



**Office of Capital Planning
and Project Management**

DIVISION 8

OPENINGS

This Article on Codes, Regulation and Standards shall apply
to all Divisions of the Building Standards

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- Exterior doors and frames are to be galvanized.
- Hospital stops should be used when health issues are present.
- All door frames are to be welded.
- Door labels are not to be painted.
- Hollow Metal Door:
 1. Standard Type: A (3 hour) Fire Label (UL Approved); B (1-1/2 hour) Fire Label (UL Approved); Non-Rated.
 - a) 1-3/4 inch thick, seamless hollow construction.
 - b) 18 gauge steel face sheets.
 - c) Beveled edges.
 - d) Polystyrene Insulation (Honeycomb for fire rated doors).
 - e) All spot welds will be filled and ground smooth.
 - f) 7 gauge (3/16 inch) thick by 1 1/2 inches wide by 6 inches long hinge and pivot reinforcements, with additional reinforcement welded to door face.
 - g) 12 gauge lock hardware reinforcements.
 - h) 14 gauge top and bottom reinforcement channels
 - i) All surfaces to be painted (primed - gray) for rust resistance.
 - j) Finished Sizes of Doors (Clearances): Jambs and Head - 1/8 inch; Meeting Edges, Pairs of Doors - 1/8 inch; Bottoms - 3/8 inch (no threshold or carpet), 1/4 inch (at threshold and 1/4 inch to top of decorative floor finish, except carpet), and 3/4 inch at areas to receive carpet.
 2. Type 1: A (3 hour) Fire Label (UL Approved); B (1-1/2 hour) Fire Label (UL Approved); Non-Rated. To match standard type door with these additional requirements.
 - a) 18 gauge vertical stiffeners, 8 inches on center, spot welded to face sheet every 6 inches.
 3. Type 2: A (3 hour) Fire Label (UL Approved); B (1-1/2 hour) Fire Label (UL Approved); Non-Rated. To match standard type door with these additional requirements.
 - a) 16 gauge steel face sheets
 - b) 18 gauge vertical stiffeners, 8 inches on center, spot welded to face sheet every 6 inches.
- Hollow Metal Frames:
 1. 16 gauge steel full welded unit construction with corner mitered, reinforced, continuously welded full depth and width of frame (wider than 4'-0", 14 gauge steel)
 2. All welds are to be ground smooth; Frame is to be prime painted (gray) on all surfaces for rust resistance

3. Anchors are to correspond with wall type; Frames 1'-0" to 3'-0" are to have 2 anchoring points (top and bottom); Frames 3'-0" to 7'-0" are to have 3 anchoring points (bottom, middle and top) on both door jambs; All frames taller than 7'-2" to be custom design by A/E with approval from FM. No reveal in basement and mechanical areas. All frames in masonry walls to fit modular openings.
 4. All anchors to be 14 gauge; bottom floor anchors to be attached by masonry screws.
- Door Hardware: Kickplate required on all doors.
 1. 18 gauge stainless steel kickplate, half door (non-rated door only).
 2. 8 gauge stainless steel kickplate, 14" x door width (less 1").
 - At the Owner's discretion, any door can be selected for physical destruction to validate design criteria. Owner to replace if door meets design criteria.

END OF SECTION 08 11 00

SECTION 08 14 16 - FLUSH WOOD DOORS

- Book match veneers on double doors.
- Provide a lifetime guarantee on all wood doors.
- Provide blocking for all hardware.
- Wood doors:
 1. Flush Door - Stave Lumber Core (SLC7 Bonded)
 - a. Thickness - 1-3/4".
 - b. Core - Low density, one species wood blocks glued together with Type II glue (21-27 PC).
 - c. Veneer - Plain sliced red oak, pre-manufactured 3 Ply 1/8" plywood (veneer min. 1/50" thick).
 - d. Styles - 1-3/8" minimum matching hardwood with veneer.
 - e. Rails - 1-1/8" minimum, with matching hardwood with veneer.
 - f. Standard - AWI Section 1300; ANSI/NWWDA I.S.1-A.
 - g. Warranty - One (1) year replacement.
 - h. Blocking - All necessary hardwood blocking for closer, lock, and hinges.
 - i. Machining - Pre-fit, bevel, lock and hinge mortise.

END OF SECTION 08 14 16

SECTION 08 31 00 - ACCESS DOORS AND PANELS

- Access doors and frames shall be metal.
- Access door shall be 10"x10" minimum and lockable.

END OF SECTION 08 31 00

SECTION 08 31 13.53 - FIRE-RATED' SECURITY ACCESS DOORS AND FRAMES

- Subject to compliance with requirements, provide products by one of the preferred manufacturers:
 1. Diebold, Incorporated.
 2. Mosler Inc.
 3. Schwab Corporation.
- Combination Lock: UL 768, Group 3-tumbler, mechanical type, capable of not less than one million possible combinations; equipped with UL 140 relocking device that automatically locks bolt when lock is subjected to mechanical attack.

END OF SECTION 08 31 00 13.53

SECTION 08 36 13 - SECTIONAL DOORS

- Overhead doors shall be "high lift" type wherever possible.
- Track shall be 3" deep and 11 gauge thickness.
- Provide take-up reel and pneumatic safety edge for electrically operated doors.
- Sectional overhead doors are to be insulated and gasketed to impede all infiltration.

END OF SECTION - 08 36 13

SECTION 08 41 13 - ALUMINUM FRAMED ENTRANCES AND STOREFRONTS

- Permanent Entryway Systems:
Roll out mats, grills or grates are to be installed. In the case of grills and grates, slotted systems must be included to allow for cleaning.

- The door thickness is to be 1-3/4". Right and left strikes, top and intermediate rails are to be 6" wide. The bottom rail is to be 10" wide. Provide reinforcement for all hardware, including closures.
- Bottom rail should be maximum 10" (ADA).
- Use tie rod construction.
- Minimum 1/8" (0.98-0.125") wall thickness for door.
- Use continuous gear hinges.
- Solid tube door jamb with reinforcing at the strike.
- Refer to Section 08 70 00 for door hardware.

END OF SECTION 08 41 13

SECTION 08 41 26 - ALL-GLASS ENTRANCES AND STOREFRONTS

- Preferred for interior use only.

END OF SECTION 08 41 26

SECTION 08 42 29.23 - SLIDING AUTOMATIC ENTRANCES

- Door (construction): Tubular frame members (clear anodized aluminum) fabricated with mechanical joints using heavy duty inserted reinforcing plates and concealed tie-rods or j-bolts.
 1. 4" mid rail.
 2. 10" bottom rail.
 3. 6-1/2" top rail.
 4. Glazing - safety laminated 1/4" clear.
- Door Operator: Use product specification from The Stanley Works or equal (AAADM and ADA compliant).

END OF SECTION 08 42 29.23

SECTION 08 42 29.33 - SWINGING AUTOMATIC ENTRANCES

- Door (construction): Tubular frame members (clear anodized aluminum) fabricated with mechanical joints using heavy duty inserted reinforcing plates and concealed tie-rods or j-bolts.
 1. 4" mid rail.
 2. 10" bottom rail.
 3. 6-1/2" top rail.
 4. Glazing - safety laminated 1/4" clear.
- Door Operator: Use product specification from The Stanley Works or equal (AAADM and ADA compliant).

END OF SECTION 08 42 29.33

SECTION 08 42 33 REVOLVING DOOR ENTRANCES

- Units to manually operate unless ADA required.
- Manufacturer standard sized per design requirements.
- Locking devices (2 each per opening) should be similar to: CRANE CRD 12 or International Steel #3800550.
- Use same finish as building hardware finish.
- Door construction and operator: Use product specification Besam Automated Entrance Systems or equal (AAADM and ADA compliant).

END OF SECTION 08 42 33

SECTION 08 51 13 - ALUMINUM WINDOWS

- Solid aluminum windows are required.
- Aluminum clad wood windows are not allowed.
- All windows shall be double glazed.

END OF SECTION 08 51 13

SECTION 08 70 00 - HARDWARE

- Refer to each numbered building file (request from Project Manager) and the University's Facilities Management Lockshop.
- Hardware:
 1. Locksets
 - a. Locksets shall be provided with a lever handle design as required by code.
 - b. Inside lever shall retract latchbolt, and also deadbolt if so equipped.
 - c. Locksets shall be provided with an auxiliary latch to deadlock latchbolt.
 - d. Locksets provided shall have a 3/4" latchbolt.
 - e. Locksets provided with a deadbolt shall have a 1" throw bolt.
 - f. Locksets provided for doors into stairs or entrances to vehicular traffic areas, or other hazardous areas, for example. Elevator pits, electrical switch rooms, shall have a change in texture either by knurling or applying an abrasive finish to the lever.
 - g. Locksets provided for office doors shall have stops in the face of the lock, or a turn button on the inside lever, to lock and unlock outside lever. (entrance function)
 - h. Locksets provided for laboratories and classrooms should not have stops in the face of the lock. Latch bolt shall be operated by levers from either side of the door except when outside lever is locked by a key in the outside cylinder. (classroom function)
 - i. Locks provided for public washrooms shall be similar to the Yale #314 ¼ ST. A double cylinder deadbolt with a thumb turn on the inside of the room that will allow the deadbolt to be retracted, but not thrown. Push plates and pulls are also required.
 - j. Locks provided for private washrooms shall be similar to the Yale 8802 FL series.
 - k. Lever centerline shall be 39 5/16" off of finished floor.
 - l. Provide curved lipped strikes for all mortise locksets.
 2. Panic Bars/Exit Devices:
 - a. Exit devices similar to the von Duprin #99 series shall be provided on exterior doors.
 - b. Function of the device shall be determined by the UIC project coordinator according to the planned usage of the opening. E.g., exit only, night latch, electric latch retraction, etc.

- c. Outside trim of exit devices shall be provided with lever handles similar to the von Duprin #996 with O6 lever for the #99 series device.

3. Electric Strikes:

- a. Provide electric strikes similar to the Folger Adams #712-75 24 DC n.f.s. for metal jamb applications when a mortise lockset is to be specified.
- b. Where a pair of doors with a mullion are called for, use of an electric strike similar to the Folger Adams #310-4 24 VDC n.f.s. is called for.

5. Shear Locks:

- a. Provide shear locks with no less than 1,000 lbs. Holding force similar to the von Duprin #700 series.
- b. Provide a remote light kit to indicate the status of the shear locking system.

6. Flush Bolts:

- a. Provide flush bolts similar to Ives FB458.
- b. Where automatic flush bolts are required, provide flush bolts similar to Ives FB-31 P.

7. Coordinators:

- a. Where one door in a pair of doors needs to be closed first, provide door coordinators similar to the Glynn-Johnson COR series.
- b. If, because of the lack of space due to door closer arms or vertical rod exit devices, the COR series coordinator cannot be used, provide a coordinator similar to the Glynn-Johnson COR65 or COR85.

8. Door Closers:

- a. Door closers concealed in the floor should not be used for exterior doors exposed directly to the weather. Surface mounted door closers similar to the LCN 4041 regular arm series are preferred. Under no condition should door closers be mounted on the outside of exterior doors. Do not use parallel arm door closers on exterior doors.
- b. Door closers concealed in the floor similar to the dor-o-matic 2500-2600 series may be used for exterior and vestibule doors protected from the weather.
- c. For interior doors, surface mounted door closers similar to the LCN 4041DEL regular arm series are preferred. Use of non-handed and size

adjustable closers are preferred. Do not use corner brackets or drop plates unless no other means of attachment is available.

- d. Door closers similar to LCN 4630 and 4640 series auto-equalizers, electrically powered shall be used for automatic operation on dedicated handicap entries.
- e. Use hold open arms only where it is necessary to keep the door opened and only when they are allowed by code. Use of electro-magnetic holders for fire doors that can be tied to the fire alarm system similar to the Rixson 900 series 120VAC are preferred.
- f. Door closers should be provided on doors to exterior, stairs, toilet rooms, kitchens, dining rooms, lecture rooms, and other doors to public areas, and where control is required by fire, safety and building codes. Avoid unnecessary use of door closers. All metal bucks and metal doors shall be reinforced for surface mounted door closers, weather closers are specified or not.
- g. Door closers shall be mounted on the secured side of space.

9. Electro-Magnetic Holders

- a. Provide electro-magnetic holders similar to the Rixson 900 series. Provide holders only when required by code or requested by the using agency and allowed by code.
- b. Provide manual switch in system of fire door holders to permit closing of all doors from one point without sounding alarm.

10. Kick Plates

- a. Provide stainless steel kick plates on doors that are subject to high frequency usage.
- b. Generally doors to exterior, stairs, toilet rooms, storage, receiving, library, and kitchen and dining rooms should have kick plates.
- c. Kick plates on one side of door are sufficient unless traffic flow is great enough to warrant use on other side of door also.
- d. Provide kick plates on both sides of a double acting door.

11. Push/Pull Plates and Latches

- a. Provide push plates similar to the Rockwood 70RC series.
- b. Provide push / pulls on toilet doors similar to the Rockwood 107 x 70C x 70C series.
- c. Provide back plates behind all pulls.
- d. Provide hospital push / pull latches similar to Glynn-Johnson HL-6-5" BL.

12. Hinges/Pivots

- a. Provide continuous gear type hinges similar to Roton 780HD series on exterior doors.
- b. Provide stainless steel, concealed ball bearing hinges with non-removable pins on exterior doors if a continuous gear type hinge is not used.
- c. Brass hinges shall never be used on fire rated or labeled doors.
- d. The standard hinge size shall be 4-1/2 x 4-1/2.
On doors over thigh or 3' wide, or with very heavy traffic flow provide 2 pairs of 4 1/2 x 4 1/2 hinges.
- e. Use of electric power transfer hinges similar to Stanley CEFBB179-56 are preferred over the use of door cords.
- f. Where power must be transferred on openings with pivots, provide an electric transfer pivot similar to the Glynn-Johnson EPT-3P series.

12. Door Bumpers/Stops

- a. Provide heavy duty cast wall bumpers similar to the Ives WS-402-CVX.
- b. Provide heavy duty cast dome type floor stops similar to the Ives FX-436.
- c. Where wall or floor stops cannot be used on interior doors, provide a holder similar to the Glynn-Johnson GJ100 series for concealed application. Provide a holder similar to the Glynn-Johnson GJ900 series for surface mounted holders.

13. Rubber Silencers/Muters

- a. On metal door frames provide a minimum of 3 resilient rubber silencers.

14. Thresholds/Sweeps

- a. Maximum threshold height shall be 1/2" as required by code and in keeping with ADA.
- b. All exterior door openings shall be properly weatherized to control infiltration of outside elements.

15. Finishes

- a. All finish hardware shall match existing hardware in the surrounding area of the project.
- b. If in doubt, consult the UIC project coordinator to determine the correct finish.

16. Keying

- a. Medeco biaxial lock cylinders are an approved sole source item for the UIC campus. Supplier to meet with owner to determine requirements and obtain final instructions. Medeco shall deliver lock cylinders and key blanks to owner for keying and installation.
- b. Keying and installation of all lock cylinders will be done by the UIC Facilities Management Lockshop.
Provide 3 key blanks per lock cylinder.
- c. All lock cylinders shall be Medeco biaxial cylinders with patented keyway specified by owner.
- d. Owner will provide a letter of authorization to Medeco Security Locks, Inc. for supplier to purchase material that will be drop shipped to owner.

17. Security/Control

- a. Construction keys or key blanks must be kept and/or used with great control while project is underway.
- b. All key blanks supplied for the project shall be turned over to the UIC physical plant lockshop along with a letter of transmittal.
- c. In many cases, temporary keys may be needed to access mechanical areas near the project. These keys are issued by the lockshop to the UIC project coordinator for distribution and must be returned upon completion of the project or when requested by the UIC project coordinator.
- d. All keys for switches, elevators, alarms, panic devices, access panels, lockers, desks, drawers, etc. Shall be turned over to the UIC physical plant lockshop by the UIC project coordinator with a description of their location and use along with a letter of transmittal.

18. Templates/Maintenance Manuals

- a. Upon completion of the project, all templates, instruction booklets and preventative maintenance manuals will be turned over to the physical plant department by the UIC project coordinator along with a letter of transmittal.

19. Walk-Thru/Punch List

- a. Upon completion of the project, a walk thru will take place with physical plant personnel to develop, if necessary, a punch list of items that need to be addressed before the UIC will consider the project finished.

- b. For finish hardware, personnel from the carpenter shop and the lockshop will be included in this walk thru.

18. Follow-Up/Completion

- a. All items listed in the punch list shall be addressed in a timely fashion.
- b. No job will be considered finished as long as punch list items exist.
- c. All items left over after completion of project (e.g., closers, locks, levers, rosettes, bumpers, plates, screws, etc.) shall be turned over to the physical plant department by the UIC project coordinator along with a letter of transmittal.

END OF SECTION 08 70 00

- Materials

SECTION 08 80 00 - GLAZING

1. Wire Glass: Use wire glass wherever fire resistance or vandalism is a factor. Diamond mesh is preferred.
2. Safety Glass: Use safety glass when required by the glazing act and other applicable codes.
3. Obscure Glass:
 - a. Obscure glass or diffusing glass shall be used in all toilet room windows. Verify with the University whether obscure glass should also be used in doors to offices, laboratories, and classrooms
 - b. Obscure glass shall be selected from standard patterns available from several manufacturers so that replacements may be made to match remaining materials.
4. Float Glass: Type A Glazing: FS DD-G-45; clear, double strength, 1/8" thick.
5. Insulating Glass: Hermetically sealed double glazed units: Sigma #65-7-2; outer and inner panes of 1/4" thickness minimum glass, float quality; minimum overall thickness 1", low-E and argon filled.

END OF SECTION 08 80 00

SECTION 08 90 00 - LOUVERS AND VENTS

- All exterior louvers to have insect screens.
- Architectural and mechanical louvers shall be specified in [Section 23 37 00](#) (Air Outlets and Inlets), and placed in mechanical contractor's contract.

END OF SECTION 08 90 00

This section of the Building Standards establishes minimum requirements only.
It should not be used as a complete specification