

**SECTION 08 14 00  
INTERIOR WOOD DOORS**

SPEC WRITER NOTES:

1. Use this section only for NCA projects.
2. Delete between // \_\_\_\_\_// if not applicable to project. Also delete any other item or paragraph not applicable in the section and renumber the paragraphs. See VA Standard Details for types of doors and designations.
3. See VA Physical Security Design Guide for security requirements.

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. This section specifies interior flush doors // and stile and rail doors // with prefinish, prefit option.
- B. Section includes // fire rated doors, // sound retardant doors, // smoke, // and // dutch doors //.

**1.2 RELATED WORK**

- A. Metal door frames: Section 08 11 13, HOLLOW METAL DOORS AND FRAMES.
- B. Overhead doors including loading docks: Section 08 33 00, COILING DOORS AND GRILLES.
- C. Door hardware including hardware location (height): Section 08 71 00, DOOR HARDWARE.
- D. Installation of doors and hardware: Section 08 11 13, HOLLOW METAL DOORS AND FRAMES, Section 08 14 00, INTERIOR WOOD DOORS, or Section 08 71 00, DOOR HARDWARE.
- E. Finish: Section 09 06 00, SCHEDULE FOR FINISHES.
- F. Metal louvers: Section 08 90 00, LOUVERS AND VENTS.

**1.3 SUSTAINABILITY REQUIREMENTS**

- A. Materials in this section may contribute towards contract compliance with sustainability requirements. See Section 01 81 11, SUSTAINABLE DESIGN REQUIREMENTS, for project // local/regional materials, // low-emitting materials, // recycled content, // certified wood // \_\_\_\_\_// requirements.
- B. Biobased Material: For products designated by the USDA's BioPreferred® program, provide products that meet or exceed USDA recommendations for biobased content, subject to the products compliance with performance requirements in this Section. For more information regarding the product categories covered by the BioPreferred® program, visit <http://www.biopreferred.gov>.

**1.4 SUBMITTALS**

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

## SPEC WRITER NOTES:

1. Paragraph B, delete subparagraph No. 1 on projects not involving large numbers of wood doors. Delete subparagraph No. 2 on projects where no transparent door finishes are required. Samples are not required for projects involving 10 wood doors or less.

- B. Samples:

//1. Corner section of flush veneered door 300 mm (12 inches) square, showing details of construction, labeled to show grade and type number and conformance to specified standard. //

//2. Veneer sample 200 mm (8 inch) by 275 mm (11 inch) by 6 mm (1/4 inch) showing specified wood species sanded to receive a transparent finish. Factory finish veneer sample where the prefinished option is accepted. //

- C. Shop Drawings:

1. Show every door in project and schedule location in building.
2. Indicate type, grade, finish and size; include detail of // glazing // louvers // sound gasketing // and pertinent details.
3. Provide information concerning specific requirements not included in the manufacturer's literature and data submittal.

- D. Manufacturer's Literature and Data:

//1. Labeled fire rated doors showing conformance with NFPA 80. //

- E. Laboratory Test Reports:

1. Screw holding capacity test report in accordance with WDMA T.M.10.
2. Split resistance test report in accordance with WDMA T.M.5.
3. Cycle/Slam test report in accordance with WDMA T.M.7.
4. Hinge-Loading test report in accordance with WDMA T.M.8.

- F. Quality Standard Compliance Certificates: [**AWI Quality Certification**] [**WI Certified Compliance**] Program certificates.

**1.5 WARRANTY**

- A. Doors are subject to terms of Article titled "Warranty of Construction", FAR clause 52.246-21, except that warranty to be as follows:

- 1. For interior doors, manufacturer's warranty for lifetime of original installation.

**1.6 DELIVERY AND STORAGE**

SPEC WRITER NOTES:

- 1. These packages will be required to be reinstalled on doors after installation, see Paragraph, DOOR PROTECTION.

- A. Factory seal doors and accessories in cardboard packages; keep packaging intact during delivery and storage.
- B. Label package for door opening where used.
- C. Do not deliver or install doors until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.
- D. Store doors flat on level raised platforms in clean, dry, well-ventilated area protected from sunlight and weather; cover but allow for air circulation.

**1.7 APPLICABLE PUBLICATIONS**

- A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by the basic designation only. Comply with applicable provisions and recommendations of the following, except as otherwise shown or specified.

SPEC WRITER NOTES:

- 1. Remove reference citations that do not remain in Part 2 or Part 3 of edited specification.
- 2. Verify and make dates indicated for remaining citations the most current at date of submittal; determine changes from date indicated on the TIL download of the section and modify requirements impacted by the changes.

- B. Window and Door Manufacturers Association (WDMA):

I.S.1A-21	Architectural Wood Flush Doors
I.S.4-09	Water-Repellent Preservative Non-Pressure Treatment for Millwork
I.S.6A-21	Architectural Wood Stile and Rail Doors
T.M.5-90 (2009)	Split Resistance Test Method
T.M.7-08	Cycle-Slam Test Method
T.M.8-08	Hinge Loading Test Method

T.M.10-08	Screwholding Test Method
C. National Fire Protection Association (NFPA):	
80-13	Protection of Buildings from Exterior Fire
252-12	Fire Tests of Door Assemblies

## SPEC WRITER NOTES:

1. Make material requirements agree with applicable requirements specified in the referenced Applicable Publications.
2. Update and specify only that which applies to the project.

**PART 2 - PRODUCTS****2.1 FLUSH DOORS**

## A. General:

1. Meet requirements of WDMA I.S.1-A, solid core.

## SPEC WRITER NOTES:

1. Include Type 1 Adhesive for exterior doors.

2. Adhesive: Type II.

3. Thickness: 45 mm (1-3/4 inches) unless otherwise shown or specified.

//4. Give exposed wood parts of exterior doors a water-repellent preservative treatment in accordance with WDMA I.S.4. //

## SPEC WRITER NOTES:

1. For highest quality paint finish, specify medium density overlay faces only.

## B. Face Veneer:

1. In accordance with WDMA I.S.1-A.

2. One species throughout the project unless scheduled or otherwise shown.

3. For Transparent Finishes: // Premium Grade, rotary cut, // white maple // white Birch // red oak // white oak // \_\_\_\_//.

a. Grade: Custom (Grade A).

b. Match face veneers for doors for uniform effect of color and grain at joints.

c. Provide door edges of same species as door face veneer, except maple may be used for stile face veneer on birch doors.

//d. On doors required to have transparent finish on one side and paint finish on other side; use veneers as required for transparent finish on both sides. //

//e. In existing buildings, where doors are required to have transparent finish, use wood species and grade of face veneers to match adjacent existing doors.//

SPEC WRITER NOTES:

1. For highest quality paint finish, specify medium density overlay faces only.
  4. For painted finishes: Custom Grade, mill option close grained hardwood, premium or medium density overlay; do not use Lauan.
- C. Wood for stops, louvers, muntins and moldings of flush doors required to have transparent finish:
1. Solid Wood of same species as face veneer, except maple may be used on birch doors.
  2. Glazing:
    - a. On non-labeled doors use applied wood stops nailed tight on room side and attached on opposite side with flathead, countersunk wood screws, spaced approximately 125 mm (5 inches) on centers.
    - b. Use stainless steel or dull chrome plated brass screws for exterior doors.
  3. Wood Louvers:
    - a. Door manufacturer's standard product, fabricated of solid wood sections.
    - b. Wood Slats: Not less than 5 mm (3/16 inch) thick.
    - c. Stiles routed out to receive slats.
    - d. Secure louvers in prepared cutouts with wood stops.
- D. Stiles and Rails:
1. Option for wood stiles and rails:
    - a. Composite material having screw withdrawal force greater than minimum performance level value when tested in accordance with WDMA T.M.10.
  - //2. Rabbeted transom meeting rail edges match face veneers of doors.  
// Bottom rail of transom panel match face veneer on non-rabbeted meeting rail edge.//

SPEC WRITER NOTES:

1. Do not use 60 minute B label doors or 20 minute doors. Solid core door, 45 mm (1-3/4 inches) give 20 minutes performance.
- E. Fire Rated Wood Doors:
1. Fire Performance Rating:

- a. "B" Label: 1-1/2 hours.
  - b. "C" Label: 3/4 hour.
2. Labels:
- a. Conform to the requirements of NFPA 252 and carry an identifying label, from a qualified testing and inspection agency, for class of door or opening shown designating fire performance rating.
  - b. Metal labels with raised or incised markings.
3. Performance Criteria for Stiles of doors utilizing standard mortise leaf hinges:
- a. Hinge Loading: WDMA T.M.8. Average of 10 test samples for Extra Heavy Duty doors.
  - b. Direct Screw Withdrawal: WDMA T.M.10 for Extra Heavy Duty doors. Average of 10 test samples using a steel, fully threaded #12 wood screw.
  - c. Cycle Slam: 1,000,000 cycles with no loose hinge screws or other visible signs of failure when tested in accordance with WDMA T.M.7.
4. Additional Hardware Reinforcement:
- a. Provide fire rated doors with hardware reinforcement blocking.
  - b. Size of lock blocks as required to secure hardware specified.
  - c. Top, bottom, and intermediate rail blocks must measure not less than 125 mm (five inches) by full core width.
  - d. Reinforcement blocking in compliance with manufacturer's labeling requirements.
  - e. Mineral material similar to core is not acceptable.
5. Other Core Components: Manufacturer's standard as allowed by the labeling requirements.
6. Provide steel frame approved for use in labeled doors for vision panels.
7. Provide steel astragal on pair of doors.

## 2.2 STILE AND RAIL DOORS

- A. Meeting requirements of WDMA I.S.6A.
- B. //Ponderosa pine doors of size and design shown.// //Veneer to match flush doors.//
- C. Grade: //Premium // Standard//.
- D. Door Panels:
  - 1. Grain of face of panels parallel with longest dimensions of panel.

2. Flat Panels: Veneered composite core, not less than 6 mm (5/8 inch) thick.
3. Raised Panels: Unless otherwise shown, thickness of raised panels not less than the following:
  - a. For 35 mm (1-3/8 inch) and 45 mm (1-3/4 inch) thick doors: 28 mm (1-1/8 inch) thick panels.
  - b. For 57 mm (2-1/4 inch) thick doors: 41 mm (1-5/8 inch) thick panels.
4. Where armor plate is required in connection with paneled doors, provide panels with plywood fillers, glued in place, and finished.
- E. Stops and Molds:
  1. Solid sticking both sides, of same material as stiles and rails, coped at intersections.
  2. Glazed openings applied wood stops nailed on interior side of door.
- F. Louvers: Size as shown.

SPEC WRITER NOTES:

1. If there are more than 10 doors at any project, specify doors to receive transparent as factory finished.

### 2.3 PREFITTING

- A. Flush doors may be factory machined to receive hardware, bevels, undercuts, cutouts, accessories and fitting for frame.
- B. Factory fitting to conform to specification for shop and field fitting, including factory application of sealer to edge and routings.

### 2.3 FACTORY FINISHING

- A. Grade: Premium.
- B. Finish: //System 9, UV curable, acrylated epoxy, polyester, or urethane // or // System 10, UV curable, water based //.
- C. Effect: //Open-grain finish // Filled finish // Semifilled finish, produced by applying an additional finish coat to partially fill the wood pores //.
- D. Sheen: // Satin // Semigloss //.
- E. Use stain when required to produce the finish specified in Section 09 06 00, SCHEDULE FOR FINISHES.

### 2.4 IDENTIFICATION MARK

- A. Provide on top edge of door.
- B. Provide as a stamp, brand or other indelible mark, giving manufacturer's name, door's trade name, construction of door, code date of manufacture and quality.

- C. Include one of the following additional requirements:
1. An identification mark or a separate certification including name of inspection organization.
  2. Identification of standards for door, including glue type.
  3. Identification of veneer and quality certification.
  4. Identification of preservative treatment for stile and rail doors.

## 2.5 BIOBASED CONTENT

Interior Wood Door Products shall comply with following standards for biobased materials:

Material Type	Percent by Weight
Lumber	25 percent biobased material
Composite Panels- Structural Interior Panels	89 percent biobased material

The minimum-content standards are based on the weight (not the volume) of the material in the insulating core only.

## PART 3 - EXECUTION

### 3.1 DOOR PREPARATION

- A. Factory Preparation: Do not violate the qualified testing and inspection agency label requirements for fire rated doors.
- B. Clearances between Doors and Frames and Floors:
  1. Maximum 3 mm (1/8 inch) clearance at the jambs, heads, and meeting stiles, and a 19 mm (3/4 inch) clearance at bottom, except as otherwise specified.
  2. Maximum clearance at bottom of sound rated doors, light-proofed doors, doors to operating rooms, and doors designated to be fitted with mechanical seal: 10 mm (3/8 inch).
- C. Rout doors for hardware using templates and location heights specified in Section, 08 71 00 DOOR HARDWARE.
- D. Fit doors to frame, bevel lock edge of doors 3 mm (1/8 inch) for each 50 mm (two inches) of door thickness // undercut where shown. //
- E. Immediately after fitting and cutting of doors for hardware, seal cut edges of doors with two coats of water resistant sealer.
- F. Finish surfaces, including both faces, top and bottom and edges of the doors smooth to touch.
- G. Apply a steel astragal on the opposite side of active door on pairs of fire rated doors.

- H. Apply a steel astragal to meeting style of active leaf of pair of doors or double egress smoke doors.

**3.2 INSTALLATION**

- A. Hardware: See Section 08 71 00, DOOR HARDWARE.
- B. Installation Instructions: Install doors to comply with manufacturer's written instructions and the referenced quality standard, and as indicated.
  - 1. Install fire-rated doors in corresponding fire-rated frames according to NFPA 80.
- C. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.
- D. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

**3.3 DOOR PROTECTION**

- A. As door installation is completed, place cardboard shipping container over door and tape in place.
- B. Provide protective covering over knobs and handles in addition to covering door.
- C. Maintain covering in good condition until removal is approved by RE/COR.

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