

York University Building Standards

Note to the Designer/Architect/Engineer: These standards are basic minimum criteria to be met in preparing the final project specifications for this section, which is the responsibility of the Designer

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Prepared by: Paul Mayol, Project Manager, Office of the Vice President Finance and Administration	Reviewed by: Helen Psathas, Senior Manager, Environmental Design & Sustainability, CSBO	Authorized by: Richard Francki, Assistant VP, Campus Services & Business Operations
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	Peter Thompson, Sr. Advisor, Institutional Space Planning, Office of the VP F&A Patrick Saavedra, Steve Sicluna, Manager, Maintenance, CSBO, Ron Ogata, Manager, Renovations, CSBO	
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1.0 GENERAL

1.1 Guiding Principles

- .1 Sample submission is project specific. In the case of new buildings, or major building renovations, samples for steel doors (and other items) should be submitted for evaluation and comparison against installations. However, on small renovation projects the effort to obtain door samples is out of proportion to the project size. Nevertheless, there may be specific instances or items that may need to have sample submissions made. For instance, on a relatively small renovation project, the University may not ask for paint draw downs, flooring samples for standard products, or hardware samples for almost anything but, the University may require samples of the door veneer, if this feature was a significant design element of that project. Additionally, the University may request a mock up or sample if the millwork has some material and finish that was important to the overall design of the project.

1.2 Sustainable Requirements

- .1 LEED MRc7: Certified Wood
Provide certification and chain of custody documentation from manufacturer stating that all wood based materials came from Forest Stewardship Council certified sources.
- .2 Green Globe certification is similar to LEED MRc7 with regards to certified wood source
- .3 LEED EQc4 Low Emitting materials (Urea-Formaldehyde) resin binders are NOT acceptable

Low or no-VOC (volatile organic compounds) glues and adhesives and door cores made from environmentally friendly composite wood products

NOTE: the door's aesthetics or fire performance rating is not to be affected by either certified wood use or

1.3 Scope of Work

This document defined minimum standards for:

1. Wood Doors and panels: fire rated and non-fire rated wood doors
2. Flush wood doors and panels with veneer facings
3. Pre-fitting and pre-matching for fire-rated and 20-minute wood doors

1.4 Related York University Standards

- .1 Door Finishing Hardware Section 08 70 00
- .2 Access Control Section 28 13 00
- .3 Steel Doors and Steel Frames Section 08 11 00
- .4 Glazing Section 8 80 00
- .5 Metal Supports for Gypsum and Cement Board Section 09 21 00

1.5 References

- .1 Comply with all applicable municipal, provincial, federal and trade standards in this specification, unless more stringent requirements are given herein.
- .2 CAN/CGSB-69.34/ ANSI/BHMA A156.18 - Materials and Finishes
CAN4-S104-M - Standard Method for Fire Tests of Door Assemblies
CAN4-S105-M - Standard Specification for Fire Door Frames Meeting
CAN/CSA-A440.4-07 Window, Door, and Skylight installation
CSA Canadian Standards Association
NFPA National Fire Protection Association
NFPA 80 Standard for Fire Doors and Fire Windows
ULC Underwriters' Laboratories of Canada

ASTM E90-02 Standard Test Method for Acoustic panels,
ASTM E413 (1999) Classification for rating sound insulation
ASTM D5456-01 Standard Specification for Evaluation of Structural Composite Lumber Products
ASTM E1408 (2000) Standard Test Method for Laboratory Measurement of Sound Transmission Loss of Door Panels and Door Systems
ANSI A208.1 (2009) Particleboard
CSA O112 (10-08) Evaluation of Adhesives for Structural Wood Products (Limited Moisture Exposure)
AWI/AWAAC Section 1300 Architectural Flush Doors {Architectural Woodwork Institute/Architectural Woodwork Manufacturers Association of Canada}
WDMA Window and Door Manufacturers Association Series I.S.1-A-04 Industry Specification for Architectural Wood Flush Doors
CAN/CSA-O132.2 Series 90. Wood Flush Doors

1.6 Submittals

- .1 Submit to the York University project representative complete manufacturer's technical data sheet (TD) for each type wood door used.
- .2 Indicate general construction, adherence to sustainability requirements, configurations, jointing methods, reinforcements, anchorage methods, hardware locations and locations of cutouts for glass and louvers.
- .3 Shop drawings, as applicable depending on the magnitude of the project to be undertaken submit (see Guiding principles in this section):

.1 for each door, indicate variations in height, for floor to ceiling frames, due to variations in slab level.

1.7 Product samples (P.S.):

- .1 Product samples for wood doors and door frames for wood doors are not generally required, however see Guiding principles in this section.

1.8 Templates (T):

- .1 Provide templates, template information, installation instructions and details necessary for preparation and installation of door hardware

1.9 Installation instructions and templates (S.D.):

- .1 Supply all required instructions and templates
- .2 Supply manufacturer's instructions for proper installation

1.10 Maintenance instructions (M.I.):

- .1 Provide maintenance instructions, parts list, and manufacturer's instructions for each type of wood door.
- .2 Brief York University maintenance staff regarding proper care, cleaning, and general maintenance of wood doors.

1.11 Delivery and Storage

- .1 Supply all wood doors in water resistant protective covering, with especially protected corners
- .2 All wood doors shall be stored inside a dry, warm atmosphere,

away from damp surfaces. Stock-pile horizontally, on a flat surface raised above the floor. The top of the pile to be covered with plywood, polyethylene film, wax paper or other acceptable moisture resistant covering.

- .3 Wood doors shall not be subjected to extremely high or low temperatures or humidity. Ensure that previous to delivery, doors have been kept in environmental conditions similar to those to be found on the job site.

1.12 Qualifications

- .1 The work of this Section shall be carried out by a qualified manufacturer and finished by first-class labour with at least 10 years of experience in the field.
- .2 Provide proof of qualifications.

1.13 Standard Warranties and Extended Warranties (S.W. / E.W.)

- .1 Warrant in writing wood doors and frames for a period of three (3) years from date of installation.
- .2 Include coverage of repair or replacement of components or entire assemblies which fail in materials and workmanship. Failures include but are not limited to, faulty operation, deterioration of metals and protective coatings beyond normal use.

2.0 PRODUCTS

2.1 Acceptable products:

2.2 Wood Doors and Frames:

- .1 Type WD.MC/P.1/FR – Plywood faced mineral core doors, fire-rated: flush doors, having the following characteristics:
 - .1 Core: non combustible mineral, with 45 minute fire resistance.
 - .2 Edges: stiles and rails in non treated hardwood, or hardwood laminated to proprietary materials, on maximum 22 mm ($\frac{7}{8}$ ") on 3 sides, 44 mm ($1\frac{3}{4}$ ") at the bottom, matching the face veneer.
 - .3 Faces: 3 mm ($\frac{1}{8}$ ") plywood, or composite crossband, with veneer Type WD.VN.1 or Type WD.VN.2, to be varnished. (veneer type should match existing in the case of renovation

projects and should be determined by architect for new building projects as applicable)

- .4 Total thickness: 44 mm (1³/₄").

Acceptable products: CSBO to determine

- .2 Type WD.PB/P.1 – Plywood faced particleboard doors: standard flush doors, 5 ply having the following characteristics:
 - .1 Core: particleboard, as per ANSI A208.1, Type 1, industrial fireproof brand, of minimum 0.45 g/cm³ (28 lb/cu.ft.) density, with sanded faces (120 grit). Bonded for stiles and rails.
 - .2 Edges: stiles and rails in laminated low-density wood, on structural composite lumber, stiles with laminated hardwood edges, matching the face veneer.
 - .3 Faces: 3 mm (1/8") plywood, or composite crossband, with veneer Type WD.VN.1 or Type WD.VN.2, to be varnished. (See Door schedule to determine which veneer type is applicable).
 - .4 Total thickness: 44 mm (1 3/4").
Acceptable products: CSBO to determine
- .3 Type WD.SD/P.1/AC – Plywood faced sound dampening core doors, acoustic: standard flush doors, 5 ply, blind edge, having the following characteristics:
 - .1 Core: sound dampening core bonded to the stiles, as per ASTM E90-02, ASTM E413-87, ASTM D5456-01 and ASTM E1408-91.
 - .2 Edges: stiles of 24 mm (1 5/16") hardwood, bonded on 102 mm (4") structural composite lumber (SCL), vertical sides finished with the same veneer as the door faces for varnished doors.
 - .3 Wood veneer facing: Type WD.VN.1 or Type WD.VN.2, to be varnished, bonded to a mill option composite crossband; covering the edges.
 - .4 Total thickness: 45 mm (1 3/4").
 - .5 Wood astragal and gasket for pairs of doors, as applicable.

Acceptable products: CSBO to determine

- .4 Type WD.VN – Wood veneer:
 - .1 Type WD.VN.1 – Wood veneer: 0.68 mm (0.027") rotary cut veneer, with "book match" pattern, type of wood is determined by the type of project to be undertaken - in case of renovation projects door wood veneer should match existing door wood veneer, in case of new building

construction wood veneer type to be determined by architect. Wood veneer should be clear stained, with Type PT.5F-1 varnish, matching the architects' sample. Flame spread should not exceed 150, smoke development as per OBC

- .2 Type WD.VN.2 – Wood veneer: 0.68 mm (0.027"), „wide strip" veneer, with "book match" pattern, , vertical grain, clear stained, with Type PT.5F-1 varnish , matching the Consultants" sample. Flame spread should not exceed 150, smoke development as per OBC.

2.3 Accessories

- .1 Glazing moldings: to profiles indicated, same material as door.
- .2 Type ADH.13 – Water resistant polyvinyl based adhesive for wood: Type II, cold or hot pressing, as per CSA O112 Series M.
- .3 Glazing: See **Sec 08 81 00**
- .4 Hardware: see **Section 08 71 00**.
- .5 Finishing: factory applied varnish, or site applied paint, as per **Sections 09 91 00**
- .6 Type LOUV.TR – Transfer louvers: in aluminum extrusions alloy AA-6063-T5, with auxiliary frame, fixed blades.

2.4 Fabrication

- .1 Check dimensions of openings and ensure that the floors are level under the doors before starting fabrication.
- .2 Fabricate wood doors and frames in accordance with AWI/AWAAC Section 1300, WDMA Series I.S.1-A-97 and CAN/CSA-O132.2 Series 90.
- .3 Bevel vertical edges of single acting wood doors 3 mm in 50 mm (1/8" in 2") on lock side and 1.5 mm in 50 mm (1/16" in 2") on hinge side.
- .4 Prepare doors to receive glazing and seal edges of the openings.

- .5 Reinforce door core with solid blocking for hardware requiring special solidity.
- .6 Seal the top and bottom edges of wood doors with a primer compatible with the paint or with varnish specified.
- .7 Transoms, where applicable, to be of the same composition as the doors to which they belong.
- .8 Install louvers in plant.
- .9 Apply stain and varnish finish on wood doors in the plant, as per standards specified in the project's wood door schedule

2.5 Coordination

- .1 Check air pressure differentials to ensure door closers are properly adjusted.

2.6 Hardware locations

- .1 Please consult CSBO Maintenance Section

2.7 Clearances:

- .1 Non fire rated doors: provide 3.175 mm (1/8") at jambs and heads, 3.175 mm (1/8") {0.0625 mm (1/16") per leaf} at meeting stiles on pairs of doors and 12.7 mm (1/2") from bottom of door to top of floor finish or covering. Provide 6.35 mm (1/4") clearance at thresholds. Bevel doors 3.175 mm (1/8") in 50.8 mm (2") at lock and hinge edges.

3.0 EXECUTION

3.1 General

- .1 Coordinate with the York University project representative and **Electrical** contractor and/or **York University Maintenance Department** to prepare doors and frames to receive the electronic hardware.

3.2 Installation of Frames

- .1 Set frames plumb, square, level and at correct elevation.

- .2 Secure anchorages and connections to adjacent construction.
- .3 Wherever required, provide adequate attachments to structural elements.
- .4 Brace frames and partitions rigidly in position while building-in. Install temporary horizontal wood spreader at third points of door opening to maintain frame width. Provide vertical support at centre of head for openings over 1200 mm (4' - 0") wide. Remove temporary spreaders after frames are built-in.
- .5 Make allowance for deflection to ensure structural loads are not transmitted to frames.
- .6 Seal around frames
- .7 Fill with masonry grout Type MORT.5A door frames in masonry or concrete walls where indicated.
- .8 Connect exterior door frames to the air/vapour barrier system of the building with Type MEMB.11 or compatible membrane. Seal with Type CLKG.7 all edges of the membrane, if necessary.
- .9 Insert flexible batt insulation between the frame and the adjacent wall surfaces, and wherever indicated or required, fitting tightly, leaving no voids, ensuring continuity of thermal protection of the envelope.

3.3 Installation of Doors

- .1 Install the doors and hardware in accordance with the project's door schedule, hardware templates and manufacturer's instructions.
- .2 Coordinate work with other trades in order to install doors after all finishes have been applied.
- .3 Adjust operable parts for correct function.
- .4 Seal top and bottom of doors after they have been adjusted
- .5 Provide even margins between doors and jambs, and finished floor and thresholds as per clearances section of this document. As follows:
 - .1 Hinge side: 1.5 mm (0.06") and 1.0 mm (0.04") for fire-rated doors
 - .2 Latch side and head: 2 mm (0.08") and 1.5 mm (0.06") for fire-rated doors
 - .3 Finished floor and thresholds: 12.7 mm (1/2"), or as indicated, and not more than 6 mm (1/4") for fire-rated doors.
- .6 Keep doors open for a few days after installation.

.7 Seal around frames.

3.4 Installation of Glazing

- .1 Ensure humidity level is low before installation.
- .2 Ensure all finishes are fully dry before installing the glazing.
- .3 Ensure glass panels are clean and dry prior to installation.
- .4 Install glazing according to manufacturers' specifications.
- .5 Ensure space between double glazing is perfectly clean before installing the second panel.

3.5 Installation of Louvers

- .1 Install transfer louvers where shown.
- .2 Protect aluminum surfaces from scratches and other damages.

3.6 Repairs

- .1 Touch up with correct matching varnish any scratches that may have been made during transportation or installation.

3.7 Adjustment

- .1 Re-adjust doors and hardware just prior to completion of work and after the final air balancing of the building to function freely and properly.

3.8 Coordination

- .1 Coordinate with York University project representative, **door and frame manufacturers**

End of Section