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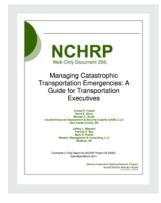
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Managing Catastrophic Transportation Emergencies: A Guide for Transportation Executives

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Preface

To the Executive

During your tenure as the chief executive of a state department of transportation (DOT), transit agency, or other transportation organization, you will likely be called upon to manage your agency's response to and recovery from a major emergency, event, or disaster. The emergency may consist of a short-duration, simple, static, and singular incident, or it may be prolonged, complex, and dynamic, having an impact on multiple fronts and requiring deployment of extensive assets and resources.

The need for emergency incident response or recovery may be due to inclement weather, the aftermath

Managing Catastrophic **Transportation** Emergencies: A Guide for Transportation Executives is a reference guide specifically designed for use by newly appointed executive-level leaders of transportation organizations. It has been written to provide executive decision makers with important leadership-level information about emergency management major event response and recovery.

of a serious highway accident or train derailment, or a significant security threat or breach. Additionally, the same planning required for incident response is needed to manage a planned special event effectively, such as an annual holiday celebration and parade, a PGA golf tournament, or a political convention.

Establishing the capability to manage and direct all-hazards transportation emergency response and recovery effectively, irrespective of the incident type, demands pre-planning, resourcing and staging of assets, and internal coordination and coordination with other affected external agencies, companies, groups, and personnel. When an emergency occurs, routine, day-to-day operations give way to a focused, practiced, and resilient crisis management approach that requires professional skills throughout the breadth and depth of the organization.

As a new chief executive officer (CEO), you may initially be unfamiliar with your agency's critical role and capabilities in preparing for, responding to, and recovering from an emergency situation. This guide was developed to assist in the transition period of your new position, and is based on the thoughts and advice of transportation leaders who have been in similar positions. Former and current transportation executives were interviewed to gain practical understanding of CEO roles and actions during emergency events. Insights were also obtained from a review of relevant literature and information about actual emergency events that affected transportation. Quotations from the interviews are incorporated into the guide, with a summary of the interviews found in Appendix A.

The guide is organized to first provide basic information about the types of emergency incidents and events that affect transportation agencies. Next,

managing these events is discussed, along with an overview of the types of questions and issues that should be considered to assist the agency in preparing for all-hazards emergency incidents. The guide also provides additional information about where to locate more detailed reference materials pertaining to transportation agency emergency management.

Introduction

During one transportation CEO's tenure there were four major snowstorms, two major tornados, and a

flood event spanning the longest duration in U.S. history. Another CEO experienced the perfect storm in his first emergency response situation—the loss/retirement of critical experienced staff, inaccurate information, and new leadership that was not prepared—that turned a localized weather event into a statewide emergency, stranding hundreds of trucks and motorists for more than 20 hours and closing major highways for

"I learned emergency response under fire."

and motorists for more than 20 hours and closing major highways for 4 days. As these examples demonstrate, learning emergency response under fire is an all-too-common experience.

Senior executives who lead state DOTs have the responsibility of planning, delivering, operating, and maintaining a transportation network that includes over four million miles of roads serving local, regional, and national travel needs, along with many rail lines, bus and rail transit systems, ferries, ports, and waterways. An agency's emergency preparedness capabilities— preparing for, responding to, and recovering from a major event—are critical to safe and efficient operation of the nation's transportation network.

The agency you are leading, one of 52 across the nation, has been on the leading edge of a transition to a new way of thinking and approach to services. Transportation is no longer focused on building the nation's infrastructure, as it had been for nearly 200 years. Over the last 15 years agencies, through American Association of State Highway and Transportation Officials (AASHTO), have been focused on understanding, inventing, and implementing a refocused mission and serving the nation's transportation needs. To get a sense of this changing environment, consider three major initiatives that DOT agencies are pursuing.

- 1. Beginning in 1995, DOTs across the country began to investigate and implement a new approach to managing pavements, bridges, and other assets using principles adopted from the private sector in an approach that has come to be known as asset management. Agencies are moving to employ life-cycle costing as a decision-making aid in doing their business. This addition to the planning and investment process has helped bring closer together the engineering, financial, innovative finance, and political communities. Most agencies now use these principles in making difficult investment decisions with increasingly limited funds.
- 2. At the turn of the century, recognizing that their mission was no longer building major transportation networks, transportation agencies began to explore what it would mean to be a 21st century operations—oriented DOT. The focus of this work has been on how to operate a transportation system and how to convert agency staffing and processes to support the emerging mission. This effort has resulted in a broad body of work in understanding organizational readiness, staff training programs, improving customer service, and traffic management programs. The result of much of the effort has been to improve the reliability of the transportation network through improved operations.
- 3. As a result of the events of September 11, 2001, and a long-term commitment to the use of technology and the work surrounding improving operations, agencies are now implementing a new focus on emergency response and their role in homeland security. Transportation plays a critical and unique role in emergency response. As the National Response Framework (NRF) states, "the ability to sustain transportation services, mitigate adverse economic impacts, meet societal needs, and move emergency relief personnel and commodities will hinge on effective

transportation decisions at all levels." Transportation's unique role stems from the broad range of capabilities and responsibilities a transportation agency has: large and distributed workforces, easy access to heavy equipment, and a robust communications infrastructure. In most states, the only other agency capable of mobilizing personnel and equipment, in quantity, to plan for or respond to any emergency may be the National Guard.

These initiatives bring into sharp focus the critical role a transportation CEO plays, particularly as a

leader in emergency response planning and operations. A state governor expects the DOT to respond to a disaster or emergency and simultaneously handle day-to-day responsibilities. Meeting these expectations requires CEO leadership, engagement of skilled employees, and critical, targeted investment in technology, people, and infrastructure.

To be ready for the agency's role, a CEO needs to ensure that a comprehensive emergency management program is in place within the agency. The four phases of emergency operations—preparedness, response, recovery, and mitigation—are summarized in Figure 1. A state DOT must be prepared for risks that cannot be eliminated and be prepared to deal with the consequences of actual events and to recover from those events.

Fundamental responsibilities in infrastructure protection, emergency management and resilience:

- Prevent incidents within your control and responsibility;
- Protect transportation users, agency personnel, and critical infrastructure;
- 3. Support regional, state, and local emergency responders with resources, including facilities, equipment, and personnel;
- 4. Recover swiftly from incidents;
- 5. Evaluate response(s) and continually improve plans, training, skills, and protocols.

Source: Countermeasures Assessment & Security Experts, LLC and Western Management & Consulting, LLC, 2014.

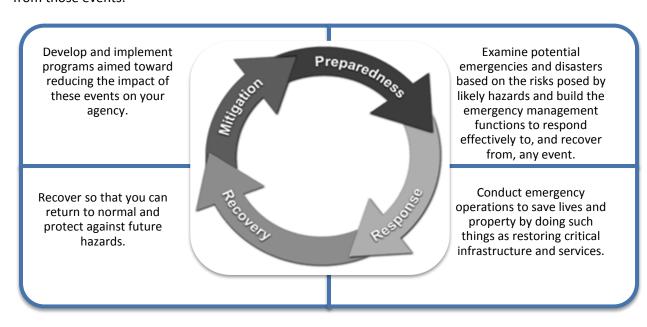


Figure 1. Phases of emergency operations.

Types of Emergency Incidents and Events

The term *all hazards* includes a broad range of incidents and events that have potential to affect transportation system operations. Figure 2 illustrates the types and frequency of events that

transportation agencies may encounter. These events may require coordination with other agencies (local, state, and federal) depending on the severity or complexity of the incident.

Planned activities range from frequent local or regional events such as sporting events, concerts, and parades to less-frequent national security special events (NSSE) such as political conventions and presidential inaugurations.

Weather-related incidents span the range of predictability, with extreme weather events increasing in frequency. Weather events not

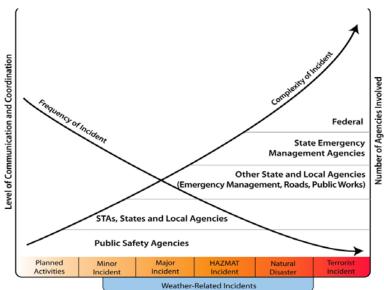


Figure 2. Agency involvement by incident level.

Source: Lockwood et al., 2005. NCHRP Report 525: Surface Transportation Security, Vol. 6: Guide for Emergency Transportation Operations.

only disrupt service, but can also damage infrastructure.

Transportation plays a critical role in an emergency situation. Other state agencies rely on the DOT to provide support during a major disaster. As a former executive director said, "Our focus is simple. We will provide the road to safety, we will clear the road to recovery, and we will maintain the road home."

As the CEO, you need to know what is out there. Understand what types of events are likely to occur in your state and what potential impacts those events can have on your agency. By anticipating the events and the potential impacts, you can plan in advance and be prepared when the events occur.

Because other local, state, and federal agencies may be involved along with your agency, a CEO needs to understand the specific procedures and protocols that have been established for managing emergencies and ensuring the staff stays current regarding the applicable state and national standards for emergency preparedness and response. The federal government expects state DOTs to incorporate principles and concepts of national initiatives that provide common approaches to incident management and response in emergency response plans and operations. National initiatives include the NRF, with its designed emergency support functions (ESFs), and the National Incident Management System (NIMS), with its protocols for multiagency interaction and communication. State and local NIMS compliance is a prerequisite for federal preparedness funds. An overview of key initiatives and their implications for transportation agencies is provided in the Appendix B.

What You NEED TO KNOW

- •State DOTs must be prepared to effectively respond to and quickly recover from many types of events.
- •State and regional agencies rely on the DOT to provide support during response to an emergency event. Transportation is ESF #1 for a reason.
- State DOTs must use the Incident Command System (ICS)/NIMS in order to maintain federal funding.
- NIMS integrates best practices into a comprehensive framework for use by emergency management personnel nationwide.

YOUR RESPONSIBILITIES

- Assessing risks and impacts of potential events
- Planning for multi-agency response
- •Ensuring that your agency understands response protocols
- Providing input on priorities, goals, and direction

What You NEED TO DO

- Maintain awareness of events that are likely to occur and their potential impacts on your agency. Learn from the agency's historical critical events.
- Understand the sensitivity of system assets, infrastructure, and services to different types of events.
- Monitor likely problem areas and explore mitigation and resiliency strategies to miminze impacts.
- Create and maintain a response and continuity of operations plan consistent with the requirements of the federal government.

Assessing the Organization and Its Capabilities

Success in dealing with a critical situation results from a combination of the extent to which your agency is prepared to deal with the situation and your relationship with those responsible for executing the plans. As a CEO, you need to develop solid relationships with key operations staff and give them

confidence that they have your trust. To do this, you must know who they are and what they do. This section provides questions to ask of the DOT staff to find out who is who and what the current organizational capabilities are.

people with the right mindset' rather than to have volumes of procedures that may or may not be read."

"An important leadership approach is

to be more focused on having the 'right

Each state transportation agency may have its own view, but in general, a CEO is responsible for and should hold his or her staff accountable for:

- 1. An agency-wide emergency operations plan that gets reviewed and updated on a regular basis.
- 2. A training and exercise program of annual or greater frequency that involves the state director in at least one exercise.
- 3. A continuity of operations plan (COOP) plan and COOP site whose capabilities are assessed on a regular basis.

The agency needs to ensure that it has these items in place and that staff know how to implement the plans and what to do **before** the event occurs. Experience with actual emergencies may be lost as key staff retire or move to other positions. Since a DOT's plans and procedures complement the state's

"Manuals and workshops, while helpful, are less important than knowing key staff, how to reach them when needed, and what they can do with the resources they have when the emergency happens."

overall emergency structure and plans, a CEO needs to be familiar with the state and regional emergency management community and ensure that the agency's plans are coordinated with theirs.

During an event, the success of any response depends largely on the strength of relationships among local law enforcement, emergency response personnel, and DOT local staff. As a CEO, you need to understand the extent of current relationships and how your agency can cooperate

more effectively with emergency responders and law enforcement.

Along with learning the capabilities of the organization, a CEO needs to know its limits. Knowing what work can be done by DOT employees and what work must be contracted out to others is critical to the effectiveness of the response.

Based on advice from others who have been in the position, to be successful, a CEO must:

- Have confidence in key maintenance/operations personnel and give them the freedom to respond based on their own initiative.
- Reinforce to staff that the CEO trusts them and will work with them to make the operation better.
- Use what is in place and what the agency has even if the CEO did not create it.

What You NEED TO KNOW

- •Your organization's structure and key people are critical to being prepared.
- •Staff expectations before, during, and after emergencies must be understood.
- •Good communication and teamwork are keys to good response.
- •Some decisions need to be made before an emergency, some will be made during the event based on the situation, and some will be made after an emergency during recovery and after-action analysis.
- •The capabilities and limits of the agency both enable and bound the agency's response.
- •Organizational roles and missions support agency and state plans.

YOUR RESPONSIBILITIES

- •Knowing your staff and listening to their needs.
- Having a plan for response and the means by which to pass it on to the next generation leadership.
- Understanding the importance of training and exercises to maintain the plan and practicing its use.
- •Supporting and motivating the team.

What You NEED TO DO

- Develop solid relationships with key operations staff. Reinforce that you trust them and will work with them to make the operation better.
- •Learn what your agency needs to do before, during, and after an emergency.
- Make sure you have a plan for response and staff who are charged with maintaining the plan and have been trained on its use.
- •Be prepared. Understand your agency and state plans and the organizational roles and missions in support of those plans.
- •Create a culture that rewards individual initiative.
- •Ride with field response staff to better understand their jobs.
- •Learn before you speak; trust before you criticize.

Questions to Quickly Assess the Organization and Its Capabilities

Roles/Responsibilities

- Who at my agency is responsible for security and emergency preparedness?
- Do all of my organization's senior managers know their responsibilities, and are they prepared for an event or situation?
- Who is responsible for plans and responses at the working level? Ask for names and numbers of staff who actually perform the work in the state's emergency operation center (EOC). Ask for non-working hours contact information.
- Where are emergency response staff physically located within the DOT? Visit the DOT sites where the staff works.
- What do the staff want me to do when there is a significant event?

Capabilities/Resources

- Does the agency have plans in place to respond to various classes of emergencies? Are the plans effective and regularly updated?
- Are plans, documents, and contact lists updated semiannually/annually? Are the documents easily available online? Are there a sufficient number of paper copies available?
- Do incident response staff have backup relief to sustain 24/7 coverage for an extended period of time?
- Does the agency have an adequately equipped alternative command center/location from which to operate should it lose access to its primary facilities and equipment?
- Could the agency handle two significant emergency situations simultaneously?
- What types of resources are available for emergencies?
- Does the agency have the proper equipment to respond to an incident?
- What types of equipment, such as specialized equipment, are available?
- Are contracts in place with vendors to acquire needed supplies or services in an emergency? If
 not, is a list of prequalified contractors available? Can the agency establish these contracts or
 are there bureaucratic, administrative, or legal hindrances?
- Have expedited procedures been established for emergency situations?

Communication/Coordination

- Is there adequate communication and coordination between the agency's headquarters and local units in an emergency situation?
- How can the agency cooperate more effectively with emergency responders, law enforcement, and others?
- How well does the agency coordinate with local governments? Are there geographic locations of concern?
- What are the communication and coordination protocols with the governor's office and the state's emergency management organization in an emergency situation?
- Is the agency's communications equipment interoperable with that of other agencies with whom it needs to communicate?

Training/Continual Improvement

- Does the agency practice and/or train for all classes of emergencies?
- How do it document lessons learned from incidents?
- How do it document lessons learned from training and exercises?

CEO Roles and Responsibilities

During emergencies, a transportation CEO has a number of roles: operations leader, political leader, spokesperson, and local/regional partner.

As operations leader of the DOT, the CEO sets the agency's agenda and must establish priorities for planning for and responding to emergencies. The agency's reputation, and its funding, may be based on

"During an event, be visible to put a face on the response. The public wants to know someone is in charge and that there is leadership that is concerned about them. Also, to let the employees know you trust them and are there to support them."

how the DOT responds. As a CEO, you need to set internal expectations and support the staff as they strive to meet those expectations. It is important to stay in touch with the overall big picture without getting bogged down in the details of everyday items. It is important to keep in mind this advice from one of your peers: "Things never go perfect in a major event. There are always issues, so don't throw staff under the bus. You will have a much stronger organization by doing such."

"The CEO must focus on clear and correct information and the long-term reputation of the organization."

As a political leader, the role of a transportation CEO is distinct and different from that of the governor and other elected officials. You need to understand the political implications of the event and provide guidance to the elected official (typically the governor) to whom you report in order to, as one as your peers has advised,

"ensure that we were not stepping into a political minefield." To be effective, you must have the full confidence of the governor and understand how to address the political requirements so that the professionals in your agency can perform their jobs.

The DOT CEO may be the public face of the state's response to an event, especially if it involves damage to or destruction of critical transportation infrastructure or requires closing major transportation facilities. Make sure that effective communications mechanisms and people are in place so that the agency can communicate regularly and competently to all stakeholders. This is critical for both the governor and the public. Given the speed and frequency with which communication travels in today's environment, communicating regularly and often means multiple times per day. The CEO does not need to be the communicator in all cases, but the CEO must insist on this pattern to be effective.

As a public entity in a crisis, the agency may be inundated with requests for public information. Get ahead of the curve by releasing relevant and related public data prior to requests. Demonstrating a commitment to honest transparency with information and public data can help build and maintain an agency's reputation during a crisis.

During an event, a DOT sits at the nexus of multiple stakeholders, resources, authorities, and responsibilities. The CEO needs to understand these relationships and how best to manage them during emergencies. He or she will need to be the advocate for the DOT with other agencies so that they can

understand DOT capabilities and resources. To do this, the CEO must establish relationships **before** an event happens with the leadership in partner agencies both within the state and in neighboring states, since some emergencies are regional and require multistate coordination.

What You NEED TO KNOW

- •DOT reputation and funding may be based on how the DOT responds when the major incident or weather event occurs.
- •The full confidence of the elected official (typically the governor) is critical.
- Demonstrating that someone is in charge of the crisis **and** that the agency's primary goal is to do whatever is necessary to protect public safety and/or address the needs of injured parties are important.
- A commitment to honest transparency will help build and maintain an organization's reputation during a crisis.
- Partnership and relationships are critical at all levels in the emergency response community. Remember: "if they know you, they will trust you."

YOUR RESPONSIBILITIES

- Focusing on the long-term reputation of the DOT.
- •Communicating clearly and correctly.
- •Understanding the importance of dealing with politics.
- Advocating for your agency with the governor and with other agencies.
- •Supporting your partner agencies.

What you NEED TO DO

- •Be visible early in a crisis. Empathy is critical.
- Communicate regularly and often to all stakeholders. "Communicate and then communicate that you communicated."
- Understand and build on the relationships among various stakeholders, resources, authorities, and responsibilities.
- Establish solid relationships with the leadership in partner agencies, both within the state and in neighboring states.

Pre-Planning Guidance: The Right Questions to Ask

Here are some important questions to ask to ensure that the agency is in a state of readiness and continually resilient for when the next emergency occurs.

Planning/Preparedness

- What is my system's current level of security and preparedness?
- How many real-time disasters has the agency responded to in the last 2 years?
- Does the agency have plans in place to respond to various types of emergencies?
- Are state emergency response plans current and adequate?
- Are the response programs centralized or decentralized?
- What additional threats should we consider for our operations?
- How are the state's functions and emergency management agencies coordinated?
- What are the roles and authority of the governor's immediate staff?
- How is the state's fusion center (see definition in Appendix D) organized?
- Are critical information technology (IT) systems included in the COOP?

Communications/Coordination

- What agency is responsible for your state's communications system, and do they have a backup plan?
- Do all of your agency's responders know who the go-to person is in case of an incident?
- Do key staff have the contact numbers of other key staff (e.g., are staff wallet cards distributed)?
- Does the contact list contain cellular numbers, home personnel cellular numbers, and personnel e-mail addresses for backup contact?
- Are the state's first responder communications sufficiently interoperable?
- What technical means of communication are available?
- How can the agency cooperate more effectively with law enforcement and other emergency responders?
- Ask to meet with your counterparts at state level from the National Guard, state police, and governor's office of emergency preparedness. Ask what you can do to help them. What barriers do they have within your agency?
- Visit communications/operations centers at the district or local level. What do they expect of you? Who will notify you and provide regular updates during an event?
- Do staff know whom to notify at the local FHWA office when an incident occurs?
- Have staff contacted bordering states to obtain contact information from their counterparts?
- Have staff communicated with local public works agencies (larger counties/cities) to see if they have a response plan? If they have such a plan, does it work with yours?

Training/Exercises

- Does the agency practice and/or train for emergencies?
- When were the last exercises/drills conducted?
- Who is in charge of the exercises?
- What other agencies participated? Were any key agencies not present?
- For the drills/exercises in which your agency has taken part, was the role realistic to operations? Is there a need to have someone involved in the planning to make them more realistic?

Feedback/Corrective Actions

- Has the agency completed after-action reviews of real-time incidents and exercises/drills?
- What went well, and what are the major areas needing improvement?
- What steps can be taken to identify and prioritize actions for mitigating and managing risks?
- Are staff aware of the ongoing efforts of AASHTO and the Transportation Research Board (TRB) as related to security/emergency response?

Appendices

- **A.** Summary of CEO Interviews
- **B.** Federal Initiatives and Strategies
- C. Additional Resources to Review
- D. Terms and Definitions
- E. Acronyms and Abbreviations
- F. Staff Resources and Tools

APPENDIX A: SUMMARY OF CEO INTERVIEWS

HAD YOU HAD ANY ENGAGEMENT IN EMERGENCY RESPONSE OR SECURITY ISSUES PRIOR TO YOUR APPOINTMENT? How familiar were you with national/local/agency procedures and protocols when you were appointed? [e.g., national codes and guidelines – emergency management, emergency response, NIMS/Incident Command System (ICS), COOP, security].

The CEOs interviewed ranged from those who were experienced and well versed in emergency response to those who had little involvement or any training when they were appointed to their positions. CEOs with exposure to emergency response were not always familiar with a lot of the terminology since they often counted on subordinates to handle issues.

TELL US ABOUT THE EVENT(S) DURING YOUR TENURE AS CEO WHICH SHAPED YOUR UNDERSTANDING OF AND APPROACH TOWARD AGENCY PLANNING AND EMERGENCY RESPONSE AND/OR SECURITY ISSUES?

Listed in the following are the events that occurred during the tenures of the CEOs interviewed and influenced their thinking and approach. Some of these events were highly visible. Others that CEOs thought would raise public and political concern were never reported in the major newspapers.

- Multiple natural disasters and manmade disasters major tornados, earthquakes, tunnel and highway accidents with resulting fires and collapse of infrastructure, flooding and long-term closure of major bridges/tunnels, and a number of winter weather emergency events, including a state-paralyzing snowstorm that "taught many lessons about equipment and staff reliability."
- I-35W bridge collapse in Minnesota that required re-establishing public and political confidence in the state DOT.
- Local bridge collapse requiring ferry service to get children to school and adults to work, and Hurricanes Katrina and Rita which were "different incidents": one with people evacuating in and "dealing with the issues with setting up shelters and food" and other with people trying to evacuate out. "That was the first time we did contraflow.... It was a learning curve. At first we spent some long nights trying to get things working as well as possible; people don't think about on and off ramps but they cause lots of issues."
- Multiple planned and unplanned events, including:
 - Traffic management for the Olympics,
 - Planning and implementation for the 1.8 million people attending the first inauguration of President Barack Obama, and
 - Bomb threat at weigh station requiring closure of the main highways with no alternative routes available for over 16 hours.
- Tornado that hit the downtown area and knocked out all telecommunications used by the emergency response community and public institutions. The CEO "found out about the event by getting a page (on his pager) over AOL from his son. The only access they had visually to the area was on TV from a camera mounted on roof in downtown. He learned and knew his agency staff was in action and responding when he saw on TV that a bucket truck was backing up to a traffic signal in the downtown area to repair the signal. The important point here is that the employees/supervisor took their own initiative to their jobs and began the response and recovery without receiving any direction or call from the EOC or headquarters."
- Response to Hurricane Katrina "most shaped thinking about the importance of being prepared for an event."

WHAT LESSONS DID YOU LEARN FROM THAT EXPERIENCE, BOTH POSITIVE AND NEGATIVE?

CEO #1 What an important role a DOT plays in a community when something happens and they depend on the DOT to help.

Just how devastating a disaster is and the toll it takes on a community.

It is important to also know when your agency needs to get back to their normal operation and let the locals know that maybe it is time for them to finish up. Sometimes it is hard for the emergency management and locals to understand that we have our daily work schedule that we need to get back to.

Just how important it is to know the people in the surrounding state DOTs. That really played a big role during the Missouri River flooding when we worked together to link our 511 web sites so the traveling public could view the "global detour" that we used during the event.

CEO #2 Do not wait to be called; immediately head into the office to help with event response.

There was not any sense of threat or fear, but rather a desire to take action and help.

My role was not to be on the scene but to maintain communications and information flow with critical audiences from the central office. There was public affairs staff on scene whose job it was to deal with the media in the immediate aftermath of the event.

CEO #3 After Rita we decided we needed to do a better job of planning for excavations and supplying fuel. I formed a task force to look into better ways to do these things. We also beefed up shoulders and intersections for contraflow.

We also came up with the idea of a buddy system; it was basically people from other parts of the state who came into the affected areas to help do the work because our employees in the area were also affected from the incidents, their families were displaced, and there homes were damaged they needed to deal with their own issues. It is something people need to consider.

Was also totally impressed by the confidence and initiative of the field operations staff, from the division engineer to lowest levels in the field who took the right actions and did not wait to be ordered or directed to take action.

CEO #4 An agency that has not had a serious event in 3 or 4 years will have a tendency to lose its skills because of loss or changes in critical staff and lack of practice to keep its skills sharp.

Leadership of an agency needs to pay attention to staff placement and replacement, ensuring that it has programs to ensure that staff get the necessary training and experiences to be able to implement emergency response procedures and think on their feet without having to go through a rule/procedures book.

We developed new and updated procedures and systems for use within the agency and between the two other partner agencies during events. There is a new focus on information sharing and distribution through a central clearinghouse. There are measures now in place to bring information together from all sources in what is in essence an information fusion center under the Emergency Management Agency.

Weather forecasting systems and providers were improved. Weather forecasts are now monitored and provided several days in advance of an event. As the event comes closer, measures for preparation and response are implemented in stages.

The agency established a protocol of actions affecting not only the internal agency staff, but also the traveling public. Some of these are a speed-reduction protocol, developing an ongoing training program, and retraining agency staff.

CEO #5 Your better agency staff/professional will not feel threatened or fear a crisis. Your good agency professionals will shine in a crisis.

Above all else, leaders need to constantly reinforce the understanding in the agency that emergency response and preparedness is a critical and primary part of the agency mission. **And** it is one of the most rewarding parts of the job in a transportation agency.

Training and ensuring that the agency has a strong emergency response capability are critical.

CEO #6 In almost all emergency situations involving traffic control, everybody but the DOT is in charge of the event and their motivation is not always to return the facility to service as quickly as possible. The success of any response is almost entirely dependent on the strength of relationships between local law enforcement, emergency response personnel, and local DOT staff.

Unrecognized by most governors is the real capability and power of their state DOT operations and maintenance functions. They do not realize that the DOT is one of the few agencies that can mobilize needed equipment and staff to provide an initial response to events.

The transportation community has lost its focus on the need to have trained and high-level staff who understand the principles of military discipline and emergency response as keys to success in operations and maintenance. There is a tremendous training and education gap for new professionals and line staff on the principles of emergency preparation and response. Currently, there are relatively few private-sector service providers who understand what is needed to provide effective emergency response services.

- **CEO #7** The key to success in emergency response is for leaders to focus on preparing agency staff by creating a culture for supervisors and employees that is positive and supportive—to define a culture that stresses individual initiative from all employees:
 - Making sure they feel a sense of ownership and are free to take action and do their jobs when they see that something needs to be done.
 - Making sure that there is no micromanagement in the agency.
 - Making sure that when someone does take action, the actions taken do not result in the employee being punished if the actions were taken in good faith.
- **CEO #8** New CEOs should be given adequate emergency management/emergency response training soon after assuming their positions, developing internal communications with key operations staff and with external agencies such as emergency management and state patrol.

In planning for an incident, it is necessary to hold internal and external drills with other state agencies, such as emergency management and state patrol. DOT staff need to be adequately trained in responding to and recovering from an event, as the CEO needs to rely on and trust the judgment of their staff.

Greatest challenge is interagency as well as external agency communications. The state has a chat board that includes key executives from all key state agencies CEOs and managers. This board meets regularly with a focus on managing responses to major events, ensuring state-level response and coordination.

Another challenge was getting the equipment (plows, bulldozers, salt, etc.) needed to respond to an event. It is important to have vendor relationships established prior to an event.

CEO #9 Bad things happen during an event whether you are prepared or not, but if you are not prepared to respond to an event and something goes bad, there is no forgiveness by the press or the public.

It is necessary that a state DOT have a credible emergency operations manager. This position reports directly to maintenance or operations, depending on the organization's alignment. It is critical that operations and public information officers (PIOs) train and work together. If an event requires the state EOC to be opened, **both** operations and the DOT PIO need to be at the EOC 24/7.

Drilling and exercising for an event is most critical. This includes participation by the CEO.

FROM YOUR EXPERIENCE, WHAT WOULD YOU RECOMMEND THAT NEW CEOS LEARN AS THEY TAKE COMMAND OF THE AGENCY IN ORDER TO BE PREPARED FOR THEIR FIRST MAJOR INCIDENT?

CEO #1 In the computer age, how critical it is to have sophisticated backup plans in place and to have emergency procedures that are understood and trained throughout the agency.

You must seek out the right people in your agency and check to see if current plans do exist within your agency.

Also meet your counterparts in agencies and surrounding states that would be involved in an emergency response. Get to know them before something happens.

As far as snow removal goes, highways need to be cleared ASAP. It might cost your agency a little more money, but you need to look at the big picture and understand how snow-packed roads affect the overall economy.

There are some things that only a CEO can do. Be prepared to help in any way so others can do their jobs. Have respect for the people that work for you and in other agencies and states. Let your staff and others take care of details and do their jobs. You must also consider the problems/situations that arise with politics, communities, and the media and how important they can become so it is very important to stay on top of the issues.

CEO #2 My advice for CEOs includes:

1. Understand that the role and reputation of the CEO is distinct and different from that of the governor and other elected officials. The CEO must focus on clear and correct information and the long-term reputation of the organization.

- 2. The value of good staff is critical. If a leader is marginal in carrying out everyday responsibilities, they will be worse in a crisis.
- Communication flow can suffer from political intervention. It is important to have the confidence of elected officials so that the professionals can maintain critical protocols.
- 4. Recognize how important emergency response is and that it is a serious business. Even though the probability of a significant event may be low, the CEO's legacy will be shaped by how he or she responds and the success of that response.
- 5. Know your organization and your people. Take the business seriously and know how you fit as its leader.
- 6. Drill to prepare. Get into the action of training with your staff.
- 7. Understand the importance of dealing with politics. In a political context, the "true character of people will be truly revealed."
- 8. Partnership and relationships are critical in the emergency response community at all levels. Remember, "If they know you, they will trust you."
- 9. Early public presence: It is important for an organization's CEO/leadership to be visible early in a crisis. The leader must demonstrate that he/she is in charge of the crisis management/response and that the organization's primary goal is to do whatever is necessary to protect public safety and/or address the needs of injured parties. Empathy is critical.
- 10. Communicate often: It is critical that during a crisis, an organization communicate regularly and often to all stakeholders. Regular communication will allow for accurate information to be shared in a timely basis, and will avoid creating information voids that will be filled with inaccurate speculation by other parties. Given the speed and frequency with which communication travels in today's social media environment, communicating regularly and often means multiple times per day. The CEO need not be the communicator in all cases, but must insist on this pattern.
- 11. Transparency: Be transparent with information and public data. As a public entity in a crisis, the organization will be inundated with requests for public information. Get ahead of the curve by self-releasing relevant (and near-relevant) public data prior to requests. During the I-35W bridge crisis, Minnesota DOT used its website to make public thousands of pages of documents prior to media, legislative, or public requests. Demonstrating a commitment to honest transparency will help build and maintain an organization's reputation during a crisis.
- **CEO #3** If you are a new CEO, get familiar with your people and the roles your people have in emergency management. You also need to know the emergency management role during an incident.

You need to ask your people, "what do you expect from me?" Then if you think you need to have some training to meet their expectations, get it.

Be visible to your staff. You need to meet and talk to them. Face-to-face, tell them that you are here to help them get the job done. Tell your people that they will need to make decisions and that you will stand by them.

CEO #4 There are several elements of advice and needs that could help new CEOs assume their

positions leading transportation agencies:

- Every state DOT could benefit from a national template that could be customized and that would support the best practices in emergency response and preparation for organizations. The template should focus at assisting CEOs and their staff, ensuring that they are pursuing the most productive approaches to this function of the agency.
- New CEOs should ask for briefings and a review of their agency emergency response protocols.
- Make sure you look back and learn from the history of the agency and its critical events. Make sure you have a plan for response and a means to pass it on to the next generations. Make sure you have staff who are charged with maintaining the plan and who are provided training on how to use it.
- Be sure you have equipment and materials ready and in place.
- Have drills and observers who give you feedback on how things are working.
- Ask yourself these questions:
 - What events have you had in the past?
 - Do you know who plays what roles?
 - Do you have trained staff?
 - Do you have the right equipment and materials?
- Make sure you have good communications mechanisms and people in place. This
 is critical for both the governor and the public
- Ask if the governor has his team prepared.

CEO #5 Ten Things to Consider:

- 1. A good relationship with the governor is important to ensure that he/she has confidence in you and that he/she will help you get the resources and influence you need when the events occur.
- 2. During an event, be visible to put a face on the responses. The public should know someone is in charge, and let the public know that there is leadership that is concerned about them. Also, let the employees know you trust them and are there to support them.
- 3. Remember that you can't do everything yourself. Collaboration is critical to your success.
 - a. Cities
 - b. Transit
 - c. Public safety agencies
 - d. Media, etc.
- 4. Be sure you have an effective public communications apparatus in place.
- 5. Know when to step back and let the contractors do their jobs and play their parts. Be supportive of the contractor/industry partner and break down the barriers they may face when assisting you in responding to the event.
- 6. Send the message that event response is important and central to your agency mission.

- 7. While manuals are important, do not make them your main focus. Quick and easy-to-use carry-around cards and information sheets are more useful for staff during a crisis. The focus should not be what to do or writing detailed procedures, but on who to contact and who has the expertise to really help and take action.
- 8. Be there to support your staff, but don't get in the way.
- Check to see how long it has been since the agency has dealt with a significant event. People who have experience turn over, and staff skills atrophy. Therefore, focus on renewing skills and doing training to be sure your staff and agency are ready.
- 10. Always sell the importance of the role of the agency and the importance of being ready. Because even if you have never been involved in an event, there is one coming and you need to be ready and be able to act on instinct.
- **CEO #6** I suspect most agencies orient their new CEO on where to go and who to contact rather than detailed training on emergency and security planning and response.

From my experience I would suggest to any CEO that they:

- Are not expected to know the details,
- Need to know what they can authorize under code from what others were recommending,
- Need to ask some common-sense questions,
- Need to ensure that they are not stepping into a political minefield,
- Need to run political interference so that professionals can do their jobs,
- Need to make sure they are there to support changes from lessons learned,
- Need to be there during the event to help those who were engaged in the response, and
- Need to create a culture in which people learn and are sustained rather than are punished when mistakes were made.
- **CEO #7** One of the most important things you can do is work on preparing your agency and staff to respond **before** the event occurs.

Create a culture that rewards individual initiative.

Tabletop exercises are important as agency staff turnover occurs to convey the attitude of individual initiative.

An important leadership approach is to be more focused on having the "right people with the right mindset" rather than to have volumes of procedures that may or may not be read.

Leave people alone and let them do their jobs.

Use what is in place and what you have, even if you did not create it.

Relationships are critical. There is no substitute for knowing your partners, both on and off the job. Both at the headquarters level and your field staff at the local level. These include:

- Police
- Fire
- Emergency response

Media

Know your FHWA staff very well.

Engage the contracting industry in the state. Develop their trust so that in an emergency they will have the equipment and people you will need. They need to know that you are good for your word and that they will get paid when they come to help.

Media relations are important/critical. Take care of reporters to help them do their jobs. Get them the information they need. You cannot always rely on the state/governor's PR people to give the right operational information because they have differing needs, agendas, and bosses.

CEO #8 All new CEOs should be given some type of training and guidance on emergency management/emergency response shortly after assuming their positions. They need to understand that they are responsible if there is an incident.

The new CEO needs to set internal expectations of the agency in determining/developing communications protocols for a future potential event.

Develop communications protocols with other key response agencies such as emergency management and state patrol.

The CEO needs to support agency staff as they have a critical role in responding to events. Things never go perfectly in a major event. There are always issues, so don't throw staff under the bus. You will have a much stronger organization by doing such.

CEO #9 At the end of the day the new CEO needs to trust her professional staff. But even her top managers—the ones that know this stuff better than anyone else—need a leader to set the tone. That is you, CEO. Set the vision and expectations.

Next, new CEOs must recognize that all of their actions, and all of the actions of their managers and staff, will reflect either positively or negatively on the overall agency reputation. If the goal of the new CEO is to raise support for increased funding, she must make sure the roads are cleared during a snowstorm. Or she must make sure that all the bridges are inspected promptly following an earthquake. And then she must tell everyone that is indeed what she asked of her team.

Ultimately, an emergency situation is really a communications situation. The communication staff needs a seat at the table. My best advice is this – "Communicate and then communicate that you communicated." In other words, speak to your team about your expectations during and immediately following an emergency. For instance, "I expect a professional response that at its core is some kind of expression of 'white knuckles and beads of sweat." Then, tell the political audience, the media and the general public (through social media) that you have communicated your expectations.

After that, get in the field (where it is safe and appropriate) and listen to the "boots on the ground," interact with the communities affected and make relationships with the reporters that are standing knee deep in flood waters. It will serve you well later when the legislature is back in session and you need the support of your staff, the media, and local communities.

APPENDIX B: FEDERAL INITIATIVES AND STRATEGIES

The federal government expects state DOTs to incorporate principles and concepts of national initiatives that provide common approaches to incident management and response in emergency response plans and operations. National initiatives include the NRF, with its designed ESFs, and NIMS, with its protocols for multiagency interaction and communication. To assist in understanding the specific procedures and protocols that have been established and ensuring the staff stays current, Table 1 on the following pages provides an overview of the key national strategies and initiatives with the specific implications for a state transportation agency.

The NIMS Process

NIMS provides a unified framework well understood by the emergency management community at the local, state, and federal levels. State and local NIMS compliance is a prerequisite for federal preparedness funds. Figure 3 provides a high-level overview of the NIMS components. The ICS provides the integration of facilities, equipment, personnel, procedures, and communications for emergencies.



Figure 3. Components of the NIMS process.

Source: U.S. DOT et al., 2006. Simplified Guide to the Incident Command System for Transportation Professionals, FWHA/DOT.

Under NIMS, a series of ESFs have been established. The ESFs provide a structure for coordinating interagency support for a response to an incident. They are mechanisms for grouping functions most frequently used to provide support, both for declared disasters and emergencies under the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

- Transportation is ESF #1. The DOT, with the assistance of the ESF #1 support agencies, provides assistance such as coordination of the restoration and recovery of the transportation infrastructure beyond the state and local level.
- ESF #3 is public works and engineering, which relates to the deployment of DOT engineering support.

Figure 4 provides an overview of ESF #1 and ESF #3.

ESF #1 - Transportation

ESF #1 provides support to the Department of Homeland Security (DHS) by participating in the following activities:

- Monitor and report status of and damage to the transportation system and infrastructure caused by the incident.
- Identify temporary alternative transportation solutions for implementation by others when systems or infrastructure are damaged, unavailable, or overwhelmed.
- Perform activities conducted under the direct authority of DOT elements as these relate to aviation, maritime, surface, railroad, and pipeline transportation.
- Coordinate the restoration and recovery of transportation systems and infrastructure.
- Coordinate and support prevention, preparedness, response, recovery, and mitigation
 activities among transportation stakeholders within the authorities and resource limitations
 of ESF 1 agencies.

ESF #3 - Public Works and Engineering

ESF #3 assists the DHS by participating in the following activities:

- Pre-incident and post-incident assessments of public works and infrastructure.
- Emergency contract support for life-saving and life-sustaining services.
- Technical assistance to include engineering expertise, construction management, and contracting and real estate services.
- Emergency repair of damaged public infrastructure and critical facilities.
- Implementing and managing the DHS/Federal Emergency Management Agency (FEMA) Public Assistance Program and other recovery programs.

Figure 4. Overview of ESF #1 and ESF #3.

Table 1. Overview of federal frameworks, strategies, and initiatives.

Initiative/Strategy	DOT Implications	
National Disaster Recovery Framework (NDRF) http://www.fema.gov/national-disaster-recovery-framework The NDRF defines an overall process by which communities can capitalize on opportunities to rebuild stronger, smarter, and safer. The framework includes: • Core recovery principles, • Roles and responsibilities of recovery coordinators and other stakeholders, • Coordinating structure that facilitates communication and collaboration among all stakeholders, and • Guidance for pre- and post-disaster recovery planning.	 Guides effective recovery support to disaster-affected areas and introduces six recovery support functions (RSFs). The infrastructure systems RSF provides the coordinating structures, framework, and guidance for resilience, sustainability, and mitigation as part of the design for infrastructure systems. 	
National Response Framework (NRF) http://www.fema.gov/national-response-framework The NRF provides guidance on how the nation conducts all-hazards response by presenting a framework for aligning key roles and responsibilities at all levels of government, private industry, and nongovernmental organizations, into a unified national response to disasters.	 Identifies critical role of transportation in response. Calls for emergency operations plans (EOPs) and COOPs. When an incident exceeds the ability of local and state government to respond effectively, the federal government uses NRF to organize federal assistance. 	
National Incident Management System (NIMS) http://www.fema.gov/national-incident-management-system The NIMS provides a unified framework well understood by the emergency management community at the local, state, and federal levels. The ICS provides the integration of facilities, equipment, personnel, procedures, and communications for emergencies.	 All federal departments and agencies are required to adopt NIMS. State and local NIMS compliance is a condition for federal preparedness funds. Transportation is ESF #1. 	

Continued on next page

Initiative/Strategy **DOT Implications** National Infrastructure Protection Plan (NIPP) 2013: Provides coordinated approach for critical **Partnering for Critical Infrastructure Security and Resilience** infrastructure and key resources (CI/KR) https://www.dhs.gov/national-infrastructure-protection-plan protection. The NIPP outlines how government and private-sector Focused on resilience - "the ability to resist, participants in the critical infrastructure community work absorb, recover from, or successfully adapt to together to manage risks and achieve security and resilience adversity or a change in conditions." outcomes. Transportation Systems Sector-Specific Plan (TSSSP) Annex to Focused on reducing risks from all types of hazards, increasing overall resiliency, and http://www.dhs.gov/xlibrary/assets/nipp-ssp-transportationenhancing readiness for continuity and recovery systems-2010.pdf operations. The TSSSP describes collaboratively developed strategies to Encourages wider participation in risk-reduction reduce risks to critical transportation infrastructure from the activities such as critical infrastructure broad range of known and unknown terrorism threats. The identification and risk assessments in an efficient, three goals of the TSSSP are: practical, and cost-effective manner. 1. Prevent and deter acts of terrorism against the transportation system, Recommends determining security and resiliency 2. Enhance resilience of the transportation system, priorities, including developing, implementing, and and measuring protective programs and resiliency 3. Improve cost-effective use of resources for strategies. transportation security. **Recovering from Disasters: The National Transportation** Develops pre-disaster partnerships and plans that **Recovery Strategy (NTRS)** are tested/evaluation through workshops and http://www.dot.gov/sites/dot.gov/files/docs/Disaster Nation exercises. al_Transportation_Recovery_Strategy.pdf Integrates pre-disaster recovery planning with The NTRS provides recommendations for preparing for and other existing plans. managing the transportation recovery process. NTRS helps bridge ESF #1 and ESF #14 by connecting transportation Develops accessible public information campaign response and recovery to long-term community recovery. for an array of possible scenarios.

The following figures provide an overview of the multiagency coordination and escalation process within NIMS (Figure 5) and the assistance flows and mutual aid process within the ICS (Figure 6).

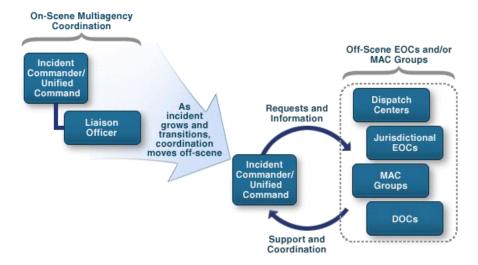


Figure 5. NIMS multiagency coordination and escalation of command.

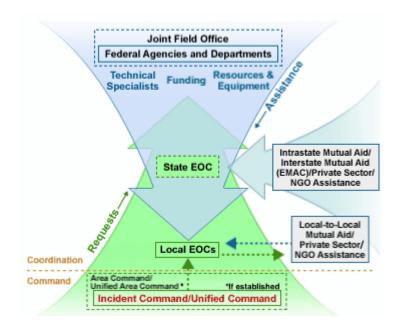


Figure 6. Overview of assistance flows and mutual aid.

APPENDIX C: ADDITIONAL RESOURCES TO REVIEW

Governor's Guide to Homeland Security (2010)

http://www.nga.org/files/live/sites/NGA/files/pdf/1011GOVGUIDEHS.PDF

The Governor's Guide to Homeland Security was developed to assist state governors in understanding the requirements for providing homeland security and ensuring public safety. This is recommended as a companion guide to better understand the state governor's perspective on emergency response and recovery. Produced by the National Governors Association Center for Best Practices, the guide addresses five critical areas:

- 1. Coordinating the state's homeland security and emergency management agencies;
- 2. Defining the role and authority of the governor's homeland security advisor;
- 3. Coordinating emergency response plans with the current threat environment;
- 4. Organizing the state fusion center and its intelligence products; and
- 5. Developing a successful approach to the future of public safety communications.

Security and Emergency Management – An Information Briefing for Executives and Senior Leaders in State Departments of Transportation

http://www.fhwa.dot.gov/security/emergencymgmt/profcapacitybldg/docs/hsemexecsrrleaders/hsem_srexecs.cfm

This briefing material, produced by the FHWA, was designed to provide a standard overview to new appointees or senior leaders about typical state department of transportation roles, missions, and organizational structures. The presentation introduces executives and senior leaders to plans, concepts, and terminology used by the security and emergency management community.

Topics covered include:

- Emergency management and emergency operations plans;
- National Response Framework, National Incident Management System, and the Incident Command System; and
- Operations centers and organizing a state emergency management program.

Role of Transportation Management Centers in Emergency Operations Guidebook (2012)

http://www.ops.fhwa.dot.gov/publications/fhwahop12050/

This guidebook explores ways to increase communication, collaboration, and cooperation between transportation management centers (TMCs) and emergency response agencies. Produced by the FHWA, the document addresses the technical and institutional barriers that prevent TMCs from fully supporting emergency operations and provides specific activities and practices such as joint planning and training activities for TMCs to become more effective in emergency operations.

Guide to Emergency Response Planning at State DOTs (2010)

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp rpt 525v16.pdf

This comprehensive guide to the emergency response process is designed for state departments of transportation. Produced by the Transportation Research Board, the guide examines the institutional

context for emergency response planning and explains in detail how to develop an emergency response program that allows transportation agencies to plan, prepare for, respond to, and recover from a complete range of hazards and threats.

Guide For Emergency Transportation Operations: Executive Guide, Volume 1 (2005)

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_525v6.pdf

This guide, intended for senior managers/policy makers and for agency program managers, outlines a coordinated, performance-oriented, all-hazard approach for emergency transportation operations (ETOs). The concept focuses on an enhanced role for state departments of transportation as participants with the public safety community in an interagency process. Produced by the Transportation Research Board, the document contains sections that focus on the importance of a coherent policy, organizational, and financial framework specifically for senior managers and policy makers.

Continuity of Operations Planning (COOP) Guidelines for Transportation Agencies (2005)

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_525v8.pdf

This guide presents guidelines for state and local highway and transit agencies on multimodal COOP. The document, produced by the Transportation Research Board, provides instructions on how to develop, implement, maintain, train for, and exercise COOP capabilities.

WSDOT Procedures Manual: Emergency Relief Procedures Manual (2012)

http://www.wsdot.wa.gov/publications/manuals/m3014.htm

This manual, produced by the Washington State Department of Transportation (WSDOT), provides the legal and procedural guidelines for WSDOT employees to prepare all necessary documentation to respond to and recover from emergencies or disasters that affect the operations of the department, and apply for emergency relief funding from FHWA. The document provides a template for other state DOTs to effectively document federal and state-specific procedures for emergency events.

Security 101: A Physical Security Primer for Transportation Agencies (2009)

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_525v14.pdf

This guide is an introductory-level reference for use primarily by those who are neither security professionals nor well versed in security language. Produced by the Transportation Research Board, the documents focuses on measures and concepts designed to safeguard personnel and to protect equipment, installations, material, and documents against espionage, sabotage, damage, and theft. The report covers security risk management and threat assessment techniques, security plan development, tools and countermeasures, security training, prioritization of asset protection, and integration with federal homeland security practices.

A Transportation Executive's Guide to Organizational Improvement (2006)

http://onlinepubs.trb.org/onlinepubs/archive/NotesDocs/20-24(42)_FR.pdf

This guide was developed to assist DOTs in identifying and pursuing opportunities for enhancing organizational performance. The document provides a guide for CEOs and senior leaders to improve

organizational performance by identifying common themes among the DOTs that reported the greatest strengths in their approaches to improvement and providing a toolbox of those effective approaches.

APPENDIX D: TERMS AND DEFINITIONS

After-Action Report/Implementation Plan (AAR/IP) — The main product of the evaluation and improvement planning process with two components: an AAR, which captures observations of an exercise and makes recommendations for post-exercise improvements; and an IP, which identifies specific corrective actions, assigns them to responsible parties, and establishes targets for their completion. The lead evaluator and the exercise planning team draft the AAR and submit it to conference participants prior to the after-action conference. The draft AAR is completed first and distributed to conference participants for review no more than 30 days after exercise conduct. The final AAR/IP is an outcome of the after-action conference and should be disseminated to participants no more than 60 days after exercise conduct. Even though the AAR and IP are developed through different processes and perform distinct functions, the final AAR and IP should always be printed and distributed jointly as a single AAR/IP following an exercise.

Continuity of Operations – An effort within individual organizations to ensure that primary mission essential functions continue to be performed during a wide range of emergencies.

Emergency – Any incident, whether natural or manmade, that requires responsive action to protect life or property. Under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, an *emergency* means any occasion or instance for which, in the determination of the President, federal assistance is needed to supplement state and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States.

Emergency Operations Center (EOC) – A control facility where emergency operations are directed and coordinated. In an EOC the local and state staff and officials receive information related to an incident. It also is where decision makers and support agencies supervise the coordination of response activities to a large incident/emergency such as an evacuation. The main functions of an EOC include providing direction, coordination, and support to emergency operations; carrying out disaster management functions at a strategic level in an emergency; and ensuring the continuity of operation of a company, political subdivision, or other organization. The EOC also collects, gathers, and analyzes data; makes decisions that protect life and property; maintains the continuity of the organization, and disseminates those decisions to all concerned agencies and individuals.

Emergency Operations Plan (EOP) – An ongoing plan for responding to a wide variety of potential hazards.

Exercise – An instrument to train for, assess, practice, and improve performance in prevention, protection, response, and recovery capabilities in a risk-free environment. Exercises can be used for testing and validating policies, plans, procedures, training, equipment, and interagency agreements; clarifying and training personnel in roles and responsibilities; improving interagency coordination and communications; identifying gaps in resources; improving individual performance; and identifying opportunities for improvement.

Full-Scale Exercise (FSE) – A multiagency, multijurisdictional activity involving actual deployment of resources in a coordinated response as if a real incident had occurred. An FSE tests many components of one or more capabilities within emergency response and recovery and is typically used to assess plans

and procedures under crisis conditions and assess coordinated response under crisis conditions. Characteristics of a FSE include mobilized units, personnel, and equipment; a stressful, realistic environment; and scripted exercise scenarios.

Fusion Center – A collaborative effort of two or more agencies that provide resources, expertise, and/or information to the center with the goal of maximizing the ability to detect, prevent, apprehend, and respond to criminal and terrorist activity. State and major urban area fusion centers serve as focal points within the state and local environment for the receipt, analysis, gathering, and sharing of threat-related information between the federal government and state, local, tribal, territorial, and private-sector partners. Fusion centers are owned and operated by state and local entities with support from federal partners in the form of deployed personnel, training, technical assistance, exercise support, security clearances, and connectivity to federal systems, technology, and grant funding.

Homeland Security Exercise Evaluation Program (HSEEP) – A capabilities- and performance-based exercise program that provides standardized policy, doctrine, and terminology for the design, development, conduct, and evaluation of homeland security exercises. HSEEP also provides tools and resources to facilitate the management of self-sustaining homeland security exercise programs.

Incident Command System (ICS) – A standardized, all-hazards incident management approach that provides the integration of facilities, equipment, personnel, procedures, and communications that operate within a common organizational structure, designed to aid in the management of resources during incidents.

National Incident Management System (NIMS) – A set of principles that provides a systematic, proactive approach guiding government agencies at all levels, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life or property and harm to the environment.

National Response Plan (NRP) — Establishes a comprehensive all-hazards approach to enhance the ability of the United States to manage domestic incidents. The plan incorporates best practices and procedures from incident management disciplines—homeland security, emergency management, law enforcement, firefighting, public works, public health, responder and recovery worker health and safety, emergency medical services, and the private sector—and integrates them into a unified structure. It forms the basis of how the federal government coordinates with state, local, and tribal governments and the private sector during incidents.

National Special Security Events (NSSE) – Events of national significance that by virtue of their political, economic, social, or religious significance may be targets of terrorism or other criminal activity. Events include presidential inaugurations, major international summits held in the United States, major sporting events, and presidential nominating conventions.

Standard Operating Guidelines – A set of instructions having the force of a directive, covering those features of operations that lend themselves to a definite or standardized procedure without loss of effectiveness.

Standard Operating Procedure – A complete reference document or an operations manual that provides the purpose, authorities, duration, and details for the preferred method of performing a single function or a number of interrelated functions in a uniform manner.

Tabletop Exercise (TTX) – Intended to stimulate discussion of various issues regarding a hypothetical situation. TTXs can be used to assess plans, policies, and procedures or to assess types of systems needed to guide the prevention of, response to, or recovery from a defined incident. During a TTX, senior staff, elected or appointed officials, or other key personnel meet in an informal setting to discuss simulated situations. TTXs are typically aimed at facilitating understanding of concepts, identifying strengths and shortfalls, and/or achieving a change in attitude. Participants are encouraged to discuss issues in depth and develop decisions through slow-paced problem solving rather than through the rapid, spontaneous decision making that occurs under actual or simulated emergency conditions. TTXs can be breakout (i.e., groups split into functional areas) or plenary (i.e., one large group).

Unified Command (UC) – An ICS application used when more than one agency has incident jurisdiction or when incidents cross political jurisdictions. Agencies work together through the designated members of the UC, often the senior persons from agencies and/or disciplines participating in the UC, to establish a common set of objectives and strategies and a single incident action plan.

APPENDIX E: ACRONYMS AND ABBREVIATIONS

AAR After-Action Report/Implementation Plan (AAR/IP)
ATF Bureau of Alcohol, Tobacco, Firearms and Explosives

CEO Chief Executive Officer

COOP Continuity of Operations Plan

CI/KR Critical Infrastructure and Key Resources

DHS Department of Homeland Security
DOT Department of Transportation
EOC Emergency Operations Center
EOP Emergency Operations Plan
ESF Emergency Support Function

ETOs Emergency Transportation Operations
FAA Federal Aviation Administration (U.S. DOT)
FEMA Federal Emergency Management Agency (DHS)
FHWA Federal Highway Administration (U.S. DOT)

FSE Full-Scale Exercise

FTA Federal Transit Administration

HSEEP Homeland Security Exercise Evaluation Program

ICS Incident Command System

MPO Metropolitan Planning Organization
MOU Memorandum of Understanding

NIMS National Incident Management System
NIPP National Infrastructure Protection Plan

NRF National Response Framework
NSSE National Special Security Events

NTRS National Transportation Recovery Strategy

PIO Public Information Officer
RSF Recovery Support Functions

SSP Sector-Specific Plan

TMC Transportation Management Center

TSSSP Transportation Systems Sector-Specific Plan
TSA Transportation Security Administration (DHS)

TTX Tabletop Exercise UC Unified Command

APPENDIX F: STAFF RESOURCES AND TOOLS

Introduction

To assist in the transition of a new CEO, staff resources and tools have been developed as a supplement to *Managing Catastrophic Transportation Emergencies: A Guide for Transportation Executives.* The resources—a set of executive handouts—were based on the thoughts and advice from CEO peers who have been in similar positions. The tools were based on the experiences of current and retired transportation staff who have supported their CEO in emergency response.

Two executive handouts were developed. One provides insights into the new position and designed to be given to the new CEO to read on the first day. The other provides an overview of key CEO decisions to be made before, during, and after an event occurs, and is designed to be used as an ongoing resource by the executive. The tools provide examples of resource and emergency contact sheets and wallet cards in current use by some state DOTs.

Two-Page Executive Handout for the First Day

The executive handout that follows was designed to be given to a new CEO to read on the first day in the new position. It was developed based on insights and advice from CEO peers.

WELCOME AND INTRODUCTION

Congratulations on being appointed the new CEO of your organization. This can be one of the most powerful and exciting opportunities in your career. Your time in public service will be critical to those you serve, even though it may often go unseen.

At some point during your tenure, you will be called upon to deal with a major emergency or disaster. One need only watch the evening news to become aware of the potential for loss of life, devastation, and havoc that can occur as the result of manmade or environmental incidents and disasters such as floods, storms, fires, earthquakes, terrorist events, explosions, gunman events, and hazardous materials incidents. When it does happen, the day-to-day methods that you use in your operation will be insufficient to handle the large-scale emergency.

A comprehensive emergency management program does the following:

- Examines potential emergencies and disasters based on the risks posed by likely hazards.
- Develops and implements programs aimed toward reducing the impact of these events on your agency.

Your agency must be prepared for those risks that cannot be eliminated, and be prepared for the actions required to deal with the consequences of actual events and to recover from those events.

Emergency operations planning activities are divided into four phases.

Mitigation — Taking sustained actions to reduce or eliminate risk to people and property from emergencies and their effects.

Preparedness — Building the emergency management function to respond effectively to, and recover from, any event.

Response — Conducting emergency operations to save lives and property by doing such things as evacuating victims; providing food, water, shelter, and medical care to those in need; and restoring critical services.

Recovery — Rebuilding so that you can function on your own, return to normal operations, and protect against future hazards.

Former and current transportation executives were interviewed to understand CEO actions and decisions during events to better understand concepts for preparing to manage transportation emergencies. Here is a summary of the thoughts and advice from others who have been in your position.

THOUGHTS AND ADVICE FROM PEERS WHO HAVE BEEN IN YOUR POSITION

- 1) During an emergency/crisis situation, you may sit at the nexus of multiple stakeholders, resources, authorities, and responsibilities. You need to understand these relationships and how best to manage and apply them during emergencies and crises. Don't get down in the weeds with everyday items, but **do** stay in touch with the overall big picture.
- 2) You *must* have the full confidence of the elected official (typically the governor) to whom you report. You need to understand the political implications of the event and provide guidance to "ensure that we are not stepping into a political minefield."
- 3) You will set the agenda for the agency and staff and *must* establish priority for planning, preparation, training for, and responding to emergencies since that is what the agency's reputation (and funding) may be built on. It is remembered how the DOT responded when a major incident or weather event occurs. This requires frequent refreshing of both the message and the training/planning/exercising since key staff turn over often and experience with actual emergencies may be lost as key staff retire or move to other positions.
- 4) You *must* have confidence in key operations staff and give them the freedom to respond based on their own initiative when emergencies arise. You should make sure to develop solid relationships with key operations staff to ensure that they know what to do and will keep you adequately informed with clear, accurate, and timely information as emergency situations unfold. Manuals and workshops, while helpful, are less important than knowing key staff, how to reach them when needed, and what they can do with the resources they have when an emergency happens.
- 5) You and the agency rely on vendors and contractors to augment agency resources when emergencies arise and you and key staff *must* have established personal and contractual relationships with those vendors and contractors who will be called upon when the emergency comes. They must be able to trust you.
- 6) Because many emergencies require coordinated responses from multiple local, state, and federal agencies, you *must* know the leadership in partner agencies both within your state and, in some cases, neighboring states, since some emergencies are regional in nature (e.g., floods, hurricanes, snowstorms) and require multistate coordination. These relationships include multiagency and multijurisdictional (including multistate) plans, communications strategies, training, exercises, resource sharing, and agreements needed to support your agency's response to emergencies.
- 7) You may be the public face of the state's response to emergencies, especially if the event involves damage to or destruction of transportation infrastructure or incidents that close or restrict major transportation facilities. In these cases, you need to cooperate with the media to provide the best information possible so that others (e.g., operations personnel) can focus on repairing the facilities and restoring mobility rather than responding to media questions.
- 8) Remember, (1) the importance of **communication** with all parties involved in preparing for and responding to emergencies that affect transportation assets or require responses from transportation agencies, and (2) the need to establish solid **relationships** with all parties who must work together effectively when emergencies happen—and emergencies **will** happen.
- 9) Reinforce to staff that you trust them and that you will work with them to make the operation better (listening to their needs) and make them understand you know how difficult their job can be.
- 10) Learn before you speak; trust before you criticize.
- 11) Ride with the field response staff.

Executive Handout: Key Decisions Before/During/After Event

The executive handout that follows provides an overview of key CEO decisions to be made before, during, and after an event occurs, and is designed to be used as an ongoing resource by the executive.

DURING: Respond

Decisions	Advice from Peers		
What events do we need to be prepared for?	Know what events your agency has experienced in the past. What additional threats are there? What mitigation approaches are available?		
Are key staff in place? Do we have the right people in place to do the job? Have staff been trained?	Get familiar with your people and the DOT roles in emergency management during an incident. Pay attention to staff placement and replacement. Put programs in place to ensure that staff have the training and experience to be able to think on their feet. Conduct interagency training and exercises with other state agencies, such as emergency management and state patrol.		
Do we have current plans in place? Do we have memorandums of understanding (MOUs) in place? Do we have the right equipment and materials? Do we have contracts in place?	Have plans in place with protocol of actions for staff that include backup plans, COOP plans, resilience/recovery plans, and customer communication plans. Make sure internal emergency procedures and emergency response protocols are in place and have been practiced. Hold planning meetings and prepare mutual aid agreements. Ensure that agency plans and procedures complement the state's overall emergency structure and plans. Be sure you have equipment and materials ready and in place for expected and unexpected events. Do you		
	have the flexibility to adapt to changing situations? Establish vendor relationships prior to an event. Have contracts with contractors in advance, if possible.		

Decisions	Advice from Peers
How can we improve?	Make sure lessons learned from past events are implemented. Ensure recommended actions and lessons learned from drills/exercises are documented and implemented. Reinforce understanding within the agency that emergency response and preparedness are a critical, primary part of agency mission and one of the most rewarding parts of the job.
Do we have effective public communications in place?	Can our website and phone number site (511) handle anticipated increase in traffic (e.g., on travel and weather information page)? Does the DOT PIO have contacts for other agencies to make sure that everyone is sending out the same message to the public?
Who do I need to meet with?	Establish relationships in advance. Partnership and relationships are critical in all levels of the emergency response community. Remember, "if they know you, they will trust you." Develop internal communications with key operations staff and with external agencies such as emergency management and state patrol. Establish and maintain the confidence of the elected officials. Understand the importance of dealing with politics.

DURING: Respond

Decisions	Advice from Peers
What needs to get done?	Establish priorities when necessary, such as
	clearing highways as soon as possible to support
What are the priorities?	the response.
	Tell your people that they will need to make decisions and that you will stand by them.
What support does the local response need?	Be visible to your staff and talk to them face-to- face. Tell them that you are here to help them get their job done.
	Know what can be authorized under code from what others were recommending.
Who do I need to	Communicate early and regularly with critical
communicate with?	audiences. Be transparent with information and public data.
How do I gain the	Ensure that you have the full confidence of the
confidence of the governor?	elected official (typically the governor) to whom you report.
	Be visible to the public early in a crisis to give a
How do I gain the	face to the responses. Does the DOT PIO have
confidence of public?	contact with other agencies to make sure that everyone is sending out the same message to the public?
What messages should be	•
delivered?	Demonstrate that you are in charge and that the
	DOT's primary goal is to do whatever is
	necessary to protect public safety and address the needs of people involved in the event.
	Empathy is critical. Let the public know that
	leadership is concerned about them.

Decisions	Advice from Peers			
Where should I go?	Get oriented on where to go and whom to			
	contact. Visit communications and operations			
What can I do to help my staff?	centers at the district or local level. Know what the staff want you to do during the event.			
	Remember that you cannot do everything			
	yourself. Know when to step back and let			
	employees and contractors perform their jobs.			
Does the situation need to be escalated from local response?	What are the internal escalation points? Is the escalation process working?			
response:	Understand the incident management escalation points—from local to regional to national—and			
	the resulting changes in communication			
	protocols.			
What can I do to help	Be an advocate for your agency with other			
other state and regional	agencies so they can understand your			
agencies?	capabilities and resources. Ask your counterparts			
	at the state level what you can do to help them.			
	Collaboration is critical to your success.			
	a. Cities, counties/parishes, MPOs			
	b. Regional authorities – seaports,			
	airports, toll authorities			
	c. Transit			
	d. Public safety agencies			
	e. Community leaders – business leaders,			
	church/mosque/synagogue leaders, critical neighborhood leader			
	f. Local school districts			
	g. Media			

AFTER: Recover

Decisions	Advice from Peers
When do we get back to normal operations?	Know or establish criteria that determine when your agency goes back to normal operations versus emergency response mode.
operations:	Prepare how to transition response/recovery efforts back to the local community when necessary.
How do we get back to normal?	Understand any long-term recovery needs and issues, (e.g., restoration of damaged or lost infrastructure). Identify repair/replacement decisions and approaches. Do the staff and locals know the criteria for reimbursement from FHWA and FEMA if damage qualifies for funding?
	Evaluate phased approaches such as using temporary solutions and multimodal approaches to expedite recovery.
	Identify how to transition from emergency mode to normal operations.
What worked well and what needs to improve?	Ensure that an after-action report is done and that the recommendations and remedial actions become part of the agency's corrective action program. Make sure that the information is shared with everyone who was involved.
	Get regular, periodic updates on remedial actions to ensure they are being implemented.
What can we do to implement lessons learned	Make sure there is support for changes made from lessons learned.
from the event?	Create a culture in which people learn and are sustained, even when mistakes are made.

Questions to Ask: Planning/Preparedness

- What is my system's current level of security and preparedness?
- Does the agency have plans in place to respond to various classes of emergencies? In the last 2 years, how many real-time disasters have we responded to? What additional threats should we consider for our operations?
- Are state emergency response plans current and adequate to respond?
- Are the response programs centralized or decentralized? Who is responsible for the plans and responses at the working level?
- Are plans, documents, and contact lists updated semiannually/annually?
 Are the documents easily available online? Are there a sufficient number of paper copies available?
- How are the state's functions and emergency management agencies coordinated? What are the role and authority of the governor's immediate staff?
- How is the state's fusion center organized? What products does it produce?

Questions to Ask: Training/Exercises

- Does the agency practice and/or train for the emergencies?
- When did our agency last conduct exercises/drills?
- What other agencies participated, and what other key agencies were not present?
- Has our agency's role in the drills/exercises been realistic to operations?
- Who is in charge of the exercises? Do we need to have someone in on the planning to make them more realistic?

Questions to Ask: Communications/Coordination

- What agency is responsible for our state's communications system? Do they have a backup plan?
- Do all emergency responders in our agency know who the go-to person is in case of an incident? Who will notify us and provide regular updates?
- Do key staff have the contact information for other key staff (e.g., do we have staff wallet cards)? Does the contact list contain cell, home personnel cell, and personnel e-mail addresses to use as backup?
- Are the state's first responder communications sufficiently interoperable?
- What technical means of communication are available?
- How can the agency cooperate more effectively with law enforcement and other emergency responders?
- Have we asked our counterparts at the state level from the National Guard, state police, and governor's office of emergency preparedness what we can do to help them? What barriers do they have within your agency?
- Visit communications/operations centers at the district or local level. What do they expect from us?
- Do staff know whom to notify at the local FHWA office when an incident occurs?
- Have staff contacted bordering states to obtain contact information from their counterparts?
- Have staff communicated with local public works (larger counties/cities) to see if they have a response plan? Does their plan work with ours?

Questions to Ask: Feedback/Corrective Actions

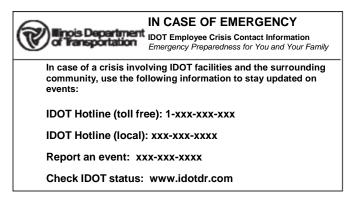
- What steps can be taken to identify and prioritize action for mitigating and managing these threats?
- What went right? What did not?
- Are plans, documents, and contact lists updated semiannually/annually?
- Does our agency have the proper equipment to respond to the incident?
- Do incident response staff have backup relief to sustain 24/7 coverage for an extended period of time?
- Are staff aware of the ongoing efforts of AASHTO and TRB as related to security/emergency response?
- Has the agency conducted after-action reviews of real-time incidents and exercises/drills? What went well, and what are the major areas needing improvement?

STAFF TEMPLATES

1-Page (Double-Sided) Agency Wallet Card

Here are two examples of state DOT wallet cards with key contacts for the agency. To supplement the wallet card, these contacts can be programed into the state director's office phone and cell phone (and satellite phone).

EXAMPLE: Illinois Department of Transportation



Enter your emergency contact Information below. This information will assist emergency personnel and your family in the case of extreme situations involving DOT facilities and surrounding communities.

Contact	Phone Number

1-Page (Double-Sided) Agency Wallet Card Example: Wisconsin Department of Transportation

WISDOT EMERGENCY DOA Building maintenance xxx-xxxx Capitol Police xxx-xxxx						
	WORK (608)	WORK/CELL	(808)	PERSONAL (608)		
THE PER (MAN)		(www) www				
IT HELP DESK (XXX)	xxx-xxxx	(***) ***	-xxx	x		
FOR OFFICIAL USE ONLY			Т			
СЕГГ	НОМЕ	(908) MOBK				
(STOATNOO YOUNGES)	(EMI	YAATƏRDƏR ƏI	HT 40	WISDOT OFFICE		

Agency Resources Contact Sheet Template

RESOURCES

Area Engineer	Phone No.
Area Supt.	Phone No.
Area Super.	Phone No.
Sub-Area Super.	Phone No.

Equipment	
Pickups	Bucket Trucks
Loaders	Flashing Light Trailers
Backhoes	Variable Message Boards
Water Trucks	Type III Barricades
Trucks	Water Pumps
Graders	Chainsaws
Bobcat	Equipment Trailer
Concrete Safety Barrier	

Employee	Radio Call Number	Cell Phone Number
		<u> </u>

Agency Contact Sheet Template

Organization		T		
Agency/Sub-Organization	Point of Contact Name	Position Title	E-mail	Telephone
ΓERNAL				
Homeland Security Coordinator				
Emergency Management Coordinator				
ESF #1 Coordinator				
District Contacts				
District A				
District B				
[continue list as necessary]				
eral Government				
U.S. DOT				
FHWA				
Local FHWA Contact				
Federal Motor Carrier Safety Administration				
Surface Transportation Board				
Pipeline and Hazardous Materials Safety Admin.				
U.S. Department of Homeland Security				
Office of Infrastructure Protection				
Protective Security Advisor				
TSA, Highway and Motor Carriers Division				
U.S. Army Corps of Engineers				

Division A			
District A			
District B			
U.S. Coast Guard			
District A			
District B			
Federal Aviation Administration (FAA)			
Federal Bureau of Investigation (FBI)			
Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF)			
[continue list as necessary]			
	<u>-</u>		
Interstate			
State A			
DOT			
Other organization as appropriate			
State B			
DOT			
Other organization as appropriate			
[continue list as necessary]			
State			
State Homeland Security Agency			
State Emergency Management Agency			
State Senior Security Advisor			
DOT's Partner Agencies at the State Level			
Agency 1 (enter title)			
Agency 2 (enter title)			
Agency 3 (enter title)			

	[continue list as necessary]			
	Turnpike Authority			
	State Police/Highway Patrol			
	Law Enforcement			
	National Guard			
	Health Agency			
		1		
[cc	ontinue list as necessary]			
Local				
Cou	inty/Parish A			
	Sheriff's Office			
	Entity Engineer			
	Fire Department			
	Chief Executive's Office			
	Highway Department			
[cc	ontinue list as necessary]			
Mu	nicipality A			
	Law Enforcement Organization(s)			
	Transportation Department			
	Fire Department			
[cc	ontinue list as necessary]			
Loca	al Airports			
	Airport A			
	Airport B			
	Airport C			
[cc	ontinue list as necessary]			
Loca	al Transit Agencies			

Agency A						
Agency B						
Agency C						
[continue list as necessary]						
Local Toll Road Agencies						
Agency A						
Agency B						
Agency C						
[continue list as necessary]						
Other Partners						
AASHTO						
Transportation Research Board						
[continue list as necessary]						

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