ADDENDUM No. 2 - February 24, 2020

RE: Multicultural Center
    Ball State University BSU Project No. 2018–052.01 MC

TO: Prospective Bidders

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated January 29, 2020 as noted below. Acknowledge receipt of this Addendum in the space provided on the Bid Form Supplements. Failure to do so may subject Bidder to disqualification.

This Addendum is issued in accordance with the provisions of the Instructions to Bidders (AIA A701, 1997 Ed.) and Supplementary Instructions to Bidders Documents of the Project Manual.

This Addendum was created to address the following items.

CHANGES TO PRIOR ADDENDA:

1. None

CHANGES TO BIDDING REQUIREMENTS:

2. None

CHANGES TO THE SPECIFICATIONS (THE SPECS BELOW HAVE BEEN RE-ISSUED AS PART OF THE ADDENDUM):

1. 00 01 10 Specification Index – 08 71 00 Door Hardware added.
2. 04 21 00 Unit Masonry, 2.1, A. 1.
   Face Brick: Watson Brick Company Sanded Smooth Sturbridge (M) or Owner approved equal color, size and texture.
   2.1, E: Delete Decorative Concrete Masonry.
3. **05 51 00 Metal Stairs, 1.1, A**
   This section includes the Main Stair constructed with steel stringers and concrete filled metal pan treads and landings. Treads and landings to receive porcelain tile.
   This section included Stair B1 constructed with steel stringers, steel tread and concrete fill metal pan landings.

4. **05 52 00 Handrails and Railings, 1.1, A.**
   This section includes aluminum pipe railings for the Main Stair. Eterna-Rail by Wagner, CRL Aluminum Railing, or Hollaender with clear anodized finish.
   This section includes steel picket railings at Stair B.

5. **08 11 13 Steel Doors, 1.1, B**
   Add: This section includes aluminum double acting doors. Provide Eliason LWP-3, .063” thick tempered aluminum, with 18x36” clear acrylic window complete with all stainless steel hardware or Owner approved equal.

6. **08 71 00 Hardware**
   Add the attached section in its entirety.

**CHANGES TO THE DRAWINGS**

1. **003-5 LEGENDS/SYMBOLS**
   a. Wall types W4 through W9 Modified.

2. **A-101-A**
   a. Wall tags updated per Addendum No. 1

3. **A-103 PLAN DETAILS**
   a. Wall Stiffener detail clarified per Addendum No. 1 (see not between details 11 & 12/A-103).

4. **A-200 ELEVATIONS**
   a. Note on drawings clarifying hatching denotes color difference.

5. **A-210 EXTERIOR DETAILS**
   a. Note on drawings clarifying hatching denotes color difference.

6. **A-400 ENLARGED PLANS-RRs**
   a. Wall Tag updated per Addendum No. 1

7. **A-401 ENLARGED PLANS RR**
   a. Wall Tag updated per Addendum No. 1

8. **A-520 DOOR SCHEDULE**
   a. Door Schedule - Door A123 clarified as an aluminum double, acting traffic door.
   b. Door Panel Legend – Item E

9. **INTERIOR ENLARGED PLAN – OFFICE & WORK ROOM**
   a. Lines removed on drawing 3/A-705

10. **H-402 SCHEMATICS & DIAGRAMS**
    b. Add to Heating Water System Flow Diagram notes “BTU METER CONTROL INTERFACE WITH CAMPUS BMS GEOTHERMAL HEATING SYSTEM FRONT END”.
    d. Add to Chilled Water System Flow Diagram notes “BTU METER CONTROL INTERFACE WITH CAMPUS BMS GEOTHERMAL HEATING SYSTEM FRONT END”.

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11. E-100 ELECTRICAL SITE PLAN
   a. Delete sheet plan note 2 in its entirety.
   b. Add to sheet plan note 1 the following. Install (2) inner ducts with pull strings into the 2" conduit.
   c. On plan at Café Kitchen A123 delete errant reference to (1) 4” PVC Conduit with (4) Innerduct.
   d. Clarification: Conduits routed to Bracken Library for Power and Emergency Power will require core drilling of existing concrete wall, link-seal, etc. EC will be responsible to return all site conditions, existing room conditions to as found condition once work is complete.

12. P-100 UNDER FLOOR PLUMBING PLAN
   a. Shifted a floor sink in Café A124.

13. P-301 PLUMBING ENLARGED PLANS
   a. Shifted a floor sink in Café A124.
   b. Shifted CW and HW drops Café A124 to line up with counter sink.

ATTACHMENTS:

00 10 10 Specification Index
08 71 00 Door Hardware
Drawing Sheet 003-G: LEGENDS/SYMBOLS
Drawing Sheet A-101-1 1ST FLOOR
Drawing Sheet A-103 PLAN DETAILS
Drawing Sheet A-200 ELEVATIONS
Drawing Sheet A-400 ENLARGED PLANS-RRs
Drawing Sheet A-401 ENLARGED PLANS RRs
Drawing Sheet A-520 DOOR SCHEDULE
Drawing Sheet A-705 INTERIOR ENLARGED PLAN-OFFICE & WORK ROOM
Drawing Sheet P-100 UNDER FLOOR PLUMBING PLAN
Drawing Sheet P-310 PLUMBING ENLARGED PLANS
Drawing Sheet H-402 SCHEMATICS 7 DIAGRAMS - HVAC
Contractor questions with responses, dated 02/24/2020.

END OF ADDENDUM No. 2
DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

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SECTION 08 71 00
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. Section includes:
   1. Mechanical and electrified door hardware for:
      1. Swinging doors.
      2. Sliding doors.
   2. Electronic access control system components.

B. Exclusions: Unless specifically listed in hardware sets, hardware is not specified in this section for:
   1. Windows
   2. Cabinets (casework), including locks in cabinets
   3. Signage
   4. Toilet accessories
   5. Overhead and coiling doors
   6. Sliding aluminum doors
   7. Folding Partitions
   8. Chain link and wire mesh doors and gates

C. Related Sections:
   1. Division 01 Section “Alternates” for alternates affecting this section.
   2. Division 06 Section “Rough Carpentry”
   3. Division 06 Section “Finish Carpentry: Installation of Finish Hardware”
   4. Division 07 Section “Joint Sealants” for sealant requirements applicable to threshold installation specified in this section.
   5. Division 08 Section “Steel Doors and Frames”
   6. Division 08 Section “Wood Doors”
   7. Division 08 Section “Special Doors”
   8. Division 08 Section “Aluminum Framed Entrances and Storefronts”
   9. Division 26 sections for connections to electrical power system and for low-voltage wiring.
  10. Division 28 sections for coordination with other components of electronic access control system.

1.3 REFERENCES
A. UL - Underwriters Laboratories
   1. UL 10B - Fire Test of Door Assemblies
   2. UL 10C - Positive Pressure Test of Fire Door Assemblies
   3. UL 1784 - Air Leakage Tests of Door Assemblies
   4. UL 305 - Panic Hardware
B. DHI - Door and Hardware Institute
   1. Sequence and Format for the Hardware Schedule
   2. Recommended Locations for Builders Hardware
   3. Key Systems and Nomenclature

C. ANSI - American National Standards Institute
   1. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties

1.4 SUBMITTALS

A. General:
   1. Submit in accordance with Conditions of Contract and Division 01 requirements.
   2. Highlight, encircle, or otherwise specifically identify on submittals deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.
   3. Prior to forwarding submittal, comply with procedures for verifying existing door and frame compatibility for new hardware, as specified in PART 3, “EXAMINATION” article, herein.

B. Action Submittals:
   1. Product Data: Product data including manufacturers’ technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
   2. Riser and Wiring Diagrams: After final approval of hardware schedule, submit details of electrified door hardware, indicating:
      1) Wiring Diagrams: For power, signal, and control wiring and including:
         a) Details of interface of electrified door hardware and building safety and security systems.
         b) Schematic diagram of systems that interface with electrified door hardware.
         c) Point-to-point wiring.
         d) Risers.
   3. Samples for Verification: If requested by Architect, submit production sample or sample installations of each type of exposed hardware unit in finish indicated, and tagged with full description for coordination with schedule.
      1. Samples will be returned to supplier in like-new condition. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.
   4. Door Hardware Schedule: Submit schedule with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule as published by the Door and Hardware Institute. Indicate complete designations of each item required for each door or opening, include:
      1. Door Index; include door number, heading number, and Architect’s hardware set number.
      2. Opening Lock Function Spreadsheet: List locking device and function for each opening.
      3. Type, style, function, size, and finish of each hardware item.
      4. Name and manufacturer of each item.
      5. Fastenings and other pertinent information.
      6. Location of each hardware set cross-referenced to indications on Drawings.
      7. Explanation of all abbreviations, symbols, and codes contained in schedule.
      8. Mounting locations for hardware.
      9. Door and frame sizes and materials.
      10. Name and phone number for local manufacturer’s representative for each product.
11. Operational Description of openings with any electrified hardware (locks, exits, electromagnetic locks, electric strikes, automatic operators, door position switches, magnetic holders or closer/holder units, and access control components). Operational description should include how door will operate on egress, ingress, and fire and smoke alarm connection.

12. Submittal Sequence: Submit door hardware schedule concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work that is critical in Project construction schedule.

5. Key Schedule:
   1. After Keying Conference, provide keying schedule listing levels of keying as well as explanation of key system's function, key symbols used and door numbers controlled.
   2. Use ANSI/BHMA A156.28 "Recommended Practices for Keying Systems" as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
   3. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
   4. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
   5. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion.
       1) Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.
   6. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.

6. Templates: After final approval of hardware schedule, provide templates for doors, frames and other work specified to be factory prepared for door hardware installation.

C. Informational Submittals:
   1. Qualification Data: For Supplier, Installer and Architectural Hardware Consultant.
   2. Product Certificates, signed by manufacturer:
       1. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
   3. Certificates of Compliance:
       1. Certificates of compliance for fire-rated hardware and installation instructions if requested by Architect or Authority Having Jurisdiction.
       2. Installer Training Meeting Certification: Letter of compliance, signed by Contractor, attesting to completion of installer training meeting specified in "QUALITY ASSURANCE" article, herein.
       3. Electrified Hardware Coordination Conference Certification: Letter of compliance, signed by Contractor, attesting to completion of electrified hardware coordination conference, specified in "QUALITY ASSURANCE" article, herein.
   4. Product Test Reports: For compliance with accessibility requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by qualified testing agency, for door hardware on doors located in accessible routes.
   5. Warranty: Special warranty specified in this Section.

D. Closeout Submittals:
   1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:
       1. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
       2. Catalog pages for each product.
       3. Name, address, and phone number of local representatives for each manufacturer.
4. Parts list for each product.
5. Final approved hardware schedule, edited to reflect conditions as-installed.
6. Final keying schedule
7. Copies of floor plans with keying nomenclature
8. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.
9. Copy of warranties including appropriate reference numbers for manufacturers to identify project.

1.5 QUALITY ASSURANCE

A. Product Substitutions: Comply with product requirements stated in Division 01 and as specified herein.
1. Where specific manufacturer’s product is named and accompanied by “No Substitute,” including make or model number or other designation, provide product specified. (Note: Certain products have been selected for their unique characteristics and particular project suitability.)
2. Where no additional products or manufacturers are listed in product category, requirements for “No Substitute” govern product selection.

B. Supplier Qualifications and Responsibilities: Recognized architectural hardware supplier with record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to that indicated for this Project and that provides certified Architectural Hardware Consultant (AHC) available to Owner, Architect, and Contractor, at reasonable times during the Work for consultation.
1. Distributor must be a factory authorized dealer for all materials required.
2. Facility with warehouse, inventory, and qualified personal on staff within 100 miles of project.
4. Engineering Responsibility: Preparation of data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.
5. Coordination Responsibility: Coordinate installation of electronic security hardware with Architect and electrical engineers and provide installation and technical data to Architect and other related subcontractors.

C. Installer Qualifications: Qualified tradesmen, skilled in application of commercial grade hardware with record of successful in-service performance for installing door hardware similar in quantity, type, and quality to that indicated for this Project.

D. Architectural Hardware Consultant Qualifications: Person 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 and meets these requirements:
1. For door hardware, DHI-certified, Architectural Hardware Consultant (AHC).
2. Can provide installation and technical data to Architect and other related subcontractors.
3. Can inspect and verify components are in working order upon completion of installation.
5. Capable of coordinating installation of electrified hardware with Architect and electrical engineers.
E. Single Source Responsibility: Obtain each type of door hardware (locksets, exit devices, closers, etc) from single manufacturer.
   1. Provide electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated.
   2. Manufacturers that perform electrical modifications and that are listed by testing and inspecting agency acceptable to authorities having jurisdiction are acceptable.

F. Fire-Rated Door Openings: Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed and are identical to products tested by Underwriters Laboratories, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.

G. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
   1. Air Leakage Rate: Maximum air leakage of 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) at tested pressure differential of 0.3-inch wg (75 Pa) of water.

H. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction.

I. Means of Egress Doors: Latches do not require more than 15 lbf (67 N) to release latch. Locks do not require use of key, tool, or special knowledge for operation.

J. Accessibility Requirements: For door hardware on doors in an accessible route, comply with governing accessibility regulations cited in “REFERENCES” article, herein.
   1. Provide operating devices that do not require tight grasping, pinching, or twisting of wrist.
   2. Maximum opening-force requirements:
      1. Interior, Non-Fire-Rated Hinged Doors: 5 lbf (22.2 N) applied perpendicular to door.
      2. Sliding or Folding Doors: 5 lbf (22.2 N) applied parallel to door at latch.
      3. Bevel raised thresholds with slope of not more than 1:2. Provide thresholds not more than 1/2 inch (13 mm) high.
      4. Adjust door closer sweep periods so that, from open position of 70 degrees, door will take at least 3 seconds to move to 3 inches (75 mm) from latch, measured to leading edge of door.

K. Keying Conference: Conduct conference at Project site to comply with requirements in Division 01.
   1. Attendees: Owner or Owner Representative, Contractor, Architect, Installer, and Supplier’s Architectural Hardware Consultant.
   2. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:
      1. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
      2. Door locking function.
      3. Preliminary key system schematic diagram.
      4. Requirements for key control system.
      5. Requirements for access control.
      6. Address for delivery of keys and permanent cores.
L. Pre-installation Conference: Conduct conference at Project site.
   1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
   2. Inspect and discuss preparatory work performed by other trades.
   3. Inspect and discuss electrical roughing-in for electrified door hardware.
   4. Review sequence of operation for each type of electrified door hardware.
   5. Review required testing, inspecting, and certifying procedures.

M. Coordination Conferences:
   1. Installation Coordination Conference: Prior to hardware installation, schedule and hold meeting to review questions or concerns related to proper installation and adjustment of door hardware.
      1. Attendees: Door hardware supplier, door hardware installer, Contractor.
      2. After meeting, provide letter of compliance to Architect, indicating when meeting was held and who was in attendance.
   2. Electrified Hardware Coordination Conference: Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.
      1. Attendees: electrified door hardware supplier, doors and frames supplier, electrified door hardware installer, electrical subcontractor, Owner or Owner representative, Architect and Contractor.
      2. After meeting, provide letter of compliance to Architect, indicating when coordination conference was held and who was in attendance.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site.

B. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package.
   1. Deliver each article of hardware in manufacturer's original packaging.

C. Project Conditions:
   1. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
   2. Provide secure lock-up for door hardware delivered to Project, but not yet installed. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.

D. Protection and Damage:
   1. Promptly replace products damaged during shipping.
   2. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work.
   3. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.

E. Deliver keys and permanent cores to Owner by registered mail or overnight package service.
1.7 COORDINATION

A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete. Concrete, reinforcement, and formwork requirements are specified in Division 03.

B. Installation Templates: Distribute for doors, frames, and other work specified to be factory prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

C. Security: Coordinate installation of door hardware, including access control and keying, with Owner's security consultant.

D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.

E. Direct shipments not permitted, unless approved by Contractor.

1.8 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.
   1. Warranty Period: Years from date of Substantial Completion, for durations indicated.
      1) Closers:
      2) Automatic Operators: 2 years.
      3) Exit Devices:
         1) Mechanical: 3 years.
         2) Electrified: 1 year.
      4) Locksets:
         1) Mechanical: 3 years.
         2) Electrified: 1 year.
      5) Continuous Hinges: Lifetime warranty
      6) Key Blanks: Lifetime

2. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.

1.9 MAINTENANCE

A. Maintenance Tools:
   1. Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Approval of manufacturers and/or products other than those listed as "Scheduled Manufacturer" or "Acceptable Manufacturers" in the individual article for the product category shall be in accordance with QUALITY ASSURANCE article, herein.
B. Approval of products from manufacturers indicated in “Acceptable Manufacturers” is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer's product.

C. Hand of Door: Drawings show direction of slide, swing, or hand of each door leaf. Furnish each item of hardware for proper installation and operation of door movement as shown.

D. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

2.2 MATERIALS

A. Fasteners
1. Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation.
2. Furnish screws for installation with each hardware item. Finish exposed (exposed under any condition) screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
3. Provide concealed fasteners for hardware units exposed when door is closed except when no standard units of type specified are available with concealed fasteners. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work unless thru-bolts are required to fasten hardware securely. Review door specification and advise Architect if thru-bolts are required.
4. Install hardware with fasteners provided by hardware manufacturer.

B. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.
   1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.

2.3 HINGES

A. Provide five-knuckle, ball bearing hinges.
1. Manufacturers and Products:
   1. Scheduled Manufacturer and Product: Ives 5BB series
   2. Acceptable Manufacturers and Products: Hager BB series, Bommer BB5000

B. Requirements:
   1. Provide three hinges per door leaf for doors 90 inches or less in height, and one additional hinge for each 30 inches of additional door height.
   2. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
      1. Steel Hinges: Steel pins
      2. Non-Ferrous Hinges: Stainless steel pins
      3. Out-Swinging Exterior Doors: Non-removable pins
      4. Out-Swinging Interior Lockable Doors: Non-removable pins
      5. Interior Non-lockable Doors: Non-rising pins
   3. Width of hinges: 4-1/2 inches at 1-3/4-inch thick doors, and 5 inches at 2 inches or thicker doors. Adjust hinge width as required for door, frame, and wall conditions to allow proper degree of opening.
   4. Doors 36 inches wide or less furnish hinges 4-1/2 inches high; doors greater than 36 inches wide furnish hinges 5 inches high, heavy weight or standard weight as specified.
2.4 CONTINUOUS HINGES

A. Aluminum Geared
   1. Manufacturers:
      1. Scheduled Manufacturer: Ives.
   2. Requirements:
      1. Provide aluminum geared continuous hinges conforming to ANSI/BHMA A156.25, Grade 2.
      2. Provide aluminum geared continuous hinges, where specified in the hardware sets, fabricated from 6063-T6 aluminum, with 0.25-inch diameter Teflon coated stainless steel hinge pin.
      3. Provide split nylon bearings at each hinge knuckle for quiet, smooth, self-lubricating operation.
      4. Provide hinges capable of supporting door weights up to 450 pounds, and successfully tested for 1,500,000 cycles.
      5. On fire-rated doors, provide aluminum geared continuous hinges that are classified for use on rated doors by testing agency acceptable to authority having jurisdiction.
      6. Provide aluminum geared continuous hinges with electrified option scheduled in the hardware sets. Provide with sufficient number and wire gage to accommodate electric function of specified hardware.
      7. Install hinges with fasteners supplied by manufacturer.
      8. Provide hinges with symmetrical hole pattern.

2.5 ELECTRIC POWER TRANSFER

A. Manufacturers:
   1. Scheduled Manufacturer: Von Duprin
   2. Acceptable Manufacturers: Securitron, ABH

B. Provide power transfer with electrified options as scheduled in the hardware sets. Provide with number and gage of wires sufficient to accommodate electric function of specified hardware.

C. Locate electric power transfer per manufacturer’s template and UL requirements, unless interference with operation of door or other hardware items.

2.6 FLUSH BOLTS

A. Manufacturers:
   1. Scheduled Manufacturer: Ives
   2. Acceptable Manufacturers: Rockwood, Trimco

B. Requirements:
   1. Provide automatic, constant latching, and manual flush bolts with forged bronze or stainless steel face plates, extruded brass levers, and with wrought brass guides and strikes. Provide 12 inch steel or brass rods at doors up to 90 inches in height. For doors over 90 inches in height increase top rods by 6 inches for each additional 6 inches of door height. Provide flush bolts designed, tested, and warranted for door material and door manufacturer. Provide dust-proof strikes at each bottom flush bolt.
2.7 MORTISE LOCKS

A. Manufacturers and Products:
   1. Scheduled Manufacturer and Product: Schlage L9000 series

B. Requirements:
   1. Provide mortise locks conforming to ANSI/BHMA A156.13 Series 1000, Grade 1
      Operational, Grade 1 Security, and manufactured from heavy gauge steel, containing
      components of steel with a zinc dichromate plating for corrosion resistance. Provide lock
      case that is multi-function and field reversible for handing without opening case. Cylinders:
      Refer to “KEYING” article, herein.
   2. Provide locks with standard 2-3/4 inches (70 mm) backset with full 3/4 inch (19 mm) throw
      stainless steel mechanical anti-friction latchbolt. Provide deadbolt with full 1 inch (25 mm)
      throw, constructed of stainless steel.
   3. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
   4. Verify lock functions with owner prior to ordering.
   5. Provide electrified options as scheduled in the hardware sets. Where scheduled, provide a
      request to exit (RX) switch that is actuated with rotation of inside lever.
   6. Lever Trim: Solid brass, bronze, or stainless steel, cast or forged in design specified, with
      wrought roses and external lever spring cages. Provide thru-bolted levers with 2-piece
      spindles.
      1. Lever Design: Schlage 17A.
      2. Tactile Warning (Knurling): Where required by authority having jurisdiction. Provide on
         levers on exterior (secure side) of doors serving rooms considered to be hazardous.

2.8 AUXILIARY LOCKS

A. Deadbolt:
   1. Manufacturers and Products:
      1. Scheduled Manufacturer and Product: Adams Rite MS1850SN Series
   2. Requirements:
      1. Provide narrow style aluminum door deadbolts as specified. Cylinders: Refer to
         “KEYING” article, herein.
      2. Provide deadbolts with backset as required for door detail and with full 1-13/32 inches
         (36 mm) throw deadbolt.
      3. Provide manufacturer’s standard strikes unless extended lip strikes are necessary to
         protect trim.

2.9 EXIT DEVICES

A. Manufacturer and Product:
   1. Scheduled Manufacturer: Von Duprin 99/33 series.

B. Requirements:
   1. Provide exit devices tested to ANSI/BHMA A156.3-2014 Grade 1, and UL listed for Panic
      Exit or Fire Exit Hardware. Cylinders: Refer to “KEYING” article, herein.
   2. Provide touchpad type exit devices, fabricated of brass, bronze, stainless steel, or aluminum,
      plated to standard architectural finishes to match balance of door hardware.
   3. Quiet Operation: Incorporate fluid damper or other device that eliminates noise of exit device
      operation.
4. Touchpad: Extend minimum of one half of door width, but not the full length of exit device rail. Provide end-cap with two-point attachment to door. Match exit device finish, stainless steel for US26, US26D, US28, US32, and US32D finishes; and for all other finishes, provide compatible finish to exit device. Provide compression springs in devices, latches, and outside trims or controls; tension springs prohibited.

5. Provide exit devices with deadlatching feature for security and for future addition of alarm kits and/or other electrical requirements.

6. Provide exit devices with manufacturer's approved striking plate.

7. Provide exit devices cut to door width and height. Locate exit devices at height recommended by exit device manufacturer, allowable by governing building codes, and approved by Architect.

8. Mount mechanism case flush on face of doors, or provide spacers to fill gaps behind devices. Where glass trim or molding projects off face of door, provide glass bead kits.

9. Provide cylinder dogging at non-fire-rated exit devices, unless specified less dogging.

10. Removable Mullions: 2 inches (51 mm) x 3 inches (76 mm) steel tube. Where scheduled as keyed removable mullion that is removed by use of a key.

11. Verify exit device functions with owner prior to ordering.

12. Where lever handles are specified as outside trim for exit devices, provide heavy-duty lever trims with forged or cast escutcheon plates. Provide vandal-resistant levers that will travel to 90-degree down position when more than 35 pounds of torque are applied, and which can easily be re-set.

1. Lever Style: Match lever style of locksets.
2. Tactile Warning (Knurling): Where required by authority having jurisdiction. Provide on levers on exterior (secure side) of doors serving rooms considered to be hazardous.

13. Provide UL labeled fire exit hardware for fire rated openings.

14. Provide factory drilled weep holes for exit devices used in full exterior application, highly corrosive areas, and where noted in hardware sets.

15. Provide electrified options as scheduled in the hardware sets.

2.10 POWER SUPPLIES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Schlage or Von Duprin PS900 series

B. Requirements:

1. Provide power supplies, recommended and approved by manufacturer of electrified locking component, for operation of electrified locks, electrified exit devices, magnetic locks, electric strikes, and other components requiring power supply.

2. Provide appropriate quantity of power supplies necessary for proper operation of electrified locking components as recommended by manufacturer of electrified locking components with consideration for each electrified component using power supply, location of power supply, and approved wiring diagrams. Locate power supplies as directed by Architect.

3. Provide regulated and filtered 24 VDC power supply, and UL class 2 listed.

4. Options:

1. Provide power supply, where specified, with internal capability of charging sealed backup batteries 24 VDC, in addition to operating DC load.
2. Provide sealed batteries for battery back-up at each power supply where specified.
3. Provide keyed power supply cabinet.

5. Provide power supply in an enclosure, complete, and requiring 120VAC to fused input.
6. Provide power supply with emergency release terminals, where specified, that allow release of all devices upon activation of fire alarm system complete with fire alarm input for initiating “no delay” exiting mode.

2.11 CYLINDER HOUSINGS

A. Manufacturers:
   1. Scheduled Manufacturer: Schlage
   2. Acceptable Manufacturers: No Substitute

B. Requirements:
   1. Provide cylinder, from the same manufacturer of locksets, compliant with ANSI/BHMA A156.5; latest revision, Section 12, Grade 1; permanent cylinders; cylinder face finished to match lockset, manufacturer's series as indicated. Refer to “KEYING” article, herein.
   2. Provide cylinders in the below-listed configuration(s), distributed throughout the Project as indicated.
      1. Match owner’s existing system.
      2. Cylinder/Core Type: Small Format Interchangeable Core (SFIC).
   3. Replaceable Construction Cores.
      1. Provide temporary construction cores replaceable by permanent cores, furnished in accordance with the following requirements.
         1) 2 construction control keys.
         2) 12 construction change (day) keys.
   4. Verify with owner where permanent cores are to be shipped to.

2.12 PERMANENT CORES, KEYING, AND KEYS

A. Manufacturers:
   1. Scheduled Manufacturer: Best
   2. Acceptable Manufacturers: No Substitute

B. Permanent Core Requirements:
   1. Provide permanent cores compliant with ANSI/BHMA A156.5; latest revision, Section 12, Grade 1; permanent cylinders; cylinder face finished to match lockset, manufacturer’s series as indicated. Refer to “KEYING” article, herein.
   2. Provide permanent cores in the below-listed configuration(s), distributed throughout the Project as indicated.
      1. Match owner’s existing system.
      2. Cylinder/Core Type: Small Format Interchangeable Core (SFIC)

C. Keying Requirements:
   1. Provide a factory registered keying system, complying with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.
   2. Provide keying system capable of multiplex masterkeying.
   3. Forward bitting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements shall be cause for replacement of cylinders/cores involved at no additional cost to Owner.
   4. Provide keys with the following features:
      1. Material: Nickel silver; minimum thickness of .107-inch (2.3mm).
      5. Identification:
1. Mark permanent cylinders/cores and keys with applicable blind code per DHI publication “Keying Systems and Nomenclature” for identification. Blind code marks shall not include actual key cuts.

2. Identification stamping provisions must be approved by the Architect and Owner.

3. Stamp keys with Owner’s unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with “DO NOT DUPLICATE”.

4. Failure to comply with stamping requirements shall be cause for replacement of keys involved at no additional cost to Owner.

6. Quantity: Furnish in the following quantities.
   1. Change (Day) Keys: 3 per cylinder/core.
   2. Permanent Control Keys: 3 (if required).
   4. Unused balance of key blanks shall be furnished to Owner with the cut keys.

D. Verify with owner where permanent and keys are to be shipped to.

2.13 KEY CONTROL SYSTEM

A. Manufacturers:
   1. Scheduled Manufacturer: Telkee
   2. Acceptable Manufacturers: HPC, Lund

B. Requirements:
   1. Provide key control system, including envelopes, labels, tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet, all as recommended by system manufacturer, with capacity for 150% of number of locks required for Project.
   1. Provide complete cross index system set up by hardware supplier, and place keys on markers and hooks in cabinet as determined by final key schedule.
   2. Provide hinged-panel type cabinet for wall mounting.

2.14 DOOR CLOSERS

A. Manufacturers and Products:

B. Requirements:
   1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. ISO 9000 certify closers. Stamp units with date of manufacture code.
   2. Provide door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
   3. Cylinder Body: 1-1/2 inch (38 mm) diameter with 3/4 inch (19 mm) diameter double heat-treated pinion journal.
   4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
   5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
   6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck.
   7. Provide closers with solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers.
8. Pressure Relief Valve (PRV) Technology: Not permitted.
9. Finish for Closer Cylinders, Arms, Adapter Plates, and Metal Covers: Powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI Standard A156.4 and ASTM B117, or has special rust inhibitor (SRI).
10. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.15 ELECTRO-HYDRAULIC AUTOMATIC OPERATORS

A. Manufacturers and Products:
   1. Scheduled Manufacturer and Product: LCN 4600 series

B. Requirements:
   1. Provide low energy automatic operator units with hydraulic closer complying with ANSI/BHMA A156.19.
   2. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
   3. Provide units with conventional door closer opening and closing forces unless power operator motor is activated. Provide door closer assembly with adjustable spring size, back-check, and opening and closing speed adjustment valves to control door
   4. Provide units with on/off switch for manual operation, motor start up delay, vestibule interface delay, electric lock delay, and door hold open delay.
   5. Provide units with conventional door closer opening and closing forces unless power operator motor is activated. Provide door closer assembly with adjustable spring size, back-check valve, sweep valve, latch valve to control door.
   6. Provide drop plates, brackets, or adapters for arms as required for details.
   7. Provide hard-wired actuator switches for operation as specified.
   8. Provide weather-resistant actuators at exterior applications.
   9. Provide key switches with LED's, recommended and approved by manufacturer of automatic operator as required for function described in operation description of hardware group below. Cylinders: Refer to "KEYING" article, herein.
   10. Provide complete assemblies of controls, switches, power supplies, relays, and parts/material recommended and approved by manufacturer of automatic operator for each individual leaf. Actuators control both doors simultaneously at pairs. Sequence operation of exterior and vestibule doors with automatic operators to allow ingress or egress through both sets of openings as directed by Architect. Locate actuators, key switches, and other controls as directed by Architect.
   11. Provide units with vestibule inputs that allow sequencing operation of two units, and SPDT relay for interfacing with latching or locking devices.

2.16 DOOR TRIM

A. Manufacturers:
   1. Scheduled Manufacturer: Ives
   2. Acceptable Manufacturers: Rockwood, Trimco

B. Requirements:
   1. Provide push plates 4 inches (102 mm) wide by 16 inches (406 mm) high by 0.050 inch (1 mm) thick and beveled 4 edges. Where width of door stile prevents use of 4 inches (102 mm) wide plate, adjust width to fit.
2. Provide push bars of solid bar stock, diameter and length as scheduled. Provide push bars of sufficient length to span from center to center of each stile. Where required, mount back to back with pull.
3. Provide offset pulls of solid bar stock, diameter and length as scheduled. Where required, mount back to back with push bar.
4. Provide pulls of solid bar stock, diameter and length as scheduled. Where required, mount back to back with push bar.
5. Provide pull plates 4 inches (102 mm) wide by 16 inches (406 mm) high by 0.050 inch (1 mm) thick, beveled 4 edges, and prepped for pull. Where width of door stile prevents use of 4 inches (102 mm) wide plate, adjust width to fit.
6. Provide decorative pulls as scheduled. Where required, mount back to back with pull.

2.17 PROTECTION PLATES

A. Manufacturers:
   1. Scheduled Manufacturer: Ives
   2. Acceptable Manufacturers: Rockwood, Trimco

B. Requirements:
   1. Provide kick plates, mop plates, and armor plates minimum of 0.050 inch thick, beveled four edges as scheduled. Furnish with countersunk sheet metal screws, finished to match plates.
   2. Adjust width accordingly for other conflicting hardware (astragals, mullions, etc).
   3. Sizes of plates:
      1. Kick Plates: 10 inches high by 1-1/2 inches less width of door on push side of single doors, 1 inch less width of door on push side of pairs
      2. Mop Plates: 4 inches high by 1 inch less width of door on pull side of single and paired doors
      3. Armor Plates: 35 inches high by 1 -1/2 inches less width of door on push side of single doors, 1 inch less width of door on push side of pairs

2.18 OVERHEAD STOPS AND OVERHEAD STOP/HOLDERS

A. Manufacturers:
   1. Scheduled Manufacturers: Glynn-Johnson
   2. Acceptable Manufacturers: No Substitute

B. Requirements:
   1. Provide heavy duty concealed mounted overhead stop or holder as specified for exterior and interior vestibule single acting doors.
   2. Provide heavy duty concealed mounted overhead stop or holder as specified for double acting doors.
   3. Provide heavy or medium duty and concealed or surface mounted overhead stop or holder for interior doors as specified. Provide medium duty surface mounted overhead stop for interior doors and at any door that swings more than 140 degrees before striking wall, open against equipment, casework, sidelights, and where conditions do not allow wall stop or floor stop presents tripping hazard.
   4. Where overhead holders are specified provide friction type at doors without closer and positive type at doors with closer.

2.19 DOOR STOPS AND HOLDERS

A. Manufacturers:
   1. Scheduled Manufacturer: Ives
2. Acceptable Manufacturers: Rockwood, Trimco

B. Provide door stops at each door leaf:
   1. Provide wall stops wherever possible. Provide convex type where mortise type locks are used and concave type where cylindrical type locks are used.
   2. Where a wall stop cannot be used, provide universal floor stops for low or high rise options.
   3. Where wall or floor stop cannot be used, provide medium duty surface mounted overhead stop.

2.20 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

A. Manufacturers:
   1. Scheduled Manufacturer: Zero
   2. Acceptable Manufacturers: National Guard, Reese, Pemko

B. Requirements:
   1. Provide thresholds, weather-stripping (including door sweeps, seals, and astragals) and gasketing systems (including smoke, sound, and light) as specified and per architectural details. Match finish of other items.
   2. Size threshold width for full wall width when frames are recessed.
   3. Cope thresholds at jambs and in front of mullions if thresholds project beyond door faces.
   4. Furnish thresholds with non-ferrous stainless steel screws and lead anchors.
   5. Furnish thresholds with slip resistant coating at exterior openings and where moisture is present.
   6. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.

2.21 SILENCERS

A. Manufacturers:
   1. Scheduled Manufacturer: Ives
   2. Acceptable Manufacturers: Rockwood, Trimco

B. Requirements:
   1. Provide "push-in" type silencers for hollow metal or wood frames.
   2. Provide one silencer per 30 inches of height on each single frame, and two for each pair frame.
   3. Omit where gasketing is specified.

2.22 DOOR POSITION SWITCHES

A. Manufacturers:
   1. Scheduled Manufacturer: Schlage
   2. Acceptable Manufacturers: GE-Interlogix

B. Requirements:
   1. Provide recessed or surface mounted type door position switches as specified.
   2. Coordinate door and frame preparations with door and frame suppliers. If switches are being used with magnetic locking device, provide minimum of 4 inches between switch and magnetic locking device.
2.23 FINISHES

A. Provide finish for each item as indicated in the sets.

PART 3 EXECUTION

2.24 EXAMINATION

A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance.

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.

2.25 INSTALLATION

A. Mounting Heights: Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.
   2. Custom Steel Doors and Frames: HMMA 831.

B. Install each hardware item in compliance with manufacturer's instructions and recommendations, using only fasteners provided by manufacturer.

C. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.

D. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.

E. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

F. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.

G. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated or one hinge for every 30 inches (750 mm) of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.

H. Lock Cylinders: Install construction cores to secure building and areas during construction period.
   1. Replace construction cores with permanent cores as indicated in keying section.

I. Wiring: Coordinate with Division 26, ELECTRICAL sections for:
   1. Conduit, junction boxes and wire pulls.
2. Connections to and from power supplies to electrified hardware.
3. Connections to fire/smoke alarm system and smoke evacuation system.
4. Connection of wire to door position switches and wire runs to central room or area, as directed by Architect.
5. Testing and labeling wires with Architect’s opening number.

J. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.

K. Door Closers: Mount closers on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Closers shall not be visible in corridors, lobbies and other public spaces unless noted otherwise or approved by Architect.

L. Closer/Holders: Mount closer/holders on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.

M. Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.
1. Configuration: Provide power supplies for each opening with electrified door hardware.

N. Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section “Joint Sealants.”

O. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.

P. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

Q. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.

R. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

2.26 FIELD QUALITY CONTROL

A. Architectural Hardware Consultant: Engage qualified independent Architectural Hardware Consultant to perform inspections and to prepare inspection reports.
1. Architectural Hardware Consultant will inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.

2.27 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 to comply with accessibility requirements and requirements of authorities having jurisdiction.

B. Occupancy Adjustment: Approximately six months after date of Substantial Completion, Installer’s Architectural Hardware Consultant shall examine and readjust each item of door hardware.
hardware, including adjusting operating forces, as necessary to ensure function of doors, door hardware, and electrified door hardware.

2.28 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.

2.29 DEMONSTRATION

A. Provide training for Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes. Refer to Division 01 Section "Demonstration and Training."

2.30 DOOR HARDWARE SCHEDULE

A. Locksets, exit devices, and other hardware items are referenced in the following hardware sets for series, type and function. Refer to the above-specifications for special features, options, cylinders/keying, and other requirements.

B. Hardware Sets:

HARDWARE GROUP NO. 01

FOR USE ON DOOR #((S):

B2

PROVIDE EACH OPENING WITH THE FOLLOWING:

<table>
<thead>
<tr>
<th>QTY</th>
<th>DESCRIPTION</th>
<th>CATALOG NUMBER</th>
<th>FINISH</th>
<th>MFR</th>
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<tbody>
<tr>
<td>3</td>
<td>HINGE</td>
<td>5BB1HW 4.5 X 4.5 (NRP AS REQ'D)</td>
<td>652</td>
<td>IVE</td>
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<tr>
<td>1</td>
<td>PASSAGE SET</td>
<td>L9010 17A</td>
<td>626</td>
<td>SCH</td>
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<tr>
<td>1</td>
<td>SURFACE CLOSER</td>
<td>4040XP REG</td>
<td>689</td>
<td>LCN</td>
</tr>
<tr>
<td>1</td>
<td>KICK PLATE</td>
<td>8400 10&quot; X 1 1/2&quot; LDW B-CS</td>
<td>630</td>
<td>IVE</td>
</tr>
<tr>
<td>1</td>
<td>WALL STOP</td>
<td>WS406/407CVX</td>
<td>630</td>
<td>IVE</td>
</tr>
<tr>
<td>1</td>
<td>SMOKE GASKET</td>
<td>488SBK PSA</td>
<td>BK</td>
<td>ZER</td>
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### HARDWARE GROUP NO. 02

**FOR USE ON DOOR # (S):**

A101   A103

**PROVIDE EACH OPENING WITH THE FOLLOWING:**

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<tr>
<td>2</td>
<td>EA DUMMY PUSH BAR</td>
<td>330</td>
<td>626</td>
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<tr>
<td>2</td>
<td>EA 90 DEG OFFSET PULL</td>
<td>8190EZHD 10&quot; O</td>
<td>630-316</td>
<td>IVE</td>
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<tr>
<td>2</td>
<td>EA OH STOP</td>
<td>100S</td>
<td>630</td>
<td>GLY</td>
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<tr>
<td>1</td>
<td>EA SURFACE CLOSER</td>
<td>4040XP TOP JAMB</td>
<td>689</td>
<td>LCN</td>
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<tr>
<td>1</td>
<td>EA SURF. AUTO OPERATOR</td>
<td>4642 WMS 120 VAC</td>
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<td>LCN</td>
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<tr>
<td>1</td>
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<td>4040XP-18TJ</td>
<td>689</td>
<td>LCN</td>
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<tr>
<td>2</td>
<td>EA ACTUATOR, WALL MOUNT</td>
<td>8310-853T</td>
<td>630</td>
<td>LCN</td>
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<tr>
<td>2</td>
<td>EA SURFACE MOUNT BOX</td>
<td>8310-867S</td>
<td>689</td>
<td>LCN</td>
</tr>
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</table>

PUSHING EITHER AUTO OPERATOR ACTUATOR SIGNALS AUTO OPERATOR TO MOMENTARILY OPEN DOOR. FREE EGRESS AT ALL TIMES.

### HARDWARE GROUP NO. 03

**FOR USE ON DOOR # (S):**

A123

**PROVIDE EACH OPENING WITH THE FOLLOWING:**

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ALL HARDWARE BY DOOR MANUFACTURER/SUPPLIER.
### HARDWARE GROUP NO. 04

*FOR USE ON DOOR # (S):*

A124

**PROVIDE EACH OPENING WITH THE FOLLOWING:**

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<tr>
<td>1</td>
<td>DEADBOLT, 2-PT, WDD</td>
<td>MS1850SN-050 X 4015 THOLD BOLT X 4005 STRIKE X ARMORED FACEPLATE</td>
<td>628</td>
<td>ADA</td>
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<td>1</td>
<td>MORTISE ADA CYL TURN, AR CAM</td>
<td>09-907 NH 118 XB11-720 L583-446 B220-050</td>
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<td>SCH</td>
</tr>
<tr>
<td>1</td>
<td>PERMANENT CORE</td>
<td>1C7*2</td>
<td>626</td>
<td>BES</td>
</tr>
<tr>
<td>1</td>
<td>MORTISE CYL HOUSING (SFIC), AR CAM</td>
<td>80-111 (W/ DISP CONSTRUCT CORE)</td>
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<td>SCH</td>
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<tr>
<td>2</td>
<td>PUSH/PULL BAR</td>
<td>9190EZHD-10*-NO</td>
<td>630-316</td>
<td>IVE</td>
</tr>
<tr>
<td>2</td>
<td>SURFACE CLOSER (W/ STOP)</td>
<td>4040XP SCUSH</td>
<td>689</td>
<td>LCN</td>
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<tr>
<td>2</td>
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<td>8400 10&quot; X 1&quot; LDW B-CS</td>
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<td>IVE</td>
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<tr>
<td>2</td>
<td>SILENCER</td>
<td>SR64</td>
<td>GRY</td>
<td>IVE</td>
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### HARDWARE GROUP NO. 05

*FOR USE ON DOOR # (S):*

A115 A116 A125 A208

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<td>5BB1HW 4.5 X 4.5 (NRP AS REQ'D)</td>
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<td>IVE</td>
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<td>1</td>
<td>PRIVACY LOCK</td>
<td>L9040 17A L583-363 L283-722</td>
<td>626</td>
<td>SCH</td>
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<tr>
<td>1</td>
<td>SURFACE CLOSER</td>
<td>4040XP REG</td>
<td>689</td>
<td>LCN</td>
</tr>
<tr>
<td>1</td>
<td>KICK PLATE</td>
<td>8400 10&quot; X 1 1/2&quot; LDW B-CS</td>
<td>630</td>
<td>IVE</td>
</tr>
<tr>
<td>1</td>
<td>MOP PLATE</td>
<td>8400 4&quot; X 1&quot; LDW B-CS</td>
<td>630</td>
<td>IVE</td>
</tr>
<tr>
<td>1</td>
<td>WALL STOP</td>
<td>WS406/407CVX</td>
<td>630</td>
<td>IVE</td>
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<tr>
<td>3</td>
<td>SILENCER</td>
<td>SR64</td>
<td>GRY</td>
<td>IVE</td>
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**HARDWARE GROUP NO. 06**

*FOR USE ON DOOR #(S):*

A202  A203  A205  A206  A211

PROVIDE EACH OPENING WITH THE FOLLOWING:

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<tr>
<td>1</td>
<td>OFFICE/ENTRY LOCK</td>
<td>L9050BDC 17A L583-363</td>
<td>☑️ 626</td>
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<tr>
<td>1</td>
<td>PERMANENT CORE</td>
<td>1C7&quot;2</td>
<td>☑️ 626</td>
<td>BES</td>
</tr>
<tr>
<td>1</td>
<td>WALL STOP</td>
<td>WS406/407CVX</td>
<td>☑️ 630</td>
<td>IVE</td>
</tr>
<tr>
<td>3</td>
<td>SILENCER</td>
<td>SR64</td>
<td>☑️ GRY</td>
<td>IVE</td>
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**HARDWARE GROUP NO. 07**

*FOR USE ON DOOR #(S):*

A210

PROVIDE EACH OPENING WITH THE FOLLOWING:

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<td>HINGE</td>
<td>5BB1HW 4.5 X 4.5 (NRP AS REQ'D)</td>
<td>☑️ 652</td>
<td>IVE</td>
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<tr>
<td>1</td>
<td>CLASSROOM LOCK</td>
<td>L9070BDC 17A</td>
<td>☑️ 626</td>
<td>SCH</td>
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<tr>
<td>1</td>
<td>PERMANENT CORE</td>
<td>1C7&quot;2</td>
<td>☑️ 626</td>
<td>BES</td>
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<tr>
<td>1</td>
<td>SURFACE CLOSER</td>
<td>4040XP REG</td>
<td>☑️ 689</td>
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<tr>
<td>1</td>
<td>KICK PLATE</td>
<td>8400 10&quot; X 1 1/2&quot; LDW B-CS</td>
<td>☑️ 630</td>
<td>IVE</td>
</tr>
<tr>
<td>1</td>
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<td>WS406/407CVX</td>
<td>☑️ 630</td>
<td>IVE</td>
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<tr>
<td>1</td>
<td>SOUND SEAL</td>
<td>870AA-S</td>
<td>☑️ AA</td>
<td>ZER</td>
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<tr>
<td>1</td>
<td>AUTO DR BTM, MORTISE</td>
<td>360AA-LS</td>
<td>☑️ AA</td>
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**HARDWARE GROUP NO. 08**

*FOR USE ON DOOR #(S):*

A108  A109  A207

PROVIDE EACH OPENING WITH THE FOLLOWING:

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<tr>
<td>1</td>
<td>STOREROOM LOCK</td>
<td>L9080BDC 17A</td>
<td>☑️ 626</td>
<td>SCH</td>
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<tr>
<td>1</td>
<td>PERMANENT CORE</td>
<td>1C7&quot;2</td>
<td>☑️ 626</td>
<td>BES</td>
</tr>
<tr>
<td>1</td>
<td>WALL STOP</td>
<td>WS406/407CVX</td>
<td>☑️ 630</td>
<td>IVE</td>
</tr>
<tr>
<td>3</td>
<td>SILENCER</td>
<td>SR64</td>
<td>☑️ GRY</td>
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HARDWARE GROUP NO. 09
FOR USE ON DOOR #S:
A110
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<tr>
<td>1</td>
<td>STOREROOM LOCK L9080BDC 17A</td>
<td>626</td>
<td>SCH</td>
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<tr>
<td>1</td>
<td>PERMANENT CORE 1C7*2</td>
<td>626</td>
<td>BES</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>SURFACE CLOSER 4040XP REG</td>
<td>689</td>
<td>LCN</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>KICK PLATE 8400 10&quot; X 1 1/2&quot; LDW B-CS</td>
<td>630</td>
<td>IVE</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>WALL STOP WS406/407CVX</td>
<td>630</td>
<td>IVE</td>
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<tr>
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<td>SILENCER SR64</td>
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HARDWARE GROUP NO. 10
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A110-B
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<td>CONT. HINGE 224XY EPT</td>
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<td>1</td>
<td>POWER TRANSFER EPT10</td>
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<td>STOREROOM LOCK L9080HD 17A RX</td>
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<td>PERMANENT CORE 1C7*2</td>
<td>626</td>
<td>BES</td>
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<tr>
<td>1</td>
<td>SURFACE CLOSER (W/STOP &amp; HO) 4040XP SHCUSH</td>
<td>689</td>
<td>LCN</td>
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<td>KICK PLATE 8400 10&quot; X 1 1/2&quot; LDW B-CS</td>
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<td>IVE</td>
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<td>WALL STOP WS406/407CVX</td>
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<td>RAIN DRIP 142AA</td>
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<td>WEATHERSTRIPPING 429AA-S</td>
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<td>DOOR SWEEP, BRUSH W/DROP 8198AA</td>
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### HARDWARE GROUP NO. 11

**FOR USE ON DOOR #(S):**

A113

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<td>IVE</td>
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<td>STOREROOM LOCK</td>
<td>L9080BDC 17A</td>
<td>626</td>
<td>SCH</td>
</tr>
<tr>
<td>1</td>
<td>PERMANENT CORE</td>
<td>1C7*2</td>
<td>626</td>
<td>BES</td>
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<tr>
<td>1</td>
<td>SURFACE CLOSER</td>
<td>4040XP CUSH</td>
<td>689</td>
<td>LCN</td>
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<td>1</td>
<td>KICK PLATE</td>
<td>8400 10&quot; X 1 1/2&quot; LDW B-CS</td>
<td>630</td>
<td>IVE</td>
</tr>
<tr>
<td>1</td>
<td>SMOKE GASKET</td>
<td>488SBK PSA</td>
<td>630</td>
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### HARDWARE GROUP NO. 12

**FOR USE ON DOOR #(S):**

A107

**PROVIDE EACH OPENING WITH THE FOLLOWING:**

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<td>1</td>
<td>CONST LATCHING BOLT</td>
<td>FB51T/61T (AS REQ'D)</td>
<td>630</td>
<td>IVE</td>
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<tr>
<td>1</td>
<td>STOREROOM LOCK</td>
<td>L9080BDC 17A</td>
<td>626</td>
<td>SCH</td>
</tr>
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<td>1</td>
<td>PERMANENT CORE</td>
<td>1C7*2</td>
<td>626</td>
<td>BES</td>
</tr>
<tr>
<td>2</td>
<td>WALL STOP</td>
<td>WS406/407CVX</td>
<td>630</td>
<td>IVE</td>
</tr>
<tr>
<td>2</td>
<td>SILENCER</td>
<td>SR64</td>
<td>GRY</td>
<td>IVE</td>
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## HARDWARE GROUP NO. 13

**FOR USE ON DOOR #(S):**

A106  A106-B

**PROVIDE EACH OPENING WITH THE FOLLOWING:**

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<td>PANIC HARDWARE</td>
<td>CD-99-L-17</td>
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<td>(INSTALL NL DRIVE PIN)</td>
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<td>PERMANENT CORE</td>
<td>1C7*2</td>
<td>626</td>
<td>BES</td>
</tr>
<tr>
<td>1</td>
<td>MORTISE CYL HOUSING (SFIC)</td>
<td>80-110 XQ11-948 (W/ DISP CONST CORE)</td>
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<td>LCN</td>
</tr>
<tr>
<td>1</td>
<td>KICK PLATE</td>
<td>8400 10&quot; X 1 1/2&quot; LDW B-CS</td>
<td>630</td>
<td>IVE</td>
</tr>
<tr>
<td>3</td>
<td>SILENCER</td>
<td>SR64</td>
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<td>IVE</td>
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## HARDWARE GROUP NO. 14

**FOR USE ON DOOR #(S):**

A106-A

**PROVIDE EACH OPENING WITH THE FOLLOWING:**

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<tr>
<th>QTY</th>
<th>DESCRIPTION</th>
<th>CATALOG NUMBER</th>
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<th>MFR</th>
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<tbody>
<tr>
<td>1</td>
<td>CONT. HINGE</td>
<td>112XY EPT</td>
<td>628</td>
<td>IVE</td>
</tr>
<tr>
<td>1</td>
<td>POWER TRANSFER</td>
<td>EPT10</td>
<td>689</td>
<td>VON</td>
</tr>
<tr>
<td>1</td>
<td>ELEC PANIC HARDWARE</td>
<td>CD-RX-33A-NL-OP-388</td>
<td>626</td>
<td>VON</td>
</tr>
<tr>
<td>2</td>
<td>PERMANENT CORE</td>
<td>1C7*2</td>
<td>626</td>
<td>BES</td>
</tr>
<tr>
<td>1</td>
<td>MORTISE CYL HOUSING (SFIC)</td>
<td>80-110 XQ11-948 (W/ DISP CONST CORE)</td>
<td>626</td>
<td>SCH</td>
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<tr>
<td></td>
<td>-&gt; FOR CYLINDER DOGGING</td>
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<td></td>
<td></td>
</tr>
<tr>
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<td>RIM CYL HOUSING (SFIC)</td>
<td>80-159 (W/ KEYED CONST CORE)</td>
<td>626</td>
<td>SCH</td>
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<tr>
<td>1</td>
<td>OH STOP</td>
<td>100S</td>
<td>630</td>
<td>GLY</td>
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<tr>
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<td>4040XP EDA</td>
<td>689</td>
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<tr>
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<td>PA MOUNTING PLATE</td>
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<td>BLADE STOP SPACER</td>
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<td>RAIN DRIP</td>
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<td>AA</td>
<td>ZER</td>
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<td>AA</td>
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</tr>
<tr>
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<td>AA</td>
<td>ZER</td>
</tr>
<tr>
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**HARDWARE GROUP NO. 15**

*FOR USE ON DOOR #(S):*

B1

**PROVIDE EACH OPENING WITH THE FOLLOWING:**

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## HARDWARE GROUP NO. 16

**FOR USE ON DOOR #(#S):**

A101-B   A103-B

**PROVIDE EACH OPENING WITH THE FOLLOWING:**

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<tr>
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<td>REMOVABLE MULLION</td>
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<td>1</td>
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<td>80-110 (W/ DISP CONST CORE)</td>
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<td>SCH</td>
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<tr>
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<tr>
<td>2</td>
<td>90 DEG OFFSET PULL</td>
<td>8190EZHD 10” O</td>
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<td>4040XP TOP JAMB</td>
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<td>4642 WMS 120 VAC</td>
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<tr>
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<td>8310-801</td>
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<td>B/O</td>
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<td>ZER</td>
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<tr>
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<td>BLK</td>
<td>SCE</td>
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<td>POWER SUPPLY</td>
<td>PS902 900-4RL 120/240 VAC</td>
<td>LGR</td>
<td>SCE</td>
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</tbody>
</table>

Door normally closed and locked. Presenting valid credential to reader momentarily retracts panic device latch and momentarily enables exterior actuator button. Pushing enabled exterior actuator button signals automatic operator to momentarily open door. Interior actuator enabled at all times. Pushing the interior actuator button momentarily retracts panic device latch and signals automatic operator to momentarily open door. Panic device latches also capable of being electronically dogged down (i.e. push/pull mode) as designated by access control system schedule. Exit devices latch and lock with activation of security system. Free egress at all times.

Door Hardware
08 71 00 - 27
<table>
<thead>
<tr>
<th>DOOR #</th>
<th>HS #</th>
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<tbody>
<tr>
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<tr>
<td>A101-B</td>
<td>16</td>
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<tr>
<td>A103</td>
<td>02</td>
</tr>
<tr>
<td>A103-B</td>
<td>16</td>
</tr>
<tr>
<td>A106</td>
<td>13</td>
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<tr>
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<tr>
<td>A106-B</td>
<td>13</td>
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<td>A116</td>
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<td>A123</td>
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<td>B2</td>
<td>01</td>
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END OF SECTION
SCHEDULED DOOR SCHEDULE

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<tr>
<th>Door Number</th>
<th>Pair of Doors</th>
<th>Door Type</th>
<th>Glass HDWR</th>
<th>FRAME THRESHOLD</th>
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<th>Fire Rating</th>
<th>Comments</th>
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<tbody>
<tr>
<td>A210</td>
<td>3’-0” 7’-0”</td>
<td>1 3/4” WOOD</td>
<td>A GL-07 HM</td>
<td>F1</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>A211</td>
<td>3’-0” 7’-0”</td>
<td>1 3/4” WOOD</td>
<td>A GL-06 HM</td>
<td>F1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GENERAL DOOR SCHEDULE NOTES:

1. UNDERCUT DOORS AS REQUIRED BY FINAL FLOOR FINISH.
2. PROVIDE SEALANT BETWEEN HOLLOW METAL FRAME PERIMETERS AND SURROUNDING WALL.
3. GROUT FULL HOLLOW METAL DOOR FRAMES IN MASONRY WALL CONSTRUCTION.
4. EXTERIOR HOLLOW METAL DOOR FRAMES TO BE WELDED AND GRIND SMOOTH. FRAMES TO BE SPOT GROUTED.
5. INSTALL DOOR GLASS USING WET GLAZING METHOD.
6. PROVIDE 4” BETWEEN THE OUTSIDE EDGE OF DOOR FRAME AND PERPENDICULAR WALL.
7. INSTALL DOOR GLASS USING WET GLAZING METHOD.
8. PROVIDE 4” BETWEEN THE OUTSIDE EDGE OF DOOR FRAME AND PERPENDICULAR WALL.

GALV. LINTEL - 3 5/8” METAL STUD - 5/8” GWB - 1/2” PLYWOOD BACKUP BOTH SIDES - 4” MIN. GROUT FRAME FULL - SEALANT EACH SIDE - SEALANT BOTH SIDES - 6” METAL STUD - FULL DEPTH MINERAL WOOL INSULATION FULL HGT. (2HR PARTITION)

FRP PANEL ONE SIDE - 1/2” PLYWOOD BACKUP ONE SIDE - 1/2” PLYWOOD BACKUP EACH SIDE - FULL DEPTH MINERAL WOOL INSULATION FULL HGT. (2HR PARTITION)

DOOR PANEL LEGEND:

A: HEAD DETAIL 3 5/8” STUD FRP PANEL BOTH SIDES [JAMB SIMILAR]
B: HEAD DETAIL 3 5/8” STUD FRP PANEL [JAMB SIMILAR]
C: HEAD DETAIL 6” STUD [JAMB SIMILAR] 2
D: HEAD DETAIL EXTERIOR WALL EXIT
E: HEAD DETAIL 6” STUD [JAMB SIMILAR] 2
F: HEAD DETAIL 3 5/8” STUD FRP PANEL [JAMB SIMILAR] 2
LEVEL 1 KITCHEN PLUMBING ENLARGED PLAN

LEVEL 1 PLUMBING ENLARGED PLAN

GENERAL PLUMBING NOTES:
1. REFER TO SHEET M FOR PLUMBING SYMBOLS, LEGENDS AND ABBRVIATIONS.

SHEET PLAN NOTES

1. ADDENDUM #2 02/24/20

NO. DESCRIPTION DATE

1. WALL THICKNESS 2" (3" DELEGATES ROW SUITE 150 INDIANAPOLIS, IN 46240 (317) 781-6200

CIRCLE DESIGN GROUP

47306 MULTICULTURAL CENTER

HALLWAY

3/4" HWR

3 1/2" CW

1 1/2" V

2 1 1/2" CW DROP.

17 1/2" CW DROP.

19 3" WASTE WITH P-TRAP UP TO MOP BASIN.

12 3" VENT UP.

11 SEE DETAIL # I / P-601.

10 SEE DETAIL # J / P-601.

8 SALT STORAGE AREA.

5 1 1/2" CW AND 1/2" HW UP.

7 INSTALL DRINKING FOUNTAIN WATER FILTER ABOVE RR CEILING.

4 "W UP.

3 4" W UP.

2 1 1/2" CW DROP.

1 1/4" CW DROP.

MULTICULTURAL CENTER

BALL STATE UNIVERSITY

47306 W University Ave, Muncie, IN 47306

RGCcollaborative

4411 9229 DELEGATES ROW SUITE 150 INDIANAPOLIS, IN 46240 (317) 781-6200

LANCER + BEEBE, LLC

BID SET

LEVEL 1 KITCHEN PLUMBING ENLARGED PLAN

LEVEL 1 PLUMBING ENLARGED PLAN
RFI RESPONSE

DATE: February 17, 2020
BY: Sanford E. Garner
RE: BSU Multicultural Center RFIs

1. Can you confirm the countertops in Kitchenette A104 and Workroom A204 are to be solid surface per spec 066200?
   a. Yes, the countertops in both spaces should be solid surface.

2. Will a door hardware specification be added in the next addendum?
   a. Yes, 08 71 00 Door Hardware has been added to the specifications and this addendum No. 2.

3. Drawing A520: Door opening A123 appears to be a traffic door of some type, but I do not see any specifications for traffic doors. Please advise on specifics for that door?
   a. The door is a Double Acting door, please see Addendum No. 2 for additional information.

4. Drawing A401: The sheet keynote legend on this drawing does not include mirrors or grab bars which appear on the plans & elevations. Are the mirrors & grab bars either furnished?
   a. The Base Bid includes Grab Bar and Mirrors.

5. The brick spec (042100, 2.1A, 1) says that the brick “to be selected”. Can we at least get an allowance we should carry per thousand brick so we are all on equal footing?
   a. For purposes of the bid, please use an allowance of $600.00 per thousand.

6. The masonry spec mentions Decorative Concrete Masonry (042100, 2.1E). The only block I see are in the foundation walls and the elevator shaft. Are there any ground face block on this project?
   a. There is no ground block on the project.

Submitted By: Sanford E. Garner

CC:

ATTACHMENT: