



Division 08 Openings

08 05 00 Common Work Results for Openings

08 05 10 General Requirements for Openings

1. Fenestration for all UW Madison facilities shall comply with all of the provisions of the latest version of the Division of Facilities Development & Management (DFDM) *Design Requirements and Guidelines for Fenestration in Building Exterior Enclosures*, which is available from the DFDM website.
2. References within the DFDM Guidelines regarding the DFDM Project Manager shall apply to the UW-Madison Project Manager on UW-Madison Managed Projects.
3. Project Specifications shall use as their basis all appropriate sections of the latest edition of the DFDM Master Specifications.
4. Deviations from DFDM's Minimum Design Guidelines or the DFDM Master Specification sections shall be made only upon approval from the UW-Madison Project Manager.
5. The Guidelines for Planning and Design of UW-Madison Facilities shall take precedence over DFDM Guidelines, but the A/E shall discuss all conflicts within the guidelines and specifications with the UW-Madison Project Manager.

08 10 00 Doors and Frames

08 11 00 Metal Doors and Frames

1. Contractors shall remove all rating labels from doors/frames that are not installed in rated wall assemblies. If the wall is not rated, the door/frame shall appear as non-rated.
2. When applicable, exterior and interior pairs of doors shall have a removable mullion.
3. All metal frames and doors must be reinforced for door closers.
4. All interior metal frames shall have face trim 2" in width except where matching existing.
5. All metal frames shall be 16 GA in thickness. Exception: 3-sided frames > 48" to be 14 GA minimum. Exterior metal frames shall be 14 GA galvanized.

08 14 00 Wood Doors

1. Wood doors shall be of standard manufactured size, either 3'-0" x 6'-8" or 3'-0" x 7'-0". Doors 3'-0" x 6'-8" are recommended only when matching existing for a remodel or addition. Exceptions may occur based on design considerations.
2. Wood doors shall be of a common species, with matched cut, throughout the project.
3. All wood doors shall have ¾" solid, species-matched wood edges the full length of the door.



4. Wood doors shall not be installed within the vicinity of loading docks where heavy cart action or pallet jack usage occurs.
5. When installing pairs of wood doors, all wood door corners using corner mount flush bolt(s) shall be equipped with sleeve reinforcement (flush bolt end caps).

08 30 00 Specialty Doors and Frames

08 31 00 Access Doors and Panels

1. The campus standard for access control is the Andover Continuum System (Schneider Electric).
2. Refer to *Division 28 11 05 Electronic Access Control for New Construction* and *Division 08 71 13 Automatic Door Openers* for the typical location of proximity card readers for added convenience and security.
3. Prior to 35% review documents, a coordination meeting with the A/E, campus police department, FP&M and Electric Shop shall occur. The UW-Madison Electric Shop shall design and provide the primary components for the access control system.
4. The contractor shall pull all the cables/wires to the IDF.
5. The Physical Plant shall purchase all the net controllers and install them in the electrical closets.
6. The contractor shall purchase and install all of the card readers and/or rough-ins for future card readers.

08 32 00 Sliding Glass Doors

Sliding glass doors shall be supported on top and have a floor track.

08 33 00 Coiling Doors

It is desired that an airlock be provided between the loading dock (where an overhead coiling door is used) and the main building.

08 36 00 Sectional Doors

It is desired that an airlock be provided between the loading dock (where an overhead sectional door is used) and the main building.

08 70 00 Hardware

08 71 00 Door Hardware

Prior to the start of hardware installation, the contractor shall schedule and conduct pre-installation meeting with the hardware supplier, and the lock, exit device, and door closer manufacturers' representative(s). The installer and related trades shall coordinate materials and techniques, and sequence complex hardware items and systems installation. Proper and correct installation and adjustment of hardware shall be reviewed, and criteria for punch list review shall be established. A coordination meeting shall occur at least one week prior to the commencement of hardware installation. Written documentation of the date and attendees/participants shall be provided to the architect and the UW-Madison Project Manager.



08 71 01 Locks

1. All mortise locksets shall be able to be re-handed in the field without removing the cover.
2. All locksets shall be provided with a lever handle and mounted at the appropriate height per ADA standards.
3. Escutcheon trim is strongly preferred for flexibility of future hardware changes. Sectional trim is acceptable when approved by the UW-Madison Project Manager.
4. Standard finishes for the campus include US26D (626) and US10 (612). Stainless steel finish US32D (630) shall be specified for high moisture or caustic areas.
5. All lock cylinders and keying shall be provided by the UW-Madison Lockshop along with the cost of re-keying. The installation of the lock cylinders shall be the responsibility of the general contractor.
6. Latch guards or astragals on all appropriate exterior doors shall be provided. This creates additional safety against doors being pried open.
7. Specifications state that the General Contractor shall be responsible for signing out keys and shall be financially responsible if keys are not returned.
8. Electric locksets and exit devices shall be preferred over electric strikes. Electric locks afford better security than electric strikes and using this type of hardware allows for greater flexibility when making functional changes to openings in the future while avoiding major reworking of the opening.
9. Where deadbolts must be used, specify a mortise version with appropriate pull(s).

08 71 02 Hinges

1. Continuous hinges shall be used on exterior doors.
2. Non-removable hinge pins shall be used on lockable out-swinging doors.
3. Aluminum doors shall have continuous hinges.
4. Heavy duty ball bearing or continuous hinges shall be used on openings with high traffic.
5. Standard ball bearing hinges shall be used on interior and moderately used openings.

08 71 04 Fire Door Hold Open Devices

Hold-open devices shall be 12 or 24 volt, hard wired.

08 71 13 Automatic Door Operators

1. Operators shall be electro-mechanical hard wired (not wireless). For certain applications where hard wired is not feasible (for example, glass doors), then wireless shall be acceptable. The campus standards are Stanley Magic Force (exterior), Stanley Magic Access (interior), and LCN Senior Swing. Each shall have a push-plate and radio receiver.



2. Push plates shall be located per accessibility details L-1 and L-2 included at the end of this section, and shall not be placed on a mullion. Bollard mounted buttons needs to be approved by UW-Madison Facilities Planning and Management. The operator shall be fitted with a lockout device that allows exterior push plate/radio controls to be turned off, leaving the interior switch mechanism operable. The operator shall be compatible with electronic security devices.
3. Automatic Door Opener Locations: For all new buildings, the accessible main entrance on each grade level shall have at least one door with an automatic door opener. Actuators shall be 48" from any perpendicular obstruction or door frame to allow sufficient clear floor space to open the door and installed per ADA standards.
4. A sign that identifies automatic doors shall include the international accessibility symbol. Standard adhesive backed signs shall be installed on the power assist door surface at 53 inches on center A.F.F., 5 inches from door hinge side. (Note: this placement might be door specific and should be verified by UW-Madison FP&M). See accessibility detail L-1 at the end of this section.
5. For existing buildings, the push button for the door opener shall be installed in accordance with ADA guidelines.
6. Push Button Heights/Proximity Card Readers and Bollard Locations: If a proximity card reader is needed, it shall be 32 inches on center A.F.F. The card reader needs to be placed in close proximity and in front of the operator button. This will allow the card to be swiped first and then the button can be pushed for accessibility. If the site has a bollard with both a push button and a proximity card reader, the mounting height shall be 32 inches on center A.F.F. less Collar (LC)

08 71 20 Institutional Door Hardware Standards

1. All lock cylinders and keying shall be provided by the UW-Madison locksmith shop along with the cost of keying.
2. Interchangeable Construction Cores: For all key-locked doors in new construction, the contractor shall provide the lock cylinder with a full-size interchangeable construction core. These cores are temporary for the construction period with the contractor in control of keying. These temporary construction cores are for securing the facility, elevator equipment rooms, IT rooms, high voltage rooms, and other spaces as required. At the end of construction, the temporary cores are replaced with the permanent cores. The core replacement shall be the responsibility of the contractor. Temporary construction cylinders/cores shall remain supplier's property. Supplier shall furnish construction keys and construction control keys as needed to UW-Madison Lock Shop, All interchangeable cores shall be furnished as follows:
 - 2.1. Zero bitted key blanks less collar.
 - 2.2. The cores shall be keyed by the UW-Madison Lock Shop
 - 2.3. All permanent cores to be purchased by UW-Madison.
 - 2.4. All permanent cores shall be installed by the contractor.
 - 2.5. Construction keying: Furnish temporary keyed alike cylinders/cores.
3. Exit Devices: All Exit Devices shall be Sargent 80 series or Von Duprin 99 series.
4. Removable Mullion: Shall match exit device manufacturer. Keyed mullions are preferred.



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5. Door Closers: All closers shall be LCN 4040XP or Sargent 281 with plastic covers .
 6. Power Operators: All power operators shall be Stanley Magic Force (exterior), Stanley Magic Access (interior), or LCN Senior Swing.
 7. Hardware Installation: A pre-installation meeting which includes the Manufacturer's representatives, DFDM construction rep and the UW-Madison Lock Shop shall be coordinated by the contractor.
 8. All electric power transfers shall be EPT, not thru-wire hinges. EPT must have a minimum of ten 24AWG wires with max. rating of 24V dc, 1 amp.
 9. At multi-stall restrooms, closers shall have hold open ability. Single use toilet rooms shall have occupancy indicators on privacy locks.



Door Hardware – Approved Manufacturers (in alphabetical order):

<u>Description</u>	<u>Manufacturer</u>	<u>Model/Series</u>
Hanging Device:		
Butt Hinges	Ives	5BB1, 5BB1HW (stainless steel at wet/corrosive areas) 3CB1, 3SP1
	McKinney	TA2714, T4A3786 (TA2314, T4A3386 at wet/corrosive) TA314, 1502
Continuous Hinges	Ives	112HD, 224HD EPT option (power transfer prep)
	Pemko	FM-SLF-HD1, FMHD1 PT option (power transfer prep)
Pin & Barrel	Ives	700, 702, 705
Continuous Hinges	Markar	FM300, FS-302, HG305
Securing Devices:		
Cylinders by GC		Furnished and keyed by UW-Madison Locksmith, installed
Mortise Lock *	Sargent	8200 Series
	Schlage	L9000 Series *Escutcheon trim preferred, owner to determine lever style/design.
Cylindrical Lock	Sargent	10 Line
	Schlage	ND Series
Exit Device	Sargent	80 Series 19- prefix = less Lexan touch pad 59- prefix = delayed egress (use with caution) 56- prefix = electric latch retraction 53- prefix = latchbolt monitoring 55- prefix = request to exit in push bar
	Von Duprin	99 Series -CX = delayed egress (use with caution) -QEL = electric latch retraction -LX = latchbolt monitoring -RX = request to exit in push bar
Removable Mullion	Sargent or Von Duprin	Match manufacturer of exit devices
Electric Strike * *use with caution	HES	1500/1600 (locksets) 9400/9500/9600 (rim exits)
	Von Duprin	6210/6211 (locksets) 6300/6400 (rim exits)
Flush Bolts	Ives	FB358/458 (manual)
		FB31P (automatic)



		FB41P (constant latching) DP1 (dustproof strike)
	Rockwood	555/557 (manual) 2842 (automatic) 2942 (constant latching) 570 (dustproof strike)
Magnetic Locks (use with extreme caution)	Schlage or Securitron	Approved only as required
Closing Devices:		
Mechanical Door Closers	LCN	4040XP Series, EDA arms, CUSH/SCUSH for push side
	Sargent	281 Series, PD arms, PS/CPS for push side
Low Energy Operator	LCN	Senior Swing 9500 Series
	Stanley	Magic Force – Exterior Magic Access – Interior
Stops and Holders:		
Overhead Stops and Holders	Glynn-Johnson, Hager, or Rixson	*Stop arm closers preferred. Overhead stops to be used only where necessary.
Wall and Floor Stops	Hager, Ives, or Rockwood	
Other Hardware:		
Coordinator	Ives	COR x FL
	Rockwood	2600 Series
Push/Pull Plate	Ives	8200, 8303
	Rockwood	70C, 111 x 70B
Kick/Armor Plate	Ives	8400
	Rockwood	K1050
Power Transfer Device	Securitron	EL-CEPT
	Von Duprin	EPT-10
Power Supply* *coordinate with GC & Electrical Contractor	Securitron	BPS Series
	Von Duprin	914 with appropriate card
Magnetic Door Holder	LCN	SEM Series
	Rixson	990 Series
Threshold, Weather-Strip, Sweeps, etc.	National Guard, Pemko, or Reese	*No vinyl seals allowed.



8 71 30 Door Hardware Installation

To ensure proper installation and adjustment of hardware items, the architect shall include the following verbiage within the Finish Hardware Section of the project specifications:

Prior to the start of hardware installation, the contractor shall schedule and conduct a pre-installation meeting with the hardware supplier, lock, exit device, and door closer manufacturers' representative(s), installer, owner's representative and related trades, to coordinate materials and techniques and to sequence complex hardware items and system installation. Proper and correct installation and adjustment of hardware shall be reviewed and the criteria for the punch list review shall be established. All parties shall convene at least one week prior to commencement of hardware installation. Written documentation of the date and attendees/participants shall be provided to the architect and owner for record.

8 71 40 Parking Structure Locking Requirements

1. All doors and locks shall meet the criteria set up by UW-Madison Transportation Services before final completion of the ramp. UW-Madison Transportation Services can supply contractor with a spare key for them to make appropriate locks.
2. All stairwell doors shall have a blank cylinder so they can't be locked.
3. All snow chutes shall have a master lock padlock with key #2027.
4. All gated areas in stairwells shall have a master lock padlock with key #3221.
5. All restrooms and store rooms shall be keyed with a Schlage A7S key.
6. All electrical rooms shall be keyed with a Schlage UT key.
7. Gate equipment shall have an APD 1 key.

08 80 00 Glazing

1. Clear, low-e, insulated window units shall be preferred by the University. The context of specific project shall be taken into consideration with the final selection of glass types.
2. Mock-ups for all exterior building materials, including all window, glazing, and spandrel types shall be required.
3. If glazing or door lights are provided for secured areas (along public hallways) laminated glass shall be used. Pattern glass can be used when necessary for privacy.
4. Door lights shall be acceptable in public and shared spaces such as conference rooms, lounges, etc.
5. Where operable windows are allowed, hoppers, awning or casement windows shall be preferred. A connection between these windows and the air handling system shall be provided for greater energy efficiency.
6. Any windows adjacent to green roofs shall have low glare glass to prevent intense sun light from reflecting off the windows and killing the green roof plant material.