



CITY OF LAGUNA HILLS TRAFFIC COMMISSION

REGULAR MEETING AGENDA Wednesday, May 15, 2019 – 7:00 PM

Len Herman - Chair

Chris Mackey - Vice Chair

Anna Lisa Lukes - Commissioner

Chris Bieber - Commissioner

Larry Woodruff - Commissioner

Location: City Council Chamber, 24035 El Toro Road, Laguna Hills, CA 92653

Any person wishing to address the Traffic Commission on any matter, whether or not it appears on this Agenda, is asked to complete a "Request to Speak" form available on the table at the back of the Chamber. The completed form is to be submitted to the Recording Secretary prior to an individual being heard by the Traffic Commission. Completion of the form is voluntary. All persons may attend the meeting regardless of whether this form is completed.

Members of the public wishing to address the Traffic Commission can do so during the Public Comments portion of the Agenda with a time limitation of three minutes per person, an overall time limit of ten minutes for any one subject, and a total time limit of thirty minutes for Public Comments. If you are commenting on an Agenda item, your comments will be heard at the time that item is scheduled on the Agenda. If you are addressing the Commission on an item not listed on the Agenda, the Traffic Commission is prohibited by law from discussing or taking any action on that item.

CALL TO ORDER

Resolution No. 96-04-09-1 established rules of decorum for public meetings held by the City of Laguna Hills. Resolution No. 96-04-09-1 is available on the table at the back of the City Council Chamber.

PLEDGE OF ALLEGIANCE

ROLL CALL OF COMMISSION MEMBERS

1. PUBLIC COMMENTS

This is the time to address the Traffic Commission on any matter not listed on this Agenda that is within the subject matter jurisdiction of the Commission. Public Comments are limited to three minutes per person, an overall time limit of ten minutes for any one subject, and a total time limit of thirty minutes.

2. MINUTES**2.1 Minutes**

Recommendation: That the Traffic Commission Approve the Minutes of March 20, 2019.

3. PRESENTATIONS**3.1 Presentation of the Interstate 5 Widening Project from State Route 73 to El Toro Road**

Recommendation: That the Traffic Commission Receive and File.

4. ADMINISTRATIVE REPORTS**4.1 Review of Traffic Conditions on Linda Vista Drive**

Recommendation: That the Traffic Commission Receive and File the Report.

4.2 Evaluation of Citywide School Zones and School Crossing Signage and Striping

Recommendation: That the Traffic Commission Request Staff Install the Recommended School Zone and School Crossing Signage and Striping Upgrades and Replacements.

4.3 Evaluation of Lomarena Elementary School Adult Crossing Guard Locations

Recommendation: That the Traffic Commission Receive and File the Report.

4.4 2019 Traffic Flow Map

Recommendation: That the Traffic Commission Receive and File the Report.

5. INFORMATIONAL ITEMS**5.1 Sheriff's Department Verbal Report****5.2 Radar Speed Trailer**

Recommendation: That the Traffic Commission Receive and File the Report.

6. COMMISSIONER COMMENTS**7. ADJOURNMENT**

The next Regular Meeting of the Traffic Commission will be July 17, 2019, at 7:00 PM in the City Council Chamber, located at 24035 El Toro Road, Laguna Hills California.

CERTIFICATION

I, KENNETH H. ROSENFELD, Assistant City Manager/Director of Public Services of the City of Laguna Hills, do hereby certify that a copy of the foregoing Agenda was posted at Laguna Hills City Hall, Laguna Hills Community Center, and the Courtyard at La Paz Center by May 9, 2019, at 5:00 pm.



Assistant City Manager/Director of Public Services

May 9, 2019

Date

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, you should contact the office of the City Engineer at (714) 707-2650. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to assure access.

Materials related to an item on this Agenda submitted to the Commission after distribution of the Agenda packet are available for public inspection in the Public Services Department at 24035 El Toro Road, Laguna Hills, California, during normal business hours.



City of Laguna Hills

Traffic Commission

Staff Report

DATE: May 15, 2019
TO: Traffic Commissioners
FROM: Amber M. Shah P.E.
Associate Civil Engineer
ISSUE: Minutes

RECOMMENDATION: That the Traffic Commission Approve the Minutes of March 20, 2019.

ATTACHMENTS:

- Minutes March 20 2019

**CITY OF LAGUNA HILLS
TRAFFIC COMMISSION MEETING
REGULAR MEETING MINUTES
MARCH 20, 2019**

CALL TO ORDER

The Regular Meeting of the Traffic Commission of the City of Laguna Hills, California, was called to order by Chair Woodruff at 7:00 PM in the Laguna Hills City Council Chamber, 24035 El Toro Road, Laguna Hills, California.

PLEDGE OF ALLEGIANCE

The Pledge of Allegiance was led by Chair Woodruff.

ROLL CALL OF COMMISSION MEMBERS

Present: Chair Larry Woodruff, Commissioner Chris Bieber, Commissioner Len Herman, Commissioner Anna Lisa Lukes, Commissioner Chris Mackey.

ELECTION OF CHAIR

Motion was made by Chair Woodruff to open nominations to elect a new Chair. Chair Woodruff nominated Commissioner Herman. The nomination was seconded by Commissioner Mackey.

APPROVED BY A VOTE OF 5-0.

ELECTION OF VICE CHAIR

Motion was made by Chair Woodruff to open nominations to elect a new Vice Chair. Commissioner Herman nominated Commissioner Mackey. The nomination was seconded by Commissioner Bieber.

APPROVED BY A VOTE OF 5-0.

1. PUBLIC COMMENTS

There were no Public Comments.

2. MINUTES

THE TRAFFIC COMMISSION APPROVED THE MINUTES OF THE JANUARY 16, 2019, REGULAR MEETING, BY M/COMMISSIONER HERMAN, S/CHAIR WOODRUFF.

APPROVED BY A VOTE OF 5-0.

Attachment: Minutes March 20 2019 (1863 : Minutes)

**CITY OF LAGUNA HILLS
TRAFFIC COMMISSION MEETING
REGULAR MEETING MINUTES
MARCH 20, 2019**

3. PRESENTATIONS

There were no Presentations.

4. ADMINISTRATIVE REPORTS

4.1 REPEAT SPEED SURVEY ON SANTA VITTORIA DRIVE BETWEEN RIDGE ROUTE DRIVE AND LAKE FOREST DRIVE

Associate Civil Engineer Amber Shah indicated in June 2018, Staff was contacted regarding concerns of vehicular speeding and collisions on Santa Vittoria Drive, between Ridge Route Drive and Lake Forest Drive. Staff subsequently initiated a traffic study of Santa Vittoria Drive between Ridge Route Drive and Lake Forest Drive. The report presented at the September 19, 2018, Traffic Commission meeting concluded the speed measurement of Santa Vittoria Drive was higher than expected and considered to be unacceptable. Additional traffic speed enforcement and use of the radar trailer were used to address this issue. The Traffic Commission requested Staff to repeat the speed survey of Santa Vittoria Drive in six months' time.

A follow-up speed survey was conducted on February 27, 2019. Although the 85th percentile speed was lower than the previous measurements, it was still higher than desired for the posted speed limit. Therefore, Staff recommended installation of one "Watch Downhill Speed" sign, two additional 30 mph signs and painting "30" mph pavement legends adjacent to the posted 30 mph signs along the northbound and southbound Santa Vittoria Drive. Ms. Shah indicated Staff would continue to work with the Sheriff's Department on enforcement activity in the area, and use the radar trailer to increase driver awareness of the appropriate speed on Santa Vittoria Drive. Staff recommended a follow-up survey in six months' time.

**THE TRAFFIC COMMISSION RECEIVED AND FILED THE REPORT.
BY M/COMMISSIONER HERMAN, S/COMMISSIONER MACKEY.
APPROVED BY A VOTE OF 5-0.**

4.2 REVIEW OF SIGHT DISTANCE AT THE CORNER OF BUENA VISTA DRIVE AND LOS GATOS DRIVE

Associate Civil Engineer Amber Shah, indicated Staff was contacted by a resident regarding sight distance constraints due to vehicles parking on the knuckle corner of Buena Vista Drive and Los Gatos Drive. Staff performed two field visits, and as a result, determined the sight distance is adequate. Staff recommended shifting the

Attachment: Minutes March 20 2019 (1863 : Minutes)

**CITY OF LAGUNA HILLS
TRAFFIC COMMISSION MEETING
REGULAR MEETING MINUTES
MARCH 20, 2019**

double yellow striping through the knuckle corner to increase the distance between the northerly curblin and the centerline striping, resulting in a more comfortable transition for vehicles traveling around the corner. The striping change is planned for late 2019.

**THE TRAFFIC COMMISSION RECEIVED AND FILED THE REPORT.
BY M/COMMISSIONER LUKES, S/COMMISSIONER BIEBER.
APPROVED BY A VOTE OF 5-0.**

4.3 INTERSTATE 5 AT EL TORO INTERCHANGE PAED/PR PUBLIC COMMENT PERIOD

Associate Civil Engineer Amber Shah, indicated on or about April 1, 2019, Caltrans will issue for public review a document called the "Planning and Environmental Document/Project Report" (PAED/PR) for the proposed future modifications of the I-5 at El Toro Road Interchange to address traffic congestion. Caltrans will identify the traffic benefits of each alternative plan and potential environmental impacts. Caltrans has not identified construction funding for this project, which will likely be more than 10 years in the future. The Traffic Commission members were encouraged to review the document upon its release, and notified there will be a presentation to the City Council on April 9, 2019. Commissioners were encouraged to provide comments to Staff for potential inclusion in the City's comment letter to Caltrans.

**THE TRAFFIC COMMISSION RECEIVED AND FILED THE REPORT.
BY M/COMMISSIONER HERMAN, S/COMMISSIONER BIEBER.
APPROVED BY A VOTE OF 5-0.**

5. INFORMATIONAL ITEMS

5.1 SHERIFF'S DEPARTMENT VERBAL REPORT

Sergeant McFatrige welcomed the new Commissioners and indicated the Sheriff's Department looked forward to working collaboratively with the City to address any traffic concerns and said his Staff considers safety and enforcement a priority.

5.2 RADAR SPEED TRAILER

Staff submitted the schedule for the radar trailer.

6. COMMISSIONER COMMENTS

There were no Commissioner Comments.

**CITY OF LAGUNA HILLS
TRAFFIC COMMISSION MEETING
REGULAR MEETING MINUTES
MARCH 20, 2019**

7. ADJOURNMENT

There being no further business before the Traffic Commission at this session, Chair Woodruff declared the meeting adjourned at 7:50 p.m.

Prepared By:

Amber Shah, P.E.
Associate Civil Engineer

Approved By:

Chair Len Herman

Attachment: Minutes March 20 2019 (1863 : Minutes)



City of Laguna Hills

Traffic Commission

Staff Report

DATE: May 15, 2019
TO: Traffic Commissioners
FROM: Amber M. Shah P.E.
Associate Civil Engineer
ISSUE: Presentation of the Interstate 5 Widening Project from State Route 73 to El Toro Road

RECOMMENDATION: That the Traffic Commission Receive and File.

SUMMARY:

A representative of Orange County Transportation Authority (OCTA) will present to the Traffic Commission an overview of the Interstate 5 Widening Project. Working together, OCTA and Caltrans will soon begin construction on the I-5 Freeway Widening Project from SR-73 to El Toro Road. Spanning about 6.5 miles, this freeway improvement project will increase capacity and improve operations. The project will deliver a new general-purpose lane in each direction, enhance carpool lanes, improve ramps and reconstruct interchanges, including at La Paz Road. The project is part of Measure M, Orange County's Transportation Investment Plan, passed by nearly 70% of Orange County voters in November 2006.

This is an informational presentation and no action is required by the Traffic Commission.



City of Laguna Hills

Traffic Commission

Staff Report

DATE: May 15, 2019
TO: Traffic Commissioners
FROM: Amber M. Shah P.E.
Associate Civil Engineer
ISSUE: Review of Traffic Conditions on Linda Vista Drive

RECOMMENDATION: That the Traffic Commission Receive and File the Report.

SUMMARY:

Staff was recently contacted by a resident regarding concerns of vehicular speeding on Linda Vista Drive between Largo Drive/Creek Drive and Sarita Drive. Please see the attached Vicinity Map. Based upon the resident's concern and in accordance with the Residential Streets Management Policy, staff initiated a review of the vehicular speeds and traffic collision history on Linda Vista Drive.

The Traffic Engineers of Hartzog & Crabill, Inc., (HCI) completed the attached April 24, 2019, study of the traffic attributes of Linda Vista Drive. The speed survey counts, performed by HCI, as shown in the study, determined the 85th percentile speeds on Linda Vista Drive as 27.9 mph west of Alisal Avenue and 29.3 mph east of Alisal Avenue, respectively. Staff's experience has found the typical prevailing speed range for such streets to be between 32 and 34 mph, without traffic safety concerns. The 85th percentile speeds were below this range. Therefore, no action is needed in response to this data.

The traffic count data revealed the 24-hr volumes to be low for a typical residential street of this character therefore, no action is needed in response to this data. A five-year traffic collision history review was also included in the study which determined no traffic collisions had been reported during this time.

ATTACHMENTS:

Review of Traffic Conditions on Linda Vista Drive

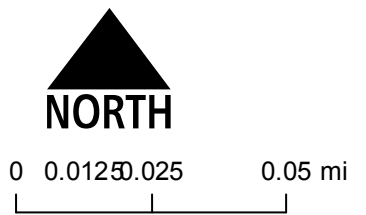
May 15, 2019

Page 2

- Vicinity Map - Linda Vista Drive
- Linda Vista Drive Traffic Evaluation



Attachment: Vicinity Map - Linda Vista Drive (1860 : Review of Traffic Conditions on Linda Vista Drive)



VICINITY MAP - LINDA VISTA DRIVE





Trammell Hartzog, President
Gerald J. Stock, PE, TE,
Executive Vice President

17852 E. 17th Street
Suite 101
Tustin, CA 92780

Phone: (714) 731-9455
FAX: (714) 731-9498

www.hartzog-crabill.com

April 24, 2019

Mr. Kenneth H. Rosenfield, PE
Assistant City Manager/Public Services Director
City of Laguna Hills
24035 El Toro Road
Laguna Hills, CA 92653

Subject: Traffic Data Collection and Evaluation on Linda Vista Drive, from Largo Drive/Creek Drive to Sarita Drive

Dear Mr. Rosenfield,

Pursuant to your request, Hartzog & Crabill, Inc. (HCI) has prepared this traffic engineering evaluation regarding residential concerns of speeding and collisions along the street segment of Linda Vista Drive, between Largo Drive/Creek Drive and Sarita Drive.

The following data was gathered/performed as part of this evaluation:

- 1) Collect Average Daily Traffic (ADT) count on Linda Vista Drive
- 2) Perform (2) radar speed surveys on Linda Vista Drive
- 3) Review traffic collision history
- 4) Site visit to verify existing traffic controls, including signing/stripping

BACKGROUND

Linda Vista Drive, between Largo Drive/Creek Drive and Sarita Drive, is primarily a 40-foot wide, 2-lane, east-west local roadway.

At the project limits, the westerly section of the roadway ends with a 1-way stop at Largo Drive/Creek Drive, and the easterly section ends with a 'knuckle' curve towards the south at Sarita Drive. There is a 3-way Stop sign installation at the approximate mid-point to the segment at Alisal Avenue. There is primarily no striping along the entire segment, with exception to short double-yellow centerlines at the Stop sign controlled intersections.

There are no posted speed limit signs along Linda Vista Drive, between Largo Drive/Creek Drive and Sarita Drive. There is one '25' pavement marking just east of Alisal Avenue. On-street parking is allowed on both sides of the roadway.

Consulting Traffic Engineers to Government Agencies

Mr. Kenneth H. Rosenfield, PE
 April 24, 2019
 Page 2 of 6

TRAVEL SPEED DATA

To determine travel speeds on Linda Vista Drive, two spot speed radar surveys were conducted along this residential collector roadway on Wednesday, April 17, 2019 (see attached). The tables below summarize the radar speed data.

SPEED SURVEY SUMMARY LINDA VISTA DRIVE, FROM LARGO DRIVE TO SARITA DRIVE

<u>9:00-11:00AM</u> Radar Speed Data Summary	Largo Drive/ Creek Drive to Alisal Avenue
85 th Percentile Speed	27.9 MPH
Median Speed	24.4 MPH
15th Percentile Speed	22.0 MPH
10 MPH Pace Speed	21 - 30 MPH
Percent in Pace Speed	88.2%

<u>3:00-5:00PM</u> Radar Speed Data Summary	Alisal Avenue to Sarita Avenue
85 th Percentile Speed	29.3 MPH
Median Speed	24.7 MPH
15th Percentile Speed	21.5 MPH
10 MPH Pace Speed	21 - 30 MPH
Percent in Pace Speed	84.3%

As shown in the two tables above, the highest 85th-percentile speed (critical speed) on Linda Vista Drive was recorded in the afternoon at 29.3 MPH. This data shows that typical travel speeds are occurring for a 25 MPH speed limit street of this character, and there are no recommendations regarding travel speeds.

Mr. Kenneth H. Rosenfield, PE
 April 24, 2019
 Page 3 of 6

TRAFFIC VOLUME DATA

Average Daily Traffic (ADT) counts were collected for the segment of Linda Vista Drive, between Largo Drive and Sarita Drive, on Thursday, April 11, 2019 (see attached).

The ADT, or 24-hour two-way traffic volume, along this segment resulted in the following:

977 vehicles (West of Alisal Avenue)
 532 vehicles (East of Alisal Avenue)

A two-lane collector type street generally has a Level-of-Service (LOS) 'D' capacity of 11,300 vehicles per day. Consequently, the existing traffic volume is still well under the roadway capacity, and there are no recommendations regarding traffic volumes.

COLLISION DATA

HCI requested/gathered the most recent, raw, citywide collision data that has been reported during the past five (5) years (between January 1, 2014 - February 28, 2019) from the Statewide Integrated Traffic Records System website (*i*-SWITRS) database.

HCI then prepared a collision history report to determine the number of collisions occurring on this particular segment of Linda Vista Drive. The table below presents the summary collision data.

TRAFFIC COLLISION DATA SUMMARY LINDA VISTA DRIVE, FROM LARGO DRIVE TO SARITA DRIVE

YEAR	NUMBER OF COLLISIONS	FATAL	INJURY	PROPERTY DAMAGE ONLY
2014	0	0	0	0
2015	0	0	0	0
2016	0	0	0	0
2017	0	0	0	0
2018	0	0	0	0
2019 *	0	0	0	0

* Available SWITRS data was up to February 2019 at the time of report preparation.

As shown above, there were a total of zero (0) collisions reported along this segment within the last five (5) years.

Mr. Kenneth H. Rosenfield, PE
April 24, 2019
Page 4 of 6

FIELD REVIEW

Our evaluation tasks included performing a field-review of the project segment of Linda Vista Drive for verification of existing conditions. HCI included the following four photographs as representative of existing conditions. As shown, the asphalt roadway is in good condition; and, there are no other field-review recommendations at this time.



Linda Vista Drive (Looking Eastbound) from Creek Drive



Linda Vista Drive (Looking Eastbound) at Alisal Avenue

Mr. Kenneth H. Rosenfield, PE
April 24, 2019
Page 5 of 6

FIELD REVIEW (*continued*)



Linda Vista Drive (*Looking Eastbound*) from Alisal Avenue



Linda Vista Drive (*Looking Westbound*) from Sarita Drive

Mr. Kenneth H. Rosenfield, PE
April 24, 2019
Page 6 of 6

RECOMMENDATION / CONCLUSION

In overall consideration of the above evaluation, and travel speeds are not excessive, HCI does not recommend any sign or pavement marking installations at this time on Linda Vista Drive, between Largo Drive/Creek Drive and Sarita Avenue.

It has been our pleasure to prepare this letter of opinion regarding Linda Vista Drive. If you may have any questions or need additional information, please feel free to call us anytime at (714) 731-9455.

Sincerely,
HARTZOG & CRABILL, INC.



Gerald J. Stock, PE, TE
Executive Vice President

Attachments: Radar Speed Data
 ADT Volume Data
 Collision History

Speed Data

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF LAGUNA HILLS

LINDA VISTA DRIVE
LARGO DRIVE TO ALISAL AVENUE

DATE: 4/17/2019

SURVEY BY:

C. BUENDIA

TIME: 9:00 AM - 11:00 AM

CHECKED BY:

JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60						X 100.0%
59						X 100.0%
58						X 100.0%
57						X 100.0%
56						X 100.0%
55						X 100.0%
54						X 100.0%
53						X 100.0%
52						X 100.0%
51						X 100.0%
50						X 100.0%
49						X 100.0%
48						X 100.0%
47						X 100.0%
46						X 100.0%
45						X 100.0%
44						X 100.0%
43						X 100.0%
42						X 100.0%
41						X 100.0%
40						X 100.0%
39						X 100.0%
38						X 100.0%
37						X 100.0%
36						X 100.0%
35						X 100.0%
34						X 100.0%
33						X 97.1%
32						X 97.1%
31						X 91.2%
30						X 91.2% } PACE
29						X 88.2% } PACE
28						X 85.3% } PACE
27						X 82.4% } PACE -- -85PCT
26						X 73.5% } PACE
25						X 58.8% } PACE
24						X 44.1% } PACE ---MEAN
23						X 32.4% } PACE
22						X 14.7% } PACE ---15PCT
21						X 14.7% } PACE
20						X 2.9%
19						X 0.0%
18						X 0.0%
17						X 0.0%
16						X 0.0%
15						X 0.0%

UPPER LIMIT 10 MPH PACE: 30 MPH
 LOWER LIMIT 10 MPH PACE: 21 MPH
 PERCENT OVER PACE: 11.8 %
 PERCENT IN PACE: 88.2 %
 PERCENT UNDER PACE: 2.9 %

85th PERCENTILE SPEED: 27.9 MPH
 MEDIAN SPEED: 24.4 MPH
 15th PERCENTILE SPEED: 22.0 MPH

Spot Spd 2019-AM cum

Attachment: Linda Vista Drive Traffic Evaluation (1860 : Review of Traffic Conditions on Linda Vista Drive)

CUMULATIVE

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122, Irvine, CA 92619
(714) 721-9455

AGENCY: LAGUNA HILLS
STREET: LINDA VISTA DRIVE
LOCATION: LARGO DR. TO ALISAL AVE Eldorado Conejo

WEATHER: SUNNY DATE: 04-17-19
ROAD CONDITION: DRY START TIME: 9:00AM
OBSERVER: CATHY BUENDIA END TIME: 11:00AM VML

DIRECTION: <u>WESTBOUND</u>							
MPH	5	NUMBER OF VEHICLES				25	30
		10	15	20			TOTAL
60							
59							
58							
57							
56							
55							
54							
53							
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32	/						1
31							0
30	/						0
29							0
28	/						1
27	/						2
26	/						2
25	/						1
24	/						2
23	/						3
22	/						0
21	/						2
20	/						1
19							
18							
17							
16							
15							

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____
CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: <u>EASTBOUND</u>							
MPH	5	NUMBER OF VEHICLES				25	30
		10	15	20			TOTAL
60							
59							
58							
57							
56							
55							
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53							
52							
51							
50							
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37							
36							
35							
34	/						1
33							0
32	/						0
31							0
30							0
29	/						0
28							0
27	/						3
26	/						5
25	/						5
24	/						2
23	/						3
22	/						0
21	/						2
20							
19							
18							
17							
16							
15							

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE TOTAL	MPH
	60
	59
	58
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	35
	34
0	33
2	32
0	31
1	30
1	29
3	28
5	27
5	26
4	25
6	24
0	23
4	22
1	21
	20
	19
	18
	17
	16
	15

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF LAGUNA HILLS

LINDA VISTA DRIVE
DATE: 4/17/2019
TIME: 3:00 PM - 5:00 PM
ALISAL AVENUE TO SARITA DRIVE
SURVEY BY: C. BUENDIA
CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT					
	20	40	60	80	100	
60					X	100.0%
59					X	100.0%
58					X	100.0%
57					X	100.0%
56					X	100.0%
55					X	100.0%
54					X	100.0%
53					X	100.0%
52					X	100.0%
51					X	100.0%
50					X	100.0%
49					X	100.0%
48					X	100.0%
47					X	100.0%
46					X	100.0%
45					X	100.0%
44					X	100.0%
43					X	100.0%
42					X	100.0%
41					X	100.0%
40					X	100.0%
39					X	100.0%
38					X	100.0%
37					X	100.0%
36					X	100.0%
35					X	100.0%
34					X	99.0%
33					X	96.1%
32					X	92.2%
31					X	90.2%
30					X	89.2%
29					X	83.3%
28					X	77.5%
27					X	71.6%
26					X	64.7%
25					X	54.9%
24					X	40.2%
23					X	30.4%
22					X	18.6%
21					X	11.8%
20					X	4.9%
19					X	2.9%
18					X	1.0%
17					X	1.0%
16					X	0.0%
15					X	0.0%

UPPER LIMIT 10 MPH PACE: 30 MPH
 LOWER LIMIT 10 MPH PACE: 21 MPH
 PERCENT OVER PACE: 10.8 %
 PERCENT IN PACE: 84.3 %
 PERCENT UNDER PACE: 4.9 %

85th PERCENTILE SPEED: 29.3 MPH
 MEDIAN SPEED: 24.7 MPH
 15th PERCENTILE SPEED: 21.5 MPH

Spot Spd 2019-PM cum

Attachment: Linda Vista Drive Traffic Evaluation (1860 : Review of Traffic Conditions on Linda Vista Drive)

CUMULATIVE

Radar Speed Survey Field Sheet

 AGENCY: CITY OF LAGUNA HILLS
 STREET: LINDA VISTA DRIVE
 LOCATION: ALISAL AVE. TO SARITA DR w/o Police

 WEATHER: SUNNY DATE: 04-17-19
 ROAD CONDITION: DRY START TIME: 3:00 PM
 OBSERVER: CATHY BUENDIA END TIME: 5:00 PM VCM

DIRECTION: <u>WESTBOUND</u>						
MPH	NUMBER OF VEHICLES					TOTAL
	5	10	15	20	25	30
60						
59						
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57						
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51						
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16	/					
15	/					

 AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____
 CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: <u>EASTBOUND</u>						
MPH	NUMBER OF VEHICLES					TOTAL
	5	10	15	20	25	30
60						
59						
58						
57						
56						
55						
54						
53						
52						
51						
50						
49						
48						
47						
46						
45						
44						
43						
42						
41						
40						
39						
38						
37						
36						
35	/					
34	/					
33	/					
32	/					
31	/					
30	/					
29	/					
28	/					
27	/					
26	/					
25	/					
24	/					
23	/					
22	/					
21	/					
20	/					
19	/					
18	/					
17	/					
16	/					
15	/					

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE TOTAL	MPH
	60
	59
	58
	57
	56
	55
	54
	53
	52
	51
	50
	49
	48
	47
	46
	45
	44
	43
	42
	41
	40
	39
	38
	37
	36
	35
3	34
4	33
2	32
1	31
6	30
16	29
16	28
2	27
10	26
15	25
10	24
12	23
7	22
7	21
2	20
0	19
1	18
	17
	16
	15

ADT Volume Data

Prepared by NDS/ATD

VOLUME

Linda Vista Dr W/O Alisal Ave

Day: Thursday
Date: 4/11/2019City: Laguna Hills
Project #: CA19_1066_001

DAILY TOTALS					NB	SB	EB					WB	Total		
					0	0	492					485	977		
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL			
00:00			0	0	0		12:00			4	7	11			
00:15			0	0	0		12:15			9	9	18			
00:30			0	0	0		12:30			12	5	17			
00:45			0	1	1	1	12:45			12	37	2	23	14	60
01:00			0	0	0		13:00			7	13	20			
01:15			1	0	1		13:15			8	6	14			
01:30			0	0	0		13:30			8	8	16			
01:45			0	1	0	0	13:45			4	27	8	35	12	62
02:00			0	0	0		14:00			8	10	18			
02:15			0	0	0		14:15			8	9	17			
02:30			0	0	0		14:30			16	7	23			
02:45			0	0	0		14:45			8	40	11	37	19	77
03:00			0	0	0		15:00			13	5	18			
03:15			0	0	0		15:15			9	14	23			
03:30			0	0	0		15:30			11	7	18			
03:45			0	2	2	2	15:45			15	48	13	39	28	87
04:00			0	1	1		16:00			8	7	15			
04:15			0	0	0		16:15			8	4	12			
04:30			0	0	0		16:30			9	10	19			
04:45			0	1	2	1	16:45			13	38	9	30	22	68
05:00			0	1	1		17:00			10	5	15			
05:15			1	1	2		17:15			11	7	18			
05:30			1	7	8		17:30			10	7	17			
05:45			0	2	2	11	17:45			8	39	8	27	16	66
06:00			1	2	3		18:00			11	11	22			
06:15			0	4	4		18:15			14	6	20			
06:30			1	8	9		18:30			8	3	11			
06:45			3	5	9	23	18:45			11	44	3	23	14	67
07:00			4	11	15		19:00			5	5	10			
07:15			4	13	17		19:15			11	3	14			
07:30			5	11	16		19:30			13	4	17			
07:45			4	17	11	46	19:45			5	34	5	17	10	51
08:00			6	7	13		20:00			5	5	10			
08:15			7	9	16		20:15			9	2	11			
08:30			5	12	17		20:30			8	5	13			
08:45			7	25	13	41	20:45			7	29	2	14	9	43
09:00			7	8	15		21:00			6	2	8			
09:15			4	15	19		21:15			8	6	14			
09:30			6	11	17		21:30			2	3	5			
09:45			4	21	9	43	21:45			3	19	2	13	5	32
10:00			6	7	13		22:00			3	1	4			
10:15			8	5	13		22:15			2	1	3			
10:30			3	8	11		22:30			1	1	2			
10:45			12	29	3	23	22:45			1	7	0	3	1	10
11:00			6	4	10		23:00			4	0	4			
11:15			4	14	18		23:15			1	0	1			
11:30			8	9	17		23:30			0	0	0			
11:45			7	25	5	32	23:45			0	5	0	0	0	5
TOTALS	125				224	349	TOTALS	367				261	628		
SPLIT %	35.8%				64.2%	35.7%	SPLIT %	58.4%				41.6%	64.3		

DAILY TOTALS			NB	SB	EB			WB		Total	
			0	0						492	485
AM Peak Hour			11:45	08:30	08:30	PM Peak Hour			15:00	15:15	15:0
AM Pk Volume			32	48	71	PM Pk Volume			48	41	87
Pk Hr Factor			0.667	0.800	0.888	Pk Hr Factor			0.800	0.732	0.77
7 - 9 Volume	0	0	42	87	129	4 - 6 Volume	0	0	77	57	134
7 - 9 Peak Hour			08:00	07:00	08:00	4 - 6 Peak Hour			16:45	16:30	16:3
7 - 9 Pk Volume	0	0	25	46	66	4 - 6 Pk Volume	0	0	44	31	74
Pk Hr Factor	0.000	0.000	0.893	0.885	0.825	Pk Hr Factor	0.000	0.000	0.846	0.775	0.84

Attachment: Linda Vista Drive Traffic Evaluation (1860 : Review of Traffic Conditions on Linda Vista Drive)

Prepared by NDS/ATD

VOLUME

Linda Vista Dr E/O Alisal Ave

Day: Thursday
Date: 4/11/2019City: Laguna Hills
Project #: CA19_1066_002

DAILY TOTALS					NB	SB	EB					WB	Total		
					0	0	262					270	532		
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL			
00:00			0	0	0		12:00			2	4	6			
00:15			0	0	0		12:15			6	3	9			
00:30			0	0	0		12:30			6	5	11			
00:45			0	1	1	1	12:45			4	18	1	13	5	31
01:00			0	0	0		13:00			2	5	7			
01:15			0	0	0		13:15			2	4	6			
01:30			0	0	0		13:30			5	3	8			
01:45			0	0	0		13:45			1	10	2	14	3	24
02:00			0	0	0		14:00			5	6	11			
02:15			0	0	0		14:15			3	5	8			
02:30			0	0	0		14:30			8	7	15			
02:45			0	0	0		14:45			4	20	4	22	8	42
03:00			0	0	0		15:00			10	4	14			
03:15			0	0	0		15:15			6	8	14			
03:30			0	0	0		15:30			3	6	9			
03:45			0	1	1	1	15:45			7	26	5	23	12	49
04:00			0	1	1		16:00			4	6	10			
04:15			0	0	0		16:15			4	2	6			
04:30			0	0	0		16:30			5	8	13			
04:45			0	1	2	2	16:45			5	18	3	19	8	37
05:00			0	0	0		17:00			7	2	9			
05:15			0	1	1		17:15			5	4	9			
05:30			1	3	4		17:30			4	4	8			
05:45			0	1	1	5	17:45			3	19	2	12	5	31
06:00			1	1	2		18:00			7	6	13			
06:15			0	3	3		18:15			2	3	5			
06:30			0	5	5		18:30			5	1	6			
06:45			3	4	3	12	18:45			9	23	2	12	11	35
07:00			3	6	9		19:00			2	2	4			
07:15			3	7	10		19:15			9	2	11			
07:30			3	5	8		19:30			7	4	11			
07:45			3	12	5	23	19:45			2	20	3	11	5	31
08:00			2	7	9		20:00			4	4	8			
08:15			4	4	8		20:15			2	1	3			
08:30			1	8	9		20:30			4	3	7			
08:45			2	9	5	24	20:45			3	13	1	9	4	22
09:00			2	1	3		21:00			3	1	4			
09:15			1	9	10		21:15			5	5	10			
09:30			3	5	8		21:30			1	1	2			
09:45			3	9	3	18	21:45			2	11	2	9	4	20
10:00			4	5	9		22:00			1	1	2			
10:15			7	4	11		22:15			1	1	2			
10:30			2	4	6		22:30			1	1	2			
10:45			8	21	2	15	22:45			1	4	1	4	2	8
11:00			5	1	6		23:00			4	3	7			
11:15			4	9	13		23:15			1	0	1			
11:30			5	4	9		23:30			0	0	0			
11:45			4	18	3	17	23:45			1	6	1	4	2	10
TOTALS	74				118	192	TOTALS	188				152	340		
SPLIT %	38.5%				61.5%	36.1%	SPLIT %	55.3%				44.7%	63.9		

DAILY TOTALS			NB	SB	EBWB				Total		
			0	0					262	270	532
AM Peak Hour			10:15	07:15	10:45	PM Peak Hour			14:30	15:15	14:30
AM Pk Volume			22	24	38	PM Pk Volume			28	25	51
Pk Hr Factor			0.688	0.857	0.731	Pk Hr Factor			0.700	0.781	0.85
7 - 9 Volume	0	0	21	47	68	4 - 6 Volume	0	0	37	31	68
7 - 9 Peak Hour			07:00	07:15	07:00	4 - 6 Peak Hour			16:30	16:00	16:30
7 - 9 Pk Volume	0	0	12	24	35	4 - 6 Pk Volume	0	0	22	19	39
Pk Hr Factor	0.000	0.000	1.000	0.857	0.875	Pk Hr Factor	0.000	0.000	0.786	0.594	0.75

Attachment: Linda Vista Drive Traffic Evaluation (1860 : Review of Traffic Conditions on Linda Vista Drive)

Collision History

CITY OF LAGUNA HILLS
5-YEAR SWITRS COLLISION DATABASE
LINDA VISTA DRIVE, BETWEEN LARGO DRIVE AND SARITA DRIVE
JAN. 1, 2014 - FEB. 28, 2019

CASE ID	COLL. DATE	COLL. TIME	PRIMARY ROAD	SECONDARY ROAD	DIST.	DIR.	INTERS.	WEATH. 1	COLL. SEVERITY	PRIM. COLL. FACT.	PCF VIOL. CAT.	PCF VIOL.	HIT AND RUN	TYPE OF COLL.	MOTOR VEHICLE INVOLVED WITH	RO/ SUF
No Collisions Reported.																

NOTES:

Weather 1
A - Clear
B - Cloudy
C - Raining
D - Snowing
E - Fog
F - Other
G - Wind
-- Not Stated

Collision Severity
1 - Fatal
2 - Injury (Severe)
3 - Injury (Other Visible)
4 - Injury (Complaint of Pain)
0 - PDO (Property Damage Only)

Primary Collision Factor
A - (Vehicle) Code Violation
B - Other Improper Driving
C - Other Than Driver
D - Unknown
E - Fell Asleep
-- Not Stated

PCF Violation Category

01 - Driving or Bicycling Under Influence
02 - Impeding Traffic
03 - Unsafe Speed
04 - Following Too Closely
05 - Wrong Side of Road
06 - Improper Passing
07 - Unsafe Lane Change
08 - Improper Turning
09 - Automobile ROW
10 - Pedestrian ROW
11 - Pedestrian Violation
12 - Traffic Signals and Signs
13 - Hazardous Parking
14 - Lights
15 - Brakes
16 - Other Equipment
17 - Other Hazardous Violation
18 - Other Than Driver (or Ped)
19 -
20 -
21 - Unsafe Starting or Backing
22 - Other Improper Driving
23 - Pedestrian or "Other" Under the Influence
24 - Fell Asleep
00 - Unknown
-- Not Stated

Hit and Run

F - Felony
M - Misdemeanor
N - Not Hit & Run

Type of Collision

A - Head-On
B - Sideswipe
C - Rear-End
D - Broadside
E - Hit Object
F - Overturned
G - Vehicle/Pedestrian
H - Other
-- Not Stated

Motor Vehicle Involved With:

A - Non-Collision
B - Pedestrian
C - Other Motor Vehicle
D - Motor Vehicle on Other Roadway
E - Parked Motor Vehicle
F - Train
G - Bicycle
H - Animal
I - Fixed Object
J - Other Object
-- Not Stated

Road Surface

A - Dry
B - Wet
C - Snowy or Icy
D - Slippery
-- Not Stated



City of Laguna Hills

Traffic Commission

Staff Report

DATE: May 15, 2019
TO: Traffic Commissioners
FROM: Amber M. Shah P.E.
Associate Civil Engineer
ISSUE: Evaluation of Citywide School Zones and School Crossing Signage and Striping

RECOMMENDATION: That the Traffic Commission Request Staff Install the Recommended School Zone and School Crossing Signage and Striping Upgrades and Replacements.

SUMMARY:

Staff initiated a field evaluation of all (citywide) school zones and school crossing signage and striping to determine steps needed to meet current standards at Laguna Hills High School, Lomarena Elementary School, New Vista School (private school), San Joaquin Elementary School, and Valencia Elementary School. In addition, Staff was contacted by a resident with concerns regarding school aged pedestrian access to Lomarena Elementary School and based upon the resident's concern, initiated a separate analysis of crossing guard needs in that area.

The Traffic Engineers of Hartzog & Crabill, Inc., (HCI) completed the attached May 1, 2019, field evaluation of the existing school zones and school crossing signage and striping at the five schools and their respective surrounding streets up to an approximate 2800' radius from each school for upgrades, replacements and other recommendations to meet current standards in accordance with the California Manual on Uniform Traffic Control Devices (CA MUTCD).

Based upon HCI's field-review of each school location, a total of eleven (11) crosswalk intersection striping upgrades, twenty-eight (28) sign replacements and nine (9) new signs are recommended for installation on the streets adjacent to Laguna Hills High

Evaluation of Citywide School Zones and School Crossing Signage and Striping

May 15, 2019

Page 2

School, Lomarena Elementary School, San Joaquin Elementary School and Valencia Elementary School. The signage at New Vista School was determined to be appropriate for this location and there were no other recommendations. More detailed information regarding the existing site conditions and recommendations for each school location can be found in the attached HCI report. Staff recommends installing the recommended school zones and school crossing signage and striping prior to the beginning of the Fall 2019 school year.

FISCAL IMPACT:

The installation of the upgraded and replacement school zones and school crossing signage and striping have an anticipated cost of \$15,000. Funds are available for this work in the 2019-20 Fiscal Year Public Works Maintenance Budget.

ATTACHMENTS:

- Field Evaluation of School Zone and School Crossing Signage and Striping at 5 Locations
- Vicinity Map - Laguna Hills High School
- Vicinity Map - Lomarena Elementary School
- Vicinity Map - New Vista School
- Vicinity Map - San Joaquin Elementary School
- Vicinity Map - Valencia Elementary School



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May 1, 2019

Mr. Kenneth H. Rosenfield, PE
Assistant City Manager/Public Services Director
City of Laguna Hills
24035 El Toro Road
Laguna Hills, CA 92653

**SUBJECT: FIELD-EVALUATION OF SCHOOL ZONE AND
SCHOOL CROSSING SIGNAGE AND STRIPING
AT FIVE (5) LOCATIONS**

Dear Mr. Rosenfield,

Per the City's request, Hartzog & Crabill, Inc. (HCI) has completed the subject evaluation. As you know, the objective of this request was to field verify existing school-related signing, striping, and markings at each of the following (5) school locations in the City of Laguna Hills:

- 1) Laguna Hills High School
- 2) Lomarena Elementary School
- 3) New Vista School (*private school*)
- 4) San Joaquin Elementary School
- 5) Valencia Elementary School,

including surrounding streets at each school, followed by evaluation for upgrades, replacements, or other recommendations.

**FIELD-REVIEW EXISTING SCHOOL ZONE SIGNAGE,
STRIPING, MARKINGS**

HCI staff began these services by performing a field-review of each of the above school locations to verify existing school area conditions, which included signing, striping, and markings. Our field-reviews included driving the streets adjacent to each school location, as well as the surrounding streets within each school zone up to an approximate 2,800' radius from each school to identify the need for any recommended MUTCD upgrades.

It is important to note, per the latest CA MUTCD guidelines, school-related warning signs, including supplemental plaques, shall have a fluorescent-yellow-green (FYG) background. Also, advance school signs and school speed limit signs shall be located within 500' of the school property. The latest school area signs are shown in Figure 7B-1(CA), and referred to in this report as Assembly A, B, C, or D (*see applicable CA MUTCD guidelines in Appendix 'A'*).

Mr. Kenneth H. Rosenfield, PE
 May 1, 2019
 Page 2 of 11

FIELD-REVIEW EXISTING SCHOOL ZONE SIGNAGE, STRIPING, MARKINGS (continued)

1) Laguna Hills High School (25401 Paseo de Valencia)

Laguna Hills High School is located along Paseo de Valencia and Laguna Hills Drive. The school has its main access on Paseo de Valencia, along with a gated access through the adjacent Community Center located just south of the high school. The field reviews identified the following existing conditions and recommendations (shown in **bold**).

Paseo de Valencia

- Paseo de Valencia is a six-lane roadway (3 lanes in each direction)
- Divided by a raised concrete, landscaped center median
- Posted 45 MPH speed limit signs
- SB advance alternating yellow flashing beacon in median, north of Laguna Hills Drive
- Two SB 25 MPH School Speed Limit signs (w/FYG), approximately 500' north of school property (at yellow flashing beacon)
- **Yellow crosswalks at the Laguna Hills Drive and Hawk High traffic signals are recommended for upgrade to high-visibility type (i.e., ladder style, continental, etc.)**
- SB 25 MPH School Speed Limit sign (w/FYG), in front of school property
- Existing traffic signal at Hawk High driveway has a high-visibility marked yellow crosswalk across driveway.
- **NB 25 MPH School Speed Limit sign (non-FYG), is located within 500' south of school property (s/o Hawk High signal), but should be replaced with 'Assembly C (CA)' FYG sign**

Laguna Hills Drive

- Laguna Hills Drive is a four-lane roadway (2 lanes in each direction) with bicycle lanes
- Divided by a raised concrete, landscaped center median
- Posted 45 MPH speed limit signs
- **WB 25 MPH School Speed Limit sign (non-FYG), near the intersection with Paseo de Valencia, should be replaced with 'Assembly C (CA)' FYG sign**
- EB 25 MPH School Speed Limit sign (w/FYG), on side of school property
- **Recommend to install a new EB 'Assembly C (CA)' FYG advance sign within 500 feet of the westerly school property line.**

Community Center Drive

- Community Center Drive is a two-lane roadway (1 lane in each direction)
- Divided by a double-yellow centerline
- This street provides access from Alicia Parkway to the southerly high school parking lot
- Posted 15 MPH speed limit signs
- There are 2 high-visibility yellow marked crosswalks, just south of the school property
- **Both NB and SB Pedestrian Crossing warning signs (non-FYG) at the two above crosswalks should be replaced with back-to-back 'Assembly B (CA)' with downward arrow FYG signs, since they are adjacent to and provide access to the high school property**

FIELD-REVIEW EXISTING SCHOOL ZONE SIGNAGE, STRIPING, MARKINGS (continued)

2) Lomarena Elementary School (25100 Earhart Road)

Lomarena Elementary School is located along Earhart Road and Barents Street. Wilkes Place is a nearby street that is used to access these two streets when driving towards the school from Alicia Parkway. The school has its main access on Earhart Road only.

Earhart Road

- Earhart Road is a two-lane roadway (1 lane in each direction)
- Not divided by any centerline striping, except a double-yellow stripe at the Stop controlled intersections of Barents Street and Velasquez Road
- Speed limit is not posted, but is 25 MPH per CVC 515
- There are several posted No U-Turn signs for both directions of travel
- **Existing Stop controls at Barents Street and Velasquez Road have yellow marked crosswalks, which are recommended for upgrade to high-visibility type**
- **New SB ‘Assembly A (CA)’ FYG sign should be installed at/near Barents Street**
- **New NB ‘Assembly A (CA)’ FYG sign should be installed at/near Velasquez Road**
- **WB School Pedestrian Crossing signs (non-FYG), east of Velasquez Road, should be replaced with ‘Assembly A (CA)’ FYG sign**

Barents Street

- Barents Street is a two-lane roadway (1 lane in each direction)
- Not divided by any centerline striping
- EB 25 MPH speed limit sign near Wilkes Place, along with ‘25’ pavement marking
- **Existing 1-way Stop control at Wilkes Place has a yellow marked crosswalk, which is recommended for upgrade to high-visibility type**
- **EB School sign, w/School marking, should be replaced with ‘Assembly A (CA)’ sign**
- **Install EB ‘Assembly D (CA)’ FYG sign at Slow School Xing pavement markings**
- **Replace/Install new EB & WB ‘Assembly B (CA)’ w/arrow pointing down signs at both crosswalks at Earhart Road (as close as possible to each crosswalk)**
- **Existing yellow marked crosswalks at Earhart Road are recommended for upgrade to high-visibility type**
- **Install new ‘Assembly A (CA)’ sign on EB Barents at Hillary**

Velasquez Road

- Velasquez Road is a two-lane roadway (1 lane in each direction)
- Not divided by any centerline striping, except for double-yellow at Earhart Road
- Speed limit is not posted
- **Yellow marked crosswalks at Earhart Road are recommended for upgrade to high-visibility type**
- **NB & SB School signs (non-FYG), at Mawson Drive and Northrup Drive, should be replaced with ‘Assembly A (CA)’ FYG signs**
- **Slow School Xing pavement markings should be removed, since they approach a Stop sign control at Earhart Road (per CA MUTCD guidelines Section 7C.03)**

Mr. Kenneth H. Rosenfield, PE
 May 1, 2019
 Page 4 of 11

FIELD-REVIEW EXISTING SCHOOL ZONE SIGNAGE, STRIPING, MARKINGS (continued)

2) Lomarena Elementary School (cont'd)

Wilkes Place

- Wilkes Place is a two-lane roadway (1 lane in each direction)
- Divided by a double-yellow centerline stripe, and also a yellow skip centerline
- Posted 25 MPH
- **Install new SB 'Assembly A (CA)' FYG sign at/near Alicia Parkway**
- **SB advance School Crossing sign (non-FYG), south of Alicia Parkway, should be replaced with 'Assembly D (CA)' sign**
- **SB & NB School Crossing signs (non-FYG), at Barents Street (south), should be replaced with 'Assembly B (CA)' w/arrow pointing down sign, as close as possible to crosswalk**
- **Yellow marked crosswalks at Barents Street (south) are recommended for upgrade to high-visibility type**
- **Install new NB 'Assembly A (CA)' FYG sign north of Mawson Drive**
- **NB advance School sign (non-FYG), south of Barents Street (south), should be replaced with 'Assembly D (CA)' sign**

Alicia Parkway

- Alicia Parkway is a six-lane roadway (3 lanes in each direction)
- Divided by a raised concrete, landscaped center median
- Posted 45 MPH
- **Yellow crosswalks at Wilkes Place recommended for upgrade to high-visibility type**

3) New Vista School (23092 Mill Creek Drive)

Per the school's website, New Vista School is a WASC-accredited non-public school, which serves approximately 80 students with ASD from grades 6 – 12. It is located along Mill Creek Drive, south of Lake Forest Drive, with its only access on Mill Creek Drive.

Mill Creek Drive

- Mill Creek Drive is a two-lane roadway (1 lane in each direction)
- Divided by a painted, double-yellow centerline
- Posted 30 MPH speed limit signs on Mill Creek Drive
- There are advance NB & SB 25 MPH School Speed Limit signs (w/FYG), north and south of school property

Since this private school's access is only along Mill Creek Drive, and there are no uncontrolled crosswalks near the school, it appears the majority of school children are driven into the property parking lot. The two existing 25 MPH School Speed Limit signs along Mill Creek Drive are up to current standards and located within the limits recommended in the CA MUTCD. **Therefore, they are considered sufficient for this school location, and there are no other recommendations at this time.**

Mr. Kenneth H. Rosenfield, PE

May 1, 2019

Page 5 of 11

FIELD-REVIEW EXISTING SCHOOL ZONE SIGNAGE, STRIPING, MARKINGS (continued)

4) San Joaquin Elementary School (22182 Barbera)

San Joaquin Elementary School is located along Barbera, Santa Vittoria Drive, and Santa Maria Avenue. The school has its main access along the two Barbera roadway segments (Barbera runs diagonally east-west from Santa Vittoria Drive, and continues south of Marsala).

Barbera, from Santa Vittoria Drive to Marsala

- Barbera is a two-lane roadway (1 lane in each direction)
- Not divided by any centerline striping, except a single yellow stripe at the Stop controlled intersections
- EB 25 MPH School Speed Limit sign (w/FYG), in front of school
- **Existing 1-way Stop controls at Santa Vittoria Drive and Marsala have yellow marked crosswalks, which are recommended for upgrade to high-visibility type**

Barbera, south of Marsala

- Barbera is a two-lane roadway (1 lane in each direction)
- Barbera is uncontrolled at Marsala
- Not divided by any centerline striping, except a single yellow stripe at Marsala
- Speed limit not posted, but is 25 MPH per CVC 515
- **Existing WB yellow advance School sign (non-FYG), with pavement marking, at Formello, should be replaced with 'Assembly A (CA)' FYG sign**
- **Install new WB 'Assembly D (CA)' FYG sign at the existing Slow School Xing advance pavement markings**
- **NB yellow School Xing sign (non-FYG) at the yellow marked crosswalk at Marsala should be replaced with 'Assembly B (CA)' FYG w/arrow pointing down signs**
- **There is a yellow marked crosswalk across Barbera/Marsala (south leg only), which is recommended for upgrade to high-visibility type**

Marsala

- Marsala, north of Barbera, is a two-lane roadway (1 lane in each direction)
- Marsala is uncontrolled at Barbera
- Divided by single, yellow skip centerline stripe, north of Barbera
- Speed limit is not posted, but is 25 MPH per CVC 515
- **SB yellow School sign (non-FYG), with pavement marking, in advance of the school property, should be replaced with 'Assembly A (CA)' FYG sign**
- **Install new SB 'Assembly D (CA)' FYG sign at the existing Slow School Xing advance pavement markings**
- **There is a SB yellow School Xing sign (non-FYG) posted at the yellow marked crosswalk at Barbera, which should be replaced with 'Assembly B (CA)' FYG w/downward arrow signs**

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FIELD-REVIEW EXISTING SCHOOL ZONE SIGNAGE, STRIPING, MARKINGS (continued)

4) San Joaquin Elementary School (cont'd)

Santa Vittoria Drive

- Santa Vittoria Drive is a two-lane roadway (1 lane in each direction)
- It is 1-way Stop controlled at Santa Maria Avenue and uncontrolled at Barbera
- Divided by a double-yellow centerline stripe
- 30 MPH posted speed limit signs, with 30 pavement markings
- NB & SB 25 MPH School Speed Limit signs (w/FYG) located north of Santa Maria Avenue adjacent to school property, and north of Barbera

Santa Maria Avenue

- Santa Maria Avenue is a four-lane roadway (2 lanes in each direction)
- It is uncontrolled at Santa Vittoria Drive
- Posted 40 MPH speed limit signs
- Divided by a raised, landscaped center median
- **WB advance yellow School 200 Feet warning signs (non-FYG), east of Santa Vittoria Drive, should be replaced with in-kind 'Assembly D (CA)' FYG signs**
- **WB 25 MPH School Speed Limit sign (non-FYG), east of Santa Vittoria Drive, within 500 feet of school, but should be replaced with 'Assembly C (CA)' FYG sign**
- **WB yellow School sign (non-FYG), with pavement markings east of Santa Vittoria Drive, should be replaced with 'Assembly A (CA)' FYG sign**
- There is a WB End School Zone regulatory sign, west of Santa Vittoria Drive
- **EB advance yellow School 200 Feet warning signs (non-FYG), west of Santa Vittoria Drive, should be replaced with in-kind 'Assembly D (CA)' FYG signs**
- **EB 25 MPH School Speed Limit sign (non-FYG), west of Santa Vittoria Drive, within 500 feet of school, but should be replaced with 'Assembly C (CA)' FYG sign**

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FIELD-REVIEW EXISTING SCHOOL ZONE SIGNAGE, STRIPING, MARKINGS (continued)

5) Valencia Elementary School (25661 Paseo de Valencia)

Valencia Elementary School is located along Paseo de Valencia and La Paz Road. The school has its main access only along Paseo de Valencia.

Paseo de Valencia

- Paseo de Valencia is a four-lane roadway (2 lanes in each direction)
- Divided by a painted double-yellow center median
- Posted 45 MPH speed limit
- SB School Ahead signs (w/FYG), north of La Paz Road
- **SB 25 MPH School Speed Limit sign (non-FYG), north of La Paz Road, should be replaced with 'Assembly C (CA)' FYG sign**
- **Yellow marked crosswalks traffic signal at La Paz Road are recommended for upgrade to high-visibility type**
- SB 25 MPH School Speed Limit sign (w/FYG), and with pavement markings, located south of La Paz Road across school
- **Yellow marked crosswalk across Mackenzie is recommended for upgrade to high-visibility type**
- There is a NB alternating yellow flashing beacon located north of Mackenzie
- NB School Ahead signs (w/FYG), and with pavement marking, north of Mackenzie
- NB advance 25 MPH School Speed Limit sign (w/FYG) at Vista Firenze
- NB No U-Turn sign posted at school driveway

La Paz Road

- La Paz Road is a four-lane roadway (2 lanes in each direction)
- Divided by a raised concrete landscaped center median
- Posted 40 MPH speed limit
- EB School Ahead signs (w/FYG), west of Paseo de Valencia
- **EB 25 MPH School Speed Limit sign (non-FYG), west of Paseo de Valencia, should be replaced with new 'Assembly C (CA)' FYG sign**
- **EB 25 MPH School Speed Limit sign (non-FYG), east of Paseo de Valencia next to school property, should be replaced with new 'Assembly C (CA)' FYG sign**
- **WB School Ahead warning signs (non-FYG), in center median at Champlain, should be replaced with 'Assembly A (CA)'**
- Two WB 25 MPH School Speed Limit signs (w/FYG), at and west of Champlain
- **Yellow crosswalks at Paseo de Valencia are recommended for upgrade to high-visibility type**

Mackenzie

- **SB School sign (non-FYG), north of Grissom Road, should be replaced with 'Assembly A (CA)' FYG sign**

RECOMMENDATIONS

Upon overall field-review of each school location, HCI is providing the following summarized recommendations for updating the School Zone and School Crossing signage and markings to meet current standards, per the California Manual on Uniform Traffic Control Devices (CA MUTCD), Part 7, Traffic Controls for School Areas (Chapter 7B, Signs). ***In addition, see map of each school location with related recommendations attached in Appendix 'B'.***

1) Laguna Hills High School

Paseo de Valencia

- Yellow crosswalks at the Laguna Hills Drive and Hawk High traffic signals are recommended for upgrade to high-visibility type (i.e., ladder style, continental, etc.)
- NB 25 MPH School Speed Limit sign (non-FYG), is located within 500' south of school property (s/o Hawk High signal), but should be replaced with 'Assembly C (CA)' FYG sign

Laguna Hills Drive

- WB 25 MPH School Speed Limit sign (non-FYG), near the intersection with Paseo de Valencia, should be replaced with 'Assembly C (CA)' FYG sign
- Recommend to install a new EB 'Assembly C (CA)' FYG advance sign within 500 feet of the westerly school property line.

Community Center Drive

- Both NB and SB Pedestrian Crossing warning signs (non-FYG) at the two above crosswalks should be replaced with back-to-back 'Assembly B (CA)' with downward arrow FYG signs, since they are adjacent to and provide access to the high school property

2) Lomarena Elementary School

Earhart Road

- Existing Stop controls at Barents Street and Velasquez Road have yellow marked crosswalks, which are recommended for upgrade to high-visibility type
- New SB 'Assembly A (CA)' FYG sign should be installed at/near Barents Street
- New NB 'Assembly A (CA)' FYG sign should be installed at/near Velasquez Road
- WB School Pedestrian Crossing signs (non-FYG), east of Velasquez Road, should be replaced with 'Assembly A (CA)' FYG sign

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RECOMMENDATIONS *(continued)*

2) Lomarena Elementary School *(cont'd)*

Barents Street

- Existing 1-way Stop control at Wilkes Place has a yellow marked crosswalk, which is recommended for upgrade to high-visibility type
- EB School sign, with School marking, should be replaced with 'Assembly A (CA)' sign
- Install EB 'Assembly D (CA)' FYG sign at Slow School Xing pavement markings
- Replace/Install new EB & WB 'Assembly B (CA)' w/arrow pointing down signs at both crosswalks at Earhart Road (as close as possible to each crosswalk)
- Existing yellow marked crosswalks at Earhart Road are recommended for upgrade to high-visibility type
- Install new 'Assembly A (CA)' sign on EB Barents Street at Hillary

Velasquez Road

- Yellow marked crosswalks at Earhart are recommended for upgrade to high-visibility type
- NB & SB School signs (non-FYG), at Mawson Drive and Northrup Drive, should be replaced with 'Assembly A (CA)' FYG signs
- Slow School Xing pavement markings should be removed, since they approach a Stop sign control at Earhart Road (per CA MUTCD guidelines Section 7C.03)

Wilkes Place

- Install new SB 'Assembly A (CA)' FYG sign at/near Alicia Parkway
- SB advance School Crossing sign (non-FYG), south of Alicia Parkway, should be replaced with 'Assembly D (CA)' sign
- SB & NB School Crossing signs (non-FYG), at Barents Street (south), should be replaced with 'Assembly B (CA)' w/arrow pointing down sign, as close as possible to crosswalk
- Yellow marked crosswalks at Barents Street (south) are recommended for upgrade to high-visibility type
- Install new NB 'Assembly A (CA)' FYG sign north of Mawson Drive
- NB advance School sign (non-FYG), south of Barents Street (south), should be replaced with 'Assembly D (CA)' sign

Alicia Parkway

- Yellow crosswalks at Wilkes Place recommended for upgrade to high-visibility type

3) New Vista School

There are no recommendations at this time.

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RECOMMENDATIONS *(continued)*

4) San Joaquin Elementary School

Barbera, from Santa Vittoria Drive to Marsala

- Existing 1-way Stop controls at Santa Vittoria Drive and Marsala have yellow marked crosswalks, which are recommended for upgrade to high-visibility type

Barbera, south of Marsala

- Existing WB yellow advance School sign (non-FYG), with pavement marking, at Formello, should be replaced with 'Assembly A (CA)' FYG sign
- Install new WB 'Assembly D (CA)' FYG sign at the existing Slow School Xing advance pavement markings
- NB yellow School Xing sign (non-FYG) at the yellow marked crosswalk at Marsala should be replaced with 'Assembly B (CA)' FYG w/arrow pointing down signs
- There is a yellow marked crosswalk across Barbera/Marsala (south leg only), which is recommended for upgrade to high-visibility type

Marsala

- SB yellow School sign (non-FYG), with pavement marking, in advance of the school property, should be replaced with 'Assembly A (CA)' FYG sign
- Install new SB 'Assembly D (CA)' FYG sign at the existing Slow School Xing advance pavement markings
- There is a SB yellow School Xing sign (non-FYG) posted at the yellow marked crosswalk at Barbera, which should be replaced with 'Assembly B (CA)' FYG w/downward arrow signs

Santa Vittoria Drive

- No recommendations at this time

Santa Maria Avenue

- WB advance yellow School 200 Feet warning signs (non-FYG), east of Santa Vittoria Drive, should be replaced with in-kind 'Assembly D (CA)' FYG signs
- WB 25 MPH School Speed Limit sign (non-FYG), east of Santa Vittoria Drive, within 500 feet of school, but should be replaced with 'Assembly C (CA)' FYG sign
- WB yellow School sign (non-FYG), with pavement markings east of Santa Vittoria Drive, should be replaced with 'Assembly A (CA)' FYG sign
- EB advance yellow School 200 Feet warning signs (non-FYG), west of Santa Vittoria Drive, should be replaced with in-kind 'Assembly D (CA)' FYG signs
- EB 25 MPH School Speed Limit sign (non-FYG), west of Santa Vittoria Drive, within 500 feet of school, but should be replaced with 'Assembly C (CA)' FYG sign

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RECOMMENDATIONS *(continued)*

5) Valencia Elementary School

Paseo de Valencia

- SB 25 MPH School Speed Limit sign (non-FYG), north of La Paz Road, should be replaced with 'Assembly C (CA)' FYG sign
- Yellow marked crosswalks traffic signal at La Paz Road are recommended for upgrade to high-visibility type
- Yellow marked crosswalk across Mackenzie is recommended for upgrade to high-visibility type

La Paz Road

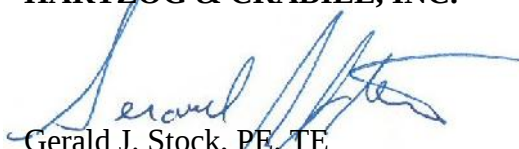
- EB 25 MPH School Speed Limit sign (non-FYG), west of Paseo de Valencia, should be replaced with new 'Assembly C (CA)' FYG sign
- EB 25 MPH School Speed Limit sign (non-FYG), east of Paseo de Valencia next to school property, should be replaced with new 'Assembly C (CA)' FYG sign
- WB School Ahead warning signs (non-FYG), in center median at Champlain, should be replaced with 'Assembly A (CA)'
- Yellow crosswalks at Paseo de Valencia are recommended for upgrade to high-visibility type

Mackenzie

- SB School sign (non-FYG), north of Grissom Road, should be replaced with 'Assembly A (CA)' FYG sign

We appreciate the opportunity to prepare this report letter of recommendations for the City's review. Should you have any questions or desire additional information, please do not hesitate to contact us at (714) 731-9455.

Sincerely,
HARTZOG & CRABILL, INC.


 Gerald J. Stock, PE, TE
 Executive Vice President
 City and Traffic Engineering Services

Appendix ‘A’

Applicable CA MUTCD Guidelines

Section 7B.06 Lettering

Support:

⁰¹ The “Standard Highway Signs and Markings” book (see Section 1A.11) contains information regarding sign lettering.

Section 7B.07 Sign Color for School Warning Signs

Standard:

⁰¹ School warning signs, including the “SCHOOL” portion of the School Speed Limit (S5-1) sign and including any supplemental plaques used in association with these warning signs, shall have a fluorescent yellow-green background with a black legend and border unless otherwise provided in this Manual for a specific sign.

Section 7B.08 School Advance Warning Assembly (S1-1 with Supplemental Plaque)

Support:

⁰¹ Many state and local jurisdictions find it beneficial to advise road users that they are approaching a school that is adjacent to a highway, where additional care is needed, even though no school crossing is involved and the speed limit remains unchanged. Additionally, some jurisdictions designate school zones that have a unique legal standing in that fines for speeding or other traffic violations within designated school zones are increased or special enforcement techniques such as photo-radar systems are used. It is important and sometimes legally necessary to mark the beginning and end points of these designated school zones so that the road user is given proper notice.

⁰² The School (S1-1) sign (see Figure 7B-1 or 7B-1(CA)) has the following four applications:

- A. School Area – the S1-1 sign can be used to warn road users that they are approaching a school area that might include school buildings or grounds, a school crossing, or school related activity adjacent to the highway.
- B. School Zone – the S1-1 sign can be used to identify the location of the beginning of a designated school zone (see Section 7B.09).
- C. School Advance Crossing – if combined with an AHEAD (W16-9P) plaque or an XX FEET (W16-2P or W16-2aP) plaque to comprise the School Advance Crossing assembly, the S1-1 sign can be used to warn road users that they are approaching a crossing where schoolchildren cross the roadway (see Section 7B.11).
- D. School Crossing – if combined with a diagonal downward pointing arrow (W16-7P) plaque to comprise the School Crossing assembly, the S1-1 sign can be used to warn approaching road users of the location of a crossing where schoolchildren cross the roadway (see Section 7B.12).

^{02a} The School Assemblies A(CA) through E(CA) are shown in Figure 7B-1(CA) and Table 7B-1(CA).

Option:

⁰³ If a school area is located on a cross street in close proximity to the intersection, a School (S1-1) sign with a supplemental arrow (W16-5P or W16-6P) plaque may be installed on each approach of the street or highway to warn road users making a turn onto the cross street that they will encounter a school area soon after making the turn.

Section 7B.09 School Zone Sign (S1-1) and Plaques (S4-3P, S4-7P) and END SCHOOL ZONE Sign (S5-2)

Standard:

⁰¹ If a school zone has been designated under State or local statute, a School (S1-1) sign (see Figure 7B-1 or 7B-1(CA)) shall be installed to identify the beginning point(s) of the designated school zone (see Figure 7B-2).

Option:

⁰² A School Zone (S1-1) sign may be supplemented with a SCHOOL (S4-3P) plaque (see Figure 7B-1 or 7B-1(CA)).

⁰³ A School Zone (S1-1) sign may be supplemented with an ALL YEAR (S4-7P) plaque (see Figure 7B-1) if the school operates on a 12-month schedule.

~~04 The downstream end of a designated school zone may be identified with an END SCHOOL ZONE (S5-2) sign (see Figures 7B-1 and 7B-2).~~

05 If a school zone is located on a cross street in close proximity to the intersection, a School Zone (S1-1) sign with a supplemental arrow (W16-5P or W16-6P) plaque may be installed on each approach of the street or highway to warn road users making a turn onto the cross street that they will encounter a school zone soon after making the turn.

Standard:

06 The School Warning Assembly A(CA) shall be used on streets with prima facie 25 mph speed limits that are contiguous to a school building or school grounds.

07 The SCHOOL (S4-3P) plaque shall not be used alone.

Guidance:

08 If used, the School Warning Assembly A(CA) should be posted at the school boundary. Refer to CVC 22352.

Option:

09 If used, the School Warning Assembly A(CA) may be posted up to 500 feet in advance of the school boundary. Refer to CVC 22352.

Support:

10 The School Warning Assembly A(CA) does not need to be posted if there are no school pedestrians using the highway and the school grounds are separated from the highway by a fence, gate or other physical barrier. Refer to CVC 22352.

Section 7B.10 Higher Fines Zone Signs (R2-10, R2-11) and Plaques

Standard:

~~01 Where increased fines are imposed for traffic violations within a designated school zone, a BEGIN HIGHER FINES ZONE (R2-10) sign (see Figure 7B-1) or a FINES HIGHER (R2-6P), FINES DOUBLE (R2-6aP), or \$XX FINE (R2-6bP) plaque (see Figure 2B-3) shall be installed as a supplement to the School Zone (S1-1) sign to identify the beginning point of the higher fines zone (see Figures 7B-2 and 7B-3).~~

Option:

02 Where appropriate, one of the following plaques may be mounted below the sign that identifies the beginning point of the higher fines zone:

- A. An S4-1P plaque (see Figure 7B-1) specifying the times that the higher fines are in effect;
- B. A WHEN CHILDREN ARE PRESENT (S4-2P) plaque (see Figure 7B-1); or
- C. A WHEN FLASHING (S4-4P) plaque (see Figure 7B-1) if used in conjunction with a yellow flashing beacon.

Standard:

~~03 Where a BEGIN HIGHER FINES ZONE (R2-10) sign or a FINES HIGHER (R2-6P) plaque supplementing a School Zone (S1-1) sign is posted to notify road users of increased fines for traffic violations, an END HIGHER FINES ZONE (R2-11) sign (see Figure 7B-1) or an END SCHOOL ZONE (S5-2) sign shall be installed at the downstream end of the zone to notify road users of the termination of the increased fines zone (see Figures 7B-2 and 7B-3).~~

Section 7B.11 School Advance Crossing Assembly

Standard:

01 The School Advance Crossing assembly (see Figure 7B-1 or 7B-1(CA)) shall consist of a School Advance warning Assembly D(CA), or a School (S1-1) sign supplemented with an AHEAD (W16-9P) plaque or an XX FEET (W16-2P or W16-2aP) plaque.

02 Except as provided in Paragraph 3, a School Advance Crossing assembly or Assembly D(CA) shall be used in advance (see Table 2C-4 for advance placement guidelines) of the first School Crossing assembly (see Section 7B.12) that is encountered in each direction as traffic approaches a school crosswalk (see Figure 7B-4).

Option:

03 The School Advance Crossing assembly or Assembly D(CA) may be omitted (see Figure 7B-5) where a School Zone (S1-1) sign (see Section 7B.09) is installed to identify the beginning of a school zone in advance of the School Crossing assembly.

~~06 A standard Speed Limit sign showing the speed limit for the section of highway that is downstream from the authorized and posted reduced school speed limit zone may be mounted on the same post above the END SCHOOL SPEED LIMIT (S5-3) sign or the END SCHOOL ZONE (S5-2) sign or the Speed Limit (R2-1) sign may be posted by itself (see Figures 7B-5(CA) and 7B-102(CA)).~~

Guidance:

~~07 The beginning point of a reduced school speed limit zone should be at least 200 feet in advance of the school grounds, a school crossing, or other school related activities; however, this 200 foot distance should be increased if the reduced school speed limit is 30 mph or higher. Refer Figures 7B-1(CA), 7B-5, 7B-5(CA), and 7B-101(CA) through 7B-103(CA).~~

Standard:

~~08 The School Speed Limit assembly~~ **Assembly C(CA)** shall be either a fixed-message sign assembly or a changeable message sign.

~~09 The fixed-message School Speed Limit assembly~~ **Assembly C(CA)** shall consist of a top plaque (S4-3P) with the legend SCHOOL, a Speed Limit (R2-1) sign, and a bottom plaque **WHEN CHILDREN ARE PRESENT (S4-1P, S4-2P, S4-4P, or S4-6P)** indicating the specific periods of the day and/or days of the week that the ~~special school speed limit is in effect~~ (see Figure 7B-1 **7B-1(CA)**).

Option:

10 Changeable message signs (see Chapter 2L and Section 6F.60) may be used to inform drivers of the school speed limit. If the sign is internally illuminated, it may have a white legend on a black background. Changeable message signs with flashing beacons may be used for situations where greater emphasis of the special school speed limit is needed.

Guidance:

11 *Even though it might not always be practical because of special features to make changeable message signs conform in all respects to the standards in this Manual for fixed-message signs, during the periods that the school speed limit is in effect, their basic shape, message, legend layout, and colors should comply with the standards for fixed-message signs.*

12 *A confirmation light or device to indicate that the speed limit message is in operation should be considered for inclusion on the back of the changeable message sign.*

Standard:

13 **Fluorescent yellow-green pixels shall be used when the “SCHOOL” message is displayed on a changeable message sign for a school speed limit.**

Option:

14 Changeable message signs may use blank-out messages or other methods in order to display the school speed limit only during the periods it applies.

15 Changeable message signs that display the speed of approaching drivers (see Section 2B.13) may be used in a school speed limit zone.

~~16 A Speed Limit Sign Beacon (see Section 4L.04) also may be used, with a WHEN FLASHING legend, to identify the periods that the school speed limit is in effect.~~

Standard:

17 **The School Speed Limit Assembly C(CA) shall be used on streets with speed limits greater than 25 mph that are contiguous to a school building or school grounds.**

Support:

18 The School Speed Limit Assembly C(CA) is shown in Figure 7B-1(CA).

Option:

19 If used, the School Speed Limit Assembly C(CA) may be posted up to 500 feet in advance of the school boundary.

Standard:

20 **The “WHEN FLASHING” and specific time period messages shall not be used in school areas in California as they are not supported by CVC 22352. Hence, the Specific Time Period Plaque (S4-1P), WHEN FLASHING (S4-4P) and SCHOOL SPEED LIMIT 20 WHEN FLASHING (S5-1) signs shall not be used in California.**

Support:

21 **The “WHEN FLASHING” message is misleading because it suggests that the speed limit is in force only when the flashing beacons are in operation. The prima facie speed limit of 25 mph is in effect based on the presence of children per CVC 22352, not on the operation of the flashing beacons.**

Figure 7B-1(CA). School Area Signs (Sheet 1 of 2)

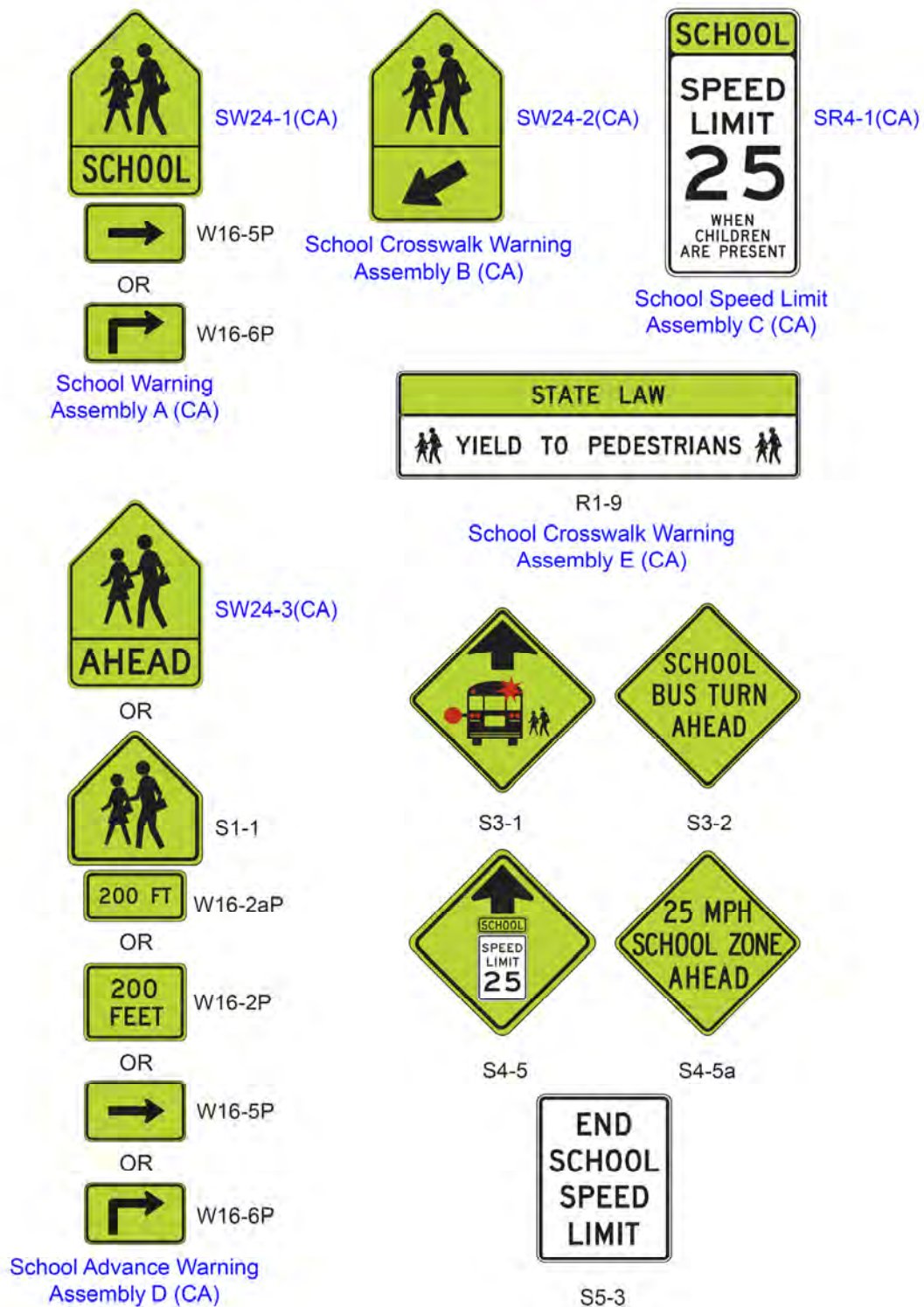


Figure 7B-5(CA). Example of Signing for a School Zone with a School Speed Limit and a School Crossing

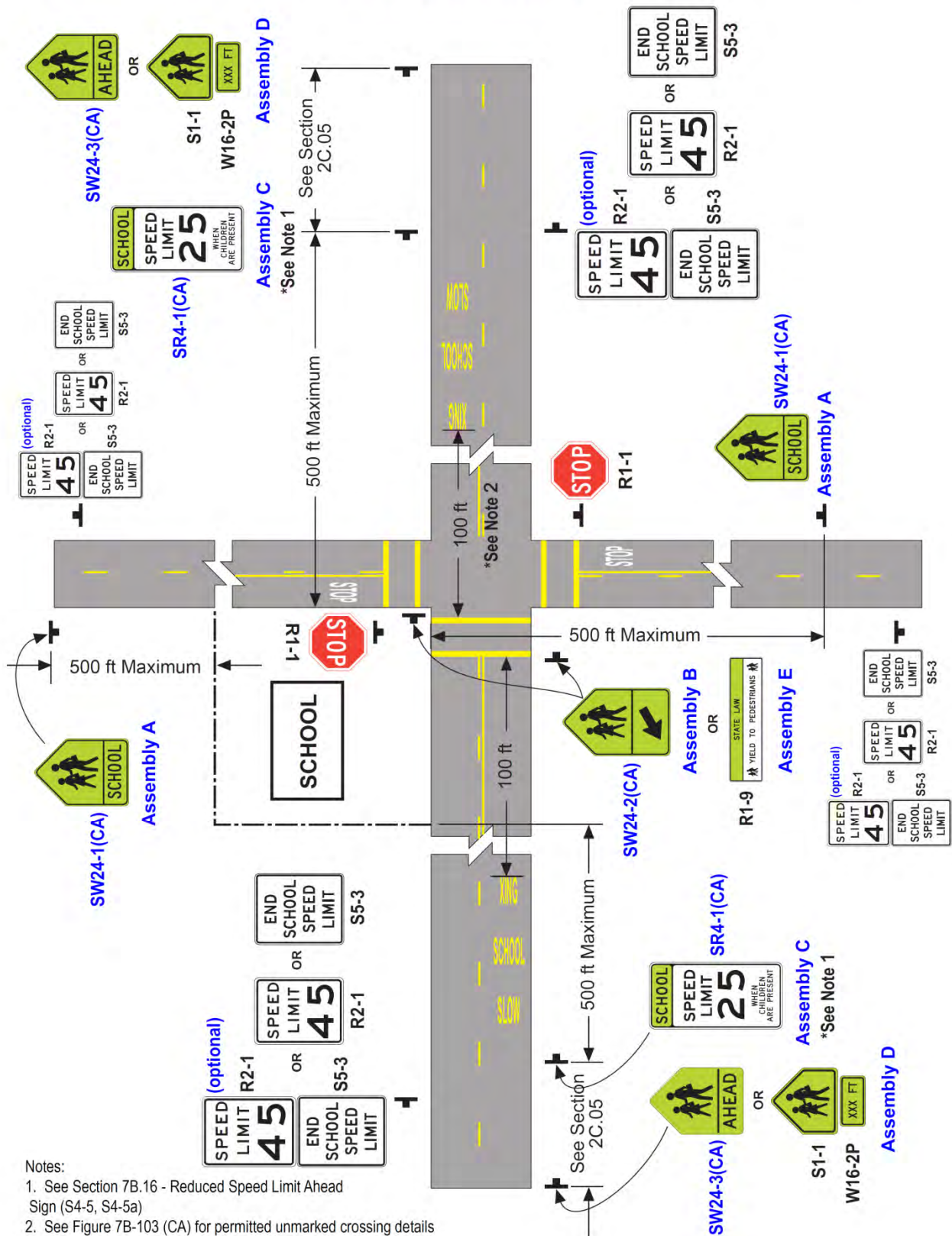
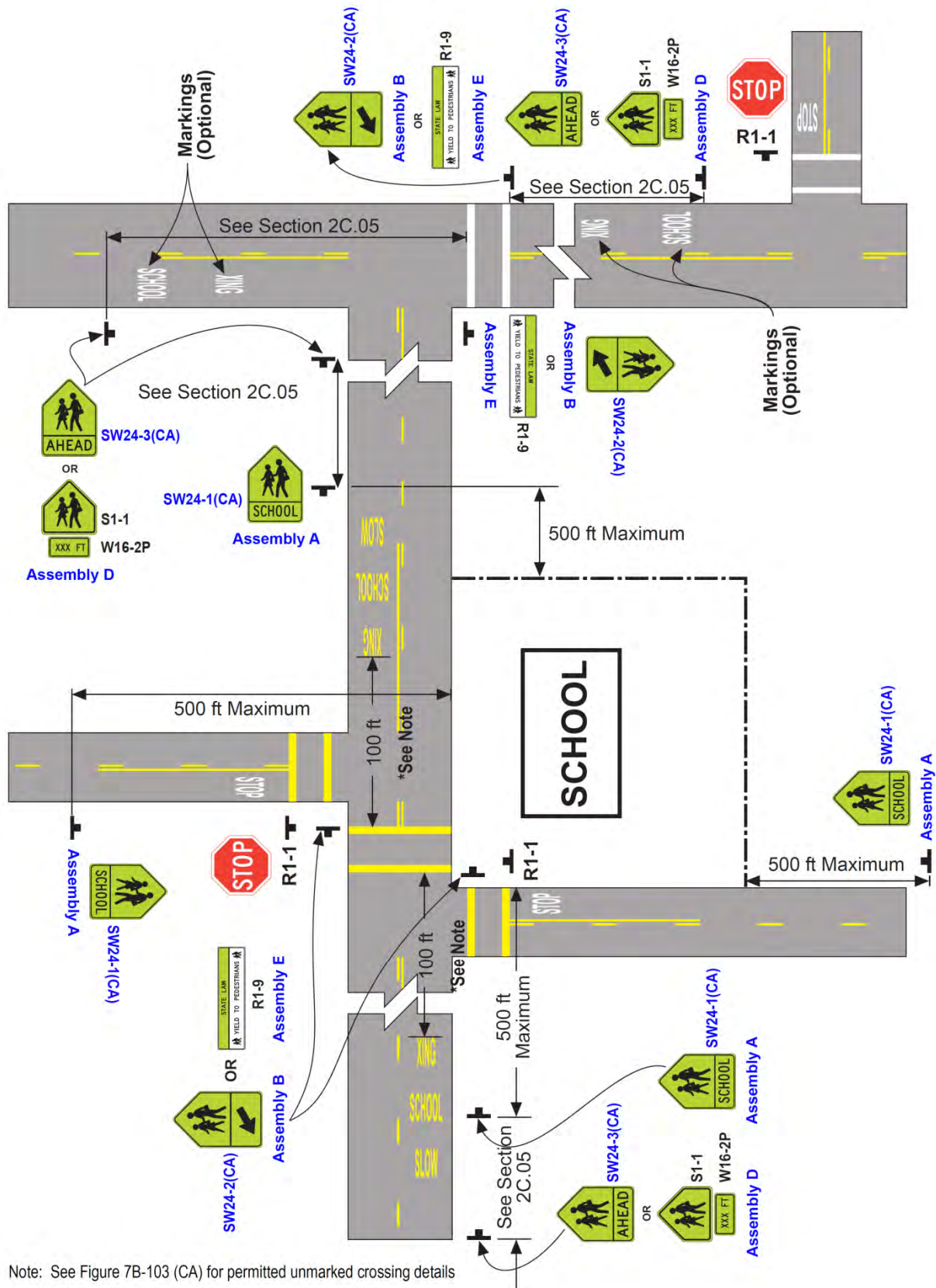


Figure 7B-104(CA). Example of Signing for School Crosswalk Warning Assembly



Option:

⁰⁸ A marked pedestrian crosswalk may be yellow if the nearest point of the crosswalk is not more than 600 feet from a school building or school grounds. Refer to CVC 21368.

⁰⁹ A marked pedestrian crosswalk may be yellow if the nearest point of the crosswalk is not more than 2800 feet from a school building or school grounds and there are no intervening crosswalks other than those contiguous to the school grounds, and it appears that the facts and circumstances require special marking for the protection and safety of persons attending the school. Refer to CVC 21368.

Guidance:

¹⁰ *Diagonal or longitudinal markings should be used when a crosswalk is marked at an uncontrolled crossing location. The diagonal or longitudinal lines should be 12 to 24 inches wide and spaced 12 to 60 inches apart. The spacing design should avoid the wheel paths.*

Option:

¹¹ For added visibility, the area of a crosswalk may be marked with white or yellow diagonal lines at a 45-degree angle to the line of the crosswalk or with white or yellow longitudinal lines parallel to traffic flow. Refer to CVC 21368. When diagonal or longitudinal lines are used to mark a crosswalk, the transverse crosswalk lines may be omitted.

Section 7C.03 Pavement Word, Symbol, and Arrow Markings

Option:

⁰¹ ~~If used, the SCHOOL word marking may extend to the width of two approach lanes (see Figure 7C-1).~~

Guidance:

⁰² ~~If the two-lane SCHOOL word marking is used, the letters should be 10 feet or more in height.~~

Support:

⁰³ Section 3B.20 contains provisions regarding other word, symbol, and arrow pavement markings that can be used to guide, warn, or regulate traffic.

Standard:

⁰⁴ **If used, the SCHOOL pavement marking shown in Figure 7C-101(CA) shall be used and it shall be restricted to a single lane.**

Guidance:

⁰⁵ *On State highways, all letters, numerals, and symbols should be in accordance with Caltrans' Standard Plans publication. See Section 1A.11 for more information regarding this publication.*

Standard:

⁰⁶ **The SLOW SCHOOL XING marking shall be used in accordance with the provisions of CVC 21368 in advance of all yellow school crosswalks (see Figure 7C-101(CA)). They shall not be used where the crossing is controlled by stop signs, traffic signals, or yield signs. They shall be yellow, with the word XING at least 100 feet in advance of the school crosswalk.**

Option:

⁰⁷ The SCHOOL XING marking and crosswalks may be used at remote locations outside of the school zone.

Support:

⁰⁸ Remote crosswalk locations are locations near schools, which are not included in CVC 21368 criteria. Also refer to Section 7C.03.

Standard:

⁰⁹ **If the SCHOOL XING marking and crosswalks are used at remote locations outside of the school zone, they shall not be yellow (Refer to CVC 21368), but white.**

Guidance:

¹⁰ *The SCHOOL XING marking should be used in advance of all white school crosswalks.*

Option:

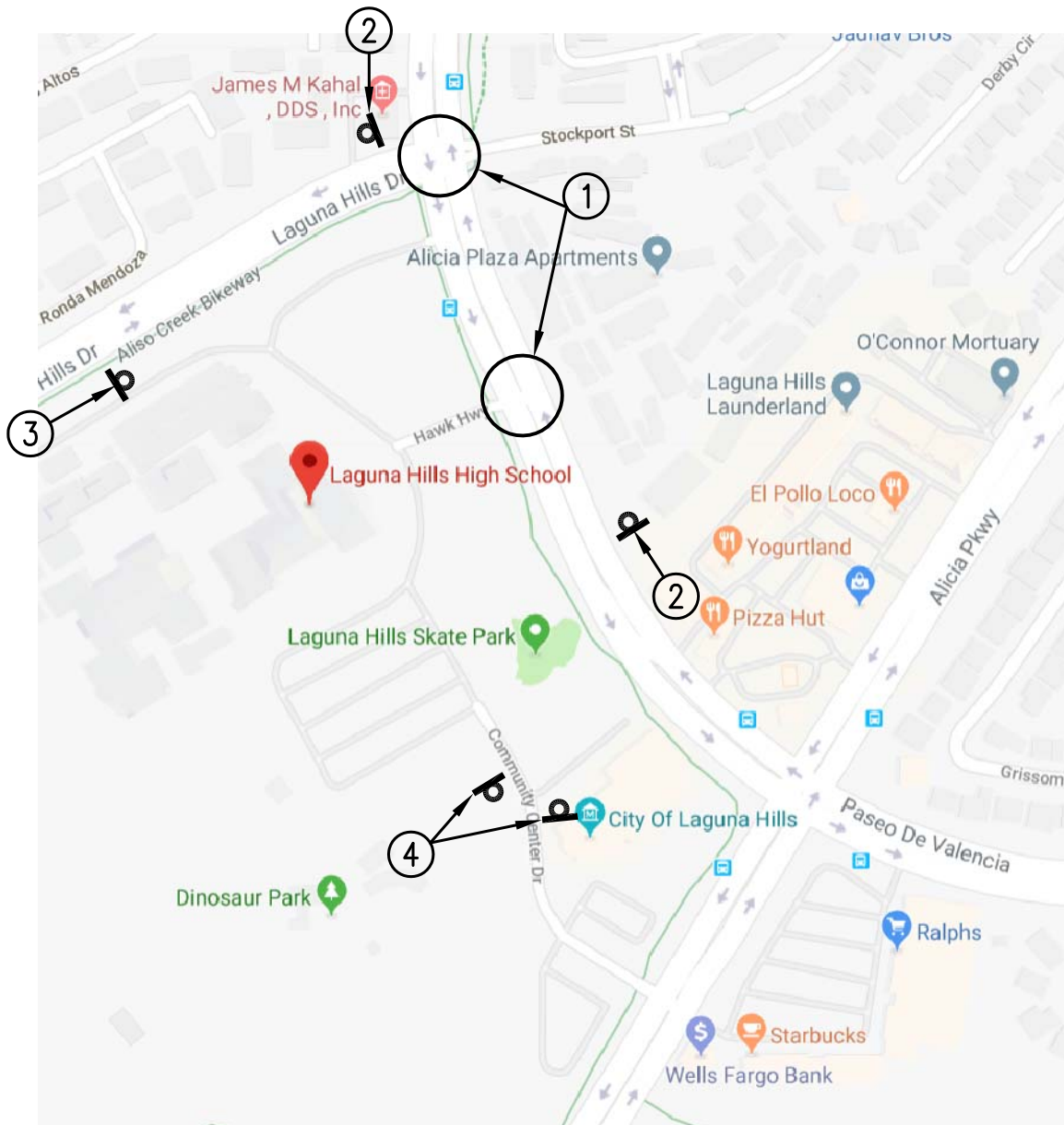
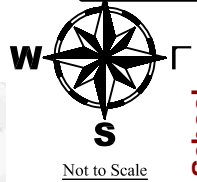
¹¹ The SCHOOL marking may be used with the School Assemblies A(CA) or C(CA), except at locations where SLOW SCHOOL XING markings are required.

Standard:

¹² **If the SCHOOL marking is used with the School Assemblies A(CA) or C(CA) (See Section 7B.11), it shall be yellow.**

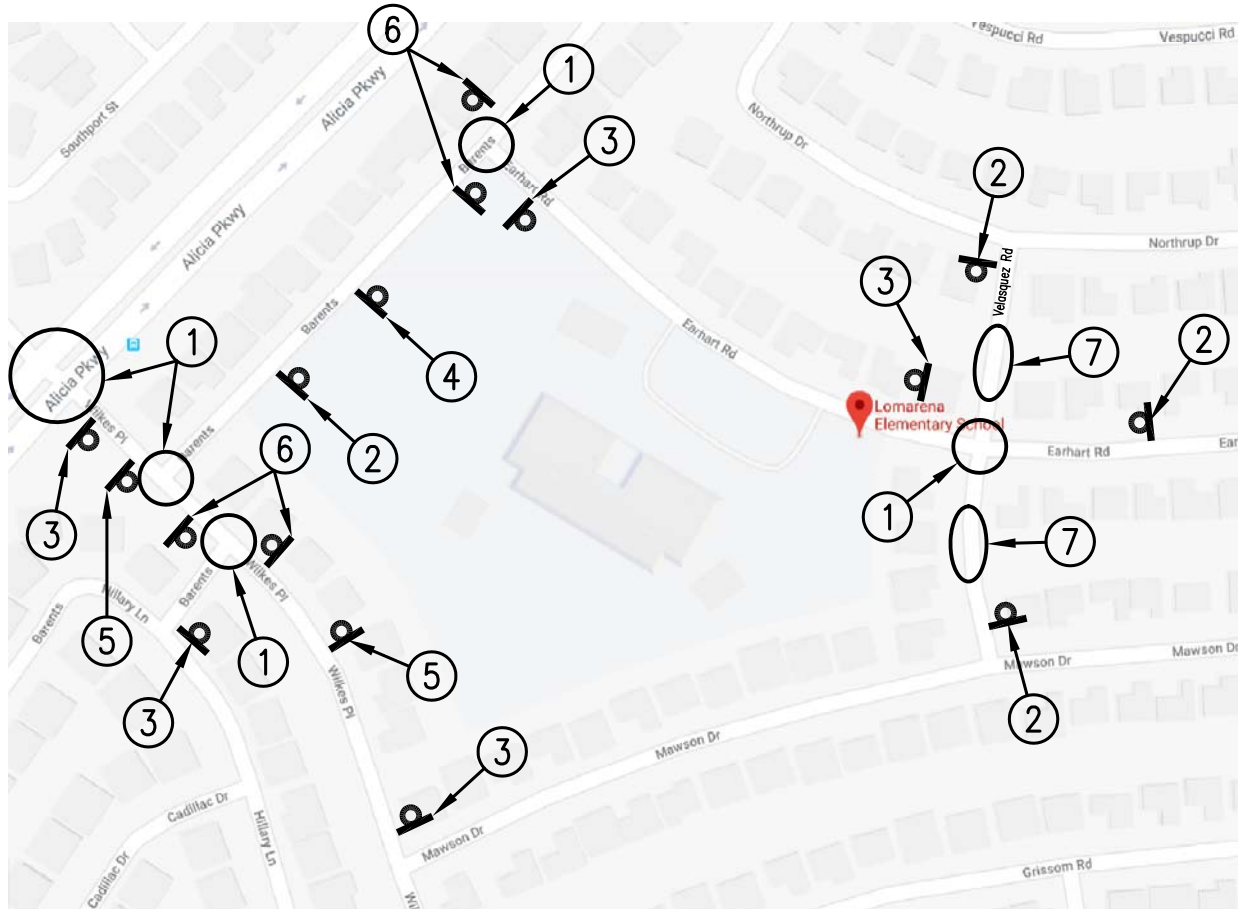
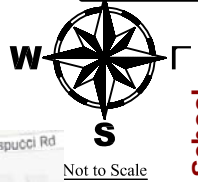
Appendix ‘B’

Maps Showing Each School with Related Recommendations



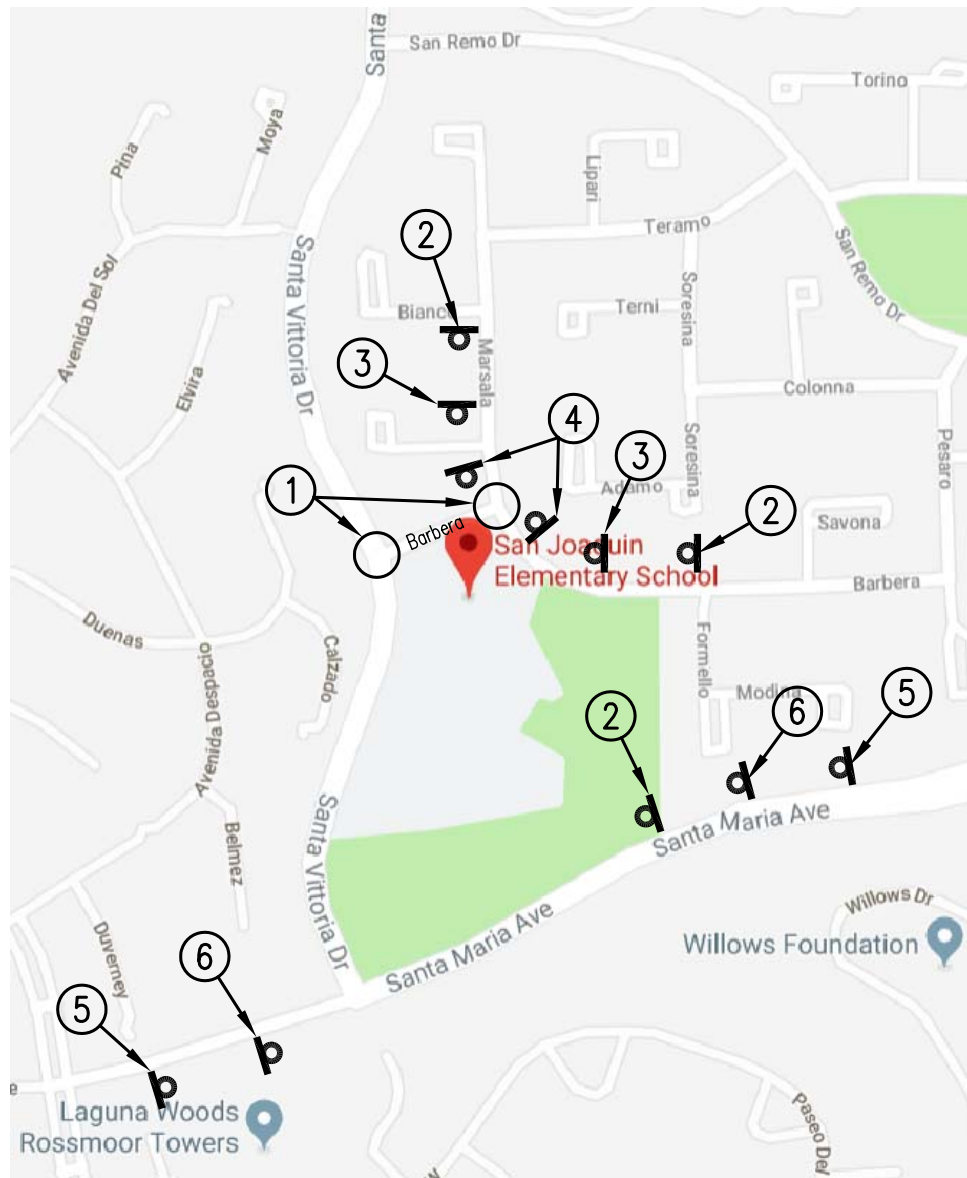
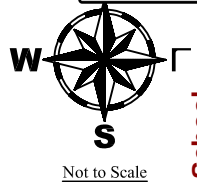
RECOMMENDATIONS:

- ① Upgrade existing yellow marked crosswalk to High-Visibility type.
- ② Replace existing sign with Assembly C (CA) FYG sign.
- ③ Install new Assembly C (CA) FYG sign within 500' of school property.
- ④ Replace existing signs at the crosswalk with back-to-back Assembly B (CA) FYG with down-angle arrow signs.



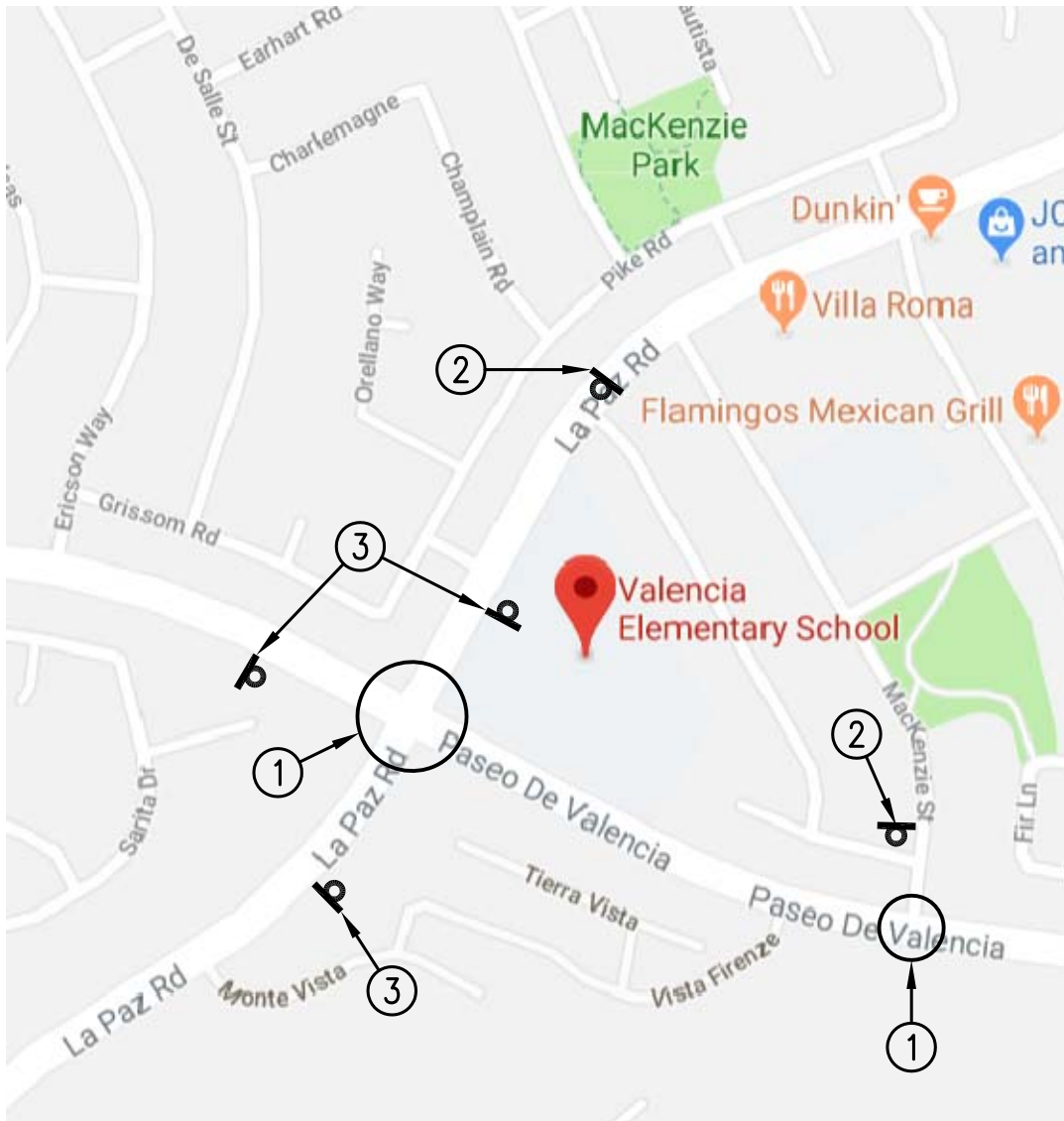
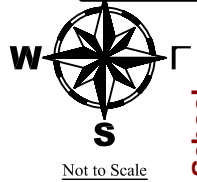
RECOMMENDATIONS:

- ① Upgrade existing yellow marked crosswalk to High-Visibility type.
- ② Replace existing signs with Assembly A (CA) FYG sign.
- ③ Install new Assembly A (CA) FYG sign.
- ④ Install new Assembly D (CA) FYG sign.
- ⑤ Replace existing sign with Assembly D (CA) FYG sign.
- ⑥ Replace existing signs at the crosswalk with back-to-back Assembly B (CA) FYG with down-angle arrow signs.
- ⑦ Wet sandblast existing "SLOW SCHOOL XING" pavement markings.



RECOMMENDATIONS:

- ① Upgrade existing yellow marked crosswalk to High-Visibility type.
- ② Replace existing sign with Assembly A (CA) FYG sign.
- ③ Install new Assembly D (CA) FYG sign.
- ④ Replace existing signs at the crosswalk with back-to-back Assembly B (CA) FYG with down-angle arrow signs.
- ⑤ Replace existing School 200 ft. sign with Assembly D (CA) FYG signs.
- ⑥ Replace existing School speed limit sign with Assembly C (CA) FYG sign.



RECOMMENDATIONS:

- ① Upgrade existing yellow marked crosswalk to High-Visibility type.
- ② Replace existing sign with Assembly A (CA) FYG sign.
- ③ Replace existing sign with Assembly C (CA) FYG sign.

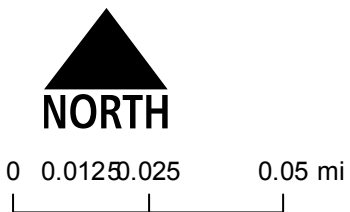


NORTH

0 0.02750.055 0.11 mi

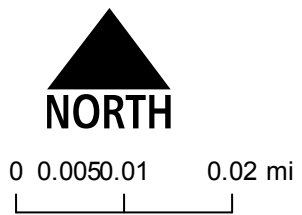
VICINITY MAP - LAGUNA HILLS HIGH SCHOOL





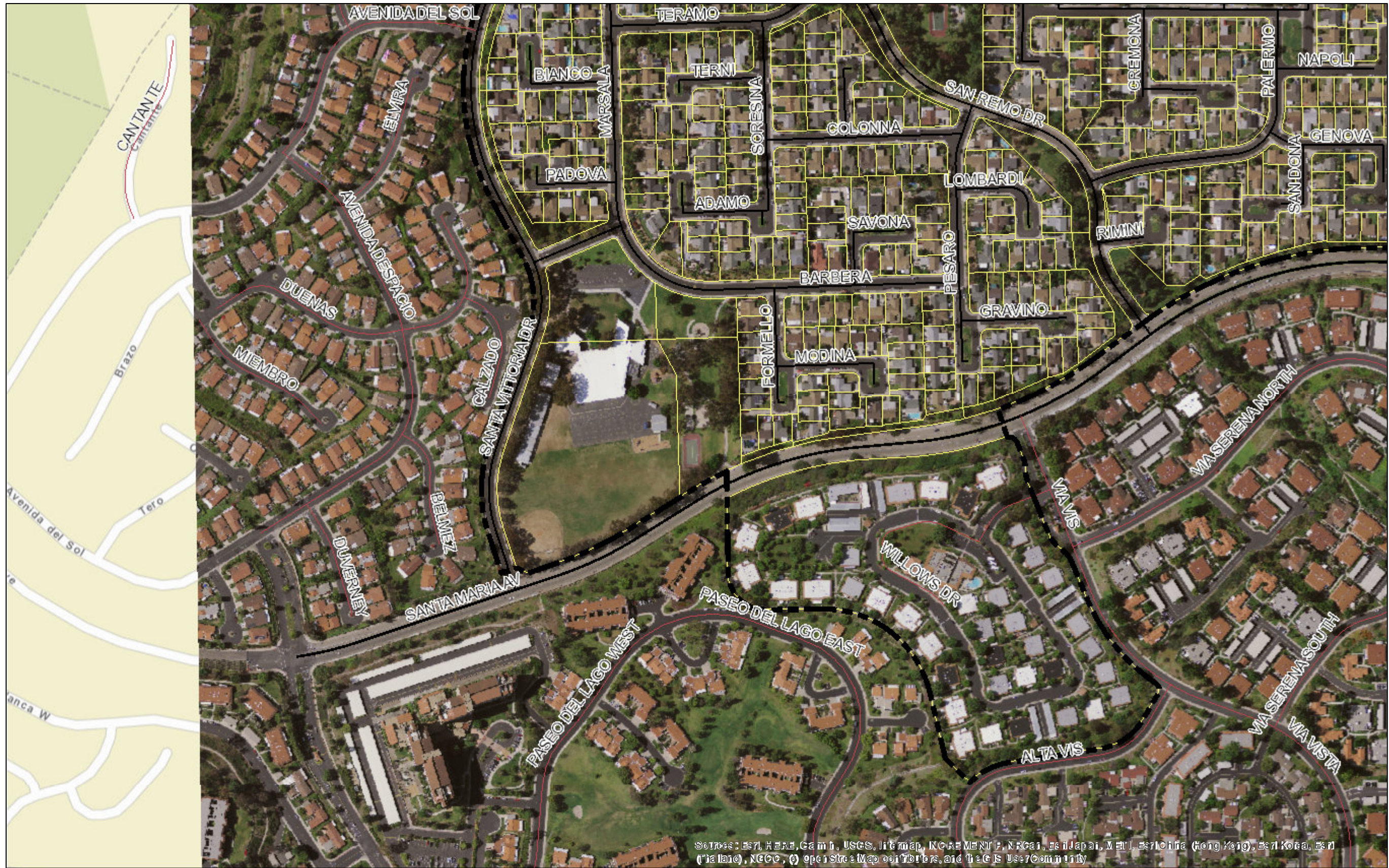
VICINITY MAP - LOMARENA ELEMENTARY SCHOOL



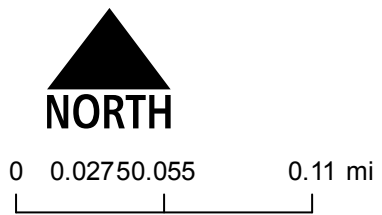


VICINITY MAP - NEW VISTA SCHOOL





VICINITY MAP - SAN JOAQUIN ELEMENTARY SCHOOL





Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, MLL, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NCCO, © OpenStreetMap contributors, and the GIS User Community



0 0.02750.055 0.11 mi

VICINITY MAP - VALENCIA ELEMENTARY SCHOOL





City of Laguna Hills

Traffic Commission

Staff Report

DATE: May 15, 2019
TO: Traffic Commissioners
FROM: Amber M. Shah P.E.
Associate Civil Engineer
ISSUE: Evaluation of Lomarena Elementary School Adult Crossing Guard Locations

RECOMMENDATION: That the Traffic Commission Receive and File the Report.

SUMMARY:

Staff was contacted by a resident with concerns regarding students walking to Lomarena Elementary School and crossing residential streets southerly of the school without adult crossing guards. Please see the attached Vicinity Map. Based upon the resident's concern and in accordance with the Residential Streets Management Policy, staff initiated a review of school walking patterns during the morning and afternoon peak-hour school times to collect data required by the California Manual on Uniform Traffic Control Devices (CA MUTCD) on adult crossing guard criteria and to determine if the standards are met for the deployment of additional adult crossing guards.

The Traffic Engineers of Hartzog & Crabill, Inc., (HCI) completed the attached May 1, 2019, review of the streets southerly of Lomarena Elementary School on 1) Grissom Road, between Wilkes Place and Las Bolsas, 2) Mawson Drive, between Wilkes Place and Las Bolsas, and 3) Velasquez Road between Mawson Drive and Earhart Road.

The school pedestrian counts, collected by National Data & Surveying Services (NDS), as shown in the study, determined there were 12 pedestrians crossing during the morning peak-hour and 24 pedestrians crossing during the afternoon peak hour at the intersection of Velasquez Road at Mawson Drive. However, the pedestrian counts did not satisfy the criteria of 40 school pedestrians for each of the two hours. The traffic

Evaluation of Lomarena Elementary School Adult Crossing Guard Locations

May 15, 2019

Page 2

volumes during these hours also fell below the criteria of 350 vehicles for each of the two hours at an uncontrolled crossing.

The pedestrian counts at the intersection of Velasquez Road at Earhart Road, a four-way stop sign controlled intersection, did exceed the criteria of 40 pedestrians per each of the two hours with 114 pedestrians during the morning peak-hour and 116 pedestrians during the afternoon peak-hour. However, the traffic volumes, at 115 vehicles and 231 vehicles, respectively, did not satisfy the criteria of 500 vehicles for each of the two hours at a stop sign controlled crossing.

There were no school pedestrians crossing observed at or near the intersections of Mawson Drive at Wilkes Place or Mawson Drive at Las Bolsas.

None of the intersections satisfied the criteria for an adult crossing guard. No action is needed in response to this data.

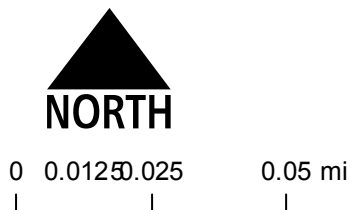
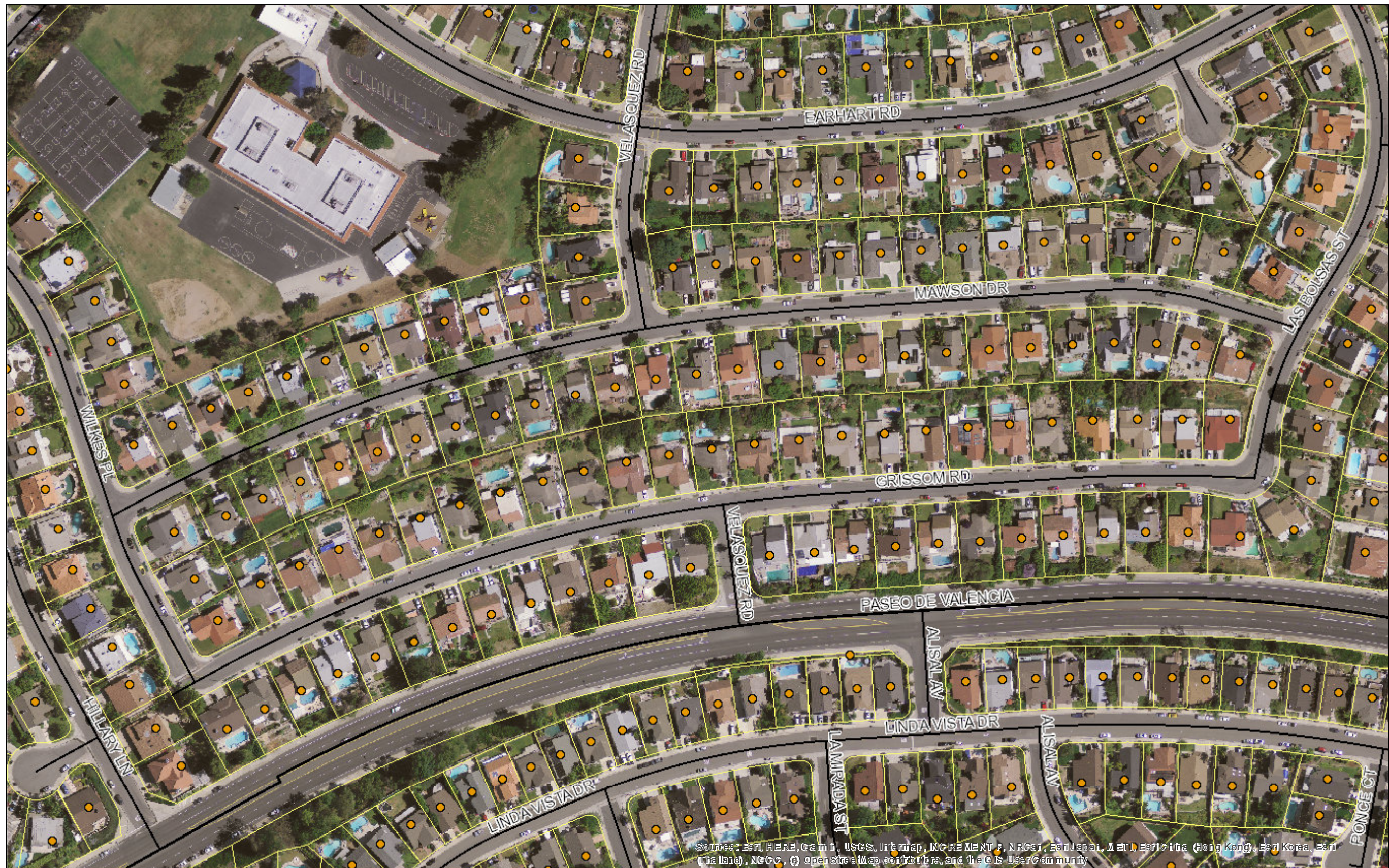
Independently, the Sherriff's Department is working with the Principal of Lomarena Elementary School regarding traffic control concerns in front of the school along Earhart Road.

FISCAL IMPACT:

<Delete If not used>

ATTACHMENTS:

- Vicinity Map - Lomarena Elementary School
- Lomarena School Crossing Guard Evaluation



VICINITY MAP - LOMARENA ELEMENTARY SCHOOL





Trammell Hartzog, President
Gerald J. Stock, PE, TE,
Executive Vice-President

17852 E. 17th Street
Suite 101
Tustin, CA 92780

Phone: (714) 731-9455
FAX: (714) 731-9498

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May 1, 2019

Mr. Kenneth H. Rosenfield, PE
Assistant City Manager/Public Services Director
City of Laguna Hills
24035 El Toro Road
Laguna Hills, CA 92653

**SUBJECT: LOMARENA ELEMENTARY SCHOOL
ADULT CROSSING GUARD EVALUATION**

Dear Mr. Rosenfield,

Per the City's request, Hartzog & Crabill, Inc. (HCI) has completed the subject evaluation. As you know, this separate task for Lomarena Elementary (25100 Earhart Road) was requested to review school walking patterns during the AM/PM peak-hour school times to evaluate adult crossing guard criteria along the southerly school area including:

- 1) Grissom Road, between Wilkes Place and Las Bolsas,
- 2) Mawson Drive, between Wilkes Place and Las Bolsas, and
- 3) Velasquez Road, between Mawson Drive and Earhart Road.

BACKGROUND

Grissom Road, between Wilkes Place and Las Bolsas, is the most southerly street of the three listed above. It is a two-lane local east-west roadway (one lane in each direction). Grissom Road has no striping, with exception to short, double-yellow centerlines at the 90-degree curves at Wilkes Place and Las Bolsas. The street is 25 MPH per CVC 515. It is uncontrolled at its mid-point T-intersection of Velasquez Road (which only provides southerly access to Paseo de Valencia). There are sidewalks on both sides of the roadway that continuously connect northerly to Mawson Drive.

Mawson Drive, between Wilkes Place and Las Bolsas, is a two-lane local east-west roadway (one lane in each direction). The street is 25 MPH per CVC 515. Mawson Drive has no signing or striping, and is also uncontrolled at its mid-point T-intersection of Velasquez Road (which only provides northerly access to Earhart Road). There are sidewalks on both sides of the roadway that continuously connect to Velasquez Road.

Mr. Kenneth H. Rosenfield, PE

May 1, 2019

Page 2 of 4

BACKGROUND (continued)

Velasquez Road, between Mawson Drive and Earhart Road, is a two-lane local north-south roadway (one lane in each direction). The street is 25 MPH per CVC 515. The roadway has a northbound School warning sign posted near Mawson Drive, as well as Slow School Xing advance pavement markings. Velasquez Road has no centerline striping, with exception to a short, double-yellow centerline at its Stop controlled intersection with Earhart Road. There are sidewalks on both sides of the roadway that continuously connect northerly to Earhart Road.

Lomarena Elementary School is located along Earhart Road, just west of Velasquez Road. There are sidewalks on both sides of the roadway that continuously connect westerly to Lomarena Elementary School.

EVALUATION

Per the latest CA MUTCD guidelines in Chapter 7D. Crossing Supervision (*see Appendix 'A'*), the criteria for Adult Crossing Guards includes the following statements:

- ✓ "... at least 40 school pedestrians for each of any two hours (not necessarily consecutive) daily use the crossing while going to or from school"
- ✓ "At uncontrolled crossings... In urban areas where the vehicular traffic volume exceeds 350 during each of any two hours..."
- ✓ "At stop sign controlled crossings... vehicular traffic volumes on undivided highways of four or more lanes exceeds 500 per hour..."

In order to determine the students walking to/from school via the southerly streets listed above, HCI used National Data & Surveying Services (NDS) to collect peak-hour school-age pedestrian crossing data (*see School-Age Pedestrian counts in Appendix 'B'*).

In summary, the data was collected during a typical midweek school day on Tuesday, March 26, 2019, from 7:30-8:30am and from 2:00-3:00pm at the following four locations:

Intersection of Mawson Drive at Wilkes Place

- There were no school-age pedestrians recorded crossing at or near this intersection.

Intersection of Mawson Drive at Las Bolsas

- There were no school-age pedestrians recorded crossing at or near this intersection.

Mr. Kenneth H. Rosenfield, PE

May 1, 2019

Page 3 of 4

EVALUATION *(continued)*

Intersection of Velasquez Road at Mawson Drive

Peak-Hour	School-Age Pedestrians Crossing	Vehicular Traffic Volumes
7 - 8am	12	45
2 - 3pm	24	126
TOTAL:	36	171

The above count data was recorded at the intersection. It should also be mentioned, there were a total of five (5) school-age pedestrians observed crossing near this intersection (3 in the AM, and 2 in the PM). As can be seen above, during the highest morning and afternoon school peak hours, there were not at least 40 school pedestrians for each of the two hours, even adding the five that did not cross at the intersection (nor did the traffic volumes). Therefore, the criteria for an adult crossing guard are not satisfied.

Intersection of Velasquez Road at Earhart Road

Peak-Hour	School-Age Pedestrians Crossing	Vehicular Traffic Volumes
7 - 8am	114	115
2 - 3pm	116	231
TOTAL:	230	346

As can be seen above, during the highest morning and afternoon school peak hours, there were at least 40 school pedestrians for each of the two hours at this stop-controlled intersection. However, the vehicular traffic volumes did not satisfy the 500 per hour, as well as the roadway is not 4 or more lanes. Therefore, the criteria for an adult crossing guard are not satisfied.

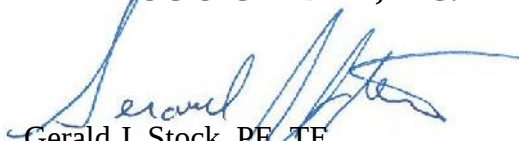
CONCLUSION / RECOMMENDATION

In regards to the above task requested for Lomarena Elementary, our evaluation showed that none of the study intersections satisfied the criteria for an adult crossing guard. Therefore, there are no further recommendations at this time.

Mr. Kenneth H. Rosenfield, PE
May 1, 2019
Page 4 of 4

We appreciate the opportunity to prepare this evaluation report letter for the City's review and consideration. Should you have any questions or desire additional information, please do not hesitate to contact us at (714) 731-9455.

Sincerely,
HARTZOG & CRABILL, INC.



Gerald J. Stock, PE, TE
Executive Vice President
City and Traffic Engineering Services

Appendix ‘A’

Applicable CA MUTCD Guidelines

CHAPTER 7D. CROSSING SUPERVISION

Section 7D.01 Types of Crossing Supervision

Support:

- 01 There are three types of school crossing supervision:
 - A. Adult control of pedestrians and vehicles by adult crossing guards,
 - B. Adult control of pedestrians and vehicles by uniformed law enforcement officers, and
 - C. Student and/or parent control of only pedestrians with student and/or parent patrols.
- 02 Information regarding the organization, administration, and operation of a school safety patrol program is contained in the "AAA School Safety Patrol Operations Manual" (see Section 1A.11).

Section 7D.02 Adult Crossing Guards

Option:

01 Adult crossing guards may be used to provide gaps in traffic at school crossings where an engineering study has shown that adequate gaps need to be created (see Section 7A.03), and where authorized by law.

02 Adult Crossing Guards may be assigned at designated school crossings to assist school pedestrians at specified hours when going to or from school. The following suggested policy for their assignment applies only to crossings.

Guidance:

03 An Adult Crossing Guard should be considered when:

- A. Special situations make it necessary to assist elementary school pedestrians in crossing the street.
- B. A change in the school crossing location is being made, but prevailing conditions require school crossing supervision until the change is constructed and it is not reasonable to install another form of traffic control or technique for this period.

Criteria for Adult Crossing Guards

Support:

04 Adult Crossing Guards normally are assigned where official supervision of school pedestrians is desirable while they cross a public highway, and at least 40 school pedestrians for each of any two hours (not necessarily consecutive) daily use the crossing while going to or from school.

Option:

05 Adult crossing guards may be used under the following conditions:

- 1. At uncontrolled crossings where there is no alternate controlled crossing within 600 feet; and
 - a. In urban areas where the vehicular traffic volume exceeds 350 during each of any two hours (not necessarily consecutive) in which 40 or more school pedestrians cross daily while going to or from school; or
 - b. In rural areas where the vehicular traffic volume exceeds 300 during each of any two hours (not necessarily consecutive) in which 30 or more school pedestrians cross daily while going to or from school.
 Whenever the critical (85th percentile) approach speed exceeds 40 mph, the guidelines for rural areas should be applied.
- 2. At stop sign-controlled crossing:
 - Where the vehicular traffic volumes on undivided highways of four or more lanes exceeds 500 per hour during any period when the school pedestrians are going to or from school.
- 3. At traffic signal-controlled crossings:
 - a. Where the number of vehicular turning movements through the school crosswalk exceeds 300 per hour while school pedestrians are going to or from school; or
 - b. Where justified through analysis of the operations of the intersection.

Legal Authority and Program Funding for Adult Crossing Guards

Option:

06 Cities and counties may designate local law enforcement agencies, the governing board of any school district or a county superintendent of schools to recruit and assign adult crossing guards to intersections that meet approved guidelines for adult supervision.

Appendix ‘B’

School-Age Pedestrian Count Data

Prepared by National Data & Surveying Services

School Age-Pedestrian Study

Location: Wilkes Pl & Mawson Dr
City: Laguna Hills

Date: 3/26/2019
Day: Tuesday

TIME	Crosswalk									Jaywalker								
	North Leg		South Leg		East Leg		West Leg		TOTAL	North Leg		South Leg		East Leg		West Leg		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB		EB	WB	EB	WB	NB	SB	NB	SB	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Prepared by NDS/ATD

VOLUME

Mawson Dr & Wilkes Pl

Day: Tuesday
Date: 3/19/2019City: Laguna Hills
Project #: CA19_1051_001

DAILY TOTALS					NB	SB					EB	WB	Total
					180	377					0	383	940
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL		
00:00	0	0	0	0	0	12:00	4	1	0	0	5		
00:15	0	0	0	0	0	12:15	1	3	0	2	6		
00:30	0	0	0	0	0	12:30	2	1	0	7	10		
00:45	0	1	1	0	1	12:45	2	9	5	10	7	28	
01:00	1	0	0	0	1	13:00	5	8	0	7	20		
01:15	0	0	0	0	0	13:15	3	5	0	7	15		
01:30	0	0	0	0	0	13:30	6	6	0	6	18		
01:45	0	1	0	0	0	13:45	6	20	7	26	17	70	
02:00	0	0	0	0	0	14:00	4	16	0	1	21		
02:15	0	0	0	0	0	14:15	5	21	0	6	32		
02:30	0	0	0	0	0	14:30	7	15	0	53	75		
02:45	0	0	0	0	0	14:45	1	17	2	54	26	154	
03:00	0	0	0	0	0	15:00	0	6	0	5	11		
03:15	0	0	0	0	0	15:15	3	4	0	6	13		
03:30	0	0	0	0	0	15:30	0	9	0	2	11		
03:45	0	0	0	0	0	15:45	3	6	4	23	11	46	
04:00	0	0	0	1	1	16:00	2	11	0	2	15		
04:15	0	0	0	0	0	16:15	7	5	0	2	14		
04:30	0	0	0	0	0	16:30	2	5	0	3	10		
04:45	0	1	1	0	2	16:45	6	17	9	30	19	58	
05:00	1	0	0	2	3	17:00	3	13	0	3	19		
05:15	1	0	0	1	2	17:15	2	12	0	8	22		
05:30	0	0	0	2	2	17:30	2	13	0	6	21		
05:45	0	2	0	0	1	17:45	1	8	7	45	12	74	
06:00	0	0	0	0	0	18:00	2	7	0	7	16		
06:15	0	0	0	2	2	18:15	3	5	0	3	11		
06:30	3	3	0	1	7	18:30	3	1	0	4	8		
06:45	1	4	0	1	2	18:45	1	9	4	17	6	41	
07:00	2	0	0	7	9	19:00	1	9	0	1	11		
07:15	3	1	0	1	5	19:15	1	11	0	1	13		
07:30	1	3	0	7	11	19:30	2	5	0	4	11		
07:45	6	12	16	20	30	19:45	0	4	6	31	8	43	
08:00	12	20	0	59	91	20:00	2	4	0	4	10		
08:15	2	5	0	43	50	20:15	2	8	0	0	10		
08:30	5	2	0	5	12	20:30	6	2	0	1	9		
08:45	1	20	2	3	6	20:45	1	11	2	16	4	33	
09:00	2	0	0	2	4	21:00	2	0	0	0	2		
09:15	3	9	0	1	13	21:15	0	6	0	0	6		
09:30	7	6	0	6	19	21:30	1	4	0	2	7		
09:45	3	15	3	3	9	21:45	1	4	2	12	4	19	
10:00	2	1	0	1	4	22:00	0	4	0	0	4		
10:15	1	4	0	0	5	22:15	0	2	0	1	3		
10:30	2	2	0	4	8	22:30	0	4	0	1	5		
10:45	3	8	6	3	12	22:45	2	2	2	12	5	17	
11:00	2	2	0	2	6	23:00	0	2	0	0	2		
11:15	4	0	0	12	16	23:15	0	2	0	1	3		
11:30	1	4	0	2	7	23:30	0	0	0	0	0		
11:45	4	11	6	1	11	23:45	0	0	4	0	0	5	
TOTALS	73	97		182	352	TOTALS	107	280		201	588		
SPLIT %	20.7%	27.6%		51.7%	37.4%	SPLIT %	18.2%	47.6%		34.2%	62.6		

DAILY TOTALS					NB	SB					EB	WB	Total
					180	377					0	383	940
AM Peak Hour	07:45	07:30		07:30	07:45	PM Peak Hour	13:45	13:45		14:15	14:0		
AM Pk Volume	25	44		117	183	PM Pk Volume	22	59		87	154		
Pk Hr Factor	0.521	0.550		0.496	0.503	Pk Hr Factor	0.786	0.702		0.410	0.51		
7 - 9 Volume	32	49	0	133	214	4 - 6 Volume	25	75	0	32	132		
7 - 9 Peak Hour	07:45	07:30		07:30	07:45	4 - 6 Peak Hour	16:15	16:45		16:45	16:4		
7 - 9 Pk Volume	25	44	0	117	183	4 - 6 Pk Volume	18	47	0	21	81		
Pk Hr Factor	0.521	0.550	0.000	0.496	0.503	Pk Hr Factor	0.643	0.904	0.000	0.656	0.92		

Attachment: Lomarena School Crossing Guard Evaluation (1864 : Evaluation of Lomarena Elementary School Adult Crossing Guard Locations)

Prepared by National Data & Surveying Services

School Age-Pedestrian Study

Location: Las Bolsas & Mawson Dr
City: Laguna Hills

Date: 3/26/2019
Day: Tuesday

TIME	Crosswalk									Jaywalker								
	North Leg		South Leg		East Leg		West Leg		TOTAL	North Leg		South Leg		East Leg		West Leg		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB		EB	WB	EB	WB	NB	SB	NB	SB	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Prepared by NDS/ATD

VOLUME

Las Bolsas & Mawson Dr

Day: Tuesday
Date: 3/19/2019City: Laguna Hills
Project #: CA19_1051_007

DAILY TOTALS					NB	SB					Total
					223	205					546
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	0	0	0	0	12:00	5	2	0	0	7
00:15	0	0	0	0	0	12:15	4	4	0	0	8
00:30	0	0	0	0	0	12:30	4	1	0	0	5
00:45	0	0	0	0	0	12:45	2	15	3	10	30
01:00	0	0	0	0	0	13:00	8	2	1	0	11
01:15	0	0	0	0	0	13:15	1	2	1	0	4
01:30	0	0	0	0	0	13:30	2	3	0	0	5
01:45	0	0	0	0	0	13:45	6	17	3	10	36
02:00	0	0	0	0	0	14:00	5	5	0	0	10
02:15	0	0	0	0	0	14:15	8	4	0	0	12
02:30	0	0	0	0	0	14:30	7	13	2	0	22
02:45	1	1	0	0	2	14:45	3	23	4	26	56
03:00	0	0	0	0	0	15:00	7	8	2	0	17
03:15	0	0	0	0	0	15:15	2	4	4	0	10
03:30	0	0	0	0	0	15:30	1	3	2	0	6
03:45	0	1	1	0	2	15:45	4	14	6	21	45
04:00	0	0	0	0	0	16:00	6	5	2	0	13
04:15	2	1	0	0	3	16:15	3	4	0	0	7
04:30	0	0	0	0	0	16:30	6	5	2	0	13
04:45	0	2	0	1	3	16:45	4	19	4	18	45
05:00	0	1	0	0	1	17:00	5	6	4	0	15
05:15	1	0	0	0	1	17:15	4	6	2	0	12
05:30	0	1	0	0	1	17:30	3	6	3	0	12
05:45	0	1	2	4	7	17:45	8	20	2	20	50
06:00	1	0	0	0	1	18:00	4	4	5	0	13
06:15	1	0	0	0	1	18:15	3	1	0	0	4
06:30	2	4	1	0	7	18:30	3	8	0	0	11
06:45	1	5	3	7	16	18:45	2	12	3	16	33
07:00	6	3	3	0	12	19:00	7	3	1	0	11
07:15	1	1	4	0	6	19:15	3	2	3	0	8
07:30	2	6	2	0	10	19:30	1	1	1	0	3
07:45	4	13	6	16	39	19:45	5	16	1	7	29
08:00	7	5	13	0	25	20:00	2	1	1	0	4
08:15	4	10	9	0	23	20:15	3	0	2	0	5
08:30	5	3	2	0	10	20:30	2	3	0	0	5
08:45	2	18	0	27	27	20:45	3	10	1	5	19
09:00	1	1	0	0	2	21:00	3	1	2	0	6
09:15	3	1	2	0	6	21:15	1	2	0	0	3
09:30	2	0	2	0	4	21:30	3	0	0	0	3
09:45	3	9	0	2	12	21:45	0	7	0	3	10
10:00	0	2	1	0	3	22:00	1	0	0	0	1
10:15	3	2	2	0	7	22:15	1	0	0	0	1
10:30	3	4	1	0	8	22:30	0	2	1	0	3
10:45	3	9	1	9	22	22:45	0	2	0	2	4
11:00	1	1	1	0	3	23:00	2	1	0	0	3
11:15	3	3	0	0	6	23:15	2	1	0	0	3
11:30	1	2	1	0	4	23:30	0	0	0	0	0
11:45	1	6	1	7	15	23:45	0	4	0	2	6
TOTALS	64	65	59		188	TOTALS	159	140	59		358
SPLIT %	34.0%	34.6%	31.4%		34.4%	SPLIT %	44.4%	39.1%	16.5%		65.6%

DAILY TOTALS					NB	SB					Total
					223	205					546
AM Peak Hour	07:45	07:30	07:30	07:30	PM Peak Hour	13:45	14:15	16:45	14:1		
AM Pk Volume	20	27	29	73	PM Pk Volume	26	29	11	60		
Pk Hr Factor	0.714	0.675	0.558	0.730	Pk Hr Factor	0.813	0.558	0.688	0.68		
7 - 9 Volume	31	34	41	106	4 - 6 Volume	39	38	15	92		
7 - 9 Peak Hour	07:45	07:30	07:30	07:30	4 - 6 Peak Hour	17:00	16:45	16:45	16:3		
7 - 9 Pk Volume	20	27	29	73	4 - 6 Pk Volume	20	22	11	50		
Pk Hr Factor	0.714	0.675	0.558	0.730	Pk Hr Factor	0.625	0.917	0.688	0.83		

Attachment: Lomarena School Crossing Guard Evaluation (1864 : Evaluation of Lomarena Elementary School Adult Crossing Guard Locations)

Prepared by National Data & Surveying Services

School Age-Pedestrian Study

Location: Velasquez Rd & Mawson Dr
City: Laguna Hills

Date: 3/26/2019
Day: Tuesday

TIME	Crosswalk									Jaywalker								
	North Leg		South Leg		East Leg		West Leg		TOTAL	North Leg		South Leg		East Leg		West Leg		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB		EB	WB	EB	WB	NB	SB	NB	SB	
7:30 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	1	0	3	0	4	2	0	0	0	0	0	0	0	2
8:00 AM	1	0	0	0	3	0	3	0	7	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Totals	1	0	0	0	4	0	7	0	12	2	0	0	1	0	0	0	0	3
2:00 PM	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
2:15 PM	2	0	0	0	0	1	0	2	5	0	1	0	0	0	0	0	0	1
2:30 PM	5	0	2	0	2	3	3	3	18	0	0	0	0	1	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	8	0	2	0	2	4	3	5	24	0	1	0	0	1	0	0	0	2
Grand Total	9	0	2	0	6	4	10	5	36	2	1	0	1	1	0	0	0	5

Prepared by NDS/ATD

VOLUME

Velasquez Rd & Mawson Dr

Day: Tuesday
Date: 3/19/2019City: Laguna Hills
Project #: CA19_1051_004

DAILY TOTALS					NB	SB	EB					WB	Total	
					0	246	225					77	548	
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL		
00:00	0	0	0	0	0		12:00	0	0	1	0	1		
00:15	0	0	0	0	0		12:15	0	0	0	1	1		
00:30	0	0	0	0	0		12:30	0	1	1	1	3		
00:45	0	0	0	0	0		12:45	0	0	1	3	2	4	
01:00	0	0	0	0	0		13:00	0	5	3	4	12		
01:15	0	0	0	0	0		13:15	0	1	3	2	6		
01:30	0	0	0	0	0		13:30	0	3	5	0	8		
01:45	0	0	0	0	0		13:45	0	3	12	15	1	7	
02:00	0	0	0	0	0		14:00	0	2	16	1	19		
02:15	0	0	0	0	0		14:15	0	5	20	3	28		
02:30	0	0	0	0	0		14:30	0	44	13	4	61		
02:45	0	0	1	1	2	2	14:45	0	18	69	0	49	0	8
03:00	0	0	0	0	0		15:00	0	1	2	0	3		
03:15	0	0	0	0	0		15:15	0	3	2	1	6		
03:30	0	0	0	0	0		15:30	0	1	4	2	7		
03:45	0	0	0	0	0		15:45	0	1	6	2	10	1	4
04:00	0	0	0	0	0		16:00	0	1	5	1	7		
04:15	0	0	0	0	0		16:15	0	0	5	1	6		
04:30	0	0	0	0	0		16:30	0	1	2	0	3		
04:45	0	0	0	0	0		16:45	0	1	3	1	13	0	2
05:00	0	0	0	0	0		17:00	0	2	5	1	8		
05:15	0	0	0	0	0		17:15	0	0	3	2	5		
05:30	0	0	0	0	0		17:30	0	2	6	1	9		
05:45	0	0	0	1	1	1	17:45	0	1	5	4	18	0	4
06:00	0	0	0	0	0		18:00	0	3	2	4	9		
06:15	0	0	1	1	2		18:15	0	1	3	1	5		
06:30	0	0	0	0	0		18:30	0	1	0	0	1		
06:45	0	0	0	1	0	1	18:45	0	1	6	2	7	0	5
07:00	0	1	1	3	5		19:00	0	0	4	3	7		
07:15	0	2	1	2	5		19:15	0	1	6	0	7		
07:30	0	2	1	1	4		19:30	0	0	3	3	6		
07:45	0	9	14	18	31	45	19:45	0	0	1	2	15	1	7
08:00	0	63	26	5	94		20:00	0	0	1	2	3		
08:15	0	40	5	2	47		20:15	0	0	1	1	2		
08:30	0	2	3	1	6		20:30	0	0	1	0	1		
08:45	0	0	105	35	1	148	20:45	0	0	2	5	0	3	
09:00	0	1	1	0	2		21:00	0	0	1	0	1		
09:15	0	0	5	1	6		21:15	0	0	1	0	1		
09:30	0	3	4	1	8		21:30	0	0	2	0	2		
09:45	0	1	5	2	4	20	21:45	0	0	1	5	0		
10:00	0	0	1	1	2		22:00	0	0	1	0	1		
10:15	0	1	1	0	2		22:15	0	0	1	0	1		
10:30	0	1	0	2	3		22:30	0	0	2	0	2		
10:45	0	2	4	3	7	14	22:45	0	0	2	6	0		
11:00	0	0	1	2	3		23:00	0	0	0	0	0		
11:15	0	10	0	1	11		23:15	0	1	0	0	1		
11:30	0	3	0	0	3		23:30	0	1	0	0	1		
11:45	0	0	13	3	3	20	23:45	0	0	2	0	0		
TOTALS	141		79		33		TOTALS	105		146		44		295
SPLIT %	55.7%		31.2%		13.0%		SPLIT %	35.6%		49.5%		14.9%		53.8

DAILY TOTALS					NB	SB						EB	WB						Total
					0	246						225	77						548
AM Peak Hour	07:30		07:45		07:15		07:45	PM Peak Hour	14:00		13:45		12:30		14:00				
AM Pk Volume	114		52		12		178	PM Pk Volume	69		53		9		126				
Pk Hr Factor	0.452		0.500		0.600		0.473	Pk Hr Factor	0.392		0.663		0.563		0.51				
7 - 9 Volume	0		119		56		193	4 - 6 Volume	0		8		31		45				
7 - 9 Peak Hour	07:30		07:45		07:15		07:45	4 - 6 Peak Hour	16:45		17:00		16:45		17:00				
7 - 9 Pk Volume	0		114		52		178	4 - 6 Pk Volume	0		5		18		27				
Pk Hr Factor	0.000		0.452		0.500		0.473	Pk Hr Factor	0.000		0.625		0.750		0.500				

Attachment: Lomarena School Crossing Guard Evaluation (1864 : Evaluation of Lomarena Elementary School Adult Crossing Guard Locations)

Prepared by National Data & Surveying Services

School Age-Pedestrian Study

Location: Velasquez Rd & Earhart Rd
City: Laguna Hills

Date: 3/26/2019
Day: Tuesday

TIME	Crosswalk									Jaywalker								
	North Leg		South Leg		East Leg		West Leg		TOTAL	North Leg		South Leg		East Leg		West Leg		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB		EB	WB	EB	WB	NB	SB	NB	SB	
7:30 AM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
7:45 AM	4	2	0	22	0	7	0	16	51	1	3	0	0	0	0	0	0	4
8:00 AM	0	8	0	19	0	5	2	28	62	1	3	0	0	2	0	0	0	6
8:15 AM	0	0	0	0	0	0	0	0	0	0	3	1	1	0	0	0	0	5
Totals	4	10	0	41	0	12	2	45	114	2	9	1	1	2	0	0	0	15
2:00 PM	0	0	1	0	0	0	0	0	1	1	0	0	0	1	0	0	0	2
2:15 PM	1	0	6	0	1	0	3	0	11	2	0	0	0	0	0	0	0	2
2:30 PM	4	0	51	0	17	1	29	0	102	0	3	0	1	0	0	0	0	4
2:45 PM	0	0	1	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0
Totals	5	0	59	0	18	1	33	0	116	3	3	0	1	1	0	0	0	8
Grand Total	9	10	59	41	18	13	35	45	230	5	12	1	2	3	0	0	0	23

Prepared by NDS/ATD

VOLUME

Velasquez Rd & Earhart Rd

Day: Tuesday
Date: 3/19/2019City: Laguna Hills
Project #: CA19_1051_010

DAILY TOTALS					NB	SB	EB					WB	Total			
					191	174						448	243	1,056		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL					
00:00	0	0	0	0	0	12:00	0	3	4	0	7					
00:15	0	0	0	0	0	12:15	0	3	2	2	7					
00:30	0	0	0	0	0	12:30	2	5	3	1	11					
00:45	0	0	0	0	0	12:45	0	2	2	13	17	42				
01:00	1	0	0	0	1	13:00	3	5	16	1	25					
01:15	0	0	0	0	0	13:15	2	1	2	6	11					
01:30	0	0	0	0	0	13:30	5	3	2	3	13					
01:45	0	1	0	0	0	13:45	5	15	3	12	5	15	18	67		
02:00	0	0	0	0	0	14:00	13	5	6	8	32					
02:15	0	0	0	0	0	14:15	19	7	12	10	48					
02:30	0	0	0	0	0	14:30	25	16	55	18	114					
02:45	1	1	0	0	1	14:45	4	61	1	29	26	99	6	42	37	231
03:00	0	0	0	1	1	15:00	2	1	6	1	10					
03:15	0	0	0	0	0	15:15	2	1	5	4	12					
03:30	1	0	0	0	0	15:30	3	2	13	5	23					
03:45	0	1	0	0	0	15:45	0	7	3	7	4	28	3	13	10	55
04:00	0	0	0	0	0	16:00	1	4	6	3	14					
04:15	0	0	0	0	0	16:15	3	1	6	4	14					
04:30	0	0	0	0	0	16:30	2	3	11	2	18					
04:45	0	0	0	0	0	16:45	0	6	6	14	13	36	1	10	20	66
05:00	0	0	0	0	0	17:00	1	0	7	2	10					
05:15	0	0	0	0	0	17:15	0	4	3	3	10					
05:30	0	0	2	0	2	17:30	2	1	6	5	14					
05:45	0	0	0	2	1	17:45	1	4	5	10	10	26	5	15	21	55
06:00	0	0	0	2	2	18:00	0	5	5	0	10					
06:15	1	0	0	2	3	18:15	2	2	3	2	9					
06:30	1	0	1	3	5	18:30	0	3	1	0	4					
06:45	1	3	1	1	7	18:45	1	3	0	10	1	10	1	3	3	26
07:00	1	1	0	6	8	19:00	2	4	3	1	10					
07:15	3	2	5	3	13	19:15	0	1	3	1	5					
07:30	0	7	9	9	25	19:30	0	0	3	2	5					
07:45	12	16	12	22	69	19:45	0	2	0	5	0	9	0	4	0	20
08:00	30	2	34	19	85	20:00	0	0	2	0	2					
08:15	13	5	29	4	51	20:15	0	0	1	2	3					
08:30	4	1	3	3	11	20:30	0	0	2	2	4					
08:45	0	47	2	10	5	20:45	0	2	2	7	0	4	4	13		
09:00	1	1	2	0	4	21:00	0	1	2	0	3					
09:15	4	2	5	1	12	21:15	0	0	0	1	1					
09:30	5	6	12	7	30	21:30	0	1	1	4	6					
09:45	1	11	2	11	13	21:45	0	3	5	2	5	2	7	7	17	
10:00	0	1	5	2	8	22:00	0	0	0	2	2					
10:15	1	3	3	1	8	22:15	1	2	1	2	6					
10:30	0	2	5	1	8	22:30	0	0	0	1	1					
10:45	4	5	1	7	8	22:45	0	1	0	2	3	4	1	6	4	13
11:00	1	4	6	6	17	23:00	0	1	0	1	2					
11:15	3	2	13	3	21	23:15	0	0	0	1	1					
11:30	0	5	8	5	18	23:30	0	0	0	0	0					
11:45	1	5	2	13	9	23:45	0	0	1	0	0	2	0	3		
TOTALS	90	64	182	112	448	TOTALS	101	110	266	131	608					
SPLIT %	20.1%	14.3%	40.6%	25.0%	42.4%	SPLIT %	16.6%	18.1%	43.8%	21.5%	57.6					

DAILY TOTALS					NB	SB						EB	WB	Total
					191	174						448	243	1,056
AM Peak Hour	07:45	07:30	07:30	07:30	07:30	PM Peak Hour	13:45	13:45	14:00	14:00	14:00	14:00	14:00	14:00
AM Pk Volume	59	26	98	51	230	PM Pk Volume	62	31	99	42	231	62	31	231
Pk Hr Factor	0.492	0.542	0.721	0.671	0.676	Pk Hr Factor	0.620	0.484	0.450	0.583	0.50	0.620	0.484	0.50
7 - 9 Volume	63	32	108	64	267	4 - 6 Volume	10	24	62	25	121	10	24	121
7 - 9 Peak Hour	07:45	07:30	07:30	07:30	07:30	4 - 6 Peak Hour	16:00	16:00	16:15	17:00	16:0	16:00	16:00	16:0
7 - 9 Pk Volume	59	26	98	51	230	4 - 6 Pk Volume	6	14	37	15	66	6	14	66
Pk Hr Factor	0.492	0.542	0.721	0.671	0.676	Pk Hr Factor	0.500	0.583	0.712	0.750	0.82	0.500	0.583	0.82

Attachment: Lomarena School Crossing Guard Evaluation (1864 : Evaluation of Lomarena Elementary School Adult Crossing Guard Locations)



City of Laguna Hills

Traffic Commission

Staff Report

DATE: May 15, 2019
TO: Traffic Commissioners
FROM: Amber M. Shah P.E.
Associate Civil Engineer
ISSUE: 2019 Traffic Flow Map

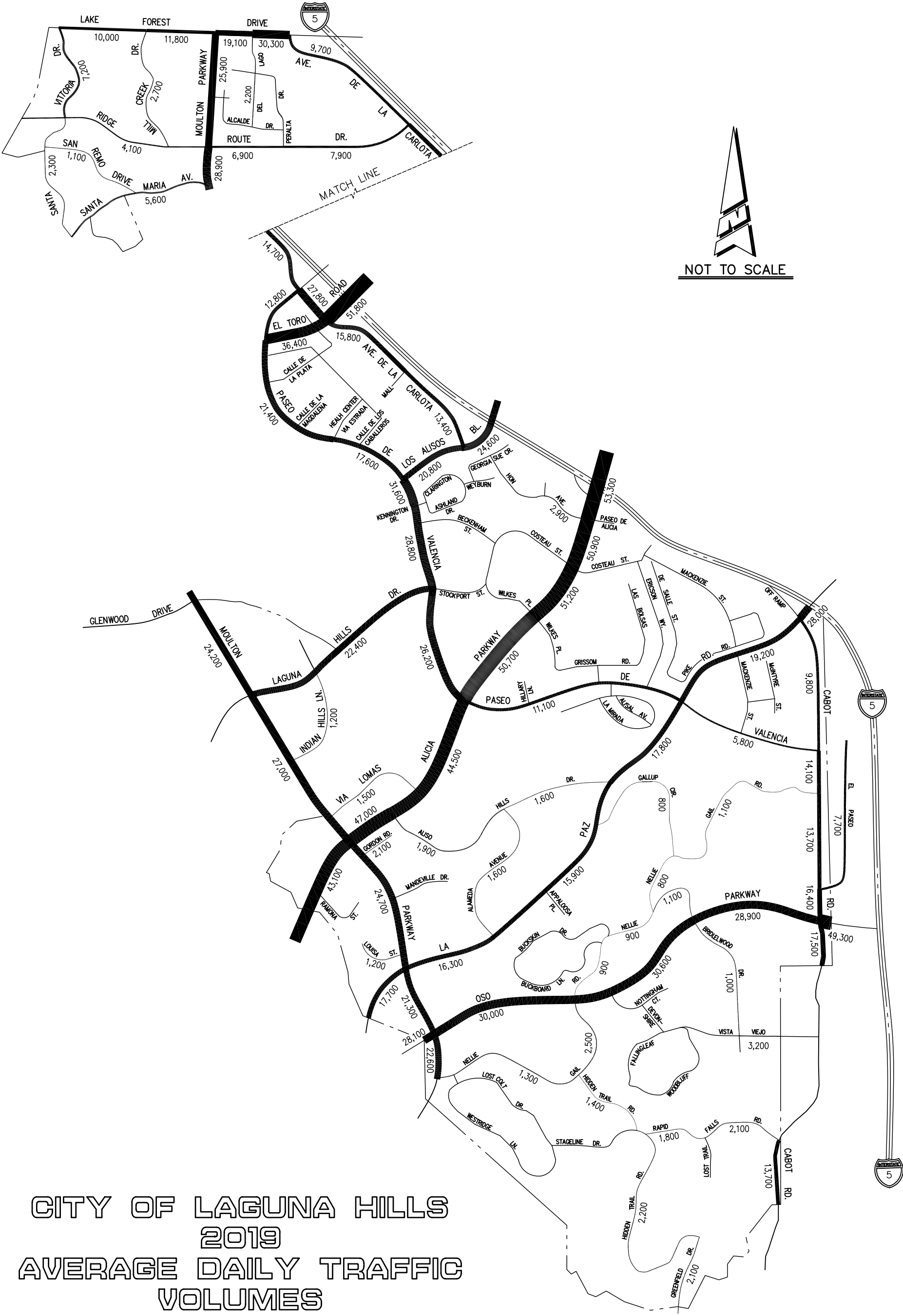
RECOMMENDATION: That the Traffic Commission Receive and File the Report.

SUMMARY:

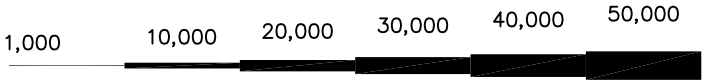
The City performs 24-hour two-way traffic volume surveys every two years in order to measure traffic flow and patterns throughout the City. The City's Traffic Engineering Consultants, Hartzog & Crabill, Inc., recently completed a 2019 Traffic Flow Map based upon the Average Daily Traffic (ADT) count for the arterials and collector streets in the City. The 2019 Traffic Flow Map is attached to this report.

ATTACHMENTS:

- 2019 Traffic Flow Map



CITY OF LAGUNA HILLS 2019 AVERAGE DAILY TRAFFIC VOLUMES



VOLUMES SHOWN REPRESENT AN AVERAGE FOR BOTH DIRECTIONS OF TRAVEL. COUNTS OBTAINED VIA 24 HOUR MECHANICAL COUNTS TAKEN AT EACH LOCATION.

CITY OF LAGUNA HILLS								4.4.a							
AVERAGE DAILY TRAFFIC VOLUMES (24-HOUR TWO-WAY TRAFFIC)															
2019															
LOCATION	2007	2009	2011	2013	2015	2017	2019	LOCATION	2007	2009	2011	2013	2015	2017	2019
ALAMEDA AVENUE								LA PAZ ROAD							
Aliso Hills Drive to La Paz Road	900	1,400	600	1,600	1,000	800	1,600	I-5 Fwy to Cabot Road	41,100	40,500	37,600	35,800	21,300	25,400	28,000
ALICIA PARKWAY								Cabot Road to P.D. Valencia	19,000	20,400	17,500	17,500	17,200	18,000	19,200
I-5 Fwy to Hon Ave./P.D. Alicia	51,500	57,100	54,200	54,300	49,800	50,200	53,300	P.D. Valencia to Aliso Hills Drive	18,100	18,400	16,700	16,800	12,400	17,800	17,800
Hon Ave./P.D. Alicia to Costeau Street	45,500	43,900	41,900	46,400	45,600	46,300	50,900	Aliso Hills Drive to Alameda Avenue	15,500	12,500	14,900	15,100	12,300	15,700	15,900
Costeau Street to Wilkes Place	49,000	44,300	47,500	47,600	42,800	40,500	51,200	Alameda Avenue to Moulton Parkway	15,300	16,700	15,500	15,200	18,700	16,400	16,300
Wilkes Place to P.D. Valencia	43,200	40,700	41,400	43,400	43,400	42,900	50,700	Moulton Parkway to SR-73	18,200	17,400	17,100	16,400	17,400	16,600	17,700
P.D. Valencia to Aliso Hills Drive	44,600	42,800	39,600	43,300	40,900	44,000	44,500	LAKE FOREST DRIVE							
Aliso Hills Drive to Moulton Parkway	39,900	40,600	39,900	40,200	37,200	40,700	47,000	Ave. De La Carlota to Del Lago Drive	29,300	24,700	30,000	31,100	27,800	30,400	30,300
Moulton Parkway to Ramona St.	39,100	35,300	34,700	40,100	39,900	39,700	43,100	Del Lago Drive to Moulton Parkway	20,000	18,100	18,600	18,900	18,300	20,800	19,100
ALISO HILLS DRIVE								Moulton Parkway to Mill Creek	8,100	6,100	7,300	6,200	8,100	10,300	11,800
Alicia Parkway to Alameda Avenue	2,200	1,600	2,000	2,700	800	1,800	1,900	Mill Creek to Santa Vittoria Drive	4,100	3,700	4,000	4,300	7,400	9,500	10,000
Alameda Avenue to La Paz Road	1,800	1,800	1,500	1,700	1,200	1,500	1,600	LOS ALISOS BOULEVARD							
AVENIDA DE LA CARLOTA								P.D. Valencia to Ave. De La Carlota	22,600	21,400	21,900	21,400	20,800	22,400	20,800
Lake Forest Drive to Ridge Route Drive	9,100	11,600	11,300	10,800	7,200	9,600	9,700	Ave. De La Carlota to East City Limits	24,700	22,900	24,100	23,500	23,200	21,100	24,600
Ridge Route Drive to P.D. Valencia	15,600	14,800	17,100	15,900	15,100	15,200	14,700	LOUISA STREET							
P.D. Valencia to El Toro Rd.	29,200	28,900	29,100	30,800	26,500	27,800	27,800	Moulton Parkway to Lupita St.	2,000	1,700	2,000	2,800	1,200	600	1,200
EL Toro Rd. to South of Mall	14,100	13,600	15,700	13,600	13,000	13,700	15,800	MILL CREEK DRIVE							
South of Mall to Los Alisos Boulevard	12,900	13,800	13,000	12,700	11,600	13,500	13,400	Lake Forest Drive to Ridge Route Drive	2,000	1,700	2,000	2,800	2,000	2,200	2,700
BRIDLEWOOD DRIVE								MOULTON PARKWAY							
Nellie Gail Road to Oso Parkway	1,100	1,700	1,200	1,000	1,800	1,100	1,100	Lake Forest Drive to Ridge Route Drive	27,200	26,800	22,800	24,300	22,000	26,800	25,900
Oso Parkway to Vista Viejo	1,000	1,000	2,300	2,200	2,100	900	1,000	Ridge Route Drive to Santa Maria Avenue	31,000	28,800	22,900	25,200	24,100	28,300	28,900
CABOT ROAD								Glenwood Drive to Laguna Hills Drive	23,000	23,700	22,100	21,600	21,600	21,200	24,200
La Paz Road to P.D. Valencia	9,900	8,500	9,900	10,300	12,200	10,000	9,800	Laguna Hills Drive to Alicia Parkway	22,600	24,800	20,900	21,800	19,700	23,900	27,000
P.D. Valencia to Nellie Gail Rd.	15,200	14,500	12,100	13,600	13,300	13,900	14,100	Alicia Parkway to La Paz Road	21,100	19,800	21,000	19,800	15,900	21,100	24,700
Nellie Gail Rd. to El Paseo	14,300	11,900	11,600	12,800	12,600	14,300	13,700	La Paz Road to Oso Parkway	17,100	16,100	18,800	20,300	15,900	18,200	21,300
El Paseo to Oso Parkway	19,100	17,700	16,500	15,800	13,100	16,300	16,400	Oso Parkway to Nellie Gail Road	21,700	20,900	20,100	21,100	17,500	20,000	22,600
Oso Parkway to Vista Viejo	14,100	17,200	15,500	16,700	15,500	17,000	17,500	NELLIE GAIL ROAD							
Rapid Falls Rd. to South City Limits	12,900	13,000	12,300	12,500	11,500	13,100	13,700	Cabot Road to Gallup Circle	1,300	1,200	1,300	1,200	1,200	1,100	1,100
DEL LAGO DRIVE								Gallup Circle to Bridlewood Drive	1,100	1,100	1,000	900	800	800	800
Lake Forest Drive to Alcalde Drive	2,500	2,200	2,400	2,800	2,100	7,700	2,200	Bridlewood Drive to Buckskin Drive	1,100	1,100	1,100	900	1,500	800	900
EL PASEO								Buckskin Drive to Oso Parkway	1,100	900	1,000	1,700	900	900	900
East of Cabot Road	10,700	8,900	9,400	7,300	5,600	7,700	7,700	Oso Parkway to Hidden Trail Road	2,900	2,500	2,700	2,300	2,100	2,500	2,500
EL TORO ROAD								Hidden Trail Road to Moulton Parkway	1,400	1,400	1,100	1,100	2,800	1,200	1,300
P.D. Valencia to Avenida De La Carlota	25,600	—	27,200	34,900	36,200	29,800	36,400	OSO PARKWAY							
Avenida De La Carlota to I-5 Fwy.	50,200	53,700	66,400	55,600	44,800	56,600	51,800	West City Limits to Moulton Parkway	24,000	24,500	24,200	22,700	21,500	28,600	28,100
GALLUP CIRCLE								Moulton Parkway to Nellie Gail Road	31,800	30,800	28,900	29,400	27,000	29,200	30,000
La Paz Rd. to Nellie Gail Rd.	1,000	1,100	1,200	1,200	700	900	800	Nellie Gail Road to Bridlewood Drive	30,400	26,900	31,900	29,100	28,000	30,500	30,600
GORDON ROAD								Bridlewood Drive to Cabot Road	30,100	27,500	33,600	30,500	30,400	28,700	28,900
Moulton Pkwy to East End.	—	—	—	—	1,700	1,800	2,100	Cabot Road to I-5 Fwy.	42,100	40,800	—	37,800	38,900	36,900	49,300
GREENFIELD DRIVE								PASEO DE VALENCIA							
South City Limits to Hidden Trail Road.	2,400	2,000	2,000	1,900	2,300	2,300	2,100	Avenida De La Carlota to El Toro Road	14,300	14,400	15,900	15,700	12,200	14,800	12,800
HIDDEN TRAIL ROAD								El Toro Road to Health Center Drive	22,500	24,500	21,600	23,300	19,600	21,400	21,400
Nellie Gail Road to Rapid Falls Road	1,400	1,300	1,200	1,200	1,300	1,300	1,400	Health Center Drive to Los Alisos Boulevard	17,700	21,400	23,200	22,300	19,000	18,000	17,600
Rapid Falls Road to Greenfield Drive	2,400	2,200	2,300	1,800	2,300	2,100	2,200	Los Alisos Boulevard to Kennington Drive	33,400	32,900	32,800	31,800	31,000	31,100	31,600
HON AVENUE								Kennington Drive to Laguna Hills Drive	33,800	31,500	32,000	31,100	27,900	28,600	28,800
Alicia Parkway to Julie Avenue	—	—	—	—	3,700	3,300	2,900	Laguna Hills Drive to Alicia Parkway	26,900	26,300	25,600	24,600	19,900	25,100	26,200
INDIAN HILLS LANE								Alicia Parkway to La Paz Road	11,400	10,000	10,200	10,900	7,700	10,200	11,100
Moulton Parkway to Laguna Hills Drive	—	—	—	—	1,200	1,000	1,200	La Paz Road to Cabot Road	6,100	6,200	5,100	5,500	5,500	5,600	5,800
LAGUNA HILLS DRIVE								RAPID FALLS ROAD							
Moulton Parkway to Paseo De Valencia	23,000	20,800	22,000	21,800	15,200	22,400	22,400	Hidden Trail Road to Lost Trail Drive	2,200	2,000	1,900	1,700	1,900	1,800	1,800
								Lost Trail Drive to Cabot Road	2,600	2,400	2,400	2,000	2,300	2,000	2,100
								RIDGE ROUTE DRIVE							
								West City Limits to Moulton Parkway	4,400	4,200	3,900	4,200	4,100	4,200	4,100
								Moulton Parkway to Peralta Drive	7,600	6,400	7,000	6,900	6,900	7,000	6,900
								Peralta Drive to Avenida De La Carlota	8,300	7,400	8,200	8,100	7,000	8,800	7,900
								SAN REMO DRIVE							
								Santa Vittoria to Santa Maria Avenue	—	—	—	—	1,600	1,200	1,100
								SANTA MARIA AVENUE							
								Santa Vittoria to Moulton Parkway	7,200	11,200	5,700	7,700	6,800	5,400	5,600
								SANTA VITTORIA DRIVE							
								Lake Forest Drive to Ridge Route Drive	4,800	4,400	5,900	5,100	6,200	6,400	7,200
								Ridge Route Drive to Santa Maria Avenue	1,900	1,600	1,400	1,800	4,200	2,100	2,300
								VIA LOMAS							
								Moulton Parkway to Alicia Parkway	2,000	1,700	1,700	1,600	1,500	1,900	1,500
								VISTA VIEJO							
								East of Bridlewood Drive	3,500	3,300	3,000	3,000	2,700	2,700	3,200
COUNT DATA TAKEN MARCH/ARPIIL 2019.								Packet Pg. 80							



City of Laguna Hills

Traffic Commission

Staff Report

DATE: May 15, 2019
TO: Traffic Commissioners
FROM: Amber M. Shah P.E.
Associate Civil Engineer
ISSUE: Radar Speed Trailer

RECOMMENDATION: That the Traffic Commission Receive and File the Report.

ATTACHMENTS:

- Radar Trailer Calendar 2019 MAY-JULY

CITY OF LAGUNA HILLS

MAY 2019

RADAR TRAILER SCHEDULE (RAINY DAYS EXCLUDED)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7 Hidden Trail Across from 27783 25 MPH RAIN	8 Santa Vittoria S/O Laurel Crest 30 MPH	9 Bridlewood S/O Laurel Crest 25 MPH	10	11
12	13	14	15	16	17	18
19	20	21 Mustang W/O Appaloosa 25 MPH	22 Rapid Falls W/O Sundowner 25 MPH	23 Nellie Gail E/O Desert Trail 25 MPH	24	25
26	27 HOLIDAY	28	29	30	31	

Attachment: Radar Trailer Calendar 2019 MAY-JULY (1862 : Radar Speed Trailer)

CITY OF LAGUNA HILLS

JUNE 2019

RADAR TRAILER SCHEDULE (RAINY DAYS EXCLUDED)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4 Santa Vittoria 30 MPH	5 Bridlewood S/O Laurel Crest 25 MPH	6 Millcreek 30 MPH	7	8
9	10	11	12	13	14	15
16	17	18 Rapid Falls W/O Sundowner 25 MPH	19 Lost Colt W/B Mid-block 25 MPH	20 Woodbluff W/O Middleridge 25 MPH	21	22
23	24	25	26	27	28	29
30						

Attachment: Radar Trailer Calendar 2019 MAY-JULY (1862 : Radar Speed Trailer)

CITY OF LAGUNA HILLS

JULY 2019

RADAR TRAILER SCHEDULE (RAINY DAYS EXCLUDED)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4 HOLIDAY	5	6
		Rapid Falls S/O Sundowner 25 MPH				
7	8	9	10	11	12	13
14	15	16	17	18	19	20
		Lost Colt E/O Beargrass 25 MPH	Bridlewood S/O Laurel Crest 25 MPH	Santa Vittora 30 MPH		
21	22	23	24	25	26	27
28	29	30	31			

Attachment: Radar Trailer Calendar 2019 MAY-JULY (1862 : Radar Speed Trailer)