

08 71 00 | Door Hardware

Submittals

1. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 - A. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
 - B. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening.
2. Content: Include the following information:
 - A. Type, style, function, size, label, hand, and finish of each door hardware item
 - B. Manufacturer of each item
 - C. Fastenings and other pertinent information
 - D. Location of each door hardware set, cross-referenced to Drawings, both on floorplans and in door and frame schedule
 - E. Explanation of abbreviations, symbols, and codes contained in schedule
 - F. Mounting locations for door hardware
 - G. Door and frame sizes and materials
 - H. Description of each electrified door hardware function, including location, sequence of operation, and interface with other building control systems
3. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of Door Hardware Schedule must precede fabrication of other work that is critical in the Project Construction Schedule. Include Product Data, Samples, Shop Drawings or other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
4. Keying Schedule: Submit schedule prepared by supplier, detailing Owner's final keying instructions for locks.
5. Warranties: Special warranties specified in this Section.

Quality Assurance

1. Supplier Qualifications: Door hardware supplier with warehousing facilities in Project's vicinity and who is or employs a qualified Architectural Hardware Consultant, available during the course of the work to consult with Contractor, Architect, and Owner about door hardware and keying
 - A. Scheduling Responsibility: Preparation of door hardware and keying schedule.

- B. Authorized Dealer: Supplier shall be factory-authorized dealer and/or distributor of specified products.
 - C. Inventorying Hardware: Representatives of Supplier to assist the Contractor and Installer in receiving and inventorying of hardware. Provide report detailing products were received complete.
 - D. Pre-installation Conference: Supplier to attend meeting with Contractor and Installer prior to hardware installation.
- 2. Architectural Hardware Consultant Qualifications: A person who is currently certified by the door and Hardware Institute as an Architectural Hardware Consultant and who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for the Project.
 - 3. Source Limitations: Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.
 - 4. Regulatory Requirements: Comply with ADA, NFPA 101
 - 5. Generally retain Americans with Disabilities Act Accessibility Guidelines below for private projects; FED-STD-795 for Federal, State and local government projects. Verify with authorities having jurisdiction.

Delivery, Storage, and Handling

Deliver all permanent keys to the Owner by signed receipt. Deliver ONLY construction master keys to Contractor/Installer.

Warranty

Warranty Period: All hardware shall have a one-year warranty from date of Substantial Completion, unless otherwise indicated. All door closers shall have a five or ten year warranty as applicable for the specified closers.

Maintenance Service

Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and remove and replacement of door hardware.

Products

- 1. Hinges
 - A. Hinges:
 - 1) Hager Companies (HAG)
 - 2) McKinney Products Company; Div or ESSEX Industries, Inc. (MCK)
 - 3) Stanley Commercial Hardware; Div. of The Stanley works (STH)
 - B. Hinge Pins: Unless otherwise indicated, provide the following:



- 1) Steel Hinges: Steel Pins
 - 2) Non-Ferrous Hinges: Stainless Steel Pins
 - 3) Exterior Doors: Non-Removable pins (NRP) whether specified in the hardware sets or not.
- C. Avoid use of pivots.
2. Locks and Latches
- Mechanical Locks and Latches:
- Sargent Manufacturing Company; Div. of ESSEX Industries, Inc. (SGT). No Substitution.
3. Exit Devices
- A. Sargent Manufacturing Company; Div. of ESSEX Industries, Inc (SGT). 80 Series. No Substitution.
- B. Concealed panic devices not acceptable.
4. Cylinders and Keying
- A. Manufacturers: subject to compliance with requirements, provide products by the following:
- Sargent. No Substitution.
- B. Keying System:
- 1) Existing system: Master key or grand master key locks to Owner's existing Sargent restricted keyway system.
 - 2) Cylinders shall be construction master keyed.
 - 3) Factory Keyed: Distributer keying not acceptable.
 - 4) Sargent to send key system and bitting information to the University Locksmith Services, including expansion as determined in keying conference.
- C. Keys: Provide silver keys complying with the following:
- 1) Stamping: Permanently inscribe each key with a visual key control number and include the following notation: "Do Not Duplicate".
 - 2) Quantity: In addition to one extra blank key for each lock, provide the following:
 - a. Cylinder change keys: Two each
 - b. Master keys: Six each
 - c. Construction Master Keys: Twenty each
 - 3) Ship all permanent keys to the Owner as determined during keying conference.



- 4) Ship construction keys to project site
5. Closers
 - A. Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Surface-Mounted Closers:

Sargent Manufacturing Company; Div. of ESSEX Industries, Inc.(SGT). 280 Series.
 - 2) All closers shall be mounted on interior side of rooms. All closers to be mounted with sex nut bolts on all label doors including 20 min. Concealed closers not acceptable.
 - 3) All closers to have full covers.
 - 4) All interior closers shall have adjustable spring power from sizes 1-4 and be capable of compliance with 5 lb. interior barrier free opening force restrictions. All exterior closers shall have adjustable spring power from sizes 2-6 and be capable of installation to meet 8.5 lb. exterior and 15lb. fire door opening force restrictions.
 - 5) All closers to have a ten (10) year written warranty.
 - 6) All similar type closers shall be from one manufacturer.
 - 7) Aluminum door closers will not be accepted.
 - 8) At all closer locations on aluminum storefront, coordinate requirements for top rail construction as required to support and securely anchor closer.
 6. Stops and Holders
 - A. Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Trimco (TR)
 - 2) Rockwood Manufacturing Company
 - B. Standards: Comply with the following:
 - 1) Stops and Bumpers: BHMA A156.16
 - 2) Mechanical Door Holders: BHMA A156.16
 - 3) Electromagnetic Door Holders: BHMA A156.15
 - 4) Combination Overhead Holders and Stops: BHMA A156.8
 - 5) Door Silencers: BHMA A156.16
 - C. Stops and Bumpers: BHMA Grade 1, unless Grade 2 is indicated.
 - D. Mechanical Door Holders: BHMA Grade 1, unless Grade 2 is indicated.

- E. Combination Floor and Wall Stops and Holders: BHMA Grade 1, unless Grade 2 is indicated.
- F. Combination Overhead Stops and Holders: BHMA Grade 1, unless Grade 2 is indicated.
- G. Floor Stops: For doors, unless wall or other type stops are scheduled or indicated. Do not mount floor stops where they will impede traffic.
 - 1) Where floor or wall stops are not appropriate, provide overhead holders.
 - 2) Provide heavy duty floor stop similar to Trimco #1209
- H. Silencers for Metal Door Frames L BHMA Grade 1; neoprene or rubber, minimum diameter ½ inch (13mm); fabricated for drilled in application to frame.

7. Door Gasketing

- A. Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Door Gasketing:
 - a. Hager Companies (HAG)
 - b. National Guard Products, Inc (NGP)
 - c. Pemko Manufacturing Co., Inc. (PEM)
 - 2) Door Bottoms:
 - a. Hager Companies (HAG)
 - b. National Guard Products, Inc (NGP)
 - c. Pemko Manufacturing Co., Inc. (PEM)
 - 3) Gasketing Materials: Comply with ASTM D 2000 and AAMA 701/702.

8. Thresholds

- A. Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Hager Companies (HAG)
 - 2) National Guard Products, Inc (NGP)
 - 3) Pemko Manufacturing Co., Inc. (PEM)
- B. Standard: Comply with BHMA A156.21

9. Flat Goods

- A. Accepted and approved only as following:

- 1) Ives
- 2) Rockwood
- 3) Hager

10. Electronic Hardware

- A. Where electronic hardware is required for security purposes, contact the University's Public Safety Data Administration at 348-6049 for hardware requirements.
- B. Provide concealed electrical power transfer (EPT) for electric locks, panic devices and latches. Avoid surface mounted devices.

Installation

1. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 - A. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - B. Custom Steel Doors and Frames: DHI's "Recommended Locations for Builders' Hardware for Custom Steel Doors and Frames"
 - C. Wood Doors: DHI WDHS.3. "Recommended Locations for Architectural Hardware for Wood Flush Doors."
2. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
 - A. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
 - B. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
3. Thresholds: Set Thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

Adjusting

1. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with references accessibility requirements.

Door Closers: Adjust sweep period so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.

2. Six-Month Adjustment: Approximately six months are date of Substantial Completion, Installer shall perform the following:
 - A. Examine and readjust each item of door hardware as necessary to ensure function of doors, door hardware, and electrified door hardware.
 - B. Consult with and instruct Owner's personnel on recommended maintenance procedures.
 - C. Replace door hardware items that have deteriorated or failed due to faulty design, materials, or installation of door hardware units.

Cleaning and Protection

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

- End of Guideline -