

**SECTION 08 71 00**  
**DOOR HARDWARE**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. Door hardware and related items necessary for complete installation and operation of doors.

**1.2 RELATED WORK**

- A. Caulking: Section 07 92 00 JOINT SEALANTS.
- B. Application of Hardware: Section 08 14 00 WOOD DOORS, Section 08 11 13 HOLLOW METAL DOORS AND FRAMES, Section 08 71 13 AUTOMATIC DOOR OPERATORS.
- C. Finishes: Section 09 06 00, SCHEDULE FOR FINISHES.
- D. Painting: Section 09 91 00, PAINTING.
- E. Card Readers: Section 28 13 11, PHYSICAL ACCESS CONTROL SYSTEMS.
- F. Wander Prevention: Section 28 13 00, DOOR CONTROL AND WANDER PREVENTION SYSTEM.
- G. Electrical: Division 26, ELECTRICAL.
- H. Fire Detection: Section 28 31 00, FIRE DETECTION AND ALARM.

**1.3 GENERAL**

- A. All hardware shall comply with UFAS, (Uniform Federal Accessible Standards) unless specified otherwise.
- B. Provide rated door hardware assemblies where required by most current version of the International Building Code (IBC).
- C. Hardware for Labeled Fire Doors and Exit Doors: Conform to requirements of NFPA 80 for labeled fire doors and to NFPA 101 for exit doors, as well as to other requirements specified. Provide hardware listed by UL, except where heavier materials, large size, or better grades are specified herein under paragraph HARDWARE SETS. In lieu of UL labeling and listing, test reports from a nationally recognized testing agency may be submitted showing that hardware has been tested in accordance with UL test methods and that it conforms to NFPA requirements.
- D. Hardware for application on metal and wood doors and frames shall be made to standard templates. Furnish templates to the fabricator of these items in sufficient time so as not to delay the construction.
- E. The following items shall be of the same manufacturer, except as otherwise specified:
  - 1. Mortise locksets.

2. Hinges for hollow metal and wood doors.
3. Surface applied overhead door closers.
4. Exit devices.

#### 1.4 WARRANTY

- A. Automatic door operators shall be subject to the terms of FAR Clause 52.246-21, except that the Warranty period shall be two years in lieu of one year for all items except as noted below:
1. Locks, latchsets, and panic hardware: 5 years.
  2. Door closers and continuous hinges: 10 years.

#### 1.5 MAINTENANCE MANUALS

- A. In accordance with Section 01 00 00, GENERAL REQUIREMENTS Article titled "INSTRUCTIONS", furnish maintenance manuals and instructions on all door hardware. Provide installation instructions with the submittal documentation.

#### 1.6 SUBMITTALS

- A. Submittals shall be in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES. Submit 6 copies of the schedule per Section 01 33 23. Submit 2 final copies of the final approved schedules to VAMC Locksmith as record copies (VISN Locksmith if the VAMC does not have a locksmith).
- B. Hardware Schedule: Prepare and submit hardware schedule in the following form:

Hardware Item	Quantity	Size	Reference Publication Type No.	Finish	Mfr. Name and Catalog No.	Key Control Symbols	UL Mark (if fire rated and listed)	ANSI/BHMA Finish Designation

- C. Samples and Manufacturers' Literature:

1. Samples: All hardware items (proposed for the project) that have not been previously approved by Builders Hardware Manufacturers Association shall be submitted for approval. Tag and mark all items with manufacturer's name, catalog number and project number.

2. Samples are not required for hardware listed in the specifications by manufacturer's catalog number, if the contractor proposes to use the manufacturer's product specified.

- D. Certificate of Compliance and Test Reports: Submit certificates that hardware conforms to the requirements specified herein. Certificates shall be accompanied by copies of reports as referenced. The testing shall have been conducted either in the manufacturer's plant and certified by an independent testing laboratory or conducted in an independent laboratory, within four years of submittal of reports for approval.

#### **1.7 DELIVERY AND MARKING**

- A. Deliver items of hardware to job site in their original containers, complete with necessary appurtenances including screws, keys, and instructions. Tag one of each different item of hardware and deliver to COR for reference purposes. Tag shall identify items by Project Specification number and manufacturer's catalog number. These items shall remain on file in COR's office until all other similar items have been installed in project, at which time the COR will deliver items on file to Contractor for installation in predetermined locations on the project.

#### **1.8 PREINSTALLATION MEETING**

- A. Convene a pre-installation meeting not less than 30 days before start of installation of door hardware. Require attendance of parties directly affecting work of this section, including Contractor and Installer, Architect, Project Engineer and VA Locksmith, Hardware Consultant, and Hardware Manufacturer's Representative. Review the following:
1. Inspection of door hardware.
  2. Job and surface readiness.
  3. Coordination with other work.
  4. Protection of hardware surfaces.
  5. Substrate surface protection.
  6. Installation.
  7. Adjusting.
  8. Repair.
  9. Field quality control.
  10. Cleaning.

## 1.9 INSTRUCTIONS

- A. Keying: All cylinders shall be keyed into existing Stanley/Best Grand Master Key System. Provide locksets that will accept KABA core cylinders that are removable only with a special key or tool without disassembly of lockset. Cylinders shall be 7 pin type, B1 keyway. Keying information shall be furnished at a later date by the COR. VA to combine the cores.

## 1.10 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only. In text, hardware items are referred to by series, types, etc., listed in such specifications and standards, except as otherwise specified.
- B. American Society for Testing and Materials (ASTM):
- F883-04.....Padlocks
  - E2180-07.....Standard Test Method for Determining the  
Activity of Incorporated Antimicrobial Agent(s)  
In Polymeric or Hydrophobic Materials
- C. American National Standards Institute/Builders Hardware Manufacturers Association (ANSI/BHMA):
- A156.1-06.....Butts and Hinges
  - A156.2-03.....Bored and Pre-assembled Locks and Latches
  - A156.3-08.....Exit Devices, Coordinators, and Auto Flush  
Bolts
  - A156.4-08.....Door Controls (Closers)
  - A156.5-01.....Auxiliary Locks and Associated Products
  - A156.6-05.....Architectural Door Trim
  - A156.8-05.....Door Controls-Overhead Stops and Holders
  - A156.12-05 .....Interconnected Locks and Latches
  - A156.13-05.....Mortise Locks and Latches Series 1000
  - A156.14-07 .....Sliding and Folding Door Hardware
  - A156.15-06.....Release Devices-Closer Holder, Electromagnetic  
and Electromechanical
  - A156.16-08.....Auxiliary Hardware
  - A156.17-04 .....Self-Closing Hinges and Pivots
  - A156.18-06.....Materials and Finishes
  - A156.20-06 .....Strap and Tee Hinges, and Hasps

A156.21-09.....Thresholds  
A156.22-05.....Door Gasketing and Edge Seal Systems  
A156.23-04.....Electromagnetic Locks  
A156.24-03.....Delayed Egress Locking Systems  
A156.25-07 .....Electrified Locking Devices  
A156.26-06.....Continuous Hinges  
A156.28-07 .....Master Keying Systems  
A156.29-07 .....Exit Locks and Alarms  
A156.30-03 .....High Security Cylinders  
A156.31-07 .....Electric Strikes and Frame Mounted Actuators  
A250.8-03.....Standard Steel Doors and Frames

D. National Fire Protection Association (NFPA):

80-10..... Fire Doors and Fire Windows  
101-12.....Life Safety Code

E. Underwriters Laboratories, Inc. (UL):

Building Materials Directory (2008)

**PART 2 - PRODUCTS**

**2.1 BUTT HINGES**

A. ANSI A156.1. The following types of butt hinges shall be used for the types of doors listed, except where otherwise specified:

1. Exterior Doors: Type A8111/A5111 hinges. Hinges for exterior outswing doors shall have non-removable pins. Hinges for exterior fire-rated doors shall be of stainless steel material.
2. Interior Doors: Type A8111 /A5111 hinges. Hinges for doors exposed to high humidity areas (shower rooms, toilet rooms, kitchens, janitor rooms, etc. shall be of stainless steel material.

B. Provide quantity and size of hinges per door leaf as follows:

1. Doors up to 1210 mm (4 feet) high: 2 hinges.
2. Doors 1210 mm (4 feet) to 2260 mm (7 feet 5 inches) high: 3 hinges minimum.
3. Doors greater than 2260 mm (7 feet 5 inches) high: 4 hinges.
4. Doors up to 900 mm (3 feet) wide, heavy-weight: 114 mm x 114 mm (4-1/2 inches x 4-1/2 inches) hinges.
5. Doors over 900 mm (3 feet) to 1065 mm (3 feet 6 inches) wide, heavy-weight: 127 mm x 114 mm (5 inches x 4-1/2 inches).
6. Doors over 1065 mm (3 feet 6 inches) to 1210 mm (4 feet), heavy weight: 127 mm x 114 mm (5 inches x 4-1/2 inches).

7. At doors weighing 330 kg (150 lbs.) or more, furnish 127 mm (5 inch) high hinges.

C. See Articles "MISCELLANEOUS HARDWARE" and "HARDWARE SETS" for pivots and hinges other than butts specified above and continuous hinges specified below.

## **2.2 CONTINUOUS HINGES**

A. ANSI/BHMA A156.26, Grade 1-600.

1. Listed under Category N in BHMA's "Certified Product Directory."

B. General: Minimum 0.120-inch- (3.0-mm-) thick, hinge leaves with minimum overall width of 4 inches (102 mm); fabricated to full height of door and frame and to template screw locations; with components finished after milling and drilling are complete

C. Continuous, Barrel-Type Hinges: Hinge with knuckles formed around a Teflon-coated 6.35mm (0.25-inch) minimum diameter pin that extends entire length of hinge.

1. Base Metal for Exterior Hinges: Stainless steel.

2. Base Metal for Interior Hinges: Stainless steel.

3. Base Metal for Hinges for Fire-Rated Assemblies: Stainless steel.

4. Provide with non-removable pin (hospital tip option) at lockable outswing doors.

5. Where required to clear adjacent casing, trim, and wall conditions and allow full door swing, provide wide throw hinges of minimum width required.

6. Provide with manufacturer's cut-outs for separate mortised power transfers and/or mortised automatic door bottoms where they occur.

7. Where thru-wire power transfers are integral to the hinge, provide hinge with easily removable portion to allow easy access to wiring connections.

8. Where models are specified that provide an integral wrap-around edge guard for the hinge edge of the door, provide manufacturer's adjustable threaded stud and machine screw mechanism to allow the door to be adjusted within the wrap-around edge guard.

## **2.3 DOOR CLOSING DEVICES**

A. Closing devices shall be products of one manufacturer for each type specified.

## **2.4 OVERHEAD CLOSERS**

A. Conform to ANSI A156.4, Grade 1.

B. Closers shall conform to the following:

1. The closer shall have minimum 50 percent adjustable closing force over minimum value for that closer and have adjustable hydraulic back check effective between 60 degrees and 85 degrees of door opening.
2. Where specified, closer shall have hold-open feature.
3. Size Requirements: Provide multi-size closers, sizes 1 through 6, except where multi-size closer is not available for the required application.
4. Material of closer body shall be forged or cast.
5. Arm and brackets for closers shall be steel, malleable iron or high strength ductile cast iron.
6. Where closers are exposed to the exterior or are mounted in rooms that experience high humidity, provide closer body and arm assembly of stainless steel material.
7. Closers shall have full size metal cover; plastic covers will not be accepted.
8. Closers shall have adjustable hydraulic back-check, separate valves for closing and latching speed, adjustable back-check positioning valve, and adjustable delayed action valve.
9. Provide closers with any accessories required for the mounting application, including (but not limited to) drop plates, special soffit plates, spacers for heavy-duty parallel arm fifth screws, bull-nose or other regular arm brackets, longer or shorter arm assemblies, and special factory templating. Provide special arms, drop plates, and templating as needed to allow mounting at doors with overhead stops and/or holders.
10. Closer arms or backcheck valve shall not be used to stop the door from overswing, except in applications where a separate wall, floor, or overhead stop cannot be used.
11. Provide parallel arm closers with heavy duty rigid arm.
12. Where closers are to be installed on the push side of the door, provide parallel arm type except where conditions require use of top jamb arm.
13. Provide all surface closers with the same body attachment screw pattern for ease of replacement and maintenance.
14. All closers shall have a 1 ½" (38mm) minimum piston diameter.

15. Facility preferred manufacturer and model: LCN 4041XP.

## **2.5 FLOOR CLOSERS AND FLOOR PIVOT SETS**

Section not used.

## **2.6 DOOR STOPS**

- A. Conform to ANSI A156.16.
- B. Provide door stops wherever an opened door or any item of hardware thereon would strike a wall, column, equipment or other parts of building construction. For concrete, masonry or quarry tile construction, use lead expansion shields for mounting door stops.
- C. Where cylindrical locks with turn pieces or pushbuttons occur, equip wall bumpers Type L02251 (rubber pads having concave face) to receive turn piece or button.
- D. Provide stop Type L02011, as applicable for exterior doors. At outswing doors where stop can be installed in concrete, provide stop mated to concrete anchor set in 76mm (3-inch) core-drilled hole and filled with quick-setting cement.
- E. Omit stops where floor mounted door holders are required and where automatic operated doors occur.
- F. Provide appropriate roller bumper for each set of doors (except where closet doors occur) where two doors would interfere with each other in swinging.
- G. Provide appropriate door mounted stop on doors in individual toilets where floor or wall mounted stops cannot be used.
- H. Provide overhead surface applied stop Type C02541, ANSI A156.8 on patient toilet doors in bedrooms where toilet door could come in contact with the bedroom door.
- I. Provide door stops on doors where combination closer magnetic holders are specified, except where wall stops cannot be used or where floor stops cannot be installed within 4-inches of the wall.
- J. Where the specified wall or floor stop cannot be used, provide concealed overhead stops (surface-mounted where concealed cannot be used).

## **2.7 OVERHEAD DOOR STOPS AND HOLDERS**

- A. Conform to ANSI Standard A156.8. Overhead holders shall be of sizes recommended by holder manufacturer for each width of door. Set overhead holders for 110 degree opening, unless limited by building construction



or equipment. Provide Grade 1 overhead concealed slide type: stop-only at rated doors and security doors, hold-open type with exposed hold-open on/off control at all other doors requiring overhead door stops.

- B. Facility standard manufacturer and model holder for fire and smoke barrier doors, where not connected to magnetic hold-opens: LCN 4310ME.

## **2.8 FLOOR DOOR HOLDERS**

- A. Conform to ANSI Standard A156.16. Provide extension strikes for Types L01301 and L01311 holders where necessary.

## **2.9 LOCKS AND LATCHES**

- A. Conform to ANSI A156.2. Facility standard lock system is Best (no substitutions). Locks and latches for doors 45 mm (1-3/4 inch) thick or over shall have beveled fronts. Lock cylinders shall have seven pins. Cylinders for all locksets shall be removable core type. Cylinder shall be removable by special key or tool. Construct all cores so that they will be interchangeable into the core housings of all mortise locks, rim locks, cylindrical locks, and any other type lock included in the Great Grand Master Key System. Disassembly of lever or lockset shall not be required to remove core from lockset. All locksets or latches on double doors with fire label shall have latch bolt with 19 mm (3/4 inch) throw, unless shorter throw allowed by the door manufacturer's fire label. Provide temporary keying device or construction core to allow opening and closing during construction and prior to the installation of final cores.
- B. In addition to above requirements, locks and latches shall comply with following requirements:
  - 1. Mortise Lock and Latch Sets: Conform to ANSI/BHMA A156.13. Mortise locksets shall be series 1000, minimum Grade 2. All locks and latchsets shall be furnished with 122.55 mm (4-7/8-inch) curved lip strike and wrought box. At outswing pairs with overlapping astragals, provide flat lip strip with 21mm (7/8-inch) lip-to-center dimension. Lock function F02 shall be furnished with emergency tools/keys for emergency entrance. All lock cases installed on lead lined doors shall be lead lined before applying final hardware finish. Furnish armored fronts for all mortise locks. Where mortise locks are installed in high-humidity locations or where exposed to the exterior on both sides of the opening, provide non-ferrous mortise lock case.

2. Cylindrical Lock and Latch Sets: levers shall meet ADA (Americans with Disabilities Act) requirements. Cylindrical locksets shall be series 4000 Grade I. All locks and latchsets shall be furnished with 122.55 mm (4-7/8-inch) curved lip strike and wrought box. At outswing pairs with overlapping astragals, provide flat lip strip with 21mm (7/8-inch) lip-to-center dimension. Provide lever design to match design selected by Architect or to match existing lever design. Where two turn pieces are specified for lock F76, turn piece on inside knob shall lock and unlock inside knob, and turn piece on outside knob shall unlock outside knob when inside knob is in the locked position. (This function is intended to allow emergency entry into these rooms without an emergency key or any special tool.)
3. Auxiliary locks shall be as specified under hardware sets and conform to ANSI A156.5.
4. Facility standard manufacturer/model: Best Cylindrical Locks - 9K3.

#### **2.10 PUSH-BUTTON COMBINATION LOCKS**

- A. ANSI/BHMA A156.13, Grade 1. Battery operated pushbutton entry.
- B. Construction: Heavy duty mortise lock housing conforming to ANSI/BHMA A156.13, Grade 1. Lever handles and operating components in compliance with the UFAS and the ADA Accessibility Guidelines. Match lever handles of locks and latchsets on adjacent doors.
- C. Special Features: Key override to permit a master keyed security system and a pushbutton security code activated passage feature to allow access without using the entry code.
- D. Facility standard manufacturer/model: Best - 93KZ.
- E. Facility standard manufacturer/model at Meds Rooms: Best 45HZ.

#### **2.11 ELECTROMAGNETIC LOCKS**

Section not used.

#### **2.12 ELECTRIC STRIKES**

- A. ANSI/ BHMA A156.31 Grade 1.
- B. General: Use fail-secure electric strikes at fire-rated doors.

#### **2.13 KEYS**

- A. Stamp all keys with change number and key set symbol. Furnish two (2) key blanks per core.

#### **2.14 KEY CABINET**

Section not used.

**2.15 ARMOR PLATES, KICK PLATES, MOP PLATES AND DOOR EDGING**

- A. Conform to ANSI Standard A156.6.
- B. Provide protective plates and door edging as specified below:
  - 1. Kick plates, mop plates and armor plates of metal, Rockwood K1050 series.
  - 2. Provide kick plates and mop plates where specified. Kick plates shall be 254 mm (10 inches) or 305 mm (12 inches) high. Mop plates shall be 152 mm (6 inches) high. Both kick and mop plates shall be minimum 1.27 mm (0.050 inches) thick. Provide kick and mop plates beveled on all 4 edges (B4E). On push side of doors where jamb stop extends to floor, make kick plates 38 mm (1-1/2 inches) less than width of door, except pairs of metal doors which shall have plates 25 mm (1 inch) less than width of each door. Extend all other kick and mop plates to within 6 mm (1/4 inch) of each edge of doors. Kick and mop plates shall butt astragals. For jamb stop requirements, see specification sections pertaining to door frames.
  - 3. Kick plates and/or mop plates are not required on following door sides:
    - a. Armor plate side of doors;
    - b. Exterior side of exterior doors;
    - c. Closet side of closet doors;
    - d. Both sides of aluminum entrance doors.
  - 4. Armor plates for doors are listed under Article "Hardware Sets". Armor plates shall be thickness as noted in the hardware set, 875 mm (35 inches) high and 38 mm (1-1/2 inches) less than width of doors, except on pairs of metal doors. Provide armor plates beveled on all 4 edges (B4E). Plates on pairs of metal doors shall be 25 mm (1 inch) less than width of each door. Where top of intermediate rail of door is less than 875 mm (35 inches) from door bottom, extend armor plates to within 13 mm (1/2 inch) of top of intermediate rail. On doors equipped with panic devices, extend armor plates to within 13 mm (1/2 inch) of panic bolt push bar.
  - 5. Where louver or grille occurs in lower portion of doors, substitute stretcher plate and kick plate in place of armor plate. Size of stretcher plate and kick plate shall be 254 mm (10 inches) high.
  - 6. Provide stainless steel edge guards where so specified at wood doors. Provide mortised type instead of surface type except where

door construction and/or ratings will not allow. Provide edge guards of bevel and thickness to match wood door. Provide edge guards with factory cut-outs for door hardware that must be installed through or extend through the edge guard. Provide full-height edge guards except where door rating does not allow; in such cases, provide edge guards to height of bottom of typical lockset armor front. Forward edge guards to wood door manufacturer for factory installation on doors.

#### **2.16 EXIT DEVICES**

- A. Conform to ANSI Standard A156.3. Exit devices shall be Grade 1; type and function are specified in hardware sets. Provide flush with finished floor strikes for vertical rod exit devices in interior of building. Trim shall have cast satin stainless steel lever handles of design similar to locksets, unless otherwise specified. Provide key cylinders for keyed operating trim and, where specified, cylinder dogging.
- B. Surface vertical rod panics shall only be provided less bottom rod; provide fire pins as required by exit device and door fire labels. Do not provide surface vertical rod panics at exterior doors.
- C. Concealed vertical rod panics shall be provided less bottom rod at interior doors, unless lockable or otherwise specified; provide fire pins as required by exit device and door fire labels. Where concealed vertical rod panics are specified at exterior doors, provide with both top and bottom rods.
- D. Where removable mullions are specified at pairs with rim panic devices, provide mullion with key-removable feature.
- E. At non-rated openings with panic hardware, provide panic hardware with key cylinder dogging feature.
- F. Exit devices for fire doors shall comply with Underwriters Laboratories, Inc., requirements for Fire Exit Hardware. Submit proof of compliance.
- G. **Basis of Design** manufacturer/model: Von Duprin - 98 Series.

#### **2.17 FLUSH BOLTS (LEVER EXTENSION)**

- A. Conform to ANSI A156.16. Flush bolts shall be Type L24081 unless otherwise specified. Furnish proper dustproof strikes conforming to ANSI A156.16, for flush bolts required on lower part of doors.

- B. Lever extension manual flush bolts shall only be used at non-fire-rated pairs for rooms only accessed by maintenance personnel.
- C. Face plates for cylindrical strikes shall be rectangular and not less than 25 mm by 63 mm (1 inch by 2-1/2 inches).
- D. Friction-fit cylindrical dustproof strikes with circular face plate may be used only where metal thresholds occur.
- E. Provide extension rods for top bolt where door height exceeds 2184 mm (7 feet 2 inches).

#### **2.18 FLUSH BOLTS (AUTOMATIC)**

- A. Conform to ANSI A156.3. Dimension of flush bolts shall conform to ANSI A115. Bolts shall conform to Underwriters Laboratories, Inc., requirements for fire door hardware. Flush bolts shall automatically latch and unlatch. Furnish dustproof strikes conforming to ANSI A156.16 for bottom flush bolt. Face plates for dustproof strike shall be rectangular and not less than 38 mm by 90 mm (1-1/2 by 3-1/2 inches).
- B. Facility preferred manufacturer and model: Assa Abloy, Rockwood 1845.

#### **2.19 DOOR PULLS WITH PLATES**

- A. Conform to ANSI A156.6. Pull Type J401, 152 mm (6 inches) high by 19 mm (3/4 inches) diameter with plate Type J302, 90 mm by 350 mm (3-1/2 inches by 14 inches), unless otherwise specified. Provide pull with projection of 70 mm (2 3/4 inches) and a clearance of 51 mm (2 inches). Cut plates of door pull plate for cylinders, or turn pieces where required.

#### **2.20 PUSH PLATES**

- A. Conform to ANSI A156.6. Metal, Type J302, 200 mm (8 inches) wide by 350 mm (14 inches) high. Provide metal Type J302 plates 100 mm (4 inches wide by 350 mm (14 inches) high) where push plates are specified for doors with stiles less than 200 mm (8 inches) wide. Cut plates for cylinders, and turn pieces where required.

#### **2.21 COMBINATION PUSH AND PULL PLATES**

- A. Conform to ANSI 156.6. Type J303, stainless steel 3 mm (1/8 inch) thick, 80 mm (3-1/3 inches) wide by 800 mm (16 inches) high), top and bottom edges shall be rounded. Secure plates to wood doors with 38 mm (1-1/2 inch) long No. 12 wood screws. Cut plates for turn pieces, and cylinders where required. Pull shall be mounted down.

## **2.22 COORDINATORS**

- A. Conform to ANSI A156.16. Coordinators, when specified for fire doors, shall comply with Underwriters Laboratories, Inc., requirements for fire door hardware. Coordinator may be omitted on exterior pairs of doors where either door will close independently regardless of the position of the other door. Coordinator may be omitted on interior pairs of non-labeled open where open back strike is used. Open back strike shall not be used on labeled doors. Paint coordinators to match door frames, unless coordinators are plated. Provide bar type coordinators, except where gravity coordinators are required at acoustic pairs. For bar type coordinators, provide filler bars for full width and, as required, brackets for push-side surface mounted closers, overhead stops, and vertical rod panic strikes. Facility preferred manufacturer and model: Door Controls International 600 Series.

## **2.23 THRESHOLDS**

- A. Conform to ANSI A156.21, mill finish extruded aluminum, except as otherwise specified. In existing construction, thresholds shall be installed in a bed of sealant with ¼-20 stainless steel machine screws and expansion shields. In new construction, embed aluminum anchors coated with epoxy in concrete to secure thresholds. Furnish thresholds for the full width of the openings.
- B. For thresholds at elevators entrances see other sections of specifications.
- C. At exterior doors and any interior doors exposed to moisture, provide threshold with non-slip abrasive finish.
- D. Provide with miter returns where threshold extends more than 12 mm (0.5 inch) from frame face.

## **2.24 AUTOMATIC DOOR BOTTOM SEAL AND RUBBER GASKET FOR LIGHT PROOF OR SOUND CONTROL DOORS**

- A. Conform to ANSI A156.22. Provide mortise or under-door type, except where not practical. For mortise automatic door bottoms, provide type specific for door construction (wood or metal).

## **2.25 WEATHERSTRIPS (FOR EXTERIOR DOORS)**

- A. Conform to ANSI A156.22. Air leakage shall not to exceed 0.50 CFM per foot of crack length ( $0.000774\text{m}^3/\text{s/m}$ ).

## **2.26 MISCELLANEOUS HARDWARE**

- A. Access Doors (including Sheet Metal, Screen and Woven Wire Mesh Types):  
Except for fire-rated doors and doors to Temperature Control Cabinets, equip each single or double metal access door with Lock Type E76213, conforming to ANSI A156.5. Key locks as directed. Ship lock prepaid to the door manufacturer. Hinges shall be provided by door manufacturer.
- B. Cylinders for Various Partitions and Doors: Key cylinders same as entrance doors of area in which partitions and door occur, except as otherwise specified. Provide cylinders to operate locking devices where specified for following partitions and doors:
  - 1. Fire-rated access doors - Engineer's key set.
  - 2. Doors from corridor to electromagnetic shielded room.
- C. Mutes: Conform to ANSI A156.16. Provide door mutes or door silencers Type L03011 or L03021, depending on frame material, of white or light gray color, on each steel or wood door frame, except at fire-rated frames, lead-lined frames and frames for sound-resistant, lightproof and electromagnetically shielded doors. Furnish 3 mutes for single doors and 4 mutes for each pair of doors, except double-acting doors. Provide 2 mutes for each edge of sliding door which would contact door frame.

## **2.30 FINISHES**

- A. Exposed surfaces of hardware shall have ANSI A156.18, finishes as specified below. Finishes on all hinges, pivots, closers, thresholds, etc., shall be as specified below under "Miscellaneous Finishes." For field painting (final coat) of ferrous hardware, see Section 09 91 00, PAINTING.
- B. 626 or 630: All surfaces on exterior and interior of buildings, except where other finishes are specified.
- C. Miscellaneous Finishes:
  - 1. Hinges - Exterior doors: 630.
  - 2. Hinges - Interior doors: 652 or 630.
  - 3. Pivots: Match door trim.
  - 4. Door Closers: Factory applied paint finish. Dull or Satin Aluminum color.
  - 5. Thresholds: Mill finish aluminum.
  - 6. Cover plates for floor hinges and pivots: 630.
  - 7. Other primed steel hardware: 600.

D. Hardware Finishes for Existing Buildings: U.S. Standard finishes shall match finishes of hardware in (similar) existing spaces except where otherwise specified.

E. Special Finish: Exposed surfaces of hardware for dark bronze anodized aluminum doors shall have oxidized oil rubbed bronze finish (dark bronze) finish on door closers shall closely match doors.

F. Anti-microbial Coating: All hand-operated hardware (levers, pulls, push bars, push plates, paddles, and panic bars) shall be provided with an anti-microbial/anti-fungal coating that has passed ASTM E2180 tests. Coating to consist of ionic silver (Ag<sup>+</sup>). Silver ions surround bacterial cells, inhibiting growth of bacteria, mold, and mildew by blockading food and respiration supplies.

### 2.31 BASE METALS

A. Apply specified U.S. Standard finishes on different base metals as following:

Finish	Base Metal
652	Steel
626	Brass or bronze
630	Stainless steel

## PART 3 - EXECUTION

### 3.1 HARDWARE HEIGHTS

A. For existing buildings locate hardware on doors at heights to match existing hardware. The Contractor shall visit the site, verify location of existing hardware and submit locations to VA COR for approval.

### 3.2 INSTALLATION

A. Closer devices, including those with hold-open features, shall be equipped and mounted to provide maximum door opening permitted by building construction or equipment. Closers shall be mounted on side of door inside rooms, inside stairs, and away from corridors. At exterior doors, closers shall be mounted on interior side. Where closers are mounted on doors they shall be mounted with sex nuts and bolts; foot shall be fastened to frame with machine screws.

B. Hinge Size Requirements:

Door Thickness	Door Width	Hinge Height
45 mm (1-3/4 inch)	900 mm (3 feet) and less	113 mm (4-1/2 inches)



45 mm (1-3/4 inch)	Over 900 mm (3 feet) but not more than 1200 mm (4 feet)	125 mm (5 inches)
35 mm (1-3/8 inch) (hollow core wood doors)	Not over 1200 mm (4 feet)	113 mm (4-1/2 inches)

C. Hinge leaves shall be sufficiently wide to allow doors to swing clear of door frame trim and surrounding conditions.

D. Where new hinges are specified for new doors in existing frames or existing doors in new frames, sizes of new hinges shall match sizes of existing hinges; or, contractor may reuse existing hinges provided hinges are restored to satisfactory operating condition as approved by COR. Existing hinges shall not be reused on door openings having new doors and new frames. Coordinate preparation for hinge cut-outs and screw-hole locations on doors and frames.

E. Hinges Required Per Door:

Doors 1500 mm (5 ft) or less in height	2 butts
Doors over 1500 mm (5 ft) high and not over 2280 mm (7 ft 6 in) high	3 butts
Doors over 2280 mm (7 feet 6 inches) high	4 butts
Dutch type doors	4 butts
Doors with spring hinges 1370 mm (4 feet 6 inches) high or less	2 butts
Doors with spring hinges over 1370 mm (4 feet 6 inches)	3 butts

F. Fastenings: Suitable size and type and shall harmonize with hardware as to material and finish. Provide machine screws and lead expansion shields to secure hardware to concrete, ceramic or quarry floor tile, or solid masonry. Fiber or rawl plugs and adhesives are not permitted. All fastenings exposed to weather shall be of nonferrous metal.

G. After locks have been installed; show in presence of COR that keys operate their respective locks in accordance with keying requirements. (All keys, Master Key level and above shall be sent Registered Mail to the Medical Center Director along with the bidding list. Also a copy of the invoice shall be sent to the COR for his records. Installation of locks which do not meet specified keying requirements shall be

considered sufficient justification for rejection and replacement of all locks installed on project.

### 3.3 FINAL INSPECTION

- A. Installer to provide letter to VA COR that upon completion, installer has visited the Project and has accomplished the following:
1. Re-adjust hardware.
  2. Evaluate maintenance procedures and recommend changes or additions, and instruct VA personnel.
  3. Identify items that have deteriorated or failed.
  4. Submit written report identifying problems.

### 3.4 DEMONSTRATION

- A. Demonstrate efficacy of mechanical hardware and electrical, and electronic hardware systems, including adjustment and maintenance procedures, to satisfaction of COR and VA Locksmith.

### 3.5 HARDWARE SETS

- A. The following sets of hardware correspond to hardware sets shown on drawings.

**Note: All hardware sets listed may not be applicable to the project. Refer to the Contract Drawings for further information.**

#### Hardware Set: HW-1 (Resident Rooms)

For use on mark/door #(s):

A407	A409	A410	A412	A413	A415
A419	A420	A423	A424	A426	A428
B407	B409	B410	B412	B413	B415
B419	B420	B423	B424	B426	B428

Qty	Description	Catalog Number	Finish	Mfr
1 EA	CONT. HINGE	700 (A51031B)	630	ANSI
1 EA	CYLINDRICAL LOCK	9K3 7R 15D (F84)	626	BES
1 EA	WALL STOP	WS402CVX (L12201)	626	ANSI
3 EA	SILENCER	SR64 (L03011)	GRY	ANSI
2 EA	DOOR VIEWER	U698 (L23222)	626	ANSI

**Hardware Set: HW-2  
(Resident Bathrooms)**

For use on mark/door #(s):

A407A	A409A	A410A	A412A	A413A	A415A
A419A	A420A	A423A	A424A	A426A	A428A
B407A	B409A	B410A	B412A	B413A	B415A
B419A	B420A	B423A	B424A	B426A	B428A

Qty		Description	Catalog Number	Finish	Mfr
4	EA	HW HINGE	5BB1HW 5 X 4.5 NRP (A5111)	630	ANSI
1	EA	HOSPITAL PRIVACY SET	9K3 0LL 15D	626	BES
1	EA	WALL STOP	WS402CCV (L12251)	626	ANSI
3	EA	SILENCER	SR64 (L03011)	GRY	ANSI
2	EA	CLOTHES HOOK	SEE SECTION 09 06 00 SCHEDULE FOR FINISHES	630	

**Hardware Set: HW-3  
(Laundry Room)**

For use on mark/door #(s):

A418                  B418

Qty		Description	Catalog Number	Finish	Mfr
1	EA	CONT. HINGE	700 (A51031B)	630	ANSI
1	EA	CYLINDRICAL LOCK	9K3 0N 15D (F75)	626	BES
1	EA	ELECTRIC STRIKE	6211 FSE (E59321)	630	ANSI
1	EA	SURF. AUTO OPERATOR	9542 HL/D MS (C0Unknown)	ANCLR	ANSI
1	EA	SENSOR PACKAGE	8310-3881		LCN
2	EA	ACTUATOR, WALL MOUNT	8310-853T	630	LCN
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
1	SET	SEALS	5020B	BRN	NGP
1	EA	DOOR BOTTOM	780VA	CL	NGP
1	EA	POWER SUPPLY	PS902 900-BBK 900-4RL	LGR	SCE
1	EA	WIRING DIAGRAMS	POINT TO POINT WIRING DIAGRAMS		
1	EA	WIRING DIAGRAMS	RISER WIRING DIAGRAM		

**Hardware Set: HW-4**  
**(Clean Linen, W.O.W. Storage)**

For use on mark/door #(s):

A411            A421            A421A            B411            B421            B421A

Qty		Description	Catalog Number	Finish	Mfr
6	EA	HW HINGE	5BB1HW 4.5 X 4.5 (A5111)	630	ANSI
1	SET	AUTO FLUSH BOLT	TYPE 27	630	ANSI
1	EA	DUST PROOF STRIKE	DP2 (L14011)	626	ANSI
1	EA	PUSHBUTTON COMBINATION LOCK	9KZ-7-DV-15-KP	626	BES
1	EA	COORDINATOR	COR X FL (Type 21A)	628	ANSI
2	EA	MOUNTING BRACKET	MB	689	IVE
2	EA	SURFACE CLOSER	4041XP CUSH (C02021 PT-4A, PT-4C, PT-4D, PT-4G, PT-4H)	689	ANSI
2	EA	SILENCER	SR64 (L03011)	GRY	ANSI

**Hardware Set: HW-5**  
**(Clean Supply, Soiled Utility)**

For use on mark/door #(s):

A422            A430            B422            B430

Qty		Description	Catalog Number	Finish	Mfr
1	EA	CONT. HINGE	700 EPT (A51031B)	630	ANSI
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	PUSHBUTTON COMBINATION LOCK	9KZ-7-DV-15-KP	626	BES
1	EA	SURFACE CLOSER	4041XP REG OR PA AS REQ (C02011/C02041 PT-4A, PT-4C, PT-4D, PT-4H) MOUNT CLOSER AS REGULAR ARM MOUNT ON PULL SIDE OF DOOR.	689	ANSI
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
1	EA	MOP PLATE	4" X 1" LDW (J103)	630	ANSI
1	EA	WALL STOP	WS402CVX (L12201)	626	ANSI
3	EA	SILENCER	SR64 (L03011)	GRY	ANSI

**Hardware Set: HW-6  
 (Storage/Wheelchairs)**

For use on mark/door #(s):  
 408

Qty		Description	Catalog Number	Finish	Mfr
1	EA	CONT. HINGE	700 (A51031B)	630	ANSI
1	EA	PUSHBUTTON COMBINATION LOCK	9KZ-7-DV-15-KP	626	BES
1	EA	SURFACE CLOSER	4041XP REG OR PA AS REQ (C02011/C02041 PT-4A, PT-4C, PT-4D, PT-4H) MOUNT CLOSER AS REGULAR ARM MOUNT ON PULL SIDE OF DOOR.	689	ANSI
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
1	EA	MOP PLATE	4" X 1" LDW (J103)	630	ANSI
1	EA	FLOOR STOP	FS436	626	IVE
3	EA	SILENCER	SR64 (L03011)	GRY	ANSI

**Hardware Set: HW-6A  
 (MEDS)**

For use on mark/door #(s):  
 A405                      B405

Qty		Description	Catalog Number	Finish	Mfr
1	EA	CONT. HINGE	700 (A51031B)	630	ANSI
1	EA	PUSHBUTTON COMBINATION LOCK	45HZ-7-DV-15-KP	626	BES
1	EA	SURFACE CLOSER	4041XP REG OR PA AS REQ (C02011/C02041 PT-4A, PT-4C, PT-4D, PT-4H) MOUNT CLOSER AS REGULAR ARM MOUNT ON PULL SIDE OF DOOR.	689	ANSI
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
1	EA	MOP PLATE	4" X 1" LDW (J103)	630	ANSI
1	EA	WALL STOP	WS402CVX (L12201)	626	ANSI
3	EA	SILENCER	SR64 (L03011)	GRY	ANSI

**Hardware Set: HW-7  
 (Stairs)**

For use on mark/door #(s):

SW1                      SW5

Qty		Description	Catalog Number	Finish	Mfr
1	EA	CONT. HINGE	700 - EDGE MOUNTED	630	ANSI
1	EA	CYLINDRICAL LOCK	9K3 0N 15D (F75)	626	BES
1	EA	SURFACE CLOSER	4041XP EDA (C02021 PT-4A, PT-4C, PT-4D, PT-4H)	689	ANSI
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
1	EA	WALL STOP	WS402CVX (L12201)	626	ANSI
1	SET	SEALS	5020B	BRN	NGP

WANDER PREVENTION SYSTEM HARDWARE BY SECTION 281300, DOOR CONTROL AND WANDER PREVENTION SYSTEM

NOTE: WANDER PREVENTION SYSTEM IS PROVIDING THESE DOORS WITH: MAGNETIC LOCKS, DOOR CONTACTS, STAIR SIDE "PUSH TO RELEASE LOCK" BUTTON, CORRIDOR SIDE KEY PAD FOR CONTROL OF MAG LOCK, AND WANDER PREVENTION SENSOR. THE MAG LOCK WILL ALWAYS BE ENERGIZED. CORRIDOR SIDE STAFF MAY UNLOCK DOOR WITH KEYPAD. PEOPLE IN THE STAIRWELL MAY OPEN THE DOOR WITH THE "PUSH TO RELEASE LOCK" BUTTON. LOSS OF POWER, OR THE SMOKE OR FIRE SPRINKLER SYSTEM ACTIVATION WILL UNLOCK THE DOOR.

**Hardware Set: HW-7A  
 (Stairs)**

For use on mark/door #(s):

SW2                      SW3                      SW4                      SW6

Qty		Description	Catalog Number	Finish	Mfr
1	EA	CONT. HINGE	HALF MORTISE	630	ANSI
1	EA	CYLINDRICAL LOCK	9K3 0N 15D (F75)	626	BES
1	EA	SURFACE CLOSER	4041XP EDA (C02021 PT-4A, PT-4C, PT-4D, PT-4H)	689	ANSI
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
1	EA	WALL STOP	WS402CVX (L12201)	626	ANSI
1	SET	SEALS	5020B	BRN	NGP

WANDER PREVENTION SYSTEM HARDWARE BY SECTION 281300, DOOR CONTROL AND WANDER PREVENTION SYSTEM

NOTE: WANDER PREVENTION SYSTEM IS PROVIDING THESE DOORS WITH: MAGNETIC LOCKS, DOOR CONTACTS, STAIR SIDE "PUSH TO RELEASE LOCK" BUTTON, CORRIDOR SIDE KEY PAD FOR CONTROL OF MAG LOCK, AND WANDER PREVENTION SENSOR. THE MAG LOCK WILL ALWAYS BE ENERGIZED. CORRIDOR SIDE STAFF MAY UNLOCK DOOR WITH KEYPAD. PEOPLE IN THE STAIRWELL MAY OPEN THE DOOR WITH THE "PUSH TO

RELEASE LOCK" BUTTON. LOSS OF POWER, OR THE SMOKE OR FIRE SPRINKLER SYSTEM  
ACTIVATION WILL UNLOCK THE DOOR.

**Hardware Set: HW-8**  
**(Electric Room & Linen Chutes)**

For use on mark/door #(s):

A414                      B414                      LC1                      LC2

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HW HINGE	5BB1HW 4.5 X 4.5 NRP (A5111)	630	ANSI
1	EA	CYLINDRICAL LOCK	9K3 7D 15D (F86)	626	BES
1	EA	SURFACE CLOSER	4041XP CUSH (C02021 PT-4A, PT-4C, PT-4D, PT-4G, PT-4H)	689	ANSI
3	EA	SILENCER	SR64 (L03011)	GRY	ANSI

**Hardware Set: HW-9**  
**(HAC)**

For use on mark/door #(s):

A406                      B406

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HW HINGE	5BB1HW 5 X 4.5 NRP (A5111)	630	ANSI
1	EA	CYLINDRICAL LOCK	9K3 7D 15D (F86)	626	BES
1	EA	SURFACE CLOSER	4041XP EDA (C02021 PT-4A, PT-4C, PT-4D, PT-4H)	689	ANSI
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
1	EA	WALL STOP	WS402CVX (L12201)	626	ANSI
3	EA	SILENCER	SR64 (L03011)	GRY	ANSI

**Hardware Set: HW-10**  
**(Bathing Suite)**

For use on mark/door #(s):

A404                      B404

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Qty		Description	Catalog Number	Finish	Mfr
1	EA	CONT. HINGE	700 (A51031B)	630	ANSI
1	EA	CYLINDRICAL LOCK	9K3 7R 15D (F84)	626	BES
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
1	EA	MOP PLATE	4" X 1" LDW (J103)	630	ANSI
1	EA	WALL STOP	WS402CVX (L12201)	626	ANSI
2	EA	CLOTHES HOOK	SEE SECTION 09 06 00 SCHEDULE FOR FINISHES	630	
3	EA	SILENCER	SR64 (L03011)	GRY	ANSI

**Hardware Set: HW-11**  
**(Quiet Room)**

For use on mark/door #(s):  
 A431                B431

Qty		Description	Catalog Number	Finish	Mfr
1	EA	CONT. HINGE	700 (A51031B)	630	ANSI
1	EA	CYLINDRICAL LOCK	9K3 7R 15D (F84)	626	BES
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
1	EA	WALL STOP	WS402CVX (L12201)	626	ANSI
1	SET	SEALS	5020B	BRN	NGP
1	EA	DOOR BOTTOM	780VA	CL	NGP

**Hardware Set: HW-12**  
**(Kitchen - half doors)**

For use on mark/door #(s):  
 A402                A403                B402                B403

Qty		Description	Catalog Number	Finish	Mfr
2	EA	HW HINGE	5BB1HW 4.5 X 4.5 (A5111)	630	ANSI
1	EA	CYLINDRICAL LOCK	9K3 7R 15D (F84)	626	BES
1	EA	WALL STOP	WS402CVX (L12201)	626	ANSI
2	EA	SILENCER	SR64 (L03011)	GRY	ANSI

**Hardware Set: HW-13**



**(Pantry)**

For use on mark/door #(s):  
 A403A                B403A

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HW HINGE	5BB1HW 4.5 X 4.5 NRP (A5111)	630	ANSI
1	EA	CYLINDRICAL LOCK	9K3 7R 15D (F84)	626	BES
1	EA	OH STOP	100S ADJ (C01541)	630	ANSI
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
1	EA	MOP PLATE	4" X 1" LDW (J103)	630	ANSI
3	EA	SILENCER	SR64 (L03011)	GRY	ANSI

**Hardware Set: HW-14  
 (Cross Corridor)**

For use on mark/door #(s):  
 A401                B401

Qty		Description	Catalog Number	Finish	Mfr
6	EA	HW HINGE	5BB1HW 5 X 4.5 (A5111)	630	ANSI
2	EA	SURFACE CLOSER	4041XP EDA (C02021 PT-4A, PT-4C, PT-4D, PT-4H)	689	ANSI
2	EA	PULL W/ PLATES	J406 4"x16"	630	ANSI
4	EA	KICK PLATE	10" X 1" LDW (J102)	630	ANSI
2	EA	FIRE/LIFE WALL MAG	SEM7850 (C0)	689	ANSI
4	EA	SILENCER	SR64 (L03011)	GRY	ANSI

**Hardware Set: HW-15  
 (Office)**

For use on mark/door #(s):  
 410                411                412                413

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HW HINGE	5BB1HW 4.5 X 4.5 (A5111)	630	ANSI
1	EA	CYLINDRICAL LOCK	9K3 7AB 15D (F109)	626	BES
1	EA	WALL STOP	WS402CVX (L12201)	626	ANSI

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2	EA	CLOTHES HOOK	SEE SECTION 09 06 00 SCHEDULE FOR FINISHES	630	
3	EA	SILENCER	SR64 (L03011)	GRY	ANSI

**Hardware Set: HW-16  
 (Oxygen and I.T. Closet)**

For use on mark/door #(s):  
 414                      415

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HW HINGE	5BB1HW 4.5 X 4.5 NRP (A5111)	630	ANSI
1	EA	CYLINDRICAL LOCK	9K3 7D 15D (F86)	626	BES
1	EA	OH STOP	100S ADJ (C01541)	630	ANSI
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
3	EA	SILENCER	SR64 (L03011)	GRY	ANSI

**Hardware Set: HW-17  
 (Closet (Non-Secure))**

For use on mark/door #(s):  
 401A                      410A

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HW HINGE	5BB1HW 4.5 X 4.5 (A5111)	630	ANSI
1	EA	CYLINDRICAL LOCK	9K3 0N 15D (F75)	626	BES
1	EA	WALL STOP	WS402CVX (L12201)	626	ANSI
3	EA	SILENCER	SR64 (L03011)	GRY	ANSI

**Hardware Set: HW-18  
 (Staff Toilet)**

For use on mark/door #(s):  
 406A                      409

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HW HINGE	5BB1HW 4.5 X 4.5 (A5111)	630	ANSI

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1	EA	CYLINDRICAL LOCK	9K3 0L 15D (F76)	626	BES
1	EA	SURFACE CLOSER	4041XP REG OR PA AS REQ (C02011/C02041 PT-4A, PT-4C, PT-4D, PT-4H) MOUNT CLOSER AS REGULAR ARM MOUNT ON PULL SIDE OF DOOR.	689	ANSI
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
1	EA	MOP PLATE	4" X 1" LDW (J103)	630	ANSI
1	EA	WALL STOP	WS402CCV (L12251)	626	ANSI
2	EA	CLOTHES HOOK	SEE SECTION 09 06 00 SCHEDULE FOR FINISHES	630	
3	EA	SILENCER	SR64 (L03011)	GRY	ANSI

**Hardware Set: HW-18A  
(Public Toilet)**

For use on mark/door #(s):

403A                      A429                      B429

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HW HINGE	5BB1HW 5 X 4.5 NRP (A5111)	630	ANSI
1	EA	HOSPITAL PRIVACY SET	9K3 0LL 15D	626	BES
1	EA	SURFACE CLOSER	4041XP EDA (C02021 PT-4A, PT-4C, PT-4D, PT-4H)	689	ANSI
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
1	EA	MOP PLATE	4" X 1" LDW (J103)	630	ANSI
1	EA	WALL STOP	WS402CCV (L12251)	626	ANSI
2	EA	CLOTHES HOOK	SEE SECTION 09 06 00 SCHEDULE FOR FINISHES	630	
3	EA	SILENCER	SR64 (L03011)	GRY	ANSI

**Hardware Set: HW-19  
(Reception)**

For use on mark/door #(s):

401B                      401C

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HW HINGE	5BB1HW 4.5 X 4.5 (A5111)	630	ANSI

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1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	ELEC MORTISE LOCK	45HW 7DEU15S RQE	626	BES
1	EA	SURFACE CLOSER	4041XP CUSH (C02021 PT-4A, PT-4C, PT-4D, PT-4G, PT-4H)	689	ANSI
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
3	EA	SILENCER	SR64 (L03011)	GRY	ANSI
1	EA	MULTITECH READER	MTK15	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-BBK 900-4RL	LGR	SCE
1	EA	WIRING DIAGRAMS	POINT TO POINT WIRING DIAGRAMS		
1	EA	WIRING DIAGRAMS	RISER WIRING DIAGRAM		

**Hardware Set: HW-20**  
**(Break/Locker Room)**

For use on mark/door #(s):  
406

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HW HINGE	5BB1HW 5 X 4.5 NRP (A5111)	630	ANSI
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	ELEC MORTISE LOCK	45HW 7DEU15S RQE	626	BES
1	EA	SURFACE CLOSER	4041XP REG OR PA AS REQ (C02011/C02041 PT-4A, PT-4C, PT-4D, PT-4H) MOUNT CLOSER AS REGULAR ARM MOUNT ON PULL SIDE OF DOOR.	689	ANSI
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
1	EA	MOP PLATE	4" X 1" LDW (J103)	630	ANSI
1	EA	WALL STOP	WS402CVX (L12201)	626	ANSI
2	EA	CLOTHES HOOK	SEE SECTION 09 06 00 SCHEDULE FOR FINISHES	630	
3	EA	SILENCER	SR64 (L03011)	GRY	ANSI
1	EA	MULTITECH READER	MTK15	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-BBK 900-4RL	LGR	SCE
1	EA	WIRING DIAGRAMS	POINT TO POINT WIRING DIAGRAMS		
1	EA	WIRING DIAGRAMS	RISER WIRING DIAGRAM		

**Hardware Set: HW-21**  
**(Recreational Therapy)**

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For use on mark/door #(s):  
 407

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HW HINGE	5BB1HW 5 X 4.5 NRP (A5111)	630	ANSI
1	EA	CYLINDRICAL LOCK	9K3 7AB 15D (F109)	626	BES
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
1	EA	MOP PLATE	4" X 1" LDW (J103)	630	ANSI
1	EA	WALL STOP	WS402CVX (L12201)	626	ANSI
2	EA	CLOTHES HOOK	SEE SECTION 09 06 00 SCHEDULE FOR FINISHES	630	
3	EA	SILENCER	SR64 (L03011)	GRY	ANSI

**Hardware Set: HW-22  
 (Multi-Purpose)**

For use on mark/door #(s):  
 402                      403

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HW HINGE	5BB1HW 5 X 4.5 NRP (A5111)	630	ANSI
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	ELEC PANIC HARDWARE	QEL+-98-L-996-06 (Grade 1, Type 1, Function 08)	630	ANSI
1	EA	RIM CYLINDER	1E72	626	BES
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	SURF. AUTO OPERATOR	9542 HL/D MS	ANCLR	ANSI
1	EA	SENSOR PACKAGE	8310-3881		LCN
2	EA	ACTUATOR, WALL MOUNT	8310-853T	630	LCN
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
3	EA	SILENCER	SR64 (L03011)	GRY	ANSI
1	EA	KEYSWITCH	653-04	630	SCE
1	EA	POWER SUPPLY	PS902 900-BBK 900-4RL	LGR	SCE
1	EA	WIRING DIAGRAMS	POINT TO POINT WIRING DIAGRAMS		
1	EA	WIRING DIAGRAMS	RISER WIRING DIAGRAM		

WANDER PREVENTION SYSTEM HARDWARE BY SECTION 281300, DOOR CONTROL AND WANDER PREVENTION SYSTEM

NOTE: WANDER PREVENTION SYSTEM IS PROVIDING THESE DOORS WITH: MAGNETIC LOCKS, AND WANDER PREVENTION SENSOR.  
THE MAG LOCK SHOULD ONLY BE ENERGIZED WHEN A WANDERGUARD PATIENT APPROACHES THE DOOR. FOR OTHER RESIDENTS THE PUSH SIDE SHALL HAVE FREE EGRESS AND THE DOOR ACTUATORS SHOULD FUNCTION NORMALLY. KEYSWITCH TO TURN ON/OFF AUTOMATIC OPERATORS. OPERATORS TO ONLY BE ACTIVE WHEN DOORS ARE UNLOCKED.

**Hardware Set: HW-23  
(Multi-Purpose)**

For use on mark/door #(s):  
404

Qty		Description	Catalog Number	Finish	Mfr
1	EA	CONT. HINGE	700 (A51031B)	630	ANSI
1	EA	CYLINDRICAL LOCK	9K3 7R 15D (F84)	626	BES
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	ELECTRIC STRIKE	6211 FSE (E59321)	630	ANSI
1	EA	SURF. AUTO OPERATOR	9531 MS	ANCLR	ANSI
1	EA	SENSOR PACKAGE	8310-3881		LCN
2	EA	ACTUATOR, WALL MOUNT	8310-853T	630	LCN
1	EA	KICK PLATE	10" X 1 1/2" LDW (J102)	630	ANSI
1	SET	SEALS	130NSS	630	NGP
1	EA	DOOR SWEEP	200NSS	630	NGP
1	EA	THRESHOLD	896S MS/LA	AL	NGP
1	EA	KEYSWITCH	653-04	630	SCE
1	EA	POWER SUPPLY	PS902 900-BBK 900-4RL	LGR	SCE
1	EA	WIRING DIAGRAMS	POINT TO POINT WIRING DIAGRAMS		
1	EA	WIRING DIAGRAMS	RISER WIRING DIAGRAM		

WANDER PREVENTION SYSTEM HARDWARE BY SECTION 281300, DOOR CONTROL AND WANDER PREVENTION SYSTEM

NOTE: WANDER PREVENTION SYSTEM IS PROVIDING THESE DOORS WITH: MAGNETIC LOCKS, AND WANDER PREVENTION SENSOR.  
THE MAG LOCK SHOULD ONLY BE ENERGIZED WHEN A WANDERGUARD PATIENT APPROACHES THE DOOR. FOR OTHER RESIDENTS AND STAFF THE PUSH SIDE LEVER SHOULD ALWAYS BE FREE AND THE DOOR ACTUATORS SHOULD FUNCTION NORMALLY. KEYSWITCH TO TURN ON OFF PULL SIDE ACTUATORS WHEN DOOR IS LOCKED FROM THE PULL SIDE.

**Hardware Set: HW-24  
(Seasonal Enclosure)**

For use on mark/door #(s):  
 A432

Qty		Description	Catalog Number	Finish	Mfr
1	EA	CONT. HINGE	700 (A51031B)	630	ANSI
1	EA	CYLINDRICAL LOCK	9K3 7R 15D (F84)	626	BES
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	ELECTRIC STRIKE	6211 FSE (E59321)	630	ANSI
1	EA	SURF. AUTO OPERATOR	9531 MS	ANCLR	ANSI
1	EA	SENSOR PACKAGE	8310-3881		LCN
2	EA	ACTUATOR, WALL MOUNT	8310-853T	630	LCN
1	EA	DOOR SWEEP	200NSS	630	NGP
1	EA	THRESHOLD	896S MS/LA	AL	NGP
1	EA	KEYSWITCH	653-04	630	SCE
1	EA	POWER SUPPLY	PS902 900-BBK 900-4RL	LGR	SCE
1	EA	WIRING DIAGRAMS	POINT TO POINT WIRING DIAGRAMS		
1	EA	WIRING DIAGRAMS	RISER WIRING DIAGRAM		

WANDER PREVENTION SYSTEM HARDWARE BY SECTION 281300, DOOR CONTROL AND WANDER PREVENTION SYSTEM

NOTE: WANDER PREVENTION SYSTEM IS PROVIDING THESE DOORS WITH: MAGNETIC LOCKS, AND WANDER PREVENTION SENSOR.

THE MAG LOCK SHOULD ONLY BE ENERGIZED WHEN A WANDERGUARD PATIENT APPROACHES THE DOOR. FOR OTHER RESIDENTS AND STAFF THE PUSH SIDE LEVER SHOULD ALWAYS BE FREE AND THE DOOR ACTUATORS SHOULD FUNCTION NORMALLY. KEYSWITCH TO TURN ON OFF PULL SIDE ACTUATORS WHEN DOOR IS LOCKED FROM THE PULL SIDE.

**Hardware Set: HW-25  
 (Seasonal Enclosure)**

For use on mark/door #(s):  
 B402A

Qty		Description	Catalog Number	Finish	Mfr
1	EA	CONT. HINGE	700 (A51031B)	630	ANSI
1	EA	CYLINDRICAL LOCK	9K3 7R 15C (F84)	626	BES
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	ELECTRIC STRIKE	6211 FSE (E59321)	630	ANSI
1	EA	SURF. AUTO OPERATOR	9542 HL/D MS	ANCLR	ANSI

1	EA	SENSOR PACKAGE	8310-3881		LCN
2	EA	ACTUATOR, WALL MOUNT	8310-853T	630	LCN
1	EA	DOOR SWEEP	200NSS	630	NGP
1	EA	THRESHOLD	896S MS/LA	AL	NGP
1	EA	KEYSWITCH	653-04	630	SCE
1	EA	POWER SUPPLY	PS902 900-BBK 900-4RL	LGR	SCE
1	EA	WIRING DIAGRAMS	POINT TO POINT WIRING DIAGRAMS		
1	EA	WIRING DIAGRAMS	RISER WIRING DIAGRAM		

WANDER PREVENTION SYSTEM HARDWARE BY SECTION 281300, DOOR CONTROL AND WANDER PREVENTION SYSTEM

NOTE: WANDER PREVENTION SYSTEM IS PROVIDING THESE DOORS WITH: MAGNETIC LOCKS, AND WANDER PREVENTION SENSOR.

THE MAG LOCK SHOULD ONLY BE ENERGIZED WHEN A WANDERGUARD PATIENT APPROACHES THE DOOR. FOR OTHER RESIDENTS AND STAFF THE PULL SIDE LEVER SHOULD ALWAYS BE FREE AND THE DOOR ACTUATORS SHOULD FUNCTION NORMALLY. KEYSWITCH TO TURN ON OFF PUSH SIDE ACTUATORS WHEN DOOR IS LOCKED FROM THE PULL SIDE.

**Hardware Set: HW-26  
 (Elevator Lobby)**

For use on mark/door #(s):

A400 B400

Qty		Description	Catalog Number	Finish	Mfr
2	EA	CONT. HINGE	700 EPT (A51031B)	630	ANSI
2	EA	POWER TRANSFER	EPT10	689	VON
2	EA	ELEC PANIC HARDWARE	QEL+-9827-L-BE-LBR-996-06-299F (Grade 1, Type 2, Function 14)	630	ANSI
1	EA	SURF. AUTO OPERATOR	9553 REG/STD HL/D MS	ANCLR	ANSI
2	EA	ACTUATOR, WALL MOUNT	8310-853T	630	LCN
1	EA	POWER SUPPLY	PS902 900-BBK 900-4RL	LGR	SCE
2	EA	KICK PLATE	10" X 1" LDW (J102)	630	ANSI
1	EA	WIRING DIAGRAMS	POINT TO POINT WIRING DIAGRAMS		
1	EA	WIRING DIAGRAMS	RISER WIRING DIAGRAM		

WANDER PREVENTION SYSTEM HARDWARE BY SECTION 281300, DOOR CONTROL AND WANDER PREVENTION SYSTEM

NOTE: WANDER PREVENTION SYSTEM IS PROVIDING THESE DOORS WITH: MAGNETIC LOCKS, AND WANDER PREVENTION SENSOR.

THE MAG LOCK SHOULD ONLY ENERGIZE WHEN A WANDERGUARD PATIENT APPROACHES THE



DOOR. FOR OTHER RESIDENTS, STAFF AND VISITORS THE PUSH SIDE SHOULD ALWAYS BE FREE EGRESS AND THE DOOR ACTUATORS SHOULD FUNCTION NORMALLY.

**Hardware Set: HW-27  
(Roof Patio)**

For use on mark/door #(s):  
404A

Qty		Description	Catalog Number	Finish	Mfr
1	EA	CONT. HINGE	700 (A51031B)	630	ANSI
1	EA	CYLINDRICAL LOCK	9K3 7R 15D (F84)	626	BES
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	ELECTRIC STRIKE	6211 FSE (E59321)	630	ANSI
1	EA	SURF. AUTO OPERATOR	9531 MS	ANCLR	ANSI
1	EA	SENSOR PACKAGE	8310-3881		LCN
2	EA	ACTUATOR, WALL MOUNT	8310-853T	630	LCN
1	EA	DOOR SWEEP	200NSS	630	NGP
1	EA	THRESHOLD	896S MS/LA	AL	NGP
1	EA	KEYSWITCH	653-04	630	SCE
1	EA	POWER SUPPLY	PS902 900-BBK 900-4RL	LGR	SCE
1	EA	WIRING DIAGRAMS	POINT TO POINT WIRING DIAGRAMS		
1	EA	WIRING DIAGRAMS	RISER WIRING DIAGRAM		

WANDER PREVENTION SYSTEM HARDWARE BY SECTION 281300, DOOR CONTROL AND WANDER PREVENTION SYSTEM

NOTE: WANDER PREVENTION SYSTEM IS PROVIDING THESE DOORS WITH: MAGNETIC LOCKS, AND WANDER PREVENTION SENSOR.

THE MAG LOCK SHOULD ONLY BE ENERGIZED WHEN A WANDERGUARD PATIENT APPROACHES THE DOOR. FOR OTHER RESIDENTS AND STAFF THE PUSH SIDE LEVER SHOULD ALWAYS BE FREE AND THE DOOR ACTUATORS SHOULD FUNCTION NORMALLY. KEYSWITCH TO TURN ON OFF PULL SIDE ACTUATORS WHEN DOOR IS LOCKED FROM THE PULL SIDE.

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