



CITY OF LAGUNA HILLS TRAFFIC COMMISSION

REGULAR MEETING AGENDA Wednesday, September 20, 2017 – 7:00 PM

Mark Jones - Chair

**Larry Woodruff - Vice Chair
Greg Staar - Commissioner**

**Len Herman - Commissioner
David Wheeler - 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 Traffic 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 July 19, 2017.

3. PRESENTATIONS**3.1 Update of the Alicia Parkway Regional Traffic Signal Synchronization Project (RTSSP)**

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

4. ADMINISTRATIVE REPORTS**4.1 Review of Traffic Speed Conditions on Hidden Trail Road at Pine Strap Circle**

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

4.2 Review of Traffic Speed Conditions on Nellie Gail Road Between Glen Canyon Drive and Cabot Road

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

4.3 Review of Traffic Speed Conditions on Rapid Falls Road Between Lost Trail Drive and Cabot Road

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

4.4 2017 Traffic Flow Map

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

4.5 Dynamic Speed Feedback Signs

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

4.6 Citywide Street Maintenance Project

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

5. INFORMATIONAL ITEMS**5.1 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 November 15, 2017, at 7:00 PM in the City Council Chamber, located at 24035 El Toro Road, Laguna Hills California.

CERTIFICATION

I, KENNETH H. ROSENFELD, Director of Public Services/City Engineer 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 September 15, 2017, at 5:00 pm.



Director of Public Services/City Engineer

September 15, 2017

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: September 20, 2017
TO: Traffic Commissioners
FROM: Kenneth H. Rosenfield P.E.
Director of Public Services/City Engineer
ISSUE: Minutes

RECOMMENDATION: That the Traffic Commission Approve the Minutes of July 19, 2017.

ATTACHMENTS:

- Minutes

**CITY OF LAGUNA HILLS
TRAFFIC COMMISSION MEETING
REGULAR MEETING MINUTES
JULY 19, 2017**

CALL TO ORDER

The Regular Meeting of the Traffic Commission of the City of Laguna Hills, California, was called to order by Chair Jones 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 Jones.

ROLL CALL OF COMMISSION MEMBERS

Present: Chair Mark Jones, Vice Chair Larry Woodruff, Commissioner Len Herman, Commissioner Greg Staar, and Commissioner David Wheeler.

1. PUBLIC COMMENTS

There were no Public Comments.

2. MINUTES

**THE TRAFFIC COMMISSION APPROVED THE MINUTES OF THE MAY 17, 2017, REGULAR MEETING, BY M/COMMISSIONER HERMAN, S/VICE CHAIR WOODRUFF.
APPROVED BY A VOTE OF 5-0**

3. PRESENTATIONS

3.1 PRESENTATION OF THE ALICIA PARKWAY REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT (RTSSP)

Mr. Chalap Sadam, P.E., Albert Grover & Associates, Project Manager for the Alicia Parkway Regional Traffic Signal Synchronization Project (RTSSP), gave a presentation on the Alicia Parkway RTSSP. Mr. Sadam indicated the project will improve the traffic operations through the Cities of Mission Viejo, Laguna Hills, Aliso Viejo, and Laguna Niguel. The project will reduce delays, stops, fuel consumption and travel time. The project encompasses 10.6 miles, and 40 signals. There are 8 traffic signals along the Alicia corridor in Laguna Hills that will be upgraded with new communication and synchronization capabilities. Pedestrian access will be improved by the addition of countdown indicators at the traffic signal intersections included in this project. After all upgrades and

Attachment: Minutes (1377 : Minutes)

**CITY OF LAGUNA HILLS
TRAFFIC COMMISSION MEETING
REGULAR MEETING MINUTES
JULY 19, 2017**

modifications are complete, Albert Grover & Associates will perform a final review of the new systems and traffic signal timing, and adjust the equipment as necessary to optimize traffic along the Alicia corridor.

**3.2 PRESENTATION OF THE MOULTON PARKWAY & EL TORO ROAD
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
(RTSSP)**

Mr. Bernard Li, T.E., Iteris, Project Manager for the Moulton Parkway & El Toro Road Regional Traffic Signal Synchronization Project (RTSSP), gave a presentation on the Moulton Parkway & El Toro Road RTSSP. Mr. Li indicated the project will improve regional traffic signal synchronization, which will allow drivers to travel through all the cities seamlessly. The RTSSP will enhance safety, improve air quality, reduce fuel consumption and improve travel time. The Moulton Parkway project is 11 miles long, and includes 37 signals through the Cities of Laguna Woods, Laguna Hills and Laguna Niguel. Laguna Hills has 9 signals included in the Moulton Parkway project. The El Toro Road project is three miles long through the Cities of Laguna Woods and Laguna Hills, encompassing 15 signals, three in Laguna Hills. Mr. Li indicated the synchronization plan will have various timing plans, depending on the time of day and day of the week. When the construction phase is complete, the new timing plans will be programmed, and Iteris will monitor the synchronization and timing for a period of two years.

4. ADMINISTRATIVE REPORTS

**4.1 SIGHT DISTANCE ANALYSIS – PASEO DE VALENCIA AT ALISAL
AVENUE**

Associate Civil Engineer Amber Shah, indicated Staff was contacted by a resident regarding concerns of sight distance and collisions on Paseo de Valencia at Alisal Avenue and made a request for a traffic signal installation. Based upon the resident's concern, Staff initiated a review of the collision history and a sight distance evaluation of the intersection. The sight distance analysis was performed by Hartzog and Crabill, Inc.

The results of the study concluded there is adequate visibility and the collision history showed there was only one collision reported at or near this intersection during the most recent 6-year period. Based upon the findings of the visibility study and the collision history, there are no recommended changes at this time.

**CITY OF LAGUNA HILLS
TRAFFIC COMMISSION MEETING
REGULAR MEETING MINUTES
JULY 19, 2017**

**THAT THE TRAFFIC COMMISSION RECEIVE AND FILE THIS REPORT.
M/COMMISSIONER HERMAN, S/VICE CHAIR WOODRUFF.
APPROVED BY A VOTE OF 5-0**

**4.2 REVIEW OF TRAFFIC SPEED CONDITIONS ON MUSTANG DRIVE
AT APPALOOSA PLACE**

Associate Civil Engineer Amber Shah, indicated Staff was contacted by a concerned resident regarding speeding on Mustang Drive at Appaloosa Place. Based upon the resident's concern and in accordance with the Residential Streets Management Policy, Staff initiated a review of the travel speeds on Mustang Drive on either side of Appaloosa Place.

The results of the speed survey, performed by Hartzog and Crabill, Inc., concluded the 85th percentile speeds on Mustang Drive as 34.2 mph and 31.2 mph, west of and east of Appaloosa Place, respectively. Although the posted speed limit is 25 mph, Staff experience has found the typical prevailing speed range on residential streets in the City as being between 32 and 34 mph, without adverse traffic collision history. The study also determined 19.8% of vehicles on Mustang Drive west of Appaloosa Place were exceeding the upper limit of the 10 mph pace of 33 mph, which is a slightly higher percentage than expected (15%). Accordingly, Police enforcement of driver behavior is the best and appropriate remedy for this location and issue of concern. Ms. Shah indicated Staff will work with the Sheriff's Department on enforcement activity in this area and post the radar trailer in this area to increase driver education as to the appropriate speed on Mustang Drive.

Darin Farnworth, resident of Laguna Hills, stated he is the person that contacted Staff regarding speed concerns on Mustang Drive and appreciated the review of traffic conditions.

**THAT THE TRAFFIC COMMISSION RECEIVE AND FILE THIS REPORT AND
REPEAT THE SPEED SURVEY WHEN APPROPRIATE. M/COMMISSIONER
HERMAN, S/CHAIR JONES,
APPROVED BY A VOTE OF 4-1, VICE CHAIR JONES VOTED NO.**

5. INFORMATIONAL ITEMS

5.1 SHERIFF'S DEPARTMENT VERBAL REPORT

Sergeant Prince had a prior commitment and was unable to attend the meeting.

Attachment: Minutes (1377 : Minutes)

**CITY OF LAGUNA HILLS
TRAFFIC COMMISSION MEETING
REGULAR MEETING MINUTES
JULY 19, 2017**

5.2 RADAR SPEED TRAILER

Staff submitted the schedule for the radar trailer.

6. COMMISSIONER COMMENTS

Commissioner Wheeler requested information on the effectiveness of radar trailers.

7. ADJOURNMENT

There being no further business before the Traffic Commission at this session, Vice Chair Jones declared the meeting adjourned at 8:31 p.m.

Prepared By:

Amber Shah, P.E.
Associate Civil Engineer

Approved By:

Chair Mark Jones

Attachment: Minutes (1377 : Minutes)



City of Laguna Hills

Traffic Commission

Staff Report

DATE: September 20, 2017
TO: Traffic Commissioners
FROM: Kenneth H. Rosenfield P.E.
Director of Public Services/City Engineer
ISSUE: Update of the Alicia Parkway Regional Traffic Signal Synchronization Project (RTSSP)

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

SUMMARY:

The City recently completed traffic signal modifications at two locations along Alicia Parkway - Alicia Parkway/Community Center and Alicia Parkway/Hon Avenue-Paseo De Alicia as a part of the Alicia Parkway Signal Synchronization project. The signal modifications at both of these intersections were completed on August 21, 2017, and traffic and pedestrian movements have since been monitored. A representative of Albert Grover Associates, Mr. Chalap K. Sadam, P.E., will be present at the Traffic Commission meeting to present his initial observations of the traffic signal modifications.

The traffic signal modification at Alicia Parkway/Community Center intersection involved removing the northbound left-turn arrow from the Shopping Center approach traffic, optimizing traffic signal timing to serve the minor street quicker and allocating additional green time to Alicia Parkway to reduce congestion and queueing. Additional signage coupled with temporary orange flags were installed to indicate to motorists the change in signal operations. The existing southbound left-turn arrow for Community Center traffic is retained. New pedestrian countdown heads were also installed for the pedestrian crossing of Alicia Parkway.

The traffic signal modification at Alicia Parkway/Hon Avenue-Paseo De Alicia intersection involved removing the northbound left-turn arrow for the Paseo De Alicia approach

Update of the Alicia Parkway Regional Traffic Signal Synchronization Project (RTSSP)

September 20, 2017

Page 2

traffic, optimizing traffic signal timing to serve the minor street quicker and allocating additional green time to Alicia Parkway to reduce congestion and queueing. Additional signage coupled with temporary orange flags were installed to indicate motorists of change in signal operations. The existing southbound left-turn arrow for Hon Avenue traffic is retained.

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



City of Laguna Hills

Traffic Commission

Staff Report

DATE: September 20, 2017

TO: Traffic Commissioners

FROM: Kenneth H. Rosenfield P.E.
Director of Public Services/City Engineer

ISSUE: Review of Traffic Speed Conditions on Hidden Trail Road at Pine Strap Circle

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

SUMMARY:

Staff was recently contacted by a resident regarding concerns of vehicular speeding on Hidden Trail Road near Pine Strap Circle. Please see attached Vicinity Map. Based upon the resident's concern and in accordance with the Residential Streets Management Policy, staff initiated a review of the travel speeds on Hidden Trail Road on either side of Pine Strap Circle.

The speed surveys, performed by Hartzog & Crabill, Inc., attached, determined the 85th percentile speeds on Hidden Trail Road as 33.4 mph and 30.9 mph, north of and south of Pine Strap Circle, respectively. While the regulatory speed limit on a residential street is 25 mph, Staff's experience has found the typical prevailing speed range on residential streets in the City as being between 32 and 34 mph, without adverse traffic collision history. The 85th percentile speeds determined in this speed survey are consistent with our experience. No change to traffic controls is proposed. However, as available, police enforcement of driver behavior is the best and appropriate remedy for this location and issue of concern. Staff will work with the Sheriff's Department on enforcement activity in this area and we will also post the radar trailer in this area to increase driver education as to the appropriate speed on Hidden Trail Road.

ATTACHMENTS:

Review of Traffic Speed Conditions on Hidden Trail Road at Pine Strap Circle

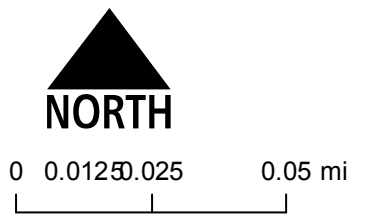
September 20, 2017

Page 2

- Vicinity Map
- Speed Survey Report on Hidden Trail Road



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



VICINITY MAP - HIDDEN TRAIL ROAD AT PINE STRAP CIRCLE



Attachment: Vicinity Map (1378 : Review of Traffic Speed Conditions on Hidden Trail Road at Pine Strap Circle)



Trammell Hartzog, President
Gerald J. Stock, P.E., T.E.,
Executive Vice President

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

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

www.hartzog-crabill.com

August 7, 2017

Mr. Ken Rosenfield, P.E.
Director of Public Services/City Engineer
City of Laguna Hills
24035 El Toro Road
Laguna Hills, California 92653

**Subject: Letter of Opinion – Speeding Concerns – Hidden Trail Road
On Both Sides of Pine Strap Circle**

Dear Mr. Rosenfield:

Pursuant to your request, Hartzog & Crabill, Inc. (HCI) has prepared this letter of opinion accompanied by specific recommendations regarding resident concerns of vehicular speeding on Hidden Trail Road at/near Pine Strap Circle.

Background

Hidden Trail Road is a local street with a prima facie speed limit of 25 mph (un-posted). The segment of Hidden Trails Road at/near Pine Strap Circle runs both northerly/southerly (north-side) and easterly/westerly (south-side), and has areas of limited sight distance as a result of the curvilinear character of the roadway. Adjacent land uses are residential with a high density of fronting driveways. Sidewalks are provided along the west-side of the street. At its intersection with Pine Strap Circle, Hidden Trail Road is Stop-controlled on both approaches.

Pine Strap Circle is also an east-west local street with a prima facie speed limit of 25 mph (un-posted). Pine Strap Circle intersects Hidden Trail Road as the westerly leg (T-intersection), and is Stop-controlled.

Radar Speed Surveys

To determine travel speeds on Hidden Trail Road, a certified radar technician using a calibrated radar gun conducted two radar speed surveys near Pine Strap Circle – one north of Pine Strap Circle and one south of Pine Strap Circle. Both radar locations were outside of the influence of the stop signs.

Both surveys were performed on Wednesday, July 26, 2017. The segment North of Pine Strap was performed between 9:00am - 11:00am, and the segment South of Pine Strap was performed between 3:00pm - 4:15pm.

Mr. Ken Rosenfield, P.E.
 August 7, 2017
 Page 2

Table 1 below summarizes the results of the speed survey data:

TABLE 1

Radar Speed Survey Summary	Hidden Trail Road (N/o Pine Strap)	Hidden Trail Road (S/o Pine Strap)
85th Percentile Speed	33.4 mph	30.9 mph
Median Speed	29.0 mph	27.3 mph
15th Percentile Speed	24.5 mph	24.5 mph
10 MPH Pace	25 to 34 mph	24 to 33 mph
Percent in 10 MPH Pace	77.3%	89.1%

Source: Hartzog & Crabill, Inc., 2017.

As shown above, the 85th percentile speeds on Hidden Trail Road are 33.4 mph and 30.9 mph, North of and South of Pine Strap Circle, respectively. This data shows that higher travel speeds are occurring north side of Pine Strap Circle when compared with the south-side data.

Recommendations

Therefore, it is recommended that an incremental approach be taken to address travel speeds. Initial steps include increased law enforcement, use of a portable radar speed feedback trailer, and posting of 25 mph speed limit signs along Hidden Trail Road.

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

Sincerely,

HARTZOG & CRABILL, INC.


 Gerald Stock, P.E.
 Executive Vice President
 City & Traffic Engineering Services

Attach: (2) Speed Survey Field Sheets



RADAR SPEED DISTRIBUTION SHEET

CITY OF LAGUNA HILLS

HIDDEN TRAIL ROAD

DATE: 7/26/2017

TIME: 9:00 AM - 11:00 AM

NORTH OF PINE STRAP

SURVEY BY: C. BUENDIA

CHECKED BY: JERRY STOCK

[illegible]

UPPER LIMIT 10 MPH PACE:	34	MPH
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LOWER LIMIT 10 MPH PACE: 25 MPH

PERCENT OVER PACE: 11.0 %

PERCENT IN PACE: 77.3 %

PERCENT UNDER PACE: 11.7 %

85th PERCENTILE SPEED: 33.4 MPH

MEDIAN SPEED: 29.0 MPH

15th PERCENTILE SPEED: 24.5 MPH

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122, Tustin, CA 92680
(714) 734-3455

AGENCY: CITY OF LAGUNA NIGUEL
STREET: HIDDEN TRAIL ROAD
LOCATION: N/O PINE STRAP

WEATHER: SUNNY DATE: 07/26/17
ROAD CONDITION: DRY START TIME: 9:00 AM
OBSERVER: CATHY BUENDIA END TIME: 11:00 AM

DIRECTION: <u>SOUTHBOUND</u>									
MPH	5	10	15	20	25	30	TOTAL		
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AVERAGE SPEED: 29.5 CRITICAL SPEED: 34.1 PACE SPEED: 26-35 77.8

CUMULATIVE (BOTH DIRECTIONS) Cum = 33.4, 29.0, 25-34, 77.3

DIRECTION: <u>NORTHBOUND</u>									
MPH	5	10	15	20	25	30	TOTAL		
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AVERAGE SPEED: 27.9 CRITICAL SPEED: 31.8 PACE SPEED: 24-33 (85.5)

spot sp



RADAR SPEED DISTRIBUTION SHEET

CITY OF LAGUNA HILLS

HIDDEN TRAIL ROAD

DATE: 7/26/2017

TIME: 3:00 PM - 4:15 PM

SOUTH OF PINE STRAP

SURVEY BY: C. BUENDIA

CHECKED BY: JERRY STOCK

SPEED	NUMBER OF VEHICLES									VEH.	PCT.	CUM. PCT.
	5		10		15		20		25			
60												100.0%
												100.0%
												100.0%
												100.0%
												100.0%
55												100.0%
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50												100.0%
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45												100.0%
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40												100.0%
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	X										1	0.6% 100.0%
											0	0.0% 99.4%
35	X	X	X								3	1.7% 99.4%
	X	X	X								3	1.7% 97.7%
	X	X	X	X	X	X	X				7	4.0% 96.0%
	X	X	X	X	X	X	X	X			10	5.7% 92.0%
	X	X	X	X	X	X	X	X	X		16	9.1% 86.3%
30	X	X	X	X	X	X	X	X	X	X	19	10.9% 77.1%
	X	X	X	X	X	X	X	X	X		13	7.4% 66.3%
	X	X	X	X	X	X	X	X	X	X	22	12.6% 58.9%
	X	X	X	X	X	X	X	X	X	X	27	15.4% 46.3%
	X	X	X	X	X	X	X	X	X	X	18	10.3% 30.9%
25	X	X	X	X	X	X	X	X	X	X	20	11.4% 20.6%
	X	X	X	X							4	2.3% 9.1%
	X	X	X	X							5	2.9% 6.9%
	X	X	X								3	1.7% 4.0%
	X	X									2	1.1% 2.3%
20	X										1	0.6% 1.1%
	X										1	0.6% 0.6%
												0.0%
												0.0%
15												0.0%
	TOTAL VEHICLES										175	

UPPER LIMIT 10 MPH PACE: 33 MPH

LOWER LIMIT 10 MPH PACE: 24 MPH

PERCENT OVER PACE:	4.0	%
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PERCENT IN PACE: 89.1 %

PERCENT UNDER PACE:	6.9	%
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85th PERCENTILE SPEED: 30.9 MPH

MEDIAN SPEED:	27.3	MPH
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15th PERCENTILE SPEED: 24.5 MPH

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin, CA 92680
(714) 731-9400

AGENCY: CITY OF LAGUNA NIGUEL

STREET: HIDDEN TRAIL

LOCATION: SOUTH OF PINE STRAP

WEATHER: SUNNY

DATE: 07/26/17

ROAD CONDITION: DRY

START TIME: 3:00 PM

OBSERVER: CATHY BUENDIA

END TIME: 4:15 PM *VAL*

DIRECTION: <u>SOUTHBOUND</u>									
MPH	NUMBER OF VEHICLES						TOTAL		
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AVERAGE SPEED: 26.8

CRITICAL SPEED: 30.6

PACE SPEED: 25-34 (90.8)

CUMULATIVE (BOTH DIRECTIONS) Cum = 30.9, 27.3, 24-33, 89.1

DIRECTION: <u>NORTHBOUND</u>									
MPH	NUMBER OF VEHICLES						TOTAL		
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AVERAGE SPEED: 27.6

CRITICAL SPEED: 31.0

PACE SPEED: 24-33 (88.9)

CUMULATIVE TOTAL	MPH
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	37
1	36
0	35
3	34
7	33
10	32
16	31
19	30
13	29
22	28
27	27
18	26
20	25
4	24
5	23
3	22
2	21
1	20
	19
	18
	17
	16
	15



City of Laguna Hills

Traffic Commission

Staff Report

DATE: September 20, 2017
TO: Traffic Commissioners
FROM: Kenneth H. Rosenfield P.E.
Director of Public Services/City Engineer
ISSUE: Review of Traffic Speed Conditions on Nellie Gail Road Between Glen Canyon Drive and Cabot Road

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

SUMMARY:

Staff was recently contacted by a resident regarding concerns of vehicular speeding on Nellie Gail Road approaching Cabot Road. 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 travel speeds and traffic collision history on Nellie Gail Road between Glen Canyon Road and Cabot Road.

The speed surveys, performed by Hartzog & Crabill, Inc., attached, determined the 85th percentile speeds on Nellie Gail Road as 31.1 mph and 28.1 mph, west of and east of Desert Trail, respectively. While the regulatory speed limit on a residential street is 25 mph, Staff's experience has found the typical prevailing speed range on residential streets in the City as being between 32 and 34 mph, without adverse traffic collision history. The 85th percentile speeds determined in this speed survey are below typical speeds.

A six-year traffic collision history report was also prepared which determined only one of eleven reported traffic collisions was categorized as speed-related. Given the speed surveys and data review, no change to traffic controls is proposed. However, as available, police enforcement of driver behavior is the best and appropriate remedy for this location and issue of concern. Staff will work with the Sheriff's Department on

Review of Traffic Speed Conditions on Nellie Gail Road Between Glen Canyon Drive and Cabot Road

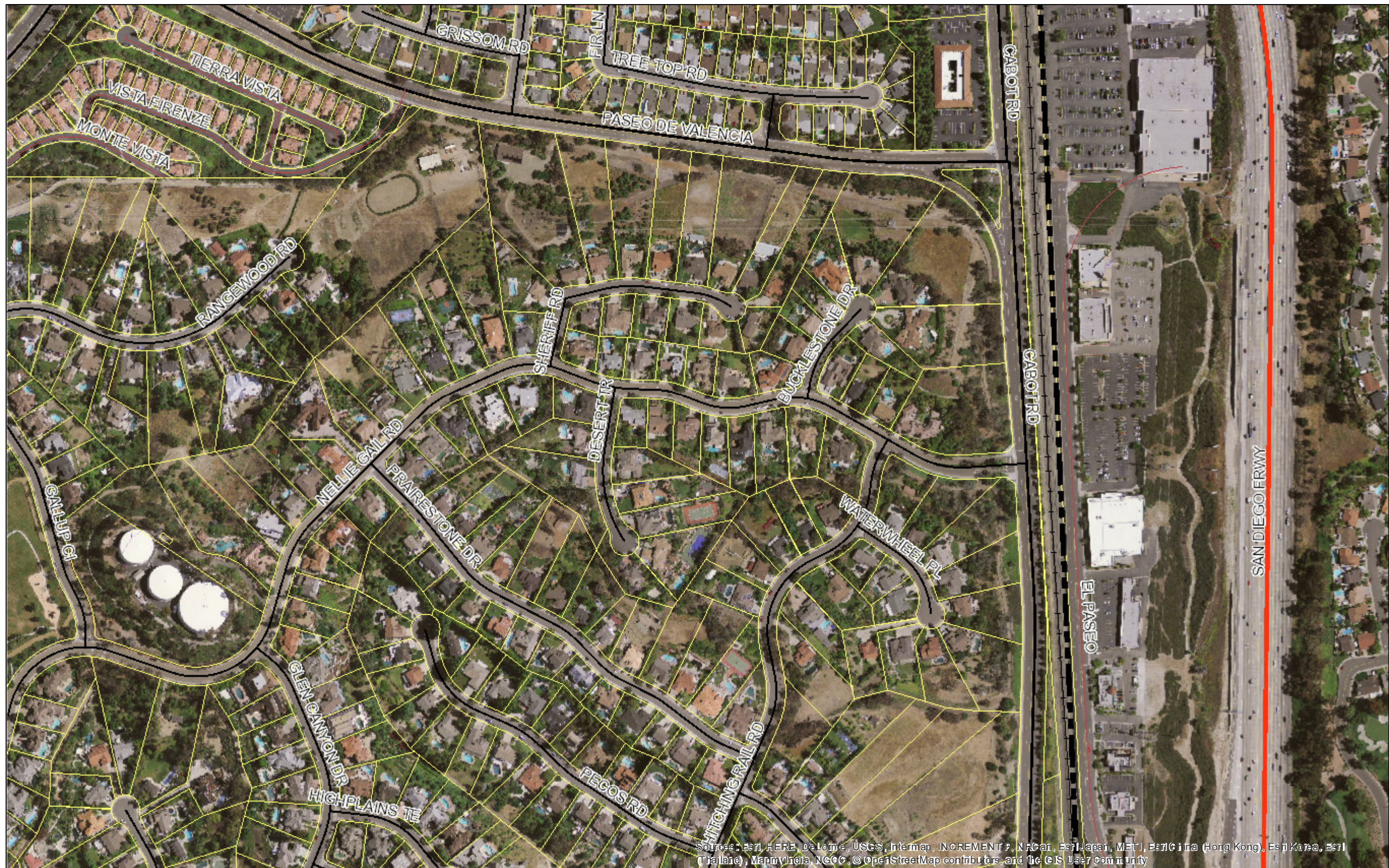
September 20, 2017

Page 2

enforcement activity in this area and we will also post the radar trailer in this area to increase driver education as to the appropriate speed on Nellie Gail Road.

ATTACHMENTS:

- Vicinity Map
- Nellie Gail Road Analysis



VICINITY MAP - NELLIE GAIL RD BETWEEN GLEN CANYON DR & CABOT RD



0 0.02750.055 0.11 mi





Trammell Hartzog, President
Gerald J. Stock, P.E.,
Executive Vice President

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

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

www.hartzog-crabill.com

August 8, 2017

Mr. Kenneth Rosenfield, P.E.
Director of Public Services
City of Laguna Hills
24045 El Toro Road
Laguna Hills, CA 92653

**Subject: Traffic Data Evaluation - Letter of Opinion -
Speeding and Collision Concerns along Nellie Gail Road
between Glen Canyon Drive and Cabot Road**

Dear Mr. Rosenfield,

Pursuant to your request, Hartzog & Crabill, Inc. (HCI) has prepared this traffic engineering review regarding resident concerns of speeding and collisions on Nellie Gail Road between Glen Canyon Drive & Cabot Road.

BACKGROUND

Nellie Gail Road, between Glen Canyon Drive and Cabot Road, is a 40-foot, 2-lane, east-west residential collector roadway. The westerly intersection of Nellie Gail Road at Glen Canyon Drive is controlled by a 1-way stop for Glen Canyon Drive only (uncontrolled on Nellie Gail Road), while the easterly intersection of Nellie Gail Road at Cabot Road is controlled by a traffic signal. At its eastbound approach to Cabot Road, the roadway width increases to 60-feet and provides for one left-turn lane and one right-turn lane.

The posted speed limit on Nellie Gail Road is 25 MPH between Glen Canyon Drive and Cabot Road. On-street parking is allowed on both sides of Nellie Gail Road. There is one equestrian crossing within this segment.

TRAVEL SPEEDS

To determine travel speeds on Nellie Gail Road, a speed-count survey was conducted at two separate locations along this residential collector roadway on Thursday, July 20, 2017.

The speed data from Glen Canyon Drive to Desert Trail (approximate midpoint) was collected between 9:00am - 11:00am, and the data from Desert Trail to Cabot Road was collected between 3:00pm - 5:00pm.

Table 1 on the next page summarizes the speed survey data. The speed-count survey data is attached to this letter.

Mr. Kenneth Rosenfield, P.E.
 August 8, 2017
 Page 2 of 5

TRAVEL SPEEDS *(continued)*

TABLE 1
SPEED SURVEY SUMMARY
NELLIE GAIL ROAD, GLEN CANYON DRIVE TO CABOT ROAD

Radar Speed Survey Summary	West of Desert Trail	East of Desert Trail
85th Percentile Speed	31.1 MPH	28.1 MPH
Median Speed	27.6 MPH	25.1 MPH
15th Percentile Speed	23.6 MPH	22.3 MPH
10 MPH Pace	23 to 32 MPH	22 to 31 MPH
Percent in 10 MPH Pace	83.2%	90.1%

Source: Hartzog & Crabill, Inc., 2017.

As shown above, the 85th percentile speeds on Nellie Gail Road are 31.1 MPH and 28.1 MPH, west of and east of Desert Trail, respectively. This data shows that higher travel speeds are occurring west of Desert Trail when compared with the east-side data.

TRAFFIC VOLUMES

Traffic counts were also gathered for the segment of Nellie Gail Road between Glen Canyon Drive and Cabot Road to assess if traffic volumes have increased on this segment of Nellie Gail Road. The existing traffic volume data had been collected on Tuesday, May 16, 2017. This most recent traffic count data shows that the Average Daily Traffic (ADT) - 24-hour two-way traffic volumes along this segment is approximately 1,100 vehicles. The traffic counts are shown in the attached ADT count data.

Table 2 below presents historical, as well as the most recent traffic volumes on Nellie Gail Road.

TABLE 2
HISTORICAL TRAFFIC VOLUMES
NELLIE GAIL ROAD, GLEN CANYON DRIVE TO CABOT ROAD

YEAR	24-HOUR VOLUMES *
2005	1,300
2007	1,300
2009	1,200
2011	1,300
2013	1,200
2015	1,200
2017	1,100

* Rounded to the nearest 100 vehicles.

Mr. Kenneth Rosenfield, P.E.
 August 8, 2017
 Page 3 of 5

TRAFFIC VOLUMES *(continued)*

The above data shows that, between 2005 and 2017, traffic volumes range from a high of 1,300 vehicles per day to a low of 1,100 vehicles per day. The recent data shows traffic volumes are within but at the lower end of the historical range.

A two-lane collector street generally has a Level-of-Service (LOS) 'D' capacity of 11,300 vehicles per day. Consequently, the traffic volumes are well under the roadway capacity.

COLLISIONS

HCI obtained collision data from the Statewide Integrated Traffic Records System website (*i*-SWITRS) database to determine the number of collisions occurring on Nellie Gail Road from Glen Canyon Drive to Cabot Road between January 1, 2011 - June 30, 2017. Table 3 below presents the summary collision data.

TABLE 3
TRAFFIC COLLISIONS
NELLIE GAIL ROAD, GLEN CANYON DRIVE TO CABOT ROAD

YEAR	NUMBER OF COLLISIONS	FATAL	INJURY	PROPERTY DAMAGE ONLY
2011	2	0	1	1
2012	2	0	1	1
2013	2	0	1	1
2014	1	0	1	0
2015	3	0	1	2
2016	0	0	0	0
2017*	1	0	1	0

*Available SWITRS data was only up to June 2017 at the time of report preparation.

Out of the (11) total collisions reported, (3) were recorded as Rear-End, (3) were recorded as Hit Object, (4) were recorded as Broadside, and (1) was recorded as Head-On. The majority of the collisions were categorized as Improper Turning, Unsafe Starting and Backing, and Automobile Right of Way. Only one of these collisions was categorized as 'speed-related'. The comprehensive 6-year intersection collision history report is attached to this letter. Consequently, there are no other recommendations regarding collisions to provide at this time.

Mr. Kenneth Rosenfield, P.E.
August 8, 2017
Page 4 of 5

RECOMMENDATIONS

It is recommended that an incremental approach be taken to address travel speeds. Initial steps include increased law enforcement, along with use of a portable radar speed feedback trailer.

It has been our pleasure to prepare this letter of opinion regarding speeds, traffic volumes, and collisions on Nellie Gail Road, between Glen Canyon Drive and Cabot Road. If you may have any questions or need additional information, please feel free to call us at (714) 731-9455.

Sincerely,
HARTZOG & CRABILL, INC.



Gerald J. Stock, P.E., T.E.
Executive Vice President

Attachments: Speed Data
 ADT Count Data
 Collision History

Speed Data



RADAR SPEED DISTRIBUTION SHEET

CITY OF LAGUNA HILLS

NELLIE GAIL ROAD

DATE: 7/20/2017

TIME: 9:00 AM - 11:00 AM

GLEN CANYON DR TO DESERT TRAIL

SURVEY BY: C. BUENDIA

CHECKED BY: JERRY STOCK

[illegible]

UPPER LIMIT 10 MPH PACE: 32 MPH

LOWER LIMIT 10 MPH PACE: 23 MPH

PERCENT OVER PACE: 9.9 %

PERCENT IN PACE: 83.2 %

PERCENT UNDER PACE: 6.8 %

85th PERCENTILE SPEED: 31.1 MPH

MEDIAN SPEED: 27.6 MPH

15th PERCENTILE SPEED: 23.6 MPH

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC
Consulting Traffic Engineers
17532 Irvine Blvd., Suite 112, Irvine, CA 92614
(714) 751-5455

AGENCY: CITY OF LAGUNA HILLS
STREET: NELLIE GAIL ROAD
LOCATION: GLEN CANYON DR. TO DESERT TRAIL

WEATHER: SUNNY DATE: 07/20/19
ROAD CONDITION: DRY START TIME: 9:00 AM
OBSERVER: CATHY BUENDIA END TIME: 11:00 AM VAL

DIRECTION: <u>SOUTHBOUND</u>							
MPH	5	10	15	20	25	30	TOTAL
60							
59							
58							
57							
56							
55							
54							
53							
52							
51							
50							
49							
48							
47							
46							
45							
44							
43							
42							
41							
40							
39							
38							
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28							
27							
26							
25							
24							
23							
22							
21							
20							
19							
18							
17							
16							
15							

AVERAGE SPEED: 27.1 CRITICAL SPEED: 31.1 PACE SPEED: 24-33 (83.1)

CUMULATIVE (BOTH DIRECTIONS) CUM = 31.1, 27.6, 23-32, 83.2

DIRECTION: <u>NORTHBOUND</u>							
MPH	5	10	15	20	25	30	TOTAL
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: 28.0 CRITICAL SPEED: 31.0 PACE SPEED: 23-32 (85.0)

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
4	37
3	36
2	35
2	34
4	33
9	32
15	31
18	30
16	29
15	28
14	27
9	26
4	25
9	24
8	23
4	22
2	21
2	20
	19
0	18
0	17
0	16
1	15

RADAR SPEED DISTRIBUTION SHEET

HCl

CITY OF LAGUNA HILLS

NELLIE GAIL ROAD

DATE: 7/20/2017

TIME: 3:00 PM - 5:00 PM

DESERT TRAIL TO CABOT RD

SURVEY BY: C. BUENDIA

CHECKED BY: JERRY STOCK

SPEED		5	10	15	20	25	VEH.	PCT.	CUM. PCT.
60									100.0%
									100.0%
									100.0%
									100.0%
									100.0%
55									100.0%
									100.0%
									100.0%
									100.0%
									100.0%
50									100.0%
									100.0%
									100.0%
									100.0%
									100.0%
45									100.0%
									100.0%
									100.0%
									100.0%
									100.0%
40									100.0%
									100.0%
									100.0%
									100.0%
									100.0%
35									100.0%
									100.0%
	X X						2	1.2%	100.0%
	X X						2	1.2%	98.8%
	X X X X						4	2.3%	97.7%
30	X X X X X X X X X X						10	5.8%	95.3%
	X X X X X X X X X						9	5.2%	89.5%
	X X X X X X X X X X X X X X X X X X						20	11.6%	84.3%
	X X X X X X X X X X X X X X X X X X						20	11.6%	72.7%
	X X X X X X X X X X X X X X X X X X X						21	12.2%	61.0%
25	X X						28	16.3%	48.8%
	X X X X X X X X X X X X X X X X X X X						19	11.0%	32.6%
	X X X X X X X X X X X X X X X X						17	9.9%	21.5%
	X X X X X X X						7	4.1%	11.6%
	X X X X						4	2.3%	7.6%
20	X X X						3	1.7%	5.2%
	X X						2	1.2%	3.5%
							0	0.0%	2.3%
	X						1	0.6%	2.3%
	X						1	0.6%	1.7%
15	X X						2	1.2%	1.2%
	TOTAL VEHICLES						172		

UPPER LIMIT 10 MPH PACE:	31	MPH
LOWER LIMIT 10 MPH PACE:	22	MPH
PERCENT OVER PACE:	4.7	%
PERCENT IN PACE:	90.1	%
PERCENT UNDER PACE:	7.6	%

85th PERCENTILE SPEED:	28.1	MPH
MEDIAN SPEED:	25.1	MPH
15th PERCENTILE SPEED:	22.3	MPH

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
13532 Irvine Blvd., Suite 422, Irvine, CA 92618
(714) 751-5452

AGENCY: CITY OF LAGUNA HILLS
STREET: NELLIE GAIL ROAD
LOCATION: DESERT TRAIL TO CABOT RD
W/O DESERT TRAIL

WEATHER: SUNNY DATE: 07/20/17
ROAD CONDITION: DRY START TIME: 3:00 PM
OBSERVER: CATHY BUENDIA END TIME: 5:00 PM W/L

DIRECTION: <u>EASTBOUND</u>						
MPH	5	NUMBER OF VEHICLES				TOTAL
		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	/					1
31	/					3
30	/					2
29	/					10
28	/					7
27	/					3
26	/					13
25	/					9
24	/					3
23	/					4
22	/					2
21	/					2
20	/					0
19	/					0
18	/					0
17	/					2
16	/					2
15	/					2

AVERAGE SPEED: 24.6 CRITICAL SPEED: 27.4 PACE SPEED: 21-30 (89.3)
CUMULATIVE (BOTH DIRECTIONS) Cum = 28.1, 25.1, 22-31, 90.1

DIRECTION: <u>WESTBOUND</u>						
MPH	5	NUMBER OF VEHICLES				TOTAL
		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	/					2
32	/					3
31	/					10
30	/					9
29	/					20
28	/					13
27	/					8
26	/					15
25	/					10
24	/					6
23	/					4
22	/					0
21	/					3
20	/					2
19	/					0
18	/					0
17	/					1
16	/					2
15	/					2

AVERAGE SPEED: 25.9 CRITICAL SPEED: 29.0 PACE SPEED: 22-31 (95.4)

ADT Count Data

Prepared by NDS/ATD

VOLUME

Nellie Gail Rd Bet. Cabot Rd & Gallup Cir

Day: Tuesday
Date: 5/16/2017City: Laguna Hills
Project #: CA17_1110_071

DAILY TOTALS					NB	SB						EB	WB	Total	
					0	0						572	506	1,078	
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL			
00:00			1	0	1		12:00			8	9	17			
00:15			1	1	2		12:15			13	5	18			
00:30			0	0	0		12:30			10	13	23			
00:45			1	3	1	2	12:45			11	42	5	32	16	74
01:00			0	0	0		13:00			10	3	13			
01:15			0	0	0		13:15			10	3	13			
01:30			0	0	0		13:30			8	4	12			
01:45			0	1	1	1	13:45			10	38	11	21	21	59
02:00			0	1	1		14:00			20	9	29			
02:15			1	1	2		14:15			12	13	25			
02:30			0	0	0		14:30			10	10	20			
02:45			0	1	0	2	14:45			8	50	14	46	22	96
03:00			0	0	0		15:00			9	9	18			
03:15			0	0	0		15:15			10	12	22			
03:30			0	0	0		15:30			16	9	25			
03:45			0	0	0		15:45			14	49	14	44	28	93
04:00			0	0	0		16:00			8	13	21			
04:15			0	0	0		16:15			9	13	22			
04:30			0	0	0		16:30			14	5	19			
04:45			0	0	0		16:45			12	43	16	47	28	90
05:00			1	0	1		17:00			7	13	20			
05:15			2	0	2		17:15			14	10	24			
05:30			0	1	1		17:30			11	10	21			
05:45			1	4	1	2	17:45			8	40	4	37	12	77
06:00			2	3	5		18:00			12	14	26			
06:15			5	0	5		18:15			9	4	13			
06:30			5	2	7		18:30			7	11	18			
06:45			14	26	6	11	18:45			9	37	15	44	24	81
07:00			5	6	11		19:00			6	10	16			
07:15			5	4	9		19:15			3	7	10			
07:30			9	4	13		19:30			8	7	15			
07:45			12	31	8	22	19:45			3	20	5	29	8	49
08:00			21	11	32		20:00			6	4	10			
08:15			17	7	24		20:15			4	4	8			
08:30			15	8	23		20:30			2	4	6			
08:45			21	74	4	30	20:45			3	15	9	21	12	36
09:00			8	7	15		21:00			3	3	6			
09:15			4	10	14		21:15			4	6	10			
09:30			7	10	17		21:30			2	2	4			
09:45			8	27	4	31	21:45			1	10	0	11	1	21
10:00			9	6	15		22:00			0	2	2			
10:15			9	7	16		22:15			0	2	2			
10:30			5	6	11		22:30			2	1	3			
10:45			5	28	3	22	22:45			0	2	2	7	2	9
11:00			4	6	10		23:00			0	3	3			
11:15			6	8	14		23:15			0	0	0			
11:30			9	12	21		23:30			1	3	4			
11:45			11	30	10	36	23:45			1	2	2	8	3	10
TOTALS			224	159	383		TOTALS			348	347	695			
SPLIT %			58.5%	41.5%	35.5%		SPLIT %			50.1%	49.9%	64.5			

DAILY TOTALS					NB	SB						EB	WB	Total	
					0	0						572	506	1,078	
AM Peak Hour			08:00	11:15	08:00		PM Peak Hour			13:45	15:30	14:00			
AM Pk Volume			74	39	104		PM Pk Volume			52	49	96			
Pk Hr Factor			0.881	0.813	0.813		Pk Hr Factor			0.650	0.875	0.82			
7 - 9 Volume	0	0	105	52	157		4 - 6 Volume	0	0	83	84	167			
7 - 9 Peak Hour			08:00	07:45	08:00		4 - 6 Peak Hour			16:30	16:45	16:4			
7 - 9 Pk Volume	0	0	74	34	104		4 - 6 Pk Volume	0	0	47	49	93			
Pk Hr Factor	0.000	0.000	0.881	0.773	0.813		Pk Hr Factor	0.000	0.000	0.839	0.766	0.83			

Attachment: Nellie Gail Road Analysis (1379 : Review of Traffic Speed Conditions on Nellie Gail Road Between Glen Canyon Drive and Cabot

Collision History

CITY OF LAGUNA HILLS
SWITRS COLLISION DATABASE
NELLIE GAIL ROAD, FROM GLEN CANYON ROAD TO CABOT ROAD
JAN. 1, 2011 - JUNE 30, 2017

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	RC SU
4756517	20110505	815	NELLIE GAIL RD	CABOT RD	0		Y	A	0	A	21	22106	N	C	C	/
5341591	20110831	1756	NELLIE GAIL RD	DESERT TRL RD	252	E	N	A	3	A	8	22100	N	D	C	/
5491652	20120208	400	NELLIE GAIL RD	DESERT TRL	105	E	N	B	0	A	8	22107	M	E	I	/
5503234	20120211	1700	NELLIE GAIL RD	DESERT TRAIL RD	283	E	N	B	3	A	3	22350	N	E	I	/
6110585	20130521	1719	NELLIE GAIL RD	DESERT TRL	23	E	N	A	0	A	21	22106	N	E	I	/
6131538	20130613	1835	NELLIE GAIL RD	HITCHING RAIL RD	0		Y	A	3	A	9	21801	N	D	C	/
6605588	20140804	1740	NELLIE GAIL RD	HITCHING RAIL RD	0		Y	A	4	A	9	21801	N	D	C	/
6831972	20150214	1540	NELLIE GAIL RD	PRAIRIESTONE DR	254	E	N	A	0	A	8	22103	N	D	C	/
7103942	20150925	1700	NELLIE GAIL RD	CABOT RD	37	W	N	A	0	A	21	22106	M	C	C	/
7094516	20150928	1242	NELLIE GAIL	CABOT RD	0		Y	A	0	A	3	22350	N	A	I	/
8328632	20170108	1001	NELLIE GAIL RD	BUCKLESTONE DR	192	W	N	A	2	A	8	22107	N	C	E	/

Attachment: Nellie Gail Road Analysis (1379 : Review of Traffic Speed Conditions on Nellie Gail Road

CITY OF LAGUNA HILLS
SWITRS COLLISION DATABASE
NELLIE GAIL ROAD, FROM GLEN CANYON ROAD TO CABOT ROAD
JAN. 1, 2011 - JUNE 30, 2017

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	RC SU
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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: September 20, 2017
TO: Traffic Commissioners
FROM: Kenneth H. Rosenfield P.E.
Director of Public Services/City Engineer
ISSUE: Review of Traffic Speed Conditions on Rapid Falls Road Between Lost Trail Drive and Cabot Road

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

SUMMARY:

Staff was recently contacted by a resident regarding concerns of vehicular speeding on Rapid Falls Road approaching Cabot Road. 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 travel speeds and traffic collision history on Rapid Falls Road between Lost Trail Drive and Cabot Road.

The speed surveys, performed by Hartzog & Crabill, Inc., attached, determined the 85th percentile speeds on Rapid Falls Road as 34.8 mph and 31.3 mph, west of and east of Sundowner Drive, respectively. While the regulatory speed limit on a residential street is 25 mph (and, in this case 30 mph east of Sundowner Drive), Staff's experience has found the typical prevailing speed range on residential streets in the City as being between 32 and 34 mph, without adverse traffic collision history. The 85th percentile speeds determined in this speed survey are relatively consistent with our experience although the 85th percentile speed west of Sundowner Drive was slightly exceeding this range.

A six-year traffic collision history report was prepared and, of the four traffic collisions reported, none were categorized as speed-related. Consequently, no change to traffic controls is proposed but speed enforcement is recommended. As available, police enforcement of driver behavior will be pursued as the best remedy for this location and

Review of Traffic Speed Conditions on Rapid Falls Road Between Lost Trail Drive and Cabot Road

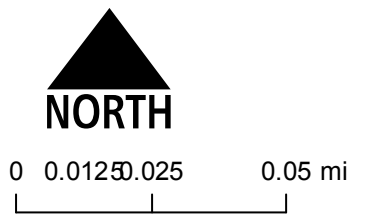
September 20, 2017

Page 2

issue of concern. Staff will work with the Sheriff's Department on enforcement activity in this area and we will also post the radar trailer in this area to increase driver education as to the appropriate speed on Rapid Falls Road.

ATTACHMENTS:

- Vicinity Map
- Rapid Falls Road Analysis



VICINITY MAP - RAPID FALLS RD BETWEEN LOST TRAIL DR & CABOT RD





Trammell Hartzog, President
 Gerald J. Stock, P.E.,
 Executive Vice President

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

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

www.hartzog-crabill.com

August 7, 2017

Mr. Kenneth Rosenfield, P.E.
 Director of Public Services
City of Laguna Hills
 24045 El Toro Road
 Laguna Hills, CA 92653

**Subject: Traffic Data Evaluation - Letter of Opinion -
 Speeding and Collision Concerns along Rapid Falls Road
 between Lost Trail Drive and Cabot Road**

Dear Mr. Rosenfield,

Pursuant to your request, Hartzog & Crabill, Inc. (HCI) has prepared this traffic engineering review regarding residents concerns of speeding and collisions on Rapid Falls Road between Lost Trail Drive and Cabot Road.

BACKGROUND

Rapid Falls Road, between Lost Trail Drive and Cabot Road, is a 40-foot, 2-lane, east-west residential collector roadway. The westerly intersection of Rapid Falls Road at Lost Trail Drive is controlled by a 3-way stop, while the easterly intersection of Rapid Falls Road at Cabot Road is controlled by a traffic signal. At its eastbound approach to Cabot Road, the roadway width increases to 50-feet and provides one left-turn lane and one right-turn lane.

The posted speed limit on Rapid Falls Road is 25 MPH between Lost Trail Drive and Sundowner Drive, and 30 MPH between Sundowner Drive and Cabot Road. On-street parking is prohibited along the north-side of Rapid Falls Road, while the south-side is permit parking only.

TRAVEL SPEEDS

To determine travel speeds on Rapid Falls Road, a speed-count survey was conducted at two separate locations along this residential collector roadway on Wednesday, July 19, 2017.

The speed data from Lost Trail Drive to Sundowner Drive was collected between 9:00am - 11:00am, and the data from Sundowner Drive to Cabot Road was collected between 3:00pm - 5:00pm.

Table 1 on the next page summarizes the speed survey data. The speed-count survey data is attached to this letter.

Mr. Kenneth Rosenfield, P.E.

August 7, 2017

Page 2 of 5

TRAVEL SPEEDS *(continued)*

TABLE 1
SPEED SURVEY SUMMARY
RAPID FALLS ROAD, LOST TRAIL DRIVE TO CABOT ROAD

Radar Speed Survey Summary	West of Sundowner Drive	East of Sundowner Drive
85th Percentile Speed	34.8 MPH	31.3 MPH
Median Speed	30.6 MPH	27.7 MPH
15th Percentile Speed	26.3 MPH	25.1 MPH
10 MPH Pace	27 to 36 MPH	24 to 33 MPH
Percent in 10 MPH Pace	78.7%	93.7%

Source: Hartzog & Crabill, Inc., 2017.

As shown above, the 85th percentile speeds on Rapid Falls Road are 34.8 MPH and 31.3 MPH, west of and east of Sundowner Drive, respectively. This data shows that higher travel speeds are occurring west of Sundowner Drive when compared with the east-side data.

TRAFFIC VOLUMES

Traffic counts were also gathered for the segment of Rapid Falls Road between Lost Trail Drive and Cabot Road to assess if traffic volumes have increased on this segment of Rapid Falls Road. The existing traffic volume data had been collected on Tuesday, May 9, 2017. The most recent traffic count data shows that the Average Daily Traffic (ADT) - 24-hour two-way traffic volumes along this segment is approximately 2,000 vehicles. The traffic counts are shown in the attached speed-count data.

Table 2 below presents historical, as well as the most recent traffic volumes on Rapid Falls Road.

TABLE 2
HISTORICAL TRAFFIC VOLUMES
RAPID FALLS ROAD, LOST TRAIL DRIVE TO CABOT ROAD

YEAR	24-HOUR VOLUMES *
2005	2,500
2007	2,600
2009	2,400
2011	2,400
2013	2,000
2015	2,300
2017	2,000

* Rounded to the nearest 100 vehicles.

Mr. Kenneth Rosenfield, P.E.

August 7, 2017

Page 3 of 5

TRAFFIC VOLUMES *(continued)*

The above data shows that, between 2005 and 2017, traffic volumes range from a high of 2,600 vehicles per day to a low of 2,000 vehicles per day. The recent data shows traffic volumes are within but at the lower end of the historical range.

A two-lane collector street generally has a Level-of-Service (LOS) 'D' capacity of 11,300 vehicles per day. Consequently, the traffic volumes are well under the roadway capacity.

COLLISIONS

HCI obtained collision data from the Statewide Integrated Traffic Records System website (i-SWITRS) database to determine the number of collisions occurring on Rapid Falls Road from Lost Trail Drive to Cabot Road between January 1, 2011 - June 30, 2017. Table 3 below presents the summary collision data.

TABLE 3
TRAFFIC COLLISIONS
RAPID FALLS ROAD, LOST TRAIL DRIVE TO CABOT ROAD

YEAR	NUMBER OF COLLISIONS	FATAL	INJURY	PROPERTY DAMAGE ONLY
2011	1	0	0	1
2012	0	0	0	0
2013	1	0	1	0
2014	0	0	0	0
2015	1	0	1	0
2016	1	0	0	1
2017 *	0	0	0	0

* Available SWITRS data was only up to June 2017 at the time of report preparation.

Out of the (4) total collisions reported, (2) were recorded as Hit Object, (1) was recorded as Broadside, and (1) was not defined. Of the three defined collisions, one was categorized as Driving Under the Influence (DUI), while two others indicated Improper Turning and Unsafe Starting and Backing. The comprehensive 6-year intersection collision history report is attached to this letter. There were no collisions determined as 'speed-related'. Consequently, there are no other recommendations regarding collisions to provide at this time.

Mr. Kenneth Rosenfield, P.E.
August 7, 2017
Page 4 of 5

RECOMMENDATION

It is recommended that an incremental approach be taken to address travel speeds. Initial steps include increased law enforcement, along with use of a portable radar speed feedback trailer.

It has been our pleasure to prepare this letter of opinion regarding speeds, traffic volumes, and collisions on Rapid Falls Road, between Lost Trail Drive and Cabot Road. If you may have any questions or need additional information, please feel free to call us at (714) 731-9455.

Sincerely,
HARTZOG & CRABILL, INC.



Gerald J. Stock, P.E., T.E.
Executive Vice President

Attachments: Speed Data
 ADT Count Data
 Collision History

Speed Data

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF LAGUNA HILLS

RAPID FALLS ROAD

DATE: 7/19/2017

TIME: 9:00 AM - 11:00 AM

LOST TRAIL DR TO SUNDOWNER DR

SURVEY BY: C. BUENDIA

CHECKED BY: JERRY STOCK

SPEED	NUMBER OF VEHICLES										VEH.	PCT.	CUM. PCT.
	5	10	15	20	25	30	35	40	45	50			
60													100.0%
													100.0%
													100.0%
													100.0%
55													100.0%
													100.0%
													100.0%
													100.0%
50													100.0%
													100.0%
													100.0%
													100.0%
45													100.0%
													100.0%
													100.0%
													100.0%
	X	X									2	1.2%	100.0%
											0	0.0%	98.8%
40	X	X									2	1.2%	98.8%
	X										1	0.6%	97.6%
	X	X	X	X							4	2.4%	97.0%
	X	X	X	X	X						5	3.0%	94.7%
	X	X	X	X	X	X	X				8	4.7%	91.7%
35	X	X	X	X	X	X	X	X	X	X	15	8.9%	87.0%
	X	X	X	X	X	X	X	X	X	X	15	8.9%	78.1%
	X	X	X	X	X	X	X	X	X	X	15	8.9%	69.2%
	X	X	X	X	X	X	X	X	X		11	6.5%	60.4%
	X	X	X	X	X	X	X	X	X	X	15	8.9%	53.8%
30	X	X	X	X	X	X	X	X	X	X	16	9.5%	45.0%
	X	X	X	X	X	X	X	X	X	X	16	9.5%	35.5%
	X	X	X	X	X	X	X	X	X	X	12	7.1%	26.0%
	X	X	X	X	X	X	X	X			10	5.9%	18.9%
	X	X	X	X	X	X	X				8	4.7%	13.0%
25	X	X	X	X	X	X	X				8	4.7%	8.3%
	X	X	X								3	1.8%	3.6%
	X										1	0.6%	1.8%
											0	0.0%	1.2%
	X										1	0.6%	1.2%
20											0	0.0%	0.6%
	X										1	0.6%	0.6%
													0.0%
													0.0%
													0.0%
15													0.0%
TOTAL VEHICLES											169		

UPPER LIMIT 10 MPH PACE: 36 MPH

LOWER LIMIT 10 MPH PACE: 27 MPH

PERCENT OVER PACE: 13.0 %

PERCENT IN PACE: 78.7 %

PERCENT UNDER PACE: 13.0 %

85th PERCENTILE SPEED: 34.8 MPH

MEDIAN SPEED: 30.6 MPH

15th PERCENTILE SPEED: 26.3 MPH

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17532 Irvine Blvd., Suite 122, Irvine, CA 92610
(714) 731-5452

AGENCY: CITY OF LAGUNA HILLS
STREET: RAPID FALLS ROAD
LOCATION: LOST TRAIL DR TO SUNDOWNER DR

WEATHER: SUNNY DATE: 07/19/17
ROAD CONDITION: DRY START TIME: 9:00 AM
OBSERVER: CATHY BUENDIA END TIME: 11:00 AM VCM

DIRECTION: <u>WESTBOUND</u>						
MPH	5	NUMBER OF VEHICLES				TOTAL
		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: 29.4 CRITICAL SPEED: 33.8 PACE SPEED: 25-34 (32.6)

CUMULATIVE (BOTH DIRECTIONS) CUM 34.8, 30.6, 27-36, 28.7

DIRECTION: <u>EASTBOUND</u>						
MPH	5	NUMBER OF VEHICLES				TOTAL
		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: 32.3 CRITICAL SPEED: 36.1 PACE SPEED: 29-38 29.2

Rapid falls 1



RADAR SPEED DISTRIBUTION SHEET

CITY OF LAGUNA HILLS

RAPID FALLS ROAD

DATE: 7/19/2017

TIME: 3:00 PM - 5:00 PM

SUNDOWNER DR TO CABOT RD

SURVEY BY: C. BUENDIA

CHECKED BY: JERRY STOCK

[illegible]

UPPER LIMIT 10 MPH PACE: 33 MPH

LOWER LIMIT 10 MPH PACE: 24 MPH

PERCENT OVER PACE: 4.7 %

PERCENT IN PACE: 93.7 %

PERCENT UNDER PACE: 1.6 %

85th PERCENTILE SPEED: 31.3 MPH

MEDIAN SPEED: 27.7 MPH

15th PERCENTILE SPEED: 25.1 MPH

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC
Consulting Traffic Engineers
17532 Irvine Blvd., Suite 122, Irvine, CA 92618
(714) 731-5452

AGENCY: CITY OF LAGUNA HILLS
STREET: RAPID FALLS ROAD
LOCATION: SUNDOWNER DR TO CABOT RD
E/O SUNDOWNER

WEATHER: SUNNY DATE: 07/19/17
ROAD CONDITION: DRY START TIME: 3:00 PM
OBSERVER: CATHY BUENDIA END TIME: 5:00 PM 1/4H

DIRECTION: <u>EAST BOUND</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	/	/					3
32	/	/	/				7
31	/	/	/	/			4
30	/	/	/	/	/		12
29	/	/	/	/	/		10
28	/	/	/	/	/		8
27	/	/	/	/	/		8
26	/	/	/	/	/		5
25	/	/	/	/	/		5
24	/	/	/	/	/		0
23	/	/	/	/	/		0
22	/	/	/	/	/		0
21	/	/	/	/	/		0
20	/	/	/	/	/		0
19	/	/	/	/	/		0
18	/	/	/	/	/		0
17	/	/	/	/	/		0
16	/	/	/	/	/		0
15	/	/	/	/	/		0

AVERAGE SPEED: 27.2 CRITICAL SPEED: 30.5 PACE SPEED: 24-33 (93.7)

CUMULATIVE (BOTH DIRECTIONS) CUM = 31.3, 27.7, 24-33, 93.7

DIRECTION: <u>WEST BOUND</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	/						1
35	/						2
34	/	/					5
33	/	/	/				9
32	/	/	/	/			15
31	/	/	/	/	/		15
30	/	/	/	/	/		20
29	/	/	/	/	/		22
28	/	/	/	/	/		18
27	/	/	/	/	/		33
26	/	/	/	/	/		23
25	/	/	/	/	/		16
24	/	/	/	/	/		7
23	/	/	/	/	/		2
22	/	/	/	/	/		0
21	/	/	/	/	/		0
20	/	/	/	/	/		0
19	/	/	/	/	/		1
18	/	/	/	/	/		1
17	/	/	/	/	/		1
16	/	/	/	/	/		1
15	/	/	/	/	/		1

AVERAGE SPEED: 28.3 CRITICAL SPEED: 31.8 PACE SPEED: 25-34 (93.8)

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
1	36
2	35
5	34
9	33
15	32
15	31
20	30
22	29
18	28
33	27
23	26
16	25
7	24
2	23
0	22
0	21
0	20
1	19
	18
	17
	16
	15

RAPID FALLS 2 Spot Spd 2

ADT Count Data

Prepared by NDS/ATD

VOLUME

Rapid Falls Rd Bet. Lost Trail Dr & Cabot Rd

Day: Tuesday
Date: 5/9/2017City: Laguna Hills
Project #: CA17_1110_005

DAILY TOTALS					NB	SB	EB				WB	Total	
					0	0					1,018	993	2,011
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL		
00:00			1	2	3	12:00			18	11	29		
00:15			0	1	1	12:15			17	22	39		
00:30			2	1	3	12:30			13	9	22		
00:45			0	3	1	12:45			16	64	12		
01:00			1	0	1	13:00			16	17	33		
01:15			0	1	1	13:15			17	8	25		
01:30			0	0	0	13:30			14	15	29		
01:45			0	1	0	13:45			30	77	22		
02:00			0	1	1	14:00			22	12	34		
02:15			0	0	0	14:15			15	9	24		
02:30			1	0	1	14:30			22	22	44		
02:45			0	1	0	14:45			12	71	24		
03:00			0	0	0	15:00			17	14	31		
03:15			1	1	2	15:15			15	21	36		
03:30			0	1	1	15:30			22	18	40		
03:45			0	1	0	15:45			22	76	22		
04:00			0	0	0	16:00			20	24	44		
04:15			1	0	1	16:15			21	21	42		
04:30			1	2	3	16:30			20	20	40		
04:45			2	4	0	16:45			21	82	19		
05:00			0	1	1	17:00			17	26	43		
05:15			1	0	1	17:15			19	18	37		
05:30			6	3	9	17:30			21	25	46		
05:45			3	10	0	17:45			13	70	20		
06:00			3	2	5	18:00			13	17	30		
06:15			5	4	9	18:15			23	22	45		
06:30			18	8	26	18:30			12	20	32		
06:45			14	40	4	18:45			11	59	22		
07:00			14	7	21	19:00			15	8	23		
07:15			16	6	22	19:15			12	21	33		
07:30			21	13	34	19:30			11	14	25		
07:45			24	75	18	19:45			5	43	12		
08:00			19	13	32	20:00			6	10	16		
08:15			23	19	42	20:15			4	14	18		
08:30			23	16	39	20:30			5	11	16		
08:45			19	84	18	20:45			7	22	13		
09:00			22	17	39	21:00			3	10	13		
09:15			23	15	38	21:15			2	12	14		
09:30			19	10	29	21:30			1	5	6		
09:45			11	75	15	21:45			1	7	8		
10:00			20	18	38	22:00			1	10	11		
10:15			27	13	40	22:15			4	7	11		
10:30			13	16	29	22:30			4	5	9		
10:45			17	77	7	22:45			3	12	2		
11:00			14	16	30	23:00			0	2	2		
11:15			18	11	29	23:15			0	1	1		
11:30			12	21	33	23:30			3	2	5		
11:45			16	60	12	23:45			1	4	0		
TOTALS	431				314	745	TOTALS	587				679	1266
SPLIT %	57.9%				42.1%	37.0%	SPLIT %	46.4%				53.6%	63.0%

DAILY TOTALS			NB	SB	EB			WB			Total
			0	0							1,018
AM Peak Hour			07:45	08:15	08:15	PM Peak Hour			13:45	17:00	15:30
AM Pk Volume			89	70	157	PM Pk Volume			89	89	178
Pk Hr Factor			0.927	0.921	0.935	Pk Hr Factor			0.742	0.856	0.960
7 - 9 Volume	0	0	159	110	269	4 - 6 Volume	0	0	152	173	325
7 - 9 Peak Hour			07:45	07:45	07:45	4 - 6 Peak Hour			16:00	17:00	16:00
7 - 9 Pk Volume	0	0	89	66	155	4 - 6 Pk Volume	0	0	82	89	166
Pk Hr Factor	0.000	0.000	0.927	0.868	0.923	Pk Hr Factor	0.000	0.000	0.976	0.856	0.940

Attachment: Rapid Falls Road Analysis (1380) : Review of Traffic Speed Conditions on Rapid Falls Road Between Lost Trail Drive and Cabot

Collision History

CITY OF LAGUNA HILLS
SWITRS COLLISION DATABASE
RAPID FALLS RD, FROM LOST TRAIL DRIVE TO CABOT ROAD
JAN. 1, 2011 - JUNE 30, 2017

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	RC SU
5293388	20110716	1750	RAPID FALLS RD	SUNDOWNER DR	118	W	N	A	0	A	8	22107	N	E	I	,
6153377	20130622	950	RAPID FALLS	SUN DOWNER	0		Y	A	3	A	12	22450	N	D	G	,
7041347	20150716	2328	RAPID FALLS RD	SUNDOWNER DR	4	W	N	A	2	A	1	23152	N	E	I	,
8089739	20160817	1620	RAPID FALLS RD	SUNDOWN DR	545	W	N	A	0	A	21	22106	N	H	E	,

NOTES:

Weather 1	Collision Severity	Primary Collision Factor	PCF Violation Category	Hit and Run	Type of Collision
A - Clear	1 - Fatal	A - (Vehicle) Code Violation	01 - Driving or Bicycling Under Influence	F - Felony	A - Head-On
B - Cloudy	2 - Injury (Severe)	B - Other Improper Driving	02 - Impeding Traffic	M - Misdemeanor	B - Sideswipe
C - Raining	3 - Injury (Other Visible)	C - Other Than Driver	03 - Unsafe Speed	N - Not Hit & Run	C - Rear-End
D - Snowing	4 - Injury (Complaint of Pain)	D - Unknown	04 - Following Too Closely		D - Broadside
E - Fog	0 - PDO (Property Damage Only)	E - Fell Asleep	05 - Wrong Side of Road		E - Hit Object
F - Other		- - Not Stated	06 - Improper Passing		F - Overturned
G - Wind			07 - Unsafe Lane Change		G - Vehicle/Pedestrian
- - Not Stated			08 - Improper Turning		H - Other
			09 - Automobile ROW		- - Not Stated
			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		

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: September 20, 2017
TO: Traffic Commissioners
FROM: Kenneth H. Rosenfield P.E.
Director of Public Services/City Engineer
ISSUE: 2017 Traffic Flow Map

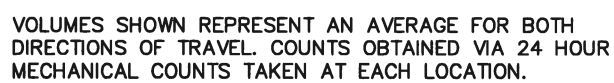
RECOMMENDATION: That the Traffic Commission Receive and File the Report.

SUMMARY:

The City performs traffic 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 2017 Traffic Flow Map along with an Average Daily Traffic (ADT) count for the arterials and collector streets in the City. The 2017 Traffic Flow Map has been attached to this report.

ATTACHMENTS:

- 2017 Traffic Flow Map



CITY OF LAGUNA HILLS

AVERAGE DAILY
TRAFFIC VOLUMES
(24-HOUR TWO-WAY TRAFFIC)

2017

LOCATION2005200720092011201320152017

ALAMEDA AVENUE
Aliso Hills Drive to La Paz Road

ALICIA PARKWAY
I-5 Fwy to Hon Ave./P.D. Alicia
Hon Ave./P.D. Alicia to Costeau Street
Costeau Street to Wilkes Place
Wilkes Place to P.D. Valencia
P.D. Valencia to Aliso Hills Drive
Aliso Hills Drive to Moulton Parkway
Moulton Parkway to Ramona St.

ALISO HILLS DRIVE
Alicia Parkway to Alameda Avenue
Alameda Avenue to La Paz Road

AVENIDA DE LA CARLOTA

Lake Forest Drive to Ridge Route Drive
Ridge Route Drive to P.D. Valencia
P.D. Valencia to El Toro Rd.
EL Toro Rd. to South of Mall
South of Mall to Los Alisos Boulevard

BRIDLEWOOD DRIVE

Nellie Gail Road to Oso Parkway
Oso Parkway to Vista Viejo

CABOT ROAD

La Paz Road to P.D. Valencia
P.D. Valencia to Nellie Gail Rd.
Nellie Gail Rd. to El Paseo
El Paseo to Oso Parkway
Oso Parkway to Vista Viejo
Rapid Falls Rd. to South City Limits

DEL LAGO DRIVE

Lake Forest Drive to Alcalde Drive

EL PASEO

East of Cabot Road

EL TORO ROAD

P.D. Valencia to Avenida De La Carlota
Avenida De La Carlota to I-5 Fwy.

GALLUP CIRCLE

La Paz Rd. to Nellie Gail Rd.

GORDON ROAD

Moulton Pkwy to East End.

GREENFIELD DRIVE

South City Limits to Hidden Trail Road.

HIDDEN TRAIL ROAD

Nellie Gail Road to Rapid Falls Road
Rapid Falls Road to Greenfield Drive

HON AVENUE

Alicia Parkway to Julie Avenue

INDIAN HILLS DRIVE

Moulton Parkway to Laguna Hills Drive

LAGUNA HILLS DRIVE

Moulton Parkway to Paseo De Valencia

LOCATION

LA PAZ ROAD

I-5 Fwy to Cabot Road
Cabot Road to P.D. Valencia
P.D. Valencia to Aliso Hills Drive
Aliso Hills Drive to Alameda Avenue
Alameda Avenue to Moulton Parkway
Moulton Parkway to SR-73

LAKE FOREST DRIVE

Ave. De La Carlota to Del Lago Drive
Del Lago Drive to Moulton Parkway
Moulton Parkway to Mill Creek
Mill Creek to Santa Vittoria Drive

LOS ALISOS BOULEVARD

P.D. Valencia to Ave. De La Carlota
Ave. De La Carlota to East City Limits

LOUISA STREET

Moulton Parkway to Lupita St.

MILL CREEK DRIVE

Lake Forest Drive to Ridge Route Drive

MOULTON PARKWAY

Lake Forest Drive to Ridge Route Drive
Ridge Route Drive to Santa Maria Avenue
Glenwood Drive to Laguna Hills Drive
Laguna Hills Drive to Alicia Parkway
Alicia Parkway to La Paz Road
La Paz Road to Oso Parkway
Oso Parkway to Nellie Gail Road

NELLIE GAIL ROAD

Cabot Road to Gallup Circle
Gallup Circle to Bridlewood Drive
Bridlewood Drive to Buckskin Drive
Buckskin Drive to Oso Parkway
Oso Parkway to Hidden Trail Road
Hidden Trail Road to Moulton Parkway

OSO PARKWAY

West City Limits to Moulton Parkway
Moulton Parkway to Nellie Gail Road
Nellie Gail Road to Bridlewood Drive
Bridlewood Drive to Cabot Road
Cabot Road to I-5 Fwy.

PASEO DE VALENCIA

Avenida De La Carlota to El Toro Road
El Toro Road to Health Center Drive
Health Center Drive to Los Alisos Boulevard
Los Alisos Boulevard to Kennington Drive
Kennington Drive to Laguna Hills Drive
Laguna Hills Drive to Alicia Parkway
Alicia Parkway to La Paz Road
La Paz Road to Cabot Road

RAPID FALLS ROAD

Hidden Trail Road to Lost Trail Drive
Lost Trail Drive to Cabot Road

RIDGE ROUTE DRIVE

West City Limits to Moulton Parkway
Moulton Parkway to Peralta Drive
Peralta Drive to Avenida De La Carlota

SAN REINO DRIVE

Santa Vittoria to Santa Maria Avenue

SANTA MARIA AVENUE

Santa Vittoria to Moulton Parkway

SANTA VITTORIA DRIVE

Lake Forest Drive to Ridge Route Drive
Ridge Route Drive to Santa Maria Avenue

VIA LOMAS

Moulton Parkway to Alicia Parkway

VISTA VIEJO

East of Bridlewood Drive

2005

2007

2009

2011

2013

2015

2017

2017



City of Laguna Hills

Traffic Commission

Staff Report

DATE: September 20, 2017
TO: Traffic Commissioners
FROM: Kenneth H. Rosenfield P.E.
Director of Public Services/City Engineer
ISSUE: Dynamic Speed Feedback Signs

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

SUMMARY:

Based upon a request by the Traffic Commission, Staff performed a literature review on the effectiveness of dynamic speed feedback signs (DSFS). DSFS are traffic control devices programmed to provide drivers with feedback about their speed in relationship to the posted speed limit. We refer to our DSFS as a "Radar Speed Trailer." Several published studies were reviewed and their conclusions about the effectiveness of DSFS were mixed.

In a report, *Dynamic Speed Feedback Signs (2014)*, which primarily focused on the effectiveness of DSFS implemented on curves, a study by the City of Bellevue, Washington (2009) evaluated DSFS systems on urban two-lane roads (25-35 mph speed limits) and concluded moderate reductions were noted in the mean and 85th percentile speeds, and reductions were sustained across the two-year period of DSFS evaluation.

The article *Spotlighting Speed Feedback Signs (2016)* focused on the effectiveness of DSFS on two-lane rural curves based upon an FHWA study of sites in seven states. The results of the study indicated the DSFS were reasonably effective in reducing both vehicle speeds and crashes, and the observed reductions were maintained for more than two years.

Dynamic Speed Feedback Signs

September 20, 2017

Page 2

The paper *Spatial Effectiveness of Speed Feedback Signs* (2012) studied the speed trajectories of vehicles as they approached and receded from DSFS. The study concluded the long-term effectiveness of DSFS in slowing drivers is questionable and the findings also suggested that once drivers pass the DSFS, the speed reduction effectiveness is lost.

The report *Evaluating the Effectiveness of Dynamic Speed Display Signs* (2012) focused on the results of a survey of Maryland drivers and vehicle speed data collected upstream and downstream of DSFS along different corridors. The study concluded the DSFS are effective as a temporary solution and for short distances.

Although the results of the studies are mixed, Staff considers the DSFS to be an educational device and one tool in addressing resident concerns of vehicle speeds.

Staff will have the below listed reference reports at the Commission meeting should there be an interest in any further review of the information. Staff will also provide a review of the specific effectiveness of the City's Radar Speed Trailer at a future meeting. This is an informational item and no action is required by the Traffic Commission.

REFERENCES:

Hallmark, Shauna and Neal Hawkins. *Dynamic Speed Feedback Signs*. Tech Transfer Summaries, 2014.

Zineddin, Abdul, Shauna Hallmark, Omar Smadi, and Neal Hawkins. *Spotlighting Speed Feedback Signs*. Federal Highway Administration, 2016.

Santiago-Chaparro, Kelvin, Madhav Chitturi, Andrea Bill, and David Noyce. *Spatial Effectiveness of Speed Feedback Signs*. Transportation Research Record Journal of the Transportation Research Board, 2012.

Jeihani, Mansoureh, Anam Ardeshiri, and Amir Naeeni. *Evaluating the Effectiveness of Dynamic Speed Display Signs*. National Transportation Center of Morgan State University, 2012.



City of Laguna Hills

Traffic Commission

Staff Report

DATE: September 20, 2017
TO: Traffic Commissioners
FROM: Kenneth H. Rosenfield P.E.
Director of Public Services/City Engineer
ISSUE: Citywide Street Maintenance Project

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

SUMMARY:

On a biennial basis, The City implements a Capital Improvement Project (CIP) to perform maintenance on a portion of the City's street system. A currently planned project, known as CIP No. 101-J, will perform pavement maintenance, including either a slurry seal or asphalt concrete overlay, on selected streets in accordance with the City's Pavement Management Plan for the preservation of this asset. The streets included are in the following areas and are more particularly shown on the attached plans.

1. Zone A – selected streets southerly of Oso Parkway.
2. Zone D – selected streets in the area bounded by Alicia Parkway, I-5, La Paz Road, and Paseo de Valencia.
3. Zone E – all streets bounded by Los Alisos Boulevard, I-5, Aliso Creek, and Paseo de Valencia, including the construction of access ramps.
4. Alternate Bid 2 – a portion of Paseo de Valencia from El Toro Road to approximately 200 feet northerly.

The Citywide Street Maintenance Project, CIP No. 101-J, was approved as part of the Fiscal Year 2017/2018 Capital Improvement Program Budget. The Project was advertised for bids, and the Contract was awarded by the City Council to the low bidder, Hardy & Harper, Inc., in the amount of \$1.1 million on September 12, 2017. It is anticipated construction work will begin in late October 2017, for a period of three months.

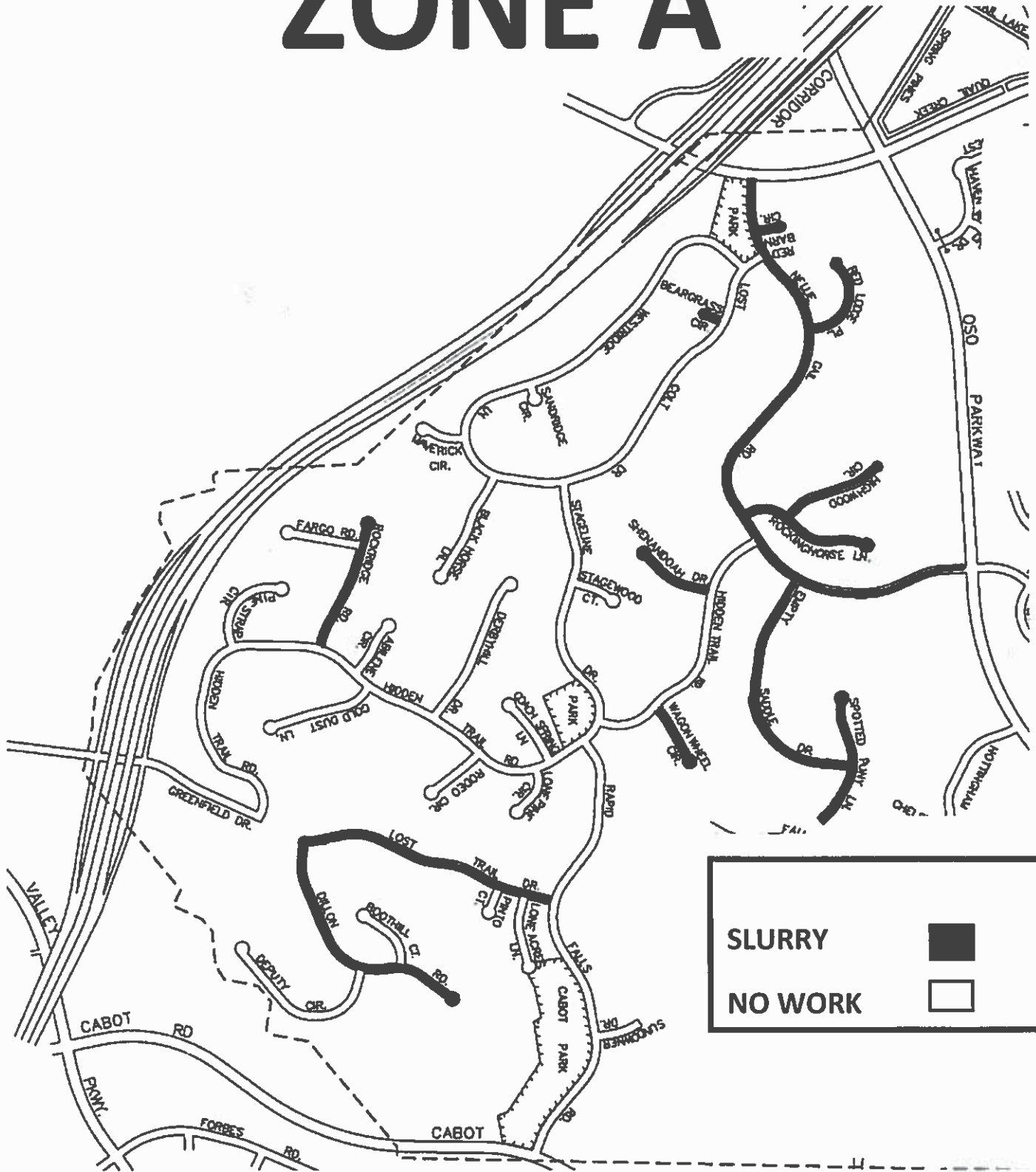
Citywide Street Maintenance Project
September 20, 2017
Page 2

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

ATTACHMENTS:

- Zone A D E Maps

ZONE A

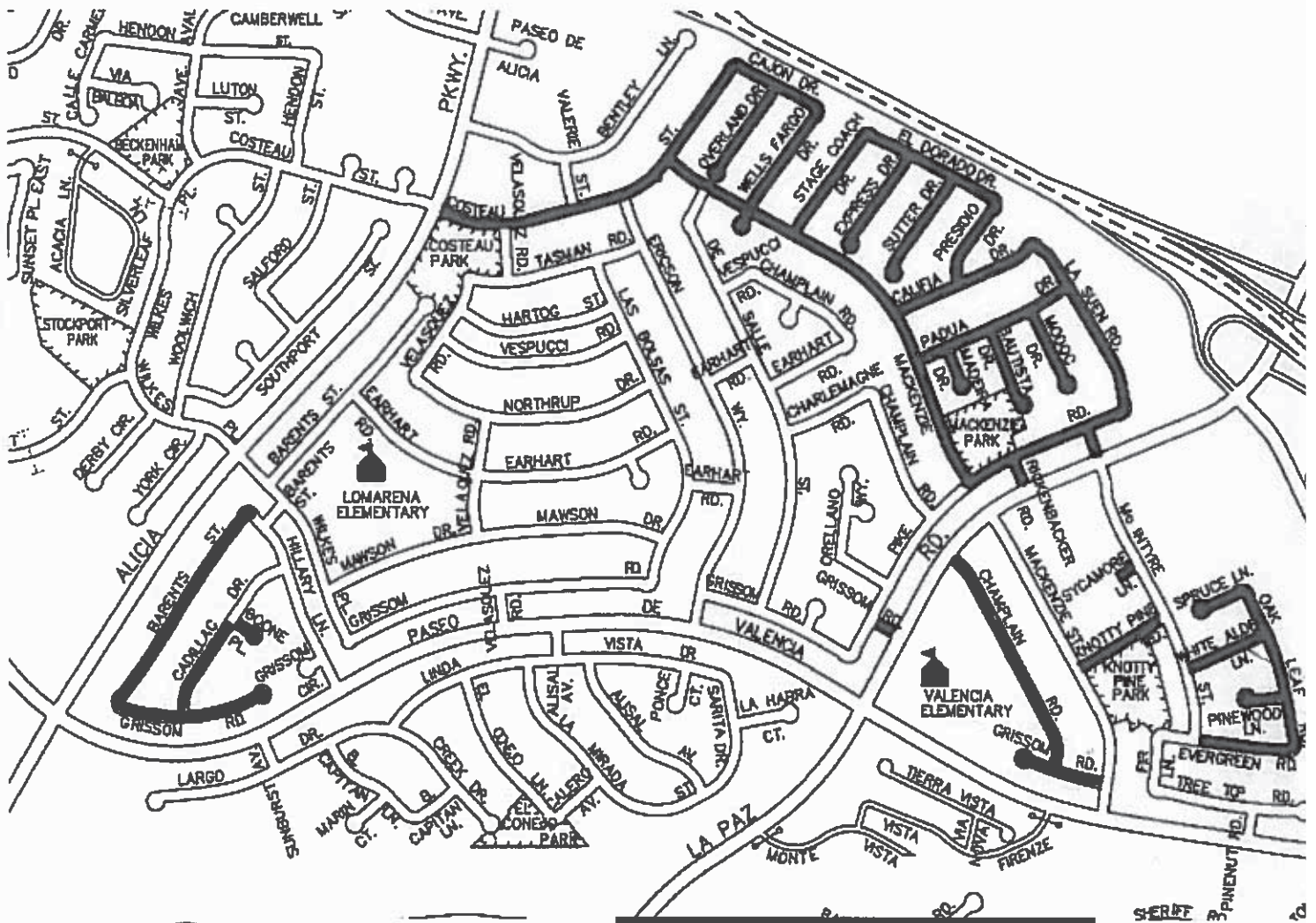


Attachment: Zone A D E Maps (1382 : Citywide Street Maintenance Project)



CITY OF LAGUNA HILLS

ZONE D



CITY OF LAGUNA HILLS

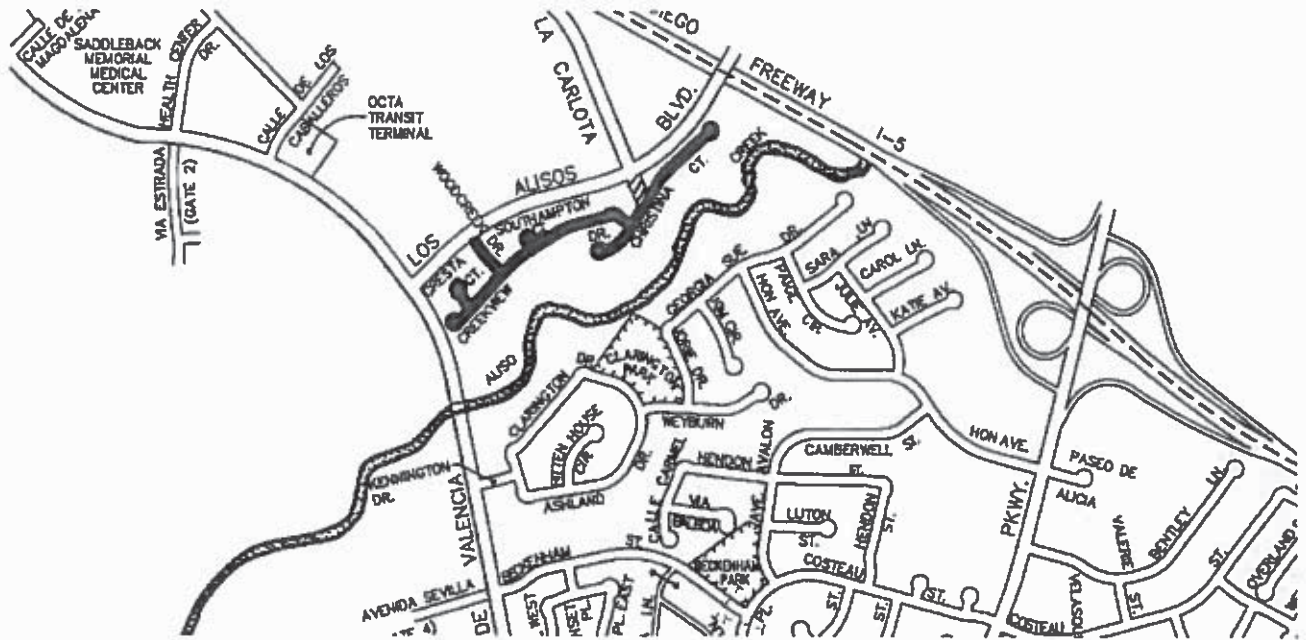
SLURRY



NO WORK



ZONE E



CITY OF LAGUNA HILLS

0.12' OVERLAY	
SLURRY	
NO WORK	

CIP 101-J 2017



City of Laguna Hills

Traffic Commission

Staff Report

DATE: September 20, 2017
TO: Traffic Commissioners
FROM: Kenneth H. Rosenfield P.E.
Director of Public Services/City Engineer
ISSUE: Radar Speed Trailer

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

ATTACHMENTS:

- Radar Trailer September 2017

CITY OF LAGUNA HILLS

SEPTEMBER 2017

RADAR TRAILER SCHEDULE (RAINY DAYS EXCLUDED)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	HOLIDAY 4	5 Rapid Falls W/O Sundowner 25 MPH	6 Bridlewood S/O Laurel Crest 25 MPH	7 Alameda W/O El Prado 25 MPH	8	9
10	11	12	13	14	15	16
17	18	19 Glen Canyon W/O Nellie Gail 25 MPH	20 Nellie Gail E/O Empty Saddle 25 MPH	21 Lost Colt 27251 E/O Beargrass 25 MPH	22	23
24	25	26	27	28	29	30

Attachment: Radar Trailer September 2017 (1383 : Radar Speed Trailer)

CITY OF LAGUNA HILLS

OCTOBER 2017

RADAR TRAILER SCHEDULE (RAINY DAYS EXCLUDED)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8	9	10 Nellie Gail E/O Empty Saddle 25 MPH	11 Rapid Falls W/O Sundowner 25 MPH	12 Glen Canyon S/O Nellie Gail 25 MPH	13	14
15	16	17	18	19	20	21
22	23	24 Alameda W/O El Prado 25 MPH	25 Bridlewood S/O Laurel Crest 25 MPH	26 Santa Vittoria N/O Ridge Route 30 MPH	27	28
29	30	31				

Attachment: Radar Trailer September 2017 (1383 : Radar Speed Trailer)

CITY OF LAGUNA HILLS

NOVEMBER 2017

RADAR TRAILER SCHEDULE (RAINY DAYS EXCLUDED)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7 Bridlewood S/O Laurel Crest 25 MPH	8 Woodbluff S/O Middleridge 25 MPH	9 Nellie Gail E/O Empty Saddle 25 MPH	10 HOLIDAY	11
12	13	14	15	16	17	18
19	20	21 Glen Canyon W/O Nellie Gail 25 MPH	22 Lost Colt E/O Beargrass 25 MPH	23 THANKSGIVING	24 HOLIDAY	25
26	27	28	29	30		

Attachment: Radar Trailer September 2017 (1383 : Radar Speed Trailer)