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# Section 2B.06 STOP Sign Applications

#### Guidance:

At intersections where a full stop is not necessary at all times, consideration should first be given to using less restrictive measures such as YIELD signs (see Sections 2B.08 and 2B.09).

- The use of STOP signs on the minor-street approaches should be considered if engineering judgment indicates that a stop is always required because of one or more of the following conditions:
  - A. The vehicular traffic volumes on the through street or highway exceed 6,000 vehicles per day;
  - B. A restricted view exists that requires road users to stop in order to adequately observe conflicting traffic on the through street or highway; and/or
  - C. Crash records indicate that three or more crashes that are susceptible to correction by the installation of a STOP sign have been reported within a 12-month period, or that five or more such crashes have been reported within a 2-year period. Such crashes include right-angle collisions involving road users on the minor-street approach failing to yield the right-of-way to traffic on the through street or highway.

#### Support:

The use of STOP signs at grade crossings is described in Sections 8B.04 and 8B.05.

## Section 2B.07 Multi-Way Stop Applications

## Support:

- Multi-way stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multi-way stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multi-way stop control is used where the volume of traffic on the intersecting roads is approximately equal.
- The restrictions on the use of STOP signs described in Section 2B.04 also apply to multi-way stop applications.
- os The decision to install multi-way stop control should be based on an engineering study.
- 104 The following criteria should be considered in the engineering study for a multi-way STOP sign installation:
  - A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
  - B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.
  - C. Minimum volumes:
    - 1. The 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
    - 2. 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, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but
    - 3. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.
  - D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

#### Option:

- Other criteria that may be considered in an engineering study include:
  - A. The need to control left-turn conflicts;
  - B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
  - C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
  - D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

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