

CHAPTER 8A

METAL DOORS AND FRAMES

8A-01. SUBMITTALS

a. Shop Drawings

(1) Check for complete submittal, including material type size, finish, assembly, anchorage, connections, etc.

(2) A door schedule should be inclosed.

(3) Check for specials as fire-rating hardware reinforcement, noncombustible insulation as required.

b. Certificates

(1) Does certificate indicate compliance with specification requirements?

(2) You will expect a special certificate of inspection for oversized fire-rated doors and for fire-rated doors without UL Label.

c. Manufacturer*s Instructions

Check for submittal, approval and use at installation. Catalogue cuts may also be required to complete the instructions.

d. Experience Statement

Specifications may require this, especially for cold storage door manufacturer.

8A-02. MATERIALS

a. General

(1) Doors and frames usually have specific gauge or thickness specifications.

(2) Check paragraph 8A-04, INSTALLATION, for items pertaining to specific type door and frame.

(3) Check workmanship of joints and connections.

(4) Check for closed top, finished flush and sealed, on exterior doors.

(5) Are pierced louvers permitted? Louvers must be non-removable from lock side of doors.

(6) Will door frame be set before masonry begins? Tothing masonry for later installation of metal frames is prohibited?

(7) Check for frame anchors in accordance with requirements.

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(8) Are guards provided at the hinge and strike areas to prevent filling with mortar as frames are installed? Is hardware reinforcement built-in doors and frames?

(9) Are special frames provided for the special doors? Soundproof? Lightproof? Lead lined?

b. Finish

(1) Is aluminum finish ?as specified? Mill? Satin? Anodic? Enameled?

(2) Shop coat required on steel? Or is it galvanized (G90) with phosphate treatment?

(3) Abraded surfaces of protective coatings must be recoated when found.

(4) Is factory supplied hardware finish as specified?

c. Glazing

(1) Sliding glass doors require safety glass. Check for etched (permanent) label in lower corner of glass.

(2) Check AAMA 402.9 for required glass thickness.

(3) Both lites of double glazed sliding doors must be safety glass.

(4) Are glazed peepholes required and provided in vestibule doors of cold storage facilities?

(5) Are removable or snap-on glazing beads specified? Does type and removal meet Steel Door Institute specifications?

d. Weather Stripping

(1) Exterior doors require weather stripping.

(2) Check type material. The elastomeric materials are required for door heads and jambs and spring metal is prohibited. Check specification for door bottom weather stripping.

(3) See "cold storage doors" paragraph for gasket seals.

a. Hardware

(1) Check for aluminum or stainless steel hardware on sliding glass doors. This includes compatible fasteners.

(2) Accordion doors required anodized aluminum or chrome plated brass hardware.

(3) Check Chapter 8D for other information on hardware.

f. Screens

(1) Check type screen. Is bronze, aluminum or plastic-coated fibrous glass specified?

(2) Are splines removable and reusable?

- (3) Check frame size and stiffness for compliance.
- (4) Do the door louvers require insect screening?

8A-03. STORAGE

- a. Units should be checked on arrival for damage, missing items, and comparison with samples and shop drawings.
- b. Reorder to replace damaged units.
- c. Use off-ground storage, protected from the weather.
- d. According doors must be stored in a clean and dry space.

8A-04. INSTALLATION

a. General

- (1) Set door frames before erection of surrounding masonry. Tothing-out at missing frames is not permitted.
- (2) Check frame anchorage at floor.
- (3) Leave spreader in place till wall is erected and frame anchored-in.
- (4) Fill hollow metal frames with concrete, mortar or plaster, as appropriate, for stiffening.
- (5) Check for double stud at jambs in frame walls.
- (6) Leave required groove for sealant bead at exterior door frames. Other special doors require sealant.
- (7) Operate units to determine fit.
- (8) Are silencers installed in frames?
- (9) Check fire-rated door frames immediately for required labels.
- (10) Use shop drawings and manufacturer*s instruction to verify installation.

b. Aluminum Combination Doors

- (1) Is a residential quality door being used for heavy traffic? If so, can a change be made now?
- (2) Check frame anchorage and use of compatible fasteners.
- (3) Check fit and adjust as required for weatherproofness.

c. Aluminum Hinged Doors

- (1) These doors are usually glazed with stile and rail construction for entrance ways.
- (2) Be sure to make a timely check on back-priming for concealed surfaces against dissimilar materials.

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(3) Protect finish surfaces from damage, mortar stain, etc., with adequate protection.

(4) Check weather stripping for tight fit.

d. Aluminum Sliding Glass Doors

(1) Safety glass is required.

(2) Is aluminum finish as specified?

(3) Check for back-priming aluminum surfaces in contact with dissimilar materials.

(4) Check for weather stripping at full perimeter and meeting rail. Adjust fit for weatherproofness.

(5) Are fasteners aluminum or stainless steel?

(6) Make a final check with requirements in AAMA publication 402.9. Check for AAMA quality certification label.

a. Steel Hinged Doors

(1) Do the fire-rated doors have required labels?

(2) Do all exterior doors have thresholds and weather stripping?

(3) Check top off exterior doors for sealed and flush cap to prevent water entry into doors.

(4) Make a final check of installation in accordance with the following information:

"The Installation of Commercial Steel Doors and Steel Frames, Insulated Steel Doors in Wood Frames, and Builders Hardware" by the Door and Hardware Institute (DHI).

"Standard Steel Doors and Frames", No. 100-078 by the SDI.

f. Steel Overhead Doors

(1) Are exterior doors insulated? Fully weather stripped? Is insulation required to be non-combustible type? Does it meet "U" value requirement?

(2) These doors are for commercial application and have specific requirements for wind resistance and deflection. Do they comply?

(3) Is guide and track adjustment correct for proper operation.

(4) Are safety and limit switches operating properly?

(5) Is the pilot door insulated? Weather stripped? Does it have safety stop for electric operator?

g. Steel Rolling Doors

(1) These doors have interlocking slats. Are end locks provided as required? Are windlocks provided as required?

(2) Check all features of installation and operation with shop drawings and manufacturer*s instructions.

h. Steel Sliding Doors

(1) Are face panels at least 14 gauge?

(2) Are operating cables and counter weights enclosed to 7 foot height.

(3) Is specified operating force sufficient for manual operation.

(4) Are safety features operable for electric power driven doors?

i. Accordion Doors

(1) Check concealed supporting construction for adequacy. Use shop drawings, catalog cuts and manufacturer*s instructions.

(2) Track sections shall be at least 6 feet long, minimum 14 gage aluminum or 16 gage steel.

(3) Check track alignment, especially at joints.

(4) Metal soffit is required at ceiling when track is recessed type.

(5) Check for ball bearing carrier wheels.

(6) Check panels (door) for label indicating flame spread rating not more than 25.

(7) Check fit at bottom seal when closed.

(8) Check speed, bottom seal retraction and safety shutoff of electrically operated door.

j. Fire-Rated Doors

(1) Check door schedule for location of fire-rated doors.

(2) Check for appropriate label on edge of door and on door frame. Labels shall be permanently affixed.

(3) Remember that each oversized fire-rated door will have a certificate of inspection instead of the label. Check National Fire Protection Association (NFPA) Standards No. 80 and 80A for certification requirements.

(4) Labeled door frames will have non-removable anchors for attachment to wall construction.

(5) Check for positive closure and latching devices. Hardware for fire-rated doors is discussed in Chapter 80.

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k. Cold Storage Doors

(1) Doors shall arrive factory assembled with templates for all attachment.

(2) Check door frame anchorage and wireway for the recessed electric heater cable on freezer doors and exterior doors.

(3) Heaters shall be thermostatically controlled.

(4) Check armor plating for type material, gage and finish.

(5) Check for heavy duty hardware in specified material and finish.

(6) Check door latch for safety release from inside box.

(7) Is a door closer or padlock required?

(8) Are gasket seals effective? Are the number of seals per door as required.

(9) Is door construction vapor tight?

(10) Are sliding door hangers adjustable? Check floor guides for location and adjustment for adequate gasket seal.

(11) Hinge type door shall arrive factory-mounted in its frame for erection in an assembled and rigidly anchored sub-frame.

(12) Vestibule doors shall have reinforcing at doors and jams as required, including specified wheel guards and bumpers.

(13) Check for heavy-duty steel supports for vestibule doors. Check for full closure.

l. Vault Doors

(1) Check for the safety release device on the interior side of the door.

(2) Arms vaults require two security doors.

(3) Check fire resistance classification for compliance.

8A-05. ELECTRIC OPERATORS

a. General

(1) Check submittal for compliance with requirements, as:

(a) Totally enclosed motor,

(b) Required operating mechanism, emergency release, auxiliary operators etc.,

(2) Safety device at bottom edge of door.

b. Installation

- (1) Check for conflicting items in the way of tracks, operating devices and door extension.
- (2) Check weather stripping for tight seal at operator closure limit.
- (3) Does operator perform as required?