MARYLAND'S REACTION AND RESPONSE
TO THE EVENTS OF SEPTEMBER 11TH -- A CASE STUDY

Summary of Maryland’s Response and Lessons Learned

The State of Maryland, itself, did not have a terrorist attack. The events of September 11th did, however, serve as a wake up call, precipitate a Departmentwide response and cause the Maryland Department of Transportation (MDOT) and its highway-related agencies, the State Highway Administration (SHA) and the Maryland Transportation Authority (MdTA), to take a hard look at their approach, planning and field-level responses to the threat of terrorism and its after-effects.

Maryland has a significant, highly visible military and intelligence agency presence. This presents unusual security and access issues during times of high alert, causing severe traffic backups on the adjacent roadway networks. There is also significant regional integration of infrastructure and overlapping jurisdictions tying together Maryland, Virginia, the District of Columbia and the federal government in a unique fashion, notably at the Potomac River crossings and the Baltimore/Washington Parkway.

Since there was no direct act of terrorism in Maryland, the response was narrowly focused and anticipatory. It consisted largely of:

- Increased and vigilant monitoring of roadways, bridges and tunnels;
- Taking steps to ensure infrastructure security;
- Managing extraordinarily heavy traffic, with particular emphasis on the Washington/Baltimore areas;
- Assisting with communications and traffic alerts along the I-95 corridor; and
- Lending assistance to Virginia DOT with ramp/roadway closures and equipment in the wake of the Pentagon attack.

As an operations agency, MDOT is structured and focused to be responsive by nature, with a “think on our feet” philosophy for emergencies. Major lessons learned in the wake of the September 11th events are that MDOT, SHA and MdTA: are well organized to respond; have an appropriate, if evolving, set of protocols (including an Emergency Operations Plan since 1997); and are empowered with the necessary authority to act quickly and flexibly at the operations level. Communications, notably interoperability, appears to be an area of weakness that needs attention on a regional basis. While there are some areas outlined below which could be improved upon, Maryland nevertheless appears to have acquitted itself well on September 11th and afterwards.

Actions Immediately Following The Attacks

First reports of terrorist attacks in New York came via the media and TRANSCOM. Awareness of the attacks led to mobilization according to set protocols, which in turn led to quick, specific actions as determined by geography and need.

The first concern was to make sure there were no imminent threats to infrastructure and to secure the bridge, tunnels and miles of roadway against future threats. The next concern was to get people out of downtown Washington, Baltimore and Annapolis locations and government facilities, and home safely within a narrow timeframe. Although there was near-gridlock as many employers (including the federal and state governments) allowed employees to leave due to the uncertainty about the nature and extent of events, there were no formal evacuations.

Mobilization

- MDOT and its agency representatives immediately headed to Maryland Emergency Management Agency (MEMA) headquarters to coordinate activities statewide and respond to the needs of various agencies and jurisdictions according to protocols.
- The Emergency Operations Center (EOC) was activated between the first and second attacks at the World Trade Center and emergency operations plans were readied.
MDOT directed SHA and MdTA to keep as many people and as much equipment as possible on the roads. This was the operational cornerstone of MDOT’s response. They were also told to move stranded or abandoned vehicles, especially under bridges because of concern about bombs.

All essential and operations personnel were contacted through prescribed call-out lists, and maintenance facilities were put on high alert. SHA maintenance staff was divided into two shifts for around-the-clock coverage. MdTA personnel were put on high alert, all leave cancelled and all personnel reported to work. Other essential personnel were put on 12-hour shifts until they heard from headquarters that the situation was stabilized.

An outlying Washington-area SHA shop was redeployed to a facility closer to the Capital Beltway for faster reaction time to any potential Washington-area problems.

SHA’s Washington-area TOC supervisor was dispatched to Virginia DOT command center within 30 minutes of the Pentagon attack to help coordinate different traffic patterns and assist otherwise as needed. Three VMSs were sent to Virginia assist with road and ramp closures.

Specific Actions

Statewide:

Surveillance under bridges began. SHA district engineers were immediately directed to provide regular patrols of high-risk structures (above and below) using maintenance forces and to report any “suspicious” activities to the Maryland State Police and the EOC. The next day, bridge inspectors were dispatched to high-risk bridges to visually observe the piers and substructures for any foreign objects or any other irregularities. These inspections are now part of their routine duties. MdTA also began inspections of its structures, including highways, land bridges and overpasses, as well as bridges over water and tunnels. Routine inspections and random patrols for suspicious vehicles are continuing, by police, vehicle recovery patrols and boat. All video surveillance cameras at high-profile locations, including major bridges and tunnels, were activated and monitored.

Suspicious or abandoned vehicles were removed. MdTA began towing any vehicles around bridges, tunnels, toll plazas and on the highway generally on an immediate basis, as opposed to their usual 12-hour policy. SHA called MSP to investigate abandoned vehicles before it began towing, though it did so on a more urgent basis. Several days later, parking was banned underneath bridges.

State troopers and MdTA Police worked on clearing fender-benders and disabled vehicles more aggressively.

Physical barriers were placed in front of facilities that housed command centers, and heightened security measures were instituted at all facilities.

The Motor Carrier Division, in conjunction with close cooperation of the MSP and at the request of the Federal Motor Carrier Safety Administration, stepped up vehicle inspections with special emphasis on hazardous materials loads and drivers. Escorts, when needed, were provided by Maryland State Police and MdTA police.

All work zone closures involving shutting lanes were terminated.

Washington area:

Traffic into Washington was detoured as Washington declared a state of emergency. Ramps were closed from interstates and Changeable Message Signs (CMS) alerted motorists to avoid the area.

Traffic flow leaving Washington was facilitated by retiming signals for very heavy peak-period outbound traffic. The same was done in suburban Montgomery County which, under prior agreement, controls signals on the state system that are located within the county. HOV (high-occupancy vehicle) restrictions were removed and motorists were alerted by overhead sign changes, Traveler’s Advisory Radios (TARs) and the media.

Baltimore area:

I-83 (John F. Kennedy Expressway) south into Baltimore was closed, restricting access into the city via local roadways.

All roads accessing BWI airport were closed.

Traffic permitting, two of the four bores of the Ft. McHenry Tunnel were closed for tighter security.

Military/security/high-visibility installations:
There is a wide range of facilities within this category, including those pertaining to national security and public health, major military installations, National Guard, State Police, and so on. Ramps from parkways to security agencies were closed. These were later reopened with limited access to the facility via only one gate. All area military installations closed secondary gates. SHA rendered assistance to NSA when non-essential personnel were evacuated. Traffic was rerouted around Andrews Airforce Base so that access was only via one entrance at the front of the base and one toward the back. The next day, concrete barriers were provided at several of these installations as security was beefed up and access limited to these facilities. To date, approximately one mile of Jersey barrier has been moved by forklift, front-end loaders and trucks to provide physical barrier to high-security and other state and federal government locations. Considerable SHA activities over the next days were focused on the backups that resulted. A 7-10 mile back up existed the next day because of the security checks for vehicles entering the NSA installation. They continued for several days, though dissipating over time with better coordination and traffic control improvements.

East Coast Corridor:
- Changeable Message Signs (CMSs) displayed messages alerting motorists to stay out of the New York region, as well as to avoid the Metropolitan Washington and downtown Baltimore regions, and stay alert for multiple road closings. Regional communications channels were kept open and on full alert to receive information and convey it to MEMA and other agencies.

**Plans, Protocols and Standard Operating Procedures**
- When the Governor declares a state of emergency, MEMA (Maryland Emergency Management Agency) is activated. MEMA is a collection of state agencies responsible for determining what local jurisdictions and state agencies need to respond to an emergency, and coordinating the resources with the requirements. MDOT, SHA and MdTA have representatives at MEMA. The SHA representative activates the EOC, which in turn notifies essential personnel.
- MEMA has developed/adopted a statewide Emergency Operations Plan. There is an MDOT component to the statewide Emergency Operations Plan that contains a whole range of support functions, including: transportation, communications, public works, fire fighting, information planning, mass care and shelter, search and rescue, hazardous materials, food, energy, law enforcement, debris management, military support, business continuation, and so on. Some of the sections are being developed, and it has a specific portion on domestic terrorism. SHA has an annex to this plan. Part of SHA’s plan includes snow/ice removal redeployment guidelines, which cover priority routes in the event of a winter storm of severe magnitude. While it focuses on natural disasters, it can also be used for man-made emergencies. However, many of the elements are still being developed.
- A Terrorism Forum was set up in 1997 as an offshoot of the MDOT Emergency Operations Plan. It includes the FBI, FEMA, and several state agencies, putting us ahead of many states. A terrorism plan is an outgrowth, but the plan is departmentwide and still a first attempt, long on generalities and short on specifics.
- The MDOT/SHA Terrorism Emergency Operations Plan addresses emergency plans, emergency assistance protocols, asset risk assessment, management of suspicious incidents (biological, chemical, nuclear and hazardous materials), sample emergency evacuation plans for facilities, and so on.
- Maryland operates with a five-tier threat-level system, ranging from no threat (Level 5) to an actual terrorist event has occurred resulting in mass casualties (Level 5). This ranking currently is the reverse of the order used by the federal government.
- MDOT’s organization is well-suited to handle terrorism. The location of SHA’s seven engineering districts, each with several maintenance shops, allows for thorough knowledge of various geographic areas of the state and close working relationships with other jurisdictions and agencies. The Districts are geared to act within the State’s CHART program. Similarly, MdTA has very detailed knowledge of the toll facilities along the I-95 corridor, which serves as the north/south spine of the state, and the bridges and tunnels that span the Chesapeake Bay and other waterways.
MDOT/SHA Command Facilities. SHA’s Statewide Operations Center, located just south of the BWI airport, is the statewide dispatch unit for SHA and houses all the equipment and facilities to monitor and deal with highway emergencies statewide. It has a small staff that operates 24/7 and coordinates the CHART program. CHART, Coordinated Highways Action Response Team, is Maryland’s statewide incident/traffic management program. The Emergency Operations Center is the command unit physically located in the SOC. When MEMA declares a state of emergency, the EOC is activated and staff trained to deal with emergency expertise is called in. The EOC handles calls, disseminates information, gives operational directions and keeps MEMA and the Governor informed. The two Traffic Operations Centers (TOCs) are field-level, traffic-oriented response units, each of which is located a State Police barrack in the Baltimore and Washington area. The seven engineering districts provide most of the field-level support.

Training that was already in place include a terrorism awareness video shown to all maintenance shops, discussions on terrorism with all maintenance staff and a terrorism module as part of a larger workplace violence presentation. This is in addition to the training for other emergency operations.

FITM (Freeway Incident Traffic Management) plans, drawn up in advance and used to divert traffic around a particular area as the result of a highway incident or accident, were pulled and readied for use at identified potential targets. These included regional detour plans for the Woodrow Wilson Bridge and the American Legion Bridge over the Potomac River. FITM trailers outfitted with signs, cones, flares and other equipment were relocated to the Washington metropolitan area. FITM plans are being refined as a result of the September 11th experience.

Coordination and Communications
Coordination:
- The Federal Highway Administration Deputy Division Administrator is present at the EOC and is responsible for integrating/coordinating federal responses to emergencies in Maryland. FHWA has a newly designated (prior to September 11th) coordinator for terrorist-related responses.
- MDOT regularly coordinates with other federal agencies, including the FBI, the various branches of the military (largely through post command and base police) as well as the National Guard.
- MEMA is the state’s emergency management structure and it critical for efficient coordination among state agencies.
- The I-95 Corridor Coalition serves as a major information exchange mechanism with routine methods and contacts throughout the northeast. This is handled 24/7 by the SOC.
- Due to regional integration and shared infrastructure (i.e., the Woodrow Wilson Bridge), MDOT and VDOT have a very close and efficient system to coordinate emergency responses.
- Baltimore City can communicate through MEMA, but we did not have a formalized relationship with the District of Columbia in emergency situations.

Communications:
- Telephones, particularly cell phones, were overloaded almost immediately and communications became difficult. This affected some of signal systems programmed by phone, as the circuits were busy. As a result, signal technicians had to be dispatched to the scene. Two-way direct-connect communications and two-way pagers were the few reliable methods of communications.
- Communications by the internet, as well as intranet, were similarly reliable and the use of e-mail was a big plus for both communicating messages and data.
- SHA and the State Police both use low-band radios that are inter-programmable for efficient communications, and SHA’s low-band frequency radio, channel 1, was designated for emergency use only. The variety of radio frequencies used by other state agencies and local jurisdictions on their emergency radio systems proved to be a problem because they are not compatible.
- There were very few media inquiries as traffic was a low-level concern and the usual media were covering other stories. Staff mainly took citizen calls, which were largely about road closures. Fax machines were unreliable, so no press releases were issued. The web was used to disseminate traffic information, including road closures, the media and the public. Metro Traffic and other media went directly through the SOC for specific information, which is routine.
Lessons Learned/Items Needing To Be Addressed

Maryland’s approach was that field-level personnel, who are on the road daily, were the best resource available to see when things are amiss. Such an approach also keeps physical assets, such as vehicles, equipment and materials, dispersed and readily available for response. This worked very well.

- In the short-term, the only solution is to “throw people at the situation.” However, this is costly and there is a burn-out/fatigue factor. In the longer term, we have to figure out how to keep up a high level of vigilance with fewer staff. A related issue involves demobilization: at what point do you “stand down”? how long do you keep equipment, such as light plants and VMSs, at locations?
- Each administration within MDOT is doing a capital facilities security review, looking at its capital program to see what can be done, including but not limited to, what is more high-tech and sustainable. This may including anything from better reinforced building materials to minimize damage, to the use of CHART, ITS and CCTV’s for better security and monitoring to prevent terrorism.

Prior to September 11th, MDOT was conducting some risk assessments, evaluating the vulnerability and consequences of assets (including criticality, visibility, access to assets, threat of hazards, the ability to inflict mass casualties and disruptions, as well as collateral damage).

- Within several days of September 11th, the SHA Administrator met with selected staff and counterparts at MdTA to review terrorist-related security issues, identify and eliminate areas of vulnerability and begin developing improved contingency plans. Approximately three dozen critical transportation locations were identified.
- Maryland has guidelines and procedures about incident responses. While none address the type of situations of September 11th, many existing procedures were flexible enough to fit the situation at hand. Terrorism planning documents, which are being finalized now, need to be targeted for optimal distribution and drilled for application. The speed of implementing some of our protocols and plans (because of incident management training) should be relatively fast.
- The documentation and protocols used for Y2K planning may provide some very useful insights and structure, as slightly more than half of the identified processes apply to terrorism and emergency operations planning.
- While there are some protocols for evacuation, they are for weather-related events. Such events usually have an element of planning and time, as most are foreseeable and able to be tracked. The degree to which we could handle high-level incidents with mass exodus from major population centers is unknown.
- Comprehensive evacuation plans are not available for the Washington or Baltimore areas, nor are the plans available multi-jurisdictional.
- MDOT’s terrorism plan, while a good framework, needs to be filled in with specifics. Site assessments, outlining vulnerability and consequences, have been completed statewide with input from all local jurisdictions as well as the state, and the information has been transmitted to MEMA. As the specifics are filled in, responsibility needs to be assigned and reassigned to the various elements.
- At this point, the State Emergency Plan is still more of a high-level protocol than an operational one, which would be more reactive and specific. While nuclear, biological and chemical hazard response protocols are in place, in real terms, they need to be fleshed out and have never been tested. Thus, some of the responses to the September 11th events were “shooting from the hip” and relying on what we normally do, such as CHART operations, FITM, training and traffic signalization – which worked well.

A protocol needs to be established regarding public transit. It involves a difficult balance to determine under what conditions public transit ceases operations and how to handle the resulting outward-bound congestion. The level-of-threat approach may be useful in addressing this.

- While there are some threats inherent in keeping public transit open, likewise there are problems in closing it when a mass exodus or evacuation of an area or city are likely. The Washington Metro is one example. Closing it means the only way out of the city is by individual vehicle, causing massive gridlock, or walking, which is not always feasible. When AMTRAK shut down at Union Station in Washington, MARC commuter trains were forced to shut down due to rail-sharing.
The real hero of the day was two-way direct connect devices, such as NEXTEL. Infrastructure for paging is more robust than telephones, so when voice communications went down, NEXTEL direct connection was still working and the two-way pagers had the capacity to handle the necessary volume of data.

- Regular telephone communications were not reliable, probably because of overload. Some of the phone companies have a high-priority service for government agencies and SHA is looking into this.

Although SHA coordinates well with the MSP, local and county police are all on different radio frequencies, as are some other agencies.

- Communications was a problem with the inconsistency of frequencies used by different agencies – interoperability – making it hard to communicate in real time. Redundancy in communication devices may also be desirable.
- Because the phones were jammed and unreliable, for a period of time, we were not able to reliably communicate with traffic signals and other devices connected by phone. Technicians had to be sent to several sites to make necessary timing and message changes.

The accuracy of information disseminated both internally and externally is critical.

- There was a fair amount of information, particularly disseminated by the media, which turned out to be false. It was initially difficult to get accurate information and this could ultimately affect deployment of resources. For example, it was difficult to get verification about a possible crash at Camp David.
- Similarly, reports were coming out via the media of terrorist threats against eleven sites in Maryland, including the State House, Baltimore’s World Trade Center, and the Naval Academy. The Governor was evacuated from Annapolis, State Circle in Annapolis was closed and non-essential personnel were told to leave state offices. This hoax diverted a lot of attention of the Maryland State Police and other police authorities and caused severe traffic congestion in the Baltimore metropolitan region as various transportation facilities were closed or severely restricted in their availability.

The EOC/MEMA integration worked smoothly and well.

- Better coordination is needed among regional boundaries, especially regarding communications across boundaries, as well as the fullness and openness of those communications. While in some areas this is excellent, we need to build better communications particularly with Baltimore City and Washington.
- Concerted efforts have started in this regard.
- Regular military does not routinely coordinate with MDOT, unless through the National Guard. They are for a large part unaware and therefore unable to take advantage of some of our programs, such as CHART and the capabilities of our district offices. This is what happened on September 11th.
- Other federal security agencies likewise do not coordinate regularly with MDOT personnel. The result is that in emergencies, staff does not know the “players” and their roles in these agencies, which would allow for better coordination. The FHWA Terrorism Emergency Coordinator can be crucial in this role.

MDOT, through MdTA, has a police force at its disposal to patrol its infrastructure. In addition, SHA has a full-time MSP liaison officer, housed in the SOC office, to coordinate traffic and other related operations between the two agencies and with local authorities. There also is a well-integrated structure among other police agencies at the state level and with the surrounding major jurisdictions.

- During the next legislative session, it is likely MDOT will ask for more security-related flexibility, allowing its police to have wider authority and jurisdiction including full police powers at other facilities if necessary.

Montgomery County, adjacent to Washington, maintains and operates traffic signals on state roads within county limits. Its entire system was activated as though it was a very heavy evening peak period immediately upon hearing of the terrorist incidents. The unrestricted outbound movement so early in the mass exodus from Washington went far in preventing major regional gridlock.

- Although there are reversible flow lanes on two major outbound routes, they were not used because they are regulated by both static signs noting hours of use and over the road, changeable signs. There was concern that the static signs would cause confusion. The replacement of static signs with changeable ones would permit using the reversible lanes in the event of evacuation.

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