

NCEF Assessment Guide

SCHOOL GROUNDS AND SITE ACCESS CONTROL

Use the following questions to think about ways of increasing safety and security in your school. For more information, see *Mitigating Hazards in School Facilities*, <http://www.ncef.org/safeschools/index.cfm>.

Location _____ Date _____

See also **OUTDOOR RECREATIONAL FACILITIES** and **EMERGENCY COMMUNICATIONS, POWER, FUEL, AND WATER**.

1. Site Surveillance

■ Can 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 Note:

■ Are site entry points positioned so one individual can monitor as many entries as possible? Nothing should block this means of visual surveillance, such as signs, trees, shrubs, or walls.

Yes No Not applicable Further study Note:

■ Is natural surveillance from the surrounding neighborhood maintained, allowing neighbors and passing patrol cars to help serve as guardians of the school?

Yes No Not applicable Further study Note:

■ Are there are any hidden areas on the site? In many cases, landscaping, signs, vending machines, bus shelters, trash receptacles, mailboxes, storage sheds, or street furniture can be altered or moved to improve natural surveillance.

Yes No Not applicable Further study Note:

■ Are there hidden areas adjacent to the school that might provide offenders with "cover" or provide students with a location for illicit activities? Have they been made safer by opening them up, exposing them, sealing them off, or other measures?

Yes No Not applicable Further study Note:

2. Site Territoriality-Maintenance

■ Are the school site and buildings well maintained, reinforcing territoriality? Are there 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. Where necessary and possible, exterior walls should be treated to repel graffiti or tolerate repeated cleaning, and game lines should be provided on walls and surfaces in play areas so that students are not tempted to create their own.

Yes No Not applicable Further study Note:

■ Does the school have a marquee or other sign visible from beyond school property that clearly identifies the school by name?

Yes No Not applicable Further study Note:

- Are site entry points clearly marked?

Yes No Not applicable Further study Note:

- Do adequate signs, postings, or window decals direct all visitors to the main site entry points to gain permission to enter? Are illustrations, such as a map with arrows showing visitors the route to the main entry, included where appropriate? Signs should be simple, readable, well lit, written in all relevant languages, located at all entry points onto the property and at all entry points into the school, and easy to read from an appropriate distance, such as from a car window when approaching the site by car.

Yes No Not applicable Further study Note:

- Are school property lines clearly marked, establishing territoriality? Boundaries between joint-use areas and school-only areas should be 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 Note:

- Have future development plans in the surrounding area been identified and has the school site development planning been adjusted accordingly?

Yes No Not applicable Further study Note:

- Are separate wings, separate buildings, and stand-alone, portable or modular classrooms 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 Note:

3. Site Access Control

- Are entry points to the site kept to a minimum?

Yes No Not applicable Further study Note:

- Are there are at least two entry points so that if one is blocked, the other can be used?

Yes No Not applicable Further study Note:

- Do site entries provide for the ready passage of fire trucks and other emergency vehicles?

Yes No Not applicable Further study Note:

- Can unsupervised site entrances be secured during low-use times for access control purposes and reinforce the idea that access and parking are for school business only? Are gates available for closing access points when necessary?

Yes No Not applicable Further study Note:

- Do perimeter fences, walls, or "hostile vegetation" provide sufficient access control, surveillance and territoriality? Fencing options, including their pros and cons, include:

- A solid wall or fence blocks natural surveillance and can attract graffiti.
- A stone or concrete block wall can be an effective barrier against bullets.
- A solid wall or fence can enhance privacy.
- Wire mesh fencing usually provides foot holds, making it easy to climb over.
- Wire mesh fencing is relatively easy to vandalize but often the most economical option.
- Smaller gauge wire mesh may deter climbing.

- Powder-coated wire mesh fencing can be more aesthetically pleasing.
- Wrought iron fencing is low maintenance, vandal resistant, without blocking surveillance or providing foot holds.
- A short fence can establish territoriality, but is of limited value for controlling access.
- 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 student trying to escape to or from the site.
- "Hostile 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 Note:

4. School Surroundings

- Have potential threats or targets near the school been identified, along with their possible impact? Are appropriate crisis plans in place? Examples of potential threats include nearby chemical plants, gas lines, heavy truck traffic, and railroad lines. Potential targets include major government buildings, structures with high symbolic value, power plants, communications towers, and dams.

Yes No Not applicable Further study Note:

5. High Risk Sites

- Is the perimeter of the site secured to a level that prevents unauthorized vehicles or pedestrians from entering, and does this occur as far from the school building as possible? Anti-ram protection may be provided by adequately strengthened bollards, street furniture, sculpture, landscaping, walls, and fences. Anti-ram protection should be able to stop the threat vehicle size/weight at the speed attainable by that vehicle at impact. If 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 a vehicle's approach.

Yes No Not applicable Further study Note:

- Can vehicle entry beyond checkpoints be controlled, permitting entry by only one vehicle at a time?

Yes No Not applicable Further study Note:

- Is there space outside the protected perimeter to pull over and inspect cars?

Yes No Not applicable Further study Note:

- Are there perimeter barriers capable of stopping vehicles?

Yes No Not applicable Further study Note:

- Are manholes, utility tunnels, culverts, and similar unintended access points to the school property secured with locks, gates, or other appropriate devices, without creating additional entrapment hazards?

Yes No Not applicable Further study Note:

- In areas subject to chemical spills, is the school sited in a depression or low area that can trap heavy vapors or inhibit natural decontamination by the prevailing winds?

Yes No Not applicable Further study Note:

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

Yes No Not applicable Further study Note:

- Do bomb threat evacuation sites remain confidential to administrators, staff, and law enforcement?

Yes No Not applicable Further study Note:

- Are outdoor containers in which explosives can be hidden (such as garbage cans, mailboxes, and recycling or newspaper bins) kept at least 30 feet from the building and are they designed to restrict the size of objects placed inside them or to expose their contents (by using steel mesh, for instance, instead of solid walls)?

Yes No Not applicable Further study Note:

- In areas considered susceptible to explosive attack, is the stand-off distance between buildings and the nearest parking or roadway at least 75 feet, with more distance for unreinforced masonry or wooden walls? If this is not achievable, consider creating additional stand-off protection through barriers and parking restrictions. More stand-off distance is needed for unscreened vehicles than for screened vehicles. Also consider relocating vulnerable functions within the building.

Yes No Not applicable Further study Note:

6. Earthquake, Wind, and Flood Protection

- In areas prone to flooding, is the site located in a flood plain or is it at high risk if nearby water sources flood? Does the building design incorporate features to protect against flood damage? Can emergency vehicles access the site during high water conditions?

Yes No Not applicable Further study Note:

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

Yes No Not applicable Further study Note:

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

Yes No Not applicable Further study Note:

- In areas prone to earthquakes or high winds, are building setbacks adequate to prevent battering from falling trees or buildings?

Yes No Not applicable Further study Note:

- In areas prone to earthquakes, high winds, flooding, or other natural or man-made hazards, have nearby facilities been identified as safe areas of refuge or community gathering places? The refuge area should not be located in the likely path of falling buildings or trees, nor should it be prone to flooding or adjacent to potential terrorist targets, chemical storage areas, or other high risk facilities.

Yes No Not applicable Further study Note:

- In areas prone to earthquakes and high winds, are roof tiles, parapets, cornices, balconies, signs, satellite dishes, etc., adequately secured against falling?

Yes No Not applicable Further study Note:

7. Landscaping

- Does landscaping reinforce access control, natural surveillance, and territoriality? Careful design can maintain ample sight lines for effective surveillance.
 - Where fences are used to border property, appropriate landscaping can soften edges while communicating to the public the message of privacy.
 - Uninviting neighborhood development can be screened and intrusive noise softened, while discouraging unwanted visitors.
 - In more rural settings, landscaping can define boundaries without the use of fences.
 - Landscaping 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.
 - Hedges should be kept low enough to expose places where people could otherwise hide.
 - 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.
 - Large tree canopies have a tremendous capacity to absorb high-speed wind energy from hurricanes and other storms, thereby reducing storm and wind damage.

Yes No Not applicable Further study Note:

- Are trees located far enough away from buildings or are they trimmed appropriately to avoid providing roof, window, or second story access, damage from falling limbs, 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 Note:

- Are trees well maintained, with dead or weak limbs or trees removed?

Yes No Not applicable Further study Note:

- Are trees 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 Note:

- Are planters, garbage cans, seating, tables, or other amenities on site well maintained, designed for easy maintenance, free of vandalism, and vandal resistant? Do they restrict sidewalk space unreasonably or create logjams for passers-by? Do design features make these amenities unattractive to abuse by skateboarders?

Yes No Not applicable Further study Note:

8. Site and Exterior Building Lighting

- Is exterior lighting uniform and does it eliminate pockets of shadow or glare? Exterior lighting is best evaluated at night.

Yes No Not applicable Further study Note:

- Are exterior lighting fixtures vandal resistant, beyond easy reach (at least 12 to 14 feet off the ground), maintainable, and built with break-resistant lenses or protected by cages or other means?

Yes No Not applicable Further study Note:

- Are lighting fixtures designed to avoid providing handholds for climbing onto the building?

Yes No Not applicable Further study Note:

- Is exterior lighting well maintained?

Yes No Not applicable Further study Note:

- Is the exterior lighting scheme effective for enhancing natural surveillance, discouraging trespassing, and preventing school vandalism?

-- 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.

-- A compromise to a complete blackout is to utilize motion detectors to activate lighting as needed.

-- 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.

-- 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 Note:

- Can exterior lighting controls be centrally accessed from the main administration area?

Yes No Not applicable Further study Note:

- Does school lighting avoid excessive illumination of adjacent neighborhoods?

Yes No Not applicable Further study Note:

9. Traffic Circulation

- Are all vehicle pathways, access points, and interfaces with main thoroughfares designed to avoid accidents, speeding, blind spots and traffic conflicts? Are transitional areas between streets and school access points clearly marked, such as with "School Zone" signs? Traffic control options include:

-- Traffic controls or calming devices such as speed humps, bumps, raised crosswalks or traffic circles that reduce the likelihood of injury due to speeding vehicles.

-- Driveways that curve, change direction, or are broken into short enough segments to prevent cars from building up speed.

-- Driveways that access slower streets directly, but not high speed streets.

-- Signs, fences and landscaping at intersections that do not block vision.

Yes No Not applicable Further study Note:

- Is pedestrian safety addressed by well designed crossing areas and separation from vehicle traffic? Pedestrian safety options include:

-- Lighting, traffic signals, flags, painted crosswalks, signs, and crossing guards that are visible to drivers and that are effective.

-- Electronically controlled "Walk/Don't Walk" lights with countdown displays and push buttons.

-- Pedestrian islands or median strips that provide safe havens for students crossing streets.

-- Pedestrian bridges, walking or biking paths that provide alternatives to walking near traffic.

Yes No Not applicable Further study Note:

- Does emergency vehicle access around the building meet 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 Note:

■ Are bus, car, pedestrian and bike traffic reasonably safe from each other at entry and exit points as well as throughout the site, and do traffic calming strategies discourage speeding? Options include raised and marked pedestrian or bicycle crossings, median strips, pedestrian safety islands, one way traffic, speed bumps, speed humps, and the elimination of blind spots or their remediation through the installation of convex mirrors.

Yes No Not applicable Further study Note:

■ Is handicapped parking located on the shortest route from adjacent parking via an accessible path to an accessible entrance?

Yes No Not applicable Further study Note:

■ Is site circulation at peak loading and unloading times acceptable, without vehicle or pedestrian conflicts?

Yes No Not applicable Further study Note:

■ Are vehicle circulation routes to service and delivery areas, visitors' entry, bus drop-off, student parking, and staff parking separated as needed and do they function safely in the context of the site?

Yes No Not applicable Further study Note:

■ Where there are roadways through the site, are they serpentine or otherwise indirect or do they include traffic calming features, with gates or barriers as needed? Do signs prohibit through traffic?

Yes No Not applicable Further study Note:

■ Are designated entries, routes, and parking lots for after-hours use clearly identified and controlled within the context of the site?

Yes No Not applicable Further study Note:

■ Are hiding places minimized or eliminated along pedestrian routes? Hiding places can be exposed to natural surveillance by trimming landscaping, improving lighting, removing solid fencing, or installing convex mirrors.

Yes No Not applicable Further study Note:

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

■ Can buses 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? Do students have to walk in front of the bus or other traffic to move between the bus and the school?

Yes No Not applicable Further study Note:

■ Do busses have to back up to turn or park, or do they have to be parked in double rows?

Yes No Not applicable Further study Note:

■ Are areas where students congregate while waiting for buses, and associated pedestrian paths, adequate to avoid overcrowding?

Yes No Not applicable Further study Note:

■ Are curb lanes adjacent to school facades marked to prohibit parking?

Yes No Not applicable Further study Note:

■ Are sheltered areas provided in clearly designated, logical locations for students waiting to board buses or to be picked up by parents? Are they large enough to avoid conflict over limited space and located in a position that allows for natural surveillance from the main office?

Yes No Not applicable Further study Note:

■ Are parent drop-off and pick-up zones clearly designated and separated from bus traffic?

Yes No Not applicable Further study Note:

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

Yes No Not applicable Further study Note:

11. Vehicle Parking

■ Are parking areas within view of the main office, other staffed areas, or surveillance cameras?

Yes No Not applicable Further study Note:

■ Do signs or posted rules clearly identify who is allowed to use parking facilities and when they may do so?

Yes No Not applicable Further study Note:

■ Is visitor parking located near the main entrance, with clear signs directing visitors to the main office?

Yes No Not applicable Further study Note:

■ In high schools, are parking spaces numbered and marked for the designated users: students, faculty, staff, and visitors? Are unassigned parking spaces minimized, especially in student parking zones?

Yes No Not applicable Further study Note:

■ In high schools, is a section of the parking lot 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 for staff to pay attention to cars coming and going during the school day.

Yes No Not applicable Further study Note:

■ Is access to parking areas limited by curbs, fencing, gates, and a minimum number of entry points?

Yes No Not applicable Further study Note:

■ Can gates 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 Note:

■ Are student and staff parking areas separated or mixed appropriately for the school's circumstances?
-- Separate parking areas may protect staff's cars from vandalism. They can also make it easier to manage parking overload.
-- Staff 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 can provide adult supervision in areas prone to inappropriate behavior in student vehicles.

Yes No Not applicable Further study Note:

■ Do school expansion plans include anticipated parking expansion? Note that parking patterns predict entry points; if drivers start using a new lot on the south side, they will enter and exit on the south side regardless of where the official entry is. Plans for expanded parking should anticipate this by adding a fully controlled entry that serves the new area.

Yes No Not applicable Further study Note:

■ Are bicycle parking areas sheltered, securable, and readily observable from inside the school? Do rack designs make it possible to use U-locks or other effective locking devices?

Yes No Not applicable Further study Note:

■ Are bicycle routes located to maximize surveillance from inside the school?

Yes No Not applicable Further study Note:

12. Dumpster Enclosures

■ Are dumpsters 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 Note:

■ Are dumpsters and their enclosures positioned so that they cannot be used as ladders for gaining access to the school roof?

Yes No Not applicable Further study Note:

13. Site Utilities

■ Is access to site utilities, such as electrical transformers, generators, and meters, limited and secure, and is exposed equipment protected against vandalism and vehicular damage?

Yes No Not applicable Further study Note:

■ Do site utilities create hiding places?

Yes No Not applicable Further study Note:

■ Do site utilities impede access by emergency vehicles?

Yes No Not applicable Further study Note:

■ Are exterior mechanical equipment enclosures lockable? Do doors have protected hasps, hinges, and deadbolt locks or a high security padlock? Do hasps and hinges have secure fasteners and are hinge pins non-removable?

Yes No Not applicable Further study Note:

■ Can exterior mechanical equipment be climbed upon and is it protected from thrown objects?

Yes No Not applicable Further study Note:

■ Is exterior mechanical equipment reachable by vehicles protected with bollards or other devices?

Yes No Not applicable Further study Note:

■ Do meter locations allow access for meter readers without compromising access control for secure areas of the school?

Yes No Not applicable Further study Note:

■ Are fire hydrants on or around the site readily visible and accessible?

Yes No Not applicable Further study Note:

■ Are school buildings and structures located an appropriate distance from power transmission lines? California recommends the following minimum distances between school facilities and power transmission lines:

- 100-110 kV line, 100 feet from easement
- 220-230 kV line, 150 feet from easement
- 345 kV line, 250 feet from easement

Yes No Not applicable Further study Note:

14. Storm Water Retention Areas

■ Where used, are storm water retention areas 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 Note:

■ Does fencing around enclosed storm water retention areas provide footholds for climbing or interfere with natural surveillance of these areas or other parts of the site?

Yes No Not applicable Further study Note:

■ Are storm water pipes over 15 inches in diameter leading to or from storm water retention areas protected with appropriate grating or metal rebar to prevent access into the retention area or school site?

Yes No Not applicable Further study Note:

Additional notes and comments:
