



TRAFFIC OPERATIONS SECTION

CRITERIA FOR INSTALLATION OF STOP SIGNS

These criteria, or “warrants” for installation of stop signs are intended for analysis purposes. Meeting these criteria may warrant consideration for installation of stop signs, although meeting the criteria should not automatically result in stop sign installation, neither is the County Traffic Engineer, or designee, prevented from approving, or asking the Board of Supervisors to approve, the installation of a stop sign due to particular circumstances that justify deviation from these criteria. Professional discretion and judgment should be utilized by staff when making a final decision on whether to install a stop sign. A stop sign may not be approved despite meeting these criteria if it is determined that safety or efficiency could be reduced by the installation.

Temporary stop signs may be installed for construction or emergency purposes regardless of meeting warrants, if approved by the County Traffic Engineer or designee.

The criteria for the installation of multi-way stop signs vary according to roadway vehicular volumes on major roadways and residential district roadways. “Residential District” roadways are defined in Section 515 of the California Vehicle Code. Multi-way stop signs are installed on the major roadway where the minor roadway is controlled by an existing stop sign. The criteria for installation of a stop sign on an uncontrolled intersection is used where the intersection has no existing stop sign controls. The criteria set forth will be used by the Public Works Director, or designee, when considering installation of a stop sign absent Board approval of a stop sign installation.

HIGH-VOLUME ROADWAYS (OVER 4,000 VEHICLES PER DAY)

Multi-way stop sign installation may be considered if any two (2) of the following conditions exist:

1. Minimum Traffic Volumes:

- a. The total vehicular volume entering the intersection from all approaches must average at least 450 vehicles per hour for any 8 consecutive hours of an average day, AND
- b. The combined vehicular and pedestrian volume entering the intersection from the minor roadway averages at least 300 vehicles and/or pedestrians per hour for the same 8 consecutive hours.
- c. When the 85th percentile approach speed exceeds 40 mph, the minimum volume requirements in Sections 1(a) (vehicles) per hour) and 1(b) (vehicles and/or pedestrians per hour) shall be reduced to 70% of the above standards.

2. **Collisions:** Collision history at the location includes three (3) or more reported collisions within a 12-month period, or five or more reported collisions within a 24-month period, of a type susceptible to correction by a multi-way stop sign installation. Collisions that are susceptible to correction by a multi-way stop sign installation are those collisions resulting in citations issued by law enforcement identifying the primary collision factor to be right-of-way conflict.
3. **Visibility:** The stopping sight distance per CA MUTCD, 2014 Edition, Rev. 6, Table 6C-2 on the approaches to the major roadway are less than recommended for the given design speed and cannot be improved by clearing the sight obstruction(s).

MODERATE-VOLUME ROADWAYS (4,000 OR FEWER VEHICLES PER DAY)

Multi-way stop sign installation may be considered if any TWO of the following conditions exist:

1. **Minimum Traffic Volumes:**
 - a. The total vehicular volume entering the intersection from all approaches must average 300 vehicles per hour for any 8 consecutive hours of an average day, and
 - b. The vehicular and pedestrian volume entering the intersection from the minor roadway during the same 8 consecutive hours must average at least 200 vehicles and/or pedestrians per hour.
2. **Collisions:** Collision history at the location includes four (4) or more reported collisions within a 12-month period of a type susceptible to correction by a multi-way stop sign installation. Collisions that are susceptible to correction by a multi-way stop sign are those collisions resulting in citations issued by law enforcement identifying the primary collision factor to be right-of-way conflict.
3. **Visibility:** The stopping sight distance per CA MUTCD, 2014 Edition, Rev. 6, Table 6C-2 on the approaches to the major roadway are less than recommended for the given design speed and cannot be improved by clearing the sight obstruction(s).

RESIDENTIAL STREETS (ANY TRAFFIC VOLUME)

Multi-way stop sign installation may be considered if ALL the following conditions exist:

1. **Minimum Traffic Volumes:**
 - a. The total vehicular volume entering the intersection from all approaches for any eight (8) consecutive hours of an average day must average 180 vehicles per hour, and
 - b. The vehicular volume entering the intersection from the minor road(s) for the same eight (8) consecutive hours must average at least one-third (1/3) of the total volume entering the intersection (*i.e.*, at least 60 vehicles per hour).

2. **Collisions:** There are three (3) or more vehicle collisions susceptible to correction by multi-way stop signs within any 12-consecutive-month period. Collisions that are susceptible to correction by a stop sign are those collisions resulting in citations issued by law enforcement identifying the primary collision factor to be right-of-way conflict.
3. **Visibility:** The stopping sight distance per CA MUTCD, 2014 Edition, Rev. 6, Table 6C-2 on the approaches to the major roadway are less than recommended for the given design speed and cannot be improved by clearing the sight obstruction(s).
4. **Speed:** Each of the intersecting roadways has residential frontage with an existing 25 mph speed limit.
5. **Other (all criteria must be met):**
 - a. Neither intersecting roadway is designated as a Through Street.
 - b. Neither intersection roadway exceeds forty feet (40) of roadway width.
 - c. No existing stop sign or traffic signal is located on the more heavily traveled road within a distance of 800 feet from where the multi-way stop would be located.
 - d. The intersecting roadways extend 800 feet or more away from the intersection.
 - e. The intersection is at a location where many elementary school children cross (minimum of 30 children for rural areas and 40 children for urban areas crossing).

UNCONTROLLED INTERSECTIONS

Stop signs may be considered if any three (3) of the following conditions exist:

- Traffic:** Peak hour traffic of 50 vehicles or more on the higher volume roadway. Peak hour traffic means the traffic volumes during the one-hour period when the greatest volume of traffic uses the road system within a 24-hour period.
- Collisions:** There are two (2) or more vehicle collisions susceptible to correction by stop signs within any consecutive 12-month period. Collisions that are susceptible to correction by a stop sign are those collisions resulting in citations issued by law enforcement identifying the primary collision factor to be right-of-way conflict.
- Visibility:** The stopping sight distance per CA MUTCD, 2014 Edition, Rev. 6, Table 6C-2 on the approaches to the major roadway are less than recommended for the given design speed and cannot be improved by clearing the sight obstruction(s).
- Other:** The intersection is at a location where many elementary school children cross (minimum of 30 children for rural areas and 40 children for urban areas crossing).

EXCEPTIONS

Any requests for exceptions based on any proposed deviation from this policy will be subject to the consideration of the Board of Supervisors.

COUNTY DISCRETION

In addition to the above criteria, the Contra Costa County Public Works Department may approve or deny a request for stop signs based on other factors. Other factors that may be evaluated may include

intersection capacity, pedestrian activity, bicycle traffic, delays, intersection approach speeds, through traffic, diversion of traffic to local streets, road geometry, location of public facilities and traffic control devices at adjacent intersections. Stop controls are right of way control devices and should not be installed to address speeding concerns. A proliferation of unwarranted stop controls can diminish their effectiveness.

MO:cp

G:\transeng\Traffic\Policies\Stop Sign Warrant Policies Revision\DRAFTS\Criteria for Installation of Stop Signs.docx