

**Part 1 General****1.1 Summary**

- .1 Unless otherwise indicated, follow the standards below when specifying hardware work. These standards are not intended to restrict or replace professional judgment.
- .2 Unless otherwise indicated, all standard hardware sets were established to suit single door leaf of 36" (915 mm) x 84" (2135 mm) x 1 3/4" (45 mm).

**1.2 Design Requirements**

- .1 All existing locksets that are removed shall be taken back by McGill. Coordinate with the Project Manager.
- .2 The keying needs have to be elaborated by McGill University. Contact the Project Manager for questions concerning keying and key sections. McGill has its own master keyway.
- .3 For projects involving more than 20 doors, the Project Manager shall supply the contractor with an authorization letter, from McGill's Security Services, authorizing the contractor to order the Medeco keys and cylinders. After receiving this official authorization letter from McGill's Security Services, Medeco shall supply the required number of cylinders directly to the contractor and shall send the required number of keys directly to McGill's Security Services for sign out. Contractors must wait for confirmation, from McGill's Security Services, that the keys have been distributed before changing any locks. Provide a minimum of 5 keys per lock / cylinders (quantity to be confirmed by McGill Project Manager).
- .4 For each project, the Project Manager and a representative from McGill's Security Services will meet with the client to determine the required master keying system.
- .5 For fewer than 20 doors, Medeco keys and cylinders shall be supplied and installed by McGill
- .6 For a project of more than 20 doors, McGill's Security Services will supply Medeco with the required codes. Medeco will provide the cylinders to the subcontractor.
- .7 Temporary construction master keys and cylinders are to be included for every project and used during the construction period, five (5) copies of the construction master key is to be given to the McGill Project Manager at the beginning of the project. For a project with fewer than 20 doors, the temporary keys and cylinders will remain McGill University property and for a project of more than 20 doors, temporary cylinders and keys will remain the general contractor's property (less the 5 keys returned to McGill) once removed following the installation of the permanent Medeco cylinders.
- .8 All hardware for doors in fire separations and exit doors shall be certified by the Canadian Certification Organization accredited by Standards Council of Canada. (Ex.: ULC and CSA.)
- .9 Interior electromagnetic locks are restricted in use. They can be accepted in limited circumstances through consultation with Campus Public Safety.

- .10 When renovating a selected area and changing the locks, migrate to a Medeco keyway. If the change is to a lock with a numeric keypad or a card reader, the override lock must be on the Medeco keyway. Exceptions must be approved by Building Operations and Security Services.
- .11 The installation of new locks not supported or approved by McGill Building Operations or Security Services is forbidden. Users of Lister Locks may continue to use their services to cut new keys for existing locks only. Users who violate this policy will be obliged to conform to it at their own or their department's expense.
- .12 Where a door, or series of doors, restricts movement along a principal circulation artery, electromagnetic hold-open devices shall be used to maintain the continuity of the path of travel, where permitted by the Quebec Construction Code.
- .13 In addition to providing power door operators for entrance doors as prescribed by the Quebec Building Code, power door operators are also required:
  - .1 If an existing door is not readily operable, i.e. more than 38 N is required to open an exterior door and more than 22 N is required to open an interior door.
  - .2 When the minimum door width cannot be provided
  - .3 When the minimum clear space required beyond the latch side of the door cannot be provided
  - .4 When the minimum clear floor area required on the push and pull sides of the door cannot be provided
- .14 Finishes:
  - .1 McGill must approve finishes and models.
  - .2 In the case of hardware replacement, refer to the existing hardware and finishes as much as possible.
  - .3 For new installations, 630 stainless steel finish is the standard finish for locksets and exit devices and hinges on exterior doors, other components to be plated to match if not made of stainless steel.
- .15 The installation of electric strikes in fire rated doors is not permitted unless required for automatic door operator compatibility.
- .16 Where card readers are required on fire rated doors, electrified mortise locks or electrified exit device shall be used.
- .17 Whenever an existing door, with any type of security equipment (i.e.: card reader, contacts, siren, etc.), has to be modified or removed, McGill's Security Services must be advised. The contractor shall not remove or modify this type of equipment. This is the responsibility of McGill's NCS Department.
- .18 Panic bars shall be installed on doors in
  - .1 Fire exits in buildings or rooms with an occupant load greater than 100 people.
  - .2 Rooms with two (2) points of access that may be used for occupancies other than what the normal design is for, such as Special Events (lounges, conference rooms, recording studios, etc.) used occasionally for large gatherings.

**1.3 Guarantee**

- .1 Guarantee is required for all work under this section for a period of one (1) year from the date of substantial completion of the work, exception for the door closers that is guaranteed for 10 years, mortise locks and exit devices for a period of three (3) years.

**Part 2 Products****2.1 Preferred Products**

- .1 For products with Environmental Product Declarations (EPDs), which may contribute to LEED® v4 MR Credit Building and Disclosure Optimization – Environment Product Declarations, refer to:
  - .1 UL Environment <http://productguide.ulenvironment.com/>
- .2 For products with a manufacturer inventory and/or with Health Product Declarations (HPDs), for LEED® v4 MR Credit Building Product Disclosure and Optimization – Material Ingredients, refer to:
  - .1 Declare Product Database [www.living-future.org/declare-products](http://www.living-future.org/declare-products)
  - .2 HPD Library <http://hpd.smithgroupjir.org/>
- .3 Materials that are locally sourced (extracted, manufactured, and purchased) within 160 km (100 miles) are preferred and will increase cost values for credit calculations in the Materials and Resources Building Product Disclosure and Optimization credits.

**2.2 Door Hardware**

- .1 Locksets:
  - .1 Specify mortise type, lever handle locksets equipped with Medeco type lock cylinders, in a master-key system to be designed by McGill. With each lockset, furnish companion strike as indicated, for installation on doorjamb.
  - .2 Manufacturer/Model of Lock/Latch Sets: Specify the following units, or equivalent products of Corbin ML2000 series for renovations in existing buildings.
    - .1 Office Lockset: ML2051-NSA
    - .2 Classroom Lockset: ML2055-NSA
    - .3 Free Passage Lockset: ML2010-NSA
    - .4 Service/Storage Room Lockset: ML2057-NSA
    - .5 Privacy lockset: ML2020-NSA
    - .6 Universal Toilet Room: ML2030-NSA with M34 ergonomic thumb turn inside and emergency release tool outside.
    - .7 Mechanical Room/ Telecom Room/ Elev.+Service Room: ML2057-NSA
    - .8 Stairways, corridors and high traffic spaces: Mortise ML 2010-NSA
    - .9 Fail secure electrified mortise lock for access control (card reader) and fire-rated doors applications: ML20906 NSA x 12VDC x M92

(For some application, the build-in latch bolt monitoring suffix M91 or build in latch bolt monitoring M91 plus security monitor M105 may be required. To be coordinated with McGill Project Manager and NCS) .

- .3 Where existing cylindrical lockset existed, added locks during minor renovations should be cylindrical, CL3300 NZD x 626 series from Corbin/Russwin to be used. Buildings that have cylindrical locksets are:

- # 101 - 1033 des Pins
- # 112 – James Administration
- # 122 – New Chancellor Day Hall
- # 245 – New Music Elizabeth Wirth
- # 189 – Rutherford Physics
- # 236 – Brown Students Services
- # 229 – Wong
- # 233 – 688 Sherbrooke
- # 249 – Durocher

.2 Strike Plates:

- .1 Specify handed-type strike plates with curved lip; flat (non-handed) strikes are not permitted.
- .1 Specify strike plates with extended lips where required to protect the doorframe and trim from being marred by latch bolt. Specify strike plates that project not more than 1/8 inch beyond doorframe trim at single doors; and flush with the face of doors at double (pair) door applications.
  - .2 Specify custom-fabricated strike plates at existing doorframes if required for compatibility with new lockset or latch set units. Fabricate units of base metal and finish specified. Specify units manufactured by Rockwood or equivalent.

.3 Hinges:

- .1 Interior Hinges:
- .1 For all light and medium traffic doors such as classrooms, offices, storage rooms, utility rooms, doors that require door closers such as fire-rated classrooms and office doors, reasonable traffic washrooms and stairway doors, etc., shall be Medium-Duty (2 ball bearings per hinge) type TA2714, N.R.P. (non-removable pin) by "McKinney" or BB1279 (minimum 4 ½" x 4") 646, N.R.P. (non-removable pin) by Hager. All hinges on washroom doors or custodial areas opening toward inside the room to have stainless steel base hinges such as TA2314, N.R.P. (non-removable pin) by "McKinney" or BB1191 (minimum 4 ½" x 4") x 630, N.R.P. (non-removable pin) by Hager.
  - .2 For all heavy traffic doors that require door closers, such as exterior doors, student washrooms, high traffic stairways (those in buildings with no elevators), etc., shall be Heavy-Duty (4 ball bearings per hinge) type T4A3786, N.R.P. (non-removable pin) by "McKinney" or BB1168 (minimum 4 ½" x 4") C15, N.R.P. (non-removable pin) by Hager. All

hinges on washroom doors or custodial areas opening toward inside the room to have stainless steel base hinges such as T4A3786, N.R.P. (non-removable pin) by "McKinney" or BB1199 (minimum 4 1/2" x 4") x 630, N.R.P. (non-removable pin) by Hager.

- .2 Exterior Hinges:
  - .1 Hinges: shall be type T4A3386 by "McKinney," N.R.P. (non-removable pin).
  - .2 Specify 5-knuckle, 4 ball-bearing hinges; swaged; inner leaf bevelled; with square corners; non-removable pin, complete with set screw (knurled pin not acceptable); and as follows:
- .3 Size and Weight: Specify hinges sized and quantity as follows:
  - .1 Doors not wider than 3 feet nor taller than 7 feet 6 inches:
    - .1 3 hinges Size: 4-1/2 inches by 4 inches.
  - .2 Doors not wider than 3 feet nor taller than 7 feet 6 inches for heavy traffic
    - .1 4 hinges size: 4-1/2 inches by 4 inches.
  - .3 Doors wider than 3 feet or taller than 7 feet 6 inches:
    - .1 4 hinges size: 5 inches by 4 inches.
  - .4 Doors wider than 3 feet or taller than 7 feet 6 inches for heavy traffic
    - .1 4 hinges size: 5 inches by 4 inches.
  - .5 Doors 1-3/8 inches thick and not wider than 3 feet nor taller than 7 feet:
    - .1 4-1/2 inches by 4 inches.
- .4 McGill will not accept alternative manufacturers of hinges.
- .5 Doors with exit device to have a quantity of minimum 4 hinges regardless the height.
- .6 Continuous hinge: For special application and design such as door with cage or cart passage or aluminum door, continuous hinges may be used. Use only extra heavy-duty type continuous hinge such as the 300 series from Markar for all wood and hollow metal doors and series \_FM\_\_SLF-1000 from Pemko for aluminum doors and frames.

.4 Exit Devices (Panic Bars):

- .1 Non-Fire-Rated concealed Mounted Vertical Rod Type Exit Device:
  - .1 For use on pairs of doors Concealed mounted, vertical rod type units activated by a partial-width touch-bar, complete with accessories including strike. Equip units with cylinder key operated dogging device mounted on mechanism housing to hold the touch-bar depressed and the latch bolt in the retracted position.
  - .2 Exit Devices with Night latch: Von Duprin model CD9847NL, 996NL-V trim.
  - .3 Exit Devices with Dummy trim : Von Duprin model CD9847DT, 996DT trim.
  - .4 Exit Devices with Exit only: Von Duprin model 9847EO.
  - .5 Exit Devices with lever: Von Duprin model CD9847L-06, 996L-R/V trim.

- .6 LBR, less bottom rod Exit device option to be considered on openings with non-security applications; Example: Corridor egress doors. LBR exit devices shall not be used on the exterior door.
- .2 Fire-Rated Concealed Mounted Vertical Rod Type Exit Device:
  - .1 Fire-rated, ULC listed, concealed mounted, vertical rod type units activated by a partial-width touch-bar, complete with accessories including strike.
  - .2 Exit Devices with night latch: Von Duprin model 9847NL-F, 990NL-V trim.
  - .3 Exit Devices with exit only: Von Duprin model 9847EO-F.
  - .4 Exit Devices with lever: Von Duprin model 9847L-F-06, 996L-R/V trim.
  - .5 LBR, less bottom rod Exit device option to be used on openings with non-security applications; Example: double-egress corridor fire-rated doors. LBR exit devices shall not be used on the exterior door.
- .3 Non-Fire-Rated Mortise Type Exit Device: for high traffic doors.
  - .1 Surface mounted, vertical rod type units activated by a partial-width touch-bar, complete with accessories including strike. Equip units with cylinder key operated dogging device mounted on mechanism housing to hold the touch-bar depressed and the latch bolt in the retracted position.
  - .2 Exit Devices: Von Duprin model 9875L, 996L-M-06 trim.
- .4 Fire-Rated Mortise Type Exit Device:
  - .1 Fire-rated, ULC listed; mortise type units activated by a partial-width touch-bar, complete with accessories including strike.
  - .2 Manufacturer/Model of Exit Devices: Von Duprin model 9875L-F, 996L-M-06 trims.
- .5 Door Closers:
  - .1 Specify closers with field-adjustable, full range sizing feature capable of complying with the manufacturer's size recommendations for application indicated; and complying with applicable portions of the Americans with Disabilities Act (ADA). Fasteners should always be coordinated with door and frame materials.
  - .2 Unless otherwise indicated, mount closer bodies on room side (not corridor side) of doors. Refer doubtful conditions to the architect for decision.
  - .3 Interior Closers:
    - .1 For regular access doors shall be Heavy-Duty type LCN 4040XP 689 finish. Door closers to be installed parallel on LHR and RHR doors, regular or standard mounting on LH or RH doors.
  - .4 Exterior Closers: 4040XP-SCUSH 689
    - .1 For accessibility doors shall be type LCN P4041 DEL 689 finish.
- .6 Door Operators:
  - .1 Power assist and low-energy power operated doors: to CAN/CGSB-69.35.
  - .2 General: Of size recommended by the manufacturer for door size, weight, and movement; for condition of exposure; and for long-term, maintenance-free operation under normal traffic load for type of occupancy indicated.
    - .1 Type: Low-energy power operated, complying with ANSI/BHMA A156.19.

- .2 Connections: For power and control wiring.
- .3 Adjustment Features: Fully adjustable without removing entrance doors, including On/Off Feature: On/off/hold-open switch controls electric power to the operator.
- .3 Power door operators: Self-contained overhead units, with closing speed controlled by gear train and dynamic braking action of electric motor and with manual operation and spring closing when power is off.
  - .1 Closing Mechanism: Power-assisted spring operated.
  - .2 Mounting: Surface, otherwise specified.
  - .3 Manual Operation: Requires less than 9 lbf to set door in motion when power is off, according to ANSI/BHMA A156.10.
- .4 Manufacturer/Model No. of Door Operator: Stanley Magic Force, finish 689 or Ditec/Entrematic HA8 Including all necessary accessories Ex: Wall-mounted plate actuators, motion sensors and/or presence detectors.
- .5 Specify latch monitors for operators used in conjunction with deadbolts.
- .6 Motion detectors are recommended for exteriors rather than push plates.
- .7 Architectural Door Trim:
  - .1 Push plates shall be 100 mm x 405 mm (4" x 16") stainless steel type 70C by Rockwood or approved equivalent. Pulls shall be 111 x 70C by Rockwood.
  - .2 Push /Pull Set:
    - .1 Specify pull handles and push plates with concealed mounting fasteners wherever possible, and as follows:
    - .2 Material: Solid stainless steel.
    - .3 Finish: Satin.
    - .4 Manufacturer/Model of Push/Pull Set: Subject to compliance with requirements, specify the following, or equivalent products of Rockwood, Trimco/BBW, Ives, CBH, and Hager in 630 finishes.  
Push Plates: Example Rockwood; No. 70C (4 inches by 16 inches).  
Pulls: Examples Ives; No. 111 x 70C (10 inches by 1 inch diameter; (4 inches by 16 inches) base plate.
  - .3 For design or functional purposes (example: aluminum main entrance door, push and pull with a deadbolt, etc.), door pulls and push plates may vary from the standards but must be made of stainless steel, provided in 630 finish and with heavy-duty mountings. To be approved and reviewed by McGill Project Manager.
- .8 Pick proof plate:

All exterior reverse swing doors and interior reverse swing doors that lead to a suite or sector shall have a security latch astragal.

  - .1 Rockwood 325 626 on fire rated door
  - .2 Royal Arch AST83SS 630 on non-fire-rated door

.9 Coded Locks (to be avoided):

.1 Interior Coded Locks:

.1 L1021M Kaba-Ilco with Medeco key plug (supplied and installed by the Contractor & keyed by McGill).

.2 Exterior Coded Locks: Non Acceptable.

.10 Card Readers:

.1 All hardware to be supplied and installed by the general contractor (including electric handle or strike, contact and all 12 V DC wiring).

.2 12 V DC power to be supplied by McGill to secure junction box above the door. 2X12 port terminal blocks to be supplied and installed by the general contractor in the junction box to accommodate wiring.

.3 General contractor to wire up all the devices at the door; terminate them on the south side of the terminal blocks.

.4 General contractor to run the wiring from junction box back to the NCS closet; wiring to be connected on the north side. The general contractor's responsibility for running this wiring will be determined in the design phase on a per-project basis – if the general contractor is deemed not responsible for it, NCS will arrange for this wiring between our NCS closet and the terminal blocks.

.5 Cabling:

.1 All wires shall be white

.2 Reader cable: 1 x 6-18 (Belden 5342FE)

.3 Electric door locking (strike, door handle, crash bar): 1 x 2-18 (Belden 5300FE)

.4 Contact cable: 1 x 4-22(JKT) (Belden 5522UE)

.5 Request To Exit (REX): 1 x BDN Cat5E (Belden 1200)

.6 Door operating device motor cable interface (Optional) : 1 x 6-18 (Belden 5342FE)

.7 Tamper switch for reader (Optional) 1 x 4-22(JKT) (Belden 5522UE)

.8 Buzzer (Optional) : 1 x 4-22(JKT) (Belden 5522UE)

.6 Hardware list:

.1 Flush mounted contacts (**Model to be determined as needed by McGill Network & Communication Services (NCS)**) :

.1 Metal doors: Interlogix/Sentrol **1076D-N/1078C-N/ 1078W-N**

.2 Wooden doors: Interlogix/Sentrol 1072C-N

.3 Metal entry/exit doors with a channel in the top of the door:  
Interlogix/Sentrol R1078

.2 Surface mounted contacts:

.1 To be used solely when flush mounted contacts are not possible:  
Interlogix 1085T-N

.3 Reader : HID (Model to be determined as needed by McGill Network & Communication Services (NCS)), Regular reader: 920PTNTEK00000, Keypad reader: 921PTNTEK00000 (for additional security and specific uses, to be used if recommended by Security Services). Slim reader: 910PTNTEK00000 (for use on the lateral mullion of doors with sidelights).



- .4 Terminal blocks: Weco 323(-HDS) 12 Poles
- .5 Buzzer (Optional): Piezo-A-Lert PAL-328
  
- .7 Installation:
  - .1 For all installations: metal wire mold or conduit shall be used if wires cannot be fished or concealed in the walls/floors/ceiling. Plastic PVC wiremold shall not be accepted. All installations should have metal conduit, plastic is not allowed.
  - .2 At closet end, all wires are to be tagged (room number / device, etc.) and brought to appropriate panels. At least 10 feet of slack is expected on all cabling. NCS, will have to be present to provide the contractor with access to the NCS closet.
  - .3 Detailed wiring information will be provided when the general contractor/subtrade is prepared to complete the installations.
    - .1 Card reader: shall be installed 36 inches (Center) to the ground and 6-pair wire to be terminated upon onsite instructions provided by NCS/TIS.
    - .2 Card reader with door operator: 6-18 cable to be brought inside the motor above door.
    - .3 Junction box above door- on SECURED Side: wires from various components to be connected in box, on the south side of the terminal poles (information to be supplied to contractor onsite when required).
    - .4 BDN, contacts and JKT: work wiring information to be supplied to contractor onsite when required.
    - .5 Buzzer (optional): to be installed on secure side of door, on single gang faceplate : (information to be supplied to contractor onsite when required).
  
- .11 Electric Strikes (to be avoided):
  - .1 Shall be supplied and installed by the contractor. The 12 V power shall be supplied by McGill.
  - .2 For metal non-fire rated frames; shall be series 1500 x 2005M3 by HES or approved equivalent, voltage 12V.
  - .3 For wood frames; shall be series 1500 x 2005M3 by HES or approved equivalent, voltage 12V.
  
- .12 Automatic Door Bottom/ Door Bottom Seal:
  - .1 Specify manufacturer's standard units of type, size and profile indicated, continuous at bottom of indicated door opening. Specify non-corrosive fasteners.
  - .2 Manufacturer/Model Automatic Door Bottoms:
    - .1 For existing and new doors shall be surface mounted type Pemko 412CPKL or Legacy 7123CA.
    - .2 For new doors where aesthetic consideration is required shall be mortise type, Pemko 434APKL (wood door) / 420ASL (hollow metal door) or Legacy 7463CA (wood door) / 7553MA (hollow metal door). For

maintenance purposes, mortise door bottom shall only be used when the opening aesthetic is important, otherwise use surface door bottom as listed in 12.2.1,

.13 Electromagnetic Hold-Open Device:

- .1 Specify units consisting of a silently operating wall-mounted electromagnet in electrical box with cover plate and door-mounted contact plate. Specify contact plate with swivel adjustment that adjusts to door contact angle indicated on drawings. Specify units that ULC listed.
- .2 Minimum holding force: 25 lbs.
- .3 Operating Voltage: 12VDC or 120VAC.
- .4 If the above is required to be activated/deactivated by LENEL, the voltage needs to be confirmed. LENEL usually takes 12V .
- .5 Finish: Brushed zinc on all visible components.
- .6 Manufacturer/Model: LCN model 7830 or Rixson equivalent (surface-mounted).
- .7 Manufacturer/Model: LCN model 7840 or Rixson equivalent (recessed).

.14 Door Silencers (bumper): supplied and installed by the door manufacturer.

.15 Door Stop and overhead stop: Reinforce the substrate as recommended.

- .1 Colour of resilient parts: Grey
- .2 Manufacturer / model of stops: Rockwood model indicated or equivalent products of Trimco/BBW.  
Model no: 441H (universal floor mount)  
Model no: 480H/481H (floor mounted, for mortise door bottom application)  
Model no: 415 (universal high impact wall mounted)  
Model no: 416 (wall mounted for cylindrical lockset application with a push button on the lever > Privacy and office functions)  
Model no: 459 Plunger type door holder  
Model no: 461L Kick down holder

When required, specify heavy-duty overhead concealed door stop. If low ceiling condition, use heavy-duty surface door stop.

Manufacturer/Model of Overhead Door Stops/Holders:-Rixson #1 series for concealed application and Rixson #9 series for surface application.

.16 Manual/Automatic Flush Bolts:

- .1 Manual Flush Bolts: Mortise units, ULC listed and rated for indicated application, with spring loaded snap action levers for manual operation.  
Manufacturer/Model of Manual Flush Bolts: Specify Ives or Rockwood equivalent products as follows:
  - .1 Metal Doors: FB458 (Ives) / 555 (Rockwood), both top and bottom bolts.
  - .2 Wood Doors: FB358 (Ives) / 557 (Rockwood), both top and bottom bolts.

- .2 Constant Latching Flush Bolts: Mortise units, ULC listed and rated for indicated application, with automatically retracting bottom bolt, and manually released top bolt when active leaf is opened.
  - .1 Manufacturer/Model of Constant Latching Flush Bolts: Specify Ives or Rockwood.
    - .1 Metal Doors: FB51P (Ives) / 2845 (Rockwood)
    - .2 Wood Doors: FB61P (Ives) / 2945 (Rockwood)
  - .3 Automatic Flush Bolts: Mortise units, ULC listed and rated for indicated application, automatically retracting when active leaf is opened.
    - .1 Manufacturer/Model of Automatic Flush Bolts: Specify Glynn-Johnson, or equivalent products of H.B., Ives, Rockwood.
      - .1 Metal Doors: FB31P (Ives) / 2842 (Rockwood)
      - .2 Wood Doors: FB41P (Ives) / 2942 (Rockwood)
- .17 Coordinator:
  - .1 A coordinator is a device coordinating pairs of doors with astragals ensuring proper closing sequence. Specify coordinators complete with carry-bar and UL listed and rated for indicated application.
    - .1 Manufacturer / model of door coordinator: specify Trimco/BBW
      - .1 Model: Series 3094 complete with filler bar and mounting brackets 3095 or 3096 if required and suited for the door size as manufactured by Trimco/BBW.
- .18 Thresholds:
  - .1 Specify manufacturer's standard, extruded, anodized aluminum units of type, size, and profile indicated. Specify units continuous across bottom of door openings. Select profile and dimension to suit the application.

Specify noncorrosive fasteners.

    - .1 Manufacturer/Model: Pemko or equivalent products of Hager, Legacy or Zero.
    - .2 With thermal break and stop for exterior doors.
    - .3 All threshold to meet barrier-free design code.
- .19 Weather-Stripping:
  - .1 Weather stripping: Shall be installed continuously at both jambs and at the head with heavy-duty strips consisting of cellular neoprene bars set into extruded aluminum bumpers, surface-mounted to frames.
  - .2 Head and jamb seal:
    - .1 Specify manufacturer's standard weatherstripping of type, size and profile indicated, continuous at head and jamb edges of each indicated door opening. Specify non-corrosive fasteners.
    - .2 "CR" suffix below is for clear anodized aluminum finish. Change to "DR" suffix for dark bronze anodized aluminum finish.
    - .3 Manufacturer/Model Jamb Seals: Example Legacy 7123CA, or equivalent products of Zero.

- .4 Specify manufacturer's standard sound attenuating jamb and head seals of type, size, and profile indicated, continuous at head and jamb edges of scheduled door openings. Specify units with noncorrosive fasteners.
- .5 Manufacturer/Model: Pemko No. 350 CSR, or equivalent products of Legacy or Zero.
- .6 Self-adhesive seals at door perimeter are prohibited. Where door seals are required for smoke and sound purposes, use seals as recommended in section 19.2.3 .
- .3 Door bottom seal (sweep):
  - .1 Specify manufacturer's standard weatherstripping of type, size and profile indicated, continuous at bottom edges of each indicated door. Specify non-corrosive fasteners.
  - .2 Suffix below is for clear anodized aluminum finish. Change suffix to "d" for dark bronze anodized aluminum.
  - .3 Manufacturer/Model door bottom seals: Example Pemko; No. 18062C, or equivalent products of Hager, Legacy-or Zero.
- .20 Astragal (full door height)
  - .1 Manufacturer/Model of Astragals: Example Legacy 7383CA with suffix SLC (Strike lip cavity) where required. On an exterior door, use security fasteners.
- .21 Fastenings: Use only the fasteners supplied by the hardware manufacturer. **No self-tapping screw.**
  - .1 Supply screws, bolts, expansion shields and other fastening devices required for satisfactory installation and operation of hardware.
  - .2 Exposed fastening devices to match finish of hardware.
  - .3 Use fasteners compatible with material through which they pass.
- .22 Kick Plates (protective plate)
  - .1 Specify solid metal units as follows:
    - .1 Material: Stainless steel.
    - .2 Finish: Satin.
    - .3 Size: 1 1/2 inches less than door width on push side, 1" inch less than door width on pull side, by 0.050-inch thick or otherwise. Kick plates to be size considering other hardware components such as astragals, perimeter seals, surface door bottom, etc.
    - .4 Manufacturer/Model of Kick plates: Example Rockwood K1050 B4E CSK
    - .5 Unless otherwise specified, all kick plates should be installed with countersunk screws (CSK) and with bevel on all 4 edges (B4E).
    - .6 Kick plate to be on both sides of every wood and hollow metal doors.
    - .7 Kick plate height to be minimum 203 mm unless incompatible with the door elevation.
    - .8 Kick plate on door with cage or cart passage to be 762 mm in height unless incompatible with the door elevation.

- .9 Kick plate higher than 406 mm and installed on fire door should be fire rated (K1050F from Rockwood) with screw mounting, half-round screw head with countersunk screw holes.

## 2.3 Door Hardware Sets

### .1 Following Sections:

0. Typical access control
1. Animal Facilities
2. Classrooms, General
3. Classrooms, Supplementary Requirements
4. Corridors and Hallways
5. Custodial Areas
6. Electrical rooms
7. Entrance Vestibules
8. Laboratories
9. Landscape
10. Mechanical Rooms
11. Offices
12. Roofs
13. Staff rooms
14. Stairs and Ramps
15. Telecommunication Data Rooms
16. Washrooms
17. Exterior door
18. Daycare
19. Meeting room
20. Glass door

**The following hardware sets reflect McGill University standards and are based on regular applications. They are to be used as a guideline and do not intend to replace professional judgment. Hardware sets may vary according to the opening configuration and applicable building codes. For any application not expressed in the following hardware sets, guideline procedures can be found in the specification section.**

## Hardware set 0.1 / Typical card reader access control door

Application:			
- Single door NON-FIRE-RATED - For hollow metal door and frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
2	Heavy duty full mortise hinges T4A3786 114 mm x 101 mm x NRP	646	MCKINNEY
1	Concealed circuit electric hinge T4A3786 114 mm x 101 mm x QC12	646	MCKINNEY
1	Electrically controlled mortise lockset with request to exit ML20906-SEC NSA x D134 x SA114 x M17 x M92 x 12VDC x L4-6 x KA1 (latch bolt monitor option M91 if required by Security Services).	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0200 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Door closer 4040XP See note 1	689	LCN
1	Kick plate K1050-254mm x 878mm x B4E x CSK	630	ROCKWOOD
1	Wall stop 415	619	ROCKWOOD
1	Or Concealed overhead stop if no wall behind the doors 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON
1	Door position switch Wooden doors:1072 Metal doors: <b>1076/1078</b> Metal entry/Exit doors with a channel in the top of the door: R1078 <b>Surface mounted: 1085</b>		SENTROL
1	Quick connect cable QC-C3000P (From electric hinge to junction box above the door)		MCKINNEY
1	Quick connect cable QC-C300P (In the door between electric lockset to electric hinge, to be coordinated with door elevation)		MCKINNEY
1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR0.1-REV180506		ARD
1	Card Reader Regular*: 920PTNTEK00000 Keypad*: 921PTNTEK00000 Slim*: 910PTNTEK00000 *See 2.2.10.3.3 for selection criteria		HID
1	Terminal Blocks 323(--HDS) 12 poles		WECO
1	Buzzer (Optional) PAL-328		PIEZO-A-LERT

## Note:

1. Electrical conduits, electrical junction boxes, pull cords and card reader (wire to the junction box) to be supplied and installed by **Electricity**.
2. All electrified components specified in this hardware group to be supplied, installed and wires by this section including wires between them up to the junction boxes. All wires to be identified and run up to the ceiling junction box, final wiring to be done by McGill University (NCS). (Refer to the section 3.2 – Hardware Final Wiring.)
3. 12VDC electric power source for the electric lock set to be supplied, installed and wired by McGill University (NCS). (Refer to the section 3.2 – Hardware Final Wiring.)
4. Mode of operation:
  1. From secure side of the door, the card reader momentary unlock the electric lock and the door can be open.
  2. From the unsecured side of the door, door can be pulled open using the lockset (always free exit), lockset send a request to exit signal to the access control.
5. For security reasons, a pick plate shall be added to this group.



**Hardware set 1.1 / Animal Facilities with cages or carts passage**

Application: - Single door NON-FIRE-RATED - For hollow metal door and frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
1	Adjustable hinge guard HG305 x M91-002 x 2135 mm	630	MARKAR
1	Deadlock classroom function DL 4117 x D134 x M40 x L4-6 x KA1	619	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0200 x CT-Z46 x EMK x KD+ 94-0188	626	MEDECO
1	Push and pull set BF110-70C-low mount x 92 x CFC/CFTT Mtg#9	630	ROCKWOOD
1	Door closer 4041 DEL See note 1	689	LCN
1	Kick plates K1050-711mm x 850mm x B4E x CSK (push side) (Install above the automatic door bottom)	630	ROCKWOOD
1	Kick plates K1050-762mm x 875mm x B4E x CSK (pull side)	630	ROCKWOOD
1	Wall stop 415 Or Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	619	ROCKWOOD
1	Protector bar R102LPB	630	ROCKWOOD
1	Perimeter gasketing 513 CA x 1/915 mm x 2/2135 mm non-corrosive fasteners (Add mounting bracket 5823 SB if surface overhead stop is used)	628	LEGACY
1	Automatic door bottom 7123 CA x 915 mm	628	LEGACY
	If an automatic door operator is required, delete the door closer and add :		
1	Monitoring strike SCC-028-312-SPDT		ARD
1	Automatic door operator HA8-SP Ditec	628	ENTREMATIIC
2	Push button PBR45 BEA Ditec	630	ENTREMATIIC

1	Presence detector Bodyguard BEA Ditec		ENTREMATIC
1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR1.1		ARD

## Note:

1. Electrical conduits, electrical junction boxes, pull cords and 120 V electric power source to be supplied, installed and wired by Electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them. Where require, the 120 V electric power source will be supplied and wired by Electricity.
3. Interlock could be required, to be confirmed with McGill project manager and coordinate with the hardware consultant.

**Hardware set 1.1 a / Animal Facilities without cages or carts passage**

Application: - Single door NON-FIRE-RATED - For hollow metal door and frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
3	Hinges T4A3786 114 mm x 101 mm NRP	646	MCKINNEY
1	Deadlock classroom function DL 4117 x D134 x M40 x L4-6 x KA1	619	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0200 x CT-Z46 x EMK x KD + 94-0188	626	MEDECO
1	Push and pull set BF110-70C-low mount x 92 x CFC/CFTT Mtg#9	630	ROCKWOOD
1	Door closer 4041 DEL See note 1	689	LCN
1	Kick plates K1050-711mm x 850mm x B4E x CSK (push side) (Install above the automatic door bottom)	630	ROCKWOOD
1	Kick plates K1050-762mm x 875mm x B4E x CSK (pull side)	630	ROCKWOOD
1	Wall stop 415 Or	619	ROCKWOOD
1	Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON
1	Perimeter gasketing 513 CA x 1/915 mm x 2/2135 mm non-corrosive fasteners (Add mounting bracket 5823 SB if surface overhead stop is used)	628	LEGACY
1	Automatic door bottom 7123 CA x 915 mm	628	LEGACY
	If an automatic door operator is required, delete the door closer and add :		
1	Monitoring strike SCC-028-312-SPDT		ARD
1	Automatic door operator HA8-SP Ditec	628	ENTREMATI
2	Push button PBR45 BEA Ditec	630	ENTREMATI
1	Presence detector Bodyguard BEA Ditec		ENTREMATI

1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR1.2		ARD
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Note:

1. Electrical conduits, electrical junction boxes, pull cords and 120 V electric power source to be supplied, installed and wired by Electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them. Where require, the 120 V electric power source will be supplied and wire by Electricity.
3. Interlock could be required, to be confirmed with McGill project manager and coordinate with the hardware consultant .

**Hardware set 1.2 / Animal Facilities with cages or carts passage**

Application:			
- Single door FIRE-RATED - For hollow metal door and frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
1	Adjustable hinge guard HG305 x M91-002 x 2135 mm	630	MARKAR
1	Classroom lockset ML2055 HPSK x D134 x SA114 x M17 x L4-6 x KA1	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0200 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Door closer 4041 DEL See note 1	689	LCN
1	Kick plates K1050F-711mm x 850 mm x B4E x CSK (push side) (Install above the automatic door bottom)	630	ROCKWOOD
1	Kick plates K1050F-762mm x 875 mm x B4E x CSK (pull side)	630	ROCKWOOD
1	Wall stop 415	619	ROCKWOOD
1	Or Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON
1	Protector bar R102LPB	630	ROCKWOOD
1	Perimeter gasketing 513CA x 1/915 mm x 2/2135 mm non-corrosive fasteners (Add mounting bracket 5823SB if surface overhead stop is used)	628	LEGACY
1	Automatic door bottom 7123 CA x 915 mm	628	LEGACY
	If an automatic door operator is required, delete the door closer, replace lockset and cylinder and add :		
1	Classroom lockset with deadbolt ML2073 HPSK x D134 x SA114 x M17 x L4-6 x KA1	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0200 x CT-Z00 x EMK x KD + 94-0188	626	MEDECO
1	Electric strike 1600CS x 12 VDC x DLM x 2005M3 (Energize by the door operator)	630	HES
1	Automatic door operator HA8-SP Ditec	628	ENTREMATIIC
2	Push button PBR45 BEA Ditec	630	ENTREMATIIC
1	Presence detectorSDR-042 (2017) Bodyguard BEA Ditec		ENTREMATIIC

1	Electric cable with quick connectors QC-C1500P		MCKINNEY
1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR1.2		ARD

## Note:

1. Electrical conduits, electrical junction boxes, pull cords, 120 V electric power source and contact from fire alarm panel to be supplied, installed and wired by Electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them. Where require, the 120 V electric power source and the contact from the fire alarm panel will be supplied and wired by Electricity.
3. Interlock could be required, to be confirmed with McGill project manager and coordinate with the hardware consultant .

**Hardware set 1.3 / Animal Facilities with card readers access control and without cages or carts passage**

Application: - Single door FIRE-RATED with card reader access control - For hollow metal door and frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
2	Hinges T4A3786 114 mm x 101 mm x NRP	646	MCKINNEY
1	Electric hinge T4A3786 114 mm x 101 mm x QC12	646	MCKINNEY
1	Electrically controlled mortise lockset with request to exit ML20906-SEC HPSK x D134 x SA114 x M17 x M92 x 12VDC x L4-6 x KA1 (latch bolt monitor option M91 if required, see McGill project manager)	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0200 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Door closer 4041 DEL See note 1	689	LCN
1	Kick plates K1050F-711mm x 860 mm x B4E x CSK (push side) (Install above the automatic door bottom)	630	ROCKWOOD
1	Kick plates K1050F-762mm x 875 mm x B4E x CSK (pull side)	630	ROCKWOOD
1	Wall stop 415 Or	619	ROCKWOOD
1	Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON
1	Perimeter gasketing 513CA x 1/915 mm x 2/2135 mm non-corrosive fasteners (Add mounting bracket 5823SB if surface overhead stop is used)	628	LEGACY
1	Automatic door bottom 4 CA x 915 mm	628	LEGACY
1	Quick connect cable QC-C3000P		MCKINNEY
1	Quick connect cable QC-C300P (to be coordinated with door elevation)		MCKINNEY

1	Door position switch Wooden doors:1072 Metal doors: <b>1076/1078</b> Metal entry/Exit doors with a channel in the top of the door: R1078 <b>Surface mounted: 1085</b>		SENTROL
1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR1.3		ARD
1	Card Reader Regular*: 920PTNTEK00000 Keypad*: 921PTNTEK00000 Slim*: 910PTNTEK00000 *See 2.2.10.3.3 for selection criteria		HID
1	Terminal Blocks 323(--HDS) 12 poles		WECO
1	Buzzer (Optional) PAL-328		PIEZO-A-LERT
	If an automatic door operator is required, delete the door closer and add :		
1	Electric strike 1600 x <b>12</b> VDC x 2005M3 (Energize by the door operator)	630	HES
1	Quick connect cable QC-C1500P		MCKINNEY
1	Automatic door operator HA8-SP Ditec	628	ENTREMATIIC
2	Push button PBR45 BEA Ditec	630	ENTREMATIIC
1	Presence detector Bodyguard BEA Ditec		ENTREMATIIC

**Note:**

1. Electrical conduits, electrical junction boxes, pull cords and card reader (wire to the junction box), 120 V electric power source and contact from fire alarm panel (if applicable) to be supplied, installed and wired by Electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them up to the junction boxes. All wires to be identified and run up to the ceiling junction box, final wiring to be done by McGill University (NCS). If require, the 120 V electric power source and the contact from the fire alarm panel will be supplied and wire by Electricity. (Refer to the section 3.2 – Hardware Final Wiring.)
3. 12VDC electric power source for the electric lock set to be supplied, installed and wired by McGill University (NCS). (Refer to the section 3.2 – Hardware Final Wiring.)
4. Mode of operation:
  1. From secure side of the door, the card reader momentary unlock the electric lock and the door can be open.
  2. From the unsecured side of the door, door can be pulled open using the lockset (always free exit), lockset send a request to exit signal to the access control.
  3. If an automatic door operator is used, the push button from the secure side is only active when the lockset is unlocked.
5. Interlock could be required, to be confirmed with McGill project manager and coordinate with the hardware consultant .



**Hardware set 2.1 / Classrooms, dry labs, staff room (base set for smaller spaces)**

Application: - Single door FIRE-RATED or NON-FIRE RATED - For hollow metal door and frame or wood door and hollow metal frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
3	Heavy duty full mortise hinges T4A3786 114 mm x 101 mm x NRP	646	MCKINNEY
1	Classroom lockset ML2055 NSA x D134 x SA114 x M17 x L4-6 x KA1	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10 0200 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Door closer 4040XP See note 1	689	LCN
1	Kick plates K1050-203mm x 860mm x B4E x CSK (Install above the automatic door bottom)	630	ROCKWOOD
1	Kick plates K1050-203mm x 890mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Wall stop 415 Or	619	ROCKWOOD
1	Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON
1	Perimeter gasketing 513CA x 1/915 mm x 2/2135 mm non-corrosive fasteners (Add mounting bracket 5823SB in surface overhead stop is used)	628	LEGACY
1	Automatic door bottom 7123 CA x 915 mm	628	LEGACY

**Hardware set 2.2 / Classrooms Security with electronic lockdown feature "confinement capability"**  
 (with card reader – 99 students or less)

Application:			
- Single door FIRE-RATED or NON-FIRE RATED - For hollow metal door and frame or wood door and hollow metal frame - For left hand or left hand reverse or right hand or right hand reverse door swings			
Qty	Description	Finish	Manufacturer
2	Heavy duty full mortise hinges T4A3786 114 mm x 101 mm x NRP	646	MCKINNEY
1	Concealed circuit electric hinge T4A3786 114 mm x 101 mm x QC12	646	MCKINNEY
1	Electrically controlled mortise lockset fail secure ML20906-SEC NSA x D134 x SA114 x M17 x M92x 12VDC x L4-6 x KA1 (Could be remotely lock and unlock on a schedule or locked locally by emergency push button inside the classroom)	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10 0200 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Latch guard 5000T x D134 (only for reverse hand door)	619	TRIMCO/BBW
1	Door closer 4040XP See note 1 (for reverse hand door, use 4040 XP-EDA, if no wall behind the door use model 4040 XP-S-CUSH and do not use an overhead stop)	689	LCN
1	Kick plates K1050-203mm x 860mm x B4E x CSK (push side) (Install above the automatic door bottom)	630	ROCKWOOD
1	Kick plates K1050-203mm x 890mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Wall stop 415 Or 1 Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	619  630	ROCKWOOD  RIXSON
1	Perimeter gasketing 513CA x 1/915 mm x 2/2135 mm non-corrosive fasteners (Add mounting bracket 5823SB if surface overhead stop is used)	628	LEGACY
1	Automatic door bottom 7123 CA x 915 mm	628	LEGACY
1	Door position switch Wooden doors:1072 Metal doors: <b>1076/1078</b> Metal entry/Exit doors with a channel in the top of the door: R1078 <b>Surface mounted: 1085</b>		SENTROL
1	Quick connect cable QC-C3000P		MCKINNEY
1	Quick connect cable QC-C300P (to be coordinated with door elevation)		MCKINNEY

1	Wall mount push button SS2505ZA-ZL Station top text: CONFINEMENT Station bottom text: LOCKDOWN	Orange	STI
1	Security plastic cover <b>STI-13230 NW</b> *Note: The covers local buzzer must be deactivated		STI
1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR2.2-REV180506		ARD
1	Card Reader Regular*: 920PTNTEK00000 Keypad*: 921PTNTEK00000 Slim*: 910PTNTEK00000 *See 2.2.10.3.3 for selection criteria		HID
1	Terminal Blocks 323(--HDS) 12 poles		WECO
1	Buzzer (Optional) PAL-328		PIEZO-A-LERT
	If an automatic door operator is required, delete the door closer and add :		
1	Electric strike 1600 x <b>12</b> VDC x 2005M3 (Energize by the door operator)	630	HES
1	Quick connect cable QC-C1500P		MCKINNEY
1	Automatic door operator HA8-SP Ditec	628	ENTREMATI
2	Push button PBR45 BEA Ditec	630	ENTREMATI
1	Presence detector Bodyguard BEA Ditec		ENTREMATI

**Note:**

1. Electrical conduits, electrical junction boxes, pull cords, card reader (wire to the junction box), 120 V electric power source (if applicable) and contact from fire alarm panel (if applicable) to be supplied, installed and wired by Electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them up to the junction boxes. All wires to be identified and run up to the ceiling junction box, final wiring to be done by McGill University (NCS). (Refer to section 3.2- Hardware Final Wiring) Where required, the 120 V electric power source and the contact from the fire alarm panel will be supplied and wired by electricity.
3. 12VDC electric power source for the electric lock all to be supplied, installed and wired by McGill University (NCS). (Refer to the section 3.2 – Hardware Final Wiring.)
4. Mode of operation:
  1. From secure side of the door, the card reader momentarily unlocks the electric lock and the door can be opened, the lockset can also be locked and unlocked remotely by the access control system.
  2. In case of an emergency, the lockset can be locked remotely by the access control system or by the emergency wall mount push button located inside the classroom near the door.
  3. From the unsecured side of the door, door can be pulled open using the lockset (always free exit), lockset sends a request to exit signal to the access control.
5. If an automatic door operator is used, the push button from the secure side is only active when the lockset is unlocked.
6. For security reasons a pick plate shall be added to this group

**Hardware set 2.3 / Classrooms Security with electronic lockdown feature "confinement capability"**  
 (with card reader – 100 students and over )

Application:			
- Single door FIRE-RATED or NON-FIRE RATED			
- For hollow metal door and frame or wood door and hollow metal frame			
- For left hand or left hand reverse or right hand or right hand reverse door swings			
Qty	Description	Finish	Manufacturer
3	Heavy duty full mortise hinges T4A3786 114 mm x 101 mm x NRP	646	MCKINNEY
1	Concealed circuit electric hinge T4A3786 114 mm x 101 mm x QC12	646	MCKINNEY
1	Electrically controlled trim fail secure mortise exit device RX-E9875L- (-F if fire rated)-3' x 996L-M-06 x L/C x FSE x 12VDC (Could be remotely lock and unlock on a schedule or locked locally by emergency push button inside the classroom)	630	VON DUPRIN
1	Temporary mortise cylinder 1000-114-A02 x L4-6 x KA1	619	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0500 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Latch guard 5000T x D134 (only for reverse hand door)	619	TRIMCO/BBW
1	Door closer 4040XP See note 1 (for reverse hand door, use 4040 XP-EDA, if no wall behind the door use model 4040 XP-S-CUSH and do not use an overhead stop)	689	LCN
1	Kick plates K1050-203mm x 860mm x B4E x CSK (push side) (Install above the automatic door bottom)	630	ROCKWOOD
1	Kick plates K1050-203mm x 890mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Wall stop 415 Or	619	ROCKWOOD
1	Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON
1	Perimeter gasketing 513CA x 1/915 mm x 2/2135 mm non-corrosive fasteners (Add mounting bracket 5823SB if surface overhead stop is used)	628	LEGACY
1	Automatic door bottom 7123 CA x 915 mm	628	LEGACY
1	Door position switch Wooden doors:1072 Metal doors: <b>1076/1078</b> Metal entry/Exit doors with a channel in the top of the door: R1078 <b>Surface mounted: 1085</b>		SENTROL

1	ElectroLynx cable QC-C3000P		MCKINNEY
1	ElectroLynx cable QC-C300P (to be coordinated with door elevation)		MCKINNEY
1	Wall mount push button SS2505ZA-ZL Station top text: CONFINEMENT Station bottom text: LOCKDOWN	Orange	STI
1	Security plastic cover <b>STI-13230 NW</b> *Note: The covers local buzzer must be deactivated		STI
1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR2.2-REV180506		ARD
1	Card Reader Regular*: 920PTNTEK00000 Keypad*: 921PTNTEK00000 Slim*: 910PTNTEK00000 *See 2.2.10.3.3 for selection criteria		HID
1	Terminal Blocks 323(--HDS) 12 poles		WECO
1	Buzzer (Optional) PAL-328		PIEZO-A-LERT
	If an automatic door operator is required, delete the door closer and add :		
1	Electric strike 1600 x <b>12</b> VDC x 2005M3 (Energize by the door operator)	630	HES
1	Quick connect cable QC-C1500P		MCKINNEY
1	Automatic door operator HA8-SP Ditec	628	ENTREMATIIC
2	Push button PBR45 BEA Ditec	630	ENTREMATIIC
1	Presence detector Bodyguard BEA Ditec		ENTREMATIIC

**Note:**

1. Electrical conduits, electrical junction boxes, pull cords, card reader (wire to the junction box), 120 V electric power source (if applicable) and contact from fire alarm panel (if applicable) to be supplied, installed and wired by electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them up to the junction boxes. All wires to be identified and run up to the ceiling junction box, final wiring to be done by McGill University (NCS). (Refer to section 3.2- Hardware Final Wiring) Where required, the 120 V electric power source and the contact from the fire alarm panel will be supplied and wired by electricity.
3. 12VDC electric power source for the electric exit device all to be supplied, installed and wired by McGill University (NCS). (Refer to the section 3.2 – Hardware Final Wiring.)
4. Mode of operation:
  1. From secure side of the door, the card reader momentarily unlocks the exit device outside trim. The outside trim can also be locked and unlocked remotely by the access control system.

2. In case of an emergency, the exit device outside trim can be locked remotely by the access control system or locally by the emergency wall mount push button locate inside the classroom near the door.
3. From the unsecured side of the door, door can be pulled open using the exit device (always free exit), the exit device sends a request to exit signal to the access control.
6. If a door an automatic door operator is used, the push button from the secure side is only active when the lockset is unlocked.
7. For security reasons, a pick plate shall be added to this group.

**Hardware set 2.4 / Classrooms Security with mechanic lockdown feature "confinement capability"**  
 (without card reader – 99 students or less)

Application:			
- Single door FIRE-RATED or NON-FIRE RATED			
- For hollow metal door and frame or wood door and hollow metal frame			
- For left hand or left hand reverse or right hand or right hand reverse door swings			
Qty	Description	Finish	Manufacturer
3	Heavy duty full mortise hinges T4A3786 114 mm x 101 mm x NRP	646	MCKINNEY
1	Dormitory function mortise lockset with lock status indicator ML2065 NSA x D134 x SA114 x M17 x M19N x M19S x LA-6 x KA1	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0200 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Latch guard 5000T x D134 (only for reverse hand door)	619	TRIMCO/BBW
1	Door closer 4040XP See note 1 (for reverse hand door, use 4040 XP-EDA, if no wall behind the door use model 4040 XP-S-CUSH and do not use an overhead stop)	689	LCN
1	Kick plates K1050-203mm x 860mm x B4E x CSK (push side) (Install above the automatic door bottom)	630	ROCKWOOD
1	Kick plates K1050-203mm x 890mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Wall stop 415 Or	619	ROCKWOOD
1	Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON
1	Perimeter gasketing 513CA x 1/915 mm x 2/2135 mm non-corrosive fasteners (Add mounting bracket 5823SB if surface overhead stop is used)	628	LEGACY
1	Automatic door bottom 7123 CA x 915 mm	628	LEGACY
	If an automatic door operator is required, delete the door closer and add :		
1	Electric strike 1600 x 12 VDC x DLM x 2005M3 (Energize by the door operator)	630	HES
1	Quick connect cable QC-C1500P		MCKINNEY
1	Automatic door operator HA8-SP Ditec	628	ENTREMATIIC
2	Push button PBR45 BEA Ditec	630	ENTREMATIIC
1	Presence detector Bodyguard BEA Ditec		ENTREMATIIC

## Note:

1. Electrical conduits, electrical junction boxes, pull cords, 120 V electric power source and contact from fire alarm panel (if require) to be supplied, installed and wired by electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them. Where required, the 120 V electric power source and the contact from the fire alarm panel will be supplied and wired by electricity.



**Hardware set 2.5 / Classrooms Security with mechanic lockdown feature "confinement capability"**  
 (without card reader – 100 students or more)

Application:			
- Single door FIRE-RATED or NON-FIRE RATED - For hollow metal door and frame or wood door and hollow metal frame - For left hand or left hand reverse or right hand or right hand reverse door swings			
Qty	Description	Finish	Manufacturer
4 **	Heavy duty full mortise hinges T4A3786 114 mm x 101 mm x NRP	646	MCKINNEY
1	Rim exit device with push side trim locking thumb turn and indicator 98L(-F if fire rated)-3' x 996L-R-06 x 2SI x L/C	630	Von Duprin
1	Temporary rim cylinder 3000-200 x L4-6 x KA1	619	CORBIN/ RUSSWIN
1	Rim cylinder 10_0400 x EMK x KD + 94-0188	626	MEDECO
1	Thumb turn rim cylinder 3300-200	630	CORBIN/RUSSWIN
1	Latch guard 5000T x D134 (only for reverse hand door)	619	TRIMCO/BBW
1	Door closer 4040XP See note 1 (for reverse hand door, use 4040 XP-EDA, if no wall behind the door use model 4040 XP-S-CUSH and do not use an overhead stop)	689	LCN
1	Kick plates K1050-203mm x 860mm x B4E x CSK (push side) (Install above the automatic door bottom)	630	ROCKWOOD
1	Kick plates K1050-203mm x 890mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Wall stop 415 Or	619	ROCKWOOD
1	Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON
1	Perimeter gasketing 513CA x 1/915 mm x 2/2135 mm non-corrosive fasteners (Add mounting bracket 5823SB if surface overhead stop is used)	628	LEGACY
1	Automatic door bottom 7123 CA x 915 mm	628	LEGACY
	If an automatic door operator is required, delete the door closer and add :		
1	Electric strike 9600 (9500 if fire rated) x 12 VDC x LBSM x 2004M x 2005M3 (Energize by the door operator)	630	HES
1	Quick connect cable QC-C1500P		MCKINNEY

1	Automatic door operator HA8-SP Ditec	628	ENTREMATIIC
2	Push button PBR45 BEA Ditec	630	ENTREMATIIC
1	Presence detector Bodyguard BEA Ditec		ENTREMATIIC

## Note:

1. \*\* 4 hinges for a door of 2135 mm in height.
2. Electrical conduits, electrical junction boxes, pull cords, 120 V electric power source and contact from fire alarm panel (if require) to be supplied, installed and wired by electricity.
3. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them. Where require, the 120 V electric power source and the contact from the fire alarm panel will be supplied and wire by Electricity.

**Hardware set 4.1 / Corridors and Hallways (emergency exit)**

Application:			
- Single door FIRE-RATED or NON-FIRE RATED - For hollow metal door and frame - For left-hand reverse or right hand reverse door swings			
Qty	Description	Finish	Manufacturer
4 **	Heavy duty full mortise hinges T4A3786 114 mm x 101 mm x NRP	646	MCKINNEY
1	Exit device 9875L(-F if fire rated)-3' x 996L-M-06 x L/C	630	VON DUPRIN
1	Temporary mortise cylinder 1000-114-A02 x L4-6 x KA1	619	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0500 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Door closer 4040XP-EDA Or Door closer with stop if no wall behind the door 4040XP-SCUSH	689	LCN
1	Kick plates K1050-203mm x 860mm x B4E x CSK (Push side) (Install above the automatic door bottom)	630	ROCKWOOD
1	Kick plates K1050-203mm x 890mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Wall stop 415 (do not use if 4040 XP-CUSH door closer is used)	619	ROCKWOOD
1	Perimeter gasketing 513CA x 1/915 mm x 2/2135 mm + 5823SB (non-corrosive fasteners)	628	LEGACY
1	Automatic door bottom 7123 CA x 915 mm	628	LEGACY
	If an automatic door operator is required, delete the door closer and add :		
1	Electric strike 1600 x 12 VDC x 2005M3 (Energize by the door operator)	630	HES
1	Quick connect cable QC-C1500P		MCKINNEY
1	Automatic door operator HA8-SP Ditec	628	ENTREMATIIC
2	Push button PBR45 BEA Ditec	630	ENTREMATIIC

1	Presence detector Bodyguard BEA Ditec		ENTREMATIIC
1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR4.1		ARD

## Note:

1. Electrical conduits, electrical junction boxes, pull cords, 120 V electric power source and contact from fire alarm panel (if require) to be supplied, installed and wired by electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them. Where require, the 120 V electric power source and the contact from the fire alarm panel (if applicable) will be supplied and wired by electricity.
3. \*\* 4 hinges for a door of 2135 mm in height.

**Hardware set 4.2 / Corridors and Hallways (emergency exit)**

Application:			
- Pair of door FIRE-RATED or NON-FIRE RATED - For hollow metal door and frame - For left-hand reverse and right hand reverse door swings			
Qty	Description	Finish	Manufacturer
8 **	Heavy duty full mortise hinges T4A3786 114 mm x 101 mm x NRP	646	MCKINNEY
2	Exit device 9847L(-F if fire rated)-LBR-3' x 996L-V-06 x L/C	630	VON DUPRIN
2	Temporary rim cylinder 3000-200 x L4-6 x KA1	619	CORBIN/ RUSSWIN
2	Rim cylinder 10 0400 x EMK x KD + 94-0188	626	MEDECO
2	Door closer 4040XP-EDA Or Door closer with stop if no wall behind the door 4040XP-SCUSH	689	LCN
2	Kick plates K1050-203mm x 880mm x B4E x CSK (Push side) (Install above the automatic door bottom)	630	ROCKWOOD
2	Kick plates K1050-203mm x 870mm x B4E x CSK (Pull side)	630	ROCKWOOD
2	Wall stop 415 (do not use if 4040 XP-CUSH door closer is used)	619	ROCKWOOD
1	Perimeter gasketing 513CA x 1/1830mm x 2/2135 mm + 2/5823SB (non-corrosive fasteners)	628	LEGACY
2	Automatic door bottom 7123 CA x 915 mm	628	LEGACY
1	Two pieces astragal 7178CA + 7178CA x 2135 mm	628	LEGACY

## Note:

- \*\* 4 hinges for a door of 2135 mm in height.

**Hardware set 4.3 / Corridors and Hallways (emergency exit)**

Application:			
- Pair of door FIRE-RATED or NON-FIRE RATED - For wood door and hollow metal frame - For left-hand reverse and right hand reverse door swings			
Qty	Description	Finish	Manufacturer
8 **	Heavy duty full mortise hinges T4A3786 114 mm x 101 mm x NRP	646	MCKINNEY
2	Exit device 9847WDC-L(-F if fire rated)-LBR-3' x 996L-V-06 x L/C	630	VON DUPRIN
2	Temporary rim cylinder 3000-200 x L4-6 x KA1	619	CORBIN/ RUSSWIN
2	Rim cylinder 10_0400 x EMK x KD + 94-0188	626	MEDECO
2	Door closer 4040XP-EDA Or Door closer with stop if no wall behind the door 4040XP-SCUSH	689	LCN
2	Kick plates K1050-203mm x 880mm x B4E x CSK (Push side) (Install above the automatic door bottom)	630	ROCKWOOD
2	Kick plates K1050-203mm x 870mm x B4E x CSK (Pull side)	630	ROCKWOOD
2	Wall stop 415 (do not use if 4040 XP-CUSH door closer is used)	619	ROCKWOOD
1	Perimeter gasketing 513CA x 1/1830mm x 2/2135 mm + 2/5823SB (non-corrosive fasteners)	628	LEGACY
2	Automatic door bottom 7123 CA x 915 mm	628	LEGACY
1	Two pieces astragal 7178CA + 7178CA x 2135 mm	628	LEGACY

## Note:

- \*\* 4 hinges for a door of 2135 mm in height.

**Hardware set 4.4 / Corridors and Hallways with electromagnetic door holder (double egress emergency exit)**

Application:			
- Pair of door FIRE-RATED - For hollow metal door and frame - For left hand reverse door swings			
Qty	Description	Finish	Manufacturer
8 **	Heavy duty full mortise hinges T4A3786 114 mm x 101 mm x NRP	646	MCKINNEY
2	Exit device 9847EO-F-LBR-3'	630	VON DUPRIN
2	Door closer 4040XP-EDA	689	LCN
2	Kick plates K1050-203mm x 880mm x B4E x CSK (Push side) (Install above the automatic door bottom)	630	ROCKWOOD
2	Kick plates K1050-203mm x 870mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Perimeter gasketing 513CA x 2/915mm x 2/2135 mm + 2/5823SB (non-corrosive fasteners)	628	LEGACY
2	Automatic door bottom 7123 CA x 915 mm	628	LEGACY
2	Self-adhesive astragal S1125BL x 2135 mm (depending of the door gap, install 1 or 2 lengths on the door edge(s))	Black	PEMKO
1	Power supply BPS-12-1 B-12-5 CKL		SECURITRON
1	Relay RB-4-12		SECURITRON
2	Electromagnetic door holder 998M-12VDC .180amp 55 lbs x extension (if required) 900/900-Z x 900-XXX	689	RIXSON
1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR4.4		ARD

**Note:**

1. Electrical conduits, electrical junction boxes, pull cords, 120 V electric power source and contact from fire alarm panel to be supplied, installed and wired by electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them. Where require, the 120 V electric power source and the contact from the fire alarm panel will be supplied and wired by electricity.
3. \*\* 4 hinges for a door of 2135 mm in height.

**Hardware set 4.5 / Corridors and Hallways with electromagnetic door holder (double egress emergency exit)**

Application:			
- Pair of door FIRE-RATED - For wood door and hollow metal frame - For left hand reverse door swings			
Qty	Description	Finish	Manufacturer
8 **	Heavy duty full mortise hinges T4A3786 114 mm x 101 mm x NRP	646	MCKINNEY
2	Exit device 9847WDC-EO-F-LBR-3'	630	VON DUPRIN
2	Door closer 4040XP-EDA	689	LCN
2	Kick plates K1050-203mm x 880mm x B4E x CSK (Push side) (Install above the automatic door bottom)	630	ROCKWOOD
2	Kick plates K1050-203mm x 870mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Perimeter gasketing 513CA x 2/915mm x 2/2135 mm + 2/5823SB non-corrosive fasteners	628	LEGACY
2	Automatic door bottom 7123 CA x 915 mm	628	LEGACY
2	Self-adhesive astragal S1125BL x 2135 mm (depending of the door gap, install 1 or 2 lengths on the door edge(s))	Black	PEMKO
1	Power supply BPS-12-1 B-12-5 CKL		SECURITRON
1	Relay RB-4-12		SECURITRON
2	Electromagnetic door holder 998M-12VDC .180amp 55 lbs x extension (if required) 900/900-Z x 900-XXX	689	RIXSON
1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR4.5		ARD

**Note:**

1. Electrical conduits, electrical junction boxes, pull cords, 120 V electric power source and contact from fire alarm panel to be supplied, installed and wired by electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them. Where require, the 120 V electric power source and the contact from the fire alarm panel will be supplied and wired by Electricity.
3. \*\* 4 hinges for a door of 2135 mm in height.



**Hardware set 4.6 /** Corridors and Hallways, emergency exit with 15 seconds delay, exit only

Application:			
- Single door FIRE-RATED or NON-FIRE RATED - For hollow metal door and frame or wood door and hollow metal frame - For left-hand reverse or right hand reverse door swings			
Qty	Description	Finish	Manufacturer
4 **	Heavy duty full mortise hinges T4A3786 114 mm x 101 mm x NRP	646	MCKINNEY
1	Exit device with build in delay egress CX-9875L(-F if fire rated)-3' x 24VDC x 996L-M-06 x L/C	630	VON DUPRIN
2	Temporary mortise cylinder 1000-114-A02 x L4-6 x KA1	619	CORBIN/ RUSSWIN
2	Mortise cylinder 10_0500 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Door closer 4040XP-EDA Or Door closer with stop if no wall behind the door 4040XP-SCUSH	689	LCN
1	Kick plates K1050-203mm x 860mm x B4E x CSK (Push side) (Install above the automatic door bottom)	630	ROCKWOOD
1	Kick plates K1050-203mm x 890mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Wall stop 415 (do not use if 4040 XP-CUSH door closer is used)	619	ROCKWOOD
1	Perimeter gasketing 513CA x 1/915 mm x 2/2135 mm + 5823SB (non-corrosive fasteners)	628	LEGACY
1	Automatic door bottom 7123 CA x 915 mm	628	LEGACY
1	Power transfer CEPT-10	630	SECURITRON
1	Door position switch Wooden doors:1072 Metal doors: <b>1076/1078</b> Metal entry/Exit doors with a channel in the top of the door: R1078 <b>Surface mounted: 1085</b>		SENTROL
1	Power supply BPS-24-1 x B-24-5 x CKL		SECURITRON
1	Relay RB-4-24		SECURITRON
1	Warning sign SCC-3292-315-FAN		ARD
1	Electric wiring diagram section 08 71 10 SCC-DR-12-MCGILL-GR4.6		ARD

Note:

1. Electrical conduits, electrical junction boxes, pull cords, 120 V electric power source and contact from fire alarm panel to be supplied, installed and wired by electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them. Where require, the 120 V electric power source and the contact from the fire alarm panel will be supplied and wired by electricity.
3. \*\* 4 hinges for a door of 2135 mm in height.
4. Usage of delay egress and operating mode must be approved and validated by McGill fire prevention office.

**Hardware set 4.7 / Corridors and Hallways with door operator (emergency exit)**

Application:			
- Pair of door NON-FIRE RATED - For hollow metal door and frame - For left-hand reverse or right hand reverse door swings			
Qty	Description	Finish	Manufacturer
8 **	Heavy-duty hinges T4A3786 114 mm x 101 mm x NRP	646	MCKINNEY
1	Exit devices RX-LX-QEL-9847EO-LBR-3'	630	VON DUPRIN
1	Exit devices RX-LX-QEL-9847NL-OP-LBR-3' x 110NL-OP x L/C	630	VON DUPRIN
1	Temporary rim cylinder 3000-200 x L4-6 x KA1	619	CORBIN/ RUSSWIN
1	Rim cylinders 10-_400-Cam x EMK	626	MEDECO
2	45 degrees offset door pulls BF169 x MTG x 12XHD x D134	630	ROCKWOOD
2	Kick plates K1050-203mm x 880mm x B4E x CSK (Push side) (Install above the automatic door bottom)	630	ROCKWOOD
2	Kick plates K1050-203mm x 870mm x B4E x CSK (Pull side)	630	ROCKWOOD
2	Wall stop 415	619	ROCKWOOD
2	Or Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON
1	Perimeter gasketing 513CA x 1/1830mm x 2/2135 mm non-corrosive fasteners (Add mounting bracket 5823SB if surface overhead stop is used)	628	LEGACY
2	Automatic door bottom 7123 CA x 915 mm	628	LEGACY
1	Two pieces astragal 7178CA + 7178CA x 2135 mm	628	LEGACY
2	Power transfer CEPT-10	630	SECURITRON
1	Keyswitch MK-MKSA	630	SECURITRON
1	Temporary mortise cylinder 1000-114-A02 x L4-6 x KA1	619	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0500 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO

1	Power supply PS902-2RS x BBK		VON DUPRIN
1	Double automatic door operator HA8-SP x Double x Heavy Duty x relay x interphase x CX-12 Ditec		ENTREMATIc
2	Push plate PBR45LL Ditec	630	ENTREMATIc
2	Presence sensor Superscan Ditec		ENTREMATIc
1	Electric wiring diagram section 087110 SCC-DR-12-170412-GR4.7		ARD

## Note:

1. Electrical conduits, electrical junction boxes, pull cords and 120 V electric power source to be supplied, installed and wired by Electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them. Where required, the 120 V electric power source will be supplied and wired by electricity.
3. \*\* 4 hinges for a door of 2135 mm in height.
4. Mode of operation :
  1. Always free on the push side (means of egress side)
  2. With the key switch, set the opening on lock or unlock mode.
  3. In lock mode, the automatic door operator is 'off' and the exit devices are not electrically powered, the top latches are projected in the strike. Access by key on the pull side.
  4. In unlock mode, the automatic door operator is 'on' and the exit devices are electrically powered, the top latches are retracted.

**Hardware set 5.1 / Custodial Areas - Janitor's closet / Garbage room**

Application:			
- Single door FIRE-RATED or NON-FIRE RATED - For hollow metal door and frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
3	Hinges TA 2314 114 mm x 101 mm x NRP	630	MCKINNEY
1	Storeroom mortise lock ML 2057 NSA x D134 x SA114 x M17 x L4-6 x KA1	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0200 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Door closer 4040XP See note 1	689	LCN
1	Kick plates K1050-203mm x 878mm x B4E x CSK (Push side)	630	ROCKWOOD
1	Kick plates K1050-203mm x 890mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Wall stop 415 Or Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	619  630	ROCKWOOD  RIXSON

**Hardware set 5.2 / Custodial Areas – Garbage room**

Application:			
- Pair of door FIRE-RATED - For hollow metal door and frame - For left hand and right-hand door swings			
Qty	Description	Finish	Manufacturer
6	Hinges T4A3386 114 mm x 101 mm x NRP	630	MCKINNEY
1	Self latching flush bolts set 2845	630	ROCKWOOD
1	Storeroom mortise lock ML 2057 NSA x D134 x SA114 x M17 x L4-6 x KA1	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0200 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Coordinator 3094B2 (+ 2/3095 or 2/3096 if required)		TRIMCO
2	Door closer 4040XP See note 1	689	LCN
2	Kick plates K1050-203mm x 870mm x B4E x CSK (Push side)	630	ROCKWOOD
2	Kick plates K1050-203mm x 890mm x B4E x CSK (Pull side)	630	ROCKWOOD
2	Wall stop 415	619	ROCKWOOD
2	Or Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON

## Note:

1. Astragal supplied by the hollow metal doors manufacturer.

**Hardware set 6.1 / Electrical rooms with card reader access control**

Application: - Single door FIRE-RATED or NON-FIRE RATED - For hollow metal door and frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
2	Hinges TA2714 114 mm x 101 mm x NRP	646	MCKINNEY
1	Concealed circuit electric hinge TA2714 114 mm x 101 mm x QC8	646	MCKINNEY
1	Electrically controlled mortise lockset with request to exit ML20906-SEC NSA x D134 x SA114 x M17 x M92 x 12VDC x L4-6 x KA1 (latch bolt monitor option M91 if required, see McGill project manager)	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0200 x CT-Z01x EMK x KD + 94-0188	626	MEDECO
1	Door closer 4041 DEL See note 1	689	LCN
1	Kick plates K1050-203mm x 860mm x B4E x CSK (Push side) (Install above the automatic door bottom)	630	ROCKWOOD
1	Kick plates K1050-203mm x 890mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Wall stop 415 Or Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	619  630	ROCKWOOD  RIXSON
1	Perimeter gasketing 513CA x 1/915 mm x 2/2135 mm non-corrosive fasteners (Add mounting bracket 5823SB if surface overhead stop is used)	628	LEGACY
1	Automatic door bottom 7123 CA x 915 mm	628	LEGACY
1	Quick connect cable QC-C3000P		MCKINNEY
1	Quick connect cable QC-C300P (to be coordinated with door elevation)		MCKINNEY
1	Door position switch Wooden doors:1072 Metal doors: <b>1076/1078</b> Metal entry/Exit doors with a channel in the top of the door: R1078 <b>Surface mounted: 1085</b>		SENTROL
1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR6.1		ARD

1	Card Reader Regular*: 920PTNTEK00000 Keypad*: 921PTNTEK00000 Slim*: 910PTNTEK00000 *See 2.2.10.3.3 for selection criteria		HID
1	Terminal Blocks 323(--HDS) 12 poles		WECO
1	Buzzer (Optional) PAL-328		PIEZO-A-LERT

## Note:

1. Electrical conduits, electrical junction boxes, pull cords and card reader (wire to the junction box) to be supplied and installed by electricity.
2. All electrified components specified in this hardware group to be supplied, installs and wires by this section including wires between them up to the junction boxes. All wires to be identified and run up to the ceiling junction box, final wiring to be done by McGill University (NCS). (Refer to the section 3.2 – Hardware Final Wiring.)
3. 12VDC electric power source for the electric lock set to be supplied, installed and wired by McGill University (NCS). (Refer to the section 3.2 – Hardware Final Wiring.)
4. Mode of operation:
  1. From secure side of the door, the card reader momentary unlock the electric lock and the door can be open.
  2. From the unsecured side of the door, door can be pulled open using the lockset (always free exit), lockset send a request to exit signal to the access control.



**Hardware set 6.2 / Electrical rooms with card reader access control**

Application: - Pair of door FIRE-RATED - For hollow metal door and frame - For left hand and right hand door swings			
Qty	Description	Finish	Manufacturer
5	Hinges T4A3786 114mm x 101mm x NRP	646	MCKINNEY
1	Concealed circuit electric hinge T4A3786 114mm x 101mm x QC8	646	MCKINNEY
1	Self latching flush bolts set 2845	630	ROCKWOOD
1	Electrically controlled mortise lockset with request to exit ML20906-SEC HPSK x D134 x SA114 x M17 x M92 x 12VDC x L4-6 x KA1 (latchbolt monitor option M91 if required, see McGill project manager)	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10 0200 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Coordinator 3094B2 (+ 2/3095 or 2/3096 if required)		TRIMCO
2	Door closer 4040XP See note 1	689	LCN
2	Kick plates K1050-203mm x 860mm x B4E x CSK (Push side) (Install above the automatic door bottom)	630	ROCKWOOD
2	Kick plates K1050-203mm x 890mm x B4E x CSK (Pull side)	630	ROCKWOOD
2	Wall stop 415 Or	619	ROCKWOOD
2	Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON
1	Perimeter gasketing 513CA x 1/1830mm x 2/2135mm non-corrosive fasteners (Add mounting bracket 5823SB if surface overhead stop is use)	628	LEGACY
2	Automatic door bottom 7123 CA x 915 mm	628	LEGACY
1	Flat astragal with solid neoprene inserts 7383 CA x 2135 mm	628	LEGACY
2	Door position switch Wooden doors:1072 Metal doors: <b>1076/1078</b> Metal entry/Exit doors with a channel in the top of the door: R1078 <b>Surface mounted: 1085</b>		SENTROL
1	Quick connect cable QC-C3000P		MCKINNEY
1	Quick connect cable QC-C300P (to be coordinate wth door elevation)		MCKINNEY

1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR6.2		ARD
1	Card Reader Regular*: 920PTNTEK00000 Keypad*: 921PTNTEK00000 Slim*: 910PTNTEK00000 *See 2.2.10.3.3 for selection criteria		HID
1	Terminal Blocks 323(--HDS) 12 poles		WECO
1	Buzzer (Optional) PAL-328		PIEZO-A-LERT

## Note:

1. Electrical conduits, electrical junction boxes, pull cords and card reader (wire to the junction box) to be supplied and installed by electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them up to the junction boxes. All wires to be identified and run up to the ceiling junction box, final wiring to be done by McGill University (NCS). (Refer to the section 3.2 – Hardware Final Wiring.)
3. 12VDC electric power source for the electric lock set to be supplied, installed and wired by McGill University (NCS). (Refer to the section 3.2 – Hardware Final Wiring.)
4. Mode of operation:
  1. From secure side of the door, the card reader momentary unlock the electric lock and the door can be open.
  2. From the unsecured side of the door, door can be pulled open using the lockset (always free exit), lockset send a request to exit signal to the access control.

**Hardware set 7.1 / Entrance with automatic door operator on 1 door leaf and card reader access control**

Application: - Pair of door NON-FIRE-RATED - For aluminum door (insulated) and frame - For left-hand reverse and right hand reverse door swings			
Qty	Description	Finish	Manufacturer
2	Continuous hinges CFM83SLF-1100 x PT (Securitron CEPT-10)		PEMKO
1	Exit device RX-LX-QEL-9847NL-OP-3' x INS	630	VON DUPRIN
1	Exit device RX-LX-QEL-9847NL-OP-3' x INS x 110NL-OP	630	VON DUPRIN
2	Temporary rim cylinder 3000-200 x L4-6 x KA1	619	CORBIN/ RUSSWIN
2	Rim cylinder 10_0400 x EMK x KD + 94-0188	626	MEDECO
2	45 degrees offset door pulls BF169 x MTG 12XHD x D214	630	ROCKWOOD
1	Door closers 4040XP-EDA x 4040XP-18PA	689	LCN
2	Overhead stops 1-336	630	RIXSON
2	Power transfer CEPT-10	630	SECURITRON
2	Door position switch Wooden doors:1072 Metal doors: <b>1076/1078</b> Metal entry/Exit doors with a channel in the top of the door: R1078 <b>Surface mounted: 1085</b>		SENTROL
1	Keyswitch MKA	630	SECURITRON
1	Temporary mortise cylinder 1000-114-A02 x L4-6 x KA1	619	CORBIN/ RUSSWIN
1	Mortise cylinder (CT-Z01) 10_0500 x EMK x KD + 94-0188	626	MEDECO
1	Power supply PS902-2RS x BBK		VON DUPRIN
1	Automatic door operator HA8-SP x Heavy Duty x relay x interphase x CX-12 Ditec		ENTREMATIIC
1	Exterior push plate PBR45LL x BOX x WR (wall mount) or PBJL x BOX (jamb mount) Ditec	630	ENTREMATIIC

1	Interior push plate PBR45LL (wall mount) or PBJL (jamb mount) Ditec	630	ENTREMATIIC
1	Presence detector Superscan Ditec		ENTREMATIIC
1	Card reader Regular *920PTNTEK00000 Keypad*921PTNTEK00000 Slim*910PTNTEK00000 *See 2.2.10.3.3 for selection criteria		HID
1	Terminal Blocks 323(--HDS) 12 poles		WECO
1	Buzzer (Optional) PAL-328		PIEZO-A-LERT
1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR7.1		ARD

## Note:

1. Electrical conduits, electrical junction boxes, pull cords, card reader (wire to the junction box) and 120 V power source to be supplied, installed and wired by Electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them up to the junction boxes/components/power supply/junction box (See electric elevation). All wires to be identified and run up to the ceiling junction box, final wiring to be done by McGill University (NCS). (Refer to the section 3.2 – Hardware Final Wiring.)
3. Aluminum door and frame, coordinate hardwares with their constructions.
4. Thresholds and gaskets all to be supplied and installed by the aluminum door and frame manufacturer.

**Hardware set 7.2 / Entrance or vestibule with automatic door operator on 1 door leaf and card reader access control**

Application: - Pair of door NON-FIRE-RATED - For aluminum door (non insulated) and frame - For left hand reverse and right hand reverse door swings			
Qty	Description	Finish	Manufacturer
2	Continuous hinges CFM83SLF-1100 x PT (Securitron CEPT-10)		PEMKO
1	Exit device RX-LX-QEL-9847NL-OP-3' x INS	630	VON DUPRIN
1	Exit device RX-LX-QEL-9847NL-OP-3' x INS x 110NL-OP	630	VON DUPRIN
2	Temporary rim cylinder 3000-200 x L4-6 x KA1	619	CORBIN/ RUSSWIN
2	Rim cylinder 10_0400 x EMK x KD + 94-0188	626	MEDECO
2	45 degrees offset door pulls BF169 x MTG 12XHD x D134	630	ROCKWOOD
1	Door closers 4040XP-EDA x 4040XP-18PA	689	LCN
2	Overhead stops 1-336	630	RIXSON
2	Power transfer CEPT-10	630	SECURITRON
2	Door position switch Wooden doors:1072 Metal doors: <b>1076/1078</b> Metal entry/Exit doors with a channel in the top of the door: R1078 <b>Surface mounted: 1085</b>		SENTROL
1	Keyswitch MKA	630	SECURITRON
1	Temporary mortise cylinder 1000-114-A02 x L4-6 x KA1	619	CORBIN/ RUSSWIN
1	Mortise cylinder (CT-Z01) 10_0500 x EMK x KD + 94-0188	626	MEDECO
1	Power supply PS902-2RS x BBK		VON DUPRIN
1	Automatic door operator HA8-SP x Heavy Duty x relay x interphase x CX-12 Ditec		ENTREMATI
1	Exterior push plate PBR45LL x BOX x WR (wall mount) or PBJL x BOX (jamb mount) Ditec	630	ENTREMATI

1	Interior push plate PBR45LL (wall mount) or PBJL (jamb mount) Ditec	630	ENTREMATIIC
1	Presence detector Superscan Ditec		ENTREMATIIC
1	Card reader Regular *920PTNTEK00000 Keypad*921PTNTEK00000 Slim*910PTNTEK00000 *See 2.2.10.3.3 for selection criteria		HID
1	Terminal Blocks 323(--HDS) 12 poles		WECO
1	Buzzer (Optional) PAL-328		PIEZO-A-LERT
1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR7.2		ARD

**Note:**

1. Electrical conduits, electrical junction boxes, pull cords, card reader (wire to the junction box) and 120 V power source to be supplied, installed and wired by electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them up to the junction boxes/components/power supply/junction box (See electric elevation). All wires to be identified and run up to the ceiling junction box, final wiring to be done by McGill University (NCS). (Refer to the section 3.2 – Hardware Final Wiring.)
3. Aluminum door and frame, coordinate hardwares with their constructions.
4. Thresholds and gaskets all to be supplied and installed by the aluminum door and frame manufacturer.
5. Aluminum door and frame, coordinate hardwares with their constructions.
6. Thresholds and gaskets all to be supplied and installed by the aluminum door and frame manufacturer.

**Hardware set 8.1 / Laboratories**

Application: - Single door FIRE-RATED or NON-FIRE RATED - For hollow metal door and frame - For left hand or right hand door swings			
Qty	Description	Finish	Manufacturer
1	Heavy duty full mortise hinges T4A3386 114mm x 101mm x NRP	630	MCKINNEY
1	Classroom lockset ML2055 NSA x D134 x SA114 x M17 x L4-6 x KA1	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0200 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Door closer 4040XP See note 1	689	LCN
1	Kick plates K1050-203mm x 860mm x B4E x CSK (Push side)	630	ROCKWOOD
1	Wall stop 415 Or Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	619  630	ROCKWOOD  RIXSON
1	Perimeter gasketing 513CA x 1/915mm x 2/2135mm non-corrosive fasteners (Add mounting bracket 5823SB if surface overhead stop is use)	628	LEGACY
1	Adjustable drop plate K0062SP-ADJ-RC-1/4 127mm x 880mm		TRIMCO

Note:

- For wet labs, seal every piece of hardware with clear silicone.

**Hardware set 9 / Landscape (exit fence door)**

Application: - Single door - For custom gate door - For left hand reverse or right hand reverse door swings			
Qté	Description	Finis	Manufacturier
1	Exit device 98EO-WH-3'	630	VON DUPRIN

Note:

- Except for the specified exit device, all other hardware components to be supplied by the gate manufacturer.

**Hardware set 10.1 / Mechanical rooms, wide door application**

Application:			
- Single door FIRE-RATED or NON-FIRE RATED – Wide door of 1200 mm - For hollow metal door and frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
2	Hinges T4A3786 127 mm x 101 mm x NRP	646	MCKINNEY
1	Concealed circuit electric hinge T4A3786 127 mm x 101 mm x QC8	646	MCKINNEY
1	Electrically controlled mortise lockset with request to exit ML20906-SEC NSA x D134 x SA114 x M17 x M92 x 12VDC x L4-6 x KA1 (latch bolt monitor option M91 if required, see McGill project manager)	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0200 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Door closer 4041 DEL See note 1	689	LCN
1	Kick plates K1050-203mm x 1150mm x B4E x CSK (Push side) (Install above the automatic door bottom)	630	ROCKWOOD
1	Kick plates K1050-203mm x 1175mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Perimeter gasketing 513CA x 1/1200 mm x 2/2135 mm non-corrosive fasteners (Add mounting bracket 5823SB if surface overhead stop is used)	628	LEGACY
1	Automatic door bottom 7123 CA x 1200 mm	628	LEGACY
1	Wall stop 415	619	ROCKWOOD
1	Concealed overhead stop if no wall behind the door 1-536 or 9-536 surface if low ceiling condition above the door	630	RIXSON
1	Quick connect cable QC-C3000P		MCKINNEY
1	Quick connect cable QC-C400P (to be coordinated with door elevation)		MCKINNEY
1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR10.1		ARD

## Note:

1. Electrical conduits, electrical junction boxes, pull cords and card reader (wire to the junction box) to be supplied and installed by electricity.



2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them. Where required, the 120 V electric power source and the contact from the fire alarm panel will be supplied and wired by electricity.
3. 12VDC electric power source for the electric lock set to be supplied, installed and wired by McGill University (NCS). (Refer to the section 3.2 – Hardware Final Wiring.)
4. Mode of operation:
  1. From secure side of the door, the card reader momentary unlock the electric lock and the door can be open.
  2. From the unsecured side of the door, door can be pulled open using the lockset (always free exit), lockset send a request to exit signal to the access control.
5. For a pair of doors, see Group 6.2 Electrical rooms.

**Hardware set 11.1 / Offices**

Application:			
- Single door NON-FIRE RATED - For hollow metal door and frame or wood door and hollow metal frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
3	Hinges TA2714 114 mm x 101 mm x NRP	646	MCKINNEY
1	Office lockset ML2051 NSA x D134 x SA114 x M17 x L4-6 x KA1	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0200 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Kick plates K1050-203mm x 860mm x B4E x CSK(Push side) (Install above the automatic door bottom)	630	ROCKWOOD
1	Wall stop 415 Or 1	619	ROCKWOOD
	Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON
1	Perimeter gasketing 513CA x 1/915 mm x 2/2135 mm non-corrosive fasteners (Add mounting bracket 5823SB if surface overhead stop is used)	628	LEGACY
1	Automatic door bottom 7123 CA x 915 mm	628	LEGACY

**Hardware set 12 / Roofs**

Qty	Description	Finish	Manufacturer
	Hardware N/A or not required, to be confirmed.		

**Hardware set 13.1 / Staff rooms, Fire rated classroom**

Application:			
- Single door FIRE-RATED or NON-FIRE RATED - For hollow metal door and frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
3	Heavy duty full mortise hinges T4A3786 114 mm x 101 mm x NRP	646	MCKINNEY
1	Classroom lockset ML2055 NSA x D134 x SA114 x M17 x L4-6 x KA1	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0200 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Door closer 4040XP See note 1	689	LCN
1	Kick plates K1050-203mm x 860mm x B4E x CSK (Push side) (Install above the automatic door bottom)	630	ROCKWOOD
1	Wall stop 415	619	ROCKWOOD
1	Or Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON
1	Perimeter gasketing 513CA x 1/915 mm x 2/2135 mm non-corrosive fasteners (Add mounting bracket 5823SB if surface overhead stop is used)	628	LEGACY
1	Automatic door bottom 7123 CA x 915 mm	628	LEGACY

**Hardware set 13.2 / Secured staff room and secured classroom with card reader access control**

Application:			
- Single door FIRE-RATED or NON-FIRE RATED with card reader access control - For hollow metal door and frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
2	Hinges T4A3786 114 mm x 101 mm x NRP	646	MCKINNEY
1	Electric hinge T4A3786 114 mm x 101 mm x QC12	646	MCKINNEY
1	Electrically controlled mortise lockset with request to exit ML20906-SEC NSA x D134 x SA114 x M17 x M92 x 12VDC x L4-6 x KA1 (latch bolt monitor option M91 if required, see McGill project manager)	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0200 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Door closer 4041 DEL See note 1	689	LCN
1	Kick plates K1050-203mm x 860mm x B4E x CSK (Push side) (Install above the automatic door bottom)	630	ROCKWOOD
1	Kick plates K1050-203mm x 890mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Wall stop 415 Or	619	ROCKWOOD
1	Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON
1	Perimeter gasketing 513CA x 1/915 mm x 2/2135 mm non-corrosive fasteners (Add mounting bracket 5823SB if surface overhead stop is used)	628	LEGACY
1	Automatic door bottom 7123 CA x 915 mm	628	LEGACY
1	Quick connect cable QC-C3000P		MCKINNEY
1	Quick connect cable QC-C300P (to be coordinated with door elevation)		MCKINNEY
1	Door position switch Wooden doors:1072 Metal doors: <b>1076/1078</b> Metal entry/Exit doors with a channel in the top of the door: R1078 <b>Surface mounted: 1085</b>		SENTROL

1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR13.2		ARD
1	Card Reader Regular*: 920PTNTEK00000 Keypad*: 921PTNTEK00000 Slim*: 910PTNTEK00000 *See 2.2.10.3.3 for selection criteria		HID
1	Terminal Blocks 323(--HDS) 12 poles		WECO
1	Buzzer (Optional) PAL-328		PIEZO-A-LERT

## Note:

1. Electrical conduits, electrical junction boxes, pull cords and card reader (wire to the junction box) to be supplied and installed by electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them up to the junction boxes. All wires to be identified and run up to the ceiling junction box, final wiring to be done by McGill University (NCS). (Refer to the section 3.2 – Hardware Final Wiring.)
3. 12VDC electric power source for the electric lock set to be supplied, installs and wires by McGill University (NCS). (Refer to the section 3.2 – Hardware Final Wiring.)
4. Mode of operation:
  1. From secure side of the door, the card reader momentary unlock the electric lock and the door can be open.
  2. From the unsecured side of the door, door can be pulled open using the lockset (always free exit), lockset send a request to exit signal to the access control.

**Hardware set 14 / Stairs and Ramps**

Qty	Description	Finish	Manufacturer
	Hardware N/A or not required, to be confirmed.		

**Hardware set 15 / Telecommunications/Data Room**

Qty	Description	Finish	Manufacturer
	Hardware to be confirmed.		

**Hardware set 16.1 / Single user washrooms**

Application: - Single door FIRE-RATED or NON-FIRE RATED - For hollow metal door and frame or wood door and hollow metal frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
3	Hinges TA 2314 114 mm x 101 mm x NRP	630	MCKINNEY
1	Privacy lockset with ergonomic thumb turn ML2030 NSA x D134 x SA114 x M17 x M19V x M34	630	CORBIN/ RUSSWIN
1	Door closer 4041 DEL	689	LCN
1	Kick plates K1050-203mm x 878mm x B4E x CSK (Push side)	630	ROCKWOOD
1	Kick plates K1050-203mm x 890mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Wall stop 415	619	ROCKWOOD
1	Or Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON

**Hardware set 16.2 / Public washrooms**

Application:			
- Single door NON-FIRE RATED - For hollow metal door and frame or wood door and hollow metal frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
3	Hinges T4A3386 114 mm x 101 mm x NRP	630	MCKINNEY
1	Deadlock double cylinder with ergonomic thumb turn DL4122 x D134 x M34 x M40 x L4-6 x KA1	630	CORBIN/ RUSSWIN
2	Mortise cylinder 10_0200 x CT-Z46 x EMK x KD+ 94-0188	626	MEDECO
1	Push and pull set BF110-70C-low mount x 92 x CFC/CFTT Mtg#9	630	ROCKWOOD
1	Door closer 4041 DEL	689	LCN
1	Kick plates K1050-203mm x 878mm x B4E x CSK (Push side)	630	ROCKWOOD
1	Kick plates K1050-203mm x 890mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Wall stop 415	619	ROCKWOOD
1	Or Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON
	If an automatic door operator is required, delete the door closer and add :		
1	Monitoring strike SCC-028-312-SPDT		ARD
1	Automatic door operator HA8-SP Ditec	628	ENTREMATI
2	Push button PBR45 BEA Ditec	630	ENTREMATI
1	Presence detector Bodyguard BEA Ditec		ENTREMATI
1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR16.2		ARD

**Note:**

1. Electrical conduits, electrical junction boxes, pull cords and 120 V electric power source to be supplied, installed and wired by electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them. Where require, the 120 V electric power source will be supplied and wired by electricity.

**Hardware set 16.3 / Single user washrooms with automatic door operator**

Application:			
- Single door NON-FIRE RATED - For hollow metal door and frame or wood door and hollow metal frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
3	Hinges T4A3386 114 mm x 101 mm x NRP	630	MCKINNEY
1	Privacy lockset with ergonomic thumb turn and indicator ML2030-SP NSA x D134 x SA114 x M19V x M34 x less spring latch, deadbolt only	630	CORBIN/ RUSSWIN
1	Kick plates K1050-203mm x 878mm x B4E x CSK (Push side)	630	ROCKWOOD
1	Kick plates K1050-203mm x 890mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Wall stop 415 Or	619	ROCKWOOD
1	Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON
1	Monitor strike LML-1		SECURITRON
1	Automatic door operator HA8-SP Ditec		ENTREMATIc
2	915 mm low profile push plate LPR36L-HW Ditec	630	ENTREMATIc
1	Presence detector Bodyguard Ditec		ENTREMATIc
1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR16.3		ARD

**Note:**

1. Electrical conduits, electrical junction boxes, pull cords and 120 V electric power source to be supplied, installed and wired by Electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wires by this section including wires between them. Where require, the 120 V electric power source will be supplied and wired by Electricity.



**Hardware set 17 / Exit only exterior door**

Application:			
- Single door NON-FIRE RATED - For hollow metal door and frame - For left hand reverse or right hand reverse door swings			
Qty	Description	Finish	Manufacturer
4 **	Heavy duty full mortise hinges T4A3386 114 mm x 101 mm x NRP	630	MCKINNEY
1	Exit device exit only 9875EO-3'	630	VON DUPRIN
1	Door closer 4040XP-SCUSH	689	LCN
1	Kick plates K1050-203mm x 860mm x B4E x CSK	630	ROCKWOOD
1	Perimeter gasketing 513CA x 1/915 mm x 2/2135 mm + 5823SB non-corrosive fasteners	628	LEGACY
1	Door sweep 345ANB x 915 mm		PEMKO
1	Threshold 254x4AFG x 915 mm		PEMKO
1	Astragal AST83SS	630	ROYAL ARCH
1	Door position switch Wooden doors:1072 Metal doors: <b>1076/1078</b> Metal entry/Exit doors with a channel in the top of the door: R1078 <b>Surface mounted: 1085</b>		SENTROL
1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR17.1		ARD

**Note:**

1. Electrical conduits, electrical junction boxes and pull cords to be supplied, installed and wired by electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them. Where required, the 120 V electric power source and the contact from the fire alarm panel will be supplied and wired by electricity.
3. \*\* 4 hinges for a door of 2135 mm in height.

**Hardware set 18 / Daycare**

Application:			
- Single Dutch door NON-FIRE RATED - For hollow metal door and frame or wood door and hollow metal frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
1	Continuous safety hinge CFM83SLISF-1100 x DDP	628	PEMKO
1	Office lockset ML2051 NSA x D134 x SA114 x M17 x L4-6 x KA1	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0200 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Deadlock DL3260 (Install in top panel with bolt project in bottom panel)	626	CORBIN/ RUSSWIN
1	Kick plates K1050-203mm x 878mm x B4E x CSK	630	ROCKWOOD
1	Kick plates K1050-203mm x 890mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Wall stop 415	619	ROCKWOOD
1	Concealed overhead stop if no wall behind the door 1-336 or 9-336 surface if low ceiling condition above the door	630	RIXSON

**Hardware set 18.1 / Daycare**

Application: - Single Dutch door FIRE RATED - For hollow metal door and frame or wood door and hollow metal frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
1	Continuous hinge CFM83SLF-1100 x DDP	628	PEMKO
1	Finger guard MK1A x 2135 mm (Cut in the field to suit Dutch door prep)	Grey	FINGERSAFE
1	Office lockset ML2051 NSA x D134 x SA114 x M17 x L4-6 x KA1	630	CORBIN/ RUSSWIN
1	Mortise cylinder 10_0200 x CT-Z01 x EMK x KD + 94-0188	626	MEDECO
1	Automatic flush bolt 3815L (wood door) or 3810 (metal door) (Install in top panel with bolt project in bottom panel)	630	TRIMCO
1	Door closer 4040XP	689	LCN
1	Wall stop 415	619	ROCKWOOD
1	Kick plates K1050-203mm x 878mm x B4E x CSK	630	ROCKWOOD
1	Kick plates K1050-203mm x 890mm x B4E x CSK (Pull side)	630	ROCKWOOD
1	Power supply BPS-12-1 B-12-5 CKL		SECURITRON
1	Relay RB-4-12		SECURITRON
2	Electromagnetic door holder 998M-12VDC .180amp 55 lbs x extension (if required) 900/900-Z x 900-XXX	689	RIXSON
1	Electric wiring diagram section 08 71 10 SCC-DR-12-170412-GR18.1		ARD

**Note:**

1. Electrical conduits, electrical junction boxes, pull cords, 120 V electric power source and contact from fire alarm panel to be supplied, installed and wired by electricity.
2. All electrified components specified in this hardware group to be supplied, installed and wired by this section including wires between them. Where required, the 120 V electric power source and the contact from the fire alarm panel will be supplied and wired by electricity.

**Hardware set 19 / Meeting rooms**

Application: - Single door - For hollow metal door and frame or wood door and hollow metal frame - For left hand or right-hand door swings			
Qty	Description	Finish	Manufacturer
	Under development		

**Hardware set 20 / Glass door**

Application:			
Qty	Description	Finish	Manufacturer
	Under development		

**Part 3 Execution****3.1 Installation-General**

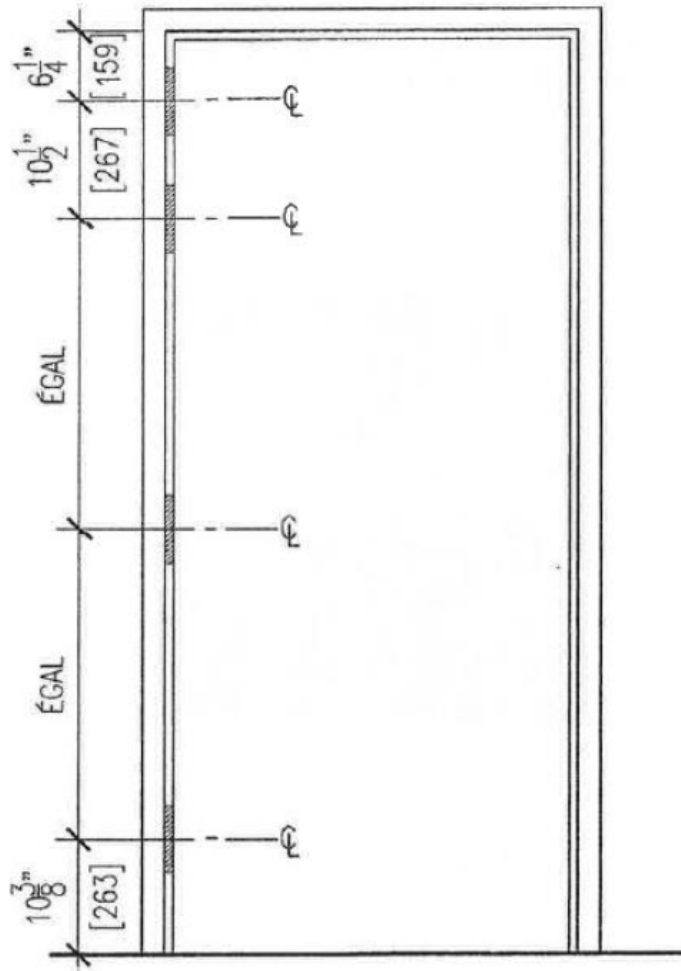
- .1 General: Install each hardware item to comply with the manufacturer's printed installation instructions and recommendations for application indicated unless otherwise indicated by referenced standard or by provisions of this section.
- .2 Use a mounting plate 4040XP-18 or 4040XP-18PA for the door closer if a concealed overhead stop is used.
- .3 Unless indicated otherwise, all hardware sets are based on 915 mm x 2135 mm single door and (2)915 mm x 2135 mm double doors. Hardware shall be adapted to any other dimension specified by the architect.
- .4 All aluminum thresholds to be coordinated with site conditions.

**3.2 Hardware Locations**

- .1 All deadlocks shall be installed at 1220 mm from the floor. Where a deadlock and push and pull set are used on the same door, the push and pull set to be coordinated so the deadlock remains at 1220 mm C/L from the floor.
- .2 All locksets shall be installed at 1023 mm C/L from the floor.
- .3 The adjustment of door closers shall be installed according to their related requirements.
- .4 Consultants shall verify all installations of doors and hardware to assure proper levelling and fitting.
- .5 Locks, latches, roller latches, double handle sets, rim and mortise panic devices :
  - .1 1033 mm centreline of the strike plate from bottom of the frame.
- .6 Push plates :
  - .1 1143 mm centreline from bottom of the frame.
- .7 Pull plates :
  - .1 1067 mm centreline of grip from bottom of the frame.
- .8 Combination push bar :
  - .1 1067 mm centreline from bottom of frame
- .9 Hospital arm pull :
  - .1 1143 mm centreline of lower base from bottom of the frame with grip open at bottom.
- .10 Hinges :
  - .1 3 hinge prep locations on 2135 mm door height to be the industry standards
  - .2 4 hinge prep location on 2135 mm door height to be as per 4 hinge locations elevation on next page

Note: The above guidelines are to coordinate with the door elevation and all other hardware's components part of the final assembly.

4 hinge locations on 2135 mm door height



**3.3 Hardware Final Wiring**

- .1 The final wiring done by the Network and Communication Services (NCS) (commissioning) should ideally be done with the GC's cooperation – possibly with them present.
- .2 Additional coordination with security may be required to finalize the order – NCS will follow up.
- .3 NCS will connect its wires to the other connector plates on the bus bars.

**END OF SECTION**