

Flush Wood Doors

Section revised and reissued by Addendum 03

## **PART 1 - GENERAL**

### **1.1 Summary**

- .1 Section includes:
  - .1 Solid core doors with high pressure plastic laminate.
  - .2 Factory finished wood doors.

### **1.2 Administrative Requirements**

- .1 Coordination:
  - .1 Coordinate installation of doors with installation of frames specified in other Sections and hardware specified in Section 08 71 00.
  - .2 Coordinate with hardware mortises in metal frames to verify dimensions and alignment before factory machining.

### **1.3 Submittals**

- .1 Submit required submittals in accordance with Section 01 33 00.
- .2 *Product* data sheets:
  - .1 Submit manufacturer's *Product* data sheets for *Products* proposed for use in the work of this section.
- .3 Shop drawings:
  - .1 Submit shop drawings for the work of this section complying with the North American Architectural Woodwork Standards 4.0 requirements.
  - .2 Indicate door location using numbering system per door schedule, size, and hand of each door, elevation of each door type; undercuts, bevelling, construction type core and edge construction not covered in product data; and special blocking requirements.
  - .3 Indicate dimensions and locations of factory machining criteria for hardware, extent of hardware blocking.
  - .4 Indicate dimensions and locations of cut-outs including trim for openings.
  - .5 Indicate door face finish requirements including veneer matching.
  - .6 Indicate doors to be factory finished and finish requirements.
  - .7 Indicate electrified hardware requirements and preparations.
- .4 Verification samples:
  - .1 Submit samples of proposed plastic laminate door faces for each colour, texture and pattern selected.
  - .2 Submit cut-away sample of each type of door, to show stile and rail construction, core, cross banding, door face finish and edges.

### **1.4 Quality Assurance**

- .1 Qualifications:

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- .1 Manufacturer shall be a member in good standing of the Architectural Woodwork Institute or the Architectural Woodwork Manufacturers Association of Canada or the Woodwork Institute.
- .2 Quality standard:
  - .1 Work shall be in accordance with the North American Architectural Woodwork Standards 4.0, Premium Grade, or the highest grade available for performance and appearance characteristics of materials in Sections 3 – 5 used that apply to *Product* fabrication and installation requirements governed by Sections 6 – 12.

### 1.5 Delivery, Storage, and Handling

- .1 Doors shall be marked with door numbers used on shop drawings in the top hinge cavity created by the machining for hinges.
- .2 Identify doors with labels. Package with resilient packaging.
- .3 Store doors flat at the *Place of the Work* in piles with bottom face on bottom of pile. Protect from moisture by placing water resistant material under skids supporting piles. Cover top of piles and provide air at sides of piles.
- .4 Deliver the wood doors only after the building is closed and dry and HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period. Do not receive the doors in a damp area. Do not drag the doors on the ground, floor or across one another.

### 1.6 Field Conditions

- .1 Environmental conditions:
  - .1 During storage and installation: Obtain and comply with wood door manufacturer's instructions for optimum temperature and relative humidity conditions for wood doors during its storage and installation. Do not install wood doors until these conditions have been attained.
  - .2 During finishing: Comply with wood door manufacturer's temperature and humidity requirements before, during, and after application of finishes.
  - .3 During service life of woodwork: Obtain and comply with wood door manufacturer's advice for optimum temperature and humidity conditions.

### 1.7 Warranty

- .1 Warrant work of this section in accordance with Section 01 78 36.
- .2 Extended warranties:
  - .1 System:
    - .1 Labour, materials, and workmanship for work of this section.
    - .2 The warranty is a total system warranty, and includes hardware, sealants, hanging and fitting, and finishing.
    - .3 Duration: 2 years.
  - .2 Glass and glazing: in accordance with Section 08 80 00.

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## **PART 2 - PRODUCTS**

### **2.1 Manufacturers**

- .1 Baillargeon by Masonite Architectural.
- .2 Lambton Doors.
- .3 Masonite Architectural.
- .4 VT Industries.
- .5 Substitutions: in accordance with Section 01 25 00.

### **2.2 Performance/Design Requirements**

- .1 Flush wood doors shall meet the minimum acceptance levels in accordance with the North American Architectural Woodwork Standards 4.0.
- .2 Doors and frames shall function as intended, including but not limited to:
  - .1 Be in true alignment.
  - .2 Operate and swing freely, smoothly, and easily.
  - .3 Remain stationary at any point.
  - .4 Close evenly and tightly against stops without binding.
  - .5 Latch positively when doors are closed with moderate force.
  - .6 No delamination.
  - .7 No telegraphing of core construction in face panels exceeding 0.254 mm (0.01") in a 75 mm (3") span, and warp exceeding 3 mm (1/8") in a 1066 mm (42") x 2133 mm (84") section.

### **2.3 General**

- .1 Single-source manufacturing and fabrication responsibility: Engage a qualified Manufacturer to assume undivided responsibility for wood doors specified in this section, including fabrication and finishing except where site finishing is specified.

### **2.4 Door Construction**

- .1 Door construction, industry abbreviations and types to North American Architectural Woodwork Standards 4.0.
- .2 Performance duty level:
  - .1 Doors shall meet the requirements of ANSI/WDMA I.S. 1A-13 for Heavy Duty Performance Level unless otherwise indicated or scheduled.
- .3 Solid particle board core, high pressure decorative laminate faced, non fire rated wood door construction:
  - .1 Type PC-HPDL-5, particle core to ANSI A208.1-2009 LD-2.
- .4 Bonding:
  - .1 Bond stiles and rails to core; abrasive sand core assembly to achieve uniform thickness prior to lamination of door faces.

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### .5 Panel edge types:

#### .1 High pressure decorative laminate faced doors:

.1 For vertical edges (stiles) and exposed horizontal edges (rails). (Exposed horizontal edges are those edges that can be viewed from floors above.):

.1 High pressure decorative laminate finish, face and cross bands are covered.

.2 For unexposed horizontal edges (rails):

.1 Non rated or: Minimum 25 mm (1") structural composite lumber.

#### .2 Wood veneer faced doors for painted finish:

.1 For vertical edges (stiles) and exposed horizontal edges (rails). (Exposed horizontal edges are those edges that can be viewed from floors above.):

.1 Solid wood edgeband to match face veneer, face and cross bands show.

.2 For unexposed horizontal edges (rails):

.1 Non rated doors: Minimum 25 mm (1") structural composite lumber.

### .6 Blocking:

#### .1 Provide hardware blocking for doors as follows:

.1 Non-rated doors: Structural composite lumber for hardware blocking.

.2 HB-1, minimum 125 mm (5") wide, full door width, top-rail blocking for closure devices or flush bolts or for sliding door hardware.

.3 HB-2, minimum 125 mm (5") wide, full door width, bottom-rail blocking for doors with protection plates, concealed door seals, automatic bottoms, pivots or floor bolts.

.4 HB-4, minimum 125 mm (5") wide x 250 mm (10") high blocking for doors with mortise locks and pockets.

.5 HB-5, minimum 125 mm (5") wide x 250 mm (10") high blocking for hinges.

.6 HB-6, minimum 125 mm (5") wide, full door width, mid-rail blocking for fire exit devices.

.7 HB-7, minimum 125 mm (5") wide, full door height, for doors with continuous type hinges.

### .7 Thickness:

.1 45 mm (1-3/4") minimum unless otherwise indicated or scheduled.

## 2.5 Plastic Laminate Faced Doors (PL1)

.1 Type: Grade 10 General Purpose, to ANSI/NEMA LD3-2005.

.2 Colours and patterns: as indicated on Interior Finish Schedule.

## 2.6 Accessories

.1 Wood glass stops: Solid hardwood, species to match face finish, and referenced quality standard.

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- .2 Finishing hardware: in accordance with Section 08 71 00.
- .3 Kick plates, where indicated:
  - .1 Engineered PVC free kick plates manufactured in nominal 1.52 mm (0.060") thick high-impact sheet with suede texture.
  - .2 Colour: Acrovyn solid colour to later selection by the *Consultant*.
  - .3 Adhesive: as recommended by the manufacturer.
  - .4 Acceptable *Product*:
    - .1 CS Acrovyn 'KP-60'.

### 2.7 Fabrication

- .1 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. Seal edges of doors, edges of cutouts, and mortises after fitting and machining.
  - .1 Clearances: Refer to Part 3 for clearance tolerances.
  - .2 Fit doors for automatic door bottoms.
  - .3 Bevel non-fire-rated doors 3-1/2 degrees (1/8 inch in 2 inches) at lock and hinge edges.
- .2 Fabricate doors with hardware blocking as specified in Part 2 of this Section.
- .3 Factory machine doors for finish hardware that is not surface applied. Do not machine for surface hardware. Locate hardware to comply with Door and Hardware Institute (DHI) "Recommended Locations for Architectural Hardware for Flush Wood Doors (latest edition). Comply with final reviewed hardware schedules, door and frame shop drawings and hardware templates.
- .4 Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes.
- .5 Electrified hardware: Where electrically or electronically operated hardware is specified on the schedules or details or the final approved schedule and templates provided by the hardware supplier, doors with electrified devices shall be manufactured to include wire raceway in door panel to accommodate electrified devices, such as electric hinge, power transfer units, electrified locks, electrified door closures and electrified exit devices. Construction of raceways shall provide a continuous conduit or channel between entry and exit points to accommodate wire installation after door manufacture.
- .6 Factory cut and trim openings.

### 2.8 Factory Finishing

- .1 Finish work in factory in accordance with North American Architectural Woodwork Standards 4.0 and referenced quality standard.
- .2 Prior to finishing, handling marks or effects of exposure to moisture removed with a thorough final sanding over surfaces of the exposed portions, using appropriate grit sandpaper, and shall be cleaned prior to applying sealer or finish. Sanding shall be completed just prior to stain or finishing application.
- .3 Comply with requirements indicated below for finish system, staining, and sheen.

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- .1 Sheen range measurements in accordance with North American Architectural Woodwork Standards 4.0:
  - .1 Satin.
- .2 Factory finish with transparent, Post Catalyzed Lacquer in accordance with the North American Architectural Woodwork Standards 4.0.
  - .1 Opaque finish: Paint or pigmented stain colour to later selection by the *Consultant*.
- .4 Seal top and bottom door edges.

### PART 3 - EXECUTION

#### 3.1 Examination

- .1 Provide necessary grounds, bracing and strapping for fitting and adequate for securing of the work.

#### 3.2 Installation - General

- .1 Execute installation and assembly at the *Place of the Work* using skilled forces under supervision of a competent joinery foreperson.
- .2 Install work plumb, level and straight, and fasten it securely to backing to support itself and anticipated superimposed loads.
- .3 Build into construction as indicated, or specified in other sections of this specification, or both.
- .4 Adequately fasten units and secure in place with concealed fixings wherever possible. Include grounds and furring where required.

#### 3.3 Installation - Doors

- .1 Align and fit doors in frames with uniform clearances as indicated below; do not trim stiles and rails in excess of limits set by manufacturer. Machine doors for hardware. Seal edges of doors, edges of cutouts, and mortises after fitting and machining.
  - .1 Clearances:
    - .1 Provide clearances as follows except where more stringent clearance is required or indicated.
    - .2 Provide 3.18 mm (1/8") maximum clearance between door and frame at heads, jambs, and between pairs of doors.
    - .3 Provide minimum 6 mm (1/4") clearance from bottom of door and top of floor finish and maximum clearance of 9.5 mm (3/8").
  - .2 Seal top and bottom edges of wood doors. Re-seal field cuts in accordance with manufacturer's written requirements.
  - .3 Pilot drill screw and bolt holes.

#### 3.4 Installation - Finishing Hardware

- .1 Install finishing hardware in accordance with Section 08 71 00.

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**3.5 Adjusting and Cleaning**

- .1 Adjust doors to swing freely, smoothly and easily, to remain stationary at any point, to close evenly and tightly against stops without binding, and to latch positively when doors are closed with moderate force.
- .2 Adjust hardware so that latches and locks operate smoothly and without binding, and closers act positively with the least possible resistance in use. Lubricate hardware if required by *Supplier's* requirements.
- .3 Ensure that doors equipped with closers operate to close doors firmly against anticipated wind and building air pressure, and to enable doors to be readily opened as suitable for function, location and traffic.
- .4 Clean hardware after installation in accordance with *Supplier's* requirements.

**END OF SECTION**