Travel Time for Rural Construction Work Zones

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MnDOT

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Your Destination...Our Priority
Why provide travel time in work zones?

- Well received by the public;
- Improves travelers’ experiences;
- Motorists appreciate information to:
  - make route and other planning decisions,
  - set their expectations, and
  - reduce stress and frustration.
General Description of I–35 Travel Time System

- Along I–35 between Hinckley and Duluth in Minnesota
- MnDOT District 1 (Duluth)
General Description of I–35 Travel Time System

- Provide travel time & congestion information to motorists on rural freeways
- Utilize an innovative approach
General Description of I-35 Travel Time System

- Travel time system, called TrafAlert™ developed and operated by Renaissance Technologies in Mechanicsburg, Penn
- Peak period is primarily weekends, defined as Fridays thru Sundays
- Collects traffic data
- Determines & provides real-time travel time with a desired specified accuracy and latency for this rural application
- Traffic data collected is archived in an xml format & transferred to MnDOT ownership
Travel Time Signs

Hinckley 50 MILES
TRAVEL TIME 58 MIN
Development of Travel Time for Rural Interstate During Construction on I-35

Project Background

Destination Innovation Project
Design-Bid-Build
Best Value Procurement
Pay for Performance
Stand-A-Lone Project
Stand-A-Lone Project

- Unique as it is set up as a stand-a-lone project
- Travel time contractor is also the prime contractor
- Allows direct accountability to successfully attain the project goals/deliverables
Best Value Procurement

Allows other key factors, to be considered in the evaluation and selection process, to minimize impacts, enhance long-term performance and value of construction:

• Qualifications and Experience
• Schedule
• Quality
• Performance-Based Criteria
Pay for Performance

- Description
- Benefits
- Drawbacks
System Details in Plans and Specifications

- Performance Requirements
- Method Requirements
- Basis of Payment
Quality Control

- Cost of Additional Requirements
- Appropriate Levels of Inspection
Systems Requirements Language

- Provide Clear Easily Understood Requirements
- Define Terms in the Contract
Travel Time Comparison Method

Floating Car Method
Project Website

- Required by Contract
- Linked on Mn511 Website
Staff Training and Technology
Public Feedback
System Performance

TRAVEL TIME
TO Hinckley

VIA 35  68 MIN
VIA 23  80 MIN
Project Goals and Indicators of Success

- Provide travel time & congestion information to motorists on rural freeways
- Utilize an innovative approach
Eastbound I–94 Intelligent Work Zone

**Eastbound Section**
- IWZ contractor provides detection
- IWZ contractor provides portable DMS
- IWZ contractor determines and posts travel times
- IWZ contractor determines and posts stopped traffic advisory

**Westbound Section**
- MnDOT and IWZ contractor provide detection
- SSR provides portable DMS
- MnDOT determines and posts travel times

**Work zone**
MnDOT and IWZ contractor provide detection

**Travel time advisory sign**
Note: Dayton and Rogers travel time advisory not shown
Questions?

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http://www.dot.state.mn.us/guidestar/2006_2010/
I–94 Speed Data

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>Traffic</td>
<td>Count of vehicles in the traffic data.</td>
</tr>
<tr>
<td>Speed</td>
<td>Average speed of vehicles on the road.</td>
</tr>
<tr>
<td>Conditions</td>
<td>Weather conditions and road conditions.</td>
</tr>
</tbody>
</table>

![Graph showing speed data for I–94.](image-url)