Emergency Transportation Response

21st Century Operations Using 21st Century Technologies

Emergency Transportation Response Challenges

Disasters can happen anywhere at any time, often without warning, and come in infinite varieties. Now we must consider terrorist attacks as well as natural disasters and incidents. Transportation is critical to emergency response. Regardless of whether transportation facilities are directly affected by the disaster, transportation is needed to bring responders to the scene, transport the ill and injured to medical facilities, and move the public away from potential harm.

To achieve efficient response across the transportation network, we need information, resources, and well-understood and effective procedures that are rehearsed with other emergency responders.

What We Have Learned

The Federal Highway Administration (FHWA) studied several emergencies, including the 9/11 terrorist attacks and natural disasters such as Hurricane Floyd. The following common themes emerged.

All types of security incidents have a transportation impact.

- The 9/11 attacks affected public transit, commuter rail, commercial vehicles, and ferries, and resulted in needs for significant road repairs.
- Anything suspicious near a transportation facility can result in closures or restrictions.
- Efforts to catch the "D.C. sniper" resulted in massive queues on interstates in Maryland, Washington, D.C., and Virginia.

Few of the surveyed State, local, and regional emergency management plans fully integrate transportation.

- Fewer than 50 percent include details on media coordination, traveler information, and asset protection
- Only 10 percent address transportation coordination with the Emergency Operations Center
- Fewer than half specify evacuation routes
- Only two thirds of the State and one third of the municipal plans include transportation contacts
- Intelligent Transportation Systems applications are generally not discussed in emergency management plans

Traffic impacts occur outside the incident scene and can become a separate "incident."

- These take additional scarce resources to manage.
- They can have a major affect in the region and can create an additional hazard.

Traffic impacts during recovery may be more significant than during response.

In New York City following 9/11:

- It took 3.5 hours to travel a common 22-mile commute route in the first week following 9/11.
- On 9/26 there was a 4-mile queue to enter Manhattan.
- There were 40 subway service changes in three days.
- Ferry ridership increased 91 percent.

Transportation responders are often not . . .

- Linked fully with emergency managers;
- Trained to work with other responders under the Incident Command System; or
- Prepared with equipment and knowledge to deal with terrorist threats.

Future Directions

FHWA is working with transportation agencies and their partners to improve planning and use of technology in emergency transportation operations. Eight program areas are targeted in the areas of planning and technology.

Planning: Better regional and transportation operations planning, with training and exercises

Goal: Emergency management plans need to accurately reflect how transportation will work, and transportation agency emergency plans need to reflect how the emergency will be managed. The American Association of State Highway and Transportation Officials (AASHTO) has developed an emergency response plan guide.

- FHWA assessed existing plans and is developing recommended practices.

Planning: More and better relationships, including new partners and more integration

Goal: Transportation agencies need to have effective working relationships with other responders, including police, fire, emergency medical, public health, military, and intelligence.

- FHWA is sponsoring multimodal, multiagency exercises around the country to build relationships and test plans.

Technology: Use of smarter and more powerful tools to support updated procedures

Goal: Agencies need to have tools such as evacuation models and prepared traffic response scenarios in place and tested.

- FHWA-developed, next-generation models are being assessed for how they improve evacuation planning and conduct.

Technology: Using the Incident Command System (ICS)—working the way partner responders work

Goal: Agencies need to understand and be ready to work with other responders at the incident scene through ICS.

- FHWA's traffic incident management program has introduced ICS to hundreds of transportation practitioners.

Technology: Protecting the information infrastructure

Goal: Agencies need to identify critical information technology resources, assess the risks, and identify and implement countermeasures.

- FHWA is studying how to protect communications networks and transportation management centers.

Technology: Implementing information infrastructure on key evacuation routes

Goal: Agencies should prioritize and implement intelligent infrastructure along critical evacuation routes.

- FHWA has suggested deployment levels.

Technology: Interoperable communications

Goal: Understand and implement agency communications systems that are compatible with other modes and other responders.

- FHWA has sponsored two demonstrations of voice/data/video interoperability and is working on a guide describing alternatives.

Sharing experiences, lessons learned, and successful practices

Goal: Agencies can learn from the experiences of others that have faced disasters.

- FHWA has created a Web site at www.ops.fhwa.dot.gov/opssecurity

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