

# The University of Tennessee, Knoxville

## Design Criteria Preferences

September 6, 2017

1	Exterior and classroom locking mechanisms must allow room occupants the ability to secure from the inside while conforming to fire related life safety requirements. Mechanisms should not be easily defeated by other building safety features (fire alarm).
2	Ceiling tiles should be of standard sized grid spacing and of a standard readily available design. 2x2 preferred.
3	Roofing should be built-up systems.
4	Automatic openers for accessible entrances
5	Three sets of review drawings and specs (1/2 size)
6	All materials developed are the property of UTK. All drawings shall be made available in electronic/BIM format. All specifications shall be made available in Word format.
7	not used
8	PCs are not necessary for fire alarm or HVAC systems, but all software shall be made available to the Facilities Services Department. Where possible and practical outside air intakes should be from the roof level. This is to minimize the risk of contamination of the airstream. Provide a shunt tied to the DDC system that will shut down outside air to the building. Shunt should be placed in an area with maintenance access only such as a mechanical room and should be placed in a fairly inconspicuous location. i.e. not beside egress door.
9	Cooling towers are preferred as metal with stainless cold water basins, VFDs, and geared drive
10	See electrical specifications
11	See elevator design criteria
12	See site design guidelines
	Site design to be evaluated for emergency communications in regards to potential blue phone locations or a alternate exterior emergency messaging capability. Alternate exterior messaging could be any communication platform, like exterior PAs, used in place or in conjunction with blue phones that is effective at providing emergency information to that area. Installing blue phones or an alternative is evaluated by UTPD and the design team based on the infrastructure needs (electrical and phone connections) and in consideration of proximity to existing phones, pedestrian patterns and any unique locations concerns.
	Landscaping designs will be reviewed by UTPD for inclusion of Crime Prevention Through Environmental Design (CPTED) recommendations. Vehicle barriers should be included in the design for areas with high pedestrian traffic or gathering areas (i.e. Pedestrian Walkway, Stadium plazas)
	Landscaping plans will consider storm drainage secondary effects.i.e. flooding
13	See mechanical design guidelines
14	As built drawings shall be turned over to UTK Facilities Services at completion of project.
15	Locking systems shall be as manufactured by Best. Exit devices shall be Von Duprin.
16	State Sustainability and Energy Guidelines should be followed. Certain key buildings may be selected for actual USGBC LEED certification.
17	Fire alarm communications shall consist of a network connection to Facilities Services, a dry pair to UT Central Alarm security panel in the building, and a dry pair for supervisory signal to the Central Alarm panel. Fire alarm signalling devices shall be strobe/speaker. Fire alarm panels shall have the capability to receive and transmit messaging from the Campus emergency alert system. Fire alarm system must also have the capability to transmit messaging via text or email to notify specific individuals.
18	Elevator phone shall be provided in all elevators with a dial up line. Elevator phone will be programmed by UT Telephone Services to ring at Central Alarm at UTPD.
19	Central Alarm security panel will be installed with dry pair connection through the Telephone system to UTPD.
20	All security devices and wiring to be installed by the contractor, with final connectivity and programming by UTK Facilities Services.

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21	Separate meetings need to be scheduled to determine safety and security needs during programming and design, followed with a review meeting prior to final documents. Safety and security needs include but aren't limited to: access control, emergency signage, sheltering locations, video surveillance systems, emergency power, fire alarm and HVAC systems.
22	All electrical and communications panel knockouts to be stubbed to above ceilings for current and future use.
23	A separate meeting needs to be scheduled to determine communications and A/V needs. This meeting will include a review of building communication devices (electronic signage) to receive UT Alert messages.
24	Where KUB utility connections are required, connections shall be coordinated by the contractor, but the University has to give KUB the approval for future billings for usage. The contractor shall bear the connection costs.
25	Electrical connections to UT system. Contractor to install all raceways and conductor with the University installing terminations. The contractor is to supply all materials, including terminations UT installs.
26	Utilities outages on UT systems. Contractor is to request outages to the designers, copying request to UT Facilities Services. Outages must then be requested of the Campus by Facilities Services. These requests will not be made until such time Facilities Services is certain all necessary parties will be ready for said outage. This includes all materials being on site and certainty that all preparatory work is or will be ready for the outage.
27	Contractor shall provide an emergency contact list to Facilities Planning and Facilities Services within one week of notice to proceed. This shall include contacts for the general, electrical, mechanical, and site work contractor. Within this the contractor may provide one or two key contacts that can be alerted through the Campus emergency alerting system so that these individuals will be alerted to Campus emergency events and can take proper action on their work sites. Information will also be given to contractors for personnel to sign up on SMS alerting system.
29	See room numbering guidelines. In addition to room numbering stairwells should be provided with geographical naming and signage at each landing identifying the stair name, floor, egress floor, and whether roof access is available for firefighters. Ex: Southwest Stair, 4th Floor, Egress on 1st Floor, No roof access.
30	See communications guidelines. Some analog communications pairs to be provided for each building. Refer to OIT Communications Guidelines..
31	Facilities Services personnel should be contacted prior to start-up of major equipment, and will probably want to witness start-up.
32	Landscape irrigation systems shall be metered. Meters shall read in CCF. Meters shall be in meter wells equal to , and not wells where covers overlap the wells. Grass areas shall be watered via impact sprinklers (see Site Design Guidelines). Planting beds shall be watered via (pop-up spray heads).
33	See Recycling Guidelines
34	Windows should be non-operable
35	All exterior doors to be provided with positive locking hardware. No doors shall depend on mag locks for security. If mag locks fail, hardware locking systems shall cause door to fail in a locked position during unoccupied periods. (i.e. after the building is locked)
36	Steam pressure regulators to be Spence or Watson McDaniel
37	Sheltering areas shall be provided within each building that will be used to send occupants to during a severe weather threat in order to minimize threats from flying glass, etc. In general, an interior space low in the building without windows. This can be multiple locations and should be dual use and support operational needs/functions of the building not a stand alone shelter space.

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38	In addition to life safety requirements emergency power shall be provided for key research needs and be able to carry communication and messaging systems within the building.
40	Locking mechanism details
	Exterior entrances: Electronic locks with card reader access; must allow emergency egress. Every exterior door must be able to be manually locked.
	Exterior exit doors only: Door prop indicators: a device that sends a signal to central alarm located at UTPD dispatch if a door that is supposed to remain closed is propped open.
	High risk/value and high occupancy spaces: access control mechanisms to be reviewed by UTPD based on planned operational use.
	Interior spaces that will have access needs for large numbers of people will be equipped with electronic locking systems. Keyed locking systems shall also be provided along with the capability to lock from within the space. The purpose of this requirement is to minimize the need for multiple issuance of keys.
41	Video surveillance: Exterior entrances; high volume exit doors; High risk areas; high value property storage/use; Security evaluation will include potential for exterior campus views; high-volume hallways; high capacity rooms; conduit and wiring for future installs
42	Rooms specifically designed to house high value electronics/equipment should not be located on ground floors if possible as a theft protection measure.
44	Shelving and storage in all spaces (labs, Hazardous Materials Storage rooms) that will store hazardous materials must be designed to mitigate secondary impacts of hazardous materials spills due to minor earthquake events. For example; HazMat cabinets should be anchored or braced and shelves should be of a design with some form of lip or guard that would NOT allow stored items to easily fall.
45	Install fire alarm and fire suppression systems in critical facilities and areas of high risk
47	Design flood channels, storm sewers, retaining ponds, etc. to mitigate collection of debris, sediment, overgrowth, and structural failure. Ensure bordering channels, including streambank and vegetation are restored. Determine flood mitigation during site/location planning and building design to avoid risk to building systems and operations.
48	Determine lightning protection requirements based on a risk assessment and to mitigate impacts/ loss.
49	It is understood that the use of glass is an important aesthetic in design; however, consideration must also be given to providing some protection for classroom occupants from an active shooter. Glass use in high capacity classrooms (50+ and especially in/near doors) should consider materials (translucent glass or security film) and design (blocked sightlines from the door or blinds) to improve survivability. Should this prove impractical in the overall design, an appropriate room to move occupants to that provides better protection should be available on the same floor if possible.
50	Spaces shall be provided for Zone Maintenance and Building Services for shop and office spaces, fire rated storage spaces, and spaces to house and charge floor machines.
51	Where possible, one elevator (preferably freight) should extend to utility tunnels and penthouses with security to prevent unauthorized access.
52	Copper communications conductors shall be provided to allow analog signalling to/from fire alarm panel and emergency power-fail phones.