

City of San Mateo

*Policy
for the
Installation of Stop Signs*



Prepared by:

**Gary Heap, P.E.
Senior Engineer**

**Adopted by City Council
February 17, 2009**

I. POLICY

Objective: It is the intent of this policy to install stop signs where appropriate.

Principles:

- ❖ Stop signs are installed at intersections where drivers cannot safely apply the right-of-way rule¹.
- ❖ Stop signs control vehicular traffic conflicts at intersections and promote driver safety.
- ❖ The functional street classification system, as described in the City's General Plan Circulation Element, shall be used as the reference system for defining street types used in the warranting procedures.
- ❖ Warrants defined in the Manual of Uniform Traffic Control Devices (MUTCD) including the amount of daily traffic, the amount of pedestrian activity, high traffic speed, restricted view, accident records and unusual site conditions, or geometrics will be used in the evaluation of all stop sign requests.
- ❖ Stop signs may be installed to support neighborhood traffic management.
- ❖ Stop signs may be installed against the major flow of traffic when unusual intersection design requires such installation to provide adequate and safe operation of the intersection.
- ❖ Other methods of slowing traffic to the posted speed limit should be considered before a stop sign is used to slow local traffic. Please refer to the City's Neighborhood Traffic Management Program (NTMP) for improvement options.

¹ * **Right of Way Rule – The Failure to yield the right of way at an uncontrolled intersection.** A person commits the offense of failure to yield the right of way at an uncontrolled intersection (an intersection without any traffic signs or signals) if the person, in a vehicle that is approaching an uncontrolled intersection, does not look out for, and give right of way, to any driver on the right who simultaneously approaches the intersection, regardless of which driver first reaches the intersection.

II. PROCEDURES

The following is the process that will be followed in the application and approval process for public requests for all-way stop sign control.

1. Submit a stop sign request to Public Works that includes the intersecting streets and contact information for the individual(s) requesting the sign. The request should be mailed to:

City of San Mateo
Department of Public Works
330 W. 20th Avenue
San Mateo, CA 94403
Attention: Susanna Chan, City Engineer
Or email to: schan@cityofsanmateo.org

2. You will be notified of the Public Works Director's decision following completion of the stop sign warrant evaluation. The data collection and evaluation usually take about three (3) months to complete.
3. The Director's decision may be appealed to the Public Works Commission. The appeal must be received by the Public Works Department within 10 days of the mailing of notices of the Director's decision.
4. The action taken by the Public Works Commission may be appealed to the City Council. The appeal must be received by the Public Works Department within 10 days of the Commission meeting when action was taken.

III. STOP SIGN WARRANTS

One or more of the following traffic warrants, as identified in the Manual of Uniform Traffic Control Devices (MUTCD), must be met for staff to recommend the installation of a stop sign to the Public Works Director. Conditions which satisfy one or more of the warrants may not necessarily justify the installation of a stop sign. Public Works staff exercises engineering judgment on a case-by-case basis to determine the need for stop signs based on which warrants and considerations are satisfied.

Minimum Traffic Volumes and Speed

The minimum traffic volume warrant provides the necessary criteria for identifying intersections where the main street and side street traffic volumes are sufficiently high such that traffic on the stop-controlled side street suffers undue delay or risk in crossing or entering the controlled main street traffic system. The volume warrant thresholds identified in the MUTCD are met when:

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 the minor street vehicular traffic of at least 30 seconds per vehicle during the highest hours, but;
3. If the 85th-percentile approach speed of the major street traffic exceeds 35 mph, the minimum vehicular volumes warrants are reduced 70% of the above values.

When the following criteria are satisfied, the intersection is considered to be located in a residential area and the volume warrant thresholds may be reduced by 60% of the MUTCD values:

1. Both streets have residential frontages with existing 25 mph speed limits
2. Neither street is classified as a collector or arterial street within the General Plan Circulation Element
3. Both streets are two-lane streets
4. No existing stop sign or signal is located on the more heavily traveled street within a distance of 600 feet
5. Intersection with streets extending 600 feet or more away from the intersection on at least three sides

6. Installation of a multi-way stop is compatible with the overall traffic circulation needs for the residential area

Visibility

The visibility warrant establishes the criteria for determining if an intersection has inadequate visibility to maintain safe traffic operations. Providing the appropriate stopping sight distance reduces the likelihood of a collision at an intersection caused by a driver on the minor street crossing or entering the major street in the presence of oncoming traffic.

1. A stop sign is warranted where driver visibility is limited at the minor street approach to the intersection, and causes drivers to reduce their intersection approach speed to less than 10 miles per hour.
2. The stopping sight distance is defined within the AASHTO's *A Policy on Geometric Design of Highways and Streets*. The City uses the measured 85th-percentile intersection approach speeds determine if there is adequate sight distance as determined by an engineer in the field. Inadequate stopping sight distance may be mitigated by the installation of red curbing or the trimming of landscaping (trees or hedges) to improve sight distance.

Design Speed	Stopping Sight Distance
25 MPH	155 feet
30 MPH	200 feet
35 MPH	250 feet
40 MPH	305 feet
45 MPH	360 feet

Additional Considerations

When determining whether to install a stop sign, there are a number of additional engineering considerations that may be considered evaluation. These factors include:

- **Accidents** – When evaluating the installation of a stop sign, correctible accidents should be considered by the engineer conducting the analysis.
- **Minor Leg of 3-Legged Intersection** – Stop signs may be erected at the intersection of the minor leg of a three-legged intersection, or where a minor street meets a major arterial, or collector street. A minimum of 25 vehicles per hour shall be observed on the minor leg approach for this criterion to be satisfied.

- **In Vicinity of High-Pedestrian Generator** – Installation of a stop sign may be justified at an intersection where any facility adjacent to that study intersection generates an unusually high concentration of pedestrian traffic. This may include the use of the intersection by school-aged children, the elderly or physically challenged pedestrians; or the presence of a facility such as a school, playground, park, shopping center, fire station, etc. The installation of a crosswalk may be considered with the installation of stop signs when near an identified high-pedestrian generator.
- **Unusual Intersection Geometrics** – Installation of a stop sign may be justified where unusual intersection design or geometrics (horizontal and/or vertical curves, or intersection offsets) require the installation of a stop sign.
- **Visible Signs** – Installation of a stop sign may be justified where visible signs of potential traffic problems exist, such as, skid marks, evidence of fixed object collisions, etc.
- **Volume Equilibrium** – Installation of a stop sign may be justified if the intersection approach volumes for the minor/major legs near equilibrium (45%/55%).

IV. FINDINGS FOR APPEAL

A stop sign request that is denied by the Director based on evaluation of the stop sign warrants may be approved by the Public Works Commission only if each of the following findings can be made:

- a. Installation of the stop sign will not prevent the street from operating consistently with its functional classification level (arterial, collector or local street) as defined in the General Plan Circulation Element.
- b. Installation of the stop sign will not unduly restrict the delivery of emergency services to the surrounding neighborhood.
- c. Installation of the stop sign will not create any potentially hazardous conflicts with driveways near the intersection.
- d. Installation of a stop sign will not create any significant queuing at the intersection.
- e. Installation of a stop sign is not expected to result in additional accidents at the intersection.
- f. The installation of a stop sign will not adversely affect any adjacent controlled intersection.
- g. There are no other feasible methods to successfully address the traffic issues associated with the request for the stop sign.

If the Public Works Commission is unable to make each of these recommended findings the stop sign request must be denied. The applicant may then appeal that decision to the City Council in accordance with San Mateo Municipal Code Section 11.16.060.