2019 DESIGN GUIDELINES and PREFERENCES

HARDWARE

Date: July 8, 2019
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PREFACE

The “basis of design” standards and design preferences listed below are for new capital construction projects on the University of Tennessee Knoxville (UTK) Campus. Off campus and auxiliary structures will be evaluated individually.

Durability, maintainability, uniformity, availability and the ability to be easily maintained by UTK Facilities Services (UTFS) are key factors in campus preferences. Variances from these standards may require extensive vetting and campus approval.

REFERENCES


Campus entities involved and consulted:
- UTK Police
- UTK Facilities Services
- UTK Office of Information Technology
- UTK Central Alarm

DESIGN STANDARDS

Hinges and Butts – Manufactured by Hager Hinge Co., full mortise standard weight ball bearing hinge with flat pins
- BB1191 – Exterior openings
- BB1279 – Interior openings
- Finish: ANSI 626 or US26D (Satin chrome plated)
- Acceptable substitutes: Stanley, Ives
Locksets:

A. **Mortise** – Manufactured by Best Security Solutions. To be used at high use areas, exterior openings and where security is an issue, such as public corridors, public spaces, storerooms, utility rooms, etc. See “Design Preferences” section below for interior thumb turn lockdown capabilities at classrooms and other gathering areas.
   - 45H Series
   - Core Housing: 7 pin to accept Best cores
   - Rose Style: D-3 ½” convex
   - Finish: ANSI 626 or US26D (Satin chrome plated)
   - Lever Style: 14H lever design, ADA compliant
   - Acceptable substitutes: None

B. **Cylindrical** – Manufactured by Best Security Solutions. To be used at interior openings within areas protected by mortise locksets such as offices within a suite, etc.
   - 93K Series
   - Core Housing: 7 pin to accept Best cores
   - Rose Style: D-3 ½” convex
   - Finish: ANSI 626 or US26D (Satin chrome plated)
   - Lever Style: 14H lever design, ADA compliant
   - Acceptable substitutes: None

Interchangeable Cores and Rim Cylinders – Manufactured by Best Security Solutions. Cores and Cylinders will be provided to UTFS Lock & Key for keying & installation.
   - 1E Series
   - Finish: ANSI 626 or US26D (Satin chrome plated)
   - Acceptable substitutes: None

Exit Devices Wood & Metal Doors – Manufactured by Von Duprin, Inc.
   - Type: Rim, mortise or vertical rod *(avoid vertical rods if possible. See “Design Preferences” section below.)*
   - 99 Series Panic Device Push Bar
   - 996L outside trim with 17 Breakaway Lever design
   - Finish: ANSI 626 or US26D (Satin chrome plated)
   - Acceptable substitutes: None

Exit Devices Aluminum Doors – Manufactured by Von Duprin, Inc.
   - Type: Rim or vertical rod *(avoid vertical rods if possible. See “Design Preferences” section below.)*
   - 33A Series Panic Device Push Bar
   - Night Latch / Dummy Trim
   - Finish: ANSI 626 or US26D (Satin chrome plated)
   - Acceptable substitutes: None

Automatic Door Operators and Controls – Manufactured by Quad Systems LLC: Provide at all public exterior entrances.
• 28K Series
• Low Energy Operation per ANSI A156.19
• Finish: ANSI 689 or Aluminum paint

**Overhead Door Closers** – Manufactured by LCN Closers
• 4111 Series at exterior openings
• 4011 Series at interior openings
• Finish: ANSI 689 or Aluminum paint
• ADA compliant opening force

**Push/Pull/Protective Plates** – Manufactured by Hager Hinge Co.
• 30S – Push plates
• H33G – Pull plates
• 193S Series – Protective plates: Beveled 3 edges, 8inch high
• Finish: ANSI 630 or US32D (Satin stainless steel)
• Acceptable substitutes: Ives, Rockwood

**Door Stops** – Manufactured by Hager Hinge Co. (*Wall mounted are preferred over floor mounted.*)
• 236W: Wall mounted, wrought/concave
• 241F: Floor mounted, cast
• Finish: ANSI 626 or US26D (Satin chrome plated)
• Acceptable substitutes: Ives, Rockwood

**Electric Strikes** – Manufactured by HES, Inc. (*Electric strikes are determined on a project by project basis. UTFS and UT Police Department should be consulted on their preferences*)
• 1006 Series: Used with mortise & cylinder locks
• 9500/9600 Series: Used with rim exit devices
• Finish: ANSI 630 or US32D
• Acceptable Substitutes: Von Duprin, Inc. Programmed and monitored by UT Police Central Alarm Division
• Fail Secure Fire Alarm connection
• Compatible with UT Security and Access Control system

**DESIGN PREFERENCES**

**Mullions** – A center removable mullion is preferred at double doors to eliminate vertical rods.

**Multiple Single Doors and/or 3'-6” Wide x 7”-0” High Doors** – Preferred over double doors to eliminate the need for a center mullion.

**Automatic Door Operators and Controls:** These features will be determined on a project by project basis. UTFS Zone Maintenance may prefer to procure and install automatic door operators and controls.
• Requires hard wiring by contractor
• Requires coordination with access control & fire alarm systems

Double Door Panic Device - Rim style panic devices are preferred over vertical rods.

Classrooms and Other Meeting or Large Gathering Area Lockdown Capability: Thumb turn dead bolt at the interior side, co-acting with exit device or lockset to unlatch with one operation.
• 28I Von Duprin Security Indicator at rim style panic device hardware
• 45H Best Mortise Lockset with Dormitory function

Pulls at Public Toilets – Hygienic door handle pull manufactured by SanitGrasp
• SG-101
• Finish: ANSI 630 or US32D (Satin stainless steel)

Mechanical/Electrical/Plumbing/Fire Alarm/Communication Rooms - High security equipment rooms to remain locked at all times
• 45H Mortise Lockset with a Storeroom function
• Master keyed separately by UTFS Lock and Key for UTFS/OIT use only

Janitor’s Closet/Custodial and Maintenance Supply Rooms - To remain locked at all times. Assembly occupancy lockset function is determined on a project by project basis. On projects under Athletic facilities, frequent and immediate access during games or events should be considered when selecting lock function.
• 93K Cylinder Lockset with Storeroom function
• Master keyed by UT Lock and Key for UTFS Building Service/Maintenance use only

Roofs – Key access only
• F80 Communicating function
• Fire Marshall approval required
• Master keyed by UTFS Lock and Key for UTFS use only

Public Toilets: – Key locking ability on outside, always unlocked on inside
• Classroom function
• Master keyed by UTFS Lock and Key for UTFS use only

Department Offices, Break Rooms, Conference Rooms, and Supply Rooms: (This includes Interior department controlled spaces where locking control is desired at both sides)
• 9K Best Cylinder lockset with an Office “AB” function
• Keyed by UT Lock and Key as requested by department

Magnetic Hold Open – Manufactured by Rixson-Firemark: (Used to ease access to different parts of a building where closed doors are not preferred)
• FM 998
• Finish 689
• Activation of Fire Alarm or Sprinkler System will automatically release doors in egress path

**Access Control:** Electronic Security System – *(Used at public entrances and where card access is required for security, department preference and/or scheduling of Registrar controlled classrooms)*

- Coordinate locations with UT Police
- Receive UTK administration and department approvals prior to specifying.
- Manufacturer: Galleger/Cardax except CBORD @ Residence Halls & Dining *(CBORD access system must coordinate with Cardax controllers to provide interface with Fire Alarm and Central Alarm Systems)*
- Activation of Fire Alarm or Sprinkler System will automatically unlock doors
- Monitored by UT Police Central Alarm Division
- Compatible with Fire Alarm System *(SimplexGrinnell or approved others)*
- Post Installation: Provide approved names/times of operation to UT Police Central Alarm Division *(by UTK departments)*

**Continuous Hinges** – Provide at oversized doors

**Thresholds** – Heavy duty at high traffic doors

**Door Stiles** – 5” wide vertical stiles at entrance doors. ADA complying with bottom stile.