OZARKS TRANSPORTATION ORGANIZATION

A METROPOLITAN PLANNING ORGANIZATION

Traffic Incident Management Guidelines

May 2019

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CHAPTER 1: INTRODUCTION

These guidelines focus on a unified response to non-reoccurring incidents; such as vehicle crashes, vehicle breakdowns and other events that cause reductions in highway capacity. An average of (12) law enforcement officers, (5) firefighters, (60) towing and recovery operators and an unknown number of transportation professionals are killed each year responding to traffic incidents. Secondary crashes are those crashes that occur within the incident scene or within the queue or backup, including the opposite direction, resulting from an original incident. Often the secondary crash is more severe than the initial incident. According to NHTSA, the total value of societal harm from motor vehicle crashes in 2010 was $836 billion. Congestion caused by crashes, including travel delay, excess fuel consumption, greenhouse gases and criteria pollutants accounted for $28 billion. The Traffic Incident Management Guidelines is intended to provide first responders the ability for safe, quick, clearance while protecting the traveling public.

TRAFFIC INCIDENT MANAGEMENT

Traffic Incident Management consists of a planned and coordinated multi-disciplinary process to detect, respond to, and clear traffic incidents so that traffic flow may be restored as safely and quickly as possible. To be effective, TIM teams must have involvement from a wide range of stakeholders. Meaningful TIM reduces the duration and impacts of traffic incidents and improves the safety of motorists, crash victims, and emergency responders. A “good” TIM program is one in which responders go home every time, roadways are blocked for the minimum amount of time, and secondary crashes are reduced or eliminated.

PURPOSE

These Traffic Incident Management Guidelines are intended to provide incident responders along in the OTO planning area with a proactive, aggressive, and uniform approach to traffic incident management including traffic control and scene management. 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 the situation or incident. 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.

GOALS

The goals of these Traffic Incident Management Guidelines are:

- Promote the safety of incident responders, crash victims, and the safety of motorists
- Reduce the time for incident detection and verification
- Reduce response time
- Exercise proper and safe on-scene management of personnel and equipment, while keeping as many lanes, as possible, open to traffic
- Conduct an appropriate response, investigation, and safe clearing of an incident
- Reduce clearance time
- Provide timely and accurate information to the public that enables them to make informed choices.
- Get traffic moving again as soon as possible after a partial or complete roadway closure while managing the affected traffic until normal conditions are restored
- Reduce secondary crashes

KEY MISSOURI TRAFFIC LAWS

The State of Missouri has various policies and procedures that are intended to ensure quick clearance of the scene and the safety of responders. They are listed below.

"Move Over" Law

Section 304.022: "Upon approaching a stationary emergency vehicle displaying lighted red or red and blue lights, the driver of every motor vehicle shall:

- Proceed with caution and yield the right-of-way, if possible with due regard to safety and traffic conditions, by making a lane change into a lane not adjacent to that of the stationary vehicle, if on a roadway having at least four lanes with not less than two lanes proceeding in the same direction as the approaching vehicle; or
- Proceed with due caution and reduce the speed of the vehicle, maintaining a safe speed for road conditions, if changing lanes would be unsafe or impossible."

"Steer It and Clear It" Law

Section 304.151: "Except in the case of an accident resulting in the injury or death of any person, the driver of a vehicle, which for any reason obstructs the regular flow of traffic on the roadway of any state highway shall make every reasonable effort to move the vehicle or have it moved so as not to block the regular flow of traffic."

Section 304.155(2): MoDOT or any law enforcement officer may immediately remove any abandoned, unattended, wrecked, burned, or partially dismantled property, spilled cargo, or other personal property from the right-of-way of any interstate highway, freeway, or state highway if the abandoned property, cargo, or personal property is creating a traffic hazard.

"Authority Tow" Law

Section 304.155(1): "Any law enforcement officer within the officer's jurisdiction, or an officer of a government agency where that agency's real property is concerned, may authorize a towing company to remove to a place of safety:

- Any abandoned property on the right-of-way of:
    - Any interstate highway or freeway in an urbanized area, left unattended for ten hours, or immediately if a law enforcement officer determines that the abandoned property is a serious hazard to other motorists, provided that commercial motor vehicles not hauling materials designated as hazardous under 49 U.S.C. 5103(a) may only be removed under this subdivision to a place of safety until the owner or owner's representative has had a reasonable opportunity to contact a towing company of choice;
    - Any interstate highway or freeway outside of an urbanized area, left unattended for twenty-four hours, or after four hours if a law enforcement officer determines that the abandoned property is a serious hazard to other motorists, provided that commercial motor vehicles not hauling materials designated as hazardous under 49 U.S.C. 5103(a) may only be removed under this subdivision to a place of safety until the owner or owner's representative has had a reasonable opportunity to contact a towing company of choice;

  - Any state highway other than an interstate highway or freeway in an urbanized area, left unattended for more than ten hours; or
  - Any state highway other than an interstate highway or freeway outside of an urbanized area, left unattended for more than twenty-four hours; provided that commercial motor vehicles not hauling waste designated as hazardous under 49 U.S.C. 5103(a) may only be removed under this subdivision to a place of safety until the owner or owner's representative has had a reasonable opportunity to contact a towing company of choice;
- Any unattended abandoned property illegally left standing upon any highway or bridge if the abandoned property is left in a position or under such circumstances as to obstruct the normal movement of traffic where there is no reasonable indication that the person in control of the property is arranging for its immediate control or removal

CHAPTER 2: OPERATIONAL CONSIDERATIONS

INCIDENT DEFINITION

A traffic incident is defined in the Manual on Uniform Traffic Control Devices (MUCTD) as an emergency road user occurrence, a natural disaster, or other unplanned event that affects or impedes the normal flow of traffic. The incident can also be defined as any non-recurring event that causes a reduction of roadway capacity or an abnormal increase in demand, as found in FHWA's Traffic Incident Management Handbook.

The OTO TIM Committee will use the FHWA definition of an incident as a matter of consistency. A *non-recurring event*, as referenced in the FHWA definition, can include traffic crashes, disabled vehicles, or spilled cargo.

INCIDENT CLASSIFICATION

A traffic incident can be classified into 3 categories, based on severity and expected incident duration. The three categories include Major, Intermediate, and Minor. Below are definitions and examples of each class.

Major

The expected duration of a major incident is more than two hours. Major traffic incidents are typically 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 two hours. Alternate routes may be used during this type of incident. Examples include:

- Chain reaction crashes
- 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)
- Overturned tractor trailers
- Complex commercial vehicle incidents with large debris fields or cargo fires

Intermediate

Intermediate traffic incidents typically affect travel lanes for 30 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. Alternate routes may be used during this type of incident. Examples include:

- Major roadway debris
- Overturned cars, RVs, or small trailers
- Multi-vehicle crashes
- Commercial carrier crashes

Minor

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 GDOT service patrols. Examples include:

- Disabled vehicles in a travel lane or on the shoulder
- Minor crashes that can be moved or relocated to the shoulder
- Minor roadway debris

INCIDENT MANAGEMENT

The TIM timeline lays out the events and activities that occur from the time when an incident happens to when traffic conditions return to normal. The color bar at the top of the chart represents potential traffic congestion along the timeline. The goal of TIM is to shorten the time duration between T0 and T6.

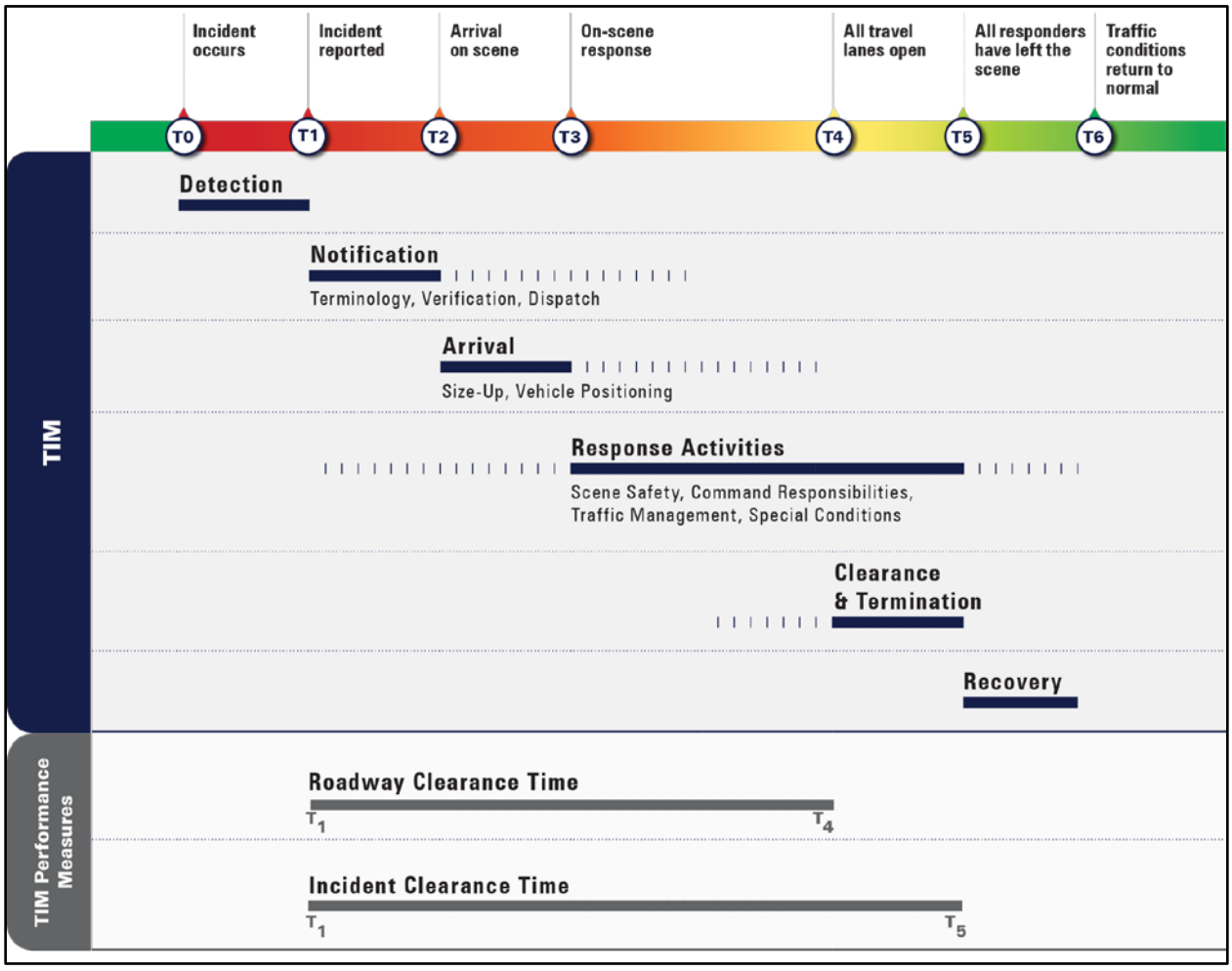

Figure 1 Incident Management Timeline

Detection

Detection is the determination that an incident has occurred and is brought to the attention of the agency/agencies responsible for maintaining traffic flow and safe operations on the facility. Various methods of detection include:

- Cell phone calls from motorists
- Closed-circuit television (CCTV) images viewed by traffic management center (TMC) operators.
- HERE real-time traffic data (MoDOT)
- Law Enforcement / Emergency Response Personnel
- 911 Dispatch

Notification (T1)

Notification is the time in which we verify, dispatch, and utilize basic terminology to define lanes and general information. Verification confirms that incident has occurred, determines its exact location, and obtains as many relevant details about the incident to dispatch the proper initial response.

Actions by the TMC upon notification include:

- Enter incidents into the Advanced Traffic Management System
- Activate Changeable or Dynamic Message Signs (CMS/DMS)
- Monitor CCTV
- Monitor Queues
- ATMS Generated Notifications for interstates or region
- Dispatch appropriate MoDOT personnel such as; Emergency Response Personnel and Maintenance crews.

Arrival (T2)

The first 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. One of the first decisions that responders make is whether to Move It or to Work It. If the decision is made to Work It, as soon as practical, implement advance warning signs.

Once the initial block is established, the first responder on scene should:

- Call dispatch with “Windshield Size-up” before leaving the vehicle providing the exact location using as many of the following as possible:
    - Route #
    - Landmark
    - Direction Before/After Exit #
    - Mile post (MP)
    - Town
    - County
    - Lane(s) blocked
- Describe the nature of the incident by answering, “What do I see?”
    - Number and type of vehicles
    - Extent of damage to vehicles
    - Possible injuries
    - Other Relevant Conditions
        - Hazardous Materials
        - Downed Power Wires
        - Adverse Weather Conditions

- Determine initial incident classification
    - Minor - (under 30 minutes) – MoDOT Complexity Type 5 Incident
    - Intermediate - (between 30 minutes and 2 hours) – MoDOT Complexity Type 5 Incident
    - Major - (2 hours or more) – MoDOT Complexity Type 4 Incident

Response (T3)

Incident response is the activation of a planned strategy for the safe and rapid deployment of the most appropriate personnel and resources to the incident scene. Accurate information from the windshield size-up helps ensure the deployment of appropriate resources and a timely response.

The responding agency's responsibility to assess and solicit required resources and determine the fastest possible route to the incident scene. The initial responder is responsible for:

- Deploying temporary traffic controls
- Parking the response vehicle upstream to protect the incident scene
- Assuming the role of IC
- Providing necessary first aid to victims (without exceeding the responder's skill level)
- Assessing the need for additional responders or resources

Additional guidance for the response portion of TIM can be found throughout these guidelines. Many details are in Chapter 3: Temporary Traffic Control and Scene Safety.

Clearance & Termination (T4)

Remove wreckage, debris, or any other elements that disrupt the normal traffic flow. Keep the following in mind:

- Let other responders know when you are leaving
- Protect all responders while they finish and clear the scene
- Check with incident commander prior to leaving
- Make sure all personnel are accounted for
- Let the TMC know that lanes are open

Recovery (T5)

Recovery evaluates the long-term impact of an incident and identifies recovery actions needed to mitigate those impacts. The goal of recovery is to restore the roadway capacity to its pre-incident condition and includes these actions:

- Debris clearance
- Damage assessments
- Restoration of damaged infrastructure
- Structural inspections

COMMAND RESPONSIBILITIES

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

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.

CHAPTER 3: TEMPORARY TRAFFIC CONTROL AND SCENE SAFETY

Providing consistent traffic control and ensuring responder safety are critical components of TIM. This chapter covers three priorities of every incident scene. These priorities inform all decisions related to the deployment of temporary traffic controls. Deployment includes the establishment of a Traffic Incident Management Area, the staging of vehicles, and the use of emergency lighting.

PRIORITIES AT AN INCIDENT SCENE

There are three key priorities at an incident scene. These include life safety, incident stabilization, and protection of property. They are described below in rank order

Priority 1: Life Safety

The most important concern is the protection of emergency responders, incident victims, and the public. Safety must be the priority throughout the incident.

- Be Visible: All responders operating at an incident with moving traffic shall wear highly visible, highly reflective garments to increase the ability of motorists to see the emergency responders during day and night operations.
- Protect Yourself: Responders should make every effort to keep a physical barrier between themselves and moving traffic. If engaged in emergency activities, try to position a blocker vehicle between you and moving traffic. If standing-by at a scene, sit inside your vehicle, or stand behind the guide rail. The less time you're exposed to moving traffic, the safer you are!

Priority 2: Incident Stabilization

To enhance operational safety, actions must be taken to stabilize the incident. This will help prevent secondary crashes, protect evidence, and provide safe, quick clearance.

- 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 to 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; motorists approaching the end of a queue are unlikely to be aware of the crash ahead. Responders should contact dispatch with incident information for dissemination to travelers to reduce congestion and the potential for secondary incidents.
- Protection of the Scene: Position vehicles and traffic control devices in such a way that allows for adequate space between the point where the traffic is diverted and the actual incident space. Fire apparatus should position in a manner that best protects the incident space. Such positioning affords protection to responders from the hazards of working in or near motor vehicle traffic.
- Protection of Evidence: Responders will make every effort to minimize the impact of their presence on the crash scene. For example, responders should not cause damage to vehicles beyond what is necessary for extrication purposes or remove debris not in an actively flowing traffic lane until authorized. 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: At an incident, every responder's goal should be to clear the scene safely and quickly to restore traffic flow and limit the diversion of traffic to less desirable, more hazardous routes. It is important to note that Missouri's Steer It and Clear It law requires motorists involved in non-injury crashes to move drivable vehicles to a location where they will obstruct traffic as little as possible. The priority of safe, quick clearance also aligns with the National Unified Goals for Traffic Incident Management.
- Protection of the Environment: For hazardous materials and/or potential hazardous materials scenes, responders with the proper personal protective equipment and training will strive to contain the spilled product while minimizing exposure.

Priority 3: Protection of Property

Responders will attempt to protect or save property by limiting damage to vehicles to what is necessary to stabilize and remove trapped persons. Property salvage operations will also be conducted as soon as safely possible.

TEMPORARY TRAFFIC CONTROLS

A traffic incident management area (TIMA) is a type of temporary traffic control (TTC) zone established in response to a road user incident, natural disaster, hazardous material spill, or other unplanned incident.

Responders should, within 15 minutes of arriving on-scene, estimate:

- The magnitude of the incident, including lane blockage
- The expected duration
- The expected queue length

Responders should set up the appropriate TTCs for these estimates.

On-scene responders, IC / UC, should also reevaluate traffic control devices, scene safety, emergency vehicle positions, and traffic flow every 15 minutes and provide updated information to dispatch or the TMC.

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. TIMA's 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 initial stages of an incident, responders should use 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 of the Manual on Uniform Traffic Control Devices (MUTCD 6I). Chapter 6I provides guidance on the types of temporary traffic control devices that should be used at a TIMA based on the incident type, as follows.

- 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.

Staging

For multiple unit responses, the first unit approaching or entering a highway should continue to the scene to begin the scene size-up. 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 possible, preferably within the upstream transition space. All other approaching units should consider off-scene (Level 2) staging until they are needed on scene. This will help maintain safety on the scene as well as for passing motorists. It is best to have all unnecessary vehicles and personnel located somewhere nearby. One possible staging area could be the “On-Ramp” before the incident.

Safe Vehicle Placement

Proper vehicle placement upon initial response establishes safe and effective traffic control. This guide describes TIMAs for the two primary types of traffic incidents, Non-blocking and blocking.

Non-Blocking

It is important to note that even though traffic lanes remain open, incidents on the shoulder or off the roadway can sometimes be more hazardous than lane blocking incidents. Traffic controls and advance warning are minimal, and passing motorists are less likely to slow down, Move-Over laws notwithstanding.

At the scene, responders should:

- Park well off the travel lane.
- Practice space safety. Park closely enough to read the license plate, but no closer than two to four car lengths. Exceptions should be limited.
- Avoid stopping in the glide path on the outside of a curve. Vehicles operated by inattentive drivers or at an unsafe speed may drift onto the shoulder.
- Check traffic before exiting the vehicle.
- Turn and look and use peripheral vision to monitor oncoming traffic for potential errant vehicles.
- Approach the incident vehicle on the side away from traffic. In most cases, this is the passenger’s side of the vehicle. If the vehicle is on the left shoulder or median, approach the vehicle on the driver’s side.
- Scan the interior of the vehicle while approaching it.

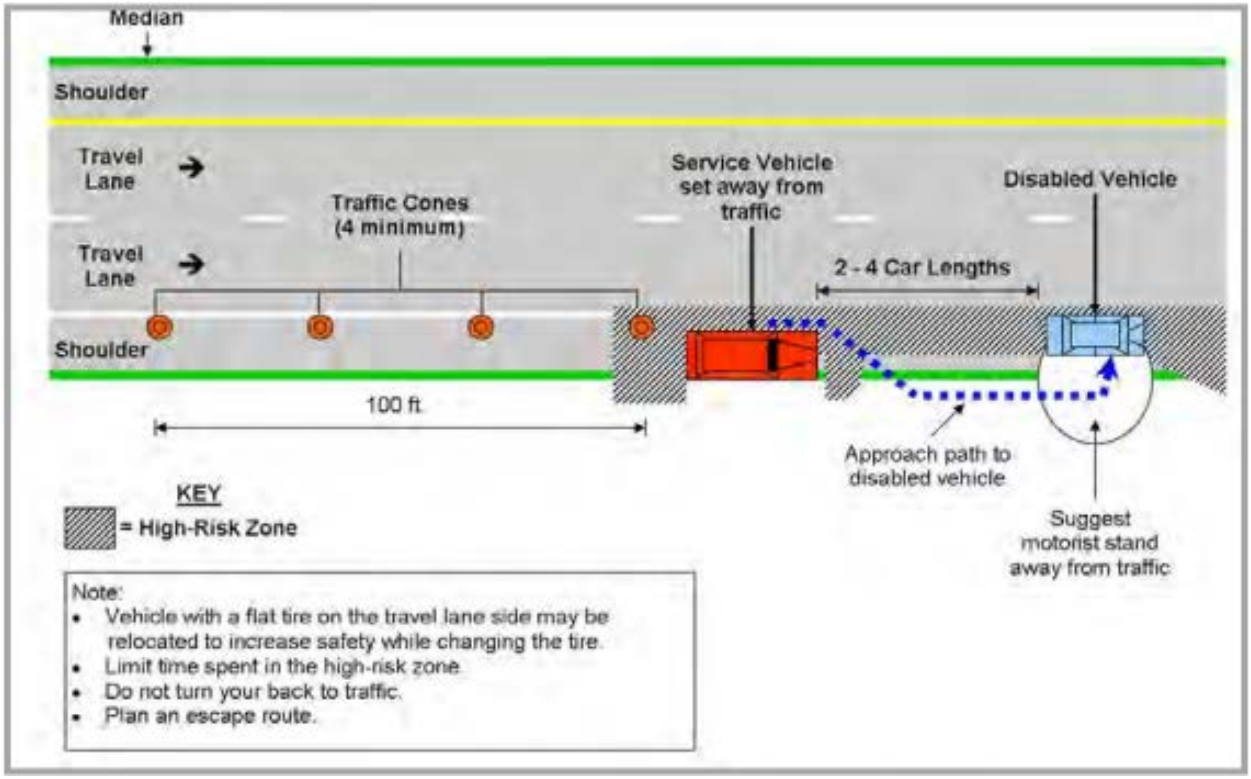

Figure 2 Non-Blocking Incident with Single Responder, Credit: Nevada TIM Guidelines

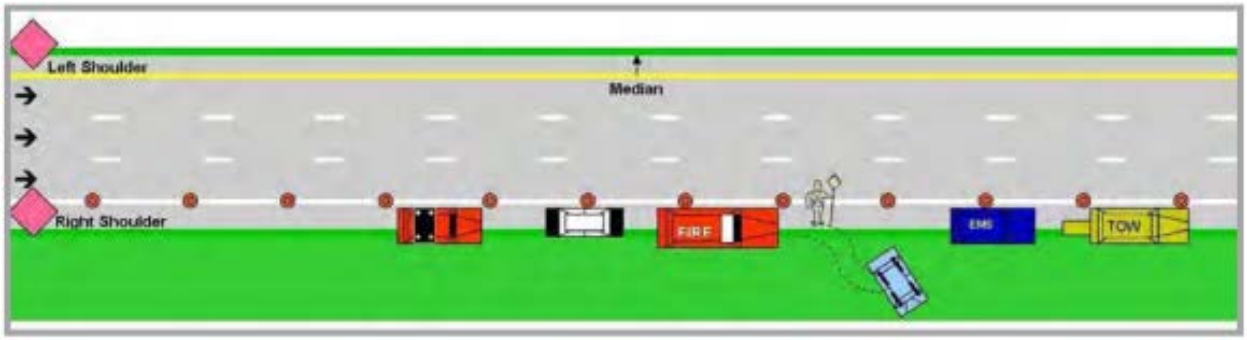

Figure 3 Non-Blocking Incident with Multiple Responders, Credit: Nevada TIM Guidelines

Lane Blocking

The following are general guidelines for responders working at a lane blocking incident:

- Place the response vehicle in a visible location between the incident and approaching traffic. An arrow panel (when available) and traffic cones should be used to warn motorists and direct traffic around the scene.
- Consider repositioning the initial response vehicle to allow more room for emergency vehicles as additional resources arrive.
- Confer with other on-scene agencies, when appropriate, through the Incident Command structure to ensure that emergency vehicle placement is optimized for scene safety, on scene operations, and traffic flow past the scene. Consider staging additional response vehicles off-site until needed.

- Take only as many lanes as needed, for only as long as needed.
- Take an extra lane (called Lane Plus One) where needed to provide a safe buffer against moving traffic. Open the lane when the extra buffer is no longer needed.
- Relocate the response vehicle as needed to best utilize the arrow panel once the traffic cones are in place.
- Continue to look for opportunities to improve traffic flow and scene safety.

Figure 4 and Figure 5 illustrate vehicle positioning and TTC device placement at lane-blocking incidents.

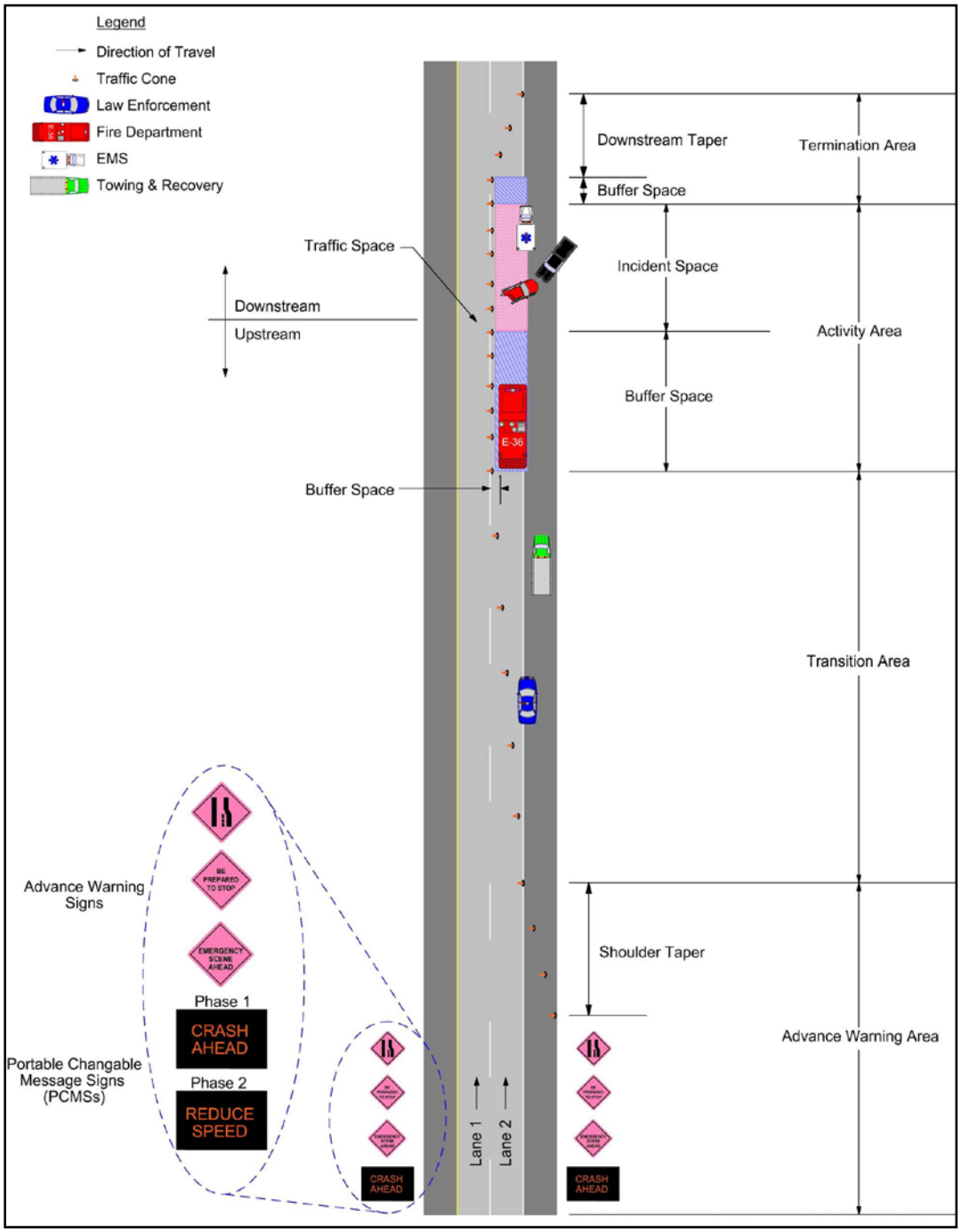

Figure 4 Blocking Incident with Multiple Responders

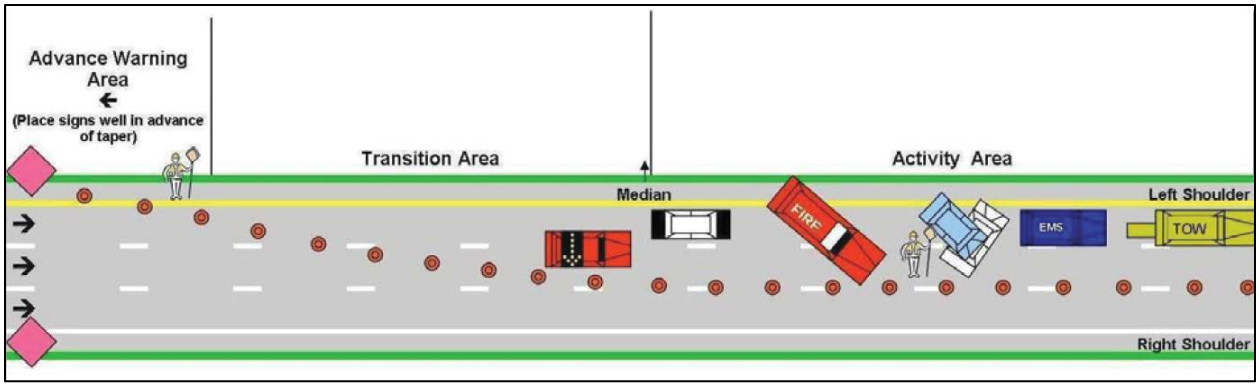

Figure 5 Blocking Incident in Two Lanes, Credit: Nevada TIM Guidelines

Arrow Panel Use and Traffic Cone Placement

An arrow panel is probably the most effective TTC device. Proper use of a vehicle-mounted arrow panel (or DMS, if so equipped) is essential for emergency TTC at an incident scene. Traffic cones serve as effective traffic control devices, and they are also effective safety devices because they provide an audible warning when hit.

Arrow Panel

The arrow panel, used in conjunction with traffic cones and other traffic control device, provides positive guidance to direct approaching traffic way from a blocked travel lance at an incident scene.

Use the arrow panel in Arrow mode, shown in Figure 6, only to indicate a blocked travel lane.

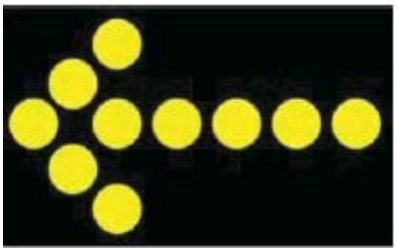

Figure 6 Arrow Panel Indicating Blocked Lane, Credit Nevada TIM Guidelines

Use the arrow panel in Caution mode, shown in Figure 7, when on or near the shoulder of the roadway

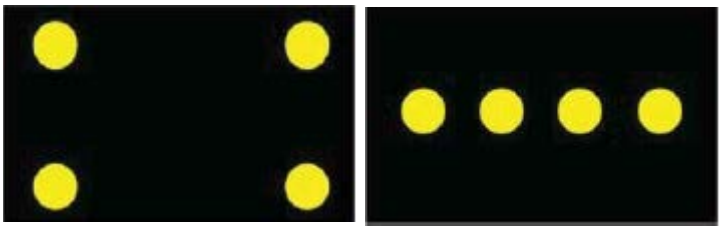

Figure 7 Arrow Panel Indicating Caution, Credit: Nevada TIM Guidelines

Advance Warning and Queue Protection

Any incident creates a significant potential for the occurrence of a secondary incident, which is often more serious than the initial event. Incident responders play an important role in reducing these secondary incidents.

Vehicles approaching at high speeds will often encounter the stopped queue of traffic before arrow panels and scene emergency lighting are visible. These high-speed motorists do not expect stopped traffic and need appropriate warning.

An advance warning area established upstream of the incident:

- Warns oncoming traffic of the upcoming incident scene
- Promotes a reduction in travel speeds

Advance Warning Signs

Special incident management advance warning signs placed by responders provide warning to approaching motorists. These signs should be a special fluorescent pint color with black lettering, such as “INCIDENT AHEAD’ and “BE PREPARED TO STOP” (per MUTCD Chapter 6I). Examples of these signs are shown in Figure 6.

Figure 8 Examples of TIMA Advance Warning Signs

Since this will likely be approaching motorists’ first warning of the incident, responders should take special care to place advance warning signs and or response vehicles using these guidelines:

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

All advance warning signs should be placed to provide enough warning to motorists to slow before reaching the traffic queue. Advance warning signs placed in urban areas may need to be paced at shorter distances to avoid sign clutter. Setting up a TIMA near a corner, hill, or other recued visibility situation may require the location of the advance warning devices to be adjusted.

Portable Changeable Message Signs

Portable changeable message signs are another tool for providing drivers advance warning.

Portable changeable message signs can be used for intermediate incidents and are strongly recommended for use during major incidents.

Dynamic Message Signs

Dynamic Message Signs (DMS) are permanent, structure-mounted, electronic signs. DMS are remotely operated and can provide advance warning messages to motorists if an incident occurs downstream.

Positive Traffic Control

At an incident scene, manual positive traffic control, also called flagging, reduced rubbernecking and helps keep traffic moving smoothly. When resources permit, the flagger function should assist in slowing and directing approaching traffic. Flaggers shall be outfitted with high-visibility safety apparel.

Stop/Slow paddles are the preferred hand-signaling device because they provide more positive guidance than red flag. X illustrates the flagging procedures for emergency situations.

When resources permit a traffic spotter should monitor traffic and activate an emergency signal if a motorist's actions do not conform to established traffic control measures. A portable air horn or similar device is an ideal emergency signal. A portable radio is not recommended for this purpose since all responders on the scene are unlikely to be monitoring the same radio frequency.

Qualified flaggers should provide manual traffic control, but in necessary, any response personnel can provide it. The following are guidelines for effective positive traffic control:

- Do not use bystanders, good Samaritans, or other untrained personnel for traffic control duties.
- Give commands r direction to traffic in a clear, courteous, but firm tone.
- Accompany verbal commands to "stop," "slow down," and "proceed" with appropriate hand movements or the use of a Stop/Slow paddle or flag. Whistles can also be an effective tool.
- Stand at a safe location adjacent to the wrecked vehicles when providing positive traffic control in the activity area.
- Stand at a safe location near the beginning of the taper when providing positive traffic control in the transition taper area.
- Make eye contact with the drivers of approaching vehicles to encourage them to pay attention to their driving and not the incident. This will increase the flow of traffic past the incident scene, reducing delay.
- Avoid providing individualized direction to motorists as this can create more congestion by slowing traffic. The flagger's job is to keep traffic moving safely past the incident scene.

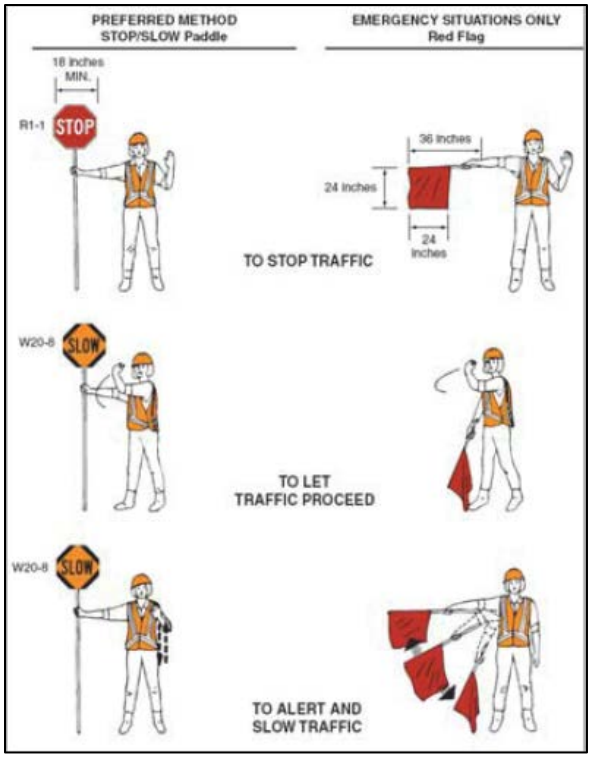

Figure 9 Flagger Commands for Emergency Positive Traffic Control, Credit: Nevada TIM Guidelines

Incident Scene Illumination

While it is important to ensure proper illumination of the incident scene and work 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.

Within the OTO area, the following guidelines for incident scene illumination should be followed:

- On all major incidents, an adequate number of vehicles with mounted lighting setups should be intentionally dispatched to the incident scene.
- On intermediate incidents, all vehicle mounted lighting setups on scene should be utilized, as appropriate. Other forms of lighting can be used to supplement on scene lighting needs.

Stationary Presence of Law Enforcement

Law Enforcement officers should place their patrol vehicle on the shoulder, NOT in the buffer spaces. Relocate as needed based on traffic queue build up. Short distance queues may allow the officer to backup, but only if it can be done safely. Examples for work zone (WZ) choices are provided below.

Stationary work zone patrol vehicle positioning varies by location and speed of vehicles surrounding the work zone. Examples of common-sense choices are provided Figure 7. If there are situations where positioning is unclear, a unified decision can be determined through working with the Point of Contact (POC) at the WZ scene.

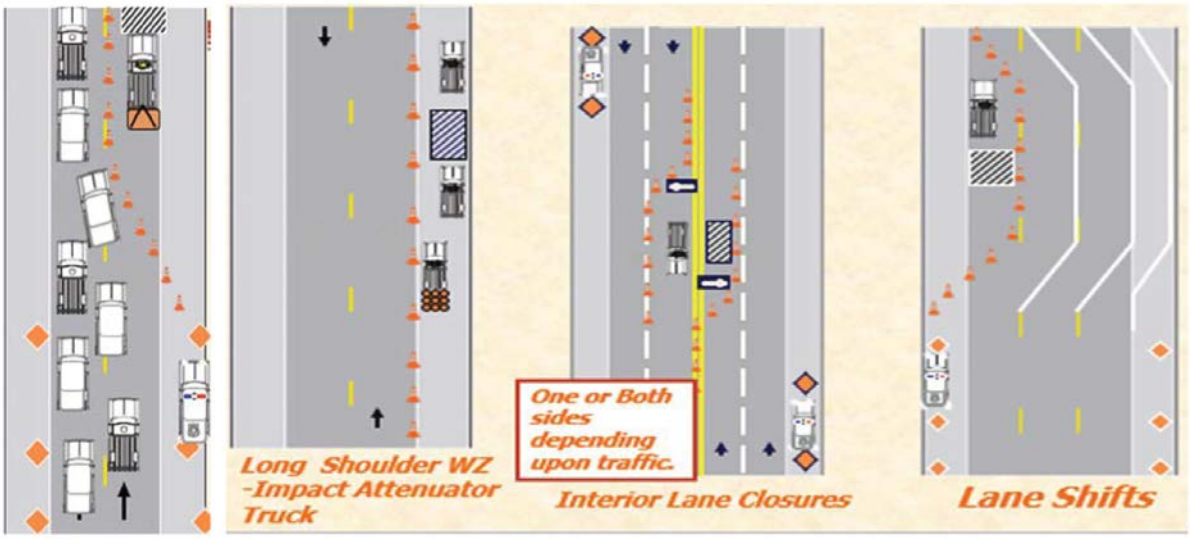

Figure 10 Stationary Work Zone Law Enforcement Positioning, Credit: Nevada TIM Guidelines

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.

Within the OTO area, the following guidelines for emergency vehicle lighting should be followed:

- Emergency lighting should be reduced to lowest feasible settings, especially during dusk, dawn, and night incidents.
- Once a proper TIMA is established, emergency lights on all non-essential vehicles should be turned off.
- Once a proper TIMA is established, all vehicle headlights facing oncoming traffic should be turned off.

Vehicle Markings

To increase the visibility of emergency vehicles parked in or near moving traffic, it is strongly recommended that the rear of emergency vehicles be outfitted with retro-reflective striping. Examples of vehicles with retro-reflective striping are shown in Figure 8.

Figure 11 Vehicles with Retro-reflective Striping

Personal 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, Towing & Recovery, etc.) to respond to the scene of highway incidents is strongly discouraged. 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 the roadway (e.g. a nearby parking lot).

Medical Helicopter Landing Zones (Helispot)

When medical helicopter services are required, strong consideration should be given to the use of off-site landing zones Missouri Heliport Locations. 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 medical helicopter landing zone is free and clear of any overhead power lines
- 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 belonging
- Ensure that you are aware of the possibility of flying debris and that there will be a lot of noise.

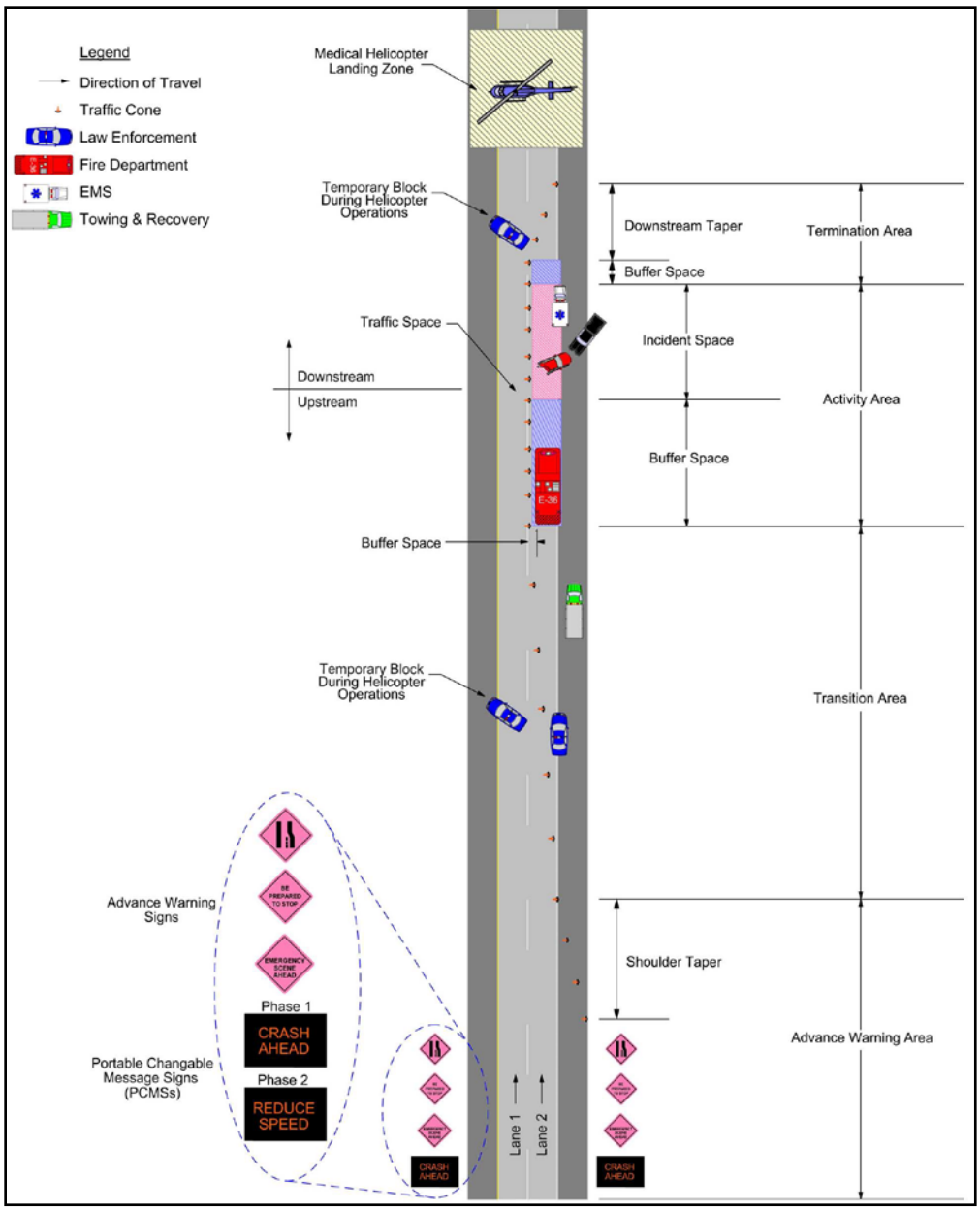

Figure 12 TIMA Example with Helicopter Landing Zone

CHAPTER 4: TIM STAKEHOLDER RESPONSIBILITIES

Primary TIM stakeholders include law enforcement, fire protection, EMS, and towing recovery, amongst others. This section summarizes these stakeholders' roles in the TIM processes. More detailed responder responsibilities can be found in *Appendix A: Safety Guidelines*.

STATE PATROL (MISSOURI HIGHWAY PATROL)

Responsibilities: routinely patrol state roadways, including interstates, state highways, and secondary county roads; enforce motor vehicle laws; assist in major incidents; report road conditions (primarily winter road conditions) and input into the MoDOT Traveler Information Map; post Amber Alert Messages on DMS or notify DOT Headquarters of alerts to be posted to DMS; operationally share responsibility with DOT for posting Amber Alerts to DMS; assess incident and call for additional resources; serve as Incident Commander; traffic control; conducts scene investigation and evidence collection; establish scene security; remain on scene until recovery process is complete

COUNTY SHERIFF'S OFFICE (GREENE, CHRISTIAN)

Responsibilities: enforce the laws and manage incidents on county roads; assess incident and call for additional resources; serve as Incident Commander if Missouri Highway Patrol is not present; traffic control; conducts scene investigation and evidence collection; establish scene security; remain on scene until recovery process is complete

CITY POLICE DEPARTMENTS (BATTLEFIELD, NIXA, OZARK, REPUBLIC, SPRINGFIELD, STRAFFORD, WILLARD)

Responsibilities: enforce the laws and manage incidents on city streets, report Amber Alerts to State Patrol; coordinate with other emergency management agencies during regional and large-scale emergencies; respond to incident throughout the city including traffic incidents on the freeway and highway system; assess incident and call for additional resources; serve as Incident Commander if Missouri Highway Patrol is not present traffic control; conducts scene investigation and evidence collection; establish scene security; remain on scene until recovery process is complete

CITY FIRE DEPARTMENTS/PROTECTION DISTRICTS (BATTLEFIELD, NIXA, OZARK, REPUBLIC, SPRINGFIELD, STRAFFORD, WILLARD, EBENEZER, WEST REPUBLIC…)

Responsibilities: respond to fires, accidents, hazardous material spills, freeway, highway and local street incidents; support response; Assess the scene thoroughly to determine estimated time duration; Establish a safe transition area and work zone utilizing proper blocking techniques and traffic cones to define the areas; Coordinate activities to save lives, control hazards, and combat fires within agency capabilities; Transfer command to remaining on scene agencies once fire activities are completed; Assist with removing vehicles, debris, etc. when instructed by law enforcement; Handle (if equipped) or coordinate with HAZMAT response agencies to handle HAZMAT issues; Reposition fire and rescue vehicles to minimize lane blockage as soon as possible;

911 (Christian County Emergency Services, Greene County 911 Emergency Communications)

Responsibilities: Receive incident notification call and verify as necessary; Dispatching for law enforcement, fire, and EMS; Notify MoDOT when appropriate; Log incident information into CAD or other systems

Emergency Medical Service (Mercy, Cox)

Responsibilities: Assessment and/or transport of potential patients at an incident; Track patient/victim disposition

Medical Examiners (Greene, Christian)

Responsibilities: Move or remove victims from the incident scene; Authorize other agencies to move or remove victims from the incident scene

Transportation Management Center (TMC of the Ozarks)

Responsibilities: Monitor and help coordinate the incident activities using traffic cameras, changeable message signs (CMS), and OzarksTraffic.com; Notifying high-level MoDOT and MSHP personnel through incident paging; Implementing response plans, including CMS/DMS messages for planned and unplanned events; Coordinating with the on-scene responders to continuously update response plans and the Estimated Time of Clearance (ETC); Continuously updating traveler information as the incident evolves

Missouri Department of Transportation (MoDOT)

Responsibilities: Plan, build, maintain the state transportation systems; provide regional traveler information; Aid with coordination of related to issues concerning the freeway system; Assist locals in deploying and maintaining ITS systems

MoDOT Southwest District Office

Responsibilities: Assist in the preparation of media and business notifications to changes in traffic caused by construction and/or incidents.

MoDOT Incident Response Crew

Responsibilities: Changing tires, assisting in moving vehicles, providing jump-starts, providing gasoline, providing first aid or CPR, containing minor spills, and setting up temporary traffic control devices; Detect and report incidents;

MoDOT Roadway Maintenance

Responsibilities: Provide a safe, efficient and sustainable highway system; Respond and deploy resources to major traffic incidents 24 hours a day, 7 days per week; Develop and implement response procedures in an attempt to meet the goal of providing assistance within 30 minutes of notification during the assigned working hours of each maintenance yard and 60 minutes after hours; Upgrade temporary traffic controls (TTC), determine detour routes and discuss clearance strategies; Determine and deploy the necessary heavy equipment and manpower to reopen the roadway if there is a delay in clearing the travel lanes or if the task is beyond the capabilities of the wrecker service on scene; Assist in the relocation of materials in the shortest possible time, using available equipment; Assess any damage to state assets and notify parties responsible for the repair; Document all MoDOT hours and equipment

used for traffic control, roadway clearance and debris clean up; Secure the traffic scene to the extent possible prior to leaving the travel lanes; Continually work with all responders to ensure that the needs of motorists and state roadways are being met in the most professional, safe and efficient manner

MoDOT Planners and Designers

Responsibilities: Scheduling delivery and funding of construction projects with consideration of feasible route alternates; Designing projects with roadway operations, especially incident response and traffic incident management, in mind; Mainstream the development of Traffic Management Plans that facilitate incident management during construction; Coordinating with agencies, consultants and contractors that are not typically involved in traffic incident management

MoDOT Resident Engineers and Traffic Engineers

Responsibilities: Providing recommendations for Traffic Incident Management during the plan development process; Coordinating response with the roadway maintenance resource office; Arranging emergency procurement of additional resources; Soliciting heavy-duty equipment at the incident scene; Assisting in emergency planning, such as evacuation, detour, and alternate route planning; communicate construction project status and changes needed in traffic management

City Public Works Departments (Battlefield, Nixa, Ozark, Republic, Springfield, Strafford, Willard)

Responsibilities: Maintain and operate signal systems; Monitor traffic conditions and flow along city streets when incidents occur on the interstate system; Monitor diversion routes for traffic directed off the interstate.

Emergency Management Agency (Greene, Christian)

Responsibilities: Support, coordinate, and maintain county and local emergency management activities; Request assistance on a Hazards Materials incident, assistance from appropriate agencies when animals, animal products or food products are involved, and American Red Cross assistance in sheltering and feeding people associated with the event

Towing and Recovery

Responsibilities: Safety of responders, crash victims, and motorists is a towing and recovery operator's first priority; Help remove crash vehicles and debris from the roadway; Contain and assist with clearing travel lanes of vehicle fluids; Towing and recovery personnel should help clean debris from roadway; Transport uninjured crash victims to a safer location; Handle financial negotiations outside the incident scene and not while clearance activity is underway; Relocate crash vehicles from the roadway for off-loading cargo, if possible; Relocate crash vehicles from the roadway to off ramp or safe location for final hookup and rigging for tow to facility; set up and maintain traffic control devices for a planned event (up-righting, off-loading, rigging, waiting for non-rush hour traffic) on the shoulder of roadway, to provide warning to approaching motorists

Hazmat Mitigation Agencies

Responsibilities: Containment/public safety protection and ultimate clean up

Public Information Offices

Responsibilities: To be an on-scene representative to ensure accurate and timely information is communicated in a unified manner

Media

Responsibilities: To work with Public Information Officers and responders to gather and disseminate information from the scene. This is the primary source of information for commercial radio traffic information broadcasts. The typical roles and responsibilities of the media include but not limited to:

- Reporting of traffic incidents
- Broadcast information on delays
- Provide alternate route information
- Provide status updates frequently

CHAPTER 5: RESPONDER SAFETY

A responder's job environment contains many potential hazards—not just traffic and HAZMAT, but also weather, fire, injury from debris, and shock. All responders must be familiar with vehicle and agency safety policies.

GENERAL RESPONDER SAFETY

At an incident scene, all responders should:

- Position vehicles considering the safety of those at the scene.
- Park in a manner that provides maximum protection for responders outside of the vehicle by creating a buffer zone to separate responder vehicles from the disabled vehicle. If a responder's vehicle is struck by an errant motorist, the probability of injury to a responder or the victim is likely reduced.
- Turn front wheels away from traffic. Should your vehicle be struck, this may direct your vehicle away from the incident scene.
- Call dispatch with "Windshield Size-up" before leaving the vehicle providing the exact location using as many of the following as possible:
    - Route #
    - Landmark
    - Direction Before/After Exit #
    - Mile post (MP)
    - Town
    - County
    - Lane(s) blocked
- Describe the nature of the incident by answering, "What do I see?"
    - Number and type of vehicles
    - Extent of damage to vehicles
    - Possible injuries
- Evaluate each situation, determine what needs to be done to manage the situation, and take appropriate action.
- Consider weather conditions and sight distance when positioning vehicle and setting up traffic controls.
- Always think about safety

SITUATIONAL AWARENESS

- 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
- Consider how your actions may be impacting motorists traveling in the opposite direction
- Maintain knowledge of current weather conditions

Personal Safety Items

To ensure safety, responders should:

- Use a seat belt.
- Wear gloves when changing tires or removing debris from the roadway.
- Wear disposable exam gloves if there is a possibility of contact with blood borne pathogens. Leather work gloves are not a substitute.
- Wear safety shoes, such as steel toe boots, to protect feet from falling objects or crushing injuries.
- Avoid loose or hanging clothing or personal items that may become snagged when working on disabled vehicles.

High-Visibility Apparel/ Safety Vest

All responders must always wear approved high-visibility apparel when working outside of the vehicle. "Part 634 - Worker Visibility," published by FHWA under Title 23 of the Code of Federal Regulations (CFR), requires all workers within the right-of-way of a Federal-aid highway to wear high-visibility clothing. This requirement applies to all emergency responders.

Safety apparel must be conspicuous during both daytime and nighttime. To ensure the effectiveness of high-visibility apparel, responders should:

- Keep high-visibility apparel clean to maintain reflectivity and visibility.
- Replace high-visibility apparel when it is worn, heavily soiled, or faded.
- Wear high-visibility apparel on top of all other clothing, including jackets.

APPENDIX A: SAFETY GUIDELINES

1. INCIDENT MANAGEMENT

1.1. Incident Command Structure (ICS) will be used for every traffic incident.

1.2. The first arriving emergency responder will establish command of the incident and remains in control until command is transferred or the incident is stabilized and terminated.

1.3. If law enforcement arrives on an established scene, they shall interface with the Incident Commander for an incident briefing and the transfer of command. While still maintaining overall incident scene responsibility, the law enforcement Incident Commander may designate incident operations to another public safety agency in order to effectively manage and coordinate incident resources.

2. ROLES AND RESPONSIBILITIES

2.1. **Common Responsibilities**: These responsibilities are applicable to all branches of responders:

- 2.1.1. Protect the incident scene
- 2.1.2. Perform first responder duties
- 2.1.3. Assume role of Incident Commander, if appropriate
- 2.1.4. Support unified command
- 2.1.5. Clear minor incidents
- 2.1.6. Follow bloodborne pathogens protocol
- 2.1.7. Wear appropriate Personal Protective Equipment (PPE), including Safety Vests
- 2.1.8. Preserve evidence
- 2.1.9. Be visible at all times

2.2. **Emergency Medical Services Branch**: The primary responsibilities of EMS are the triage, treatment, and transport of victims. Additional incident management responsibilities include:

- 2.2.1. Provide medical treatment to those injured at the incident scene
- 2.2.2. Determine destination and transportation requirements for injured victims
- 2.2.3. Coordinate evacuation with fire, police, and ambulance or airlift
- 2.2.4. Transport victims for additional medical treatment
- 2.2.5. Provide medical monitoring and rehabilitation for emergency responders

2.3. **Fire Branch**: Fire and rescue services are provided by fire departments and HazMat agencies. Additional incident management responsibilities include:

- 2.3.1. Rescue/extricate victims
- 2.3.2. Extinguish fires
- 2.3.3. Stabilize and render safe crash damaged vehicles
- 2.3.4. Assess incidents involving a hazardous materials release
- 2.3.5. Contain or mitigate a hazardous materials release
- 2.3.6. Mitigate minor fluid spills
- 2.3.7. Establish and monitor Temporary Medevac Landing Zones

2.4. **Law Enforcement**: Applicable law enforcement agencies have jurisdiction over roadway incidents. Additional incident management responsibilities include:

- 2.4.1. Serve as Incident Commander
- 2.4.2. Secure incident scene
- 2.4.3. Assist responders in accessing the incident scene

2.4.4. Establish emergency access routes
2.4.5. Control arrival and departure of incident responders
2.4.6. Police perimeter of incident scene and impact area
2.4.7. Conduct incident investigation
2.4.8. Establish Traffic Incident Management Area
2.4.9. Perform traffic control
2.4.10. Coordinate issuance of Amber Alerts
2.4.11. Remain at the incident scene until the tow truck or other last responder has left the scene, unless the DOT provides that coverage

2.5. **Transportation Agency**: The applicable transportation agency is responsible for establishing traffic control. Additional incident management responsibilities include:
2.5.1. Monitor Traffic Operations
2.5.2. Perform incident detection and verification
2.5.3. Establish Temporary Traffic Control Zone
2.5.4. Implement traffic control strategies and provide supporting resources
2.5.5. Disseminate motorist information
2.5.6. Assess and direct incident clearance activities
2.5.7. Develop and operate alternate routes
2.5.8. Assess and perform emergency roadwork and infrastructure repair
2.5.9. Remain at the incident scene until the tow truck or last responder has left the scene, unless law enforcement provides that coverage

2.6. **Towing and Recovery**: Towing and recovery services are responsible for the safe and efficient removal of wrecked or disabled vehicles, and debris from the incident scene. Additional incident management responsibilities include:
2.6.1. Evaluate scene safety with IC, discussing recovery procedures
2.6.2. Provide technical assistance/information to other responding stakeholders
2.6.3. Mitigate minor fluid spills
2.6.4. Apply absorbents and remove debris/spilled fluids from the roadway, and properly dispose of, when directed by
2.6.5. Perform recovery by re-aligning the vehicle to tow truck, not tow truck to vehicle, using snatch blocks or other techniques, when able to do so safely
2.6.6. Perform recoveries in one lane, if possible, and load vehicle for transport
2.6.7. Clean up debris and used absorbents. Do not place debris and absorbents in the vehicle
2.6.8. Return roadway to pre-incident condition as well as possible
2.6.9. Check in with IC prior to departing the scene
2.6.10. Transport occupants of the vehicle to a safe location after the vehicle is removed from the roadway

3. RECOMMENDED EQUIPMENT

All dispatched responding personnel must wear ANSI Class II (or higher) Safety Vests. In compliance with the MUTCD, and where applicable, agencies responding to incidents should have the following equipment:

3.1. A minimum of six (6) MODOT approved reflective traffic cones;

3.2. A minimum of one (1) case of traffic flares or strobes;
3.3. A lighted arrow stick or sign board;
3.4. National Fire Protection Association 2009 Edition, MoDOT, or other agency approved reflective striping to the rear and sides of the appropriate emergency response vehicles;
3.5. A minimum compliment of Basic First Aid equipment;
3.6. A 48" x 48" retro-reflective pink sign stating "Emergency Scene Ahead".

4. General Safety and Risk Management

Police and other emergency responders must work cooperatively to employ the necessary traffic diversions to establish a safe work zone for responders, without unnecessarily restricting the flow of traffic through the area.

Each responder at an incident must be constantly aware of his or her personal safety. While traffic control devices and visibility enhancing garments will increase your safety, they will not protect you from a driver who loses control of their vehicle and/or is not paying attention to the road. Therefore, your greatest protection is to keep a physical barrier (blocker vehicle, guiderail, crash vehicles, etc.) between you and moving traffic whenever possible.

The following are additional protective measures you can take to maximize your protection at an incident scene.

4.1. In accordance with Federal Regulation 23 CFR 634, all emergency workers operating on a highway who are exposed to traffic shall wear a Class II or higher vest complying with ANSI/ISEA 107, 2004 or 2006 or a Public Safety Vest complying with ANSI/ISEA 207, 2006. Firefighters or other emergency responders engaged in emergency operations that directly expose them to flame, fire, heat, and/or hazardous materials are not required to wear a vest, provided they are attired in retro-reflective turn-out gear that is specified and regulated by other organizations, such as the National Fire Protection Association.
4.2. Notwithstanding the visibility requirements described above, fire department members are expected to wear full Personal Protective Equipment (coat, pants, helmet) while operating on the highway. As noted above, an approved Class II vest must be worn over the coat (unless the above described exemption criterion is met). The IC may allow firefighters to remove their coats after the hazard has been mitigated, however, the Class II vest must still be worn.
4.3. Responders shall never operate in a live lane. Crossing a live lane should be done with extreme caution and should be avoided when possible.
4.4. Hose lines/equipment should be deployed from the protected, downstream side (opposite live traffic lanes) of emergency vehicles whenever possible.
4.5. Do not enter or exit apparatus near or in live lanes of traffic.
4.6. Do not drive against the flow of traffic without law enforcement approval and confirmation that traffic has been stopped.
4.7. Use designated entrances and exits. Do not use median turnarounds unless there is a life threat or other extenuating circumstances.
4.8. Shut down forward facing emergency lights to reduce opposite direction incidents.
4.9. Limit the amount of equipment on the roadway, thus reducing your liability exposure. Risk vs. Need.

4.10. Always communicate, coordinate, cooperate, be professional, and work within the framework of unified command.
4.11. Ensure all members are aware of and trained on these guidelines.

5. Incident Response

5.1. Only official vehicles will be permitted on the highway. Under no circumstances will personal vehicles respond to incidents on any limited access highways.
5.2. A sufficient crew of emergency responders is recommended for units responding to incidents to limit the number of apparatus on scene.
5.3. Companies may be assigned responsibility for a specific area of the highway and may be directed to enter the highway via a designated ramp. Absent extenuating circumstances, or specific orders to the contrary, companies will utilize their assigned entry ramp whenever responding to incidents.
5.4. As a rule, full size fire apparatus should utilize normal entrances and exits to reverse their direction of travel. Use of the median or paved U-Turns should be reserved for life threatening emergencies and extenuating circumstances.
5.5. Emergency responding units should utilize normal entrances and exits to reverse their direction of travel. Use of the median or paved U-Turns should be reserved for life threatening emergencies and extenuating circumstances.
5.6. In the absence of other options, it may be necessary for emergency vehicles to travel against the normal traffic flow to access an incident scene. No units or vehicles will employ this maneuver unless and until they receive specific approval from law enforcement and confirmation that traffic flow has been stopped. Once approval is received, the emergency vehicle shall proceed with extreme caution utilizing the shoulder portion of the roadway if possible.
5.7. Communicate with the appropriate transportation agency's regional traffic operations center or dispatch center to assist with detection and verification of the incident location.

6. Arriving On Scene

6.1. The first arriving emergency responder will establish command and provide an arrival report with the following information:
  6.1.1. Location of the incident (direction of travel, milepost, landmark, waterway, etc.)
  6.1.2. Lanes affected by the incident
  6.1.3. Number of vehicles involved (d)
  6.1.4. Vehicle condition (on fire, overheat, occupied, entrapment, overturned)
  6.1.5. Best access for responding units (left shoulder, right shoulder, etc.)
6.2. A detailed size-up should be conducted as quickly as possible. Based on the size-up, a determination will be made regarding the resources needed to handle the incident. Units not needed should be directed to staging or recalled.
6.3. Standard practice will be to position emergency response vehicles in such a manner that best protects the incident space and passing motorists.
6.4. Consideration should be given to traffic flow and to providing an avenue for additional resources to access the incident space.

6.5. When possible, crew members should enter/exit their units on the side opposite the traffic flow. Emergency responders should always check for approaching traffic before exiting their vehicle.

6.6. The magnitude of the incident should be estimated, within the first fifteen (15) minutes of arrival, using the criteria set below:

Minor – 30 minutes or less
Intermediate – 30 minutes to 2 hours (contact Highway Agency)
Major – more than 2 hours (contact Highway Agency)

6.7. Emergency responders should always be aware of their visibility to oncoming traffic and take measures to move the traffic incident as far off the traveled highway as possible or to provide for appropriate warning. Emergency vehicles should be safe-positioned in such a manner as to optimize traffic flow through the incident scene. All subsequent arriving emergency vehicles should be positioned as to not interfere with the established temporary traffic flow.

6.8. EMS units should routinely be positioned downstream of the incident, within the incident space.

6.9. If a second fire apparatus responds to the scene as a shadow vehicle, it should be positioned at least 50 feet upstream of the blocker vehicle, to help ensure an adequate buffer zone. The crew in the shadow vehicle shall abandon the vehicle and report to the incident space. The shadow vehicle assumes a fend-off position to deflect any high-speed impact that would otherwise crash into the incident space.

6.10. Unit operators shall cancel any warning lights, which impair the vision of approaching traffic (i.e. headlights, spotlights, clear warning lights).

6.11. Position emergency vehicles on the same side of the roadway as the incident.

7. Traffic Control

Emergency responders shall control oncoming traffic prior to turning their attention to the incident. Understanding that there is no absolute means to protect emergency responders at the scene of an incident, responders are urged to constantly keep in mind the “four guiding principles” when operating in or near moving traffic. Recognizing the following principles will increase the margin of safety.

Provide Advance Warning: Use traffic control devices such as signs, other emergency vehicles, or any other appropriate device that will warn or direct motorists away from an approaching incident.

Protection of the Scene: Position vehicles and traffic control devices in such a way that allows for adequate space between the point where the traffic is diverted and the actual incident space. Fire apparatus should position in a manner that best protects the incident space. Such positioning affords protection to responders from the hazards of working in or near motor vehicle traffic.

Be Visible: All responders operating at an incident with moving traffic shall wear highly visible, highly reflective garments to increase the ability of motorists to see the emergency responders during day and night operations.

Protect Yourself: Responders should make every effort to keep a physical barrier between themselves and moving traffic. If engaged in emergency activities, try to position a blocker vehicle between you and moving traffic. If standing-by at a scene, sit inside your vehicle, or stand behind the guide rail. The less time you're exposed to moving traffic, the safer you are!

7.1. Traffic control is primarily the responsibility of applicable law enforcement or highway authorities.

7.2. If the above agencies are not present, it is the responsibility of initial responders to establish a safe Traffic Incident Management Area. Traffic cones, flares and/or emergency vehicles may be used for this purpose, until appropriate equipment becomes available.

7.3. Scene conditions may necessitate the use of a buffer lane to provide an additional margin of safety for emergency workers, or to protect against any other unforeseen circumstances which would expose emergency workers to increased risk from passing traffic.

7.4. When placing traffic control devices, consideration should be given to drivers' reaction time and visual obstructions. Advance warning may need to be extended upstream based on factors such as topography, time of day, and weather to reduce the potential for secondary crashes.

7.5. Responders should always face traffic when placing and retrieving traffic control devices. Placement of cones shall begin at the corner of the blocker or shadow vehicle, while moving upstream, tapering at an angle. An "Emergency Scene Ahead" retroreflective pink sign should be deployed upstream of all apparatus and cones, on the shoulder, as per MUTCD guidelines.

7.6. Traffic should not be allowed to pass the incident space on both sides of emergency responders, unless approved by the Incident Commander. Traffic should be diverted to the left or the right of the scene

7.7. If law enforcement arrives on scene and determines that a previously closed lane must be opened to traffic, fire department and/or EMS responders must comply with this order A reasonable amount of time will be afforded for responders to move to a safe area before the lane is opened.

7.8. If the senior fire or EMS officer does not feel adequate safety measures are in place, they should direct their personnel to a safe area until the situation is resolved with the Incident Commander at the scene.

7.9. The closing of additional lanes not affected by the accident, to include on and off ramps, shall require the approval of law enforcement and transportation agencies.

7.10. When communicating with other personnel responding to an incident, it is important to note the exact location of the incident, and the most efficient route to access the incident

7.10.1. Use plain English where possible to identify incident location and lane designations. On roadways with 3 or less lanes, they are named left, center, and right when facing in the direction of traffic flow.

7.10.2. When roadways have more than 3 lanes in any one direction, the lanes can be identified and labeled with numbers, starting with the far-left lane.

7.10.3. When using lane numbers, the far-left lane shall be called "Lane 1." Each lane to the right is numbered sequentially 2 through n.

7.10.4. Shoulders should be identified as "right shoulder" or "left shoulder."

7.10.5. Indicate the relative direction of travel (e.g. northbound or southbound) along with other incident location detail and any specific position assignments. For example, an

incoming unit might be told to safe park or "Upon arrival, position as a blocker for the right shoulder and right lane."

7.10.6. If the incident is located before the merge point it shall be considered a separate roadway and identified as such, i.e. left-hand exit ramp.

7.10.7. The use of specific terms which apply only to certain sections of the response area are acceptable, provided the terminology is NIMS compliant and is communicated to all companies/units who normally respond to those areas.

7.11. To aid with traffic management and support responder safety, the MoDOT and the City of Springfield monitor traffic along their facilities from the TMC of the Ozarks. Additional advanced warning of incidents can be provided using the resources available from these centers (Dynamic Message Signs (DMS), or portable DMS).

8. DEMOBILIZATION

8.1. Demobilization of the incident must be managed with the same aggressiveness as initial actions. Apparatus and equipment should be removed promptly, to reduce exposure to moving traffic and minimize traffic congestion.

8.2. Demobilization begins at the downstream termination area and ends at the furthest most upstream advance warning device. All responders and apparatus should clear the travel lanes before the last device is picked up and secured.

8.3. Vehicle operators shall ensure that all equipment has been properly returned to the apparatus, and all doors are closed and secure.

8.4. All personnel should be properly seated and secured with seat belts.

8.5. Departing the scene can be hazardous for emergency responders, especially when attempting to merge large fire apparatus into traffic moving at highway speeds. Merging into the left lane from the center median is particularly hazardous. If the company officer does not feel the apparatus can safely merge into traffic, assistance should be sought from law enforcement and/or the transportation agency to employ a slow down or other protective measures to assist the apparatus in safely departing the scene. When possible, apparatus should use the shoulder as an acceleration lane before merging into traffic. Emergency warning lights should be cancelled only after the vehicle has completely merged into traffic.