Development of Travel Time for Rural Interstate During Construction on I-35

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Project Location

- Along I-35 between Hinckley and Duluth in Minnesota
- MnDOT District 1 (Duluth)
Project Goals

- Provide travel time & congestion information to motorists on rural freeways
- Utilize an innovative approach
Project Background

Destination Innovation Project

Stand-Alone Project

Design-Bid-Build

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Pay for Performance

Best Value Procurement
**What is the Destination Innovation Program?**

- Assist MnDOT in delivering the right solution at the right time with the right participation
- Projects funded must demonstrate innovation and advance MnDOT’s Strategic Vision

**What was it developed?**

- Build upon our Area Transportation Partnership and Statewide Transportation Improvement Plan process
- Provide flexibility in fostering innovative opportunities in delivering our vision
- Encourage MnDOT employees to deliver projects that help move MnDOT forward in one or more of its Strategic Directions

**Who can participate?**

- All MnDOT employees are eligible to submit requests.
- The Destination Innovation Program is managed by Commissioner Sorel.
- The Stewardship Council, which consists of the division directors and the deputy commissioner/chief engineer, supports the commissioner by recommending funding opportunities.
### Design-Bid-Build Process vs. Design-Build

#### Design-Bid-Build Process

- **Project Scoping** → **Pre-Design & Environmental Studies** → **Construction Plan Development & Right of Way Acquisition** → **Construction** → **Open Bids** → **Open to Traffic**

#### Design-Build

- **Project Scoping** → **Pre-Design & Environmental Studies** → **Construction Plan Development & Right of Way Acquisition** → **Detail Design** → **Construction** → **Open Bids** → **Open to Traffic** → **Time Savings**

[www.dot.state.mn.us/designbuild](http://www.dot.state.mn.us/designbuild)
Best Value Procurement

- 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. Key factors include:
  - Qualifications
  - Schedule
  - Quality
  - Performance-Based Criteria
Pay for Performance

- **Description**
  - The contractor is paid for work on a graduated scale based on the quality and longevity of the work over time.

- **Benefits**
  - Eliminates blame when there is a problem with the quality of a specific work item
  - Shifts risk of providing a quality product to the contractor
  - Provides higher quality products for a longer duration

- **Drawbacks**
  - Time needed after project completion to ensure product performance
  - Product monitoring and inspection is time-consuming
  - Contractor may be required to finance a portion of the work during the performance period
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
Current System AND Why Changes Are Needed

- Implementation of this system will
  - Enhance safety and mobility in work zones, as well as,
  - Respond to a request by our customers to
  - Provide a uniform,
  - Easily understood system for the work zones on I-35 from Hinckley to Duluth

- If successful, this project can provide the following to enable future successful deployments:
  - Cost & reliability information
  - System design & operation documents to
  - Develop a best practice and standard special provisions
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

The signs display real-time travel information which is simultaneously available online at http://www.trafalert.net/taduluth35/tamap.htm
Non-Financial Benefits

- MnDOT continually strives to take a proactive innovative approach to enhance safety, mobility and efficiency of roadways in Minnesota.
- Innovative strategies to achieve our TZD goals
The overall goals of this evaluation are:

- To document the process MnDOT followed, identifying what worked well and what did not; and
- To examine and summarize the data that MnDOT has collected in order to articulate a recap of the project to help MnDOT understand what to expect in similar deployments.
- Provide documentation enabling decisions on the value of these systems on future similar projects.

* The project evaluation will be available on our website in February of 2013.
Questions?

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http://www.dot.state.mn.us/guidestar/2006_2010/