

ADDENDUM No. 1

for

**AIP #3-23-0005-070-2016
Gate 3 Passenger Boarding Bridge & Holding Area**

at Bangor International Airport – Bangor, ME

Due to be opened 2:00 p.m., Tuesday April 26, 2016

Date: _____ **April 18, 2016** _____

The attention of firms submitting proposals for the work named above is called to the following modifications to the documents as were issued.

The items set forth herein, whether of clarification, omission, addition and/or substitution, shall be included and form a part of the Proposer's submitted materials and the corresponding contract when issued. No claim for additional compensation, due to lack of knowledge of the contents of this Addendum will be considered.

All Proposer's are advised that receipt of this notice and all attached material must be duly acknowledged in the space provided on the signature page of the proposal documents, and **by the insertion of this sheet, signed, and submitted with your Proposal package.**

This form must be signed and attached to the original copy of your submission.

The attached sheets contain information or clarifications requested or discussed.

Receipt of Addendum No. 1 to the REQUEST FOR PROPOSALS for **AIP # 3-23-0005-070-2016 Gate 3 Passenger Boarding Bridge & Holding Area** at Bangor International Airport is hereby acknowledged.

COMPANY NAME: _____

SIGNED BY: _____

NAME AND TITLE PRINTED: _____

TELEPHONE: _____ FAX: _____

CLARIFICATIONS

Addendum Item No.1 -

Submitted Question:

What is the anticipated valuation of this project?

Clarification/Reply:

\$2,000,000 - \$2,500,000

Addendum Item No.2 -

Submitted Question:

The total construction time is clearly stated to be 200 calendar days, but are there specific timeframes associated with the completion of individual phases? If so, will liquidated damages be assessed after each phase, or only if the 200 calendar days is exceeded?

Clarification/Reply:

There are no specific timeframes associated with the completion of individual phases. Liquidated damages will only be assessed if the 200 calendar day limit is exceeded.

Addendum Item No.3 -

Submitted Question:

FAA General Provisions 00 73 00, 100-04 Project Progress Schedule: Is a typical Gantt Chart schedule depicting the critical path an acceptable form of scheduling for this project? Sections 01 32 00 and 01 33 00 seem to indicate that a Gantt Chart will be acceptable.

Clarification/Reply:

Gantt Chart schedules depicting the critical path are acceptable.

Addendum Item No.4 -

Submitted Question:

Supplemental Provisions 01 14 01, 13.0 Insurance, Section d: This section indicates that the required Builder's Risk Insurance is only to cover the value of new work. Please confirm that the policy is not intended to cover any other portions of the existing facility beyond our limited scope of work.

Clarification/Reply:

Builder's Risk Insurance is only to cover the value of new work.

Addendum Item No.5 -

Submitted Question:

Closeout Submittals 01 78 00, 1.2, B, 3: What is the expectation for a "Final Site Survey" for this project?

Clarification/Reply:

Final Site Survey shall include topographic survey of the new HMA pavement on a 10' x 10' grid including the perimeter where new is to match existing. It shall also include grade shots on the new precast concrete ramp in the same locations the elevations are called out on the drawings.

Addendum Item No.6 -

Question asked at the Pre-bid Meeting:
Is there an allowance for data/security on this project?

Clarification/Response:

No. Please include the cost of all data/security work in bid item no. 1 *Terminal Holding Area*. Additionally, all access control and video surveillance terminations, programming, configuring, and testing must be performed by Northeast Security Systems Inc.

Addendum Item No.7 -

Question asked at the Pre-Bid Meeting:
Please clarify which bid item the power for the Passenger Boarding Bridge should be included under.

Clarification/Response:

All costs associated with the power feeds for the passenger boarding bridge and associated equipment shall be included in bid item no. 14 00 00-1 *Apron Drive Passenger Boarding Bridge*.

Addendum Item No.8 -

Question asked at the Pre-bid Meeting:
The General Electrical System notes on drawing E-004 appear to refer to work included in the current downstairs renovation project – please clarify.

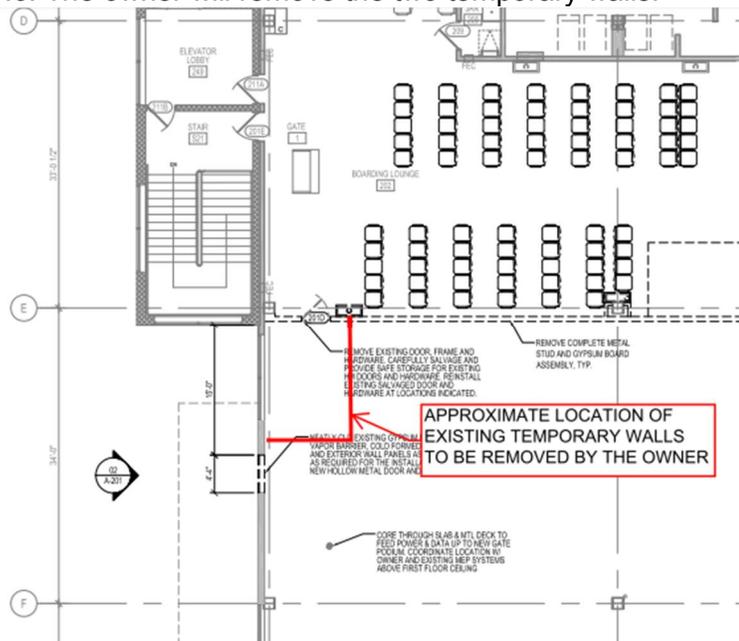
Clarification/Response:

The General Electrical System notes on drawing E-004 have been updated. Please refer to revised drawing E-004 issued under this addendum.

Addendum Item No.9 -

Question asked during the site walk:
Will demolition of the existing temporary police office walls (shown below) be part of the scope of this project?

Clarification/Response: No. The owner will remove the two temporary walls.



Addendum Item No.10 - The current list of plan holders is attached to this addendum.

Addendum Item No.11 - The sign-in sheet from the pre-bid meeting is attached to this addendum.

CHANGES TO SPECIFICATIONS

Addendum Item No.12 -

REVISE Specification 28 13 00 *ACCESS CONTROL SYSTEM* section 1.1.B. to read as follows:

- “B. This item includes furnishing and installation of new Secure Identification Display Area (SIDA) door control and monitoring systems. The new doors will include contactless smart card readers, magnetic door sensors, electric strikes, Request-to-Exit (REX) ~~Passive Infra Red (PIR) detectors~~ ~~Panic bars~~, access control panels (as required), and associated conduit and wiring.”

Addendum Item No.13 -

REVISE Specification 28 13 00 *ACCESS CONTROL SYSTEM* section 1.2.A.1.b. to read as follows:

- “b. ~~Request to Exit (REX) Infra Red Detectors~~ ~~Panic Bars w/ REX~~”

Addendum Item No.14 -

REMOVE Specification 28 13 00 *ACCESS CONTROL SYSTEM* section 2.3.H. and REPLACE with the following:

- “H. Refer to 08 71 00 *DOOR HARDWARE* for Panic Bar with integral Request-to-Exist (REX).”

Addendum Item No.15 -

REMOVE Specification 08 71 00 *DOOR HARDWARE* in its entirety and REPLACE with the revised specification provided under this addendum.

CHANGES TO DRAWINGS

Addendum Item No.16 -

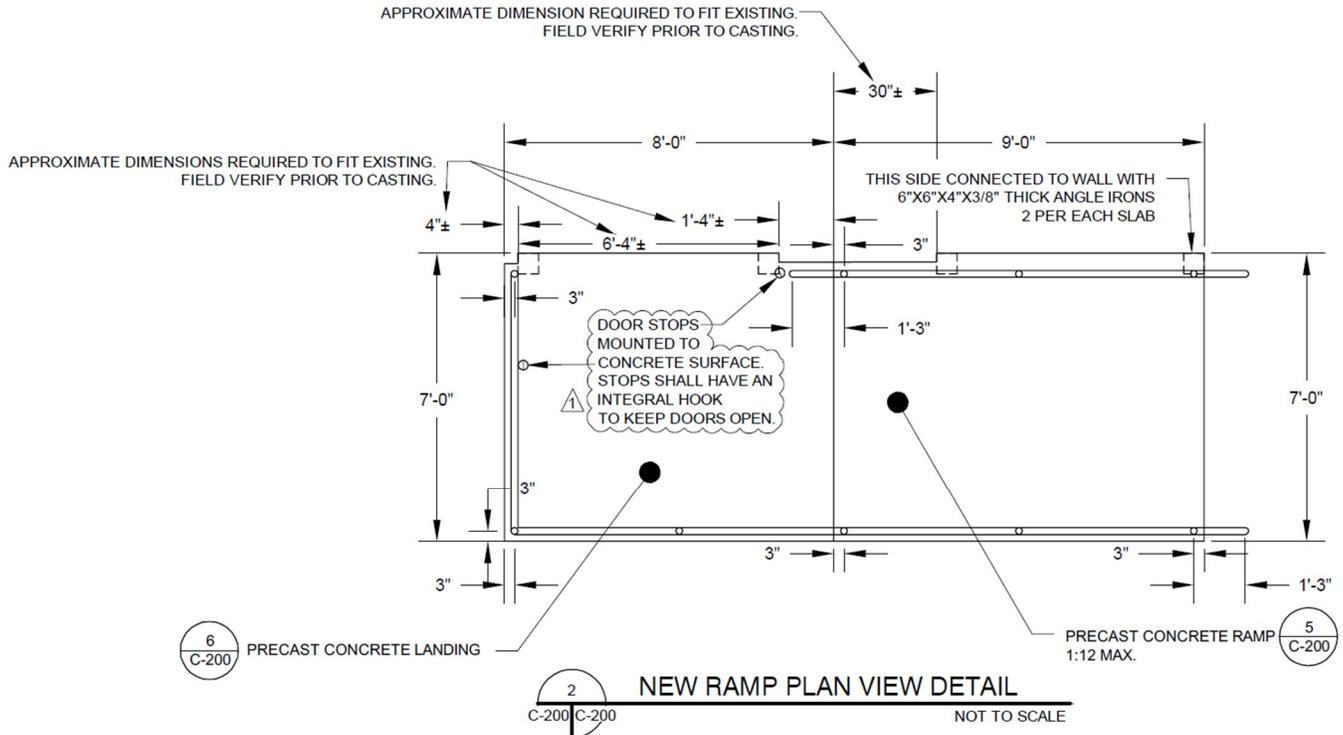
REMOVE and REPLACE Drawing No. G-001 *Phasing Plan*

Changes to the drawing include the revision of a line type in the Phasing Legend to match the plan.

Addendum Item No.17 -

REVISE Detail 2 on Drawing No. C-200 as follows:

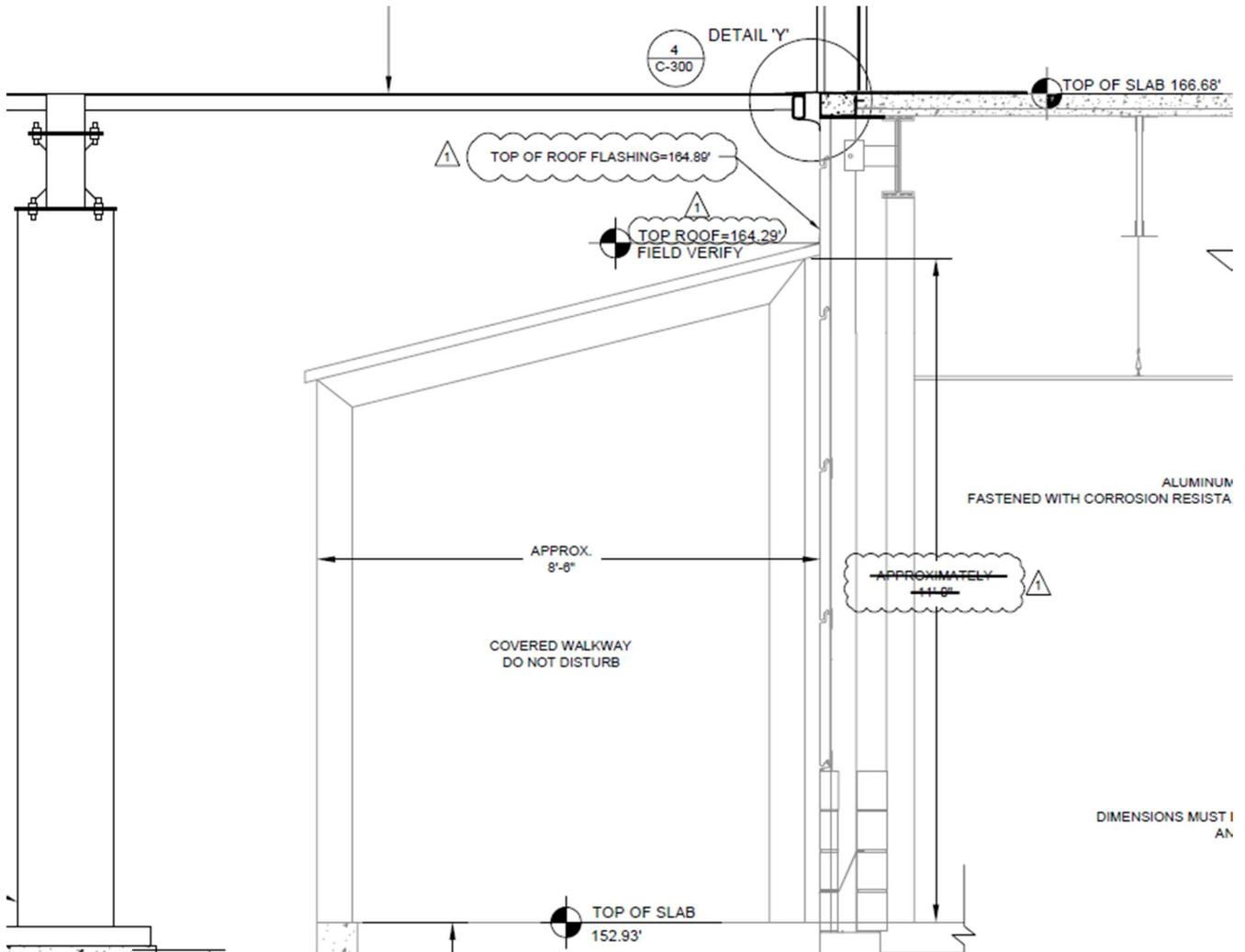
Changes to the drawing consist of adding two door stops.



Addendum Item No.18 -

REVISE the notes on Detail 6 of Drawing No. C-300 as follows:

Changes/additions provide more precise information on the height of the existing covered walkway.



Addendum Item No.19 -

REMOVE and REPLACE Drawing No. AD-101 *Second Floor Demolition Plan*

Changes to the drawing include the revision of the wall type along column line 4. Precast panels from the original 1970 Structure where removed during the 2008 renovation between column lines F-G and replaced with 6" MTL stud wall.

Addendum Item No.20 -

REMOVE and REPLACE Drawing No. AD-102 *Roof Demolition Plan*

Changes to the drawing include the revision of roof demo scope to prepare for new cricket installation.

Addendum Item No.21 -

REMOVE and REPLACE Drawing No. AD-120 *First Floor Demolition RCP*

Changes to the drawing include but are not limited to the addition of ceiling demo to allow access for new work associated with the PBB door threshold installation.

Addendum Item No.22 -

REMOVE and REPLACE Drawing No. AD-121 *Second Floor Demolition RCP*

Changes to the drawing include the addition of the exit sign symbol to the RCP legend.

Addendum Item No.23 -

REMOVE and REPLACE Drawing No. A-102 *Roof Plan*

Changes to the drawing include but are not limited to the modification of RTU-15 roof crickets, and roof detail notes revised to reference TPO roofing instead of PVC.

Addendum Item No.24 -

REMOVE and REPLACE Drawing No. A-121 *Second Floor RCP*

Changes to the drawing include but are not limited to the addition of the exit sign symbol to the RCP legend, and revision of line weights to clarify scope of new ceiling work.

Addendum Item No.25 -

REMOVE and REPLACE Drawing No. A-501 *Interior Details*

Changes to the drawing include but are not limited to the revision of column detail # 11 to more accurately reflect existing conditions.

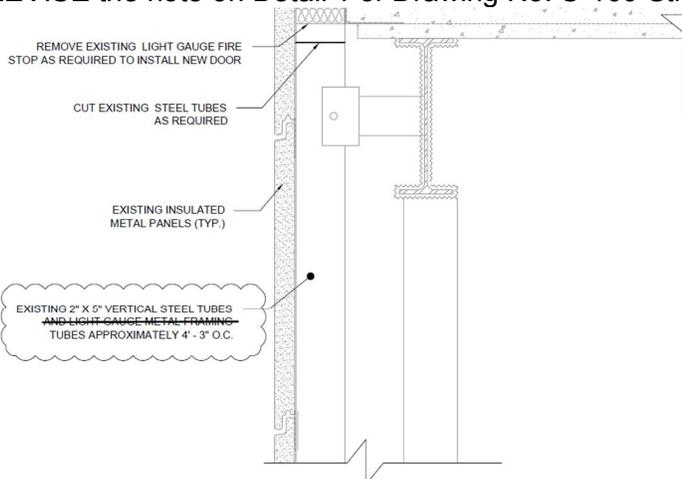
Addendum Item No.26 -

REMOVE and REPLACE Drawing No. A-621 *Door Schedule & Details*

Changes to the drawing include the removal of references to light gauge metal framing in detail # 1.

Addendum Item No.27 -

REVISE the note on Detail 1 of Drawing No. S-100 *Structural Details 1 of 2* as follows:



DOOR 220A - STRUCTURAL
DEMOLITION DETAIL AT EXTERIOR WALL
NOT TO SCALE

Addendum Item No.28 -

REMOVE and REPLACE Drawing No. P-003 *Plumbing Plan Second Floor*
Changes to the drawing include coordination of RTU-15 location.

Addendum Item No.29 -

REMOVE and REPLACE Drawing No. M-003 *Mechanical Demo Second Floor*
Changes to the drawing include modification of ductwork demo scope.

Addendum Item No.30 -

REMOVE and REPLACE Drawing No. M-004 *Mechanical Duct Plan Second Floor*
Changes to the drawing include coordination of RTU-15 location and revisions to ductwork runs.

Addendum Item No.31 -

REMOVE and REPLACE Drawing No. M-006 *Mechanical Pipe Plan Second Floor*
Changes to the drawing include but are not limited to the coordination of RTU-15 location.

Addendum Item No.32 -

REMOVE and REPLACE Drawing No. M-007 *Mechanical Details*
Changes to the drawing include revisions to the duct as a result of coordination of RTU-15 location.

Addendum Item No.33 -

REMOVE and REPLACE Drawing No. E-004 *Electrical Power/Data Plan*
Changes to the drawing include but are not limited to the coordination of RTU-15 location and removal of notes that are not applicable to the project.

Addendum Item No.34 -

REMOVE and REPLACE Drawing No. E-005 *Electrical Plan First Floor*
Changes include the cable for new camera to the I.T. Room South.

Addendum Item No.35 -

REMOVE and REPLACE Drawing No. E-006 *Electrical Details*
Changes to the drawing include revisions to the *RTU-15 Electrical Detail*.

Addendum Item No.36 -

REMOVE and REPLACE Drawing No. AC-1 *Second Floor Access Control System Plan*.
Changes to the drawing include but are not limited to removal of the passive infra-red detector, addition of the panic bar with integral request-to-exit (REX), and clarification/more detail on conduit and wiring associated with the Access Control System.

END OF ADDENDUM #1 AFTER ATTACHMENTS

ATTACHMENTS

Bangor International Airport
Bangor Maine
AIP No. 3-23-0005-070-2016
Gate 3 Passenger Boarding Bridge & Holding Area
Plan Holders List

iSqFt	Eric Fritz	efritz@ISQFT.com
Construction Summary	Mike Naczas	mnaczas@constructionsummary.com
cdc news	n/a	plans@cdcnews.com
Associated General Contractors of Maine	n/a	info@agcmaine.org
Thyssenkrupp Airport Systems	Tony Thompson	tony.thompson@thyssenkrupp.com
Maine Fire Protection Systems	Jennifer Sullivan	<a href="mailto:Jen.Sullivan<jsullivan@mefirepro.com>">Jen Sullivan <jsullivan@mefirepro.com>
Sargent Corporation	Pat Dubay	pdubay@sargent-corp.com
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Nickerson & O'Day, Inc.	Tim Porter	Timothy Porter <tporter@nickoday.com>
Twin City Sheet Metal Inc.	Gerald Kelly	Gerald Kelly <gkelly@twincitysheetmetal.com>
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ELCO Electric	Chris Philbrick	Philbrick@aol.com
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Construction Journal	Ounica Moore	Ounica Moore <O.Moore@constructionjournal.com>
Associated Builders	Wilson King	Wilson King <Wilsonk@associatedbuilders.net>
Sullivan and Merritt Constructors, Inc.	Jon E. Lee	Jon Lee <jlee@smcinc.net>
Dunbar and Brawn Construction, Inc.	Wendy Clancy Nick B.	Wendy Clancy <wendyc@dunbarandbrawn.com> NickB@dunbar@brawn.com
Dodge Data & Analytics	Brad Earich	Brad Earich <brad.earich@construction.com>

BANGOR INTERNATIONAL AIRPORT – AIP 3-23-0005-070-2016
PRE-BID MEETING SIGN – IN
April 14, 2015 1:00 PM OFFICE OF AIRPORT DIRECTOR
Gate 3 Passenger Boarding Bridge & Holding Area

Name	Company/Agency	Phone	E-Mail
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Randy Bragg	"	207-827-8001	info@carpentersassoc.com
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Tim Portier	Nickerson's Oldway	207-989-7400	TPORTIER@WICKLOWAY.COM
Chris Filbrick	ELCO ET.	942-4659	PHILBRICK@AOL.COM
Gerald Kelly	TwinCity SheetMetal	990-5605	gkelly@twincitysheetmetal.com
Scott Young	ABM	992-9250	SYOUNG@abmmechanical.com
Kuan Knowlton	Honeywell	212-5878	Kuan.Knowlton@Honeywell.com
WES JORDAN	SHERIDAN	207-453-9311	wjordan@sheridancorp.com
Bob Young	Bowman Constructors	207-368-2408	Bids@bowmanconstructors.com
Tim Pione	BID	207-992-4642	tpione@flybangor.com
MARY KELLY	BGR	207-992-4574	mkelly@flybangor.com
Chris Cross	Hampden Electrical	207-942-6255	Cross@HampdenElectrical.com
Glenn Quintal	Hughes Bros	207-942-4606	gquintal@hughesbrosc.com

SECTION 087100

DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

1. This Section includes commercial door hardware for the following:
 - a) Swinging doors.
2. Door hardware includes, but is not necessarily limited to, the following:
 - a) Mechanical door hardware.
 - b) Electromechanical door hardware.
3. Related Sections: Electronic door components are listed in sets for coordination purposes. Electronic components shall be furnished and installed by Division 28 subcontractor.
 - a) Division 08 Section "Hollow Metal Doors and Frames".
 - b) Division 28 Section "Access Control".
4. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
 - a) ANSI A117.1 - Accessible and Usable Buildings and Facilities.
 - b) ICC/IBC - International Building Code.
 - c) NFPA 70 - National Electrical Code.
 - d) NFPA 80 - Fire Doors and Windows.
 - e) NFPA 101 - Life Safety Code.
 - f) NFPA 105 - Installation of Smoke Door Assemblies.
 - g) State Building Codes, Local Amendments.
5. Standards: All hardware specified herein shall comply with the following industry standards:
 - a) ANSI/BHMA Certified Product Standards - A156 Series
 - b) UL10C – Positive Pressure Fire Tests of Door Assemblies

1.3 SUBMITTALS

1. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
2. 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.
 - a) Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
 - b) 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.

- c) Content: Include the following information:
 - (1) Type, style, function, size, label, hand, and finish of each door hardware item.
 - (2) Manufacturer of each item.
 - (3) Fastenings and other pertinent information.
 - (4) Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - (5) Explanation of abbreviations, symbols, and codes contained in schedule.
 - (6) Mounting locations for door hardware.
 - (7) Door and frame sizes and materials.
 - (8) Warranty information for each product.
 - d) 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.
3. 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.
4. Informational Submittals:
 - a) 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.
5. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals.

1.4 QUALITY ASSURANCE

- 1. 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.
- 2. 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.
- 3. 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.

4. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.
5. 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:
 - a) Function of building, purpose of each area and degree of security required.
 - b) Plans for existing and future key system expansion.
 - c) Requirements for key control storage and software.
 - d) Installation of permanent keys, cylinder cores and software.
 - e) Address and requirements for delivery of keys.
6. 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.
 - a) 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.
 - b) Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
 - c) Review sequence of operation narratives for each unique access controlled opening.
 - d) Review and finalize construction schedule and verify availability of materials.
 - e) Review the required inspecting, testing, commissioning, and demonstration procedures.
7. 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

1. 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.
2. 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.
3. 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

1. 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.

2. 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.
3. 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

1. 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.
2. 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:
 - a) Structural failures including excessive deflection, cracking, or breakage.
 - b) Faulty operation of the hardware.
 - c) Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - d) Electrical component defects and failures within the systems operation.
3. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.
4. Special Warranty Periods:
 - a) Ten years for mortise locks and latches.
 - b) Five years for exit hardware.
 - c) Twenty five years for manual surface door closer bodies.

1.8 MAINTENANCE SERVICE

1. 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

1. 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.
2. 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:

3. 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.
4. 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

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

2.3 CYLINDERS AND KEYING

1. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.
2. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.
3. Cylinders: Original manufacturer cylinders complying with the following:
 - a) Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
 - b) Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.

- c) 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.
 - d) Keyway: Manufacturer's Standard. Match Facility Standard.
- ~~4. Patented Cylinders: ANSI/BHMA A156.5, Grade 1, certified patented 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. Cylinders are to be factory keyed with owner having the ability for on-site original key cutting.~~
- ~~a) Acceptable Manufacturers:
 - (1) Sargent Manufacturing (SA) – XC Series.
 - (2) No Substitution. Match existing.~~
5. Keying System: Each type of lock and cylinders to be factory keyed.
- a) Conduct specified "Keying Conference" to define and document keying system instructions and requirements.
 - b) Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
 - c) Existing System: Key locks to Owner's existing system.
6. Key Quantity: Provide the following minimum number of keys:
- a) Change Keys per Cylinder: Two (2)
 - b) Master Keys (per Master Key Level/Group): Five (5).
 - c) Construction Keys (where required): Ten (10).
 - d) Temporary Control Key: One (1).**
 - e) Permanent Cylinder Compatible with owners existing control key**
7. Construction Keying: Provide **temporary construction core, construction keys, and temporary control key.** ~~master keyed cylinders.~~
8. Key Registration List (Bitting List):
- a) Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
 - b) Provide transcript list in writing or electronic file as directed by the Owner.

2.4 MECHANICAL LOCKS AND LATCHING DEVICES

1. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 certified. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
- a) Mortise locks to be certified Security Grade 1.
 - b) Extended cycle test: Locks to have been cycle tested in ordinance with ANSI/BHMA 156.13 requirements to 10 million cycles.
 - c) Acceptable Manufacturers:
 - (1) Sargent Manufacturing (SA) – 8200 Series.
 - (2) No Substitution. Match existing.

2.5 LOCK AND LATCH STRIKES

1. 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:
- a) Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.

- b) Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
 - c) Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
 - d) Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.
2. Standards: Comply with the following:
- a) Strikes for Mortise Locks and Latches: BHMA A156.13.
 - b) Strikes for Bored Locks and Latches: BHMA A156.2.
 - c) Strikes for Auxiliary Deadlocks: BHMA A156.5.
 - d) Dustproof Strikes: BHMA A156.16.

~~2.6~~ ELECTROMAGNETIC LOCKING DEVICES

- ~~1. Furnished and installed by Division 28 subcontractor.~~
 - ~~a) Acceptable Manufacturers: Match existing.~~
 - ~~(1) Securitron (SU) M62 Series.~~

2.7 CONVENTIONAL EXIT DEVICES

1. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
- a) 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.
 - b) 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.
 - c) 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.
 - d) 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.
 - e) Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
 - (1) Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
 - (2) Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
 - f) Extended cycle test: Devices to have been cycle tested in ordinance with ANSI/BHMA 156.2 requirements to 50 million cycles.
 - g) Rail Sizing: Provide exit device rails factory sized for proper door width application.
 - h) Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.
 - i) Furnish Electric Push Rail Monitor Switch as indicated (55 feature).**
2. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 certified panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
- a) Acceptable Manufacturers: Match Existing

- (1) Sargent Manufacturing (SA) - 80 Series.
- (2) No Substitution.

2.8 DOOR CLOSERS

1. All door closers specified herein shall meet or exceed the following criteria:
 - a) General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers including installation and adjusting information on inside of cover.
 - b) Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
 - c) Cycle Testing: Provide closers which have surpassed 15 million cycles in a test witnessed and verified by UL.
 - d) Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the physically handicapped, provide units complying with ANSI ICC/A117.1.
 - e) Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
 - f) Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
 - g) Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates, and through-bolt and security type fasteners as required for proper installation.
2. Door Closers, Surface Mounted (Commercial Duty): ANSI/BHMA 156.4, Grade 1 certified surface mounted, institutional grade 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, closing sweep, and latch speed control valves. Provide non-handed units standard.
 - a) Acceptable Manufacturers: Match Existing.
 - (1) Sargent Manufacturing (SA) - 1431 Series.

2.9 ARCHITECTURAL TRIM

1. Door Protective Trim
 - a) General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
 - b) 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.
 - c) Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
 - (1) Stainless Steel: 300 grade, 050-inch thick.
 - d) Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
 - e) Acceptable Manufacturers:
 - (1) Hiawatha, Inc. (HI).
 - (2) Rockwood Manufacturing (RO).
 - (3) Trimco (TC).

2.10 ARCHITECTURAL SEALS

1. 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.
2. 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.
 - a) Provide smoke labeled perimeter gasketing at all smoke labeled openings.
3. 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.
 - a) Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and UBC 7-2, Fire Tests of Door Assemblies.
4. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.
5. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
6. Acceptable Manufacturers:
 - a) National Guard Products (NG).
 - b) Pemko Manufacturing (PE).
 - c) Reese Enterprises, Inc. (RE).

2.11 ELECTRONIC ACCESSORIES

1. Digital Keypad, **Door Monitor Switches, Mortise Unlatch Devices and Power Supplies:** Furnished and installed by Division 28 subcontractor.
 - ~~a) Acceptable Manufacturers: Match existing.~~
 - ~~(1) Securitron (SU) DK Series.~~
 - ~~2. Touch Plates: Furnished and installed by Division 28 subcontractor.~~
 - ~~a) Acceptable Manufacturers: Furnished and installed by Division 28 subcontractor.~~
 - ~~(1) Securitron (SU) SP Series.~~
 - ~~3. Power Supplies: Furnished and installed by Division 28 subcontractor.~~
 - ~~a) Acceptable Manufacturers:~~
 - ~~(1) Securitron (SU) BPS Series.~~

2.12 FABRICATION

1. 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.

2.13 FINISHES

1. 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.
2. 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.
3. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

1. 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.
2. 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

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

3.3 INSTALLATION

1. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
 - a) 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.
2. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 - a) Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - b) Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
 - c) Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
 - d) Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
3. 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.

4. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
5. 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

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

3.5 ADJUSTING

1. 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

1. 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.
2. Clean adjacent surfaces soiled by door hardware installation.
3. 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

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

3.8 DOOR HARDWARE SETS

1. 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.
2. Manufacturer's Abbreviations:

1. MK - McKinney
2. PE - Pemko
3. SA - Sargent
4. SU - Securitron
5. NO - Norton
6. RO - Rockwood

Hardware Schedule

Set: 1.0

Doors: 220A

Description: Rated Exterior Card Access (inswing with Panic Hardware)

32 Hinge	<u>TA2314 x NRP 5" x 4-1/2"</u>	US32D MK 087100
1 Electric Hinge	TA2314 5" x 4-1/2" x QC-4	US32D MK 087100
4 Magnetic Lock	M62BD By Security Contractor	SU 281300
1 Exit Device	<u>11 12 24 63 55 8904 PTB</u>	US32D SA 087100
1 Door Closer	<u>SRI 1431 OTB</u>	EN SA 087100
1 Wall Holders (Magnetic)	998	689 RF 087100
1 Kick Plate	<u>K1050 8" high</u>	US4 RO 087100
1 Gasketing	<u>S44D</u>	PE 087100
1 Sweep	<u>3452DV TKSP8</u>	PE 087100
4 Digital Entry	DK 26SS By Security Contractor	SU 281300
4 Touch Plate	SP 1 By Security Contractor	SU 281300
4 Power Supply	BPS 24 3 By Security Contractor	SU 281300
1 Mortise Unlatch Device	MUNL	SU 281300

Notes: Door controller and security management software by others.

OPERATION: Keypad inside and ~~touch plate push bar~~ outside temporarily unlock ~~magnetic lock electromechanical strike~~. ~~Lock can be put into passage mode by door system controller. Mag lock is fail-safe~~ **Electromechanical strike is fail-secure** and includes ~~status sensor latchbolt monitor switch~~. Fire exit hardware is night latch function: Inside key retracts latch bolt. Push bar always allows ingress mechanically. **Wall magnet holds door open under normal conditions and releases during smoke event.**

Verify function with local AHJ.

Set: 2.0

Doors: 220B, 220C

Description: Classroom Function + Closer

1 Gasketing	<u>S88D (Head & Jambs)</u>	PE 087100
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Set: 3.0

Doors: 222

Description: Privacy Function + Closer

3 Hinge	<u>TA2714 NRP 4-1/2" x 4-1/2"</u>	US26D MK 087100
1 Privacy Set	<u>49 8265 LNJ</u>	US26D SA 087100
1 Closer	<u>1431 CPS</u>	EN SA 087100
1 Kick Plate	<u>K1050 8" high</u>	US4 RO 087100
1 Gasketing	<u>S44D</u>	PE 087100

END OF SECTION
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