

SECTION 08212  
FLUSH WOOD DOORS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This Section describes the requirements for furnishing and installing flush wood doors.
- B. Related Sections:
  - 1. Metal door frames are specified in Section 08110.
  - 2. Finish hardware is specified in Section 08710.
  - 3. Glass for vision panels is specified in Section 08800.
  - 4. Field finishing of doors and accessories is specified in Section 09900.

1.02 SUBMITTALS

- A. Product Data: Manufacturer's descriptive and technical data and illustrations for each type of door including details of core and edge construction, and trim for openings.
- B. Shop Drawings: Indicate location and size of each door, elevation of each kind of door, details of construction, location and extent of hardware blocking, fire ratings, requirements for factory finishing and other data.
- C. Samples: Submit 12-inch square or larger samples as specified or required to represent required characteristics. Resubmit samples until approved.
  - 1. Doors for Transparent Finish: Door faces with solid wood edging representing typical range of color and grain for each species of veneer. Samples shall be representative of the complete range of wood veneer colors to be expected in the work.
- D. Certification: Prior to delivery to the jobsite, furnish a WI Certified Compliance Certificate certifying that products to be furnished for this Project will meet the requirements of the specified grades. After completion, furnish a WI Certified Compliance Certificate certifying that the installation complies with all applicable requirements for WI grade specified.

1.03 QUALITY ASSURANCE

- A. Flush wood door construction shall comply with WI "Manual of Millwork" Section 12 for Premium grade doors.
- B. Fire-Rated Door Assemblies: Units that comply with NFPA 80, are identical to door and frame assemblies whose fire resistance characteristics have been determined in accordance with ANSI/UL 10B and are labeled and listed by UL, Factory Mutual, Warnock Hersey, or other testing and inspecting organization acceptable to authorities having jurisdiction.
  - 1. Fire-rated door assemblies shall bear an approved label showing the rating, the name of the manufacturer, and the identification of the listing service in accordance with CBC Section 1004.3.4.3.2.1. The label on 20-minute doors and frames shall include the rating followed by the letter "S".
- C. Flush wood doors and steel frames specified in Section 08110 shall comply with positive pressure test requirements of UBC Standard 7-2 and shall be labeled accordingly by the door and frame manufacturer in a manner approved by authorities having jurisdiction.
- D. Allowable Tolerances: As specified in WI "Manual of Millwork" Section 12, Table 12-1.
- E. Flush wood doors and steel frames specified in Section 08110 shall comply with positive pressure test requirements of UBC Standard 7-2 and shall be labeled accordingly by the door and frame manufacturer in a manner approved by authorities having jurisdiction.

#### 1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver doors individually protected with polyvinyl or plastic wrap, identified with manufacturer's name, and name and type of door. Identify each door with same symbol used on door schedule. Leave protection on door during construction.
  - 1. Comply with WI "Manual of Millwork" for delivery, storage, and handling of doors.
- B. Store doors covered and flat, supported above a level surface in a dry, well ventilated building in compliance with WI "Manual of Millwork" Section 1.
- C. Do not subject doors to extremely high or low temperatures or humidity.
- D. Handle with clean gloves; do not drag doors across one another or other surfaces.

#### 1.05 PROJECT CONDITIONS

- A. Do not deliver or install doors until conditions for temperature and relative humidity have been stabilized and will be maintained in storage and installation areas during the remainder of construction period in compliance with the requirements specified in WI "Manual of Millwork" Section 1.

#### 1.06 WARRANTY

- A. Warrant each solid core interior door against defects in materials and workmanship for the life of the original installation, including costs of rehangng. Defects include, but are not limited to the following:
  - 1. Cores shall not telegraph through door faces. Stile, rail, and core show-through shall be considered a defect when the face of the door varies from a true plane in excess of 0.010-inch in a 3-inch span.
  - 2. Doors shall not have warped (bow, cup, or twist) more than 1/4-inch in a 42-inch x 48-inch section.
- B. This warranty shall be in addition to and not a limitation of other rights the Owner may have against the Design/Builder under the Contract Documents.

### PART 2 - PRODUCTS

#### 2.01 APPROVED MANUFACTURERS

- A. Algoma Hardwoods, Inc., Eggers, VTI, Marshfield Doors, Western Oregon Door or approved equal.

#### 2.02 FLUSH WOOD DOORS, GENERAL

- A. Type: Flush veneered, five-ply construction. Doors with seven-ply construction will not be acceptable.
- B. Cross Banding: Manufacturer's standard, minimum 1/16-inch thick. Fire-retardant treated where required by testing agency.
- C. Door Thickness: 1-3/4-inches, unless otherwise indicated.
- D. Fabricate wood doors in sizes indicated for either job-site fitting or factory fit doors to suit frame-opening sizes indicated, at the Design/Builder's option. Factory fit doors shall comply with the following uniform clearances and bevels:
  - 1. Comply with clearance requirements of referenced quality standard for fitting. Comply with requirements of NFPA 80 for fire-resistance-rated doors.
- E. For doors that are pre-machined, factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame shop drawings, DHI A115-W series standards, and hardware templates.
  - 1. Coordinate measurements of hardware mortises in metal frames to verify dimensions and alignment before proceeding with factory machining.

## 2.03 INTERIOR FLUSH WOOD DOORS

- A. Veneer:
  - 1. Transparent Finish Doors: WI Premium Grade, White Oak, rift cut.
    - a. Veneer Matching: Book and balance matching.
    - b. Pairs and Sets: Provide pair matching and set matching for pairs of doors and for doors hung in adjacent sets.
- B. Adhesive: NWWDA IS-1.6, Type II adhesive bond or better for cores, Type I adhesive bond for faces and cross bands.
- C. Cores:
  - 1. Fire-Rated Doors - 90-Minute Rated: Incombustible mineral approved by labeling authority. Provide top, bottom, and intermediate blocking for surface-mounted hardware.
- D. Edge Construction:
  - 1. Fire-Rated Doors - 90-Minute Rated:
    - a. Top Rail: Door manufacturer's standard special laminated material.
    - b. Stiles and Rails: Hardwood, fire-retardant treated where required by label. Where not required to be fire-retardant treated, provide same species for stiles as face veneer for doors to receive transparent finish. Sizes required by testing agency.
- E. Edge Clearances:
  - 1. Jambs and Heads: 1/8-inch.
  - 2. Meeting Stiles of Pairs of Doors: 1/4-inch.
  - 3. Bottom of Door to Top of Finish Floor: 3/4-inch at concrete, 5/8-inch at resilient flooring, 3/8-inch at carpet, tile, thresholds, and other finish flooring.

## 2.04 DOOR LOUVERS

- A. Type: Prefabricated 20-gauge steel units.
- B. Opening Sizes: As scheduled.
- C. Finish: Manufacturer's standard baked-enamel finish, of color selected by County's Representative.

## 2.05 LIGHT FRAMES

- A. Fire-Rated Doors: Manufacturer's standard wood-veneered noncombustible beads matching veneer species of door faces and approved for use in doors of fire ratings indicated. Include concealed metal glazing clips where required for opening size and fire ratings scheduled.

## PART 3 - EXECUTION

### 3.01 INSPECTION

- A. Examine door frames and verify that frames are of the correct type and have been installed as required for proper hanging of corresponding doors. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Condition doors to average prevailing humidity in installation area prior to hanging.

3.03 INSTALLATION

- A. General: Install wood doors in accordance with the manufacturer's printed instructions, as indicated and in accordance with WI "Manual of Millwork".
- B. Fire-Rated Doors: Install in fire-rated frames in accordance with requirements of NFPA Standard No. 80.
- C. Job-Fit Doors: For doors not factory-machined, align and fit doors in frames with uniform clearances and bevels as specified; do not trim stiles and rails in excess of limits set by manufacturer or permitted with fire-rated doors. Machine doors for hardware. Seal cut surfaces after fitting and machining.
  - 1. Fitting Clearances:
    - a. Jambs and Heads: 1/8-inch.
    - b. Meeting Stiles of Pairs of Doors: 1/4-inch.
    - c. Bottom of Door to Top of Finish Floor: Not more than 3/4-inch at concrete, 5/8-inch at resilient flooring, 3/8-inch at carpet, tile, thresholds, and other finish flooring.
  - 2. Bevel fire-rated doors 1/8-inch in 2-inches at lock edge; trim stiles and rails only to extent permitted by labeling agency.
- D. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.
- E. Cutouts, Recesses, and Exposed Rail Edges: Unless factory provided, paint with two coats of clear sealer, each coat well dried, before hardware is set in place.

3.04 ADJUSTING AND PROTECTION

- A. When complete, doors shall be flat within allowable tolerance, shall be plumb in all positions of swing, and shall operate smoothly, quietly, and free from binding. Re-hang or replace doors that do not swing or operate freely.
- B. Exposed surfaces shall be uniform in appearance, clean and free from scratches, tool marks, dents, discoloration, stains, and other damage and defects.
- C. Refinish or replace doors damaged during installation.
- D. Protect doors as recommended by door manufacturer to ensure that doors will be without damage or deterioration at completion of Project.

END OF SECTION