



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

**MAR 29 2011**

1200 New Jersey Ave., SE  
Washington, D.C. 20590

In Reply Refer To:  
HOTO-1

---

Janelle Anderson, P.E.  
Tort Claims and Traffic Standards Engineer  
Office of Traffic, Safety, and Technology  
Minnesota Department of Transportation  
1500 West County Road B-2  
Roseville, MN 55113

Dear Ms. Anderson:

Thank you for your letter of February 4 transmitting a request from St. Louis County to experiment with lane narrowing and a series of converging chevron markings for speed reduction approaching an intersection.

Mr. Scott Wainwright of our MUTCD Team reviewed the original request and, in an email dated February 9 indicated that the proposed experiment could not be approved as submitted because the lane narrowing and converging chevron markings would be implemented and evaluated simultaneously. Since it has been clearly demonstrated through previous research that lane narrowing (which does not require experimentation approval) almost always results in reduced speeds, the experiment would not be able to identify what speed reductions, if any, were due to the experimental chevron markings. Other issues were also pointed out regarding statistical methods in the proposed evaluation plan, and it was suggested that St. Louis County restructure the implementation and evaluation plan to make it approvable.

On March 15 you transmitted St. Louis County's response to the review comments. Unfortunately, that response indicates that the county is unwilling to restructure the experiment to separate the implementation of narrow lanes from the converging chevron markings. Regrettably, this refusal to separate the implementation of the treatments makes it necessary for us to deny the request for experimentation. 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. The experiment, as currently proposed, would not provide any useful data or knowledge regarding the experimental markings.

Further, although there have been a few previous experiments with converging chevrons, we are increasingly concerned that such a design would not be appropriate for future MUTCD consideration even if it were proved to have effects on reducing speeds. Use of these chevron-shaped markings within a travel lane is contrary to the established meaning of chevron markings



as denoting an area of pavement on which drivers are not to travel, such as in gore areas or flush islands separating travel lanes in the same direction, as with offset turn lanes. Use of this style marking within a travel lane could be confusing to road users, especially on an intersection approach such as St. Louis County proposed.

Accordingly, the request to experiment is officially denied. We have assigned this matter the following experiment number and title: "3(09)-7 (E) – Converging Chevron Speed Reduction Markings (Denied)." Please refer to this number in any future correspondence.

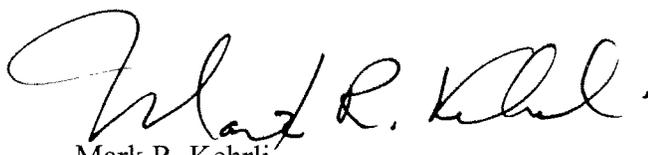
---

We would be open to considering a new request from St. Louis County to experiment with a different form of speed reduction markings, such as a series of progressively closer spaced transverse lines across the lane ("optical speed bars"). However, the county would still need to agree to a staged implementation and evaluation, with the lane narrowing occurring first, so that the speed reduction markings can be properly evaluated.

We regret we cannot approve the request as submitted, however we hope that you understand our position on this. If there are any further questions, please feel free to contact Mr. Wainwright at [scott.wainwright@dot.gov](mailto:scott.wainwright@dot.gov) or by telephone at 202-366-0857.

Thank you for your interest in traffic operations and safety.

Sincerely yours,



Mark R. Kehrli  
Director, Office of Transportation  
Operations