DESIGNING SAFE SCHOOLS IN DANGEROUS TIMES

Randall Atlas, Ph.D., CPP, FAIA

DESIGNING SAFE SCHOOLS is the responsibility of every community, while day-to-day operations are primarily the responsibility of teachers, school administrators, and school security/law enforcement officers. Before the first student walks the halls, however, an architect designs the school, creating subsequent relationships of people and their buildings.

The success or failure of each school is predisposed to the integration of security and crime prevention through environmental design (CPTED) during the design process and budget limitations. The basic CPTED premise is that the effective use and design of the built environment can reduce the opportunity and fear of crime and result, in this case, in improvement in the quality of the educational experience. Designing the next generation of schools for the effective use of space with CPTED features will substantially reduce the opportunity and fear of crime.

CPTED applies to both new and existing schools and is based on the concepts of natural surveillance, natural access control, territoriality, management and maintenance, and legitimate activity support. If a school layout seems unsafe, adopting a few CPTED fundamentals may help make it significantly safer.

CPTED elements that can have the most impact on school security include:

> Providing for limited and controlled entrances.

> Security layering and zoning.

> Staff training and operational strategies for protecting the building and its users.

> Perimeter boundary definition.

> Reducing conflicting user traffic patterns.

> Securing the classrooms with improved door hardware.

> Having spaces for sheltering in place in the event of an active shooter situation.

School administrators and architects cannot select appropriate countermeasures unless clear objectives are identified. The threats to a school are either external (from outside influences and persons) or internal (from students, faculty, staff, and workplace violence). CPTED can make a direct impact on reducing external threats through use of the concepts mentioned above. The internal threats can be primarily deterred through policy, procedure and management techniques, as opposed to physical design. When a school has multiple entrances and ground floor windows, for example, the threat and vulnerability levels increase greatly, and make the facility much more difficult for the protection of people, property and information.

Safe school design involves four key areas that should include CPTED security layering/defensible space planning practices.

> Site design includes features of landscaping, exterior pedestrian routes, vehicular routes and parking, and recreational areas.

> Building design features include building organization, exterior covered corridors, points of entry, enclosed exterior spaces, ancillary buildings, walls, windows, doors, roofs and lighting.

> Interior spaces include features of lobby and reception areas, corridors, rest rooms, stairs and stairwells, cafeterias, auditoriums, gyms, libraries and media centers, classrooms, locker rooms, labs, shops, music and computer rooms, and administrative areas.

> Systems and equipment include features such as alarms and surveillance systems, fire control, HVAC and mechanical equipment, vending machines, duress alarms, elevators, telephone and visitor identification systems.

A single point of entry is the new standard of care where possible. Depending on the size of the school, a single point of entry is preferred for maximum utilization of weapons screening, staffing and labor efficiency, and visitor entry. Weapons detectors can be integrated within an entry way, but with that comes the responsibility of pat downs, package screening, and video recording to prevent frivolous claims of inappropriate searches. Access to areas from main entryways should be carefully planned and not obscured. Main entryways should be obvious and designed with CPTED in mind. Treatments of secondary entries are just as important as primary entries.

Changes in fire code now make fire alarm pull stations optional. Classroom locks for schools must comply with fire and accessibility codes. While locks can prevent a hostage situation by using the door barricade devices, they can prevent quick response by police and EMS. Codes now allow school faculty/ administration three minutes to verify a fire condition, and either shut down the alarm or allow the alarm to activate, thereby evacuating the school. This was one of the lessons learned from the Stoneman Douglas shootings after the shooter's weapon discharged smoke and activated the fire alarm system, thereby creating confusion about whether to evacuate or shelter in place.

Summary: Many schools in the U.S. have an inviting and open campus style, with multiple buildings, entrances and exits; large windows; and many opportunities for hiding or privacy. These design configurations are not conducive to many current requirements that need to encompass security needs. Incorporating the principles of CPTED in the design and remodeling of schools can contribute to the overall safety of the school, while reducing the target hardening and fortressing effects of a "old school" bunker mentality. Security technologies such as cameras, sensors, weapons screening, etc. can contribute to overall school security, but not in all situations. Schools must not undervalue the importance of good maintenance, construction, and design; and a fair and equal management style of school operations. Creating a secure and safe educational environment is all about planning, but each school has unique needs. Best practices begin with a security threat and vulnerability assessment, which identifies the security functional requirements and design basis for each unique school environment.
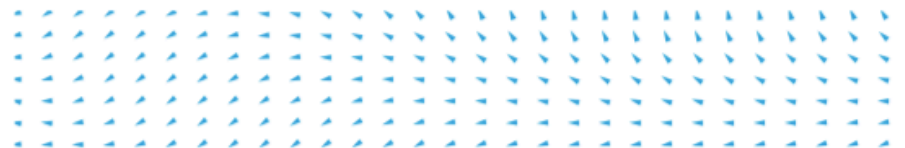
BIO

RANDALL ATLAS, PH.D., CPP, FAIA

Randall Atlas is America's only architect/ criminologist. Atlas received his Doctorate of Criminology from Florida State University, a Master's in Architecture from the University of Illinois, and a Bachelor of Criminal Justice degree from the University of South Florida. Atlas is president of Atlas Safety & Security Design, Inc., based in Fort Lauderdale, Florida. He is a registered architect in Florida, nationally accredited with the National Council Architectural Registration Board (NCAR.B), and is a Fellow with the American Institute of Architects. Atlas is a Certified Protection Professional (CPP), a past chairman of the ASIS Security Architecture and Engineering Council, and an appointed member of the National Fire Protection Association (NFPA) Premises Security Committee. Atlas is a professor at Florida Atlantic University, where he teaches a CPTED course online for the schools of Architecture and Criminal Justice. He is a member of the Florida Design Out Crime network, the International CPTED Association, a member of the International Society of Crime Prevention Practitioners and the International Association of Counterterrorism and Security Professionals. Atlas is a nationally recognized trainer and author on Crime Prevention Through Environmenta Design. Atlas authored the book 21st Century Security and CPTED in 2008, and the 2nd Edition in 2013. Atlas has conducted risk vulnerability assessment security surveys for a variety of school environments throughout the United States, including Harvard, Ohio State, and Georgetown universities.