



HARRIMAN

ADDENDUM

Date April 3, 2020

To Prospective Bidders

Re Addendum No. 6 to the Construction Documents for:

University of Maine at Augusta
Campus Welcome Center
Augusta, Maine
Project No. 19331

This Addendum forms a part of the Contract Documents and modifies the original Construction Documents dated March 11, 2020 and Addendum No. 1 dated March 17, 2020 and Addendum No. 2 dated March 19, Addendum No.3 dated March 20, 2020, Addendum No.4 dated March 26, 2020 and Addendum No. 5 dated March 30, 2020. Acknowledge receipt of this Addendum in the space provided in the Bid Form.

This Addendum consists of seven pages and specification sections 004113, 087100, 260741 and drawings as listed on page seven.

Harriman

AUBURN

Mark Lee, AIA, LEED AP
Principal, Senior Architect

BOSTON

PORTLAND

PORTSMOUTH

PRE-BID QUESTIONS AND ANSWERS

Q1. Is the Structural Steel erector required to be AISC certified?

A1. Yes.

Q2. The mockup panels described in section 054000 1.7G is extensive. I do not see where it is referred to other specifications. This work will need to be completed by several trades and their cost should be carried as part of their bid. If you would please supply a sketch of this mockup and note that all related trades are responsible to complete this mockup, it would help clarify what is required.

A2. Detailed mockup panels are a project requirement. A sketch will be forthcoming and will include a portion of exterior wall that includes brick veneer, metal panel, and storefront which is a reoccurring condition at the Admissions wing and Function Room.

Q3. In specification 033000 1.4 H is states that the concrete slab needs to cure for 120 days minimum before installation of floor systems, including gymnasium athletic flooring.

a. Is there an athletic floor product in this project?

b. Is the intent of this section to reduce the moisture in the concrete floor slab for the flooring product in lieu of moisture mitigation product? If so, if this does not reduce the concrete slab moisture, will a floor mitigation product be approved as an extra, if required?

A3. There is no athletic flooring in this project.

Q4. Project Scheduling:

1. On Phase 1 new construction, the final completion date is before the substantial completion date. Please advise.

2. On Phase 2 between the start date and substantial completion there is only 13 calendar days, is this correct?

A4. See "Changes to Specifications" section 011000 issued in this Addendum.

Q5. 104400 Fire-Protection Specialties: We do not see fire extinguishers or cabinets on the code compliance plans or the floor plans. Please let us know where these are required.

A5. Fire Extinguisher Cabinets (FEC) are identified on SKA03 issued with this Addendum..

Q6. 108500 Building Specialties: A knock box is schedule for Entrance V001, but we did not find this room on the drawings. Please advise if a knock box is required.

A6. A knock box is required and will be located in the Randall Lobby 108. The specifications have been corrected with this Addendum.

Q7. A10-1 First Floor Plan Area A, Admissions Open Work Area 180: We believe the interior elevations tag for this room should reference drawing A81-2. Also, BL1 shown on elevation D5/A81-2 doesn't show up on the floor plan and we don't want it to get missed.

A7. See previous response in Addendum 4.

- Q8. Section 00 21 13 item 3.12 indicates to check section 00 73 46 to see if Davis-Bacon federal wage rates are required, however this spec section is not in the spec book. It is listed in the table of contents and there is a wage determination in section 000200 Information available to bidders. Please confirm bids have to comply with this determination.
- A8. Davis-Bacon federal wage rates do not apply to this project.**
- Q9. On the aluminum storefront specifications on page 084113-6 item 2.3 detail 5 it is calling for this to be a shear block system. Will screws spline system be accepted? It is a better system than the shear block. It uses all the same material except that it is screwed together rather than using a shear block
- A9. The screw spline system is acceptable.**
- Q10. Taking off the U-Maine Augusta project and have a question in the E.I.S. 172 room. At the pass thru's it appears that two of them going into room 170 have sliding wood panels. The other going in to room 171 is hatched differently in detail and not labeled. Is this one getting sliding glass? Reference details B2 & B3 on drawing A83-1.
Also there is a note in detail that suggests that there may be a pocket within the wall it receive the wood sliding panels. If you could clarify the intent all all three of these openings it would be appreciated.
- A10. The 2 pass thru windows at room E.I.S. 171 opening onto Waiting 170 are sliding glass as identified on detail B2/A83-1. The pass thru at E.I.S. 172 opening onto Reception 171 is sliding wood panels as identified on detail B3/A83-1. Detail B3/A83-1 will be updated to include an ADA compliant wood counter as identified on E6/A81-1. An additional sketch will be provided in a later Addendum to represent the pockets that receive the sliding wood panels.**
- Q11. Please advise: The finish schedule has rooms, 160 (hub), 170 (Waiting) and 171 (reception), listed has both LVT-1 and 2. In the spec for the Resilient Flooring, there isn't anything that specifically says how tiles are patterned or laided. In the finish legend they are two different size tiles being called for.
LVT-1= Mannington 17.7"x17.7"
LVT-2= Tarkett 12"x24"
- A11. The Materials Plan, A71-1 includes the pattern for the flooring in 160, 170, and 171. The plan shows an alternating pattern of 1 row of 12x24 tiles and 3 rows of 17.7x17.7 tiles. Both tiles are Mannington. LVT2 was listed incorrectly in the Materials Legend sheet A61-1.**
- Q12. Specification section 055813 2.1B9 calls for 15" diameter and 12" square column in need of column covers. Detail 2/A50-3 specifies the circular columns and location, but there does not seem to be a 12" square columns anywhere in construction set. Please specify location.
- A12. Spec section has been updated. Please see "Changes to Specifications" in this Addendum.**
- Q13. Unable to find a door hardware schedule- please specify location.
- A13. Hardware Schedule is included in this addendum.**
- Q14. Under section 101100, uncertain of how many markerboards/ corkboards are needed and locations.
- A14. The specification section has been removed with this Addendum.**
- Q15. Under section 101100 2.3B2, please verify that 90 linear feet is required roll length.
- A15. The specification section has been removed wit this Addendum.**

- Q16. Do the bid bond dates need to be updated to match the revised bidding deadlines per Addendum #5?
- A16. Yes.**
- Q17. Addendum references reissuing drawings A15.1, A60.1 and A70.1 but I did not find them in the addendum. Are they coming under separate cover?
- A17. A narrative response was provided in lieu of resubmitting the entire sheets. Please see ‘Changes to Drawings’ section of Addendum 4. The responses are located in items 3, 5, & 6.**
- Q18. Revised advertisement for bids indicate the file sub for sitework should include divisions 31 & 32, shouldn’t also include division 33 Utilities?
- A18. Bid Form is revised and reissued with this Addendum.**
- Q19. Sections 084113 Aluminum Entrances and Storefronts and 084412 Glazed Aluminum Curtain Walls are being handled as a filed-sub bid. Please confirm that the 088000 Glazing is to be included with these assemblies only. Please confirm that all other 088000 Glazing required for the project will be carried separately by the General Contractors.
- A19. Confirmed, the assumptions listed above are correct.**
- Q20. How does the GC procure bids from trades listed under the file sub-bids?
- A20. Please visit the AGC Maine website for more information: <https://agcmaine.org/about/maine-construction-bid-depository/>.**
- Q21. The doors are calling for a 2” thick door (Heavy Wall Door). On the plans on page A60-1 B2, B3, C2, C3, D2 and D3 it is showing a thermally broken door which are 2 ¼” thick. What type of door are you looking for. Please advise on these two questions.
- A21. See ‘Changes to Specifications’ Specification Section 084113 below for updated language regarding aluminum entrance door systems.**
- Q22. First Floor Demolition Plan A05-1, Note 14: This note says to remove the existing recessed floor grate in Vestibule 112C and prep to infill with concrete. We do not see a detail on the Architectural or Structural drawings for the infill. Is there a specific product or mix design you want for this infill? Is reinforcing required?
- A22. Typical new to existing concrete slab detail is provided as Section D1/D50.1. New concrete slab information is included in Specification Section 033000 in the Bid Documents.**
- Q23. On Dwg. S60.1, Section C5 - is the 3/8 bent plate 100% welded to the beam and is the 3/8 stiffener plates underneath it 100% welded? Also the note above the detail says braces and deck to be welded prior to bent plate, I do not see any 3x3 brace detail for that section and is the decking not going to bear half on the beam? Obviously the bent plate cannot be installed at center beam if the decking is also at center beam and get proper welding.
- A23. See “Changes to Drawings” in this Addendum. The 3/8” thick bent plate shall be fully welded to the beam top flange at the top of the flange only (not at the underside of the plate to the side of the beam flange). The 3/8” thick stiffener plate shall be fully welded to the steel beam web (both sides), but shall be welded to the underside of the bent plate with a 2 at 12 stitch pattern each side of stiffener plate. Revise the boxed note to read: “Steel bent plate and stiffener plates to be installed in field after the roof beams connected to the support beam at Line F are installed and the metal deck is installed and fully fastened to**

the framing between Lines F and K. Steel beam size along Line F will be increased to W8x28 to allow welding of angle at beam centerline and proper approx. 3” bearing for metal deck on beam flange for fastening.

- Q24. The specification for section 115213-projection screens, calls for fixed projections screens of 110” and 133”. However in the drawings, the screens are motorized and called out sizes are 220.75” and 130”. Can you clarify which screens should be included and their type?
- A24. The projection screen is being furnished by the Owner.. The specification section has been removed with this Addendum.**
- Q25. On Dwg. S60.1, Sections D1, C3, A1 and A2 bent plate is it all 100% welded at the beams? There is no weld pattern like 2 on 6 or 3 on 8 specified.
- A25. At sections D1, C3, & A1, the specified fillet weld shall occur on each side of the angle at a 4 at 12 stitch pattern. At Section A2, the specified weld shall occur at each side of the angle to the joist top chord, fully.**
- Q26. We do not seem to find the location of quantity of Corner Guard as noted in specification section 108500, please clarify.
- A26. Corner guards are identified on floor plan sheet A10-2 and marked with a CG tag. 3 corner guards are shown.**
- Q27. Is there any opportunity to visit and inspect the site and existing building?
- A27. No. Per the virtual pre-bid tour, the UMA campus is currently closed to all visitors due to COVID-19 concerns. The pre-bid presentation is available for viewing and download on the UMA website.**
- Q28. Will temporary fencing be required?
- A28. Fencing around the new construction will be required to separate construction activity from regular campus activities.**

CHANGES TO SPECIFICATIONS

1. SECTION 001113 – ADVERTISEMENT FOR BIDS
 - a. Page 3 of Advertisement, Site File Sub-bids has been modified, delete and replace with the following:
“Site
Divisions 31, 32, 33”
2. SECTION 004113 – BID FORM WITH SUB-BIDS
 - a. Revised and reissued with this Addendum.
3. SECTION 011000 – SUMMARY
 - a. Article 1.6,C., delete and replace with the following:
“C. Completion dates for the work:
 1. The work associated with the Campus Welcome Center shall be as follows:
 - a. Phase I
 - 1) Renovation shall be substantially complete on or before October 21, 2020. Final completion, including completion of punch list items shall be done on or before October 29, 2020.
 - 2) New construction shall be substantially complete on or before March 8, 2021. Final completion, including completion of punch list items shall be done on or before March 15, 2021.

Addendum No. 6

- b. Phase II shall be substantially complete on or before February 05, 2021. Final completion, including completion of punch list items shall be done on or before February 12, 2021.
- c. Phase III shall be substantially complete on or before March 03, 2021. Final completion, including completion of punch list items shall be done on or before March 10, 2021.”

4. SECTION 042000 – UNIT MASONRY

- a. Article 2.5, B. delete and replace with the following:
 - “B. Face Brick, Field Brick: New Construction and Infills at Randall Hall: ASTM C 216, Grade SW, Type FBS.
 - 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of not less than 8000 psi.
 - 2. Initial Rate of Absorption: Less than 18 g/30 sq. in. per minute when tested per ASTM C 67.
 - 3. Efflorescence: Provide brick that has been tested according to ASTM C 67 and is rated "not effloresced."
 - 4. Size (Actual Dimensions): 3-5/8 inches wide by 2-1/4 inches high by 7-5/8 inches long.
 - 5. Product: Morin Brick Co.; Brushed Velour Narrow Flashed Range.”
- b. Article 2.5, C., delete and replace with the following:
 - “C. Face Brick: New Construction Flashed Brick: ASTM C 216, Grade SW, Type FBS.
 - 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of not less than 8000 psi.
 - 2. Initial Rate of Absorption: Less than 18 g/30 sq. in. per minute when tested per ASTM C 67.
 - 3. Efflorescence: Provide brick that has been tested according to ASTM C 67 and is rated "not effloresced."
 - 4. Size: Size (Actual Dimensions): 3-5/8 inches wide by 2-1/4 inches high by 7-5/8 inches long.
 - 5. Product: Morin Brick Co.: Woodland Brown Brushed Velour.”

5. SECTION 055813 –COLUMN COVERS

- a. Article 2.1, B., 9., delete and replace with the following:
 - “9. Column Sizes: 16 inch diameter as indicated on drawings”

6. SECTION 084113 – ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

- a. Article 2.4, A., 1., delete and replace with the following:
 - “1. Door Construction: 2 1/4-inch overall thickness, thermally broken, with minimum 0.188-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. Article 2.4, A., 3., delete and replace with the following:
 - “3. Door Frame: Minimum 0.188-inch thick, extruded aluminum; 2 1/4-inch by 4-1/2 inch profile, stop with weather stripping; run heavy weight jambs full height of opening and transom.”

7. SECTION 087100 – DOOR HARDWARE

- a. Issued with this Addendum.

8. SECTION 101100 – VISUAL DISPLAY UNITS

- a. This will be an Owner furnished item, please delete section in its entirety.

9. SECTION 108500 – BUILDING SPECIALTIES
 - a. Article 2.3, A., 1., delete and replace with the following:
“1. Quantity: One at Lobby 108, South Wall near Vestibule 112C.”
10. SECTION 115213 – PROJECTION SCREENS
 - a. This will be an Owner furnished item, please delete section in its entirety.
11. SECTION 260741 – COMMUNICATION DISTRIBUTION SYSTEM
 - a. Revised and reissued with this addendum.
12. SECTION 270100 – VOICE/DATA DISTRIBUTION SYSTEM
 - a. Delete section in its entirety.

CHANGES TO DRAWINGS

1. DRAWING A61-1 – ROOM FINISH SCHEDULE
 - a. Change LVT2 manufacturer from “Tarkett” to “Mannington”.
2. DRAWING S30-1 – ROOF FRAMING PLAN
 - a. Plan A1: Low Roof Framing Plan: Along Line F between Lines B and 19, change the two beams to “W8x28”.
3. DRAWING E20-1 FIRST FLOOR PLAN AREA A POWER AND SYSTEMS
 - a. Add provisions for ceiling mounted wireless access points (WAP) to the following rooms (exact location by owner/owner’s vendor): FUNCTION A 164, HUB 160, E.I.S. 172, ADMISSIONS OPEN WORK AREA 180, AND OFFICE 180B.
4. DRAWING E20-2 – FIRST FLOOR PLAN AREA B POWER AND SYSTEMS
 - a. Add provisions for ceiling mounted wireless access points (WAP) to the following rooms (exact location by owner/owner’s vendor): CORRIDOR 147C (near Financial Aid), FINANCIAL AID OPEN WORK AREA 137, PROGRAMMER 13.7C, AND REGISTRAR OPEN WORK AREA 143.

DRAWINGS ISSUED WITH THIS ADDENDUM, DATED 04-03-2020:

1. SKA02 – MANUAL WINDOW SHADES
2. SKA03 – FIRE EXTINGUISHER CABINET LOCATIONS

Bid Form

BIDDER:

University of Maine at Augusta
c/o **Buster Neel, Chief Business Officer**
46 University Drive
Augusta, ME 04330

Having carefully examined the form of contract, general conditions and plans and specifications contained therein for **University of Maine at Augusta Campus Welcome Center**, as well as the premises and conditions affecting the work, we the undersigned propose to furnish all labor, equipment and materials necessary for and reasonably incidental to the construction and completion of this contract for the sum of

Dollars (\$ _____).

Alternate prices as follows:

Alternate #1 N/A Alternate #2 _____ Alternate #3 _____

This proposal includes the cost of 100% Performance Bond plus 100% Payment Bond.

The receipt of the following addenda to plans and specifications is hereby acknowledged:

ADDENDUM# _____ DATED: _____ ADDENDUM # _____ DATED: _____
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ADDENDUM # _____ DATED: _____ ADDENDUM # _____ DATED: _____
ADDENDUM # _____ DATED: _____ ADDENDUM # _____ DATED: _____

Any material or materials not specified in the bidding document but worthy of consideration may be introduced by the bidder by a separate letter attached to this Proposal. A cost comparison must be included giving the comparison with the Material specified and the reason for the suggested substitution. The basic bid shall be as specified.

Subcontractors submitting bids to General Contractors for Work listed on General Contractor's Bid Form and the Notice to Contractor's Form are required to send or deliver a copy of their Bids to the Maine Construction Bid Depository, 188 Whitten Road, Augusta, Maine 04330, and to be considered valid, must be received in the Bid Depository on or before 3PM on April 9, 2020, in accordance with the supplemental instructions to Bidders, Section 00 22 13 and the General conditions and Regulations of the Maine Construction Bid Depository, on the form provided.

*Subcontract Bids filed with the Bid Depository must be accompanied by a satisfactory **Bid Bond**, in conformity with the Form of Bond contained in Section 00 43 13.10, made out to the **Owner**, for 5% of the Sub-Bid Amount, and filed separately in the **WHITE** envelope.*

The selected Subcontractors, required to file their Sub-Bids with the Bid Depository, will also be required to furnish the selected General Contractor with a 100% Performance Bond and 100% Payment Bond, for their portion of the work.

Subcontractors required to file their Sub-Bids and Bid Bonds with the Bid Depository are as follows:

Aluminum Storefront/Curtainwall

08 41 13 – Aluminum Entrances and Storefronts, 08 44 13 – Glazed Aluminum Curtain Walls

Sprinkler

Division 21

Mechanical/Plumbing

Divisions 22, 23

Electrical

Divisions 26, 27

Site

Divisions 31, 32, 33

Official Forms and Envelopes for all Sub-Bids may be obtained from the Office of the Maine Construction Bid Depository, 188 Whitten Road, Augusta, ME 04330.

Filed Subcontract Bids as follows: (List those trades required, but do not combine trades except as called for).

<i>Specification Division</i>	<i>Subcontractor Name</i>	<i>Amount</i>

The undersigned agrees that each of the above named Subcontractors represents a bona fide SubBid based on the Plans and Specifications and will be used for the Work indicated at the Amount stated, unless a substitution is made by mutual agreement as provided for in Section 00 22 13, "Supplemental Instruction to Bidders". In the event Alternate Prices are requested and various trades are involved, the General Contractor may use properly filed SubBids even though a change in Subcontractors because of Alternates, the General Contractor shall use supplemental sheets attached to the Bid Form to indicate such changes.

The undersigned agrees, if this bid is accepted to sign a contract and deliver it, along with the bonds and affidavits for all insurance specified within twelve (12) calendar days after the date of notification of such acceptance, except if the 12th day falls on a Saturday, Sunday or holiday, then the conditions will be fulfilled if the required documents are received before 12 o'clock noon on the day following the holiday, or the Monday following the Saturday or Sunday, and as a guarantee thereof, herewith submits a bid bond as required.

The undersigned agrees, if awarded the Contract, to complete the work on or before _____. The undersigned also agrees, if awarded the Contract, that no more than 80% of the contract amount will be sublet to other contractors.

Signed _____
By _____
Address _____

NOTE: If bidder is a corporation, write State of Incorporation, and if a partnership, give full names of all partners.

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SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Commercial door hardware for the following:
 - a. Swinging doors.
 - 2. Cylinders for doors specified in other Sections.
 - 3. Electrified door hardware.
- B. Related Sections include the following:
 - 1. Division 08 Section "Hollow Metal Doors and Frames" for hardware prep and for door silencers provided as part of the frame.
 - 2. Division 8 Section "Wood Doors" for door hardware prep and door silencers provided as part of the frame. Division 08 Section "Aluminum-Framed Entrances and Storefronts" for partial entrance door hardware.
 - 3. Division 08 Section "Glazed Aluminum Curtain Walls" for hinges, locksets and stops for all-glass doors.

1.3 SUBMITTALS

- A. General: Submit in accordance with Section 013300.
 - 1. Submittals for Sections 081113, 081416, 084113, and 087100 shall be made concurrently.
- B. Product Data: Include installation details, material descriptions, dimensions of individual components and profiles, and finishes.
- C. Shop Drawings: Details of electrified door hardware, indicating the following:
 - 1. Wiring Diagrams: Detail wiring for power, signal, and control systems and differentiate between manufacturer-installed and field-installed wiring. Include the following:
 - a. System schematic.
- D. Samples: For exposed door hardware of each type indicated below, in specified finish, full size. Tag with full description for coordination with the Door Hardware Schedule. Submit samples before, or concurrent with, submission of the final Door Hardware Schedule.
 - 1. As requested by Architect.
 - 2. Samples will be returned to Contractor. Units that are acceptable and remain undamaged through submittal, review, and field comparison process may, after final check of operation, be incorporated into the Work, within limitations of keying requirements.

- E. 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.
 - a. Organize door hardware sets in same order as in the Door Hardware Schedule at the end of Part 3.
 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 each 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. Description of each electrified door hardware.
 - 1) Sequence of Operation: Include description of component functions that occur in the following situations: authorized person wants to enter; authorized person wants to exit; unauthorized person wants to enter; unauthorized person wants to exit.
 - i. Provide hardware for every door in the project, except as indicated, so that each door functions correctly for its intended use. Where a door is not included in the Door Hardware Schedule at end of Part 3, provide hardware scheduled for similar type opening and review with Architect.
 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, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- F. Keying Schedule: Meet directly with the Owner to review hardware function and keying requirements before ordering hardware. Prepare keying schedule by or under the supervision of supplier, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations.
- G. Qualification Data: For firms and persons specified in "Quality Assurance" Article.
 1. Include lists of completed projects with project names and addresses of architects and owners, and other information specified.
- H. Maintenance Data: For each type of door hardware to include in maintenance manuals specified in Division 01.
- I. Warranties: Special warranties specified in this Section.

1.4 QUALITY ASSURANCE

- A. **Installer Qualifications:** An experienced installer who has completed 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.
- B. **Supplier Qualifications:** Door hardware supplier with warehousing facilities in Project's vicinity and who is or employs a qualified Architectural Hardware Consultant, available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.
 - 1. **Electrified Door Hardware Supplier Qualifications:** An experienced door hardware supplier who has completed projects with electrified door hardware similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance, and who is acceptable to manufacturer of primary materials.
 - 2. **Scheduling Responsibility:** Preparation of door hardware and keying schedules.
- C. **Architectural Hardware Consultant Qualifications:** A person who is currently certified by the Door and Hardware Institute as an Architectural Hardware Consultant and who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project.
 - 1. Architectural hardware consultant shall be a full time employee of the hardware supplier, shall be located within 2 hours driving time of the project site, and participate in job site meetings, keying and hardware function reviews, coordination and field examination of installed hardware.
- D. **Source Limitations:** Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.
- E. **Pre-Ordering Meeting:** Before ordering hardware, have a meeting with the Contractor, Owner and Architect to review hardware functions, door swing clearances and closer requirements, requirements and conflicts with hold open devices, electronic locking, door stops and other similar hardware requirements affecting the use and operation of each opening.
 - 1. Prepare a list of questions and potential conflicts and distribute to the Architect 5 days before the meeting.
 - 2. Shop drawings, including door and frame shop drawings and door hardware schedule shall be furnished to the Architect at least 10 days before the meeting.
 - 3. Review each door on the project and record meeting notes regarding any coordination, modifications and changes. Submit meeting minutes within 3 days of meeting date.
- F. **Conditions and Coordination:** Hardware supplier shall determine conditions and materials of doors and frames for proper application of hardware.
 - 1. The Hardware Schedule shall list the actual product series numbers. Hardware supplier shall follow manufacturers' catalog requirement for the actual size of door closers, brackets and holders. Door opening sizes are as noted on the Door and Frame Schedule and hardware shall be in strict accordance with requirements of height, width, and thickness.
- G. **Regulatory Requirements:** Comply with provisions of the following:
 - 1. Comply with all applicable codes. Comply with Americans with Disabilities Act (ADA), as follows:

- a. Handles, Pulls, Latches, Locks, and other Operating Devices: Shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist.
 - 1) Operable parts of such hardware shall be 34 inches minimum and 48 inches maximum above the finish floor or ground.
 - b. Door Closers: Comply with the following maximum opening-force requirements indicated:
 - 1) Interior Hinged Doors: 5 lbf applied perpendicular to door.
 - c. Thresholds (Public Traffic Doors): Not more than 1/2 inch high. Bevel raised thresholds with a slope of not more than 1:2.
2. NFPA 101: Comply with the following for means of egress doors:
 - a. Latches, Locks, and Exit Devices: Not more than 15 lbf to release the latch. Locks shall not require the use of a key, tool, or special knowledge for operation.
 - b. Door Closers: Not more than 30 lbf to set door in motion and not more than 15 lbf to open door to minimum required width.
 - c. Thresholds (Public Traffic Doors): Not more than 1/2 inch high.
 3. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction.
- H. Fire-Rated Door Assemblies: Provide door hardware for 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 NFPA 252 and NFPA 101 without exception. Provide only hardware tested by UL for the type and size of door installed and fire resistance rating required.
1. UL 10C - Positive Pressure Test of Fire Door Assemblies Test Pressure: Test at atmospheric pressure.
- I. Keying Conference: Conduct conference directly with the Owner. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including, but not limited to, the following:
1. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
 2. Address for delivery of keys.
- J. Preinstallation Conference: Conduct conference at Project site with hardware supplier, and hardware installer, and electrical subcontractor to comply with requirements in Division 01 Section "Management and Coordination." Door hardware preinstallation conference shall run concurrently with door preinstallation conference. Review methods and procedures related to door hardware including, but not limited to, the following:
1. Inspect and discuss electrical roughing-in and other preparatory work performed by other trades.
 2. Review sequence of operation for each type of electrified door hardware.
 3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 4. Review required testing, inspecting, and certifying procedures.
 5. Review proper installation procedures for locksets, exit devices and closers with Installer and Hardware Supplier.
 6. Coordinate onsite inspection of installed hardware, including proper installation of closers for degree of swing, allowing doors to open to door stops without binding.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.
- 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 keys to Owner by registered mail or overnight package service.

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 door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- B. Electrical System Roughing-in: Coordinate layout and installation of electrified door hardware with connections to power supplies, fire alarm system and detection devices, and access control system.

1.7 WARRANTY

- A. General Warranty: 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. Special Warranty: Written warranty, executed by manufacturer agreeing to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period. Failures include, but are not limited to, the following:
 - 1. Structural failures including excessive deflection, cracking, or breakage.
 - 2. Faulty operation of operators.
 - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
- C. Warranty Period for Manual Closers: 10 years from date of Substantial Completion.

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 this Section, and the Door Hardware Schedule at the end of Part 3.

1. Door Hardware: Provide quantity, item, size, finish or color indicated, and named manufacturer's products.
2. Sequence of Operation: Provide electrified door hardware function, sequence of operation, and interface with other building control systems indicated.

2.2 HINGES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Hinges:
 - a. Hager Companies.
 - b. McKinney Products Company.
 - c. Stanley Commercial Hardware; Div. of The Stanley Works.
 2. Double Acting Spring Hinge
 - a. Hager Companies McKinney Products Company Stanley Commercial Hardware; Div. of The Stanley Works
- B. Standards: Comply with the following:
1. Butts and Hinges: BHMA A156.1.
 2. Template Hinge Dimensions: BHMA A156.7.
 3. Self-Closing Hinges: BHMA A156.17.
- C. Quantity: Provide the following, 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.
- D. Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required.
- E. Hinge Weight: Unless otherwise indicated, provide the following:
1. Entrance Doors: Heavy-weight hinges.
 2. Interior Stair Doors: Heavy-weight hinges.
 3. Vestibule Doors: Heavy-weight hinges.
 4. Doors with Closers: Antifriction-bearing hinges.
 5. Interior Doors without closers: Standard-weight hinges, oil-impregnated bearings unless specified otherwise.
- F. Hinge Base Metal: Unless otherwise indicated, provide the following:
1. Interior Hinges: Steel, with steel pin.
- G. Hinge Options: Comply with the following:
1. Nonremovable 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 following applications:
 - a. Outswinging interior doors with locks.
 2. Corners: Square.
 3. Coordinate hinge requirements and reinforcement with aluminum door supplier.

- H. Electrified Functions for Hinges: Comply with the following:
 - 1. Electrical Contact: Exposed electrical contacts for transfer of power.
 - 2. Power Transfer: Concealed PTFE-jacketed wires, secured at each leaf and continuous through hinge knuckle.
 - 3. Monitoring: Concealed electrical monitoring switch.
 - 4. Power Transfer and Monitoring: Concealed PTFE-jacketed wires, secured at each leaf and continuous through hinge knuckle, and with concealed electrical monitoring switch.
- I. Continuous-Gear Hinges: Provide for exterior and interior doors where scheduled. Minimum 0.120-inch- thick, hinge leaves with minimum overall width of 4 inches; fabricated to full height of door and frame; concealed leaf mounting. Finish components after milling and drilling are complete. Fabricate hinges to template screw locations.
 - 1. Power Transfer: Concealed PTFE-jacketed wires, secured at each leaf and continuous through hinge knuckle.
- J. Fasteners: Comply with the following:
 - 1. Machine Screws: For metal doors and frames. Install into drilled and tapped holes.
 - 2. Threaded-to-the-Head Wood Screws: For fire-rated wood doors.
 - 3. Screws: Phillips flat-head screws; machine screws (drilled and tapped holes) for metal doors. Finish screw heads to match surface of hinges.
 - 4. Stainless steel for stainless steel hinges.

2.3 LOCKS AND LATCHES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Mechanical Locks and Latches:
 - a. Corbin Russwin Architectural Hardware.
 - b. Sargent Manufacturing Company.
 - c. Schlage Lock Company.
- B. Bored Locks: Heavy duty locks with lever handles, deadlocking latch bolt, core to receive Medeco cylinder provided by Owner, BHMA A156.2, Grade 1; Series 4000.
 - 1. Sargent: 10-Line, J Lever Design, 3-1/2-inch Rose, core to receive Medeco cylinder, ANSI No. 88 Curved Lip Strike.
 - 2. Schlage: ND-Lever Series, Lever design Tubular TLR, 3-1/2-inch Rose, core to receive Medeco cylinder, ANSI Curved Lip Strike 10-025.
- C. Mortise Locks: Stamped steel case with steel or brass parts; BHMA Grade 1; Series 1000.
 - 1. Corbin-Russwin: Series ML2200, Lever design NSA.Decorative Lever: Museo 21M, polished ends with 32D insert and 2" rose.
 - 2. Sargent: Series 8200, Lever design LNB.Decorative Lever: Studio Collection, Gramercy Series RAM, polished ends with 32D insert and 2" rose.
 - 3. Schlage: Series L9000, Lever design 07A.
- D. Auxiliary Locks: BHMA Grade 1.
- E. Lock Trim: Comply with the following:
 - 1. Lever: Forged or Cast.
 - 2. Escutcheon (Rose): Wrought, forged, or cast.
 - 3. Dummy Trim: Match lock trim and escutcheons.

- F. Lock Functions: Function numbers and descriptions indicated in the Door Hardware Schedule comply with the following:

1. Mortise Locksets:

Function	Schlage	Sargent	Corbin-Russwin	
A (Storeroom)	80	04	57	
C (Office)	50	05	51	
D (Passage)	10	15	10	
E (Vestibule)	60	16	22	
F (Classroom)	70	37	55H (Privacy)	40
	65	20		

2. Mortise Deadlocks:

Function	Schlage	Sargent	Corbin-Russwin
A (Key both sides)	L462	4874	DL4012
B (Key w/throw)	L460	4875	DL4013
C (Key one side only)	L464	4876	DL4011
D (Key w/retract only lever)	L463	4877	DL4017

- G. Lock Throw: Comply with testing requirements for length of bolts to comply with labeled fire door requirements, and as follows:

1. Minimum 1/2-inch latchbolt throw.

- H. Deadbolts: Minimum 1-inch bolt throw. Backset: 2-3/4 inches, unless otherwise indicated.

2.4 EXIT DEVICES

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

1. Sargent Manufacturing Company.
2. Von Duprin.
3. Stanley Security Solutions.

- B. Products: All exit devices for this project shall be one of the following:

1. Stanley Apex Series.
 - a. Provide Narrow Stile Apex Series devices for aluminum doors.
2. The 80 Series exit device by Sargent & Co.
 - a. Provide narrow design 8500 Series for aluminum doors.
3. 98 Series by Von Duprin Division
 - a. Provide narrow design 35A Series Series for aluminum doors.

- C. Panic Exit Devices: Listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for panic protection, based on testing according to UL 305. Non-rated devices shall have cylinder dogging and exterior cylinder. Provide one leaf with exterior cylinder at pairs of doors.

1. Levers to match locksets standard levers as scheduled.

- D. Fire Exit Devices: Complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire and panic protection, based on testing according to UL 305 and NFPA 252.
- E. Outside Trim: Lever with cylinder; Cylinder at doors scheduled to receive pulls; material and finish to match locksets, unless otherwise indicated.
 - 1. Match design for locksets and latchsets, unless otherwise indicated.

2.5 CYLINDERS AND KEYING

- A. Available Manufacturers: Medeco to match existing system.
 - 1. Cylinders: Same manufacturer as for locks and latches. Match campus standards.
 - 2. Key Control Systems: Existing
 - a. Key Control Systems, Inc.
 - b. Sargent Manufacturing Company.
 - c. Sunroc Corporation.
 - d. Lund.
- B. Construction Keying: Comply with the following:
 - 1. Construction Cylinders: Provide temporary cylinders and keys for use by the contractor during the construction period. Provide temporary cylinders for all exterior doors, and for not less than 1 interior door.
 - 2. Provide 10 construction master keys.
 - a. Provide temporary cylinders and keys for use by the contractor during the construction period. Provide temporary cylinders for all exterior doors, and for not less than 1 interior door.
 - b. Replace construction cores with permanent cylinderscores at completion of project.
- C. Keying System: Prepare keying schedule with the Owner. Owner will obtain keys with the Medeco cylinders. Match existing.
 - 1. Master Key and/or Grand Master Key System: Cylinders are operated by a change key, a master key, and a grand master key.
 - 2. Master Keys shall be sent to the Owner by registered mail, return receipt required.
 - 3. Furnish manufacturer's job number to Architect and Owner.

2.6 STRIKES

- A. Manufacturers: Same manufacturer as lock, latch and device bolt engaging into strike.
- B. 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.
- C. Electric Strike: Hes 9600, 630 satin stainless steel finish, field selectable fail secure/fail safe, dual voltage 12 or 24VDC.
- D. Materials: Fabricate from stainless steel, unless otherwise indicated.
 - 1. Decorative Pulls: HDI Door Hardware; Series 2000, No. 2430, 19-11/16 inches overall length, 32D.

- 2. Push-Pull Design: Door Pulls (General Use): 1 inch diameter by 10 inches long offset design.
 - Type A Straight
 - Rockwood BF111
 - Burns BF26C
 - Quality BF163-10"

2.7 CLOSERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Surface-Mounted Closers:
 - a. LCN Closers; an Ingersoll-Rand Company.
 - b. Sargent Manufacturing Company.
- B. Standards: Comply with the following:
 - 1. Closers: BHMA A156.4.
- C. Surface Closers: BHMA Grade 1, cast-iron body.
 - 1. Door closers shall have fully hydraulic, full rack and pinion action. Cylinder body shall be 1-1/2" in diameter, and double heat treated pinion shall be 11/16" in diameter.
 - 2. Spring power shall be continuously adjustable over the full range of closer sizes, and allow for reduced opening force for the physically handicapped. Hydraulic regulation shall be by tamper-proof, non-critical valves. Closers shall have separate adjustment for latch speed, general speed, and hydraulic back-check.
 - 3. All closers shall have heavy (extra) duty solid forged steel main arms (and forged forearms for parallel arm closers).
 - 4. Closer arms shall have a powder coating finish.
 - 5. Provide drop, mounting plates for aluminum doors, and where required.
 - 6. Do not locate closers on the side of doors facing corridors, passageways or similar type areas. Where it is necessary, due to certain conditions and approval of the Architect, to have closers in corridors, provide such closers with parallel or track type arms.
 - 7. Door closers shall be adjusted by the installer in accordance with the manufacturer's templates and written instructions. Closers with parallel arms shall have back-check features adjusted prior to installation.
 - 8. Closers shall conform to all applicable code and law requirements relative to setting closing speeds for closers and maximum pressure for operating interior and exterior doors.

<u>Models:</u>	<u>LCN</u>	<u>Sargent</u>
Exterior	4111S-CUSH	281 - CPS
	4111S--CUSH	281 - CPSH
Interior	4011	281 - 0
	4111	281 - P10
	4111S-CUSH	281 - CPS
	4111S-H-CUSH	281 - CPSH
	4040SEL	2468
Interior (Service, Mechanical, Electric only)	1461	1431

- D. Swing: Allow door to swing to the maximum degree opening allowable for the swing condition. Where doors with closers do not have a bumper stop, provide closer with CUSH-N-STOP feature. Do not allow leading edge of door to swing into the path of an adjacent door opening.
- E. Size of Units: Unless otherwise indicated, comply with manufacturer's written recommendations for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

2.8 POWERED DOOR OPERATORS

A. Electrically - Powered Door Operator

1. Referenced Standard: Provide unit that conforms to AAMA/BHMA A156.19 low energy operation, and to ADA Architectural Guidelines for opening force and time to close standards.
2. Products: Subject to compliance with requirements, furnish one of the following products:
 - a. Horton 7000 4000LE
 - b. LCN 4610/20 (Electrically powered "Auto-Equalizer" system).
 - c. Keane-Monroe Corporation, "Access Two" Series 3100.
3. General: Furnish complete system, including electro-mechanical swinging door operator and solid-state electronic control, aluminum header matching door frame, connecting hardware, and power on/off switch.
4. Operator: Opening by means of a fractional HP DC motor, through reduction gears, splined spindle, door arm and linkage assembly. If door encounters an obstacle, operator shall stop the door in the open position by electrically reducing the motor voltage and stalling. Spring closing, with closing speed controlled by the motor operating as a dynamic brake. Operator shall function as a manual door closer in the direction of swing, with or without electrical power.
 - a. Operator shall be removable from the header as a unit, for servicing and replacement.
 - b. Door Speed and Timing:
 1. Door opening time: Adjustable but not less than 4 seconds.
 2. Door closing time: Adjustable but not less than 4.5 seconds.
 3. Hold Open: Adjustable from 6 to 60 seconds, to allow safe passage between series of doors at entrance and vestibule.
 - c. Furnish unit without power assist ("Push-N-Go") feature, or with device that allows Owner to activate or disconnect the feature after the door has been installed.
5. Header: 0.125 minimum wall thickness extruded aluminum.
6. Metal Finish: Finish covers, mounting plates, and arm system with manufacturer's standard powder-coat finish. Match finish of storefront framing system.
7. Push-Plate Control: Nominal 4 inch square or 4-1/2 inch diameter round push-plate control; stainless steel with No. 4 satin finish; with international accessibility symbol engraved and painted blue.a. Vestibule Dual Push-Plate: BEA 10PBDGP1.
8. Pedestal: Type 304 brushed stainless steel, 6 inches by 4 inches by .120 wall tube thickness, 48 inches high, sloped top with rounded edges, 6 inch by 10 inch rear access panel. Provide custom cut-out size for vestibule dual push-plate. Provide four stainless steel chemical anchors for attachment to concrete slab.
 - a. Pedestal CEO, 800-660-3072.

2.9 Furnish wall-mounted type, as appropriate to mounting conditions indicated on Drawings
PROTECTIVE TRIM UNITS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Metal Protective Trim Units:
 - a. Burns Manufacturing Incorporated.
 - b. Don-Jo Mfg., Inc.
 - c. Rockwood Manufacturing Company.
- B. Standard: Comply with BHMA A156.6.
- C. Materials: Fabricate protection plates from the following:
 - 1. Stainless Steel: 0.050 inch thick; beveled top and 2 sides.
- D. Fasteners: Provide manufacturer's oval head exposed fasteners for door trim units consisting of either machine or self-tapping screws, for installation in counter sunk holes.
- E. Furnish protection plates sized 2 inches less than door width on push side by the following height:
 - 1. Armor Plates: 34 inches.
 - 2. Kick Plates: 8 inches
 - 3. Push Plates: 8 inches wide by 16 inches high.

2.10 STOPS AND HOLDERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Glynn-Johnson; an Ingersoll-Rand Company.
 - 2. Hager Companies.
 - 3. Ives: H. B. Ives.
 - 4. Rixson-Firemark, Inc.
 - 5. Rockwood Manufacturing Company.
- B. Standards: Comply with the following:
 - 1. Stops and Bumpers: BHMA A156.16.
 - 2. Door Silencers: BHMA A156.16.
- C. Stops and Bumpers: BHMA Grade 1.
 - 1. Wall Stops: Convex with concealed mounting.
 - 2. Floor Stops: Dome stop, base thickness to accommodate flooring thickness.
- D. Wall Stops: For doors, unless floor or other type stops are scheduled or indicated. Do not mount floor stops where they will impede traffic.
 - 1. Where floor or wall stops are not appropriate, provide heavy duty overhead holders.
 - a. Glynn-Johnson GJ90-32D, unless indicated otherwise.
 - 2. Where concealed overhead stops are scheduled, provide Glynn-Johnson GJ410F-32D
- E. Silencers for Metal Door Frames: BHMA Grade 1; neoprene or rubber, minimum diameter 1/2 inch; fabricated for drilled-in application to frame.
 - a. Zero International, Inc.

- F. General: Provide continuous weather-strip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated or scheduled.
- G. Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.
- H. 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 10B or NFPA 252.
 - 1. Astragal Smoke Seals: Pemko 29310CPK, concealed fastener.
- I. Sound-Rated Gasketing:
 - 1. Head and Jamb: Self-adhesive silicone, teardrop configuration, equal to NGP 5050, Pemko S88.
 - a. Apply after final painting. Apply two rows of gasketing to sides and top of frame, located per Marshfield DoorSystems door gasketing detail.
 - 2. Sill Automatic Drop Seal: Concealed mortised automatic drop seal, equal to NGP 111NAPemko 411CNBL, 9/16-inch by 1-3/8 inch housing, 434 screw applied end plates.
- J. Kerf smoke seals and weatherstripping specified in Section 081113 - Hollow Metal Doors and Frames.
- K. 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. Self-adhesive silicone, teardrop configuration, equal to Basis-of-Design Product, No. 5050 by National Guard Products 5050, Pemko S88 or approved equal.
- L. Provide smoke-labeled gasketing on 20-minute-rated doors and on smoke-labeled doors. Basis-of-Design Product, No. 5050 by National Guard Products or approved substitute.

2.11 THRESHOLDS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. National Guard Products, Inc.
 - 2. Pemko Manufacturing Co., Inc.
 - 3. Reese Enterprises, Inc.
 - 4. Zero International, Inc.
- B. Standard: Comply with BHMA A156.21.
- C. General: Extruded aluminum, depth as required for sill condition. Where thresholds extend out beyond face of frame, provide returned closed ends by miter cutting on a 45 degree angle and return to face of frame.
 - 1. Height: 1/2 inch ADA compliant.

2.12 FABRICATION

- A. Base Metals: Produce door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness.

Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18 for finishes. Do not furnish manufacturer's standard materials or forming methods if different from specified standard.

- B. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to commercially recognized industry standards for application intended. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.
1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
 2. Steel Machine or Wood Screws: For the following fire-rated applications:
 - a. Mortise hinges to doors.
 - b. Strike plates to frames.
 - c. Closers to doors and frames.
 3. Spacers or Sex Bolts: For through bolting of hollow metal doors.
 4. Fasteners for Wood Doors: Comply with requirements of DHI WDHS.2, "Recommended Fasteners for Wood Doors."

2.13 FINISHES

- A. Standard: Comply with BHMA A156.18.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- D. BHMA Designations: Comply with base material and finish requirements indicated by the following:
 1. BHMA 626 (US26D): Satin chromium plated over nickel, over brass or bronze base metal.
 2. BHMA 630 (US32D): Satin stainless steel, over stainless-steel base metal.
- E. With the exceptions of exit devices, door closers, plates, push bars, pulls, thresholds, all hardware items shall be furnished in dull chrome finish 26D or brushed stainless steel 32D.
 1. Exceptions are as follows:

Exit Devices:	32D
Door Closers:	Sprayed Aluminum
Plates:	32D

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Contractor shall examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance. If errors in dimensions or preparation are encountered, they are to be corrected by the responsible parties prior to the installation of hardware.
- B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Steel Doors and Frames: Comply with DHI A115 series.
 - 1. Surface-Applied Door Hardware: Drill and tap doors and frames according to SDI 107.
- B. Wood Doors: Comply with DHI A115-W series.

3.3 INSTALLATION

- A. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- B. Install each door hardware item to comply with manufacturer's 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.
 - 1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
 - 2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- C. Exit devices shall be carefully installed so as to permit friction free operation of crossbar, touch bar and lever. Latching mechanism shall also operate freely without friction or binding.
- D. Boxed Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings. Verify location with Architect.
- E. Thresholds: Set thresholds for exterior doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- F. Door closers shall be installed in accordance with the manufacturer's instructions. Each door closer shall be carefully installed, on each door, at the degree of opening dictated by the frame

condition relative to adjacent construction and clearances to permit full swing of the door to the door stops. Arm position shall be as shown on the instruction sheets.

1. The adjustments for all door closers shall be the installer's responsibility and these adjustments shall be made at the time of installation of the door closer. The closing speed and the latching speed valves shall be adjusted individually to provide a smooth, continuous closing action without slamming. The delayed action feature or back check valve shall also be adjusted so as to permit the correct delayed action cycle or hydraulic back check cushioning of the door in the opening cycle. All valves shall be properly adjusted at the time of installation. Each door closer has adjustable spring power capable of being adjusted, in the field, from size 1 thru 6. It shall be the installer's responsibility to adjust the spring power for each door closer in exact accordance with the spring power adjustment chart illustrated in the door closer installation sheet packed with each door closer.
- G. Coordinate installation of hinges in wood doors to prevent the removal and reinstallation of screws into the edges. Provide proper torque on screws without over tightening and stripping.
- H. Prior to Substantial Completion, the installer, accompanied by representative of the supplier of latch sets and locksets, closers, door control devices, and other major hardware, shall perform the following work:
1. Examine and re-adjust each item of door hardware as necessary to restore function of doors and hardware to comply with specified requirements. Review the location of door closers and verify door closers are properly installed for the degree of swing required to permit maximum opening range of the door without binding or stress that could damage doors and frames. Verify arm position is at proper location.
 2. Consult with and instruct Owner's personnel in recommended additions to the maintenance procedures.
 3. Replace hardware items that have deteriorated or failed due to faulty design, materials, or installation of hardware units.

3.4 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.
1. Door Closers: Adjust sweep period so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the leading edge of the door.

3.5 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items as necessary to restore proper function and finish.
- C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

3.6 DOOR HARDWARE SCHEDULE

- A. Each Hardware Set listed below represents the complete hardware requirements for one opening (single door or pair of doors). Furnish the quantities required for each set for the work.
1. If a door is found in the door schedule that is not included in the hardware sets, provide door hardware for similar condition.

Heading 1

Door: 161, 162, 164A, 164B

Each Door Shall Have: Each Opening Shall Have: Narrow Design Rim Exit Device, Narrow Design Rim Exit Device w/Electric Latch Retraction, Electric Harness from Exit device to Hinge, Electric Harness from Hinge to Power Supply Junction Box, Powered Door Operator, Push-Plate Controls (Push-Plate at Exterior, Dual Push-Plate in Vestibule), Presence Sensor, Closer w/Drop Plate (180°), Hardware Mullion (powder coat finish to match aluminum storefront), Decorative Pulls

Note: Continuous hinges and weather stripping provided in Section 084113.

Note: Connect electrified door hardware to existing card reader.

Heading 2

Door: 112A, 161A, 162A

Each Door Shall Have: Push Bars, Decorative Pulls, Powered Door Operator, Push-Plate Control (Push-Plate at Lobby, Vestibule dual push-plate provided in Heading 1), Closer w/Drop Plate

Note: Continuous hinges and weather stripping provided in Section 084113.

Heading 3

Door: 127A, 137, 143, 163A, 164C, 137D, 137E

Each Door Shall Have: Hinges, Lockset (Classroom Function), Wall Stop, Silencers

Heading 4

Door: 140A (Fire Rated Single)

Each Door Shall Have: Hinges, Narrow Design Rim Exit Device, Decorative Pulls, Closer w/Drop Plate, Wall Stop, Silencers, Kick Plates

Heading 5

Door: 137A, 137B, 137C, 138B, 138C, 143B, 143C, 143D, 172, 172A, 173, 174 (locking on Admissions side), 180A, 180B, 180C, 210B, 217, 227A

Each Door Shall Have: Hinges, Lockset (Office Function), Wall Stop, Silencers, Kick Plates

Heading 6

Door: 174A (Meeting Room – Corridor side)

Each Door Shall Have: Hinges, Push Bar, Decorative Pull, Closer, Wall Stop, Silencers

Note: Continuous hinges provided in Section 084113

Heading 7

Door: 180E

Each Door Shall Have: Hinges, Narrow Design Rim Exit Device, Decorative Pulls, Closer, Silencers

Note: Continuous hinges provided in Section 084113

Heading 8

Door: 137D, 143A

Each Door Shall Have: Hinges, Lockset (Storeroom Function), Floor Stop, Silencers

Heading 9

Door: 163U

Each Door Shall Have: Hinges, Lockset (Storeroom Function), Closer, Kick Plates, Threshold, Door Bottoms, Sweeps, Weatherstripping (equal to Pemko 5110, Zero 8780N)

Heading 10

Door: 163C, 180D

Each Door Shall Have: Hinges, Rim Exit Device with Trim (Classroom Function), Closers w/EDA Arm, Kick Plates, Threshold, Door Bottoms, Sweeps, Weatherstripping (equal to Pemko 5110, Zero 8780N)
Kerf weatherstripping provided in Section 081113

Heading 11

Door: 139, 163B

Each Door Shall Have: Hinges, Lockset (Storeroom Function), Closer, Floor Stop

Heading 12

Door: 140 (Fire Rated Double)

Each Door Shall Have: Hinges, Narrow Design Rim Exit Device, Decorative Pulls, Closer w/Drop Plate, Wall Stop, Silencers, Kick Plates

END OF SECTION 087100

SECTION 260741 - COMMUNICATION DISTRIBUTION SYSTEM

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Wiring paths for communication and technology systems.
- B. Voice/Data outlet wall boxes (and ceiling boxes for WAP) with pathways to nearest data room (MDF and IDF rooms).
- C. Interior raceways and junction boxes for system indicated.

1.2 RELATED SECTIONS

- A. Section 260100: Basic Electrical Requirements.

1.3 SUBMITTALS

- A. NONE

1.4 PROJECT RECORD DOCUMENTS

- A. Accurately record actual locations and mounting heights of outlets if not as shown on Drawings, plus pull and junction boxes larger than 12x12x6 inches, backboard.

1.5 PROJECT CONDITIONS

- A. See Section 260100 - BASIC ELECTRICAL REQUIREMENTS: WORK BY OWNER
- B. The intent of this section is to provide wiring paths to allow for this work.
- C. Verify locations of wall boxes and outlets in all finished walls prior to rough-in.
- D. Electrical boxes are shown on Drawings in approximate locations unless dimensioned. Install at location required for box to serve intended purpose.

PART 2 - PRODUCTS

2.1 CADDY CABLE CAT CLIPS

- A. Manufactures - Erico Caddy. Substitutions: Under provisions of Section 016300.

PART 3 - EXECUTION

3.1 EXAMINATION

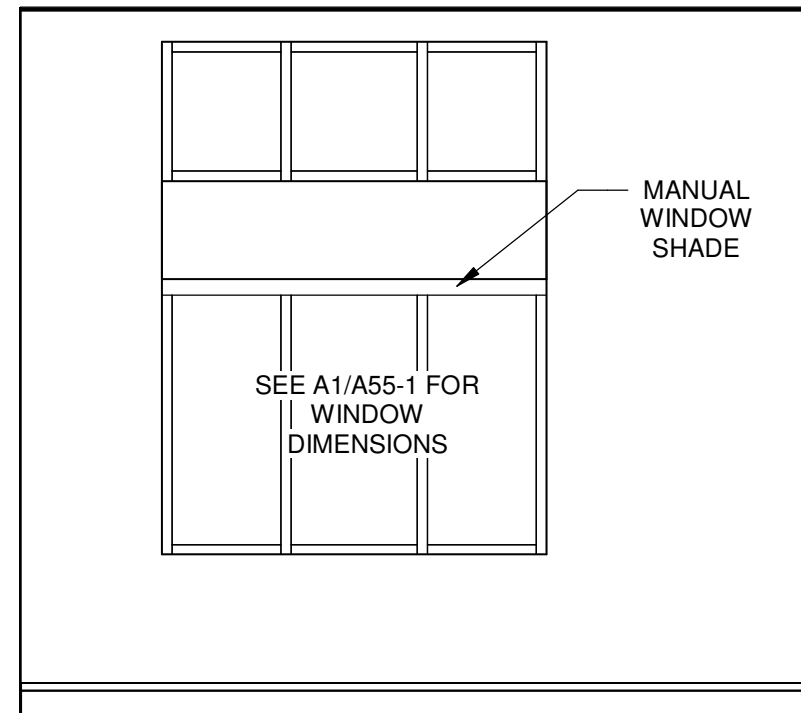
- A. Verify that surfaces are ready to receive work.

- B. Verify that building is watertight before start of installation. Do not install until building is water-tight.

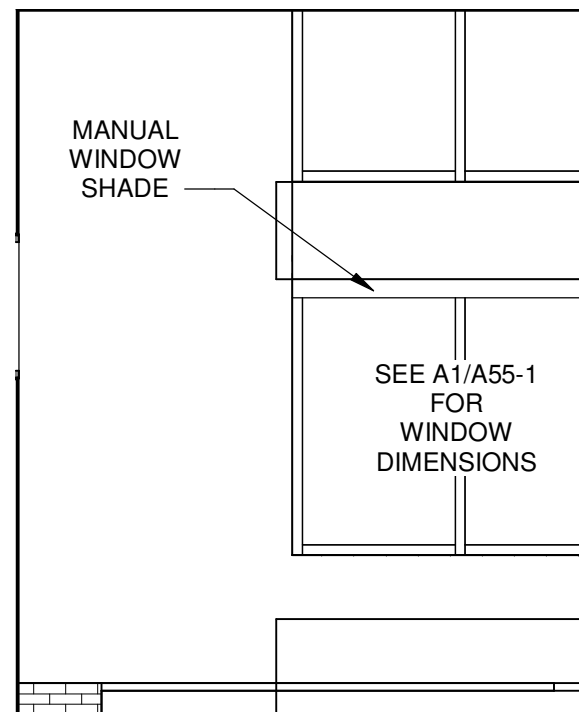
3.2 INSTALLATION

- A. Provide four square wall box and appropriate plaster ring for all device locations. See floor plans.
- B. Provide minimum 1 inch conduit/s from each wall box to a cable tray accessible path to the designated destination. In locations with exposed structure ceilings, all exposed conduit shall be EMT and shall continue to a cable tray.
 - 1. EMT shall have maximum two 90 degree bends to conform to EIA/TIA standard.
- C. Install clamps, hangers, and other miscellaneous hardware to structural steel, joists and girders.
- D. Install polyethylene pulling string in each empty conduit.
- E. Install all flush wall boxes, vertical & plumb.
- F. When passing through fire rated walls, install fittings as required to maintain the fire rating.

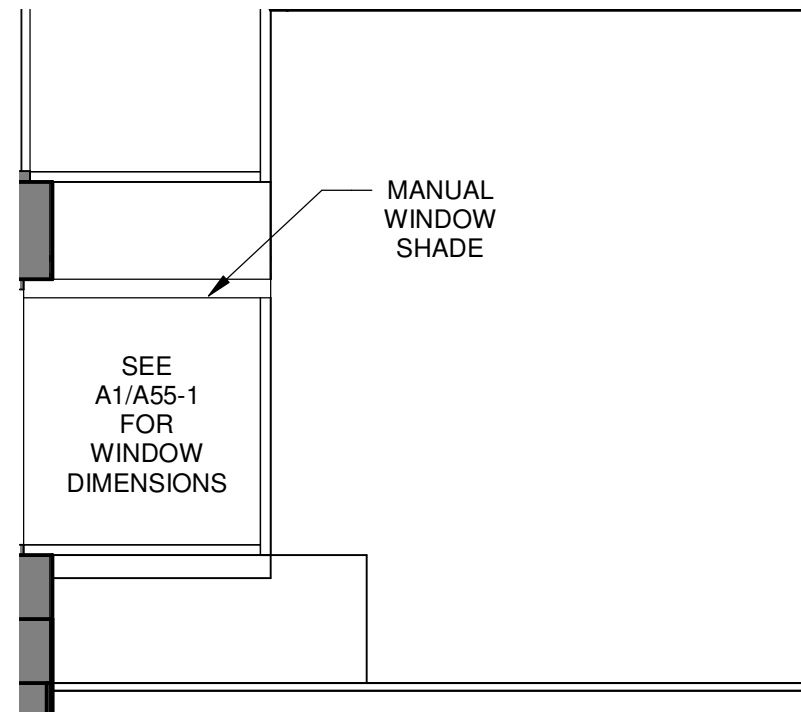
END OF SECTION 260741



3 OFFICE 180B (180C SIM.)
SCALE: 1/4" = 1'-0"



1 OFFICE 180A
SCALE: 1/4" = 1'-0"



2 OFFICE 180A
SCALE: 1/4" = 1'-0"

Date	04-03-20
Scale	1/4" = 1'-0"

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MANUAL WINDOW
SHADES

SKA02

**UNIVERSITY OF MAINE AT
 AUGUSTA
 CAMPUS WELCOME
 CENTER**

AUGUSTA, MAINE

HA Project No. 19331

Date	04-03-20
Scale	3/32" = 1'-0"

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**FIRE EXTINGUISHER
 CABINET LOCATIONS**

SKA03

