

## **1 General**

### **1.1 REFERENCES**

- .1 Canadian Steel Door and Frame Manufacturers' Association (CSDFMA).
  - .1 CSDFMA Canadian Metric Guide for Steel Doors and Frames (Modular Construction) prepared by Canadian Steel Door and Frames Manufacturer's Association.
- .2 Canadian General Standards Board (CGSB).
  - .1 CAN/CGSB 69.32 M90/ANSI/BHMA A156.16, Auxiliary Hardware.
  - .2 CAN/CGSB 69.34 93/ANSI/BHMA A156.18, Materials and Finishes.
- .3 All hardware shall comply with requirements of the National Building Code (2015).

### **1.2 REQUIREMENTS OF REGULATORY AGENCIES**

- .1 Use ULC listed and labeled hardware for doors in fire separations.

### **1.3 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 Hardware List:
  - .1 Submit Finish Hardware Schedule electronically for approval.
  - .2 Schedule shall be written in accordance with DHI Sequence and Format for vertical hardware schedule publication.
  - .3 Schedule shall reference item and door number to hardware set specified.
  - .4 Door index to be included referencing the door number to scheduled item number.
- .3 Manufacturer's Instructions:
  - .1 Submit manufacturer's installation instructions.
  - .2 Provide template drawings as requested.

### **1.4 DELIVERY, STORAGE, AND HANDLING**

- .1 Trade Contractor to provide clean, dry locked room for storage of hardware on shelving.
- .2 Each hardware item shall be delivered to site in manufacturers original packaging. Each item shall be labeled with door and item number to correspond with hardware schedule.
- .3 All hardware will be delivered to one receiving area on site.

### **1.5 WARRANTY**

- .1 Furnish a one-year written warranty for all products.

### **1.6 WASTE DISPOSAL AND MANAGEMENT**

- .1 Collect and separate for disposal waste material generated by this Section.
- .2 Place in appropriate on-site bins in accordance with Waste Management Plan.
- .3 A clean worksite is mandatory at all times. Failure to maintain the site in a clean, safe condition shall result in the Departmental Representative initiating a clean-up and related costs being deducted from progress claims.

## **2 Products**

### **2.1 THRESHOLDS, SPRING LOADED ADJUSTABLE WEATHERSTRIP & AUTOMATIC DOOR BOTTOMS**

- .1 Thresholds are to be 12.7mm high by jamb width by door frame width thermally broken threshold and constructed of extruded aluminum with rigid P.V.C. frost insert.

- .2 Spring loaded adjustable weatherstrips are to be 14.3mm thick by 29.4mm wide with an adjusting range of 6.4mm installed on both sides and at top of door frame and constructed of clear anodized extruded aluminum and pile.
- .3 Automatic door bottoms are to be 23mm wide by 48.4mm high by door width capable of a max. drop of 20.6mm and constructed of anodized aluminum with neoprene seal surface mounted to inside face of existing exterior doors.

## **2.2 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 Use fasteners compatible with material through which they pass.

## **2.3 DOOR HARDWARE**

- .1 Locks and latches:
  - .1 Bored and preassembled locks and latches: to ANSI/BHMA A156, 4000 bored lock, grade 1, designed for function and keyed as directed by the Departmental Representative.
  - .2 Mortise locks and latches: to ANSI/BHMA A156, series 1000 mortise lock, designed for function.
  - .3 Door Handles: Lever Style - Quarter turn to open.
  - .4 Normal strikes: box type, lip projection not beyond jamb.
  - .5 Cylinders: key into keying system as directed by Departmental Representative.
  - .6 All corresponding cylinders to be removable.
- .2 Butts and hinges:
  - .1 Butts and hinges: to ANSI/BHMA A156.
  - .2 Interior hinges of steel, unless otherwise indicated.
  - .3 Quantity, size and width of hinges in accordance with manufacturer's recommendations and ANSI/BHMA 156.
- .3 Door Closers and Accessories:
  - .1 Door controls (closers): to ANSI/BHMA A156, size/select in accordance with ANSI/BHMA A156. Table A1.
  - .2 Closers of narrow, slim line design complete with backcheck, rack and pinion hydraulic action.
  - .3 Adapter plates for added reinforcing shall be added to any opening if required to suit field conditions or door design.
  - .4 Closers shall include all necessary arm brackets, cushion arm supports and blade stop spacers to suit door swing, frame reveals or stop conditions.
  - .5 Closers capable of field adjustments of at least fifteen (15) percent.

## **2.4 KEYING**

- .1 Doors, padlocks and cabinet locks to be keyed as directed by Departmental Representative. Prepare detailed keying schedule for approval by Departmental Representative
- .2 Provide keys in triplicate for every lock in this Contract.
- .3 Stamp keying code numbers on keys and cylinders.
- .4 Provide construction cores.
- .5 Provide all permanent cores and keys to Departmental Representative.

## **3 Execution**

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### **3.1 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 Furnish metal door and frame manufacturers with complete instructions and templates for preparation of their work to receive hardware.
- .3 Recommend mounting heights shall be in accordance with Canadian Metric Guide for Steel Doors and Frames (Modular Construction) prepared by Canadian Steel Door and Frame Manufacturer's Association.
- .4 Furnish manufacturers' instructions for proper installation of each hardware component.

### **3.2 INSTALLATION**

- .1 Install hardware to standard hardware location dimensions in accordance with Canadian Metric Guide for Steel Doors and Frames (Modular Construction) prepared by Canadian Steel Door and Frame Manufacturers' Association.
- .2 Use only manufacturer's supplied fasteners. Failure to comply may void manufacturer's warranties and applicable licensed labels. Use of "quick" type fasteners, unless specifically supplied by manufacturer, is unacceptable.

### **3.3 ADJUSTING**

- .1 Adjust door hardware, operators, closures and controls for optimum, smooth operating condition, safety, weather tight closure and to provide tight fit at contact points with frames.

### **3.4 CLEANING**

- .1 Perform cleaning after installation to remove construction and accumulated environmental dirt.
- .2 Clean hardware with damp rag and approved non-abrasive cleaner, and polish hardware in accordance with manufacturer's instructions.
- .3 Remove protective material from hardware items where present.

### **3.5 PROTECTION**

- .1 Provide proper protection of all hardware items until Departmental Representative accepts project as complete.

**END OF SECTION**

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