BEST PRACTICES STANDARDS FOR SCHOOLS UNDER CONSTRUCTION OR BEING PLANNED FOR CONSTRUCTION

I. Site Layout

A. School buildings shall be provided with a securable perimeter. A securable perimeter means that all parking, drives, and roads are located a specified distance away from any exterior building wall.

1. Parking may be within this perimeter provided that access to it is controlled and only known vehicles are permitted and parked there.

2. School drop-off areas may be within this perimeter provided that access to them can be controlled so that only known vehicles are permitted entry to areas within the perimeter.

3. Access to loading areas for delivery vehicles should be access-controlled. Access controlled means a system of physical barriers and/or security personnel combined with delivery controls.

4. Roads and drives shall be arranged such that they do not provide a paved approach leading directly to building entrances. Bollards or similar physical barriers shall be used to block any paved surfaces such as walks where a vehicle could be driven directly toward a building entrance. They shall be located at the closest point of uncontrolled access.

    a. Bollards or similar physical barriers shall be spaced 3 to 5 feet apart, measured on center; height shall be 39 to 40 inches above grade. Bollards shall be fully embedded into a concrete strip foundation with a depth determined by design vehicle impact. Similar physical barriers, such as planters, shall be heavy enough as determined by design vehicle impact.

B. Where the securable perimeter is located less than 148 feet (45 meters) from instructional areas then glass having an exposure to that perimeter shall be shatter resistant. Acceptable materials are thermally tempered glass, heat strengthened or annealed glass with an attached 4-mil minimum safety film.

C. Where the securable perimeter is located less than 82 feet (25 meters) from instructional areas then glass having an exposure to that perimeter shall have enhanced shatter resistance. Acceptable materials are thermally tempered glass with an attached 4 mil minimum safety film, laminated thermally tempered or laminated annealed glass. Any glazing assembly which can be shown to meet GSA glazing protection level 3b is also accepted.

D. All trash containers, mailboxes, and package pick-up areas shall be located at least 33 feet from the building entrances (i.e. all exterior doors that can be entered).

E. Access to parking areas beneath school buildings shall be restricted. Such areas shall be electronically controlled to minimize unauthorized access. Where speeds in excess of 30 mph can be obtained leading to the access point, a crash barrier shall be provided.

a. Exception: In lieu of providing a crash barrier, a risk assessment may be performed. All protection measures identified by the risk assessment must be implemented and installed.

II. Building Layout

A. Essential Officials: The interior of offices of those necessary for enacting emergency procedures, such as Principal and Vice-Principal, shall not be visible from streets or public areas (non-school property areas).

B. Rooms and areas housing utilities such as, but not limited to, electric, gas, emergency generators, fuel tanks, and affiliated switch gear shall be as follows:

1. Such rooms/areas shall be physically isolated from the main entrance and parking;

2. Such rooms/areas shall have the capability of being locked and alarmed;

3. The location of utility service entrances shall be concealed from public view, where possible;

4. Utilities service entrance features mounted on the exterior of the building shall be protected from tampering by enclosing them with walls or fences. Access to such areas shall be by lockable doors;

5. Fuel storage tanks shall be physically separated from generators (i.e. non-integral tank and generator). The associated fuel lines shall be protected from damage;

6. Duration of power provided by generator fuel tank shall be known by the school's emergency management personnel and posted in the emergency control center.

C. Emergency control centers shall comply with the Uniform Construction Code.

III. Specific Standards

A. Exterior Lighting:

1. Site lighting:

a. Lighting shall be installed on the building exterior, along the perimeter of occupied area and, if applicable, the space between the building exterior and perimeter of occupied area. Lighting illumination levels shall be such that camera operation can function according to manufacturer specifications, but not less than 0.2 foot candles, measured at walking surface level, in any case.

b. Walking surfaces that connect remote exterior school areas (i.e. parking areas to building entrances) shall have lighting installed as per "a." above.

2. Parking:

a. Lighting shall be installed in all parking areas. Lighting illumination levels shall be such that camera operation can function according to manufacturer specifications, but not less than 0.2 foot candles, measured at walking surface level, in any case.

B. Entrance/ Access:

1. Doors and windows that can be accessed from grade shall have the capability of being locked and alarmed when the building is not in operation;

2. Doors and hatches that can be accessed from the roof shall have the capability of being locked and alarmed at all times.

C. Heating, Ventilation and Air conditioning (HVAC):

1. Access to air intakes shall be restricted and secure:

a. Intakes installed on the roof shall screened; maximum size of openings in screen shall be 1.75 inch^2. Access to the roof shall have the capability of being locked;

b. Intakes installed on the exterior wall of the building shall be screened and no lower than the third floor above grade; maximum size of openings in screen shall be 1.75 inch^2;

i. Exception: Screened intakes installed on the second floor above grade shall be sloped at 45 degrees minimum, measured from the horizontal axis; or

ii. Exception: Screened intakes installed at grade or on the first floor less than 12 feet above grade shall have chemical, biological, radiological and nuclear (CBRN) notification and detection, or

be physically protected (i.e. enclosed by fence or wall) from uncontrolled approach.

c. Intake air dampers that are centrally operated, motorized, low-leakage and fast acting (less than 30 seconds) shall be installed.

2. Mechanical rooms that house HVAC equipment shall have the capability of being locked and alarmed; this requirement shall also apply to interior air return grilles in rooms or spaces where people are not readily observable;

3. If zoning options are installed, they shall be provided with controls having the capability to shut down individual zones and spaces. In addition, the system shall be controllable from the emergency control center and have a switch that operates all zones;

a. Smoke control systems shall have an independent control switch in the emergency control center;

4. HVAC filtration shall be at the highest level compatible with the system design;

5. HVAC systems shall be ducted;

a. Exception: Non-ducted systems, plenum, with ceilings no lower than 11 feet measured from the floor;

b. Exception: Non-ducted systems, plenum, with ceilings that cannot be accessed without special tools (i.e. drop ceiling panels secured in place).

D. Fire Protection, where installed:

1. Fire protection systems shall be connected to the emergency or standby power supply, as applicable;

2. Rooms/areas that contain equipment for the functioning of the fire protection systems shall have the capability of being locked or alarmed;

3. For buildings with an occupied floor located more than 75 feet above the lowest level of fire department vehicle access, fire sprinkler system piping (feed mains and cross mains) shall be looped and valved so that any damaged area can be isolated and the remainder of the system will remain functional.

E. Elevators:

1. Machinery rooms shall have the capability of being locked or alarmed;

2. Where possible, elevators shall be controlled electronically (card activated) or key activated.

F. Emergency Control Center and Communication:

1. There shall be not less than two points of access to the public address system;

2. Circuits for telephone, public address and alarms systems shall be redundant.

3. Required Control Center:

a. The control center shall contain controls for HVAC, fire alarm, fire sprinkler, public address systems, communications, security, and video requirement;

b. There shall be a standby power supply for the building's critical functions. In addition to the emergency system, the supply shall have sufficient capacity to power all required emergency lighting, and emergency control systems;

c. An onsite, remote back-up control center shall be installed that shall have the capacities in "a." above; the back-up control center shall be installed as far away as practical from the main control center;

d. The emergency control center and the back up shall not be located near each other.

G. Video Surveillance:

1. Video surveillance cameras shall be installed throughout the exterior and interior of the building, including adjacent parking. Covering areas shall include, but not limited to the following:

a. Building approach areas for vehicles and pedestrians.

b. Areas outside the building that are not readily visible.

c. Loading areas.

d. Infrequently occupied areas that are not locked or alarmed such as, but not limited to, auditoriums.

e. Main entrances and lobbies.

f. Corridors and stairways.