

NC State University Design and Construction Guidelines

Division 00 Planning & Design – Security

1.0 Purpose

- A. The following guideline addresses security concerns and requirements for university buildings, facilities, and grounds. Security management may include card access, closed circuit television, 2-way communication, intrusion/duress.

2.0 General Requirements

- A. Design Concerns
 1. Actual security installation is provided by NC State; building infrastructure to support security systems is provided within the project.
 2. Provide clear border definition of controlled spaces to clearly identify public, private, and semi-private spaces. Design shall accommodate compartmentalization of public and private spaces so that layers of security are created which can be secured and maintained independently.
 3. Site development and building design must maximize natural surveillance and minimize concealment opportunities. Fencing, loading docks, service areas, landscaping, and site furnishings are particular areas of concern.
 4. Buildings must have a lobby. Lobby areas should have a clear line of sight to elevators, lobby restrooms, stair access, and primary building entry. Both horizontal and vertical entrance to private and semi-private areas shall be controlled access.
 5. The quantity and location of openings penetrating a security perimeter (fence, building envelope, secure lab or office suite) must be minimized.
- B. Facility Security Level: the Facility Security Level is an index that associates minimum security counter measures with facility or area types. It is used in conjunction with the security measures spreadsheet.

Security Level	Facility Type	Examples
Level 1	Animal, Nuclear, Pharmacy, BSL Labs, Other Special Areas	CVM, Burlington, Student Health
Level 2	Central Support, Utility Plants, Data Centers, MDFs	Hillsborough, Stream Plants, SMDF
Level 3	Wet Labs, Chemical Storage, Radiation	EHPS Center, EB1,

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Level 4	Residential	Wolf Village,
Level 5	Retail, Dining, Bookstore, Cash Handling Areas	C-Stores, Fountain Dining Hall
Level 6	Administrative and Academic	Dabney, Winston,
Level 7	Athletic, Large Venues	Carter Finley, Doak Field
Level 8	Parking decks, surface parking lots	Dan Allen, Centennial Park and Ride
Level 9	External areas of public congregation and/or iconic value	Brickyard, Bell Tower
Level 10	On Campus Storage and Maintenance Areas	Sullivan Shops II
Level 11	Remote Facilities	Lake Wheeler Facilities,

Perimeters	Descriptions
Site Perimeter/Grounds	The property perimeter. Site perimeters typically boarder public streets, public spaces, unrelated university properties or private property not owned by the university. Grounds are the exterior spaces between a building(s) and the site perimeter.
Building	The building perimeter is the exterior shell of buildings and is comprised of windows, doors, stairs, ramps, parking areas and other areas of approach or entrance.
Interior	Areas that are largely defined by the business function or value of the assets being maintained in these areas. Examples include suites, labs, server rooms, cash storage, record storage etc...

Security Measure	Description
Border Definition	Provides clear designation of property boundaries and serves as a deterrent to casual entry by unauthorized individuals. Fencing, walls, plantings, signage and bollards are examples of techniques used to establish border definition
Control Point(s)	Focused entrance point, point of audit, or waiting areas that clearly defines transition from public to semi-private or private space. These are areas of visual and procedural access control which can be combined with mechanical or electronic mean of ingress including gates, reception desks, and turnstiles.

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Access Control	Security perimeters that can be accessed and controlled by key or electronic means. These areas provide audit capabilities and provide door status/door help open events upon breach of the secure perimeter.
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CCTV	Fixed or Pan-Tilt-Zoom (PTZ) cameras that are positioned at strategic points to allow for surveillance and auditing of the events that take place within camera purview. Integrated with campus network video management system for archiving, distribution, and analysis.
Intrusion Detection	Detection systems using motion sensors, passive infrared detectors, glass break detection, door positions switches, leash tampers, keypads and/or card readers to create security zones or perimeters. These systems can be integrated with access control for bypassing of the intrusion zone or arming of the intrusion zone. Alarms are incorporated into the 911 Center receivers for monitoring and response.
2-Way Communication	Callbox devices, receiving masters and associated communication infrastructure used to distribute calls to a local or remote location for answering. These devices are typically integrated with access control and video equipment to provide “buzz-in” functionality and customer support.

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