

Dated: June 30, 2005

**MINNESOTA DEPARTMENT OF TRANSPORTATION
APPLICATION GUIDELINES, OPERATIONAL STRATEGY and
IWZ TRAVEL TIME SYSTEM SPECIFICATIONS**

The Travel Time System is a type of Intelligent Work Zone (IWZ) System which is considered a Stand-Alone system with minimal Mn/DOT support services or equipment required for full deployment and operation.

APPLICATION GUIDELINES and OPERATION STRATEGY:

The IWZ Travel Time System is designed to be a stand-alone system that computes the approximate travel time between two locations via a selected route. In general, the system would display a message to the traveler that, from their current location it will take xx minutes to reach a given location ahead of them. Such as: “ *Travel Time to River Crossing: 12 minutes* “. Actual messages for individual project locations and message locations will vary based upon critical routes. The travel time system is extremely useful where construction will create large vehicle delays for extended periods of time. Although a Travel Time System is not directly an operational TTC device for a project, since it provides no direct traffic control, it should be considered for deployment as part of a District’s public relations and traveler’s information system. Advanced travel time information to travelers will reduce frustration and may persuade some travelers to use alternate routes.

Deployment consideration should address the estimated traffic volumes, duration of the delay due to the project, and the effects of congestion at the particular project location. The messaging system utilized would be dependent on the project location, but generally would be changeable message signs (either existing permanent CMS or portable CMS). Primary locations of the messaging should be designed such that travelers have a chance to choose alternate routes based upon the displayed time for their planned route. Secondary locations for messaging would provide the traveler with travel time information, although there are no alternate routes available, but this provides the traveler with real-time information about their traffic delay situation.

TRAVEL TIME SYSTEM SPECIFICATIONS:

A IWZ Travel Time System should be an addition to the standard Temporary Traffic Control Plan (TTCP) for a construction or maintenance project, and consists of appropriately placed changeable message devices and Non-intrusive Traffic Detectors (NITD). Through the monitoring of the NITD, the Equipment Control Unit (ECU) assesses current traffic conditions and determines an appropriate time value to be displayed for traveling public. The computation algorithm to be utilized by the system shall be approved by the engineer prior to deployment. The TTCP shall include the approximate locations of detectors, and type of message to be provided. The message format and means of delivery shall be determined by the TTCP, which may include Portable Changeable Message Signs (PCMS), existing permanent changeable message signs (CMS), static signs with changeable characters, and/or other systems such as real-time Highway Advisory Radio (HAR).

The IWZ Travel Time System will consist of furnishing, installing, and placing into operation all the needed detection, equipment control, system calibration, travel time computations, communications networking and approved messaging system that are required for the project, the daily monitoring of the system and timely response to system problems. Mn/DOT will conduct field reviews and require event logs for performance measures.

Due to the ever-changing and improving technology, the specific types of detection, data computations or communication network are not specified for the IWZ Travel Time System. The vendor/ manufacturer shall supply equipment that is fully functional and quickly/easily repaired/replaced if damaged. The vendor/ manufacturer shall provide technical personnel for all system calibration, operation, maintenance and timely on-call support services. The vendor/ manufacturer shall certify that the system will perform to the Application Guideline and Operational Strategy above and details as specified in the TTCP. All of the project’s special provisions will prevail. The IWZ Travel Time System must be listed on the Mn/DOT OTSO Work Zone Qualified Product List as either approved or in provisional approval status. Systems provided by provisionally approved vendor/ manufacturers must also adhere to the provisional approval requirements as outlined in the IWZ Systems Qualification and Acceptance Process.