New York State

Emergency Traffic Control and Scene Management Guidelines

March 16, 2011

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April, 2010

SUBJECT: New York State Department of Transportation (NYSDOT) Emergency Traffic Control and Scene Management Guidelines

Dear Traffic Incident Management Partner:

In June of 2009, NYSDOT established a Traffic Incident Management Steering Committee …

Sincerely,

John Bassett

Background

These guidelines were developed in response to New York State's need for consistent, effective traffic management statewide. Led by the New York State Department of Transportation, the Traffic Incident Management Steering Committee developed these guidelines in an effort to coordinate traffic incident management activities across agencies and to enhance those activities already occurring throughout the state.

Acknowledgements

The New York State Department of Transportation would like to thank the following agencies/organizations for their time, dedication and contribution to the development of these guidelines.

- Empire State Towing and Recovery Association (ESTRA)
- Federal Highway Administration (FHWA), New York Division
- New York State Association of Chiefs of Police (NYSACOP)
- New York State Association of Fire Chiefs (NYSAFC)
- New York State Department of Health (NYSDOH) Bureau of Emergency Medical Services (BEMS)
- New York State Department of State's Office of Fire Prevention and Control (OFPC)
- New York State Department of Transportation (NYSDOT)
- New York State Emergency Management Office (SEMO)
- New York State Fire Coordinator's Association
- New York State Police (NYSP)
- New York State Sheriffs Association (NYSSA)
- New York State Thruway Authority (NYSTA)

Table of Contents

Appendices

Purpose

Each year, dozens of traffic incident responders are injured or killed while working on or near the nation's roadways. These guidelines have been established to provide incident responders within the state of New York a uniform approach to emergency traffic control and scene management. Having a uniform approach will help provide the safest possible work environment for all New York State incident responders, while minimizing the risk for secondary crashes. The guidelines presented in this document are intended to be dynamic and the application of methods presented may vary slightly based on the type of incident being responded to. Although these guidelines are in place, it is essential that proper judgment is used to assess each individual situation and to ensure the safety of all those involved.

When responding to an incident scene, the first priority for first responders is protecting themselves from the dangers inherent to working in traffic. As illustrated in these guidelines, responders can enhance their safety by:

1. **Using protective equipment** – Being seen by motorists is extremely important when working in and near traffic, especially during nighttime and inclement weather. Always wear appropriate high-visibility safety apparel (i.e. vest, jackets, pants, etc.).

2. **Avoiding the errant or distracted driver** – Do not turn your back to traffic. Face traffic and remain alert at all times; utilize another person as a lookout or spotter to watch for dangers and provide warnings. Always have an escape plan to get out of the way of errant drivers.

3. **Establishing a Traffic Incident Management Area (TIMA)** – Utilize all available equipment to set up appropriate emergency traffic control and provide positive guidance to the driver as to what is happening and where to drive.

Key points to remember when using this document are:

- This document serves as a guideline for incident responders and is not a procedure.
- These guidelines were developed with input from a multi-discipline group and are intended for use by all incident responders.
- The majority of the information contained in these guidelines is applicable to any traffic incident that occurs on any highway.
- These guidelines are flexible and can be adapted based on the type of incident being responded to. As no two traffic incidents are the same, experience and judgment should be applied in each emergency situation.
- These guidelines use the Incident Command System (ICS) as a foundation and support that the use of ICS at every incident scene is absolutely necessary.

Process for Requesting Revisions/Updates to the Guidelines

Due to the dynamic nature of traffic incident management and corresponding guidelines, it is recognized and expected that periodic revisions to these guidelines will be required. Emergency responders are encouraged to submit suggestions and/or recommended changes as these guidelines are applied in the field. Also, any errors or omissions that responders may encounter when using these guidelines should be promptly brought to the attention of John Bassett at jbassett@dot.state.ny.us or Rebecca Gibson at rgibson@dot.state.ny.us.

A Record of Revisions table can be found on the inside of the back cover of the guidelines document. This table documents all revisions made since the first version of the guidelines, which was dated April, 2010, was published.

Process for Obtaining Additional Copies of the Guidelines and Other Related Materials

In addition to the Emergency Traffic Control and Scene Management Guidelines document, supplemental materials have been developed to assist with both training and outreach efforts. These materials include:

- **Quick Reference Visor Card** – This 8.5" x 5.5" laminated visor card highlights key points of the guidelines and is intended to provide responders an easy to use quick reference if needed while on-scene at a traffic incident.

- **Informational Overview Presentation** – This PowerPoint presentation, complete with video clips, highlights the impacts of traffic incidents and provides an overview of the need, purpose and content of the Emergency Traffic Control and Scene Management Guidelines.

- **Training Presentation** – This comprehensive PowerPoint presentation covers all the material found in the guidelines and may be used for training purposes. An instructor manual is included with the presentation.

All of these materials, including the guidelines, are being offered free of charge from NYSDOT and can be obtained using the Materials Order Form found on the last page of this document. The Materials Order Form is also available online at:

www.nysdot.gov/TIM

Glossary of Terms

Activity Area – Section of the highway where incident response activities take place. The activity area is comprised of the upstream buffer space and the incident space.

Advance Warning – Notification methodologies that advise approaching motorists to transition from normal driving status to that required by the temporary emergency traffic control measures ahead of them.

Advance Warning Area – Section of highway where motorists are informed about the upcoming incident area.

Block – Positioning of an emergency vehicle to create a physical barrier between upstream traffic and the incident space.

Block to the Left – Positioning of an emergency vehicle where traffic is being diverted to the left.

Block to the Right – Positioning of an emergency vehicle where traffic is being diverted to the right.

Buffer Space – A lateral and/or longitudinal area that separates personnel and vehicles in the protected incident space from nearby moving traffic.

Command – The act of directing, ordering, or controlling by virtue of explicit statutory, regulatory, or delegated authority.

Command Staff – Consists of Public Information Officer, Safety Officer, Liaison Officer, and other positions as required, who report directly to the Incident Commander.

Communications/Dispatch Center – Agency or interagency dispatch centers, 911 call centers, emergency control or command dispatch centers, or any naming convention given to the facility and staff that handles emergency calls from the public and communication with emergency management/response personnel.

Crash Reconstruction – The objective analysis of physical evidence present in a collision event that serves to establish how the collision occurred, factually and objectively.

Downstream – Roadway or traffic flow beyond the incident space, when considered from the perspective of a passing motorist.

Flagger(s) – Personnel assigned to control stop and go traffic or direct traffic in conformance with the Manual on Uniform Traffic Control Devices (MUTCD).

Helispot – See Landing Zone

Highway – A general term for denoting a public way for purposes of travel by vehicular travel, including the entire area within the right-of-way.

Incident Command – Responsible for overall management of the incident and consists of the Incident Commander, either single or Unified Command, and any assigned supporting staff.

Incident Command Post – The field location where the primary tactical-level, on-scene incident command functions are performed.

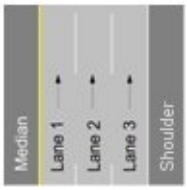
Incident Command System (ICS) – A standardized, on-scene, all-hazard incident management concept that is based upon a flexible, scalable response organization providing a common framework within which people can work together effectively.

Incident Commander – The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and release of resources. The Incident Commander has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site.

Incident Space – Physical area of the roadway within which the emergency responders perform their EMS, fire, law enforcement, and recovery tasks at a vehicle-related incident.

Landing Zone – A designated location where a helicopter may safely take off and land. Landing zones may be used for medical evacuation and loading of supplies, equipment or personnel.

Lane 1, 2. 3, etc. – Naming convention for lane identification. Lanes are numbered starting with the right most lane as seen from the motorist's direction of travel (the lane nearest the shoulder) being Lane 1. See example below for a 3 lane highway:



Lane 1 - Left lane nearest the median

Lane 2 - middle lane

Lane 3 - right lane nearest the shoulder

Liaison Officer – A member of the Command Staff responsible for coordinating with representatives from cooperating and assisting agencies or organizations.

Manual on Uniform Traffic Control Devices (MUTCD) – The MUTCD is the national standard for all traffic control devices used during construction and maintenance

activities. MUTCD Chapter 6I covers the use of traffic control devices at an incident scene.

National Traffic Incident Management Coalition (NTIMC) – The NTIMC is a forum of national organizations representing EMS, fire, law enforcement, public safety communications, towing and recovery, and transportation communities working together to promote multi-disciplinary, multi-jurisdictional Traffic Incident Management (TIM) programs and activities.

National Unified Goal (NUG) – The NUG for Traffic Incident Management is responder safety; safe, quick clearance; and prompt, reliable, interoperable communications. The NUG was developed by the NTIMC.

Officers – The ICS title for the personnel responsible for the Command Staff positions of Safety, Liaison, and Public Information.

Public Information Officer – A member of the Command Staff responsible for interfacing with the public and media and/or with other agencies with incident-related information requirements.

Responders – All personnel who have a responsibility in managing an incident and mitigating its impacts. Most responders arrive on the scene and are there to assist those involved in the incident. Traffic incident responders may include, but are not limited to: law enforcement, fire, EMS, towing and recovery, coroner or medical examiner, county maintenance/highway, city/village/town public works, transportation officials, insurance investigators and engineers.

Retroreflectivity – A property of a surface that allows a large portion of the light coming from a point source to be returned directly back to a point near its origin.

Safety Officer – A member of the Command Staff responsible for monitoring incident operations and advising the Incident Commander on all matters relating to operational safety, including the health and safety of emergency responder personnel.

Shadow – The protected incident space at a traffic incident that is shielded by the block from an emergency vehicle(s).

Spotter(s) – Emergency personnel assigned to monitor approaching traffic and activate an emergency signal if the actions of a motorist do not conform to established traffic control measures in place at the incident scene.

Staging Area – Location established where available resources can be temporarily housed or parked while awaiting operational assignment.

Tapers – Used to move traffic out of or into the normal path through the use of a series of channelizing devices.

Task Force – Any combination of resources, with common communications and a designated leader, assembled to support a specific mission or operational need.

Temporary Traffic Control (TTC) Zone – An area of a highway where road user conditions are changed due to a work zone or incident by the use of temporary traffic control devices, flaggers, uniformed law enforcement officers, and other authorized personnel/emergency responders.

Termination Area – Area used to return motorists to their normal path. The termination area extends from the downstream end of the incident space to the last temporary traffic control device.

Traffic Incident – Any non-recurring event that causes a reduction in roadway capacity or an abnormal increase in traffic demand that disrupts the normal operation of the transportation system. Traffic incidents, for example, include motor vehicle crashes, a vehicle breakdown, infrastructure damage, flooding, fires, hazardous materials release, terrorist events, and other occurrences that require an emergency response.

Traffic Incident Management (TIM) – Systematic, planned and coordinated use of human, institutional, mechanical and technical resources to reduce the duration of traffic incidents, and improve the safety of motorists, crash victims and incident responders.

Traffic Incident Management Area (TIMA) – Area of a highway where temporary traffic controls are imposed by authorized officials in response to an incident. A TIMA is a type of TTC Zone and extends from the first warning device (such as a sign or cone) to the last TTC device or to a point where vehicles return to the original lane alignment and are clear of the incident. The components of a TIMA include an advance warning area, a transition area, an activity area and a termination area.

Traffic Incident Scene – Location at which a traffic incident occurred including the TIMA.

Traffic Space – Portion of the highway in which traffic is routed through the activity area.

Transition Area – The section of the highway where motorists are redirected out of their normal path. The transition area is the area in which approaching motorists should change their speed and position to comply with the emergency traffic control measures established at an incident scene.

Unified Command – An ICS application in which responding agencies and/or jurisdictions with responsibility for the incident work together to establish a common set of objectives and strategies.

Upstream – Roadway or traffic flow prior to the incident space, when considered from the perspective of a passing motorist.

1. National Incident Management System / Incident Command System

The National Incident Management System (NIMS) is a comprehensive, national approach to incident management that is applicable at all jurisdictional levels and across functional disciplines. The intent of NIMS is to:

- Be applicable across a full spectrum of potential incidents and hazard scenarios, regardless of size or complexity.
- Improve coordination and cooperation between public and private entities in a variety of domestic incident management activities.

One of the key features of NIMS is the Incident Command System (ICS). ICS consists of procedures for controlling personnel, facilities, equipment and communications. It is a system designed to be used or applied from the time an incident occurs until the requirement for management and operations no longer exists. ***ICS should be established and used for every incident.***

ICS under single command has an Incident Commander who has complete responsibility for incident management. The Incident Commander must account for all personnel working at the scene. This includes those that arrived on the scene initially (law enforcement, fire, EMS, etc.) as well as those who arrive later to assist with the scene (highway department personnel, insurance investigators, engineers, etc.). It is recommended that when command is established or transferred from one person to another, this information, as well as the location of the command post, be communicated for all responders to hear. In many instances, difficulties in communication may exist with not all on-scene responders being able to hear important information. In such cases, it is necessary that the Incident Commander ensure that all parties have been made aware of any pertinent information.

Additionally, ambiguous codes and acronyms have proven to be a major obstacle in communications at incidents that involve multiple agencies. As such, NIMS requires that all responders use plain English, or clear text, when responding to an incident, which means that radio codes, agency-specific codes and/or jargon should not be used.

As often as possible, the guidelines of Unified Command should be followed. A Unified Command allows agencies with different legal, geographic, and functional authorities and responsibilities to work together effectively without affecting individual agency authority, responsibility or accountability. Under a Unified Command, a single, coordinated incident action plan will direct all activities. This allows responding agencies to set up and follow a common method of operation and a single set of objectives for clearing and managing the scene. Use of Unified Command helps minimize duplication of efforts and confusion on the scene.

The principles of ICS are carried through the remainder of this document.

2. Incident Response Priorities

Priority 1: Life Safety – Initial efforts will be directed to preserving lives, including those of responders, injured persons and passing motorists. Safety will be the first priority throughout the incident.

Priority 2: Incident Stabilization – To enhance operational safety, actions must be taken to prevent fire, eliminate ignition sources and stabilize the crash vehicles.

- Prevention of Secondary Crashes – To minimize the risk of another motor vehicle crash involving response units and personnel, responders must properly warn approaching traffic that there is a hazard ahead, to slow down and use caution. Responders should utilize available traffic control devices and, if possible, position apparatus to divert traffic around the crash scene. Special attention should be paid to the end of the traffic queue such that warning is given to motorists approaching the end of the queue.

- Protection of Evidence – Responders will make every effort to minimize the impact of their presence on the crash scene. For example, responders will not cause damage to vehicles beyond what is necessary for extrication purposes or remove debris not in an actively flowing traffic lane. Crash scene investigators rely upon scene evidence to reconstruct the event. These reconstructions are often used to hold the involved persons accountable for their actions during potential criminal proceedings. Responders should understand that any crash is a potential crime scene and must be treated accordingly.

- Safe, Quick Clearance – It shall be the goal to clear the scene as soon as practical to restore traffic flow and limit the diversion of traffic to less desirable and more hazardous routes. It is important to note that NYSDOT has submitted separate "Quick Clearance" and "Move It" bills that will give responders the legal support needed to quickly and safely clear an incident scene and its debris. In the meantime, NYSDOT is developing a program called "Steer It, Clear It" to raise public awareness about involvement in keeping state highways safe.

  The priority of safe, quick clearance also aligns with the National Unified Goal (NUG) for Traffic Incident Management. Additional details about the NUG can be found at: timcoalition.org.

Priority 3: Protection of Property and the Environment – Responders will attempt to protect or save property by limiting damage to vehicles to what is necessary to safely stabilize and remove trapped persons. Property salvage operations will also be conducted as soon as safely possible. For hazardous materials and/or potential hazardous materials scenes, only responders with the proper personal protective equipment and training will work to contain and clean up the spilled product while

minimizing exposure for all responders and the public.

3. Incident Classification

All traffic incidents will be classified in one of the following three categories:

- **Level 1 - Major** – expected duration of more than 2 hours.

    - Major traffic incidents are typically traffic incidents involving hazardous materials, fatal traffic crashes, crashes involving numerous vehicles, and other natural or man-made disasters. These traffic incidents typically involve closing all or part of a roadway facility for a period exceeding two hours.

    - Examples include:
        - Crashes that require a significant medical response, a coroner response, and/or a crash reconstruction response (e.g. fatalities)
        - Incidents involving advanced, prolonged environmental clean-up (e.g. incidents involving hazardous materials)
        - Structural damage
        - Wild fires near the roadway
        - Acts of terrorism

- **Level 2 - Intermediate** – expected duration between 30 minutes and 2 hours.

    - Intermediate traffic incidents typically affect travel lanes for a time period of thirty minutes to two hours, and usually require traffic control on the scene to divert road users past the blockage. Full roadway closures might be needed for short periods during traffic incident clearance to allow traffic incident responders to accomplish their tasks.

    - Examples include:
        - Roadway debris
        - Overturned truck/trailer
        - Rollover or multi-vehicle crashes
        - Commercial carrier crashes

- **Level 3 - Minor** – expected duration of less than 30 minutes.

    - Minor traffic incidents are typically disabled vehicles and minor crashes that result in lane closures of less than 30 minutes. On-scene responders typically include law enforcement and towing companies, and occasionally NYSDOT service patrols.

    - Examples include:
        - Disabled vehicles in a travel lane or on the shoulder

- Minor crashes
- Minor roadway debris

4. Responder Safety

4.1 Responder Visibility

The Federal Highway Administration (FHWA) has established a new rule in Title 23 of the Code of Federal Regulations (CFR) titled, "Part 634 Worker Visibility". The new rule requires that all workers within the right-of-way of a Federal-aid highway wear high-visibility safety apparel when they are exposed either to traffic (vehicles using the highway for purposes of travel) or to construction equipment within the work area. The rule defines workers as people on foot whose duties place them within the right-of-way of a Federal-aid highway. This definition of worker encompasses all first responders, including, but not limited to: law enforcement, fire, EMS, towing and recovery, medical examiner/coroner, roadway maintenance and transportation officials, insurance investigators, engineers, and media personnel.

Federal-aid highways are defined as highways on the Federal-aid highway systems (the National Highway System and the Interstate System) and all other public roads not classified as local roads or rural minor collectors. However, for the purposes of this document it is recommended that this rule be followed when responding to incidents on all highways, including local roads and rural minor collectors.

Part 634 also defines high-visibility safety apparel as personal protective safety clothing that is intended to provide conspicuity during both daytime and nighttime usage, and that meets the Performance Class 2 or 3 requirements of ANSI/ISEA 107-2004. Finally, 23 CFR Part 634 has required that state and other agencies comply with the provisions of the rule since November 24, 2008.

FHWA supports the use of high visibility safety apparel in Section 6D.03 of the MUTCD, which states: "All workers exposed to the risks of moving roadway traffic or construction equipment should wear high-visibility safety apparel meeting the requirements of ISEA "American National Standard for High-Visibility Safety Apparel" (see Section 1A.11), or equivalent revisions, and labeled as ANSI 107-1999 standard performance for Class 1, 2, or 3 risk exposure."

ANSI/ISEA 107-2004 is the American National Standard for Highway Visibility Safety Apparel and Headwear. This standard provides uniform guidelines for the design and use of high-visibility safety apparel such as safety vests, rainwear, outerwear, trousers and headwear to improve worker visibility during the day, in low-light conditions and at night. ANSI/ISEA 207-2006 is the American National Standard for High-Visibility Public Safety vests. This standard establishes design and use criteria for highly visible vests that reflect the needs of public safety workers.

4.2 Situational Awareness

Responders should keep the following in mind when working on or alongside active highways:

- Never trust approaching traffic.
- Always maintain an acute awareness of the risk of working in/near moving traffic.
- Look before you move.
- Plan an escape route.
- Don't allow yourself to get tunnel vision, maintain a view of the "big picture" and remember to consider how your actions may be impacting motorists traveling in the opposite direction.
- Maintain knowledge of current weather conditions and how it may affect driving and/or visibility abilities of the passing motorists and adjust advance warning to accommodate these difficulties.
- Whenever possible, direct witnesses to park on, or move to the same side of the highway that the incident is on. This will assist in allowing traffic to flow more smoothly around the incident scene, as well as eliminate the need for responders to cross traffic unnecessarily.

Additionally, once a scene is secure and the incident is under control, personnel that no longer have an active role or specific duty related to the incident should be released from the scene. This will help the Incident Commander maintain order on the scene and will also minimize unnecessary exposure of responders to potentially hazardous working conditions.

5. Responder Vehicles

5.1 Vehicle Positioning

When arriving at an incident scene, emergency vehicles should be positioned to provide added protection to the scene and activity area from passing traffic. The positioning of an emergency vehicle to create a physical barrier between upstream traffic and the incident space is referred to as the block position. In order to provide the greatest protection from traffic, the block position is best fulfilled using larger vehicles, such as fire department ladder trucks and fire engines. When the circumstances allow, these vehicles may be replaced with public works and/or highway department vehicles equipped with impact attenuators, especially when the initial blocking vehicle is carrying equipment that is being utilized by on-scene responders.

When acting as the block, there are two ways a vehicle is commonly positioned on the roadway - at a 20-45 degree angle or "straight-on". When determining how to properly position a vehicle, responders should evaluate current conditions, including roadway geometry, sight distance, weather, etc., and the safety of other responders, crash victims and passing motorists. Consideration should also be given to how vehicle

placement impacts vehicle visibility, including vehicle markings and vehicle emergency lighting. Regardless of roadway position, the blocking vehicle should park ensuring that wheels are turned away from the scene. This will ensure that if the vehicle is hit from behind, it will not enter the Activity Area.

All vehicles responding to an incident scene should be located on the same side of the roadway and in the same direction as the incident. Vehicles should only be parked on the opposite side of a divided highway when it is determined that the benefits justify the risk.

Tow vehicles may be placed upstream of the scene in the transition area or buffer space. This positioning keeps the vehicles out of the way and allows towers to maneuver around the incident when necessary thereby minimizing the need for them to back into traffic when it is necessary to access vehicles involved in the incident from a different angle or location.

5.2 Emergency Vehicle Lighting

The use of emergency vehicle lighting is important for response and for the safety of emergency responders and persons involved with the traffic incident. Lighting is also essential for the safety of drivers approaching the incident scene. However, emergency-vehicle lighting only provides warning and should not be used for traffic control. In some instances, emergency vehicle lighting can be a hazard and blinding to traffic and/or the responders at the incident scene. Emergency-vehicle lighting should be reduced if good traffic control is established at the incident scene (i.e., advanced warning signs, appropriate tapers, safety cones, etc.)

In MUTCD Chapter 6I, it is recommended that public safety agencies examine their policies on the use of emergency-vehicle lighting, especially after a traffic incident scene is secured, with the intent of reducing the use of this lighting as much as possible while not endangering those at the scene. Additionally, special consideration should be given to reducing or extinguishing forward facing emergency-vehicle lighting, especially on divided roadways, to reduce distractions to on-coming road users.

5.3 Vehicle Markings

To increase the visibility of emergency vehicles parked in or near moving traffic, some response agencies have added a pattern of retroreflective diagonal striping across the rear of their vehicles. The diagonal pattern chosen by the fire service is called a chevron. It is important to note that this pattern is defined by the MUTCD as a ‘vertical panel’ and as such must conform to MUTCD guidelines. Additionally, requirements for retroreflective striping on the rear-facing vertical surfaces of fire apparatus have been established for all new apparatus in the 2009 Edition of the NFPA 1901 Standard for Automotive Fire Apparatus. Examples of vehicles with retroreflective striping are shown in Figure 1.

Figure 1 - Emergency Vehicles with Retroreflective Chevrons (Source: ResponderSafety.com)

It is strongly recommended that the rear of emergency vehicles be outfitted with retroreflective striping.

5.4 Personally Owned Vehicles

Due to the lack of vehicle markings and appropriate emergency lighting, ***the use of personally owned vehicles (e.g. volunteer fire fighters, first responders, etc.) to respond to the scene of highway incidents is strongly discouraged***. It is becoming common practice for individual fire departments to develop pre-determined meeting areas along limited access routes for personnel to meet the apparatus prior to entering the highway. When it is necessary for a privately owned vehicle to respond to a highway incident, the vehicle must be parked safely in the downstream buffer area or, if possible, off of the roadway (e.g. a nearby parking lot).

6. Initial Scene Response

6.1 Arrival and Vehicle Positioning

The first emergency responder to arrive at an incident scene should position their vehicle to establish an initial block. Parking the vehicle in a blocking position will provide a protective buffer between personnel and traffic (see Section 5.1). Additionally, as soon as practical, implement advance warning signs.

The first emergency responder to arrive at an incident will typically also be responsible for stabilizing the scene and providing initial medical attention to injured persons.

6.2 Scene Size-Up

As soon as practical upon arriving at the scene of a traffic incident, the responder should provide their communications/dispatch center with the information outlined below in Sections 6.2.1 through 6.2.6. Ideally, as much information as possible should be provided before initially exiting the response vehicle.

6.2.1 Location – It is critical to relay the exact location (including highway name,

direction, cross street and/or mile marker, etc.) of the incident to the communications/dispatch center, as well as to all other responding units. This information will assist other responders in planning response routes, as well as emergency alternate routes should they be needed.

Enhanced Reference Markers – Enhanced reference markers, also referred to as enhanced reference location signs, provide motorists and responders an additional tool for accurately identifying their location on the highway. Enhanced reference markers are signs posted along the highway that provide the name, direction and mile marker of the highway. Enhanced reference markers are typically placed every one-tenth of a mile along the shoulder of the highway. Currently, enhanced reference markers are installed mainly along urbanized freeways. An example of an Enhanced Reference Marker can be found in Figure 1 below.

Figure 2 - Enhanced Reference Marker Example: 1-94 EB at Mile Marker 301.2

System Interchanges – The term system interchange is typically used to denote the intersection of two or more freeways. When an incident occurs in a system interchange, it is imperative that the location of the incident be correctly identified. Examples of system interchanges in New York State include the Bruckner Interchange (between I-95, I-278, I-295, and I-678) in New York City and the Thruway Exit 24 Interchange (between I-87 and I-90) in Albany. When referring to ramps within a system interchange the nomenclature "from the *direction* to the *direction*" should be used. For example, if a motorist traveling on I-87 SB takes the ramp to I-90 EB this ramp should be identified as the ramp from the north to the east.

6.2.2 Incident Type – The incident type, as described in Section 3, should be relayed to the communications/dispatch center to assist in resource allocation and planning. An initial approximation will be adequate, as it can always be upgraded or downgraded as necessary.

- Level 1 – Major (2 hours or more)
- Level 2 – Intermediate (between 30 minutes and 2 hours)
- Level 3 – Minor (under 30 minutes)

6.2.3 Vehicles – The number and type of vehicles involved in the incident should

be relayed to the communications/dispatch center.

6.2.4 Injured Persons – The number of people injured, including the extent of their injuries and whether or not extrication will be necessary should be communicated. This information is critical to responding fire and EMS personnel and will allow them to begin planning for additional resources if necessary. Follow up will likely be required as additional information, such as victim condition and level of consciousness, becomes available.

6.2.5 Other Conditions – Any important information regarding other conditions present at the scene that may affect the safety of additional responders needs to be relayed. For example, fires on the scene, the potential need for a hazardous materials response, downed wires, or adverse weather conditions such as ice or fog are important to communicate.

As soon as possible, and preferably within the first ten minutes on the scene, the information outlined in Sections 6.2.6 through 6.2.11 should be provided to the appropriate communications/dispatch center to ensure that all additional resources needed are dispatched in a timely manner.

6.2.6 Hazardous Materials – It is necessary to quickly identify the presence or potential presence of hazardous materials at an incident scene in order to maintain the safety of all responders. If hazardous materials are present, or are suspected to be present, the fire department should be notified to ensure they can respond with the proper equipment to handle the clean up and disposal of any materials. For some hazardous materials it may be necessary to bring in specialized resources for clean up and disposal.

6.2.7 Towing and Recovery – If it appears that one or more of the vehicles involved in the incident are impacted such that they cannot be driven, towing and recovery personnel need to be notified. When contacting towing and recovery agencies it is very important to provide them with accurate incident details to ensure they are able to respond with the proper equipment. Incident clearance can be significantly delayed when towing and recovery agencies respond with the incorrect equipment due to inaccurate information. *Appendix A* includes a Towing and Recovery Call-Out Checklist that should be followed any time towing and recovery services are needed.

6.2.8 Traffic Conditions – Traffic conditions, as well as alternate response routes for additional personnel, must be relayed to the communications/dispatch center. Traffic related information, such as the length of traffic backups, will help responding units ensure they use an appropriate response route and can be used to identify locations where responders may need to set up additional traffic control. Also, all impacted agencies should be notified when an emergency alternate route is activated. When the communications/dispatch center receives traffic condition information, they should relay this information

to the Regional Traffic Management Center as outlined in Section 6.6.

6.2.9 Additional Resources – Information pertaining to any additional resource needs should also be relayed to the communications/dispatch center. Some examples include the need for medical helicopter services, requests for crash investigation/reconstruction services, requests for a medical examiner/ coroner, requests for a State Patrol or County Motor Carrier Inspector for an incident involving a truck or tractor trailer, and/or Department of Environmental Conservation (DEC) or Department of Agriculture and Markets notification.

6.2.10 Request for Public Works and/or Highway Department Support – For an intermediate or major incident, the public works and/or highway department should be notified. The public works and/or highway department can assist by providing the additional traffic control devices necessary for proper temporary traffic control, which should release other first responder personnel and vehicles to help clear the scene and assist in other ways necessary. It should be noted that the county highway department should be contacted when an incident occurs on a county facility and that the city/village/town public works department should be contacted when an incident occurs on a city/village/town road.

An Emergency Traffic Control and Scene Management Quick Reference Visor Card has been developed to assist responders with the scene size-up. A copy of the visor card can be found in *Appendix B.* Visor cards can be obtained using the Materials Order Form found on the last page of this document.

6.3 Cancelled En-Route

When responding to highway emergencies, it is the responsibility of the first unit on scene to initiate ICS and to then evaluate all response factors before canceling any other responding units (law enforcement, ambulance or fire units).

Canceling a unit en-route should only be done if the Incident Commander is sure he or she has all the response factors identified, and is confident additional units will not be needed. Any units that are cancelled en-route should not proceed into the scene unless re-dispatched.

It should be noted that there may be instances in which agencies have restrictions on en-route cancellations. Some agencies have protocols enforcing the need of fire to arrive on-scene. In such cases, even if the need for fire personnel is cancelled, fire may still proceed to the scene in order to comply with protocol.

6.4 Incident Scene Illumination

While it is important to ensure proper illumination, or lighting, of the incident space, care must be exercised to ensure that scene lights are not blinding traffic. When available,

vehicles with special lighting capabilities should be utilized. By using vehicle mounted lighting setups that can be controlled remotely, the lights can be directed downward to minimize the amount of light that reaches the motorists.

6.5 Role of a Communications/Dispatch Center

Communications/dispatch centers serve a key role in traffic incident response. When an incident occurs, communications/dispatch centers are often the first to receive notification and are responsible for facilitating the assessment of the situation and dispatching an appropriate response based on their knowledge of available resources.

Traffic incident information received by communications/dispatch centers comes from many sources and is often received simultaneously via telephone, mobile data computer, two-way radio and, in some centers, from observing real-time video.

Effective and efficient dispatch of emergency responders mandates that all communication between the field and the center be clear, concise and accurate. Furthermore, proper response requires that communications/dispatch centers be educated as to what resources and assets are available and how and when they should be deployed. For example, to facilitate response to traffic incidents, personnel working in communications/dispatch centers should have easy access to items such as the Towing and Recovery Call-Out Checklist, emergency alternate route guides and highway/public works department contact information.

6.6 New York State's Regional Traffic Management Centers

Each Region in New York State (except Region 7 – Watertown) has its own Regional Traffic Management Center (TMC) that monitors, operates and maintains traffic management and traveler information systems within the Region, including Variable Message Signs (VMS), Portable Variable Message Signs (PVMS), Closed-Circuit Television (CCTV) cameras, Ramp Meters (RM), the Highway Advisory Radio (HAR) and the Highway Emergency Local Patrol (HELP) program. Most TMC's are a 24/7/365 operation.

The TMC providing local traffic management should be contacted for any incident that is anticipated to have at least one Interstate / state highway lane or ramp blocked for more than 30 minutes. For any incident occurring on the New York State Thruway, the Thruway State Operations Center (TSOC) should be notified.

The TMC will make the necessary notifications to state maintenance and emergency personnel. For larger incidents, the local TMC will also notify adjacent TMC's to coordinate advance traveler information. Additionally, agencies should contact the TMC to report transportation infrastructure problems that occur on state-maintained highways, such as signal knockdowns, bridge hits, flooding, etc.

Please note that TMC contact numbers are to be used by first responders and emergency personnel *only.* This number is **NOT** to be distributed to the general public.

For major and/or intermediate traffic incidents, the TMC uses the information they receive to post Incident Alerts to the NYSDOT 511NY Web site. Therefore, it is essential that agencies provide the TMC with updates as an incident progresses (i.e. additional lanes are opened or closed) and when the incident has been cleared.

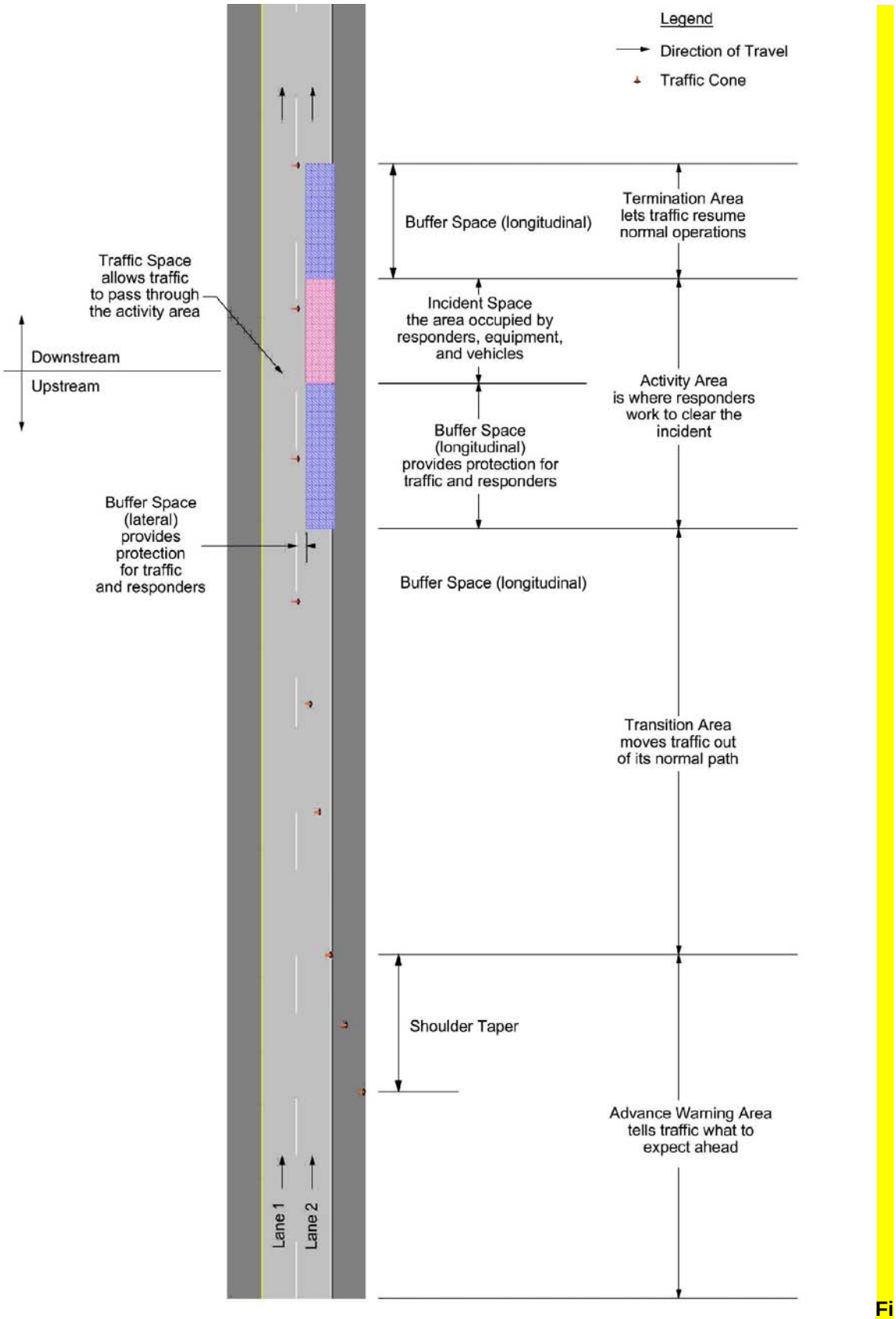
In July of 2000, the Federal Communications Commission (FCC) designated 511 as the national traveler information number. The objective of 511NY is to provide convenient access to real-time, route-specific traveler information including congestion, construction activity, road weather conditions, incident and emergency alerts, and special event notices via the Internet or by dialing 511 from any phone. To date, 511NY programs have been deployed in three quarters of the states in the country. New York State's 511NY Web site can be accessed at: www.511ny.org.

7. Initial Traffic Incident Management Area Establishment

A Traffic Incident Management Area (TIMA) should be established as soon as practically possible following arrival at an incident scene. TIMAs are used to provide the traffic control and advance warning necessary to provide a safe working area for first responders at an incident scene. In the early stages of an incident, responders should use all equipment on hand to set up traffic control, realizing that the TIMA will be expanded/enhanced as additional responders arrive and additional resources become available. Also, responders should keep in mind that as the incident progresses, the scene may escalate (go from a 1-lane closure to multiple lane closure) or de-escalate (go from a multiple lane closure to a 1-lane or shoulder closure).

All TIMAs should conform to the standards established in Chapter 6I of the Manual on Uniform Traffic Control Devices (MUTCD). A copy of MUTCD Chapter 6I can be found in *Appendix C*. Chapter 6I provides guidance on the types of temporary traffic control devices that should be used at a TIMA based on the incident type. For Major and Intermediate incidents, Chapter 6I states that temporary traffic control should include proper traffic diversions, tapered lane closures, and upstream warning devices to alert approaching traffic of the end of a queue. For Minor incidents, Chapter 6I recognizes that it is not generally possible or practical to set up a lane closure with traffic control devices and recommends that when a minor incident blocks a travel lane, it should be removed from that lane to the shoulder as quickly as possible.

It is important to note that motorists have become increasingly accustomed to the types of traffic control measures used in work zones, and are familiar with how to react to them. TIMAs and corresponding traffic control devices that are not similar to work zones tend to confuse drivers. Figure 3 illustrates the components of a TIMA, which are discussed in detail in the following sections.


Legend
Direction of Travel
Traffic Cone
Buffer Space (longitudinal)
Termination Area
lets traffic resume
normal operations
Traffic Space
allows traffic
to pass through
the activity area
Incident Space
the area occupied by
responders, equipment,
and vehicles
Downstream
Upstream
Activity Area
is where responders
work to clear the
incident
Buffer Space
(longitudinal)
provides protection for
traffic and responders
Buffer Space
(lateral)
provides
protection
for traffic
and responders
Buffer Space (longitudinal)
Transition Area
moves traffic out
of its normal path
Shoulder Taper
Advance Warning Area
tells traffic what to
expect ahead
Lane 1
Lane 2

Fi

gure 3 - TIMA Components (Source: Modified from 2009 MUTCD)

7.1 Advance Warning Area

The advance warning area is established upstream of the incident in order to warn oncoming traffic of the upcoming incident scene and to promote a reduction in travel speeds. Warning signs and/or response vehicles should be placed according to the following guidelines with special care as this will most likely be the motorist's first warning of the incident:

- Incidents on the Interstate system or other high speed divided roadways should have advance warning signs placed approximately 1,000 – 2,600 feet in advance of the beginning of the transition area. It should be noted that delineator posts are commonly placed approximately 200 feet apart, allowing for an estimated warning sign placement of between 5 and 13 delineator post spaces between the transition area and the closest warning sign.

- Warning signs on other roadways should be placed approximately 500 – 1,000 feet prior to the transition area.

All advance warning signs should be placed so that they will provide enough warning for vehicles to slow before reaching the traffic backup. Advance warning signs placed in urban areas may need to be placed at shorter distances to avoid sign clutter. It should be noted that setting up a TIMA for traffic incident management situations near a corner, hill, or other reduced visibility situation may require the location of the advance warning devices to be adjusted.

7.1.1 Advance Warning Signs – Warning and guide signs used for emergency traffic incident management situations should have black lettering and a black border on a fluorescent pink background (per MUTCD Chapter 6I). Examples of these signs are shown in Figure 4.

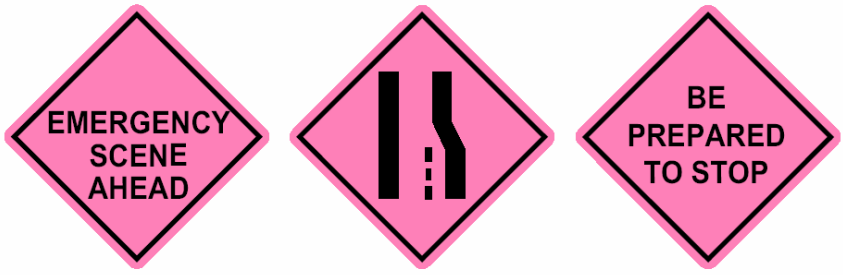


Figure 4 - Examples of TIMA Advance Warning Signs

7.1.2 Portable Variable Message Signs – Portable Variable Message Signs (PVMS) are another tool for providing drivers advance warning. PVMS can be used for intermediate incidents and are strongly recommended for use during major incidents. The Department is typically responsible for housing and

deploying PVMS. Upon deployment, the TMC will operate the PVMS including providing messages.

7.1.3 Variable Message Signs – Variable Message Signs (VMS) are the permanent, structure-mounted, electronic signs located on some segments of the State's highways. NYSDOT remotely operates these signs from the TMC and may be able to provide advance warning messages to motorists if an incident occurs near one or more VMS.

7.2 Transition Area and Tapers

The transition area is that section of highway where road users are redirected out of their normal path. Proper transition areas usually involve the use of tapers.

A taper, using traffic cones, should be set up as soon as practically possible any time there is a lane closure and/or traffic is moved from one lane to another. Walking a straight line taper can be both difficult and dangerous. Exposure to the traffic flow is almost certain. Whenever resources permit, a spotter should be present to assist in watching for traffic during taper set up. Furthermore, it is highly recommended that personnel place and retrieve cones while facing oncoming traffic.

The speed of the roadway should be considered when determining the length of a taper. Typically, the higher the roadway speed the longer the taper. However, initial scene set up is dynamic in nature and it is recognized that a balance must be reached between the roadway speed and the number of available cones. For example, as illustrated in Figure 5, if the first responder on scene only has 6 cones available when responding to an incident on a high speed roadway, they will only be able to set up a short taper; however, ***any taper is better than no taper***. A short taper should be extended as soon as resources permit.

Figure 5 - Initial Scene Set Up

Key points to remember when setting up a taper include:

- A taper should encompass as much equipment as is available on the scene.
- Tapers should be set up to accommodate for sight obstacles.
- The taper should begin at the upstream end of the buffer space.
- Try to maximize the spacing covered with the cones available at that time.

- Block as much of the roadway as needed and extend the taper out as far as possible to allow drivers adequate time to merge.

Skip lines provide a useful guide for placing cones. Skip lines are the broken pavement markings used to separate two travel lanes. In New York State, the distance from the beginning of one skip line to the end of the next skip line is approximately 50 feet. *Appendix D* contains a detailed explanation, with diagrams, on how to set up a taper using skip lines.

It is strongly recommended that responder vehicles be equipped with, at minimum, the following numbers of MUTCD compliant traffic cones:

- Fire response vehicles: 5 - 20 cones depending on type and size of the apparatus
- Law enforcement response vehicles: *6 cones*

Cones used for the purpose of emergency traffic control and scene management should be consistent with the standards established in MUTCD Section 6F.59. Such cones should be orange, fluorescent orange or fluorescent red-orange in color, 28 inches or greater in height, and should be retroreflective for maximum visibility. Retroreflection of 28 inch or larger cones should be provided by a white band 6 inches in width, no more than 3 to 4 inches from the top of the cone, and an additional 4-inch-wide white band a minimum of 2 inches below the 6-inch band. Figure 6 illustrates the appropriate cone dimensions.

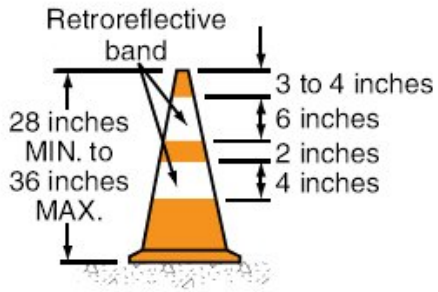


Figure 6 - Traffic Cone Dimensions (Source: Modified from 2009 MUTCD)

7.3 Flagger and Spotter

When resources permit, a “Flagger” function should be established to assist in slowing and directing approaching traffic. Flaggers should be outfitted with high-visibility safety apparel. While STOP/SLOW paddles are preferred, a flag may be used at an emergency scene. The flag should be a minimum of 24 inches square, made of a red material, and securely fastened to a staff that is approximately 36 inches in length. Flags used at night should be retroreflectorized red. The free edge of the flag should be weighted so the flag will hang vertically, even in heavy winds. Figure 6 illustrates some suggested flagging procedures for emergency situations.

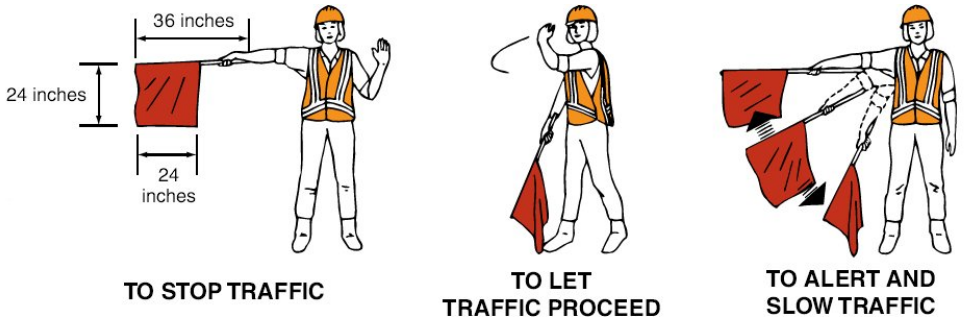


Figure 7 - Use of Hand Signaling Device by Flaggers (Source: Modified from 2009 MUTCD)

Alternatively, a flash light equipped with a small traffic direction cone may also be used to direct traffic.

It is also recommended that, when resources permit, a traffic spotter function be utilized to monitor traffic and activate an emergency signal if the actions of a motorist do not conform to established traffic control measures in place at the incident scene. The use of a portable air horn or similar device is suggested for use as an emergency signal. A portable radio is not recommended for this purpose, as it is unlikely that all responders on the scene would be monitoring the same radio frequency.

7.4 Activity Area

The activity area is the section of the highway where response activities take place. The activity area is comprised of the upstream buffer space and the incident space. Refer to Section 9.1 for discussion on the positioning of vehicles within the activity area.

Traffic cones should be placed along the edge of the activity area starting at the end of the transition area, following alongside the buffer space and the incident space. This will help define a clear boundary between the traffic space and the activity area.

7.4.1 Upstream Buffer Space – It is highly recommended that a longitudinal buffer space be placed between the end of the transition area (taper) and the actual incident space. Since the majority of response activities take place in the incident space, the buffer will help provide additional protection for responders. Longitudinal buffer space is dependent on, but not limited to, the speed of passing traffic and sight distance when approaching the scene, as well as when passing the scene. Table 1 below provides suggested longitudinal buffer spaces as outlined in the MUTCD.

When needed, providing lateral buffer space is also possible. This is the area between the incident itself and the path of traveling vehicles. Lateral buffer space can be beneficial because it allows more room for responders to work. The amount of lateral buffer space to be used is dependent upon many

conditions including, but not limited to, time of day, weather and road conditions. Lateral buffer space can encompass partial lanes or an entire lane; the amount of area necessary to properly perform duties is determined by the Incident Commander.

Speed (mph)	Length (feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645

Table 1 - Suggested Longitudinal Buffer Spaces (Source: 2009 MUTCD)

7.4.2 Incident Space – The incident space is the physical area of roadway within which the emergency responders perform their EMS, fire, law enforcement, and recovery tasks at a traffic incident.

7.5 Termination Area

The termination area is used to notify traffic that the TIMA is ending, and that they may resume normal driving. The termination area only needs to be spread out over a distance of approximately 100 feet, but is necessary to prevent motorists from entering the end of the incident space. The termination area typically includes the downstream buffer space and the downstream taper, however, the downstream taper has been eliminated in the TIMA to allow for easier ingress and egress of emergency vehicles. Traffic cones should extend far enough beyond the incident to provide sufficient buffer space for worker safety.

7.6 Traffic Incident Management Area Examples

The following figures provide examples of typical TIMAs recognizing that each incident has unique characteristics and no two incidents are exactly alike. The TIMA example in Figure 8 illustrates traffic control at an incident scene on a divided roadway. The TIMA example in Figure 9 illustrates traffic control at an incident scene on a two-way roadway. Additionally, the figures included in *Appendix E* illustrate the progression of an incident with the corresponding expansion and reduction of the TIMA.

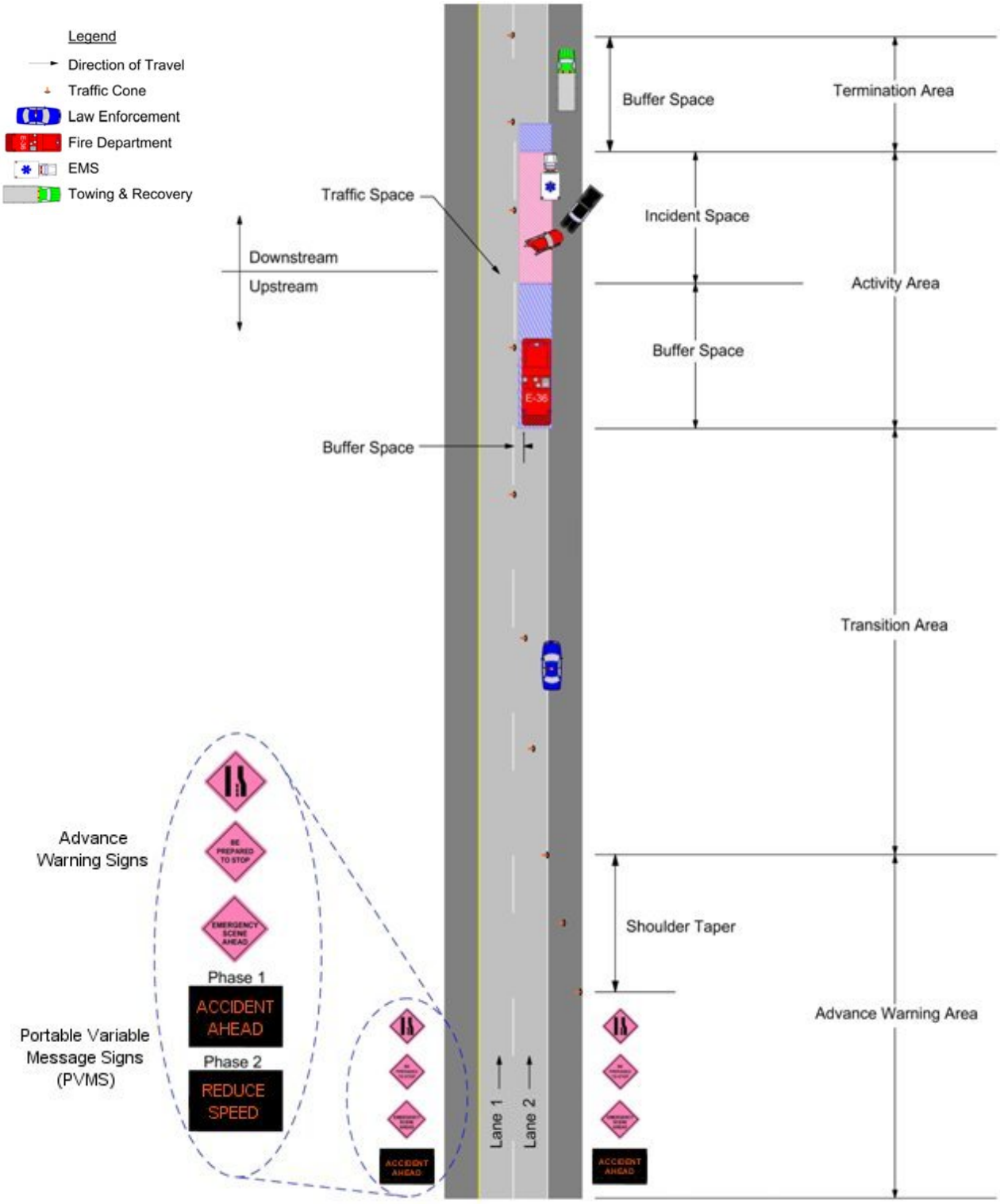

Legend
Direction of Travel
Traffic Cone
Law Enforcement
Fire Department
EMS
Towing & Recovery
Traffic Space
Downstream
Upstream
Buffer Space
Buffer Space
Incident Space
Buffer Space
Termination Area
Activity Area
Transition Area
Shoulder Taper
Advance Warning Area
Advance Warning Signs
Portable Variable Message Signs (PVMS)
Phase 1
ACCIDENT AHEAD
Phase 2
REDUCE SPEED
Lane 1
Lane 2
E-36

Figure 8 - TIMA Example -- Divided Roadway

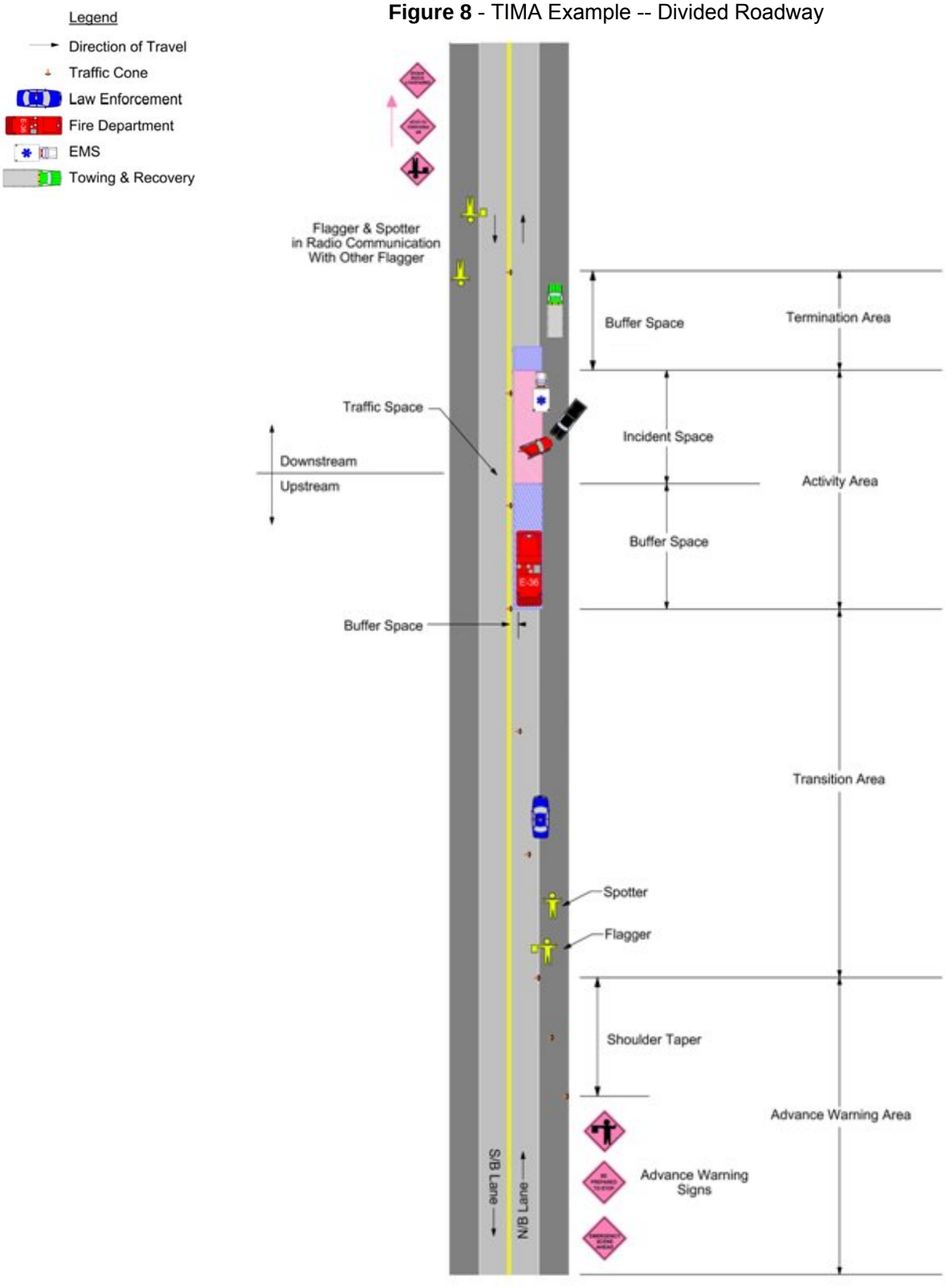


Figure 9 - TIMA Example -- Two-way Roadway

8. Staging

8.1 On-Scene

Only resources that have been assigned tasks should be present at the scene. Staging areas should be set up as close to the operation as possible, but in a safe location. The on-scene staging area should be upstream of the incident space if at all possible, preferably within the upstream buffer space.

8.2 Off-Scene

For multiple unit responses, the first unit approaching or entering a highway should continue to the scene to begin the scene size-up. All other approaching units should consider off-scene staging. This will help maintain safety on the scene as well as for passing motorists. If a vehicle is needed on the scene, then staging can be altered but until that is deemed necessary, it is best to have all unnecessary vehicles and personnel located somewhere nearby.

8.3 Medical Helicopter Landing Zones (Helispot)

When medical helicopter services are required, strong consideration should be given to the use of off-site landing zones. Additional information about medical helicopter landing zone (helispot) preparation and safety is located in *Appendix F*.

If injuries appear severe enough to require immediate attention, medical helicopter services should be notified that they may be needed as soon as possible. However, it is best to have helicopters land at a nearby location that is easily accessible by an ambulance if services are not needed immediately or if the injured person(s) can be transported directly up to the helicopter via ambulance.

When medical helicopters are needed, keep the following in mind:

- Ensure the scene is properly controlled and managed and all responders are aware of safety requirements and protocols.
- Approach the aircraft only from the front and ensure the pilot can see you and is aware that you are approaching the aircraft.
- Due to the high winds generated by the helicopter rotors, make sure everything is secure when the helicopter is present on the scene – this includes traffic control equipment, everything in or attached to a vehicle, and all personal belongings.
- Ensure that you are aware of the possibility of flying debris and that there will be a lot of noise.

Figure 10 illustrates traffic control at an incident scene during a medical helicopter landing.

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* Many medical helicopter service providers throughout the state have, with the assistance of local

fire/EMS agencies, started to identify and record the GPS coordinates of preferred off-highway landing zones within their typical response areas.

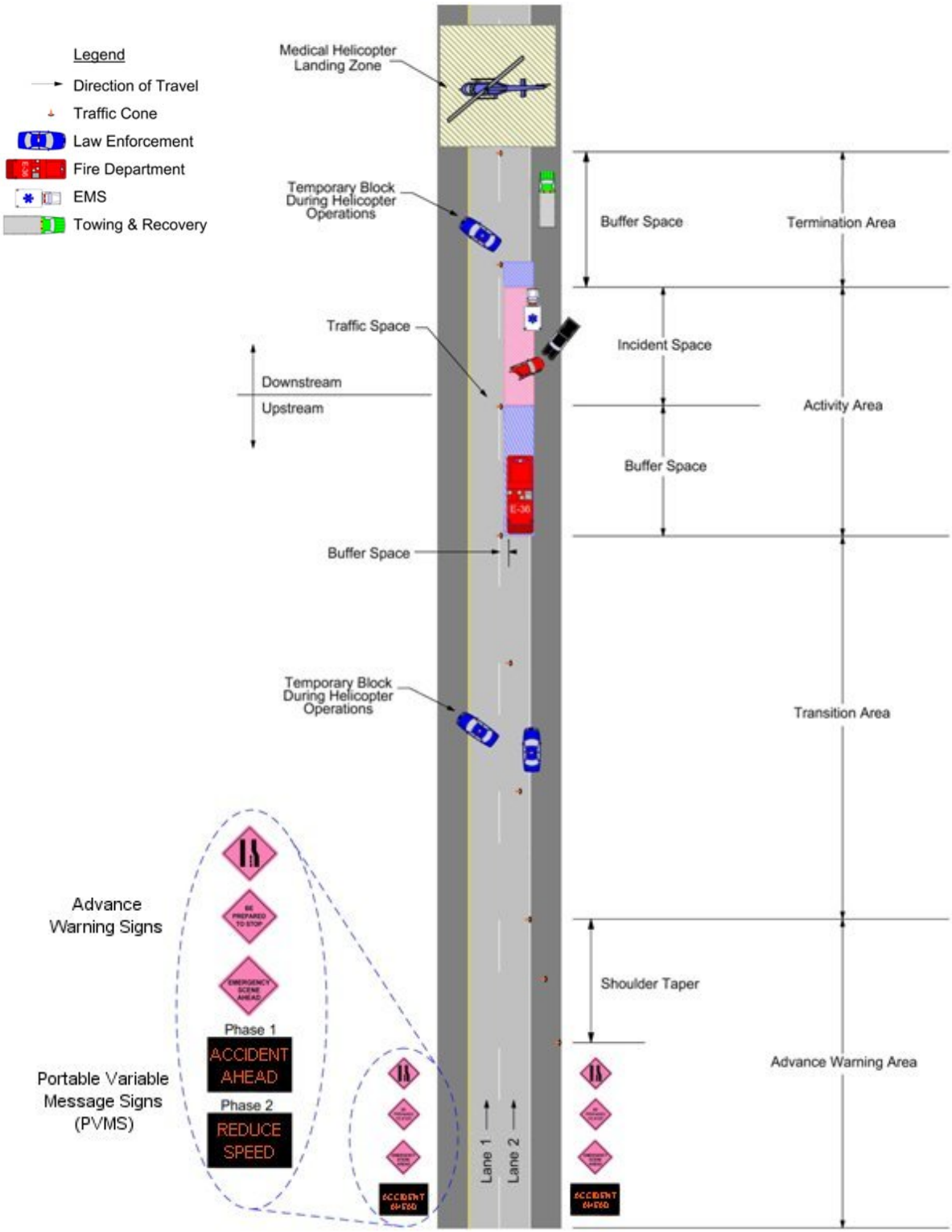


Figure 10 - TIMA Example -- With Medical Helicopter Landing Zone (Helispot)

9. Scene Breakdown and Demobilization

A demobilization plan should be developed for each incident. Command must monitor and control the dismantling of the scene and plan to remove personnel, apparatus, injured persons, bystanders, and vehicles safely from the scene. Ensure that all debris has been cleared from the roadway so as to not present an additional hazard. ***Dismantle the scene from the termination area backwards to the advance warning area.***

- Considerations while removing personnel and apparatus from scene:
  - Ambulance leaving scene with or without traffic control
  - Dismantling your safe incident space
  - Blocking apparatus leaving the scene
  - Picking up traffic cones safely

- Personnel must realize as the incident terminates, conditions change and the following will likely occur:
  - Safe area may no longer be intact
  - Frustrated drivers increase speed to make up for lost time
  - Frustrated drivers enter gaps in safe incident space
  - Vehicles (e.g. ambulances) leaving the scene may be too busy watching traffic to see personnel on scene

When an incident scene has been cleared, ensure that the appropriate agency, generally the maintaining authority, has been notified that the roadway is now open. Additionally, if the TMC was notified of the incident they also need to be notified that the incident is clear.

10. Crash Investigation/Reconstruction

Crash scenes should be cleared as quickly as is practical, emphasizing restoration of all available traffic lanes without compromising the short-lived and un-retrievable evidence necessary for a thorough investigation. The investigation and reconstruction of traffic collisions has become increasingly more important in recent years. Among the most significant reasons for this include:

- Criminal and civil aspects of traffic crash cases.
- Litigation against law enforcement agencies and personnel.
- Documentation of the economic and personal loss and injury of those involved in traffic crashes.

Reconstruction is a process of recreating an incident through factual information. In order to perform reconstructions of incident scenes, evidentiary items must be

accurately documented and preserved for analytical purposes. Time on-scene will vary between incidents based on the individual circumstances of the incident. There may be instances in which not all information needs to be gathered immediately. For example, in some situations, the roadway could be opened after all crash related data is collected and then roadway configuration information could be collected at a later date in a safer manner. However, regardless of the situation, it is most important that safety is maintained for all personnel.

Some critical pieces of evidence that need to be thoroughly investigated include:

- Locate and identify all witnesses, drivers, and others involved, as may be appropriate. If resources permit, consider conducting an initial interview to determine the depth of their knowledge about the incident.
- Gather and preserve physical evidence from the scene when necessary.
- Take appropriate photographs of all fatal, personal injury, extensive property damage crashes, and when feasible, all crashes where enforcement action is taken.
- Sketch the scene and record necessary measurements on all fatal, personal injury, and extensive property damage crashes.
- Collect all other information necessary to complete the following, as appropriate, including:

    - New York State motor vehicle accident report
    - Supplementary notes
    - Witness statements
    - New York State motor vehicle fatal supplement form
    - Emergency vehicle involvement
    - Other forms as necessary

11. Emergency Alternate Routes

As soon as possible after arriving at the scene, the activation of an emergency alternate route should be considered. Because activating an emergency alternate route takes considerable resources, early planning will be essential to its successful implementation and operation. The use of an emergency alternate route will be necessary in the event that the highway must be completely closed. Emergency alternate routes should also be considered when an incident is causing significant traffic queues.

In some areas of the state, emergency alternate route guides have been developed and/or alternate route signing has been installed. These can be helpful resources in instances where an emergency alternate route needs to be used. The emergency alternate route guides assist in determining what route would be most effective and how to best implement diversion to the route. Additional public works and/or highway department traffic direction resources should be requested as soon as possible when an emergency alternate route is implemented. Portable Variable Message Signs (PVMS)

can also be deployed to assist in notifying motorists of and/or guiding motorists along the emergency alternate route.

12. Media Considerations

It is understood that the media provides a service to the traveling public by providing traffic information. However, their safety, along with the safety of all responders is the first priority. It is recommended, especially for large-scale incidents, that a media area be established in a safe location near the scene, but away from the incident command post. The establishment and use of a media area will ultimately assist in the management of the incident scene in the following ways:

- Response by the media to an incident scene should be in compliance with the protocols of the facility owner.
- Media personnel will be kept together in one location, allowing information to be released as quickly and efficiently as possible. A Public Information Officer (PIO) should be assigned to the media area to disseminate the information. All information released by the PIO must be approved by the Incident Commander.
- Media personnel will be separated from the responders on scene, allowing the responders to concentrate on completing their tasks, and clearing the scene as quickly and efficiently as possible.
- If the members of the media will be allowed to go to the scene, they should be accompanied by an escort to and from the scene for the purpose of obtaining photographs and video footage. Consider the use of a "pool" camera and video crew, reducing the amount of people that need to be escorted. This process will help ensure that the media is only allowed to access the portions of the scene that have been secured for their safety. As a reminder, all members of the media that arrive at a highway incident scene should follow the same high-visibility safety apparel requirements as other responders.
- Any media personnel not participating in the media area should be denied access to the scene.

13. Post Incident Analysis

Each traffic incident is unique and, as such, one of the most effective ways to enhance quick clearance and improve safety is to regularly analyze incidents that have occurred. The purpose of an incident analysis is to evaluate the decisions made and actions taken during an incident and to identify best practices and opportunities for improvement. An incident analysis can be held for any type or size of incident, but it is highly recommended that all major incidents be analyzed.

Effective analyses provide a forum in which conflicts and inefficiencies are identified and steps are taken to resolve or eliminate them. The analysis can also help open lines of communication and foster relationships among responders. It is essential that incident

reviews be multi-agency and multi-discipline and include all agencies and personnel that were involved with the incident, including dispatchers. Incident analyses can be initiated by any agency involved in the response to an incident and should take place as soon as possible.

The TIME Program Incident Analysis Form can be found in *Appendix G*. The form is intended to assist agencies in gathering and disseminating incident details and can be completed by any agency involved in the response to a traffic incident.

Appendix A

Towing and Recovery Call-Out Checklist

TOWING AND RECOVERY CALL-OUT CHECKLIST

Reason for tow: □ Crash □ Breakdown □ Arrest

Location

City/County: _____

Roadway (including direction of travel):_____

Is the vehicle on the: □ Median (Left/Inside) □ Shoulder (Right/Outside) □ In traffic

And is the vehicle: □ On the roadway □ Off the roadway 20 ft or more

Vehicle Information

How many vehicles need to be towed: _____ # of Light Duty _____ # of Heavy Duty

Light Duty

Vehicle description (make and model): _____

Is the vehicle: □ Four-Wheel/AWD and/or □ Hybrid

Is the vehicle: □ Unoccupied □ Occupied - # of passengers: _____

Are the keys with the vehicle? □ Yes □ No

Heavy Duty

Is the truck/trailer: □ Empty □ Loaded and/or □ HAZMAT

What is the approximate weight of the truck? _____

How many axles does the truck/trailer have? _____

How many tires does the truck/trailer have? _____

Additional Vehicle/Crash Information

Visual damage assessment (i.e. load spill, vehicle facing wrong direction, etc.): _____

_____

_____

Additional information: _____

_____

_____

Appendix B

Emergency Traffic Control and Scene Management Quick Reference Visor Card

Emergency Traffic Control & Scene Management
Quick Reference Visor Card

Incident Response Priorities

1. Life Safety
2. Incident Stabilization - prevention of secondary crashes; protection of evidence; safe, quick clearance
3. Protection of Property and the Environment

Incident Classification

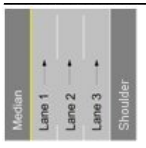
- **Major** - expected duration of more than 2 hours
- **Intermediate** - expected duration between 30 minutes and 2 hours
- **Minor** - expected duration of less than 30 minutes

Initial Scene Response Objectives

It is imperative that high-visibility safety apparel (i.e. safety vests) be put on and worn for the duration of an incident

1. Position your vehicle to establish initial block
2. Stabilize scene and provide medical attention to injured persons
3. Conduct initial scene size-up
   - *Location* - exact incident location
   - *Incident Type* - Major, Intermediate, or Minor
   - *Request for Public Works and/or Highway Dept Support* - for major and intermediate incidents the Department of Transportation/TA should be notified to assist with traffic control
   - *Vehicles* - number and type of vehicles involved
   - *Injured Persons* - number of people injured and extent of injuries
   - *Other Conditions* - any other conditions present at the scene that may affect the safety of other responders
4. Initiate Incident Command System (ICS) and/or Unified Command
5. Establish a Traffic Incident Management Area (TIMA)
6. Conduct secondary scene size-up - request additional resources
   - *Hazardous Materials* - response and clean up
   - *Towing and Recovery* - provide accurate, detailed vehicle info
   - *Traffic Conditions* - report traffic conditions, as well as alternate response routes and/or emergency alternate routes being used
   - *Additional Resources* - medical helicopter services, crash investigation/reconstruction, medical examiner/coroner, DEC, etc.

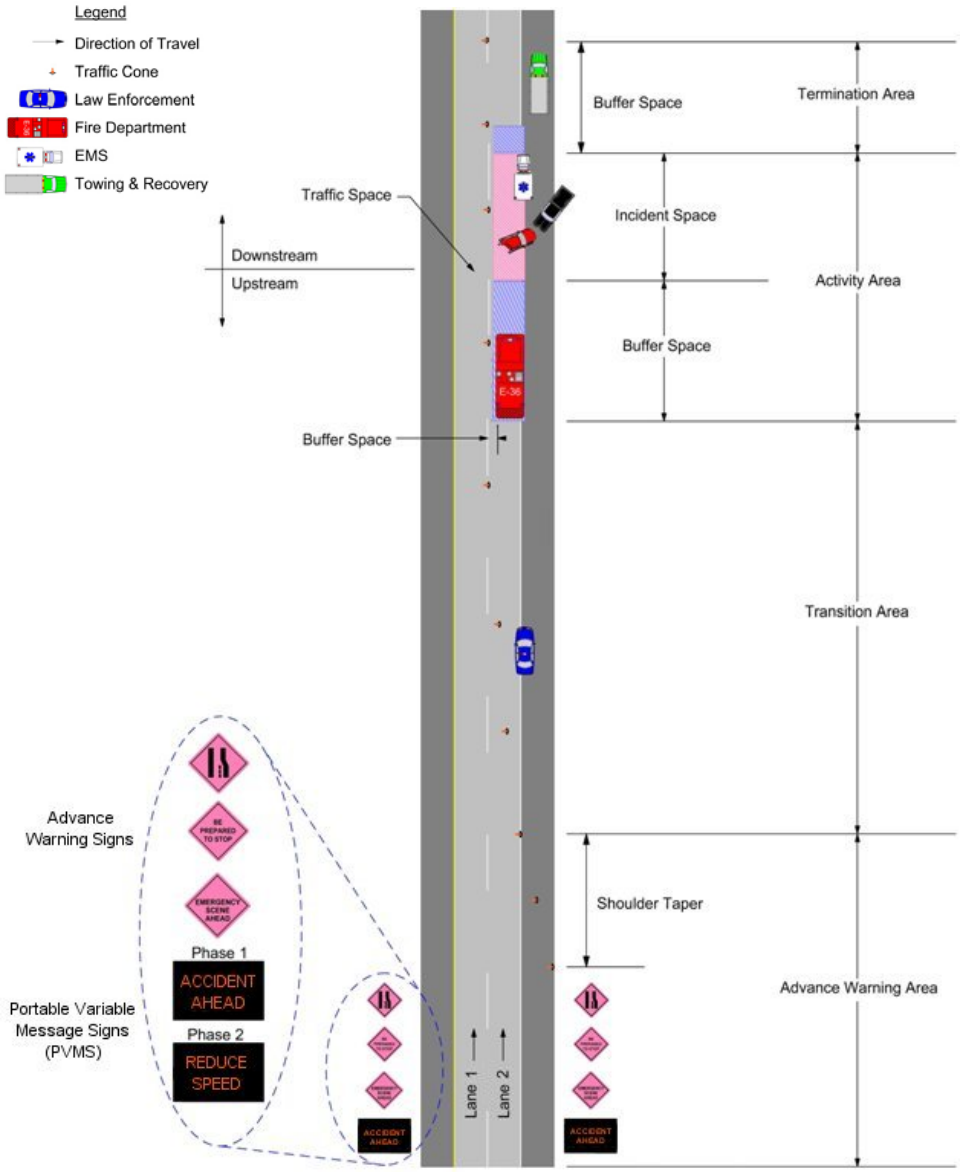
Contact the NYSDOT's Regional **Traffic Management Center (TMC)** for any incident that is anticipated to have at least one state highway lane/ramp blocked for more than 30 minutes.



Lane Naming Convention

Lanes are numbered starting with the right most lane as seen from the motorist's direction of travel being Lane 1. (Lane 1 is nearest to the shoulder.)

Traffic Incident Management Area (TIMA)



Put on high-visibility apparel as soon as possible

1. Park vehicle in a block position
2. Stabilize scene
3. Conduct initial scene size-up
4. Initiate ICS / Unified Command
5. Establish a TIMA
6. Conduct secondary scene size-up

For additional copies please contact NYSDOT at: (###) ###-#### I 3/16/11

Appendix C

Manual on Uniform Traffic Control Devices (MUTCD) Chapter 6I

New York State has adopted the National Manual of Uniform Traffic Control Devices with the addition of a state supplement. In Section 1680 (a) of the New York State Vehicle and Traffic Law, further guidance is given with respect to MUTCD Section 6I – Control of Traffic Through Incident Management Areas.

The complete MUTCD is available online at: mutcd.fhwa.dot.gov

NEW YORK STATE SUPPLEMENT
CHAPTER 6I. CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS

Section 6I.01 General

INSERT the following at the beginning of the section:

Standard:

In New York, the operational practices related to emergency incident responses provided in the National Manual shall apply to police officers and other emergency responders responding to an emergency only in so far as such officers or emergency responders deem compliance with such Manual practicable.

Support:

Chapter 722 of the 2006 Laws of New York modified Section 1680(a) of the Vehicle & Traffic Law regarding the need for police officers and other emergency responders to comply with Chapter 6I.

"§ 1680. Department of Transportation to maintain a manual of uniform traffic-control devices. (a) The department of transportation shall maintain a manual and specifications for a uniform system of traffic-control devices consistent with the provisions of this chapter for use upon highways within this state. Such uniform system shall correlate with and so far as practicable conform to nationally accepted standards. To the extent that the National Manual on Uniform Traffic Control Devices (hereinafter referred to in this section as MUTCD), promulgated by the Federal Highway Administration pursuant to subpart F of part 655 of Title 23 of the Code of Federal Regulations and subject to a public comment period under federal law, does not conflict with the provisions of this chapter and the provisions of other laws of the state, the National MUTCD shall constitute such state manual and specifications; provided, however, such manual and specifications may be modified by the commissioner of transportation by the adoption of a supplement or supplements as such commissioner of transportation determines warranted and in compliance with the applicable provisions of the state administrative procedure act. The manual and its specifications is adopted as the state standard for traffic control devices on any street, highway, or bicycle path open to public travel. No person shall install or maintain in any area of private property used by the public any sign, signal, marking or other device intended to regulate, warn or guide traffic unless it conforms with the state manual and specifications maintained under this section. ***Unless otherwise provided for by the adoption of a supplement by the commissioner of transportation, the operational practices related to emergency incident responses provided in the manual shall apply to police officers and other emergency responders responding to an emergency only in so far as such officers or emergency responders deem compliance with the manual practicable."***

NATIONAL MUTCD

Chapter 6I. Control of Traffic Through Traffic Incident Management Areas

Section 6I.01 General

Support:
01 The National Incident Management System (NIMS) requires the use of the Incident Command System (ICS) at traffic incident management scenes.

02 A traffic incident is an emergency road user occurrence, a natural disaster, or other unplanned event that affects or impedes the normal flow of traffic.

03 A traffic incident management area is an area of a highway where temporary traffic controls are installed, as authorized by a public authority or the official having jurisdiction of the roadway, in response to a road user incident, natural disaster, hazardous material spill, or other unplanned incident. It is a type of TTC zone and extends from the first warning device (such as a sign, light, or cone) to the last TTC device or to a point where vehicles return to the original lane alignment and are clear of the incident.

04 Traffic incidents can be divided into three general classes of duration, each of which has unique traffic control characteristics and needs. These classes are:

A. Major—expected duration of more than 2 hours,
B. Intermediate—expected duration of 30 minutes to 2 hours, and
C. Minor—expected duration under 30 minutes.

05 The primary functions of TTC at a traffic incident management area are to inform road users of the incident and to provide guidance information on the path to follow through the incident area. Alerting road users and establishing a well defined path to guide road users through the incident area will serve to protect the incident responders and those involved in working at the incident scene and will aid in moving road users expeditiously past or around the traffic incident, will reduce the likelihood of secondary traffic crashes, and will preclude unnecessary use of the surrounding local road system. Examples include a stalled vehicle blocking a lane, a traffic crash blocking the traveled way, a hazardous material spill along a highway, and natural disasters such as floods and severe storm damage.

Guidance:
06 *In order to reduce response time for traffic incidents, highway agencies, appropriate public safety agencies (law enforcement, fire and rescue, emergency communications, emergency medical, and other emergency management), and private sector responders (towing and recovery and hazardous materials contractors) should mutually plan for occurrences of traffic incidents along the major and heavily traveled highway and street system.*

07 *On-scene responder organizations should train their personnel in TTC practices for accomplishing their tasks in and near traffic and in the requirements for traffic incident management contained in this Manual. On-scene responders should take measures to move the*

incident off the traveled roadway or to provide for appropriate warning. All on-scene responders and news media personnel should constantly be aware of their visibility to oncoming traffic and wear high-visibility apparel.

08 *Emergency vehicles should be safe-positioned (see definition in Section 1A.13) such that traffic flow through the incident scene is optimized. All emergency vehicles that subsequently arrive should be positioned in a manner that does not interfere with the established temporary traffic flow.*

09 *Responders arriving at a traffic incident should estimate the magnitude of the traffic incident, the expected time duration of the traffic incident, and the expected vehicle queue length, and then should set up the appropriate temporary traffic controls for these estimates.*

Option:
10 Warning and guide signs used for TTC traffic incident management situations may have a black legend and border on a fluorescent pink background (see Figure 6I-1).

Figure 6I-1 Examples of Traffic Incident Management Area Signs

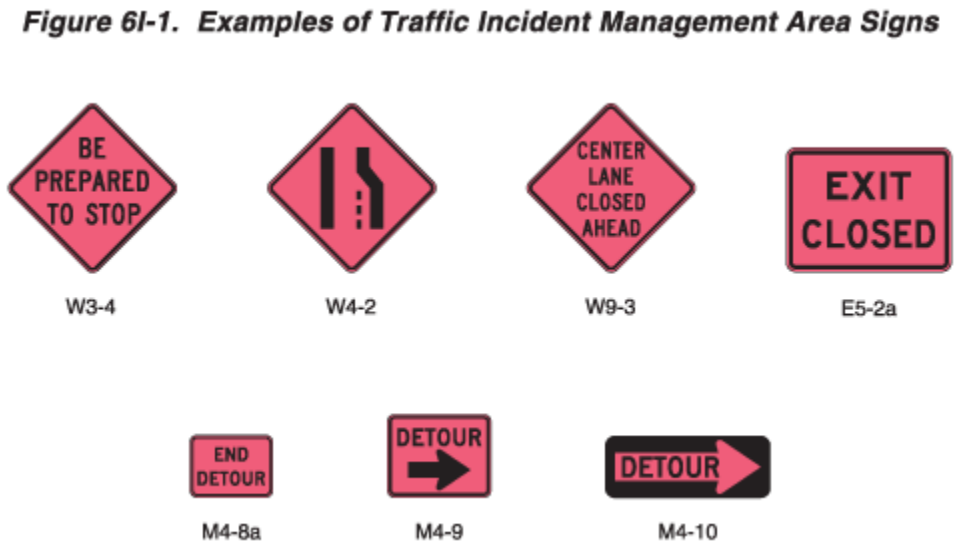


Figure 6I-1. Examples of Traffic Incident Management Area Signs

This figure illustrates seven traffic incident management area signs.

W3-4 is shown as a diamond-shaped fluorescent pink sign with a black border and legend. The words "BE PREPARED TO STOP" are shown on three lines.

W4-2 is shown as a diamond-shaped fluorescent pink lane ends sign with a black border and legend. It shows a thick, vertical straight line on the left; a thick, vertical line on the right that angles toward the left half way up; and a thin, short vertical dotted line between them that is the length of the vertical section of the line on the right.

W9-3 is shown as a diamond-shaped fluorescent pink sign with a black border and legend. The words "CENTER LANE CLOSED AHEAD" are shown on four lines.

E5-2a is shown as a horizontal rectangular fluorescent pink sign with a black border and the legend. The words "EXIT CLOSED" are shown on two lines.

M4-8a is shown as a horizontal rectangular fluorescent pink sign with a black border and the legend. The words "END DETOUR" are shown on two lines.

M4-9 is shown as a horizontal rectangular fluorescent pink sign with a black border and the legend. The word "DETOUR" is shown above a right-pointing black arrow.

M4-10 is shown as a horizontal rectangular black sign with a fluorescent pink border. The word "DETOUR" is shown in black superimposed on a right-pointing fluorescent pink arrow.

Support:
11 While some traffic incidents might be anticipated and planned for, emergencies and disasters might pose more severe and unpredictable problems. The ability to quickly install proper temporary traffic controls might greatly reduce the effects of an incident, such as secondary crashes or excessive traffic delays. An essential part of fire, rescue, spill clean-up, highway agency, and enforcement activities is the proper control of road users through the traffic incident management area in order to protect responders, victims, and other personnel at the site. These operations might need corroborating legislative authority for the implementation and enforcement of appropriate road user regulations, parking controls, and speed zoning. It is desirable for these statutes to provide sufficient flexibility in the authority for, and implementation of, TTC to respond to the needs of changing conditions found in traffic incident management areas.

Option:
12 For traffic incidents, particularly those of an emergency nature, TTC devices on hand may be used for the initial response as long as they do not themselves create unnecessary additional hazards.

Section 6I.02 Major Traffic Incidents

Support:
01 Major traffic incidents are typically traffic incidents involving hazardous materials, fatal traffic crashes involving numerous vehicles, and other natural or man-made disasters. These traffic incidents typically involve closing all or part of a roadway facility for a period exceeding 2 hours.

Guidance:
02 *If the traffic incident is anticipated to last more than 24 hours, applicable procedures and devices set forth in other Chapters of Part 6 should be used.*

Support:
03 A road closure can be caused by a traffic incident such as a road user crash that blocks the traveled way. Road users are usually diverted through lane shifts or detoured around the traffic incident and back to the original roadway. A combination of traffic engineering and enforcement preparations is needed to determine the detour route, and to install, maintain or operate, and then to remove the necessary traffic control devices when the detour is terminated. Large trucks are a significant concern in such a detour, especially when detouring them from a controlled-access roadway onto local or arterial streets.

04 During traffic incidents, large trucks might need to follow a route separate from that of automobiles because of bridge, weight, clearance, or geometric restrictions. Also, vehicles carrying hazardous material might need to follow a different route from other vehicles.

05 Some traffic incidents such as hazardous material spills might require closure of an entire highway. Through road users must have adequate guidance around the traffic incident. Maintaining good public relations is desirable. The cooperation of the news media in publicizing the existence of, and reasons for, traffic incident management areas and their TTC can be of great assistance in keeping road users and the general public well informed.

06 The establishment, maintenance, and prompt removal of lane diversions can be effectively managed by interagency planning that includes representatives of highway and public safety agencies.

Guidance:
07 *All traffic control devices needed to set up the TTC at a traffic incident should be available so that they can be readily deployed for all major traffic incidents. The TTC should include the proper traffic diversions, tapered lane closures, and upstream warning devices to alert traffic approaching the queue and to encourage early diversion to an appropriate alternative route.*

08 *Attention should be paid to the upstream end of the traffic queue such that warning is given to road users approaching the back of the queue.*

09 *If manual traffic control is needed, it should be provided by qualified flaggers or uniformed law enforcement officers.*

Option:
10 If flaggers are used to provide traffic control for an incident management situation, the flaggers may use appropriate traffic control devices that are readily available or that can be brought to the traffic incident scene on short notice.

Guidance:
11 *When light sticks or flares are used to establish the initial traffic control at incident scenes, channelizing devices (see Section 6F.63) should be installed as soon thereafter as practical.*

Option:
12 The light sticks or flares may remain in place if they are being used to supplement the channelizing devices.

Guidance:
13 *The light sticks, flares, and channelizing devices should be removed after the incident is terminated.*

Section 6I.03 Intermediate Traffic Incidents

Support:
01 Intermediate traffic incidents typically affect travel lanes for a time period of 30 minutes to 2 hours, and usually require traffic control on the scene to divert road users past the blockage. Full roadway closures might be needed for short periods during traffic incident clearance to allow traffic incident responders to accomplish their tasks.

02 The establishment, maintenance, and prompt removal of lane diversions can be effectively managed by interagency planning that includes representatives of highway and public safety agencies.

Guidance:
03 *All traffic control devices needed to set up the TTC at a traffic incident should be available so that they can be readily deployed for intermediate traffic incidents. The TTC should include the proper traffic diversions, tapered lane closures, and upstream warning devices to alert traffic approaching the queue and to encourage early diversion to an appropriate alternative route.*

04 *Attention should be paid to the upstream end of the traffic queue such that warning is given to road users approaching the back of the queue.*

05 *If manual traffic control is needed, it should be provided by qualified flaggers or uniformed law enforcement officers.*

Option:
06 If flaggers are used to provide traffic control for an incident management situation, the flaggers may use appropriate traffic control devices that are readily available or that can be brought to the traffic incident scene on short notice.

Guidance:
07 *When light sticks or flares are used to establish the initial traffic control at incident scenes, channelizing devices (see Section 6F.63) should be installed as soon thereafter as practical.*

Option:
08 The light sticks or flares may remain in place if they are being used to supplement the channelizing devices.

Guidance:
09 *The light sticks, flares, and channelizing devices should be removed after the incident is terminated.*

Section 6I.04 Minor Traffic Incidents

Support:
01 Minor traffic incidents are typically disabled vehicles and minor crashes that result in lane closures of less than 30 minutes. On-scene responders are typically law enforcement and towing companies, and occasionally highway agency service patrol vehicles.

02 Diversion of traffic into other lanes is often not needed or is needed only briefly. It is not generally possible or practical to set up a lane closure with traffic control devices for a minor traffic incident. Traffic control is the responsibility of on-scene responders.

Guidance:
03 *When a minor traffic incident blocks a travel lane, it should be removed from that lane to the shoulder as quickly as possible.*

Section 6I.05 Use of Emergency-Vehicle Lighting

Support:
01 The use of emergency-vehicle lighting (such as high-intensity rotating, flashing, oscillating, or

strobe lights) is essential, especially in the initial stages of a traffic incident, for the safety of emergency responders and persons involved in the traffic incident, as well as road users approaching the traffic incident. Emergency-vehicle lighting, however, provides warning only and provides no effective traffic control. The use of too many lights at an incident scene can be distracting and can create confusion for approaching road users, especially at night. Road users approaching the traffic incident from the opposite direction on a divided facility are often distracted by emergency-vehicle lighting and slow their vehicles to look at the traffic incident posing a hazard to themselves and others traveling in their direction.

02 The use of emergency-vehicle lighting can be reduced if good traffic control has been established at a traffic incident scene. This is especially true for major traffic incidents that might involve a number of emergency vehicles. If good traffic control is established through placement of advanced warning signs and traffic control devices to divert or detour traffic, then public safety agencies can perform their tasks on scene with minimal emergency-vehicle lighting.

Guidance:
03 *Public safety agencies should examine their policies on the use of emergency-vehicle lighting, especially after a traffic incident scene is secured, with the intent of reducing the use of this lighting as much as possible while not endangering those at the scene. Special consideration should be given to reducing or extinguishing forward facing emergency-vehicle lighting, especially on divided roadways, to reduce distractions to oncoming road users.*

04*Because the glare from floodlights or vehicle headlights can impair the nighttime vision of approaching road users, any floodlights or vehicle headlights that are not needed for illumination, or to provide notice to other road users of an incident response vehicle being in an unexpected location, should be turned off at night.*

Appendix D

Guide for Taper Set Up Using Skip Lines

# of Cones	Speed (mph)	Taper Length (ft)	Cumulative Skip Distance (feet)																					
			0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850
			Offset Distance from Lane Edge (feet)																	
18	70	840	12	11.5	10.5	10	9	8.5	8	7	6.5	5.5	5	4.5	3.5	3	2	1.5	0.5	0
17	65	780	12	11.5	10.5	10	9	8.5	7.5	7	6	5.5	4.5	4	3	2.5	1.5	1	0	-
16	60	720	12	11	10.5	9.5	9	8	7	6.5	5.5	5	4	3	2.5	1.5	1	0	-	-
15	55	660	12	11	10.5	9.5	8.5	8	7	6	5	4.5	3.5	2.5	2	1	0	-	-	-
13	50	600	12	11	10	9	8	7	6	5	4	3	2	1	0	-	-	-	-	-
12	45	540	12	11	10	9	7.5	6.5	5.5	4.5	3.5	2	1	0	-	-	-	-	-	-
7	40	320	12	10.5	8.5	7	5	3.5	2	0	-	-	-	-	-	-	-	-	-	-
6	35	245	12	9.5	7	5	2.5	0	-	-	-	-	-	-	-	-	-	-	-	-
5	30	180	12	9	6	3	0	-	-	-	-	-	-	-	-	-	-	-	-	-
4	25	125	12	8	4	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D-1 - Taper Set Up -- Guide for Cone Placement Offset Distances

Guide for Taper Set Up Using Skip Lines - Detailed Explanation

The following guide was developed to allow a responder placing a taper to walk toward traffic, therefore minimizing the time their back is to traffic.

1) Beginning at the upstream end of the buffer zone, place a single traffic cone on one end of a skip line as shown in Figure D-1.

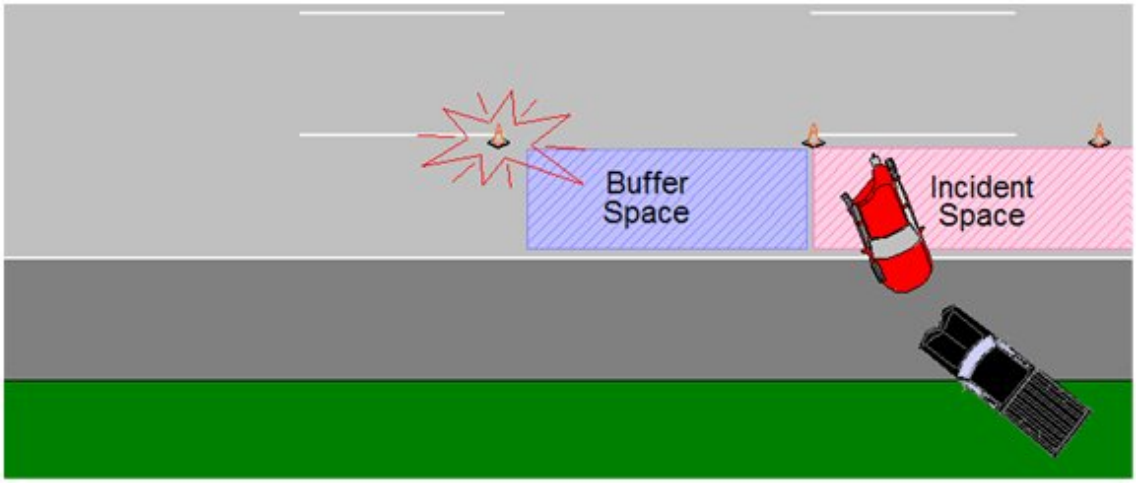


Figure D-1 - Taper Set Up -- Initial Cone Placement

2) Walk to the shoulder on the side of the roadway that you are closing, then walk upstream along the shoulder until you reach the corresponding end of the next skip line as shown in Figure D-2.

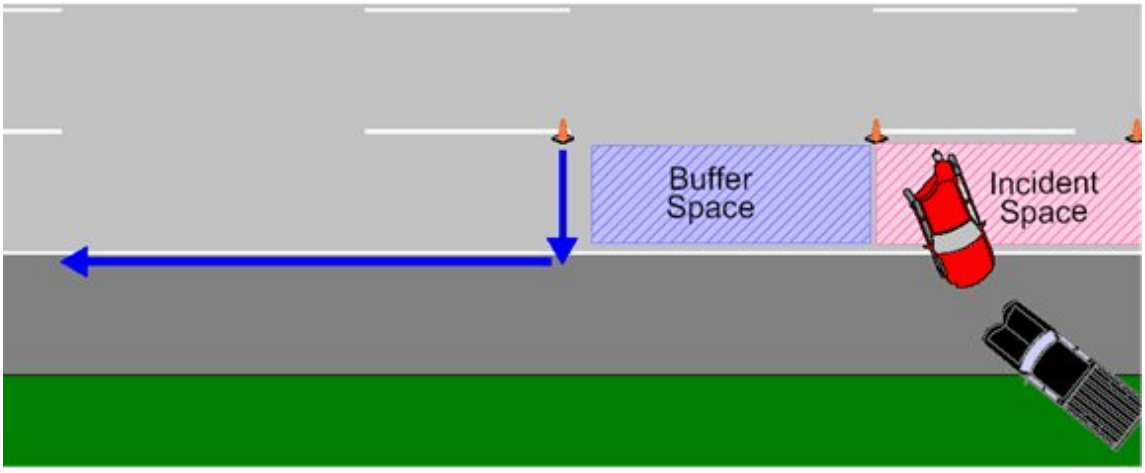


Figure D-2 - Taper Set Up -- Safe Movement Path

3) When traffic conditions permit, walk into the traffic lane, and place a cone at the distance specified, in Table D-1, from the shoulder side edge of the lane as shown in Figure D-3.

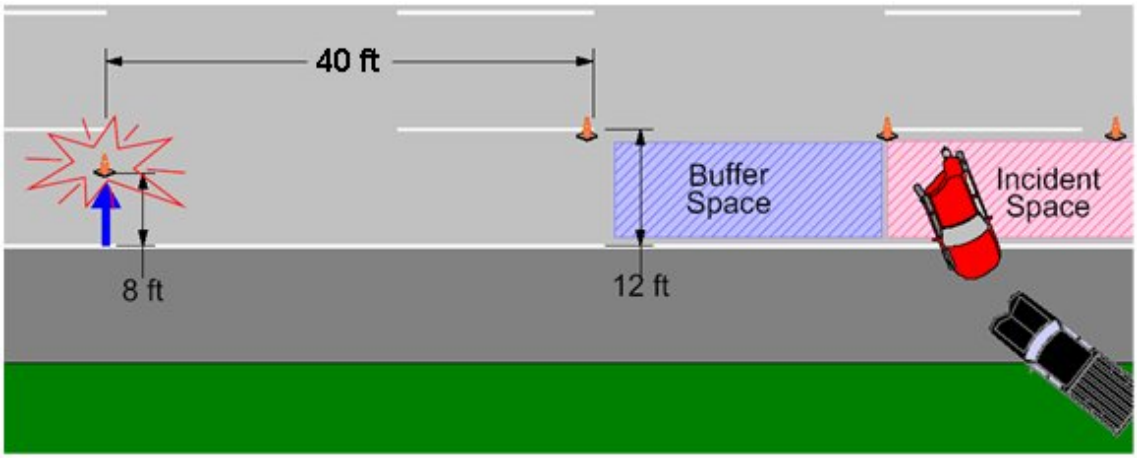


Figure D-3 - Taper Set Up -- Second Cone Placement

4) Repeat this process using the next specified distance in Table D-1 until the taper reaches the lane edge as shown in Figure D-4. A similar process will need to be used to continue the taper across the shoulder.

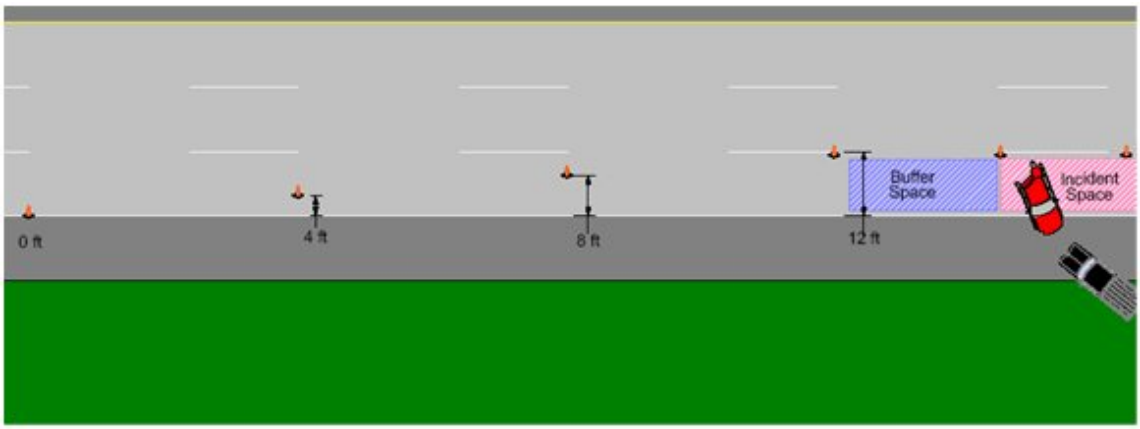
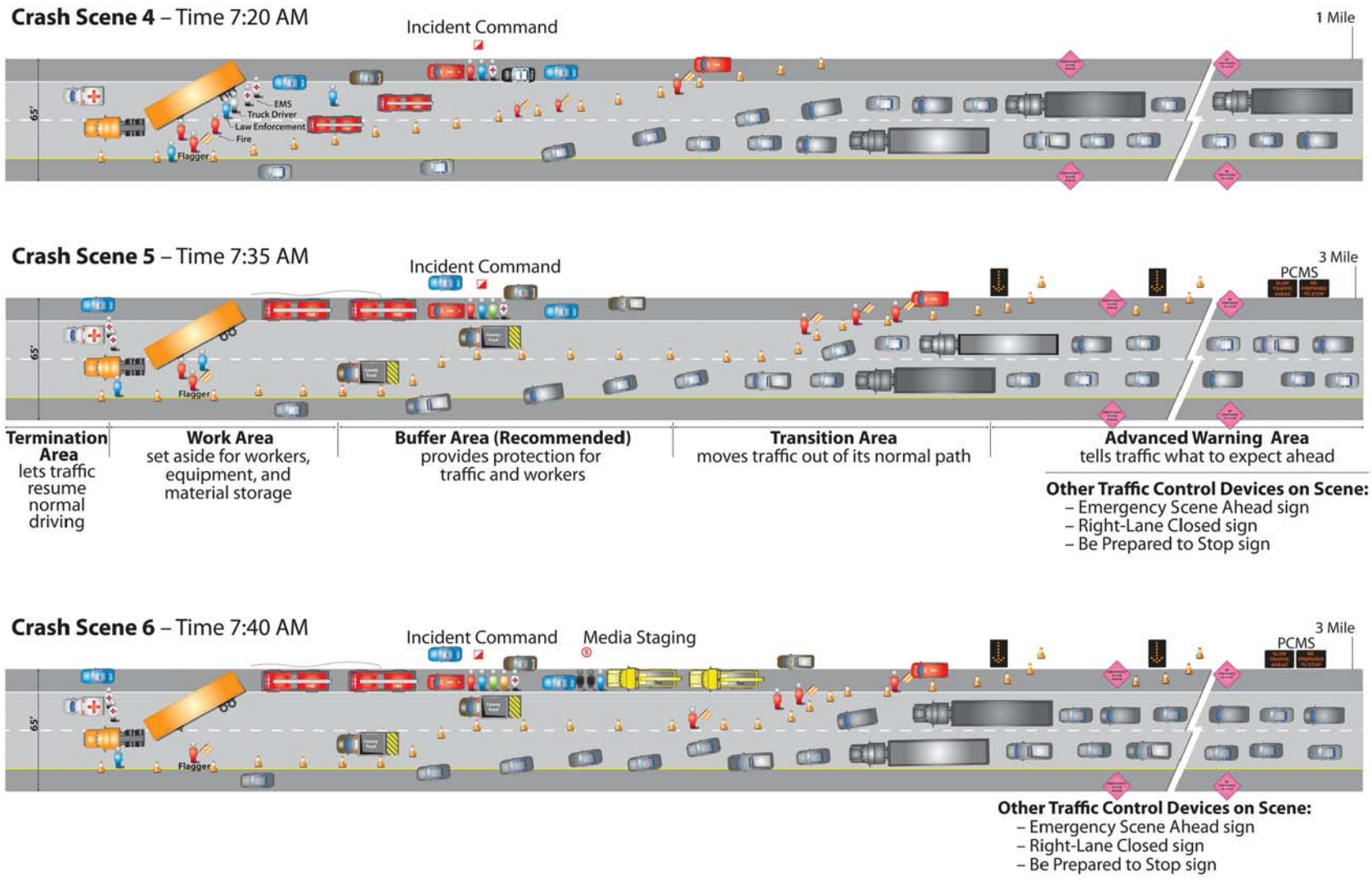


Figure D-4 - Taper Set Up -- Final Result

Appendix E

TIMA Incident Progression Example

1 Mile
Crash Scene 1 – Time 7:00 AM
1 Mile
Crash Scene 2 – Time 7:10 AM
Truck Driver
Law Enforcement
1 Mile
Crash Scene 3 – Time 7:15 AM
Fire
Truck Driver
Law Enforcement
Flagger
Fire
Law
County Highway Dept.
EMS
Tow
Public
Media
Incident Command Area
Staging Area
NOTE: Not to Scale
February 28, 2008


Crash Scene 4 – Time 7:20 AM
Incident Command
1 Mile
65'
EMS
Truck Driver
Law Enforcement
Fire
Flagger
Crash Scene 5 – Time 7:35 AM
Incident Command
3 Mile
PCMS
65'
Flagger
Termination Area
lets traffic resume normal driving
Work Area
set aside for workers, equipment, and material storage
Buffer Area (Recommended)
provides protection for traffic and workers
Transition Area
moves traffic out of its normal path
Advanced Warning Area
tells traffic what to expect ahead
Other Traffic Control Devices on Scene:
– Emergency Scene Ahead sign
– Right-Lane Closed sign
– Be Prepared to Stop sign
Crash Scene 6 – Time 7:40 AM
Incident Command
Media Staging
3 Mile
PCMS
65'
Flagger
Other Traffic Control Devices on Scene:
– Emergency Scene Ahead sign
– Right-Lane Closed sign
– Be Prepared to Stop sign
February 28, 2008
Fire
Law
County Highway Dept.
EMS
Tow
Public
Media
Incident Command Area
Staging Area
NOTE: Not to Scale

Crash Scene 7a – Time 7:50 AM
Incident Command
Media Staging
3 Mile
PCMS
Other Traffic Control Devices on Scene:
– Emergency Scene Ahead sign
– Right-Lane Closed sign
– Be Prepared to Stop sign
Crash Scene 7b – Time 7:50 AM
Incident Command
Media Staging
3 Mile
PCMS
Other Traffic Control Devices on Scene:
– Emergency Scene Ahead sign
– Right-Lane Closed sign
– Be Prepared to Stop sign
Crash Scene 7c – Time 8:00 AM
Incident Command
3 Mile
PCMS
Fire
Law
County Highway Dept.
EMS
Tow
Public
Media
Incident Command Area
Staging Area
NOTE: Not to Scale
February 28, 2008

Appendix F

Flight For Life Landing Zone Preparation and Safety Guidance Card

General helicopter landing zone/helispot preparation and safety requirements, provided by Flight For Life, are shown in Figure F-1. There are numerous medical helicopter service providers that work within the state, and each may have slightly different requirements. The information shown below is provided as one example of such requirements and as an educational resource.

Figure F-1 - Flight For Life Landing Zone Preparation and Safety Guidance Card

New York State
Department of Health
Bureau of Emergency Medical Services

POLICY STATEMENT

Supercedes/Updates: ***New***

No. 05-05

Date: 9/12/05

Re: Guidelines for Helicopter Utilization Criteria for Scene Response

Purpose:

Air Medical Services (AMS) are a valuable, yet limited resource in New York State. It is important that Emergency Medical Service Personnel utilize consistent and appropriate criteria when requesting an air medical service for assistance with patient care and transport. The following represents a combination of the current criteria in use throughout the state. These criteria are consistent with national AMS utilization criteria. It is important that review of appropriate helicopter utilization be a part of EMS training, as well as a component of the agency and regional level retrospective quality assurance process.

Criteria:

1. The helicopter is an air ambulance and an essential part of the EMS system. It may be considered in situations wherein:

- The use of the helicopter would speed a patient's arrival to the hospital capable of providing definitive care and this is felt to be significant to the patient's condition, or;
- If specialized services offered by the air medical service would benefit the patient prior to arrival at the hospital.

2. The following criteria should be used when considering use of an air medical service:

- The patient's condition is a "life or limb" threatening situation demanding intensive multidisciplinary treatment and care. This may include but not be limited to:
  - Patients with ***physical findings*** defined in the adult and pediatric major trauma protocols (see attached)
  - Critical burn patients (see attached)
  - Critically ill medical patients requiring care at a specialized center to include, but not be limited to: acute stroke or ST elevation MI as defined by NYS protocol (see attached); and/or
  - ***Patients in cardiac arrest who are not hypothermic should be excluded from these criteria***

3. Dispatch, Police, Fire or EMS will evaluate the situation/condition and if necessary, may place the helicopter on standby.

4. The helicopter may be requested to respond to the scene when:

- ALS personnel request the helicopter.
- BLS personnel request the helicopter, when ALS is delayed or unavailable.
- In the absence of an EMS agency, any emergency service may request the helicopter, if it is felt to be medically necessary.

5. When EMS arrive, they should assess the situation. If the MOST HIGHLY TRAINED EMS PERSONNEL ON THE SCENE determine, that the helicopter is not needed, it should be cancelled as soon as possible.

6. When use of air medical services is not specifically defined by the protocol, the on scene EMS provider should establish communication with medical control to discuss the situation with the on line physician.

7. Air medical services may be considered in situations where the patient is inaccessible by other means or, if utilization of existing ground transport services threatens to overwhelm the local EMS system.

8. The destination facility will be determined by the AMS crew based upon medical appropriateness with consideration for patient preference and on line medical direction, in compliance with regional protocols.

9. An EMS service should not wait on the scene or delay transport waiting for the helicopter to arrive. If the patient is packaged and ready for transport, the EMS service should initiate transport to the hospital and reassign the landing zone. The helicopter may intercept with an ambulance during transport at an alternate-landing site.

THIS IS A GUIDELINE AND IS NOT INTENDED TO SPECIFICALLY DEFINE EVERY CONDITION IN WHICH AIR MEDICAL SERVICES SHOULD BE REQUESTED. EMS PERSONNEL SHOULD USE GOOD CLINICAL JUDGEMENT SHOULD BE USED AT ALL TIMES

Transfer of Patient Care, Documentation and Quality Assurance:

- As with other instances where care of a patient is transferred, it is expected that all patient related information, assessment findings and treatment will be communicated to the flight crew.
- At the completion of the EMS call, all of the details of the response, including, but not limited to all patient related information, assessment findings and treatment must be documented on a Department approved Patient Care Report (PCR).
- As with all EMS responses, helicopter utilization, the treatment and transportation of patients will be reviewed as a part of a Quality Assurance process.

05-05 Guidelines for Helicopter Utilization Criteria for Scene Response

ADULT MAJOR TRAUMA

1. GCS less than or equal to 13
2. Respiratory Rate less than 10 or more than 29 breaths per minute
3. Pulse rate is less than 50 or more than 120 beats per minute
4. Systolic blood pressure is less than 90mmHg
5. Penetrating injuries to head, neck, torso or proximal extremities
6. Two or more suspected proximal long bone fractures
7. Suspected flail chest
8. Suspected spinal cord injury or limb paralysis
9. Amputation (except digits)
10. Suspected pelvic fracture
11. Open or depressed skull fracture

PEDIATRIC MAJOR TRAUMA

1. Pulse greater than normal range for patient's age
2. Systolic blood pressure below normal range
3. Respiratory status inadequate (central cyanosis, respiratory rate low for the child's age, capillary refill time greater than two seconds)
4. Glasgow coma scale less than 14
5. Penetrating injuries of the trunk, head, neck, chest, abdomen or groin.
6. two or more proximal long bone fractures
7. flail chest
8. combined system trauma that involves two or more body systems, injuries or major blunt trauma to the chest or abdomen
9. spinal cord injury or limb paralysis
10. amputation (except digits)

CRITICAL BURNS

1. Greater than 20% Body Surface Area (BSA) second or third degree burns
2. Evidence of airway/facial burns
3. Circumferential extremity burns

**Note that for patients with burns and coexisting trauma, the traumatic injury should be considered the first priority and the patient should be triaged to the closest appropriate trauma center for initial stabilization.

CRITICAL MEDICAL CONDITIONS

1. Suspected acute stroke
   - Positive Cincinnati Pre-hospital Stroke Scale
   - Total prehospital time (time from when the patient's symptoms and/or signs first began to when the patient is expected to arrive at the Stroke Center) is less than two (2) hours.
2. Suspected Acute Myocardial Infarction
   - Chest pain, Shortness of breath or other symptoms typical of a cardiac event
   - EKG findings of
     - ST elevation 1mm or more in 2 or more contiguous leads

     OR
     - LBBB (QRS duration >.12msec and Q wave in V1 or V2)

3

Appendix G

TIME Program Incident Analysis Form

An electronic version of the Incident Analysis Form is also available on the TIME Program Web site at: www.nysdot.gov/TIM

INCIDENT ANALYSIS FORM OVERVIEW

Each traffic incident is unique and, as such, one of the most effective ways to enhance quick clearance and improve safety is to regularly review incidents that have occurred. The purpose of an incident analysis is to evaluate the decisions made and actions taken during an incident and to identify best practices and opportunities for improvement. An incident analysis can be held for any type or size of incident, but it is highly recommended that all major incidents be reviewed.

Effective analyses provide a forum in which conflicts and inefficiencies are identified and steps are taken to resolve or eliminate them. Reviews can also help open lines of communication and foster relationships among responders. It is essential that incident analysis be multi-agency and multi-discipline.

The Incident Analysis Form is intended to assist agencies in gathering and disseminating incident details and can be completed by any agency involved in the response to a traffic incident. Ideally, the form will enhance communications between agencies and provide the framework for formal reviews. In addition, the form provides another avenue for identifying and compiling traffic incident management best practices.

Completed Incident Analysis Forms should be submitted to the appropriate NYSDOT TIME Program contact for your Region. Current contact information can be found on the TIME Program Web site at: www.nysdot.TIM. Alternatively, completed forms can be submitted to the NYSDOT State TIM Engineer via fax (???) ???-???? or e-mail _____@dot.state.ny.us.

INCIDENT ANALYSIS FORM

Contact Information

Name: _____ Agency: _____

Phone Number: _____ Fax Number: _____

E-mail: _____

Incident Information

Date: _____ Time: _____ CAD/Crash Record #: _____

Main Street: _____ Direction: _____

Cross Street / Mile Marker: _____

Total Duration: _____ Weather: _____

County: _____ Municipality: _____

Brief Incident Description: *(Provide a brief description of the incident, highlighting key activities)*

_____

_____

_____

_____

Roadway Closures: *(List any roadway closures and detour routes used)*

_____

_____

_____

_____

Responding Agencies: *(List all agencies that participated in response to this incident)*

_____

_____

_____

_____

Timeline: *(Identify* key *events and approximate times when they occurred starting with arrival on-scene)*

_____

_____

_____

_____

Best Practices: *(Identify TIM best practices utilized during the incident, i.e. traffic control, safety vest use, communication/coordination among responders, etc.)*

_____

_____

_____

_____

Opportunities for Improvement: *(Identify possible areas for improvement)*

_____

_____

_____

_____

Pictures: Please include any digital photos you would like to share in an e-mail to the NYSDOT TIME Program contact for your Region.

NYSDOT Emergency Traffic Control & Scene Management Guidelines

ERROR/OMISSION NOTIFICATION AND REVISION REQUEST FORM

Today's Date _____ **Date of Guidelines** _____

Guidelines Section Number / Title _____

_____ **Page** _____

Error/Omission Notification and/or Revision Request:

_____

_____

_____

_____

Reason for Notification/Revision:

_____

_____

Requested By:

Name _____

Agency _____

Title_____

Mailing Address_____

City _____ **State** _____ **Zip**_____

Phone _____ **Fax**_____

E-mail Address_____

Please submit completed forms: Attention State TIM Engineer
Mail: NYSDOT RTOC 123 Somewhere Street, Anywhere NY 11111
Phone: (???) ???-???? **Fax**: (###) ###-#### **E-mail**: someone@dot.state.ny.us

NYSDOT Emergency Traffic Control & Scene Management Guidelines

MATERIALS ORDER FORM

Date _____

Contact Information

Name_____

Agency_____

Title_____

Mailing Address_____

City _____ **State** _____ **Zip**_____

Phone _____ **Fax**_____

E-mail Address_____

Materials Request

In the spaces below, please indicate how many of each item you wish to receive. All items are available free of charge. Also, please include the date the materials are needed by in the space provided.

_____ **NYSDOT Emergency Traffic Control & Scene Management Guidelines Document**

_____ **NYSDOT Emergency Traffic Control & Scene Management - Quick Reference Visor Card** (Laminated 8.5" x 5.5")

_____ **NYSDOT Emergency Traffic control & Scene Management Guidelines Overview and Training Presentation CD** - includes both the Informational Overview PowerPoint Presentation and the Training PowerPoint Presentation with Instructor Manual (*Limit 3 per agency*)

Date Materials Are Needed By _____

NYSDOT Emergency Traffic Control & Scene Management Guidelines

RECORD OF REVISIONS

The table below provides a record of all revisions made since the original version of the Emergency Traffic Control and Scene Management Guidelines was published.

Original Guidelines Date: March 16, 2011

Revision Date	Section	Page	Revision
Example Date	Example Section	Ex. Page	Example Revision
11/25/09	8.1	20	Clarification was added in regard to the use of ANSI/ISEA 207-2006 vests.
11/25/09	Multiple pages throughout the entire document		A TIME Program e-mail account was established, TBD@dot.state.ny.us, and contact information for specific individuals was removed throughout the entire document.

If you would like to obtain additional copies
of this document please contact the local
New York State Department of Transportation's Regional
Traffic Operations Center at: (???) ???-???? or visit our
Web site at: www.nysdot.gov/TIM