

MnDOT Work Zone Safety & Mobility Policy

- Elements and Current Efforts

Statewide Work Zone Safety Committee April 2012

Ken E. Johnson

Work Zone, Pavement Marking & Traffic Devices Unit





















What we'll answer today...

- Why does the policy exist?
- What are the major elements of the policy?
- What areas of improvement are necessary?
- Next steps...



















Why does the Policy exist?

- Short answer
 - To implement CFR, Title 23 Part 630,
 Subpart J, Work Zone Safety and Mobility
- Longer answer
 - Feds wanted to encourage all states to improve safety <u>and mobility</u> of work zones by providing standards and guidelines from existing best practices



















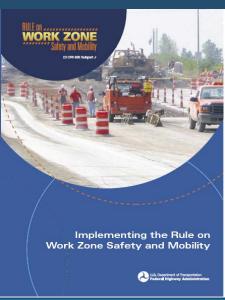
What is Subpart J?

Establishes requirements and provides guidance for:

- Systematically addressing WZ safety and mobility impacts
- Developing strategies to help manage these impacts

Applies to all Federal-aid highway projects

- Published September 2004
- Effective October 2007





















Tech Memos

MnDOT published in 2007 – TM 07-16-T-05:

Minnesota Work Zone Safety and Mobility Policy

MnDOT updated the Tech Memo for 2012

- TM 12-03-T-02
- Reflects personnel and committee changes



MINNESOTA DEPARTMENT OF TRANSPORTATION Engineering Services Division Technical Memorandum No. 12-03-T-02 February 6, 2012

To: Electronic Distribution Recipients

From: Jon M. Chiglo, P.E.

Division Director. Engineering Service

Subject: Minnesota Work Zone Safety and Mobility Policy

Expiration

This Technical Memorandum supersedes TM 07-16-T-05 and shall remain in force until February 6, 2017 unless superseded prior to that date or incorporated in the Traffic Engineering Manual.

Implementation

This policy shall be implemented immediately for all projects and operations in the planning and design phase. The provisions of these policies and procedures apply to Federal and non-Federal aid MnDOT projects and State-Aid projects with Federal aid in the State of Minnesota.

For projects that are in the later stages of development atlor about the compliance date, and if it is determined that the delivery of those projects would be significantly impacted as a result of this rule's provisions, MnDOT may request variances for those projects from the FHWA, on a project-by-project basis. They should also be implemented on maintenance and utility operations to the extent practical

The provisions contained in this Technical Memorandum do not apply to current Construction Projects and Maintenance Operations.

Introduction

Use of the Work Zone Impact Assessment Decision Tree for projects on lower-volume streets and highways typically only requires the development of a temporary traffic control plan. Agencies are encouraged to apply the good practices, especially the decision tree included in the Minnesota Work Zone Safety and Mobility Policy, on all projects.

Purpos

The purpose of the attached "Minnesota Work Zone Safety and Mobility Policy" is to implement the requirements and guidelines contained in the Code of Federal Regulations, Title 23 Part 630, Subpart J, "Work Zone Safety and Mobility" for appropriate highway projects in Minnesota.

J, WORK Z

See attachment "Minnesota Work Zone Safety and Mobility Policy"

Questions

For information on the technical contents of this memorandum, please contact Ken Johnson at (651) 234-7386.

Any questions regarding publication of this Technical Memorandum should be referred to the Design Standards Unit, <u>DesignStandards.DOT@state.mn.us</u>. A link to all active and historical Technical Memoranda can be found at http://lechnemos.aspx.

To add, remove, or change your name on the Technical Memoranda mailing list, please visit the web page http://techmemos.dot.state.mn.us/subscribe.aspx

Attachment

Minnesota Work Zone Safety and Mobility Policy Work Zone Impact Considerations Worksheet Work Zone Management Strategies













Key Concepts

We can be more effective in improving safety and reducing mobility impacts if we:

- Better understand, anticipate, and plan for the impacts
- Do so early in the program delivery process
- Consider solutions that go beyond the immediate vicinity of the project
- Integrate this thinking into all phases/levels
 - Scoping through construction
 - Policy District Project



















Major Elements of Policy

- 1. Project Level Procedures
- 2. District or Local Level Process & Procedures
- 3. State Level Processes & Procedures













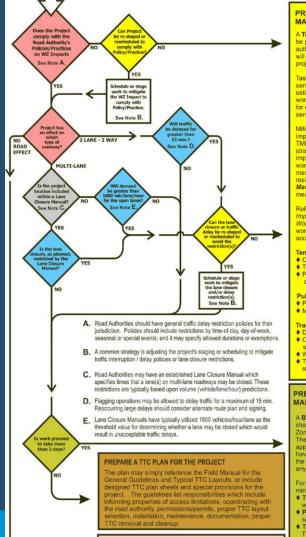






Project Level Procedures

- Work Zone Mobility Impact **Assessment**
 - Identify the level of impact of the project
 - Determine the level of **Transportation Management** Plan
 - From identification of layout in Field Manual
 - To Full Transportation Management Plan



THE PROJECT MAY NOT REQUIRE A TTC PLAN

Projects with NO equipment or work within 15 ft of an open

traffic lane may not need a TTC Plan. Review the project for other TMP considerations including TO and PI strategies.

PREPARE A TRANSPORTATION MANAGEMENT PLAN

A Transportation Management Plan (TMP) should be prepared through the assistance of the road authority's Traffic Engineer. The scope of the TMP will range from minor to major depending upon the project's complexity. Also see "Basic TMP" below.

Tasks include listing all potential work zone impacted services, businesses, or specific traffic types, and the estimated volumes and durations. Refer to the worksheet of "Work Zone Impact Considerations" for examples of potentially work zone impacted services, businesses, and traffic types.

Mitigation strategies for each identified Work Zone Impact should be identified and incorporated into the TMP. Many work zone impact management strategies can be used to minimize traffic delays. improve mobility, maintain or improve motorist and worker safety, complete road work in a timely manner, and maintain access for businesses and residents. Refer to the listing of "Work Zone Impact Management Strategies" for examples of typical measures utilized to reduce work zone impacts.

Refer to FHWA publication titled *Developing and Implementing Transportation Management Plans for Work Zones" for complete descriptions of various work zone management strategies, grouped according to the following categories:

Temporary traffic control (TTC):

- ♦ Traffic control devices
- Project coordination, contracting and innovative

Public awareness strategies

- Motorist information strategies.
- Transportation operations (TO):

Demand management strategies

- Corridor/network management (traffic operations)
- Work zone safety management strategies. ♦ Traffic/incident management and enforcement

PREPARE A BASIC TRANSPORTATION MANAGEMENT PLAN

A Basic Transportation Management Plan (TMP) shall contain documentation of all anticipated Work Zone Impacts and associated mitigation strategies. The Basic TMP may vary in complexity as appropriate for the project, but as a minimum, it shall have provisions for a TTC Plan and include details or the required minimum mitigation strategies to avoid

minimal in scope, should consist of the following TO: a detour plan and/or access plan (if needed)

- with an appropriate work schedule for min. delay, PI: a process for contacting potentially affected
- services, businesses, and/or residents, and • TTC: a selection of an appropriate combination of TTC plan layouts from the Long-term TTC Templates or plan sheets developed specifically for the project. Some projects may utilize modified layouts from the MN MUTCD Field Manual











Project Level Procedures

- 2. Transportation Management Plans
 - Lays out a set of strategies for managing the work zone impacts of a project
 - TTC, TO & PI elements
 - Need to determine impacts (Attachment A)
 - Need to determine mitigations (Attachment B)
 - Living document that follows project development and into Construction
 - Starts as early as possible (could even be in Scoping)
 - Responsible persons need to be identified
 - Road authority & Contractor



















Project Level Procedures

- 2. Plans, Specifications & Estimates
 - Contains appropriate provisions of the TMP
- 3. TTC Field Observations
 - May require modifications to TMP
 - Documentation critical



















District or Local Level Process & Procedures

- 1. Encourage the establishment of Work Zone Safety Coordinator (or delegate responsibilities to appropriate personnel)
 - a. Make periodic reviews of projects (Constr & Maint)
 - b. Ensure proper documentation is maintained
 - C. Regularly obtain and keep a record of all known crashes in a work zone
 - d. Make recommendations to functional areas regarding TTC
 - e. Assist design & field personnel with TMP & TTC development





















District or Local Level Process & Procedures

- 2. Operational Performance Information
 - Incident response time
 - Delay time comparison between expected and actual
 - Traffic measures (when IWZ data is available)



- Work Zone Crash Data Review on a District Level
 - Review all fatal and life-changing crashes
 - Within project area or approaching?
 - Assess possible improvements
 - Report deficiencies in current standards and guidelines



















State Level (CO) Process & Procedures

- 1. Statewide Analysis of Work Zone Crash Data (OTST)
- 2. Statewide TTC Field Reviews (OCIC & OM)
 - Determine adequacy of TTC
 - Identify improvement areas
- 3. Training in Transportation Management and TTC
 - Provide training to personnel appropriate to job decisions
 - Development, design, implementation, operation, inspection & enforcement
- 4. Process Feedback Discussion
 - District visits to assess the effectiveness of WZ Safety & Mobility procedures



















State Level (CO) Process & Procedures

5. Statewide Group Activities

- Set policies, standards and guidelines
- Direct research and practices
 - Statewide Work Zone Safety Committee
 - Special Provisions Annual Update
 - TEO Temporary Traffic Control Committee
 - Resident Engineers Work Zone Safety Advisory Committee



















Questions?

















