Safe School Design Task Force

OBJECTIVE, RESEARCH, & TRENDS FRAMEWORK

SITE SAFETY & SECURITY

A. Objective Statement

Our AIA NJ Safe School Design Task Force is focusing attention on the timely and important topic of "**SITE SAFETY & SECURITY"** and how it relates to the overall framework of designing safe and secure schools in New Jersey.

GOAL: **Make school sites safe and secure for all users and visitors – both on-site and off-site external elements.**

Our consideration of safety includes covers two primary sub-categories, Site Access and Control and Vehicular Transportation and Circulation. A layered approach to school safety is advocated in several guidelines, and the site areas of a school represent the outer school perimeter layers of security, as noted by The Partner Alliance for Safe Schools (PASS).

Designing from the outside-in, schools should begin by considering what is in place at a school's grounds perimeter layer and assess whether they are confident that capabilities at this layer enable schools to detect and delay threats and prompt responses at subsequent layers inside the school perimeter. The same security considerations can be taken across the school grounds layer, moving inwards to assess capabilities at the building perimeter layer.

Security measures installed at each layer of a school campus work individually at that layer, and together across layers, to detect, delay, and respond to threats. The property perimeter, parking lot perimeter, and exterior building entrance approach all need to be planned and designed to help deter, detect, and delay intruders from gaining unauthorized access to the school building and grounds.

B. Design Innovations & Creative Solutions

Crime Prevention Through Environmental Design (CPTED) guidelines provides design ideas for school campus site environments to help reduce the incidences and fear of crimes.

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School Site Access and Control

CPTED principles can be translated into various planning and design strategies. that help enhance school property security. These strategies address the external campus boundary and well as school grounds. Design strategies include allowing for clear boundaries and sight lines; providing adequate lighting; minimizing concealed and isolated routes; provide monitoring of site areas; reducing isolation; providing signs and information; and improving overall design of the built environment.

Perimeter Boundaries & Barriers:
Natural access control relies on doors, fences, shrubs, and other physical elements to keep unauthorized persons out of a particular place if they do not have a legitimate reason for being there.

Clear boundaries between public and private site areas achieved by using physical elements such as fences, pavement treatment, signs, good maintenance, and landscaping are ways to add to the sense of security.

A first step is to make sure that a perimeter barrier is in place to clearly demarcate the boundaries of a school's campus grounds; barriers define the perimeter and make it more difficult for intruders to enter the site. Exterior walls and fences are effective perimeter solutions, as are various landscaping features such as tall thick hedges.

Site Access Control:
Vital to achieving a secure school perimeter layer is limiting and controlling access to the campus and grounds. While vehicle and pedestrian traffic and egress requirements may preclude having a single point of access, limiting the number of access and egress points will help manage access control on school sites. School access and entry points need to managed to balance security requirements with the need for smooth movement of students, visitors, and staff at peak daytime and off-hour use of the site.

Monitoring of Sites:
Active monitoring of school perimeter access points and grounds is a key part of enhancing security. Monitoring can include the installation of digital cameras and monitor (e.g. CCTV) systems that tie into school office and security personnel stations, and include automated alerts and recording of site activity. The installation of emergency call boxes across a school's grounds can also contribute to quicker responses to threats. Call boxes can either connect callers directly to police and emergency personnel based outside the school, and/or to school security personnel present on site.

In addition to using built-in digital technology systems to monitor and record site movement, some level of active observation and patrol of school grounds is also a way to both deter and detect intruders and manage school perimeter security. Security systems are part of the architect and engineer design scope of work, while staff patrol monitoring is an operational function.

Site Lighting:
Lighting dispersed across school grounds increase the chance for members of the school community to see intruders outside of daylight hours. Site lighting must provide adequate visibility and lighting levels for CCTV cameras. Pedestrian walkways, back lanes and access routes open to public spaces should be lit so that a person with normal vision is able to identify a face from about 30 feet. Additionally, signs, entrances, and exits must be adequately illuminated to enhance school security.

Exterior Door Numbering Signage:
When emergencies occur in schools the rapid response of first responders and emergency workers to the incident can be critical. Most schools have multiple doors providing entrance and egress to their buildings and during an emergency it may be necessary for responders to gain access through the door closest to the emergency scene. Numbering external doors is extremely valuable to emergency responders and will also assist your students and staff in acclimating themselves to door locations in case of an emergency.

There are established guidelines and model numbering recommendations available for school facilities staff and vendors to reference before installing new or replacement exterior door signage. The Center for Safe Schools recommends that the main school entrance should always be labeled as door number "1." Subsequent doors should be numbered in sequentially in a 'clockwise' order if viewing the buildings from above the building. Position the door number labels at the top-right of the door when facing from the exterior. Doors that allow entry and exit of the building should also be labeled from the interior, matching the number on the outside of the door.

Vehicular Transportation and Circulation

Safe Routes to School:
School safety begins beyond the site boundaries, and it is important to make the environment to, from and around schools a place where children and their parents feel safe. New Jersey Safe Routes to School (NJ SRTS) is New Jersey's statewide initiative led by NJDOT to enable and encourage students to safely walk and bicycle to and from school. The NJ School Zone Design Guide provides guidance for all stakeholders involved in the effort to enable and encourage children, including those with disabilities, to walk and bicycle to school.

School Traffic Safety:
Traffic in and around school zones can create significant hazards for children and all people who travel close to schools. Traffic-related pedestrian injuries and fatalities in New Jersey school zones is a top safety issue that school districts and communities need to focus on. Indeed, traffic and pedestrian risks around schools can be significantly higher than the more attention grabbing acts of violence covered in the news.

The focus of the New Jersey School Zone Design Guide published by the NJDOT is on design and engineering measures that can be utilized to make the environment to, from and around schools a place where children and their parents feel safe and want to walk and bicycle. Engineering measures include physical improvements to the transportation infrastructure in the vicinity of the school and on school property that are intended to improve access and safety for travel by walking and bicycling and minimize conflicts with motorized traffic.

Building an environment that supports children's ability to walk or bicycle to school safely achieves a wide range of benefits for students, the school, and the community. These benefits include reduced traffic in the vicinity of schools, improved air quality, creation of safer, calmer streets and neighborhoods.

C. Resource Reference Links

1. **SchoolSafety.gov** was created by the federal government to provide schools and districts with actionable recommendations to create a safe and supportive learning environment where students can thrive and grow.
   https://www.schoolsafety.gov/

2. **Crime Prevention Through Environmental Design (CPTED)** s a multi-disciplinary approach of crime prevention that uses urban and architectural design and the management of built and natural environments. CPTED guidelines include many recommendations for enhancing site safety and security applicable for school facilities.
   https://www.cpted.net/

3. **Partner Alliance for Safe Schools (PASS)** offers the most comprehensive information available on best practices specifically for securing school facilities
   https://passk12.org/

4. **CSIA School Security Guide 2022** outlines a systems-based approach to school physical security planning can help schools create safe and secure

learning environments.
5. https://www.cisa.gov/sites/default/files/2022-11/k12-school-security-guide-3rd-edition-022022-508.pdf

6. **AIA Committee on Architecture for Education (CAE)** School K-12 Educational Design for Safety and Security presentation. https://content.aia.org/sites/default/files/2016-04/CAE-designing-schools-for-safety-and-security.pdf

7. **New Jersey School Zone Design Guide** published by The New Jersey Department of Transportation in 2014 is a resource for school boards, school administration, police, parents and engineers to advance the goals of the NJ Safe Routes to School (SRTS) Program. https://www.state.nj.us/transportation/community/srts/pdf/schoolzonedesignguide2014.pdf