#### DOOR HARDWARE

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#### PART 1 - GENERAL REQUIREMENTS

 Doors are powered by JCI panel with low voltage wiring. Unless otherwise noted external power supply is not necessary.

## PART 2 - PRODUCTS AND MATERIALS

- BUTTS AND HINGES
  - Acceptable Manufacturers and Types:

Туре	McKinney	Hager	Stanley
Type 1	T4A3795	OB1262	CB268
Type 2	TA2714	OB1279	CB179
Туре 3	TA2314	OB1191	CB191
Туре 4	T4A3786	OB1168	CB168
Туре 5	T4A3386	OB1199	CB199

# • Application:

pplication.	
Exterior out-swinging doors	Type 2, 3, 4 or 5 x NRP
Exterior in-swinging doors and vestibule doors	Туре 4
Interior doors with closers	Type 2 or 4
Interior doors over 36 inches wide	Туре 4
Interior doors 36 inches or less without closer	Туре 2

NRP (non-removable pins) required on all exterior out-swinging lockable doors.

- Provide 2 hinges per leaf for openings through 60 inches high. Provide 1 additional hinge per leaf for each additional 30 inches in height or fraction thereof. Provide 4 hinges (2 per leaf) on Dutch doors up to 90 inches in height.
- BI-ELECTRIC HINGES
  - Acceptable Manufacturers:
    - McKinney Model QC-6 with McKinney MG-16 electric hinge motor guard.
  - Standardized wire colors and concealed plug connectors to accommodate up to 12 wires.
- ♦ CONTINUOUS GEARED HINGES
  - Acceptable Manufacturers and Types:
    - Hager Roton Continuous hinge
      - Provide with hinge leaf cutout to accommodate electric power transfer.
      - Model depends upon the type, inset, and thickness of the door specified.
- FLUSH BOLTS AND DUSTPROOF STRIKES
  - Acceptable Manufacturers:

	Rockwood	Door Controls
Flush Bolt	550	780
Automatic Flush Bolt	1842	842NH
Automatic Flush Bolt	1942	942NH
Dustproof Strike	570	82

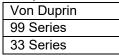
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- On Non-labeled Openings provide 2 flush bolts for inactive leaf of pairs of locked and latched doors. Locate the centerline of top bolt not more than 78 inches from finished floor. Provide dustproof strike for bottom bolt.
- On Labeled Openings provide automatic flush bolt set, as applicable, for inactive leaf of pairs of doors. Provide dustproof strike for bottom bolt.
- LOCKSETS MORTISE
  - Acceptable Manufacturer and Series:

Manufacturer	Series	Use
Corbin/Russwin	ML 20915 x SAF	Electrified mortise without core/key
Corbin/Russwin	ML 20914 x SAF	Electrified mortise with core/key (IDF)

- Locksets must meet the requirements of ANSI/BHMA A156.13, Operational Grade 1, and Security Grade 1.
- Backsets shall be 2-3/4 inches.
- Provide wrought boxes and strikes with proper lip length to protect trim but not to project more than 1/8 inch beyond trim, frame or inactive leaf. Where it is required, provide open back strike and protected to allow practical and secure operation.
- ♦ EXIT DEVICES
  - Acceptable Manufacturer and Series:



- Where a lever trim is required, provide a lever design to match lockset levers.
- Provide cylinders for exit devices with locking trim and cylinder dogging.
- Provide keyed removable mullions.
- Provide a RX (request to exit) internal SPDT switch in each exit device.
- KEYING
  - Provide 6 pin H0-1 keyway, "0" bitted, or 6 pin H0-2 keyway "0" bitted, or 6 pin H0-4 keyway, "0" bitted. Note: Selection will be identified at the Early Design Meeting based on the project location by the DOA Lockshop.
  - The Owner will key all cylinders.

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- ♦ DOOR TRIM
  - Acceptable Manufacturers and Types:

	Rockwood
Push Plate	70C
Pull Plate	125x70C
Push & Pull Bar	BF15747
Offset Pull	BF157
Straight Pull	111
Straight Pull	107
Edge Guard	EG308

- All push plates shall be 6 inches by 16 inches. Where the width of the door strike stile prevents the use of a 6 inch wide plate, provide a plate one inch less than the width of the stile, but not less than 4 inches in width.
- Kick plates and armor plates shall be a minimum of 0.050 inches thick, beveled 4 edges. At single doors provide width 1-1/2 inches less than the door width on the stop side and one inch less than the door width on the face side. At pairs of doors provide width one inch less than the door width on both sides. Minimum height of kick plates and armor plates shall be 24 inches.
- Edge guards shall be a minimum of 0.050 inches thick, stainless steel, and 42 inches high.
- COORDINATORS
  - Acceptable Manufacturers and Series:

Rockwood	Door Controls
1600 Series	600

- Provide coordinators for labeled pairs of doors equipped with automatic flush bolts and those with vertical rod/mortice lock fire exit device combinations with astragals.
- Provide filler bars for total opening width, closer mounting brackets, carry bars, and special preparation for top latches.
- DOOR CLOSERS
  - Acceptable Manufacturer:
    - LCN 4041
  - Provide heavy duty, cast iron body.
- OVERHEAD STOPS
  - Acceptable Manufacturer:
    - LCN
  - Overhead stops must match door closers.
  - Provide overhead stops on doors that swing more than 140 degrees before striking a wall.

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- ♦ WALL STOPS AND HOLDERS
  - Applications:

Card reader doors that are intended to remain open for long periods of time (eg. Jetbridges).

- Acceptable Manufacturers and Types:
  - LCN
    - 2310ME (specify tie-in to Fire Alarm Control panel)
    - 4310ME (specify tie-in to Fire Alarm Control panel)
    - 4410ME (specify tie-in to Fire Alarm Control panel)
- Floor and base stops shall be used only where unavoidable.
- THRESHOLDS
  - Acceptable Manufacturers:

Pe	mko	Zero
27	2A	546A

- Equal products by Reese Enterprises and National Guard Products are also acceptable.
- Where thresholds occur at openings with one or more mullions, they shall be cut for the mullions and extended continuously for the entire opening.
- WEATHERSTRIPPING
  - Acceptable Manufacturers and Type:

	Pemko	Zero
Sweeps	18062CNP	8192A
Jambs	303AV	328A
Door top drips	346C	11A

- Rain drips shall be no less than full frame width.
- ♦ GASKETING
  - Acceptable Manufacturers:

Pemko	Zero
S88D	188

- Equal products by Reese Enterprises are also acceptable.
- Where smoke gasket is required, provide MCKPK55D.
- Provide gaskets for all 20-minute doors that are designated for smoke and draft control.
- Where frame applied intumescent seals are required by the manufacturer, provide gaskets that comply with UL 10C positive pressure tests.
- FASTENERS
  - Including, but not limited to, wood or machine screws, bolts, nuts, anchors, etc. of proper type, material, and finish required for installation of hardware.
  - Use Phillips head for all exposed screws. Aluminum screws are not allowed.

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- Provide self-tapping (TEC) screws for the attachment of sweeps and stop-applied weatherstripping only.
- FINISHES AND MATERIALS
  - Finishes shall be as follows:
    - Butts on Out-swinging Exterior Doors: US32D (BHMA 630) on Stainless Steel
    - Butts on Interior Doors and In-swinging Exterior Doors: US26D (BHMA 652) on Steel
    - Continuous Hinges: US28 (BHMA 628) on Aluminum
    - Flush Bolts: US26D (BHMA 626) on Brass or Bronze
    - Exit Devices: US26D (BHMA 630) on Stainless Steel
    - Locks and Latches: US26D (BHMA 626) on Brass or Bronze
    - Push Plates, Pulls, and Push Bars: US32D (BHMA 630) on Stainless Steel
    - Coordinators: USP (BHMA 600) on Steel
    - Kick Plates, Armor Plates, and Edge Guards: US32D (BHMA 630) on Stainless Steel
    - Overhead Stops and Holders: US26D (BHMA 626) on Brass or Bronze
    - Closers (Surface Mounted): Sprayed Aluminum Lacquer
    - Latch Protectors: US32D (BHMA 630) on Stainless Steel
    - Miscellaneous Hardware: US26D (BHMA 626) on Brass or Bronze

# PART 3 - EXECUTION

- ♦ PRE-INSTALLATION MEETING
  - Prior to the installation of hardware, CONTRACTOR shall coordinate a jobsite meeting to instruct the installing contractor's personnel on the proper installation of their respective products. A representative of the Facilities Division must attend this meeting."