06 – Door Hardware Specification Guideline
354th Civil Engineering Squadron
OPR: CES/CEOHS
ISSUED: 13 September 2017 2017

Purpose

These standards will serve as the primary door hardware criteria reference documents for services provided by architectural and engineering (A&E) firms and consultants in the development of both design-bid-build and design-build contracts. This document is not intended to be used in lieu of detailed design documents in the procurement of facility construction. No part of this document should be considered inclusive to all government requirements.

The 354th CES Structures Shop maintains the hardware described in this document and stocks replacement parts. Any questions regarding this document should be directed to the 354th CES Locksmith, Mr. Loring Wellnitz at 907-978-9555 or loring.wellnitz@us.af.mil.

1. General

1.1. Product Substitution

1.1.1. The products listed in this guide are to be used without substitution on new construction and modernization projects unless products are listed in this guide as an alternate.

1.2. Product Finishes

1.2.1. Product finishes will be selected on a project by project basis by the 354th CES Project Manager during the design development process.

1.3. Specifications Documents

1.3.1. This guide is to be incorporated into Section 08710 of the project specifications. Section 08710 of the specifications must include the following language:

a. Door and Frame Preparation

i. Before hardware installation, verify that all doors and frames are properly prepared to receive the specified hardware. Hollow metal frames shall be prepared for American National Standards Institute (ANSI) strike plates per A115.1-2 (4-7/8” high). Hinge preps will be mortised and reinforced with a minimum of 10 gauge reinforcement material; minimum of 14 gauge reinforcement material for closer. Hollow metal doors shall be properly prepared and reinforced with a minimum of 16 gauge material for either mortised or cylindrical locks as specified. It is preferred that all hollow metal doors receiving door closers have 14 gauge reinforcement. If this is not possible, the use of sex bolts is mandatory. Wood doors shall be factory prepared to receive the scheduled hardware.

b. Hardware installation

i. The manufacturer’s representative for the locking devices and closing devices must inspect and approve, in writing, the installation of their

products. Hardware installed incorrectly must be reported to the AE prior to the AE's final punch list.

c. For specifications or questions, please contact:

Alan Sharpe
End User Consultant
Best Access Solutions, Inc.
Phone: 425-269-3365
Alan.sharpe@dormakaba.com

2. Hanging Devices

2.1. Continuous Hinge

2.1.1. Primary

a. Stanley 651HD/652HD (Exterior & High Traffic doors)

2.1.2. Alternate

a. Bommer

2.2. Mortise Hinge

2.2.1. Primary

a. Stanley

i. FBB199 x NRP (Heavy use exterior doors)

ii. FBB168 (Heavy use interior doors)

iii. FBB179 (Interior doors)

2.2.2. Alternate

a. Bommer

3. Securing Devices

3.1. Lock Set

3.1.1. Primary

a. Best

i. Mortise, 45H Series, 16J Trim

ii. Cylindrical, 93K Series, 16D Trim

iii. Lock function by room type as follows:

Lock Function	Room Type
45H-AB (9K-AB)	Office/Entrance Function-Faculty, Administration
45H-R (9K-R)	Classroom Function
45H-G (9K-S)	Communicating Function-doors between rooms
45H-D (9K-D)	Storeroom Function-Janitor, Storage, and Boiler rooms
45H-N (9K-N)	Passage Function

3.1.2. Alternate

a. No substitution

3.2. Auxiliary Locks

3.2.1. Primary

a. Best 83T-S/38H-R- Deadlock

3.2.2. Alternate

a. No substitution

3.3. Padlocks

3.3.1. Primary

a. Best 21B722L x SPL

3.3.2. Alternate

a. No substitution

3.4. Key System

3.4.1. Primary

a. Best

i. Removable/Interchangeable Core

ii. 7-pin Standard Keyway Cormax (Existing System)

3.4.2. Alternate

a. No substitution

3.5. Exit Device

3.5.1. Primary

a. Precision Apex 2000

i. 2403CD x 2003C (single door, narrow stile, exterior)

ii. 2401CD x 2001 X 2403CD x 2003C X KR822 (pair, narrow stile, exterior)

iii. 2103CD x Trim (at single door, exterior)

iv. 2101CD x 2103CD x NL Trim X KR822 (at pairs, exterior)

v. FL2108 x 4908A (rated single doors)

vi. FL2101 X FL2108 x 4908A x FLKR822 (rated pairs)

vii. N674DA-3 Dummy push bars at vestibule doors

b. All non-electrified, non-rated exit devices to have hex key for cylinder dogging. Devices that are electrified do not require dogging.

c. Prefer keyed, removable mullions or fixed mullions where applicable

d. ”ALK” option when specified

3.5.2. Alternate

a. No substitution

3.6. Coordinator

3.6.1. Primary

a. Trimco 3094 Series x 2/3095 /or/ 3096

b. Use coordinator where required by fire code

3.6.2. Alternate

a. Hager, Rockwood

3.7. Automatic Flush Bolts

3.7.1. Primary

a. Trimco

i. 3810 x 3810 (Automatic) (metal doors)

ii. 3815 x 3815 (Automatic) (wood doors)

3.7.2. Alternate

a. Hager, Rockwood

3.8. Manual Flush Bolts

3.8.1. Primary

a. Trimco

i. 3917 (Manual) (metal doors)

ii. 3913 (Manual) (wood doors)

3.8.2. Alternate

a. Hager, Rockwood

4. Closing Device

4.1. Surface Closer

4.1.1. Primary

a. Stanley QDC100

i. QDC113 (exterior out swinging)

ii. QDC115/QDC111 (interior)

b. All door frames to be reinforced

c. EDA or Comp. Stop arms on all exterior and hard traffic openings

d. No hold-open arms at exterior doors

e. Allow for maximum swing of doors

4.1.2. Alternate

a. No Substitution

4.2. Automatic Operator (Low Energy)

4.2.1. Primary

a. Stanley D-4990 (Low Energy)

4.2.2. Alternate

a. Hager, Rockwood

5. Stops and Holders

5.1. Overhead Door Holder

5.1.1. Primary

a. ABH

i. 1000 Series (Overhead Concealed-Heavy Duty)

ii. 4000 Series (Overhead Concealed-Standard Duty)

iii. 4400 Series (Overhead Surface-Standard Duty)

5.1.2. Alternate

a. a. Hager, Rockwood

5.2. Door Stop

5.2.1. Primary

a. Trimco

i. 1270 CXCP Wall Stop (interior)

ii. 1211 -Floor Stop (interior)

iii. 1214CK –Floor Stop (exterior)

iv. 1261- Floor Stop/Holder at all restrooms

b. Allow for maximum swing of doors

c. Backing required at wall stops

5.2.2. Alternate

a. Hager, Rockwood

6. Accessories

6.1. Push/Pull Bars

6.1.1. Primary

a. Trimco 1731

6.1.2. Alternate

a. Hager, Rockwood

6.2. Push/Pull Plate

6.2.1. Primary

a. Trimco 1001 x 1018-3B

6.2.2. Alternate

a. Hager, Rockwood

6.3. Kick Plate

6.3.1. Primary

a. Trimco

i. KO050 10" x 2" LDW x B3E x CSK (single doors)

ii. KO050 10" x 1" LDW x B3E x CSK (pair doors)

6.3.2. Alternate

a. No substitution

6.4. Mop Plate

6.4.1. Primary

a. Trimco

i. KO050 4" x 2" LDW x B3E x CSK (single doors)

ii. KO050 4" x 1" LDW x B3E x CSK (pair doors)

6.4.2. Alternate

a. Hager, Rockwood

6.5. Electromagnets

6.5.1. Primary

a. ABH 2120

6.5.2. Alternate

a. Rixson

6.6. Threshold

6.6.1. Primary

a. Pemko 171A (1/2" x 5" saddle threshold)

b. Architect to coordinate with project conditions

6.6.2. Alternate

a. Rixson

6.7. Smoke Seal

6.7.1. Primary

a. Pemko S88

6.7.2. Alternate

a. Reese

6.8. Weather Seal

6.8.1. Primary

a. Pemco

i. 305 CR (at head and jambs)

ii. 315 CN (at sill on door – surface mount)

6.8.2. Alternate

a. Reese

6.9. Astragal

6.9.1. Primary

a. Pemko 355 CS

6.9.2. Alternate

a. Reese

6.10. Meeting Stile

6.10.1. Primary

a. Pemko 18041 CP

6.10.2. Alternate

a. Reese

6.11. Drip Guard

6.11.1. Primary

a. Pemko 346C x 4" ODW (exterior doors exposed to rain)

6.11.2. Alternate

a. Reese

6.12. Door Silencer

6.12.1. Primary

a. Trimco

i. 1229A (metal frames)

ii. 1229B (wood frames)

6.12.2. Alternate

a. Hager, Rockwood

6.13. Key Control

6.13.1. Primary

a. Best Computer Software- Keystone KS600N

6.13.2. Alternate

a. No substitution

7. Access Control System for Non-Secured Spaces

7.1. Access Control Systems for secured spaces are covered in *Eielson AFB Design Guideline 25 – Intrusion Detection and Access Control Systems for Secured Spaces*.

7.2. Specific doors requiring ACS to non-secured spaces shall be identified by the owner/user during the design process.

7.3. Exit Device

7.3.1. Precision Hardware

a. 2103-630 Precision Rim Exit Device prepped for Basis G Trim

b. KR822 (Standard Keyed Removable Mullions for Pairs of Rim Exits Devices)

c. FLKR822 (Fire Rated Keyed Removable Mullions for Pairs of Rim Exits Devices)

7.4. Exit Trim

7.4.1. Best

a. EXG7EV15MS-626-PH2-RM (B.A.S.I.S. G Exit Trim for Precision Rim Exit Device)

7.5. Card Readers

7.5.1. Best

a. Best B.A.S.I.S. G Magnetic Stripe Reader

b. 45HG7DV15MS-626 (Best Mortise Lock, Electric Unlock, Request to Exit, Door Status, Latch Status, Quick Connect)

c. 93KG7DV15MS-626 (Best Cylindrical Lock, Electric Unlock, Request to Exit, Quick Connect)

7.5.2. Alternate

a. No substitutions

7.6. Miscellaneous

7.7. Eielson AFB will procure the following items for use with the hardware listed in this section.

7.7.1. Best

a. Basis Offline Software: BAS-SWS-G

b. Netbook Computer as Data Transport Device: SES-NETBOOK

c. USB to serial cable: SES-USB

d. Connector/Adapter: SES-DB9CON

e. 6-foot cable extender: SES-DP9CAB

f. Mag Stripe Encoder: NTDMSR20633BA

g. 500 Non-Encoded Mag Swipe Cards: VPAPVC