



**SECTION 08 14 33  
STILE AND RAIL WOOD DOORS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Architectural Interior Stile and Rail Wood Doors

**1.02 RELATED SECTIONS**

- A. Section 06 48 16 – Interior Wood Frames
- B. Section 08 12 00 – Metal Frames
- C. Section 08 71 00 – Door Hardware
- D. Section 08 80 00 – Glass Glazing
- E. Section 09 00 00 - Finishes

**1.03 REFERENCES**

- A. Architectural Woodwork Institute
  - 1. Architectural Woodwork Standards (AWS)
- B. ANSI/W.D.M.A. Quality Standards
  - 1. I.S.6-A-13 Industry Standards for Architectural Wood Stile and Rail Doors
- D. Underwriters Laboratories, Inc. (UL) and Underwriters Laboratories of Canada (ULC):
  - 1. UL 10B Fire Tests of Door Assemblies
  - 2. UL 10C Positive Pressure Fire Test of Door Assemblies
- E. National Fire Protection Agency (NFPA):
  - 1. NFPA 80 Fire Doors and Windows
  - 2. NFPA 252 Standard Method of Fire Tests for Door Assemblies
- F. QAI Laboratories
  - 1. Listing Directory for Building Products

G. Intertek Warnock-Hersey

1. Directory of Certification Listings for Fire Doors.

**1.04 SUBMITTALS**

- A. Submit shop drawings under this section to the Architect for approval. All drawings must be approved and returned to the contractor before manufacture or fabrication begins. Signed approvals must be received by the manufacturer 90 days prior to the requested delivery date.
- B. Indicate plans and elevations, materials, surface grain directions, profiles, assembly methods, joint details, fastening methods, accessories, hardware compliance with specified fire-retardant treatments, preservative treatments, and schedule of finishes.
- C. Submit 3 samples of veneer, minimum of 5 x 5" illustrating expected range of component finish color and/or grain. The sample shall bear identification of the project, architect or designer, general contractor, woodwork manufacturer, items to which the finish applies, and the system utilized to attain the finish. Doors will not be released for manufacturing until written approval has been received.

**1.05 QUALITY ASSURANCE**

- A. Work in this section shall comply with the specified Grade(s) of Work and Section (s) of the current edition of the AWS Architectural Woodwork Institute or the current edition of W.D.M.A. Quality Standards.
- B. Fire rated doors shall comply with local building codes as enforced by the Authority Having Jurisdiction (AHJ) and installed in accordance with NFPA 80. All doors shall bear the appropriate certification label from the authorized listing agency.

**1.06 QUALIFICATIONS**

- A. Contractors and their personnel engaged in the work shall be able to demonstrate successful experience with work of comparable extent, complexity, and quality to that shown and specified.
- B. Manufacturers who are members in good standing of the Architectural Woodwork Institute (AWI), Architectural Woodwork Manufacturers Association of Canada (AWMAC) or the Window and Door Manufacturers Association (WDMA) and are familiar with these standards.

**1.07 DELIVERY, STORAGE AND HANDLING**

- A. Store doors on a flat level surface, in a clean, dry, well-ventilated area. Keep doors a minimum of 3 ½" off floor.

- B. Doors shall not be exposed to excessive heat, moisture, dryness, or direct sunlight.
- C. Break any protective plastic packaging on site to permit ventilation.
- D. Ensure that the top, bottom, and any cut-outs on doors are sealed immediately after removal of protective packaging.
- E. Handle doors with clean, dry hands and/or gloves.
- F. Do not drag doors across one another.

## **1.08 WARRANTY**

- A. Provide limited lifetime warranty for interior doors.
- B. Include coverage for defective materials, including tolerances for warp and delamination of materials.
- C. Stile and rail dimensions shall meet manufacturer's minimum requirements for face width.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Concept Millwork Corporation
- B. Substitutions accepted upon Architect's approval.

### **2.02 STILE AND RAIL DOOR CONSTRUCTION**

- A. Interior Doors
  1. Stiles and rails shall be constructed of SCL core material laminated with a 1/16 HDF crossband and a minimum 1/16" "A" grade veneer (if applicable) banded with a minimum 3/4" solid hardwood edge.
  2. Cope and stick joinery of all stiles and rails using 1/2" x 4" dowels. All joints have a minimum of 1 dowel.
  3. Stile and rail dimensions unless otherwise approved by manufacturer:
    - a. Door Thickness: 1-3/4", 1-3/8", 2-1/4"
    - b. Top rail width: 5"
    - c. Stile width: 5"
    - d. Bottom rail width: 10"
  4. All muntin bars shall have 1/4" x 2 1/2" dowels at every joint.
  5. Pressure fit all joints using type 2 water resistant glue.

6. Panels shall be manufactured using a crossbanded face veneer bonded to PB Core (Flat Panels, Rim Banded Raised Panels) or MDF Core (Vacuum Pressed Raised Panels)
  7. Flat panels shall have a minimum thickness of 5/8"
  8. Raised panels shall have a minimum thickness of 1 1/8"
- B. Labeled Fire Doors-Specify 20, 45, 60 or 90 minutes. Label doors shall conform to one of the following applicable local codes: (choose one)

1. **Negative Pressure:** Tested to UL10-B

2. **Positive Pressure:** Tested to UL10-C

If positive pressure is required, choose the category of compliance desired (choose one)

**Category A:**

Doors are manufactured with concealed intumescent to eliminate the need for formed metal edges and astragals.

**Category B:**

Doors are required to have surface applied intumescent to either the frame or the edge of the door.

### **2.03 FABRICATION**

- A. Fabricate to one of the following Quality Assurance Standards selected by Architect.
1. WDMA I.S.6A - Premium Grade
  2. WDMA I.S.6A - Custom Grade
- B. All hardware cutouts are to be pre-machined by the manufacturer. Hinge screw pilot holes in fire doors shall be bored by door manufacturer upon request.
- C. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Reseal or refinish any machining alterations required at jobsite prior to installation.

### **2.04 FINISHING MATERIALS AND APPEARANCE**

- A. All wood doors shall be finished at the factory using the manufacturer's standard finishing system in conformance with AWI Quality Standards.
- B. All raised panel tongues are to be stained prior to assembly.

### **PART 3. EXECUTION**

### **3.01 EXAMINATION**

- A. Examine doors as received from the manufacturer prior to hanging. Notify Architect of any warrantable defects prior to hanging.
- B. Doors and frames must be installed plumb, square and level.
- C. Clearance between door edges and door frame shall be 1/8". Undercut of door shall be 3/4" unless indicated otherwise.

### **3.02 PREPARATION**

- A. Allow doors a minimum of 24 hours to acclimate to the building's temperature and relative humidity prior to installation.

### **3.03 INSTALLATION**

- A. Install work in accordance with manufacturer's instructions.
- B. Doors and frames must be installed plumb, square and level.
- C. Clearance between door edges and door frame shall be 1/8". Undercut of door shall be 3/4" unless indicated otherwise.
- D. Install door hardware as specified in Section 08 71 00

### **3.04 ADJUSTING**

- A. Ensure that all doors swing freely and do not bind in their frame.
- B. Adjust the finish hardware for proper alignment, smooth operation and proper latching without necessary force or excessive clearance.

### **3.05 CLEANING**

- A. Clean doors promptly after installation in accordance with the manufacturer's care and handling instructions.
- B. Do not use harsh cleaning methods or materials that could damage the door's finish.

### **3.05 PROTECTION**

- A. Protect installed doors from damage during construction.

**END OF SECTION**