



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

1200 New Jersey Avenue, SE.
Washington, DC 20590

December 3, 2008

In Reply Refer To: HOTO-1

Mr. Vernon Kleen
1825 Clearview Drive
Springfield, IL 62704

Dear Mr. Kleen:

Thank you for your August 1 letter in which you reiterated your 2001 proposal for modification of the Manual on Uniform Traffic Control Devices (MUTCD) to incorporate a system of five different colors of markings on center curbs and median strips. The stated intent of such colored markings is to improve the ability of drivers to detect those median curbs when turning left at an intersection or when turning right out of a driveway onto a one-way roadway.

In 2001, we reviewed your proposal and, because of the lack of any formal scientific evaluations of the safety and effectiveness of your proposed markings system, your request for a change in the MUTCD was denied in our official ruling number 3-151(C) titled "Detection of Center Curbs and Median Strips."

While we appreciate your interest in a system of colored markings as stated in your letter and recognize that it is aimed at producing safety improvements, nevertheless you have not provided any new information in the form of the required safety and effectiveness studies that substantiate your claims or justify reconsideration of our previous denial. Accordingly, we hereby reaffirm our previous 2001 denial of your request for a change in the MUTCD, numbered 3-151(C).

If a State or local highway agency is sufficiently interested in your markings system to submit a request for experimentation, such a request could be considered for approval but only if it included a comprehensive, scientifically sound plan for the experimenting highway agency to collect appropriate data and evaluate the safety and effectiveness of such markings in comparison to the standard colored markings (including retroreflective raised pavement markers) that the MUTCD currently allows on center curbs and median strips for the same purposes. You may wish to consult the information about experimentation with new traffic control device ideas on the MUTCD Web site at <http://mutcd.fhwa.dot.gov/condexper.htm>.

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ECONOMY



Thank you again for your interest in highway safety. We regret we cannot approve your proposal but we trust you understand why approval is not possible at this time.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Hari Kalla". The signature is fluid and cursive, with the first name "Hari" and last name "Kalla" clearly distinguishable.

Hari Kalla
Acting Director, Office of Transportation
Operations

Vernon Kleen
1825 Clearview Drive
Springfield, IL 62704
217-787-3515

1 August 2008

Director
Office of Transportation Operations
U.S. Department of Transportation
Federal Highway Administration
400 Seventh Street S.W.
Washington, D.C. 20590

Re: Proposal for modification to MUTCD

Dear Director:

Back in August, 2001, I submitted a suggestion to improve the detection of center curbs and median strips that may have required modification to the Manual on Uniform Traffic Control Devices (MUTCD). (Refer to your response: HOTO-1, with ruling number 3-(151(C)) Change (Detection of Center Curbs and Median Strips)).

Since providing that suggestion, hundreds of people have been injured and thousands of cars seriously damaged and destroyed as a result of hitting/running over unmarked or poorly marked curbs, lane dividers and median strips. [I've personally observed such incidents right here in Springfield several times.]

The suggestion, for human (and vehicle) safety and road effectiveness, fit in the same arena (including cost) as other recent and similar road improvements such as the imbedded orange reflectors that separate highway lanes, the imbedded white lights (that light up with the traffic signals) at corners with multiple turning lanes in order to keep traffic in their correct turning lanes, etc.

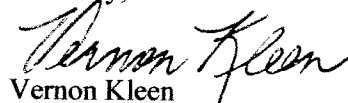
Since the MUTCD has a variety of scenarios available that already address this suggestion, it would seem appropriate that individual site markings (such as retroreflective paint, raised pavement markers, imbedded pavement markers, or other options) could be readily placed at known problem locations (and phased in at other locations) over time.

I realize that should this suggestion (or even part of it) be adopted, some driver education may be necessary. However, that education would be minimal since drivers already know that red means danger, orange/yellow – caution, and green – okay to proceed. The only “supplemental” feature in this suggestion is “blue” -- which would signify “all clear”.

Therefore, as a goal to improve human (and vehicle) safety and road effectiveness, I once again submit the suggestion to: “Improve the Detection of Center Curbs and Median Strips” and provide some visual examples (enclosed) that can be used for reference purposes.

Thank you (again) for your much-appreciated consideration.

Sincerely,


Vernon Kleen

enclosures

Two-part Suggestion for Improving the Detection of Center Curbs and Median Strips
Drawings to accompany the suggestions

cc: file

SUBJECT OR SUGGESTION: Improving the Detection of Center Curbs, Lane Dividers and Median Strips.

1. Current Practice or Procedural Problem:

At night, drivers (particularly older drivers) find it difficult to discern the presence and location of some elevated center curbs, lane dividers and median strips – especially at intersections. The problem increases during (or immediately after) rains and is exacerbated by the presence of glaring (often flashing) lights reflecting off the wet pavement from street lights, local businesses, and standing or moving vehicles. Because of their inability to “see” (or properly detect) the elevated barriers, many drivers and/or their passengers are injured -- and their cars seriously damaged or destroyed.

2. Your Suggestion for Solution or Improvement

Part A. On corners with and/or without elevated center curbs, lane dividers or median strips, I suggest a methodology (options already available in the MUTCD) be adopted to clearly mark the presence (perhaps even the height) of the curbs, lane dividers and median strips so drivers can readily see (detect) their location and drive correctly and safely around them. A potential solution to the problem would be to use a standard, color-coded, marking system that could be universally recognized everywhere. My suggestion would be to use five (5) colors in the following sequence from left to right: red, orange, yellow, green and blue. (Perhaps it could be reduced to four colors). Red, orange/yellow and green are already known and accepted colors; “blue” could be the standard “all clear” symbol.

Such colors could be considered as an international standard and could be used to mark and help identify all center curbs, lane dividers or median strips (or even non-elevated locations) where traffic should be alerted and informed. The markings at each site could be prepared so that the driver could tell where AND how high the curb (etc.) was by the “shape and/or orientation” of the colored markers and be assured that **everything** to the “right” of the blue marker would be safe passage (at least as far as the curb was concerned).

The MUTCD offers a variety of options from retroreflective paint to raised permanent markers that could be site specific. The size of the “marker” could also vary based on the need at the site. However, the “material” used should be long-lasting so as to maintain long-term effectiveness for its intended purpose.

Part B. In another scenario, drivers leaving parking lots, businesses and driveways regularly encounter median strips that separate the two traffic directions. Such median strips “should” prevent drivers from making left-hand turns into “oncoming” traffic; however, drivers unfamiliar with specific locations aren’t always aware of or able to detect divided traffic lanes at night (or when it’s raining) and may not see or recognize (for a variety of reasons) the median strip as a barrier to the split-direction traffic (especially when there are a lot of bright lights—including headlights from the opposite side of the road—in the area masking the barrier).

A solution to this problem would be to mark such median strips with a highly reflective “warning” color (perhaps a bright variation of red – Example 1) or something that would signify “no left turn” that could be placed on the curb (median strip) directly in front of the drivers as they exit from such driveways.

Another solution would be to modify the color-coded standard identified in Part A above (Example 2) in such a way that the color code would identify the median barrier and direct the driver in the correct direction (with, perhaps, the blue marker an arrow pointing in the correct direction).

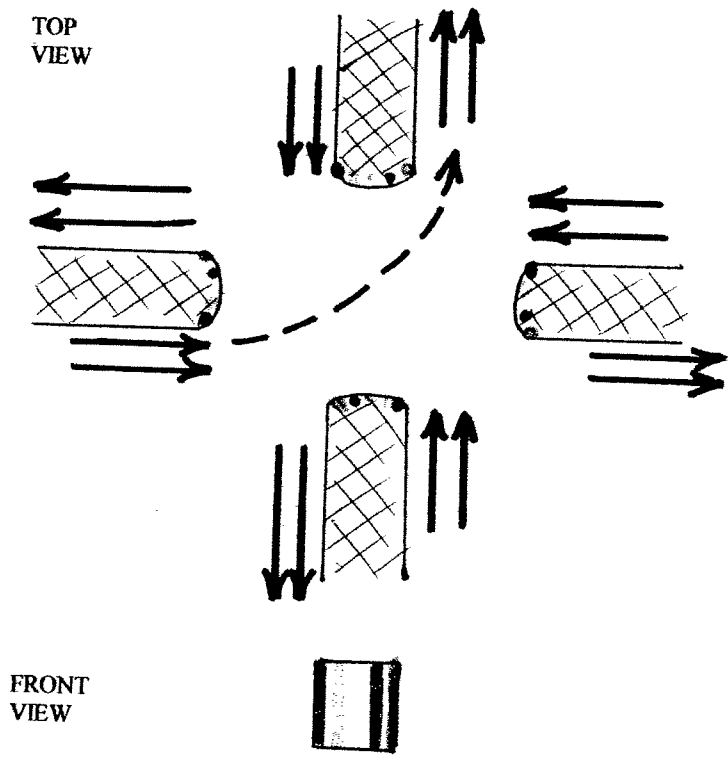
Again, the “material” for these markers should be permanent, require low maintenance and placed in such a way that they wouldn’t be seriously damaged (or scraped off) by traffic that might accidentally rub against that portion of the curb or median strip.

3. Benefits and/or Savings if your Suggestion is Implemented:

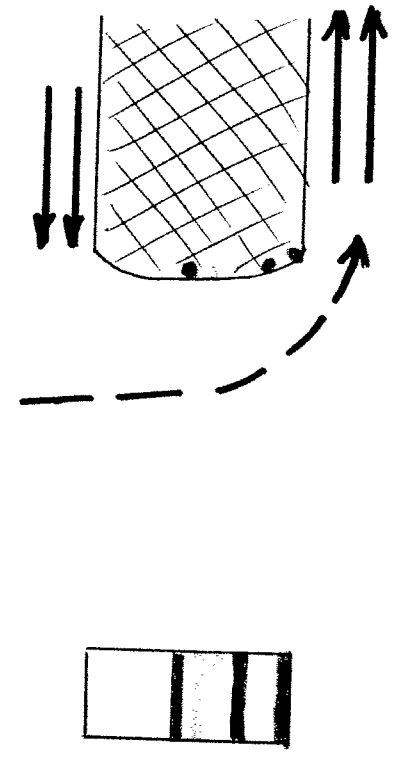
The primary benefits and/or savings (\$millions and \$millions every year) would be in the form of safety to human life (preventing injury and death); other major benefits would be the reduction in costs to repair damaged vehicles and the repair or replacement of the damaged barriers. The implementation of this suggestion would not only reduce the number of automobile accidents but be an investment in both human health and traffic safety.

PART A: 4 examples

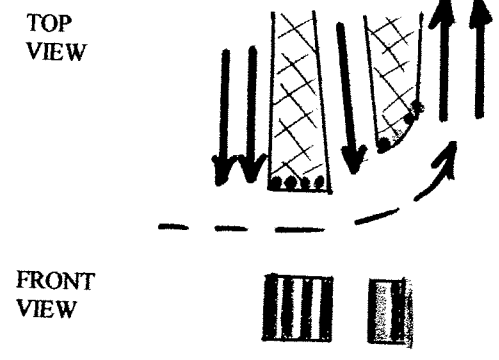
Example 1
Curbs & Median Strips
(All four corners shown)



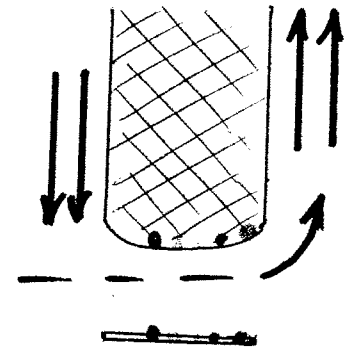
Example 2
Similar to Example 1
(Only 1 corner shown)



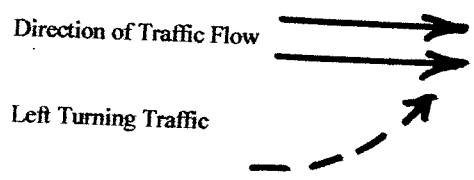
Example 3
Just one set of curbs and median strips shown



Example 4
Reduced (or no) curb or median strip



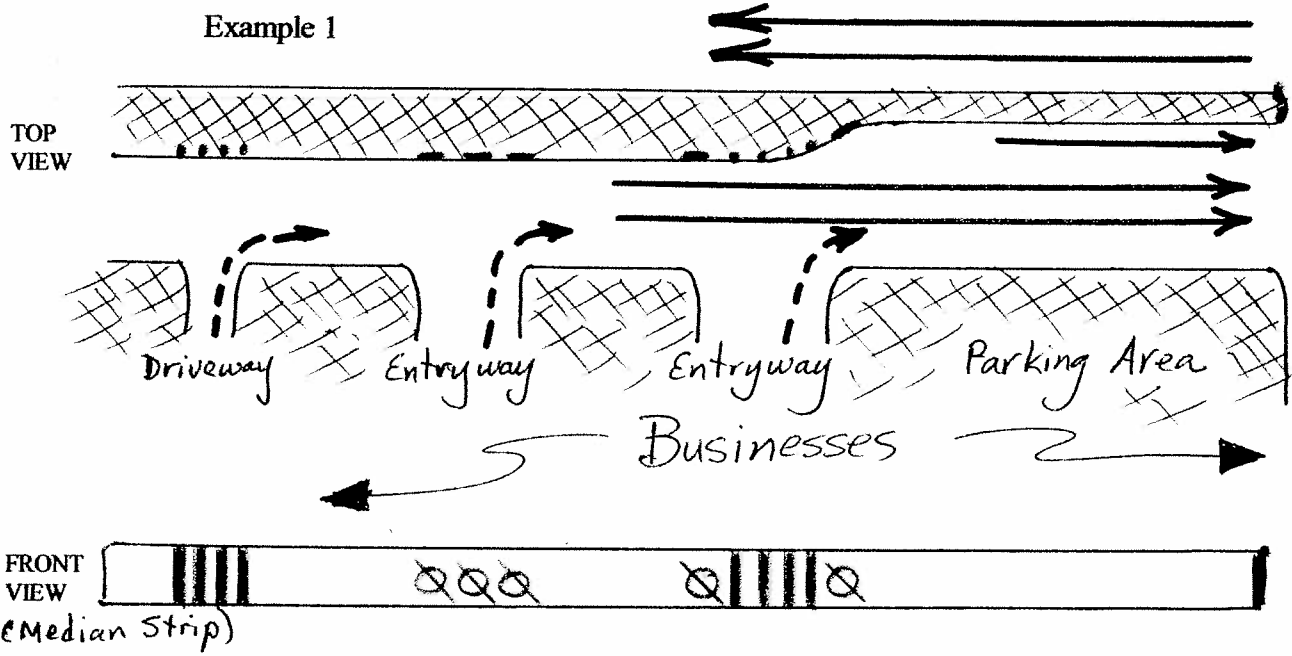
KEY TO ARROWS:



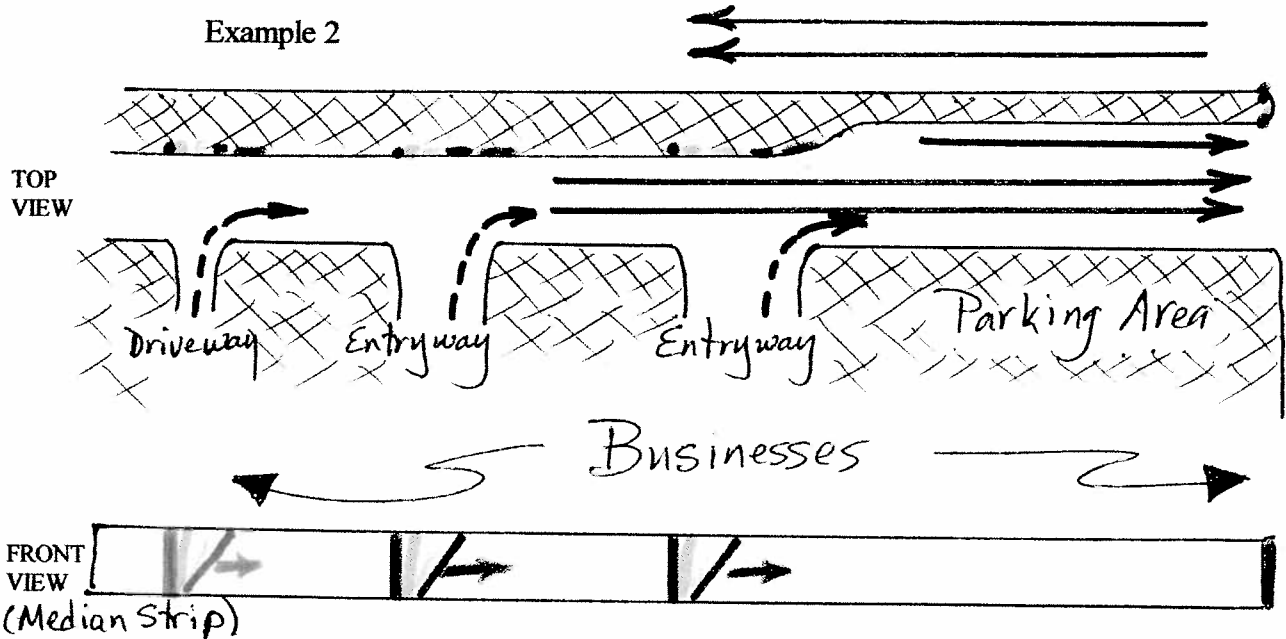
Vernon Kleen 1 Aug 2008

PART B: 2 Examples

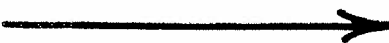
Example 1




Example 2



KEY TO ARROWS

Direction of Traffic Flow 

Right Turning Traffic 

Vernon Kleen 1 Aug 2008