

## ***Specific Guidance for Multiway Stop Applications***

In addition to the general guidance and restrictions provided in Section 2B.05 of the MUTCD, it provides additional guidance for situations where a multiway, rather than a single stop will be used. It states that multiway stop control can be useful as a safety measure at intersections if certain conditions exist. Safety concerns associated with multiway stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multiway stop control is used where the volume of traffic on the intersection roads is approximately equal (§ 2B.07).

The guidance for multiway stops states that the decision to install a multiway stop should be based on an engineering study. The criteria, also known as *warrants*, that should be considered in such an engineering study are:

1. Where traffic control signals are justified, the multiway stop is an interim measure that can be installed quickly to control traffic where arrangements are being made for the installation of the traffic control signal.
2. A crash problem, as indicated by five or more reported crashes in a 12-month period that are susceptible to correction by a multiway stop installation. Such crashes include right- and left-turn collisions and right-angle collisions.
3. Minimum volumes— (a) The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any eight hours of an average day, **and** (b) 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 eight hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, **but** (c) if the 85<sup>th</sup> percentile approach speed of the major-street traffic exceeds 65 kilometers or 40 miles per hour, the minimum vehicular volume warrants are 70% of the ones noted above.

Where no single criterion is satisfied, but where criteria 1, 2, 3(a), and 3(b) above are all satisfied to 80% of the minimum values, criterion 3(c) is excluded from the consideration. In traffic engineering, the 85<sup>th</sup> percentile speed is the speed at or below which 85% of the motor vehicles travel.

The engineering study may consider other criteria as well. These may include: (1) the need to control left-turn conflicts; (2) the need to control vehicle-pedestrian conflicts near locations that generate high pedestrian volumes; (3) locations where a road user, after stopping, cannot see conflicting traffic and is not able to reasonably safely negotiate the intersection unless conflicting cross traffic is also required to stop; and (4) an intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multiway stop control would improve traffic operational characteristics of the intersection.