	Title: YALE OFFICE OF FACILITIES PROCEDURE MANUAL Chapter: 01 - Yale Design Standard Division: 08 00 00 Openings	Section: 08 20 00 Requirements for Wood Doors
		Date: December 2023
		Author: Office of Facilities

PART 1 - INTRODUCTION

1.1 PURPOSE

This section contains general design criteria for wood doors.

PART 2 - GENERAL DESIGN REQUIREMENTS

2.1 SYSTEM DESIGN AND PERFORMANCE REQUIREMENTS

- A. Historic, reproduction, special, or custom doors are detailed by the architect.
- B. Use hollow-core, flush interior doors only at residential properties.

2.2 SUBMITTALS

Submit the following design and construction documentation to Yale University.


- A. Shop Drawings
 1. Indicate elevations of each door type, location, size, fire rating, swing, undercuts, stile and rail reinforcement, internal blocking for hardware attachment, and cut-outs for glazing.
 2. Note fire-rated door frames and their rating.
 3. Indicate large-scale drawings of veneer layout.
 4. Note each frame condition.
 5. Designate the work to be provided by other trades and coordinate accordingly.

- B. Product Data

Provide the door manufacturer's technical product data for each type of door and frame specified, including core details, factory finishing, and fire test data.

- C. Samples

Provide four samples of factory finishing for color approval.

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D. Notarized Certificates of Compliance

Provide a notarized certificate of compliance indicating compliance with NWWDA 1A, requirements.

E. Closeout

Provide a written warranty signed by the door manufacturer, installer, and contractor agreeing to replace defective doors. The warranty must cover the cost of refinishing, hardware installation, and re-hanging defective doors.

2.3 PRODUCT STANDARDS


Products must conform to the following standards:

- ANSI/BHMA 115-W – Wood Door Preparation Standards
- ASTM E152 – Methods of Fire Tests of Door Assemblies
- AWS – Quality Standards of Architectural Woodwork Institute
- NFPA 80 – Fire Doors and Windows
- UL 10B – Fire Tests of Door Assemblies
- UL 10C – Standard for Positive Pressure Fire Tests of Door Assemblies

2.4 MANUFACTURERS

Subject to compliance with the design requirements, manufacturers offering products that may be incorporated in the work include, but are not limited to, the following:

- Algoma Hardwoods, Inc.
- Eggers Industries
- Marshfield Door Systems, Inc.
- Graham Wood Doors

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2.5 MATERIALS


- A. Flush interior wood doors must conform to AWS standards and have a quality grade of AWS Premium. Flush interior wood doors must also meet the following additional criteria.
- 1-3/4" thick
 - Solid core
 - Five-ply construction
 - Solid-particle core bonded to stiles and rails using Type 1 waterproof glue
 - Agrifiber core doors can be used for 20, and 45 minute doors. (Contributes to LEED MR5.1)
 - Fully threaded to the head wood screws shall be provided for wood doors other than mineral core and engineered core doors.
- B. The architect selects the face veneers.
- C. Flush interior wood doors intended to receive a painted finish must have birch veneer faces.
- D. Hollow-core, flush interior wood doors must be 1-3/4", AWS custom or premium grade, with closed-grain hardwood faces.
- E. Blocking shall be provided for all door closer, exit devices, and locksets regardless if blocking is not required by manufacturer. Size of blocking shall be based upon hardware used, and manufacturers' requirements.

2.6 FINISH

Factory finish doors in accordance with AWS Quality Standard, Section 1500 and with Architect's selection of the color finish determined by the Architect.

2.7 SPECIAL REQUIREMENTS

- A. Maintain a maximum diagonal distortion of 1/16" from corner to corner.
- B. Provide a custom copper cap across the top of all custom exterior wood doors.
- C. Conceal wiring between the door frame and door in hinges and within the door for security and power assist wiring needs at historic or custom wood doors.

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2.8 INSTALLATION GUIDELINES

- A. Verify that doors are free of defects prior to hanging.
- B. Install doors in accordance with the manufacturer’s requirements and AWI quality standards.
- C. Install fire-rated doors and frames in accordance with NFPA 80.
- D. Glass to be factory installed on all rated doors, per NFPA 80 - 2010 edition.

2.9 QUALITY CONTROL

Conform to National Wood Window and Door Association industry standard I.S.1: Architectural Wood Flush Doors and the requirements of AWS Quality Woodwork Standards, Section 1300: Architectural Flush Doors, Premium Grade.

2.10 CLEANING AND ADJUSTING

Adjust hardware for smooth and balanced door operation.

Date	Description of Change	Pages / Sections Modified	ID
12/12/23	Template update	-	Office of Facilities