

08 120 STORM REFUGE DOORS AND FRAMES

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PART 1 GENERAL**DESCRIPTION:**

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New hollow metal doors to meet storm refuge requirements at locations indicated on plans as "STL" doors.

Related Work, Work/Materials Specified Elsewhere

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- 03 Section for concrete work
- 04 200 Sections for masonry work
- 08 210 Wood doors
- 08 710 Finish hardware
- 09 200 Sections for framing and wallboard

QUALITY ASSURANCE:

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Standards

The applicable portions of the listed documents establish minimum requirements and shall be followed except where modified or exceeded by these drawings or specifications:

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National Fire Protection Association:
NFPA-80 Fire doors and windows

Steel Door Institute:
Door and Frames

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Hardware Locations

Prepare for hardware installation at locations in accordance with Door and Hardware Institute standards unless shown otherwise.

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Test Reports and Compliance

FIRE LABELS: Rated units shall be labeled by Underwriters Laboratories, Inc., Warnock Hersey Int. or Factory Mutual Systems.

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- ▶ All labeled fire doors and frames shall be of a type which has been investigated and tested in accordance with ANSI/UL-10B, ASTM E-152, NFPA 252 or UL-305 and shall provide the degree of fire protection, heat transmission, panic loading capability and/or smoke control as indicated on the label.
- ▶ A physical label shall be applied to the fire door or fire door frame at an authorized facility as evidence of compliance with procedures of the labeling agency.

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PERFORMANCE OF FINISHES: Prime finishes on all doors and frames shall meet the ASTM humidity, salt spray, impact and film adhesion test as required by ANSI A224.1. Shop applied red oxide primers are not acceptable.

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SUBMITTALS:

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Submit in accordance with General Conditions, Supplementary General Conditions and 01 000 series Sections.

Shop drawings showing minimum

- ▶ Materials, construction, anchorage details
- ▶ Hardware preparation
- ▶ Schedule(s) of doors and frames
- 5 ▶ Schedule of window wall frames
- ▶ Detail of splices for units shipped in less than full opening size
- ▶ Fire rating label (when scheduled) date; test agency and code report number

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PART 2 PRODUCTS**BASIC MATERIALS:**

15 Doors shall be manufactured from commercial quality, cold-rolled steel sheets at interior. Hot-dipped galvanized smooth steel at exterior.

Frames shall be manufactured from commercial quality, cold-rolled steel at interior. Hot-dipped galvanized steel at exterior.

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Steel shall conform to ASTM designations A366 or A620 & A658 (uncoated), ASTM A526 or A642 & A525 (hot-dipped galvanized A60)

Steel shall be chemically treated to promote good paint adhesion.

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STORM REFUGE DOORS:

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Shelter entry doors are to be made of commercial quality hot dipped zinc coated steel that complies with ASTM A924 A60. Skins shall be 14 gage, hinge and lock rails to be 14 ga. Vertical edges will join the face sheets by a continuous weld extending the full height of the door. Welds are to be ground, filled to make them invisible and provide a smooth flush surface. Hinge reinforcement to be not less than 7 gage (3/16") plate 1 1/4" x 9" prepared for 4 1/2 x 4 1/2 x .180 hinges. Reinforce tops and bottoms of all doors with a continuous steel channel not less than 16 gage, extending the full width of the door and welded to the face sheet. Doors are to be completely filled with 2.0 density rigid foamed-in-place polyurethane core chemically bonded to all interior surfaces with a minimum insulation value of R10. Door systems shall be tested and must comply with the FEMA 361 Design and Construction Guidance for Community Shelters and have available verifiable third party conformance test results.

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Hardware reinforcements are to be in accordance with the minimum standard gages as listed in SDI-100. Doors shall be mortised, reinforced and function holes provided at the factory in accordance with the hardware schedule and templates provided by the hardware supplier. Through bolt holes, attachment holes, or drilling and tapping for surface hardware, shall be done by others in the field.

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Acceptable manufacturers for FEMA doors are CECO and Curries. Other manufacturers may submit for approval if they have met FEMA requirements, and have been approved for other hollow metal work.

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STORM REFUGE FRAMES:

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Frames shall be 14 gage hot dipped zinc coated steel that complies with ASTM designations A924 A60. All frames are to be assembled so that the face miter seam is "closed and tight." Weld the face seam, grind and dress the weld area smooth. Apply a zinc rich primer over the grinding area,

and finish with a matching prime paint. Frame assembly for both single doors and paired openings shall be tested and must comply with the FEMA 361 Design and Construction Guidance for Community Shelters and have available verifiable third party conformance test results. Hardware reinforcements shall be in accordance with the minimum standard gages as listed in SD1-100.

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MANUFACTURERS:

*Ceco
Curries*

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HOLLOW METAL FIRE RATING LABELS:

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Provide fire rating label on storm refuge doors and frames as scheduled, employing configurations shown. Some configurations may not be available from all manufacturers. Provide units labeled (even if differing manufacturers products are furnished) for the use, time, frame and door condition and single or double as required.

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PART 3 EXECUTION**DOOR AND FRAME INSTALLATION:**

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Doors and frames shall be assembled and installed by Contractor and shall be erected plumb and in true alignment. Preparation for surface applied hardware shall be performed on the job site by Contractor. Frames shall be rigid and securely anchored in-place. Doors shall be installed in a manner to achieve the intended functional operation and appearance. DHI installation guide is applicable.

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Installation of labeled fire doors, frames and hardware, including all operating characteristics, shall be in accordance with NFPA publications No. 80, 101 and/or 105, with procedures of labeling agency where applicable, and with codes of local authorities having jurisdiction.

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Coordinate concealed installation of electrically connected hardware such as strikes, latches, hinges, closer/detectors etc., which may be specified.

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Erect frames plumb (true plane $\pm 1/16"$), jambs straight & vertical (+ $1/16"$ - $1/32"$ in line and across opening), diagonal dimensions across frame face places (4 dimensions within $1/16"$ \pm).

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Erect frames so that the following door clearances will occur (subject to SDI 117 tolerances) - $1/8"$ at head, jambs, abutting door leaves, $3/8"$ to hard surface flooring where no threshold is used, $5/8"$ at carpet and threshold to substrate floor (non-rated), $1/4"$ plus threshold height at fire rated doors.

Coat inside of frames to be grouted in masonry & concrete with asphalt foundation coating, solvent type. Allow to dry before setting.

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END OF SECTION

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