

STOP Sign Applications(Two-Way STOP & Multi-Way STOP) Analysis

Major Street: North Madeira Avenue

Minor Street: Roosevelt Street

Study Dates: 5/21/2024-5/23/2024

Two-Way STOP Installation Criteria based on Guidance from California MUTCD 2014 Edition - Rev 7 (Section 2B.06 02)

A. Traffic Volume

The vehicular traffic volumes on the through street or highway exceed **6,000 vehicles per day(vph)**. 3880 vph

B. Restricted View

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

Reason: Restricted View Exist
Parking on Major Street

C. Crash History

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

Multi-Way STOP Installation Criteria based on Guidance from California MUTCD 2014 Edition - Rev 7 (Section 2B.07 04)

A. Traffic Volume

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.

Has a traffic signal warrant study been conducted for this intersection that recommends installation of a traffic control signal? If no, Interim Multi-Way Stop not recommended

Interim Multi-Way STOP?

B. Crash History

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

- C1 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
- C2 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 hours 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
- C3 If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volumes warrants are 70 percent of the values provided in Items 1 and 2.

North Madeira Avenue N/O Roosevelt Street85-th % Speed: 35 MPH

North Madeira Avenue S/O Roosevelt Street85-th % Speed: 28 MPH

Hours	Northbound North Madeira Avenue				Southbound North Madeira Avenue				Eastbound Roosevelt Street				Westbound Roosevelt Street			
	Veh	Peds	Bikes	Total	Veh	Peds	Bikes	Total	Veh	Peds	Bikes	Total	Veh	Peds	Bikes	Total
11:00-12:00	101			101	103			103	62	3		65	52	2		54
12:00-13:00	114			114	106			106	85	4		89	52	4		55
13:00-14:00	118			118	93			93	91	6		97	55	5		60
14:00-15:00	131			131	131			131	104	4		108	67	10		77
15:00-16:00	163			163	161			161	147	7		154	82	29		111
16:00-17:00	179			179	192			192	171	6		177	79	10		89
17:00-18:00	167			167	172			172	170	8		178	79	10		89
18:00-19:00	131			131	142			142	157	4		161	60	4		64

D. 80% Minimum Values

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.

- B. Crash history satisfied to 80% of the minimum values
- C.1 Major Street satisfied to 80% of the minimum values
- C.2 Minor Street satisfied to 80% of the minimum values

Factors to consider in the Engineering Study for Multi-Way STOP Installation (Section 2B.07 05)

Other criteria that may be considered in an engineering study include:

- A. The need for control left-turn conflicts;
Are left-turn collisions occurring?
- B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
Locations near or adjacent to intersection that generate pedestrians.

☒ Yes ☐ No

Locations
La Paz Park
Senior Centers
Sherwood Elementary School

Can the installation of the Multi-Way Stop eliminate vehicle/pedestrian conflicts at the intersection?

☒ Yes ☐ No

- 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
Are there sight lines issues?
- 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

☒ Yes ☐ No

☒ Yes ☐ No

Major Street(Functional Class): North Madeira Avenue
Minor Street(Functional Class): Roosevelt Street

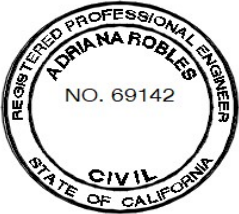
Would the installation of a Multi-Way STOP improve traffic operational characteristics of the intersection or the major street?

☒ Yes ☐ No

Multi-Way Stop Installation recommended at North Madeira Avenue and Roosevelt Street
☒ Yes ☐ No

CERTIFICATION:
This Multi-Way STOP Analysis was determined in accordance with the recommendations set forth by the California - Manual on Uniform Traffic Control Devices (MUTCD) - 2014 Edition - Rev 7 and approved by Adriana Robles P.E..

Engineer's Stamp



Multi-Way STOP Analysis - Prepared by
Gerardo Rodriguez
Multi-Way STOP Analysis - Approved by
Adriana Robles, P.E.