

**RESCINDED  
JANUARY 2024**  
This Recommended  
Change to the MUTCD  
was rescinded by the  
NCUTCD Council on  
January 12, 2024.



## National Committee on Uniform Traffic Control Devices

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ATTACHMENT NO. 1

RW Item No. 4

### National Committee on Uniform Traffic Control Devices RWSTC RECOMMENDATION

**REVISIONS FOLLOWING SPONSOR COMMENTS SHOWN IN YELLOW**

**TECHNICAL COMMITTEE: NCUTCD Regulatory/Warning Signs Technical  
Committee**

**DATE OF ACTION: 12-15-08**

**RWSTC APPROVAL DATE: 1-8-09**

**RWSTC APPROVAL FOLLOWING SPONSOR COMMENTS: June 19, 2009**

**TRANSMITTAL TO SPONSORS DATE: March 2, 2009**

**COUNCIL APPROVAL DATE: June 20, 2009**

**TOPIC: Multiway Stop Control**

**AFFECTED PORTIONS OF MUTCD: Section 2B.07 (NPA, Proposed 2009  
MUTCD)**

**DISCUSSION/QUESTION:**

The support statement in Section 2B.07 states:

Multiway stop control is used where the volume of traffic on the intersecting roads is approximately equal.

How do we define the term “approximately equal”?

Section 2B.07 guidance provides criteria in paragraph C as follows:

- Vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and
- The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours.

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This language provides a reasonable indication that approximately equal at the minimum 200 units minor street/500 total volume. This is a ratio of 40% minor street to the total volume. However, this does not provide a definition or indication of the maximum volumes on either the major or minor street. It only deals with the

48 minimum volume end of the spectrum.

49

50 The Highway Capacity Manual (HCM) does provide some insights in Chapter 17,  
51 Unsignalized intersections. The critical criteria may be found in the critical gap and  
52 delay studies. The delay study along with the level of service at the intersection must be  
53 factored in along with the turning volumes. The MUTCD already has language in this  
54 section indicating a delay of at least 30 seconds for the minor street approach during the  
55 highest hour.

56

57 The principal elements affecting selection of intersection traffic control are:

58

- 59 • Functional classification of each intersecting street
- 60 • Peak hour traffic volumes (vehicular and pedestrian)
- 61 • Crash History
- 62 • Intersection geometrics
- 63 • Sight Distance

64

65 Functional classification and traffic volumes are the two parameters that larger influence  
66 the question of “approximately equal volumes”.

67

68 The classification of intersecting legs should also be factored in before electing to use a  
69 multitway stop control.

70

- 71 • At a local –local intersection, no control or YIELD control is more appropriate.
- 72 • At a local-collector intersection, a YIELD or 1 or 2 Way STOP control is more  
73 appropriate.
- 74 • At a local- major intersection a 1 or 2 Way STOP control is more appropriate.
- 75 • Where a collector intersects with a collector with medium vehicular activity level,  
76 a all-way STOP may be appropriate
- 77 • Where Two Major Roadways intersect, an all-way STOP may be appropriate or  
78 signal.

79

80 ITE studies have demonstrated that when the 8 hour minimum volumes from all  
81 approaches of 180-400 vehicles per hour with at least 40% from the minor or secondary  
82 street would then provide the point at which a multiway stop could be considered.  
83 More recent studies have shown that when the 8 hour minimum volumes from all  
84 approaches of 500 vehicles per hour with at least 40% from the minor or secondary street  
85 would provide the point at which a multiway stop could be considered, in addition to the  
86 sight distance criteria.

87

88

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**RECOMMENDATION:**

Language in the MUTCD, Section 2B.07 be modified to define “approximately 40% minor street total volumes to the total of all approaches at the intersection.

**RECOMMENDED WORDING:**

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97

**Section 2B.07 Multiway Stop Applications.**

98 Support:

99 Multiway stop control can be useful as a safety measure at intersections if certain  
100 traffic conditions exist. Safety concerns associated with multiway stops include  
101 pedestrians, bicyclists, and all road users expecting other road users to stop. ~~Multiway  
102 stop control is used where the volume of traffic on the intersecting roads is approximately  
103 equal.~~

104 Guidance:

105 The decision to install multiway stop control should be based on an engineering study.

106 The following criteria should be considered in the engineering study for a multiway STOP  
107 sign installation:

- 108 A. Where traffic control signals are justified, the multiway stop is an interim measure  
109 that can be installed quickly to control traffic while arrangements are being made  
110 for the installation of the traffic control signal.
- 111 B. A crash problem, as indicated by 5 or more reported crashes in a 12-month period  
112 that are susceptible to correction by a multiway stop installation. Such crashes  
113 include right- and left-turn collisions as well as right-angle collisions.
- 114 C. Minimum volumes:
- 115 1. The vehicular volume entering the intersection from the major street  
116 approaches (total of both approaches) averages at least 300 vehicles per  
117 hour for any 8 hours of an average day, and
- 118 2. The combined vehicular, pedestrian, and bicycle volume entering the  
119 intersection from the minor street approaches (total of both approaches)  
120 is at least 40% of the total entering vehicular volume entering from all  
121 approaches and averages at least 200 units per hour for the same 8  
122 hours, with an average delay to minor-street vehicular traffic of at least 30  
123 seconds per vehicle during the highest hour, but
- 124 3. If the 85th-percentile approach speed of the major-street traffic exceeds  
125 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants  
126 criteria are 70 percent of the above values.
- 127 D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all  
128 satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this  
129 condition.

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131 RWSTC to Sponsors, 2009-01-08

132 Vote: For: Unanimous

133 Against:

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was rescinded by the  
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Abstentions:

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approved : June 20, 2009

multi-way stop control 2B.07 – RW # 4 following sponsor comments 5-24-09

139 revised 6-18-09

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