

SECTION 081416
FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Solid-core doors with wood-veneer faces.
 - 2. Factory finishing flush wood doors.
 - 3. Factory fitting flush wood doors to frames and factory machining for hardware.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of door indicated. Include details of core and edge construction and trim for openings.
- B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; location and extent of hardware blocking; and other pertinent data.
 - 1. Indicate dimensions and locations of mortises and holes for hardware.
 - 2. Indicate dimensions and locations of cutouts.
 - 3. Indicate requirements for veneer matching.
 - 4. Indicate doors to be factory finished and finish requirements.
 - 5. Indicate fire-protection ratings for fire-rated doors.
- C. Samples for Verification:
 - 1. Factory finishes applied to actual door face materials, approximately 8 by 10 inches, for each material and finish. For each wood species and transparent finish, provide set of three samples showing typical range of color and grain to be expected in the finished work.
 - 2. Corner sections of doors, approximately 8 by 10 inches, with door faces and edges representing actual materials to be used.
 - a. Provide samples for each species of veneer and solid lumber required.
 - b. Finish veneer-faced door samples with same materials proposed for factory-finished doors.
 - 3. Louver blade and frame sections, 6 inches long, for each material and finish specified.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain flush wood doors and wood paneling from single manufacturer.
- B. Quality Standard: In addition to requirements specified, comply with AWI's "Architectural Woodwork Quality Standards Illustrated."
 - 1. Provide AWI Quality Certification Labels or an AWI letter of licensing for Project indicating that doors comply with requirements of grades specified.

- C. Fire-Rated Wood Doors: Doors complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252.
 - 1. Temperature-Rise Limit: Where indicated, provide doors that have a maximum transmitted temperature end point of not more than 450 deg F above ambient after 30 minutes of standard fire-test exposure.
- D. Manufacturer Certification: A qualified manufacturer that is a certified participant in AWI's Quality Certification Program.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Comply with requirements of referenced standard and manufacturer's written instructions.
- B. Package doors individually in plastic bags or cardboard cartons.
- C. Mark each door on top and bottom rail with opening number used on Shop Drawings.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: 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.

1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Warping (bow, cup, or twist) more than 1/4 inch in a 42-by-84-inch section.
 - b. Telegraphing of core construction in face veneers exceeding 0.01 inch in a 3-inch span.
 - 2. Warranty shall also include installation and finishing that may be required due to repair or replacement of defective doors.
 - 3. Warranty Period for Solid-Core Interior Doors: Life of installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Masonite Architectural.
 - 2. Oshkosh Door Company.
 - 3. VT Industries Inc.

2.2 DOOR CONSTRUCTION, GENERAL

- A. Adhesives: Use adhesives that meet the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- B. Composite Wood Products: Products shall be made using ultra-low-emitting formaldehyde resins as defined in the California Air Resources Board's "Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products" or shall be made with no added formaldehyde.
- C. Structural-Composite-Lumber-Core Doors:
 - 1. Structural Composite Lumber: WDMA I.S.10.
 - a. Screw Withdrawal, Face: 700 lbf.
 - b. Screw Withdrawal, Edge: 400 lbf.

- D. Fire-Protection-Rated Doors: Provide core specified or mineral core as needed to provide fire-protection rating indicated.
 - 1. Edge Construction: Provide edge construction with intumescent seals concealed by outer stile. Comply with specified requirements for exposed edges.
 - 2. Pairs: Provide fire-retardant stiles that are listed and labeled for applications indicated without formed-steel edges and astragals. Comply with specified requirements for exposed edges.
- E. Mineral-Core Doors:
 - 1. Core: Noncombustible mineral product complying with requirements of referenced quality standard and testing and inspecting agency for fire-protection rating indicated.
 - 2. Blocking: Provide composite blocking with improved screw-holding capability approved for use in doors of fire-protection ratings indicated as follows:
 - a. 5-inch top-rail blocking.
 - b. 5-inch bottom-rail blocking, in doors indicated to have protection plates.
 - c. 5-inch midrail blocking, in doors indicated to have armor plates.
 - d. 5-inch midrail blocking, in doors indicated to have exit devices.
 - 3. Edge Construction: At hinge stiles, provide laminated-edge construction with improved screw-holding capability and split resistance. Comply with specified requirements for exposed edges.

2.3 VENEERED-FACED DOORS FOR TRANSPARENT FINISH

- A. Interior Solid-Core Doors:
 - 1. Grade: Premium, with Grade A faces.
 - 2. Species: Walnut.
 - 3. Cut: Quarter figured.
 - 4. Match between Veneer Leaves: Slip match.
 - 5. Assembly of Veneer Leaves on Door Faces: Balance match.
 - 6. Pair and Set Match: Provide for doors hung in same opening or separated only by mullions.
 - 7. Core: Either glued wood stave or structural composite lumber.
 - 8. Construction: Five plies. Stiles and rails are bonded to core, then entire unit abrasive planed before veneering.

2.4 DOORS FOR OPAQUE FINISH

- A. Interior Solid-Core Doors:
 - 1. Grade: Premium.
 - 2. Faces: Any closed-grain hardwood of mill option.
 - 3. Core: Either glued wood stave or structural composite lumber.
 - 4. Construction: Five plies. Stiles and rails are bonded to core, then entire unit abrasive planed before veneering.

2.5 LOUVERS

- A. Wood Louvers: Door manufacturer's standard solid-wood louvers unless otherwise indicated.
 - 1. Wood Species: Same species as door faces.

2.6 FABRICATION

- A. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.
 - 1. Comply with requirements in NFPA 80 for fire-rated doors.

- B. 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 with hardware mortises in metal frames to verify dimensions and alignment before factory machining.
- C. Openings: Cut and trim openings through doors in factory.
 - 1. Louvers: Factory install louvers in prepared openings.

2.7 FACTORY FINISHING

- A. General: Comply with referenced quality standard for factory finishing. Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before finishing.
 - 1. Finish faces, all four edges, edges of cutouts, and mortises. Stains and fillers may be omitted on bottom edges, edges of cutouts, and mortises.
- B. Finish doors at factory.
- C. Transparent Finish:
 - 1. Grade: Premium.
 - 2. Finish: AWI pre-catalyzed lacquer to match paneling.
 - 3. Sheen: Match Architect's sample.
- D. Opaque Finish:
 - 1. Grade: Premium.
 - 2. Finish: AWI catalyzed polyurethane system.
 - 3. Color and Sheen: Match Architect's sample.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine doors and installed door frames before hanging doors.
 - 1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
 - 2. Reject doors with defects.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Hardware: For installation, see Section 087100 "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 ADJUSTING

- A. Operation: Rehang or replace doors that do not swing or operate freely.
- B. Finished Doors: Replace doors that are damaged or that do not comply with requirements. Doors may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION 081416