MANUFACTURER

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CSI PRODUCT SPECIFICATION

Specifier note: This CSI product specification is written using the Construction Specifications Institute (CSI) *Manual of Practice (Fifth Edition)*, including *MasterFormat™, SectionFormat™* and *PageFormat™.*

Specifier note: Information contained in this CSI product specification is accurate as of November 2018. Due to ongoing product changes, this information is subject to change. Consult manufacturer for complete product details.

PART 1 GENERAL

1.1 SECTION INCLUDES

 A. Wood [Inswing] [Outswing] Side-Hinged French Doors with Hardware.

 B. Glazing.

 C. Accessories.

1.2 RELATED SECTIONS

1. Section 01 33 00 – Submittal Procedures.
2. Section 01 65 00 – Product Delivery Requirements.
3. Section 01 66 00 – Product Storage and Handling Requirements.
4. Section 06 10 00 – Rough Carpentry.
5. Section 06 20 00 – Finish Carpentry.
6. Section 07 90 00 – Joint Protection.
7. Section 08 71 00 – Door Hardware.
8. Section 08 80 00 – Glazing.
9. Section 09 90 00 – Painting and Coating.

1.3 REFERENCES

1. American Society for Testing and Materials (ASTM):
	* + 1. ASTM C1036 – Standard Specification for Flat Glass.
			2. ASTM C1048 – Standard Specification for Heat-Treated Flat Glass – Kind HS, Kind FT Coated and Uncoated Glass.
			3. ASTM E283 – Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen.
			4. ASTM E330 – Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
			5. ASTM E547 – Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Difference.
			6. ASTM E2190 – Standard Specification for Insulating Glass Unit Performance and Evaluation.
2. American Architectural Manufacturers Association/Window and Door Manufacturers Association/Canadian Standards Association (AAMA/WDMA/CSA):
	* + 1. AAMA/WDMA/CSA 101/I.S.2/A440-11/NAFS – North American Fenestration Standard/Specification for Windows, Doors and Skylights.
3. Window and Door Manufacturers Association (WDMA):
	* + 1. WDMA I.S.2 – Hallmark Certification Program.
			2. WDMA I.S. 4-05 – Industry Standard for Water Repellent Preservative Non-Pressure Treatment for Millwork.
4. National Fenestration Rating Council (NFRC):
	* + 1. NFRC 102 – Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems.
			2. NFRC 200 – Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.
			3. NFRC 500 – Procedure for Determining Fenestration Product Condensation Resistance Values.
			4. ENERGY STAR® Compliant Models available.
5. Insulating Glass Certification Council (IGCC).
6. Safety glass tested in accordance with ANSI Z97.1.
	1. PERFORMANCE REQUIREMENTS

Specifier note: Higher test results may be achieved using high performance options and/or smaller sizes. Specific testing is dependent upon size and options. For further information contact your Weather Shield territory manager.

1. Design and performance requirements:

 1. French door units shall be Hallmark certified in compliance with AAMA/WDMA/CSA 101/I.S.2/A440-11:

* 1. 6510 Inswing 1-3/4” panel French door [LC-PG25-SHD (71-1/4”x96 1/32” jamb size tested with standard sill, 3-point lock, manual flush-bolt and butt hinges)]
1. 6610 Outswing 1-3/4” panel French door [LC-PG25-SHD (71-1/4”x96-1/32” jamb size tested with standard sill, 3-point lock, manual flush-bolt and butt hinges)]

 2. Air infiltration shall not exceed 0.30 cfm/ft2 [1.5 L/s•m2] when tested at 1.57 psf [75 Pa]

 according to ASTM E283.

1. No water penetration when tested at the following pressure according to ASTM E547:

[LC-PG25-SHD – 3.75 psf (180Pa)]

1. Door units must withstand the following positive/negative structural test pressure without damage when tested according to ASTM E330:

[LC-PG25-SHD - +37.5/-37.5 psf (+1800/-1800 Pa)]

1. French doors must pass a forced entry resistance test of at least Level 10 to meet requirements set forth in ASTM F842.

* 1. SUBMITTAL PROCEDURES
1. Shop drawings: submit shop drawings according to Section 01 33 23 – Shop Drawings, Product Data and Samples.
2. Product data: submit manufacturer's product catalog data and installation guides.
3. Samples: submit samples including the following:
	* + 1. Corner cutaway: submit corner cutaway, including glazing system, quality of construction and specified exterior/interior finishes.
			2. Exterior: submit color samples of exterior color finishes.
			3. Hardware: submit samples indicating typical hardware finishes.

1.6 QUALITY ASSURANCE

1. Single source responsibility: except for hardware mechanisms, weather strip and aluminum extrusions, the door manufacturer is responsible for fabrication of all components and materials including treatment of wood with acceptable wood preservatives, millwork of door panel and frame members, assembly of most insulating glass and manufacture of all panels and frames.
2. Regulatory requirements:
3. Emergency escape and rescue: comply with requirements for sleeping units of

[IBC International Building Code] [IRC International Residential Code] [\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_].

* 1. PRODUCT DELIVERY REQUIREMENTS
	2. Comply with the product delivery requirements specified in Section 01 65 00 - Product Delivery Requirements.
	3. PRODUCT STORAGE AND HANDLING REQUIREMENTS
		1. Comply with the requirements for storage and handling of products as specified in Section 01 66 00 – Product Storage and Handling Requirements.
		2. Store units in a dry location, off the ground, under cover, protected from weather and construction activities.

1.9 WARRANTIES

1. Workmanship and materials: 20-year limited warranty.
2. Wood rot: 10-year warranty.
3. Insulating glass: 20-year warranty.

PART 2 PRODUCTS

2.1 MANUFACTURED UNITS

1. Premium Wood [6510 Inswing] [6610 Outswing] Side-Hinged French Doors as manufactured by Weather Shield Mfg., Inc. of Medford, Wisconsin.

2.2 WOOD SIDE-HINGED FRENCH DOOR MATERIALS

1. Frame:
	* + 1. Exterior frame members milled from pine, kiln dried to a moisture content of 6-12% at the time of fabrication and treated with a water-repellent preservative. The frame includes solid one-piece head and side jambs. Top corners shall be rabbeted, butted, chemically and mechanically fastened.
2. Interior frame materials to be milled from [pine fingerjoint (standard)] [pine no fingerjoint] [oak] [cherry] [maple] [mahogany] [mixed grain fir] [vertical grain fir] [character alder], kiln dried to a moisture content of 6-12% at the time of fabrication and treated with a water-repellent preservative.
3. Specify [inswing] [outswing].
4. Choose one of the following sill options:
	1. Inswing doors:
* [Extruded aluminum sill anodized in a bronze matte finish with dark brown vinyl threshold (standard) and wood sill filler; sill height 1-15/16” [49mm]. Factory-applied vinyl construction sill cover shall be standard].
* [ADA-compliant extruded aluminum sill anodized in a bronze matte finish; sill height ½” [13mm]]. Option: 2” [51mm] sill extension.
	1. Outswing doors:
* [Extruded aluminum sill anodized in a bronze matte finish with dark brown vinyl exterior/hardwood interior threshold (standard) and wood sill filler; overall sill height of 2-13/16” [71mm]. Factory-applied vinyl construction sill cover shall be standard.]
* [Low profile extruded aluminum sill anodized in a bronze matte finish with dark brown vinyl exterior/hardwood interior threshold and wood sill filler; overall sill height of 2” [51mm]].
* [ADA-compliant extruded aluminum sill anodized in a bronze matte finish; sill height ½” [13mm]]. Option: 2” [51mm] sill extension.
	+ - 1. Side jamb thickness 1-1/4” [32mm]; head jamb thickness 1-1/4” [32mm].

6. Frame shall have standard overall jamb depth of 5-13/16” [148mm] with 4-9/16” [116mm]

from backside of nailing fin to interior of door.

7. Frame shall have 2” [51mm] brick mould applied to head and side jambs.

8. Option: frame provided with jamb extensions.

* 1. Inswing doors:
* Factory-applied jamb extensions available up to and including 7-1/8” [181mm] overall jamb depth.
* Jamb extensions shall be factory-applied to the exterior head and side jambs.
* Standard sill shall include aluminum extension extending to exterior.
	1. Outswing doors:
* One-piece jamb extensions [factory-applied (standard)] [shipped loose] available up to and including 12” [305mm] overall jamb depth.
* Jamb extensions shall be factory-applied to the interior head and side jambs and shall match interior frame finish. Jamb extension at the sill is not provided.
1. Door panel:
2. Exterior door panel members shall be milled from wood substrate with fiber resin skin, kiln dried to a moisture content of 6-12% at the time of fabrication and treated with a water-repellent preservative.
3. Interior door panel materials shall be milled from [pine (standard)] [oak] [cherry] [maple] [mahogany] [mixed grain fir] [vertical grain fir] [character alder] veneer over wood substrate, kiln dried to a moisture content of 6-12% at the time of fabrication and treated with a water-repellent preservative.
4. Laminated lock stile and block core hinge stile and rails shall be chemically and mechanically fastened at joints with hardwood dowels.
5. Top rail is 5” [127mm] wide; stiles are 5-1/4” [133mm] wide; bottom rail on doors up to and including 8-2 callout heights [7-1/2” (191mm) standard] [10” (254mm)] [12” (305mm)]; bottom rail on doors over 8-2 callout heights [10” (254mm) standard] [12” (305mm)]. Option: 5-3/16” [132mm] center rail.
6. Door panel shall be 1-3/4” [44mm] thick.
7. Option: raised panels:

 a. [One panel] [two panels] shall be two medium density fiberboard (MDF) panels consisting of an exterior and interior panel, glazed into door panel with flush glazing bead.

 b. Exterior raised panel shall be finished to match exterior door panel.

 c. Interior raised panel wood species to match interior door panel.

 d. Raised panel thickness shall be minimum 1-3/8” [35mm].

1. Finish:
2. Exterior finish:  [primed (standard)] [no prime/no fingerjoint] [poly, shall be low gloss, two-component acrylic polyurethane: [white] [cameo] [desert tan] [adobe] [hartford green] [obsidian] [craftsman bronze] [brick red] [47 designer colors] [custom color as selected by the Architect]].
3. Interior frame finish: [clear treated wood: [pine (standard)] [oak] [cherry] [maple] [mahogany] [mixed grain fir] [vertical grain fir] [character alder] [knotty pine]] [primed] [prefinished white] [prefinished black] [poly prefinished: [white] [adobe] [desert tan] [Hartford green] [brick red] [cameo] [obsidian] [craftsman bronze] [47 designer colors]] [stained/sealed: [clear satin] [golden oak] [fruitwood] [chestnut]].
4. Interior panel finish:

a. Wood veneer on wood substrate: [pine (standard)] [oak] [cherry] [maple] [mahogany] [mixed grain fir] [vertical grain fir] [character alder].

b. Fiber resin skin on wood substrate: [primed] [prefinished].

1. Glazing: select quality complying with ASTM C1036. Insulating glass IGCC certified to performance level CBA when tested in accordance with ASTM E2190.
	1. Glazing method:
		* + 1. Insulated glass consisting of two lites of clear tempered glass
				2. Triple insulated glass consisting of three lites of clear tempered glass
	2. Glass type:

 [Clear]

[Low E 272 sputter coat applied on number two surface]

[High-performance Low E: insulated glass consisting of one lite sputter coat Low E 366 applied on the number two surface and one lite clear glass with warm-edge spacer system and argon gas in airspace]. Optional: [EasyCare coating applied on number one surface] [pyrolytic Low E applied on number four surface].

[High-performance Low E laminated: insulated glass consisting of one lite sputter coat Low E 366 applied on the number two surface and one lite of clear laminated glass with .030” polyvinyl butyral interlayer with warm-edge spacer system and argon gas in airspace]. Optional: [EasyCare coating applied on number one surface] [Safeguard] [SafeGuard Certified].

[High-performance triple insl Low E: triple insulated glass consisting of one lite sputter coat Low E 366 applied on the number two surface, one lite of sputter coat Low E 272 applied on the number five surface and one center lite of clear glass with warm-edge spacer system and argon gas in two airspaces]. Optional: [EasyCare coating applied on number one surface].

 [Specialty glass: [obscure] [rain glass] [bronze] [gray]]

* 1. Insulated glass airspace:

[Air (standard)]

[Argon gas]

[Altitude adjusted (not available with argon gas)]

* 1. Insulated glass shall be sealed with a
	2. [black (standard)] [gray] [charcoal shadowline] warm-edge spacer system with integrated edge seal and foil laminate moisture vapor barrier.
	3. [black] [silver] stainless steel spacer system with polyisobutylene edge seal.
	4. Glass shall be silicone glazed at panel exterior to allow reglazing from the interior with [[flush type (standard)] [colonial profile] [putty profile]] [raised type] wood glazing bead.
1. Hardware:

 1. Lock systems:

 a. Locking mechanisms shall be handle-activated and include mortise lock, rods, shootbolts and strike plate. Deadbolt shall be heat-treated plated powdered material. Latchbolt shall be bronze finished. Backset shall be 2-3/4” [70mm].

* Doors up to and including 6-10 callout heights: [three-point (standard)] [single-point] locking mechanism.
* 7-2 callout height doors and taller shall have three-point locking mechanism.
1. No lockset options:
	* [No lockset no bore]
	* [No lockset] with [2-3/8” (60mm)] [2-3/4” (70mm)] backset and [5-1/2” (140mm)] [6” (152mm)] center-to-center double bore.
		1. Handle set styles:

 a. Solid brass handle with 2” x 12” [51mmx305mm] one-piece [arch top (standard)] [square top] escutcheon plates.

* Finish: [bright brass pvd (standard)] [chrome] [antique brass] [black] [oil-rubbed bronze (static finish)] [brushed nickel pvd].
* All doors ordered with handle sets shall be furnished with construction handles.

 b. Keyed lock options: [keyed random (standard)] [keyed alike].

1. [Dummy handle set (two panel doors only) for passive door panel]
2. [No handle set]
3. [Handle set extensions]
4. Lockset location shall be [36” (914mm) standard height] [54” (1372mm) raised height] from bottom edge of door panel to center of the lever handle.
5. [Manual (standard)] [handle-activated] flushbolt systems (on two-panel doors only) shall have concealed rods at head and sill.
6. Hinges:

 a. Adjustable hinges – four 4” x 4” [102mmx102mm] hinges per panel. Finish: [plated steel: [bright brass (standard)] [brushed nickel] [chrome] [black] [oil-rubbed bronze (static finish)] [antique brass]] [stainless steel].

 b. Ball-bearing butt hinges – four 4” x 4” [102mmx102mm] hinges per panel. Finish: [plated steel: [bright brass] [brushed nickel] [true oil-rubbed bronze] [antique brass]] [stainless steel].

 c. Spring-loaded butt hinges (inswing doors only up to and including 6-10 callout heights) – four 4” x 4” [102mmx102mm] hinges per panel. Finish: [bright brass plated steel] [stainless steel].

 6. All provisions of this section shall conform to requirements of Section 08 71 00 – Door Hardware.

1. Weather stripping:
2. Inswing doors shall have beige foam-filled vinyl weather stripping at head, astragal and side jambs providing two points of contact with the panel.
3. Outswing doors:
4. Standard sill: beige foam-filled vinyl weather stripping at head jamb, side jambs, astragal and sill shall provide two points of contact with the panel. Beige vinyl bulb weather strip at top rail.
5. ADA sill: beige foam-filled vinyl weather stripping at head jamb, astragal and side jambs shall provide two points of contact with the panel. Beige vinyl bulb weather strip at top rail.
6. Low profile sill: beige foam-filled vinyl weather stripping at head jamb, side jambs, astragal and sill shall provide two points of contact with the panel. Beige vinyl bulb weather strip at top rail.
7. Door panel shall include adobe vinyl sill sweep with minimum four points of contact.

Optional accessories. Edit as required.

1. Interior removable grilles:

1. Full perimeter colonial profile 7/8” (22mm) wood grilles with no exposed fastening devices. [factory applied (standard)] [shipped loose].

 2. Pattern: [rectangular] [prairie] [custom configuration as noted on drawings (lite cut subject to approval of Weather Shield)].

 3. Finish: matches interior door panel finish.

1. Grilles-Between-The-Glass:

 1. Aluminum grilles in sealed airspace: [5/8" (16mm) flat] [11/16" (17mm) sculptured].

 2. Pattern: [rectangular] [prairie] [custom configuration as noted on drawings (lite cut subject to approval of Weather Shield)].

 3. Color: [white] [adobe] [cameo] [desert tan] [tan] [hartford green] [jet black] [craftsman bronze] [brick red] [heritage brown] [obsidian] [gray matters] [45 designer colors].

 4. Optional finishes: two-tone [5/8” (16mm) flat] [11/16” (17mm) sculptured]. Color:

 [adobe/white interior] [cameo/white interior] [desert tan/white interior] [tan/white interior]

 [hartford green/white interior] [jet black/white interior] [craftsman bronze/white interior]

 [brick red/white interior] [heritage brown/white interior] [obsidian/white interior].

1. Simulated divided lites:

1. Exterior and interior wood muntins adhered to glass with double-coated acrylic foam tape:

a. Colonial profile exterior simulated divided lite bar options: [5/8” (16mm)] [7/8” (22mm)]

 [1-1/8” (29mm)] [2” (51mm)].

b. [Colonial (standard)] [putty] profile interior simulated divided lite bar options: [5/8” (16mm)] [7/8” (22mm)] [1-1/8” (29mm)] [2” (51mm)].

 2. [Adobe aluminum grilles-between-the-glass] [no grilles-between-the-glass].

 3. Pattern: [rectangular] [prairie] [custom configuration as noted on drawings (lite cut subject to approval of Weather Shield)].

 4. Finish: matches exterior/interior door panel finish.

1. Mullions:
	1. Vertical mullions:
		* + 1. Factory-mulled units shall have solid vertical mull [1-1/2” (38mm) wide (standard)] [solid spread mull as detailed on the drawings].
2. Size limitations for factory-mulled units shall apply.
	1. Horizontal mullions:
		* + 1. Factory-stacked transoms over door units shall have horizontal mull:
* Single transoms up to and including 24-1/2” [622mm] rough opening height stacked over one- or two-panel doors: [tight stack] [solid spread stack as detailed on the drawings].
* Single transoms over 24-1/2” [622mm] rough opening height require minimum: [3-1/2” (89mm) solid spread stack] [solid spread stack as detailed on the drawings].
* Single transoms over three-panel doors require minimum: [3-1/2” (89mm) solid spread stack] [solid spread stack as detailed on the drawings].
* Two- and three-wide transoms over doors require minimum: [3-1/2” (89mm) solid spread stack] [solid spread stack as detailed on the drawings].
1. Size limitations for factory-stacked units shall apply.

3. Option: interior lattice. Finish matches interior door frame.

* 1. ACCESSORIES AND TRIM
1. Interior installation clips [shipped loose (standard)] [factory applied]: [5-1/2” (140mm)] [11” (279mm)].
2. Exterior wood casings [factory applied (standard)] [shipped loose]: [2” (51mm) brick mould (standard)] [2” (51mm) stucco mould] [3-1/2” (89mm) franklin casing] [3-7/16” (87mm) Washington casing] [flat casing up to 8” (203mm)] [custom profile (subject to approval of Weather Shield)]. Color to match exterior frame.
3. Interior trim styles: [WM327 – 2-1/4”x11/16” (57mm x17mm)] [WM356 – 2-1/4”x11/16” (57mm x17mm)] [WM366 – 2-1/4”x11/16” (57mm x17mm)] [WM376 – 2-1/4”x5/8” (57mm x16mm)] [WM351 – 2-1/4”x11/16” (64mmx17mm)] [WM444 – 3-1/4”x11/16” (89mm x17mm)] [WM445 – 3-1/4”x11/16” (89mm x17mm)] [Windsor – 3-1/2”x1-1/16” (89x27mm)] [flat – 3-1/2”x1-1/16” (89x27mm)] [flat – 2-1/4”x1-11/16” (58x27mm)]. Finish: [clear pine] [primed] [prefinished white latex] [stained/sealed: [clear satin] [golden oak] [fruitwood] [chestnut]].
4. Wood rosettes: [2-1/2”x2-1/2” (64mmx64mm)] [3-5/8”x3-5/8” (92mmx92mm)]. Wood species: [clear pine] [primed] [prefinished white latex] [stained/sealed: [clear satin] [golden oak] [fruitwood] [chestnut]].

PART 3 EXECUTION

3.1 INSTALLATION

 A. Install doors according to manufacturer's instructions and reviewed shop drawings to ensure proper installation and operation.

 B. Install door unit plumb, level and square with no distortion of frame members.

 C. Fill perimeter frame to wall opening cavity per manufacturer’s installation instructions.

 D. Apply approved sealant in accordance with Section 07 90 00 - Joint Protection.

 E. Do not puncture prefinished exterior. Refer to installation instructions for complete installation recommendations.

 F. Manufacturer does not recommend installation clips alone for installation of doors.

3.2 ADJUSTING AND CLEANING

 A. Adjust operating panel and hardware to provide tight fit at contact points and at the weather stripping for smooth operation.

 B. Remove excess sealant materials and visible labels from glass. Clean glass surfaces promptly after installation.

C. Initiate and maintain all protection and other precautions required to ensure doors are in acceptable condition at time of substantial completion.

END OF SECTION