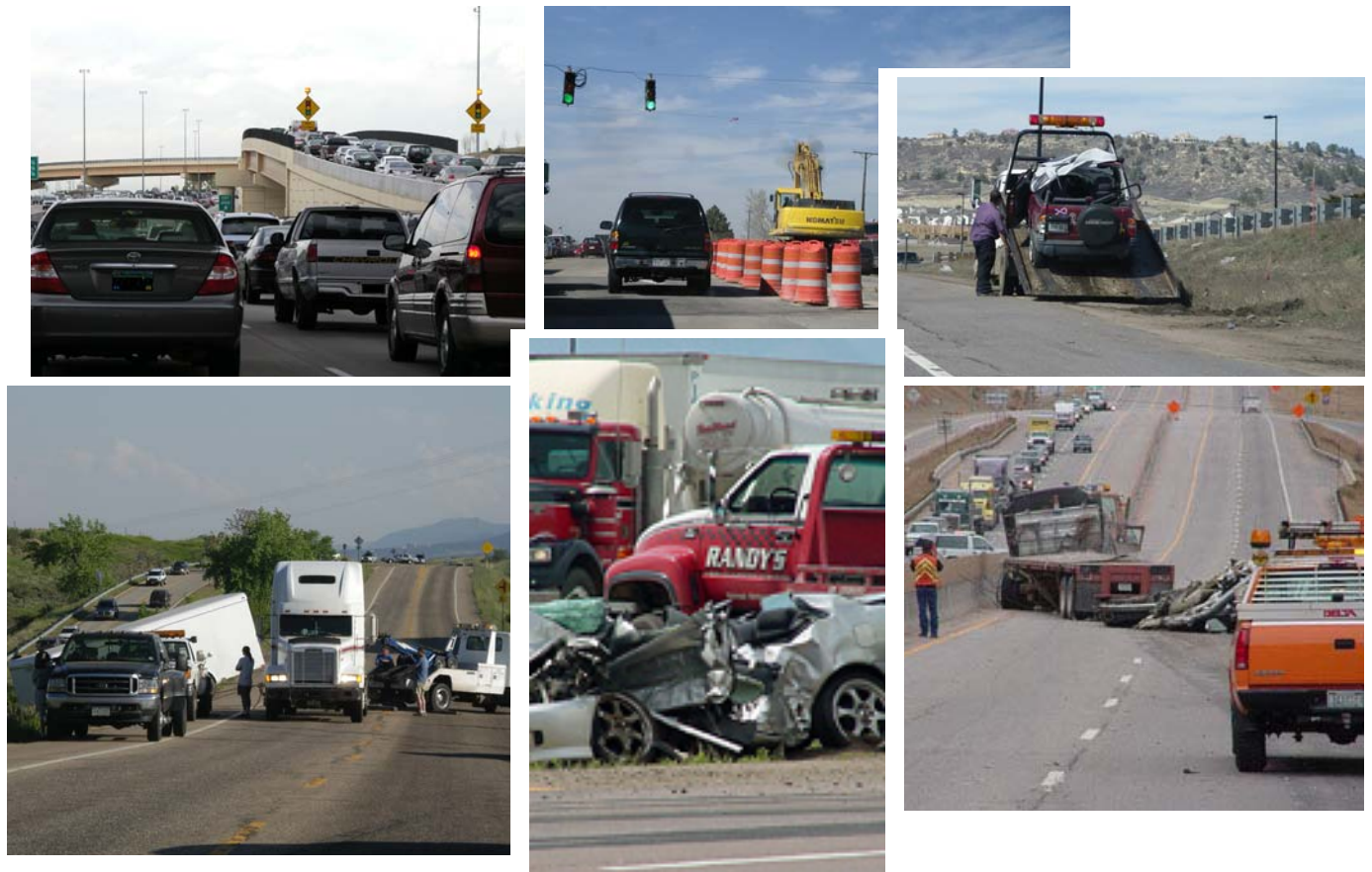




GUIDELINES FOR DEVELOPING TRAFFIC INCIDENT MANAGEMENT PLANS FOR WORK ZONES

- REVISED 2008 -



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I. HISTORY / BACKGROUND

Federal Requirements for Work Zones and Traffic Incident Management

23 CFR Part 630 addresses Work Zone Safety and Mobility (WZSM). It states:

The FHWA recognizes that increasing road construction activity on our highways can lead to an increase in congestion and crashes, as well as loss in productivity and public frustration with work zones. [Changes to 23 CFR Part 630 were] intended to facilitate consideration of the broader safety and mobility impacts of work zones in a more coordinated and comprehensive manner across project development stages.

(Federal Register, Vol. 68, No. 88, May 7, 2003, page 24385)

23 CFR Part 630 requires the development of a Transportation Management Plan (TMP) for each highway project. One component of the TMP is the Transportation Operations Plan (TOP).

A TOP includes considerations that address the safety and mobility of the transportation system by adopting strategies for the sustained operations and management of the work zone impact area. The TOP consists of strategies that address transportation systems management; corridor management; and traffic management operations and safety (*i.e.*, Intelligent Transportation Systems (ITS) based traffic control and traveler information, speed management and enforcement, incident and emergency management, safety reviews and audits). Development and sustained coordination of the TOP in partnership with stakeholders (*i.e.*, other transportation agencies, transit providers, freight movers, utility suppliers, police, fire, emergency medical services, and regional transportation centers) is encouraged.

(Federal Register, Vol. 68, No. 88, May 7, 2003, page 24403)

Chapter 6 of the Manual on Uniform Traffic Control Devices (MUTCD) states “The primary function of [Temporary Traffic Control] TTC is to provide for the reasonably safe and efficient movement of road users through or around TTC zones while reasonably protecting workers, responders to traffic incidents, and equipment.” Chapter 6 includes requirements and guidance on all temporary traffic control associated with work zones and the traffic incidents. One of the principles for temporary traffic control is to develop “general plans or guidelines ... to provide safety for motorists, bicyclists, pedestrians, workers, enforcement/emergency officials, and equipment.

National Incident Management System (NIMS)

“On February 28, 2003, the President issued Homeland Security Presidential Directive (HSPD)–5, *Management of Domestic Incidents*, which directs the Secretary of Homeland Security to develop and administer a National Incident Management System (NIMS). This system provides a consistent nationwide template to enable Federal, State, local, and tribal governments and private-sector and nongovernmental organizations to work together effectively and efficiently to prepare for, prevent, respond to, and recover from domestic incidents, regardless of cause, size, or complexity, including acts of catastrophic terrorism. This document establishes the basic elements of

the NIMS and provides mechanisms for the further development and refinement of supporting national standards, guidelines, protocols, systems, and technologies.

“Building on the foundation provided by existing incident management and emergency response systems used by jurisdictions and functional disciplines at all levels, this document integrates best practices that have proven effective over the years into a comprehensive framework for use by incident management organizations in an all hazards context (terrorist attacks, natural disasters, and other emergencies) nationwide. It also sets in motion the mechanisms necessary to leverage new technologies and adopt new approaches that will enable continuous refinement of the NIMS over time. This document was developed through a collaborative, intergovernmental partnership with significant input from the incident management functional disciplines, the private sector, and nongovernmental organizations.

“The NIMS represents a core set of doctrine, concepts, principles, terminology, and organizational processes to enable effective, efficient, and collaborative incident management at all levels. It is not an operational incident management or resource allocation plan...HSPD-5 requires all Federal departments and agencies to adopt the NIMS and to use it in their individual domestic incident management and emergency prevention, preparedness, response, recovery, and mitigation programs and activities, as well as in support of all actions taken to assist State, local, or tribal entities. The directive also requires Federal departments and agencies to make adoption of the NIMS by State and local organizations a condition for Federal preparedness assistance (through grants, contracts, and other activities) beginning in FY 2005.”

National Incident Management System, U.S. Department of Homeland Security, March 1, 2004.

CDOT is integrating NIMS into its emergency and incident management programs. Major components of NIMS include:

- *Command and management*: Incident Command System (ICS), Multi-agency Coordination Systems (MACS), and Public Information Systems.
- *Preparedness*: Planning, training, exercises, personnel qualification and certification, and mutual aid.
- *Resource management*: Standardized mechanisms and process requirements to describe, inventory, mobilize, dispatch, track and recover resources.
- *Communications and information management*: Incident management communications and information management.
- *Supporting technologies*: Creation and advancement of supporting technology that provides capabilities essential for implementation and refinement.
- *Ongoing management and maintenance*: Routine review and continuous refinement of the system and its components over the long term.

Each of these is considered and addressed in the development and on-going management of incident management programs in the State of Colorado.

National Unified Goal for Traffic Incident Management

The National Traffic Incident Management Coalition (NTIMC) is an official association of organizations representing transportation professionals and emergency responders. The NTIMC consists of national organizations representing emergency medical services, fire & rescue, law enforcement (local and state), public safety communications, towing and recovery, and transportation departments.

The goal of NTIMC is to promote and support the successful development of local, regional and statewide incident management programs through peer networking and knowledge. Information and resources to develop and support traffic incident management activities can be found on the NTIMC website (www.timcoalition.org).

In 2007, the NTIMC announced a National Unified Goal (NUG) for incident management. The NUG was developed through a consensus process and was formally ratified in November 2007 by the NTIMC.

The NUG promotes achievement of these objectives through 18 strategies, including development of multi-jurisdictional, multi-disciplinary incident management policies, procedures and training, and development of national, multi-disciplinary recommended practices for operational issues. The NUG is organized around three major objectives:

- Responder safety
- Safe and quick clearance
- Prompt and reliable incident communications

Background Material

Additional background and reference materials are provided in Appendix C. The Traffic Incident Management Handbook, prepared for FHWA's Office of Travel Management, includes information beyond what is presented in this manual and should be consulted for further guidance. Other references included in Appendix C provide more detailed information than presented here.

II. INTRODUCTION

Goals of Traffic Incident Management for Work Zones

CDOT is committed to providing the best, safest and most reliable multimodal transportation system. In 2006, the U.S. Department of Transportation and National Highway Traffic Safety Administration published the Traffic Safety Facts 2005 Publication (No. DOT HS 810 631, Washington, D.C., 2006). The report states that the number of fatalities which resulted from motor vehicle crashes in work zones has increased at an alarming rate from 1997 to 2005. In addition, it states that more than 41,000 people were injured in 2003, as a result of motor vehicle crashes in work zones. This has grown from 36,000 in 1996. There were 1,074 fatalities in 2005, 1,028 fatalities in 2003, and 693 fatalities in 1997.

Incidents and non-recurring events that cause a reduction in highway capacity account for nearly 50 to 60 percent of total daily congestion delay. In small urban or rural areas, this number can be significantly higher (FHWA, Freeway Management Operations Handbook, Chapter 10, 2003). These incidents pose a risk of secondary incidents and can cause additional problems, including increased traveler delay and fuel consumption, reduced air quality and, when combined with work zones, delays and costs to the construction project. Recent studies indicate that approximately 50 percent of all highway congestion is attributed to non-recurring conditions (such as traffic incidents, weather, work zones, and special events), with work zones on freeways accounting for nearly 24 percent of all non-recurring delays. (U.S. Department of Energy, Temporary Losses of Highway Capacity and Impacts on *Performance*, Oak Ridge National Laboratory (ORNL/TM-2002/3), May 2002.)

Struck-by incidents, where passing motorists hit responders, are also on the rise. In 2005, the National Institute for Occupational Safety and Health (NIOSH) reported that 390 workers were killed in struck-by incidents (up from 278 in 2004). That year, struck-by incidents accounted for 7 percent of the total number of occupational injuries. Data on highway workers killed at traffic incidents currently is not separated from overall statistics; however, NIOSH estimates struck-by deaths (including workers struck by a passing vehicle, or mobile equipment) accounted for half of the 844 worker deaths between 1996 and 2002. On average, at least two emergency responders are struck every day in the United States. According to FBI statistics, between 1995 and 2006, an average of one U.S. law enforcement officer was struck and killed each month by a passing vehicle. In addition, about 20 percent of all firefighter deaths resulted from vehicle-related incidents. In just the first three months of 2006, five Towing and Recovery Association of America towers were killed at traffic incident scenes.

The FHWA's Freeway Management Operations Handbook (Chapter 10, 2003), describes traffic incident management as:

The systematic, planned, and coordinated use of human, institutional, mechanical, and technical resources to reduce the duration and impact of traffic incidents, and improve the safety of motorists, crash victims, and traffic incident responders. Effectively using these resources can also increase the operating efficiency, safety, and mobility of the highway. This results from reducing the time to detect and verify a traffic incident occurrence; implementing the

appropriate response; safely clearing the incident; and managing the affected flow until full capacity is restored.

Traffic incident management provides a coordinated approach to managing incidents that occur on our highways. These guidelines are designed to help develop traffic incident management plans that will create a safer work zone for all stakeholders.

Best Practices

CDOT’s initiative to provide guidelines for traffic incident management in work zones builds on successful practices already in place in Colorado and other states. Although a number of other states have adopted guidelines and requirements to address traffic incident management, CDOT’s effort goes beyond these current practices. Table 1 illustrates practices from other states.

Table 1: Examples of Work Zone Traffic Incident Management

State	Description	Benefit
California	Designated towing-service responsible for keeping work zone free of disabled vehicles.	Quick response results in significant decrease in queue lengths and motorist delays.
Illinois	Emergency traffic patrol fleet responds to minor breakdowns and major incidents. Crash investigation sites are used to get vehicles off the roadway during investigation.	Helps to minimize the negative effects on traffic flow that result from vehicle breakdowns and traffic crashes.
Iowa	Contractor provides 24-hour per day monitoring of traffic control devices and incident response and assists stranded motorists.	Improves traffic safety and traffic flow through major reconstruction projects and provides prompt notification of incidents.
Mississippi	I-55/I-20 reconstruction project provision outlined the responsibilities of the contractor as part of the Incident Management Team, responsible for reducing traffic delay and providing emergency vehicle access to the site.	The contractor became a partner involved in making decisions with the Incident Management Team and was more willing to be responsible for improving traffic control and emergency vehicle access on the project.
North Carolina	Since 1991, representatives from emergency response agencies have met in Incident Management Inter-Agency Teams. During team meetings, NCDOT resident engineers inform agencies about construction projects.	Pre-planning and preparation allow emergency response agencies to access the scene more quickly. Quick response and clearance by predetermined alternate routes help maintain traffic flow.

State	Description	Benefit
Oregon	The Westside Corridor Work Zone Incident Management program included safe pullouts for disabled vehicles, tow truck and operator during peak hours, regular patrol by supervisor, supervisor truck with emergency equipment, routine service patrols, call-in number for motorists to report incidents, and motorist information provided through VMS and news outlets.	Benefits included reduced delay and enhanced safety in the work zone because incidents are responded to and cleared faster. The program fostered good will with the public
Pennsylvania	Incident management plans are required on long-term construction projects. The policy has been in use since 1994 and requires a pre-construction meeting with emergency responders	The meetings eliminate guesswork during actual emergencies and provide effective response and reduced delay.
Utah	Service patrols were provided on the I-15 project on I-15 and the alternate route I-215. The service patrols consisted of vehicles equipped to handle minor vehicle problems.	The intended benefit was to reduce congestion and provide good public relations with the community.
Utah	Utah has initiated a cooperative effort of emergency response agencies, trucking companies and the media to develop emergency response plans submitted and incorporated within traffic control plans.	The practice allows emergency response agencies and the private sector to have input into the overall traffic control plan, improving and coordinating emergency response to the work zone.

(Source: FHWA, Work Zone Operations Best Practices Guidebook, 2000)

The California Department of Transportation “Transportation Management Plan Guidelines” (CalTrans Office of Systems Management Operations, May 2004) provides a list of traffic incident management strategies for consideration when developing TIMPs for work zones. These strategies include:

- Call boxes
- Enhanced enforcement
- Freeway service patrol
- Traffic surveillance stations (traffic detectors and CCTV)
- 911 cellular calls
- Transportation management center
- Traffic control officers
- State police in TMC during construction
- Onsite traffic advisor

- State police helicopter
- Traffic management team

These strategies are in addition to those related to traveler information, alternate route, and public information that can be used during incidents.

Overview of Existing CDOT TIMPs

CDOT has led the development of a number of traffic incident management plans and programs throughout the state. These programs address procedural and coordination aspects of managing unplanned events on the highway that impact the flow of traffic. These incidents range from environmental events, to stalled vehicles, to multi-vehicle crashes, to hazardous materials incidents that may impact the shoulder or close the entire roadway.

Examples of formalized traffic incident management programs developed for long-term construction efforts in Colorado include the T-REX project in Denver and the COSMIX project in Colorado Springs. These projects provided a program that integrated transportation and public safety agencies in planning and responding to incidents in the work zone. They also provided coordination of traffic operation centers that monitored and coordinated responses to incidents. Currently, there are twelve active traffic incident management programs for Colorado Interstates and State Highways. A brief description of the locations/areas of these programs is shown below. Additional information for each program is available in the programs' specific response manuals.

North I-25 – Weld/Larimer Counties

The North I-25 Weld/Larimer Counties Incident Management Plan developed by CDOT Region 4 and covers I-25 from SH 7 (MP 229) to Exit 293.

US 36 – I-25 to Boulder

The US 36 Incident Management Plan covers the Boulder Turnpike from I-25 to Boulder.

I-25 – Express Lanes

The I-25 HOV/Toll Lanes Traffic Incident Management Program covers both the Express Lanes and general purpose lanes from 84th Avenue on I-25 and Pecos on US 36 into downtown Denver at 20th Street.

T-REX – I-25 Broadway to Lincoln Avenue, I-225 Parkway to I-25

The T-REX Traffic Incident Management Program incorporated and updated the I-25 DTC Incident Management Plan developed in 1998 and added additional sections of I-25 and I-225. The limits of the T-REX program are I-25 from Broadway to Lincoln Avenue and I-225 from Parker Road to I-25.

South I-25 – Douglas County

The South I-25 Corridor Incident Management Program covers the 30 miles of I-25 in Douglas County (MP 193 to MP 163) and abuts the portion of I-25 covered in the T-REX Traffic Incident Management Program.

DIA – I-225/I-70 Interchange

The DIA Incident Management Plan was originally developed in 1997 and is currently undergoing a revision. It addresses incidents in the vicinity of the I-225/I-70 interchange to minimize delays to DIA.

6th Avenue – Kalamath to I-70

The US 6 – Kalamath to I-70 Incident Management Program covers 6th Avenue from Kalamath east of I-25 to I-70 in Jefferson County.

I-70 Mountain Corridor – Morrison to Utah

The I-70 Mountain Corridor Incident Management Program covers 259 miles of I-70 through the mountains from the Utah state line to the Morrison exit. The program coordinates two CDOT regions (Region 1 and 3), three traffic operations centers, Hanging Lake Tunnel, Eisenhower/Johnson Memorial Tunnel, and the Colorado Transportation Management Center in Lakewood. There are several subcomponents of the plan: Jefferson County, Clear Creek County, Eisenhower/Johnson Memorial Tunnel, and Summit County.

I-25 El Paso County

The I-25 El Paso County plan covers I-25 through El Paso County, milepost 116 to 163.

Pueblo County

The Traffic Incident Management Plan for Pueblo County includes I-25 and US 50 through Pueblo County.

I-25 Trinidad

The I-25 Trinidad Reconstruction Project Corridor includes approximately 1 mile of I-25 from milepost 13.3 to 14.4, including six interchanges.

Park County Highway Incident Management Program

The Park County program includes 68 miles of US 285, 58 miles of US 24, and 43 miles of SH 9 in Park County.

These programs were developed through a multi-agency planning process that involved CDOT, local transportation agencies, local fire/rescue, law enforcement, emergency medical services, towing services, and other stakeholders in the corridor. The process included reviewing and incorporating existing protocols and agreements. The programs outline procedures for informing system users and the media, and provide guidance for program implementation and management.

Each of the programs includes an Incident Response Manual that provides a quick, in-the-field reference to response personnel. This ensures effective, consistent responses to incidents. The manuals contain the following:

- Incident levels and associated actions
- Lists of response agencies
- Roles and responsibilities of response agencies
- Contact information and procedures
- Scene management guidelines
- Predetermined alternate routes
- Resource information

III. CONSIDERATIONS FOR DEVELOPING TRAFFIC INCIDENT MANAGEMENT PLANS

It is CDOT's intent to ensure work zones are safe and minimize the impact and delay to the traveling public. Planning for incidents that occur within work zones is a critical component for reducing delay and increasing the safety and reliability of the transportation system. Traffic incident management plans should be consistent with NIMS, FHWA 23 CFR Part 630, the MUTCD, and the NTIMC National Unified Goal for Traffic Incident Management. The plans should be developed in a collaborative effort with the emergency response and public safety community and incorporated in the transportation management plan.

The level of complexity of these plans should reflect the duration and complexity of the construction project and its impacts on the system. Short-term projects may simply require an initial meeting and ongoing coordination with appropriate response agencies. Long-term and complex reconstruction projects, such as T-REX, necessitate comprehensive programs with significant investment in equipment and procedures. Each construction project presents unique problems for emergency responders and the management of incidents that occur in the work zone. The intent of these guidelines is to guide and assist the development of programs that meet the reasonable needs of the contractor, CDOT, emergency responders, and other stakeholders.

Incorporating and Adapting Existing Programs

The first step in developing a program for a CDOT construction project is to review the list of existing programs to determine if the project is within a corridor with an active traffic incident management program. If it is, the Contractor will need to coordinate with CDOT and the appropriate response agencies to identify and modify the TIMP to accommodate the project. In this case, the Contractor will become an active partner in the existing program and will not need to develop an entirely new program for use on the project.

If the proposed project lies outside of any existing programs, the Contractor shall take the lead in developing a program appropriate to the project duration and the level of impact the project will have on the highway and its users. At the completion of the project, the traffic incident management plan will become the property of CDOT.

Identifying Appropriate Program Detail

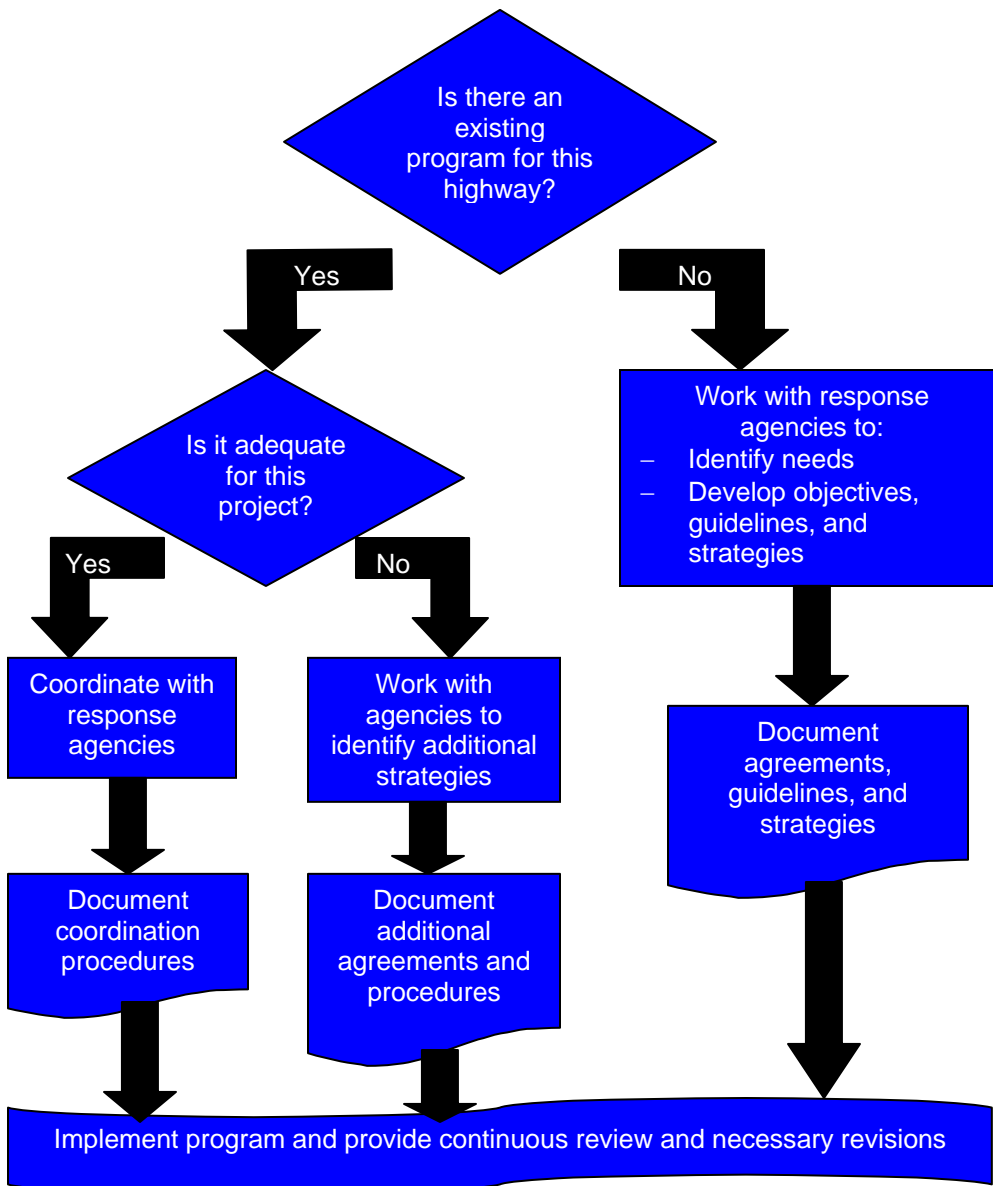
Each project should identify the level of detail and the strategies necessary to ensure a safe work zone. The TIMP should enhance incident detection, response, and clearance times. The process for determining the level of detail to include in the TIMP should include the Contractor, CDOT Project Manager, response agencies, and other stakeholders in the project area. Figure 1 illustrates a flowchart to help identify key questions and to determine the needs of the program.

Some important questions that should be taken into consideration are:

- Will this project impact emergency response in this segment of highway?
- Are there access issues for responding to incidents within the work zone?

- If an incident closes the highway in one or more directions, how will traffic be re-routed?
- Are there strategies to minimize project impacts on response agencies?
- Are there strategies to minimize incident impacts on the public?
- Are there procedures that would enhance incident clearance and safety?
- What equipment would improve emergency response and management during construction? Is it available? Where is it located?
- How will project personnel coordinate and assist emergency responders?

Figure 1: Flowchart for Developing a TIMP for Work Zones



As illustrated in Figure 1, the first step in the process is to determine if the project lies in an area that is currently covered by an existing TIMP. If it does, the Contractor should

anticipate meeting with all stakeholders to determine if the existing program is adequate to satisfy the needs of the project. The Contractor should contact all appropriate response agencies and stakeholders to discuss their concerns with the proposed work and suggest procedures and strategies that support traffic incident management. If it is adequate, then no changes are required. This communication and coordination is essential. For either situation, it is important for the Contractor and CDOT to determine and document all stakeholders' roles and how they support the program. On more complex projects, this coordination will become more formalized and will require more involvement from all stakeholders.

If it is determined that additional procedures and strategies are needed, then these should be identified, documented, and implemented by the Contractor (with CDOT approval). Examples might include:

- Contact lists for construction and utility personnel.
- Procedures for communicating with the Contractor during an incident.
- Procedures for updating response agencies on traffic control changes.
- Emergency access requirements.
- Variable message signs or other traveler information strategies.
- Detour routes to be used in the event of a long-term incident.

On more complex projects where there is no TIMP in place, the Contractor should anticipate identifying and meeting with all stakeholders to identify concerns and consider a full range of strategies to address these concerns. On projects with multiple phases, it may be necessary to develop a plan for each phase of the project. The procedures and recommended strategies should be documented by the Contractor and distributed to all stakeholders. Strategies that require implementation (e.g. signing, ITS devices, courtesy patrol, etc.) should be implemented by the contractor at the start of the project, or as determined to be most beneficial for the traveling public. Training and follow-up sessions will be necessary to ensure that all stakeholders are familiar with the procedures in the plan. The plans should be reviewed, revised and updated as necessary throughout the life of the project.

Some items to include in the plan are:

- Incident levels and associated actions.
- Lists of response agencies.
- Roles and responsibilities of response agencies.
- Contact information and procedures.
- Scene management guidelines.
- Predetermined alternate routes.
- Resource information.

Coordinating with Stakeholders

Interagency coordination provides the foundation for successful traffic incident management. On construction projects, it is essential that the contractor's key personnel be familiar with the agencies that respond to incidents in the project area. This includes identifying the agencies and meeting with representatives to discuss current procedures and protocols, as well as concerns the agency may have with

potential impacts of the project on their operations. On more complex projects, this may entail developing project-specific procedures and agreements.

Agency Identification

When identifying agencies in the project area, the Contractor should consider the following agencies, and develop a list specific to the project:

Transportation Agencies

CDOT personnel with a specific interest in traffic incident management on the project may include the Region Traffic Engineer, Maintenance Supervisor, special response teams (e.g. Hanging Lake Tunnel personnel in Glenwood Canyon), and the traffic management centers (CTMC, Hanging Lake, and Eisenhower/Johnson Memorial Tunnel).

At the local level, cities and counties that have transportation or road maintenance and operations personnel who would be impacted by detours and who could provide resources in the event of an incident.

Law Enforcement

Colorado State Patrol (CSP) generally has jurisdiction on state highways in Colorado and is often the first responding unit to incidents on these facilities. Local law enforcement, police and sheriff, also respond to traffic incidents on state highways and in some locations may have primary jurisdiction. It is important to coordinate with law enforcement at all levels to determine their needs in managing incidents in the project area.

Fire/Rescue

Fire/rescue response is generally provided by local fire departments. These departments may have volunteer or career responders, or a combination thereof. It is important to work with these agencies to determine their needs and understand their current practices and protocols. On large projects, the project area may overlap more than one fire district, requiring the coordination between each district. In most areas of the state, agreements between neighboring districts are in place that will support coordination on these projects.

911 Dispatch

Public Safety Answering Points (PSAP) receive all 911 calls and dispatch appropriate response agencies. 911 calls from cell phones usually are routed to the county or city dispatch centers. These centers then dispatch emergency responders appropriate to the nature of the call. Special cell phone numbers may be routed to other dispatch centers. For example, *CSP and *DUI cell phone calls are received by CSP dispatch centers, as are calls made from existing emergency call boxes along state highways. Coordination between these centers and the response agencies is a critical part of effective response. The Contractor needs to identify the dispatch centers for the project and ensure that their information and procedural needs are met in managing incidents in the work zone.

Towing and Recovery

Towing and recovery services are generally provided by private companies. Towing services are often maintained on a pre-qualified list by CSP for response on state highways. In some cases, contractors provide on-call or on-site towing capability as part

of the TIMP. If private towing services will be used, representatives of the providers should be involved in developing any guidelines or procedures for the project area.

Emergency Medical Service

Emergency medical service (EMS) is generally provided by fire departments or ambulance services. Since their primary role is to help stabilize and transport victims, they should also be involved in developing guidelines and procedures.

Hazardous Materials

Hazardous materials incidents fall under the jurisdiction of the Designated Emergency Response Authority (DERA). This is the agency with legal authority to respond to and manage hazardous materials incidents. In many urban areas, the DERA is the fire department. In more rural areas or locations without local expertise in hazardous materials, the DERA on state highways is CSP. It is important to identify who the DERA is for the project area and involve them in identifying any special needs in the project area when developing the guidelines and procedures.

Media

The media can be an essential resource in informing the traveling public of incidents in the project area. Broadcast media, such as radio and television, can provide real-time information, allowing drivers to make informed decisions about their travel. Print media, such as local newspapers, can help distribute project information in advance in terms of incident procedures. Other media services, such as internet and paging services, can provide time-sensitive information. Local media services should be identified and coordinated with to provide effective incident management.

Other Stakeholders

A number of other stakeholders may exist in a project area and could have an impact on how incidents are managed. Some local governments or quasi-governmental agencies provide specialized rescue services, such as extrication of patients from badly damaged vehicles or high-angle rescues in mountainous areas. Special dive teams may be needed for incidents that involve patients in rivers that run parallel to a number of highways in Colorado. The Red Cross and Salvation Army provide support services to responders and victims during long-term or catastrophic events. In many counties, victims of fatal crashes cannot be moved until the Coroner is on-scene to pronounce the death. These procedural issues should be identified in the planning process and appropriate representatives should be included in plan development.

Coordination with Other Projects

Some projects may occur where other construction activities are underway in close proximity. For these situations, it is important to coordinate with these projects to minimize the impact and to simplify the planning process. Projects that occur in the same area often impact the same stakeholders. Therefore, efforts must be made to support procedures developed for these projects. Different procedures for different projects in the same area can create confusion and cause a high potential for implementation failure. Another important consideration when there are multiple projects in the same area is the limitation they place on detour routes. Routes that include highways that are under construction create increased congestion and safety concerns on detour routes.

ITS Considerations

Many CDOT construction projects include the use of intelligent transportation system (ITS) devices, such as variable message signs (VMS), traffic monitoring video devices, and ramp metering. These devices provide opportunities for effective traffic and incident management. The early construction and activation of these devices can support traffic incident management during construction. For example, if the project includes a permanent variable message sign and it is possible to construct it and bring it on-line early in the project, it can be used to inform drivers of any incidents or delays in the work zone.

In addition to permanent installations, there are a number of strategies that use ITS devices in temporary or portable applications. These include trailers that combine surveillance capabilities with VMS displays or VMS boards mounted on the back of a truck. These are fairly inexpensive strategies that provide significant benefit in terms of safety and congestion management.

Response Manual

A response manual compiled with all critical information needed to respond to an incident should be provided to all appropriate field personnel. The manual should address the project's traffic incident management program and provide key information in a simple to use format (tables, charts, maps, etc.).

The information to consider for inclusion in the manual includes:

- Incident levels and associated actions
- Lists of response agencies
- Roles and responsibilities of response agencies
- Contact information and procedures
- Scene management guidelines
- Predetermined alternate routes
- Resource information
 - Personnel
 - Equipment
- Staging area locations
 - Apparatus
 - Media
- Communication plan or radio frequency lists
- GPS coordinates or landing site lists
- Accident alert packet
- Project phasing information
- ICS terms and information
- VMS and video camera locations
- Typical lane closure information
- Flagging guidelines
- Any information that could support field personnel who respond to and manage a traffic incident should be considered for a field reference or response manual.

IV. THE PLANNING PROCESS

Traffic incident management addresses several key components and phases of incident management. It includes:

- Incident Detection and Verification
- Incident Response
- Incident Site Management
- Incident Clearance
- Motorist Information Dissemination

Many of the goals and strategies for traffic incident management are specific to each aspect or phase of construction. Incident detection and verification begins as soon as an incident is discovered or reported. Verification may occur with the arrival of the first responding unit or by use of video surveillance. The important aspect of verification is that it helps substantiate the incident, begins defining the resources needed, and helps determine the level of impact to the roadway.

Incident response is the process of providing resources necessary to address life-safety issues, as well as effectively manage traffic. A well-planned and managed response minimizes the number of responding units and ensures appropriate resources are allocated efficiently and effectively.

Effective site management ensures safety for responders, victims, and the traveling public. It should be well coordinated and orchestrated to minimize negative impacts.

Effective traffic incident management requires a comprehensive, integrated planning process that involves all stakeholders. To effectively manage incidents means to reduce the impact of the incident on the system and improve safety. Stakeholders must work together to define common goals, roles, responsibilities, and strategies for improving institutional, technical and operational aspects of incident management.

Incident clearance is the process of clearing the incident from the roadway and returning the traffic to normal operating conditions. In the event of a long-term incident (with significant impact on the capacity of the highway), this may include rerouting traffic until capacity is restored and incident-related congestion is reduced.

A very powerful component of traffic incident management is traveler information. Motorists who are informed of an incident can use that information to make changes to their travel plans. This is important from a customer service and scene safety perspective. Reducing the number of frustrated drivers in the work zone reduces the potential for secondary crashes and the exposure for on-scene responders and personnel.

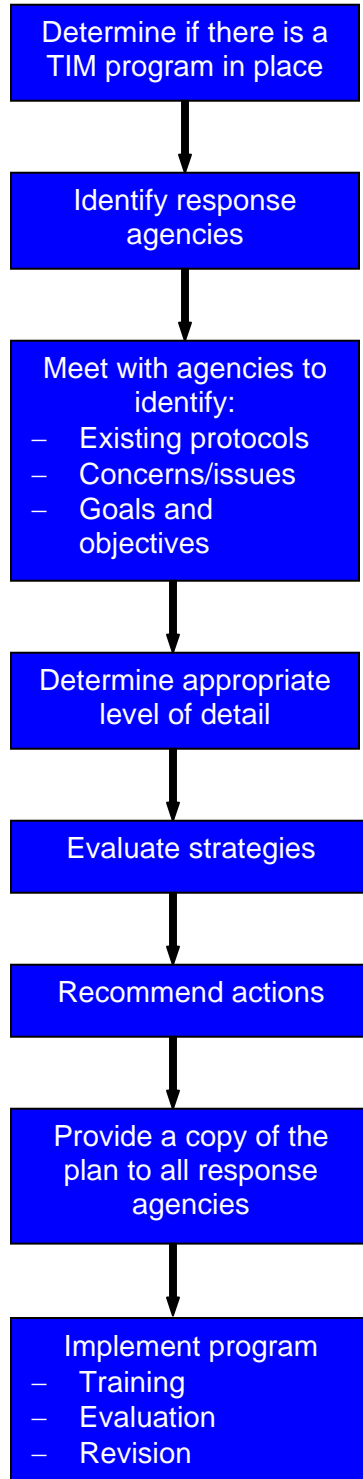
There are two approaches to developing and implementing effective traffic incident management plans. The first is to identify traffic incident management as a planning priority and develop programs and plans for the existing system. The second is to incorporate traffic incident management as a key component of any project. The inclusion of a comprehensive traffic incident management program supports safety goals for the long term while mitigating traffic congestion during construction. Traffic incident

management provides a wide range of opportunities for traffic and safety management and requires a comprehensive approach to planning.

Process Overview

The following flowchart illustrates the general steps in developing a traffic incident management (TIM) program:

Figure 2: Steps in Developing a TIM Program



Planning Overview

**Traffic Incident
Management Planning
Steps***

- Goals
- Objectives
- Performance Measures
- Strategies
- Alternative Tactics
- Implementation
- Evaluation

* Corbin and Noyes, "Traffic Incident Management Planning: The Case for Mainstreaming," *ITE Journal*, 2003.

Goals

Goals are the desired effects of the effort. An example would be to reduce delay caused by traffic incidents in the work zone.

Objectives

Objectives are discernible outcomes. For the goal of reducing delay, an objective might be to reduce incident-related delay on the freeway by 50 percent.

Performance Measures

Performance measures determine how effective an application may be. This is most clearly applied in terms of quantification of an objective, but can be measured in less quantitative ways such as responder observation or public

feedback. A performance measure that supports reduced delay might be to clear 90 percent of traffic incidents within 10 minutes.

Strategies and Tactics

Strategies are specific approaches to a specific outcome or objective. If reduced delay is the goal, one approach might be to provide for quick-response clearance equipment during peak periods.

Tactics include a variety of specific actions intended to deliver results. In the case of a quick-clearance strategy, a number of alternative tactics such as towing contracts, drop sites, expanded peak period patrols, or contracted roving motorist assistance towing patrols should be considered.

Program Implementation

A traffic incident management program develops a combination of tactics and timeframes for implementation. This generally includes operational, procedural, and technical alternatives, combined in a comprehensive system to support the program mission, goals and objectives.

Program Evaluation

Program evaluation applies the performance measures to the program through a scheduled review process. This can be achieved by incorporating tactics into regularly scheduled evaluations, collecting before and after data on specific objectives, and using performance monitoring in service contracts.

Multi-disciplinary Approach

A successful traffic incident management program requires strong, inter-agency involvement and commitment. Incidents require a high level of collaboration and coordination to meet the safety and mobility needs of all stakeholders. All agencies responding to incidents must be involved in the program planning phase to ensure that the program meets their specific needs and help ensure its successful implementation.

The planning process should involve representatives from transportation agencies, emergency response agencies, the media and all applicable stakeholders. The following is a sample list of agencies and organizations that may be involved in developing a traffic incident management program:

- Transportation agencies
 - Federal, state, and local
 - Construction and traffic engineering department
 - Maintenance department
- Law enforcement
 - State and local
- Fire/rescue
 - All districts affected by the project
- 911 dispatch
 - Colorado State Patrol
 - County
 - Other local
- Towing and recovery providers
- Emergency medical services
 - All districts affected by the project
- Hazardous materials
 - Colorado State Patrol
 - All affected DERAs
- Media
- Other response agencies (as needed for the project area)
 - State Office of Emergency Management
 - Local offices of emergency management
 - Coroner's office
 - Other

Representatives from these agencies should be brought together to discuss specific concerns and objectives and to consider a variety of strategies and tactics that might be implemented as part of the project's traffic incident management program. A number of strategies are provided below and throughout the section on key components of a successful traffic incident management program.

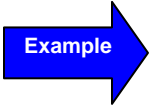
Alternative Strategies

A large number of strategies are available to support traffic incident management programs. Each strategy has a range of applications, and its advantages, disadvantages, and costs should be considered. For example, closed circuit television (CCTV) in the work zone can help detect and verify an incident, help dispatch the appropriate response equipment, assist in scene management, and be used as part of a public information program with feeds to the internet or broadcast television. However, providing CCTV surveillance throughout the work zone can be very expensive. The application, cost, and benefits of each strategy should be considered prior to selecting.

A list of strategies considered in the development of the COSMIX Traffic Incident Management Program is shown in Appendix A.

Construction Phasing and Method of Handling Traffic

A critical aspect of planning for traffic incident management in work zones is accommodating emergency response personnel and equipment through all phases of construction, for the life of the project. The Contractor must notify emergency response agencies to review proposed changes and notify them when the changes have been implemented. This requires considering changes in access, capacity and detour routes. Similarly, a general process for review and notification should be in place for the work zone traffic management plans throughout the life of the project.



The following process was developed for the T-REX Traffic Incident Management Program (2001):

A number of planned activities to support MHT and public information will be coordinated with and support the T-REX Incident Management Program. As part of the MHT program, SECC will develop and furnish Traffic Management Strategy Reports (TMSRs) to identify, address and resolve traffic impact issues within the construction zones and other areas affected by construction activities. SECC will also develop and furnish Traffic Control Plans (TCPs) for work sites and detour routes. The T-REX Incident Management Program will be fully integrated with the TMSRs and TCPs through ongoing coordination meetings. SECC coordination with local and regional emergency service providers, law enforcement entities and other related corridor users will include advance communication of lane closure plans, detour plans and other project elements that may affect the delivery of time-sensitive services. Coordination will include, but not be limited to, the Colorado State Patrol, various county and municipal police and sheriff departments, the South Metro Fire Department, the City of Denver Fire Department, Aurora Fire and various ambulance/emergency service providers.

Because this large construction project will be completed in distinct phases, SECC will modify and implement the T-REX Incident Management Program in conjunction with the planned construction phases. The T-REX Incident Management Program will be updated prior to the start of a new construction phase to accommodate actual and projected changes in the Corridor.

V. KEY COMPONENTS OF A TRAFFIC INCIDENT MANAGEMENT PROGRAM

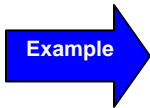
The following section outlines key components of a successful traffic incident management program. The intent of these guidelines is to help provide elements for consideration for use in work zone management; however, it is not a requirement that each of the elements be incorporated into the program. These elements can be adapted to the level of complexity of the project and the level of impact the project will have on the roadway. It is important to consider and discuss each of these elements in the planning phase and identify those that should be formalized to help ensure a clear understanding for all stakeholders.

Response Agencies

One of the first and most critical activities in planning for traffic incidents in the work zone is to identify the affected jurisdictions and response agencies. When working with these agencies, the roles and responsibilities of each should be identified and clearly documented. In addition, all existing protocols, agency information, and response boundaries should be clarified and documented and /or mapped for the entire project.

Roles and Responsibilities

Each agency responding to an incident in the project area has specific priorities and responsibilities. On complex incidents, some of these roles may overlap and the priorities of some of some agencies may affect the ability of other agencies to perform their duties. Discussing and documenting these roles and responsibilities during the planning phase of traffic incident management plan will minimize the probability of conflicts and confusion during an actual incident.



The following example is from the US 36 Boulder Turnpike Incident Management Plan (2007):

Agency Roles

Incident Management is oriented to the following operational agencies: CDOT, Law Enforcement, Fire/EMS, Local Jurisdictions, Coroners, and towing/recovery agencies. The typical role of each agency at the scene of an incident is briefly described below.

First Responder

- Determine severity of incident and condition of persons involved and relay to dispatch
- Identify if hazardous materials are involved
- Act as incident command leader until relieved

Law Enforcement

- Isolate and protect the scene
- Provide traffic control and implement alternate routes as needed
- Investigate the incident

- Release information related to activities at the scene

Fire/EMS

- Respond to and contain the incident
- Rescue, remove and treat injured persons
- Request containment or clean-up resources
- Release information related to activities at the scene

CDOT

- Provide and place all required traffic control
- Provide sand or special equipment as requested
- Notify all agencies of incident as required
- Investigate and repair damages to roadway
- Release information related to activities at the scene

Local Jurisdiction

- Release information related to activities at the scene
- Assist with detour management

Coroner

- On scene investigation
- Release information related to activities at the scene

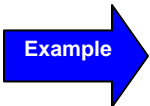
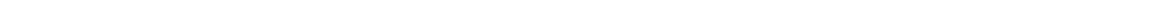
Towing/Recovery

- Respond quickly to incident when called
- Remove vehicle(s) in a safe manner

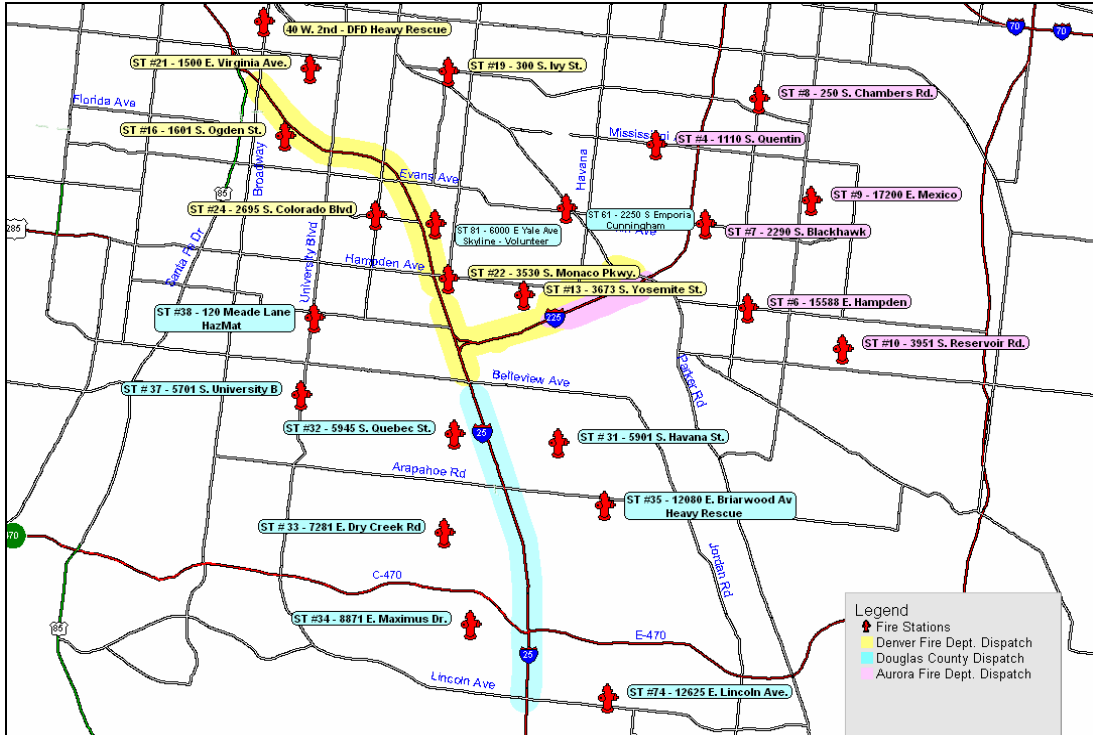


Response Area Boundaries

Since response area boundaries may overlap, clarifying and documenting these boundaries will help in managing incidents that occur in the project area. The boundary map should also include any proposed detour routes.



The following response boundaries map is from the T-REX Traffic Incident Management Program (2001):



Existing Protocols and Agreements

Agencies currently responding to incidents in the project area have protocols and procedures they use to guide their response. These may be in a formally adopted protocol manual or may be undocumented, common practices. In either case, identifying these practices and any additional information necessary for the project is a key component of traffic incident management planning. In addition, a number of response agencies may have mutual aid agreements in place that outline how they will support each other in areas near boundaries or when additional resources are needed. Understanding what agreements exist will help support traffic incident management efforts.

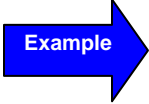
Each of the CDOT Regions has developed a lane closure policy that outlines procedural guidance and strategies for lane closures. The current policies can be accessed at [http://www.dot.state.co.us/Traffic Manuals Guidelines/Traffic Guidelines and Information.asp](http://www.dot.state.co.us/Traffic_Manuals_Guidelines/Traffic_Guidelines_and_Information.asp) and should be considered in the development of work zone traffic incident management plans.

Contact Information

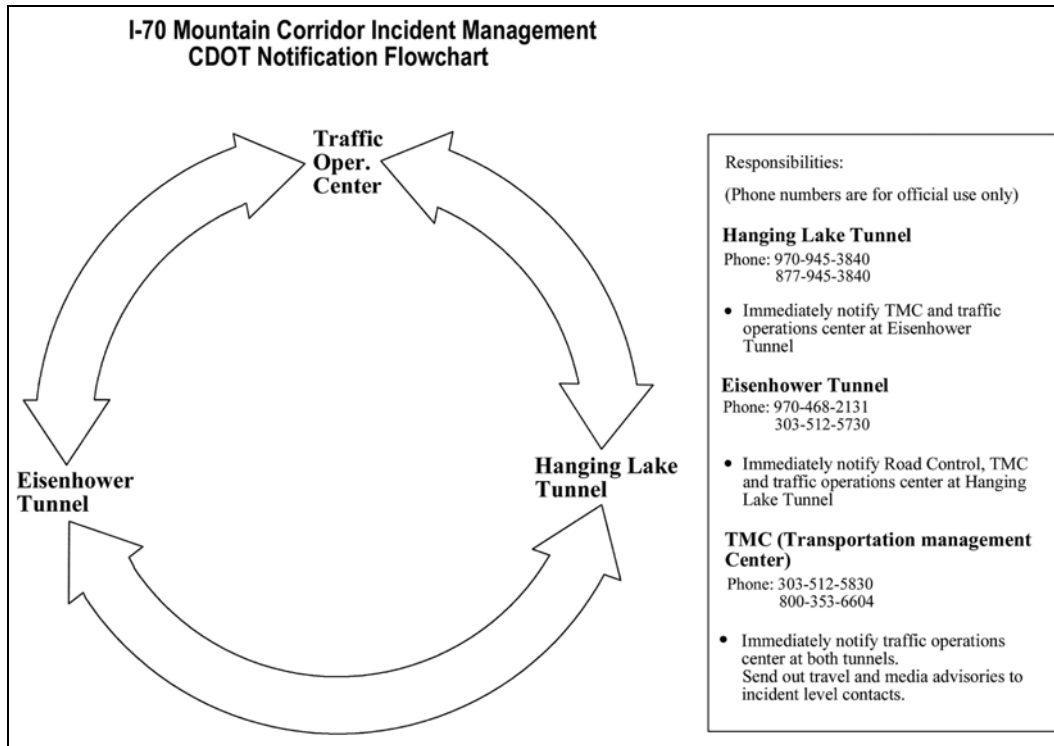
In the event of an incident, it is essential for response agencies to communicate with each other. Contact information for each stakeholder should include essential personnel names, phone numbers, pager information, and dispatch information, as well as the preferred process for making those contacts. This is essential when communicating at the time of an incident or requesting additional resources.

Contact Procedures

It is important to establish standard procedures for contacting agencies for additional response or resources during an incident. These procedures should reflect the current practices in the area and identify additional systems that would support incident management in the work zone.



The diagram below is an example from the I-70 Mountain Corridor Incident Management Program (2005):



Incident Levels

Incident levels are intended to simplify and guide consistent responses based on the level of impact to the roadway and the specific needs of the corridor. All of the existing traffic incident management programs in Colorado have defined incident levels to help guide response efforts.

Incident Level Definitions

Incident levels are defined by the extent and duration of the impact anticipated on the roadway and is consistent with the definitions provided in the MUTCD. The purpose of defining levels is to help identify appropriate actions to be taken in response to the anticipated level of impact. Common use of levels also helps responders and those responsible for disseminating information immediately understand the magnitude of the incident. The following incident levels have been adopted as *standard definitions* for use throughout Colorado:

Minor (Level 1):

Impact to traveled roadway estimated to be less than 30 minutes with no lane blockage.

Intermediate (Level 2):

Impact to traveled roadway estimated to be greater than 30 minutes, but less than 2 hours with lane blockages, but not a full closure of the roadway.

Major (Level 3):

Congestive impact to traveled roadway is estimated to be greater than 2 hours or roadway is fully closed in any single direction.

Major – Long Term Closure (Level 4):

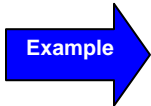
Extended closure greater than 24 hours. Closure duration shall be determined by the incident commander.

The purpose of defining levels is not to create additional burden to the incident manager or initial responder, but to provide consistent actions and support based on the level of impact.

While an initial size-up may indicate a minor incident that could be cleared in less than 30 minutes, subsequent information, such as a hazardous materials situation or a fatality, may change what was initially thought to be a minor incident to a more complex response with more significant impacts to the roadway.

Associated Actions

Actions associated with each level help define the roles and responsibilities of support agencies and provide a quick reference for the incident commander in terms of appropriate actions based on the level of impact to the roadway.



The following table illustrates the use of incident levels and associated actions in the South I-25 Traffic Incident Management Program (2008):

Level	Impact to Roadway	Actions to be Taken
Minor (Level 1)	Impact to traveled roadway estimated to be less than 30 minutes with no lane blockage.	➤ Routine incident procedures
Intermediate (Level 2)	Impact to traveled roadway estimated to be greater than 30 minutes, but less than 2 hours with lane blockages, but not a full closure of the roadway.	<ul style="list-style-type: none"> ➤ Establish Incident Command ➤ Contact CDOT who will take the lead performing the following: <ul style="list-style-type: none"> – Update CDOT web page – Activate Highway Advisory Radio (HAR) – Place messages on permanent variable message signs (VMS) – Send out media advisories to Intermediate (Level 2) contacts – Contact CDOT Region 1 Maintenance Supervisors – Contact CDOT Region 2 and Region 6 Maintenance Supervisors as appropriate – Contact EJMT TOC – Contact CDOT Public Information Officer (PIO) – Consider implementing alternate routes
Major (Level 3)	Congestive impact to traveled roadway is estimated to be greater than 2 hours or roadway is fully closed in any single direction.	<ul style="list-style-type: none"> ➤ If the traffic incident is anticipated to last more than 24 hours, applicable procedures and devices set forth in Part 6 of the MUTCD should be used.: <ul style="list-style-type: none"> – Update CDOT web page – Activate Highway Advisory Radio (HAR) – Place messages on permanent variable message signs (VMS) – Send out media advisories to Intermediate (Level 2) and Major (Level 3) contacts – Contact CDOT Region 1 Maintenance Supervisors – Contact CDOT Region 2 and Region 6 Maintenance Supervisors as appropriate – Contact EJMT TOC – Contact CDOT PIO – Implement Alternate Routes: Notify impacted jurisdiction – Contact Douglas County OEM – Contact Arapahoe County OEM – Contact El Paso County OEM
Major – Long Term Closure (Level 4)	Extended closure greater than 24 hours. Closure duration shall be determined by the incident commander.	<ul style="list-style-type: none"> ➤ Implement Major (Level 3) activities listed above ➤ Applicable procedures and devices set forth in Part 6 of the MUTCD should be used.

“Move-it Law” and Accident Alert

The Colorado Revised Statutes 42-4-1602, Section 2, commonly referred to as the “Move-it Law,” states that when an accident occurs on the traveled portion, median or ramp of a divided highway and each vehicle involved can be safely driven, each driver shall move such driver’s vehicle as soon as practicable off the traveled portion, median or ramp to a frontage road, the nearest suitable cross street or other suitable location. This law applies to all crashes or other incidents on divided highways when no injuries, drugs, or alcohol are involved. This is very helpful in maintaining traffic flow on major highways and is important in work zones where lanes are often narrow and there are limited shoulders or other pullout areas.

In developing the T-REX Traffic Incident Management Program, representatives from state and local law enforcement worked with other stakeholders to support the promotion of this law in the work zone. CDOT provided public support for the effort and the Contractor posted signs in work zones, as well as distributed flyers on the law.

The second situation that applies to the relocation of vehicles from the traveled way in the event of a crash is accident alert. The accident alert status is determined by law enforcement agencies in situations where conditions and the number of crashes exceed the available personnel. An example would be limited response during a severe snowstorm event. For this situation, drivers involved in minor crashes with no involvement of injuries, drugs or alcohol would be asked to move their cars from the roadway and file a report without response. The Colorado State Patrol now allows drivers to file the report on-line at <http://crash.state.co.us/splash.jsp>.

Application to Project Area

Both of these situations have applicability to traffic incident management in work zones. If the project occurs on a divided highway, it is important to discuss the “Move-it Law” with all response agencies and address any concerns law enforcement agencies have. It is also very helpful to identify emergency pullout or crash investigation sites with signs to encourage motorists to proceed to those locations while waiting for an officer to arrive. The nature of the project and how significantly it will limit available shoulders and pull-offs is an important consideration in determining the appropriate level of use and public promotion.

If the project is in an area where an accident alert is likely to be activated by law enforcement, providing information on accident alert, copies of instructions for completing a counter accident report, and information about the on-line reporting website may be helpful to inform drivers involved in a crash during an accident alert period.

Procedural Guidelines for Scene Management

It is important to identify and create specific procedural guidelines for managing traffic incidents in the work zone. A number of these procedural guidelines have been used in various programs in Colorado. A brief description and example are provided under the “Reporting Incidents” section of these guidelines.

Reporting Incidents

Reporting incidents efficiently, effectively and accurately is a critical step in incident detection and verification. The accuracy and type of information provided in the initial

and subsequent calls can greatly enhance the response and management of an incident.



Example

The reporting incidents flyer from the COSMIX Traffic Incident Management Program (2005) is shown below:

Call 911 to report any incident that may include injuries, hazardous materials, fire or other life-safety threats. Provide the 911 operator with the following information, if known:

- Location – including closest mile marker and cross street and direction of travel
- Number of lanes impacted and extent of closure
- Number and type of vehicles involved
- Extent of damage or injury
- Number of patients involved
- Any hazardous conditions
- The placard number on any hazardous materials placarded vehicles

The 911 operator may ask for additional information that will help responders, including your name and phone number as a contact.

Application of the National Incident Management System and Incident Command System

Homeland Security Presidential Directive/HSPD-5, requires state and local agencies to use the National Incident Management System (NIMS) in their domestic incident management and emergency prevention, preparedness, response, recovery, and mitigation activities. In conformance with this directive, CDOT has adopted NIMS as the system to be used on all types of incidents.

The NIMS Incident Command System (ICS) provides clear procedures for coordinating between agencies and responders on-scene and outlines roles and activities assigned to each. Who fills the role of Incident Commander is usually dictated by the nature of the call and the level of command experience of the responders. For example, on an injury accident scene that requires extrication of a patient, it is common for a fire/rescue officer to serve as Incident Commander. On a spilled load or other incident that impacts traffic flow but does not involve life/safety threats, a law enforcement officer may perform the command function. On complex incidents with multiple response agencies, Unified Command is used to coordinate between the agencies and provide a management structure for the incident.

Many of the traffic incident management programs developed in Colorado specifically call for the application of NIMS and ICS principles in managing highway incidents. Traffic incident management plans for work zones should consider strategies and procedures to address each of these components in order to comply with NIMS.

Example

The South I-25 Corridor Incident Management Program (2008) provides specific guidance on the application of the National Incident Management System:

Application of the National Incident Management System

- Follow standard National Incident Management System (NIMS) principles.
- Unified command should be implemented during multi-agency responses. Within NIMS, Unified Command is a team effort which allows all agencies with responsibility for the incident, either geographical or functional, to manage an incident by establishing a common set of incident objectives and strategies. This is accomplished without losing or abdicating agency authority, responsibility, or accountability.
- When assigning NIMS Incident Command System (ICS) positions, consider the following:

Common Responsibilities

- a. Receive assignment from your agency
- b. Upon arrival at the incident, check in at designated check-in location
- c. Use clear text and ICS terminology
- d. Receive briefing from immediate supervisor
- e. Acquire and organize work materials
- f. Supervisors shall maintain accountability of their assigned personnel
- g. Organize and brief subordinates
- h. Know your assigned frequency(s) for your area of responsibility and ensure that communication equipment is operating properly
- i. Complete forms and reports required
- j. Respond to demobilization orders and brief subordinates regarding demobilization

ICS Positions

The Command Staff consists of the Information Officer, Safety Officer and Liaison Officer, who report directly to the Incident Commander. The General Staff is comprised of the Incident Commander, Operations Section Chief, Planning Section Chief, Logistics Section Chief, and the Finance/Administration Section Chief.

a. Incident Commander

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

b. Public Information Officer

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

c. Liaison Officer

The Liaison Officer is a member of the Command Staff responsible for coordinating with representatives from cooperating and assisting agencies.

d. Agency Representatives

An Agency Representative is a person assigned by a primary, assisting, or cooperating Federal, State, local, or tribal government agency or private entity that has been delegated authority to make decisions affecting that agency's or organization's participation in incident management activities following appropriate consultation with the leadership of that agency.

e. Safety Officer

The Safety Officer is a member of the Command Staff responsible for monitoring and assessing safety hazards or unsafe situations and for developing measures for ensuring personnel safety.

f. Operations Section Chief

The Operations Section Chief activates and supervises elements in accordance with the Incident Action Plan (IAP).

g. Division/Group Supervisor

A Division/Group Supervisor reports to the Operations Section Chief and is responsible for the implementation of the assigned portion of Incident Action Plan, assignment of resources within the Division/Group, and reporting on the progress of control operations and status of resources within the Division/Group. Groups are assigned by functional area, such as a medical group, a debris removal group, or a traffic control group. The creation and assignment of these groups is the role of the ICS General Staff.

h. Staging Area Manager

The Staging Area Manager reports to the Operations Chief and is responsible for managing all activities within a Staging Area.

i. Planning Section Chief

The Planning Section Chief is responsible for the collection, evaluation, dissemination, and use of information about the development of the incident and status of resources.

j. Multi-Casualty Branch Director

The Multi-Casualty Branch Director is responsible for the implementation of the Incident Action Plan with the Branch. This Branch Director reports to the Operations Section Chief and supervises the Medical Group/Division and Patient Transportation Group Supervisors.

k. Medical Group/Division Supervisor

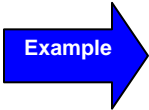
The Medical Group/Division Supervisor reports to the Multi-Casualty Branch Director and supervises the Triage Unit Leader, Treatment Unit Leader and Medical Supply Coordinator in order to assure the best possible emergency medical care to patients during a multi-casualty incident.

l. Patient Transportation Group Supervisor

Patient Transportation Group Supervisor reports to the Multi-Casualty Branch Director and supervises the Medical Communications Coordinator and the Air and Ground Ambulance Coordinators and is responsible for the coordination of patient transportation and maintenance of patient records.

Moving Vehicles

Guidelines for moving vehicles from the roadway can be helpful in locations where it takes a while for law enforcement to reach the scene and there is no other reason to keep traffic lanes closed. Predetermined procedures can be implemented that support law enforcement's need to investigate and document the crash. These procedures should be consistent with CDOT Procedural Directive 1510.1 on Promptly Reopening Roadway to Traffic, see Appendix B. Contractor is responsible for obtaining the latest version of Procedural Directive 1510.1 from CDOT's Office of Government Relations.



The I-70 Mountain Corridor Incident Response Manual (2005) provides an example of the procedures agreed to by all responding agencies:

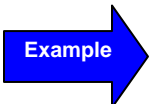
Rapid Vehicle Removal (CRS 42-4-1602 - Accident involving damage - duty)

- If practical before moving vehicles, final positions and points of impact should be found and marked. Mark tire and axle location of each vehicle and direction of vehicle if necessary.
 - Every attempt should be made to confirm with CSP, or appropriate law enforcement agency, prior to moving vehicles.
 - Crashed vehicles may be moved from traveled portions of roadways before CSP investigators arrive. Exceptions to this procedure would be fatal, serious injury, felony, drug or alcohol related crashes, or haz-mat crash scenes.
-

Emergency Traffic Control

In the event an incident shuts down one or more travel lanes, it is important to have guidelines, provisions, and procedures in place for implementing emergency traffic control. These may include diagrams for typical traffic control for roadway closures, lists of available traffic control equipment available on-site, and guidelines for who has the authority to close or open lanes and the process for doing so.

In the event of a long-term or full closure of the roadway, traffic may need to be detoured using alternate routes. All impacted agencies should be involved in planning these routes and be notified upon implementation. Each of the traffic incident management programs used in Colorado includes predetermined alternate routes for use during incidents that close the highway.

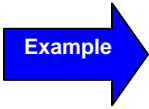


The US 6 Incident Response Manual (2001) provides the following guidelines for lane closures and openings:

Lane closures or openings

The primary responsibility of response agencies is to stabilize the incident scene and provide care for victims. After these two responsibilities have been adequately addressed, and any necessary investigation activity is completed, the Incident Commander should restore the travel lanes to traffic as quickly as possible to reduce

travel delay. The focus should be on moving response vehicles and personnel out of lanes as quickly as possible to minimize the number of lanes closed. CDOT should be notified...of any change in the status of the roadway with regard to opening or closing lanes.



The T-REX Traffic Incident Management Program (2001) provided the following guidelines on when and how to establish an alternate route:

When to Establish an Alternate Route

- The use of alternate routes should only be considered when there is full closure of the interstate in either direction or when the Incident Commander deems it necessary for the safety of the traveling public and responders.
- In addition to the above, consideration must be given to the extent of roadway or structural damage, and the extent of bodily injury or fatalities.
- The final determination to use alternate routes will be made by the Incident Commander based on observation of the scene.
- Remember to *contact the CDOT TOC when lanes are reopened to traffic.*

Implementing the Alternate Routes

After determining that alternate routes should be implemented, the following actions should be taken to establish an alternate route:

1. CDOT TOC must be notified of any closures or implementation of alternate routes. Notification should include the following information:

FIRST CALL

- Direction of closure (northbound or southbound)
- Extent and location of closure (# of lanes, from where to where)
- Anticipated duration of closure
- Hazardous materials involved, if any

SECOND CALL

- PIO information (crime scene, type of crash, incident staging area, media staging area, etc...)
- Scene management (equipment needed, trailblazers, DMS, etc...)
- If needed, implement alternate routes

2. All agencies affected by the alternate route must be notified. The CDOT TOC will be responsible for notifying the appropriate agencies.

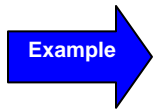
The following is a list of agencies that should be notified, as appropriate, in the event of an alternate route implementation.

Agency	Business Phone	Hours	Non-Business Hours Phone
CDOT TOC	(303) 512-5830		(303) 512-5830
CDOT Region 6	(303) 757-9514		(303) 512-5830

Agency	Business Phone	Hours	Non-Business Hours Phone
CDOT Region 1	(303) 688-6230		(303) 512-5830
City of Denver (Traffic Operations)	(720) 865-4000		(720) 865-6855
City of Aurora	(303) 341-7552		(303) 341-7552
City of Greenwood Village	(303) 741-5960		(303) 741-5960
City of Englewood	(303) 762-2438		(303) 762-2438
City of Littleton	(303) 794-3809		(303) 794-3809
Arapahoe County	(303) 795-4640		(303) 795-4711
Douglas County	(303) 660-7490		(303) 891-7750

3. Upon notification, agencies that have signal systems or detour trailblazers on the alternate route should put the appropriate signal timing changes and trail blazers into effect to accommodate that particular alternate route.

If an agency is not capable of immediately changing the signal timing plans, traffic control personnel should be posted at critical intersections provided along the route. A map of the signal system jurisdictions and key intersections is shown in the back of this manual.



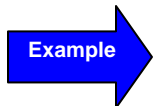
The T-REX Traffic Incident Management Response Manual (2001) included the following:

Implementation of Alternate Routes

- The Incident Commander, in coordination with CDOT, will determine the need for implementation of alternate routes.
- The CDOT TOC will then follow the appropriate incident response level actions.
- The CDOT TOC will contact jurisdictions along the alternate routes and verify that traffic control devices are in place.

Use of Emergency Flashers

Emergency flashers are intended to enhance the safety of responders, victims and motorists in an emergency scene. Excessive use of emergency flashers can compromise safety by confusing drivers and reducing night vision. The appropriate use of emergency flashers should be discussed with emergency response agencies, particularly in work zones that already have numerous traffic control devices with flashers. Guidelines should be established to maximize safety for all involved.



The following example for emergency flashers was developed for the COSMIX Traffic Incident Management Response Manual (2005):

The following guidelines should be considered by on-scene personnel for the use of emergency overhead flashers. The final decision on the use of overhead flashers is the responsibility of the Incident Commander based on scene conditions.

Flashing lights should be used when:

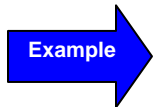
- Incident vehicles are on the Interstate lanes or incident vehicles are on the shoulder and traffic is passing at a high speed.
- Proceeding cautiously through stopped traffic at the incident scene.
- Traveling to an incident on the shoulder or under emergency running conditions.
- When an agency needs to work through traffic to remove a blocking, disabled vehicle.

Flashing lights should be turned off:

- During daylight hours, the incident vehicles are sufficiently off the Interstate lanes and on the shoulder, and traffic is already congested and passing slowly by the scene.
- When the vehicle is parked well off the side of the shoulder.

Apparatus Parking and Staging

For incidents with a large number of responding units or for incidents within work zones with limited shoulders or lanes, it may be appropriate to implement staging areas removed from the immediate scene. Staging areas can be predetermined for both response apparatus and for media responding to the scene. Apparatus staging areas should be on flat, hard surfaces with adequate space and easy access to the roadway. Media staging areas can be smaller and preferably removed from the apparatus staging area to minimize conflicts. The media will respond to the staging area if there is a designated spokesperson available to provide information on the incident and if there is an opportunity for camera shots of the incident.



The T-REX Traffic Incident Management Program (2001) developed guidelines and maps for possible staging areas within the project corridor:

Staging Areas

- On Level 2 and Level 3 incidents, the Incident Commander should consider use of predetermined staging areas for responding units and media personnel.
- Maps of the predetermined staging areas are provided in this response manual.

Emergency response

The use of staging areas should be considered for Level 2 and 3 incidents. Staging areas are used to keep apparatus and response personnel safe and away from immediate the incident scene. The decision to use a staging area and the location of the staging area is the decision of the Incident Commander. The CDOT TOC should be notified of the location of the selected incident staging areas. The following map shows locations that were selected as potential incident staging areas.

Media

Special staging areas for the media have also been identified. These areas are separate from the emergency response areas and will be used to keep the media

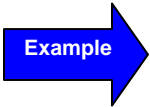
clear of the incident scene to ensure their safety and the safety of responders. Implementation of media staging areas should be at the direction of the Incident Commander and all Public Information Officers (PIO) responding to the incident should be sent to that location to coordinate with the press. The CDOT TOC should be notified of the location of the selected media staging area. The following map shows locations that were selected as potential incident staging areas.

Dedicated Response Teams

Dedicated teams of responders from each of the agencies may be helpful if there is a need for specialized personnel or apparatus response within a work zone. These teams can be identified in advance and can help in the review and management of the overall traffic incident management program.

Dedicated Response Equipment


If there is a need for dedicated response equipment for a work zone (such as a dedicated tow truck or other rescue equipment), guidelines for operation and response should be established. In some cases, CDOT may require a dedicated courtesy patrol in the work zone. If required, the courtesy patrol must be integrated into the traffic incident management plan in conformance with CDOT's specifications for a courtesy patrol.



Since the T-REX project required the Contractor to provide a courtesy patrol during designated hours, the following guidelines were developed:

Guidelines for Courtesy Patrol

- Patrol corridor for disabled vehicles or other traffic impediments.
- Assess project area traffic conditions and notify CDOT TOC of conditions.
- Inform motorists of the services performed by the courtesy patrol.
- During Accident Alerts, provide information to motorists involved in minor accidents of responsibilities for moving and reporting the accident.
- Courtesy Patrol Operator will maintain a response log, which will be turned into Segment Supervisor at the end of each shift (see attached).
- Level 1 Incidents:
 - Notify CDOT TOC dispatch
 - Incident to be cleared in within 10 minutes of arrival.
 - If non-injury incident (e.g. flat tire, out of gas, stall, debris), get the vehicle moving or push/tow to a drop site.
 - If minor accident and Colorado State Statute 42-4-1602 applies, take picture, inform motorists of ‘Move It’ law requirements, and encourage that the scene be cleared immediately.
- Level 2 and Level 3 Incidents
 - Notify CDOT TOC dispatch
 - Remain on scene until scene commander arrives (law enforcement, fire/rescue personnel or jurisdictional representative).
 - Provide assistance to scene commander as requested.
 - Monitor and pick up light debris on roadway.



**Southeast Corridor Constructors
Courtesy Patrol**

Southeast Corridor Constructors - the T-REX Contractor - is providing Courtesy Patrol service in the T-REX Project corridor.

What: Courtesy patrol vehicles will travel the T-REX corridor, assisting stranded motorists with the following services:


- Towing
- Gas
- Flat Tire Repair

The Courtesy Patrol is authorized by the Colorado Department of Transportation (CDOT) to provide towing and motorist assistance.

When: 24 hours a day
Where: I-25 - from Broadway to Lincoln Avenue
 I-225 - from I-25 to Parker Road

Why: To avoid major traffic delays, it is important to get disabled motorist off the highway as quickly as possible. By providing an enhanced courtesy patrol along the T-REX corridor, Southeast Corridor Constructors can help keep traffic moving.

** Courtesy Patrol drivers cannot accept any tips or gratuities. Thank You.*



**El Equipo de Cortesia
de los Constructores de las Carreteras Sureste**

Los constructores de las carreteras sureste — la empresa que construye el proyecto "T-REX"— suministra un servicio de cortesia en las carreteras del proyecto.

¿Qué es el Equipo de Cortesia? Sus vehículos viajan las carreteras de T-REX para apoyar a los motoristas que necesitan ayuda con estos servicios siguientes GRATIS:

- remolquear
- gasolina
- arreglar llantas fijas

El Departamento de Transportación de Colorado (CDOT) se autoriza al Equipo de Cortesia a suministrar ayuda a los motoristas.

Cuando: 24 horas cada día
Donde: I-25, de Broadway hasta Lincoln Avenue
 I-225, de I-25 hasta Parker Road

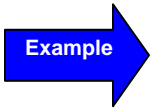
Porque: Para evitar tardanza para los motoristas en las carreteras de T-REX, es importante remover vehículos que impiden el tráfico tan pronto como posible. El Equipo de Cortesia trabaja para mantener el flujo de tráfico para la gente.

Los conductores no pueden tomar ni propinas ni regalos. Gracias.

Communication/Interoperability

A major component of NIMS is communications and information management. Organizations with responsibility for managing incidents must ensure that systems exist to provide effective communications and coordination among the various jurisdictions. Interagency interoperability is critical to effective scene management. Due to the range of agencies responding to highway incidents, there are often many different systems in use. Pre-planning for on-scene communication can include procedural guidelines as well as identification of frequencies and opportunities to address incompatibilities.

One tool that has been used on many of Colorado's traffic incident management plans is a frequency matrix. The purpose of this matrix is to help with the on-scene assignment of radio frequencies during a response.



The following frequency matrix was developed for the COSMIX Traffic Incident Management Response Manual (2005):

Agency	Channel																	
	CS Fire	CS Police	CS TMC	CS Utilities	CSP	CDOT Region 2	El Paso SO	CS OEM	El Paso OEM	El Paso PW	AMR	USAFA Fire	Tri-Lakes Fire	Stratmoor Hills Fire	Fountain Fire	Wescott Fire	Springs Transit	COSMIX Courtesy Patrol
EPSO RED	X	X	X		P	P	X	X	X	X	X	X	X	X	X	X	X	
BLUE CMD	X	X	X		P	P	X	X	X	X	X		X	X	X	X	X	
BLUE OPS	X	X	X		P	P	X	X	X	X	X		X	X	X	X	X	
RUBY CMD	X	X	X	P	P	P	X	X	X	X	X	X	X	X	X	X	X	
RUBY OPS	X	X	X		P	P	X	X	X	X	X		X	X	X	X	X	
GREY CMD	X	X	X		P	P	X	X	X	X	X		X	X	X	X	X	
GREY OPS	X	X	X		P	P	X	X	X	X	X		X	X	X	X	X	
BROWN	X	X	X	X*	P	P	X	X	X	X	X		X	X	X	X	X	
ORANGE	X	X	X	X*	P	P	X	X	X	X	X		X	X	X	X	X	
ICALL	X	X	X	X	P	P	X	X	X	X	X		X	X	X	X	X	
ITAC1	X	X	X	X	P	P	X	X	X	X	X		X	X	X	X	X	
ITAC2	X	X	X	X	P	P	X	X	X	X	X		X	X	X	X	X	
ITAC3	X	X	X	X	P	P	X	X	X	X	X		X	X	X	X	X	
ITAC4	X	X	X	X	P	P	X	X	X	X	X		X	X	X	X	X	
CSU DISP	X	X	X	X	P	P	X	X	X	X	X		X	X	X	X	X	
CSFDSEC2	X	X	X		P	P	X	X	X	X	X		X	X	X	X	X	

X – Channel available
 P – Channel available with patch
 X*- Channel assignment preferred to patch into Ruby Com

Emergency Access

Work zones typically create issues with existing emergency accesses by limiting the availability of shoulders, reducing the number of travel lanes, limiting access from and to highway ramps, and so forth. All of these create problems for emergency response. Working early in the life of the project with emergency response agencies and CDOT, can help identify concerns with proposed traffic control and allow modifications that assist emergency response. This may include providing temporary turnarounds or access points, creating procedures that accommodate emergency response in the event of an incident. The Contractor should inform the response agencies of the proposed construction phasing and any restrictions on access, If necessary, the Contractor, CDOT, and the response agencies should determine emergency access routes and locations, and determine the process to be used for notifying agencies of changes in the traffic control that would affect access and response times.

Accident Investigation Sites

In the event of limited shoulders through a construction zone, the use of accident investigation sites should be considered. These are locations that allow a motorist to pull out of the travel lanes to wait for law enforcement and provide a safe area for law enforcement to fill out a report of the incident. These sites should be clearly signed to encourage their use.



Example

The T-REX Traffic Incident Management Program provided accident investigation sites and included the following guidance in the Response Manual:

Accident Investigation Sites

Accident investigation sites will be provided in areas where there are no shoulders or there are other limitations on accident investigation. The locations for current accident investigation sites will be the Appendix of this manual with T-REX phasing information. These locations are subject to change as freeway phasing modifications are implemented. Accident investigation site changes are identified in the traffic phasing reports and will be distributed as they occur.

Resource Management

A major component of NIMS is resource management. NIMS defines standardized mechanisms and establishes requirements for processes to describe, inventory, mobilize, dispatch, track, and recover resources over the life cycle of an incident. It is important to consider resource management in the development of traffic incident management plans and to provide information on resource availability and procedures for mobilization to all stakeholders.

In the event that an incident requires a road closure or a specialized response, it is imperative to have procedures in place for requesting additional resources and having an updated list of available equipment and personnel. Equipment lists should include traffic control devices and types of heavy equipment available, as the Contractor and CDOT find appropriate.

Personnel lists should be developed that list key agency contacts, including utility companies and public information officers, which can be used in contacting specific personnel for an incident.



Example

The following is an example of an equipment list included in the U.S. 6 Traffic Incident Management Response Manual (2001):

Typically Available Quantities	CDOT TOC*	CDOT Region 6*	City and County of Denver*	Jefferson County*	City of Lakewood*
<u>Electronic Devices</u>					
Portable VMS	2	4	4	2	1
Permanent VMS	0		2	0	0
Highway Advisory Radio	1		2	0	0
Arrow Panel	0		**	4	1
Actuated Warning Signs	0		**	0	0
<u>Barricade Devices</u>					
Cones	0	400	**	200	80
Drums	0		**	15	0
Vertical Panels	0		**	0	0
Type I Barricade	0		**	0	0
Type II Barricade	0		**	100	0
Type III Barricade	0		**	5	0
<u>Traffic Control Signs</u>					
Detour (M4-8)	0		**	5	0
Detour Arrow, L (M4-9L)	0		**	5	0
Detour Arrow, R (M4-9R)	0		**	5	0
End Detour (M4-8a)	0		**	0	0
Stop (R1-1)	0		**	10	0
Reduced Speed Ahead (R2-5a)			**	10	0
Lane Reduction Transition, L (W4-2L)		8	**	2	0
Lane Reduction Transition, R (W4-2R)		8	**	2	1
Road Closed (R11-2)	0		**	5	0
Road Closed to Thru Traffic (R11-4)			**	0	0
Detour 1000 ft (W20-2)	0		**	0	0
Advanced Flagger (W20-7a)	0		**	10	4
Stop Ahead (W3-1)	0		**	10	0
<u>Vehicles</u>					
Attenuator trucks		5			
Backhoe		1			
Bucket trucks		2			
Dump trucks		30			
Front-end loader		15			
Motor grader		2			
Sign trucks		4			
Tractor-trailer flatbed		2			
*Contact Information ** Denver has an annual contract with a barricade company.					
CDOT TOC (303) 512-5830	CDOT R6 Maint. Supervisor (303) 757-9514	City and County of Denver Traffic Operations (720) 865-4000	City of Lakewood Dispatch (303) 987-7111	Jefferson County Road & Bridge (303) 277-0211	

Traveler Information

Traveler information is a critical component of effective traffic incident management. Tools to help inform travelers of an incident include ITS devices (such as variable message signs and highway advisory radio), public education campaigns and the broadcast media. It is important to inform motorists of current traffic conditions to help minimize frustration, increase compliance with alternate routes, and enhance safety throughout the work zone. Furthermore, it is important to notify drivers who have not yet entered the highway system. For example, it is imperative to inform those who have not left for their destination so they can reconsider the amount of time or route of travel.

There are a number of tools available for information dissemination. It is helpful to determine which tools are most appropriate for the scope of the project. A list of tools is included in the strategy list in Appendix A.

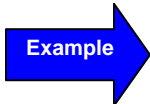
Procedures for Informing Drivers

In addition to using specific tools for informing motorists, there need to be procedures outlining responsibilities for updating and disseminating information. In many of CDOT's traffic incident management plans, the Colorado Transportation Management Center (CTMC) provides a key role in disseminating information to the public and the media. The CTMC is staffed 24-hours a day, 365 days a year, with personnel who monitor traffic conditions throughout the state and update the Road Condition phone line, CDOT website, permanent variable message signs, and highway advisory radios. They also send out press releases and fax notifications to predetermined recipients. They act as the point of contact for the media, who call the CTMC for updates on events. Procedures for how to coordinate with the CTMC should be established as well as procedures for additional information activities to be performed by the Contractor or other response agencies.

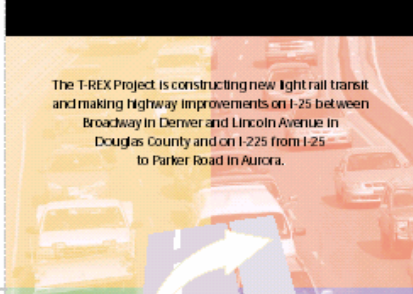


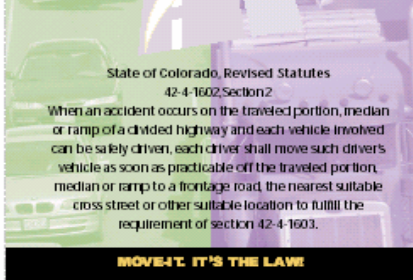

Public Information Activities



In NIMS, Command and Management addresses the application of Public Information Systems. These systems create the protocols and procedures for communicating timely and accurate information to the public during crisis or emergency situations. These activities should be coordinated with the overall public information plans for the work zone as established in the Work Zone Transportation Management Plan.

Public information activities may include websites, press releases, or newsletters informing the public of planned construction and phasing activities. These provide an opportunity for the Contractor to inform the public of procedures related to incidents in the work zones such the enforcement of the Move-it Law. The use of public education campaigns, press releases, and signs in the work zone can enhance compliance with the Move-it Law and accident alerts.



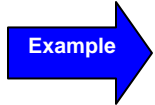
The following brochure was developed for the T-REX Traffic Incident Management Program (2001). This is an excellent example of public education and outreach.

<p>Motorist Information Card</p> <p>Name: _____ Address: _____ Phone Number: _____ Driver's License Number: _____ Insurance Carrier: _____ Phone Number: _____ Policy/Group Number: _____ Make/Model: _____ Year/Color: _____ License Plate Number: _____</p>	 <p>The T-REX Project is constructing new light rail transit and making highway improvements on I-25 between Broadway in Denver and Lincoln Avenue in Douglas County and on I-225 from I-25 to Parker Road in Aurora.</p>	 <p>MOVE-IT IT'S THE LAW!</p> <p>For more information on the Move-It Program or on the T-REX Project, call 303-786-TREX (8739) or visit www.trexproject.com</p>	 <p>MOVE-IT IT'S THE LAW!</p>
<p>Motorist Information Card</p> <p>Name: _____ Address: _____ Phone Number: _____ Driver's License Number: _____ Insurance Carrier: _____ Phone Number: _____ Policy/Group Number: _____ Make/Model: _____ Year/Color: _____ License Plate Number: _____</p>	 <p>State of Colorado, Revised Statutes 42-4-1602, Section 2 When an accident occurs on the traveled portion, median or ramp of a divided highway and each vehicle involved can be safely driven, each driver shall move such driver's vehicle as soon as practicable off the traveled portion, median or ramp to a frontage road, the nearest suitable cross street or other suitable location to fulfill the requirement of section 42-4-1603.</p>	 <p>7200 S. Alton Way, Suite 400 Centennial, CO 80112</p>	<p>MOVE-IT. IT'S THE LAW</p> <p>MOVE ACCIDENTS FROM TRAFFIC</p>

<p>The Transportation Expansion (T-REX) Project is telling drivers that it's OK to get out of the way.</p> <p>MOVE-IT. IT'S NOT JUST A GOOD IDEA. IT'S THE LAW. Ever been involved in a minor traffic accident on the freeway? Rather than move your car off the road, you left it in a traffic lane until the police arrived? Don't feel bad if you have. Actually, it happens quite often in the metro Denver area. Unfortunately, it's against state law.</p> <p>Studies show that moving accidents quickly from traffic lanes is key.</p> <ul style="list-style-type: none"> • Traffic accidents – not volume – account for as much as 60% of all traffic delays. • For every minute an accident remains in a traffic lane, traffic is delayed for an average of five additional minutes. • The longer traffic is delayed, the more likely that secondary and more serious accidents will occur. <p>Even a tender bender or flat tire that only takes 10 minutes to clear can delay traffic for an entire hour. When this happens in T-REX country, this leads to more congestion, more frustration and longer commutes.</p>	 <p>It's OK to get out of the way. Police and insurance companies will not penalize you for moving your car off the road.</p> <p>State law requires motorists involved in a minor accident on a divided highway – including the T-REX corridor – to move their vehicles off the highway when</p> <ul style="list-style-type: none"> • the vehicle is drivable • no drugs or alcohol are involved and • there are no injuries <p>Once at a safe location, drivers can notify law enforcement and exchange information.</p>	<p>What to do if you are involved in an accident. While T-REX wants to keep traffic moving as smoothly as possible, safety is our most important goal. If you are involved in an accident, follow these four steps:</p> <ol style="list-style-type: none"> 1. Assess: <ul style="list-style-type: none"> • Check for injuries – If anyone is injured, call 911 immediately • Determine whether vehicles are drivable • Determine whether drugs or alcohol are involved 2. Move-It: <ul style="list-style-type: none"> • Move vehicles off the road to the nearest emergency pullout, highway shoulder or off-ramp shoulder 3. Notify: <ul style="list-style-type: none"> • Call 911 to alert them of the accident and your location – they will send a response team or tell you what to do 4. Report: <ul style="list-style-type: none"> • Exchange information including: name, address, phone number, driver's license number, make, model, color of vehicle, license plate number, insurance carrier and policy number using the attached cards • Report the incident as instructed by law enforcement and your insurance provider 	 <p>MOVE-IT. IT'S THE LAW!</p>
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Procedures for Working with the Media

Working with the media includes both on-scene procedures to be used in the event of an incident as well as proactive information to inform the general public of upcoming road closures, delays, etc. It is important to define the roles and responsibilities of each stakeholder in working with the media to support existing agency protocols, traveler information dissemination, and incident command.



The US 6 Incident Management Program (2001) developed a media packet for distribution to the local media. Below is an extract from that packet:

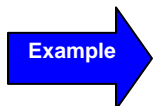
What is a Media Packet?

This media packet is intended to give the media a useful tool for obtaining information about how incidents are handled in the U.S. 6 corridor. In this booklet, you will find media contact phone numbers, maps showing where media staging areas could occur and maps showing how traffic would be detoured in the event of a major road closure.

On-scene Procedures

On-scene procedures focus on the activities related to working with the media during an incident. Who should coordinate the information and provide it to the media should be established in advance. The designation of a Public Information Officer (PIO) for the project is essential and may include designating spokespersons for different agencies depending on the nature of the incident, which agency is in command, and the types of questions anticipated. A table of agency PIOs with phone numbers and emergency contact numbers (pagers, cell phones, etc.) should be included in the response manual.

On more complex incidents with a large number of media responding, it is helpful to have predetermined staging areas. These staging areas should allow the media to safely set up and obtain information from an on-site PIO. Procedures and locations should be determined in advance and be clearly stated in the response manual and in the media packets that are provided to media personnel.

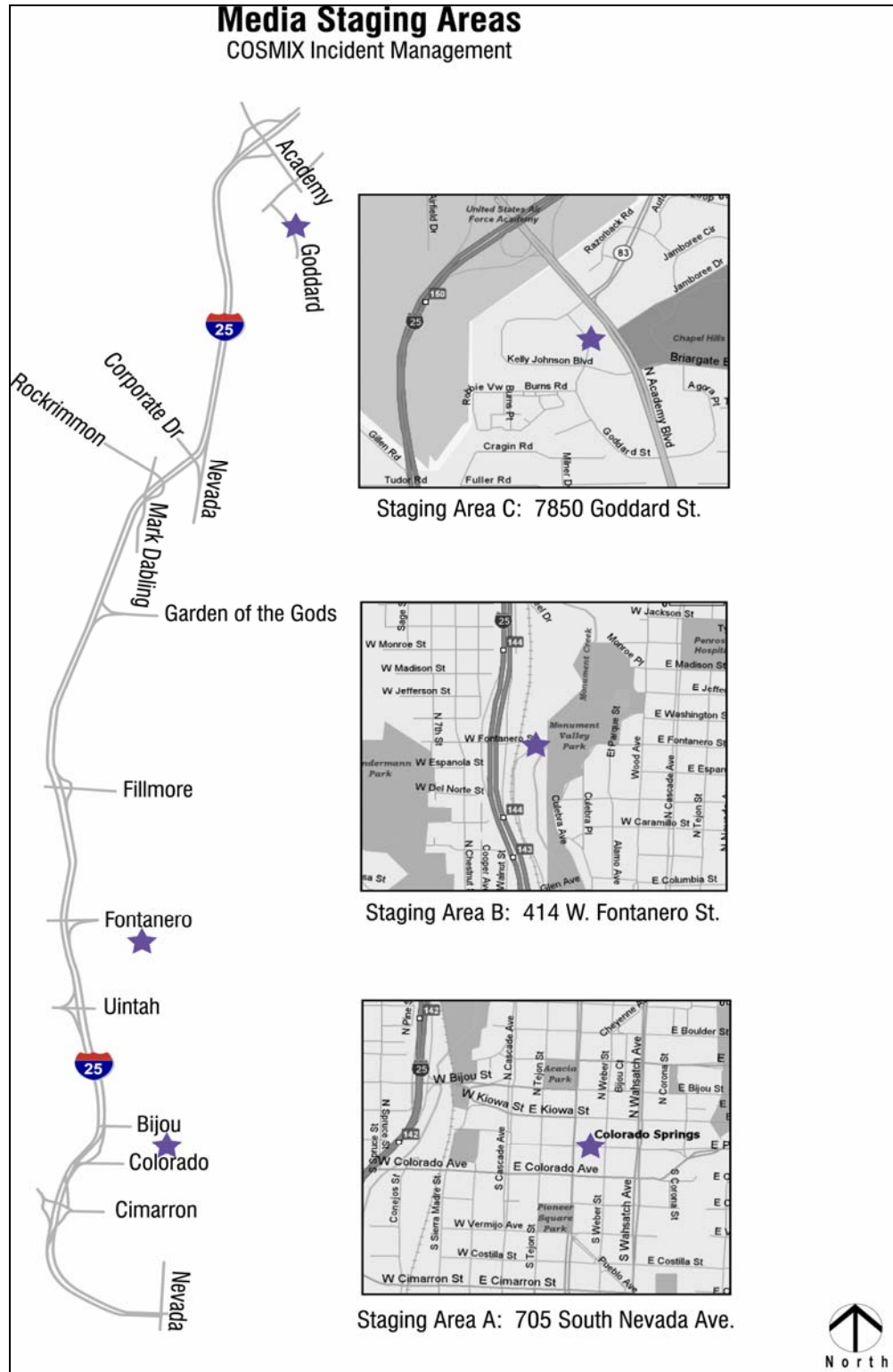


The following example is from the COSMIX Traffic Incident Management Program (2005):

Media Staging

At the discretion of the Incident Commander or the Public Information Officer, a media staging area can be designated to enhance coordination with the media, minimize impact to the interstate, and improve safety on-scene. If a media staging area is designated, a Public Information Officer should be dispatched to the media staging area to provide information updates to the media. The Incident Commander should notify the CSTMC that a media staging area has been designated and the location. The CSTMC and the CDOT TMC will notify the media of the designated staging area and direct them to respond to that location for further information from the on-scene PIO.

The following map shows the locations of predetermined media staging areas. These should be considered by the Incident Commander for possible staging areas.



VI. PREPAREDNESS

Training and Exercises

Training and exercises are a critical component to preparedness. Training and exercises can range from being as simple as reviewing the manual during scheduled briefings, to conducting occasional video training, to being as formal as conducting a full simulated scenario or tabletop exercise. “The purpose of a tabletop exercise is to encourage discussion among the stakeholders and to develop recognition of coordination and planning requirements.” (US DOT, Tabletop Exercise Instructions for Planned Events and Unplanned Incidents/Emergencies, November 2007). TIMPs are far more effective and efficient if they are periodically reviewed as opposed to being sidelined until an incident takes place. Whether a tabletop or simulated exercise is required for a project shall be determined by the CDOT Resident Engineer in the pre-construction phase.

It is imperative that all responding personnel are aware of the program and understand their specific role. All responders must be aware of all agreements made and the information provided in the response manual. Each stakeholder should be provided a copy of the response manual by the Contractor.



Example

The Colorado Department of Transportation (CDOT) sponsored a table top exercise at the Eisenhower/Johnson Memorial Tunnel (EJMT) on September 26, 2006. The purpose of the exercise was to test EJMT Tunnel incident command and communications. This included communications with a functional tunnel operations center and without the use of the tunnel operations center.

Objectives

The exercise had four objectives:

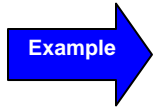
1. Test procedures in the Mountain Corridor Incident Management Program Response Manual for the Eisenhower Johnson Memorial Tunnels
 2. Practice establishing appropriate command structure for the incident
 3. Test communications between tunnel personnel and response agencies from Clear Creek County, Summit County, and the Colorado State Patrol
 4. Consider continuity of operations for the Tunnel Control Room
-

VII. ONGOING MANAGEMENT AND MAINTENANCE

The ongoing management and maintenance of the TIMP provides continuous refinement of the plan and its components. After Action Reviews (incident debriefings) and program evaluation and updates allow all stakeholders to review, refine, and enhance the plan.

After Action Reviews

After action reviews or incident debriefings provide an opportunity to review what worked and what can be improved for future incident management. A process for debriefings should be defined in the TIMP. A commitment from all stakeholders to participate in the debriefings is essential in making the TIMP more effective.



The following is an example of incident debriefing procedures developed for the COSMIX Traffic Incident Management Program (2005):

Guidelines for Incident Debriefings

It is recommended that the COSMIX Traffic Incident Management Coordinating Committee be convened for significant incidents that affect the COSMIX work zone. The Coordinating Committee will hold a formal debriefing for significant incidents occurring in the work zone and in particular the first two or more incidents. The purpose of these meetings will be to evaluate the decisions made and actions taken during the incident and to identify necessary revisions to the traffic incident management program.

Specific points of discussion should include, but not be limited to, 1) were the guidelines outlined in the Incident Response Manual followed; 2) were the actions and decisions made effective; 3) what limited the implementation of the Incident Response Manual's guidelines (e.g. lack of training, extenuating circumstances, lack of resources, communication problems, etc.); and 4) what changes are needed to improve the procedures. The agency serving as Incident Command for the incident should conduct the meeting and request that Rockrimmon Constructors notify the Coordinating Committee and other affected agencies prior to the meeting. Rockrimmon Constructors will provide documentation of the meeting in minutes or report format to be provided to all members of the Coordinating Committee.

In addition, any agency may request that the Incident Commander schedule a debriefing for a specific incident. Requests should be made within 24 hours following the incident. The Incident Commander will schedule the debriefing and contact all responding agencies. The debriefing should be held to constructively critique the decisions made and actions taken at an incident to determine if future responses need to be improved or if additional resources or procedures are needed. All crash reports and other emergency agency reports should be obtained prior to the scheduled debriefing.

Evaluation and Updates

Periodic evaluation and updates to the TIMP are vital to maintaining a dynamic and effective program. For projects that are relatively short in duration, they may require only minor changes in response to lessons learned from incident debriefings. Longer-term projects that last many months or even years will require a more extensive review and update process. A standardized schedule should be developed to ensure periodic evaluations and updates are conducted.

**Example**

The T-REX Traffic Incident Management Program (2001) outlined the following update process:

Update Process

The T-REX Project Incident Management Plan/Program (IMP) was developed in coordination with the existing DTC and South I-25 Plans and in conjunction with the City and County of Denver Public Works Department. The IMP for the T-REX project is recognized as an ongoing and interactive process. Two components of the IMP are the methodology for soliciting input on the effectiveness of the plan as implemented, and a process for periodic updating to the project IMP.

Input and review

Ongoing institutional input and review are important to ensure that the procedures of the IMP remain effective in meeting the objectives of:

- Incident detection and verification
- Timely response
- Effective site management
- Site clearance
- Motorist information

The forum for SECC to receive IMP input include:

1. Biannual IMP coordination meetings with IMP steering committee members. These meetings will begin in January of 2002 and will be held biannually through 2003 (or as determined by the committee).
2. At debriefings held within [7 days] of any major incident.
3. Solicited written comments received after the first Level 3 incident.
4. Ongoing communication with public information emergency responder liaison.

Updates

The IMP will be contained in three ring binders with each page inserted into individual clear plastic page holders. Input that leads to IMP changes or updates will be distributed as page revisions in the following manner:

- A “T-REX IMP Update” notification will be emailed or faxed to the contact person for each recorded IMP volume. An electronic copy of the revised

page, along with replacement instructions will be attached to the email message or fax.

- A “T-REX IMP Update Log” with section, page number and revision date will be maintained and mailed as needed to each contact person along with an additional hard copy of the revised pages.
 - Each biannual meeting will include a review of the previous period’s IMP page revisions.
-

Performance Measures

In order to effectively evaluate and revise a program, performance measures should be developed that reflect the specific goals and objectives of the program. For example, if quick clearance is a goal, the performance measures should reflect this goal and accurately determine how long it takes to respond to and clear an incident. These performance measures and how they are to be evaluated should be clearly stated in the TIMP by the Contractor and will need to be approved by the Project Engineer prior to use. Performance measures encourage the Contractor to deliver and document effective traffic incident management. CDOT has developed a Specification for Traffic Incident Management that requires the development of performance measures.

Through the TIM Focus States Initiative, FHWA is working on defining and using TIM performance measures. Three initial measures are being considered for broader application and provide a basis for developing performance measures for work zone TIM programs.

Roadway clearance time

This is the time between the first recordable awareness (detection/ notification/ verification) of an incident by a responsible agency and first confirmation that all lanes are available for traffic flow.

Incident clearance time

This is the time between the first recordable awareness and the time the last responder has left the scene.

Number of secondary crashes

This calculates the number of incidents for which a response or intervention is taken, where a collision occurs either a) within the incident scene, or b) within the queue (which could include opposite direction) resulting from the original incident.

Other performance measures might include response time (the time required for responders to reach the incident scene after initial detection or notification) or notification time (the time required for on-scene Contractor personnel to report an incident).

Performance measures should be based on the specific goals of the program and must be measurable, either quantitatively or qualitatively. Quantitative measures are generally more objective and more easily documented. Each performance measure should be clearly defined and the process for measuring and reporting performance should be outlined in the program document and approved by the Project Engineer.

Appendix A: Sample Strategy Matrix

Strategy	Description	Application
<i>General cell phone*</i>	Use of cell phones by motorists to report highway incidents to 911	Detection and verification
<i>Special incident cell phone</i>	A special cell phone number for reporting incidents helps keep general 911 lines open for other emergency calls	Detection and verification
<i>Volunteer spotters</i>	Volunteer spotters are those who are identified and trained to provide information by radio or cell phone regarding freeway incidents.	Detection and verification
<i>Agency and transit "probes"</i>	Transit and shuttle drivers would be trained to provide accurate and timely reports of incidents. Similar to volunteer spotters, they use cell phones, or relay information through their dispatchers.	Detection and verification
<i>Automated vehicle identifiers</i>	In-vehicle identifiers placed in vehicles that travel the corridor regularly. Locators along the corridor track their location and this information is compared against anticipated travel times to identify delay and potential incidents.	Detection and verification
<i>Weather stations*</i>	Weather monitoring and forecasting equipment improves detection of and response to weather related incidents.	Detection and verification; response
<i>24 hour patrol*</i>	Around the clock law enforcement patrol enhances detection, response and site management with dedicated officers available at all times in the corridor.	Detection and verification; response; site management
<i>Peak period motorcycle patrol</i>	Peak period motorcycle patrol provides accurate reporting of incidents; responsive site management; and more accurate requests for resources.	Detection and verification; response; site management
<i>Aircraft patrol</i>	Aircraft patrol provides another opportunity for surveillance of roadway conditions for incident detection, verification and response.	Detection and verification; response
<i>Dedicated service patrols*</i>	Service patrols along I-25 provide early detection, verification and response. Patrol vehicles are equipped to help stranded motorists and quickly remove a disabled vehicle from the roadway.	Detection and verification; response; clearance
<i>Closely spaced milepost markers</i>	Closely spaced, clearly visible milepost markers increase the accuracy of incident reports by by-passers or others by increasing the opportunity to correctly identify the location of an incident. This improves incident verification and response, and needs to be linked to a public education program.	Detection and verification

Strategy	Description	Application
<i>Automated detection</i>	Detectors, including loops, microwave and video detection, can be used to detect congestion on the freeway. Detection can be used with equipment to notify response agencies of changes in traffic flow that indicate congestion and a potential incident.	Detection and verification
<i>Video surveillance*</i>	Video equipment, mounted along the freeway, provides detection, verification and improved response and site management. Video equipment can be combined with automated detection and reporting. Video can be used to verify the occurrence of an incident and identify the appropriate response equipment needed. Video surveillance is also useful in site management for incidents that restrict access, such as hazardous materials incidents.	Detection and verification; response; site management; motorist information
<i>Call boxes</i>	Call boxes are dedicated emergency phones located along the freeway to allow stranded motorists access to assistance and to provide phone service to witnesses or by-passers.	Detection and verification
<i>Public education program*</i>	Comprehensive public education programs help the public understand the how incidents should be reported and responded to. An informed public is more helpful in allowing effective site management and clearance.	Detection and verification; response; clearance; motorist information
<i>Personnel resource list</i>	A prepared list of personnel resources improves the timely response of appropriate personnel for various incident types.	Response; clearance; site management
<i>Equipment/materials resource list</i>	A prepared list of equipment and materials resources improves the timely response of appropriate equipment for various incident types.	Response; clearance; site management
<i>Pre-planned alternate routes*</i>	Alternate route planning is a key aspect of response, site management, clearance and motorist information. Pre-established detour routes provide quick removal of the traffic, allowing easier access to the site by emergency response personnel, easier and more effective site and incident management, and clear, definitive information to motorists to use an alternative route.	Response; clearance; site management; motorist information
<i>Alternative emergency response access routes</i>	Emergency equipment that needs to reach the scene of an accident, get to another emergency, or gain access to an emergency treatment facility will need to be given alternative access when an incident closes or severely congests a facility. Alternative emergency response access routes and pre-planned routes provide this.	Response; clearance; site management

Strategy	Description	Application
<i>Construction traffic control Protocols</i>	Predetermined protocols for changing lane configurations and detours that address minimum requirements and notification procedures	Response; clearance; site management; motorist information
<i>Incident Response Manual*</i>	An Incident Response Manual, available to emergency response personnel, provides clear guidelines and information for responding to an incident, managing an incident, and informing the public. Much of the information necessary for quick response and incident management is predetermined, including guidelines, and pre-planned alternative routes, and general response information, reducing the time and resources needed to address these issues during an incident.	Response; clearance; site management; motorist information
<i>Communication protocols</i>	Radio communication between agencies is enhanced with predetermined frequency assignments, lists of agency channel access, and interagency communication protocols.	Response; clearance; site management; motorist information
<i>Interagency training program</i>	Training programs can reduce response and clearance time by ensuring that personnel are trained to respond quickly and effectively. They enhance site management by providing a common understanding of the incident command system and program guidelines. Personnel training can improve motorist information by assuring a pre-established information dissemination procedure and designated personnel.	Response; clearance; site management; motorist information
<i>Equipment storage sites</i>	Equipment storage sites provide quick access to necessary equipment, improving both incident response and site management.	Response; clearance; site management
<i>Defined traffic control techniques*</i>	Defined traffic control techniques provide clear guidance for incident traffic control and allow safe and efficient deployment of closures, detours and alternative routes.	Response; clearance; site management; motorist information
<i>Mobile Command Post*</i>	A mobile Command post provides a well-equipped incident command post on scene. Common radio frequencies with tactical and command channels should be available.	Site management; motorist information
<i>Identification vests</i>	Identification vests provide easy identification of various incident command and emergency response personnel. The vests can also be used for access limitations within certain perimetered areas.	Site management

Strategy	Description	Application
<i>Flashing lights guidelines*</i>	Flashing lights on equipment on-scene provide for the safety of personnel. They can also impact the flow of traffic through visual distractions and increased confusion. Flashing lights guidelines that minimize the use of flashing lights while maintaining a safe site for response personnel can improve safety for responders and the public.	Site management
<i>Pre-determined staging areas</i>	Pre-determined staging areas improve site management by establishing apparatus staging areas for each segment of freeway. These reduce confusion on staging and improve equipment response. Pre-determined staging areas can also be developed for media staging.	Site management
<i>Incident response teams</i>	Pre-determined incident response teams can be identified from the various response agencies to streamline site management and incident response.	Site management
<i>Incident management review team</i>	An Incident Review Team provides increased coordination and evaluation of each of the phases of an incident. A standing team of incident response professionals who are regularly involved in COSMIX incidents would meet to review major incidents and identify opportunities to improve incident detection and verification, response, site management, clearance and motorist information.	Site management; detection and verification; response; clearance; motorist information
<i>Travel on shoulder guidelines</i>	The highway shoulders are available for emergency use for response vehicles and general traffic. Guidelines for their use can assist in site management, response and clearance.	Site management; response; clearance
<i>Closure and alternate route guidelines</i>	In addition to pre-determined routes and traffic control, guidelines should be determined for the implementation of these to ensure their appropriate and effective use.	Site management; clearance
<i>Rapid vehicle removal guidelines*</i>	Colorado State law requires immediate removal of vehicles from the highway if they are not involved in an injury or alcohol-related accident. Extended enforcement of this law would enhance incident clearance and return the roadway to traffic.	Clearance; site management
<i>Landing zone guidelines</i>	Established guidelines and predetermined landing sites for med-evac helicopters	Site management; clearance
<i>Air bag systems</i>	Inflatable air bag systems used for the rapid removal of overturned vehicles, including commercial vehicles.	Clearance; site management
<i>Total station surveying equipment</i>	Surveying equipment outfitted with global positioning equipment used to quickly document the location of critical accident reporting and reconstruction information and return the roadway to traffic.	Clearance; site management
<i>Push bumpers*</i>	Emergency response vehicles equipped with push bumpers can quickly and easily push disabled vehicles to the side of the road without incurring additional damage to the vehicle.	Clearance

Strategy	Description	Application
<i>Accident investigation sites</i>	Pre-established investigation sites provide an alternative to the travel way or shoulder for accident investigation and reporting. These areas should be identified in advance and allow adequate space for movable vehicles and investigation personnel. These can be designed with screening devices to further reduce impact on traffic.	Clearance; site management
<i>Traffic signal control plans</i>	Pre-established traffic signal control plans can be used to quickly implement alternative routes and close impacted lanes on the Interstate. Traffic responsive equipment will ensure the most efficient use of roadways for the existing traffic demand.	Clearance
<i>Ramp metering</i>	Ramp metering controls the access of vehicles to the interstate. These could be used in conjunction with alternate routes to encourage the use of other highways.	Clearance
<i>Incremental lane opening guidelines</i>	Guidelines for opening lanes quickly, as they become available and safe to open, encourage returning lanes to travel as soon as possible.	Clearance; site management
<i>Actuated or static trailblazers</i>	Pre-installed trailblazers with an actuated message/arrow can reduce the time necessary to set up detour routes.	Clearance; motorist information
<i>Media interface guidelines</i>	One of the best sources of motorist information is the media. Improved media ties that provide fast, accurate information to the media will improve information dissemination to the traveling public.	Motorist information
<i>Traffic reporting services</i>	Traffic reporting services provide a link between agencies and the broadcast media. Protocols for interactions with these services should provide guidance for involving them in informing the public.	Motorist information
<i>Broadcast radio</i>	Agreements with broadcast radio stations can ensure that information is provided in a pre-established format within specific time frames. Cooperating radio station call numbers can be posted on actuated or variable message signs.	Motorist information
<i>Cable television</i>	Cooperative agreements can be developed with cable television stations to provide information to targeted populations (e.g. local government channels).	Motorist information
<i>Highway Advisory Radio</i>	AM stations that provide traveler information in the immediate vicinity of the transmitter. Activated signing is used to notify motorists that traffic/roadway information is being broadcast.	Motorist information
<i>Internet*</i>	Internet and kiosk facilities inform the public of highway conditions before they leave. Internet sites and links to existing sites provide easy access.	Motorist information

Strategy	Description	Application
<i>Mass fax*</i>	The CTMC currently faxes road closure information to truck stops, weigh stations, media outlets and others. The lists associated with I-25 incidents can be expanded and targeted based on incident level.	Motorist information
<i>Dedicated information phone number</i>	A publicized information phone number with project and incident information.	Motorist information
<i>Variable message signs*</i>	Permanent and movable variable message signs are used to provide timely, accurate information in advance of, and at the scene of an incident.	Motorist information; clearance

Appendix B: Procedural Directive 1510.1

COLORADO DEPARTMENT OF TRANSPORTATION		<input type="checkbox"/> POLICY DIRECTIVE <input checked="" type="checkbox"/> PROCEDURAL DIRECTIVE	
Subject			Number
PROMPTLY REOPENING ROADWAY TO TRAFFIC			1510.1
Effective	Supersedes	Originating office	
12/12/95		Program Office for the Intelligent Transportation System	

PURPOSE

To provide guidance to CDOT personnel to facilitate the removal of vehicles, motorized vehicles, cargo, and debris from the highway rights of way that block or partially block a roadway or travel lane in the interest of preserving public safety as the highest priority and accommodate normal traffic flow.

AUTHORITY

Executive Director
C.R.S. 42-4-1803(2)

This procedural directive is consistent with the objectives of the Transportation Commission and its existing policies in the areas of Safety, Partnership, and Management of the System.

BACKGROUND

Roadways or travel lanes that are closed or partially blocked due to motorized vehicle and vehicle accidents, spilled cargo/debris from motorized vehicles and vehicles cause traffic delays and contribute to secondary accidents and safety problems. CDOT Region Transportation Directors (RTDs) or their representative(s) are authorized to remove vehicles, cargo, and debris in the course of their regular duties. However, approval from the law enforcement agency in authority is required in order to remove motorized vehicles to clear/reopen the roadway as soon as possible.

This policy recognizes that public safety is the highest priority and must be secured. It is understood that damage to vehicles, motorized vehicles, and cargo may occur as a result of clearing the roadway on an urgent basis. While reasonable attempts to avoid such damage will be taken, the highest priority is to clear traffic lanes that will provide for public safety.

DEFINITIONS

Cargo: Any freight or goods not classified as hazardous materials carried or transported by a vehicle or motor vehicle.

Debris: Any scattered remains or fragments of transported cargo that has spilled onto the highway right of way.

SUBJECT	NUMBER
PROMPTLY REOPENING ROADWAY TO TRAFFIC	1510.1

Law Enforcement: The law enforcement agency that has jurisdictional authority for the roadway in question.

Motor Vehicle: Any self propelled vehicle which is designed primarily for travel on the public highways and which is commonly used to transport persons and property over the public highways.

Roadway: That portion of a highway improved, designed, or ordinarily used for vehicular travel, exclusive of the sidewalk, berm, or shoulder. In the event that a highway includes two or more separate roadways, "roadway" refers to any such roadway separately but not to all roadways collectively.

Traffic Incident: Includes non-recurring events such as stalls, accidents and other vehicular problems resulting in closed or partially blocked roadways or travel lanes that cause backups and congestion and the potential for the occurrence of secondary accidents.

Vehicle: Any device that is capable of being moved from place to place upon wheels or endless tracks but "not" self-propelled.

PROCEDURE

Detection

1. The law enforcement officer in charge of the traffic incident scene will make the decision as to whether or not to call for commercial help or assistance from CDOT to clear travel lanes.
2. If CDOT personnel happen to be the first party to arrive at the traffic incident scene involving motor vehicles, they will contact the appropriate law enforcement agency and follow their instructions to initiate clearing the roadway, controlling traffic, and if needed, establishing necessary detours around the incident scene.
3. CDOT personnel will, if they are able, stop and offer assistance to law enforcement officers and commercial service groups at the scene of an incident should they observe the event.

Response

1. The RTDs, or their representative(s) are to assign the necessary equipment and manpower to provide traffic control and/or reopen the roadway or lane as soon as practicable.
2. It is recommended that appropriate warning devices (variable message signs, arrow boards, barricades, etc.) be brought to the scene to facilitate the temporary roadway or

SUBJECT	NUMBER
PROMPTLY REOPENING ROADWAY TO TRAFFIC	1510.1

lane closure and maintain traffic flow if possible. Traffic control devices will remain at the scene should the damaged vehicle(s) or cargo temporarily remain adjacent to a shoulder.

Clearing the Roadway

1. The RTD, or his representative(s), has the authority under C.R.S. 42-4-1803(2), to remove cargo and debris from the roadway without approval from law enforcement to insure the safety of the travelling public in the scope of their regular duties. However, the RTD, or his representative, does **not** have the authority to remove motor vehicles from the roadway without **prior** approval from the law enforcement officer with appropriate jurisdictional authority over the accident or highway.
2. Trailers are classified as vehicles, except when they are hitched to a motor vehicle; they are then are to be treated as a motor vehicle. Should the trailer become unhitched during the incident from the motor vehicle, the trailer would then be treated as a vehicle.
3. Due to the complex nature of trying to clear/reopen the roadway in as expedient a manner as practicable, the RTD, or his representative(s), is encouraged to enter into written inter-agency agreements with the appropriate law enforcement agencies that set forth the procedures that will be followed by that law enforcement agency and CDOT personnel.

Agreements should be entered into in order to simplify the motor vehicle removal process, but not to serve as a blanket approval. The authority to remove motor vehicles from the roadway should be sought on a case-by case basis in accordance with the written agreement. Oral approval is sufficient as long as the agreement with the respective agency provides that written directives are not required. It is imperative that the Department follow the procedure set forth in the agreement. The agreement should include but not be limited to the following:

- a. Exactly what rank officers (i.e. trooper, Sgt., Lt., Capt., etc.) from the law enforcement agency are authorized to approve the removal of motor vehicles by CDOT personnel;
 - b. Whether an approval by phone or radio is acceptable, and if so, under what circumstances;
 - c. Whether an on-site oral approval is acceptable, and if so, under what circumstances;
 - d. Specific procedures for written confirmation of the approvals.
4. If a police officer with the appropriate jurisdiction requests CDOT personnel to remove a motor vehicle, the employee should do the following: follow up the removal as soon as possible with a written notation in their diary and advise their supervisor.

<p>SUBJECT PROMPTLY REOPENING ROADWAY TO TRAFFIC</p>	<p>NUMBER 1510.1</p>
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5. CDOT personnel may provide assistance at the traffic incident scene to the on-scene law enforcement officer and the commercial help when available.
6. If cargo being transported is spilled or dumped on travel lanes, the RTD, or his representative(s), is advised to take due care in first making sure that the cargo is not hazardous or flammable material. All non-hazardous cargo will be relocated in as short a distance as possible, but not be placed so as to present a traffic hazard.

Hazardous/Flammable/Exploding Materials

No attempt is to be made by CDOT personnel/equipment to move any hazardous or flammable explosive material or materials thought to be such for any reason. If CDOT is first on scene and the cargo content is not readily identifiable, the RTD, or his representative(s), will contact the proper authorities to ascertain if special measures should be taken.

If hazardous material is suspected, the State Patrol, or law enforcement agency with appropriate jurisdiction, shall be notified. CDOT personnel should be aware of hazardous material notification placards.

7. The RTD, or his representative(s), may prepare a list of the personnel and equipment used and the work hours and rates involved so that the owner of the cargo, vehicle, motor vehicle can be billed for cleanup and removal costs.

FISCAL IMPACT

No additional fiscal impact is expected through the implementation of this procedure.

REVIEW DATE

This procedure shall be reviewed in June, 2000.

(signature on file)
 Chief Engineer, _____ Date

Appendix C: References

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Appendix D: List of Acronyms

CCTV	Closed-Circuit Television
CDOT	Colorado Department of Transportation
CFR	Code of Federal Regulations
CRS	Colorado Revised Statutes
CSP	Colorado State Patrol
CTMC	Colorado Transportation Management Center
DERA	Designated Emergency Response Authority
DMS	Dynamic Message Sign
EMS	Emergency Medical Services
FHWA	Federal Highway Administration
GIS	Geographic Information System
GPS	Global Positioning System
HAR	Highway Advisory Radio
HAZMAT	Hazardous Materials
HOV	High Occupancy Vehicle
IC	Incident Command
ICP	Incident Command Post
ICS	Incident Command System
IIMS	Incident Information Management System
ITE	Institute of Transportation Engineers
ITS	Intelligent Transportation Systems
LZ	Landing Zone
MHT	Method of Handling Traffic
MUTCD	Manual on Traffic Control Devices
NIMS	National Incident Management System
NIOSH	National Institute for Occupational Safety and Health
NTP	Notice to Proceed
NTCIP	National Transportation Communications for ITS Protocol
NTIMC	National Traffic Incident Management Coalition
NUG	National Unified Goal
OEM	Office of Emergency Management
PIO	Public Information Officer
PSAP	Public Safety Answering Point
RWIS	Road Weather Information System
PD	Policy Directives
SOP	Standard Operating Procedure
TIM	Traffic Incident Management
TIMP	Traffic Incident Management Plan
TMC	Transportation Management Center
TMP	Transportation Management Plan
TOC	Transportation/Traffic Operation Center
TOP	Transportation Operations Plan
TSM	Traffic System Management
TTC	Temporary Traffic Control
VMS	Variable Message Sign
WZSM	Work Zone Safety and Mobility