



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

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

SEP 12 2016

In Reply Refer to: HOTO-1

William M. Sampson, P.E.
Director
McTrans
University of Florida, College of Engineering
P.O. Box 116585
Gainesville, FL 32611

Dear Mr. Sampson:

Thank you for your July 27 letter requesting an official interpretation of the term “higher-volume,” which is used in Chapter 4C of the 2009 edition of the *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD) when performing a signal needs study based on traffic volume criteria for the minor-street approach. You suggest that the phrase “more critical” would be a more accurate phrase to use in in Chapter 4C when comparing the traffic volumes on each of the opposing minor-street approaches with the warranting criteria.

Based on the warranting criteria contained in the tables and figures to which the text of Chapter 4C of the MUTCD refers, the FHWA agrees that the term “higher-volume” might not always be appropriate. At intersections where the same number of lanes (either one lane on each approach or two or more lanes on each approach) for moving traffic are present on both minor-street approaches, the term is appropriate. At intersections where one minor-street approach has one lane of moving traffic and the other minor-street approach has two or more lanes of moving traffic, the language sometimes does not appropriately characterize the warranting volume on the minor-street approach.

The intent of the language is to indicate that the minor-street approach that has a volume that meets the warranting criterion for that approach would be selected for each hour that is being analyzed. The warranting minor-street approach might not always be the one with the higher volume as illustrated by the following example:

When analyzing Condition A using the 100 percent column in Table 4C-1 for the minor street, the minimum volume threshold for a one-lane approach would be 150 vehicles per hour and the minimum volume threshold for an approach with two or more lanes would be 200 vehicles per hour. If the minor-street approach volumes during a particular hour are 160 on the one-lane approach and 190 on the approach with two or more lanes, then the volume on the one-lane approach would satisfy the warranting criterion for that hour

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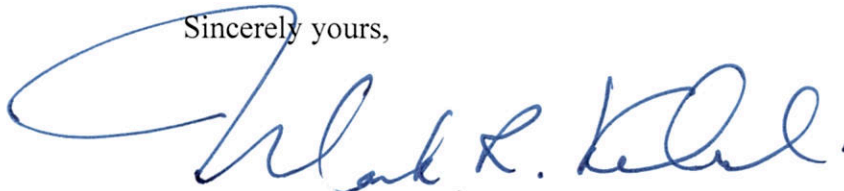
and the volume on the approach with two or more lanes would not satisfy the warranting criterion for that hour even though the volume on the approach with two or more lanes is the higher-volume approach for that hour.

Based on the preceding example, it is the FHWA's official interpretation that the procedure outlined in Chapter 4C is to select the minor-street approach that has a volume that meets the warranting criterion for each hour that is being analyzed. The warranting minor-street approach need only meet the warranting volume criterion and will not necessarily be the one with the higher volume.

For recordkeeping purposes, we have assigned this interpretation the following Official Ruling number and title: "4(09)-59 (I) – Clarification of Higher-Volume Minor-Street Approach." Please refer to this number and title in any future correspondence regarding this topic.

Thank you for your interest in improving the clarity of the provisions contained in the MUTCD.

Sincerely yours,

A handwritten signature in blue ink, appearing to read "Mark R. Kehrl", with a large, stylized initial "M" that loops back.

Mark R. Kehrl
Director, Office of Transportation
Operations