

### Critical Factors in Performing an Impacts Analysis

Safety, mobility, and constructability are affected by a variety of factors. Factors that influence the level of work zone impacts include:

**Project Characteristics** – Project type, size, extent, and duration.

**Travel/Traffic Characteristics** – Traffic demand, volumes, and characteristics, including whether the road is a freight or transit corridor.

**Corridor, Network, and Community Issues** – Presence of alternate routes, access to businesses, impacts of other work zones nearby.

**Design, Procurement and Construction Options** – Timing and staging of the work, alternative lane closure strategies.

**Work Zone Design and Safety Issues** – Cross-sectional issues such as lane widths, shoulder availability, and number of lanes available for travel.

**TTC Strategies** – Traffic safety and capacity requirements, work zone configurations, and TMP traffic safety and control checklists.

**Transportation Operations (TO) Strategies** – Deploying ITS technologies for work zone traffic monitoring and management.

All State DOTs should have a specific policy on work zone safety and mobility. Be sure to contact your State DOT to learn about your State's policy.

The material in this brochure is drawn from guides developed by the FHWA for the Work Zone Safety and Mobility Rule. For more information, see:

*Work Zone Impacts Assessment – An Approach to Assess and Manage Work Zone Safety and Mobility Impacts of Road Projects at:*

[http://ops.fhwa.dot.gov/wz/resources/final\\_rule/wzi\\_guide/index.htm](http://ops.fhwa.dot.gov/wz/resources/final_rule/wzi_guide/index.htm)

and

*Developing and Implementing Transportation Management Plans for Work Zones at:*

[http://ops.fhwa.dot.gov/wz/resources/publications/trans\\_mgmt\\_plans/index.htm](http://ops.fhwa.dot.gov/wz/resources/publications/trans_mgmt_plans/index.htm)

Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the Federal Highway Administration.

Developed by:  
American Traffic Safety Services Association  
15 Riverside Parkway Suite 100  
Fredericksburg, VA 22406-1022  
800-272-8772

This material is based upon work supported by the Federal Highway Administration under grant agreement No. #DTFH61-06-G-00004

Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the Federal Highway Administration.



American Traffic Safety Services Association



U.S. Department of Transportation  
Federal Highway Administration

# Considering Work Zone Impacts:



Planning for Safety,  
Mobility, and  
Constructability



American Traffic Safety Services Association



U.S. Department of Transportation  
Federal Highway Administration

## What Is A Work Zone Impacts Assessment?

A work zone impacts assessment is the process of understanding the safety and mobility impacts of a road construction, rehabilitation, or maintenance projects. The process involves:

- ❖ Assessing the likely work zone impacts and developing an appropriate work zone Transportation Management Plan (TMP) to manage those impacts.
- ❖ Monitoring the actual impacts of the project and making any necessary adjustments to the TMP during construction.
- ❖ Conducting performance assessments to track performance and identify lessons and trends that can be used to improve work zone policies, procedures, and practices.

An assessment may involve a high-level, qualitative review for some projects or a detailed quantitative analysis using modeling for other projects.

## Why Are Work Zone Impacts Assessments Important?

The Work Zone Safety and Mobility Final Rule requires states to implement a policy for the systematic consideration and management of work zone impacts on all Federal-aid highway projects and are useful for any construction or large scale maintenance projects where work zones will be used. There are many reasons to perform an impacts assessment, including helping agencies to:

- ❖ Identify the work zone safety and mobility impacts of road projects and understand the implications of alternative project options and design strategies.
- ❖ Allocate resources effectively and efficiently.
- ❖ Coordinate and manage multiple projects and construction schedules to minimize overall impacts.

## Example: I-495/U.S. Route 1 Interchange Reconstruction Project

Virginia Department of Transportation (VDOT) developed general policies related to construction work zone lane closures. These policies were applied to the program delivery stages: systems planning, project development, construction, and performance assessment. Impacts were determined based on four classes of impacts: improvement, low, moderate, and severe. Mitigation measures taken included: sequencing construction activities, reducing speeds in project corridors, enhancing sign and pavement markings, increasing police presence, coordinating with local traffic, using CCTV cameras, providing real-time traffic information, and providing updates on scheduled traffic changes.

## Work Zone Impacts Considerations

The fundamental purpose of assessing and managing the work zone impacts of road construction and maintenance projects lies in:

**Safety** - Maximizing the safety of road users and highway workers.

**Mobility** - Maximizing mobility and accessibility on roadways.

**Constructability** - Planning, designing, and building projects as effectively and efficiently as possible.

A work zone impacts assessment is the process of understanding the safety and mobility impacts of a road construction, rehabilitation, or maintenance projects.

Work zone impacts assessments are performed progressively through the various program delivery stages.

**Systems Planning** – At this phase, a conceptual, qualitative assessment using engineering judgment can determine whether projects will need additional management strategies as well as a Temporary Traffic Control (TTC) plan.

**Preliminary Engineering** – At this stage, the assessment identifies the potential work zone impacts early enough so that work zone-related project delays or costs are not incurred in later design stages.

**Design** – Assessments performed at the design phase are focused on developing traffic control plans, which are intended to enhance and supplement existing practices and provide a broader work zone transportation management approach.

**Construction** – Construction-phase assessments address and resolve pre-construction coordination issues, determine the impact of any proposed changes prior to the start of work, implement the TMP, and actively monitor and manage work zone impacts during construction.

**Maintenance and Operations (M&O)** – During M&O activities, work zone impacts assessments involve enhancing agency procedures to minimize direct safety and mobility impacts, planning and coordinating to minimize system-wide impacts and impacts on other construction projects, and incorporating features in construction projects that would facilitate future M&O with minimum disruption.