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## 085113 - Aluminum Windows

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## **SECTION 08 1113 – HOLLOW METAL DOORS AND FRAMES**

### 1.1 SUMMARY

#### A. Section Includes:

1. Standard hollow metal doors and frames.

### 1.2 SUBMITTALS

#### A. LEED Submittal:

1. Product Data for Credit MR 4.1 and Credit MR 4.2: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include statement indicating costs for each product having recycled content.
2. Product Data for Credit MR 5.1 and Credit MR 5.2: For regional materials indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.

### 1.3 GENERAL

1. Narrow stile doors shall NOT be allowed.
2. Full length glass doors shall NOT be allowed.
3. Minimum Width: Any door intended for passage by the public shall not be less than 36 inches in width. Exterior doors shall be no less than 36" in width and no less than 7'-0" in height.
4. Glazed Lites: Where doors are provided with glazed lites, and do not have a transparent full length sidelite, the bottom edge of the lite shall not be greater than 43 inches above finished floor and shall be glazed with transparent glazing material.
5. Steel Doors with Glass: Provide minimum 4-1/2 inch stiles. Rail shall have a minimum 6 inch, top and bottom rails shall be 8 inch minimum (excluding glass stops). Coordinate midrail locations with push bars and exit devices. All exit devices and push bars, on doors with glass thicker than 1/2 inch, shall be located behind midrail and coordinated with push bars and exit devices.
6. All steel doors and frames shall be factory-prepped for locks and hardware as prescribed by UNH Hardware Services.
7. Steel doors shall be provided only with prior written authorization of UNH Hardware Services.
8. At least one Exterior Door regardless of construction r at each accessible entrance shall be equipped with an automatic opener.

#### 1.4 DEFINITIONS

- A. Minimum Thickness: Minimum thickness of base metal without coatings Steel Doors shall be a minimum 16 gauge for interior and 14 gauge for exterior.
- B. Standard Hollow Metal Work: Hollow metal work fabricated according to ANSI/SDI A250.8.

#### 1.5 QUALITY ASSURANCE

- A. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.
- B. Fire-Rated, Borrowed-Light Frame Assemblies: Assemblies complying with NFPA 80 that are listed and labeled, by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 257 or UL 9. Label each individual glazed lite.
- C. Smoke-Control Door Assemblies: Comply with NFPA 105 or UL 1784.

#### 1.6 COORDINATION

- A. Coordinate installation of anchorages for hollow metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

#### 1.7 MANUFACTURERS

- A. Manufacturers:
  - 1. Amweld Building Products, LLC.
  - 2. Benchmark; a division of Therma-Tru Corporation.
  - 3. Ceco Door Products; an Assa Abloy Group company.
  - 4. Curries Company; an Assa Abloy Group company.
  - 5. Deansteel Manufacturing Company, Inc.
  - 6. Kewanee Corporation (The).
  - 7. Mesker Door Inc.
  - 8. Pioneer Industries, Inc.
  - 9. Security Metal Products Corp.
  - 10. Steelcraft; an Ingersoll-Rand company.
  - 11. Special-Lite Inc.

#### 1.8 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

- B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.
- D. Frame Anchors: ASTM A 591/A 591M, Commercial Steel (CS), 40Z (12G) coating designation; mill phosphatized.
  - 1. Anchors appropriate for wall conditions to anchor framing to wall. A minimum of 5 anchors up to 7'-4" on jamb members, and one additional anchor for each foot over 7'-4". Secure head and sill members of transom, sidelites and similar conditions.

### 1.9 STANDARD HOLLOW METAL DOORS

- A. General: Provide doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces unless otherwise indicated. Comply with ANSI/SDI A250.8.
  - 1. Design: Flush panel.
  - 2. Core Construction: Manufacturer's standard kraft-paper honeycomb, polystyrene, polyurethane, polyisocyanurate, mineral-board, or vertical steel-stiffener core.
- B. Exterior Doors: Face sheets fabricated from metallic-coated steel sheet. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:
  - 1. Level 3 and Physical Performance Level A (Extra Heavy Duty), Model 2 (Seamless and) Model 3 (Stile and Rail).
  - 2. Exterior doors shall be insulated.
- C. Interior Doors: Face sheets fabricated from cold-rolled steel sheet. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level: Interior doors exposed to high humidity or high acidity shall be galvanized bearing steel.
  - 1. Level 2 and Physical Performance Level B (Heavy Duty), Model 2 (Seamless).

### 1.10 STANDARD HOLLOW METAL FRAMES

- A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.
  - 1. Hinge plates shall be minimum 3/16-inch thick drilled and tapped for 12-24 machine screws. Self-tapping screws are NOT allowed.
  - 2. Steel frames exposed to high humidity, or high acidity areas (such as chicken coops, cow barns) shall be hot-dip galvanized steel.
  - 3. Provide T-anchors at steel frames in masonry.

- B. Exterior Frames: Fabricated from metallic-coated steel sheet.
  - 1. Fabricate frames as full profile welded.
  
- C. Interior Frames: Fabricated from cold-rolled steel sheet. Steel frames exposed to high humidity or high acidity shall be galvanized steel
  - 1. Fabricate frames as full profile welded. No knock down frames except by specific written UNH permission.
  - 2. Frames for Level 2 Steel Doors: 0.053-inch- (1.3-mm-) thick steel sheet.
  - 3. Frames for Wood Doors: 0.067-inch- (1.7-mm-) thick steel sheet.
  - 4. Frames for Borrowed Lights: Same as adjacent door frame.

#### 1.11 STOPS AND MOLDINGS

- A. Moldings for Glazed Lites in Doors: Minimum 0.032 inch (0.8 mm) thick, fabricated from same material as door face sheet in which they are installed.
  
- B. Fixed Frame Moldings: Formed integral with hollow metal frames, a minimum of 5/8 inch (16 mm) high unless otherwise indicated.
  
- C. Loose Stops for Glazed Lites in Frames: Minimum 0.032 inch (0.8 mm) thick, fabricated from same material as frames in which they are installed.

#### 1.12 FABRICATION

- A. Fabricate concealed stiffeners, edge channels, and hardware reinforcement from either cold- or hot-rolled steel sheet.
  
- B. Hardware Preparation: Factory prepare hollow metal work to receive templated hardware; include cutouts, reinforcement, mortising, drilling, and tapping as prescribed by University Hardware Services.
  - 1. Locate hardware according to ANSI/SDI A250.8.
  - 2. Reinforce doors and frames to receive nontemplated, mortised and surface-mounted door hardware.
  - 3. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.
  
- C. Stops and Moldings: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with butted or mitered hairline joints.
  - 1. Single Glazed Lites: Provide fixed stops and moldings welded on secure side of hollow metal work.
  - 2. Multiple Glazed Lites: Provide fixed and removable stops and moldings so that each glazed lite is capable of being removed independently.
  - 3. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames.
  - 4. Provide loose stops and moldings on inside of hollow metal work.

5. Coordinate rabbet width between fixed and removable stops with type of glazing and type of installation indicated.

1.13 STEEL FINISHES

- A. Prime Finish: Apply manufacturer's standard primer immediately after cleaning and pretreating.
  1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

1.14 WEATHER STRIPPING

- A. Shall be Thermal Brush as manufactured by SEALEZE Corporations. Weather stripping shall not be mounted under the door.

END OF SECTION 08 1113