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Impacts on Building Security Measures

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Geoff is board certified in security management as a certified protection professional (CPP) by ASIS International, accredited as a building security certified professional (BSCP) by the Building Security Council (American Society of Civil Engineers), and certified by the Los Angeles Fire Department to provide high-rise life safety services. He is a member of the ASIS International Board of Directors and the NFPA International High-rise Building Safety Advisory Committee.

The climactic events of September 11, 2001, were a watershed in the world of high-rise security and safety. September 11 has transformed the way we live and work in many tall buildings throughout the world.

Impact on Security

Before the incident, access controls in many tall buildings, particularly office buildings, were generally loose during normal business hours, Monday to Friday, although they usually tightened up after hours. Since this incident, many buildings in major US cities, and in various overseas countries (including buildings considered as significant or signature structures in the cities where they are situated), have implemented strict access controls 24 hours per day, seven days per week. Such controls include the following:

- Not permitting public parking in under-building or subterranean parking garages. Parking is restricted to tenants and building users with pre-authorization. At some sensitive facilities, a background check is required of such drivers.
- Asking vehicle drivers, who do not have an electronic access card that enables them to enter building parking garages, to state their destination within the building to a security officer or a parking attendant. They are then directed to a valet parking service.
- Checking passenger vehicles, particularly those entering under-building parking garages, for suspected bombs. For high-risk facilities such inspections might include security or parking personnel inspecting each vehicle (including the trunk), or the use of a small hand-held mirror, or a video camera attached to a metal pole to inspect under vehicles, under-vehicle scanning systems, or the use of explosive trace detectors or explosives-detection trained (bomb-sniffing) dogs.
- Requiring vehicles, particularly vans and trucks, to undergo on-street inspections before entering loading dock/shipping and receiving areas. For high-risk facilities, inspections include procedures such as performing X-rays of entire vehicles, using under-vehicle scanning systems, and using explosive trace detectors or explosives-detection trained (bomb-sniffing) dogs.
- Visually inspecting delivery vehicles and checking their manifests prior to their entry to loading docks. Keeping loading dock doors and gates closed between deliveries and pickups. Installing retractable bollards at loading dock entrances and lowering them only when an authorized vehicle enters or leaves.
- Placing building passenger elevators on card access, thus requiring tenants to use access cards to gain access to their floors. (For some major buildings, installing optical turnstiles in their main lobbies to screen persons before allowing them to proceed to building elevators).
- Security personnel in building lobby reception areas asking visitors for photo identification. Some office buildings establish a separate visitor center for processing visitors before signing them in, giving them a temporary identification badge or access card, and permitting entry. In some buildings, to reduce processing time, the procedure includes giving tenants prior authorization by using a letter, a memorandum, an e-mail, or a password-protected, web-based visitor management software system to pre-register visitors

Figure 1. Tightening security checks

before they arrive. In other buildings, security staff telephone the tenant to request permission for the person to enter, then either the tenant or building security escorts the visitor to the tenant, or building security "cards up" (using an access card to select the floor that the person is authorized to access) the visitor in an elevator to the floor that they are authorized to visit.

- Asking couriers and delivery persons for photo identification, and requiring the tenant to give authorization before the person is provided a temporary access badge and permitted to perform the delivery (in some buildings, security staff retains the photo identification document of the person until the person is about to exit the site, and even video or photograph the person being granted entry. In other buildings, security staff, or a courier company with messengers dedicated to the building, is responsible for delivering and picking up items for the tenants on behalf of outside courier and delivery services).
- Using metal detectors and X-ray machines, explosives trace detectors or explosives-detection trained (bomb-sniffing) dogs, to screen for weapons and explosive devices concealed on people or in items they carry, and in delivered packages. Due to perceived high-risk, some landmark buildings are deploying such measures.

In addition, some buildings have implemented the following security measures:

- Prohibiting vehicle parking close to the building. Enforcement of no-stopping zones for vehicles on streets and driveways adjacent to the building (and sometimes requesting permission from the local city authority for security personnel to write parking violation tickets). Eliminating taxi stands outside the building.
- Establishing an adequate stand-off distance from vehicles using fountains, sculpture, boulders, stairs, embankments, park benches, concrete planters, concrete barricades, and bollards.
- Installing video cameras with video motion-detector capabilities for viewing a building's perimeter and neighboring streets. Positioning cameras at building parking garage entrances and exits to facilitate recording close-up images of the driver and license plate of every vehicle entering, and the license plates of all vehicles exiting these areas.
- Applying security window film on lower floor glass windows, installing bomb blast curtains in building lobbies. Providing blast-resistant trash or garbage receptacles. Strengthening exposed building support columns in areas such as pedestrian lobbies and loading docks by wrapping them with layers of bomb-blast protective material.
- Increasing security staffing to implement additional security measures, including increasing building perimeter patrols and a visible security presence.
- Deploying undercover police officers and armed plainclothes civilians.

The nature of subsequent events that occur in society will determine the permanence and pervasiveness of many of these measures.

Impact on Safety

The collapse of the Towers caused much concern among the whole building industry regarding the safety of tall buildings and their vulnerability to hostile acts. Much discussion focused on the design and construction of tall buildings, including their ability to withstand explosions, and their capacity for all building occupants to evacuate in a timely manner. Much time and effort has been invested by the American Society of Mechanical Engineers "elevator emergency use" task group, in evaluating whether, during some emergencies such as fire, elevators, prior to Phase 1 recall (i.e., before affected elevators are automatically recalled due to smoke in the elevator vestibule, elevator shaft, or elevator machine room), could be used for occupants to self-evacuate from impacted floors. Irrespective of what elevator-usage protocols are finally adopted, one clear message for all tall buildings, whether or not they were evaluated to be at risk of a terrorist event, is that all occupants should be well trained in evacuation procedures.

On September 11, in each tower there were people who perished on the floors that sustained the direct impact of the aircraft and those who were inextricably trapped above the crash site because all three stairwells in the north tower and two stairwells in the south tower (and most elevators) were made inoperable by the impact, explosions and ensuing fires. The Towers had a comprehensive, well-executed fire life safety program and emergency plan – especially after learning from the earlier 1993 bombing – that helped prepare building emergency staff and occupants to react appropriately to the catastrophic events that unfolded. All indications are that the occupants who were able to evacuate did so in an orderly and competent manner, and the evacuation was successful. Hence, the past decade has seen a continued emphasis on having well-written emergency plans, thorough policies and procedures, and well-trained occupants. This emphasis seeks to ensure that when necessary and depending on the nature of the emergency, people can quickly react and either shelter in place, evacuate to another location on their floor, move to another floor, or evacuate out of the building to safety.

Impact on Private Security and Public Law Enforcement/Emergency Responders

Since 9/11, there has been considerable improvement in the relationship between public law enforcement, emergency responders (including fire departments) and private security personnel protecting the nation's critical infrastructure. Increased awareness of each groups' responsibilities and capabilities, improved collecting and sharing of information, and heightened education of the general public have all contributed to improving the security and safety of all types of facilities, including tall buildings. ■