



CITY OF LAGUNA HILLS TRAFFIC COMMISSION

REGULAR MEETING AGENDA Wednesday, May 17, 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 March 15, 2017.

3. PRESENTATIONS**4. ADMINISTRATIVE REPORTS****4.1 Request for the Establishment of No Parking During Street Sweeping Hours on Various Streets in the North Laguna Hills Mixed Use Zone**

Recommendation: That the Traffic Commission Recommend to the City Council Establishment of No Parking During Street Sweeping Hours on Mondays from 2:00 A.M. to 6:00 A.M. in the North Laguna Hills Mixed Use Zone.

4.2 Draft Local Signal Synchronization Plan (LSSP) Update

Recommendation: That the Traffic Commission Review the 2017 Local Signal Synchronization Plan and Recommend Approval by the City Council.

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 19, 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 May 12, 2017, at 5:00 pm.



Director of Public Services/City Engineer

May 12, 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: May 17, 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 March 15, 2017.

ATTACHMENTS:

- Minutes

**CITY OF LAGUNA HILLS
TRAFFIC COMMISSION MEETING
REGULAR MEETING MINUTES
MARCH 15, 2017**

CALL TO ORDER

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

ROLL CALL OF COMMISSION MEMBERS

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

Absent: Commissioner David Wheeler

1. ELECTION OF CHAIR

Motion was made by Vice Chair Jones to open nominations to elect a new Chair. Commissioner Woodruff nominated Vice Chair Jones. The nomination was seconded by Commissioner Staar. There were no further nominations.

APPROVED BY A VOTE OF 3-0, VICE CHAIR JONES ABSTAINED, COMMISSIONER WHEELER ABSENT.

2. ELECTION OF VICE CHAIR

Motion was made by Vice Chair Mark Jones to open nominations to elect a new Vice Chair. Vice Chair Jones nominated Commissioner Woodruff. The nomination was seconded by Commissioner Staar. There were no further nominations.

APPROVED BY A VOTE OF 3-0, COMMISSIONER WOODRUFF ABSTAINED, COMMISSIONER WHEELER ABSENT.

3. PUBLIC COMMENTS

Nena Del la Torre, owner of Golden Touch Auto Center and resident of Laguna Hills, requested parking restrictions on El Pacifico Drive and Verdugo Drive to allow the street sweeper better access and to alleviate the issue of vehicles being stored on the street.

**CITY OF LAGUNA HILLS
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REGULAR MEETING MINUTES
MARCH 15, 2017**

Thomas Chancler, a resident and Board member of Laguna Village, spoke against allowing parking on Ridge Route Drive. Mr. Chancler said Laguna Village is in the process of implementing a community parking policy, and allowing parking on Ridge Route Drive would allow the Laguna Village residents to circumvent the new parking policy.

Janel Cranch, a resident and Board member of Laguna Village, spoke in favor of parking on Ridge Route Drive. Ms. Cranch said allowing parking on Ridge Route Drive would help alleviate parking within the Laguna Village community.

4. MINUTES

THE TRAFFIC COMMISSION APPROVED THE MINUTES OF THE JANUARY 18, 2017, REGULAR MEETING, BY M/COMMISSIONER WOODRUFF, S/COMMISSIONER STAAR.

APPROVED BY A VOTE OF 3-0, COMMISSIONER HERMAN ABSTAINED, COMMISSIONER WHEELER ABSENT.

5. PRESENTATIONS

There were no Presentations.

6. ADMINISTRATIVE REPORTS

6.1 TRAFFIC ENGINEERING EVALUATION – SANTA VITTORIA DRIVE BETWEEN RIDGE ROUTE DRIVE AND LAKE FOREST DRIVE

Associate Civil Engineer Amber Shah, indicated residents of Laguna Village contacted staff regarding concerns of speeding, cut-through traffic and collisions on Santa Vittoria Drive between Ridge Route Drive and Lake Forest Drive. Staff initiated a traffic engineering evaluation, performed by Hartzog and Crabill, Inc., and the results were presented by Jerry Stock, P.E, T.E., a principal with Hartzog and Crabill, Inc., and author of the report. Ms. Shah introduced Mr. Stock, and he presented the findings of his report.

Mr. Stock indicated the data on Santa Vittoria Drive showed traffic speed to be consistent with the speed limit; the traffic volumes to be consistent with historic counts, and well below the traffic carrying capacity of the roadway; the cut-through traffic to be in the low range; and no traffic collision history related to traffic speed. Based upon the findings of the report, Santa Vittoria Drive is performing as expected.

Attachment: Minutes (1293 : Minutes)

**CITY OF LAGUNA HILLS
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MARCH 15, 2017**

Patti Casas, resident of Laguna Hills, spoke in favor of increased traffic enforcement by the Sheriff's Department.

Janel Cranch, resident and Board member of Laguna Village spoke in favor of a traffic signal at the intersection of Santa Vittoria Drive and Ridge Route Drive, and also spoke in favor of road bumps along Santa Vittoria Drive.

**THAT THE TRAFFIC COMMISSION RECEIVED AND FILED THE REPORT.
M/VICE CHAIR JONES, S/COMMISSIONER HERMAN.
APPROVED BY A VOTE OF 4-0, COMMISSIONER WHEELER ABSENT.**

6.2 REVIEW OF ON-STREET PARKING ON EL DORADO DRIVE

Associate Civil Engineer Amber Shah, indicated Staff was contacted by a resident regarding parking of vehicles on the easterly side of El Dorado Drive adjacent to a landscape parkway and the I-5 freeway wall. The resident stated suspicious activities have occurred in the area believed to be associated with the parked vehicles. A search of the Sheriff's records showed there have been 20 calls related to parking complaints on El Dorado Drive in the past year. Half of the calls were generated from regular patrols, and the balance originated from the public. Only two calls resulted in vehicle code citations.

El Dorado Drive is a relatively straight street with a width adequate for parking on both sides and two lanes of traffic. Based upon the configuration of the neighborhood, the traffic volumes on this street would likely be very low. There does not appear to be any traffic engineering basis to implement parking controls. Police enforcement of driver behavior is the best and appropriate remedy for this location and issue of concern.

**THAT THE TRAFFIC COMMISSION RECEIVED AND FILED THE REPORT.
M/COMMISSIONER WOODRUFF, S/COMMISSIONER STAAR,
APPROVED BY A VOTE OF 4-0, COMMISSIONER WHEELER ABSENT.**

7. INFORMATIONAL ITEMS

7.1 SHERIFF'S DEPARTMENT VERBAL REPORT

Sergeant Prince gave a verbal report updating the Traffic Commission on traffic issues in the City. Every year the Sheriff's Department provides an annual report to the City. Sergeant Prince indicated the two Motor Deputies in Laguna Hills had issued a total of 2,863 citations for moving violations during the past year. The Traffic Enforcement Index is a mathematical equation which takes into account

**CITY OF LAGUNA HILLS
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MARCH 15, 2017**

the injury and non-injury accidents verses citations. Laguna Hills Traffic Enforcement Index was listed as 16.34, out of an optimal range of 12-25. Sergeant Prince indicated this index number demonstrated the Sheriff's Department is working with the community to proactively enforce traffic safety, and not writing an excessive number of citations for revenue generation.

7.2 RADAR SPEED TRAILER

Staff submitted the schedule for the radar trailer.

8. COMMISSIONER COMMENTS

There were no Commissioner Comments.

9. ADJOURNMENT

There being no further business before the Traffic Commission at this session, Vice Chair Jones declared the meeting adjourned at 8:08 p.m.

Prepared By:

Amber Shah, P.E.
Associate Civil Engineer

Approved By:

Chair Mark Jones

Attachment: Minutes (1293 : Minutes)



City of Laguna Hills

Traffic Commission

Staff Report

DATE: May 17, 2017
TO: Traffic Commissioners
FROM: Kenneth H. Rosenfield P.E.
Director of Public Services/City Engineer
ISSUE: Request for the Establishment of No Parking During Street Sweeping Hours on Various Streets in the North Laguna Hills Mixed Use Zone

RECOMMENDATION: That the Traffic Commission Recommend to the City Council Establishment of No Parking During Street Sweeping Hours on Mondays from 2:00 A.M. to 6:00 A.M. in the North Laguna Hills Mixed Use Zone.

SUMMARY:

The Traffic Commission was contacted by a Business Owner, located at El Pacifico Drive and Verdugo Drive, regarding undesired truck and long-term parking on El Pacifico Drive creating conflicts with street sweeping operations. The Owner stated the vehicles are left on the street for extended periods from days to weeks at a time. Based upon field reviews of the current site conditions, a review of parking complaints received by the Sheriff's Department and the Business Owner's complaint, staff is recommending establishing a no parking during street sweeping hours on Mondays from 2:00 a.m. to 6:00 a.m. on streets in the mixed used zone. This action will also enhance the aesthetics of the mixed-use zone and further support the goals of the National Pollutant Discharge Elimination System (NPDES) program for storm water quality, by ensuring regular street sweeping operations are able to clean trash and debris from the streets preventing it from entering the storm drain system.

BACKGROUND:

The mixed-use zone is located in the northern part of the City between Lake Forest Drive, Ridge Route Drive, Moulton Parkway and Avenida de la Carlota. Please see the

Request for the Establishment of No Parking During Street Sweeping Hours on Various Streets

May 17, 2017

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attached vicinity map. In the past, staff and the Traffic Commission have reviewed limited parking issues at various locations within the mixed-use zone. Parking is currently allowed along the entire block of El Pacifico Drive, La Cadena Drive, Plaza Pointe Drive, Terra Drive and Verdugo Drive, except at previously designated no parking zones at fire hydrant and corner locations.

At a recent Traffic Commission meeting, a complaint was received from a Business Owner on El Pacifico Drive at Verdugo Drive, regarding undesired truck parking and long-term parking of vehicles on El Pacifico Drive. The Business Owner's concerns include the appropriateness of the vehicles parked on the street, the long-term parking of vehicles (72 hour parking is allowed by the City Code) and the conflicts created by these vehicles preventing street sweeping operations. A search of the police dispatch report revealed ten (10) of the twenty-one (21) calls received by Police Services between March 1, 2017 and May 1, 2017 were related to parking complaints on El Pacifico Drive.

In order to address the long term parking concern, enhance aesthetics of the mixed-use zone and further support the goals of the National Pollutant Discharge Elimination System (NPDES) program for storm water quality, by ensuring regular street sweeping operations are able to clean trash and debris from the streets preventing it from entering the storm drain system, staff recommends the establishment of a No Parking during Street Sweeping Hours on Mondays from 2:00 a.m. to 6:00 a.m. on the following streets:

- Del Lago Drive – Alcalde Drive to La Cadena Drive
- El Pacifico Drive – Entire Block
- La Cadena Drive – Entire Block
- Plaza Pointe Drive – Entire Block
- South Pointe Drive – Plaza Pointe Drive to End of Cul de Sac
- Terra Drive – Entire Block
- Verdugo Drive – Entire Block

The remainder of the streets in the mixed-use zone have other parking controls establishing either no parking anytime or no overnight parking already implemented that preclude parking during street sweeping hours on those streets as follows:

- Alcalde Drive – No Parking Anytime, Entire Block
- Commerce Center Drive – No Parking Anytime from 9:00 p.m. to 6:00 a.m.

Request for the Establishment of No Parking During Street Sweeping Hours on Various Streets

May 17, 2017

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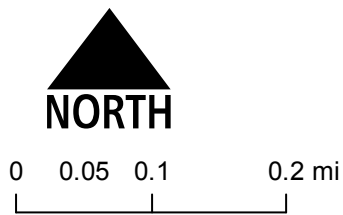
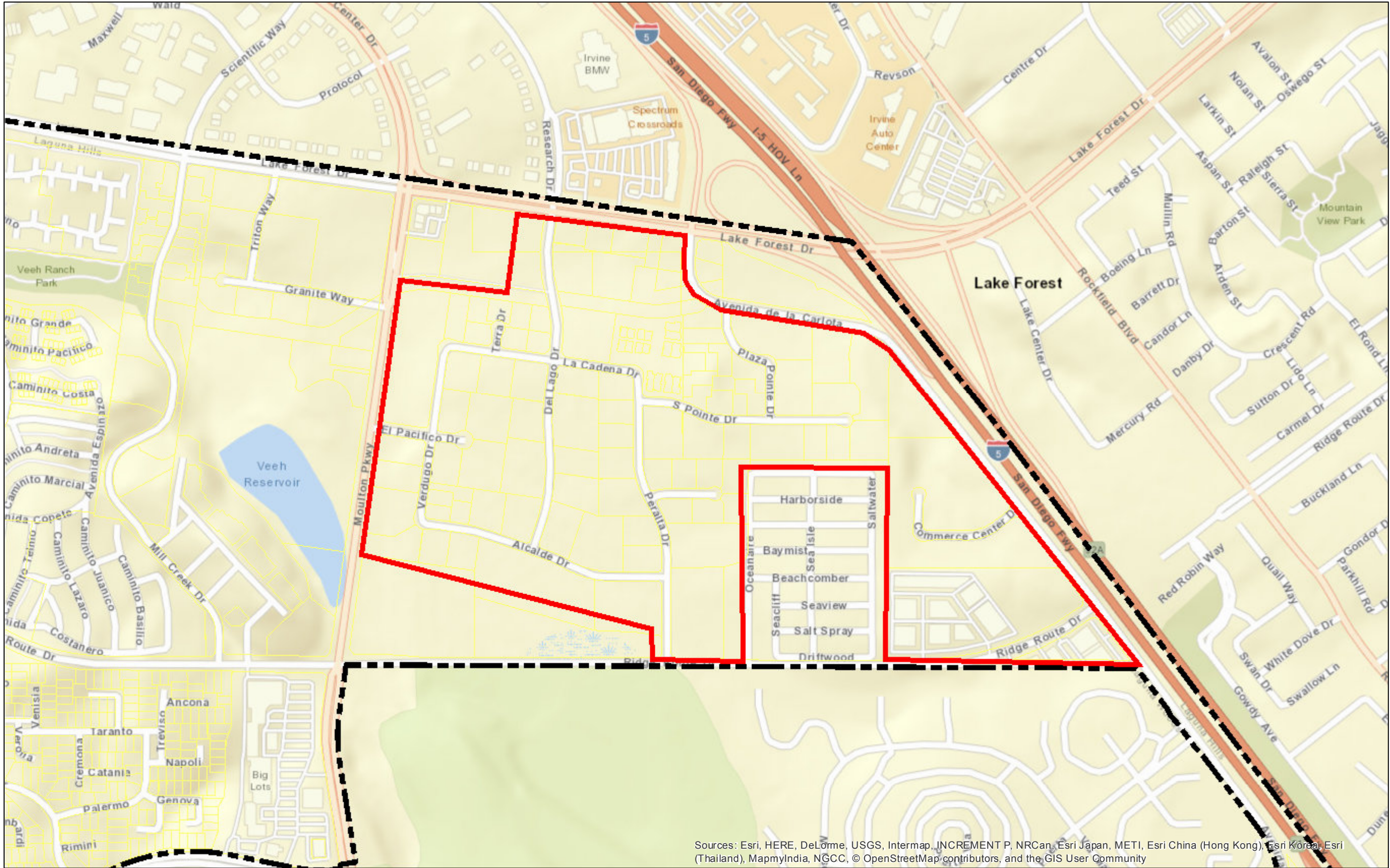
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- Del Lago Drive – No Parking Anytime, La Cadena Drive to Lake Forest Drive
 - Peralta Drive – No Parking Anytime, Entire Block
 - South Pointe Drive – No Parking Anytime, Peralta Drive to Plaza Pointe Drive
 - Vista Grande Drive – No Parking Anytime from 9:00 p.m. to 6:00 a.m.

FISCAL IMPACT:

The installation of twenty (20) “No Parking during Street Sweeping, Mondays from 2:00 a.m. to 6:00 a.m.” signs have an anticipated cost of \$3000. Funds are available for this work in the 2016-17 Fiscal Year Public Works Maintenance Budget.

ATTACHMENTS:

- Vicinity Map



VICINITY MAP: MIXED USE ZONE





City of Laguna Hills

Traffic Commission

Staff Report

DATE: May 17, 2017
TO: Traffic Commissioners
FROM: Kenneth H. Rosenfield P.E.
Director of Public Services/City Engineer
ISSUE: Draft Local Signal Synchronization Plan (LSSP) Update

RECOMMENDATION: That the Traffic Commission Review the 2017 Local Signal Synchronization Plan and Recommend Approval by the City Council.

SUMMARY:

The Local Signal Synchronization Plan (LSSP) is a planning document to implement and maintain coordination of traffic signals within our City and beyond our borders on a corridor approach basis that optimizes the performance of traffic signals based on existing traffic patterns. The LSSP is required to ensure consistency with the Regional Traffic Signal Synchronization Program (RTSSP) and to have the City remain eligible for Measure M2 funding. The draft 2017 update to the LSSP is provided for the review of the Traffic Commission.

BACKGROUND:

On November 6, 2006, voters approved Measure M2 to continue the ½-cent sales tax for transportation improvements originally approved under Measure M in 1990, for an additional 30 years beginning in 2011. Project P, the Regional Traffic Signal Synchronization Program (RTSSP), was included as part of Measure M2.

The RTSSP, led by the Orange County Transportation Authority (OCTA), is comprised of a 750-mile regional signal synchronization network with approximately 2,000 signals. The goals of the program are to improve the flow of traffic on Orange County streets and

Draft Local Signal Synchronization Plan (LSSP) Update

May 17, 2017

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roads by implementing multi-agency signal synchronization of traffic signals throughout Orange County on a corridor basis to improve travel time and reduce stops.

The City of Laguna Hills is in concurrence with these goals, and will continue to work cooperatively with OCTA and adjacent jurisdictions to synchronize signals throughout the City on a corridor basis. In the past, the City has participated in the La Paz Road, Lake Forest Drive, Los Alisos Boulevard and Oso Parkway RTSSP projects and is currently participating in the Alicia Parkway, El Toro Road and Moulton Parkway RTSSP projects.

The RTSSP requires that local agency's adopt a Local Signal Synchronization Plan (LSSP) consistent with the Regional Traffic Signal Synchronization Master Plan as a key component of local agencies' efforts to synchronizing traffic signals across local agencies' boundaries. The City adopted an initial LSSP in December 2010, and updates it every three years to remain eligible for Measure M2 funding and ensure the transportation system is functioning effectively. For the City, the traffic engineers at Hartzog & Crabill, Inc., have recently updated the LSSP and the 2017 Draft LSSP is attached for the review of the Traffic Commission. This document is required to be approved by the City Council prior to the end of this fiscal year.

ATTACHMENTS:

- Draft LSSP Update



CITY OF LAGUNA HILLS

May 12, 2017

D-R-A-F-T

Orange County Transportation Authority (OCTA)
ATTN: Mr. Anup Kulkarni
Regional Modeling and Traffic Operations
Planning Division
P.O. Box 14184
Orange, CA 92863-1584

Subject: Local Signal Synchronization Plan Submittal as Part of the Measure M2 Eligibility Process

Dear Mr. Kulkarni:

The City of Laguna Hills is pleased to submit its updated Local Signal Synchronization Plan as part of the Measure M2 eligibility process. The submittal includes the following components:

1. A completed "Local Signal Synchronization Plan Consistency Review Checklist" form establishing consistency between the Local Signal Synchronization Plan and the Regional Traffic Signal Synchronization Master Plan.
2. An updated Local Signal Synchronization Plan for Fiscal Years 2017/2018 to 2019/20 including all required elements as identified in the "Guidelines for the Preparation of Local Signal Synchronization Plans".

The City of Laguna Hills looks forward to continuing the implementation of the beneficial programs and construction projects required and made possible by Measure M2. If you have any questions, please feel free to call me at (949) 707-2655.

Sincerely,

Kenneth H. Rosenfield, P.E.
Director of Public Services

Enclosures:

- A. Local Signal Synchronization Plan Consistency Review Checklist
- B. Local Signal Synchronization Plan

24035 El Toro Road • Laguna Hills, California 92653 • (949) 707-2600 • FAX (949) 707-2633
Website: www.ci.laguna-hills.ca.us

Attachment: Draft LSSP Update (1292 : Draft Local Signal Synchronization Plan (LSSP) Update)

LOCAL SIGNAL SYNCHRONIZATION PLAN CONSISTENCY REVIEW CHECKLIST

The Local Agency Name: **CITY OF LAGUNA HILLS** Plan Date: **JUNE 30, 2017**

Local agencies must submit a copy of their Local Signal Synchronization Plan, and any supporting documentation, including a completed consistency review checklist below.

Local Agency Statement	Page(s) in LSSP	Provided or N/A
Section 1) Signal synchronization goals of the agency are consistent with those outlined as part of the Regional Traffic Signal Synchronization Master Plan. Include information on how the traffic signal synchronization street routes and traffic signals may be coordinated with traffic signals on the street routes in adjoining jurisdictions.	PAGES 2-4	Provided
Section 2) Traffic signal synchronization street routes are identified, including all corridors along the regional signal synchronization network located within the local agency.	PAGES 5-7	Provided
Section 3) Traffic signal inventory for all traffic signal synchronization street routes.	PAGES 8-11	Provided
Section 4) Three-year plan separately showing costs, available funding, and phasing for capital, operations, and maintenance of signal synchronization along the traffic signal synchronization street routes and traffic signals. Include a separate planning level estimate of complete system implementation cost.	PAGES 12-15	Provided
Section 5) Signal synchronization review, revision, and assessment of synchronization activities along the traffic signal synchronization street routes and traffic signals.	PAGES 16-21	Provided

I certify that the above statements are true to the best of my knowledge.


May 12, 2017

Signature Date

Kenneth H. Rosenfield, P.E., Director of Public Services, City of Laguna Hills, CA
Printed Name, Title, & Local Agency

Attachment: Draft LSSP Update (1292 : Draft Local Signal Synchronization Plan (LSSP) Update)



LOCAL SIGNAL SYNCHRONIZATION PLAN

D-R-A-F-T

JUNE 2017

SECTION ONE
TRAFFIC SIGNAL SYNCHRONIZATION
GOALS, POLICIES, AND OBJECTIVES

GOALS

OCTA's Regional Traffic Signal Synchronization Program (Project P) is included as part of the approved Measure M2. Project P is a multi-agency, corridor-based approach that optimizes the performance of traffic signals based on existing traffic patterns. The goals of the program are to improve the flow of traffic on Orange County streets and roads by implementing multi-agency signal synchronization.

The City of Laguna Hills is in concurrence with these goals, and will continue to work cooperatively with OCTA and adjacent jurisdictions to synchronize signals throughout the City on a corridor basis. This cooperation will serve to provide safe, efficient traffic circulation for our local needs as well as future demands, by continuing to improve travel times and reducing stops.

1. The City of Laguna Hills will support the Measure M2 Regional Traffic Signal Synchronization Program goals as published by OCTA.
2. The City of Laguna Hills will support a multi-agency, corridor-based approach that optimizes traffic signals based on existing traffic patterns.
3. The City of Laguna Hills will support the local agency responsibility for signal timing and working with neighboring agencies to develop synchronization timing.
4. The City of Laguna Hills will participate with neighboring jurisdictions in Traffic Signal Synchronization efforts.
5. The City of Laguna Hills will implement its General Plan Policy M-1.2 to "Coordinate intersection signalization to encourage improved traffic flow on arterial streets."

The City is part of a joint multi-agency 'central' system that includes the following five (5) local agencies:

- 1) Aliso Viejo
- 2) Laguna Hills**
- 3) Laguna Niguel
- 4) Laguna Woods
- 5) Lake Forest

As traffic signal synchronization corridor projects have been completed, the City of Laguna Hills' traffic signals that were on the Aries system have been transitioned to the central Centrac system. This central Econolite traffic management system allows for street routes to be more easily coordinated across jurisdictional boundaries.

Most recently the City participated in the completion of the La Paz Road, Lake Forest Drive, Los Alisos Boulevard, and Oso Parkway TSSP projects which, in addition to the timing improvements, included upgrading the City's controllers.

The TSSP corridor projects in which the City is currently participating in this cycle are: Alicia Parkway, Moulton Parkway, and El Toro Road.

POLICIES

The City of Laguna Hills has adopted an initial Local Signal Synchronization Plan (LSSP), and updates it every three years to remain eligible for Measure M2 funding and ensure the transportation system is functioning effectively. As the initial LSSP adoption occurred in December 2010, this is the second cycle of the 3-year updates. The purpose of the LSSP is to implement and maintain coordination of traffic signals along corridors within our City and beyond its borders to regionally maintain safe and efficient flow of vehicular traffic. Project P also provides the opportunity to work with neighboring agencies in order to accomplish mutually-beneficial goals.

It is the City of Laguna Hills' desire and policy to continue participating in and supporting Project P. The City maintains local control and responsibility of all traffic signals within our jurisdiction, and will continue to be responsible for any changes to our signals, equipment, and policies.

OBJECTIVES

The City of Laguna Hills has implemented and maintained corridor-based signal coordination timing via daily traffic signal operations and consultant support services. Through these on-going support services, the City periodically evaluates and optimizes coordination signal timing in response to changing traffic volumes and patterns.

The City concurs that Project P is beneficial and needed in order to effectively move people and goods locally and regionally through efficient signal timing. By participating in Project P, the City recognizes the benefits gained from local signal timing and synchronization, as well as from eligible traffic signal and interconnect equipment upgrades. Moreover, the City recognizes this program as a valuable, corridor-based measure for improving air quality by reducing green-house gas emissions. In participating in Project P, as well as using the on-going signal operations support services, it is the City's objective to continue to address regional goals while serving constituents in a reasonable manner.

SECTION TWO

TRAFFIC SIGNAL SYNCHRONIZATION STREET ROUTES
(EXISTING AND PLANNED)

TRAFFIC SIGNAL SYNCHRONIZATION STREET ROUTES

Existing:

Priority Corridor Network

- 1) Alicia Parkway
- 2) El Toro Road
- 3) Lake Forest Drive
- 4) Moulton Parkway
- 5) Oso Parkway

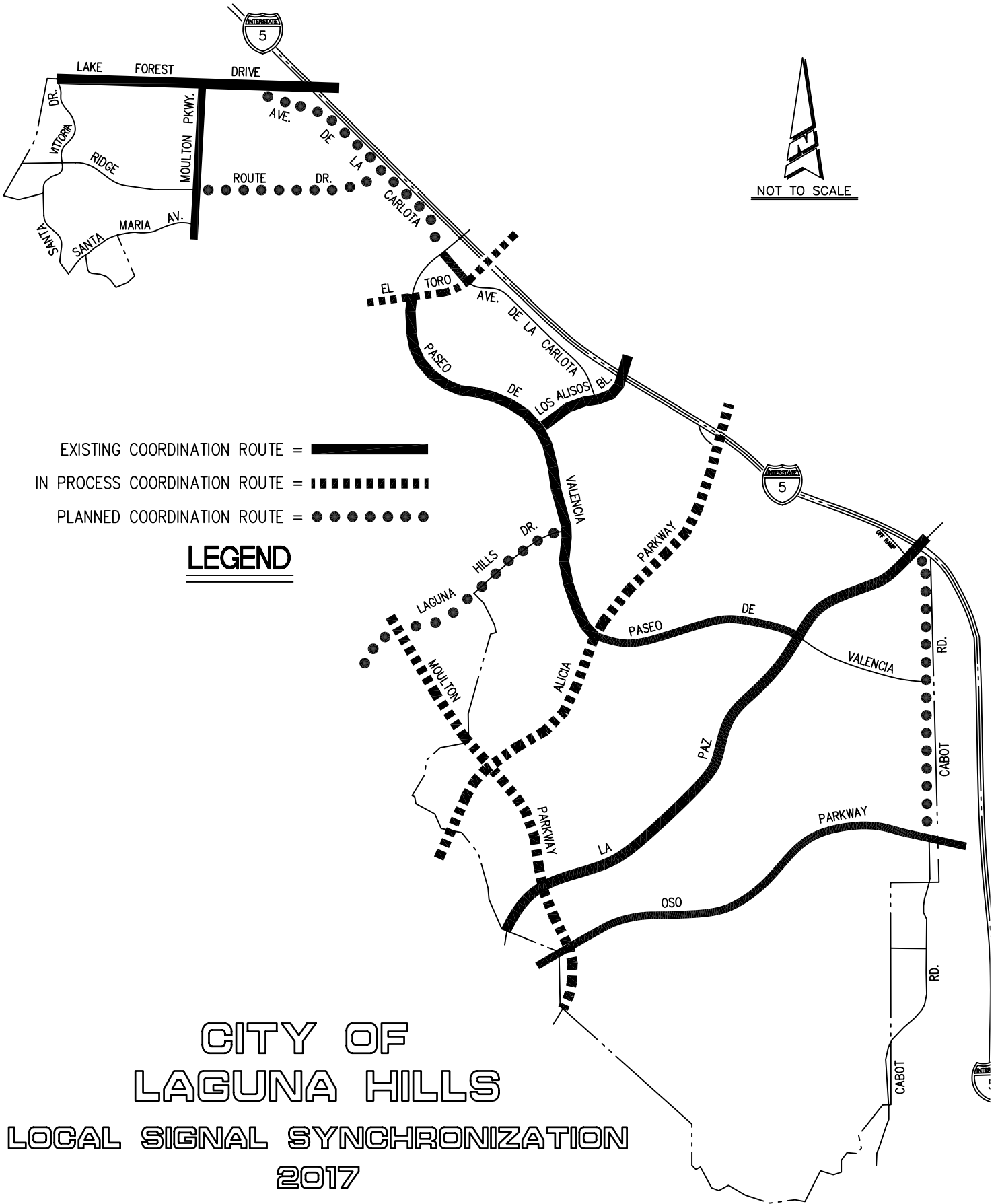
Signal Synchronization Network

- 6) Cabot Road
- 7) La Paz Road
- 8) Los Alisos Boulevard
- 9) Paseo de Valencia

PROPOSED:

Signal Synchronization Network

- 10) Avenida de La Carlota
- 11) Laguna Hills Drive
- 12) Ridge Route Drive



SECTION THREE

TRAFFIC SIGNAL INVENTORY

CITY OF LAGUNA HILLS - TRAFFIC SYNCHRONIZATION LIST

Corridor	Cross-street Intersection	Cycle Length				Controller Type	Maintenance Responsibility
		AM	MD	PM	WKND		
Lake Forest Dr	Carlota (Caltrans)	Free	Free	Free	Free	ASC/3	Laguna Hills
Priority Corridor Network	Del Lago	130	120	130	120	ASC/3	Laguna Hills
	Moulton	130	120	130	120	ASC/3	Laguna Hills
	Mill Creek	Free	Free	Free	Free	ASC/3	Laguna Hills
	Santa Vittoria	Free	Free	Free	Free	ASC/3	Laguna Hills
El Toro Road	Carlota	140	150	150	150	ASC/3	Laguna Hills
Priority Corridor Network	Regional Center	140	150	150	150	ASC/3	Laguna Hills
	Paseo De Valencia	140	150	150	150	ASC/3	Laguna Hills
Alicia Pkwy	Hon	130	110	130	110	ASC/3	Laguna Hills
Priority Corridor Network	Costeau	130	Free	130	Free	ASC/3	Laguna Hills
	Wilkes	130	Free	130	Free	ASC/3	Laguna Hills
	Paseo De Valencia	130	130	130	130	ASC/3	Laguna Hills
	Community Center	130	130	130	130	ASC/3	Laguna Hills
	Aliso Hills	130	Free	130	Free	ASC/3	Laguna Hills
	Moulton	130	Free	130	Free	ASC/3	Laguna Hills
	Ramona	130	Free	130	Free	ASC/3	Laguna Hills
La Paz Road	Cabot	Free	Free	Free	Free	170	Caltrans
Signal Synchronization Network	McIntyre	Free	110	110	110	ASC/3	Laguna Hills
	Paseo De Valencia	Free	110	110	110	ASC/3	Laguna Hills
	Aliso Hills	60	55	55	55	ASC/3	Laguna Hills
	Moulton	120	120	130	110	ASC/3	Laguna Hills
Oso Pkwy	Cabot	120	150	150	120	ASC/3	Laguna Hills
Priority Corridor Network	Bridlewood	120	Free	130	Free	ASC/3	Laguna Hills
	Nellie Gail	120	Free	130	Free	ASC/3	Laguna Hills
	Moulton	120	120	130	110	ASC/3	Laguna Hills

Central System (Indicate if multiple systems in use):

Controller Operating System:

ECONOLITE ARIES
ECONOLITE CENTRACS (LAGUNA HILLS)
ECONOLITE (NEMA)

Attachment: Draft LSSP Update (1292 : Draft Local Signal Synchronization Plan (LSSP) Update)

CITY OF LAGUNA HILLS - TRAFFIC SYNCHRONIZATION LIST

Corridor	Cross-street Intersection	Cycle Length				Controller Type	Maintenance Responsibility
		AM	MD	PM	WKND		
Moulton Pkwy	Lake Forest	130	120	130	120	ASC/3	Laguna Hills
Priority Corridor Network	El Pacifico	130	Free	130	Free	ASC/3	Laguna Hills
	Ridge Route	130	Free	130	Free	ASC/3	Laguna Hills
	Glenwood	130	Free	130	110	ASC/3	Laguna Hills
	Laguna Hills	130	Free	130	110	ASC/3	Laguna Hills
	Via Lomas	130	Free	130	110	ASC/3	Laguna Hills
	Alicia	130	Free	130	Free	ASC/3	Laguna Hills
	La Paz	120	120	130	110	ASC/3	Laguna Hills
	Oso	120	120	130	110	ASC/3	Laguna Hills
	Nellie Gail	Free	Free	Free	Free	2070	Caltrans
Cabot Rd	La Paz	Free	Free	Free	Free	2070	Caltrans
Proposed Signal Synchronization Network	Paseo De Valencia	Free	Free	Free	Free	ASC/3	Laguna Hills
	El Paseo	Free	Free	Free	Free	ASC/3	Laguna Hills
	Nellie Gail	Free	Free	Free	Free	ASC/3	Laguna Hills
	Oso	120	150	150	120	ASC/3	Laguna Hills
	Rapid Falls	Free	Free	Free	Free	ASC/2S	Laguna Hills
Paseo de Valencia	Carlota /1-5	140	150	150	150	ASC/3	Laguna Hills
Signal Synchronization Network	El Toro	140	150	150	150	ASC/3	Laguna Hills
	La Plata	130	130	130	130	ASC/3	Laguna Hills
	Magdalena	130	130	130	130	ASC/3	Laguna Hills
	Health Center	130	130	130	130	ASC/3	Laguna Hills
	Los Alisos	130	130	130	130	ASC/3	Laguna Hills
	Kennington	130	130	130	130	ASC/3	Laguna Hills
	Beckenham	130	130	130	130	ASC/3	Laguna Hills
	Laguna Hills	130	130	130	130	ASC/3	Laguna Hills
	Hawk High Way	130	130	130	130	ASC/3	Laguna Hills
	Alicia	130	130	130	130	ASC/3	Laguna Hills

Central System (Indicate if multiple systems in use):

Controller Operating System:

ECONOLITE ARIES
ECONOLITE CENTRACS (LAGUNA HILLS)
ECONOLITE (NEMA)

Attachment: Draft LSSP Update (1292 : Draft Local Signal Synchronization Plan (LSSP) Update)

[illegible]

Controller Operating System:

Attachment: Draft LSSP Update (1292 : Draft Local Signal Synchronization Plan (LSSP) Update)

SECTION FOUR
TRAFFIC SIGNAL SYNCHRONIZATION SYSTEM
AND THREE YEAR PLAN

3-YEAR OUTLOOK TRAFFIC SIGNAL SYNCHRONIZATION

Funding Needs for Synchronized Operation (*Constrained*)

Reporting Jurisdiction Expenditures: City of Laguna Hills

Type of Traffic Signal Synchronization Expenditures in Year of Expenditure Dollars

MAINTENANCE

PROJECT	FY17/18	FY18/19	FY19/20	TOTAL
Traffic Signal, Communication, and Software Maintenance	\$25,000	\$25,000	\$25,000	\$75,000
Subtotal Maintenance	\$25,000	\$25,000	\$25,000	\$75,000

CONSTRUCTION

PROJECT	FY17/18	FY18/19	FY19/20	TOTAL
Citywide Signal Synchronization	\$0	\$50,000	\$0	\$50,000
Subtotal Construction	\$0	\$50,000	\$0	\$50,000

OPERATIONS

PROJECT	FY17/18	FY18/19	FY19/20	TOTAL
Citywide Signal Timing/Operations Monitoring	\$35,000	\$35,000	\$35,000	\$105,000
Subtotal Operations	\$35,000	\$35,000	\$35,000	\$105,000
	\$60,000	\$110,000	\$60,000	\$230,000

Attachment: Draft LSSP Update (1292 : Draft Local Signal Synchronization Plan (LSSP) Update)

3-YEAR OUTLOOK TRAFFIC SIGNAL SYNCHRONIZATION

Funding Needs for Synchronized Operation (*Unconstrained*)

Reporting Jurisdiction Expenditures: City of Laguna Hills

Type of Traffic Signal Synchronization Expenditures in Year of Expenditure Dollars

MAINTENANCE

PROJECT	FY17/18	FY18/19	FY19/20	TOTAL
Traffic Signal, Communication, and Software Maintenance	\$25,000	\$25,000	\$25,000	\$75,000
Subtotal Maintenance	\$25,000	\$25,000	\$25,000	\$75,000

CONSTRUCTION

PROJECT	FY17/18	FY18/19	FY19/20	TOTAL
Citywide Signal Synchronization	\$0	\$50,000	\$0	\$50,000
Subtotal Construction	\$0	\$50,000	\$0	\$50,000

OPERATIONS

PROJECT	FY17/18	FY18/19	FY19/20	TOTAL
Citywide Signal Timing/Operations Monitoring	\$35,000	\$35,000	\$35,000	\$105,000
Subtotal Operations	\$35,000	\$35,000	\$35,000	\$105,000
	\$60,000	\$110,000	\$60,000	\$230,000

Attachment: Draft LSSP Update (1292 : Draft Local Signal Synchronization Plan (LSSP) Update)

**LSSP IMPLEMENTATION – CANDIDATE SIGNAL
SYNCHRONIZATION PROJECTS WITH ESTIMATED COSTS**

Reporting Jurisdiction Expenditures: City of Laguna Hills

At this time, the City of Laguna Hills has no corridor improvements provided below that may be considered as candidate projects. Consequently, the City does not have any unfunded needs to report during this next (3) year cycle.

CORRIDOR	IMPROVEMENT SUMMARY	ESTIMATED COST
N/A		
Total Estimated Cost:		

Attachment: Draft LSSP Update (1292 : Draft Local Signal Synchronization Plan (LSSP) Update)

SECTION FIVE

**TRAFFIC SIGNAL SYNCHRONIZATION ASSESSMENT
REVIEW AND REVISE, AS NECESSARY,
THE TIMING OF TRAFFIC SIGNALS**

**Significant timing plan updates and projects
completed FY 2014/2015 through 2016/2017**

**(Periodic refinements performed as part of
routine monthly reviews are not included)**

Corridor Assessment

OCTA's current 2016 Corridor Synchronization Performance Index (CSPI) map for the City of Laguna Hills corridors shows the following signal synchronization results:

• Alicia Parkway	Tier I (More than 80) CSPI – Very Good
• Cabot Road	Tier III (60 – 70) CSPI - Average
• El Toro Road	Tier III (60 – 70) CSPI - Average
• La Paz Road	Tier III (60 – 70) CSPI - Average
• Lake Forest Drive	Tier III (60 – 70) CSPI - Average
• Los Alisos Boulevard	Tier II (70 – 80) CSPI – Good
• Moulton Parkway	Tier II (70 – 80) CSPI – Good
• Paseo de Valencia	Tier I (More than 80) CSPI – Very Good
• Oso Parkway	Tier II (70 – 80) CSPI – Good

The City of Laguna Hills recently participated in five (5) Traffic Signal Synchronization Projects, administered by OCTA (with one exception) in cooperation with our neighboring cities including:

- 1) La Paz Road
- 2) Lake Forest Drive
- 3) Los Alisos Boulevard
- 4) Paseo de Valencia (*administered by City of Laguna Hills*)
- 5) Oso Parkway

Traffic signal synchronization projects for these corridors are either entirely completed or primarily complete, with all implementation in the field done (Phase 1).

The implemented synchronized corridors now effectively move vehicles between and among the City of Laguna Hills and its adjacent jurisdictions with minimum stops and delays (and improved CSPI results). Not only did the corridors benefit through overall synchronization, they were also improved with traffic signal and interconnect equipment upgrades allowing for signal timing efficiencies and optimization of operations.

Specific Corridor Project Assessment

As mentioned, the City of Laguna Hills participated in several Traffic Signal Synchronization Projects, in cooperation with our neighboring cities. The five completed corridors with specific CSPI results include the following:

<u>La Paz Road:</u>	<u>Before</u>	<u>After</u>
• CSPI score for this corridor (<i>PM Peak Hour</i>)	66	81
<u>Lake Forest Drive:</u>	<u>Before</u>	<u>After</u>
• CSPI score for this corridor (<i>PM Peak Hour</i>)	58	87
<u>Los Alisos Road:</u>	<u>Before</u>	<u>After</u>
• CSPI score for this corridor	69.1	82.4
<u>Paseo de Valencia:</u>	<u>Before</u>	<u>After</u>
• CSPI score for this corridor (<i>PM Peak Hour</i>)	77.1	80.9
<u>Oso Parkway:</u>	<u>Before</u>	<u>After</u>
• CSPI score for this corridor (<i>PM Peak Hour</i>)	71.2	85.2

All above CSPI After scores, represent very good synchronization (Tier I).

The overall corridor results are tabulated in Table 5 (following page).

Table 6 (following page) presents the timing revisions information in the requested tabular format. As shown, there have been no other significant timing plan updates over the past three years.

Priorities, Approach, and System Plan

It is important to note that the City has implemented and maintained corridor-based signal coordination timing through daily traffic signal operations and consultant support services. These on-going services include the Aries traffic signal management system collecting data on a 24/7 basis, as well as the daily review/monitoring of the collected data via Aries, especially looking at detector and communication events. These events are immediately forwarded to the City's traffic signal maintenance company for trouble-shooting and repair.

The City strives to move traffic regionally in a safe manner along our corridors, reducing commuter travel times and stops, while minimizing side-street delays that serve our citizens. These services include daily review of all coordination timing with every city arterial driven bi-monthly. Through these services, the City assures that the signal timing is maintained on a daily basis, and is periodically evaluated and fine-tuned in response to changing traffic volumes and patterns.

The City's traffic signal system plan includes upgrades to intersections that are currently being run by older controllers that are over twelve (12) years old and no longer manufactured to the latest Advanced Transportation Controller (ATC) type controllers. The City does desire to continue participating in future Project P corridor projects.

TABLE 5
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION ASSESSMENT, REVIEW, & REVISIONS

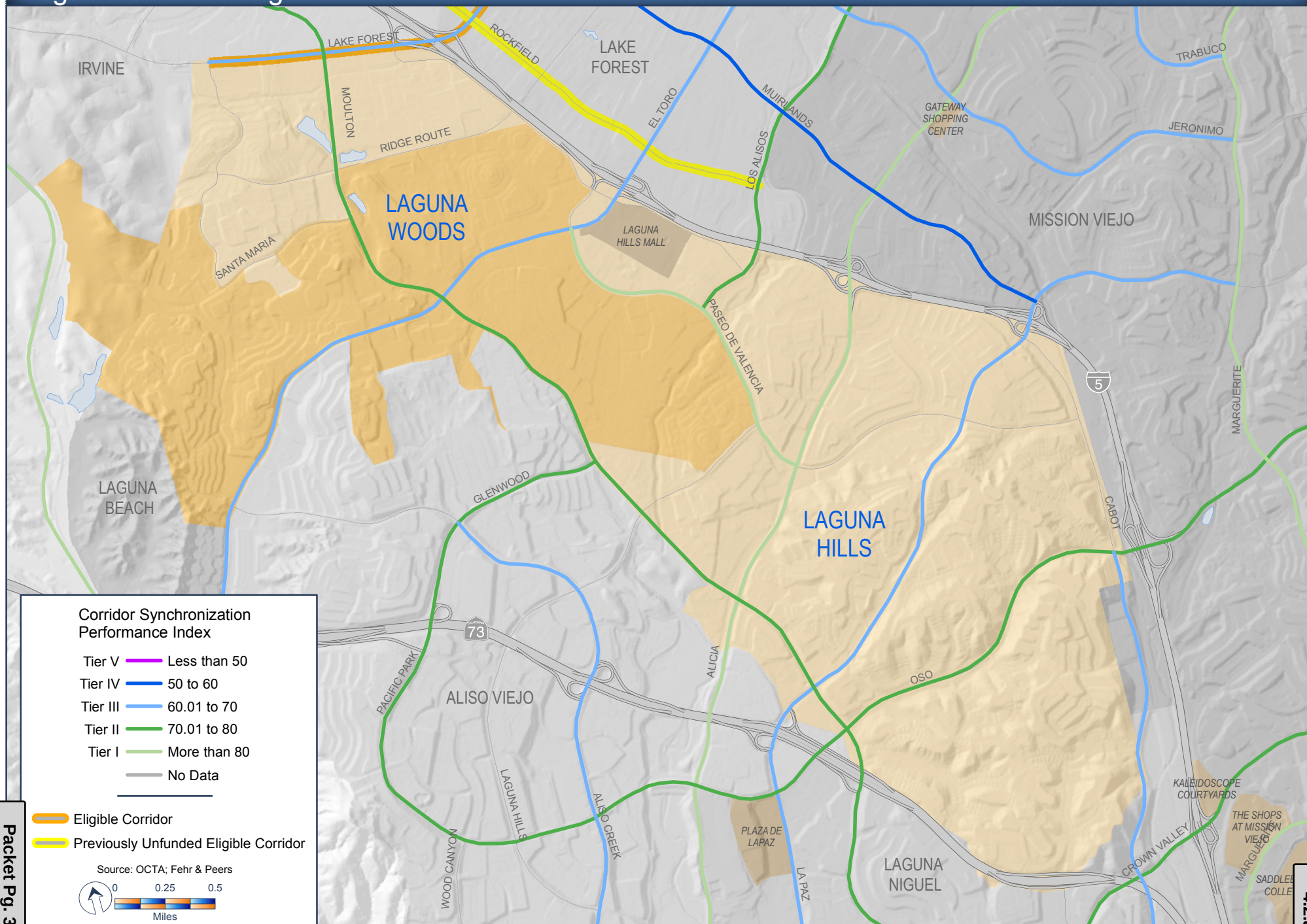
LOCAL AGENCY CORRIDOR	TIMING REVIEWED (Past 3 Years)	DID TIMING REQUIRE AN UPDATE?	TIMING UPDATE RESULTS (if available)							
			Speed Travel		Stops per mile		Greens per red		CSPI Score*	
			Before	After	Before	After	Before	After	Before	After
La Paz Road	Yes	Yes	21.8	29.3	27.4	30.2	10.3	15.6	66	81
Lake Forest Drive	Yes	Yes	25.9 (PM)	30.9 (PM)	1.9 (PM)	1.1 (PM)	1.67 (PM)	3.63 (PM)	58.0 (PM)	87.0 (PM)
Los Alisos Boulevard	Yes	Yes	28.1 (PM)	29.3 (PM)	1.12 (PM)	0.90 (PM)	1.67 (PM)	2.82 (PM)	69.1	82.4
Paseo de Valencia	Yes	Yes	27.6 (PM)	29.4 (PM)	1.10 (PM)	0.99 (PM)	2.80 (PM)	2.80 (PM)	77.1 (PM)	80.9 (PM)
Oso Parkway	Yes	Yes	27.7	31.5	1.3	1.1	2.6	3.2	71.2	85.2

Attachment: Draft LSSP Update (1292 : Draft Local Signal Synchronization Plan (LSSP) Update)

**TABLE 6
SIGNAL TIMING REVISIONS**

PROJECT CORRIDOR	CROSS STREET	CYCLE LENGTH (Before/After)
Alicia Parkway		Timing was reviewed. No significant changes warranted.
El Toro Road		Timing was reviewed. No significant changes warranted.
Moulton Parkway		Timing was reviewed. No significant changes warranted.
Cabot Road		Timing was reviewed. No significant changes warranted.
Avenida de La Carlota		Timing was reviewed. No significant changes warranted.
Laguna Hills Drive		Timing was reviewed. No significant changes warranted.
Ridge Route Drive		Timing was reviewed. No significant changes warranted.

2016 Corridor Operational Performance Laguna Hills and Laguna Woods



ATTACHMENT A

LA PAZ ROAD

TRAFFIC SIGNAL SYNCHRONIZATION PROJECT

CORRIDOR SYNCHRONIZATION PERFORMANCE INDEX (CSPI)

RESULTS

La Paz Road Regional Traffic Signal Synchronization Project

Corridor Synchronization Performance Index (CSPI)

Corridor: **La Paz Road RTSSP**

Limits: **Olympiad Rd / Felipe Rd to Crown Valley Pkwy**

of Signalized Intersections: **23**

Total Distance: **7.9** mi

Before and After Study Results

Measures of Effectiveness	Before								After							
	AM		MD		PM		Weekend		AM		MD		PM		Weekend	
	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Travel Time (min)	17.5	18.8	17.2	17.6	18.9	20.2	16.6	17.7	15.4	17.3	14.3	15.1	16.7	16.0	14.2	15.7
Number of Stops	9.2	9.0	8.2	8.4	9.4	10.8	6.8	9.2	7.2	7.6	6.0	6.8	7.6	8.0	5.8	7.2
Average Speed (mph)	27.1	25.3	27.7	27.1	25.1	23.5	28.6	26.9	30.8	27.6	33.2	31.5	28.5	29.8	33.4	30.2

CSPI Calculation

CSPI Component	Before								After							
	AM		MD		PM		Weekend		AM		MD		PM		Weekend	
	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Average Speed Index	25.5	22.5	27.0	25.5	22.5	21.0	28.5	25.5	31.5	27.0	34.5	31.5	28.5	30.0	34.5	30.0
Greens per Red Index (Green/Red)	12.0	12.4	14.4	13.9	11.6	9.0	19.1	12.0	17.6	16.2	22.7	19.1	16.2	15.0	23.7	17.6
Stops per Mile Index	28.4	28.7	29.7	29.4	28.1	26.4	31.4	28.4	30.9	30.4	32.4	31.4	30.4	29.9	32.7	30.9
CSPI Score	65.9	63.6	71.1	68.8	62.2	56.4	79.0	65.9	80.0	73.6	89.6	82.0	75.1	74.9	90.9	78.5
	D	D	C	D	D	F	C	D	B	C	B	B	C	C	A	C
	63		73		63		61		85		82		92		70	

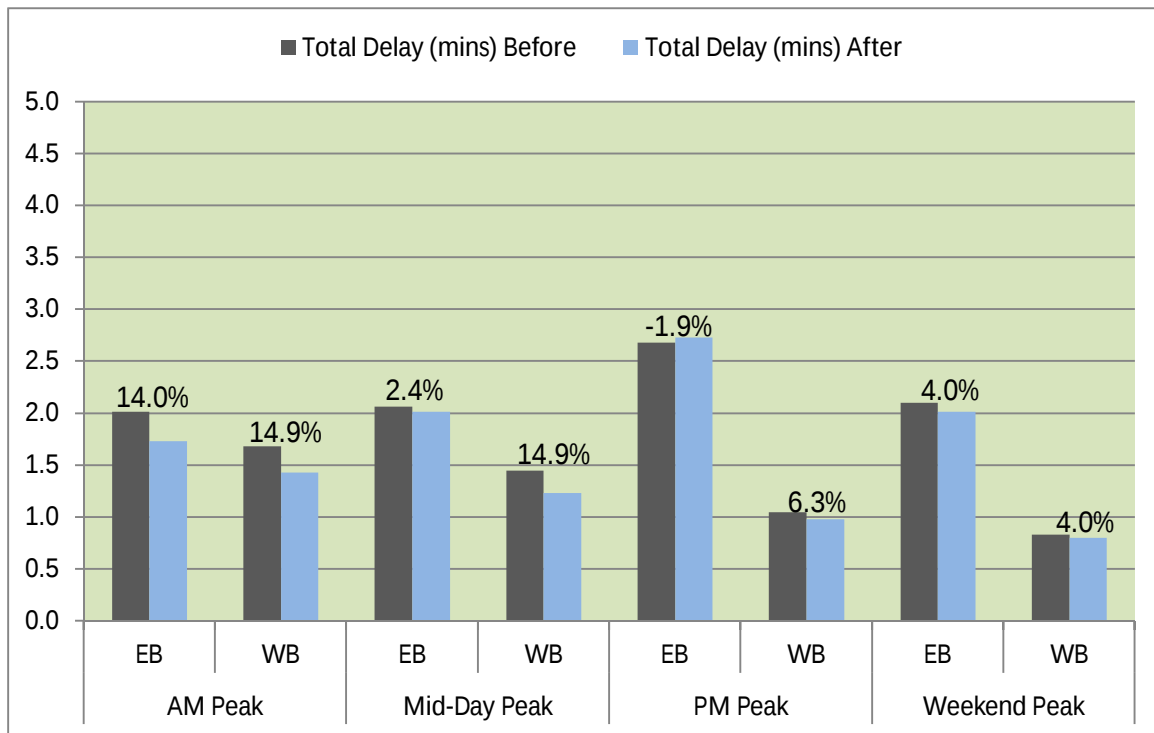
	Before	After
Average CSPI Score	66	81
Level	Tier 3	Tier 1

ATTACHMENT B

LAKE FOREST DRIVE
TRAFFIC SIGNAL SYNCHRONIZATION PROJECT

CORRIDOR SYNCHRONIZATION PERFORMANCE INDEX (CSPI)
RESULTS

Figure 7 – Reduction in Total Delay: “Before” and “After” Conditions



6.2 CSPI INDEX COMPARISON

Corridor Synchronization Performance Index (CSPI) was developed by OCTA to assist with comparison of TSSP project corridors having different characteristics for prioritization of corridors. The “Before” and “After” conditions CSPI was calculated as per OCTA guidelines and the results are summarized below:

BEFORE:	AM Peak				Mid-Day Peak				PM Peak				Weekend Peak			
	EB		WB		EB		WB		EB		WB		EB		WB	
Parameters	score		score		score		score		score		score		score		score	
Avg Speed	24.30	21	26.20	24.0	23.70	21.0	27.40	26	22.30	18	29.50	30	24.20	21	30.90	32
Green/Red	1.22	9.60	1.17	9.60	1.33	10.40	1.63	12.80	1.38	11.20	1.94	15.20	1.63	12.80	2.57	20.80
Stops per Mile	2.25	17.00	2.30	17.00	2.15	18.00	1.90	21.00	2.10	19.00	1.70	23.00	1.90	21.00	1.40	26.00
CSPI	48		51		49		59		48		68		55		78	
CSPI Grade	F		F		F		F		F		D		F		C	

AFTER:	AM Peak				Mid-Day Peak				PM Peak				Weekend Peak			
	EB		WB		EB		WB		EB		WB		EB		WB	
Parameters	score		score		score		score		score		score		score		score	
Avg Speed	30.60	31.50	33.50	36.00	29.00	28.50	34.80	36.00	25.40	22.50	36.30	36.00	28.40	27.00	38.70	36.00
Green/Red	2.33	18.40	2.33	18.40	3.00	24.00	2.03	16.00	2.70	21.60	4.56	36.80	2.57	20.80	4.56	36.80
Stops per Mile	1.50	25.00	1.50	25.00	1.25	27.00	1.65	23.00	1.35	26.00	0.90	31.00	1.40	26.00	0.90	31.00
CSPI	75		79		80		75		70		104		74		104	
CSPI Grade	C		C		C		C		C		A		C		A	

The CSPI Index improved in all peak periods from C, D, and F in the “Before” conditions to A and C in the “After” conditions.

ATTACHMENT C

LOS ALISOS BOULEVARD
TRAFFIC SIGNAL SYNCHRONIZATION PROJECT

CORRIDOR SYNCHRONIZATION PERFORMANCE INDEX (CSPI)
RESULTS

Table 6.3 - After Study **PM Peak MOEs based on Tru-Traffic**

MOE	DIRECTION								
	EB (to Entidad)			WB (to PDV)			BOTH (Directions Averaged)		
	Before	After	Difference	Before	After	Difference	Before	After	Difference
Travel Time (sec)	603	513	-90	540	584	43	572	548	-23
Stops	4.7	2.7	-2.0	5.2	4.7	-0.5	4.9	3.7	-1.2
Delay (sec)	48	-42	-90	-15	29	43	17	-7	-23
Travel Speed (mph)	26.3	31.1	4.8	29.8	27.5	-2.4	28.1	29.3	1.2
Green Red Ratio	1.77	3.83	2.07	1.57	1.80	0.23	1.67	2.82	1.15
Stops per Mile	1.07	0.73	0.33	1.18	1.06	-0.11	1.12	0.90	-0.22
Fuel Consumption (gal/hr.)	275	233	-42	178	193	15	226.5	213	-13.5
CO (lbs.) ¹	-	-	-1,280.7	-	-	468.6	-	-	-406.1
NOx (lbs.) ¹	-	-	-116.4	-	-	42.6	-	-	-36.9
CO2 (lbs.)	5,332	4,512	-820	3,452	3,752	300	4,392	4,132	-260
CSPI	68.0	94.8	26.8	70.2	70.0	-0.2	69.1	82.4	13.3
CSPI Tier	III	I	-	II	II	-	III	I	-

¹ Only the "Difference" (Reduction) is calculated using the OCTA Methodology.

ATTACHMENT D

PASEO DE VALENCIA
TRAFFIC SIGNAL SYNCHRONIZATION PROJECT

CORRIDOR SYNCHRONIZATION PERFORMANCE INDEX (CSPI)
RESULTS

BEFORE/AFTER STUDY REPORT

A summary of OCTA CSPI for the 'before' and 'after' field travel time studies along the Paseo De Valencia corridor are shown in **Table 8** and **Table 9**.

TABLE 8: 'BEFORE' STUDY CSPI SUMMARY-PASEO DE VALENCIA CORRIDOR

Parameters	AM Peak				Midday Peak				PM Peak				Saturday Peak			
	NB		SB		NB		SB		NB		SB		NB		SB	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Avg Speed	30.4	27.9	29.8	29.7	24.4	21.5	33.2	32.6	30.0	29.6	25.2	22.8	27.4	26.0	26.9	25.3
Green/Red	2.75	22.0	2.67	21.3	1.44	11.6	5.0	40.0	4.0	32.0	1.5	12.0	2.56	20.4	2.78	22.2
Stops per Mile	1.16	28.4	1.19	28.1	2.01	19.9	0.7	33.0	0.76	32.4	1.45	25.5	1.62	23.8	1.47	25.3
CSPI	78.3		79.1		53.0		105.6		94.0		60.3		70.3		72.8	
CSPI Tier	2		2		4		1		1		3		2		2	

TABLE 9: 'AFTER' STUDY CSPI SUMMARY-PASEO DE VALENCIA CORRIDOR

Parameters	AM Peak				Midday Peak				PM Peak				Saturday Peak			
	NB		SB		NB		SB		NB		SB		NB		SB	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Avg Speed	32.8	30.9	34.0	35.6	28.8	28.1	24.5	21.8	30.1	29.7	28.6	27.9	31.0	30.8	28.8	27.3
Green/Red	4.0	32.0	5.0	40.0	3.0	24.0	5.0	40.0	3.0	24.0	2.5	20.0	3.67	29.3	3.67	29.3
Stops per Mile	0.76	32.4	0.70	33.0	1.25	27.5	0.7	33.0	0.93	30.7	1.05	29.5	1.06	29.4	1.06	29.4
CSPI	95.3		108.6		79.7		94.8		84.4		77.4		89.5		86.0	
CSPI Tier	1		1		2		1		1		2		1		1	

ATTACHMENT E

OSO PARKWAY
TRAFFIC SIGNAL SYNCHRONIZATION PROJECT

CORRIDOR SYNCHRONIZATION PERFORMANCE INDEX (CSPI)
RESULTS

TABLE 9.3: MD PERIOD “BEFORE” AND “AFTER” STUDY RESULTS

MD Period	Eastbound			Westbound		
	Before	After	Improvement	Before	After	Improvement
Segment 1: Aliso Viejo Pkwy to Bridlewood Dr (13 traffic signals)						
Travel Time (min)	8.6	6.4	26%	7.4	6.1	18%
Stops (#)	4.6	3.2	30%	4.6	2.6	43%
Average Speed (mph)	25.4	34.2	35%	29.6	35.8	21%
Green per Red (#)	1.9	4.0	111%	1.9	5.0	163%
Stops per Mile (#)	1.3	0.9	30%	1.3	0.7	43%
Segment 2: Cabot Rd to SR-241 NB Ramp (19 traffic signals)						
Travel Time (min)	8.9	7.5	16%	8.1	7.5	8%
Stops (#)	5.0	3.8	24%	4.2	3.6	14%
Average Speed (mph)	28.4	34.1	20%	30.8	33.7	9%
Green per Red (#)	2.9	5.0	71%	3.9	4.7	20%
Stops per Mile (#)	1.2	0.9	23%	1.0	0.9	14%

TABLE 9.4: PM PERIOD “BEFORE” AND “AFTER” STUDY RESULTS

PM Period	Eastbound			Westbound		
	Before	After	Improvement	Before	After	Improvement
Segment 1: Aliso Viejo Pkwy to Bridlewood Dr (13 traffic signals)						
Travel Time (min)	7.9	7.1	10%	8.2	6.7	18%
Stops (#)	4.0	3.2	20%	4.2	3.8	10%
Average Speed (mph)	27.8	30.7	10%	27.3	32.2	18%
Green per Red (#)	2.4	2.8	19%	2.1	2.4	15%
Stops per Mile (#)	1.1	0.9	20%	1.2	1.1	9%
Segment 2: Cabot Rd to SR-241 NB Ramp (19 traffic signals)						
Travel Time (min)	9.2	8.4	9%	9.0	7.6	16%
Stops (#)	5.6	5.2	7%	5.4	3.6	33%
Average Speed (mph)	27.1	29.7	10%	28.4	33.2	17%
Green per Red (#)	2.7	2.8	3%	3.2	4.7	49%
Stops per Mile (#)	1.4	1.3	7%	1.3	0.9	33%

TABLE 9.5: WKND PERIOD “BEFORE” AND “AFTER” STUDY RESULTS

WKND Period	Eastbound			Westbound		
	Before	After	Improvement	Before	After	Improvement
Segment 1: Aliso Viejo Pkwy to Bridlewood Dr (13 traffic signals)						
Travel Time (min)	7.7	6.0	22%	7.2	6.1	16%
Stops (#)	4.8	2.0	58%	4.6	2.4	48%
Average Speed (mph)	28.4	36.1	27%	29.9	35.8	20%
Green per Red (#)	1.7	5.0	198%	1.8	5.0	184%

WKND Period	Eastbound			Westbound		
	Before	After	Improvement	Before	After	Improvement
Stops per Mile (#)	1.3	0.7	48%	1.3	0.7	45%
Segment 2: Cabot Rd to SR-241 NB Ramp (19 traffic signals)						
Travel Time (min)	8.9	7.8	12%	8.7	7.3	16%
Stops (#)	6.0	5.0	17%	5.4	3.8	30%
Average Speed (mph)	28.1	32.6	16%	28.9	34.0	18%
Green per Red (#)	2.2	3.5	58%	2.5	4.4	75%
Stops per Mile (#)	1.4	1.2	16%	1.3	0.9	29%

The OCTA CSPI metric for the entire corridor is shown in **Table 9.6**. These tables show the performance level “Tier” as well as existing travel speed, green per red, and stops per mile.

TABLE 9.6: CORRIDOR CSPI SCORE RESULTS

Corridor Totals	AM	AM	MD	MD	PM	PM	WKND	WKND
	Before	After	Before	After	Before	After	Before	After
Eastbound								
CSPI Score	72.3	108.2	71.4	87.2	71.7	80.7	68.1	97.9
CSPI Tier	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 3	Tier 1
Westbound								
CSPI Score	65.4	85.8	79.6	100.5	70.7	89.7	72	101
CSPI Tier	Tier 3	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1
Total								
CSPI Score	68.8	97	75.5	93.9	71.2	85.2	70.1	99.4
CSPI Tier	Tier 3	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1

The Caltrans Metrics are shown in **Table 9.7** and the Caltrans Costs are shown in



City of Laguna Hills

Traffic Commission

Staff Report

DATE: May 17, 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 Calendar May 2017

CITY OF LAGUNA HILLS

MAY 2017

RADAR TRAILER SCHEDULE (RAINY DAYS EXCLUDED)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
		7				
7	8	9 Nellie Gail E/O Empty Saddle 25 MPH	10 Woodbluff W/O Middleridge 25 MPH	11 Bridlewood S/O Laurel Crest 25 MPH	12	13
14	15	16	17	18	19	20
21	22	23 San Remo Mid-block 30 MPH	24 Rapid Falls W/O Sundowner 25 MPH	25 Lost Colt E/O Beargrass 25 MPH	26	27
28	29 HOLIDAY	30	31			

CITY OF LAGUNA HILLS

JUNE 2017

RADAR TRAILER SCHEDULE (RAINY DAYS EXCLUDED)

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

CITY OF LAGUNA HILLS

JULY 2017

RADAR TRAILER SCHEDULE (RAINY DAYS EXCLUDED)

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