

**PART 1 GENERAL****1.1 INCLUDED WORK**

- .1 Metal interior frames. 2 units.

**1.2 RELATED REQUIREMENTS**

- .1 Section 08 14 00, flush wood doors.

**1.3 REFERENCES**

- .1 American Society for Testing and Materials International (ASTM)
  - .1 ASTM A653/A653M-[06a], Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
  - .2 ASTM B29-[03], Standard Specification for Refined Lead.
  - .3 ASTM B749-[03], Standard Specification for Lead and Lead Alloy Strip, Sheet and Plate Products.
- .2 Canadian Standards Association (CSA International)
  - .1 CSA-G40.20-[04]/G40.21-[04], General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
  - .2 CSA W59-[03], Welded Steel Construction (Metal Arc Welding).
- .3 Canadian Steel Door Manufacturers' Association (CSDMA)
  - .1 CSDMA, Recommended Specifications for Commercial Steel Doors and Frames, [2000].
  - .2 CSDMA, Selection and Usage Guide for Commercial Steel Doors, [1990].

**1.4 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Provide shop drawings: in accordance with Section 01 33 00 - Submittal Procedures.
  - .1 Indicate each type frame material, core thickness, reinforcements, glazing stops, location of anchors and exposed fastenings reinforcing finishes.
  - .2 Include schedule identifying each unit, with door marks and numbers relating to numbering on drawings and door schedule.

**PART 2 PRODUCTS****2.1 MATERIALS**

- .1 Cold dipped galvanized steel sheet: to ASTM A653M, [ZF75], minimum base steel thickness in accordance with CSDMA Table 1 - Thickness for Component Parts.
- .2 Reinforcement [channel]: to CSA G40.20/G40.21, Type 44W, coating designation to ASTM A653M, [ZF75].
- .3 Rolled pure sheet lead: to ASTM B29, ASTM B749, weight: 9.8] [14.6] [19.5] kg/m<sup>2</sup>, thickness 1,2mm.

**2.2 PRIMER**

- .1 Touch-up prime CAN/CGSB-1.181.

**2.3 PAINT**

- .1 Field paint steel doors and frames in accordance with Section 09 91 23 - Interior Painting, Protect weatherstrips from paint. Provide final finish free of scratches or other blemishes.

**2.4 ACCESSORIES**

- .1 Door silencers: single stud rubber/neoprene type, color gray.
- .2 Interior top bottom caps: rigid polyvinylchloride extrusion conforming to CGSB 41-GP-19Ma steel.
- .3 Fabricate glazing stops as formed channel, minimum 16 mm height, accurately fitted, butted at corners and fastened to frame sections with counter-sunk oval head sheet metal screws.
- .4 Metallic paste filler: to manufacturer's standard.
- .5 Sealant: see Section 07 92 00- Joint Sealants,

**2.5 FRAMES FABRICATION GENERAL**

- .1 Fabricate frames in accordance with CSDMA specifications.
- .2 Fabricate frames to profiles and maximum face sizes as indicated.
- .3 Interior frames: 1.2 mm welded type construction, for drywall applications..
- .4 Blank, reinforce, drill and tap frames for mortised, templated hardware, using templates provided by finish hardware supplier. Reinforce frames for surface mounted hardware.
- .5 Protect mortised cutouts with steel guard boxes.
- .6 Prepare frame for door silencers, 3 for single door, 2 at head for double door.
- .7 Manufacturer's nameplates on frames and screens are not permitted.
- .8 Conceal fastenings except where exposed fastenings are indicated.
- .9 Provide factory-applied touch up primer at areas where zinc coating has been removed during fabrication.

**2.6 FRAMES : WELDED TYPE**

- .1 Welding in accordance with CSA W59.
- .2 Accurately mitre or mechanically joint frame product and securely weld on inside of profile.
- .3 Cope accurately and securely weld butt joints of mullions, transom bars, centre rails and sills.
- .4 Grind welded joints and corners to a flat plane, fill with metallic paste and sand to uniform smooth finish.
- .5 Securely attach floor anchors to inside of each jamb profile.
- .6 Weld in 2 temporary jamb spreaders per frame to maintain proper alignment during shipment.

**PART 3 EXECUTION****3.1 MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

**3.2 INSTALLATION GENERAL**

- .1 Install doors and frames to CSDMA Installation Guide.

**3.3 FRAME INSTALLATION**

- .1 Set frames plumb, square, level and at correct elevation.
- .2 Secure anchorages and connections to adjacent construction.
- .3 Brace frames 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 wide. Remove temporary spreaders after frames are built-in.
- .4 Make allowances for deflection of structure to ensure structural loads are not transmitted to frames.
- .5 Caulk perimeter of frames Between frame and adjacent material.

**3.4 FINISH REPAIRS**

- .1 Touch up with primer finishes damaged during installation.
- .2 Fill exposed frame anchors surfaces with imperfections with metallic paste filler and sand to a uniform smooth finish.

**END OF SECTION**

**PART 1 GENERAL****1. WORK INCLUDED**

- .1 Hollow core, for intensive and interior use

**2. RELATED REQUIREMENTS**

- .1 Section 08 11 00- Metal frames.
- .2 Section 08 71 00 Door hardware.

**3. REFERENCES**

- .1 Architectural Woodwork Manufacturers Association of Canada (AWMAC).
- .2 Quality Standards for Architectural Woodwork [1998].
- .3 Canadian Standards Association (CSA International).
- .4 CSA O115-[M1982(R2001)], Hardwood and Decorative Plywood.
- .5 CAN/CSA O132.2 Series-[90(R1998)], Wood Flush Doors.
- .6 CSA Certification Program for Windows and Doors [00].

**4. ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Product Data:
  - .1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Shop Drawings:
  - .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.

**5. SAMPLES**

- .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit one 300 x 300 mm corner sample of each type wood door.
- .3 Show door construction, core, glazing detail and faces.
- .4 Manufacturer's Instructions:
- .5 Submit manufacturer's installation instructions.

**6. QUALITY ASSURANCES**

- .1 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

**7. DELIVERY, STORAGE, AND HANDLING**

- .1 Storage and Protection:
  - .1 Protect doors from dampness. Arrange for delivery after work causing abnormal humidity has been completed.
  - .2 Store doors in well ventilated room, off floor, in accordance with manufacturer's recommendations.
  - .3 Protect doors from scratches, handling marks and other damage.
  - .4 Store doors away from direct sunlight.

## **PART 2 PRODUCTS**

### **1. WOOD FLUSH DOORS**

- .1 Hollow core, for intensive and interior use, to CAN/CSA-O132.2.2.
- .2 Construction:
  - .1 Stiles: 1/8" (3mm) hardwood or thick veneer, longitudinally laminated by hot pressing with type 1 structural glue, as per ASTM-D5456-93 (LVL FSC) or laminated strand lumber (LSL), including a 7/8" (22mm) piece of hardwood, for a total width of 1 3/16" (30mm).
  - .2 Top and bottom rails: 1 3/16" (30mm).
  - .3 Core: 4 3/4" (120mm) honeycomb (100% recycled).
  - .4 Faces: Wood veneer .
  - .5 Lock Block: lock materials manufacturer's choice. Low-density wood parts 108mm wide x 508mm long.
  - .6 Glue: type 1 PVA Cross-link (NAUF) or equivalent.
  - .7 Warranty : 3 years.

### **2. FABRICATION**

- .1 Vertical edge strips to match face veneer.
- .2 Bevel vertical edges of single acting doors 3 mm in 50 mm on lock side and 1.5 mm in 50 mm on hinge side.
- .3 Radius vertical edges of double acting doors to 60 mm radius.

## **PART 3 EXECUTION**

### **1. MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

### **2. INSTALLATION**

- .1 Unwrap and protect doors in accordance with CAN/CSA-O132.2 Series, Appendix A.

- .2 Install doors and hardware in accordance with manufacturer's printed instructions [and CAN/CSA-O132.2 Series, Appendix A].
- .3 Adjust hardware for correct function.
- .4 Secure transom and side panels by means of stops, concealed fasteners or countersunk screws concealed by means of wood plugs matching panel In grain and colour.

**3. ADJUSTMENTS**

- .1 Re-adjust doors and hardware just prior to completion of building to function freely and properly.

**4. CLEANINGS**

- .1 Perform cleaning as soon as possible after installation to remove construction and accumulated environmental dirt.
- .2 Remove traces of primer, caulking; clean doors and frames.
- .3 On completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

**END OF SECTION**

**PART 1 GENERAL****1.1 REFERENCES**

- .1 American National Standards Institute (ANSI) / Builders Hardware Manufacturers Association (BHMA)
  - .1 ANSI/BHMA A156.1-[2000], American National Standard for Butts and Hinges.
  - .2 ANSI/BHMA A156.2-[2003], Bored and Preassembled Locks and Latches.
  - .3 ANSI/BHMA A156.3-[2001], Exit Devices.
  - .4 ANSI/BHMA A156.4-[2000], Door Controls - Closers.
  - .5 ANSI/BHMA A156.5-[2001], Auxiliary Locks and Associated Products.
  - .6 ANSI/BHMA A156.6-[2005], Architectural Door Trim.
  - .7 ANSI/BHMA A156.8-[2005], Door Controls - Overhead Stops and Holders.
  - .8 ANSI/BHMA A156.10-[1999], Power Operated Pedestrian Doors.
  - .9 ANSI/BHMA A156.12-[2005], Interconnected Locks and Latches.
  - .10 ANSI/BHMA A156.13-[2002], Mortise Locks and Latches Series 1000.
  - .11 ANSI/BHMA A156.14-[2002], Sliding and Folding Door Hardware.
  - .12 ANSI/BHMA A156.15-[2006], Release Devices - Closer Holder, Electromagnetic and Electromechanical.
  - .13 ANSI/BHMA A156.16-[2002], Auxiliary Hardware.
  - .14 ANSI/BHMA A156.17-[2004], Self-closing Hinges and Pivots.
  - .15 ANSI/BHMA A156.18-[2006], Materials and Finishes.
  - .16 ANSI/BHMA A156.19-[2002], Power Assist and Low Energy Power - Operated Doors.
  - .17 ANSI/BHMA A156.20-[2006], Strap and Tee Hinges and Hasps.
- .2 Canadian Steel Door and Frame Manufacturers' Association (CSDMA)
  - .1 CSDMA Recommended Dimensional Standards for Commercial Steel Doors and Frames - 2009.

**1.2 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Product Data:
  - .1 Submit manufacturer's instructions, printed product literature and data sheets for door hardware and include product characteristics, performance criteria, physical size, finish and limitations.
- .2 Hardware List:
  - .1 Submit contract hardware list.
  - .2 Indicate specified hardware, including make, model, material, function, size, finish and other pertinent information.
- .3 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
- .4 Manufacturer's Instructions: submit manufacturer's installation instructions.

**1.3 MAINTENANCE MATERIALS SUBMITTALS AND DEMONSTRATION**

- .1 Extra Stock Materials:
  - .1 Supply maintenance materials in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Tools:
  - .1 Supply 2 sets of wrenches for door closers and locksets hardware.
- .3 Maintenance Staff Briefing:
  - .1 Brief maintenance staff regarding:
    - .4 Proper care, cleaning, and general maintenance of projects complete hardware.
    - .5 Description, use, handling, and storage of keys.
      - .1 Use, application and storage of wrenches for door closers, locksets and fire exit hardware.
- .6 Demonstrate operation, operating components, adjustment features, and lubrication requirements.

**1.4 QUALITY ASSURANCE**

- .1 Regulatory Requirements:
- .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

**1.5 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Package items of hardware including fastenings, separately or in like groups of hardware, label each package as to item definition and location.
- .4 Storage and Handling Requirements:
- .5 Store materials in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
- .6 Store and protect door hardware from nicks, scratches, and blemishes.
- .7 Protect prefinished surfaces with wrapping or strippable coating.
- .8 Replace defective or damaged materials with new.

**PART 2 PRODUCTS****2.1 KEYING AND KEYS SYSTEMS**

- .1 Doors, padlocks and cabinet locks to be grand master keyed as directed. Prepare detailed keying schedule in conjunction with Departmental Representative.
- .2 Supply keys in duplicate for every lock in this Contract.

- .3 Supply 2 master keys for each master key or grand master key group.
- .4 Stamp keying code numbers on keys and cylinders.
- .5 Supply construction cores.
  - .1 Hand over permanent cores and keys to Departmental Representative.

**2.2 HARDWARE ITEMS**

- .1 Use one manufacturer's products only for similar items.

**2.3 FASTENINGS**

- .1 Use only fasteners provided by manufacturer. Failure to comply may void warranties and applicable licensed labels.
- .2 Supply screws, bolts, expansion shields and other fastening devices required for satisfactory installation and operation of hardware.
- .3 Exposed fastening devices to match finish of hardware.
- .4 Where pull is scheduled on one side of door and push plate on other side, supply fastening devices, and install so pull can be secured through door from reverse side. Install push plate to cover fasteners.
- .5 Use fasteners compatible with material through which they pass.

**PART 3 EXECUTION****3.1 INSTALLATION**

- .1 Manufacturer's Instructions: comply with manufacturer's written recommendations, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.
- .2 Supply metal door and frame manufacturers with complete instructions and templates for preparation of their work to receive hardware.
- .3 Supply manufacturers' instructions for proper installation of each hardware component.

**3.2 ADJUSTING**

- .1 Adjust door hardware, closures and controls for optimum, smooth operating condition, safety and for weather tight closure.
- .2 Lubricate hardware, operating equipment and other moving parts.
- .3 Adjust door hardware to ensure tight fit at contact points with frames.

**3.3 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
- .2 Leave Work area clean at end of each day.
- .3 Clean hardware with damp rag and approved non-abrasive cleaner, and polish hardware in accordance with manufacturer's instructions.
- .4 Remove protective material from hardware items where present.

**3.4 PROTECTION**

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by door hardware installation.

**3.5 HARDWARE GROUP**

<b>GROUP 01</b>			<b>FINI</b>
3	Hinges	FBB199 114X102 (4.5X4) NRP	630
1	Lock keys	L9080L 07B	626
1	Mortise cylinder	20-001C 114	626

**END OF SECTION**