

ARIZONA



— DEPARTMENT OF —
TRANSPORTATION

Implementation Guidelines for Work Zone Safety and Mobility

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Implementation Guidelines for Work Zone Safety and Mobility

PREFACE

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Supersedes: September, 2021

Pursuant to 23 CFR 630 Subpart J and K

Arizona Department of Transportation Work Zone Safety and Mobility Policy, Processes,
Guidelines, and Procedures

ADOT practices achieve the intent of this Rule through our policy, processes, guidelines, and
procedures. These guidelines will expand/enhance existing practices currently in place.

Primary responsibility for responding to questions and Revisions of this document is the Arizona
Department of Transportation (ADOT)
(602) 712-2212

Contents

Introduction to Users

Chapter 1

Work Zone Safety and Mobility Committee

- 1.1 Work Zone Safety and Mobility Committee
- 1.2 Work Zone Safety and Mobility Committee Framework
- 1.3 Work Zone Safety and Mobility Committee Members
- 1.4 Committee Chair
- 1.5 Purpose of Committee
- 1.6 Committee Procedures

Chapter 2

Work Zone Safety and Mobility Policy

- 2.1 Purpose
- 2.2 Scope
- 2.3 Authority
- 2.4 Definitions
- 2.5 Incident
- 2.6 Mobility
- 2.7 Significant Project
- 2.8 Transportation Management Plan (TMP)
- 2.9 Work Zone Safety
- 2.10 Policy

Chapter 3

Significant Project

- 3.1 Definition of a Significant Project
- 3.2 ADOT Process for Defining a Significant Project

Chapter 4

Work Zone Safety and Mobility Process, Guidelines, and Procedure

- Figure 4.a ADOT's Work Zone Safety and Mobility Continuous Improvement Process
- Table 4 Work Zone Safety and Mobility Process, Guideline and Procedure Map

Implementation Guidelines for Work Zone Safety and Mobility

Chapter 5 Transportation Management Plan (TMP)

- 5.1 All Projects
- 5.2 Significant Projects
- 5.3 Exemptions

Chapter 6 Work Zone Impact Assessment

- 6.1 Work Zone Impact Assessment Tools
- 6.2 Incident Management

Chapter 7 Work Zone Training

Chapter 8 Program Reviews

- 8.1 Program Review Stages
- 8.2 ADOT's approach for FHWA Work Zone Self-Assessment
- 8.3 Work Zone Crash Review

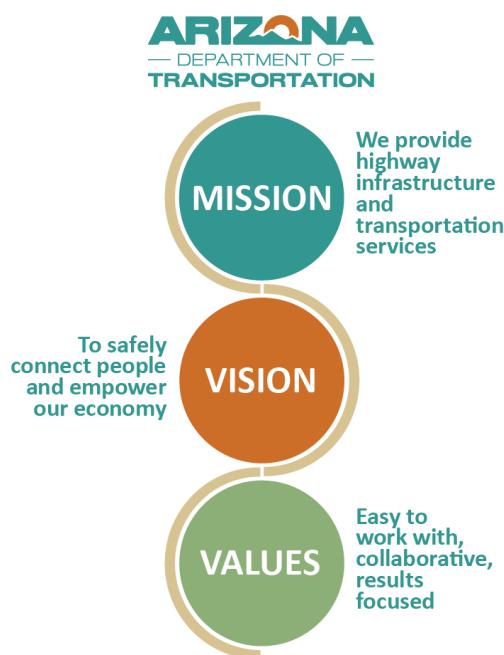
Chapter 9 23 CFR 630 Subpart K Compliance

Introduction to Users

In September 2004, the Federal Highway Administration (FHWA) published updates to the work zone regulations at 23 CFR 630 Subpart J referred to as Work Zone Safety and Mobility Rule (herein referred to as the Rule). In December 2007, FHWA added new regulations at 23 CFR 630 Subpart K referred to as the Temporary Traffic Control Devices Rule. Both are applicable to all Federal-Aid Highway Projects with the intent to improve road user and workers exposed to motorized traffic. The Rule was effective October 12, 2007, and Subpart K was effective on December 4, 2008. Both Subparts J and K were updated effective December 2, 2024.

These guidelines describe how ADOT has and will continue to improve Work Zone Safety and Mobility (WZSM) by identifying if projects are “significant” for all projects added to ADOT’s Five-Year Transportation Facilities Construction Program. These guidelines are referred to as the “Five-Year Program,” cycle based on the criteria defined in ADOT’s WZSM Policy. The use of the term “significant” within this document is always in reference to WZSM and as defined in our Policy ENG 07-3. All projects will be continually re-evaluated and assessed for work zone impacts from Pre-Design through Design, Construction and Maintenance phases.

The Rule broadens some aspects of work zones in the CFR and identifies key areas where States have an opportunity to develop and strengthen their current methods for providing mobility through work zones while maintaining a safe and efficient work environment for highway workers. In response to the requirements of the Rule, ADOT WZSM Policy ENG 07-3 was developed. The policy describes the importance of the Rule and ADOT’s commitment to comply with the Rule. The policy also explains that ADOT will develop guidelines for implementation of the Rule on all ADOT projects, which is the purpose of this document.



Chapter 1

Work Zone Safety and Mobility Committee

1.1 Work Zone Safety and Mobility Committee

A team was established in 2007 to define, document and implement the Rule (23 CFR, Part 630, Subpart J and K). The committee has cross-functional representation throughout ADOT.

1.2 Work Zone Safety and Mobility Committee Framework

Starting in calendar year 2018, ADOT established a standing Work Zone Safety and Mobility Committee (WZSMC) with the Deputy Director for Transportation/State Engineer as the sponsor. The Committee is made up of ten voting members, which provide cross functional representation across the agency's business functions.

1.3 WZSMC Members

The discipline areas that have voting members on the committee are:

1. Committee Chair
2. Construction
3. Development
4. Districts
5. Traffic Standards
6. Regional Traffic
7. Traffic Operations Center
8. Traffic Safety
9. Communications
10. Multi-Modal Planning Division

All of these representatives are selected by the division/district/group manager responsible for those areas except for the Traffic Standards representative, which is the ADOT Traffic Standards Engineer from the Department's Traffic Group. The State Engineer may add or remove voting representatives at any time. The Committee Chair may add or remove voting members, but must initiate a vote and receive a majority of voting members present in favor of that action. If a voting member is unable to attend a committee meeting, they may appoint someone to represent them at the meeting. The Committee may appoint non-voting representatives to serve as advisors.

1.4 Committee Chair

The Committee Chair is one of the District Administrators / Engineers or Development Group Managers and is selected by the State Engineer. The Committee Chair is selected to a two-year term with no limits on the number of consecutive terms.

1.5 Purpose of Committee

Implementation Guidelines for Work Zone Safety and Mobility

The Committee is responsible for the continuous improvement of work zone safety and mobility, primary responsibilities include:

- Conducting and Delivering the Work Zone Program Review by December 31st, 2030, and every 5 years thereafter.
- Implementing the recommendations resulting from the most recent Program Review.
- Updating the Work Zone Safety and Mobility policy, ENG 07-3.
- Implementing continuous improvements.

These responsibilities are accomplished by:

- Reviewing recent work zone data.
- Identifying and discussing work zone safety and mobility-related issues at a program level.
- Identifying potential improvements.
- Establishing action plans to implement those improvements.
- Empowering Committee members to propose changes to processes, standards, and/or guidelines within their areas through the ADOT Standards Committee process.
- Reviewing work zone practices to evaluate implementation.

1.6 Committee Procedures

The WZSMC's role is to create/update procedures to complete the Work Zone Safety and Mobility Program reviews, update Work Zone Safety and Mobility Policies, Processes, and Procedures and Implementation Guidelines and implement improvements/recommendations. The Committee has also established timeframes for the completion of tasks, including organizing the timing and frequency of committee meetings. The Committee makes decisions based on majority votes. The State Engineer may veto any decisions.

Chapter 2

Work Zone Safety and Mobility Policy



TRANSPORTATION POLICIES AND PROCEDURES

ENG 07-3 Work Zone Safety and Mobility Policy

Effective: August 11, 2025

Supersedes: ENG 07-3 (August 22, 2022)

Review: August 11, 2027

Page 1 of 4

PURPOSE

The purpose of this document is to define the policy requirements and expand on existing guidance and requirements for systematically considering and managing work zone safety and mobility impacts on Arizona Department of Transportation (ADOT) administered projects.

SCOPE

This policy applies to all construction, maintenance and procurement projects determined by ADOT to be a *significant project* as defined in this policy.

AUTHORITY

Current Federal Highway Administration (FHWA) regulations in this area are provided through 23 CFR 630 Subpart J *Work Zone Safety and Mobility Rule* (§630.1002 through §630.1016) and 23 CFR 630 Subpart K *Temporary Traffic Control Devices Rule* (§630.1102 through §630.1110). Arizona Revised Statutes (ARS) §28-332 *Department of Transportation, Jurisdiction, Duties, Divisions* gives ADOT exclusive control and jurisdiction over state highways and routes. ARS §28-652 *State Highway Work Zones; Definition* sets ADOT's authority to adopt standards and specifications for traffic control and mobility in state highway work zones. ARS §28-710 *State Highway Work Zone Safety; Civil Penalty; Fund* allows a civil penalty for exceeding speed limits in work zones when workers are present.

DEFINITIONS

Incident	An Incident is any non-recurring event that causes a reduction of roadway capacity or an abnormal increase in demand. Such events include traffic crashes, disabled vehicles, spilled loads, highway construction and
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Implementation Guidelines for Work Zone Safety and Mobility

maintenance activities and special events (e.g., sporting events, concerts, parades).

Mobility

Mobility is the ability to move from place to place and is significantly dependent on the availability of transportation facilities and system operating conditions. With specific reference to work zones, mobility pertains to moving road users efficiently through or around a work zone area – with delay minimized compared to baseline travel when no work zone is present – while not compromising the safety of highway workers or road users. The commonly used performance measures for assessing mobility include: delay, speed, travel time, travel time reliability performance indicators, and queue lengths.

Significant Project

A significant project is one that, alone or in combination with other concurrent projects nearby, is anticipated to cause sustained work zone impacts on roadway operations (safety and mobility) that are greater than what is considered tolerable based on State policy and engineering judgment. In addition, all interstate system projects within the boundaries of a designated Transportation Management Area that require intermittent or continuous lane closures for 3 or more consecutive days shall be considered Significant Projects.

Transportation

Management Area

Per the Federal Transit Administration (FTA) and FHWA, all urbanized areas with populations greater than 200,000 as determined by the 2020 Census are designated as Transportation Management Areas.

Transportation Management Plan (TMP)

The Transportation Management Plan consists of strategies to effectively manage the work zone impacts of a project. Its scope, content and degree of detail may vary based upon the agency's work zone policy and the agency's understanding of the expected work zone impacts of the project. The TMP may consist only of a Temporary Traffic Control Plan and Emergency Vehicle Access Plan and may add a Transportation Operational and Public Information components/documents dependent upon if the project is considered Significant. On Significant Projects, the TMP will define the roles and responsibilities of the project stakeholders prior to and during construction.

All projects will include:

1. Temporary Traffic Control Plan (TTC)
2. Emergency Vehicle Access Plan (EVAP)

Significant Projects will also include:

1. Transportation Operational (TO) component
2. Public Information (PI) component

Work Zone Safety

Minimizing potential hazards to road users and highway workers in the vicinity of a work zone is the definition of Work Zone Safety. Measures for work zone safety are the number of crashes or the consequences of crashes (fatalities and

Implementation Guidelines for Work Zone Safety and Mobility

injuries) at a given location or along a section of highway during a specific period of time.

POLICY

ADOT will :

- A. Assess work zone impacts during project development and manage safety and mobility during project implementation as outlined in these procedures.
- B. Use field observations, work zone crash data, operational information and public feedback to manage work zone impacts for specific projects during implementation of the policy. This is done to continually pursue safety and mobility improvements in work zones by analyzing work zone crashes and operational data from multiple projects to improve State processes and procedures.
- C. Require competent personnel for the development, design, implementation, operation, inspection, and management of work zones and traffic control appropriate to their position decision-making authority. Competency may include professional registration and experience in accordance with ARS and the Arizona Board of Technical Registration (AzBTR) Rules or a combination of education, experience and specialized training, such as courses taken through the National Highway Institute (NHI) or the American Traffic Safety Services Association (ATSSA). Enforcement duties shall be restricted to sworn officers in accordance with ARS §38-1101.
- D. Perform a Program Review by December 31, 2030, and every five years thereafter to evaluate and improve work zone processes and procedures with the intent to increase safety and mobility per 23 CFR 630 Subpart J, paragraph 630.1016. A program review is a data-driven, systematic and holistic analysis that uses quantitative and qualitative data from different sources to assess the safety and mobility performance of work zones in order to identify improvements to work zone processes and procedures.
- E. Identify a project as a Significant Project before scoping is complete. This determination is based on a project's characteristics, and the magnitude and extent of the anticipated work zone impacts.
- F. Develop TMPs in consultation with both internal and external stakeholders as determined by the project characteristics and the traffic control requirements identified for the project. A Request for Exemption (for a TMP) may be completed and submitted to FHWA. For an Interstate system project or categories of Interstate system projects that are classified as 'significant,' but do not cause sustained work zone impacts, ADOT may request an exception from their Local Federal Highway Administration Division Office Per 23 CFR 630 Subpart J, paragraph 630.1010(d).
 1. For **Significant Projects**, the TMP should include:
 - a. A TTC describing measures designed to facilitate road users' travel through the work zone. The plan must be consistent with Part 6 of the Manual on Uniform Traffic Control Devices

Implementation Guidelines for Work Zone Safety and Mobility

(MUTCD), the Arizona Supplement to the MUTCD, ADOT Traffic Guidelines and Processes (TGP) and the ADOT Temporary Traffic Control Design Guidelines.

- b. A TO component that identifies strategies for mitigating the impacts of the work zone on the operation and management of the transportation system. This component may include demand management, corridor/network management, safety management, enforcement, and work zone traffic management. Incorporate TTC using Integrated Traffic Systems (ITS).
 - c. A PI component that includes outreach and communication strategies designed to inform the traveling public, area residences and businesses, appropriate public entities and other stakeholders about the project and the expected work zone impacts. The selected communication method(s) should convey information including project characteristics, expected impacts and duration, closure/restriction details and commuter alternatives. Information should be updated as needed to reflect changing conditions.
 - d. An EVAP, which must be included in the TMP in accordance with *ARS §28-332 Department of Transportation Jurisdiction; Duties; Divisions* and *§28-652 State Highway Work Zones; Definition*. The EVAP will be established in consultation with, and will be communicated to, area law enforcement agencies and emergency responders.
2. For projects that are not designated as significant, the TMP may consist of a TTC and EVAP only. However, addressing traffic operations and public information in the plan should also be considered.

G. Develop Plans, Specifications and Estimates (PS&E) that include a TMP or provisions for contractors to develop a TMP. The PS&E should include appropriate pay item provisions for implementing the TMP through either method-based or performance-based specifications.

H. Designate a competent person, in conjunction with the competent person designated by the contractor, who has authority and responsibility for implementing the TMP and other safety and mobility aspects of the project. The competent person selected must be approved by the ADOT Engineer.

J. Monitor work zone impacts during construction and take corrective action to manage mobility and safety based on criteria such as travel delay, queue lengths and crash occurrences.

K. Initiate appropriate incident management procedures to restore the roadway to full capacity after becoming aware of an incident. The ADOT Traffic Operations Center (TOC) shall be responsive to incidents and dispatch appropriate resources.

RESOURCES

ADOT Work Zone Safety and Mobility

Implementation Guidelines for Work Zone Safety and Mobility

<https://azdot.gov/business/transportation-systems-management-and-operations/operational-traffic-safety/work-zone>

ADOT Implementation Guidelines for Work Zone Safety & Mobility

<https://azdot.gov/sites/default/files/media/2021/06/Implementation-Guidelines-for-WZSM-2021.pdf>

ADOT 2021 Transportation Management Plan Template

<https://apps.azdot.gov/files/TSMO/TMP-Template.pdf>

National Work Zone Safety Information Clearinghouse

<https://www.workzonesafety.org/>

Gregory Byres, P.E.

Deputy Director/State Engineer

Date

Chapter 3

Significant Project

In compliance with 23 CFR 630 Subpart J, all projects in ADOT's Five-Year Program will be identified as "Significant" or not. If a project is Significant, it will be stated in the project description.

3.1 Definition of a Significant Project:

Per ADOT Work Zone Safety and Mobility Policy (ENG-07) and in compliance with 23 CFR 630 Subpart J, a Significant project is

“...one that, alone or in combination with other concurrent projects nearby, is anticipated to cause sustained work zone impacts that are greater than what is considered tolerable based on engineering judgment and cooperation with the FHWA. This judgment is based on existing traffic volumes, duration of construction and anticipated impacts to travel time and the surrounding transportation network; these issues are discussed further in the ADOT Guidelines for Work Zone Safety and Mobility. In addition, all interstate system projects within the boundaries of a Transportation Management Area that occupy a location for more than three days with either intermittent or continuous lane closures are considered Significant.”

For an interstate system project or categories of interstate system projects that are classified as Significant through the application of this provision, but in the judgment of ADOT they do not cause sustained work zone impacts, ADOT may request from the FHWA, an exception to the requirements triggered by the classification. Exceptions to these provisions may be granted by the FHWA based on ADOT's ability to show that the specific interstate system project or categories of interstate system projects do not have sustained work zone impacts.

One of the factors utilized in the judgement above is the anticipated operating speed. Based on ADOT's current system, high anticipated operating speeds are speeds 55 mph and greater.

Another aspect that is analyzed are projects that may contain locations with no means of escape. Locations with no means of escape from motorized traffic are defined based on engineering judgment (e.g., tunnels, bridges, bridge painting, narrow medians, etc.).

When either of these aspects or factors are present, the use of positive protection devices will be considered for use.

3.2 ADOT Process for Defining a Significant Project:

The intent of ADOT's Policy is to maintain flexibility in determining if a project is Significant for all projects added to ADOT's Five-Year Program. ADOT identifies upcoming projects that are expected to be Significant as early as possible in the process and in cooperation with FHWA. All

Implementation Guidelines for Work Zone Safety and Mobility

projects are continually re-evaluated as they move from Pre-Design into the Design, Construction and Maintenance Phases using the Transportation Management Plan Memo.

To better anticipate the impacts associated with individual projects, every project will require a Transportation Management Plan (TMP). The Transportation Management Plan outlines the strategies that will be implemented to minimize impacts to the traveling public during construction of a project. The TMP may consist only of a Temporary Traffic Control (TTC) and Emergency Vehicle Access Plan (EVAP), and may add Transportation Operational (TO) and Public Information (PI) components/documents if the project is Significant. On Significant projects, the TMP will define the roles and responsibilities of the project stakeholders prior to and during construction. More information and discussion on TMPs is provided in Chapter 5.

Significant Projects will include:

1. TTC
2. EVAP
3. TO component
4. PI component

Significant Projects: Significant projects have a high level of public interest and will likely impact a large number of travelers. This impact must be analyzed individually and also in combination with concurrent active projects. It will have moderate to high user-cost impacts and the duration is usually moderate to long. These characteristics create work zone impacts that fall outside of the typical work zone safety and mobility thresholds. Examples of this work type may include major corridor reconstruction, high impact intersection reconstruction, full closures on high volume facilities, major bridge reconstruction or repair, repaving projects that require long-term lane closures, etc. It is important to note that Significant projects are unique in they have considerable impacts to areas outside of the project area as well as the surrounding community.

A project is always Significant if the following three criteria are met:

1. It is on an Interstate
2. It is in a Transportation Management Area (TMA)
3. There will be lane closures for three or more days (can be intermittent)

ADOT or the FHWA may also designate a project as Significant based on engineering judgment (e.g. I-15 in the Virgin River Gorge).

Chapter 4

WZSM Process, Guideline and Procedure

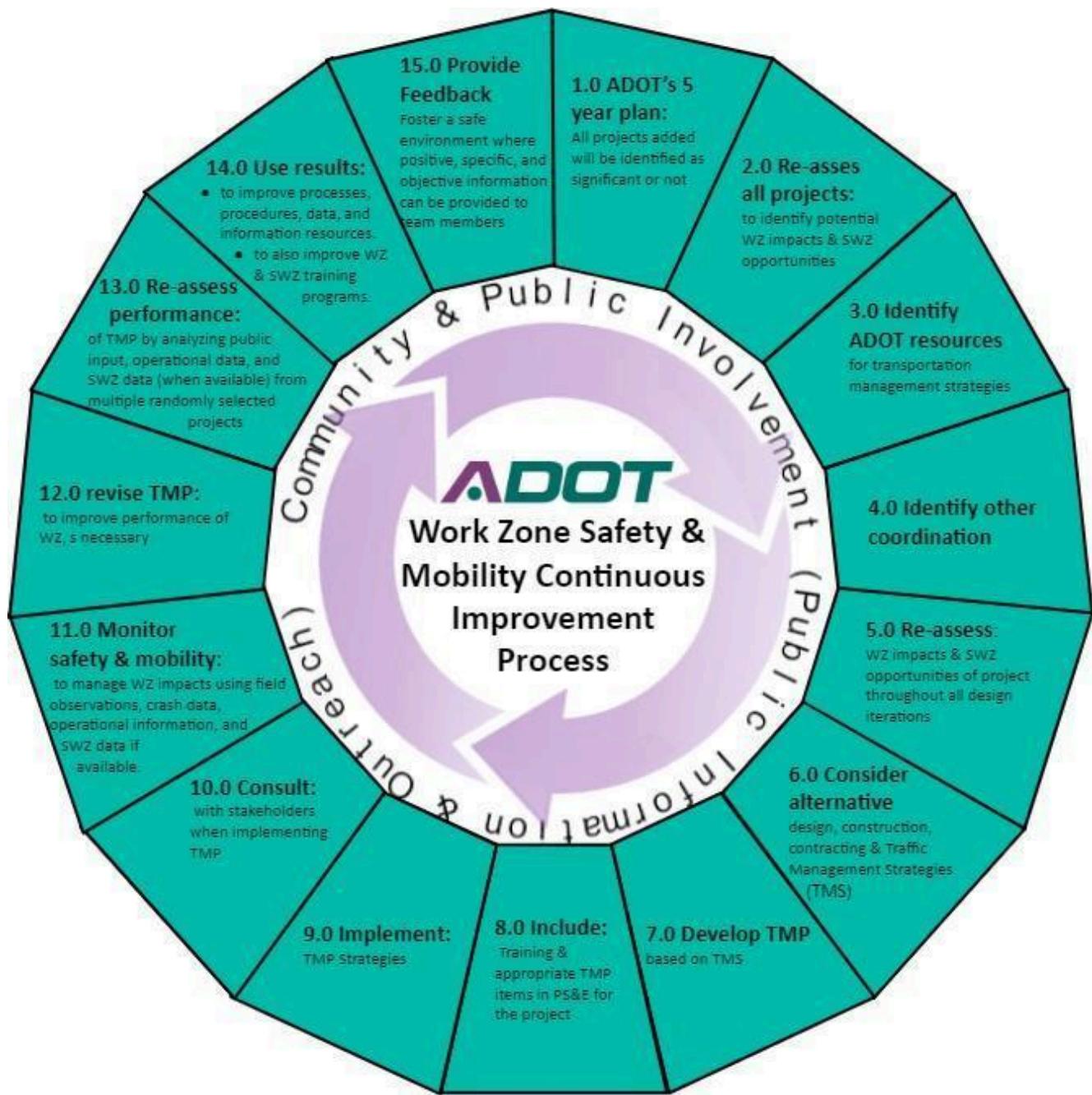


Figure 4a: ADOT's process for the identification, assessment, implementation and re-assessment of Work Zone Safety and Mobility.

Implementation Guidelines for Work Zone Safety and Mobility

Table 4 WZSM Process, Guidelines, and Procedure

Process Owner(s): MPD and PDO	Activity	Tasks/Key Actions
	<p>4.1</p> <p>All Projects added to ADOT's Five Year Program will be identified as Significant or not.</p> <p>Responsible: MPD, Communications, Pre-Design and PDO Leadership Team</p>	<p>Projects added to ADOT's Five-Year Program will be identified as Significant or not.</p> <p>Projects within a TMA and an access controlled divided highway will be marked as "Significant for WZSM" and will include the conception of a four part TMP during the scope of the project. The two additional parts of the TMP can be removed at a later stage if the project team deems that the project is not a Significant project.</p> <p>This will be designated in the Pre-Design Scoping document in Activity 2.0. Projects will be continually re-assessed throughout Pre-Design, Design, Construction and Maintenance for Work Zone Safety and Mobility issues. This will be designated in the Pre-Design Scoping document in Activity 2.0. Projects will be continually re-assessed throughout Pre-Design, Design, Construction and Maintenance for Work Zone Safety and Mobility issues.</p> <p>Review of Work Zone Impact will be included in the Stages Checklist; including a TMP Memo.</p>
	<p>4.2</p> <p>Re-Assess all Significant Projects to identify potential work zone impacts and Smart Work Zone opportunities</p> <p>Responsible: Pre-Design, PMG, Traffic Engineering, Districts, Regional Traffic, and Communications</p>	<p>The Project Manager will coordinate with the District, Regional Traffic, Traffic Design, Contracts and Specifications, and Communications Office at each phase of the Project.</p>

Implementation Guidelines for Work Zone Safety and Mobility

<p>4.3</p> <p>Identify ADOT resources for Transportation Management Strategies (TMS)</p> <p>Responsible: Pre-Design, PMG, Traffic Engineering, Districts, Regional Traffic, Communications, Environmental, Local Governments, IPA and IGA</p>	<p>Starting from typical ADOT strategies in limiting traffic restrictions, closures and closure times, examine contract acceleration and construction phasing. Communication is at the same time identifying Public Notice and feedback strategies.</p> <p>Environmental strategies (Hazard Identification and Reduction plans) are developed to eliminate hazards, such as vehicle collisions with wildlife, tree removal, etc.</p>
<p>4.4</p> <p>Identify other coordination needs</p> <p>Responsible: Pre-Design, PMG, Traffic Engineering, Districts, Region Traffic, Communications, Environmental, Local Governments, UandRR, IPA and IGA</p>	<p>Utility and Railroads (UandRR)</p> <p>Enforcement (Uniformed Law Enforcement/DPS)</p> <p>Local government coordination</p> <p>Environmental strategies</p> <p>Contact all affected first responders, including fire and ambulance services and potentially towing services</p> <p>Develop EVAP concepts</p>
<p>4.5</p> <p>Re-Assess WZ impacts and SWZ opportunities of the project throughout all design iterations</p> <p>Responsible: Pre-Design, PMG, Traffic Engineering, Districts, Region Traffic and Communications</p>	<p>This re-assessment should be completed at all phases of the project starting with Pre-Design, Traffic Engineering, Construction and Maintenance (Districts), and Regional Traffic.</p> <p>Review of Work Zone Impact, SWZ opportunities, and EVAP concepts will be included in the Stages Checklist; including a Traffic Management Plan Memo identified at Stage 1 and updated, as necessary, during each successive design phase.</p>
<p>4.6</p> <p>Consider alternative design, construction, contracting and TMS</p> <p>Responsible: PMG, Traffic Engineering, Districts and Region Traffic</p>	<p>Design continues coordination as in Pre-Design</p> <p>Update TMP Memo to reflect any changes</p>

Implementation Guidelines for Work Zone Safety and Mobility

<p>4.7</p> <p>Develop TMP based on TMS</p> <p>Responsible: PMG, Traffic Engineering, Districts, Regional Traffic, Communications and Traffic Operations Center</p>	<p>Develop TMP for contract documents from TMP Memo.</p> <p>All projects will include:</p> <p style="text-align: center;">TTC</p> <p style="text-align: center;">EVAP</p> <p>Significant Projects will also include:</p> <p style="text-align: center;">TO component</p> <p style="text-align: center;">PI component</p>
<p>4.8</p> <p>Include Training and appropriate TMP items in PS&E for the project</p> <p>Responsible: PMG, C&S, LTAP, Traffic Engineering, Districts, Regional Traffic, Communications and Traffic Operations Center</p>	<p>Training on new technologies should be a continued practice that is renewed as technology changes.</p> <p>PMG should plan for enough budget in CE costs for the Districts and Operational Traffic to effectively review and participate with the operational component aspect of the project.</p> <p>Likewise, PMG should include enough budget for Communications to perform their required tasks.</p> <p>Smart Work Zone items and specifications should always be included on Significant projects.</p>
<p>4.9</p> <p>Implement TMP strategies</p> <p>Responsible: Districts and Communications</p>	<p>Reference TMP Project Specifications in the Contract and the Project Plans.</p> <p>Hold periodic meetings with stakeholders as specified.</p>
<p>4.10</p> <p>Consult with stakeholders when implementing TMP</p> <p>Responsible: Districts and Communications</p>	<p>ADOT Construction hosts TSM and ESM meetings with Contractors, TOC, Regional Traffic, Communications, PM's, Traffic Engineering, Local Government, Schools, Hospitals, Uniformed Law Enforcement/DPS, Fire, Ambulance services and any other previously identified stakeholders.</p>

Implementation Guidelines for Work Zone Safety and Mobility

<p>4.11</p> <p>Monitor safety and mobility to manage WZ impacts</p> <p>Responsible: Districts, Regional Traffic, Communications and Traffic Safety</p>	<p>Monitor safety and mobility to manage WZ impacts using field observations, crash data, operational information and SWZ data, if available.</p> <p>Solicit community feedback.</p>
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Chapter 5

Transportation Management Plan (TMP)

Transportation Management Plans (TMPs) are documented strategies/methodologies that will be implemented to manage mobility and ensure a safe work zone in and around transportation projects. The project's classification as Significant or not will determine what is required for the TMP.

To better anticipate the impacts associated with individual projects, every project will require a TMP. A TMP memo will be initially submitted for all projects at Stage 1 in the development process and then updated, as needed, at each successive submittal to re-assess work zone impacts. The TMP memo will guide the project team on what should be included in the contract documents for the contractor and what is expected during the project's construction phase. The TMP memo is a "dynamic document" that will be maintained and revised by the project team as project development progresses. As the TMP evolves, it is important to reassess the management strategies to confirm the work zone impacts are addressed and the necessary funding is available.

5.1 All projects will include a TMP that consist of at least:

1. TTC: A TTC plan describes temporary traffic control measures to be used for facilitating road users through a work zone or an incident area. The TTC plan plays a vital role in providing continuity of reasonably safe and efficient road user flow and highway worker safety when a work zone, incident or other event temporarily disrupts normal road user flow. The TTC plan shall be consistent with the provisions of the ADOT State Supplement of the MUTCD, Arizona temporary traffic control guidelines and AASHTO Roadside Design Guide. PDO Traffic Engineering Group is ultimately responsible for developing the temporary traffic control plans for inclusion within the TMP.
2. EVAP: Pursuant to ARS 28-652 Part C: For projects requiring a TMP (all projects) the standards and specifications for work zone safety and mobility adopted will provide for consultation with stakeholders, including area law enforcement and emergency responders. ADOT will establish an EVAP as part of the TMP in consultation with area law enforcement and emergency responders and communicate the EVAP to area law enforcement and emergency responders by electronic mail, fax or other effective means. PDO Traffic Engineering Group is ultimately responsible for developing the TTC temporary traffic control plans for inclusion within the TMP, but will consult with the Engineering Districts, Regional Traffic Engineer and Traffic Operations Center, and other parties as applicable.

5.2 For Significant projects the TMP will also include:

Implementation Guidelines for Work Zone Safety and Mobility

3. TO component: The TO component shall include the identification of strategies to mitigate impacts of the work zone on the operation of the transportation system within the work zone impact area. The work zone impact area consists of the immediate work zone as well as affects to the surrounding roadways and communities. The Designer, District, Regional Traffic and/or Traffic Design. is ultimately responsible for developing transportation operations plans for inclusion within the TMP.
4. PI component: The PI component shall include communication strategies that seek to inform project stakeholders of work zone impacts and the changing condition of the project. Stakeholders may include road users, area residences and businesses, schools, local governments, tribes and others. Communications is ultimately responsible for developing public information and outreach plans for inclusion within the TMP.

Even though a group within ADOT is listed as “ultimately responsible” for different parts of the TMP, the appropriate counterpart on a consultant-designed project will develop these plans and consult with the ADOT technical groups, as needed.

Chapter 6

Work Zone Impact Assessment

6.1 Work Zone Impact Assessment Tools

The work zone impact assessment is a process for understanding the safety and mobility impacts of road construction/maintenance/rehabilitation projects. For all projects, work zone impacts are continually re-assessed at all stages of the project, including Systems Planning (MPD), Pre-design, Design, Construction, Maintenance and Operations.

These stages can be summarized into three types:

1. During project development, the likely work zone impacts are estimated and, where possible, mitigated.
2. During construction, the TMP is implemented and the actual impacts are gauged against what was expected. If actual impacts are greater than allowable or expected, alternative work zone strategies may be implemented.
3. Following project completion, performing an assessment is helpful to determine what worked and what did not. The results of the assessment should be used to improve future TMPs.

Factors that will influence the level of impact in a work zone include traffic conditions and characteristics, project characteristics, geographic/physical features and aspects of the surrounding area (e.g., alternate routes, nearby businesses).

Work zones can cause a variety of impacts that affect different stakeholders.

Worker safety is critical since workers are subject to the direct dangers of moving traffic. Motorist safety is critical as drivers are subjected to unfamiliar driving conditions in work zones. Work zone capacity reductions impact the mobility of traffic, including freight, leading to queues and delays that can reduce mobility.

The transportation network is impacted when a work zone cannot serve all the demand, or detours traffic to surrounding roads. Depending on the location, size and complexity of a project, a work zone can also impact the access, mobility and safety of pedestrians, bicyclists, transit users, and business and property owners, as well as emergency services.

Environmental impacts, like construction noise and dust, can be a primary concern as they tend to generate complaints from the public.

A work zone impact assessment should consider all the potential impacts.



Figure 6.1a: Types of Work Zone Impacts

Beginning work zone impact assessment early in the life of a project can significantly increase the chances of successful traffic management for the project.

An assessment of work zone impacts during the early planning stages of the project will help identify issues or uncover problem areas that should be considered during project development. This provides ADOT with an opportunity to evaluate the work zone impacts along with the design alternatives analysis, which can lead to the selection of a design alternative that alleviates many of the work zone impacts. This also helps to allocate adequate funding in the project budget for TMP implementation.

Implementation Guidelines for Work Zone Safety and Mobility

Start work zone impact assessment early in project development to:

- Identify issues/problem areas
- Consider WZ impacts in design alternative analysis
- Ensure MOT alternatives analysis is done along design alternatives analysis
- Choose a design alternative that alleviates many WZ impacts
- Ensure TMP development and implementation costs are included in the project budget

It is difficult to change options at a later stage due to issues such as:

- Affecting the chosen preferred alternative
- Environmental impact study already done
- Need for additional analysis
- May incur additional costs

There are four general steps in assessing the impacts of work zones during the project development stages. These steps lead to identifying strategies for the TMP:

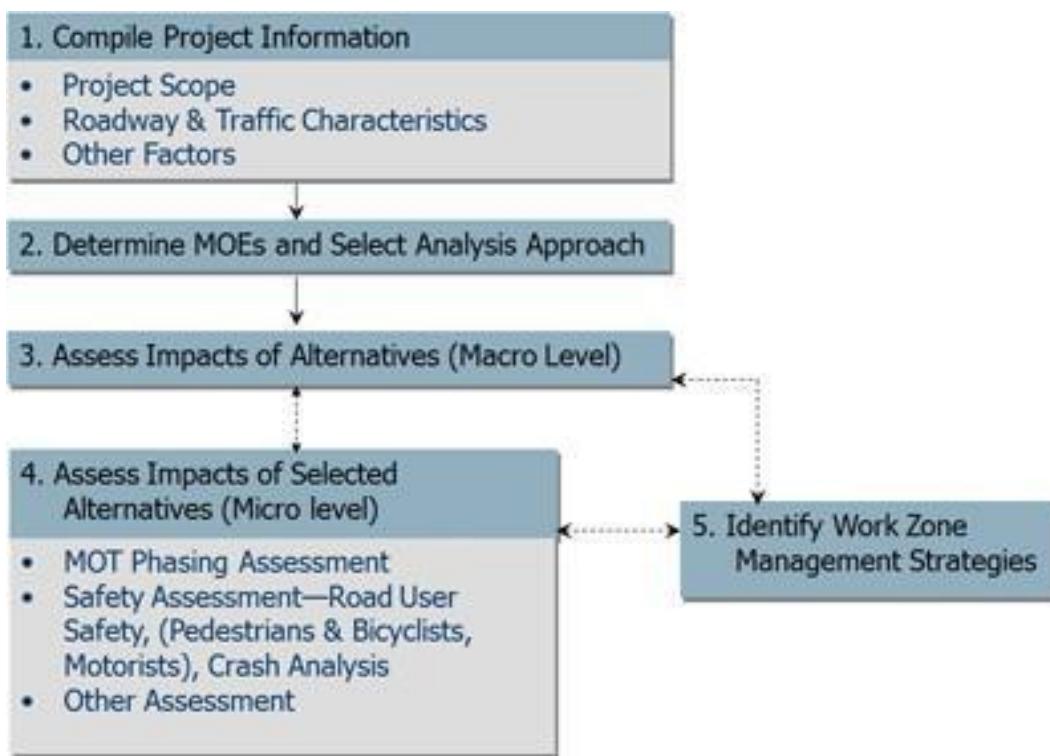


Figure 6.1b: Work Zone Impact Assessment Process

Work zone impact assessments lead to identification and understanding of potential impacts, brings work zone considerations into project alternatives analysis, enables more effective

Implementation Guidelines for Work Zone Safety and Mobility

selection of TMP strategies to manage impacts, provides information for a more accurate cost estimate, and targets resources to projects with the greatest need.

6.2 Incident Management

A highway incident is any non-recurring event (such as a vehicle crash, a vehicle breakdown, or a special event) that causes a reduction in roadway capacity or an abnormal increase in traffic demand that disrupts the normal operation of the transportation system. Most highway incidents are random events that occur with little or no advance warning. They can vary widely in terms of severity, ranging from a minor crash involving a single-response agency (such as law enforcement) to a natural disaster or other catastrophe requiring a multi-agency response from multiple jurisdictions and disciplines. Incidents are a major source of congestion on the roadway system and can contribute to problems away from the actual incident scene (for example, secondary crashes caused due to unexpected congestion).

Traffic Incident Management (TIM) is defined as the coordinated, preplanned use of technology, processes, and procedures to reduce the duration and impact of incidents and improve the safety of motorists, crash victims, and incident responders. Specifically, TIM involves the use of technology, procedures, and processes to accomplish the following:

- Reduce the amount of time to detect and verify that an incident has occurred.
- Shorten the time required for appropriate response personnel and equipment to respond to the scene.
- Facilitate the management of response apparatus and personnel on site so as to minimize the amount of capacity lost due to the incident and the response equipment.
- Reduce the amount of time required to clear the incident from the travel lanes.
- Provide for the timely notification of travelers upstream of the incident to encourage a reduction in traffic demand entering the incident area and to reduce driver frustration.

TIM practices are successful when they are built on a foundation of cooperation and collaboration. When planning or organizing a construction project, it is essential that work zone planners and construction personnel coordinate with the incident responders in the area. This includes identifying and meeting with agencies to discuss current response policies, procedures and practices.

To improve the nation's preparedness to respond to incidents of all magnitudes, the Department of Homeland Security has developed the National Incident Management System (NIMS). NIMS was developed so responders from different jurisdictions and disciplines can work better together in responding to natural disasters and emergencies. Part of the NIMS structure involves the use of the Incident Command System (ICS). ICS is a systematic tool used for the command, control and coordination of an emergency response. It is designed to facilitate

Implementation Guidelines for Work Zone Safety and Mobility

agencies working closely together through the use of common terminology and operating procedures to control personnel, facilities, equipment and communications at a single incident scene. The guiding concepts and principles of ICS are as follows:

- Most incidents are managed locally by local agencies to provide a coordinated, cooperative response.
- The field command and management functions should be performed in accordance with a standard set of ICS organizations, doctrine and procedures.
- ICS is modular and scalable so that responses can be adapted as situation, technology, size and complexity of the incident changes.
- All components of the response are managed interactively in a coordinated manner.
- ICS establishes common terminology, standard, and procedures that enable diverse organizations to work together effectively.
- Incidents are managed by objectives, which are measurable and begin at the top and are communicated throughout the entire response.
- Implementation of ICS should have the least amount of disruption of existing systems and processes as possible.
- ICS should be user friendly and be applicable across a wide spectrum of emergency response and incident management disciplines.

The overwhelming majority of highway incidents do not require the formal implementation of the ICS. Instead, most highway incidents involve only law enforcement or highway personnel and a tow truck. In these situations, there is usually no need for the organization and command structure of the ICS. Only when traffic incidents are large and more complex does the ICS become necessary because of the need for responders from multiple agencies. In these situations, it is critical for work zone planners and construction personnel to understand what the ICS is and how emergency responders use the ICS to manage all types of incidents, not just highway traffic incidents.

The term Unified Command (UC) is used to define the application of ICS when there is more than one agency with incident jurisdiction or when an incident crosses political jurisdictions. In situations where an incident crosses multiple jurisdictions or in the case where multiple agencies have jurisdiction over the same incident (for example, a wreck with injuries or fatalities), unified command allows all agencies that have statutory authority for an incident to jointly participate in the development of the overall response strategy.

Implementation Guidelines for Work Zone Safety and Mobility

More information on the ICS and its application to highway incidents, can be found in Simplified Guide to the Incident Command System for Transportation Professionals.

The process to be used to develop a TIM program for a particular construction or maintenance project is not unlike the process used to develop a traditional incident management program. What is different about the TIM program for a construction or maintenance program is who commonly initiates the development process – the construction project manager or the contractor. This process needs to begin at the very early planning stages of the project, predominantly well before traditional incident responders are aware the project is going to be advertised for design or construction. Work zone and construction planners need to first assess if there is a need to implement special incident management procedures with a particular work zone.

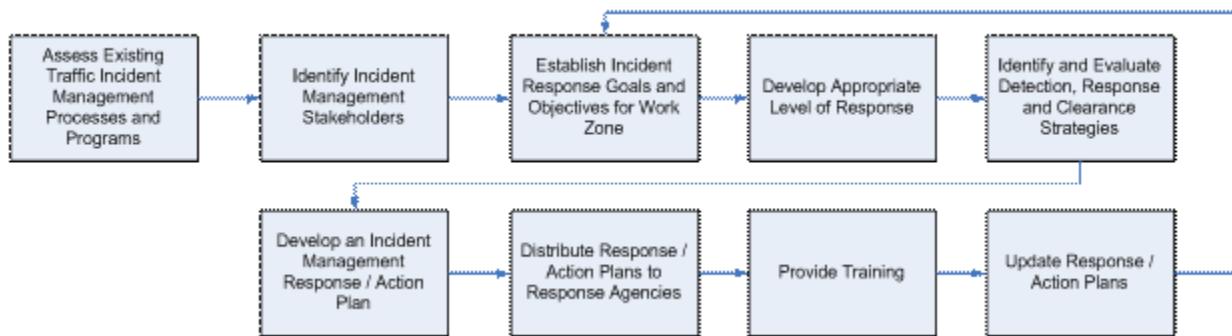


Figure 6.2a: Process for Planning Traffic Incident Management for Highway Work Zones

In many locations throughout the United States, comprehensive incident management programs and processes already exist; therefore, the first step in developing a TIM program for a specific construction or maintenance project is to determine and assess what incident management processes and procedures already exist in the area where the work zone will be in effect. In many cases, it may be wasteful and counterproductive to develop new and different response procedures. Work zone planners need to first check to see if the project lies within the boundaries and jurisdiction of any existing incident management program. If it does, work zone planners and contractors need to coordinate with appropriate response and traffic operations personnel to determine if the existing processes and procedures are adequate for the project. Together, these agencies can identify those changes, additions and modifications to the existing procedures and responses that may be needed to accommodate the project. In the situation where existing TIM practices and procedures are already in place, at a minimum, work zone planners should contact appropriate response agencies in the corridor to discuss issues and concerns about managing incidents in the proposed work zone and agree upon the procedures and strategies that will be implemented to support TIM in the work zone. On more complex projects, it is necessary for the work zone planner, project administrators and construction personnel to become active partners in the existing incident management program for the duration of the project. On projects with multiple phases, it may be necessary to develop a plan for each phase of the project.

Implementation Guidelines for Work Zone Safety and Mobility

If the proposed project lies outside the jurisdiction of any existing TIM program, it may be necessary for work zone planners and contractors to identify, develop, and deploy TIM strategies that are appropriate for the type and level of work zone. In most regions, multiple agencies are involved in the TIM process. At a minimum, work zone planners and contractors should meet with key incident response agencies to discuss how the project will impact TIM responses. The following is a list of potential agencies and organizations that are traditionally involved in the development of TIM programs in a region:

- Federal, state and local transportation agencies
- State and local law enforcement personnel
- Public and volunteer fire and rescue agencies
- Regional, county or local 911 dispatch
- Towing and recovery providers
- Emergency medical service providers
- State and local hazardous material recovery personnel
- Media
- Other response personnel (as defined by the project area), including state and local offices of emergency management, coroner's office, etc.

Work zone planners and contractors must be aware that multiple agencies may have jurisdiction over incident responses within the limit of a construction project. It is not uncommon for multiple police, fire and rescue and emergency service providers to have incident management responsibilities on a given highway. Work zone planners need to make sure that all appropriate incident responders are identified for any given project.

Agencies have at their disposal a large number of strategies, technologies, techniques and procedures for providing incident management in work zones; however, not all are appropriate for every work zone situation or incident scenario. Each strategy, technology and procedure needs to be evaluated within the context of project needs and duration, the infrastructure requirements, the level of cooperation and coordination between incident responders, and the costs and perceived effectiveness of the strategy. Some strategies are needed to provide a solid foundation for other strategies, while other strategies are more appropriate when the work zone project is expected to impact traffic operations for extended periods (years, for example). Agencies need to carefully evaluate each strategy and incident scenario and determine the appropriate level of response for each type of incident. Agencies also need a realistic assessment of the likelihood that an incident of major severity may occur when the work zone is in effect.

Agencies need to keep in mind that all incident situations are not the same and that not all incidents require or mandate the same level of response. Recognizing this fact, the Manual on Uniform Traffic Control Devices 11 divides incidents into three general classes based on duration, each of which has unique traffic control characteristics and needs. These classes are as follows:

Implementation Guidelines for Work Zone Safety and Mobility

- Major – typically traffic incidents involving hazardous materials, fatal traffic crashes involving numerous vehicles and other natural or man-made disasters. These traffic incidents typically involve closing all or part of a roadway facility for a period exceeding 2 hours.
- Intermediate – typically affect travel lanes for a time period of 30 minutes to 2 hours, and usually require traffic control on the scene to divert road users past the blockage. Full roadway closures might be needed for short periods during traffic incident clearance to allow traffic incident responders to accomplish their tasks.
- Minor – typically disabled vehicles and minor crashes that result in lane closures of less than 30 minutes. On-scene responders are typically law enforcement and towing companies and occasionally highway agency service patrol vehicles. Diversion of traffic into other lanes is often not needed or is needed only briefly. It is not generally possible or practical to set up a lane closure with traffic control devices for a minor traffic incident. Traffic control is the responsibility of on-scene responders.

Agencies can use these general criteria for classifying incident levels as a beginning point for determining appropriate levels of responses. However, these criteria should be refined to be consistent with agency goals and objectives.

One underlying principle of the ICS is that it allows responses to be scaled to the level that is appropriate for the situation and existing conditions. An initial small response can be transitioned to a large, multi-agency operation with only minimal adjustment for the agencies involved.

Once the appropriate level of response has been determined for the work zone, the next step in the process is to identify and evaluate candidate strategies for detecting, responding to, and clearing incidents from the roadway.

After determining which strategies are appropriate for a particular work zone, agencies then need to develop criteria and conditions for when and how these responses should be executed. This is typically called a response or action plan. The response or action plan lays out the conditions and criteria for what types of responses are needed for different levels of incidents that might occur in the work zone.

Once the response plans have been developed, the next step in the process is to distribute the response plans to the appropriate response agencies. Because the response plans are usually developed in cooperation and collaboration with emergency responders, dissemination of the plan to the incident responders often occurs naturally, but it is important for traffic operators to ensure the response/action plan is disseminated to the appropriate response and field personnel. As part of the plan development process, stakeholders should also discuss methods

Implementation Guidelines for Work Zone Safety and Mobility

and procedures for distributing and disseminating the response plan to appropriate personnel within their organization—both at the administrative and field personnel levels.

A critical aspect of planning for TIM in work zones is ensuring that emergency response procedures and practices remain valid through all phases of construction. Agencies should also plan to meet routinely to ensure important elements of the plan remain valid and up-to-date, typically called Transportation System Management (TSM) or Emergency Services meetings. On large construction projects, incident responders, transportation agencies and construction personnel should meet routinely throughout the project to review actual responses to incidents that have occurred during the project and update response and communication plans as needed. Response plans often need to be updated and/or revised as conditions, lane closures, and access to the work zone changes. It is essential that incident responders be notified when new conditions might impact response times or access to the site.

Furthermore, response plans may need to be revised based on feedback from the public, agency decision-makers and field personnel. If any part of the response plan or program is revised, it is critical that all responding agencies receive notification of how the established response procedure or access needs have changed. Likewise, incidents that damage the pavement or other infrastructure within the work zone need to be communicated to work zone traffic planners as these may impact or change the construction sequences in the work zone. Good two-way communication between incident responders and construction personnel is critical.

Chapter 7

Work Zone Training

7.1 Work Zone Training

The provision that pertains to work zone training is provided in Section 630.1008(d) of the Rule. This provision:

1. Specifies that agencies require appropriate training for personnel involved in the development, design, implementation, operation, inspection and enforcement of work zone related transportation management and traffic control. Furthermore, the Rule also states that agencies require periodic training updates for these personnel. These periodic training updates are to reflect changing industry practices and agency processes and procedures.
2. Clarifies appropriate training as training that is relevant to the job, which are decisions that each individual is required to make.

ADOT in partnership with the Arizona Chapter of the American Traffic Safety Services Association (ATSSA) developed a two-tiered training program for workers, supervisors and managers:

- TCH1168 ATSSA Workzone Traffic Control Technician
- TCH1167 ATSSA Workzone Traffic Control Supervisor

The partnership also developed a third course for flagging operations:

- TCH1114 ATSSA Flagger Certified Training.

International Municipal Signal Association (IMSA) work zone safety specialist is equivalent to the ATSSA Traffic Control Technician or Traffic Control Supervisor. ADOT Signals, Lighting and Technical Electrical (SLATE) employees take the IMSA classes, and therefore do not need to take the equivalent ATSSA classes.

Designer training will be required for those with responsibility or authority to decide on specific maintenance of traffic requirements, including the Engineer responsible for work zone traffic control phasing and plans; and Technicians drafting or electronically generating work zone traffic control plans.

ADOT Point of Contact (POC) is:

AZ LTAP Program Manager 602-712-4252

Implementation Guidelines for Work Zone Safety and Mobility

As training courses become available, notice of the new training for Work Zone Safety and Mobility will be distributed to those affected.

ADOT has also partnered with other groups to provide Traffic Incident Management (TIM) training. The Arizona TIM program is made up of a consortium of Federal, State, County, and Local Government agencies as well as private industry partners, such as tow and utility companies. Although TIM is not focused solely on work zones, when incidents are within a work zone, the trained staff will increase safety and efficiency of those responding.

For questions about TIM training, please visit tim.az.gov

Chapter 8

Program Reviews

8.1 Program Review Stages

The provision that pertains to Program reviews is provided in Section 630.1008(e) and 630.1016 of the Rule. These provisions:

- Requires agencies to perform a Program Review by December 31st, 2030, and every 5 years thereafter to assess the effectiveness of their work zone safety and mobility procedures.
- Requires ADOT to perform a systematic analysis using quantitative and qualitative work zone data to assess the safety and mobility performance of work zones in their jurisdiction.
- Requires work zone data metrics be tracked annually including: Field observations, Available work zone crash data, Safety surrogate data, Available operational information, and Available exposure data. Additionally, every year--for eventual reporting on the 5 year program review--performance measures that are used to manage work zone impacts should be tracked.
- Recommends that appropriate personnel, representing the project development stages and various divisions/groups within ADOT, as well as the FHWA, participate in the Program reviews.
- Allows the participation of other non-ADOT stakeholders in the reviews as appropriate.
- Explains that the Program review results are intended to lead to improvements in ADOT work zone processes and procedures, data and information resources and training programs that ultimately enhance efforts to address safety and mobility on current and future projects.

Periodic evaluation of work zone policies, processes, procedures and work zone impacts aids in addressing and managing the safety and mobility impacts of work zones. Reviews help assess the effectiveness of the Program and its processes and procedures, enabling ADOT and respective FHWA Division Office to confirm that an issue does not exist and to make recommendations to improve situations where shortcomings might exist.



Figure 8.1a: Program Review Stages

8.2 ADOT's approach for FHWA Work Zone Self Assessment

To help evaluate work zone practices, ADOT uses the Work Zone Safety and Mobility Self Assessment Tool (WZSM-SAT). The WZSM-SAT consists of 46 questions designed to assist with work zone management responsibilities, assessing our programs, policies and procedures against other work zone practices used.

Modeled after the AASHTO Systems Operations and Maintenance guidance, this tool assesses work zone management capability in the same six dimensions — Business Processes, Systems

Implementation Guidelines for Work Zone Safety and Mobility

and Technology, Culture, Organization and Workforce, Performance Measurement and Collaboration. However, in this tool, work zone management is viewed as a subset of the larger TSMO program. The capability levels and the actions are more focused and defined from a traffic manager's perspective. The actions may require other agencies to be the responsible party, which is intended to foster multi-agency collaboration and dialogue about work zone management at the regional level. Users that take this assessment are encouraged to share this tool with agencies they collaborate and work with on work zone management of their respective agency's transportation systems.

A. Assemble a multi-disciplinary team.

There are several groups, teams, or divisions responsible for carrying out a program or operation. It is important these different perspectives are represented in a program review team. A practice that works well for one unit may cause difficulties for other units (e.g., decisions made independently by the design unit could make development of effective TMP's or traffic control plans problematic for the traffic engineers). Or a step taken by one unit might be more effective if taken earlier in the process by another unit (e.g., identifying significant projects). The appropriate personnel, who represent the various project development stages and the different offices within ADOT, as well as the FHWA, should participate in program reviews. Non-ADOT stakeholders should be invited to participate in the reviews, as appropriate, as they can provide useful and different perspectives and insights.

The maximum effective team size is generally around eight people. If the team is too large, the participation of some members will likely be limited. Other people can support the review but not be a member of the core review team. For example, the review team may interview other stakeholders on specific topics of interest or make use of data collected by others.

B. Develop a review plan

Preparing a review plan can be helpful to ensure that all team members have a common understanding and remain focused on the scope of the review. What needs to be considered to plan for a review?

- i. Purpose
- ii. Function/processes reviewed
- iii. Expected results
- iv. Information needed
 - a. What do we know now?
 - b. Gaps in information and possible sources
- v. Team members and roles
- vi. Schedule and resources

1. Purpose: Having a clear purpose and scope for the review and an agreed upon set of objectives is vital to the success of a review.

Implementation Guidelines for Work Zone Safety and Mobility

2. Function/processes reviewed: The review should identify the limits to ensure it remains focused on the key processes and should specify the timeframe to be covered by the review (e.g., the most recent five years). ADOT and the FHWA Division Office generally work together to identify the review, based on the Stewardship Agreement and a risk assessment.
3. Expected results: The program review should have clear and concise goals that define what the review is trying to accomplish and identify the expected results and performance metrics. The review team should base the selection of topics on opportunities for improvement and consider a fairly uniform distribution of review topics among the various program areas to serve the desired purpose.
4. Data needed: Data for review should come from a variety of sources. After determining the type of data the review team needs, it should next assess what information is already available and identify what needs to be generated. Data sources may include field data collection, data records (e.g., crash reports), project logs, and interviews with key stakeholders, post-construction reports and other sources. This may include:
 5. Collection of data including project-related information as well as public and stakeholder perception.
 6. Synthesis and analysis of data at multiple levels (project, local, regional, state and national) and comparison of findings to performance metrics.
 7. Application of the analysis results toward continually improving work zone practices, policies, processes and procedures.
 8. Team members and roles: The team members should know their roles, limitations and authority.
 9. Schedule and resources: The review team should identify target dates for conducting the review and presenting the results, as well as the resources available for the review. Resources should include staff time and expertise, data availability and budget.

C. Conduct review

This step involves carrying out the review plan developed by the team. The review team leader should designate appropriate assignments to the team members to promote active participation by everyone. It is valuable to document the steps taken and data collected during the planning phase to have a good basis for any conclusions reached and recommendations made.

D. Analyze and Interpret results

Implementation Guidelines for Work Zone Safety and Mobility

In this step, the team should compile and analyze the collected data and compare the results with the stated goals of the processes and functions being reviewed to identify the gaps and problem areas. If the goals are not being met in certain areas, then the analysis should attempt to identify the “root cause.” It is valuable to identify the “root cause(s)” as much as possible, rather than focusing on the symptoms and how to treat them.

E. Develop inferences, recommendations

Once the root causes of problem areas or gaps are identified, the team needs to develop recommended improvements targeting these areas. The team may find it helpful to brainstorm solutions or conduct follow-up interviews to identify or assess alternatives for improvements.

During the review, the team may also identify weaknesses, as well as best practices that should be documented in the findings. Documenting best practices is an opportunity to give credit for good things that are discovered, can help build rapport with partners and may lead to solutions that can be shared.

Recommendations/solutions should be:

- Conceivable
- Achievable
- Valuable
- Manageable
- Constructive

F. Prioritize recommendations

The team should suggest a prioritization to the recommendations based on several considerations, including the amount of influence the recommendation will have on the desired outcomes and ability to implement it.

G. Present the findings from the review

A close-out meeting should be held with non-ADOT stakeholders to present the findings and obtain feedback. The review team should provide a brief overview of the process followed, the information considered and the basis for each recommendation. The review team should be prepared to support its findings and may encounter the need to defend the recommendations.

H. Apply recommendations and lessons learned

Based on the team’s findings, proposed recommendations and the feedback during the close-out meeting, the team should develop an action plan that identifies the actions, responsible parties, timeframes for implementation and expected outcomes. The results of the review and implementing the action plan should lead to improvements in ADOT policies, processes and procedures.

8.3 Work Zone Crash Review

Implementation Guidelines for Work Zone Safety and Mobility

When a work zone experiences a significant crash or a pattern of vehicular crashes, a Work Zone review is performed by the Resident Engineer and the Regional Traffic Engineer. They shall review the adequacy of the existing Temporary Traffic Control Plan (TTCP) and consider refinements and / or alternative traffic control measures. At a minimum, the work zone review shall include:

- A site visit
- A review of police crash reports (if available)
- Interviews with the construction staff and contractor
- Collaboration with the Roadway and Traffic Design Engineers / District staff / Traffic Safety / Regional Traffic Operations.

When the review is complete, a report containing recommended changes (if any) is sent to the Regional Traffic Engineer (RTE) and District Engineer (DE) for review. The intent is a timely review to implement changes as necessary, not the creation of a lengthy or formal report. The use of email is encouraged.

If change(s) are implemented, changes to contract documents shall be made in accordance with the Standard Specifications. A paper copy of the report / email shall be filed with project records.

- Each project will conduct program reviews, similar to the crash review, to examine adjustments to traffic management strategies when the TTCP is not meeting desired outcomes.
- Mitigation / changes to the TTCP are then agreed to and implemented, by the appropriate RTE and DE.

Chapter 9

Compliance with 23 CFR630 Subpart K

9.1 ADOT Compliance with Subpart K (Traffic Control Devices)			
Category	Use	Status and Location	Responsible
Positive Protection Devices	Based on an Engineering Study (ADOT-wide or to determine measures to be applied on an individual project)	Addressed in Traffic Control Design Guidelines and Standard drawings	Traffic Engineering Group and Regional Traffic
Exposure Control Measures	Considered to avoid or minimize exposure for workers and road users (Full road closures, ramp closures, median crossovers and night work)	Addressed in Traffic Control Design Guidelines and Standard drawings Valley Transportation White Paper on lane closure	Traffic Engineering Group and Regional Traffic
Other Traffic Control Measures	Considered to reduce work zone crashes, risks and consequences of intrusions into the work space	Addressed in Traffic Control Design Guidelines	Traffic Engineering Group and Regional Traffic
Uniformed Law Enforcement/DPS	Develop Guidelines and Procedures	See: Construction Bulletins	Construction Group
Safe Entry/Exit for Work Vehicles	Develop Guidelines and Procedures	Being Developed Traffic Control Design Guidelines	Traffic Engineering Group and Regional Traffic
Payment for Traffic Control Features and Operations	Incidental to the contract or included in payment of work unrelated to traffic control and safety	Standard Specifications/Special Provisions Bid Tabs	Contract and Specifications (C&S)

Implementation Guidelines for Work Zone Safety and Mobility

9.1 ADOT Compliance with Subpart K (Traffic Control Devices)(continued...)			
Category	Use	Status and Location	Responsible
Quality Guidelines	Maintain quality and adequacy of TCC devices during project	Quantlists See: Construction Bulletins	Construction Operations