

Wainwright, Scott (FHWA)

From: Wainwright, Scott (FHWA)
Sent: Wednesday, February 09, 2011 10:54 AM
To: 'JANELLE.ANDERSON@STATE.MN.US'
Cc: Kalla, Hari (FHWA); Stein, William (FHWA); 'LundV@co.st-louis.mn.us'
Subject: RE: Request to Experiment: St. Louis County MN Converging Chevrons and Narrow Lanes

Janelle, thanks for submitting the experiment request on behalf of St. Louis County. I have done a preliminary review of the request, and I have identified some concerns that we (FHWA) would like MnDOT and/or St. Louis County to resolve before we go any further in our review.

Narrow lanes is not an MUTCD issue that requires FHWA experimentation approval. Of course, the converging chevrons markings are non-MUTCD-compliant markings that do require experimentation approval. The purpose of experimentation with non-MUTCD-compliant traffic control devices is to evaluate their safety and effectiveness, and thereby provide basis for potential future consideration of inclusion in the MUTCD. With St. Louis County's proposed implementation of both narrowed lanes and converging chevron markings at the same time, it will be impossible to determine whether the markings caused any speed reductions at all versus reductions caused by the narrowed lanes. Thus, this experiment, as currently proposed, would not provide any useful data or knowledge regarding the experimental markings.

We cannot approve the experiment unless it is restructured in a way that evaluates the narrowed lanes and converging chevrons separately. One way to do this would be a staged implementation, with the narrowed lanes being installed first and data collected to evaluate the resulting speed reductions, and then the addition of the chevron markings would come later, with data collected to evaluate whether that produced further speed reductions.

Another significant concern is that simple before-and-after speed comparisons are insufficient to provide reliable information on causes for any changes in speeds that occur. Control sites with comparable physical conditions at which no treatments are applied need to be identified and data collected at the same times and intervals as the experiment sites for comparison purposes. Further, appropriate statistical methods must be employed to analyze the data and determine statistical significance of the results.

I hope that MnDOT's research staff can help St. Louis County restructure the implementation and evaluation plan with appropriate time periods for each of the two stages, control sites, and appropriate statistical methods, so that meaningful data and results can be obtained. If this approach is amenable to the county and MnDOT, please revise the request and resubmit it when it is ready for further FHWA review.

Thanks for your anticipated assistance in making MUTCD experiments provide meaningful, scientifically sound results that will be supportable under peer review.

W. Scott Wainwright, P.E., PTOE
Highway Engineer, MUTCD Team
Federal Highway Administration
Office of Transportation Operations, HOTO-1
1200 New Jersey Avenue, S.E., E84-477
Washington, DC 20590

phone: 202-366-0857
fax: 202-366-3225
e-mail: scott.wainwright@dot.gov

From: Anderson, Janelle (DOT) [SMTP:JANELLE.ANDERSON@STATE.MN.US]
Sent: Friday, February 04, 2011 10:54:45 AM
To: MUTCDofficialrequest (FHWA)

Cc: Ege, Rob (DOT); LundV@co.st-louis.mn.us

Subject: Request to Experiment: St. Louis County MN Converging Chevrons and Narrow Lanes

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Attached please find a Request to Experiment for St. Louis County, MN. Also attached are supporting documents as described in the Letter. Contact me with any questions.

Janelle Anderson, P.E.

Tort Claims/Standards Engineer

Office of Traffic, Safety, and Technology

M.S. 725 Waters Edge, 3rd Floor

651-234-7388 (Office)

651-230-7641 (cell)

651-230-7370 (fax)