

## SECTION 08100CPPR -- METAL DOORS AND FRAMES

### PART 1 - GENERAL

- 1.01 This Section includes custom and standard assemblies for metal doors and frames.
- 1.02 Reference standards include the American Society for Testing of Materials (ASTM), Door Hardware Institute (DHI), the National Fire Protection Association (NFPA), the Steel Door Institute (SDI), and Underwriters Laboratory (UL).
- 1.03 Complete shop drawings based on accurate and complete field measurements and product data including required certifications will be required for all assemblies and components.
- 1.04 Maneuvering Clearances: In new construction door widths shall always accommodate barrier-free accessibility requirements. Required clearances on both sides of doors vary greatly depending on the operation and type of hardware on the door. The designer shall carefully review the ADA for specific requirements pertaining to clearances.
- 1.05 Clear Width: In new construction doors installed in "standard" frames shall be a minimum of 36" wide to comply with the requirements for accessibility. Non-standard conditions shall be carefully reviewed based on the ADA.
- 1.06 Egress corridor and Stair Fire/Smoke Door Assemblies: To facilitate maintenance and movement of equipment, furnishings, and other items, provide electromechanical/electromagnetic hold-open closers with automatic release interconnected into building fire/smoke alarm system. Avoid use of magnetic holders which may require degaussing and which may hold doors open even when electrical current is disconnected. Closely coordinate electromechanical/electromagnetic hold open devices and closers with hardware, electrical and fire alarm and protection Contract Documents.
- 1.07 RELATED WORK
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|----|---------------|---|
| A. | Section 00100 | General Conditions for as-built samples |
| B. | Section 08400 | Entrances and Storefronts               |
| C. | Section 08460 | Automatic Entrance Doors                |
| D. | Section 08500 | Windows                                 |
| E. | Section 08900 | Curtain Walls                           |

### PART 2 - PRODUCTS

- 2.01 Appropriate gauge shall be reviewed carefully with a Brown University Project Manager prior to specification. The following gauges are required for the identified conditions:

18 gauge door	Heavy Use Locations
16 gauge frame	Heavy Use Locations
16 gauge door	Mechanical Room
14 gauge frame	Mechanical Room

- 2.02 All frames shall be of full weld unit type fabrication. Joints shall be mitered and externally welded. Contact edges shall be closed tight. Welds on exposed surfaces shall be dressed smooth and flush. Knock-Down frame construction will only be considered for interior use with the approval of a Brown University Project Manager.
- 2.03 All doors shall be by the same manufacturer and supplier.
- 2.04 The manufacturer of doors and door assemblies shall be "Steelcraft" unless prior approval is given by the Brown University Project Manager.
- 2.05 Doors and frames shall be prepared to receive hardware. Preparation includes sinkages and cutouts as well as plaster guards for mortise and concealed hardware. Frames shall be mortised, reinforced, drilled and tapped to template to receive mortised hardware. Welding of hinges will not be permitted.
- 2.06 Care shall be taken for proper reinforcement of all concealed and surface applied hardware including hinges, closers, and exit devices.
- 2.07 Proper reinforcements shall be provided for all hardware. Reinforcements, drilling and tapping for mortised applied hardware shall be done at the factory. Surface applied hardware reinforcements shall be installed at the factory, drilling and tapping shall be done in the field by others. Reinforcement for surface applied closer, magnetic hold open and lock shall be 12 gauge steel. No through bolting of closers or magnetic hold opens will be accepted.
- 2.08 Doors shall have a flushed top and inverted bottom 16 gauge channels projection welded at maximum 2 1/2" on centers.
- 2.09 All interior doors shall have 1/2" undercut.
- 2.10 All fire rated door and frame assemblies shall carry the appropriate Underwriters Laboratories' labels on the door and frame. Labels shall be of metal. Anchors shall be shaped and sized required for adjoining type of wall construction, rated by UL for class of door frame anchored.
- 2.11 When doors are required to be thermally insulated, doors shall have a minimum R value of 7.5. Provide full weather-stripping at insulated doors all around including head, jambs and thresholds.

- 2.12 Vision Panels: Glazing in doors with vision panels shall be the appropriate material. At a minimum, all glass, including wire glass, shall be laminated safety glass. In Fire Rated assemblies, glass shall be of the correct size and material for the rating. Glass shall pass high impact and thermal shock tests.
- 2.13 Automatic entrance door systems shall have LCN closer 4010, 4030, 4110 or 4130 unless otherwise approved by a Brown University Project Manager. Remote pneumatic air compressors shall be LCN.
- 2.14 All doors shall have solid blocking for all hardware including emergency exit devices.

### PART 3 - EXECUTION

- 3.01 Coordinate with masonry and wallboard wall construction for anchor placement.
- 3.02 Continuous solid wood blocking shall be provided around all frames.

END OF SECTION