

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. Cylinders specified for doors in other sections.
- C. Related Sections:
 - 1. Division 06 Section "Rough Carpentry".
 - 2. Division 06 Section "Finish Carpentry".
 - 3. Division 08 Section "Operations and Maintenance".
 - 4. Division 08 Section "Door Schedule".
 - 5. Division 08 Section "Hollow Metal Doors and Frames".
 - 6. Division 08 Section "Flush Wood Doors".
 - 7. Division 08 Section "Aluminum-Framed Entrances and Storefronts".
 - 8. Division 28 Section "Access Control Hardware Devices".
- 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. ANSI/SDI A250.13 - Testing and Rating of Severe Windstorm Resistant Components for Swing Door Assemblies.
 - 3. ASTM E1886 - Test Method for Performance of Exterior Windows, Curtain Walls, Doors and Shutters Impacted by Missiles and Exposed to Cyclic Pressure Differentials.

4. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure difference.
 5. ASTM E1996 - Standard specification for performance of exterior windows, curtain walls, doors and storm shutters impacted by Windborne Debris in Hurricanes.
 6. ICC/IBC - International Building Code.
 7. NFPA 70 - National Electrical Code.
 8. NFPA 80 - Fire Doors and Windows.
 9. NFPA 101 - Life Safety Code.
 10. NFPA 105 - Installation of Smoke Door Assemblies.
 11. TAS-201-94 - Impact Test Procedures.
 12. TAS-202-94 - Criteria for Testing Impact and Non-Impact Resistant Building Envelope Components using Uniform Static Air Pressure.
 13. State Building Codes, Local Amendments.
- E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:
1. ANSI/BHMA Certified Product Standards - A156 Series.
 2. UL10C - Positive Pressure Fire Tests of Door Assemblies.
 3. ANSI/UL 294 - Access Control System Units.
 4. UL 305 - Panic Hardware.
 5. ANSI/UL 437- Key Locks.

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. Proof of Qualification: Provide copy of manufacturer(s) Factory Trained Installer documentation indicating proof of status as a qualified installer of Windstorm assemblies.
- E. 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.
- F. Informational Submittals:
1. Hurricane Resistant Openings (State of Florida): Within the State of Florida, provide copy of current State of Florida Product Approval or Metro-Dade County

Notice of Acceptance (NOA) as proof of compliance that doors, frames and hardware for exterior opening assemblies have been tested and approved for use at the wind load and design pressure level requirements specified for the Project.

- a. Hurricane Resistant Components (State of Florida): Within the State of Florida, provide copy of independent, third party certified listing to ANSI A250.13.
2. 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.
- G. 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 Procedures.

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. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).
- C. 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.
- D. 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.
- E. Windstorm Assembly Installer Qualifications: Installers are to be factory trained for shop and field installation prior to project bid, and are responsible for commissioning, servicing, and warranting the installed equipment specified for the project. A pre-installation site inspection of the frame and floor conditions shall be conducted by the

factory trained installer prior to any Windstorm assembly hardware applied to the opening.

- F. 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.
- G. Hurricane Resistant Exterior Openings (State of Florida including the High Velocity Hurricane Zone (HVHZ)): Provide exterior door hardware as complete and tested assemblies, or component assemblies, including approved doors and frames specified under Section 081113 "Hollow Metal Doors and Frames", to meet the wind loads, design pressures, debris impact resistance, and glass and glazing requirements as detailed in the current State of Florida building code sections applicable to the Project.
 - 1. Each unit to bear third party permanent label in accordance with the Florida Building Code requirements.
- H. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.
- I. 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.
- J. 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
- K. 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. Five years for standard duty cylindrical (bored) locks and latches.
 - 2. Five years for exit hardware.
 - 3. Five years for manual overhead door closer bodies.
 - 4. Twenty five years for manual overhead door closer bodies.
 - 5. Five years for motorized electric latch retraction exit devices.
 - 6. 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:
 - 1. 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.

- C. 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 and other options as specified in the Door Hardware Sets.
1. Quantity: Provide the following hinge quantity:
 - 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 3'0": 4-1/2" standard or heavy weight as specified.
 - b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
 - a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
 - b. 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:
 - a. Non-removable Pins: With the exception of electric through wire hinges, 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. Manufacturers:
 - a. Hager Companies (HA).
 - b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK).
 - c. Stanley Hardware (ST).

- B. Concealed Hinges: Hinges mortised into door and frame so that they are concealed when the door is closed. Hinges shall be adjustable three ways; vertically, horizontally and compression (in/out) capable of a 180 degree swing. Hinges are to be non-handed and available for hollow metal and steel covered composite fire doors rated up to 3 hours and for 20 minute wood core fire doors. Provide fastener type, size, and quantity as recommended by hinge manufacturer for properly installing concealed hinges in the door and frame type application. Provide steel receiver for metal door and frame cutouts for receiving concealed hinges.
1. Manufacturers:
 - a. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK).
- C. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 certified continuous geared hinge. with minimum 0.120-inch thick extruded 6060 T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cut-outs.
1. Manufacturers:
 - a. Hager Companies (HA).
 - b. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).
- D. Sliding and Folding Door Hardware: Hardware is to be of type and design as specified and should comply with ANSI/BHMA A156.14.
1. Bi-folding Door Hardware: Rated for door panels weighing up to 125 lb.
 2. Pocket Sliding Door Hardware: Rated for doors weighing up to 200 lb.
 3. Manufacturers:
 - a. Hager Companies (HA).
 - b. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).

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. Manufacturers:
 - a. Hager Companies (HA) - ETW-QC (# wires) Option.

- b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) - QC (# wires) Option.
 - c. Stanley Hardware (ST) - C Option.
 - B. Electrified Quick Connect Continuous Geared Transfer Hinges: Provide electrified transfer continuous geared hinges with a removable service panel cutout accessible without de-mounting door from the frame. Furnish with Molex™ standardized plug connectors with 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. Manufacturers:
 - a. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE) - SER-QC (# wires) Option.
 - C. 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; ASSA ABLOY Architectural Door Accessories (MK) - Electrical Connecting Kit: QC-R001.
 - b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) - Connector Hand Tool: QC-R003.
 - 2. Manufacturers:
 - a. Hager Companies (HA) - Quick Connect.
 - b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) - QC-C Series.
 - c. Stanley Hardware (ST) - WH Series.

2.4 DOOR OPERATING TRIM

- A. Door Push Plates and Pulls: ANSI/BHMA A156.6 certified door pushes and pulls of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.

1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.
4. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.
5. Manufacturers:
 - a. Hiawatha, Inc. (HI).
 - b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (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. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:
 1. Threaded mortise cylinders with rings and cams to suit hardware application.
 2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
 3. Bored or cylindrical lock cylinders with tailpieces as required to suit locks.
 4. Tubular deadlocks and other auxiliary locks.
 5. 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.
- C. Patented Cylinders: ANSI/BHMA A156.5, Grade 1 Certified Products Directory (CPD) listed cylinders employing a utility patented and restricted keyway requiring the use of a patented key. Cylinders are to be protected from unauthorized manufacture and distribution by manufacturer's United States patents.
 1. Patented key systems shall not be established with products that have an expired patent. Expired systems shall only be specified and supplied to support existing systems.
 2. Manufacturers:
 - a. Medeco (MC) - X4.
- D. Keying System: Each type of lock and cylinders to be factory keyed.

1. Supplier shall conduct a "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: Field verify and key cylinders to match Owner's existing system.

E. Key Quantity: Provide the following minimum number of keys:

1. Change Keys per Cylinder: Two (2)
2. Master Keys (per Master Key Level/Group): Five (5).
3. Construction Keys (where required): Ten (10).

F. Construction Keying: Provide construction master keyed cylinders.

G. 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.

2.6 KEY CONTROL

P. Electronic Key Management System: Provide an electronic key control system with Stand-alone Plug and Play features including advanced RFID technology. Touchscreen interface with PIN access for keys individually locked in place. Minimum 1,000 system users and 21 iFobs for locking receptors. System shall have a minimum 250,000 audit events screen displayed or ability to be exported via USB port.

1. Manufacturers:
 - a. Medeco (MC).
 - b. Traka (TA).

2.7 MECHANICAL LOCKS AND LATCHING DEVICES

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

1. Where specified, provide status indicators with highly reflective color and wording for "locked/unlocked" or "vacant/occupied" with custom wording options if required. Indicator to be located above the cylinder with the inside thumb-turn not blocking the visibility of the indicator status. Indicator window size to be a minimum of 2.1" x 0.6" with a curved design allowing a 180 degree viewing angle with protective covering to prevent tampering.

2. Manufacturers:

- a. Corbin Russwin Hardware (RU) - ML2000 Series.
- b. Sargent Manufacturing (SA) - 8200 Series.
- c. Schlage (SC) - L9000 Series.

B. Cylindrical Locksets, Grade 2 (Standard Duty): ANSI/BHMA A156.2, Series 4000, Grade 2 Certified Products Directory (CPD) listed.

1. Locks are to be non-handed and fully field reversible.

2. Manufacturers:

- a. Corbin Russwin Hardware (RU) - CL3800 Series.
- b. Sargent Manufacturing (SA) - 7 Line.
- c. Schlage (SC) - ALX Series.

2.8 ELECTROMECHANICAL LOCKING DEVICES

2.9 AUXILIARY LOCKS

A. Mortise Deadlocks, Small Case: ANSI/BHMA A156.36, Grade 1, small case mortise type deadlocks constructed of heavy gauge wrought corrosion resistant steel. Steel or stainless steel bolts with a 1" throw and hardened steel roller pins. Deadlocks to be products of the same source manufacturer and keyway as other specified locksets.

1. Manufacturers:

- a. Corbin Russwin Hardware (RU) - DL4000 Series.
- b. Sargent Manufacturing (SA) - 4870 Series.
- c. Schlage (SC) - L460 Series.

2.10 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.
- 4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.

B. Standards: Comply with the following:

1. Strikes for Mortise Locks and Latches: BHMA A156.13.
2. Strikes for Bored Locks and Latches: BHMA A156.2.
3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
4. Dustproof Strikes: BHMA A156.16.

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. 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.
6. 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.
7. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
8. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.

9. Rail Sizing: Provide exit device rails factory sized for proper door width application.
 10. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.
 11. Hurricane and Tornado Resistance Compliance: Conventional exit devices are to be U.L. listed for windstorm assemblies where applicable. Provide the appropriate hurricane or tornado resistant products that have been independent third party tested, certified, and labeled to meet state and local windstorm building codes applicable to project.
- B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed 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. Manufacturers:
 - a. Corbin Russwin Hardware (RU) - ED4000 / ED5000 Series.
 - b. Sargent Manufacturing (SA) - 80 Series.
 - c. Von Duprin (VD) - 35A/98 XP Series.

2.12 ELECTROMECHANICAL EXIT DEVICES

- A. Electromechanical Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed panic and fire exit hardware devices subject to same compliance standards and requirements as mechanical exit devices. Electrified exit devices to be of type and design as specified below and in the hardware sets.
1. Energy Efficient Design: Provide devices which have a holding current draw of 15mA maximum, and can operate on either 12 or 24 volts. Locks are to be field configurable for fail safe or fail secure operation.
 2. Where conventional power supplies are not sufficient, include any specific controllers required to provide the proper inrush current.
 3. Motorized Electric Latch Retraction: Devices with an electric latch retraction feature must use motors which have a maximum current draw of 600mA. Solenoid driven latch retraction is not acceptable.
 4. Manufacturers:
 - a. Corbin Russwin Hardware (RU) - ED5000 Series.
 - b. Sargent Manufacturing (SA) - 80 Series.
 - c. Von Duprin (VD) - 35A/98 XP Series.

2.13 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.
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. 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 Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.
4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

B. Door Closers, Surface Mounted (Large Body Cast Iron): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed 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 body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control.

1. Manufacturers:
 - a. Corbin Russwin Hardware (RU) - DC8000 Series.
 - b. LCN Closers (LC) - 4040XP Series.
 - c. Norton Door Controls (NO) - 9500 Series.
 - d. Sargent Manufacturing (SA) - 281 Series.

C. Door Closers, Overhead Concealed (Narrow Profile): ANSI/BHMA 156.4 Grade 1 Certified Products Directory (CPD) listed door closers designed for narrow profile frames and doors. Closers to have fully concealed body in the frame head for offset hung applications, with separate and independent valves for closing speed and backcheck adjustments and a decorative cover plate.

1. Manufacturers:

- a. LCN Closers (LC) - 2030 Series.
- b. Rixson Door Controls (RF) - 91DCP 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. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
4. 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.
5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
6. Manufacturers:
 - a. Hiawatha, Inc. (HI).
 - b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
 - c. Trimco (TC).

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. Manufacturers:

- a. Hiawatha, Inc. (HI).
- b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
- c. Trimco (TC).

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 NPFA 252, Standard Methods of Fire Tests of Door Assemblies.
- D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.
- E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- F. Manufacturers:
 1. National Guard Products (NG).
 2. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).
 3. Reese Enterprises, Inc. (RE).

2.17 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.

2.18 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.

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. 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.
- D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- E. 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 (Punch Report): Reference Division 01 Sections "Closeout Procedures". Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.
1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.
 2. Submit documentation of incomplete items in the following formats:
 - a. PDF electronic file.
 - b. Electronic formatted file integrated with the Openings Studio™ door opening management software platform.

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.
 - 1. Quantities listed are for each pair of doors, or for each single door.
 - 2. The supplier is responsible for handling and sizing all products.
 - 3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.
 - 4. At existing openings with new hardware the supplier shall field inspect existing conditions prior to the submittal stage to verify the specified hardware will work as required. Provide alternate solutions and proposals as needed.
- B. Manufacturer's Abbreviations:
 - 1. MK - McKinney
 - 2. PE - Pemko
 - 3. RO - Rockwood
 - 4. SA - SARGENT
 - 5. ET - Emtek

- 6. MC - Medeco
- 7. RF - Rixson
- 8. TA - Traka
- 9. SU - Securitron

Revised
Hardware Sets
Version 6: 09/16/2022

Set: 1.0

Doors: A100C

Description: LOBBY PR - EAC

Contractor:

1	Continuous Hinge	CFMZZHD1		PE	
1	Continuous Hinge (Elec)	CFMZZHD1 SER		PE	⚡
1	Concealed Vert Rod Exit, Exit Only	43 AD8410 EO	US32D	SA	
1	Concealed Vert Rod Exit, Nightlatch	43 55 56 AD8410 106 x 862	US32D	SA	⚡
2	Concealed Closer	91N / PH91 – 90N [special template]	626	RF	
2	Door Stop	409 / 446 as required	US26D	RO	
1	ElectroLynx Harness	QC-C1500 [PS to hinge]		MK	⚡
1	ElectroLynx Harness	QC-CXXP [Lock / exit to hinge]		MK	⚡
2	Position Switch	DPS-M/W-WH (as required)		SU	⚡
1	Power Supply	AQLX-E1 – Size as required		SU	⚡

OWNER:

1	Medeco Cylinder	100200 H – M4 Key System	26	MC	
1	Gasketing	By door / frame mfg			
1	Card Reader	SE RP40 / SE RP15 as req			⚡
1	Wiring Diagram	WD-SYSPK		SA	

Set: 2.0

Doors: X106

Description: EXT ELEC - ALUM – EAC

Contractor:

1	Continuous Hinge	CFMZZHD1		PE	
1	Continuous Hinge (Elec)	CFMZZHD1 SER		PE	⚡
1	Concealed Vert Rod Exit, Exit Only	43 AD8410 EO	US32D	SA	
1	Concealed Vert Rod Exit, Nightlatch	43 55 56 AD8410 106 x 862	US32D	SA	⚡
2	Sweep	3452AV		PE	
2	Door Closer	281 CPS	EN	SA	
2	Door Pull	BF168	US32D	RO	
1	Rain Guard	346C x LAR			
1	ElectroLynx Harness	QC-C1500 [PS to hinge]		MK	⚡
1	ElectroLynx Harness	QC-CXXP [Lock / exit to hinge]		MK	⚡
2	Position Switch	DPS-M/W-WH (as required)		SU	⚡
1	Power Supply	AQLX-E1 – Size as required		SU	⚡

OWNER:

1	Modeco Cylinder	100200 H – M4 Key System	26	MC	
1	Gasketing	By door / frame mfg			
1	Card Reader	SE RP40 / SE RP15 as req			⚡

Notes: Hardware listed for design criteria, confirm with specific door manufacturer the hardware requirements to meet specified windstorm rating - Provide 3rd party test results for confirmation.

Set: 2.1

Doors: X107

Description: EXT EGRESS - HM - EAC

Contractor:

1	Continuous Hinge (Elec)	CFMZZHD1 SER		PE	⚡
1	Rim Exit Device, Storeroom	43 55 56 WS 8804 ETL	US32D	SA	⚡
1	Door Closer	281 CPS	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Threshold	2005AT MSES25SS		PE	

1	Gasketing	303AS		PE	
1	Rain Guard	346C x LAR		PE	
1	Sweep	3452AV		PE	
1	ElectroLynx Harness	QC-C1500 [PS to hinge]		MK	⚡
1	ElectroLynx Harness	QC-CXXP [Lock / exit to hinge]		MK	⚡
2	Position Switch	DPS-M/W-WH (as required)		SU	⚡
1	Power Supply	AQLX-E1 – Size as required		SU	⚡

OWNER:

1	Modeco Cylinder	100200 H – M4 Key System	26	MC	
1	Card Reader	SE RP40 / SE RP15 as req			⚡

Notes: Hardware listed for design criteria, confirm with specific door manufacturer the hardware requirements to meet specified windstorm rating - Provide 3rd party test results for confirmation. Door normally closed and secured.

Authorized credential retracts the latchbolt to allow free entry, door relocks upon closing. REX (request to exit) switch in device rail allow for free exit at all times. Entry by key override at all times. Door is fail secure

Set: 3.0

Doors: D109

Description: STOR - RATED – EAC

Contractor:

1	Door Closer	281 Reg / PA	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	
1	Gasketing	S88D		PE	

OWNER:

1	Access Control Cyl Lock	IN120-10G77 BIPS MB LL – By security Vendor			⚡
---	-------------------------	---	--	--	---

Set: 4.0

Doors: B154

Description: STOR - RATED

Contractor:

1	Door Closer	281 Reg / PA	EN	SA	
3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Storeroom Lock	LC65G04 KL	US26D	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	
1	Gasketing	S88D		PE	

OWNER:

1	Modeco Cylinder	100200 H – M4 Key System	26	MC	
---	-----------------	--------------------------	----	----	--

Set: 5.0

Doors: B102

Description: CORR – EAC

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Rim Exit Device, Passage	43 8815 ETP	US32D	SA	
1	Door Closer	281 Reg / PA	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	
1	Silencer	608		RO	

Set: 5.1

Doors: A112, A115A, A132A, A192, B122, B130, B134, B138, D125, E101, E101B, E108A


Description: CORR – EAC - WIFI

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Closer	281 Reg / PA	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	

3	Silencer	608		RO	
---	----------	-----	--	----	--

OWNER:

1	Access Control Rim Exit	43 IN120-8877 BIPS MB ETL		RO	
---	-------------------------	---------------------------	--	----	---

Set: 6.0

Doors: A197, E114, E114A, E139, E139A

Description: OPEN OFFICE - EAC

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Closer	281 Reg / PA	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	
3	Silencer	608		RO	

OWNER:

1	Cylinder Lock				
---	---------------	--	--	--	--


Set: 6.1

Doors: A113A, B127, B127A, B160, B160A, C137, D103, D105A, D115, D116, D120, D144, D148

Description: OPEN OFFICE – EAC - WIFI

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Closer	281 Reg / PA	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	
3	Silencer	608		RO	

OWNER:

1	Access Control Cyl Lock	IN120-10G77 BIPS MB LL – By security Vendor	US32D	SA	
---	-------------------------	---	-------	----	---


Set: 6.2

Doors: D103A, D126

Description: OPEN OFFICE – EAC - WIFI

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Closer	281 Reg / PA	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	
3	Silencer	608		RO	

OWNER:

1	Access Control rim Exit	43 IN120-8877 BIPS MB ETL		RO	
---	-------------------------	---------------------------	--	----	---

Set: 7.0


Doors: E155

Description: ELEC / IDF – EAC

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Closer	281 Reg / PA	EN	SA	
1	Door Stop	409 / 446 as required	US26D	RO	
1	Gasketing	S88D		PE	

OWNER:

1	Access Control Rim Exit	43 IN120-8877 BIPS MB ETL		RO	
---	-------------------------	---------------------------	--	----	---

Set: 8.0


Doors: D155A

Description: IDF - EAC [OHS]

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Closer	281 Reg / PA	EN	SA	
1	Gasketing	S88D		PE	

OWNER:

1	Access Control Cyl Lock	IN120-10G77 BIPS MB LL – By security Vendor	US32D	SA	
---	-------------------------	---	-------	----	---

Set: 9.0


Doors: B122A, B174

Description: CORR

Contractor:

3	Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	US26D	MK	
1	Door Closer	281 Reg / PA	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	
3	Silencer	608		RO	

OWNER:

1	Access Control Rim Exit	43 IN120-8877 BIPS MB ETL		RO	
---	-------------------------	---------------------------	--	----	---

Set: 10.0

Doors: D133

Description: MAIL - EAC

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Closer	281 Reg / PA	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	
3	Silencer	608		RO	

OWNER:

1	Office Lock	In stock lock			
---	-------------	---------------	--	--	--

Set: 11.0

Doors: B153, E145A

Description: OPEN OFFICE

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Closer	281 Reg / PA	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	

3	Silencer	608		RO	
---	----------	-----	--	----	--

OWNER:

1	Office Lock	LC 65G05 KL	US26D	SA	
1	Modeco Cylinder	100200 H – M4 Key System	26	MC	

Set: 13.0

Doors: B134A, B161C, D101A

Description: BREAK

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Closer	281 Reg / PA	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	
3	Silencer	608		RO	

OWNER:

1	Passage Latch	65U15 KL	US26D	SA	
---	---------------	----------	-------	----	--

Set: 13.1

Doors: D101

Description: Break – Exit

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Closer	281 Reg / PA	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	
3	Silencer	608		RO	

OWNER:

1	RIM Exit				
---	----------	--	--	--	--

Set: 14.0


Doors: C128

Description: PRINT

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Closer	281 Reg / PA	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
3	Silencer	608		RO	

OWNER:

1	Access Control Cyl Lock	IN120-10G77 BIPS MB LL – By security Vendor	US26D	SA	
---	-------------------------	---	-------	----	---

Set: 15.0

Doors: C140

Description: FITNESS

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Pull Plate	BF 110 x 70C	US32D	RO	
1	Push Plate	70C	US32D	RO	
1	Door Closer	281 Reg / PA	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	
3	Silencer	608		RO	

Set: 16.0

Doors: E136

Description: OFFICE - EAC

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Closer	281 Reg / PA	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	
1	Gasketing	S88D		PE	
1	Sweep	29326CNB		PE	

OWNER:

1	Office Lock	LC 65G05 KL	US26D	SA	
---	-------------	-------------	-------	----	--

Set: 16.1


Doors: D159, E142

Description: OFFICE – EAC – WIFI

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Closer	281 Reg / PA	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	
1	Gasketing	S88D		PE	
1	Sweep	29326CNB		PE	

OWNER:

1	Access Control Cyl Lock	IN120-10G77 BIPS MB LL – By security Vendor	US26D	SA	
---	-------------------------	---	-------	----	---

Set: 17.0

Doors: A221

Description: SGL - EAC

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Closer	281 Reg / PA	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	
3	Silencer	608		RO	

OWNER:

1	Office Lock	LC 65G05 KL	US26D	SA	
---	-------------	-------------	-------	----	--

Set: 17.1

Doors: B173, C142, E108

Description: SGL – EAC - WIFI

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
---	---------------------	------------------------	-------	----	--

1	Door Closer	281 Reg / PA	EN	SA	
1	Kick Plate	K1050 10" x 2" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	
3	Silencer	608		RO	

OWNER:

1	Access Control Cyl Lock	IN120-10G77 BIPS MB LL – By security Vendor	US26D	SA	⚡
---	-------------------------	---	-------	----	---

Set: 18.0

Doors: A172, B141, E106, E170

Description: STOR

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Stop	409 / 446 as required	US26D	RO	
3	Silencer	608		RO	

OWNER:

1	Storeroom Lock	LC 65G04 KL	US26D	SA	
---	----------------	-------------	-------	----	--

Set: 19.0

Doors: C144, E171

Description: JAN

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Mop Plate	K1050 4" X 1" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	
1	Gasketing	S88D		PE	

OWNER:

1	Storeroom Lock	LC 65G04 KL	US26D	SA	
---	----------------	-------------	-------	----	--

Set: 20.0

Doors: A122, A127, A128, A129, A142, A145, A146, A153, A154, A155, A184, A185, A196, A207, A219, A222, B111, B112, B114, B115, B116, B117, B118, B119, B120, B123, B123A, B140, B143, B144, B145, B146, B147, B148, B151, B165, C117, C118, C123, C124, C125, C135, C151, D107, D113, D114, D117, D121, D122, D122A D123, D124,

D131, D137, D139, D145, D146, D153, D154, D160, E107, E109, E110, E113, E115, E116, E117, E118, E119, E120, E121, E124, E125, E129, E130, E131, E137, E138, E140, E141, E143, E144, E148, E149, E150, E151, E152, E153

Description: OFFICE

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Stop	409 / 446 as required	US26D	RO	
3	Silencer	608		RO	

OWNER:

1	Office Lock	LC 65G06 KL	US26D	SA	
---	-------------	-------------	-------	----	--

Set: 20.1


Doors: A107, B139, B170, D119, D134

Description: OFFICE - WIFI

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Stop	409 / 446 as required	US26D	RO	
3	Silencer	608		RO	

OWNER:

1	Access Control Cyl Lock	IN120-10G77 BIPS MB LL – By security Vendor	US26D	SA	
---	-------------------------	---	-------	----	---

Set: 21.0

Doors: A100A

Description: WORK

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Stop	409 / 446 as required	US26D	RO	
3	Silencer	608		RO	

OWNER:

1	Classroom Lock	LC 65G37 KL	US26D	SA	
---	----------------	-------------	-------	----	--

Set: 22.0

Doors: A173, A174, A176, A177, B155, B155A, B164, B168, B171, C120, C121, C122, C141A, C141B, C141C, C143, C145, C156, C157, C158, D141, D142, D143, D156, D157, E103, E104, E122, E123, E126, E128, E133, E134

Description: TOILET

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Mop Plate	K1050 4" X 1" LDW	US32D	RO	
1	Door Stop	409 / 446 as required	US26D	RO	
1	Gasketing	S88D		PE	
1	Sweep	29326CNB		PE	

OWNER:

1	Privacy Lock	V21 8265 LNL	US26D	SA	
---	--------------	--------------	-------	----	--

Set: 23.0

Doors: A119, A119A, A203, B103, B128, B129, B131, B142, C141, D108, D135, D138, D147, D149, D150, D151, D155, D155B, E100, E106A, E112, E146, E147

Description: CONF / INTERVIEW

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Stop	409 / 446 as required	US26D	RO	
3	Silencer	608		RO	

OWNER:

1	Passage Latch	65U15 KL	US26D	SA	
---	---------------	----------	-------	----	--

Set: 23.1

Doors: A116, B172, B172A, C109, D152

Description: CONF / INTERVIEW - WIFI

Contractor:

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	
1	Door Stop	409 / 446 as required	US26D	RO	
3	Silencer	608		RO	

OWNER:

1	Access Control Cyl Lock	IN120-10G77 BIPS B LL	US26D	SA	
---	-------------------------	-----------------------	-------	----	--

Set: 24.0

Doors: A100B

Description: WORK [BLIND DOOR]

Contractor:

3	Hinge, Concealed	MK80A	Satin Chrome	MK	
1	Edge Pull	RM754 4"	US32D	RO	
3	Silencer	608		RO	

OWNER:

1	Mortise Deadbolt	4875		RO	
---	------------------	------	--	----	--

Set: 25.0

Doors: B173A

Description: POCKET DOOR

Contractor:

1	Pocket Door Hdwe	PF28200A		PE	
1	Passage	XGT – 205 – PD9610 – A	630	XX	

OWNER:

1	Pocket door lock (Keyed)	2113	US15	ET	
---	--------------------------	------	------	----	--

Set: 26.0

Doors: C109A

Description: CLOSET – BI-FOLD

Contractor:

1	Bifold Door Set	HF4/100A/XX		PE	
1	Pull	RM1200-6	US32D	RO	

Set: 27.0

Doors: B167

Description: CASSED OPEN


1	Cased Open				
---	------------	--	--	--	--

Set: 28.0

Doors: A113

Description: EXISTING – EAC - WIFI

OWNER:

1	Access Control Rim Exit	43 IN120-8877 BIPS MB ETL		RO	
1	Existing – Balance	Balance of Existing Hardware to remain			

Set: 29.0

Doors: A114, A124, A125, A136, A141, A143, A144, A147, A148, A150A, A151, A152, A158, A175, A180, A180A, A181, A193, A194, A195, A202A, A205, A206, A208, A211, A212, A213, A214, A214A, A216, A217, A218, B100, B106, B108, B109, B110, B135, B136, B137, B149, B161, B161A, B161B, B162, B163, B166A, B166B, B169, C108, C110, C111, C113, C113A, C113B, C114A, C129, C130, C131, C132, C138, C146, C147, C148, C150, C152, C154, C155, C159, D102, D104, D111, D112, D127, D128, D129, D133A, D136, E145B

Description: EXISTING

All Existing Hardware to Remain

Contractor will clean and repair as necessary.


Set: 29.1

Doors: A101, A103, A104, A105, A106, A108, A109, A110, A111, A116A, A117, A120, A121, A130, A131, A135, A137, A156, A157, A159, A160, A161, A162, A163, A164, A165, A166, A167, A168, A169, A170, A178, A179, A181, A182, A189, A190, A190A, A198, A199, A201, A215, A220, A220A, B150, C100, C101, C102, C103, C133, D130, D132, E145

Description: EXISTING -WIFI

All Existing Hardware to Remain

OWNER:

1	Access Control Cyl Lock	IN120-10G77 BIPS MB LL – By security Vendor	US26D	SA	
---	-------------------------	---	-------	----	---

Notes: Coordinate hardware requirements with existing door / frame. Clean and repair as necessary - advise architect if hardware needs to be replaced


Set: 29.2

Doors: D113A

Description: EXISTING -WIFI - EXIT

All Existing Hardware to Remain

OWNER:

1	Access Control Rim Exit	43 IN120-8877 BIPS MB ETL		RO	
---	-------------------------	---------------------------	--	----	---

Notes: Coordinate hardware requirements with existing door / frame. Clean and repair as necessary - advise architect if hardware needs to be replaced

Set 29.3

Doors: X101, X102, X103, X104, X105,X108, X109

Description: EXISTING - OUTDOOR

All Existing Hardware to Remain

Notes: Coordinate hardware requirements with existing door / frame. Clean and repair as necessary - advise architect if hardware needs to be replaced

Set: 30.0

Doors: MISC

Description: MISC

1	Key Management System	T21		TA	
---	-----------------------	-----	--	----	--

Set: 31.0

Doors: A102

Description: Sliding Door - WIFI

Hardware included in door system.
Access Control provided by OWNER