SECTION 08 1113
HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL
1.01 SECTION INCLUDES
   A. Non-fire-rated hollow metal doors and frames.
   B. Hollow metal frames for wood doors.
   C. Fire-rated hollow metal doors and frames.
   D. Thermally insulated hollow metal doors with frames.
   E. Sound-rated hollow metal doors and frames.
   F. Commercial security hollow metal doors and frames.
   G. Hollow metal borrowed lites glazing frames.
   H. Accessories, including glazing, louvers, and matching panels.

1.02 RELATED REQUIREMENTS
   A. Section 08 7100 - Door Hardware.

1.03 REFERENCE STANDARDS
   C. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100); 2014.
   D. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.
   H. ASTM E413 - Classification for Rating Sound Insulation; 2010.
   I. BHMA A156.115 - American National Standard for Hardware Preparation in Steel Doors and Steel Frames; 2014.
   K. ITS (DIR) - Directory of Listed Products; current edition.
   M. NAAMM HMMA 830 - Hardware Selection for Hollow Metal Doors and Frames; 2002.
   N. NAAMM HMMA 831 - Hardware Locations for Hollow Metal Doors and Frames; 2011.
   Q. NFPA 105 - Standard for Smoke Door Assemblies and Other Opening Protectives; 2016.
   S. UL (DIR) - Online Certifications Directory; current listings at database.ul.com.


1.04 SUBMITTALS
A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced standards/guidelines.
C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS
A. Requirements for Hollow Metal Doors and Frames:
   1. Steel Sheet: Comply with one or more of the following requirements; galvannealed steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
   2. Accessibility: Comply with ICC A117.1 and ADA Standards.
   3. Door Edge Profile: Hinged edge square, and lock edge beveled.
   4. Hardware Preparations, Selections and Locations: Comply with NAAMM HMMA 830 and NAAMM HMMA 831 or BHMA A156.115 and ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.02 HOLLOW METAL DOORS
A. Door Finish: Factory primed and field finished.
B. Exterior Doors: Thermally insulated.
   1. Door Core Material: Manufacturers standard core material/construction and in compliance with requirements.
C. Interior Doors, Non-Fire Rated:
   1. Based on NAAMM HMMA Custom Guidelines:
      a. Comply with guidelines of NAAMM HMMA 860 for Hollow Metal Doors and Frames.
      b. Performance Level 3 - Heavy Duty, in accordance with NAAMM HMMA 805.
      c. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
      d. Door Face Metal Thickness: 16 gage, 0.053 inch, minimum.
D. Fire-Rated Doors:
   1. Fire Rating: As indicated on Door Schedule, tested in accordance with UL 10C and NFPA 252 ("positive pressure fire tests").
   2. Temperature-Rise Rating (TRR) Across Door Thickness: In accordance with local building code and authorities having jurisdiction.
   3. Provide units listed and labeled by UL (DIR) or ITS (DIR).
      a. Attach fire rating label to each fire rated unit.
4. Smoke and Draft Control Doors (Indicated with letter "S" on Drawings and/or Door Schedule): Self-closing or automatic closing doors in accordance with NFPA 80 and NFPA 105, with fire-resistance-rated wall construction rated the same or greater than the fire-rated doors, and the following;
   a. Maximum Air Leakage: 3.0 cfm/sq ft of door opening at 0.10 inch w.g. pressure, when tested in accordance with UL 1784 at both ambient and elevated temperatures.
   b. Gasketing: Provide gasketing or edge sealing as necessary to achieve leakage limit.
   c. Label: Include the "S" label on fire-rating label of door.
E. Sound-Rated Interior Doors:
   1. Sound Transmission Class (STC) Rating of Door and Frame Assembly: STC of 39, minimum, calculated in accordance with ASTM E413, and tested in accordance with ASTM E90.
   2. Door Thickness: As required to meet acoustic requirements indicated.

2.03 HOLLOW METAL FRAMES
A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
B. Exterior Door Frames: Full profile/continuously welded type.
   1. Frame Metal Thickness: 14 gage, 0.067 inch, minimum.
   2. Frame Finish: Factory primed and field finished.
   3. Weatherstripping: Separate, see Section 08 7100.
C. Interior Door Frames, Non-Fire Rated: Full profile/continuously welded type.
   1. Frame Metal Thickness: 14 gage, 0.067 inch, minimum.
   2. Frame Finish: Factory primed and field finished.
D. Door Frames, Fire-Rated: Full profile/continuously welded type.
   1. Fire Rating: Same as door, labeled.
   2. Frame Metal Thickness: 14 gage, 0.067 inch, minimum.
   3. Frame Finish: Factory primed and field finished.
E. Sound-Rated Door Frames: Full profile/continuously welded type.
   1. Frame Metal Thickness: 14 gage, 0.067 inch, minimum.
   2. Frame Finish: Factory primed and field finished.

2.04 ACCESSORIES

PART 3 EXECUTION
3.01 INSTALLATION
A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.
B. Install fire rated units in accordance with NFPA 80.
C. Coordinate frame anchor placement with wall construction.
D. Install door hardware as specified in Section 08 7100.

3.02 TOLERANCES
A. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

3.03 ADJUSTING
A. Adjust for smooth and balanced door movement.
B. Adjust sound control doors so that seals are fully engaged when door is closed.

END OF SECTION 08 1113