

# REVISION HISTORY

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This document will be periodically updated by the Iowa Department of Transportation (DOT). The following table provides the date and a brief description of each revision to track revision history.

REVISION NUMBER	DATE OF REVISION	DESCRIPTION OF REVISION
1.0	June 2018	Initial Version
2.0	October 2020	Updated Action Recommendations

# ACTION RECOMMENDATIONS

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Many of the Action Recommendations from the 2018 Work Zone Management Service Layer Plan have been completed or revised as progress has been made. This update incorporates revisions to ongoing actions and adds new actions resulting from work zone mobility and safety efforts.

The following action recommendations are being proposed to achieve the Work Zone Management Service Layer’s (WZMSL) objectives outlined in the previous sections. Action recommendations are presented in order of priority.

### 1. Systems and Technology

#### Iowa Work Zone Data Hub \* Ongoing

Iowa has incredible amounts of data used for work zone applications that is located in many different places and in different formats. The Iowa Data Hub creates a one-stop-shop that will link research-grade data which could be used by Department staff and others for meaningful, and useful applications such as future project planning. The data includes, but is not limited to work zone data, crash data, LCPT, hourly volumes, AADT, annual cultural events, weather history, etc. Beyond linking data, Iowa DOT wants to turn data into useful information.

Development will include processes to systematically relate data and expand process for reporting critical WZM performance measures.

The Data Hub is being developed in cooperation with the FHWA Work Zone Data Initiative (WZDI). Current efforts are for three use Cases:

1. Work Zone Mobility Performance Analysis
2. Agency Project Initiation and Planning TTC Coordination
3. Work Zone Safety Performance Analysis

Work Zone Plan Dissemination to Third Party Data Providers is part of the Work Zone Data Exchange (WZDx) Grant application.

**Action:** Continue to collaborate with FHWA WZDI and develop applications for Iowa DOT users.

**Lead:** Traffic and Safety Bureau

**Support:** Traffic Operations Bureau, IT, TMC, GIS

**Maintenance:**

**Duration:** 5 years

## 2. Performance Measures

### Research/Evaluation/Study - Determine Standard Delay in TCP Work Zones

#### \*Ongoing/Updated

Utilizing work zone data from the past three years of the TCP program, this study determined the current work zone delay on TCP's in Iowa looking at both urban and rural locations. A white paper was completed and approved by the Work Zone Council to use a 4-minute delay per vehicle as the baseline for planning work zone mitigations and is being incorporated into a new lane closure policy.

**Action:** Collect and review data on TCP and other work zones (where available) for review against the new performance measure. Develop SOP and feedback loops for information on project delay and performance.

**Lead:** Traffic Operations Bureau

**Support:** Traffic and Safety Bureau, Construction & Materials Bureau

**Maintenance:** Revised every three years to review and refine the urban and rural benchmark delays and queue lengths

**Duration:** 6 months

### Identify Work Zone Performance Measures \* New

The Iowa DOT has developed Transportation Systems Management and Operations (TSMO) performance measures to aid in managing the transportation system. These overarching performance measures are being used to determine outcome-based performance measures for work zone management that align with TSMO performance measures.

**Action:** Present work zone performance measures to the Work Zone Council.

**Lead:** Construction and Materials Bureau

**Support:** Traffic and Safety Bureau, Traffic Operations Bureau

**Maintenance:** Revised every three years

**Duration:** 12 months

## 3. Culture

### Information Sharing Initiative Workshop \* Ongoing

The first Biennial Information Sharing Workshop was held in December 2019 with one day of technical presentations and one day discussion bringing together field and design personnel

from across the state to collaborate, share, and begin working towards closing the feedback loop between field staff and project designers.

<b>Action:</b>	Schedule second workshop for December 2021 as allowed by existing COVID-19 restrictions and policies
<b>Lead:</b>	Office of Construction and Materials Bureau
<b>Support:</b>	Bureaus of Traffic and Safety, Traffic Operations, Design, and Maintenance
<b>Maintenance:</b>	Biennially
<b>Duration:</b>	On going

### **Promote Work Zone Mobility and Safety Innovations \* Ongoing**

There are many innovative techniques deployed on projects. Identifying, analyzing and communicating these innovations is critical to improving mobility and safety in work zones. This can be accomplished by adding an innovation discussion to the Work Zone Council agenda as a standing item for Districts, Design, and others to bring forth “news” of current projects/innovations/new initiatives.

<b>Action:</b>	Implement procedure and incorporate into process reviews.
<b>Lead:</b>	Construction and Materials Bureau
<b>Support:</b>	Bureaus of Maintenance, Design, Traffic and Safety, Traffic Operations
<b>Maintenance:</b>	Include on all Work Zone Council Agendas and process reviews
<b>Duration:</b>	On going

## **4. Collaboration**

### **Work Zone Library \*Ongoing**

A Work Zone Reference Library (WRL) was created to serve as a work zone document retention and revision information page (<https://iowadot.gov/workzonereferencelibrary>). This site houses work zone standards and supporting documents using the specifications page as a model.

<b>Action:</b>	This page will be reviewed, and content updated as required
<b>Lead:</b>	Construction and Materials Bureau
<b>Support:</b>	Office of Strategic Communication and Policy
<b>Maintenance:</b>	Update as required
<b>Duration:</b>	Ongoing

### **Work Zone Design Stakeholders \* New**

The work zone CMF workshop identified the need to establish a list of stakeholders to contact during work zone design and Transportation Management Plan (TMP) development including developing a process to engage stakeholders and include traveler and customer satisfaction measures.

<b>Action:</b>	Work with ADEs and designated personnel to document the standard process that can be used statewide
<b>Lead:</b>	Design Bureau
<b>Support:</b>	Construction and Materials Bureau and Traffic and Safety Bureau
<b>Maintenance:</b>	Include in process review
<b>Duration:</b>	One year

## 5. Business Process

### **Improve Plan Development Process and Collaboration Tools \* Ongoing**

This program action item will assist in creating a process for communication and collaboration between design and field staff by updating the process from an ad-hoc process to a more formal review using available technology to streamline the process. This may include:

- i. Creating a formal process to communicate work zone field changes to central design
- ii. Increase feedback between design/safety/field staff and Motor Vehicle Enforcement (MVE)
- iii. Establish a means for design/safety/field staff to access crash reports
- iv. Determine a means to systematically collect work zone issues and changes
- v. Examine alternatives for creating a statewide repository of work zone changes
- vi. Examine alternatives to establish a statewide Design Review Team and/or Safety Review Team
- vii. Develop training sessions or presentations on new or changed standards and processes

### **Plan Review \* Ongoing**

A working group to develop a bluebeam based plan review procedure has been formed. They are planning a pilot program to establish the final statewide procedure.

<b>Action:</b>	Form a plan review development team and conduct a pilot demonstration to establish a detailed process for plan review
<b>Lead:</b>	Construction and Materials Bureau
<b>Support:</b>	Bureaus of Design, Bridges and Structures, Traffic and Safety
<b>Maintenance:</b>	Quarterly project updates and incorporation into training
<b>Duration:</b>	5 years

### **Improve Processes to Identify Significant Projects \*Ongoing/Updated**

Developed and implemented a procedure for the Mitigation Team to begin reviewing projects two years out, advise designers of requirements, and audit this process to ensure additional projects are included in the process. A list will be sent to FHWA on June 1 each year and updated on September 1.

**Action:** Document in the Design Manual and collaborate with Project Management Bureau to include in new Master Works process.

**Lead:** Traffic and Safety Bureau

**Support:** Bureaus of Design, Construction and Materials and Project Management

**Maintenance:**

**Duration:** 1 year

### **Implement Process for all Projects to Have TTC and Mitigation Concepts \* New**

All projects should contain TTC and mobility and safety mitigation concepts based on needs for each project to ensure appropriate design and specifications are included in the contract documents.

**Action:** Publish a chapter in the Design Manual containing guidance for development of concepts for TTC and mobility and safety mitigation.

**Lead:** Design Bureau

**Support:** Bureaus of Traffic and Safety, Construction and Materials and Traffic Operations

**Maintenance:**

**Duration:** 1 year

### **Develop and Implement Improved Process Review \* New**

Iowa DOT has been selected by FHWA as 1 of 3 states as a case study to implement a data driven process review. This is being done in collaboration with the development of a broader base process review procedure that includes field reviews, field operations staff interviews, district management team input, and inclusion of motor vehicle enforcement participation.

**Action:** Participate with FHWA and their consultant to integrate data driven processes into the process review procedures and provide information for publication of the case study. Complete the new procedures and implement for the 2021 construction season.

**Lead:** Design Bureau

**Support:** Bureaus of Construction and Materials, Traffic and Safety, Motor Vehicle Enforcement, Local Systems, and FHWA

**Maintenance:**

**Duration:** 5 years - ongoing

## **6. Organization and Work Force**

### **Transition from Managed TCP to In-house TCP\* Ongoing**

This action item is currently in progress. The TCP program deals directly with Iowa work zones so having the TCP program housed under the TSMO WMZSL umbrella is appropriate. This action recommendation is a continuation of the TCP program as it transitions to an internal process for the DOT as 'a way of doing business' for Iowa work zones.

**Action:** Update the concept procedures and design manual with TCP initiatives that have been developed. Incorporate IWZ layouts into the design manual and begin incorporating them into projects' traffic control plans. Move the TCP group towards a support role of training, plan review, and system monitoring and assisting the DOT transitioning into an in-house TCP program.

**Lead:** Traffic Operations Bureau

**Support:** Bureaus of Traffic and Safety, Design, Construction and Materials, Bridges and Structures

**Maintenance:**

**Duration:** 3 years

### **Work Zone Management Training Program\* Ongoing**

Develop a work zone management training program to provide information and new developments in management of mobility and safety in work zones. This includes both construction and maintenance operations.

**Action:** Include this as part of the annual work zone training program

**Lead:** Design Bureau

**Support:** Bureaus of Traffic and Safety, Construction and Materials, Bridges and Structures

**Maintenance:** Annual updates

**Duration:** On going