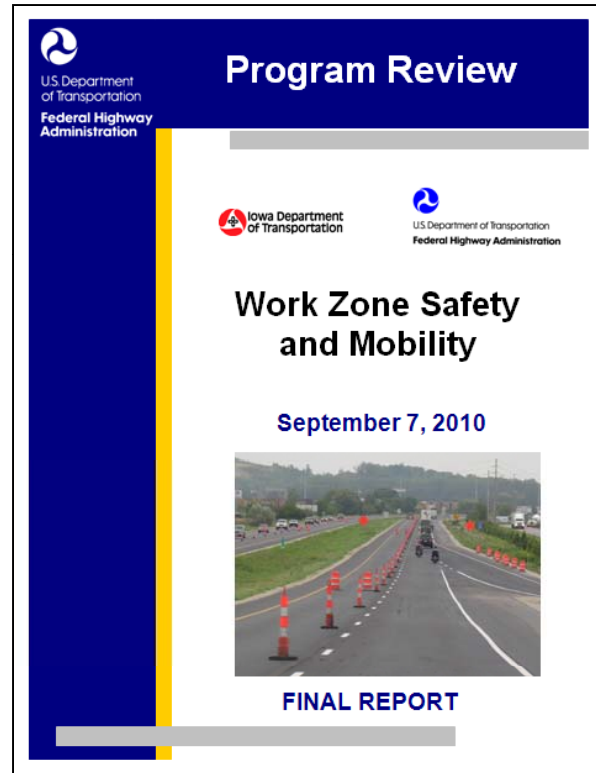


# Iowa's Work Zone Safety & Mobility Process Review



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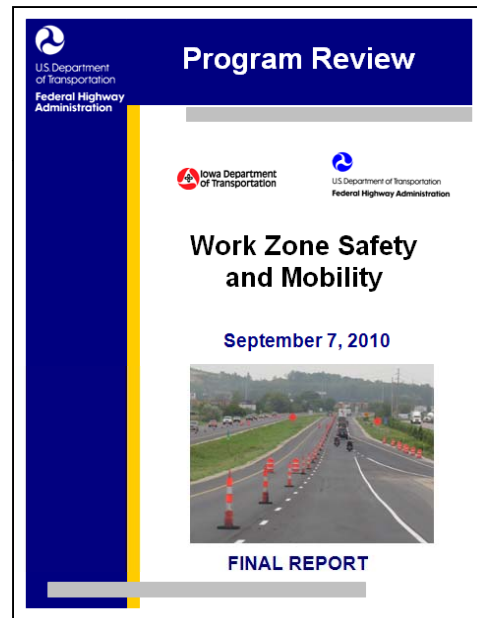
# Work Zone S&M Process Review

- Conducted 2008 & 2009
- Joint FHWA and Iowa DOT team
- Comprehensive review (51 pages)
- Used FHWA Process Review template



# Work Zone S&M Process Review

- Final Report completed September 7, 2010



Executive Summary  
Background  
Purpose and Objective  
Scope and Methodology  
Team Members  
Observations & Recommendations  
Successful Practices  
Action Plan  
Appendices

- Still wrapping up some action items

# Review Team



Members	Affiliation	Title
Steve Gent	Iowa DOT, Office of Traffic & Safety	Director (Team Sponsor)
Mark Bortle	Iowa DOT, Office of Construction	Traffic Safety Engineer
Troy Jerman	Iowa DOT, Office of Traffic & Safety	Senior Transportation Engineer
Kevin Korth	FHWA - Iowa Division	Civil Engineer Trainee
Jerry Roche	FHWA - Iowa Division	Safety & Traffic Operations Engineer
Dan Sprengeler	Iowa DOT, Office of Traffic & Safety	Traffic Control Engineer

# Conformance w/ Federal Regs

- **630 Subpart J (WZ S&M)**
  - October 11, 2007
- **630 Subpart K (Temporary TCDs)**
  - April 14, 2009
- **634 (Worker Visibility)**
  - Into effect with April 2009 letting



# PR Objectives

1. Assess the Iowa DOT's compliance with the WZ S&M Requirements. Corresponding Iowa DOT policies, procedures, and contract documents will be reviewed and their effectiveness in providing safe and efficient work zones will be assessed.
2. Determine if TMPs are sufficiently addressing safety and mobility impacts, especially those for significant projects.



# PR Objectives

3. Review temporary traffic control deployed on state and local construction, maintenance, and utility projects for compliance with all applicable requirements, including the MUTCD, TC Road Standards, Specifications, and project plans.
4. Identify best practices that may warrant deployment statewide.
5. Identify any areas that need further development.



# PR Scope



1. Document and compare Iowa DOT policies, procedures, and contract documents to the provisions set forth in 23 CFR 630 Subparts J and K, and 23 CFR 634.
2. Evaluate current work zone practices, problems, concerns, issues, and best practices.
  - Process Review Guide Questions
  - Work zone self-assessments
3. Perform in-depth review of Significant Project determination and the development of Transplantation Management Plans (TMPs)



# PR Scope



4. Conduct temporary traffic control field reviews of construction and maintenance work zones in each District to determine compliance with and effectiveness of Iowa DOT contract documents.
  
5. Assess the Iowa DOT's efforts to improve public and work force safety within construction work zones in the following areas:
  - Crash Data
  - Training
  - Work Zone Traffic Safety Committee
  - Public Information summary
  - Extra Enforcement

# Findings



**Observation #1:** All policies, procedures, and contract documents related to work zone safety and mobility have been created or modified and address all current federal work zone requirements.

**Recommendation #1:** Documents should continue to be reviewed as part of the biennial process review and modified on an as-needed basis.

**Resolution #1:** No further action required.

**Observation #2:** Because of limited construction staff availability due to the additional projects associated with ARRA, I-Jobs, and Emergency Relief, these process review guide questions were only discussed and responded to by the PR Team.

**Recommendation #2:** The next time the program review is conducted, District and Central Office staff input should be obtained.

**Resolution #2:** The 2010-2011 Program Review will include District and Central Office staff involved in project development and delivery (participation solicitation anticipated November 2011).

# Findings



**Observation #3:** After reviewing existing TMPs, it appears some district and central office staff need assistance in developing effective Transportation Management Plans for significant projects.

**Recommendation #3:** Training should be provided for central office and district staff on developing effective TMPs.

**Resolution #3:** The Division Office requested assistance from the Office of Transportation Operations and training workshops were conducted May 18-19 in eastern Iowa and May 20-21 in central Iowa.

**Observation #4:** After receiving TMPs from district offices, it appears that there is no format for Iowa DOT staff to aid in the development of comprehensive Transportation Management Plans for significant projects.

**Recommendation #4:** A significant project TMP template should be developed for use by central office and district staff.

**Resolution #4:** A draft TMP template will be piloted on projects in December 2010 with a final template in place by April 2011.

**Follow up:** Final Draft TMP template deployed in August 2011

# Findings



**Observation #5:** Some TMPs were created but the electronic copies were not able to be located when requested. The Iowa DOT does not have a standardized electronic storage location for significant project files, including TMPs and supporting documentation.

**Recommendation #5:** The Iowa DOT should designate a centralized electronic repository for storage and sharing of documents.

**Resolution #5:** The Information Technology Division will add folders under the project directory folders on the local area network (W: drive) for significant project files, including TMPs and supporting documentation by January 2011.

**Follow up: Completed**

**Observation #6:** In discussing the level of understanding of TMP requirements for significant projects, it was noted that some Assistant District Engineers (ADEs) are new to their positions since the Work Zone Safety and Mobility Rule was adopted by the Iowa DOT and may not have the FHWA reference materials.

**Recommendation #6:** The FHWA Iowa Division will send copies of all four FHWA guidebooks pertaining to 23 CFR 630 Subpart J to all six Iowa district offices to assist in interpreting the rule.

**Resolution #6:** The Division Office sent out packages containing the four FHWA guidebooks through Iowa DOT local mail on December 15, 2009.

# Findings



**Observation #7:** Although TMPs are required for construction projects, there is no such requirement for maintenance activities. There have been instances in which contractors were not allowed to work during peak times, but Iowa DOT crews would be occupying the roadway conducting routine maintenance.

**Recommendation #7:** A lane closure map should be developed for all interstate routes, providing field maintenance staff a reference as to when their operations would significantly impact traffic. This tool could also be used by central office and district design staff developing construction projects. This could be accomplished in number of different ways, such as, a spreadsheet showing lane configuration and AADT showing when traffic impacts may occur, a color-coded map with a green-yellow-red theme, or a GIS-based map on the internet fed by real-time traffic data.

**Resolution #7:** Draft lane closure map applicable to construction and maintenance activities will be created by April 2011 with a final version anticipated by October 2011.

**Follow up:** prototype lane closure map created May 2011, turned over to Transportation Data to supplement the automated traffic recorder (ATR) data and automate

# Findings



**Observation #8:** For major projects, significance is determined before the alternatives analysis begins. However, resurfacing projects are typically identified only one year in advance, too late to make changes to better accommodate traffic.

**Recommendation #8:** Event Dates for significance determination should be added into project scheduling. The first date would be at the concept phase and the second would be prior to final PS&E turn-in.

**Resolution #8:** Event Dates or other “flag” options such as milestone toggles will be added to the Project Scheduling System (PSS) by December 2011.

**Follow up:** Event dates TMP1 (Significant Project Determination), TMP2 (TMP Review) were added to PSS in September 2011

**Observation #9:** The process review team received 4 of the expected 10 TMPs created by the districts. There is a need for someone from the central office to receive and review these TMPs.

**Recommendation #9:** A central office staff engineer should review and approve all initial TMPs from the district and be involved through project completion. This effort should also be coordinated with the Division Office.

**Resolution #9:** Review and concurrence of TMPs shall be implemented by January 2011.

**Follow up:** This was incorporated into “TMP2” Event Date

# Findings



**Observation #10:** While exceptional training is provided to those who install, maintain, and inspect temporary traffic control in the field, training for those who design temporary traffic control plans is not available.

**Recommendation #10:** Training should be developed for Iowa DOT employees and consultants that design temporary traffic control plans.

**Resolution #10:** ATSSA's Traffic Control Supervisor course will be brought in for Iowa DOT employees and others who instruct the work zone safety workshops by January 2011. ATSSA's Traffic Control Design Specialist course will be brought in from Iowa DOT staff and consultants involved in the design of temporary traffic control plans by May 2011.

**Follow up:** Participant scheduling conflicts pushed this to November 2011

# What Worked Well

- Joint team approach
- Continuing our TTC reviews on annual basis
- WZ S&M PR Guide Questions
- Agreement on the findings





# What to Improve Upon

- Provide notice of what we're doing
- Involve field staff
- Focus the review
- Obtain commitment on action item deadlines
- Collect and use more data





# Next Work Zone S&M PR

- Late Fall 2011
- Follow-up on previous PR action items
- Possible Focus areas
  - TMPs
  - flagger training
  - law enforcement training
- Process Review Template?

# Questions?



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