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This MANU-SPEC[®] utilizes the Construction Specifications Institute (CSI) *Project Resource Manual* (PRM), including *MasterFormat*[™], *SectionFormat*[™] and *PageFormat*[™]. A MANU-SPEC is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets []; delete optional text in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

This MANU-SPEC specifies exit devices. These products are manufactured by Hager Companies. Revise MANU-SPEC section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat* for other section numbers and titles.

**SECTION 08 71 00
DOOR HARDWARE**

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Exit Devices:
 - a. Standard and Heavy Duty Surface Vertical Rod Exit Devices.
 - b. Standard and Heavy Duty Rim Exit Devices.

Specifier Note: Revise paragraph below to suit project requirements. Add section numbers and titles per CSI *MasterFormat* and specifier's practice.

B. Related Sections:

Specifier Note: Include in this Article only those sections that directly affect the work of this section. Do not include Division 00 or Division 01 sections since it is assumed that all technical sections are related to all project Division 00 and Division 01 sections to some degree.

1. Section [08 11 00 - Metal Doors and Frames] [_____].
2. Section [08 14 00 - Wood Doors] [_____].
3. Section [08 15 00 - Plastic Doors] [_____].
4. Section [08 34 00 - Special Function Doors] [_____].
5. Section [08 41 00 - Entrances and Storefronts] [_____].

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Division 01 References Section may establish the edition date of standards. This article does not require compliance with standard, but is merely a listing of references used. Article below should list only those industry standards referenced in this section. Retain only those reference standards to be used within the text of this Section. Add and delete as required for specific project.

1.02 REFERENCES

- A. American National Standards Institute/Builders Hardware Manufacturers Association (ANSI/BHMA):
 - 1. ANSI/BHMA A156.18 Materials & Finishes.
 - 2. ANSI/BHMA A156.3 Exit Devices.
- B. Underwriters Laboratories, Inc. (UL):
 - 1. UL 10B Fire Tests of Door Assemblies.
 - 2. UL 10C/UBC 7-2 Positive Pressure Fire Tests of Door Assemblies.
 - 3. UL 305 Panic Hardware.

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Contract Conditions and Section 01 33 00 - Submittal Procedures.

1.03 ACTION SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and [01 33 00 - Submittal Procedures] [_____].
- B. Product Data: Submit manufacturer's complete product literature for specified hardware items, detailed installation diagrams and instructions, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
 - 4. Manufacturer's SPEC-DATA® product sheet.
- C. Samples:

Specifier Note: Describe specific types and quantities of samples required to determine style, finish or other characteristics.

- 1. Submit samples upon request.
- 2. Identify each sample by label indicating applicable specification paragraph number, brand name and number, finish and hardware package number.
- 3. After approval, samples will be returned for incorporation into work.
- D. Templates: Submit templates detailing installation procedures, including layout, dimensions and placement of hardware.

1.04 INFORMATION SUBMITTALS

- A. Quality Assurance:
 - 1. Test Reports: Certified test reports issued by nationally recognized testing laboratory showing product compliance with specified performance characteristics and physical requirements.
 - 2. Certificate of Compliance: Manufacturer's certification that products furnished meet specified performance characteristics and physical requirements.
 - 3. Manufacturer's Instructions: Manufacturer's installation instructions; manufacturer's instruction sheets.

1.05 CLOSEOUT SUBMITTALS

- A. Closeout Submittals: Submit following:
 - 1. Warranty: Warranty documents specified.
 - 2. Maintenance Data: Maintenance data for installed products in accordance with Section [01 78 00 - Closeout Submittals] [_____]. Include:
 - a. Methods for maintaining installed products.
- B. Closeout Submittals: Submit the following:
 - 1. Warranty: Manufacturer's standard warranty document executed by authorized company official. Manufacturer's

warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

1.06 QUALITY ASSURANCE

- A. Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.

Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed in Conditions of the Contract and Division 01 Regulatory Requirements Section. Repetitive statements should be avoided.

- B. Preinstallation Meetings: Conduct preinstallation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements. Comply with Section [01 31 19 - Project Meetings] [_____].

1.07 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Section [01 61 00 - Common Product Requirements] [_____].
- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery, Storage and Protection:

1. Deliver, store and handle in accordance with Section [01 61 00 - Common Product Requirements] [_____].
2. Deliver, store and handle materials in accordance with manufacturer's written instructions.
3. Deliver in original packaging with labels and identification intact.
4. Ship hardware items in lots coordinated with openings, as numbered in opening schedule.
5. Inspect hardware items upon delivery to ensure that specified products have been received.
6. Store hardware items in secure dry location, protected from weather until ready for installation.

- D. Waste Management and Disposal:

Specifier Note: Environment: The disposal of packaging waste into landfill site demonstrates an inefficient use of natural resources and consumes valuable landfill space. Specifying appropriate packaging and construction waste management and disposal procedures may contribute to points required for LEED® construction project certification.

1. Separate waste materials for [Reuse] [And] [Recycling] [_____] in accordance with Section [01 74 19 - Construction Waste Management and Disposal] [_____].
2. Remove from site and dispose of packaging materials at appropriate recycling facilities.
3. Collect and separate for disposal [Paper] [Plastic] [Polystyrene] [Corrugated cardboard] [_____] packaging material [In appropriate onsite bins] [_____] for recycling.

1.08 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

Specifier Note: Coordinate article below with Contract Conditions and with Section 01 78 36 - Warranties.

1.09 WARRANTY

- A. Project Warranty: Refer to Contract Conditions and Section [01 78 36 - Warranties] [_____] for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and does not limit, other rights Owner may have under Contract Documents.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Ensure manufacturer has minimum [5] [_____] years experience in manufacturing.

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal," "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for

determining “or equal” products.

B. Manufacturer: Hager Companies.

1. Contact: 139 Victor St., St. Louis, MO 63104; Telephone: (800) 325-9995, (314) 772-4400; Fax: (800) 782-0149; E-mail: webmaster@hagerco.com; website: www.hagerco.com.

2.02 EXIT DEVICES

Specifier Note: Repeat the following article when more than one type of surface vertical rod exit device is required for project. Refer to Hager Companies door hardware catalog when selecting and specifying exit devices.

A. Surface Vertical Rod Exit Devices Standard Duty:

Specifier Note: Refer to Hager Companies product catalog for product finish designations and availability per series selection.

1. Cover: [Painted steel] [Brass] [Stainless steel].
2. End Caps: [Painted steel] [Brass] [Stainless steel].
3. Chassis: [Steel plated] [Stainless steel].

Specifier Note: Fire ratings up to 3 hours are available. Refer to Hager Companies product catalog for more information.

4. Listing: UL/ULC for up to 3 hours, UL10C/UBC 7-2 Positive Pressure Rated, UL10B Neutral Pressure Rated, UL305 Certified.
5. Fasteners: [Wood screws] [Machine screws] [Through-bolts] [_____].

Specifier Note: Select or delete following sentences to suit chosen trim. Refer to Hager Companies product catalog for description of item number and specify to suit project.

6. Trim: Compatible with surface rod exit device, finished [To match] [_____].
 - a. Acceptable Material: Hager Companies trim item numbers [47CE] [47BE] [47NL] [47DT] [47RN] [47RD] [Pull x Rim Cylinder NL function].
7. Door Size: [36 inches (915 mm) field sizable to 32 inches (813 mm)] [48 inches (1220 mm) field sizable to 38 inches (965 mm)].
8. Door Thickness: 1 3/4 inches (45 mm).
9. Latches and Strikes:
 - a. Latchbolt: 1/2 inch (12.7 mm) throw, stainless steel with Dead Latch.
 - b. Strikes: [Stainless steel with plated rollers] [Surface applied to frame with slotted holes].

Specifier Note: Refer to Hager Companies product catalog for product finish designations. BHMA finish designations are available on the Hager Companies website.

- c. Finish: To [_____].
10. Acceptable Material: Hager Companies Surface Vertical Rod Exit Devices Series 4700 standard duty.

Specifier Note: Repeat the following article when more than one type of surface vertical rod exit device is required for project. Refer to Hager Companies door hardware catalog when selecting and specifying exit devices.

B. Surface Vertical Rod Exit Devices Heavy Duty:

Specifier Note: Refer to Hager Companies product catalog for product finish designations and availability per series selection.

1. Cover: [Brass] [Bronze].
2. End Caps: [Brass] [Bronze].
3. Chassis: [Aluminum].

Specifier Note: Fire ratings up to 3 hours are available. Refer to Hager Companies product catalog for more information.

4. Listing: UL/ULC for up to 3 hours, UL10C/UBC 7-2 Positive Pressure Rated, UL10B Neutral Pressure Rated, UL305 Certified.
5. Fasteners: [Wood screws] [Machine screws] [Through-bolts] [_____].

Specifier Note: Select or delete following sentences to suit chosen trim. Refer to Hager Companies product catalog for description of item number and specify to suit project.

6. Trim: Compatible with surface rod exit device, finished [To match] [_____].
 - a. Acceptable Material: Hager Companies trim item numbers [47CE] [47BE] [47NL] [47DT] [47RN] [47RD] [Pull x Rim Cylinder NL function].
7. Door Size: [36 inches (915 mm) field sizable to 32 inches (813 mm)] [48 inches (1220 mm) field sizable to 38 inches (965 mm)].
8. Door Thickness: [1 3/4 inches (45 mm)] [_____].
9. Latches and Strikes:
 - a. Latchbolt: 1/2 inch (12.7 mm) throw, stainless steel with Dead Latch.
 - b. Strikes: [Solid steel, fire rated] [Surface applied to frame with slotted holes].

Specifier Note: Refer to Hager Companies product catalog for product finish designations. BHMA finish designations are available on the Hager Companies website.

- c. Finish: [US3] [US4] [US10] [US10B] [US26] [US26D].
10. Acceptable Material: Hager Companies Surface Vertical Rod Exit Devices, Series 4500 Heavy Duty Commercial, Grade 1.

Specifier Note: Repeat the following article when more than one type of rim exit device is required for project. Refer to Hager Companies door hardware catalog when selecting and specifying exit devices.

C. Rim Exit Devices Standard Duty.

Specifier Note: Refer to Hager Companies product catalog for product finish designations and availability per series selection.

1. Cover: [Painted steel] [Brass] [Stainless steel].
2. End Caps: [Painted steel] [Brass] [Stainless steel].
3. Chassis: [Steel plated] [Stainless steel].

Specifier Note: Fire ratings up to 3 hours are available. Refer to Hager Companies product catalog for more information.

4. Listing: UL/ULC for up to 3 hours, UL10C/UBC 7-2 Positive Pressure Rated, UL10B Neutral Pressure Rated, UL305 Certified.
5. Fasteners: [Wood screws] [Machine screws] [Through-bolts] [_____].

Specifier Note: Select or delete following sentences to suit chosen trim. Refer to Hager Companies product catalog for description of item number, and specify to suit project.

6. Trim: Compatible with rim style exit device, finished [To match] [_____].
 - a. Acceptable Material: Hager Companies trim item numbers [47CE] [47BE] [47NL] [47DT].
7. Door Size: [36 inches (915 mm) field sizable to 32 inches (813 mm)] [48 inches (1220 mm) field sizable to 38 inches (965 mm)].
8. Door Thickness: 1 3/4 inches (45 mm).
9. Latches and Strikes:

- a. Latchbolt: 3/4 inch (19.1 mm) throw, stainless steel with Dead Latch.
- b. Strikes: [Steel with plated rollers] [Surface applied to frame with slotted holes].

Specifier Note: Refer to Hager Companies product catalog for product finish designations. BHMA finish designations are available on the Hager Companies website.

- c. Finish: To [_____].
10. Acceptable Material: Hager Companies Rim Style Exit Devices Series 4700 standard duty.

Specifier Note: Repeat the following article when more than one type of rim exit device is required for project. Refer to Hager Companies door hardware catalog when selecting and specifying exit devices.

D. Rim Exit Devices Heavy Duty.

Specifier Note: Refer to Hager Companies product catalog for product finish designations and availability per series selection.

1. Cover: [Brass] [Bronze].
2. End Caps: [Brass] [Bronze].
3. Chassis: [Aluminum].

Specifier Note: Fire ratings up to 3 hours are available. Refer to Hager Companies product catalog for more information.

4. Listing: UL/ULC for up to 3 hours, UL10C/UBC 7-2 Positive Pressure Rated, UL305 Certified.
5. Fasteners: [Wood screws] [Machine screws] [Through-bolts] [_____].

Specifier Note: Select or delete following sentences to suit chosen trim. Refer to Hager Companies product catalog for description of item number, and specify to suit project.

6. Trim: Compatible with rim style exit device, finished [To match] [_____].
 - a. Acceptable Material: Hager Companies trim item numbers [47CE] [47BE] [47NL] [47DT] [47RN] [47RD] [Pull x Rim Cylinder NL function].
7. Door Size: [36 inches (915 mm) field sizable to 32 inches (813 mm)] [48 inches (1220 mm) field sizable to 38 inches (965 mm)].
8. Door Thickness: [1 3/4 inches (45 mm)] [_____].
9. Latches and Strikes:
 - a. Latchbolt: 3/4 inch (19.1 mm) throw, stainless steel with Dead Latch.
 - b. Strikes: [Steel with plated rollers] [Overlapping strike for pair of doors] [Surface applied to frame with slotted holes].

Specifier Note: Refer to Hager Companies product catalog for product finish designations. BHMA finish designations are available on the Hager Companies website.

10. Acceptable Material: Hager Companies Rim Style Exit Devices Series 4500 Heavy Duty Commercial, Grade 1.

Specifier Note: Edit Paragraph below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 01 Project Requirements (Product Substitutions Procedures) Section.

2.03 PRODUCT SUBSTITUTIONS

- A. Substitutions: [In accordance with [Section 01 25 13 - Product Substitution Procedures] [_____]] [No substitutions permitted].

PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

Specifier Note: Article below is an addition to the CSI *SectionFormat* and a supplement to MANU-SPEC. Revise article below to suit

project requirements and specifier's practice.

- A. Compliance: Comply with manufacturer's written data, including product technical bulletins, product catalog installation instructions, product carton installation instructions and Hager Companies SPEC-DATA sheets for exit devices.
- B. Furnish door and frame manufacturers with complete instructions and templates for preparation of their work to receive exit devices.
- C. Furnish manufacturer's instructions for proper installation of each exit device component.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify that substrate conditions are acceptable for product installation in accordance with manufacturer's instructions.

3.03 INSTALLATION

- A. Install exit devices to standard hardware location dimensions in accordance with Hager Companies Standard Hardware Locations Chart.
- B. Use only manufacturer's supplied fasteners. Failure to comply may void manufacturer's warranties and applicable licensed labels. Use of "quick" type fasteners, unless specifically supplied by manufacturer, is unacceptable.

3.04 ADJUSTING

- A. Adjust exit devices for optimum, smooth operating condition.
- B. Lubricate where directed by manufacturer.

3.05 CLEANUP

- A. Proceed in accordance with Section [01 74 23 - Final Cleaning] [_____].
- B. Clean exit devices with damp rag and approved nonabrasive cleaner, and polish exit devices in accordance with manufacturer's instructions.
- C. Remove protective material from exit devices where present.
- D. Upon completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

END OF SECTION