NCEF Safe School Facilities Checklist

Downloaded April 06, 2009

School or building name: _____

Date of assessment: _____

Assessor: _____ Phone number: _____

Contact person: _____ Phone number: _____

About the Checklist

This checklist is designed for assessing the safety and security of school buildings and grounds. Created by the National Clearinghouse for Educational Facilities and funded by the U.S. Department of Education's Office of Safe and Drug-Free Schools, the checklist combines the nation's best school facility assessment measures into one comprehensive online source. Nationally recognized school facility and safety experts participated in the checklist's creation and oversee its maintenance and updating.

The checklist embodies the three principles of Crime Prevention through Environmental Design (CPTED): **natural surveillance**, the ability to easily see what is occurring in a particular setting; **natural access control**, the ability to restrict who enters or exits an environment; and **territoriality-maintenance**, the ability to demonstrate ownership of and respect for property.

There is no perfect score or passing grade for the checklist and not all assessment measures will apply to any one school. Those that do apply must be considered in the context of the school's primary purpose: providing an effective teaching and learning environment. Proper safety and security measures do not work counter to this purpose.

Using the checklist should be an integral part of a school's crisis mitigation and prevention strategy. For complete information about crisis planning, see the publication **Practical Information on Crisis Planning: A Guide for Schools and Communities** by the Office of Safe and Drug-Free Schools, at http://www.ed.gov/admins/lead/safety/emergencyplan/crisisplanning.pdf.

NCEF Assessment Guides

An alternative form of this checklist is the series of ***NCEF Assessment Guides***. The guides may be downloaded individually, by space type, and multiple copies may be made for repetitive spaces such as classrooms. See **Mitigating Hazards in School Facilities** at www.necf.org/safeschools.

The Assessment Team

For reviewing designs for a new school, addition, or renovation, the assessment team should be led by a school CPTED specialist and include the project facility planner and architect as well as appropriate school personnel and engineering and security professionals. Reviews should be conducted during the schematic phase and at the 30 and 95 percent document completion stages, with emphasis on getting things right as early in the design process as possible. If there is a post-design value engineering review, be careful that safety and security features are not compromised.

For assessing an existing school, where the facility itself is examined, the assessment team should be led by a school CPTED specialist and include the school or district facility manager, the principal, and, as appropriate, the head custodian, a teacher, the school resource officer, the local fire and building inspectors, and any needed architectural, engineering, and security professionals. Where assembling such a team is impractical, key school personnel should be interviewed to identify specific safety and security concerns and potential sources of trouble that otherwise might be missed.

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Sources

The checklist is drawn primarily from six sources:

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The checklist is available in Word format for states and local school districts seeking to adopt and modify it; contact NCEF at *bbrenner@nibs.org*.

Questions and Comments

For questions, comments, or suggestions, contact NCEF at *bbrenner@nibs.org.*

You have made the following initial selections:

Assessing an existing school facility

Acts of violence and terrorism
Earthquakes
Hurricanes, tornados, and other wind hazards
Flooding

You have selected the following categories and subcategories of information:

SCHOOL SURROUNDINGS
· Potential Man-Made Hazards
· Seismic and Wind Hazards
· Flood Hazards
SCHOOL GROUNDS
· General
· Site Access Control
· Site Circulation
· School Bus Areas, Parent Pick-Up Areas, and Public Transportation
· Vehicle Parking
· Bicycle Parking
· Pedestrian Pathways and Student Drop-Off Areas
· School Grounds and Recreational Areas
· Exterior Lighting
· Landscaping
· Dumpster Enclosures
· Storm Water Retention Areas
· Site Utilities
SCHOOL BUILDINGS AND FACILITIES
· General
· Building Access Control
· Exterior Walls
· Exterior Doors
· Windows
· Roofs
· Canopies, Awnings, Breezeways, and Covered Walkways
· Courtyards
· Portable, Modular, or Temporary Classrooms
· Entryways
· Main Office, Lobby, and Reception Area
· Administrative Areas and Staff Offices
· Corridors, Circulation, and Lockers
· Stairs and Stairwells
· Classrooms
· Media Center
· Health Clinic/Nurse's Office
· Guidance Office and Conference Rooms
· Restrooms
· Labs, Shops, and Computer Rooms
· Art Rooms
· Music Rooms
· Dance Classrooms
· Cafeterias and Student Commons
· Auditoriums and Theaters
· Gymnasiums
· Locker Rooms
· Interior Doors
· Interior Lighting and Ceilings
· Elevators
· Water Fountains
· Vending Machines and Public Telephones
· Fire Alarm and Control Systems
· Means of Egress in Existing Buildings
· General Fire Requirements for Existing Buildings
· Storage and Equipment Rooms
· Non-Structural Building Hazards
· Emergency Shelters
COMMUNICATIONS SYSTEMS

· Building Notification Systems
· Radio/Wireless Communication Systems
· Telephone Systems
· Communications Wiring

BUILDING ACCESS CONTROL AND SURVEILLANCE

· Building Access Control
· CCTV Surveillance Systems

UTILITY SYSTEMS

· Site Utilities
· Water Supply and Storage

EMERGENCY POWER

· General

MECHANICAL SYSTEMS

· Fresh Air Intakes
· Air Handling and Filtration
· Equipment Inspection, Maintenance, Recommissioning, and Testing

1. SCHOOL SURROUNDINGS

1.1. Potential Man-Made Hazards

1.1 a Potential threats or targets near the school have been identified, along with their possible impact. New buildings are designed accordingly, and appropriate crisis plans are in place for existing buildings.

Examples of potential threats include chemical plants, gas lines, heavy truck traffic, and railroads. Potential targets include major government buildings, structures with high symbolic value, power plants, communications towers, and dams.

_Yes _No _Not Applicable _Further Study Notes:

1.1 b Hidden areas adjacent to the school that might provide offenders with "cover" or provide students with a location for illicit activities have been made safer by opening them up, exposing them, sealing them off, or other measures.

_Yes _No _Not Applicable _Further Study Notes:

1.1 c Natural surveillance from the surrounding neighborhood is maintained, allowing neighbors and passing patrol cars to help serve as guardians of the school.

_Yes _No _Not Applicable _Further Study Notes:

1.1 d Future development plans in the surrounding area have been identified and school site development planning is being adjusted accordingly.

_Yes _No _Not Applicable _Further Study Notes:

1.2. Seismic and Wind Hazards

1.2 a In areas prone to earthquakes, the proximity and vulnerability to active geological faults has been investigated. Within the context of local conditions, the site is considered safe, or extra safety measures have been built into the facility to compensate for the risk. In any case, the facility meets all applicable building code requirements for earthquakes.

_Yes _No _Not Applicable _Further Study Notes:

1.2 b In areas prone to earthquakes or high winds, alternate routes into and out of the site have been identified to avoid potential fallen trees, buildings, utility lines, or other hazards.

_Yes _No _Not Applicable _Further Study Notes:

1.2 c In areas prone to earthquakes or high winds, backup and emergency power and communication sources have been incorporated into the design.

_Yes _No _Not Applicable _Further Study Notes:

1.2 d In areas prone to earthquakes or high winds, building setbacks are adequate to prevent battering from falling trees or buildings.

_Yes _No _Not Applicable _Further Study Notes:

1.2 e In areas prone to earthquakes, high winds, flooding, or other natural or man-made hazards, nearby facilities have been identified as a safe area of refuge or community gathering space. The refuge area is not in

the likely path of falling buildings or trees, nor is it prone to flooding or adjacent to potential terrorist targets, chemical storage areas, or other high risk facililties.

_Yes _No _Not Applicable _Further Study Notes:

1.3. Flood Hazards

1.3 a In areas prone to flooding, the site is not located in a flood plain nor is it at high risk if nearby water sources flood.

_Yes _No _Not Applicable _Further Study Notes:

1.3 b In areas prone to flooding, the building design incorporates features to protect against flood damage.

_Yes _No _Not Applicable _Further Study Notes:

1.3 c In areas prone to flooding, emergency vehicles can access the site during high water conditions.

_Yes _No _Not Applicable _Further Study Notes:

2. SCHOOL GROUNDS

2.1. General

2.1 a The school has a marquee or other sign clearly identifying the school by name and visible from beyond school property.

_Yes _No _Not Applicable _Further Study Notes:

2.1 b The site layout maintains open sight lines throughout through careful placement and maintenance of buildings, landscaping features and lighting.

_Yes _No _Not Applicable _Further Study Notes:

2.1 c The school site and buildings are well maintained, reinforcing territoriality.

_Yes _No _Not Applicable _Further Study Notes:

2.1 d School property lines are clearly marked, establishing territoriality. Boundaries between joint-use areas and school-only areas are similarly marked.

Examples of property line markers include fencing, landscaping, natural geographic features, ground surface treatments, sculpture, architectural features, signs, or changes in elevation.

_Yes _No _Not Applicable _Further Study Notes:

2.1 e In areas of high fire risk, fire evacuation sites are at least 300 feet from at-risk buildings.

_Yes _No _Not Applicable _Further Study Notes:

2.1 f In high threat areas, bomb threat evacuation sites remain confidential to administrators, staff, and law enforcement.

_Yes _No _Not Applicable _Further Study Notes:

2.2. Site Access Control

2.2 a In high threat areas, the perimeter of the site is secured at a level that prevents unauthorized vehicles or pedestrians from entering, and has this effect as far from the school building as possible.

_Yes _No _Not Applicable _Further Study Notes:

2.2 b In high threat areas, vehicle entry beyond checkpoints can be controlled, permitting entry by only one applicant at a time.

_Yes _No _Not Applicable _Further Study Notes:

2.2 c In high threat areas, there is space outside the protected perimeter to pull over and inspect cars.

_Yes _No _Not Applicable _Further Study Notes:

2.2 d All vehicle pathways, access points and interfaces with main thoroughfares are designed to avoid accidents, speeding, blind spots and traffic conflicts. Transitional areas between streets and school access points are clearly marked, such as with "School Zone" signs.

Traffic control options include:
a) Traffic controls or calming devices such as speed humps, bumps, raised crosswalks or traffic circles reduce the likelihood of injury due to speeding vehicles.
b) Driveways curve, change direction, or are broken into short enough segments to prevent cars from building up speed.
c) Driveways access slower streets directly, but not high speed streets.
d) Signs, fences and landscaping at intersections do not block vision.

_Yes _No _Not Applicable _Further Study Notes:

2.2 e Pedestrian safety is addressed with well designed crossing areas and separation from vehicle traffic.

Pedestrian safety options include:
a) Lighting, traffic signals, flags, painted crosswalks, signs and crossing guards are visible to drivers, and are effective.
b) Electronically controlled "Walk/Don't Walk" lights with countdown displays and push buttons.
c) Pedestrian islands or median strips provide safe havens for students crossing streets.
d) Pedestrian bridges, walking or biking paths provide alternatives to walking near traffic.

_Yes _No _Not Applicable _Further Study Notes:

2.2 f In high threat areas, manholes, utility tunnels, culverts, and similar unintended access points to the school property are secured with locks, gates, or other appropriate devices, without creating additional entrapment hazards.

_Yes _No _Not Applicable _Further Study Notes:

2.2 g Perimeter fences, walls, or "hostile vegetation" provide sufficient access control, surveillance and territoriality.

Fencing options, including their pros and cons, include:
a) A solid wall or fence blocks natural surveillance and can attract graffiti.
b) A stone or concrete block wall can be an effective barrier against bullets.
c) A solid wall or fence can enhance privacy.
d) Wire mesh fencing usually provides foot holds, making it easy to climb over.
e) Wire mesh fencing is relatively easy to vandalize but often the most economical option.
f) Smaller gauge wire mesh may deter climbing.
g) Powder-coated wire mesh fencing can be more aesthetically pleasing.
h) Wrought iron fencing is low maintenance, vandal resistant, without blocking surveillance or providing foot holds.
i) A short fence can establish territoriality, but is of limited value for controlling access.

j) Tall, continual fencing can significantly restrict access, but may also block a pedestrian path serving students who walk to and from school, forcing them to take a longer route where they are more exposed to traffic, crime, or environmental hazards. A compromise may be appropriate, such as installing gates at selected locations. Open gates at least define likely entry points; lockable gates provide the school with the ability to further secure the site but can also create an unexpected barrier for a studend trying to escape to or from the site.
(k) "Hositle vegetation" (dense, thorny groundcover or bushes) often can be used effectively to define boundaries of various kinds around and within school property, providing it doesn't interfere with natural surveillance.

_Yes _No _Not Applicable _Further Study Notes:

2.2 h Site entry points are clearly marked, controllable, and easily seen from the school. Gates are available for closing access points when necessary.

_Yes _No _Not Applicable _Further Study Notes:

2.2 i Entry points to the site are kept to a minimum.

_Yes _No _Not Applicable _Further Study Notes:

2.2 j There are at least two entry points so that if one is blocked, the other can be used.

_Yes _No _Not Applicable _Further Study Notes:

2.2 k In high threat areas, there area perimeter barriers capable of stopping vehicles.

Anti-ram protection may be provided by adequately strengthened bollards, street furniture, sculpture, landscaping, walls, and fences. The anti-ram protection should be able to stop the threat vehicle size/weight at the speed attainable by that vehicle at impact. If the anti-ram protection cannot absorb the desired kinetic energy, consider adding speed controls such as speed bumps to limit vehicle speed. Serpentine driveways can also help slow down the vehicle's approach.

_Yes _No _Not Applicable _Further Study Notes:

2.2 l Site entry points can be readily observed and monitored by staff and students in the course of their normal activities.

_Yes _No _Not Applicable _Further Study Notes:

2.2 m Site entry points are positioned so that one individual can monitor as many entries as possible. Nothing blocks this means of visual surveillance, such as signs, trees, shrubs, walls, etc.

_Yes _No _Not Applicable _Further Study Notes:

2.2 n Unsupervised site entrances may be secured during low-use times for access control purposes and to reinforce the idea that access and parking are for school business only.

_Yes _No _Not Applicable _Further Study Notes:

2.2 o Site entries provide for the ready passage of fire trucks and other emergency vehicles.

_Yes _No _Not Applicable _Further Study Notes:

2.2 p Fire hydrants on the site are readily visible and accessible.

_Yes _No _Not Applicable _Further Study Notes:

2.3. Site Circulation

2.3 a Emergency vehicle access around the building meets local requirements.

-- If emergency vehicle access lanes are required by local codes, they should be constructed as wide sidewalks or grassed, hardened surfaces. Vehicular access should be over the curb, rather than via curb cuts that could encourage unauthorized use.
-- California requires a 20-foot-wide fire lane.

_Yes _No _Not Applicable _Further Study Notes:

2.3 b Bus, car, pedestrian and bike traffic are reasonably safe from each other at entry and exit points as well as throughout the site, and traffic calming strategies discourage speeding throughout the site.

Raised and marked pedestrian or bicycle crossings, median strips, pedestrian safety islands, one way traffic, speed bumps, speed humps, the elimination of blind spots, or their remediation through the installation of convex mirrors are some options.

_Yes _No _Not Applicable _Further Study Notes:

2.3 c In high threat areas, the distance between buildings and the nearest parking or roadway (setback) is at least 75 feet, with more distance for unreinforced masonry or wooden walls.

-- If the recommended distance for the postulated threat cannot be arranged, consider reducing the setback required through structural hardening or by manufacturing additional stand-off protection through barriers and parking restrictions.
-- Also consider relocation of vulnerable functions within the building or designing a more hazard-resistant building.
-- More stand-off distance should be used for unscreened vehicles than for screened vehicles.

_Yes _No _Not Applicable _Further Study Notes:

2.3 d Handicapped parking is located on the shortest route from adjacent parking via an accessible path to an accessible entrance.

_Yes _No _Not Applicable _Further Study Notes:

2.3 e Site circulation at peak loading and unloading times is acceptable, without vehicle or pedestrian conflicts.

_Yes _No _Not Applicable _Further Study Notes:

2.3 f Adequate signs, postings, or window decals direct all visitors to the main site entry points in order to gain permission to enter.

Signs should be:
1) Simple, readable, well lit, and written in all relevant languages.
2) Located at all entry points onto the property and at all entry points into the facility.
3) Easy to read from an appropriate distance, such as from a car window when approaching the site by car.
Illustrations, such as a map with arrows showing visitors the route to the main entry, should be included as appropriate.

_Yes _No _Not Applicable _Further Study Notes:

2.3 g Vehicle circulation routes to service and delivery areas, visitors' entry, bus drop-off, student parking, and staff parking are separated as needed and functional in the context of the site.

_Yes _No _Not Applicable _Further Study Notes:

2.3 h Where there are roadways through the site, they are serpentine or otherwise indirect or include traffic calming features, with gates or barriers as needed. Signs prohibit through traffic.

_Yes _No _Not Applicable _Further Study Notes:

2.3 i Designated entries, routes, and parking lots for after-hours use are clearly identified and controlled within the context of the site.

_Yes _No _Not Applicable _Further Study Notes:

2.4. School Bus Areas, Parent Pick-Up Areas, and Public Transportation

2.4 a Buses can drop and pick up students directly from a designated, marked loading and unloading zone near a designated and supervised school entrance, in full view of designated school staff. Students do not need to walk in front of the bus or other traffic to move between the bus and the school.

_Yes _No _Not Applicable _Further Study Notes:

2.4 b Buses do not have to back up to turn or park, nor do they have to be parked in double rows.

_Yes _No _Not Applicable _Further Study Notes:

2.4 c Areas where students congregate while waiting for buses, and associated pedestrian paths, are adequate to avoid overcrowding.

_Yes _No _Not Applicable _Further Study Notes:

2.4 d Curb lanes adjacent to school facades are marked to prohibit parking.

_Yes _No _Not Applicable _Further Study Notes:

2.4 e Sheltered areas are provided in clearly designated, logical locations for students waiting to board buses or to be picked up by parents. Areas are large enough to avoid conflict over limited space and are located in a position that allows for natural surveillance from the main office.

_Yes _No _Not Applicable _Further Study Notes:

2.4 f Parent drop-off and pick-up zones are clearly designated and separated from bus traffic.

_Yes _No _Not Applicable _Further Study Notes:

2.4 g In schools where students use public transportation, the route from the school to the point of public transportation access is reasonably safe due to good natural surveillance, traffic safety features, or other measures.

_Yes _No _Not Applicable _Further Study Notes:

2.5. Vehicle Parking

2.5 a Parking areas are within view of the main office, other staffed areas, or surveillance cameras.

_Yes _No _Not Applicable _Further Study Notes:

2.5 b Clear signs or posted rules identify who is allowed to use parking facilities and when they are allowed to do so.

_Yes _No _Not Applicable _Further Study Notes:

2.5 c Parking spaces are numbered and marked for the designated users: students, faculty, staff, or visitors. Unassigned parking spaces are minimized, especially in student parking zones.

_Yes _No _Not Applicable _Further Study Notes:

2.5 d Visitor parking is located near the main entrance, with clear signs directing visitors to the main office.

_Yes _No _Not Applicable _Further Study Notes:

2.5 e A section of the parking lot is reserved for students who attend part time, or who spend part of the day off-site.

This makes it easier for the school to secure the main parking area during the day, and to pay attention to cars coming and going during the school day.

_Yes _No _Not Applicable _Further Study Notes:

2.5 f Access to parking areas is limited by curbs, fencing, gates, and a limited number of entry points.

_Yes _No _Not Applicable _Further Study Notes:

2.5 g Gates can close off unnecessary parking entrances during low-use times to control access and reinforce the perception that school parking areas are private.

_Yes _No _Not Applicable _Further Study Notes:

2.5 h Student and employee parking areas are separated or mixed appropriately for the school's circumstances.

-- Separate parking areas may protect staff cars from vandalism. They can also make it easier to manage parking overload.
-- Faculty can park near a secondary entry where they can use proximity cards to gain entry. Unlike publicly accessible entries, the staff parking entry does not need to be supervised.
-- Mixed parking lots can provide more adult supervision in an area prone to inappropriate behavior in student vehicles.

_Yes _No _Not Applicable _Further Study Notes:

2.5 i If parking space is at a premium, a specific area is designated for motorcycle parking.

_Yes _No _Not Applicable _Further Study Notes:

2.6. Bicycle Parking

2.6 a Bicycle parking areas are sheltered, securable, and readily observable from inside the school. Rack designs make it possible to use U-locks or other effective locking devices.

_Yes _No _Not Applicable _Further Study Notes:

2.7. Pedestrian Pathways and Student Drop-Off Areas

2.7 a Hiding places are minimized or eliminated along pedestrian routes.

In existing schools, these areas can be exposed to natural surveillance by trimming landscaping, improving lighting, removing solid fencing or installing convex mirrors.

_Yes _No _Not Applicable _Further Study Notes:

2.7 b Exterior pedestrian and bicycle routes are located to maximize surveillance from inside the school.

_Yes _No _Not Applicable _Further Study Notes:

2.7 c Planters, garbage cans, seating, tables, or other amenities on site are well maintained, designed for easy maintenance, free of vandalism, and vandal resistant. They don't restrict sidewalk space unreasonably or create logjams for passers-by. Design features make these amenities unattractive to abuse by skateboarders.

_Yes _No _Not Applicable _Further Study Notes:

2.8. School Grounds and Recreational Areas

2.8 a Recreational areas and playgrounds are in direct view of front office staff or other staff in the school building.

Placing play areas on higher ground, installing lighting for night games, removing visual obstacles, or installing windows are some options for improving natural surveillance.

_Yes _No _Not Applicable _Further Study Notes:

2.8 b Play areas have clearly defined boundaries and are protected by fencing.

_Yes _No _Not Applicable _Further Study Notes:

2.8 c Play areas are well separated from vehicle traffic.

_Yes _No _Not Applicable _Further Study Notes:

2.8 d Emergency and maintenance vehicles can readily access play areas and ball fields, while all other vehicle access is restricted by fencing, bollards, gates, or other features.

_Yes _No _Not Applicable _Further Study Notes:

2.8 e Student gathering places are set back from streets, driveways, and parking areas by at least 50 feet.

-- A generous setback makes it harder for intruders to sell drugs to students, lure them off campus, or victimize them with drive-by shootings.
-- One new school solved this problem by building a basketball court on the roof; others incorporate completely contained inner courtyards.
-- This recommendation may be unworkable in existing schools built on a small footprint.

_Yes _No _Not Applicable _Further Study Notes:

2.8 f There are no hidden areas on the site.

In existing schools, landscaping, signs, vending machines, bus shelters, trash receptacles, mailboxes, storage sheds, or street furniture can be moved or changed to improve natural surveillance.

_Yes _No _Not Applicable _Further Study Notes:

2.8 g Access points between joint-use recreational facilities and the school building are limited and secure.

_Yes _No _Not Applicable _Further Study Notes:

2.8 h Sections of the building that are unoccupied or off limits can be sealed off from recreational areas during

non-school hours.

_Yes _No _Not Applicable _Further Study Notes:

2.8 i Pre-kindergarten and kindergarten play areas are separated from play areas for older children.

_Yes _No _Not Applicable _Further Study Notes:

2.8 j Emergency escape gates are installed in walls or fences enclosing pre-school or kindergarten outdoor play areas.

_Yes _No _Not Applicable _Further Study Notes:

2.8 k Separate or limited-access facilities are provided near after-hours or community recreational areas.

-- This includes restrooms, water fountains, garbage cans, and vending areas.
-- It bars unwelcome visitors from entering an unsupervised area of the school and engaging in illicit behavior.
-- It can also help deter littering, etc.

_Yes _No _Not Applicable _Further Study Notes:

2.8 l Drinking fountains are vandal-resistant by design, such as by being wall-mounted and being made of durable materials.

_Yes _No _Not Applicable _Further Study Notes:

2.8 m School grounds are free of loose rocks, bricks, or other potential projectiles.

_Yes _No _Not Applicable _Further Study Notes:

2.8 n Hard-surface play areas are far enough from classrooms to protect windows and avoid distraction.

_Yes _No _Not Applicable _Further Study Notes:

2.8 o Windows near hard-surface play areas are protected.

_Yes _No _Not Applicable _Further Study Notes:

2.8 p Bleachers are well maintained, with no signs of rust, rot, or splintering.

_Yes _No _Not Applicable _Further Study Notes:

2.8 q Risers between bleacher seats prevent entrapment and keep children from falling through.

_Yes _No _Not Applicable _Further Study Notes:

2.8 r Handrails and guardrails for bleachers or seating areas are adequate.

_Yes _No _Not Applicable _Further Study Notes:

2.8 s Field houses and other outbuildings are securable to prevent intruders from gaining entry.

1) Exterior door hinge pins are not removable from the outside.

2) Hasp screws are one-way or cannot be accessed while the padlock is in place.
3) Deadbolt locks are used.
4) Sliding windows have lift and slide protection.
5) Other windows are kept locked or protected when the building is unoccupied.
6) Alarms should be considered in high-value or high-crime circumstances.

_Yes _No _Not Applicable _Further Study Notes:

2.8 t Surfaces around playground equipment have a minimum depth of one foot of wood chips, mulch, sand, pea gravel, safety-tested rubber, or rubber-like mats.

_Yes _No _Not Applicable _Further Study Notes:

2.8 u Protective surfaces extend a minimum of 6 feet horizontally in all directions from play equipment. For swings, the surfacing extends in back and front twice the height of the suspending bar.

_Yes _No _Not Applicable _Further Study Notes:

2.8 v Play structures more than 30 inches high are spaced at least 9 feet apart.

_Yes _No _Not Applicable _Further Study Notes:

2.8 w Playground equipment and areas are well maintained, with no tripping hazards such as exposed concrete footings, stumps, or rocks; no sharp points or edges; and no open "s" hooks or protruding bolt ends.

More than 200,000 children go to U.S. emergency rooms annually with playground equipment injuries, mostly involving falling.

_Yes _No _Not Applicable _Further Study Notes:

2.9. Exterior Lighting

2.9 a Exterior lighting is uniform and eliminates pockets of shadow or glare.

For existing buildings, exterior lighting is best evaluated at night.

_Yes _No _Not Applicable _Further Study Notes:

2.9 b Exterior lighting fixtures are vandal resistant, beyond easy reach (12 to 14 feet minimum off the ground), maintainable, and built with break-resistant lenses or protected by cages or other means.

_Yes _No _Not Applicable _Further Study Notes:

2.9 c Lighting fixtures are designed to avoid providing handholds for climbing onto the building.

_Yes _No _Not Applicable _Further Study Notes:

2.9 d Exterior lighting is well maintained.

_Yes _No _Not Applicable _Further Study Notes:

2.9 e The exterior lighting scheme is effective for enhancing natural surveillance, discouraging trespassing, and preventing school vandalism.

1) Practice either the "full lighting" or the "dark campus" approach after hours. The dark campus approach discourages trespassing inside the building at night (intruders' lights are readily visible) and saves on electricity.

2) A compromise to a complete blackout is to utilize motion detectors to activate lighting as needed.
3) Security lighting should be directed at the building if the building is to be patrolled from the exterior. Lighting should illuminate the grounds if the building is to be patrolled from the interior, without compromising surveillance by creating glare for the observer.
4) Timers or motion detectors should illuminate entry points for the first worker to arrive and the last one to leave.

_Yes _No _Not Applicable _Further Study Notes:

2.9 f Exterior lighting controls can be centrally accessed from the main administration area.

_Yes _No _Not Applicable _Further Study Notes:

2.9 g School lighting avoids excessive illumination of adjacent neighborhoods.

_Yes _No _Not Applicable _Further Study Notes:

2.10. Landscaping

2.10 a Landscaping reinforces access control, natural surveillance, and territoriality and can reduce storm damage.

Careful design can maintain ample sight lines for effective surveillance.
1) Where fences are used to border property, appropriate landscaping can soften edges while communicating to the public the message of privacy.
2) Uninviting neighborhood development can be screened and intrusive noise softened, while discouraging unwanted visitors.
3) In more rural settings, landscaping can define boundaries without the use of fences.
4) Landscaping also can serve to control and direct access and traffic. Trees lining sidewalks or drives can give natural direction to pedestrian and vehicular traffic while limiting or denying access to identified sections of the school site.
5) Hedges should be kept low enough to expose places where people could otherwise hide.
6) North Carolina recommends that shrubs and hedges bordering walkways not exceed 18 inches in height and that tree branches and leaves be kept clear to a minimum height of 8 feet off the ground.
7) Large tree canopies have a tremendous capacity to absorb high-speed wind energy from hurricanes and other storms.

_Yes _No _Not Applicable _Further Study Notes:

2.10 b Trees are located far enough away from buildings or are trimmed appropriately, to avoid providing roof, window, or second story access, damage from trees falling on buildings, or a fire hazard in areas at risk of forest or brush fires.

California recommends a minimum distance of 10 feet between buildings and trees.

_Yes _No _Not Applicable _Further Study Notes:

2.10 c Trees are well maintained, with dead or weak limbs or trees removed.

_Yes _No _Not Applicable _Further Study Notes:

2.10 d Trees are planted far enough away from exits, access roads, equipment, utilities and emergency refuge areas to ensure that, if they blow over or lose large branches, they will not block these areas.

_Yes _No _Not Applicable _Further Study Notes:

2.10 e In high risk areas, outdoor containers in which explosives could be hidden (such as garbage cans, mailboxes, and recycling or newspaper bins) are kept at least 30 feet from the building and are designed to restrict the size of objects that can be placed inside them or are designed to expose their contents (by using steel mesh, for instance, instead of solid walls).

_Yes _No _Not Applicable _Further Study Notes:

2.11. Dumpster Enclosures

2.11 a Dumpsters are either enclosed in a designated service area or surrounded on three sides by a high wall, preferably a see-through, climbing resistant fence, and provided with a securable gate. Through the use of see-through fencing, wall openings, convex mirrors or motion response lighting, hiding around these enclosures is made difficult.

_Yes _No _Not Applicable _Further Study Notes:

2.11 b Dumpster enclosures are positioned so that they cannot be used as ladders for gaining access to the school roof.

_Yes _No _Not Applicable _Further Study Notes:

2.12. Storm Water Retention Areas

2.12 a Storm water retention areas, where used, are located to help limit access to school property, demarcate school boundaries, or segregate play and pedestrian areas from heavy vehicular traffic.

_Yes _No _Not Applicable _Further Study Notes:

2.12 b Fencing around enclosed storm water retention areas doesn't provide footholds for climbing or interfere with natural surveillance of these areas.

_Yes _No _Not Applicable _Further Study Notes:

2.12 c Storm water pipes over 15 inches in diameter leading to or from storm water retention areas are protected with appropriate grating or metal rebar to prevent access into the retention area or school site.

_Yes _No _Not Applicable _Further Study Notes:

2.13. Site Utilities

2.13 a Access to site utilities, such as electrical transformers, generators, and meters, is limited and secure, and the exposed portions are protected against vandalism and vehicular damage.

_Yes _No _Not Applicable _Further Study Notes:

2.13 b Site utilities do not create hiding places.

_Yes _No _Not Applicable _Further Study Notes:

2.13 c Site utilities do not impede access by emergency vehicles.

_Yes _No _Not Applicable _Further Study Notes:

2.13 d Exterior mechanical equipment enclosures are lockable. Doors have protected hasps, hinges, and deadbolt locks or high security padlocks. Hasps and hinges have secure fasteners and hinge pins are non-removable.

_Yes _No _Not Applicable _Further Study Notes:

2.13 e Exterior mechanical equipment is difficult to climb and is protected from thrown objects.

_Yes _No _Not Applicable _Further Study Notes:

2.13 f Exterior mechanical equipment reachable by vehicles is protected with bollards or other devices.

_Yes _No _Not Applicable _Further Study Notes:

2.13 g Meter locations allow access for meter readers without compromising access control for secure areas.

_Yes _No _Not Applicable _Further Study Notes:

3. SCHOOL BUILDINGS AND FACILITIES

3.1. General

3.1 a Buildings are well maintained, with no signs of graffiti, breakage, neglect, or disrepair.

Well maintained buildings and grounds promote civil order and demonstrate ownership of and respect for school property, qualities that tend to be reciprocated by students, staff, and community.

_Yes _No _Not Applicable _Further Study Notes:

3.1 b If the school is spread among many buildings, either each building has adequate independent access control features or the site overall has adequate access control features, such as a surrounding, non-climbable wall or fence. If neither of these is the case, active human or electronic surveillance over the site is used.

_Yes _No _Not Applicable _Further Study Notes:

3.1 c Windows allow for natural surveillance throughout as much of the site as possible.

_Yes _No _Not Applicable _Further Study Notes:

3.1 d The school is small in size or is broken into more than one school-within-a-school, or it has in place other measures to boost connectivity and familiarity among students and staff.

In general, smaller schools are safer schools because students are better known to school staff and to each other, making them potentially more accountable for their actions.

_Yes _No _Not Applicable _Further Study Notes:

3.1 e Separate wings, separate buildings, and stand-alone, portable or modular classrooms are readily identified from a distance by colors, icons, or signage. Reflective or lighted markings are ideal.

Clear identification of buildings and areas greatly aids emergency response and rescue efforts.

_Yes _No _Not Applicable _Further Study Notes:

3.1 f If the school is contained within one building, access into the school is limited to selected, controlled entries.

From a security perspective, this configuration is usually the most manageable, although a one-building configuration may not be feasible for other reasons.

_Yes _No _Not Applicable _Further Study Notes:

3.1 g If the school contains asbestos now or has contained asbestos in the past, an asbestos management plan

per 40 CFR 763, Subpart E, is in place.

Title 40 of the Code of Federal Regulations (CFR), Part 763, contains federal asbestos regulations. Subpart E covers "Asbestos-Containing Materials in Schools." To access Subpart E, go to GPO Access at *www.access.gpo.gov*.

_Yes _No _Not Applicable _Further Study Notes:

3.2. Building Access Control

3.2 a Access into the building is 100% controllable through designated, supervised, or locked entry points. Windows and service entries are not exceptions. Entry is either granted by supervising staff or by using proximity cards, keys, coded entries, or other devices.

_Yes _No _Not Applicable _Further Study Notes:

3.2 b The school layout requires visitors to pass through at least visual screening before they can gain access to bathrooms, service spaces, stairwells, or other amenities inside the school. No one can get inside without being seen close enough by staff to be identified.

_Yes _No _Not Applicable _Further Study Notes:

3.2 c Portions of the school that are not being used can be readily secured. This can be accomplished by locking wing doors or accordian-style gates, etc., provided emergency egress is not blocked.

_Yes _No _Not Applicable _Further Study Notes:

3.2 d Signs, in all relevant languages and with simple maps or diagrams where needed, direct visitors to designated building entries.

Where appropriate, signs may warn in a friendly but firm way about trespassing and illicit behavior and cite applicable laws and regulations.

_Yes _No _Not Applicable _Further Study Notes:

3.2 e High value targets for theft, such as offices, computer rooms, music rooms, shops, and chemical storage areas are protected by high security locks and an alarm system, or at least one all-purpose storage room is available for storing valuables.

Note that chemicals must be stored separately.

_Yes _No _Not Applicable _Further Study Notes:

3.3. Exterior Walls

3.3 a Building niches and recesses are fenced off, well lit, or observable from inside the building.

_Yes _No _Not Applicable _Further Study Notes:

3.3 b Walls do not provide footholds, or the top 3 to 4 feet nearest the roof are non-climbable.

_Yes _No _Not Applicable _Further Study Notes:

3.3 c Game lines are provided on walls and surfaces in play areas so that students are not tempted to draw their own.

_Yes _No _Not Applicable _Further Study Notes:

3.4. Exterior Doors

3.4 a The number of exterior doors is minimized.

_Yes _No _Not Applicable _Further Study Notes:

3.4 b All exit doors and gates are equipped with emergency exit hardware and are not locked or secured by any other means.

See the 2003 edition of the International Building Code, Section 1008.1.8, and NFPA 101 Life Safety Code, Section 14.2.2.2 for new educational uses and Section 15.2.2.2 for existing educational uses. Under no circumstances may such doors be otherwise locked or chained shut.

_Yes _No _Not Applicable _Further Study Notes:

3.4 c All exterior doors are designed to prevent unauthorized access into the building.

a) Exterior doors should have as little exposed hardware as possible.
b) Exterior doors should be equipped with hinges with non-removable pins.
c) Exterior exit-only doors do not need handles and locks protruding on the outside. However, it should be possible to open the doors from outside during an emergency in some manner, such as with a proximity card.
d) Exterior doors should be constructed of steel, aluminum alloy, or solid-core hardwood.
e) Exterior door frames should be installed without excess flexibility to deter vandals from prying them open.
f) Exterior glass doors should be fully framed and equipped with breakage-resistant tempered glass.
g) Exterior door locks used as the primary means of security should be mounted flush to the surface of the door.
h) Exterior doors should not rely on key-in-knob or other protruding locking devices.
i) Exterior swinging doors should have a minimum 1-inch deadbolt lock with a 1-inch throw bolt and hardened steel insert, a free-turning brass or steel tapered guard, and, if glass is located within 40 inches of the locking mechanism, double cylinder locks.
j) Panic bar latches on exterior doors should be protected by pick plates to prevent tools and plastic cards from releasing the bolt.
k) Exterior doors with panic push-bars should be equipped with tamper-proof deadbolt locks to prevent easy exit after school hours by criminals or vandals. They should also be equipped with an astragal (metal plate) covering the gap between the doors.
l) The armored strike plate on exterior doors should be securely fastened to the door frame in direct alignment to receive the latch easily.
m) Key-controlled exterior doors can be equipped with contacts so they can be tied into a central monitoring and control system.
n) Exterior double doors should be equipped with heavy-duty, multiple-point, long flush bolts.
o) Doors that are vulnerable to unauthorized use, when students open them from inside the building, can be made more secure by installing door alarms, delayed opening devices, or sensors or cameras monitoring doors from the central office.

_Yes _No _Not Applicable _Further Study Notes:

3.4 d Exterior doors are sized and arranged to reduce congestion and avoid crowding

Multiple single doors reduce congestion and are recommended over double doors. Wider-than-normal (oversize) doors accommodate movement of equipment and supplies and are recommended for accessible entries and for music, vocational technology, kitchen, and receiving areas.

_Yes _No _Not Applicable _Further Study Notes:

3.4 e Exterior doors have narrow windows, sidelights, fish-eye viewers, or cameras to permit seeing who is on the exterior side. Windows and sidelites are sized and located so that if they are broken, vandals cannot reach through and open the door from the inside.

_Yes _No _Not Applicable _Further Study Notes:

3.4 f Air-tight exterior doors improve energy efficiency and retard interior contamination during a hazardous chemical or other harmful outdoor release.

_Yes _No _Not Applicable _Further Study Notes:

3.4 g Exterior doors are designed and certified to resist thrown or wind-blown objects.

_Yes _No _Not Applicable _Further Study Notes:

3.5. Windows

3.5 a All windows lock securely. Sliding windows have lift and slide protection. In existing buildings, window hardware and frames are in good condition, and transom windows or other designs that have clear security weaknesses are either permanently closed (provided they are not to be used as a means of emergency egress) or are reinforced with slide bolts or other security devices.

California suggests avoiding sliding and casement windows, which are associated with security problems, and says that operable windows should not have crank and worm-gear openers.

_Yes _No _Not Applicable _Further Study Notes:

3.5 b In high risk areas, windows and their framing and anchoring systems are designed and located to resist the effects of explosive blasts, gunfire, and forced entry. Windows overlooking or directly exposed to public streets or dangerous areas are either minimized or protected.

-- The greatest risk to occupants from an explosive blast originating near the school or even blocks away is injury from flying glass shards.
-- Window openings should be small and located away from interior occupied areas as much as possible.
-- Glazing should be laminated or protected with an anti-shatter film.
-- Glass-clad polycarbonate and laminated polycarbonate are two types of acceptable glazing material.
-- Bullet resistant glazing should meet the requirements of UL 752.
-- Security glazing should meet the requirements of ASTM F1233 or UL 972.
Window assemblies containing forced-entry-resistant glazing should meet the requirements of ASTM F588.

_Yes _No _Not Applicable _Further Study Notes:

3.5 c Windows are located strategically, providing natural light and natural surveillance, while providing sufficient stand-off distance and other security features to deter vandalism.

-- Glass replacement is the highest routine maintenance cost for some schools.
-- Consider incorporating skylights (but only if roofs are fully protected from climbers), solar light tubes, or clerestory windows (windows located high on interior walls) and light shelves in lieu of normal-height windows in exposed or vulnerable locations.
-- Clerestory windows allow for ventilation, light, and privacy while minimizing wall penetrations, but do not provide for natural surveillance.
-- California suggests that ground floor windows be eliminated where possible on the building perimeter, but this must be weighed against the need for natural light and ventilation in occupied areas and the loss of visual surveillance of school grounds.
-- Some school districts prohibit skylights because they are considered impossible to protect from climbers.

_Yes _No _Not Applicable _Further Study Notes:

3.5 d Windows are used to enhance natural surveillance of courtyards and school grounds, especially from classrooms and administration areas.

Windows in administrative areas are particularly important for helping staff monitor the main entrance area and the school grounds around it.

_Yes _No _Not Applicable _Further Study Notes:

3.5 e Second-floor windows are inaccessible or protected against burglary.

_Yes _No _Not Applicable _Further Study Notes:

3.5 f Windows intended to serve as a secondary means of escape are not blocked by screens, security grills, louvers, awnings, or other devices and are readily openable from the inside.

In Florida, security grills or louvers may be used if they open in one operation with the secondary means of egress.

_Yes _No _Not Applicable _Further Study Notes:

3.5 g Basement windows are protected from unauthorized entry by security grills or window well covers.

_Yes _No _Not Applicable _Further Study Notes:

3.5 h Tempered and wired glass meet building code and Consumer Product Safety Commission requirements when used in doors, sidelites, locations near the floor, and other 'hazardous' locations specified by the code.

Note that the 2003 edition of the International Building Code has dropped an exemption for wired glass from high-impact-resistance requirements in K-12 facilities and it may no longer be used in new construction. Newer fire-rated glass products can be used in its place.

_Yes _No _Not Applicable _Further Study Notes:

3.6. Roofs

3.6 a Built-in roof access is from inside the building only. The access point is locked and inside a secure room.

-- In new buildings, avoid the use of permanent exterior roof access ladders or exterior building materials and architectural elements that allow climbing to obtain roof access.
-- In existing buildings, apply slippery finishes or coatings to exterior pipes and columns and otherwise block unauthorized access to the roof.

_Yes _No _Not Applicable _Further Study Notes:

3.6 b Mechanical equipment enclosures on the roof are secured and protected from unauthorized access or vandalism.

_Yes _No _Not Applicable _Further Study Notes:

3.6 c Access into the school through skylights is blocked by security grilles or other devices.

_Yes _No _Not Applicable _Further Study Notes:

3.6 d Roof parapets are low enough to allow visual surveillance of the roof from the ground.

_Yes _No _Not Applicable _Further Study Notes:

3.6 e Heavy roofing materials such as tile and slate are securely attached to the structure, especially over points of egress.

Falling roof tiles are a safety hazard.

_Yes _No _Not Applicable _Further Study Notes:

3.7. Canopies, Awnings, Breezeways, and Covered Walkways

3.7 a Covered walkways and adjoining posts, structures, walls, planters, etc., do not serve to provide climbing

access to adjoining windows, roofs, or other upper-level areas.

_Yes _No _Not Applicable _Further Study Notes:

3.7 b Covered walkways and their surroundings are adequately lit to promote visual surveillance while in use.

_Yes _No _Not Applicable _Further Study Notes:

3.7 c Windows in occupied areas of the building overlook walkways for natural surveillance.

_Yes _No _Not Applicable _Further Study Notes:

3.7 d Exterior entrance canopies and walkways are engineered to withstand high winds and seismic activity.

_Yes _No _Not Applicable _Further Study Notes:

3.8. Courtyards

3.8 a Lines of sight across courtyards are unobstructed so one person can supervise the entire area.

_Yes _No _Not Applicable _Further Study Notes:

3.8 b Entries into courtyards from the exterior of the school are controlled and lockable.

_Yes _No _Not Applicable _Further Study Notes:

3.8 c Courtyard entries are next to administration or staff spaces, with windows permitting visual surveillance.

_Yes _No _Not Applicable _Further Study Notes:

3.8 d Courtyards are configured to eliminate unauthorized after-hours access.

_Yes _No _Not Applicable _Further Study Notes:

3.8 e Windows in occupied areas of the building overlook courtyards.

_Yes _No _Not Applicable _Further Study Notes:

3.8 f Courtyard entry doors are wide enough to prevent congestion.

Avoid using swinging doors that must be held open by students. Mishaps at swinging doors are a common cause of fighting, especially in middle schools.

_Yes _No _Not Applicable _Further Study Notes:

3.8 g Outer courtyard walls are not climbable and outside seating, planters, and landscaping features are far enough from courtyard enclosures to eliminate climbing opportunities.

_Yes _No _Not Applicable _Further Study Notes:

3.9. Portable, Modular, or Temporary Classrooms

3.9 a Portable classrooms are not used.

This is preferable from a safety viewpoint but unrealistic for many schools.

_Yes _No _Not Applicable _Further Study Notes:

3.9 b The location of portables has been carefully thought out to optimize security.

a) Windows from the main building overlook the school's portable classrooms and the pedestrian paths to them.
b) Portables are placed together as much as possible to prevent avoidable sprawl, but are sufficiently separated from one another and from permanent structures to meet fire code requirements.
c) Portables are gathered within security fencing, but have direct access to the main school.
d) Portables are reasonably close to the main school so students aren't forced to walk long distances between buildings.
e) Evacuation paths are pre-determined to avoid unreasonable time or distance requirements.
f) Power and computer cabling are run in a manner that makes them resistant to vandalism, such as underground.
g) Ramps meet ADA requirements, running 1 foot in length for every inch of rise.
h) Positioning, lighting and screening decisions maximize natural surveillance between and under portables.
i) Walkways to portables are direct, logical and well indicated with signs or markings.
j) Isolated portables are monitored by CCTV cameras.

_Yes _No _Not Applicable _Further Study Notes:

3.9 c Portables have adequate internal security features.

a) Windows or fisheye viewers permit people inside the classroom to see people outside the classroom.
b) Communication devices, including the PA system, allow teachers and the office to reach each other.
c) Classrooms can be locked and unlocked from inside the classroom by the teacher.
d) Sliding windows have lift and slide protection against burglars.

_Yes _No _Not Applicable _Further Study Notes:

3.9 d Portables are clearly and consistently identified with numbers, words, icons, or colors, without contradictory markings.

_Yes _No _Not Applicable _Further Study Notes:

3.9 e Portables are adequately tied down, consistent with local wind resistance requirements and building regulations.

_Yes _No _Not Applicable _Further Study Notes:

3.9 f Trailer hitches and tongues have been removed to prevent injuries.

_Yes _No _Not Applicable _Further Study Notes:

3.9 g Access beneath portables is restricted with grates, fencing, siding, or other material. There are no spaces suitable for hiding people, contraband, weapons, or incendiary or explosive devices.

In high risk locations, see-through fencing may be best because nothing can be hidden behind it.

_Yes _No _Not Applicable _Further Study Notes:

3.10. Entryways

3.10 a The number of building entryways is kept to the minimum needed, and all are controlled or supervised.

_Yes _No _Not Applicable _Further Study Notes:

3.10 b The main point of entry is at the front of the school and is readily identifiable.

_Yes _No _Not Applicable _Further Study Notes:

3.10 c The main entry, or a supervised, controlled, designated secondary entry, is the closest entry option for visitors approaching after parking.

_Yes _No _Not Applicable _Further Study Notes:

3.10 d The areas directly outside and inside at the main point of entry are well-lit, sheltered from the elements, and spacious enough to avoid becoming overcrowded.

_Yes _No _Not Applicable _Further Study Notes:

3.10 e Entry access is adequately controlled by a combination of direct supervision, limited points of entry, and security technology.

_Yes _No _Not Applicable _Further Study Notes:

3.10 f Entries have adequate space for security screening, including space for queuing, equipment, and pulling students aside for more thorough investigation.

If built-in metal detectors are going to be used, contact manufacturers to determine space needs.

_Yes _No _Not Applicable _Further Study Notes:

3.10 g Entry walkways and entry doors are wide enough to avoid overcrowding at peak times.

_Yes _No _Not Applicable _Further Study Notes:

3.10 h Secondary entries are protected from the weather but do not provide places for people to hide.

Alcoves that shield doors and stairs from weather can serve as concealed areas for unwanted activity. Visibility into alcoves is enhanced by the use of chamfered (angled) wall corners and adequate glazing and lighting.

_Yes _No _Not Applicable _Further Study Notes:

3.10 i Signs spell out behavioral expectations, access-restrictions, and applicable local and state regulations.

_Yes _No _Not Applicable _Further Study Notes:

3.10 j If there is covered seating at the main entry or bus loading area, it doesn't obstruct circulation pathways.

_Yes _No _Not Applicable _Further Study Notes:

3.10 k In high risk areas, entries are designed to mitigate explosive blast hazards. Interior and exterior foyer doors are offset from each other. Doors and walls along the line of security screening meet requirements of UL 752, "Standard for Safety: Bullet-Resisting Equipment."

Entry areas should avoid design elements that could entrap an explosion, thus amplifying the impact.

_Yes _No _Not Applicable _Further Study Notes:

3.11. Main Office, Lobby, and Reception Area

3.11 a The main office, lobby, and reception areas are located at the main entry.

_Yes _No _Not Applicable _Further Study Notes:

3.11 b The receptionist can see visitors before they gain entry, and can electronically lock doors to block entry into the building, beyond the lobby, or beyond the reception desk.

_Yes _No _Not Applicable _Further Study Notes:

3.11 c When the main entry doors are unlocked, securable internal foyer doors can oblige visitors to confer with the receptionist to gain entry beyond the foyer.

_Yes _No _Not Applicable _Further Study Notes:

3.11 d Windows facilitate surveillance from the reception area, providing an unimpeded view of adjoining halls, stairwells, bathroom entries, the internal foyer, the main entry, and drop-off and visitor parking areas.

_Yes _No _Not Applicable _Further Study Notes:

3.11 e The reception area includes adequate protective features, including a counter or desk to serve as a protective shield, a panic or duress button to call for help, a telephone, a radio base station if radios are used, and a rear exit or safe haven into which staff can retreat. In unsafe areas, the reception counter area is protected by a bullet-resistant window.

A safe haven is a windowless room with a solid door, easily locked from the inside without requiring a key, and in which there is a telephone for calling for help.

_Yes _No _Not Applicable _Further Study Notes:

3.11 f Seating areas for visitors do not impede foot traffic.

_Yes _No _Not Applicable _Further Study Notes:

3.12. Administrative Areas and Staff Offices

3.12 a Confidential records are separated from the reception area, in locked, vandal- and fire-resistant containers.

_Yes _No _Not Applicable _Further Study Notes:

3.12 b The main office has two-way communication capability with all classrooms.

_Yes _No _Not Applicable _Further Study Notes:

3.12 c The front office has a windowless space or "safe room" with a lockable door and a telephone for emergencies.

_Yes _No _Not Applicable _Further Study Notes:

3.12 d The principal's office has a window or door that can serve as a secondary emergency exit.

_Yes _No _Not Applicable _Further Study Notes:

3.13. Corridors, Circulation, and Lockers

3.13 a Corridor sight lines are maximized.

Recesses, niches, or blind corners are visually exposed with windows, convex mirrors, chamfered (angled) corners, or surveillance cameras, or are shallow enough in depth to not serve as hiding areas, or are sealed off against illicit use.

_Yes _No _Not Applicable _Further Study Notes:

3.13 b Areas for lockers, vending machines, trash containers, fire extinguishers, display cases, cabinets, and water coolers are either low profile or mounted flush with walls to avoid injury and keep a clear view.

_Yes _No _Not Applicable _Further Study Notes:

3.13 c Freestanding objects that could be toppled intentionally or fall during earthquakes are adequately secured.

_Yes _No _Not Applicable _Further Study Notes:

3.13 d Otherwise hidden corridors and stairwells receive visual surveillance through the placement of windowed administrative offices or other spaces occupied by adults or through the use of video surveillance equipment.

_Yes _No _Not Applicable _Further Study Notes:

3.13 e Corridors are well lit with artificial or natural lighting, having no dark or shadowed recesses.

_Yes _No _Not Applicable _Further Study Notes:

3.13 f If hallways double as lockdown or emergency shelter locations, windows can be readily blocked with shutters.

_Yes _No _Not Applicable _Further Study Notes:

3.13 g Wall space is used well, with interior glazing to improve surveillance. Walls are covered with or made of materials that make it easy to display student artwork and posters as a means of promoting territoriality, ownership, and connectivity.

Note that Section 14.7.3.3 of NFPA 101, Life Safety Code, 2003, prohibits teaching materials and childrens' artwork from covering more than 20 percent of the wall area.

_Yes _No _Not Applicable _Further Study Notes:

3.13 h Corridor lighting controls are protected from unauthorized use.

_Yes _No _Not Applicable _Further Study Notes:

3.13 i Corridors are wide enough to prevent crowding and provide adequate room for maneuvering wheelchairs.

-- Corridors are usually cited as the second most common indoor location for school fights (cafeterias are first), primarily because of crowding. Wide corridors prevent crowding and jostling.
-- During class changes, corridors also serve as commons areas, and spacious corridors help reduce undesirable behavior.
-- North Carolina recommends the following corridor widths:
a) Corridors serving classroom feeder corridors and large-group spaces such as cafeterias, media centers, gyms and auditoriums: elementary and middle schools, 10 feet; high schools, 12 feet.
b) Classroom corridors serving more than 2 classrooms, 8 feet.
c) Classroom corridors serving more than 8 classrooms, 9 feet.
d) Corridors with lockers along one wall, add 2 feet; with lockers along both walls, add 3 feet.

_Yes _No _Not Applicable _Further Study Notes:

3.13 j Locker locations and designs do not cause crowding or security problems.

Options to consider:
a) Lockers are easiest to supervise if they are in controlled classrooms, such as homerooms.
b) Lockers in hallways should be mounted flush to the wall so that they don't narrow the hallway.
c) Single lockers lead to less conflict than over and under designs.
d) Spreading lockers out can help avoid congestion and conflict.
e) Unused lockers should be locked.
f) If the supply of lockers is excessive, locking every other locker can help avoid congestion.
g) Locker bays should not block natural surveillance into or around the bays, or the bays should be electronically monitored.
h) Metal mesh doors allow natural surveillance into the lockers.
i) Locker bays should be well lit and allow ample room for circulation.
j) Lockers should be bolted in place.
k) Assign locker privileges selectively and revoke them for related abuse, such as for storing contraband.
l) If nothing else works, consider removing or locking all lockers against any use, even temporarily.

_Yes _No _Not Applicable _Further Study Notes:

3.13 k Exit signs are well maintained, easily seen, and pointing in the right direction.

-- The maintenance program for corridor, stairwell, and exit sign lighting should ensure functioning under normal and emergency power conditions.
-- Expect state or local building codes to be updated to require floor proximity signs, which are needed when heat and smoke drive occupants to crawl along the floor to get out of a building; signs and lights mounted high on the wall or on the ceiling may be of little or no benefit in such situations.
-- Consider glow-in-the-dark technology.
-- Good quality, consistent exit lighting is cost-effective in the long term and worthwhile from a maintenance perspective.
-- Using different exit lighting at different doors makes it harder to efficiently stock, keep track of, and replace parts.
-- See also Means of Egress in Existing Buildings section, below.

_Yes _No _Not Applicable _Further Study Notes:

3.13 l Clear and precise emergency evacuation maps are posted at critical locations. They are customized or posted to match their positions in the building and are protected from vandalism or removal.

_Yes _No _Not Applicable _Further Study Notes:

3.13 m Lockers are locked with school-owned padlocks. The school retains ownership and access to the locks and lockers.

_Yes _No _Not Applicable _Further Study Notes:

3.14. Stairs and Stairwells

3.14 a Stairs are adequately located and designed to avoid congestion and accidents.

-- For efficiently moving large numbers of students, additional sets of stairs may function more safely and effectively than very wide stairs.
-- North Carolina requires single stair runs not to exceed 8 feet without a landing and a minimum stair width of 6 feet for grades 6 through 12.

_Yes _No _Not Applicable _Further Study Notes:

3.14 b Stairwells are adequately lit, including exit signs.

_Yes _No _Not Applicable _Further Study Notes:

3.14 c Stair handrails and guardrails allow visual surveillance from either side of the stairs.

_Yes _No _Not Applicable _Further Study Notes:

3.14 d Stair handrail designs discourage sliding, climbing, or skateboarding.

_Yes _No _Not Applicable _Further Study Notes:

3.14 e Stair risers are enclosed to prevent persons under the stairs from grabbing the ankles of others using the stairs, or under-stair areas are completely blocked off.

_Yes _No _Not Applicable _Further Study Notes:

3.14 f Windows or openings provide natural surveillance into stairwells located on outer walls.

_Yes _No _Not Applicable _Further Study Notes:

3.14 g Where natural surveillance is inadequate, enclosed stairwells are electronically monitored.

_Yes _No _Not Applicable _Further Study Notes:

3.14 h In high risk areas or areas subject to earthquakes or high winds, stairwell materials and designs are adequate to prevent their collapse and to limit the extent of falling debris that would impede safe passage and reduce the flow of evacuees.

_Yes _No _Not Applicable _Further Study Notes:

3.15. Classrooms

3.15 a In classrooms with smoke or heat detectors, the detectors are working, paint-free, un-obscured, and unobstructed.

_Yes _No _Not Applicable _Further Study Notes:

3.15 b Classrooms are well lit, with as much natural light as possible.

Well lit classrooms are safer classrooms, and natural light does not depend on a power source.

_Yes _No _Not Applicable _Further Study Notes:

3.15 c All parts of the classroom are visible from the classroom door. There are no hidden areas anywhere in the classroom.

This aids natural surveillance and reduces opportunities for misbehavior.

_Yes _No _Not Applicable _Further Study Notes:

3.15 d All classrooms are on the public address system.

_Yes _No _Not Applicable _Further Study Notes:

3.15 e Intercoms, phones, or radios allow for two-way verbal communication between all classrooms and the

school's administrative or security offices.

_Yes _No _Not Applicable _Further Study Notes:

3.15 f Interior windows between classrooms and corridors are unobstructed by posters, pictures, or other posted materials.

_Yes _No _Not Applicable _Further Study Notes:

3.15 g Interior windows between classrooms and hallways promote visual surveillance in both directions.

_Yes _No _Not Applicable _Further Study Notes:

3.15 h Classrooms can be locked down quickly by faculty from inside the classroom without entering the hall. Door and window security hardware allows egress from classrooms at all times.

_Yes _No _Not Applicable _Further Study Notes:

3.15 i Classroom doors are made of metal or solid wood, with heavy duty, vandal-resistant locks.

_Yes _No _Not Applicable _Further Study Notes:

3.15 j In high risk areas, windows in classrooms facing locations that may be subject to blasts or attack are shatterproof.

See the Windows section, above.

_Yes _No _Not Applicable _Further Study Notes:

3.15 k Classroom windows enhance visual surveillance of the school grounds.

_Yes _No _Not Applicable _Further Study Notes:

3.15 l Classrooms for mobility-impaired students are on the first floor, or are otherwise easy to evacuate without relying on elevators.

_Yes _No _Not Applicable _Further Study Notes:

3.15 m All classrooms have secondary escape routes where required by code. Windows designated for escape are readily operable and are not blocked by grills or screens. The room layout helps teachers maintain surveillance and control over these routes.

_Yes _No _Not Applicable _Further Study Notes:

3.15 n Retractable classroom partitions fully recess into permanent, lockable niches to eliminate hiding places.

_Yes _No _Not Applicable _Further Study Notes:

3.15 o Retractable partitions contain windows or otherwise provide visual access into adjoining spaces.

_Yes _No _Not Applicable _Further Study Notes:

3.15 p Heat-producing appliances are properly guarded.

As a fire safety measure, heat-producing appliances should be avoided in elementary classrooms and controlled via a "kill switch" with pilot light in middle and high schools.

_Yes _No _Not Applicable _Further Study Notes:

3.15 q Teaching materials and children's artwork do not cover more than 20 percent of the wall area.

See Section 14.7.3.3 of NFPA 101, Life Safety Code, 2003.

_Yes _No _Not Applicable _Further Study Notes:

3.16. Media Center

3.16 a The media center, if jointly used by the school and the community, has separate and secure access for school use and after-hours activities, restricting access to other areas of the school.

_Yes _No _Not Applicable _Further Study Notes:

3.16 b The media center is well lit, with no dark or shadowy areas.

_Yes _No _Not Applicable _Further Study Notes:

3.16 c The media center's reception area and circulation desk are near the main entrance and are positioned to control traffic in and out of the area.

_Yes _No _Not Applicable _Further Study Notes:

3.16 d The media center's reception area and circulation desk positions have unobstructed surveillance of the entire area and are able to monitor all users.

Low stacks (max. 4 feet high) parallel to the librarian's line of sight help to accomplish this. Shelves along walls can be full height.

_Yes _No _Not Applicable _Further Study Notes:

3.16 e There are separate, lockable areas for storing media equipment, or other security measures are in place.

_Yes _No _Not Applicable _Further Study Notes:

3.16 f Adequate theft deterrents are used, such as magnetic strips in books, door readers, and alarmed exits.

_Yes _No _Not Applicable _Further Study Notes:

3.16 g Storytelling areas or niches are on one level or, if recessed or elevated, are designed to prevent fall injuries or hidden activities.

_Yes _No _Not Applicable _Further Study Notes:

3.17. Health Clinic/Nurse's Office

3.17 a Clinic equipment and supplies can be locked in an observable area of the nurse's office.

_Yes _No _Not Applicable _Further Study Notes:

3.17 b A vision panel with blinds provides natural surveillance into the area as needed.

_Yes _No _Not Applicable _Further Study Notes:

3.17 c Toilet room doors in health rooms swing outward to prevent students from being trapped if incapacitated.

A fallen student or overturned wheelchair could otherwise block the door.

_Yes _No _Not Applicable _Further Study Notes:

3.18. Guidance Office and Conference Rooms

3.18 a Vision panels with blinds are installed in guidance offices and all other areas where one-on-one adult/child conferencing is conducted.

_Yes _No _Not Applicable _Further Study Notes:

3.19. Restrooms

3.19 a Restrooms are bright, well lit, and easy to supervise.

-- Restrooms are the fourth biggest problem area in schools, primarily because are difficult to supervise.
-- The most common concerns are vandalism, fighting, disorderly conduct, and alcohol and drug use.

_Yes _No _Not Applicable _Further Study Notes:

3.19 b Lighting fixtures have protective, vandalproof covers.

_Yes _No _Not Applicable _Further Study Notes:

3.19 c Group restrooms have visually screened, door-less ("maze") entryways that allow acoustic surveillance from adjacent areas.

_Yes _No _Not Applicable _Further Study Notes:

3.19 d Entry/exit doors on group restrooms are lockable only from the outside and cannot be locked or readily blocked from the inside.

_Yes _No _Not Applicable _Further Study Notes:

3.19 e Stall doors and partitions don't exceed 5'-6" in height and have a 1' clearance above the floor for surveillance. Partitions are bolted to the floor, wall, and ceiling. Doors have operable latches.

_Yes _No _Not Applicable _Further Study Notes:

3.19 f Sinks and hand dryers are located in publicly exposed or semi-exposed areas to deter vandalism and to encourage hand washing.

_Yes _No _Not Applicable _Further Study Notes:

3.19 g Access to and natural surveillance over single user bathrooms with locking doors is adequately controlled, requiring keys, passes, or other means.

_Yes _No _Not Applicable _Further Study Notes:

3.19 h Restroom smoke detectors have vandal-resistant features, such as protective cages or tamper alarms.

_Yes _No _Not Applicable _Further Study Notes:

3.19 i Restrooms are located to maximize visual surveillance, such as near administrative areas.

_Yes _No _Not Applicable _Further Study Notes:

3.19 j Restrooms intended for use by people engaged in after-school activities are conveniently located and can be used without providing access to the rest of the school.

_Yes _No _Not Applicable _Further Study Notes:

3.19 k Restroom fixtures and their hardware are made of vandal-resistant, readily cleanable materials.

_Yes _No _Not Applicable _Further Study Notes:

3.19 l Exposed hot water pipes are insulated and protected with a cover, as required by the accessibility code.

Particularly note under-sink pipes that might come into contact with wheelchair users' legs.

_Yes _No _Not Applicable _Further Study Notes:

3.19 m Restrooms have hard ceilings that prevent hiding contraband in above-ceiling spaces.

_Yes _No _Not Applicable _Further Study Notes:

3.19 n Restrooms have good mechanical ventilation.

California advises against using windows for ventilation in bathrooms because windows can serve as passageways for weapons, people, or contraband.

_Yes _No _Not Applicable _Further Study Notes:

3.19 o Large-event restrooms have two means of entry/egress and can be locked or restricted during normal school operations. Door hardware permits the doors to be locked in the open position during designated events unless the door is in a fire-rated wall.

_Yes _No _Not Applicable _Further Study Notes:

3.19 p Hand dryers, vending equipment, and trash containers are heavy duty, recessed, and fire-resistant. Access to trash containers is lockable.

_Yes _No _Not Applicable _Further Study Notes:

3.19 q Electrical outlets are protected by ground fault circuit interrupters (GFCIs).

_Yes _No _Not Applicable _Further Study Notes:

3.19 r Restrooms are well maintained and do not have an offensive smell. No graffit is present and latches for tiolet stalls are all operable. Mirrors are intact and unbroken.

Well maintained restrooms promote orderly behavior by demonstrating respect for and ownership of property. They draw legitimate users, boosting safety through their presence in larger numbers. Poorly maintained restrooms repel legitimate users, including school staff, thereby reducing supervision.

_Yes _No _Not Applicable _Further Study Notes:

3.19 s Paper towel, liquid soap, and toilet tissue holders are of a see-through design, making it hard to use them as hiding places for contraband. Holders that have been retired from use have all been removed from the walls for similar reasons.

_Yes _No _Not Applicable _Further Study Notes:

3.20. Labs, Shops, and Computer Rooms

3.20 a Rooms for storing equipment, supplies, chemicals, tools, or other items that could be used for dangerous purposes, have adequate, locking doors. Hazard placards on the door conform to the requirements of the fire code.

_Yes _No _Not Applicable _Further Study Notes:

3.20 b Staff have direct surveillance over work and entry areas, with no visual obstructions.

_Yes _No _Not Applicable _Further Study Notes:

3.20 c Labs, shops, and computer room entries have alarm systems to deter breaking and entering.

_Yes _No _Not Applicable _Further Study Notes:

3.20 d Windows in rooms with costly equipment or hazardous materials are highly burglar resistant, or are alarmed.

_Yes _No _Not Applicable _Further Study Notes:

3.20 e Fire extinguishers are located in all laboratory areas.

_Yes _No _Not Applicable _Further Study Notes:

3.20 f Circuits for hazardous machines are controlled via "kill switches."

_Yes _No _Not Applicable _Further Study Notes:

3.20 g Laboratories and vocational shops are equipped with eyewash stations. In existing buildings, they are in good working condition.

_Yes _No _Not Applicable _Further Study Notes:

3.20 h In chemistry labs, logs are maintained for all chemicals and dangerous substances.

_Yes _No _Not Applicable _Further Study Notes:

3.20 i In vocational shops, there is adequate dust removal equipment. In existing buildings, the equipment is in good working order.

_Yes _No _Not Applicable _Further Study Notes:

3.20 j Paint booths, auto shops, welding booths, and fume hoods are well ventilated and exhaust directly to the exterior.

_Yes _No _Not Applicable _Further Study Notes:

3.20 k Sawdust, used oil, and other debris are stored in fire- and vandal-proof containers.

_Yes _No _Not Applicable _Further Study Notes:

3.20 l An electric solenoid key-operated shut-off switch is installed on each gas line in instructional areas.

_Yes _No _Not Applicable _Further Study Notes:

3.20 m Electrical outlets are protected by ground fault circuit interrupters (GFCIs).

_Yes _No _Not Applicable _Further Study Notes:

3.20 n Battery-powered emergency lights are installed in chemical storerooms that do not have windows.

_Yes _No _Not Applicable _Further Study Notes:

3.21. Art Rooms

3.21 a Kilns are located in separate rooms with adequate exhaust fans or ducts that vent directly to the outside.

_Yes _No _Not Applicable _Further Study Notes:

3.21 b Kiln rooms contain no stored goods other than clay products.

_Yes _No _Not Applicable _Further Study Notes:

3.21 c Electrical outlets are protected by ground fault circuit interrupters (GFCIs).

_Yes _No _Not Applicable _Further Study Notes:

3.22. Music Rooms

3.22 a Faculty have a clear view of the entire music room area, including practice and storage room entries.

_Yes _No _Not Applicable _Further Study Notes:

3.22 b There are lockable rooms for storing equipment and instruments.

_Yes _No _Not Applicable _Further Study Notes:

3.22 c The music room has an alarm system to deter breaking and entering.

_Yes _No _Not Applicable _Further Study Notes:

3.22 d Windows in music and practice rooms are burglar resistant or alarmed.

_Yes _No _Not Applicable _Further Study Notes:

3.23. Dance Classrooms

3.23 a Dance classrooms have suspended wood floors or resilient floor covering systems that reduce impact injuries.

_Yes _No _Not Applicable _Further Study Notes:

3.23 b Mirrors in dance classrooms are shatterproof.

_Yes _No _Not Applicable _Further Study Notes:

3.24. Cafeterias and Student Commons

3.24 a Cafeterias and common areas have separate entrances and exits into adjacent corridors to reduce crowding and fighting.

_Yes _No _Not Applicable _Further Study Notes:

3.24 b Cafeterias and common areas are well lit and have no shadowy or dark areas.

_Yes _No _Not Applicable _Further Study Notes:

3.24 c Cafeteria and commons area acoustics are designed to keep noise levels low.

Low noise levels reduce occupant stress and the incidence of misbehavior.

_Yes _No _Not Applicable _Further Study Notes:

3.24 d There is a clear view of the entire dining area and serving line from a controlled entry point.

_Yes _No _Not Applicable _Further Study Notes:

3.24 e There is sufficient circulation space between and around table areas and serving lines.

_Yes _No _Not Applicable _Further Study Notes:

3.24 f The kitchen and serving areas can be secured during and after school hours.

_Yes _No _Not Applicable _Further Study Notes:

3.24 g Cafeterias or commons used after school are designed to prevent unauthorized access further into the building.

_Yes _No _Not Applicable _Further Study Notes:

3.24 h Walk-in coolers, if accessible to students, may be secured when not directly supervised. There is a door release inside the cooler and a distress button that allows an occupant to call for help. In existing buildings, the door release is fully operational.

_Yes _No _Not Applicable _Further Study Notes:

3.24 i Fixed kitchen equipment does not block emergency exit paths.

_Yes _No _Not Applicable _Further Study Notes:

3.24 j Kitchen and cafeteria evacuation plans are posted and readily visible, as are "Helping a Choking Victim" and hand-washing instructions.

_Yes _No _Not Applicable _Further Study Notes:

3.25. Auditoriums and Theaters

3.25 a There are separate, secure, controllable entrances to the auditorium or theater for after-hours activities. Attendees do not have uncontrolled access to the rest of the school.

_Yes _No _Not Applicable _Further Study Notes:

3.25 b Clear sight lines allow for visual surveillance.

_Yes _No _Not Applicable _Further Study Notes:

3.25 c Seating and circulation layouts reduce or eliminate traffic flow conflicts.

_Yes _No _Not Applicable _Further Study Notes:

3.25 d There is a secure area for stage equipment, props, and tools.

_Yes _No _Not Applicable _Further Study Notes:

3.25 e Access to catwalks, scaffolding, and upper level platforms is limited and controlled.

_Yes _No _Not Applicable _Further Study Notes:

3.25 f Stage lighting and electrical equipment controls are located in locked panels.

_Yes _No _Not Applicable _Further Study Notes:

3.25 g The auditorium or theater layout avoids features that could contribute to accidental falls.

An alternative to an orchestra pit is to provide several rows of removable seats at the front of the auditorium.

_Yes _No _Not Applicable _Further Study Notes:

3.25 h Stage draperies are non-flammable or fire-retardant.

_Yes _No _Not Applicable _Further Study Notes:

3.26. Gymnasiums

3.26 a The gym has separate, secure entrances for school use and after-hours activities. Gym users do not have uncontrolled access to the rest of the school.

_Yes _No _Not Applicable _Further Study Notes:

3.26 b There is a secure area for gym equipment, with an entry visible to gym users and staff.

_Yes _No _Not Applicable _Further Study Notes:

3.26 c Walls and entryways are free of hiding places, such as deep niches or recesses.

_Yes _No _Not Applicable _Further Study Notes:

3.26 d Retractable partitions can be fully recessed into walls and locked in place.

_Yes _No _Not Applicable _Further Study Notes:

3.26 e Basketball courts are provided with safety borders that are at least 6 feet wide on the sides and 8 feet wide on the ends.

Walls or protrusions at the ends of courts may require padding where safety borders are too narrow.

_Yes _No _Not Applicable _Further Study Notes:

3.26 f Bleachers are safe, secure, and in good condition, free of sharp edges and splinters. They have guardrails, handrails, and fall-through protection as appropriate. If the bleachers are electronically controlled, they are equipped with safety features that prevent entrapment of people as they close. Control buttons are located in a position to provide the operator with a clear view around, under, and behind the bleachers.

_Yes _No _Not Applicable _Further Study Notes:

3.27. Locker Rooms

3.27 a Coaches offices are located at locker room entries, providing unobstructed views of the locker rooms.

_Yes _No _Not Applicable _Further Study Notes:

3.27 b Locker rooms are designed to maintain natural surveillance, with lockers recessed in perimeter walls and adequately spaced to avoid overcrowding, or, if freestanding, limited in height to 4 feet or placed in rows perpendicular to office window walls.

_Yes _No _Not Applicable _Further Study Notes:

3.27 c The locker room has a solid ceiling so contraband cannot be hidden in above-ceiling spaces.

_Yes _No _Not Applicable _Further Study Notes:

3.27 d Locker room windows, fixtures, and hardware are vandal and impact resistant, and mirrors are shatterproof.

_Yes _No _Not Applicable _Further Study Notes:

3.27 e Lockers are of the open mesh type, making concealment of prohibited items more difficult.

_Yes _No _Not Applicable _Further Study Notes:

3.27 f Electrical outlets are protected by ground fault circuit interrupters (GFCIs).

_Yes _No _Not Applicable _Further Study Notes:

3.27 g If separate locker rooms are provided for visiting teams, their doors are clearly labeled "Visiting Team Lockers" and are not adjacent to those of home team locker rooms.

Separation and clear labeling help avoid confusion and conflict.

_Yes _No _Not Applicable _Further Study Notes:

3.27 h Lockers are locked with school-owned padlocks. The school retains ownership and access to the locks and lockers.

_Yes _No _Not Applicable _Further Study Notes:

3.28. Interior Doors

3.28 a Door hardware allows staff to quickly lock rooms from the inside without having to step into the hallway.

See also Classrooms, above.

_Yes _No _Not Applicable _Further Study Notes:

3.28 b Door access devices such as master keys or proximity cards allow staff to gain quick entry to any room where students have secured themselves.

_Yes _No _Not Applicable _Further Study Notes:

3.28 c Hardware does not permit criminals or vandals to lock hall doors as a way of significantly slowing down security officers in pursuit.

_Yes _No _Not Applicable _Further Study Notes:

3.28 d Classroom doors can always be opened from the inside for emergency egress purposes.

_Yes _No _Not Applicable _Further Study Notes:

3.28 e Recessed door entries are angled or chamfered.

Chamfered door entry recesses are inset at 45 rather than 90 degrees to reduce opportunities for concealment and to minimize pedestrian collisions and conflicts.

_Yes _No _Not Applicable _Further Study Notes:

3.28 f Interior doors are sized and arranged to reduce congestion and avoid crowding.

-- Multiple single doors reduce congestion and are recommended over double doors.
-- Wider-than-normal (oversize) doors accommodate movement of large items and are recommended for accessible areas, music rooms, vocational development spaces, kitchens, and receiving areas.
-- See similar requirement under the Exterior Doors section, above.

_Yes _No _Not Applicable _Further Study Notes:

3.28 g Recessed doors do not project more than 7 inches into the corridor.

Section 1005.2 of the 2003 International Building Code does not permit a fully opened door to project into a corridor (a path of egress travel) by more than seven inches.

_Yes _No _Not Applicable _Further Study Notes:

3.29. Interior Lighting and Ceilings

3.29 a In areas subject to earthquakes, suspended lighting fixtures, suspended ceiling systems, and other overhead components and objects an are braced and provided with safety wires.

-- An earthquake can subject structural and non-structural building components and their connections to loads for which they were not designed, resulting in injury or death from falling debris.
-- Lighting fixtures, ceiling systems, and other overhead components or objects should be mounted to minimize the likelihood that they will fall and injure building occupants.
-- Equipment mountings should resist forces of 0.5 times the component's weight in any direction and 1.5 times its weight in the downward direction. This does not preclude the need to design equipment mountings for forces required by other seismic standards.
-- Lay-in fluorescent lights must be supported independent of the ceiling grid. Spot lights and track lights must be securely attached to the structure.

_Yes _No _Not Applicable _Further Study Notes:

3.29 b Lighting is designed to be easy to clean, and bulbs and tubes are easy to replace. In existing buildings, the lighting is well maintained.

_Yes _No _Not Applicable _Further Study Notes:

3.29 c Light levels are appropriate and uniform, creating minimal glare or pockets of shadow.

_Yes _No _Not Applicable _Further Study Notes:

3.29 d Daylighting or emergency lighting is provided in areas containing hazardous equipment to enhance safe movement during power interruptions.

_Yes _No _Not Applicable _Further Study Notes:

3.29 e Daylighting is provided extensively throughout the school as a means of enhancing safety, especially in classrooms, with the exception of mass shelter areas.

See similar criterion under Classrooms.

_Yes _No _Not Applicable _Further Study Notes:

3.29 f Light switches for restrooms and corridors are designed so that students cannot operate them, or the switches are located in lockable panels, are centrally controlled by school staff, or are movement-activated.

_Yes _No _Not Applicable _Further Study Notes:

3.29 g Fluorescent lighting fixtures manufactured before 1979 contain both mercury and PCBs. These have been replaced with PCB-free models and have been disposed of as required by law. Most types of high-intensity discharge (HID) lamps (mercury vapor, metal halide, and high-pressure sodium) also contain mercury.

For more information, see http://www.epa.gov/Region9/cross_pr/p2/projects/pcbs.html

_Yes _No _Not Applicable _Further Study Notes:

3.30. Elevators

3.30 a Elevators have adequate security measures in place to address local conditions. Elevator cabs and landing areas are well lit.

Options include:
a) Limiting use and access to authorized individuals.
b) Installing elevators in the main lobby or other areas with good visual surveillance.
c) Including a 5-foot-deep landing area in front of the elevator, out of hallway traffic, to minimize traffic conflicts.
d) Installing video cameras in front of and within elevator cabs.
e) Providing elevator recall and emergency message capability.

_Yes _No _Not Applicable _Further Study Notes:

3.31. Water Fountains

3.31 a Water fountains are wheelchair accessible.

-- Water fountains should be accessibly located.
-- The spout should be at most 36 inches off the floor, with at least 27 inches of clearance for wheelchair users'legs beneath the apron of the fountain.
-- Avoid foot-operated fountains, which don't work for wheelchair users. Push-bar or lever designs work well.

_Yes _No _Not Applicable _Further Study Notes:

3.31 b Water fountains do not impede traffic flow or lead to overcrowding or conflicts.

Options include:
1) Fountains are placed in gathering areas that are typically monitored, or in an area of natural surveillance.
2) Fountains are in recessed areas that can be closed off by a roll-down security grill.

_Yes _No _Not Applicable _Further Study Notes:

3.31 c Water fountains are vandal resistant in materials and placement, solidly mounted, and well secured. Spash guards are made of soft, bendable material.

_Yes _No _Not Applicable _Further Study Notes:

3.32. Vending Machines and Public Telephones

3.32 a Vending machines and public telephones are located in well-monitored activity areas rather than in isolated areas.

_Yes _No _Not Applicable _Further Study Notes:

3.32 b Vending machines are recessed flush in alcoves that do not provide hiding places.

_Yes _No _Not Applicable _Further Study Notes:

3.32 c Outdoor vending machines are adequately secured for local conditions.

-- If subject to vandalism, vending machines can be enclosed in a recessed area that can be closed off by a roll-down security grill or in wire cages with hand openings for operating the machines.
-- Wire cages can look menacing, however, and should be used as a last resort.
-- It's preferable to temporarily remove or relocate machines to a location easier to control.
-- Many health experts advocate doing away with vending machines.

_Yes _No _Not Applicable _Further Study Notes:

3.32 d Vending machines and public telephones don't impede natural surveillance or cause foot traffic conflicts.

_Yes _No _Not Applicable _Further Study Notes:

3.32 e A pay phone, emergency call station, or similar device is available external to the building for after-hours emergencies.

_Yes _No _Not Applicable _Further Study Notes:

3.33. Fire Alarm and Control Systems

3.33 a All fire alarms and control systems meet local code requirements, are maintained by qualified personnel, and are in good working order.

_Yes _No _Not Applicable _Further Study Notes:

3.33 b Fire extinguishers, pull stations, and standpipe cabinets are located where they can be easily monitored.

Pull stations chronically used for false alarms can be put under electronic surveillance.

_Yes _No _Not Applicable _Further Study Notes:

3.33 c Alarms can be perceived and recognized as evacuation signals above ambient noise or light levels by everyone in the area.

_Yes _No _Not Applicable _Further Study Notes:

3.33 d Fire alarm panels are not accessible to unauthorized personnel.

_Yes _No _Not Applicable _Further Study Notes:

3.33 e There is redundant off-premises fire alarm reporting, such as to a fire station or a monitoring center.

_Yes _No _Not Applicable _Further Study Notes:

3.33 f Fire-detection equipment is reasonably protected from incapacitating mechanical or physical impact.

_Yes _No _Not Applicable _Further Study Notes:

3.33 g Outdoor fire detection and response systems are protected against vandalism, corrosion, and the elements.

_Yes _No _Not Applicable _Further Study Notes:

3.33 h An alarm system backup battery or emergency generator can operate the system for 24 hours.

This protects occupants if the power goes out or the school is used as a temporary shelter.

_Yes _No _Not Applicable _Further Study Notes:

3.34. Means of Egress in Existing Buildings

3.34 a Every passageway from corridors and stairs to the street is clear of obstructions or impediments.

Examples of violations are empty boxes, boxes of used fluorescent light tubes, carts, lawnmowers, steel racks, ball racks, and stored equipment, and tripping hazards such as electric cords, tools, lumber, and hoses.

_Yes _No _Not Applicable _Further Study Notes:

3.34 b Exit doors have no locks, chains, or fastenings to prevent escape from inside the building.

_Yes _No _Not Applicable _Further Study Notes:

3.34 c Areas required by the building or fire code to have two exits have, in fact, two functioning exits.

_Yes _No _Not Applicable _Further Study Notes:

3.34 d Exit doors open in the direction of egress travel from areas designed to be occupied by more than 50 people.

_Yes _No _Not Applicable _Further Study Notes:

3.34 e All egress paths are 28 inches or more in width.

Examples of violations include a space of only 17 inches between a desk and wall in an egress path or only 14 inches between rows of desks or tables.

_Yes _No _Not Applicable _Further Study Notes:

3.34 f All exits and the routes to them are clearly visible, conspicuously indicated and reliably illuminated, with signs in appropriate languages, so everyone readily knows the direction of escape from any point. Exit signs are distinctive in color and easily distinguished from decorations, finishes, and other signs. "EXIT" lettering is at least 6 inches high with principal strokes not less than 3/4-inch wide.

Decorations or other materials cannot obstruct the view of, or access through, any element of a means of egress.

_Yes _No _Not Applicable _Further Study Notes:

3.34 g Exits do not rely on passage through rooms or spaces subject to locking.

_Yes _No _Not Applicable _Further Study Notes:

3.34 h Storage or use of flammable or combustible materials in exit ways is explicitly prohibited and school staff, contractors, and others using the school understand this.

_Yes _No _Not Applicable _Further Study Notes:

3.34 i Doors, passageways, or stairways that are neither exits nor leading to exits, but that can be mistaken for exits, are marked with a "NOT AN EXIT" sign or similar designation.

Other appropriate marking would be "To Basement," "To Store Room," "To Mechanical Room," etc.

_Yes _No _Not Applicable _Further Study Notes:

3.35. General Fire Requirements for Existing Buildings

3.35 a All fire doors are tight fitting and in good operational condition.

_Yes _No _Not Applicable _Further Study Notes:

3.35 b There are no openings in walls, floors, ceilings, or above-ceiling spaces that would contribute to the spread of fire or smoke from one room to another.

_Yes _No _Not Applicable _Further Study Notes:

3.35 c Vertical clearance between sprinklers and objects below them is at least 18 inches.

_Yes _No _Not Applicable _Further Study Notes:

3.35 d There is adequate clearance between stored materials and light fixtures or heaters.

_Yes _No _Not Applicable _Further Study Notes:

3.35 e Decorative materials, curtains, draperies, streamers, and fabrics are flame resistant.

_Yes _No _Not Applicable _Further Study Notes:

3.35 f Teaching materials and children's artwork cover 20 percent or less of the wall area.

See Section 14.7.3.3 of NFPA 101, Life Safety Code, 2003.

_Yes _No _Not Applicable _Further Study Notes:

3.36. Storage and Equipment Rooms

3.36 a All rooms containing mechanical, electrical, communications, water, fire, security, and other critical equipment are identified by number or simply as "Equipment Room" to help prevent intruders from knowing where critical equipment is located.

Check with local emergency services to ensure they are comfortable with this kind of unspecific designation.

_Yes _No _Not Applicable _Further Study Notes:

3.36 b Doors to these rooms are made of metal or solid wood, with concealed hinges, pick plates, high quality deadbolt locks, and high security strike plates.

_Yes _No _Not Applicable _Further Study Notes:

3.36 c Chemical storage areas are labeled with appropriate NFPA hazard diagrams.

_Yes _No _Not Applicable _Further Study Notes:

3.36 d Custodial closets containing cleaning solvents or other potentially toxic materials, potentially hazardous tools, or master keys, are kept securely locked.

_Yes _No _Not Applicable _Further Study Notes:

3.37. Non-Structural Building Hazards

3.37 a In high risk, earthquake-prone, or wind hazard areas, roof tiles, parapets, cornices, balconies, signs, satellite dishes, etc., are adequately secured against falling.

_Yes _No _Not Applicable _Further Study Notes:

3.37 b In high risk or earthquake-prone areas, free-standing appliances, office equipment, sculpture, TVs, hanging plants, file cabinets, lockers, bookshelves, aquariums, and other unsecured heavy objects, along with

ductwork, water heaters and other tanks, are adequately secured against falling.

_Yes _No _Not Applicable _Further Study Notes:

3.37 c In high risk or earthquake-prone areas, heavy mechanical equipment is adequately secured. Sensitive equipment and gauges are protected against vibration damage.

For instance, spring isolated equipment is restrained from jumping off isolators.

_Yes _No _Not Applicable _Further Study Notes:

3.37 d In high risk or earthquake-prone areas, partitions that terminate at hung ceilings are properly braced to the structure above.

Heavy partitions are particularly vulnerable to strong earthquake or explosive forces because of their stiffness and mass, and are prone to damage. They are particularly dangerous around stairs and exit ways.

_Yes _No _Not Applicable _Further Study Notes:

3.37 e In high risk or earthquake-prone areas, ceilings--particularly heavy lath or plaster ceilings--are adequately braced or supported.

Suspended ceilings require diagonal bracing. Plaster and gypsum board ceilings and soffits should be secured to structural framing.

_Yes _No _Not Applicable _Further Study Notes:

3.38. Emergency Shelters

3.38 a In high risk or wind hazard areas, spaces used for refuge, such as school gymnasiums, hallways, or other windowless areas are identified, with special consideration given to egress, lockdown ability, and emergency supply storage.

_Yes _No _Not Applicable _Further Study Notes:

3.38 b In wind hazard areas, large shelter spaces such as gyms have adequately reinforced roofs.

Long-span-construction is normally inadequate.

_Yes _No _Not Applicable _Further Study Notes:

3.38 c Areas used as safe havens in high wind areas either have no windows or have readily available shutters or equivalents with which to cover windows and block projectiles or flying glass.

_Yes _No _Not Applicable _Further Study Notes:

4. COMMUNICATIONS SYSTEMS

4.1. Building Notification Systems

4.1 a A mass notification system reaches all building occupants (public address, pager, cell phone, computer override, etc.) and is supplied with emergency power.

Depending on building size, the mass notification system will provide warning and alert information, along with actions to take before and after an incident.

_Yes _No _Not Applicable _Further Study Notes:

4.1 b An uninterruptible power supply (UPS) provides emergency backup power.

-- A UPS should be located at all computerized points, from the main distribution facility to individual data closets and at critical personal computers/terminals.
-- Critical LAN sections should also have uninterruptible power.

_Yes _No _Not Applicable _Further Study Notes:

4.1 c In high risk, earthquake-prone, and wind hazard areas, exterior communication system components are adequately braced and supported. In high risk and earthquake-prone areas, interior communication system components are adequately braced and supported.

Post- event communications are vital for issuing instructions to school administrators, students, faculty, and staff. Some components, such as satellite disc antennas, are easily damaged if not adequately supported.

_Yes _No _Not Applicable _Further Study Notes:

4.2. Radio/Wireless Communication Systems

4.2 a The facility has the necessary transmitters, receivers, and repeaters to ensure radio communication by EMS personnel everywhere in the building.

Radio frequency communication may not be possible within parts of larger schools, particularly if their construction incorporates many steel components, such as structural steel framing, steel bar joists, steel studs, and metal roof and floor decking.

_Yes _No _Not Applicable _Further Study Notes:

4.2 b A sufficient number of hand-held two-way radios or cellular phones are available to staff.

The principal, vice principal, front office staff, playground supervisors, bus drivers, custodians, lunch duty staff, crossing guards, and school resource officers should have these devices.

_Yes _No _Not Applicable _Further Study Notes:

4.3. Telephone Systems

4.3 a The main telephone distribution room is secure.

_Yes _No _Not Applicable _Further Study Notes:

4.3 b The telephone system has an uninterruptible power supply (UPS).

-- Many telephone systems are computerized and need a UPS to ensure reliability during power fluctuations.
-- The UPS is also needed while waiting for emergency power to come on line or to allow an orderly shutdown.

_Yes _No _Not Applicable _Further Study Notes:

4.4. Communications Wiring

4.4 a In high risk areas, communications system wiring is distributed in secure chases and risers, or otherwise secure areas, to prevent tampering.

_Yes _No _Not Applicable _Further Study Notes:

4.4 b Panic or duress alarm buttons are installed at the reception desk.

_Yes _No _Not Applicable _Further Study Notes:

4.4 c In high risk areas, panic button or intercom call boxes are used in parking areas, at entry points, in isolated areas, or along the building perimeter as needed. Where permanent buttons are impractical, individuals carry pendant alarms.

_Yes _No _Not Applicable _Further Study Notes:

5. BUILDING ACCESS CONTROL AND SURVEILLANCE

5.1. Building Access Control

5.1 a A basic security alarm system is installed throughout hallways, administrative offices, exit doors, and rooms containing high-value property such as computers, shop equipment, laboratory supplies, and musical instruments.

-- As needs and budgets allow, use room alarm, motion detection, and electronic surveillance systems at primary and secondary entry points, stairwells, courtyards, unsupervised or hidden areas inside the building and along the building perimeter, rooms containing valuable equipment or student records, and in rooms containing dangerous chemicals such as chemistry labs and maintenance supply areas.
-- Have expert contractors install and maintain these systems.

_Yes _No _Not Applicable _Further Study Notes:

5.1 b Card access systems are installed throughout the campus for use by students and staff.

Card access systems greatly simplify access control and eliminate problems associated with lost keys and massive re-keying.

_Yes _No _Not Applicable _Further Study Notes:

5.1 c Where keyed locks are used, a master key control system is in place to monitor keys and duplicates.

_Yes _No _Not Applicable _Further Study Notes:

5.1 d Devices used for physical security are integrated with computer security systems.

For example, they are used in place of or in combination with user ID and system passwords.

_Yes _No _Not Applicable _Further Study Notes:

5.1 e In high risk areas, magnetometers (metal detectors) and x-ray equipment are installed. Where installed, they are used effectively.

_Yes _No _Not Applicable _Further Study Notes:

5.1 f Access to information on building operations, schematics, procedures, detailed drawings, and specifications is controlled and available only to authorized personnel.

_Yes _No _Not Applicable _Further Study Notes:

5.2. CCTV Surveillance Systems

5.2 a CCTV camera systems cover appropriate areas of the school and record to digital or tape devices, which are set up to send images to printers or be downloaded onto disks. The pictures printed fromthis equipment

provide clear enough images to identify suspects in a court of law.

_Yes _No _Not Applicable _Further Study Notes:

5.2 b CCTV cameras use lenses that capture useful images under existing lighting conditions. Infrared is used if needed for dark areas or at night.

_Yes _No _Not Applicable _Further Study Notes:

5.2 c Cameras are triggered by motion or intrusion.

_Yes _No _Not Applicable _Further Study Notes:

5.2 d Camera housings are designed to protect against tampering, vandalism, and exposure to extreme temperature or moisture.

_Yes _No _Not Applicable _Further Study Notes:

5.2 e Cameras have an uninterruptible power supply and are connected to the building's emergency power supply.

_Yes _No _Not Applicable _Further Study Notes:

6. UTILITY SYSTEMS

6.1. Site Utilities

6.1 a Utility lifelines (water, power, voice, data and internet communications, etc.) are adequately protected from vandalism and natural disasters, preferably by concealing, burying, or encasing. They are protected at points of entry into the building, and braced as needed.

_Yes _No _Not Applicable _Further Study Notes:

6.1 b Critical systems (e.g., main telephone switch room) are protected against extreme temperature and humidity exceeding normal operation limits.

_Yes _No _Not Applicable _Further Study Notes:

6.1 c In high risk areas, there are multiple, redundant locations for the telephone and communications service entering the site and serving the building.

_Yes _No _Not Applicable _Further Study Notes:

6.2. Water Supply and Storage

6.2 a In high risk, wind hazard, and flood prone areas, water supply lines and storage are adequately protected.

Although bottled water can satisfy requirements for drinking water and minimal sanitation, domestic water meets many other needs, such as flushing toilets, building heating and cooling system operation, cooling of emergency generators, humidification, etc.

_Yes _No _Not Applicable _Further Study Notes:

6.2 b Only authorized personnel have access to the water supply and its components.

_Yes _No _Not Applicable _Further Study Notes:

7. EMERGENCY POWER

7.1. General

7.1 a Provisions for emergency power throughout the building, and especially for critical areas, are in place.

_Yes _No _Not Applicable _Further Study Notes:

7.1 b There is an exterior connection for emergency power from sources such as portable generators.

_Yes _No _Not Applicable _Further Study Notes:

7.1 c In high hazard areas, no single critical node allows both the normal electrical service and the emergency backup power to be affected by a single incident. Emergency and normal electrical equipment are installed at different locations as far apart as possible.

_Yes _No _Not Applicable _Further Study Notes:

8. MECHANICAL SYSTEMS

8.1. Fresh Air Intakes

8.1 a -- Fresh air intakes are located on roofs or placed high on exterior walls, at least 12 feet off the ground (or the fourth floor or higher in tall buildings), and away from vehicle exhaust-laden areas.
-- Fresh air intakes are installed at less than 12 feet off the ground, they are within secure fenced areas, cages or enclosures, and are protected by metal mesh sloped at least 45 degrees to reduce the threat of objects being tossed onto them.
-- Air exhusts are located downwind from air intakes and separated by the maximum distance possible.

-- Roof-mounted air intake locations are vulnerable to flying debris in high winds, so wall-mounting is preferable.
-- Wall intake heights should be increased where existing platforms or building features (i.e., loading docks, retaining walls) might provide access to them.

_Yes _No _Not Applicable _Further Study Notes:

8.2. Air Handling and Filtration

8.2 a There is a master ventilation system shut-off in the principal's office or other designated area, making it possible to help control the spread of airborne contaminants through the ventilation system from any source, from chemical spills to volcanic ash fall to chemical-biological-radiological (CBR) attack.

_Yes _No _Not Applicable _Further Study Notes:

8.2 b Critical air systems have been balanced after initial construction or rebalanced after later renovation.

_Yes _No _Not Applicable _Further Study Notes:

8.2 c Functional, tight-sealing fire dampers are installed and operational at all fire barriers, as required by building and fire codes.

_Yes _No _Not Applicable _Further Study Notes:

8.2 d In high risk areas, a smoke evacuation system with adequate purge capacity is operational, installed

facing away from high-risk buildings, with controls and wires protected against damage, and connected to emergency power.

_Yes _No _Not Applicable _Further Study Notes:

8.3. Equipment Inspection, Maintenance, Recommissioning, and Testing

8.3 a There are well-maintained records of fire inspections by fire officials, elevator inspections by building officials, and maintenance logs for all mechanical equipment.

_Yes _No _Not Applicable _Further Study Notes:

8.3 b Major mechanical, electrical, plumbing, security, communications, and other systems are maintained, recommissioned, and tested on a preventive maintenance schedule, by trained workers in cooperation with security staff.

_Yes _No _Not Applicable _Further Study Notes: