Florida Safe School Design Guidelines

Strategies to Enhance Security and Reduce Vandalism

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Florida Department of Education
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Florida Safe School Design Guidelines
Strategies to Enhance Security and Reduce Vandalism

A Research Report for the Florida Department of Education, Office of Educational Facilities

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This document updates and replaces the 1993 Safe School Design Guidelines. Portions of the original 1993 document written by The Florida Center for Community Design + Research, University of South Florida, have been incorporated into this report.

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Introduction

Fundamental Ideas and Orientation

The Guidelines presented here are based on the fundamental idea that the proper design and management of the physical environment can help prevent and deter criminal behavior in Florida's schools and community colleges. The growing body of scientific evidence to support this suggestion comes from the field of place-based crime prevention, which early on produced theories of Defensible Space (Newman 1973), Crime Prevention Through Environmental Design (Jeffrey 1971, 1977, Crowe 2000), Environmental Criminology (Brantingham 1981), and Situational Crime Prevention (Clarke 1997). These initial, interconnected approaches to crime prevention have produced a modern stream of research and applications that explore crime prevention strategies relative to educational institutions and their unique place in society (see for example Schneider et al, 2000, American Institute of Architects 2001, Duke 2001, National Crime Prevention Council 2002). This work is applicable to Florida schools and community colleges, and these Guidelines illustrate – through text and drawings – how school architects, facility managers, risk managers, planners, and others can translate these crime prevention ideas into action. This guide also is intended to serve school resource officers, school administrators, and the general public as well.

Research Approach

The Guidelines are based on research and studies of schools and crime prevention from across the United States and the world (see the Bibliography, Appendix B) on site visits to schools and community colleges throughout Florida conducted by the research team, and on survey responses gathered between May 15 and August 14, 2002, from a wide variety of individuals who have day-to-day responsibilities dealing with school and community college design, safety, and administrative issues (see the Research Report, Appendix A). Their experiences and insights as noted in questionnaire responses and through telephone interviews, as well as the input of the Project Steering Committee, have contributed significantly to the quality of the information and ideas contained in this document.

Organization of the Guidelines

The organizing scheme of the Guidelines is to move from the largest level or scale of concern – the school or community college "Site Design" – progressively down to the smallest and most specific scale of concern – "Systems and Equipment." In so doing, the Guidelines present the design principles identified in Section 423, 7 (h) of the 2001 Florida Building Code – "*Natural Access Control, Natural Surveillance and Territorial Integrity*" and, where applicable, related "*Management*" concerns that are either identified in the Code principles or are suggested by them.

To facilitate ease of use and cross referencing to the Florida Building Code's principles, the Guidelines provide *bullet points* that summarize the most significant elements within each scale of interest and that are keyed, in order of their presentation, to each design principle in the Florida Building Code. For example, at the first and largest scale of concern "Site Design," the Guidelines focus on "Natural Access Control" which is the first design principle identified by the Florida Building Code. Each subsequent element such as "Site Perimeter" is numbered for reference purposes. Following the bullet points, the Guidelines present a more detailed discussion of the points in relation to the major heading. So, for example, under "Site Design" Section 1.7 "Landscaping," the text discusses factors that "must be considered when planning landscape arrangements on school campuses."

Drawings and graphics are provided adjacent to the text that illustrates the most salient design (and, in some cases, management) aspects pertaining to each principle identified. It is important to note that the drawings are for illustrative purposes only, and are not meant to provide prescriptive design solutions.

The Linkage Between Design and Management

The scientific literature dealing with place-based crime prevention demonstrates that the design *and* management of places go hand-in-hand. It is easy to think of these as separate concerns, but they are intimately connected in "real world" application. This is especially germane to schools and community colleges, where day-to-day uses of places can easily affect their original design intent. One simple example to illustrate this is the design of windows facing building entryways to facilitate surveillance, a fundamental crime prevention principle. If administrators allow staff or students to obstruct the windows (by closing blinds or covering them with posters), their effectiveness is severely compromised. Management policies and practices must therefore be linked to design so as to complement crime prevention and deterrence on a continuing basis. That being said, we emphasize that these guidelines are not intended to dictate management practices or policy, which must remain the province of individual school districts, community colleges, and their respective administrators. Rather, our concern is to highlight the importance of thinking through the connections between design and management so that local administrators can better appreciate the implications that their decisions may have on facility design and use, and ultimately on crime prevention.

Scope of the Guidelines: Conflicts and Contradictions

While the Guidelines seek to be as specific as possible, because of the great variety of conditions found in Florida schools and community colleges, they are necessarily presented to address issues in a general manner. In that sense, the Guidelines do not differentiate between new construction and old construction, or between elementary schools, middle schools, high schools, or community colleges. The research team recognizes, however, that there are indeed differences among regions of Florida, urban and rural areas, and among design, construction, management, budget, and crime issues that affect each of these levels and types of institutions. Administrators are advised to make specific adjustments based upon the unique need of their school or community college. Where possible, the Guidelines suggest approaches or strategies that may be useful to them in that process.

Definition of Terms

ACCESS CONTROL:

The general design/management strategy that is intended to decrease opportunity for crime by denying or increasing the effort required to approach a target or gain entry to a target area. This may also create or increase the perception of risk to the offender. Access control is generally categorized into three types—natural, mechanical, and organized:

> **Natural**: the use of design, including spatial definition and designation strategies, to deny or increase the effort and risk of entry and detection to offenders. Natural access control strategies tend to be more cost effective when they are "designed into" the structure beginning with the initial, schematic planning phases than added by retrofit.

> **Mechanical**: the use of locks, hardened or reinforced doors, gates, fences, bollards, or other similar "target hardening" devices or structures to deny or increase the effort and risk of entry and detection to offenders. These may also be complemented by electronic devices associated with surveillance strategies below.

> **Organized**: the use of human guardianship (whether formal, as in the employment of police or private security personnel, or informal, as when regular employees or residents control a target's site entry) to protect a target or target area by denying entry or increasing the real and perceived effort and risk of entry and detection to offenders.

MANAGEMENT:

Used here in terms of crime prevention theory and practice, management is the appropriate and effective use of resources, including personnel, equipment, and supplies, to preserve, sustain, or repair owned or controlled property so as to achieve crime prevention goals. Wilson and Kelling's "broken windows" theory (1982) suggested that small levels of environmental disorder (such as a broken window, graffiti, uncollected trash, etc.) provide "cues" that no one cares about places (and hence, they are attractive to offenders). There is a presumed developmental sequence to such disorder, such that small problems lead to larger ones, including the possibility of criminal behavior. The function of responsible management, in this context, is to maintain property under their control so as to not send out the "wrong" environmental cues.

SURVEILLANCE:

The general crime prevention strategy that seeks to decrease crime opportunity by keeping intruders under observation and/or by increasing their perception of the risk of being observed Like "access control" above, surveillance is generally divided into three types—natural, mechanical, and organized:

> **Natural**: the use of design, including spatial definition and designation strategies, to increase the actual abilities of guardians to observe intruders, as well as to increase the *perception* of intruders that they may be observed by others. Examples here would include the placement of windows near building entryways and the design of entrance paths so that they put pedestrians in view of observers.

> **Mechanical**: the use of mechanical or electronic devices for observation purposes, such as mirrors,

closed circuit television (CCTV), or sound recording devices. Visual observation is greatly facilitated by appropriate lighting which can help reduce crime opportunity by increasing perceived risks relative to the chances of being observed and can also help reduce the fear of crime.

Organized: the use of human guardianship (whether formal, as in the employment of police or private security personnel, or informal, as when regular employees or residents observe a target or target site) to increase the real and perceived effort and risk of entry and detection to offenders.

TERRITORIAL INTEGRITY:

A phrase derived from Oscar Newman's original notion of **"territoriality"** (1973) which focused on **the physical environment's capacity, through the design and marking of space, to create in users and residents the sense of *responsibility* for and *control* of that space such that they will protect and defend it, if necessary.** Territorial integrity and territoriality are promoted by the clear definitions of boundaries such that intruders (as well as "legitimate" users) can easily determine whether spaces are "public" or "private" in nature. In well-marked and bounded places, intruders can be easily observed and are likely to be challenged by legitimate users or by space guardians. Examples of markers are real space borders and barriers (such as fences and gates, which also serve as access control devices), as well as symbolic markers of space such as street pavers, ornamental gateposts, or entryways. Other space markers which augment territorial integrity include signs and posted maps, which also serve as way finding devices and can be used for "rule setting" in places. Territorial integrity is further promoted by effective access control and surveillance techniques, as defined above.

Site Design

1.1   SITE PERIMETER

<u>Natural Access Control</u>

- Clearly establish and define school property lines.
- Secure the site perimeter and limit access with selected entry points.
- Create boundaries that delineate public, semi-public, semi-private, and private spaces.
- Establish clearly defined and secure boundaries between joint-use facilities and school.
- Where feasible, utilize fencing that does not permit footholds in order to deter unauthorized access.

<u>Natural Surveillance</u>

- Avoid blocking lines of sight with fencing, signage, and landscaping.
- Locate site entry points in areas of high visibility where they can be easily observed and monitored by staff and students in the course of their normal activities.

<u>Territorial Integrity</u>

- Maintain school property to help establish pride of place and a sense of ownership.
- Encourage activities on school grounds that promote community ownership and territorial integrity.

<u>Management</u>

- Utilize fencing materials that resist graffiti.

The location of a school and its relationship to its immediate surroundings is critical in evaluating safety and security concerns. While there is evidence showing that, by and large, schools and community college campuses tend to be safer places than the neighborhoods in which they are located, crime rates and types of crimes in schools nevertheless are affected by their surrounding environment. Despite this, each campus is unique and there are no formulas that can be applied to all. However, there are overarching design principles that are applicable to virtually all locations whether rural,
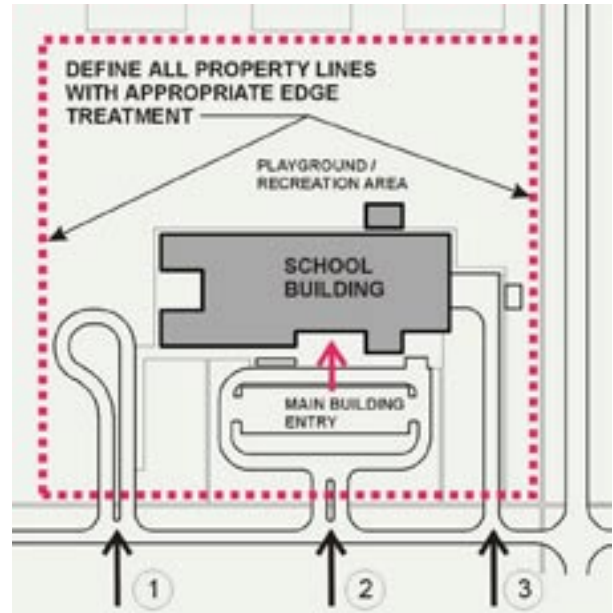
Figure 1.1.1
Secure Perimeter with Limited Entry/Access Points
1) Bus 2) Parent Drop-off 3) Service
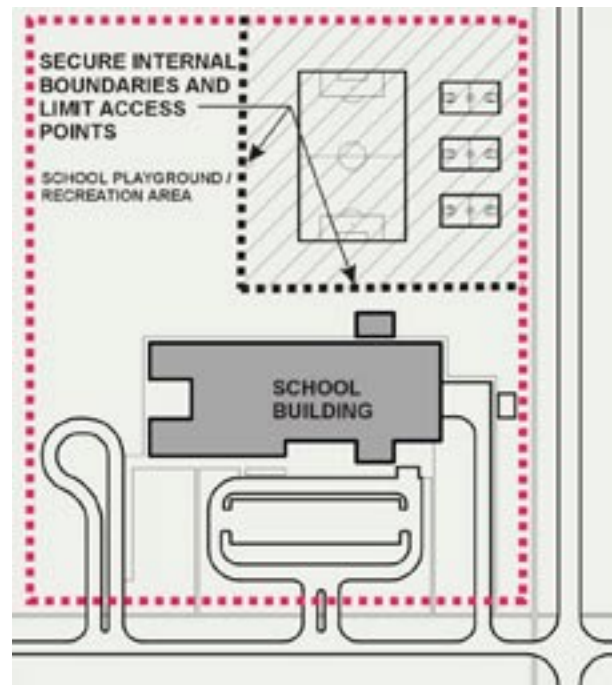
Figure 1.1.2
Joint Use Recreational Facilities
School/Community

suburban, or inner city urban. These principles apply not only to the relation of the school to its context but also to its edges as well as to its connections or specific linkages, whether physical or perceptual, between the school and neighboring areas. These principles include: maximizing natural surveillance opportunities onto school grounds from surrounding areas, controlling access into and out of the campus, increasing, whenever possible, the sense of ownership that students, staff, and neighbors have in the school, clearly demarcating boundaries and spaces, minimizing undefined and "unowned" spaces, properly maintaining the property and grounds so that strong signals are sent that "someone cares about this place," and locating campus facilities and activities so that they are compatible with adjacent, off-site land uses and activities.

The site perimeter, which is the part of the school grounds that contacts the street and adjacent property, defines the initial impression of a school. How a school's site design responds to its immediate surroundings is evident in its treatment of its perimeter and edges. These edges communicate to the public messages of accessibility or inaccessibility. Therefore, a primary consideration in school site design is the clear definition of the school property lines. This definition can be achieved by utilizing layered edge treatments such as fencing, landscaping, and ground surface treatments. Symbolic markers such as archways, entry posts, and student artworks are also useful in creating psychological boundary delineations of the school's perimeter and edges.

Special consideration should be taken in the design of schools with joint-use or shared facilities such as playgrounds and recreational areas, which are accessible to the community during and/or after school hours. In such circumstances, it is critical to delineate internal boundaries between the community and the school by establishing a distinct perimeter for both the school and the joint-use facilities with separate and secure access points. Properly designed joint-use facilities can reinforce neighborhood connections, ownership, and territorial integrity.
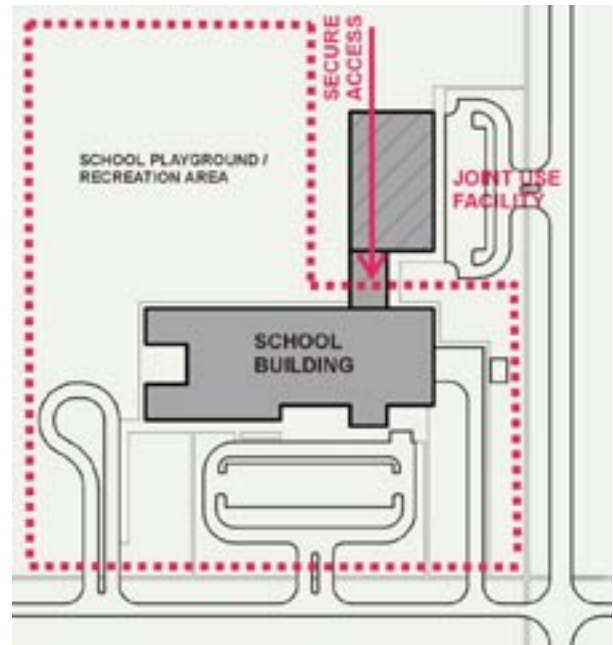
Figure 1.1.3
Joint-Use Building Facility
School/Communit

Site Design

1.2 VEHICULAR ROUTES & PARKING AREAS

<u>Natural Access Control</u>

- Restrict external access to parking areas to a limited number of controlled entrances.
- Close unsupervised entrances during low-use times to reinforce the idea that access and parking are for school business only.
- Provide clear signage and posted rules as to who is allowed to use parking facilities and when they are allowed to do so.
- Locate visitor parking directly adjacent to main entry and administration.
- Provide adequate space adjacent to the building for emergency vehicles.
- Establish separate vehicular circulation routes to service and delivery areas, visitors entry, bus drop-off, student parking, and staff parking.
- Prohibit through traffic on school campuses.
- Provide a secure caged area for off-hour deliveries.

<u>Natural Surveillance</u>

- Locate parking areas in close proximity to school building or activity areas to facilitate natural surveillance.
- Provide windows in classrooms and administration areas that overlook parking areas.
- Provide adequate lighting in drop-off zones and parking areas.
- Utilize zoned parking in limited controlled areas when appropriate.
- Locate bus loading area so that it is visible to administration or adjacent to areas of surveillance.
- Locate access to public transportation in areas that promote natural surveillance.

<u>Territorial Integrity</u>

- Differentiate and identify parking spaces for students, faculty, staff, and visitors.
- Provide designated primary routes and parking lots for after-hours use when applicable.
- Clearly mark transition(s) from public street onto school entry routes and into parking areas.
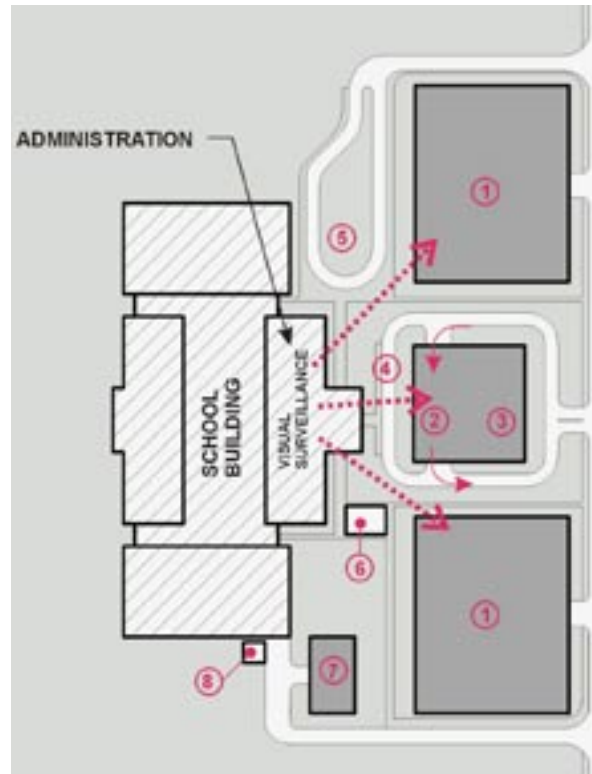
Figure 1.2.1
Parking Schematic for a Large School Facility
1) Zoned Parking 2) Visitor Parking 3) Faculty/Staff Parking 4) Parent Drop-off 5) Bus Drop-off
6) Bicycle Rack 7) Kitchen/Custodial Staff Parking
8) Secure Fenced Area for Off-hour Deliveries

Figure 1.2.2
Vehicular Route / Parent Drop-off and Pick-up

- Provide clearly marked transitions from parking areas to pedestrian routes.
- Minimize ambiguous and unassigned spaces at entry and parking areas.
- Maintain a separation between pedestrian and vehicular traffic.
- Provide blue light emergency phones in parking lots on community college campuses.

Management

- Supervise entrances and parking areas during peak use times.
- Utilize vandal-resistant lighting in parking areas and along vehicular routes.
- Design parking lots that reduce opportunities for high-speed activity.

Figure 1.2.3
Bus Loading Area

Vehicular routes and parking areas include the primary entry drive, parking lots, bus loading zones, parent drop-off / pickup areas, and service and delivery drives. Vehicular routes and parking lots must be designed to handle the rush of people and vehicles at the peak unloading and loading times at the beginning and end of each day. Other times, these areas may be completely empty and unsupervised, potentially providing opportunities for unwanted access.

In general, the safety and security of vehicular routes and parking areas benefit from the following design considerations. First, they should not be isolated from the school, but should be in close proximity to facilitate visual surveillance from classroom and administration areas. Second, these areas, especially classrooms, should be provided with windows that overlook vehicular routes and parking areas. Third, external access to parking areas should be restricted to a limited number of controlled entrances. Fourth, provisions must be made to ensure separation of vehicular and pedestrian circulation by creating barriers and well defined routes. Fifth, unassigned and "unowned" spaces should be minimized as much as possible, especially in student parking zones. Sixth, entry areas and parking lots should have signs that spell out accepted usage and rules that describe what is and is not permitted. And finally, parking areas and vehicular routes should be adequately lit with vandal-resistant lighting.

The main entry drive area should be where visitors enter the school and parents pick up their children. This entry drive should be clearly visible from the administration

1.2.4
Visitor Parking

office, where staff can keep an eye on who is coming and going during regular school hours. Also, it is important to provide a designated paved area adjacent to the building for emergency vehicles as per code requirements.

The bus loading area must be segregated from the main entry and other vehicular traffic according to code. However, when possible, the bus waiting area should still be visible from the administration area or some other point of natural surveillance such as classrooms.

Parking lots are particularly susceptible to criminal activity. A primary factor is that these areas are typically the furthest from the central core of the campus. Because parking lots have been consistently identified by principals, school resource officers, and facility managers as venues for misbehavior, vandalism, and more serious crimes, adequate guardianship is essential. While this is particularly important at peak use times, it should also be a priority, resources permitting, during off-peak periods since parking lots contain an enormous trove of valuable targets for motivated offenders.

Locating parking lots near areas that promote natural surveillance, such as classrooms, can help mitigate criminal activity. It is important to provide a sufficient amount of windows in these areas to allow views of the lots. Special provision may have to be made for overflow lots for special and sporting events. When numerous lots exist, such as on large campuses, these lots should be clearly numbered or identified to avoid confusion. It is also recommended that designated parking lots be provided, especially for high schools, in order to monitor students who may leave campus during school hours. Such lots should be able to be secured and, if possible, supervised during peak use times. In addition, design professionals should consider providing a designated "estranged spouses" parking lot for endangered or stalked adult students and school employees. This area should be centrally located and well protected at all times with constant monitoring.

When designing parking lots, particularly those that will be used by students, avoid long straight layouts that allow cars to speed through the lot endangering pedestrians. Traffic calming devices can greatly reduce the potential for high-speed activity.

Community colleges have unique vehicular route and parking requirements for several reasons. The bulk of

CONTROL GATES USED TO DESIGNATE ZONED PARKING IN LARGE HIGH SCHOOL PARKING LOTS
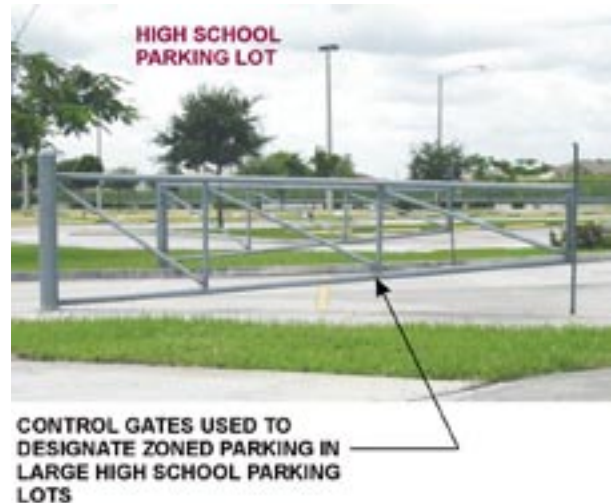
Figure 1.2.5
Parking Control Device

PROVIDE ADEQUATE LIGHTING IN PARKING LOTS USING VANDAL RESISTANT TYPE FIXTURES

Figure 1.2.6
Parking Lot Lighting

the student population is no longer delivered in groups to specific entry points. Instead, these students typically arrive individually, are usually required to park in areas located a substantial distance from the implied security zones of campus buildings, and often leave school after dark. It is, therefore, imperative that areas used in these circumstances have appropriate levels of lighting and that potential hiding places be eliminated. In addition, in order to increase security on community college campuses, blue light emergency phones should be located in all parking lots. It is important to place these phones in areas that are clearly visible and easily accessible.

For community colleges, public transportation also poses particular safety and security concerns. Public buses can provide a means to quickly enter and leave campus undetected and unmonitored. Therefore, access points to public transportation should be located near areas that promote natural surveillance whenever possible. Community colleges should also consider incorporating electronic surveillance, such as closed circuit television (CCTV), of these access points.

Service and delivery drives should be separated from other vehicular routes. These areas should be able to be secured and should include a caged area for off-hour deliveries.

There are some key considerations regarding vehicular routes and parking areas when schools incorporate joint-use or shared facilities. Clearly marked designated parking lots should be provided for the public to avoid conflicts and confusion. In addition, routes and access points for the community should be well defined and separated from the school.

Finally, vehicular requirements for Enhanced Hurricane Protection Areas (EHPA) or designated shelters must be taken into account in the design of school vehicular routes and parking areas. Since parking is not permitted within 50 feet of an EHPA during an emergency condition, provisions must be made to prevent confusion regarding where one can and cannot park during these times. In addition, clearly defined emergency vehicle access must be provided and located to avoid potential conflicts with other vehicular access routes and parking. Vehicular requirements for EHPA should not impede or obstruct designated areas for emergency equipment.

Figure 1.2.7
Provide Blue Light Type Emergency Phones in Community College Campus Parking Lots

Figure 1.2.8
Coordinate Location of Public Transit Access to Promote Visual Surveillance

Site Design

1.3   EXTERIOR PEDESTRIAN ROUTES

<u>Natural Access Control</u>

- Design exterior sidewalks to clearly mark routes.
- Direct pedestrian circulation to a few selected entry points.
- Provide designated routes and entry points for use after dark on community colleges campuses.
- Provide clear signage for wayfinding and access control.

<u>Natural Surveillance</u>

- Minimize hiding places along pedestrian routes.
- Avoid blocking lines of sight with fencing, signage, and landscaping.
- Place exterior pedestrian routes so as to maximize surveillance from inside adjacent spaces.
- Provide windows along exterior pedestrian routes.
- Design lighting along exterior routes to reinforce natural surveillance, avoiding shadowed areas caused by uneven lighting and landscaping.

<u>Territorial Integrity</u>

- Provide a physical buffer between sidewalks and vehicular routes with safety islands, landscape buffers, lights, or exterior furnishings.
- Clearly demarcate pedestrian routes so that there are no ambiguous spaces along the way.
- Utilize canopies to provide covered areas that are protected from the elements for students waiting to board buses or to be picked up by parents.
- Provide paths from drop-off areas of sufficient width to accommodate peak periods of use.
- Provide secure exterior assembly area(s) for gathering during an emergency.
- Provide blue light emergency phones along pedestrian routes on community college campuses.

In survey research, adjacent sites off school grounds and parking lots were ranked the highest among all school locations as areas susceptible to security problems. Exterior walkways connect these areas to the core campus. The exterior walkway should be well defined
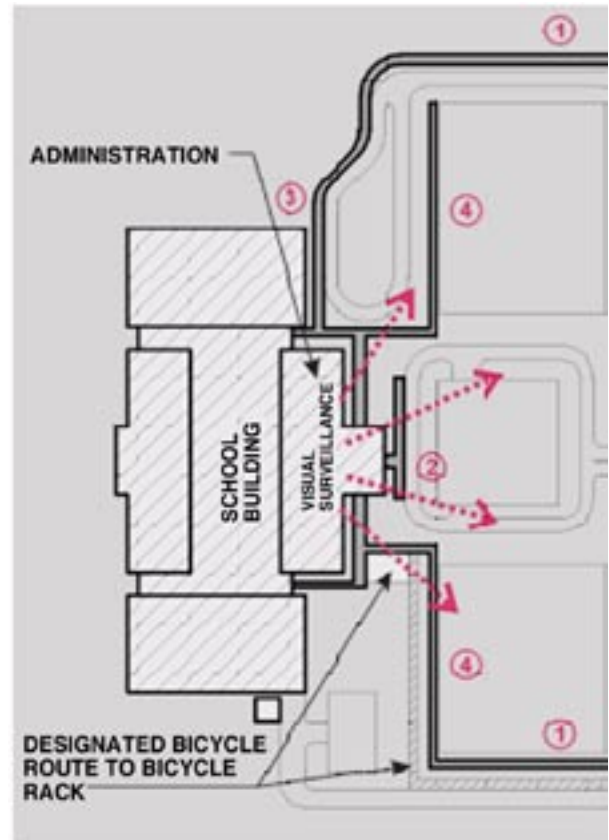
Figure 1.3.1
Primary Pedestrian Routes for a Large School Facility
1) Pedestrian Entry Point 2) Path from Parent Drop-off
3) Path from Bus Drop-off 4) Path from Zoned Parking

Figure 1.3.2
Pedestrian Route at Main Building Entry

with smooth walking surfaces and adequate lighting, placed in locations that allow natural surveillance.

Public routes should be clearly marked and provided with signage and maps to reduce confusion and wandering visitors. Well defined public pedestrian routes also make it easier to identify trespassing in unauthorized or restricted areas. Windows in school buildings should be located along exterior pedestrian routes, wherever possible, to encourage surveillance by teachers, administrators, staff, and students during their normal activities, thus reducing the potential for undetected trespassers, vandalism, and other such security concerns.

Paths from drop-off areas and routes to school entry points need to be wide enough to accommodate peak periods of use, thus preventing congestion, pushing, fighting, and accidents. Paving material should be nonskid, well-marked, and non-glare. Canopies should be used to provide shaded and dry areas for students to wait to board buses or for those waiting to be picked up by parents. This can help reduce conflicts caused by the psychological irritation of standing in the hot sun or in the rain.

Planters along exterior routes should be designed to allow easy maintenance and prevent vandalism. Properly designed, these planters can integrate seating, lighting, and garbage containers, which will prevent damage to plants as well as eliminate stray refuse. Moreover, they can serve as surfaces for student art, thereby reinforcing territorial integrity.

Special consideration must be taken when designing exterior pedestrian routes for community colleges, which typically have large "campus plan" organizations with multiple access points surrounding their perimeter. In addition, because community colleges offer evening classes, provisions must be made to ensure campus security after dark. There are a few key design strategies to help enhance safety and security in these cases. First, community colleges should utilize blue light emergency phones throughout the campus. These phones should be placed along pedestrian routes in visible locations with unobstructed access. Second, all access points should be well-marked with adequate lighting. Finally, whenever

Figure 1.3.3
Pedestrian Route with Safety Buffer
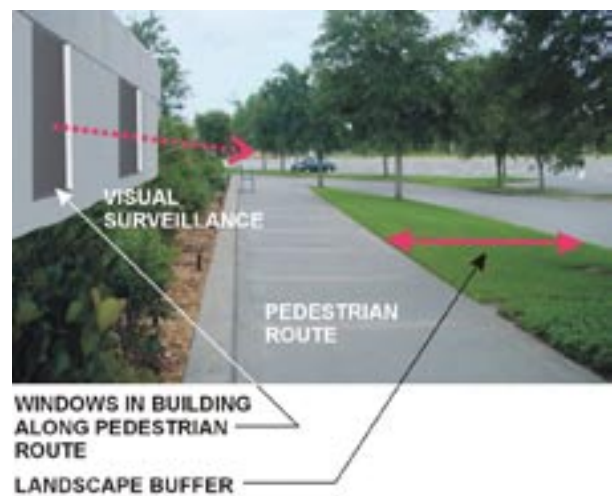
Figure 1.3.4
Pedestrian Route with Landscape Buffer

feasible, limit such access points during evening hours by designating specific routes and entry points to be used after dark. It is important that these designated areas are clearly identified, well-lit, and devoid of potential hiding places.
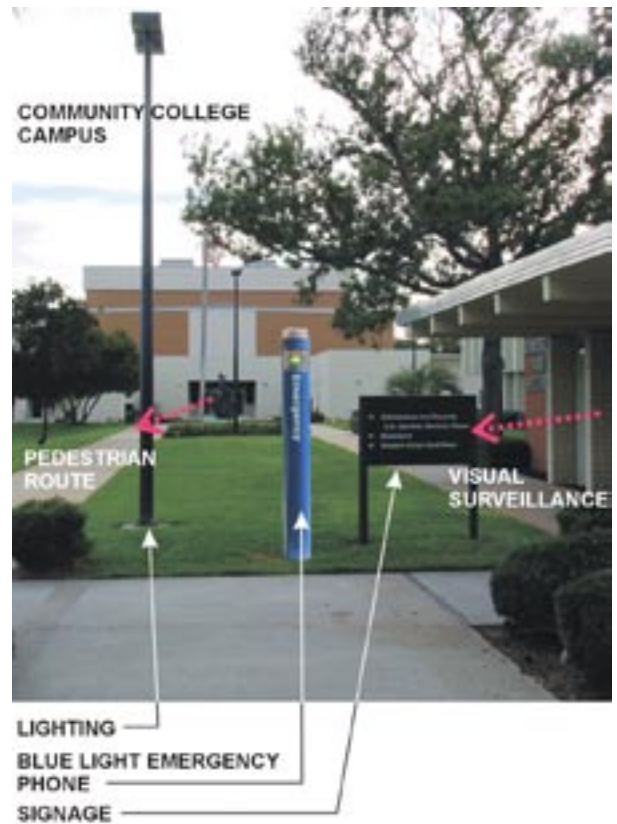
Figure 1.3.5
Pedestrian Route
Community College Campus

Site Design

1.4 RECREATIONAL AREAS

Natural Access Control

- Provide multiple enclosures around recreational areas to achieve greater access control.
- Secure and limit access points between joint-use recreational facilities and school.
- Provide separate facilities related to recreational areas such as restrooms, water fountains, and vending areas when applicable.

Natural Surveillance

- Locate recreational areas in a visible location whenever possible.
- Avoid blocking lines of sight into recreational areas with fencing, signage, and landscaping.
- Utilize see-through fencing in recreational areas to enhance supervision .
- Design lighting of recreational areas to reinforce natural surveillance.

Territorial Integrity

- Clearly delineate boundaries between joint-use recreational facilities and school.

Management

- Locate hard court play areas away from buildings.
- Protect window openings located near hard court play areas.

Recreation areas and playgrounds have been cited in survey research as locations vulnerable to criminal activities such as vandalism, trespassing, and assault and battery. Specific safety and security concerns in these areas include visibility and proximity to the school building as well as securing and limiting access points. In addition, schools that include joint-use or shared recreational facilities for the community must make special provisions to ensure control of access to the school campus.

Strategic placement of recreational areas and playgrounds on school campuses can significantly
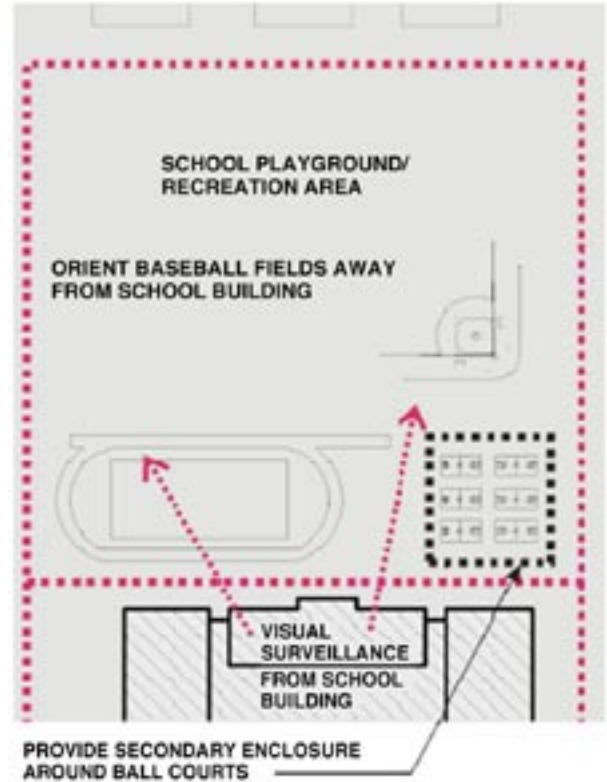
Figure 1.4.1
Playground / Recreation Area Schematic

Figure 1.4.2
Secure Ball Courts

enhance natural surveillance. These areas should always be placed in locations that permit unobstructed views from the school building. When possible, it is preferable to identify vantage points on school sites to locate buildings for unobstructed surveillance of recreational areas. Nighttime visual access to recreational areas requires not only adequate illumination, but attention to the design of the edge conditions as well. Where play areas are adjacent to neighborhoods, fencing or street edge plants should have sufficient openings to allow visual sight lines to fields beyond. This allows the local community and passing patrol cars to monitor after-hour school recreational use.

As discussed in Section 1.1, joint-use facilities present special security concerns. Increasingly, Florida schools are sharing facilities with their surrounding community. In the case of joint-use recreational facilities, it is critical to eliminate ambiguity regarding the boundaries of the school campus and to differentiate the recreational facilities from the school by clearly marking and securing the edges of the campus. Access between the school and the shared recreational areas should be limited and located in a place that facilitates natural surveillance.

Many community colleges have a strong relationship with the surrounding community and often promote activity and use of their facilities. In these circumstances, recreational areas are open to the public and, therefore, some campuses may require internal separation of athletic and academic areas in order to control and limit unauthorized access.

Multiple enclosures around individual tennis, basketball courts, and other recreational areas can provide greater control. Additional layers of fencing make it more difficult to penetrate into these areas and remove or vandalize school property. Interior fences can be a strictly functional material, while the outer public fence can have a more aesthetically pleasing appearance when allowed by the budget. Fencing should permit maximum visibility into the play areas and, whenever possible, minimize climbing opportunities.
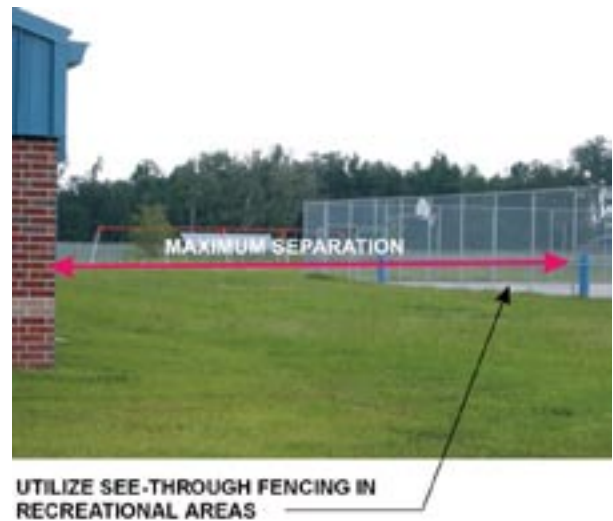
Figure 1.4.3
Locate Hard Court Play Areas away from Buildings

Site Design

1.5   BIKE RACKS & DUMPSTER ENCLOSURES

<u>Natural Access Control</u>

- Secure and enclose bike racks in lock-up areas.
- Limit access to dumpsters.

<u>Natural Surveillance</u>

- Minimize hiding places around bike racks and dumpster enclosures.
- Locate bike racks near windows to enhance surveillance.

Bike racks and lock-up areas should be located in a highly visible area near either the main entrance or where they can be easily observed by faculty, staff, and students during the course of normal activities. Enclose bike racks with see-through fencing and avoid blocking lines of sight to facilitate monitoring and surveillance.

Dumpsters should be secured and enclosed to prevent unauthorized access. If not enclosed in a designated service area, they should be surrounded on three sides by a high wall and provided with a gate that can be secured.

Figure 1.5.1
Secure Bicycle Rack
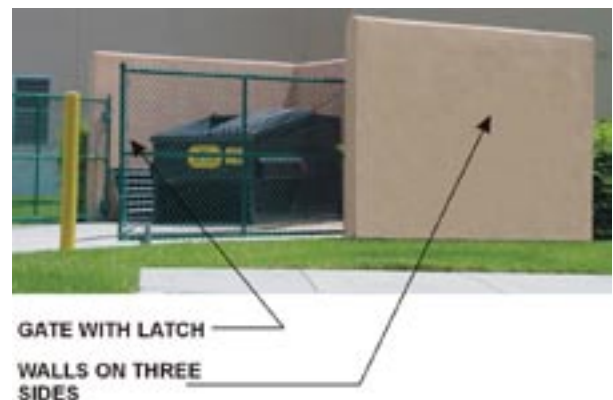
Figure 1.5.2
Secure Dumpster Enclosure

Site Design

1.6   SIGNAGE

Natural Access Control

- Design signs with large bold graphics and simple directions.

Natural Surveillance

- Design signage to eliminate spaces that permit concealment.
- Avoid blocking lines of sight with signage.
- Design lighting to enhance natural surveillance near signage.

Territorial Integrity

- Include signage that directs visitors to main entry and administrative office as well as to an emergency contact point.
- Clearly mark entry with signs indicating to visitors what is expected of them.

Signage is a critical element for controlling access and establishing territoriality on school campuses. Signs can be instrumental in minimizing lost and wandering visitors. Signs should have large lettering, bold graphics, simple directions, and be well-lit. It is also important to ensure that signs do not create hiding places.

Signage that includes maps and arrows in addition to text helps guide visitors along the appropriate route to the main entry. Signage should indicate to visitors what is expected of them, including rules governing access and impermissible behavior as well as applicable local and state regulations.

USE STRATEGICALLY PLACED
SIGNAGE WITH BOLD GRAPHICS

Figure 1.6.1
Example Signage

DESIGN SIGNAGE TO
PREVENT CONCEALMENT

Figure 1.6.2
Example Signage

Site Design

1.7   LANDSCAPING

<u>Natural Access Control</u>

- Utilize landscaping elements to control access and define public, semi-public, semi-private, and private areas.
- Locate trees to avoid providing access to roof.

<u>Natural Surveillance</u>

- Design landscaping to minimize hiding places and shadowed areas.
- Avoid blocking lines of sight with landscaping.

<u>Territorial Integrity</u>

- Provide a safety barrier between sidewalks and vehicular routes with landscape buffers.
- Utilize tree canopies to provide shaded areas.
- Incorporate garden areas, landscaping, planting, and student artwork to enhance territorial integrity.

<u>Management</u>

- Design low maintenance landscaping.
- Locate trees to prevent laydown or impact hazards.

Several factors must be considered when planning landscape arrangements and plant selections on school campuses. In Florida's climate, landscaping can become an essential ingredient in the design of outdoor spaces. However, budget constraints may make it difficult to employ extensive landscaping strategies on school campuses. In addition, landscaping must be properly maintained. If it is not managed, landscaping can actually cause an unsafe school environment by creating places to hide, by blocking illumination, and by interfering with lines of sight necessary for natural surveillance. Finally, misplaced landscape elements may also encourage vandalism. Therefore, care must be taken when considering the use of landscaping on school campuses in safe school design.

Landscaping can be used as a method of access control. Like walls and fencing, a row of trees incorporated with low level plants can define an edge that leads to

Figure 1.7.1
Maintain Landscaping to Promote Natural Surveillance and Prevent Hiding Places

Figure 1.7.2
Landscape Example
Landscape Elements Used to Delineate Exterior Space

an opening or entrance. When budget constraints are an issue, landscape materials that are less expensive such as boulders, mulch, and timbers can also effectively delineate spaces and control access. In order to insure that landscaping does not obscure natural surveillance or create places to hide, tree canopies should be maintained above eight feet and shrubs should be trimmed to maintain a maximum height of eighteen inches.

Trees can also provide comfort and relief from the heat of Florida's subtropical sun, often far more economically than a built structure. However, it is important to position trees away from exits, access roads, and equipment areas to ensure that, if they should blow over or lose large branches, they will not block these areas. In addition, emergency drill areas should be free of trees to prevent danger to students in the event of a fire.

SPECIAL GARDEN AREAS CREATE A SENSE OF PRIDE AND REINFORCE TERRITORIALITY

Figure 1.7.3
Landscape Example
Use of Landscape to Enhance Territoriality

Site Design

1.8   STORMWATER

Natural Access Control

• Utilize retention ponds to limit access to school property.
• Enclose retention areas with fencing that does not provide footholds for climbing whenever possible.

Natural Surveillance

• Avoid blocking lines of sight with fencing and landscaping around retention ponds.

Territorial Integrity

• Utilize retention ponds to demarcate boundaries.

Management

• Periodically inspect dry retention areas, which can provide places to hide.

Stormwater retention areas, necessary in Florida to control flooding and to filter pollution from rainwater runoff, can be dry ponds or landscaped wet ponds. Both must be safely enclosed to prevent accidental drowning as per code requirements.

The wet retention pond, while requiring more space, has many advantages. Designed to hold water even during the dry season, they can be used to form a physical barrier or moat to prevent trespassing to certain parts of the school. They can also help segregate play and pedestrian areas from areas of heavy vehicular traffic.

When dry ponds are not enclosed with fencing, protection of outflow structures should be addressed. Utilize grating or metal rebar to reduce the opening size and prevent access. Precautions should be taken to insure that such protection does not impede the performance of the stormwater system.

Figure 1.8.1
Fenced Retention Pond with Landscape Features

Figure 1.8.2
Prevent Access to Stormwater Structures

Site Design

1.9   SITE UTILITIES

Natural Access Control

•   Secure site utilities and limit access.

Natural Surveillance

•   Locate site utilities to promote natural surveillance.

Territorial Integrity

•   Provide a designated area for equipment associated with the Enhanced Hurricane Protection Areas (EHPA) requirements.

Site utilities must be properly protected against criminal activities. It is important to insure that these areas will not be damaged or interfered with in any way. Water and electrical supply, transformers, backflow preventors, and other site utilities should be secured to eliminate unauthorized access. Whenever possible, provide unobstructed views to these areas from the school building to enhance monitoring.

Enhanced Hurricane Protection Areas (EHPA) or designated shelters present particular safety and security concerns, especially in terms of site design and emergency utilities. Designated shelters require special equipment such as generators, water bladders, and sewer bladders. Designs should include adequate parking for required equipment in a designated area that can be secured to limit access. Care should be taken to locate these designated areas where they will not impede access into the shelter or obstruct emergency vehicle routes. In addition, designated equipment areas should be located to prevent lay down or impact damage from trees.

Figure 1.9.1
Secure Site Utilities and Limit Access

Figure 1.9.2
Secure Site Utilities and Limit Access

Building Design

2.1   BUILDING ORGANIZATION

Natural Access Control

*   Tailor access control solutions to fit the particular building organizational type utilized, such as a compact single/multi-story plan, alphabet configurations, courtyard organization, or campus plan.

Natural Surveillance

*   Organize building components to promote natural surveillance of both the school campus and interior spaces within the building.
*   Organize building components to promote natural surveillance from adjacent neighborhoods.

Territorial Integrity

*   Locate the building(s) on the site to promote a connection to the neighborhood context when possible.

If properly designed, the overall organization of a school can enhance school and safety authorities' ability to maintain a secure environment and can also discourage vandalism, trespassing, and breaking and entering.

The contemporary "campus plan" evolved from the availability of inexpensive land and the lower cost of constructing single story buildings.   Maintaining security can be difficult in this type of building organization because the buildings are spread out, hindering surveillance and access control. One solution is to close gaps by linking all the buildings together with fencing and clearly marked routes. Limiting the points of access can also aid in securing the school campus plan by forcing visitors and late arrivers to enter through specific monitored places.

Traditional school plan organizations were relatively compact.   This was a reaction to the environmental concerns of natural daylighting and ventilation.   The benefits of the compact plans include an efficient interior circulation system and a minimal amount of exterior

COMPACT SINGLE / MULTI-STORY PLAN

"H" PLAN CONFIGURATION

"U" PLAN CONFIGURATION

ENCLOSED COURTYARD CONFIGURATION

CAMPUS PLAN CONFIGURATION
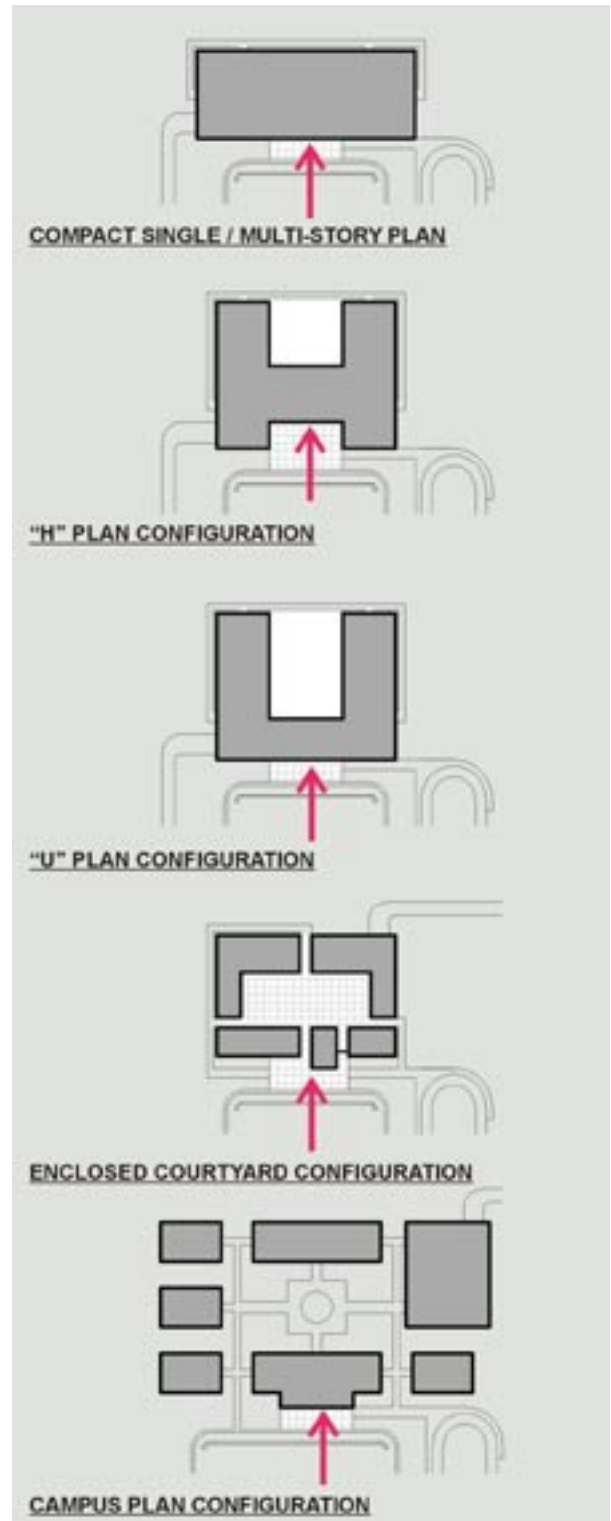
Figure 2.1.1
Typical Building Plan Types

surface area, which reduces maintenance requirements. When utilizing a compact building organization, precautions must be taken to insure that the surrounding exterior environment is also secure. When schools become too introverted, students may be at risk once they leave the safety of the interior environment, since there is little to no surveillance of the school perimeter and recreational areas from inside the school building. Avoiding solid walls and providing extensive windows to the exterior will help make the surrounding exterior secure.

The narrow wings of traditional school organization lend themselves to common "alphabet" configurations. "U" and "H" shaped buildings result in courtyards protected on three sides. This makes monitoring activity in the courtyard easier and helps provide shade and shelter. These types of organization are also easy to lock and secure.
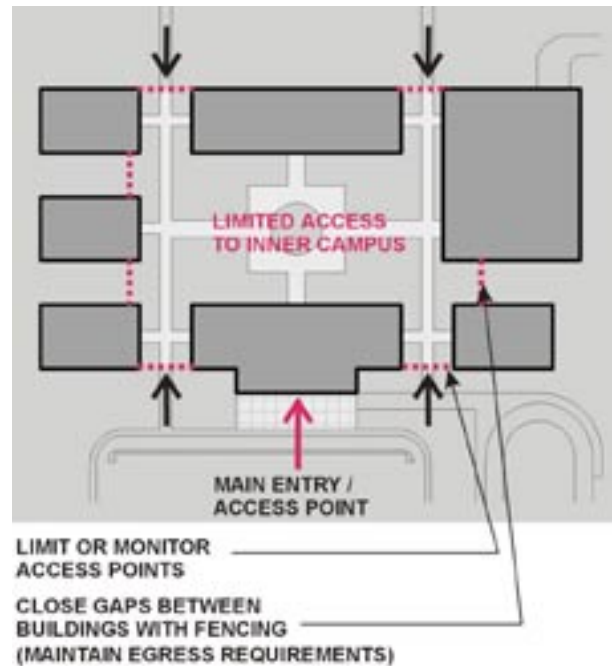
Figure 2.1.2
Secure Campus Plan

Building Design

2.2 EXTERIOR COVERED WALKWAYS

Natural Access Control

- Design covered walkways to eliminate opportunities for gaining access to roofs, windows, or other upper level areas.
- Apply slippery finishes or coatings to columns.
- Design landscaping and tree placement around covered walkways to eliminate access to roofs, windows, or other upper level areas.

Natural Surveillance

- Avoid blocking lines of sight along exterior covered walkways.
- Avoid using niches at entries.
- Design lighting to reinforce natural surveillance along walkways.

Covered walkways provide protection from the rain and sun for primary exterior circulation paths. However, if designed improperly, these structures can provide opportunities for criminal activity and unauthorized access. Columns and other supports should be designed to prevent climbing by using smooth building materials and finishes and by eliminating footholds. Low walls, trees, and planters should be located away from canopies to prevent access onto rooftops and into buildings through upper level windows. Exterior covered walkways should also be designed to promote natural surveillance and should be provided with adequate illumination as a deterrence against criminal activity during normal use. Incorporate windows that overlook covered walkways whenever possible.

Exterior covered walkways should also be designed with "T" connections at entries to provide a continuously protected walkway without using niches, which can create hiding places. This will also insure a clear path unobstructed by doors.
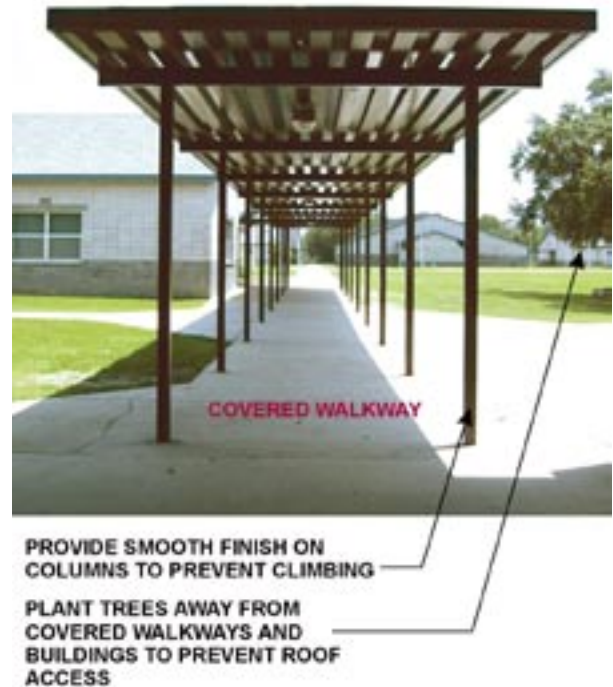
Figure 2.2.1
Typical Covered Walkway
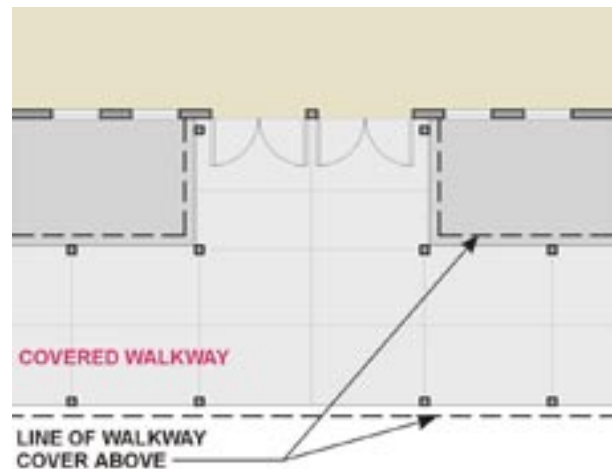
Figure 2.2.2
Example "T" Connection at Building Entry

Building Design

2.3   POINTS OF ENTRY

<u>Natural Access Control</u>

- Minimize the number of unmonitored entrances into the building.
- Locate main point of entry at the front of the school near the administration area and visitor parking/drop-off area.
- Avoid hidden entries.
- Secure secondary entries.

<u>Natural Surveillance</u>

- Provide windows and glazed doors at main entry to enhance natural surveillance.
- Utilize glazing extensively at administrative area to promote surveillance of main entry as well as drop-off and visitor parking areas.
- Eliminate places to hide at recessed secondary entries.
- Design lighting at points of entry to reinforce natural surveillance.

<u>Territorial Integrity</u>

- Design a well defined main entry with signage and rules to direct all visitors to the administration area during school hours.
- Design overhangs at the main entry to shelter a large number of people from sun and rain.
- Provide covered seating areas at main entry and bus loading area.

<u>Management</u>

- Provide vandal resistant lighting.
- Maintain operational integrity of sensor or timer lighting when utilized at points of entry.

Ideally, the main point of entry should be at the front of the school and should provide a safe, well-lit, protected shelter for people entering the school. This area should also be easily visible from the administration area. Provide glazed doors and windows at this entry to enhance monitoring.   The main entry should also be
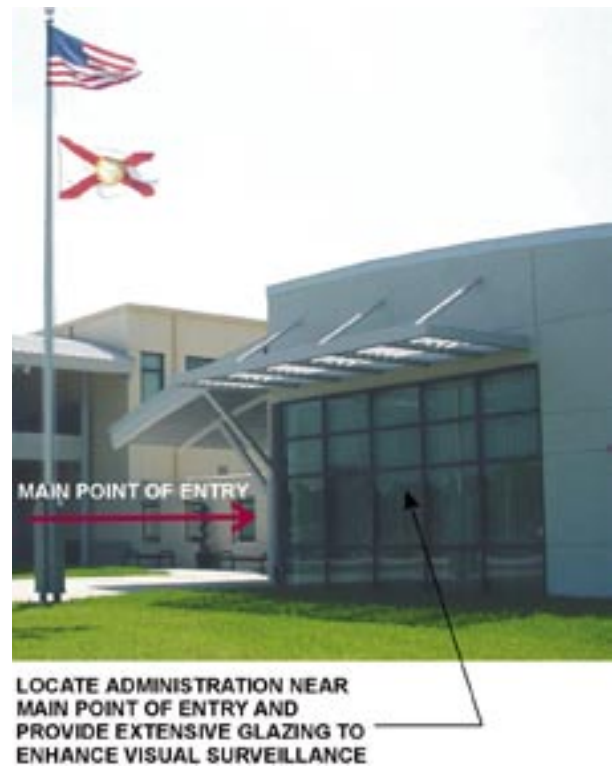
Figure 2.3.1
Main Point of Entry
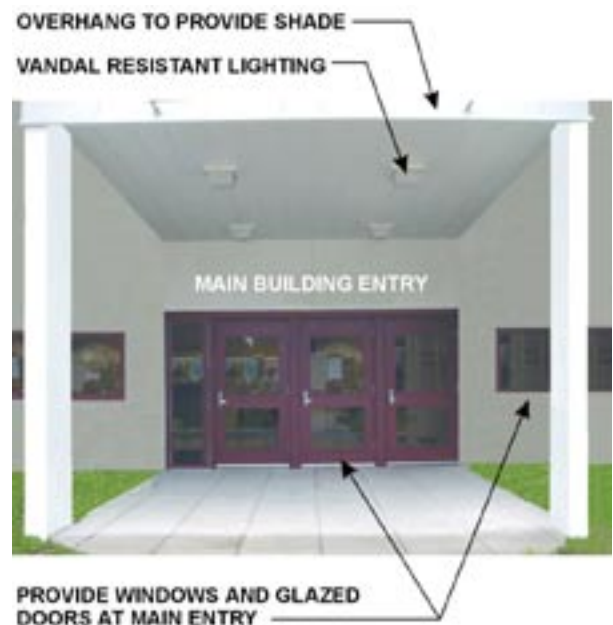
Figure 2.3.2
Main Building Entry

prominent and well-marked to guide visitors to the administration office. In the case of community college campuses, where there are typically multiple buildings each with its own entry, a well-defined primary entrance for each building can help direct visitors to this entry. Placing this primary entry in a location that promotes natural surveillance such as a lobby, administration areas, or faculty offices whenever appropriate can also help eliminate wandering visitors and trespassing as well as provide general access control.

The entry overhang should be large enough to shelter a large number of people from the sun and rain. This can prevent heatstroke during the summer as well as wet and slippery ground surfaces during storms. The overhang should drain to the sides away from where people might enter or where it meets the school building. Covered seating areas should be provided at the main entry and the bus loading zone.   Seating should be carefully located to eliminate opportunities for gaining access to the roof. The walkway must be wide enough to accommodate seating areas without obstructing normal pedestrian movement. Entries used during peak hours, such as the primary points of entry and exit used by students at the start and end of the school day, pose safety concerns. Congestion at these entry points can cause pushing and fighting, especially in middle schools. Design wide sidewalks and entrances in these areas to reduce overcrowding.

According to survey data and site visits, secondary entries are a common problem area for school security. Even if properly designed as "exit only" access points, students frequently prop these doors open. Therefore these access points should be placed in a visible location whenever possible and checked often. When feasible, secondary entries should be equipped with alarms to indicate when these doors are open.   Secondary entries also require careful design to prevent them from becoming dark alcoves where someone can hide. While secondary exterior entries should remain recessed for weather protection, their alcoves can have improved visibility by the use of wide recesses or chamfered corners. These recesses should be limited by the same constraints applicable to interior room doors.

Points of entry should have adequate illumination with vandal resistant fixtures. Consideration should be given to providing a sensor or timer light at delivery and service entries. When sensor or timer lighting is provided, care should be taken to insure that they are operating properly by periodically checking these systems.

Figure 2.3.3
Secure Exit Access

Figure 2.3.4
Secure Points of Entry when Using
Campus Plan Schemes

Building Design

2.4   COURTYARDS

Natural Access Control

- Secure and limit entries to courtyards.
- Place main entry to courtyards adjacent to administration or staff/faculty office spaces.
- Design courtyards to eliminate unauthorized after hours access.

Natural Surveillance

- Provide windows with views into courtyards.
- Maintain unobstructed lines of sight across courtyards.

Territorial Integrity

- Minimize ambiguous or "unowned" spaces in courtyards.
- Designate and clearly demarcate formal gathering areas for students.
- Utilize student art, ground surface treatments, and landscaped areas to reinforce territorial integrity.

The overall organization of the school can create a beneficial enclosure of exterior space. The traditional form of the courtyard school allows for uncomplicated supervision and control. An outdoor circulation arcade around the courtyard allows one person to oversee activities during class changes. The arcade also helps provide protection from the sun and rain.

Care must be taken to insure access control in courtyards. Secure entries must be provided to limit access into and out of the courtyard area. The main entry should be located adjacent to the administration office. Since this area is always occupied during school hours, continuous observation of this entry can be maintained. Windows from administration office areas with views to the main entry should be provided. Increased surveillance of courtyards can also be achieved by providing windows in the building that look out into the courtyard.

Entries to courtyards used during peak hours of the day by students can present safety and security concerns. These courtyard entry areas should be wide to reduce
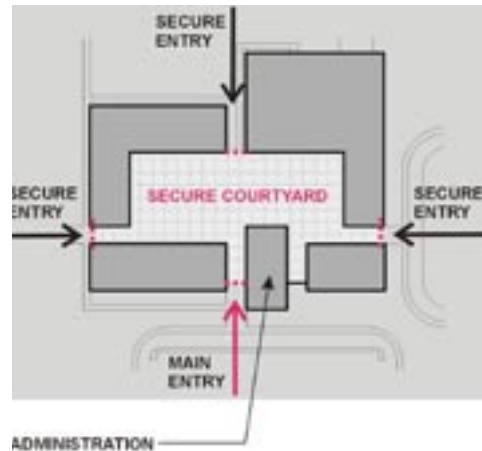
Figure 2.4.1
Plan Diagram
Secure Courtyard Scheme
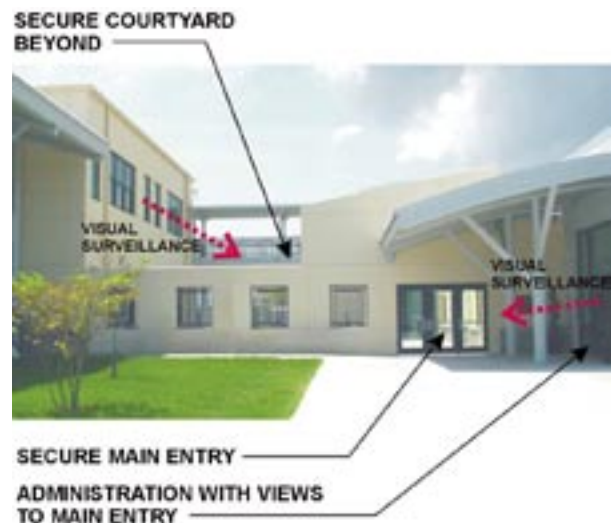
Figure 2.4.2
Natural Access Control for a Secure Courtyard

congestion. Avoid using swinging doors that must be held open by students, a situation considered by principals and school resource officers to be a common cause of fighting, especially in middle schools. It is preferable to utilize roll up security grilles with adjacent "exit only" doors. An alternative solution is to use wide gates that can be secured. In this case, it is important to design the gates to minimize climbing opportunities.

It is critical to design walls and fences surrounding courtyards high enough to prevent access after hours. They should be built with materials that do not provide footholds whenever possible and designed to resist climbing. Seating, planters, and landscaping should be located away from courtyard enclosures to eliminate opportunities for gaining unauthorized access into the courtyard.
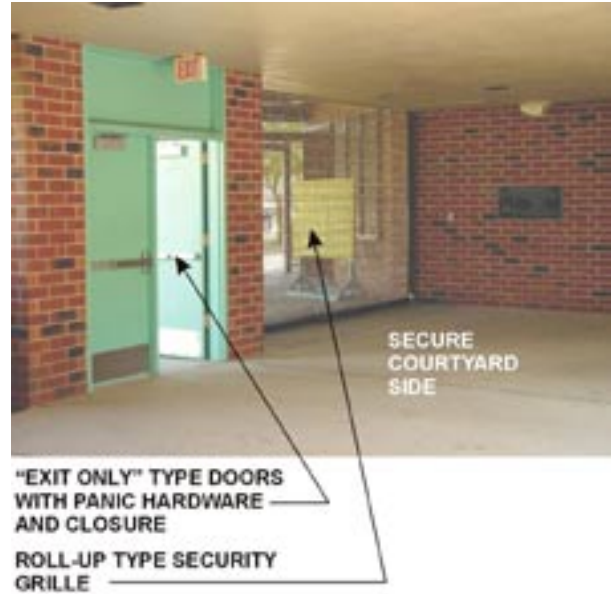
Figure 2.4.3
Example Elements to Secure a Courtyard Entry
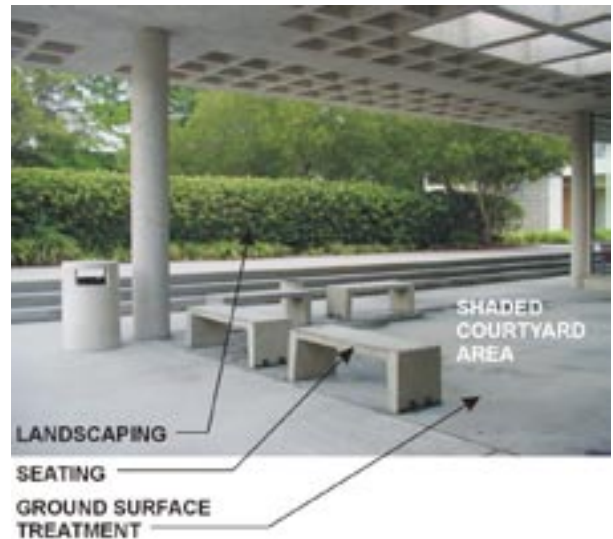
Figure 2.4.4
Define Exterior Spatial Zones within Courtyards to Enhance Territoriality

Building Design

2.5 RELOCATABLE / PORTABLE BUILDINGS

Natural Access Control

- Design exterior sidewalks that clearly mark routes to relocatable/portable buildings.
- Screen spaces under relocatable/portable buildings to prevent access.

Natural Surveillance

- Minimize hiding places around relocatable/portable buildings.
- Design lighting to reinforce natural surveillance.

Management

- Provide vandal resistant lighting.
- Provide appropriate emergency communications connections between the relocatable/portable and school administration.

Relocatable/portable buildings present similar safety and security concerns as the main school building. If not designed properly, these areas can actually promote a heightened sense of separation from the main building and, consequently, concerns about safety. It is important to eliminate hiding places, enhance visual supervision of these buildings, and to be able to secure these buildings when necessary.

Relocatables/portable buildings should be well-lit, with clearly defined and unambiguous routes to and from these areas. Whenever possible, provide windows from the main building overlooking these pedestrian paths to afford possibilities for surveillance. The buildings should be sufficiently separated for fire prevention and control as well as to promote natural surveillance.

A common problem with relocatable/portable buildings is that they can provide places to hide underneath the structure. Therefore, whenever feasible, these areas should be screened with materials that will simultaneously prohibit access, maintain visibility, and allow for ventilation. This can be easily accomplished by utilizing see through fencing.
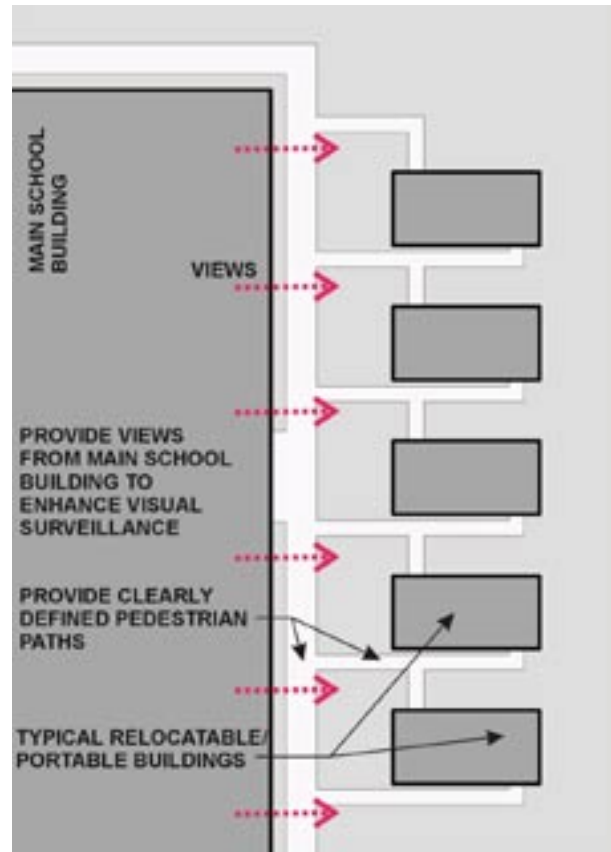
Figure 2.5.1
Plan Diagram
Relocatable/Portable Buildings

Figure 2.5.2
Example Relocatable/Portable Building

Building Design

2.6   DOORS

Natural Access Control

•   Incorporate tamper resistant doors and locks.
•   Utilize vestibules at entry doors where possible to increase security.
•   Design classroom doors with locksets that allow the door to be locked from either side and always opened from inside.

Natural Surveillance

•   Design doors with view panels or sidelites to increase visibility of adjacent circulation spaces.
•   Avoid blind corners and dark niches which can provide places to hide.
•   Design vestibule lighting for surveillance at night.

Management

•   Provide kickplates at classroom, assembly, and circulation doors.

Doors and hardware must conform to use and location requirements. In an emergency situation, classrooms should be able to be locked down quickly. Whenever feasible, classroom doors should be equipped with special classroom security locksets.   This lockset function allows teachers to secure a door from inside the classroom without having to enter the corridor and also allows egress from the inside of the classroom at all times.

The use of hinges with non-removable pins and strike plate covers reduce the potential for forced break-ins. Doors with view panels or sidelites increase safety by allowing a person to see what is on the other side of the door and also allow teachers to keep an eye on activity in adjacent circulation spaces.   Kick-plates should be provided for classroom, assembly, and circulation doors.

Doors along main corridors must either be located in a recess or must swing a full 180 degrees by code. These recesses can be dark and can provide opportunities for hiding. One solution is to chamfer the corners of the
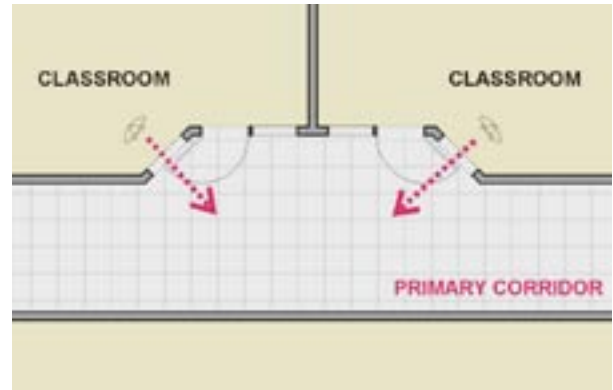
Figure 2.6.1
Doors in Corridor
Wide Recess with Chamfered Corners
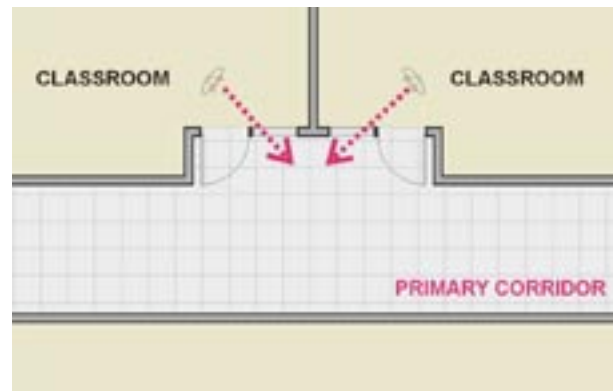
Figure 2.6.2
Doors in Corridor
Wide Recess and Hinged to Swing 90º
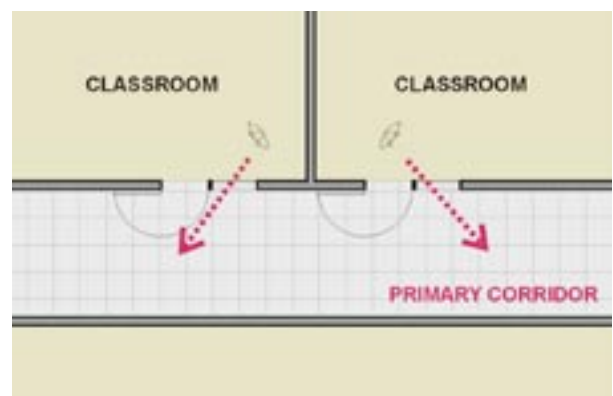
Figure 2.6.3
Doors in Corridor
Flush with 180º Full Door Swing

recess. However, due to budget constraints this may not be feasible. Another option is to create larger recessed areas in the corridor by coupling classrooms that share the same niche. This can greatly increase both surveillance and illumination. In all cases, provide adequate and well designed lighting in these areas.

The use of multiple sets of doors to create vestibules can help reduce heated and air conditioned air loss, as well as increase security. Lighting the vestibule at night illuminates activities and helps prevent entry through the second set of doors.

Figure 2.6.4
Doors in Corridor
Wide Recess with Chamfered Corner
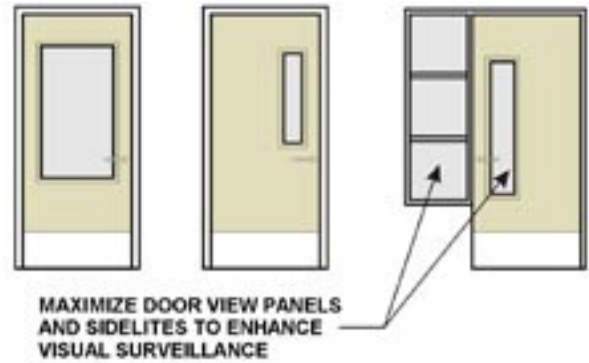
Figure 2.6.5
Typical Door Glazing

Building Design

2.7   WINDOWS

Natural Access Control

• Design windows to deter after hour access.

Natural Surveillance

• Utilize extensive glazing, especially in classrooms and administration areas, to enhance natural surveillance.

As mentioned in previous sections, strategic incorporation of windows and glazing in school buildings is an important aspect of safe school design and can be vital for enhancing access control and surveillance. However, care must also be taken to insure that windows do not create security problems.

Windows not only let in light and air but can also let in thieves if their design and placement is not carefully considered. Clerestory windows allow for ventilation, light, and privacy while minimizing wall penetrations. However, because they do not provide views to adjacent areas, clerestory windows should be utilized in conjunction with window designs that create opportunities for natural surveillance by staff and students during the course of their normal activities. Window protection requirements for Enhanced Hurricane Protection Areas (EHPA) or designated shelters, such as hurricane shutters and screens, can have an added benefit of deterring after hour access.

Glazing in administration areas is especially critical to enable staff to monitor the main entrance as well as other areas on the school campus. Another important location for windows is classrooms, where many eyes can have views of exterior areas such as parking lots, exterior pedestrian routes, and recreational facilities. In addition, incorporating view panels and sidelites in classrooms and administration areas along corridors can also provide enhanced security. Whenever possible, extensive glazing should be utilized to permit views and surveillance of exterior areas such as courtyards.

UTILIZE EXTENSIVE GLAZING AT MAIN ENTRY TO ENHANCE VISUAL SURVEILLANCE TO PARKING LOTS AND PEDESTRIAN ROUTES

Figure 2.7.1
Entry Glazing

STOREFRONT TYPE GLAZING ENHANCES NATURAL SURVEILLANCE FOR COURTYARDS AND OPEN SPACES ON CAMPUS PLAN DESIGNS

Figure 2.7.2
Example Glazing
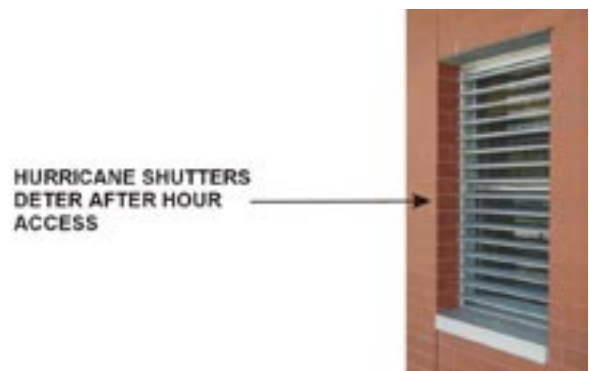
HURRICANE SHUTTERS DETER AFTER HOUR ACCESS

Figure 2.7.3
Window Protection

Building Design

2.8   EXTERIOR WALLS

Natural Access Control

• Design screening walls and architectural features on exterior walls that do not allow footholds or handholds.

Natural Surveillance

• Avoid blind corners and dark niches which can provide places to hide.

Management

• Design vandal resistant walls.
• Provide markings and game lines on walls near recreational and play areas to deter graffiti.

Figure 2.8.1
Prevent Roof Access from Screening Walls

Wall form, texture, and use influence safety concerns. Avoid utilizing walls that undulate or project into small wings, which can create niches and hiding places. When such niches occur, security can be enhanced by incorporating windows that have unobstructed lines of sight into these areas. In addition, these recesses or niches should also be well-lit to enhance safety.

Screening walls of metal or decorative concrete block are often used to provide separation without compromising ventilation. However, they can become informal ladders that allow unauthorized access to the roof. This can be prevented by making sure that the screening wall provides no footholds and that the top three or four feet near the roof is smooth and unclimbable.

Walls in graffiti prone areas should be made of a durable vandal resistant material or be replaced with see-through fencing, when appropriate, to reduce maintenance and vandalism. Walls near recreation areas are often defaced by youths making markings for games such as handball and street hockey. Provide markings and game lines beforehand so that students will not be tempted to make their own.

Building Design

2.9   ROOFS

Natural Access Control

• Avoid using building materials or designing architectural elements that provide access to roofs.
• Apply slippery finishes or coatings to exterior pipes and columns.
• Install locks on roof hatches.
• Protect roof equipment from access and vandalism.
• Minimize access through roof skylights.

Natural Surveillance

• Design roof parapets to allow for surveillance from the ground whenever possible.

A key concept for safe school design is to minimize opportunities to gain access to school roofs and into the school from roofs through potential entry points. Avoid the use of permanent mounted roof access ladders, short walls adjacent to low canopy roofs, screen walls and columns using decorative block, or other building materials that make climbing up to roofs easy.

Skylights can create opportunities to gain entry into the interior of school buildings. When utilized, they must be carefully designed to minimize access. Incorporating solid or fixed diffusers within the light well or adding cages over skylights can prevent entry at these points as well as eliminate the possibility of someone accidentally falling through the glass.

Roof equipment, such as heating, ventilation, and air conditioning (HVAC) cooling towers, should be protected with enclosures to prevent vandalism. Whenever possible, provide roof access from a secure room within the building and utilize lockable type roof hatches to eliminate unauthorized access onto the roof or into the building.

USE LOCKABLE TYPE ROOF HATCHES

Figure 2.9.1
Roof Access Control
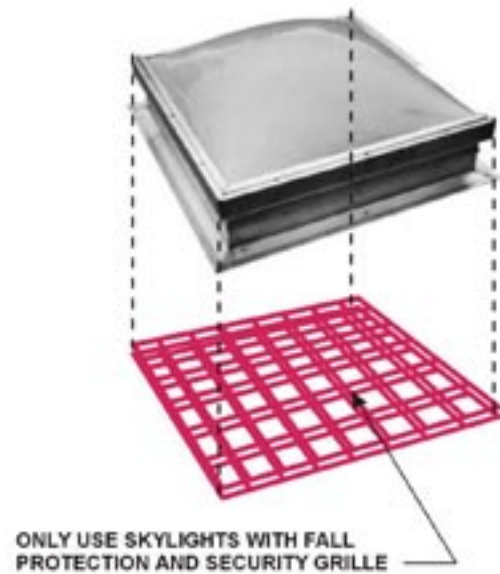
ONLY USE SKYLIGHTS WITH FALL
PROTECTION AND SECURITY GRILLE

Figure 2.9.2
Skylight Protection

Building Design

2.10 LIGHTING

<u>Natural Access Control</u>

*   Design lighting that does not provide footholds or handholds for climbing.
*   Secure and protect fixtures to reduce vandalism.

<u>Natural Surveillance</u>

*   Design uniform and consistent levels of lighting.
*   Avoid pockets of shadow and uneven lighting created by niches, landscaped areas, and fencing.
*   Avoid excessive lighting and glare.

<u>Territorial Integrity</u>

*   Utilize lighting to maximize use of public facilities.

<u>Management</u>

*   Utilize vandal resistant fixtures.
*   Maintain proper operation of lighting.

The use of artificial illumination can help deter criminal activity and reduce accidents. Key issues are the accessibility of the fixtures, the level of illumination, the reduction of shadows, and the lighting of horizontal surfaces. Areas for careful consideration of lighting include lobbies, stairwells, corridors.

There are currently two approaches to after hours lighting on school campuses. The first approach promotes full lighting and the second encourages darkened campuses. The advantages to a lighted campus include enhanced surveillance of the school by the community and law enforcement and protection of staff after hours. In addition, a lighted campus can also encourage use of facilities by the public after hours. On the other hand, there is evidence to suggest that a darkened campus may also have security benefits, especially with regards to vandalism and theft. On a dark campus, light sources from intruders will be apparent to external surveillance. A compromise to complete blackout is the utilization of motion response and timer lighting. The choice of one approach over another requires a thorough assessment of the unique and specific needs of the school.

Figure 2.10.1
Typical Vandal Resistant Type Light Fixtures

DESIGN UNIFORM AND CONSISTENT LEVELS OF LIGHTING
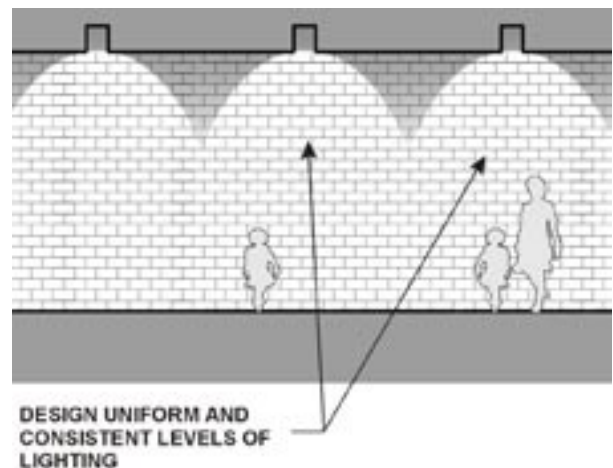
Figure 2.10.2
Lighting Example

Maintenance of lighting is crucial to insure school safety and security. A school's lighting may be well designed but, if inadequately maintained, will fail to perform as intended. Check for proper operation of motion response systems, burned out light bulbs, and correct settings for timer lighting.

Light fixtures are a frequent target of vandalism. The damage or theft of a fixture can leave an area vulnerable to safety and security problems. Therefore, the proper selection and installation of fixtures is critical. Fixtures should not provide footholds or handholds for scaling a wall. They should be flush mounted or recessed whenever possible and covered with an impact resistant material.

Light fixtures should be located so that they do not block lines of sight or create hiding places. In addition, it is important to consider lighting design relative to elements such as low walls or landscaping so that shadows and dark areas will not inadvertently be created. Campus lighting should also be carefully designed to avoid excess illumination of adjacent neighborhoods.

Figure 2.10.3
Lighting Example
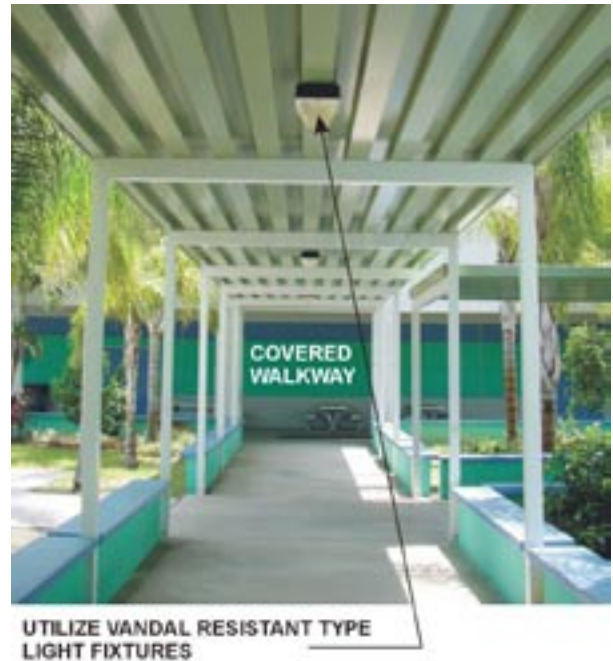
Figure 2.10.4
Lighting Example

Interior Spaces

3.1 LOBBIES & RECEPTION AREAS

<u>Natural Access Control</u>

- Position a primary control point in the lobby between the main entry and all other areas of school.
- Direct visitors through this single control point at main entry.
- Locate a staffed administration area or desk adjacent to main entry and connected to the lobby.
- Design lobby areas that can be easily secured.

<u>Natural Surveillance</u>

- Utilize extensive interior glazing and windows in lobby area to encourage natural surveillance.

<u>Territorial Integrity</u>

- Provide an escape route from staffed administration reception area for emergency egress out of lobby area.

To control access and limit intrusion, visitors should be guided to a single control point and required to pass directly through to administration reception areas when entering or leaving the building. Lobbies should also be designed to be easily secured after hours and during emergencies.

The combination of a main entry with a carefully located and constantly staffed administration area can enhance supervision of school entries, stairs, and hallways without the need for an additional assigned monitor.

This area should be positioned to allow for unobstructed surveillance of lobby doors, stairwells, and perpendicular hallways. Placing the administrative area on an exterior wall allows additional surveillance and a distant view of outside areas, especially visitor parking, drop-off areas, and exterior routes leading up to the main entrance. When feasible and appropriate, consider providing security camera(s) in the lobby area for electronic surveillance to enhance access control.
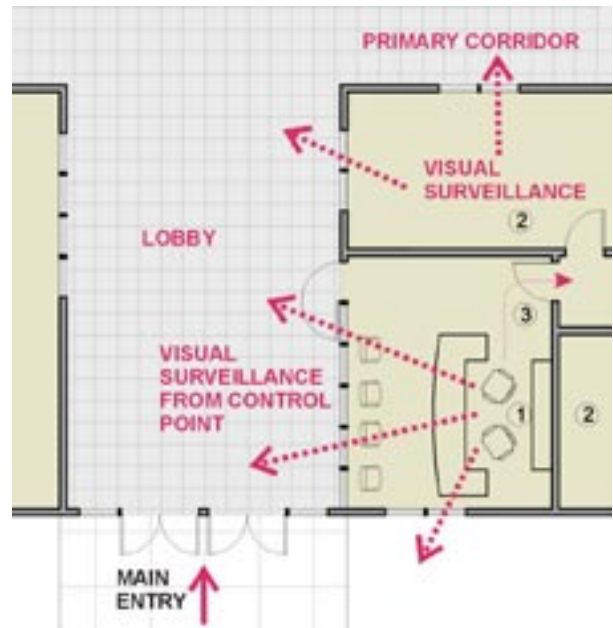
Plan Diagram
1) Control point 2) Admin. Area 3) Escape Route
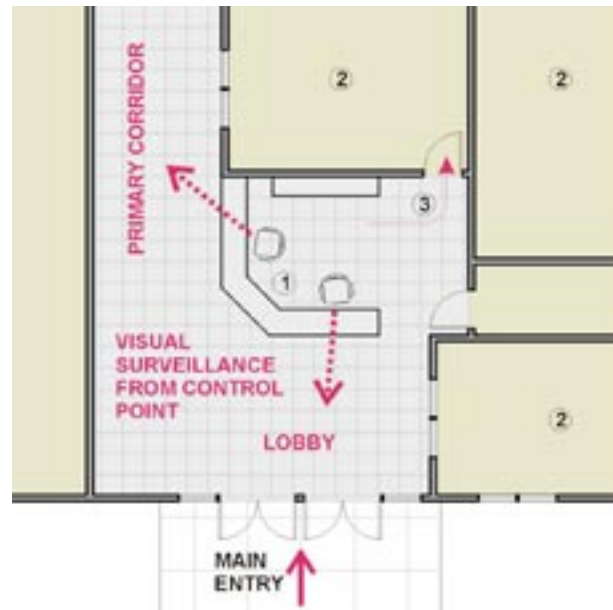
Figure 3.1.2
Plan Diagram
1) Control Point 2) Admin. Area 3) Escape Route

Interior Spaces

3.2   ADMINISTRATION AREAS

<u>Natural Access Control</u>

*   Locate administration areas adjacent to the main entry and lobby.
*   Provide the reception/visitor information area with adequate protection by utilizing a counter and, when necessary, a protective shield.
*   Secure faculty offices, student records, and clinic supplies.

<u>Natural Surveillance</u>

*   Incorporating extensive interior glazing in administration areas to provide unobstructed views and natural surveillance.

<u>Territorial Integrity</u>

*   Design and locate the administration area to reinforce its role as the guardian of school facility.
*   Provide seating at reception/visitor information areas.

Figure 3.2.1
Plan Diagram / Administration Area with Views to
Primary Access Points
1) Zoned Parking 2) Visitor Parking
3) Parent Drop-off 4) Bus Drop-off

The visitors' information counter, faculty offices, student records, and clinics need to have a high degree of security while maintaining a "sense of accessibility" to students, parents, and visitors. Administration areas should be adjacent to main entry areas and designed to allow a visual connection through windows between administrators and students or visitors.

The reception/visitor information area should be provided with the minimum protection of a counter. In certain circumstances, a protective shield of plexiglass may be required, especially in areas where funds are collected. This area should include interior glazing to provide surveillance of main access corridors and main entry.

When appropriate, consider providing a safe room in the administration area. This room should consist of a lockable door and a working telephone. In addition, two remote exits should be provided from the principal's office, one of which could be a window to the exterior. Faculty offices and student records should be separated

from reception area and accessible through lockable corridor doors. Student records should be stored in a fire resistant vault within a locked room.

Schools might also consider providing an emergency kit, which should be located within the administration area in a locked cabinet. These kits would include items that administrators use during emergency situations such as: keys, facility information such as site plans, floor plans, evacuation maps, system control and shut-off information, radios and/or cell phones, medical supplies, attendance data, contact lists, and emergency numbers.

Clinic supplies and equipment should be locked in an observable storage closet located in the nurse's office.
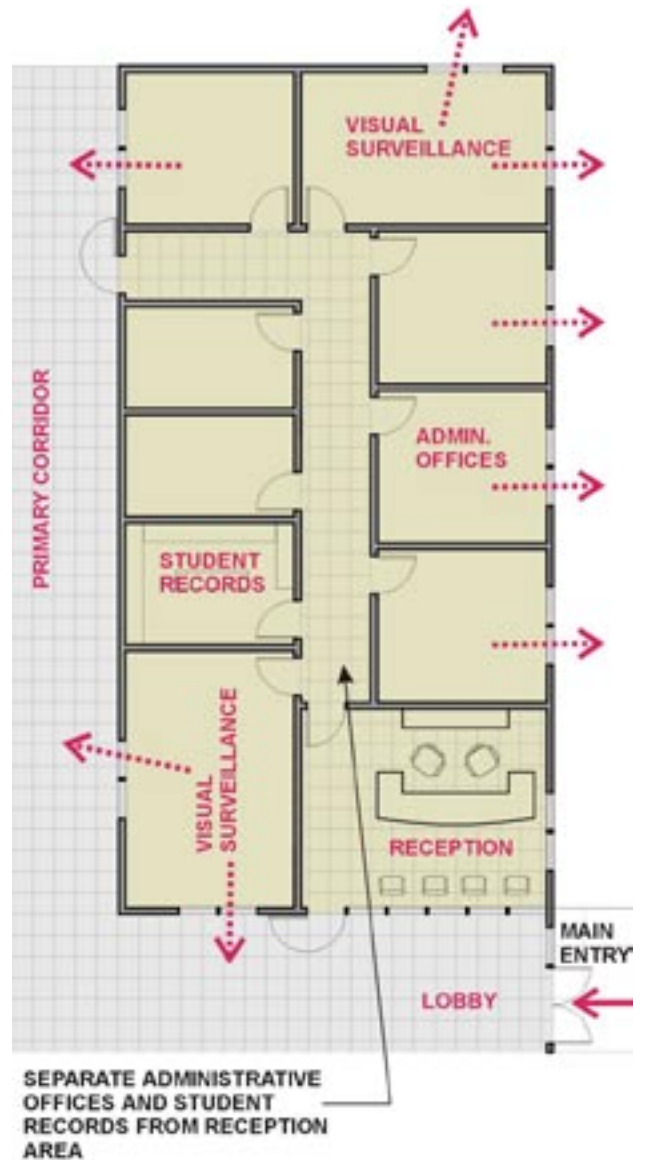
Figure 3.2.3
Plan Diagram
Administrative Area

Interior Spaces

3.3 CORRIDORS

Natural Access Control

- Secure exterior doors located along corridors to prevent unauthorized access into the building.

Natural Surveillance

- Incorporate interior glazing where possible to avoid long corridors with dead walls that block off natural surveillance.
- Minimize hiding places and blind corners in corridors.
- Avoid the use of segregated locker areas by locating lockers within main corridors or classrooms.
- Recess lockers to eliminate hiding places.

Territorial Integrity

- Increase corridor width beyond minimum requirements when possible.

According to survey research, corridors are cited by principals, facility managers, and school resource officers as the second highest location within the school building for fighting. This is primarily due to overcrowding and congestion. It is therefore vital that corridors be carefully designed to accommodate large numbers of students during peak-use hours. Although a minimum corridor width is dictated by code, research has shown that this minimum width may not be sufficient. It is recommended that corridors be designed beyond the minimum width whenever feasible, especially where lockers are located. Corridors should also be well-lit and clearly defined without projections that might impede the flow of movement.

Designs that lead to sudden 90 degree turns should be avoided. These corners allow people to hide and

although costly, allow better visibility as well as smoother pedestrian traffic flow. When budget constraints are an issue, strategically located convex mirrors can also help enhance surveillance and reduce conflicts.
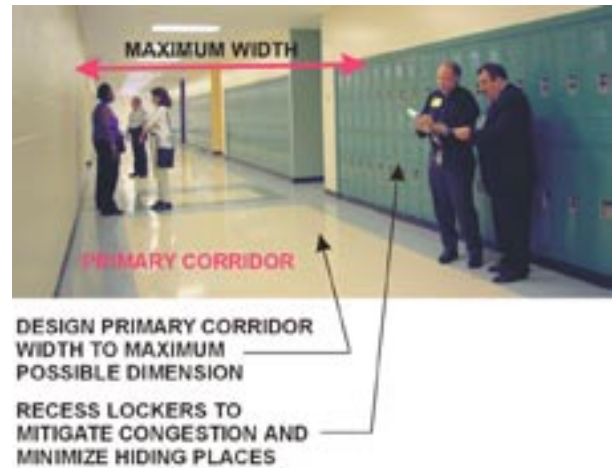
Figure 3.3.1
Primary Corridor with Recessed Lockers
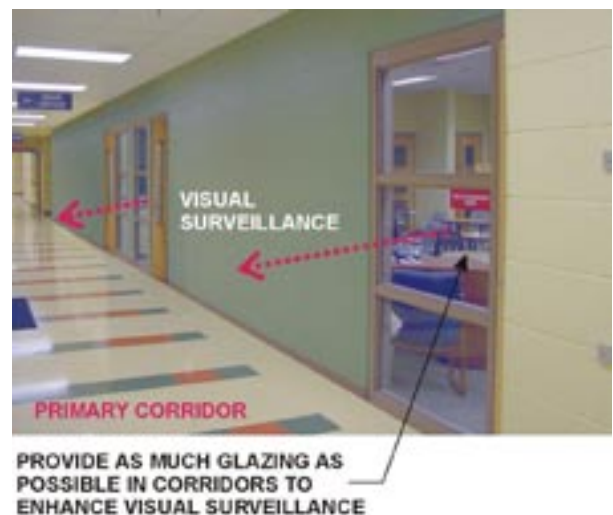
Figure 3.3.2
Primary Corridor with Interior Glazing to Enhance Natural Surveillance

To reduce hiding places and possible injury, water coolers, vending machines, trash containers, and lockers should be either low profile or recessed to be flush with the wall. Avoid creating nooks and other small spaces along corridors that promote criminal activity. Any freestanding objects such as stand alone lockers or vending machines should be mounted to the wall to avoid injury if they should fall over.
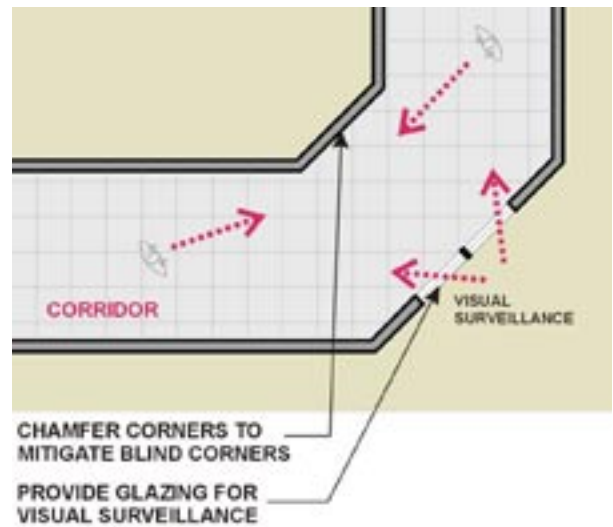
Figure 3.3.3
Plan Diagram
Corridor with Chamfered Corner

Interior Spaces

3.4   STAIRS AND STAIRWELLS

Natural Access Control

- Enclose entire area under all stairs.
- Monitor doors leading to exterior from stairwells.

Natural Surveillance

- Exterior stairs, balconies, ramps, and upper level corridors should have open or see-through type handrails and guardrails to allow surveillance.
- Avoid designing enclosed exterior stairwells when possible.
- Design lighting in stairs and stairwells to enhance surveillance.

Territorial Integrity

- Increase stair width beyond minimum requirements when possible.

Stairs and stairwells pose similar safety and security issues as corridors. Because they are also susceptible to congestion during peak use hours, consideration should be given to designing stairs and landings beyond the minimum code requirements.

Solid handrails create hiding places on stairs and landing areas. Open handrails allow visual access to areas on both sides of the stairwells. Handrails should be designed to discourage people from sliding on them, which can result in inadvertent damage or possible injury. The entire area under all stairs should be enclosed and made inaccessible for any use.

Attempts should be made to avoid enclosed exterior stairwells. If required, consideration should be given to providing these enclosed stairwells with electronic surveillance equipment whenever feasible. Doors leading to the exterior from stairwells are typically concealed and are therefore particularly vulnerable to unauthorized access. They should be monitored and checked by staff as much as possible. If the budget allows, equip these doors with alarms to indicate when a door has been opened.
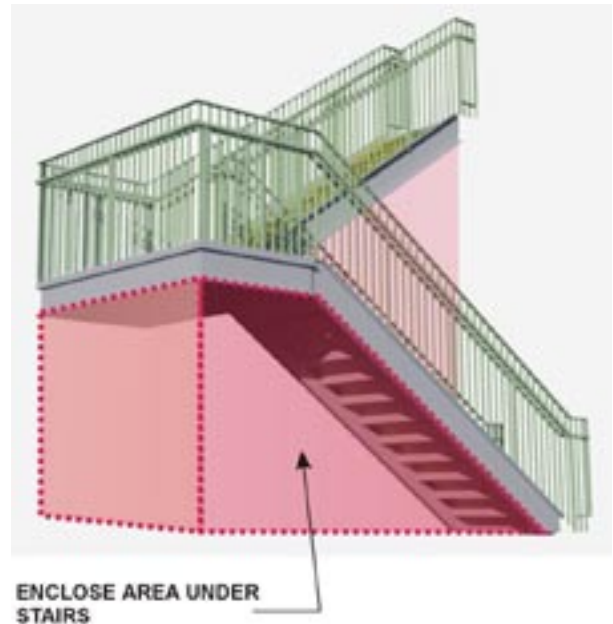
Figure 3.4.1
Prohibit Access to Underside of Stairs

Figure 3.4.2
Use Open Type Handrail and Guardrail Systems for Surveillance

Interior Spaces

3.5   TOILET ROOMS

<u>Natural Surveillance</u>

- Design group toilet rooms that open to the building interior with maze entries utilizing screen partitions rather than double-door entries.
- Locate toilet room entrances near areas with natural surveillance.
- Provide adequate facilities for after school activities in locations adjacent to recreation areas.

<u>Management</u>

- Utilize vandal resistant materials, fixtures, and hardware.

Research data indicates that toilet rooms are the fourth highest locations for criminal activities on school campuses. The most common security concerns are vandalism, fighting, disorderly conduct, and alcohol and tobacco use. The primary factor for security problems is that, due to their enclosure and privacy requirements, toilet rooms are difficult to supervise. However, there are a few key design strategies to help mitigate safety and security problems in these areas.

First, toilet rooms entrances should be located in places where natural surveillance can occur such as primary corridors and administration areas. Facilities provided for after school activities should also be designed to promote surveillance and should be able to be secured when necessary. They should be highly visible from recreational areas. Second, utilizing privacy screen partitions with a maze type entry design in interior group toilet rooms, when allowed by code, provides enhanced acoustical surveillance from adjoining corridors while preserving privacy. Third, the enclosed nature of the toilet room allows vandals the opportunity to damage fixtures. Therefore shelves, hand dryers, soap and paper towel dispensers, sanitary napkin dispensers, and trash containers should be heavy duty, recessed, fire resistant, and have separate locks. Toilet room walls, floors, and ceilings should have a durable finish to withstand repeated cleaning of graffiti.
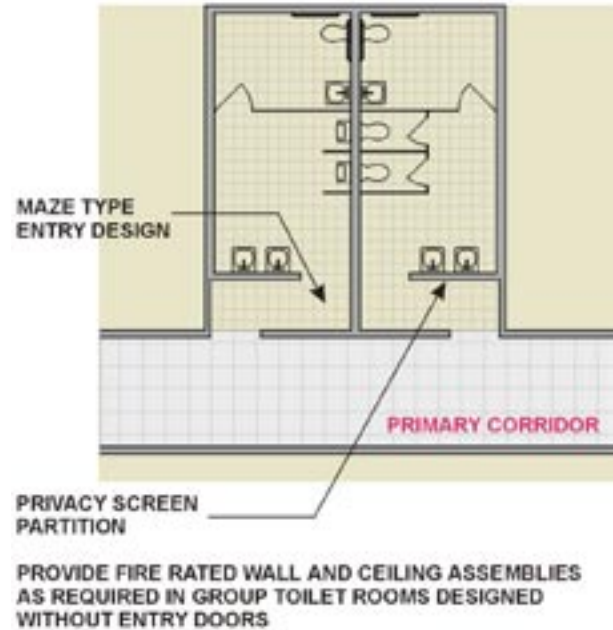
Figure 3.5.1
Group Toilet Room with Privacy Screen Partitions
Locate on Primary Corridor for Natural Surveillance
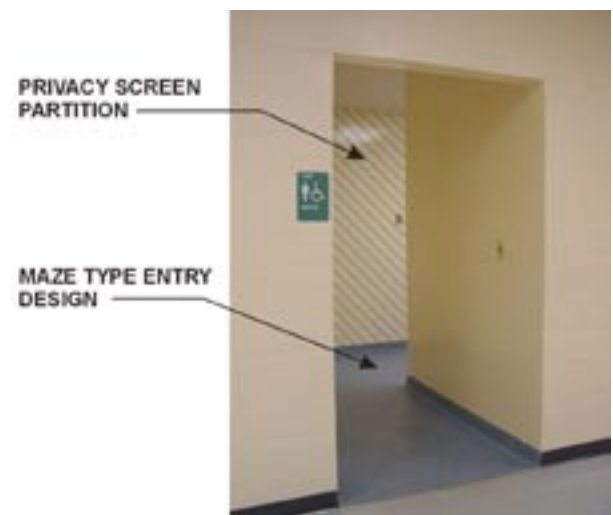
Figure 3.5.2
Example Group Toilet Room Entry

Interior Spaces

3.6   CLASSROOMS

<u>Natural Access Control</u>

•   Design classrooms to be locked down quickly by faculty inside classrooms during an emergency situation.

<u>Natural Surveillance</u>

•   Provide extensive exterior windows from classrooms to enhance surveillance of school campus.
•   Provide interior windows and glazing between the classroom and the hallway to promote surveillance both into and out of the classroom.
•   Design retractable partitions to fully recess into walls to eliminate hiding places.

Classrooms are a common location on school campuses for fighting, theft, and disorderly conduct. Therefore, it is important to design classrooms for easy monitoring and unobstructed visual supervision. Designs should include windows and glazing between hallways and classrooms to help increase surveillance. In classrooms that include retractable partitions, niches should be provided for housing partitions when they are in a retracted position. When applicable, lockers, built-in furniture, and storage units in classrooms should be designed so as not to obscure surveillance of the room or provide hiding places.

Incorporating windows along exterior walls of classrooms with views to the exterior enhances school security and promotes natural surveillance of the campus by staff and students during the course of their normal activities. This is particularly important for areas on campus that cannot be easily seen by the main administration office area.

In an emergency situation, classrooms should be able to be locked down quickly. Whenever possible, provide special classroom security locksets, which give teachers the ability to secure a door from inside the classroom without having to enter the corridor. This lockset function also allows egress from the room at all times.
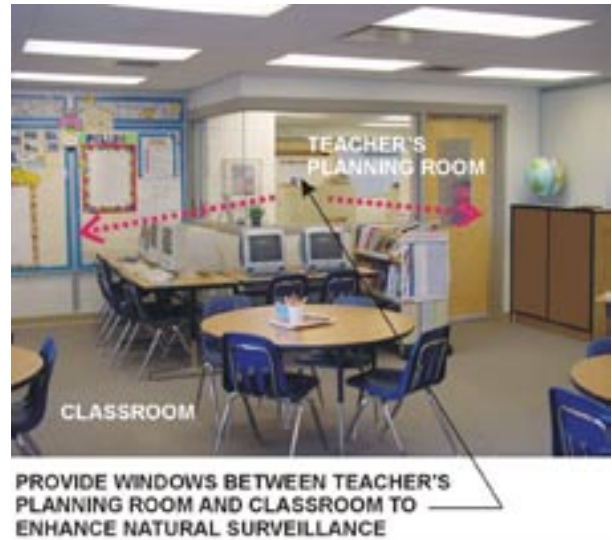
Figure 3.6.1
Classroom Designed to Enhance Natural Surveillance

Figure 3.6.2
Classroom with Windows toward Parking to Enhance Natural Surveillance

Interior Spaces

3.7   LABS / SHOPS & COMPUTER ROOMS

Natural Access Control

• Locate labs, shops, and computer rooms with minimal direct access from the exterior whenever possible.
• Provide a lockable room for storing equipment and supplies.

Natural Surveillance

• Provide faculty and staff with direct visual access to work room and entry areas.

Clear organization and unobstructed surveillance of work spaces is essential in the design of rooms where special equipment is being used. Since theft is a primary security issue associated with labs, shops, and computer rooms, faculty and staff should have direct visual access to workrooms and entries. Secondary access points, when they occur, should be well-secured. In addition, valuable equipment and supplies should be protected by providing storage in a lockable closet visible to faculty and staff to limit unauthorized access. It is also important to limit access to chemicals, tools, and similar items that could be used for dangerous purposes.

Whenever feasible, entries to work spaces should be equipped with an alarm system to make breaking and entering difficult. To maximize security and minimize theft, rooms with computers and other costly equipment should have a limited number of windows. Direct access from the exterior should also be limited.
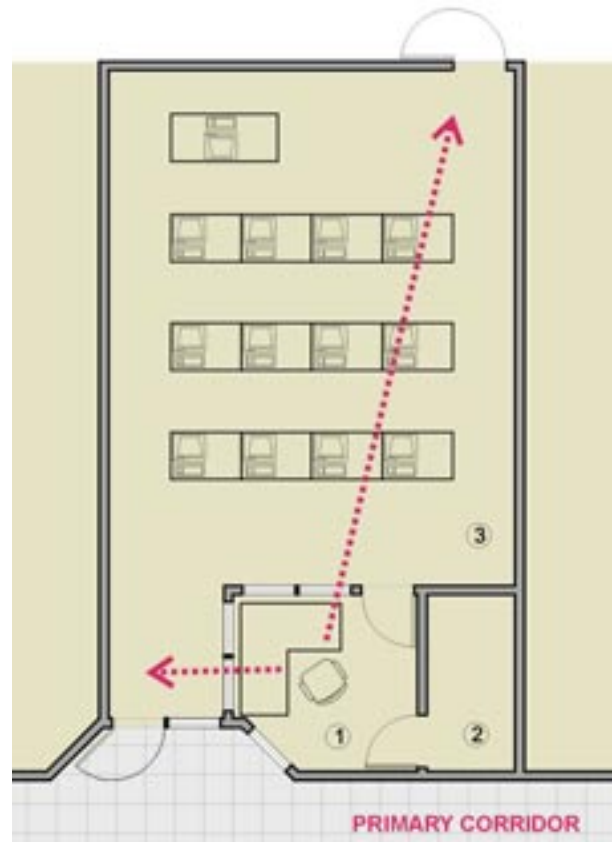
Figure 3.7.1
Plan Diagram
1) Faculty/Staff 2) Secure Closet 3) Student Work

RoomFigure 3.7.2
Labs/Shops & Computer Rooms
Access Control

Interior Spaces

3.8   MUSIC ROOMS

Natural Access Control

• Provide unobstructed view of entrances to music room for access control.
• Provide a lockable room for equipment and supplies.

Natural Surveillance

• Locate lockable storage rooms to promote natural surveillance.

As in the previous section, a principle security concern in the case of music rooms is theft. Music rooms or band practice areas also have similar programmatic considerations as auditoriums. It is important to facilitate visual supervision by one person over a large assembly of students and to properly secure equipment. Storage areas for equipment and supplies should be locked at all times and should be located in an area clearly visible to faculty and staff.

Entrances to the music room should be able to be easily secured and located in a highly visible area. Special consideration should be given to providing access detection alarms to increase security. Storage units, built-in furniture, or similar accessories associated with music and band practice areas should not create places to hide or obstruct surveillance of any portion of the room.
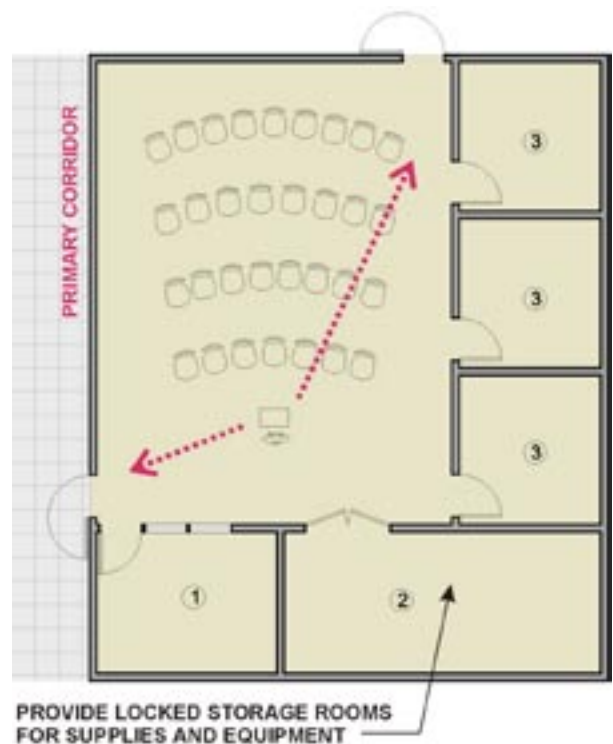
Figure 3.8.1
Plan Diagram
1) Planning Room 2) Storage Room 3) Practice Room

Interior Spaces

3.9 CAFETERIAS

Natural Access Control

- Locate a well defined control point near main entrance of cafeteria.
- Design kitchen and serving area so that they can be secured both during and after school hours.

Natural Surveillance

- The control point at the main entrance should have unobstructed surveillance of entire cafeteria.
- Design serving line and cashier area to be visible from dining area.

Territorial Integrity

- Design cafeteria to eliminate traffic-flow conflicts and overcrowding.

Cafeterias have been cited by educators and school resource officers as the primary location on school campuses for fighting. Overly cramped and crowded designs can irritate and frustrate students. Because large groups of students move in and out of cafeterias at the same time, it is critical to design circulation patterns that eliminate traffic-flow problems. Solutions include designing well defined one way entry and exit doors as well as a providing sufficient space between tables to allow ample circulation. It is also important to provide a designated control point near the main entrance and exit that has a clear line of sight of the whole cafeteria.

Due to the presence of cash, both at the cashier and with the students in line, the serving line should be visible from the dining area. The serving and kitchen area of cafeterias should be able to be properly secure since food may be a target of theft in schools. In addition, care must be taken to secure kitchen utensils such as knives, which may be used for dangerous purposes.

Since cafeteria restrooms may be used after hours, they should be designed to prevent unauthorized access into other areas of the school building.
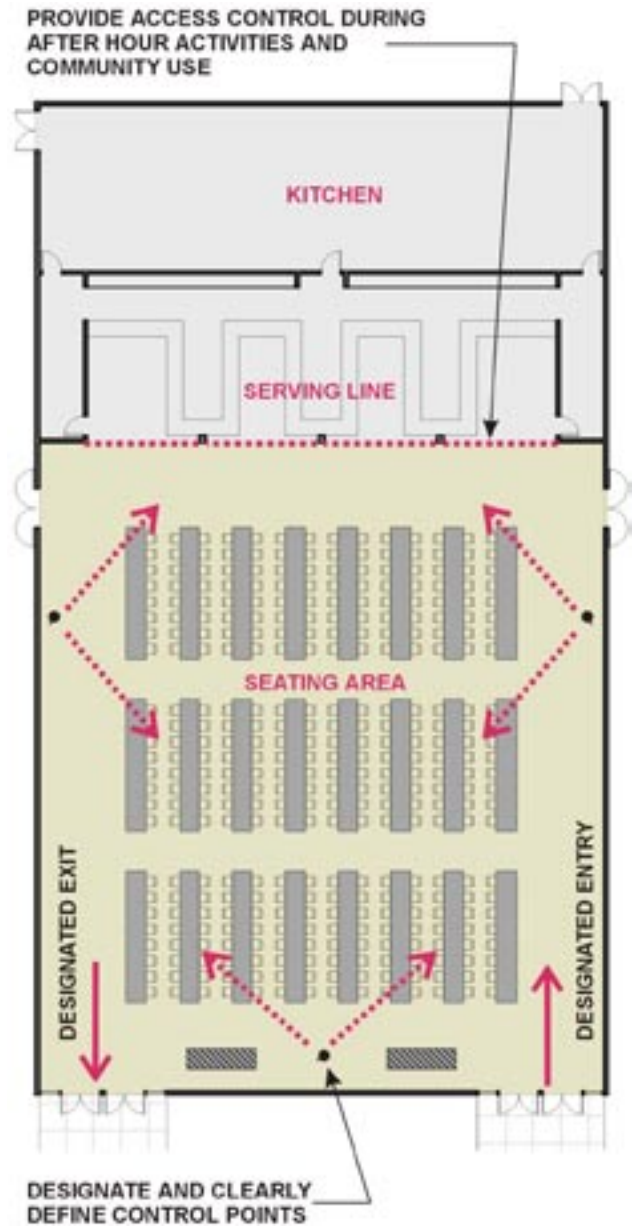
Figure 3.9.1
Plan Diagram
Cafeteria Schematic

Interior Spaces

3.10 AUDITORIUMS

Natural Access Control

*   Locate roof openings as far away as possible from catwalks, platforms, and scaffolding to prevent access from roof into auditorium.
*   Provide a secure area for controls, equipment, props, and tools.
*   Limit and control student access to catwalks, scaffolding, and upper level platforms.
*   Provide secure separate entrances for school use and after hours activities.

Natural Surveillance

*   Avoid niches that provide hiding places along walls.
*   Design retractable partitions to fully recess into walls to eliminate hiding places.

Territorial Integrity

*   Design auditoriums to eliminate traffic flow conflicts.

Like any large school assembly area, auditoriums should provide clear sight lines and easy traffic flow. Niches along walls should be eliminated, and if the auditorium is subdivided for dual use as classrooms, the partitions should fully recess into the wall. Partitions that do not recess can form a barrier for people to hide behind when the auditorium is empty, as well as providing cover to those intent on disrupting a general assembly.

The stage curtain can be left open to allow surveillance of back stage area when not in use. Electrical and lighting controls, stage equipment, props, and tools should be placed in lockable storage rooms to reduce theft.

Auditoriums often require scaffolding, platforms, and catwalks for the installation and maintenance of lighting and sound equipment. For safety and security reasons, access to these areas should be carefully controlled. During times when students are permitted in these areas, it is imperative that they are closely monitored and supervised. Care must also be taken not to locate
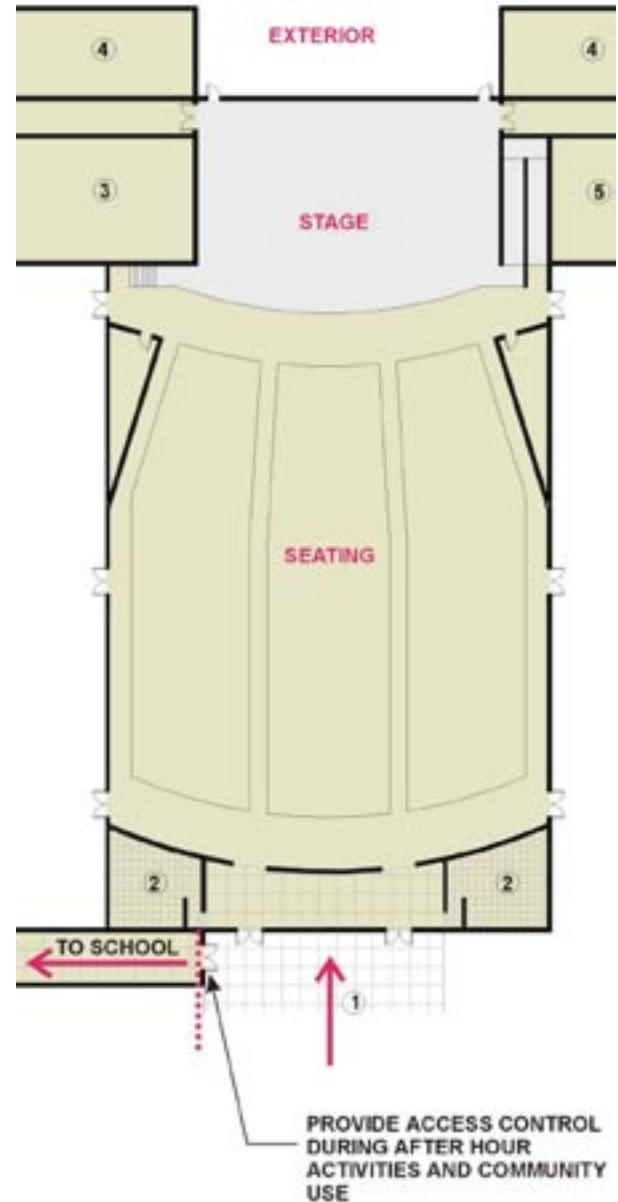
Figure 3.10.1
Plan Diagram
1) Provide Separate Entrance for After Hour Activities
2) Toilet Facilities 3) Storage 4) Dressing Room
5) Workshop

roof openings close to these structures, as it is possible to gain entry into an auditorium by prying open a roof hatch or smoke vent and traveling via a scaffold down to floor level.

Auditoriums are often used for after hour activities and are commonly used by the community as joint-use facilities. Therefore, dual main entrances should be provided. Design a direct entrance from the school for students and a separate entrance from the street or designated parking area for the public. Both entrances should be able to be properly secured for access control.

Interior Spaces

3.11 GYMNASIUMS

Natural Access Control

• Locate roof openings as far away as possible from architectural features within the gymnasium that may provide a means for climbing from the roof into the interior.
• Utilize clerestories instead of skylights whenever possible.
• Provide a secure area for equipment.
• Provide secure separate entrances for school use and after hour activities.

Natural Surveillance

• Utilize retractable bleachers that can be secured when not in use.
• Locate equipment storage rooms in an area that is visible to gym users and staff to promote surveillance.

As in the case of auditoriums, gymnasiums require dual entrances to allow independent operation for school use and after hour activities as well as community use. This will restrict visitors from entering the school. Provide a direct entrance from the school for students and an entrance for the public from the street or designated parking lot. Both entrances should be able to be secured.

Like the auditorium, the gym is another large span structure, and care must be taken to avoid opportunities for students to enter the school building through the roof and climbing down structural elements such as trusses.

When skylights are used, they should be installed well clear of any means of climbing down to the gym floor. Clerestory windows can be used in place of skylights. However, they should be designed to prevent access from bleachers. In addition, structural members should not be accessible from either the floor or from adjacent bleachers.

Retractable bleachers should be secured so as to prevent vandalism. Because these areas can also present

Figure 3.11.1
Plan Diagram
1) Secure Separate Entrance for After Hour Activities
2) Bleachers 3) Gymnasium Storage 4) Toilet Facilities

opportunities for hiding, it is important to control and monitor access to the underside of bleachers.

Equipment rooms must be designed for access control. A secure and lockable area for storage of equipment should be provided. This area should be placed in a location where it will be seen by gym users, instructors, and coaches during the course of their normal activities to enhance monitoring and surveillance.

RETRACTABLE BLEACHER ASSEMBLY

LIMIT ACCESS TO UNDERSIDE OF BLEACHERS TO PREVENT HIDING PLACES AND ENHANCE SECURITY
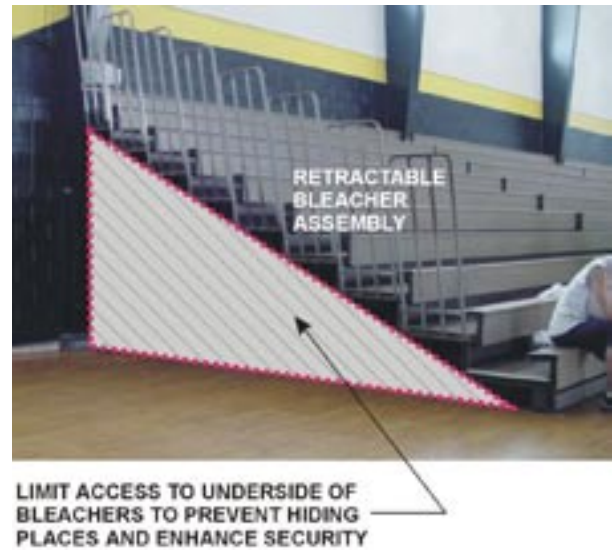
Figure 3.11.2
Bleacher Assembly in Gymnasium

Interior Spaces

3.12 LOCKER ROOMS

Natural Access Control

- Locate gym instructors' and coaches' offices near the main entrance to the locker room.
- Utilize finishes that eliminate access to ceiling area.

Natural Surveillance

- Provide windows in gym instructors' and coaches' offices with unobstructed views into locker area.
- Recess lockers to eliminate hiding places and limit access to ceiling areas.
- Place lockers along the perimeter walls of locker room or limit locker height to enhance surveillance.

Management

- Utilize vandal resistant materials, fixtures, and hardware.

Locker rooms have consistently been cited by educators and security officers as school locations with a high level of security and safety problems. Theft, fighting, and vandalism are specific concerns. Due to the enclosure and privacy requirements of these areas, locker rooms can present opportunities for criminal activities. Therefore, these areas should be carefully organized and designed to promote as much access control and surveillance as is possible.

The gym instructors' and coaches' offices should be located adjacent to the main entry to the locker room and should have extensive glazing that overlooks the entire room. These offices should able to be easily secured to control unauthorized access. It is preferable to place lockers along the perimeter walls of the locker room with a centralized and open changing space. However, this may not be feasible due to budget constraints and space limitations. When parallel rows of lockers are necessary, an alternative is to utilize lockers that do not exceed four feet in height, adequately spaced to avoid crowding, and to place the rows of lockers perpendicular to the office window wall and parallel to the faculty's line of sight to insure an unobstructed view of this area. Lockers should be either recessed into the wall or sloped on top

Figure 3.12.1
Plan Diagram
Locker Room Schematic
1) Gymnasium Storage 2) Coach's Office
3) Coach's Toilet Room 4) Trainer's Office
5) Towel Storage 6) Changing Area and Lockers
7) Toilet and Shower Facilities

to minimize opportunities to gain access to ceiling areas. Recessed lockers can also eliminate places to hide.

Light fixture covers, windows, and mirrors should be impact resistant to prevent damage from vandalism. Acoustical ceiling tiles should not be used in any area of the locker room. Exposed concrete or plaster finished ceilings eliminate the opportunity to use the space above as a hiding place for persons, stolen property, or controlled substances.
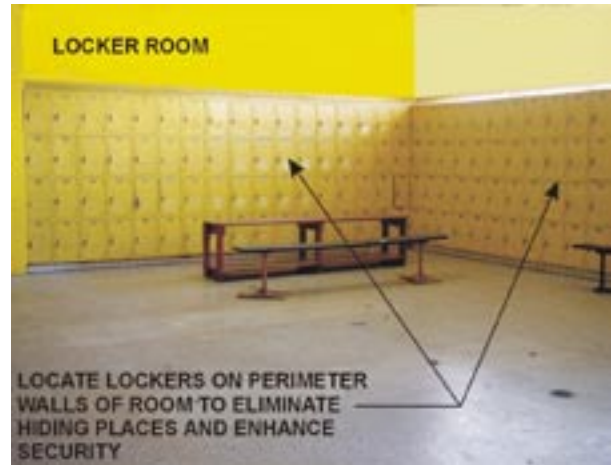
Figure 3.12.2
Locker Arrangement

Figure 3.12.3
Locker Arrangement

Interior Spaces

3.13 LIBRARIES & MEDIA CENTERS

Natural Access Control

• Locate circulation desk and/or reception area near main entrance.
• Design a separate lockable area for audio-visual and computer equipment to control access.

Natural Surveillance

• A control point at the main entrance should have unobstructed surveillance of entire library/media center.
• Maintain unobstructed lines of sight throughout library/media center and from the media specialist's office.

Management

• Install detection devices and alarm systems when possible.

Library design should minimize opportunities for theft of materials and equipment as well as minimize possible hiding places. Both goals can be met through the use of control points and the maintenance of clear sight lines.

The reception area or circulation librarian should be placed in a central location near the main entry to control student traffic. Low stacks that are well-spaced and placed parallel to the circulation librarian's line of sight will aid in visual control as well as reduce hiding places for storing stolen goods or controlled substances. Serious consideration should be given to installing a book alarm system. When feasible and applicable, also consider providing alarms at secondary exits in libraries and media centers to enhance access control and to protect against theft.

Access to audiovisual (A.V.) equipment can be controlled by creating a lockable delivery/pickup area separate from general equipment storage.

School libraries and media centers may also be combined with public libraries or be used by the public
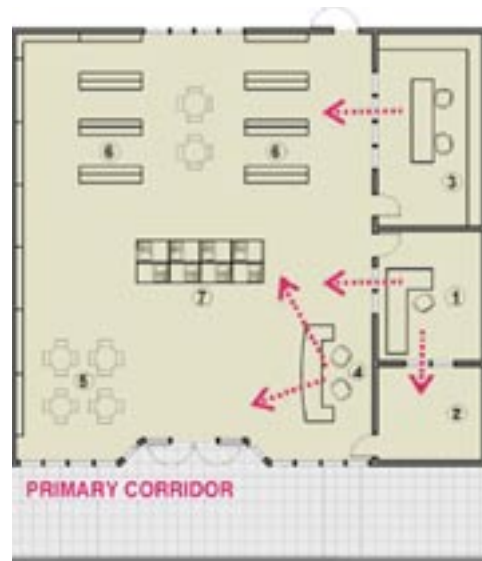
Figure 3.13.1
Plan Diagram
Library/Media Center
1) Media Specialist Office 2) Lockable Room for Audiovisual and Computer Equipment 3) Work Room
4) Control Point 5) Student Work Area 6) Low Stacks
7) Computer Work Stations

LOW STACKS INCREASE VISUAL CONTROL

Figure 3.13.2
Library/Media Center

in a joint-use arrangement. Special provisions for access control should be made in these circumstances. As in other shared facilities mentioned in previous sections, two distinct and separate main entrances, one direct entrance from the school and one entrance for the public from the exterior, should be provided to control access into the school by the public. These entrances should be monitored and easily secured.

Systems & Equipment

4.1 ELEVATORS

<u>Natural Access Control</u>

• Limit access to elevators to authorized individuals.

<u>Natural Surveillance</u>

• Locate elevators adjacent to main circulation where they can be observed.
• Provide adequate lighting in elevator lobbies.

<u>Territorial Integrity</u>

• Provide electronic surveillance within elevator cabs when possible.
• Provide vandal resistant convex mirrors in elevator cabs.

Figure 4.1.1
Plan Diagram
Elevator Location

Elevators should be centrally located adjacent to main circulation spaces, i.e., entry lobbies and primary corridors. A landing area that does not obstruct student traffic should be provided. Elevator lobbies should be well-lit to enhance surveillance and security.

The use of elevators for criminal activities can be significantly deterred by faculty/staff surveillance of lobbies and corridors coupled with the use of electronic surveillance, such as closed circuit television (CCTV), within the elevator cabs. Convex mirrors placed in strategic locations within elevator cabs can eliminate hiding places and greatly increase security. These mirrors should be made of vandal resistant materials.

Systems & Equipment

4.2 HVAC/MECHANICAL EQUIPMENT

Natural Access Control

• Locate heating, ventilation, and air conditioning (HVAC)/Mechanical equipment in a secured area accessible to authorized personnel only.
• Provide a lockable enclosure for equipment such as exterior condensing units.
• Install flush mounted vents in mechanical rooms.
• Identify all critical electrical and communication distribution rooms as "Equipment Room."

Natural Surveillance

• Locate lockable equipment enclosures in areas where general lighting occurs when possible.

The location for heating, ventilation, and air conditioning (HVAC) equipment should be accessible only to authorized personnel, but should also allow for proper ventilation. Mechanical equipment storage should have flush mounted vents located out of reach. Spacing of vent slats should not allow persons to reach in or to pass objects through them, potentially causing damage to equipment or exhaust fans. Equipment should be protected with bollards when located adjacent to vehicular routes.

Secure exterior condensing unit with enclosures designed using materials that provide protection from thrown projectiles.

Fresh air intake, water and electrical supply, and backflow preventors should be secured to eliminate unauthorized access. Rooms containing electrical, telephone, computer distribution, security, fire, and other critical distribution rooms should be identified and labeled simply as "Equipment Room." This makes it difficult for an intruder to shut down the school and its communication network.

LOCATE AIR INTAKE AS HIGH AS POSSIBLE FROM THE GROUND LEVEL

PROVIDE GENERAL SITE LIGHTING FOR EXTERIOR EQUIPMENT AREAS

LOCATE MECHANICAL EQUIPMENT IN SECURE AREA ACCESSIBLE TO AUTHORIZED PERSONNEL ONLY

Figure 4.2.1
HVAC/Mechanical Equipment Example

PROVIDE A SECURE ENCLOSURE AROUND CONDENSING UNITS

Figure 4.2.2
HVAC Equipment Example

Locating these structures in areas where general site lighting is used will make nighttime surveillance easier without having to install direct lighting.

Figure 4.2.3
Mechanical Equipment Example

Systems & Equipment

4.3   WATER FOUNTAINS

Natural Access Control

- Utilize wall-hung water fountains to prevent vandalism when possible.

Natural Surveillance

- Locate water fountains near group toilet rooms in areas with natural surveillance.

Water fountains need to be protected from vandalism. It is important to locate water fountains in areas where they can be monitored. Flush mounted water fountains provide protection for the cooling system, but do not provide access for handicapped persons. Floor mounted fountains are completely exposed, providing protection only to the side facing the wall. It is preferable to use wall-hung fountains that have in-wall cooling systems when possible. These fountains should have heavy duty mounts to prevent damage due to vandalism.

Water fountains in exterior locations should be able to be easily secured to limit access after school hours when necessary. Place water fountains in a recessed area and provide a roll-up type security grille to control access and prevent vandalism.

Figure 4.3.1
Typical Wall-hung Type Fixture

Figure 4.3.2
Provide Access Control for Exterior Water Fountains

Systems & Equipment

4.4   VENDING MACHINES & PUBLIC TELEPHONES

Natural Access Control

- Control student access to vending machines.
- Design exterior vending machine areas that can be easily secured after school hours.
- Locate public telephones in a centralized area.

Natural Surveillance

- Locate vending machine areas in well monitored areas with natural surveillance.
- Recess vending machines into alcoves to prevent hiding places.
- Locate public telephones in areas that facilitate supervision and surveillance.

Vending machines are vulnerable to vandalism and theft, both during and after school hours. Provision should be made to protect vending machines located in schools and on school campuses. Public telephones can also provide opportunities for criminal activity. A common problem cited is the use of public telephones for bomb threats. Therefore, supervision of these areas is key to enhancing school security.

Controlling access to vending machines can be achieved in several ways. Providing a recess or alcove with a roll-up type security grille with hand openings can limit access to machines as well as eliminate hiding places. These recesses can also be provided with doors to secure vending areas after school hours when necessary. A less expensive alternative is to fit machines with hinged cages and hand openings that only allow students to reach in and make purchases. In either case, avoid placing vending areas in isolated areas. They should be located in well-lit areas where they can be monitored by faculty and staff in the course of their normal activities. Design wide corridors and walkways adjacent to vending machine areas to avoid conflicts and overcrowding.

Figure 4.4.1
Access Control for Vending Machines

Figure 4.4.2
Alternative Method to Provide Access Control of Vending Machines

Public telephones, especially on high school campuses, should be located in a centralized and highly visible location such as adjacent to the administration areas. Providing a window with unobstructed lines of sight of the telephones in these locations can significantly reduce vandalism. Design wide corridors and walkways in these areas to prevent congestion.

Figure 4.4.3
Public Telephone Location

Systems & Equipment

4.5   FIRE CONTROL & ALARMS

<u>Natural Access Control</u>

- Flush-mount sprinklers in ceilings.
- Avoid blocking or obstructing paths of travel with fire control equipment.

<u>Natural Surveillance</u>

- Locate fire extinguishers, fire alarms and standpipe cabinets where they can be easily monitored.

Fire control equipment includes such items as fire extinguishers, fire alarm pull stations, standpipe cabinets, and sprinklers.

Fire extinguisher and standpipe cabinets located in main circulation paths should be flush mounted in walls adjacent to classrooms. Fire alarm pull stations should be located in areas that allow for unobstructed surveillance. Like vending machine and telephones, isolated equipment is more susceptible to vandalism and misuse. Providing tamper-proof covers for fire alarm pull stations can also deter misuse of the device. Fire sprinklers should also be flush mounted in ceilings to avoid damage.

LOCATE PULL STATIONS AND OTHER DEVICES WHERE THEY CAN EASILY BE MONITORED
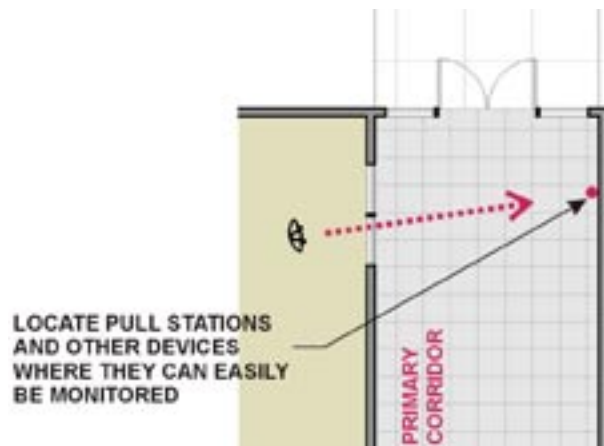
Figure 4.5.1
Plan Diagram

Figure 4.5.2
1) Fire Alarm Pull Station with Tamper-proof Cover
2) Recessed Type Fire Extinguisher Cabinet

Systems & Equipment

4.6 ALARM & SURVEILLANCE SYSTEMS

Mechanical Access Control

• Utilize audio and/or motion sensitive detection systems and alarm systems when possible.
• Locate detection devices at critical entry points and in rooms that contain valuable equipment.

Mechanical Surveillance

• Provide surveillance equipment in enclosed stairwells and other key locations when possible.

Management

• Maintained operational integrity of equipment.

Both survey data and site visits confirm that increased surveillance and access control continues to be a significant issue for schools. Electronic surveillance systems, such as closed circuit television (CCTV), are mentioned repeatedly by principals, facility managers, and school resource officers as a desirable addition to their campuses. Because the use of alarm and surveillance systems can greatly increase the safety and security of schools, serious consideration should be given to incorporating mechanical as well as natural access control and surveillance.

Typical locations and conditions cited as potential problem areas in need of increased control include: the lobby and main entrance, enclosed stairwells, courtyards, secondary access points, and blind corners and hidden areas along the building perimeter. Propped doors at secondary entrances are a particularly common occurrence and, since it is difficult for resource officers and staff to properly check these areas throughout the school day, providing alarms on these doors to alert staff should be a priority.

The use of sensor or alarmed security systems can reduce property loss and vandalism in schools after

CCTV SHOULD BE INSTALLED IN POTENTIAL PROBLEM AREAS IN NEED OF INCREASED CONTROL

Figure 4.6.1
Typical Wall Mounted CCTV Camera

CCTV STRATEGICALLY POSITIONED TO MONITOR VISITOR PARKING AND BUILDING PERIMETER

Figure 4.6.2
Electronic Surveillance of Building Perimeter and Parking

hours. Coordination with local police can help reduce response time, increasing the chances of apprehending persons while still on school grounds with property in hand. Installation of electronic surveillance systems should be handled by expert contractors. They will strategically locate detection devices at key points throughout the school.

ELECTRONIC SURVEILLANCE SYSTEM
STRATEGICALLY PLACED TO MONITOR
BLIND CORNER AT PERIMETER OF
SCHOOL BUILDING

Figure 4.6.3
Electronic Surveillance of Building Perimeter

Appendix A

Research Report

Executive Summary

Introduction

This is a summary of specific and general findings and recommendations based upon responses to survey instruments, field investigations at schools and community colleges throughout Florida, and a review of the literature on safety and security in schools and community colleges. The "Methodology" and "Survey Results and Related Data Analysis" Sections below provide a detailed description of the approaches used to gather the data and the results of that effort. Accompanying some of the findings here are general recommendations: others are spelled out in the *"Guidelines"* that precede this section and are highlighted in the bullet points associated with the graphics and the text.

Specific Findings and Recommendations

Findings:

Knowledge, Use and Assessment of CPTED, Safe School Design Principles, and the Existing *Guidelines*

Survey respondents for this research were, by and large, much more aware of CPTED principles than were respondents to the survey conducted as part of the research preceding publication of the 1993 *Guidelines*. Awareness and use of the principles is credited to increased training through reference organizations and through articles in the trade and professional literature.

Despite higher knowledge and awareness levels of those principles generally, survey respondents and those interviewed in the field were considerably less aware of 1993 *Guidelines*. Design Professionals respondents are much more likely than other respondents to indicate that either Safe School Design principles or the *Guidelines* have been incorporated into the design and construction of public schools and community colleges.

Most Important Features Relative to Safety and Security Issues

When asked to identify the "most important" Safe School Design features relative to safety and security, the responses from the School District, Community College, and Design Professional groups centered around *surveillance*, *access control*, and *territoriality* issues, in that order.

Does Safe School Design Make Schools Safer?

Although some Design Professionals are critical of elements of the *Guidelines*, the great majority of all respondents believe that the use of Safe School Design principles and the *Guidelines* make schools

and community colleges safer places. Some Design Professionals report difficulty fulfilling the design intent of "slippery finishes," "audio/motion detection systems," and providing for the "separation of after school activities" from the core educational facility.

Recommendation:

Continue education programs focused on CPTED and Safe School Design principles as contained in the *Florida Safe School Design Guidelines* for School District Risk/Facility Managers, Community College Risk/Facility Managers and Design Professionals. Wherever possible, partner with organizations such as the Florida Association of School Resources Officers (FASRO) to present educational programs about the *Guidelines* and their impacts on promoting school safety and security.

What Are Serious Crimes on Public School and Community College Campuses?

Finding:

Principals report that *fighting, disorderly conduct,* and *vandalism* are the top three crimes on their campuses in terms of numbers of incidents, while Community College respondents say that *larceny/ theft*, *vandalism,* and *breaking and entering* are the three crimes they perceive to be the most serious based on event frequency.

Preferred School Design Type

Finding:

A sizeable majority of respondents overall favor the one-story, centrally organized building group configuration over other plan types. However, only a plurality of Principals and Community College respondents favored this arrangement over others.

Critical Areas of School Design

Finding:

Relative to critical areas of school design, *corridor surveillance* issues are the most important concerns among the respondent groups generally. These are followed by *perimeter enclosure* issues and by the perceived need to *minimize niches*. For public schools in particular, corridor surveillance is considered to be especially important. Community College Risk/Facility Managers reported that their most critical areas of school design related to security are *exterior lighting*, *alarm systems*, and *interior lighting*, in that order.

What Single Policy or Procedure Change?

Finding:

All respondents were asked the open-ended question, "What single policy or procedural change would they recommend if funding were available?" Central themes that emerge from this very mixed collection of open-ended responses tend to center around the fundamental problems of *surveillance* and *access control*, which are interwoven issues.

Public Access After Hours

Finding:

With the notable exception of Community College respondents who were split almost evenly (50% "Yes," 45% "No," and 5% non-responsive), significant majorities within the other three respondent groups (ranging from 65% to 69%) believe that public access does make their institutions more prone to criminal activity.

Posting Signs for Access Control

Finding:

Most respondents (64%) who answered this question report that their school, district, or community college had policies in place governing the posting of access control signs during school hours; however, a significantly lower number (33%) report having policies for signage to deal with *after-hours* access.

Crime by Location

Finding:

Several distinct peaks and valleys are evident. On the <u>high</u> side of the spectrum, respondents overall identify *parking lots*, *off-grounds/adjacent buildings*, *locker rooms,* and *restrooms* as the top four places for crimes and report <u>low</u> criminal activity on *rooftops of covered walkways*, on *building rooftops*, in *lobby/reception areas,* and at *main entrances*. The most crimes reported in parking lots were trespassing and vandalism. The most crimes reported in off-grounds/adjacent buildings are use of alcohol, tobacco, drugs, and fighting. For locker rooms, the most crimes reported are larceny/theft and fighting. The most crimes in restrooms are vandalism and the use of alcohol, tobacco, and drugs.

Crime by Time

Finding:

All respondents group for this question perceived that significantly more crimes occur *before school*, *after school*, *during the evening,* and *on weekends* than during *normal classroom hours* (including breaks between classes). This perception is consistent with earlier results showing that respondent groups (with the exception of Community College Risk/Facility Managers) overwhelmingly report the perception that after-hours access to public school campuses makes them more prone to crime.

Other Serious Concerns on Public School and Community College Campuses

Finding:

Principals, School District Risk/Facility Managers, Community College Risk/Facility Managers, and School Resource Officers were asked whether they had serious concerns relative to "*gang-related activities*, *hate crimes*, *bomb threats, terrorism, and violence* in the workplace." Of the listed concerns, "bomb threats" registered the highest number of affirmative responses, with slightly over a fourth (26% or 40 individuals) of all those who answered this question saying that they were a serious concern at their schools. The second most serious concern was "violence in the workplace" which registered a positive response from 24.2% of the respondents (34 individuals) who answered this question, and the third was *gang violence*, which was viewed by 19.3% of the respondents as a serious concern.

What Design Changes Would You Implement in Your School/Community College to Make it Safer?

Finding:

All of the respondent groups put *surveillance* issues clearly at the forefront, followed by *access control* (with the exception of School Resource Officers who combined *access control and territoriality* issues second), and *territoriality* third. Some respondents combined all of these as well as *guardianship* and *management* issues in their comments.

General Findings and Recommendations

Surveillance and CCTV

Finding:

There is significant and growing interest in the use of close circuit television (CCTV) to accomplish surveillance in both interior and exterior spaces at schools and community colleges.

Recommendation:

Continue emphasis on programs that focus on designs for natural surveillance, which should be the first strategy for surveillance. Nevertheless, a framework for the application and design integration of CCTV for security purposes should be developed for Florida public schools. A model could be the National Institute of Justice report, <u>The Appropriate and Effective Use of Security Technologies in U.S. Schools</u>, NCJ 178265, September 1999.

Small Scale Design Elements

Finding:

Specific, small scale elements may be important contributors to school and community college security. Examples include the design and placement of access control signs and alarming secondary building entrances to warn administrators and school resource officers when doors are propped open.

Recommendation:

Support research into small scale design changes in schools and community colleges.

Community Colleges and K-12

Finding:

Even though they are subject to the same Safe School Design Requirements found in Florida Building Code requirements, community colleges and public schools present very different security design profiles inasmuch as they have very different student populations and, for the most part, different campus plans and organization. As a consequence, they tend to have different crime and crime prevention issues.

Recommendation:

Future research should concentrate on community colleges and public school as separate entities insomuch as security design is concerned.

After-Hour Access

Finding:

Respondents to our surveys, and especially those from public schools, report overwhelmingly that after-hour access to school campuses make them more prone to crime, even though the co-location of public facilities is bound to increase in the future. School designers report that they have problems

fulfilling the design intent of this aspect of Safe School Design. Moreover, most respondents believe that more crime takes place after normal daytime class hours than during that period.

Recommendation:

Increased research and continuing education should be devoted to the after-hours access issue.

School Crime and Location Data

Finding:

There is a lack of Florida data that connects school design, location, and criminal acts.

Recommendation:

School Environment Safety Incident Reporting System (SESIR) data should include references to the specific locations where crimes are committed in schools.

Student Interviews

Finding:

Field interviews and survey research about crime in Florida public schools and community colleges suggest that school children and community college students may be the best sources of information about crime on their campuses.

Recommendation:

Student interviews should be incorporated into research conducted for the updating and revision of future *Florida Safe School Design Guidelines*.

History and Status of Florida Safe School Design Guidelines

Introduction

The present project grows out of a decade of research and practice in the area of Safe School Design supported by the Florida Department of Education. Beginning in 1992 with a focus on K-12 public schools, the scope of the *Florida Safe School Design Guidelines* has grown to include the state's community colleges. This period of time has witnessed great change in Florida's and the nation's educational systems and in the way that citizens view schools and school safety, due in part to a series of highly publicized incidents of school violence. This has raised the consciousness of many people about improving strategies of all kinds to make schools and community colleges safer places. Among those strategies are those that involve the relationship between good planning and design of facilities and criminal behavior. The revised *Florida Safe School Design Guidelines* presented here, along with the research data supporting the *Guidelines*, represent a milestone in the refinement of those strategies.

Background

In 1993 the Florida Department of Education contracted with the Florida Center for Community Design + Research at the University of South Florida in Tampa to carry out the "necessary research to confirm existing design standards, or establish new standards, and develop safe school design guidelines for Florida's public schools."[1] The request for proposal preceding that contract noted that the intent of the project was to:

> answer the most complex problems and issues concerning safety, crime and violence on school campuses, suggest configurations and layouts for typical spaces and facilities, and develop design guidelines which can be used by the Office, educational facility planners, architects, and engineers to plan and design new educational facilities, and assess the safety of existing facilities in Florida's public school districts.[2]

As a result of that contract, the University of South Florida's team produced the state's original *Florida Safe School Design Guidelines*, which included graphics and text as well as supporting research materials aimed at informing design professionals, facility and construction managers, and the crime prevention research community. A major intent of that work was to recommend changes to Chapter 6A-2, Florida Administrative Code, at that time the Uniform Building Code for Public Educational

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[1]Florida Safe School Design Guidelines: A Research Report for the Florida Department of Education Office of Educational Facilities, Florida Center for Community Design and   Research, University of South Florida, Tampa, Florida, 1993.

[2]Id

Facilities Construction. Subsequent to the publication of the university's work, Safe School Design principles were incorporated into Section 423.8.8 of the 2001 Florida Building Code. The 1993 *Guidelines* were referenced in that provision ("safe school design strategies") and their availability was promoted through Florida Department of Education sources, including the Department's Internet site.[3]

Present Work

Initial discussions relative to the present work were held in the summer of 2001, and a contract was concluded between the Florida Department of Education and the University of Florida's College of Design, Construction and Planning in October 2001. Faculty and graduate students in the College's School of Architecture and Department of Urban and Regional Planning were contracted to complete the project. A Steering Committee of 10 members representing FDOE, school districts from around the state, community colleges, and law enforcement was selected to help guide the project. The first meeting of the Steering Committee was October 11, 2001, in Gainesville. Due to unforeseen delays, the project formally commenced in January 2002. It concluded in September 2002.

Work on the project was divided into four phases, with the Steering Committee's input programmed into each phase. The overall goals and approach to the work were to:

1) Evaluate the impacts of the existing *Florida Safe School Design Guidelines* on school safety and, based on that evaluation,
2) Make recommendations to improve the *Guidelines* where appropriate.

Recommendations were to incorporate developments in the relevant literature since the 1993 *Guidelines* were promulgated, present organizational and administrative opportunities for increased coordination among agencies concerned with school safety, and the latest technology applicable to crime prevention planning and design in schools.

To accomplish these goals, the research team developed and implemented five survey instruments, conducted field research at schools and community colleges throughout Florida, conducted a review of the relevant literature (with a special focus on studies done since 1993), and sought the counsel and advice of the Steering Committee throughout the entire process. Further details about the process and the results of the work are contained in the revised and updated *Guidelines* presented here and in the supporting research materials.

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[3]Pursuant to Chapter 120, Florida Statutes, in January 2001, the State Requirement for Educational Facilities (SREF), which contained the Safe School Design provisions, was incorporated into the State Uniform Building Code for Public Educational Facilities Construction (UBC).

Methodology

Approach and Rationale

The research team used several different types of information gathering strategies intended to provide several different "layers" of data. The expectation was that the variety of approaches and data would provide, in the end, a more complete picture of existing conditions in Florida public schools and community colleges relative to Safe School Design than if only one approach was utilized. The steps in the process involved:

- Review of the *1993 Florida Safe School Design Guidelines* and associated materials
- Literature review and the compilation of annotated bibliography, with a focus on the published literature since 1993
- Direct interviews with design professionals
- Telephone interviews and conversations with School Resource Officers
- Site visits to schools and community colleges in Alachua County, Bay County, Broward County, Duval County, Osceola County, and Pinellas County with on-site interviews with school administrators (generally principals), school designers and architects, facility managers, and school resource officers
- Steering Committee recommendations and input
- Implementation of the Principals Survey Instrument, Community College Risk/Facility Managers Survey Instrument, School Resource Officers Survey Instrument, School District Risk/Facility Managers Survey Instrument, and Design Professionals Survey Instrument
- Data analysis and refinement of preliminary drafts of the *Guidelines* with the advice and assistance of the Steering Committee

The structured and unstructured data and information collected through the above methods facilitated the research team's evaluation and understanding of the extent to which the Department of Education *1993 Florida Safe School Design Guidelines* have been utilized in public schools and community colleges throughout Florida. The data and information collected were further used to identify how the *Guidelines* could be improved and updated.

Interviews, Review, and Input

At the start of the research, the research team conducted direct interviews with design professionals, principals, and school resource officers to assess critical aspects of school design and related criminal activity. The research team reviewed the history of Florida Safe School Design, and Safe School Design practices across the United States. The research team also reviewed the available records and files, including Florida Department of Education School Environment Safety Incident Reporting

System (SESIR) data on school crime, and the 2001 Florida Building Code (Safety Requirements for Educational Facilities). The research team commenced a literature review and collected historical and current documents utilized in the evaluation and assessment of the design of safe schools, with a special focus on developments in the literature since 1993.

Throughout the research process the Steering Committee provided advice and assistance. For example, the Steering Committee assisted the research team by coordinating site visits to public schools and community colleges across Florida; the five survey instruments were reviewed and revised with the support of the Steering Committee as well as the University of Florida Institutional Review Board. The value of the contributions and assistance from the Steering Committee and representatives of the Florida Department of Education during the course of the research cannot be overemphasized.

The Survey Instruments

Besides direct interviews, a primary method of data collection was survey instruments. Because of the number of sub-groups to be surveyed as well as time and cost constraints, the respondents do *not* represent a scientific sampling of the universe of their respective populations. Rather, they represent a "convenience sample" which, when taken into account along with the current literature, information from site visits and first-hand observations and input from the Steering Committee, nevertheless provides credible evidence in support of the design and management recommendations made in the *Guidelines*. It would be incorrect to generalize findings from our respondents to all those in that group's universe in Florida or elsewhere.

Five survey instruments were developed by the research team to target a broad range of respondents involved in the planning, design, construction, and daily operations of public schools and community colleges in Florida. The five survey instruments included: the Principals Survey Instrument, the School District Risk/Facility Managers Survey Instrument, the Community College Risk/Facility Managers Survey Instrument, the School Resource Officers (SROs) Survey Instrument, and the Design Professionals Survey Instrument. At the start of the research, the research team conducted several direct interviews with design professionals, school resource officers, and principals across Florida to assess critical aspects of school design and related criminal activity. The survey instruments were then pre-tested and distributed to the following:

- Principals of the schools constructed in Florida since 1993 based on a mailing list provided by the Florida Department of Education.
- Risk/Facility Managers of school districts throughout Florida based on a mailing list provided by the Florida Department of Education.
- Risk/Facility Managers of community colleges throughout the twenty-eight community college regions within Florida based on a mailing list provided by the Steering Committee.
- School Resource Officers listed in the Northeast Florida Educational Consortium, as well as members of the Florida Association of School Resource Officers Association (FASRO).

- Architecture firms and individual design professionals involved in the design and construction of schools in the state of Florida since 1993.

The first series of mailings to lists of principals, community colleges, and school resource officers commenced May 1, 2002, and was completed on August 14, 2002. The Community College Risk/ Facility Managers Survey Instrument was distributed a second time at a meeting of Community College Facility Managers in Orlando in May 2002. The School Resource Officer Survey Instrument was mailed and, on July 22, 2002, also was distributed a second time at the 23rd Annual Florida School Resource Officers (FASRO) Conference in Fort Lauderdale, Florida.

The Design Professionals Instrument was initially conducted during face-to-face interviews with individuals involved in the planning, design, and construction of public schools in Florida. Moreover, survey instruments were also distributed in person by the research team during May-July 2002 to principals, facility managers, and school resource officers during various site visits. On June 28, 2002, the Design Professionals Survey Instrument was mailed to design professionals involved in the design and construction of Florida public schools since the introduction of the *1993 Florida Safe School Design Guidelines*. Of the total of 1,123 survey instruments distributed to all groups, 178 were returned by August 14, 2002, a return rate of about 16%. The aggregate number of completed surveys was below the expectations of the research team although the results for individual groups varied considerably; time and resource constraints prohibited follow up beyond second attempts to have respondents complete the survey instruments.

The results from the survey instruments were tabulated using Microsoft Excel, and can be found in the Section "Survey Results and Related Data Analysis" in this appendix. Maps depicting the overall distribution of responses by county, and those for individual respondent groups with the exception of design professionals, may be found on pages 178 through 182.

Site Visits and Review

As noted above, site visits were made to school districts and community colleges throughout Florida, with the intent of seeing a cross section of schools (levels and types) located in as many of the state's regions as possible. Time constraints prohibited the team from seeing schools and community colleges in all of the state's regions, although most regions were visited. Initial site visits provided the research team with information that aided in the development of subsequent survey instruments. Further, the site visits provided the opportunity to collect unstructured data from respondents. In doing so, the research team asked the same general questions at each site. Responses to these questions often led to follow-up questions, which provided additional information and data.

The site visits, coordinated with representatives from the Steering Committee and the Florida Department of Education, were conducted during February, April, May, June, and July 2002. During each site visit, the research team was provided the opportunity to observe and assess, as well as

photograph, the design of Florida public schools and community colleges. The site visits allowed the research team to observe the extent to which Safe School Design principles and strategies have been, and may continue to be, incorporated into the design of public schools and community colleges. Site visits further allowed the research team to assess the reliability and validity of results of initial interviews and survey instruments and to check reports in the literature against first hand field experience.

Preliminary and Final Findings and Recommendations

Preliminary research findings were presented at the August 1, 2002, meeting of the Steering Committee. The following report, and the *2002 Florida Safe School Design Guidelines*, document the final findings and recommendations based upon the preceding research methodology.

Appendix A
Survey Results and Related Data Analysis

1. Overall Analysis of Survey Instruments

Introduction

As described in the preceding Methodology Section, five survey instruments were designed and tailored to specific respondent groups consisting of Principals, School District Risk/Facility Managers, Community College Risk/Facility Managers, School Resource Officers, and Design Professionals. The intent was to provide the research team with a variety of viewpoints about the knowledge and use of Safe School Design principles and the occurrence, location, and timing of crime in Florida schools and community colleges.[1] An additional intent was to uncover recommended design and policy changes from respondents about making Florida schools and community colleges safer places. The overall goal of this effort was to inform the revision of the *1993 Florida Safe School Design Guidelines*.[2] While serving as a beginning point, the report accompanying those initial *Guidelines* also provided benchmark data for the present research. Several questions were incorporated into the present survey instruments that replicate or were similar to those asked of Florida School District personnel in 1993 so that longitudinal comparisons could be made relative to crime and security planning issues.

While each of the survey instruments differed in some degree from the others, there were some common questions asked of all respondents – such as most questions dealing with demographics as well as those dealing with fundamental design and policy issues – and there was a common format and structure. In that context, all survey instruments were divided into three general sections. The first section, "*Part 1: Background and Context*," sought to uncover demographic information about respondents; the second section, "*Part 2: Criminal Activity and School Design,*" aimed at gathering perceptions about crime, locations, and timing issues; and the third section, "*Part 3: Design and Policy Suggestions*," focused on gathering respondent input and ideas. Individual analyses for each respondent group may be found in parts 2-6 of this section of the report.

The following analysis discusses and compares responses *across* groups, taking into account common questions and their associated responses. Where that is not possible, such as in the case of idiosyncratic questions (especially relevant to School Resource Officers and Design Professionals), the analysis focuses on that particular group's response set.

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[1]Questions were targeted to respondent groups based upon the research team's understanding of their differences in knowledge and experiences. Moreover, some questions were specifically requested by the Steering Committee to be asked of specific respondent groups and not to others.

[2]Florida Safe School Design Guidelines: A Research Report for the Florida Department of Education Office of Educational Facilities, Florida Center for Community Design and Research, University of South Florida, Tampa, Florida, 1993.

Part 1, Background and Context Questions: General Demographic Characteristics

By August 14, 2002, the research team had received a total of 178 completed questionnaires from the following :

Respondent Group	Number
Public School Principals	
• Elementary School	35
• Middle School	15
• High School	9
• Not Designated	3
School District Risk/Facility Managers	23
Community College Risk/Facility Managers	20
School Resource Officers (SROs)	54
Design Professionals	19

Questionnaires were distributed either in person or by mail to respondents in each of Florida's counties. The overall distribution of responses is illustrated in Map 1 on the following page. Completed survey instruments have been received from individuals in 50 counties (75% of the state). Some individuals either did not indicate their county or were not asked their geographic location, as in the case of Design Professionals. When community college regions are considered, the county coverage is considerably larger (see Map 4, Maps Section). In 1993 questionnaires were mailed to the Superintendents of each of Florida's 67 school districts, with completed questionnaires returned from 46 school districts (counties).

Demographic characteristics from each of the respondent groups can be found in the individual analyses in the following sections. In general, where responses are comparable, we find that public school respondents tended to be senior administrative officers (e.g., 65% of the "Principals" survey responses were from principals themselves, with the remainder from lower level school officials) that school resource officers reported having an average of five years experience in those positions and some (6%) had supervisory experience, and that the majority of school designer respondents noted that they had at least ten years experience in designing schools and a similarly large majority (84%) had designed at least 10 public schools in Florida. In addition, most designer respondents had experience with a variety of types and levels of schools and community colleges in Florida.

MAP 1

SAFE SCHOOLS SURVEY INSTRUMENTS
OVERALL DISTRIBUTION OF RESPONSES BY COUNTY

County	Count	County	Count
Alachua	4	Lake	4
Baker	1	Lee	5
Bay	4	Leon	5
Bradford	2	Levy	1
Brevard	3	Liberty	1
Broward	8	Madison	0
Calhoun	0	Manatee	4
Charlotte	2	Marion	6
Citrus	3	Martin	2
Clay	2	Monroe	0
Collier	0	Nassau	0
Columbia	2	Okaloosa	4
Dade	5	Okeechobee	2
De-Soto	0	Orange	10
Dixie	0	Osceola	4
Duval	2	Palm Beach	5
Escambia	4	Pasco	3
Flagler	1	Pinellas	6
Franklin	0	Polk	1
Gadsen	1	Putnam	3
Gilchrist	2	St. Johns	3
Glades	1	St. Lucie	7
Gulf	1	Santa Rosa	2
Hamilton	0	Sarasota	2
Hardee	0	Seminole	5
Hendry	1	Sumter	0
Hernando	2	Suwannee	1
Highlands	2	Taylor	0
Hillsborough	5	Union	1
Holmes	0	Volusia	5
Indian River	0	Walton	4
Jackson	2	Wakulla	0
Jefferson	0	Washington	1
Lafayette	0		

RESPONSE BY COUNTY
No Response
Respondent Counties

Respondents to these surveys therefore had reasonable rank and/or career longevity (some stretching back beyond the time when *1993 Guidelines* were promulgated) which provided them with good experiential perspectives to respond to the questions posed in the remainder of their specific survey instruments. And while it is no doubt true that respondents self select at least in part because they *know something* about the issues raised in the survey instrument (and that this introduces bias into their responses), we nevertheless have a higher level of confidence in their responses than if they had reported lesser experience or rank.

We cannot compare similar results for the other groups of respondents – School District Risk/ Facility Managers and Community College Risk /Facility Managers since they were not asked to provide data concerning experience or career longevity. Rather, we refer the reader to the individual analyses provided for these groups in parts 3 and 4 of this section. In an effort to widen the possibilities of response from school districts and community colleges, the research team elected to broaden the possible range of respondents here (hence facility managers *and* risk managers) while minimizing the number of questions asked.

Knowledge, Use, and Assessment of Safe School Design Principles and the Existing *Guidelines*

As part of the demographic context, we wanted to know something about the levels of knowledge and use among respondents of the Safe School Design principles and the 1993 *Guidelines*. Field interviews with design professionals and school resource officers had led us to suspect that while the principles (derived largely from Crime Prevention Through Environmental Design principles) embodied in the *Guidelines* were widely known, the *Guidelines* themselves were not as well known or used. We therefore asked School District Risk/Facility Managers and Community College Risk/Facility Managers a series of questions (Q. 7-11 for School Districts and Q. 6-11 for Community Colleges) to understand their familiarity with the seven Safe School Design Principles incorporated into Section 423.8.8 of the 2001 Florida Building Code.

As noted, we were interested in gauging their familiarity with the *Guidelines* themselves, and assessing their sense of how extensively these principles (whether derived from the *Guidelines* or not) have been incorporated into the design and construction of schools/community colleges in their respective jurisdictions. We also wanted to know whether the incorporation of these principles made schools *safer* in their estimation. A similar set of questions relating to the Safe School Design Principles was also asked of Design Professionals (Q.14-18) in addition to a question about their knowledge about CPTED principles (Q 12). School Resource Officers were asked directly about their knowledge of CPTED since we believed that they would have little knowledge or experience with the applicable Florida Building Code provisions.

Familiarity with Safe School Design Principles and with the Existing *Florida Safe School Design Guidelines*

While the majority of School District and Community College respondents to the question say that they are either "Very" or "Somewhat Familiar" with Safe School design *principles* (86% and 85% respectively), fewer of either respondent groups say that they are either "Very"or "Somewhat Familiar" with the existing *Guidelines*. Indeed, only 10% of the Community College respondents report that they are "Very Familiar" with the *Guidelines*. The same trend is borne out by the results of the Design Professionals' Survey Instrument relative to these questions. A large majority of the respondents to the latter survey (74%) say that they are "Very Familiar" with Safe School Design principles, whereas only a tiny minority (5%) report being "Very Familiar" with the 1993 *Guidelines*. CHART 1 and CHART 2 below depict overall numbers for these three respondent groups relative to the two questions.

<u>**CHART 1**</u>

FAMILIARITY WITH FLORIDA SAFE SCHOOL DESIGN GUIDELINES
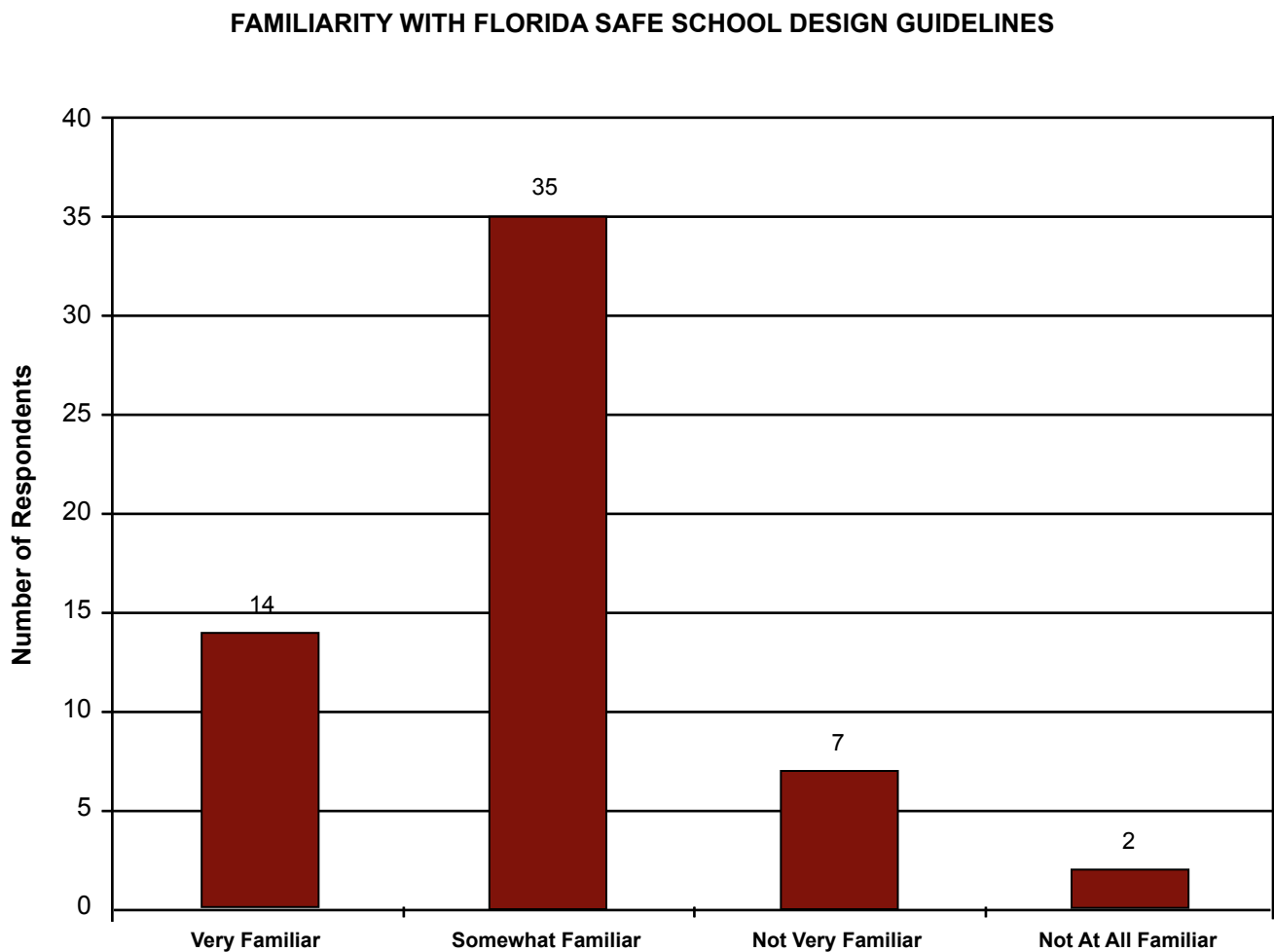
CHART 2

FAMILIARITY WITH SAFE SCHOOL DESIGN PRINCIPLES
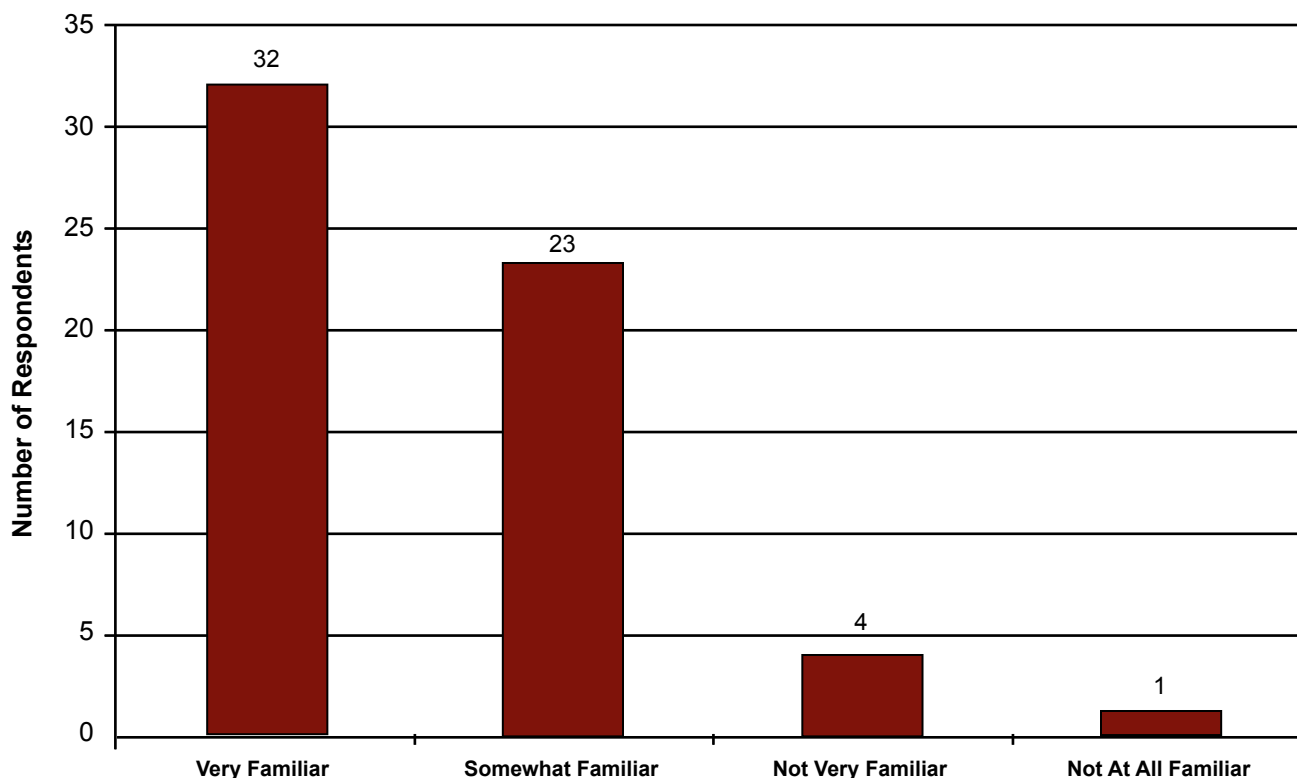
The above results tend to validate what the research team had heard from designers directly during site interviews, as noted above, and argue for a much better means of disseminating the revised *Guidelines* so that they are better known to the design and construction risk/management community, whether in the public or private sector. Putting this information on-line at the Department of Education's website is one very positive step in that direction.

Familiarity with CPTED Concepts

In 1993 when School District Superintendents were asked simply whether "they were familiar with Crime Prevention Through Environmental Design (CPTED) concepts," only a fraction (24%) indicated that they had *any* degree of acquaintance with them. Compared to that we see a quantum leap of knowledge in this area among School District personnel responding to this survey. While there are no strictly comparable data for other groups since the 1993 survey only targeted School District staff, when we compare the 1993 data with very similar questions asked of School Resource

Officers (Q 8) and Design Professionals (Q 12) about familiarity with CPTED, both groups report high levels of familiarity with these concepts. Respondents account for these knowledge levels by virtue of increased CPTED training for School Resource Officers through a variety of organizations (i.e., Florida School Resource Officers Association and the Florida Attorney Genera's Office) and for design professionals through articles in trade and professional journals as well as by seminars proved by the American Institute of Architects. Such training accompanied by the publication and wide dissemination of relevant literature on the subject is essential to building knowledge of place based crime prevention strategies (including CPTED) and Safe School Design principles, and should be encouraged and supported by the Florida Department of Education and especially targeted at School District and Community College staff.

Incorporation of Safe School Design Principles or Guidelines into Design and Construction

When asked to assess the extent to which either the Safe School Design Principles or *Guidelines* were incorporated into the construction (and retrofit) of facilities in their jurisdictions, the vast majority of both School District and Community College respondents say that they have been incorporated "Extensively" or "Incorporated Somewhat." A much higher proportion of School District respondents (34%) say that they have been incorporated "Extensively" as compared to only 15% of the Community College respondents who report likewise. However, the difference in actual numbers is too small to be statistically significant given the small sample sizes. Moreover, we have no tangential evidence to explain this other than the fact that Community Colleges tend to have very different building organizational features than most public schools and have only recently become subject to the *Florida Safe School Design Guidelines*.

When we compare the responses above to that of Design Professionals who were asked essentially the same question, we find that the vast majority (95%) say that the *Guidelines* or the principles have been incorporated either "Extensively" or "Somewhat Extensively" into the schools designed by their firms, although a higher proportion of these respondents (42%) compared to School District or Community College respondents say that they have been "Extensively" incorporated. We suspect, based on the responses from all the latter groups to the above questions concerning their knowledge of the *Guidelines* versus the more general design *principles*, that respondents believe that what has been incorporated into new or remodeled schools/community colleges are indeed the general principles of Safe School design as distinct from the more specific *Guidelines*. See Chart 3 below depicting the overall distribution of responses of School District, Community College, and Design Professionals answering this question.

CHART 3

INCORPORATION OF SAFE SCHOOL DESIGN PRINCIPLES
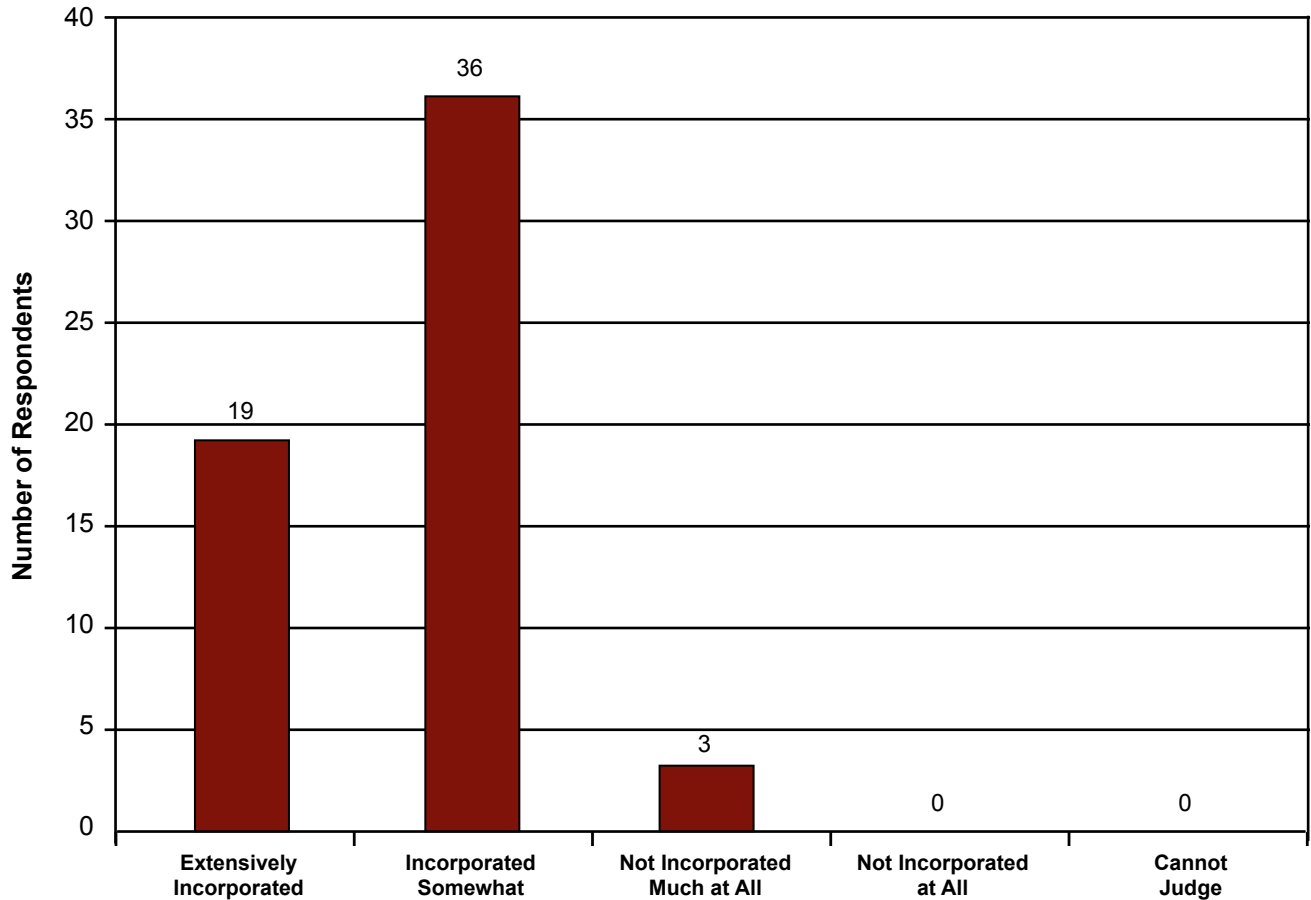
Most Important Features Relative to Safety and Security Issues

When asked the follow-up question to identify the "most important" Safe School Design features relative to safety and security, the responses from the School District, Community College, and Design Professional groups centered around *surveillance*, *access control*, and *territoriality* issues, in that order. The primary importance of surveillance issues surfaced again and again throughout the general survey results.

Some of their comments are illustrated here. For example, School District respondents noted the importance of the "Elimination of alcoves and obstructions," while others suggested "video cameras... open handrails/balconies." Some Community College respondents said that the most important features from the *Guidelines* were "adequate lighting, low density landscaping, security cameras in high cost equipment rooms," and "landscaping for maximum view of campus for security." In

this context, Design Professionals noted such strategies as "natural surveillance of exterior" and "continuous visual control of student environment by admin."

A recurrent theme by School District and Community College respondents, as well as by School Resource Officers, is emphasis on electronic and mechanical surveillance techniques (especially security cameras). However, nowhere in the existing *Florida Safe School Design Guidelines* are these devices listed or even mentioned. Rather, the *Guidelines* stress the use of "natural surveillance" and, where justified, the use of "audio and motion" detection systems. Here natural surveillance means the ability to see as much and widely as possible based upon the wise application of design features. Designers repeatedly emphasized the importance of passive design features as distinct from electronic or mechanical devices which may be expensive retrofits and which may also be costly to maintain. As one Design Profession respondent described it:

> "Natural Surveillance and Natural Access Control. The use of these passive elements provides safety and security without the costs or maintenance of active mechanical systems."

Does Safe School Design Make Schools Safer? How?

An important question concerning the assessment of Safe School Design principles was whether respondents perceived them as making schools and community colleges safer. We asked this question of School District Risk/Facility Managers, Community College Risk/Facility Managers, and (relative to the existing *Guidelines* directly) of Design Professionals. The great majority of each group reported that they believed that the incorporation of the principles in school/community college design and construction has indeed made their facilities safer (78% of District respondents, 65% of Community College respondents, and 84% of Design Professionals respondents). See Chart 4 on Page 86 for an overall summary of the distribution of responses to this question.

CHART 4

DO SAFE SCHOOL GUIDELINES HELP MAKE SCHOOLS SAFER?
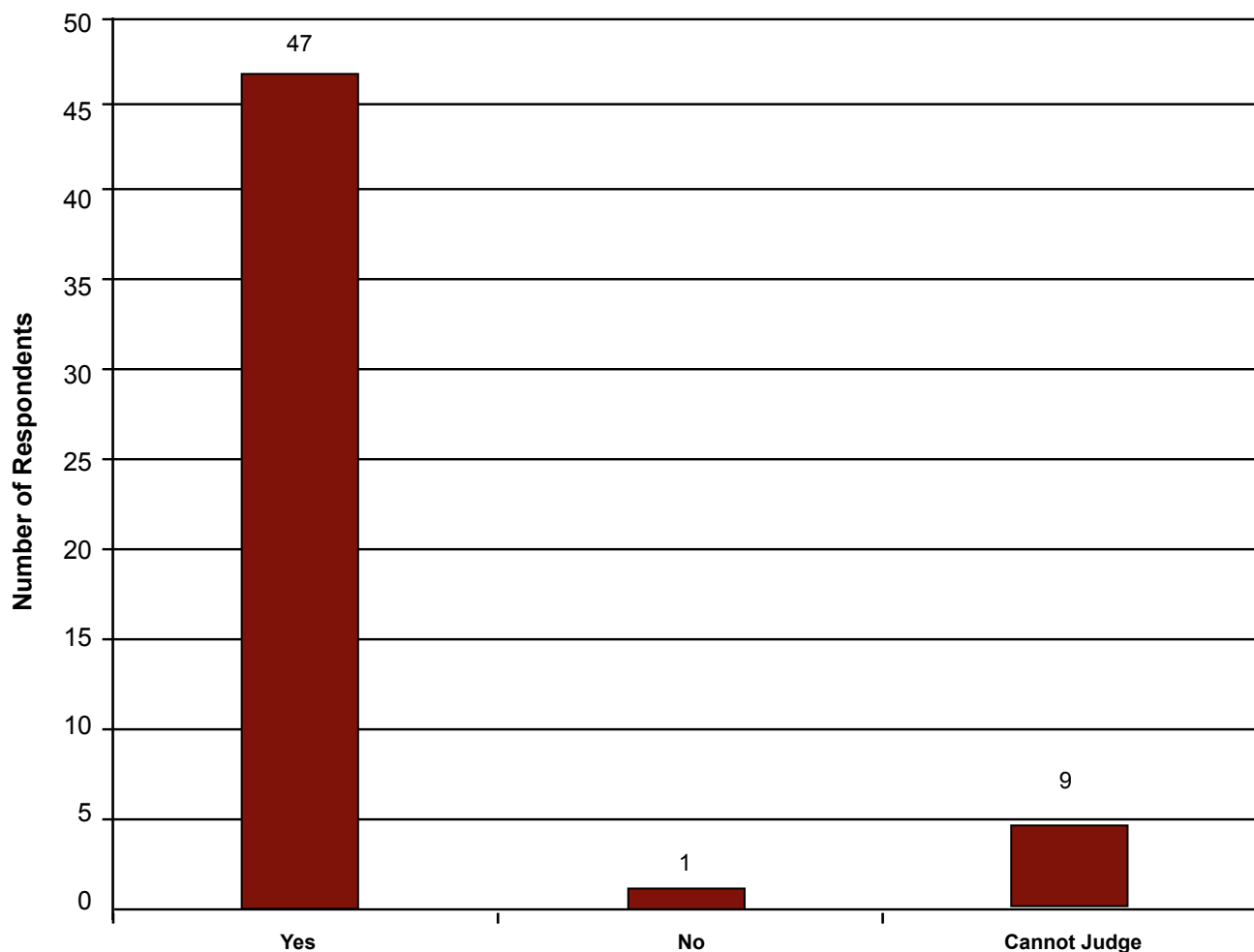
Follow-up open-ended comments to this question from School District and Community College respondents generally focused on surveillance and training issues as being important features of Safe School Design. Design Professionals tended to stress the educational value of the existing *Guidelines,* insomuch as they were seen as a valuable tool to inform architects as well as school board clients about Safe School Design. One noted that they were useful in conveying generalized concepts instead of prescriptive instructions about design, a point that was emphasized as well by the Steering Committee and during field interviews with school architects.

Design Professional were also asked about the *least* useful elements or components of the 1993 *Guidelines*. The varied responses included critiques that some of the design principles were not economically feasible, that the existing *Guidelines* did not differentiate among the various levels

and types of schools (a problem also encountered by the present research team and especially in conjunction with issues dealing with community colleges), and that, since many projects involve remodeling as distinct from new construction, architects often have to deal with fundamentally flawed campus organizational plans (from a security standpoint), and that the 1993 *Guidelines* are perceived to provide little guidance in these cases.

Complaints concerning the format of the existing *Guidelines* such as, "the research report comes before the actual *Guidelines* and these should be reversed" and it is "too difficult to find the important points in the text of the *Guidelines*," were expressed to the research team during field interviews and by the Steering Committee. Additionally, some designers objected to the "cartoon- like" quality of the graphics in the existing document, requesting more attractive and precise diagrams and graphics. The research team has addressed many of these concerns in the current document.

Relative to the substance of the *Florida Safe School Design Guidelines*, Design Professionals were asked to rate each of the issues (design principles from the *Guidelines*) high, medium, or low in terms of their "abilities to fulfill their design intent."[3] On one hand, they responded that they believed they had high ability in the areas of "site and building lighting, natural surveillance, tamper proof doors and locks, open hand rails for surveillance and open space visibility." On the other hand, they felt their ability to fulfill the design intent of the following principles was low: "slippery finishes, audio/ motion detection systems," and providing for the "separation of after school activities." There were no middle-ground answers, although some indicated that the principles associated with territoriality and slippery finishes were not clear.

In the course of site visits, it was evident to the research team, especially when older schools were compared with those built since 1993, that many Safe School Design principles had been incorporated in varying degrees into school and community college design and construction, irrespective of whether they had come from the 1993 *Guidelines* themselves or from the generalized knowledge of the designer or school official. Moreover, local informants (especially Designers and School Resource Officers) clearly believed that the application of Safe School design principles and practices had made an important impact in terms of making schools safer. We believe, however, that further research is warranted to look at specific elements, especially at the micro design level, that could be significant contributors to improving school/community college safety through design. Some of those elements – such as alarmed secondary entry doors – are tentatively identified in the research findings below.

What Are Serious Crimes on Public School and Community College Campuses?

Within "Part 1: Background and Context" of the Principals and Community College Survey Instruments, we asked respondents to identify the most serious crimes they perceived taking place on their campuses based on the number of incidents taking place (as distinct from the seriousness of the crime itself). We compared the data they provided with that published for 1999-2000 by the

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[3]This is Question 19 in the Design Professionals Survey Instrument. None of the other respondent groups was asked this question.

Florida Department of Education School Environment Safety Incident Reporting System (SESIR). Principals report that *fighting, disorderly conduct,[4]* and *vandalism* are the top three crimes on their campuses in terms of numbers of incidents, while Community College respondents say that *larceny/ theft, vandalism*, and *breaking and entering* are the three crimes they perceive to be the most serious based on event frequency.

The principals' list is almost directly compatible with the SESIR data showing that *fighting, disorderly conduct,* and *the use of alcohol, tobacco, and other drugs* are the top three crimes reported on a statewide basis. The only difference is that vandalism, a property crime, is seen as more evident than the use of controlled substances. The list is significantly different, however, for Community College respondents when compared to either the Principals' or to the SESIR data. It is obvious that these respondents see property crimes as much more prevalent problems on their campuses than violent crimes or those involving controlled substances. The reasons for this are readily apparent. Not only are community college campuses generally very different in design and physical organization from most public school campuses, they have very different student compositions.

Community college students are older, more mature, are voluntary students, and are consequently much less likely to engage in violent or disruptive behaviors as are public school students, especially those in middle and high schools. Moreover, some community college students may be able to legally possess and use some controlled substances on their campuses (e.g., in designated smoking areas or at special functions) whereas these are never permitted in public schools. These differences between the two environments and student bodies show up consistently in the survey results and were apparent to the research team on site visits and during meetings of the Steering Committee. They argue for a separate series of yardsticks by which to measure and assess criminality as well as Safe School Design applications in these two very different types of places.

Part 2: Criminal Activity and School Design

In this section we consider responses by all groups of respondents who were asked the same questions as to: 1) their preferred *type* of school design in terms of providing safety and security; 2) their perceptions of the most critical *areas* of school design relative to safety and security, and; 3) what single policy or procedural change would they recommend if funding were available?[5]

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[4]Note that recently released SESIR data show that "Disorderly Conduct" has dropped from 78,948 incidents in 1998-1999 and from 36,091 incidents in 1999-2000 to 7,817 incidents in 2000-2001. This extraordinary decrease is the result of a redefinition of the term to exclude minor threats of disorderly conduct in favor of major campus disturbances, such as bomb threats. (See http://www.firn.edu/doe/besss/sesir/sesir_home.htm) The survey data categories reported here are based on 1999-2000 statistics, which are part of the trend line consistently showing disorderly conduct among the top three crimes reported by school authorities.

[5]See Q 8 in the Principals survey instrument, Q 13 for both School District Risk/Facility Managers and for Community College Risk/Facility Managers, Q 10 for School Resource Officers, and Q 23 for Design Professionals.

Preferred School Design Type

Relative to preferred school design type,[6] the answers of all respondents are generally uniform and they echo the responses of the 48 school district respondents to the 1993 Safe School Design questionnaire, which posed the same question. At that time, of the 48 school districts responding, 71% favored a one-story centrally organized building group configuration. With the exception of Principals and Community College respondents, where pluralities (40% and 45%, respectively) of the respondents favored the one-story centrally organized arrangement, clear majorities of the other respondent groups favored that arrangement. CHART 5 below demonstrates the overall strength of the preference for this plan. This type of plan arrangement is intuitively attractive from a security standpoint. Designed appropriately, it provides good opportunities for access control, surveillance, and guardianship, and generally also offers an easily defined perimeter which facilitates territoriality.

<u>CHART 5</u>

PREFERRED TYPE OF SCHOOL DESIGN

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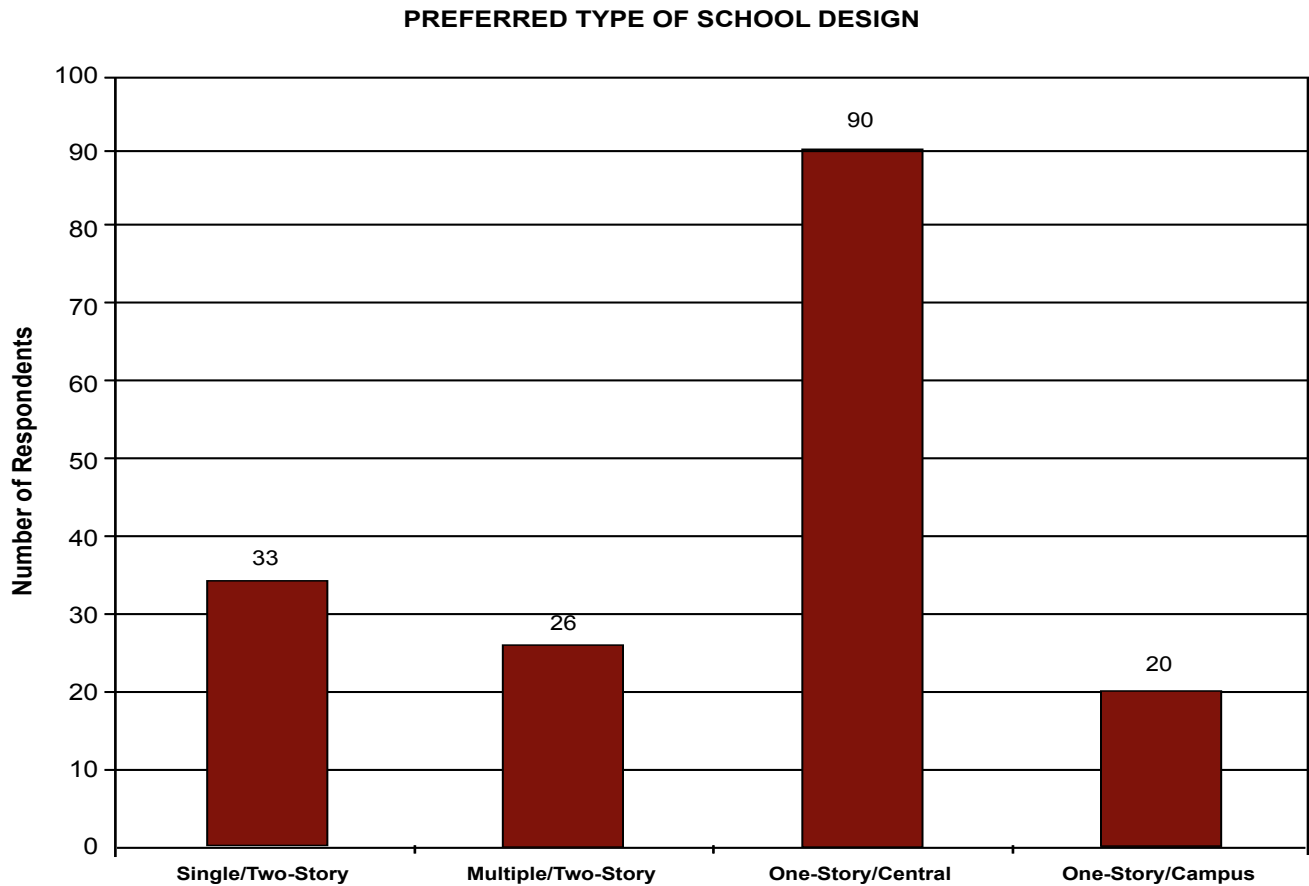
[6]See Q 17 in the Principals Survey Instrument, Q 21 for School District Risk/Facility Managers, Q 22 for Community College Risk/Facility Managers, Q 19. For School Resource Officers, and Q 24 for Design Professionals.

Critical Areas of School Design

All respondent groups were also asked to rank the most critical areas of school design relative to safety and security. The overall distribution of responses for this question from all five respondent groups is depicted in CHART 6 below. It is clear that *corridor surveillance* is perceived to be the single most critical element, followed by *perimeter enclosures* (fencing and other access control and associated territorial boundary marking elements), and third by the perceived need to *minimize niches*. Corridor surveillance in public schools tends to be a major issue not only because corridors are the main transportation arteries, but because they are places where crimes of violence, especially fighting, battery, and disorderly conduct tend to occur in public schools.

CHART 6

CRITICAL AREAS OF SCHOOL DESIGN
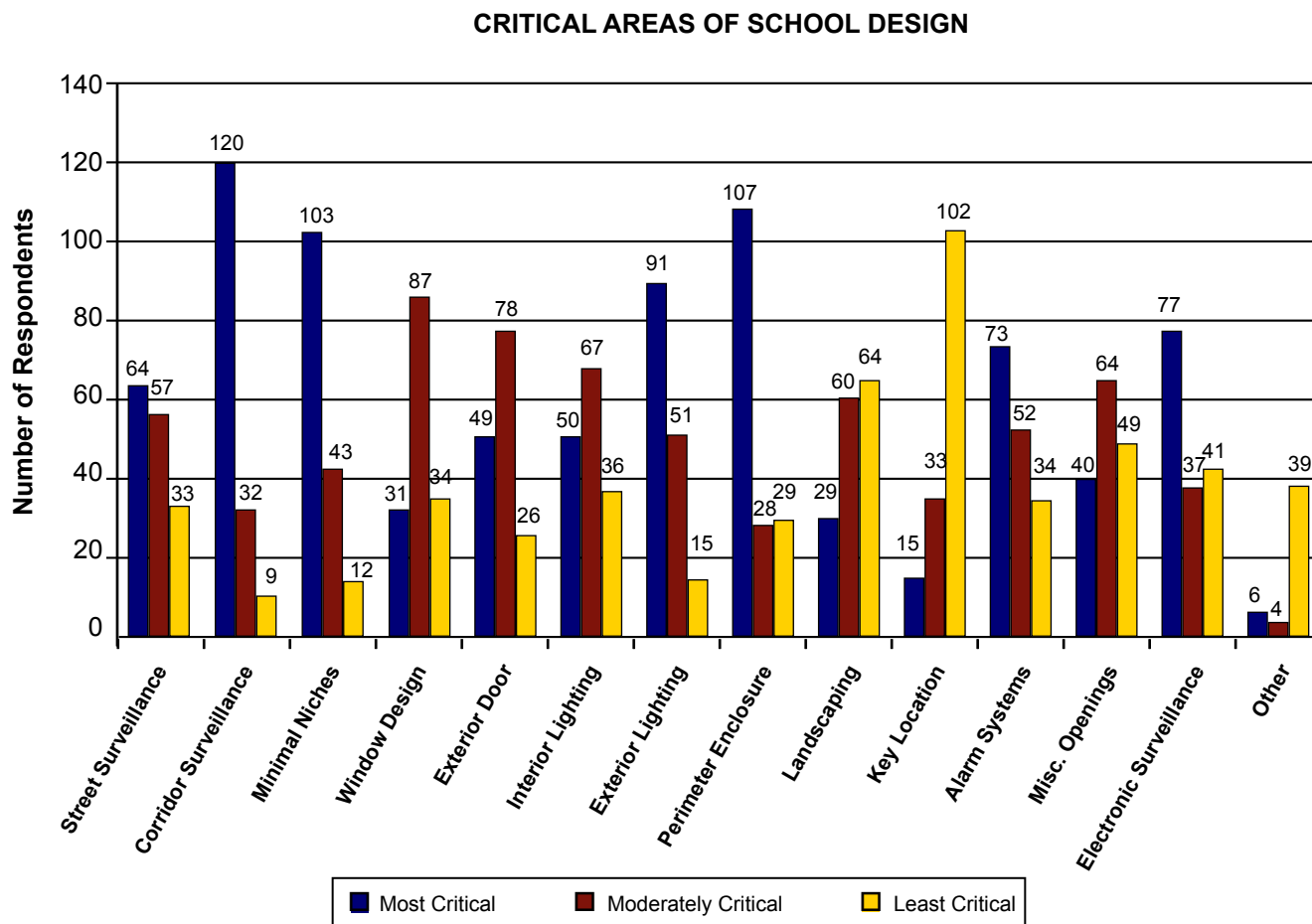
Further, corridors are often the direct paths to the main and secondary school entrances. As indicated by MATRIX A: Crime by Location (see 97), secondary entries are perceived to be significant portals

for trespassing, especially where doors are illegitimately propped open by students. Further, as the research team learned during site visits, they are often used as "escape routes" by students skipping school. In many cases these secondary entries are not alarmed or under surveillance of any type. This tends to defeat whatever rigorous access control, surveillance, or guardianship may be in place at the main entrance to the facility, since trespassers and truants will quickly find the unguarded entrances. One School Resource Officer the research team interviewed was so distressed by this situation at his middle school, which was compounded by numerous hiding spaces in niches along the corridors, that he purchased and installed a CCTV system by himself, running hundreds of feet of cabling throughout the facility. Schools ought to strongly consider, we believe, the installation of electronic or mechanical warning systems for secondary entrances.

Of the five respondent groups, only the Community College respondents provided answers that were completely different from the others in terms of their top three choice. For these respondents the issues of *exterior lighting*, *alarm systems*, and *interior lighting* were paramount.

When one considers the physical differences between most community college campuses and K-12 public schools in Florida, the rationales for these choices seem obvious. Community college campuses tend to be used more at night and their campus organization tends to be much more dispersed, with buildings located far apart from each other but connected by walkways and paths. Moreover, community colleges tend to have more specialized technology and equipment on hand than public schools, and have a great need to protect this inventory. Increased lighting and alarm systems are natural security responses to the need to protect these targets, whether they are people or property. Adequate lighting, open sight lines, and guardianship are especially important in community college parking lots, especially since much of their usage is during evening hours.

What Single Policy or Procedure Change?

All respondents were also asked the open ended question, "What single policy or procedural change would they recommend if funding were available?" While this question was located in the "Design and Policy Suggestion Part" of the questionnaires, we include it here since it is one of only three that *all* respondents answered.[7] It was designed to force the respondents to pick what they considered to be the most important policy change. The answers are extremely varied and we refer the reader to the individual questionnaires for all the recorded responses. Despite that, there are some themes that stand out.

Principals and School Resource Officers provided the most responses to this question, with the former group focusing on *surveillance* and *guardianship* issues and the latter focusing on *guardianship* and

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[7]See Q 19 in the Principals Survey Instrument, Q 23 for School District Risk/Facility Managers, Q 24 for Community College Risk/Facility Managers, Q 21. For School Resource Officers, and Q 25 for Design Professionals.

management concerns. In this regard, Principals suggested that "cameras for the exterior and interior" were needed and that building lights should be left on "at night and [on] weekends." In a contrary view, one School District respondent suggested that there be a "Lights out policy between 11:00 PM and 5:00 AM, coupled with motion sensor exterior lighting." The question of campus lighting is fairly controversial, with some school district personnel in Florida and elsewhere, as well as some researchers, advocating no lighting at night, while others promote the opposite view. When we questioned a variety of respondents during site visits, most preferred the "lights on" policy approach. Several justified this on the basis that it helps protect janitorial staff and others who may legitimately be on campus at odd hours of the evening. We are not aware of any empirical evidence in the literature that clearly supports one view or the other at the present time.

Some Principals also suggested that additional SROs were needed, especially on a year-round basis, while others stressed the need for more counselors, deans, and behavioral specialists. Some respondents voiced the need for policies aimed directly at student behavior including one who made a plea for the continuation of the "no backpack rule" and another who advocated "parents to wear 'parent ID's' which would identify them with their children." The heart of this issue is the problem of knowing who is a legitimate visitor on campus and who is not. It pertains both to design and management policies which include (but are not limited to) entrance placement and fenestration, access control signs, and local ID tag policies, all of which varied greatly across the sites visited by the research team.

School Resource Officers suggested programs dealing with student "self-policing" and also advocated increased guardianship whether through added SROs or the presence of more teachers and administrators in the interior corridors. Increased access control policies also were suggested, with one SRO respondent saying that there should be "absolute zero visitors during school hours." Some SRO respondents (along with one School District respondent) advocated that students "wear uniforms" to identify who was a legitimate campus visitor, as noted above a persistent theme throughout this research. In this context it is important to note that public schools and community colleges are caught in a difficult balancing act between functioning as open and inviting public institutions yet needing to protect their campuses from unauthorized and illegitimate entry, especially from those who intend to commit criminal acts. There is a dynamic tension in this relationship that is probably never resolvable, with the balance point in terms of policy and design shifting in one direction or the other over time.

School District respondents' remarks ranged from the need for an "easy method to lock down system gates and survey all parts of the system through electronic systems" to the suggestion to "close all high school campuses during lunchtime." Community College respondents tended to stress *management and guardianship* and *access control issues,* with some respondents advocating a round-the-clock security staffing and "better training" for security officers, while others suggested the introduction of "coded card access" systems and other access control devices. While some Design Professional respondents echoed these themes – one said that "night watchmen [are needed] at facilities." Many provided responses in a broad category that we call *Management/Oversight/Education.* In this context some of the remarks included calls for " better enforcement" of Florida Building Code provisions while another respondent advocated that the Department of Education change its basic method

of determining facility replacement versus renovation to include security design criteria. Another suggested more rigorous processes of selecting school architects and of overseeing their work relative to security design.. Other Design professionals suggested changes relative to combinations of *territoriality*, *access control,* and *surveillance*.

If there are central themes that come from this very mixed collection of open-ended responses, they tend to center around the fundamental problems of *surveillance* and *access control*, which are interwoven. All respondents acknowledge these basic problems in both design and management applications, which are also interwoven. Some favor more electronic and mechanical devices to achieve better results in terms of regulating visitors and behavior on campus such as the use of Closed Circuit Television (CCTV) or card readers, while others single out policies such as the use of uniforms and ID badges. Others prefer as their single most important policy or procedure increased or better guardianship, putting more reliance on organized[8] access control and surveillance. And while it was our intent to force respondents to pick one top choice (many selected several in any case), in the end, we know that it is the combination of many strategies, appropriately employed, that creates truly safer schools and community colleges.

We turn now to a series of questions that were asked only of Principals, School District Risk/Facility Managers, Community College Risk/Facility Managers, and School Resource Officers. These include questions about the effects of allowing public access after hours to school and community college campuses, policies pertaining to posting access control signs, the perceived linkages between campus locations and types of crimes, the perceived linkages between crimes and times of their occurrence, open-ended comments about crime, location and times issues, and finally, suggestions for the most important design changes.

Public Access After Hours

A somewhat controversial question is the impact that public access has on school and community college security, especially when this occurs following "normal"[9] school daytime hours. This issue is particularly important because, as we have noted previously, these institutions often play important roles as general community resources in terms of fulfilling local adult educational, recreational, social, cultural, and civic needs. Moreover, school and community college sites are often venues for the co-location of other public uses, such as libraries and recreational facilities, and questions arise as to how to insulate one use from another – especially after normal school hours – for security purposes.[10]

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[8]See the Definition of Terms Section for the distinction between "organized, mechanical and natural" methods of surveillance and access control.

[9]A definition of the "normal" school day depends upon many factors insomuch as many schools and most community colleges have a variety of programs that extend into the evening hours.

[10]Florida Statute 163.31776, Public Educational Facilities Element, Section 2, requires that "Each local government public facilities educational element within a county must be consistent with the other elements and must address....(subsection c) the "co-location of other public facilities such as parks, libraries, and community centers in proximity to public schools."

When we asked Principals, School District Risk/Facility Managers, Community College Risk/Facility Mangers, and School Resource Officers whether they think that allowing public access to recreational (or other) facilities after normal daytime class hours makes their institutions more prone to criminal activities than if the campus was closed to such activities, the answer was "Yes" by a more than two-to-one margin. (See CHART 7).[11]

CHART 7

DOES AFTER HOURS ACCESS MAKE SCHOOLS MORE PRONE TO CRIME?
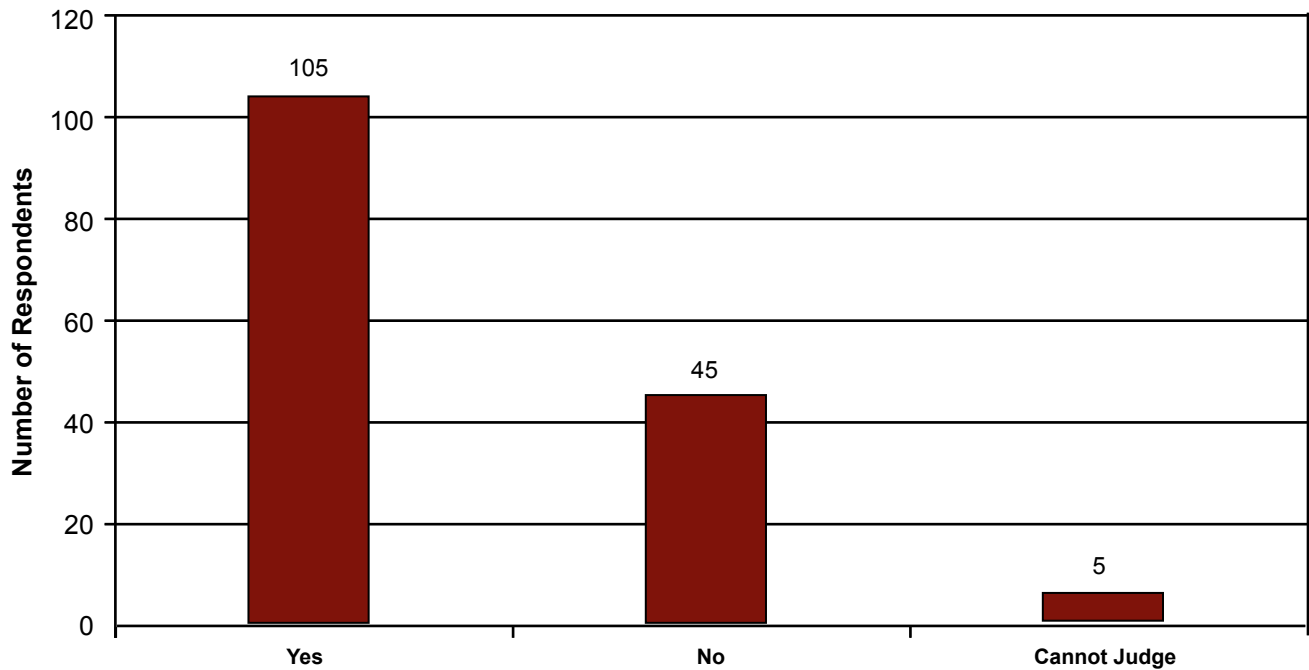
With the notable exception of Community College respondents who were split almost evenly (50% "Yes," 45% "No," and 5% non response), significant majorities within the other three respondent groups (ranging from 65% to 69%) believe that public access does indeed make their institutions more prone to criminal activity. Some of the comments gathered through the open-ended follow-up question were, "This [open access] allows people to identify potential target areas for criminal behavior,"

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[11]These are Q 9 and 10 (open-ended follow up) in the Principals Survey Instrument, Q 16 and 17 for School District Risk/Facility Managers, Q 17 and 18 for Community College Risk/Facility Managers and Q 14 and 15 for School Resource Officers.

"[it is] extremely difficult for security to maintain access and conduct control if the gym and recreation facilities are open to community use after hours." On the other side of the issue, some said "more people more eyes" and "the presence of people helps deter some crimes from happening."

Responses from principals during field interviews were directly contrary to those gathered by the questionnaire insomuch as all stated that they believed that public access did *not* promote crime on their campuses. Community college respondents reported the same beliefs and noted that community outreach was a significant component of their missions and that such access was "simply a fact of life." School Resources Officers acknowledge this is so, but nevertheless stress that they see a connection between after-hour access and crime. One said, "Outside people come in to fight and start problems." While we are not aware of empirical studies that support correlations between open access and increased crime on school and community college campuses, there is a perception among most of our respondents that one exists. Nevertheless, given the law and the practical economics of co-location of facilities, it is indeed a fact of life that designers must deal with directly and with great sensitivity.

Posting Signs for Access Control

We asked Principals, School District Risk/Facility Managers, Community College Risk/Facility Managers, and School Resource Officers about policies within their schools and districts relative to the posting of access control signs.[12] CHART 8 depicts the distribution of responses for this question. Most respondents (64%) who answered this question report that their school, district, or community college had policies in place governing the posting of access control signs during school hours; however a significantly lower number (33%) report having policies for signage to deal with *after-hours* access.

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[12]See Principals Survey Instrument, Q 11, School District Risk/Facility Managers, Q 18, Community College Risk/Facility Managers Q 19, School Resource Officers, Q 16.

CHART 8

DOES YOUR SCHOOL HAVE POLICIES FOR POSTING SIGNS FOR ACCESS CONTROL?

A bar chart titled with the question above. The y-axis is labeled "Number of Respondents" ranging from 0 to 160. Three bars are shown:
- Signs During School: 135
- Signs After School: 69
- Don't know: 4
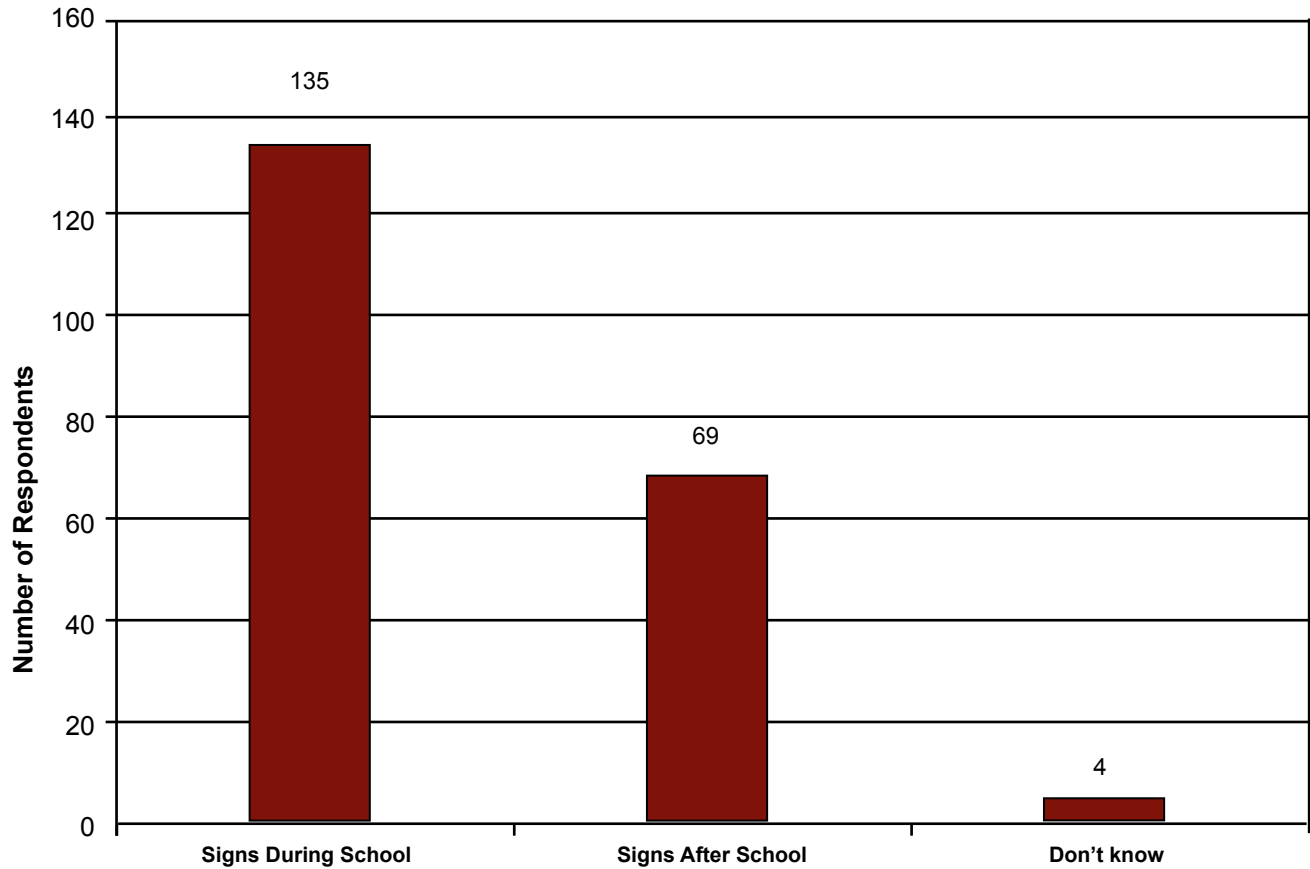
The field experience of the research team was variable in this regard, such that some schools and community colleges had signs prominently posted near the main and secondary entrances whereas others had virtually no signage or the signs were not well placed or well designed. Access control signs are an important aspect of "rule-setting" that publically establishes the type of behaviors and activities that are permitted and prohibited. They are elements of modern "situational crime prevention" theory and practice and there is evidence that they help deter criminal behavior at places.[13] Moreover, since we have evidence that after-hour access is perceived as contributing to security problems by our respondents, it makes a good deal of sense to have policies in place to deal with this issue.

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[13]See Ronald V. Clarke, <u>Situational Crime Prevention: Successful Case Studies</u>, second edition, Harrow and Heston: Albany, NY, 1997 (in the Bibliography, Appendix C.)

Crime by Location

In the field of crime prevention there is significant data about crimes (see, for instance the Uniform Crime Reports and the National Crime Victimization Surveys) and data on generalized locations and crime. There is, however, very little data linking crimes with specific locations and especially in small scale contexts such as within school and community college micro-environments. We asked Principals, School District Risk/Facility Managers, Community College Risk/Facility Managers, and School Resource Officers to locate 11 crimes derived from SESIR categories within 27 specific locations which were perceived to be significant venues for the crimes in question. The Matrix below depicts the results of that inquiry.

MATRIX A: Crime by Location

	Robbery	Battery	Sexual Battery	Alcohol, Tobacco, and Other Drugs	Breaking and Entering	Larceny/Theft	Vandalism	Trespassing	Fighting	Disorderly Conduct	Weapons Possession	Total
Off Grounds/Adjacent Building	20	51	11	68	14	17	21	17	67	38	25	349
Parking Lots	18	32	7	51	44	49	55	56	49	33	39	433
Recreation Areas/Playgrounds	4	33	7	24	2	7	33	37	60	32	3	242
Exterior Walkways	1	26	1	13	0	2	29	29	39	17	4	161
Exterior Courtyards/Patios	1	16	2	14	1	4	30	23	36	18	1	146
Vehicle Drop Off/Pick-Up	0	4	0	11	0	4	7	25	14	14	6	85
Bike Racks	7	9	1	5	2	50	21	9	13	9	2	128
Portables	5	8	4	7	36	15	35	12	14	14	1	151
Accessory Buildings	2	1	7	4	21	14	24	12	2	1	1	89
Main Entrance	1	6	0	4	3	1	11	21	8	12	3	70
Secondary Entry	2	7	0	8	15	5	18	37	9	11	3	115
Lobby/Reception Area	1	5	0	3	2	5	5	8	9	21	4	63
Interior Courtyards	2	19	4	12	6	8	16	20	44	22	3	156
Interior Corridors	4	26	2	7	4	12	20	6	46	31	6	164
Stairs and Stairwells	9	18	13	16	1	2	27	8	23	16	3	136
Administrative Offices	1	4	0	3	13	12	6	4	6	30	3	82
Classrooms	4	24	4	6	19	56	31	11	34	49	21	259
Labs/Shops/Art/Music Rooms	3	11	3	8	14	28	18	6	14	21	7	133
Recreation Rooms	3	19	9	11	7	26	21	16	45	33	6	196
Locker Rooms	17	27	15	22	19	59	40	12	45	24	10	290
Auditorium/Assembly Rooms	1	5	6	2	5	9	12	6	11	17	1	75
Media Centers/Computer Rooms	3	2	1	2	15	30	19	2	3	8	0	85
Cafeteria/Food Court	4	30	1	9	10	30	16	14	61	46	8	229
Within/Adjacent Vending Areas	8	6	4	5	8	18	24	6	11	10	2	102
Restrooms	13	30	19	57	2	12	68	8	45	24	8	286
Rooftops of Covered Walkways	1	1	3	2	4	1	12	15	4	1	3	47
Building Rooftops	0	1	4	3	6	2	16	18	2	0	3	55
Total	135	421	128	377	273	478	635	438	714	552	176	4327

CHART 9
CRIME BY LOCATION
(Based on Perceived Frequency of Incidents)

Bar chart titled "Number of Responses" showing the following values by location:

Location	Number of Responses
Off Grounds/Adjacent Building	349
Parking Lots	433
Recreation Areas/Playgrounds	242
Exterior Walkways	161
Exterior Courtyards/Patios	146
Vehicle Drop Off/ Pick-Up	85
Bike Racks	128
Portables	151
Accessory Buildings	89
Main Entrance	70
Secondary Entry	115
Lobby/Reception Area	63
Interior Courtyards	156
Interior Corridors	164
Stairs and Stairwells	136
Administrative Offices	82
Classrooms	259
Labs/Shops/Art/Music Rooms	133
Recreation Rooms	196
Locker Rooms	290
Auditorium/Assembly Rooms	75
Media Centers/Computer Resource Rooms	85
Cafeteria/Food Court	229
Within/Adjacent Vending Areas	102
Restrooms	286
Rooftops of Covered Walkways	47
Building Rooftops	55

When the data is displayed in bar chart form (see CHART 9), several distinct peaks are evident. On the high side of the spectrum, respondents overall identify parking lots, off-grounds locations/adjacent buildings, locker rooms, and restrooms as the top four venues for crimes and report low criminal activity on rooftops of covered walkways, on building rooftops, in lobby/reception areas, and at main entrances.

The first category of places are within common/easy access but are also places of generally low

visibility, surveillance, and guardianship. Moreover, targets – whether people or property, are likely to be isolated or left unattended in all of these places. This is particularly true of school parking lots at off-peak time. Design strategies should, therefore, pay particular attention to surveillance, access control, and designs that facilitate guardianship in these areas. Facility windows should face these areas wherever possible, and school staff should have open sight lines to restroom and locker room doors. School parking lots – identified as the single highest venue for crime – are common places for trespassing, so strategies that enhance territoriality and access control – such as clearly defined borders, enclosed perimeters, designated and well-marked parking areas, and well-placed signage that clearly spells out the rules – are recommended.

Areas of least crime are either difficult to access, such as walkway or building rooftops,[14] contain few targets (rewards), or have a great deal of surveillance and guardianship, such as lobby and reception areas and the main entrance. How does one explain the relatively high occurrence of crimes in classrooms, where both surveillance and guardianship are likely to be intense? One explanation comes from looking at the crimes involved. Classroom crimes that are perceived to happen the most frequently are larceny/theft and disorderly conduct. The latter is likely to be a "group" crime and is thus more probable where many students gather at frequent intervals. Classrooms also contain a high density of targets, both in terms of people and property, which is likely to appeal to opportunistic offenders, especially thieves. Primary design strategies to reduce classroom crime entail increased surveillance opportunities by teachers and other staff and designs that improve or facilitate opportunities for guardianship.

Larceny and theft are seen as the crimes of choice in locker rooms, as these are places where personal possessions are often moved about and placed in jeopardy, whereas vandalism – also a crime of stealth – is the major problem of restrooms. Both these latter locations, busy yet secluded/private places where people disrobe and are often alone and vulnerable, are also perceived to be the venue where sexual batteries are most likely to occur in the schools. Surveillance is impeded in such places because they are private or semi-private by definition, and because sight lines are often blocked by the placement of lockers or stalls. Where feasible, therefore, lockers should be placed against walls and sight lines to restroom doors should be unimpeded. Restroom door openings should provide easy and

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[14]We have evidence, however, that walkways and building rooftops can be places for crime when they are more accessible. In England, school rooftops have been favorite spots used by offenders to break into offices and classrooms below. (See in the Bibliography, Appendix C, R. Schneider and T. Kitchen, "Planning for Crime Prevention: A Trans Atlantic Perspective," Routledge, London and New York, 2002.) Making them inaccessible by eliminating climbing opportunities through maintenance of landscape materials, designing barriers, reducing footholds in nearby structures, and specifying slippery surfaces for supporting columns (as in the existing and 2002 *Florida Safe School Design Guidelines*) are prevention strategies.

[15]Despite good design, personnel issues may present unanticipated problems in quickly accessing restrooms or locker rooms, as one School Resource Officer noted during a site visit. Male SROs generally wait for a female staff member to enter women's restrooms or locker rooms if they suspect a problem inside. Offenders often factor in this delay.

noiseless access, where possible.[15]

While not the highest venues for crimes by perceived numbers of incidents, corridors are problematic spaces in public schools. Principals, School Resource Officers, and School District Facility Managers individually report through survey (See Sections 2, 3, and 5) that fighting is the most significant crime that takes place in corridors. Moreover, as we have previously discussed, survey findings suggest that corridor surveillance is the most critical area of school design for all respondents. Discussions at site visits confirm that assessment. Narrow corridors and obstructions that further restrict passage space or that obscure sight lines are perceived to be particularly problematic, especially for middle school students.

In contrast, when we look at the data from Community College Risk/Facility Managers, we find that no fighting is reported in corridors. Rather, the highest location for fights is thought to be community college parking lots, a problem area identified by all respondent groups answering this question for virtually all crimes listed. As indicated earlier, when we discussed the identification of the most serious perceived crimes, Community College respondents are much more troubled by property crimes of larceny/theft and vandalism (in that order) than by violent crimes or by disorderly conduct issues. This stems from significant differences in the composition of the student body as well as from design and organizational differences of their campuses compared with K-12 public schools.

For further detail about the responses of individual groups to this question, we direct the reader to Survey Instrument Analysis Sections 2-5 below.

Crime by Time

All respondent groups except Design Professionals were asked to identify the most significant time periods in which the 11 crimes derived from SESIR categories were perceived to occur.[16] In part, this was another way of looking at the possible impact of access to school and community college property after normal classroom hours and was also intended to provided information about the likelihood of specific crimes being committed during specific time periods.[17] This has a bearing on a number of design questions related to surveillance, and especially lighting, access control and perimeter enclosures, entry control, and guardianship. The total number and distribution of the 2,086 responses

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[16]See Principals Survey Instrument, Q 13, School District Risk/Facility Managers, Q 14, Community College Risk/Facility Managers Q 15, School Resource Officers, Q 12.

[17]It is certainly possible that some respondents interpreted this question to include crimes involving students outside of normal school hours and not on school grounds. We believe, however, based on pretests, that most respondents took this question to mean crimes associated with the school or community college campus.

MATRIX B: Crime By Time

	Robbery	Battery	Sexual Battery	Alcohol, Tobacco, and Other Drugs	Breaking and Entering	Larceny/Theft	Vandalism	Trespassing	Fighting	Disorderly Conduct	Weapons Possession	Total
Before School	7	25	2	58	7	16	16	20	40	31	25	247
During School Hours	14	47	16	39	10	74	37	50	78	66	40	471
Between Classes	10	44	9	36	4	29	25	13	79	48	12	309
After School	17	45	12	37	7	22	26	32	71	33	19	321
Evening Hours	27	15	26	35	65	36	83	55	9	16	14	381
Weekends	17	15	17	27	70	34	88	55	10	10	14	357
Total	92	191	82	232	163	211	275	225	287	204	124	2086

CHART 10

CRIME BY TIME
(Based on Perceived Frequency of Incidents)
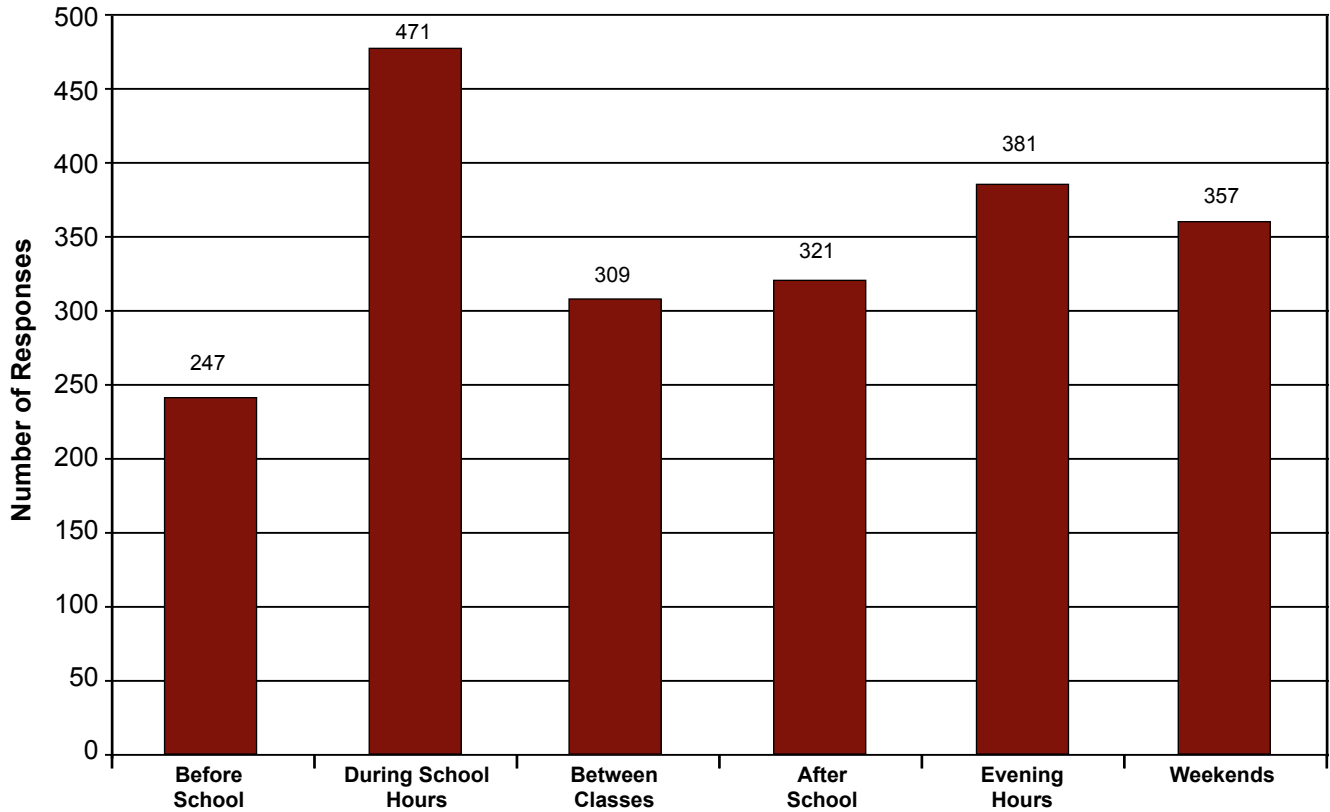
to this question are displayed in CHART 10 (See also MATRIX B).

The aggregate number of times that respondents checked crimes they believed to be committed during "school hours" and "between classes" (both of which we consider to be part of normal classroom hours) is 780, or 37.3% of all perceived incidents noted. When we look at individual respondent groups, this proportion holds steady, insomuch as the spread between the highest (38.3% for Community College respondents) and lowest (36.4% for Principals) is negligible. Thus, all respondent groups answering this question perceived that significantly more crimes (almost 65%) occur before school, after school, during the evening, and on weekends than during normal classroom hours. This perception is consistent with earlier aggregate results showing that respondent groups (with the exception of Community College Risk/Facility Managers) overwhelmingly report the perception that after-hours access to public school campuses makes them more prone to crime.

This, however, does not apply to all crimes equally. While some, such as the property crimes of breaking and entering, vandalism, and, in some cases, trespassing, are much more likely to be perceived by respondents as taking place either after school, during evening hours, or on weekends, others such as the violent crimes of battery and fighting are much more likely to be perceived to take place during the course of the school day. (One exception is sexual batteries, which respondents tend to see as occurring more often after school or in the evenings.) Larceny/theft, whether from students directly or from their cars, also tends to be a problem that takes place during the normal school day. Some of these responses can be explained in terms of the relationship between crime opportunity and expected rewards for offenders. On one hand, where vulnerable targets are plentiful and risk and efforts to commit a crime are thought to be low – such as stealing from cars in poorly monitored and designed parking lots – motivated offenders will seize the opportunity to act. On the other hand, some offenses – such as fighting in public schools – are often spontaneous events triggered by many circumstances, one of which may be narrow corridors that become congested with students during class changes.

A follow-up question attempted to gather open-ended responses connecting crimes, times, and locations. One School District Risk/Facility Manager suggested that better records need to be kept linking crime data with locations.[18] A School Resource Officer observed that fighting takes place during periods of "limited supervision." Principals noted problems with busses parked overnight, and one linked crime occurrence to the "phase of the moon, high humidity, unsettled weather, proximity to holidays or vacations, and post FCAT." Another said that portables were a crime target because they were easy to break into. In that context, the research team observed during several site visit that portables – relocatables – were often located on the exterior perimeter of school campus sites. One school administrator pointed out that this isolated them from the core of the campus and made them more vulnerable targets for breaking and entering, vandalism, and burglaries. Crime prevention responses to this are to harden the targets through strengthened doors, windows and locking mechanism, to provide increased levels of electronic or mechanical surveillance and to increase guardianship.

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[18]This is a problem throughout the criminal justice system and is especially pertinent to circumstances where design and physical planning suggestions are sought to prevent or deter criminal behavior.

Other Serious Concerns on Public School and Community College Campuses

To understand a broader spectrum of crime problems affecting schools and community colleges than just those 11 crimes derived from SESIR crime categories, we asked Principals, School District Risk/ Facility Managers, Community College Risk/Facility Managers, and School Resource Officers[19] to tell us whether they had serious concerns relative to "gang-related activities, hate crimes, bomb threats, terrorism and violence in the workplace." Of the listed concerns, "bomb threats" registered the highest number of affirmative responses, with slightly over a fourth (26% or 40 individuals) of all those who answered this question saying that they had serious concerns at their schools. Among the respondent groups, 43% of School District Risk/Facility Managers, 40% of Community College Risk/Facility Managers, and 37% of School Resource Officers noted bomb threats as serious concerns. Only 3% of Principals said that was the case, although that may be explained by the fact that elementary schools were over-represented in their respondent group sample.

The second most serious concern was "violence in the workplace" which registered a positive response from 24.2% of the respondents (34 individuals) who answered this question. One in ten respondents (15 persons) indicated that "hate crimes and related activities and incidents" were serious concerns at their institutions, and slightly more than 7% (8 individuals) said that "terrorism" was a serious concern.

The follow-up question (directed to those individuals who acknowledged that the issues presented *were* serious concerns) asked whether their schools or districts had "policies and plans in place to deal with that situation." Unfortunately, the question confused some respondents who had said that these issues were *not* serious concerns, but who answered nevertheless. Irrespective of that, it is clear from the answers that none of the issues were serious concerns to the great majority of respondents.

Part 3: Design and Policy Suggestions

The final section of the survey instruments was intended to draw out responses and ideas that had not surfaced through previous questioning. While the Principals, School District Risk/Facility Manager, Community College Risk/Facility Manager and School Resource Officer Survey Instruments contain questions dealing with "the most critical areas of educational facilities design" and recommendations about "policy and procedure" changes to make schools safer. We have discussed them previously in this report. We focus here on open-ended questions dealing with recommended design changes[20] and on the respondents' final open-ended comments and suggestions.

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[19]See Principals Survey Instrument, Q 15, School District Risk/Facility Managers, Q 19, Community College Risk/Facility Managers Q 20, School Resource Officers, Q 17.

[20]See Principals Survey Instrument, Q 18, School District Risk/Facility Managers, Q 22, Community College Risk/Facility Managers Q 23, School Resource Officers, Q 20.

What Design Changes Would You Implement in
Your School/Community College to Make It Safer?

All of the respondent groups put surveillance issues clearly at the forefront, followed by access control (with the exception of School Resource Officers who combined access control *and* territoriality issues second), and then territoriality third. Some respondents combined all of these as well as guardianship and management issues in their comments.

A significant majority of the responses from Principals (67%) suggested design changes involving either natural (designed), organized (human), or mechanical (primarily CCTV) surveillance changes.[21] Two advocated specific physical renovations to their schools saying "remove several columns inside and out," and "relocation of administration office to increase visual surveillance," while others called for more lighting to facilitate surveillance opportunities. But the most common refrain was a call for the use of CCTV, with respondents writing, "Cameras," "Add security cameras," "Install CCTV in stair wells," "Cameras in halls leading to restrooms," "Redesign the camera surveillance system," "More surveillance cameras throughout campus, interior as well as exterior," "Full camera access from multiple locations including administrators and police." An even larger proportion of School District Facility Managers (72%) suggested surveillance features as the design change they would implement if funding were available.

While they too advocated the use of security cameras, other School District respondents' suggestions included natural surveillance designed into the building. As one said, " [we need] large secure central courtyard with clear visibility to perimeter points," and another mentioned "vision windows in all doors and vision windows and bells at all kitchen/service entrances and after care programs." For Community College respondents whose campuses are generally large with dispersed buildings and parking areas, surveillance issues were expressed in terms of the need for "Electronic surveillance systems in our parking lots" and "Expand electronic surveillance systems (CCTV) to cover all buildings, parking lots, and walkways."

Fifty two percent of the responses from School Resource Officers centered on surveillance issues. Like Principals, their comments spanned the gamut from the need for increased CCTV to the wish that campuses be designed " so [that the] office can see entrance and parking in order to see visitors prior to entering buildings." This is a fundamental element of Safe School Design, which has been neglected in the past (especially prior to 1993) in some school planning.

For all groups but SROs, access control strategies were the second most identified design changes that were suggested. Some Principals wished for more gates and barriers and for the ability to reduce the number of entrances and exits to their facility. Others saw target hardening strategies as an option ("better locks and stronger doors"), while still others thought that organized access control strategies would be best. As one said, "Have a person to sit in the entryway of the school to greet people as they enter the school before reaching the offices."

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[21]See the Definition of Terms Section of the Report.

School District Facility Managers opted for somewhat different access control approaches. Some of their responses included "Alarm systems," "Simple motion detector alarm systems in general areas and hallways," "District-wide integrated building access systems." Another answer was to "Limit pedestrian access points to campus," "Separate vehicle entrances/exits for employees, buses, parents, students, and visitors," while another School District respondent said "Separation of public use (night activities) from student use (school programs)."

Access control features for Community College respondents centered around controlling parking lots (a perceived hot spot for crime for all groups, as we have noted). Respondents said "Control and limit the number of entrances to parking lots," and "Restrict vehicle traffic access when closed - using gate controls." One community college has designated a parking area for "stalked spouses" and has established special guardianship and surveillance for this area. This is similar to programs that have been suggested for several cities whereby specific areas of parking garages would be designated for women only, again accompanied by appropriate surveillance and guardianship.

School Resource Officers tended to combine access control and territoriality issues, referencing the need to establish boundaries for school property as well as to provide barriers to keep trespassers out. Some said, "[we need] enclosure of school property," "A fence in front of the school," "Install perimeter fence near front of school," "I would have the entire school fenced in." Surprisingly, however, one School Resource Officer wrote, "Remove fences and walls that turn our schools into prisons instead of places of learning."

In that context, the research team noted during site visits that school territory could be marked in many ways, not all of them involving gates, fences, barriers, or other enclosures. Gardens, student artworks, and designated outside picnic and sitting areas were used in some schools to set off special places and uses, generally within the school grounds itself. These oases were not intended to serve as access control mechanisms, but they did reroute pedestrian traffic and provided gentle territorial reminders that the property was cared for, defended, controlled, and watched over. Such design strategies are useful in softening hard spaces and in keeping schools and community colleges from resembling fortresses or prisons.

Additional Comments and Suggestions

The final question garnered a wide range of open-ended suggestions with little central tendency. Some Principals noted, "We have a sheriff's deputy on campus. He lives in a portable. We have a vandal watcher agreement with him," "Interior central courtyards are a great tool for grouping students during breaks. They allow for easier supervision of students," "The safest schools are those with the students acting to keep the school safe and reporting crimes before they happen." In this context, it was suggested to the research team by Principals and School Resource Officers that students ought to be surveyed about crime in schools, "since they know more about this than anyone." We believe that this is a valid point and recommend that strategy as a logical next step in this research area.

School District respondents commented "The location of the school has bearing on the kind and

number of crimes committed." One offered the researchers words of encouragement, "Thank you for addressing safety and security in our schools. Too often this topic is considered an afterthought, not only in the construction phase of a school but also when funds are allocated for day-to-day operations."

One of the two Community College respondents who replied to this question stated that "all institutions of higher education as well as school districts should have one individual familiar with CPTED and that member [should be] a key person in any future planning." A School Resource Officer reiterated something that had been seen in the responses to other survey questions, in the literature, and on-site visits. He said, "Open areas with wide walkways and hallways reduce crime and violence more than any other policy or improvement I've seen." Another stated that "All school building plans should be required to go through a CPTED review," and a final one simply wrote, "Thank you."

2. Principals Survey Instrument and Related Analysis

The Survey Instrument Format

The survey instrument consisted of twenty (20) closed and open-ended questions and required approximately thirty (30) minutes to complete. The survey instrument began with a general introductory statement that provided informed consent information to the respondents. The survey instrument was then divided into three (3) sections.[1]

The first section, *Part 1: Background and Context* (Questions 1-7), collected basic demographic information on respondents. Following the collection of demographics, *Part I* began by categorizing and describing criminal activities catalogued by occurrence throughout public schools in Florida based upon 1999-2000 Florida School Environment Safety Incident Reporting System (SESIR) data categories (i.e., Robbery, Battery, Vandalism, etc.). The second section, *Part 2: Criminal Activity and School Design* (Questions 8-16), assessed school design options and the specific places and locations, as well as the specific period of the day incidents of crime are believed to occur most frequently. The final section, *Part 3: Design and Policy Suggestions* (Questions 17-20), addressed school design and policy concerns of the respondents.

Throughout the survey instrument, the questions also aimed to evaluate management trends and the effectiveness of management policy, as proper management is considered a fundamental component of Safe School Design.

Part 1: Background and Context

Questions 1-6, "**Date**," "**School Name**," "**County**," "**Person Completing Survey**," "**Title/Position**," and "**Contact Information**" provided demographic data, which allowed the research team to identify, organize, and catalogue the types of respondents and the geographic origin of the completed survey instruments.

On May 1, 2002, the survey instruments were distributed, based on a list provided by the Florida Department of Education, to public schools constructed in Florida since 1993. Three hundred and twenty (320) survey instruments were initially mailed to the principals of elementary schools, middle schools, and high schools, as well as to state academies and institutes. By August 14, 2002, sixty-two (62) -- nineteen percent (19%) -- of the Principal Survey Instruments distributed to schools were received and returned to the research team. Florida elementary schools were mailed one hundred and ninety-two (192) survey instruments, accounting for sixty percent (60%) of the schools on the mailing

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[1]Note that because of rounding, response totals to some questions may not equal 100%

list. By August 14, 2002, thirty-five (35) -- eighteen percent (18.2%) -- of the survey instruments mailed to elementary schools were returned. Florida middle schools were mailed seventy-six (76) survey instruments, accounting for twenty-four percent (24%) of the schools on the mailing list. By August 14, 2002, fifteen (15) -- nineteen percent (19.7%) -- of the survey instruments mailed to middle schools were returned. Florida high schools were mailed forty-eight (48) survey instruments, accounting for fifteen percent (15%) of the schools on the mailing list. By August 14, 2002, nine (9) -- eighteen percent (18.7%) -- of the survey instruments mailed to high schools were returned. Four (4) survey instruments were mailed to state academies and institutes in Florida, accounting for less than one percent (1%) of the survey instruments distributed to all schools – of which none had been received as of August 14, 2002. Of the sixty-two (62) survey instruments received and returned, three (3) -- less than one percent (1%) -- did not provide background information regarding the type of school. The returned Principals Survey Instruments accounted for thirty-one (31) Florida counties -- forty-six percent (46%) of the state's 67 counties. (See Map 2, page 179)

Forty (40) responses were received from *Principals* (65%); fifteen (15) were received from *Vice Principals* (24%); two (2) were received from *School Resource Officers* (3%); and one (1) was received from a *Safe School/Drug Free Representative* (1%). One (1) Principals Survey Instrument was returned from both the *Principal* and *Vice Principal* (1%).

Question 7: Of the 11 crimes listed below (which are derived from the categories above), please rank those which are *the most serious concerns* on your campus relative to occurrence (number of incidents) where 1=most serious and 11=least serious.

A. Robbery	**F. Larceny/Theft**
B. Battery	**G. Vandalism**
C. Sexual Battery	**H. Trespassing**
D. Possession of alcohol, tobacco and other drugs	**I. Fighting**
	J. Disorderly Conduct
E. Breaking and Entering	**K. Weapons Possession**

Reviewing responses to Question 7, fifty-four (54) -- eighty-seven percent (87%) -- of the respondents provided data. Eight (8) -- twelve percent (12%) -- of the respondents did not provide a response. Within the fifty-four (54) responses, thirty-seven (37) -- sixty-eight percent (68%) -- of the respondents rank ordered all of the criminal activities listed in the question. Seventeen (17) -- thirty-one percent (31%) -- of the respondents provided only partial data.

In the Principals Survey Instrument, the majority of the respondents reported *Fighting* to be the most serious criminal activity relative to the number of incidents (i.e., 1= Most Serious). *Disorderly Conduct* was reported to be the second most serious criminal activity, relative to the number of incidents. *Vandalism* and *Alcohol, Tobacco, and Other Drugs,* respectively, were the third and fourth most reported criminal activities, relative to the number of incidents. (See below)

MOST SERIOUS CRIMINAL ACTIVITIES
(Based on Perceived Frequency of Incidents)

Criminal Activity	Frequency	Percent
• Fighting	19	30%
• Disorderly Conduct	12	19%
• Vandalism	7	11%
• Alcohol, Tobacco, and Other Drugs	5	8%

Respondent data from Question 7 closely resembles criminal activities reported in the 1999- 2000 SESIR data for schools in the state of Florida.[2] In the SESIR data, *Fighting* accounted for the majority of the criminal activities reported by schools, and *Disorderly Conduct* accounted for the second most frequently reported criminal activities. The third most reported criminal activity, according to the SESIR data, is *Alcohol, Tobacco, and Other Drugs*. (See below)

Florida School Crimes Reported in SESIR Data In Rank Order and Percent
(Based on the Number of Incidents)

Criminal Activity	Frequency	Percent
• Fighting	67, 412	37%
• Disorderly Conduct	36, 091	20%
• Alcohol, Tobacco, and Other Drugs	18, 753	10%
• Harassment	16, 921	9%
(Threats and Intimidation account for 83% of the Harassment category)		
• Property Crimes	15, 491	8%
(Larceny/Theft accounts for 46%, and Vandalism accounts for 41% of the Property Crimes)		
• Violent Acts	13, 980	7.75%
(Battery accounts for 96% of Violent Acts)		
• Other Non-Violent Incidents	7, 971	4%
("Other Major"category accounts for 61% of Other Non-Violent Acts)		
• Weapons Possession	3, 732	2%

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[2]Note that just released SESIR data show that "Disorderly Conduct" has dropped from 78,948 incidents in 1998-1999 and from 36,091 incidents in 1999-2000 to 7,817 incidents in 2000-2001. This extraordinary decrease is the result of a redefinition of the term to exclude minor threats of disorderly conduct in favor of major campus disturbances, such as bomb threats. (See http://www.firn.edu/doe/besss/sesir/sesir_home.htm) The survey data categories reported here are based on 1999-2000 statistics, which are part of the trend line consistently showing disorderly conduct among the top three crimes reported by school authorities.

Based on the responses to Question 7 in the Principals Survey Instrument, respondent data was grouped into three categories: Most Serious (rankings 1-3), Moderately Serious (4-6), and Least Serious (7-11). Reviewing the grouped data, respondents perceive *Fighting* to be the most serious criminal activity in terms of numbers of incidents, *Disorderly Conduct* to be the second most serious criminal activity, *Vandalism* to be the third most serious criminal activity, and *Battery* to be the fourth most serious criminal activity. (See below)

Most Serious Crimes
(Based on Perceived Frequency of Incidents)

Criminal Activity	Frequency	Percent
• Fighting	40	64%
• Disorderly Conduct	25	40%
• Vandalism	22	35%
• Battery	20	32%

* Does not total 100% due to reclassified or grouped data.

The entire results from Question 7 are generally consistent with the data on criminal activities reported in (SESIR), in which **Violent Crimes** of *Fighting* and *Battery* are reported to occur more frequently than **Property Crimes** of *Vandalism, Breaking and Entering*, and *Larceny/Theft*. Similar to the *1993 Florida Safe School Design Guidelines: Survey Results*, the majority of reported criminal activities, according to the Principals Survey Instrument, stem from *Assault and Battery* type incidents, as well as *Vandalism*. The significance of a perceived high frequency of violent crimes, such as fighting and battery, when prescribing appropriate recommendations for Safe School Design, should not be overlooked.

Part 2: Criminal Activity and School Design

Question 8: Of the various types of school designs listed below, which one would you prefer in terms of providing the best school safety and security?

A. **A single 2-story (or more) building**
B. **Multiple 2-story (or more) buildings**
C. **1-story centrally organized grouping of buildings**
D. **1-story campus plan (spread out) grouping of buildings**

Question 8, also asked in the *1993 Florida Safe School Design Guidelines*, "State of Florida Questionnaire," measured the preferred school design among respondents in terms of providing the best school safety and security. According to the Principals Survey Instrument, a plurality of the respondents, twenty-five (25) -- forty percent (40%) -- of the respondents prefer a *1-Story Centrally Organized Grouping of Buildings*. Twenty (20) -- thirty-two percent (32%) -- of the

respondents prefer *A Single 2-Story (or more) Building*. Ten (10) -- sixteen percent (16%) -- of the respondents prefer *Multiple 2-Story (or more) Buildings*. And four (4) -- six percent (6%) -- of the respondents prefer a *1-Story Campus Plan (Spread Out) Grouping of Buildings*. Three (3) -- four percent (4%) -- of the respondents did not provide a response.

Question 9: Using your best judgement based on past experience, do you believe that allowing public access to recreational (or other) facilities after normal daytime class hours in your school makes them more prone to criminal activities than if the campus was closed to such activities?

A.   Yes
B.   No
C.   Cannot Judge

Question 9 asked respondents whether or not they believe public access to school facilities after normal daytime class hours makes schools more prone to criminal activities than if school facilities were closed to such activities. A clear majority, forty-three (43) -- sixty-nine percent (69%) -- of the respondents reported, *Yes*- access to school facilities after normal daytime class hours makes schools more prone to criminal activity. Fifteen (15) -- twenty- four percent (24%) -- of the respondents reported, *No*. Four (4) -- six percent (6%) -- of the respondents reported that they *Cannot Judge*. (See below)

Question 10: Please provide any comments relative to question 9 above.

Question 10 elicited a wide variety of open-ended comments detailing the perceived advantages and disadvantages of access to public schools after normal daytime class hours. Of the sixty-two (62) respondents to the Principals Survey Instrument, twenty-five (25) -- forty percent (40%) -- provided additional comments. Thirty-seven (37) -- fifty-nine percent (59%) -- of the respondents did not provide a response.

Eighteen (18) respondents -- twenty-nine percent (29%) -- stated that after-hour access increases the potential for crime (e.g., "More traffic brings more problems," "Too many areas to supervise. Too much access," "We experience more vandalism everyday and alcohol/drugs," "At this time, we have control of who enters our campus; if the campus facilities were open during the day we would not," "Security is seldom provided. This practice allows strangers to be familiarized with campus. It also allows opportunities for criminal acts").

Seven (7) respondents -- eleven percent (11%) -- stated that after-hour access does not increase the potential for crime, and may even deter criminal activity (e.g., "It can aid in reporting crime and prevention of crimes," "We have very little vandalism or theft because someone is always here," "It builds a sense of community to have community members using the facility").

Question 11: Does your school post signs advising visitors about school entry procedures for access control (check all that apply)?

A.   **During School Hours**
B.   **After School Hours**
C.   **Don't Know**

Question 11 elicited responses concerning access control management. The majority, sixty- one (61) -- ninety-eight percent (98%) -- of the respondents reported that school policies exist for posting signs detailing school entry procedures *During School Hours*. Twenty-seven (27) -- forty-three percent (43%) -- of the respondents reported that policies for posting signs detailing entry procedures *After School Hours*. No respondents reported *Don't Know*. And no respondents provided additional, open-ended information indicating that *No Policies* exist as was reported from other target respondents. One (1) of the respondents did not provide a response.

Question 12: Crime Location. Using your best judgement based on past experience, place an "X" in the box or boxes that you believe best represent a significant location (according to the number of incidents) for the occurrence of each particular crime. For example, if you believe that school parking lots represent a significant location where robberies take place, put an "X" in the corresponding box.

Question 12 measured various crimes in relation to the corresponding locations in which the crimes are perceived to occur most frequently. When we review the results of Question 12 with the results of Question 7, which indicate that *Fighting, Disorderly Conduct, Vandalism,* and *Battery* are the most serious crimes, Matrix A shows that the most serious criminal activities, relative to the number of incidents, are believed to occur most frequently in the following locations: (See below, See also MATRIX A: CRIME BY LOCATION)

<u>**CRIME BY LOCATION**</u>
(Based on Perceived Frequency of Incidents)

<u>Criminal Activity</u>   <u>Location (Reported Frequency)</u>
•   Fighting   Recreation Areas/Playgrounds (23), Cafeterias (18), Off
                               Grounds (18), Locker Rooms (16), Interior Corridors (15),
                               Classrooms (13), Restrooms (13), Interior Courtyards (12),
                               Exterior Courtyards (11)

•   Disorderly Conduct   Recreation Areas/Playgrounds (16), Cafeterias (12),
                               Classrooms (11)

•   Vandalism   Restrooms (17), Portables (14), Playgrounds (12), Parking
                               Lots (10), Exterior Walkways (10), Exterior Courtyards (10)

- Battery   Recreation Areas/Playgrounds (10), Locker Rooms (7), Restrooms (7)

MATRIX A: CRIME BY LOCATION

	Robbery	Battery	Sexual Battery	Alcohol, Tobacco, Other Drugs	Breaking and Entering	Larceny/Theft	Vandalism	Trespassing	Fighting	Disorderly Conduct	Weapons Possession	Totals
Off Grounds/Adjacent Building	6	9	2	10	3	2	5	1	18	6	3	65
Parking Lots	8	4	0	7	7	6	10	13	8	6	4	73
Recreation Areas/Playgrounds	1	10	1	5	1	1	12	12	23	16	0	82
Exterior Walkways	0	5	1	2	0	0	10	8	9	7	0	42
Exterior Courtyards/Patios	0	2	0	1	1	0	10	8	11	6	0	39
Vehicle Drop Off/Pick-Up	0	0	0	1	0	2	5	7	2	8	1	26
Bike Racks	3	3	0	0	0	13	4	1	6	5	0	35
Portables	2	4	0	0	9	7	14	3	5	5	0	49
Accessory Buildings	1	0	0	0	3	3	8	2	1	0	1	19
Main Entrance	0	0	0	1	1	0	2	6	0	5	0	15
Secondary Entry	1	1	0	1	4	1	5	7	1	3	0	24
Lobby/Reception Area	0	0	0	0	0	0	0	2	0	4	0	6
Interior Courtyards	0	2	0	1	1	1	4	7	12	4	0	32
Interior Corridors	0	3	0	0	1	2	4	1	15	4	0	30
Stairs and Stairwells	2	6	4	3	0	0	6	1	4	3	0	29
Administrative Offices	0	0	0	0	1	0	0	0	0	4	0	5
Classrooms	3	6	1	0	3	12	7	2	13	11	4	62
Labs/Shops/Art/Music Rooms	1	2	1	2	2	4	3	1	1	5	0	22
Recreation Rooms	0	3	0	1	0	3	4	3	9	7	0	30
Locker Rooms	7	7	3	3	3	11	9	3	16	7	1	70
Auditorium/Assembly Rooms	0	1	1	0	1	1	4	1	2	1	0	12
Media Centers/Computer Rooms	0	0	0	0	1	3	4	1	0	1	0	10
Cafeteria/Food Court	2	6	0	1	1	6	3	2	18	12	0	51
Within/Adjacent Vending Areas	3	0	0	0	2	4	6	2	3	1	0	21
Restrooms	4	7	2	15	0	3	17	1	13	8	0	70
Rooftops of Covered Walkways	0	0	0	0	1	0	0	2	1	0	0	4
Building Rooftops	0	0	0	0	1	0	1	2	1	0	0	5
Totals	44	81	16	54	47	85	157	99	192	139	14	928

Of all the reported criminal activities, responses to Question 12 indicate that respondents believe criminal activities occur most frequently in the following locations:

Location	Reported Frequency
• Recreation Areas/Playgrounds	82
• Parking Lots	73
• Locker Rooms	70
• Restrooms	70
• Off Grounds/Adjacent Buildings	65
• Classrooms	62

Question 13: Time of Crime Occurrence. Using your best judgement based on past experience, place an "X" in the box or boxes that you believe best represents the most significant time period during which each particular crime occurs. For example, if you believe that batteries are more likely to take place during regular daytime school hours, place an "X" in the corresponding box.

MATRIX B: CRIME BY TIME

	Robbery	Battery	Sexual Battery	Alcohol, Tobacco, Other Drugs	Breaking and Entering	Larceny/Theft	Vandalism	Trespassing	Fighting	Disorderly conduct	Weapons Possession	Total
Before School	0	8	0	13	0	2	5	5	16	11	5	65
During School Hours	6	9	2	8	1	14	10	10	27	15	8	110
Between Classes	3	12	3	7	0	5	7	2	26	9	2	76
After School	5	9	2	7	1	4	9	7	21	9	3	77
Evening Hours	7	2	2	8	13	7	29	18	1	4	0	91
Weekends	6	2	2	5	17	7	30	17	2	2	1	91
Total	27	42	11	48	32	39	90	59	93	50	19	510

Question 13 measured various crimes in relation to the corresponding times during which the crimes are perceived to occur most frequently. When we review the results of Question 13 with the results of Question 7, which indicate that *Fighting*, *Disorderly Conduct*, *Vandalism*, and *Battery* are the most serious crimes relative to the perceived number of incidents, Matrix B demonstrates that the most serious criminal activities are believed to occur most frequently during the following times: (See above, MATRIX B: CRIME BY TIME)

CRIME BY TIME
(Based on Perceived Frequency of Incidents)

Criminal Activity	Time (Reported Frequency)
• Fighting	During School Hours (27), Between Classes (26), After School (21), and Before School (16)
• Disorderly Conduct	During School Hours (15), Before School (11)
• Vandalism	Weekends (30), Evening Hours (29), and During School Hours (10)
• Battery	Between Classes (12)

Of all the reported criminal activities, responses to Question 13 indicate that respondents believe criminal activities occur most frequently during the following time periods:

FREQUENTLY REPORTED CRIME TIMES
(Based on Perceived Frequency of Incidents)

Time	Reported Frequency
• During School Hours	110
• Evening Hours	91
• Weekends	91

Of the crimes perceived to be occurring most frequently *During School Hours*, *Fighting* (27) and *Disorderly Conduct* (14) are reported to occur most often. Of the crimes reported to be occurring most frequently during *Evenings and Weekends, Breaking and Entering, Theft,* and *Vandalism* are reported to occur most often. No direct connection exists, or may be established, between Matrix A and Matrix B (e.g., *Parking Lots*, while they may be subject to a great deal of *Breaking and Entering*, cannot be said to be subject to a greater or lesser frequency of *Breaking and Entering* on weekends -- often when no cars are present -- than during school hours.)

Question 14: If there are other connections or relationships between specific crimes and their location and time of occurrence in your school not covered by the above matrices, please tell us about them.

Question 14 elicited additional responses to Question 12 and Question 13, and further attempts to connect and relate specific crimes with spatial and temporal features. Nine (9) -- fourteen percent (14%) -- of the respondents provided additional information. Noted connections or relationships among location and place included "Many fights and disorderly conduct on school buses," as well as "Buses are parked at the school overnight and on weekends [with a] high rate of vandalism to buses." "Portables… have had numerous items stolen from them [due to the ease of entry]." And the "phase of the moon, high humidity, unsettled weather, proximity to holidays or vacations, and post FCAT."

Question 15: Please tell us whether the following are serious concerns relative to their *actual occurrence* within your school.

A.   Yes_____   No_____   **Gang Related Activities**
B.   Yes_____   No_____   **Hate Crimes Related Activities/Incidents**
C.   Yes_____   No_____   **Bomb Threats**
D.   Yes_____   No_____   **Terrorism**
E.   Yes_____   No_____   **Violence in the Workplace**

Fifty-three (53) -- eighty-five percent (85%) -- of the respondents reported that *Gang Related Activities* are not serious concerns. Six (6) -- ten percent (10%) -- of the respondents indicated that *Gang Violence Activities* are serious concerns. And three (3) -- five percent (5%) -- of the respondents did not provide a response.

Fifty-four (54) -- eighty-seven percent (87%) -- of the respondents reported that *Hate Crime Related Activities/Incidents* are not serious concerns. Four (4) -- six percent (6%) -- of the respondents reported that *Hate Crimes Related Activities/Incidents* are serious concerns. And four (4) -- six percent (6%) -- of the respondents did not provide a response (Note: Because of rounding, the total percentage does not equal 100%.)

Fifty-six (56) -- ninety percent (90%) -- of the respondents reported that *Bomb Threats* are not serious concerns. Two (2) -- three percent (3%) -- of the respondents report that *Bomb Threats* are serious concerns. And four (4) -- six percent (6%) -- of the respondents did not provide a response. (Note: Because of rounding, the total percentage does not equal 100%.)

Fifty-eight (58) -- ninety-four percent (94%) -- of the respondents reported that *Terrorism* is not a serious concern. Zero (0) respondents reported that *Terrorism* is a serious concern. And four (4) -- six percent (6%) -- of the respondents did not provide a response.

Fifty-two (52) -- eighty-four percent (84%) -- of the respondents reported that *Violence in the Workplace* is not a serious concern. Six (6) -- ten percent (10%) -- of the respondents reported that *Violence in the Workplace* is a serious concern. And four (4) -- six percent (6%) -- of the respondents did not provide a response.

Question 16: If you answered yes to any of the answers above, does your school have specific plans and policies in place to deal with that situation? Please describe them briefly.

Question 16 further measured school policies and management practices relative to: A. Gang Violence, B. Hate Crimes; C. Bomb Threats; D. Terrorism; and E. Violence in the Workplace.

Nine (9) respondents indicated that specific plans and policies exist to deal with *Gang Violence Activities*. In terms of management practices, five (5) respondents reported that specific plans and policies do not exist to deal with Gang Violence.

Seven (7) respondents reported that specific plans and policies exist to deal with *Hate Crimes Related Activities/Incidents*. Five (5) respondents reported that specific plans and policies do not exist to deal with *Hate Crimes Related Activities/Incidents*.

Seven (7) respondents reported that specific plans and policies exist to deal with *Bomb Threats*. Five (5) respondents reported that specific plans and policies do not exist to deal with *Bomb Threats*.

Four (4) respondents reported that specific plans and policies exist to deal with *Terrorism*. Seven (7) respondents reported that specific plans and policies do not exist to deal with *Terrorism*.

Eight (8) respondents reported that specific plans and policies exist to deal with *Violence in the Workplace*. Four (4) respondents reported that specific plans and policies do not exist to deal with *Violence in the Workplace*.

Part 3: Design and Policy Suggestions

Question 17: What do you see as the *most critical areas of school design* with respect to safety and security from crime relative to your district (or your school)? Please rank the areas noted below such that 1=the most critical area and 15=the least critical area.
(*Note*: Question 17 should have read "... such that 1=the most critical area and 14= the least critical area.")

  A.   **Maintaining visual surveillance from the street**
  B.   **Maintaining visual surveillance in corridors (interior and exterior)**
  C.   **Minimizing niches, alcoves, and other residual spaces that provide places for hiding**
  D.   **Window design**
  E.   **Exterior door design**
  F.   **Interior Lighting**
  G.   **Exterior Lighting**
  H.   **Enclosure of school property perimeter (fencing, walls)**
  I.   **Landscaping**
  J.   **Location of key cabinets**
  K.   **Alarm systems**
  L.   **Miscellaneous openings and outbuildings**
  M.   **Electronic Surveillance systems (for example CCTV)**
  N.   **Other (please specify)**

Question 17 measured respondent perspectives concerning the most critical areas of school design

related to safety and security. The responses were grouped into three nominal categories: Most Critical (Rankings 1-5), Moderately Critical (Rankings 6-10), and Least Critical (11-14), to assess the most frequently recorded areas of concern.

Corridor Surveillance (42) and *Perimeter Enclosure* (42) were reported to be the most critical areas of school design. *Minimal Niches* (29) and *Exterior Lighting* (29) were reported to be the second most critical areas of school design. *Alarm Systems* (28) and *Electronic Surveillance* (25), respectively, were reported to be the third and fourth most critical areas of school design. (See below)

CRITICAL AREAS OF SCHOOL DESIGN

Area of School Design	Reported Frequency
• Corridor Surveillance	42
• Perimeter Enclosure	42
• Minimal Niches	29
• Exterior Lighting	29
• Alarm Systems	28
• Electronic Surveillance Systems	25

Question 18: If funding were available, what *design changes* would you implement in your school to make it safer from crime?

Question 18 elicited a variety of open-ended responses. Fifty-five (55) -- eighty-nine percent (89%) -- of the respondents provided comments or recommended design changes. Seven (7) -- eleven percent (11%) -- of the respondents did not provide a response.

The majority, thirty-seven (37) -- sixty-seven percent (67%) -- of the respondents provided design changes involving issues of *Surveillance*. Twenty-three (23) -- forty-one percent (41%) -- of the respondents suggested design changes involving issues of *Access Control*. Eight (8) -- fourteen percent (14%) -- of the respondents recommended design changes involving issues of *Territoriality*.

Among the respondent comments involving issues of *Surveillance*, Natural Surveillance, Organized Surveillance, and Mechanical Surveillance[3] were each referenced by respondents. Natural Surveillance was commonly referenced (e.g., "Mirrors in halls to see around corners," "Remove several columns inside and out," "Relocation of administration office to increase visual surveillance," "Much more exterior lights and much more police surveillance in the off- hours"). Organized Surveillance was also commonly recommended (e.g., "Surveillance in halls and

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[3]See "Definition of Terms" Section in the *Guidelines*

teachers' areas," "Have security officer live on campus to help cover night and weekend shifts," "Better security features at the front reception area"). Mechanical Surveillance was among the design changes most commonly referenced (e.g., "Cameras," "Add security cameras," "Install CCTV in stair wells," "Cameras in halls leading to restrooms," "Redesign the camera surveillance system," "More surveillance cameras throughout campus, interior as well as exterior," " Full camera access from multiple locations including administrators and police"). In consideration of the most critical areas of school design, while respondents do not rank electronic surveillance the most critical area of school design, the foregoing suggests that electronic surveillance, especially in corridors, may be the most important design consideration (See Question 17). In some respondents' views, however, less intrusive measures than electronic surveillance are more appropriate. Many respondent suggestions related to *Surveillance*, as well as *Access Control* and *Territoriality*, often involved issues of *Maintenance/Management* (e.g., "Keep exterior lights on longer (8pm -7am)," "Connect cameras to local police access for emergencies").

Among the respondent comments involving issues of <u>*Access Control*</u>, Natural Access Control, Organized Access Control, and Mechanical Access Control[4] were all referenced by respondents. Natural Access Control, such as fences and gates, was commonly referenced (e.g., "I would enclose the outside stairways into the security gates. Also the doors located outside the security gates in the gym would be placed within the gates," "Gates between buildings to allow areas to be closed off," "Reduce the number of exit/entry"). Target hardening devices were also commonly referenced (e.g., "Replace front doors," "Panic hardware on all exit/exterior doors," "Place locks on exterior doors that could be locked from the inside"). Organized Access Control was also commonly recommended (e.g., "Put up a guard house at parking lot entrance," "Staff the front desk for better control of visitors on site," "Have a person to sit in the entryway of the school to greet people as they enter the school before reaching the offices"). Mechanical Access Control was among the design changes most commonly referenced [e.g., "Coded entry to all rooms," "More alarms (intrusion alarms) installed," "Electronic employee-only parking," "More sophisticated security system," "Remove doors to stairwells or have them automatically close and lock during alarm"]. Many respondent suggestions related to *Access Control* often involved issues of *Surveillance* (e.g., "I would have electronic gates and closed circuit television so that I could control their coming and going of vehicles").

Among the respondent comments involving issues of *Territoriality*, fencing and gates were commonly suggested (e.g., "Install perimeter fencing," "Gates to close driveways," "Interior and exterior fences"). Further, respondent comments related design changes, such as fences and gates, with specific crimes and times (e.g., "I would suggest that where the exterior fence joins the brick wall be made more secure and less accessible to climbing over," "Fence all around school to deter trespassers from entering campus without permission. I would make it a one way in and one way out only," "Enclose the perimeter for evenings and weekends"). Several respondent suggestions

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[4]See "Definition of Terms" Section in the *Guidelines*

relating to *Territoriality* also involved issues of *Access Control* (e.g., "Fencing gates to force to the office for check-ins," "Fence the perimeter. Put up a guard house at parking lot entrance").

Eleven (11) respondent suggestions may be classified under issues of *Maintenance/Management*, as well as *Guardianship*. Among these, respondents most commonly recommended security officers [e.g., "Full-time security on campus (live-in)," "Have security officer live on campus to help cover night and weekend shifts"]. Also, several respondents recommended the removal of portables (e.g., "Eliminate portable classrooms," "No portable classrooms). Respondents also suggested the removal of lockers (ie: "Remove lockers - over crowded"). And, among respondent responses, design changes were noted which target specific crimes (e.g., "Bathroom in each class should not be shared to minimize tobacco, fighting, etc.").

Question 19: If funding were available, what *single policy or procedure* would you implement within your school to increase safety and security?

Question 19 elicited forty-four (44) responses providing policy and procedure recommendations. Eighteen (18) respondents did not provide a response. Eleven (11) respondents provided design changes involving issues of *Surveillance* and *Guardianship* (e.g., "Leave exterior lights on at night and weekends," "Additional security personnel," "A full-time SRO," "Year-round funding for SROs," "Cameras for exterior and interior"). Nine (9) respondents suggested design changes involving issues of *Access Control* (e.g., "Electronic or coded entry system for the entire building," "Video cameras at entry point"). One (1) respondent recommended design changes involving the issue of *Territoriality* (e.g., all buildings would be in a defined and maintained perimeter).

Among the recommendations involving issues of *Maintenance/Management* and *Guardianship*, the majority of the recommendations involved staffing policy (e.g., "Training and professional development," "Additional guidance counselors," "Increase in staff deans, behavioral specialists"). Recommendations included suggestions for both students and parents (e.g., "I would require parents to wear 'parent IDs' which would identify them and their children"). And several respondent recommendations specifically pertained to student activity (e.g., "No backpacks on campus," "Continue the no back-pack rule," "Set up a student participation program with reward system," "Valid alternative placement for repeat offenders regardless of their status [IDGA] placement would be mandatory").

Question 20: Please provide any additional comments or suggestions concerning the issues presented in this questionnaire.

Question 20 elicited additional open-ended responses. Fourteen (14) -- twenty-three percent (23%) -- of the respondents provided additional comments. Forty-eight (48) -- seventy-seven percent (77%) -- of the respondents did not provide a response.

In the majority of additional comments, respondents provided suggestions concerning design

and/or policy changes that they believe have been effectively implemented within the schools (e.g., "We have a sheriff's deputy on campus. He lives in a portable. We have a vandal watcher agreement with him," "Interior central courtyards are great tool for grouping students during breaks. They allow for easier supervision of students," "The safest schools are those with the students acting to keep the school safe and reporting crimes before they happen," "We finally were able to get a perimeter installed and have a security person come around at night and on weekends to check doors. Until then we had a couple of break-ins and vandalism but not since the fence was installed").

Several respondents provided comments and recommendations surrounding policy changes based on observations made through years of experience (e.g., "I have observed that smaller is better, especially at the high school level where I believe that the students should not exceed 1,500. Our high school has a student population of about 1,300 at the present," "Schools should have access to appropriate services from police, social workers, and medical practitioners (nurse). All should be funded above formula and based on NEED, not formula"). Some respondents noted problematic areas within the school environment (e.g., "Car Lines [related to congestion] are always a problem).

Several of the respondents did not believe the survey instrument was applicable to their school (e.g., "This questionnaire had little to do with our school environment. Some of the answers were not accurate due to the fact that we have very little difficulty at this facility," "While I rank ordered the lists, it does not mean we have all these problems," "My school has very few incidents. I don't think it is due to building design, but to the base location and the population and the grade level"). Issues raised in the foregoing comments, coupled by the large number of elementary schools on the mailing list, may account for much of the missing data in the Principals Survey Instrument (e.g., "This questionnaire does not really apply to most elementary schools but I did try to answer the questions that did apply").

3. School District Risk/facility Managers Survey Instrument and Related Data Analysis

The Survey Instrument Format

The survey instrument consisted of twenty-four (24) closed-ended and open-ended questions and required approximately thirty (30) minutes for respondents to complete. The survey instrument began with a general introductory statement that provided informed consent information to the respondents. The survey instrument was then divided into the following three (3) sections[1].

The first section, *Part 1: Background and Context* (Questions 1-11), collected basic demographic information on respondents. *Part* 1 began by focusing on respondent familiarity with Safe School Design principles. Further, *Part 1* sought to uncover the extent to which Safe School Design principles and guidelines were perceived to have been incorporated into the design of public schools as well as the perceived effectiveness of these design principles. The second section, *Part 2: Criminal Activity and School Design* (Questions 12-20), assessed the specific places and locations, as well as the specific period of the day, where and when, incidents of crime are believed to occur most frequently. The final section, *Part 3: Design Policy Suggestions* (Questions 21-24), addressed school design and policy concerns of the respondents.

Throughout the survey instrument, the questions also aimed to evaluate management trends and the effectiveness of management policy, as proper management is considered a fundamental component of safe school design.

Part 1: Background and Context

Questions 1-5, "**Date**," "**County**," "**Person Completing Survey**," "**Title/Position**," and "**Contact Information**" provided demographic data, which enabled the research team to identify, organize, and catalogue respondent information and the geographic origin of the completed survey instruments.

On May 1, 2002, sixty seven (67) survey instruments were distributed to school districts throughout Florida. Twenty-three (23) -- thirty-four percent (34%) -- of the School District Risk/Facility Managers Survey Instruments were returned by August 14, 2002. The twenty-three (23) returned School District Risk/Facility Managers Survey Instruments accounted thirty-four percent (34%) of the school districts throughout Florida. (See Map 3, page 180)

1Note that because of rounding, response total to some question may not equal 100%

Twelve (12) -- fifty-two percent (52%) -- of the respondents were from Facilities/Plant Management Offices. Five (5) -- twenty-two percent (22%) -- of the respondents were from the Office of the Superintendent of Schools. Three (3) -- thirteen percent (13%) -- of the respondents were from respondents who designated their offices as "Administration," and two (2) -- nine percent (9%) -- were received from "Capital Projects Management" offices. One (1) respondent did not provide background data (4%).

Question 6: How would you rate your familiarity with the design principles listed in Table-A above?

A. **Very Familiar**
B. **Somewhat Familiar**
C. **Not Very Familiar**
D. **Not At All Familiar**

Question 6 measured respondent familiarity with Safe School Design principles (derived from CPTED theory) codified in the 2001 Florida Building Code, Section 423, 7(h). Thirteen (13) -- fifty-seven percent (57%) -- of the respondents reported being *Very Familiar*. Seven (7) -- thirty percent (30%) -- of the respondents reported being *Somewhat Familiar*. One (1) -- four percent (4%) -- of the respondents reported being *Not Very Familiar*. Zero (0) respondents reported being *Not At All Familiar*. Two (2) -- nine percent (9%) -- of the respondents did not provide a response.

Question 7: The *1993 Florida Safe School Design Guidelines* illustrate how the above design principles can be implemented. How familiar are you with these principles?

A. **Very Familiar**
B. **Somewhat Familiar**
C. **Not Very Familiar**
D. **Not At All Familiar**

Question 7 measured respondent familiarity with the *1993 Florida Safe School Design Guidelines*. Thirteen (13) -- fifty-six percent (56%) -- of the respondents reported being *Somewhat Familiar*. Six (6) -- twenty-six percent (26%) -- of the respondents reported being *Very Familiar*. One (1) -- five percent (5%) -- of the respondents reported being *Not Very Familiar*, and one (1) -- five percent (5%) -- reported being *Not At All Familiar*. Two (2) -- eight percent (8%) -- of the respondents did not provide a response.

Question 8: Whether you are familiar or not with the design principles above or the guidelines, how would you characterize the incorporation of the Safe School Design principles listed in Table-A into the design and construction (including retrofit) of your schools in your district?

A. **Extensively Incorporated**
B. **Incorporated Somewhat**
C. **Not Incorporated Much At All**
D. **Not Incorporated At All**
E. **Cannot Judge**

Question 8 measured the extent to which respondents perceived Safe School Design principles have been incorporated into the design and construction of public schools. Ten (10) -- forty-three percent (43%) -- of the respondents reported that the safe school design principles and guidelines have been *Incorporated Somewhat*. Eight (8) -- thirty-five percent (35%) -- of the respondents reported that the principles and guidelines have been *Extensively Incorporated*. Three (3) -- thirteen percent (13%) -- of the respondents reported that the principles and guidelines were *Not Incorporated Much At All*. Two (2) -- nine percent (9%) -- of the respondents did not provide a response.

Question 9: If incorporated "extensively or somewhat" (A and B above), in your judgement, what have been some of their most important features relative to school safety and security?

Question 9 elicited a variety of open-ended responses related to the effectiveness of Safe School Design features applicable to public schools. Sixteen (16) -- seventy percent (70%) -- of the respondents provided additional comments. Seven (7) -- thirty percent (30%) -- of the respondents did not provide additional responses.

Eleven (11) -- sixty-eight percent (68%) -- of the responses related to *Surveillance* features (e.g., "Provide open viewing of all areas," "Better visibility -- less area that cannot be observed," "Elimination of alcoves and obstructions," "Video cameras... open handrails/balconies... Upgrading lighting for video cameras," "Open courtyard, parking lots with visibility from the admin area and exterior design to prevent entry," etc.). Nine (9) -- thirty-nine percent (39%) -- of the responses also related to *Access Control* features (e.g., "Installed high security locking hardware," "The limiting of access to the school," "Channeling people into single office door," "Replacing handles on gates with panic hardware providing security as well as safety," etc.) Five (5) -- twenty-one percent (21%) -- of the respondents providing additional responses reported the effectiveness of *Territoriality* (i.e., "All schools re-fenced," "Control and defined points of access," "School and campus territorial integrity," etc.).

Question 10: In your estimation, has the incorporation of Safe School Design principles *helped make your district's schools safer*?
A. **Yes**
B. **No**
C. **Cannot Judge**

Question 10 estimated respondent perspectives related to the effectiveness of Safe School Design principles in promoting a safe and secure school environment. Eighteen (18) -- seventy-eight percent (78%) -- of the respondents reported, *Yes* -- Safe School Design principles helped make schools safer. Two (2) -- nine percent (9%) -- of the respondents reported that they *Cannot Judge*. One (1) -- four percent (4%) -- of the respondents reported, *No*, Safe School Design principles did not help make schools safer. Two (2) -- nine percent (9%) -- of the respondents did not provide a response.

Question 11: Comments?

Question 11 sought to elicit additional open-ended responses pertaining to certain areas and specific principles that have been most effective in promoting a safe and secure school environment. In addition to Question 9, the responses allowed the research team to more effectively assess the perceived effectiveness and ineffectiveness of specific Safe School Design principles, and provided a variety of examples from which to better measure the perceived advantages and disadvantages of Safe School Design principles. Nine (9) -- thirty-nine percent (39%) -- of the respondents provided additional comments. Fourteen (14) -- sixty-one percent (61%) -- of the respondents did not provide additional comments.

In the additional comments, respondents provided recommendations for incorporating design concepts which are perceived to have been effective in their own schools (e.g., "Lighting has cut down on vandalism," "The elimination of foot and hand holds at the exterior walls also helps," "By making student activities more visible from beginning of school to end," "Better visual control by the school staff is achieved through the use of guidelines," "Staff office locations decentralized for better student surveillance," "Improvements in restrooms have decreased fire incidents; All schools now have motion detectors decreasing vandalism; By the end of 2002 all schools will have video cameras").

Part 2: Criminal Activity and School Design

Question 12: Of the various types of school designs listed below, which one would you prefer in terms of providing the best school safety and security?

A. A single 2-story (or more) building
B. Multiple 2-story (or more) buildings
C. 1-story centrally organized grouping of buildings
D. 1-story campus plan (spread out) grouping of buildings

Question 12, also asked in the *1993 Florida Safe School Design Guidelines*, "State of Florida Questionnaire," measured the preferred school design among respondents in terms of providing the best school safety and security. Thirteen (13) -- fifty-seven percent (57%)

-- of the respondents prefer a *1-Story Centrally Organized Grouping of Buildings*. Three (3) -- thirteen percent (13%) -- of the respondents prefer *Multiple 2-Story (or more) Buildings*. Two (2) -- nine percent (9%) -- of the respondents prefers *A Single 2-Story (or more) Buildings*. One (1) -- four percent (4%) -- of the respondents prefer *1-Story Campus Plan (spread out) Grouping of Buildings*. Four (4) -- seventeen percent (17%) -- of the respondents did not provide a response.

Question 13: Crime Location. Using your best judgement based on past experience, place an "X" in the box or boxes that you believe best represent a significant location (according to the number of incidents) for the occurrence of each particular crime. For example, if you believe that school parking lots represent a significant location where robberies take place put an "X" in the corresponding box.

Question 13 measured various crimes in relation to the corresponding locations in which the crimes are perceived to occur most frequently. When we review the results of Question 13 with criminal activities reported in Florida's School Environment Safety Incident Reporting System (SESIR) data for 1999-2000,[2] which indicate that *Fighting*, *Disorderly Conduct*, and *Alcohol, Tobacco, and Other Drugs* are the most serious crimes relative to the number of incidents, Matrix A indicates that the most serious crimes are believed to occur most frequently in the following locations: (See MATRIX A: CRIME BY LOCATION)

CRIME BY LOCATION
(Based on Perceived Frequency of Incidents)

Criminal Activity	Location (Reported Frequency)
• Fighting	Interior Corridors (11), Recreation Areas/Playgrounds (10), Off Ground (9), Exterior Courtyards/Patios (9), Recreation Rooms (9)
• Disorderly Conduct	Interior Corridors (9), Classrooms (9), Restrooms (8), Recreation Rooms (8)
• Alcohol, Tobacco, and Other Drugs	Off Ground/Adjacent Buildings (14), Parking Lots (13), Restrooms (10)

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[2]Note that just released SESIR data show that "Disorderly Conduct" has dropped from 78,948 incidents in 1998-1999 and from 36,091 incidents in 1999-2000 to 7,817 incidents in 2000-2001. This extraordinary decrease is the result of a redefinition of the term to exclude minor threats of disorderly conduct in favor of major campus disturbances, such as bomb threats. (See http://www.firn.edu/doe/besss/sesir/sesir_home.htm)) The survey data categories reported here are based on 1999-2000 statistics, which are part of the trend line consistently showing disorderly conduct among the top three crimes reported by school authorities.

MATRIX A: CRIME BY LOCATION
(Based on Perceived Frequency of Incidents)

	Robbery	Battery	Sexual Battery	Alcohol, Tobacco, Other Drugs	Breaking and Entering	Larceny/Theft	Vandalism	Trespassing	Fighting	Disorderly Conduct	Weapons Possession	Total
Off Grounds/Adjacent Buildings	2	9	2	14	1	0	0	0	9	6	4	47
Parking Lots	2	3	1	13	6	10	9	9	6	7	11	77
Recreation Area/Playground	0	5	1	3	1	0	4	7	10	4	0	35
Exterior Walkways	0	5	0	1	0	0	5	4	8	3	0	26
Exterior Courtyards/Patios	0	2	0	2	0	1	3	1	9	3	0	21
Vehicle Drop Off/Pick-Up	0	0	0	2	0	1	1	2	3	2	1	12
Bike Racks	1	0	0	0	0	5	3	0	1	0	0	10
Portables	1	0	0	1	9	3	7	2	1	2	0	26
Accessory Buildings	0	0	3	0	2	2	6	0	0	0	0	13
Main Entrance	0	2	0	1	2	1	4	1	1	1	1	14
Secondary Entry	0	1	0	1	6	3	4	4	1	1	1	22
Lobby/Reception Areas	0	1	0	1	1	1	1	1	2	5	1	14
Interior Courtyards	1	2	2	2	3	1	2	1	7	4	0	25
Interior Corridors	1	5	0	0	1	3	5	0	11	9	2	37
Stairs/Stairwells	1	3	2	2	1	1	2	1	7	4	0	24
Administration Offices	0	1	0	1	3	2	3	0	1	5	1	17
Classrooms	0	2	1	1	5	7	6	1	3	9	2	37
Labs/Shops/Art/Music Room	0	1	0	0	1	2	3	0	2	5	0	14
Recreation Rooms	1	2	2	1	2	2	5	0	9	8	1	33
Locker Rooms	3	3	1	2	2	7	8	0	8	5	2	41
Auditorium/Assembly	1	1	4	1	1	1	1	1	2	5	1	19
Media Centers/Computer Rooms	2	0	1	0	4	3	2	0	0	1	0	13
Cafeteria/Food Court	1	3	0	1	3	5	2	1	8	6	1	31
Within/Adjacent Vending Areas	1	1	2	1	1	4	6	1	2	4	1	24
Restrooms	1	3	4	10	1	2	9	1	8	8	1	48
Rooftops of Walkways	0	0	1	1	0	0	6	3	0	0	1	12
Building Rooftops	0	0	1	2	1	1	8	5	0	0	1	19
Total	19	55	28	64	57	68	115	46	119	107	33	711

Of all the reported criminal activities, responses to Question 13 indicate that respondents believe criminal activities occur most frequently in the following locations:

FREQUENTLY REPORTED CRIME LOCATIONS
(Based on Perceived Frequency of Incidents)

Location	Reported Frequency
• Parking Lots	77
• Restrooms	4
• Off Grounds/Adjacent Buildings	47
• Locker Rooms	41

Question 14: Time of Crime Occurrence. Using your best judgement based on past experience, place an "X" in the box or boxes that you believe best represents the most significant time period during which each particular crime occurs. For example, if you believe that batteries are more likely to take place during regular daytime school hours, place an "X" in the corresponding box.

MATRIX B: CRIME BY TIME
(Based On Perceived Frequency of Incidents)

	Robbery	Battery	Sexual Battery	Alcohol, Tobacco, Other Drugs	Breaking and Entering	Larceny/Theft	Vandalism	Trespassing	Fighting	Disorderly Conduct	Weapons Possession	Total
Before School	1	0	0	9	1	0	2	0	4	5	6	28
During School Hours	3	6	4	4	1	8	2	6	11	13	8	66
Between Classes	2	6	1	7	2	4	1	1	11	11	2	48
After School	2	5	5	5	1	2	3	2	10	4	4	43
Evening Hours	5	2	4	3	12	9	13	10	1	2	3	64
Weekends	2	1	1	2	15	10	17	12	0	0	2	62
Total	15	20	15	30	32	33	38	31	37	35	25	311

Question 14 measured various crimes in relation to the corresponding times during which they are perceived to occur most frequently. When we review the results of Question 14 with criminal activities reported in SESIR data, which indicate that *Fighting, Disorderly Conduct, Alcohol, Tobacco, And Other Drugs* are the most serious crimes relative to the number of incidents, Matrix B indicates that the most serious crimes are believed to occur most frequently at the following times: (See MATRIX B: CRIME BY TIME)

CRIME BY TIME
(Based on Perceived Frequency of Incidents)

Criminal Activity	Time (Reported Frequency)
• Fighting	During Normal Daytime School Hours (11), Between Classes (11), After School Hours (10)
• Disorderly Conduct	During Normal Daytime School Hours (13), Between Classes (11)
• Alcohol, Tobacco and Other Drugs,	Before School (9), Between Classes (7)

Of all the reported criminal activities, responses to Question 14 indicate that respondents believe criminal activities occur most frequently during the following time periods:

FREQUENTLY REPORTED CRIME TIMES
(Based on Perceived Frequency of Incidents)

Time	Reported Frequency
During School Hours	66
Evening Hours	64
Weekends	62

In Matrix B, of the crimes reported most frequently *During School Hours, Disorderly Conduct* (13) and *Fighting* (11) were reported most often. Of the crimes reported most frequently in the *Evening Hours, Vandalism* (13)*, Breaking and Entering* (12), and *Trespassing* (10) were reported most often. Of the crimes reported most frequently on the *Weekends, Trespassing* (17), *Vandalism* (15), and *Breaking and Entering* (12) were reported most often. It is interesting that, when compared to the findings for SROs, facility manager respondents tend to believe that more crimes occur in *Evening Hours* as distinct from *After School*. We suspect that view reflects experiential differences between the two groups of respondents: SROs are present throughout the school day and probably have a better sense of the ebb and flow of criminal activity at schools. That is, based on their day-to-day experiences, they can more finely analyze the entire day in terms of crime occurrences whereas facility managers probably see the school day, in terms of crime, as larger and more distinct time segments. Of course, further research would be needed to bear out this speculation.

Question 15: If there are other connections or relationships between specific crimes and their location and time of occurrence in your school not covered by the above matrices, please tell us about them.

Question 15 elicited additional responses to Question 13 and Question 14, and further attempts to connect and relate specific crimes with spatial and temporal features. Four (4) -- seventeen percent (17%) -- of the respondents provided additional information noting the locations and times where and when they believe criminal activities occur most frequently (e.g., "Undeveloped/wooded areas are of concern and opportunity for illegal activity," "Fighting at extracurricular activities. Locker room theft during extracurricular activities," "B&E and Larceny theft occur to student victims primarily during the day; they occur to school property primarily at night and on the weekends"). Emphasizing the need for more precise methods of collecting crime data within the school districts, one respondent recommended: "Via panel S289 on terms a history of each type of incident can be documented, which includes in the data the location and time of each specific incident. With this data a spreadsheet can be created to show problem areas on campus and their time of occurrence." Nineteen (19) -- eighty-three percent (83%) -- of the respondents did not provide a response to this question.

Question 16: Using your best judgement based on past experience, do you believe that allowing public access to recreational (or other) facilities after normal daytime class hours in your school makes them more prone to criminal activities than if the campus was closed to such activities?

A. Yes
B. No
C. Cannot Judge

Question 16 asked respondents whether or not they believe public access to school facilities after normal daytime class hours makes schools more prone to criminal activities than if school facilities were closed to such activities. Fifteen (15) -- sixty-five percent (65%) -- of the respondents reported, *Yes*- access to school facilities after normal daytime class hours makes schools more prone to criminal activity. Six (6) -- twenty-six percent (26%) -- of the respondents reported, *No*. Two (2) -- nine percent (9%) -- of the respondents did not provide a response to the question.

Question 17: Please provide any comments relative to question 16 above.

Question 17 elicited a wide variety of open-ended comments detailing the perceived advantages and disadvantages of access to public schools after normal daytime class hours. Of the twenty-three (23) respondents to the Community Colleges Survey Instrument, thirteen (13) -- fifty seven percent (57%) -- of the respondents provided additional comments. Ten (10) -- forty-three percent (43%) -- of the respondents did not provide a response.

Of those providing data, ten (10) -- forty-three percent (43%) -- of the respondents stated that after-hour access increases the potential for crime (e.g., "Gives criminals a chance to scope out facility and come back at a later date," "Allows vandalism; abuse of facility and theft," "Public activities often poorly supervised by the public group"). Three (3) -- thirteen percent (13%) -- of

the respondents stated that after-hour access *does not* increase the potential for crime, and may even deter crime (e.g., "We found that the more we secure the campus to prevent the public from using our recreational facilities vandalism went up," "Public access makes sites less prone to criminal activities - especially from dismissal to dusk," "Keeping people out tends to encourage them to want to get in").

Question 18: Does your school post signs advising visitors about school entry procedures for access control? (check all that apply)[3]

A. During-School Hours
B. After-School Hours
C. Don't Know

Question 18 elicited responses concerning access control and management. Twenty (20) -- eighty-six percent (86%) -- of the respondents reported that school policies exist for posting signs detailing school entry procedures *During School Hours*. Ten (10) -- forty-three percent (43%) -- of the respondents reported policies for posting signs detailing entry procedures *After School Hours*. One (1) -- four percent (4%) -- of the respondents reported that they *Don't Know*. Two (2) -- nine percent (9%) -- of the respondents did not provide a response.

Question 19: Please tell us whether the following are serious concerns relative to their *actual occurrence* within your school.

A.	**Yes____**	**No____**	**Gang Related Activities**
B.	**Yes____**	**No____**	**Hate Crimes Related Activities/Incidents**
C.	**Yes____**	**No____**	**Bomb Threats**
D.	**Yes____**	**No____**	**Terrorism**
E.	**Yes____**	**No____**	**Violence in the Workplace**

Reviewing Question 19, eighteen (18) -- seventy-eight percent (78%) -- of the respondents reported that *Gang Violence Activities* are not serious concerns, relative to number of incidents. Five (5) -- twenty-two percent (22%) -- of the respondents indicated that *Gang Violence Activities* are serious concerns, relative to number of incidents.

Twenty (20) -- eighty-five percent (85%) -- of the respondents also reported that *Hate Crimes Related Activities/Crimes* are not serious concerns. None of the respondents reported that *Hate Crimes Related Activities/Incidents* are serious concerns.

Thirteen (13) -- fifty-seven percent (57%) -- of the respondents reported that *Bomb Threats* are not serious concerns. Ten (10) -- forty-three percent (43%) -- of the respondents reported that *Bomb Threats* are serious concerns.

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[3]Note: Because of non-exclusive response categories, the total percentage exceeds 100%

Twenty (20) -- eighty-five percent (85%) -- of the respondents reported that *Terrorism* is not a serious concern. None of the respondents reported that *Terrorism* is a serious concern.

Seventeen (17) -- seventy-four percent (74%) -- of the respondents reported that *Violence in the Workplace* is not a serious concern. And, four (4) -- seventeen percent (17%) -- of the respondents reported that *Violence in the Workplace* is a serious concern. Two people – nine percent – did not respond to the question either way.

Question 20: If you answered yes to any of the items above, does your school have specific plans and policies in place to deal with that situation? Please describe them briefly.

Question 20 further assessed school policies and management practices relative to: A. Gang Violence; B. Hate Crimes; C. Bomb Threats; D. Terrorism; and E. Violence in the Workplace.

Five (5) -- twenty-one percent (21%) -- of the respondents reported that specific plans and policies exist to deal with *Gang Violence Activities*. None of the respondents indicated that plans and policies do not exist to deal with *Gang Violence Activities*.

Two (2) -- eight percent (8%) -- of the respondents indicated that specific plans and policies do not exist to deal with *Hate Crime Related Incidents/Activities*. One (1) -- four percent (4%) -- of the respondents reported that specific plans and policies exist to deal with *Hate Crime Related Incidents/Activities*.

Eight (8) -- thirty-four percent (34%) -- of the respondents indicated that specific plans and policies exist to deal with *Bomb Threats*. One (1) -- four percent (4%) -- of the respondents reported not having plans and policies to deal with *Bomb Threats*.

Two (2) -- eight percent (8%) -- of the respondents indicated that specific plans and policies do not exist to deal with *Terrorism*. One (1) -- four percent (4%) -- of the respondents reported that plans and policies exist to deal with *Terrorism*.

And five (5) -- twenty-one percent (21%) -- of the respondents reported that specific plans and policies exist to deal with *Violence in the Workplace*. Two (2) -- eight percent -- of the respondents reported that specific plans and policies do not exist to deal with *Violence in the Workplace*.

Part 3: Design and Policy Suggestions

Question 21: What do you see as the *most critical areas of school design* with respect to safety and security from crime relative to your district (or your school)? Please rank the areas noted below such that 1=the most critical area and 14=the least critical area.

A. **Maintaining visual surveillance from the street**
B. **Maintaining visual surveillance in corridors (interior and exterior)**
C. **Minimizing niches, alcoves, and other residual spaces that provide places for hiding**
D. **Window design**
E. **Exterior door design**
F. **Interior Lighting**
G. **Exterior Lighting**
H. **Enclosure of school property perimeter (fencing, walls)**
I. **Landscaping**
J. **Location of key cabinets**
K. **Alarm systems**
L. **Miscellaneous openings and outbuildings**
M. **Electronic Surveillance systems (for example CCTV)**
N. **Other (please specify)**

Question 21 measured respondent perspectives concerning the most critical areas of school design related to safety and security. The responses were grouped into three nominal categories: Most Critical (Rankings 1-5) , Moderately Critical (Ranking 6-10), and Least Critical (Rankings 11-14), to assess the most frequently recorded areas of concern.

Corridor Surveillance (17) was reported to be the most critical area of school design. *Minimal Niches* (15) and *Perimeter Enclosure* (15), respectively, were the second and third most critical areas of school design.

CRITICAL AREAS OF SCHOOL DESIGN

Area of School Design	Reported Frequency
• Corridor Surveillance	17
• Minimal Niches	15
• Perimeter Enclosure	15
• Exterior Lighting	13
• Exterior Doors	10

Question 22: If funding were available, what *design changes* would you implement in your school to make it safer from crime?

Question 22 elicited a variety of open-ended responses. Eighteen (18) -- seventy-eight percent (78%) -- of the respondents provided additional comments and recommended design considerations. Five

(5) -- twenty-one percent (21%) -- of the respondents did not provide additional comments nor recommend design changes.

Among the respondents providing additional comments, thirteen (13) -- seventy-two percent (72%) -- of the respondents recommended design changes involving issues of *Surveillance* (e.g., "More surveillance," "Better exterior lighting," "More Cameras," "Large secure central courtyard with clear visibility to perimeter points," "Vision windows in all doors and vision windows and bells at all kitchen/service entrances and after care programs," etc.).

Eight (8) -- thirty-four percent (34%) -- of the respondents suggested design changes involving issues of *Access Control* (e.g., "Alarm systems," "Simple motion detector alarm systems in general areas and hallways," "District wide integrated building access systems," "Limit pedestrian access points to campus. Separate vehicle entrances/exits for employees, buses, parents, students, and visitors," "Separation of public use [night activities], from student use [school programs]," etc.).

Three (3) -- thirteen percent (13%) -- of the respondents suggested design changes involving issues of *Territoriality* (e.g., "Perimeter control," "Fences around all schools," etc.). And several respondents provided recommendations involving *Management* and *Guardianship* (e.g., "A CPTED audit of school sites," "Build a new better design for Jr-Sr high school," etc.).

Question 23: If funding were available, what *single policy or procedure* would you implement within your school to increase safety and security?

Fifteen (15) -- sixty-five percent (65%) -- of the respondents provided comments to Question 23. Eight (8) -- thirty-four percent (34%) -- of the respondents did not provide a response.

The majority of responses from respondents concerned policy recommendations involving *Management* and *Guardianship*, in addition to issues of *Surveillance, Access Control*, and *Territoriality* (e.g., "District approval of storage buildings and landscaping to prevent interference with sight lines," "Lights out policy between 11:00 pm and 5:00 am, coupled with motion sensor exterior lighting," "Easy method to lock down system gates and survey all parts of school through electronic system," "Provide resource officer for every school," etc.). Some respondents suggested strategies focused directly on student behavior, dress, or activities (e.g., "Stricter discipline," "A better dress code," "Implement a dress code that requires all students to dress alike," "Implement policy to close all high schools campus during lunch time," etc.).

Question 24: Please provide any additional comments or suggestions concerning the issues presented in this questionnaire.

Question 24 elicited additional open-ended responses. Nineteen (19) -- eighty-three percent (83%) -- of the twenty-three (23) respondents to this question did not provide a response. Four (4) -- seventeen percent (17%) -- of the respondents provided additional suggestions (e.g., "The

location of the school has bearing on the kind and number of crimes committed") and words of encouragement (e.g., "Security and safety of our schools is of great importance to [the] county school district. Safety, SIU, and design concepts work together to decrease vandalism and provide safe schools for all of our students," "Thank you for addressing safety and security in our schools. Too often this topic is considered an afterthought not only in the construction phase of a school but also when funds are allocated for day to day operations").

4. Community College Risk/facility Managers Survey Instrument and Related Analysis

The Survey Instrument Format

The survey instrument consisted of twenty-five (25) closed and open-ended questions and required approximately thirty (30) minutes to complete. The survey instrument began with a general introductory statement that provided informed consent to the respondents. The survey instrument was then divided into three (3) sections.[1]

The first section, *Part 1: Background and Context* (Questions 1-12), collected basic demographic information on respondents. *Part 1* began by focusing on respondent familiarity with Safe School Design principles. Further, *Part 1* sought to uncover the extent to which Safe School Design principles (as contained in the *Guidelines*) have been incorporated into the design of community colleges as well as the perceived effectiveness of the design principles contained the *Guidelines*. *Part 1* also categorized and described criminal activities catalogued by occurrence throughout the public school system in Florida's School Environmental Safety Incident Reporting System (SESIR) for the years 1999-2000. This provides comparative criminal activity data even though we know that community colleges are considerably different in many aspects from K-12 public schools.

Part 2: Criminal Activity and School Design (Questions 13-21), assessed the specific places and locations, as well as the specific period of the day, when incidents of crime are believed to occur most frequently. The final section, *Part 3: Design and Policy Suggestions* (Questions 22-25), addressed school design and policy concerns of the survey respondents.

Throughout the survey instrument, the questions also aimed to evaluate management trends and the effectiveness of management policy, as proper management is a fundamental component of Safe School Design.

Part 1: Background and Context

Questions 1-5, "**Date**," "**County**," "**Person Completing Survey**," "**Title/Position**," and "**Contact Information**" provided demographic data which enabled the research team to identify, organize, and catalogue respondent information and the geographic origin of the completed surveys.

Fifty (50) survey instruments were mailed to community college administrators across Florida in May and June 2002. In addition, thirty (30) survey instruments were personally distributed at a meeting of community college facility managers and administrators on May 23, 2002. By August 14, 2002,

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[1]Note that because of rounding, response totals to some questions may not equal 100%

twenty (20) of the survey instruments were returned, for a completion rate of twenty-five percent (25%). Eleven (11) -- fifty-five percent (55%) -- of the respondents were from Facilities/Physical Plant. Six (6) -- thirty percent (30%) -- of the respondents were from Police/Safety and Security. And two (2) -- ten percent (10%) -- of the respondents were from Administration. One (1) -- five percent (5%) -- of the respondents did not provide background information. The returned Community Colleges Survey Instruments accounted for 18 (eighteen), or sixty four percent (64%) of the twenty- eight (28) community college regions throughout Florida (See Map 4, page 181).

Question 6: How would you rate your familiarity with the design principles listed in Table-A above?

  A. **Very Familiar**
  B. **Somewhat Familiar**
  C. **Not Very Familiar**
  D. **Not At All Familiar**

Question 6 measured respondent familiarity with the Safe School Design principles codified in the 2001 Florida Building Code, Section 423, 7(h). The majority, twelve (12) -- sixty percent (60%) -- of the respondents reported being *Somewhat Familiar* with the Safe School Design principles. Five (5) -- twenty- five percent (25%) -- of the respondents reported being V*ery Familiar*. Two (2) -- ten percent (10%) -- of the respondents reported being *Not Very Familiar*, and one (1) -- five percent (5%) -- of the respondents reported being *Not At All Familiar*.

Question 7: The *1993 Florida's Safe School Design Guidelines* illustrate how the above design principles can be implemented. How familiar are you with these principles?

  A. **Very Familiar**
  B. **Somewhat Familiar**
  C. **Not Very Familiar**
  D. **Not At All Familiar**

Question 7 measured respondent familiarity with the *1993 Florida Safe School Design Guidelines*. Twelve (12) -- sixty percent (60%) -- of the respondents reported being *Somewhat Familiar* with the *Guidelines*. Four (4) -- twenty percent (20%) -- of the respondents reported being *Not Very Familiar*. Two (2) -- ten percent (10%) -- of the respondents reported being *Very Familiar*. One (1) -- five percent (5%) -- of the respondents reported being *Not At All Familiar*. One (1) -- five percent (5%) -- of the respondents did not provide a response.

Question 8: Whether you are familiar or not with the design principles above or the guidelines, how would you characterize the incorporation of the Safe School Design principles listed in Table-A into the design and construction (including retrofit) of your community college?

A. **Extensively Incorporated**
B. **Incorporated Somewhat**
C. **Not Incorporated Much At All**
D. **Not Incorporated At All**
E. **Cannot Judge**

Question 8 measured the extent to which the respondent perceived the Safe School Design principles of the *1993 Florida Safe School Design Guidelines to* have been incorporated into the design and construction of community colleges. The majority, sixteen (16) -- eighty-percent (80%) -- of the respondents reported that the Safe School Design principles and guidelines have been *Incorporated Somewhat*. Three (3) – fifteen percent (15%) – of the respondents reported that the principles and guidelines have been *Extensively Incorporated*. One (1) -- five percent (5%) – of the respondents did not provide a response.

Question 9: If incorporated "*extensively or somewhat*" (A and B above) in your judgement what have been some of their most important features relative to safety and security?

Question 9 elicited a variety of open-ended responses related to effective safe school design features applicable to community colleges. Fifteen (15) -- seventy-five percent (75%) – of the respondents provided additional data for Question 9. Five (5) -- twenty-five percent (25%) – of the respondents did not provide a response.

Among the responses provided, fourteen (14) -- ninety-three percent (93%) – of the data related to *Surveillance* (e.g., "adequate lighting, low density landscaping, security cameras in high cost equipment rooms," "Landscaping for maximum view of campus for security," "Opening the view to buildings, removing archs and barriers, and the site lighting have been very effective tools for design," "Site lighting and the elimination of hiding places").

Seven (7) -- forty-six percent (46%) -- of the responses related to *Access Control* (e.g., "Natural access and control of buildings and campuses," "Locked roof access," "Intrusion alarm systems to detect unauthorized entry when buildings are closed," "Separation of spaces during partial use periods"). One (1) -- six percent (6%) -- of the respondents provided a response that included *Territoriality* (i.e., "Natural Access Control, Natural Surveillance, and Territorial Reinforcement"), indicating that this individual understood the connection among these concepts.

Question 10: In your estimation, has the incorporation of the Safe School Design principles helped make your community college safer?

A. **Yes**
B. **No**
C. **Cannot Judge**

Question 10 estimated respondents' perspectives related to the effectiveness of Safe School Design principles in promoting a safe and secure community college environment. A significant majority of the respondents, thirteen (13) -- sixty-five percent (65%) -- reported, *"Yes,"* Safe School Design principles help make community colleges safer. Five (5) -- twenty-five percent (25%) -- of the respondents reported that they *Cannot Judge.* Two (2) -- ten percent (10%) -- of the respondents did not provide a response.

Question 11: Comments?

Question 11 sought to elicit additional responses pertaining to certain areas and specific principles that have been most effective in promoting a safe and secure community college environment. In addition to Question 9, the responses allowed the research team to assess the perceived effectiveness and ineffectiveness of specific Safe School Design principles, and provided a variety of examples with which to better understand the perceived advantages and disadvantages of Safe School Design principles.

Seven (7) -- thirty-five percent (35%) -- of the respondents provided additional comments. Thirteen (13) -- sixty-five percent (65%) -- of the respondents did not provide additional comments. Of the responses provided, three (3) -- forty-two percent (42%) -- of the responses referred the research team back to additional comments provided in Question 9. One (1) -- fourteen percent (14%) -- of the responses suggested that the Safe School Design principles "are common sense -- many of our architects have done K-12 work." Another respondent suggested that "the most helpful principles have been provided by the eighty (80) hour class 'Crime Prevention Through Environmental Design' (CPTED)," that this person had taken.

Question 12: Of the 11 crimes listed below (which are derived from SESIR categories), please rank those which are *the most serious concerns* on your campus relative to occurrence (number of incidents) where 1=most serious and 11=least serious.

  A. **Robbery**
  B. **Battery**
  C. **Sexual Battery**
  D. **Possession of alcohol, tobacco and other drugs**
  E. **Breaking and Entering**
  F. **Larceny/Theft**
  G. **Vandalism**
  H. **Trespassing**
  I. **Fighting**
  J. **Disorderly Conduct**
  K. **Weapons Possession**

Reviewing responses to Question 12, twenty (20) -- one hundred percent (100%) -- of the respondents provided data. Seventeen (17) -- eighty-five percent (85%) -- of the respondents rank ordered all of the criminal activities listed in Question 12. Three (3) -- fifteen percent (15%) -- of the respondents provided only partial data.

Based on responses to Question 12, respondent data was regrouped into three categories: Most Serious (Rankings 1-3), Moderately Serious (Rankings 4-6), and Least Serious (Rankings 7-11). Reviewing the grouped data, respondents perceive *Larceny/Theft* to be the most serious criminal activity and *Vandalism* to be the second most serious criminal activity. *Breaking and Entering* was perceived to be the third most serious criminal activity.

MOST SERIOUS CRIMINAL ACTIVITIES (Regrouped Data)
(Based on Perceived Frequency of Incidents)

Criminal Activity	Frequency	Percent*
• Larceny/Theft	17	85%
• Vandalism	12	60%
• Breaking and Entering	8	40%
• Trespassing	6	30%
• Disorderly Conduct	6	30%

*Does not total 100% due to recoded, or grouped, data.

The resulting data from Question 12 contrasts with the criminal activities recorded in the SESIR data, in which the violent crimes of *Fighting* and *Battery* are reported to occur more frequently than property crimes of *Breaking and Entering, Larceny/Theft*, or *Vandalism*. The significance of a relatively higher frequency of property crimes when prescribing appropriate recommendations for Safe School Design in community colleges should not be overlooked. However, one would expect to find less violent crimes at community colleges due to the differences in ages and maturity levels of these students than compared with those attending K-12 public schools.

SESIR DATA: FLORIDA SCHOOL CRIMES IN RANK ORDER AND PERCENT[2]

(Based on the Number of Reported Incidents)

Criminal Activity	Frequency	Percent
Fighting	67, 412	37%
Disorderly Conduct	36, 091	20%
Alcohol, Tobacco, and Other Drugs	18, 753	10%
Harassment	16, 921	9%
Property Crimes	15, 491	8%
Violent Acts	13, 980	7.75%
Other Non-Violent Acts	7, 971	4%
Weapons Possession	3, 732	2%

Part 2: Criminal Activity and School Design

Question 13: Of the various types of school designs listed below, which one would you prefer in terms of providing the best community college safety and security?

- **A single 2-story (or more) building**
- **Multiple 2-story (or more) buildings**
- **1-story centrally organized grouping of buildings**
- **1-story campus plan (spread out) grouping of buildings**

Question 13, repeats a question from the *1993 Florida Safe School Design Guidelines*, "State of Florida Questionnaire," which sought to assess the preferred type of school design among respondents in terms of providing the best community college safety and security.

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[2]Note that just released SESIR data show that "Disorderly Conduct" has dropped from 78,948 incidents in 1998-1999 and from 36,091 incidents in 1999-2000 to 7,817 incidents in 2000-2001. This extraordinary decrease is the result of a redefinition of the term to exclude minor threats of disorderly conduct in favor of major campus disturbances, such as bomb threats. (See http://www.firn.edu/doe/besss/sesir/sesir_home.htm) The survey data categories reported here are based on 1999-2000 statistics, which are part of the trend line consistently showing disorderly conduct among the top three crimes reported by school authorities.

Nine (9) -- forty-five percent (45%) – of the respondents prefer a "1-Story Centrally Organized Grouping of Buildings." Six (6) -- thirty percent (30%) -- of the respondents prefer "Multiple 2-Story (or more) Buildings." Three (3) -- fifteen percent (15%) -- of the respondents prefer "A Single 2-Story (or more) Building." And two (2) -- ten percent (10%) -- of the respondents prefer a "1-Story Campus Plan (Spread Out) Grouping of Buildings."

Question 14: Crime Location. Using your best judgement based on past experience, place an "X" in the box or boxes that you believe best represent a significant location (according to the number of incidents) for the occurrence of each particular crime. For example, if you believe that school parking lots represent a significant location where robberies take place put an "X" in the corresponding box.

Question 14 measured various crimes in relation to the corresponding locations in which crimes are perceived to occur most frequently. When we review the results of Question 14 with the results of Question 12, which indicate that *Larceny/Theft*, *Vandalism*, and *Breaking and Entering* are the most serious crimes, Matrix A indicates that the most serious crimes, relative to the number of incidents, are believed to occur most frequently in the following locations: (See MATRIX A: CRIME BY LOCATION)

CRIME BY LOCATION
(Based on Perceived Frequency of Occurrence)

Criminal Activity	Location (Reported Frequency)
• Larceny/Theft	Parking Lots (14), Classrooms (9)
• Vandalism	Parking Lots (11), Restrooms (8)
• Breaking and Entering	Parking Lots (12), Accessory Buildings (5)

Of all the reported criminal activities, responses to Question 14 indicate that respondents believe criminal activities occur most frequently in the following locations:

FREQUENTLY REPORTED CRIME LOCATIONS
(Based on Perceived Frequency of Incidents)

Location	Reported Frequency
• Parking Lots	88
• Off Grounds/Adjacent Buildings	35
• Classrooms	21
• Cafeterias/Food Courts	19
• Restrooms	19

- Recreation Areas   18
- Accessory Buildings   16

MATRIX A: CRIME BY LOCATION

	Robbery	Battery	Sexual Battery	Alcohol, Tobacco, Other Drugs	Breaking & Entering	Larceny/Theft	Vandalism	Trespassing	Fighting	Disorderly conduct	Weapons Possession	Total
Off Grounds/Adjacent Building	4	4	4	6	2	3	3	2	1	2	4	35
Parking Lots	4	7	4	9	12	14	11	8	9	6	4	88
Recreation Areas/Playgrounds	0	1	1	2	0	0	5	1	2	0	0	12
Exterior Walkways	0	1	0	0	0	0	2	2	1	0	0	6
Exterior Courtyards/Patios	0	0	1	2	0	1	5	2	1	0	0	12
Vehicle Drop Pff/Pick-Up	0	0	0	0	0	0	0	0	0	0	0	0
Bike Racks	0	0	0	0	0	6	0	0	0	0	0	6
Portables	0	0	1	1	2	2	1	1	0	1	0	9
Accessory Buildings	1	1	1	0	5	3	1	2	1	1	0	16
Main Entrance	0	0	0	0	0	0	1	1	0	0	0	2
Secondary Entry	0	0	0	0	0	0	2	2	0	0	0	4
Lobby/Reception Area	0	0	0	0	0	3	1	0	0	1	0	5
Interior Courtyards	0	0	0	1	0	1	1	1	0	0	0	4
Interior Corridors	0	1	0	0	1	1	2	0	0	2	0	7
Stairs and Stairwells	0	0	1	0	0	0	3	0	0	0	0	4
Administration Offices	1	0	0	0	3	4	0	1	0	2	0	11
Classrooms	0	0	0	0	2	9	3	1	1	5	0	21
Labs/Shops/Art/Music Rooms	0	0	0	1	4	6	1	0	0	2	1	15
Recreation Rooms	0	0	0	0	1	5	1	3	4	3	1	18
Locker Rooms	0	0	1	0	2	7	2	1	1	0	0	14
Auditorium/Assembly Rooms	0	0	0	0	1	2	0	0	0	1	0	4
Media Centers/Computer Resource Rooms	0	0	0	0	4	7	1	0	0	1	0	13
Cafeteria/Food Court	0	2	1	0	1	6	2	0	2	5	0	19
Within/Adjacent Vending Areas	0	0	1	1	2	3	2	1	0	1	0	11
Restrooms	0	2	3	0	0	2	8	2	2	0	0	19
Rooftops of Covered Walkways	0	0	0	0	0	0	1	1	0	0	0	2
Building Rooftops	0	0	0	0	1	0	0	1	0	0	0	2
Total	10	19	19	23	43	85	59	33	25	33	10	359

Question 15: Time of crime occurrence. Using your best judgement based on past experience, place an "X" in the box or boxes that you believe best represents the most significant time period during which each particular crime occurs. For example, if you believe batteries are more likely to take place during regular daytime school hours, place an "X" in the corresponding box.

Question 15 measured various crimes in relation to the corresponding times during which the crimes are perceived to occur most frequently. Matrix B below depicts respondents' thinking in this regard.

MATRIX B: CRIME BY TIME

	Robbery	Battery	Sexual Battery	Alcohol, Tobacco, Other Drugs	Breaking & Entering	Larceny/Theft	Vandalism	Trespassing	Fighting	Disorderly conduct	Weapons Possession	Total
Before School	0	1	0	2	1	4	0	0	1	0	1	10
During School Hours	4	4	1	5	4	13	6	7	5	9	2	60
Between Classes	0	5	0	3	0	2	2	0	4	6	0	22
After School	0	2	0	1	0	1	1	0	2	1	2	10
Evening Hours	6	4	10	6	12	8	10	8	1	5	3	73
Weekends	1	1	3	4	6	5	8	7	1	1	2	39
Total	11	17	14	21	23	33	27	22	14	22	10	214

When we review the results of Question 15 with the results from Question 12, which indicate that *Larceny/Theft*, *Vandalism*, and *Breaking and Entering* are the most serious crimes relative to the perceived number of incidents, we see the following pattern:

CRIME BY TIME
(Based on Perceived Frequency of Incidents)

Criminal Activity	Time (Reported Frequency)
Larceny/Theft	During Normal Daytime School (13), Evening (8)
Vandalism	Evening Hours (10), Weekends (8)
Breaking and Entering	Evening Hours (10), Weekends (6)

Of all the reported criminal activities, responses to Question 15 indicate that respondents believe criminal activities occur most frequently during the following time periods:

FREQUENTLY REPORTED CRIME TIMES
(Based on Perceived Frequency of Incidents)

Time	Reported Frequency
• Evening Hours	73
• During Normal Daytime School Hours	60
• Weekends	39

In Matrix B, the crimes reported most frequently in the *Evening Hours* are *Breaking and Entering* (12), *Vandalism* (10), and *Sexual Battery* (10). Crimes reported most frequently *During Normal Daytime School Hours* are *Larceny Theft* (13), *Disorderly Conduct* (9), *Trespassing* (7), and *Vandalism* (6). Crimes reported most frequently on the *Weekend* include *Vandalism*, *Trespassing,* and *Breaking* and *Entering*.

Question 16: If there are other connections or relationships between specific crimes and their location and time of occurrence in your district not covered by the above matrices, please tell us about them.

Question 16 elicited additional responses to Question 14 and Question 15, and further attempts to connect and relate specific crimes with spatial and temporal features. Of the twenty (20) respondents, one (1) – five percent (5%) – of the respondents provided additional information noting problems with "sporadic students not involving college students – non-students on campus – transients, etc." Nineteen (19) – ninety-five percent (95%) – of the respondents did not provide a response.

Question 17: Using your best judgement based on past experience, do you believe that allowing public access to recreational (or other) facilities after normal daytime class hours to schools in your district makes them more prone to criminal activities than if schools were closed to such activities?

- **Yes**
- **No**
- **Cannot Judge**

Question 17 asked respondents whether or not they believe public access to school facilities after normal daytime class hours makes schools more prone to criminal activities than if school facilities were closed to such activities. Community college respondents were almost equally divided on this issues with ten (10) -- fifty percent (50%) -- of the respondents reporting, "Yes," access to school

facilities after normal daytime class hours makes schools more prone to criminal activity, while nine (9) -- forty-five percent (45%) -- of them said "No." One (1) -- five percent (5%) – of the respondents did not provide a response.

Question 18: Please provide any comments relative to Question 17 above.

Question 18 elicited a wide variety of open-ended comments detailing the perceived advantages and disadvantages of access to public schools after normal daytime class hours. Of the twenty (20) respondents to the Community Colleges Survey Instrument, eleven (11) – fifty-five percent (55%) – of the respondents provided additional comments. Nine (9) – forty-five percent (45%) – of the respondents did not provide a response.

Of those providing data, ten (10) -- ninety percent (90%) -- of the respondents stated that after- hour access increases the potential for crime, with most offering reasons why they thought this was so (e.g., "Yes, lack of appropriate security staffing," "Lack of funding to provide adequate security coverage," "Allowing the public access to the campus after-hours when police/security/staff is minimal makes it difficult to keep the campus safe," "Extremely difficult for security to maintain access and conduct control if the gym and recreation facilities are open to community use after hours," "Bathroom use and a lack of a bathroom cause problems"). One (1) -- nine percent (9%) -- of the respondents stated that "we have no data to support a correlation" between crime and after-hour access.

Question 19: Does your community college post signs advising visitors about school entry procedures for access control? (check all that apply)

- **During School Hours**
- **After School Hours**
- **Don't Know**

Question 19 elicited responses concerning access control management. Four (4) -- twenty percent (20%) -- of the respondents reported that policies exist for posting signs detailing entry procedures "After School Hours." Three (3) -- fifteen percent (15%) -- of the respondents reported that they "Don't Know." Two (2) -- ten percent (10%) -- of the respondents reported policies for posting signs detailing entry procedures "During School Hours." In addition, six (6) -- thirty percent (30%) -- of the respondents provided additional, open-ended information indicating that "No Policies" exist.

Question 20: Please tell us whether the following are serious concerns relative to their *actual occurrence* within your community college.

A. Yes____ No____ **Gang Related Activities**
B. Yes____ No____ **Hate Crimes Related Activities/Incidents**
C. Yes____ No____ **Bomb Threats**
D. Yes____ No____ **Terrorism**
E. Yes____ No____ **Violence in the Workplace**

Seventeen (17) -- eighty-five percent (85%) -- of the respondents indicated that *Gang Violence Activities* are not serious concerns relative to the number of incidents, whereas two (2) -- ten percent (10%) -- of the respondents indicated that *Gang Violence Activities* are serious concerns relative to the number of incidents.

Seventeen (17) -- eighty-five percent (85%) -- of the respondents indicated that *Hate Crimes Related Activities/Incidents* are not serious concerns relative to the number of incidents. Two (2) -- ten percent (10%) -- of the respondents indicated that *Hate Crimes Related Activities/Incidents* are serious concerns relative to the number of incidents.

Eleven (11) -- fifty-five percent (55%) -- of the respondents indicated that *Bomb Threats* are not serious concerns, relative to the number of incidents. Eight (8) -- forty percent (40%) -- of the respondents indicated that *Bomb Threats* are serious concerns relative to the number of incidents.

Sixteen (16) -- eighty percent (80%) -- of the respondents indicated that *Terrorism* is not a serious concern relative to the number of incidents. Three (3) -- fifteen percent (15%) -- of the respondents indicated that *Terrorism* is a serious concern relative to the number of incidents.

Fourteen (14) -- seventy percent (70%) -- of the respondents indicated that *Violence in the Workplace* is not a serious concern relative to the number of incidents. And, five (5) -- twenty-five percent (25%) -- of the respondents indicated that *Violence in the Workplace* is a serious concern relative to the number of incidents.

One (1) -- five percent (5%) -- of the respondents did not provide a response to Question 20.

Question 21: If you answered yes to any of the answers above, does your community college have specific plans and policies in place to deal with that situation? Please describe them briefly.

Question 21 further measured community college policies and district management practices relative to the five issues noted above. Four (4) -- twenty percent (20%) -- of the respondents indicated that specific plans and policies do not exist to deal with *Gang Violence Activities*. Two (2) -- ten percent (10%) -- of the respondents indicated that specific plans and policies do exist to deal with *Gang Violence Activities*.

Four (4) -- twenty percent (20%) -- of the respondents indicated that specific plans and policies do exist to deal with *Hate Crimes Related Activities/Incidents*. Two (2) -- ten percent (10%) -- of the respondents indicated that specific plans and policies do not exist to deal with *Hate Crimes Related Activities/Incidents*.

Nine (9) -- forty-five percent (45%) -- of the respondents indicated that specific plans and policies exist to deal with *Bomb Threat*. Zero (0) respondents indicated that specific plans and policies do not exist to deal with *Gang Violence Activities*.

Six (6) -- thirty percent (30%) -- of the respondents indicated that specific plans and policies exist to deal with *Terrorism*. Two (2) -- ten percent (10%) -- of the respondents indicated that specific plans and policies do not exist to deal with *Terrorism*.

And eight (8) -- forty percent (40%) -- of the respondents indicated that specific plans and policies exist to deal with *Violence in the Workplace*. And one (1) -- five percent (5%) -- of the respondents indicated that specific plans and policies do not exist to deal with *Violence in the Workplace*.

Part 3: Design and Policy Suggestions

Question 22: What do you see as the most critical areas of school design with respect to safety and security from crime relative to your community college? Please rank the areas noted below such that 1=the most critical area and 14=the least critical area.

A.   **Maintaining visual surveillance from the street**
B.   **Maintaining visual surveillance in corridors (interior and exterior)**
C.   **Minimizing niches, alcoves, and other residual spaces that provide places for hiding**
D.   **Window design**
E.   **Exterior door design**
F.   **Enclosure of school property perimeter (fencing, walls)**
G.   **Landscaping**
H.   **Location of key cabinets**
I.   **Alarm systems**
J.   **Miscellaneous openings and outbuildings**
K.   **Electronic Surveillance systems (for example CCTV)**
L.   **Other (please specify)**

The responses to Question 22 were grouped into three categories: Most Critical (Rankings 1-5), Moderately Critical (Rankings 6-10), and Least Critical (Rankings 11-14), to assess the most frequently recorded areas of concern. When grouped in this *way, Exterior Lighting* (17) was reported to be the most critical area of school design. *Alarm Systems* (12) and *Interior Lighting* (11), respectively, were the second and third most critical areas of school design.

FREQUENTLY REPORTED AREAS CRITICAL TO SCHOOL DESIGN

Area of School Design	Reported Frequency
• Exterior Lighting	17
• Alarm Systems	12

- Interior Lighting   11

- Minimal Niches   9

Question 23: If funding were available, what *design changes* would you implement in your community college to make it safer from crime?

Question 23 elicited a variety of open-ended responses. Of the twenty (20) respondents to this question, sixteen (16) -- eighty percent (80%) -- of the respondents provided additional comments and recommended design changes. Four (4) -- twenty percent (20%) -- of the respondents did not provide additional comments nor recommend design changes.

Among the respondents providing additional comments, nine (9) -- fifty-six (56%) -- of the respondents recommended design changes involving issues of *Surveillance* (e.g., "Install security camera systems," "Surveillance cameras throughout the college," "Electronic surveillance systems in our parking lots," "Expand electronic surveillance systems (CCTV) to cover all buildings, parking lots, and walkways").

Seven (7) -- forty-three percent (43%) -- of the respondents suggested design changes involving issues of *Access Control* (e.g., "Access control systems management," "Key access to certain areas," "Control and limit the number of entrances to parking lots," "Restrict vehicle traffic access when closed -- using gate controls," "Closure of campus to public after hours").

Question 24: If funding were available, what *single policy or procedure* would you implement within your community college to increase safety and security?

Question 24 elicited thirteen (13) -- sixty-five percent (65%) -- responses from the respondents to the Community Colleges Survey Instrument. Seven (7) -- thirty-five percent (35%) -- of the respondents did not provide a response.

Six (6) -- thirty percent (30%) -- of the respondents provided policy recommendations concerning *Management* and *Guardianship* (e.g., "24 hour security presence on campus," "Policy of providing adequate security 24/7," "Provide additional security staff," "Improve the professional training of the security staff").

Four (4) -- thirty percent (30%) -- of the respondents provided policy recommendations concerning *Access Control* (e.g., "Coded card access," "Start new keyless system," "Direct actual visitors to report to control location for access control," "A program to increase the number of access control monitoring devices").

One (1) -- seven percent (7%) -- of the respondents provided policy recommendations concerning *Access Control and Territoriality* (i.e., "Fencing around campus property").

Question 25: Please provide any additional comments or suggestions concerning the issues presented in this questionnaire.

Question 25 elicited additional open-ended responses. Of the twenty (20) respondents to the Community Colleges Survey Instrument, eighteen (18) -- ninety percent (90%) -- of the respondents did not provide a response. Two (2) -- ten percent (10%) -- of the respondents provided additional comments.

One (1) respondent suggested that "all institutions of higher education as well as school districts should have one individual familiar with CPTED and that member a key person in any future planning." The other respondent critiqued the questionnaire insomuch as "Question 19 should be thrown out – does not contain a space for 'NO'."

5. School Resource Officers (SRO) Survey Instrument and Related Data Analysis

The Survey Instrument Format

The survey instrument consisted of twenty-two (22) closed-ended and open-ended questions, requiring approximately thirty (30) minutes to complete.

The survey instrument began with a general introductory statement that provided informed consent information to the respondents. The survey instrument was then divided into the following three (3) sections. The first section, *Part 1: Background and Context* (Questions 1-9), collected basic demographic information on respondents. *Part 1* also focused on respondent experience and familiarity with Safe-School Design and Crime Prevention Through Environmental Design (CPTED). The second section, *Part 2: Criminal Activity and School Design* (Questions 10-18), assessed the specific places and locations, as well as the specific period of the day, where, and when incidents of crime are believed by respondents to occur most frequently. The final section, *Part 3: Design and Policy Suggestions* (Questions 19-22), addressed school design and policy concerns of the respondents.[1]

Throughout the survey instrument, the questions also aim to evaluate management trends and the effectiveness of management policy, as proper management is considered a fundamental component of safe-school design.

Part 1: Background and Context

Questions 1-6, "Date," "County," "Person Completing Survey," "School Name," "Title/Position," and **"Contact Information"** provided demographic data, which enabled the research team to identify, organize, and catalogue respondents, and the geographic origin of the completed survey instruments.

On May 1, 2002, eighty-nine (89) survey instruments were initially distributed to the addresses of sixty-seven (67) SROs listed in the North East Florida Educational Consortium's website, http://www.nefec.org/health/sro.asp, and to the twenty-two (22) board and regional directors of the Florida Association of School Resource Officers (FASRO). On June 22, 2002, approximately 500 School Resource Officers (SRO) Survey Instruments were distributed at the 23rd Annual FASRO Conference in Fort Lauderdale, Florida. Fifty-four (54), or slightly more than 8 percent of the survey instruments, were returned by August 14, 2002. Map 5 on page 182 depicts the county-by-county distribution of completed survey instruments from SROs.

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[1]Note that because of rounding, response totals to some questions may not equal 100%

Question 7: How long have you served as a School Resource Officer?

A. _____ (Years and Months)

B. _____ (Years and Months as a Supervisor)

Fifty-three (53) -- ninety-eight percent (98%) -- of the respondents provided a response to this question. The mean number of years and months of experience reported in the returned SRO survey instruments was five years and six months (5.68 years). Six (6) -- eleven percent (11%) -- of the respondents had supervisory experience. Of those with supervisory experience, a mean of three (3) years of supervisory experience was reported.

Question 8: Please rate your knowledge of Crime Prevention Through Environmental Design (CPTED)?

1. **very familiar**
2. **somewhat familiar**
3. **have heard of it but not very familiar**
4. **not familiar at all**

A sizeable majority of respondents to the survey instrument (68% or 37) report that they are either "very familiar" (24% or 13) or "somewhat familiar" (44% or 24) with Crime Prevention Through Environmental Design (CPTED) principles. Of the remaining respondents to the question, 25% (13) indicate that they are "not very familiar" or, as in the case of one person (2%) "not at all familiar" with CPTED. These findings track expectation levels about police knowledge of place-based crime prevention approaches since law enforcement agencies around the nation have begun CPTED educational programs at local and state levels over the last decade. Florida is no exception in this regard, and the responses here demonstrate the effect of such training in terms of police, and in this case, School Resource Officer, familiarity.

Question 9: If you are "very or somewhat familiar" with CPTED (answers A and B above) please tell us how you learned about it? (For example, through Florida Attorney General courses, FASRO, NCPI, other training?)

Of the thirty-seven (37) respondents to this question who said they were "very or somewhat familiar" with CPTED, thirty-four (34) -- ninety-two percent (92%) -- of the respondents provided additional comments. Many respondents reported having learned about CPTED in SRO Basic Training, through the Florida Association of School Resource Officers (FASRO) and the National Association of School Resource Officers (NASRO). Several respondents noted CPTED courses given through the Florida Attorney General. Others noted learning of CPTED through current literature and by virtue of their years of experience.

Part 2: Criminal Activity and School Design

Question 10: Of the various types of school designs listed below, which one would you prefer in terms of providing the best school safety and security?

1. **A single 2-story (or more) building**
2. **Multiple 2-story (or more) buildings**
3. **1-story centrally organized grouping of buildings**
4. **1-story campus plan (spread out) grouping of buildings**

Question 10, also asked in the *1993 Florida Safe School Design Guidelines*, "State of Florida Questionnaire," measured the preferred school design among respondents in terms of providing the best school safety and security. Thirty-two (32) -- sixty percent (60%) -- of the fifty-three respondents who answered this question preferred a "1-Story Centrally Organized Grouping of Buildings." And Twelve (12) -- twenty-three percent (23%) -- of the respondents preferred a "1-Story Campus Plan (Spread Out) Grouping of Buildings." Five (5) -- nine percent (9%) -- of the respondents preferred "A Single 2-Story (or more) Building". Four (4) -- seven percent (7%) -- of the respondents preferred "Multiple 2-Story (or more) Buildings". This response directly tracks the respondents to other survey instruments in this research who, by a large majority, tend to favor the 1-story centrally organized plan for security purposes.

Question 11: Crime Location. Using your best judgement based on past experience, place an "X" in the box or boxes that you believe best represent a significant location (according to the number of incidents) for the occurrence of each particular crime. For example, if you believe that school parking lots represent a significant location where robberies take place, put an "X" in the corresponding box.

<u>**MATRIX A: CRIME BY LOCATION**</u>
(Based on Perceived Frequency of Incidents)

	Robbery	Battery	Sexual Battery	Alcohol, Tobacco, Other Drugs	Breaking Entering	Larceny/Theft	Vandalism	Trespassing	Fighting	Disorderly Conduct	Weapons Possession	Total
Off Grounds/Adjacent Buildings	8	29	3	38	8	12	13	14	39	24	14	202
Parking Lots	4	18	2	22	19	19	25	26	26	14	20	195
Recreation Areas/ Playgrounds	3	17	4	14	0	6	12	17	25	12	3	113
Exterior Walkways	1	15	0	10	0	2	12	15	21	7	4	87

Exterior Courtyards/Patios	1	12	1	9	0	2	12	12	15	9	1	74
Vehicle Drop-Off/Pick-Up	0	4	0	8	0	1	1	16	9	4	4	47
Bike Racks	3	6	1	5	2	26	14	8	6	4	2	77
Portables	2	4	3	5	16	3	13	6	8	6	1	67
Accessory Buildings	0	0	3	4	11	6	9	8	0	0	0	41
Main Entrance	1	4	0	2	0	0	4	13	7	6	2	39
Secondary Entrances	1	5	0	6	5	1	7	24	7	7	2	65
Lobby/Reception Areas	1	4	0	2	1	1	3	5	7	11	3	38
Interior Courtyards	1	15	2	8	2	5	9	11	25	14	3	95
Interior Corridors	3	17	2	7	1	6	9	5	20	16	4	90
Stairs/Stairwells	6	9	6	11	0	1	16	6	12	9	3	79
Administration Offices	0	3	0	2	6	6	3	3	5	19	2	49
Classrooms	1	16	2	5	9	28	15	7	17	24	15	139
Labs/Shops/Art/Music Rooms	2	8	2	5	7	16	11	5	11	9	6	82
Recreation Rooms	2	14	7	9	4	16	11	10	23	15	4	115
Locker Rooms	7	17	10	17	12	34	21	8	20	12	7	165
Auditorium/Assembly	0	3	1	1	2	5	7	4	7	10	0	40
Media Centers/Computer Rooms	1	2	0	2	6	17	12	1	3	5	0	49
Cafeteria/Food Court	1	19	0	7	5	13	9	11	33	23	7	128
Within/Adjacent Vending Rooms	4	5	1	3	3	7	10	2	6	4	1	46
Restrooms	8	18	10	32	1	5	34	4	22	8	7	149
Rooftops of Walkways	1	1	2	1	3	1	5	9	3	1	2	29
Building Rooftops	0	1	3	1	3	1	7	10	1	0	2	29
Total	62	266	65	236	126	240	304	260	378	273	119	2,329

Question 11 measured various crimes in relation to the corresponding locations in which the crimes are perceived to occur most frequently. When we review the results of Question 11 with criminal activities reported in Florida's School Environmental Safety Incident Reporting System (SESIR), data for 1999-2000 indicates that "Fighting," "Alcohol, Tobacco, and Other Drugs," and "Disorderly Conduct" were the most commonly reported crimes relative to the number of incidents.[2] Matrix A indicates that the most serious crimes are believed to occur most frequently in the following locations: (See above, MATRIX A: CRIME BY LOCATION)

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[2]Note that just released SESIR data show that "Disorderly Conduct" has dropped from 78,948 incidents in 1998-1999 and from 36,091 incidents in 1999-2000 to 7,817 incidents in 2000-2001. This extraordinary decrease is the result of a redefinition of the term to exclude minor threats of disorderly conduct in favor of major campus disturbances, such as bomb threats. (See http://www.firn.edu/doe/besss/sesir/sesir_home.htm) The survey data categories reported here are based on 1999-2000 statistics, which are part of the trend line consistently showing disorderly conduct among the top three crimes reported by school authorities.

<u>CRIME BY LOCATION</u>
(Based on Perceived Frequency of Incidents)

Criminal Activity	Location (Reported Frequency)
• Fighting	Off Grounds (39), Cafeteria/Food Court (33), Parking Lots (26), Recreation Areas/Playgrounds (25), Interior Courtyards (25)
• Disorderly Conduct	Off Grounds (24), Classrooms (24), Cafeteria/Food Court (23)
• Alcohol, Tobacco, and Other Drugs	Off Grounds (38), Restrooms (32), Parking Lots (22), Locker Rooms (17)

When we look at those perceived crimes most frequently reported by our respondents, we see that the order is Fighting (378), Vandalism (304), Disorderly Conduct (273), and Battery (266). While this generally tracks SESIR statewide data, it is obvious that our respondents believe that "Vandalism" is a far more serious problem than the SESIR reports indicate.

Of all the reported criminal activities, responses to Question 11 indicate that respondents believe criminal activities occur most frequently in the following locations:

<u>FREQUENTLY REPORTED CRIME LOCATIONS</u>
(Based on Perceived Frequency of Incidents)

<u>Location</u>	<u>Reported Frequency</u>
• Off Grounds/Adjacent Buildings	202
• Parking Lots	195
• Locker Rooms	165
• Restrooms	149
• Classrooms	139

From this, one could draw a conclusion that the respondents perceived more crimes occurring in either remote locations where surveillance and guardianship are likely to be low or in interior spaces where the same problems apply. If that is the case, how does one explain the relatively high occurrence in classrooms (139), where both surveillance and guardianship are likely to be intense? One explanation comes from looking at the crimes involved. Classroom crimes that are thought to happen the most frequently are *larceny and theft* (28) and *disorderly conduct* (24), which is likely to be "group" crime. Classrooms contain a high density of targets, both in terms of people and property, which are likely to appeal to opportunistic offenders, especially thieves. The largest numbers of perceived crime in parking lots fit the location there as well: one sees more *fighting* (26), *trespassing* (26), and *vandalism*

(25), since these areas are likely to have low levels of surveillance, especially at non-peak times, and to be poorly supervised. Of all places, off-ground locations are considered to be the highest venues of crime, with the most perceived incidents reported by SROs. They are seen as locales for *fights* (39), the *use of alcohol, tobacco and other drugs* (38), and where *batteries* (29) take place. Indeed, it is the single most significant location for these latter crimes of violence. *Larceny and theft* are seen as the crimes of choice in locker rooms as these are places where personal possessions are constantly at risk because they are often moved about and placed in jeopardy, whereas *vandalism* -- largely a crime of stealth -- is the major problem of restrooms. Both these latter locations, busy yet potentially secluded/ private places where people disrobe, are perceived to be the venue where sexual batteries are most likely to occur in the schools which SROs patrol.

Question 12: Time of Crime Occurrence. Using your best judgement based on past experience, place an "X" in the box or boxes that you believe best represents the most significant time period during which each particular crime occurs. For example, if you believe that batteries are more likely to take place during regular daytime school hours, place an "X" in the corresponding box.

MATRIX B: CRIME BY TIME
(Based on Perceived Frequency of Incidents)

	Robbery	Battery	Sexual Battery	Alcohol, Tobacco, Other Drugs	Breaking and Entering	Larceny/Theft	Vandalism	Trespassing	Fighting	Disorderly Conduct	Weapons Possession	Total
Before School	6	16	2	34	5	10	9	15	19	15	13	144
During School Hours	1	28	9	22	4	39	19	27	35	29	22	235
Between Classes	5	21	5	19	2	18	15	10	38	22	8	163
After School	10	29	5	24	5	15	13	23	38	19	10	191
Evening Hours	9	7	10	18	28	12	31	19	6	5	8	153
Weekends	8	11	11	16	32	12	33	19	7	7	9	165
Total	39	112	42	133	76	106	120	113	143	97	70	1,051

Question 12 measured various crimes in relation to the corresponding time during which the crimes are perceived to occur most frequently. (See above, MATRIX B) When we review the results of Question 12 with criminal activities reported in SESIR data for 1999-2000, which indicates that *Fighting*, *Disorderly Conduct*, and *Alcohol, Tobacco, and Other Drugs* are the most serious crimes relative to the number of incidents, Matrix B shows that the most serious crimes are believed to occur most frequently at the following times:

CRIME BY TIME
(Based on Perceived Frequency of Incidents)

Criminal Activity	Time (Reported Frequency)
• Fighting	Between Classes (38), After Normal Daytime School Hours (38), During School (35)
• Disorderly Conduct	During School (29), Between Classes (22)
• Alcohol, Tobacco, and Other Drugs	Before School (34), After School (24), Between Classes (22)

Of all the reported criminal activities, responses to Question 12 indicate that the respondents believe criminal activities occur most frequently during the following time periods: (See below)

FREQUENTLY REPORTED CRIME TIMES
(Based on Perceived Frequency of Incidents)

Time	Reported Frequency
• During School Hours	235
• After School	191
• Weekends	165
• Between Classes	163

In Matrix B, of the crimes reported most frequently *During School Hours*, *Larceny/Theft* and *Fighting* are reported most frequently. Of the crimes reported most frequently *After School*, *Fighting* and *Battery* are reported most frequently. Of the crimes reported most frequently during *Weekends*, *Vandalism* and *Breaking and Entering* are reported to occur most frequently.

Question 13: If there are other connections or relationships between specific crimes and their location and time of occurrence in your school not covered by the above matrices, please tell us about them.

Question 13 elicited additional responses to Question 11 and Question 12, and further attempts to connect and relate specific crimes with spatial and temporal features. Of the fifty- four (54) respondents, seven (7) -- thirteen percent (13%) -- of the respondents provided additional information. Several of the statements suggested a broader, but more specific categorization of criminal activities (e.g., "Assaults," "Truancy needs listed," "Disruption of a school function is used frequently per 877 Florida Statute (2000)," "Separating tobacco from alcohol and other drugs section would provide

a more accurate report for the serious illicit drugs"). Other respondents emphasized information provided in both Matrices ("Most of the fighting in our school takes place during periods of limited supervision," "Batteries, fighting/disorderly conduct are all likely to happen anywhere," "Smoking in the bathrooms").

Question 14: Using your best judgement based on past experience, do you believe that allowing public access to recreational (or other) facilities after normal daytime class hours to schools in your school makes them more prone to criminal activities than if schools were closed to such activities?

A. **Yes**
B. **No**
C. **Cannot Judge**

Question 14 asked respondents whether or not they believe public access to school facilities after normal daytime class hours makes schools more prone to criminal activities than if school facilities were closed to such activities. Thirty-seven (37) -- sixty-nine percent (69%) -- of the respondents reported, *Yes*, access to school facilities after normal daytime class hours makes schools more prone to criminal activity, and fifteen (15) -- twenty-eight percent (28%) -- of the respondents reported, *No*. One (1) -- two percent (2%) -- of the respondents reported that they "Cannot Judge". One (1) -- two percent (2%) -- of the respondents did not provide a response.

Question 15: Please provide any comments relative to Question 14 above.[3]

Question 15 elicited a wide array of comments detailing the perceived advantages and disadvantages of after hours access to public schools. Thirty-nine (39) -- seventy-two percent (72%) -- of the respondents provided additional comments. Fifteen (15) -- twenty-eight percent (28%) -- of the respondents did not provide a response.

Of those providing data, twenty-five (25) -- forty-six percent (46%) -- of the respondents stated that after-hours access increases the potential for crime (e.g., "Outside people come in to fight and start problems," "I live on a school campus (to provide security). I see criminal activity at school campus after hours and deal with it on a daily basis," "This allows people to identify potential target areas for criminal behavior"). Fourteen (14) -- twenty-six percent (26%) -- of the respondents stated that after-hours access does not increase the potential for crime, and may even deter crime (e.g., "More people, more eyes," "The presence of people helps deter some crimes from happening," "The more hours the honest public has access to facilities reduces the hours the criminals have for mischief"). Several respondents also provided suggestions for dealing with after-hour access (e.g., "These activities

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[3]Note that because of rounding, the total percentage exceeds 100% for responses to this question.

would need to be controlled and supervised," "If this is allowed, it should be controlled by an agency [illegible] (Parks dept) and that person should be held responsible for the event and accountable to the school," "It varies by activity taking place; sports increase the likelihood of fights -- drama and band activities seem to have no adverse effects").

Question 16: Does your school post signs advising visitors about school entry procedures for access control? (Check all that apply)

A. **During School Hours**
B. **After School Hours**
C. **Don't Know**

Question 16 elicited responses concerning school access control management. Fifty-two (52) -- ninety-six percent (96%) -- of the respondents reported that district policies exist for posting signs detailing school entry procedures *During School Hours*, and twenty-eight (28) -- fifty-two percent (52%) -- respondents report policies for posting signs detailing entry procedures *After School Hours*. One (1) -- two percent (2%) -- of the respondents provided additional information indicating that policies do not exist detailing school entry procedures. And one (1) -- two percent (2%) -- of the respondents did not provide data.

Question 17: Please tell us whether the following are serious concerns relative to their *actual occurrence* within your school.

A. Yes_____ No_____ **Gang Related Activities**
B. Yes_____ No_____ **Hate Crimes Related Activities/Incidents**
C. Yes_____ No_____ **Bomb Threats**
D. Yes_____ No_____ **Terrorism**
E. Yes_____ No_____ **Violence in the Workplace**

Reviewing Question 17, thirty-six (36) -- sixty-eight percent (68%) -- of the respondents reported that *Gang Violence Activities* are not serious concerns relative to the number of incidents. Seventeen (17) -- thirty-two percent (32%) -- of the respondents indicated that *Gang Violence Activities* are serious concerns relative to number of incidents.

Forty-three (43) -- eighty-three percent (83%) -- of the respondents indicated that *Hate Crimes Related Activities/Incidents* are not serious concerns relative to the number of incidents. Nine (9) -- seventeen percent (17%) -- of the respondents reported that *Hate Crimes Related Activities/ Incidents* are serious concerns.

Thirty-three (33) -- sixty-two percent (62%) -- of the respondents reported that *Bomb Threats* are not serious concerns. Twenty (20) -- thirty-eight percent (38%) -- of the respondents indicated that *Bomb Threats* are serious concerns relative to the number of incidents.

Forty-eight (48) -- ninety-two percent (92%) -- of the respondents indicated that *Terrorism* is not a serious concern relative to the number of incidents. Four (4) -- seven percent (7%) -- of the respondents reported that *Terrorism* is a serious concern relative to the number of incidents.

Thirty-six (36) -- sixty-nine percent (69%) -- of the fifty-two (52) respondents to this question reported that *Violence in the Workplace* is not a serious concern relative to the number of incidents. Sixteen (16) -- thirty-one percent (31%) -- of the respondents indicated that *Violence in the Workplace* is a serious concern relative to the number of incidents.

Question 18: If you answered yes to any of the items above, does your school have specific plans and policies in place to deal with that situation? Please describe them briefly.

Question 18 further measured school policies and management practices relative to: A. Gang Violence; B. Hate Crimes; C. Bomb Threats; D. Terrorism; and E. Violence in the Workplace.

Of the twenty-four (24) persons answering this question, eighteen (18) -- seventy-five percent (75%) -- of the respondents indicated that specific plans and policies exist to deal with *Gang Violence Activities*. Six (6) -- twenty-five percent (25%) -- of the respondents reported that specific plans and policies do not exist to deal with *Gang Violence Activities.*

Of the fifteen (15) persons answering this question, ten (10) respondents-- sixty-six percent (66%) -- reported that specific plans and policies exist to deal with *Hate Crimes Related Activities/ Incidents*. Five (5) -- thirty-three percent (33%) -- of the respondents reported that specific plans and policies do not exist to deal with *Hate Crime Related Activities/Incidents*.

Of the twenty-seven (27) persons answering this question, twenty-five (25) respondents -- ninety-three percent (93%) -- reported that specific plans and policies exist to deal with *Bomb Threats*. Two (2) -- seven percent (7%) -- of the respondents reported that specific plans and policies do not exist to deal with *Bomb Threats*.

Of the thirteen people answering this question, five (5) respondents --thirty-eight percent (38%) -- reported that specific plans and policies exist to deal with *Terrorism*. Eight (8) -- sixty-two percent (62%) -- of the respondents reported that specific plans and policies do not exist to deal with *Terrorism*.

Of the twenty (20) persons answering this question, fifteen (15) respondents -- seventy-five percent (75%) -- reported that specific plans and policies exist to deal with *Violence in the Workplace*. Five (5) -- twenty-five percent (25%) -- of the respondents reported that specific plans and policies do not exist to deal with *Violence in the Workplace*.

Part 3: Design and Policy Suggestions

Question 19: What do you see as the *most critical areas of school design* with respect to safety and security from crime relative to your district? Please rank the areas noted below such that 1=the most critical area and 14=the least critical area.

A. **Maintaining visual surveillance from the street**
B. **Maintaining visual surveillance in corridors (interior and exterior)**
C. **Minimizing niches, alcoves, and other residual spaces that provide places for hiding**
D. **Window design**
E. **Exterior door design**
F. **Enclosure of school property perimeter (fencing, walls)**
G. **Landscaping**
H. **Location of key cabinets**
I. **Alarm systems**
J. **Miscellaneous openings and outbuildings**
K. **Electronic Surveillance systems (for example CCTV)**
L. **Other (please specify)**

Question 19 measured respondent perspectives concerning the most critical areas of school design related to safety and security. The responses were grouped into three categories: Most Critical (Rankings 1-5), Moderately Critical (Rankings 6-10), and Least Critical (Rankings 11-14). *Corridor Surveillance* (38) was reported to be the most critical area of school design. *Perimeter Enclosure* (35) was reported to be the second most critical area of school design, and *Minimal Niches* (34) was reported to be the third most critical area. Two (2) -- four percent (4%) -- of the respondents did not provide a response. (See below)

CRITICAL AREAS OF SCHOOL DESIGN

Area of School Design	Reported Frequency
• Corridor Surveillance	38
• Perimeter Enclosure	35
• Minimal Niches	34
• Electronic Surveillance	33
• Street Surveillance	23
• Exterior Lighting	23

Question 20: If funding were available, what *design changes* would you implement in your district (or school) to make it safer from crime?

Question 20 elicited a variety of open-ended responses. Fifty-three (53) -- ninety-eight percent (98%) -- of the respondents provided additional comments and recommended design considerations. One (1) -- two percent (2%) -- of the respondents did not provide a response.

Among the respondents providing additional data, twenty-eight (28) of the respondents recommended design changes involving issues of *Surveillance* (e.g., "School cameras," "Electronic Surveillance," "More SROs," "Hire adult hall monitors," "Hallway Cameras and Monitors," "Exterior cameras on social gathering points on and off campus," "Making all schools have camera surveillance not only inside the school but outside, too," "Design all so office can see entrance and parking in order to see visitors prior to entering buildings").

Nineteen (19) of the respondents suggested design changes involving issues of *Territoriality* (e.g., "Enclosure of school property," "A fence in front of the school," "Install perimeter fence near front of school," "I would have the entire school fenced in," "Remove fences and walls that turn our schools into prisons instead of places of learning"). The majority of the fencing recommendations appeared as much an issue of *Access Control* as *Territoriality*.

Fourteen (14) of the respondents suggested design changes involving issues of *Access Control* (e.g., "Better access controls," "People should have to buzz and identify themselves before the office lets them in," "Change locks on classrooms so you could lock your classroom from the inside," "Design parking lots in such a manner that once school begins it can be arranged to have only one way in and one way out. Check station outside parking lot, checking people coming in and out").

Several of the respondents suggested design changes involving the combined issues of *Surveillance*, *Territoriality*, and *Access Control* (e.g., "Cameras, better alarm system, improve exterior lights, fence perimeter, proper signs for entrance procedures," "Electronic Surveillance/perimeter fencing and alarm systems," "Video surveillance and secured perimeter"). And still other respondents made recommendations dealing more with issues of *Guardianship* and *Management* (e.g., "Reduce students per school," "Remove portables," "Phase out the use of portables," "More enclosed corridors and get rid of portables and build to accommodate classrooms," "Increase awareness and knowledge of all staff in understanding the true importance of security issues," "Get money for Crime Watch and attempt to get the people that live in the area and parents involved in a safe school program").

Question 21: If funding were available, what *single policy or procedure* would you implement within your district (or school) to increase safety and security?

Question 21 elicited forty-six (46) -- eighty-five percent (85%) -- responses from the respondents

to the SRO survey instrument. Eight (8) -- fifteen percent (15%) -- of the respondents did not provide additional comments.

The majority of the responses from respondents concerned policy recommendations involving issues of *Guardianship* and *Management*, in addition to *Surveillance*, *Access Control*, and *Territoriality*. Several respondents offered program recommendations [e.g., "I'd have more programs/classes for the staff and students," "Self-policing system by students," "Get programs as SAVE (Students Against Violence Everywhere) some awareness program that targets youth offenders in school"]. Others strictly presented policy changes (e.g., "Mandatory uniforms for students," "Students would have to wear uniforms," "Uniforms for all students and identification cards for staff and visitors," "Not let subjects arrested for drugs and fighting in school until the next school year," "I would purchase portable drug and chemical detectors," "School search and drug dogs"). Many dealt specifically with issues of *Guardianship* [e.g., "More campus advisors or additional SRO on campus," "Hire a permanent full-time security guard to assist SRO," "More SROs on campus," "Mandatory SRO/Student ratio (SRO to 1000 students)," "SRO to Student Ratio: Many schools have too many students for officers to protect," "Train staff on problem recognition and to effectively patrol between classes, etc.," "All teachers and administrators roaming in halls between classes"]. One (1) of the respondents recommended "true and accurate reporting of crimes and situations occurring."

In combination with issues of *Guardianship* and *Management*, others suggested policy changes involving issues of *Territoriality* (e.g., "Fencing"), *Surveillance* (e.g., "CCTV and personnel to man it"), and *Access Control* (e.g., "Limit access onto/off campus - manned security," "To have the ability to have a buzzer for access to my school," "Absolutely zero visitors during school hours. If money or personal items need to be dropped off, have it done at check station -- receipts -- eliminate visitors in the main building of schools. Only faculty and students allowed inside").

Question 22: Please provide any additional comments or suggestions concerning the issues presented in this questionnaire.

Question 22 elicited additional responses. Forty-five (45) -- eighty-three percent (83%) -- of the respondents did not provide a response. Nine (9) -- seventeen percent (17%) -- of the respondents provided additional suggestions (e.g., "Teachers need to be a more active part of crime prevention," "Need to fence the school property - update and increase cameras and train teachers for critical incidents," "Open areas with wide walkways and hallways reduce crime and violence more than any other policy or improvement I've seen," "All school building plans should be required to go through a CPTED review"). Others offered additional miscellaneous comments (e.g., "We have a state law that makes it mandatory that all violate misdemeanors be reported to law enforcement, but there is no penalty if the school officials don't report crime on their campus"). And words of appreciation (e.g., "Thank you").

6. Design Professionals Survey Instrument and Related Data Analysis

The Survey Instrument Format

The survey instrument consisted of twenty-five (25) closed-ended and open-ended questions, requiring approximately thirty (30) minutes to complete. The survey instrument began with a general introductory statement that provided informed consent information to the respondents. The survey instrument was then divided into the following three (3) sections:[1]

The first section, *Part 1: Background and Context* (Questions 1-13), collected basic demographic information on respondents. *Part 1* also focused on respondent experience and familiarity with Safe-School Design and Crime Prevention Through Environmental Design (CPTED). The second section, *Part 2: Criminal Activity and School Design* (Questions 14-23), assessed the perceived usefulness of Safe School Design Principles. The final section, *Part 3: Design and Policy Suggestions* (Questions 24-25), addressed school design and policy concerns of the respondents.

Part 1: Background and Context

Questions 1-5, "Date," "Firm Name," "Person Completing Survey," "Title/Position," and "Contact Information" provided demographic data, which allowed the research team to identify, organize, and catalogue respondents.

On June 27, 2002, survey instruments were mailed to the addresses of 45 design firms and individual design professionals and architects involved in the planning and construction of public schools in the state of Florida since 1993. Nineteen (19) -- forty two percent (42%) -- of the survey instruments were returned by August 14, 2002.

Question 6: How many years experience does your firm have providing design services for school facilities?

A. **0-5**
B. **5-10**
C. **10-15**
D. **15-20**
E. **over 20**

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[1]Note that because of rounding, response totals to some questions may not equal 100%.

The clear majority, sixteen (16) -- eighty-four percent (84%) -- of the respondents reported at least ten (10) years of experience providing design services for school facilities. Thirteen (13) -- sixty- eight percent (68%) -- of the respondents reported *Over 20* years of experience. Three (3) -- sixteen percent (16%) -- of the respondents reported *15-20* years of experience. And three (3) -- sixteen percent (16%) of the respondents reported *5-10* years of experience. (This question's categories are non-exclusive, which makes it difficult to better identify specific lengths of experience.)

Question 7: How many public school facilities has your firm designed, including building design and/or master planning projects?

A. **0-5**
B. **5-10**
C. **10-15**
D. **15-20**
E. **over 20**

As in the previous question, a large majority, sixteen (16) -- eighty-four percent (84%) -- of the respondents reported having designed at least ten (10) public schools. Thirteen (13) -- sixty-eight percent (68%) -- of the respondents reported having designed *Over 20* public schools. Two (2) -- eleven percent (11%) -- of the respondents reported having designed *15-20*, and two (2) -- eleven percent (11%) -- of the respondents reported *0-5*. One (1) -- five percent (5%) -- of the respondents reported having designed *10-15*, and one (1) -- five percent (5%) -- of the respondents reported *5-10*. (This question's categories are non-exclusive, which makes it difficult to better identify the range of experience.)

Question 8: What types of school facilities has your firm designed?

A. **Elementary School**
B. **Middle School**
C. **High School**
D. **Community College**

The vast majority, seventeen (17) -- eighty-nine percent (89%) -- of the respondents reported having designed *Elementary Schools*, *Middle Schools*, and *High Schools*. Thirteen (13) -- sixty-eight percent (68%) -- of the respondents reported having designed *Community Colleges*. All respondents provided a response.

Question 9: Where are these schools located?

A. **Inner City Context**
B. **Suburban Context**
C. **Rural Context**

Eighteen (18) -- ninety-five percent (95%) -- of the respondents reported having designed schools located in the *Suburban Context*. Nine (9) -- forty-seven percent (47%) -- of the respondents reported having designed schools in the Rural Context, and eight (8) -- forty-two percent (42%) -- of the respondents reported having designed schools in the Inner City. One (1) -- five percent (5%) -- of the respondents did not provide a response.

Question 10: How many schools has your firm designed since 1993?[2]

A.   0-5
B.   5-10
C.   10-15
D.   15-20
E.   over 20

The majority, thirteen (13) -- sixty-eight percent (68%) -- of the respondents reported having designed at least ten (10) school facilities since 1993. Seven (7) -- thirty seven percent (37%) -- of the respondents reported having designed *Over 20*. Four (4) -- twenty one percent (21%) -- of the respondents reported having designed *15-20*, and two (2) -- eleven percent (11%) -- of the respondents reported having designed *10-15* school facilities since 1993. Three (3) -- sixteen percent (16%) -- of the respondents reported having designed *0-5*. And two (2) -- eleven percent (11%) -- of the respondents reported having designed *5-10* school facilities since 1993. (This question's categories are non-exclusive, which makes it difficult to better identify ranges of experience.)

Question 11: Is your firm currently working on any school projects?

A.   Yes
B.   No

The large majority, thirteen (13) -- sixty-eight percent (68%) -- of the respondents reported being currently involved with school projects. Two (2) -- eleven percent (11%) -- of the respondents reported that they were not currently involved with a school project. Four (4) persons – twenty-one percent (21%) – did not answer the question.

Question 12: Are you familiar with "CPTED" (Crime Prevention Through Environmental Design) or other crime mitigation design or planning strategies?

A.   Very Familiar
B.   Somewhat Familiar
C.   Not Very Familiar
D.   Not At All Familiar

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[2]This question's categories are non-exclusive, which makes it problematic to precisely specify ranges of experience and which cause total percentages to not add to 100%.

A large majority of the respondents reported being familiar to some degree with CPTED or other crime mitigation design or planning strategies. Thirteen (13) -- sixty-eight percent (68%) -- of the respondents reported being *Somewhat Familiar*. Five (5) -- twenty-six percent (26%) -- of the respondents reported being *Very Familiar*. One (1) -- five percent (5%) -- of the respondents reported being *Not Very Familiar*. (Because of rounding, percentages do not total to 100%.)

Question 13: What resources does your firm rely on to keep current with building security issues?

A. **AIA Seminar**
B. **Graphic Standards**
C. **Trade Journals**
D. **Other**

Eighteen (18) -- ninety-five percent (95%) -- of the respondents rely on *Trade Journals*. Thirteen (13) -- sixty-eight percent (68%) -- of the respondents rely on *AIA Seminar*. Six (6) -- thirty-two percent (32%) -- rely on *Graphic Standards* and *Other* resources. All respondents provided a response and many provided multiple responses, which accounts for percentages not equaling 100.

Question 14: How would you rate your familiarity with the design principles listed in Table-A above?

A. **Very Familiar**
B. **Somewhat Familiar**
C. **Not Very Familiar**
D. **Not At All Familiar**

Fourteen (14) -- seventy-four percent (74%) -- of the respondents reported being *Very Familiar* with the identified principles. Four (4) -- twenty-one percent (21%) -- of the respondents reported being *Somewhat Familiar*. And one (1) -- five percent (5%) -- of the respondents reported being *Not Very Familiar*.

Question 15: In addition to the design principles listed in Table-A above, The FDOE provides "*Florida Safe School Design Guidelines*" which illustrate how the above design principles can be implemented. How familiar are you with these *Guidelines*?

A. **Very Familiar**
B. **Somewhat Familiar**
C. **Not Very Familiar**
D. **Not At All Familiar**

All but one of the eighteen (18) respondents to this question reported being familiar to some degree with the *Florida Safe School Design Guidelines*. Ten (10) -- fifty-six percent (56%) -- of the

respondents reported being *Somewhat Familiar.* Six (6) -- thirty three percent (33%) -- reported being *Not Very Familiar* with the Guidelines. One (1) -- six percent (6%) -- respondent indicated being *Very Familiar* with the *Guidelines.* One (1) -- six percent (6%) -- of the respondents reported being *Not At All Familiar.* (Because of rounding, percentages do not total 100%.)

Question 16: Whether you are familiar or not with the *Guidelines*, how would you characterize the incorporation of the Safe School Design Principles listed in Table-A into the design and construction (including retrofit) of the schools your firm has designed?

- **A. Extensively Incorporated**
- **B. Incorporated Somewhat**
- **C. Not Incorporated Much At All**
- **D. Not Incorporated At All**
- **C. Cannot Judge**

Ten (10) -- fifty-three percent (53%) -- of the respondents reported that Safe School Design Principles are *Incorporated Somewhat.* Eight (8) -- forty-two percent (42%) -- of the respondents reported that Safe School Design Principles are *Extensively Incorporated.* One (1) -- five percent (5%) -- of the respondents did not provide a response.

Question 17: If incorporated "*extensively or somewhat,*" in your judgement what have been some of their most important features relative to school safety and security? Provide a brief answer.

Question 17 elicited a variety of responses related to the most important features of the Safe School Design principles. Sixteen (16) -- eighty-four percent (84%) -- provided additional comments. Three (3) -- sixteen percent (16%) -- of the respondents did not provide a response.

The responses provided tended to fall into the following categories, with illustrative examples in each: *Surveillance:* "Visual Surveillance. Being able to achieve visual control over a given area with as few staff as possible." "Maximize visibility and central control points," "No niches at doorways to hide in; low shrubs near buildings, security lighting with motion detection, temporal glass in high security areas - computer labs, etc." "Natural Surveillance of Exterior," "Continuous visual control of student environment by admin."

Access Control: "Controlled access to campus and buildings," "Natural access and control of campus," "Control of access points and the placing of administrative functions in close proximity. Use of open exterior stairways to control and monitor vertical circulation," "Control of Schools and Campuses," "The overall design of the building -- i.e., minimize points of entry, hidden corners, and all access to upper floors."

Combined Elements (Surveillance/Access Control/Design/Territoriality): "Courtyard visibility and open access to restrooms; Durable construction/materials; public access buildings at school front;

Consideration of landscape design," "Campus Integrity, Natural Surveillance," "Controlled Access/ Visibility," "Few and secured entrances, interior corridors, interior views to exterior spaces, few hidden areas," "More uniform design standards -- elicit understanding," "Limited access- controls traditionally open campuses; Decentralized administration -- enhances passive surveillance,"
"Natural Surveillance and Natural Access Control. The use of these passive elements provides safety and security without the costs or maintenance of active mechanical systems."

Question 18: In your estimation, has the incorporation of the safe school Design Principles *helped make your school facilities designs safer?*

A. **Yes**
B. **No**
C. **Cannot Judge**

Question 18 estimated respondent perspectives related to the effectiveness of Safe School Design principles in promoting a safe and secure school environment. Sixteen (16) -- eighty-four percent (84%) -- of the respondents report, *Yes*, the Safe School Design principles helped make schools safer. Two (2) -- eleven percent (11%) -- of the respondents reported that they Cannot Judge. One (1) -- five percent (5%) -- of the respondents did not provide a response.

Question 19: Safe School Design Principles: Using your best judgement based on past experience, rate each of the issues below (high, medium, or low) in terms of your ability to fulfill their design intent. For example, if "K. Locks on roof hatches" is not easily achieved, place an "X" in the box marked "low." Additionally, if the design intent related to the issue is not clear, place an "X" in that box.

ABILITY TO FULFILL SAFE SCHOOL DESIGN PRINCIPLES
Responses from architects tended to fall into the following categories:

High Ability	Site and Building Lighting
	Natural Surveillance
	Tamper-Proof Doors and Locks
	Open Hand Rails for Surveillance
	Open Space Visibility
Low Ability	Slippery Finishes
	Audio/Motion Detection Systems
	Separation of After-School Activities
Issue Not Clear	Territorial Integrity
	Slippery Finishes

Question 20: If your firm has used the *Florida Safe School Design Guidelines*, in your opinion

and experience, *how useful* have these *Guidelines* been in informing your own design decisions relative to school safety issues?

A. **Very Useful**
B. **Somewhat Useful**
C. **Not Very Useful**
D. **Don't Use the Guidelines**

While the vast majority, sixteen (16) -- eighty-four percent (84%) -- of the respondents have found the *Florida Safe School Design Guidelines* to be useful to some degree, it is interesting to note, however, that only a small minority have found the existing (1993) *Guidelines* to be *very* useful. Thus, thirteen (13) -- sixty-eight percent (68%) -- of the respondents reported that the *Guidelines* have been *Somewhat Useful*. Three (3) -- sixteen percent (16%) -- of the respondents find the *Guidelines* to be *Very Useful*. Three (3) -- sixteen percent (16%) -- of the respondents *Don't Use the Guidelines*.

Question 21: What are the *most useful* elements or components of the *Guidelines*? (Note: this can include both process and substance issues -- how the *Guidelines* are presented as well as what is in them.) Provide a brief answer.

Ten (10) -- fifty-three (53%) -- of the respondents provided additional comments which defy simple categorization. They are: "Natural access and surveillance," "Bringing attention to various areas of safety," "Extensive listing of design element categories (site, building, alarm systems, etc.) associated diagrams," "The most useful element is that the *Guidelines* do not dictate how exactly to achieve a certain CPTED element. They only give criteria and the goal," "Makes the school designer aware of various elements that should be considered during the design process," "Organization and use of graphics allow non-technical clients (principals, board members, parents, etc.) to understand and help prioritize critical issues for their campus," "Provide support for the architect in 'selling' the importance and slightly added cost of some features -- to school boards," "You need to see that all architects working with schools get copies."

Question 22: What are the *least useful* elements or components of the *Guidelines*? (Note: This can include both process and substance issues - how the *Guidelines* are presented as well as what is in them.) Provide a brief answer.

Seven (7) -- thirty-seven percent (37%) -- of the respondents provided additional comments. They are grouped in the following categories: *Territorial Integrity*: "Schools should strive to engage the neighborhood, not isolate themselves in a "territory" that becomes a no-man's land after school and at night."

Building Organization: "[The] majority of projects are renovation and remodeling -- how do you modify an existing design which has poor organization? How can we assist the districts in setting priorities? Issues related to organization need to be expanded."

Economics: "Some elements are not economically feasible".

Guidelines Organization: "The fact that the *Guidelines* do not differentiate between types of schools (elementary, middle, high) has caused problems. Since behavior of students, as well as building type/ functions, changes with school types, *Guidelines* cannot be applied across the board."
"Additional diagrams would be helpful," "Stating the obvious." In field interviews with architects, the researchers found that some found the existing *Guidelines* "uninteresting" to look at from a design standpoint. (One said, "Why would I ever want to look at these?" While others found that the drawings were sometimes difficult to interpret or understand.") A common theme was that the information they sought to convey was too often "hidden" in the text and suggested that bullet points be used to highlight important comments and ideas. Indeed, this strategy was used in the revised *Guidelines*.

Question 23: Of the various types of school facilities designs listed below, which one would you prefer in terms of providing the best school safety and security?

A. **A Single Multi-Story Building**
B. **Multiple Multi-Story Buildings**
C. **Single-Story, Centrally Organized Group of Buildings**
D. **Single-Story (Spread Out) Grouping Of Buildings**

The majority, eleven (11) -- fifty-eight percent (58%) -- of the respondents prefer *Single-Story, Centrally Organized Group of Buildings*. Three (3) -- sixteen percent (16%) -- of the respondents prefer *A Single Multi-Story Building*, and three (3) -- sixteen percent (16%) -- of the respondents prefer *Multiple Multi-Story Buildings*. One (1) -- five percent (5%) -- of the respondents preferred *Single-Story (Spread Out) Grouping of Buildings*. One (1) -- five percent (5%) -- of the respondents did not provide a response.

Part 3: Design and Policy Suggestions

Question 24: What do you see as the most critical areas of school design with respect to safety and security from crime? Please rank the areas noted below such that 1 = the most critical area and 14 = the least critical area.

A. **Maintaining visual surveillance from the street**
B. **Maintaining visual surveillance in corridors**
C. **Minimizing niches, alcoves, and other residual spaces that provide places for hiding**
D. **Window design**
E. **Exterior door design**
F. **Interior Lighting**
G. **Exterior Lighting**
H. **Enclosure of school property perimeter (fencing, walls)**

I. **Landscaping**
J. **Location of key cabinets**
K. **Alarm Systems**
L. **Miscellaneous openings and outbuildings**
M. **Electronic Surveillance Systems (for example CCTV)**
N. **Other (please specify)**

Question 24 measured respondent perspectives concerning the most critical areas of school design related to safety and security. The responses were grouped into three categories: Most Critical (Rankings 1-5), Moderately Critical (Rankings 6-10), and Least Critical (Rankings 11-14), to assess the most frequently recorded areas of concern.

Minimal Niches (16) was reported to be the most critical area of school design, and *Corridor Surveillance* (15) was reported to be the second most critical area of school design, followed by *Street Surveillance* (11), which was tied with *Perimeter Enclosure* (11). (See below)

Two (2) respondents noted *Other* critical areas of school design [i.e., "Enclosure of all non-public school spaces; limited and controlled access to school space (single point of 'public' entrance)," and "Small Schools #1"].

FREQUENTLY REPORTED AREAS OF SCHOOL DESIGN

Area of School Design	Reported Frequency
• Minimal Niches	16
• Corridor Surveillance	15
• Street Surveillance	11
• Perimeter Enclosure	11
• Exterior Door	9
• Exterior Lighting	9

Question 25: If funding were available, what single-policy or procedure would you recommend to increase safety and security in school facilities design?

The responses to this open ended question were grouped into the following categories, with illustrative examples from each:

Guardianship and Surveillance: "Night watchman at facilities" and "Electronic Surveillance systems and personnel to use them, onsite safety officers as a deterrent."

Management/Oversight/Education: "Better enforcement by plan reviewers of Section 423.7b"; "Provide campus type school designs. Groups of buildings laid-out with control and surveillance

in mind for a more pleasant student learning environment and provide better control for daily use."; "DOE presently utilizes the Castaldi generalized formula to determine facility replacement vs. renovation. No element of the formula considers safe school criteria. This should be added and weighted appropriately. End result should be that unsafe facilities be replaced rather than renovated."; "Require CPTED conformance"; "First, Pick an architect with a good track record for good design; second, prepare a program making safety and security most important. Have reviews to see that the program has been met—if not, go back to the drawing board"; "Places that engender respect for school buildings, not solely SREF type space standards. #1 Smaller schools"; and "Education of students and staff."

Territoriality, Access Control: "Utilize building exterior as a means of providing perimeter security, establishing open courtyards at interior of site" and "Security of campus boundary through controlled perimeter access points."

Surveillance and Maintenance: "CCTV throughout exterior campus areas" and "Provide funding for additional security features such as exterior lighting systems, and the operation and maintenance of lighting through joint program between utilities and State of Florida."

Access Control, Surveillance: "2 CPTED principles: limited/controlled access, natural/passive surveillance" and "Establish one main control point of entry into the school."

Appendix A
Maps

MAP 1

SAFE SCHOOLS SURVEY INSTRUMENTS
OVERALL DISTRIBUTION OF RESPONSES BY COUNTY

County	Count	County	Count
Alachua	4	Lake	4
Baker	1	Lee	5
Bay	4	Leon	5
Bradford	2	Levy	1
Brevard	3	Liberty	1
Broward	8	Madison	0
Calhoun	0	Manatee	4
Charlotte	2	Marion	6
Citrus	3	Martin	2
Clay	2	Monroe	0
Collier	0	Nassau	0
Columbia	2	Okaloosa	4
Dade	5	Okeechobee	2
De-Soto	0	Orange	10
Dixie	0	Osceola	4
Duval	2	Palm Beach	5
Escambia	4	Pasco	3
Flagler	1	Pinellas	6
Franklin	0	Polk	1
Gadsen	1	Putnam	3
Gilchrist	2	St. Johns	3
Glades	1	St. Lucie	7
Gulf	1	Santa Rosa	2
Hamilton	0	Sarasota	2
Hardee	0	Seminole	5
Hendry	1	Sumter	0
Hernando	2	Suwannee	1
Highlands	2	Taylor	0
Hillsborough	5	Union	1
Holmes	0	Volusia	5
Indian River	0	Walton	4
Jackson	2	Wakulla	0
Jefferson	0	Washington	1
Lafayette	0		

RESPONSE BY COUNTY

No Response

Respondent Counties

MAP 2

RETURNED PRINCIPALS SURVEY INSTRUMENTS

County	Count	County	Count
Alachua	0	Lake	3
Baker	0	Lee	3
Bay	2	Leon	2
Bradford	0	Levy	0
Brevard	1	Liberty	0
Broward	3	Madison	0
Calhoun	0	Manatee	1
Charlotte	1	Marion	1
Citrus	1	Martin	0
Clay	0	Monroe	0
Collier	0	Nassau	0
Columbia	0	Okaloosa	0
Dade	5	Okeechobee	1
De-Soto	0	Orange	6
Dixie	0	Osceola	3
Duval	2	Palm Beach	4
Escambia	1	Pasco	2
Flagler	0	Pinellas	3
Franklin	0	Polk	0
Gadsen	0	Putnam	0
Gilchrist	1	St. Johns	3
Glades	0	St. Lucie	2
Gulf	0	Santa Rosa	1
Hamilton	0	Sarasota	0
Hardee	0	Seminole	2
Hendry	1	Sumter	0
Hernando	1	Suwannee	1
Highlands	1	Taylor	0
Hillsborough	1	Union	0
Holmes	0	Volusia	1
Indian-River	0	Walton	0
Jackson	0	Wakulla	0
Jefferson	0	Washington	1
Lafayette	0		

RESPONSE BY COUNTY

No Response

Respondent Counties

MAP 3

RETURNED SCHOOL DISTRICT FACILITY/RISK MANAGERS SURVEY INSTRUMENTS

County	Count	County	Count
Alachua	1	Lake	0
Baker	0	Lee	1
Bay	1	Leon	0
Bradford	1	Levy	0
Brevard	0	Liberty	1
Broward	1	Madison	0
Calhoun	0	Manatee	0
Charlotte	1	Marion	1
Citrus	1	Martin	0
Clay	1	Monroe	0
Collier	0	Nassau	0
Columbia	1	Okaloosa	0
Dade	0	Okeechobee	1
De-Soto	0	Orange	0
Dixie	0	Osceola	0
Duval	0	Palm Beach	0
Escambia	0	Pasco	0
Flagler	1	Pinellas	0
Franklin	0	Polk	0
Gadsen	1	Putnam	1
Gilchrist	0	St. Johns	0
Glades	1	St. Lucie	0
Gulf	1	Santa Rosa	1
Hamilton	0	Sarasota	1
Hardee	0	Seminole	1
Hendry	0	Sumter	0
Hernando	0	Suwannee	0
Highlands	0	Taylor	0
Hillsborough	0	Union	1
Holmes	0	Volusia	0
Indian River	0	Walton	0
Jackson	1	Wakulla	0
Jefferson	0	Washington	0
Lafayette	0		

RESPONSE BY COUNTY

No Response

Respondent Counties

MAP 4

RETURNED COMMUNITY COLLEGE RISK/FACILITY MANAGERS SURVEY INSTRUMENTS

Broward Community College (1)
Palm Beach Community College (1)
Seminole Community College (1)
Hillsborough Community College (2)
Indian River Community College (1)
South Florida Community College (1)
Edison Community College (1)
Manatee Community College (1)
Valencia Community College (1)
Daytona Beach Community College (1)
St. Johns River Community College (1)
Lake-Sumter Community College (1)
Pasco-Hernando Community College (1)
Santa Fe Community College (1)
Central Florida Community College (1)
Lake City Community College (1)
Gulf Coast Community College (1)
Chipola Jr. College (1)
Okaloosa-Walton Community College (1)

*Regions Absent From Color Legend Did Not Respond

MAP 5

RETURNED SCHOOL RESOURCE OFFICERS SURVEY INSTRUMENTS

County	Count	County	Count
Alachua	2	Lake	0
Baker	1	Lee	0
Bay	0	Leon	3
Bradford	1	Levy	1
Brevard	2	Liberty	0
Broward	3	Madison	0
Calhoun	0	Manatee	2
Charlotte	0	Marion	3
Citrus	1	Martin	2
Clay	1	Monroe	0
Collier	0	Nassau	0
Columbia	0	Okaloosa	3
Dade	0	Okeechobee	0
De-Soto	0	Orange	3
Dixie	0	Osceola	1
Duval	0	Palm Beach	0
Escambia	3	Pasco	0
Flagler	0	Pinellas	3
Franklin	0	Polk	1
Gadsen	0	Putnam	1
Gilchrist	1	St. Johns	0
Glades	0	St. Lucie	3
Gulf	0	Santa Rosa	0
Hamilton	0	Sarasota	1
Hardee	0	Seminole	1
Hendry	0	Sumter	0
Hernando	1	Suwannee	0
Highlands	0	Taylor	0
Hillsborough	2	Union	0
Holmes	0	Volusia	3
Indian River	0	Walton	4
Jackson	0	Wakulla	0
Jefferson	0	Washington	0
Lafayette	0		

RESPONSE BY COUNTY

No Response

Respondent Counties

Appendix B
Bibliography

Bibliography

Agron, J., "Under Siege: Schools as the New Battleground," *American School and University* **71:11 (Supplement), Pg. 30, July 1999.**

Provides information from experts in the security industry concerning school violence and its prevention. Articles address the lessons learned from recent school shootings that may help reduce future occurrences, the need for a greater adherence to order in schools to set the stage for a more secure learning environment, the use of identification badges, and ways of conducting a school facility security audit. It explains how to determine which technologies are most important for school security and how to evaluate them, the development of a crisis management plan, and the preplanning steps that helped one community deal quietly with a rash of bomb threats.

Alcott, W.A., "Prize Essays on the Construction of Schools," *American Institute of Instructions, Discussions and Lectures***, Pgs. 239-259, 1831.**

These early essays emphasize the proper location of schoolhouses, and the need for recreation areas within the school plan. The essays emphasize the fundamentals of school planning and give due attention to the inadequacies and over-crowded conditions of schoolhouses.

American Institute of Architects. *Building Security by Design: A Primer for Architects, Design Professionals, and Their Clients,* **Washington, DC, November 2001.**

The booklet includes guidelines for defining security needs, shaping security responses, and practical considerations -- 1) rethinking the security equation, 2) asset, threat, vulnerability, and risk analysis, 3) layering concepts, 4) finding a security consultant, and 5) liability and legal issues.

Astor, R.A., Meyer, H.A., and Behre, W., "Unowned Places and Times: Maps and Interviews About Violence in High Schools," *American Educational Research Journal***, Vol. 36 (1), Spring 1999.**

Differing from prior theoretical perspectives on the prevention of crime and violence in schools, the study considers two perspectives on school violence: a social-environmental perspective, which suggests that social and psychological dynamics around school violence may be inseparable from where and when they occur; and a transactional perspective, which suggests that physical spaces in schools and violent behaviors have a bi-directional influence upon each other. According to the study, teachers and students view some locations as violence prone because violence has occurred there, and that violence tends to occur there because those locations are associated with a specific social characteristic. The authors suggest that preventative measures would be more effective targeting where and when crime occurs in schools, and increasing the role of students, teachers, and other members of the community to reclaim un-owned school territories. The authors additionally note the need for continued study and research surrounding important, yet relatively unexplored, theoretical areas such as the transactions between school staff and students, at locations and times known to be violence prone.

Baker, C.D., "Differences in School Administrators' Reporting of School Crime to Law Enforcement," Arizona State University: Dissertation, 2000.

The study examined school administrators' differences in reporting school crime based upon selected school and administrator variables. The authors note concern for underreporting of the school crime by school administrators. Significant differences were noted between schools located in cities and towns, schools with and without police or security officers on campus, school administrators who believe reporting crime impacts school safety, and those who don't, and those who perceive administrative support in reporting school crime, and those who don't. Results indicate that school administrators in Arizona have a positive attitude towards law enforcement and are willing to report school crime, which is not consistent with studies that indicate vast underreporting.

Bangs, K., "Protecting Piano," *School Planning and Management* **39:2, Pgs. 41-44, February 2000.**

Examines how one school district used a comprehensive plan that included cooperation between parents, students, and local law enforcement, to effectively respond to the current furor over school security. The components and costs of the plan are highlighted.

Barnard, H., *School Architecture: Or Contributions to the Improvement of Schoolhouses in the United States*, **A.S. Barnes & Company: New York, NY, 1848**.

The volume contains a number of early reports by state commissions on education. The condition of schoolhouses in the various states is discussed, as well as a number of planning elements such as location, size of the site, dangers, and the architecture of school buildings. The author includes the First Annual Report by the Secretary of Board of Commissioners of Common Schools for Connecticut, 1839, in which the importance of school planning is discussed with a number of factors important in school planning such as location of schools, location of playgrounds, wet and disagreeable sites, and the disturbance from noise and dust caused by a poorly chosen site. The volume also includes the Fourth Annual Report of the Board of Education of Massachusetts, 1841, which emphasizes the close connection between schoolhouses and health of the pupils, as well as the importance of schoolhouse architecture in the building and planning of schools. The volume further includes the First Annual Report of the State Superintendent of Common Schools of Vermont, 1846, which, while emphasizing the fact that cheapness seemed to be the governing standard, urges that schoolhouses be provided with a comfortable location, a sufficient size space, and that there be shade trees on the site to serve as shelter; and in which it is mentioned that the style of architecture is often as much neglected in the construction of school buildings as the location and environment.

Beresh-Taylor, L., "Preventing Violence in Ohio's Schools," *Akron Law Review* **33:2, Pgs. 311-349, Winter 2000.**

The article discusses the school's liability for failing to protect students, suits filed under 42 USC 1983, and Fourteenth Amendment, procedural due -- process rights of students, as well as rights to education. The author concludes by noting the need to deter, divert, and target juvenile crime.

Blue, Don., "Safety By Design," *Principle Leadership*, **2000. (Also, International CPTED Association -- 1998)**

Expounds upon the concept that a safe school is an inviting school. Whether the occupants are consciously aware of the safety features, there is a comfort level people experience when safety is an integral part of the surroundings. The article highlights the strategies and principles of Crime Prevention Through Environmental Design (CPTED). The author purports that the CPTED approach blends effective design with occupants' physical, social and psychological needs. The author approvingly supports the use of CPTED features, elaborating upon three overlapping aspects of CPTED: territoriality, increasing the occupants' territorial concern or watchfulness; surveillance and improving natural surveillance features; and access control, controlling access to spaces within the school campus.

Bousquet, Antonine, Providing a Secure Environment for Learning, (Organization for Economic Cooperation and Development, Programme on Educational Building, Paris, France), 1998, ERIC no: ED436923.

A seminar report addressing the recognition and measurement of outside threats, preventative measures and degrees of protection, the responsibility of education authorities, and the development of partnership policies. The seminar report attempts to demonstrate that schools should come out of their isolation and introduce partnerships that can: 1) ensure their own security, 2) adapt to a changing society, and 3) help in economic, social, and political partners to understand what makes the school special.

Brantingham P.J. and Brantingham P.L., *Environmental Criminology*, **Sage: Beverly Hills, CA, 1981**.

The classic text in the field of environmental criminology by the field's preeminent pioneers. This book discusses issues relating to locating crime in space and time, focusing on such geographic elements of crime as paths, patterns, and search areas of criminals. The authors look at the landscape and "timescape" of crime and foreshadow the development of geographic information systems (GIS), which are now being applied to crimes in schools as well as within the larger urban context.

Brubaker, W.C., *Planning and Designing Schools*, **McGraw-Hill: New York, NY, 1998.**

The book discusses 21st century architecture for educational facilities. The author reflects upon the importance of the proper planning and design of educational facilities to foster a learning environment appropriate for children. The author recounts the history of school design in the 19th and 20th centuries. The book addresses site planning, and displays the master plan for several exemplary elementary, middle, and secondary schools, further providing illustrative examples throughout the U.S.-- to include North Fort Myers High School. The author provides strategies to transform the learning environment and prevent obsolete schools.

Burnap, George, "School Distribution and Areas in the City Plan," *The Architectural Record*, **Vol. 52, Pg 383, November 1922.**

The author discusses the importance of planning for schools to optimize community resources and maximize the growth of children. The author emphasizes the importance of school surveys, school building plans, and school planning to derive a long-term program with regard to: 1) population trends, 2) growth and expansion of the city, 3) financial capacity of the city or community, 4) and the growing conception of the place of the school within (i.e., to what extent school building planning be conducted independent of city planning, in what specific ways can articulation between city planning and school building planning be improved.) The study records the relationship between the schools and the city plan. The author further presents a history of the condition of the schoolhouse in numerous states.

Burstyn, J. N. et al., Preventing Violence in Schools: A Challenge to American Democracy, Lawrence Erlbaum Associates: Mahwah, NJ, 2001.

The authors focus on the cultural and psychological underpinnings of crime and violence. The authors assess the effects of preventative programs adopted by schools. The authors explicitly admit to efforts to galvanize public outrage and the adoption of a full-scale "whole school" approach to preventing violence. The authors note the rush to rectify safe schools policies through physical design -- to cut back bushes, increase lighting, control access, and install metal detectors. The authors discuss present and future research to expand our understanding of the influence and effects of prevention and intervention programs, and acknowledge that more research is necessary. The authors conclude that violence in schools has its roots in many systems of our society and cannot be eliminated by merely changing rules or introducing prevention programs into schools.

Butterfield, E., "Assessing School Security: Not an Either/Or Question," *School Construction News* **3:1, Pg. 19, January-February 2000.**

Discusses school security program assessment and strategies that try to strike a balance between security equipment and staffing needs. The article explores how security equipment can save school districts money. The article also discusses access control strategies, the physical elements that often compromise security, and school security personnel hiring criteria.

Carter and Carter Associates, "Surrounded by Safety: A Crime Prevention Through Environmental Design (CPTED) Handbook for Youth," Youth Crime Watch of America, Miami, Florida, 2001.

This step-by-step handbook is designed to inform public school students about the elements of CPTED and how they may be applied to their own school environments. The intent is to provide students with tools to detect and implement changes in their school grounds to enhance safety and security from crime.

Castaldi, B., *Educational Facilities: Planning, Remodeling and Management,* **Allyn & Bacon, Inc.: Boston, Mass, 1977.**

The book discusses the theory, principles and evolution of educational facilities. The book sets forth procedures for long-term planning criteria to include: 1) school surveys, 2) the school building survey, and 3) the prerequisites to architectural planning. The book examines several aspects of planning an education facility, to include: 1) post-planning procedures, 2) construction costs, and 3) architectural trends. The book also discusses remodeling, maintenance, operating, and managing the useful life of an existing education facility through maintenance and operational practices.

Cervantes, RP., "The Condition of School Facilities as Related to Student Academic Achievement and Behaviour," University of Alabama: Dissertation, 1999.

The study examined the relationship between the condition of school buildings and the academic achievement and behavior of students. The school facilities were assessed according to Hawkins and Lilley's *Guide for School Facility Appraisal Instrument* (1992). Six major areas were assessed: 1) school site, structural and mechanical, 2) plant maintainability, 3) school building safety and security, 4) educational adequacy, 5) environment for education, and 6) overall building condition. Study findings indicate a relationship between math and reading achievement and the building category of school site. An inverse relationship existed between the number of suspensions and the building category

educational adequacy. According to the report, providing school facilities that are well maintained and safe, and that promote quality-learning conditions, is an issue that needs to be addressed.

Chan, T. C., and Morgan, P.L., "Physical Environment and Student Safety in South Georgia Schools," Paper presented at the Annual Meeting of the Georgia Educational Research Association, Atlanta, GA, November 1996, ERIC no: ED405604.

The paper presents findings of a study that examined school facility safety in 27 Georgia schools -- 9 elementary, 11 middle, and 7 high schools. Survey information related to both school-site safety and school-building safety, and respondents assessed the condition of the school buildings with a school-building evaluation instrument. Research showed a significant correlation between school safety and school-building age. The general rating of the schools was above average, except in areas such as corridors, parking lots, and playgrounds.

Clarke R.V., *Situational Crime Prevention: Successful Case Studies*, Second Edition, Harrow and Heston: Albany, NY, 1997.

Clark presents a variety of case studies from around the world that support the theory and practice of situational crime prevention. Situational crime prevention is a fundamental approach to crime prevention that incorporates both defensible space and crime prevention through environmental design (CPTED). Its basic elements, as presented in this book, involve the notion of crime being a function of opportunity, risk effort and reward. It also incorporates routing activity and rational choice theory in explaining criminal behavior.

Cornell, D.G., "Designing Safer Schools for Virginia: A Guide to Keeping Students Safe from Violence," Thomas Jefferson Center for Educational Design: Curry School of Education, University of Virginia, Charlottesville, VA, 1998.
http://curry.edschool.virginia.edu/centers/jefferson/

In 1997 the Virginia General Assembly passed legislation requiring local school boards to conduct school safety audits for each school under their jurisdictions. The guide presents detailed assessments of schools' safety needs, lists standards for safety and security personnel, and lists sample items for a school safety survey.

Crow, C.L., *History of Early Public Schools In Florida*, 1894.

In an era of good feeling in the educational life of the state, the author explores early efforts to establish a system of public schools, 'common schools' and 'free schools.' The book discusses the first actions taken by the Florida Legislature, January 10, 1849, to provide for general public instruction in Florida -- where on the day before the law passed, January 09, 1849, the Florida Legislature passed an act "for the increase, investment, safe-keeping, and disbursement of the common-school fund." The author reports that taxation by individual counties for support of schools was authorized by legislation in 1850. The author discusses early organization of state schooling initiatives (i.e., Judge of Probate -- County Superintendent of Schools, and County Commissioners -- County School Boards). The responsibilities of the organization included assuming responsibility for any sum, which they deem proper to be paid out of the treasury for the augmentation of the school. According to the author, Monroe County and Franklin County were the first counties in Florida to receive monies from the state.

Crowe T., *Crime Prevention Through Environmental Design*, Second Edition, Sage: Beverly Hills, CA, 2000.

Crowe is a widely known CPTED practitioner and trainer who has worked with police agencies around the world. This book discusses modern theory and applications of CPTED including those involving convenience stores, banks, recreational facilities, and public schools, among other land uses. The book provides a history of crime prevention and examples of modern day uses. The fundamental concept of the book is that physical design, properly applied, can have a positive effect on preventing criminal behavior.

Department for Education, London, England, *Security Lighting: Crime Prevention in Schools*, April 21, 1993, ERIC no: ED430378.

At the time of the report, English schools had seen a rise in crime necessitating the need for increased security measures. The document examines the use of security lighting and provides guidance and technical advice on policy

to assist those responsible for design, specification, purchase, installation, maintenance, operation, and management of security lighting systems for educational buildings. The sections categorize luminaries and lamps available, and highlight case studies showing types of lights needed for educational facilities and the associated costs.

Department for Education and Employment, Suffolk, England, *Improving Security in Schools: Managing School Facilities Guide IV*, **1996.**
www.dfes.gov.uk/schoolbuildings/security.shtml
 The booklet offers guidance on how to improve school security, including advice on management of security and the roles of local education authorities, school governors, and headteachers. The guide describes how schools can carry out their own security surveys, assess themselves in terms of risk, and then consider security measures appropriate to that level of risk. The selection of specific security issues discussed includes access control, activities (cash handling, out of hours access), property marking, mechanized surveillance and security measures, car parking, and vehicle security.

Drug Strategies, Washington DC, *Safe Schools, Safe Students: A Guide to Violence Prevention Strategies, Programs, Policies, and Environmental Change,* **1998.**
www.drugstrategies.org/pubs.html
 The guide assesses over 80 violence prevention programs created for classroom use, and examines school policies to promote a peaceful and safe learning environment. The guide reviews architectural and environmental changes that protect students.

Duke, D.L., *Creating Safe Schools for All Children*, **Allyn and Bacon: Boston, Mass, 2001.**
 The book examines issues of school safety and how safety issues have developed in recent years, and outlines seven standards of school safety. The book further addresses a variety of legal, policy, and specific safety concerns that educator and citizens may articulate. The book examines perspectives on school safety, ranging from educational and psychological perspectives, to organizational, political, cultural, and design-based perspectives. The book discusses the cost/benefit of behavioral incentives, the disciplining of children, the merits of zero-tolerance policies, and the proper focus of accountability regarding school safety. The book concludes with a discussion of school facilities designed for safety, covering safer movements in and around school, better supervision through design, controlled access, safety on school grounds, and environmental enhancement through design.

Fenske, Neil R., *A History of American Public Schools: Through the Eyes of Principals* **Mellen Studies in Education, Vol. 37, Edwin Mellen: Lewiston, NY, 1998.**
 The author explores the world of public high school through the eyes of the high-school principal. The author examines the life of the principal to find a diversity of expectations, and a complexity of relationships between divergent concerns and the expanding scope of responsibilities of the principal. The book provides administrators insight into the subtle shifts in ideology that shape schools. The book purports to contribute to our present knowledge of American public high schools in three significant ways: by giving support to a group essential to the operation of our public high schools, by exploring the ideological competition between four purposes of learning (i.e., individual, intellectual, social, and vocational development), and by capturing the ambiguity of thought of individual principals and the collective whole.

Fickes, M., "Making the Grade with School Security," *School Planning and Management* **39:4, Pgs. 39-41, April 2000.**
 Shows how technology is helping school security directors prevent violence and protect students. One school's use of a state-of-the-art security system involving closed-circuit television, access control for doors, vehicles equipped with global positioning technology, and hand-held computers for security officers is discussed.

Fickes, M., "Revolving Doors Spin Off Benefits," *College Planning and Management* **3:2, Pgs. 30-33, February 2000.**
 Discusses how revolving doors can serve as security tools and help control energy costs for college buildings. Reduction of tailgater entries and pass back techniques to help unauthorized people enter buildings are addressed. Concluding comments highlight revolving door features that assist emergency exiting and energy cost savings potentials.

Florida Community Colleges Risk Management Consortium, "Guidelines for Addressing Violence and Terrorism on Florida Community College Campuses," January 2002.

Developed by a task force of Florida community college safety professionals, these guidelines are intended to update existing community college plans for handling emergencies on campus, with a particular emphasis on acts of terrorism and crimes of violence. The Guidelines contain information on prevention strategies, pre-crisis preparation, management of critical incidents, recovery, and critical incident review.

Goldstein, A., "Controlling Vandalism: The Person-Environment Duet," In Goldstein, A. and Conoley, J. C. , *School Violence Intervention: A Practical Handbook.* (Pgs. 290-324), Guillford Press: New York, 1997.

The author presents an alternative perspective from which to view the perpetrator of aggressive behavior, crime, and violence, and perhaps to understand and reduce human aggressive behavior, crime, and violence. The author denotes internal and external motivational typologies, person-centered and environmental-centered respectively; as an in-the-person phenomenon, and a not-in-person phenomenon but in the nature of the design of the environment, which represents the person-environment duet. The author presents intervention strategies for implementation which include: 1) target hardening, 2) access control, 3) deflecting offenders, 4) controlling facilitators, 5) exit-entry-screening, 6) formal surveillance, 7) natural surveillance, 8) target removal, 9) identifying property, 10) removing inducements, 11) rule setting, 12) education, 13) publicity, 14) punishment, 15) counseling, 16) involvement, and 17) organizational climate. The author presents multiple causes of aggressive behavior, crime, and violence, both person-oriented and environment-oriented: physiological, cognitive-affective, and interpersonal factors, on the one hand, and on the other, cultural, immediate personal and physical environment, presence of deterrents, presence of means, and the presence of targets. The author concludes that aggressive behavior, crime, and violence are causally person-environment events.

Goldstein, A. and Conoley, J. C., *School Violence Intervention: A Practical Handbook.* Guillford Press: Pgs. 03-16, New York, 1997.

The book is about the control and reduction of aggressive behavior, violence, and crime in US schools. The book deals with school-based interventions for dealing with aggressive youths. The book presents perspectives from several practitioners (teachers, principals, State Department, Nationwide) and also reports several intervention strategies oriented around the system, the school, and the student (system-oriented, school-oriented, and student- oriented, respectively). According to the author, violence towards persons in US schools is substantial and apparently growing. Presenting diverse underlying prevention and intervention strategies, the author concludes that school violence has complex causes and any remedy must be equally dynamic.

Green, M. W., "The Appropriate and Effective Use of Security Technologies in US Schools: A Guide for Schools and Law Enforcement Agencies." National Institute of Justice, 1999.
www.ncjrs.org/school/pdf.htm

The National Institute of Justice reports that if a school is perceived to be unsafe (i.e., it appears that no adult authority prevails), then "undesirables" will come in, and the school will actually become unsafe -- the embodiment of the broken window theory, and the foundation of the maintenance principle: one broken window left unrepaired will encourage additional windows to be broken. The author provides basic guidelines to help schools, in collaboration with law enforcement, analyze vulnerability to violence, theft, and vandalism, and suggests potential technologies to effectively address these problems. The report describes available technologies and urges careful cost/benefit analysis in consideration of capital investments, site modifications, additional staffing, training, and equipment maintenance and repair. The report suggests that a security conscious design can mitigate long-term security budgets, security personnel, and sophisticated gadgetry, and eliminate legal issues and liability. The National Institute of Justice acknowledges that the ramifications of every possible incident cannot be foreseen, yet it is still helpful to be aware of the issues that might be raised and to be aware of current thinking about ways to address each issue. The report concludes that issues contributing to the overall maintenance and order of a school must be taken seriously, not unlike other public facilities. Resource information including books, publications, web sites, and conferences conclude the guide.

"Incidents of Crime and Violence in Public Schools," Violence and Discipline in U.S. Public Schools: 1996- 1997, Washington, DC, National Center for Educational Statistics, 1998.

The study quantifies crimes occurring at public schools across the nation, which were reported to police during the 1996-1997 school year. For this period, the nation's public schools reported 4,000 sexual assaults, 11,000 attacks with weapons, 7,000 robberies, 190,000 attacks without weapons, 115,000 thefts, and 98,000 occurrences of vandalism.

Jeffrey, C. R., *Defensible Space: Crime Prevention Through Urban Design*, Macmillan: New York, 1977.

In this classic text on the subject, Jeffrey presents the arguments in favor of CPTED theory. He argues that human-environment learning is the basic component of CPTED and discusses the sociological concepts that focused academic and governmental attention on other (especially social and offender-based) theories of criminal behavior.

Jones, M., "Security and Education: A Best-Case Scenario Guide," School Construction News 4:6, Pgs. 18-20, September-October 2001.

The article describes the design of Indiana's 500,000 square-foot high school building, which incorporates many security features without creating a fortress atmosphere. Of the features described in the article: a controlled- access floor plan, security cameras, and duress alarms for health emergencies and physical threats.

Kaestle, C., *Pillars of the Republic: Common Schools and American Society 1780 to 1860*, 1983.

The book culminates a series of books and articles on the history of schools. The book describes rural district schools and urban charity schools. The book recounts the legislative battles waged by reformers and re- examines the institutions they have sought to establish. The book explores several perspectives of the origins of public schooling, and of popular resistance to that reform. The book recalls, not the initial opposition to reform per se, but opposition to a structure of state control and financing -- and in later years, opposition to the attempt to gather all groups into a common system with a common curriculum. The book looks beyond schools to the broader economic and cultural context and impact of schooling.

Kennedy, M., "On Call," *American School and University* 73:6, Pgs. 42(b)(d)(f), February 2001.

Discusses the usefulness of using emergency call boxes for establishing a safe campus environment allowing for more immediate response to emergencies. Technology's influence on the future of campus call boxes is highlighted.

Kennedy, M., "Teachers with a Badge," *American School and University* 73:6, Pgs 36, 38, February 2001.

Explores the use of the school resource officer (SRO) as the fastest growing area for preventing school violence and improving the educational environment. The SRO's importance to students is highlighted as is the combining of the SRO with more technologically centered crime prevention efforts.

Kliment, S.A., *Building Type Basics for Elementary and Secondary Schools* John Wiley & Son, Inc.: New York, NY, 2001.

The book contains school design considerations for architects, consultants, and their clients. The book offers a hands-on resource providing basic information on the design phases of a project -- from pre-design, circulation, unique design concerns, site planning/parking/access/codes, environmental challenges, and structural and mechanical systems features, materials, lightings, to additions, renovations, remodeling, restoration, and adoptive reuse, and operations and maintenance of school facilities.

Lackney, J.A., *Thirty-Three Educational Design Principles*, The School Design Research Studio, Engineering Professional Development: University of Wisconsin-Madison, November 2002.

Drawing on a large body of knowledge concerning well-defined learning environments, the author provides a framework for the design, construction, use, and management of school facilities. The author provides design principles which include educational facility planning and design principles, as well as principles for site organization, principles for primary educational space, principles for shared-school and community facilities, community spaces, principles related to the character of all spaces, and principles related to the site design of outdoor learning spaces- cautioning that the objective in using "Thirty-Three Educational Design Principles" as a design guide is to consider as many of these principles as are appropriate.

Lane, K.E., Richardson, M. D., and Van Berkum, D. W., *The School Safety Handbook: Taking Action for Student and Staff Protection,* **1996.**

This collection of essays describes how communities can make their schools safe. The text is divided into four parts: "Roots of Violence," "Legal Issue," "Strategies for Making Schools Safe," and "Conclusions and Recommendations." Part I includes essays addressing "The Impact of Violence in Schools" (Demoulin), "Psychological Aspects of Safe Schools" (Hoover and Oliver), "School Violence: Everybody's Problem" (McFarlin and McFarlin). Part II addresses "Sexual Harassment in the Schools: A Safety and Liability Issue for All Administrators" (Simpson), "The Politics of Zero-Tolerance Legislation in Michigan Public Schools: Origins, Implementation, and Consequences" (Geltner and Gooden), "Creating Safe Schools: Policies and Practices" (Grady). Part III includes "Creating and Keeping Safe Schools: The Roles of Parents and Community" (Wanat), "The Involvement of Community Agencies in the Development of Safe Schools" (Pool and Pool), School Based Intervention: The Tuscon, Arizona, Model" (Bornfield and Pfeuffer), "Technology to Create Safer Schools" (Townley and Martiniez), "Extra Curricular Activities: Asset or Hindrance" (Engelking and Hoadley). Part IV concludes the publication with "Educational Reform in Changing Contexts of Families and Community: Leading School-Interagency Collaboration" (Bjork), and "Violence in Our Schools" (Tolley).

Lebowitz, M., "Smile, Vandals--You're on Candid Camera," *School Planning and Management* **36:12, Pgs. 28-29, December 1997.**

Describes the Huntsville, Alabama, school district's use of surveillance cameras and other high-tech equipment to ward off arson, theft, and vandalism. Also describes how these efforts reduced repair and replacement costs and helped the district retain its insurance coverage.

Leisner, Hava., "No Blanket Security Measures," *School Construction News* **4:6, Pgs. 31-33, September- October 2001.**

Presents a discussion with Jefferson County, Colorado, Architect Jack Swanzy, who explains how security is implemented in his 148-school district in the aftermath of the Columbine tragedy. Discusses the use of key management, videotapes, on-site police, and staff emergency communications.

Lindstrom, P., "Patterns of School Crime: A Replication and Empirical Extension," *British Journal of Criminology***, Vol. 37 (1) Winter 1997.**

According to the study, a greater number of the schools victimized by crimes are likely to experience multiple acts in a short period of time, and will likely suffer a variety of other crimes as well. The study considers property and violent crimes without deference, and suggests that preventative efforts in one area may impact the other. The study notes a correlation among the neighborhood or edge characteristics of schools and crime levels. However, no apparent relationship was observed between preventative measures and crime levels. The study suggests that indicators and predictors of crime, and preventative plans, should consider the number of crimes occurring during any given period of time. Lastly, the study indicates that the location of the school could also be an indicator or predictor of school crime.

Meeker, B. L., "Is B less than PL? Economic Tort Law Analysis and Our Public Schools: An Opportunity Foregone," *Creighton Law Review* **31:4, Pgs. 1413-46, June 1998.**

The article reviews the facts and holdings in BeShears v Unified School District No 305 (Kansas Supreme Court). The author further examines the history of school law and negligence issues in Kansas. The article then notes the significance of economic tort law theory in the United States.

Nason, R., "Maintaining Security in an Insecure World: New Strategies Are Emerging to Help Architects Design Without a Bunker Mentality," *Architectural Record***, December 2000.**

Discusses security issues of buildings in the public and private sector, including schools that may be vulnerable to malevolent actions. Describes CPTED principles and includes a case study of Chesterton, Indiana, a new school incorporating 125 surveillance cameras that is considered state of the art in creating a safe place for learning.

Nathan, J., and Febey, K., *Smaller, Safer, Saner, Successful Schools*, **The National Clearinghouse for Educational Facilities, 2001.**

The report provides brief case studies of 22 public school buildings in 12 states, representing urban, suburban, and rural communities, including both district-run and charter schools. The studies demonstrate the schools' ability to improve academic achievement and behavior in safe, nurturing, and stimulating environments. The researchers say the case study analysis reveals that on an average, smaller schools provide a safer and more challenging school environment that creates higher academic achievement and graduation rates, fewer disciplinary problems, and greater satisfaction from families, students, and teachers. The report also states that schools that share facilities with other organizations offer broader learning opportunities for students, their families, and present a way to efficiently use tax dollars.

National Crime Prevention Council, *Designing Safer Communities: A Crime Prevention Through Environmental Design Handbook, 1997.*
http://www.ncpc.org/

The handbook outlines the benefits of Crime Prevention Through Environmental Design (CPTED), and emphasizes the fact that CPTED involves police officers, residents, local planners, and members of other local agencies in designing a physical environment that reduces the opportunity for crime and makes occupants feel safer. The book demonstrates that the CPTED concept can be applied to specific sites using examples of successful efforts. The book explores how to engage community organizations, gather information, and initiate a discussion of the positive effects of CPTED on a neighborhood's quality of life. The book also provides sample survey forms, planning guidelines, and a detailed list of organizations, literature, and CPTED experts.

National Crime Prevention Council, "Safer Schools and Communities by Design: The CPTED Approach," Atlanta, Georgia, April 2002.

This publication is the training manual used by NCPC consultants Carter and Carter Associates for a two- day training session conducted in Atlanta for public school officials, school resource officers, and lay citizens interested in crime prevention planning. It includes sections on behavior and the school environment, CPTED concepts and principles, wayfinding and travel routes, blueprints and CPTED reviews, as well as the *1993 Florida Safe School Design Guidelines.*

National Center for Educational Statistics, Bureau of Justice Statistics, *Indicators of School Crime and Violence*, **October 2000.**
http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2002113

The report is a collaborative effort between the Bureau of Justice Statistics and National Center for Education Statistics. The report presents data on crime at school from the perspectives of students, teachers, principals, and the general population from an array of sources--the National Crime Victimization Survey (1992-99), the School Crime Supplement to the National Crime Victimization Survey (1989, 1995 and 1999), the Youth Risk Behavior Survey (1993, 1995, 1997 and 1999), and the School and Staffing Survey (1993-94). The report examines crime occurring in school as well as on the way to and from school. Data for crime away from school are also presented to place school crime in the context of crime in the larger society. The report provides the most current detailed statistical information to inform the nation on the nature of crime in schools.

Newman O., *Defensible Space: Crime Prevention Through Urban Design*, **Macmillan, New York, 1973.**

The benchmark work in the field, this book concentrates on physical design elements as a means of preventing and deterring crime in the environment. The focus of the book is on Newman's experiences in public housing projects in St. Louis and New York. Ideas of territoriality, surveillance, place image, social stigma, and maintenance relative to crime prevention are eloquently expressed in this work. The issues are relevant to present day school planning and design.

North Carolina Department of Public Instruction, Alternative and Safe Schools Section; Raleigh, NC, Assessment Screening Inventory for Safe, Orderly, and Caring Schools, ERIC no: ED443270.
www.dpi.state.nc.us/alternative/screening.html
>   Data collecting forms are provided for conducting a public school safety assessment-screening inventory for the school's physical, social, and cultural environment. Data sheets assess traffic control, surveillance, access control, safety devices and equipment, and safety provisions and planning, with directions for the use of the assessment forms.

Polack, I. and Sunderman, C., "Creating Safe Schools: A Comprehensive Approach," *Juvenile Justice*. 8:1, Pgs. 13-21, June 2001.
>   Discusses the complexity of youth violence and the activities needed to prevent it. Discusses the importance of comprehensive safe school plans that require collaboration with the community. Further discusses the development of comprehensive safe school planning to foster safe environments for students and teachers.

Prager, Gary C., "Designing Safe Schools," *American School and University*, Vol. 73: Pgs. 40, 42-43, July 2001.
>   Explores facility design techniques that schools can use to enhance security in the absence of built-in security systems. Highlights security design concepts, including those involving site accessibility, facility access, circulation management, and territorial definition. Report indicates that schools and the people hired to design school facilities can take steps to head off potential trouble. The report distinguishes between two "place-based" crime mitigation strategies: passive and active. The latter includes mechanical and organized surveillance strategies: CCTV and security. The former encompasses natural design elements: site accessibility, facility access, circulation management, and territorial definition.

Queeno, C., "What's Ahead for Campus Security?" *College Planning and Management* 3:3, Pgs. 30-32. March 2000.
>   Identifies five trends in security technology and what they mean for colleges and universities in the near future. Trends addressed are: less emphasis on complete system integration; increased prevalence of open networking protocol systems; rising use of proximity and smart cards; increased use of digital technology and remote video surveillance; and continued rise of professional services.

Ravitch, D., *Left Back: A Century of Failed School Reforms* Simon & Schuster: New York, NY, 2000.
>   The author explores the debate surrounding school standards, school curriculum, and school methods. The book recounts the growing number of attacks on schools, and the subsequent school reforms. The book explores the origin of several school reform movements and the search for standards throughout the last century. The book also examines the range of traditional and progressive reform movements. The book demonstrates three great errors over the course of the last century: 1) the belief that schools are expected to solve all of society's problems, 2) the belief that only a portion of children need access to a high quality "academic curriculum," and 3) the belief that schools should emphasize students' immediate, or temporal, experiences and minimize, or even ignore, the transmission of knowledge. The book conveys the importance of a liberal education, or "academic curriculum," for children, and reflects upon an understanding of the world in which children live.

Reid, D. L., "Building a Safe Environment," American School and University, Vol. 73: 3, Pgs 386-90, November 2000.
>   Explains how proper site and facility assessments can create a school atmosphere that discourages violence. Issues involving access, general appearance, surveillance, comfort and convenience, security systems, and equipment are addressed. The report supports a comprehensive, custom-tailored action plan, incorporating teacher training, student programs, clearly defined discipline codes, physical security policies and procedural strategies (i.e., locker searches, pat and frisk, visitor check-in, etc.), and site and facility assessment to ensure that the environment discourages inappropriate behavior by providing clear sightlines, securer door hardware, and ample circulation. The report emphasizes that architectural planners proficient in security-related school design issues are a tremendous asset -- to balance all facets of a facility in proposing effective and affordable solutions. Lastly, the report supports the implementation of every available security strategy and every aspect of site and building design: general appearance, access, surveillance, comfort and convenience, systems and equipment, and specialized spaces.

Rich, T., "Problem Solving With Maps," *National Institute of Justice Journal*, **Pgs. 3-9, October 1999.**

Discusses the importance and beneficence of combined database and display mapping analysis, with respect to Community Safety Initiatives such as the Comprehensive Communities Program, Operation Weed and Seed, and other community revitalization efforts. The article discusses how computer-mapping software that combines multiple data sets into one display may be used: 1) to isolate factors, which may contribute to crime, 2) to reduce operating costs and manage resources more effectively, and 3) to assess the efficacy of interventions. The article discusses a Redlands, California, study, which combined crime data with data from citywide surveys on risk factors to determine where resources were needed most. Also discusses a Temple University pilot test conducted which combined survey victimization data from students who rated geographic regions of the campus, with crimes linked to specific locations throughout the interior and exterior of buildings on campus.

Ross-Utley, A. L., "The Perceived Impact of Pennsylvania's Act 26: Efforts to Control Violence in Pennsylvania's Public Schools," Widener University: Dissertation, 2000.

The purpose of the study was to identify the safety measures, violence prevention programs, and community outreach strategies implemented in Pennsylvania's public school system, and ascertain any relationships between these programs and perceived changes in student misconduct and violence. The study found that the level of violence has remained the same or decreased in the majority of Pennsylvania's public school districts between 1995 and 2000. A significant difference was found in school districts' implementation of several safety measures, violence prevention programs, and community outreach strategies before and after 1995. Although the study revealed no significant difference among district size and economic status, associations did exist between the implementation of violence prevention programs and the size and wealth of the district.

Seaborne, M., *Primary School Design,* **Rutledge & Kegan Paul, Ltd. : London, 1971.**

The book is a short case study of primary school buildings in differing parts of England. The book aims to foster discussion relating to primary school design by showing the relevance of past experiences to present problems. The book discusses the importance of the environment, and the need for consultation, control, and follow-up studies to derive design concepts and elements in consideration of the education component. The book discusses several architectural school designs: the one row plan, the central hall plan, the veranda and quadrance plan, and the corridor plan, in the rural, urban, and suburban environment.

"Schools Can Help Stem Violence by Taking Charge of Public Areas," University of Michigan News and Information Services: Ann Arbor, MI, 1999.

The study explores student teacher roles and transactions directed towards preventing school violence and crime in certain "hot spot" locations. The study found that acts of violence occurred in locations without an adult presence or where such presence is lacking (i.e., parking lots, gymnasiums, dining halls, and assemblies). In the report, teachers regard these places as outside their areas of "ownership." The study notes that most school guidelines have not adequately defined zones of responsibility for teachers, students, and the community. The authors conclude that preventative strategies should identify and reclaim hot spots, in contrast to targeting hot suspects and suspect behavior.

"School Shootings Taken Out of Context Don't Justify Harsher Laws, Experts Say," *Youth Crime Alert*, **December 1999.**

The study shows that school-related deaths have declined in recent years. Contrary to public perception, homicides are in decline. The youth of 1976 were more likely to be threatened with a weapon at school than today's youth. The authors conclude that the media created "moral panic" has led to more restrictive laws, which may be unnecessary as well as harmful.

Schneider, T., Walker H., and Sprague J., *Safe School Design: A Handbook for Educational Leaders,* **ERIC Clearinghouse on Educational Management: Eugene, OR, 2000.**

This resource guide compiles research on safe school design, focusing on effective design, usage, and supervision strategies. The intent of the authors is to synthesize information on the topic of school safety, making these concepts available to school board members and school personnel.

Schneider, R.H., and Kitchen, T., *Planning for Crime Prevention: A Transatlantic Perspective,* **Routledge: New York, NY, 2002.**
>Discusses issues concerning crime and the fear of crime. The book discusses the contribution urban planners and a comprehensive planning process can make in response to these issues. The book focuses on the extent to which opportunities for crime may be reduced or prevented through design, planning, and management of the built environment. The first part of the book introduces the concept of place-based crime prevention and presents a context for understanding ideas and practices in this field. Via a series of case studies, the second part of the book presents place-based crime prevention policy and practice in the USA and the UK. The third part of the book compares the differing perspectives and positions between the USA and the UK. The book is for anyone who wants to know about how planning processes and crime prevention activities can be more effectively integrated.

Small, M. and Tetrick, K. D., "School Violence: An Overview," *Juvenile Justice* **8:1, Pgs. 3-13, June 2001.**
>Discusses the challenges facing schools and the need for a continued effort to keep students and staff safe from harm. Discusses the importance of understanding the nature of these challenges and efforts to devise effective strategies to prevent school violence and promote school safety.

Stephens, R. D., "National Trends in School Violence: Statistics and Prevention Strategies," In Goldstein, A. and Conoley, J. C., School Violence Intervention: A Practical Handbook, Pgs. 72-90, Guillford Press: New York, 1997.
>The article reports that violent and disruptive behavior is not confined to socioeconomic group, cultural group, or ethnic community. The article reports that teachers want better security and safety on school campuses, and further indicates that teachers feel that better security, safety, and comfort on school campuses is requisite to a high quality education. The report noted that some of the best teachers and students have dropped out of the educational system because of violence and fear. The article lists 48 intervention strategies for preventing violence and increasing school safety.

"The Lethal Threat: Security Countermeasures for Schools," *Today's Facility Manager Online,* **September 1998.**
>Educational facilities managers have always faced distinct challenges in creating environments conducive to learning while ensuring safety and security. Metal detectors and CCTV cameras do not create a friendly, inviting atmosphere for students; public access is always an issue since most students come and go throughout the day. Public schools must deal with the student population of the community they serve and facilities managers often have very little control during non-school hours. Technical and human factors, both internal and external, must be examined carefully in this complex issue.

"The Making of Safe and Secure Schools." *Schoolhouse of Quality* **3:l Pgs. 11-15. Spring 1999**.
>Explains why the architectural design of school facilities is the first step in the process of making safer schools. School areas examined include the front entrance design, the design of corridors, stairwells, and restrooms. The article also looks at building placement. Other safety considerations discussed include lighting and other visibility enhancements, as well as the use of law enforcement presence.

Thomas Jefferson Center for Educational Design: Curry School of Education, University of Virginia, Charlottesville, VA., *School Safety Audit: Protocol, Procedures, and Checklists***, 1997.**
http://curry.edschool.virginia.edu/centers/jefferson/
>The 1997 HB 1851 directs local school boards to require all schools under their supervisory control to conduct school safety audits. The purpose of the audit is to assess the safety conditions in each public school.

Trump, K. S., "Security Policy, Personnel, and Operations." In Goldstein, A. and Conoley, J. C., *School Violence Intervention: A Practical Handbook.* **(Pgs. 265-289), Guillford Press: New York, 1997.**
>The article suggests that safe schools begin with an honest shift from a traditional framework influenced by denial, image concerns, and politics, to a new framework in which school security efforts are viewed as proactive measures performed consistently and unapologetically. The author encourages each district to avoid looking for "the" panacea or "the" checklist for perfect school security, and instead conduct an in-depth review of its own beliefs, policies, procedures, and practices related to school safety and security -- past, present, and future.

US Department of Education and Justice, *1999 Annual Report on School Safety.* **Washington, DC, 1999.**

       The study provides international data concerning the nature and scope of school violence. The reports indicate that students in school today are less likely to be victimized than in previous years. The study points to certain groups of people, as indicators, and predictors of violence and crime. The report provides case studies of successful school-community relations and contact information for agencies, organizations, and Web sites dedicated to safe schools.

Virginia State Department of Education, Richmond, *Checklist for the Safety and Security of Buildings and Grounds***, 1997.**
http://www.pen.k12.va.us/VDOE/Instruction/schoolsafety/checklis.html

       VDOE provides an evaluation checklist for assessing a school's strengths and weaknesses relative to safety and security of buildings and grounds, as well as assessing development and enforcement of policies, the presence of intervention and prevention plans, staff development, parent and community involvement, opportunities for student involvement, development of a crisis management plan, and the standards for security personnel. The checklist also includes advice on audit protocol and procedure along with guidelines for conducting school safety audits.

Warner, D. and Kelly, G., *Managing Educational Property: A Handbook for Schools, Colleges, and Universities* **The Society for Research into Higher Education, 1994.**

       The primary objective of this book is to change attitudes by illustrating the importance of property and by making its management more accessible and intelligible. The book shows how the educational estate strategic plan should fit into the overall strategic plan of the institution, and, at the same time, deal with issues of property and implementing the strategic plan. The book illustrates a multitude of property decisions which may have been ignored or forgotten, but which can no longer be overlooked during the present limits on funding and capital funds.

Note: In addition to the references noted above, several other resources provide recommendations, advice and strategies to design, develop, and implement plans for a safe and secure learning environment which focus on assessing potential threats, preventing and managing disruptive incidents, and capturing and reporting data about incidents, and, in doing so, provide guidelines and checklists for conducting safe school security audits as part of a comprehensive security plan:

"A Checklist for Safe Schools," *Educational Leadership* **57:6 Pgs. 72-74. March 2000.**

Agron, J., "Safe Havens: Preventing Violence and Crime in Schools." *American School and University* **71:6 Pgs. 18-20, 22, 24. February 1999.**

Coburn, J., "School Security: Where Does Technology Fit In?" *School Planning and Management* **39:l0 Pgs. 35-38, Oct 2000.**

Felder, L.I., "Safe and Sound." *American School & University* **69:8 Pgs. 32-34. April 1997.**

Flanary, R.A., "Making Your School a Safe Place for Learning!" *Schools in the Middle* **7:2 Pgs. 43-45, 64. November-December 1997.**

Fleming, C., "Lighten Up!" *School Planning and Management* **40:2 Pgs. 48-51. Feb 2001.**

Funck, G., "Armed with the Basics." *American School and University* **72:1 Pgs. 38, 40, 42, 44. September 1999.**

Funck, G., "The Building Blocks of School Security." *School Business Affairs* **65:6 Pgs. 29-31. June 1999.**

Gaustad, J., *The Fundamentals of School Security*, 1999.
 www.eric.uoregon.edu/publications/digests/digest132.html

Hubler, G.L., "Designs on Security." *School Planning and Management* 38:4 Pgs. 36-37, April 1999.

Kelly, A., "Security Gap." Education FM 2:1 Pgs. 16-19. February 1999.

Kennedy, M., "Fighting Crime by Design." *American School and University* 73:9 Pgs. 46, 48, 50., May 2001.

Kosar, J.E., and Ahmed, F., "Building Security into Schools." *School Administrator* 57:2 Pgs. 24-26, 31-35. February 2000.**

Longworth, D., "The Ins and Outs of Access Control." *School Planning and Management* 38:5 Pgs. 45-46, 49. May 1999.**

Lupinacci, J.A., "Advanced Planning." *American School and University* 72:8 Pgs. 36-39. April 2000.**

National Education Association, *NEA Action Sheet: Safe Schools.* **Washington, DC., 1998.**

Peters, R., "Site Design for Greater Security." *School Planning and Management* 38:7 Pgs. 30-32. July 1999.**

Reid, David L., "Designed for Learning -- And for Safety." *School Planning and Management* 39:8 Pgs. 43-48. August 2000.**

Schmidt, Wayne S., "Security on a Budget." *American School and University* 72:10 Pgs. 30-34. June 2000.**

Steward, G.K., and Knapp, M.J., "How to Modify Your Facilities to Minimize Violence and Vandalism." *School Business Affairs* 63:4 Pgs. 43-46. April 1997.**

Sturgeon, J., "Security vs. Safety." *College Planning and Management* 2:l0 Pgs. 21-24. October 1999.**

Trump, K.S., "School Security Consultants and Overnight Experts: How Not to Be Exploited." *School Planning and Management* 38:11 Pgs. 30-33. November 1999.**

Utah State Office of Education, Salt Lake City, UT, *School Violence: Physical Security*, **2001. ERIC no: ED449640.**

Whitehouse, B., Patel, M., and Gofton K., *Crime Prevention in Schools: Closed Circuit TV Surveillance Systems in Educational Buildings: Building Bulletin No. 75*, **1991. ERIC no: ED431303.**

William, C., "Technology's Role in Security Day., *American School and University* 72:1 Pgs. 54-55. September 1999.**

American Association of School Administrators (AASA)
http://www.aasa.org
   One of elementary and secondary education's longstanding professional organizations. Committed to providing highly qualified leaders, and developing excellence in educational administration by supporting laws, policies, research, and practices to improve education.

American Institute of Architects Committee on Architecture for Education (AIA/CAE)
http://www.aia.org/cae/
   The AIA's professional interest group on issues related to pre-kindergarten through university level educational facilities.

Campus Safety, Health and Environmental Management Association (CSHEMA).
http://www.cshema.org/
   HEMA is dedicated to assisting the membership in advancing safety, health and environmental quality in higher education. HEMA is the definitive resource on best practices for this area of planning. Includes an extensive list of resources on campus safety.

Center for Educational Innovation-Public Education Association
http://www.cei-pea.org/
   The Center has more than 20 years of experience in converting large school buildings into small schools. It publishes information and conducts workshops on converting schools.

Center for the Prevention of School Violence at North Carolina State University
http://www.ncsu.edu/cpsv/
   Established in 1993 at North Carolina State University, the Center serves as a primary point of contact for dealing with the problem of school violence. The Center is currently working on several special projects and is a nationally recognized resource for school resource officer (SRO) programs.

Center for School Change
http://www.hhh.umn.edu/centers/school-change/
   The Hubert H. Humphrey Institute of Public Affairs, University of Minnesota, conducts research and publishes information regarding the creation of smaller, personalized learning environments, including information on the Gates Smaller High School Learning Communities Project and the New Twin Cities Charter School Project.

Charter Friends National Network
http://www.charterfriends.org
   The Network provides technical assistance to charter schools across the nation. Many of its resources were developed or co-developed by staff from the Charter Schools Development Center.

Clearinghouse on Rural Education and Small Schools
http://www.ael.org/eric
   The ERIC clearinghouse responsible for gathering and disseminating information on small schools, migrant education, American Indian education, outdoor education, and rural education.

Coalition for Community Schools
http://www.communityschools.org
   The Coalition works toward improving education and helping students learn and grow. It offers a range of supports and opportunities for children, youth, families, and communities.

Council of Educational Facility Planners, International (CEFPI)
http://www.cefpi.org
   The Council is an international professional association whose members -- individuals, institutions, and corporations -- are actively involved in planning, designing, building and equipping schools and colleges.

Council of Great City Schools
http://www.cgcs.org/

Education Resources Information Center (ERIC)
http://www.eric.ed.gov/
   Now under the National Library of Education and the Office of Educational Research and Improvement, ERIC produces two monthly indexes, Resources In Education (PIE) and the Current Index to Journals In Education (CIJE). These indexes are available in print, on CD-ROM, and via the Internet. The ERIC database, which can be searched via the Internet, now features more than one million citations, which include school security, school safety, school violence, legal issues, and the use of technology in these areas.

Florida Association of School Resource Officers (FASRO)
http://www.fasro.com
   The members of the Florida Association of School Resource Officers, in a uniform effort, provide support and training to those who work daily with our greatest assets: children. In addition, FASRO can help ensure a safe educational environment through advanced training and networking of law enforcement officials.

Florida Information Resource Network (FIRN)
http://www.firn.edu/
   The Florida Information Resource Network is an extensive network which electronically links all of Florida's public education entities, including the Florida Department of Education, to data base resources which serve public education. FIRN's primary mission is to provide electronic pathways and procedures enabling user access to computing services for Florida's public educational community.

International Association of Professional Security Consultants (IAPSC)
http://www.iapsc.org
   A nonprofit professional association of independent, nonproduct-affiliated, professional security consultants. The IAPSC Web site includes a directory of experts, full text of the current issue of the association newsletter, and information on events and other services.

Keep Schools Safe
http://www.keepschoolssafe.org
   A joint initiative of the National Association of Attorney Generals and the National School Boards Association, which have joined together to address the escalating problem of youth violence. The Web site was launched to facilitate sharing of ideas and program information by providing up-to-date information on successful programs and ideas.

Kentucky Center for School Safety (CSS)
http://www.kysafeschools.org
   The Kentucky CSS provides a clearinghouse of information and materials concerning school violence, training and technical assistance to schools and law enforcement agencies. They provide data collection evaluation of school safety programs and information on the best practices. The Kentucky CSS is operated by a consortium of three state universities (Eastern Kentucky University, University of Kentucky, and Murray State University), with the assistance of the Kentucky School Boards Association.

National Alliance for Safe Schools (NASS)
http://www.safeschools.org
Founded in 1977 by a group of school security directors to provide technical assistance, training, and research to school districts interested in reducing school-based crime and violence. NASS products and services include school security assessments, educational programs for troubled youth, training programs for administrators, teachers, and students, various publications, and safe school workshops, which are held at different locations around the country. The NASS Web site includes descriptions of the workshops and a 2-3 month calendar of workshop locations.

National Association of School Resource Officers (NASRO)
http://www.nasro.org/home.asp
An organization made up of school-based law enforcement officers and school administrators. The association serves as the largest training organization for school-based police and district personnel in the Nation. NASRO sponsors an annual training conference each summer and regional training throughout the year.

National Association of School Safety and Law Enforcement Officers
http://www.nassleo.org/

National Clearinghouse for Educational Facilities (NCEF)
http://www.edfacilities.org
NCEF is the U.S. Department of Education's information center for people who plan, design, build, operate, and maintain K–12 schools. An affiliated ERIC clearinghouse, it maintains an information hotline and hosts a Web site with thousands of on-line resources on school facilities.

National Crime Prevention Council
http://www.ncpc.org or www.weprevent.org
An organization dedicated to helping millions of people across the United States prove that building a sense of community and taking commonsense precautions can cut crime and counter the fear of crime. The council aims to stop school violence and provides many useful suggestions and links included on their web site.

National Criminal Justice Reference Service (NCJRS), School Safety.
http://www.ncjrs.org
NCJRS is a federally sponsored information clearinghouse for people around the country and the world involved with research, policy, and practice related to criminal and juvenile justice and drug control. The website has many resources regarding school safety, including facts and figures, legislation, publications, grants and funding programs, training and technical assistance, and links to other websites with school safety information. NCJRS services available through the Web site: the Justice Information Center (JIC) with links to resources on many specific topics including juvenile justice and drugs and crime, and a NCJRS Abstracts Database providing summaries of criminal justice literature, government reports, journal articles, books, and more—and which is searchable free on the Web.

National Resource Center for Safe Schools
http://www.nwrel.org/safe/
Established by the Northwest Regional Educational Laboratory, the resource center works with schools,, state and local education agencies, communities and other concerned individuals to create safe learning environments and prevent school violence. Includes publications, facts and figures, databases, recommended readings, calendar of events, and links to other sites.

National School Safety Center (NSSC)
http://www.nssc1.org/
A nonprofit partnership of the U.S. Department of Justice, the U.S. Department of Education, and Pepperdine University. NSSC was created in 1984 with the charge to promote safe schools -- free of crime and violence -- and to help ensure quality education for all American children. NSSC has a number of publications, films/tapes, and posters available for sale.

National School Safety and Security Services (NSSSS)
http://www.schoolsecurity.org
       An independent, Ohio-based, national consulting firm specializing in training and technical assistance on secondary and elementary (K-12) school security, crisis management, gangs, juvenile crime Issues, and crisis preparedness. NSSSS services include presentations and training; security assessments; expert witness and litigation consultation; and related management consulting.

North Carolina Department of Public Instruction, Alternative and Safe Schools Section; Raleigh, NC. *Assessment Screening Inventory for Safe, Orderly, and Caring Schools*, **ERIC no: ED443270**
www.dpi.state.nc.us/alternative/screening.html
       Data collecting forms are provided for conducting a public school safety assessment-screening inventory for the school's physical, social, and cultural environment. Data sheets assess traffic control, surveillance, access control, safety devices and equipment, and safety provisions and planning, with directions for the use of the assessment forms.

Office of Juvenile Justice and Delinquency Prevention
http://www.ojjdp.ncjrs.org/

Partners Assuring Safer Schools (PASS)
http://www.fema.gov/reg-vii/pass/passmain.htm
       PASS is a cooperative effort among approximately 20 federal agencies and other organizations to coordinate resources involved in creating disaster-resistant, safe school environments. Each of the participants contributes resources, expertise, and technical assistance. This Web site includes a PASS toolkit, and information on FEMA Project Impact Grants to Promote School Safety.

Pennsylvania Center for Safe Schools
http://www.center-school.org/viol_prev/css/index.html
       Under direction from the Pennsylvania Department of Education, the Pennsylvania CSS addresses problems that disrupt the educational process and affect school safety. Training, technical assistance, and a clearinghouse of video and print materials are available to help schools implement effective programs and practices. The Center also maintains a database of resources available to assist school districts.

Programme on Educational Building (PEB)
http://www.oecd.org/EN/home/0,,EN-home-611-20-no-no--no,00.html
       Based in Paris, PEB operates within the Organization for Economic Co-operation and Development to promote the international exchange of ideas, research, and experience in the field of educational facilities.

Safe Schools
http://www.aasa.org/
       American Association of School Administrators list of resources on safe schools.

Safe Schools Coalition
http://www.thesafeschools.org/
       A nonprofit organization that provides a network for organizations working for safer schools and communities. Sponsors workshops and provides links to related resources.

Small Schools Project at the Center on Reinventing Public Education
http://www.smallschoolsproject.org/index.html
       The Small Schools Project provides technical assistance to the new small schools being established in Washington State and elsewhere. Its Web site includes research summaries, articles, case studies, organization names, tools, professional development and facilities information, and job notices.

Small Schools Workshop
http://www.smallschoolsworkshop.org
        A group of organizers, educators, and researchers based in the College of Education at the University of Illinois at Chicago. The Workshop collaborates with teachers, principals, and parents to create new, small, innovative learning communities in public schools. Its Web site includes an archive of articles, numerous links, a bookshelf, project listings, a calendar, and a directory of small schools.

Thomas Jefferson Center for Educational Design, University of Virginia
http://www.tjced.org
        The Thomas Jefferson Center promotes the design of learning environments that foster the acquisition of knowledge, skills, and wisdom in a climate of caring, cooperation, and mutual respect.

U.S. Charter Schools
http://www.uscharterschools.org
        An information clearinghouse and on-line community developed by WestEd in partnership with the U.S. Department of Education and the California State University Institute for Education Reform. Its Web site provides state and school profiles, information resources, and hosts related discussion groups.

U.S. Department of Education Safe and Drug Free Schools Program
http://www.ed.gov/offices/OESE/SDFS

Wisconsin School Safety Coordinators Association
http://www.wssca.org/
        Includes information on school safety and health, promotes new and existing programs, and lists conferences and workshops.

Yale University Bush Center in Child Development and Social Policy
http://www.yale.edu/bushcenter
        The Center has helped create hundreds of collaborations between schools and social service agencies. It publishes information, conducts training, and holds an annual conference.