
SECTION 08 14 16 - FLUSH WOOD DOORS



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PART 1 GENERAL

1.1 SECTION INCLUDES

Wood doors non-rated and fire-rated.

(Note: Choose applicable project requirements.)

- .1 Flush.
- .2 Factory Glazing. *(Note: Recommended for fire-rated doors to meet NFPA 80 requirements.)*
- .3 Louvers.
- .4 Transoms; non-rated and fire-rated.
- .5 Applied mouldings.

1.2 SECTIONS

(Note: List only the following sections that have a direct bearing on this section.)

- .1 Section 06 20 00 - Finish Carpentry
- .2 Section 06 40 00 - Architectural Woodwork
- .3 Section 08 11 00 - Metal Doors and Frames
- .4 Section 08 14 33 - Stile and Rail Wood Doors
- .5 Section 08 71 00 - Door Hardware
- .6 Section 08 80 00 – Glazing *(Note: Delete when factory glazing is specified.)*
- .7 Section 08 90 00 - Louvers

1.3 REFERENCES

- .1 Architectural Woodwork Standards 1st Edition 2009 published jointly by the Architectural Woodwork Institute (AWI), the Architectural Woodwork Manufacturer Association of Canada (AWMAC), and the Woodwork Institute (WI)

- .2 ANSI/WDMA I.S. 1A-04 Industry Standard for Architectural Wood Flush Doors
- .3 CAN/ULC S-104 Standard Method for Fire Tests of Door Assemblies
- .4 ASTM E2074-00 Standard Test Method for Fire Tests of Door Assemblies
- .5 NFPA 80 Standard for Fire Doors and Other Opening Protectives
- .6 NFPA 252 Standard Method of Fire Tests of door Assemblies
- .7 ITS/Warnock Hersey Mark for Fire Door Test Certification
- .8 ASTM E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements

1.4 SUBMITTALS

- .1 Submit shop drawings in conformance to the requirements of the Architectural Woodwork Standards 1st Edition 2009.
- .2 Shop Drawings: Illustrate door opening information such as location, size types, construction, swings, undercuts, special bevelling, hardware location and preparation requirements, blocking for hardware in mineral core doors, fire ratings, lite cut-outs, factory finish, glass, and other pertinent data.
- .3 Product Data: Indicate door core materials, thickness, construction, veneer species. *(Note: Veneer color selection required in Ash, Birch and Maple species. Refer to Architectural Woodwork Standards [AWS]; Section 9 Doors, for cut and matching requirements and Section 5 Finishing, for factory finishing criteria.)*
- .4 Provide door construction samples with door faces, edges, and core representative of the specified door type(s).
- .5 Provide pre-finished veneer sample to illustrate the color of the specified door face materials. *(Note: Due to variance in wood color and grain within the same species and even within the same log, a range of color and grain shall be expected on wood products.)*
- .6 Provide manufacturer's full lifetime warranty.
- .7 Provide glass size, type and thickness for factory glazed doors.

1.5 QUALITY ASSURANCE

- .1 Work shall be [Custom Grade] [Premium Grade] in accordance with the Grade requirements specified in the Architectural Woodwork Standards 1st Edition 2009, or as herein otherwise specified. *(Note: Economy Grade does not apply to AWS Section 9 Doors. Refer to the Architectural Woodwork Standards 1st Edition 2009 (AWS) page 206 for definitions and recommendations for Custom Grade and Premium Grade work.)*
- .2 Manufacturer specializing in products herein specified with a minimum of five years documented experience.
- .3 Manufacturer must be a member in good standing of the Architectural Woodwork Manufacturer Association of Canada (AWMAC).
- .4 Fire-rated wood doors shall be in compliance with NFPA 80 according to building code standards having local jurisdiction.
- .5 Fire-rated wood doors will carry either ULC or ITS/Warnock Hersey label, and shall be of the construction standard to the door manufacturer and conform to the requirements of manufacturer's labelling agency.

1.6 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store, protect and handle products in compliance with the Architectural Woodwork Standards; Section 2 Care & Storage, and manufacturer's care and handling instructions.
- .2 Deliver materials only when the project is ready for installation and the general contractor has provided a clean storage area.
- .3 Accept doors on site in manufacturer's standard packaging. Inspect for damage.
- .4 Protect all doors from exposure to natural and artificial light after delivery. *(Note: Certain wood species such as Cherry, Walnut, and Mahogany are light sensitive and should be protected from photodegradation.)*

1.7 WARRANTY

- .1 Provide manufacturer's standard lifetime warranty for "Full Life of Original Installation".

PART 2 PRODUCTS

2.1 MANUFACTURER

- .1 Approved manufacturer:
 - .1 Lambton Doors
- .2 Other acceptable manufacturers of 5 Ply, bonded (stiles and rails securely glued to core) doors of quality as defined herein:
 - .1 _____
 - .2 _____

2.2 COMPONENTS

- .1 Flush Wood Doors
 - .1 Doors shall meet the requirements of ANSI/WDMA I.S. 1A-04 [Heavy Duty] [Extra Heavy Duty] performance level. *(Note: AWS requires ANSI/WDMA Heavy Duty performance level for all doors. Refer to Architectural Woodwork Standards 1st Edition 2009 (AWS) page 209 and 231 for more information on performance duty levels and test criteria.)*
 - .2 Faces of wood veneered doors intended for transparent finish shall be [AA] [A] Grade, [Rotary Cut] [Plain Sliced] [Quarter Cut] [Rift Cut], [Veneer Species], [Book] [Slip] Match, [Run] [Balance] [Center Balance] Match. *(Note: Refer to the Architectural Woodwork Standards 1st Edition 2009 (AWS) Section 9 Doors for details on Veneer Grades, Cuts, and Matching).*
 - .3 Faces at Plastic Laminate faced doors shall be [Manufacturer] [Thickness] [Pattern] [Color] [Finish].
 - .4 Faces at doors for opaque finish shall be [Closed Grain Hardwood] [MDO].
 - .5 Doors in pairs and sets shall be identified on door schedule by door numbers, including doors separated by a mullion.
 - .6 Doors with transoms shall be [Continuous Match] [End Match].
 - .7 Core for non-rated and 20-minute fire-rated doors shall be [Hollow Grid] [Particleboard] [Structural Composite Lumber] [Stave Lumber] [Per Door Schedule]. *(Note: Particleboard and Structural*

Composite Lumber are the recommended core materials. Hollow Grid is not available fire-rated.)

- .8 Core for 45 minute fire-rated doors shall be [Mineral Core] [Structural Composite Lumber Core] [Agrifiber Core].
- .9 Core for 60 minute fire-rated doors and 90-minute fire rated doors shall be Mineral Core.
- .10 Stiles for non-rated doors shall be structural composite lumber laminated to hardwood.
- .11 Top and bottom rails for non-rated doors shall be structural composite lumber.
- .12 Stiles and rails for fire-rated wood doors shall be the standard of the door manufacturer and shall conform to the requirements of the manufacturer's labelling agency.
- .13 Crossband shall be composite crossband. Wood crossband is not permitted.
- .14 Adhesives shall be Type I adhesives.
- .2 Specialty doors
 - .1 Acoustical doors: Shall be the standard of the manufacturer. The Sound Transmission Class (STC) specified shall be certified by the manufacturer to be based on tests conducted at an independent testing agency in accordance with ASTM E90 and ASTM E413. *(Note: STC Ratings are available from STC27 – STC50).*
 - .2 Lead Lined doors: Shall be the standard of the manufacturer. Total lead thickness required: [_____ mm / _____ inches].
 - .3 Bullet Resistive doors: Shall be the standard of the manufacturer. Bullet resistive level required: [UL Level 1] [UL Level 2] [UL Level 3] or [NIJ Level I] [NIJ Level II] [NIJ Level II-A] [IJ Level III].

2.3 ACCESSORIES

- .1 Louvers
 - .1 Wood louvers as detailed on the elevations.
 - .2 Louvers to be furnished by the manufacturer.
 - .3 Metal Louvers for fire-rated doors as specified in Section [____].

- .2 Glazing Stops
 - .1 Non-rated glazing stops: [Wood species same as door face] [Wood species compatible with door face] [Metal Vision Frame].
 - .2 Fire-rated glazing stops: [Wood species same as door face] [Wood species compatible with door face] [Veneer wrapped metal of same species as door face] [Metal Vision Frames].
- .3 Glass and glazing in wood doors.
 - .1 Glass and glazing for non-rated and fire-rated doors to be provided [and installed] by manufacturer.
- .4 Meeting edges for fire-rated door pairs.
 - .1 [Metal Edge and Astragal] [Metal Edges] [No Metal Edge or Astragal] *(Note: Special hardware requirements may apply.)*
- .5 Applied Moulding
 - .1 As selected from manufacturer's standard profiles.
 - .2 Installed by manufacturer as detailed.
 - .3 Affixed to door without the use of nails or staples. No visible fasteners permitted.

2.4 FABRICATION

- .1 Flush wood doors shall be [Custom Grade] [Premium Grade] in accordance with the Grade requirements specified in the Architectural Woodwork Standards 1st Edition 2009, or as herein otherwise specified. *(Note: Economy Grade does not apply to AWS Section 9 Doors. Refer to the Architectural Woodwork Standards 1st Edition 2009 (AWS) page 206 for definitions and recommendations for Custom Grade and Premium Grade work.)*
- .2 Doors shall be 5 ply construction.
- .3 Stiles and rails shall be fully bonded to core and assembled unit shall be abrasive planed prior to lamination of faces.
- .4 Doors shall be assembled using Type 1 adhesive.
- .5 Door details shall be indicated on the door schedule.

- .6 Edges for veneered doors shall be [Type A] [Type D] of the same species as face veneer. Type B, wood veneered edges are not permitted.
- .7 Edges for doors for Opaque finish shall be Type A of a species compatible with face veneer.
- .8 Edges for doors with Plastic Laminate faces shall be [Type A mill option wood to be painted on-site to match face laminate] [Type C to match face laminate].
- .9 Fire-rated doors shall be of the construction standard of the manufacturer and conform to the requirements of all applicable labelling agencies.
- .10 Provide blocking as required for surface mounted hardware to prevent the need for through-bolting.
- .11 Factory drill pilot holes for hinges.
- .12 Bevel lock and hinge edges to Architectural Woodwork Standard 1st Edition 2009, 3 degree bevel.

2.5 FINISHES

- .1 Factory Finishing: All products provided in this Section shall be factory finished using Architectural Woodwork Standards 1st Edition 2009, System 9 UV Curable System.
 - .1 Factory stain shall be water-based stain with ultraviolet (UV) curable polyurethane.
 - .2 Factory opaque finishes shall be water-based paint with ultraviolet (UV) curable polyurethane.
 - .3 Factory seal top and bottom of doors.
 - .4 Submit approved sample for all factory finishing.
 - .5 Custom factory finish doors in accordance with approved sample.
 - .6 Factory finished doors to be installed just prior to substantial completion.

.7 Provide Touch-up Kit for field touch-ups.

PART 3 EXECUTION

3.1 EXAMINATION

- .1 Verify that opening sizes and tolerances are acceptable and ready to receive this work.
- .2 Do not install doors in frame openings that are not plumb or are out of tolerance for size or alignment.

3.2 INSTALLATION

- .1 Install non-rated and fire-rated doors in accordance with NFPA 80, manufacturer's instructions and to ITS/Warnock Hersey requirements.
- .2 Allow a fitting clearance of 3 mm (1/8").
- .3 Trim non-rated door widths as required by cutting equally on both edges. Reseal and refinish all cut or planed surfaces immediately to match factory finish.
- .4 Trim door height by cutting bottom edges to a maximum 19 mm (3/4").
- .5 Trim fire door heights at bottom edge only in accordance with fire rating requirements.
- .6 Do not trim fire rated door widths.
- .7 Pilot holes to be factory drilled.
- .8 Coordinate installation of doors with installation of frames and hardware.
- .9 Install door louvers and light kits plumb and level.
- .10 Adjust doors for smooth and balanced door movement and operation.
- [.11 Non-rated and fire-rated glass and glazing to be factory installed.]

3.3 WARRANTY TOLERANCES

- .1 Conform to the Architectural Woodwork Standards 1st Edition 2009 standards and testing methods for warp, cup, bow, and telegraphing.

END OF SECTION
