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**ADDENDUM NO. 2**

CATTARAUGUS COUNTY  
LITTLE VALLEY COUNTY CENTER  
ACCESSIBILITY IMPROVEMENTS

**JANUARY 10, 2023**

**OWNER**

CATTARAUGUS COUNTY DPW  
8810 Route 242  
Little Valley, NY 14755

**ARCHITECT/ENGINEER**

Wendel WD Architecture, Engineering, Surveying & Landscape Architecture, Inc.  
375 Essjay Road  
Suite 200  
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Project No. 307670

**This Addendum is being issued to clarify the bid documents and shall supersede and supplement all portions of previously issued bid documents with which it conflicts. It shall be made an integral part of the construction documents.**



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Project Cattaraugus County Little Valley County Center  
Accessibility Improvements  
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Addendum No. 02  
Contract GC-65  
M-66  
E-67

Wendel Project No. 307670

Date Jan. 10, 2023

ARTICLE - 1

DRAWING NO. \_\_\_\_\_  
SPEC  
SECTION 087100

**DELETE:** Specification section 087100 Door Hardware in its entirety.

**ADD:** Specification section 087100 Door Hardware as issued as part of this addendum.

ARTICLE - 2

DRAWING NO. A902  
SPEC  
SECTION \_\_\_\_\_

**DELETE:** Drawing A902 in its entirety.

**ADD:** Drawing A902 - Door Schedules, Door Details, and Door and Frame Types - as issued as part of this addendum.

Cattaraugus County  
Little Valley County Center - Accessibility Improvements  
DPW No. 65 – General Construction  
DPW No. 66 – Mechanical Construction  
DPW No. 67 – Electrical Construction  
Wendel Project No. 307670

## **PART 1 – GENERAL**

### **1.01 SUMMARY**

- A. Section includes hardware for doors specified in “Hardware Sets”.
- B. Related Divisions:
  - 1. Division 08 Openings
  - 2. Division 09 Finishes
  - 3. Division 26 Electrical
  - 4. Division 28 Electronic Safety and Security

### **1.02 REFERENCES**

- A. American National Standards Institute/Builders Hardware Manufacturers Association (ANSI):
  - 1. ANSI/BHMA A156.1 Butts & Hinges (2016)
  - 2. ANSI/BHMA A156.2 Bored & Preassembled Locks & Latches (2017)
  - 3. ANSI/BHMA A156.3 Exit Devices (2020)
  - 4. ANSI/BHMA A156.4 Door Controls – Closers (2019)
  - 5. ANSI/BHMA A156.5 Cylinders and Input Devices for Locks (2020)
  - 6. ANSI/BHMA A156.6 Architectural Door Trim (2015)
  - 7. ANSI/BHMA A156.7 Template Hinge Dimensions (2016)
  - 8. ANSI/BHMA A156.13 Mortise Locks & Latches (2017)
  - 9. ANSI/BHMA A156.16 Auxiliary Hardware (2018)
  - 10. ANSI/BHMA A156.18 Materials & Finishes (2020)
  - 11. ANSI/BHMA A156.19 Power Assist & Low Energy Power Operated Doors (2019)
  - 12. ANSI/BHMA A156.21 Thresholds (2019)
  - 13. ANSI/BHMA A156.22 Door Gasketing Systems (2017)
  - 14. ANSI/BHMA A156.25 Electrified Locks (2018)
  - 15. ANSI/BHMA A156.26 Continuous Hinges (2017)
  - 16. ANSI/BHMA A156.28 Keying Systems (2018)
  - 17. ANSI/BHMA A156.31 Electric Strikes (2019)
  - 18. ANSI/BHMA A156.35 Power Supplies for Electronic Access Control (2020)
  - 19. ANSI/BHMA A156.36 Auxiliary Locks (2020)
- B. International Code Council/American National Standards Institute (ICC/ANSI)/ADA:
  - 1. ICC/ANSI A117.1 Standards for Accessible and Usable Buildings and Facilities.
- C. Door and Hardware Institute (DHI):
  - 1. DHI Publication – Abbreviations and Symbols (2019).
  - 2. DHI Publication – Installation Guide for Doors and Hardware (2020).
  - 3. DHI Publication – Sequence and Format of Hardware Schedule (2019).
- D. National Fire Protection Agency (NFPA):
  - 1. NFPA 70 National Electrical Code.

2. NFPA 80 Standard for Fire Doors and Other Opening Protectives.
3. NFPA 105 Standard for the Installation of Smoke Door Assemblies.

### **1.03 SUBMITTALS**

- A. Submit in accordance with Conditions of the Contract and Division 01 Administrative Requirements and Submittal Procedures Section.
- B. Shop Drawings:
  1. Schedule hardware in vertical format using the DHI publication Sequence and Formatting for the Hardware Schedule.
  2. Include abbreviations and symbols page to include manufacturers' abbreviations, finish code descriptions, and fastener abbreviations including descriptions according to the DHI publication Abbreviations and Symbols.
  3. Detail headings referencing the Architect's heading, opening number, locations, fire rating, handing, degree of opening, and description of the opening elements. Include Voltage, amperage, and operational descriptions for openings that have electrified hardware.
  4. Coordinate final door hardware schedule with doors, frames, and related work listing proper sizing of hardware, addressing door thickness, handing, function, mounting accessories, and finish of hardware.
  5. List related door devices specified in other Sections for each opening.
  6. Architectural Hardware Consultant (AHC), as certified by DHI, who will affix seal attesting to completeness and correctness, including the review of the hardware schedule prior to submittal.
- C. Product Data:
  1. Furnish manufacturers' catalog sheets on design, grade, and function of items listed in hardware schedule. Submit only relevant information and circle or highlight the technical information including: model numbers, sizing information, voltage and amperage requirements, options and accessories required, means of fastening, listings of fire-rated applications, and finishes.
- E. Templates:
  1. Within fourteen days of receiving approved door hardware submittals submit complete list of templates for each hardware item to the opening manufacturers and the installers. Include detailed lists of the hardware location requirements for mortised and surface applied hardware.
- F. Wiring Diagrams: Detail a title block for each drawing that includes the project name, project address, architect name, architect's opening number, hardware set, date, and name of the author.
  1. Elevation Riser Drawings:
    - a. Furnish one set of elevation drawings with each hardware schedule submittal for hardware sets that contain electrified hardware. Illustrate the openings with proportional representations of the opening and electrified hardware components and dimension their mounting locations as well as sizes of junction boxes and power supplies. Label the components, wire quantities and gauges, high voltage requirements, as well as other building interfaces. Create a legend that complements the drawings with brand names, model numbers, and include voltage and amperage requirements. Add an operational description that includes the normal state of the door, ingress, egress, and what happens in case of power loss or fire alarm activation and any special conditions.

- b. Upon receipt of approved hardware correct and resubmit elevation drawings with the point-to-point and system drawings.
  2. Point-to-Point and System Drawings: Upon receipt of approved hardware schedule, submit point-to-point per hardware set and a system drawing. Cross-reference all wiring diagrams and the associated drawings to each other.
    - a. Point-to-Point Drawings: Draw each product in a realistic representation including each terminal including those not used, and lines representing wires from component to component, labeling wire colors and gauges.
    - b. System Drawing: illustrate all equipment and building interfaces required for the entire system. Include room labels and locations, opening numbers and locations.
- G. Closeout Submittals: Include the following information as well as highlight and flag fire rated openings for annual inspections:
  1. Cover page with required information:
    - a. Project name
    - b. Hardware supplier's name and contact information.
    - c. Date of substantial completion.
  2. Final record hardware schedule.
  3. Product Data.
  4. Keying Schedule.
  5. Record Wiring Diagrams.
    - a. System Drawing.
    - b. Elevations.
    - c. Point-to-Point Drawings with all final wire colors noted as terminated. (Include network IP and/or MAC addresses of field devices).
  6. Operating and Maintenance Manual.
  7. Warranty Information.

#### **1.04 QUALITY ASSURANCE**

- A. Hardware supplier shall employ an Architectural Hardware Consultant (AHC) as certified by DHI and a member of the seal program who will be available at reasonable times during course of work for Project hardware consultation. The supplier is to be located within 75 miles of the Project.
  1. Electrified Door Hardware Supplier Qualifications: Experienced door hardware supplier who has completed projects with electrified door hardware similar in material, design, and extent to that is indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
  2. Access and Electrified Security Supplier Qualifications: Experienced supplier who has completed projects with access and electrified security door hardware similar in material, design, and extent to that is indicated for this Project, whose work has resulted in construction with a record of successful in-service performance and be a factory authorized distributor.
  3. Supplier is to walk the project and file a report with the General Contractor indicating any conflicts between the specified hardware and the existing project conditions. See section 3.01E and 3.01F.
- B. Where openings are required to be accessible door hardware shall conform to ICC/ANSI A117.1.

- C. Fire Rated Door Assemblies: Where fire-rated door assemblies are indicated, provide door hardware complying with NFPA 80 that are listed and/or labeled by a qualified testing agency for fire-protection ratings indicated.
- D. Smoke and Draft Control Door Assemblies: Where smoke and draft control doors are required, provide door hardware that meets requirements of assemblies in compliance with NFPA 105.
- E. Door hardware certified to ANSI/BHMA standards as noted, manufacturer must participate and be listed in BHMA Certified Products Directory.
- F. Meetings: Comply with requirements in Division 01 Section “Project Meetings.”
  - 1. Low-voltage Coordination Meeting
    - a. Prior to furnishing door hardware submittals, convene a low-voltage coordination meeting. Meeting participants should include all affected trades including the following, but not limited to: Contractor, installer, supplier, electrical contractor, security consultant and installer, Owner’s IT representative, and fire alarm consultant.
    - b. Review sequence of operation for each opening with electrified hardware to ensure that every opening functions properly for the Owner’s use.
    - c. Discuss the types of electrified door hardware, inspection, and electrical roughing-in and other preparatory work performed by other trades.
    - d. Verify wire quantities, wire types, wire sizes, conduit sizes, and locations including if the power supplies will be centrally located or if they will be located near each opening.
    - e. Coordinate the door hardware, power supplies, back-up power requirements, access control components, fire alarm interfaces, elevator controls, and related building systems have all proper and necessary components to interface and operate correctly.
  - 2. Keying Meeting
    - a. Within fourteen days of receiving approved door hardware submittals, contact Owner to establish a keying conference. Include keying meeting decisions into final keying schedule submittal after reviewing the following, but not limited to:
      - ii. Function of the building, flow of traffic, individual area’s purpose, and degree of security.
      - iii. Lock functions and operation.
      - iv. Preliminary key system schematic diagram.
      - v. Verify existing keyways, and/or proposed keyways
      - vi. Visual key and cylinder identification
      - vii. Quantity of keys required including master level keys, change keys, and keys per lock.
      - viii. Review the key control system.
      - ix. Determine the recipient and contact information for the delivery of keys and accessories.
  - 3. Pre-installation Meeting
    - a. Convene meeting within fourteen days of receiving approved door hardware submittals. Participants from all affected buildings trades shall attend. Minimum participants should include: Contractor, installer, material supplier, manufacturer representatives, electrical contractor, security consultant, and fire alarm consultant.
    - b. Inspect and discuss preparatory work performed by other trades.

- c. Include in-conference decisions regarding proper installation methods and procedures for receiving and handling hardware.
  - d. Review all system, elevation, and point-to-point drawings to ensure that all necessary components are provided and detailed.
  - e. Review and finalize construction schedule and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - f. Review required testing, inspecting, and certifying procedures.
- G. Installer Qualifications: Specialized in performing installation of this Section and have five years minimum documented experience.
- 1. Electrified Hardware Supplier Qualifications: Experienced door hardware installer who has installed 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.
  - 2. Access Control and Electrified Security Supplier Qualifications: Experienced installer who has completed projects with access and electrified security 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 be a factory authorized to install and commission the system.

#### **1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Pack each item complete with necessary parts and fasteners in manufacturer's original packaging.
- B. Mark hardware that is not bulk packed with architect's opening number, hardware set number, and item number for each type of hardware. Include keyset symbols and corresponding hardware component for keyed products. Mark hardware that is bulk packed with manufacturers' part number and reference all hardware sets associated.
- C. Deliver hardware to the job site according to the phasing agreed upon in the pre-installation meeting. Inventory the delivery with the supplier's assistance. Immediately note shortages and damages on the shipping receipts and bill of ladings. Coordinate replacement or repair with the supplier.
- D. Deliver permanent keys, cores, access control credentials, software, and related accessories directly to Owner via registered mail or overnight package service. Establish the instructions for delivery to Owner at "Keying Conference."
- E. Provide a clean, dry, and secure room for hardware delivered. Shelve hardware off the floor and with larger items of hardware stored on pallets. Arrange locksets and keyed cylinders by opening number. Organize the balance of hardware by brand, model of hardware, and hardware set number. Leave the door markings of the hardware visible for installers.
- F. Waste Management and Disposal: Separate waste materials for use or recycling in accordance with Division 01.

## **1.06 WARRANTY**

- A. General Warranty: Comply Division 01 for Warranty requirements.
- B. Special Warranty: Warranties specified in this article will not deprive Owner of other rights.
  - 1. Ten years for manual door closers.
  - 2. Five years for locks.
  - 3. Five years for exit devices.
  - 4. One year for electromechanical door hardware.
  - 5. All access and electrified security equipment and systems will be warranted for a period of one (1) year commencing with the filing date of the Notice of Completion, provided the system has been inspected and signed off by a factory authorized installer and the factory authorized commissioning agent.

## **1.07 MAINTENANCE**

- A. Maintenance Tool and Instructions: Furnish a complete set of specialized tools and maintenance instructions for Owner's continued adjustment, maintenance, removal, and replacement of door hardware.

## **PART 2 – PRODUCTS**

### **2.01 HINGES**

- A. Hinges, electric hinges, and self-closing hinges of one manufacturer as listed for continuity of design and consideration of warranty.
- B. Standards: Products to be certified and listed by the following:
  - 1. Butts and Hinges: ANSI/BHMA A156.1.
  - 2. Template Hinge Dimensions: ANSI/BHMA A156.7.
  - 3. Self-Closing Hinges: ANSI/BHMA A156.17.
- C. Butt Hinges:
  - 1. Hinge weight and size unless otherwise indicated in hardware sets:
    - a. Doors up to 36" wide and up to 1-3/4" thick provide hinges with a minimum thickness of .134" and a minimum of 4-1/2" in height.
    - b. Doors from 36" wide up to 42" wide and up to 1-3/4" thick provide hinges with a minimum thickness of .145" and a minimum of 4-1/2" in height.
    - c. For doors from 42" wide up to 48" wide and up to 1-3/4" thick provide hinges with a minimum thickness of .180" and a minimum of 5" in height.
    - d. Doors greater than 1-3/4" thick provide hinges with a minimum thickness of .180" and a minimum of 5" in height.
    - e. Width of hinge is to be minimum required to clear surrounding trim.
  - 2. Base material unless otherwise indicated in hardware sets:
    - a. Exterior Doors: 304 Stainless Steel, Brass or Bronze material.
    - b. Interior Doors: Steel material.



- c. Fire Rated Doors: Steel or 304 Stainless Steel materials.
- d. Stainless Steel ball bearing hinges to have stainless steel ball bearings. Steel ball bearings are unacceptable.
- 3. Quantity of hinges per door unless otherwise stated in hardware sets:
  - a. Doors up to 60” in height provide 2 hinges.
  - b. Doors 60” up to 90” in height provide 3 hinges.
  - c. Doors 90” up to 120” in height provide 4 hinges.
  - d. Doors over 120” in height add 1 additional hinge per each additional 30” in height.
  - e. Dutch doors provide 4 hinges.
- 4. Hinge design and options unless otherwise indicated in hardware sets:
  - a. Hinges are to be of a square corner five-knuckle design, flat button tips and have ball bearings unless otherwise indicated in hardware sets.
  - b. Out-swinging exterior and out-swinging access-controlled doors are required to have Non-Removable Pins (NRP) to prevent removal of pin while door is in closed position.
  - c. When full width of opening is required, use hinges that are designed to swing door completely from opening when door is opened to 95 degrees.
  - d. When shims are necessary to correct frame or door irregularities, provide metal shims only.
- 5. Acceptable Manufacturers:

	Standard Weight	Heavy Weight
Hager	BB1279	BB1168
Bommer		
McKinney		

**2.02 CONTINUOUS HINGES**

- A. Continuous hinges of one manufacturer as listed for continuity of design and consideration of warranty.
- B. Standards: Products to be certified and listed by ANSI/BHMA A156.26 Grade 1.
- C. Continuous Geared Hinges:
  - 1. Determine model number by door and frame application, door thickness, frequency of use, and fire rating requirements according to manufacturer’s recommendations.
    - a. Size length of hinge to equal the actual door height unless otherwise stated in hardware sets.
- D. Material and Design:
  - 1. Base material: Anodized aluminum manufactured from 6063-T6 material; unexposed working metal surfaces be coated with TFE dry lubricant.
  - 2. Bearings:
    - a. Vertical loads be carried on Lubriloy RL bearings for non-fire rated doors.
    - b. Continuous hinges are to have a minimum spacing between bearings of 2-9/16”. Typical door from 80” to 84” in height to have a minimum of 32 bearings.
  - 3. Options:
    - a. When full width of opening is required, use hinges that are designed to swing door completely from opening when door is opened to 95 degrees.

- b. At fire rated openings provide hinges that carry a UL certification, up to and including 90-minute applications for wood doors and up to 3-hour applications for metal doors.

E. Acceptable Manufacturers:

Hager	780-224HD
Bommer	
Zero	

**2.03 FLUSH BOLTS AND COORDINATORS**

- A. Flush bolts of one manufacturer as listed for continuity of design and consideration of warranty.
- B. Standards: Manufacturer to be listed by the following: Auxiliary Hardware: ANSI/BHMI A156.16.
- C. Labeled openings: Provide automatic or constant latching flush bolts per hardware schedule for inactive leaf of pairs of doors. Provide dust proof strikes for bottom bolt.
- D. Non-Labeled openings: Provide two flush bolts for inactive leaf of pairs of doors per hardware schedule. Provide extension rods so that the center line of the top flush bolt is not more than 78” above the finish floor. Provide dust proof strike from bottom bolt.
- E. Acceptable Manufacturers:

	Manual Flush Bolt	Auto Flush Bolt	Dust Proof Strike
Hager	282D	291D/292D	280X
Burns			
Trimco			

- F. Coordinators: Provide for labeled pairs of doors with automatic flush bolts or with vertical rod exit device with a mortise-locking device per hardware schedule. Provide filler piece to extend full width of stop on frame. Provide mounting brackets for closers and special preparation for latches where applicable.
- G. Acceptable Manufacturers:

	Coordinator	Bracket
Hager	297D	297B
Burns		
Trimco		

**2.04 ELECTRIC STRIKES**

- A. Provide for use with type of locks shown on hardware schedule.
- B. Products to be certified and listed by the following:
  1. ANSI/BHMA A156.31 Electric Strikes and Frame Mounted Actuators Grade 1.
  2. UL Tested 1500 lb. static strength.
  3. UL listed for Fire Doors and Frames where applicable.
  4. UL 1034 Burglary Resistance.

5. UL 10C.3H fire-rated, 4' x 8' door.

C. Material and Design:

1. To accept up to 3/4" latch bolt and 1" deadbolt.
2. Field reversible, Fail Safe or Fail Secure.
3. Dual voltage 12/24 VDC.
4. Tamper resistant, stainless steel corrosion resistance parts, and cast body and keeper.

D. Options:

1. Latch Bolt Monitoring (LBM) Signals the door is closed and latched or unlatched and open.
2. Door Secure Monitor (DSM) Door secure and unlocked monitoring.
3. Deadbolt Monitoring (DBM) Signals deadbolt projected or retracted.
4. Plug in buzzer (BUZZ) Indicates Fail Secure strike is energized and unlocked.
5. Rectified (RECT) Converts AC to DC.

E. Acceptable Manufacturers:

HES	9600/UNL
Acceptable Equal	

**2.05 LOCKS AND LATCHES**

- A. Locks and latches of one manufacturer as listed for continuity of design and consideration of warranty.
- B. Lock and latch function numbers and descriptions of manufacturer's series as listed in hardware sets.

C. Heavy Duty Cylindrical Locks:

1. Lock and latch chassis to be zinc dichromate for corrosion resistance.
2. Keyed functions to be of a freewheeling design to help resist against vandalism.
3. Non-handed, field reversible.
4. Thru-bolt mounting with no exposed screws.
5. Levers, zinc cast and plated to match finished designation in hardware sets.
6. Roses, wrought brass or stainless steel material.
7. Stainless Steel latch bolt with minimum of 1/2" throw and deadlocking for keyed and exterior functions. Provide 3/4" latch bolt for pairs of fire-rated doors where required by door manufacturer. Standard backset to be 2-3/4" and adjustable faceplate to accommodate a square edge door or a standard 1/8" beveled edge door.
8. Strike is to fit a standard ANSI A115 prep measuring 1-1/4" x 4-7/8" with proper lip length to protect surrounding trim.
9. Fail-Secure (power unlocks lever) outside trim is locked when there is no power and unlocked when power is applied. Lockset will be locked in the event of a power failure (EU).
10. Request to Exit: Monitors inside lever rotation (RX).

D. Mortise Locks and Latches:

1. Lock cases from fully wrapped, 12 gauge steel, zinc dichromate for corrosion resistance.
2. Non-handed, field reversible without opening lock case.
3. Break-away spindles to prevent unlocking during forced entry or vandalism.

4. Levers, zinc cast, forged brass or stainless steel and plated to match finish designation in hardware sets.
5. Sectional Roses, solid brass or stainless steel material and have a minimum diameter of 2-7/16”.
6. Armor fronts, self-adjusting to accommodate a square edge door or a standard 1/8” beveled edge door.
7. Stainless steel latch bolt with minimum of 3/4” throw and deadlocking for keyed and exterior functions.
8. Strike is to fit a standard ANSI A115 prep measuring 1-1/4” x 4-7/8” with proper lip length to protect surrounding trim.
9. Deadbolts to be 1-3/4” total length with a minimum of a 1” throw and 3/4” internal engagement when fully extended and made of stainless steel material.
10. Fail-Secure (power unlock): Outside trim is locked when there is no power and unlocked when power is applied. Lockset will be locked in the event of a power failure (EU).
11. Request to Exit: Monitors inside lever rotation (RX).

E. Acceptable Manufacturers:

Hager	3400 Series	3800 Series
Best		
Sargent		

**2.06 MORTISE DEADBOLTS**

- A. Mortise deadbolts of one manufacturer as listed for continuity of design and consideration of warranty.
- B. Standards: Manufacturer to be certified by the following:
  1. ANSI/BHMA A156.13 Series 2000 Grade 1 Operational and Security.
  2. UL/cUL listed for functions up to 3 hours for “A” label.
  3. UL10C/UBC 7-2 Positive Pressure Rated.
  4. ADA – Thumb turn.
- C. Deadbolt function numbers and descriptions of manufacturer’s series as listed in hardware sets.
- D. Material and Design:
  1. Latch bolt projection 1” throw.
  2. Case steel, zinc dichromate.
  3. Armor front 5-9/16”. Case dimension 4-5/16” x 3-9/16’ x 1”.

E. Acceptable Manufacturers:

Hager	3830 Series
Best	
Sargent	

**2.07 EXIT DEVICES**

- A. Exit Devices of one manufacturer as listed for continuity of design and consideration of warranty. Touchpad type, finish to match balance of door hardware.
- B. Standards: Manufacturer to be certified and/or listed by the following:

1. BHMA Certified ANSI A156.3 Grade 1.
2. UL/cUL Listed for up to 3 hours for “A” labeled doors.
3. UL10C/UBC 7-2 Positive Pressure Rated.
4. UL10B Neutral Pressure Rated.
5. UL 305 Listed for Panic Hardware.

C. Material and Design:

1. Provide exit devices with actuators that extend a minimum of one-half of door width.
2. Where trim is indicated in hardware sets provide the lever design to match design of lock levers.
3. Exit device to mount flush with door.
4. Latchbolts:
  - a. Rim device – 3/4” throw, Pullman type with automatic dead-latching, stainless steel
  - b. Surface vertical rod device – Top 1/2” throw, Pullman type with automatic dead-latching, stainless steel. Bottom 1/2” throw, Pullman type, held retracted during door swing, stainless steel.
5. Fasteners: Wood screws, machine screws, and thru-bolts.

D. Lock and Latch Functions: Function numbers and descriptions of manufacturer’s series and lever styles indicated in door hardware sets.

E. Acceptable Manufactures:

Hager	4500 Series
Von Duprin	
Sargent	

F. Electric Modifications:

1. Motorized Latch Retraction (MLR): An electric motor retracts the latch bolt for momentary or maintained periods of time.
2. Provide Request to Exit (REX) switches as scheduled.
3. Electrified Trim: Outside trim locked (EL) or unlocked (EU) by electric current.
4. Delayed Egress with Wall Mounted Controller (Hager Model 2-679-0630) (DE).

**2.08 CYLINDERS AND KEYING**

A. Cylinders of one manufacturer as listed for continuity of design and consideration of warranty.

B. Products to be certified and listed by the following:

1. Auxiliary Locks: ANSI/BHMA A156.5

C. Cylinders:

1. Provide cylinders matched to the types required for hardware that has a locking function and for keyed electronic functions. Furnish with appropriate collars, cams, and tailpieces to fit and operate associated hardware. Stacking collars is not acceptable, a single collar of proper size is required.
2. Manufacturer’s standard tumbler type, seven-pin IC core and seven-pin conventional core supported by the Hager H series keyway.

3. Provide concealed key control (CKC) at cylinder by stamping or permanently marking the keyset symbol in a location on the cylinder that is concealed when installed.

D. Keying:

1. Provide a new factory registered key system.
2. Great-Grand Master Key System: Change keys, a master key, a grand master key, and a great-grand master key operate cylinders.
  - a. Provide three cylinder change keys and ten each of master, grand master, and five each of great grand master keys.
  - b. Provide two keys per cylinder.
3. Provide a bitting list to Owner of combinations as established, and expand to twenty-five percent for future use or as directed by Owner.
  - c. Include all of the keysets and bittings of the original key system creating one clean version of the entire key system.
4. Keys to be shipped directly to the Owner’s Representative as established during the keying conference.
  - a. Package the keys in individual envelopes, grouped by keyset symbol, and label envelopes with project name, factory registry number, and keyset symbol.
5. Stamp large bow key blanks with visual key control (keyset symbol) and “Do Not Duplicate”.
6. Provide interchangeable cores with construction cores as required per the keying meeting.

E. Acceptable Manufacturers:

Hager
Schlage
Sargent

**2.09 PUSH/PULL PLATES AND BARS**

- A. Push/Pull plates and bars of one manufacturer as listed for continuity of design and consideration of warranty.
- B. Standards: Manufacturer to be certified by the following:
  1. Architectural Door Trim: ANSI/BHMA A156.6.
  2. Americans with Disabilities Act Accessibility Guidelines (ADAAG).

- C. Push plates: .050” thick, square corner and beveled edges with countersunk screw holes. Width and height as stated in hardware sets.

D. Acceptable Manufacturers:

Hager	30S
Burns	
Trimco	

- E. Pull Plates: .050” thick, square corner and beveled edges. Width and height as stated in hardware sets, 3/4” diameter pull, with clearance of 2-1/2” from face of door.

F. Acceptable Manufacturers:

Cattaraugus County  
 Little Valley County Center - Accessibility Improvements  
 DPW No. 65 – General Construction  
 DPW No. 66 – Mechanical Construction  
 DPW No. 67 – Electrical Construction  
 Wendel Project No. 307670

Hager	H33J
Burns	
Trimco	

G. Door Pulls: 1” round bar stock with 2 –1/2” clearances from face of door.

H. Acceptable Manufacturers:

Hager	H12J
Rockwood	
Trimco	

**2.10 CLOSERS**

A. Closers of one manufacturer as listed for continuity of design and consideration of warranty. Unless otherwise indicated on hardware schedule, comply with manufacturer’s recommendations for size of closer, depending on width of door, frequency of use, atmospheric pressure, ADAAG requirements, and fire rating.

B. Standards: Manufacturer to be certified by the following:

1. BHMA Certified ANSI A156.4 Grade 1.
2. ADA Complaint ANSI A117.1.
3. UL/cUL Listed up to 3 hours.
4. UL10C Positive Pressure Rated.
5. UL10B Neutral Pressure Rated.

C. Material and Design:

1. Provide aluminum non-handed bodies with full plastic covers.
2. Closers will have separate staked adjustable valve screws for latch speed, sweep speed, and backcheck.
3. Provide Tri-Pack arms and brackets for regular arm, top jamb, and parallel arm mounting.
4. Double heat-treated steel, tempered springs.
5. Precision machined heat-treated steel piston.
6. Triple heat-treated steel spindle.
7. Full rack and pinion operation.

D. Mounting:

1. Out-swing doors surface parallel arm mount closers except where noted on hardware schedule.
2. In-swing doors surface regular arm mount closers except where noted on hardware schedule.
3. Provide brackets and shoe supports for aluminum doors and frames to mount fifth screw.
4. Furnish drop plates where top rail conditions on door do not allow for mounting of closer and where backside of closer is exposed through glass.

E. Size closers in compliance with requirements for accessibility (ADAAG). Comply with following maximum opening force requirements.

1. Interior hinged openings: 5.0 lbs.
2. Fire-rated and exterior openings are to be adjusted to have minimum opening force allowable by authority having jurisdiction.

F. Fasteners: Provide self-reaming, self-tapping wood and machine screws, and sex nuts and bolts for each closer.

G. Acceptable manufacturers:

Hager	5200 Series
Norton	
Sargent	

**2.11 LOW ENERGY POWER OPERATORS**

A. Low energy power operators of one manufacturer as listed for continuity of design and consideration of warranty.

B. Products to be certified and listed by the following:

1. Power Assist and Low Energy Power Operated Doors: ANSI/BHMA A156.19.
2. ADA Complaint ANSI A117.1.

C. Materials and Design:

1. Self-contained electrical control unit, including necessary transformers, relays, rectifiers, and other electronic components for proper operation, switching and control of door up to 350 lbs. and include time delay for normal cycle.
2. On pairs of doors, door to be opened manually without the other door opening.
3. Operates as a mechanical closer if power is disconnected. Forces consistent with ANSI A117.1 and ANSI A156.19.
4. Provide delay switches for motor activation, exit device latch retraction interfacing and hold open times. Hold open times to be adjustable from 1 second to continuous seconds.
5. Adjustable vestibule sequencing input for operation of two or more units. Specify 2-659-0240.
6. Adjustable powered swing degree from 80 degrees to 110 degrees.
7. Integral obstruction detection for closing and opening cycle.
8. Adjustable built-in stop, set from 80 degrees maximum to 180 degrees manual swing.
9. When in “blow open” operation for smoke ventilation, operator will stay in the open position when loss of power.
10. Boost to close selectable on/off switch.

D. Signage: Provide signage in according to the requirements of ANSI/BHMA A156.19.

E. Acceptable Manufacturers:

Hager	8300 Series
LCN	
Norton	

F. Actuators:

1. Opening cycle activated by pressing switches with international symbol of accessibility and “PUSH TO OPEN” engraved on faceplate.



2. Switches installed in standard 2-gang electrical wall box and placed in a location in compliance with ANSI A117.1.
3. Wireless actuators optional.
4. Provide bollards as required where a suitable wall mount is not possible.

G. Acceptable Manufacturers:

Hager
MS Sedco
SDC

**2.12 PROTECTIVE TRIM**

- A. Protective trim of one manufacturer as listed for continuity of design and consideration of warranty.
- B. Size of protection plate: single doors, size two inches less door width (LDW) on push side of door, and one inch less door width on pull side of door. For pairs of doors, size one inch less door width (LDW) on push side of door, and 1/2 inch on pull side of door. Adjust sizes to accommodate accompanying hardware, such as, edge guards, astragals, and others.
  1. Kick Plates 10” high or sized to door bottom rail height.
  2. Mop Plates 4” high.
  3. Armor Plates 36” high.
- C. Products to be certified and listed by the following:
  1. Architectural Door Trim: ANSI/BHMA A156.6.
  2. UL.
- D. Material and Design:
  1. 0.050” gage stainless steel.
  2. Corner’s square, polishing lines, or dominant direction of surface pattern so they run across door width of plate.
  3. Bevel top, bottom, and sides uniformly leaving no sharp edges.
  4. Countersink holes for screws. Space screw holes so they are no more than eight inches CTC, along a centerline not over 1/2” in from edge around plate. End screws maximum of 0.53” from corners.
- E. UL label stamp required on protection plates when top of plate is more than 16 inches above bottom of door on fire rated openings. Verify door manufacturer’s UL listing for maximum height and width of protection plate to be used.

F. Acceptable Manufacturers:

Hager	190S
Trimco	
Burns	

**2.13 EDGE FILLER PLATES AND WRAP AROUND PLATES**

A. Wrap around plates and filler plates to be furnished by one manufacturer.

B. Acceptable Manufacturers:

	Filler Plate	Wrap Around Plate
Don Jo	CV-2414	30CW
Acceptable Manufacturer		

**2.14 STOPS AND HOLDERS**

C. Stops and holders of one manufacturer as listed for continuity of design and consideration of warranty.

D. Wall Stops: Provide door stops wherever necessary to prevent door or hardware from striking an adjacent partition or obstruction. Provide wall stops when possible. Door stops and holders mounted in concrete floor or masonry walls have stainless steel machine screws and lead expansion shields.

E. Products to be certified and listed by the following:

1. Auxiliary Hardware: ANSI/BHMA A156.16.

F. Acceptable Manufacturers:

	Convex	Concave
Hager	232W	236W
Trimco		
Burns		

**2.15 POWER TRANSFER**

A. Power transfer of one manufacturer as listed for continuity of design and consideration of warranty.

B. Products to be certified and listed by the following:

1. UL Listed Miscellaneous Fire Door Accessories.
2. UL 10C Listed for up to 3 hours on fire-rated doors and frames.
3. Classified according to Uniform Building Code (UBC) Standard 7-2, Fire Test of Door Assemblies (1997).

C. Design:

1. Stainless steel tubular wire transfer and cast housing with steel back boxes to provide weather and tamper resistance when door is open or closed.
2. Mortise door and frame installation
3. Two 18 ga wires, 5 amps @ 12/24 VAC/DC.

D. Acceptable Manufacturers:

Hager	2-679-0623 US28
SDC	

**2.16 MODULAR ACCESS CONTROL POWER SUPPLIES**

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- A. Power supplies of one manufacturer as listed for continuity of design and consideration of warranty.
- B. Products to be certified and listed by the following:
  - 1. UL Listed.
- C. Design:
  - 1. Use with modular access control systems.
  - 2. Field selectable filtered and regulated 12 VDC or 24 VDC constant voltage.
  - 3. 1-, 2-, 4-, and 6-AMP load capacities. Match the power supply amperage to the total load of the opening /system plus an additional thirty percent to cover line drop, as well as possible expansion.
  - 4. Circuit breaker protected AC input voltage; secondary output PTC protected.
  - 5. Fire alarm input provides simultaneous release of fail-safe locks and holders.
  - 6. Interface relay.
  - 7. LED status indicators provide information regarding AC input, DC output, and battery backup status.
  - 8. Separate inputs for activation switch on entry and egress and ingress side of opening.
  - 9. 5-amp hour battery backup.
  - 10. Input 115 VAC (230 VAC optional).
  - 11. Optional dual 12 VDC or 24 VDC output.
  - 12. Optional power supply monitor module to monitor power supply status, A/C power, and D/C output and battery Status
- D. Include optional modules as required to properly interface, control, and sequence the hardware with the access control system.

E. Acceptable Manufacturer:

Hager	2908	1 Amp
	2909	2 Amp
	2910	4 Amp
	2911	6 Amp

**2.17 THRESHOLDS**

- A. Thresholds of one manufacturer as listed for continuity of design and consideration of warranty.
- B. Set thresholds for exterior and acoustical openings in full bed of sealant with lead expansion shields and stainless-steel machine screws complying with requirements specified in Division 7 Section “Joint Sealants: Notched in field to fit frame by hardware installer. Refer to Drawings for special details.
- C. Standards: Manufacturer to be certified by the following:
  - 1. Thresholds: ANSI/BHMA A156.21.
  - 2. American with Disabilities Act Accessibility Guidelines (ADAAG).

D. Acceptable Manufacturers:

Hager	413S/520S
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K.N. Crowder	
Reese	

**2.18 DOOR GASKETING AND WEATHERSTRIP**

- A. Door gasketing and weatherstrip of one manufacturer as listed for continuity of design and consideration of warranty.
- B. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing where indicated on hardware schedule. Provide noncorrosive fasteners for exterior applications.
  - 1. Perimeter gasketing: Apply to head and jamb, forming seal between door and frame.
  - 2. Meeting stile gasketing: Fasten to meeting stiles, forming seal when doors are in closed position.
  - 3. Door bottoms: Apply to bottom of door, forming seal with threshold or floor when door is in closed position.
  - 4. Sound Gasketing: Cutting or notching for stop mounted hardware not permitted.
  - 5. Drip Guard: Apply to exterior face of frame header. Lip length to extend 4” beyond width of door.
- C. Products to be certified and listed by the following:
  - 1. Door Gasketing and Edge Seal Systems: ANSI/BHMA A156.22.
  - 2. BHMA certified for door sweeps, automatic door bottoms, and adhesive applied gasketing.
- D. Smoke-Labeled Gasketing: Comply with NFPA 105 listed, labeled, and acceptable to Authorities Having Jurisdiction, for smoke control indicated.
  - 1. Provide smoke-labeled gasketing on 20-minute rated doors and on smoke rated doors.
- E. Fire-Rated Gasketing: Comply with NFPA 80 listed, labeled, and acceptable to Authorities Having Jurisdiction, for fire ratings indicated.
- F. Refer to Section 08 1416 Wood Doors for Category A or Category B. Comply with UBC 7-2 and UL10C positive pressure where frame applied intumescent seals are required.
- G. Acceptable Manufacturers:

1. Perimeter Gasketing:

	Stop Applied	Adhesive Applied
Hager	881S	726
K.N. Crowder		
Reese		

2. Meeting Stile Weatherstrip:

Hager	872SN
K.N. Crowder	
Reese	

3. Door Bottom Sweeps:

Hager	750S / 770SV
K.N. Crowder	
Reese	

4. Automatic Door Bottoms:

Hager	743S
K.N. Crowder	
Reese	

5. Overhead Drip Guard

Hager	810S
K.N. Crowder	
Reese	

**2.19 SILENCERS**

- A. Where smoke, light, or weather seal are not required, provide three silencers per single door frame, two per double door frame and four per Dutch door frame.
- B. Products to be certified and listed by the following:
  - 1. Auxiliary Hardware: ANSI/BHMA A156.16

C. Acceptable Manufacturers:

Hager	307D
Burns	
Trimco	

**2.20 KEY CABINET**

- A. Provide key cabinet; surface mounted to wall.
- B. Key control system:
  - 1. Include two sets of key tags, hooks, labels, and envelopes.
  - 2. Contain system in metal cabinet with baked enamel finish.
  - 3. Capacity will be able to hold actual quantities of keys, plus 50 percent.
  - 4. Provide tools, instruction sheets, and accessories required to complete installation.

C. Acceptable Manufacturers:

Lund Equipment
Telkee Incorporated
Key Control

**2.21 FINISHES**

- A. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if within 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 range of approved samples.
- B. Comply with base material and finish requirements indicated by ANSI/BHMA A156.18 designations in hardware schedule.

### **PART 3 – EXECUTION**

#### **3.01 EXAMINATION**

- A. Examine doors and frames, with installers present, for compliance with requirements for installation tolerances, labeled fire-rated construction, wall and floor construction, and other conditions affecting performance.
- B. Where hardware will be installed directly on walls inspect applications for blocking material of sufficient type and size for hardware.
- C. Examine roughing-in and cabling for electrical power systems to verify actual locations of wiring connections and wiring supplied matches the requirements as described in the wiring diagrams before electrified door hardware installation.
- D. Where existing products will be reused, examine existing door and frame sizes, preps, swings, ratings, and compare to the specified hardware for compatibility and functionality. The hardware set specified should act as guide for design and function. Provide filler plates as needed to fill and repair existing materials. Test any existing to remain hardware for functionality and visually inspect for damage. Note any defective or damaged products as well as noting any code deficiencies and submit issues and estimated costs for direction of how to proceed with repair or replacement.
- E. Notify Architect via a prepared written report and endorsed by installer of any discrepancies between the door schedule, door types, drawings, and scheduled hardware. List conditions detrimental to application, to the proper and timely completion of the work and performance of the hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

#### **3.02 INSTALLATION**

- A. Install hardware using manufacturers' recommended fasteners and installation instructions, at height locations and clearance tolerances that comply with:
  - 1. NFPA 80
  - 2. NFPA 105
  - 3. ICC/ANSI A117.1
  - 4. DHI Publication – Installation Guide for Doors and Hardware
  - 5. Approved shop drawings
  - 6. Approved hardware schedule

- B. Install soffit mounted gaskets prior to other soffit mounted hardware ensuring a continuous seal around the perimeter of the opening without cutting or notching.
- C. Locate surface mounted door closers on stairwell side of stair doors, interior side of exterior openings, or on the room side of openings, unless it is a sterile room.
- D. Locate wall mounted bumper to contact the operating trim. Verify that pushbuttons of locksets do not contact the stop and inadvertently lock the door.
- E. Mount armor, mop, and kick plates flush with the bottom of the door and centered horizontally on the door.
- F. Notch thresholds with no larger than a 1/32-inch gap matching the frame profile. Set in a full bed of sealant complying with requirements specified in Division 07 Section “Joint Sealants” forming a tight seal between threshold and mounting surface. Caulk and seal the entire perimeter to prevent water leakage. Remove excess sealants immediately and clean the area thoroughly.
- G. Do not install surface mounted items until finishes have been completed on substrates involved. Set unit level, plumb and true to line location.
- H. Locate power supplies and junction boxes as directed and verified in the low-voltage coordination meeting.
- I. Perform final connections of the system components to match the approved operational narratives. Use cable markers to label wires at each termination or end to match the final wiring diagrams. Terminate wiring in accordance with the manufacturer’s recommendations. Where quick-connects are seated correctly. Provide wire ties and adhesive pads to secure and organize wires in enclosures. Outside of enclosures seal terminations in waterproof connectors. Include record drawings of the point-point and the elevations in a plastic sleeve attached to the inside cover of the power supply/junction box enclosure for the Owner’s use.

### **3.03 FIELD QUALITY CONTROL**

- A. Schedule a final walk through to inspect hardware installation ten (10) business days before final acceptance of the Owner. Visually inspect for proper fasteners and verify that doors open, close, latch properly, and that openings are installed to meet NFPA 80 and ANSI A117.1 requirements. Correct deficiencies, including missing hardware immediately. Provide a written report detailing discrepancies of each opening within five (5) business days of the walk through.
- B. Prior to receiving certificate of occupancy have doors inspected by a Certified Fire and Egress Door Assembly Inspector (CFDAI), as certified by Intertek (ITS), submit a written report to the Owner and Contractor. Doors failing inspection must be adjusted, modified, or replaced to be within appropriate code requirements without delay.
- C. Test the functionality of electrified openings upon completion of the installation in accordance with the description of operation and the Owner’s intent under the supervision of a factory authorized representative and an Owner’s representative, verify that all features of the software are working correctly, including

interfaces with any associated trades. Document the result of all tests and provide these results to the Owner and correct immediately.

### **3.04 ADJUSTMENT, CLEANING, AND DEMONSTRATING**

- A. Prior to final adjustments, the HVAC system must be completed and balanced. Test that all openings meet ANSI A117.1 for closer opening pressure, closing speed, latching, and hardware operating forces. Replace items that cannot be adjusted to operate freely and smoothly or as intended for application.
- B. Prior to final walk-through inspection, clean adjacent surfaces soiled by hardware installation. Clean finish hardware per manufacturer's instructions after final adjustments have been made. Remove all protection and replace items that cannot be cleaned to manufacturer's level of finish quality.
- C. Demonstration and training will be conducted as per the following sessions. All sessions will be recorded and turned over to the Owner for future use.
  - 1. Hardware Maintenance: Conduct a training class for building maintenance personnel demonstrating the adjustment, operation, and maintenance of mechanical and electrified hardware. Special tools for finish hardware to be turned over and demonstrated usage at the meeting.
  - 2. Key control system: Train the Owner's designated representative on the key control system demonstrating the permanent file keys, duplicate loaner keys, key receipts, key envelopes, key change identification sheets, bitting lists, tags, and labels. When key management software is provided training will be provided for the setup and usage of the software.
  - 3. Access control: Demonstrate the management and programming of the access control system including the following, but not limited to:
    - a. System administration personnel to manage the LAN and databases including updating, maintaining, and backing up the system and database software.
    - b. Instruct on all software features and programming for managing the credentials, users, access points, time zones, alarms and events, door monitoring, audit trails, and time schedules.

### **3.05 PROTECTION**

- A. Leave manufacturer's protective film intact and, protect exit devices, locks, and surface mounted hardware with kraft paper or bubble wrap. Cover fire labels at painted products that bear a label with magnetic or masking tape. Keep protection in place until time of final cleaning and adjustment.

### **3.06 HARDWARE SET SCHEDULE**

- A. Door hardware items have been placed in sets which are intended to be a guide of design, grade, quality, function, operation, and performance.
  - 1. Review products that may require mounting accessories to meet door, frame, and swing conditions as these final details vary from manufacturer to manufacturer and provide as required.
  - 2. Where additional items of hardware are required for completion of the Work, a written statement of such omission, error, or other discrepancy is required to be submitted to the Architect, prior to bid date for clarification via an addendum.
  - 3. Abbreviations listed below do not appear in the manufacturer's literature, for any other abbreviations refer



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to manufacturer's literature.:

- a. LDW = Less than Door Width
- b. LAR = Length as Required
- c. QTY = Quantity
- d. CTC = Centerline to Centerline
- e. BTB = Back-to-Back mounting

### 3.07 HARDWARE SCHEDULE

#### SET #A1

Doors: 009-1, 011-1, 011-2, 012-1, 013-1, 014-1, 113-2, 301A-1, 301B-1, 302-1

Each opening to have:

1 Office Lockset	3450 WTN 7 PIN	US26D	HA
1 Cylinder Core	3969-C	US26D	HA

NOTE: Existing door and frame. Balance of existing hardware to remain.

#### SET #A2

Doors: 134-1, 214-1, 214-2, 219-1

Each opening to have:

1 Classroom Lock	3470 WTN SFIC	US26D	HA
1 Cylinder Core	3969-C	US26D	HA

NOTE: Existing door and frame. Balance of existing hardware to remain.

#### SET #A3

Doors: 106-2

Each opening to have:

1 Passage Set	3410 WTN	US26D	HA
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NOTE: Existing door and frame. Balance of existing hardware to remain.

#### SET #A4

Doors: 215-1

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Each opening to have:

1 Office Lockset	3450 WTN 7 PIN	US26D	HA
1 Cylinder Core	3969-C	US26D	HA

NOTE: Existing door and frame. Balance of existing hardware to remain. 1-3/8" thick door.

**SET #B1**

Doors: 001-1, 002-1, 002-2, 003-1, 004-1, 015-2, 017-1, 020-1, 021-1, 022-1, 022-2, 024-1, 025-2, 015-1

Each opening to have:

1 Office Lockset	3850 ESC WTN SFIC7	US26D	HA
1 Cylinder Core	3969-C	US26D	HA

NOTE: Existing door and frame. Balance of existing hardware to remain.

**SET #B2**

Doors: 016-1, 019-1, 019-2

Each opening to have:

1 Passage Set	3810 ESC WTN	US26D	HA
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NOTE: Existing door and frame. Balance of existing hardware to remain.

**SET #B3**

Doors: 010-1, 023-1, 023-2, 030-1, 031-1, 032-1, 033-1, 036-1, 038-1

Each opening to have:

1 Storeroom Lockset	3880 ESC WTN SFIC7	US26D	HA
1 Cylinder Core	3969-C	US26D	HA

NOTE: Existing door and frame. Balance of existing hardware to remain.

**SET #B4**

Doors: 022-3

Each opening to have:

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1 Classroom Lockset	3870 ESC WTN SFIC7	US26D	HA
1 Cylinder Core	3969-C	US26D	HA

NOTE: Existing door and frame. Balance of existing hardware to remain.

**SET #B5**

Doors: 08A-1

Each opening to have:

1 Privacy Set	3896 ESC WTN	US26D	HA
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NOTE: Existing door and frame. Balance of existing hardware to remain.

**SET #C1**

Doors: 018-1, 018-2

Each opening to have:

1 Deadlock	3833S SFIC7	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Push Plate	30S 8 X 16	US32D	HA
1 Pull Plate	H 33J 8 X 16	US32D	HA

NOTE: Existing door and frame. Balance of existing hardware to remain.

**SET #D1**

Doors: 019-3, 039-5

Each opening to have:

1 Continuous Hinge	780-224HD x LAR	CLR	HA
1 Exit Device	4501 RIM	US32D	HA
1 Exit Trim	45NL WTN	US26D	HA
1 Rim Cylinder	3901 SFIC	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Electric Strike	9600	630	HS
1 Closer	5200 HDCS	ALM	HA
1 Weatherstrip	881S N x LAR	MIL	HA
1 Rain Drip Cap	810S x LAR	MIL	HA
1 Door Sweeps	770S V x LAR	MIL	HA
1 Threshold	520S N x LAR	MIL	HA

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**DESCRIPTION OF OPERATION:**

- 1) Door normally closed and locked.
- 2) Upon proper credential validation, entry is permitted.
- 3) Free egress at all times.
- 4) Upon loss of power, door to remain locked.

**SET #E1**

Doors: 025-1, 026-1, 029-1

Each opening to have:

1 Storerrrom Lockset	3880 ESC WTN SFIC7	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Electric Strike	1500	630	HS

NOTE: Existing door and frame. Remove existing conflicting hardware. Balance of existing hardware to remain. Repair, patch, modify, and paint as conditions require.

**DESCRIPTION OF OPERATION:**

- 1) Door normally closed and locked.
- 2) Upon proper credential validation, entry is permitted.
- 3) Free egress at all times.
- 4) Upon loss of power, door to remain locked.

**SET #E2**

Doors: 310-2, 330-2

Each opening to have:

3 Hinges	BB1279 4 1/2 x 4 1/2 NRP	US26D	HA
1 Power Transfer	FC3	630	DE
1 Exit Device	4501 RIM F	US26D	HA
1 Exit Trim	45ET WTN EL	US26D	HA
1 Mortise Cylinder	3902 x LAR 7 PIN	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Closer	5200	ALM	HA
1 Kick Plate	190S 8" x 2" LDW	US32D	HA
1 Wall Stop	232W/236W (as required)	US32D	HA
1 Seal	726 x LAR	S	HA
1 Wiring Diagrams	Wiring Diagrams		BYOT
1 Card Reader	Access Control provided by aces control supplier.		BYOT

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1 Power Supply 2908/2909/2910/2911 As Required No Finish HA

NOTE: New door and frame. Remove existing conflicting hardware. Balance of existing hardware to remain. Repair, patch, modify, and paint as conditions require.

**DESCRIPTION OF OPERATION:**

- 1) Door normally closed and locked.
- 2) Upon proper credential validation, entry is permitted.
- 3) Free egress at all times.
- 4) Upon loss of power, door is to unlocked.

**SET #F1**

Doors: 030-2, 050-1, 050-10, 050-11, 050-12, 050-13, 050-14, 050-15, 050-16, 050-2, 050-3, 050-4, 050-5, 050-6, 050-7, 050-8, 050-9, 101-1, 111-2, 120-1, 220-1, 221-1, 222-1, 225-1, 229-2, 230-2, 308-1, 309-1, 310-1, 315-1, 331-1, 331-4, 034-1

Each opening to have:

1 SFIC Cylinder Housing	3901 SFIC/3902 SFIC/3982 SFIC (AS REQUIRED)		
US26D HA			
1 Cylinder Core	3969-C	US26D	HA

NOTE: Existing door and frame. Balance of existing hardware to remain.

**SET #G1**

Doors: 102-1, 103-1, 106-1, 107-1, 112-1, 113-1, 114-1, 123-1, 125-1, 128-1, 128-2, 132-1, 136-1, 203-1, 204-1, 208-1, 209-1, 210-1, 211-1, 213-1, 213-2, 218-1, 236-1, 239-1, 240-1, 303-1, 305-1, 311-1, 312-1, 313-1, 314-4, 316-1, 317-1, 318-1, 328-1, 329-1, 331A-1, 336-1, 338-1, 124-1

Each opening to have:

1 Edge Filler Plate	CV-2414	SL	DJ
1 Office Lockset	3450 WTN 7 PIN	US26D	HA
1 Cylinder Core	3969-C	US26D	HA

NOTE: Existing door and frame. Balance of existing hardware to remain.

**SET #G2**

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Doors: 104-1, 105-2, 108-1, 110-1, 115-1, 121-1, 122-1, 126-1, 129-1, 129-2, 135-1, 202.1, 205-1, 212-1, 217-1, 228-1, 229-1, 230-1, 231-1, 231-2, 304-1, 314-3, 319-1, 332-1

Each opening to have:

1 Edge Filler Plate	CV-2414	SL	DJ
1 Classroom Lock	3470 WTN SFIC	US26D	HA
1 Cylinder Core	3969-C	US26D	HA

NOTE: Existing door and frame. Balance of existing hardware to remain.

**SET #G3**

Doors: 130-1, 130-2, 216-1, 227-1, 232-1, 232-2, 243-1, 244-1, 307-1, 320-1, 401-1, 401-2, 402-1

Each opening to have:

1 Edge Filler Plate	CV-2414	SL	DJ
1 Storeroom Lock	3480 WTN SFIC	US26D	HA
1 Cylinder Core	3969-C	US26D	HA

NOTE: Existing door and frame. Balance of existing hardware to remain.

**SET #G4**

Doors: 207-2, 238-1, 239-2, 306-1, 311-2

Each opening to have:

1 Edge Filler Plate	CV-2414	SL	DJ
1 Privacy Latch	3440 WTN	US26D	HA

NOTE: Existing door and frame. Balance of existing hardware to remain.

**SET #G5**

Doors: 207-3, 237-1, 329-2, 207-1

Each opening to have:

1 Edge Filler Plate	CV-2414	SL	DJ
1 Passage Set	3410 WTN	US26D	HA

NOTE: Existing door and frame. Balance of existing hardware to remain.

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**SET #H1**

Doors: 126.3

Each opening to have:

6 Hinges	BB1168 4 1/2 X 4 1/2	US26D	HA
1 Auto Flush Bolt Set	292D	US32D	HA
1 Dust Proof Strike	280X	US26D	HA
1 Classroom Lock	3470 WTN SFIC	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Coordinator	297D x LAR	BLACK	HA
2 Closers	5200 TRK NHOTA	ALM	HA
2 Wall Stops	232W/236W (as required)	US32D	HA

NOTE: Astragal by door manufacturer.

**SET #H2**

Doors: 100-1

Each opening to have:

3 Hinges	BB1279 4 1/2 X 4 1/2	US26D	HA
1 Office Lockset	3450 WTN 7 PIN	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Closer	5200 TRK NHOTA	ALM	HA
1 Kick Plate	190S 8" x 2" LDW	US32D	HA
1 Wall Stop	232W/236W (as required)	US32D	HA
1 Seal	726 x LAR	S	HA

**SET #H3**

Doors: 100-2, 200-1, 201-1, 322-1

Each opening to have:

3 Hinges	BB1279 4 1/2 X 4 1/2	US26D	HA
1 Privacy Set	3896 ESC WTN	US26D	HA
1 Closer	5200	ALM	HA
1 Kick Plate	190S 8" x 2" LDW	US32D	HA
1 Wall Stop	232W/236W (as required)	US32D	HA
1 Seal	726 x LAR	S	HA

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**SET #H4**

Doors: 127-1

Each opening to have:

3 Hinges	BB1279 4 1/2 X 4 1/2	US26D	HA
1 Classroom Lock	3470 WTN SFIC	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Closer	5200	ALM	HA
1 Kick Plate	190S 8" x 2" LDW	US32D	HA
1 Wall Stop	232W/236W (as required)	US32D	HA
1 Seal	726 x LAR	S	HA

**SET #H5**

Doors: 133-1

Each opening to have:

6 Hinges	BB1168 4 1/2 X 4 1/2 NRP	US26D	HA
1 Set Automatic Flush Bolts	291D	US32D	HA
1 Dust Proof Strike	280X	US26D	HA
1 Classroom Lock	3470 WTN SFIC	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Coordinator	297D x LAR	BLACK	HA
2 Mounting Brackets	297B	BLACK	HA
2 Closers	5200 HDCS	ALM	HA
2 Kick Plates	190S 8" x 1" LDW	US32D	HA
1 Seal	726 x LAR	S	HA

NOTE: Astragal by door manufacturer.

**SET #H6**

Doors: 004-2

Each opening to have:

3 Hinges	BB1279 4 1/2 X 4 1/2	US26D	HA
1 Classroom Lock	3470 WTN SFIC	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Closer	5200	ALM	HA
1 Kick Plate	190S 8" x 2" LDW	US32D	HA
1 Wall Stop	232W/236W (as required)	US32D	HA



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3 Silencers	307D	GREY	HA
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**SET #H7**

Doors: 005-1, 006-1

Each opening to have:

3 Hinges	BB1168 4 1/2 X 4 1/2	US26D	HA
1 Deadlock	3833S SFIC7	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Push Plate	30S 8 X 16	US32D	HA
1 Pull Plate	H 33J 8 X 16	US32D	HA
1 Closer	5200	ALM	HA
1 Kick Plate	190S 8" x 2" LDW	US32D	HA
1 Wall Stop	232W/236W (as required)	US32D	HA
3 Silencers	307D	GREY	HA

**SET #H8**

Doors: 007-1

Each opening to have:

NOTE: Cased Opening.

**SET #H9**

Doors: 007-2, 127-2

Each opening to have:

3 Hinges	BB1279 4 1/2 X 4 1/2	US26D	HA
1 Storeroom Lock	3480 WTN SFIC	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Kick Plate	190S 8" x 2" LDW	US32D	HA
1 Wall Stop	232W/236W (as required)	US32D	HA
3 Silencers	307D	GREY	HA

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**SET #H10**

Doors: 008-1, 328-2

Each opening to have:

3 Hinges	BB1279 4 1/2 x 4 1/2 NRP	US26D	HA
1 Office Lockset	3450 WTN 7 PIN	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Wall Stop	232W/236W (as required)	US32D	HA
3 Silencers	307D	GREY	HA

**SET #H11**

Doors: 215-2

Each opening to have:

3 Hinges	BB1279 4 1/2 X 4 1/2	US26D	HA
1 Classroom Lock	3470 WTN SFIC	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Closer	5200	ALM	HA
1 Wall Stop	232W/236W (as required)	US32D	HA
1 Seal	726 x LAR	S	HA

**SET #H12**

Doors: 242-1, 323-1, 327-1, 333-1, 341-1, 342-1

Each opening to have:

3 Hinges	BB1279 4 1/2 X 4 1/2	US26D	HA
1 Privacy Set	3896 ESC WTN	US26D	HA
1 Closer	5200 HDCS	ALM	HA
1 Kick Plate	190S 8" x 2" LDW	US32D	HA
1 Seal	726 x LAR	S	HA

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**SET #H13**

Doors: 314-2

Each opening to have:

6 Hinges	BB1168 4 1/2 X 4 1/2 NRP	US26D	HA
2 Power Transfers	2-679-0623	ALM	HA
2 Exit Devices	4501 SVR LBR F MLR	US26D	HA
1 Firebolt Kit	2-649-0166		HA
1 Rim Cylinder	3901 SFIC	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
2 Offset Door Pulls	H 12J	US32D	HA
1 Simultaneous Pair Operator	8319 PUSH	ALM	HA
2 Actuators	2-659-0169	US32D	HA
2 Operator Control Back Boxes	2-659-0171	BLACK	HA
2 Radio Transmitters	2-659-0184	BLACK	HA
1 Radio Receiver	2-659-0183		HA
2 Kick Plates	190S 8" x 1" LDW	US32D	HA
2 Wall Stops	232W/236W (as required)	US32D	HA
1 Seal	726 x LAR	S	HA
1 Meeting Stiles	872S N x LAR	CLR	HA
2 Automatic Door Bottoms	743S N x LAR	MIL	HA
1 Threshold	413S x LAR	MIL	HA
1 Power Supply	2908/2909/2910/2911 As Required	No Finish	HA
1 Card Reader	Access Control provided by access control supplier.		BYOT
1 Wiring Diagrams	Wiring Diagrams		BYOT

DESCRIPTION OF OPERATION:

- 1) Door normally closed and locked.
- 2) Upon proper credential validation, entry is permitted. Actuator may be used for automatic entry.
- 3) Free egress at all times. Actuator may be used for automatic exiting.
- 4) Upon loss of power, door to remain locked.

**SET #H14**

Doors: 333.2

Each opening to have:

3 Hinges	BB1279 4 1/2 X 4 1/2	US26D	HA
1 Office Lockset	3450 WTN SFIC	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Wall Stop	232W/236W (as required)	US32D	HA
1 Seal	726 x LAR	S	HA

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1 Automatic Door Bottom	743S N x LAR	MIL	HA
1 Threshold	413S x LAR	MIL	HA

**SET #H15**

Doors: 334-1

Each opening to have:

3 Hinges	BB1279 4 1/2 X 4 1/2	US26D	HA
1 Classroom Lock	3470 WTN SFIC	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Wall Stop	232W/236W (as required)	US32D	HA
3 Silencers	307D	GREY	HA

**SET #H16**

Doors: 340-1

Each opening to have:

3 Hinges	BB1279 4 1/2 X 4 1/2	US26D	HA
1 Classroom Lock	3470 WTN SFIC	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Wall Stop	232W/236W (as required)	US32D	HA
1 Seal	726 x LAR	S	HA
1 Automatic Door Bottom	743S N x LAR	MIL	HA
1 Threshold	413S x LAR	MIL	HA

**SET #J1**

Doors: 131-1, 131-2, 206-1, 230-3, 233-2

Each opening to have:

NOTE: Existing door and frame. Existing hardware to remain.

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**SET #K1**

Doors: 235-1, 300-2, 321-1

Each opening to have:

3 Hinges	BB1279 4 1/2 X 4 1/2	US26D	HA
1 Classroom Lock	3470 WTN SFIC	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Electric Strike	UNL-24		HS
1 Single Operator	8318 PUSH	ALM	HA
2 Actuators	2-659-0169	US32D	HA
2 Operator Control Back Boxes	2-659-0171	BLACK	HA
2 Radio Transmitters	2-659-0184	BLACK	HA
1 Radio Receiver	2-659-0183		HA
1 Wall Stop	232W/236W (as required)	US32D	HA

NOTE: Existing door and frame. Balance of existing hardware to remain. Repair, patch, modify, and paint as conditions require.

**DESCRIPTION OF OPERATION:**

- 1) Doors normally closed and unlocked during business hours and closed and locked after hours.
- 2) If power assist is required, actuator may be used for entry and exiting. Both leafs are to open when the actuators are depressed.
- 3) Free egress at all times.

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**SET #K2**

Doors: 300-3

Each opening to have:

3 Hinges	BB1279 4 1/2 X 4 1/2	US26D	HA
1 Exit Device	4501 RIM	US32D	HA
1 Exit Device Trim	45CE WTN	US26D	HA
1 Mortise Cylinder	3902 x LAR 7 PIN	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Electric Strike	9600	630	HS
1 Single Operator	8318 PULL	ALM	HA
2 Actuators	2-659-0169	US32D	HA
2 Operator Control Back Boxes	2-659-0171	BLACK	HA
2 Radio Transmitters	2-659-0184	BLACK	HA
1 Radio Receiver	2-659-0183		HA
1 Wall Stop	232W/236W (as required)	US32D	HA

NOTE: Existing door and frame. Balance of existing hardware to remain. Repair, patch, modify, and paint as conditions require.

**DESCRIPTION OF OPERATION:**

- 1) Doors normally closed and unlocked during business hours and closed and locked after hours.
- 2) If power assist is required, actuator may be used for entry and exiting. Both leafs are to open when the actuators are depressed.
- 3) Free egress at all times.

**SET #L1**

Doors: 330-1

Each opening to have:

1 Door Wrap	30 CW	S	DONJ
1 Exit Device	4501 RIM	US32D	HA
1 Exit Trim	45BE WTN	US26D	HA

NOTE: Existing door and frame. Remove existing conflicting hardware. Balance of existing hardware to remain. Repair, patch, modify, and paint as conditions require.

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**SET #L2**

Doors: 300-1

Each opening to have:

1 Door Wrap	30 CW	S	DONJ
1 Exit Device	4501 RIM F	US26D	HA
1 Exit Trim	45BE WTN	US26D	HA

NOTE: Existing door and frame. Remove existing conflicting hardware. Balance of existing hardware to remain. Repair, patch, modify, and paint as conditions require.

**SET #L3**

Doors: 314-1

Each opening to have:

1 Door Wrap	30 CW	S	DONJ
1 Exit Device	4501 RIM	US32D	HA
1 Exit Device Trim	45CE WTN	US26D	HA
1 Cylinder Core	3969-C	US26D	HA
1 Mortise Cylinder	3902 x LAR 7 PIN	US26D	HA

NOTE: Existing door and frame. Remove existing conflicting hardware. Balance of existing hardware to remain. Repair, patch, modify, and paint as conditions require.

**SET #M1**

MISC EQUIPMENT

1 Programmer (8300 Operator)	2-679-0907		HA
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**END OF SECTION**

