

08 14 00 – Wood Doors

1. General

- A. Doors shall be provided that meet or exceed the minimum standards of the Architectural Woodwork Institute (AWI) Quality Standards, Section 1300 (latest edition).

Note: Mineral core doors are strictly prohibited.

2. Warranties and Submittals

- A. Contractor shall submit door manufacturer's product construction data, hardware attachment performance data, specifications and installation instructions for each type of wood door, including details of core and edge construction, trim for glass openings and similar components.
- B. Doors shall be warranted by the manufacturer to be free of manufacturing defects for the life of the installation. The manufacturer's warranty shall be submitted to the Consultant for transmittal to the Owner.

3. Fabrication and Storage

- A. Stave lumber doors shall be AWI specification symbol SLC-5. Wood used in construction of the doors shall be thoroughly seasoned, low-density, non-resinous, kiln dried hardwood with a moisture content between 5% and 8%. Cores shall be wood blocks no more than 1 1/2 inch wide. All joints shall be well staggered with the maximum single piece length of block no more than 48 inches. Cross bands shall be thoroughly oven-dried hardwood of 1/16 inch minimum thickness, extending the full width of the door and laid with the grain at right angles to the face veneers.
- B. Stile edge bands shall be laminated to the core and be a minimum of 1/2 inch thick. Stiles shall be wood species compatible with the face veneer. Two-ply rails of mill-option hardwood shall be used. Rails must measure a minimum of 1 3/8 inch wide after trimming and be glued securely to the core parts with no voids allowed. Cross bands and faces shall be laminated to the cores with Type I melamine-fortified urea glue using the hot-press process.
- C. Doors shall be stored in a well-ventilated building. The doors shall be covered and kept clean and dry; stacking and coverage shall allow air circulation. Relative humidity in the storage environment shall be maintained at 30% to 60%. Doors shall be allowed to acclimate to average prevailing humidity in installation area prior to installation.

4. Fire-Rated, Flush Wood Doors

- A. Type and construction shall be the standard of the manufacturer, with the following exceptions:

1. Shall provide balanced construction by furnishing manufacturer's laminated stile edge for improved screw holding to both stiles of all C-Label and B-Label doors. Stile edge split resistance shall exceed 751 pounds, in accordance with ASTM D143-52 modified classification.
2. Shall provide all C-Label and B-Label doors with full-length, solid lumber, untreated outer stiles compatible with the face veneer.
3. Shall provide all C-Label and B-Label doors with special, heavy-duty reinforcement to allow surface-mounted hardware to be attached with screws. To attach hardware, shall use #12 "threaded-to-the-head" steel wood screws of sufficient length to penetrate 1 1/2 inches into the door.
4. All glass openings in C-Label and B-Label doors shall be provided with the manufacturer's standard, primer-painted metal vision panel frame.
5. Shall provide UL approved astragal at all pairs of rated doors where required.
6. Manufacturer shall furnish a statement on sixty-minute and ninety-minute labeled doors indicating that construction provides the heat transmission rating of a maximum of 250° F within thirty minutes.

5. Lead Lined Doors

- A. Doors shall have the AWI specification symbol LL. Cores shall consist of solid core glued blocks. The stile edge bands shall be thoroughly kiln-dried hardwood at least 1 inch thick and compatible with faces. Two-ply rails or mill-option hardwoods shall be used. Rails shall measure a minimum of 1 3/8 inch wide after trimming. All edge bands shall be laminated to the core with Type II water-resistant glue using the high-frequency method of curing the glue.
- B. Of the three plies on each side of the door, the center shall be 1/16 inch thick thoroughly oven-dried hardwood, extending the full width of the door and laid with the grain at right angles to the face and back veneers. Backs shall be of a wood species to balance the face veneers. The three plies shall be hot-plate pressed with fortified urea glue. Lead sheets shall be attached to each side of the stave core using thicknesses as indicated on the drawings. The sheets shall be attached with Type II water-resistant glue. The three plies of veneer shall also be laminated to the core along the lead sheets using Type II water-resistant glue.

6. Sound-Retardant Doors

- A. Doors shall have the AWI specification symbol SR.
- B. Sound Transmission Class (STC) shall be not less than thirty-two (32 STC) or more than forty (40 STC) as tested by Riverbank Acoustical Laboratories in accordance with requirements of ASTM E90 and E413. Doors shall be five-ply and shall be the standard

of the manufacturer, with matching edge strips bonded to particleboard or stave lumber core with resin glue.

- C. Doors shall be furnished complete with automatic threshold-sealing-device gaskets. Doors shall be not less than 1 3/4 inch or more than 2 inch in thickness, according to the manufacturer's standard, in order to provide the sound transmission class specified.

7. Veneers

- A. Face veneers shall be premium grade, plain-sliced red oak. It is preferred that faces be book-matched for grain direction and color uniformity. All pairs of doors shall have matching grain. Where adjacent pairs are shown, pairs will be from the same flitch of lumber and match each other in color and grain.

8. Finish

- A. Transparent finished wood doors shall have tops and bottoms sealed with Water-Lox sealer or equivalent sealer immediately after trimming. Clear or stained doors shall be finished at the factory to meet or exceed the performance characteristics of AWI System #5. Wood doors scheduled for paint finish shall be paint-grade birch or maple wood. All painted doors shall be job finished as specified in Division 9. Door hinges will not be painted.