use of its current MasterFormat section title and numbering system, shown below.

SECTION 08 14 23 – CLAD WOOD DOORS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Wood-framed aluminum-clad [**hinged**] [**and**] [**gliding**] patio doors [**with one stationary panel and one sliding panel on adjustable rollers**] [**with**] [**transoms**] [**and**] [**sidelights**].

Editor Note: Revise paragraph below to suit Project requirements. Add section numbers and titles according to CSI MasterFormat and specifier practice. This paragraph is intended for use only when a reader might reasonably expect to find work requirements in this Section, but those requirements are actually located in another, related section.

B. Related Sections: Section(s) related to this section include:

1. <**Insert Work Title**>: <**Insert Division number**> Section <**Insert Section title**>.

Editor Note: Standards numbers and titles in the article below are provided for specifier information and reference. The purpose of this Article is to fully identify standards that are referenced elsewhere using abbreviated nomenclature. Retain, edit or delete article to suit specifier practice and Project requirements.

1.2 REFERENCES

A. General: Standards listed by reference form a part of this specification section. Standards listed are identified by issuing authority, abbreviation, designation number, title or other designation. Standards subsequently referenced in this Section are referred to by issuing authority abbreviation and standard designation.

B. American Architectural Manufacturers Association (AAMA):

1. AAMA 450 - Voluntary Performance Rating Method for Mulled Fenestration Assemblies.

2. AAMA 502 - Voluntary Specification for Field Testing of Newly Installed Fenestration Products.

3. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum.

4. AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.

5. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

6. NAFS - North American Fenestration Standard/Specification for windows, doors and skylights (AAMA/WDMA/CSA/101/I.S.2/A440).

C. U.S. Department of Justice: Americans with Disabilities Act (ADA).

D. Andersen E- Series Product Installation Guides.

E. ASTM International (ASTM):

1. ASTM C1036 - Standard Specification for Flat Glass.

2. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass.

3. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.

4. 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.

5. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation.

Editor Note: Retain paragraph below when pine, FSC Certified – Mixed Credit certification is required and coordinate with Part 2 - Products.

F. Forest Stewardship Council (FSC): FSC Chain-of-Custody Certification.

G. Insulating Glass Certification Council (IGCC): Insulating Glass Unit Certification.

H. Insulating Glass Manufacturers Alliance of Canada (IGMAC) and Canadian General Standards Board (CGSB): Insulating Glass Units Standard CAN/CGSB 12.8-97.

I. International Standards Organization (ISO): ISO 14021 - Environmental Labels and Declarations -- Self-Declared Environmental Claims (Type II Environmental Labeling).

J. 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.

K. Texas Department of Insurance: Product Evaluation WIN-1875 for compliance with wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

L. U.S. Environmental Protection Agency (EPA): ENERGY STAR.

M. Window and Door Manufacturers Association (WDMA):

1. WDMA Hallmark Certification Program for Manufacturers.

2. WDMA I.S.4 - Industry Specification for Preservative Treatment for Millwork.

1.3 ADMINISTRATIVE REQUIREMENTS

Editor Note: Retain paragraph below if pre-installation meetings are required and edit to suit Project requirements.

A. Pre-installation Meetings: Conduct pre-installation meeting to clarify Project requirements, substrate conditions, manufacturer’s installation instructions and manufacturer’s warranty requirements.

1.4 PERFORMANCE REQUIREMENTS

Editor Note: Project requirements in paragraph below might include but not be limited to design wind load, wind speed, maximum design deflection, importance factor, exposure category, and performance class.

A. Structural Performance Requirements:

1. Comply with requirements of NAFS.

2. <**Insert requirements**>.

Editor Note: Retain paragraph below if compliance with a whole-building rating system (such as USGBC LEED, GBI GreenGlobes, or other) or specific sustainability-related design and construction aspects are required. Edit to suit Project requirements. Project requirements might include but not be limited to energy performance, recycled material content, regional materials, and indoor air quality.

B. Environmental Performance Requirements: <**Insert requirements**>.

1.5 SUBMITTALS

A. Product Data: For each type of product required.

B. Shop Drawings: Showing methods of installation, plans, sections, elevations and details of walls, specified loads, flashings, vents, sealants, and interfaces with all materials not supplied by the patio door manufacturer, and identification of proposed component parts and finishes.

C. Samples: Selection and verification samples for finishes, colors and textures. Submit two complete sample sets of each type of material required.

D. Certificates: Signed by manufacturer certifying materials comply with specified performance characteristics, criteria and physical requirements.

E. Test and Evaluation Reports: Showing compliance with specified performance characteristics and physical properties.

F. Manufacturer’s Instructions: Manufacturer installation, storage, and other instructions.

Editor Note: Retain paragraph below if compliance with a whole-building rating system (such as USGBC LEED, GBI GreenGlobes, or other) or specific sustainability-related design and construction aspects is required. Edit to suit Project requirements.

G. Sustainable Design Submittals in Compliance with ISO 14021.

H. Qualification Statements: For manufacturer and installer.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. Member in good standing of the Insulating Glass Certification Council (IGCC).

2. Hallmark Certified Manufacturer and member in good standing of the Window and Door Manufacturers Association (WDMA).

3. Member in good standing of U.S. Green Building Council.

4. U.S. ENERGY STAR Partner.

5. Capable of demonstrating an extended history of window and door design, production and innovation.

Editor Note: Retain when a separate installer warranty is required.

B. Installer Qualifications:

1. Minimum five years’ experience in the commercial installation of products required for the Project.

2. Experience on at least five projects of similar size, type and complexity as the Project.

3. An entity utilizing workers competent in techniques required by manufacturer for product types and applications indicated.

1.7 DELIVERY, STORAGE AND HANDLING

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

B. Deliver materials to Project in manufacturer’s original unopened, undamaged containers with identification labels intact.

C. Storage and Protection: Store materials and accessories protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by manufacturer off ground, under cover and not exposed to weather and construction activities.

1.8 WARRANTY

Editor Note: Coordinate article below with Conditions of the Contract and with Division 01 Closeout Submittals (Warranty) Section.

A. Special Warranty: Manufacturer's transferrable, non-prorated limited warranty.

1. Warranty Period, Glass: 20 years.

2. Warranty Period, Non-Glass Parts: 10 years.

Editor Note: Retain paragraph below if a separate installation warranty, not provided by the manufacturer, is required and edit to suit Project requirements.

B. Special Warranty: Installer's standard form in which installer agrees to repair or replace clad wood patio doors that fail due to poor workmanship or faulty installation within the specified warranty period.

1. Warranty Period: <**Insert number of years**> years from date of Substantial Completion.

PART 2 PRODUCT

Editor Note: Add product features, performance characteristics, material standards, and descriptions as applicable. Use of terms such as "or equal" or "approved equal" or similar may cause ambiguity in specifications, requiring verification (procedural, legal and regulatory) and assignment of responsibility for the determination of "equal" products. Therefore it is recommended that terms such as these be avoided. Mahogany wood species will be either Sapele or Sipo, having color and characteristics similar to Central American mahoganies.

2.1 CLAD WOOD DOORS

A. General: Provide wood doors complying with the performance requirements indicated and tested according to NAFS.

B. Basis-of-Design Product: Subject to compliance with requirements provide Andersen Corporation: Andersen E-Series patio doors.

C. Substitution Limitations: [**No substitutions**] [**All other manufacturers: Submit substitution request in accordance with Section 01 25 00 - "Substitution Procedures"**] <**Insert substitution limitations**>.

2.2 MATERIALS

A. Construction:

1. Cladding: Extruded aluminum, minimum thickness 0.050 inch (1.27 mm).

2. Stiles and Rails: Preservative treated (WDMA I.S.4) laminated veneer lumber (LVL) with wood veneer, kiln dried and suitable for stain or painted finish on interior.

3. Interior Exposed Frame: Preservative treated (WDMA I.S.4) lumber, kiln dried and suitable for stain or painted finish.

B. Wood Species: [**Pine**] [**Pine, FSC Certified – Mixed Credit**] [**Vertical Grain Douglas Fir**] [**Oak**] [**Hickory**] [**Mahogany**] [**Cherry**] [**Walnut**] [**Maple**] [**Alder**] [**Custom**] <**Insert requirements**>.

Editor Note: If factory-applied interior finish is required, retain and edit paragraph below to suit Project requirements. If unfinished interior is required retain only the “Unfinished” option.

C. Interior Finish:

1. Stained: Factory-applied before assembly, water-based, [**Clear Coat**] [**Wheat**] [**Autumn Oak**] [**Golden Hickory**] [**Honey**] [**Cinnamon**] [**Russet**] [**Mocha**] [**Espresso**] <**Insert requirements**>.

2. Painted: Factory-applied before assembly, [**White**] [**Canvas**] [**Sandtone**] [**Terratone**] [**Forest Green**] [**Dark Bronze**] [**Black**] [**Cocoa Bean**] [**Red Rock**] [**Prairie Grass**] [**Dove Gray**] <**Insert requirements**>.

3. Primed: Factory-applied before assembly. <**Insert requirements**>.

4. Custom Finished: Factory-applied, [**custom finish as selected and approved by Architect**] <**Insert requirements**>.

5. Unfinished.

Editor Note: Andersen E-Series products are available in factory-applied baked-on silicone polyester enamel in 50 colors, in 2-, 3-, or 4-tone combinations of those colors, or with anodized aluminum finish in 7 colors. To view available finishes and colors go to

<http://www.andersenwindows.com/for-professionals>

D. Exterior Finish:

Editor Note: Retain sub-paragraphs below for painted patio door frame and panels. Edit to suit Project requirements.

1. Painted Frame: Factory-applied baked-on silicone polyester enamel, in compliance with [**AAMA 2604**] [**AAMA 2605**] [**color as selected from manufacturer’s standard colors of no less than 50 options**] [**custom color as selected and approved by Architect**] <**Insert requirements**>.

2. Painted Panel: Factory-applied baked-on silicone polyester enamel, in compliance with [**AAMA 2604**] [**AAMA 2605**] [**color as selected from manufacturer’s standard colors of no less than 50 options**] [**custom color as selected and approved by Architect**] <**Insert requirements**>.

Editor Note: Retain sub-paragraphs below for anodized door frame and panels. Edit to suit Project requirements.

3. Anodized Frame: Architectural quality, in compliance with AAMA 611 Class I [**Black**] [**Medium Bronze**] [**Dark Bronze**] [**Light Bronze**] [**Copper**] [**Champagne**] [**Clear**] <**Insert color**>.

4. Anodized Panel: Architectural quality, in compliance with AAMA 611 Class I [**Black**] [**Medium Bronze**] [**Dark Bronze**] [**Light Bronze**] [**Copper**] [**Champagne**] [**Clear**] <**Insert color**>.

Editor Note: Copy article below for each patio door type, edit to suit Project and product requirements and re-insert text as many times as needed to describe additional patio door types.

Editor Note: The performance values and ratings indicated within this guide specification represent a variety of typical Andersen product configurations based on testing according to applicable industry standards. The performance of any specific product depends on unit size, glass type and other configuration and material variables. The values indicated may or may not be applicable to Project requirements. Many other product configuration and materials options are available. Consult with an Andersen Product Representative for more information.

2.3 [**GLIDING**] [**AND**] [**HINGED**] PATIO DOOR <**Insert patio door designation(s) used on Drawings**>.

Editor Note: Retain paragraph below when gliding patio doors are required.

A. Patio Door Type and Performance Requirements: Gliding patio door with stationary panel(s) and sliding panel(s) on adjustable rollers [**with**] [**transoms**] [**and**] [**sidelights**] <**Insert manufacturer model or part number designation**>.

Editor Note: Retain one or more sub-paragraphs below to suit Project requirements.

1. Two-Panel Gliding Patio Door, Performance Class and Grade, Non-Impact-Resistant: LC-PG30 (96 x 96 inches).

2. Four-Panel Gliding Patio Door, Performance Class and Grade, Non-Impact-Resistant: LC-PG25 (190 X 96 inches).

3. Two-Panel French Gliding Patio Door, Performance Class and Grade, Non-Impact-Resistant: [**LC-PG40 (96 X 96 inches)**] [**LC-PG50 (72 X 96 inches)**].

4. Four-Panel French Gliding Patio Door, Performance Class and Grade, Non-Impact-Resistant: [**LC-PG40 (142 X 96 inches)**] [**LC-PG25 (190 X 96 inches)**].

Editor Note: Coordinate glass selection in two sub-paragraphs below with glazing requirements.

5. Two-Panel French Gliding Patio Door, Performance Class and Grade, Monolithic Impact-Resistant: [**LC-PG60 (95 X 96 inches)**] [**CW-PG60 (50 X 96 inches)**].

6. Two-Panel French Gliding Patio Door, Performance Class and Grade, Insulated Impact-Resistant: LC-PG60 (72 X 96 inches).

Editor Note: Retain paragraph below when hinged patio doors are required.

B. Patio Door Type and Performance Requirements: Hinged patio door [**with**] [**transoms**] [**and**] [**sidelights**] <**Insert patio door type**> <**Insert manufacturer model or part number designation**>.

Editor Note: Retain one or more sub-paragraphs below to suit Project requirements.

1. Inswing Single-Panel Hinged Patio Door, Performance Class and Grade, Non-Impact-Resistant: CW-PG45 (40 X 120 inches).

2. Inswing Double-Panel Hinged Patio Door, Performance Class and Grade, Non-Impact-Resistant: [**LC-PG40 (79 X 96 inches)**] [**LC-PG30 (79 X 120 inches**).

3. Outswing Single-Panel Hinged Patio Door, Performance Class and Grade, Non-impact-Resistant: [**CW-PG60 (40 X 95 inches)**] [**CW-PG50 (40 X 101 inches)**] [**LC-PG50 (40 X 119 inches)**].

4. Outswing Double-Panel Hinged Patio Door, Performance Class and Grade, Non-impact-Resistant: [**LC-PG60 (79 X 95 inches)**] [**LC-PG40 (79 X 119 inches)**].

Editor Note: Patio doors equipped with low-threshold sills have limited water (LW) ratings.

5. Outswing Commercial Single-Panel Hinged Patio Door, Performance Class and Grade, Non-Impact-Resistant: LC-PG60 LW (40 X 94 inches).

6. Outswing Commercial Double-Panel Hinged Patio Door, Performance Class and Grade, Non-Impact-Resistant: LC-PG50 LW (79 X 94 inches).

Editor Note: WDMA standard is < 0.3 cfm/ft². Retain sub-paragraph below for commercial buildings. Not for use with doors having low-profile thresholds.

C. Air Infiltration Requirements:

1. Air Infiltration Rate: **< 0.2 cfm/sf²**.

D. Environmental Certifications:

1. ENERGY STAR performance requirements.

2. Indoor air quality performance.

Editor Note: Retain paragraph below when gliding patio doors are required.

E. Gliding Patio Door Weatherstrip Type and Material:

1. Frame: HR Urethane Foam Core with M5 Liner.

2. Panel: HR Urethane Foam Core with M5 Liner.

Editor Note: Retain paragraph below when hinged inswing patio doors are required.

F. Hinged Patio Door Weatherstrip Type and Material:

1. Frame: Urethane foam with Q-Lon skin.

2. Panel: Urethane foam Q-Lon skin.

G. Installation Flange: [**Extruded vinyl**] [**Extruded aluminum**] [**None**].

H. Rail and Stile Profile:

Editor Note: Retain subparagraph below for rail and stile profile required.

1. French: 8” Bottom Rail.

2. French: 12” Bottom Rail.

3. Contemporary: 3 11/16” Rails and Stiles.

4. Contemporary: 4 11/16” Rails and Stiles.

I. Hardware:

1. Gliding Panel Latch Type and Material: Single-actuation, two-point locking system, galvanized steel and engineered polymer components.

2. Rollers and Guides Type and Material: Dual [**corrosion-resistant**] [**stainless steel**] ball bearing rollers and roller track with stainless steel cap.

Editor Note: Retain sub-paragraph below when Yuma patio door handle sets are required.

3. Patio Door Handle Designation and Finish: Yuma, [**Distressed Bronze**] [**Distressed Nickel**].

Editor Note: Retain sub-paragraph below when Encino patio door handle sets are required.

4. Patio Door Handle Designation and Finish: Encino, [**Distressed Bronze**] [**Distressed Nickel**].

Editor Note: Retain sub-paragraph below when Anvers patio door handle sets are required.

5. Patio Door Handle Designation and Finish: Anvers, [**Bright Brass**] [**Oil-Rubbed Bronze**] [**Satin Nickel**].

Editor Note: Retain sub-paragraph below when Newbury patio door handle sets are required.

6. Patio Door Handle Designation and Finish: Newbury, [**Antique Brass**] [**Bright Brass**] [**Brushed Chrome**] [**Oil-Rubbed Bronze**] [**Polished Chrome**] [**Satin Nickel**].

Editor Note: Retain sub-paragraph below when Covington patio door handle sets are required.

7. Patio Door Handle Designation and Finish: Covington, [**Antique Brass**] [**Bright Brass**] [**Oil-Rubbed Bronze**].

Editor Note: Retain sub-paragraph below when Whitmore patio door handle sets are required.

8. Patio Door Handle Designation and Finish: Whitmore, [**Antique Brass**] [**Bright Brass**] [**Oil-Rubbed Bronze**] [**Satin Nickel**].

Editor Note: Retain sub-paragraph below when Albany patio door handle sets are required.

9. Patio Door Handle Designation and Finish: Albany, [**Black**] [**Gold Dust**] [**Stone**] [**White**].

Editor Note: Retain sub-paragraph below when Tribeca patio door handle sets are required.

10. Patio Door Handle Designation and Finish: Tribeca, [**Black**] [**Stone**] [**White**].

Editor Note: Retain sub-paragraph below when FSB patio door handle sets are required.

11. Patio Door Handle Designation and Finish: FSB, [**1035**][**1075**][**1076**][**1102**], Satin Stainless Steel, [**1035**] [**1075**] [**1076**] Black.

Editor Note: Retain sub-paragraphs below when French gliding patio doors are required and edit to suit Project requirements.

Editor Note: Retain sub-paragraph below when auxiliary foot lock for gliding patio doors is required.

12. Gliding Patio Door Auxiliary Foot Lock Type and Finish: Foot-operated device designed to secure sliding panel in track, finish to match door handle.

13. Gliding Patio Door Lock Type and Finish: [**Keyed exterior**] [**Unkeyed exterior**], finish to match handle.

Editor Note: Retain sub-paragraphs below when hinged patio doors are required and edit to suit Project requirements.

14. Hinged Patio Door Escutcheon Finish: Match handle.

15. Patio Door Hinge Type and Finish: Heavy-duty, commercial grade, finish to match door handle.

Editor Note: Retain paragraph below when hinged patio door raised panel is required.

16. Hinged Patio Door Raised Panel: [**1/2 light**] [**3/4 light**] species and finish to match door panel.

17. Venting Sidelights: [**None**] [**Inswing**] [**Outswing**].

18. Hinged Patio Door Center Post Door Depth and Material: [**None**] [**3-1/2 inches**] [**Adjustable 4-9/16 inches**] [**Adjustable 6-9/16 inches**] clad laminated veneer lumber (LVL).

19. Hinged Patio Door Concealed Panic System: [**None**] [**Clear opening, lockable at head and sill**].

Editor Note: Yale® Assure Lock® power patio door lock is optional. Retain paragraph below when Yale Assure Lock is required. For use with hinge patio doors, includes Anvers handle and sold as an option; not applied in the factory.

20. Yale® Assure Lock™: **Satin Nickel**.

Editor Note: Retain paragraph below when divided lights are required. Grille type and location are a determining factor in overall patio door thermal performance. Coordinate with required U-Factor in GLAZING Article and with manufacturer’s information on product availability.

J. Divided Lights:

Editor Note: Retain sub-paragraph below when Full Divided Light Grilles are required and edit to suit Project requirements. Removable interior grille is available in 7/8 inch width only. Grille spacers will match the insulated glass spacer available in Black, Stainless Steel or White – see glazing articles.

1. Full Divided Light: Permanent exterior and interior attachment, spacer between glass panes.

a. Style: [**Ovolo**] [**Contemporary**].

b. Width: [**5/8 inch (16mm)**] [**7/8 inch (22mm)**] [**1-1/8 inches (29mm)**] [**1-1/2 inches (38mm)**] [**2-1/4 inches (57mm**].

c. Pattern: [**As shown in Drawings**] <**Insert pattern designation**>.

d. Spacer Color: [**Match insulated glass spacer color**].

e. Exterior Color: [**Match patio door**] <**Insert requirements**>.

f. Interior Finish: [**Match patio door**] <**Insert requirements**>.

Editor Note: Retain sub-paragraph below when Simulated Divided Light Grilles are required and edit to suit Project requirements.

2. Simulated Divided Light: [**Permanent exterior and interior attachment, no spacer between glass panes**] [**Permanent exterior attachment, removable interior, no spacer between glass panes**] [**Permanent exterior only, no spacer between glass panes**] [**Removable only, no spacer between glass panes**].

a. Style: [**Ovolo**] [**Contemporary**].

b. Width: [**5/8 inch (16mm)**] [**7/8 inch (22mm)**] [**1-1/8 inches (29mm)**] [**1-1/2 inches (38mm)**] [**2-1/4 inches (57mm**].

c. Pattern: [**As shown in Drawings**] <**Insert pattern designation**>.

d. Spacer Color: [**Match insulated glass spacer color**].

e. Exterior Color: [**Match patio door**] <**Insert requirements**>.

f. Interior Finish: [**Match patio door**] <**Insert requirements**>.

Editor Note: Retain sub-paragraph below when Finelight Grilles-Between-the-Glass are required and edit to suit Project requirements.

3. Finelight Grille: Permanently installed between glass panes.

a. Pattern: [**As shown in Drawings**] <**Insert pattern designation**>.

Editor Note: Retain sub-paragraph below when 5/8-inch-wide between-glass grilles are required.

b. Width, Style and Color: 5/8 inch (16mm), flat, [**Colony White**] [**Sierra Bronze**] [**Pebble Tan**] [**Forest Green**].

Editor Note: Retain sub-paragraph below when 1-inch-wide between-glass grilles are required.

c. Width, Style and Color: 1 inch (25mm), contoured, [**1-tone match patio door**] [**1-tone**] **<insert requirements>** [**2-tone Colony White/Sierra Bronze**] [**2-tone Colony White/Pebble Tan**] [**2-tone Colony White/Forest Green**] [**As selected from manufacturer’s standard colors**] <**Insert requirements**>.

d. Material: Aluminum.

K. Insect Screens:

Editor Note: Retain sub-paragraphs below when top-hung gliding insect screens are required and edit to suit Project requirements. Applicable only to gliding and inswing active-stationary or stationary-active two-panel patio doors.

1. Type: Top-hung gliding insect screen.

a. Frame Material: Aluminum.

b. Painted Finish and Color: [**Factory-applied baked-on silicone polyester enamel**] [**Match patio door frame**] **<Insert color>**.

c. Insect Screen Material: [**Fiberglass mesh**] [**Aluminum wire mesh**].

Editor Note: Retain sub-paragraphs below when retractable insect screens are required and edit to suit Project requirements. Applicable only to gliding and inswing patio doors.

2. Type: Retractable insect screen.

a. Frame Material: Aluminum.

b. Painted Finish and Color: [**Factory-applied baked-on silicone polyester enamel**] [**Match patio door frame**] **<Insert color>**.

c. Insect Screen Material: Fiberglass mesh.

Editor Note: Retain sub-paragraphs below when hinged insect screens are required and edit to suit Project requirements. Applicable only to inswing patio doors.

3. Type: Hinged insect screen.

a. Frame Material: Aluminum.

b. Painted Finish and Color: [**Factory-applied baked-on silicone polyester enamel**] [**Match patio door frame**] **<Insert color>**.

c. Insect Screen Material: [**Fiberglass mesh**] [**Aluminum wire mesh**].

Editor Note: Retain paragraph below when blinds or shades are required and edit to suit Project requirements. System 3 blinds are applicable only on hinged inswing and outswing patio doors. Insulated Glass Spacer colors Black and White not available when Between-the-glass blinds are selected.

L. Blinds and Shades:

1. Type: [**System 3 applied to interior of stile and rail**] [**Between-glass blinds**].

2. Removable Storm Panel and Finish: Aluminum, [**Bronze**] [**White**] [**Black**] [**Gold**] [**Wood veneer to match patio door**].

Editor Note: Retain sub-paragraph below only when blinds are required.

3. Blinds Control Knob Color: [**Bronze**] [**White**] [**Black**] [**Gold**].

4. Blinds Color: [**Almond**] [**Tan**] [**White**].

5. Shade Color: [**Almond**] [**Pearl**] [**Vanilla**] [**Winter White**].

M. Sills:

Editor Note: Retain one or more sub-paragraphs below when aluminum sills are required and edit to suit Project requirements.

1. Type and Color: Inswing with oak threshold, aluminum with drainage channel, removable top plate, polyurethane thermal barrier, [**unfinished**] [**dark bronze anodized** **finish**].

2. Type and Color: Outswing with oak threshold, aluminum with bumper sill backed with foam compression weatherstrip, [**unfinished**] [**dark bronze anodized**].

Editor Note: Sill type in paragraph below is ADA-compliant only in consideration of threshold height.

3. Type, Jamb Depth and Color: [**Inswing**] [**Outswing**], low-threshold (ADA-compliant), [**4-9/16 inches**] [**6-9/16 inches**], aluminum with polyurethane thermal barrier, with dark bronze anodized finish.

Editor Note: Retain paragraph below when exterior trim or accessories are required and edit to suit Project requirements.

N. Exterior Trim and Accessories:

1. Type: [**2 inch Brick Mould**] [**3-1/2 inch Brick Mould**] [**2 inch Adjustable Brick Mould**] [**2 inch Ovolo Brick Mould**] [**Expandable Brick Mould with Flange**] [**Expandable Brick Mould without Flange**].

2. Type: [**3-1/2 inch Flat Casing**] [**5-1/2 inch Flat Casing**] [**3-1/2 inch Backband and Bead Casing**] [**Expandable Flat Casing**].

3. Type: [**As indicated**] <**Insert requirements**>.

4. Material: Factory-applied extrudedaluminum with corner keys.

5. Finish and Color: [**Painted**] [**Anodized**] [**Match doors**] <**Insert requirements**>.

Editor Note: Patio doors installed in combination must be designed and installed so as to attain a level of structural performance meeting requirements of the authority having jurisdiction. Refer to product literature or consult with an Andersen product representative.

O. Mullions: [**Laminated veneer lumber**] [**Structural steel**] configured to be structurally sound and designed in accordance with AAMA 450.

Editor Note: Retain article below when non-impact-resistant glazing using Andersen Low-E4 glass is required. Retain article below when non-impact-resistant glazing is required and edit to suit Project requirements. Glass type is a significant factor in determining overall patio door U-Factor. Specific performance values indicated below are based on 3.0 mm glass thickness1-inch Full Divided Light (Divided Light with Spacer) Grilles and Argon gas blend-filled insulated glazing units where applicable. Copy article below for each patio door type, edit to suit Project and product requirements and re-insert text as many times as needed to describe additional patio door types.

2.4 NON-IMPACT-RESISTANT GLAZING <**Insert patio door designation(s) used on Drawings**>.

Editor Note: Select required U-Factor in paragraph below and coordinate with required glazing type. U-Factors provided are based on whole-door performance, not on center-of-glass. Coordinate selection below with manufacturer’s product information. Actual unit performance values will vary depending upon Performance Grade (PG) rating, glass options, accessories such as grilles, unit size and type. Go to <http://www.andersenwindows.com/for-professionals> to view the performance values. Consult Andersen Product Representative for more information.

A: Thermal Transmission (U-Factor), NFRC 100:

Editor Note: Retain sub-paragraph below for inswing patio doors.

1. Inswing: [**0.31 without grilles**] [**0.32 with grilles**] <**Insert U-Factor value**>.

Editor Note: Retain sub-paragraph below for outswing patio doors.

2. Outswing: [**0.33 without grilles**] [**0.34 with grilles**] <**Insert U-Factor value**>.

Editor Note: Retain sub-paragraph below for gliding patio doors.

3. Gliding: [**0.31 without grilles**] [**0.33 with grilles**] <**Insert U-Factor value**>.

Editor Note: Retain sub-paragraph below for French gliding patio doors.

4. French Gliding: [**0.31 without grilles**] [**0.31 with grilles**] <**Insert U-Factor value**>.

B. Solar Heat Gain Coefficient (SHGC), NFRC 200:

Editor Note: Retain sub-paragraph below for inswing patio doors.

1. Inswing: [**0.24 without grilles**] [**0.21 with grilles**] <**Insert SHGC value**>.

Editor Note: Retain sub-paragraph below for outswing patio doors.

2. Outswing: [**0.25 without grilles**] [**0.19 with grilles**] <**Insert SHGC value**>.

Editor Note: Retain sub-paragraph below for gliding patio doors.

3. Gliding: [**0.32 without grilles**] [**0.25 with grilles**] <**Insert SHGC value**>.

Editor Note: Retain sub-paragraph below for French gliding patio doors.

4. French Gliding: [**0.27 without grilles**] [**0.21 with grilles**] <**Insert SHGC value**>.

C. Visible Light Transmittance (VLT), NFRC 200:

Editor Note: Retain sub-paragraph below for inswing patio doors.

1. Inswing: [**0.41 without grilles**] [**0.35 with grilles**] <**Insert VLT value**>.

Editor Note: Retain sub-paragraph below for outswing patio doors.

2. Outswing: [**0.42 without grilles**] [**0.30 with grilles**] <**Insert VLT value**>.

Editor Note: Retain sub-paragraph below for gliding patio doors.

3. Gliding: [**0.56 without grilles**] [**0.42 with grilles**] <**Insert VLT value**>.

Editor Note: Retain sub-paragraph below for French gliding patio doors.

4. French Gliding: [**0.46 without grilles**] [**0.34 with grilles**] <**Insert VLT value**>.

Editor Note: Sound Transmission Class (STC)/Outdoor Indoor Transmission Classification (OITC) performance varies depending on patio door type and features. Go to <http://www.andersenwindows.com/for-professionals> to view the performance values. Consult Andersen Product Representative for more information.

D. Sound Transmission Class (STC)/Outdoor Indoor Transmission Classification (OITC), ASTM E90:

Editor Note: Retain sub-paragraph below for single-panel inswing patio doors. In all cases, the second set of optional performance data is for an upgraded, unbalanced glass construction.

1. Single-Panel Inswing: [**31/26**] [**33/30 with unbalanced glass**] <**Insert STC/OITC value**>.

Editor Note: Retain sub-paragraph below for double inswing patio doors. In all cases, the second set of optional performance data is for upgraded glass.

2. Two-Panel Inswing: [**30/26**] [**32/29 with unbalanced glass**] <**Insert STC/OITC value**>.

Editor Note: Retain sub-paragraph below for single outswing patio doors. In all cases, the second set of optional performance data is for upgraded glass.

3. Single-Panel Outswing: [**30/26**] [**33/30 with unbalanced glass**] <**Insert STC/OITC value**>.

Editor Note: Retain sub-paragraph below for double outswing patio doors. In all cases, the second set of optional performance data is for upgraded glass.

4. Two-Panel Outswing: [**29/25**] [**32/29**] <**Insert STC/OITC value**>.

Editor Note: Retain sub-paragraph below for gliding patio doors. In all cases, the second set of optional performance data is for upgraded glass.

5. Gliding: [**29/24**] [**30/28 with unbalanced glass**] <**Insert STC/OITC value**>.

E. Glass Units: Provide insulating glass units certified through [**Insulating Glass Certification Council as conforming to the requirements of IGCC and ASTM E2190**] [**Insulating Glass Manufacturers Alliance of Canada (IGMAC) conforming to the requirements of Canadian General Standards Board CAN/CGSB 12.8**].

1. Manufacturer Designation: Andersen Low-E4 Glass.

2. Glazing Configuration: [**Dual-pane**] [**Triple-pane**].

3. Tint: [**Bronze**] [**Gray**] [**Green**] [**None**].

4. Seal and Spacer Type: Dual sealed insulating glass units with polyisobutylene primary seal, silicone secondary seal and stainless steel spacers.

5. Glass Spacer Color: [**Black**] [**Stainless Steel**] [**White**]

6. Glass Type: Fully tempered glass, ASTM C1048.

7. Opacity: [**Obscure**] [**Rain**] [**Reed**] [**Glue chip**] [**Satin Etch**] [**None**].

Editor Note: Retain sub-paragraphs below when laminated glass is required and edit to suit Project.

8. Laminate Interlayer Thickness: [**0.030**] [**0.060**] [**0.090**] inch.

Editor Note: Retain article below when non-impact-resistant glazing using Andersen Low-E4 SmartSun glass is required. Retain article below when non-impact-resistant glazing is required and edit to suit Project requirements. Glass type is a significant factor in determining overall patio door U-Factor. Specific performance values indicated below are based on 3.0 mm glass thickness, 1-inch Full Divided Light (Divided Light with Spacer) Grilles and Argon gas blend-filled insulated glazing units where applicable. Copy article below for each door type, edit to suit Project and product requirements and re-insert text as many times as needed to describe additional patio door types.

2.5 NON-IMPACT-RESISTANT GLAZING <**Insert patio door designation(s) used on Drawings**>.

Editor Note: Select required U-Factor in paragraph below and coordinate with required glazing type. U-Factors provided are based on whole-door performance, not on center-of-glass. Coordinate selection below with manufacturer’s product information. Actual unit performance values will vary depending upon Performance Grade (PG) rating, glass options, accessories such as grilles, unit size and type. Go to <http://www.andersenwindows.com/for-professionals> to view the performance values. Consult Andersen Product Representative for more information.

A: Thermal Transmission (U-Factor), NFRC 100:

Editor Note: Retain sub-paragraph below for inswing patio doors.

1. Inswing: [**0.30 without grilles**] [**0.31 with grilles**] <**Insert U-Factor value**>.

Editor Note: Retain sub-paragraph below for outswing patio doors.

2. Outswing: [**0.33 without grilles**] [**0.34 with grilles**] <**Insert U-Factor value**>.

Editor Note: Retain sub-paragraph below for gliding patio doors.

3. Gliding: [**0.30 without grilles**] [**0.32 with grilles**] <**Insert U-Factor value**>.

Editor Note: Retain sub-paragraph below for French gliding patio doors.

4. French Gliding: [**0.31 without grilles**] [**0.31 with grilles**] <**Insert U-Factor value**>.

B. Solar Heat Gain Coefficient (SHGC), NFRC 200:

Editor Note: Retain sub-paragraph below for inswing patio doors.

1. Inswing: [**0.16 without grilles**] [**0.14 with grilles**] <**Insert SHGC value**>.

Editor Note: Retain sub-paragraph below for outswing patio doors.

2. Outswing: [**0.17 without grilles**] [**0.13 with grilles**] <**Insert SHGC value**>.

Editor Note: Retain sub-paragraph below for gliding patio doors.

3. Gliding: [**0.22 without grilles**] [**0.17 with grilles**] <**Insert SHGC value**>.

Editor Note: Retain sub-paragraph below for French gliding patio doors.

4. French Gliding: [**0.18 without grilles**] [**0.14 with grilles**] <**Insert SHGC value**>.

C. Visible Light Transmittance (VLT), NFRC 200:

Editor Note: Retain sub-paragraph below for inswing patio doors.

1. Inswing: [**0.37 without grilles**] [**0.27 with grilles**] <**Insert VLT value**>.

Editor Note: Retain sub-paragraph below for outswing patio doors.

2. Outswing: [**0.37 without grilles**] [**0.27 with grilles**] <**Insert VLT value**>.

Editor Note: Retain sub-paragraph below for gliding patio doors.

3. Gliding: [**0.50 without grilles**] [**0.38 with grilles**] <**Insert VLT value**>.

Editor Note: Retain sub-paragraph below for French gliding patio doors.

4. French Gliding: [**0.41 without grilles**] [**0.30 with grilles**] <**Insert VLT value**>.

Editor Note: Sound Transmission Class (STC)/Outdoor Indoor Transmission Classification (OITC) performance varies depending on patio door type and features. Go to <http://www.andersenwindows.com/for-professionals> to view the performance values. Consult Andersen Product Representative for more information.

D. Sound Transmission Class (STC)/Outdoor Indoor Transmission Classification (OITC), ASTM E90:

Editor Note: Retain sub-paragraph below for single-panel inswing patio doors. In all cases, the second set of optional performance data is for an upgraded, unbalanced glass construction.

1. Single-Panel Inswing: [**31/26**] [**33/30 with unbalanced glass**] <**Insert STC/OITC value**>.

Editor Note: Retain sub-paragraph below for two-panel inswing patio doors. In all cases, the second set of optional performance data is for upgraded glass.

2. Two-Panel Inswing: [**30/26**] [**32/29 with unbalanced glass**] <**Insert STC/OITC value**>.

Editor Note: Retain sub-paragraph below for single-panel outswing patio doors. In all cases, the second set of optional performance data is for upgraded glass.

3. Single-Panel Outswing: [**30/26**] [**33/30 with unbalanced glass**] <**Insert STC/OITC value**>.

Editor Note: Retain sub-paragraph below for two-panel outswing patio doors. In all cases, the second set of optional performance data is for upgraded glass.

4. Two-Panel Outswing: [**29/25**] [**32/29**] <**Insert STC/OITC value**>.

Editor Note: Retain sub-paragraph below for gliding patio doors. In all cases, the second set of optional performance data is for upgraded glass.

5. Gliding: [**29/24**] [**30/28 with unbalanced glass**] <**Insert STC/OITC value**>.

E. Glass Units: Provide insulating glass units certified through [**Insulating Glass Certification Council as conforming to the requirements of IGCC and ASTM E2190**] [**Insulating Glass Manufacturers Alliance of Canada (IGMAC) conforming to the requirements of Canadian General Standards Board CAN/CGSB 12.8**].

1. Manufacturer Designation: Andersen Low-E4 SmartSun Glass.

2. Glazing Configuration: [**Dual-pane**] [**Triple-pane**].

3. Tint: [**Bronze**] [**Gray**] [**Green**] [**None**].

4. Seal and Spacer Type: Dual sealed insulating glass units with polyisobutylene primary seal, silicone secondary seal and stainless steel spacers.

5. Glass Spacer Color: [**Black**] [**Stainless Steel**] [**White**]

6. Glass Type: Fully tempered glass, ASTM C1048.

7. Opacity: [**Obscure**] [**Rain**] [**Reed**] [**Glue chip**] [**Satin Etch**] [**None**].

Editor Note: Retain sub-paragraphs below when laminated glass is required and edit to suit Project.

8. Laminate Interlayer Thickness: [**0.030**] [**0.060**] [**0.090**] inch.

Editor Note: Retain article below when non-impact-resistant glazing using Low-E4 triple-pane glass is required. Glass type is a significant factor in determining overall patio door U-Factor. Specific performance values indicated below are based on 3.0 mm glass thickness, 1-inch MDL Grilles and Argon gas blend-filled insulated glazing units where applicable. Copy article below for each door type, edit to suit Project and product requirements and re-insert text as many times as needed to describe additional patio door types.

2.6 NON-IMPACT RESISTANT GLAZING <**Insert patio door designation(s) used on Drawings**>.

Editor Note: Select required U-Factor in paragraph below and coordinate with required glazing type. U-Factors provided are based on whole-door performance, not on center-of-glass. Coordinate selection below with manufacturer’s product information. Actual unit performance values will vary depending upon Performance Grade (PG) rating, glass options, accessories such as grilles, unit size and type. Go to <http://www.andersenwindows.com/for-professionals> to view the performance values. Consult Andersen Product Representative for more information.

A: Thermal Transmission (U-Factor), NFRC 100:

Editor Note: Retain sub-paragraph below for inswing patio doors.

1. Inswing: [**0.29 without grilles**] [**0.29 with grilles**] <**Insert U-Factor value**>.

Editor Note: Retain sub-paragraph below for outswing patio doors.

2. Outswing: [**0.31 without grilles**] [**0.31 with grilles**] <**Insert U-Factor value**>.

Editor Note: Retain sub-paragraph below for gliding patio doors.

3. Gliding: [**0.28 without grilles**] [**0.28 with grilles**] <**Insert U-Factor value**>.

Editor Note: Retain sub-paragraph below for French gliding patio doors.

4. French Gliding: [**0.29 without grilles**] [**0.29 with grilles**] <**Insert U-Factor value**>.

B. Solar Heat Gain Coefficient (SHGC), NFRC 200:

Editor Note: Retain sub-paragraph below for inswing patio doors.

1. Inswing: [**0.23 without grilles**] [**0.17 with grilles**] <**Insert SHGC value**>.

Editor Note: Retain sub-paragraph below for outswing patio doors.

2. Outswing: [**0.23 without grilles**] [**0.18 with grilles**] <**Insert SHGC value**>.

Editor Note: Retain sub-paragraph below for gliding patio doors.

3. Gliding: [**0.30 without grilles**] [**0.24 with grilles**] <**Insert SHGC value**>.

Editor Note: Retain sub-paragraph below for French gliding patio doors.

4. French Gliding: [**0.25 without grilles**] [**0.19 with grilles**] <**Insert SHGC value**>.

C. Visible Light Transmittance (VLT), NFRC 200:

Editor Note: Retain sub-paragraph below for inswing patio doors.

1. Inswing: [**0.38 without grilles**] [**0.27 with grilles**] <**Insert VLT value**>.

Editor Note: Retain sub-paragraph below for outswing patio doors.

2. Outswing: [**0.38 without grilles**] [**0.27 with grilles**] <**Insert VLT value**>.

Editor Note: Retain sub-paragraph below for gliding patio doors.

3. Gliding: [**0.51 without grilles**] [**0.39 with grilles**] <**Insert VLT value**>.

Editor Note: Retain sub-paragraph below for French gliding patio doors.

4. French Gliding: [**0.42 without grilles**] [**0.31 with grilles**] <**Insert VLT value**>.

Editor Note: Sound Transmission Class (STC)/Outdoor Indoor Transmission Classification (OITC) performance varies depending on patio door type and features. Go to <http://www.andersenwindows.com/for-professionals> to view the performance values. Consult Andersen Product Representative for more information.

D. Sound Transmission Class (STC)/Outdoor Indoor Transmission Classification (OITC), ASTM E90:

Editor Note: Retain sub-paragraph below for single-panel inswing patio doors. In all cases, the second set of optional performance data is for an upgraded, unbalanced glass construction.

1. Single-Panel Inswing: [**31/27**] [**33/30 with unbalanced glass**] <**Insert STC/OITC value**>.

Editor Note: Retain sub-paragraph below for two-panel inswing patio doors. In all cases, the second set of optional performance data is for upgraded glass.

2. Two-Panel Outswing: [**31/26**] [**32/29 with unbalanced glass**] <**Insert STC/OITC value**>.

Editor Note: Retain sub-paragraph below for single-panel outswing patio doors. In all cases, the second set of optional performance data is for upgraded glass.

3. Single-Panel Outswing: [**31/26**] [**33/30 with unbalanced glass**] <**Insert STC/OITC value**>.

Editor Note: Retain sub-paragraph below for gliding patio doors. In all cases, the second set of optional performance data is for upgraded glass.

4. Gliding: [**30/25**] [**30/28 with unbalanced glass**] <**Insert STC/OITC value**>.

E. Glass Units: Provide insulating glass units certified through [**Insulating Glass Certification Council as conforming to the requirements of IGCC and ASTM E2190**] [**Insulating Glass Manufacturers Alliance of Canada (IGMAC) conforming to the requirements of Canadian General Standards Board CAN/CGSB 12.8**].

1. Manufacturer Designation: Andersen Low-E4 Triple-Pane Glass.

2. Glazing Configuration: Triple-pane.

3. Tint: [**Bronze**] [**Gray**] [**Green**] [**None**].

4. Seal and Spacer Type: Dual sealed insulating glass units with polyisobutylene primary seal, silicone secondary seal and stainless steel spacers.

5. Glass Spacer Color: [**Black**] [**Stainless Steel**] [**White**]

6. Glass Type: Fully tempered glass, ASTM C1048.

7. Opacity: [**Obscure**] [**Rain**] [**Reed**] [**Glue chip**] [**Satin Etch**] [**None**].

Editor Note: Retain sub-paragraphs below when laminated glass is required and edit to suit Project.

8. Laminate Interlayer Thickness: [**0.030**] [**0.060**] [**0.090**] inch.

Editor Note: Retain article below when insulated impact-resistant glazing using Andersen Low-E4 glass is required. Glass type is a significant factor in determining overall patio door U-Factor. Specific performance values indicated below are based on 3.0 mm glass thickness, 1-inch Full Divided Light (Divided Light with Spacer) Grilles and Argon gas blend-filled insulated glazing units where applicable. Copy article below for each patio door type, edit to suit Project and product requirements and re-insert text as many times as needed to describe additional patio door types.

2.7 IMPACT-RESISTANT GLAZING <**Insert patio door designation(s) used on Drawings**>.

Editor Note: Select required U-Factor in paragraph below and coordinate with required glazing type. U-Factors provided are based on whole-door performance, not on center-of-glass. Coordinate selection below with manufacturer’s product information. Actual unit performance values will vary depending upon Performance Grade (PG) rating, glass options, accessories such as grilles, unit size and type. Go to <http://www.andersenwindows.com/for-professionals> to view the performance values. Consult Andersen Product Representative for more information.

A: Thermal Transmission (U-Factor), NFRC 100:

Editor Note: Retain sub-paragraph below for inswing patio doors.

1. Inswing: [**0.32 without grilles**] [**0.34 with grilles**] <**Insert U-Factor value**>.

Editor Note: Retain sub-paragraph below for outswing patio doors.

2. Outswing: [**0.35 without grilles**] [**0.36 with grilles**] <**Insert U-Factor value**>.

Editor Note: Retain sub-paragraph below for French gliding patio doors.

3. French Gliding: [**0.33 without grilles**] [**0.35 with grilles**] <**Insert U-Factor value**>.

B. Solar Heat Gain Coefficient (SHGC), NFRC 200:

Editor Note: Retain sub-paragraph below for inswing patio doors.

1. Inswing: [**0.27 without grilles**] [**0.20 with grilles**] <**Insert SHGC value**>.

Editor Note: Retain sub-paragraph below for outswing patio doors.

2. Outswing: [**0.28 without grilles**] [**0.21 with grilles**] <**Insert SHGC value**>.

Editor Note: Retain sub-paragraph below for French gliding patio doors.

3. French Gliding: [**0.30 without grilles**] [**0.23 with grilles**] <**Insert SHGC value**>.

C. Visible Light Transmittance (VLT), NFRC 200:

Editor Note: Retain sub-paragraph below for inswing patio doors.

1. Inswing: [**0.40 without grilles**] [**0.28 with grilles**] <**Insert VLT value**>.

Editor Note: Retain sub-paragraph below for outswing patio doors.

2. Outswing: [**0.40 without grilles**] [**0.29 with grilles**] <**Insert VLT value**>.

Editor Note: Retain sub-paragraph below for French gliding patio doors.

3. French Gliding: [**0.44 without grilles**] [**0.32 with grilles**] <**Insert VLT value**>.

D. Glass Units: Provide insulating glass units certified through [**Insulating Glass Certification Council as conforming to the requirements of IGCC and ASTM E2190**] [**Insulating Glass Manufacturers Alliance of Canada (IGMAC) conforming to the requirements of Canadian General Standards Board CAN/CGSB 12.8**].

1. Glazing Configuration: Dual-pane.

2. Tint: [**Bronze**] [**Gray**] [**None**].

3. Seal and Spacer Type: Dual sealed insulating glass units with polyisobutylene primary seal, silicone secondary seal and stainless steel spacers.

4. Glass Spacer Color: [**Black**] [**Stainless Steel**] [**White**]

5. Glass Type: Fully tempered glass, ASTM C1048.

6. Opacity: [**White obscure**] [**None**].

Editor Note: Retain article below when impact-resistant glazing using Andersen Low-E4 SmartSun glass is required. Glass type is a significant factor in determining overall patio door U-Factor. Specific performance values indicated below are based on 3.0 mm glass thickness, 1-inch Full Divided Light (Divided Light with Spacer) Grilles and Argon gas blend-filled insulated glazing units where applicable. Copy article below for each patio door type, edit to suit Project and product requirements and re-insert text as many times as needed to describe additional patio door types.

2.8 IMPACT-RESISTANT GLAZING <**Insert patio door designation(s) used on Drawings**>.

Editor Note: Select required U-Factor in paragraph below and coordinate with required glazing type. U-Factors provided are based on whole-door performance, not on center-of-glass. Coordinate selection below with manufacturer’s product information. Actual unit performance values will vary depending upon Performance Grade (PG) rating, glass options, accessories such as grilles, unit size and type. Go to <http://www.andersenwindows.com/for-professionals> to view the performance values. Consult Andersen Product Representative for more information.

A: Thermal Transmission (U-Factor), NFRC 100:

Editor Note: Retain sub-paragraph below for inswing patio doors.

1. Inswing: [**0.32 without grilles**] [**0.33 with grilles**] <**Insert U-Factor value**>.

Editor Note: Retain sub-paragraph below for outswing patio doors.

2. Outswing: [**0.34 without grilles**] [**0.36 with grilles**] <**Insert U-Factor value**>.

Editor Note: Retain sub-paragraph below for French gliding patio doors.

3. French Gliding: [**0.32 without grilles**] [**0.34 with grilles**] <**Insert U-Factor value**>.

B. Solar Heat Gain Coefficient (SHGC), NFRC 200:

Editor Note: Retain sub-paragraph below for inswing patio doors.

1. Inswing: [**0.22 without grilles**] [**0.17 with grilles**] <**Insert SHGC value**>.

Editor Note: Retain sub-paragraph below for outswing patio doors.

2. Outswing: [**0.22 without grilles**] [**0.17 with grilles**] <**Insert SHGC value**>.

Editor Note: Retain sub-paragraph below for French gliding patio doors.

3. French Gliding: [**0.24 without grilles**] [**0.18 with grilles**] <**Insert SHGC value**>.

C. Visible Light Transmittance (VLT), NFRC 200:

Editor Note: Retain sub-paragraph below for inswing patio doors.

1. Inswing: [**0.36 without grilles**] [**0.26 with grilles**] <**Insert VLT value**>.

Editor Note: Retain sub-paragraph below for outswing patio doors.

2. Outswing: [**0.36 without grilles**] [**0.26 with grilles**] <**Insert VLT value**>.

Editor Note: Retain sub-paragraph below for French gliding patio doors.

3. French Gliding: [**0.40 without grilles**] [**0.29 with grilles**] <**Insert VLT value**>.

D. Glass Units: Provide insulating glass units certified through [**Insulating Glass Certification Council as conforming to the requirements of IGCC and ASTM E2190**] [**Insulating Glass Manufacturers Alliance of Canada (IGMAC) conforming to the requirements of Canadian General Standards Board CAN/CGSB 12.8**].

1. Manufacturer Designation: Andersen Low-E4 SmartSun Glass.

2. Glazing Configuration: Dual-pane.

3. Tint: [**Bronze**] [**Gray**] [**None**].

4. Seal and Spacer Type: Dual sealed insulating glass units with polyisobutylene primary seal, silicone secondary seal and stainless steel spacers.

5. Glass Spacer Color: [**Black**] [**Stainless Steel**] [**White**]

6. Glass Type: Fully tempered glass, ASTM C1048.

7. Opacity: [**White obscure**] [**None**].

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that all substrate conditions are suitable for installation in compliance with manufacturer’s recommendations.

B. Do not begin installation until substrates have been properly prepared and any conditions not in compliance with manufacturer’s recommendations have been corrected.

3.2 INSTALLATION

A. General: Comply with manufacturer’s product recommendations, including but not limited to the Andersen Unit Installation Guide, installation information in product literature and on product packaging. Comply with Drawings [**and Shop Drawings**] for installing patio doors, hardware, accessories, and other components.

B. Install patio doors plumb, level and square. Anchor patio doors securely to structure in correct orientation to flashing and adjacent construction as indicated. Comply with product installation instructions for proper flashing integration into wall system. Install patio doors so as to drain water penetration to the exterior.

C. Adjust sliding patio door, insect screens, hardware and accessories as applicable for correct fit. Adjust weatherstrip for smooth operation and weather-tight closure.

3.3 FIELD QUALITY CONTROL

A. Manufacturer’s Field Services: If requested by Owner, provide manufacturer’s field service consisting of product use recommendations and periodic site visits for observation of product installation in accordance with manufacturer’s recommendations.

1. Site Visits: <**Insert site visit requirements**>.

Editor Note: Retain article below if field tests for air and water leakage are required. Edit to suit Project requirements including testing services and methodology.

B. Field Testing: Provide field testing of installed units.

1. Test units in compliance with AAMA 502.

2. Use test equipment calibrated according to ASTM E1105.

3.4 CLEANING

A. Refer to manufacturer for guidance on timing for when best to remove protective films and non-permanent labels after installation.

B. Remove excess sealant, soiling, dirt and other substances. Clean patio door frame and glass surfaces. Avoid damaging coatings and finishes.

C. Touch-up, repair or replace glass or other patio door components broken, scratched or damaged during construction prior to Substantial Completion.

D. Remove and lawfully dispose of construction debris from Project site.

3.5 PROTECTION

A. Protect installed patio doors and finish surfaces from damage during construction until completion of Project and acceptance by Owner.

(END OF SECTION 08 14 23 – CLAD WOOD DOORS)