



# County of Santa Cruz 0133

## DEPARTMENT OF PUBLIC WORKS

701 OCEAN STREET, ROOM 410, SANTA CRUZ, CA 95060  
(931) 454-2160 FAX (931) 454-2395 TDD (931) 454-2123

THOMAS L. BOLICH  
DIRECTOR OF PUBLIC WORKS

AGENDA: NOVEMBER 14, 2000  
November 2, 2000

SANTA CRUZ COUNTY BOARD OF SUPERVISORS  
701 Ocean Street  
Santa Cruz, California 95060

SUBJECT: PROPOSED MULTI-WAY STOP FOR GROSS ROAD  
AT GROSS ROAD AND SOQUEL AVENUE/40TH AVENUE

Members of the Board:

The Department of Public Works has concluded a traffic analysis for the Gross Road and Soquel Avenue/40th Avenue Intersection, and we have determined that the safety of the community warrants the installation of multi-way stop signs at this location. A location map is attached for reference.

Public Works has reviewed the intersection and has determined that the existing combination of **geometrics** and current traffic control measures are limited in providing efficient traffic operations. The installation of stop signs on Gross Road would improve the operation of the intersection by allowing the through traffic on Soquel Avenue to make a more efficient turn onto Gross Road. This major traffic movement is currently constrained since it must relinquish the **right-of-way** to vehicles on Gross Road. Therefore, Public Works supports the installation of the **multi-way stop** in order to continue providing improved safety and efficient traffic operations at this intersection.

A professional office building development now under construction at the northeast corner of the intersection was conditioned to provide a westbound right-turn lane on Gross Road to Soquel Avenue. Because this right turn is one of the major movements at the intersection, the installation of multi-way stop signs could not be recommended without the construction of this right-turn lane, which was recently completed. Without the right-turn lane, the delay and queues associated with a multi-way stop would have negatively **impacted the 41st Avenue/Gross Road** intersection operations. This was confirmed in a multi-way stop sign traffic volume warrants analysis and an intersection level of service analysis performed by Higgins Associates (attached) for the office building development in May 1998. In addition, a yield sign must be installed on Gross Road for the right-turn movements onto Soquel Avenue.

The City of Capitola in cooperation with the County Redevelopment Department is also finalizing plans to improve Gross Road from Soquel Avenue to 4 1 st Avenue with sidewalks and an additional eastbound right-turn lane on Gross Road to 4 1 st Avenue. The construction of these improvements is tentatively scheduled for spring 2001. The installation of the multi-way stop sign would benefit local traffic during the construction phase of the Gross Road Project.

It is therefore recommended that the Board of Supervisors adopt the attached ordinance in concept, and place the ordinance on the next available agenda for final adoption.

Yours truly,

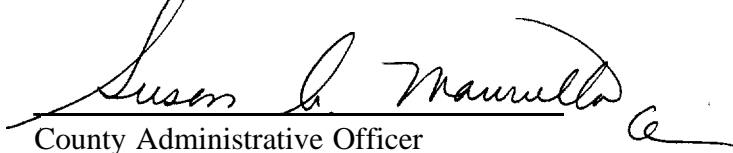


THOMAS L. BOLICH  
Director of Public Works

TLB:mg

Attachment

RECOMMENDED FOR APPROVAL:

  
County Administrative Officer

copy to: Public Works

STPM



FOUR WAY STOP SIGN  
WARRANTS

0136

CALC \_\_\_\_\_ DATE \_\_\_\_\_

CHK \_\_\_\_\_ DATE \_\_\_\_\_

DIST \_\_\_\_\_ CO \_\_\_\_\_ RTE \_\_\_\_\_ PM \_\_\_\_\_

Major St: SOQUEL AVE. Critical Approach Speed \_\_\_\_\_ mph

Minor St: TROSS RD. Critical Approach Speed \_\_\_\_\_ mph

Critical speed of major street traffic  $\geq$  40 mph \_\_\_\_\_

or RURAL (R)

In built up area of isolated community of  $\leq$  10,000

URBAN (U)

Warrant 1 - Traffic Signal Warrant Satisfied YES ☐ NO ☒

Attach Traffic Signal Warrant Worksheet

Warrant 2 - Accident Experience Satisfied YES ☐ NO ☐

ACC WITHIN A 12 MON. PERIOD SUSCEPTIBLE OF CORR. & INVOLVING INJURY OR  
 $\geq$  \$200 DAMAGE

MINIMUM REQUIREMENT NUMBER OF ACCIDENTS

5 OR MORE \*

Warrant 3 - Minimum Traffic Volumes Satisfied YES ☒ NO ☐

MINIMUM REQUIREMENTS  
8 HOURS

MINIMUM REQUIREMENTS  
PEAK HOUR

	U	R									U	R	
All													
Both													
Minor Approaches	205	351	40	596	697	331	669	722	375	401	800	560	401
Minor Street													

Source: Caltrans Traffic Manual

## Center For Microcomputers In Transportation

University of Florida

512 Weil Hall

Gainesville, FL 32611-2083

Ph: (904) 392-0378

0137

Streets: (N-S) Soquel Avenue

(E-W) Gross Street

Analyst..... MKN

Date of Analysis..... 5/22/98

Other Information..... Existing + Project Conditions (PM Peak Hour)

All-way Stop-controlled Intersection

No.	Lanes	Eastbound			Westbound			Northbound			Southbound		
		L	T	R	L	T	R	L	T	R	L	T	R
		0	> 1	< 0	0	> 1	1	0	> 1	< 0	0	> 1	< 0
Volume	95	5.95	64.95	0.95	4.95	0.95	0.95	4.95	0.95	0.95	4.95	0.95	0.95

## Volume Summary and Capacity Analysis Worksheet

				EB	WB	NB	SB
LT	Flow	Rate	5	4	0		437
RT	Flow	Rate	0	212	7		7
Approach	Flow	Rate	72	279	8		448
Proportion	LT	0.07	0.01	0.00			0.98
Proportion	RT	0.00	0.76	0.88			0.02
Opposing	Approach	Flow	Rate	279	72	448	a
Conflicting	Approaches	Flow	Rate	456	456	351	351
Proportion, Subject	Approach	Flow	Rate	0.09	0.35	0.01	0.56
Proportion, Opposing	Approach	Flow	Rate	0.35	0.09	0.56	0.01
Lanes on Subject	Approach			1	2	1	1
Lanes	Opposing	Approach	Approach	4	2	5	1
RT, Opposing	Approach			212	0	7	7
LT, Conflicting	Approaches			437	437	9	9
RT, Conflicting	Approaches			14	14	212	212
Proportion LT, Opposing	Approach			0.01	0.07	0.98	0.00
Proportion RT, Opposing	Approach			0.76	0.00	0.02	0.88
Proportion LT, Conflicting	Approaches			0.96	0.96	0.03	0.03
Proportion RT, Conflicting	Approaches			0.03	0.03	0.60	0.60
Approach Capacity				201	409	383	1011

## Intersection Performance Summary

Movement	Approach Flow Rate	Approach Capacity	V/C Ratio	Average Total Delay	LOS
EB	72	201	0.36	3.9	A
WB	279	409	0.68	13.4	C
NB	a	383	0.02	1.1	A
SB	448	1011	0.44	5.4	B

Intersection Delay = a.0  
Level of Service (Intersection) = B



ORDINANCE NO. \_\_\_\_\_

ORDINANCE AMENDING CHAPTER 9 OF THE SANTA CRUZ COUNTY CODE  
RELATING TO STOP INTERSECTIONS

The Board of Supervisors of the County of Santa Cruz  
does ordain as follows:

SECTION I

Section 9.28.030 - Multi-way stop intersections, is  
hereby amended by adding paragraph G.2 to read:

**6.2. Gross Road, and Soquel Avenue/40th Avenue.**

SECTION II

Section 9.28.20 - Stop intersections designated, is  
hereby amended by deleting paragraph F.12 to read:

~~F.12. On 40th Avenue, at Gross Road.~~

SECTION III

Section 9.28.20 - Stop intersections designated, is  
hereby amended by deleting paragraph S.28 to read:

~~S.28. On Soquel Avenue, at Gross Road.~~

SECTION IV

This Ordinance shall take effect on the 31st day after  
the date of final passage.

PASSED AND ADOPTED by the Board of Supervisors of the  
County of Santa Cruz, State of California, this \_\_\_\_\_ day of  
\_\_\_\_\_, 2000, by the following vote;

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AYES: SUPERVISORS

NOES: SUPERVISORS

ABSENT: SUPERVISORS

\_\_\_\_\_  
Chairperson of said Board

ATTEST: \_\_\_\_\_  
Clerk of said Board

Approved as to form:

D. M. Rae 11-2-06  
Assistant County Counsel

Distribution: County Counsel  
Public Works Department

ORDINANCE NO. \_\_\_\_\_

ORDINANCE AMENDING CHAPTER 9 OF THE SANTA CRUZ COUNTY CODE  
RELATING TO STOP INTERSECTIONS

The Board of Supervisors of the County of Santa Cruz  
does ordain as follows:

## SECTION I

Section 9.28.030 - Multi-way stop intersections, is  
hereby amended by adding paragraph G.2 to read:

G.2. Gross Road, and Soquel Avenue/40th Avenue.

## SECTION II

This Ordinance shall take effect on the 31st day after  
the date of final passage.

PASSED AND ADOPTED by the Board of Supervisors of the  
County of Santa Cruz, State of California, this \_\_\_\_\_ day of  
\_\_\_\_\_, 2000, by the following vote;

AYES: SUPERVISORS

NOES: SUPERVISORS

ABSENT: SUPERVISORS

\_\_\_\_\_  
Chairperson of said Board

ATTEST: \_\_\_\_\_  
Clerk of said Board

Approved as to form:

D. McRa 11-2-00  
Assistant County Counsel

Distribution: County Counsel  
Public Works Department

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ORDINANCE AMENDING CHAPTER 9 OF THE SANTA CRUZ COUNTY CODE  
RELATING TO YIELD RIGHT-OF-WAY INTERSECTIONS

The Board of Supervisors of the County of Santa Cruz  
does ordain as follows:

## SECTION I

Section 9.32.010 - Intersections designated, is hereby  
amended by adding paragraph G.3 to read:

G.3. On Gross Road, at Soquel Avenue.

## SECTION II

This Ordinance shall take effect on the 31st day after  
the date of final passage.

PASSED AND ADOPTED by the Board of Supervisors of the  
County of Santa Cruz, State of California, this \_\_\_\_\_ day of  
\_\_\_\_\_, 2000, by the following vote;

AYES: SUPERVISORS

NOES: SUPERVISORS

ABSENT: SUPERVISORS

\_\_\_\_\_  
Chairperson of said Board

ATTEST: \_\_\_\_\_  
Clerk of said Board

Approved as to form:

*D. McRae* 11-6-00  
Assistant County Counsel

Distribution: County Counsel  
Public Works Department

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