

Road Closed: Research project analyzes full-closure construction

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Reprinted with permission from Mn/DOT Newsline dated July 28, 2010

In the back of your mind, you probably knew that completely closing a road during construction makes sense in terms of efficiency and safety. But could you prove it?

Mn/DOT and University of Minnesota research staff can. In fact, the recent Research Services report, "TH-36 Full Closure Construction: Evaluation of Traffic Operations Alternatives," analyzed how closing a highway affects the project and the public.

In 2007, the department closed Hwy 36 in North St. Paul, which at the time was the largest full closure the department had ever planned and executed. This gave researchers an opportunity to evaluate the actual impact of a full closure in real time and measure how it affected nearby highways, local roads and safety.

Highways

The congestion impact from the full closure was mild, but it extended over a large area. Because many commuters from Wisconsin use Hwy 36, when it closed, some chose to cross the St. Croix River at Interstate 94 rather than Stillwater.

Local Roads

Two of the 12 local roads measured experienced some congestion — most local roads had enough spare capacity.

Safety

The Minnesota State Patrol and local police were originally on call for a week, but after two days it was determined that their services were not needed.

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Overall, the team concluded that the construction cost savings far outweighed the increase in Road User Costs, which is a calculation designed to measure how much impact construction has on motorists. The research team also did a before-and-after snapshot of public perception. Before the full closure, there was a 50-50 split in public opinion whether it was a good idea. After the project was complete:

- 92 percent of residents agreed that a full closure was the right plan of action.
- 84 percent of businesses agreed with the decision to fully close the highway.
- 87 percent of commuters supported a full closure.

“There were a lot of early discussions about using full closure, and we thought people would be very uncomfortable with that. But our market research told us we could turn that around if we did it right,” said Commissioner Tom Sorel in an interview with the Federal Highway Administration’s Innovator newsletter.

To view the entire Hwy 36 full-closure report, visit <http://www.lrrb.org/pdf/201004.pdf>.

To view a two-page wrap up of the report, visit <http://www.lrrb.org/pdf/201004TS.pdf>.