

Table of Contents

Introduction.....	2
Revision History.....	2
Consultant Compliance Checklist.....	3
1.0 General Guidelines.....	4
1.1 Closures	
1.2 Exit Devices	
1.3 Hinges	
1.4 Locksets and Door Handles	
1.5 Electric Locking	
1.6 Finishes	
1.7 Automatic Door Operators	
1.8 Exterior Doors	
1.9 Interior Doors	
1.10 Installation Requirements	
2.0 Acceptable Manufacturers.....	6
2.1 Cylinders and Keying	
2.2 Locksets	
2.3 Door Closures	
2.4 Exist Devices	
2.5 Electric Strikes	
2.6 Automatic Door Operators (exterior/vestibule/high frequency use oversized doors)	
2.7 Overhead Door Stops (exterior/vestibule/high frequency use)	
2.8 Hinges	
2.9 Flush Bolts	
2.10 Surface Bolts (manual)	
2.11 Door Seals, Door Bottoms & Sweeps, Astragals, and Thresholds	
2.12 Door pulls, Push Bars, Push & Kick Plates, Floor Stops	

Introduction

Dalhousie University Design Guidelines provide assistance to consultants during the planning, and design phases of the University’s expansion and renovations. The Guidelines do not relieve a consultant from any professional responsibility, duty or due diligence to design elegant, functional, efficient and low maintenance facilities.

Facility owners have preferred materials and requirements that make the task of maintaining facilities less costly. Dalhousie understands this is a balance between capital and operating cost. The Guidelines are not intended to be the only acceptable solution. Dalhousie expects consultants to bring modern and innovative ideas, materials and methods to the University. If these Guidelines do not allow these new ideas then the consultant is to make a request in writing to the Dalhousie Project Manager for an exception to the guidelines. Necessary reasoning and or calculations shall accompany the request. The exception request will be reviewed internally and either rejected or accepted. The consultant will document this rational and/or justification for each exception in the Basis of Design. The University Guidelines may be updated subsequently.

These documents provide design guidelines only, and are not intended for use, in whole or in part, as a specification. Do not copy the guidelines verbatim in specifications or in notes on drawings. Refer questions and comments regarding the content and use of these documents to the Dalhousie University Project Manager. The Guidelines are intended to be read in conjunction with the local codes and regulations, and in no way are to be considered as a code replacement. The codes and regulations represent the minimum acceptable standard. Where the technical design requirements differ from the building codes and other applicable codes and standards, the more stringent of the codes shall be applied.

Maintaining the Standards/Guidelines

These Design Guidelines are created and maintained by Dalhousie’s Facilities Management Department. Any enquiries about the Guidelines should be directed to Facilities Management, Director of Projects, Central Services Building. Dalhousie encourages design specialist and other interested parties to provide their input and suggestions based on their experience.

Revision History

REVISION NUMBER	DATE PUBLISHED
1	Jan 23, 2013
02b	August 8, 2019
3	September 21, 2020
4	November 8, 2023

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Consultant Compliance Checklist

		C	NC	NA
1.0	General Guidelines			
1.1	Closures			
1.2	Exit Devices			
1.3	Hinges			
1.4	Locksets and Door Handles			
1.5	Electric Locking			
1.6	Finishes			
1.7	Automatic Door Operators			
1.8	Exterior Doors			
1.9	Interior Doors			
1.10	Installation Requirements			
2.0	Acceptable Manufacturers			
2.1	Cylinders and Keying			
2.2	Locksets			
2.3	Door Closures			
2.4	Exit Devices			
2.5	Electric Strikes			
2.6	Automatic Door Operators (exterior / vestibule / high frequency use / oversized doors)			
2.7	Overhead Door Stops (exterior/vestibule/high frequency use)			
2.8	Hinges			
2.9	Flush Bolts			
2.10	Surface Bolts (manual)			
2.11	Door Seals, Door Bottoms & Sweeps, Astragals, and Thresholds			
2.12	Door Pulls, Push Bars, Push & Kickplates, Floor Stops			

Dalhousie FAMIS Project Number: _____

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Note: If the Guidelines or part of cannot be attained or fulfilled (i.e. NC or NA) during the design process, the Consultant should provide reason(s) why such Guidelines are not met. Any modification or alterations to the design guidelines will need to be agreed/accepted by Facilities Management prior to inclusion in the design.

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1.0 General Guidelines

1.1 Closers

- a) Floor mounted and concealed door closers are prohibited.
- b) Force of door closures to be set at an operating force less than 5 lbs for interior doors and less than 8.5 lbs for exterior doors. Where this cannot be met, power door operators shall be installed.

1.2 Exit Devices

- a) When used, all mechanical dogging shall be cylinder key style.
- b) Mechanical dogging shall not be installed in conjunction with electronic access control.
- c) Concealed vertical rods are prohibited.
- d) On the exterior side of doors, Lever Lock/Unlock Trims for Exit Devices shall be used.

1.3 Hinges

- a) Electric power transfers though any door shall be concealed wire contact transfer hinge, or electric power transfer (Von Duprin EPT10 Power Transfer).
- b) Renovated doors (non-fire rated) for access control installation shall use heavy duty armoured door loops c/w 20 AWG wires.
- c) Use non removable pins (minimum one per door) for out-swinging exterior doors.
- d) Use of spring-loaded hinges is acceptable as an alternate to door closers on dorm room doors up to a maximum 36" wide door.
- e) Continuous (piano) hinges (non-corrosive material) on all exterior doors.
- f) All standard hinges to be ball bearing.

1.4 Locksets and Door Handles

- a) Mounting height of lockset to be (min) 900mm to (max) 1100mm from floor.
- b) Lever style handles and U shape pulls only. Lever handle with an end return towards the door shall be used to prevent objects from catching.
- c) Locksets and door handles shall colour contrast from door or wall surfaces.
- d) All door pulls and hardware to be through-bolted.

1.5 Electric Locking

- a) Use field selectable DC 12V or 24V power supply
- b) Electromagnetic locks are prohibited

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1.6 Finishes

- a) New Construction – 626 (and must be a colour contrast to door finish).
- b) Renovations – match existing finishes.
- c) Kick plates shall be installed on all power-operated doors to prevent damage.

1.7 Automatic Door Operators

- a) All Operators shall have Push and Go Power Assist Option
- b) All operators to have 3-Way toggle Switch (on/off/hold-open).
- c) Rim exit strikes to have pre-Load.
- d) Vertical clearance from door frame shall be minimum of 10 inches. Horizontal clearance from door frame shall be minimum of 12 inches.
- e) Where double doors exist and only one door is primarily operable, place operator push button on hinge side of unused door. Where both doors are operable place operator push button on a cane-detectable guardrail to limit travel distance and to prevent people from maneuvering backwards away from the door once activated.
- f) Operator push buttons shall be operable between a height of 150 and 300mm as well as 900mm and 1100 above finish floor.
- g) Where operator push buttons and hands-free motion sensors are installed on a wall, they shall be placed on latch side of doors.
- h) Where operator push buttons are mounted on walls, they shall be colour contrasted from surrounding wall surfaces.
- i) Display the person in motion Symbol of Access on push operator buttons and signage where the symbol is used to identify accessible access:



1.8 Exterior Doors

- a) Exterior double doors shall have exposed or non-concealed vertical rod systems.
- b) Mullions are prohibited.

1.9 Interior Doors

- a) Interior double doors shall have surface less bottom rod exits, except in residence buildings. In residence buildings, interior double doors shall have both top and bottom rod exits.

1.10 Installation Requirements

- a) All fasteners shall be drilled and tapped or through bolts (no self-tapping).

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2.0 Acceptable Manufacturers

2.1 Cylinders and Keying

- a) Cylinders
 - i. Halifax campus cylinders to accept Best small format interchangeable 7-pin cores (SFIC).
 - ii. Truro campus cylinders to accept Schlage conventional 6pin core or optional full size interchangeable 6-pin cores (FSIC).
- b) Cores and Keys
 - i. Best or Schlage, as noted above.
 - ii. Locks supplied by Contractor complete with temporary construction cores in all new cylinders.
 - iii. One permanent core per cylinder, pinned to Owner's requirements, c/w two (2) keys supplied separately by Contractor and installed by Owner.
 - iv. Owner staff install permanent cores and distribute keys to building occupants.
 - v. Stamp keys with code reference.

2.2 Locksets

- a) Mortise locksets shall be Best, Schlage, or Sargent, series and models as listed below;
 - i. Best 45H 7 15H – 626
 - ii. Schlage L9000L Series 06/A – 626
 - iii. Sargent 8200 Series LNL L/C - 626
- b) Cylindrical locksets shall be Best, Schlage, or Sargent, series and models as listed below;
 - i. Best 9K 3 7 15D - 626
 - ii. Schlage ND Series BDC RHO - 626
 - iii. Sargent 11 Line 70-11G LL - 626
- c) Mortise electronic locksets shall be Best or Schlage, series and models as listed below;
 - i. Best IDH Max 45HM 7 15 - 626
 - ii. Schlage AD400MS/MD MT RHO BD – 626
- d) Cylindrical electronic locksets shall be Best, Schlage, or Sargent, series and models as listed below;
 - i. Best IDH Max 45HCY 7 15 - 626
 - ii. Schlage AD400CY/MD MT RHO BD – 626

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2.3 Door Closers

- a) Door closers on exterior doors, fire exit doors, and other high traffic doors shall be LCN, Sargent, or Dorma, series and models as listed below;
 - i. LCN 4040XP REG - 689
 - ii. Sargent 281 x “O10” arm - 689
 - iii. Dorma 8900 Series 8916-SPA – 689
- b) Door closers on interior doors, storage/office doors, and other low traffic doors shall be LCN, Sargent, or Dorma, series and models as listed below;
 - i. LCN 4031 REG - 689
 - ii. Sargent 1431 x “O” arm - 689
 - iii. Dorma 8600 Series 8616-SPA-FC - 689

2.4 Exit Devices

- a) Narrow stile surface vertical rod exit devices on exterior or vestibule doors shall be Von Duprin, Corbin, or Dorma, series and models as listed below;
 - i. Von Duprin 3547A - 626
 - ii. Corbin ED4400 Series - 619/626
 - iii. Dorma 9800 Series - 626
- b) Wide stile surface vertical rod exit devices on exterior or vestibule doors shall be Von Duprin, Corbin, or Dorma, series and models as listed below;
 - i. Von Duprin 9827 - 626
 - ii. Corbin ED5400 Series - 619/626
 - iii. Dorma 9400 Series - 626
- c) Narrow stile surface rim exit devices on exterior or vestibule doors shall be Von Duprin, Corbin, or Dorma, series and models as listed below;
 - i. Von Duprin 35A - 626
 - ii. Corbin ED4200 Series - 619/626
 - iii. Dorma 9700 Series - 626
- d) Wide stile surface rim exit devices on exterior or vestibule doors shall be Von Duprin, Corbin, or Dorma, series and models as listed below;
 - i. Von Duprin 98 - 626
 - ii. Corbin ED5200 - 619/626
 - iii. Dorma 9300 Series - 626
- e) Electric Latch Retraction option/feature on exit devices shall be Von Duprin, Corbin, or Dorma, series and models as listed below;
 - i. Von Duprin QEL
 - ii. Sargent 68-3212 3 / 56-8888F-32D

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- iii. Dorma MLR
- f) All functions of free-wheeling, clutch action lever handle trim on exit devices shall be Von Duprin, Corbin, or Dorma, series and models as listed below;
 - i. Von Duprin 996-06
 - ii. Sargent 713-8-ETL
 - iii. Dorma Y08R

2.5 Electric Strikes (Surface-Exit Devices / Mortise-Locksets)

- a) Electric Strikes, surface and mortise types, shall be Von Duprin, HES, or RCI, series and models as listed below;
 - i. Von Duprin 6300 series / 6200 & 6400 series - 630
 - ii. HES 9500 series / 1006 series - 630
 - iii. RCI (dormaKaba) 0162 series / F2164 series - 630
 - iv. RCI 6505-6514

2.6 Automatic Door Operators (exterior/vestibule/high frequency use/oversize doors)

- a) Automatic door operators on exterior doors, vestibule doors, oversize doors, and other high traffic doors shall be LCN, Besam, or Horton, series and models as listed below;
 - i. LCN 9540/9530 series - 689
 - ii. Besam 200i - 689
 - iii. Ditec - HA9
- b) Automatic door operator push buttons on exterior doors, vestibule doors, oversize doors, and other high traffic doors shall be LCN or Besam.

2.7 Overhead Door Stops (exterior/vestibule/high frequency use)

- a) Overhead door stops on exterior doors, vestibule doors, and other high traffic doors shall be Glynn-Johnson, Rixson, or ABH, series and models as listed below;
 - i. Glynn-Johnson 100 series concealed / 900 series surface - 630
 - ii. Rixson #1 ADJ series concealed / #9 ADJ series surface - 630
 - iii. ABH 1000RA series concealed / 9000RA series surface - 630

2.8 Hinges

- a) Butt type full mortise hinges shall be Ives, Stanley, or McKinney, series and models as listed below;
 - i. Ives 5BB1/5BB1HW – 626/630
 - ii. Stanley FBB179/FBB191, FBB168/FBB199 – 626/630
 - iii. McKinney TA2714/TA2314, T4A3786/T4A3386 – 626/630

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- b) Continuous full door height hinges, aluminum geared or pin and barrel, shall be Ives, Stanley, or McKinney/Markar, series and models as listed below;
 - i. Ives 112HD-628 / 700-630
 - ii. Stanley 661HD-628 / 651-630
 - iii. McKinney MCK12HD-628 / Markar FM300-630

2.9 Flush Bolts (manual/constant latching)

- a) Flush bolts, manual or constant latching, shall be Ives, Hager, or Rockwood, series and models as listed below;
 - i. Ives FB458-12-626 / FB51P-630
 - ii. Hager 282D-12-626 / 293D-630
 - iii. Rockwood 555-12-626 / 2845-630

2.10 Surface Bolts (manual)

- a) Surface bolts, manual locking, shall be Ives, Hager, or Rockwood, series and models as listed below;
 - i. Ives SB453-12 - 626
 - ii. Hager 276D-12 - 626
 - iii. Rockwood 580-12 - 626

2.11 Door Seals, Door Bottoms & Sweeps, Astragals, and Thresholds

- a) Door seals and weatherstripping, automatic door bottoms, door sweeps, astragals, and thresholds, shall be DraftSeal, K N Crowder, or Pemko, series and models as required for exterior doors, fire rated doors, security doors, & office doors listed in each specific project.

2.12 Door Pulls, Push Bars, Push & Kickplates, Floor Stops

- a) Door pulls, push bars, push plates, kickplates, and floor stops, shall be Ives, Rockwood, or Hager, series and models as required for exterior doors, fire rated doors, security doors, and office doors listed in each specific project.

FACILITIES MANAGEMENT