

SECTION 081423 - CLAD WOOD DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:

1. Solid-core doors with wood-veneer faces.
2. Solid-core doors with hardboard faces.
3. Solid-core doors with plastic-laminate faces.
4. Solid-core doors with metal faces.
4. Hollow-core doors with wood-veneer faces.
5. Hollow-core doors with hardboard faces.
5. Hollow-core doors with plastic-laminate faces.
6. Solid-core doors with metal faces.
7. Shop priming flush wood doors.
8. Factory finishing flush wood doors.
9. Factory fitting flush wood doors to frames and factory machining for hardware.
10. Louvers for flush wood doors.

- B. Related Sections include the following:

1. Division 6 Section "Interior Architectural Woodwork" for requirements for veneers from the same flitches for both flush wood doors and architectural woodwork.
2. Division 6 Section "Panelwork" for requirements for veneers from the same flitches for both flush wood doors and wood paneling.
3. Division 6 Section "Finish Carpentry" for wood door frames.
4. Division 6 Section "Interior Architectural Woodwork" for wood door frames.
5. Division 8 Section "Glazing" for glass view panels in flush wood doors.
6. Division 13 Section "Radiation Protection" for lead-lined flush wood doors.

1.3 SUBMITTALS

- A. Product Data: For each type of door. Include details of core and edge construction, trim for openings, and louvers.

1. Include factory-finishing specifications.

- 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 ratings for fire doors.
- C. Samples for Initial Selection: Color charts consisting of actual materials in small sections for the following:
1. Plastic-laminate door faces. Show the full range of colors, textures, and patterns available.
 2. Faces of factory-finished doors with transparent finish. Show the full range of colors available for stained finishes.
 3. Faces of factory-finished doors with opaque finish. Show the full range of colors available.
- D. Samples for Verification: As follows:
1. Corner sections of doors approximately 8 by 10 inches (200 by 250 mm) with door faces and edgings representing the typical range of color and grain for each species of veneer and solid lumber required. Finish sample with same materials proposed for factory-finished doors.
 2. Plastic laminate, 6 inches (150 mm) square, for each color, texture, and pattern selected.
 3. Corner sections of plastic-laminate-clad doors, 8 by 10 inches (200 by 250 mm), for each color, texture, and pattern selected.
 4. Louver blade and frame sections, 6 inches (150 mm) long, for each material and finish specified.
 5. Frames for light openings, 6 inches (150 mm) long, for each material, type, and finish required.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain flush wood doors through one source from a single manufacturer.
- B. Quality Standard: Comply with the following standard:
1. NWWDA Quality Standard: NWWDA I.S.1-A, "Architectural Wood Flush Doors."
 2. AWI Quality Standard: AWI's "Architectural Woodwork Quality Standards" for grade of door, core, construction, finish, and other requirements.
 3. WIC Quality Standard: WIC's "Manual of Millwork" for grade of door, core, construction, finish, and other requirements.
 - a. Provide WIC Certified Compliance Certificate indicating that doors meet requirements of grades specified.
 - b. Provide WIC Certified Compliance Certificate for installation.
- C. Fire-Rated Wood Doors: Doors complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 252.
1. Test Pressure: Test at atmospheric pressure.
 2. Oversized, Fire-Rated Wood Doors: For door assemblies exceeding sizes of tested assemblies, provide manufacturer's certificate stating that doors comply with all standard construction requirements of tested and labeled fire-door assemblies except for size.
 3. Temperature-Rise Rating: At stairwell enclosures, provide doors that have a temperature-rise rating of 450 deg F (250 deg C) maximum in 30 minutes of fire exposure.
 4. Temperature-Rise Rating: At stairwell enclosures, provide doors that have a temperature-rise rating of 250 deg F (139 deg C) maximum in 30 minutes of fire exposure.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Protect doors during transit, storage, and handling to prevent damage, soiling, and deterioration. Comply with requirements of referenced standard and manufacturer's written instructions.
 - 1. Individually package doors in plastic bags or cardboard cartons.
 - 2. Individually package doors in cardboard cartons and wrap bundles of doors in plastic sheeting.
 - 3. Comply with WIC's Technical Bulletin 420-R for delivery, storage, and handling of doors.
- B. Mark each door with individual opening numbers used on Shop Drawings. Use removable tags or concealed markings.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install doors until building is enclosed, wet-work is complete, and HVAC system is operating and will maintain temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Environmental Limitations: 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 the construction period to comply with requirements of the referenced quality standard for Project's geographical location.

1.7 WARRANTY

- A. General Warranty: Door manufacturer's warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.
- B. Door Manufacturer's Warranty: Submit written agreement on door manufacturer's standard form, signed by manufacturer, Installer, and Contractor, agreeing to repair or replace defective doors that have warped (bow, cup, or twist) more than **1/4 inch (6.35 mm)** in a **42-by-84-inch (1067-by-2134-mm)** section or that show telegraphing of core construction in face veneers exceeding **0.01 inch in a 3-inch (0.25 mm in a 75-mm)** span, or do not comply with tolerances in referenced quality standard.
 - 1. Warranty shall also include installation and finishing that may be required due to repair or replacement of defective doors.
 - 2. Warranty shall be in effect during the following period of time after the date of Substantial Completion:
 - a. Solid-Core Exterior Doors: Two years.
 - b. Solid-Core Interior Doors: Life of installation.
 - c. Hollow-Core Interior Doors: One year.
 - d. Hollow-Core Interior Doors: Two years.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. LOEWEN
77 Highway 52 West

Steinbach, MB Canada
R5G 1B2
Telephone: 1.877.563.9368
Website: www.loewen.com

2.2 MATERIALS

A. DOOR AND FRAME

The basic specifications include Douglas Fir wood door and frame. Door sill is clad with clear anodized aluminum. A rigid bronze colored vinyl extrusion serves as a sill thermal break. All exterior components are factory primed; minor scratches or abrasions are not considered defects. Refer to elevation drawings for screen availability.

1. PRESERVATIVE TREATED

All wood parts are dipped in approved preservative.

B. GLAZING

A wood stop combined with glazing materials ensure a positive seal.

C. INSULATING GLASS

Double glass configuration with 1/2" (12 mm) airspace.

D. HEAT-SMART® Plus System 1

Heat-Smart® best describes the benefits of the product that incorporates Low E2 coating and argon gas. Heat-Smart® systems help reduce heating and cooling costs, providing superior energy efficiency.

E. METAL CLADDING

Heavy duty extruded aluminum exterior metal cladding in clear anodized. Interior of door remains a natural wood finish as a standard. Metal clad units are supplied ready to-install complete with nailing flange.

F. HARDWARE

Multi-point locking hardware — complete with brass handle set and escutcheon — and dead bolt are standard on all Terrace Doors. Standard concealed bearing hinges in a clear anodized.

G. WEATHERSTRIP

Bottom corners of the door are weatherstripped with a pile dust plug attached to the side jambs. The operating door will be sealed with a wrapped foam weatherstrip at the head and the side jambs to provide a tight seal.

H. DOOR SWINGS

Traditional Terrace Door: configured as a single door, outswinging, left hinged panel.

2.3 FABRICATION

A. Fabricate flush wood doors in sizes indicated for Project site fitting.

B. Factory fit doors to suit frame-opening sizes indicated, with the following uniform clearances and bevels, unless otherwise indicated:

1. Comply with clearance requirements of referenced quality standard for fitting. Comply with requirements of NFPA 80 for fire-rated doors.
- C. 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 factory machining.
 2. Metal Astragals: Premachine astragals and formed-steel edges for hardware for pairs of fire-rated doors.
- D. Exterior Doors: Factory treat exterior doors with water repellent after manufacturing has been completed.
 1. Flash top of outswinging doors (with manufacturer's standard metal flashing).

2.4 SHOP PRIMING

- A. Doors for Opaque Finish: Shop prime exposed portions of doors for paint finish with one coat of wood primer specified in Division 9 Section "Painting."
- B. Transparent Finish: Shop seal faces and edges of doors for transparent finish with stain (if required), other required pretreatments, and first coat of finish as specified in the following:
 1. Division 9 Section "Painting."
 2. Division 9 Section "Exterior Wood Stains."

2.5 FACTORY FINISHING

- A. General: Comply with referenced quality standard's requirements for factory finishing.
- B. Finish wood doors at factory.
- C. Finish wood doors at factory that are indicated to receive transparent finish. Field finish wood doors indicated to receive opaque finish.
- D. Finish wood doors at factory where indicated in schedules or on Drawings as factory finished.
- E. Transparent Finish: Comply with requirements indicated for grade, finish system, staining effect, and sheen.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine 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 plumb jambs and level heads.
 2. Reject doors with defects.

- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Hardware: For installation, see Division 8 Section "Door Hardware."
- B. Manufacturer's Written Instructions: Install wood doors to comply with manufacturer's written instructions, referenced quality standard, and as indicated.
 - 1. Install fire-rated doors in corresponding fire-rated frames according to NFPA 80.
- C. Job-Fit Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; 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. Clearances: Provide **1/8 inch (3.2 mm)** at heads, jambs, and between pairs of doors. Provide **1/8 inch (3.2 mm)** from bottom of door to top of decorative floor finish or covering. Where threshold is shown or scheduled, provide **1/4 inch (6.4 mm)** from bottom of door to top of threshold.
 - a. Comply with NFPA 80 for fire-rated doors.
 - 2. Bevel non-fire-rated doors **1/8 inch in 2 inches (3-1/2 degrees)** at lock and hinge edges.
 - 3. Bevel fire-rated doors **1/8 inch in 2 inches (3-1/2 degrees)** on 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. Factory-Finished Doors: Restore finish before installation, if fitting or machining is required at Project site.
- F. Field-Finished Doors: Refer to the following for finishing requirements:
 - 1. Division 9 Section "Painting."
 - 2. Division 9 Section "Exterior Wood Stains."

3.3 ADJUSTING AND PROTECTING

- A. Operation: Rehang or replace doors that do not swing or operate freely.
- B. Finished Doors: Refinish or replace doors damaged during installation.
- C. Protect doors as recommended by door manufacturer to ensure that wood doors are without damage or deterioration at the time of Substantial Completion.