

## **Change list for Revision No. 1 of the Work Zone Safety and Mobility Implementation Guide, Dated January 2008.**

### **Table of Contents**

On page 2, Policy 2.5.9; Positive Protection Devices and 2.5.10 Uniformed Law Enforcement were added.

On page 4, Appendix A should be Appendix D; Appendix B should be Appendix A; Appendix D should be Appendix B

### **Part 2.0 Policy**

On page 11, first paragraph, first sentence, remove chief safety/traffic engineer and replace with chief maintenance and operations engineer.

On Page 14-16 add;

#### **2.5.9 Positive Protection Devices**

Positive protection devices should be used to the extent that they are possible, practical, and adequate to manage work zone exposure and reduce the risks of crashes resulting in fatalities or injuries to workers and road users. Positive protection devices shall be used to prevent the intrusion of motorized traffic into the work space and other potentially hazardous areas in the work zone. Positive Protection Devices means devices that contain and/or redirect vehicles and meet the crashworthiness evaluation criteria contained in NCHRP Report 350.

Positive protection devices shall be considered in work zone situations that place workers at increased risk from motorized traffic and where positive protection devices offer the highest potential for increased safety for workers and road users, such as:

1. work zones that provide workers no means of escape from motorized traffic e.g. tunnels, bridges, etc)
2. long duration work zones (two weeks or more) resulting in substantial worker exposure to motorized traffic
3. projects with high anticipated operating speeds (45mph or greater) especially when combines with high traffic volumes
4. work operations that place workers close to travel lanes open to traffic
5. roadside hazards, such as drop-offs or unfinished bridge decks that will remain in place overnight or longer

The need for positive protection devices shall be based on an engineering study. The engineering study may be used to develop positive protection guidelines for the agency or to determine measures to be applied on an individual project. The engineering study should be based on consideration of factors and characteristics such as:

1. Project scope and duration
2. Anticipated traffic speeds through the work zone
3. Anticipated traffic volume
4. Vehicle mix
5. Type of work (as related to worker exposure and crash risks)
6. Distance between traffic and workers and extent of worker exposure
7. Escape paths available for workers to avoid a vehicle intrusion into the work space
8. Time of day (e.g. night work)
9. Work area restrictions (including impact on worker exposure)
10. Consequences from/to road users resulting from roadway departures
11. Potential hazard to workers and road users presented by device itself and during device placement and removal
12. Geometrics that may increase crash risks (e.g. poor sight distance, sharp curves)
13. Access to/from work space
14. Roadway classification
15. Impacts on project cost and duration

#### 2.5.10 Uniformed Law Enforcement

A number of conditions may indicate the need for or benefit of uniformed law enforcement in work zones. The presence of a uniformed law enforcement officer and marked law enforcement vehicle in view of motorized traffic on a highway project can affect driver behavior, helping to maintain appropriate speeds and improve driver alertness through the work zone.

The use of uniformed law enforcement shall be considered on Federal-aid projects. The need for law enforcement is greatest on projects with high traffic speeds and volumes and where the work zone is expected to result in substantial disruption to or changes in normal traffic flow patterns. Project conditions should be examined to determine the need for or potential benefit of law enforcement, such as:

- a. Frequent worker presence adjacent of high-speed traffic without positive protection devices.
- b. Traffic control setup or removal that presents significant risks to workers and road users.
- c. Complex or very short term changes in traffic patterns with significant potential for road use confusion or worker risk from traffic exposure.
- d. Night work operations that create substantial traffic safety risks for workers and road users.
- e. Existing traffic conditions and crash histories that indicate a potential for substantial safety and congestion impacts related to the work zone activity and that may be mitigated by improved driver behavior and awareness of the work zone.
- f. Work zone operations that require brief stoppage of all traffic in one or both directions.

- g. High-speed roadways where unexpected or sudden traffic queuing is anticipated, especially if the queue forms a considerable distance in advance of the work zone or immediately adjacent to the work space.
- h. Other work site conditions where traffic presents a high risk for workers and road users, such that the risk may be reduced by improving road user behavior and awareness.

#### **Part 4.0 Development of Traffic Management Plan (TMP)**

On page 21, section 4.2.4 Resources; in the first sentence; change Operational Analysis Section of the Safety/Traffic Division to Operations / ITS Section of the Maintenance and Operations Division.

On page 23, section 4.3.4 Resources; remove the second sentence and replace with “Requests for traffic information used in determining traffic control issues such as lane closures or hourly counts for limitations of operations are to be coordinated with the Operations / ITS Section of the Maintenance and Operations Division.”

On page 25, section 4.4.3.1, second paragraph; change TMP to TTC.

On page 25, section 4.4.3.1, third paragraph, Receive Approvals; change the first sentence to “The Senior Traffic Engineer presents the final TTC plan to the Chief Safety/Traffic Engineer and the Chief Maintenance and Operations Engineer for review and final approval by the date specified in the processing memo.”

On page 26, section 4.5.3 Elements in a TMP report; added to the end of the paragraph “The number of pages contained within the report should be between 10 – 15 pages.”