Project Owner:	Ludington Area School District
Project Name:	Secondary Complex Technology Renovations
Issue Date:	September 6, 2022

ADDENDUM NO. 1

*This Addendum No. 1 of the **Technology Request for Bid** for the above referenced project hereby amends, supplements and/or augments all prior issued document(s) as described herein, and becomes an inseparable part of the Contract Documents, superseding all previous, contrary and/or conflicting information.*

AD1 - 1 Section 28 13 00 is hereby revised, reissued and attached hereto.

AD1 - 2 Appendix E is hereby revised, reissued and attached hereto.

END OF ADDENDUM NO. 1

SECTION 28 13 00
BUILDING ACCESS CONTROLS

PART 1 - GENERAL

1.01 DESCRIPTION OF PROJECT

A. Work described in this specification section pertains to a new access control system for Ludington Areas School District High School and Middle School complex.

B. Contractor shall advise, coordinate, and work cooperatively with Owner representatives and/or owner's designee related to any installation or special security provisions.

C. The Contractor shall design, engineer, configure, supply, connect, test, document, train Owner representatives and warrant a fully operational and compliant system, complete and with full functionality as specified herein.

D. Contractor shall coordinate their installation with other contractors, Designer and the Owner as is appropriate.

E. Contractor shall retain integration functions of alarm system and alarm monitoring organization with access control system provided/upgraded, including, but not limited to, programmed alerts, notifications, alarm keypad arm and disarm functions, alarm disregard and all other current functions and operations of the alarm system existing at the High School / Middle School.

F. Contractor shall fully coordinate and cooperate with door hardware vendor supplying the balance of items identified in section 08 71 00 as identified herein. All final connections, component integration, configuration, testing and programming functions to provide for a fully operational and functional system as specified shall remain the responsibility of Contractor selected for work in this section/division.

1.02 WARRANTY

A. Complete installation shall be free from defect and/or failure for a period of three (3) years. Any replacement, upgrade, or fix, including labor for any non-conforming or non-operational part of the system shall be fixed and/or replaced at no cost to the Owner.

B. Manufacturer's warranty shall be provided for all components of the system.

1. Any documents and/or submittals required by individual manufacturers for compliance with the standard and/or applicable extended warranty programs shall be provided and submitted for approval by the Contractor.

2. Contractor shall submit all documents, apply for warranty or extended warranty certification, and provide a Certificate of Warranty or Extended Warranty as may be applicable from the manufacturer prior to project closeout.

C. On site services provided under the warranty shall be performed by personnel or representatives of Contractor as herein defined and located within physical proximity to provide response levels deemed acceptable to Owner.

D. Contractor shall provide the following response times for all malfunctioning equipment:

1. Eight (8) hours or less for matters that render twenty percent (20%) or more of the system unable to maintain normal functionality.

2. Two (2) business days for matters not meeting the above criteria.

3. Response time shall be measured from the time Contractor is notified by Owner to the time work is begun to resolve the matter.

E. Bidder shall provide current annual maintenance contract pricing for recommended maintenance programs for all equipment following the specified and included one (1) year period. This information will be considered by Owner and Designer as part of the bid evaluation process.

F. System Warranty shall commence on date of substantial completion as certified by Designer and provided for herein. Delivery to work site of materials, physical removal from packaging, issuance of Contractor documents including, but not limited to invoices and/or packing slips, or any event or documentation, not specifically provided for herein, shall have no effect on Warranty or System Acceptance by Owner and/or Designer.

G. MANDATORY ALTERNATE: Contractor shall provide alternate for five (5) year warranty in lieu of the specified and required warranty. Such warranty shall maintain the same requirements for performance, but for five years rather than the specified base bid duration.

H. MANDATORY ALTERNATE: To facilitate continued satisfactory operation during warranty period, Contractor shall provide the following warranty services at least once each year during the warranty term:

1. Inspection of all system components to ensure:

a. All doors physically lock and unlock as expected.

b. All REX devices physically operate as expected

c. All door position indicators report correct door position as expected.

d. All card readers function correctly and as expected.

e. Lockdown buttons function correctly as expected and command correct integration functions with other related building systems.

2. Review of all central server and/or processor logs and files to address errors and/or system anomalies to ensure continued compliance with manufacturer recommended best practices.

3. Application of latest versions of all applicable manufacturer firmware, software upgrades/updates and any manufacture recommended patches and/or system fixes to maintain the system in the most current configuration recommended by manufacturer for all components.

4. Ensure all Owner documentation and record documents are updated with current and accurate information including, but not limited to controller, card reader and integrated door hardware models, serial numbers, Software and firmware versions, installation locations, Server configuration parameters.

1.03 STORAGE OF MATERIALS

A. All materials shall be secured when not in use by the Contractor.

B. It shall be the Contractor's responsibility to secure all equipment including material to be installed as part of the contract. No changes shall be made to the contract due to loss or theft of equipment and/or materials not officially accepted by the Owner.

C. Formal receipt of the materials shall not be completed by the Owner until completion of project closeout. The Contractor shall be responsible for all equipment until time of closeout as provided for herein.

1.04 SUBMITTALS

A. Submittals shall consist of, but not be limited to, technical cut sheets and detailed information pamphlets on all components of the system to be installed. All cut sheets and submittals shall be distinctly marked to highlight the actual part number of the item being submitted for approval with Bid Proposals.

B. Shop drawings and diagrams shall be submitted by Bidder for approval by Designer with Bid Proposals.

1. Shop drawings and diagrams shall show all data relating to structural, electrical, wiring, cross connect, interconnect, equipment arrangement/layout, and any other information deemed significant by the Designer.

2. No work constituting final installation shall be commenced until after approval of shop drawings by Designer.

C. Contractor shall provide proof of manufacturer support by photocopy of certification and letter of support from major component manufacturers for this specific project with Bid Proposals.

D. Equipment or material installed for this project that does not have an approved submittal associated with it, will be removed, and replaced with acceptable equipment or material as defined by the Designer. All replacement costs including, but not limited to material and labor, shall be the sole responsibility of the Contractor.

1. The Owner and/or Designer may notify Contractor of any offending situations under this provision allowing Contractor up to forty-eight (48) hours to correct the situation prior to taking other corrective action.

2. The Owner reserves the right to replace unapproved materials and deduct the costs of doing so as defined herein from any amounts that may be due or become due Contractor.

E. The Contractor shall submit within ten (10) calendar days after the Notice to Proceed, a schedule that reflects the sequence of activities of the contractor's approach to the execution of and completion of the work. The schedule shall be broken into work areas to provide for a clear identification of the planned progress of the work. Included in the schedule will be a list of tasks with list of deliverables and the percentage of work completed. This schedule shall coincide with progress payments applications dates and projected amounts. All durations shown will be in working days. Microsoft Project is the software of choice for this schedule. The timeframe described in the Contractor's Schedule shall represent the Contractor's plan for organizing, directing, managing, controlling, staffing, and executing the work required by the Contract Documents. Owner will rely on such schedules to coordinate and otherwise plan related work of Owner personnel, other separate contractors, or the Owner’s routine daily work.

1.05 REFERENCE SPECIFICATIONS

A. All work, products, and materials shall conform with the following standards as applicable for the intended use:

1. IEEE

2. EIA/TIA Commercial and Administration Standards

3. NEC

4. FCC – All Applicable Rules and Regulations

5. UL

6. MOSHA Safety Standards

B. Bidder shall be responsible for supply, configuration and installation of components identified in Section 087100 - Door Hardware, Part 5 “Hardware Schedule”.

1.06 CONTRACTOR

A. The Contractor shall accept complete responsibility for the installation, certification, and support of the system. Contractor shall be an authorized vendor of all major components.

B. All work shall be performed and supervised by Project Managers, Engineers and/or Technicians who are qualified to install system and perform related tests as recommended by the manufacturer and in accordance with the manufacturer’s best practices and methods.

C. Project Managers, Engineers and Technicians employed on this project shall be properly and fully trained and qualified by the manufacturer on the installation and testing of the equipment and systems to be installed.

D. The Contractor shall have a proven track record in security system configuration and installation. This must be shown by the inclusion of references of at least three (3) projects involving the installation of similar systems completed by the Contractor in the prior two (2) years on unaltered forms with the sealed Bid Proposal as provided herein. Bid Proposal Form(s) may be duplicated as required in order to provide adequate space to list required number of reference installations for each division Bidder is responding to.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturers (In alphabetical order):

1. AXIS

2. GENETEC

3. HID

B. Any access control software solution provided by Contractor must support all hardware provided for herein and on architectural door hardware schedules. Such support shall include, but not be limited to, integrated door hardware, PoE transfer hinges, wireless hubs, door position indicators, REX devices, card readers, mercury door controllers and other components for a fully integrated, functional, and operational system.

2.02 Supply most current version of all products provided.

A. Manufacturer shall have five (5) years of experience and history manufacturing similar products to those specified.

B. Proposed components shall have been field tested and proven in actual use.

C. Prior and/or old versions of products, unless specifically approved and documented by Designer and/or Owner shall not be acceptable.

D. In cases where a newer version of hardware or software is available at the time of installation, Contractor shall request clarification from Designer on which version is to be used.

2.03 Furnish only new, first-class quality materials and equipment.

2.04 System shall be comprised of interoperable components including, but not limited to, controller, credential sensors and management software integrated into a common working system.

2.05 System administrator shall be capable of complete system back-up and full system restoration from a previously saved configuration.

2.06 System shall be of a distributed processing design with a fully distributed database including, but not limited to time, date, valid codes, access levels and related data so that each Controller makes access control decisions for that location. If communications with central station equipment is lost, all transactions shall be buffered until the restoration of a connection to the central station.

2.07 In the event of a power failure, complete system shall automatically re-initialize and “become active” to the last configuration in use with no human intervention.

2.08 Contractor shall be responsible for final and working system. Use of existing components and materials provided by others during new construction shall be integral to system configuration and cost-effective installation. Bidders are encouraged to use all compatible and working components in system solution. See schedule(s) and reference files for additional detail.

2.09 CENTRAL MANAGEMENT SOFTWARE

A. Contractor shall supply all necessary licensing to add all door access devices and accessories to existing Genetec system (Education K12 Package)

B. Central management software shall meet or exceed the following:

1. System shall be accessed from a standard web browser by Owner designated personnel using their district issued devices.

2. Capable of being fully administered from any web browser attached to the network, including, but not limited to viewing alarm notifications.

3. Administration access shall be protected by unique and secure log on (User ID and Password) and fully integrated with any Owner's existing Microsoft Active Directory configuration.

4. Update Controller(s) in real-time for changes including, but not limited to adding and deleting access levels, adding, and deleting card holders and deactivating card holders.

5. Provide badge creation enabling Owner to create customized photo identification credentials. System shall be compatible with both real-time video camera to capture images, or with images taken with a standard digital camera and saved in a standard picture format.

    a. System shall include all badge creation software, camera, card reader and one badge printer for Owner's central preparation and enrollment of valid credentials.

6. Provide communication to credential readers, each with individual associated door interface hardware. See associated appendices herein.

7. System reporting shall include, but not be limited to:

    a. Access through entrance doors.

    b. Attempted access per entrance.

    c. Propped and unsecured door alerting.

8. System shall provide for Owner definition of access groups, schedules and door groups that can be combined by Owner's system administrator into combinations of access policies for users.

2.10 CONTROLLER

A. Acceptable Manufacturer(s)

1. Genetec

a. LP1501

B. Door controllers shall be provided in locations at doors not containing integrated door hardware and as identified on provided drawings and specified herein.

C. Door controllers shall be provided in locations to support connection of supplied door contacts as identified on provided drawings and specified herein.

D. In identified locations where new integrated PoE hardware is not specified, and controllers and doors are to be added, a dedicated PoE+ door/entrance controller is to be provided at the opening. Controller(s) shall provide, but not be limited to:

1. Mercury hardware based to support multiple software vendor's systems. Proprietary hardware will not be favorably considered.

2. Capable of supporting multiple types and styles of credential readers.

3. New dedicated PoE+ door controllers:

a. Owner closet-based UPS/Generator shall provide required power back-up.

b. Controllers are to be housed in a surface mounted, lockable impact resistant enclosure to protect the controller and provide for cable termination and management above/behind the finished surface at the door location. Remote controllers located in other parts of the building away from the individual door(s) being controlled shall not be acceptable. Contractor shall provide all necessary patch cables to connect both ends of the link to the controller. Cabling contractor will supply a tested and certified category 6 cable outlet above the center of the door opening.

2.11 CREDENTIALS

A. Six hundred (600) credentials shall be provided.

B. Credentials shall be HID 13.56 MHz cards compatible with specified credential readers.

2.12 CREDENTIAL READERS

A. Where indicated on drawings, credential readers (CR) shall be provided that meet or exceed the following requirements:

1. HID R40 SE Smart Card Reader
2. Read Contractor supplied credentials.
3. DC powered from associated Controller.
4. Response time for passage requests of 800ms.
5. Sealed weatherproof shell enclosure rated for outdoor operation.
6. Surface mounted on exterior surface of structure.
7. LED or other type of visual indicator indicating request status.
8. Audible status indicator upon user prompt.
9. Range of four inches (4”).

B. See associated supplied drawings for location and quantity.

2.13 DOOR INTERFACE HARDWARE (INTEGRATED COMPONENTS)

A. All controllers shall be PoE Genetec Mercury door controllers and shall be mounted above the secure side of each entry requiring a controller. Where new door controllers are to be provided, the door interface hardware provided by others shall meet or exceed the following:

1. 12v PoE+ controller compliant strikes will be provided by others as part of Section 08700 work and shall be integrated into the door controller installation by Contractor.
2. Where new door controllers are to be provided, each door controlled by the system shall be equipped with PIR REX device and shall be integrated into the door controller installation by Contractor.
    a. REX devices shall be Bosch DS160.
3. Where new door controllers are to be provided, each door shall be equipped with magnetic DPI sensors by others and shall be integrated into the door controller installation by Contractor.
    a. DPI sensors shall be Bosch ISN-CMINI-10.

4. All door strike, REX and DPI cables shall of a sufficient length to be neatly routed by Contractor supplying material, to a location suitable to reach inside controller enclosure for door(s).

2.14 INTEGRATED PoE HARDWARE

A. Where Owner has specified integrated hardware as identified in Section 08700 – Door Hardware, Part 5 "Hardware Schedule", Contractor shall provide, install, configure, and attach ASSA-ABLOY Sargent IN220 Integrated Locks. Contractor shall include cables of a sufficient length to be neatly routed to a suitable location to reach Ethernet ports planned for connection to PoE integrated hardware.

2.15 INTEGRATED WIRELESS DOOR HARDWARE

A. Where Owner has specified integrated hardware as identified in Section 08700 – Door Hardware, Part 5 "Hardware Schedule", Contractor shall provide, install, configure, and attach ASSA-ABLOY APERIO IN100 Wireless Locks. Contractor shall supply all necessary APERIO wireless communication hubs in quantities provided including all necessary licensing, labor and accessories for a fully functional system.

2.16 INTEGRATED WIRELESS DOOR HARDWARE HUBS

A. Security Contractor shall and configure supply thirty-eight (38) Integrated Wireless Door Hardware Hubs for online connectivity.

1. Wireless Hub Devices shall meet or exceed the following requirements:

a. ASSA-ABLOY

1. APERIO AH40 IP HUB

2. IEEE 8.02.15.4 (2400-2483,5MHz)

3. 15 channels (11-25)

4. AES128 bit encryption

5. PoE Powered

B. Contractor shall work collaboratively with Owner and Designer to identify optimal wireless hub locations to maximize coverage and functionality prior to installation.

C. Contractor shall configure device and provide any necessary licensing, accessories, and labor to fully integrated hubs and wireless locksets with Genetec security system.

2.17 HIDDEN DOOR RELEASE SWITCHES

A. Door release switches are to be provided in locations identified on provided drawings as specified herein.

1. Door release switches shall meet or exceed the following requirements:

a. ALLEGION 660-PB or ASSA ABLOY equal

B. Hidden door release switches shall be programmed to provide door release capabilities for doors identified on provided drawings. Contractors shall supply all necessary cabling, labor and accessories to integrate hidden door release switches with Contractor provided door controllers.

2.18 LOCK DOWN BUTTONS

A. Lock down buttons are to be provided in locations as identified on provided drawings and as specified herein. Provided buttons shall be located in each HS and MS office areas.

B. New buttons shall be wall mounted and prominently located in an area promoting easy access by staff that may reasonably be required to initiate a lock down.

C. New lockdown buttons shall be SS2242LD-EN STI Yellow Indoor/Outdoor Flush or approved equal.

D. Lockdown buttons shall be programmed to provide all functionality defined by Owner, including, but not limited to the integration via contact closure with the PA/program system, video monitoring system and clock system. Such integration shall include both a lockdown and all clear integration.

2.19 NETWORK VIDEO DOOR STATIONS

1. Network Video Door Stations shall be provided at entrances of the facility as identified on provided drawings and as provided for herein. See locations as identified on drawings as IC.

2. AXIS A8105-E

a. Activity/motion detection

b. 30fps Maximum Frame Rate at full resolution

c. 10/100/1000 Ethernet (RJ-45) connector

d. Power over Ethernet IEEE 802.3af/802.3at Type 1 Class 3b

e. SIP Compatible

f. IP65- and NEMA 4X-rated

g. Operating temperature range from -25 °C to 55 °C (-13 °F to 131 °F)

h. Contractor shall be responsible to integrate new door stations with the Owner's telephone system for common office operations. No dedicated door station console will be used.

2.20 COMPONENT INTERCONNECTION

A. All wiring not installed in conduit shall be plenum type cable and shall be so identified with continuous marking.

B. Wiring color shall remain the same throughout the system. Colors used for coding shall be as directed by the system manufacturer, Owner and Designer.

C. Wire shall be copper.

2.21 ALLOWANCES

A. Contractor shall include allowances for equipment and/or other contract service reimbursements as required below in base bid lump sum amount(s). Equipment and/or contract services shall be provided and sourced at Owner's discretion and convenience with full cooperation by Contractor and paid for from successful bidder's contract in the amount(s) provided for herein. Any allowance amount proving to be excessive for the intended equipment and/or contract services shall be credited to the Owner against contract payment requests.

1. Allowance shall be made in the amount of $20,000.00 for contract services related to supply, installation, and connection of computer hardware for central management software.

2. Allowance shall be made in the amount of $10,000.00 for contract services related to supply, installation, and connection of power supplies to support particular door hardware requiring greater than PoE power at the door location.

PART 3 - EXECUTION

3.01 PREPARATION

A. Contractor shall conduct detailed walk-through examination with Designer and Owner verifying equipment and material locations as well as mounting and placement requirements prior to commencement of other installation activities.

B. Contractor shall ensure all submittals and shop drawings have been provided to, and approval has been obtained from Designer prior to commencement of any final installation activities.

3.02 INSTALLATION

A. Contractor shall be familiar with the environment where work will be done as specified herein and make every reasonable effort to minimize interference with Owner's or other contractor's activities.

B. Work Areas shall be cleaned at the end of each day. All debris shall be cleared, removed, and disposed of in an approved container for the site. All equipment and tools shall be removed from common areas and stored in approved, secure storage locations. Any work that may impede the general use of the space and/or other contractor's work and cannot be removed shall be flagged and cordoned off by the Contractor prior to their departure.

C. Contractor shall supply all necessary equipment to complete the installation as specified including appropriate lift equipment to access high ceiling areas.

D. All equipment and materials shall be installed in a neat and workmanlike manner. Best practices installation principles shall be used throughout the project.

E. The Contractor shall furnish, set in place, and install all equipment necessary for a fully compliant and operational system as specified herein. The installation process includes, but is not limited to the following:

1. Inventory receipt of all components and equipment.

2. Storage of all equipment and components until such time those items are installed according to the specifications.

3. Transport equipment to the Owner's installation location(s).

4. Assemble, install, configure, and test all equipment and components, maintaining accurate inventory records and status documents and discarding packaging.

5. Collect all information necessary to accurately program all system devices to the Owner's intended use and need.

6. Label all system devices as may be appropriate and required by Owner and Designer.

7. Complete end user and system administrator training programs as specified herein.

8. Work shall be performed to meet local codes and industry standards including proper grounding and bonding of installed equipment.

F. Worksites include the following:

1. Ludington High School
   508 N. Washington
   Ludington, Michigan 49431

2. OJ DeJonge Middle School
   706 E. Tinkham Ave.
   Ludington, Michigan 49431

G. It shall be the responsibility of the Contractor to repair or replace any damage done to the structure of finishes in the building by the Contractor. If in the course of work, Contractor damages, marks, or misplaces any surfaces or access plates/panels the Contractor shall repair and/or replace the surface, plate or panel to the original condition.

1. Final determination as to the damage condition and/or repair/replacement fitness of any surface, plate or panel shall be the sole responsibility of the Designer.

2. The building and work area shall be returned to its original condition prior to final sign off of the project.

H. Following installation and system “turn-up”, but prior to final acceptance of the system, Contractor shall conduct follow-up interviews with Owner identified administrators and staff to review system functionality, suitability and confirm feature and program fitness for Owner applications.

1. Follow-up interviews shall be fully documented by Contractor and submitted to Owner for approval.

3.03 TESTING

A. In an effort to ensure a smooth “turn-up” of the new system Contractor shall submit to a thorough testing process as defined herein prior to cut-over.

B. Prior to requesting testing by Designer, the Contractor shall use adequate means to assure the Work is completed in accordance with the specified

requirements, meets the owner's specific application requirements and is ready for functionality and integrity testing.

C. Testing Procedures

1. Prior to system "turn-up", Contractor shall submit a written request to Designer indicating they have completed full and final configuration of the system and are ready to have system integrity and functionality tested.

2. Within reasonable time after receipt of request, Designer will provide a test schedule and coordinate testing date(s) with Owner and Contractor.

3. Should Designer determine the Work is not acceptably configured or not of adequate integrity:

   a. Designer promptly will so notify Contractor, giving reasons therefore and providing sufficient details to allow Contractor to make corrective actions.

   b. Contractor shall then expeditiously remedy the deficiencies and notify Designer in writing when ready for re-testing.

   c. Designer will schedule re-test of the Work.

   d. Excessive re-testing of Work may result in fees being assessed Contractor.

4. Should Designer and Owner concur the Work is configured properly, and system integrity is as required:

   a. Designer will review Contractors detailed "turn-up" plan, and upon finding it acceptable issue a memorandum of Testing Completion to Owner and Contractor after which system "turn-up" can proceed.

3.04 DOCUMENTATION

A. Contractor shall, throughout the completion of the project, provide Owner a file storage system that shall include all necessary equipment, including if reasonably required, file drawers, folders, dividers, etcetera, to contain all as-built drawings, owner's manuals of all equipment installed, warranty and maintenance information and other information the Contractor, Designer and/or Owner deem necessary. Documentation shall also be provided in a digital format in file formats and on media as specified by Owner and/or Designer.

B. Contractor shall be responsible for providing thorough, timely documentation on all hardware, software. Documentation shall include, but not be limited to:

1. Equipment description.
2. Equipment make.
3. Model number.
4. Software release.
5. Date installed.
6. Manufacturer's warranty.
7. Maintenance contract terms.
8. Verification of maintenance contract engagement.
9. Telephone numbers for service and support.
10. Detailed technical support and service procedure instructions.
11. All product (hardware and software) manuals and manufacturer supplied documentation, including, but not limited to owner manuals, system administrator manuals and configuration guides. Where number of duplicate copies for particular manual or documentation item could be reasonably considered excessive, Contractor shall request direction from Owner and Designer.
12. Photocopy of original invoice listing make and model for all components and equipment from individual manufacturer(s), distribution source(s), or authorized agent(s) to establish manufacturer warranty start date for potential use after end of contract warranty provisions.
13. CAD as built drawings for each building.
14. System Configuration Report.
15. Complete inventory of installed hardware and system software. Hardware inventory shall include, but not be limited to, model numbers, serial number, physical installation location and software/firmware options.

3.05 TRAINING

A. Training shall be conducted at the Owner’s discretion and at times and places convenient to Owner personnel. Prior to any training being conducted,

Contractor shall provide Owner and Designer with detailed training syllabus and schedule for proposed training event. Compliant syllabus and schedule shall be provided at least ninety-six 96 hours in advance. Owner reserves the right to postpone training if syllabus and/or schedule submitted are deemed inadequate. Training shall not be conducted until such time a syllabus and schedule submitted by Contractor are found to be acceptable to Owner.

B. Contractor shall provide training for the Owner designated system administrator(s). Owner shall designate up to four (4) administrators to be trained. Training shall be a minimum of two (2), three (3) hour session(s) in length, at the convenience of the Owner personnel, and of sufficient duration to satisfactorily complete training on all system administration functions including, but not limited to:

1. Creating credentials
2. Establishing, configuring, enrolling and issuing new users and credentials.
3. Integration with any Owner's existing Microsoft Active Directory.
4. Setting up new alerts within the system.
5. Changing the actions taken by the system when a lock-down is initiated.
6. Basic trouble shooting of the installed system and components including diagnostic and problem resolution actions.
7. System back-up and restore functions and procedures for all system parameters and configurations.
8. Review of system alerts, logs and monitoring of configuration parameters including, but not limited to, configuration changes and device status.

3.06 SCHEDULE, MEETINGS AND PLANS

A. Planned sequence of operations shall be established by the Contractor within the guidelines established by the Owner, as required herein and as required to meet schedules.

B. Contractor shall work collaboratively with General Contractor, Owner and Consultant to plan and phase work as necessary. See appendix D for proposed construction schedule.

C. All work shall be coordinated with Owner's construction manager on site.

D. Project progress meetings shall be held, but not limited to, weekly at a site and time identified as convenient for Owner and as required herein. Meetings will be attended as required herein.

END OF SECTION

SECTION 08 71 00 - DOOR HARDWARE
(A004) (BULLETIN 002)

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.
   4. Cylinders specified for doors in other sections.

C. 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.

D. 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. 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 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. Automatic Operator Supplier Qualifications: Power operator products and accessories are required to be supplied and installed through the Norton Preferred Installer (NPI) 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.

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. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

H. 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.

I. 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

J. 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 overhead door closer bodies.
4. Five years for motorized electric latch retraction exit devices.
5. Two years for electromechanical door hardware, unless noted otherwise.

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 Three Hinges: For doors with heights 61 to 90 inches Four Hinges: For doors with heights 91 to 120 inches 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 Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
    b. Widths up to 3’0”: 4-1/2” standard or heavy weight as specified.
    c. Sizes from 3’1” to 4’0”: 5” standard or heavy weight as specified.
2. 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.
3. 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.
4. Manufacturers:
    a. Ives (IV).
    b. McKinney (MK).

B. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 certified continuous geared hinge. with minimum 0.120-inch thick extruded 6063-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. Ives (IV).
      b. Pemko (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 with a 1-year warranty. 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. McKinney (MK) - QC (# wires) Option.

B. Concealed Quick Connect Electric Power Transfers: Provide concealed wiring pathway housing mortised into the door and frame for low voltage electrified door hardware. Furnish 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. Securitron (SU) - EL-CEPT Series.

C. Electrified Quick Connect Data Transfer Hinges: Provide combined electrified power and Ethernet data transfer hinges with Molex™ standardized plug connectors to accommodate electrified functions with a 1-year warranty as 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. Data transfer hinges feature two 6-position and two 4-position Molex connectors, 9 multi-strand wires; 2 twisted pairs (26 AWG), 4 straight conductors (28 gauge) and 1 straight conductor (22 AWG) with concealed plug connectors eliminating the need for separate or exposed wiring. Rated 350 mA continuous @ 48 volts DC nominal, the hinge is capable of two PoE wiring configurations:
      a. Power over Data (5 wire): Power and Data supplied together over the 2 twisted 26 AWG) pairs. The 22 AWG conductor is used for the earth ground connection.
      b. Data with Power over Spares (9 wire): Data over 2 twisted (26 AWG) pairs with Power over spare pairs 94 straight 28 AWG conductors). The 22 Awg conductor is used for earth ground connection.
   2. Manufacturers:
      a. McKinney (MK) - PoE Series.

D. 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 (MK) - Electrical Connecting Kit: QC-R001.
    b. McKinney (MK) - Connector Hand Tool: QC-R003.
2. Manufacturers:
    a. McKinney (MK) - QC-C Series.
    b. McKinney (MK) - PoE Series.

2.4 DOOR OPERATING TRIM

A. Flush Bolts and Surface Bolts: ANSI/BHMA A156.3 and A156.16, Grade 1, certified.
    1. Flush bolts to be furnished with top rod of sufficient length to allow bolt retraction device location approximately six feet from the floor.
    2. Furnish dust proof strikes for bottom bolts.
    3. Surface bolts to be minimum 8” in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
    4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.
    5. Manufacturers:
        a. Ives (IV).
        b. Rockwood (RO).

B. Coordinators: ANSI/BHMA A156.3 certified door coordinators consisting of active-leaf, hold-open lever and inactive-leaf release trigger. Model as indicated in hardware sets.
    1. Manufacturers:
        a. Ives (IV).
        b. Rockwood (RO).

C. 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. Ives (IV).
        b. Rockwood (RO).

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.

C. 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.
   6. Keyway: Manufacturer's Standard.

D. Interchangeable Cores: Provide small format interchangeable cores as specified, core insert, removable by use of a special key; usable with other manufacturers' cylinders.

E. 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. Schlage (SC) - Everest D.
      b. No Substitution.

F. 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.

G. 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).
   4. Construction Control Keys (where required): Two (2).
   5. Permanent Control Keys (where required): Two (2).

H. Construction Keying: Provide temporary keyed construction cores.

I. 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

A. 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. Manufacturers:
      a. Lund Equipment (LU).

b. MMF Industries (MM).

c. Telkee (TK).

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 1 (Heavy Duty): ANSI/BHMA A156.2, Series 4000, Operational Grade 1 Certified Products Directory (CPD) listed.

1. Vertical Impact: Exceed 100 vertical impacts (20 times ANSI/BHMA A156.2 requirements).
2. Furnish with solid cast levers, standard 2 3/4” backset, and 1/2" (3/4" at rated paired openings) throw brass or stainless steel latchbolt.
3. Locks are to be non-handed and fully field reversible.
4. Manufacturers:
    a. Corbin Russwin Hardware (RU) - CLX3300 Series.
    b. Sargent Manufacturing (SA) - 10X Line.
    c. Schlage (SC) - ND Series.

2.8 ELECTROMECHANICAL LOCKING DEVICES

A. Electromechanical Mortise Locksets, Grade 1 (Heavy Duty, High Security Monitoring): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed, 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. Energy Efficient Design: Provide lock bodies 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.
3. High Security Monitoring: Provide lock bodies which have built-in request to exit monitoring and are provided with accompanying door position switches. Provide a resistor configuration which is compatible with the access control system.
4. Manufacturers:
    a. Corbin Russwin Hardware (RU) - ML20600 NAC Series.
    b. Sargent Manufacturing (SA) - NAC 8200 Series.

B. Electromechanical Mortise Locksets, Grade 1 (Commercial Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed, 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. Manufacturers:

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.

B. Cylindrical Deadlocks: ANSI/BHMA A156.36 Grade 1 Certified Products Directory (CPD) listed deadlocks to fit standard ANSI 161 preparation and 1 3/8" to 1 3/4" thickness doors. Provide tapered collars to resist vandalism and 1" throw solid steel bolt with hardened steel roller pins. Deadlocks to be products of the same source manufacturer and keyway as other locksets.
   1. Manufacturers:
      a. Corbin Russwin Hardware (RU) - DL3000 Series.
      b. Sargent Manufacturing (SA) - 480 Series.
      c. Schlage (SC) - B600 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 ELECTRIC STRIKES

A. Standard Electric Strikes: Electric strikes tested to ANSI/BHMA A156.31, Grade 1, for use on non-rated or fire rated openings. Strikes shall be of stainless steel construction tested to a

minimum of 1500 pounds of static strength and 70 foot-pounds of dynamic strength with a minimum endurance of 1 million operating cycles. Provide strikes with 12 or 24 VDC capability, fail-secure unless otherwise specified. Where specified provide latchbolt and latchbolt strike monitoring indicating both the position of the latchbolt and locked condition of the strike.

1. Manufacturers:
    a. HES (HS) - 1500/1600 Series.

B. Surface Mounted Rim Electric Strikes: Surface mounted rim exit device electric strikes tested to ANSI/BHMA A156.31, Grade 1, and UL Listed for both Burglary Resistance and for use on fire rated door assemblies. Construction includes internally mounted solenoid with two heavy-duty, stainless steel locking mechanisms operating independently to provide tamper resistance. Strikes tested for a minimum of 500,000 operating cycles. Provide strikes with 12 or 24 VDC capability 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. Strike requires no cutting to the jamb prior to installation.

1. Manufacturers:
    a. HES (HS) - 9400/9500/9600/9700/9800 Series.

C. Provide electric strikes with in-line power controller and surge suppressor by the same manufacturer as the strike with the combined products having a five year warranty.

2.12 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. Flush End Caps: Provide flush end caps made of architectural metal in the same finish as the devices as in the Hardware Sets. Plastic end caps will not be acceptable.
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. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2” wide stiles.

9. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.
10. Rail Sizing: Provide exit device rails factory sized for proper door width application.
11. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.

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.

2.13 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.

2.14 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 of 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 (Heavy Duty): 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 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. Manufacturers:
      a. Corbin Russwin Hardware (RU) - DC6000 Series.
      b. LCN Closers (LC) - 4040 Series.
      c. Norton Rixson (NO) - 7500 Series.
      d. Sargent Manufacturing (SA) - 351 Series.

2.15 ELECTROHYDRAULIC DOOR OPERATORS

A. General: Provide low energy 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. Standard: Certified ANSI/BHMA A156.19.

C. Performance Requirements:
   1. 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.
   2. Entrapment Protection: Not more than 15 lbf required to prevent stopped door from closing or opening.

D. Configuration: Surface mounted or in-ground as required. Door operators to control single swinging and pair of swinging doors.

E. 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.

F. 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.

G. 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.

H. Brackets and Reinforcements: Manufacturer's standard, fabricated from aluminum with nonferrous shims for aligning system components.

I. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. LCN Closers (LC) - 4640 Series.
   2. Norton Rixson (NO) - 6000 Series.

2.16 SURFACE MOUNTED CLOSER HOLDERS

A. Electromagnetic Door Holders: Certified ANSI A156.15 electromagnetic door holder/releases with a minimum 20 to 40 pounds holding power and single coil construction able to

accommodate.12VDC, 24VAC, 24VDC and 120VAC. Coils to be independently wound, employing an integral fuse and armatures to include a positive release button.

1. Manufacturers:
    a. LCN Door Closers (LC) - SEM7800 Series.
    b. Norton Rixson (RF) - 980/990 Series.
    c. Sargent Manufacturing (SA) - 1560 Series.

2.17 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. Ives (IV).
        b. Rockwood (RO).

2.18 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. Ives (IV).
        b. Rockwood (RO).

C. Overhead Door Stops and Holders: ANSI/BHMA A156.8, Grade 1 Certified Products Directory (CPD) listed 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. Manufacturers:
        a. Norton Rixson (RF).
        b. Rockwood (RO).
        c. Sargent Manufacturing (SA).

2.19 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. Pemko (PE).
2. Zero (ZE).

2.20 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.

2.21 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. DHI TDH-007-20: Installation Guide for Doors and Hardware.
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.

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 handing 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. SU - Securitron
4. RO - Rockwood
5. CR - Curries (Hardware Only)
6. RU - Corbin Russwin
7. OT - Other
8. SC - Schlage
9. KA - Kaba Ilco
10. HS - HES
11. RF - Rixson
12. NO - Norton
13. PN - PERSONA
14. LU - Lund Equipment Co

PART 4 - DOOR HARDWARE SETS

Set: 1.0

Doors: E101A, P123B

1	Continuous Hinge	CFM-SLF-HD1		PE	087100	
1	Continuous Hinge	CFM-SLF-HD1 x PT		PE	087100	
1	Electric Power Transfer	CEPT-C5E	630	SU	087100	⚡
1	Removable Mullion	910KM		RU	087100	
1	Rim Exit Device, Exit Only	ED5200S EO M51	630	RU	087100	
1	IN220 Rim Exit	ED5200SN B PR9134ET-IN220 M51	630	RU	281500	⚡

1	Mortise Housing	CR1040 CT_SD	630	RU	087100	
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
2	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
2	Conc Overhead Stop	6-X36	630	RF	087100	
2	Surface Closer	J7500 x mounting plate to suit application	689	NO	087100	
1	Threshold	252x3AFG Pemkote MSES25SS		PE	087100	
1	Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113	
2	Sweep	29326CNB TKSP		PE	087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	PoE-C (power transfer to exit device or lock)		MK	087100	⚡
1	Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Notes:

Doors normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 1.1

Doors: A118B, D136B, F113B, M121C

1	Continuous Hinge	CFM-SLF-HD1		PE	087100	
1	Removable Mullion	910KM		RU	087100	
1	Rim Exit Device, Exit Only	ED5200S EO M51	630	RU	087100	
1	IN100 Rim Exit	ED5200SN B PR9134ET-IN100 M51	613E	RU	281500	⚡
1	Mortise Housing	CR1040 CT_SD	630	RU	087100	
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
2	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
2	Conc Overhead Stop	6-X36	630	RF	087100	
2	Surface Closer	J7500 x mounting plate to suit application	689	NO	087100	
1	Threshold	252x3AFG Pemkote MSES25SS		PE	087100	
1	Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113	
2	Sweep	29326CNB TKSP		PE	087100	

Notes:

Doors normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 2.0

Doors: M101D

1	Continuous Hinge	CFM-SLF-HD1 x PT		PE	087100	
1	Electric Power Transfer	CEPT-C5E	630	SU	087100	⚡
1	IN220 Rim Exit	ED5200SN B PR9134ET-IN220 M51	630	RU	281500	⚡
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Conc Overhead Stop	6-X36	630	RF	087100	
1	Surface Closer	7500ST - pull side mount	689	NO	087100	
1	Threshold	252x3AFG Pemkote MSES25SS		PE	087100	
1	Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113	
1	Sweep	29326CNB TKSP		PE	087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	PoE-C (power transfer to exit device or lock)		MK	087100	⚡

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 2.1

Doors: B102A

1	Continuous Hinge	CFM-SLF-HD1		PE	087100	
1	IN100 Rim Exit	ED5200N B PR9134ET-IN100 M51	630	RU	281500	⚡
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Conc Overhead Stop	6-X36	630	RF	087100	

1	Surface Closer	7500ST - pull side mount	689	NO	087100
1	Threshold	252x3AFG Pemkote MSES25SS		PE	087100
1	Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113
1	Sweep	29326CNB TKSP		PE	087100

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 3.0

Doors: B101C, N120A

1	Continuous Hinge	CFM-SLF-HD1 x PT		PE	087100	
1	Electric Power Transfer	CEPT-C5E	630	SU	087100	⚡
1	IN220 Rim Exit	ED5200SN B PR9134ET-IN220 M51	630	RU	281500	⚡
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Conc Overhead Stop	6-X36	630	RF	087100	
1	Surface Closer	J7500 x mounting plate to suit application	689	NO	087100	
1	Threshold	252x3AFG Pemkote MSES25SS		PE	087100	
1	Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113	
1	Sweep	29326CNB TKSP		PE	087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	PoE-C (power transfer to exit device or lock)		MK	087100	⚡

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 4.0

Doors: F123B, N116B, N124B, N128B

1	Continuous Hinge	CFM-SLF-HD1		PE	087100	
1	IN100 Rim Exit	ED5200N B PR9134ET-IN100 M51	630	RU	281500	⚡
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Conc Overhead Stop	6-X36	630	RF	087100	
1	Surface Closer	J7500 x mounting plate to suit application	689	NO	087100	
1	Threshold	252x3AFG Pemkote MSES25SS		PE	087100	
1	Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113	
1	Sweep	29326CNB TKSP		PE	087100	

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 5.0

Doors: D117A, L121A

1	Continuous Hinge	CFM-SLF-HD1		PE	087100	
1	Fixed Aluminum Mullion	- Provided with section 084113		OT	084113	
1	Rim Exit Device, Nightlatch	ED5200S K157ET x LC M110 M51	630	RU	087100	
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Electric Strike	9700-LBM	630	HS	087100	⚡
1	SMART Pac Bridge Rectifier	2005M3		HS	087100	⚡
1	ElectroLynx Adaptor	2004M		HS	087100	⚡
1	Pull	RM201 Mtg-Type 12XHD	US32D-316	RO	087100	
1	Conc Overhead Stop	6-X36	630	RF	087100	
1	Automatic Opener	6021 / 6031 D x confirm head detail	689	NO	087100	⚡
1	Threshold	252x3AFG Pemkote MSES25SS		PE	087100	
1	Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113	
1	Sweep	29326CNB TKSP		PE	087100	

1	ElectroLynx Harness	QC-C1500P (power transfer or electric strike to junction box above)		MK	087100	⚡
1	Card Reader	- Provided by Security Contractor		OT	281300	⚡
2	Door Switch	505		NO	087100	⚡
1	Motion Sensor	- Provided by Security Contractor		OT	281300	⚡
1	Remote Release	- Provided by Security Contractor		OT	281300	
1	Intercom	- Provided by Security Contractor		OT	281300	
1	Door Switch	504		NO	087100	⚡
1	Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Notes:

Door to be on lock / unlock schedule per the buildings access control system.
Motion sensor to shunt door monitoring upon egress.
Activating actuator switch unlocks electric strike, if locked, and initiates automatic operator cycle.
Activating exterior actuator switch initiates cycle of automatic operator if the electric strike is unlocked.
Free egress at all times.
Fail-secure.

After hours - access by valid use of card reader outside / automatic operator will only operate if card reader is authorized first.

Set: 6.0

Doors: D117B, D117C, G109L, L121B, L121C, L121D, L121E

1	Continuous Hinge	CFM-SLF-HD1		PE	087100	
1	Fixed Aluminum Mullion	- Provided with section 084113		OT	084113	
1	Rim Exit Device, Exit Only	ED5200S EO M51	630	RU	087100	
1	Electric Strike	9700	630	HS	087100	⚡
1	SMART Pac Bridge Rectifier	2005M3		HS	087100	⚡
1	ElectroLynx Adaptor	2004M		HS	087100	⚡
1	Pull	RM201 Mtg-Type 12XHD	US32D-316	RO	087100	
1	Conc Overhead Stop	6-X36	630	RF	087100	
1	Surface Closer	J7500 x mounting plate to suit application	689	NO	087100	
1	Threshold	252x3AFG Pemkote MSES25SS		PE	087100	
1	ElectroLynx Harness	QC-C1500P (power transfer or electric strike to junction box above)		MK	087100	⚡
1	Door Position Switch	- Provided by Security Contractor		OT	281300	⚡
1	Power Supply	- Provided by Security Contractor		OT	281300	⚡

Notes:

Door to be on lock / unlock schedule per the buildings access control system.
Free egress at all times.

Fail-secure.

Set: 7.0

Doors: A116A, G101A

2	Continuous Hinge	CFM-SLF-HD1		PE	087100	
1	Removable Mullion	910KM		RU	087100	
1	Rim Exit Device, Exit Only	ED5200S EO M51	630	RU	087100	
1	Rim Exit Device, Nightlatch	ED5200S K157ET x LC M110 M51	630	RU	087100	
1	Mortise Housing	CR1040 CT_SD	630	RU	087100	
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
2	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Electric Strike	9700-LBM	630	HS	087100	⚡
1	Electric Strike	9700	630	HS	087100	⚡
2	SMART Pac Bridge Rectifier	2005M3		HS	087100	⚡
2	ElectroLynx Adaptor	2004M		HS	087100	⚡
2	Pull	RM201 Mtg-Type 12XHD	US32D-316	RO	087100	
2	Conc Overhead Stop	6-X36	630	RF	087100	
2	Surface Closer	J7500 x mounting plate to suit application	689	NO	087100	
1	Automatic Opener	6021 / 6031 D x confirm head detail	689	NO	087100	⚡
1	Threshold	252x3AFG Pemkote MSES25SS		PE	087100	
1	Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113	
2	Sweep	29326CNB TKSP		PE	087100	
2	ElectroLynx Harness	QC-C1500P (power transfer or electric strike to junction box above)		MK	087100	⚡
1	Card Reader	- Provided by Security Contractor		OT	281300	⚡
2	Door Switch	505		NO	087100	⚡
1	Motion Sensor	- Provided by Security Contractor		OT	281300	⚡
2	Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Notes:

Doors to be on lock / unlock schedule per the buildings access control system.
Motion sensor to shunt door monitoring upon egress.
Activating actuator switch unlocks electric strike, if locked, and initiates automatic operator cycle.
Activating exterior actuator switch initiates cycle of automatic operator if the electric strike is unlocked.
Free egress at all times.
Fail-secure.

After hours - access by valid use of card reader outside / automatic operator will only operate if card reader is authorized first.

Set: 8.0

Doors: G101B

2	Continuous Hinge	CFM-SLF-HD1 x PT		PE	087100	
2	Electric Power Transfer	EL-CEPT	630	SU	087100	⚡
1	Removable Mullion	910KM		RU	087100	
2	Rim Exit Device, Exit Only	ED5200S EO M51	630	RU	087100	
1	Mortise Housing	CR1040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
2	Electric Strike	9700	613E	HS	087100	⚡
2	SMART Pac Bridge Rectifier	2005M3		HS	087100	⚡
2	ElectroLynx Adaptor	2004M		HS	087100	⚡
2	Pull	RM201 Mtg-Type 12XHD	US32D-316	RO	087100	
2	Conc Overhead Stop	6-X36	630	RF	087100	
2	Surface Closer	J7500 x mounting plate to suit application	689	NO	087100	
1	Threshold	252x3AFG Pemkote MSES25SS		PE	087100	
1	Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113	
2	Sweep	29326CNB TKSP		PE	087100	
2	ElectroLynx Harness	QC-C1500P (power transfer or electric strike to junction box above)		MK	087100	⚡
2	ElectroLynx Harness	QC-C (power transfer to exit device rail)		MK	087100	⚡
2	Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Notes:

Doors to be on lock / unlock schedule per the buildings access control system.
Motion sensor to shunt door monitoring upon egress.
Free egress at all times.
Fail-secure.

Set: 9.0

Doors: A148A

1	Continuous Hinge	CFM-SLF-HD1		PE	087100	
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Conc Overhead Stop	6-X36	630	RF	087100	
1	Surface Closer	J7500 x mounting plate to suit application	689	NO	087100	
1	Threshold	252x3AFG Pemkote MSES25SS		PE	087100	

1	Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113
1	Sweep	29326CNB TKSP		PE	087100
1	Door Position Switch	- Provided by Security Contractor		OT	281300

Set: 10.0

Doors: P102B, P104B

2	Continuous Hinge	CFM-SLF-HD1		PE	087100
1	Flush Bolt	555 / 557	US26D	RO	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
2	Conc Overhead Stop	6-X36	630	RF	087100
1	Surface Closer	J7500 x mounting plate to suit application	689	NO	087100
1	Threshold	1715AK MSES25SS		PE	087100
1	Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113
2	Sweep	29326CNB TKSP		PE	087100
2	Door Position Switch	- Provided by Security Contractor		OT	281300

Set: 11.0

Doors: G201A

1	Continuous Hinge	CFM-SLF-HD1		PE	087100
1	Passage Latch	ML2010 PSA	626	RU	087100
1	Deadbolt	DL4112 CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Conc Overhead Stop	6-X36	630	RF	087100
1	Surface Closer	J7500 x mounting plate to suit application	689	NO	087100
1	Threshold	252x3AFG Pemkote MSES25SS		PE	087100
1	Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113
1	Sweep	29326CNB TKSP		PE	087100
1	Door Position Switch	- Provided by Security Contractor		OT	281300

Set: 12.0

Doors: D101C

1	Continuous Hinge	CFM-SLF-HD1		PE	087100

1	Rim Exit Device, Nightlatch	ED5200S N957ET M110 M51	630	RU	087100	
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Conc Overhead Stop	6-X36	630	RF	087100	
1	Surface Closer	7500ST - pull side mount	689	NO	087100	
1	Threshold	252x3AFG Pemkote MSES25SS		PE	087100	
1	Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113	
1	Sweep	29326CNB TKSP		PE	087100	
1	Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Set: 12.1

Doors: E101B

1	Continuous Hinge	CFM-SLF-HD1		PE	087100	
1	Fire Rated Rim Exit, Nightlatch	ED5200SA N957ET M110 M51	630	RU	087100	
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Conc Overhead Stop	6-X36	630	RF	087100	
1	Surface Closer	7500ST - pull side mount	689	NO	087100	
1	Threshold	252x3AFG Pemkote MSES25SS		PE	087100	
1	Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113	
1	Sweep	29326CNB TKSP		PE	087100	
1	Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Set: 13.0

Doors: A118C, AS02A, G119A

2	Continuous Hinge	CFM-SLF-HD1		PE	087100	
1	Removable Mullion	910KM		RU	087100	
2	Rim Exit Device, Exit Only	ED5200S EO M51	630	RU	087100	
1	Mortise Housing	CR1040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
2	Conc Overhead Stop	6-X36	630	RF	087100	
2	Surface Closer	J7500 x mounting plate to suit application	689	NO	087100	
1	Threshold	252x3AFG Pemkote MSES25SS		PE	087100	
1	Weatherstrip	- integral within construction of door and		OT	08 4113	

	frame assembly				
2 Sweep	29326CNB TKSP		PE	087100	
2 Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Set: 14.0

Doors: B101A, B101B

2 Continuous Hinge	CFM-SLF-HD1		PE	087100	
1 Fixed Aluminum Mullion	- Provided with section 084113		OT	084113	
2 Rim Exit Device, Exit Only	ED5200S EO M51	630	RU	087100	
2 Conc Overhead Stop	6-X36	630	RF	087100	
2 Surface Closer	J7500 x mounting plate to suit application	689	NO	087100	
1 Threshold	252x3AFG Pemkote MSES25SS		PE	087100	
1 Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113	
2 Sweep	29326CNB TKSP		PE	087100	
2 Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Set: 15.0

Doors: M101E

1 Continuous Hinge	CFM-SLF-HD1		PE	087100	
1 Rim Exit Device, Exit Only	ED5200S EO M51	630	RU	087100	
1 Conc Overhead Stop	6-X36	630	RF	087100	
1 Surface Closer	7500ST - pull side mount	689	NO	087100	
1 Threshold	252x3AFG Pemkote MSES25SS		PE	087100	
1 Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113	
1 Sweep	29326CNB TKSP		PE	087100	
1 Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Set: 16.0

Doors: AS01A, AS01B, E102B, E107B, F102C, F105B, G120A, H115B, H117C, H120C, H121A, H121B, J113B, K101A, K101B, K101D, L114C, L120B, L120C, M121A, M121B, N116D, N120B, N122B, N123B, N124D, N126B

1 Continuous Hinge	CFM-SLF-HD1		PE	087100	
1 Rim Exit Device, Exit Only	ED5200S EO M51	630	RU	087100	
1 Conc Overhead Stop	6-X36	630	RF	087100	
1 Surface Closer	J7500 x mounting plate to suit application	689	NO	087100	
1 Threshold	252x3AFG Pemkote MSES25SS		PE	087100	

1	Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113	
1	Sweep	29326CNB TKSP		PE	087100	
1	Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Set: 17.0

Doors: D116A, L121F

1	Continuous Hinge	CFM-SLF-HD1		PE	087100	
1	Fixed Aluminum Mullion	- Provided with section 084113		OT	084113	
1	Rim Exit Device, Nightlatch	ED5200S K157ET x LC M110 M51	630	RU	087100	
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Electric Strike	9700-LBM	630	HS	087100	⚡
1	SMART Pac Bridge Rectifier	2005M3		HS	087100	⚡
1	ElectroLynx Adaptor	2004M		HS	087100	⚡
1	Pull	RM201 Mtg-Type 12XHD	US32D-316	RO	087100	
1	Conc Overhead Stop	6-X36	630	RF	087100	
1	Automatic Opener	6021 / 6031 D x confirm head detail	689	NO	087100	⚡
1	Weatherstrip	- integral within construction of door and frame assembly		OT	08 4113	
1	ElectroLynx Harness	QC-C1500P (power transfer or electric strike to junction box above)		MK	087100	⚡
1	Card Reader	- Provided by Security Contractor		OT	281300	⚡
2	Door Switch	505		NO	087100	⚡
1	Motion Sensor	- Provided by Security Contractor		OT	281300	⚡
1	Remote Release	- Provided by Security Contractor		OT	281300	
1	Intercom	- Provided by Security Contractor		OT	281300	
1	Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Notes:

Door to be on lock / unlock schedule per the buildings access control system.
Motion sensor to shunt door monitoring upon egress.
Activating actuator switch unlocks electric strike, if locked, and initiates automatic operator cycle.
Activating exterior actuator switch initiates cycle of automatic operator if the electric strike is unlocked.
Free egress at all times.
Fail-secure.

After hours - access by valid use of card reader outside / automatic operator will only operate if card reader is authorized first.

Set: 18.0

Doors: D116B, D116C, L121G, L121H, L121J, L121K

1	Continuous Hinge	CFM-SLF-HD1		PE	087100	
1	Fixed Aluminum Mullion	- Provided with section 084113		OT	084113	
1	Rim Exit Device, Exit Only	ED5200S EO M51	630	RU	087100	
1	Electric Strike	9700	630	HS	087100	⚡
1	SMART Pac Bridge Rectifier	2005M3		HS	087100	⚡
1	ElectroLynx Adaptor	2004M		HS	087100	⚡
1	Pull	RM201 Mtg-Type 12XHD	US32D-316	RO	087100	
1	Conc Overhead Stop	6-X36	630	RF	087100	
1	Surface Closer	J7500 x mounting plate to suit application	689	NO	087100	
1	ElectroLynx Harness	QC-C1500P (power transfer or electric strike to junction box above)		MK	087100	⚡
1	Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Notes:

Door to be on lock / unlock schedule per the buildings access control system.
Free egress at all times.
Fail-secure.

Set: 19.0

Doors: F102A

1	Continuous Hinge	CFM-SLF-HD1 x PT		PE	087100	
1	Electric Power Transfer	CEPT-C5E	630	SU	087100	⚡
1	IN220 Rim Exit	ED5200N B PR9134ET-IN220 M51	630	RU	281500	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Wall Stop	406 / 409	US32D	RO	087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	PoE-C (power transfer to exit device or lock)		MK	087100	⚡

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 20.0

Doors: G101D

2	Continuous Hinge	CFM-SLF-HD1		PE	087100
2	Dummy Bar, Exit Only	ED5000DB EO	630	RU	087100
2	Pull	RM201 Mtg-Type 12XHD	US32D-316	RO	087100
2	Conc Overhead Stop	6-X36	630	RF	087100
2	Surface Closer	J7500 x mounting plate to suit application	689	NO	087100

Set: 21.0

Doors: G101C, G103A

2	Continuous Hinge	CFM-SLF-HD1		PE	087100
2	Dummy Bar, Exit Only	ED5000DB EO	630	RU	087100
2	Pull	RM201 Mtg-Type 12XHD	US32D-316	RO	087100
2	Conc Overhead Stop	6-X36	630	RF	087100
1	Surface Closer	J7500 x mounting plate to suit application	689	NO	087100
1	Automatic Opener	6021 / 6031 D x confirm head detail	689	NO	087100
1	Door Switch	505		NO	087100
1	Door Switch	504		NO	087100

Notes:

Automatic operator by actuator.

Set: 22.0

Doors: AS02C

1	Continuous Hinge	CFM-SLF-HD1		PE	087100
1	Rim Exit Device, Exit Only	ED5200 EO M51	630	RU	087100
1	Conc Overhead Stop	6-X36	630	RF	087100
1	Surface Closer	J7500 x mounting plate to suit application	689	NO	087100

Set: 23.0

Doors: D118A, D121A, D121B

1	Continuous Hinge	CFM-SLF-HD1		PE	087100
1	Communicating Lock	CLX3362 PZD CT_SD	626	RU	087100
2	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Electric Strike	1500C	630	HS	087100
1	SMART Pac Bridge Rectifier	2005M3		HS	087100

1	ElectroLynx Adaptor	2004M		HS	087100	⚡
1	Conc Overhead Stop	6-X36	630	RF	087100	
1	Surface Closer	7500ST - pull side mount	689	NO	087100	
1	ElectroLynx Harness	QC-C1500P (power transfer or electric strike to junction box above)		MK	087100	⚡
1	Card Reader	- Provided by Security Contractor		OT	281300	⚡
1	Remote Release	- Provided by Security Contractor		OT	281300	

Notes:

Daytime operation:

Office side of opening locked.
Remote push button at reception unlocks electric strike allowing ingress to school corridor.
Free ingress from school corridor to office.
Fail-secure.

After hours operation:

Corridor side locked by key.
Presentation of valid credential at card reader unlocks electric strike allowing ingress to office, egress to school.
Fail-secure.

Set: 24.0

Doors: D118B

1	Continuous Hinge	CFM-SLF-HD1		PE	087100	
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Electric Strike	1500C-LM	630	HS	087100	⚡
1	SMART Pac Bridge Rectifier	2005M3		HS	087100	⚡
1	ElectroLynx Adaptor	2004M		HS	087100	⚡
1	Conc Overhead Stop	6-X36	630	RF	087100	
1	Automatic Opener	6021 / 6031 D x confirm head detail	689	NO	087100	⚡
1	ElectroLynx Harness	QC-C1500P (power transfer or electric strike to junction box above)		MK	087100	⚡
1	Card Reader	- Provided by Security Contractor		OT	281300	⚡
2	Door Switch	505		NO	087100	⚡
1	Remote Release	- Provided by Security Contractor		OT	281300	

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader, or remote pushbutton at reception releases electric strike allowing ingress.

Free egress at all times.
Fail-secure.

Automatic operator by actuator.

Set: 25.0

Doors: N124A

1	Hinge, Full Mortise, Hvy Wt	T4A3786 PoE	US26D	MK	087100	⚡
5	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Removable Mullion	910KM		RU	087100	
1	Rim Exit Device, Exit Only	ED5200 EO M51	630	RU	087100	
1	IN220 Rim Exit	ED5200N B PR9134ET-IN220 M51	630	RU	281500	⚡
1	Mortise Housing	CR1040 CT_SD	630	RU	087100	
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
2	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
2	Surface Closer	PR7500	689	NO	087100	
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
2	Wall Stop	406 / 409	US32D	RO	087100	
2	Silencer	608 / 609		RO	087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	PoE-C (power transfer to exit device or lock)		MK	087100	⚡

Notes:

Doors to be normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Free egress at all times.
Fail-secure.

Set: 26.0

Doors: A118A

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Removable Mullion	910KM		RU	087100	
1	Rim Exit Device, Exit Only	ED5200 EO M51	630	RU	087100	
1	IN100 Rim Exit	ED5200N B PR9134ET-IN100 M51	630	RU	281500	⚡
1	Mortise Housing	CR1040 CT_SD	630	RU	087100	
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
2	Surface Closer	PR7500	689	NO	087100	

2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
2	Wall Stop	406 / 409	US32D	RO	087100	
2	Silencer	608 / 609		RO	087100	

Notes:

Doors normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 26.1

Doors: F113A, F123A, M125D

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Mullion	CR907BKM / CR908BKM		RU	087100	
1	IN100 Fire Rated Rim Exit	ED5200AN B PR9134ET-IN100	630	RU	281500	⚡
1	Exit Device (rim, exit only)	ED5200A EO M110	630	RU	087100	
1	Mortise Housing	CR1040 CT_SD	630	RU	087100	
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
2	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
2	Surface Closer	PR7500	689	NO	087100	
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
2	Wall Stop	406 / 409	US32D	RO	087100	
1	Gasketing	S88BL		PE	087100	

Notes:

Doors normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 27.0

Doors: AS04A, M125B, M125C

1	Hinge, Full Mortise, Hvy Wt	T4A3786 PoE	US26D	MK	087100	⚡
5	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Fixed Hollow Metal Mullion	- Provided with section 081113		CR	081113	
1	IN220 Fire Rated Rim Exit	ED5200AN B PR9134ET-IN220	630	RU	281500	⚡
1	Exit Device (rim, exit only)	ED5200A EO M110	630	RU	087100	

1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
2	Surface Closer	PR7500	689	NO	087100	
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
2	Wall Stop	406 / 409	US32D	RO	087100	
1	Gasketing	S88BL		PE	087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	PoE-C (power transfer to exit device or lock)		MK	087100	⚡
1	Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Notes:

Doors normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 28.0

Doors: A121A

1	Hinge, Full Mortise, Hvy Wt	T4A3786 PoE	US26D	MK	087100	⚡
5	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Mullion	CR907BKM / CR908BKM		RU	087100	
1	IN220 Fire Rated Rim Exit	ED5200AN B PR9134ET-IN220	630	RU	281500	⚡
1	Exit Device (rim, exit only)	ED5200A EO M110	630	RU	087100	
1	Mortise Housing	CR1040 CT_SD	630	RU	087100	
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
2	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
2	Surface Closer	PR7500	689	NO	087100	
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
2	Wall Stop	406 / 409	US32D	RO	087100	
1	Gasketing	S88BL		PE	087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	PoE-C (power transfer to exit device or lock)		MK	087100	⚡
1	Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Notes:

Doors normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 28.1

Doors: B108A, B109B

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Mullion	CR907BKM / CR908BKM		RU	087100	
1	IN100 Fire Rated Rim Exit	ED5200AN B PR9134ET-IN100	630	RU	281500	⚡
1	Exit Device (rim, exit only)	ED5200A EO M110	630	RU	087100	
1	Mortise Housing	CR1040 CT_SD	630	RU	087100	
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
2	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
2	Surface Closer	PR7500	689	NO	087100	
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
2	Wall Stop	406 / 409	US32D	RO	087100	
1	Gasketing	S88BL		PE	087100	

Notes:

Doors normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 29.0

Doors: L109B, N123C

1	Hinge, Full Mortise, Hvy Wt	T4A3786 PoE	US26D	MK	087100	⚡
2	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	IN220 Rim Exit	ED5200N B PR9134ET-IN220 M51	630	RU	281500	⚡
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Door Stop	487	US26D	RO	087100	
3	Silencer	608 / 609		RO	087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	PoE-C (power transfer to exit device or		MK	087100	⚡

		lock)				

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 30.0

Doors: P119A

1	Hinge, Full Mortise, Hvy Wt	T4A3786 PoE	US26D	MK	087100	⚡
2	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	IN220 Rim Exit	ED5200N B PR9134ET-IN220 M51	630	RU	281500	⚡
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Surface Closer	PR7500	689	NO	087100	
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Door Stop	487	US26D	RO	087100	
3	Silencer	608 / 609		RO	087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	PoE-C (power transfer to exit device or lock)		MK	087100	⚡

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 31.0

Doors: E102A, E107A, F102B, L109A, N123A

1	Hinge, Full Mortise, Hvy Wt	T4A3786 PoE	US26D	MK	087100	⚡
2	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	IN220 Fire Rated Rim Exit	ED5200AN B PR9134ET-IN220	630	RU	281500	⚡
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key	.626	SC	087100	

		system)				
1	Surface Closer	PR7500	689	NO	087100	
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Door Stop	487	US26D	RO	087100	
1	Gasketing	S88BL		PE	087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK	087100	
1	ElectroLynx Harness	PoE-C (power transfer to exit device or lock)		MK	087100	

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 32.0

Doors: G107A, G107B

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Removable Mullion	910KM		RU	087100	
2	IN100 Rim Exit	ED5200N B PR9134ET-IN100	630	RU	281500	
1	Mortise Housing	CR1040 CT_SD	630	RU	087100	
2	Rim Housing	CR3040 CT_SD	630	RU	087100	
3	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Surface Closer	PR7500	689	NO	087100	
1	Surface Closer	CPS7500	613E	NO	087100	
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Wall Stop	406 / 409	US32D	RO	087100	
2	Silencer	608 / 609		RO	087100	

Notes:

Doors normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 33.0

Doors: M109B

2	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	IN100 Rim Exit	ED5200N B PR9134ET-IN100	630	RU	281500	⚡
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Door Stop	487	US26D	RO	087100	
3	Silencer	608 / 609		RO	087100	

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 33.1

Doors: G109B, G109C

2	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	IN100 Rim Exit	ED5200N B PR9134ET-IN100	630	RU	281500	⚡
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Surface Closer	PR7500	689	NO	087100	
1	Door Stop	487	US26D	RO	087100	
3	Silencer	608 / 609		RO	087100	

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 34.0

Doors: C104A, C106A, C108A, C110A, C111A, D124B, H106B, H114A, H115A, H120A, H120B, H122A, L114A, N106A, N106B, N114E

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
~~1~~	~~IN220 Fire Rated Rim Exit~~	~~ED5200AN B PR9134ET-IN220~~	~~630~~	~~RU~~	~~281500~~	~~⚡~~
1	IN100 Fire Rated Rim Exit	ED5200AN B PR9134ET-IN100	630	RU	281500	⚡
1	Rim Housing	CR3040 CT_SD	630	RU	087100	

1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	PR7500	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Door Stop	487	US26D	RO	087100
1	Gasketing	S88BL		PE	087100

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 34.1

Doors: H106A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	IN100 Fire Rated Rim Exit	ED5200AN B PR9134ET-IN100	630	RU	281500	⚡
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Surface Closer	CPS7500	689	NO	087100	
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Gasketing	S88BL		PE	087100	

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric exit device trim allowing ingress.
Exit device equipped with request to exit switch in rail to shunt monitoring at egress.
Exit device equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 35.0

Doors: B113A

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Electric Power Transfer	EL-CEPT	630	SU	087100	⚡
1	Surface Vert Rod Exit, Exit Only	ED5470 EO M55 M110 M51	630	RU	087100	
1	Surface Vert Rod Exit, Nightlatch	ED5470 N957ET M55 M110 MELR M51	630	RU	087100	⚡
1	Rim Housing	CR3040 CT_SD	630	RU	087100	

1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
2	Surface Closer	PR7500	689	NO	087100	
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
2	Silencer	608 / 609		RO	087100	
~~1~~	~~ElectroLynx Harness~~	~~QC-C1500P (power transfer or electric strike to junction box above)~~		~~MK~~	~~087100~~	⚡
~~1~~	~~ElectroLynx Harness~~	~~QC-C (power transfer to exit device rail)~~		~~MK~~	~~087100~~	⚡
~~1~~	~~Card Reader~~	~~- Provided by Security Contractor~~		~~OT~~	~~281300~~	⚡
~~1~~	~~Power Supply~~	~~- Provided by Security Contractor~~		~~OT~~	~~281300~~	⚡

Notes:

Doors to be normally held open on door / wall mounted magnetic hold open devices.
Magnetic hold open devices to release at activation of fire alarm.

Presentation of valid credential at card reader retracts exit device latch bolt allowing ingress.
Free egress at all times.
Fail-secure.

Set: 36.0

Doors: D101B, H102A, M101A, M101B

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Electric Power Transfer	EL-CEPT	630	SU	087100	⚡
1	Fire Rated Surf Vert Rod, Exit Only	ED5470B EO M55 M110	630	RU	087100	
1	Fire Rated Surf Vert Rod, Nightlatch	ED5470B N957ET M55 M110 MELR	630	RU	087100	⚡
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
2	Surface Closer	PR7500	689	NO	087100	
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
2	Electromagnetic Holder	994M	689	RF	087100	⚡
1	Gasketing	S88BL		PE	087100	
1	Astragal	S772C		PE	087100	
1	ElectroLynx Harness	QC-C1500P (power transfer or electric strike to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	QC-C (power transfer to exit device rail)		MK	087100	⚡
1	Card Reader	- Provided by Security Contractor		OT	281300	⚡
1	Power Supply	- Provided by Security Contractor		OT	281300	⚡

Notes:

Doors to be normally held open on door / wall mounted magnetic hold open devices.
Magnetic hold open devices to release at activation of fire alarm.

Presentation of valid credential at card reader retracts exit device latch bolt allowing ingress.
Free egress at all times.
Fail-secure.

Set: 37.0

Doors: F112A

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Fixed Hollow Metal Mullion	- Provided with section 081113		CR	081113	
1	Fire Rated Rim Exit, Nightlatch	ED5200A N957ET M110	630	RU	087100	
1	Exit Device (rim, exit only)	ED5200A EO M110	630	RU	087100	
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Electric Strike	9700	630	HS	087100	⚡
1	SMART Pac Bridge Rectifier	2005M3		HS	087100	⚡
1	ElectroLynx Adaptor	2004M		HS	087100	⚡
2	Surface Closer	CPS7500	689	NO	087100	
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Gasketing	S88BL		PE	087100	
1	Astragal	S772C		PE	087100	
1	ElectroLynx Harness	QC-C1500P (power transfer or electric strike to junction box above)		MK	087100	⚡
1	Card Reader	- Provided by Security Contractor		OT	281300	⚡
1	Power Supply	- Provided by Security Contractor		OT	281300	⚡

Notes:

Doors normally closed and locked.
Presentation of valid credential at card reader unlocks electric strike allowing ingress.
Free egress at all times.
Fail-secure.

Set: 38.0

Doors: E111A, M113A

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
2	Fire Rated Surf Vert Rod, Exit Only	ED5470B EO M55 M110	630	RU	087100	
2	Surface Closer	PR7500	689	NO	087100	

2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
2	Electromagnetic Holder	994M	689	RF	087100	⚡
1	Gasketing	S88BL		PE	087100	
1	Astragal	S772C		PE	087100	
2	Silencer	608 / 609		RO	087100	

Notes:

Doors to be normally held open on door / wall mounted magnetic hold open devices.
Magnetic hold open devices to release at activation of fire alarm.

Set: 39.0

Doors: M125F, M125H

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Exit Device (rim, exit only)	ED5200A EO M110	630	RU	087100	
1	Surface Closer	CPS7500	689	NO	087100	
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Gasketing	S88BL		PE	087100	
1	Astragal	S772C		PE	087100	

Set: 39.1

Doors: M113B

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Exit Device (rim, exit only)	ED5200A EO M110	630	RU	087100	
1	Surface Closer	PR7500	689	NO	087100	
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Electromagnetic Holder	994M	689	RF	087100	⚡
1	Gasketing	S88BL		PE	087100	

Notes:

Door to be normally held open on door / wall mounted magnetic hold open device.
Magnetic hold open device to release at activation of fire alarm.

Set: 40.0

Doors: G107D

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Removable Mullion	910KM		RU	087100
2	Rim Exit Device, Classroom	ED5200 N955ET M110 M51	630	RU	087100
1	Mortise Housing	CR1040 CT_SD	630	RU	087100

2	Rim Housing	CR3040 CT_SD	630	RU	087100
3	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
2	Surface Closer	PR7500	689	NO	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	406 / 409	US32D	RO	087100
2	Silencer	608 / 609		RO	087100

Set: 41.0

Doors: K101C, L153A

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100
2	Concealed Vert Rod Exit, Classroom	ED5860 N955ET M55 M110 M51	630	RU	087100
2	Rim Housing	CR3040 CT_SD	630	RU	087100
2	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
2	Surface Closer	PR7500	689	NO	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
2	Electromagnetic Holder	994M	689	RF	087100
2	Silencer	608 / 609		RO	087100

Notes:

Doors to be normally held open on door / wall mounted magnetic hold open devices.
Magnetic hold open devices to release at activation of fire alarm.

Set: 42.0

Doors: G107C

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Removable Mullion	910KM		RU	087100
2	Rim Exit Device, Classroom	ED5200 N955ET M110 M51	630	RU	087100
1	Mortise Housing	CR1040 CT_SD	630	RU	087100
2	Rim Housing	CR3040 CT_SD	630	RU	087100
3	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	PR7500	689	NO	087100
1	Surface Closer	CPS7500	689	NO	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	406 / 409	US32D	RO	087100
2	Silencer	608 / 609		RO	087100

Set: 43.0

Doors: M125E, M125G

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Mullion	CR907BKM / CR908BKM		RU	087100
2	Fire Rated Rim Exit, Classroom	ED5200A N955ET M110	630	RU	087100
1	Mortise Housing	CR1040 CT_SD	630	RU	087100
2	Rim Housing	CR3040 CT_SD	630	RU	087100
3	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
2	Surface Closer	CPS7500	689	NO	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Gasketing	S88BL		PE	087100
1	Astragal	S772C		PE	087100

Set: 44.0

Doors: N101A

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100
2	Fire Rated Conc Vert Rod, Classroom	ED5860B N955ET M55 M110	630	RU	087100
2	Rim Housing	CR3040 CT_SD	630	RU	087100
2	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
2	Surface Closer	PR7500	689	NO	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
2	Electromagnetic Holder	994M	689	RF	087100
1	Gasketing	S88BL		PE	087100
1	Astragal	S772C		PE	087100

Notes:

Doors to be normally held open on door / wall mounted magnetic hold open devices.
Magnetic hold open devices to release at activation of fire alarm.

Set: 45.0

Doors: G109A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Rim Exit Device, Classroom	ED5200 N955ET M110 M51	630	RU	087100
1	Rim Housing	CR3040 CT_SD	630	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	CPS7500	613E	NO	087100

1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
3	Silencer	608 / 609		RO	087100	

Set: 46.0

Doors: M125J

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Fire Rated Rim Exit, Classroom	ED5200A N955ET M110	630	RU	087100	
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Surface Closer	PR7500	689	NO	087100	
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Wall Stop	406 / 409	US32D	RO	087100	
1	Gasketing	S88BL		PE	087100	

Set: 47.0

Doors: N101B

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
2	Concealed Vert Rod Exit, Passage	ED5860 N910ET M55 M110 M51	630	RU	087100	
2	Surface Closer	PR7500	689	NO	087100	
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
2	Electromagnetic Holder	994M	689	RF	087100	⚡
2	Silencer	608 / 609		RO	087100	

Notes:

Doors to be normally held open on door / wall mounted magnetic hold open devices.
Magnetic hold open devices to release at activation of fire alarm.

Set: 50.0

Doors: E112A, E113A, E115A, K102A, K102B, K103A, K104A, K105A, K106A, K107A, K108A, K109A, K110A, P107B

1	Hinge, Full Mortise, Hvy Wt	T4A3786 PoE	US26D	MK	087100	⚡
2	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Access Control Mort Lock	IN220-ML20234 B PSA CT_SD	626	RU	281500	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Door Stop	487	US26D	RO	087100	
3	Silencer	608 / 609		RO	087100	

1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK 087100	
1	ElectroLynx Harness	PoE-C (power transfer to exit device or lock)		MK 087100	

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 51.0

1	Hinge, Full Mortise, Hvy Wt	T4A3786 PoE	US26D	MK 087100	
2	Hinge (heavy weight)	T4A3786	US26D	MK 087100	
1	Access Control Mort Lock	IN220-ML20234 B PSA CT_SD	626	RU 281500	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC 087100	
1	Conc Overhead Stop	1-X36	630	RF 087100	
3	Silencer	608 / 609		RO 087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK 087100	
1	ElectroLynx Harness	PoE-C (power transfer to exit device or lock)		MK 087100	

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 53.0

Doors: B111A, G104A, K111A, K116A, L152B

1	Hinge, Full Mortise, Hvy Wt	T4A3786 PoE	US26D	MK 087100	
2	Hinge (heavy weight)	T4A3786	US26D	MK 087100	
1	Access Control Mort Lock	IN220-ML20234 B PSA CT_SD	626	RU 281500	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC 087100	

1	Surface Closer	7500 - pull side mount	689	NO	087100	
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Wall Stop	406 / 409	US32D	RO	087100	
3	Silencer	608 / 609		RO	087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	PoE-C (power transfer to exit device or lock)		MK	087100	⚡

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 54.0

Doors: L122C

1	Hinge, Full Mortise, Hvy Wt	T4A3786 PoE	US26D	MK	087100	⚡
2	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Access Control Mort Lock	IN220-ML20234 B PSA CT_SD	626	RU	281500	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Surface Closer	7500 - pull side mount	689	NO	087100	
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Wall Stop	406 / 409	US32D	RO	087100	
3	Silencer	608 / 609		RO	087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	PoE-C (power transfer to exit device or lock)		MK	087100	⚡
1	Remote Release	- Provided by Security Contractor		OT	281300	

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader or remote release at reception unlocks electric lock allowing ingress.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 55.0

Doors: K114A

2	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Hinge, Full Mortise, Hvy Wt	T4A3786 QC12	US26D	MK	087100	⚡
1	Fail Secure Lock	ML20608 x NAC-SEC PSA PHR V21 CT_SD	626	RU	087100	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Surface Closer	7500 - pull side mount	689	NO	087100	
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Wall Stop	406 / 409	US32D	RO	087100	
3	Silencer	608 / 609		RO	087100	
1	ElectroLynx Harness	QC-C1500P (power transfer or electric strike to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	QC-C (power transfer to lock or electric strike location)		MK	087100	⚡
1	Card Reader	- Provided by Security Contractor		OT	281300	⚡
1	Power Supply	- Provided by Security Contractor		OT	281300	⚡

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Engaging deadbolt changes occupancy indicator and disables card reader.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 56.0

Doors: L135A

1	Hinge, Full Mortise, Hvy Wt	T4A3786 PoE	US26D	MK	087100	⚡
2	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Access Control Mort Lock	IN220-ML20234 B PSA CT_SD	626	RU	281500	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Surface Closer	PR7500	689	NO	087100	
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Wall Stop	406 / 409	US32D	RO	087100	
3	Silencer	608 / 609		RO	087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	PoE-C (power transfer to exit device or		MK	087100	⚡

		lock)			

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 58.0

Doors: L122B

1	Hinge, Full Mortise, Hvy Wt	T4A3786 PoE	US26D	MK	087100	⚡
2	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Access Control Mort Lock	IN220-ML20234 B PSA CT_SD	626	RU	281500	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Surface Closer	CPS7500	689	NO	087100	
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
3	Silencer	608 / 609		RO	087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	PoE-C (power transfer to exit device or lock)		MK	087100	⚡
1	Remote Release	- Provided by Security Contractor		OT	281300	

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader or remote release at reception unlocks electric lock allowing ingress.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 59.0

Doors: E106A, E110A

2	Hinge (heavy weight)	T4A3786	US26D	MK	087100

1	Hinge, Full Mortise, Hvy Wt	T4A3786 QC12	US26D	MK	087100	⚡
1	Fail Secure Lock	ML20608 x NAC-SEC PSA PHR V21 CT_SD	626	RU	087100	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Surface Closer	CPS7500	689	NO	087100	
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
3	Silencer	608 / 609		RO	087100	
1	ElectroLynx Harness	QC-C1500P (power transfer or electric strike to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	QC-C (power transfer to lock or electric strike location)		MK	087100	⚡
1	Card Reader	- Provided by Security Contractor		OT	281300	⚡

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Engaging deadbolt changes occupancy indicator and disables card reader.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 59.1

Doors: C114A

2	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Hinge, Full Mortise, Hvy Wt	T4A3786 QC12	US26D	MK	087100	⚡
1	Fail Secure Lock	ML20608 x NAC-SEC PSA PHR V21 CT_SD	626	RU	087100	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Surface Closer	CPS7500	689	NO	087100	
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Gasketing	S88BL		PE	087100	
1	ElectroLynx Harness	QC-C1500P (power transfer or electric strike to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	QC-C (power transfer to lock or electric strike location)		MK	087100	⚡
1	Card Reader	- Provided by Security Contractor		OT	281300	⚡

Notes:

Door normally closed and locked.

Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Engaging deadbolt changes occupancy indicator and disables card reader.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 60.0

Doors: D136A, P120A

1	Hinge, Full Mortise, Hvy Wt	T4A3786 PoE	US26D	MK	087100	⚡
2	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Access Control Mort Lock	IN220-ML20234 B PSA CT_SD	626	RU	281500	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Surface Closer	7500 - pull side mount	689	NO	087100	
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Wall Stop	406 / 409	US32D	RO	087100	
1	Gasketing	S88BL		PE	087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	PoE-C (power transfer to exit device or lock)		MK	087100	⚡

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 61.0

Doors: B104A, B105A, H111A, J105A, L117A, N122A, P112A, P116A, P122A

1	Hinge, Full Mortise, Hvy Wt	T4A3786 PoE	US26D	MK	087100	⚡
2	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Access Control Mort Lock	IN220-ML20234 B PSA CT_SD	626	RU	281500	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Surface Closer	PR7500	689	NO	087100	

1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Wall Stop	406 / 409	US32D	RO	087100	
1	Gasketing	S88BL		PE	087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	PoE-C (power transfer to exit device or lock)		MK	087100	⚡

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 61.1

Doors: J113A

1	Hinge, Full Mortise, Hvy Wt	T4A3786 PoE	US26D	MK	087100	⚡
2	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Access Control Mort Lock	IN220-ML20234 B PSA CT_SD	626	RU	281500	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Surface Closer	CPS7500	689	NO	087100	
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Gasketing	S88BL		PE	087100	
1	ElectroLynx Harness	PoE-C1500P (power transfer to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	PoE-C (power transfer to exit device or lock)		MK	087100	⚡

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 62.1

Doors: N111A

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Flush Bolt	2845 / 2945	US26D	RO	087100

1	Dust Proof Strike	570	US26D	RO	087100	
1	Access Control Mort Lock	IN100-ML20234 B PSA CT_SD	626	RU	281500	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Coordinator	2672	US28	RO	087100	
1	Filler Bar	FB-1 / FB-2	US28	RO	087100	
2	Mounting Bracket	2601AB / 2601C	US28	RO	087100	
2	Surface Closer	PR7500	689	NO	087100	
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
2	Wall Stop	406 / 409	US32D	RO	087100	
1	Gasketing	S88BL		PE	087100	

Notes:

Doors normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 62.2

Doors: N128A

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Flush Bolt	2845 / 2945	US26D	RO	087100	
1	Dust Proof Strike	570	US26D	RO	087100	
1	Access Control Mort Lock	IN100-ML20234 B PSA CT_SD	626	RU	281500	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Coordinator	2672	US28	RO	087100	
1	Filler Bar	FB-1 / FB-2	US28	RO	087100	
2	Mounting Bracket	2601AB / 2601C	US28	RO	087100	
2	Surface Closer	CPS7500	689	NO	087100	
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Gasketing	S88BL		PE	087100	

Notes:

Doors normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 63.0

Doors: D111A

3	Hinge (heavy weight)	T4A3786	US26D	MK 087100	
1	Access Control Mort Lock	IN100-ML20234 B PSA CT_SD	626	RU 281500	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC 087100	
1	Door Stop	487	US26D	RO 087100	
3	Silencer	608 / 609		RO 087100	

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 64.0

Doors: D112A, D113A

3	Hinge (heavy weight)	T4A3786	US26D	MK 087100	
1	Access Control Mort Lock	IN100-ML20234 B PSA CT_SD	626	RU 281500	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC 087100	
1	Surf Overhead Stop	9-X36	652	RF 087100	
3	Silencer	608 / 609		RO 087100	

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 64.1

Doors: M103A, M118A, M130A

3	Hinge (heavy weight)	T4A3786	US26D	MK 087100	
1	Access Control Mort Lock	IN100-ML20234 B PSA CT_SD	626	RU 281500	⚡
1	Cylinder	80-037 (match Owner's exisitng key	.626	SC 087100	

	system)				
1 Surface Closer	7500 - pull side mount	689	NO	087100	
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
3 Silencer	608 / 609		RO	087100	

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 64.2

Doors: G108A, M108B

3 Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1 Access Control Mort Lock	IN100-ML20234 B PSA CT_SD	626	RU	281500	⚡
1 Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1 Surface Closer	PR7500	689	NO	087100	
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
3 Silencer	608 / 609		RO	087100	

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 64.4

Doors: B115A, C105C, C109A, C112A, D104A, F106A, F106B, H108A, H113A, H118A, J103A, J114A, M108A, M109A, N102A, P103A, P104A

3 Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1 Access Control Mort Lock	IN100-ML20234 B PSA CT_SD	626	RU	281500	⚡
1 Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1 Surface Closer	7500 - pull side mount	689	NO	087100	
1 Door Stop	487	US26D	RO	087100	
1 Gasketing	S88BL		PE	087100	

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 64.5

Doors: A126A, A135A, B105B, B106A, B114A, B116A, B117A, B118A, C101A, C102A, C115A, C116A, D107A, D108A, D109A, F103A, F105A, H110A, H116B, N104A, N104B

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Access Control Mort Lock	IN100-ML20234 B PSA CT_SD	626	RU	281500	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Surface Closer	PR7500	689	NO	087100	
1	Door Stop	487	US26D	RO	087100	
1	Gasketing	S88BL		PE	087100	

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.
Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 64.6

Doors: C108B, J117A, P106A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Access Control Mort Lock	IN100-ML20234 B PSA CT_SD	626	RU	281500	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Surf Overhead Stop	10-X36	630	RF	087100	
1	Surface Closer	7500 - pull side mount	689	NO	087100	
1	Gasketing	S88BL		PE	087100	

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader unlocks electric lock allowing ingress.

Electric lock equipped with request to exit switch in lever to shunt monitoring at egress.
Electric lock equipped with door position switch to monitor position of door.
Free egress at all times.
Fail-secure.

Set: 65.0

Doors: D128A, L134A, L150A, N125A

3	Hinge, Full Mortise	TA2714	US26D	MK	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	7500 - pull side mount	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	406 / 409	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Set: 66.0

Doors: D103A, D119A, D120A, D126A, D127A, D129A, D130A, D131A, D133A, D137A, F127A, L123A, L123B, L124A, L129A, L131A, L137A, L138A, L142A, L143A, L144A, L146A, L148A, M119A, M120A, N127A

3	Hinge, Full Mortise	TA2714	US26D	MK	087100
1	Entrance Lock	ML2053 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Wall Stop	406 / 409	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Set: 67.0

Doors: F122A, P113A, P118A

3	Hinge, Full Mortise	TA2714	US26D	MK	087100
1	Entrance Lock	ML2053 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Conc Overhead Stop	1-X36	630	RF	087100
3	Silencer	608 / 609		RO	087100

Set: 68.0

Doors: D122A, D134A, D135A, L126A, L133A, L149A

3	Hinge, Full Mortise	TA2714	US26D	MK	087100
1	Classroom Lock	ML2055 PSA CT_SD	626	RU	087100

1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Wall Stop	406 / 409	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Set: 69.0

Doors: C113A, D123A, D125A, F107A, L147A

3	Hinge, Full Mortise	TA2714	US26D	MK	087100
1	Privacy Lock	ML2060 PSA M34 V21	626	RU	087100
1	Surface Closer	7500 - pull side mount	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	406 / 409	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Set: 70.0

Doors: D105A

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Flush Bolt	2805 / 2905	US32D	RO	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
2	Wall Stop	406 / 409	US32D	RO	087100
2	Silencer	608 / 609		RO	087100

Set: 71.0

Doors: N126A

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Flush Bolt	2845 / 2945	US26D	RO	087100
1	Dust Proof Strike	570	US26D	RO	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	7500 - pull side mount	689	NO	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
2	Wall Stop	406 / 409	US32D	RO	087100

Set: 72.0

Doors: A130A

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Flush Bolt	2845 / 2945	US26D	RO	087100

1	Dust Proof Strike	570	US26D	RO	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	PR7500	689	NO	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
2	Wall Stop	406 / 409	US32D	RO	087100

Set: 73.0

Doors: H119A

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Flush Bolt	2805 / 2905	US32D	RO	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Conc Overhead Stop	1-X36	630	RF	087100
1	Surface Closer	CPS7500	689	NO	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
2	Silencer	608 / 609		RO	087100

Set: 74.0

Doors: M122A, M123A

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Flush Bolt	2845 / 2945	US26D	RO	087100
1	Dust Proof Strike	570	US26D	RO	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Coordinator	2672	US28	RO	087100
1	Filler Bar	FB-1 / FB-2	US28	RO	087100
2	Mounting Bracket	2601AB / 2601C	US28	RO	087100
2	Surface Closer	PR7500	689	NO	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
2	Wall Stop	406 / 409	US32D	RO	087100
1	Gasketing	S88BL		PE	087100
1	Astragal	S772C		PE	087100

Set: 75.0

Doors: D106A, F121A, L110A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100

1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Wall Stop	406 / 409	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Set: 76.0

Doors: L152A, M129A, P105A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	7500 - pull side mount	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	406 / 409	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Set: 77.0

Doors: E110B, P115A, P115B

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	PR7500	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	406 / 409	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Set: 78.0

Doors: E108A, E109A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	CPS7500	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Set: 79.0

Doors: N110B, P104C

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100

1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surf Overhead Stop	10-X36	630	RF	087100
1	Surface Closer	7500 - pull side mount	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Set: 80.0

Doors: A108A, F110A, F130A, H103A, H109A, H118B, H118C, J115A, K117A, L113A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	7500 - pull side mount	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	406 / 409	US32D	RO	087100
1	Gasketing	S88BL		PE	087100

Set: 81.0

Doors: A142A, M126A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	PR7500	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	406 / 409	US32D	RO	087100
1	Gasketing	S88BL		PE	087100

Set: 82.0

Doors: M124A, N110A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	CPS7500	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Gasketing	S88BL		PE	087100

Set: 83.0

Doors: E103A, E103B, J106A, J106B

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Passage Latch	ML2010 PSA	626	RU	087100
1	Wall Stop	406 / 409	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Set: 84.0

Doors: A108B, F126A, L130A, L139A, N109A, P119B, P121A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Classroom Lock	ML2055 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Wall Stop	406 / 409	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Set: 85.0

Doors: F117A, F119A, F124A, F125A, N109B

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Classroom Lock	ML2055 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Wall Stop	406 / 409	US32D	RO	087100
1	Gasketing	S773BL		PE	087100
1	Gasketing	S44BL		PE	087100
1	Gasketing	ACP112BL		PE	087100
1	Door Bottom	STC411APK		PE	087100

Set: 86.1

Doors: F128A, F129A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Classroom Lock	ML2055 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	7500 - pull side mount	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Gasketing	S88BL		PE	087100

Set: 87.0

Doors: A141A, A144A, F104A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Classroom Lock	ML2055 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	PR7500	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	406 / 409	US32D	RO	087100
1	Gasketing	S88BL		PE	087100

Set: 87.1

Doors: F104D

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Classroom Lock	ML2055 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	CPS7500	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Gasketing	S88BL		PE	087100

Set: 88.0

Doors: H125A, K115A, L122A, L127A, L128A, M110A, M112A, N103A, P114A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Privacy Lock	ML2060 PSA M34 V21	626	RU	087100
1	Surface Closer	7500 - pull side mount	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	406 / 409	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Set: 89.0

Doors: P117A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Privacy Lock	ML2060 PSA M34 V21	626	RU	087100
1	Surface Closer	PR7500	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	406 / 409	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Set: 90.0

Doors: N129A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Privacy Lock	ML2060 PSA M34 V21	626	RU	087100
1	Surf Overhead Stop	10-X36	630	RF	087100
1	Surface Closer	7500 - pull side mount	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Set: 91.0

Doors: A110A, F108A, L108A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Privacy Lock	ML2060 PSA M34 V21	626	RU	087100
1	Surface Closer	7500 - pull side mount	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	406 / 409	US32D	RO	087100
1	Gasketing	S88BL		PE	087100

Set: 93.0

Doors: M104A, M105A, M108C, M108D, N104D

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Deadbolt	DL4112 CT_SD	626	RU	087100
2	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Push Plate	70C-RKW	US32D-316	RO	087100
1	Pull Plate	BF 111x70B	US32D	RO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Door Stop & Holder	494S	US26D	RO	087100
3	Silencer	608 / 609		RO	087100

Set: 94.0

Doors: N104C

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Deadbolt	DL4112 CT_SD	626	RU	087100
2	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Push Plate	70C-RKW	US32D-316	RO	087100
1	Pull Plate	BF 111x70B	US32D	RO	087100
1	Conc Overhead Hold Open	1-X26	630	RF	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100

3	Silencer	608 / 609		RO	087100	

Set: 96.0

Doors: A106A, A111B

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Electric Strike	1500C-LM	630	HS	087100	⚡
1	SMART Pac Bridge Rectifier	2005M3		HS	087100	⚡
1	ElectroLynx Adaptor	2004M		HS	087100	⚡
1	Surf Overhead Stop	9-X36	652	RF	087100	
1	Automatic Opener	6011 / 6051 - pull side mount - confirm head detail	689	NO	087100	⚡
1	Wall Stop	406 / 409	US32D	RO	087100	
1	Gasketing	S88BL		PE	087100	
1	ElectroLynx Harness	QC-C1500P (power transfer or electric strike to junction box above)		MK	087100	⚡
1	Card Reader	- Provided by Security Contractor		OT	281300	⚡
2	Door Switch	505		NO	087100	⚡

Notes:

Door normally closed and locked.
Presentation of valid credential at card reader releases electric strike allowing ingress.
Free egress at all times.
Fail-secure.

Automatic operator by actuator.

Set: 97.0

Doors: L125A, L140A, L145A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Communicating Lock	CLX3362 PZD CT_SD	626	RU	087100	
2	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Electric Strike	1500C	630	HS	087100	⚡
1	SMART Pac Bridge Rectifier	2005M3		HS	087100	⚡
1	ElectroLynx Adaptor	2004M		HS	087100	⚡
1	Surface Closer	CPS7500	689	NO	087100	
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	ElectroLynx Harness	QC-C1500P (power transfer or electric strike to junction box above)		MK	087100	⚡

2	Card Reader	- Provided by Security Contractor	OT	281300	
1	Remote Release	- Provided by Security Contractor	OT	281300	

Notes:

Daytime operation:

Office side of opening locked.
Remote push button at reception unlocks electric strike allowing ingress to school corridor.
Free ingress from school corridor to office.
Fail-secure.

After hours operation:

Corridor side locked by key.
Presentation of valid credential at card reader unlocks electric strike allowing ingress to office, egress to school.
Fail-secure.

Set: 98.0

Doors: G109M

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100	
1	Communicating Lock	CLX3362 PZD CT_SD	626	RU	087100	
2	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Electric Strike	1500C	630	HS	087100	
1	SMART Pac Bridge Rectifier	2005M3		HS	087100	
1	ElectroLynx Adaptor	2004M		HS	087100	
1	Surface Closer	CPS7500	689	NO	087100	
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100	
1	Gasketing	S88BL		PE	087100	
1	ElectroLynx Harness	QC-C1500P (power transfer or electric strike to junction box above)		MK	087100	
2	Card Reader	- Provided by Security Contractor		OT	281300	
1	Remote Release	- Provided by Security Contractor		OT	281300	

Notes:

Daytime operation:

Office side of opening locked.
Remote push button at reception unlocks electric strike allowing ingress to school corridor.
Free ingress from school corridor to office.
Fail-safe.

After hours operation:

Corridor side locked by key.
Presentation of valid credential at card reader unlocks electric strike allowing ingress to office, egress to school.
Fail-safe.

Set: 99.0

Doors: B119A

2	Rim Exit Device, Exit Only	ED5200S EO M51	630	RU	087100
2	Door Position Switch	- Provided by Security Contractor		OT	281300

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 100.0

Doors: A100A, A100B

1	Removable Mullion	910KM		RU	087100
2	Rim Exit Device, Exit Only	ED5200S EO M110 M51 *SPAR CLEAR POWDERCOAT*	630C	RU	087100
1	Mortise Housing	CR1040 CT_SD *SPAR CLEAR POWDERCOAT*	626	RU	087100
2	Door Position Switch	- Provided by Security Contractor		OT	281300

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 101.0

Doors: F112B

2	Dummy Mortise Cylinder	CR1400	630	RU	087100
2	Door Position Switch	- Provided by Security Contractor		OT	281300

Notes:

Field verify specified hardware is compatible with existing conditions.

Remove keyed cylinder from exit device rail. Install dummy cylinder.

Set: 102.0

Doors: A125A, A145A, B110A

1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key	.626	SC	087100

		system)			

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 103.0

Doors: N112A

1	Entrance Lock	ML2053 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 104.0

Doors: A102A

1	Storeroom Lock	ML2057 PSA CT_SD *SAPR CLEAR POWDERCOAT*	626C	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 105.0

Doors: A111A

1	Classroom Lock	ML2055 PSA CT_SD *SPAR CLEAR POWDERCOAT*	626C	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 106.0

Doors: A120B

1	Continuous Hinge	DFM-SLF-HD1		PE	087100
1	IN100 Rim Exit	ED5200SN B PR9134ET-IN100 M51	613E	RU	281500

1	Rim Housing	CR3040 CT_SD	613E	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	Surface Closer	CPS7500	613E	NO	087100	

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 107.0

Doors: A120A, A120C

1	Continuous Hinge	DFM-SLF-HD1		PE	087100	
1	Rim Exit Device, Exit Only	ED5200S EO M110 M51	613E	RU	087100	
1	Surface Closer	CPS7500	613E	NO	087100	
1	Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 108.0

Doors: J111A

1	Rim Exit Device, Exit Only	ED5200S EO M51	630	RU	087100	
1	IN100 Rim Exit	ED5200SN B PR9134ET-IN100 M51	630	RU	281500	⚡
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
3	Push Plate	70C-RKW	US32D-316	RO	087100	
1	Pull Plate	BF 111x70B	US32D	RO	087100	

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 109.0

Doors: A121B, A121C

1	Rim Exit Device, Exit Only	ED5200S EO M51	630	RU	087100	
1	Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 110.0

Doors: A120D

2	Concealed Vert Rod Exit, Classroom	ED5860 N955ET M55 M110 M51	630	RU	087100
2	Surface Closer	CPS7500	689	NO	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 111.0

Doors: A109A

1	Classroom Lock	ML2055 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 112.0

Doors: A202B

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Removable Mullion	910KM		RU	087100
1	Rim Exit Device, Exit Only	ED5200 EO M51	630	RU	087100
1	Rim Exit Device, Nightlatch	ED5200 N957ET M110 M51	630	RU	087100
1	Mortise Housing	CR1040 CT_SD	630	RU	087100
1	Rim Housing	CR3040 CT_SD	630	RU	087100
2	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
2	Surface Closer	PR7500	689	NO	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 113.0

Doors: G109G

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Removable Mullion	910KM		RU	087100
2	Rim Exit Device, Exit Only	ED5200 EO M51	630	RU	087100
1	Mortise Housing	CR1040 CT_SD	630	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
2	Surface Closer	PR7500	689	NO	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
2	Silencer	608 / 609		RO	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 114.0

Doors: G109F

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Rim Exit Device, Exit Only	ED5200 EO M51	630	RU	087100
1	Rim Housing	CR3040 CT_SD	630	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	PR7500	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 115.0

Doors: G109H

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Removable Mullion	910KM		RU	087100
2	Rim Exit Device, Classroom	ED5200 N955ET M110 M51	630	RU	087100
1	Mortise Housing	CR1040 CT_SD	630	RU	087100
2	Rim Housing	CR3040 CT_SD	630	RU	087100
3	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
2	Surface Closer	PR7500	689	NO	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100

2	Wall Stop	406 / 409	US32D	RO	087100
2	Silencer	608 / 609		RO	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 116.0

Doors: J102A, J104A, J107A, J118A, J119A, J120A, J121A, J122A, J123A, J124A, J125A

1	Access Control Mort Lock	IN100-ML20234 B PSA CT_SD	626	RU	281500	⚡
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	

Notes:

Field verify if existing lock prep is cylindrical or mortise.

Set: 117.0

Doors: A122A, A138A

6	Hinge, Full Mortise	TA2714	US26D	MK	087100
2	Flush Bolt	555 / 557	US26D	RO	087100
1	Dust Proof Strike	570	US26D	RO	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
2	Surface Closer	PR7500	689	NO	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 118.0

Doors: N121A

6	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Flush Bolt	2805 / 2905	US32D	RO	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	CPS7500	689	NO	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	406 / 409	US32D	RO	087100
2	Silencer	608 / 609		RO	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 119.0

Doors: A146A, A204A, D138A, D139A, H116A, H117A, M114A, N117A, N118A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	7500 - pull side mount	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 120.0

Doors: A137A, A205A, D140A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	PR7500	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 121.0

Doors: G110A, G118A, N106C

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	CPS7500	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 122.0

Doors: H117B, M115A, M116A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surf Overhead Stop	10-X36	630	RF	087100
1	Surface Closer	7500 - pull side mount	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 123.0

Doors: N113A, N113B, P110A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	7500 - pull side mount	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	406 / 409	US32D	RO	087100
1	Gasketing	S88BL		PE	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 124.0

Doors: N107A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	PR7500	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	406 / 409	US32D	RO	087100
1	Gasketing	S88BL		PE	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 125.0

Doors: J109A, N108A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Storeroom Lock	ML2057 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	CPS7500	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Gasketing	S88BL		PE	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 126.0

Doors: A127A, A136A, N102B

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Entrance Lock	ML2053 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 127.0

Doors: G112A, G113A, G114B, G117A, N111B, N116A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Classroom Lock	ML2055 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 128.0

Doors: A123A, A131A, A202A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Classroom Lock	ML2055 PSA CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Surface Closer	7500 - pull side mount	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 129.0

Doors: L118A, N119A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Privacy Lock	ML2060 PSA M34 V21	626	RU	087100
1	Surface Closer	7500 - pull side mount	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	406 / 409	US32D	RO	087100
3	Silencer	608 / 609		RO	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 130.0

Doors: C106B, G105A, G106A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Deadbolt	DL4117 CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Push Plate	70C-RKW	US32D-316	RO	087100
1	Pull Plate	BF 111x70B	US32D	RO	087100
1	Surface Closer	7500 - pull side mount	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 131.0

Doors: P109A, P111A

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Deadbolt	DL4117 CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
1	Push Plate	70C-RKW	US32D-316	RO	087100
1	Pull Plate	BF 111x70B	US32D	RO	087100
1	Surface Closer	PR7500	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 132.0

Doors: A126B, A135B

3	Hinge (heavy weight)	T4A3786	US26D	MK	087100
1	Push Plate	70C-RKW	US32D-316	RO	087100
1	Pull Plate	BF 111x70B	US32D	RO	087100
1	Surface Closer	PR7500	689	NO	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 133.0

Doors: J110A

1	Deadbolt	DL3217 CT_SD	626	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 134.0

Doors: G109D, G109E

1	Removable Mullion	910KM		RU	087100	
2	IN100 Rim Exit	ED5200N B PR9134ET-IN100	630	RU	281500	⚡
1	Mortise Housing	CR1040 CT_SD	630	RU	087100	
2	Rim Housing	CR3040 CT_SD	630	RU	087100	
3	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 135.0

Doors: A147B

1	Electric Power Transfer	CEPT-C5E	630	SU	087100	⚡
1	Removable Mullion	910KM		RU	087100	
1	Rim Exit Device, Exit Only	ED5200S EO M51	630	RU	087100	
1	IN220 Rim Exit	ED5200N B PR9134ET-IN220 M51	630	RU	281500	⚡
1	Mortise Housing	CR1040 CT_SD	630	RU	087100	
1	Rim Housing	CR3040 CT_SD	630	RU	087100	
2	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100	
1	ElectroLynx Harness	QC-C1500P (power transfer or electric strike to junction box above)		MK	087100	⚡
1	ElectroLynx Harness	QC-C (power transfer to exit device lever trim)		MK	087100	⚡
1	Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 136.0

Doors: C103A

2	Door Position Switch	- Provided by Security Contractor		OT	281300	⚡

Notes:

Field verify specified hardware is compatible with existing conditions.

Disable dogging from exit devices.

Set: 137.0

Doors: D101A

2	Dummy Mortise Cylinder	CR1400	630	RU	087100
1	Dummy Rim Cylinder	7010	32D	KA	

Notes:

Field verify specified hardware is compatible with existing conditions.

Install dummy mortise cylinders at exit device rail disabling dogging and dummy rim cylinder at exterior disabling nightlatch function.

Set: 138.0

Doors: J116A

2	Dummy Mortise Cylinder	CR1400	630	RU	087100
1	Dummy Rim Cylinder	7010	32D	KA	
2	Door Position Switch	- Provided by Security Contractor		OT	281300

Notes:

Field verify specified hardware is compatible with existing conditions.

Install dummy mortise cylinders at exit device rail disabling dogging and dummy rim cylinder at exterior disabling nightlatch function.

Set: 139.0

Doors: H121C

1	Rim Exit Device, Exit Only	ED4200S EO M110 M51	613E	RU	087100

Notes:

Disable and remove deadbolt, pull and push bar.

Set: 140.0

Doors: F101A, G111A

1	Removable Mullion	910KM		RU	087100
2	Rim Exit Device, Exit Only	ED5200S EO M110 M51	613E	RU	087100
1	Mortise Housing	CR1040 CT_SD	630	RU	087100
1	Cylinder	80-037 (match Owner's exisitng key system)	.626	SC	087100
2	Surface Closer	CPS7500	689	NO	087100
1	Threshold	252x3AFG Pemkote MSES25SS		PE	087100
2	Sweep	29326CNB TKSP		PE	087100

2	Door Position Switch	- Provided by Security Contractor		OT	281300

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 141.0

Doors: A145B

2	Surface Closer	PR7500	689	NO	087100
2	Door Position Switch	- Provided by Security Contractor		OT	281300

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 142.0

Doors: C104B

2	Door Position Switch	- Provided by Security Contractor		OT	281300

Notes:

Field verify specified hardware is compatible with existing conditions.

Set: 143.0

Doors: A116B, A117A, D109B, D110A, D113B, D114A, F101B, H101A, J111B, J116B, M125A, N114A, P102A, P123A

1	Hardware	- Existing hardware to remain, verify in field		OT	087100

Set: 144.0

Doors: MISC

1	Data Hinge Tester	DHTA		PN	087100
1	Kit	WFCD1		PN	281300
1	Repair Kit	QC-R001		MK	087100
1	Crimp Tool	QC-R003		MK	087100
1	Key Cabinet	1200 Series x Mounting Brackets & Capacity As Required		LU	

END OF SECTION

SECTION 08 41 13 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
   1. Aluminum-framed storefront systems.
   2. Aluminum-framed entrance door systems.

B. Related Requirements:
   1. Section 07 92 00 “Joint Sealants” for perimeter sealant and back-up materials
   2. Section 08 44 13 “Glazed Aluminum Curtain Walls”.
   3. Section 08 71 00 “Door Hardware” for door hardware other than specified in this section.
   4. Section 08 80 00 “Glazing” for glass and glazing accessories other than specified in this section.

1.3 COORDINATION

A. Coordinate all work with job site superintendent and all applicable trades.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site; require attendance by all affected installers.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.
   1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: For aluminum-framed entrances and storefronts. Include plans, elevations, sections, full-size details, and attachments to other work.
   1. Include details of provisions for assembly expansion and contraction and for draining moisture occurring within the assembly to the exterior.
   2. Include full-size isometric details of each type of vertical-to-horizontal intersection of aluminum-framed entrances and storefronts, showing the following:
      a. Joinery, including concealed welds.
      b. Anchorage.
      c. Expansion provisions.
      d. Glazing.
      e. Flashing and drainage.
   3. Show connection to and continuity with adjacent thermal, weather, air, and vapor barriers.
   4. Include point-to-point wiring diagrams showing the following:
      a. Power requirements for each electrically operated door hardware.
      b. Location and types of switches, signal device, conduit sizes, and number and size of wires.

C. Entrance Door Hardware Schedule: Prepared by or under supervision of supplier, detailing fabrication and assembly of entrance door hardware, as well as procedures and diagrams. Coordinate final entrance door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of entrance door hardware.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data:

B. Energy Performance Certificates: For aluminum-framed entrances and storefronts, accessories, and components, from manufacturer.

1. Basis for Certification: NFRC-certified energy performance values for each aluminum-framed entrance and storefront.

C. Product Test Reports: For aluminum-framed entrances and storefronts, for tests performed by manufacturer and witnessed by a qualified testing agency and/or a qualified testing agency.

D. Quality-Control Program: Developed specifically for Project, including fabrication and installation, according to recommendations in ASTM C1401. Include periodic quality-control reports.

E. Source quality-control reports.

F. Sample Warranties: For special warranties.

1.7 CLOSEOUT SUBMITTALS

A. Maintenance Data: For aluminum-framed entrances and storefronts to include in maintenance manuals.

1.8 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

B. Product Options: Information on Drawings and in Specifications establishes requirements for aesthetic effects and performance characteristics of assemblies. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction.

1. Do not change intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If changes are proposed, submit comprehensive explanatory data to Architect for review.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Ordering: Comply with manufacturer’s ordering instructions and lead time requirements to avoid construction delays.

B. Handle products of this section in accordance with AAMA CW-10.

C. Protect finished aluminum surfaces with strippable coating. Do not use adhesive papers or sprayed coatings that bond to aluminum when exposed to sunlight or weather.

1.10 FIELD CONDITIONS

A. Do not install sealants when ambient temperature is less than 40 degrees F. Maintain this minimum temperature during and 48 hours after installation.

B. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements, fabrication schedule with construction progress to avoid construction delays.

1.11 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of aluminum-framed entrances and storefronts that do not comply with requirements or that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Structural failures, including, but not limited to, excessive deflection.

b. Noise or vibration created by wind and thermal and structural movements.

c. Deterioration of metals, metal finishes, and other materials beyond normal weathering.

d. Water penetration through fixed glazing and framing areas.

e. Failure of operating components.

2. Warranty Period: Five years from date of Substantial Completion.

B. Special Finish Warranty: Standard form in which manufacturer agrees to repair finishes or replace aluminum that shows evidence of deterioration of finishes within specified warranty period.

1. Deterioration includes, but is not limited to, the following:

a. Color fading more than 5 Delta E units when tested according to ASTM D2244.

b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.

c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. General Performance: Comply with performance requirements specified, as determined by testing of aluminum-framed entrances and storefronts representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.

1. Aluminum-framed entrances and storefronts shall withstand movements of supporting structure, including, but not limited to, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.

2. Failure also includes the following:

a. Thermal stresses transferring to building structure.

b. Glass breakage.

c. Noise or vibration created by wind and thermal and structural movements.

d. Loosening or weakening of fasteners, attachments, and other components.

e. Failure of operating units.

B. Structural Loads:

1. Wind Loads: As indicated on Drawings, or, if not indicated, in accordance with applicable codes and manufacturer recommendations.

C. Deflection of Framing Members: At design wind pressure, as follows:

1. Deflection Normal to Wall Plane: Limited to 1/175 of clear span for spans of up to 13 feet 6 inches and to 1/240 of clear span plus 1/4 inch for spans greater than 13 feet 6 inches or an amount that restricts edge deflection of individual glazing lites to 3/4 inch, whichever is less.

2. Deflection Parallel to Glazing Plane: Limited to 1/360 of clear span or 1/8 inch, whichever is smaller.

a. Operable Units: Provide a minimum 1/16-inch clearance between framing members and operable units.

3. Cantilever Deflection: Where framing members overhang an anchor point, as follows:

a. Perpendicular to Plane of Wall: No greater than 1/240 of clear span plus 1/4 inch for spans greater than 11 feet 8-1/4 inches or 1/175 times span, for spans of less than 11 feet 8-1/4 inches.

D. Structural: Test according to ASTM E330/E330M as follows:

1. When tested at positive and negative wind-load design pressures, storefront assemblies, including entrance doors, do not evidence deflection exceeding specified limits.
2. When tested at 150 percent of positive and negative wind-load design pressures, storefront assemblies, including entrance doors and anchorage, do not evidence material failures, structural distress, or permanent deformation of main framing members exceeding 0.2 percent of span.
3. Test Durations: As required by design wind velocity, but not less than 10 seconds.

E. Water Penetration under Static Pressure: Test according to ASTM E331 as follows:
1. No evidence of water penetration through fixed glazing and framing areas, including entrance doors, when tested according to a minimum static-air-pressure differential of 20 percent of positive wind-load design pressure, but not less than 15 lbf/sq. ft..

F. Water Penetration under Dynamic Pressure: Test according to AAMA 501.1 as follows:
1. No evidence of water penetration through fixed glazing and framing areas when tested at dynamic pressure equal to 20 percent of positive wind-load design pressure, but not less than 15 lbf/sq. ft..
2. Maximum Water Leakage: No uncontrolled water penetrating assemblies or water appearing on assemblies' normally exposed interior surfaces from sources other than condensation. Water leakage does not include water controlled by flashing and gutters, or water that is drained to exterior.

G. Energy Performance: Certified and labeled by manufacturer for energy performance as follows:
1. Thermal Transmittance (U-factor):
   a. Fixed Glazing and Framing Areas: U-factor for the system of not more than 0.42 Btu/sq. ft. x h x deg F as determined according to NFRC 100.
   b. Entrance Doors (glazed aluminum): U-factor of not more than 0.77 Btu/sq. ft. x h x deg F as determined according to NFRC 100.
   c. Entrance Doors (flush aluminum): U-factor of not more than 0.50 Btu/sq. ft. x h x deg F as determined according to NFRC 100.
2. Solar Heat-Gain Coefficient (SHGC):
   a. Fixed Glazing and Framing Areas: SHGC for the system of not more than 0.40 as determined according to NFRC 200.
   b. Entrance Doors: SHGC of not more than 0.40 as determined according to NFRC 200.
3. Air Leakage:
   a. Fixed Glazing and Framing Areas: Air leakage for the system of not more than 0.06 cfm/sq. ft. at a static-air-pressure differential of 6.24 lbf/sq. ft. when tested according to ASTM E283.
   b. Entrance Doors: Air leakage of not more than 1.0 cfm/sq. ft. at a static-air-pressure differential of 1.57 lbf/sq. ft..
4. Condensation Resistance Factor (CRF):
   a. Fixed Glazing and Framing Areas: CRF for the system of not less than 55 as determined according to AAMA 1503.
   b. Entrance Doors: CRF of not less than 57 as determined according to AAMA 1503.

H. Thermal Movements: Allow for thermal movements resulting from ambient and surface temperature changes.
1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.
2. Thermal Cycling: No buckling; stress on glass; sealant failure; excess stress on framing, anchors, and fasteners; or reduction of performance when tested according to AAMA 501.5.

a. High Exterior Ambient-Air Temperature: That which produces an exterior metal-surface temperature of 180 deg F.

b. Low Exterior Ambient-Air Temperature: 0 deg F.

c. Interior Ambient-Air Temperature: 75 deg F.

2.2 SOURCE LIMITATIONS

A. Obtain all components of aluminum-framed entrance and storefront system, including framing and accessories, from single manufacturer.

2.3 STOREFRONT SYSTEMS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Cross Aluminum Products.
2. EFCO Corporation.
3. Kawneer North America, an Arconic company.
4. Special-Lite.
5. Tubelite Inc.
6. Wausau Window and Wall Systems.
7. YKK AP America Inc.

B. Framing Members: Manufacturer's extruded- or formed-aluminum framing members of thickness required and reinforced as required to support imposed loads.

1. Exterior Framing Construction: Thermally broken with 2” x 4-1/2” profile.
   a. Products:
      1) Cross Aluminum Products – T-14000 Series (U-factor of 0.39 when UCOG=0.28).
      2) EFCO Corporation – Series 403 (U-factor of 0.42 when UCOG=0.30).
      3) Kawneer North America, an Arconic company – Trifab VersaGlaze 451T (U-factor of 0.36 when UCOG=0.28).
      4) Special-Lite – SL-450TB (U-factor of 0.41 when UCOG=0.29).
      5) Tubelite Inc. – T14000 Series (U-factor of 0.39 when UCOG=0.28).
      6) Wausau Window and Wall Systems – 14000 Series (U-factor of 0.39 when UCOG=0.28).
      7) YKK AP America Inc. – YES 45 XT Center Set (U-factor of 0.36 when UCOG=0.29).
2. Interior Vestibule Framing Construction: Nonthermal with 1-3/4” x 4-1/2” profile.
   a. Products:
      1) Cross Aluminum Products – E-4500 Series.
      2) EFCO Corporation –Series 401(NT).
      3) Kawneer North America, an Arconic company –Trifab VersaGlaze 450.
      4) Special-Lite – SL-45 FG.
      5) Tubelite Inc. –4500.
      6) Wausau Window and Wall Systems – 4500.
      7) YKK AP America Inc. –YES 45 FS.
3. Glazing System: Retained mechanically with gaskets on four sides.
4. Glazing Plane: Centered (front to back) at exterior, centered at interior.

5. Glazing Stops: Flush.
6. Finish: See “Aluminum Finishes” section.
7. Fabrication Method: Field-fabricated stick system.
8. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
9. Steel Reinforcement: As required by manufacturer.

C. Backer Plates: Manufacturer's standard, continuous backer plates for framing members, if not integral, where framing abuts adjacent construction.

D. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning system components.

2.4 ENTRANCE DOOR SYSTEMS

A. Exterior Entrance Doors: Thermal glazed aluminum.

1. Products:
   a. Cross Aluminum Products – WS-500 Wide Stile (U-factor of 0.61 when UCOG=0.28).
   b. EFCO Corporation – ThermaStile D502 Wide Stile (U-factor of 0.65 when UCOG=0.28).
   c. Kawneer North America, an Arconic company – 500T Insulpour Thermal Entrance Wide Stile (U-factor of 0.55 when UCOG=0.28).
   d. Special-Lite – SL-15 Wide Stile Monumental (U-factor of 0.63 when UCOG=0.28).
   e. Tubelite Inc. – Therml=Block Wide Stile (U-factor of 0.61 when UCOG=0.28).
   f. Wausau Window and Wall Systems – Therml=Block Wide Stile (U-factor of 0.61 when UCOG=0.28).
   g. YKK AP America Inc. – 50XT Megatherm Wide Stile (U-factor of 0.53 when UCOG=0.28).
2. Entrance Doors: Manufacturer's standard glazed entrance doors for manual-swing or automatic operation.
   a. Door Construction: 1-3/4-inch minimum overall thickness, with minimum 0.125-inch-thick, extruded-aluminum tubular rail and stile members. Mechanically fasten corners with reinforcing brackets that are deeply penetrated, and fillet welded or that incorporate concealed tie rods.
      1) Thermal Construction: High-performance plastic connectors separate aluminum members exposed to the exterior from members exposed to the interior.
   b. Door Design:
      1) **Top Rail: 7 1/2 inches wide minimum (no exceptions, width required to accommodate overhead door stop and closer)**.
      2) Vertical Stiles: 5 inches wide.
      3) Bottom Rail: 10 inches wide.
   c. Glazing Stops and Gaskets: Square, snap-on, extruded-aluminum stops and preformed gaskets.
      1) Provide nonremovable glazing stops on outside of door.
   d. Finish: Match adjacent storefront framing finish.

B. Exterior Entrance Doors: Thermal solid flush aluminum.

1. Products:
   a. Cross Aluminum Products – FL-400T (U-factor of 0.34 for flush door).
   b. Special-Lite – SL-16 (U-factor of 0.47 for flush door).

2. Entrance Doors: Manufacturer's standard flush entrance doors for manual-swing or automatic operation.
    a. Door Construction: 1-3/4-inch minimum overall thickness.
    b. Door Design: See door schedule for locations and types.
    c. Surface: Smooth.
    d. Finish: Match adjacent storefront framing finish.

C. Interior Entrance Doors: Non-thermal.
1. Products:
    a. Cross Aluminum Products – WS-500 Wide Stile.
    b. EFCO Corporation – D500 Wide Stile.
    c. Kawneer North America, an Arconic company – 500 Standard Entrance.
    d. Special-Lite – SL-15 Wide Stile Monumental.
    e. Tubelite Inc. – Standard Wide Stile.
    f. Wausau Window and Wall Systems – Standard Wide Stile.
    g. YKK AP America Inc. – 50M Monumental Wide Stile.
2. Entrance Doors: Manufacturer's standard glazed entrance doors for manual-swing or automatic operation.
    a. Door Construction: 1-3/4-inch overall thickness, with minimum 0.125-inch-thick, extruded-aluminum tubular rail and stile members. Mechanically fasten corners with reinforcing brackets that are deeply penetrated, and fillet welded or that incorporate concealed tie rods.
    b. Door Design:
        1) Top Rail: 8 inches wide (no exceptions, width required to accommodate overhead door stop and closer).
        2) Vertical Stiles: 5 inches wide.
        3) Bottom Rail: 10 inches wide.
    c. Glazing Stops and Gaskets: Square, snap-on, extruded-aluminum stops and preformed gaskets.
    d. Finish: Match adjacent storefront framing finish.

2.5 ENTRANCE DOOR HARDWARE

A. Entrance Door Hardware: Hardware not specified in this Section is specified in Section 08 71 00 "Door Hardware".

B. Removable Mullions: BHMA A156.3 extruded aluminum.
1. When used with panic exit devices, provide keyed removable mullions listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for panic protection, based on testing according to UL 305. Use only mullions that have been tested with exit devices to be used.

C. Weather Stripping: Manufacturer's standard replaceable components.
1. Compression Type: Made of ASTM D2000 molded neoprene or ASTM D2287 molded PVC.
2. Sliding Type: AAMA 701/702, made of wool, polypropylene, or nylon woven pile with nylon-fabric or aluminum-strip backing.

D. Weather Sweeps: Manufacturer's standard exterior-door bottom sweep with concealed fasteners on mounting strip.

2.6 GLAZING

A. Glazing: Comply with Section 08 80 00 "Glazing."

B. Glazing Gaskets: Manufacturer's standard sealed-corner pressure-glazing system of black, resilient elastomeric glazing gaskets, setting blocks, and shims or spacers.

C. Glazing Sealants: As recommended by manufacturer.

D. Weatherseal Sealants: ASTM C920 for Type S; Grade NS; Class 25; Uses NT, G, A, and O; chemically curing silicone formulation that is compatible with structural sealant and other system components with which it comes in contact; recommended by structural-sealant, weatherseal-sealant, and structural-sealant-glazed storefront manufacturers for this use.

1. Color: Match structural sealant.

2.7 MATERIALS

A. Sheet and Plate: ASTM B209.

B. Extruded Bars, Rods, Profiles, and Tubes: ASTM B221.

C. Extruded Structural Pipe and Tubes: ASTM B429/B429M.

D. Structural Profiles: ASTM B308/B308M.

E. Steel Reinforcement:

1. Structural Shapes, Plates, and Bars: ASTM A36/A36M.
2. Cold-Rolled Sheet and Strip: ASTM A1008/A1008M.
3. Hot-Rolled Sheet and Strip: ASTM A1011/A1011M.

F. Steel Reinforcement Primer: Manufacturer's standard zinc-rich, corrosion-resistant primer complying with SSPC-PS Guide No. 12.00; applied immediately after surface preparation and pretreatment. Select surface preparation methods according to recommendations in SSPC-SP COM and prepare surfaces according to applicable SSPC standard.

2.8 ACCESSORIES

A. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding fasteners and accessories compatible with adjacent materials.

1. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
2. Reinforce members as required to receive fastener threads.
3. Use exposed fasteners with countersunk Phillips screw heads, finished to match framing system.

B. Anchors: Three-way adjustable anchors with minimum adjustment of 1 inch that accommodate fabrication and installation tolerances in material and finish compatible with adjoining materials and recommended by manufacturer.

1. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts complying with ASTM A123/A123M or ASTM A153/A153M requirements.

C. Concealed Flashing: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding flashing compatible with adjacent materials.

D. Bituminous Paint: Cold-applied asphalt-mastic paint containing no asbestos, formulated for 30-mil thickness per coat.

E. Rigid PVC Filler.

2.9 FABRICATION

A. Form or extrude aluminum shapes before finishing.

B. Fabricate components that, when assembled, have the following characteristics:

1. Profiles that are sharp, straight, and free of defects or deformations.

2. Accurately fitted joints with ends coped or mitered.
3. Physical and thermal isolation of glazing from framing members.
4. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
5. Provisions for field replacement of glazing from exterior.
6. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.

C. Mechanically Glazed Framing Members: Fabricate for flush glazing without projecting stops.

D. Entrance Door Frames: Reinforce as required to support loads imposed by door operation and for installing entrance door hardware.

1. At interior and exterior doors, provide compression weather stripping at fixed stops.

E. Entrance Doors: Reinforce doors as required for installing entrance door hardware.

1. At pairs of exterior doors, provide sliding-type weather stripping retained in adjustable strip and mortised into door edge.
2. At exterior doors, provide weather sweeps applied to door bottoms.

F. Entrance Door Hardware Installation: Factory install entrance door hardware to the greatest extent possible. Cut, drill, and tap for factory-installed entrance door hardware before applying finishes.

G. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

2.10 ALUMINUM FINISHES

A. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.

2.11 SOURCE QUALITY CONTROL

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. In the event of discrepancy, immediately notify the Architect/Engineer, and do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. Comply with manufacturer's written instructions.

B. Do not install damaged components.

C. Fit joints to produce hairline joints free of burrs and distortion.

D. Rigidly secure nonmovement joints.

E. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints.

F. Seal perimeter and other joints watertight unless otherwise indicated.

G. Metal Protection:

1. Where aluminum is in contact with dissimilar metals, protect against galvanic action by painting contact surfaces with materials recommended by manufacturer for this purpose or by installing nonconductive spacers.
2. Where aluminum is in contact with concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.

H. Set continuous sill members and flashing in full sealant bed, as specified in Section 07 92 00 "Joint Sealants," to produce weathertight installation, unless otherwise specified within manufacturers' written recommendations.

I. Install joint filler behind sealant as recommended by sealant manufacturer.

J. Install components plumb and true in alignment with established lines and grades.

3.3 INSTALLATION OF GLAZING

A. Install glazing as specified in Section 08 80 00 "Glazing."

3.4 INSTALLATION OF ALUMINUM-FRAMED ENTRANCE DOORS

A. Install entrance doors to produce smooth operation and tight fit at contact points.

1. Exterior Doors: Install to produce weathertight enclosure and tight fit at weather stripping.
2. Field-Installed Entrance Door Hardware: Install surface-mounted entrance door hardware according to entrance door hardware manufacturers' written instructions using concealed fasteners to greatest extent possible.

3.5 ERECTION TOLERANCES

A. Install aluminum-framed entrances and storefronts to comply with the following maximum tolerances:

1. Plumb: 1/8 inch in 10 feet; 1/4 inch in 40 feet.
2. Level: 1/8 inch in 20 feet; 1/4 inch in 40 feet.
3. Alignment:
   a. Where surfaces abut in line or are separated by reveal or protruding element up to 1/2-inch-wide, limit offset from true alignment to 1/16 inch.
   b. Where surfaces are separated by reveal or protruding element from 1/2 to 1 inch wide, limit offset from true alignment to 1/8 inch.
   c. Where surfaces are separated by reveal or protruding element of 1 inch wide or more, limit offset from true alignment to 1/4 inch.
4. Location: Limit variation from plane to 1/8 inch in 12 feet; 1/2 inch over total length.

3.6 ADJUSTING

A. Adjust operating hardware for smooth operation.

3.7 CLEANING

A. Remove protective material from pre-finished aluminum surfaces.

B. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.

C. Remove excess sealant by method acceptable to sealant manufacturer.

3.8 PROTECTION

A. Protect installed products from damage during subsequent construction.

END OF SECTION

SECTION 08 11 13 - HOLLOW METAL DOORS AND FRAMES
(ADDENDUM 003)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes:

1. New Interior standard steel doors and frames.
2. Refinishing of steel doors per Door & Frame Schedule

B. Related Requirements:

1. Section 08 14 16 “Flush Wood Doors” for wood doors
2. Section 08 71 00 "Door Hardware" for door hardware for hollow-metal doors.

1.3 DEFINITIONS

A. Minimum Thickness: Minimum thickness of base metal without coatings according to SDI A250.8.

1.4 COORDINATION

A. Coordinate anchorage installation for hollow-metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

B. Coordinate requirements for installation of door hardware, electrified door hardware, and access control and security systems.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, core descriptions, fire-resistance ratings, temperature-rise ratings, and finishes.

B. Shop Drawings: Include the following:

1. Elevations of each door type.
2. Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
4. Locations of reinforcement and preparations for hardware.
5. Details of each different wall opening condition.
6. Details of electrical raceway and preparation for electrified hardware, access control systems, and security systems.
7. Details of anchorages, joints, field splices, and connections.
8. Details of accessories.
9. Details of moldings, removable stops, and glazing.

C. Product Schedule: For hollow-metal doors and frames, prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final door hardware schedule.

1.6 INFORMATIONAL SUBMITTALS

A. Product Test Reports: For each type of hollow-metal door and frame assembly, for tests performed by a qualified testing agency.

B. Oversize Construction Certification: For assemblies required to be fire-rated and exceeding limitations of labeled assemblies.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver hollow-metal doors and frames palletized, packaged, or crated to provide protection during transit and Project-site storage. Do not use nonvented plastic.

1. Provide additional protection to prevent damage to factory-finished units.

B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

C. Store hollow-metal doors and frames vertically under cover at Project site with head up. Place on minimum 4-inch-high wood blocking. Provide minimum 1/4-inch space between each stacked door to permit air circulation.

1.8 CLOSEOUT SUBMITTALS

A. Record Documents: For fire-rated doors, list of door numbers and applicable room name and number to which door accesses.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Ceco Door; ASSA ABLOY.
2. Curries Company; ASSA ABLOY.
3. Pioneer Industries.
4. Republic Doors and Frames.
5. Steelcraft; an Allegion brand.

2.2 PERFORMANCE REQUIREMENTS

A. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for fire-protection ratings and temperature-rise limits indicated on drawings, based on testing at positive pressure according to NFPA 252 or UL 10C.

1. Smoke- and Draft-Control Assemblies: Provide assemblies with gaskets listed and labeled for smoke and draft control by a qualified testing agency acceptable to authorities having jurisdiction, based on testing according to UL 1784 and installed in compliance with NFPA 105.

B. Fire-Rated, Borrowed-Lite Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 257 or UL 9.

2.3 INTERIOR STANDARD STEEL DOORS AND FRAMES

A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

B. Extra-Heavy-Duty Doors and Frames: SDI A250.8, Level 3; SDI A250.4, Level A. At all interior hollow metal locations unless otherwise noted.

1. Doors:
   a. Type: As indicated in the Door and Frame Schedule.
   b. Thickness: 1-3/4 inches.
   c. Face: Uncoated steel sheet, minimum thickness of 0.053 inch.
   d. Edge Construction: Model 1, Full Flush.

e. Edge Bevel: Bevel lock and hinge edges 1/8 inch in 2 inches.

f. Core: Manufacturer's standard.

g. Fire-Rated Core: Manufacturer's standard laminated mineral board core for fire-rated and temperature-rise-rated doors.

2. Frames:

a. Materials: Uncoated steel sheet, minimum thickness of 0.053 inch.

b. Sidelite and Transom Frames: Fabricated from same thickness material as adjacent door frame.

c. Construction: Face welded.

3. Exposed Finish: Factory primed, for field finishing, unless otherwise noted.

2.4 BORROWED LITES

A. Fabricate of uncoated steel sheet, minimum thickness of 0.053 inch.

B. Construction: Face welded.

C. Fabricate in one piece except where handling and shipping limitations require multiple sections. Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of metal of same or greater thickness as metal as frames.

D. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.

2.5 FRAME ANCHORS

A. Jamb Anchors:

1. Type: Anchors of minimum size and type required by applicable door and frame standard, and suitable for performance level indicated.

2. Quantity: Minimum of three anchors per jamb, with one additional anchor for frames with no floor anchor. Provide one additional anchor for each 24 inches of frame height above 7 feet.

3. Anchors: At new construction, wire for masonry or manufacturer's standard galvanized anchor for wall type as recommended.

4. Postinstalled Expansion Anchor: At existing construction and/or when specifically approved by Architect PRIOR to installation, minimum 3/8-inch-diameter bolts with expansion shields or inserts, with manufacturer's standard pipe spacer.

B. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor.

C. Material: ASTM A 879/A 879M, Commercial Steel (CS), 04Z coating designation; mill phosphatized.

1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M; hot-dip galvanized according to ASTM A 153/A 153M, Class B.

2.6 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.

C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B.

D. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.

E. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-metal frames of type indicated.

F. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.

G. Glazing: Comply with requirements in Section 08 80 00 "Glazing."

2.7 FABRICATION

A. Door Astragals: Provide overlapping astragal on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch beyond edge of door on which astragal is mounted or as required to comply with published listing of qualified testing agency.

B. Hollow-Metal Frames: Fabricate in one piece except where handling and shipping limitations require multiple sections. Where frames are fabricated in sections, provide alignment plates or angles at each joint, fabricated of metal of same or greater thickness as frames.

1. Sidelite and Transom Bar Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by welding.
2. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
3. Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers as follows. Keep holes clear during construction.
    a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
    b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.

C. Hardware Preparation: Factory prepare hollow-metal doors and frames to receive templated mortised hardware, and electrical wiring; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.

1. Reinforce doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.
2. Comply with BHMA A156.115 for preparing hollow-metal doors and frames for hardware.

D. Glazed Lites: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with butted hairline joints.

1. Provide stops and moldings flush with face of door, and with square stops unless otherwise indicated.
2. Multiple Glazed Lites: Provide fixed and removable stops and moldings so that each glazed lite is capable of being removed independently.
3. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames. Provide loose stops and moldings on inside of hollow-metal doors and frames.
4. Coordinate rabbet width between fixed and removable stops with glazing and installation types indicated.
5. Provide stops for installation with countersunk flat- or oval-head machine screws spaced uniformly not more than 9 inches o.c. and not more than 2 inches o.c. from each corner.

2.8 STEEL FINISHES

A. Factory Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.

1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

2.9 LOUVERS

A. Provide louvers for interior doors, where indicated, which comply with SDI 111, with blades or baffles formed of 0.020-inch-thick, cold-rolled steel sheet set into 0.032-inch-thick steel frame.

1. Lightproof Louver: Stationary louvers constructed with baffles to prevent light from passing from one side to the other.
2. Fire-Rated Automatic Louvers: Louvers constructed with movable blades closed by actuating fusible link, and listed and labeled for use in fire-rated door assemblies of type and fire-resistance rating indicated by same qualified testing and inspecting agency that established fire-resistance rating of door assembly.

B. Form corners of moldings with hairline joints. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames.

PART 3 - EXECUTION

3.1 PREPARATION

A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces. Touch up factory-applied finishes where spreaders are removed.

B. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

C. Coat inside of frames to be installed in masonry or to be grouted, with bituminous coating, prior to installation.

3.2 SHOP REFINISHING OF STEEL DOORS

A. Remove all existing hardware.

B. Sand and/or grind down finish from doors on all 6 sides.

C. Patch and repair any imperfections, dents, or scuffs on doors greater than 1/8” deep. Fill gaps as needed

D. Repaint per finish plan & coatings specification. Touch up in field as required.

3.3 INSTALLATION

A. General: Install hollow-metal doors and frames plumb, rigid, properly aligned, and securely fastened in place. Comply with approved Shop Drawings and with manufacturer's written instructions.

B. Hollow-Metal Frames: Comply with SDI A250.11.

1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces without damage to completed Work.
    a. Where frames are fabricated in sections, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces. Touch-up finishes.
    b. Install frames with removable stops located on secure side of opening.
2. Fire-Rated Openings: Install frames according to NFPA 80.
3. Floor Anchors: Secure with expansion anchors or power-actuated fasteners.
4. Non-Masonry Walls: Solidly pack mineral-fiber insulation inside frames.
5. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout or mortar.
6. In-Place Concrete: Secure frames in place with post installed expansion anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.
7. Installation Tolerances: Adjust hollow-metal frames to the following tolerances:
    a. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.

b. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.

c. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.

d. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.

C. Hollow-Metal Doors: Fit and adjust hollow-metal doors accurately in frames, within clearances specified below.

1. Non-Fire-Rated Steel Doors: Comply with SDI A250.8.
2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.
3. Smoke-Control Doors: Install doors according to NFPA 105.

D. Glazing: Comply with installation requirements in Section 08 80 00 "Glazing" and with hollow-metal manufacturer's written instructions.

3.4 REPAIR

A. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

3.5 ADJUSTING

A. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

B. Metallic-Coated (Galvanized) Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.

END OF SECTION

SECTION 08 14 16 - FLUSH WOOD DOORS
(ADDENDUM 003)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Provide and install all wood doors and components specified herein and shown on all Schedules and Drawings.

B. Refinishing of wood doors per Door & Frame Schedule

C. Related Requirements

1. Section 08 11 13 - Hollow Metal Doors and Frames.
2. Section 08 71 00 - Door Hardware.
3. Section 08 80 00 - Glazing.

1.3 REFERENCE STANDARDS

A. ANSI A208.1 - Standard for Particle Board; 1998.

B. ASTM E 413 - Classification for Rating Sound Insulation; 2004.

C. ASTM E 1408 - Standard Test Method for Laboratory Measurement of the Sound Transmission Loss of Door Panels and Door Systems; 1991 (Reapproved 2000).

D. Michigan Building Code (MBC) 2015.

E. ITS (DIR) - Directory of Listed Products; Intertek Testing Services NA, Inc.; current edition.

F. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2010.

G. UL (BMD) - Building Materials Directory; Underwriters Laboratories Inc.; current edition.

H. WDMA I.S.1-A - Architectural Wood Flush Doors; Window and Door Manufacturers Association; 2004.

1.4 COORDINATION

A. Coordinate all work with job site superintendent and all applicable trades.

1.5 SUBMITTALS

A. See Section 01 33 00 – Submittals and Substitutions for submittal procedures.

B. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.

C. Shop Drawings: Show doors and frames, elevations, sizes, types, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, cutouts for glazing and other details.

D. Test Reports: Show compliance with specified requirements for the following:

1. Acoustical doors and frames.

E. Samples: Submit two samples of door veneer, 8-1/2 by11 inch in size illustrating wood grain, stain color, and sheen.

F. Manufacturer's Installation Instructions: Indicate special installation instructions.

1.6 QUALITY ASSURANCE

A. Maintain one copy of the specified door quality standard on site for review during installation and finishing.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

C. Installed Fire Rated Door Assembly: Conform to NFPA 80 for fire rated class as scheduled.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Package, deliver and store doors in accordance with specified quality standard.

B. Accept doors on site in manufacturer's packaging. Inspect for damage.

C. Protect doors with resilient packaging. Do not store in damp or wet areas; or in areas where sunlight might bleach veneer. Seal top and bottom edges if stored more than one week. Break seal on site to permit ventilation.

D. Protect existing doors from damage during refinishing.

1.8 WARRANTY

A. Interior Doors: Provide manufacturer's warranty for the life of the installation.

B. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

C. Warranty shall also include refinishing and reinstallation which may be required due to repair or replacement of the defective doors.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Wood Veneer Faced Doors (with blocking added as required to meet or exceed Extra Heavy Duty Performance Level):

1. Graham Wood Doors; Product GPD PC5: www.grahamdoors.com.
2. Eggers Industries; Product PC-5: www.eggersindustries.com.
3. Marshfield Door Systems, Inc; Product DPC-1: www.marshfielddoors.com.
4. Algoma Hardwoods, Inc.; Product Novodor: www.algomahardwoods.com.
5. Oshkosh Architectural Door Company; Product GP: www.oshkoshdoor.com.
6. VT Industries Inc.; Product 5502: www.vtindustries.com.
7. Substitutions: See Section 01 33 00 – Submittals and Substitutions.

2.2 DOORS

A. All Doors: See drawings for locations and additional requirements.

1. Quality Level: Custom Grade A, Extra Heavy Duty performance, in accordance with WDMA I.S.1-A.
2. Wood Veneer Faced Doors: 5-ply unless otherwise indicated.

B. Interior Doors: 1-3/4 inches thick unless otherwise indicated; flush construction.

1. Provide solid core doors at all locations. Particleboard core shall comply with ANSI A 208, Type I, Grade 1-LD-2 (32 lb. minimum core).
2. Fire Rated Doors: Category ‘A’, tested to UL 10C and NFPA 252 and to the ratings indicated on drawings in accordance with International Building Code ("positive pressure"); UL or WH (ITS) labeled.
3. Sound Retardant Doors: Minimum STC of 50, calculated in accordance with ASTM E 413, tested in accordance with ASTM E 1408.
4. Wood veneer facing with factory transparent finish.

2.3 DOOR AND PANEL CORES

A. Non-Rated Solid Core and 20 Minute Rated Doors: Type particleboard core (PC), plies and faces as indicated above.

B. Fire Rated Doors: Mineral core, Type FD, plies and faces as indicated above; with core blocking as required to provide adequate anchorage of hardware without through-bolting.

C. Sound Retardant Doors: Equivalent to Type PC construction with core as required to achieve rating specified; plies and faces as indicated above.

2.4 DOOR FACINGS

A. Wood Veneer Facing for Transparent Finish: White Birch, veneer grade as specified above, plain sliced, book veneer match, center balance assembly match; unless otherwise indicated.

1. Vertical Edges: Same species as face veneer.
2. Pairs: Pair match each pair; set match pairs within 10 feet of each other when doors are closed.

B. Facing Adhesive: Type I - waterproof.

2.5 ACCESSORIES

A. Metal Louvers:

1. Material and Finish: Roll formed steel; pre-painted finish to color as selected.
2. Louver Blade: Inverted slat blade.
3. Size: 24” wide by 12” tall.
4. Louver Free Area**:** 50 percent.
5. Frame: Fixed, vandal proof style with surface fasteners.
6. Locations: Doors A141A and A144A

B. Glazing Stops

1. Non-rated: Manufacturer's standard flush wood bead to match face veneer.
2. Fire-rated: Veneer wrapped non-combustible material of profiles to match non-rated moldings, 20-minute wood bead on 20-minute rated wood doors.
3. Intumescent Seals: As required to meet positive pressure test at all rated doors.

C. Coat Hooks: Provide coat hooks on back of all Single Use Toilet Room Doors as noted in drawings. Basis of Design: Richelieu Contemporary Stainless Steel Hook 51124

2.6 DOOR CONSTRUCTION

A. Fabricate doors in accordance with door quality standard specified.

B. Cores Constructed with stiles and rails:

1. Provide solid blocks at lock edge, top of door for closer, and vertical rod exits for hardware reinforcement.
2. Provide solid blocking for other through bolted hardware.

C. Where supplementary protective edge trim is required, install trim after veneer facing has been applied full-width.

D. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.

E. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.

F. Provide edge clearances in accordance with the quality standard specified.

2.7 FACTORY FINISHING - WOOD VENEER DOORS

A. Factory finish doors in accordance with specified quality standard:

1. Comply with recommendations of AWI System TR-6 (catalyzed polyurethane) factory finishing of doors utilizing manufacturer's standard finishing system, color as selected by Architect.

2. Factory Seal all doors on all six (6) sides using Manufacturer's Standard Sealer.

B. Seal door top edge with matching sealer and veneer to match door facing when exposed to view from occupancy above.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that opening sizes and tolerances are acceptable.

C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

3.2 SHOP REFINISHING - WOOD VENEER DOORS

A. Remove hardware, and sand existing doors to remove visible markings, stain, and minor imperfections.

B. Shop finish doors in accordance with specified quality standard:

1. Comply with recommendations of AWI System TR-6 (catalyzed polyurethane) finishing of doors utilizing manufacturer's standard finishing system, color as selected by Architect.

2. Seal all doors on all six (6) sides using Manufacturer's Standard Sealer.

C. Seal door top edge with matching sealer and veneer to match door facing when exposed to view from occupancy above.

D. Touch up stain in field as required.

3.3 INSTALLATION

A. Install doors in accordance with manufacturer's instructions and specified quality standard.

B. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.

C. Shop-Finished Doors: Trim or

D. Use machine tools to cut or drill for hardware.

E. Coordinate installation of doors with installation of frames and hardware.

F. Coordinate installation of glazing.

G. Install door louvers plumb and level.

3.4 FIELD QUALITY CONTROL

A. Conform to specified quality standard for fit and clearance tolerances.

B. Conform to specified quality standard for telegraphing, warp, and squareness.

3.5 ADJUSTING

A. Adjust doors for smooth and balanced door movement.

B. Adjust closers for full closure.

C. Adjust doors to hang free from rattling when in latched position.

D. Replace prefinished doors damaged during installation.

END OF SECTION