

**Meeting of the Ad-Hoc Citizen Traffic Advisory Group  
December 22, 2015**

**Lake Forest City Hall  
25550 Commercentre Drive  
Council Chambers  
Lake Forest, California 92630**

**AGENDA ON THE INTERNET:** The Agenda is available through the Internet at [www.lakeforestca.gov](http://www.lakeforestca.gov). You can access the document on the Friday before the meeting on Tuesday.

**AGENDA DOCUMENT REVIEW:** The full Agenda including all back up information is available at City Hall, 25550 Commercentre Dr., Lake Forest, California, on the Friday prior to the Tuesday meeting.

**AGENDA DESCRIPTION:** The Agenda descriptions are intended to give notice to members of the public of a general summary of items of business to be transacted or discussed.

**CALL TO ORDER:**

**7:00 p.m.**

ROLL CALL:      Chair:                      Scott Drapkin  
  
                         Vice Chair:                      John Irish  
  
                         Members:                      Mark Armando  
  
                                                              Grady Glover  
  
                                                              Tim Redwine  
  
                                                              Donald Stoll  
  
                                                              Derek Wieske

Staff Liaison:                      David Rogers, Traffic Engineering  
                                                              Manager

**PUBLIC COMMENTS:**

At this time, members of the public may address the Ad-Hoc Citizen Traffic Advisory Group regarding any items within the subject matter jurisdiction of the Group. No action may be taken on items not listed on the agenda unless authorized by law. Comments shall be limited to three minutes per person and an overall time limit of thirty minutes for the Public Comments portion of the agenda.

Any person wishing to address the Ad-Hoc Citizen Traffic Advisory Group on any matter, whether or not it appears on this agenda, is requested to complete a "Request to Speak" form available at the door. The completed form is to be submitted to City staff prior to an individual being heard by the Ad-Hoc Citizen Traffic Advisory Group.

## **CONSENT CALENDAR:**

All matters listed under the Consent Calendar are considered routine and will be enacted by one vote. There will be no separate discussion of these items unless Members of the Group, the public, or staff request specific items be removed from the Consent Calendar for separate action.

1. APPROVAL OF MINUTES OF THE REGULAR MEETING OF THE CITIZEN TRAFFIC ADVISORY GROUP HELD ON November 24, 2015, submitted by Public Works staff.

RECOMMENDED ACTION: Approve as submitted.

2. STATUS REPORT ON CTAG TRAFFIC CONCERNS LIST, submitted by Public Works staff.

RECOMMENDED ACTION: Receive and File.

## **DISCUSSION/ACTION ITEMS:**

The following matters are for Commission consideration/discussion/action. Members of the public may have the opportunity to address these items if they wish to do so. Please complete the "Request to Speak" form and give to the Public Works Management Aide.

3. UPDATED WORK PROGRAM FOR REMAINING MEETINGS, submitted by Public Works staff.

RECOMMENDED ACTION: Review and discuss the Revised Work Plan for the remaining meetings and direct staff, as appropriate.

4. PRESENTATION AND DISCUSSION REGARDING CAPITAL PROJECTS, submitted by Public Works staff.

RECOMMENDED ACTION: Receive a presentation from the Public Works Department regarding the City's traffic model and discuss this topic and make findings and recommendations, as appropriate.

## **ADJOURNMENT:**



In compliance with the Americans With Disabilities Act, if you need special assistance to participate in this Meeting, including auxiliary aids or services, you should contact the Public Works Management Aide at (949) 461-3493. Notification 48 hours prior to the Meeting will enable the City to make reasonable arrangements to assure accessibility to this meeting. The Ad-Hoc Citizen Traffic Advisory Group and agenda back-up materials can be obtained from Public Works Management Aide on the Friday prior to the Ad-Hoc Citizen Traffic Advisory Group meeting. Copies of all Agendas, Staff Reports and Supporting Materials can also be found on the City's website – [www.lakeforestca.gov/services/agendas](http://www.lakeforestca.gov/services/agendas). Agenda and agenda packets, if requested, will be made available in an appropriate alternative format to persons with a disability as required by the Americans With Disabilities Act. Copies of the agenda are provided at no cost and agenda back-up materials are available at the per page copy cost. If you wish to be added to the mailing list to receive a copy of the agenda, request must be provided to staff in writing.

The City of Lake Forest mailing address is 25550 Commercentre Drive, Lake Forest, California 92630.  
Phone: (949) 461-3400. FAX (949) 461-3511.

CERTIFICATION: I, Amber Haston, Public Works Management Aide, of the City of Lake Forest, California, hereby certify that the foregoing Ad-Hoc Citizens Traffic Advisory Group agenda was posted for public review on December 17, 2015, at 6:00 p.m.

MINUTES OF A SPECIAL MEETING OF THE LAKE FOREST  
AD-HOC CITIZEN TRAFFIC ADVISORY GROUP

The meeting of the Lake Forest Ad-Hoc Citizen Traffic Advisory Group which was held November 24, 2015, at the Lake Forest City Council Chambers, 25550 Commercentre Drive, Lake Forest, California was called to order at 7:00 p.m.

**ROLL CALL:** Chair: Scott Drapkin  
Vice-Chair: John Irish  
Members: Mark Armando  
Grady Glover  
Tim Redwine  
Donald Stoll  
Derek Wieske

**ALSO PRESENT:** Tom Wheeler, Director of Public Works/City Engineer  
David Rogers, Traffic Engineering Manager  
Doug Anderson, Traffic Engineering Consultant  
Amber Haston, Public Works Management Aide

**PUBLIC COMMENTS:**

There were no Public comments.

**CONSENT CALENDAR:**

1. APPROVAL OF MINUTES OF THE REGULAR MEETING OF THE CITIZEN TRAFFIC ADVISORY GROUP HELD ON OCTOBER 27, 2015.

Suggestions were considered regarding the meeting minutes specificity with member's comments and motions.

There was consensus among the Group Members to make two revisions to Item 4, Presentation and Discussion Regarding Traffic Modeling: modify the discussion summary to reflect the Group's suggestion of incorporating an Orange County Fire Authority evacuation plan within the Safety Element of the General Plan and amend the action of this item to reflect the Group's support of the City's efforts to revise the General Plan and the Circulation Element.

**ACTION:** Members of the Ad-Hoc Citizen Traffic Advisory Group approved the minutes, inclusive of the two determined revisions to Item 4.

## 2. UPDATE ON THE SADDLEBACK RANCH ROAD TRAFFIC CALMING PROJECT

ACTION: The Ad-Hoc Citizens Traffic Advisory Group received and filed the written report.

### **DISCUSSION/ACTION ITEMS:**

## 3. STATUS REPORT ON CTAG TRAFFIC CONCERNS LIST

Doug Anderson, Traffic Engineering Consultant, provided updates for specific items on the Traffic Concerns List.

The Group Members received an update on Items 30 and 31 pertaining to the intersection of Muirlands and Dylan and Muirlands and Ridge Route. These intersections are part of a joint Traffic Signal Synchronization Project between the City of Lake Forest, City of Irvine and Orange County Transportation Authority that is nearing completion.

The Group Members also received an update concerning Item 34 on the intersection of Chinook and Serrano and Item 35 at the intersection of Sunflower and Alton. Item 34 has a new coordination timing being implemented and is on track to be completed in spring of 2016. The sensitivity on the bicycle loop has been adjusted for Item 35.

The Group Members discussed Item 12 and noticed the possible similarity in the sight distance concern at Sterling Drive/Lake Forest Drive and intersections on Saddleback Ranch Road. Staff will continue to review and monitor the conditions based on the County sight distance standards. These sight distance standards will be discussed at a future meeting. Staff was complimented for its prompt efforts in resolving the Groups concerns.

Discussion ensued regarding Item 8 and the concern with the intersection of eastbound Bake Parkway and Trabuco Road.

There was further discussion regarding the number of meetings left and to separate the meeting topics to encompass all major areas of traffic engineering. Staff informed the Group that they will prepare a proposed schedule to include the remaining discussion points. With the limited time available to the Ad-Hoc Citizen Traffic Advisory Group, the Group Members

briefly discussed the potential for City Council to establish a Traffic Commission in the future.

Questions arose concerning whether transportation permits are required for Item 14 on Skyridge Development. Item 39 on widening Bake Parkway was also discussed and will be included with the Capital Improvement Program discussion.

**ACTION:** The Ad-Hoc Citizens Traffic Advisory Group received a presentation from the Public Works Department and discussed the status of the items on the list of traffic concerns.

#### 4. PRESENTATION AND DISCUSSION REGARDING TRAFFIC MODELING

Dave Rogers, Traffic Engineering Manager, provided the Group Members with an overview of how traffic modeling impacts the City's Capital Improvement Program.

Daryl Zerfass, P.E., P.T.P., Stantec Consulting Services Inc., provided the Group Members with an overview of traffic modeling and the Portola Gap Closure case study.

The Group Members discussed the potential for development to have impacts on traffic congestion.

The Portola Parkway Gap Closure case study was reviewed to demonstrate how traffic modeling can identify advantages and potential implications of a change to the transportation network. Councilman Dr. Jim Gardner indicated that the City Council reviewed this report in late 2014, and the majority deemed that this project was not a priority and concluded that the benefits were not worth the costs at the time.

Staff informed the Group Members that the City's model uses the information that is included in the Orange County Transportation's Model, especially pertaining to the areas outside of the City's boundaries. The Orange County Transportation Model is derived from the input of Lake Forest's adjacent cities and is, therefore, relying on each city's involvement for accuracy.

Dave Rogers, Traffic Engineering Manager, discussed the LFTM projects with the Group. The Group Members further discussed the LFTM projects in connection with the series of goals provided to the Group for consideration. The Group discussed that some projects may potentially require the City Council to proceed with obtaining portions of private property.

Staff confirmed with the Group Members that prior to taking their cumulative recommendations on all of the topics they have reviewed to the City Council, the recommended goals will be brought to them for a final review.

The Group Members expressed budgetary concerns with the proposed second goal of annually reviewing the LFTM program and prioritization of the projects. Tom Wheeler, Director of Public Works, received the Group's approval on his suggestion of changing this to a once every 2 year review. Staff reminded the Group Members of City Council's prerogative of approving the City's proposed budget and the existing budget for this goal.

Dave Rogers, Traffic Engineering Manager, suggested an additional goal for the Group Members to consider recommending: that the City review possible modifications to existing projects or substitute projects and improvements within the framework of the Lake Forest Traffic Mitigation for projects that have a potential significant impact on residential properties.

Consensus was also reached among the Group Members to add an additional goal of monitoring the potential traffic issues in the City of Irvine pertaining to the development in and around the Great Park.

**ACTION:** The Ad-Hoc Citizen Traffic Advisory Group received a presentation from the Public Works Department regarding the City's traffic model and discussed this topic and recommended that the City Council consider 5 goals:

- 1) That the City continue to update the Lake Forest Traffic Mitigation, as appropriate, and continue to use the latest modeling processes and techniques to insure that the Lake Forest Traffic Mitigation represents the most accurate depiction of the City's traffic condition.
- 2) a. That the City continue to review and monitor the mitigation program and update the prioritization of the projects, as appropriate, every 2 years.

- b. That the City considers conducting biennial peak hour traffic counts at the intersections in the program and other select locations to help track and identify changing conditions. This will assist in the project prioritization process in the years between the full Lake Forest Traffic Mitigation updates (usually conducted once every 5 years).
- 3) That the City considers entering into a master funding and project implantation agreement with the City of Irvine to help expedite project delivery.
- 4) That the City reviews possible modifications to existing projects or substitute projects and improvements within the framework of the Lake Forest Traffic Mitigation for projects that have a potential significant impact on residential properties.
- 5) That the City monitors potential traffic issues in the City of Irvine pertaining to the development in and around the Great Park.

**ADJOURNMENT:**

The Ad-Hoc Citizen Traffic Advisory Group Adjourned the November 24 Ad-Hoc Citizen Traffic Advisory Group Meeting at 9:42 p.m.

Respectfully submitted:

APPROVED:

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AMBER HASTON  
PUBLIC WORKS MANAGEMENT AIDE

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DAVE ROGERS  
TRAFFIC ENGINEERING MANAGER



## **Ad-Hoc Citizen Traffic Advisory Group Agenda Report**

**Meeting Date:** December 22, 2015

**Department:** Public Works

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### **SUBJECT:**

STATUS REPORT ON CTAG TRAFFIC CONCERNS LIST

### **RECOMMENDED ACTION(S):**

Receive and File.

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### **DISCUSSION:**

At the August 25, 2015 CTAG meeting, the members provided staff with a list of traffic and transportation topics and issues to cover and address as part of future meetings. Two additional items were added by the Group at the September meeting. In addition, a citizen provided a list of topics at the September meeting which the Group asked to be reviewed and items added, as appropriate. Staff included all the items on the list and provided comments on each. This will be a standing item for all future CTAG agendas.

The topics and issues range from concerns about traffic signal operations at individual intersections to broad topics such as the status of the gap closure for Portola Parkway between Lake Forest and Irvine. As you can see on the attached list, some of the items have been referred to the City's contractors and consultants for review. These items should be addressed within a relatively short time frame. For other topics and issues, staff is gathering information and will either forward the appropriate material to the members for their review and information or schedule a brief discussion under this standing item or another discussion item for a future meeting. For this meeting, we have included a discussion of the Portola Parkway Gap Closure (item #17) as a case study for traffic modeling as part of the report on that topic.

If the Group wants more detailed reports and presentations on specific items, the Group (as a whole or at least a majority of members) would need to provide direction to staff on which items they would like additional information on and when they would like to have the information presented for review and discussion.

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**ATTACHMENTS:**

CTAG Traffic Concerns List

Initiated By: David Rogers, P.E., T.E., Traffic Engineering Manager  
Reviewed By: Carlo Tomaino, Assistant to the City Manager  
Approved By: Thomas E. Wheeler, P.E., Director of Public Works/City  
Engineer



## CTAG TRAFFIC CONCERNS

<b>UNDER REVIEW</b>				
NO.	TRAFFIC CONCERNS	CTAG MEMBER	STATUS	COMMENTS
6	EL TORO HIGH SCHOOL TRAFFIC –CONCERN ABOUT GENERAL SCHOOL TRAFFIC	STOLL	UNDER REVIEW	WILL BE INCLUDED WITH TRAFFIC ENGINEERING DISCUSSION IN JANUARY 2016
7	PROTECTED/PERMISSIVE	WIESKE	UNDER REVIEW	WILL BE INCLUDED WITH TRAFFIC ENGINEERING DISCUSSION IN JANUARY 2016
8	EB BAKE PKWY. AT TRABUCO RD.	STOLL	UNDER REVIEW	WILL BE INCLUDED WITH CAPITAL PROJECT DISCUSSION IN DECEMBER 2015
9	SB TOLEDO WAY AT SERRANO RD. (POSSIBLE USE OF PROTECTED PERMISSIVE)	WIESKE	UNDER REVIEW	WILL BE INCLUDED WITH TRAFFIC ENGINEERING DISCUSSION IN JANUARY 2016
10	SHASTA LAKE RD. AT SERRANO RD. (STATUS)	WIESKE	UNDER REVIEW	WILL BE INCLUDED WITH TRAFFIC ENGINEERING DISCUSSION IN JANUARY 2016
11	NB TOLEDO WAY NEEDS DUAL LEFT ONTO WB BAKE PKWY.		UNDER REVIEW	WILL BE INCLUDED WITH CAPITAL PROJECT DISCUSSION IN DECEMBER 2015
12	STERLING SIGHT DISTANCE	IRISH	UNDER REVIEW	STAFF IS REVIEWING CONDITIONS; SIGHT DISTANCE STANDARDS WILL BE DISCUSSED



## CTAG TRAFFIC CONCERNS

UNDER REVIEW				
NO.	TRAFFIC CONCERNS	CTAG MEMBER	STATUS	COMMENTS
				WITH THE TRAFFIC ENGINEERING PRESENTATION IN JANUARY 2016
16	ROUNDABOUTS	WIESKE	UNDER REVIEW	WILL BE INCLUDED WITH TRAFFIC ENGINEERING DISCUSSION IN JANUARY 2016
18	RIDGE ROUTE OVERCROSSING (STATUS)	WIESKE & REDWINE	UNDER REVIEW	WILL BE INCLUDED WITH CAPITAL PROJECT DISCUSSION IN DECEMBER 2015
19	ACCIDENT/SAFETY DATA INFORMATION	WIESKE/DRAPKIN	UNDER REVIEW	WILL BE INCLUDED WITH TRAFFIC ENGINEERING DISCUSSION IN JANUARY 2016
20	STRATEGIC PLAN BACKLOG PROJECTS		UNDER REVIEW	WILL BE INCLUDED WITH CAPITAL PROJECT DISCUSSION IN DECEMBER 2015
38	REVIEW SERRANO CREEK UNDERCROSSING ON TRABUCO FOR BIKERS AND HIKERS	WEISKE	UNDER REVIEW	WILL BE INCLUDED WITH CAPITAL PROJECT DISCUSSION IN DECEMBER 2015
39	WIDEN BAKE PARKWAY	GLOVER	UNDER REVIEW	WILL BE INCLUDED WITH CAPITAL PROJECT DISCUSSION IN DECEMBER 2015



## CTAG TRAFFIC CONCERNS

<b>UNDER REVIEW</b>				
<b>NO.</b>	<b>TRAFFIC CONCERNS</b>	<b>CTAG MEMBER</b>	<b>STATUS</b>	<b>COMMENTS</b>
40	ADD TRAFFIC DELINEATORS TO NB TRABUCO, NORTH OF EL TORO	ARMANDO	UNDER REVIEW	REVIEW TO BE COMPLETED BY MARCH 2016



## CTAG TRAFFIC CONCERNS

<b>COMPLETE</b>				
NO.	TRAFFIC CONCERNS	CTAG MEMBER	STATUS	COMMENTS
1	EB LAKE FOREST DR. INTO MIMI'S - SIGNAL TIMING EXCESSIVE DELAY	STOLL	COMPLETE	ADJUSTMENTS MADE ON SEPT 15
2	EB LAKE FOREST DR. TO 241 TOLL ROAD TRAFFIC SIGNAL ISSUE (LOOP DOES NOT DETECT MOTORCYCLE)		COMPLETE	FORWARDED TO CALTRANS FOR ADJUSTMENT
3	SB ALISO PARK, LEFT TURN TO GO EB ON EL TORO RD. TRAFFIC SIGNAL ISSUE (LOOP DOES NOT DETECT MOTORCYCLE)		COMPLETE	ADJUSTED MADE ON SEPT 15
4	EL TORO RD. WB AT TOLEDO WAY (NEEDS TO STAY GREEN LONGER)	REDWINE	COMPLETE	SIGNAL TIMING WAS ADJUSTED ON 9/8/15
5	EB EL TORO RD. ON SERRANO ( SCHOOL TIME - DEMAND EXCEEDS THE LENGTH)		COMPLETE	SIGNAL TIMING WAS ADJUSTED ON 9/8/15
13	SADDLEBACK RANCH RD. - REVIEW BIKE SAFETY/PORKCHOPS/PARKING NEAR CONCOURSE PARK	GLOVER	COMPLETE	INFORMATION PROVIDED 11/24/15
14	SKYRIDGE DEVELOPMENT	GLOVER	COMPLETE	INFORMATION PROVIDED 11/24/15
15	BIKE SAFETY/TRAIL ALONG RAILROAD/MULTI MODAL STREETS	WIESKE/DRAPKIN	COMPLETE	INCLUDED WITH GENERAL PLAN DISCUSSION ON 10/27/15
17	PORTOLA GAP CLOSURE	WIESKE	COMPLETE	INFORMATION PROVIDED 11/24/15
21	GENERAL PLAN CIRCULATION ELEMENTS	DRAPKIN & WIESKE	COMPLETE	INFORMATION PROVIDED 10/27/15
22	MONITORING DEVELOPMENT IN ADJACENT CITIES	DRAPKIN	COMPLETE	INFORMATION WAS INCLUDED WITH TRAFFIC MODELING DISCUSSION IN NOVEMBER 2015



## CTAG TRAFFIC CONCERNS

<b>COMPLETE</b>				
NO.	TRAFFIC CONCERNS	CTAG MEMBER	STATUS	COMMENTS
23	ALL TRAFFIC SIGNALS ESPECIALLY ON ARTERIALS – TOO LONG RED OR GREEN LIGHTS DURING NON-PEAK TRAFFIC PERIODS	GROUP VIA JIM RICHERT	COMPLETE	CYCLE LENGTHS ARE USUALLY REDUCED BUT GREEN LIGHTS WILL EXTEND WITH MINIMAL TRAFFIC
24	NORTHBOUND BAKE AT TRABUCO – RIGHT LANE ON BAKE HAS BOTH RIGHT TURN AND STRAIGHT AHEAD ABILITY – LARGE TRAFFIC BACKUP	GROUP VIA JIM RICHERT	COMPLETE	FUTURE CAPITAL PROJECT TO ADD DEDICATED RIGHT TURN LANE
25	SERRANO AND LAKE FOREST – WESTBOUND ON SERRANO CROSSING LAKE FOREST – LEFT TURN LIGHT ONTO LF IS ALWAYS GREEN EVEN WITH NO LEFT TURN TRAFFIC	GROUP VIA JIM RICHERT	CLOSED – PROJECT UNDER CONSTRUCTION	THIS IS CURRENTLY A SPLIT PHASE INTERSECTION FOR SERRANO. CITY IS MODIFYING TO INSTALL PROTECTED LEFTTURNS MARCH 2016
26	WESTBOUND TOLEDO AT BAKE – RIGHT LANE BACKUP ON TOLEDO DUE TO NO RIGHT TURN LANE	GROUP VIA JIM RICHERT	COMPLETE	DEDICATED RIGHT NOT JUSTIFIED BASED ON TRAFFIC MODEL
27	SOUTHBOUND LAKE FOREST AT TRABUCO – RIGHT LANE BACKUP ON LAKE FOREST DUE TO NO RIGHT TURN LANE ONTO TRABUCO	GROUP VIA JIM RICHERT	COMPLETE	DEDICATED RIGHT NOT JUSTIFIED BASED ON TRAFFIC MODEL
28	HOME DEPOT ENTRANCE ON RANCHO PARKWAY IN FOOTHILL RANCH – LEFT TURN LIGHT ON RANCHO PARKWAY INTO HOME DEPOT IS NOT NEEDED DUE TO VERY LOW TRAFFIC VOLUME ON RANCHO PARKWAY	GROUP VIA JIM RICHERT	COMPLETE	PROTECTED LEFT IS JUSTIFIED
29	BAKE PARKWAY BETWEEN TRABUCO AND 241 – TRAFFIC CONGESTION ON BAKE – WILL BE EVEN WORSE WITH 4000 NEW HOMES	GROUP VIA JIM RICHERT	COMPLETE	SIGNAL COORDINATION PROJECT UNDERWAY. TRAFFIC MODEL DOES



## CTAG TRAFFIC CONCERNS

<b>COMPLETE</b>				
NO.	TRAFFIC CONCERNS	CTAG MEMBER	STATUS	COMMENTS
				NOT CALL FOR ADDITIONAL MITIGATIONS/WIDENING
30	MUIRLANDS AND RIDGE ROUTE – AT RUSH HOUR, EASTBOUND TRAFFIC ON MUIRLANDS BACKS UP TO DYLAN	GROUP VIA JIM RICHERT	CLOSED – PROJECT UNDER CONSTRUCTION	TRAFFIC SIGNAL SYNCHRONIZATION PROJECT TO BE COMPLETED IN EARLY 2016
31	MUIRLANDS AND DYLAN – RED LIGHT FOR MUIRLANDS TRAFFIC AT DYLAN EVEN THOUGH NO CROSS TRAFFIC ON DYLAN	GROUP VIA JIM RICHERT	CLOSED – PROJECT UNDER CONSTRUCTION	TRAFFIC SIGNAL SYNCHRONIZATION PROJECT TO BE COMPLETED IN EARLY 2016
32	EL TORO AND ARBOR – GREEN LIGHT FOR ARBOR TRAFFIC IS VERY LONG – EL TORO ROAD TRAFFIC DELAYED NEEDLESSLY	GROUP VIA JIM RICHERT	COMPLETE	PEDESTRIANS ARE COMMON AT THIS LOCATION. PEDESTRIANS REQUIRE EXTENDED TIMES TO CROSS THIS WIDE SECTION OF EL TORO. OVERALL GREEN IS AT MINIMAL NECESSARY
33	EL TORO AT BRIDGER – TRAFFIC BACKS UP ON EL TORO AS THERE IS NO DEDICATED RIGHT TURN LANE ONTO BRIDGER	GROUP VIA JIM RICHERT	COMPLETE	DEDICATED RIGHT NOT JUSTIFIED BASED ON TRAFFIC MODEL
34	CHINOOK AND SERRANO LIGHT COORDINATION – A REAL TRAFFIC MESS – CHINOOK AND SERRANO LIGHTS ALWAYS RED FOR LAKE FOREST TRAFFIC	GROUP VIA JIM RICHERT	CLOSED – PROJECT UNDER CONSTRUCTION	CONTRACTOR ORDERING EQUIPMENT; TO BE COMPLETED



## CTAG TRAFFIC CONCERNS

<b>COMPLETE</b>				
NO.	TRAFFIC CONCERNS	CTAG MEMBER	STATUS	COMMENTS
				3/2016
35	SUNFLOWER AND ALTON – SUNFLOWER GETS GREEN LIGHT EVEN WHEN THERE IS NO TRAFFIC EXITING SUNFLOWER ONTO ALTON	GROUP VIA JIM RICHERT	COMPLETE	BICYCLE LOOP SENSITIVITY ADJUSTED.
36	TRABUCO BETWEEN BAKE AND EL TORO – GREEN LIGHT DURATION ALONG TRABUCO IS WAY TOO LONG DURING PEAK VOLUME TIMES DUE TO NEW SYNCHRONIZATION PROGRAM	GROUP VIA JIM RICHERT	COMPLETE	LONGER GREEN TIMES FOR THRU MOVEMENT IS TYPICAL FOR COORDINATION
37	LAKE FOREST AT JERONIMO – LEFT TURN LIGHT FROM SOUTHBOUND LAKE FOREST ONTO EASTBOUND JERONIMO IS TOO SHORT	GROUP VIA JIM RICHERT	COMPLETE	BACKUP OCCURS ONLY DURING SCHOOL AM AND PM PEAKS. MAXIMUM TIME ALREADY ALLOTTED
41	TRABUCO/VIA DEL RIO, SIGNAL CYCLING INCORRECTLY	REDWINE	COMPLETE	CYCLE LENGTH CHECKED & ADJUSTED PER SYNCHRONIZATION PLAN



## Ad-Hoc Citizen Traffic Advisory Group Agenda Report

**Meeting Date:** December 22, 2015

**Department:** Public Works

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### **SUBJECT:**

UPDATED WORK PROGRAM FOR REMAINING MEETINGS

### **RECOMMENDED ACTION(S):**

Review and discuss the Revised Work Plan for the remaining meetings and direct staff, as appropriate.

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### **BACKGROUND:**

(From August CTAG Work Program Report):

On April 7, 2015, the City Council voted to approve the CTAG. As approved, the group is a temporary body tasked with reviewing various traffic and transportation issues and acting as an advisory body to the City Council. At the meeting, the City Council approved the following parameters for the CTAG:

- 1) **Duration of time:** Maximum of 1 year, but could be less depending on various factors.
- 2) **Number of Meetings:** A minimum of 4 meetings with no more than 12 meetings (one per month on average), with a 2-hour time limit per meeting.
- 3) **Topic Specific Meetings:** Each covering one specific issue/sub-topic. For instance, under the broad topic of roadway improvements, one meeting would focus on traffic modeling and forecasting; another would focus on how staff determines what specific improvements to implement, etc.

In addition to the administrative and organizational efforts described above, the City Council also approved the CTAG mission statement below:

*“To provide recommendations to the City Council regarding overall strategies and processes to improve long term traffic conditions throughout the City including how to provide future citizen participation without creating another permanent layer of bureaucracy.”*

As noted, the CTAG will focus on providing recommendations related to the main components of traffic management, namely: community input, signal operations, signal coordination, intersection and roadway improvement strategies, and additional processes to build on the City's efforts to date. In this way, the CTAG will concentrate its efforts on studying these issues further with assistance from the City's traffic engineering staff. The City Council requested that the CTAG offer initial findings and recommendations to the City Council as follows:

Community Input: The CTAG will review and make recommendations regarding the process for long-term sustained community input on traffic related issues. This could include reviews of the Community Satisfaction Study, the traffic forums, as well as other methods that the City uses to communicate with its residents.

Traffic Signal Operation, Coordination and Communication: The CTAG will review how the City operates the traffic signal system, including coordination and communication. The CTAG, thereby, could identify potential areas of broad focus within the City's existing transportation network.

Intersection and Roadway Improvement Strategies: The CTAG will provide broad based input on how the City determines what types of traffic and transportation related capital improvement projects should be constructed and how to determine the timing of the improvements. This could include, for example, a review of traffic modeling and forecasting and the LFTM.

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## **DISCUSSION:**

Based on the parameters authorized by the City Council, staff prepared an initial work plan that was presented to the CTAG at their first meeting on August 25, 2015. After hearing staff's presentation on this issue, the group agreed with the general topics, but also suggested that additional topics may need to be reviewed. Over the last few meetings, CTAG members have identified a few topics and at the November meeting the CTAG asked that staff bring back a revised work program. Staff prepared the following updated work program summary, covering the topics of discussion reflected as part of the City Council's prior direction and some of the CTAG traffic concern items.

### **Completed Reviews (Meetings 1-4)**

#### Traffic Signal Operations, Coordination, and Communication

The CTAG reviewed information on the basics of this topic and the status of the City's traffic management system at the September 2015 meeting. The CTAG

developed recommendations to enhance the traffic signal system and signal coordination.

### Traffic Modeling for Development and Transportation Planning

The CTAG reviewed information on local and regional transportation modeling and how this relates to traffic and transportation related capital projects at the November 2015 meeting. The CTAG developed recommendations related to the City traffic model, capital projects and overseeing neighboring development.

### General Plan and Circulation Element Overview

This item was not one of the core areas of review identified by the City Council, but was requested by the CTAG during a previous meeting. The CTAG heard a presentation on this topic from the Director of Development Services. The CTAG made recommendations that are pertinent to the upcoming General Plan update.

### **Remaining Topics (Includes Items from CTAG Concern List)**

#### 1 - Capital Projects (Meeting 5 - December 22, 2015 )

The CTAG will review information on how traffic and transportation related capital projects are identified and prioritized with a specific discussion of the current 2 year Capital Improvement Program (“CIP”) and 5 Year Strategic Plan. The CTAG will make recommendations and direct staff as appropriate. The review will also include specific examples of capital projects that have been identified by the CTAG. The CTAG items that will be included in the discussion are:

- a) Bake/Trabuco - Discussion of proposed improvements for eastbound Bake
- b) Bake Parkway east of Trabuco – Discussion of capacity and demand on this segment of Bake (4 vs 6 lanes).
- c) Bake/Toledo – Review need for dual left turns from northbound Toledo to Bake
- d) Ridge Route Overcrossing – status report on the potential extension of Ridge Route over the I-5 Freeway.

#### 2 - Traffic Engineering (Meeting 6 - January 26, 2016)

The CTAG would review information on the day-to-day activities of the Traffic Engineering group and processes and procedures that the City employs to

improve safety on the City's transportation network. Other traffic operational issues that have been identified by the CTAG will also be included in the review.

- a) Traffic Collision Review – A discussion of the tools and methods used to analyze traffic collision patterns and trends.
- b) Protected/Permissive Left Turn Phasing – A general discussion about protected permissive left turn phasing and its use in North and South Orange Counties.
- c) Roundabouts – a general discussion on roundabouts and their use in Lake Forest.
- d) El Toro High School – A general discussion about school related traffic patterns and congestion.
- e) Various Intersection Reviews – Shasta Lake at Serrano and Sterling at Lake Forest.

### 3 - Community Input (Meeting 7 - February 23, 2016)

The CTAG will discuss how the City currently communicates with the residents and business owners and look for ways to sustain and enhance communication with the community.

### 4 - Discussion and Finalization of CTAG Recommendations (Meeting 8 - March 23, 2016)

The CTAG will review and discuss all the findings and recommendations that have come out of the previous meetings and decide on the prioritization of the recommendations (if appropriate). If this meeting is held on or before March 2016, the CTAG priorities can be considered during the budget discussions for the Fiscal Year 2016/2017 Operating Budget and the mid-cycle update of the 2015-2017 Capital Improvements Projects Budget.

### **Schedule**

The City Council's approved parameters for the CTAG include a one year term and a maximum of 12 meetings. Based on the work program noted above, the three remaining topics (2-4) will each take at least one full meeting. This leaves up to 4 meetings to review other related topics or sub-topics or expand the review of the above referenced topics. For example, it may require a follow up meeting to present the final recommendations and priority list for the City Council, if there is an extensive discussion at the first meeting.

**RECOMMENDATION:**

Review and discuss the revised work plan for the remaining meetings and direct staff as appropriate.

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**ATTACHMENTS:**

CTAG August 25, 2015 Work Plan Report

Initiated By: David Rogers, P.E., T.E., Traffic Engineering Manager  
Reviewed By: Thomas E. Wheeler, Director of Public Works/City Engineer  
Approved By: Thomas E. Wheeler, Director of Public Works/City Engineer



## **Ad-Hoc Citizen Traffic Advisory Group Agenda Report**

**Meeting Date:** August 25, 2015

**Department:** Public Works

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### **SUBJECT:**

AD-HOC CITIZEN TRAFFIC ADVISORY GROUP WORK PLAN

### **RECOMMENDED ACTION(S):**

RECEIVE A PRESENTATION FROM THE PUBLIC WORKS DEPARTMENT REGARDING THE AD-HOC CITIZEN ADVISORY TRAFFIC GROUP WORK PLAN.

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### **EXECUTIVE SUMMARY:**

The City Council recently authorized the formation of the Citizen Traffic Advisory Group (“CTAG”) and appointed its seven members. The City Council directed that the CTAG hold its discussion in the areas of community input, traffic signal operation, coordination, and communication, and intersection and roadway improvement strategies. Based on the framework provided by the City Council’s prior direction, the CTAG will hold meetings to discuss various traffic and transportation-related items in those focus areas. One topic area will be discussed at each meeting and the CTAG will provide feedback to the City accordingly. To effectuate the City Council’s direction, staff prepared a Work Plan to frame the CTAG’s discussion over the course of the next several months. The Work Plan incorporates a total of eight meetings, including the initial meeting. Using this format, the CTAG’s effort will culminate in a series of findings and recommendations to the City Council. The Work Plan schedule coincides approximately around the time in which the City prepares its budget. In that fashion, recommendations with potential budgetary impacts may be considered by the City Council at an appropriate time.

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### **BACKGROUND:**

On April 7, 2015, the City Council voted to approve the CTAG. As approved, the group is temporary body tasked with reviewing various traffic and transportation issues and acting as an advisory body to the City Council. At the meeting, the City Council approved the following components of the CTAG:

- 1) **Duration of time:** Maximum of 1 year, but could be less depending on various factors.
- 2) **Number of Members:** A total of 7-12 members representing a broad spectrum of residents and the business community.
- 3) **Number of Meetings:** A minimum of 4 meetings with no more than 12 meetings (one per month on average), with a 2-hour time limit per meeting.
- 4) **Format:** An informal meeting setting whereby collaboration between professional traffic engineers and the group of volunteers around a common table may occur.
- 5) **Staffing:** City staff would provide primary staff support. Outside experts/consultants could be brought in to make presentations; provide information; and answer questions on specific topics, such as traffic modeling.
- 6) **Topic Specific Meetings:** Each covering one specific issue/sub-topic. For instance, under the broad topic of roadway improvements, one meeting would focus on traffic modeling and forecasting; another would focus on how staff determines what specific improvements to implement, etc.

In addition to the administrative and organizational efforts described above, the City Council also approved the CTAG mission statement below:

*“To provide recommendations to the City Council regarding overall strategies and processes to improve long term traffic conditions throughout the City including how to provide future citizen participation without creating another permanent layer of bureaucracy.”*

One of the core responsibilities of the CTAG is to provide traffic and transportation related findings and recommendations to the City Council. The parameters approved by the City Council serve as the basis for the CTAG’s formation, participation, and scope of work as defined.

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## **DISCUSSION:**

As noted, the CTAG will focus on providing recommendations related to the main components of traffic management, namely: community input, signal operations, signal coordination, intersection and roadway improvement strategies, and additional processes to build on the City’s efforts to date. In this way, the CTAG will concentrate its efforts on studying these issues further with assistance from the City’s traffic engineering staff. The City Council requested that the CTAG

offer initial findings and recommendations to the City Council:

Community Input: The CTAG will review and make recommendations regarding the process for long-term sustained community input on traffic related issues. This could include reviews of the Community Satisfaction Study, the traffic forums, as well as other methods that the City uses to communicate with its residents.

Traffic Signal Operation, Coordination and Communication: The CTAG will review how the City operates the traffic signal system, including coordination and communication. The CTAG, thereby, could identify potential areas of broad focus within the City's existing transportation network.

Intersection and Roadway Improvement Strategies: The CTAG will provide broad based input on how the City determines what types of traffic and transportation related capital improvement projects should be constructed and how to determine the timing of the improvements. This could include, for example, a review of traffic modeling and forecasting and the LFTM.

Based on the parameters authorized by the City Council, staff will assist the CTAG in preparing a Work Plan. Staff prepared the following schedule, covering the topics of discussing reflected as part of the City Council's prior direction:

#### Second Meeting – Traffic Signal Operations, Coordination, and Communication

The CTAG will review information on the basics of this topic and the status of the City's traffic management system. The CTAG will also discuss opportunities to further enhance the system and signal coordination.

#### Third Meeting – Traffic Modeling for Development and Transportation Planning

The CTAG will review information on local and regional transportation modeling and how this relates to traffic and transportation related capital projects.

#### Fourth Meeting – Capital Projects

The CTAG will review information on how traffic and transportation related capital projects are identified and prioritized with a specific discussion of the current 2 year Capital Improvement Program ("CIP") and 5 Year Strategic Plan.

#### Fifth Meeting – Traffic Engineering

The CTAG would review information on the day-to-day activities of the Traffic Engineering group and processes and procedures that the City employs to

improve safety on the City's transportation network.

#### Sixth Meeting – Community Input

The CTAG will discuss how the City currently communicates with the residents and business owners and look for ways to sustain and enhance communication with the community.

#### Seventh Meeting – Discussion and Finalization of CTAG Recommendations

The CTAG would review and discuss all the findings and recommendations that have come out of the previous meetings and decide on the prioritization of the recommendations. This meeting needs to be held on or before March 2016 so the CTAG priorities can be considered during the budget discussions for the Fiscal Year 2016/2017 Operating Budget and the mid-cycle update of the 2015-2017 Capital Improvements Projects Budget.

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#### **ATTACHMENTS:**

None.

Initiated By: Carlo Tomaino, Assistant to the City Manager  
Reviewed By: David Rogers, P.E., T.E., Traffic Engineering Manager  
Approved By: Thomas E. Wheeler, Director of Public Works/City Engineer



## Ad-Hoc Citizen Traffic Advisory Group Agenda Report

Meeting Date: December 22, 2015

Department: Public Works

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### **SUBJECT:**

PRESENTATION AND DISCUSSION REGARDING TRAFFIC AND TRANSPORTATION RELATED CAPITAL PROJECTS

### **RECOMMENDED ACTION(S):**

Receive a presentation from Public Works regarding traffic and transportation related capital projects and discuss this topic and make findings and recommendations, as appropriate.

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### **DISCUSSION:**

Traffic and Transportation projects generally make up a large percentage of the Capital Improvement Program (CIP) for a typical City. The City of Lake Forest currently prepares a 2 year CIP and a 5 year Strategic Plan that include traffic and transportation capital projects (see attached).

#### **Project Type**

##### Traffic Projects

Traffic projects are generally classified as those that involve minimal construction. These can include, but are not limited to, restriping projects, traffic signal synchronization projects, and traffic signal operational changes and, in some cases, new traffic signals.

##### Transportation Projects

Transportation projects generally involve hard construction and are designed to improve traffic flow and circulation. These can include roadway widenings to increase the number of through lanes and intersection improvements, such as widening to add dedicated right or left turn lanes.

## **Determining Projects and Priorities**

Whether the projects are traffic or transportation related, the City will go through a process to determine what projects to construct and when they should be constructed. This process includes several steps.

### Traffic Modeling

Traffic modeling is the primary method used to determine what types of transportation projects are necessary in the short, medium and long terms. Modeling can occur on a regional level or a local level and each one may identify different types or levels of improvements.

For example, OCTA maintains the regional model for Orange County. This model is used to update the Master Plan of Arterial Highways (MPAH). The MPAH (see attached map) has often been looked to as a model of coordinated planning, requiring the cities of Orange County (cities) and the County of Orange (County) to work cooperatively in implementing a regional transportation system. The MPAH map is a critical element of overall transportation planning and operations in Orange County, because it defines a countywide circulation system in response to existing and planned land uses. This includes defining the number of lanes that each roadway should contain in order to meet the traffic demands. These are considered “higher level” type projects. Other more localized transportation projects, such as the configuration of intersections, is often determined as part of local modeling.

In the City of Lake Forest, the Lake Forest Traffic Model (LFTM) is the local model used to determine the need for local traffic/transportation projects. This model and the modeling process were discussed in detail at the last CTAG meeting. The latest update for the model (see attached excerpts) identifies a total of 15 remaining traffic and transportation projects that must be completed prior to the horizon year of 2030 to keep the City’s roadways and intersections operating at an acceptable level.

### City Initiated Projects

Many projects, especially traffic projects, are proposed by the City based on real world traffic conditions and observations. Modeling is not generally capable of identifying these needs, making this staff driven process a critical component in an overall CIP program. The best example of this would be the traffic signal synchronization projects. The City has participated in 8 of these projects in the last few years and is currently working on an updated synchronization project for

El Toro Road.

### Citizen Initiated Projects

Although staff has extensive experience in identifying conditions that may justify consideration of capital projects, we do not drive all the streets often enough to identify all the conditions that may justify consideration of capital projects. Residents who experience issues on a daily basis are often the ones that make suggestions for reviews that can sometimes lead to capital projects. A recent example is at the intersection of Lake Forest and Serrano. This signal is currently split phase for Serrano (where the through and left always go at the same time for the same direction). Based on a resident request to review the congestion at this location, staff determined that traditional left turn phasing would work and should reduce delays. This minor “capital project” should be completed in Spring 2016.

### **Prioritizing Projects**

At any given time there are several traffic and transportation projects planned in the 2 year CIP. In addition, there are projects that have been identified, but are not included in the plan for reasons such as a lack of current funding or a need to wait for another project to be completed first. These projects are included in the 5 Year Strategic Plan.

The overall prioritization process involves staff reviewing a variety of criteria related to the potential projects and then using the results to create a priority list.

The criteria that are taken into consideration include, but are not limited to, the following:

- Need (would it address a current condition or future condition)
- Overall cost
- Right of way acquisition
- Conflicting projects or work
- Length of design and construction process
- Deadlines imposed by the City Council or other agencies
- Coordination with other agencies
- Grant or other outside funding options
- Funding constraints
- Staff Workload

## Two Year CIP

The two year CIP is the document that staff prepares to request funding for projects. Once the City Council approves the two year CIP, staff will take the necessary steps to move the projects forward towards completion within the time frames noted. Traffic and transportation projects are listed on pages 16-22. The current Two Year CIP (2015-2017) includes several LFTM intersection improvement projects and two traffic signal synchronization/communication projects.

## 5 Year Strategic Plan

The Five-Year Strategic Business Plan (“Plan”), first initiated by the City Council in 1999, serves as a touchstone for elected officials and staff to guide short-term and long-term projects and programs along with associated activities and resources. Updated every two years, the Plan serves as a tool to allow the City to assess its current status, identify future goals, and develop strategies toward achieving those goals. Chapter 7 identifies those programs and projects (including traffic and transportation projects) that have been deferred until funds become available.

## **Specific CTAG Capital Project Reviews**

As part of the first CTAG meeting, the members identified specific issues that they wanted to discuss. Several of the issues involve potential capital projects. These items are discussed below.

### Bake Parkway/Trabuco Road/Irvine Boulevard

This intersection is identified in the LFTM as needing improvements by 2030 to meet the current level of service (LOS) intersection standards. The LFTM improvements include adding a second eastbound left turn lane and a 4<sup>th</sup> northbound through lane (see attached).

These improvements were identified as part of a modeling process. But as noted above, ideas for potential improvements can also come from other sources. The CTAG members asked staff to review the possibility of converting the #3 eastbound lane on Bake back to a dedicated right turn lane (like it was 5+ years ago). The concern is that one or two vehicles waiting to go straight on a red, prevents drivers from making right turns on red. This was noted to be particularly acute in the evening when the vast majority of vehicles in the #3 lane turn right onto Trabuco. This suggestion had also been made by other residents recently.

Staff reviewed the conditions in both the AM and PM weekday peak periods and found that the traffic conditions are substantially different in these periods. In the AM the vast majority of traffic (about 80%) in the #3 lane goes straight through Trabuco with many turning right into the commercial center on the corner and the rest proceeding straight and then either merging into the #2 lane or turning right onto South Pointe. In the PM the vast majority of traffic (80+ %) turns right onto Trabuco. During about half of the cycles during the 5-6pm period a vehicle waiting to go through will prevent drivers from making right turns on red. The number waiting to go straight was usually just one, but was as many as three on a couple of occasions.

Although the LFTM model and proposed improvements will allow the intersection to meet the required level of service, this will still leave about 700 vehicles making right turns from Bake to Trabuco in the PM peak period without a dedicated right turn lane. This is an example where designing to the LOS number may not adequately address all the issues at an intersection.

Based on staff's review and analysis, there is justification to provide three through lanes on eastbound Bake at Trabuco for the AM peak period and a dedicated right turn lane to accommodate the heavy right turn traffic in the PM peak. Since we cannot provide one lane to serve both these heavy movements adequately, staff would recommend that a dedicated right turn lane be added. This would have to be a stand-alone capital project request, since it was not identified as a necessary improvement in the LFTM.

Staff is not recommending returning the #3 lane to a right turn only lane in the interim, because the conditions that justified converting it to a through-right lane still exist and because it would result in adverse impacts to the overall intersection operation. Staff will be proceeding with a phase 1 LFTM improvement within the next several months. This improvement will add a second eastbound left turn lane, which should reduce the time needed to serve this left turn and may allow for additional green time on other movements. In addition, it will significantly reduce the potential for the queue from the left turn movement to extend into the #1 lane, which creates traffic safety and capacity concerns. The current traffic signal synchronization project on Bake, which is scheduled to be completed in mid-2016, may further improve traffic flow and capacity. These two improvements should be completed and evaluated before any type of lane re-designation should be considered.

## Bake Parkway East of Trabuco

As noted above, the MPAH defines a countywide circulation system in response to existing and planned land uses. In the MPAH, Bake Parkway east of Trabuco is designated as a primary arterial highway, which has two through lanes in each direction. The roadway is currently built to the full MPAH standard for this roadway classification and actually includes a short (1/5 mile) six lane section just east of Trabuco, which increases capacity at the intersection. The 2030 projected average daily traffic on Bake east of Trabuco ranges from 20,000 to 36,000, which are considered acceptable for this type of roadway.

Some members of the CTAG and others have suggested that the City should review the need for additional through lanes on this segment of Bake. As was discussed at the November CTAG meeting, the LFTM was developed in conjunction with the Opportunities Study Area (OSA) to determine what traffic and transportation improvements would be necessary with the new residential development and to determine if the roadway network could support the proposed level of development.

The LFTM did not identify a need to add through lanes to any existing roadways in the City in order to mitigate the OSA impacts or any regional growth. The LFTM did identify the need for improvements at 17 intersections, including 4 on Bake Parkway. Since intersections operate as the true regulators of traffic flow on any roadway, they are the most critical elements in an effective transportation network. If the intersections work efficiently through a combination of the appropriate number of lanes and proper signal synchronization, the overall roadway capacity is maximized.

Although additional through lanes could always be added if cost was no object, it is important to remember that we strive to strike the correct balance by “right sizing” the roadways and improvements to match the need and provide efficient operation without excessive costs. Based on the information from the models and other sources, there is no justification to add additional through lanes on Bake Parkway east of Trabuco.

## Bake/Toledo

The CTAG asked staff to review the need for a second northbound left turn lane at Toledo/Bake. This intersection is also one of the study locations in the LFTM. The traffic data shows that the northbound left turn volume is projected to be about 300 vehicles in the AM peak hour in 2030. Generally, a single left or right turn lane is considered adequate for volumes up to and slightly beyond 300

vehicles per hour. Observations in the AM peak do indicate that the queue can occasionally exceed the current striped 300 foot long left turn lane, but that the queue will usually clear in one cycle. The length of the left turn lane could be increased by about 50 feet (by restriping) if the queuing issue becomes more prevalent over time.

The Bake Parkway Traffic Signal Synchronization Project (TSSP) is currently in the construction phase and this movement will be important to the overall timing, since it is a dominant movement in the AM peak hour. When the new timing is updated this intersection can be reevaluated. In order to install a second northbound left turn lane right of way would have to be acquired on the eastside of Toldeo. Therefore other measures should be implemented and evaluated before a project that requires right of way is considered.

#### Ridge Route Overcrossing I-5

Ridge Route Drive is designated as a primary arterial between Rockfield in Lake Forest and Moulton Parkway in Laguna Hills and is shown crossing over the I-5 freeway on the MPAH map. The connection over the I-5 is not currently funded and there are various technical and other issues that would have to be overcome in order to consider completing this connection. Due to these concerns, the City made accommodations for additional traffic on El Toro Road as part of the widening project that was completed several years ago. As a result, the connection of Ridge Route over the I-5 is not necessary for the City to maintain acceptable levels of service (LOS) on our roadway network up through the 2030 horizon year of the traffic model.

### **Recommendations**

Staff is suggesting that the CTAG make recommendations related to the processes and procedures that the City uses to identify and prioritize traffic and transportation related capital projects.

#### Suggested Process and Procedure Recommendations

1. That the City continue to use the Two Year CIP as the planning tool for near term traffic and transportation projects
2. That the City continue to use the 5 Year Strategic Plan to identify projects for future consideration.
3. That the LFTM continue to be updated at appropriate intervals to identify the timing of LFTM improvements and to identify other potential projects.

4. That the City continue to update both ADT counts and intersections counts in alternating years to provide data that can be reviewed to determine if additional traffic and transportation projects may be justified.
5. That the City continue to provide staff with adequate resources to review and evaluate traffic conditions that may result in recommendations for capital projects.
6. That the City limit the acquisition of right of way for capital projects until all other alternatives have been implemented and/or evaluated.

#### Suggested Capital Project Recommendation

Staff is also suggesting that the CTAG make a recommendation that the City Council consider allocating funds as part of a future 2 Year CIP update to construct/install a dedicated right turn lane for northbound Bake at Trabuco.

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#### **ATTACHMENTS:**

1. 2 Year CIP - excerpts
2. 5 Year Strategic Plan - excerpts
3. OCTA MPAH Map
4. LFTM Update – Executive Summary
5. Bake/Trabuco – plan, cost estimate, aerial
6. Bake East of Trabuco – map, ADT map
7. Bake/Toledo – aerials, peak hour count sheet
8. Ridge Route/I-5 - aerials

Initiated By: David Rogers, P.E., T.E., Traffic Engineering Manager  
Reviewed By: Thomas E. Wheeler, Director of Public Works/City Engineer  
Approved By: Thomas E. Wheeler, Director of Public Works/City Engineer

# CITY OF LAKE FOREST



## Capital Improvement Projects Budget

2015-2017

# CAPITAL IMPROVEMENT PROJECTS BUDGET FISCAL YEARS 2015-17

## Elected Officials

Scott Voigts, Mayor  
Andrew Hamilton, Mayor Pro Tem  
Dr. Jim Gardner Council Member  
Adam Nick, Council Member  
Dwight Robinson, Council Member

### Planning Commission

Charles W. Brower, Chair  
Jolene Fuentes, Vice Chair  
Robert DeAlmeida, Commissioner  
Thomas Ludden, Commissioner  
Jerry Verplancke, Commissioner

### Parks and Recreation Commission

Victor Scherr, Chair  
Jeff Werkmeister, Vice Chair  
Francisco Barajas, Commissioner  
Loretta Herrin, Commissioner  
Jim Rosenberg, Commissioner

## City Staff

Robert C. Dunek, City Manager

Gayle Ackerman, Director of Development Services  
Bryan Brice, Division Chief - Fire Services  
Keith D. Neves, Deputy City Manager/  
Director of Finance/City Treasurer  
Matthew Richardson, City Attorney  
Debra Rose, Assistant City Manager/  
Director of Economic Development/  
Community Preservation

Hannah Shin-Heydorn, Director of Management Services  
Stephanie Smith, City Clerk

Lieutenant Bradley Valentine, Chief of Police Services  
Scott Wasserman, Director of Community Services  
Tom Wheeler, Director of Public Works/City Engineer

# CAPITAL IMPROVEMENT PROJECTS BUDGET

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June 16, 2015

Honorable Mayor and Members of the City Council:

Submitted for your review is the Proposed Capital Improvement Projects Budget ("CIP Budget") for Fiscal Years ("FY") 2015-16 and 2016-17. This CIP Budget reflects attention to the needs of the community based on a solid fiscal and management foundation.

The CIP Budget is interrelated and complimentary to the City's Annual Operating Budget and the Five-Year Strategic Business Plan ("Plan"). Each document plays a vital role in coordinating and guiding the City's financial plan for the future. The annual Operating and the CIP Budgets outline construction funding for the capital projects and the Plan contains the operating costs in future years, if any, associated with them.

### Funding

The CIP Budget summarizes the funding for the projects on page eight of the document. The main sources of funding are the Opportunity Study Area Capital Fund, Park Development Fund, CIP Fund, General Fund, Gas Tax, Lake Forest Transportation Mitigation Fund (LFTM), and Orange County Transportation Authority (OCTA) Measure M2 Fund. Grant revenues will also provide some additional funding.

Since 2005, the City's policy has been to fund capital projects with the transfer of General Fund surpluses from prior years. This retrospective transfer process provides the City a greater assurance of a balanced Annual Operating Budget from year to year and provides first call on available funds for capital projects. Since the City budgets capital projects in two-year cycles, the retrospective transfers from operating savings provide the actual funds available for the next two-year capital project planning cycle. Staff believes that process has served the City well and continues to recommend that future capital budgets do not exceed the amount available from those transfers. Exceptions to that policy might involve any future use of available funds or debt financing the Council may wish to consider for important major public facilities. Due to the recession and its effect on the City's finances, the City Council suspended this policy for FY 2010-11 and 2011-12. However, as City finances show signs of improvement, staff recommends a transfer for the current budget cycle.

**Mayor**  
Scott Voigts

**Mayor Pro Tem**  
Andrew Hamilton

**Council Members**  
Dr. Jim Gardner  
Adam Nick  
Dwight Robinson

**City Manager**  
Robert C. Dunek

It is important to note that unfinished capital projects budgeted in previous years are not included in this CIP Budget. Pursuant to ongoing practice, the City considers these projects to be "carryover" and, therefore, they are not re-budgeted or included in this year's CIP. A list of the completed and carryover projects is included below primarily for informational purposes.

#### Completed Projects in the 2013-2015 CIP Budget

Americans with Disabilities Act Access Ramp Improvements Phase 7  
Citywide Traffic Signal Coordination Master Plan  
Environmental Tier 1 Phase 3  
Internally Illuminated Street Name Sign Replacement  
Lake Forest Sports Park and Recreation Center  
Lake Forest Drive Corridor Traffic Signal Synchronization  
Lake Forest Transportation Mitigation Improvements (LFTM) Study  
Los Alisos Blvd. Corridor Traffic Signal Synchronization  
MPS - El Toro (Toledo to Trabuco)  
MPS - Trabuco (El Toro to Manalastas)  
Park Light Pole Replacements  
Park Parking Lot Pavement Management  
Santa Margarita Parkway Corridor Traffic Signal Synchronization  
Sidewalk Repairs  
Signalized intersection at Rancho Parkway and Sports Park Access  
Street Resurfacing and Slurry Seal FY 2013-14  
Street Resurfacing and Slurry Seal FY 2014-15  
Street Resurfacing on El Toro Road - City of Laguna Hills  
Trabuco Road Corridor Traffic Signal Synchronization  
Traffic Signal Modification at Alton/Towne Centre and Rancho South

#### Carryover Projects

Alton Parkway Corridor Traffic Signal Synchronization  
Bake Parkway Corridor Traffic Signal Synchronization  
Barranca Pkwy/Muirlands Blvd. Corridor Traffic Signal Synchronization  
Dairy Fork Constructed Wetlands  
Environmental Tier 1 Phase 4  
J01P08 Subdrainage  
Jeronimo Road Corridor Traffic Signal Synchronization  
Park ADA and Transitional Access Repairs Phase 8  
Portola Center Community Park  
Saddleback Ranch Road Traffic Enhancements  
Street Light Installation at Various Locations  
Teed Street Storm Drain Improvements  
Whispering Hills Park

## New Projects

The Proposed CIP Budget includes various projects programmed for 2015-16 and 2016-17 Fiscal Years. Staff incorporated all of the projects in this CIP Budget into the first two Fiscal Years of the draft 2015-2020 Strategic Business Plan. The projects recommended for this budget cycle are categorized as follows:

- Streets:

Americans with Disabilities Act Access Ramp Improvements ( Phase 9)  
Americans with Disabilities Act Access Ramp Improvements ( Phase 10)  
Internally Illuminated Street Name Sign Panel Replacement  
Portola Parkway Widening/Streetscape  
Sidewalk Repairs  
Street Light Installation at Various Locations  
Street Resurfacing and Slurry Seal (FY 2015-16)  
Street Resurfacing and Slurry Seal (FY 2016 -17)  
Street Traffic Sign Replacement

- Traffic Improvements:

Alton Parkway/Irvine Boulevard Modification (LFTM)  
Alton Parkway/Toledo Modification (LFTM)  
Bake Parkway/Irvine Blvd - Trabuco Road Modification - Phase 1 (LFTM)  
Bake Parkway/Portola Parkway Modification (LFTM)  
Lake Forest Drive/Rancho Parkway Modification – Phase 1 (LFTM)  
Rockfield Boulevard Traffic Signal Synchronization  
Traffic Signal System Communications Enhancements

- Parks and Recreation:

Alton Park Monument Sign  
Barker Dog Park  
Etnies Skate Park Facilities Painting and Repairs  
Irrigation Backflow Devices Protective Equipment Installation  
Lake Forest Sports Park Improvement - Phase 2  
Park Amenities Replacement  
Park Gazebo Replacement  
Park Light Pole Replacement  
Park Playground Resilient Surface Sealant Installation  
Park Restrooms Floor Sealant Installation  
Park Restrooms Repair  
Solar Compactor Receptacle Installation  
Village Pond Park  
Water Conservation

- Environmental:

Environmental Tier 1 Improvements Phase 5  
Environmental Tier 1 Improvements Phase 6

- Facilities:

Civic Center and Senior Center Design

### CIP Highlights

The previous two-year CIP allowed for the design and construction of the Lake Forest Sports Park and Recreation Center. The size and scope of the park creates one of the largest parks in Orange County and serves as a recreational facility capable of hosting various sports tournaments and large community events. The Sports Park improvements include five baseball/softball diamonds, two synthetic turf soccer fields, three natural turf soccer fields with a 3-acre common lawn area for community events and practice fields, as well as a 27,000 square foot recreation center with a gymnasium and classrooms. The sports park property encompasses a total of 86 acres, which includes 57 acres for active use and an additional 29 acres set aside for passive uses.

In the 2015-17 CIP Budget five Lake Forest Traffic Mitigation (“LFTM”) Program projects will be initiated and completed. LFTM mitigates the impacts of development by improving certain intersections in the City and adjacent cities. In addition, with grant funding from OCTA, Portola Parkway expands from two to three lanes under the SR 241, with a constructed landscaped median added from SR 241 to El Toro Road.

The most significant project in the proposed two-year budget cycle is the Lake Forest Civic Center. This project will design a new Civic Center with the purpose to provide services in one consolidated and central location for the residents and businesses of Lake Forest. The Civic Center includes indoor and outdoor public meeting spaces, public cultural and artistic performance venues, administrative and governmental department offices, police services, emergency operations services, senior services, business services, and sufficient parking for facility users and staff.

Park projects include an off-leash dog facility at Baker Ranch (Barker Dog Park) and a complete renovation of Village Pond Park. The City began public outreach and conceptual design for the Whispering Hills Park site and the Portola Center Community Park.

The CIP also includes a proposal for OCTA funding for a traffic signal synchronization project on Rockfield Boulevard. This project is part of a program where traffic signal equipment upgrades and new traffic signal timing plans tie

traffic signals together to promote the efficient and safe movement of traffic along major corridors through Lake Forest and adjoining cities. This project is coordinated with the adjoining cities and is subject to competitive grants from OCTA. The City will use Air Quality Management District (AQMD) funds for its share of the project costs for the signals located in Lake Forest.

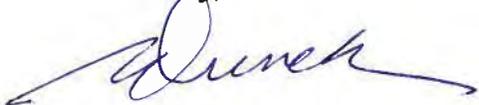
The City's focus on preventative maintenance continues with Street Resurfacing and Slurry Seal Project allocations of \$3.5 million over a two-year budget cycle. This preventive maintenance program includes slurry seal of streets to prevent water, ultra-violet exposure, and contaminants from deteriorating the condition of street pavement for several years, thereby, reducing future pavement repair costs. The City's pavement condition index (PCI), a nationally recognized standard that grades street conditions, is currently 83 out of 100 and is one of the highest in Orange County. Staff also was successful in securing grant funds for resurfacing projects on Alton Parkway and Portola Parkway to assist in funding these projects. The CIP Budget further describes these projects and others in the Project Description section of this document.

#### Conclusion

This Capital Improvement Projects Budget represents a new investment of approximately \$15 million (\$5 million for the design for the Civic Center) during the upcoming two-year period for the community. As always, the City is committed to maintaining the high quality of life for residents and businesses enjoyed throughout the years through strategic and conservative funding of capital improvement projects.

Staff looks forward to working with the City Council and the community in making these projects a reality over the next few years.

Sincerely,

A handwritten signature in blue ink, appearing to read "Dunek", with a long, sweeping underline.

Robert C. Dunek  
City Manager

# Two-Year Capital Project Plan - Expenditures

	Fiscal Year of Funding		Page for
	2015-16	2016-17	Detail
			Description
<u>Streets</u>			
● Americans with Disabilities Act Access Ramp Improvements (Phase 9)	\$ 161,200		9
● Americans with Disabilities Act Access Ramp Improvements (Phase 10)		\$ 153,100	9
● Internally Illuminated Street Name Sign Panel Replacement	10,000	10,000	10
● Portola Parkway Widening/Streetscape	800,000		11
● Sidewalk Repairs	40,000	40,000	12
● Street Light Installation at Various Locations	15,000	35,000	13
● Street Resurfacing and Slurry Seal (FY 2015-16)	1,600,500		14
● Street Resurfacing and Slurry Seal (FY 2016 -17)		1,918,000	14
● Street Traffic Sign Replacement	55,000	35,000	15
<u>Traffic Improvements</u>			
● Alton Parkway/Irvine Boulevard Modification (LFTM)	38,800	116,200	16
● Alton Parkway/Toledo Way Modification (LFTM)	7,700		17
● Bake Parkway/Irvine Blvd - Trabuco Road Modification - Phase 1 (LFTM)	18,200		18
● Bake Parkway/Portola Parkway Modification (LFTM)		400,000	19
● Lake Forest Drive/Rancho Parkway Modification - Phase 1 (LFTM)	17,800		20
● Rockfield Boulevard Traffic Signal Synchronization	98,000	487,000	21
● Traffic Signal System Communications Enhancements	64,300	87,500	22
<u>Environmental</u>			
● Environmental Tier 1 Improvements Phase 5	125,000		23
● Environmental Tier 1 Improvements Phase 6		250,000	23
<u>Parks and Recreation</u>			
● Alton Park Monument Sign	3,000		24
● Barker Dog Park	5,000		25
● Etnies Skate Park Facilities Painting and Repairs	30,000		26
● Irrigation Backflow Devices Protective Equipment Installation	100,000		27

# Two-Year Capital Project Plan - Expenditures

	Fiscal Year of Funding		Page for
	2015-16	2016-17	Detail
			Description
<u>Parks and Recreation (Continued)</u>			
● Lake Forest Sports Park Improvement - Phase 2	360,000		28
● Park Amenities Replacement		40,000	29
● Park Gazebo Replacement	360,000		30
● Park Light Pole Replacement	30,000	30,000	31
● Park Playground Resilient Surface Sealant Installation	50,000		32
● Park Restrooms Floor Sealant Installation	25,000		33
● Park Restrooms Repair	90,000		34
● Solar Compactor Receptacle Installation	72,100		35
● Village Pond Park	2,003,700		36
● Water Conservation	50,000	50,000	37
 <u>Facilities</u>			
● Civic Center and Senior Center Design	2,740,000	2,200,000	38
Totals	\$8,970,300	\$5,851,800	

## Two-Year Capital Project Plan - Funding Sources

	Fiscal Year of Funding	
	2015-16	2016-17
Funding Needs:		
Capital Project Expenditures	<u>\$ 8,970,300</u>	<u>\$ 5,801,800</u>
Funding Sources:		
Air Quality Improvement Fund	\$ 73,100	\$ 131,300
Beverage Recycling Container Grant	72,100	
Community Development Block Grant Fund	161,200	153,100
Capital Improvement Projects Fund	1,406,800	288,800
City of Irvine	2,000	9,800
Developer/OSA	3,100,000	2,200,000
Gas Tax	65,000	45,000
Lake Forest Transportation Mitigation Improvements:	82,500	516,200
Measure M2 (Fairshare)	1,350,500	1,418,000
Park Development	2,003,700	
Subtotal City Funds	<u>8,316,900</u>	<u>4,762,200</u>
Grants <sup>1</sup> :		
Arterial Pavement Management	250,000	500,000
Measure M2 CTFP Competitive Grant Funds	403,400	589,600
Total	<u>653,400</u>	<u>1,089,600</u>
Total All Sources	<u>\$ 8,970,300</u>	<u>\$5,851,800</u>

<sup>1</sup>Grant approval is pending

PROJECT TITLE: Americans with Disabilities Act (ADA) Access Ramp Improvements  
(Phases 9 and 10)

CATEGORY: Streets

**PROJECT DESCRIPTION**

Phases 9 (FY 2015-16) and 10 (FY 2016-17) of this project reconstructs existing sidewalk access ramps to comply with current standards and requirements of the Americans with Disabilities Act (ADA). This project also implements the City’s ADA self-assessment and transition plan. The schedule for design and construction of Phases 9 and 10 will depend on the annual allocation amount of Community Development Block Grant (CDBG) funds.

**CAPITAL COST DETAIL**

FISCAL YEAR	DESIGN	CONSTRUCTION	OTHER	TOTAL
2015-16	\$20,000	\$141,200		\$161,200
2016-17	\$18,000	\$135,100		\$153,100
Total	\$38,000	\$276,300		\$314,300

**SOURCE OF FUNDING**

Community Development Block Grant\* 100%

\*Subject to grant availability and matching requirement, if any

**OPERATING BUDGET IMPACT**

ANNUAL OPERATING COSTS: N/A  
FISCAL YEAR COSTS BEGINS: N/A



Project Photo



Vicinity Map

PROJECT TITLE: Internally Illuminated Street Name Sign Panel Replacement

CATEGORY: Streets

**PROJECT DESCRIPTION**

This project replaces deteriorated internally illuminated street name sign (ISNS) panels at traffic signals citywide. A 2013 inventory of ISNS panels indicated 176 panels needed replacement due to weather damage. The estimated cost to replace all 176 panels is \$50,000. To date, the City has replaced 74 ISNS panels. This project would replace the remaining damaged signs at approximately 34 sign panels per year over a three-year period, at a cost of \$10,000 per year.

**CAPITAL COST DETAIL**

FISCAL YEAR	DESIGN	CONSTRUCTION	OTHER	TOTAL
2015-16		\$10,000		\$10,000
2016-17		\$10,000		\$10,000
Total		\$20,000		\$20,000

**SOURCE OF FUNDING**

Gas Tax 100%

**OPERATING BUDGET IMPACT**

ANNUAL OPERATING COSTS: N/A  
FISCAL YEAR COSTS BEGINS: N/A



Illuminated Street Name Sign



Citywide Project

Vicinity Map

PROJECT TITLE: Portola Parkway Widening/Streetscape

CATEGORY: Streets

**PROJECT DESCRIPTION**

This project adds a third southbound through lane on Portola Parkway under the SR 241 and constructs a raised landscape median on Portola Parkway between SR 241 and El Toro Road. This project would provide traffic safety and traffic congestion relief opportunities. Competitive OCTA Measure M2 funds would fund \$225,000 of the construction cost.

**CAPITAL COST DETAIL**

FISCAL YEAR	DESIGN	CONSTRUCTION	OTHER	TOTAL
2015-16		\$800,000		\$800,000
2016-17				
Total		\$800,000		\$800,000

**SOURCE OF FUNDING**

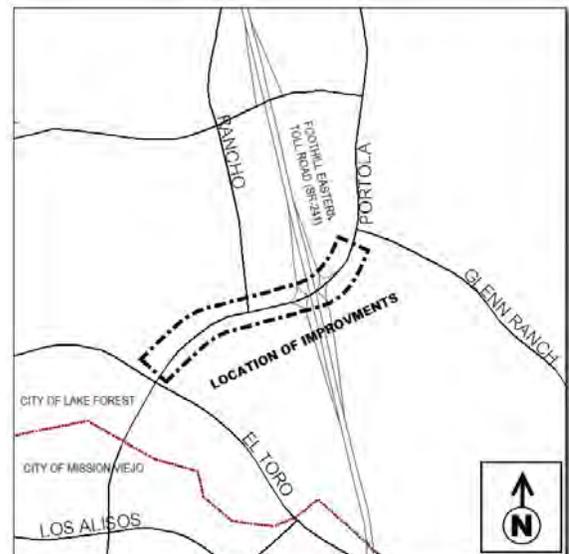
Measure M2 CTFP Competitive Grant Funds (City CIP)	28%
Capital Improvement Projects Fund	72%

**OPERATING BUDGET IMPACT**

ANNUAL OPERATING COSTS: \$3,200  
 FISCAL YEAR COSTS BEGINS: 2016/2017



Project Diagram



Vicinity Map

PROJECT TITLE: Sidewalk Repairs

CATEGORY: Streets

**PROJECT DESCRIPTION**

This annual program focuses on inspecting and improving the City's sidewalks and park locations throughout the City.

**CAPITAL COST DETAIL**

FISCAL YEAR	DESIGN	CONSTRUCTION	OTHER	TOTAL
2015-16		\$40,000		\$40,000
2016-17		\$40,000		\$40,000
Total		\$80,000		\$80,000

**SOURCE OF FUNDING**

Capital Improvement Projects Fund 100%

**OPERATING BUDGET IMPACT**

ANNUAL OPERATING COSTS: N/A  
FISCAL YEAR COSTS BEGINS: N/A



Typical Sidewalk Repair



Citywide Project

Vicinity Map

PROJECT TITLE: Street Lights Installation at Various Locations

CATEGORY: Streets

**PROJECT DESCRIPTION**

This project installs streetlights citywide based on site conditions, need, and requests by residents. Current proposed streetlight locations include northbound Toledo approaching Bake Parkway, and the residential street of Costa Bella.

**CAPITAL COST DETAIL**

FISCAL YEAR	DESIGN	CONSTRUCTION	OTHER	TOTAL
2015-16	\$15,000			\$15,000
2016-17		\$35,000		\$35,000
Total	\$15,000	\$35,000		\$50,000

**SOURCE OF FUNDING**

Capital Improvement Projects Fund 100%

**OPERATING BUDGET IMPACT**

ANNUAL OPERATING COSTS: N/A  
FISCAL YEAR COSTS BEGINS: N/A



Typical City Streetlight



Citywide Project

Vicinity Map

PROJECT TITLE: Street Resurfacing and Slurry Seal (FY 2015-16 and FY 2016-17)

CATEGORY: Streets

**PROJECT DESCRIPTION**

This project provides asphalt overlays on arterial roadways and slurry seals on collector and residential streets as determined by the Pavement Management System. The system is designed to avoid expensive deferred maintenance. Conformance with the system makes the City eligible for Measure M funding. In FY15-16, the overlay project is on Alton Parkway from Portola Parkway to Rancho Parkway South and the slurry seal project is in Zone A located north of Ridge Route and west of Jeronimo. In FY16-17, the overlay project is on Portola Parkway from Alton Parkway to El Toro Road and the slurry seal project is in Zone D located north of Lake Forest Drive between 241 and Trabuco.

**CAPITAL COST DETAIL**

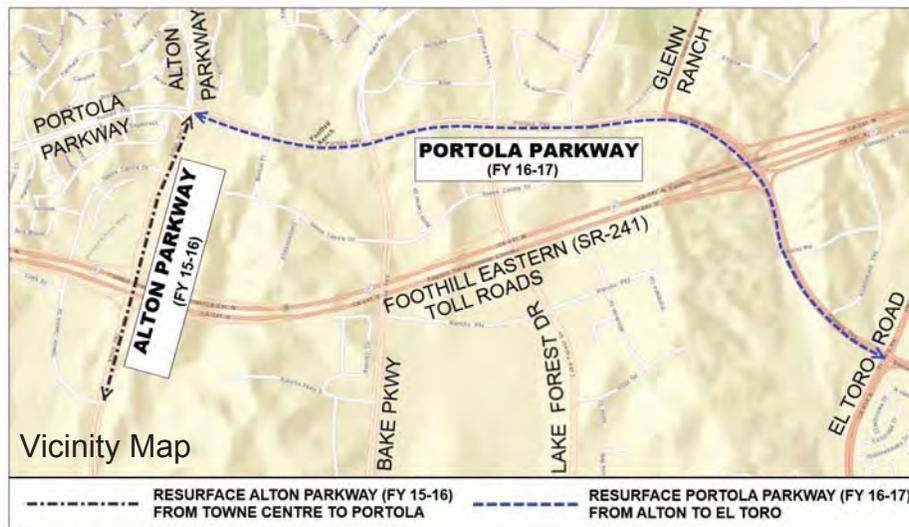
FISCAL YEAR	DESIGN	CONSTRUCTION	OTHER	TOTAL
2015-16	\$150,200	\$1,450,300		\$1,600,500
2016-17	\$185,400	\$1,732,600		\$1,918,000
Total	\$335,600	\$3,182,900		\$3,518,500

**SOURCE OF FUNDING**

Measure M2 Fairshare	79%
Arterial Pavement Management Grant (City CIP)	21%

**OPERATING BUDGET IMPACT**

ANNUAL OPERATING COSTS: N/A  
 FISCAL YEAR COSTS BEGINS: N/A



PROJECT TITLE: Street Traffic Sign Replacement

CATEGORY: Streets

**PROJECT DESCRIPTION**

This project replaces approximately 600 faded City street traffic signs citywide. The signs would comply with requirements of the 2012 California Manual on Uniform Traffic Control Devices (MUTCD). The signs would be replaced in three phases.

**CAPITAL COST DETAIL**

FISCAL YEAR	DESIGN	CONSTRUCTION	OTHER	TOTAL
2015-16	\$1,000	\$54,000		\$55,000
2016-17	\$1,000	\$34,000		\$35,000
Total	\$2,000	\$88,000		\$90,000

**SOURCE OF FUNDING**

Gas Tax 100%

**OPERATING BUDGET IMPACT**

ANNUAL OPERATING COSTS: N/A  
FISCAL YEAR COSTS BEGINS: N/A



Deteriorated Traffic Sign



Citywide Project

Vicinity Map

PROJECT TITLE: Alton Parkway and Irvine Boulevard Modification (LFTM)

CATEGORY: Traffic

**PROJECT DESCRIPTION**

This project modifies the intersection by restriping the southbound Irvine Boulevard lanes to add left-turn capacity to turn onto Alton Parkway. The project is within the City of Irvine and includes fair share funding of improvements by the LFTM Program and the City of Irvine’s North Irvine Transportation Mitigation (NITM) Program. The LFTM improvements include restriping the Irvine Boulevard southbound approach to add a third left-turn lane and modify the median island to add additional left-turn pocket storage. The total project cost is \$177,000. The costs for the LFTM improvements funded by the City of Lake Forest are \$155,000.

**CAPITAL COST DETAIL**

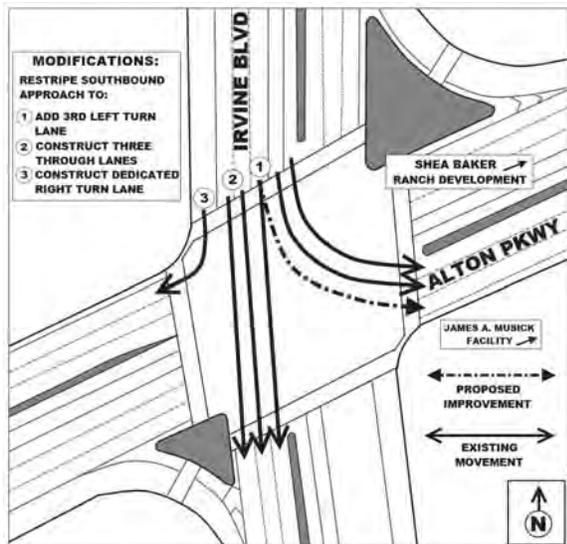
FISCAL YEAR	DESIGN	CONSTRUCTION	OTHER	TOTAL
2015-16	\$38,800			\$38,800
2016-17		\$116,200		\$116,200
Total	\$38,800	\$116,200		\$155,000

**SOURCE OF FUNDING**

Lake Forest Transportation Mitigation Improvements 100%

**OPERATING BUDGET IMPACT**

ANNUAL OPERATING COSTS: N/A  
 FISCAL YEAR COSTS BEGINS: N/A



Project Diagram



Vicinity Map

PROJECT TITLE: Alton Parkway and Toledo Way Modification (LFTM)

CATEGORY: Traffic

**PROJECT DESCRIPTION**

This project modifies traffic signal intersection operations by adding a right-turn overlap feature for the northbound Toledo Way right-turn onto eastbound Alton Parkway. The overlap feature will add a green arrow to allow vehicles to turn right on red without stopping. This project is in the City of Irvine, but there are no NITM improvements, only LFTM improvement obligations. Costs for the LFTM improvement funded by the City of Lake Forest is \$7,700.

**CAPITAL COST DETAIL**

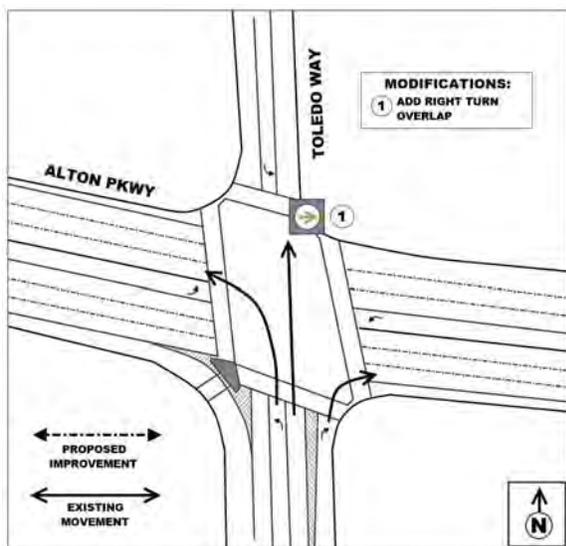
FISCAL YEAR	DESIGN	CONSTRUCTION	OTHER	TOTAL
2015-16		\$7,700		\$7,700
2016-17				
Total		\$7,700		\$7,700

**SOURCE OF FUNDING**

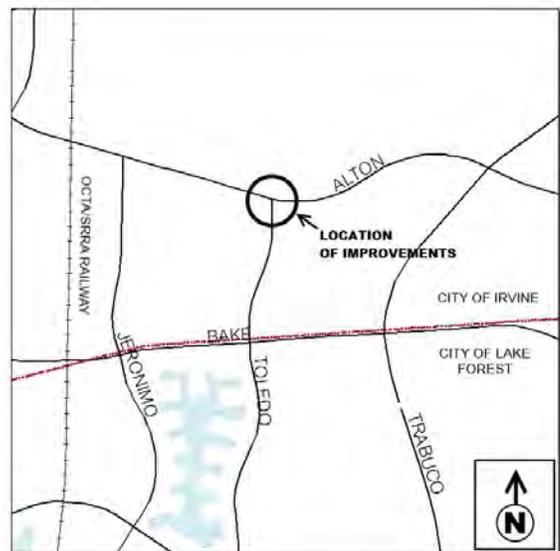
Lake Forest Transportation Mitigation Improvements 100%

**OPERATING BUDGET IMPACT**

ANNUAL OPERATING COSTS: N/A  
 FISCAL YEAR COSTS BEGINS: N/A



Project Diagram



Vicinity Map

PROJECT TITLE: Bake Parkway/Irvine Blvd – Trabuco Road Modifications – Phase 1 (LFTM)

CATEGORY: Traffic

**PROJECT DESCRIPTION**

This project modifies the existing eastbound Bake Parkway lanes at Irvine Boulevard - Trabuco Road by re-striping to add a second left-turn lane while maintaining the existing three through lanes. This LFTM improvement would add additional left-turn capacity and reduce the left turn-lane queue from blocking the through lanes. Although this intersection is partially within the City of Irvine, the Phase 1 LFTM improvements are within Lake Forest.

**CAPITAL COST DETAIL**

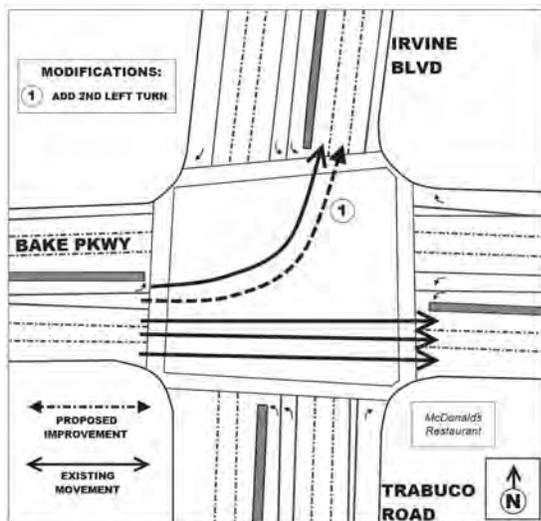
FISCAL YEAR	DESIGN	CONSTRUCTION	OTHER	TOTAL
2015-16	\$5,000	\$13,200		\$18,200
2016-17				
Total	\$5,000	\$13,200		\$18,200

**SOURCE OF FUNDING**

Lake Forest Transportation Mitigation Improvements 100%

**OPERATING BUDGET IMPACT**

ANNUAL OPERATING COSTS: N/A  
 FISCAL YEAR COSTS BEGINS: N/A



Project Diagram



Vicinity Map

PROJECT TITLE: Bake Parkway/Portola Parkway Modification (LFTM)

CATEGORY: Traffic

**PROJECT DESCRIPTION**

This project modifies the existing median on Portola Parkway to add a second left-turn lane from southbound Portola Parkway to eastbound Bake Parkway. This LFTM improvement would increase the left-turn capacity and reduce the lane queue from blocking the through lanes.

**CAPITAL COST DETAIL**

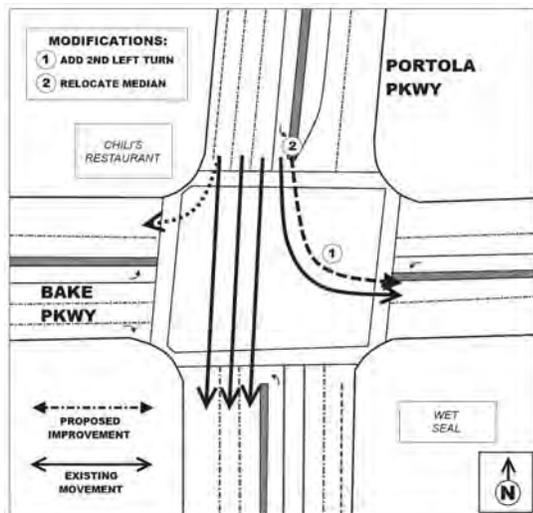
FISCAL YEAR	DESIGN	CONSTRUCTION	OTHER	TOTAL
2015-16				
2016-17	\$100,000	\$300,000		\$400,000
Total	\$100,000	\$300,000		\$400,000

**SOURCE OF FUNDING**

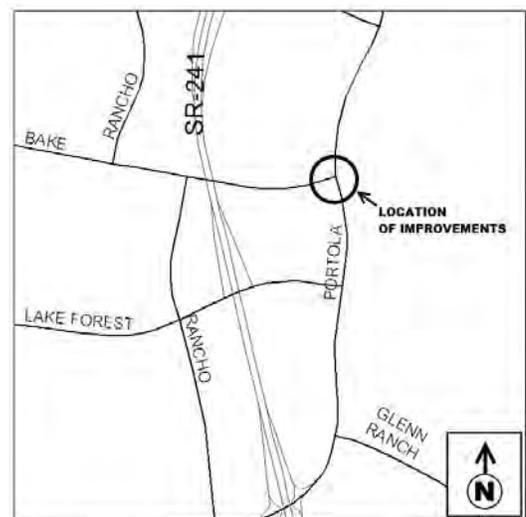
Lake Forest Transportation Mitigation Improvements 100%

**OPERATING BUDGET IMPACT**

ANNUAL OPERATING COSTS: N/A  
 FISCAL YEAR COSTS BEGINS: N/A



Project Diagram



Vicinity Map

PROJECT TITLE: Lake Forest Drive/Rancho Parkway Modifications – Phase 1 (LFTM)

CATEGORY: Traffic

**PROJECT DESCRIPTION**

This project adds an additional left-turn lane on northbound Rancho Parkway to westbound Lake Forest Drive by modifying the existing striping and removing the dedicated right-turn lane. This LFTM improvement would accommodate the increase traffic flow due to extending Rancho Parkway to Portola Parkway.

**CAPITAL COST DETAIL**

FISCAL YEAR	DESIGN	CONSTRUCTION	OTHER	TOTAL
2015-16	\$3,500	\$14,300		\$17,800
2016-17				
Total	\$3,500	\$14,300		\$17,800

**SOURCE OF FUNDING**

Lake Forest Transportation Mitigation Improvements 100%

**OPERATING BUDGET IMPACT**

ANNUAL OPERATING COSTS: N/A  
 FISCAL YEAR COSTS BEGINS: N/A



Project Diagram



Vicinity Map

PROJECT TITLE: Rockfield Boulevard Traffic Signal Synchronization

CATEGORY: Traffic

**PROJECT DESCRIPTION**

This project synchronizes eleven traffic signals along Rockfield Boulevard from Bake Parkway (eight intersections in Lake Forest; three intersections in Irvine). This project includes updating signal equipment, signal timing, coordination operations, and maintenance. Total project cost is \$585,000. Lake Forest’s share of the project cost is \$107,700 consisting of AQMD and CIP funds. OCTA Measure M funds and Irvine would provide the remaining funds. This project is subject to OCTA grant funding. Lake Forest would be the lead agency.

**CAPITAL COST DETAIL**

FISCAL YEAR	DESIGN	CONSTRUCTION	OTHER	TOTAL
2015-16	\$98,000			\$98,000
2016-17		\$487,000		\$487,000
Total	\$98,000	\$487,000		\$585,000

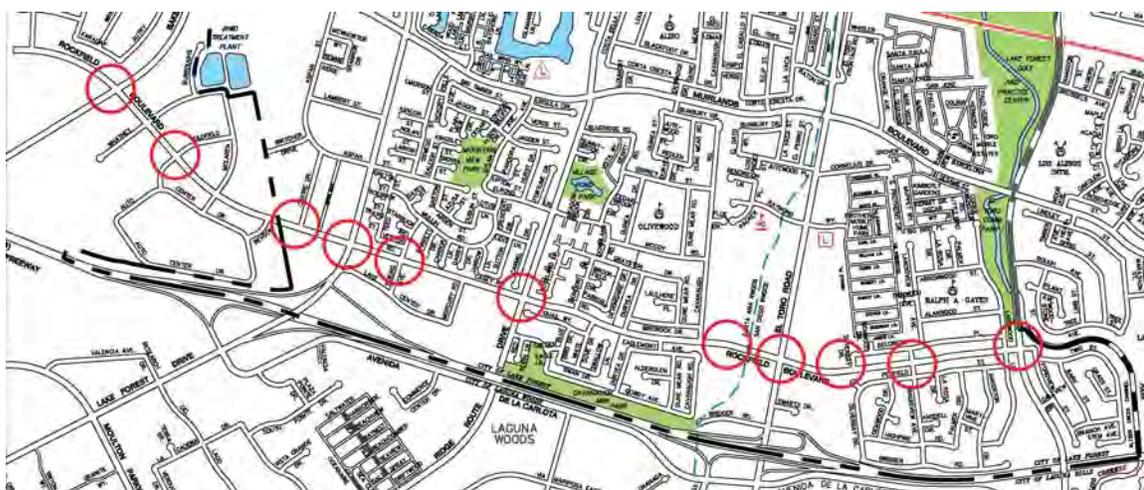
**SOURCE OF FUNDING**

Air Quality Management District	9%
Capital Improvement Projects Fund	9%
Measure M2 CTFP Competitive Grant Funds (City CIP)*	80%
City of Irvine	2%

\*Pending grant funding from OCTA

**OPERATING BUDGET IMPACT**

ANNUAL OPERATING COSTS: \$4,200  
 FISCAL YEAR COSTS BEGINS: 2017-2018



Vicinity Map

PROJECT TITLE: Traffic Signal System Communications Enhancements

CATEGORY: Traffic

**PROJECT DESCRIPTION**

This project includes the purchase and installation of traffic signal system communication equipment necessary to complete the traffic signal synchronization system per the Citywide Traffic Signal Coordination Master Plan. This project will include upgrades and replacement of missing and obsolete communication equipment over a two-year period. This project is the first phase of \$1.5 million for necessary improvements to upgrade, connect, and operate all traffic signals electronically. As of April 2015, 53 of 90 signals maintained by the City are currently tied into the City's Centrac system.

**CAPITAL COST DETAIL**

FISCAL YEAR	DESIGN	CONSTRUCTION	OTHER	TOTAL
2015-16		\$64,300		\$64,300
2016-17		\$87,500		\$87,500
Total		\$151,800		\$151,800

**SOURCE OF FUNDING**

Air Quality Management District Fund 100%

**OPERATING BUDGET IMPACT**

ANNUAL OPERATING COSTS: N/A  
FISCAL YEAR COSTS BEGINS: N/A



Traffic Signal Controller Cabinet

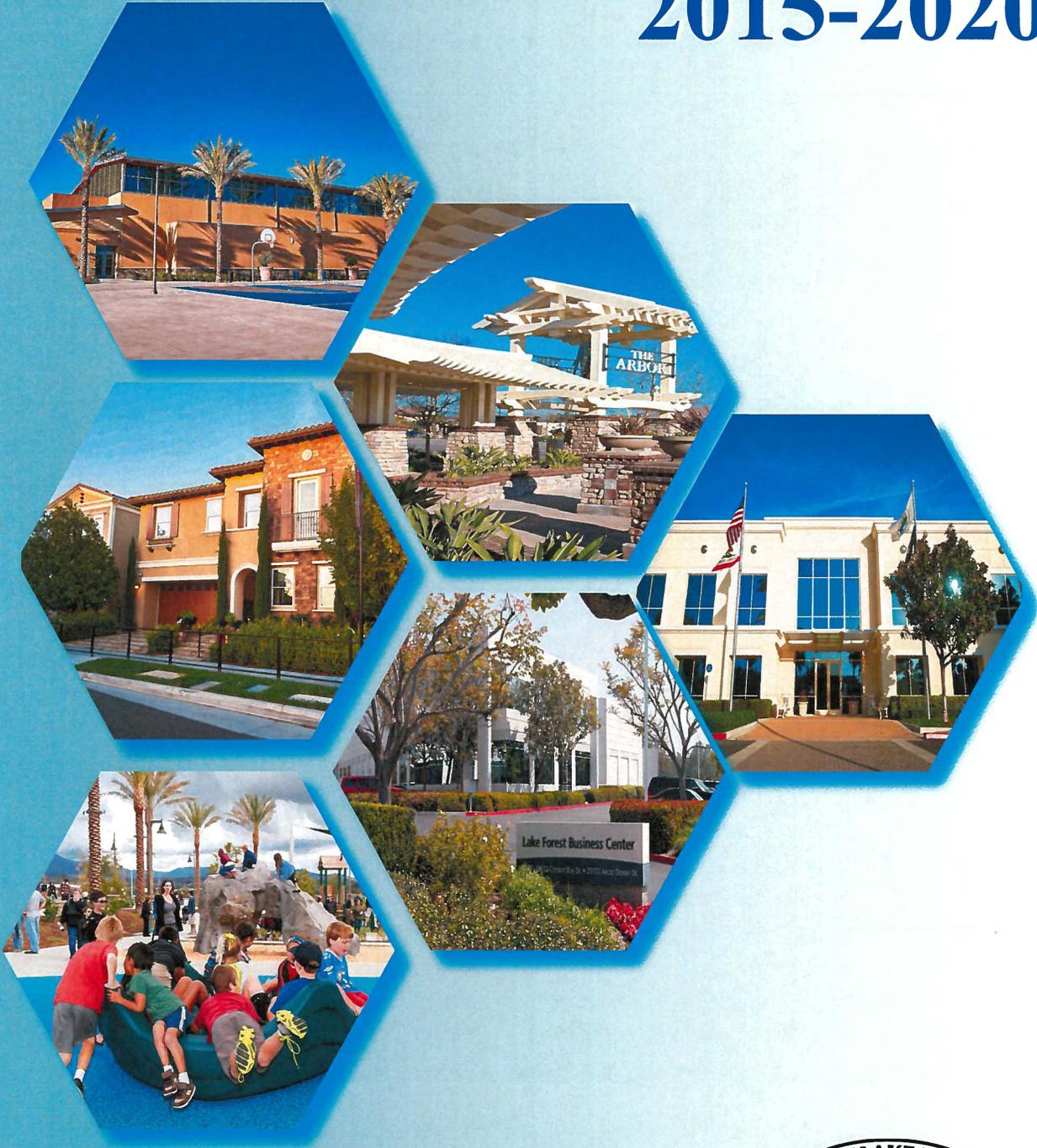


Citywide Project

Vicinity Map

# Five-Year Strategic Plan

## 2015-2020



CITY OF LAKE FOREST



## **CHAPTER 1 OVERVIEW OF THE FIVE-YEAR STRATEGIC BUSINESS PLAN**

The Five-Year Strategic Business Plan (“Plan”), first initiated by the City Council in 1999, serves as a touchstone for elected officials and staff to guide short-term and long-term projects and programs along with associated activities and resources. Updated every two years, the Plan serves as a tool to allow the City to assess its current status, identify future goals, and develop strategies toward achieving those goals.

Section I highlights strategic issues, community demographics, and community priorities. Chapter 1 defines strategic issues – the most important issues facing Lake Forest over the next five years. Chapter 2 provides an overview of population, housing, and economic characteristics. Chapter 3 summarizes key findings from the City’s biennial resident and business survey most recently conducted in 2014.

Section II provides a high-level review of the financial resources available to address strategic issues and community priorities. Chapter 4 presents an overview of revenues, and Chapter 5 provides an overview of expenditures. Chapter 6 identifies carryover appropriations which bring unspent balances forward from Fiscal Year 2014-15 along with anticipated carryover capital projects. Chapter 7 identifies those programs and projects that have been deferred until funds become available.

Section III outlines the proposed operating programs and capital improvement projects for the five-year planning period. Chapter 8 provides information on new operating programs, and Chapter 9 describes capital improvement projects. Chapter 10 focuses on the Opportunity Study Area (“OSA”) Public Facilities Business Plan and the current status surrounding the public facilities projects and private development activity.

### **STRATEGIC ISSUES**

The most important issues facing Lake Forest over the next five years (July 2015 – June 2020) are identified in this plan as “Strategic Issues.” Strategic Issues are identified by public input, as captured by the City’s biennial surveys and sources of information including, but not limited to, public workshops, program evaluation forms, and the City’s online resident relationship management program (AskLakeForest.com). These strategic issues, obtained from various sources, are important to translate the community’s vision into reality. This information serves as a guide in developing projects in this Five-Year Plan, as well as City-wide and departmental goals for the City’s annual Operating Budget

and the Two-Year Capital Improvement Projects Budget. Based on identified sources, those issues important to the community that inform the Strategic Plan are:

## **TRAFFIC**

Over the past several years, the City enhanced and beautified portions of its major transportation corridors including El Toro Road, Trabuco Road, Jeronimo Road, and Rockfield Boulevard. The City also added capacity enhancements with the completion of the Alton Parkway extension between Irvine Boulevard and Towne Centre Drive and the Rancho Parkway Project. Both of these projects included new travel and turn lanes, provided traffic relief to parallel routes, and reduced delay on the arterials. The City will pursue additional streetscape and capacity projects on arterial roadways where opportunities are available. Streetscape projects that provide traffic congestion relief will be made shelf-ready to take advantage of outside funding as well as early project implementation.

In 2010, the City adopted the Local Traffic Signal Synchronization Program (LTSSP) and began upgrading traffic signal system components. These improvements included equipment replacements and communication system upgrades. This program also included the preparation and implementation of coordinated traffic signal programs to optimize the progression of traffic on major arterials within Lake Forest. Through synchronization, the City reduced peak-hour traffic delays on El Toro Road, Bake Parkway, Lake Forest Drive, Trabuco Road and Portola Parkway.

The City also made a commitment to participate in the Orange County Transportation Agency ("OCTA") Regional Traffic Signal Synchronization Program (M2 Project 'P'). The Project 'P' Program targets over 2,000 synchronized intersections across Orange County to maintain traffic signal synchronization, improve traffic flow, and reduce congestion across jurisdictions. The City was awarded OCTA funding for three traffic signal coordination programs with adjacent communities that were recently completed. The City has also received funding for an additional five programs. During the upcoming five-year period, the City will continue its program to synchronize traffic signals throughout the City. The City's goal is to have 100% of the City's major transportation corridors synchronized by 2017.

In 2014, the City hired a consultant to evaluate and upgrade the traffic signal communication and monitoring system. This system allows the City to monitor the traffic signals in real time to help staff detect and resolve issues quickly, including making remote changes to traffic signal timing. Currently,

approximately 60% of the signals are connected to the system. Consistent with the timing efforts described above, the City's goal is to have 100% of the signals connected to the system by 2017.

Through traffic modeling, the City maintains its vision for an efficient and sustainable circulation system. The City is currently using the Lake Forest Traffic Model ("LFTM") program for this purpose. The LFTM program identifies necessary traffic improvements in anticipation of the Opportunities Study Area ("OSA") developments currently planned within the City. Traffic modeling ensures that roadway improvements are implemented in a timely manner and continues to serve the City as a method by which to refine its circulation system. During the upcoming five-year period, the City will continue to utilize the LFTM program to ensure that the OSA development and its associated traffic impacts mitigated and that traffic circulation in the City overall is enhanced.

The City also recognizes that factors outside of its control, such as growth in neighboring communities, motorists traveling through Lake Forest, and regional transportation patterns, impact the community's perception of traffic congestion. While occasional traffic delays may simply be unavoidable in Southern California, the City will continue applying a combination of transportation strategies to reduce chronic traffic delays on local arterials, such as roadway capacity enhancements, traffic signal synchronization and coordination, and citywide traffic modeling in addition to continued coordination with adjacent cities.

## **PUBLIC SAFETY**

### **Maintaining a Safe Community**

Using a variety of statistical measures, the City is consistently found to be a safe community at a local, county, state, and national level. As a strategic issue, preserving a safe and peaceful community will continue to be a top priority. In light of anticipated growth in population due to new housing units, Police Services will begin planning future resource deployment to ensure optimized patrol and other law enforcement services. In addition, the Saddleback Substation will provide enhanced public safety by increasing the presence of the Sheriff Department within the City. Also, it is anticipated that the substation's location within City limits will reduce the City's contract police costs related to vehicle replacement and maintenance.

Police Services will continue to incorporate technological advances with the introduction of Virtual Briefings (which provides an electronic map with displaying information regarding crime trends other policing data within the City), Automated License Plate Readers ("ALPR"), and will consider the potential of body-worn

## **CHAPTER 3**

### **RESIDENT AND BUSINESS SURVEYS**

#### **SUMMARY**

Understanding evolving community sentiment is crucial to identifying current and future areas for improvement as well as ensuring that appropriate resources are dedicated to maintaining a high level of service in areas of importance to the community. To gauge the community's satisfaction, priorities, and concerns as they relate to services and facilities, the City commissions Resident and Business Satisfaction Surveys ("Surveys") on a biennial basis. Over the years, the results have helped guide City Council and staff in making sound, strategic decisions in a variety of areas, including service improvements and enhancements, budgeting, policy-making, and planning.

The most recent Surveys were completed in late 2014. The following sections focus on the results of the Surveys and summarize generally certain findings for specific community issues. Top issues for residents include reducing traffic congestion, public safety, and improving parks and recreation. Approximately nine-in-ten residents surveyed in 2014 indicated that they were satisfied with the City's overall performance in providing municipal services (90%) and offered positive ratings (excellent or good) for the quality of life in Lake Forest (92%). Approximately 87% of businesses noted that they were satisfied with the City's efforts to provide services and 84% of all businesses rated the business climate as either excellent or good.

Looking forward, the City will continue utilizing the feedback provided through the Surveys and other public means to address the top priorities/concerns of community members. In addition, the City will continue to monitor the evolving demographic trends within the community to anticipate and respond to the emerging needs and preferences. The City's performance in providing municipal services has contributed to a high quality of life in the City, as well as a positive business climate. To that end, the City will continue to utilize the Survey results to focus efforts on delivering and maintaining the high quality of services that it currently provides.

#### **RESIDENT AND BUSINESS SURVEY RESULTS**

The Surveys contain extensive amounts of information and were presented previously to the City Council. For purposes of the Strategic Plan, the following sections of this chapter highlight both general and specific perceptions of the City and local issues, in essence summarizing the major findings of the 2014

## **SPECIFIC SERVICES: BUSINESS SURVEY**

The Business Survey rated maintaining a low crime rate as the most important of the services tested (93% extremely or very important), followed by investigating criminal activity (86%). Promoting economic development (68%) and revitalizing outdated areas in the City (67%) were next in the list, although somewhat less important overall. At the top of the satisfaction scale was maintaining a low crime rate (95%), followed by providing building inspection services (95%), investigating criminal activity (95%), and providing business education events (94%).

Among the infrastructure-related services provided by the City to local businesses, members of the business community rated maintaining local streets and roads as most important (80%), followed closely by reducing traffic congestion (77%). Street sweeping (52%), enforcing zoning regulations (49%), enforcing sign regulations (49%), and landscaping median strips and other areas of the City (48%) were viewed as somewhat less important. Overall, satisfaction was greatest with respect to the City's efforts to provide street sweeping services (98%), enforce zoning regulations (95%), landscape median strips and other areas of the City (95%), and maintain local streets and roads (95%).

## **RECREATION**

Among nine recreational amenities and facilities presented to residents, the highest-rated priorities were expanding and improving the network of walking, hiking, and biking trails (75% high or medium priority) and upgrading playground equipment at existing parks (73%). Providing off-leash dog park facilities (56%), a community swimming pool (54%), and additional sports courts (53%) were also popular.

## **TRAFFIC**

Residents reported that, on average, that they encounter bad traffic on Orange County freeways on more than half (56%) of their trips. Trips on major streets in the City were better, with an average of 45% involving bad congestion, compared with roughly 20% of trips in residential areas of the City.

Most (84%) of residents surveyed felt that Lake Forest has either less than (45%) or about the same (39%) traffic congestion as neighboring Orange County cities. A minority (14%) of residents surveyed felt that Lake Forest has more congestion than other Orange County cities.

About three quarters (72%) of residents indicated they were very (34%) or somewhat (38%) satisfied with the City's efforts to improve traffic circulation by

improving roads and inter-sections, timing traffic signals, and other measures, whereas 26% were very (10%) or somewhat (16%) dissatisfied.

Residents were asked, *If the City could fund only one traffic or transportation-related project, what should it be?* Almost a third (30%) of respondents were unsure or could not think of any traffic or transportation-related projects for funding. Adjusting the timing of traffic signals (22%) and making improvements and repairs to local streets (19%) were the most common specific suggestions, followed by a general desire for less traffic congestion (10%) and improved public transit services (10%). An additional 9% of residents surveyed said the City should not fund any transportation projects.

## **COMMUNICATION**

Eight-in-ten (82%) of residents surveyed said they were either very (44%) or somewhat (38%) satisfied with the City's efforts to communicate with residents through newsletters, the Internet, social media, and other means.

Overall, 88% of local businesses indicated that they were satisfied with the City's efforts to communicate with them through newsletters, the Internet, social media, and other means.

The single most frequently cited source of City information among residents was the Internet in general (22%). The City's newsletter, referred to in general (19%) and mentioned by name, *The Leaflet*, (18%) were the next most popular specific mentions, followed by the City's website (15%), the *Orange County Register* (8%), and the City's e-Newsletter (6%).

Forty-four percent (44%) of residents surveyed in 2014 mentioned *at least one* of Lake Forest's newsletters as a source of City information.

When asked what information sources they use to find out about City news, information, and programming, members of the business community were most likely to mention the City's website in general (25%), *The Leaflet* (24%), the e-Newsletter (23%), and the City newsletter in general (19%).

Overall, 58% of businesses surveyed in 2014 mentioned *at least one* of Lake Forest's newsletters as a source of City information.

Lake Forest business managers that direct mail to their office was the most effective method the City can use to communicate with their business (92% very or somewhat effective), followed by email (89%), e-Newsletters (89%), and the City's website (85%).

Fifty-one percent (51%) of residents indicated that they had visited at least one of the City's websites in the 12 months prior to the interview.

## CHAPTER 7 DEFERRED PROGRAMS AND PROJECTS

When developing a strategic plan during times of economic uncertainty, it is crucial to scrutinize all programs and projects. The City must remain flexible when reviewing existing and future needs and must prioritize programs and projects to provide the best service possible to the community within existing budgetary constraints. To that end, the following is a list of projects that have been deferred until funds become available (there are no operating programs identified as “deferred” in this Plan). These projects amount to approximately \$122.2 million.

## PROJECTS

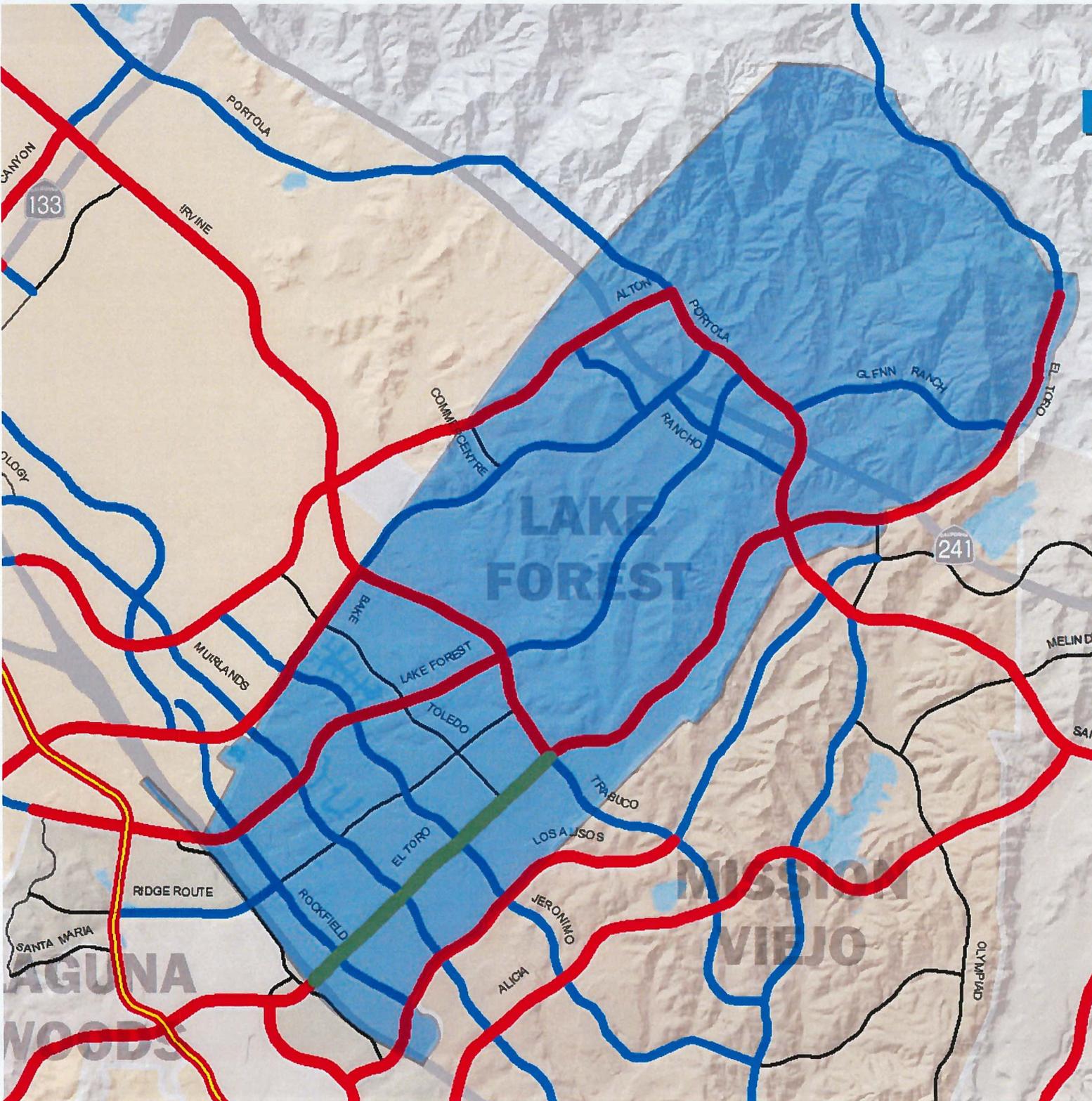
Name	Description	Total	Funding Source
Americans with Disabilities Act Access Ramp Improvements	Reconstruct existing sidewalk ramps at intersections over the next five years to comply with current standards and requirements of the Americans with Disabilities Act (ADA) and further implement the City's ADA self assessment and transition plan.	\$2,017,000	CIP Fund – 100%
El Toro Road Streetscape Project – Phase 2	Investigate and implement traffic safety and traffic congestion relief opportunities, and construct raised landscaped median islands and parkway landscaping along El Toro Road between Jeronimo and Trabuco.	\$2,038,000	CIP Fund – 100%
El Toro Road Streetscape Project – Phase 3	Investigate and implement traffic safety and traffic congestion relief opportunities, and construct raised landscaped median islands and parkway landscaping along El Toro Road between Trabuco Road and Portola Parkway.	\$6,173,000	CIP Fund – 100%
General Neighborhood Traffic Improvements	Investigate, analyze, design, and construct/implement various traffic safety improvements, traffic signing, or traffic routing solutions. The majority of the aforementioned work is part of an ongoing process within the City Engineering Department. This categorization is for those projects that are extraordinary or beyond the scope of normal activities.	\$464,000	CIP Fund – 100%
Jeronimo Road Streetscape Project – Phase 2	Investigate and implement traffic safety and traffic congestion relief opportunities, and construct raised landscaped median islands and parkway landscaping along Jeronimo Road between Lake Forest Drive and Jeronimo Road.	\$2,700,000	CIP Fund – 100%

## PROJECTS

Name	Description	Total	Funding Source
Jeronimo Road Streetscape Project – Phase 3	Investigate and implement traffic safety and traffic congestion relief opportunities, and construct raised landscaped median islands and parkway landscaping along Jeronimo Road between Bake Parkway and Lake Forest Drive.	\$900,000	CIP Fund – 100%
Muirlands Boulevard Streetscape Project	Investigate and implement traffic safety and traffic congestion relief opportunities, and construct raised landscaped median islands and parkway landscaping along Muirlands between Los Alisos and Bake Parkway.	\$5,310,000	CIP Fund – 100%
Normandale Park Development	Construct improvements to Normandale Park with amenities to be determined.	\$12,150,000	CIP Fund – 100%
Portola Parkway Gap Closure	This project lies within unincorporated Orange County and within the City of Irvine’s Planning Area 6. The Orange County Master Plan of Arterial Highways identifies Portola Parkway as a primary arterial highway between State Route 241 and its existing terminus in the City of Lake Forest, a gap of approximately 1.1 miles. Neither the County of Orange nor the City of Irvine have established project development teams, schedules, or funding for this project. Project costs were estimated at over \$81 million in October 2005; with project development, environmental clearances, and design engineering estimated to cost \$14,820,000. The project requires right-of-way across Parcel R of Irvine Open Space Preserve – North, which is subject to the First Amendment to Management Agreement between the City of Irvine and the Irvine Ranch Land Trust Reserve, dated February 1, 2007. Lake Forest staff has initiated discussions and will continue to collaborate with the City of Irvine, County of Orange,	\$81,000,000	N/A

	Orange County Transportation Authority, and other stakeholders to establish Portola Parkway as a regional priority.		
Rockfield Boulevard Streetscape Project Phase 2 – Construction	This project would investigate and implement traffic safety and traffic congestion relief opportunities, and construct raised landscaped median islands and parkway landscaping along Rockfield Boulevard between El Toro Road and Ridge Route Drive.	\$1,330,000	CIP Fund – 100%
Rockfield Boulevard Streetscape Project Phase 3	This project would investigate and implement traffic safety and traffic congestion relief opportunities, and construct raised landscaped median islands and parkway landscaping along Rockfield Boulevard between Ridge Route Drive to Centre Drive.	\$1,300,000	CIP Fund – 100%
Rue de Fortuna Crosswalk Enhancement	This project would add in-ground pavement lights to the mid-block crosswalk that crosses Rue de Fortuna at Fascia Place.	\$110,000	ATP Grant – 100%
Split-Rail Fencing on Rockfield at Larkwood	This project would install split-rail fencing in the Rockfield Boulevard median at Larkwood Lane to prevent pedestrians from crossing the arterial roadway at its intersection.	\$50,000	Grant Fund – 100%
Toledo Road Streetscape Project	Investigate and implement traffic safety and traffic congestion relief opportunities, and construct raised landscaped median islands and parkway landscaping along Toledo Way between Bake Parkway and El Toro Road.	\$4,186,000	CIP Fund – 100%
Trabuco Road Streetscape Project Phase 2	Investigate and implement traffic safety and traffic congestion relief opportunities, and renovate the raised landscaped median islands and parkway landscaping along Trabuco Road from Lake Forest Boulevard to the Mission Viejo city limits.	\$1,481,000	CIP Fund – 100%
	GRAND TOTAL	\$122,155,000	

# 2014 Master Plan of Arterial Highways



## LEGEND

- ARTERIAL HIGHWAYS**
- |                       |                    |           |
|-----------------------|--------------------|-----------|
| ESTABLISHED ALIGNMENT | PROPOSED ALIGNMENT | PRINCIPAL |
| MAJOR                 | MAJOR              | PRIMARY   |
| SECONDARY             | SECONDARY          | COLLECTOR |
- ROADS OUTSIDE OF OC SHOWN FOR CONTINUITY
- FREEWAY \*  
TRANSPORTATION CORRIDOR \*
- SMART STREET 8 LANE  
SMART STREET 6 LANE  
SMART STREET 4 LANE
- EXISTING INTERCHANGE  
PROPOSED INTERCHANGE
- RIGHT-OF-WAY RESERVE

\* Shown for references purposes only

**LFTM Program – 5-Year Review  
(2014 Update)**



Prepared for:  
City of Lake Forest

Prepared by:  
Stantec Consulting Services Inc.

May 29, 2014

## **LFTM PROGRAM – 5-YEAR REVIEW (2014 UPDATE)**

EXECUTIVE SUMMARY  
May 29, 2014

### **Executive Summary**

#### **Introduction**

This report describes the 2014 update to the City of Lake Forest Transportation Mitigation (LFTM) traffic analysis in support of the City's five-year review of the LFTM Program. It thereby updates the program adopted by the City Council in 2008, which added Chapter 7.19 to the Lake Forest Municipal Code, and which established the current Program for transportation improvements in the City and the related LFTM fees. A requirement for a five-year review was included in the LFTM Program to ensure that the LFTM Program continues to adequately address the City's future roadway improvement needs. A baseline adjustment was last prepared in 2011, the purpose of which was to update the land use assumptions of the LFTM Program for consistency with the approved Opportunity Study Area (OSA) and other development plan approvals.<sup>1</sup>

This five-year review incorporates the following changes:

1. Updates to the Citywide land use data
2. Updates to the committed roadway network
3. Updates to the Lake Forest Traffic Analysis Model (LFTAM)
4. Updates to the identified transportation improvements
5. Updates to the total cost of the program
6. Revised LFTM fee structure based on the above

The LFTM Program does not include new roadways or roadway improvements directly related to new development (i.e., on-site roadways that would be built or widened as part of standard subdivision requirements). Signalized intersections that provide project access are likewise excluded. These improvements are considered part of the "Committed" or "Baseline" roadway. The focus of this five-year review of the LFTM Program is on roadway improvements to augment the committed roadway system.

To prepare the updated transportation improvement program, traffic forecasts based on the future land uses in the City were evaluated and potential deficiencies identified. LFTM improvements to alleviate the deficiencies were reevaluated and refined, where applicable. In accordance with the LFTM Ordinance, the five-year review does not add any new LFTM improvements. It is these LFTM improvements that form the basis for the updated citywide transportation improvement program and associated LFTM fees.

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<sup>1</sup> Lake Forest Transportation Mitigation (LFTM) Program 2011 Baseline Adjustment Study, Austin-Foust Associates, Inc., August 2011.

## LFTM PROGRAM – 5-YEAR REVIEW (2014 UPDATE)

EXECUTIVE SUMMARY  
May 29, 2014

### Properties Participating in the LFTM Program

The properties in the City of Lake Forest that currently take part in the LFTM Program include the OSA participating landowners and the development plans for the vacant lands. These properties include the five LFTM Program participants listed in Table ES-1 with each property's approved entitlements.

**Table ES-1 Properties Participating in the LFTM Program**

LFTM Properties	Description
1. Shea/Baker (Baker Ranch)	1,160 single family dwelling units; 599 condominium units; 619 apartment units; 25,000 sq. ft. of retail commercial; public park
2. Portola Center	635 single family dwelling units; 256 condominium units; 57 apartment units; 10,000 sq. ft. of retail commercial; public park
3. Irvine Ranch Water District (Serrano Summit)	150 single family dwelling units; 458 condominium units
4. KB Homes (Whisler Ridge)	75 single family dwelling units (complete)
5. Pacific Heritage (The Pinnacle at Serrano Highlands)	85 single family dwelling units

### Improvement Locations

The current focus of the LFTM Program is on enhancing capacity at key intersections throughout the City since the City's backbone arterial roadway system is primarily built-out. For this review of the LFTM Program, major intersections within the City and select key intersections in neighboring Cities, 45 intersections in total, have been evaluated with respect to future traffic volume demand and capacity needs. The evaluation has been prepared for a future year horizon that is based on buildout of the City's General Plan and regional growth projections for the year 2030. A long-range buildout horizon such as the year 2030 is used so that the investments made to improve the City's roadway network will accommodate not just the current needs, but the future traffic demand as well.

As a result of the analysis, the following eight intersections were found to not meet the established Level of Service (LOS) criteria in the year 2030:

- 10. Lake Forest & Rancho
- 12. El Toro & Portola/Santa Margarita
- 14. Bake & Irvine/Trabuco
- 22. Bake & Jeronimo
- 23. Lake Forest & Jeronimo
- 31. Lake Forest & Rockfield
- 34. Los Alisos & Rockfield
- 36. Lake Forest & I-5/Carlota

## **LFTM PROGRAM – 5-YEAR REVIEW (2014 UPDATE)**

EXECUTIVE SUMMARY  
May 29, 2014

The LFTM Program also funds improvements previously identified for the OSA participating properties, which includes the following additional five intersections:

- 2. Bake & Portola
- 32. Ridge Route & Rockfield
- 105. Alton & Irvine
- 117. Alton & Toledo
- 125. Bake & Rockfield

The following two intersections within the City of Laguna Hills are also included in the LFTM program, with the City's share of the improvement costs calculated according to the Laguna Hills Urban Village Fee Program<sup>2</sup>. Improvements at these intersections have recently been completed, however the City's share of the costs for the improvements have been retained in the LFTM Program pending a cost sharing agreement between the two cities.

- 37. Paseo de Valencia & Carlota
- 39. El Toro & Carlota

The number of intersections with improvements funded by the LFTM Program has evolved over time as updated analyses have been prepared. Appendix B provides a comparison table showing past, current, and proposed intersection improvement locations under the LFTM program.

### **LFTM Fee Calculations**

The derivation of the LFTM fee is based on two primary factors, the amount of traffic generated by a development and the cost of the roadway improvements included in the LFTM Program. Traffic forecasts based on buildout of the City's General Plan for the year 2030 are derived using data from the Lake Forest Traffic Analysis Model (LFTAM), the City's traffic demand model (see Chapter 2.0 for a detailed description of the LFTAM), and these forecasts are used to identify where roadway and intersection improvements are needed to accommodate the anticipated increase in traffic. Specific improvements that result in acceptable LOS are then derived.

Capacity enhancing improvements have been identified for each of the intersections listed above and cost estimates for each improvement have been updated to 2014 dollars. Since the improvements are identified for the 2030 time frame, the timing and priority for improvement implementation is based on actual traffic demand and analysis, citywide performance standards, and available funds to complete the improvements. Table ES-2, below, summarizes the improvement cost for each location. As shown, the total LFTM Program cost is approximately \$10.4 million.

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<sup>2</sup> Ibid.

## LFTM PROGRAM – 5-YEAR REVIEW (2014 UPDATE)

EXECUTIVE SUMMARY  
May 29, 2014

**Table ES-2 LFTM Program Improvement Costs**

Item	Intersection No.	Intersection	Total Cost <sup>1</sup> (Thousands)	Jurisdiction
1	2	Bake Pkwy & Portola Pkwy	\$315	LF
2	10	Lake Forest Dr & Rancho Pkwy	\$247	LF
3	12	El Toro Rd & Portola Pkwy/Santa Margarita Pky	\$2,015	LF
4	14	Bake Pkwy & Irvine Blvd/Trabuco Rd	\$948	LF/Irvine
5	22	Bake Pkwy & Jeronimo Rd	\$939	LF/Irvine
6	23	Lake Forest Dr & Jeronimo Rd	\$134	LF
7	31	Lake Forest Dr & Rockfield Blvd	\$59	LF
8	32	Ridge Route Dr & Rockfield Blvd	\$2	LF
9	34	Los Alisos Blvd & Rockfield Blvd	\$678	LF
10	36	Lake Forest Dr & I-5 Fwy SB Off-Ramp/Carlota	\$1,268	LH/Irvine
11	37	Paseo de Valencia & Avenida de la Carlota <sup>2</sup>	\$79	LH
12	39	El Toro Road & Avenida de la Carlota <sup>2</sup>	\$78	LH
13	105	Alton Pkwy & Irvine Blvd	\$124	Irvine
14	117	Alton Pkwy & Toledo Way	\$6	Irvine
15	125	Bake Pkwy & Rockfield Blvd	\$1,436	Irvine
Total Cost of Improvements			\$8,328	
Administration & Environmental (25%)			\$2,082	
<b>Total Program Cost</b>			<b>\$10,410</b>	

<sup>1</sup> VA Consulting Cost Summary prepared in January 2011 adjusted to 2014 dollars based on the California Construction Cost Index (CCCI).

<sup>2</sup> Costs for Paseo de Valencia/Carlota and El Toro/Carlota represent the LFTM share (\$157,000 total) for the City of Laguna Hills (based on Laguna Hills Urban Village Fee Program).

Abbreviations:  
LF – Lake Forest, LH – Laguna Hills

Table ES-3, below, shows the cost allocation according to land use and the resulting fee per unit of land use. The trip length factors used in the table are relative, using dwelling units as the comparative base. The commercial development associated with the properties participating in the LFTM Program is neighborhood serving commercial, and this type of commercial land use has a substantially lower trip length factor because of the relatively short trips involved. As shown, fees of \$2,739/single family dwelling unit, \$2,187/multi-family dwelling unit (condominiums and apartments), and \$8,792/thousand square feet of commercial have been established.

The LFTM Program cost shares for the properties participating in the LFTM Program are summarized in Table ES-4. Shown here are the land uses within each project area and the corresponding cost allocation to that land use.

## LFTM PROGRAM – 5-YEAR REVIEW (2014 UPDATE)

EXECUTIVE SUMMARY  
May 29, 2014

**Table ES-3 LFTM Fee Calculation**

Land Use	Land Use Units	Land Use Amount	ADT Trip Generation	Trip Length Factor	Fee/ADT	Fee (\$000s)	Fee/Land Use Unit
SDU	DU	2,030	19,325	1.00	\$287.72	\$5,560	\$2,739
MDU	DU	1,989	15,117	1.00	\$287.72	\$4,349	\$2,187
Commercial	TSF	35	4,278	.25	\$71.93	\$308	\$8,792
SDU (Paid) <sup>1</sup>	DU	75	714	1.00	\$269.22	\$192	\$2,563
<b>TOTAL</b>			<b>39,434</b>			<b>\$10,410</b>	

Baseline ADT Fee = \$287.72/trip

(Fee/ADT = Baseline ADT Fee x Trip Length Factor)

Abbreviations:

ADT – Average Daily Trips

SDU – Single Family Detached Dwelling Unit

MDU – Multi-Family Attached Dwelling Unit (includes condominiums and apartments)

<sup>1</sup>Fees previously paid: KB Homes (Whisler Ridge) completed their payment obligations (\$192,225) in 2011 under the prior fee structure of \$2,563/DU.

## LFTM PROGRAM – 5-YEAR REVIEW (2014 UPDATE)

EXECUTIVE SUMMARY  
May 29, 2014

**Table ES-4 LFTM Participating Properties Fee Calculation**

Land Use Description	Amount	Fee per Unit	Cost
<b>Shea/Baker (Baker Ranch)</b>			
Single Family Detached	1,160 DU	\$2,739/DU	\$3,177,240
Condominium	599 DU	\$2,187/DU	\$1,310,013
Apartment	619 DU	\$2,187/DU	\$1,353,753
Commercial	25 TSF	\$8,792/TSF	\$219,800
<b>Total</b>			<b>\$6,060,806</b>
<b>Portola Center</b>			
Single Family Detached	635 DU	\$2,739/DU	\$1,739,265
Condominium	256 DU	\$2,187/DU	\$559,872
Apartment	57 DU	\$2,187/DU	\$124,659
Commercial	10 TSF	\$8,792/TSF	\$87,920
<b>Total</b>			<b>\$2,511,716</b>
<b>Irvine Ranch Water District (Serrano Summit)</b>			
Single Family Detached	150 DU	\$2,739/DU	\$410,850
Condominium	458 DU	\$2,187/DU	\$1,001,646
<b>Total</b>			<b>\$1,412,496</b>
<b>KB Homes (Whisler Ridge)</b>			
Single Family Detached	75 DU	\$2,563/DU <sup>1</sup>	\$192,225
<b>Pacific Heritage (The Pinnacle at Serrano Highlands)</b>			
Single Family Detached	85 DU	\$2,739/DU	\$232,815
<b>Total</b>			
Single Family Detached	2,105 DU		\$5,752,395
Condominium	1,313 DU		\$2,871,531
Apartment	676 DU		\$1,478,412
Commercial	35 TSF		\$307,720
<b>Total</b>			<b>\$10,410,058</b>
Abbreviations: DU – Dwelling Unit, TSF – Thousand Square Feet			
<sup>1</sup> KB Homes (Whisler Ridge) completed their payment obligations (\$192,225) in 2011 under the prior fee structure of \$2,563/DU.			

**\*CONSTRUCTION NOTES**

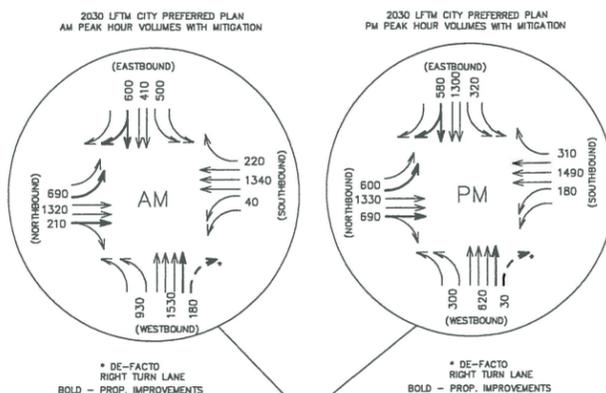
- 1 INSTALL ACCESS RAMP, TYPE I, PER COUNTY OF ORANGE RDMO STD. PLAN 1115.
- 2 INSTALL SIDEWALK, W=5', PER COUNTY OF ORANGE RDMO STD. PLAN 1205.
- 3 INSTALL CURB AND GUTTER, TYPE A2-8, PER COUNTY OF ORANGE RDMO STD. PLAN 120-D-0C.
- 4 INSTALL MEDIAN CURB, TYPE A1-8, PER COUNTY OF ORANGE RDMO STD. PLAN 120-D-0C.
- 5 REMOVE EXISTING MEDIAN CURB.
- 6 CONSTRUCT LANDSCAPE MEDIAN PER COUNTY OF ORANGE RDMO STD. PLAN 1114.
- 7 SAWCUT EXISTING PAVEMENT (2' FROM EDGE OF EXISTING GUTTER).
- 8 REMOVE EXISTING PAVEMENT AND STRUCTURAL SECTION.
- 9 CONSTRUCT AC PAVEMENT STRUCTURAL SECTION.
- 10 INSTALL DETAIL 9 PER CALTRANS STANDARD PLAN NO. A20A.
- 12 INSTALL DETAIL 38 PER CALTRANS STANDARD PLAN NO. A20D.
- 13 INSTALL DETAIL 39 AND 39A PER CALTRANS STANDARD PLAN NO. A20D.
- 14 INSTALL DETAIL 40 PER CALTRANS STANDARD PLAN NO. A20D.
- 15 INSTALL 12" WIDE WHITE STRIPE PER CALTRANS STANDARD PLAN NO. A24E.
- 17 INSTALL 12" WIDE WHITE CHEVRONS AT 45° AT 50' ON CENTERS.
- 18 INSTALL TYPE IV ARROW PER CALTRANS STANDARD PLAN NO. A24A.
- 19 INSTALL TYPE VI(RT) ARROW PER CALTRANS STANDARD PLAN NO. A24A.
- 20 INSTALL TYPE VI ARROW PER CALTRANS STANDARD PLAN NO. A24A.
- 21 INSTALL DETAIL 37B PER CALTRANS STANDARD PLAN NO. A20C.
- 22 REMOVE CONFLICTING LINES, MARKINGS AND RAISED PAVEMENT MARKERS BY WET SANDBLASTING.
- 23 REMOVE EXISTING CURB AND GUTTER.
- 24 REMOVE EXISTING SIDEWALK.
- 25 RELOCATE EXISTING BUS SHELTER.

**QUANTITIES**

- 1 EA
- 3790 SF
- 647 LF
- 415 LF
- 420 LF
- 970 SF
- 1150 LF
- 1441 SF
- 963 TON
- 1223 LF
- 1290 LF
- 864 LF
- 37 LF
- 565 LF
- 18 SF
- 150 SF
- 54 SF
- 126 SF
- 250 LF
- 4035 LF
- 1150 LF
- 3067 SF
- 1 EA

**PROPOSED IMPROVEMENT:**

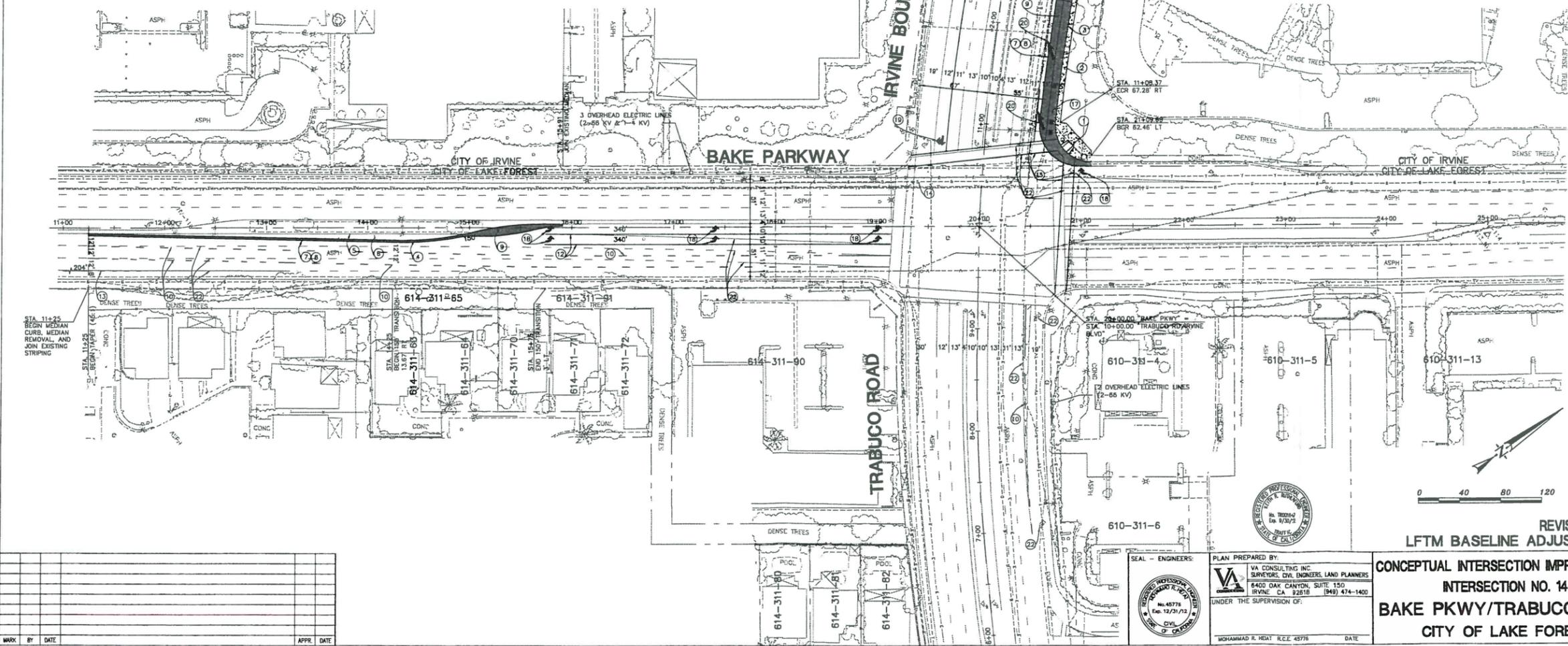
ADD 2ND NORTHBOUND LEFT-TURN; RESTRIPE NORTHBOUND RIGHT TO SHARED 3RD NORTHBOUND THRU/NORTHBOUND RIGHT; CONVERT WESTBOUND RIGHT-TURN TO 4TH WESTBOUND THRU AND DEFACTO RIGHT-TURN; RESTRIPE 3RD EASTBOUND THRU TO PROVIDE 2.5 EASTBOUND THRUS AND 1.5 EASTBOUND RIGHT-TURNS



INTERSECTION APPROACH LANES AND VOLUMES PER AUSTIN-FOUST ASSOCIATES, INC

\*NOTE: FOR ADDITIONAL CONSTRUCTION ITEMS AND COSTS ASSOCIATED WITH THIS INTERSECTION MODIFICATION SEE THE "PRELIMINARY ESTIMATE OF PROBABLE COSTS" ON THE PREVIOUS PAGE.

NO.	A.P. NUMBER	PARTIAL TAKE S.F.
1	591-093-15	3,073
TOTAL		3,073



MARK	BY	DATE	APPR	DATE

SEAL - ENGINEERS: PLAN PREPARED BY: VA CONSULTING INC. SURVEYORS, CIVIL ENGINEERS, LAND PLANNERS 8400 OAK CANYON, SUITE 150, IRVINE, CA 92618 (949) 474-1400 UNDER THE SUPERVISION OF: MOHAMMAD R. MEAD R.C.E. 45778 DATE: \_\_\_\_\_

REVISED 01/11  
LFTM BASELINE ADJUSTMENT  
CONCEPTUAL INTERSECTION IMPROVEMENTS  
INTERSECTION NO. 14  
BAKE PKWY/TRABUCO ROAD  
CITY OF LAKE FOREST

X:\Projects\629\_0200\Eng\CADD\DWG\Submittal\11\_010611 - 2011 Report\_Revision\629\_0200\ENR1-04\_14\_Bake\_Trabuco.dwg 03/17/11 04:56:13 PM



**LAKE FOREST TRAFFIC MITIGATION PROGRAM  
PRELIMINARY ESTIMATE OF PROBABLE COSTS**

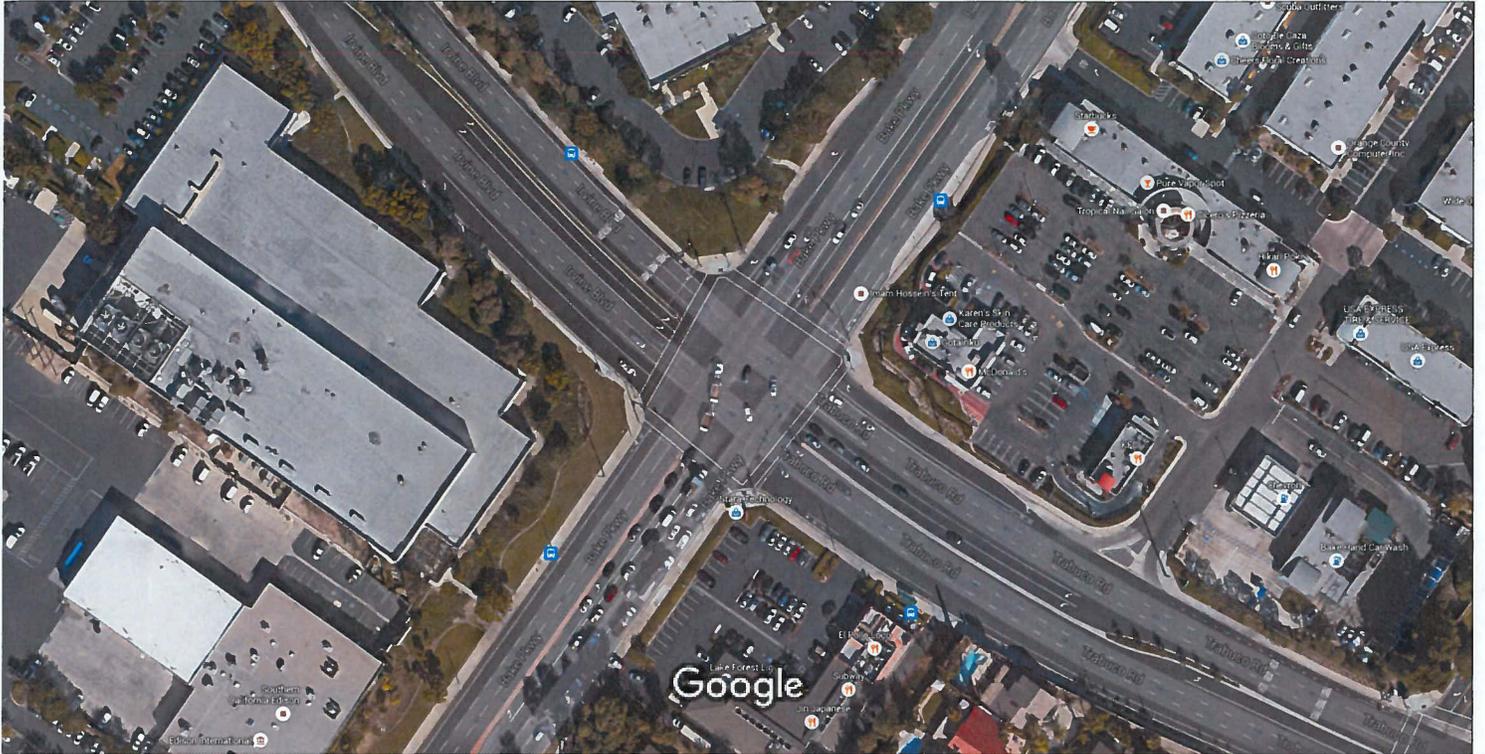
**No. 14 BAKE PARKWAY/TRABUCO ROAD/IRVINE BOULEVARD**

**Improvements: Add 2nd northbound left, restripe northbound right to shared 3rd northbound thru/northbound right turn lane, convert westbound right turn lane to 4th westbound thru and a de facto westbound right turn lane. Restripe 3rd eastbound thru to shared 3rd eastbound thru lane/2nd eastbound right turn lane.**

Date: January 2011

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>ROADWAY</b>				
Clearing and Grubbing	1	LS	\$1,587.69	\$1,600
Roadway Excavation	880	CY	\$13.84	\$12,200
Sawcut	1,150	LF	\$1.77	\$2,000
Remove Existing Pavement Structural Section	1,441	SF	\$1.24	\$1,800
Remove Existing Curb and Gutter	1,150	LF	\$5.31	\$6,100
Remove Existing Median Curb	420	LF	\$1.58	\$700
Remove Existing Sidewalk	3,097	SF	\$1.58	\$4,900
AC Pavement Structural Section	963	TON	\$105.00	\$101,100
4" PCC Sidewalk	3,790	SF	\$4.96	\$18,800
Curb and Gutter, A2-8	647	LF	\$21.68	\$14,000
Median Curb and Gutter, A1-8	415	LF	\$11.90	\$4,900
Access Ramp and Landing	745	SF	\$4.76	\$3,500
Relocate Existing Bus Shelter	1	EA	\$793.85	\$800
Traffic Striping and Signing	1	LS	\$3,969.23	\$4,000
Traffic Signal Modification	1	LS	\$39,692.25	\$39,700
Modify Landscaping and Irrigation System	1	LS	\$11,907.68	\$11,900
Construction Traffic Control	1	LS	\$7,938.45	\$7,900
<b>Subtotal</b>				<b>\$235,900</b>
<b>DRAINAGE</b>				
Catch Basin	0	EA	\$2,381.54	\$0
Local Depression	0	EA	\$635.08	\$0
Concrete Collar	0	EA	\$793.85	\$0
18" RCP	0	LF	\$51.60	\$0
<b>Subtotal</b>				<b>\$0</b>
<b>UTILITIES</b>				
Relocate Fire Hydrant	0	EA	\$595.38	\$0
Relocate Power Pole	1	EA	\$7,938.45	\$7,900
Relocate Electrical Vault	1	EA	\$39,692.25	\$39,700
Relocate Telephone Vault	0	EA	\$19,846.13	\$0
Relocate Street Light	2	EA	\$1,190.77	\$2,400
Relocate Miscellaneous Vault	0	EA	\$19,846.13	\$0
Adjust Manhole to Grade	3	EA	\$238.15	\$700
Adjust Water Valve to Grade	2	EA	\$119.08	\$200
Pull Box	5	EA	\$198.46	\$1,000
St. Light Conduit	665	LF	\$15.88	\$10,600
Relocate Control Valve	0	EA	\$873.23	\$0
<b>Subtotal</b>				<b>\$62,500</b>
Construction Subtotal				\$298,400
Mobilization (10%)				\$29,800
SWPPP (6%)				\$17,900
Construction Contingencies (20%)				\$59,700
<b>CONSTRUCTION TOTAL (without right of way, planning and engineering)</b>				<b>\$405,800</b>
Right-of-Way	3,073	SF	\$64.00	\$196,700
Right-of-Way Contingencies (20%)				\$39,300
<b>RIGHT-OF-WAY TOTAL</b>				<b>\$236,000</b>
<b>TOTAL CONSTRUCTION AND RIGHT-OF-WAY</b>				<b>\$641,800</b>
Project Development/Public Hearings (10%)				\$64,200
Design Engineering (15%)				\$96,300
Construction Engineering (15%)				\$96,300
<b>PROJECT PLANNING AND ENGINEERING</b>				<b>\$256,800</b>
<b>TOTAL PROJECT COST</b>				<b>\$898,600</b>

Google Maps Bake Parkway at Trabuco Road

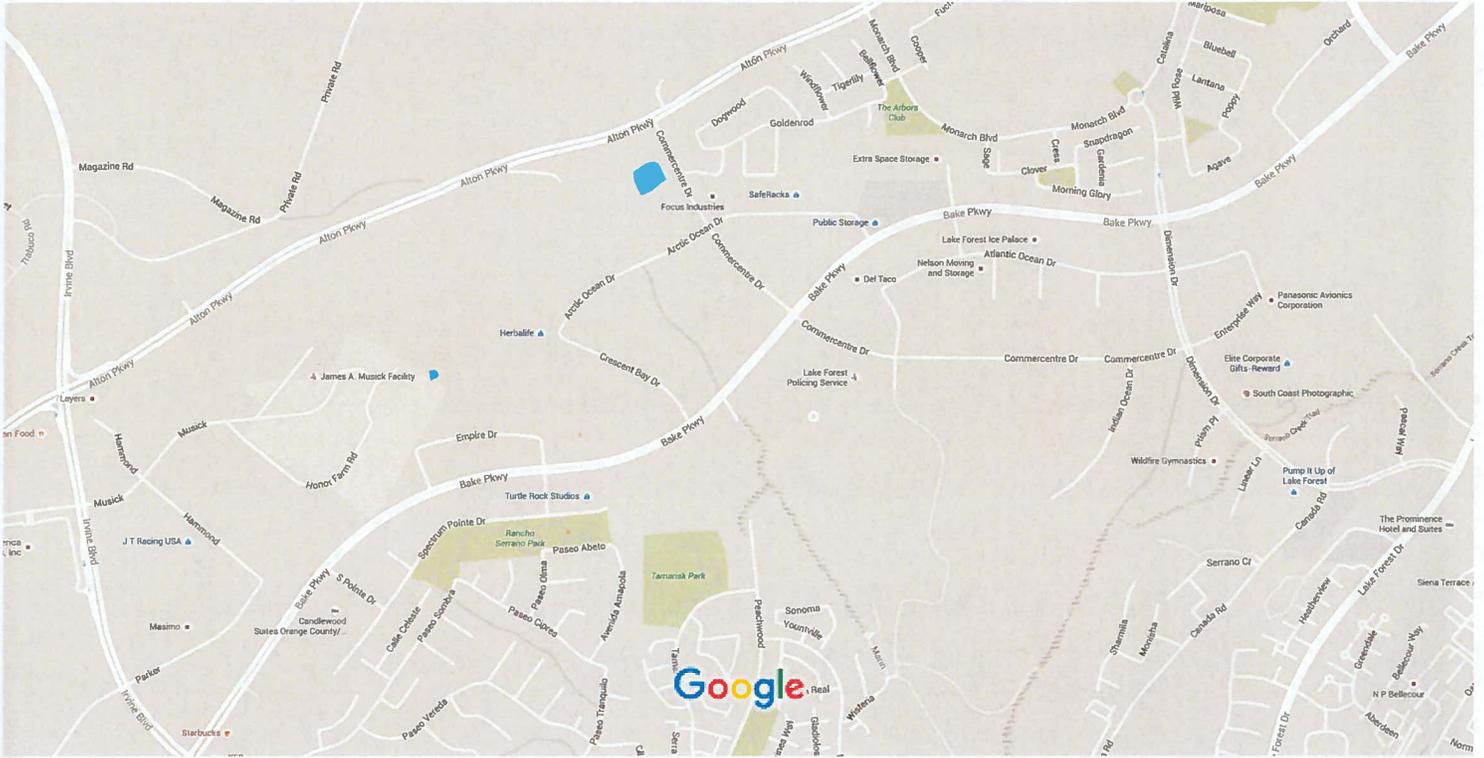


Imagery ©2015 Google, Map data ©2015 Google 50 ft



Imagery ©2015 Google, Map data ©2015 Google 20 ft

# Google Maps Bake Parkway East of Trabuco Road



Map data ©2015 Google 500 ft



Google Maps Bake Parkway at Toledo Way



Imagery ©2015 Google, Map data ©2015 Google 50 ft



Imagery ©2015 Google, Map data ©2015 Google 20 ft

17. El Toro & Trabuco

2030 Baseline						
	LANES	CAPACITY	AM PK HOUR		PM PK HOUR	
			VOL	V/C	VOL	V/C
NBL	2	3400	370	.11*	440	.13
NBT	3	5100	1180	.23	1530	.30*
NBR	1	1700	120	.07	600	.35
SBL	2	3400	280	.08	270	.08*
SBT	3	5100	1750	.34*	1050	.21
SBR	1	1700	460	.27	180	.11
EBL	2	3400	200	.06*	750	.22
EBT	3	5100	340	.10	1290	.29*
EBR	0	0	270	.16	210	
WBL	2	3400	280	.08	220	.06*
WBT	3	5100	1210	.24*	570	.11
WBR	1	1700	250	.15	160	.09
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for SBR NBR						

TOTAL CAPACITY UTILIZATION .80 .78

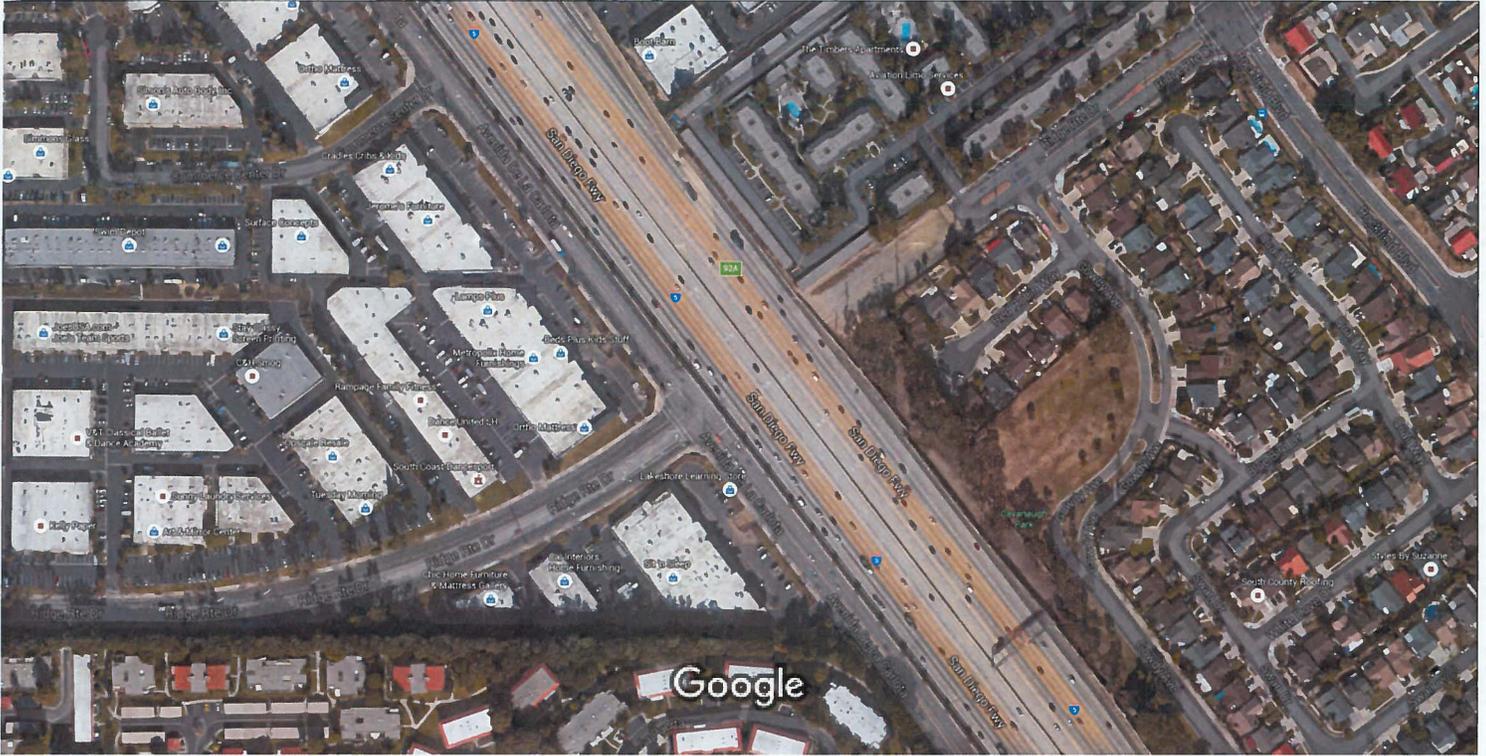
18. Bake & Toledo

2030 Baseline						
	LANES	CAPACITY	AM PK HOUR		PM PK HOUR	
			VOL	V/C	VOL	V/C
NBL	1	1700	230	.14*	40	.02
NBT	3	5100	1980	.39	2200	.43*
NBR	d	1700	20	.01	320	.19
SBL	1	1700	70	.04	120	.07*
SBT	3	5100	2360	.46*	2190	.43
SBR	d	1700	220	.13	70	.04
EBL	2	3400	130	.04*	210	.06
EBT	2	3400	20	.01	460	.14*
EBR	1	1700	20	.01	230	.14
WBL	1	1700	270	.16	40	.02*
WBT	2	3400	630	.21*	60	.04
WBR	0	0	70		80	.05
Clearance Interval				.05*		.05*

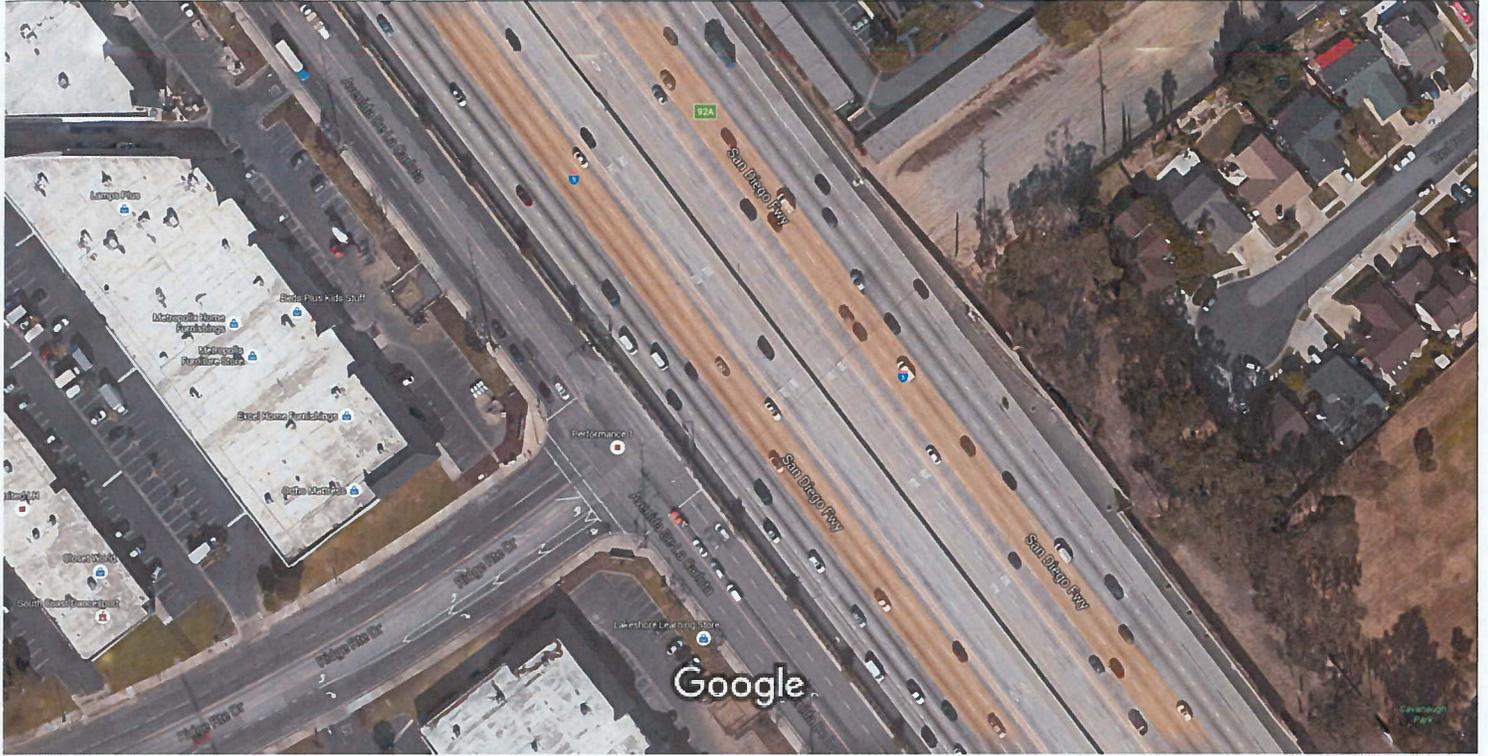
TOTAL CAPACITY UTILIZATION .90 .71

NORTHBOUND  
PER  
THE  
REPORT

# Google Maps Ridge Route at I-5



Imagery ©2015 Google, Map data ©2015 Google 100 ft



Imagery ©2015 Google, Map data ©2015 Google 50 ft