

SECTION 087100 – DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes commercial door hardware for the following:
  - 1. Swinging doors.
  - 2. Sliding doors.
  - 3. Other doors to the extent indicated.
- B. Door hardware includes, but is not necessarily limited to, the following:
  - 1. Mechanical door hardware.
  - 2. Electromechanical door hardware.
  - 3. Automatic operators.
- C. Related Sections:
  - 1. Division 06 Section "Rough Carpentry".
  - 2. Division 08 Section "Hollow Metal Doors and Frames".
  - 3. Division 08 Section "Flush Wood Doors".
  - 4. Division 08 Section "Aluminum-Framed Entrances and Storefronts".
  - 5. Division 28 Section "Access Control".
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
  - 1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
  - 2. ICC/IBC - International Building Code.
  - 3. NFPA 70 - National Electrical Code.
  - 4. NFPA 80 - Fire Doors and Windows.
  - 5. NFPA 101 - Life Safety Code.
  - 6. NFPA 105 - Installation of Smoke Door Assemblies.
  - 7. UL/ULC and CSA C22.2 – Standards for Automatic Door Operators Used on Fire and Smoke Barrier Doors and Systems of Doors.
  - 8. State Building Codes, Local Amendments.
- E. Standards: All hardware specified herein shall comply with the following industry standards:
  - 1. ANSI/BHMA Certified Product Standards - A156 Series
  - 2. UL10C – Positive Pressure Fire Tests of Door Assemblies

### 1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
  - 1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
  - 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
  - 3. Content: Include the following information:
    - a. Type, style, function, size, label, hand, and finish of each door hardware item.
    - b. Manufacturer of each item.
    - c. Fastenings and other pertinent information.
    - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
    - e. Explanation of abbreviations, symbols, and codes contained in schedule.
    - f. Mounting locations for door hardware.
    - g. Door and frame sizes and materials.
    - h. Warranty information for each product.
  - 4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Shop Drawings: Details of electrified access control hardware indicating the following:
  - 1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:
    - a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
    - b. Complete (risers, point-to-point) access control system block wiring diagrams.
    - c. Wiring instructions for each electronic component scheduled herein.
  - 2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.

- D. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.
- E. Informational Submittals:
  - 1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.
- F. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals.

#### 1.4 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.
- B. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.
- D. Automatic Operator Supplier Qualifications: Power operator products and accessories are required to be supplied and installed through current members of the manufacturer's "Power Operator Preferred Installer" program. Suppliers are to be factory trained, certified, and a direct purchaser of the specified power operators and be responsible for the installation and maintenance of the units and accessories indicated for the Project.
- E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
  - 1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
  - 2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.
- F. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

- G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
1. Function of building, purpose of each area and degree of security required.
  2. Plans for existing and future key system expansion.
  3. Requirements for key control storage and software.
  4. Installation of permanent keys, cylinder cores and software.
  5. Address and requirements for delivery of keys.
- H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
  2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
  3. Review sequence of operation narratives for each unique access controlled opening.
  4. Review and finalize construction schedule and verify availability of materials.
  5. Review the required inspecting, testing, commissioning, and demonstration procedures
- I. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

#### 1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

- B. Door Hardware and Electrical Connections: Coordinate the layout and installation of scheduled electrified door hardware and related access control equipment with required connections to source power junction boxes, low voltage power supplies, detection and monitoring hardware, and fire and detection alarm systems.
- C. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

#### 1.7 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
  - 1. Structural failures including excessive deflection, cracking, or breakage.
  - 2. Faulty operation of the hardware.
  - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
  - 4. Electrical component defects and failures within the systems operation.
- C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.
- D. Special Warranty Periods:
  - 1. Ten years for mortise locks and latches.
  - 2. Five years for exit hardware.
  - 3. Twenty five years for manual surface door closer bodies.
  - 4. Two years for electromechanical door hardware.

#### 1.8 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

### PART 2 - PRODUCTS

#### 2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.

- B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
- C. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
- D. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

## 2.2 HANGING DEVICES

- A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles as specified in the Door Hardware Sets.
  - 1. Quantity: Provide the following hinge quantity, unless otherwise indicated:
    - a. Two Hinges: For doors with heights up to 60 inches.
    - b. Three Hinges: For doors with heights 61 to 90 inches.
    - c. Four Hinges: For doors with heights 91 to 120 inches.
    - d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
  - 2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
    - a. Widths up to 3'5": 4-1/2" standard or heavy weight as specified.
    - b. Sizes from 3'6" to 4'0": 5" standard or heavy weight as specified.
  - 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
    - a. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
  - 4. Hinge Options: Comply with the following where indicated in the Hardware Sets or on Drawings:
    - a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.
  - 5. Acceptable Manufacturers:
    - a. Bommer Industries (BO).
    - b. Lawrence Brothers (LA).
    - c. McKinney Products (MK).

## 2.3 POWER TRANSFER DEVICES

- A. Electrified Quick Connect Transfer Hinges: Provide electrified transfer hinges with Molex™ standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.
1. Acceptable Manufacturers:
    - a. McKinney Products (MK) - QC (# wires) Option.
- B. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number and type of concealed wires to accommodate electric function of specified hardware. Provide a connector for through-door electronic locking devices and from hinge to junction box above the opening. Wire nut connections are not acceptable. Determine the length required for each electrified hardware component for the door type, size and construction, minimum of two per electrified opening.
1. Provide one each of the following tools as part of the base bid contract:
    - a. McKinney Products (MK) - Electrical Connecting Kit: QC-R001.
    - b. McKinney Products (MK) - Connector Hand Tool: QC-R003.
  2. Acceptable Manufacturers:
    - a. McKinney Products (MK) – QC-C Series.
- C. Provide mortar guard enclosure on steel frames installed at masonry openings for each electrical hinge specified.

## 2.4 DOOR OPERATING TRIM

- A. Flush Bolts and Surface Bolts: ANSI/BHMA A156.3 and A156.16, Grade 1, certified.
1. Manual flush bolts to be furnished with top rod of sufficient length to allow bolt location approximately six feet from the floor.
  2. Furnish dust proof strikes for bottom bolts.
  3. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.
  4. Acceptable Manufacturers:
    - a. Door Controls International (DC).
    - b. Rockwood Manufacturing (RO).
    - c. Trimco (TC).

## 2.5 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.

- B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.
  - 1. Acceptable Manufacturers:
    - a. Stanley Best (BE).
    - b. To Match Existing.
- C. Cylinders: Original manufacturer cylinders complying with the following:
  - 1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
  - 2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
  - 3. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
  - 4. Keyway: Match Facility Standard.
- D. Permanent Cores: Manufacturer's standard; finish face to match lockset; complying with the following:
  - 1. Interchangeable Cores: Core insert, removable by use of a special key; usable with other manufacturers' cylinders.
- E. Keying System: Each type of lock and cylinders to be factory keyed.
  - 1. Conduct specified "Keying Conference" to define and document keying system instructions and requirements.
  - 2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
  - 3. Existing System: Key locks to Owner's existing system.
- F. Key Quantity: Provide the following minimum number of keys:
  - 1. Change Keys per Cylinder: Three (3) each.
  - 2. Master Keys (per Master Key Level/Group): Five (5) each.
  - 3. Construction Keys: Ten (10) each.
  - 4. Construction Control Keys: Two (2) each.
  - 5. Permanent Control Keys: Two (2 each).
- G. Construction Keying: Provide construction master keyed brass temporary cores.
- H. Key Registration List (Bitting List):
  - 1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
  - 2. Provide transcript list in writing or electronic file as directed by the Owner.
- I. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.



1. Acceptable Manufacturers:

- a. Lund Equipment (LU).
- b. MMF Industries (MM).
- c. Telkee (TK).

- J. Key Control Software: Provide one network version of "Key Wizard" branded key management software package that includes one year of technical support and upgrades to software at no charge. Provide factory key system formatted for importing into "Key Wizard" software.

2.6 MECHANICAL LOCKS AND LATCHING DEVICES

- A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 certified. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.

1. Acceptable Manufacturers:

- a. Corbin Russwin Hardware (RU) – ML2000 Series.
- b. Sargent Manufacturing (SA) – 8200 Series.
- c. Yale Locks and Hardware (YA) – 8800FL Series.

2.7 ELECTROMECHANICAL LOCKING DEVICES

- A. Electromechanical Mortise Locksets, Grade 1 (Heavy Duty): Subject to same compliance standards and requirements as mechanical mortise locksets, electrified locksets to be of type and design as specified below.

- 1. Electrified Lock Options: Where indicated in the Hardware Sets, provide electrified options including: outside door lock/unlock trim control, latchbolt and lock/unlock status monitoring, deadbolt monitoring, and request-to-exit signaling. Support end-of-line resistors contained within the lock case. Unless otherwise indicated, provide electrified locksets standard as fail secure.
- 2. Acceptable Manufacturers:

- a. Corbin Russwin Hardware (RU) - ML20900 Series.
- b. Sargent Manufacturing (SA) - 8200 Series.
- c. Yale Locks and Hardware (YA) - 8890 Series.

2.8 LOCK AND LATCH STRIKES

- A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:

- 1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
- 2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
- 3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.

B. Standards: Comply with the following:

1. Strikes for Mortise Locks and Latches: BHMA A156.13.
2. Dustproof Strikes: BHMA A156.16.

2.9 ELECTROMAGNETIC LOCKING DEVICES

- A. Surface Electromagnetic Locks (Heavy Duty): Electromagnetic locks to be surface mounted type conforming to ANSI A156.23, Grade 1 with minimum holding force strength of 1,200 pounds. Locks to be capable of either 12 or 24 voltage and be UL listed for use on fire rated door assemblies. Electronics are to be fully sealed against tampering and allow exterior weatherproof applications. As indicated in Hardware Sets, provide specified mounting brackets and housings. Power supply to be by the same manufacturer as the lock with combined products having a lifetime replacement warranty.

1. Acceptable Manufacturers:
  - a. Folger Adam (FA) - Series.
  - b. Secuity Door Controls (SD) - Series.
  - c. Securitron (SU) – M62 Series.

2.10 ELECTRIC STRIKES

- A. Standard Electric Strikes: Heavy duty, cylindrical and mortise lock electric strikes conforming to ANSI/BHMA A156.31, Grade 1, UL listed for both Burglary Resistance and for use on fire rated door assemblies. Stainless steel construction with dual interlocking plunger design tested to exceed 3000 lbs. of static strength and 350 ft-lbs. of dynamic strength. Strikes tested for a minimum 1 million operating cycles. Provide strikes with 12 or 24 VDC capability and supplied standard as fail-secure unless otherwise specified. Option available for latchbolt and latchbolt strike monitoring indicating both the position of the latchbolt and locked condition of the strike.

1. Acceptable Manufacturers:
  - a. Folger Adam EDC (FO).
  - b. HES (HS).
  - c. Von Duprin (VD).

2.11 CONVENTIONAL EXIT DEVICES

- A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:

1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.

3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.
  4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
  5. Electromechanical Options: Subject to same compliance standards and requirements as mechanical exit devices, electrified devices to be of type and design as specified in hardware sets. Include any specific controllers when conventional power supplies are not sufficient to provide the proper inrush current.
  6. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
    - a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
    - b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
  7. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.
  8. Rail Sizing: Provide exit device rails factory sized for proper door width application.
- B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 certified panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
1. Acceptable Manufacturers:
    - a. Corbin Russwin Hardware (RU) – ED5000 Series.
    - b. Sargent Manufacturing (SA) - 80 Series.
    - c. Von Duprin (VD) - 98 XP Series.

## 2.12 DOOR CLOSERS

- A. All door closers specified herein shall meet or exceed the following criteria:
1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers including installation and adjusting information on inside of cover.
  2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
  3. Cycle Testing: Provide closers which have surpassed 15 million cycles in a test witnessed and verified by UL.

4. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the physically handicapped, provide units complying with ANSI ICC/A117.1.
  5. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
  6. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
  7. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates, and through-bolt and security type fasteners as required for proper installation.
- B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.
1. Acceptable Manufacturers:
    - a. Corbin Russwin Hardware (RU) – DC6000 Series.
    - b. Sargent Manufacturing (SA) - 351 Series.
    - c. Norton Door Controls (NO) - 7500 Series.
- C. Door Closers, Surface Mounted (Cam Action): ANSI/BHMA 156.4, Grade 1 certified surface mounted, high efficiency door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be of the cam and roller design, one piece cast aluminum silicon alloy body with adjustable backcheck and independently controlled valves for closing sweep and latch speed.
1. Acceptable Manufacturers:
    - a. Corbin Russwin (RU) - DC5000 Series.
    - b. Norton Door Controls (NO) - 2800ST Series.
    - c. Sargent Manufacturing (SA) - 421 Series.

## 2.13 AUTOMATIC DOOR OPERATORS

- A. General: Provide operators of size recommended by manufacturer for door size, weight, and movement; for condition of exposure; and for compliance with UL 325. Coordinate operator mechanisms with door operation, hinges, and activation devices.
1. Fire-Rated Doors: Provide door operators for fire-rated door assemblies that comply with NFPA 80 for fire-rated door components and are listed and labeled by a qualified testing agency.

- B. Electrohydraulic Door Operators: Self-contained low-pressure units with rack and pinion design contained within a cast aluminum housing. Door closing speed controlled by independent hydraulic adjustment valves in the sweep and latch range of the closing cycle. Operator is to provide conventional door closer opening and closing forces unless the power operator motor is activated. Unit is to include an adjustable hydraulic backcheck valve to cushion the door speed if opened violently. Non-handed units for both push and pull side applications.
- C. Brackets and Reinforcements: Manufacturer's standard, fabricated from aluminum with nonferrous shims for aligning system components.
- D. Standard: Certified ANSI/BHMA A156.19.
  - 1. Performance Requirements:
    - a. Opening Force if Power Fails: Not more than 15 lbf required to release a latch if provided, not more than 30 lbf required to manually set door in motion, and not more than 15 lbf required to fully open door.
    - b. Entrapment Protection: Not more than 15 lbf required to prevent stopped door from closing or opening.
- E. Configuration: Surface mounted. Door operators to control single swinging and pair of swinging doors.
- F. Operation: Power opening and spring closing operation capable of meeting ANSI A117.1 accessibility guideline. Provide time delay for door to remain open before initiating closing cycle as required by ANSI/BHMA A156.19. When not in automatic mode, door operator to function as manual door closer with fully adjustable opening and closing forces, with or without electrical power.
  - 1. On-off switch to control power to be key switch operated.
- G. Features: Operator units to have full feature adjustments for door opening and closing force and speed, backcheck, motor assist acceleration from 0 to 30 seconds, time delay, vestibule interface delay, obstruction recycle, and hold open time from 0 up to 30 seconds.
- H. Provide outputs and relays on board the operator to allow for coordination of exit device latch retraction, electric strikes, magnetic locks, card readers, safety and motion sensors and specified auxiliary contacts.
- I. Activation Devices: Provide activation devices in accordance with ANSI/BHMA A156.19 standard, for condition of exposure indicated and for long term, maintenance free operation under normal traffic load operation. Coordinate activation control with electrified hardware and access control interfaces. Activation switches are standard SPST, with optional DPDT availability.
- J. Signage: As required by cited ANSI/BHMA A156.19 standard for the type of operator.
  - 1. Acceptable Manufacturers:
    - a. Besam Automated Entrance Systems (BM) - SW100 Series.
    - b. Chase Doors (CH) - Series.
    - c. Norton Door Controls (NO) - 6000 Series.

2.14 ARCHITECTURAL TRIM

A. Door Protective Trim

1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
3. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
  - a. Stainless Steel: 300 grade, 050-inch thick.
4. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
5. Acceptable Manufacturers:
  - a. Hiawatha, Inc. (HI).
  - b. Rockwood Manufacturing (RO).
  - c. Trimco (TR).

2.15 DOOR STOPS AND HOLDERS

A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.

B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.

1. Acceptable Manufacturers:
  - a. Door Controls International (DC).
  - b. Rockwood Manufacturing (RO).
  - c. Trimco (TC).

C. Overhead Door Stops and Holders: ANSI/BHMA A156.6, Grade 1 certified overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.

1. Acceptable Manufacturers:
  - a. Rixson Door Controls (RF).
  - b. Rockwood Manufacturing (RO).
  - c. Sargent Manufacturing (SA).

2.16 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
  - 1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
- C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
  - 1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and UBC 7-2, Fire Tests of Door Assemblies.
- D. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- E. Acceptable Manufacturers:
  - 1. National Guard Products (NG).
  - 2. Pemko Manufacturing (PE).
  - 3. Reese Enterprises, Inc. (RE).

2.17 ELECTRONIC ACCESSORIES

- A. Touchless Switches: FCC certified microwave sensing switch used for REX or activation of various access control devices in place of a traditional wired switch. Unit to have an adjustable sensing zone from 4" to 24". At exterior locations furnish foam gaskets and weather covers. Provide single gang or double gang unit as specified in the hardware sets
  - 1. Acceptable Manufacturers:
    - a. Norton Door Controls (NO) - 679 Series.
    - b. Securitron (SU) - WSS Series.
- B. Door Position Switches: Door position magnetic reed contact switches specifically designed for use in commercial door applications. On recessed models the contact and magnetic housing snap-lock into a 1" diameter hole. Surface mounted models include wide gap distance design complete with armored flex cabling. Provide SPDT, N/O switches with optional Rare Earth Magnet installation on steel doors with flush top channels.
  - 1. Acceptable Manufacturers:
    - a. Sargent Manufacturing (SA) – 3280 Series.
    - b. Security Door Controls (SD) - DPS Series.
    - c. Securitron (SU) - DPS Series.

- C. Power Supplies: Provide Nationally Recognized Testing Laboratory Listed 12VDC or 24VDC (field selectable) filtered and regulated power supplies. Include battery backup option with integral battery charging capability in addition to operating the DC load in event of line voltage failure. Provide the least number of units, at the appropriate amperage level, sufficient to exceed the required total draw for the specified electrified hardware and access control equipment.

1. Acceptable Manufacturers:

- a. Corbin Russwin Hardware (RU) – 782.
- b. Sargent Manufacturing (SA) – 3500 Series.
- c. Securitron (SU) - BPS Series.
- d. Von Duprin (VD) - PS.

2.18 FABRICATION

- A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.19 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- D. Antimicrobial Finishes: Where specified, finishes on locksets, latchsets, exit devices and push/pull trim to incorporate an FDA recognized. Silver Ion, antimicrobial coating (MicroShield™) listed for use on equipment as a suppressant to the growth and spread of a broad range of bacteria, algae, fungus, mold and mildew.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.



### 3.2 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
- B. Wood Doors: Comply with ANSI/DHI A115-W series.

### 3.3 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
  - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
  - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
  - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
  - 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
  - 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Power Operator products and accessories are required to be installed through current members of the manufacturer's "Power Operator Preferred Installer" program.
- D. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- E. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- F. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

### 3.4 FIELD QUALITY CONTROL

- A. Field Inspection: Supplier will perform a final inspection of installed door hardware and state in report whether work complies with or deviates from requirements, including whether door hardware is properly installed, operating and adjusted.

3.5 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.
- C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

- A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

- A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

**PHASE 1**

**Set: PH1-1** – EMS

Doors: GE113

3 Hinge (A8111)	T4A3786 5" x 4-1/2"	USP	MK
1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Closer (C02011)	351 O	EN	SA
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Overhead Stop (C01541)	69XS x 90 deg	US26D	SA

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer

**Set: PH1-2** – AMMS

Doors: GE113A.1

6 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2"	USP	MK
1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
2 Flush Bolt (L04251)	555 x 12"	US26D	RO
1 Closer (C02011)	351 O	EN	SA
<i>(For active leaf of pair only)</i>			
2 Kickplate (J102)	K1050 10" x 1" LDW 4BE CSK	US32D	RO
2 Door Stop (L02131)	481	US26D	RO

STC rated opening-threshold, sound seal, automatic door bottoms and astragal furnished by door manufacturer

**Set: PH1-3** – Exterior AMMS

Doors: GE113A.2

6 Hinge (A2111)	T4A3386 4-1/2" x 4-1/2" NRP	US32D	MK
1 Storeroom Lockset (F15)	72 SG 8251 LNL x CMK	US26D	SA
2 Permanent Core (E09241)	To match existing key system x MK	626	BE
2 Flush Bolt (L04251)	555 x 12"	US26D	RO
1 Closer (C02021)	351 P3	EN	SA
<i>(For active leaf of pair only)</i>			
1 Mounting Bracket	770SPB		ZE
2 Kickplate (J102)	K1050 10" x 1" LDW 4BE CSK	US32D	RO
2 Overhead Stop (C02541)	59XS x 90 deg	US26D	SA
2 Mounting Bracket	770SPB		ZE
2 Door Bottom Seal (R0Y536)	345 AV x DOW		PE
1 Drip Strip	346 C x DOW + 4"		PE

STC rated opening-threshold, sound seal, automatic door bottoms and astragal furnished by door manufacturer

**Set: PH1-4** – Utility

Doors: GE113B

3 Hinge (A8112)	TA2714 4-1/2" x 4-1/2" NRP	USP	MK
1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Closer/Stop (C02021 PT 4G)	351 CPS	EN	SA
3 Silencer (L03011)	608		RO

**Set: PH1-5** – Mechanical Room

Doors: GE115B

3 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2" NRP	US26D	MK
1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Closer/Stop (C02021 PT 4G)	351 CPS	EN	SA
1 Mounting Bracket	770SPB		ZE
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer

**Set: PH1-6** – Electric Room

Doors: GE115C

2 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2" NRP	US26D	MK
1 Electric Hinge (A8111) (Install at middle hinge)	T4A3786 4-1/2" x 4-1/2" QC-12	US26D	MK
1 ElectroLynx Harness (Install between electric hinge and junction box)	QC-C1500P		MK
1 Mortar Box	MG-16	US2C	MK
1 Fail Secure Electrified Lockset	72 SG 8271 LNL x CMK x 24VDC	US26D	SA
1 ElectroLynx Harness (Install between electric hinge and electrified lockset)	QC-CXXX x required length		MK
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Closer/Stop (C02021 PT 4G)	351 CPS	EN	SA
1 Mounting Bracket	770SPB		ZE
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Card Reader	Furnished and installed by security contractor		00
1 Door Position Switch	DPS-M-BK		SU
1 Power Supply	3520		SA
1 Wiring Diagram	WD-SYSPK		SA

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer

Card reader to be used by authorized persons to gain entry from the corridor side of the opening

Card reader to be used to unlock the corridor side lever of the electrified exit device

Push bar of electrified exit device always free for immediate egress

**Set: PH1-7** – Mechanical Room

Doors: GE265A

5 Hinge (A8112)	TA2714 4-1/2" x 4-1/2" NRP	US26D	MK
1 Electric Hinge (A8112) (Install at middle hinge-active leaf only)	TA2714 4-1/2" x 4-1/2" QC-12	US26D	MK
1 ElectroLynx Harness (Install between electric hinge and junction box)	QC-C1500P		MK
1 Mortar Box	MG-16	US2C	MK
1 Fail Secure Electrified Lockset	72 SG 8271 LNL x CMK x 24VDC	US26D	SA
1 ElectroLynx Harness (Install between electric hinge and electrified lockset)	QC-CXXX x required length		MK
2 Flush Bolt (L04251)	555 x 12"	US26D	RO

1 Closer/Stop (C02021 PT 4G) <i>(For active leaf of pair only)</i>	351 CPS	EN	SA
2 Kickplate (J102)	K1050 10" x 1" LDW 4BE CSK	US32D	RO
1 Overhead Stop (C02541) <i>(For inactive leaf of pair only)</i>	59XS x 90 deg	US26D	SA
1 Threshold (J32130)	1715 A x DOW x MS & ES25		PE
1 Set of Gasketing (R0Y155)	S88 BL x DOW x DOH		PE
2 Door Bottom Seal (R0Y416)	321 CN x DOW		PE
1 Card Reader	Furnished and installed by security contractor		00
2 Door Position Switch	DPS-M-BK		SU
1 Power Supply	3520		SA
1 Wiring Diagram	WD-SYSPK		SA

Flat metal astragal furnished by door manufacturer

Card reader to be used by authorized persons to gain entry from the corridor side of the opening

Card reader to be used to unlock the corridor side lever of the electrified lockset

Mechanical room side lever of the electrified lockset always free for immediate egress

**Set: PH1-8** – Exterior Mechanical Room

Doors: GE265B

3 Hinge (A2112)	TA2314 4-1/2" x 4-1/2" NRP	US32D	MK
1 Storeroom Lockset (F15)	72 SG 8251 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Closer (C02021)	351 P10	EN	SA
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Wall Stop (L02101)	406	US32D	RO
1 Threshold (J32130)	1715 A x DOW x MS & ES25		PE
1 Set of Gasketing (R0Y165)	316 AS x DOW x DOH		PE
1 Door Bottom Seal (R0Y536)	345 AV x DOW		PE
1 Drip Strip	346 C x DOW + 4"		PE

**PHASE 2**

**Set: PH2-1** – EMS

Doors: GE101

3 Hinge (A8111)	T4A3786 5" x 4-1/2"	USP	MK
1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Closer (C02011)	351 O	EN	SA
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Wall Stop (L02101)	406	US32D	RO

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer

**Set: PH2-2** – Corridor Storage

Doors: GE113D

4 Hinge (A8111)	T4A3786 5" x 4-1/2" NRP	US26D	MK
2 Electric Hinge (A8111)	T4A3786 5" x 4-1/2" QC-12	US26D	MK
<i>(Install at middle hinge-both leaves)</i>			
2 ElectroLynx Harness	QC-C1500P		MK
<i>(Install between electric hinge and junction box)</i>			
2 Mortar Box	MG-16	US2C	MK
1 Fail Secure Electric Latch Retraction Exit Device (Type 2/03)	16 43 56 72 SG NB 8706 J x 706 ETL x CMK x 24VDC	US32D	SA
1 Fail Secure Electric Latch Retraction Exit Device (Type 2/02)	16 43 56 72 SG NB 8710 J x 710 ETL x CMK x 24VDC	US32D	SA
2 ElectroLynx Harness	QC-CXXX x required length		MK
<i>(Install between electric hinge and electric latch retraction exit device)</i>			
3 Permanent Core (E09241)	To match existing key system x MK	626	BE
2 Automatic Door Operator	6060 x 24VDC	689	NO
1 Touchless Wall Switch	697 x 125VAC		NO
2 Armor Plate (J101)	K1050 30" x 1" LDW 4BE CSK	US32D	RO
2 Heavy Duty Door Stop	463	US26D	RO
1 Card Reader	Furnished and installed by security contractor		00
2 Door Position Switch	DPS-M-BK		SU
1 Power Supply	3520		SA
1 Wiring Diagram	WD-SYSPK		SA

STC rated opening-threshold, sound seal, automatic door bottoms and astragal furnished by door manufacturer

Card reader to be used by authorized persons to gain entry from the corridor side of the opening

Card reader to be used to retract the latch of the electric latch retraction exit devices and then activate the automatic door operators

Storage side wall switch to retract the latch of the electric latch retraction exit devices and then activate the automatic door operators

Push bar of electric latch retraction exit devices always free for immediate egress

**Set: PH2-3** – Corridor Office

Doors: GE115A

3 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1 Office Lockset (F04)	72 SG 8255 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Closer (C02011)	351 O	EN	SA
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Wall Stop (L02101)	406	US32D	RO

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer

**Set: PH2-4** – Stair

Doors: GE117

3 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2" NRP	US26D	MK
1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Closer/Stop (C02021 PT 4G)	351 CPS	EN	SA
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
3 Silencer (L03011)	608		RO

**Set: PH2-5** – Utility

Doors: GE121B

3 Spring Hinge <i>(For active leaf of pair only)</i>	1502 4-1/2" x 4-1/2"	USP	MK
3 Hinge (A8112)	TA2714 4-1/2" x 4-1/2" NRP	USP	MK
1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
2 Flush Bolt (L04251)	555 x 12"	US26D	RO
2 Wall Stop (L02101)	406	US32D	RO

STC rated opening-threshold, sound seal, automatic door bottoms and astragal furnished by door manufacturer

**Set: PH2-6** – Mechanical Room

Doors: GE121C

3 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2" NRP	USP	MK
1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Closer/Stop (C02021 PT 4G)	351 CPS	EN	SA
1 Mounting Bracket	770SPB		ZE

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer

**Set: PH2-7** – Staging Decon

Doors: GE125C

4 Hinge (A8111)	T4A3786 5" x 4-1/2"	US26D	MK
2 Electric Hinge (A8111) <i>(Install at midlle hinge-both leaves)</i>	T4A3786 5" x 4-1/2" QC-12	US26D	MK
2 ElectroLynx Harness <i>(Install between electric hinge and junction box)</i>	QC-C1500P		MK
2 Mortar Box	MG-16	US2C	MK
2 Fail Secure Electric Latch Retraction Exit Device (Type 2/14)	16 43 56 72 SG NB 8715 J x 715-8 ETL x CMK x 24VDC	US32D	SA
2 ElectroLynx Harness <i>(Install between electric hinge and electric latch retraction exit device)</i>	QC-CXXX x required length		MK
2 Permanent Core (E09241)	To match existing key system x MK	626	BE
2 Mounting Bracket	770SPB		ZE

2 Automatic Door Operator	6010 x 24VDC	689	NO
1 Touchless Wall Switch	697 x 125VAC		NO
2 Armor Plate (J101)	K1050 30" x 1" LDW 4BE CSK	US32D	RO
2 Wall Stop (L02101)	406	US32D	RO
2 Electromagnetic Lock (E08501)	M62-B x 24VDC		SU
4 Mounting Bracket	770SPB		ZE
1 Card Reader	Furnished and installed by security contractor		00
2 Door Position Switch	DPS-M-BK		SU
1 Power Supply	3520		SA
1 Wiring Diagram	WD-SYSPK		SA

STC rated opening-threshold, sound seal, automatic door bottoms and astragal furnished by door manufacturer

This opening to interlocked with opening GE125A.1 in Hardware Set PH3-9

Electromagnetic locks to be tied into the building fire alarm system

Upon activation of the building fire alarm system power to be terminated to the electromagnetic locks deactivating the units

Card reader to be used by authorized persons to gain entry from the corridor side of the opening

Card reader to be used to deactivate the electromagnetic locks, retract the latch of the electric latch retraction exit devices and then activate the automatic door operators

Staging decon side wall switch to deactivate the electromagnetic lock, retract the latch of the electric latch retraction exit devices and then activate the automatic door operators

Card reader and wall switch to be deactivated when GE125A.1 is in the open position

**Set: PH2-8** – Water Treatment

Doors: GE125E

1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Heavy Duty Door Stop	463	US26D	RO

STC rated opening-cam lift hinges, threshold, sound seal and automatic door bottom furnished by door manufacturer

**PHASE 2A**

**Set: PH2A-1** – Lockers

Doors: GE126, GE127

3 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1 Passage Set (F01)	SG 8215 LNL	US26D	SA
1 Closer (C02211)	421 CTB	EN	SA
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Mop Plate (J103)	K1050 4" x 1" LDW 4BE CSK	US32D	RO
1 Wall Stop (L02101)	406	US32D	RO

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer



**Set: PH2A-2** – Toilet

Doors: GE126A, GE127A

3 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1 Privacy Set (F02)	49 SG 8265 LNL	US26D	SA
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Mop Plate (J103)	K1050 4" x 1" LDW 4BE CSK	US32D	RO
1 Wall Stop (L02101)	406	US32D	RO

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer

**Set: PH2A-3** – Lift Equipment

Doors: GE130C

3 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2"	USP	MK
1 Storeroom Lock (F07)	72 76 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Closer (C02011)	351 O	EN	SA
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Door Stop (L02131)	481	US26D	RO

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer

**Set: PH2A-4** – Utility

Doors: GE133A

3 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2" NRP	US26D	MK
1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Closer (C02021)	351 P10	EN	SA
1 Mounting Bracket	770SPB		ZE
1 Wall Stop (L02101)	406	US32D	RO
3 Silencer (L03011)	608		RO

**PHASE 3**

**Set: PH3-1** – Vendor Consign

Doors: GE116.1

3 Hinge (A8111)	T4A3786 5" x 4-1/2" NRP	US26D	MK
1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Electric Strike (E09321)	1006 x 1000-KM x 2004 x 24VDC	630	HS
1 ElectroLynx Harness (Install between electric strike and junction box)	QC-C1500P		MK
1 Automatic Door Operator	6010 x 24VDC	689	NO
1 Touchless Wall Switch	697 x 125VAC		NO
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO

1 Wall Stop (L02101)	406	US32D	RO
1 Electromagnetic Lock (E08501)	M62-B x 24VDC		SU
2 Mounting Bracket	770SPB		ZE
1 Card Reader	Furnished and installed by security contractor		00
1 Door Position Switch	DPS-M-BK		SU
1 Power Supply	BPS-24-1		SU
1 Wiring Diagram	WD-SYSPK		SA

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer  
This opening to be interlocked with opening GE116.2 in Hardware Set PH3-1.1  
Electromagnetic lock to be tied into the building fire alarm system  
Upon activation of the building fire alarm system power to be terminated to the electromagnetic lock  
deactivating the unit  
Electromagnetic lock to be activated only when opening GE116.2 is in the open position  
Card reader to be used by authorized persons to gain entry from the corridor side of the opening  
Card reader to be used to activate the electric strike and then the automatic door operator  
Consign side wall switch to activate the electric strike and then the automatic door operator  
Card reader and wall switch to be deactivated when opening GE112.2 is in the opening position

**Set: PH3-1.1** – Vendor Consign

Doors: GE116.2

3 Hinge (A8111)	T4A3786 5" x 4-1/2"	US26D	MK
1 Passage Set (F01)	SG 8215 LNL	US26D	SA
1 Electric Strike (E09321)	1006 x 1000-KM x 2004 x 24VDC	630	HS
1 Electric Strike Faceplate	KM	630	HS
1 ElectroLynx Harness	QC-C1500P		MK
<i>(Install between electric strike and junction box)</i>			
1 Automatic Door Operator	6010 x 24VDC	689	NO
2 Touchless Wall Switch	697 x 125VAC		NO
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Wall Stop (L02101)	406	US32D	RO
1 Electromagnetic Lock (E08501)	M62-B x 24VDC		SU
2 Mounting Bracket	770SPB		ZE
1 Card Reader	Furnished and installed by security contractor		00
1 Door Position Switch	DPS-M-BK		SU
1 Power Supply	BPS-24-1		SU
1 Wiring Diagram	WD-SYSPK		SA

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer  
This opening to be interlocked with opening GE116.1 in Hardware Set PH3-1  
Electromagnetic lock to be tied into the building fire alarm system  
Upon activation of the building fire alarm system power to be terminated to the electromagnetic lock  
deactivating the unit  
Electromagnetic lock to be activated only when opening GE116.1 is in the open position  
Wall switches to activate the electric strike and then the automatic door operator  
Wall switches to be deactivated when opening GE112.1 is in the opening position

**Set: PH3-2** – Records

Doors: GE116A.1, GE116A.2

6 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2" NRP	US26D	MK
1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
2 Flush Bolt (L04251)	555 x 12"	US26D	RO
1 Dust Proof Strike (L04021)	570	US26D	RO
1 Closer/Stop (C02021 PT 4G) (For active leaf of pair only)	351 CPS	EN	SA
2 Kickplate (J102)	K1050 10" x 1" LDW 4BE CSK	US32D	RO
1 Overhead Stop (C02541) (For inactive leaf of pair only)	59XS x 90 deg	US26D	SA
2 Silencer (L03011)	608		RO

Flat metal astragal furnished by door manufacturer

**Set: PH3-3** – Storage

Doors: GE120B.1

3 Hinge (A2111)	T4A3386 4-1/2" x 4-1/2"	US32D	MK
1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Closer (C02011)	351 O	EN	SA
1 Heavy Duty Door Stop	463	US26D	RO

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer

**Set: PH3-4** – Prep

Doors: GE120B.2

2 Hinge (A2111)	T4A3386 4-1/2" x 4-1/2" NRP	US32D	MK
1 Electric Hinge (A2111) (Install at middle hinge)	T4A3386 4-1/2" x 4-1/2" QC-12	US32D	MK
1 ElectroLynx Harness (Install between electric hinge and junction box)	QC-C1500P		MK
1 Mortar Box	MG-16	US2C	MK
1 Fail Secure Electrified Lockset	72 SG 8271 LNL x CMK x 24VDC	US26D	SA
1 ElectroLynx Harness (Install between electric hinge and electrified lockset)	QC-CXXX x required length		MK
1 Closer (C02021)	351 P10	EN	SA
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Wall Stop (L02101)	406	US32D	RO
1 Electromagnetic Lock (E08501)	M62-B x 24VDC		SU
1 Card Reader	Furnished and installed by security contractor		00
1 Door Position Switch	DPS-M-BK		SU
1 Power Supply	3520		SA
1 Wiring Diagram	WD-SYSPK		SA

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer  
This opening to be interlocked with opening GE137E in Hardware Set PH3-4.1

Electromagnetic lock to be tied into the building fire alarm system  
Upon activation of the building fire alarm system power to be terminated to the electromagnetic lock deactivating the unit  
Electromagnetic lock to be activated only when opening GE1137E is in the open position  
Card reader to be used to by authorized persons to gain entry from the ante room side of the opening  
Card reader to be used to unlock the ante room side lever of the electrified lockset  
Prep side lever of the electrified lockset always free for immediate egress  
Card reader to be deactivated when opening GE137E is in the open position

**Set: PH3-4.1** – Ante Room

Doors: GE137E

2 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2" NRP	US26D	MK
1 Electric Hinge (A8111) (Install at middle hinge)	T4A3786 4-1/2" x 4-1/2" QC-12	US26D	MK
1 ElectroLynx Harness (Install between electric hinge and junction box)	QC-C1500P		MK
1 Mortar Box	MG-16	US2C	MK
1 Fail Secure Electrified Lockset	72 SG 8271 LNL x CMK x 24VDC	US26D	SA
1 ElectroLynx Harness (Install between electric hinge and electrified lockset)	QC-CXXX x required length		MK
1 Closer (C02021)	351 P10	EN	SA
1 Mounting Bracket	770SPB		ZE
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Wall Stop (L02101)	406	US32D	RO
1 Electromagnetic Lock (E08501)	M62-B x 24VDC		SU
1 Card Reader	Furnished and installed by security contractor		00
1 Door Position Switch	DPS-M-BK		SU
1 Power Supply	3520		SA
1 Wiring Diagram	WD-SYSPK		SA

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer  
This opening to be interlocked with opening GE120B.2 in Hardware Set PH3-4  
Electromagnetic lock to be tied into the building fire alarm system  
Upon activation of the building fire alarm system power to be terminated to the electromagnetic lock deactivating the unit  
Electromagnetic lock to be activated only when opening GE120B.2 is in the open position  
Card reader to be used to by authorized persons to gain entry from the ante room side of the opening  
Card reader to be used to unlock the ante room side lever of the electrified lockset  
Prep side lever of the electrified lockset always free for immediate egress  
Card reader to be deactivated when opening GE120B.2 is in the open position

**Set: PH3-5** – Disinfection

Doors: GE120B.3

3 Hinge (A2111)	T4A3386 4-1/2" x 4-1/2" NRP	US32D	MK
1 Office Lockset (F04)	72 SG 8255 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Closer/Stop (C02021 PT 4G)	351 CPS	EN	SA
1 Mounting Bracket	770SPB		ZE

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer

**Set: PH3-6** – Prep

Doors: GE120B.4

5 Hinge (A8111)	T4A3786 5" x 4-1/2"	US26D	MK
1 Electric Hinge (A8111) (Install at middle hinge)	T4A3786 5" x 4-1/2" QC-12	US26D	MK
1 ElectroLynx Harness (Install between electric hinge and junction box)	QC-C1500P		MK
1 Mortar Box	MG-16	US2C	MK
1 Fail Secure Electrified Lockset	72 SG 8271 LNL x CMK x 24VDC	US26D	SA
1 ElectroLynx Harness (Install between electric hinge and junction box)	QC-CXXX x required length		MK
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
2 Flush Bolt (L04251)	555 x 12"	US26D	RO
1 Closer (C02011) (For active leaf of pair only)	351 O	EN	SA
2 Kickplate (J102)	K1050 10" x 1" LDW 4BE CSK	US32D	RO
2 Overhead Stop (C01541)	69XS x 90 deg	US26D	SA
1 Card Reader	Furnished and installed by security contractor		00
2 Door Position Switch	DPS-M-BK		SU
1 Power Supply	3520		SA
1 Wiring Diagram	WD-SYSPK		SA

STC rated opening-threshold, sound seal, automatic door bottoms and astragal furnished by door manufacturer

Card reader to be used by authorized persons to gain entry from the corridor side of the opening

Card reader to be used to unlock the corridor side lever of the electrified lockset

Prep side lever of the electrified lockset always free for immediate egress

**Set: PH3-7** – Sterilization

Doors: GE120D.1, GE120D.2, GE120D.3, GE120D.4

3 Hinge (A2112)	TA2314 4-1/2" x 4-1/2" NRP	US32D	MK
1 Storeroom Lockset (F07)	3 72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Overhead Stop (C02541)	59XS x 90 deg x CPC	US26D	SA
1 Threshold (J35100)	181 AT x DOW x MS & ES25		PE
1 Set of Gasketing (R0Y155)	S88 BL x DOW x DOH		PE
1 Drip Strip	346 C x DOW + 4"		PE

**Set: PH3-8** – Ante Room

Doors: GE125

3 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Electric Strike (E09321)	1006 x 1000-KM x 2004 x 24VDC	630	HS
1 ElectroLynx Harness (Install between electric strike and junction box)	QC-C1500P		MK
1 Automatic Door Operator	6060 x 24VDC	689	NO
1 Touchless Wall Switch	697 x 125VAC		NO

1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Wall Stop (L02101)	406	US32D	RO
1 Electromagnetic Lock (E08501)	M62-B x 24VDC		SU
2 Mounting Bracket	770SPB		ZE
1 Card Reader	Furnished and installed by security contractor		00
1 Door Position Switch	DPS-M-BK		SU
1 Power Supply	3520		SA
1 Wiring Diagram	WD-SYSPK		SA

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer  
This opening to be interlocked with opening GE125A.2 in Hardware Set PH3-8.1  
Electromagnetic lock to be tied into the building fire alarm system  
Upon activation of the building fire alarm system power to be terminated to the electromagnetic lock deactivating the unit  
Electromagnetic lock to be activated only when opening GE125A.2 is in the open position  
Card reader to be used by authorized persons to gain entry from the corridor side of the opening  
Card reader to be used to activate the electric strike and then activate the automatic door operator  
Ante room side wall switch to activate the electric strike and then the automatic door operator  
Card reader and wall switch to be deactivated when opening GE125A.2 is in the open position

**Set: PH3-8.1** – Ante Room

Doors: GE125A.2

3 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1 Passage Set (F01)	SG 8215 LNL	US26D	SA
1 Electric Strike (E09321)	1006 x 1000-KM x 2004 x 24VDC	630	HS
1 ElectroLynx Harness	QC-C1500P		MK
<i>(Install between electric strike and junction box)</i>			
1 Electric Strike Faceplate	KM	630	HS
1 Automatic Door Operator	6060 x 24VDC	689	NO
2 Touchless Wall Switch	697 x 125VAC		NO
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Wall Stop (L02101)	406	US32D	RO
1 Electromagnetic Lock (E08501)	M62-B x 24VDC		SU
2 Mounting Bracket	770SPB		ZE
1 Door Position Switch	DPS-M-BK		SU
1 Power Supply	BPS-24-1		SU
1 Wiring Diagram	WD-SYSPK		SA

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer  
This opening to be integrated with opening GE125 in Hardware Set PH3-8  
Electromagnetic lock to be tied into the building fire alarm system  
Upon activation of the building fire alarm system power to be terminated to the electromagnetic lock deactivating the unit  
Electromagnetic lock to be activated only when opening GE125 is in the open position  
Wall switches to activate the electric strike and then the automatic door operator  
Wall switches to be deactivated when opening GE125 is in the open position  
Wall switches to be deactivated when opening GE125 is in the open position

**Set: PH3-9** – Staging Decon

Doors: GE125A.1

4 Hinge (A8111)	T4A3786 5" x 4-1/2"	US26D	MK
2 Electric Hinge (A8111)	T4A3786 5" x 4-1/2" QC-12	US26D	MK
<i>(Install at middle hinge-both leaves)</i>			
2 ElectroLynx Harness	QC-C1500P		MK
<i>(Install between electric hinge and junction box)</i>			
2 Mortar Box	MG-16	US2C	MK
2 Fail Secure Electric Latch Retraction Exit Device (Type 2/14)	16 43 56 72 SG NB 8715 J x 715-8 ETL x CMK x 24VDC	US32D	SA
2 ElectroLynx Harness	QC-CXXX x required length		MK
<i>(Install between electric hinge and electric latch retraction exit device)</i>			
2 Permanent Core (E09241)	To match existing key system x MK	626	BE
2 Mounting Bracket	770SPB		ZE
2 Automatic Door Operator	6010 x 24VDC	689	NO
2 Touchless Wall Switch	697 x 125VAC		NO
2 Armor Plate (J101)	K1050 30" x 1" LDW 4BE CSK	US32D	RO
1 Wall Stop (L02101)	406	US32D	RO
1 Overhead Stop (C01541)	69XS x 90 deg	US26D	SA
2 Electromagnetic Lock (E08501)	M62-B x 24VDC		SU
4 Mounting Bracket	770SPB		ZE
2 Door Position Switch	DPS-M-BK		SU
1 Power Supply	3520		SA
1 Wiring Diagram	WD-SYSPK		SA

STC rated opening-threshold, sound seal, automatic door bottoms and astragal furnished by door manufacturer

This opening to be interlocked with opening GE125C in Hardware Set PH2-7

Electromagnetic locks to be tied into the building fire alarm system

Upon activation of the building fire alarm system power to be terminated to the electromagnetic locks deactivating the units

Electromagnetic locks to be activated only when opening GE125C is in the open position

Wall switches to retract the latch of the electric latch retraction exit devices and then activate the automatic door operators

Wall switches to be deactivated when opening GE125C is in the open position

**Set: PH3-10** – Utility

Doors: GE125D

3 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2"	USP	MK
1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Closer (C02011)	351 O	EN	SA
1 Door Stop (L02131)	481	US26D	RO

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer

**Set: PH3-11** – Ante Room

Doors: GE133.1

3 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1 Passage Set (F01)	SG 8215 LNL	US26D	SA
1 Electric Strike (E09321)	1006 x 1000-KM x 2004 x 24VDC	630	HS
1 ElectroLynx Harness	QC-C1500P		MK
<i>(Install between electric strike and junction box)</i>			
1 Automatic Door Operator	6010 x 24VDC	689	NO
2 Touchless Wall Switch	697 x 125VAC		NO
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Wall Stop (L02101)	406	US32D	RO
1 Electromagnetic Lock (E08501)	M62-B x 24VDC		SU
2 Mounting Bracket	770SPB		ZE
1 Door Position Switch	DPS-M-BK		SU
1 Power Supply	BPS-24-1		SU
1 Wiring Diagram	WD-SYSPK		SA

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer

This opening to be interlocked with opening GE135 in Hardware Set PH3-11.1

Electromagnetic lock to be tied into the building fire alarm system

Upon activation of the building fire alarm system power to be terminated to the electromagnetic lock deactivating the unit

Electromagnetic lock to be activated only when opening GE135 is in the open position

Wall switches to activate the electric strike and then the automatic door operator

Wall switches to be deactivated when opening GE135 is in the open position

**Set: PH3-11.1** – Ante Room

Doors: GE135

3 Hinge (A8111)	T4A3786 5" x 4-1/2" NRP	US26D	MK
1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Electric Strike (E09321)	1006 x 1000-KM x 2004 x 24VDC	630	HS
1 ElectroLynx Harness	QC-C1500P		MK
<i>(Install between electric strike and junction box)</i>			
1 Automatic Door Operator	6060 x 24VDC	689	NO
1 Touchless Wall Switch	697 x 125VAC		NO
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Door Stop (L02131)	481	US26D	RO
1 Electromagnetic Lock (E08501)	M62-B x 24VDC		SU
2 Mounting Bracket	770SPB		ZE
1 Card Reader	Furnished and installed by security contractor		00
1 Door Position Switch	DPS-M-BK		SU
1 Power Supply	BPS-24-1		SU
1 Wiring Diagram	WD-SYSPK		SA

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer

This opening to be integrated with opening GE133.1 in Hardware Set PH3-11

Electromagnetic lock to be tied into the building fire alarm system

Upon activation of the building fire alarm system power to be terminated to the electromagnetic lock deactivating the unit



Electromagnetic lock to be activate only when opening GE133.1 is in the open position  
Card reader to be used by authorized persons to gain entry from the corridor side of the opening  
Card reader to be used to activate the electric strike and then the automatic door operator  
Ante room side wall switch to activate the electric strike and then the automatic door operator  
Card reader and wall switch to be deactivated when opening GE133.1 is in the open position

**Set: PH3-12** – Storage

Doors: GE133.2

3 Hinge (A2111)	T4A3386 4-1/2" x 4-1/2"	US32D	MK
1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Closer (C02011)	351 O	EN	SA
1 Wall Stop (L02101)	406	US32D	RO
1 Electromagnetic Lock (E08531) (Pull side mount)	M62-B x ZA-62CL x 24VDC		SU
1 Door Position Switch	DPS-M-BK		SU
1 Power Supply	BPS-24-1		SU
1 Wiring Diagram	WD-SYSPK		SA

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer  
This opening to be integrated with opening GE137 in Hardware Set PH3-12.1  
Electromagnetic lock to be tied into the building fire alarm system  
Upon activation of the building fire alarm system power to be terminated to the electromagnetic lock  
deactivating the unit  
Electromagnetic lock to be activated only when opening GE137 is in the open position

**Set: PH3-12.1** – Ante Room

Doors: GE137

3 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1 Storeroom Lockset (F07)	72 SG 8204 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Electric Strike (E09321)	1006 x 1000-KM x 2004 x 24VDC	630	HS
1 ElectroLynx Harness (Install between electric strike and junction box)	QC-C1500P		MK
1 Automatic Door Operator	6010 x 24VDC	689	NO
1 Touchless Wall Switch	697 x 125VAC		NO
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Wall Stop (L02101)	406	US32D	RO
1 Electromagnetic Lock (E08501)	M62-B x 24VDC		SU
2 Mounting Bracket	770SPB		ZE
1 Card Reader	Furnished and installed by security contractor		00
1 Door Position Switch	DPS-M-BK		SU
1 Power Supply	BPS-24-1		SU
1 Wiring Diagram	WD-SYSPK		SA

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer  
This opening to be integrated with opening GE133.2 in Hardware Set PH3-12  
Electromagnetic lock to be tied into the building fire alarm system  
Upon activation of the building fire alarm system power to be terminated to the electromagnetic lock  
deactivating the unit  
Electromagnetic lock to be activated only when opening GE133.2 is in the open position

Card reader to be used by authorized persons to gain entry from the corridor side of the opening  
Card reader to be used to activate the electric strike and then the automatic door operator  
Ante room side wall switch to activate the electric strike then the automatic door operator  
Card reader and wall switch to be deactivated when opening GE133.2 is in the open position

**Set: PH3-13** – Sliding Door

Doors: GE133B

All hardware furnished by door manufacturer

**Set: PH3-14** – Lockers

Doors: GE137A, GE137D

3 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1 Passage Set (F01)	SG 8215 LNL	US26D	SA
1 Closer (C02211)	421 CTB	EN	SA
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Mop Plate (J103)	K1050 4" x 1" LDW 4BE CSK	US32D	RO
1 Wall Stop (L02101)	406	US32D	RO

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer

**Set: PH3-15** – Toilet

Doors: GE137B, GE137C

3 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1 Privacy Set (F02)	49 SG 8265 LNL	US26D	SA
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Mop Plate (J103)	K1050 4" x 1" LDW 4BE CSK	US32D	RO
1 Wall Stop (L02101)	406	US32D	RO
1 Door Stop (L02131)	481	US26D	RO
<i>(For door GE137C only)</i>			

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer

**Set: PH3-16** – Multipurpose Room

Doors: GE138

2 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1 Electric Hinge (A8111)	T4A3786 4-1/2" x 4-1/2" QC-12	US26D	MK
<i>(Install at middle hinge)</i>			
1 ElectroLynx Harness	QC-C1500P		MK
<i>(Install between electric hinge and junction box)</i>			
1 Mortar Box	MG-16	US2C	MK
1 Fail Secure Electrified Lockset	72 SG 8271 LNL x CMK x 24VDC	US26D	SA
1 ElectroLynx Harness	QC-CXXX x required length		MK
<i>(Install between electric hinge and junction box)</i>			
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Closer/Holder (C02051)	351 H	EN	SA
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO

1 Wall Stop (L02101)	406	US32D	RO
1 Card Reader	Furnished and installed by security contractor		00
1 Door Position Switch	DPS-W-BK		SU
1 Power Supply	3520		SA
1 Wiring Diagram	WD-SYSPK		SA

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer  
Card reader to be used by authorized persons to gain entry from the corridor side of the opening  
Card reader to be used to unlock the corridor side lever of the electrified lockset  
Multipurpose room side lever of the electrified lockset always free for immediate egress

**Set: PH3-17** – Administration

Doors: GE139.1

2 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1 Electric Hinge (A8111)	T4A3786 4-1/2" x 4-1/2" QC-12	USP	MK
	<i>(Install at middle hinge)</i>		
1 ElectroLynx Harness	QC-C1500P		MK
	<i>(Install between electric hinge and junction box)</i>		
1 Mortar Box	MG-16	US2C	MK
1 Fail Secure Electrified Lockset	72 SG 8271 LNL x CMK x 24VDC	US26D	SA
1 ElectroLynx Harness	QC-CXXX x required length		MK
	<i>(Install between electric hinge and junction box)</i>		
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Closer (C02011)	351 O	EN	SA
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Door Stop (L02131)	481	US26D	RO
1 Card Reader	Furnished and installed by security contractor		00
1 Door Position Switch	DPS-W-BK		SU
1 Power Supply	3520		SA
1 Wiring Diagram	WD-SYSPK		SA

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer  
Card reader to be used by authorized persons to gain entry from the corridor side of the opening  
Card reader to be used to unlock the corridor side lever of the electrified lockset  
Administration side lever of the electrified lockset always free for immediate egress

**Set: PH3-18** – Administration

Doors: GE139.2

3 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1 Office Lockset (F04)	72 SG 8255 LNL x CMK	US26D	SA
1 Permanent Core (E09241)	To match existing key system x MK	626	BE
1 Kickplate (J102)	K1050 10" x 2" LDW 4BE CSK	US32D	RO
1 Wall Stop (L02101)	406	US32D	RO

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer

**Set: PH3-19** – Office

Doors: GE139A, GE139B

3 Hinge (A8111)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1 Office Lockset (F04)	72 SG 8255 LNL x CMK	US26D	SA
1 Wall Stop (L02101)	406	US32D	RO

STC rated opening-threshold, sound seal and automatic door bottom furnished by door manufacturer

END OF SECTION 087100