Seven Important Building Design Features to Enhance School Safety and Security

Building Design, Renovation and Front Entry Concepts
to Enhance School Safety, Security, Climate, Culture
and Emergency Preparedness

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Introduction

There are many opportunities to enhance school safety, security, climate, culture and emergency preparedness through physical design features. This guide introduces some key concepts that can reduce the risk of harm while also enhancing the ability of building occupants to avoid or reduce injury and death if a crisis does happen. Safe Havens International (SHI) produced this document at no cost for the Indiana School Safety Specialist's Academy (ISSSA). Our analysts drew from the experience we have gained through assisting in six statewide school security assessment projects and our work in assessing security for more than 6,000 K12 schools globally.

We also relied on our extensive experience in working with architects and engineers to help design safer schools. The seven building design features highlighted in this document were selected because they are among the most common features that are missed in new school construction and renovation projects. While there are a number of other important school safety design features, these are opportunities for improvement that we observe with the most frequency in our assessment work and our security reviews for renovations and new school construction projects. These concepts are part of a larger body of knowledge known as Crime Prevention Through Environmental Design (CPTED).

This document is intended to provide general guidance on safer school design. It is not designed to replace advice or evaluation by qualified school security experts, architects, engineers and other professionals. Schools should also consult with local and state public safety officials when seeking opportunities to enhance safety, security and emergency preparedness. The reader should keep in mind that security hardware, systems, protocols and procedures are often easily compromised if students and staff are not also properly trained, supervised and informed on using these features. Our experience in thousands of public and non-public schools has taught us that effective security approaches are intensively reliant upon proper support by school employees and students if we expect them to be reasonably effective.

Finally, there are no school safety measures that are 100 percent reliable. Some safety and security incidents can still occur in spite of any and all precautions. However, while no school can assure school safety, there are many opportunities to significantly enhance school safety, security, climate, culture and emergency preparedness and thus reduce the opportunity for the risk of crime and accidents through thoughtful planning and design.

Feature 1: Positive Body Language as an Influence on School Safety

Positive school body language created through décor and culture should be considered an inherent and important part of school security. Relevant and appropriate murals, student artwork, and color schemes help improve school climate and culture. Research shows that when students feel a connection to the building, they are less

likely to vandalize it and more likely to prevent or report vandalism. This is part of a CPTED concept known as territoriality. In some buildings, the history of the school itself can be used as one of the focal points of the design. In other cases, bright and resilient flooring can be an excellent way to connect students, staff and parents to a school. New building construction and renovation projects are excellent opportunities to set a positive tone. This is also an excellent opportunity to create spaces that students will appreciate, use and protect. The photos on this page demonstrate ways that positive body language can be created through incorporation of artwork and inviting color schemes into the building design itself.

Photo courtesy of Bibb County Public Schools, Macon, Georgia.

Photo courtesy of the First Academy, Orlando, Florida.

With these concepts in mind, we must always remember that schools are not courthouses, airports, or corporate buildings. To enhance safety and security, a school should visibly and distinctly give the appearance of a place of learning, even after safety and security measures are implemented. Concepts that work in other settings might fail to improve security in schools or even reduce the level of security.

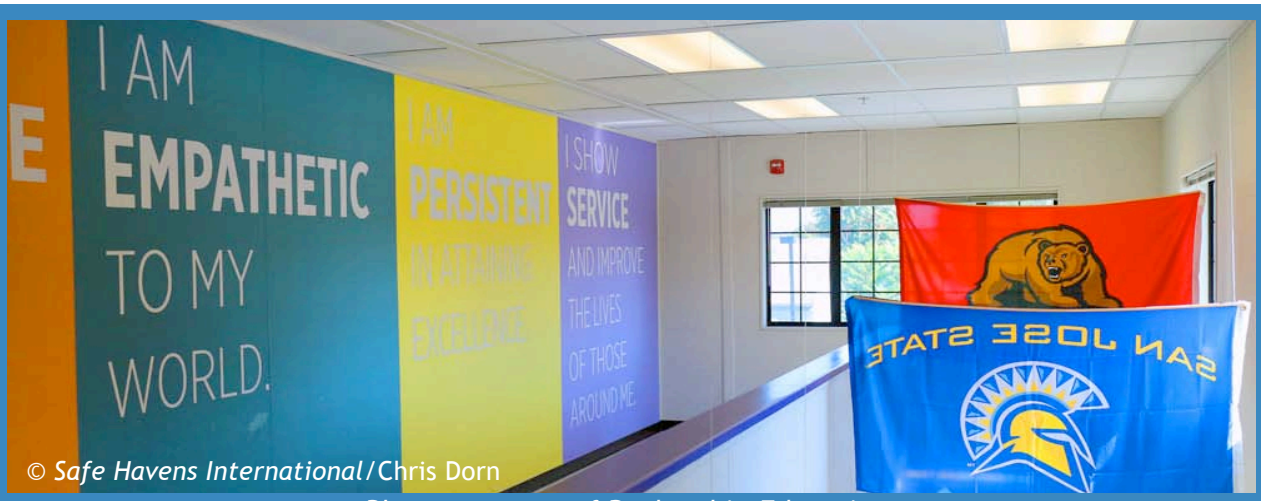

Photo courtesy of Rocketship Education.

These three photos are examples of positive body language built into the design of a newly constructed school with an international curriculum. Photos courtesy of Norman Public Schools, Norman, Oklahoma.

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The photo below demonstrates how even school bathrooms can be used to give positive body language to the facility and create positive territoriality. The use of murals in student bathrooms and in stairwells can be particularly effective in creating a greater connection between students and their schools since these areas are often drab and uninviting. Photo courtesy of Bibb County Public Schools, Macon, Georgia.

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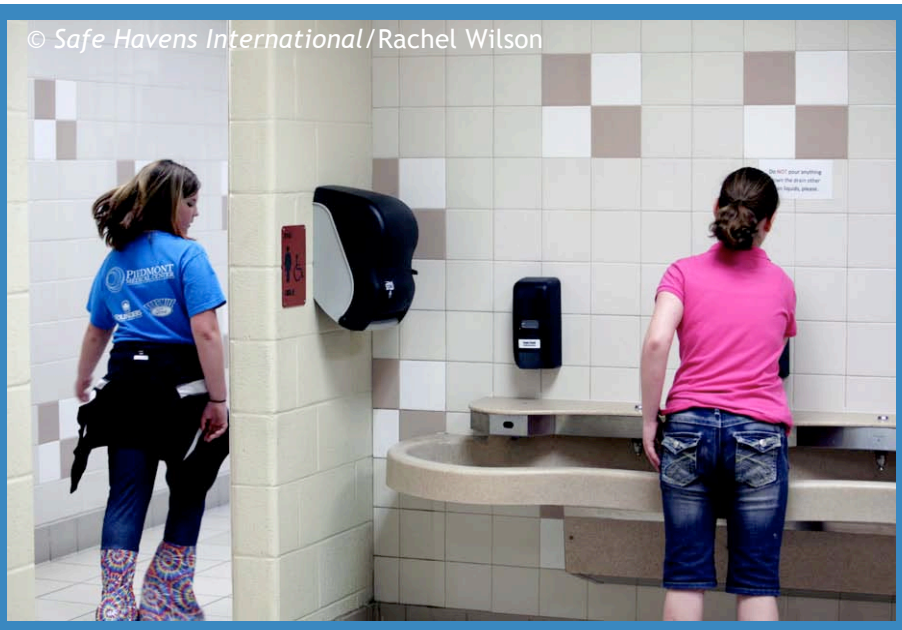
This is an excellent example of how schools can communicate desired behaviors of students in an upbeat and positive manner. Photo courtesy of National Heritage Academy Schools.

Feature 2: Natural Surveillance

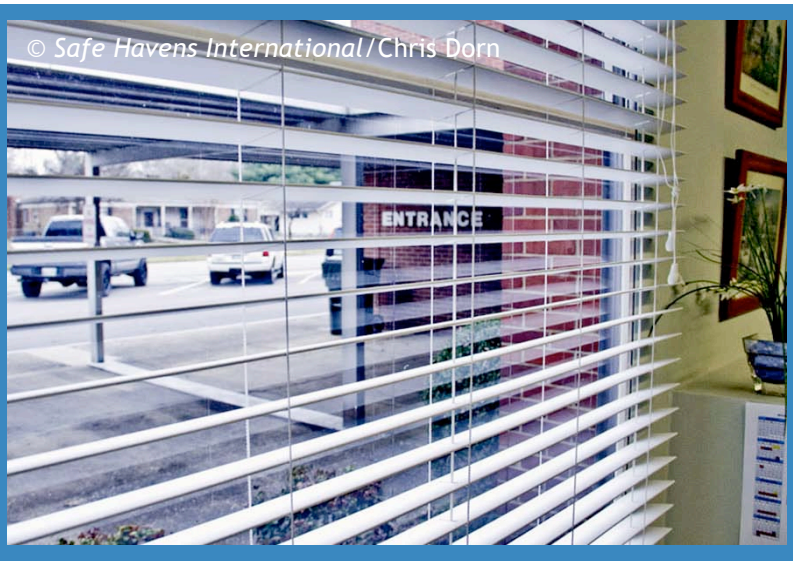
Research shows that natural surveillance has a very powerful deterrence effect on crime because aggressors are afraid that people can see their activities. Natural surveillance primarily involves the ability of people to see each other and to be seen by others without technology. It can even exist where a person who is considering committing a crime merely perceives that they are being watched. It can also mean the ability for people to hear one another to prevent victimization.

One example of the application of this concept is a restroom with a "lazy S" entryway like those that are commonly seen in airports and other public spaces. People also often feel safer in locations with optimal natural surveillance. In schools where existing bathrooms have doors, these can sometimes be propped open by practice or even removed if this will still allow for an adequate level of privacy for students using the restroom. One other option is to replace a solid door with a door that features an air vent to allow better audio monitoring. These types of practices must also be reviewed to prevent fire and code violations.



This student restroom is designed to give an appropriate level of privacy to students while allowing staff to easily supervise students while they are in the restroom and when they wash their hands. The location of the sink in the hallway encourages hand washing and can also reduce bullying that sometimes takes place at restroom sinks. Photo courtesy of Rock Hill Schools, Rock Hill, South Carolina.

Natural surveillance and line of sight should be enhanced and maximized as appropriate throughout the building. The thoughtful placement of windows in relation to student bicycle racks and visitor parking lots is another way to enhance visibility on campus and reduce undesirable privacy and blind spots in critical areas. When utilized in balance, this approach can actually reduce danger and make people feel safer while making those with inappropriate and unlawful intent less comfortable. These design features should be balanced with severe weather and lockdown concerns. There can also be unusual situations where increasing natural surveillance can increase risk. For example, an independent school where children of celebrities or high-ranking government officials might require visual barriers for a playground due to the risk of abduction or an attempt on the life of a high-profile child.



This entryway is designed so that staff members inside the building can easily observe visitors. This type of natural surveillance also depends on staff maintaining visibility through windows and the proper placement of well marked visitor parking spaces to direct these vehicles to appropriate areas that can be monitored from the front office or other occupied interior spaces with windows facing parking lots.

Landscaping and trees are another area where natural surveillance is commonly lost. By carefully choosing plants that will allow for natural surveillance with the selected building design, line of sight can be vastly improved. In this example, the trees and shrubs would not pose a problem if they are properly maintained and trimmed.

Feature 3: Natural Access Control and Front Office Set-up

Natural access control is another CPTED concept that can help staff members control a campus by creating boundaries between public and private space and directing people to appropriate areas. For example, fences, hedgerows, walls and other geographic or building features can be used to define the edge of campus and guide visitors to the main entrance of the school.

This is how one Rocketship charter school campus has created a well defined boundary between the parking lot and the school. The use of bright paint to match school colors also maintains the sense that this is a place of learning and avoids creating a prison like appearance. This photo appears courtesy of Rocketship Education.

Design features can also help protect front office areas. For example, campuses with a single point of entry for visitors can guide visitors to the front office where they can be screened and given a visitor badge after signing in. Well-designed front entry vestibules can allow staff to control access remotely. These areas also typically require either natural surveillance or visibility through the use of cameras or mirrors, as well as a method for staff to speak to visitors, such as a window or an intercom call box. Designs that enhance natural surveillance (such as glass office windows) and the use of high countertops can all enhance the security of the front office suite.

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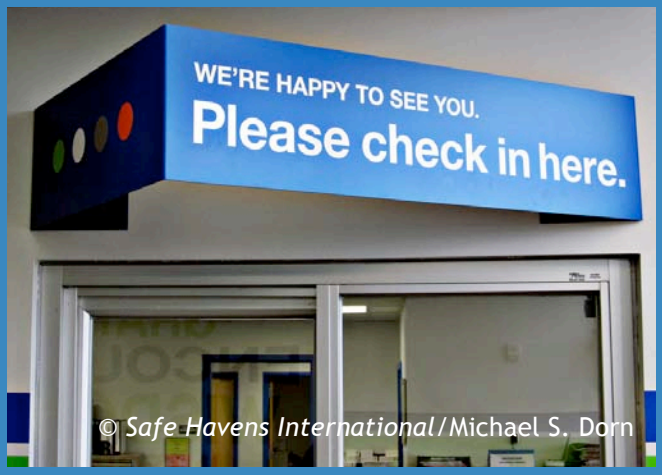
The visitor reception desk should be inviting but allow control of movement. In the above photo, staff can easily see visitors as they approach, and by locking the set of doors to the left after student arrival, visitors can be naturally funneled through the main office where they can be screened. This entry could be further secured by adding a door with buzzer access in the doorway leading from the office into the school. Photo courtesy of South Haven Michigan Public Schools.



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Pleasant but clear signage can help let visitors understand that they need to stop and sign in as they enter the school. One tactic sometimes used by individuals with malicious intent is to avoid the front office area or attempt to bypass sign in procedures. Obvious signage combined with natural access control features is one way to make it more difficult for a person to do so, and gives staff members more authority and confidence when confronting visitors who have not signed in. Photo courtesy of National Heritage Academy Charter Schools.

Applying security films, protective laminates, or clear ballistic protective barriers on front entry glass can slow down an aggressor who tries to shoot or smash his or her way into the school. However, school officials should be aware that aggressors may still be able to force their way through these barriers with enough force, and trespassers may also gain access through side doors or classroom windows that are not similarly treated. In addition, these protective measures are very expensive and have limitations such as deteriorating protective capabilities as they age. Some of these types of barriers are also typically fairly thick and are reliant upon how they are mounted into the window frame. These features can also create a false sense of security among staff who assume that anyone who is in the building has passed through the front office.

School officials should also consider that if ballistic protection is not offered for supportive walls and doors, an aggressor might be able to shoot through these areas to bypass the main entrance. Overall costs of this approach should be weighed against factors including the likelihood they will ever actually be needed, available budget and whether or not greater safety needs have been addressed. For example, while there have been very few instances where aggressors have shot through windows in K12 schools, there have been many instances where school officials have had difficulty warning students and staff who are outdoors because of poor or nonexistent external public address systems. This can be especially critical when tornadoes, hazardous materials or potentially dangerous people or animals are in the area.

Feature 4: Traffic Safety Equipment

School-related traffic fatalities are a leading cause of death for K12 students. Design features relating to traffic safety should be thoughtfully implemented, well maintained, visible and easily understandable to students, staff and visitors.

Physical traffic safety features such as the safety lines, marked crosswalk and brightly colored metal bollards shown in this photo should be combined with positive staff practices, such as these school staff who are equipped with high visibility safety vests, high volume whistles and portable radios as they assist students in exiting vehicles during morning arrival. Photo courtesy of National Heritage Academy Charter Schools.

Thoughtful signage, bollards, roll stops, raised crossings, and other physical features can be used to make parking areas and access roads safer and easier to navigate. For example, schools serving large populations of students whose parents and guardians speak a foreign language should consider signage in those languages. In addition, signage can help staff members, students, and even visitors become what are known as "capable guardians" – those who have the ability and the motivation to exert some level of protection over an area. One way of creating capable guardians out of visitors and students is signage that provides a set of rules as well as a mechanism, such as a phone number or an emergency call box that would allow a person to report inappropriate behavior or call for help. The key is to use signage, design features and campus layout in an integrated fashion to direct users to appropriate areas. Paint, signage and other equipment should be well maintained and updated as needed.

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Photo courtesy of Leander Independent School District, Leander, Texas.

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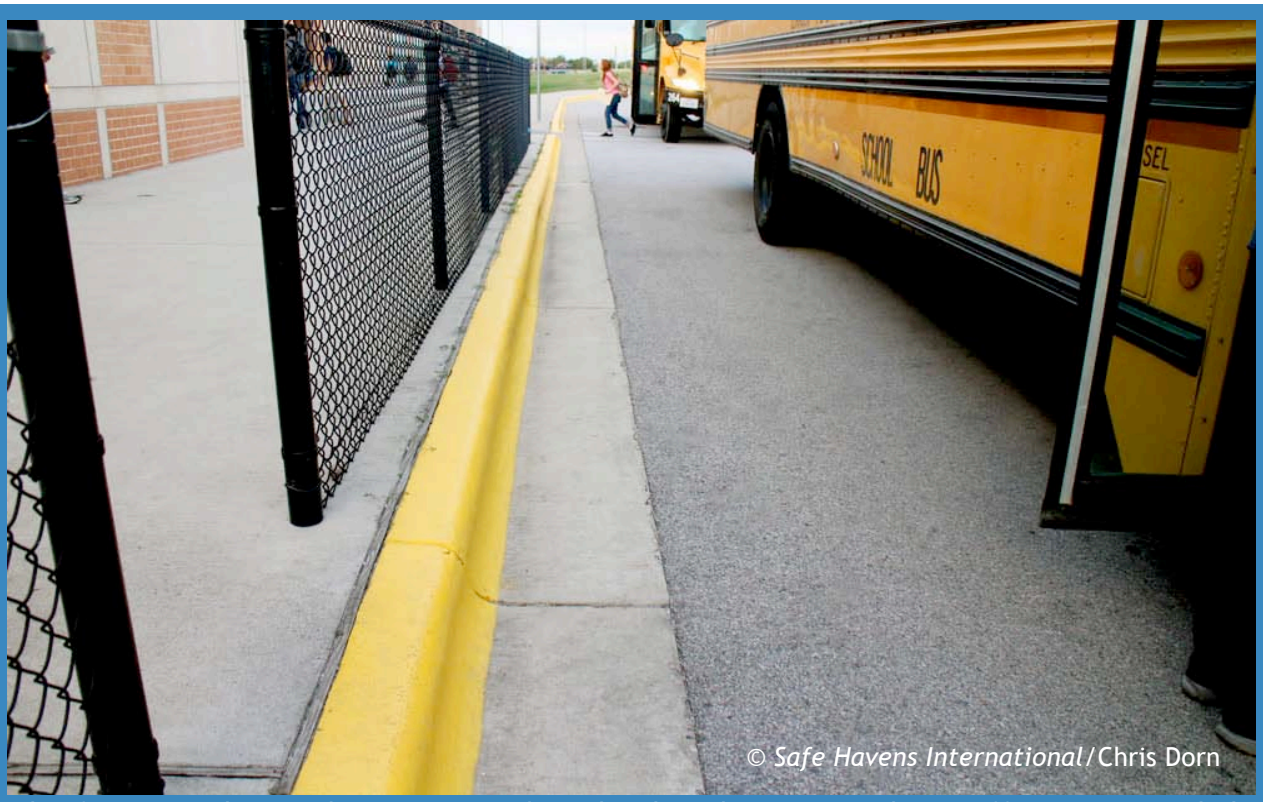
Appropriately placed and well maintained gates, signage and traffic control features such as bollards and curbing can make it easier for staff to control parking areas and prevent undesirable vehicular behavior. Parking lot features such as winding roadways can also help to reduce speed and increase the time available where staff can observe vehicles and visitors as they approach the building.

Designing school buildings and grounds in such a way that school bus drop-off and pick-up areas, parent car drop-off and pick-up areas, and staff parking areas are physically separated can alleviate traffic issues. Optimally, school bus loading and parent/student drive areas should be on opposite sides of the building. Similarly, the road providing school bus access to the school grounds should be separate from the road providing parent and staff access. Any connections between the two areas should be gated, to restrict access during heavy traffic periods. Clear signage and support with consistent enforcement is an important part of this strategy to prevent vehicles other than buses from using these areas.

According to a State Farm Insurance article titled *Prevent Parking Lot Accidents*, their research found that 20 percent of all vehicular accidents happen in parking lots. Those that occur in school parking lots are often in areas in which school buses and personal automobiles intersect. A number of students have died after being struck by school buses, including incidents in Indiana, Ohio and Georgia, just to name a few.

One other way to make bus loading and unloading zones safer is to create clear barriers between the sidewalk and the roadway. One way of doing this is to create fencing or gates that would make it more difficult for students to accidentally enter the roadway. Painted curbs, signs, and consistent enforcement of these policies by school staff are other important parts of this strategy.



This fencing with periodic gaps (spaced one bus length apart) can be an effective way to help prevent students from entering the roadway during bus loading when accompanied by driver and staff training. Photo courtesy of Leander Independent School District, Leander, Texas.

Posting signage at all drive entrances with consent to search notices for vehicles can help deter people from bringing contraband onto school property. In some cases these types of notices can enhance the ability of school and law enforcement officials to search on school grounds. Signage identifying visitor parking areas, no parking/fire zones, student drop-off, student pick-up, no idling, and additional restrictions on anything from skateboards to cell phone usage can also be of benefit. In addition, local zoning regulations may require shielding of parking lots. This can sometimes create hidden areas, thus reducing natural surveillance by the school's capable guardians. This may also interfere with surveillance video system coverage. Parking lots can also attract illicit activity both during and after school hours. Consideration should be given to the amount of camera and lighting coverage needed in a given area. Careful thought should be given to both the type and placement of light sources based on the legitimate activities that may occur after nightfall. Lighting poles in the parking lot can also be designed so that it is more difficult to conceal contraband such as drugs or weapons in the base. Sometimes small details can make a big difference.

Appropriately placed and well maintained gates, signage and traffic control features such as bollards and curbing can make it easier for staff to control parking areas and prevent undesirable vehicular behavior. Parking lot features such as winding roadways can also help to reduce speed and increase the time available where staff can observe vehicles and visitors as they approach the building Light pole bases are typically not secured and can provide hiding places for contraband as demonstrated in the left photo. In the example on the right, the base of the lighting pole has special bolts that can only be removed by staff with the appropriate tool.

School and district officials should consider requiring architectural firms to utilize a qualified traffic engineer when designing school parking areas, egress points, and other related features. Our analysts have observed schools where arrival and dismissal activities are aggravating and even dangerous because campus entrances, roadways, and parking lots were designed without this type of planning. This should be performed with the input of school staff in regards to how they plan to conduct arrival and dismissal at the campus. Architectural firms sometimes take this approach as a cost-saving measure in response to the way bid requirements are articulated. While requiring a traffic study and the assistance of a qualified traffic engineer may

increase the cost of new school construction in the short term, the cost is often modest in relation to the long-term improvements this requirement can achieve. The implications of even a single traffic incident where a student or staff member is injured or killed can far outweigh the cost of this process. In fact, traffic issues are one of the most common concerns expressed at schools we have inspected.

School officials should also strive for positive boundary definition around parking lots to deflect persons and trespassers to designated openings where they can be observed. For example, earth berms and high plantings can be replaced with four-foot metal picket fencing with local plantings to reduce trespassing and improve perimeter security. Fencing should be based on the needs of individual school situations and should take a variety of risk factors into account.

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Perimeter fencing and plantings can aid in directing people where to enter the school grounds and can also reduce trespassing. Wrought style fencing combined with carefully selected plants can also reduce the chances that trespassers or students will be able to climb fencing.

Schools should also avoid creating what are known as "target identifiers" in parking lots. Target identifiers are features that could help an attacker determine the location of an intended victim. The average school employee or parent is not aware that aggressors sometimes attempt to kill or abduct victims from schools, even in low crime communities. A teacher was targeted in this fashion at one of the nation's finest independent K12 schools.

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It is important to find a balance that achieves the desired outcome without putting staff in danger. Instead of providing signs that identify a space by a staff member's name or title, generic "Reserved" signage can be used in some areas or certain areas can be designated as "Staff Parking Only" lots. In addition to administrators and front office staff, target identifiers are commonly seen in parking spaces used by cafeteria staff, athletic coaches and band directors. One exception where target identifiers are generally not a concern are spaces marked for law enforcement use only, since the vehicles that typically park in this space are already clearly marked as law enforcement vehicles.

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Spaces marked "Reserved" instead of "Reserved for Principal" can make it harder for an aggressor to target a specific staff member. If assigned spaces are needed, randomized numbering can be used.

Feature 5: Safer Lockdown Rooms

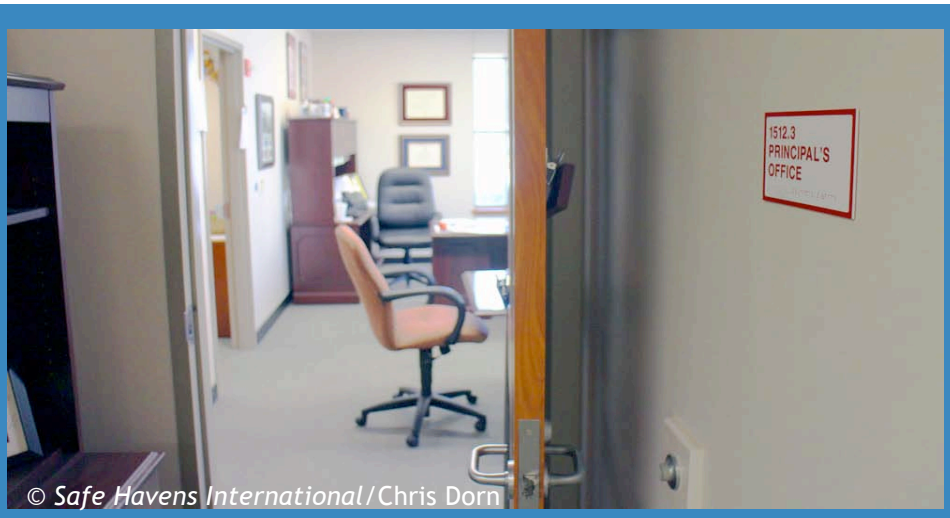
During the design or renovation phase it is important to include offices, storage rooms, and other areas that can be used during potentially violent situations. These areas can sometimes be created by modifying existing spaces. It is important to provide reasonably secure areas that staff can quickly retreat to, secure themselves in and, ideally, communicate from, thus reducing the risk of injury and death to others. Planning for these areas in advance will not only reduce danger for school staff who work in those areas, but can enhance the safety of staff and students throughout the building. This is because these features make it easier for office staff to protect themselves so they can in turn help warn others to implement protective actions and to summon emergency assistance. For example, the front office should have a space that can be rapidly locked but still provides access to the intercom system that can be used to warn the rest of the building and a phone that can be used to call 911. Without this option, staff may be forced to decide between protecting themselves from one or more aggressors and warning others in the building. An ideal lockdown area will have a strong door that can be quickly accessed and then secured, at least one means of communication, and a secondary exit that is also secure. In schools with security cameras, administrative lockdown areas will also have access to monitor and control camera systems. Food, water and emergency supplies including copies of the school's crisis plan should be accessible from this area as well. All staff, including administrators, should also practice using these areas during drills and consider asking district personnel, law enforcement officers or staff from another facility to serve as evaluators to perform functions like checking doors.

Factors that can affect the security of lockdown areas include wall construction, the type of door, room layout and the presence or lack of additional exit doors. This room may need to be kept pre locked with the door open, and staff should practice quickly accessing and securing these areas, especially if this access will require a key.

Some schools set up their administrative lockdown areas as an ad hoc command post where functions like student accountability can be performed remotely using software programs like the one shown in this photo, courtesy of Farmington Municipal Schools, Farmington New Mexico.

Feature 6: Design of Administrator's Offices and Meeting Rooms

Administrative offices, conference rooms, and other areas where parent or student meetings take place are generally safer it they have a secondary exit or the ability for staff members to exit the room if a visitor becomes volatile or tries to trap the staff member in their office and assault them. Thoughtful placement of furniture and secondary exits can help reduce this risk. Desks and other furniture should be positioned so that an angry visitor or intruder cannot easily trap a staff member behind their desk. One large school district that we assessed now makes it a formal practice to include at least two doors in all of their high school principal's offices because of an incident where an administrator was killed by an attacker. In existing schools where there is no secondary exit and the size of the office does not allow for this type of furniture placement, this risk can be addressed by specifically holding all meetings in conference rooms or other areas with a secondary door. Discussing emergency procedures as a team can also help so that staff members know to be alert to danger in nearby offices and to call for help at the first sign of danger. One other strategy that can be used in offices with limited space is to seat visitors furthest from the door so that staff members are near the exit. This can be achieved by either explicitly asking visitors or students to sit in a specific chair or by placing personal items such as jackets or paperwork in the chair where the staff member will sit.



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This office is designed with two exits and office further is arranged so that it would be difficult for the principal to be trapped with no escape route. The staff member in the adjoining office can also easily hear in case police need to be called during a meeting.

Feature 7: Roof Access Features

One of the most common security gaps that our analysts see in schools is easy roof access, both from the exterior and the interior of the building. Low roof sections, catwalks, exposed gutters, utility boxes, and railings are among the common building features that allow easy roof access. Roof access can also be commonly gained through loose items left on the campus, such as pallets, milk crates (such as those in the photo to the right), ladders, and even unsecured benches or tables.

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The milk crates in this photo, which could provide roof access, would be less of a risk if the gates were kept secured at all times.

Most school districts assessed by our analysts have experienced problems with roof access. In one case, an administrator reported that an elementary-aged student had climbed a two-story roof to enter through an unlocked roof hatch and let his friends in so they could play basketball in the school gym on a weekend. In another case a homeless man had repeatedly taken a mattress on the roof and was sleeping there despite being caught and removed numerous times. In one situation where students gained access to play on the roof for a brief period of time, they unknowingly displaced a roofing tile and caused extensive water damage and internal flooding when it rained later that weekend. This example is minor compared to the other types of incidents that could result from student or trespasser access to rooftop areas without the knowledge of building staff. Schools have experienced fatalities due to roof access, and in one school we assessed, a home-school student detonated a small synthetic explosive device on the roof of an elementary school.

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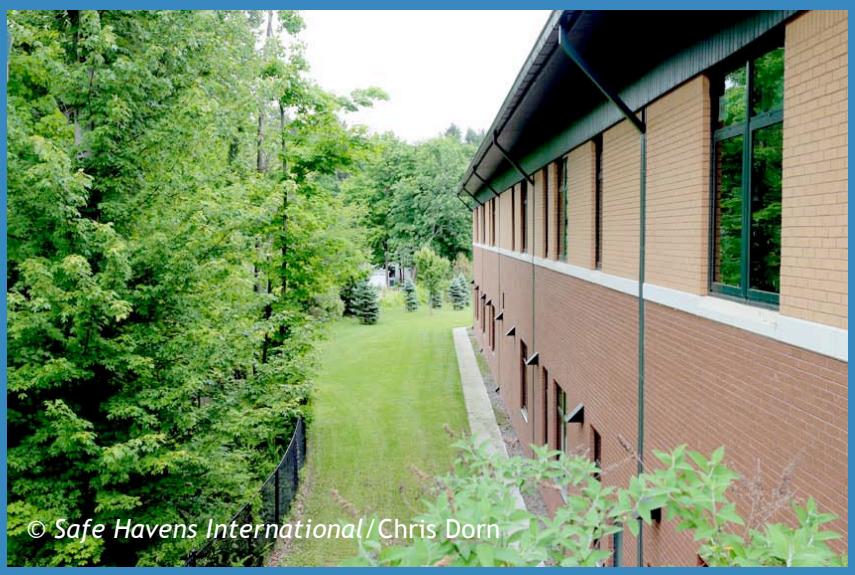
Safe Havens analysts took this photo on a Sunday during a weekend site visit to a school. A group of three young students was seen running along the edge of the roof and they climbed down this gas line as soon as they saw the analysts approach the school. Existing utility lines and gutters can be secured by adding a shroud or other barrier to make them more difficult to climb.

In some cases, roof access can be gained with very little effort. This photo shows an awning that can be easily accessed by climbing over the railing on an exterior stairwell.



The gutters on this school were built with a recessed design to prevent climbing. This is an excellent example of forethought in design to increase security in the finished facility while also achieving improved asthetics. Trees and plantings have also been set back from the building to provide better natural surveillance and remove one more possible point of roof access. Photo courtesy of Danbury Public Schools.

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In many cases, roof access can also be gained from the interior of the school by accessing mechanical rooms, mezzanine areas or other locations that are not properly secured. Interior ladders leading to mechanical areas, crawlspaces, catwalks or roof access should be secured by lockable gates, metal plates or other hardware to prevent unauthorized access. One common area where our analysts often find unsecured interior ladders is the stage or auditorium area. It is not uncommon to find litter, graffiti, drug paraphernalia and even used condoms in these areas.

This photo depicts a common scene in many schools we assess an interior ladder leading to roof access with the padlock left unlocked next to the ladder. Many interior doors that are clearly marked "Roof Access" are found unlocked by our analysts, who are able to proceed up the ladder and find unlocked roof hatches or catwalks. In many cases these areas are hazardous even without the added danger of providing unencumbered roof access. Interior roof hatches should be kept secured with a sturdy padlock, especially if they are in areas accessible to students or visitors.

Conclusion

In this document we have described some simple ways that school design can be used as part of an overall school safety strategy. The techniques discussed here have been very effective for many schools across the U.S. and around the world. There is often little or no cost to utilize them and they can usually be easily incorporated in new school and renovation projects. Many of these measures can even reduce construction costs. While some of these concepts might seem too subtle or too basic to have an impact, we have found that they can make a significant difference in not only the actual level of safety in schools but also help to improve the very important perceptions of school safety. When you consider that these approaches can yield decades of benefits over the life span of a school, their value becomes even more apparent. We hope that you have found the time you have taken to review this document to be worthwhile. We welcome feedback to help us improve future revisions of this document as well as other free resources we develop in the future.

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About Safe Havens International

Formed in 2000, Safe Havens International (SHI) is the largest K12 school safety center in the world. A non-profit organization, SHI is dedicated to assisting schools and community partners in creating a safer world for our children and those who dedicate their lives to educating them. SHI currently employs more than fifty full-time, part-time and adjunct analysts in addition to their support staff and video production department. SHI analysts have published more than thirty books on school safety, emergency management and security and have work experience in more than two-dozen countries.

About the Authors

Michael Dorn is the Executive Director of Safe Havens International. During his thirty-plus years of full time school safety work, his work has taken him to almost all 50 states as well as Central America, Mexico, Canada, Europe, Asia, Africa and the Middle East. Michael rose to the rank of Lieutenant with the Mercer University Police Department before being appointed as the Chief of Police for the Bibb County Board of Education Campus Police Department. He is the author or co-author of 27 books on school safety and is a graduate of the 181st session of the FBI National Academy. He was selected for a fellowship exchange in Israel for 14 days of advanced training and briefings by the Israel Police, Defense Forces and intelligence agencies.

Dr. Randall I. Atlas is a registered architect in Florida and the president of Atlas Safety & Security Design Inc. He is a Certified Protection Professional (CPP) with the American Society of Industrial Security and has served as the chairman of their Security Architecture and Engineering Council. He received his Ph.D. in criminology from Florida State University and is a nationally recognized speaker, trainer and author on Crime Prevention through Environmental Design (CPTED). Dr. Atlas is the author of "21st Century Security and CPTED: Design to protect critical infrastructure 2nd Edition", one of the leading texts on CPTED. Dr. Atlas is a professor of architecture at Florida Atlantic University where he teaches CPTED to professionals from around the world and can be reached at www.cpted-security.com.

Tod Schneider has authored, co-authored or contributed to countless books and articles on school safety, including Safe School Design (ERIC, 2000), one of the first and few books dedicated to CPTED for schools, and Safe and Healthy School Environments (Oxford Press 2006). Todd has visited hundreds of schools to provide his services, including Thurston High School in Springfield, Oregon, after the mass casualty shooting involving more than twenty victims.

Chris Dorn started his work in school safety while still a middle school student. He has more than fifteen years of experience in school safety and over ten years of experience assisting with and performing school security, vulnerability and emergency preparedness assessments for thousands of schools. Chris' work has taken him to Mexico, Bolivia, Canada, England, Holland, South Africa and Vietnam. He co-authored the USDHS/FEMA active shooter web training program *IS-360: Preparing for Mass Casualty Incidents: A Guide for Schools and Houses of Worship* as part of the 2013 White House's 2013 School Safety Initiative and has co-authored six books on school safety including *Staying Alive – How to Act Fast and Survive Deadly Encounters*, published by Barron's Education Series. Chris holds a B.S. in International Affairs and Modern Languages from the Georgia Institute of Technology.

Phuong Nguyen has provided oversight for SHI in reporting for school safety assessment projects covering more than 2,000 public, private, charter, independent and parochial schools. Phuong served as a research consultant for the DHS/FEMA web course *IS-360: Preparing for Mass Casualty Incidents: A Guide for Schools and Houses of Worship* and served as the Content Developer for the book *Staying Alive – How to Act Fast and Survive Deadly Encounters*. She holds an M.A. in Applied Linguistics from Vietnam National University, an M.A. in Mass Communications from Texas Tech University, and is presently enrolled in the M.S. dual degree program for Cyber Security/MBA at the University of Maryland University College.

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Steve Satterly serves as the Director of Transportation and School Safety for a central Indiana school district. He is a certified Indiana School Safety Specialist, and an alumnus of the Indianapolis FBI Citizen's Academy. He served in the Army and has received police training including basic certification in the Active Shooter Doctrine, and basic certification as a gang specialist. He has presented at the state and national level and co-authored *Staying Alive – How to Act Fast and Survive Deadly Encounters* as well as for the White House IS-360: Preparing for Mass Casualty Incidents: A Guide for Schools and Houses of Worship web course released in 2013.

Chief Russell Bentley is a 20-year police veteran with 15 years of experience in executive positions with campus police agencies, and currently serves as the Chief of Police for a large urban school district. Mr. Bentley is a 2001 graduate of the FBI National Academy. He holds an M.S. in Administration and a Bachelor's Degree in Child Development and Family Life Education. Russell has presented on school security, application of CPTED in schools, security and emergency preparedness for school athletic events in more than 25 states.

Chief Rod Ellis is a 26-year law enforcement veteran currently serving as the Chief of Police for a school district in Georgia. He has also trained for 14 days with the Israeli Police and Security forces in the State of Israel. He serves as a panel member representing the k-12 school sector on the Federal Law Enforcement Training Center's National Summit of Mass Casualty Violence. He is currently pursuing a Master's degree from Columbia Southern University.

Ulric Bellaire is a 13-year police veteran with more than seven years of experience in conducting school safety assessments. He also served in the Army Reserves with the 921st Field Hospital in Sacramento, California and holds a Bachelor's of Science Degree in Computer Information Systems from Mercer University. He has completed advanced training in school security, emergency preparedness and anti-terrorism.

Corey Goble is a veteran Law Enforcement Officer and was formerly attached to the Georgia Bureau of Investigation Internet Crimes against Children (ICAC) Task Force. He is currently a Chief Investigator for a school system police force serving approximately 24,000 students and 3,500 employees. Corey is also a FEMA recognized "Multi-Hazard Emergency Planning for Schools" trainer and has completed considerable advanced training in school safety, security, emergency preparedness and antiterrorism. He has conducted numerous school safety assessments and has approximately 10 years of experience in evaluating traffic safety for K12 schools.

Rachel Wilson serves as an analyst and as the senior photographer for Safe Havens International and is part of the award-winning Safe Havens Video crew. In addition to serving as our lead photographer since 2009, Rachel has also assisted with all major assessment projects conducted by SHI since the fall of 2012 and served as an on-site analyst for school assessments in over a dozen states. She manages Safe Havens' social media and has also provided translation, research and photography for SHI in Mexico and Bolivia.

Morgan Billinger serves as a PR Intern for SHI and worked closely with the authoring team and assisted with the content development and formatting of this document. Morgan assists SHI in creating infographics, conducting research, editing school security assessment reports, web marketing and development and social media management. Morgan has a BFA degree in Speech Communications with an emphasis in Public Relations from Valdosta State University.

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