

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- .1 Types of items described in this Section:
  - .1 Solid-core doors with wood-veneer faces.
  - .2 Hollow-core doors with hardboard or MDF faces.
  - .3 Shop priming and factory finishing flush wood doors.
- .2 Types of items you will not find described in this Section:
  - .1 Solid-core doors with hardboard, MDF, or plastic-laminate faces.
  - .2 Hollow-core doors with wood-veneer and plastic-laminate faces.
  - .3 Wood door frames including fire-rated wood door frames.
  - .4 Factory fitting flush wood doors to frames and factory machining for hardware.
  - .5 Requirements for veneers from the same flitches for both flush wood doors and wood paneling.
  - .6 Exterior painting, interior painting and staining and transparent finishing for field finishing doors.
  - .7 Lead-lined flush wood doors.
  - .8 Glass view panels in flush wood doors.

### 1.3 SUBMITTALS

- .1 Product Data: For each type of door indicated. Include details of core and edge construction, louvers, and trim for openings.
- .2 Sustainability Submittals:
  - .1 Chain-of-custody certificates certifying that flush wood doors comply with forest certification requirements. Include evidence that manufacturer is certified for chain of custody by an FSC-accredited certification body.
  - .2 For adhesives and composite wood products, indicating that product contains no urea formaldehyde.
- .3 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 cut-outs.
  - .2 Indicate doors to be factory finished and finish requirements.
  - .3 Indicate fire-protection ratings for fire-rated doors.
- .4 Samples for Verification:
  - .1 Factory finishes applied to actual door face materials, approximately 200 by 250 mm, for each material and finish. For each wood species and transparent finish, provide set of three samples showing typical range of colour and grain to be expected in the finished work.
- .5 Warranty: Sample of special warranty.

### 1.4 QUALITY ASSURANCE

- .1 Non-Rated Wood Flush Doors: complying with CAN/CSA-O132.2 Series 90.

- .2 Fire-Rated Wood Doors: Doors complying with CAN4-S104-M that are listed and labelled by a qualified testing agency, for fire-protection ratings indicated.
  - .1 Oversize Fire-Rated Door Assemblies: For units exceeding sizes of tested assemblies provide certification by a qualified testing agency that doors comply with standard construction requirements for tested and labelled fire-rated door assemblies except for size.
- 1.5 DELIVERY, STORAGE, AND HANDLING
  - .1 Comply with requirements of referenced standard and manufacturer's written instructions.
  - .2 For wood veneer doors, package doors individually in plastic bags or cardboard cartons.
- 1.6 PROJECT CONDITIONS
  - .1 Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weather tight, 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.
  - .2 Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weather tight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining temperature between 16 and 32 deg C and relative humidity between 43 and 70 percent during the remainder of the construction period.
- 1.7 WARRANTY
  - .1 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:
      - .1 Warping (bow, cup, or twist) more than 6.4 mm in a 1067-by-2134 mm section.
      - .2 Telegraphing of core construction in face veneers exceeding 0.25 mm in a 76.2 mm 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.
    - .4 Warranty Period for Hollow-Core Interior Doors: One year(s) from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 DOOR CONSTRUCTION, GENERAL

- .1 Low-Emitting Materials: provide doors made with adhesives and composite wood products that do not contain urea formaldehyde.
- .2 Particleboard-Core Doors: to CAN/CSA-O132.2 Series 90
  - .1 Blocking: Provide wood blocking in particleboard-core doors as needed to eliminate through-bolting hardware.
  - .2 Provide doors with either glued-wood-stave or structural-composite-lumber cores instead of particleboard cores for doors indicated to receive exit devices.
- .3 Mineral-Core Doors:
  - .1 Tested in accordance with CAN4 S104 or NFPA 252 to achieve rating as specified.
  - .2 Core: Non-combustible mineral product complying with requirements of referenced quality standard and testing and inspecting agency for fire-protection rating indicated.

- .3 Blocking: Provide composite blocking with improved screw-holding capability approved for use in doors of fire-protection ratings indicated as needed to eliminate through-bolting hardware.
  - .4 Edge Construction: At hinge stiles, provide laminated-edge construction with improved screw-holding capability and split resistance. Comply with specified requirements for exposed edges.
  - .5 Pairs: Provide fire-retardant stiles that are listed and labelled for applications indicated without formed-steel edges and astragals. Comply with specified requirements for exposed edges.
- .4 Hollow-Core Doors:
- .1 Moulded residential-type panel doors fabricated moulded wood fibre facing, wood or MDF stiles and rails, and corrugated cell, bonded together to form a 3-ply structural attachment, internally reinforced for hardware, factory-machined to accommodate scheduled hardware, and primed with latex primer.
    - .1 Overall thickness: 35 mm.
- 2.2 VENEERED-FACED DOORS FOR TRANSPARENT FINISH
- .1 Interior Solid-Core Doors:
- .1 Grade: Hardwood Veneer Grade II (Good).
  - .2 Species: Select white maple; unless otherwise noted.
  - .3 Cut: Quarter sliced, unless otherwise noted
  - .4 Match between Veneer Leaves: Slip match.
  - .5 Pair and Set Match: Provide for doors hung in same opening or separated only by mullions.
  - .6 Exposed Vertical Edges: Same species as faces or a compatible species.
  - .7 Core: Particleboard.
    - .1 Substitute particleboard core with mineral core when required to achieve the fire rating specified.
  - .8 Construction: Seven plies, either bonded or non-bonded construction.
- 2.3 DOORS FOR OPAQUE FINISH
- .1 Interior Solid-Core Doors:
- .1 Grade: Sound (paint).
  - .2 Faces: Any closed-grain hardwood of mill option.
  - .3 Exposed Vertical Edges: Any closed-grain hardwood.
  - .4 Core: Particleboard.
    - .1 Substitute particleboard core with mineral core when required to achieve the fire rating specified.
  - .5 Construction: Five or seven plies. Stiles and rails are bonded to core, and then entire unit abrasive planed before veneering. Faces are bonded to core using a hot press.
- .2 Interior Hollow-Core Doors:
- .1 Panel design: see door elevation drawings.
  - .2 Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - .1 Masonite Corporation.
    - .2 Or approved alternate.
- 2.4 LOUVERS AND LIGHT FRAMES
- .1 Wood Louvers: Provide door manufacturer's standard solid-wood louvers, unless otherwise indicated.
  - .1 Wood Species: Species compatible with door faces.
- .2 Metal Louvers: Provide metal louvers only when specifically indicated.
  - .1 Blade Type: Vision-proof, inverted Y.
  - .2 Metal and Finish: Hot-dip galvanized steel, 1.0 mm thick, with baked-enamel- or powder-coated finish.

- .3 Louvers for Fire-Rated Doors: Provide metal louvers with fusible link and closing device, listed and labelled for use in doors with fire-protection rating of 1-1/2 hours and less.
    - .1 Metal and Finish: Hot-dip galvanized steel, 1.0 mm thick, with baked-enamel- or powder-coated finish.
  - .4 Wood Beads for Light Openings in Wood Doors: Provide manufacturer's standard wood beads as follows, unless otherwise indicated.
    - .1 Wood Species: Species compatible with door faces.
    - .2 Profile: Manufacturer's standard shape.
    - .3 At wood-core doors with 20-minute fire-protection ratings, provide wood beads and metal glazing clips approved for such use.
  - .5 Metal Frames for Light Openings in Fire-Rated Doors: Provide manufacturer's standard frame formed of 1.2 mm thick, cold-rolled steel sheet; with baked-enamel- or powder-coated finish; and approved for use in doors of fire-protection rating greater than 20 minutes.
- 2.5 FABRICATION
- .1 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.
  - .2 Openings: Cut and trim openings through doors in factory.
    - .1 Light Openings: Trim openings with mouldings of material and profile indicated.
    - .2 Glazing: Factory install glazing in doors indicated to be factory finished. Comply with applicable requirements in Division 08 Section *Glazing*.
    - .3 Louvers: Factory-install louvers in prepared openings.
- 2.6 FACTORY FINISHING
- .1 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 cut-outs, and mortises. Stains and fillers may be omitted on bottom edges, edges of cut-outs, and mortises.
  - .2 Factory finish doors only when specifically indicated.
  - .3 Transparent Factory Finish:
    - .1 Grade: Custom.
    - .2 Finish: AWI conversion varnish or catalyzed polyurethane system.
    - .3 Effect: Semi filled finish, produced by applying an additional finish coat to partially fill the wood pores.
    - .4 Staining: As selected by Public Works Representative from full range of manufacturer's stain colour if not specifically indicated elsewhere.
    - .5 Sheen: Satin, unless otherwise noted.
  - .4 Opaque Factory Finish:
    - .1 Grade: Custom.
    - .2 Finish: AWI conversion varnish or catalyzed polyurethane system.
    - .3 Colour: As selected by Public Works Representative from full range of manufacturer's colours if not specifically indicated elsewhere.
    - .4 Sheen: Semi gloss, unless otherwise noted.

PART 3 - EXECUTION

3.1 EXAMINATION

- .1 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.
- .2 Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- .1 Hardware: For installation, see Division 08 Section *Door Hardware*.
- .2 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.
- .3 Job-Fitted 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 for fire-rated doors. Machine doors for hardware. Seal edges of doors, edges of cut-outs, and mortises after fitting and machining.
  - .1 Clearances: Provide 3.2 mm at heads, jambs, and between pairs of doors. Provide 3.2 mm from bottom of door to top of decorative floor finish or covering unless otherwise indicated. Where threshold is shown or scheduled, provide 6.4 mm from bottom of door to top of threshold unless otherwise indicated.
    - .1 Comply with NFPA 80 for fire-rated doors.
  - .2 Bevel non-fire-rated doors 3-1/2 degrees at lock and hinge edges.
  - .3 Bevel fire-rated doors 3-1/2 degrees at lock edge; trim stiles and rails only to extent permitted by labelling agency.
- .4 Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

3.3 ADJUSTING

- .1 Operation: Rehang or replace doors that do not swing or operate freely.

**END OF SECTION**