



Public Works Department Transportation Engineering Division

Policy Guidelines for Multiway Stop Applications

**Adopted by the Traffic Advisory Committee
Last Update on March 19, 2003**

INTRODUCTION:

Multiway stop control (a.k.a. all-way stops) can be useful as a safety measure if certain traffic 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 intersecting roads is approximately equal.

The City of Napa's policy guideline on multiway stop applications is based on the exact language from California Vehicle Code (CVC) ¹, the Manual of Uniform Traffic Control Devices (MUTCD) ², and the California Department of Transportation (Caltrans) Traffic Manual ³.

I. General Policy on Traffic Signs

The California Vehicle Code (CVC) provides that "(a) Except as provided in Section 21374 [relating to directional signs for tourists] only those official traffic control devices that conform to the uniform standards and specifications promulgated by the Department of Transportation shall be placed upon a street or highway..." Hence, the City of Napa Public Works Department follows standard professional engineering practices as prescribed in the California Department of Transportation (Caltrans) Traffic Manual. The Manual has the following provisions, among others, that guide the City's policy and procedures for sign installation:

- A. Excessive use of signs should be avoided.
- B. Signs should be used where warranted by facts and field studies.
- C. No traffic sign or its support shall bear any message that is not essential to traffic control.
- D. Effective traffic control depends not only on appropriate application of devices, but on reasonable enforcement of regulations as well.

¹ State of California 2001 Vehicle Code Through the 2000 Legislative Session

² *Manual on Uniform Traffic Control Devices*, Millennium Edition, Part 2 - Signs, U.S. Department of Transportation Federal Highway Administration, 2001.

³ California Department of Transportation *Traffic Manual*, Chapter 4 - Signs, January, 1996

- E. Data obtained from traffic engineering studies of physical and traffic related factors should be used in determining where signs are necessary.
- F. Care should be taken not to install too many signs. A conservative use of regulatory and warning signs is recommended as these signs, if used to excess, tend to lose their effectiveness.

II. Legal Authority for Stop Sign Installation

The California Vehicle Code (CVC) includes the following excerpts regarding local authority on stop signs.

- A. *Local Authority, CVC §21351:* Local authorities in their respective jurisdictions shall place and maintain or cause to be placed and maintained such traffic signs, signals and other traffic control devices upon streets and highways as required hereunder, and may place and maintain or cause to be placed and maintained such appropriate signs, signals and other traffic control devices as may be authorized hereunder or as may be necessary properly to indicate and to carry out the provisions of this code or local traffic ordinances or to warn or guide traffic.
- B. *Stop Signs on Local Highways, CVC §21354:* ...a local authority may designate any highway under its jurisdiction as a through highway and may erect stop signs at entrances thereto or may designate any intersection under its exclusive jurisdiction as a stop intersection and erect stop signs at one or more entrances thereto.
- C. *Stop Signs, CVC §21355:* ...The Department of Transportation and local authorities in their respective jurisdictions may erect stop signs at any location so as to control traffic within an intersection.
- D. *Stop Requirements, CVC §22450(b).* Notwithstanding any other provision of law, a local authority may adopt rules and regulations by ordinance or resolution providing for the placement of a stop sign at any location on a highway under its jurisdiction where the stop sign would enhance traffic safety.

III. Specific Policy on Stop Signs

The Caltrans Traffic Manual provides the following general policies with respect to the installation of Stop signs, which the Public Works Department will uphold:

- A. Stop signs should not be used for speed control.
- B. Stop signs shall not be erected at any entrance to an intersection when such entrance is controlled by an official traffic control signal, nor at any railroad grade crossing which is controlled by automatic signals, gates, or other train-actuated

control devices except as provided in *CVC §21355, Stop Signs*. The conflicting commands of two types of control devices are confusing.

- C. Portable or part-time Stop signs shall not be used except for emergency purposes.

IV. Multiway Stop Installation Warrants

The MUTCD recommends that the decision to install multiway stop control should be based on an engineering study. The Public Works Department will conduct or sponsor an engineering study to determine the appropriateness of multiway stop control based on the Caltrans warrants described below.

The Caltrans Traffic Manual specifies that any of the following locations (or conditions) may warrant multiway stop sign installation:

- A. Where traffic control signals are warranted and urgently needed, the multiway stop may be an interim measure that can be installed quickly to control traffic while arrangements are being made for the signalization installations.
- B. An accident problem, as indicated by 5 or more reported accidents within a 12-month period of a type susceptible of correction by a multiway stop installation. Such accidents include right- and left-turn collisions as well as right-angle collisions.
- C. Minimum volumes:
 - 1. The total vehicular volume entering the intersection from all approaches must average at least 500 vehicles per hour for any 8 hours of an average day, and
 - 2. The combined vehicular and pedestrian volume from the minor street or highway must average 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 maximum hour, but
 - 3. When the 85th-percentile approach speed exceeds 64 km/hr (40 mph), the minimum vehicular volume warrant is 70 percent of the above requirements.

V. Special Conditions

Based on the optional criteria prescribed by the MUTCD, the Public Works Department may require an engineering study for special situations on a case-by-case basis. In special situations where the multiway stop warrants from Section IV are not satisfied, the Public Works Department may recommend the installation of multiway stop control for the following specific special conditions, based on professional engineering judgment and as determined by the Public Works Director:

- A. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes, such as the closest intersection to an elementary or a middle school located on a collector street, where the multiway stop control is or proposed to be a critical and necessary part of the school's Safe Routes to School Program
- B. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to safely negotiate the intersection unless conflicting cross traffic is also required to stop