

**Federal Highway  
Administration**

August 7, 2003

**Refer to: HOTO-1**

Mr. Dave Holstein  
Administrator  
Office of Traffic Engineering  
Ohio Department of Transportation  
1980 W. Broad Street  
Columbus, OH 43223

Dear Mr. Holstein:

Thank you for your May 15 e-mail requesting permission to experiment with a new symbol warning sign for an inside merge traffic condition. This experimentation would evaluate the effectiveness of a new symbol design to warn motorists of this potentially complicated merging situation. Your request to experiment has been assigned the following official ruling number and title: "Request number 2-519(E)-Inside Merge Diagrammatic Symbol Sign." Please refer to this number in future correspondence.

Your request has been reviewed and found to be consistent with the guidelines detailed in Section 1A.10 of the MUTCD. Your request to experiment is approved subject to receipt of the following:

- 1 Before the experimentation is initiated, please revise the research and evaluation plan for this experimentation to include an assessment of motorist understanding of the symbol in accordance with the requirements of "G" of Section IA. 10.

We look forward to receiving notification of implementation dates as well as receiving your semiannual progress reports and final report. To expedite the process, you may fax the additional information to 202-366-3225.

If you have questions or wish additional information, please feel free to call Mr. Fred Ranck, Safety/Design Engineer, Federal Highway Administration's Resource Center at Olympia Fields, Illinois. His telephone number is 708-283-3545.

Sincerely yours,

Vincent P. Pearce

Acting Director, Office of Transportation  
Operations

cc: Mr. Jim Baron, ATSSA



## **INSIDE MERGE DIAGRAMATIC SIGN**

Submitted by Dave Holstein, Administrator Office of Traffic Engineering  
Ohio Department of Transportation Columbus, Ohio ,

The request for permission to experiment should contain the following:

- A. A statement indicating the nature of the problem.

Inside merges are no longer built in our construction projects because they are known to cause accidents. Unfortunately, we have many of them on the system and they won't be reconstructed for many years. Existing installations generally consist of the W4-1 sign. We would like to try this experimental sign to warn motorists of the existing condition and we believe the graphical warning sign could possibly relay this information more effectively.

- B. A description of the proposed change to the traffic control device or application of the traffic control device, how it was developed, the manner in which it deviates from the standard, and how it is expected to be an improvement over existing standards.

We formally request permission to install the attached Inside Merge Warning Sign in several locations in the Dayton and Cincinnati areas. It will be black on yellow in conformance with the MUTCD requirements. We have not tried this particular sign in the past.

- C. Any illustration that would be helpful to understand the traffic control device or use of the traffic control device.

See attached drawing.

- D. Any supporting data explaining how the traffic control device was developed, if it has been tried, in what ways it was found to be adequate or inadequate, and how this choice of device or application was derived.

See item B above.

- E. A legally binding statement certifying that the traffic control device is not protected by a patent or copyright.

We are unaware of this sign being protected by patent or copyright. It is simply a diagrammatic warning sign.

- F. The time period and location(s) of the experiment.

The evaluation will last one to three years depending upon results from our before/after crash analysis. The following are the proposed locations:

In the Dayton area (Greene County) - I-675 NB at US-35 WB  
I-675 SB at Col Glenn Highway

In the Cincinnati area (Hamilton County) - I-75 SB at I-74 EB  
I-75 NB at 4th/6th Street I-275 WB at I-75  
I-275 WB at Blue Rock/Ronald Reagan Hwy I-74 EB at I-275 (west jct.)

- G. A detailed research or evaluation plan that must provide for close monitoring of the experimentation, especially in the early stages of its field implementation. The evaluation plan should include before and after studies as well as quantitative data describing the performance of the experimental device.

ODOT has detailed crash information for each location that will serve as the "before" data in our before/after evaluation. We will compare the historical crash information to crash information after the signs are installed. The evaluation will last one to three years, depending upon results from our before/after crash analysis. We will compare before and after data quarterly at the outset of the experiment and then decide upon the subsequent comparison frequency based upon initial results.

- H. An agreement to restore the site of the experiment to a condition that complies with the provisions of this Manual within 3 months following the end of the time period of the experiment. This agreement must also provide that the agency sponsoring the experimentation will terminate the experimentation at any time that it determines significant safety concerns are directly or indirectly attributable to the experimentation. The FHWA's Office of Transportation Operations has the right to terminate approval of the experimentation at any time if there is an indication of safety concerns. If, as a result of the experimentation, a request is made that this Manual be changed to include the device or application being experimented with, the device or application will be permitted to remain in place until an official rulemaking action has occurred.

We agree to restore the test sites to a condition that complies with the MUTCD following the end of the experiment, though we are hopeful we can justify permanent installation based upon our findings. Should the results of the experimental installations not yield a reduced number of crashes, we will simply remove them and reinstall the existing signs.

- I. An agreement to provide semiannual progress reports for the duration of the experimentation, and an agreement to provide a copy of the final results of the experimentation to the FHWA's Office of Transportation Operations within 3 months following completion of the experimentation. The FHWA's Office of Transportation Operations has the right to terminate approval of the experimentation if reports are not provided in accordance with this schedule.

We will provide semiannual progress reports and a final report.

RE Experiment Request - Inside merge warning sign From: Buckson,

James

Sent: Saturday, July 19, 2003 1:05 PM TO: Ranck, Fred  
Subject: RE: Experiment Request - Inside merge warning sign  
Fred

I think the request now has all of the information you need. Let me know if you have any other questions.

Jim

-----Original Message-----From: Ranck, Fred  
Sent: Thursday, June 05, 2003 5:52 PM

TO: Buckson, James; '[Dave.Holstein@dot.state.oh.us](mailto:Dave.Holstein@dot.state.oh.us)' Cc: Huckaby, Ernest  
Subject: RE: Experiment Request - Inside merge warning sign

-----Original Message-----From: Buckson, James  
sent: Thursday, May 15, 2003 11:16 AM To: Huckaby, Ernest  
Cc: Ranck, Fred

Subject: FW: Experiment Request - Inside merge warning Sign

Ernie,

The following request has been received from Dave Holstein, Administrator, office of Traffic Engineering on behalf of the Ohio Department of Transportation. This is a somewhat less formal method of submitting a request, but I trust it won't be a problem.

Jim Buckson  
Mobility & Traffic Operations Engineer  
FHWA Ohio Division  
(614) 280-6846 (office)  
(614) 402-9681 (cell)

Dave and Jim:

Your request to experiment has been reviewed; several questions compell additional information from Ohio DOT; they are:

1. what signs/traffic control devices are in place now?
2. do you have an assessment of the # of crashes or frequency of crashes with the current signing?
3. what will be your monitoring program of the sites to be able to know if the new experimental devices are working worse than the current traffic control devices and what will be your plan of action?

Please Advise

Fred Ranck  
Safety Engineer/MUTCD Team  
Resource Center - Olympia Fields IL  
19900 Governors Drive  
Olympia Fields, IL. 60461-1021  
Telephone #: 708-283-3545  
Fax #: 708-283-3545  
[E-mail: fred.ranck@fhwa.dot.gov](mailto:fred.ranck@fhwa.dot.gov)

RE Experiment Request - Inside merge warning sign

-----Original Message-----

From: [Dave.Holstein@dot.state.oh.us](mailto:Dave.Holstein@dot.state.oh.us) sent: Thursday, May 08, 2003 3:20 PM To: Buckson, James  
Cc: [Jay.Hamilton@dot.state.oh.us](mailto:Jay.Hamilton@dot.state.oh.us); [Jennifer.Townley@dot.state.oh.us](mailto:Jennifer.Townley@dot.state.oh.us); [Jim.Roth@dot.state.oh.us](mailto:Jim.Roth@dot.state.oh.us)  
subject: Experiment Request - Inside merge warning sign

Jim:

what: We formally request permission to install the attached Inside merge warning sign in several locations in District 8 (Dayton and Cincinnati areas). We have not tried this particular sign in the past. We are unaware of this sign being protected by patent or copyright. It is simply a diagrammatic warning sign.

why: Inside merges are no longer built in our construction plans because they are known to cause accidents. Unfortunately, we have many of them on the system and they won't be reconstructed for many years. We would like to try this experimental sign to warn motorists of the existing condition and we believe the graphical warning sign could possibly relay this information more effectively.

Evaluation: we will compare historical crash information to crash information after the signs are installed. The evaluation will last 1- 3 years depending upon results from our before/after crash analysis. The following are the proposed locations;

Greene County - 1675NB at us35WB  
Greene county - 1675SB at Col Glenn Highway  
Hamilton County - 175SB at 174EB  
Hamilton county - 175NB at 4th/6th street  
Hamilton county - 1275WB at 175  
Hamilton County - 1275WB at Blue Rock/Ronald Reagan Hwy  
Hamilton county - 174EB at 1275 (west jct.)

We agree to restore the test sites to a condition that complies with the MUTCD following the end of the experiment, though we are hopeful we can justify permanent installation based upon our findings.

We would like to proceed absolutely as soon as possible. Please let me know if you require any additional information and when you would expect being able to provide us with the requisite approval. Thank you in advance.

Dave Holstein  
ODOT office of Traffic Engineering  
PH 614-466-3601  
email [david.holstein@dot.state.oh.us](mailto:david.holstein@dot.state.oh.us)