



300 CHASE PARK SOUTH • SUITE 200 • HOOVER, ALABAMA 35244
205-988-9112

**ADDENDUM NO. 1
CLASSROOM ADDITION TO LINCOLN HIGH SCHOOL
Architect Job No. 22-20
February 22, 2023
DCM #Pending
Bid Number 1745**

BIDS DUE:

**Tuesday, March 21, 2023 until
2:00 p.m., local time**

**At Talladega County Board of Education
106 South Street West
Talladega, AL 35161**

The Plans and Specifications are here by amended. The following supersedes all contrary and/or conflicting information and is made part of the contract documents.

BID DATE HAS BEEN CHANGED:

BIDS DUE:

**Tuesday, March 21, 2023 until
2:00 p.m., local time**

**At Talladega County Board of Education
106 South Street West
Talladega, AL 35161**

Non-Mandatory Pre-Bid Meeting

**Thursday, March 9, 2023, at
2:00 p.m., local time
At Lincoln High School
78975 AL HWY 77
Lincoln, AL 35096**

SPECIFICATIONS

1. Add **Section 08710 – Finish Hardware** see the attached.
2. **Section 12150 – Miscellaneous Furnishings and Fixtures:**

REMOVE:

2.1 Building Letters

Cast aluminum letters, equal to Leeds Architectural Letters, Inc. Select from all available fonts. Font 12" High, lay-out indicated Colors as selected by Architect. Provide flush concealed stud mounting.

2.2 Cornerstone

Provide one cast cement or limestone cornerstone 2'-1-1/2" x 3'-0" x 4" thick with incised lettering as indicated on Drawings.

SECTION 08710 – FINISH HARDWARE

1.0 - GENERAL

1.1 Related Documents

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

1.2 Summary

- A. This Section includes items known commercially as finish or door hardware that are required for swing, sliding, and folding doors, except special types of unique hardware specified in the same sections as the doors and door frames on which they are installed.
- B. This Section includes the following:
 - 1. Architectural Hinges
 - 2. Continuous Hinges
 - 3. Key Control System, Cylinders and Cores.
 - 4. Locksets, Latchsets and Deadbolts
 - 5. Panic Devices and Fire Rated Exit Devices
 - 6. Closers and Door Control Devices
 - 7. Overhead Door Stops and Holders
 - 8. Floor and Wall Stops
 - 9. Door Bolts and Coordinators
 - 10. Door Pulls, Push/Pull Plates and Push/Pull Sets
 - 11. Protective Plates
 - 12. Door Seals, Gasketing and Weatherstripping
 - 13. Thresholds
 - 14. Miscellaneous Door Control Devices
 - 15. Electromechanical Hardware
 - 16. Miscellaneous Access Control Components and Security Equipment
- C. Related Sections: The following Sections contain requirements that relate to the following sections.
 - 1. Section 08110: Hollow Metal Doors and Frames
 - 2. Section 08215: Wood Doors
 - 3. Section 08420: Aluminum-Framed Entrances and Storefronts
 - 4. Section 08300: Tornado Resistant Opening Systems
 - 5. Division 16: Electrical
 - 6. Division 28: Electronic Safety and Security
- D. Products furnished but not installed under this Section to include:
 - 1. Cylinders for locks on entrance doors.
 - 2. Final replacement cores and keys to be installed by Owner.

1.3 References

- A. Standards of the following as referenced:
 - 1. American National Standards Institute (ANSI)
 - 2. Door and Hardware Institute (DHI)
 - 3. Factory Mutual (FM)
 - 4. National Fire Protection Association (NFPA)
 - 5. Underwriters' Laboratories, Inc. (UL)
 - 6. UL 10C - Fire Tests Door Assemblies
 - 7. Warnock Hersey
- B. Regulatory standards of the following as referenced:
 - 1. Department of Justice, Office of the Attorney General, *Americans with Disabilities*

- Act, Public Law 101-336 (ADA).
2. CABO/ANSI A117.1: *Providing Accessibility and Usability for Physically Handicapped People*, 2010 edition.

1.4 Submittals

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification sections.
- B. 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. For items other than those scheduled in the "Headings" of Section 3, provide catalog information for the specified items and for those submitted.
- C. Final hardware schedule coordinated with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 1. Final Hardware Schedule Content: Based on hardware indicated, organize schedule into vertical format "hardware sets" indicating complete designations of every item required for each door or opening. Use specification heading numbers with any variations suffixed a, b, etc. Include the following information:
 - a. Type, style, function, size, and finish of each hardware item.
 - b. Name and manufacturer of each item.
 - c. Fastenings and other pertinent information.
 - d. Location of each hardware set cross-referenced to indications on Drawings both on floor plans and in door and frame schedule.
 - e. Explanation of all abbreviations, symbols, and codes contained in schedule.
 - f. Mounting locations for hardware.
 - g. Door and frame sizes and materials.
 - h. Keying information.
 - i. Cross-reference numbers used within schedule deviating from those specified.
 - j. Column 1: State specified item and manufacturer.
 - k. Column 2: State prior approved substituted item and its manufacturer.
 2. Furnish complete wiring diagrams, riser diagrams, elevation drawings and operational descriptions of electrical components and systems, listed by opening in the hardware submittals. Elevation drawings shall identify locations of the system components with respect to their placement in the door opening. Operational descriptions shall fully detail how each electrical component will function within the opening, including all conditions of ingress and egress. Provide a copy with each hardware schedule submitted for approval. Supply a copy with delivery of hardware to the jobsite and another copy to the Owner at the time of project completion.
 3. Submittal Sequence: Submit final schedule at earliest possible date particularly where acceptance of hardware schedule must precede fabrication of other work that is critical in the Project construction schedule. Include with schedule the product data, samples, shop drawings of other work affected by door hardware, and other information essential to the coordinated review of schedule.
 4. Keying Schedule: Submit separate detailed schedule indicating clearly how the Owner's final instructions on keying of locks has been fulfilled.
- D. Provide samples if requested of each type of exposed hardware unit in finish indicated and tagged with full description for coordination with schedule. Submit samples prior to submission of final hardware schedule.
 1. Samples will be returned to the supplier. Units that are acceptable and remain undamaged through submittal, review, and field comparison process may, after

final check of operation, be incorporated in the Work, within limitations of keying coordination requirements.

- E. Templates for doors, frames, and other work specified to be factory prepared for the installation of door hardware. Check shop drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- F. Contract closeout submittals:
 - 1. Operation and maintenance data: Complete information for installed door hardware.
 - 2. Warranty: Completed and executed warranty forms.

1.5 Quality Assurance

- A. Single Source Responsibility: Obtain each type of hardware (latch and locksets, hinges, closers, etc.) from a single manufacturer.
 - 1. Supplier Qualifications: A recognized architectural door hardware supplier, with warehousing facilities in the Project's vicinity, that has a record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to that indicated for this Project and that employs an experienced Architectural Hardware Consultant (AHC) who is available for consultation to Owner, Architect, and Contractor, at reasonable times during the course of the Work.
- B. Coordination Meetings:
 - 1. Contractor to set up and attend the following:
 - a. Lock distributor to meet with the Owner to finalize lock functions and keying requirements and to obtain final instructions in writing.
 - b. Lock distributor and lock, closer and exit device manufacturer to meet with the installer prior to beginning of installation of door hardware. Instruct installer on proper installation of specified products.
 - 2. General Contractor to set up and attend the following:
 - 3. Meet with the Owner, General Contractor, Supplier, electrical and security contractors to coordinate all electrical hardware items. Supplier to provide riser diagrams, elevation drawings, wiring diagrams and operational descriptions as required by the General and sub-contractors.
- C. Fire-Rated Openings: Provide door hardware for fire-rated openings that complies with NFPA Standard No. 80 requirements of authorities having jurisdiction.
 - 1. Provide only items of door hardware that are listed and tested by UL or Warnock Hersey for given type/size opening and degree of label. Provide proper latching hardware, door closers, approved-bearing hinges and seals whether listed in the Hardware Schedule or not. All hardware to comply with State and local codes and UL 10C.
 - 2. Where emergency exit devices are required on fire-rated doors, (with supplementary marking on doors' UL labels indicating "Fire Door to be equipped with Fire Exit Hardware") provide UL label on exit devices indicating "Fire Exit Hardware".
- D. All hardware is to comply with Federal and State Handicap laws.
- E. Substitutions: Request for substitutions of items of hardware other than those listed as "acceptable and approved" shall be made to the architect in writing no later than fourteen (14) days prior to bid opening. Approval of substitutions will only be given in writing or by Addenda. Requests for substitutions shall be accompanied by samples and/or detailed information for each manufacturer of each product showing design, functions, material

thickness and any other pertinent information needed to compare your product with that specified. Lack of this information will result in a refusal.

F. Pre-Installation Coordination:

1. Installation of hardware shall be installed or directly supervised and inspected by a skilled installer certified by the manufacturer of locksets, door closers, and exit devices used on the project, or with not less than 3 years' experience in successful completion of projects similar in size and scope.
2. Schedule a hardware pre-installation meeting on site to review and discuss the installation of continuous hinges, locksets, door closers, exit devices, overhead stops, and electromechanical door hardware.
3. Meeting attendees shall be notified 7 days in advance and shall include: Architect, Contractor, Door Hardware Installers (including low voltage hardware), Manufacturers representatives for above hardware items, and any other effected subcontractors or suppliers.
4. All attendees shall be prepared to distribute installation manuals, hardware schedules, templates, and physical hardware samples.

1.6 Product Handling

- A. Tag each item or package separately with identification related to final hardware schedule, and include basic installation instructions with each item or package.
- B. Packaging of door hardware is responsibility of supplier. As material is received by hardware supplier from various manufacturers, sort and repackage in containers clearly marked with appropriate hardware set number to match set numbers of approved hardware schedule. Two or more identical sets may be packed in same container.
- C. Inventory door hardware jointly with representatives of hardware supplier and hardware installer until each is satisfied that count is correct.
- D. Deliver individually packaged door hardware items promptly to place of installation (shop or Project site).
- E. Provide secure lock-up for door hardware delivered to the Project, but not yet installed. Control handling and installation of hardware items that are not immediately replaceable so that completion of the Work will not be delayed by hardware losses both before and after installation.

1.7 Warranty

- A. Special warranties:
 1. Cylindrical Locks and Cylinders: Ten period Year Period
 2. Door Closers: Thirty Year Period
 3. Exit Devices: Three Year Period
 4. Electrified Exit Devices: One Year Period

1.8 Maintenance

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions that are packed in hardware items for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.
- B. Parts kits: Furnish manufacturers' standard parts kits for locksets, exit devices, and door closers.

2.0 - PRODUCTS

2.1 Manufactured Units

- A. Hinges:
1. Acceptable manufacturers:
 - a. Ives*
 - b. Bommer
 - c. McKinney
 2. Characteristics:
 - a. Templates: Provide only template-produced units.
 - b. Screws: Provide Phillips flat-head screws complying with the following requirements:
 - 1) For metal doors and frames install machine screws into drilled and tapped holes.
 - 2) For wood doors and frames install threaded-to-the-head wood screws.
 - 3) For fire-rated wood doors install #12 x 1-1/4 inch, threaded-to-the-head steel wood screws.
 - 4) Finish screw heads to match surface of hinges or pivots.
 - c. Hinge pins: Except as otherwise indicated, provide hinge pins as follows:
 - 1) Out-Swing Exterior Doors: Non-removable pins.
 - 2) Out-Swing Corridor Doors with Locks: Non-removable pins.
 - 3) Interior Doors: Non-rising pins.
 - 4) Tips: Flat button and matching plug. Finished to match leafs.
 - d. Size: Size hinges in accordance with specified manufacturer's published recommendations.
 - e. Quantity: Furnish one pair of hinges for all doors up to 5'-0" high. Furnish one hinge for each additional 2-1/2 feet or fraction thereof, unless otherwise specified in Hardware Headings.
- B. Geared Continuous Hinges:
1. Acceptable manufacturers:
 - a. Ives*
 - b. Select Products
 - c. Markar
 2. Characteristics:
 - a. Continuous gear hinges to be manufactured of extruded 6063-T6 aluminum alloy with anodized finish, or factory painted finish as scheduled.
 - b. All hinges are to be manufactured to template. Uncut hinges to be non-handed and to be a pinless assembly of three interlocking extrusions applied to the full height of the door and frame without mortising.
 - c. Vertical door loads to be carried on chemically lubricated polyacetal thrust bearings. The door and frame leaves to be continually geared together for the entire hinge length and secured with a full cover channel. Hinge to operate to a full 180°.
 - d. Hinges to be milled, anodized and assembled in matching pairs. Fasteners supplied to be steel self-drilling, self-tapping 12-24 x 3/4" screws.
 - e. Provide UL listed continuous hinges at fire doors. Continuous hinges at fire doors (suffix -FR) to meet the required ratings without the use of auxiliary fused pins or studs.
- C. Cylinders and Keying:
1. Acceptable manufacturers:
 - a. Match existing keying system
 2. Characteristics:
 - a. Existing System: Grandmaster key the locks to the Owner's existing system, with a new master key for the Project.

- b. Review the keying system with the Owner and provide the type required (master, grandmaster or great-grandmaster), either new or integrated into Owner's existing system.
- c. Metals: Construct lock cylinder parts from brass or bronze, stainless steel, or nickel silver.
- d. Comply with Owner's instructions for master keying and, except as otherwise indicated, provide individual change key for each lock that is not designated to be keyed alike with a group of related locks.
- e. Permanently inscribe each key with number of lock that identifies cylinder manufacturer's key symbol, and notation, "DO NOT DUPLICATE".
- f. Key Material: Provide keys of nickel silver only.
- g. Furnish the following Key Quantities:
 - 1) Three (3) change keys for each lock.
 - 2) Five (5) master keys for each master system.
 - 3) Five (5) grandmaster keys for each grandmaster system.
 - 4) Ten (10) construction master keys.
 - 5) Two (2) construction Control Keys.
 - 6) One (1) extra blank for each lock.
- h. Furnish construction master keys to General Contractor.
 - 1) Deliver keys to Owner.

D. Extra Heavy Duty Cylindrical Locks and Latches:

- 1. Acceptable manufacturers:
 - a. Schlage ND Series*
- 2. Required Features:
 - a. Chassis: Cylindrical design, corrosion-resistant plated cold-rolled steel.
 - b. Locking Spindle: Stainless steel, interlocking design.
 - c. Latch Retractors: Forged steel. Balance of inner parts: Corrosion-resistant plated steel, or stainless steel.
 - d. Lever Trim: Accessible design, independent operation, spring-cage supported, minimum 2" clearance from lever mid-point to door face.
 - e. All lock functions: 7 year warranty, Vandalguard function outside lever is disengaged when in the locked mode.
 - f. Rosettes: Minimum 3-7/16" diameter for coverage of ANSI/DHI A115.18, 1994 door preparation, through-bolt lugs on both spring cages to fully engage this pattern.
 - g. Springs: Full compression type.
 - h. Electric operation: Manufacturer-installed continuous duty solenoid.
 - i. Strikes: 16 gage curved steel, bronze or brass with 1" deep box construction, lips of sufficient length to clear trim and protect clothing.
 - j. Scheduled Lock Series and Design: **FIELD VERIFY AND MATCH EXISTING LEVER DESIGN.**
 - k. Certifications:
 - 1) ANSI A156.2, 1994, Series 4000, Grade 1. Tested to exceed 3,000,000 cycles.
 - 2) UL listed for A label single doors up to 4 ft x 8 ft.

E. Exit Devices:

- 1. Acceptable manufacturers:
 - a. Von Duprin 98 Series*
 - b. Sargent 8000 Series
- 2. Characteristics:
 - a. Exit devices to be UL Listed for life safety. Exit devices for fire rated openings to have "UL" labels for "Fire Exit Hardware."
 - b. Exit devices mounted on labeled wood doors to be mounted on the door

- c. per the door manufacturer's requirements.
- d. All trim to be thru-bolted to the lock stile case.
- e. Lever trim to be solid case material with a break-away feature to limit damage to the unit from vandalism. Lever design to match locksets.
- f. All exit devices to be made of brass, bronze, stainless steel, or aluminum material, powder coated, anodized, or plated to the standard architectural finishes to match the balance of the door hardware.
- g. Provide glass bead conversion kits to shim exit devices on doors with raised glass beads.
- h. All exit devices to be one manufacturer. No deviation will be considered.
- i. All series exit devices to incorporate a fluid damper, which decelerates the touchpad on its return stroke and eliminates noise associated with exit device operation. All exit devices to be non-handed. Touchpad to extend a minimum of 1/2 of the door width and to extend to the height of the cross rail housing for a "no pinch" operation. Plastic touchpads are not acceptable. All latchbolts to be the deadlocking type. Latchbolts to have a self-lubricating coating to reduce wear. Plated or plastic coated latchbolts are not acceptable. Plastic linkage and "dogging" components are not acceptable.
- j. Surface vertical rod devices to be UL labeled for fire door applications without the use of bottom rod assemblies. Where bottom rods are required for security applications, the devices to be UL labeled for fire doors applications with rod and latch guards by the device manufacturer.
- k. Exit devices to include impact resistant, flush mounted end cap design to avoid damage due to carts and other heavy objects passing through an opening. End cap to be of heavy-duty metal alloy construction and provide horizontal adjustment to provide alignment with device cover plate. When exit device end cap is installed, no raised edges will protrude.
- k. Exit devices used at ICC-500 rated door and frame assemblies are to be tested and approved for use with materials specified in Section 083490-Tornado Resistant Assemblies.

F. Closers and Door Control Devices:

1. Acceptable manufacturers:
 - a. LCN Closers 4040XP Series*
 - b. Norton 9500 Series
 - c. Sargent 281 Series
2. Characteristics:
 - a. Door closers to have fully hydraulic, full rack and pinion action with a high strength cast iron cylinder.
 - b. All closers to utilize a stable fluid withstanding temperature range of 120°F to -30°F without seasonal adjustment of closer speed to properly close the door. Closers for fire-rated doors to be provided with temperature stabilizing fluid that complies with standards UBC 7-2 (1997) and UL 10C.
 - c. Spring power to be continuously adjustable over the full range of closer sizes, and allow for reduced opening force for the physically handicapped. Spring power adjustment (LCN Fast™ Power Adjust) allows for quick and accurate power adjustment and visually shows closer power size settings by way of dial adjustment gauge located on closer spring tube. Hydraulic regulation to be by tamper-proof, non-critical valves. Closers to have separate adjustment for latch speed, general speed and back check.
 - d. All closers to have solid forged steel main arms (and forearms for parallel

arm closers) and where specified to have a cast-in solid stop on the closer shoe ("CUSH"). All parallel arm mounted closers to have "EDA" type arms or, where door travel on out-swing doors must be limited, use "CUSH" or "SCUSH" type closers. Auxiliary stops are not required when "CUSH" type closers are used. Provide drop plates where top rail of door is not sufficient for closer mounting. Provide "cush shoe supports" and "blade stop spacers" where dictated by frame details.

- e. Overhead concealed closers to have spring power adjustable for 50% increase in closing power and fully mortised door tracks.
- f. All surface closers to be certified to exceed ten million (10,000,000) full load cycles by a recognized independent testing laboratory. All closers (overhead, surface and concealed) to be of one manufacturer and carry manufacturer's ten year warranty (electric closers to have two year warranty).
- g. Access-Free Manual Closers: Where manual closers are indicated for doors required to be accessible to the physically handicapped provide adjustable units complying with ADA and ANSI A-117.1 provisions for door opening force.
- h. Closers to be installed to allow door swing as shown on plans. Doors swinging into exit corridors to provide for corridor clear width as required by code. Where possible, mount closers inside rooms.
- i. Powder coating finish to be certified to exceed 100 hours salt spray testing by ETL, an independent testing laboratory used by BHMA for ANSI certification.

G. Overhead Door Holders:

- 1. Acceptable manufacturers:
 - a. Glynn Johnson*
 - b. Rixson Firemark
- 2. Characteristics:
 - a. Provide heavy duty surface mounted door holders of stainless steel.
 - b. Concealed holders to be installed with the jamb bracket mortised flush with the bottom of the jamb. The arm and channel to be mortised into the door.
 - c. Surface holders to be installed with the jamb bracket mounted on the stop.

H. Floor Stops and Wall Bumpers:

- 1. Acceptable manufacturers:
 - a. Ives*
 - b. Trimco
 - c. Rockwood Manufacturing
- 2. Characteristics: Refer to Hardware Headings.

I. Push Plates:

- 1. Acceptable manufacturers:
 - a. Ives*
 - b. Trimco
 - c. Rockwood Manufacturing
- 2. Characteristics:
 - a. Exposed Fasteners: Provide manufacturers standard exposed fasteners.
 - b. Material to be forged stainless steel, per the Hardware Headings.
 - c. Provide plates sized as shown in Hardware Headings.

J. Door Pulls & Pull Plates:

1. Acceptable manufacturers:
 - a. Ives*
 - b. Trimco
 - c. Rockwood Manufacturing
 2. Characteristics:
 - a. Provide concealed thru-bolted trim on back to back mounted pulls, but not for single units.
 - b. Material to be forged stainless steel.
 - c. Provide units sized as shown in Hardware Headings.
- K. Push Pull Sets:
1. Acceptable manufacturers:
 - a. Ives*
 - b. Trimco
 - c. Rockwood Manufacturing
 2. Characteristics:
 - a. Provide mounting systems as shown in hardware sets.
 - b. Material to be tubular stainless steel.
 - c. Provide Push/Pull sets sized as shown in Hardware Headings.
- L. Protective Plates:
1. Acceptable manufacturers:
 - a. Ives*
 - b. Trimco
 - c. Rockwood Manufacturing
 2. Characteristics:
 - a. Provide manufacturers standard exposed fasteners for door trim units consisting of either machine screws or self-tapping screws.
 - b. Materials:
 - c. Metal Plates: Stainless Steel, .050 inch (U.S. 18 gage).
 - d. Fabricate protection plates not more than 2 inches less than door width on push side and not more than 1 inch less than door width on pull side.
 - e. Sizes:
 - 1) Refer to hardware headings for specific sizes.
 - 2) Kick plates to be 8 inches in height.
 - 3) Mop plates to be 6 inches in height.
 - 4) Kick plates and Mop plates to be 1" less than bottom rail height where applicable.
 - 5) Armor plates to be 34 inches in height. Armor plates on fire doors to comply with NFPA 80.
- M. Thresholds:
1. Acceptable manufacturers:
 - a. Zero Weatherstripping Co., Inc.*
 - b. Pemko
 - c. Reese Industries
 2. Types: Indicated in Hardware Headings.
- N. Door Seals/Gasketing:
1. Acceptable manufacturers:
 - a. Zero Weatherstripping Co., Inc.*
 - b. Pemko
 - c. Reese Industries
 2. Types: Indicated in Hardware Headings.
- O. Silencers:

1. Acceptable manufacturers:
 - a. Ives*
 - b. Hager
 - c. Rockwood Manufacturing
2. Provide three for each single door; two for each pair of doors.

P. Knox Box:

1. Acceptable manufacturers:
 - a. Knox Box 3200 Series. (AS REQUIRED)
2. Provide one surface mount Knox Box 3200 Series.
3. Provide unit compatible with the local Fire Department Knox key system.
4. General contractor shall install in location provided by architect.

2.2 Materials and Fabrication

- A. Manufacturer's Name Plate: Do not use manufacturers' products that have manufacturer's name or trade name displayed in a visible location (omit removable nameplates) except in conjunction with required fire-rated labels and as otherwise acceptable to Architect.
 1. Manufacturer's identification will be permitted on rim of lock cylinders only.
- B. Base Metals: Produce hardware units of basic metal and forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness, but in no case of lesser (commercially recognized) quality than specified for applicable hardware units by applicable ANSI/BHMA A156 series standards for each type of hardware item and with ANSI/BHMA A156.18 for finish designations indicated. Do not furnish "optional" materials or forming methods for those indicated, except as otherwise specified.
- C. Fasteners: Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation.
 1. Do not provide hardware that has been prepared for self-tapping sheet metal screws, except as specifically indicated.
 2. Furnish screws for installation with each hardware item. Provide Phillips flat-head screws except as otherwise indicated. 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 as closely as possible including "prepared for paint" surfaces to receive painted finish.
 3. Provide concealed fasteners for hardware units that are exposed when door is closed except to the extent no standard units of type specified are available with concealed fasteners.
 4. Use thru-bolts for installation of all exit devices, closers, and surface-mounted overhead stops. Coordinate with wood doors and metal doors and frames. Where thru-bolts are used, provide sleeves for each thru-bolt as a means of reinforcing the work, or provide sex nuts and bolts.

2.3 Hardware Finishes

- A. Match items to the manufacturer's standard color and texture finish for the latch and lock sets (or push-pull units if no latch or lock sets).
- B. Provide finishes that match those established by ANSI or, if none established, match the Architect's sample.
- C. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.
- D. Provide protective lacquer coating on all exposed hardware finishes of brass, bronze, and

aluminum, except as otherwise indicated. The suffix "-NL" is used with standard finish designations to indicate "no lacquer."

- E. The designations used to indicate hardware finishes are those listed in ANSI/BHMA A156.18, "Materials and Finishes," including coordination with the traditional U.S. finishes shown by certain manufacturers for their products.

1. **FIELD VERIFY AND MATCH EXISTING HARDWARE FINISH.**

3.0 - EXECUTION

3.1 Installation:

- A. Mount hardware units at heights indicated in following applicable publications, except as specifically indicated or required to comply with governing regulations and except as otherwise directed by Architect.
 - 1. "Recommended Locations for Builders Hardware for Standard Steel Doors and Frames" by the Door and Hardware Institute.
 - 2. "Recommended Locations for Builders Hardware for Custom Steel Doors and Frames" by the Door and Hardware Institute.
 - 3. NWWDA Industry Standard I.S.1.7, "Hardware Locations for Wood Flush Doors."
- B. Install each hardware item in compliance with the manufacturer's instructions and recommendations. Where cutting and fitting is required to install hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation or application of surface protection with finishing work specified in the Division 9 Sections. Do not install surface-mounted items until finishes have been completed on the substrates involved.
- C. Set units level, plumb, and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- D. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.
- E. Set thresholds for exterior doors in full bed of butyl-rubber or polyisobutylene mastic sealant complying with requirements specified in Division 7 Section "Joint Sealers".
- F. Weatherstripping and Seals: Comply with manufacturer's instructions and recommendations to the extent installation requirements are not otherwise indicated.

3.2 Adjusting, Cleaning, and Demonstrating

- A. Adjust and check each operating item of hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate freely and smoothly or as intended for the application made.
 - 1. Where door hardware is installed more than one month prior to acceptance or occupancy of a space or area, return to the installation during the week prior to acceptance or occupancy and make final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to function properly with final operation of heating and ventilating equipment.
- B. Clean adjacent surfaces soiled by hardware installation.
- C. Door Hardware Supplier's Field Service:
 - 1. Inspect door hardware items for correct installation and adjustment after complete installation of door hardware.

2. Instruct Owner's personnel in the proper adjustment and maintenance of door hardware and hardware finishes.
3. File written report of this inspection to Architect.

3.3 Hardware Schedule

HARDWARE SET: A01

EACH TO HAVE:

2	CONT. HINGE	112XY EPT	IVE
2	POWER TRANSFER	EPT10	VON
1	REMOVABLE MULLION	KR4954 STAB	VON
1	ELEC PANIC HARDWARE	QEL-LX-RX-LC-98-NL-990NL-SNB	VON
1	PANIC HARDWARE	LD-LX-RX-LC-98-EO-990EO-SNB	VON
2	CYLINDER/CORE	AS REQUIRED	
2	SURFACE CLOSER	4040XP SCUSH MC TBWMS	LCN
1	PA MOUNTING PLATE	4040XP-18PA SRT	LCN
1	CUSH SHOE SUPPORT	4040XP-30 SRT	LCN
1	BLADE STOP SPACER	4040XP-61 SRT	LCN
1	MULLION SEAL	139N PSA	ZER
1	THRESHOLD	65A-223	ZER
2	DOOR CONTACT	679-05HM	SCE
1	CREDENTIAL READER	BY SECURITY/ACCESS CONTROL	
1	POWER SUPPLY	PS902-4RL	VON

COORDINATE HARDWARE WITH ALUMINUM DOOR/FRAME MANUFACTURER/SUPPLIER.
BALANCE OF HARDWARE BY ALUMINUM DOOR/FRAME MANUFACTURER/SUPPLIER.

COORDINATE HARDWARE WITH ELECTRICAL, SECURITY AND ACCESS CONTROL SYSTEMS. BALANCE OF EAC COMPONENTS BY ELECTRICAL, SECURITY AND ACCESS CONTROL SYSTEMS.

OPERATION: CARD READER TO UNLOCK DOOR MOMENTARILY. DOOR CONTACT AND LATCH STATUS CONTACT, MONITORED REMOTELY VIA SECURITY AND ACCESS CONTROL SYSTEMS. FREE EGRESS AT ALL TIMES.

HARDWARE SET: A02

EACH TO HAVE:

1	CONT. HINGE	224XY EPT	IVE
1	POWER TRANSFER	EPT10	VON
1	ELEC PANIC HARDWARE	CD-LX-RX-LC-98-NL-990NL-SNB	VON
1	RIM CYLINDER	AS REQUIRED	SCH
2	CYLINDER/CORE	AS REQUIRED	
1	SURFACE CLOSER	4040XP SCUSH MC TBWMS	LCN
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
1	RAIN DRIP	142AA (AS REQ'D)	ZER
1	GASKETING	8144SBK PSA	ZER
1	DOOR SWEEP	8198AA	ZER
1	THRESHOLD	65A-223	ZER
1	DOOR CONTACT	679-05HM	SCE

COORDINATE HARDWARE WITH ELECTRICAL, SECURITY AND ACCESS CONTROL SYSTEMS. BALANCE OF EAC COMPONENTS BY ELECTRICAL, SECURITY AND ACCESS CONTROL SYSTEMS.

OPERATION: DOOR CONTACT AND LATCH STATUS CONTACT, MONITORED REMOTELY VIA SECURITY AND ACCESS CONTROL SYSTEMS. FREE EGRESS AT ALL TIMES.

HARDWARE SET: A03

EACH TO HAVE:

1	CONT. HINGE	224XY	IVE
1	PANIC HARDWARE	98-NL-990NL-SNB	VON
1	CYLINDER/CORE	AS REQUIRED	
1	SURFACE CLOSER	4040XP SCUSH MC TBWMS	LCN
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
1	RAIN DRIP	142AA (AS REQ'D)	ZER
1	GASKETING	8144SBK PSA	ZER
1	DOOR SWEEP	8198AA	ZER
1	THRESHOLD	65A-223	ZER

HARDWARE SET: B01

EACH TO HAVE:

3	HINGE	5BB1 4.5 X 4.5	IVE
1	STOREROOM LOCK	ND80	SCH
1	CYLINDER/CORE	AS REQUIRED	
1	SURFACE CLOSER	4040XP RW/PA MC TBWMS	LCN
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
1	WALL STOP	WS401/402CVX	IVE
1	GASKETING	188SBK PSA	ZER

HARDWARE SET: B02

EACH TO HAVE:

3	HINGE	5BB1 4.5 X 4.5	IVE
1	PASSAGE SET	ND10S	SCH
1	SURFACE CLOSER	4040XP RW/PA MC TBWMS	LCN
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
1	WALL STOP	WS401/402CVX	IVE
1	GASKETING	188SBK PSA	ZER

HARDWARE SET: B03

EACH TO HAVE:

3	HINGE	5BB1 4.5 X 4.5	IVE
1	STOREROOM LOCK	ND80	SCH
1	CYLINDER/CORE	AS REQUIRED	
1	SURFACE CLOSER	4040XP SHCUSH MC TBWMS	LCN
1	ARMOR PLATE	8400 32" X 2" LDW B-CS	IVE
3	SILENCER	SR64	IVE

HARDWARE SET: B04

EACH TO HAVE:

3	HINGE	5BB1 4.5 X 4.5	IVE
1	ENTRANCE/OFFICE LOCK	ND50	SCH
1	CYLINDER/CORE	AS REQUIRED	
1	OH STOP	90S	GLY
1	SURFACE CLOSER	4040XP RW/PA MC TBWMS	LCN
1	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
3	SILENCER	SR64	IVE

HARDWARE SET: B05

EACH TO HAVE:

3	HINGE	5BB1HW 4.5 X 4.5	IVE
1	PUSH PLATE	8200 4" X 16"	IVE
1	PULL PLATE	8303 10" 4" X 16"	IVE
1	SURFACE CLOSER	4040XP RW/PA MC TBWMS	LCN
1	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
1	WALL STOP	WS401/402CVX	IVE
3	SILENCER	SR64	IVE

HARDWARE SET: B06

EACH TO HAVE:

1	HINGE	3CB1 4.5 X 4.5	IVE
2	SPRING HINGE	3SP1 4.5 X 4.5	IVE
1	PRIVACY LOCK	ND40S	SCH
1	WALL STOP	WS401/402CCV	IVE
3	SILENCER	SR64	IVE

NOTE: ADJUST SPRING HINGE ENOUGH TO CLOSE THE DOOR YET NOT LATCH.

HARDWARE SET: C01

EACH TO HAVE:

3	HINGE	5BB1 4.5 X 4.5	IVE
1	STOREROOM LOCK	ND80	SCH
1	CYLINDER/CORE	AS REQUIRED	
1	WALL STOP/HOLDER	FS495	IVE
3	SILENCER	SR64	IVE

OPERATION: DOOR LOCKED AND SECURE WHEN CLOSED. FREE EGRESS AT ALL TIMES.

COORDINATE REINFORCEMENT FOR WALL STOP/HOLDER UNITS. USE "TOP OF DOOR" MOUNTING OPTION FOR FS495 WALL STOP/HOLDER.

END OF SECTION