

Radha Krishna Temple
Commercial Kitchen Expansion
Hollow Metal Door Frame - Specifications

SECTION 081113 - Hollow Metal Doors and Frames

PART 1 - GENERAL

1.1 SUMMARY

A. Related Documents:

1. Drawings and general provisions Contract apply to this Section.
2. Review these documents for coordination with additional requirements and information that apply to work under this Section.

B. Section Includes:

1. Steel doors and frames.
2. Glazed light frames.
3. Preparation for door hardware.

<Include the following paragraph if applicable.>

C. Products Supplied But Not Installed Under This Section

1. Division 04 Section "Concrete Unit Masonry" for frame anchors.

D. Related Sections:

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1. Division 01 Section "General Requirements."
2. Division 01 Section "Special Procedures."
3. Division 04 Section "Concrete Unit Masonry" for grouting and filling of frames.
4. Division 08 Section "Flush Wood Doors."
5. Division 08 Section "Hardware."
6. Division 08 Section "Glazing."
7. Coordinate with [security/card access system] [and] [fire alarm system].

1.2 REFERENCES

A. General:

1.The following documents form part of the Specifications to the extent stated. Where differences exist between codes and standards, the one affording the greatest protection shall apply.

2.Unless otherwise noted, the referenced standard edition is the current one at the time of commencement of the Work.

3.Refer to Division 01 Section "General Requirements" for the list of applicable regulatory requirements.

B. ASTM International:

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1.ASTM A653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process

2.ASTM C1363 Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus.

3.ASTM E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.

C. Building Code - Fire Tests of Door Assemblies

D. Fire Test of Window Assemblies.

E. HMMA 850: Fire Rated Hollow Metal Doors and Frames.

F. HMMA 861: Guide Specifications for Commercial Hollow Metal Doors and Frames.

G. National Association of Architectural Metal Manufacturers (NAAMM) Standard Hollow Metal Manufacturers' Association (HMMA) 840: Guide Specifications for Installation and Storage of Hollow Metal Doors and Frames.

H. National Fire Protection Association (NFPA) 80: Fire Doors and Windows.

I. NFPA Standard 252: Fire Tests for Door Assemblies.

J. NFPA 257-1990: Standard Fire Test for Window and Glass Block Assemblies.

K. Underwriters Laboratories (UL) Standard 10B: Fire Tests of Door Assemblies.

L. UL Standard 10C: Positive Pressure Fire Tests of Door Assemblies.

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1.3 SUBMITTALS

- A. Submit under provisions of Division 01 Section "General Requirements."
- B. Product Data: Manufacturer's product literature, specifications and installation instructions.
- C. Shop Drawings: Indicate door and frame elevations, dimensions, fire rating, door type, core, reinforcement, finish, hardware locations, cutout locations, frame profiles, details, metal gage, anchorage details, and finish.
- D. Schedule: Schedule of doors and frames, using same reference numbers for details and openings as those on Drawings. Indicate frame and door types.

1.4 QUALITY ASSURANCE

- A. Comply with HMMA 840 and 861.
- B. B. Regulatory Requirements:
 - 1. Comply with IBC
 - 2. Fire Labeled Doors and Frames: Comply with the following:
 - a. HMMA 850, NFPA 252, CBC Standard 7-2, and UL 10B and 10C.
 - b. Exit Enclosure Doors: Rate of rise across door thickness after 30 minutes: Maximum 450 degrees F.

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- c. Installed Door and Frame Assemblies: NFPA 80.
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- 3. Fire Labeled Window Frames: Comply with NFPA 257 and CBC 7-4.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle steel doors and frames in a manner to prevent damage and deterioration.

- B. Storage: Comply with HMMA 840 and manufacturer's recommendations.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Typical: Ceco Door Products, Forderer Cornice Works, Fenestra Corporation, or Steelcraft Ingersoll-Rand or equivalent in performance and quality

2.2 MATERIALS:

- A. Doors: HMMA 861 Type A, 1-3/4" thick, full flush continuously welded edge seams with no visible seams on faces or vertical edges, steel stiffened core, insulated with inorganic, noncombustible material.

- 1. Exterior Doors: ASTM A653 hot-dip galvanized sheet steel, 16 gage (0.0538 inches minimum) unless otherwise noted.

- 2. Interior Doors: 18 gage sheet steel (0.0428 inches minimum) unless otherwise noted.

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B. Frames: HMMA 861.

1. Exterior Frames: Welded type.
2. Interior Frames: [Welded type.] [Knock down type.]
3. Gage: Minimum 16 gage for openings 4 feet (1.2 m) in width or less; 14 gage for openings greater than 4 feet (1.2 m) in width.
4. Door Silencers: Resilient type, fitted in drilled holes, removable for replacement.
5. [Mortar Guard Boxes: Minimum 22 gage, welded in place; provide where frames may be grouted.]

C. Fire Rated Doors, Frames and Glazed Light Frames:

1. Labels: UL or Warnock-Hersey labels for the exposures indicated.
 - a. Items provided with labels other than the fire resistive rating shown on the Door Schedule are not permitted and will be rejected.
 - b. If any item noted to be fire rated cannot qualify for appropriate labeling, obtain instructions from the Project Manager before beginning fabrication on that item.

2.3 Fabrication

- A. Conform to requirements of NAAMM, except as specified otherwise in this Section.
- B. Hardware Preparation: Reinforce and prepare doors and frames to receive hardware furnished under Division 08 Section "Hardware".

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1. Minimum Gages for Hardware Reinforcing Plates: Provide in accordance with HMMA 861, except hinge and pivot reinforcements shall be 7 gage minimum.
 2. Locations for Reinforcing Hardware: Comply with Division 08 Section "Hardware".
 3. Consult with Glenn Skipper, ext. 6125, and Pat DuPont, ext. 7668, on the following paragraph. Omit par. if not applicable.
 4. Electrical Hardware and Devices: Prepare doors and frames to receive electrical hardware specified in Division 08 Section "Hardware", [and security/card access and fire alarm devices provided under Division 16].
- C. Frames:
1. Welded Frames: Accurately form and cut mitered corners of welded type frames. Weld on inside surfaces. Grind welded joints to smooth uniform finish.
 2. Knocked Down Frames: Accurately form and miter interlocking joints of knocked down frames to maintain hairline alignment of parts when field assembled.
 3. Head Reinforcement: Reinforce frames wider than 4'-0" with two 12 gage minimum formed steel channels welded in place, flush with top of frames.
 4. Door Silencers:
 - a. Prepare frames for silencers.
 - b. Provide 3 silencers on strike jamb of single door frames [and 3 silencers each strike jamb of double door frames with removable mullions. Provide 2 silencers on head of double door frames without removable mullions. Omit silencers at gaskets.

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5. Jamb Anchors: Provide per HMMA. Weld floor jamb anchors in place.

- D. Fire Rated Labels: Place where visible when doors and frames are in open, installed position.

- E. Finish: Comply with requirements of Division 09 Section "Painting" - for primer, including application and compatibility with specified finishes.

1. Interior Units: Chemically treat surfaces and apply one coat of primer.

2. Exterior Units: Hot-dipped galvanized in compliance with ASTM A623. Phosphatize or surface treat after galvanizing, and apply one coat of primer.

3. Primer: Rust-inhibitive, baked, smooth finish.

PART 3 - EXECUTION

3.1 COORDINATION

- A. Coordinate door and frame [and glazed light frames] fabrication and installation with Division 08 Section "Hardware", including electrified hardware [Division 08 Section "Glazing"] [and Division 08 Section "Flush Wood Doors"].

- B. [Coordinate door and frame fabrication with [security/card access] [and] [fire alarm] items in Division 16.]

- C. Coordinate setting of steel frames and anchor placement with wall construction.

3.2 EXAMINATION

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Examine subframes and conditions under which doors and frames are to be installed. Proceed with the work only when subframes and conditions are satisfactory.

3.3 INSTALLATION

A. Install doors and frames [and glazed light frames] in accordance with HMMA 840 and with manufacturer's recommendations and instructions.

B. In addition, install fire-rated doors and frames in accordance with NFPA 80 and the manufacturer's fire test report installation data.

C. Remove and replace doors and frames damaged during delivery, storage, installation and construction.

1. Paste filler repair is not permitted.

2. Touch up scratched paint surfaces after installation.

D. Protection: Protect metal surfaces after installation. At Substantial Completion, doors and frames shall be without indication of use, deterioration, or damage.

END OF SECTION 081113