



BOARD AGENDA

Orange County Transportation Authority Board Meeting
Orange County Transportation Authority Headquarters
Board Room - Conference Room 07-08
550 South Main Street
Orange, California
Monday, September 11, 2017 at 9:00 a.m.

Any person with a disability who requires a modification or accommodation in order to participate in this meeting should contact the OCTA Clerk of the Board, telephone (714) 560-5676, no less than two (2) business days prior to this meeting to enable OCTA to make reasonable arrangements to assure accessibility to this meeting.

Agenda Descriptions

The agenda descriptions are intended to give members of the public a general summary of items of business to be transacted or discussed. The posting of the recommended actions does not indicate what action will be taken. The Board of Directors may take any action which it deems to be appropriate on the agenda item and is not limited in any way by the notice of the recommended action.

Public Comments on Agenda Items

Members of the public may address the Board of Directors regarding any item. Please complete a speaker's card and submit it to the Clerk of the Board or notify the Clerk of the Board the item number on which you wish to speak. Speakers will be recognized by the Chairman at the time the agenda item is to be considered. A speaker's comments shall be limited to three (3) minutes.

Public Availability of Agenda Materials

All documents relative to the items referenced in this agenda are available for public inspection at www.octa.net or through the Clerk of the Board's office at the OCTA Headquarters, 600 South Main Street, Orange, California.

Call to Order

Invocation

Director Delgleize

Pledge of Allegiance

Director M. Murphy



BOARD AGENDA

Special Calendar

There are no Special Calendar matters.

Consent Calendar (Items 1 through 11)

All matters on the Consent Calendar are to be approved in one motion unless a Board Member or a member of the public requests separate action on a specific item.

Orange County Transportation Authority Consent Calendar Matters

1. Approval of Minutes

Approval of the Orange County Transportation Authority and affiliated agencies' regular meeting minutes of August 28, 2017.

2. Interstate 5 (Avenida Pico to San Diego County Line) Project Status Update Carolyn Mamaradlo/Kia Mortazavi

Overview

The Orange County Transportation Authority is working to complete a project study report/project development support document for potential improvements to Interstate 5 in San Clemente from Avenida Pico to the San Diego County line. A status update is provided below.

Recommendation

Receive and file as an information item.

3. Grant Award for the Pedestrian and Bicycle Safety Program Alfonso Hernandez/Kia Mortazavi

Overview

On July 25, 2017, the California Office of Traffic Safety awarded the Orange County Transportation Authority \$75,000 in competitive funds to develop and implement the Pedestrian and Bicycle Safety Program, which is intended to raise public awareness of safe bicycling and pedestrian practices, and reduce fatalities involving pedestrians and bicyclists. An authorizing resolution to accept the grant award and enter into grant-related agreements is presented for adoption as required by the grant program.



BOARD AGENDA

3. (Continued)

Recommendation

Authorize the Chief Executive Officer or designee to accept the grant award and execute grant-related agreements with the California Office of Traffic Safety to develop and implement the Pedestrian and Bicycle Safety Program.

Orange County Local Transportation Authority Consent Calendar Matters

4. Consultant Selection for the Preparation of Plans, Specifications, and Estimates for the State Route 55 Improvement Project Between Interstate 405 and Interstate 5

Steven L. King/James G. Beil

Overview

On June 12, 2017, the Orange County Transportation Authority Board of Directors approved the release of a request for proposals for the preparation of plans, specifications, and estimates for the State Route 55 Improvement Project between Interstate 405 and Interstate 5. Board of Directors' approval is requested for the selection of a firm to perform the required work.

Recommendations

- A. Approve the selection of WKE, Inc., as the firm to prepare the plans, specifications, and estimates for the State Route 55 Improvement Project between Interstate 405 and Interstate 5.
- B. Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-7-1719 between the Orange County Transportation Authority and WKE, Inc., to prepare the plans, specifications, and estimates for the State Route 55 Improvement Project between Interstate 405 and Interstate 5.



BOARD AGENDA

5. **Cooperative Agreement with the California Department of Transportation for the State Route 55 Improvement Project Between Interstate 405 and Interstate 5 and Authority to Acquire Right-of-Way**
Ross Lew/James G. Beil

Overview

The Orange County Transportation Authority proposes to enter into a cooperative agreement with the California Department of Transportation to establish roles, responsibilities, and funding obligations for right-of-way support services, right-of-way engineering, right-of-way acquisition, and utility relocation for the State Route 55 Improvement Project between Interstate 405 and Interstate 5.

Recommendations

- A. Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-7-1936 between the Orange County Transportation Authority and the California Department of Transportation, in the amount of \$850,000, to perform right-of-way support services for the State Route 55 Improvement Project between Interstate 405 and Interstate 5.
- B. Authorize the Chief Executive Officer, or his designee, to initiate discussions with property owners and utility owners, make offers, and execute agreements for the acquisition of all necessary real property interests and necessary utility relocations.
6. **Environmental Mitigation Program Endowment Fund Investment Report For June 30, 2017**
Rodney Johnson/Andrew Oftelie

Overview

The Orange County Transportation Authority has developed a Natural Community Conservation Plan/Habitat Conservation Plan; acquired conservation properties; and funded habitat restoration projects to mitigate the impacts of Measure M2 freeway projects. California Community Foundation manages the non-wasting endowment required to pay for the long-term management of the conservation properties. Each quarter, the California Community Foundation publishes a comprehensive report detailing the composition of the pool and the performance. Attached is the quarterly investment report for the Endowment Pool for the period ending June 30, 2017. The report has been reviewed and is consistent with the pool objectives.



BOARD AGENDA

6. (Continued)

Recommendation

Receive and file as an information item.

7. Measure M2 Environmental Mitigation Program Restoration Projects Additional Funding Request

Lesley Hill/Kia Mortazavi

Overview

Measure M2 includes a program to deliver comprehensive mitigation for the environmental impacts of freeway projects in exchange for streamlined project approvals from the state and federal wildlife agencies. On a parallel path, the Orange County Transportation Authority has developed a similar approach to work with the State Water Resources Control Board and the United States Army Corps of Engineers regarding state and federal clean water permitting requirements to facilitate expedited implementation of the Measure M2 freeway projects. A request for funding authorization to advance the streamlined permitting process is submitted for Board of Directors consideration and approval.

Recommendations

- A. Authorize the Chief Executive Officer to negotiate and execute an amount up to \$805,000 to fund the expedited clean water permitting requirements.
- B. Authorize staff to amend the fiscal year 2017-18 budget to include the recommended funding amount.



BOARD AGENDA

8. **Measure M2 Performance Assessment Report Update**
Tamara Warren/Kia Mortazavi

Overview

Measure M2 includes a requirement for a performance assessment to be conducted every three years to evaluate the efficiency, effectiveness, economy, and program results of the Orange County Transportation Authority in delivering Measure M2. The third of these performance assessments, covering the period of July 1, 2012 through June 30, 2015, was completed and presented to the Board of Directors on August 8, 2016. This report is the final update on the action items from the findings in the performance assessment.

Recommendation

Receive and file as an information item.

9. **Measure M2 Quarterly Progress Report for the Period of April 2017 Through June 2017**
Tamara Warren/Kia Mortazavi

Overview

Staff has prepared a Measure M2 quarterly progress report for the period of April 2017 through June 2017, for review by the Orange County Transportation Authority Board of Directors. This report highlights progress on Measure M2 projects and programs and will be available to the public via the Orange County Transportation Authority website.

Recommendation

Receive and file as an information item.



BOARD AGENDA

10. Cooperative Agreements for Regional Traffic Signal Synchronization Program Projects

Ronald Keith/Kia Mortazavi

Overview

On April 11, 2016, the Orange County Transportation Authority Board of Directors approved programming of funding for the Regional Traffic Signal Synchronization Program for seven projects as part of the 2016 Measure M2 Regional Traffic Signal Synchronization Program call for projects. As part of the application process, the Orange County Transportation Authority was requested to be the lead agency on three of the seven projects: El Toro Road (east), Magnolia Street, and Brookhurst Street. Separate cooperative agreements are necessary for each of these projects in order to outline the roles and responsibilities of the partnering agencies and to specify the amount and type (in-kind or cash) of the local agency match.

Recommendations

- A. Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-7-1827 for the El Toro Road (east) Regional Traffic Signal Synchronization Project.
- B. Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-7-1828 for the Magnolia Street Regional Traffic Signal Synchronization Project.
- C. Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-7-1829 for the Brookhurst Street Regional Traffic Signal Synchronization Project.



BOARD AGENDA

Orange County Service Authority For Freeway Emergencies Consent Calendar Matters

- 11. Motorist Services Update for Fiscal Year 2016-17**
Patrick Sampson/Beth McCormick

Overview

The Orange County Transportation Authority Motorist Services Program includes the following elements: call box system, Freeway Service Patrol, Southern California 511 travelers' information system, and the Orange County Taxi Administration Program. Collectively, the scope of these programs includes assisting motorists; mitigating traffic congestion; allowing the public to access information on highway conditions, transit services, and other important traveler information; and managing taxicab permitting processes and enforcement for Orange County and its 34 cities. This report provides an update on program activities for fiscal year 2016-17.

Recommendation

Receive and file as an information item.

Regular Calendar

Orange County Transportation Authority Regular Calendar Matters

- 12. 2018 State Transportation Improvement Program**
Ben Ku/Kia Mortazavi

Overview

Every two years, the Orange County Transportation Authority prepares a program of projects for state funding through the State Transportation Improvement Program. Program recommendations are presented for the Board of Directors' consideration and approval. These recommendations are consistent with programming policies approved by the Board of Directors.



BOARD AGENDA

12. (Continued)

Recommendations

- A. Approve the 2018 State Transportation Improvement Program submittal to program \$267.873 million to seven projects, from fiscal year 2018-19 through fiscal year 2022-23.
- B. Approve the use of up to \$97.418 million in Surface Transportation Block Grant Program funds for the 2018 State Transportation Improvement Program projects.
- C. Approve the use of up to \$23.355 million in Congestion Mitigation and Air Quality funds for the 2018 State Transportation Improvement Program projects.
- D. Approve the use of up to \$178.338 million in Measure M2 funds for the 2018 State Transportation Improvement Program projects.
- E. Authorize staff to make all necessary amendments to the State Transportation Improvement Program and the Federal Transportation Improvement Program, as well as execute any necessary agreements to facilitate the recommendations above.

Orange County Local Transportation Authority Regular Calendar Matters

13. Next 10: Market Conditions Forecast and Risk Analysis

Tamara Warren/Kia Mortazavi

Overview

A Market Conditions Forecast and Risk Analysis has been prepared to inform the Orange County Transportation Authority's Next 10 Plan. The Next 10 Plan provides the framework to accelerate the delivery of Measure M2 freeway, streets and roads, transit, and environmental projects through the year 2026. In response to lower actual sales tax revenue, new forecasting methodology, and increased competition for available resources due to capital work underway in the Southern California Region, a Market Conditions Forecast and Risk Analysis was conducted. The report and findings are presented to the Board of Directors for review.



BOARD AGENDA

13. (Continued)

Recommendations

- A. Receive and file the Next 10 Market Conditions Forecast and Risk Analysis.
- B. Continue to monitor the changing environment and its effects on the advancement of the Next 10 Delivery Plan.
- C. Continue to prioritize Measure M2 projects for external funding consistent with the Orange County Transportation Authority's adopted programming policies.

Discussion Items

14. Measure M2 Sales Tax Forecast

Sean Murdock/Andrew Oftelie

Staff will provide an update to the Measure M2 Sales Tax Forecast.

15. Public Comments

At this time, members of the public may address the Board of Directors regarding any items within the subject matter jurisdiction of the Board of Directors, but no action may be taken on off-agenda items unless authorized by law. Comments shall be limited to three (3) minutes per speaker, unless different time limits are set by the Chairman subject to the approval of the Board of Directors.

16. Chief Executive Officer's Report

17. Directors' Reports

18. Closed Session

There are no Closed Sessions scheduled.

19. Adjournment

The next regularly scheduled meeting of this Board will be held at **9:00 a.m. on Monday, September 25, 2017**, at the Orange County Transportation Authority Headquarters, 550 South Main Street, Board Room - Conference Room 07-08, Orange, California.

Minutes of the
Orange County Transportation Authority
Orange County Transit District
Orange County Local Transportation Authority
Orange County Service Authority for Freeway Emergencies
Board of Directors Meeting

Call to Order

The August 28, 2017 regular meeting of the Orange County Transportation Authority (OCTA) and affiliated agencies was called to order by Chairman Hennessey at 9:02 a.m. at the OCTA Headquarters, 550 South Main Street, Board Room – Conference Room 07-08, Orange, California.

Roll Call

Following the Invocation and Pledge of Allegiance, the Clerk of the Board noted a quorum was present, with the following Directors in attendance:

Directors Present: Michael Hennessey, Chairman
Lisa A. Bartlett, Vice Chair
Laurie Davies
Barbara Delgleize
Andrew Do
Lori Donchak
Steve Jones
Mark A. Murphy
Richard Murphy
Al Murray
Shawn Nelson
Miguel Pulido
Tim Shaw
Todd Spitzer
Michelle Steel
Tom Tait
Gregory T. Winterbottom
Ryan Chamberlain, Governor's Ex-Officio Member

Directors Absent: None

Also Present: Darrell Johnson, Chief Executive Officer
Ken Phipps, Deputy Chief Executive Officer
Laurena Weinert, Clerk of the Board
Olga Prado, Assistant Clerk of the Board
James Donich, General Counsel
Members of the Press and the General Public

Special Calendar

Orange County Transportation Authority Special Calendar Matters

1. Presentation of Resolutions of Appreciation for Employees of the Month for August 2017

Darrell Johnson, Chief Executive Officer (CEO), presented the OCTA Resolutions of Appreciation Nos. 2017-069, 2017-070, and 2017-071 to Manuel Esparza, Coach Operator; F. Ross Zieke, Maintenance; and Jason Lee, Administration, as Employees of the Month for August 2017.

Consent Calendar (Items 2 through 7)

Orange County Transportation Authority Consent Calendar Matters

2. Approval of Minutes

A motion was made by Director Pulido, seconded by Director Murray, and declared passed by those present, to approve the Orange County Transportation Authority and affiliated agencies' regular meeting minutes of August 14, 2017.

Directors Delgleize, Jones, and Nelson were not present to vote on this item.

3. Approval of Board Members Travel

A motion was made by Director Pulido, seconded by Director Murray, and declared passed by those present, to approve travel to New York, New York for Chairman Michael Hennessey, Vice Chair Lisa A. Bartlett, and Finance and Administration Committee Chairman Andrew Do on September 20 - September 23, 2017 for the Orange County Transportation Authority's annual rating agency trip.

Directors Delgleize, Jones, and Nelson were not present to vote on this item.

4. Performance Audit of the Orange County Transportation Authority's Storm Water Pollution Prevention Program

A motion was made by Director Pulido, seconded by Director Murray, and declared passed by those present, to direct staff to implement ten recommendations provided in the Orange County Transportation Authority Performance Audit of OCTA's Storm Water Pollution Prevention Program, Internal Audit Report No. 17-505.

Directors Delgleize, Jones, and Nelson were not present to vote on this item.

5. Amendment to the 241/91 Express Lanes Connector Project Peer Review

Director Spitzer pulled this item and inquired about this item's contract amendment breakdown for further analysis and time for additional various meetings.

Darrell Johnson, CEO, responded that the amendment to the contract is for time and expenses, and staff's amendment requests are based upon further analysis of the study, questions and answers, and attendance at upcoming meetings.

Kirk Avila, Treasurer and General Manager of the 91 Express Lanes, stated that the amendment is approximately 10 percent for travel and 90 percent for additional analysis requested by the OCTA Board of Directors (Board) and/or questions by the Transportation Corridor Agencies (TCA).

A discussion ensued regarding:

- Additional meetings are included with the analysis.
- The cost for additional analysis, and staff will follow-up.
- OCTA provided the TCA a draft of the peer review report, and the TCA forwarded it to Stantec, Inc. (Stantec).
- The TCA will receive the final report once presented to the OCTA Board.
- OCTA is currently coordinating a joint TCA/OCTA leadership meeting for late September or early October.
- Once the joint TCA/OCTA leadership meeting occurs, the final peer review report will be presented to the OCTA Board.
- Last week, there were discussions between TCA and OCTA staff, as well as Stantec and CDM Smith, Inc. (CDM) representatives about questions and to provide clarifications in the peer review report.
- There was consensus during last week's discussion, to include the output of the Riverside County Transportation Commission's (RCTC) 91 Express Lanes, and incorporate the data into both the Stantec and CDM reports.
- The completion timeframe of CDM's additional analysis is flexible and dependent upon the OCTA Board's questions.
- The additional analysis by CDM needs to include the OCTA and RCTC 91 Express Lanes and potential 241/91 connector, as well as be presented at the joint TCA/OCTA leadership meeting.

A motion was made by Director Spitzer, seconded by Vice Chair Bartlett, and declared passed by those present, to authorize the Chief Executive Officer to negotiate and execute Amendment No. 2 to Agreement No. C-5-3798 between the Orange County Transportation Authority and CDM Smith, Inc., in an amount not to exceed \$50,000, for further review and analysis. This will increase the maximum obligation of the agreement to a total contract value of \$107,333.20.

Directors Jones, Nelson, and Pulido were not present to vote on this item.

6. Agreements for Health Insurance Services

Director Murray pulled this item and asked for clarification on the no rate increase for the short-term disability insurance and the rate increase of 7.1 percent for the long-term disability insurance.

Bea Maselli, Benefits Manager, explained the differences are that after six months, an employee would go into long-term disability. In addition, Ms. Maselli stated that there was a history of high-cost cases which have driven up the long-term disability insurance costs this year.

Director Murray also inquired about health insurance benefits for retirees and what the rates are. Ms. Maselli responded that the retirees are offered medical, dental, and vision insurance at the same rate as current employees, and the retiree would pay 100 percent.

Maggie McJilton, Executive Director of Human Resources and Organizational Development, stated that the retirees pay 100 percent up to age 65.

A motion was made by Director Murray, seconded by Director Donchak, and declared passed by those present, to:

- A. Authorize the Chief Executive Officer to negotiate and execute Amendment No. 2 to Agreement No. C-5-3649 between the Orange County Transportation Authority and California State Association of Counties - Excess Insurance Authority for Kaiser Permanente Health Plan, Inc., on a cost per employee basis, for prepaid medical services through December 31, 2018. The annual 2018 Kaiser Permanente Health Plan, Inc., premium cost will vary in accordance with actual enrollment.
- B. Authorize the Chief Executive Officer to negotiate and execute Amendment No. 2 to Agreement No. C-5-3650 between the Orange County Transportation Authority and California State Association of Counties - Excess Insurance Authority for Anthem Blue Cross, on a cost per employee basis, for prepaid medical services through December 31, 2018. The annual 2018 Anthem Blue Cross health maintenance organization premium costs will vary in accordance with actual enrollment.
- C. Authorize the Chief Executive Officer to negotiate and execute Amendment No. 2 to Agreement No. C-5-3651 between the Orange County Transportation Authority and California State Association of Counties - Excess Insurance Authority for Anthem Blue Cross, on a cost per employee basis, for preferred provider organization medical services through December 31, 2018. The annual 2018 Anthem Blue Cross preferred provider organization premium costs will vary in accordance with actual enrollment.

6. (Continued)

- D. Authorize the Chief Executive Officer to negotiate and execute Amendment No. 2 to Agreement No. C-5-3652 between the Orange County Transportation Authority and California State Association of Counties - Excess Insurance Authority for Anthem Blue Cross, on a cost per employee basis, for a consumer driven health plan through December 31, 2018. The annual 2018 Anthem Blue Cross consumer driven health plan premium costs and health savings account expenses will vary in accordance with actual enrollment.

- E. Authorize the Chief Executive Officer to negotiate and execute Amendment No. 6 to Agreement No. C-1-2996 between the Orange County Transportation Authority and California State Association of Counties - Excess Insurance Authority for Delta Dental, on a cost per employee basis, for preferred provider organization dental services through December 31, 2018. The annual 2018 Delta Dental preferred provider organization premium costs will vary in accordance with actual enrollment.

- F. Authorize the Chief Executive Officer to negotiate and execute Amendment No. 6 to Agreement No. C-1-2995 between the Orange County Transportation Authority and Delta Dental, on a cost per employee basis, for health maintenance organization dental services through December 31, 2018. The annual 2018 Delta Dental health maintenance organization premium costs will vary in accordance with actual enrollment.

- G. Authorize the Chief Executive Officer to negotiate and execute Amendment No. 4 to Agreement No. C-1-2997 between the Orange County Transportation Authority and California State Association of Counties - Excess Insurance Authority for Vision Service Plan, on a cost per employee basis, for vision services through December 31, 2018. The annual 2018 vision services premium costs will vary in accordance with actual enrollment.

- H. Authorize the Chief Executive Officer to negotiate and execute Purchase Order No. C-7-1897 between the Orange County Transportation Authority and California State Association of Counties - Excess Insurance Authority for VOYA for life and accidental death and dismemberment insurance through December 31, 2018. The annual 2018 life and accidental death and dismemberment premium costs will vary in accordance with actual volume in the plan.

6. (Continued)

- I. Authorize the Chief Executive Officer to negotiate and execute Purchase Order No. C-7-1898 between the Orange County Transportation Authority and California State Association of Counties - Excess Insurance Authority for VOYA to provide supplemental life insurance to employees at their own expense through December 31, 2018.

- J. Authorize the Chief Executive Officer to negotiate and execute Purchase Order No. C-7-1899 between the Orange County Transportation Authority and California State Association of Counties - Excess Insurance Authority for VOYA for short-term and long-term disability insurance through December 31, 2018. The annual 2018 short-term and long-term disability premium costs will vary in accordance with actual volume in the plan.

- K. Authorize the Chief Executive Officer to negotiate and execute Purchase Order No. C-7-1900 between the Orange County Transportation Authority and California State Association of Counties - Excess Insurance Activity for VOYA with Compsych to provide administrative leave through December 31, 2018.

Director Nelson was not present to vote on this item.

Orange County Local Transportation Authority Consent Calendar Matters

7. Regional Rail and Facilities Engineering Quarterly Report

A motion was made by Director Pulido, seconded by Director Murray, and declared passed by those present, to receive and file as an information item.

Directors Delgleize, Jones, and Nelson were not present to vote on this item.

Regular Calendar

Orange County Local Transportation Authority Regular Calendar Matters

8. Approval to Release Request for Proposals for Toll Lanes System Integrator Services for the 405 Express Lanes and 91 Express Lanes

Jeff Mills, Program Manager for the Interstate 405 Improvement Project, and Kirk Avila, Treasurer and General Manager of the 91 Express Lanes, provided a PowerPoint presentation for this item as follows:

- Project Location and Key Features;
- Background;
- Multiple Toll System/Operations Contracts;
- Combining 405 and 91 Express Lanes;
- Recommendations; and
- Next Steps.

A discussion ensued as follows:

- OCTA currently has a congestion management toll system, and the Request for Proposals (RFP) will include dynamic pricing to be built into the system.
- The system would have the flexibility to provide dynamic pricing, in the future if decided, as well as collect daily data.
- The current 91 Express Lanes operator provides maintenance for Orange and Riverside counties.
- The RFP is to have a contractor provide toll lanes system integrator services for the 91 and 405 Express Lanes.
- The maintenance component is combined with the hardware.
- The back office and customer service center is a separate RFP to be pursued in 2018.
- OCTA has a Board-adopted throughput toll policy that includes paying the debt service against it, and OCTA does not have a toll revenue maximization policy.

A motion was made by Director Murray, seconded by Director Davies, and declared passed by those present, to:

- A. Approve the proposed evaluation criteria and weightings for Request for Proposals 7-1911 for selection of a contractor to provide toll lanes system integrator services.
- B. Approve the release of Request for Proposals 7-1911 to provide toll lanes system integrator services for the 405 Express Lanes and 91 Express Lanes.

Director Nelson was not present to vote on this item.

Discussion Items

9. Public Comments

A public comment was heard from Father Joseph Boules, Saint Mary and Saint Verena Coptic Orthodox Church, who commented that he is speaking on behalf of the seniors and disabled at the church parishioners.

Father Boules commented that since moving the church to the City of Yorba Linda, the seniors and disabled do not have ACCESS service to the church. He provided concerns about the Same Day Taxi program option that was suggested by OCTA staff. In addition, he requested ACCESS service to be provided to the church on Wednesdays and Sundays.

Darrell Johnson, CEO, responded that the Americans with Disabilities Act paratransit service footprint are three-quarters of a mile from the existing bus service to the church. Mr. Johnson offered that staff would be glad to meet with Father Boules to review other options besides the Same Day Taxi program.

Chairman Hennessey requested that staff meet with Father Boules and apprise the Board of the outcome.

10. Chief Executive Officer's Report

Darrell Johnson, CEO, reported that:

- OCTA continues to move forward with the OC Bus 360° plan to improve the bus system. OCTA has developed proposed bus service changes for February 2018, and last week, OCTA hosted a series of community meetings throughout the county to solicit public feedback. In addition, OCTA will compile the feedback, and a public hearing on the proposed service changes is scheduled for the September 25th Board meeting.
- OCTA's Roadeo save-the-date is for November 4th. The Board will be sent a notification and encouraged to participate and compete in the Roadeo.

11. Directors' Reports

Director Chamberlain reported that last Tuesday, the California Department of Transportation celebrated the opening of the Jeffrey Road park-and-ride (PNR) lot expansion (off Interstate 5), which tripled the parking spaces. In addition, he stated that the PNR lot is unique because it has a bike storage facility, other features, and it is along the Jeffrey Open Space Trail bicycle-pedestrian trail in the City of Irvine.

11. (Continued)

Director Murray reported that he, along with Director Shaw, participated in the Los Angeles – San Diego – San Luis Obispo (LOSSAN) Rail Corridor (Agency) August 21st Board meeting, and highlighted the discussions as follows:

- The LOSSAN Agency is underway with a full fare restructuring effort.
- The 60 day fare restructuring public outreach is in process.
- The LOSSAN Agency's Board will take action on the proposed fare structure in November.
- The LOSSAN Agency's Board approved a two-year operating agreement with Amtrak, in the amount of \$64.9 million
 - This is the first multi-year operating contract for the LOSSAN Agency.
- The LOSSAN Agency was recognized with the silver Telly awards for the Pacific Surfliner promotional videos.
- The next LOSSAN Agency's Board meeting is scheduled for September 18th.

Vice Chair Bartlett reported that she received positive feedback from south Orange County cities that have a summer trolley program. She stated that the program is a way to promote OCTA, the cities, get people out of their vehicles, and connect cities through the trolley program. She encouraged the Board Members' cities that want to participate in a trolley program, to consider starting out small and expand long-term.

12. Closed Session

There were no Closed Session items scheduled.

13. Managed Lanes Workshop

Darrell Johnson, CEO, opened the Managed Lanes Workshop, presented the context of the workshop, and introduced Kia Mortazavi, Executive Director of Planning.

Mr. Mortazavi presented a PowerPoint presentation as follows:

- Orange County Growth (2015-2040);
- Intercounty Travel Demand;
- Freeway Development;
- Federal Performance Standards;
- State Plans;
- Southern California Existing Express Lanes;
- Planned Regional Express Lanes;
- Planned Caltrans Express Lanes;
- Planned Express Lanes – OC Focus; and
- Panel Introductions.

13. (Continued)

The four workshop presenters were as follows:

- Robert Poole, co-founded the Reason Foundation
- Kome Ajise, Chief Deputy Director, California Department of Transportation
- Patrick Jones, Executive Director and Chief Executive Officer, International Bridge, Tunnel and Turnpike Association
- Stephen Finnegan, Manager of Government and Community Affairs, Automobile Club of Southern California

Darrell Johnson, CEO, closed with remarks and presented the next steps. A discussion ensued, and no action was taken as part of this workshop. In addition, staff will also document all the questions raised during the workshop with a written response to each questions.

14. Adjournment

The meeting was adjourned at 12:25 a.m.

The next regularly scheduled meeting of this Board will be held at **9:00 a.m. on Monday, September 11, 2017**, at Orange County Transportation Authority Headquarters, 550 South Main Street, Board Room – Conference Room 07-08, Orange, California.

ATTEST:

Laurena Weinert
Clerk of the Board

Michael Hennessey
OCTA Chairman



COMMITTEE TRANSMITTAL

September 11, 2017

To: Members of the Board of Directors

From:  Laurena Weinert, Clerk of the Board

Subject: Interstate 5 (Avenida Pico to San Diego County Line) Project Status Update

Regional Planning and Highways Committee Meeting of September 7, 2017

Present: Directors Delgleize, Do, Donchak, M. Murphy, Nelson, and Steel

Absent: Director Spitzer

Committee Vote

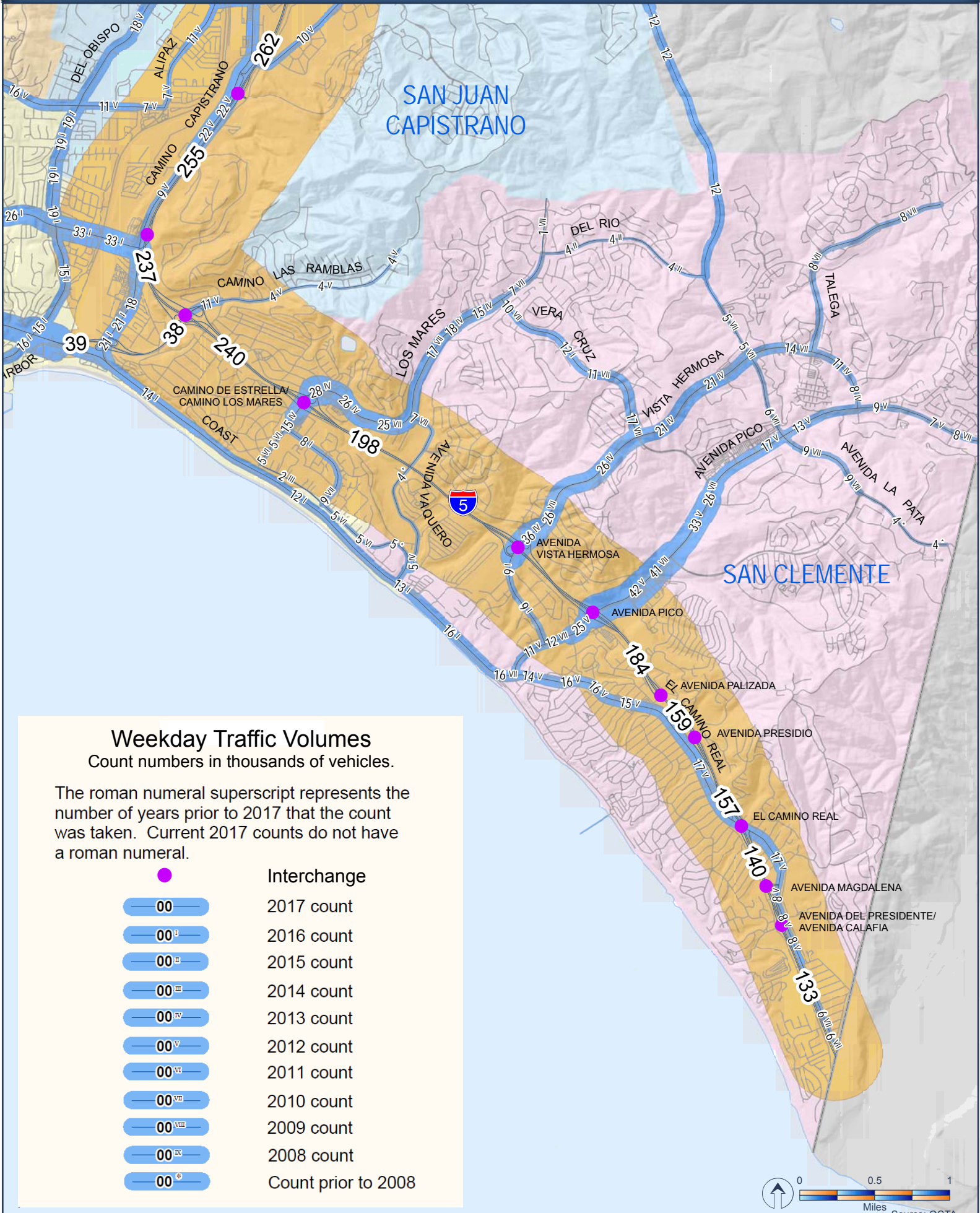
Following a discussion, no action was taken on this receive and file information item.

Staff Recommendation

Receive and file as an information item.

NOTE:

At the September 7, 2017 Regional Planning and Highways Committee meeting, a handout of the "2017 Traffic Flow – San Clemente" map was provided to the Committee Members (TRANSMITTAL ATTACHMENT).

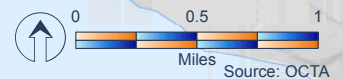


Weekday Traffic Volumes

Count numbers in thousands of vehicles.

The roman numeral superscript represents the number of years prior to 2017 that the count was taken. Current 2017 counts do not have a roman numeral.

- Interchange
- 00 2017 count
- 00ⁱ 2016 count
- 00ⁱⁱ 2015 count
- 00ⁱⁱⁱ 2014 count
- 00^{iv} 2013 count
- 00^v 2012 count
- 00^{vi} 2011 count
- 00^{vii} 2010 count
- 00^{viii} 2009 count
- 00^{ix} 2008 count
- 00^x Count prior to 2008





September 7, 2017

To: Regional Planning & Highways Committee

From: Darrell Johnson, Chief Executive Officer

A handwritten signature in blue ink, appearing to read "Darrell Johnson", is written over the "From:" line and extends into the "Subject:" line.

Subject: Interstate 5 (Avenida Pico to San Diego County Line) Project Status Update

Overview

The Orange County Transportation Authority is working to complete a project study report/project development support document for potential improvements to Interstate 5 in San Clemente from Avenida Pico to the San Diego County line. A status update is provided below.

Recommendation

Receive and file as an information item.

Background

In September 2014, the Orange County Transportation Authority's (OCTA) Board of Directors advanced OCTA's Long-Range Transportation Plan to the Southern California Association of Governments for inclusion in the Regional Transportation Plan (RTP). As part of OCTA's submittal, a project to extend high-occupancy vehicle (HOV) lanes on Interstate 5 (I-5), in the City of San Clemente (City), from Avenida Pico to the San Diego County line was included in the plan (Attachment A). This project is not part of the Measure M2 freeway program of projects. However, it is a vital project for the region as it would complete Orange County's HOV system. It would also tie in to managed-lane improvements immediately south of the study area that are contemplated in the San Diego Association of Governments' (SANDAG) RTP.

Discussion

In 2016, OCTA initiated development of a project study report/project development support (PSR/PDS) document for this project. PSR/PDS documents are planning-level studies that are required by the California Department of Transportation (Caltrans) to be completed before a

project can seek funding and/or completion of subsequent project development activities, such as environmental, final design, and construction. They are also used by agencies like OCTA to gauge a potential project's feasibility (i.e. scope, schedule, and cost). Caltrans has ultimate signing authority and approval for PSR/PDS documents.

Consistent with Caltrans' requirements, staff convened a project development team (PDT), which will continue to be involved at each key milestone of the PSR/PDS process. The PDT is comprised of staff from stakeholder agencies including Caltrans, the Transportation Corridor Agencies (TCA), the City, and SANDAG. There have been five PDT meetings to date. At the most recent meeting, the PDT discussed traffic data collection efforts and preliminary alignment considerations. The next PDT meeting will focus on finalizing traffic forecasts and developing initial improvement concepts.

To date, progress has been made on several key project milestones. In late May, the PDT reached consensus on the project's Purpose & Need (P&N) Statement that establishes the rationale for the project. The P&N Statement for this project identifies congestion and delay, as well as a lack of managed lane connectivity. To address these needs, the project will need to focus on maximizing efficiency of the freeway mainline, increasing person and vehicle throughput, and reducing traffic congestion.

Data collection efforts for existing traffic volumes were completed in June. Freeway volumes were obtained from the Caltrans' Performance Measuring System. Roadway data from the City and the TCA, as well as from past traffic studies, were used if current data were available. Traffic counts were conducted in locations where current data were not available. These data have been validated by the PDT to ensure both consensus and consistency.

Alternatives development was recently initiated and significant progress has been made on establishing the future Baseline, or "No Build" scenario. This scenario will be used to compare the performance of the project alternatives. The PDT reached consensus on the future Baseline scenario, including all projects that are programmed in the 2017 Federal Transportation Improvement Program, with the exception of the State Route 241 (SR-241) extension, along the "Green Alignment." The exclusion of the Green Alignment from future traffic forecasts is consistent with the TCA's recent settlement agreement with environmental groups. The TCA is currently evaluating various transportation options and SR-241 extension alternatives. However, until the TCA's study is complete, the PDT agrees that the most reasonable and conservative approach is to remove the Green Alignment from the scenario.

Without the assumption of the Green Alignment, any traffic demand related to the SR-241 extension will instead be included in the future forecasts for I-5 traffic volumes.

Next Steps

The project team will continue working with the PDT to further develop the alternatives. The concepts listed below reflect a framework for potential alternatives that was recently shared with the PDT. The PDT will continue to discuss these concepts and work towards defining the ultimate alternatives.

- Concept 1: Transportation System Management/Transportation Demand Management – operational improvements and minimal capacity expansion;
- Concept 2: Managed Lane Addition – addition of a single HOV or high-occupancy toll lane in each direction;
- Concept 3: General Purpose Lane Addition – addition of a single mixed-flow lane in each direction; and
- Concept 4: Reversible Lane Addition – addition of a single reversible lane (based on directional split in traffic demand).

Once the PDT reaches consensus on the alternatives, scoping analysis will be conducted to identify specific components for the ultimate alternatives. This will include more detailed traffic analyses, geometric and structural evaluations, and preliminary environmental and storm water considerations. The project team will also be responsible for developing cost estimates for each alternative. Staff anticipates that these efforts will be conducted throughout the fall, and that a draft PSR/PDS document will likely be submitted to Caltrans in early 2018 for approval.

Summary

Development of the I-5 (Avenida Pico to County line) PSR/PDS document has been underway since 2016. In coordination with the study's PDT, progress has been made on several key milestones. These include development of the P&N Statement, traffic data collection efforts, initial traffic forecasts, and consideration of potential concepts for alternatives. The project team will continue with alternatives development and additional technical studies through the end of the year. A draft PSR/PDS document will likely be submitted to Caltrans for finalization in early 2018.

Attachment

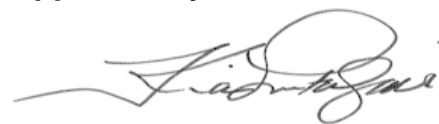
- A. I-5 – Pico to San Diego County Line

Prepared by:



Carolyn Mamaradlo
Senior Transportation Analyst
(714) 560-5748

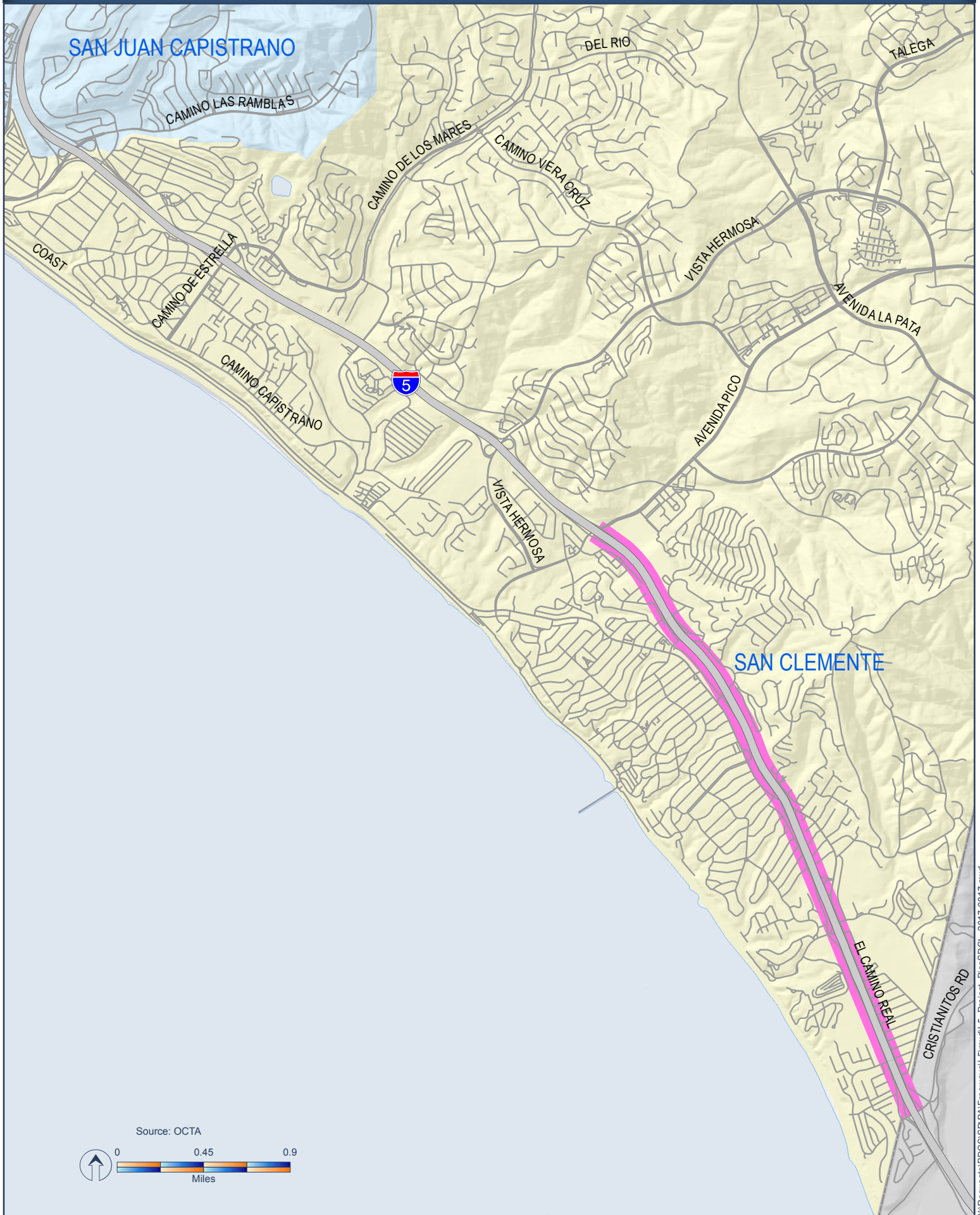
Approved by:



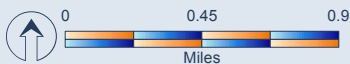
Kia Mortazavi
Executive Director, Planning
(714) 560-5741

I-5 - Pico to San Diego County Line

ATTACHMENT A




Source: OCTA





COMMITTEE TRANSMITTAL

September 11, 2017

To: Members of the Board of Directors
From:  Laurena Weinert, Clerk of the Board
Subject: Grant Award for the Pedestrian and Bicycle Safety Program

Regional Planning and Highways Committee Meeting of September 7, 2017

Present: Directors Delgleize, Do, Donchak, M. Murphy, Nelson, and Steel
Absent: Director Spitzer

Committee Vote


This item was passed by the Members present.

Committee Recommendation

Authorize the Chief Executive Officer or designee to accept the grant award and execute grant-related agreements with the California Office of Traffic Safety to develop and implement the Pedestrian and Bicycle Safety Program.



September 7, 2017

To: Regional Planning and Highways Committee
From: Darrell Johnson, Chief Executive Officer 
Subject: Grant Award for the Pedestrian and Bicycle Safety Program

Overview

On July 25, 2017, the California Office of Traffic Safety awarded the Orange County Transportation Authority \$75,000 in competitive funds to develop and implement the Pedestrian and Bicycle Safety Program, which is intended to raise public awareness of safe bicycling and pedestrian practices, and reduce fatalities involving pedestrians and bicyclists. An authorizing resolution to accept the grant award and enter into grant-related agreements is presented for adoption as required by the grant program.

Recommendation

Authorize the Chief Executive Officer or designee to accept the grant award and execute grant-related agreements with the California Office of Traffic Safety to develop and implement the Pedestrian and Bicycle Safety Program.

Background

The California Office of Traffic Safety (OTS) was created in 1967 to provide the State of California with the authority needed to implement the requirements of the National Transportation Safety Act of 1966 (P.L. 89-564). To help fulfill its mission, OTS makes available grants to local and state public agencies for programs that help them enforce traffic laws, educate the public in traffic safety, and provide varied and effective means of reducing fatalities, injuries, and economic losses from collisions. On December 5, 2016, OTS issued a statewide competitive call for projects, which made available approximately \$8.7 million in federal funding for pedestrian and bicycle safety. In response to this opportunity, the Orange County Transportation Authority (OCTA) submitted a proposal to OTS on January 27, 2017, which included a request for \$100,000 to develop and implement bicycle education safety classes, and distribution of bicycle and pedestrian safety equipment, such as bicycle helmets and safety lights.

Discussion

On July 25, 2017, OTS awarded OCTA \$75,000 to develop and implement the Pedestrian and Bicycle Safety Program (Program) to raise public awareness of safe bicycling and pedestrian practices, and reduce fatalities involving pedestrians and bicyclists. An authorizing resolution to accept the grant award and enter into grant-related agreements is presented for adoption, as required by the grant program. Due to the reduced grant award amount, the number of bicycle safety education classes has been reduced from ten classes to seven classes, and the total number of bicycle and pedestrian distribution items has been reduced from 8,400 items to 6,500 items, which includes 300 bicycle helmets, 5,500 arm band lights, and 700 bicycle lights. The distribution of the lights and reflectorized items will serve to improve safety for active transportation users, and promote the bicycle education safety classes.

The Program will build upon OCTA's prior successful efforts to improve bicycle and pedestrian safety, including the Three Feet for Passing Law, the (B) right Visibility Campaign, the Brake the Cycle Campaign, and the Active Transportation Safety videos funded by OTS in fiscal year 2016-17. The OTS grant award will fully fund the Program and does not require a local match contribution or cost sharing arrangement. The Program will take approximately 12 months to complete.

OCTA Board of Directors Resolution No. 2017-072 is presented for consideration (Attachment A). OCTA has similar authorizing resolutions on file with OTS and other grant agencies, including the Federal Transit Administration and the State of California Governor's Office of Emergency Services.

Summary

OTS awarded OCTA \$75,000 to develop and implement the Program to raise public awareness of safe bicycling and pedestrian practices, and reduce fatalities involving pedestrians and bicyclists. An authorizing resolution to accept the grant award and enter into grant-related agreements with the OTS is presented for adoption as required by the grant program.

Attachment

- A. Resolution 2017-072 of the Orange County Transportation Authority, 2018 California Office of Traffic Safety Grant Program Authorization

Prepared by:



Alfonso Hernandez
Senior Transportation Funding Analyst,
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Approved by:



Kia Mortazavi
Executive Director, Planning
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**RESOLUTION 2017-072
OF THE
ORANGE COUNTY TRANSPORTATION AUTHORITY**

**2018 CALIFORNIA OFFICE OF TRAFFIC SAFETY GRANT PROGRAM
AUTHORIZATION**

WHEREAS, the California Office of Traffic Safety makes available grant funds to local and state public agencies for programs that help enforce traffic laws and educate the public in traffic safety to reduce fatalities, injuries and economic losses from collisions, and;

WHEREAS, the Orange County Transportation Authority (OCTA) applied for and was awarded grant funds for the Pedestrian and Bicycle Safety Program as an eligible grantee of the California Office of Traffic Safety, and;

WHEREAS, the California Office of Traffic Safety requires the grantee to certify, by resolution, the acceptance of awarded grant funds and authority to execute grant-related agreements;

THEREFORE, BE IT RESOLVED that the OCTA Board of Directors authorizes the Chief Executive Officer, or designee, to file and execute grant applications and agreements, certifications, assurances, and other documents for and on behalf of OCTA with the California Office of Traffic Safety.

ADOPTED, SIGNED, AND APPROVED this ____ day of _____, 2017.

AYES:

NOES:

ABSENT:

ATTEST:

Laurena Weinert
Clerk of the Board

Michael Hennessey, Chair
Orange County Transportation Authority



COMMITTEE TRANSMITTAL

September 11, 2017

To: Members of the Board of Directors

From:  Laurena Weinert, Clerk of the Board

Subject: Consultant Selection for the Preparation of Plans, Specifications, and Estimates for the State Route 55 Improvement Project Between Interstate 405 and Interstate 5

Regional Planning and Highways Committee Meeting of September 7, 2017

Present: Directors Delgleize, Do, Donchak, M. Murphy, Nelson, and Steel

Absent: Director Spitzer

Committee Vote

This item was passed by the Members present.

Committee Recommendations

- A. Approve the selection of WKE, Inc., as the firm to prepare the plans, specifications, and estimates for the State Route 55 Improvement Project between Interstate 405 and Interstate 5.
- B. Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-7-1719 between the Orange County Transportation Authority and WKE, Inc., to prepare the plans, specifications, and estimates for the State Route 55 Improvement Project between Interstate 405 and Interstate 5.



September 7, 2017

To: Regional Planning and Highways Committee

From: Darrell Johnson, Chief Executive Officer

Subject: Consultant Selection for the Preparation of Plans, Specifications, and Estimates for the State Route 55 Improvement Project Between Interstate 405 and Interstate 5

Overview

On June 12, 2017, the Orange County Transportation Authority Board of Directors approved the release of a request for proposals for the preparation of plans, specifications, and estimates for the State Route 55 Improvement Project between Interstate 405 and Interstate 5. Board of Directors' approval is requested for the selection of a firm to perform the required work.

Recommendations

- A. Approve the selection of WKE, Inc., as the firm to prepare the plans, specifications, and estimates for the State Route 55 Improvement Project between Interstate 405 and Interstate 5.
- B. Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-7-1719 between the Orange County Transportation Authority and WKE, Inc., to prepare the plans, specifications, and estimates for the State Route 55 Improvement Project between Interstate 405 and Interstate 5.

Discussion

The State Route 55 (SR-55) improvements from Interstate 405 (I-405) to Interstate 5 (I-5) (Project) are part of Project F in the Measure M2 (M2) freeway program. In the Next 10 Plan, adopted by the Orange County Transportation Authority (OCTA) Board of Directors (Board) in November 2016, the Project is identified as one of the M2 freeway projects to be completed by 2025. The supplemental draft environmental document was circulated for public comment on April 3, 2017, and Alternative 3-Modified, which includes general purpose, high-occupancy vehicle (HOV), and auxiliary lanes, has been identified

as the preferred alternative by the Project development team. Therefore, the Project is ready to proceed into the final design phase.

On June 12, 2017, the Board approved Cooperative Agreement No. C-7-1753 with the California Department of Transportation (Caltrans) to establish roles, responsibilities, and funding for the Project. OCTA will be the lead agency on the design, and Caltrans will advertise and award the construction contract.

Procurement Approach

This procurement was handled in accordance with OCTA's Board-approved procedures for architectural and engineering (A&E) services that conform to both state and federal laws. Proposals are evaluated and ranked in accordance with the qualifications of the firm, staffing and project organization, and work plan. As this is an A&E procurement, price is not an evaluation criterion pursuant to state and federal laws. Evaluation of the proposals was conducted on the basis of overall qualifications to develop a competitive range of offerors. The highest-ranked firm is requested to submit a cost proposal, and the final agreement is negotiated. Should negotiations fail with the highest-ranked firm, a cost proposal will be solicited from the second-ranked firm in accordance with the Board-approved procurement policies.

On June 12, 2017, the Board authorized the release of Request for Proposals (RFP) 7-1719 which was electronically issued on CAMM NET. The Project was advertised on June 12 and June 19, 2017, in a newspaper of general circulation. A pre-proposal conference was held on June 22, 2017, with 36 attendees representing 23 firms. Six addenda were issued to make available the pre-proposal conference registration sheets, provide responses to questions received, and handle administrative issues related to the RFP.

On July 14, 2017, four proposals were received. An evaluation committee consisting of members from the Contracts Administration and Materials Management and Highway Programs departments, as well as external representatives from Caltrans and the City of Santa Ana, met to review all submitted proposals. The proposals were evaluated utilizing the following Board-approved evaluation criteria and weights:

- Qualifications of the Firm 25 percent
- Staffing and Project Organization 40 percent
- Work Plan 35 percent

The evaluation criteria are consistent with the weighting developed for similar A&E procurements. In developing these weights, several factors were considered, giving the greatest importance to staffing and project organization of the firm, as the qualifications of the project manager and other key personnel are very important to the successful and timely delivery of the Project. Similarly, high importance was given to the work plan criterion to emphasize the importance of the team's understanding of the Project, its challenges, and its approach to implementing the various elements of the scope of work. The technical approach to the Project is critical to the successful performance of the Project. The final criterion, qualifications of the firm, evaluated the firm's experience in performing work of similar scope and size.

The evaluation committee reviewed all proposals based on the evaluation criteria and found three firms most qualified to perform the required services. The most qualified firms are listed below in alphabetical order:

Firm and Location

HDR Engineering, Inc. (HDR)
Irvine, California

T.Y. Lin International (TY Lin)
Irvine, California

WKE, Inc. (WKE)
Santa Ana, California

On August 2, 2017, the evaluation committee interviewed the three firms. The interviews consisted of a presentation allowing each team to present its qualifications, highlight its proposal, and respond to evaluation committee questions. Each firm also highlighted its staffing plan, work plan, and perceived Project challenges. Each firm was asked general questions related to qualifications, relevant experience, Project organization, and approach to the work plan. All three firms were asked specific questions regarding the team's approach to the requirements of the scope of work, management of the Project, coordination with various agencies, experience with similar projects, and the team's solutions toward achieving the Project's goals. After considering responses to the questions asked during the interview, the evaluation committee adjusted the preliminary scores for two of the three firms; however, WKE remained as the top-ranked firm with the highest cumulative score.

Based on the evaluation of written proposals and information obtained during the interviews, staff recommends WKE as the firm to prepare the plans,

specifications, and estimates (PS&E) for the Project. WKE's proposal received the highest ranking, largely due to the team's successful management and implementation of recent and relevant PS&E projects of similar scale and scope, the firm's comprehensive understanding of the Project objectives and constraints, and solutions and recommendations proposed that were well thought out and professionally presented. The firm presented a detailed work plan that provided innovative ideas and solutions to the Project approach supported by highly-experienced key personnel that have long standing working relationships.

All three firms submitted comprehensive proposals and conducted detailed interviews. Brief summaries of evaluation results follow.

Qualifications of the Firm

All three firms are established with recent and relevant experience, and all qualified to perform the services.

The firm WKE, incorporated in 2007, is a Southern California-based general planning and engineering consulting firm providing transportation engineering services for all modes of transportation infrastructure, including design of freeway corridor widening, HOV improvements, bridge seismic retrofitting, freeway interchange, and street widening projects. WKE and its key personnel have delivered numerous PS&E projects of similar complexity. Recent relevant firm experience includes PS&E for the I-5 widening from State Route 73 (SR-73) to Oso Parkway for OCTA, as well as the State Route 241/State Route 91 express connector for the Transportation Corridor Agencies, and the project report/environmental document (PA/ED) and PS&E for the State Route 57 (SR-57)/State Route 60 interchange for the City of Industry. WKE's experience on these projects demonstrated strong leadership, technical expertise, coordination with various stakeholders, familiarity with the Caltrans process and requirements, and the ability to manage all phases of the projects.

The HDR firm is also well qualified and has been providing highway, roadway, structures, rail, transit, environmental, and construction management services since 1973. Project experience includes PA/ED for the SR-55 improvement project between I-405 and I-5, and PA/ED and PS&E for the northbound SR-57 improvement project from Katella Avenue to Lincoln Avenue for OCTA, the PA/ED and PS&E for the Interstate 110/C Street interchange improvement project for the Port of Los Angeles, and the State Route 1/Sepulveda Bridge widening for the City of Manhattan Beach.

The firm TY Lin, founded in 1954, is a qualified full-service infrastructure engineering firm providing innovative roadway and structure design services. TY Lin is familiar with Caltrans policies and procedures, and has experience delivering similar design work along the I-5 corridor. The proposed key staff have experience on the SR-55 corridor for OCTA, in addition to numerous Caltrans freeway corridor design projects throughout California.

Staffing and Project Organization

All three firms proposed highly-qualified project managers, structure leads, and experienced lead personnel and subconsultants with relevant PS&E highway widening project experience.

The WKE firm presented a detailed staffing plan that proposed experienced key personnel and subconsultants with recent and relevant PS&E project experience. The proposed project manager has 38 years of highway design experience and has successfully managed and delivered more than 36 major freeway widening projects. The project manager has a proven track record of successfully delivering PS&E projects on an accelerated schedule and within budget. WKE's proposed project team demonstrated relevant experience delivering OCTA and Caltrans PS&E projects, including the I-5 widening from SR-73 to Oso Parkway, the I-5 HOV improvement project from Avenida Pico to Avenida Vista Hermosa, and both I-405 HOV West County Connector projects. The structures lead has 37 years of experience developing large-scale transportation and bridge projects which includes conceptual studies through preparing final design. The roadway lead also has 22 years of experience managing the design and delivery of major transportation engineering projects.

The HDR firm proposed a very good team and key staff with relevant experience in PA/ED and PS&E projects. The proposed project manager has 29 years of proven experience delivering PA/ED, PS&E, and similar projects on time and within budget. The proposed subconsultants bring recent, relevant PS&E experience to the team.

The proposed team by TY Lin has relevant experience providing PS&E on similar projects. The proposed project manager has 24 years of experience designing and leading a variety of transportation projects. The proposed subconsultants are experienced and were identified to deliver a significant portion of the design work.

Work Plan

All three firms met the requirements of the RFP and effectively discussed respective approaches to the Project.

The firm WKE presented a comprehensive and viable work plan, demonstrating an excellent understanding of the Project design requirements, constraints, issues, and risks. WKE's proposed work plan was well organized and provided an innovative design approach to shift the center line to avoid significant right-of-way (ROW) acquisition and utility relocation, and demonstrated previous success with the proposed approach. The work plan also addressed key drainage and utility issues along the corridor, clarified quality control/quality assurance measures, identified deliverables, and proposed potential cost-saving recommendations. WKE presented an excellent interview, demonstrating in-depth knowledge of its proposed approach to the scope of work and detailed responses to all questions.

The work plan by HDR demonstrated a very good understanding of the Project objectives, constraints, issues, and risks. The work plan provided a creative approach to a challenging drainage system and good solutions to avoid ROW impacts to utility relocations outside of Caltrans ROW. The HDR team presented a very good interview and provided responses to the evaluation committee's questions.

The TY Lin firm's work plan demonstrated a good understanding of the Project requirements and constraints. The work plan identified some complex issues on ROW constraints, identified key issues and risks to be addressed during the final design, and provided design enhancements on utilities. However, the Project schedule lacked detail on how to deliver the solutions presented. TY Lin's team presented a good interview and provided responses to the evaluation committee's questions.

Procurement Summary

Based on the evaluation of the written proposals, team qualifications, work plan, and information obtained from the interviews, the evaluation committee recommends the selection of WKE as the top-ranked firm to prepare the PS&E for the Project. WKE demonstrated excellent, relevant experience, and submitted a proposal that was responsive to all requirements of the RFP. The firm presented an excellent interview highlighting the firm's experience, staffing, the technical approach to the work plan, and detailed Project solutions.

Consultant Selection for the Preparation of Plans, Specifications, and Estimates for the State Route 55 Improvement Project Between Interstate 405 and Interstate 5 *Page 7*

Fiscal Impact

The Project is included in OCTA's Fiscal Year 2017-18 Budget, Capital Programs Division, Account 0017-7519-FF101-0KU, and is funded through federal Surface Transportation Block Grant funds.

Summary

Staff requests Board of Directors' approval for the Chief Executive Officer to negotiate and execute Agreement No. C-7-1719 with WKE, Inc., for the preparation of plans, specifications, and estimates for the State Route 55 Improvement Project between Interstate 405 and Interstate 5.

Attachments

- A. Review of Proposals, RFP 7-1719 Consultant Services for the Preparation of Plans, Specifications, and Estimates for the State Route 55 Improvement Project Between Interstate 405 and Interstate 5
- B. Proposal Evaluation Criteria Matrix (Short-Listed), RFP 7-1719 Consultant Services for the Preparation of Plans, Specifications, and Estimates for the State Route 55 Improvement Project Between Interstate 405 and Interstate 5
- C. Contract History for the Past Two Years, RFP 7-1719 Consultant Services for the Preparation of Plans, Specifications, and Estimates for the State Route 55 Improvement Project Between Interstate 405 and Interstate 5

Prepared by:



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Virginia Abadessa
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Review of Proposals
RFP 7-1719 Consultant Services for the Preparation of Plans, Specifications, and Estimates for the State Route 55 Improvement Project Between Interstate 405 and Interstate 5
 Presented to RP&H Committee - September 7, 2017

4 proposals were received, 3 firms were interviewed, 1 firm is being recommended

Overall Ranking	Overall Score	Firm and Location	Subcontractors	Evaluation Committee Comments
1	92	WKE, Inc. Santa Ana, California	HNTB Corporation Earth Mechanics, Inc. Group Delta Consultants, Inc. FPL and Associates, Inc. Tatsumi and Partners, Inc. Guida Surveying, Inc. Utility Specialists, Inc.	Highest-ranked overall firm. Excellent recent and relevant experience delivering numerous projects of similar scope and size. Highly-qualified project manager, discipline leads, key and technical staff and subconsultants with extensive experience working together on recent plans, specifications, and estimates (PS&E) projects. Project manager has direct experience managing, planning, and successfully delivering numerous recent PS&E projects under accelerated schedules. High-occupancy vehicle widening projects on schedule and within budget. Proposed proven innovative design approach to shift centralized freeway alignment to avoid right-of-way (ROW) acquisition and utility constraints. Comprehensive work plan identifying key issues, providing recommendations and solutions on drainage, structure, and utilities challenges. Work plan includes detailed quality control/quality assurance measures, accelerated schedule, budget controls, and cost saving recommendations. Excellent team presentation and interview with detailed and thorough responses to all questions.
2	84	HDR Engineering, Inc. Irvine, California	Michael Baker International Advanced Civil Technologies Anderson Penna Partners BA Inc. Leighton Consulting, Inc. PacRim Engineering Tatsumi and Partners, Inc. TransSystems Corporation	Firm has very good relevant experience managing transportation projects of similar scope and size. Project manager is well qualified with relevant experience managing major transportation project approval/environmental documentation (PA/ED), PS&E, and other similar projects. Well-qualified key personnel and subconsultants with proven experience delivering different phases of design projects. Work plan demonstrated a good understanding of project objectives, requirements, and challenges. Work plan provided good solutions to avoid ROW impacts to avoid utility relocations outside of California Department of Transportation ROW. Very good interview that demonstrated an experienced cohesive team and good responses to all interview questions.
3	81	TY LIN International Irvine, California	Advanced Civil Technologies AECOM CPSI Earth Mechanics, Inc. Leighton Consulting, Inc. Optitrans Towill, Inc. TransSystems Corporation Yunsoo Kim Design, Inc.	Firm has relevant experience performing PS&E and other similar projects. Project manager has experience managing a variety of transportation PA/ED, PS&E, and similar projects. Highly-qualified team with expertise to deliver all tasks required in the scope of work. Majority of the core tasks to be delivered by proposed subconsultant. Work plan demonstrated a good understanding of the project requirements and constraints. Work plan identified some complex issues on ROW constraints. Schedule lacked detail on delivery of the proposed solutions. Good interview and responses to interview questions.

Evaluation Panel: 6 Members

Internal:
 Contracts Administration and Materials Management (1)
 Highway Programs (2)
 External:
 California Department of Transportation (2)
 City of Santa Ana (1)

Evaluation Criteria:

Qualifications of the Firm
 Staffing and Project Organization
 Work Plan

Weight Factors

25%
 40%
 35%

PROPOSAL EVALUATION CRITERIA MATRIX (Short-Listed)

RFP 7-1719 Consultant Services for the Preparation of Plans, Specifications, and Estimates for the State Route 55 Improvement Project Between Interstate 405 and Interstate 5

Firm: WKE, INC.								
Evaluator Number	1	2	3	4	5	6	Weights	Criteria Score
Qualifications of Firm	4.5	4.5	4.5	5.0	4.0	4.5	5	22.5
Staffing/Project Organization	4.5	4.5	4.5	4.5	4.5	4.5	8	36.0
Work Plan	5.0	5.0	4.5	5.0	5.0	4.5	7	33.8
Overall Score	93.5	93.5	90.0	96.0	91.0	90.0		92

Firm: HDR, INC.								
Evaluator Number	1	2	3	4	5	6	Weights	Criteria Score
Qualifications of Firm	4.5	4.5	4.5	4.0	4.5	4.5	5	22.1
Staffing/Project Organization	4.0	4.0	4.0	4.0	4.5	4.0	8	32.7
Work Plan	4.0	4.0	4.5	4.0	4.5	4.0	7	29.2
Overall Score	82.5	82.5	86.0	80.0	90.0	82.5		84

Firm: T.Y. LIN INTERNATIONAL								
Evaluator Number	1	2	3	4	5	6	Weights	Criteria Score
Qualifications of Firm	4.5	4.0	4.5	4.5	4.5	4.0	5	21.7
Staffing/Project Organization	4.0	4.0	4.0	3.5	3.5	4.0	8	30.7
Work Plan	4.5	4.0	4.0	4.0	4.0	4.0	7	28.6
Overall Score	86.0	80.0	82.5	78.5	78.5	80.0		81

The score for the non-short-listed firm was 74.

CONTRACT HISTORY FOR THE PAST TWO YEARS
RFP 7-1719 Consultant Services for the Preparation of Plans, Specifications, and Estimates for the
State Route 55 Improvement Project Between Interstate 405 and Interstate 5

Prime and Subconsultants	Contract No.	Description	Contract Start Date	Contract End Date	Subconsultant Amount	Total Contract Amount
WKE, Inc.						
Contract Type: Firm-Fixed Price	C-3-2189	Plans, specifications, and estimates (PS&E) for the Interstate 5 (I-5) improvement project from State Route 73 to south of Oso Parkway (Segment I)	March 2, 2015	September 30, 2023		\$ 8,449,511
Subconsultants:						
Parsons Transportation Group					\$ 2,316,738	
Earth Mechanics, Inc.					\$ 625,222	
FPL and Associates, Inc.					\$ 184,261	
Lynn Capouya, Inc.					\$ 88,337	
Psomas					\$ 543,763	
Group Delta Consultants, Inc.					\$ 239,220	
Subtotal						\$ 8,449,511
HDR Engineering, Inc.						
Contract Type: Firm-Fixed Price	C-7-0938	Project report, environmental document, and PS&E for the State Route 57 (SR-57) northbound improvements between Katella Avenue and Lincoln Avenue	April 10, 2008	July 31, 2018		\$ 4,629,009
Subconsultants:						
Fehr & Peers					\$ 89,904	
Guida Surveying					\$ 258,711	
Leighton and Associates					\$ 294,261	
LSA Associates, Inc.					\$ 357,015	
PMK and Associates, Inc.					\$ 140,333	
Tatsumi and Partners, Inc.					\$ 212,922	
Contract Type: Time & Expense	C-0-1348	Construction management support services for the SR-57 northbound widening between Yorba Linda Boulevard and Lambert Road (Segment II)	September 15, 2010	September 30, 2015		\$ 4,015,600
Subconsultants:						
Ghirardelli Associates						
RMC, Inc.						

Prime and Subconsultants	Contract No.	Description	Contract Start Date	Contract End Date	Subconsultant Amount	Total Contract Amount
HDR Engineering, Inc.						
Contract Type: Time & Expense	C-0-1482	On-call title, escrow, and related services	November 9, 2010	November 30, 2015		\$ 450,000
Subconsultants: Ninyo & Moore						
Contract Type: Time & Expense	C-0-1518	Construction management services for the Irvine Sand Canyon grade separation project	March 2, 2011	May 31, 2016		\$ 6,662,408
Subconsultants: Hill International, Inc. Leighton Consulting, Inc. Psomas						
Contract Type: Firm-Fixed Price	C-0-1587	Consultant services to prepare an environmental document and project report for the State Route 55 (SR-55) improvement project between Interstate 405 and I-5	May 24, 2011	June 30, 2018		\$ 6,311,932
Subconsultants: Guida Surveying, Inc. Fehr & Peers Leighton Consulting, Inc. LSA Associates, Inc. MTS Engineering, Inc. RMC, Inc. The Wild Horse Group					\$ 406,529 \$ 280,021 \$ 138,888 \$ 637,722 \$ 392,243 \$ 275,356 \$ 72,505	
Contract Type: Contract Task Order	C-0-1707	On-call, right-of-way (ROW) acquisition, eminent domain support, relocation assistance, and property management services	April 20, 2011	March 31, 2015		\$ 767,642
Subconsultants: The Bernard Johnson Group, Inc. Cal Pacific Land Services, Inc. Del Richardson & Associates, Inc. Inc.						
Contract Type: Contract Task Order	C-1-2603	On-call geographic information services	October 6, 2011	September 30, 2016		\$ 356,662
Subconsultants: Artisan Global, LLC San Diego Processing Corporation					\$ 406,529 \$ 280,021	

Prime and Subconsultants	Contract No.	Description	Contract Start Date	Contract End Date	Subconsultant Amount	Total Contract Amount
HDR Engineering, Inc.						
Contract Type: Firm-Fixed Price	C-3-1821	Corridor study along State Route 1 between Avenida Pico in Orange County and the Los Angeles County Line	May 8, 2014	June 30, 2016	\$	\$ 399,999
Subconsultants:						
Alta Planning + Design, Inc.					\$ 10,000	
DKS Associates					\$ 30,000	
ICF Jones and Stokes, Inc.					\$ 15,000	
Contract Type: Time & Expense	C-3-1984	Fixed-guideway policy development support services	December 17, 2013	February 28, 2015		\$ 235,010
Subconsultants:						
Holland & Knight					\$ 8,160	
Steve Green and Associates, PLLC					\$ 11,040	
Contract Type: Contract Task Order	C-4-1786	On-call ROW property management services	March 1, 2015	February 29, 2020		\$ 400,918
Subconsultants:						
APA Engineering						
The Bernard Johnson Group, Inc.						
Cal Pacific Land Services, Inc.						
Coast Surveying, Inc.						
Title Management						
Hennessey & Hennessey, LLC						
Kiley Company						
Lazar & Associates						
Pacific Environmental Company						
Pacific Real Estate Consultants, Inc.						
Inc.						
Title365						
VA Consulting						
Wiggins Group						

Prime and Subconsultants	Contract No.	Description	Contract Start Date	Contract End Date	Subconsultant Amount	Total Contract Amount
HDR Engineering, Inc.						
Contract Type: Time & Expense	C-4-1854	Project management consultant services for the Santa Ana - Garden Grove streetcar project	September 4, 2015	February 22, 2020		\$ 20,962,005
Subconsultants:						
Arellano Associates, LLC						
Boothe Transit Consulting, LLC						
CivilSource, Inc.						
IBI Group						
Intueor Consulting, Inc.						
Maintenance Design Group, LLC						
Mott MacDonald, LLC						
Nossaman, LLP						
Safework, Inc.						
Shields Obletz Johnson, Inc.						
SNC- Lavalin Rail & Transit, Inc.						
Sperry Capital, Inc.						
Steve Green and Associates, PLLC						
Contract Type: Firm-Fixed Price	C-6-1003	Study to assess Orange County's freeway system, recommend future freeway improvements, and develop alternative multimodal transportation improvement services	April 27, 2016	December 31, 2017		\$ 99,998
Subconsultants:						
Fehr & Peers					\$ 5,000	
Contract Type: Firm-Fixed Price	C-6-1514	Spatial data processing and management of Orange County Transportation Authority's (OCTA) existing Transit Analysis Tool	January 11, 2017	December 31, 2017		\$ 60,000
Subconsultants:						
None						
Contract Type: Firm-Fixed Price	C-7-1613	Geographical information systems technical support to maintain, enhance, and modify OCTA's inventory of custom-built tools and applications	May 10, 2017	May 31, 2018		\$ 34,700
Subconsultants:						
None						
Subtotal						\$ 45,385,883

Prime and Subconsultants	Contract No.	Description	Contract Start Date	Contract End Date	Subconsultant Amount	Total Contract Amount
T.Y. Lin International						
Contract Type: Firm-Fixed Price Subconsultants: Stantec Consulting Services, Inc. ICF International Group Delta Consultants, Inc. Towill, Inc. Overland, Pacific & Cutler, Inc. Civil Works Engineers	C-1-2439	Project study report/project development support for I-5/EI Toro interchange in the cities of Laguna Hills and Lake Forest	June 24, 2011	June 30, 2015	\$ 152,000 \$ 50,000 \$ 20,000 \$ 2,000 \$ 14,000 \$ 21,000	\$ 544,878
Contract Type: Firm-Fixed Price Subconsultants: CH2M Hill Coast Surveying, Inc. Earth Mechanics, Inc. LIN Consulting, Inc. Lynn Capouya, Inc.	C-4-1778	Plans, specifications and estimates for the I-5 improvement project from SR-55 to SR-57	June 30, 2015	March 31, 2020	\$ 773,313 \$ 181,110 \$ 224,563 \$ 329,698 \$ 77,765	\$ 3,560,034
Contract Type: Firm-Fixed Price Subconsultants: Kittelson & Associates, Inc. Leighton Consulting, Inc. OPTITRANS VCS Environmental Chen-Ryan Associates	C-5-3676	Project study report/project development support for I-5 between Avenida Pico to San Diego County Line	June 28, 2016	May 31, 2019	\$ 98,044 \$ 23,805 \$ 68,729 \$ 7,938 \$ 14,078	\$ 491,805
Subtotal					\$	\$ 4,596,717



COMMITTEE TRANSMITTAL

September 11, 2017

To: Members of the Board of Directors

From:  Laurena Weinert, Clerk of the Board

Subject: Cooperative Agreement with the California Department of Transportation for the State Route 55 Improvement Project Between Interstate 405 and Interstate 5 and Authority to Acquire Right-of-Way

Regional Planning and Highways Committee Meeting of September 7, 2017

Present: Directors Delgleize, Do, Donchak, M. Murphy, Nelson, and Steel

Absent: Director Spitzer

Committee Vote

This item was passed by the Members present.

Committee Recommendations

- A. Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-7-1936 between the Orange County Transportation Authority and the California Department of Transportation, in the amount of \$850,000, to perform right-of-way support services for the State Route 55 Improvement Project between Interstate 405 and Interstate 5.

- B. Authorize the Chief Executive Officer, or his designee, to initiate discussions with property owners and utility owners, make offers, and execute agreements for the acquisition of all necessary real property interests and necessary utility relocations.



September 7, 2017

To: Regional Planning and Highways Committee

From: Darrell Johnson, Chief Executive Officer

Subject: Cooperative Agreement with the California Department of Transportation for the State Route 55 Improvement Project Between Interstate 405 and Interstate 5 and Authority to Acquire Right-of-Way

Overview

The Orange County Transportation Authority proposes to enter into a cooperative agreement with the California Department of Transportation to establish roles, responsibilities, and funding obligations for right-of-way support services, right-of-way engineering, right-of-way acquisition, and utility relocation for the State Route 55 Improvement Project between Interstate 405 and Interstate 5.

Recommendations

- A. Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-7-1936 between the Orange County Transportation Authority and the California Department of Transportation, in the amount of \$850,000, to perform right-of-way support services for the State Route 55 Improvement Project between Interstate 405 and Interstate 5.
- B. Authorize the Chief Executive Officer, or his designee, to initiate discussions with property owners and utility owners, make offers, and execute agreements for the acquisition of all necessary real property interests and necessary utility relocations.

Discussion

The State Route 55 Improvement Project between Interstate 405 and Interstate 5 (Project) is part of Project F in the Measure M2 (M2) freeway program. The Next 10 Plan, adopted by the Orange County Transportation Authority (OCTA) Board of Directors (Board) in November 2016, identified the

Cooperative Agreement with the California Department of Transportation for the State Route 55 Improvement Project Between Interstate 405 and Interstate 5 and Authority to Acquire Right-of-Way *Page 2*

Project as one of the M2 freeway projects to be completed by 2025. The Project supplemental draft environmental document was circulated for public comment on April 3, 2017, and Alternative 3-Modified, which includes general purpose, high-occupancy vehicle, and auxiliary lanes, has been identified as the recommended preferred alternative by the Project development team. Therefore, the Project is ready to proceed into the final design phase.

On June 12, 2017, the Board authorized Cooperative Agreement No. C-7-1753 with the California Department of Transportation (Caltrans) to complete 35 percent design and provide oversight of the remaining plans, specifications, and estimate, and to advertise and award the construction contract for the Project. A cooperative agreement is now needed with Caltrans to initiate the Project's right-of-way (ROW) capital acquisition and support component.

OCTA proposes to enter into a cooperative agreement with Caltrans to define the roles and responsibilities of both agencies. OCTA will be the lead agency implementing ROW activities, which shall include property acquisitions, relocation assistance for displacees, and coordination of utility relocations for the Project. OCTA will perform property management for any acquired commercial properties and will be responsible for demolition services where necessary. OCTA will also be the lead agency for eminent domain proceedings, which shall include OCTA Board resolutions of necessity, if needed. Caltrans will be the lead agency for ROW engineering activities, which shall include mapping, surveying and monumentation as direct reimbursed work, and oversight of ROW activities at no cost. The estimated cost of the ROW support services is \$7,320,000, comprised of OCTA performing \$3,770,000 and Caltrans performing \$3,550,000 of the services. Caltrans' work will be funded through the State Highway Operation and Preservation Program (SHOPP), in the amount of \$2,700,000, and M2 funds in the amount of \$850,000. Caltrans will draw upon the SHOPP funds directly and will expend those funds before the M2 funds.

The final environmental document is scheduled to be approved by Caltrans in September 2017. ROW activities are anticipated to commence in spring 2018 upon completion of 35 percent design and determination of final ROW requirements. The Project is estimated to impact a total of 55 privately-owned and publicly-owned properties. The current list of impacted properties has land uses which include commercial/industrial, multi-residential, and public (Attachment A). The real property requirements are comprised of a combination of partial fee and potential full fee acquisitions, permanent easements, utility easements, and temporary construction easements. The needed property rights are required to implement the Project scope as defined in the final environmental document.

Cooperative Agreement with the California Department of Transportation for the State Route 55 Improvement Project Between Interstate 405 and Interstate 5 and Authority to Acquire Right-of-Way **Page 3**

OCTA has adopted Real Property Department Policies and Procedures (RPDPP) to properly handle the acquisition of property rights. The RPDPP incorporates requirements set by the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act). The Uniform Act was enacted by the federal government to ensure real property is acquired, and that persons, businesses, and personal property (displacees) are relocated in an equitable, consistent, and equal manner. The RPDPP also incorporates State of California laws and regulations enacted to provide benefits and safeguards to property owners. Statutory offers for the purchase of property will be made for an amount established as just compensation, which shall be determined through an independent appraisal process. Efforts will be made to reach a negotiated settlement with property owners or businesses; however, when an impasse is reached, as an act of last resort, staff, through a separate Board action, may request the Board to adopt a resolution of necessity to initiate eminent domain proceedings to obtain the necessary interests in real property.

The Project does not intend to require the permanent relocation or displacement of any single family residence; however, there may be the need to displace and relocate businesses as a result of property acquisitions. Under state and federal regulations, any qualified displacee or occupant is entitled to receive relocation advisory assistance, and actual and reasonable moving costs for displaced residential occupants, displaced business owners, and for displacement of personal property. The relocation process runs concurrently with the acquisition process and is a requirement of law.

OCTA and Caltrans staff will continue to evaluate the need for property through the design phase. If any modifications to the ROW requirements are necessary, OCTA staff will take action to appropriately justify and document the need to secure necessary property to construct the Project in accordance with procedural requirements. Any need for additional ROW requirements will be addressed for appropriate justification within the parameters of the California Environmental Quality Act and National Environmental Policy Act.

Fiscal Impact

As a condition of this cooperative agreement, funding for Caltrans services for ROW support is in OCTA's Fiscal Year (FY) 2017-2018 Budget and will be proposed for the FY 2018-19 Budget, Capital Programs Division, Account 0017-7519-FF101-OKS, and will be funded through M2 funds.

Cooperative Agreement with the California Department of Transportation for the State Route 55 Improvement Project Between Interstate 405 and Interstate 5 and Authority to Acquire Right-of-Way **Page 4**

Summary

Staff requests Board approval for the Chief Executive Officer (CEO) to negotiate and execute Cooperative Agreement No. C-7-1936 with Caltrans, in the amount of \$850,000, to provide oversight at no cost, perform ROW support services, and certify the ROW for the Project. In addition, staff requests the Board to authorize the CEO to make offers and execute agreements with property owners and utility owners for the acquisition of all necessary interests in real property and necessary utility relocations for the Project.

Attachment

- A. State Route 55 Improvement Project Between Interstate 405 and Interstate 5 Right-of-Way

Prepared by:



Ross Lew, P.E.
Program Manager
(714) 560-5775

Approved by:



James G. Beil, P.E.
Executive Director, Capital Programs
(714) 560-5646



Virginia Abadessa
Director, Contracts Administration and
Materials Management
(714) 560-5623

State Route 55 Improvement Project Between Interstate 405 and Interstate 5 Right-of-Way

Alternative 3M										
No. of Parcels	Assessor Parcel No.	City	Location	Owner Name	ROW Impacts	Permanent (SF)	TCE (SF)	Utility Easement (SF)	Land Use	
1	427-282-14 427-282-15	Irvine	17952 Cowan St	SOUTHERN CAL DIST COUNCIL OF THE ASSEMBLIES OF GOD	Partial Fee/TCE/Utility Easement	4,825	3,622	1,203	Commercial	
2	427-261-05	Irvine	17942 Cowan St	CARSON ESTATE CO	Partial Fee/TCE/Utility Easement	2,177	3,175	1,770	Commercial	
3	427-261-06	Irvine	17912 Cowan St	KROGMANN JUERGEN	Partial Fee/TCE	2,763	1,800		Industrial	
4	427-261-07	Irvine	17872 Cowan St	MILLER LEO	Partial Take/TCE	3,010	1,801		Industrial	
5	427-261-08	Irvine	17842 Cowan St	COWAN PROPERTIES LLC	Partial Take/TCE	3,000	1,801		Industrial	
6	427-261-09 427-261-10	Irvine	17792 Cowan St A & B	PUBLIC STORAGE PROPERTIES 12 PUBLIC STORAGE PROPERTIES/XII	Partial Take/TCE/Utility Easement	7,707	3,099	2,260	Industrial	
7	427-262-06	Irvine	17781 Cowan St	71-81 COWAN BUILDING	Partial Fee/TCE	4,988	11,700		Commercial	
8	427-262-02	Irvine	17751 Cowan St	ORANGE BAKERY INC	TCE		1,519		Industrial	
9	430-113-01	Irvine	Northbound SR55 between McArthur Blvd and Pullman St	IRVINE COMPANY	Utility Easement			1,608	Commercial	
10	430-111-20 430-111-01	Irvine	17482 Daimler St 17482 Pullman St	RICOH ELECTRONICS INC RICOH DEV OF CAL INC	Utility Easement			4,600	Industrial	
11	430-111-18 430-111-08	Irvine	1062 McGaw Ave 1063 McGaw Ave	RICOH DEVELOPMENT OF CALIFORNIA INC RICOH ELECTRONICS INC	TCE		915		Industrial	
12	430-112-12	Irvine	1063 McGaw Ave	1063 MCGAW LLC	Partial Fee/TCE/Utility Easement	1,071	3,586	1,760	Commercial	
13	430-112-04 430-112-05	Irvine	17132 Pullman St	MARUKOME USA INC	Partial Fee/TCE/Utility Easement	1,289	10,250	1,800	Industrial	

* The right-of-way (ROW) requirements will be finalized during the design phase of the Project.

14	430-112-06	Irvine	17092 Pullman St	GAGOS MITCHELL S	Partial Fee/TCE/Utility Easement	559	1,275	800	Industrial
15	430-115-01	Irvine	1021 Duryea Ave	WASHER JOHN	Partial Fee/TCE	3,072	2,194		Industrial
16	430-171-07	Santa Ana	1740 E Garry Ave	EQUITABLE GARRY PLAZA PARTNERSHIP	Partial Fee/TCE	3,107	2,317		Commercial
17	430-031-09 430-031-03	Santa Ana	1717 E Dyer Rd 2626 Pullman St	RONALD P BEARD	Partial Fee/TCE/Utility Easement	4,155	20,746	4,070	Commercial
18	430-032-10	Santa Ana	2501 So Pullman St	CROWN CARNEGIE ASSOCIATES LLC	Partial Fee/TCE/Utility Easement	458	1,808	780	Commercial
19	430-011-03	Santa Ana	2441 So Pullman St	CARMAN GROUP LLC/LOAN #IVA3 LLC JVAC LLC	Partial Fee/TCE/Utility Easement	3,086	1,905	320	Industrial
20	430-011-04	Santa Ana	2401 So Pullman St	LIYEMURA SACHI	Partial Fee/TCE	622	2,835		Industrial
21	430-012-04	Santa Ana	2350 So Pullman St	PULLMAN PROPERTY LLC	Partial Fee/TCE	9,478	4,060		Industrial
22	430-012-03	Santa Ana	2400 So Pullman St	OMAR DEEN	Full Fee	35,953			Industrial
23	430-241-12	Tustin	1123 Warner Ave	BEDROSIAN TUSTIN LLC	Partial Fee/TCE/Utility Easement	30,875	5,057	320	Industrial
24	430-241-07	Tustin	1100 Valencia Ave	RICOH DEVELOPMENT OF CALIFORNIA INC	Partial Fee/TCE/Utility Easement	31,185	14,315	25,800	Industrial
25	430-251-22	Tustin	Valencia Ave	CITY OF TUSTIN	TCE		4,958		Commercial (vacant)
26	430-251-35	Tustin	Edinger Ave	TUSTIN GATEWAY RI SPE LLC	TCE		1,773		Commercial
27	430-251-14 430-251-15	Tustin	Edinger Ave	CITY OF TUSTIN WATER DEPARTMENT	TCE		5,905		Commercial (vacant)
28	430-252-02 430-252-10	Tustin	Edinger Ave	MUTUAL LIQUID GAS/EQUIPMENT CO INC	TCE		3,490		Industrial (vacant)
29	SBE 804-30-12D-9 (402-10 AP MAP)	Tustin	East of SR55 just north of Edinger Ave	SCRRA (Metrolink)	TCE		5,126		Railroad
30	N/A	Tustin	East of SR55 just north of Edinger Ave	OCFCD	TCE		5,439		OCFCD
31	402-142-24	Tustin	14901 Newport Ave	EL PASEO APARTMENTS TUSTIN LLC	TCE		4,989		Multi Fam Residence
32	402-142-10	Tustin	17001 Kenyon Dr	ALFORD TERRANCE B & JACQUELINE JO	TCE		1,436		Multi Fam Residence

* The right-of-way (ROW) requirements will be finalized during the design phase of the Project.

33	402-142-11 402-142-12 402-142-13	Tustin	17021 Kenyon Dr	NEW KENYON APARTMENTS LLC	TCE	6,263			Multi Fam Residence
34	411-141-05	Santa Ana	Along SR55 between McArthur Blvd and Dyer Rd	OCFCD	Partial Fee/TCE/Permanent Easement	73,879	11,733		OCFCD
35	411-141-06	Santa Ana	So of Dyer Rd adjacent to southbound Dyer Rd Onramp	CHAN WAN SHAN	Full Fee	6,547			Industrial (vacant)
36	016-221-29 016-221-28 016-221-27	Santa Ana	So Grand Ave Brookhollow Dr 1580 E Warner Ave	MODA RENTALS LLC	Full Fee	123,241			Commercial (vacant)
37	016-221-14	Santa Ana	1570 E Warner Ave	INTERACTIVE USA CORPORATION	Partial Fee/TCE	1,045	3,499		Commercial
38	016-221-13	Santa Ana	Brookhollow Dr	MODA RENTALS LLC	Partial Fee/TCE	3,818	5,131		Commercial
39	016-221-12	Santa Ana	Brookhollow Dr	MODA RENTALS LLC	Partial Fee/TCE	6,813	8,559		Commercial
40	403-072-03	Santa Ana	2201 So Ritchey St	WESTERN EXTERMINATOR CO	Full Fee	35,611			Industrial
41	403-072-02	Santa Ana	So Ritchey St	CITY OF SANTA ANA	Full Fee	3,818			Public Use
42	403-072-01	Santa Ana	So Ritchey St	NEWPORT PARTNERS	Full Fee	1,086			Commercial
43	403-071-16	Santa Ana	2220 So Ritchey St	ADAMS-HENDERSON LLC	TCE		1,093		Industrial
44	403-071-19 403-071-18 403-071-17	Santa Ana	2200 So Ritchey St 2140 So Ritchey St 2130 So Ritchey St	AGA PARTNERS	TCE		2,707		Industrial
45	403-071-13	Santa Ana	2120 So Ritchey St	GATES PARTNERS LLC	TCE		947		Industrial
46	403-041-08	Santa Ana	2061 So Ritchey St	ONEIL DAN R	Partial Fee/TCE	4,076	7,163		Industrial

* The right-of-way (ROW) requirements will be finalized during the design phase of the Project.

47	403-041-07	Santa Ana	1969 So Ritchey St	HBR LLC		Partial Fee/TCE	3,546	8,343		Industrial
48	403-041-04	Santa Ana	1929 E Saint Andrew Pl	ONEIL DAN R		Partial Fee/TCE	3,258	12,483		Industrial
49	SBE 804-30-12D-POT. 7 (402-10 AP	Santa Ana	West of SR55 just north of Edinger Ave	SCRRRA (Metrolink)		TCE		9,152		Railroad
50	N/A	Santa Ana	West of SR55 just north of Edinger Ave	OCFCD		TCE		12,305		OCFCD
51	402-101-07 402-101-39	Santa Ana	1535 Trotter St 1505 Auto Mall Dr	HSA LLC		TCE/Utility Easement		3,941	1,970	Commercial
52	402-101-45	Santa Ana	2101 E. Edinger Ave	ERICKSON PROPERTIES CORP/AGENCY CITY OF SANTA ANA		Partial Fee/TCE/Utility Easement	1,480	15,578	7,960	Comm/Indust
53	402-111-24	Santa Ana	1411 Village Way	NORTHERN MC FADDEN		Partial Fee/TCE	32,769	9,276		Commercial
54	402-111-41	Santa Ana	2200 E McFadden Ave	PUBLIC STORAGE PICKUP/DELIVERY L P		TCE		6,713		Industrial
55	402-251-07	Tustin	15660 Tustin Village Way	CITY OF TUSTIN		TCE		2,180		Commercial



COMMITTEE TRANSMITTAL

September 11, 2017

To: Members of the Board of Directors
From: Laurena Weinert, Clerk of the Board
Subject: Environmental Mitigation Program Endowment Fund Investment Report for June 30, 2017

Finance and Administration Committee Meeting of August 23, 2017

Present: Directors Do, Hennessey, Jones, R. Murphy, and Steel
Absent: Directors Pulido and Spitzer

Committee Vote

This item was passed by the Members present.

Committee Recommendation

Receive and file as an information item.



August 23, 2017

To: Finance and Administration Committee

From: Darrell Johnson, Chief Executive Officer

Subject: Environmental Mitigation Program Endowment Fund Investment Report For June 30, 2017

A handwritten signature in blue ink, appearing to read "Darrell Johnson", is written over the "To:" and "From:" lines of the memo.

Overview

The Orange County Transportation Authority has developed a Natural Community Conservation Plan/Habitat Conservation Plan; acquired conservation properties; and funded habitat restoration projects to mitigate the impacts of Measure M2 freeway projects. California Community Foundation manages the non-wasting endowment required to pay for the long-term management of the conservation properties. Each quarter, the California Community Foundation publishes a comprehensive report detailing the composition of the pool and the performance. Attached is the quarterly investment report for the Endowment Pool for the period ending June 30, 2017. The report has been reviewed and is consistent with the pool objectives.

Recommendation

Receive and file as an information item.

Background

On September 26, 2016, the Board of Directors approved the selection of the California Community Foundation (CCF) as an endowment fund manager for the Measure M2 Freeway Environmental Mitigation Program. Approximately \$2.9 million on an annual basis will be deposited in the endowment. On March 1, 2017, Orange County Transportation Authority wired \$2,877,000 to CCF to be deposited in the Endowment Pool. These annual deposits are expected to continue for ten to 12 years, or until the fund totals approximately \$46.2 million.

Discussion

As of June 30, 2017, total pool assets in the CCF Endowment Pool were \$923.6 million. Total foundation assets were \$1.66 billion. Performance for the Endowment Pool was 0.1 percent for the month, while the benchmark was flat for the month; 2.2 percent for the quarter, exceeding the customized benchmark by 0.5 percent. The one year return was 13.1 percent, exceeding the benchmark by 3.9 percent.

At the end of each fiscal year, staff will report on the funding status relative to the amounts projected when the Endowment Fund was established. The actual balance as of June 30, 2017 is \$2,964,823. The number exceeds the projected balance of \$2,912,711 due to higher than projected investment earnings and lower than projected fees. The projected annualized cost for endowment services was 0.75 percent based on indications received during the due diligence process. The program is currently paying 0.39 percent fee on a sliding scale. That fee will continue to be reduced as assets grow.

Summary

The Orange County Transportation Authority is submitting a copy of the California Community Foundation Investment Report to the Finance and Administration Committee. The report is for the quarter ending June 30, 2017.

Attachments

- A. CCF Fund Statement - June 30, 2017
- B. CCF Endowment Pool Investments – June 30, 2017

Prepared by:



Rodney Johnson
Deputy Treasurer
Treasury/Toll Roads
714-560-5675

Approved by:



Andrew Oftelie
Executive Director, Finance and
Administration
714-560-5649



Fund Name: OCTA - Measure M2 Environmental Mitigation Program Fund
Fund Start Date: 2/28/2017
Investment Pool(s): Endowment Pool

FUND STATEMENT

OCTA - Measure M2 Environmental Mitigation Program Fund (V398)
 4/1/2017 - 6/30/2017

Fund Summary

	This Period 04/01/2017 - 06/30/2017	Calendar YTD 1/1/2017 - 6/30/2017
Opening Fund Balance	\$2,899,059.23	\$0.00
Contributions	0.00	2,877,000.00
Investment Activity, net	65,763.96	87,823.19
Net Changes to Fund	65,763.96	2,964,823.19
Ending Balance	\$2,964,823.19	\$2,964,823.19

Investment Pool Performance as of 06/30/2017

	This Qtr.	1 - Year	3 - Years	5 - Years	10 - Years
Endowment Pool	2.2%	13.1%	2.9%	7.4%	4.2%
Social Impact Endowment Pool	2.5%	9.6%	4.8%	8.1%	4.2%
Conservative Balanced Pool	1.4%	5.4%	3.7%	n/a	n/a
Short Duration Bond Pool	0.6%	0.1%	n/a	n/a	n/a
Capital Preservation Pool	0.2%	0.5%	0.3%	0.2%	1.0%

Endowment Pool - invested for long-term growth and appreciation while providing a relatively predictable stream of distributions that keeps pace with inflation over time. The target asset allocation is 50% equities, 30% alternatives, 10% fixed income and 10% real assets. Investment management fees are 85 basis points.

Social Impact Endowment Pool - invested in a diversified pool aiming for capital growth for long-term grantmaking; underlying instruments undergo rigorous environmental and social analysis, with an asset allocation of approximately 60%-75% equities and 25%-40% fixed income. Investment management fees are 66 basis points.

Conservative Balanced Pool - designed to aim for moderate growth and to offer diversified exposure to the U.S. equity market and to investment grade fixed income with maturities from one to five years and an asset allocation of 70% fixed income and 30% equities investments. Investment management fees are 9 basis points.

Short Duration Bond Pool - invested to offer diversified exposure to investment grade fixed income with maturities from one to five years for the purposes of grants over a near-term one to four year horizon. Investment management fees are 10 basis points.

Capital Preservation Pool - designed to preserve principal and provide liquidity for present grantmaking needs through investment in short-term fixed income and cash instruments. Investment management fees are 10 basis points.

Definition of Terms

Opening Fund Balance - Your fund's balance at the beginning of the statement period.

Contributions - Irrevocable financial additions to your fund.

Grants - Grants you recommended to IRS-qualified public charities that have been approved and distributed from your fund. This also includes refunds and voids of grants made.

Administrative Fee - CCF charges administrative fees to cover general operating activities. These activities could include gift establishment, receipt of assets and contributions, grants and fund administration, research on nonprofit agencies and issue areas, and other charitable purposes.

Investment Activity, net – This represents the financial returns from the CCF investment pool(s) in which your fund is invested, including interest, dividends and gains/losses as well as the deduction of any investment-related fees.

Fund Balance Transfer - Money transferred to or from another CCF fund.

Other Expenses - Permissible expenses (i.e., legal, phone charges, etc.) related to the administration of your fund.

Net Changes to Fund - The net amount of your fund after contributions, income, grants, administration and grant management fee, investment managers' fees, fund balance transfers, and other expenses.

Ending Fund Balance - The fund's balance at the end of the statement period reported on this statement. This amount includes any contributions, grant distributions, fund balance transfers, and increase or decrease in market value.

Meet Our Team

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The Endowment Pool returned 0.1% for the month of June 2017, 10 basis points ahead of its benchmark. For the trailing year, the pool returned 13.1%, 390 basis points ahead of its benchmark.

Total Pool Assets

\$923.58 million (Endowment Pool), \$1.66 billion (total foundation assets) as of June 30, 2017.

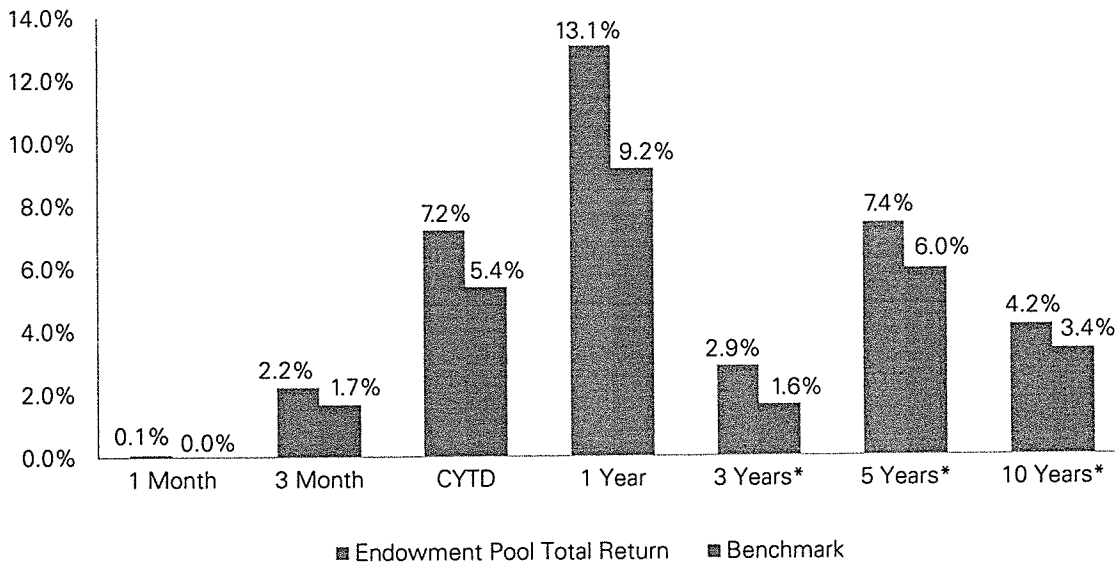
Pool Objective

Preserve the real (i.e., inflation-adjusted) purchasing power of the investment pool net of annual distributions for grants and expenses. An additional objective is to provide a relatively predictable, stable stream of distributions for grants and expenses that keep pace with inflation over time.

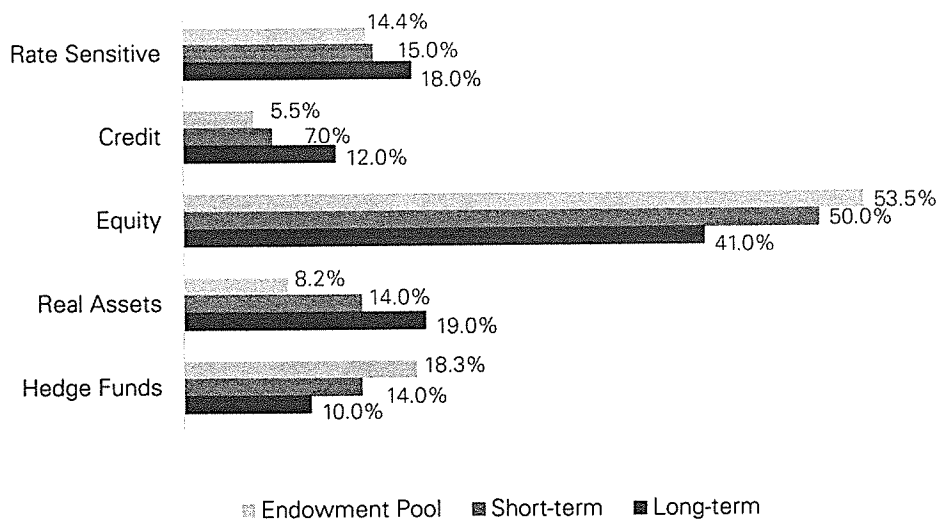
Investment Consultant

Meketa Investment Group

Performance History



Asset Allocation



*Represents annualized returns.

1) Investment performance is presented net of investment management fees. These fees vary across investment managers and asset classes, amounting to an annual average range of approximately 0.77% to 0.81% for the Endowment Pool. This includes fees paid to Meketa for investment consulting and portfolio advisory services. (Hedge fund manager incentive fees are not included.)

2) Total Fund Benchmark is a combination of: 45% MSCI ACWI / 25% HFR FOF Index / 10% Custom Asset Wtd. Inflation Hedge Benchmark / 10% BC Interm Gov't. / 5% BC Agg / 5% Citi Non-US\$ GBI. Updated 7/24/2017



COMMITTEE TRANSMITTAL

September 11, 2017

To: Members of the Board of Directors

From:  Laurena Weinert, Clerk of the Board

Subject: Measure M2 Environmental Mitigation Program Restoration Projects Additional Funding Request

Regional Planning and Highways Committee Meeting of September 7, 2017

Present: Directors Delgleize, Do, Donchak, M. Murphy, Nelson, and Steel

Absent: Director Spitzer

Committee Vote

This item was passed by the Members present.

Committee Recommendations

- A. Authorize the Chief Executive Officer to negotiate and execute an amount up to \$805,000 to fund the expedited clean water permitting requirements.
- B. Authorize staff to amend the fiscal year 2017-18 budget to include the recommended funding amount.



September 7, 2017

To: Regional Planning and Highways Committee
From: Darrell Johnson, Chief Executive Officer
Subject: Measure M2 Environmental Mitigation Program Restoration Projects Additional Funding Request

A handwritten signature in blue ink, appearing to read "Darrell Johnson", is located to the right of the "From:" field.

Overview

Measure M2 includes a program to deliver comprehensive mitigation for the environmental impacts of freeway projects in exchange for streamlined project approvals from the state and federal wildlife agencies. On a parallel path, the Orange County Transportation Authority has developed a similar approach to work with the State Water Resources Control Board and the United States Army Corps of Engineers regarding state and federal clean water permitting requirements to facilitate expedited implementation of the Measure M2 freeway projects. A request for funding authorization to advance the streamlined permitting process is submitted for Board of Directors consideration and approval.

Recommendations

- A. Authorize the Chief Executive Officer to negotiate and execute an amount up to \$805,000 to fund the expedited clean water permitting requirements.
- B. Authorize staff to amend the fiscal year 2017-18 budget to include the recommended funding amount.

Background

Measure M2 (M2) includes an innovative comprehensive Environmental Mitigation Program (EMP) to address the biological impacts of M2 freeway projects. This is achieved through the development of a Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP), approved by the California Department of Fish and Wildlife and the United States Fish and Wildlife Service (Wildlife Agencies). These documents were finalized and approved by the Orange County Transportation Authority (OCTA) Board of Directors (Board) in November 2016. The final permits were issued to OCTA by the

Wildlife Agencies in June 2017. It should be noted that the Board previously approved \$34.5 million in funding for the maintenance and operation of the seven Preserves, as committed to in the NCCP/HCP. Payments began in March 2017 to establish an account over a ten to 12 year time period.

On a parallel path, OCTA and the California Department of Transportation staff have been coordinating with the State Water Resources Control Board (State Board) and the Army Corps of Engineers (Corps), collectively referred to as Regulatory Agencies. This coordination has resulted in defining a process that would utilize some of the same mitigation within the NCCP/HCP to also obtain state and federal clean water permits to further streamline the M2 freeway projects. Separate funding is needed to meet the Regulatory Agencies' requirements. This request was presented to and endorsed by the Environmental Oversight Committee (EOC) on August 17, 2017. A summary of the additional funding needs is presented.

Discussion

The construction of the M2 freeway projects is anticipated to result in impacts to jurisdictional waters of the state and United States. These impacts will require that OCTA obtain Section 401 and 404 clean water permits from the Regulatory Agencies, which will require mitigation. On a parallel process to the NCCP/HCP, staff is finalizing program-level authorizations with the Regulatory Agencies, which is further described in Attachment A. This permit will enable OCTA to utilize mitigation included in the NCCP/HCP, as well as lay out an abbreviated process for project level 401 and 404 permit issuance.

Agency coordination has resulted in the determination that the Agua Chinon and Aliso Creek restoration projects, as well as a small portion of the Ferber Ranch Preserve, should satisfy the Regulatory Agencies mitigation needs for the M2 freeway projects. These restoration projects and this Preserve are also included in the NCCP/HCP. Fact sheets for both of these restoration projects are included as Attachment B and Attachment C. As previously discussed, state and federal regulatory requirements include additional compliance that is above and beyond what is required within the NCCP/HCP. For example, these regulations require specific language within the long-term protection assurances, as well as funding to cover long-term management needs of the mitigation sites.

After collaboration with the Regulatory Agencies and the restoration project property owners (County of Orange and The Irvine Company), it has been determined that additional management tasks are necessary to satisfy compliance needs. Additional tasks include activities such as biological monitoring, weed removal, photo documentation, and annual reporting. The Corps requires that funding is provided to facilitate these tasks in perpetuity. This amount has been estimated at approximately \$805,000. On August 17, 2017, the EOC endorsed the course of action and funding amount.

It is important to note that these additional funding needs are separate from the NCCP/HCP endowment. It is anticipated that a one-time payment will be made to a Corps-approved entity that will manage and disperse these funds to the land owners. For example, the National Fish and Wildlife Foundation has been approved to handle these types of services by the Corps.

The additional funding needs for Corps compliance was anticipated and included in the May 2015 Board-approved EMP Long-Term Funding Strategy and Guiding Principles. The EMP Guiding Principles contained the commitment to responsibly meet the M2 obligations, which include complying with regulatory requirements to ensure that freeway project mitigation obligations are met. In addition, the Long-Term Funding Strategy includes the commitment to complete the negotiations with the Corps and State Board, and allocate funding to meet regulatory permit requirements.

If OCTA does not provide this funding, additional mitigation opportunities would need to be explored. Specifically, mitigation would need to be identified within both the San Juan Creek and the San Diego Creek Special Area Management Plan areas to obtain clean water permits for the construction of the freeway projects. These watersheds are known to be challenging to locate mitigation opportunities and the same long term funding requirements would apply. This would take additional time and funding that is expected to exceed the amount presented herein.

Next Steps

Additional funding for the mitigation projects is required as a part of the regulatory permitting process related to clean water requirements. Upon Board approval, OCTA will issue a letter of commitment to the Corps for the restoration projects financial needs. In turn, the Corps and the State Board are anticipated to issue their programmatic authorizations which will help streamline the implementation of the M2 freeway projects. Additional steps are required, and OCTA will continue to work with the Corps and the State Board to complete the regulatory permitting process in order to obtain the applicable clean water authorizations, and are further described in Attachment A.

Summary

M2 includes an EMP that provides funding for programmatic mitigation to off-set impacts of the 13 freeway projects. To expedite the delivery of the freeway projects, this program was initiated in 2007 to implement early project mitigation through property acquisition and habitat restoration. This program is administered through a NCCP/HCCP, which was completed and approved by the Board in November 2016, and permits received in June 2017. State and federal programmatic clean water permits have also been developed and additional mitigation funding needs have been identified and presented for approval.

Attachments

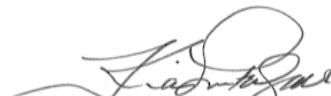
- A. Draft United States Army Corps of Engineers and State Water Resources Control Board Mitigation Funding Needs Summary
- B. Aliso Creek Restoration Project
- C. Agua Chinon and Bee Flat Canyons Restoration Project

Prepared by:



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United States Army Corps of Engineers and
State Water Resources Control Board
Mitigation Funding Needs Summary

Overview: The Orange County Transportation Authority (OCTA) is coordinating with the United States Army Corps of Engineers (Corps) and the State Water Resources Control Board (State Board) to obtain programmatic Clean Water Act (CWA) Section 401 and 404 permits for the Measure M2 (M2) Environmental Mitigation Program (EMP). These permits will provide OCTA with assurances that the mitigation provided to date is acceptable to offset potential M2 freeway project impacts to state and federal jurisdictional waters. OCTA will utilize a subset of the conservation efforts (i.e. mitigation) included in the Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP). These mitigation sites are illustrated in Figure 1. Separate funding is required by the State Board and the Corps to comply with this process.

Background: On April 6, 2015, the Corps released a Special Public Notice regarding the proposed Section 404 Letter of Permission (LOP) procedures (i.e. program level permit) for the OCTA M2 EMP. These LOPs will establish alternative permitting procedures to address anticipated discharges into Waters of the United States (WOTUS) associated with constructing the freeway projects over the next 15-20 years. LOP procedures are expected to be established via issuance of a CWA Section 404 Individual Permit. The State Board has also committed to issuing an authorization to approve the use of M2 mitigation once the Corps issues the 404 permit. This State Board authorization will provide the needed mitigation assurances and will further streamline the implementation of the M2 freeway projects.

Discussion: The Corps regulations require compliance with the April 10, 2008 mitigation rule. In addition, some M2 freeway projects may impact the San Diego and the San Juan Creek watersheds. These watersheds are subject to federal regulations that include specific Special Area Management Plan requirements. These mitigation requirements are in addition to what the Wildlife Agencies (United States Fish and Wildlife Service and California Department of Fish and Wildlife) require, and what OCTA has committed to in the NCCP/HCP. These regulations also require the development and funding of a long-term management plan for all mitigation sites before the Corps or State Board can issue their permits.

In order to satisfy the applicable CWA compensatory mitigation requirements, OCTA is proposing the following:

1. Freeway project avoidance and minimization measures: Avoidance and minimization measures are a required component of the freeway projects design and construction processes.
2. Two mitigation sites that provide enhancement and rehabilitation of the Waters of the United States: The two sites that provide the most appropriate enhancement and rehabilitation of WOTUS are the Aliso Creek and Agua Chinon restoration projects (also included in the M2 NCCP/HCP). Both restoration projects are within already managed lands. OCTA has been coordinating with the Corps and the property owners

United States Army Corps of Engineers and
State Water Resources Control Board
Mitigation Funding Needs Summary

of the Agua Chinon (The Irvine Company and the County of Orange) and Aliso Creek (the County of Orange) projects. Coordination included the review of the existing management plans and land protection documents (i.e. irrevocable offers of dedication). The Corps has determined that additional management tasks and long-term protection assurances are required. The additional management tasks require OCTA to provide a one-time payment to a Corps-approved finance manager to fund long-term maintenance costs.

3. One mitigation site that provides preservation of important physical, chemical, and biological aquatic functions: Ferber Ranch provides preservation of important physical, chemical, and biological aquatic functions. OCTA will record a conservation easement to assure that the Ferber Ranch Preserve is protected. This is also a commitment within the NCCP/HCP. The clean water requirements can be addressed through the management actions being performed as part of the existing NCCP/HCP commitments. However, the Corps has requested that supplemental funds be set aside in case future conservation easement violations occur at Ferber Ranch.

Overview of Additional Mitigation Requirements:

Mitigation Project Name	Property Owner	Location	Summary of Management Tasks	Estimated Amount Needed*
Ferber Ranch Preserve	OCTA	Trabuco Canyon	None	\$10,000
Aliso Creek Restoration Project	County of Orange (OC Parks)	Aliso and Wood Canyons Wilderness Park	Biological surveys, spot treat weeds, photo documentation and reporting	\$718,500
Agua Chinon Restoration Project	County of Orange (OC Parks) and the Irvine Company	Unincorporated Orange County	Same as above	\$76,000

*Amount based on ~2.5% real interest earnings

Total: \$804,500

United States Army Corps of Engineers and
State Water Resources Control Board
Mitigation Funding Needs Summary

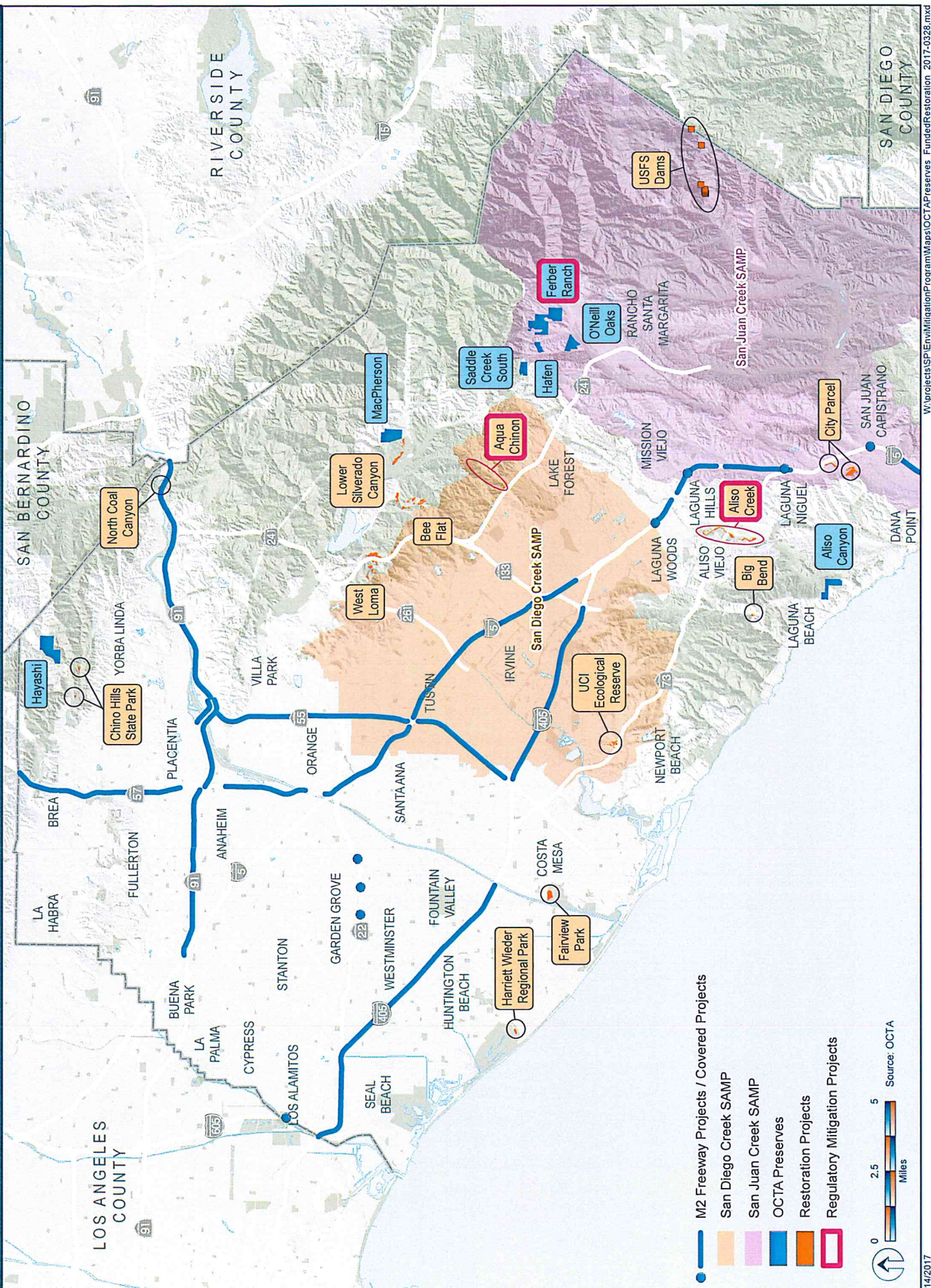
If the funding amounts are approved, OCTA must complete the following steps to meet the CWA permit requirements:

1. Issue a letter of commitment to the Corps for the restoration projects.
2. Continue coordination with the Corps and State Board to finalize the habitat and mitigation monitoring plans (i.e. restoration plans).
3. Obtain Section 401 and 404 authorizations from the State Board (general order/letter of authorization) and the Corps (LOP procedures).
4. Obtain an agreement between the Corps and a fund manager (i.e. San Diego Community Foundation, California Community Foundation, etc.) and make a one-time payment to the mutually-agreed upon fund manager.
5. Execute an agreement between OCTA and a fund manager to manage and disperse funds on behalf of OCTA to the restoration site land managers.
6. Continue to coordinate with the land owners, Corps, State Board, and the Wildlife Agencies to finalize or amend the land protection documents for the restoration sites.
7. Record a conservation easement over the Ferber Ranch Preserve.
8. Ensure the restoration projects meet their NCCP/HCP set success criteria and performance standards.
9. Record the assignment of assumption document with the land manager of the mitigation sites. This will transfer mitigation responsibilities to the land manager.
10. Request a letter from the Corps documenting mitigation release once the land protection documents have been recorded and funding for the long-term management has been obtained.



FIGURE 1

OCTA NCCP/HCP Preserves and Funded Restoration Projects



● M2 Freeway Projects / Covered Projects
 ■ San Diego Creek SAMP
 ■ San Juan Creek SAMP
 ■ OCTA Preserves
 ■ Restoration Projects
 ■ Regulatory Mitigation Projects

0 2.5 5 Miles
 Source: OCTA



ALISO CREEK RESTORATION PROJECT

M2: ENVIRONMENTAL MITIGATION PROGRAM

OCTA's M2 Freeway Environmental Mitigation Program (EMP) provides comprehensive mitigation to offset the environmental impacts of the 13 Measure M2-funded freeway projects.

The EMP presents a comprehensive mitigation approach that provides not only replacement habitat, but also the opportunity to improve the overall functions and value of sensitive biological resources throughout Orange County.

Based on the evaluation of mitigation opportunities in the County, priority conservation areas were identified, including candidate parcels and properties that could be considered for wilderness preservation purposes. Properties were then selected for acquisition and restoration. These properties are protected to enhance wildlife connectivity, safeguard sensitive species and preserve substantial parcels of valuable habitat.



Western pond turtle

ABOUT ALISO CREEK

The Aliso Creek restoration project is located in the City of Aliso Viejo within the 4,000-acre Aliso and Wood Canyons Wilderness Park, owned and operated by the County of Orange. The project, managed by the Laguna Canyon Foundation, takes place within and around Aliso Creek. The northernmost boundary of the project is Moulton Parkway and the project boundaries extend southward to approximately 500 feet south of the junction of Alicia Parkway and Avila Road.

The wilderness park is located near the Trabuco Creek Wildlife Linkage and is a part of the 19,000-acre Laguna Coast Greenbelt and the 38,000-acre Nature Preserve of Orange County. The restoration site contains the following general vegetation types:

- Willow scrub
- Riparian woodland
- Coastal sage scrub

The following listed and non-listed special status species have been reported from the wilderness park:

- Least Bell's vireo
- Coastal California gnatcatcher
- Orange-throated whiptail
- Thread-leaved brodiaea
- Big-leaved crownbeard
- Catalina mariposa lily
- Western pond turtle

The restoration goal is to improve habitat quality for riparian plants and wildlife species by increasing native habitat diversity, density, and structure within 55 acres of Aliso Creek and associated regions.



AGUA CHINON AND BEE FLAT CANYONS RESTORATION PROJECT

M2: ENVIRONMENTAL MITIGATION PROGRAM

OCTA's M2 Freeway Environmental Mitigation Program (EMP) provides comprehensive mitigation to offset the environmental impacts of the 13 Measure M2-funded freeway projects.

The EMP presents a comprehensive mitigation approach that provides not only replacement habitat, but also the opportunity to improve the overall functions and value of sensitive biological resources throughout Orange County.

Based on the evaluation of mitigation opportunities in the County, priority conservation areas were identified, including candidate parcels and properties that could be considered for wilderness preservation purposes. Properties were then selected for acquisition and restoration. These properties are protected to enhance wildlife connectivity, safeguard sensitive species and preserve substantial parcels of valuable habitat.



ABOUT AGUA CHINON AND BEE FLAT CANYONS

The Agua Chinon and Bee Flat Canyons restoration project is located east of the city of Irvine in unincorporated Orange County. Although this was funded as one project, it involves restoring lands within two distinct geographical areas, Agua Chinon and Bee Flat Canyons.

The Agua Chinon mitigation site includes acreage owned by the OC Parks and The Irvine Company. The Bee Flat canyon site is owned by the OC Parks. Both sites are being managed by the Irvine Ranch Conservancy.

These restoration sites are within the Central and Coastal Subregion Habitat Reserve System created under the Orange County Natural Communities Conservation Plan/Habitat Conservation Plan.

The restoration sites are located within large areas of open space. The Cleveland National Forest is located east of the area, while there is commercial and residential development across State Route 241 to the west of the site. The restoration site contains the following general vegetation types:

- Grassland
- Coastal sage scrub
- Riparian

The following listed and non-listed special status species have been reported from the sites:

- Least Bell's vireo
- Coastal California gnatcatcher
- Orange-throated whiptail
- Coastal cactus wren
- Many-stemmed dudleya
- Intermediate mariposa lily

The restoration goal is to enhance degraded biological habitat areas in order to help protect these lands from invasive plant species and fire within 90 acres of Agua Chinon and Bee Flat Canyons.



COMMITTEE TRANSMITTAL

September 11, 2017

To: Members of the Board of Directors

From: *Lu*
Laurena Weinert, Clerk of the Board

Subject: Measure M2 Performance Assessment Report Update

Executive Committee Meeting of September 7, 2017

Present: Chairman Hennessey, Vice Chair Bartlett, and Directors Do, Donchak, and Shaw

Absent: Directors Murray and Nelson

Committee Vote


This item was passed by the Members present.

Committee Recommendation

Receive and file as an information item.



September 7, 2017

To: Executive Committee
From: Darrell Johnson, Chief Executive Officer 
Subject: Measure M2 Performance Assessment Report Update

Overview

Measure M2 includes a requirement for a performance assessment to be conducted every three years to evaluate the efficiency, effectiveness, economy, and program results of the Orange County Transportation Authority in delivering Measure M2. The third of these performance assessments, covering the period of July 1, 2012 through June 30, 2015, was completed and presented to the Board of Directors on August 8, 2016. This report is the final update on the action items from the findings in the performance assessment.

Recommendation

Receive and file as an information item.

Background

On November 7, 2006, the voters of Orange County approved the Measure M2 (M2) Transportation Investment Plan (Plan) with a 69.7 percent vote. The Plan provides a revenue stream, from April 1, 2011 through March 30, 2041, to fund a broad range of transportation improvements. The M2 Ordinance specifies specific safeguards and requirements that are to be followed.

Ordinance No. 3 states: "A performance assessment shall be conducted at least once every three years to evaluate the efficiency, effectiveness, economy, and program results of the Authority in satisfying the provisions and requirements of the investment summary of the Plan, the Plan, and the ordinance."

The third triennial performance assessment, covering the time period of July 1, 2012 through June 30, 2015, was presented to the Orange County Transportation Authority (OCTA) Board of Directors (Board) on August 8, 2016, as well as to the Taxpayers Oversight Committee on June 14, 2016.

The performance assessment included nine findings, and staff provided the Board with an action plan to implement in response to the findings, with a commitment to be completed by the end of the 2017 calendar year.

Discussion

The key objectives of the third assessment were as follows: to evaluate the status of findings from the second M2 performance assessment and the effectiveness of changes implemented, assess the performance of OCTA on the efficient delivery of M2 projects and programs, and identify and evaluate any potential barriers to success, including opportunities for process improvements.

Overall, the fiscal year (FY) 2012-13 through FY 2014-15 assessment commended OCTA's commitment to the effective and efficient management and delivery of the M2 Program. In general, the assessment report found that OCTA has made significant progress in the implementation of the M2 Program on all plan elements over the last three years.

As part of the report, there were nine findings related to the execution of the elements outlined in the scope of work. The findings either commented on appropriateness of actions to date or provided recommendations for improvements. There were no major recommendations that suggested there should be a change in the direction of OCTA's actions.

Below are the key areas the recommendations focused on, along with a summary of the action that staff has implemented.

- To ensure successful freeway program delivery, the assessment identified a need for OCTA and the California Department of Transportation (Caltrans) to work together on a mutually agreed upon freeway delivery schedule. The assessment recommended seeking inclusion of local measure projects in Caltrans annual Contract for Delivery. Caltrans views the Contract for Delivery arrangement as an internal mechanism to ensure timely delivery of state-funded projects and, as such, not the appropriate tool to address delivery of Measure-funded projects. Accordingly, OCTA, neighboring self-help counties, and Caltrans have agreed to work together to create a master agreement demonstrating the commitment of the state to support the delivery of sales tax-funded program of projects.

- The assessment also recommended language should be developed to define “betterments” within freeway project cooperative agreements. Staff has included language related to betterments in the Interstate 405 project cooperative agreement between Caltrans and OCTA. In addition, staff has incorporated a step in the development of cooperative agreements with third party agencies to include a discussion on betterments. When possible, the cooperative agreement will define betterments and what is and is not included in the project scope.
- To continue to engage in discussions increasing awareness of M2, staff has made enhancements to the M website to provide more comprehensive information. Additionally, staff has launched the development of a new identity for M2 to increase awareness of our local sales tax measure. The proposed OC Go logo, as well as cohesive color scheme across all projects and modes within the M Program, is intended to increase awareness and promote a better understanding of how the transportation sales tax measure is put to use.
- To continue to monitor ongoing expenditures for administrative expenses, staff continues to closely monitor the one percent administrative salaries and benefits charges on a quarterly basis and takes corrective action as needed. Additionally, administrative salaries and benefits expenses are reported in the M2 quarterly reports to ensure transparency and management of the one percent cap. This level of ongoing monitoring will continue throughout the life of M2.

A table outlining the overall M2 Performance Assessment findings, as well the completed action, can be found in Attachment A.

Summary

The third Measure M2 Performance Assessment, as required by Ordinance No. 3, was completed and presented to the Board on August 8, 2016. Nine findings/recommendations were made to which staff responded and developed an action plan. Since then, all nine findings have been addressed and completed. A summary of all findings and action items is included in Attachment A.

Attachment

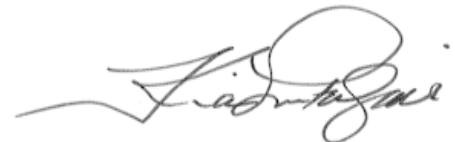
- A. July 2012 – June 2015 Measure M2 Performance Assessment Response to Findings

Prepared by:



Tamara Warren
Manager, Program Management Office
(714) 560-5590

Approved by:



Kia Mortazavi
Executive Director, Planning
(714) 560-5741

July 2012 – June 2015 M2 Performance Assessment Response to Findings

	Summary of Findings/Recommendations	OCTA Action
1.	<p>Conflicts between OCTA’s commitment to its constituents and the state’s priorities (e.g., greenhouse gas reductions) have led to delays in project definition and environmental processes.</p> <p>Continuing to partner with Caltrans at the technical level for system planning and modeling, and throughout all project phases can identify projects where advance coordination could help mitigate schedule delays while the agencies reconcile goals and objectives.</p> <p>An example of this partnership is for OCTA to work with Caltrans and explore the possibility of including OCTA projects on Caltrans list of approved projects in the fiscal year contract for delivery.</p>	<p>Underway - Staff continues to partner with Caltrans District 12 at all levels during project delivery. To ensure successful freeway program delivery, staff initiated discussions with Caltrans to create a Local Contract for Delivery. Caltrans believes that Contract for Delivery is not suited for this purpose. As a result, neighboring self-help counties and Caltrans agreed to work together to create a master agreement, demonstrating a commitment from both agencies to deliver local measure freeway projects.</p>
2.	<p>Increasing occurrences of changes and/or growth in a project’s scope have been issues during the design and development phases. Sometimes, requests for modification to constructed elements were requested during the final Caltrans safety and maintenance walk through.</p> <p>Include language that defines the term “betterment” in project-specific third-party agreements with relevant agencies. Particular agreements may define how betterments will be negotiated, if appropriate.</p>	<p>Complete - Staff included language related to “betterments” in the recently completed I-405 project cooperative agreement between Caltrans and OCTA. Staff has incorporated a step in the development of cooperative agreements with third party agencies to include a discussion on betterments. As appropriate, cooperative agreements will define betterments and what is, and is not, included in the project scope.</p>
3.	<p>The M2 PMO performance has matured and continued to perform at a high degree of professionalism and responsiveness. With the arrival of two new program analysts, OCTA is poised to oversee the growing program more fully, such as with more comprehensive (recently redesigned) quarterly reports and through deeper involvement in project management review and analysis.</p> <p>OCTA should communicate PMO staff member roles and responsibilities, which should define backup and mutual support activities. Clear roles should be communicated across divisions to help promote coordination and communication.</p>	<p>Complete - With the addition of staff, this has allowed the PMO department to expand its role within the organization. The PMO reached out to each of the Executive Directors to seek input on how the department can further assist them in their M2 delivery goals.</p> <p>Additionally, communication with partner agencies has taken place and is ongoing to ensure lessons learned are shared.</p> <p>While PMO staff roles and responsibilities are defined, PMO staff is also cross trained to allow flexibility and respond to fluctuating workflows.</p>

July 2013 – June 2015 M2 Performance Assessment Response to Findings

	OCTA should broaden the PMO by expanding participation with external stakeholder groups, think strategically about building awareness, build stronger relationships with other self-help county partner agencies, and increase collaboration with Caltrans.	
4.	<p>PMO staff have a strong base of skills to administer the M2 Program, including work experience across other OCTA divisions and history dating back to the early days of the PMO. Periodic training could enhance the PMO and key stakeholders, strengthening OCTA commitment to its broad mission.</p> <p>OCTA should implement the program management academy in the short term. Such a program will benefit new staff and strengthen collaboration between the PMO, Finance and Administration Division, and the respective project/program managers. The M2 Ordinance and policy administration strategies should be shared as part of the training. In addition, OCTA should consider project management professional training for all PMO staff.</p>	<p>Underway - The most recent program management academy took place in late 2013 and is designed to be conducted every few years based on need due to staff and/or policy changes. Following discussion with the Executive Directors, the PMO intends to conduct the next academy in spring 2018.</p> <p>The PMO staff continues to look for training opportunities to keep up with current program management techniques and tools. Staff is enrolled in a project management academy course in fall 2017.</p>
5.	OCTA should continue to monitor ongoing expenditures for administrative expenses, including labor charges by project, and determine whether any changes are required in the future.	Ongoing - The PMO and Executive Directors from each of the divisions meet quarterly and review labor charges to ensure that project-specific administrative costs are charged appropriately. Additionally, administrative expenses are reported in the M2 quarterly reports to ensure transparency and management of the one percent administrative cap. This level of ongoing monitoring will continue throughout the life of M2.
6.	<p>OCTA regularly evaluates the optimum level of debt financing and the timing of debt issuance required to deliver the M2 Program in a cost-effective manner. OCTA continues to seek alternate sources of funding to supplement M2 funds when available and has processes in place to periodically update its cash-flow needs for the M2 Program.</p> <p>In addition to evaluating the optimum level of debt to issue and timing of debt issuance to deliver the M2 Program, OCTA should continue efforts to seek alternate sources of funding to supplement M2 funds.</p>	Ongoing - The M2 cash flows are updated annually in response to the ever-changing social, political, economic environment, and most important to ensure the program is financially sustainable to be delivered as promised to the voters of Orange County. Reviewing and reporting on current and future needs for debt financing is part of these updates, along with separate plans of finance taken to the Board for consideration whenever new debt is required. Annual updates are done through the Comprehensive Business Plan updates, as well as through M2 Plan updates such as the Next 10 Plan.

July 2013 – June 2015 M2 Performance Assessment Response to Findings

7.	<p>Since three local agencies failed to request timely use of funds during the semi-annual review process, they did not receive their full allocation.</p> <p>Overtime, OCTA should work to identify patterns developing by local agencies neglecting to request timely use of funds extensions and address the underlying root causes.</p>	<p>Complete - Staff continues to ensure cities are aware of the impending deadline well in advance of expiration. Enhancements to the OC Fundtracker database has enabled the Local Programs' staff to closely monitor and track the progress of over 400 projects. Standard operating procedures were developed, and a new deadline tracking process was implemented in time for fall 2017 semi-annual review. Notifications to local agencies of at-risk projects goes out 180 days or more prior to the semi-annual review.</p>
8.	<p>Some external stakeholders noted that there is a lack of association of M2 with its projects, programs, and funding within their organizations, and among the general public.</p> <p>Guidelines or a media toolkit can help standardize and coordinate branding and awareness efforts to educate the general public and stakeholders to better highlight M2 projects and programs at project sites.</p>	<p>Underway - Staff has made enhancements to the M website to provide more comprehensive information on the program. Additionally, staff is working on a new identity for M2 to increase awareness of our local sales tax measure. The new identity, once approved, as well as cohesive color scheme across all projects and modes within the M Program, is intended to increase awareness and a better understanding of how the transportation sales tax measure is put to use.</p>
9.	<p>Small cities reported not having sufficient staff to review all M2 materials and documents.</p> <p>To make it more easy and accessible for constituents and city staff to be informed, OCTA can develop an information card for each M2 program and project.</p>	<p>Complete - Staff created new pages related to funding, project/program fact sheets and webpages on the OCTA website. Staff also reorganized existing content and added new pages and/or information to make it easier for cities and constituents to understand and obtain information from a cohesive source. Additionally, Staff performs regular quality control checks on M2 project pages, fact Sheets, and Measure M overview pages.</p> <p>OCTA continues to conduct regular workshops to ensure local agencies are equipped with all the necessary tools and to maintain their eligibility for funding, as well as apply for new project grants.</p>

M2 – Measure M2
 OCTA – Orange County Transportation Authority
 Caltrans – California Department of Transportation
 I-405 – Interstate 405
 PMO – Program Management Office



COMMITTEE TRANSMITTAL

September 11, 2017

To: Members of the Board of Directors

From: *Lu*
Laurena Weinert, Clerk of the Board

Subject: Measure M2 Quarterly Progress Report for the Period of
April 2017 Through June 2017

Executive Committee Meeting of September 7, 2017

Present: Chairman Hennessey, Vice Chair Bartlett, and Directors Do,
Donchak, and Shaw

Absent: Directors Murray and Nelson

Committee Vote

This item was passed by the Members present.


Committee Recommendation

Receive and file as an information item.



September 7, 2017

To: Executive Committee

From: Darrell Johnson, Chief Executive Officer 

Subject: Measure M2 Quarterly Progress Report for the Period of April 2017 Through June 2017

Overview

Staff has prepared a Measure M2 quarterly progress report for the period of April 2017 through June 2017, for review by the Orange County Transportation Authority Board of Directors. This report highlights progress on Measure M2 projects and programs and will be available to the public via the Orange County Transportation Authority website.

Recommendation

Receive and file as an information item.

Background

On November 7, 2006, Orange County voters, by a margin of 69.7 percent, approved the Renewed Measure M Transportation Investment Plan (Plan) for the Measure M2 (M2) one half-cent sales tax for transportation improvements. The Plan provides a 30-year revenue stream for a broad range of transportation and environmental improvements, as well as a governing ordinance which defines all the requirements for implementing the Plan. Ordinance No. 3 designates the Orange County Transportation Authority (OCTA) as responsible for administering the Plan and ensuring that OCTA's contract with the voters is followed.

OCTA is committed to fulfilling the promises made in M2. This means not only completing the projects described in the Plan, but adhering to numerous specific requirements and high standards of quality called for in the measure, as identified in the ordinance. Ordinance No. 3 requires that quarterly status reports regarding the major projects detailed in the Plan be brought to the OCTA Board of Directors (Board). All M2 progress reports are posted online for public review.

Discussion

This quarterly report reflects current activities and progress across all M2 programs for the period of April 1, 2017 through June 30, 2017 (Attachment A).

The quarterly report is designed to be easy to navigate and user friendly, reflecting OCTA's Strategic Plan transparency goals. The report includes budget and schedule information included in the Capital Action Plan, Local Fair Share Program, and Senior Mobility Program payments made to cities this quarter, as well as total distributions from M2 inception through June 2017.

Additionally, Attachment A includes a summary of the Program Management Office activities that have taken place during the quarter. Two areas in particular are highlighted below.

Next 10 Delivery Plan

On November 14, 2016, the Board adopted the Next 10 Delivery Plan, which provides guidance to staff on delivery of M2 projects and programs between 2017 and 2026. During the Next 10 time period, more than \$6 billion in transportation improvements promised to the voters in M2 are to be completed or underway by 2026. Pages three through six of Attachment A (in every M2 quarterly report) include OCTA's progress on delivering the ten objectives identified in the Next 10 Plan. In summary, all ten objectives are moving forward toward delivery as adopted by the Board.

Also part of the Next 10 Plan adoption, the Board directed staff to conduct a market analysis to analyze current resource demands and provide information on the impact on OCTA's delivery of M2 projects. Staff will receive a draft report in August 2017, and results of the analysis will be presented to the Board next quarter.

Next 10 Sales Tax Forecast Update

OCTA is currently receiving presentations from our contracted agencies who provide an annual Orange County sales tax forecast update. During the quarter, MuniServices and the University of California, Los Angeles presented updates on the annual forecast and economic outlook to the Finance and Administration Committee. To date, sales tax revenues appear to be lower than was forecasted last year when the Next 10 Plan was adopted. Once all presentations are complete and the fourth quarter sales tax actuals are finalized, an updated forecast will be provided to the Board. This will likely require a Next 10 Plan update which will be brought to the Board for consideration in the fall.

Progress Update

The following highlights M2 Program accomplishments that occurred during the fourth quarter:

- Final design plans for Interstate 5 (I-5) between State Route 55 (SR-55) and State Route 57 were completed, and the California Department of Transportation (Caltrans) is preparing the bid package to list. (Project A)
- The 95 percent design plans for I-5 between State Route 73 (SR-73) and Oso Parkway/Avery Parkway interchange were submitted to Caltrans on June 14, 2017. Staff expects to submit funding documents to Caltrans in July 2017. (Project C and Project D)
- Construction activities on I-5 between Avenida Vista Hermosa and Pacific Coast Highway are wrapping up. While construction is scheduled to be complete by the end of July 2017, the added carpool lanes will open in early 2018, after project segments on either side are complete. (Project C and Project D)
- Environmental work began in May 2017 for the I-5, El Toro Road Interchange. (Project D)
- The supplemental draft project report and environmental document for the SR-55 between Interstate 405 (I-405) and I-5 was completed and circulated for public review and comment. A public hearing took place on April 20, 2017. On June 12th, the Board executed a cooperative agreement with Caltrans and issued a request for proposals for the design phase. (Project F)
- On June 26, the Board approved the Transportation Infrastructure Finance and Innovation Act (TIFIA) loan agreement between OCTA and the United States Department of Transportation (USDOT) for the I-405 Improvement Project between SR-73 and Interstate 605. On June 29, the USDOT Build America Bureau, Federal Credit Council on Finance recommended the TIFIA loan for approval by the Secretary of Transportation. (Project K)
- On April 10, 2017, the Board approved funding for 13 Regional Capacity projects, in an amount totaling \$32.24 million, and approved funding for five Regional Traffic Signal Synchronization projects, totaling \$2.5 million. (Project P)

- The Lakeview Avenue Grade Separation Project was opened to motorists on June 5, 2017. (Project O)
- The Board awarded the construction contract on June 12, 2017, for the Orange Metrolink Station Parking Structure. (Project R)
- Design plans for the Placentia Station have been completed at 90 percent and are being reviewed. A contract for construction management services is expected to be in place by August 2017, so a required constructability review can occur. (Project R)
- Based on a Risk Workshop, and recommendations by the Federal Transit Administration (FTA) for the OC Streetcar, an updated cost estimate and funding plan were presented to and approved by the Board on May 22, 2017. The funding request, as well as extensive project readiness documents required for the application, were submitted to FTA in late May 2017. (Project S)
- On June 19, 2017, the United States Fish and Wildlife Service and the California Department of Fish and Wildlife finalized the issuance of their respective biological opinion, findings, and associated permits, as well as signed the OCTA M2 Natural Community Conservation Plan/Habitat Conservation Plan Implementing Agreement. This significant milestone was achieved following years of collaboration. (Environmental Mitigation Program)
- The Taxpayer Oversight Committee unanimously found that OCTA is proceeding in accordance with the M2 Transportation Ordinance and Investment Plan, and that Measure M is being delivered as promised to voters for the 26th consecutive year.

Caltrans and OCTA continue to work together to move projects forward. Looking ahead, Caltrans' strategic policy direction now includes a focus on enhancements of high-occupancy vehicle lanes. This policy shift needs to be closely coordinated with the remaining M2 freeway projects. OCTA continues to advise Caltrans that new state policies need to take voter commitments into consideration and be implemented as additive projects to M2 improvements where appropriate.

Another challenge that the program has faced is the delay in previously programmed M2 projects. With the passage of the state transportation funding bill, SB 1 (Chapter 5, Statutes of 2017), staff is working with the California Transportation Commission (CTC) to bring funding for M2 projects back to the original schedule and also to understand how M2 projects and programs may benefit from SB 1.

Staff is currently preparing the 2018 State Transportation Improvement Program (STIP) application to the CTC. First priority of all funding sources is to fulfill commitments to M2/Next 10 projects, and to maintain OCTA's existing assets in a state of good repair. Consideration will also be given to use state and federal funds for projects that are complementary to M2 projects. The 2018 STIP funding application will be brought to the Board in September.

A critical factor in delivering M2 freeway projects is to ensure project scope, schedules, and budgets remain on target. Project scope increases, schedule delays, and resulting cost increases can quickly affect project delivery and have a cascading effect on other activities. In light of the recent reduction in the sales tax revenue forecast, this factor is even more significant.

To address this issue, staff worked with our regional partners and gained support from the Director of Caltrans, Malcolm Dougherty, in the creation of a master agreement between regional transportation planning agencies (OCTA) and Caltrans. The master agreement is intended to acknowledge the importance and commitment by both agencies to the delivery of local measure projects focusing on maintaining budget and schedule. Development of the agreement is under way, and staff will report on the progress next quarter.

Project delivery is monitored closely, and progress, as well as challenges, are presented to the Board through these quarterly staff reports, individual project staff reports, as well as through the Capital Action Plan quarterly performance metrics reports from the Capital Programs Division.

Summary

As required by the M2 Ordinance No. 3, a quarterly report covering activities from April 2017 through June 2017 is provided to update progress in implementing the Plan. The above information and the attached details indicate significant progress on the overall M2 Program. To be cost-effective and to facilitate accessibility and transparency of information available to stakeholders and the public, the M2 quarterly progress report is presented on the OCTA website. Hard copies are available by mail upon request.

Attachment

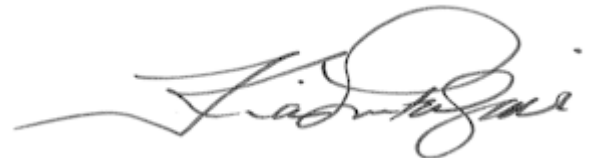
- A. Measure M2 Progress Report – Fourth Quarter of Fiscal Year 2016-17 – April 1, 2017 through June 30, 2017

Prepared by:

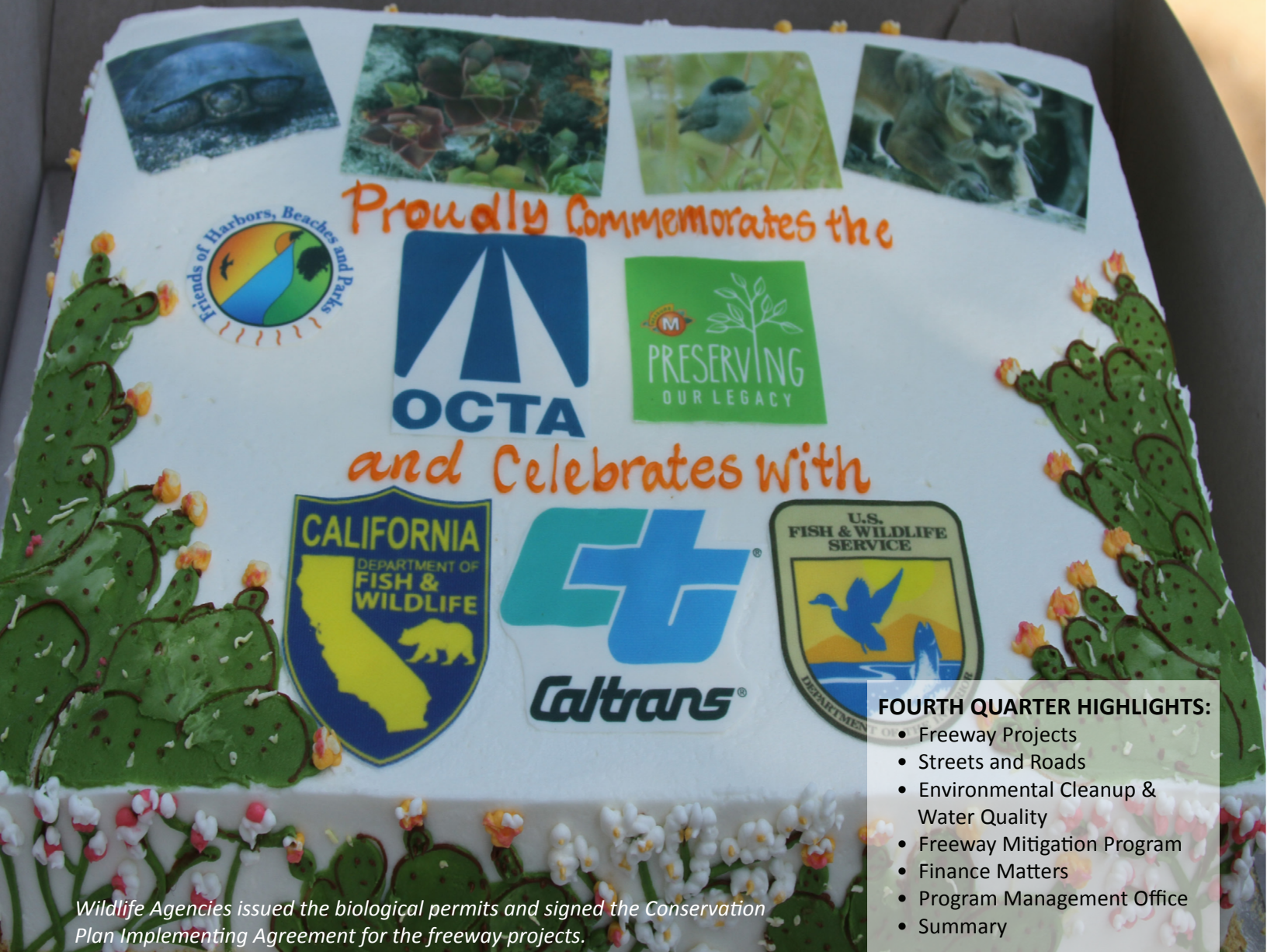


Tamara Warren
Manager, Program Management Office
(714) 560-5590

Approved by:



Kia Mortazavi
Executive Director, Planning
(714) 560-5741



Wildlife Agencies issued the biological permits and signed the Conservation Plan Implementing Agreement for the freeway projects.

FOURTH QUARTER HIGHLIGHTS:

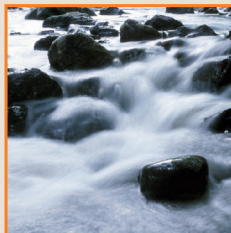
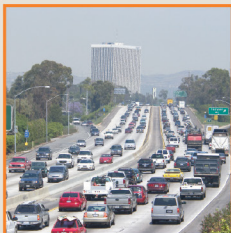
- Freeway Projects
- Streets and Roads
- Environmental Cleanup & Water Quality
- Freeway Mitigation Program
- Finance Matters
- Program Management Office
- Summary

Measure M2

Progress Report



Fourth Quarter of Fiscal Year 2016-17
 April 1, 2017 through June 30, 2017





SUMMARY

As required by the Measure M2 (M2) Ordinance No. 3, a quarterly report covering activities from **April 1, 2017 through June 30, 2017** is provided to update progress in implementing the M2 Transportation Investment Plan.

To be cost effective and to facilitate accessibility and transparency of information available to stakeholders and the public, the M2 progress report is presented on the Orange County Transportation Authority (OCTA) website. Hard copies are mailed upon request.



Cover photo shown is the cake created to celebrate with the environmental community a major milestone for the Freeway Program. On June 19, 2017, the Wildlife Agencies issued the biological permits and signed the Conservation Plan Implementing Agreement. Receipt of these permits represent the culmination of years of collaboration.

Measure M2

Progress Report

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M2 Project Schedules



Conceptual



Environmental



Design, Advertise, & Award



Design-Build



Construction



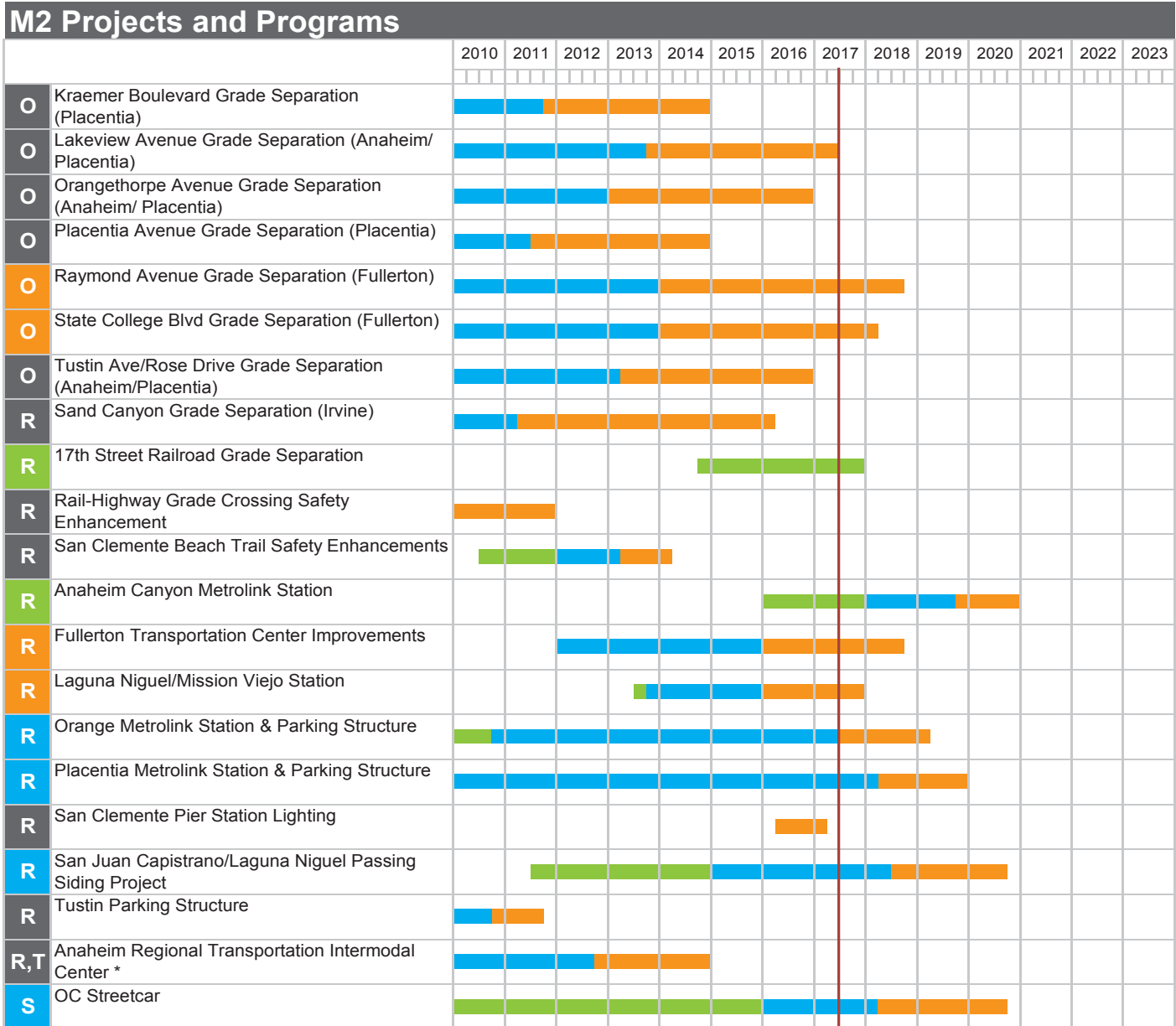
Completed

M2 Projects and Programs

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
A	I-5, SR-55 to SR-57														
B	I-5, I-405 to SR-55 (Further Schedule TBD)														
C,D	I-5, Avenida Pico to Avenida Vista Hermosa														
C	I-5, Avenida Vista Hermosa to Pacific Coast Highway														
C	I-5, Pacific Coast Highway to San Juan Creek Road														
C,D	I-5, SR-73 to Oso Parkway/Avery Parkway Interchange														
C,D	I-5, Oso Parkway to Alicia Parkway/La Paz Road Interchange														
C	I-5, Alicia Parkway to El Toro Road														
D	I-5, El Toro Interchange (Further Schedule TBD)														
D	I-5, Ortega Interchange (Complete)														
E	SR-22, Access Improvements (Complete)														
F	SR-55, I-405 to I-5														
F	SR-55, I-5 to SR-91 (Further Schedule TBD)														
G	SR-57 NB, Katella Avenue to Lincoln Avenue (Complete)														
G	SR-57 NB, Orangethorpe Avenue to Yorba Linda Boulevard (Complete)														
G	SR-57 NB, Yorba Linda Boulevard to Lambert Road (Complete)														
G	SR-57 NB, Lambert Rd to Tonner Canyon Rd (Further Schedule TBD)														
G	SR-57, Orangewood Ave to Katella Ave (Further Schedule TBD)														
H	SR-91 WB, I-5 to SR-57 (Complete)														
I	SR-91 WB, SR-55 to Tustin Avenue Interchange (Complete)														
I	SR-91, SR-55 to SR-57 (Further Schedule TBD)														
J	SR-91, SR-55 to SR-241 (Complete)														
J	SR-91, SR-241 to SR-71 (Complete)														
J	SR-91, Sr-241 to I-15 (Env. Cleared/Further Schedule TBD)														
K	I-405, SR-55 to I-605														
L	I-405, I-5 to SR-55 (Further Schedule TBD)														
M	I-605, Katella Interchange (Further Schedule TBD)														



Continued from the previous page...



*Projects managed by local agencies.

Project K is a Design-Build project, with some overlap in activities during phases. Phase work can be concurrent.

Shown schedules are subject to change.

Measure M2

Progress Report

M2 DELIVERY RISK UPDATE



Key:

- One to Watch
- At Risk

M2 Delivery Risk Update

This section discusses the risks and challenges related to overall Measure M2 and Next 10 Plan delivery that the Measure M Program Management Office is watching – complete with associated explanations and proposed actions. The below risks have been identified in the Board-adopted Next 10 Delivery Plan.

Delivery Risk	Explanation	Proposed Action
Financial		
1	Continuation of a lower-than-projected M2 revenue forecast or a reduction in external revenue assumptions would impact delivery.	<p>The original 2005 projection was \$24.3 billion. The Next 10 Plan is based on the 2016 Board-adopted forecast of \$14.2 billion which has a significant reliance on external funding. The data collection for the 2017 revenue forecast is underway.</p> <p>Continue to actively pursue all available state and federal revenue including Senate Bill 1 (SB 1) funding.</p> <p>Staff is currently reviewing the Next 10 Plan to include updated revenue and costs. A Board update is planned in fall 2017.</p>
2	The inability to scale the Freeway Program to available revenue with large freeway capital projects moving forward in the Next 10 timeframe.	<p>Management of project scopes and schedules is key to the successful delivery of the overall Freeway Program. Given the magnitude of upcoming projects (e.g. Project K), scope changes and any length of delay with associated cost escalation can be impactful and will need to be tightly managed.</p> <p>Staff will work closely with project managers and Caltrans to seek cost-saving measures on freeway projects through changes in design parameters where possible.</p> <p>Tight monitoring of project schedules and scopes will be required to ensure delivery of the entire Freeway Program. OCTA and other neighboring self-help counties are working with Caltrans to create a Master Agreement stating the importance of local project delivery and delivery schedules.</p>
3	Rising cost of operating Metrolink train service.	<p>Operational cost of Metrolink service continues to grow as new regulations are imposed, such as Positive Train Control, track-sharing arrangements with Burlington Northern Santa Fe, and new locomotive requirements.</p> <p>The passage of SB 1 provides a small source of additional revenues to help fund Metrolink Operations. In addition, Project R revenues will be reevaluated as part of the Next 10 Plan Update. Staff will continue to work closely with Metrolink and our partners to ensure cost increases are minimized while service is optimized.</p>
4	Timeframe for establishment of an endowment fund for long-term management of seven conservation properties (Preserves), as part of the Freeway Environmental Mitigation Program (EMP), may be extended.	<p>A portion of the annual revenues for the EMP will be dedicated to the endowment deposits. If sales tax revenues continue to decline, it may take longer to establish the endowment.</p> <p>Staff will continue to engage state and federal resource agencies to minimize management costs for the Preserves. Timing for the establishment of the endowment in the prescribed ten-to-twelve year period will be reevaluated as part of the Next 10 Plan Update. The first deposit of \$2.9 million to the endowment was made in March 2017.</p>

Continues on the next page...

Measure M2

Progress Report

M2 DELIVERY RISK UPDATE



Continued from previous page...

Delivery Risk	Explanation	Proposed Action
Organizational		
5	Availability of specialized staff, given the scope of Right-of-Way (ROW) activities for various freeway construction activities.	Timely ROW acquisition and utility clearance has proven to be a key factor in reducing risk on construction projects. Early acquisition is challenged by the heavy demand on Caltrans' ROW resources. This is further challenged by a change in meeting frequency by the California Transportation Commission, a necessary step in ROW settlement.
		Expert and timely coordination between OCTA and Caltrans is imperative to manage this risk. Staff is currently working with Caltrans to ensure ROW resource needs are met through determining project lead responsibility for projects as they move forward. If resource issues become a problem, OCTA could consider taking full responsibility for ROW activities.
6	New operational responsibilities with both the I-405 Express Lanes and OC Streetcar	With the implementation of both the I-405 Express Lanes and the OC Streetcar service, OCTA will be increasing its overall role in operations.
		OCTA holds a strong track record in operating various transportation systems including the 91 Express Lanes and both a fixed and demand-based bus network. Additionally, OCTA will look to augment staff's capabilities to provide guidance for operating the OC Streetcar.
Policy		
7	New statewide directives creating additional hurdles for the Freeway Program in particular.	With new statewide directives focused on greenhouse gas reductions, it will be more difficult to environmentally clear the remaining M2 general purpose lane projects.
		OCTA will need to ensure that when freeway improvement projects are reviewed for environmental clearance, they are viewed as part of a larger suite of transportation improvements.
	Additionally, within the recently completed Caltrans managed lanes study, inclusion of managed lanes is suggested for M2 project corridors where the promise to the voters is the addition of a general purpose lane. Projects currently in the environmental phase are potentially at risk.	OCTA staff will work closely with Caltrans to emphasize the importance of keeping the promise to the voters.
Market		
8	Major capital work underway in the Southern California region impacting OCTA's ability to secure resources needed for project and program delivery.	Competition for available resources for capital projects in the Southern California region has increased with the major capital work currently underway in Riverside, Los Angeles, and San Diego County. For future projects going forward, engineers, ROW experts, and materials will be in higher demand.
		A market research analysis is currently underway. The analysis will evaluate staffing and resource needs to implement the Next 10 Plan and help guide OCTA in navigating the bidding environment. Any recommendations, as a result of the analysis, requiring modifications to the delivery plan will be brought to the Board for action.

Measure M2

Progress Report
NEXT 10 UPDATE



Next 10 Plan Update

Contact: Tami Warren, PMO Manager
(714) 560-5590

On November 14, 2016, the Board of Directors (Board) approved the Next 10 Delivery Plan, a ten-year plan that outlines projects and programs for all modes of transportation to be delivered on an expedited schedule between 2017 and the year 2026. The plan identified ten deliverables for what is to be accomplished, with the overarching goal of successfully delivering the M2 Program by 2041 as promised.

Next 10 revenue, expense, and schedule sequencing assumptions have been incorporated into the M2 cash flow model. Tight monitoring of cash flow assumptions versus actual revenue, expense, and schedule activity is underway using a tracking mechanism created for this purpose. This quarter, OCTA's contracted forecasting agencies began providing their 2017 Measure M2 30-year economic outlook for taxable sales presentations. Presentations to the Finance Committee by each agency are scheduled to conclude in August. While final sales tax receipts for FY 2016-17 have not been received, the forecasting agencies' economic outlook provided to date, indicate further decline in sales tax collections. Staff is currently reviewing the Next 10 Plan and preparing an update planned to go to the Board in the fall of 2017.

Next 10 Plan Deliverables

1. Deliver \$3 billion of freeway improvements promised in M2020 (Projects A-M).

The M2 freeway program currently consists of 27 projects or project segments. At the point of Next 10 adoption, nine were already complete, and another nine designated to be complete within the Next 10 time-frame. Together, the nine segments designated for completion make up the \$3 billion delivery promise. Segments to be complete by 2026 include: three segments of I-5 between Avenida Pico and San Juan Creek Road (Project C) which are currently in construction, one project on I-405 between SR-55 and I-605 (Project K) in the Design-Build phase, another four segments on I-5 (one between SR-55 and SR-57 and the other three between SR-73 and El Toro Road) that are in design, and one segment on SR-55 (between I-405 and I-5) that is in the environmental phase. For more details, see previous page (Project Schedules) and the project updates contained in the following pages.

2. Invest approximately \$1.2 billion more in revenues, bringing the completed Freeway Program improvements to \$4.2 billion (Projects A-M).

The final nine remaining project segments (of the 27 total) are on track to be environmentally cleared by 2020, making them "shelf ready" for future advancement as revenues become available. The Next 10 Plan designated another \$1.2 billion (in addition to the \$3 billion promised above) toward moving one or two projects from the nine into construction by 2026. Congestion levels, readiness, and cost risk are factors that will determine which environmentally cleared projects will be recommended to the Board to advance into the construction phase. Project I (between SR-55 and SR-57) meets the above criteria and was designated as a priority project by the Board in the

Continued from previous page...

Next 10 Plan.

3. Allocate \$1 billion, with \$400 million in competitive funding to local jurisdictions to expand roadway capacity and synchronize signals (Project O and P) and \$630 million in flexible funding to local jurisdictions to help maintain aging streets or for use on other transportation needs, as appropriate (Project Q).

Since M2 inception, OCTA invested approximately \$263 million in M2 funds into the Regional Capacity Program (Project O), \$72.5 million in Regional Traffic Signal Synchronization Program (Project P), and \$288.5 million in the Local Fair Share Program (Project Q). Since the adoption of the Next 10 Plan, a total of \$44.3 million in Local Fair Share funds have been distributed to local agencies. Final funding recommendations for the 2017 Project O and P call for projects were presented to the Board on April 10, 2017.

a. Complete the remaining three grade separation projects (Project O).

When the Next 10 was adopted, grade separation projects under construction included: Raymond Avenue, State College Boulevard, and Lakeview Avenue. Lakeview Avenue grade separation was completed in June 2017. Construction on Raymond and State College is expected to be complete in summer 2018. To date, the Board has approved \$664 million in committed M2 and external funds for all seven of the OC Bridges Program grade separation projects.

4. Expand Metrolink service between Orange County and Los Angeles County, contingent upon cooperation and funding participation from route partners; complete six rail station improvements (Project R).

The Riverside County Transportation Commission (RCTC), Los Angeles County Metropolitan Transportation Authority (Metro), and OCTA continue to work together to secure approval of a Memorandum of Understanding (MOU) with Burlington Northern Santa Fe (BNSF) Railway, which is necessary to operate train service on BNSF-owned tracks. Metrolink is the lead in the discussions with the BNSF Railway to evaluate the current shared use and indemnification/liability agreements that govern the use of each agency's respective railroad rights of way. Special counsel has been brought in to assist in these discussions.

Within this program, funding is provided for rail corridor and station improvements to accommodate increased train service and commuter use - including station upgrades, parking expansions, and safety enhancements. The Next 10 Plan identifies six projects to be completed by 2026, which include: Laguna Niguel/Mission Viejo Metrolink station Americans with Disabilities Act (ADA) ramps (construction 78% complete), Orange Metrolink station parking structure (construction to begin July 2017), Placentia Metrolink station (construction to begin spring 2018), Anaheim Canyon Metrolink station improvement project (construction to begin late 2019), Fullerton Transportation Center elevators (construction 5% complete), and San Clemente Pier Metrolink/Amtrak station lighting (completed March 2017). For more details, see the project updates contained in the following pages.

5. Complete design, construction and begin operating the OC Streetcar (Project S) and complete the Orange County Transit Vision and the Harbor Corridor Transit Study to guide development of future transit connections (Project S).

OC Streetcar

To date, the Board has approved up to \$306.4 million for the OC Streetcar project, including preliminary studies, environmental, project development and construction. The Federal Transit Administration (FTA) has shown strong

Continued from previous page...

support for this project, as show by ascribing an overall medium-high rating to it in their Fiscal Year 2018 Annual New Starts Report. The full Notice to Proceed for design was issued in February 2016. Approval for entry into the New Starts Engineering phase was obtained from the FTA in January 2017. On May 22, 2017, the Board directed staff to enter into a Full Funding Grant Agreement with the FTA for the OC Streetcar project.

OC Transit Vision

During this quarter the Transit Investment Framework was completed. This document will be used through the remaining steps of the Transit Master Plan process to develop and evaluate recommendations. Also in this quarter, a “Build Your Own System” survey was used to solicit investment priorities from the public and stakeholders. In the next quarter, the project will focus on developing “Transit Opportunity Corridors” and recommendations for short-term bus route changes. Completed project documents can be downloaded from the project website at www.octa.net/octransitvision. The complete OC Transit Vision Plan is expected to be presented to the Board in November 2017.

Harbor Corridor Transit Study

During the quarter, the Harbor Study team completed outreach activities on the draft alternatives and began the final study phase, the evaluation of alternatives. On April 5th the team held the second and final open house and on April 16th the team provided an update to the Santa Ana City Council. The project development team (PDT) held monthly coordination meetings in April and May to finalize the definition of alternatives and discuss the modeling assumptions. In order to provide additional time to finish the model runs, complete the alternatives evaluation, and prepare the draft final report, the schedule for the OCTA Board update was moved from July to September 2017, and the June PDT meeting was rescheduled to August.

6. Provide up to \$120 million in funding to expand mobility choices for seniors and persons with disabilities (Project U).

Since M2 inception, more than \$48 million in Project U funds has been provided for the Senior Mobility Program (SMP), the Senior Non-emergency Medical Transportation Program (SNEMT), and the Fare Stabilization Program. Included in this amount, approximately \$8.4 million has been provided for the SMP, SNEMT, and Fare Stabilization programs since the Next 10 Plan adoption.

7. Support local agency efforts to deliver Board-approved community transit projects and provide grant opportunities for local agencies to implement effective local transit services (Project V).

Since 2013, the Board has approved approximately \$36.86 million to fund 29 community-based transit service projects (22 capital and operations grants and 7 planning grants). Approved projects service areas in 19 cities and the County of Orange: Anaheim, Costa Mesa, County of Orange, Dana Point, Fountain Valley, Garden Grove, Huntington Beach, Irvine, La Habra, Laguna Beach, Laguna Niguel, Lake Forest, Mission Viejo, Newport Beach, Placentia, Rancho Santa Margarita, San Clemente, San Juan Capistrano, Tustin, and Westminster. OCTA receives ridership reports from local agencies on a regular basis to monitor the success of these services against performance measures adopted by the Board. Staff continuously monitors these services to ensure the performance standards are met and provide reports to the Board on a regular basis. Projects that don't meet the standards are brought before the Board with recommendations that include discontinuing service. For more details on program performance and service see page 30.

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8. Allocate \$9 million in funding to improve the top 100 busiest bus stops in Orange County and support the modernization of the bus system to enhance the customer experience (Project W).

Between M2 inception and Next 10 Plan adoption, the Board approved up to \$1,205,666 for supporting 51 city-initiated improvements and \$370,000 for OCTA-initiated improvements. The City of Anaheim postponed development of eight stops and will move forward in a future funding cycle. Of the remaining 43 stops, 10 stops have been completed to date and the remainder are underway. The \$370,000 contribution was invested towards a mobile ticketing application to make it more convenient for bus customers to purchase bus passes, obtain trip information, and board buses by enabling riders to use smart phone devices to display bus passes as proof of payment. Following implementation of the existing projects, staff will work with local agencies to assess future funding needs. Future funding recommendations will be brought to the Board.

9. Ensure the ongoing preservation of purchased open space (Preserves), providing comprehensive mitigation of the environmental impacts of freeway improvements and higher-value environmental benefits in exchange for streamlined project approvals (Projects A-M).

The Freeway Mitigation Program is proceeding as planned, with seven properties (Preserves) acquired (1,300 acres), and 12 restoration projects approved for funding by the Board, totaling approximately 350 acres. These Preserves and restoration projects are folded into the OCTA Natural Community Conservation Plan/Habitat Conservation Plan (Conservation Plan), which contributes mitigation to streamline the permitting process for M2 freeway projects. The program's Conservation Plan and Final Environmental Impact Report and Environmental Impact Statement (EIR/ EIS) were approved by the Board in November 2016. The final permits were approved by the Wildlife Agencies in June 2017. As part of the Conservation Plan process, an endowment is required to be established to pay for the long-term management of the Preserves. As anticipated, the first deposit for the endowment was made in early 2017. Staff will continue to oversee and manage the Preserves until a long-term manager(s) is established. Management of the Preserves includes the development and release of Preserve specific resource management plans. Additionally, staff will monitor the progress of all restoration projects and provide status updates to the Environmental Oversight Committee until each project is implemented.

10. Work with the Environmental Cleanup Allocation Committee (ECAC) to develop the next tiers of water quality programs, with a goal of providing \$40 million in grants to prevent the flow of trash, pollutants, and debris into waterways from transportation facilities. In addition, focus on improving water quality on a regional scale that encourages partnerships among the local agencies as part of the Environmental Cleanup Program (Project X).

Prior to Next 10 adoption, the Board awarded approximately \$45 million for 138 Tier 1 and 22 Tier 2 projects. On March 13, 2017, the Board approved the FY 2017-18 Environmental Cleanup Program Tier 1 call for projects, totaling approximately \$3.1 million. The FY 2017-18 Tier 1 recommendations for funding projects to the Board is anticipated in August 2017. Staff is working with the ECAC and the County of Orange to determine the best timing for the next Tier 2 call based on projected cash flow and local jurisdictions' interest in potential viable Tier 2 projects.



Interstate 5 (I-5) Projects

Project A

I-5, SR-55 to SR-57

Contact: Rose Casey, Highways
(714) 560-5729

Status: 100% Design complete. Caltrans is preparing the Bid package to be Ready to List for Advertisement, expected in the second quarter of Fiscal Year 2017-18

Summary: This project will increase HOV capacity by adding a second HOV lane in both directions along I-5 between SR-55 and SR-57 in Santa Ana. This quarter, the OCTA consultant submitted the 100 percent final design Plans, Specifications, and Estimates (PS&E). Staff is working with the California Department of Transportation (Caltrans) to obtain Office Engineer Acceptance, expected in July 2017. Due to the STIP funding reduction, staff is working with the California Transportation Commission (CTC) as well as evaluating alternative funding to keep this project on schedule and move directly into construction. The OCTA Board is scheduled to approve the OCTA/Caltrans Construction Cooperative Agreement and authorize the release of the Request for Proposals (RFP) for consultant construction management services in July 2017.

Project B

I-5, I-405 to SR-55

Contact: Rose Casey, Highways
(714) 560-5729

Status: Environmental Phase Underway - 64% Complete

Summary: This project will add one general purpose lane in each direction of the I-5 corridor and improve the interchanges in the area between SR-55 and SR-133 (near the El Toro "Y" and I-405) in Tustin and Irvine. The environmental study will consider the addition of one general purpose lane on I-5 between just north of I-405 to SR-55. Additional features of Project B include improvements to various interchange ramps. Auxiliary lanes could be added in some areas and re-established in other areas within the project limits. During the quarter, the consultant continued working on technical studies and obtained approval on a number of technical studies. The final Environmental Document is expected to be complete in October 2018.



Project C & Part of Project D

I-5, Avenida Pico to Avenida Vista Hermosa/Avenida Pico Interchange

Contact: Rose Casey, Highways
(714) 560-5729

Status: Construction Underway - 69% Complete

Summary: This segment adds a carpool lane in each direction on I-5 between Avenida Pico and Avenida Vista Hermosa in San Clemente, and also includes major improvements to the Avenida Pico Interchange (part of Project D), which will also add bicycle lanes in both directions of Avenida Pico. Construction began in February 2015. During the quarter, construction of the bridge and the Avenida Pico retaining wall were completed, and construction of the main line roadway section is ongoing. Construction is scheduled to be 100 percent complete in mid-2018.

I-5, Avenida Vista Hermosa to Pacific Coast Highway

Contact: Rose Casey, Highways
(714) 560-5729

Status: Construction Underway - 99% Complete

Summary: This segment adds a carpool lane in each direction of I-5 between Avenida Vista Hermosa and Pacific Coast Highway (PCH) in San Clemente, and also includes reconstructing on and off ramps at Avenida Vista Hermosa and Camino de Estrella. Construction began in September 2014. During the quarter, landscaping work continued, and signage and electrical systems were installed throughout the project. Construction is scheduled to be 100 percent complete by the end of July 2017. The added carpool lanes will be open to traffic when the segments at either side of this improvement are complete in early 2018. Due to numerous rain delays and some construction related work, this project is marked "red" in the Capital Action Plan, signifying a delay of over three months beyond the original schedule.

I-5, Pacific Coast Highway to San Juan Creek Road

Contact: Rose Casey, Highways
(714) 560-5729

Status: Construction Underway - 92% Complete

Summary: This segment will add one carpool lane in each direction of the I-5 between PCH and San Juan Creek Road in the cities of San Clemente, Dana Point, and San Juan Capistrano. Project improvements also include reconstructing on and off ramps at PCH/Camino Las Ramblas. Construction began in March 2014. During the quarter, traffic in both directions was shifted to the outside lanes and work on the median began. In the fall of 2015, the Board was informed that a soil issued was identified, which would delay project completion. As a result, this project is marked "red" in the Capital Action Plan, signifying a delay of more than three months, with a revised completion date extending at least 19 months past the original schedule (September 2016). Construction work is scheduled to be 100 percent complete in early 2018.

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FREEWAYS



Project C & Part of Project D continued from previous page...

Contact: Rose Casey, Highways
(714) 560-5729

I-5, SR-73 to Oso Parkway/Avery Parkway Interchange (Segment 1)

Status: Design Phase Underway - 95% Complete

Summary: This project will make improvements along I-5 between SR-73 and Oso Parkway in the cities of Laguna Hills, Laguna Niguel, and Mission Viejo. The proposed improvements include the addition of a general purpose lane in each direction and reconstruction of the Avery Parkway Interchange (part of Project D). During the quarter, comments were received from Caltrans on ROW maps. All comments were addressed and maps were re-submitted for final review. Staff continued to work with Caltrans regarding ROW support services and funding. With 95 percent PS&E submitted to Caltrans on June 14, 2017, the plans identify a higher cost estimate. Project costs increased due to unit price increases, rise in Caltrans support costs, and schedule changes to address bird nesting season restrictions. Staff is working with the CTC to keep the project on schedule and move directly into construction. Design work is anticipated to be complete in 2018. Due to extended ROW coordination, this project is marked "red" in the Capital Action Plan, signifying a delay of over three months beyond the original schedule.

Contact: Rose Casey, Highways
(714) 560-5729

I-5, Oso Parkway to Alicia Parkway/La Paz Road Interchange (Segment 2)

Status: Design Phase Underway - 90% Complete

Summary: This project will make improvements along I-5 between Oso Parkway and Alicia Parkway in the cities of Mission Viejo, Laguna Hills, and Lake Forest. The proposed improvements include the addition of a general purpose lane in each direction and reconstruction of the La Paz Road Interchange. The design phase is currently underway. Major activities this quarter included working on responses to Caltrans' comments on the 95 percent PS&E submittal, continued coordination on the aesthetics concept plan, off-site sound walls, service contract with Southern California Rail Road Association (SCRRA) and Metrolink, and with Caltrans on ROW and utilities. Federal authorization to begin work on the ROW phase was granted in December 2016. Due to extended ROW coordination, this project is marked "red" in the Capital Action Plan, signifying a delay of over three months beyond the original schedule.

Contact: Rose Casey, Highways
(714) 560-5729

I-5, Alicia Parkway to El Toro Road (Segment 3)

Status: Design Phase Underway - 85% Complete

Summary: This project will make improvements along I-5 between Alicia Parkway to El Toro Road in the cities of Lake Forest, Laguna Hills, Laguna Woods and Mission Viejo, including the extension of the second HOV lane from Alicia Parkway to El Toro Road. Major activities this quarter included coordinating with Caltrans regarding the planned work at Aliso Creek and the continued development of a plan to address potential impacts to Avenida De La Carlota and Southern California Edison power lines therein. Meetings have been held with other utility agencies to determine the need, extent and schedules for third party relocations/protection. Due to extended ROW coordination, this project is marked "red" in the Capital Action Plan, signifying a delay of over three months beyond the original schedule.



Project D

This project will update and improve key I-5 interchanges at Avenida Pico, Ortega Highway, Avery Parkway, La Paz, and at El Toro Road. Three interchange improvements at La Paz, Avery Parkway, and Avenida Pico are part of Project C.

I-5, El Toro Road Interchange

Contact: Rose Casey, Highways
(714) 560-5729

Status: Environmental Phase Underway - 10% Complete

Summary: This project includes four different alternatives that consider modifications to the existing interchange, which range from a I-5 southbound direct connector to El Toro Road to modifications in how existing off ramp intersections operate. The Cooperative Agreement for the Environmental Phase between OCTA and Caltrans was approved by the Board on October 10, 2016. The E-76 package to allow Caltrans to begin work was approved in April 2017 by Federal Highway Administration (FHWA) and work began in May 2017. An update by Caltrans on this project was presented to the OCTA Board in May 2017. The Environmental Phase is anticipated to be completed in late 2019.

I-5, Ortega Highway Interchange

Contact: Rose Casey, Highways
(714) 560-5729

Status: PROJECT COMPLETE



Summary: Construction began in February 2013 to reconstruct the SR-74 Ortega Highway Bridge over I-5, and improve local traffic flow along SR-74 and Del Obispo Street in the City of San Juan Capistrano. All lanes on the new bridge were opened to traffic on September 4, 2015. A dedication ceremony was held on October 1, 2015. The project was officially completed on January 15, 2016.

State Route 22 (SR-22) Project

Project E

SR-22, Access Improvements

Contact: Rose Casey, Highways
(714) 560-5729

Status: PROJECT COMPLETE



Summary: Completed in 2008, Project E made improvements at three key SR-22 interchanges (Brookhurst Street, Euclid Street, and Harbor Boulevard) in the City of Garden Grove to reduce freeway and street congestion in the area. This M2 project was completed early as a “bonus project” provided by the original Measure M (M1).



State Route 55 (SR-55) Projects

Project F

SR-55, I-405 to I-5

Contact: Rose Casey, Highways
(714) 560-5729

Status: Environmental Phase Underway - 95% Complete

Summary: This project will widen SR-55 in the cities of Irvine, Santa Ana, and Tustin. The PDT has updated all technical studies and completed the Supplemental Draft Project Report and Environmental Document (SDPR & ED). The SDPR & ED were circulated for public review from April 3 to May 3 and a public hearing was held on April 20, 2017. Activities this quarter include geometric refinement, and draft Fact Sheet and draft Relocation Impact Statement development. The project is on schedule to obtain SPR and ED approval by the end of September 2017. During the quarter, staff received the ROW assumptions for this project. The review resulted in a project cost increase to address potential ROW risk. Additionally, on June 12th the Board executed a Cooperative Agreement with Caltrans and released the RFP for PS&E. The project is marked "red" in the Capital Action Plan, signifying a delay of more than three months. This project has been delayed by more than four years from its original schedule, due to differences in project determination between OCTA and Caltrans.

SR-55, I-5 to SR-91

Contact: Rose Casey, Highways
(714) 560-5729

Status: Environmental Phase Underway - 5% Complete

Summary: This project will add capacity between I-5 and SR 22, and provide operational improvements between SR-22 and SR-91 in the cities of Orange, Santa Ana, Tustin, and Anaheim. The environmental study will consider the addition of one general purpose lane in each direction to SR-55 between SR-22 and the I-5, and provide operational improvements on SR-55 between SR-22 and SR-91. During the quarter, focus meetings with Caltrans and cities were held and the PDT approved to move forward with 1 build alternative with design options. The traffic methodology memo has been approved and the consultant initiated the traffic study. The Environmental Phase is anticipated to be complete in 2020.



State Route 57 (SR-57) Projects

Project G

SR-57 NB, Katella Avenue to Lincoln Avenue

Contact: Rose Casey, Highways
(714) 560-5729

Status: PROJECT COMPLETE



Summary: This project increased capacity and improved operations on northbound SR-57 between Katella Avenue and Lincoln Avenue in the City of Anaheim with the addition of a new 3-mile general purpose lane, on- and off-ramp improvements, and sound walls. Bridges at Katella Avenue and Douglas Road were also widened in the northbound direction. The project opened to traffic on November 19, 2014 and completed on April 21, 2015.

SR-57 NB, Orangethorpe Avenue to Yorba Linda Boulevard

Contact: Rose Casey, Highways
(714) 560-5729

Status: PROJECT COMPLETE



Summary: This project increased capacity and improved operations on northbound SR-57 with a new 2.5-mile northbound general-purpose lane between Orangethorpe Avenue in the City of Placentia to Yorba Linda Boulevard in the City of Fullerton. In addition to the new lane, capital improvements include reconstruction of northbound on- and off-ramps, widening of seven bridges, and the addition of soundwalls. The new general purpose lane was opened to traffic on April 28, 2014. The project was completed on November 6, 2014.

SR-57 NB, Yorba Linda Boulevard to Lambert Road

Contact: Rose Casey, Highways
(714) 560-5729

Status: PROJECT COMPLETE



Summary: Completed on May 2, 2014, this project improved capacity, operations, and traffic flow on SR-57 with the addition of a new 2.5-mile northbound general-purpose lane between Yorba Linda Boulevard in the City of Fullerton and Lambert Road in the City of Brea. Additional project benefits include on- and off-ramp improvements, the widening and seismic retrofit (as required) of six bridges in the northbound direction and the addition of soundwalls. Existing lanes and shoulders were also widened to standard widths, enhancing safety for motorists. The new general purpose lane was opened to traffic on September 23, 2013.



Project G continued from previous page...

SR-57 NB, Lambert Road to Tonner Canyon Road

Status: Conceptual Phase Complete, Further Schedule TBD

Summary: Caltrans previously completed a Project Study Report/Project Development Support document for the Lambert Road to Tonner Canyon Road segment, which will add a truck-climbing lane from Lambert Road to Tonner Canyon Road in the City of Brea. The segment will be cleared environmentally by 2020. Future work will be planned so that it coincides with related work by LA Metro across the county line. Funding for environmental phase for this project was proposed to be included in the 2016 STIP but was removed due to funding constraints. Staff will evaluate alternative funding sources.

Contact: Rose Casey, Highways
(714) 560-5729

SR-57 NB, Orangewood Avenue to Katella Avenue

Status: Environmental Phase Underway - 15% Complete

Summary: This project will add capacity in the northbound direction of SR-57 from Orangewood Avenue to Katella Avenue in the cities of Anaheim and Orange. Improvements under study include adding a northbound general purpose lane to join the northbound general purpose lane which was opened to traffic in 2014 between Katella Avenue and Lincoln Avenue. During the quarter, technical studies continued and an initial public information meeting was held in the City of Orange on June 22, 2017. The Environmental Phase is anticipated to be complete in late 2018.

Contact: Rose Casey, Highways
(714) 560-5729

State Route 91 (SR-91) Projects

Project H

SR-91 WB, I-5 to SR-57

Status: PROJECT COMPLETE



Summary: This project increased capacity in the westbound direction of SR-91 by adding an additional general purpose lane in the westbound direction between Anaheim and Fullerton, and provided operational improvements at on and off-ramps between Brookhurst Street and State College Boulevard. Construction is 100 percent complete, as of June 23, 2016. Consultant-supplied construction management services ended on September 29, 2016. The general purpose lane was opened to traffic on March 7, 2016.

Contact: Rose Casey, Highways
(714) 560-5729



Project I

SR-91, SR-55 to Tustin Avenue Interchange

Status: PROJECT COMPLETE



Contact: Rose Casey, Highways
(714) 560-5729

Summary: This project improved traffic flow at the SR-55/SR-91 interchange by adding a westbound auxiliary lane beginning at the northbound SR-55 to westbound SR-91 connector through the Tustin Avenue interchange in the City of Anaheim. The project was intended to relieve weaving congestion in the area and included reconstruction of the westbound side of the Santa Ana River Bridge to accommodate the additional lane. The bypass lane was open to traffic on May 14, 2016. Construction is 100 percent complete. Contract Acceptance was granted on October 31, 2016.

SR-91, SR-55 to SR-57

Status: Environmental Phase Underway - 40% Complete

Contact: Rose Casey, Highways
(714) 560-5729

Summary: This project will improve traffic flow and operations along SR-91 within the cities of Fullerton and Anaheim. The study will look at the addition of one general purpose lane eastbound between SR-57 and SR-55, and one general purpose lane westbound from Glassell Street to State College Boulevard. Additional features of this project include improvements to various interchanges. Auxiliary lanes will be added in some segments and re-established in others within the project limits. This quarter, the consultant continued working on technical documents. M2 and federal funds would pay for the mainline freeway improvements and future funding would need to be identified for connector portions of the project. Due to Caltrans requiring extra work for the unfunded study, the project is marked "red" in the Capital Action Plan with a delay of more than one year from its original schedule. The project is being re-baselined and the environmental phase is expected to be complete in mid-2019.

Project J

SR-91, SR-55 to SR-241

Status: PROJECT COMPLETE



Contact: Rose Casey, Highways
(714) 560-5729

Summary: This completed Project J segment added six miles in the westbound and eastbound direction to a key stretch of SR-91 between SR-55 and SR-241 in the cities of Anaheim and Yorba Linda. In addition to adding 12 lane miles to SR-91, the project also delivered a much needed second eastbound exit lane at the Lakeview Avenue, Imperial Highway and Yorba Linda Boulevard/Weir Canyon Road off-ramps. Beyond these capital improvements, crews completed work on safety barriers, lane striping and soundwalls. Completion of this project in March 2013 means a total of 18 lane miles have been added to SR-91 since December 2010.

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Project J continued from previous page...

SR-91 EB, SR-241 to SR-71

Status: PROJECT COMPLETE



Contact: Rose Casey, Highways
(714) 560-5729

Summary: Completed in January 2011, this segment added six miles through a key stretch of SR-91 between Orange County's SR-241 and Riverside County's SR-71. The project improves mobility and operations by reducing traffic weaving from traffic exiting at SR-71 and Green River Road. An additional eastbound general purpose lane on SR-91 was added and all existing eastbound lanes and shoulders were widened. Because this project was shovel-ready, OCTA was able to obtain American Recovery and Reinvestment Act (ARRA) funding for this M2 project, saving M2 revenues for future projects.

SR-91, SR-241 to I-15

Status: RCTC's Design-Build - Initial Phase Complete March 20, 2017

Contact: Rose Casey, Highways
(714) 560-5729

Summary: The purpose of this project is to extend the 91 Express Lanes eastward from its current terminus in Anaheim to I-15 in Riverside County. This project will also add one general purpose lane in each direction of SR-91, from SR-71 to I-15, and construct various interchange and operational improvements. On March 20, 2017, the RCTC contractors completed a \$1.3 billion freeway improvement project. While the portion of this project between SR-241 and the Orange County/Riverside County line is part of OCTA's M2 Project J, the matching segment between the county line and SR-71 is part of RCTC's Measure A. With RCTC's first project effort to extend the 91 Express Lanes and add a general purpose lane east of SR-71, construction of the final additional general purpose lane between SR-241 and SR-71 will take place post-2035. The ultimate project widens all SR-91 general purpose lanes to standard lane and shoulder widths from SR-241 to SR-71 (RCTC is responsible for the lane improvements between Green River and SR-71 while OCTA will be responsible for the lane improvements west of Green River to SR-241). To maintain synchronization, these general purpose lanes improvements, which span both counties, will be scheduled to ensure coordinated delivery of both portions of the project, and will provide a continuous segment that stretches from SR-241 to SR-71. This action is consistent with the 2017 SR-91 Implementation Plan.

Interstate 405 (I-405) Projects

Project K

I-405, SR-55 to I-605

Status: Design-Build Contract Underway

Contact: Rose Casey, Highways
(714) 560-5729

Summary: OCTA and Caltrans are working together to widen I-405 through the cities of Costa Mesa, Fountain Valley, Garden Grove, Huntington Beach, Los Alamitos, Seal Beach, and Westminster. These improvements will add one

Measure M2

Progress Report

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Project K continued from previous page...

general purpose lane, add a second HOV lane to be combined with the existing HOV lane providing a dual express lane facility, and improve the local interchanges along the corridor from SR-73 to I-605. *

On May 8, staff provided a project update to the Board. On June 12, the Board approved a reimbursement agreement between OCTA and the West Orange County Water Board for the relocation of a water line impacted by the project. On June 26, the Board approved the Transportation Infrastructure Finance and Innovation Act (TIFIA) loan agreement between OCTA and the USDOT. On June 29, the USDOT Build America Bureau, Federal Credit Council on Finance recommended the TIFIA loan for approval by the Secretary of Transportation.

During the quarter, work continued on ROW acquisition, utility coordination, environmental permitting and re-validations, TIFIA loan pursuit, and development of the toll lanes system integrator procurement documents. Other work includes review of design builder submittals including the draft baseline schedule, quality management plan, transportation management plan, and preliminary design submittals. Construction is expected to be complete in May 2023.

*On July 25, 2014, despite OCTA's Board recommendation to select Alternative 1 (the Measure M, single general purpose lane alternative) Caltrans informed OCTA that Alternative 3 (general purpose lane and second HOV lane to be combined with existing HOV lane providing dual tolled express lane facility) would be the project preferred alternative. To ensure local control over how the express lane facility would be operated, the Board decided that OCTA would lead this project with the clear understanding that Measure M would only fund the general purpose lane portion of the project and that the second HOV lane/Express lane facility would be funded separately.

Project L

I-405, I-5 to the SR-55

Status: Environmental Phase Underway - 78% Complete

Summary: This project will add one general purpose lane in each direction of the I-405 corridor and improve the interchanges in the area between I-5 and SR-55 in Irvine. Additional features of Project L include improvements to various interchanges, auxiliary lanes and ramps. During the quarter, the consultant continued working on technical studies and obtained approval on all of the environmental technical studies and a number of engineering technical studies. The final Environmental Document is expected to be complete in July 2018.



Interstate 605 (I-605) Project

Project M

I-605, I-605 and Katella Interchange Improvements

Contact: Rose Casey, Highways
(714) 560-5729

Status: Environmental Phase Underway - 48% Complete

Summary: This project will improve freeway access and arterial connection to I-605 at Katella Avenue in the City of Los Alamitos and the County of Orange. Improvements under this project may include enhancements at the on-ramps and off-ramps in addition to operational improvements on Katella Avenue at the I-605 Interchange. With Alternative 4 removed from further consideration, the remaining two build alternatives include modification of interchange ramps and lane configurations on Katella Avenue from Coyote Creek Channel to Civic Center Drive. During the quarter, the consultant continued working on technical studies and an initial public information meeting was held in the City of Los Alamitos on June 29, 2017. The final Environmental Document is anticipated to be completed in November 2018.

Freeway Service Patrol

Project N

Freeway Service Patrol

Contact: Sue Zuhlke, Motorist Services
(714) 560-5574

Status: Service Ongoing

Summary: M2's Freeway Service Patrol (FSP) began operation in June 2012 and provides tow truck service for motorists with disabled vehicles on the freeway system to help quickly clear freeway lanes and minimize congestion. During the quarter, the midday service provided assistance to 2,047 motorists, weekend service provided assistance to 996 motorists, and construction service provided assistance to 374 motorists. Since inception, M2 and construction-funded FSP has provided a total of 59,512 assists to motorists on the Orange County freeway system.



Project O

Contact: Sam Kaur, Planning
(714) 560-5673

Regional Capacity Program

Status: 2017 Call for Projects Completed

Summary: This program, in combination with required local matching funds, provides funding for improvements on Orange County's Master Plan of Arterial Highways. On August 8, 2016, the Board approved the release of the seventh call for projects. The 2017 seventh Call for Projects allocated approximately \$32 million available to fund additional road improvements throughout the County. OCTA received 16 applications for a total of \$50.3 million in funding requests. On April 10, 2017, the OCTA Board approved funding for 13 projects, in an amount totaling \$32.24 million. Since 2011, 135 projects totaling more than \$263 million have been awarded by the Board to date.

OC Bridges Railroad Program

This program will build seven grade separations (either under or over passes) where high volume streets are impacted by freight trains along the BNSF Railroad in North County. A status for each of the seven projects is included below. As of the end of this quarter, five are complete (Kraemer, Placentia, Orangethorpe, Tustin/Rose, and Lakeview), and the two remaining projects are scheduled to be completed in 2017 and 2018.

Kraemer Boulevard Grade Separation



Contact: Rose Casey, Highways
(714) 560-5729

Status: PROJECT COMPLETE

Summary: The project located at Kraemer Boulevard railroad crossing is grade separated and open to traffic. The project separated the local street from railroad tracks in the City of Placentia by building an underpass for vehicular traffic. The grade separation was opened to traffic on June 28, 2014, and an event was held on July 8, 2014 to commemorate the opening. Project acceptance by the City of Anaheim and the City of Placentia, respectively, occurred in December 2014 and the cities assumed full maintenance responsibilities. In December 2015, the one-year warranty period expired with no issues or repairs identified.

Lakeview Avenue Grade Separation



Contact: Rose Casey, Highways
(714) 560-5729

Status: PROJECT COMPLETE

Summary: The project located at Lakeview Avenue railroad crossing grade separated the local street from railroad tracks in the cities of Anaheim and Placentia by building a bridge for vehicular traffic over the railroad crossing and reconfiguring the intersection of Lakeview Avenue and Orangethorpe Avenue. Construction began on July 1, 2014. The deck for the new Atwood Channel Bridge was poured and completed in late February 2017. Lakeview Avenue



Project O continued from previous page...

(north of Orangethorpe Avenue) was closed to traffic on February 25, 2015, and was reopened with the connector road in late July 2016. Project activities this quarter continued included irrigation, landscaping, parking lots restoration, lighting, signals, pilasters, metal railing, and asphalt paving. Lakeview Avenue (south of Orangethorpe Avenue) was closed to through traffic on March 13, 2015, and reopened on June 5, 2017. Construction acceptance from the cities of Anaheim and Placentia was obtained on June 5, 2017 and OCTA has turned over the maintenance responsibilities to the cities and commenced the one year warranty. Minor construction punchlist items are ongoing and close-out activities were initiated.

Orangethorpe Avenue Grade Separation

Contact: Rose Casey, Highways
(714) 560-5729

Status: PROJECT COMPLETE



Summary: The project located at Orangethorpe Avenue railroad crossing is grade separated and open to traffic. The project separated the local street from railroad tracks in the cities of Placentia and Anaheim by building a bridge for vehicular traffic over the railroad tracks. On May 17, 2016, a joint-grand opening event was held to commemorate the opening to traffic for the Orangethorpe and Tustin/Rose Grade Separation projects. OCTA oversaw construction of the project which was completed during the quarter. Final construction activities included landscaping, irrigation, survey monumentation, and construction close-out activities. Construction was completed in October 2016 and construction acceptance was obtained from the cities of Anaheim and Placentia on October 25, 2016. OCTA has turned over the maintenance responsibilities to the cities and commenced the one-year warranty.

Placentia Avenue Grade Separation

Contact: Rose Casey, Highways
(714) 560-5729

Status: PROJECT COMPLETE



Summary: The project located at Placentia Avenue railroad crossing is grade separated and open to traffic. This project separated the local street from railroad tracks in the city of Placentia by building an underpass for vehicular traffic. An event was held on March 12, 2014, to commemorate the opening to traffic. Project acceptance by the City of Anaheim and the City of Placentia, respectively, occurred in December 2014, and the cities assumed full maintenance responsibilities. In December 2015, the one-year warranty period expired with no issues or repairs identified.

Raymond Avenue Grade Separation

Contact: Rose Casey, Highways
(714) 560-5729

Status: Construction Underway - **82% Complete**

Summary: The project located at Raymond Avenue railroad crossing will grade separate the local street from railroad tracks in the City of Fullerton by taking vehicular traffic under the railroad crossing. The City of Fullerton is managing construction and OCTA is providing construction oversight, public outreach, railroad coordination, and ROW support. Construction began on June 2, 2014. Activities this quarter continue to include retaining walls and

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Project O continued from previous page...

Valencia Drive bridge barrier railing, pump station, storm drain, waterline, street lighting, roadway pavement, and mass excavation. Construction is expected to be 100 percent complete by summer 2018.

State College Boulevard Grade Separation

Contact: Rose Casey, Highways
(714) 560-5729

Status: Construction Underway - **85% Complete**

Summary: The project located at State College Boulevard railroad crossing will grade separate the local street from railroad tracks in the City of Fullerton by taking vehicular traffic under the railroad crossing. The City of Fullerton is managing the construction and OCTA is providing construction oversight, public outreach, railroad coordination, and ROW support. Construction activities this quarter continue to include retaining walls, pump station, mass excavation, electrical, storm drain, street lighting, traffic signal, and sacrificial beams placement on the bridge. State College Boulevard, north of the railroad bridge, was re-opened to vehicular traffic on January 4, 2017. Construction is expected to be completed by early 2018.

Tustin Avenue/ Rose Drive Grade Separation

Contact: Rose Casey, Highways
(714) 560-5729

Status: **PROJECT COMPLETE**



Summary: The project located at Tustin Avenue/Rose Drive railroad crossing is grade separated and open to traffic. The project separated the local street from railroad tracks in the cities of Placentia and Anaheim by building a bridge over the railroad crossing for vehicular traffic. On May 17, 2016, a joint-grand opening event was held to commemorate the opening to traffic for the Orangethorpe and Tustin/Rose Grade Separation projects. OCTA oversaw construction of the project, which was completed during the quarter. Final construction activities included traffic signal controller, landscaping, irrigation, survey monumentation, and construction close-out and warranty activities. Construction was completed in October 2016 and construction acceptance was obtained from the cities of Anaheim and Placentia on October 25, 2016. OCTA has turned over the maintenance responsibilities to the cities and commenced the one-year warranty.



Project P

Contact: Anup Kulkarni, Planning
(714) 560-5867

Regional Traffic Signal Synchronization Program (RTSSP)

Status: Ongoing (See current RTSSP projects' statuses illustrated on the map on the next page)

Summary: This program provides funding and assistance to implement multi-agency signal synchronization. The target of the program is to regularly coordinate signals for 2,000 intersections along 750 miles of roadway as the basis for synchronized operation across Orange County. The program will enhance the efficiency of the street grid and reduce travel delay.

On April 10, 2017, the Board approved funding for five projects totaling \$2.5 million as part of the 2017 RTSSP Call for Projects.

To date, OCTA and local agencies have synchronized more than 2,000 intersections along more than 540 miles of streets (or 59 projects). There have been seven rounds of funding to date, providing a total of 84 projects with more than \$72.5 million in funding awarded by the Board.

Project Q

Contact: Vicki Austin, Finance
(714) 560-5692

Local Fair Share Program

Status: Ongoing

Summary: This program provides flexible funding to help cities and the County of Orange keep up with the rising cost of repairing the aging street system. This program is intended to augment, not replace, existing transportation expenditures of the cities and the County. All local agencies have been found eligible to receive Local Fair Share funds. On a bi-monthly basis, 18 percent of net revenues are allocated to local agencies by formula. Approximately \$288.5 million in Local Fair Share payments have been provided to local agencies as of the end of this quarter.

See pages 47-48 for funding allocation by local agency.



Project R

High Frequency Metrolink Service

Project R will increase rail services within the County and provide additional Metrolink service north of Fullerton to Los Angeles. The program will provide for track improvements, the addition of trains and parking capacity, upgraded stations, and safety enhancements to allow cities to establish quiet zones along the tracks. This program also includes funding for grade crossing improvements at high volume arterial streets, which cross Metrolink tracks.

Metrolink Grade Crossing Improvements

Status: PROJECT COMPLETE



Contact: Jennifer Bergener, Rail
(714) 560-5462

Summary: Enhancement of the designated 52 Orange County at-grade rail-highway crossings was completed as part of the Metrolink Service Expansion Program (MSEP) in October 2012. Completion of the safety improvements provided each corridor city with the opportunity to establish a “quiet zone” at their respective crossings. Quiet zones are intended to prohibit the sounding of train horns through designated crossings, except in the case of emergencies, construction work, or safety concerns identified by the train engineer. The cities of Anaheim, Dana Point, Irvine, Orange, Santa Ana, San Clemente, San Juan Capistrano, and Tustin have established quiet zones within their communities.

Metrolink Service Expansion Program

Status: Service Ongoing

Contact: Jennifer Bergener, Rail
(714) 560-5462

Summary: Following the completion of the Metrolink Service Expansion Program (MSEP) improvements in 2012, OCTA deployed a total of ten new Metrolink intra-county trains operating between Fullerton and Laguna Niguel/ Mission Viejo, primarily during midday and evening hours. Efforts to increase ridership through a redeployment of the trains without significantly impacting operating costs have been underway since 2014. In April 2015, several schedule changes added a connection between the 91 Line and the intra-county service at Fullerton to allow a later southbound peak evening departure from Los Angeles to Orange County. Staff continues to monitor ridership on these trains, with data showing that boardings have increased by 15 percent over the last three years.

Part of OCTA’s re-deployment plan involves providing new trips from Orange County to Los Angeles. Staff continues to work with BNSF, RCTC, and Metro to address track-sharing issues, operating constraints and funding that will impact the options for redeployment. Metrolink is the lead in the discussions with the BNSF Railway to evaluate the current shared use and indemnification/liability agreements that govern the use of each agencies respective railroad rights of way. These discussions are ongoing and special counsel has been brought in to assist. Operation of

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Project R continued from previous page...

additional Metrolink trains to Los Angeles is contingent on addressing indemnification and liability agreements and the completion of a triple track project on the BNSF Railway between Fullerton and Los Angeles, which is currently anticipated to be in late 2017. Metrolink is the lead agency responsible for the negotiations.

Rail Corridor & Station Improvements

Additionally under the Metrolink Service Expansion Program, funding is provided for rail line and station improvements to accommodate increased service. Rail station parking lot expansions, better access to platforms, among other improvements have been made or are underway. For schedule information on station improvement projects, please see the Capital Action Plan pages at the back of this report.

Anaheim Canyon Metrolink Station

This OCTA-led project will include construction of a second main track and platform to lengthen the existing platform for improved pedestrian circulation, and add of benches, shade structures, and Ticket Vending Machines at the Anaheim Canyon Metrolink Station. During this quarter, a RFP for final design (PS&E) was released by the Board in April and final selection of the consultant will be presented to the Board in August. Additionally, preliminary plans are complete and the project is now environmentally cleared. Construction of the project is expected to begin in October 2019 and take 15 months.

Fullerton Transportation Center Improvements - 5% Complete

Completed early on, a new 5-level parking structure, was constructed to provide additional transit parking at the Fullerton Transportation Center for both intercity rail service and commuter rail passengers. This City-led project was completed on June 19, 2012. After completion, an elevator upgrade project was proposed with leftover savings. The elevator project will modify the existing pedestrian bridge to add two new traction elevators, one on each side. The City of Fullerton is the lead on this project as well. Notice to Proceed was issued in January 2016 and improvements to the public restrooms were completed; however, the elevator portion of the project has experienced several delays due to sub-contractor issues and utility conflicts. The City of Fullerton is now projecting the completion of the project to be in September of 2018. This project is marked “red” in the Capital Action Plan, signifying a delay of more than three months.

Laguna Niguel/Mission Viejo Station - 78% Complete

The Laguna Niguel/Mission Viejo station accessibility improvements project is currently in the construction phase. Improvements include new ADA-compliant access ramps on either side of the pedestrian undercrossing and a unisex ADA-compliant restroom. The contractor has substantially completed major concrete work related to the ramps. The contractor will continue wall finishes, installation of handrails and guardrails, restroom, vending machine room, and completing the passenger canopies. Due to various submittal requirements taking longer than expected and weather delays, staff is anticipating the project will be completed three months beyond the original schedule. As a result, this project is marked “red” in the Capital Action Plan. The project is expected to be complete in October 2017.

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Orange Parking Structure

This project will include a 611-space, 5-level shared use parking structure that will be located on Lemon Street between Chapman Avenue and Maple Street in Orange. The City of Orange is the lead for the design phase. OCTA is the lead for the construction phase of this project. A construction contract was awarded by the OCTA Board on June 12, 2017. Construction will begin the end of July with a ground breaking ceremony scheduled for July 26th. The project is expected to be completed in early 2019. This project is marked “red” in the Capital Action Plan, signifying a delay of more than three months.

Placentia Station

Plans for the proposed Placentia Metrolink Station Project were near completion when the City of Placentia requested to modify them to include a parking structure to be built where surface parking had been designed. On June 27, 2016, the Board approved a new Cooperative Agreement with the City that revised the scope of the project and budget. There will now be a parking structure as part of the project and the City will contribute towards the cost. Design plans at 90% have been completed and are being reviewed. An RFP for construction management services was released in August 2016 and a selection was approved by the Board in December 2016. A contract for these services is expected to be in place in August 2017 so a constructability review can be done. The project is anticipated to begin construction in spring 2018 and is anticipated to be complete in fall 2019. This project’s ability to move into construction is subject to finalizing a track sharing agreement with BNSF.

San Clemente Pier Station Lighting - 100% Complete

This project was completed on March 17, 2017, and is in the closeout phase. OCTA was the lead for design and installation of this project which added lighting to the existing platform and new decorative hand rails at the San Clemente Pier Station.

San Juan Capistrano/Laguna Niguel Passing Siding Project

Currently in the design phase, this project will add approximately 1.8-miles of new passing siding railroad track adjacent to the existing mainline track, which will enhance operational efficiency of passenger services within the LOSSAN rail corridor. The 90 percent design plans have been reviewed by SCRRA and the City of San Juan Capistrano (City). The design will remain at 90 percent as OCTA continues to work with the California Public Utilities Commission and the City to resolve the at-grade crossing status. The overall project cost impacts are currently estimated at \$5.6 million above the original project budget of \$25.3 million, which was based on a preliminary design in 2013. The project cost increase due to necessary changes to the specified retaining wall type, height, and length to account for site constraints, removal of Control Point Avery, replacement of an existing 1940 wooden trestle bridge, and other adjustments covering project support costs and construction cost escalations. Completion of the design phase is expected in December 2017 and construction is expected to begin in late-2018 due to continued discussion to resolve the crossing issue. Project completion is expected in late 2020. The project team continues to reduce the overall schedule impact wherever possible. This project is marked “red” in the Capital Action Plan, signifying a delay of more than three months.



Project R continued from previous page...

Tustin Parking Structure - 100% Complete

Also completed early on, this project provided additional parking at the Tustin Metrolink Station to meet increased requirements associated with the MSEP by constructing a new 4-story parking structure with approximately 735 spaces, plus on-site surface parking. The parking structure was opened to the public on September 22, 2011.

Additional rail corridor improvements include: completion of the San Clemente Beach Trail Audible Warning System (AWS) project, which provides additional safety improvements and AWS devices at seven pedestrian grade crossings along the beach trail (AWS activation occurred on June 24, 2016); completed Project Study Reports or environmental clearance for six potential grade separation projects along the LOSSAN corridor (State College Avenue, Ball Road, 17th Street, Santa Ana Boulevard, Grand Avenue, and Orangethorpe Avenue); replacement of the San Juan Creek railroad bridge in the City of San Juan Capistrano, which will also accommodate a future bike trail on the south end along the creek (design is 60 percent complete); the Control Point project at Fourth Street in the City of Santa Ana, which will provide rail operational efficiencies; the Railroad ROW Slope Stabilization project, which includes eight locations within the OCTA-owned LOSSAN rail corridor that have been identified for improvements to prevent future erosion and slope instability; video surveillance, and continued implementation of Positive Train Control.

Sand Canyon Grade Separation

Status: PROJECT COMPLETE



Contact: Rose Casey, Highways
(714) 560-5729

Summary: The project located at Sand Canyon Avenue railroad crossing is grade separated and open to traffic. The project separated the local street from railroad tracks in the City of Irvine by constructing an underpass for vehicular traffic. The westbound lanes were opened to traffic on June 12, 2014, and the eastbound lanes were opened to traffic on July 14, 2014. A road opening ceremony was held on August 11, 2014. The project is completed and construction acceptance was obtained from the City of Irvine on January 15, 2016. The project completed the one-year warranty period and no repairs were identified. The project was closed out in mid-January 2017.

Project S

Transit Extensions to Metrolink

In order to broaden the reach of Metrolink to other Orange County cities, communities, and activity centers, Project S includes a competitive program which allows cities to apply for funding to connect passengers to their final destination via transit extension. There are currently two areas of this program: a fixed guideway program (street car) and a rubber tire transit program.

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Project S continued from previous page...

OC Streetcar Project

Status: Design Phase Underway - 89% Complete

Contact: Jennifer Bergener, Rail
(714) 560-5462

Summary: OCTA is serving as the lead agency for the OC Streetcar project. The FTA formally advanced the project into the Project Development phase of the federal New Starts program in May 2015. The FTA has shown strong support for this project by ascribing an overall medium-high rating to it in their Fiscal Year 2018 Annual New Starts Report, which was released in May 2017. The full Notice to Proceed for design was issued in February 2016, and a consultant team was selected to prepare design plans (PS&E) for the project.

Based upon a Risk Workshop that was held in March 2017 to finalize the project scope, schedule and budget, the FTA recommended minor changes to the project cost estimate, increasing the cost by less than one half of one percent from the 30% design cost estimate prepared in July 2016. The updated cost estimate and funding plan were approved by the OCTA Board at their May 22, 2017 meeting. The Board also authorized submission of the Full Funding Grant Agreement Application to the FTA at this meeting. The funding request as well as extensive project readiness documents required for the application were submitted to the FTA in late May 2017. Staff is coordinating with the FTA and their consultants on the federal review of the documents.

During this quarter, the OCTA Board approved additional agreements with the City of Santa Ana and City of Garden Grove's City Councils, which included: construction agreements with the City of Santa Ana and City of Garden Grove and the agreement with the City of Santa Ana for incorporation of streetcar elements at the Santa Ana Regional Transportation Center. The OCTA Board also awarded the Public Awareness Campaign (PAC) contract to Katz Associates. The firm will be assisting with the development and implementation of a PAC during the pre-construction and construction phases of the project.

An environmental analysis for minor design modifications was completed, and staff is coordinating with FTA to obtain approval on the Section 130(c) determination, completing the federal environmental review process. In June, the State Historic Preservation Office concurred that the project would not have an adverse impact on historic properties.

OCTA, and the Cities of Santa Ana and Garden Grove expect all documents pertaining to 90% design plans to be submitted by HNTB Engineering by July 2017. Work is proceeding on preparation of the procurement documents for the Construction Invitation for Bid (IFB) which is scheduled to be released in fall 2017.

The vehicle manufacturing and delivery procurement was extended to early July 2017 in response to a proposer request. Work commenced on the development of the scope of services for the Operation and Maintenance service procurement, which is scheduled to be released in fall 2017.



Project S continued from previous page...

Bus and Station Van Extension Projects

Contact: Sam Kaur, Planning
(714) 560-5673

Status: Service Ongoing for Oakley Vanpool and Anaheim Canyon Metrolink Bus Connection

Summary: Bus and Station Van Extension projects help enhance the frequency of service in the Metrolink corridor by linking communities within the central core of Orange County. To date, the Board has approved one round of funding for bus and van extension projects, totaling over \$730,000. Four projects located within the cities of Anaheim and Lake Forest were approved for funding by the Board on July 23, 2012. Two projects have implemented service, one has been revised with a scope change, and the other has been cancelled. The vanpool connection from the Irvine Metrolink Station to the Oakley employment center in the City of Lake Forest began in December 2012, and the Anaheim Canyon Metrolink Station Bus Connection began service in February 2013. Following detailed discussions with OCTA staff, the Board approved a scope change submitted by the City on behalf of Panasonic Avionics in December 2015, which utilizes the City's established shuttle program to provide trips between the Irvine Metrolink Station and the Panasonic employment center as an alternative to providing vanpool services. Service associated with Invensys Incorporated in the City of Lake Forest was cancelled at the request of the participant, and the funds have been returned to the program for use in future calls for projects. Service provided in the City of Anaheim carries approximately 90 passengers per day between the station and Anaheim Resort area.

Project T

Convert Metrolink Stations to Regional Gateways that Connect Orange County with High-Speed Rail Systems

Contact: Jennifer Bergener, Rail
(714) 560-5462

Status: PROJECT COMPLETE



Summary: This project constructed the Anaheim Regional Transportation Intermodal Center (ARTIC) located at 2626 East Katella Avenue in the City of Anaheim. In addition to providing transit connections for OCTA bus service, Metrolink and Amtrak service, shuttle and charter bus service, taxis, bikes, and other public and private transportation services, ARTIC also accommodates future high-speed rail trains. The City of Anaheim, which led the construction effort, opened the facility to rail and bus service on December 6, 2014. A ribbon-cutting ceremony was held on December 8, 2014, with a grand opening celebration hosted on December 13, 2014. This facility replaced the former Anaheim Station that was located on the opposite side of the freeway in the Angel Stadium parking lot.



Project U

Project U expands mobility choices for seniors and persons with disabilities, and includes the Senior Mobility Program (SMP), the Senior Non-emergency Medical Transportation Program (SNEMT), and the Fare Stabilization Program. Since inception, a total of approximately \$48.7 million in Project U funding has been provided under M2.

Senior Mobility Program (SMP)

Contact: Curt Burlingame, Transit
(714) 560-5921

Status: Ongoing

Summary: This program provides one percent of net M2 revenues to continue and expand local community transportation service for seniors under the SMP. Since inception, more than \$14.6 million and 1,772,000 boardings have been provided for seniors traveling to medical appointments, nutrition programs shopping destinations, and senior and community center activities. This quarter, approximately \$900,000 was paid out to the 31 participating cities during the month of May*.

**Payments are made every other month (January, March, May, July, September, and November). The amount totaled for one fiscal year quarter either covers one or two payments, depending on the months that fall within that quarter.*

Senior Non-emergency Medical Transportation Program (SNEMT)

Contact: Curt Burlingame, Transit
(714) 560-5921

Status: Ongoing

Summary: This program provides one percent of net M2 revenues to supplement existing countywide senior non-emergency medical transportation services. Since inception, more than \$16.0 million and 578,929 SNEMT boardings have been provided. This quarter, approximately \$950,000 in SNEMT funding was paid to the County of Orange*.

**Payments are made every other month (January, March, May, July, September, and November). The amount totaled for one fiscal year quarter either covers one or two payments, depending on the months that fall within that quarter.*

Fare Stabilization Program

Contact: Sean Murdock, Finance
(714) 560-5685

Status: Ongoing

Summary: Between years 2011-2015, one percent of net M2 revenues was dedicated to stabilize fares and provide fare discounts for bus services and specialized ACCESS services for seniors and persons with disabilities. Effective January 28, 2016, an amendment to the M2 Ordinance No. 3, adjusted this amount to 1.47 percent of net M2 revenues to be dedicated to the Fare Stabilization Program.

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Approximately \$1.4 million in revenue was allocated this quarter to support the Fare Stabilization Program. The amount of funding utilized each quarter varies based on ridership. Throughout the quarter, approximately 3,224,986 program-related boardings were recorded on fixed route and ACCESS services. Since inception of the program, more than \$18 million and 79,225,000 program-related boardings have been provided.

Project V

Contact: Sam Kaur, Planning
(714) 560-5673

Community Based Transit/Circulators

Status: 2012 Call for Projects Service Ongoing, 2016 Call for Projects Service Begun

Summary: This project establishes a competitive program for local jurisdictions to develop local bus transit services such as community based circulators and shuttles that complement regional bus and rail services, and meet needs in areas not adequately served by regional transit. On June 24, 2013, the Board approved the first round of funding for \$9.8 million to fund five funding proposals from the cities of Dana Point, Huntington Beach, La Habra, Laguna Beach, and Lake Forest. Funding was approved to implement vanpool services from local employment centers to transportation hubs, special event and seasonal services that operate during heavy traffic periods, and local community circulators that carry passengers between various shopping, medical, and transportation-related centers. Prior to the second Call for Projects, Project V Guidelines were revised in 2015, per Board direction, to encourage more local agency participation. On June 13, 2016 the Board approved \$26.7 million in Project V funds for 17 Capital and Operations grants and \$323,780 for seven planning grants. OCTA staff has completed agreements with the local agencies to implement these projects. Services for the Cities of Westminster, Mission Viejo and San Clemente started in October 2016. OCTA receives ridership reports from local agencies on a regular basis to monitor the success of these services against performance measures adopted by the Board. In general, special event services are performing at high productivity levels. Since fixed route services are struggling to meet the ridership target, OCTA made recommendations to local agencies to conduct outreach efforts and route changes that can help improve the ridership. In April 2017, the City of Westminster sent a letter to OCTA to discontinue the Project V service. Staff will continue to monitor these services to ensure the performance standards are met and will provide reports to the Board on a regular basis. OCTA staff provided a ridership report update to the Board at their June 2017 meeting which showed lower than desirable ridership on some of the routes.



Project W

Contact: Sam Kaur, Planning
(714) 560-5673

Safe Transit Stops

Status: City-Initiated Improvements Underway or Complete; Mobile Ticketing in Use

Summary: This project provides funding for passenger amenities at the 100 busiest transit stops across the County, determined by average daily weekday passenger boardings. Stop improvements will be designed to ease transfers between bus lines and provide passenger amenities such as improved shelters and lighting. On July 14, 2014, the Board determined that 80 percent of available Project W funding (\$4.47 million) would be designated for supporting city-initiated projects, and the remaining 20 percent (\$1.12 million) would be directed towards the development and implementation of regional, customer-facing technologies that benefit the 100 busiest stops. On the same date, the Board approved up to \$1,205,666 for city-initiated improvements and \$370,000 for OCTA-initiated improvements in fiscal year 2014-15.

According to October 2012 ridership data, 15 cities (containing at least one of the 100 busiest stops) are eligible for Safe Transit Stops funding. Seven cities applied for funds, and 51 projects were approved for funding per the July 2014 Board approval. The City of Anaheim was not able to initiate the improvements for their projects and will reapply for funds through the next Call for Projects. The remaining 43 projects have been moving forward. The Cities of Irvine, Westminster, Costa Mesa, Orange, and Brea have completed their projects. The City of Santa Ana awarded their contract in April 2016 and installation of the shelters and other amenities started in June 2017. Staff will continue to monitor progress and report completion in the future.

For OCTA-initiated improvements, the \$370,000 investment has been contributed towards a mobile ticketing application (app) that will make it more convenient for bus customers to purchase bus passes, obtain trip information, and board buses by allowing riders to use their smart phones to display proof of payment or "mobile ticketing." The smart phone app was launched on June 15, 2016, for OC Fair and Express Bus users and received positive reviews. It is planned to be expanded to include regular fixed route and college pass purchases next quarter, and reduced fare purchases (for Seniors and Persons with Disabilities) early next year.



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Project X

Environmental Cleanup

Contact: Dan Phu, Planning
(714) 560-5907

Status: Ongoing

Summary: This program implements street and highway-related water quality improvement programs and projects that assist agencies countywide with federal Clean Water Act standards for urban runoff. It is intended to augment, not replace existing transportation-related water quality expenditures and to emphasize high-impact capital improvements over local operations and maintenance costs. The Environmental Cleanup Allocation Committee (ECAC) is charged with making recommendations to the Board on the allocation of funds for the Environmental Cleanup Program (ECP). These funds are allocated on a countywide, competitive basis to assist agencies in meeting the Clean Water Act standards for controlling transportation-related pollution.

Project X is composed of a two-tiered funding process focusing on early priorities (Tier 1), and a second program designed to prepare for more comprehensive capital investments (Tier 2). To date, there have been six rounds of funding under the Tier 1 grants program. A total of 138 projects, amounting to nearly \$17 million, have been awarded by the Board since 2011. There have been two rounds of funding under the Tier 2 grants program. A total of 22 projects in the amount of \$27.89 million have been awarded by the Board since 2013. To date, 33 of the 34 Orange County cities plus the County of Orange have received funding under this program. Board approval of the seventh Tier 1 Call for Projects funding recommendations is anticipated in August 2017 in the amount of approximately \$3.1 million.

Staff continues to work with the ECAC and the County of Orange to recommend the appropriate timing of a third Tier 2 Call for Projects.

Part of Projects A-M

Contact: Dan Phu, Planning
(714) 560-5907

Freeway Mitigation Program

Status: Biological Permits Issued and Conservation Plan Implementing Agreement Signed by the Wildlife Agencies

Summary: The Freeway Mitigation Program provides higher-value environmental benefits such as habitat protection, wildlife corridors, and resource preservation in exchange for streamlined project approvals and greater certainty in the delivery of Projects A-M. The program is proceeding as planned, with seven properties (Preserves) acquired (1,300 acres), and 12 restoration projects approved for funding by the Board, totaling approximately 350 acres. The restoration project plans have been approved by the wildlife agencies and are currently at various stages of implementation. The Board has authorized \$42 million (inclusive of setting aside funds for long-term land

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Part of Projects A-M continued from previous page...

management) for property acquisitions, \$10.5 million to fund habitat restoration activities, and \$2.5 million for conservation plan development and program support, for a total of approximately \$55 million.

On June 19, 2017, the United States Fish and Wildlife Service and the California Department of Fish and Wildlife (Wildlife Agencies) finalized the issuance of their respective biological opinion, findings, and associated permits, as well as signed the Conservation Plan Implementing Agreement. Receipt of these permits represent the culmination of years of collaboration and support by the Board, environmental community, and Wildlife Agencies. As a result, the M2 environmental process will be streamlined allowing OCTA to move forward with the M2 freeway projects (as described in the Conservation Plan) with little additional coordination from the Wildlife Agencies. The Conservation Plan also includes a streamlined process for coordination with CDFW for streambed alteration agreements will also be reduced. This is needed for portions of freeway projects that cross through streams and riverbeds. The OCTA Conservation Plan is unique as it is only the second state/federal conservation plans approved in Orange County.

As part of the Conservation Plan process, an endowment is required to be established to pay for the long-term management of the Preserves. It is estimated that it will take up to fifteen years to fully fund the endowment. As anticipated, the first deposit of \$2.9 million for the endowment was made in early 2017. Staff will continue to oversee and manage the Preserves until a long-term manager(s) is established.

To date, five of the seven Preserve resource management plans (RMPs) have been completed. These RMPs guide the management of the Preserves as outlined within the Conservation Plan. OCTA anticipates on releasing the remaining two RMPs to the public by the end of summer 2017. The five previously released RMPs are being finalized and expected to be completed on a similar timeline. Additionally, staff will monitor the progress of all restoration projects and provide status updates to the Environmental Oversight Committee until each project is implemented. A list of scheduled 2017 wilderness Preserve hiking and equestrian riding tours is available on the M2 website at www.PreservingOurLegacy.org.

As part of the safeguards in place for the M2 Program, a 12-member Environmental Oversight Committee (EOC) makes funding allocation recommendations to assist OCTA in acquiring land and restoring habitats in exchange for streamlined project approvals for the M2 freeway improvement projects (A-M). The EOC has led efforts with policy recommendations to the Board and has operated in an open and transparent manner that has garnered the trust of stakeholders, ranging from the environmental community to the recreational community to Orange County citizens.

See map of Preserves and funded restoration properties on the following page.

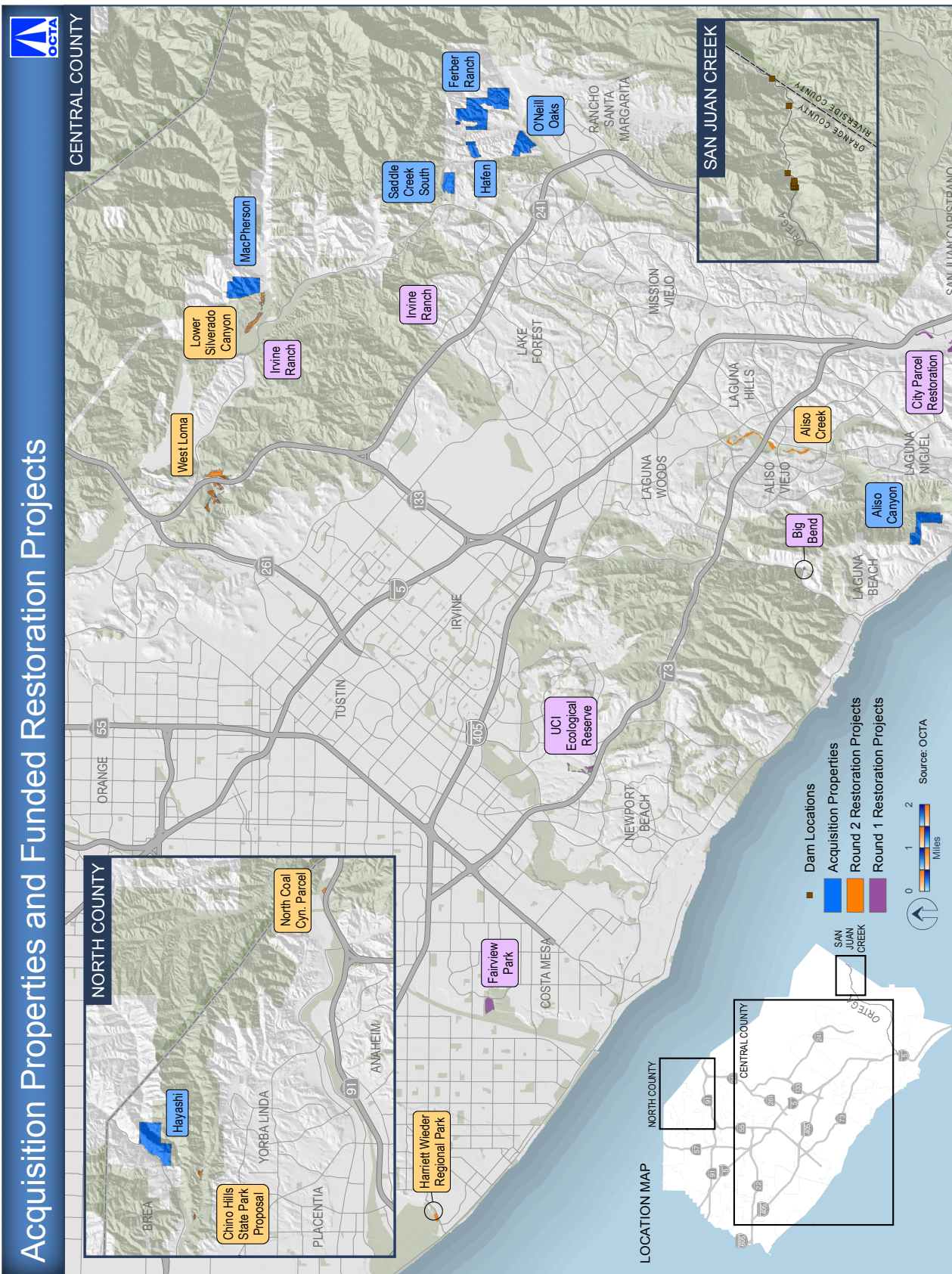
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ENVIRONMENTAL



Acquisition Properties and Funded Restoration Projects



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Program Management Office

Contact: Tami Warren, PMO Manager
(714) 560-5590

The Measure M (M1 and M2) Program Management Office (PMO) provides interdivisional coordination for all M-related projects and programs. To ensure agency-wide compliance, the PMO also holds a bi-monthly committee meeting comprised of executive directors and key staff from each of the divisions, who meet to review significant issues and activities within the Measure M programs. This quarter, the focus of the PMO has been on several major items, including the following.

Next 10 Delivery Plan

Staff continues to monitor the progress of the Next 10 Delivery Plan adopted by the Board in November 2016. Tight monitoring of cash flow assumptions versus actual revenue, expense, and schedule activity is underway using a tracking mechanism created for this purpose. This quarter, OCTA's contracted forecasting agencies began their 2017 Measure M2 30-year economic outlook for taxable sales presentations. Presentations to the Finance Committee by each agency are scheduled to conclude in August. While final sales tax receipts for Fiscal Year 2016-17 have not yet been received, the forecasting agencies' economic outlook provided to date indicate further decline in sales tax collections. Staff is currently reviewing the Next 10 Plan and preparing an update planned to go to the Board in the fall of 2017.

2012-2015 M2 Performance Assessment Update

Measure M2's Ordinance No. 3 requires that a M2 performance assessment be conducted every three years. To date there have been two prior performance assessments and the most recent assessment reviewed the time period of July 1, 2012 through June 30, 2015. The final report and findings were presented to the Board on August 8, 2016 for approval. Overall, the FY 2012-13 through FY 2014-15 assessment commends OCTA's commitment to the effective and efficient management and delivery of the M2 Program. While there were no significant findings, recommendations for improvements were made. A total of nine recommendations were identified and staff has been working to address and close out all recommendations. As planned, staff is on track to bring a closeout item to the Board in September.

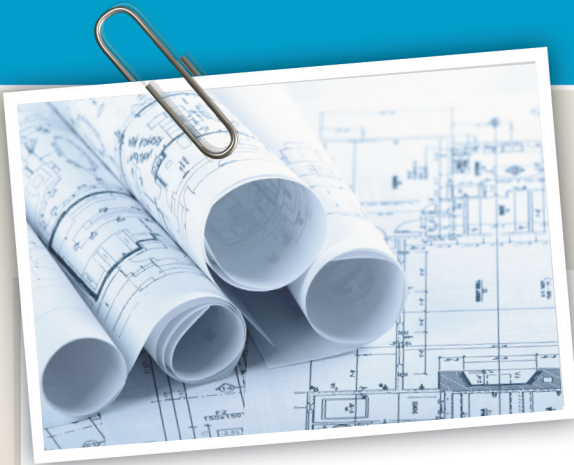
M2 Awareness and Signage

M2 Signage Guidelines are being developed in response to Performance Assessment findings regarding M2 awareness and public perception. These uniform guidelines will document signage procedures to follow for each of the M2 programs (Freeway, Streets & Roads, Transit, and Environmental projects) and will be designed to create a common brand across all modes. The effort was stalled due to concern over the continued use of Measure M in Orange County. With the passage of LA Metro's "Measure M" staff shared with the Board that a proposal will be brought forward to change the measure's logo. With the most common and visible use of the Measure M logo being on freeway funding signs and local street funding signs, staff has been working on some concepts. An initial concept is scheduled to be brought to the Legislative and Communications Committee and the Board in July for discussion.

Measure M2

Progress Report

PROGRAM MGMT



PMO continued from previous page...

OCTA Monitoring Structure for Federal Compliance

As a recipient and a “passed-through” agency of FTA and FHWA funding, OCTA is responsible for complying with agreements and regulations. Involved in agency-wide coordination and ensuring compliance with M2, the PMO has taken the lead in this effort. In June, OCTA selected Sjoberg Evashenk, Inc. to conduct a review of OCTA’s monitoring structure for federal compliance. Though not required of M2, this evaluation is important to M2 projects and programs that are funded with federal monies, ensuring compliance requirements are met and internal protocols are completed efficiently. In the coming months, the consultant will conduct onsite visits, an analysis of OCTA’s structure, and a peer review of similar agencies. The goal is to determine a preferred structure that works in OCTA’s environment.

M2 Administrative Cost Safeguards

M2 includes a one percent cap on administrative expenses for salaries and benefits of OCTA administrative staff on an annual basis. In a legal opinion on M2, it was determined that in years where administrative salaries and benefits are above one percent, only one percent can be allocated with the difference borrowed from other, non-Measure M fund sources. Conversely, in years where administrative salaries and benefits are below one percent, OCTA can still allocate the full one percent for administrative salaries and benefits but may use the unused portion to repay the amount borrowed from prior years in which administrative salaries and benefits were above one percent.

Based on the original M2 revenue projections, OCTA expected to receive \$24.3 billion in M2 funds, with one percent of total revenues available to fund administrative salaries and benefits over the life of the program. As M2 revenue projections declined (currently projected to be 41.6 percent) as a result of economic conditions, the funds available to support administrative salaries and benefits have also declined from the original expectations. While revenue has declined, the administrative effort needed to deliver M2 remains the same. Additionally, the initiation of the Early Action Plan (EAP) in 2007 required administrative functions four years prior to revenue collection. While the EAP resulted in project savings and significant acceleration of the program, administrative functions were required during this time with associated administrative costs.

As a result of the aforementioned factors, OCTA has incurred higher than one percent administrative costs. OCTA currently has Board approval to use funds from the Orange County Unified Transportation Trust (OCUTT) fund to cover costs above the one percent, with the understanding that those funds will be repaid with interest in future years that OCTA administrative costs fall below the one percent cap. As of June 30, 2012, OCTA had borrowed approximately \$5.2 million from OCUTT. Over the last few years, OCTA has experienced underruns in the one percent administration cap and has made payments to OCUTT to reduce the outstanding balance. As of the most recent March 2017 Taxpayer Oversight Committee Report, the outstanding balance was \$2.2 million.

Staff continues to meet quarterly to review all labor costs to ensure proper cost allocation under M2. During the quarter, Staff met on July 19, 2017, to review labor reports for this quarter to ensure costs attributed to the one percent cap were accurately reported and there were no misplaced project related costs, as well as to ensure project costs were applied to the correct projects. Staff will meet again on May 4, 2017, to conduct this quarterly review.

Measure M2

Progress Report

PROGRAM MGMT



PMO continued from previous page...

Taxpayer Oversight Committee

The M2 Ordinance requires a Taxpayer Oversight Committee (TOC) to oversee the implementation of the M2 plan. With the exception of the elected Auditor/Controller of Orange County who in Ordinance No. 3 is identified as the chair of the TOC, all other members are not elected or appointed officials. Members are recruited and screened for expertise and experience by the Orange County Grand Jurors Association, and are selected from the qualified pool by lottery. The TOC meets every other month. The TOC upholds the integrity of the measure by monitoring the use of Measure M funds and ensuring that all revenue collected from Measure M is spent on voter-approved transportation projects. The responsibilities of the 11-member Measure M TOC are to:

- Ensure all transportation revenue collected from Measure M is spent on the projects approved by the voters as part of the plan
- Ratify any changes in the plan and recommend any major changes go back to the voters for approval
- Participate in ensuring that all jurisdictions in Orange County conform with the requirements of Measure M before receipt of any tax monies for local projects
- Hold annual public meetings regarding the expenditure and status of funds generated by Measure M
- Review independent audits of issues regarding the plan and performance of the Orange County local Transportation Authority regarding the expenditure of Measure M sales tax monies
- Annually certify whether Measure M funds have been spent in compliance with the plan.

Two subcommittees have been formed to assist the TOC with their safeguard responsibilities: the Annual Eligibility Review (AER) Subcommittee and the Audit Subcommittee. The AER Subcommittee meets a few times per year, as needed, to ensure local jurisdictions have submitted the following documents in order to be deemed eligible to receive M2 funding: Congestion Management Program, Mitigation Fee Program, Local Traffic Signal Synchronization Plan, Pavement Management Plan, and an Expenditure Report. The Audit Subcommittee meets bi-monthly and is responsible for reviewing the quarterly M2 Revenue and Expenditure Reports and the Annual Measure M Audit, as well as any other items related to Measure M audits.

The TOC met on April 11, 2017 to hold its annual Measure M public hearing, vote on the Measure M Compliance Findings and Local Jurisdictions Eligibility Findings, and hear updates on the Regional Traffic Signal Synchronization Program and the Environmental Cleanup Program. The committee unanimously found that OCTA is proceeding in accordance with the M2 Transportation Ordinance and Investment Plan, and that Measure M is being delivered as promised to voters for the 26th consecutive year.

The TOC also met on June 13, 2017 to receive updated financial information on the M2 Quarterly Revenue & Expenditure Report (Mar. 17) and hear program/project updates on the Project V Community-Based Transit Circulators Program, Comprehensive Transportation Funding Programs, OC Streetcar, and Measure M2 Quarterly Progress Report. OCTA staff also provided the committee with updated information on funding for the I-405 Improvement Project.



M2 Financing and Schedule of Funding

Contact: Sean Murdock, Finance
(714) 560-5685

Revenue Forecast and Collection

OCTA contracts with three universities (Chapman University; University of California, Los Angeles; and California State University, Fullerton) to provide a long-range forecast of taxable sales to forecast Measure M2 revenues for purposes of planning projects and program expenditures. In the past, OCTA has taken an average of the three university taxable sales projections to develop a long-range forecast of Measure M2 taxable sales. On March 28, 2016, as part of the FY 2016-17 budget development process, the Board approved a new sales tax forecast methodology. This methodology includes a more conservative approach by utilizing a five-year forecast from MuniServices, Inc. Historically, MuniServices, Inc. has been more conservative than the three universities over the first five years of M2 revenue collection (2011-2016).

Revenue forecast information is updated quarterly based on the actual revenues received for the previous quarter. As required by law, OCTA pays the State Board of Equalization a fee to collect the sales tax. The M2 Ordinance estimated this fee to be 1.5 percent of the revenues collected over the life of the program.

Current Forecast

Based on long term forecasts received in July 2016, OCTA staff forecasts total nominal sales tax collections over the life of M2 to be approximately \$14.2 billion. Original projections in 2005 estimated total nominal M2 sales tax collections at \$24.3 billion. Based on the current estimated forecast of \$14.2 billion, sales tax revenue will run approximately \$10.1 billion (41.6 percent) less than the original 2005 projection. The revenue forecast for the life of the M2 Program will vary as actual sales tax revenue data is incorporated.

Final sales tax receipts through the third quarter of fiscal year 2016-17 (March 31, 2017) were received in June 2017, and reflected a growth in sales tax revenue of 2.29 percent over the same period of the prior fiscal year. The growth, while positive, is less than the budgeted sales tax growth rate of 4.4 percent for fiscal year 2016-17. In addition, Staff is currently evaluating the impact of this year's updated forecasts while waiting for final fourth quarter receipts. It is anticipated that the result of the updated forecasts will result in a change to the current M2 program sales tax revenue estimate of \$14.2 billion. Staff will be providing the Finance and Administration Committee as well as the Board an update on sales tax in the first quarter of fiscal year 2017-18.



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Measure M2

Progress Report

REVENUE & EXPENDITURES



Schedule 1

Measure M2
Schedule of Revenues, Expenditures and Changes in Fund Balance
as of June 30, 2017
(Unaudited)

<i>(\$ in thousands)</i>	Quarter Ended June 30, 2017	Year to Date June 30, 2017 (A)	Period from Inception to June 30, 2017 (B)
Revenues:			
Sales taxes	\$ 79,173	\$ 309,861	\$ 1,760,170
Other agencies' share of Measure M2 costs:			
Project related	19,205	76,224	552,419
Non-project related	(34)	15	454
Interest:			
Operating:			
Project related	91	126	128
Non-project related	(303)	4,840	21,922
Bond proceeds	-	6,482	42,479
Debt service	16	47	123
Commercial paper	-	-	393
Right-of-way leases	10	93	907
Proceeds on sale of assets held for resale	-	6,804	6,804
Miscellaneous:			
Project related	-	-	270
Non-project related	-	-	100
Total revenues	98,158	404,492	2,386,169
Expenditures:			
Supplies and services:			
State Board of Equalization (SBOE) fees	903	3,603	19,491
Professional services:			
Project related	16,809	38,509	311,358
Non-project related	673	1,890	16,933
Administration costs:			
Project related	1,725	7,997	52,537
Non-project related :			
Salaries and Benefits	591	2,365	19,805
Other	1,170	4,679	31,317
Other:			
Project related	45	3,171	4,849
Non-project related	69	92	3,892
Payments to local agencies:			
Project related	30,065	120,976	728,872
Capital outlay:			
Project related	57,394	86,876	633,369
Non-project related	-	-	31
Debt service:			
Principal payments on long-term debt	-	7,475	34,560
Interest on long-term debt and commercial paper	6	21,342	136,879
Total expenditures	109,450	298,975	1,993,893
Excess (deficiency) of revenues over (under) expenditures	(11,292)	105,517	392,276
Other financing sources (uses):			
Transfers out:			
Project related	(2,792)	(6,972)	(29,631)
Transfers in:			
Project related	-	3,964	79,508
Non-project related	-	(3,964)	1,973
Bond proceeds	-	-	358,593
Total other financing sources (uses)	(2,792)	(6,972)	410,443
Excess (deficiency) of revenues over (under) expenditures and other sources (uses)	\$ (14,084)	\$ 98,545	\$ 802,719



Schedule 2

Measure M2
Schedule of Calculations of Net Revenues and Net Bond Revenues (Debt Service)
as of June 30, 2017
(Unaudited)

<i>(\$ in thousands)</i>	Quarter Ended June 30, 2017 (actual)	Year to Date June 30, 2017 (actual) (C.1)	Period from Inception through June 30, 2017 (actual) (D.1)	Period from July 1, 2017 through March 31, 2041 (forecast) (E.1)	Total (F.1)
Revenues:					
Sales taxes	\$ 79,173	\$ 309,861	\$ 1,760,170	\$ 12,402,132	\$ 14,162,302
Operating interest	(303)	4,840	21,922	201,484	223,406
Subtotal	<u>78,870</u>	<u>314,701</u>	<u>1,782,092</u>	<u>12,603,616</u>	<u>14,385,708</u>
Other agencies share of M2 costs	(34)	15	454	-	454
Miscellaneous	-	-	100	-	100
Total revenues	<u>78,836</u>	<u>314,716</u>	<u>1,782,646</u>	<u>12,603,616</u>	<u>14,386,262</u>
Administrative expenditures:					
SBOE fees	903	3,603	19,491	186,107	205,598
Professional services	673	1,890	13,157	84,985	98,142
Administration costs :					
Salaries and Benefits	591	2,365	19,805	124,001	143,806
Other	1,170	4,679	31,317	214,025	245,342
Other	69	92	3,892	21,385	25,277
Capital outlay	-	-	31	-	31
Environmental cleanup	2,422	10,095	28,245	248,003	276,248
Total expenditures	<u>7,553</u>	<u>22,724</u>	<u>115,938</u>	<u>878,506</u>	<u>994,444</u>
Net revenues	<u>\$ 71,283</u>	<u>\$ 291,992</u>	<u>\$ 1,666,708</u>	<u>\$ 11,725,110</u>	<u>\$ 13,391,818</u>
Bond revenues:					
Proceeds from issuance of bonds	\$ -	\$ -	\$ 358,593	\$ 1,450,000	\$ 1,808,593
Interest revenue from bond proceeds	-	6,482	42,479	6,405	48,884
Interest revenue from debt service funds	16	47	123	3,874	3,997
Interest revenue from commercial paper	-	-	393	-	393
Total bond revenues	<u>16</u>	<u>6,529</u>	<u>401,588</u>	<u>1,460,279</u>	<u>1,861,867</u>
Financing expenditures and uses:					
Professional services	-	-	3,776	12,340	16,116
Bond debt principal	-	7,475	34,560	1,768,010	1,802,570
Bond debt and other interest expense	6	21,342	136,879	877,953	1,014,832
Total financing expenditures and uses	<u>6</u>	<u>28,817</u>	<u>175,215</u>	<u>2,658,303</u>	<u>2,833,518</u>
Net bond revenues (debt service)	<u>\$ 10</u>	<u>\$ (22,288)</u>	<u>\$ 226,373</u>	<u>\$ (1,198,024)</u>	<u>\$ (971,651)</u>

Measure M2

Progress Report

REVENUE & EXPENDITURES



Measure M2
Schedule of Revenues and Expenditures Summary
as of June 30, 2017
(Unaudited)

Schedule 3

Project	Description	Net Revenues through June 30, 2017	Total Net Revenues
	(G) (\$ in thousands)	(H)	(I)
Freeways (43% of Net Revenues)			
A	I-5 Santa Ana Freeway Interchange Improvements	\$ 65,693	\$ 527,840
B	I-5 Santa Ana/SR-55 to El Toro	41,960	337,144
C	I-5 San Diego/South of El Toro	87,639	704,161
D	I-5 Santa Ana/San Diego Interchange Upgrades	36,062	289,751
E	SR-22 Garden Grove Freeway Access Improvements	16,773	134,768
F	SR-55 Costa Mesa Freeway Improvements	51,157	411,041
G	SR-57 Orange Freeway Improvements	36,159	290,537
H	SR-91 Improvements from I-5 to SR-57	19,568	157,229
I	SR-91 Improvements from SR-57 to SR-55	58,216	467,756
J	SR-91 Improvements from SR-55 to County Line	49,228	395,543
K	I-405 Improvements between I-605 to SR-55	149,949	1,204,823
L	I-405 Improvements between SR-55 to I-5	44,686	359,044
M	I-605 Freeway Access Improvements	2,795	22,461
N	All Freeway Service Patrol	20,966	168,460
	Freeway Mitigation	35,834	287,924
	Subtotal Projects	716,685	5,758,482
	Net (Bond Revenue)/Debt Service	-	-
	Total Freeways	\$ 716,685	\$ 5,758,482
	%		
Street and Roads Projects (32% of Net Revenues)			
O	Regional Capacity Program	\$ 166,673	\$ 1,339,199
P	Regional Traffic Signal Synchronization Program	66,666	535,656
Q	Local Fair Share Program	300,007	2,410,527
	Subtotal Projects	533,346	4,285,382
	Net (Bond Revenue)/Debt Service	-	-
	Total Street and Roads Projects	\$ 533,346	\$ 4,285,382
	%		

Measure M2

Progress Report

REVENUE & EXPENDITURES



Measure M2
Schedule of Revenues and Expenditures Summary
as of June 30, 2017
(Unaudited)

Schedule 3

Expenditures through June 30, 2017 (J)	Reimbursements through June 30, 2017 (K)	Net M2 Cost (L)
\$ 5,890	\$ 1,930	\$ 3,960
6,784	4,194	2,590
101,531	40,708	60,823
1,819	527	1,292
4	-	4
9,010	23	8,987
46,081	10,820	35,261
33,488	824	32,664
18,860	2,262	16,598
6,947	5,294	1,653
120,513	8,211	112,302
7,471	4,893	2,578
1,310	16	1,294
289	-	289
48,901	1,800	47,101
<u>408,898</u>	<u>81,502</u>	<u>327,396</u>
35,748	-	35,748
<u>\$ 444,646</u>	<u>\$ 81,502</u>	<u>\$ 363,144</u>
		30.5%
\$ 666,925	\$ 393,652	\$ 273,273
35,963	4,879	31,084
<u>289,873</u>	<u>77</u>	<u>289,796</u>
992,761	398,608	594,153
39,706	-	39,706
<u>\$ 1,032,467</u>	<u>\$ 398,608</u>	<u>\$ 633,859</u>
		53.3%

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Measure M2

Progress Report

REVENUE & EXPENDITURES



Measure M2
Schedule of Revenues and Expenditures Summary
as of June 30, 2017
(Unaudited)

Schedule 3

Project	Description	Revenues through June 30, 2017	Total Revenues
	(G)	(H.1)	(I.1)
	(\$ in thousands)		
Transit Projects (25% of Net Revenues)			
R	High Frequency Metrolink Service	\$ 153,641	\$ 1,335,635
S	Transit Extensions to Metrolink	147,132	1,182,187
T	Metrolink Gateways	26,874	68,449
U	Expand Mobility Choices for Seniors and Persons with Disabilities	52,027	464,363
V	Community Based Transit/Circulators	33,325	267,765
W	Safe Transit Stops	3,678	29,555
	Subtotal Projects	416,677	3,347,954
	Net (Bond Revenue)/Debt Service	-	-
	Total Transit Projects	\$ 416,677	\$ 3,347,954
	%		
Measure M2 Program			
		\$ 1,666,708	\$ 13,391,818
Environmental Cleanup (2% of Revenues)			
X	Clean Up Highway and Street Runoff that Pollutes Beaches	\$ 35,642	\$ 287,714
	Net (Bond Revenue)/Debt Service	-	-
	Total Environmental Cleanup	\$ 35,642	\$ 287,714
	%		
Taxpayer Safeguards and Audits			
	Collect Sales Taxes (1.5% of Sales Taxes)	\$ 26,403	\$ 212,435
	%		
	Oversight and Annual Audits (1% of Revenues)	\$ 17,821	\$ 143,857
	%		

Measure M2

Progress Report

REVENUE & EXPENDITURES



Measure M2
Schedule of Revenues and Expenditures Summary
as of June 30, 2017
(Unaudited)

Schedule 3

Expenditures through June 30, 2017 (J)	Reimbursements through June 30, 2017 (K)	Net M2 Cost (L)
\$ 164,643	\$ 96,087	\$ 68,556
13,496	2,133	11,363
98,214	60,956	37,258
50,151	88	50,063
3,963	344	3,619
245	26	219
330,712	159,634	171,078
22,206	-	22,206
<u>\$ 352,918</u>	<u>\$ 159,634</u>	<u>\$ 193,284</u>
		16.2%
<u><u>\$ 1,830,031</u></u>	<u><u>\$ 639,744</u></u>	<u><u>\$ 1,190,287</u></u>
<u>\$ 28,245</u>	<u>\$ 292</u>	<u>\$ 27,953</u>
-	-	-
<u>\$ 28,245</u>	<u>\$ 292</u>	<u>\$ 27,953</u>
		1.6%
<u>\$ 19,491</u>	<u>\$ -</u>	<u>\$ 19,491</u>
		1.1%
<u>\$ 19,805</u>	<u>\$ 1,984</u>	<u>\$ 17,821</u>
		1.0%

Measure M2

Progress Report
LOCAL FAIR SHARE



M2 Funds		
ENTITY	4rd Quarter FY 2016/17	FUNDS TO DATE
ALISO VIEJO	\$210,063.10	\$3,592,390.11
ANAHEIM	\$1,881,872.38	\$31,224,189.23
BREA	\$305,081.95	\$5,222,178.34
BUENA PARK	\$454,349.44	\$8,309,398.54
COSTA MESA	\$791,159.43	\$13,146,979.86
CYPRESS	\$282,176.34	\$4,870,374.15
DANA POINT	\$171,162.00	\$2,969,584.94
FOUNTAIN VALLEY	\$328,157.77	\$5,684,114.15
FULLERTON	\$694,570.73	\$11,839,316.44
GARDEN GROVE	\$797,836.61	\$13,567,769.95
HUNTINGTON BEACH	\$1,030,145.94	\$17,662,292.84
IRVINE	\$1,480,625.19	\$24,023,636.60
LAGUNA BEACH	\$137,753.90	\$2,315,973.72
LAGUNA HILLS	\$180,408.88	\$3,103,390.76
LAGUNA NIGUEL	\$355,386.38	\$6,102,954.30
LAGUNA WOODS	\$67,060.48	\$1,169,643.01
LA HABRA	\$278,472.54	\$4,817,293.96
LAKE FOREST	\$429,950.82	\$7,140,261.41

Measure M2

Progress Report

LOCAL FAIR SHARE



ENTITY	4rd Quarter FY 2016/17	FUNDS TO DATE
LA PALMA	\$81,511.63	\$1,561,485.79
LOS ALAMITOS	\$69,593.41	\$1,179,457.45
MISSION VIEJO	\$500,709.78	\$8,542,631.72
NEWPORT BEACH	\$587,822.34	\$9,994,461.39
ORANGE	\$890,339.72	\$14,961,878.54
PLACENTIA	\$256,355.40	\$4,322,357.30
RANCHO SANTA MARGARITA	\$225,311.30	\$3,862,143.28
SAN CLEMENTE	\$302,333.48	\$5,065,474.82
SAN JUAN CAPISTRANO	\$200,011.64	\$3,456,680.05
SANTA ANA	\$1,504,041.27	\$25,255,335.61
SEAL BEACH	\$129,707.58	\$2,324,301.00
STANTON	\$160,268.84	\$2,742,325.77
TUSTIN	\$485,994.81	\$8,086,756.01
VILLA PARK	\$28,075.05	\$475,098.67
WESTMINSTER	\$461,125.86	\$7,780,997.70
YORBA LINDA	\$322,004.93	\$5,455,253.92
COUNTY UNINCORPORATED	\$1,020,181.48	\$16,719,785.92
TOTAL M2 FUNDS	\$17,101,622.40	\$288,548,167.25

Measure M2

Progress Report

CAPITAL ACTION PLAN



Grey = Milestone achieved

Green = Forecast milestone meets or exceeds plan

Yellow = Forecast milestone is one to three months later than plan

Red = Forecast milestone is over three months later than plan

Capital Projects*	Cost Budget/ Forecast (in millions)	Schedule Plan/Forecast			
		Begin Environmental	Complete Environmental	Complete Design	Complete Construction
FREEWAY PROJECTS					
I-5, SR-55 to SR-57	\$37.1	Jul-11	Jun-13	Mar-17	Feb-20
Project A	\$39.6	Jun-11	Apr-15	Oct-17	Jun-20
I-5, I-405 to SR-55	TBD	May-14	Aug-18	TBD	TBD
Project B	TBD	May-14	Oct-18	TBD	TBD
I-5, Avenida Pico to Avenida Vista Hermosa	\$113.0	Jun-09	Dec-11	Oct-13	Aug-18
Project C	\$89.5	Jun-09	Oct-11	Oct-13	May-18
I-5, Avenida Vista Hermosa to Pacific Coast Highway	\$75.6	Jun-09	Dec-11	Feb-13	Mar-17
Project C	\$71.4	Jun-09	Oct-11	May-13	Jul-17
I-5, Pacific Coast Highway to San Juan Creek Road	\$70.7	Jun-09	Dec-11	Jan-13	Sep-16
Project C	\$71.2	Jun-09	Oct-11	Jan-13	Apr-18
I-5, Ortega Interchange	\$90.9	Sep-05	Jun-09	Nov-11	Sep-15
Project D	\$75.1	Sep-05	Jun-09	Dec-11	Jan-16
I-5, Ortega Interchange (Landscape)	N/A	N/A	N/A	N/A	N/A
Project D	N/A	N/A	N/A	Oct-14	Sep-16
I-5, SR-73 to Oso Parkway	\$151.9	Sep-11	Jun-14	Jan-18	Apr-22
Project C & D	\$190.5	Oct-11	May-14	Jan-19	Sep-24
I-5, Oso Parkway to Alicia Parkway	\$196.2	Sep-11	Jun-14	Jun-17	Mar-22
Project C & D	\$191.0	Oct-11	May-14	May-18	Jul-23
I-5, Alicia Parkway to El Toro Road	\$133.6	Sep-11	Jun-14	Jun-18	Sep-22
Project C	\$166.5	Oct-11	May-14	May-19	Dec-23
I-5, El Toro Road Interchange	TBD	TBD	TBD	TBD	TBD
Project D	TBD	May-17	Apr-20	TBD	TBD

*For detailed project information, please refer to the individual project section within this report.

Measure M2

Progress Report

CAPITAL ACTION PLAN



Grey = Milestone achieved

Green = Forecast milestone meets or exceeds plan

Yellow = Forecast milestone is one to three months later than plan

Red = Forecast milestone is over three months later than plan

Capital Projects*	Cost Budget/ Forecast (in millions)	Schedule Plan/Forecast			
		Begin Environmental	Complete Environmental	Complete Design	Complete Construction
SR-55, I-405 to I-5	TBD	Feb-11	Nov-13	TBD	TBD
Project F	\$410.9	May-11	Sep-17	Nov-20	Jun-25
SR-55, I-5 to SR-91	TBD	Dec-16	Jan-20	TBD	TBD
Project F	TBD	Dec-16	Jan-20	TBD	TBD
SR-57 Northbound (NB), Orangewood Avenue to Katella Avenue	TBD	Apr-16	Dec-18	TBD	TBD
Project G	\$0.0	Apr-16	Dec-18	TBD	TBD
SR-57 (NB), Katella Avenue to Lincoln Avenue	\$78.7	Apr-08	Jul-09	Nov-10	Sep-14
Project G	\$40.5	Apr-08	Nov-09	Dec-10	Apr-15
SR-57 (NB), Katella Avenue to Lincoln Avenue (Landscape)	N/A	N/A	N/A	N/A	N/A
Project G	N/A	N/A	N/A	Jul-10	Nov-18
SR-57 (NB), Orangethorpe Avenue to Yorba Linda Boulevard	\$80.2	Aug-05	Dec-07	Dec-09	May-14
Project G	\$52.6	Aug-05	Dec-07	Jul-09	Nov-14
SR-57 (NB), Yorba Linda Boulevard to Lambert Road	\$79.3	Aug-05	Dec-07	Dec-09	Sep-14
Project G	\$55.4	Aug-05	Dec-07	Jul-09	May-14
SR-57 (NB), Orangethorpe Avenue to Lambert Road (Landscape)	N/A	N/A	N/A	N/A	N/A
Project G	N/A	N/A	N/A	Nov-17	May-19
SR-57 (NB), Lambert Road to Tonner Canyon	TBD	TBD	TBD	TBD	TBD
Project G	TBD	Aug-18	Jul-21	TBD	TBD
SR-91 Westbound (WB), I-5 to SR-57	\$78.1	Jul-07	Apr-10	Feb-12	Apr-16
Project H	\$59.6	Jul-07	Jun-10	Apr-12	Jun-16
SR-91 Westbound (WB), I-5 to SR-57 (Landscape)	N/A	N/A	N/A	N/A	N/A
Project H	N/A	N/A	N/A	Aug-16	May-18

*For detailed project information, please refer to the individual project section within this report.

Measure M2

Progress Report

CAPITAL ACTION PLAN



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Capital Projects*	Cost Budget/ Forecast (in millions)	Schedule Plan/Forecast			
		Begin Environmental	Complete Environmental	Complete Design	Complete Construction
SR-91, SR-57 to SR-55	TBD	Jan-15	Oct-18	TBD	TBD
Project I	TBD	Jan-15	May-19	TBD	TBD
SR-91 (WB), Tustin Interchange to SR-55	\$49.9	Jul-08	Jul-11	Mar-13	Jul-16
Project I	\$43.3	Jul-08	May-11	Feb-13	Jul-16
SR-91, SR-55 to SR-241	\$128.4	Jul-07	Jul-09	Jan-11	Dec-12
Project J	\$79.6	Jul-07	Apr-09	Aug-10	Mar-13
SR-91, SR-55 to SR-241 (Landscape)	N/A	N/A	N/A	N/A	N/A
Project J	N/A	N/A	N/A	Feb-13	Feb-15
SR-91 Eastbound, SR-241 to SR-71	\$104.5	Mar-05	Dec-07	Dec-08	Nov-10
Project J	\$57.8	Mar-05	Dec-07	Dec-08	Jan-11
I-405, SR-55 to I-605 (Design-Build)	\$1,900.0	Mar-09	Mar-13	Nov-15	Apr-23
Project K	\$1,900.0	Mar-09	May-15	Nov-15	May-23
I-405, I-5 to SR-55	TBD	Dec-14	Jul-18	TBD	TBD
Project L	TBD	Dec-14	Jul-18	TBD	TBD
I-605, I-605/Katella Interchange	TBD	Aug-16	Nov-18	TBD	TBD
Project M	TBD	Aug-16	Nov-18	TBD	TBD
GRADE SEPARATION PROJECTS					
Sand Canyon Avenue Railroad Grade Separation	\$55.6	N/A	Sep-03	Jul-10	May-14
Project R	\$61.8	N/A	Sep-03	Jul-10	Jan-16
Raymond Avenue Railroad Grade Separation	\$77.2	Feb-09	Nov-09	Aug-12	Aug-18
Project O	\$124.8	Feb-09	Nov-09	Dec-12	Aug-18
State College Boulevard Railroad Grade Separation (Fullerton)	\$73.6	Dec-08	Jan-11	Aug-12	May-18
Project O	\$97.0	Dec-08	Apr-11	Feb-13	Jan-18

Measure M2

Progress Report

CAPITAL ACTION PLAN



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Capital Projects*	Cost Budget/ Forecast (in millions)	Schedule Plan/Forecast			
		Begin Environmental	Complete Environmental	Complete Design	Complete Construction
Placentia Avenue Railroad Grade Separation	\$78.2	Jan-01	May-01	Mar-10	Nov-14
Project O	\$64.6	Jan-01	May-01	Jun-10	Dec-14
Kraemer Boulevard Railroad Grade Separation	\$70.4	Jan-01	Sep-09	Jul-10	Oct-14
Project O	\$63.5	Jan-01	Sep-09	Jul-10	Dec-14
Orangethorpe Avenue Railroad Grade Separation	\$117.4	Jan-01	Sep-09	Dec-11	Sep-16
Project O	\$108.6	Jan-01	Sep-09	Oct-11	Oct-16
Tustin Avenue/Rose Drive Railroad Grade Separation	\$103.0	Jan-01	Sep-09	Dec-11	May-16
Project O	\$98.3	Jan-01	Sep-09	Jul-11	Oct-16
Lakeview Avenue Railroad Grade Separation	\$70.2	Jan-01	Sep-09	Oct-11	Mar-17
Project O	\$107.4	Jan-01	Sep-09	Jan-13	Jun-17
17th Street Railroad Grade Separation	TBD	Oct-14	Jun-16	TBD	TBD
Project R	TBD	Oct-14	Oct-17	TBD	TBD
RAIL AND STATION PROJECTS					
Rail-Highway Grade Crossing Safety Enhancement	\$94.4	Jan-08	Oct-08	Sep-08	Dec-11
Project R	\$90.4	Jan-08	Oct-08	Sep-08	Dec-11
San Clemente Beach Trail Safety Enhancements	\$6.0	Sep-10	Jul-11	Apr-12	Jan-14
Project R	\$5.0	Sep-10	Jul-11	Jun-12	Mar-14
San Juan Capistrano Passing Siding	\$25.3	Aug-11	Jan-13	May-16	Jan-19
	\$30.8	Aug-11	Mar-14	Dec-17	Aug-20
OC Streetcar	\$309.0	Aug-09	Mar-12	Sep-17	Apr-20
Project S	\$310.4	Aug-09	Mar-15	Sep-17	Jul-20
Placentia Metrolink Station and Parking Structure	\$34.8	Jan-03	May-07	Jan-11	TBD
Project R	\$34.8	Jan-03	May-07	Feb-11	Oct-19

*For detailed project information, please refer to the individual project section within this report.

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Progress Report

CAPITAL ACTION PLAN



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Capital Projects*	Cost Budget/ Forecast (in millions)	Schedule Plan/Forecast			
		Begin Environmental	Complete Environmental	Complete Design	Complete Construction
Anaheim Canyon Station	\$27.9	Jan-16	Dec-16	TBD	TBD
	\$27.9	Jan-16	Jun-17	Apr-19	Dec-20
Orange Station Parking Expansion	\$33.2	Dec-09	Dec-12	Apr-13	Jun-18
	\$32.3	Dec-09	May-16	Apr-16	Jan-19
Fullerton Transportation Center - Elevator Upgrades	\$3.5	N/A	N/A	Dec-13	Mar-17
	\$4.0	N/A	N/A	Dec-13	Sep-18
Laguna Niguel/Mission Viejo Station ADA Ramps	\$3.5	Jul-13	Jan-14	Aug-14	Apr-17
	\$5.1	Jul-13	Feb-14	Jul-15	Oct-17
Anaheim Regional Transportation Intermodal Center	\$227.4	Apr-09	Feb-11	Feb-12	Nov-14
	\$230.4	Apr-09	Feb-12	May-12	Dec-14

*For detailed project information, please refer to the individual project section within this report.

LOS ANGELES

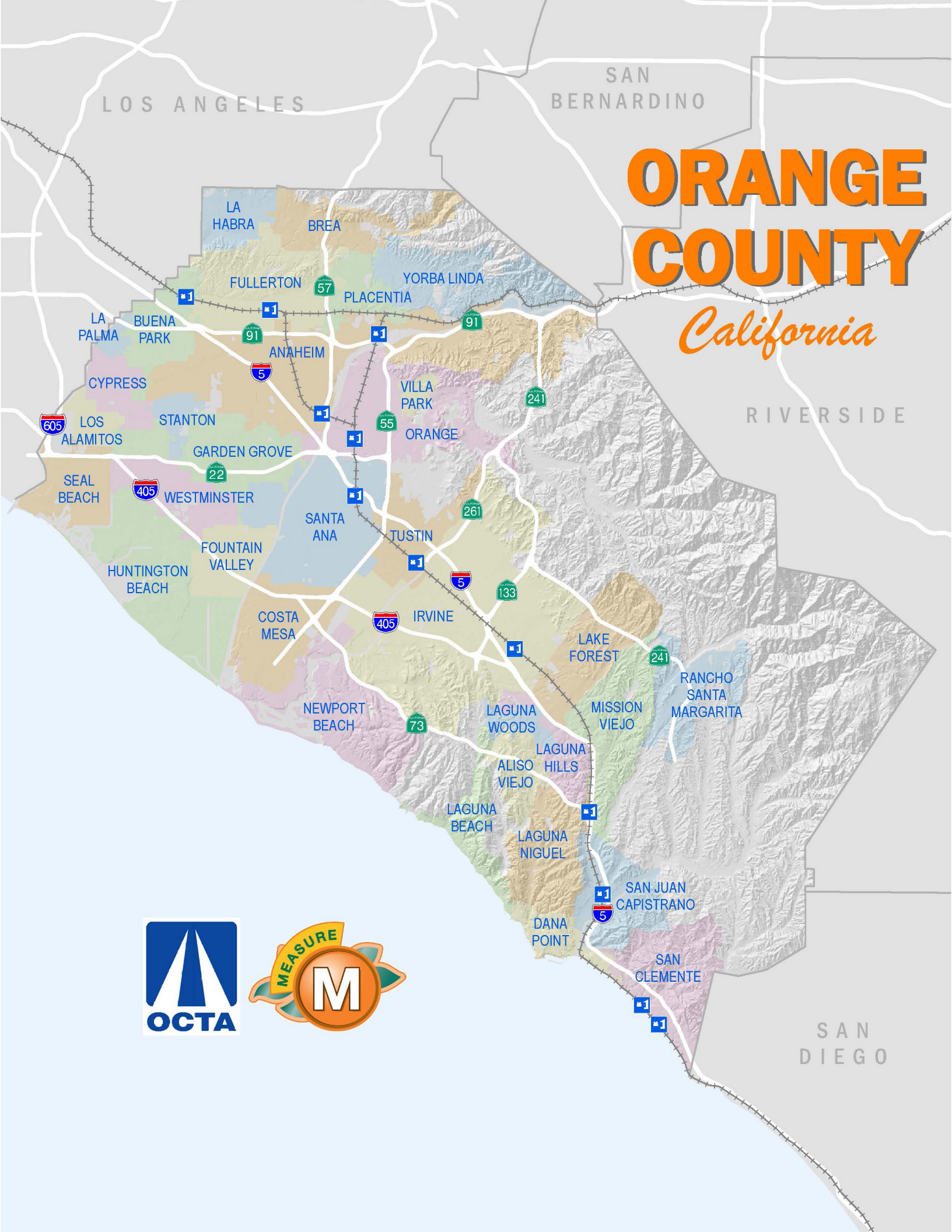
SAN BERNARDINO

ORANGE COUNTY

California

RIVERSIDE


SAN DIEGO





COMMITTEE TRANSMITTAL

September 11, 2017

To: Members of the Board of Directors
From:  Laurena Weinert, Clerk of the Board
Subject: Cooperative Agreements for Regional Traffic Signal Synchronization Program Projects

Regional Planning and Highways Committee Meeting of September 7, 2017

Present: Directors Delgleize, Do, Donchak, M. Murphy, Nelson, and Steel
Absent: Director Spitzer

Committee Vote

This item was passed by the Members present.

Committee Recommendations

- A. Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-7-1827 for the El Toro Road (east) Regional Traffic Signal Synchronization Project.
- B. Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-7-1828 for the Magnolia Street Regional Traffic Signal Synchronization Project.
- C. Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-7-1829 for the Brookhurst Street Regional Traffic Signal Synchronization Project.



September 7, 2017

To: Regional Planning and Highways Committee

From: Darrell Johnson, Chief Executive Officer

Subject: Cooperative Agreements for Regional Traffic Signal Synchronization Program Projects

A handwritten signature in blue ink, appearing to read "Darrell Johnson", is located in the upper right corner of the page.

Overview

On April 11, 2016, the Orange County Transportation Authority Board of Directors approved programming of funding for the Regional Traffic Signal Synchronization Program for seven projects as part of the 2016 Measure M2 Regional Traffic Signal Synchronization Program call for projects. As part of the application process, the Orange County Transportation Authority was requested to be the lead agency on three of the seven projects: El Toro Road (east), Magnolia Street, and Brookhurst Street. Separate cooperative agreements are necessary for each of these projects in order to outline the roles and responsibilities of the partnering agencies and to specify the amount and type (in-kind or cash) of the local agency match.

Recommendations

- A. Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-7-1827 for the El Toro Road (east) Regional Traffic Signal Synchronization Project.
- B. Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-7-1828 for the Magnolia Street Regional Traffic Signal Synchronization Project.
- C. Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-7-1829 for the Brookhurst Street Regional Traffic Signal Synchronization Project.

Discussion

As part of the 2016 call for projects, the Orange County Transportation Authority (OCTA) was requested to be the lead agency on three Regional Traffic Signal Synchronization Program (RTSSP) projects: El Toro Road (east),

Magnolia Street, and Brookhurst Street. As authorized by the Board of Directors (Board), these three RTSSP corridor projects are targeted for completion in 2019, and the partnering local agencies are required to provide 20 percent of the project funding.

Cooperative agreements are necessary for each of these projects in order to outline the roles and responsibilities of the partnering agencies with regard to the implementation of the projects and to specify the amount and type of local agency match.

- El Toro Road (Bridger {Interstate 5} to Orange Street): The corridor is approximately nine miles and includes 20 traffic signals. The corridor passes through the agencies of Lake Forest, Mission Viejo, and unincorporated Orange County, and carries daily traffic of up to 62,100. The project cost is estimated at \$1,390,559, with local agency in-kind services and cash match totaling \$278,114.
- Magnolia Street (Banning Avenue to Commonwealth Avenue): The corridor is approximately 16.2 miles and includes 50 traffic signals. The corridor passes through the cities of Anaheim, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Stanton, and Westminster, and carries daily traffic of up to 56,000. The project cost is estimated at \$3,389,617, with local agency in-kind services and cash match totaling \$677,923.
- Brookhurst Street (Pacific Coast Highway {State Route 1} to Commonwealth Avenue): The corridor is approximately 16.5 miles and includes 58 traffic signals. The corridor passes through the cities of Anaheim, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, and Westminster, and carries daily traffic of up to 44,000. The project cost is estimated at \$3,619,855, with local agency cash match totaling \$723,971.

Fiscal Impact

This project includes funding in the amount of \$8,400,031, and is included in the fiscal year 2017-18 budget, account 0017-7831-SP001-P57. In kind services and cash matching funds, in the amount of \$1,680,008, are provided by the local agencies and are approximately 20 percent of the costs of implementing the three RTSSP projects.

Summary

Staff requests Board approval for the Chief Executive Officer to negotiate and execute three cooperative agreements between OCTA, the respective cities, and the County of Orange for the El Toro Road (east), Magnolia Street, and Brookhurst Street RTSSP corridor projects to define roles, duties, governance, and fiscal responsibilities.

Attachment

None.

Prepared by:



Ron Keith
Project Manager III
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Approved by:



Kia Mortazavi
Executive Director, Planning
(714) 560-5741




Virginia Abadessa
Director, Contracts Administration and
Materials Management
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COMMITTEE TRANSMITTAL

September 11, 2017

To: Members of the Board of Directors
From:  Laurena Weinert, Clerk of the Board
Subject: Motorist Services Update for Fiscal Year 2016-17

Regional Planning and Highways Committee Meeting of September 7, 2017

Present: Directors Delgleize, Do, Donchak, M. Murphy, Nelson, and Steel
Absent: Director Spitzer

Committee Vote

This item was passed by the Members present.

Staff Recommendation

Receive and file as an information item.



September 7, 2017

To: Regional Planning and Highways Committee
From: Darrell Johnson, Chief Executive Officer
Subject: Motorist Services Update for Fiscal Year 2016-17

Overview

The Orange County Transportation Authority Motorist Services Program includes the following elements: call box system, Freeway Service Patrol, Southern California 511 travelers' information system, and the Orange County Taxi Administration Program. Collectively, the scope of these programs includes assisting motorists; mitigating traffic congestion; allowing the public to access information on highway conditions, transit services, and other important traveler information; and managing taxicab permitting processes and enforcement for Orange County and its 34 cities. This report provides an update on program activities for fiscal year 2016-17.

Recommendation

Receive and file as an information item.

Background

The Orange County Transportation Authority (OCTA) serves as the Service Authority for Freeway Emergencies (SAFE), and manages the Orange County Taxi Administration Program (OCTAP). SAFE and OCTAP are managed by the Motorist Services Department of the Transit Division. SAFE operates the call box system and the Freeway Service Patrol (FSP) program, and participates as a partner with the California Department of Transportation (Caltrans), the California Highway Patrol, Los Angeles County SAFE (LA SAFE), and Ventura County Transportation Commission in the development and operation of the Southern California 511 travelers' information system. OCTAP permits taxicab companies, taxicab vehicles, and taxicab drivers on behalf of Orange County and its 34 cities.

Discussion

Motorist Services staff has implemented a number of changes designed to improve program oversight, operations, business processes, planning, and development. This report provides a summary of major activities that occurred during fiscal year (FY) 2016-17.

In FY 2015-16, SAFE received state approval on a call box reduction plan, and reduced the number of freeway call boxes from 621 to 410. SAFE upgraded call box hardware to new 3G cellular radio technology, and completed the project during FY 2016-17 with the installation of highly visible diamond-reflective call box signs for each call box. The SAFE averaged 3.7 calls a day through the call box network in FY 2016-17. OCTA continues to utilize AT&T as its cellular service provider, securing preferred rates that are available to OCTA through the National Association of State Procurement Officers, previously known as the Western States Contracting Alliance. In Orange County, motorist aid calls are also received through the 511 program, with 4,120 calls received last FY. This is a 2.4 percent increase over FY 2015-16.

FSP tow truck operators provided 62,527 services for motorists who had disabled vehicles during FY 2016-17. This is a seven percent decrease over FY 2015-16. The FSP program recorded 1,825 customer comments through the Customer Relations call center and FSP online customer survey in FY 2016-17. Callers who were happy with the service comprised 98 percent of the total comments received in FY 2016-17. A benefit/cost (B/C) analysis prepared for FY 2014-15 indicated that, overall, the Orange County FSP provides \$18.00 of congestion relief for each dollar spent on the program. The FY 2015-16 B/C has been delayed because of Caltrans staffing changes and is scheduled to be released in the second quarter of FY 2017-18. Caltrans plans to have the FY 2016-17 B/C analysis completed by the fourth quarter of FY 2017-18.

The Southern California 511 interactive voice response system received an average of 118,352 calls per month in FY 2016-17, with five percent of the calls originating in Orange County. The Go511.com website received an average of 27,293 hits each month. In FY 2016-17, LA SAFE, with participation from OCTA staff, procured a vendor for the further development of the Go511 system. In addition to making 511 content more relevant to users, the project aims to establish cooperative agreements with the Riverside County Transportation Commission and the San Bernardino County Transportation Authority to bring Riverside and San Bernardino into the Go511 and rebrand the system to "So Cal 511."

To increase awareness of the 511 program in Orange County, staff initiated awareness campaigns to educate OCTA employees and the public about the 511 program. Outreach efforts included events at OCTA operating bases and distributing 511 promotional materials through FSP operators at the reception desk at OCTA's 600 building, and to bus patrons using OC Fair Express and Laguna Beach Summer Breeze bus services.

At FY 2016-17 year-end, OCTAP oversaw the regulation of 21 taxicab companies, 610 taxicab vehicles, and 630 taxicab drivers, down significantly from FY 2015-16 year-end. Some reasons for the decline may include taxicab drivers migrating to transportation network companies permitted by the California Public Utilities Commission and increases in commercial liability insurance costs. OCTAP staff enforced taxicab regulations by verifying eligibility prior to issuing an OCTAP permit and monitoring companies, drivers, and vehicles for continued compliance. OCTAP staff monitored for continued compliance with OCTAP regulations by monitoring drug and alcohol testing program enrollment and test results, monitoring Department of Justice subsequent arrest notifications, monitoring Department of Motor Vehicle Pull Notice records, performing compliance reviews of permitted taxicab companies, and performing annual and random vehicle inspections to ensure continued compliance with OCTAP regulations.

OCTAP staff performed 1,524 taxicab vehicle inspections during the year, including 444 random inspections and 245 cursory inspections. Random inspections occur at the OCTAP facility, with vehicles selected through a random generator within the OCTAP database. Vehicles are also called in for random inspection when necessary, based on a report or in-field observation. Cursory inspections occur in the field at John Wayne Airport (JWA) in coordination with Orange County Sheriff officers and JWA Ground Operations personnel.

Although not mandated by OCTAP regulations, 51 percent of permitted taxicabs are clean-fuel vehicles. Thirty-six percent of permitted taxicabs have the capacity to carry five or more passengers, with more than 14 percent of the vehicles being wheelchair accessible. OCTAP staff assisted in the resolution of 26 complaints, issued 23 warnings and fines, suspended two permits, and revoked nine permits during the year. OCTAP also denied three taxicab operator permits because they did not meet the minimum requirements set forth in the OCTAP regulations.

The OCTAP program is no longer financially sustainable under the current revenue structure. OCTA issued the member agencies a twelve-month notice of its intent to withdraw as the administrator of the program in June 2016, as required in the cooperative agreements with the agencies. OCTA has since

determined that there are sufficient reserves to sustain the program through December 2017, and has agreed to extend its participation as the administrator of the OCTAP program through December 2017. OCTA Government Relations staff have been working closely with the Orange County City Managers Association to have cities fund the OCTAP program for the remainder of FY 2017-18 and determine OCTA's potential role in the OCTAP program beyond FY 2017-18.

Additional information regarding each of these program areas can be found in Attachment A.

Summary

An annual report for Motorist Services and OCTAP has been prepared to highlight program activities and accomplishments for FY 2016-17.

Attachment

- A. Motorist Services Annual Report, Fiscal Year 2016-17

Prepared by:



Patrick Sampson
Manager, Motorist Services
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Approved by:



Beth McCormick
General Manager, Transit
(714) 560-5964



MOTORIST SERVICES ANNUAL REPORT

Fiscal Year 2016-17

Motorist Services Annual Report

Fiscal Year 2016-17

Introduction

The Orange County Transportation Authority (OCTA) serves as the Service Authority for Freeway Emergencies (SAFE) and manages the Orange County Taxi Administration Program (OCTAP). SAFE and OCTAP are managed by the Motorist Services Department of the Transit Division. SAFE operates the call box system and the Freeway Service Patrol (FSP) program, and participates as a partner with the California Department of Transportation (Caltrans), California Highway Patrol (CHP), Los Angeles County SAFE (LA SAFE), and Ventura County Transportation Commission (VCTC), in the development and operation of the Southern California 511 Motorist Aid and Traffic Information System (Southern California 511).

OCTAP permits taxicab companies, taxicab vehicles, and taxicab drivers on behalf of Orange County (County) and its 34 cities, ensuring that program permit requirements are met prior to issuing an operating permit. OCTAP performs vehicle safety inspections and compliance reviews, and enforces OCTAP regulations in the field, along with local law enforcement agencies as partners.

This report provides a summary of activities that occurred during fiscal year (FY) 2016-17.

Service Authority for Freeway Emergencies

Call Box System

SAFE operates a system of call boxes located on freeways, toll roads, select state highways, and select transit centers. Funding for operating the call boxes comes from a \$1 registration fee on vehicles registered in the County. This revenue stream generated approximately \$2,938,022 in FY 2016-17, a one percent increase over FY 2015-16. Revenue from the \$1 registration fee pays for the cost of contracted maintenance, call answering services, call box cellular phone service, the proportional share of the actual wage for one-half of the CHP SAFE Coordinator position, and the proportional share of the wages and benefits of Motorist Services staff. Remaining funds from this revenue stream help to pay for FSP and Southern California 511 motorist aid programs.

In FY 2015-16, SAFE received approval from the OCTA Board of Directors (Board), Caltrans, and CHP to reduce the number of highway call boxes from 621 to 410. There are currently 384 call boxes located on freeways and toll roads and 26 call boxes located on Carbon Canyon Road, Ortega Highway, and Santiago Canyon Road. Highway call boxes include call boxes temporarily removed for construction.

SAFE also upgraded all call box hardware to new 3G cellular technology as part of the SAFE call box reduction plan. This upgrade was necessary because AT&T discontinued its 2G cellular network on January 1, 2017. SAFE removed all call boxes planned for removal, replaced radio and teletypewriter hardware, and repainted and rehabilitated all remaining call boxes six months ahead of AT&T's 2G network shutdown. SAFE also replaced all call box signs with highly visible diamond-reflective signs, making the call

Motorist Services Annual Report
Fiscal Year 2016-17

boxes easier to see at night. The sign replacement portion of the project was completed in the first quarter of FY 2016-17.

Call box cellular service is provided on the AT&T Global System for Mobiles network, through an agreement available under the National Association of State Procurement Officers (NASPO) agreement, previously known as the Western States Contracting Alliance. OCTA continues to realize an average savings of \$4,000 a month under the NASPO rate structure.

Nineteen call boxes were knocked down or damaged as the result of vehicle collisions in FY 2016-17, incurring repair costs totaling \$82,226. Staff worked with CHP accident investigators and OCTA Risk Management to recover costs associated with repairing knocked down call boxes. Repair costs associated with call box knockdowns incur no additional expense to OCTA because of pre-negotiated knockdown replacement levels of up to ten percent (41) in the maintenance service agreement. During FY 2016-17, \$17,893 was recovered for call box knockdowns. This includes \$5,192 for knockdowns occurring during the FY and \$12,701 recovered from previous FYs. An additional \$12,597 is pending investigation and subrogation. Table 1 provides a breakdown of knockdown and recovery efforts for FY 2016-17. Table 2 provides a breakdown of funds recovered previous year knockdowns.

Tables 1 and 2 – Call Box Knockdown Loss Recovery

FY 2016-17 Knockdowns			
15	Unrecoverable - No Accident Report Available	\$64,438.01	79%
3	Submitted to Risk Management for Recovery	\$12,596.74	15%
1	Recovered by Risk Management During Same FY	\$5,191.68	6%
19	Total FY 2017 Knockdowns	\$82,226.43	

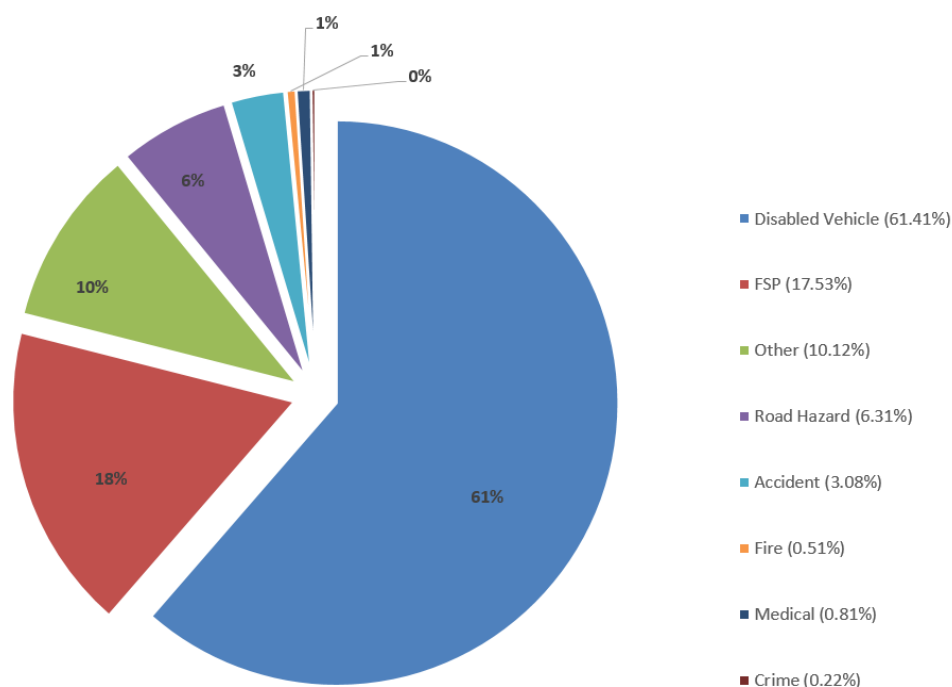
Risk Management Previous Year Recovery Progress	
Recovered in FY 2016-17 from Previous Fiscal Years	\$12,701.04
Pending from Previous Fiscal Years	\$7,735.35

During FY 2016-17, the contracted call-answering center answered 1,363 calls for assistance through the call box system, down 21 percent from FY 2015-16, which had 1,717 calls. Sixty-one percent of FY 2016-17 calls were for disabled vehicles. These calls included vehicles with flat tires, ran out of gas, overheated, or were not operable due

Motorist Services Annual Report Fiscal Year 2016-17

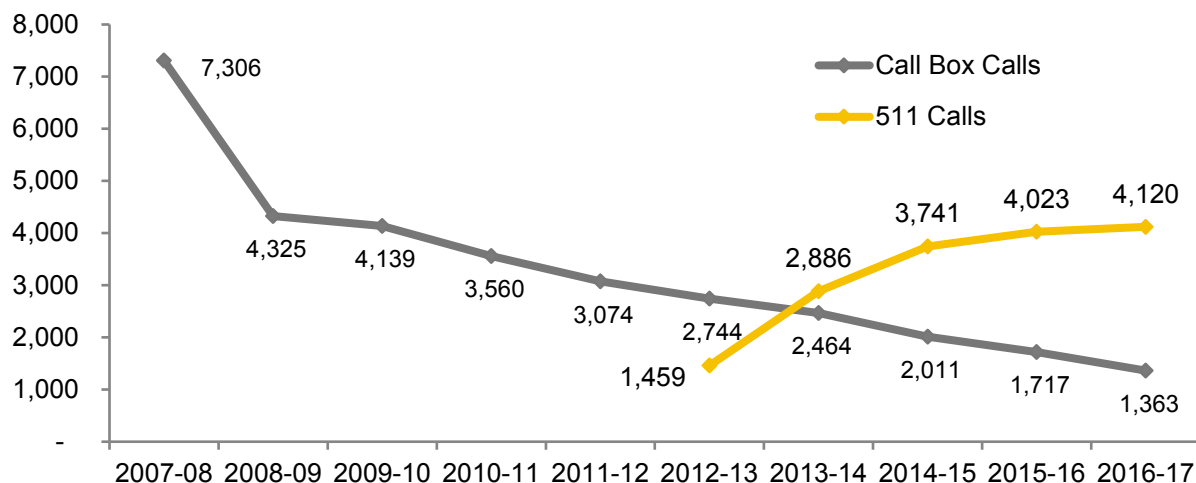
to a mechanical problem. Calls are statistically categorized as disabled vehicles during the hours that FSP does not operate, or the call is from a call box on a roadway where FSP does not operate, such as the toll roads, Carbon Canyon Road, Ortega Highway, and Santiago Canyon Road. In these cases, the call answering center assists the caller by offering to send a CHP rotation tow truck (at the caller's expense), by calling a road side assistance provider subscribed to by the caller, or by calling a family member or friend. Figure 1 depicts FY 2016-17 calls by type, with the two highest volumes of call box calls attributed to disabled vehicles (61 percent) and requests for FSP assistance (18 percent).

Figure 1 - FY 2016-17 Call Box Calls by Type



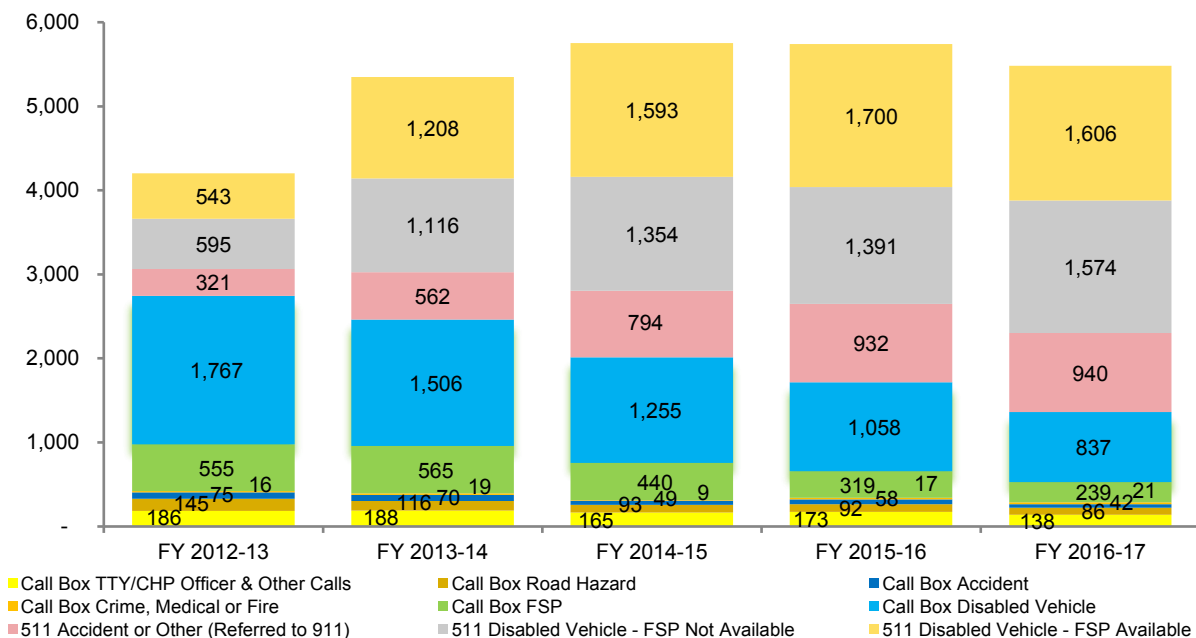
A mobile call box service, as part of the Southern California 511 system, was deployed on July 26, 2012. The mobile call box service allows motorists to reach assistance using a personal cell phone, similar to the assistance obtained by using a freeway call box, by calling 511. These calls are routed to OCTA's call box call answering center. Orange County received 4,120 calls for motorist aid through the Southern California 511 system during FY 2016-17. Figure 2 shows call box and 511 call volumes since FY 2007-08.

Figure 2 - Annual Call Box and 511 Call Volumes Beginning FY 2007-08



Reasons for the decline in call box calls may include increases in the availability and use of cell phones and increased awareness of the availability of roving FSP service during peak commute hours and expanded midday and weekend FSP service. A survey of call box callers indicates approximately 38 percent of callers did not have a working cell phone in their possession. Callers who had cell phones reported that they were unable to utilize their cell phone because it was not functioning properly, was not charged, or because they did not know who to call for assistance. Combined call box and 511 calls total 5,483 for FY 2016-17. Figure 3 depicts call type comparisons from FY 2011-12 through FY 2016-17.

Figure 3 – Call Box and 511 Calls by Type FY 2011-12 through FY 2016-17



Motorist Services Annual Report

Fiscal Year 2016-17

Thirty-four percent of the calls received through the call box and 511 systems in FY 2016-17 occurred during FSP hours. For calls received during FSP operating hours, the call-answering center notifies CHP, which dispatches an FSP truck to the caller's location to provide assistance. Calls related to road hazards, accidents, medical incidents, crimes, and fires are dispatched to the appropriate first responder.

Freeway Service Patrol

FSP is a traffic congestion management program designed for the rapid removal of disabled vehicles from traffic lanes and shoulders, as well as timely response to accidents and other incidents that require the removal of debris from freeway traffic lanes. The FSP program is a partnership among Caltrans, CHP, and OCTA. Private tow truck companies operate the service under contract to OCTA. Each tow truck operator patrols an assigned freeway segment during service hours, stopping to assist stranded motorists. The tow truck operator offers assistance, such as changing a flat tire, providing a free gallon of gas, or taping a coolant hose. If assistance cannot be completed to restore the vehicle to driving condition within 10 minutes, the tow truck operator will tow the vehicle off the freeway to a designated drop zone.

FSP began providing peak-hour service along County freeways in November 1992. FSP service during peak hours (6:00 a.m. to 10:00 a.m. and 3:00 p.m. to 7:00 p.m.) is divided into 12 areas (excluding construction zones), called service areas. Service areas are further divided into 34 peak hour beats. Five midday beats (10:30 a.m. to 2:30 p.m.) were added in 2007 and are now funded by Measure M2 (M2). Two additional midday beats were added in 2012 using M2 funds to cover congested areas of the freeway and major interchanges. Weekend service is operated on Interstate 5 (I-5) in South County, on State Route 91 through Anaheim Canyon, and on State Route 22 through the I-5 and State Route 57 interchanges using M2 funds. FSP service is also provided during non-peak hours (10:00 a.m. to 3:00 p.m. and 7:00 p.m. to 10:00 p.m.) in certain construction zone areas.

The FSP program is funded through a combination of state and local funds consisting of funding from the State Highway Account (SHA) through Caltrans, the \$1 fee on registered vehicles that supports the call box program and other motorist aid services, and through M2. These funds pay for contracted towing services, CHP overtime attributable to the FSP program, one CHP dispatcher position, radio maintenance and operation, computer equipment maintenance and operation, field equipment and supplies, mandatory quarterly training sessions, and the proportional share of the wages and benefits of Motorist Services staff. The funding from the SHA is distributed to agency SAFEs based on freeway congestion levels, urban freeway lane miles, population in each county where FSP is operated, and local agencies ability to provide required matching funds. In FY 2016-17, the County's FSP program was apportioned \$2,615,022, requiring a local match of \$653,756.

FY 2016-17 SHA funding was down three percent from FY 2015-16 because some SAFE agencies that were previously not able to accept their full allocation accepted more funds

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in FY 2016-17. Some agencies that operate FSP were unable to accept their full allocation because they were unable to provide the required local match or for other reasons. These funds are reallocated, using the same formula, to counties that overmatch state funds to operate their FSP programs.

Funds from M2 became available to support the FSP program in FY 2010-11. Guidelines for the use of M2 funds for FSP were approved by the Board on February 13, 2012, and allow for the following eligible expenditures:

- Maintaining existing service levels for the 34 peak-hour service beats, five midday service beats, and two weekend service beats.
- Operating new FSP service beats, providing a benefit/cost (B/C) analysis results in a minimum three to one ratio.
- Providing FSP service for the M2 freeway program of projects.
- Contracting for additional CHP supervision.
- Contracting for additional CHP dispatch.

In June 2012, the FSP program realigned existing midday service beats, added two new midday service beats, and added two weekend service beats utilizing M2 funds. This significantly increased midday and weekend FSP coverage.

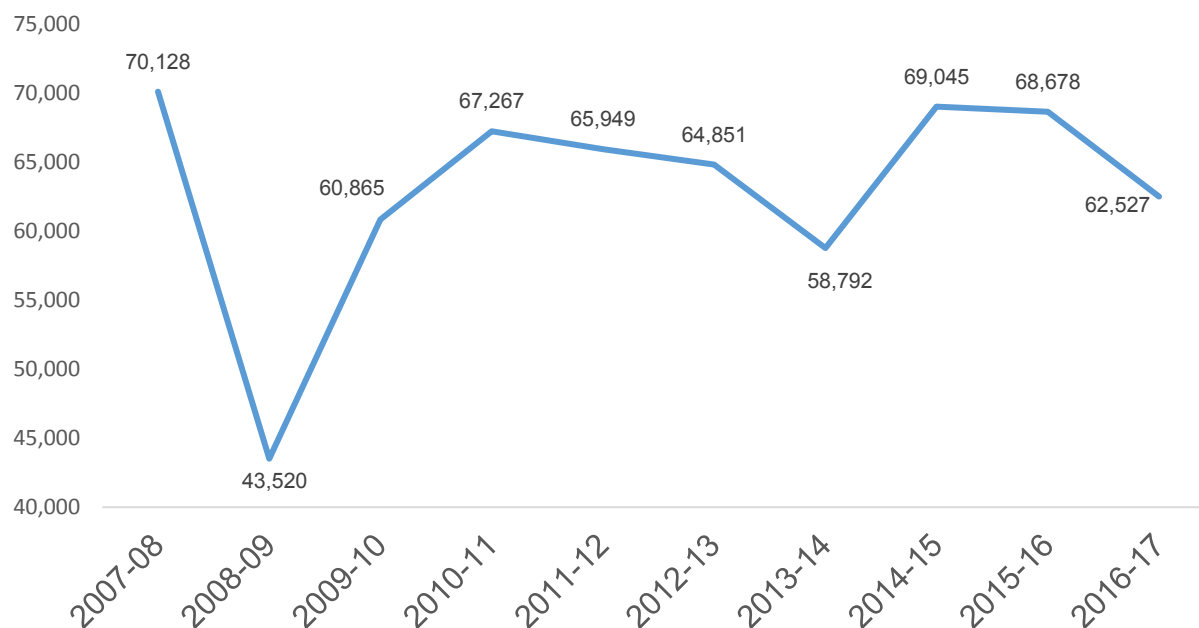
At least every three years, Caltrans contracts with a consultant to prepare a statewide B/C analysis of the FSP program. The model used for the B/C analysis was developed by the Institute of Transportation Studies at the University of California, Berkeley, following extensive field measurements before and after FSP deployment. The model estimates delay-saving benefits based on the FSP beats' geometric and traffic characteristics, as well as the frequency and type of FSP-assisted freeway incidents. The estimated benefits include reductions in incident-induced vehicular delays, fuel consumption, and air pollution emissions.

A B/C analysis for FY 2014-15 was completed in the latter part of FY 2015-16. Results of the analysis for the OCTA FSP beats indicate that FSP provided an average of \$18.00 of congestion relief benefit for each dollar spent during weekday peak operating hours and \$10.00 of congestion relief benefit for each dollar spent during weekend operating hours. The combined program average is estimated to be \$18.00 of congestion relief benefit for each dollar spent on the program. Because the program provides significantly more service on weekdays than on weekends, the weekend service has little impact on the blended B/C average. This represents a \$9.00 per hour increase in benefit cost over FY 2013-14. Improvements in tow truck operator training, how operators report assist data, and increased traffic congestion are believed to be major contributors to the significant increase in benefit cost. The FY 2015-16 B/C has been delayed because of Caltrans staffing changes, and is scheduled to be released in the second quarter of FY 2017-18. Caltrans plans to have the FY 2016-17 B/C analysis completed by the fourth quarter of FY 2017-18.

Motorist Services Annual Report Fiscal Year 2016-17

FSP tow truck operators provided 62,527 services for motorists whose vehicles had become disabled in FY 2016-17, a seven percent decrease from FY 2015-16. One reason for the decrease in assists is an increase in the number of assists requiring a tow off the freeway. Although only towing 163 more vehicles than in FY 2015-16, program supervisors have been required to move a number of FSP drop zones further from the freeway, due to changes in city parking regulations. This has increased the length of time required to complete an assist when a vehicle is towed off the freeway. Another reason for the decrease in services is that operators now are required by CHP to complete their assist data off the freeway after each assist, resulting in more time spent traveling to a safe off-freeway location to enter assist data. Figure 4 shows total services provided annually since FY 2007-08.

Figure 4 - Total Annual FSP Services – FY 2007-08 through FY 2016-17



Before FY 2007-08, assist data was recorded through a manual system on scantron cards. During FY 2007-08, assist service data was kept through the manual system, and by an electronic tracking and reporting system, to allow drivers time to become familiar with the new automated system. There was a sharp decrease in the number of assists provided from FY 2007-08 to FY 2008-09, possibly due to an economic downturn resulting in less congestion and fewer incidents on the freeways. An analysis of data available in the reporting system revealed that several other factors could have contributed to the appearance of a drop in the number of assists provided to motorists. During FY 2008-09, FSP drivers were not entering assists that were dispatched by CHP through the mobile data terminal (MDT). As a result, approximately 15,400 calls dispatched by CHP were not recorded by the FSP drivers on the MDT. Additionally, drivers did not enter some assist records because the MDT system was not functioning properly, and the system did not provide for the manual entry of assist data at a later time.

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Staff addressed the issue of inconsistent data collection for dispatched calls with FSP contractors and implemented procedures for manual data collection should a driver be unable to enter assist data into the automated system. Staff also addressed data collection and reporting practices that may have led to inaccuracies with some historical data by taking more control over data reporting, collecting, and validating the raw data, and developing reports directly from the raw data, instead of relying on pre-configured reports that may exclude some records because of missing data fields in a record. This has led to better data collection practices, an increase in data capture, a better understanding of the assist data, and more accurate overall performance reporting.

In January 2013, staff deployed a new vehicle tracking and data collection system that utilizes OCTA provided in-vehicle edge controller (black box) devices for vehicle tracking and tow contractor-provided iPad or Android tablet devices for data collection. System functionality includes geo-fencing, schedule adherence, system alerts, and an advanced reporting feature designed to enhance program tracking. The data collection system includes a customer survey module that allows customers to complete an online survey. Most disabled vehicles are discovered by FSP operators while patrolling their service beats; however, CHP may also dispatch calls for service through the system from requests that come in through the call box, 511 and 911 systems, or through a CHP officer request. Survey responses from customers who received FSP assistance indicate that 85 percent of FSP assists are initiated through FSP operator discovery of the vehicle. Figure 5 shows how survey respondents received FSP service in FY 2016-17.

When an FSP operator stops to provide assistance, the operator initiates an incident using the tablet device, which generates a survey identification (ID) number for a web-based customer survey. The tow operator greets the motorist with a program brochure containing the survey ID number, and assists the motorist within program guidelines. After completing the assist, the operator enters basic vehicle and location information and type of service provided, and closes the assist transaction. The system then returns the operator to an "On Patrol" status. The customer, at their convenience, may complete a web-based customer survey to provide feedback about their experience.

Figure 6 shows the distribution of assists by type for FY 2016-17. The highest number of recorded assists is for Towed Vehicle, followed closely by Flat Tire. Information Assist generally refers to incidents where tow operators discover a motorist stopped on the side of the road whose vehicle is not disabled. Reasons motorists are stopped on the side of the freeway often include navigation, telephone calls, texting, emailing, and resting.

Figure 5 – How FSP Customers Received Service – FY 2016-17

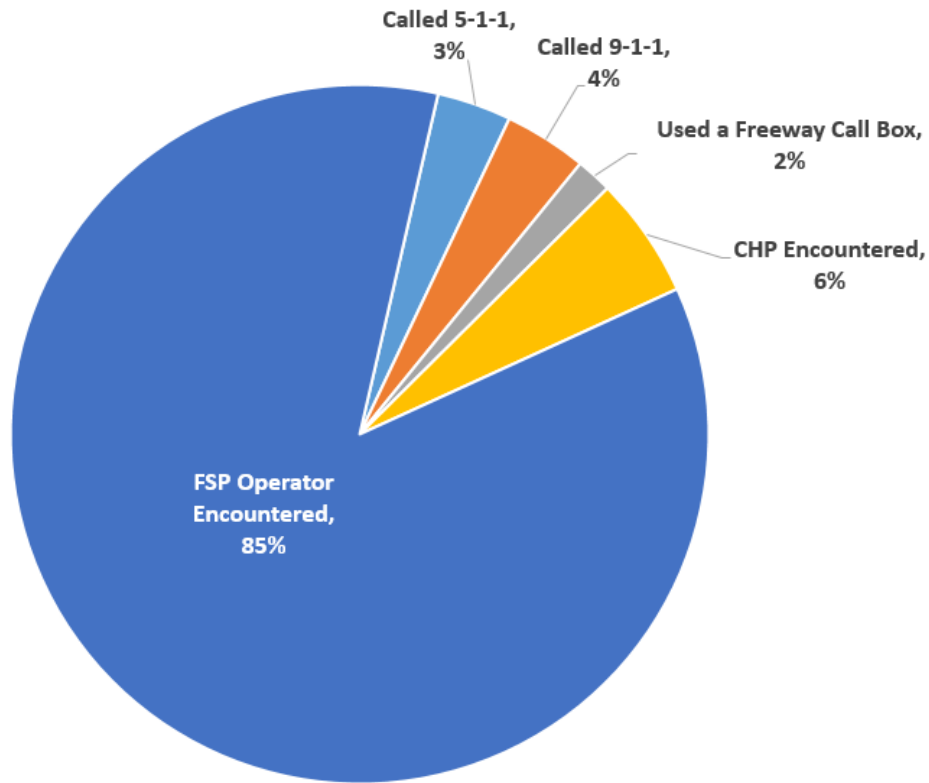
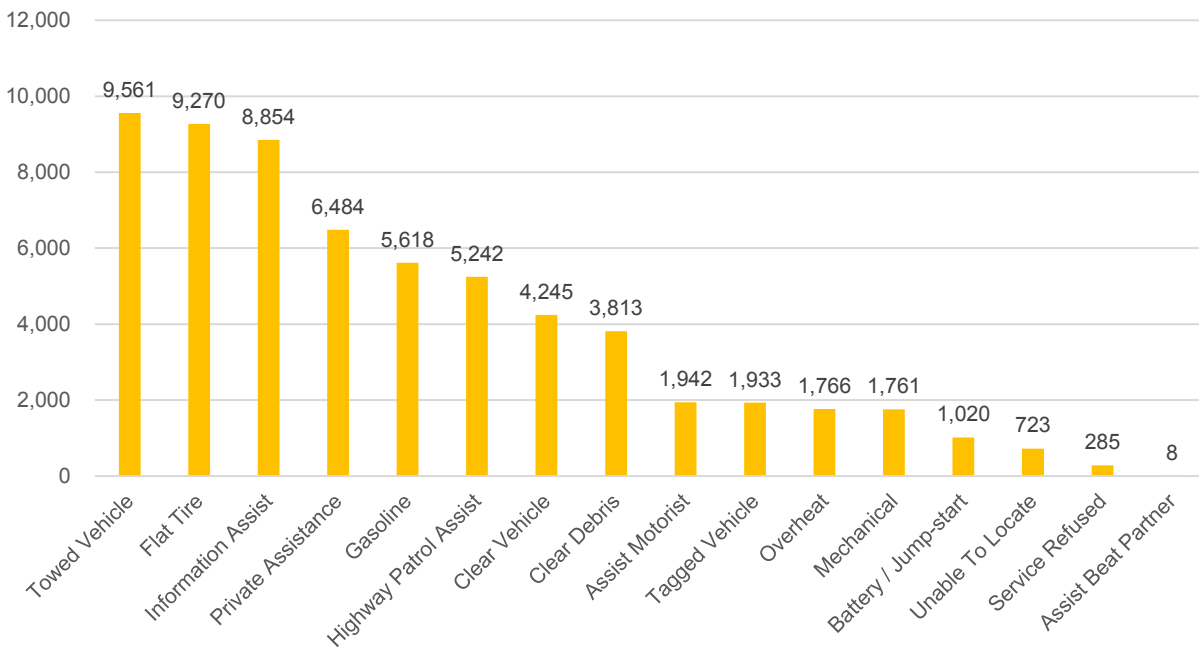


Figure 6 - FSP Assists by Type – FY 2016-17



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Primary assist types include changing a flat tire, information assist, providing a gallon of gasoline, waiting for private assistance, towing a vehicle to a designated drop zone if unable to remedy the issue within program guidelines, and assisting CHP officers. Other assist types include clearing disabled vehicles or debris from the freeway traffic lanes, tagging unattended vehicles for CHP attention, or assisting motorists with overheated vehicles or with minor mechanical defects. Operators often encounter motorists who refuse FSP service because they already have their own (private) assistance enroute, and occasionally refuse service for unknown or undisclosed reasons.

Each time an FSP operator stops to assist a motorist, the operator provides the motorist with a brochure, including a survey ID number, explaining the FSP service. Customers are also given an FSP business card with the tow operator's name and OCTA's Customer Relations telephone number. In FY 2009-10, the brochures were updated to better describe the FSP program, add safety information, and publicize the Southern California 511 program. Prior brochures listed a CHP phone number, resulting in insufficient historical comment data prior to FY 2009-10.

The FSP program recorded 1,825 customer comments through the Customer Relations call center and FSP online customer survey in FY 2016-17, up 173 percent from FY 2015-16. Callers who were happy with the service comprise 98 percent of the total comments. The program received 38 complaints from motorists who were not satisfied with the service. Complaints included dissatisfaction with the service provided, operator driving technique, and claims for damage. A CHP Officer Program Supervisor investigates each customer complaint, and provides a response to the complaining party. Program supervisors also followed up with FSP contractors and tow operators as appropriate to address customer concerns and to prevent future occurrences. Claims for damage range from stripped or broken wheel studs to damage caused as the result of a collision. OCTA is shielded from claims for damage by contract language that requires FSP contractors to name OCTA as additional insured, and to indemnify and hold OCTA harmless against any claims for loss or damage. Figure 7 charts compliments and complaints received from FY 2007-08 through FY 2016-17.

In FY 2012-13, staff implemented a new web-based survey as part of the new LATATrax system. The survey allows staff to gear survey questions toward specific performance areas such as time waited before assist, FSP operator courtesy, FSP operator knowledge, overall experience, and overall satisfaction with the service. The web-based survey also helps reduce OCTA costs associated with calls received by the Customer Relations Call Center for FSP program customer comments. Tables 3, 4, and 5 show that 98 percent of the respondents reported that they agreed or strongly agreed with three key service statements, while less than one percent indicating that they did not agree. Customers who reported dissatisfaction (disagree) with the survey area and provided contact information were contacted for follow up.

Figure 7 - FSP Customer Comments – FY 2007-08 through FY 2016-17

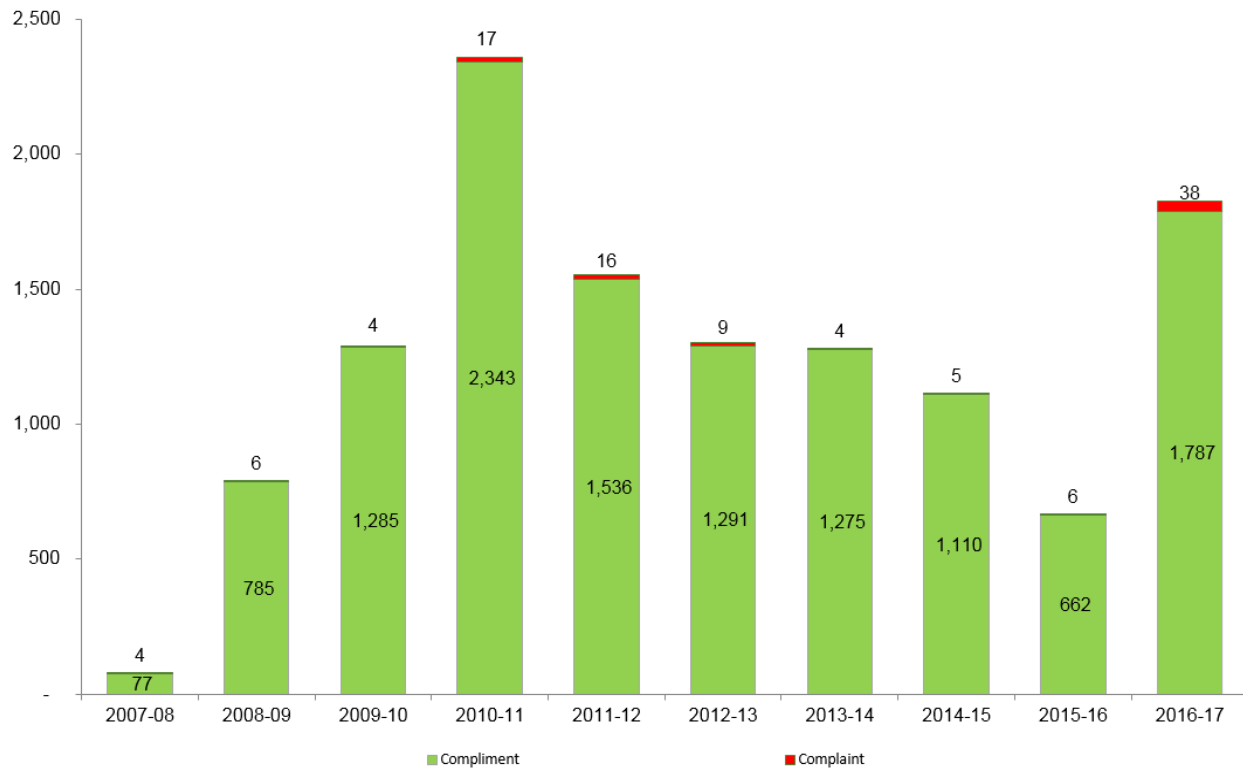


Table 3 - Safety

The FSP Operator was concerned for my safety				
Fiscal Year	Disagree	Neutral	Agree	Strongly Agree
2014	3	4	31	237
2015	2	2	44	264
2016	2	3	14	155
2017	5	8	34	223
Percentage	1.16%	1.65%	11.93%	85.26%

Table 4 – Professionalism

The FSP Operator was knowledgeable and professional				
Fiscal Year	Disagree	Neutral	Agree	Strongly Agree
2014	1	2	8	265
2015	0	2	16	292
2016	2	2	10	159
2017	4	9	24	232
Percentage	0.68%	1.46%	5.64%	92.22%

Table 5 – Courtesy

The FSP Operator treated me with courtesy and respect				
Fiscal Year	Disagree	Neutral	Agree	Strongly Agree
2014	2	1	8	264
2015	1	1	13	298
2016	3	3	3	164
2017	9	2	22	233
Percentage	1.46%	0.68%	4.48%	93.38%

Southern California 511

The Southern California 511 system is a partnership between Caltrans, CHP, LA SAFE, OCTA, and VCTC to provide a motorist aid and traveler information system for Los Angeles, Orange, and Ventura counties. The official launch of the Southern California 511 system coincided with a January 2011 marketing campaign. The Go511 mobile application was launched in May 2014. The system allows travelers and commuters to access up-to-the minute information on highway conditions, traffic speeds, transit, and commuter services via the mobile application, the same information that they receive by dialing 511 from their telephone. By visiting Go511.com, users can obtain similar information compared to calling 511. Driving directions and information on bicycling, airports, and taxis are also available.

The Southern California 511 Interactive Voice Response (IVR) system received an average of 118,352 calls per month in FY 2016-17, with 5 percent of the calls originating in Orange County. Although the total number of 511 calls are down when compared to FY 2015-16, the percentage of calls originating from Orange County increased from four percent to five percent. Figure 8 displays the number of 511 IVR calls received during FY 2016-17, along with the percentage of calls that originated from Orange County.

Table 6 displays the number of website visits and the number of IVR calls received during FY 2016-17 for Los Angeles and Orange counties. The Go511.com website received an average of 27,293 hits per month, down sixty-seven percent from 83,640 hits per month in FY 2015-16. The significant decline in website hits maybe due to the previous vendor reporting each page that was viewed in addition to website hits (double counting). To ensure that website numbers are not over inflated, the new vendor is reporting only website hits beginning with the fourth quarter of FY 2015-16. Figure 9 shows the number of website visits for the last three FYs. Figure 10 displays the total website visits by the three different device types utilized to access the Go511 website; desktops, mobile phones or tablets.

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Figure 8 - 511 IVR Calls Received, Calls with Orange County Percentages

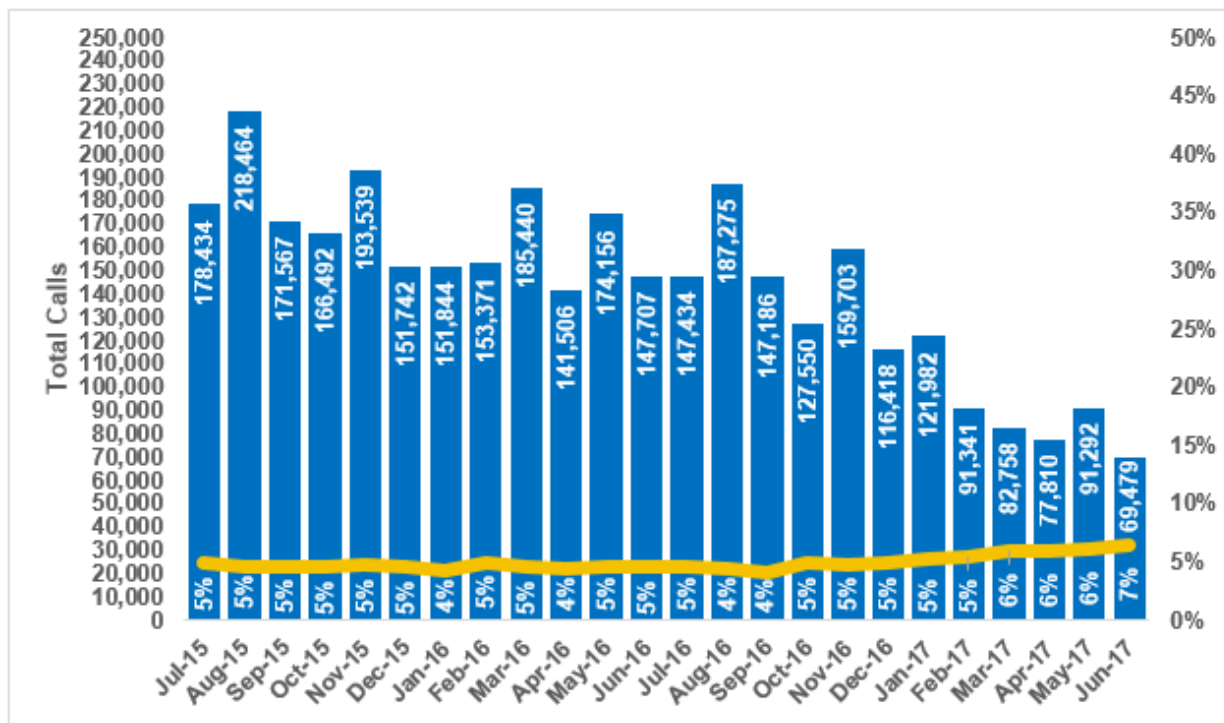


Table 6 - Southern California 511 Usage by Quarter – FY 2016-17

	1st QTR Jul-Sep 2016	2nd QTR Oct-Dec 2016	3rd QTR Jan-Mar 2017	4th QTR Apr-Jun 2017	Total
Number of Website Visits	91,172	83,331	78,091	74,917	327,511
IVR Calls Received					
Total IVR Calls	481,895	403,671	296,081	238,581	1,420,228
Orange County	20,896	19,716	16,380	14,661	71,653
511 Call Center IVR Calls Answered *	75,368	62,253	33,397	3,481	174,499

* Beginning in May 2017 LA SAFE discontinued the use of a staffed call center as part of the 511 IVR solution.

Figure 9 – Total Number of Web Visits – FY 2014-15 through FY 2016-17

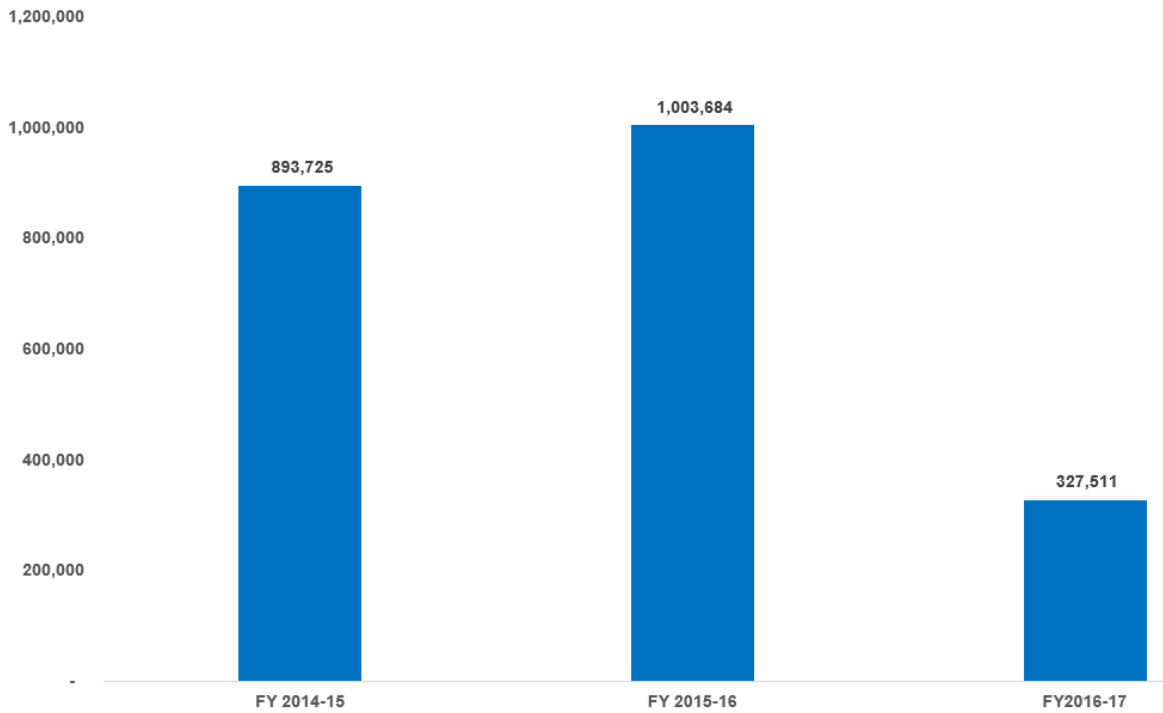
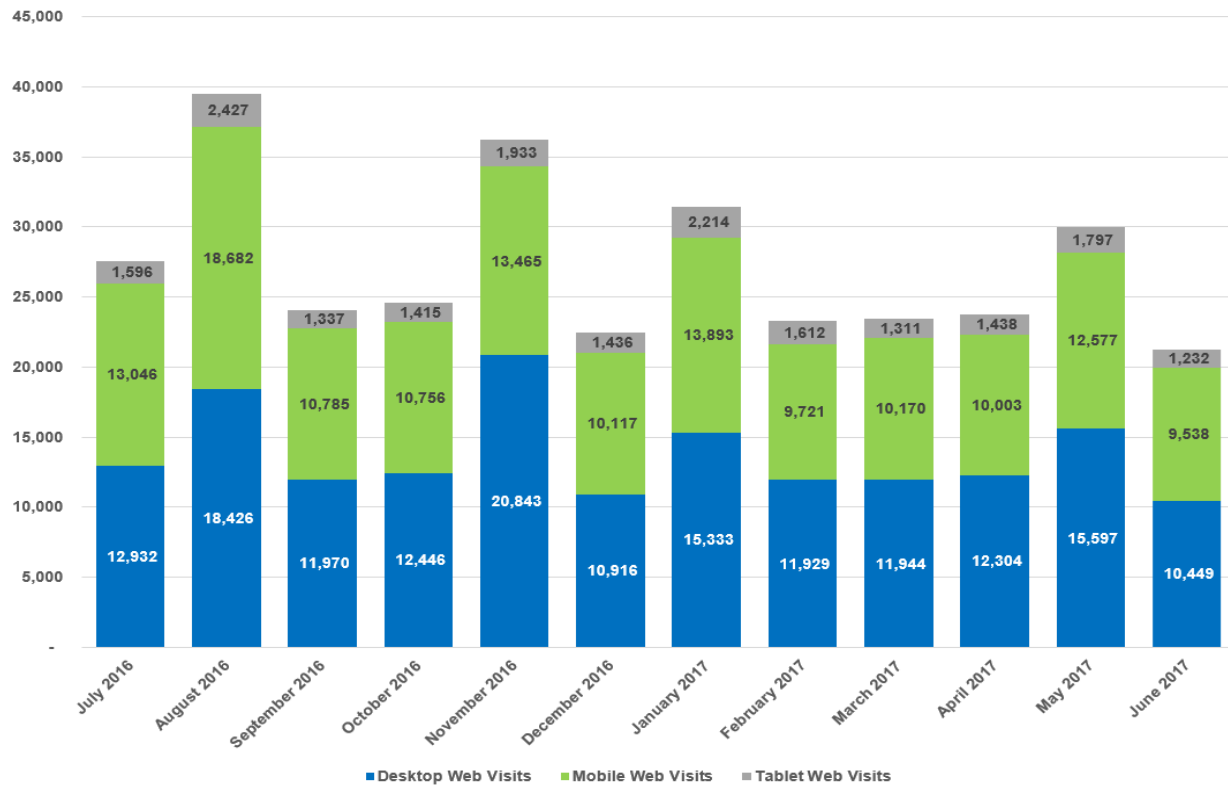


Figure 10 – Total Web Visits by Device Type



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In FY 2017, LA SAFE, with participation from OCTA staff, procured a vendor for the further development of the Go511 system. Known to the project partners as the Next Gen 511, the project will provide a more robust interactive voice response system for callers, a less governmental web interface for web users, and improved mobile content for application users. Next Gen 511 content was released for testing in the fourth quarter of FY 2016-17, and was released to the public in July 2017. The Next Gen 511 project aims to establish cooperative agreements with the Riverside County Transportation Commission and the San Bernardino County Transportation Authority, to bring Riverside and San Bernardino into the Go511 system in the third quarter of FY 2018, and rebrand the system to “So Cal 511.”

To increase motorist awareness of the 511 program in Orange County, staff initiated an awareness campaign distributing 511 logo promotional materials to the public through FSP Operators assisting motorists, through the reception desk at OCTA’s 600 building, through distribution to bus patrons using OC Fair Express and Laguna Beach Summer Breeze bus services, and through other means.

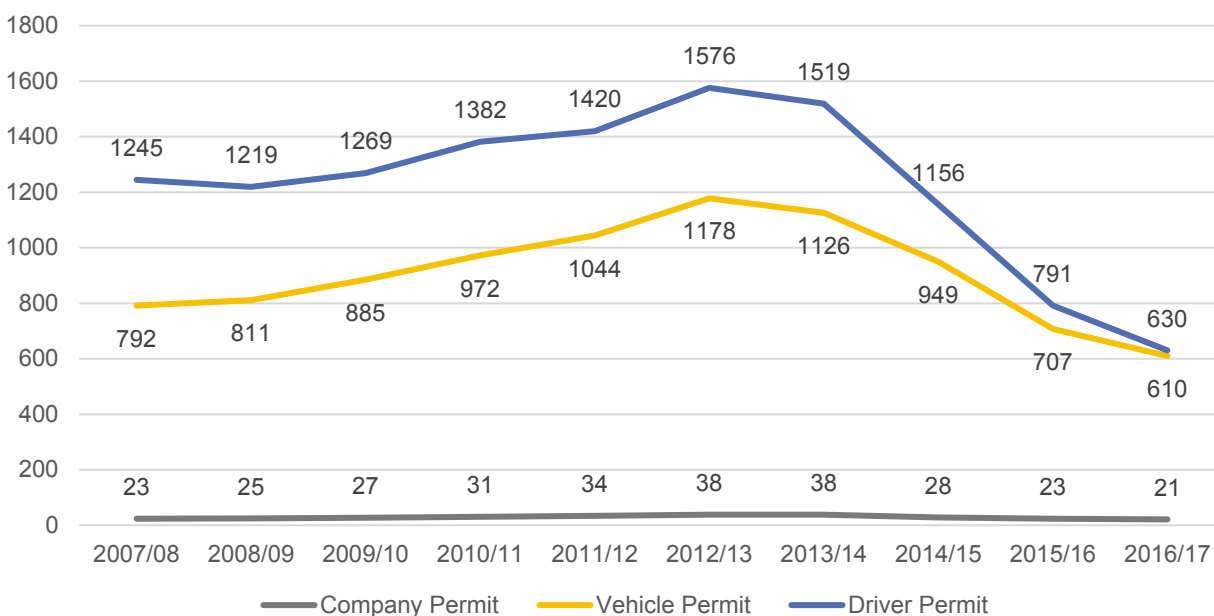
Orange County Taxi Administration Program

OCTAP staff manages taxi permitting processes, performs vehicle inspections, administers OCTAP regulations, and oversees compliance by taxicab companies and drivers on behalf of the County and its 34 cities. These activities are funded through annual permit fees and fines paid by permit holders. Each taxicab company owner and principal must pass a Department of Justice (DOJ) fingerprint background investigation, enroll in the DOJ subsequent arrest notification program (SAP), pass a check for unsatisfied judgments, and pass a review of required insurance and company policies before being granted a company permit. Each taxicab driver must pass a DOJ fingerprint background investigation, enroll in the DOJ SAP, pass a drug and alcohol screen, enroll in a random drug and alcohol testing program, and pass a driver record check. Each taxicab vehicle must pass an annual safety inspection before being issued a vehicle permit and is subject to random inspection at any time by any law enforcement officer or OCTAP staff.

At the close of FY 2016-17, OCTAP issued permits to 21 taxicab companies, 610 taxicab vehicles, and 630 taxicab drivers to operate in Orange County. A continuing decline in taxi permits is attributable to the strong competition to the taxi industry from Transportation Network Companies like Uber and Lyft. Figure 11 shows the history of OCTAP permitted taxicab companies, vehicles, and drivers since FY 2007-08.

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Figure 11 – OCTAP Operating Permits – FY 2007-08 through FY 2016-17, at June 30 each year.

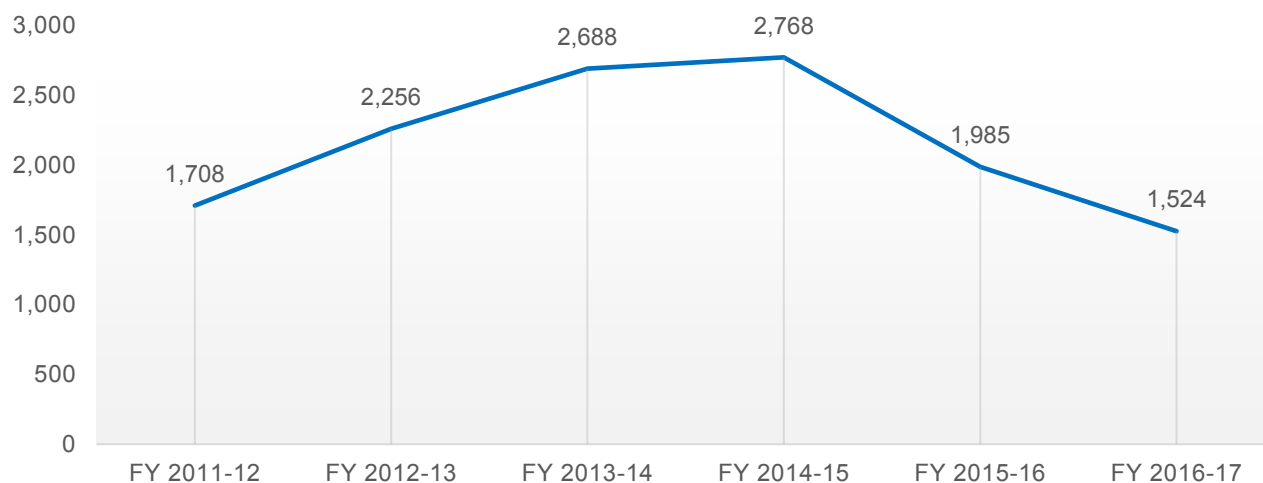


OCTAP staff performed 1,524 taxicab vehicle inspections during the year, including 444 random inspections and 245 cursory inspections. Random inspections occur at the OCTAP facility, with vehicles randomly selected through a random generator within the OCTAP database. Vehicles may also be called in for random inspection based on a report or observation. Table 6 outlines OCTAP inspections by type for the last five years. Figure 12 details OCTAP’s six-year history of taxicab inspections.

Table 6 – Taxicab Inspections by Type

INSPECTION TYPE	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17
ANNUAL INSPECTION	1,131	1,324	1,277	1,190	862	679
CURSORY INSPECTION		241	819	936	593	245
RANDOM INSPECTION	347	347	237	404	359	444
RE-INSPECTION	11	295	315	191	152	98
REPLACE / TRANSFER	219	49	40	47	19	58
Total	1,708	2,256	2,688	2,768	1,985	1,524
Change	+ 31 %	+ 32 %	+ 19 %	+ 3 %	-28 %	-23 %

Figure 12 – OCTAP Vehicle Inspections – FY 2011-12 through FY 2016-17

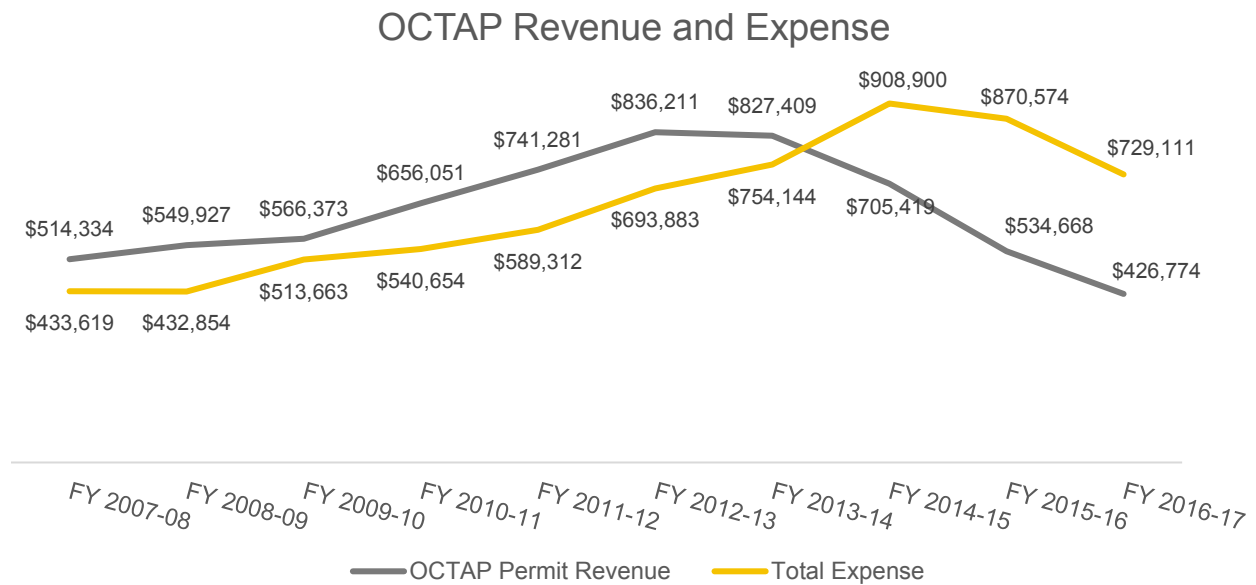


Although not mandated by OCTAP regulations, more than 51 percent of permitted taxicabs are clean-fuel vehicles. Thirty-six percent of permitted taxicabs have the capacity to carry five or more passengers, with more than 14 percent of the vehicles being wheelchair accessible.

In addition to permitting taxicab companies, drivers, and vehicles, OCTAP staff performs regulation compliance checks, issues warnings, assesses fines, suspends permits, revokes permits, and performs other administrative functions on behalf of the member agencies. Staff assisted in the resolution of 26 complaints, issued 23 warnings and fines, suspended two permits, and revoked nine permits during the year. OCTAP also denied three taxicab operator permits because they did not meet the minimum requirements set forth in the OCTAP regulations. Permit holders that are issued a fine, have their permit suspended or revoked, along with new applicants who are denied a permit, have the right to appeal the action. Representatives of the OCTAP member agencies hear the appeals and render a decision on the action.

With significant declines in the number of OCTAP taxi permits, OCTAP permit revenues have declined significantly since FY 2012-13 making the program unsustainable solely through taxi permit fees, as originally designed. OCTA has utilized program reserves to sustain the program since FY 2013-14, reduced staffing by 20 percent in FY 2015-16 and by 35 percent during FY 2016-17. Figure 13 shows OCTAP permit revenue and expenses from FY 2007-08. FY 2016-17 revenue and expenses are subject to adjustment as OCTA finalizes transactions and closes its books for the fiscal year.

Figure 13 – OCTAP Permit Revenue – FY 2007-08 through FY 2016-17.




Because the OCTAP program is no longer financially sustainable under the current revenue structure, OCTA issued the member agencies a twelve-month notice of its intent to withdraw as the administrator of the program at the beginning of FY 2016-17, as required in the cooperative agreements with the agencies. OCTA has determined that there are sufficient reserves to sustain the program through December 2017. OCTA Government Relations staff have been working closely with the Orange County City Managers Association (OCCMA) to have cities fund the OCTAP program for the remainder of FY 2017-18.

The issue of taxicab regulation has become a statewide concern, the California Legislature has been considering legislation that would change the way taxicab companies, drivers, and vehicles are regulated in California. OCTA Government Relations staff have been monitoring legislative activity closely, and will continue to work closely with the OCCMA to determine OCTA’s potential role in the OCTAP program beyond FY 2017-18.



COMMITTEE TRANSMITTAL

September 11, 2017

To: Members of the Board of Directors
From:  Laurena Weinert, Clerk of the Board
Subject: 2018 State Transportation Improvement Program

Regional Planning and Highways Committee Meeting of September 7, 2017

Present: Directors Delgleize, Do, Donchak, M. Murphy, Nelson, and Steel
Absent: Director Spitzer

Committee Vote

This item was passed by the Members present.

Committee Recommendations

- A. Approve the 2018 State Transportation Improvement Program submittal to program \$267.873 million to seven projects, from fiscal year 2018-19 through fiscal year 2022-23.
- B. Approve the use of up to \$97.418 million in Surface Transportation Block Grant Program funds for the 2018 State Transportation Improvement Program projects.
- C. Approve the use of up to \$23.355 million in Congestion Mitigation and Air Quality funds for the 2018 State Transportation Improvement Program projects.
- D. Approve the use of up to \$178.338 million in Measure M2 funds for the 2018 State Transportation Improvement Program projects.
- E. Authorize staff to make all necessary amendments to the State Transportation Improvement Program and the Federal Transportation Improvement Program, as well as execute any necessary agreements to facilitate the recommendations above.



September 7, 2017

To: Regional Planning and Highways Committee

From: Darrell Johnson, Chief Executive Officer

A handwritten signature in blue ink, appearing to read "Darrell Johnson", is placed over the "From:" line of the memo.

Subject: 2018 State Transportation Improvement Program

Overview

Every two years, the Orange County Transportation Authority prepares a program of projects for state funding through the State Transportation Improvement Program. Program recommendations are presented for the Board of Directors' consideration and approval. These recommendations are consistent with programming policies approved by the Board of Directors.

Recommendations

- A. Approve the 2018 State Transportation Improvement Program submittal to program \$267.873 million to seven projects, from fiscal year 2018-19 through fiscal year 2022-23.
- B. Approve the use of up to \$97.418 million in Surface Transportation Block Grant Program funds for the 2018 State Transportation Improvement Program projects.
- C. Approve the use of up to \$23.355 million in Congestion Mitigation and Air Quality funds for the 2018 State Transportation Improvement Program projects.
- D. Approve the use of up to \$178.338 million in Measure M2 funds for the 2018 State Transportation Improvement Program projects.
- E. Authorize staff to make all necessary amendments to the State Transportation Improvement Program and the Federal Transportation Improvement Program, as well as execute any necessary agreements to facilitate the recommendations above.

Background

The State Transportation Improvement Program (STIP) is a major source of funding for transportation improvements throughout the State of California. Every two years, state and federal transportation revenues are forecasted and programmed for the subsequent five-year period.

The Orange County Transportation Authority (OCTA) is responsible for the development and programming of the STIP, which is submitted to the California Transportation Commission (CTC) for approval and adoption. OCTA dedicates STIP funds for use on projects of countywide significance, consistent with the Board of Directors' (Board) adoption of the Capital Programming Policies (CPP).

To prepare the proposed program of projects, staff also considered prior 2016 STIP projects, prior Board-approved funding commitments, project readiness, statewide goals for transportation, emission reduction (per SB 375 {Chapter 728, Statutes of 2008} and AB 32 {Chapter 488, Statutes of 2006}), freight mobility, consistency with STIP Guidelines, and performance measures. Staff further collaborated with the California Department of Transportation (Caltrans) and local agencies.

Discussion

On August 16-17, 2017, the CTC approved the final 2018 STIP Guidelines and Fund Estimate (FE). The 2018 STIP FE provides for Orange County programming capacity of \$119.247 million in new funding. The funding levels are higher than earlier estimates due to passage and availability of SB-1 (Chapter 5, Statutes of 2017 {the Road Repair and Accountability Act of 2017}) funds. There is also an additional \$28.949 million available from the Interstate 5 (I-5) high-occupancy vehicle lane from State Route 55 (SR-55) to State Route 57 (SR-57) Project, which was approved to use Congestion Mitigation and Air Quality (CMAQ) Improvement Program funds in place of STIP funds. Existing funding already programmed to projects is \$88.511 million. The total funding available through the 2018 STIP is \$236.706 million. Additionally, OCTA is requesting \$7.117 million over the target, which totals \$243.823 million.

The 2018 STIP FE identifies funding for a new Advance Project Development Element (APDE). This will provide funding for preconstruction, which includes environmental documents and permits, plans, specifications, and estimates. Projects programmed using APDE capacity will be identified and tracked separately as they will be treated as advances of regular future county shares.

The following projects are recommended for STIP funding:

Proposed 2018 STIP	CPP Priority	Included in Prior 2016 STIP	STIP (in Millions)
I-5 widening (State Route 73 {SR-73} to Oso Parkway) (Segment 1)	✓	✓	\$90.735
SR-55 Widening (Interstate 405 {I-405} to I-5)	✓		\$80.000
I-5 from Alicia Parkway to El Toro Road (Segment 3)	✓		\$58.911
Truck Climbing Lane Phase 1 - SR-57/ Lambert Road Interchange Improvements	✓	✓	\$9.000
Planning, Programming, and Monitoring (PPM)	✓	✓	\$5.177
Total Modified and New Projects for 2018 STIP			\$243.823

APDE	CPP Priority	Included in Prior 2016 STIP	In Millions
I-5 from I-405 to SR-55	✓		\$20.000
SR-57 Truck Climbing Lane	✓	✓	\$4.050
Total 2018 STIP Submittal			\$267.873

A map which includes the 2018 STIP is provided in Attachment A. Attachment B provides a brief description of each of the projects that has been proposed for funding in the 2018 STIP.

In order to fully fund project phases, OCTA is also requesting Board approval for:

- I-5 (SR-73 to Oso Parkway) (Segment 1) – Requesting approval for \$34.992 million in Measure M2 (M2) funds to supplement the additional STIP funds. This is Project C in the Next 10 Delivery Plan.
- SR-55 from I-405 to I-5 – Requesting approval for \$23.355 million in CMAQ funds, \$66.65 million in Surface Transportation Block Grant (STBG) funds, and \$98.797 million in M2 funds to fully fund the right-of-way (ROW) and construction phases. This is Project F in the Next 10 Delivery Plan.

- I-5 from Alicia Parkway to El Toro Road (Segment 3) – Requesting approval for \$30.768 million in STBG funds and \$39.299 million in M2 funds to fully fund the ROW and construction phases. This is Project C in the Next 10 Delivery Plan.
- I-5 Widening I-405 to SR-55 – Requesting approval for \$5 million in M2 funds to fully fund the final design phase. This is Project B in the Next 10 Delivery Plan.
- SR-57 Truck Climbing Lane – Requesting approval for \$0.25 million in M2 funds to fully fund the environmental phase. This is part of Project G in the Next 10 Delivery Plan.

The use of federal CMAQ and STBG funds for these projects is consistent with the CPP, which prioritizes federal funds to fulfill commitments to Next 10 projects first. Additionally, the use of M2 funds is consistent with the CPP regarding the use of M2 funds for Next 10 projects. It is possible that the CTC staff may request changes due to revised funding capacity or timing constraints related to the state and federal funding. Adjustments to the recommended program may be necessary, and staff will continue to work with the CTC, Caltrans, and other appropriate agencies to ensure the projects continue to move toward the 2018 STIP adoption by spring 2018. Staff will keep the Board apprised if material changes are necessary.

Staff will return to the Board with proposals for pending SB 1 programs when the guidelines are completed in the fall 2017/winter 2018. Staff is considering recommending \$17.166 million in SB 1 Local Partnership Program funds for the I-5 widening from SR-73 to Oso Parkway Project, \$75 million in SB 1 Solutions for Congestion Corridors Program funds for the SR-55 widening from I-405 to I-5 Project, and \$20 million in SB 1 Trade Corridors Enhancement Program funds for the SR-57 Truck Climbing Lane Phase 1 – Lambert Road Interchange Improvement Project, and will return later when more information is available on these programs. It should be noted that these considerations are part of the 2018 STIP plan. Attachment C provides the proposed funding plan for each of the projects being considered for STIP funds.

Attachment D provides the updated Capital Funding Plan, which includes recommended changes pending approval by the Board on September 11, 2017, and also by the CTC, which is anticipated in March 2018.

Next Steps

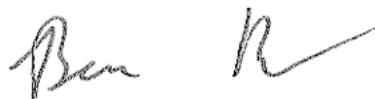
With Board approval, staff will finalize and submit the 2018 STIP to the Southern California Association of Governments by September 29, 2017, and then to the CTC by December 15, 2017. The CTC will hold public hearings on the proposed 2018 STIP on January 25, 2018, in Southern California, and on February 1, 2018, in Northern California. The CTC is expected to adopt the program on March 21-22, 2018. A 2018 STIP development schedule is included as Attachment E.

Summary

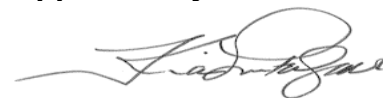
OCTA is responsible for the development and programming of the STIP for Orange County. OCTA is proposing to submit seven projects for \$267.873 million in STIP for fiscal year (FY) 2018-19 through FY 2022-23. The use of STIP funds for these projects supplements the local M2 Program and will provide a range of benefits to all of Orange County.

Attachments

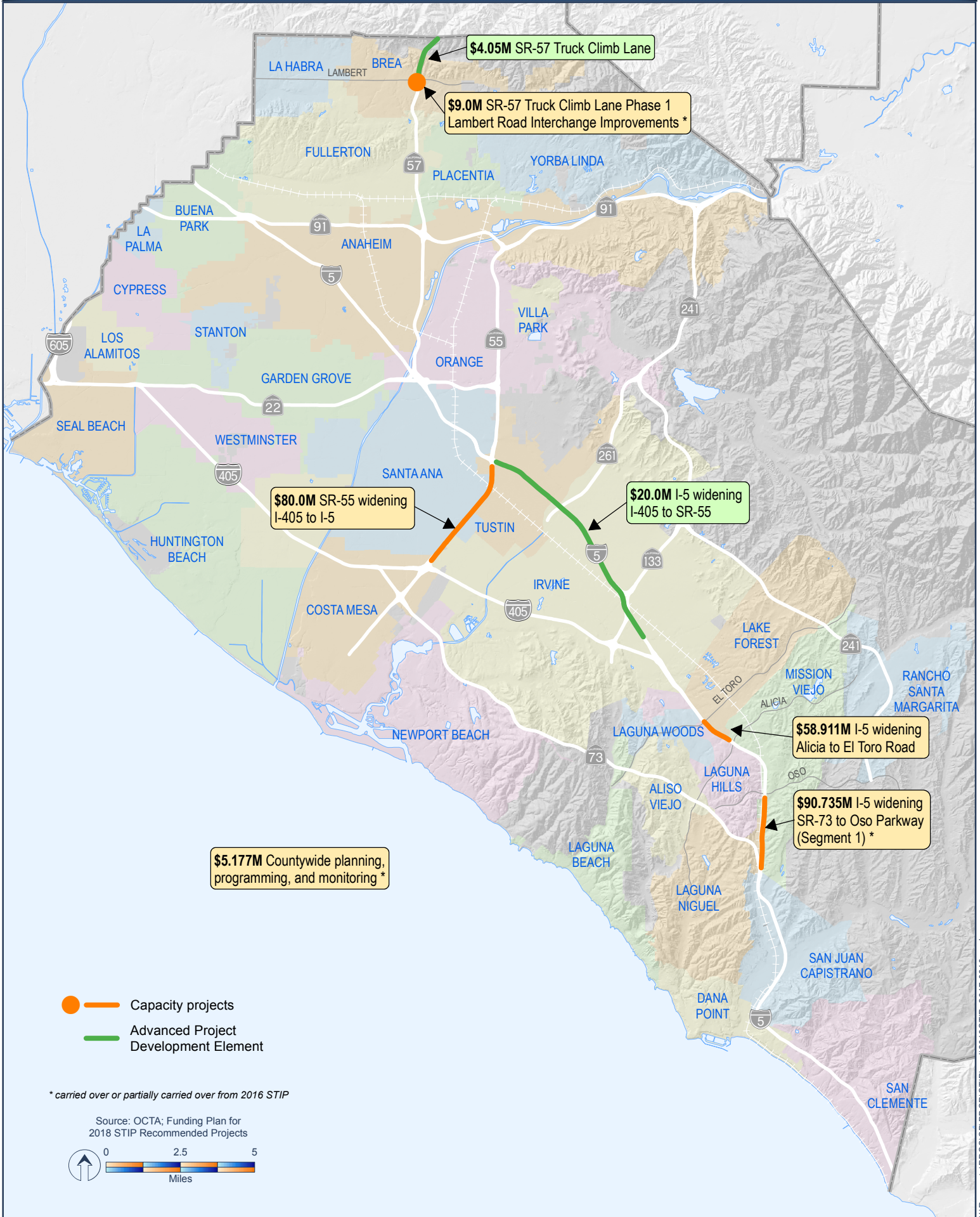
- A. OCTA 2018 State Transportation Improvement Program, Proposed Projects
- B. Orange County Transportation Authority, Regional Transportation Improvement Program for the 2018 State Transportation Improvement Program Project Descriptions
- C. Funding Plan for 2018 STIP Recommended Projects
- D. Capital Funding Program
- E. 2018 STIP Development Schedule

Prepared by:

Ben Ku
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State and Federal Programming
(714) 560-5473

Approved by:

Kia Mortazavi
Executive Director, Planning
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**Orange County Transportation Authority
Regional Transportation Improvement Program for the
2018 State Transportation Improvement Program Project Descriptions**

Interstate 5 (I-5) Widening from State Route 73 (SR-73) (Segment 1) to Oso Parkway

I-5 widening will add one general purpose lane in each direction from SR-73 to Oso Parkway, provide operational improvements, and reconstruct the interchange at Avery Parkway. This is Project C in the Next 10 Plan.

Under current traffic conditions, substantial congestion is experienced, and this project will help alleviate congestion and provide air quality benefits. The project is requesting approval of an additional \$12.705 million in State Transportation Improvement Program (STIP), and the total project cost is \$190.516 million.

State Route 55 (SR-55) Widening from Interstate 405 (I-405) to I-5 – New STIP Project

This project will add new high-occupancy vehicle (HOV), general purpose and auxiliary lanes on SR-55 between the I-405 and the I-5 connectors, to increase freeway capacity and reduce congestion in central Orange County areas. The project is located in the cities of Santa Ana, Irvine, and Tustin.

Future traffic demand is anticipated to increase traffic volumes to levels which will increase traffic congestion, increase travel delays, and reduce travel speeds. It is anticipated that without additional major capital improvements, the level of service for the majority of the study area in the northbound and southbound directions would be unacceptable during AM and PM peak periods. The project is requesting approval of \$80 million in STIP, and the total project cost is \$410.932 million.

I-5 Widening from Alicia Parkway to El Toro Road (Segment 3) - New STIP Project

The project will add one general purpose lane on the I-5 in each direction between Alicia Parkway and El Toro Road (approximately 1.7 miles), extend the second HOV lane in both directions, and add auxiliary lanes where needed. The additional lane will increase capacity and improve mainline congestion on I-5 from Alicia Parkway and El Toro Road. This is Project C in the Next 10 Plan.

Under current traffic conditions, substantial congestion is experienced, and this project will help alleviate congestion and provide air quality benefits. The project is requesting approval of \$58.911 million in STIP, and the total project cost is \$166.523 million.

**Orange County Transportation Authority
Regional Transportation Improvement Program for the
2018 State Transportation Improvement Program Project Descriptions**

State Route 57 (SR-57) Truck Climbing Lane Phase I – Lambert Road Interchange Improvements

Project work consists of reconfiguration of the northbound ramps, including construction of a loop on-ramp at the southeast quadrant, realignment of the southbound ramps, as well as adding a fourth approach lane along the southbound off-ramp, and widen the south side of Lambert Road to provide dual exclusive eastbound right turn lanes into the southbound on-ramp.

The SR-57 Lambert Road interchange is presently characterized by poor operational performance during peak traffic periods, and operational performance will further deteriorate with increase in anticipated future traffic volumes. The purpose of this project is to provide additional capacity and improve overall operational performance of the interchange. The proposed alternates should help mitigate the current congestion and better accommodate anticipated future traffic increases, thereby minimizing delays and potential safety hazards. Additionally, the corridor experiences a high amount of truck traffic, and these improvements will help improve truck travel speeds. The project is an existing 2016 STIP project.

Planning, Programming, and Monitoring (PPM)

Orange County is impacted by severe congestion on many regional and interregional facilities. Examination of the problem and potential solutions are necessary for the future construction of improvements. PPM funds will be used to develop project study reports and provide environmental clearance for projects, thus creating a shelf of projects for the future.

The PPM will support consultants and staff in developing the Long-Range Transportation Plan and multimodal strategies to address the short and long-term transportation needs for Orange County and regional connections, and to guide the expenditure of federal, state, and local transportation funds.

I-5 Widening from I-405 to SR-55 – Advance Project Development Element

This project will add one general purpose lane in both directions of the I-5 from the I-405 to SR-55. Additional features of the project include improvements to various interchanges. Auxiliary lanes will be added in some segments and re-established in others within the project limits. The overall project length is approximately nine miles.

**Orange County Transportation Authority
Regional Transportation Improvement Program for the
2018 State Transportation Improvement Program Project Descriptions**

Currently, this segment of the I-5 corridor is experiencing congestion and long traffic delays due to demand exceeding capacity, primarily resulting from local, regional, and interregional traffic demand. In addition, forecasted local and regional traffic demand is expected to increase by over 10,000 vehicles per day by the year 2040. This is Project B in the Next 10 Plan. The project is requesting approval of \$20 million in STIP, and the total cost for the PPM is \$33 million.

SR-57 Truck Climbing Lane – Advance Project Development Element

STIP funding is proposed for the project approval and environmental document phase of this project that will construct a truck climbing lane on the SR-57 from the Lambert Road undercrossing to just north of the Orange County/Los Angeles County line. A climbing lane would improve truck traffic travel speeds and would increase the throughput of the northbound SR-57. This project is Project G in the Next 10 Plan. The project is requesting approval of \$4.05 million in STIP, and the total cost for the project approval and environmental phase is \$4.3 million.

Funding Plan for 2018 STIP Recommended Projects

Proposed 2018 STIP (In Thousands)	STIP Funding						Other Funding					Total Project Cost
	2018-19	2019-20	2020-21	2021-22	2022-23	Total STIP	STBG/ CMAQ	STBG/CMAQ Pending Approval	M2 ¹	M2 Pending Approval	Other ²	
I-5 widening SR-73 to Oso Parkway (Segment 1) ^{3,4}	90,735					90,735	17,399		30,224	34,992	17,166	190,516
SR-55 Widening I-405 to I-5 ⁵			80,000			80,000	13,800	90,005	6,530	98,797	121,800	410,932
I-5 Widening Alicia Parkway to El Toro Road (Segment 3) ⁵		58,911				58,911	19,129	30,768	18,416	39,299		166,523
SR-57 Truck Climbing Lane Phase I - Lambert Road Interchange Improvements ³		9,000				9,000			6,500		29,650	45,150
PPM ³	1,481			1,848	1,848	5,177						5,177
I-5 HOV Lane SR-55 to SR-57 ⁶						-						
STIP Subtotal	92,216	67,911	80,000	1,848	1,848	243,823	50,328	120,773	61,670	173,088	168,616	818,298
APDE												
I-5 Widening I-405 to SR-55 ⁵					20,000	20,000	8,000			5,000		33,000
APDE												
SR-57 Truck Climbing Lane ⁵					4,050	4,050				250		4,300
Totals	92,216	67,911	80,000	1,848	25,898	267,873	58,328	120,773	61,670	178,338	168,616	855,598

1. M2 is approved Comprehensive Transportation Funding Program funding

2. Other funds include \$17.166 million in Local Partnership Program, \$46.8 million in State Highway Operations and Protection Program, \$75 million in Solutions for Congested Corridors Program, \$0.7 million in Demonstration Funds, \$8.95 in Local City Funds and \$20 million in Trade Corridors Enhancement Program

3. Carried over or partially carried over from 2016 STIP

4. \$12.705 million STIP increase

5. New 2018 STIP project

6. Removed from 2018 STIP

STIP - State Transportation Improvement Program

STBG/CMAQ - Surface Transportation Block Grant Program/Congestion Mitigation and Air Quality

M2 - Measure M2

I-5 - Interstate 5

SR-73 - State Route 73

SR-55 - State Route 55

I-405 - Interstate 405

PPM - Planning, programming, and monitoring

HOV - High-occupancy vehicle

APDE - Advance Project Development Element



Capital Funding Program

Pending Board Approval - September 11, 2017

State Highway Project

Project Title	M Code	Total Funding	State Funds		Federal Funds			Local Funds			
			STIP/Other	State Bonds	RSTP/CMAQ	Other Fed.	M1	M2	Local - Other		
I-5 from SR-55 to SR-57, Add 1 HOV lane each direction ¹	A	\$37,058			\$31,749					\$5,309	
I-5 (I-405 to SR-55) capacity enhancement ²	B	\$33,000	\$20,000		\$8,000					\$5,000	
I-5 HOV lane each direction s/o PCH to San Juan Creek Rd.	C	\$70,658	\$43,735	\$20,789	\$11,796					\$38,073	
I-5 HOV lanes: s/o Avenida Pico to s/o Vista Hermosa	C	\$90,441	\$46,779		\$31,741	\$1,600				\$13,365	
I-5 HOV, HOV lanes from s/o Av. Vista Hermosa to s/o PCH	C	\$71,100	\$58,911		\$13,472					\$10,849	
I-5 Widening (Alicia to El Toro) Seg 3 ³	C	\$166,523	\$196,167		\$49,897					\$57,715	
I-5 Widening (Oso to Alicia) Segment 2	C	\$190,516	\$107,901		\$47,631					\$148,536	
I-5 Widening (SR-73 to Oso) Segment 1 ⁴	C	\$4,400			\$28,167					\$54,448	
I-5 at Los Alisos / El Toro: add ramps	D	\$5,000			\$4,400						
SR-55 (I-5 to SR-91)	F	\$410,932	\$155,000		\$103,805	\$46,800				\$105,327	
SR-55 widening (I-5 to I-405) ⁵	F	\$2,500			\$2,500					\$250	
SR-57 Orangewood to Katella	G	\$4,300	\$4,050							\$35,750	
SR-57 Truck Climbing Aux Lane: Lambert -LA County Line ⁶	H	\$62,977		\$27,227						\$2,000	
SR-91 WB connect existing auxiliary lanes, I-5 to SR-57	I	\$9,000			\$7,000					\$14,000	
SR-91 (SR-57 to SR-55) Operational Improvements	I	\$46,270	\$18,270	\$14,000							
SR-91 WB (SR-55 - Tustin Interchange) Improvements	K	\$1,900,000	\$82,000	\$7,771	\$35,000	\$10,648				\$1,135,651	\$628,930
I-405 from SR-73 to I-605 Improvements	L	\$8,000			\$8,000						
I-405 (I-5 to SR-55)	L	\$2,328									
I-405 s/b Aux. Lane - University to Sand Canyon and Sand Canyon to SR-133	L	\$34,428		\$24,127						\$10,301	
SR-57 n/b widening, Katella Avenue to Lincoln Avenue	M1/G	\$183,557									\$183,557
241/91 Express Lanes (HOT) Connector		\$1,200								\$1,200	
I-605/ Katella Interchange		\$42,694	\$5,513								\$37,181
SR-74 widening, Calle Entradero-City/County line		\$40,905	\$10,000		\$5,285						\$25,620
SR-74 widening, City/County line to Antonio Parkway		\$3,613,954	\$554,487	\$93,914	\$393,443	\$59,048				\$1,637,774	\$875,288
State Highway Project Totals											
State Funding Total		\$648,401									
Federal Funding Total		\$452,491									
Local Funding Total		\$2,513,062									
Total Funding (000's)		\$3,613,954									

State Highway Project Completed

Project Title	M Code	Total Funding	State Funds		Federal Funds			Local Funds			
			STIP/Other	State Bonds	RSTP/CMAQ	Other Fed.	M1	M2	Local - Other		
I-5/Route 74 Interchange Landscaping/Replacement Planting	D	\$1,230	\$478			\$752					
I-5/SR-74 Interchange Improvements	D	\$80,300	\$48,683	\$24,109				\$2,500		\$2,688	\$5,008
SR-57 n/b widening, Yorba Linda to Lambert Road landscaping	G	\$2,688									
SR-91 eastbound widening, SR-241 to SR-71	J	\$57,611				\$47,888					\$9,723
SR-91 w/b Rte 91/55 - e/o Weir Replacement Planting	J	\$2,898	\$2,898								



Capital Funding Program

State Highway Project Completed

Project Title	M Code	Total Funding	State Funds		Federal Funds			Local Funds		
			STIP/Other	State Bonds	RSTP/CMAQ	Other Fed.	M1	M2	Local - Other	
SR-91 Widening, SR-55 to Gypsum Canyon (Weir/SR-241)	J	\$77,510	\$59,573	\$17,937						
SR-57 N/B widening, SR-91 to Yorba Linda Boulevard	M1/G	\$50,659		\$40,925					\$9,734	
SR-57 N/B widening, Yorba Linda to Lambert Road	M1/G	\$52,709		\$41,250					\$11,459	
I-405/SR-22/I-605 HOV Connector- Landscaping		\$4,600							\$4,600	
I-5 at Jamboree off ramp and auxiliary lane		\$8,485	\$8,485							
I-5 S/B AT OSO PKWY EXIT LANE & INTRCHANGE IMPROV		\$22,872	\$22,773							\$99
I-5 San Clemente Avenida Vaquero Soundwall		\$2,754	\$2,754							
I-5 soundwall, at El Camino Real		\$4,995	\$4,995							
I-5, Camino Capistrano Interchange Improvements		\$19,151	\$19,151							
SR- 57 n/b widening, Katella Avenue to Lincoln Avenue- Landscaping		\$4,650		\$4,650						
SR- 57 N/B widening, SR-91 to Yorba Linda Boulevard- landscaping		\$1,070							\$1,070	
SR-55 Continuous Access HOV restriping environmental		\$1,500								\$1,500
SR-55 southbound aux. lanes, Dyer Rd to MacArthur (env)		\$2,397	\$2,397							
SR-90 Imperial Hwy Enhancement & Mitigation Planting		\$1,669	\$1,669							
SR-91/WB connecting existing auxiliary lanes, I-5 to SR-57- landscaping		\$2,290								
HOV Connectors from I-405 and I-605	M1	\$173,091		\$135,430	\$14,787	\$49,625	\$16,200			\$6,674
HOV Connectors from SR-22 to I-405	M1	\$115,878			\$64,375	\$9,883	\$1,878			\$14,071
I-5at Gene Autry Way (west) - HOV Drop ramps	M1	\$68,199			\$35,644		\$8,601			
State Highway Project Totals		\$759,206	\$173,856	\$264,301	\$114,806	\$108,148	\$29,179	\$31,841	\$37,075	

State Funding Total	\$438,157
Federal Funding Total	\$222,954
Local Funding Total	\$98,095
Total Funding (000's)	\$759,206

Project Notes:

1. Fiscal Year 2017-18 Obligation Authority Plan - Approved the use of \$28.949 million in CMAQ funds in place of STIP.

Board Notes:

- 2018 STIP - Updated for the use of \$20 million in STIP and \$5 million in M2. Consistent with current estimates increases the authorized funding by \$25 million from \$8 million to \$33 million.
- 2018 STIP - Updated for the use of \$68.911 million in STIP, \$30.768 million in STBG and \$39.299 million in M2. Consistent with current estimates increases the authorized funding by \$32.970 million from \$133.553 million to \$166.523 million.
- 2018 STIP - Updated for the increase of \$12.705 million in STIP, \$34.992 million in M2 and \$17.166 million in proposed Local Partnership Program. Consistent with current estimates increases the authorized funding by \$38.616 million from \$151.9 million to \$190.516 million.
- 2018 STIP - Updated for the use of \$80 million in STIP, \$90.005 million in RSTP/CMAQ, \$98.797 million in M2 and \$75 million in proposed Solutions for Congested Corridors Program. Consistent with current estimates increases the authorized funding by \$386.9 million from \$24.032 million to \$410.932 million.
- 2018 STIP - Updated for the use of \$4.05 million in STIP, \$0.25 million in M2.

Acronyms:

- Board - Board of Directors
- M Code - Project Codes in Measure M1 and M2
- STIP - State Transportation Improvement Program
- RSTP - Regional Surface Transportation Program
- CMAQ - Congestion Mitigation and Air Quality Improvement Program
- M1 - Measure M1
- M2 - Measure M2
- I-5 - Interstate 5
- SR-55 - State Route 55
- SR-57 - State Route 57
- HOV - High-Occupancy Vehicle
- I-405 - Interstate 405
- S/O - South of
- PCH - Pacific Coast Highway
- SR-73 - State Route 73
- SR-91 - State Route 91
- W/B - Westbound
- I-605 - Interstate 605
- S/B - Southbound
- SR-133 - State Route 133
- N/B - Northbound
- HOT - High-Occupancy Toll
- SR-74 - State Route 74
- SR-241 - State Route 241
- SR-71 - State Route 71
- E/O - East of
- SR-22 - State Route 22
- SR-90 - State Route 90
- STBG - Surface Transportation Block Grant

2018 STIP Development Schedule

- March 15-16, 2017 – CTC fund estimate assumptions and key issues
- May 17, 2017 – CTC approves assumptions
 - June - July 2017 – Meet with internal and external stakeholders
- June 28-29, 2017 – CTC presents draft STIP fund estimate
- August 7, 2017 – OCTA RP&H STIP overview item
- August 14, 2017 – OCTA Board STIP overview item
- By August 16-17, 2017 – CTC adopts STIP fund estimate
- September 7, 2017 – OCTA RP&H STIP/RTIP program of projects approval
- September 11, 2017 – OCTA Board STIP/RTIP program of projects approval
- September 29, 2017 – OCTA STIP/RTIP projects submitted to SCAG for regional modeling analysis
- October 13, 2017 – Caltrans submits draft ITIP
- October 19, 2017 – CTC ITIP hearing – North
- October 24, 2017 – CTC ITIP hearing – South
- By December 15, 2017 – STIP/RTIP submittal due to CTC
- By December 15, 2017 – Caltrans ITIP submittal due to CTC
- January 25, 2018 – CTC STIP hearing South
- February 1, 2018 – CTC STIP hearing North
- February 28, 2018 – CTC publishes staff recommendations
- March 21-22, 2018 – CTC adopts STIP

STIP – State Transportation Improvement Program
CTC – California Transportation Commission
OCTA – Orange County Transportation Authority
RP&H – Regional Planning and Highways Committee
Board – Board of Directors
RTIP – Regional Transportation Improvement Program
SCAG – Southern California Association of Governments
Caltrans – California Department of Transportation
ITIP – Interregional Transportation Improvement Program

2018 State Transportation Improvement Program

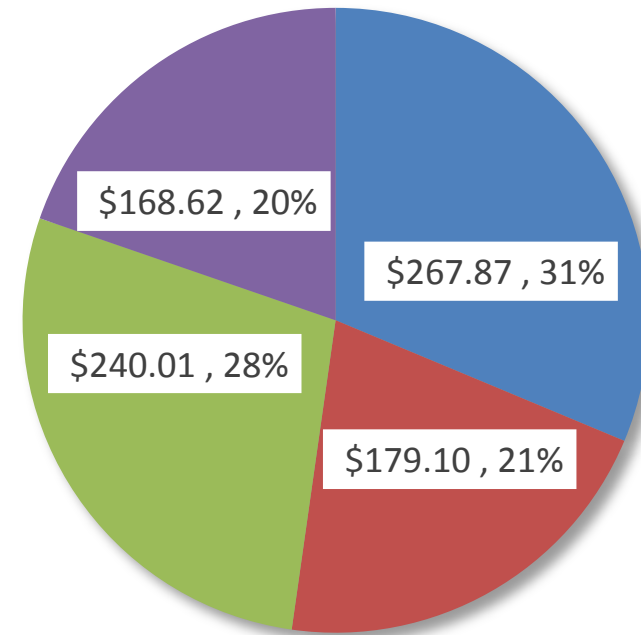
2018 STIP Overview

- Major state transportation funding source
- Provides a state funding commitment covering a five-year period
- Updated every two years for CTC approval
- 2018 STIP program of projects builds on:
 - CTC Guidelines and fund estimate
 - 2016 STIP projects
 - OCTA capital programming policies
 - Collaboration with Caltrans



Program of Projects and Funding Target

Proposed 2018 STIP	CPP Priority	Included in Prior 2016 STIP	2018 STIP (in millions)
I-5 Widening (SR-73 to Oso Parkway)	✓	✓	\$90.735
I-5 Widening (Alicia Parkway to El Toro Road)	✓		\$58.911
SR-55 Widening (I-405 to I-5)	✓		\$80.000
Truck Climbing Lane Phase 1 - SR-57/Lambert Road Interchange	✓	✓	\$9.000
Planning, Programming, and Monitoring	✓	✓	\$5.177
I-5 Widening (I-405 to SR-55)	✓		\$20.000
SR-57 Truck Climbing Lane	✓	✓	\$4.050
Total 2018 STIP Submittal			\$267.873



Total = \$856 million

■ STIP ■ Federal ■ M2 ■ Other

Constructs or advances:

- I-5 (SR-73 to El Toro)
- SR-55 (I-405 to I-5)
- SR-57/Lambert Interchange
- I-5 (I-405 to SR-55)
- SR-57 Truck Climbing Lane

CPP – Capital Program Policies / I-5 – Interstate 5 / SR-73 – State Route 73 / SR-55 – State Route 55 / I-405 – Interstate 405 / SR-57 – State Route 57

Next Steps

- September 29, 2017 – SCAG submittal for regional modeling
- December 15, 2017 – Submittal due to CTC
- January 25, 2018 – CTC hearing in Southern California
- February 28, 2018 – CTC publishes staff recommendations
- March 22, 2018 – CTC adopts STIP



COMMITTEE TRANSMITTAL

September 11, 2017

To: Members of the Board of Directors
From: *RW*
Laurena Weinert, Clerk of the Board
Subject: Next 10: Market Conditions Forecast and Risk Analysis

Executive Committee Meeting of September 7, 2017

Present: Chairman Hennessey, Vice Chair Bartlett, and Directors Do, Donchak, and Shaw
Absent: Directors Murray and Nelson

Committee Vote

This item was passed by the Members present.

Committee Recommendations

- A. Receive and file the Next 10 Market Conditions Forecast and Risk Analysis.
- B. Continue to monitor the changing environment and its effects on the advancement of the Next 10 Delivery Plan.
- C. Continue to prioritize Measure M2 projects for external funding consistent with the Orange County Transportation Authority's adopted programming policies.

Committee Discussion

At the September 7, 2017 Executive Committee meeting, Committee members requested that in addition to monitoring the changing economic environment, as included in Committee Recommendation B, that staff develop a plan (and appropriate interval) to report to the Board of Directors the results of the monitoring effort, identifying trends, and risks associated with project delivery.



September 7, 2017

To: Executive Committee
From: Darrell Johnson, Chief Executive Officer
Subject: Next 10: Market Conditions Forecast and Risk Analysis

A handwritten signature in blue ink, appearing to read "Darrell Johnson", is positioned to the right of the "From:" line.

Overview

A Market Conditions Forecast and Risk Analysis has been prepared to inform the Orange County Transportation Authority's Next 10 Plan. The Next 10 Plan provides the framework to accelerate the delivery of Measure M2 freeway, streets and roads, transit, and environmental projects through the year 2026. In response to lower actual sales tax revenue, new forecasting methodology, and increased competition for available resources due to capital work underway in the Southern California Region, a Market Conditions Forecast and Risk Analysis was conducted. The report and findings are presented to the Board of Directors for review.

Recommendations

- A. Receive and file the Next 10 Market Conditions Forecast and Risk Analysis.
- B. Continue to monitor the changing environment and its effects on the advancement of the Next 10 Delivery Plan.
- C. Continue to prioritize Measure M2 projects for external funding consistent with the Orange County Transportation Authority's adopted programming policies.

Background

On November 7, 2006, Orange County voters approved the renewal of Measure M, the one-half cent sales tax for transportation improvements. Work on expedited delivery of Measure M2 (M2) began in 2007, with emphasis on organizational, procedural, and technical efforts to prepare for early realization of M2 benefits beginning in 2011. Subsequent to early startup efforts,

the 2008 Great Recession resulted in a significant reduction in the M2 sales tax revenue forecast. In response, the Orange County Transportation Authority (OCTA) developed the M2020 Plan that established program delivery priorities through 2020. In response to continued lower actual sales tax revenue, a new forecasting methodology was adopted in March 2016 and prompted the need to develop a revised delivery plan focusing on the next ten years. On November 14, 2016, the Board of Directors (Board) approved the M2020 Plans successor, the Next 10 Plan (Next 10), which provides a framework to accelerate the delivery of M2 freeway, streets and roads, transit, and environmental projects through the year 2026.

To ensure success of the Next 10, a market conditions forecast and risk analysis was conducted to review OCTA's ability to deliver the breadth of programs and projects. The review was sought to forecast and analyze market conditions for public infrastructure development in the state, surrounding counties, and specifically Orange County, over the next five to ten years, to help develop strategies to anticipate and manage competitive cost pressures and the availability of materials, equipment, labor, and qualified professional staff and services that would affect delivery of the Next 10 in the next decade.

Discussion

Consulting services were sought to conduct OCTA's Market Conditions Forecast and Risk Analysis. Following OCTA's procurement policies, the contract was awarded to the Orange County Business Council. The consultant reviewed the prior market conditions forecast and risk analysis, completed in 2008, as a basis for this analysis. In addition, the consultant conducted a risk analysis to identify risk factors that could affect OCTA's construction costs. A copy of the consultant's report is attached for Board review (Attachment A), which includes findings and recommendations resulting from the analysis.

Seven risk factors were identified, analyzed, and discussed:

1. Sustained low unemployment
2. Increases in residential construction
3. Consolidation in the public works construction industry
4. Increases in interest rates
5. Neighboring county transportation construction programs
6. Construction wage pressure
7. Future recession

Of these, the consultant's analysis identified four near-term cost risks that are expected to be particularly influencing: neighboring county transportation construction programs, construction wage pressures, sustained low statewide unemployment, and residential construction demand and the effect on the public works construction market.

A summary of the consultant's near-term costs risks are included below.

Neighboring County Transportation Construction Programs

With local transportation measures in place in neighboring counties, the Southern California region is in the midst of a large transportation construction program. The analysis showed substantial transportation construction spending from neighboring counties, with Los Angeles County programming approximately four to six times as much construction as Orange County in the five and ten-year time periods. Riverside and San Bernardino counties programs are also substantial and are pursuing construction programs that are larger than Orange County's Next 10 Program.

This is expected to create cost pressures as contractors will have more opportunities to bid on projects and will be less likely to reduce bid prices and potentially fewer bids. This was noted by the consultant as one of the primary cost risks for OCTA in the near term.

Construction Wage Pressure

The review identified that construction wage growth in Los Angeles, Orange, Riverside, and San Bernardino has accelerated since 2014. This likely reflects labor demand pressures in these sectors and indicates stronger wage growth than the national economy.

Historical data suggests that construction employment can expand or contract substantially with economic cycles, but periods of high construction employment have coincided with periods of high public sector infrastructure costs when measured by the California Department of Transportation Construction Cost Index (CCI). The analysis concludes, if private sector economy continues to grow, coupled with large public sector construction programs in Southern California, pressure on construction wages and public sector construction costs will likely increase.

Sustained Low Unemployment

The unemployment levels in California are approaching levels that in the past have been considered full employment. While wage growth has, until recently, been slow, the possibility of sustained and prolonged low unemployment raises the potential for continued construction cost pressures.

Wages have not shown much upward pressure during the recovery from the Great Recession, generally increasing from 2 percent to 2.5 percent per year during the recovery, suggesting that the economy may still have some slack. If so, the unemployment rate might remain at or near current levels for the next few years. The consultant concludes, overall, sustained near-full employment will likely exert more cost pressure than their model predicts, and could place OCTA in a structurally high-cost and increasing-cost environment for capital projects.

Increases in Residential Construction

A key change from the past is how building permits correlated with the CCI in the approximate dozen or so years before 2012. However, building permitting activity has not recovered as the state's economy has rebounded from the Great Recession. Statewide, building permitting activity is at relatively low levels, considering the low unemployment rate. The California Legislative Analyst Office (LAO) has demonstrated that construction in Los Angeles County, in particular, has lagged what is necessary to accommodate population growth. A 2015 LAO analysis found that between 1980 and 2010, California's major metropolitan areas added approximately 120,000 new housing units each year, while the LAO estimated that 210,000 new units per year would have been needed to meet demand.

Several bills have been introduced in the state legislature to address housing needs. Some of the policy proposals may substantially streamline the approval process for new housing. If such proposals dramatically increase new housing construction, which the consultant's analysis finds possible but not likely, that will increase demand for construction labor and materials.

In light of the near-term risk factors, the consultant's analysis suggests the following four recommendations to mitigate cost risks:

- 1) Developing early warning indicators that track data that can provide information about risk factors. This would include, but not be limited to, data on building permits, construction employment and wages, executive opinion about the local economy, and construction commodity costs.

- 2) Explore apprenticeship programs that can increase the pipeline of skilled construction labor.
- 3) Explore ways to continue to be a preferred client for public works construction companies to maintain bid competition.
- 4) Explore further accelerating the Next 10 Program, to the extent possible, as the near-term risks mostly suggest increased rather than decreased public works construction costs.

A summary of the consultant's identified risk factors, impact on costs, likelihood, comments, and possible OCTA mitigation is found in Attachment B.

Next Steps

Overall, the consultant's analysis identifies a strong potential that during the Next 10 delivery years, OCTA will experience an increasing-cost environment. This, coupled with a reduction in revenue, presents the potential for significant challenges in the delivery of M2 and the Next 10 as envisioned. The consultant's recommendations include a consistent message that OCTA should accelerate projects to the extent possible.

Next 10, along with successor plans (Early Action Plan and M2020 Plan), was developed to accelerate projects where possible which has proven successful. Delivering early has allowed OCTA to capture significant external funding and deliver projects in a lower cost environment. During the Next 10 time period, more than \$6 billion in transportation improvements promised to the voters in M2 are slated to be completed or underway by 2026. While final sales tax receipts for fiscal year 2016-17 have not been received, the forecasting agencies' economic outlook provided to date indicate further decline in sales tax collections. Staff is currently reviewing the Next 10 and preparing an update. The update will review and revise project costs with the latest information, take into account the revised revenue projections, and incorporate information provided in this Market Conditions Forecast and Risk Analysis. The Next 10 update is scheduled to go to the Board in the fall 2017.


Summary

Overall, the final report of the Market Conditions Forecast and Risk Analysis that assessed OCTA's readiness to deliver the Next 10 indicates a potential increasing-cost environment. Staff will incorporate the recommendations from this analysis into the Next 10 update, scheduled to go to the Board in the October/November timeframe.

Attachments

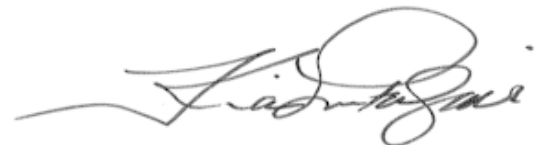
- A. Orange County Business Council, OCTA Next 10: Market Conditions Forecast and Risk Analysis, August 2017
- B. Risk Factors, Effect on Public Works Costs, and Some Possible OCTA Mitigations

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ORANGE COUNTY

BUSINESS COUNCIL

ORANGE COUNTY BUSINESS COUNCIL

**OCTA Next 10: Market Conditions
Forecast and Risk Analysis**

August 2017

Marlon G. Boarnet, Ph.D. and Wallace Walrod, Ph.D.
with assistance from Benjamin Palmer and Debapriya Chakraborty

PREPARED FOR:

THE ORANGE COUNTY TRANSPORTATION AUTHORITY

Executive Summary

This research develops cost forecasts for the public works construction environment, as a tool to help guide implementation of the Orange County Transportation Authority's (OCTA's) Next 10 Delivery Plan. Following the Great Recession of 2008, cost pressures in transportation construction in Southern California were muted. The level of the California Department of Transportation (Caltrans) construction cost index (CCI) dropped by 26.6 percent from 2006 to 2010. Yet from 2012 to 2016, the Caltrans CCI rose 78 percent. Certainly some of that was a correction following the substantial drop in the CCI from 2006 to 2010, but several factors indicate that public works construction in Southern California has shifted from a low-demand/low-cost environment to one of high-demand and cost pressure.

OCBC modeled the relationship between the Caltrans CCI and several economic indicators, to forecast growth in public works construction costs five years and ten years into the future. The OCBC team found that the time trends in the Caltrans CCI are most associated with building permits and the unemployment rate. Regression-based models forecast a two percent increase in the level of the CCI in 2017 (from 2016), and then relatively stable levels going forward after 2017.

There are several reasons to believe that the forecasting model cannot capture all of the cost risk that will be present in the next five to ten years. One of the best predictors of the recent change in the CCI was changes in the state's unemployment rate. With the California unemployment rate at 5.35 percent for 2016, further declines are unlikely, and forecasting models will not be able to capture the full effect of sustained cost pressures from a full employment economy. For that reason, OCBC conducted a risk analysis to identify risk factors that could affect OCTA's construction costs.

Seven risk factors were analyzed and discussed:

1. Sustained low unemployment
2. Increases in residential construction
3. Consolidation in the public works construction industry
4. Increases in interest rates
5. Neighboring county transportation construction programs
6. Construction wage pressure
7. Future recession

Of these, the OCBC team believes that near term cost risks will be particularly influenced by sustained low statewide unemployment, residential construction demand and the effect on the public works construction market, neighboring county transportation construction programs, and construction wage pressures.

- **Sustained low unemployment:** The California economy is approaching unemployment levels that, in the past, have been considered full employment. While wage growth has, until recently, been slow, the possibility of sustained and prolonged low unemployment raises the potential for continued construction cost pressures.
- **Increased residential construction:** California has underbuilt new housing, relative to demand, for years. A 2015 state Legislative Analyst Office (LAO) analysis found that between 1980 and 2010, California's major metropolitan areas added approximately 120,000 new housing units each year, while the LAO estimated that 210,000 new units per year would have been needed to meet demand. Several bills have been introduced in the state legislature to address housing needs, and some policy proposals might substantially streamline the approval process for new housing. If such proposals dramatically increase new housing construction, which OCBC analysis finds possible but not likely, that will increase demand for construction labor and materials.
- **Neighboring county transportation construction programs:** The passage of Los Angeles' County's Measure M in 2016 was a highly visible indicator that neighboring counties are proceeding with ambitious construction programs. OCBC examined 1,388 projects reported in the Southern California Association of Governments financially constrained regional transportation plan. Our analysis shows that Los Angeles county is currently in the midst of a construction program that, in dollar value in five-year windows to 2030, will be from four to six times the size of OCTA's Next 10 plan, and Riverside and San Bernardino are both pursuing construction programs that are at least as large as OCTA's Next 10 plan.
- **Construction wage pressure:** In Orange, Los Angeles, Riverside, and San Bernardino Counties, construction wage growth ranged from 0.49 to 2.36 percent annually from 2012 to 2014, increasing to 4.39 to 5.3 percent annually from 2014 to 2016 (the most recent year for which data are available.)

In light of these factors, OCBC analysis suggests that OCTA can mitigate cost risk through the following policies:

- **Develop early warning indicators** that track data that can provide information about risk factors. This would include, but not be limited to, data on building permits, construction employment and wages, executive opinion about the local economy, and construction commodity costs.
- **Explore apprenticeship programs** that can increase the pipeline of skilled construction labor.

- **Explore ways to continue to be a preferred client** for public works construction companies, to maintain bid competition.
- **Explore further accelerating the Next 10 program**, to the extent possible, as the near-term risks mostly suggest increased rather than decreased public works construction costs.

I. Market Forecast, Quantitative Analysis

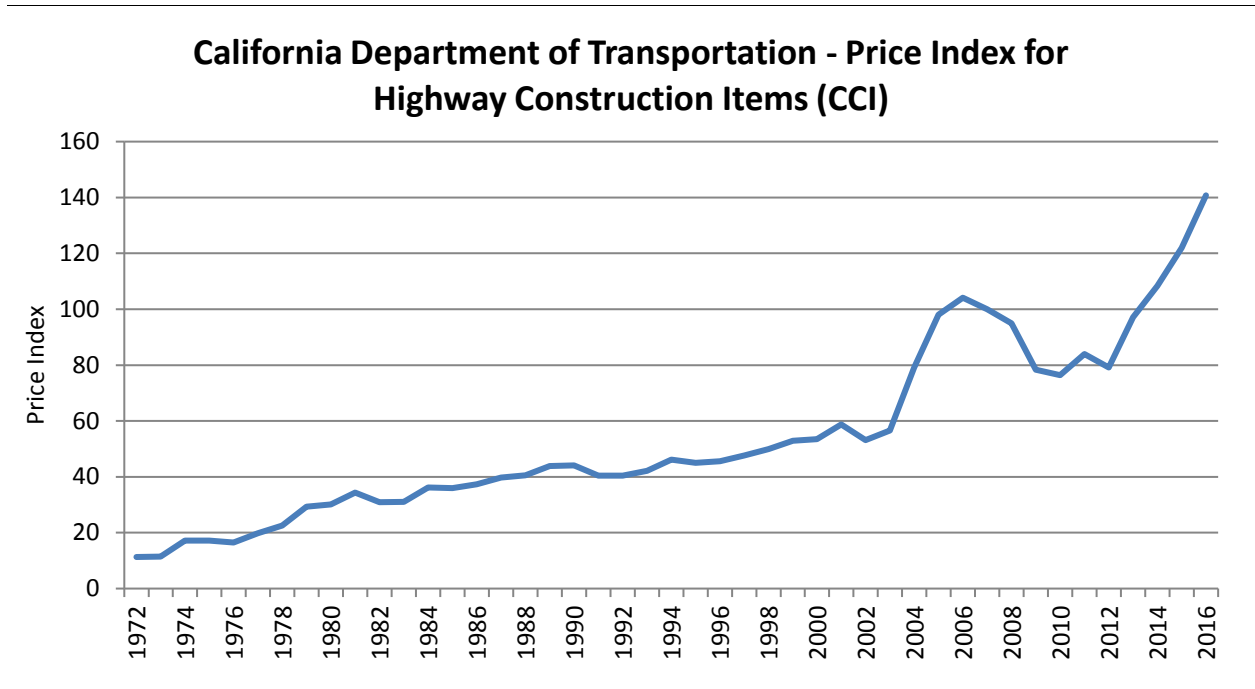
In 2008, the Orange County Business Council (OCBC) conducted the market conditions forecast for the Orange County Transportation Authority's (OCTA) M2 Early Action Plan (EAP). That forecast was done at the onset of the Great Recession, and OCBC predicted that construction costs would fall in the years immediately after 2008. The forecast predicted a falling or stable California Department of Transportation (Caltrans) construction cost index (CCI) to approximately the year 2012, which proved accurate. The Caltrans construction cost index fell from 100 in 2007 to 76.4 in 2010, and the Caltrans CCI did not rise to exceed its 2007 value until 2014 (See Table 1 and Figure 1). Yet the Caltrans CCI has risen rapidly in recent years, reaching 140.75 in 2016, suggesting that the after-effect of the Great Recession has ended.

Table 1: California Department of Transportation (Caltrans) Construction Cost Index (CC) by year, 1972-2016

California Department of Transportation - Price Index for Highway Construction Items (CCI)					
1972	11.3	1987	39.7	2002	53.1
1973	11.4	1988	40.5	2003	56.6
1974	17.2	1989	43.9	2004	79.1
1975	17.2	1990	44.1	2005	98.1
1976	16.5	1991	40.4	2006	104.1
1977	19.8	1992	40.4	2007	100
1978	22.6	1993	42.2	2008	95
1979	29.3	1994	46.2	2009	78.4
1980	30.1	1995	45	2010	76.4
1981	34.4	1996	45.6	2011	84
1982	30.9	1997	47.6	2012	79.2
1983	31	1998	49.9	2013	97.09
1984	36.2	1999	52.9	2014	108.32
1985	36	2000	53.5	2015	122.02
1986	37.3	2001	58.7	2016	140.75

Source: California Department of Transportation, Price Index for Selected Highway Construction Items

Figure 1: Time Trend of Caltrans Construction Cost Index (CCI), 1972 to 2016



Source: California Department of Transportation, Price Index for Selected Highway Construction Items

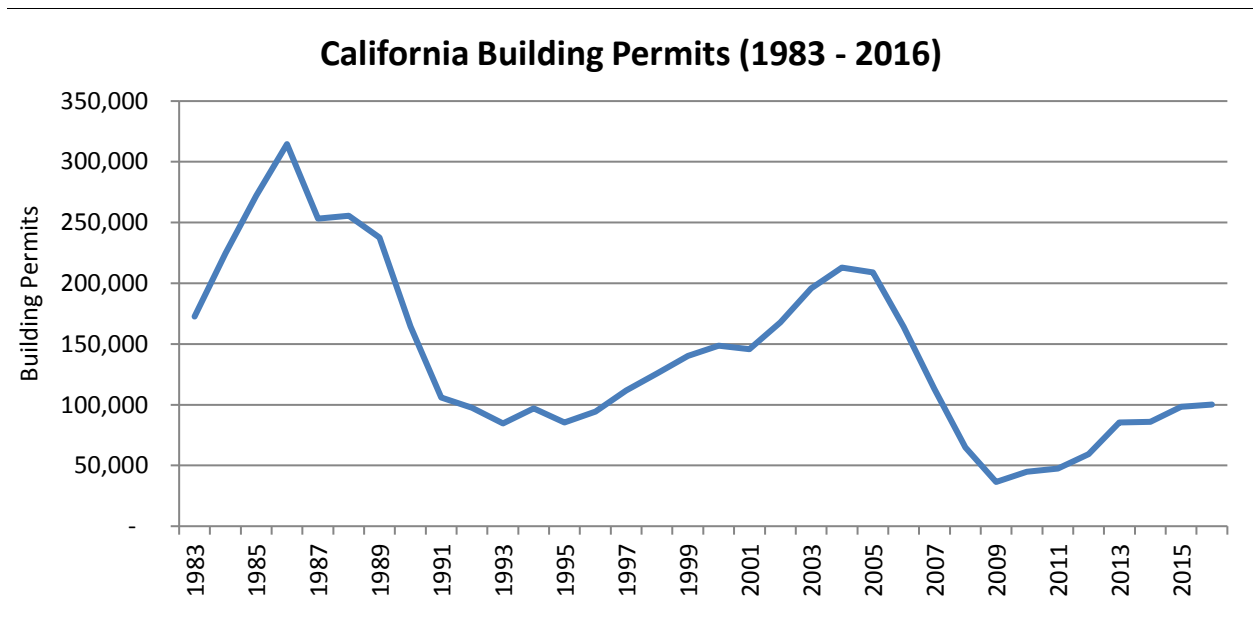
The 2008 M2 EAP market conditions forecast was based on a regression analysis that examined how four variables – building permits, population, employment, and income – are associated with the Caltrans CCI and other cost factors. In the 2008 analysis, building permitting activity was the best predictor of the Caltrans CCI (and of cost factors generally), and the large drop in building permitting activity that preceded the Great Recession predicted a period of slack markets for construction materials and labor. Table 2 and Figure 2 show the time trend of building permits in California from 1983 through 2016. Note that building permits in the state dropped from 208,972 in 2005 to 36,421 in 2009 and stayed below 100,000 every year until 2016, which saw 100,265 building permits issued in California – slightly less than half the “housing bubble” year values of 2004 and 2005.

Table 2: California Building Permits by Year

California Total Building Permits (1983-2016)					
1983	172,569	1995	85,293	2007	113,034
1984	224,845	1996	94,283	2008	64,962
1985	272,317	1997	111,716	2009	36,421
1986	314,569	1998	125,707	2010	44,762
1987	253,171	1999	140,137	2011	47,343
1988	255,559	2000	148,540	2012	59,225
1989	237,747	2001	145,757	2013	85,472
1990	164,313	2002	167,761	2014	85,844
1991	105,919	2003	195,682	2015	98,233
1992	97,407	2004	212,960	2016	100,265
1993	84,656	2005	208,972		
1994	97,047	2006	164,280		

Source: U.S. Census Bureau, Building Permit Survey

Figure 2: Time Trend of California Building Permits



Source: U.S. Census Bureau, Building Permit Survey

The forecast from 2008 was influenced by the housing bubble's coincident rise in building permits, the increasing level of the Caltrans CCI, and the substantial decline in permitting. This led to a prediction of a slack construction materials and labor market for the years following 2008.

Looking forward toward developing a forecast for the next five and ten years, the earlier M2 EAP forecast provides context, but what is striking is how conditions have changed. The economy has recovered, cost factors (including the Caltrans CCI) are rising, suggesting tightening demand, but building permitting activity has seen at best a slow and still incomplete recovery. The following observations and questions help set the stage for the analysis.

1. Building permitting activity may have been, at least in part, a proxy for broader factors (such as coincident increases and then contractions in world demand, from 2000 to 2012) in the 2008 forecast. Certainly, to some extent, building activity is a structural factor that affects the cost of public works construction. The question is to what extent materials and labor are substitutable over public- and private-sector markets, and to what extent the relationship observed in the 2008 analysis continues to be a useful forecasting tool today.
2. Will price and supply factors, going forward, be most strongly influenced by the national and world economy or by local conditions, including the public works construction program in Orange and other southern California counties?
3. Around 2012, the Caltrans CCI began to increase rapidly while state building permitting activity, while also increasing, remained well below peaks from previous time periods. Does this signal a weakening of the relationship between building permits and public sector construction costs going forward?

To foreshadow our results by briefly summarizing the answers to the above questions, the OCBC team believes that a market forecast going forward should rely less exclusively on building permits than did the M2 EAP forecast. The relationship between permits and, for example, the Caltrans CCI shows signs of change, and there is discussion later in this report how supply-side factors, including consolidation in the construction and engineering services industry in the years after 2008, might importantly affect cost pressures. Before going into that in detail, our analysis starts with descriptive analytics.

Descriptive Analysis

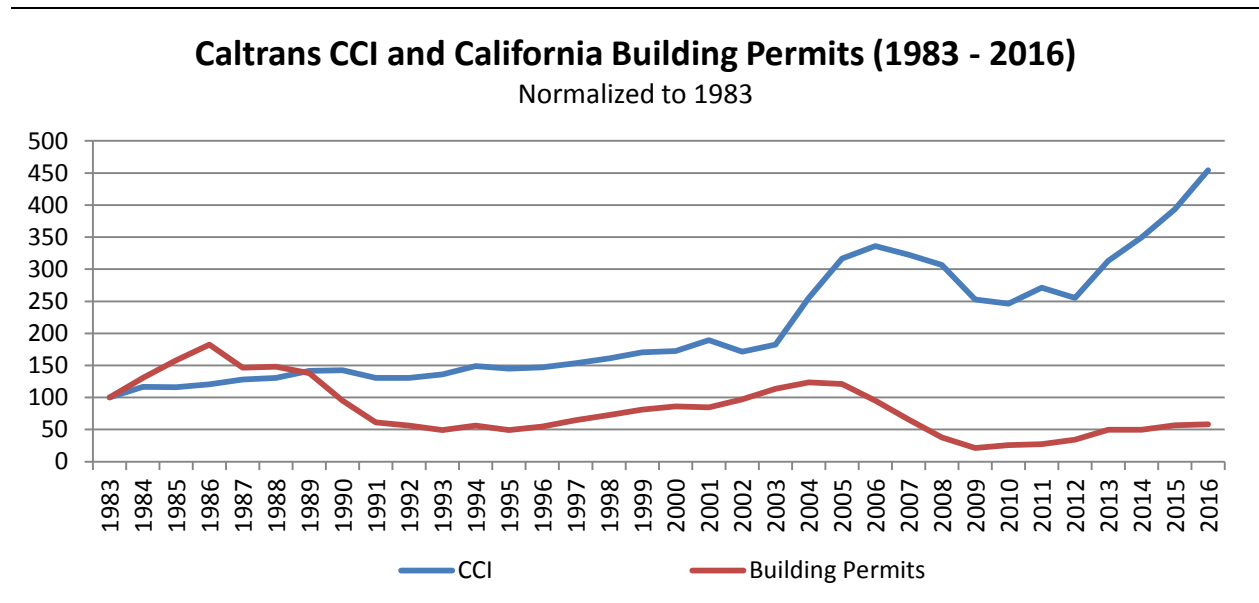
The graph of the Caltrans CCI in Figure 1 shows clear time trends that follow the business cycle. The rapid increase in the CCI during the housing bubble years following 2002 is followed by a decline after 2008, and then an increase in the past four years. The long-term trend, judging by Figure 1, suggests an increase in the growth rate of the Caltrans CCI following 2003. The average annual growth rate of the Caltrans CCI was 5.3 percent from 1972 to 2003 and 7.3 percent from 2003 to 2016.

Figure 3 graphs both the Caltrans CCI and statewide building permits, from 1983 to 2016. Both series, the CCI and building permits, are normalized to a value of 100 in 1983. The value in each year is divided by the 1983 value, such that the values of both series in any year show the

percentage change from 1983 to that year. For example, the normalized Caltrans CCI value in 2006 is 335.8, indicating that the CCI had increased 235.8% (335.8 minus 100) from 1983 to 2006. Normalizing values allows both series to be represented with the same y-axis, despite dramatically different values in the underlying data, and allows readers to easily see percent change from the 1983 base year.

In Figure 3, starting in 2000, building permits increased in California, while the Caltrans CCI showed an increase that was more dramatic, in percentage growth terms, than building permits. Both series fall following 2006, but the increase in the Caltrans CCI beginning in 2012 is not accompanied by much of an increase in building permits.

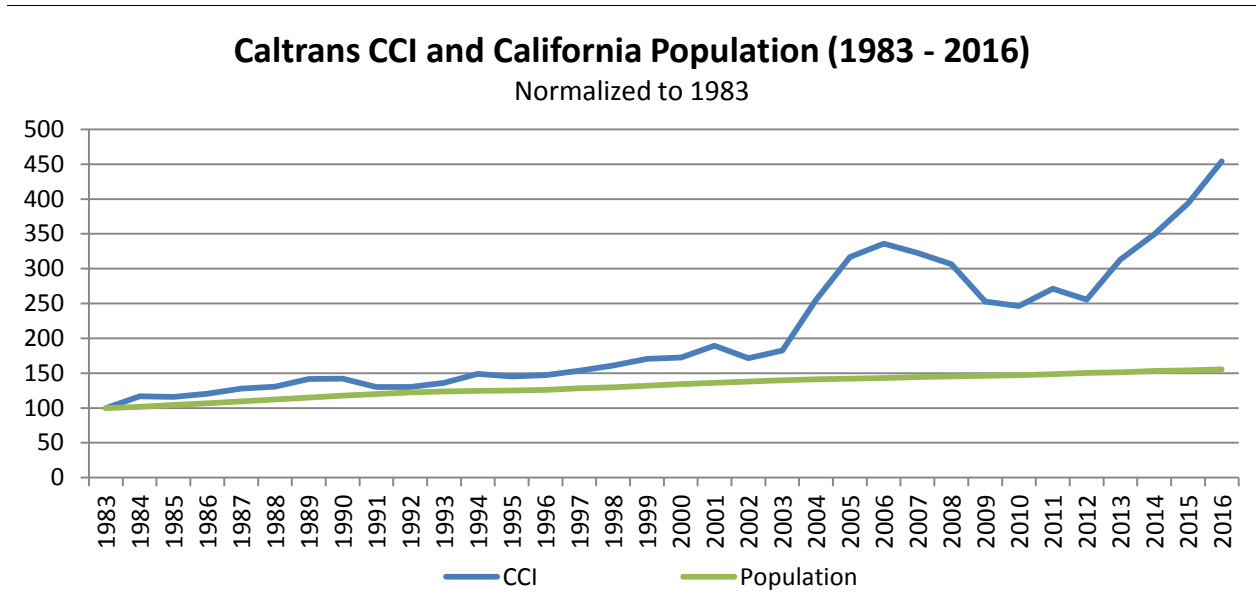
Figure 3: Normalized Caltrans Construction Cost Index (CCI) and California Building Permits, 1983 to 2016



Source: California Department of Transportation, U.S. Census Bureau, Building Permit Survey

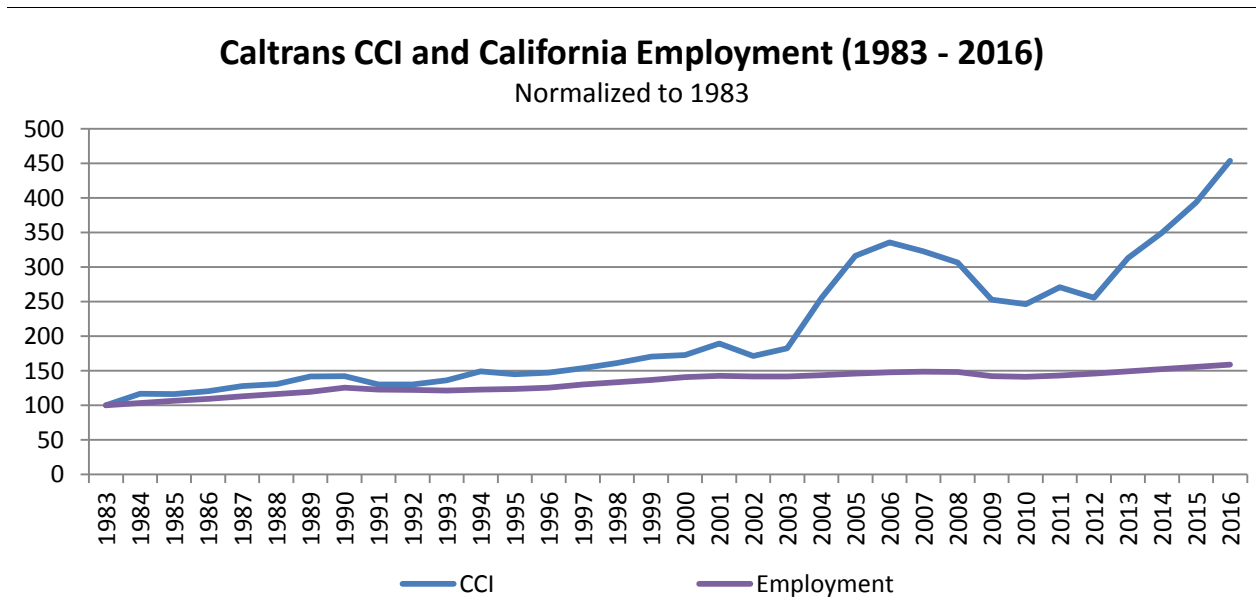
Figures 4, 5, 6, and 7 show the same normalized time trend for the Caltrans CCI compared to population (Figure 4), employment (Figure 5), total wages (Figure 6), and per capita personal income (Figure 7). Wages and income are in nominal dollars, not adjusted for inflation. All values are for California. Data sources and raw data are shown in appendix table A1.

Figure 4: Normalized Caltrans Construction Cost Index (CCI) and California Population, 1983 to 2016



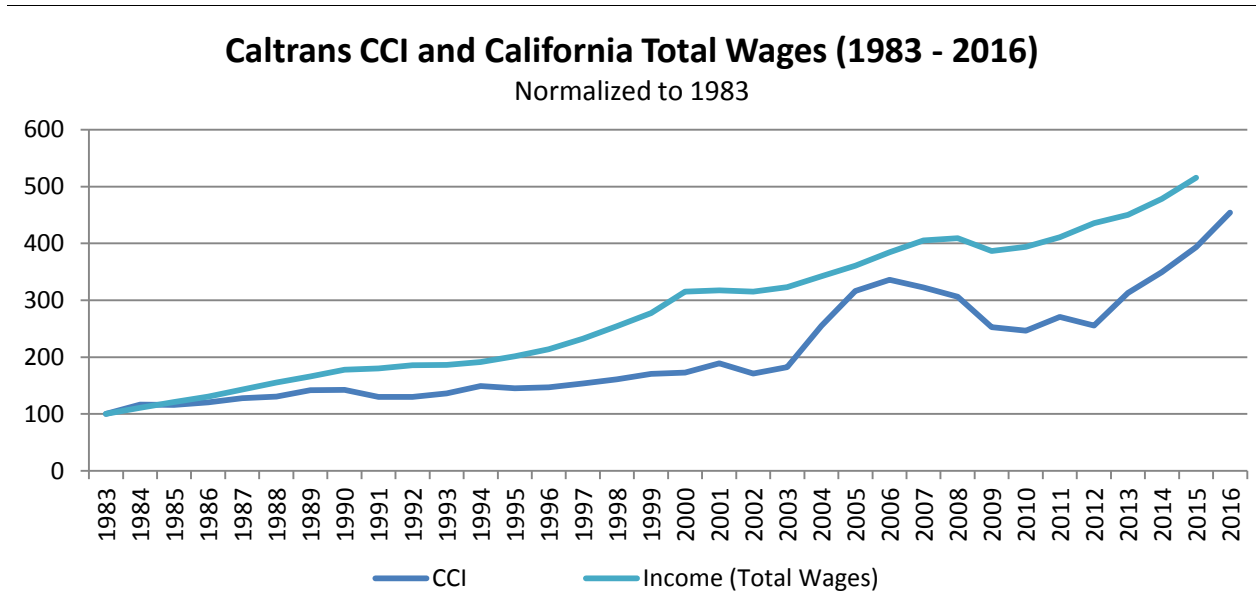
Source: California Department of Transportation, U.S. Census Bureau

Figure 5: Normalized Caltrans Construction Cost Index (CCI) and California Employment, 1983 to 2016



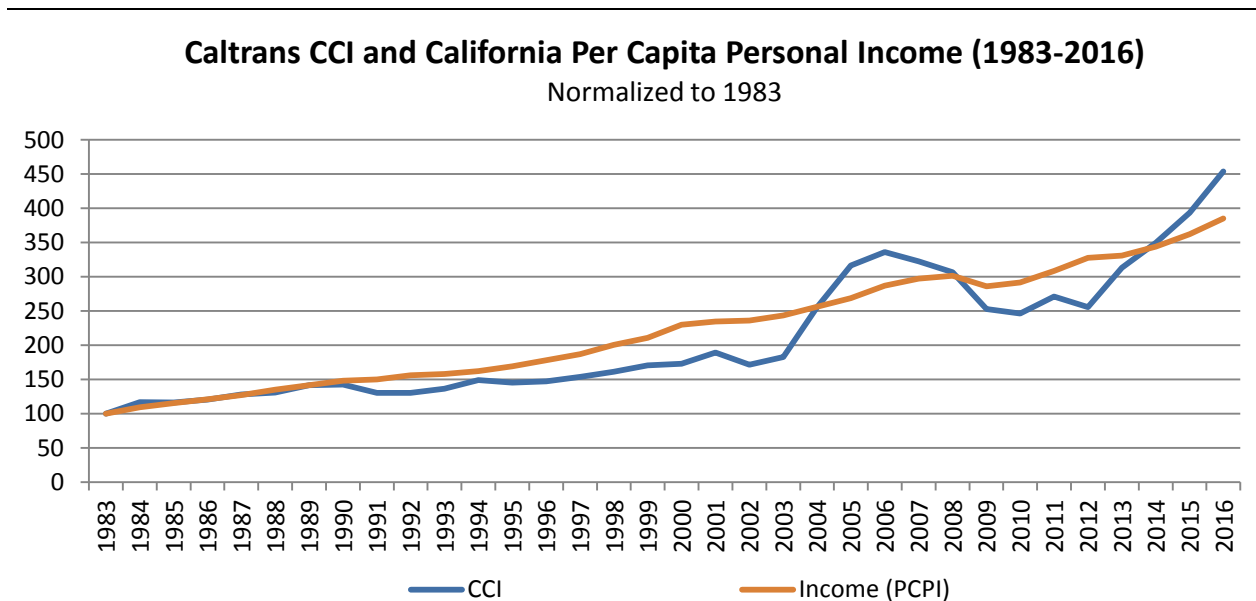
Source: California Department of Transportation, California Employment Development Department

Figure 6: Normalized Caltrans Construction Cost Index (CCI) and California Total Wages, 1983 to 2016



Source: California Department of Transportation, California Employment Development Department

Figure 7: Normalized Caltrans Construction Cost Index (CCI) and California Per Capita Personal Income (PCPI), 1983 to 2016



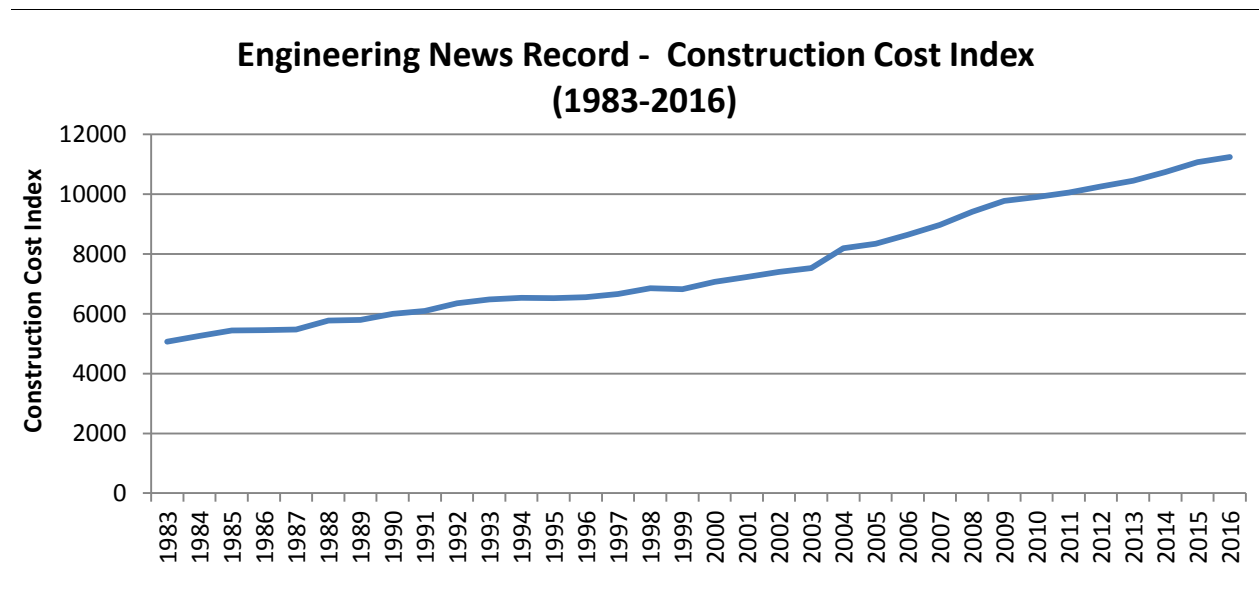
Source: California Department of Transportation, U.S. Bureau of Economic Analysis

In addition to the CCI, Caltrans reports cost factors for materials, which will be discussed later in this report. The OCBC team also analyzed data from Engineering News Record, which reports a construction cost index (ENR CCI) and a building cost index (ENR BCI) for the Los Angeles metropolitan area.

The ENR Cost Index formula contains four pricing components including: steel, lumber, cement and labor costs. This price data for the three building materials are gathered from a single supplier of each building material in each city. Therefore, the suppliers may be located within Los Angeles city limits, or they may not, but instead may be somewhere within the greater metropolitan area. Considering that these building material prices are collected from a single source for each material in each city/metropolitan area, the price is a spot price; it is not a comprehensive price based on multiple sources. ENR has no way of knowing if their sources are charging the average price for their large metropolitan area for a given material, or a higher or lower than average price. For that reason, the ENR data and indices are not capable of determining average prices but rather are better suited to tracking the change (fluctuation) of the commodity price in a specific city over time.

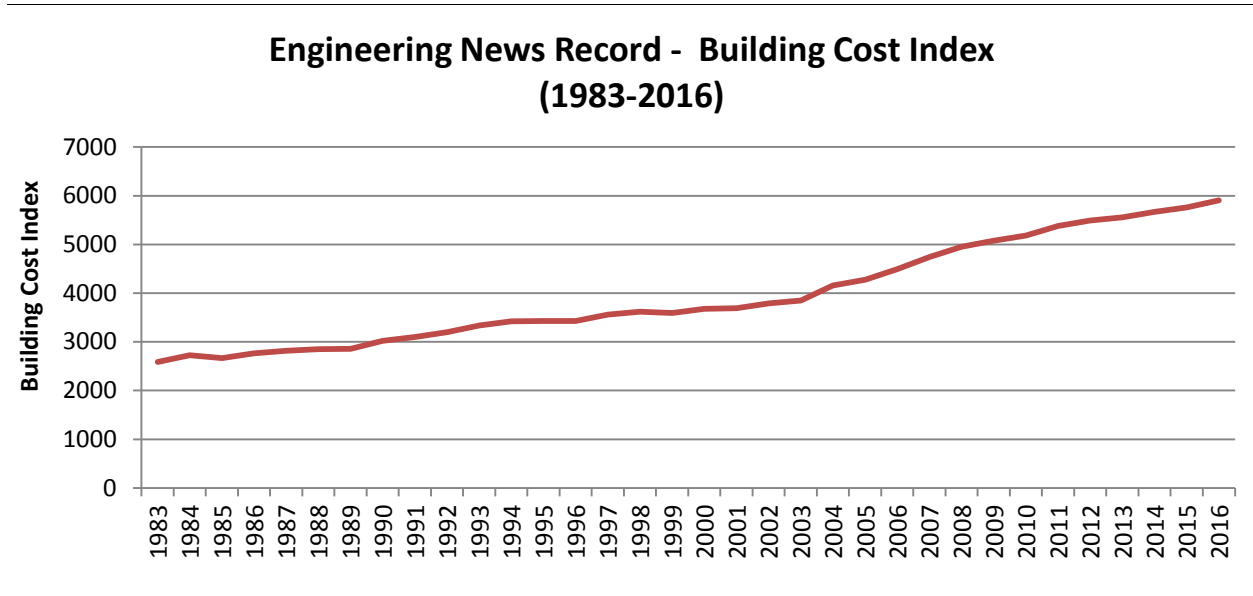
The ENR indices measure construction and building costs that can apply to both the private and public sectors, whereas the Caltrans CCI is designed to measure public sector transportation infrastructure costs. Figures 8 and 9 show the time trend of the ENR CCI and BCI respectively, and the data are in Appendix Table A-2.

Figure 8: Engineering News Record Construction Cost Index (CCI), 1983 – 2016



Source: Engineering News Record Monthly Release

Figure 9: Engineering News Record Building Cost Index (BCI), 1983 – 2016



Source: Engineering News Record Monthly Release

The trends for the ENR CCI and BCI are smoother than for the Caltrans CCI, suggesting that it will be difficult to associate those variables with changes in structural variables such as building permits, population, employment, or wages. The M2 EAP analysis did not find the ENR CCI and BCI as useful as the Caltrans CCI, and our analysis similarly finds those less useful for the Next 10 forecast. Appendix Figures A-1 through A-5 show the normalized values of the ENR CCI and ENR BCI versus, respectively by appendix figure, Los Angeles metropolitan (five-county) area building permits, Los Angeles metropolitan area population, Los Angeles metropolitan area employment, Los Angeles metropolitan area wages, and Los Angeles metropolitan area per capita personal income. None show visual relationships to the ENR CCI or BCI. For that reason, our analysis does not use the ENR indices in the forecast model.

Regression Models

1. Models from 2008 Market Conditions Report

The OCBC team reran models that reproduced, as closely as possible with available data, the regression models in the 2008 market conditions report. Those models were classified into two types – levels models (regressing the level of the Caltrans CCI on the levels of the four key independent variables – building permits, population, employment, and total wages – all for California), and change models, regressing the level of the Caltrans CCI on the changes of the

same four key independent variables. Both the levels and change models include first and second lags of Caltrans CCI on the right hand side. The regression equations are shown below.

Levels Model

$$Y_t = \beta_0 + \beta_1 Y_{t-1} + \beta_2 Y_{t-2} + \beta_3 BP_t + \beta_4 BP_{t-1} + \beta_5 BP_{t-2} + \beta_6 INC_t + \beta_7 INC_{t-1} + \beta_8 INC_{t-2} + \beta_9 EMP_t + \beta_{10} EMP_{t-1} + \beta_{11} EMP_{t-2} + \beta_{12} POP_t + \beta_{13} POP_{t-1} + \beta_{14} POP_{t-2} + u$$

where Y = cost or price index

BP = building permits

INC = total wages

EMP = total employment

POP = population

u = the regression error term

and the subscripts "t", "t-1" and "t-2" indicate years ("t" being the current year, "t-1" is a one year lag, and "t-2" is a two year lag)

β 's are regression coefficients

Changes Model

$$Y_t = \beta_0 + \beta_1 Y_{t-1} + \beta_2 Y_{t-2} + \beta_3 BP_CH_t + \beta_4 BP_CH_{t-1} + \beta_5 BP_CH_{t-2} + \beta_6 INC_CH_t + \beta_7 INC_CH_{t-1} + \beta_8 INC_CH_{t-2} + \beta_9 EMP_CH_t + \beta_{10} EMP_CH_{t-1} + \beta_{11} EMP_CH_{t-2} + \beta_{12} POP_CH_t + \beta_{13} POP_CH_{t-1} + \beta_{14} POP_CH_{t-2} + u$$

where the term "CH" behind a variable indicates the year-to-year change

(e.g. $BP_CH_t = BP_t - BP_{t-1}$)

The results are shown in Appendix Tables A3 and A4. Table A3 shows the two regressions, levels and changes models, for the Caltrans CCI. Table A4 shows the same models fit on data for the Los Angeles Metropolitan Area, with the Engineering News Record (ENR) construction cost index (ENR CCI) as the dependent variable in the first two columns of Table A4. The ENR building cost index (BCI) is the dependent variable in the second two columns of Table A4. The dependent variables in Tables A4 are the same variables in Table A3, but measured for the Los Angeles metropolitan statistical area.

The variables for building permits are only significant, at the ten percent level, for the two lags in the changes model for the Caltrans CCI. That pattern of insignificance or marginal (10% significance level), coupled with the graphical analysis in the previous section, led us to conclude that building permits, by themselves, are not a good predictor of cost pressures for the OCTA Next 10 delivery timeframe, to the year 2027. Our analysis developed additional regression models, described below.

2. Regressing Caltrans CCI on Building Permits and Unemployment Rate

Given that the descriptive analysis suggests a relationship between the Caltrans CCI and the state’s unemployment rate, in year-on-year percent changes, and until recent years suggests a similar relationship with building permits, our analysis fit simple regression models, shown in Tables 3 and 4 below. The models regressed the year-on-year percent change in the Caltrans CCI on (1) the year-on-year percent change in building permits in the state, (2) the year-on-year percent change in the state’s unemployment rate, and (3) the year-on-year percent change in both building permits and the unemployment rate. Results are shown in Table 3. Table 4 repeats the same model with all variables as three-year moving averages of annual percent changes, which smooths the data.

Table 3: Caltrans CCI Year-on-Year Percent Change Regressed on Percent Change of Building Permits and Unemployment Rate

	Building Permits only		Unemployment. Rate only		Both	
	coefficient	t-statistic	coefficient	t-statistic	coefficient	t-statistic
Building permits, year-on-year % change	0.2141	2.62			0.0066	0.06
Unemployment rate, year-on-year % change			-0.4218	-4.33	-0.4164	-3.1
sample size	33		27		27	
Years	1984-2016		1990-2016		1990-2016	
R-squared	0.1809		0.4284		0.4285	
Note: All data are for California						
Coefficients statistically significant at 5% level shown in bold						

Table 4: Caltrans CCI Year-on-Year Percent Change, 3-year Moving Average Regressed on Percent Change of Building Permits and Unemployment Rate, 3-year Moving Average

	Building Permits only		Unemployment. Rate only		Both	
	coefficient	t-statistic	coefficient	t-statistic	coefficient	t-statistic
Building permits, year-on-year % change	0.2186	3.12			-0.0334	-0.32
Unemployment rate, year-on-year % change			-0.405	-5.03	-0.4344	-3.54
sample size	31		25		25	
Years	1986-2016		1992-2016		1992-2016	
R-squared	0.251		0.5241		0.5263	
Note: All data are for California						
Coefficients statistically significant at 5% level shown in bold						

The coefficient on the unemployment rate is always statistically significant and highly stable in magnitude across all models in Tables 3 and 4. The coefficient on building permits is similarly stable in magnitude when it is statistically significant, which is only in the bivariate regression shown in the first column of Tables 3 and 4. When both building permits and the unemployment rate are included in the percent changes and three-year moving average percent change models, only the unemployment rate is statistically significant. For that reason, the OCBC team used the unemployment rate to develop a simple forecasting model for Caltrans CCI, shown in the next sub-section. The ENR data are too smooth and likely not sufficiently focused on public works costs to provide a reliable cost forecast. The forecast of the Caltrans CCI is the best available numerical forecast that can be applied to OCTA’s conditions.

3. Forecasting Model for Caltrans CCI

The estimated regression coefficients from the second column of Table 3 (the bivariate regression of the percent annual change in the Caltrans CCI on the percent annual change in the California unemployment rate) were used to develop a forecast of the Caltrans CCI, to the year 2027. The results are shown in Table 5, below.

Table 5: Five-Year Forecast (to 2022) and Ten-Year Forecast (2027) for Caltrans CCI, from Unemployment Rate Year-on-Year Percent Change Model

<u>Year</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2027</u>
CA Unemp. Rate	7.50	6.20	5.35	5.10	5.05	5.00	5.05	5.00	5.00	4.60
% YOY change, CA Unemp		-17.33%	-13.71%	-4.67%	-0.98%	-0.99%	1.00%	-0.99%	0.00%	-1.65%*
Caltrans CCI level, actual	108.32	122.02	140.85							
Predicted CCI % YOY change			5.78%	1.97%	0.41%	0.42%	-0.42%	0.42%	0	0.70%
Predicted CCI Level				149.00	151.93	152.56	153.20	152.55	153.19	158.61

* Total percent change in forecast unemployment rate from 2022 value is -8%, which is -1.65% annually over five years.
 Note: California unemployment rates are forecast values after 2016.

Note that the predicted unemployment rate values, after 2016, are averages of the forecasted values from the California Legislative Analyst Office, the California Department of Finance, the Los Angeles Economic Development Corporation, and the California Department of Transportation (Caltrans). Only Caltrans has forecasted state unemployment rates for years beyond 2020, and so the 2021 and 2022 and later values for the state unemployment rates are Caltrans forecasts. The forecasted unemployment rate data to 2022 that are used to obtain the average forecast unemployment rates in Table 5 are shown in Appendix Table A5.

The forecast in Table 5 shows a leveling of the Caltrans CCI at levels not much higher than the current level. With the 2016 California unemployment rate at 5.35 percent, close to full traditional “full employment” levels, the model will imply that the increase in the Caltrans CCI will slow and level off.

While changes in the state unemployment rate are an excellent correlate of changes in the Caltrans CCI, particularly in approximately the past fifteen years, a forecasting model based on changes in the unemployment rate cannot capture sustained public works cost pressure from an economy operating at or near full employment. The OCBC team experimented with models that relate the levels of the Caltrans CCI to the level of the state unemployment rate, but those predicted the same leveling of the Caltrans CCI. Any forecasting model will be limited when the future is unlike the past, and California may be entering a period of relatively full employment – very different from the past few years. OCBC does not believe that a simple forecasting model based only on demand-side proxies such as the unemployment rate or building permits can capture cost pressures that might arise during sustained periods of full or near-full employment. While our analysis finds the slowing of the increase in the Caltrans CCI after 2017 to be credible, the OCBC team believes that the five-year forecast might understate – possibly importantly so – cost pressures and hence increases in the Caltrans CCI going forward. This report discusses reasons for that possible understatement in the context of a risk analysis, in the next sub-section.

Ten-Year Forecast: The only available unemployment rate forecasts beyond 2022 are from Caltrans who project that the California unemployment rate will decrease from 5.0 percent in

2022 to 4.6 percent in 2027.¹ Given that unemployment rate forecast, the model predicts an increase in the Caltrans CCI to 158.36 in 2027. The OCBC team believes that the unemployment rate estimate and the model relationship at the ten-year window is too uncertain to be useful, and while the ten-year forecast is shown in Table 5, our analysis cautions against reading much into the 2027 forecast. At the ten-year timeframe, the OCBC team believes that a risk analysis will be more useful, and the key risks are described below. A risk analysis will be important even for near-term years, and the OCBC team encourages OCTA to view the risk analysis described in Section II as an integral part of their cost forecasting exercises.

II. Discussion and Risk Analysis

There are several factors which could modify the forecast shown in Table 5. Potential risk factors are summarized and listed below, along with possible OCTA mitigation strategies for each risk factor, in Table 6, at the end of this sub-section.

A. Sustained Low Unemployment

In May of 2017, the national unemployment rate was 4.3 percent, a 16-year low compared to when the unemployment rate registered a reading of 4.2 percent in February 2001, according to the U.S. Bureau of Labor Statistics. The unemployment rate will likely not fall much lower. Wages have not shown much upward pressure during the recovery from the Great Recession, generally increasing from 2 percent to 2.5 percent per year during the recovery, suggesting that the economy may still have some slack, and if so the unemployment rate might remain at or near current levels for the next few years.²

Models based on historical data may not be able to represent the cost pressures endemic in a state economy that is near full employment and that remains so for at least a few years. In the past, full employment prompted the Federal Reserve Bank to raise interest rates, inducing recessions, and hence limiting the time that the national economy remained at full employment. Given slack wage pressure, the Federal Reserve Bank may be less likely to rapidly raise interest rates, and a global savings glut (discussed below) will exert downward pressure on interest rates. On net, it is possible that unemployment could remain low for the foreseeable next several years, and possibly within the timeframe of at least the five-year Table 5 prediction.

¹ See http://www.dot.ca.gov/hq/tpp/offices/eab/index_files/2016/FullReport2016.pdf.

² For information on wage growth, see the Economic Policy Institute's nominal wage tracker, at <http://www.epi.org/nominal-wage-tracker/>.

The pressures on infrastructure costs will be difficult to predict, and would depend in part on supply response. Briefly, it is unlikely that raw materials supplies would expand to meet demand. (In Section III our analysis discusses cost pressures on raw materials.) Overall, sustained near-full employment will likely exert more cost pressure than the Table 5 model predicts, and could place OCTA in a structurally high-cost and increasing-cost environment for transportation projects.

B. Residential Construction Accelerates

Building permits were correlated with the Caltrans CCI in the approximately dozen or so years before 2012, but building permitting activity has not recovered as the state's economy has rebounded from the Great Recession. Statewide, building permitting activity is at relatively low levels, particularly so for an economy with low unemployment. The problem is in part political – local governments are reluctant to approve large or even medium-size residential construction projects due to “not in my backyard” (NIMBY) pressures from neighbors. The California Legislative Analyst Office (LAO) has demonstrated that construction in Los Angeles County, in particular, has lagged well behind what would be needed to accommodate population growth. A 2015 LAO analysis found that between 1980 and 2010, California's major metropolitan areas added approximately 120,000 new housing units each year, while the LAO estimated that 210,000 new units per year would have been needed to meet demand.³

The housing shortage and underbuilding is, in part, a characteristic of California's politics, and the risks to OCTA related to building permitting and construction are as much political as economic. The state's housing crisis has sparked political attention. There were over 100 bills dealing with housing in the California legislature as of early May, and while many if not most will not pass, for the second year in a row Sacramento is debating policies that might structurally change the incentives for localities to approve or deny building projects.⁴ In 2016, Governor Brown suggested a “by-right” zoning legislation that would have provided presumptive (by right) approval for any residential construction project that was consistent with the local zoning code and that provided affordable units that met 20% (far from transit) or 10% (near transit) targets. That proposal met with opposition in the legislature, and the governor's 2016 proposal was not introduced in the assembly or state senate.⁵ Yet the large amount of legislative activity related to housing in this session indicates that the debate has, if anything, intensified. If the state enacts changes that require localities to approve residential construction projects that would have

³ California Legislative Analysts Office, “California's High Housing Costs: Causes and Consequences,” 2015, available at <http://www.lao.ca.gov/reports/2015/finance/housing-costs/housing-costs.aspx>, accessed June 10, 2017.

⁴ Libby, Sara, “California's Legal Assault on NIMBY's begins,” Citylab, May 9, 2017, available at <https://www.citylab.com/equity/2017/05/californias-legal-assault-on-nimbys-begins/525840/>, accessed June 10, 2017.

⁵ Barmann, Jay, “Governor Brown's ‘By-Right’ Housing Fast-Track Proposal Dead in the Water,” SFist, Aug. 22, 2016, <http://sfist.com/2016/08/22/governor-browns-by-right-housing-fa.php>.

otherwise been blocked, or if reforms to the California Environmental Quality Act reduce the ability of citizens to oppose projects or that expedites challenges, California might see a substantial increase in construction. Already the Inland Empire – a location of relatively more affordable housing in Southern California – is seeing large increases in residential construction. The Inland Empire saw the fastest growth in construction jobs among any U.S. metropolitan area in March versus a year earlier.⁶

If California’s political environment changes in ways that reduce the power of NIMBY opposition, the state might see a rapid and large increase in building permits, as many of the state’s urban and coastal counties have backlogs of residential building that has lagged population growth. That could create substantial cost pressure as materials and skilled labor could be diverted from public works to private residential construction. Even absent such policy changes, the residential construction industry is growing rapidly in the Inland Empire. If policies change to allow more rapid residential permitting and construction, the resulting “burst” of residential construction might be temporary, if supply eventually meets pent-up demand, but that could take a few years and the result would be a large cost pressure on OCTA projects if residential building accelerates. Such a dramatic change in California’s residential construction regulatory framework should be regarded as unlikely, but the pent-up pressure for more homes is structural. Despite the increasing political attention to the state’s housing affordability crisis, the trend of the past four decades has been toward a more rigid and delay-prone residential construction environment. Overall, a change that allows more building in California would be an unlikely outcome, albeit an outcome that is growing more likely and an outcome that could exert substantial cost pressure on OCTA projects. Without policy change, there is still likely to be increasing residential construction, but likely concentrated in inland counties where permitting is politically easier.

C. The Public Works Construction and the Associated Professional Support Industries Continue to Consolidate

Supply-side factors, such as market structure and competition in the public works construction and associated architecture-engineering support services industries, are likely an important factor in current cost pressures. During and immediately following the Great Recession, the public works construction industry saw several consolidations, particularly among architecture, engineering, and design firms. Smaller firms merged with larger, often multi-national practices. At the same time, our earlier 2008 market conditions analysis suggested that firms during the 2008 time period may have been reducing their bid price to win enough business to cover variable costs. During the depths of the recession, there is anecdotal evidence that firms might have bid below their typical profit margin, and public works agencies reported bids coming in below estimated costs during the recession years. Those days have passed. The recent

⁶ Lansner, Jonathan, “California, Inland Empire in Building Booms, 6 Things to Know,” Orange County Register, May 2, 2017, available at <http://www.ocregister.com/2017/05/02/california-inland-empire-in-building-booms-6-things-to-know/>, accessed June 10, 2017.

consolidations pruned marginal firms and, when combined with growth in the economy, have likely allowed firms to return to pre-recession bid practices.

Going forward, the question is whether the public works construction market will see further consolidation. If so, competition for bids might decrease. Our analysis suggests this as a risk factor that OCTA should monitor, continuing their tracking of the number of bidders. Following the 2008 market conditions analysis, OCTA successfully implemented several of OCBC's recommendations and measures to facilitate the bid process. In response to risk from consolidation of bidders, OCTA can continue and, where possible, enhance those efforts that make the agency a preferred client. Additionally, look to do what can be done to increase competition in the public works infrastructure market, acknowledging that OCTA has worked hard to be a client of choice.

D. Increasing Interest Rates

The Federal Reserve Bank began what most observers expect to be a program of sustained, moderate interest rate increases in December of 2015.⁷ Interest rates are still near the lowest levels seen in the past several decades, and the U.S. is likely to be in a low but increasing interest rate environment going forward. The aging of the Baby Boom population in all developed countries, and rapid aging in middle income countries, has created a global savings glut in the form of Baby Boomer retirement savings. That will exert downward pressure on interest rates. While rates will likely increase in future years due to Federal Reserve Bank policy activity, the OCBC team expects the increases to be more moderate but possibly sustained over a longer period of time than following the peak of the business cycles in the 1970s through the 1990s. A return to the high interest rate environment of the 1980s is unlikely, even though interest rates will rise. This will increase OCTA's borrowing costs and, to the extent that rising interest rates reduce the demand for residential construction, exert a downward cost pressure on public works projects.

E. Growth in Public Works Demand from Neighboring Counties

With the passage of Measure R in 2008 and Measure M in 2016, Los Angeles County is in the midst of a large transportation construction program. That program, and similar half-cent sales tax infrastructure programs in other Southern California counties, will create cost pressures as private firms have more opportunities to bid on projects and hence those firms may be less

⁷ See, e.g., the discussion in Tankersley, Jim, "Federal Reserve Raises Interest Rates for Second Time in a Decade," Washington Post Wonkblog, Dec. 14, 2016, available at https://www.washingtonpost.com/news/wonk/wp/2016/12/14/federal-reserve-expected-to-announce-higher-interest-rates-today/?utm_term=.f811c5091e1f, accessed June 10, 2017.

willing to reduce bid prices. Our analysis sees and highlights this as one of the primary cost risks for OCTA in the next few years. The construction activity from neighboring counties is programmed by self-help sales tax increases that have been approved by voters. Those neighboring county construction programs are part of the structural landscape for public works projects. Public sector demand for public works construction will increase as Los Angeles' Measure M funds become available, creating increasing demand for materials and skilled labor.

To better understand pressure from building programs in neighboring counties the OCBC team examined the construction program reported in the 2016 SCAG Regional Transportation Plan (RTP). Our analysis examined 1,388 projects in Los Angeles, Riverside, and San Bernardino Counties, that are part of the financially constrained RTP, with completion years from 2016 to 2030.⁸ Tables 6 and 7 list the estimated cost (in current year dollars) for these projects, by county, with Orange County Next 10 projects removed, which explains the lack of cost estimates for Orange County during the 2021-2025 time period. In other words, if a project is part of Next 10 and part of the SCAG financially constrained RTP, those project cost estimates will not be in Table 6 or Table 7, but rather in Table 8. Projects are grouped by highway (Table 6) and transit (Table 7), and listed in five-year bands based on project end date. All data are from the 2016 RTP Transportation System project list, appendix, adopted April, 2016.⁹

The 2016 RTP project list is divided into three parts: the 2015 Federal Transportation Improvement Program (FTIP), the financially constrained plan, and the strategic plan. The 2015 FTIP contains six years of projects that use federal funds or that require federal approval; the financially constrained plan includes projects for which revenues have been reasonably identified; the strategic plan is additional projects that the RTP proposes to program if additional revenues become available. The financially constrained plan is the most reasonable starting point, and unlike the FTIP the financially constrained plan includes projects with completion dates throughout the life of the RTP (2016 through 2040) and lists clear classifications that categorize each project as either transit or highway. Hence Tables 6 and 7 are based on summaries of the financially constrained plan.

⁸ Our analysis excluded projects for which OCTA is listed as the lead agency, to capture work in counties that neighbor Orange County. Ventura and Imperial Counties were also excluded, again to focus on counties that neighbor Orange County. Hence the project list studied is a subset of the complete RTP project list.

⁹ See http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_ProjectList.pdf.

Table 6: Freeway Construction Cost Estimates, by County, 2016-2030, SCAG RTP/SCS

Freeway Construction Cost Estimates (SCAG RTP/SCS)				
Counties	2016-2020	2021-2025	2026-2030	Total 2016-2030 Costs
Los Angeles	\$16,037,920,000	\$14,051,669,000	\$5,347,696,000	\$35,437,285,000
Orange	4,561,804,000	-	2,419,044,000	6,980,848,000
San Bernardino	8,271,850,000	3,409,228,952	5,547,552,000	17,228,630,952
Riverside	3,131,576,000	5,476,784,000	2,784,322,000	11,392,682,000
Total Regional Costs	\$32,003,150,000	\$22,937,681,952	\$16,098,614,000	\$71,039,445,952

Source: Authors analysis of SCAG 2016 RTP/SCS project list, available at http://scagrtpscsc.net/Documents/2016/final/f2016RTPSCS_ProjectList.pdf.

Table 7: Transit Construction Cost Estimates, by County, 2016-2030, SCAG RTP/SCS

Transit Construction Cost Estimates (SCAG RTP/SCS)				
Counties	2016-2020	2021-2025	2026-2030	Total 2016-2030 Costs
Los Angeles	\$8,790,582,000	\$8,782,094,000	\$4,072,768,000	\$21,645,444,000
Orange	543,164,000	-	-	543,164,000
San Bernardino	44,080,000	185,452,000	149,265,000	378,797,000
Riverside	647,540,000	756,335,000	611,915,000	2,015,790,000
Total Regional Costs	\$10,025,366,000	9,723,881,000	4,833,948,000	\$24,583,195,000

Source: Authors analysis of SCAG 2016 RTP/SCS project list, available at http://scagrtpscsc.net/Documents/2016/final/f2016RTPSCS_ProjectList.pdf.

Tables 6 and 7 show neighboring counties (Los Angeles, Riverside, San Bernardino), and any project with OCTA as a lead agency was subtracted from totals in the above tables. OCTA’s Next 10 plan is shown in Table 8. The OCBC team cautions against a direct comparison of Table 8 to Tables 6 and 7. The Next 10 plan includes projects with OCTA Measure M funding, but would exclude projects that do not receive such funding, and hence Table 8 is not a complete accounting of projects in Orange County. Table 9 shows OCTA costs from the 2016 RTP, for projects with OCTA as the lead agency (which are excluded from Tables 6 and 7.) Differences in project end dates, differences in the timing of the data, and differences in fund source create differences in the tables, particularly so when placing project spending into five-year windows. While the five-year summary is useful, it also assumes that all spending falls within the five-year window that contains the project completion date, which can be misleading (more discussion of this follows below) but was the best approach possible given the available data.

Table 8: OCTA Next 10 Delivery Plan Cost Phasing, 2016-2030 (based on project end dates)

Next 10 Project Construction Cost Estimates from Next 10 Plan				
Sector	2016-2020	2021-2025	2026-2030	Total 2016-2030 Costs
Freeways	\$1,731,440,801	\$1,751,074,028	\$761,976,213	\$4,244,491,043
Transit	747,864,728	557,208,964	624,258,500	1,929,332,192
Streets and Roads	687,083,897	574,777,031	597,036,839	1,858,897,767
Water / Environmental	27,459,164	40,775,606	49,345,968	117,580,738
Total Costs	\$3,193,848,589	\$2,923,835,629	\$2,032,617,521	\$8,150,301,739

Source: Authors analysis of OCTA Next 10 delivery plan, available at http://www.octa.net/pdf/M2_Next10DeliveryPlan.pdf.

Table 9: OCTA Freeway and Transit Project Costs from 2016 SCAG RTP/SCS, 2016-2030

OCTA Specific Costs from SCAG RTP/SCS				
	2016-2020	2021-2025	2026-2030	Total
Freeways	\$90,469,000	\$1,854,552,000	\$1,133,266,000	\$3,278,287,000
Transit	2,770,999,000	300,879,000	-	3,071,878,000
Total Costs	\$3,061,468,000	\$2,155,431,000	\$1,133,266,000	\$6,350,165,000

Source: Authors analysis of SCAG 2016 RTP/SCS project list, available at http://scagrtpscsc.net/Documents/2016/final/f2016RTPSCS_ProjectList.pdf.

Tables 6 and 7 illuminate overall patterns, even with the shortcomings inherent in comparing data based on project end date and different time periods. First, note that transportation construction spending from neighboring counties is substantial, with Los Angeles County programming approximately four to six times as much construction as Orange County in the 2016-2020 and 2021-2025 time periods (highlighted in Table 10 below). Riverside and San Bernardino Counties are pursuing construction programs that are at least as large as Orange County's Next 10 program.

Table 10: Regional Construction Costs for Freeways and Transit, 2016-2025

Overall Southern California Regional Construction Costs for 2016-2025 Period (Freeways and Transit)	
Los Angeles	\$47,662,265,000
San Bernardino	\$11,910,610,952
Riverside	\$10,012,235,000
Orange County Measure M (Next 10 Projects) Total	\$4,787,588,521
Orange County Overall Total¹⁰	\$9,892,556,521

Source: Authors analysis of SCAG 2016 RTP/SCS Project List available at http://scagrtpscsc.net/Documents/2016/final/f2016RTPSCS_ProjectList.pdf and Authors analysis of OCTA Next 10 delivery plan, available at http://www.octa.net/pdf/M2_Next10DeliveryPlan.pdf.

¹⁰ Orange County Overall Total may include potential double counting of some costs of certain construction projects from the SCAG RTP/SCS and Next 10 Delivery Plan and, as such, this total should be seen as the upper limit of overall construction costs in Orange County.

Some cautions are necessary. The data in Tables 6 through 10 allocate project costs based on completion dates. For projects in the 2016-2020 time period, contracts may have already been signed, staffing might be in place, and the cost pressure might be present and may have been for some time. The pattern in Tables 6 and 7 shows a higher level of spending in 2016-2020 and a drop-off in 2026-2030, and both are likely artifacts of the necessity of assigning project cost based on end year. For projects ending in 2016-2020 (some are likely now complete), assigning all costs to the current five-year window includes expenditures that were likely from earlier, before 2016, time periods. For 2026-2030, some projects with end dates after 2030 will likely be in progress, but those costs will not be included. Hence there should be caution against interpreting that expenditures in the region will decline during the time trend from 2016 through 2030.

OCBC's analysis reaches the following conclusions:

1. Expenditures in neighboring counties are large, and will be a source of potential price pressure for OCTA now and through the next ten years. While Los Angeles County's program is the largest, Riverside and San Bernardino are also pursuing ambitious transportation programs and will be a source of cost pressure.
2. The region's transportation program, through the next ten years, is more focused on highways than transit. OCTA, with a relatively highway focused program, might view highway programs as the primary competition for materials and labor. That focus may be too narrow – transit infrastructure likely uses some of the same materials and skilled labor as do highways. The analysis in Tables 6 and 7 shows that, regardless of assumptions about how transit construction competes for inputs with highway construction, the programs in neighboring counties provide more funds for highways than for transit.

On net, Tables 6 and 7 show that transit is approximately 26 percent of the projects with end dates between 2016 and 2030 in the three counties that border Orange County. That is a relatively highway-focused construction program. The OCBC team compared that to two other data sources. Los Angeles County's Measure M, passed in 2016, allocates 35 percent of its funds for transit construction, 17 percent for highway construction, and 16 percent to local return.¹¹ If local return is spent mostly on street and road projects, Measure M, the most recent sales tax measure in Los Angeles, will split roughly 50-50 across transit and highway construction, and other funds (state, federal) are consistent with more total expenditures on highway than on transit construction, even in Los Angeles County. Our analysis also examined the funding split for capital projects in the SCAG RTP, 2016 through 2030. Of those capital projects, 33.3 percent are

¹¹ Proposed Ordinance #16-01, Measure M, Los Angeles County Traffic Improvement Plan, available at http://theplan.metro.net/wp-content/uploads/2016/09/measur em_ ordinance_16-01.pdf.

for transit and passenger rail, again suggesting that the bulk of SCAG region capital projects will be for roads and highways.¹²

Overall the SCAG region is in the midst of an ambitious capital construction program, with neighboring counties commissioning work that, in Riverside and San Bernardino, at least matches and, combined, exceeds the scale of Orange County. Los Angeles County's work program is approximately four to six times larger than Orange County's over the course of the 2016-2025 period. This creates the potential for substantial market pressures from demand for construction materials and skilled labor from neighboring county programs.

¹² Data on capital projects for SCAG region are from SCAG 2016 RTP, Transportation Finance appendix, Table 8, p. 20, available at http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_TransportationFinance.pdf.

F. Increasing Construction Wage Pressure

Table 11 shows construction sector wages from the U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages for Los Angeles, Orange, Riverside, and San Bernardino Counties, 2012 to 2016.

Table 11: Construction Wages and Growth Rate, Orange and Neighboring Counties, 2012-2016

County	2012	2013	2014	2015	2016	% annual growth, 2012-2014	% annual growth, 2014-2016
Los Angeles	\$ 55,774.83	\$ 56,610.48	\$ 57,995.30	\$ 61,304.54	\$ 63,366.75	1.97%	4.53%
Orange	\$ 61,830.50	\$ 61,441.55	\$ 63,494.49	\$ 66,898.66	\$ 69,195.51	1.34%	4.39%
Riverside	\$ 48,063.63	\$ 48,520.23	\$ 50,358.97	\$ 53,819.94	\$ 55,834.20	2.36%	5.30%
San Bernardino	\$ 51,890.65	\$ 52,297.51	\$ 52,397.23	\$ 55,594.93	\$ 57,341.12	0.49%	4.61%

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, NAICS codes 2362 (nonresidential building construction), 2361 (residential building construction), 237 (other heavy construction), 2382 (building equipment contractors), 2381 (building foundation and exterior contractors), 2383 (building finishing contractors), 2389 (other specialty trade contractors.)

Construction wage growth in all four counties has accelerated since 2014, likely reflecting labor demand pressures in those sectors. Since 2014, annualized wage growth has ranged from 4.39 percent (Orange) to 5.3 percent (Riverside). This reflects stronger wage growth than the national economy. The Federal Reserve Bank of Atlanta tracks wage growth, and has estimated that since 2014, monthly year-on-year wage growth in the national economy has ranged from 2.3 percent (January, 2014) to 3.9 percent (October, 2016).¹³

This is consistent with recent evidence that building construction, particularly in the Inland Empire, has accelerated.¹⁴ Historical data suggest that construction employment can expand or contract substantially with economic cycles, but periods of high construction employment have coincided with periods of high public sector infrastructure costs when measured by the Caltrans CCI. If the private sector economy continues to grow, coupled with the large public sector construction programs in southern California, pressure on construction wages and hence on public sector construction costs will likely increase.

¹³ The Federal Reserve Bank of Atlanta national wage tracker is available at <https://www.frbatlanta.org/chcs/wage-growth-tracker.aspx?panel=1>.

¹⁴ The Orange County Register reported in May of 2017 that Riverside and San Bernardino Counties added 12,200 construction jobs, year on year, as of March 2017. See Jonathan Lansner, "California, Inland Empire in building booms: 6 things to know," Orange County Register, May 2, 2017, available at <http://www.ocregister.com/2017/05/02/california-inland-empire-in-building-booms-6-things-to-know/>.

Apprenticeship programs and other education and training programs such as those offered by community colleges can help build the pipeline of skilled construction labor, and hence mitigate construction cost pressures. The construction industry has an extensive internship tradition. Approximately two-thirds of all apprenticeships registered with the U.S. Department of Labor are in the construction industry.¹⁵ Seventy-four percent of all construction apprenticeships are represented by the North America’s Building Trades Unions (NABTU), which operates apprenticeship programs through approximately a billion dollars of funding nationally in more than 1,600 teaching centers.¹⁶

Locally, the Los Angeles and Orange Counties Building and Construction Trades Council is an umbrella association representing 48 local unions and district councils in 48 trades and over 100,000 members.¹⁷ Given that public sector construction is often unionized, the Building and Construction Trades Council could be a possible partner in launching or expanding apprenticeship programs aimed at the public works market. Such apprenticeship programs would be particularly appropriate given the prospects for continued sustained demand for public works construction.

G. Recession

The current economic expansion is eight years old.¹⁸ A recession during the ten-year extended Next 10 forecasting window is likely if historic patterns of economic expansion and contraction are any guide. Yet timing such an economic contraction is highly difficult, and beyond the scope of this research. A recession will slow demand for residential construction, and exert downward cost pressure on public works projects, but that effect will be countervailed by the large public works programs in Los Angeles and neighboring counties. Those programs are not immune from economic contractions – sales tax revenues typically drop during recessions. But the base level of public sector infrastructure spending in Southern California will be high due to county sales tax infrastructure construction programs regardless of the status of the business cycle.

These risk factors, and possible OCTA mitigating actions, are summarized in Table 12 below:

Table 12: Risk Factors, Effect on Public Works Costs, and Some Possible OCTA Mitigations

¹⁵ Case Western Reserve University and U.S. Department of Commerce, *The Benefits and Costs of Apprenticeship: A Business Perspective*, Nov., 2016, p. 65, available at <http://www.esa.gov/sites/default/files/the-benefits-and-costs-of-apprenticeships-a-business-perspective.pdf>.

¹⁶ Ibid.

¹⁷ See <http://laocbuildingtrades.org/about-building-trades/>.

¹⁸ According to the National Bureau of Economic Research, which dates business cycles and hence recession start and end dates, the Great Recession ended in June of 2009. See <http://www.nber.org/cycles.html>.

Risk Factor	Impact on Costs	Likelihood	Comments	Possible OCTA Mitigations
Sustained low unemployment	Increases costs beyond Table 5 model prediction	Likely in the next 2 to 5 years	Wage pressure is still low, suggests that the economy has continued room to expand without necessitating policy efforts (i.e. interest rate increases) that would induce a recession	Accelerate the next 2 to 3 years of the Next 10 plan. Increase the supply of contractors.
Increased Building Permitting (and hence residential construction)	Increases costs	Unlikely given long-term political factors, but regulatory change could be sudden	Increasing permitting depends in part on state or local political changes, but Inland Empire construction has been increasing rapidly	Accelerate next 2 to 3 years of the Next 10 plan. Labor force training to increase supply of skilled construction labor.

Risk Factor	Impact on Costs	Likelihood	Comments	Possible OCTA Mitigations
Continued Consolidation in Construction and Architecture/Engineering Industry	Increases costs in near-term, then pressure for costs to remain high	Likely, given recent consolidation trends	The industry has been consolidating. Unclear whether that trend has played out or will continue.	<p>OCTA becomes a preferred client</p> <p>Reduce barriers to new entrants into OCTA bid process</p> <p>Innovate in ease of doing business with OCTA</p>
Interest Rate Increases	Short-term cost increases as financing costs, for OCTA and contractors, increase – long-term downward cost pressure if recession ensues	Highly likely to have moderate interest rate increases in next 2 to 5 years	U.S. is near historically low interest rates; global savings glut will exert downward pressure on interest rates; on net, rate increases likely to be moderate and sustained	Complete financing agreements in the near-term to avoid higher interest rates

Risk Factor	Impact on Costs	Likelihood	Comments	Possible OCTA Mitigations
Neighboring County Transportation Programs Exert Cost Pressure	Increases Costs	Highly Likely; current work programs in neighboring counties meet or exceed level in Orange County	Recent self-help sales tax increases “lock in” sustained demand for public works contractors in Southern California	<p>OCTA becomes a client of choice</p> <p>Simplify the bid process and process of doing business with OCTA</p> <p>Accelerate Next 10 plan to lock in prices before peak market pressure from neighboring counties</p>
Increasing Construction Wage Pressure	Increases Costs	Likely in foreseeable future, unless residential market reverses course (which would likely coincide with a recession)	Construction wages increases by from 4.39 to 5.3 percent annually, 2014 to 2016, in Orange and neighboring SCAG region counties	<p>Accelerate Next 10 plan in advance of additional increases in construction wages</p> <p>Support efforts to increase the pool of construction labor</p>

Risk Factor	Impact on Costs	Likelihood	Comments	Possible OCTA Mitigations
Recession	Decreases Costs	Likely within the next 10 years, but timing highly uncertain	Recession will reduce demand for private sector residential and commercial construction, but public sector demand will remain although sales tax revenues will drop in a recession	Timing uncertainty makes mitigation measures, beyond those listed above, difficult to implement.

The risk factors above create cost pressures that are in opposing directions, with varying possible timing and certainty, and with varying mitigation measures that may, in some cases, be at odds with each other. Our research judges the most likely risk factors (near-term) to be sustained low unemployment, increases in residential construction, cost pressure from neighboring county public works programs, and increasing construction wage pressure. . All are features of today’s environment. The largest risk, in terms of magnitude on public works costs, would be changes in the residential construction regulatory environment – an unlikely outcome but one that has the potential to create large cost pressures if that leads to a residential building boom. Such a regulatory risk hinges on political factors, and our analysis suggests that OCTA monitor the politics surrounding the regulatory approval process for residential permitting and construction. Note that changes that simplify or speed the project approval process could lower OCTA’s costs, and the increased cost pressure from residential building if permitting and approvals became easier could be countervailed by lower costs to OCTA from more rapid approval of the agency’s projects.

The OCBC analysis predicts cost pressures that will remain high, with the potential for cost increases that exceed model predictions at least in the near-term (next 2 to 5 years). When possible, OCTA might accelerate the first five years of the Next 10 Plan to avoid cost increases. Our analysis notes that significant additional near-term acceleration in the Next 10 Plan may be unrealistic, given that OCTA has worked to accelerate projects to the extent possible. More importantly, the supply of public works contractors and competition for their services promises to be a key cost factor going forward. For that reason, OCTA should do what it can to increase the supply of bidders for projects, doing what it can to remain a preferred client for public works contractors.

III. Cost Factor Analysis

OCBC collected data from 1983 through 2016, annually, for cost factors from two data sources – Caltrans and Engineering News Record (ENR). As with the indices analyzed in the previous section, the Caltrans data are for the entire state, and the ENR data are for the Los Angeles metropolitan area. The Caltrans data are from bids, and reflect data for public works transportation projects from what can be relatively small samples. The ENR data are from a survey of businesses, and represent private sector construction costs better, but each ENR cost factor is from one supplier, limiting the ability of the ENR data to reflect market averages. In many cases, materials costs across public and private sector jobs may be the same, but differences in contracting practices, the size of the job, and the timespan of the project could lead to differences in buying power across public and private entities.

Table 13 lists the Caltrans cost factor data, with units shown in the column headers, and Table 14 lists the ENR cost factor data, also with units in the column headers.

Table 13: Caltrans Cost Factors, 1983 through 2016, State of California

<i>Year</i>	<i>Roadway Excavation (\$/Cu Yd)</i>	<i>Aggregate Base (\$/Ton)</i>	<i>Asphalt Concrete Pavement (\$/Ton)</i>	<i>PCC Pavement (\$/Cu Yd)</i>	<i>Class A PCC Structure (\$/Cu Yd)</i>	<i>Bar Reinforcing Steel (\$/Lb)</i>	<i>Structural Steel (\$/Lb)</i>
1983	2.1	9.2	27.57	52.04	225.84	0.335	2.155
1984	3.19	13.67	28.38	55.79	238.48	0.375	2.155
1985	2.77	11.55	30.15	64.13	232.39	0.413	2.288
1986	3.01	12.76	28.82	60.49	249.74	0.412	2.388
1987	2.97	17.57	27.54	70.62	280.4	0.418	2.546
1988	4.16	10.13	27.46	58.66	284.55	0.44	3.956
1989	4.19	10.62	29.43	73.78	303.49	0.483	3.103
1990	4.73	12.05	30.77	68.93	295.24	0.469	2.209
1991	3.08	10.07	33.43	62.64	295.21	0.431	2.284
1992	3.62	9.76	32.46	66.78	265.31	0.419	3.073
1993	4.53	9.89	35.41	66.76	243.79	0.464	2.706
1994	4.68	10.39	37.15	66.45	277.92	0.547	2.334
1995	4.1	10.18	35.29	63.85	298.8	0.499	2.266
1996	3.8	9.74	37.66	65.93	321.88	0.512	2.172
1997	5.25	10.29	36.07	78.48	308.54	0.496	2.337
1998	4.95	11.55	38.78	75.91	319.95	0.553	2.595
1999	6.55	12.86	40.14	77.95	321.22	0.521	3.215
2000	6.21	11.14	45.12	78.14	363.59	0.507	2.754
2001	5.83	14.58	43.89	75.74	425.17	0.612	3.906
2002	4.84	12.42	49	74.15	363.5	0.508	3.248
2003	5.05	15.05	48.35	109.96	362.75	0.6	1.71
2004	13.11	16.97	53.55	135.94	399.64	0.947	5.39
2005	14.13	20.61	75.72	171.22	567.31	0.968	2.666
2006	12.8	20.26	86.04	179.67	630.16	1.039	3.734
2007	10.84	20.54	85.48	204.69	566.25	0.935	6.966
2008	11.39	17.9	78.5	177.91	553.62	0.938	5.183
2009	9.37	14.91	80.38	125.41	484.78	0.593	4.492
2010	7.94	14.2	80.25	122.82	483.64	0.716	2.149
2011	11.82	14.12	87.11	135.4	427.76	0.83	2.102
2012	8.24	14.66	89.36	132.52	461.23	0.927	2.497
2013	8.98	18.6	100.11	157.26	538.01	1.01	5.57
2014	17.49	23.1	96.97	206.22	660.64	1.12	10.132
2015	15.87	22.85	105.09	194.14	652.86	1.2	15.54
2016	21.1	25	121.43	210.83	702.98	1.62	19.62

Source: California Department of Transportation, Highway Construction Price Index Reports;
http://www.dot.ca.gov/hq/esc/oe/hist_price_index.html

Table 14: Engineering News Record Cost Factors, 1983 – 2016, Los Angeles Metropolitan Area

Year	Asphalt Average (\$/Ton)	Portland Cement (\$/Ton)	Gravel (>3/4 Inch; \$/Ton)	Gravel (<3/4 inch; \$/Ton)	Crushed Stone (\$/ Ton)	Sand Concrete (\$/Ton)	Std. Structural Shapes (\$/CWT)	I-Beams (\$/CWT)	Reinforcing Bars (\$/CWT)
1983	165.00	66.06	5.40	5.47	3.97	6.18	42.63	44.63	14.00
1984	173.00	62.75	7.67	7.82	8.15	7.88	43.42	45.14	13.66
1985	180.50	63.86	7.93	8.01	8.23	8.04	43.40	44.82	12.97
1986	187.00	63.93	8.05	8.07	8.32	8.13	43.49	44.87	13.02
1987	196.00	63.94	8.20	8.19	8.44	8.30	43.69	45.01	12.25
1988	163.55	65.95	8.23	8.24	7.70	8.33	34.01	35.94	14.81
1989	115.10	66.40	8.20	8.25	6.97	8.35	25.65	28.77	17.80
1990	118.08	66.75	8.38	8.48	7.03	8.40	25.72	28.90	17.93
1991	115.50	64.93	8.65	8.58	6.99	8.35	26.33	28.78	18.15
1992	94.63	63.48	8.78	8.08	6.68	6.68	23.77	24.70	18.90
1993	96.93	63.85	9.15	8.65	6.94	6.10	23.10	23.68	21.43
1994	108.95	63.58	9.20	8.72	7.36	6.25	24.62	25.83	23.90
1995	115.04	65.55	9.28	9.05	7.20	6.33	25.80	25.91	25.90
1996	120.23	70.84	9.70	9.31	7.45	6.56	26.32	24.47	27.00
1997	128.07	74.11	9.86	9.68	7.67	6.63	26.48	25.20	26.86
1998	134.74	76.91	9.92	9.56	7.76	6.97	27.30	27.11	26.79
1999	125.42	77.91	9.83	8.87	7.94	6.90	27.03	26.86	25.60
2000	126.61	79.04	9.42	8.66	8.13	6.94	26.83	26.88	26.57
2001	145.03	79.63	9.35	8.86	7.82	6.97	27.11	27.02	27.33
2002	147.19	81.02	9.93	9.66	7.96	7.10	26.97	27.24	26.08
2003	165.35	81.99	10.94	10.20	8.02	7.48	26.15	25.96	24.91
2004	175.34	82.48	10.81	10.25	8.09	7.52	29.51	29.74	29.57
2005	214.55	86.41	10.26	10.41	8.30	7.63	32.98	34.03	34.40
2006	232.28	88.77	10.50	10.46	8.44	7.94	35.52	37.31	35.52
2007	268.39	94.60	10.52	10.41	8.55	8.05	38.25	39.97	35.99
2008	283.31	98.00	10.50	10.04	8.90	8.29	42.83	44.17	39.16
2009	284.26	98.02	10.50	10.01	8.90	8.30	45.49	46.71	41.41
2010	284.26	98.02	10.50	10.01	8.93	8.30	45.49	46.71	41.41
2011	284.26	98.02	10.50	10.01	8.93	8.30	43.97	42.85	32.78
2012	309.57	101.76	10.65	10.36	8.93	8.68	43.62	42.34	31.99
2013	345.00	107.00	10.87	10.86	8.93	9.20	43.40	42.18	31.97
2014	345.00	107.00	10.87	10.86	8.93	9.20	43.45	42.23	32.03
2015	348.83	112.79			8.95	9.25	44.75	43.18	34.23
2016	358.52	114.90			9.25	9.22	49.74	50.73	45.00

Source: Engineering News Record Construction Economics Archive, http://www.enr.com/economics/current_costs

Graphing these cost factor trends over time is instructive, but because that involves seven graphs for the Caltrans cost factors and nine graphs for the ENR cost factors, those graphs are shown in Figures A6 through A21 of the appendix. Figures A6 through A12 display the Caltrans cost factors over time, and Figures A13 through A21 show the time trend of the ENR cost factors. Each figure shows the cost factors normalized to 100 in the beginning year of 1983, so that later years can be quickly interpreted as a percentage of the 1983 value. Each figure also shows the normalized building permit data, 1983 through 2016, for visual comparison with the cost factor time trend. Building permit data are for California when shown on the Caltrans cost factor graphs and for the Los Angeles metropolitan area when shown for the ENR cost factor graphs.

Some trends are evident from Appendix Figures A6 through A21. First, the cost factors increase after 2012 or 2013 – a trend that is consistent with the Caltrans CCI trend. The Caltrans cost factors show rapid increases after 2012, with the largest percentage increases for roadway excavation costs and structural steel (Figures A6 and A12, respectively.) The ENR cost factors also increase starting around 2012, but the increase is smoother and more modest than for the Caltrans cost factors. For the ENR cost factors, those related to steel (Figures A19 through A21) show the largest percentage increases, qualitatively consistent with the Caltrans information, although the magnitude of increases are generally smaller in the ENR cost factors. The smoother ENR trend is likely due to the fact that ENR samples one supplier of each cost factor, and individual suppliers likely change prices smoothly over time.

The individual cost factors do not display trends that are qualitatively different from the Caltrans CCI, ENR CCI, or BCI indices. Those indices are formed from the cost factors, so this is not surprising. Also, the individual cost factors show little visual relationship to building permitting activity in recent years. For both reasons, there is little reason to believe that forecasting models for individual cost factors will give insights beyond the forecasting model for the indices. For that reason, OCBC believes that an analysis of risk and uncertainties in the overall market is more important, and readers should refer to the risk analysis in Section II.

IV. Recommendations and Indicators

Going forward, risk management will be complex but important for OCTA's Next 10 Plan. OCBC suggests that OCTA develop a set of data indicators that function as an early warning system, alerting the agency to possible changes in risk factors. The following are a list of possible indicators to consider, with suggested frequency shown in parentheses:

- Overall employment/unemployment trends from the California Employment Development Department (EDD) (monthly)
- Federal Research Labor Market Conditions Index (monthly)
- Employment in construction jobs, based on the NAICS codes used in Table 11, Bureau of Labor Statistics' Quarterly Census of Employment and Wages and EDD (quarterly)

- Data on wages in construction jobs, based on the NAICS codes in Table 11, from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages (quarterly)
- Building permit data, focused on Los Angeles, Orange, Riverside, San Bernardino Counties (quarterly)
- Number of bidders on County Transportation Commission projects (quarterly)
- Executive opinion from the California State University Fullerton Orange County Business Expectations (OCBX) Survey (quarterly)
- Chapman University Orange County Composite Index (quarterly)
- Chapman University Consumer Sentiment Index
- Commercial and industrial vacancies, CoStar (quarterly)
- Commodity prices, focused on aggregate base, concrete and PCC pavement, and bar and structural steel, from Caltrans (statewide) and from Los Angeles (ENR), (quarterly)

Of these data, the number of bidders would require collaboration between OCTA and agencies in neighboring counties. If appropriate, OCBC suggests exploring such data sharing, to the extent feasible and allowed by law, so that agencies can see trends in the number of bids and hence any effect of industry consolidation.

More generally, the development of a data tracking system will be important in allowing OCTA to identify trends early to assess how risks are changing. In the next several years, increasing cost pressures will likely dominate factors that would tend to reduce costs.

IV. Appendix

Appendix Table A-1: California Department of Transportation Construction Cost Index (CCI), California Building Permits, Population, Employment, Total Annual Payrolls and Per Capita Personal Income Levels and Normalized (1983-2016)

California Department of Transportation Construction Cost Index (CCI), California Building Permits, Population, Employment, Total Annual Payrolls and Per Capita Personal Income Levels (1983-2016)						
	Caltrans CCI	Building Permits	Population	Employment	Total Annual Payroll	PCPI
1983	31	172,569	25,337,000	11,372,808	195,054,946,160	14,538
1984	36.2	224,845	25,816,000	11,765,867	216,618,428,420	15,864
1985	36	272,317	26,402,000	12,125,483	236,522,988,980	16,767
1986	37.3	314,569	27,052,000	12,440,467	255,170,888,000	17,573
1987	39.7	253,171	27,717,000	12,870,917	279,366,221,300	18,491
1988	40.5	255,559	28,393,000	13,233,408	302,871,575,460	19,606
1989	43.9	237,747	29,142,000	13,583,867	324,027,212,800	20,576
1990	44.1	164,313	29,828,496	14,264,200	346,973,875,947	21,494
1991	40.4	105,919	30,458,613	13,960,000	351,494,177,154	21,824
1992	40.4	97,407	30,987,384	13,880,900	362,212,067,130	22,644
1993	42.2	84,656	31,314,189	13,817,000	363,604,887,659	22,964
1994	46.2	97,047	31,523,690	13,944,700	373,510,553,612	23,535
1995	45	85,293	31,711,849	14,048,200	392,794,301,814	24,595
1996	45.6	94,283	31,962,949	14,300,400	417,660,266,084	25,885
1997	47.6	111,716	32,452,789	14,784,600	453,907,544,517	27,147
1998	49.9	125,707	32,862,965	15,184,500	496,463,173,957	29,133
1999	52.9	140,137	33,418,578	15,555,300	541,647,241,978	30,663
2000	53.5	148,540	34,000,835	16,033,200	615,026,413,391	33,391
2001	58.7	145,757	34,512,742	16,197,700	619,146,651,267	34,091
2002	53.1	167,761	34,938,290	16,108,700	614,542,438,304	34,306
2003	56.6	195,682	35,388,928	16,102,800	630,692,095,035	35,381
2004	79.1	212,960	35,752,765	16,304,000	667,521,587,162	37,244
2005	98.1	208,972	35,985,582	16,582,700	703,992,717,929	39,046
2006	104.1	164,280	36,246,822	16,789,400	749,504,649,781	41,693
2007	100	113,034	36,552,529	16,931,600	790,444,530,437	43,182
2008	95	64,962	36,856,222	16,854,500	797,791,743,140	43,786
2009	78.4	36,421	37,077,204	16,182,600	754,405,951,731	41,588
2010	76.4	44,762	37,253,956	16,091,900	768,071,900,576	42,411
2011	84	47,343	37,674,954	16,258,100	801,387,207,989	44,852
2012	79.2	59,225	38,041,489	16,602,700	849,471,063,227	47,614
2013	97.09	85,472	38,373,434	16,958,700	878,441,319,278	48,125
2014	108.32	85,844	38,739,410	17,348,600	933,404,857,793	49,985
2015	122.02	98,233	39,059,809	17,723,300	1,005,383,368,506	52,651
2016	140.75	100,265	39,354,432	18,065,000	N/A	55,987

Source: U.S. Census Bureau, California Employment Development Department, U.S. Bureau of Economic Analysis

Appendix Table A-1 Continued

California Department of Transportation Construction Cost Index (CCI), California Building Permits, Population, Employment, Total Annual Payrolls and Per Capita Personal Income Normalized (1983-2016)						
	Caltrans CCI	Building Permits	Population	Employment	Total Annual Payroll	PCPI
1983	100	100	100	100	100	100
1984	116.8	130.3	101.9	103.5	111.1	109.1
1985	116.1	157.8	104.2	106.6	121.3	115.3
1986	120.3	182.3	106.8	109.4	130.8	120.9
1987	128.1	146.7	109.4	113.2	143.2	127.2
1988	130.6	148.1	112.1	116.4	155.3	134.9
1989	141.6	137.8	115.0	119.4	166.1	141.5
1990	142.3	95.2	117.7	125.4	177.9	147.8
1991	130.3	61.4	120.2	122.7	180.2	150.1
1992	130.3	56.4	122.3	122.1	185.7	155.8
1993	136.1	49.1	123.6	121.5	186.4	158.0
1994	149.0	56.2	124.4	122.6	191.5	161.9
1995	145.2	49.4	125.2	123.5	201.4	169.2
1996	147.1	54.6	126.2	125.7	214.1	178.1
1997	153.5	64.7	128.1	130.0	232.7	186.7
1998	161.0	72.8	129.7	133.5	254.5	200.4
1999	170.6	81.2	131.9	136.8	277.7	210.9
2000	172.6	86.1	134.2	141.0	315.3	229.7
2001	189.4	84.5	136.2	142.4	317.4	234.5
2002	171.3	97.2	137.9	141.6	315.1	236.0
2003	182.6	113.4	139.7	141.6	323.3	243.4
2004	255.2	123.4	141.1	143.4	342.2	256.2
2005	316.5	121.1	142.0	145.8	360.9	268.6
2006	335.8	95.2	143.1	147.6	384.3	286.8
2007	322.6	65.5	144.3	148.9	405.2	297.0
2008	306.5	37.6	145.5	148.2	409.0	301.2
2009	252.9	21.1	146.3	142.3	386.8	286.1
2010	246.5	25.9	147.0	141.5	393.8	291.7
2011	271.0	27.4	148.7	143.0	410.9	308.5
2012	255.5	34.3	150.1	146.0	435.5	327.5
2013	313.2	49.5	151.5	149.1	450.4	331.0
2014	349.4	49.7	152.9	152.5	478.5	343.8
2015	393.6	56.9	154.2	155.8	515.4	362.2
2016	454.0	58.1	155.3	158.8	N/A	385.1

Source: U.S. Census Bureau, California Employment Development Department, U.S. Bureau of Economic Analysis

Appendix Table A-2: Engineering News Record Construction Cost Index (CCI) and Building Cost Index (BCI), 1983-2016; Levels and Normalized Data to 1983

Engineering News Record Construction Cost Index (CCI) and Building Cost Index (BCI), 1983-2016; Levels and Normalized Data to 1983				
	CCI	BCI	CCI (Normalized)	BCI (Normalized)
1983	5063.9	2586.6	100.0	100.0
1984	5259.9	2726.4	103.9	105.4
1985	5446.7	2664.6	107.6	103.0
1986	5452.2	2762.6	107.7	106.8
1987	5474.1	2816.5	108.1	108.9
1988	5770.8	2851.7	114.0	110.2
1989	5789.8	2855.3	114.3	110.4
1990	5994.6	3020.5	118.4	116.8
1991	6090.1	3097.8	120.3	119.8
1992	6348.6	3198.7	125.4	123.7
1993	6477.8	3334.4	127.9	128.9
1994	6533.0	3420.4	129.0	132.2
1995	6526.2	3427.3	128.9	132.5
1996	6558.4	3426.7	129.5	132.5
1997	6663.6	3560.5	131.6	137.7
1998	6852.0	3617.0	135.3	139.8
1999	6826.0	3591.0	134.8	138.8
2000	7068.0	3680.3	139.6	142.3
2001	7226.9	3694.2	142.7	142.8
2002	7402.8	3787.8	146.2	146.4
2003	7531.8	3847.3	148.7	148.7
2004	8192.1	4155.2	161.8	160.6
2005	8346.9	4274.2	164.8	165.2
2006	8640.5	4489.9	170.6	173.6
2007	8979.1	4744.4	177.3	183.4
2008	9410.6	4950.4	185.8	191.4
2009	9779.4	5076.3	193.1	196.3
2010	9906.0	5182.7	195.6	200.4
2011	10057.0	5379.8	198.6	208.0
2012	10258.7	5493.8	202.6	212.4
2013	10454.6	5553.8	206.5	214.7
2014	10740.0	5671.1	212.1	219.3
2015	11075.6	5762.0	218.7	222.8
2016	11247.8	5907.1	222.1	228.4

Source: Engineering News Record Monthly Release

Appendix Table A-3: Regression of California Department of Transportation Construction Cost Index (CCI) on California Building Permits, California Employment, California Total Annual Wages and California Population; Levels and Changes Models

Dependent Variable = California Department of Transportation Construction Cost Index (1983-2016)				
	Levels Model		Changes Model	
Caltrans CCI	Coefficient	t-statistic	Coefficient	t-statistic
CCI _{t-1}	0.5790417	1.83	1.112234	5.43
CCI _{t-2}	-0.2159114	-0.72	0.054816	0.27
California Building Permits (BP)	2.28e-06	0.03	7.56E-05	1.75
BP _{t-1}	0.0000436	0.53	0.000079	1.75
BP _{t-2}	0.000063	0.94	-5.29E-06	-0.12
California Employment (EMP)	-3.34e-06	-0.33	0.000012	1.55
EMP _{t-1}	-0.0000108	-0.91	2.26E-06	0.26
EMP _{t-2}	3.66e-06	0.40	6.09E-06	0.75
California Total Annual Wages	1.34e-10	1.20	2.65E-11	0.29
WAGE _{t-1}	7.32e-11	0.52	1.08E-10	1.27
WAGE _{t-2}	-1.33e-10	-1.27	-2.33E-10	-2.23
California Population (POP)	-0.0000203	-1.08	-2.4E-05	-1.67
POP _{t-1}	0.0000227	0.84	-7.52E-06	-0.50
POP _{t-2}	1.78e-06	0.10	4.38E-05	3.55
_Cons	5.415306	0.04	-14.1453	-1.88

Sample Size:	31	30
R-Squared:	0.9719	0.9795

Appendix Table A-4: Engineering News Record Construction Cost Index (CCI) and Building Cost Index (BCI) Regressed on Building Permits, Employment, Total Annual Wages, and Population, Los Angeles Metropolitan Area; Levels and Changes Models

Dependent Variable = Engineering News Record Construction Cost Index and Building Cost Index (1983-2016)				
	Coefficient			
	ENR CCI Levels	ENR CCI Changes	ENR BCI Levels	ENR BCI Changes
CCI ENR _{t-1} / BCI ENR _{t-1}	0.4785932	0.8609058	0.2031473	0.9382157
CCI ENR _{t-2} / BCI ENR _{t-2}	0.2711119	0.1763995	0.3854375	0.0771721
LAMSA Bldg Permits (BP_LA)	0.0004867	0.0006004	-0.0018291	-0.0002938
BP_LA _{t-1}	-0.0021584	-0.0008503	0.001916	0.0007705
BP_LA _{t-2}	-	0.0021532	-	0.0012561
LA MSA Employment (EMP)	-0.0003014	-0.0004747	-0.0002912	-0.000429
EMP _{t-1}	-0.0001717	-0.0004079	-0.000387	-0.0001544
EMP _{t-2}	0.0002593	-0.0001594	0.0001608	-0.0002407
LA MSA Total Wages	5.76e-09	6.12e-09	4.14e-09	5.75e-09
WAGE _{t-1}	7.02e-09	8.87e-09	7.22e-09	3.77e-09
WAGE _{t-2}	-4.76e-09	6.85e-09	-3.22e-09	2.95e-09
LA MSA Population (POP)	0.0000273	0.0000507	0.0000499	0.0000524
POP _{t-1}	-0.0000583	-0.0000105	-0.0000185	-6.58e-06
POP _{t-2}	-0.0000624	0.0000247	-0.0000483	0.000013
_Cons	3099.81	-211.7501	3302.414	-25.03666
Sample Size:	31	30	31	30
R-Squared:	0.9974	0.9965	0.9982	0.9967

	t-statistics (corresponding to above coefficients)			
	ENR CCI Levels	ENR CCI Changes	ENR BCI Levels	ENR BCI Changes
CCI ENR _{t-1} / BCI ENR _{t-1}	2.06	3.49	0.73	2.95
CCI ENR _{t-2} / BCI ENR _{t-2}	1.25	0.69	1.89	0.23
LAMSA Bldg Permits (BP_LA)	0.22	0.29	-1.50	-0.22
BP_LA _{t-1}	-0.79	-0.35	1.47	0.61
BP_LA _{t-2}	-	0.91	-	0.94
LA MSA Employment (EMP)	-0.58	-0.94	-1.21	-1.58
EMP _{t-1}	-0.27	-0.69	-1.25	-0.45
EMP _{t-2}	0.73	-0.40	0.95	-1.10
LA MSA Total Wages	0.87	0.84	1.41	1.47
WAGE _{t-1}	0.74	1.06	1.52	0.78
WAGE _{t-2}	-0.75	0.97	-1.07	0.76
LA MSA Population (POP)	0.43	0.83	1.66	1.57
POP _{t-1}	-0.83	-0.15	-0.54	-0.17
POP _{t-2}	-0.98	0.38	-1.48	0.38
_Cons	1.49	-1.33	2.86	-0.30

Note: “—” indicates variable dropped due to collinearity

Appendix Table A-5: California Unemployment Rate Forecasts from California Legislative Analyst’s Office, California Department of Finance and California Department of Transportation, 2017-2022

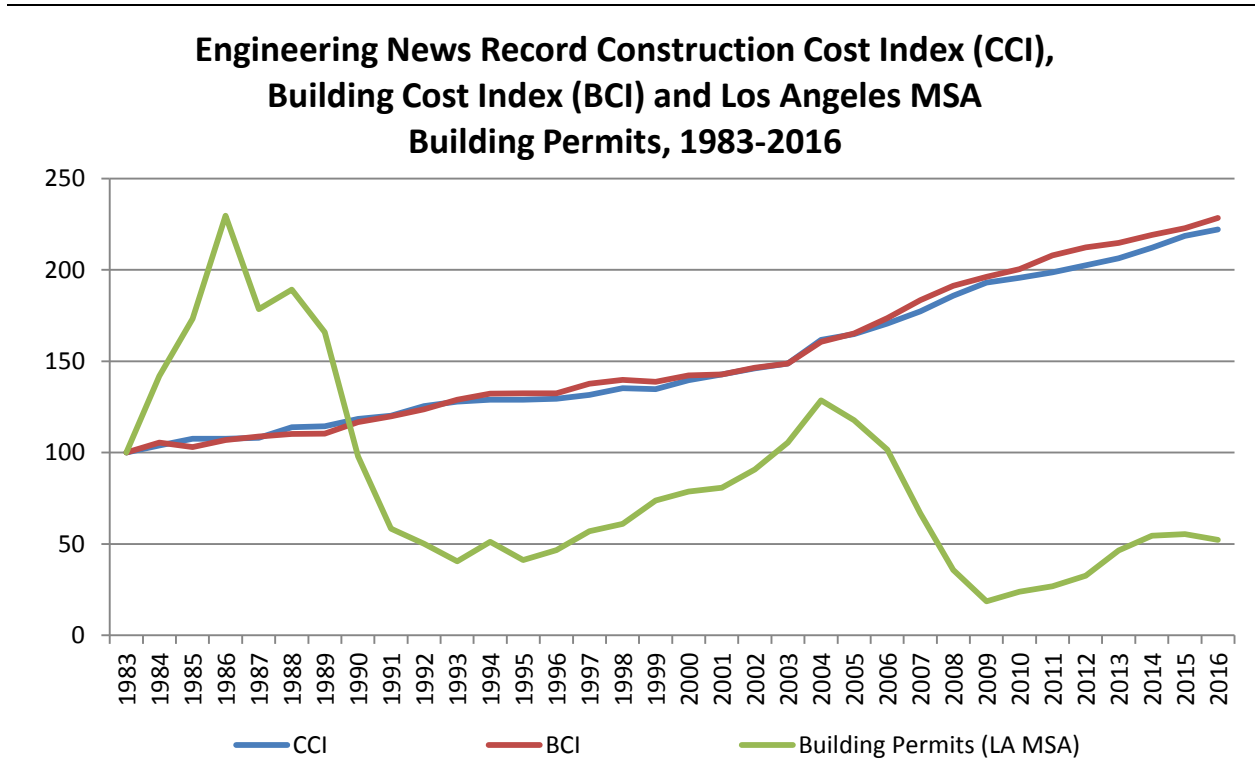
California Unemployment Rate Forecasts (2017-2022)						
	2017	2018	2019	2020	2021	2022
California Legislative Analyst’s Office ¹⁹	5.3%	5.2%	-	-	-	-
California Department of Finance ²⁰	5.1%	5.0%	5.0%	5.0%	-	-
California Department of Transportation ²¹	4.9%	5.0%	5.0%	5.1%	5.0%	5.0%

¹⁹ <http://www.lao.ca.gov/reports/2016/3507/Fiscal-outlook-111616.pdf>

²⁰ http://www.dof.ca.gov/Forecasting/Economics/Eco_Forecasts_US_Ca/index.html

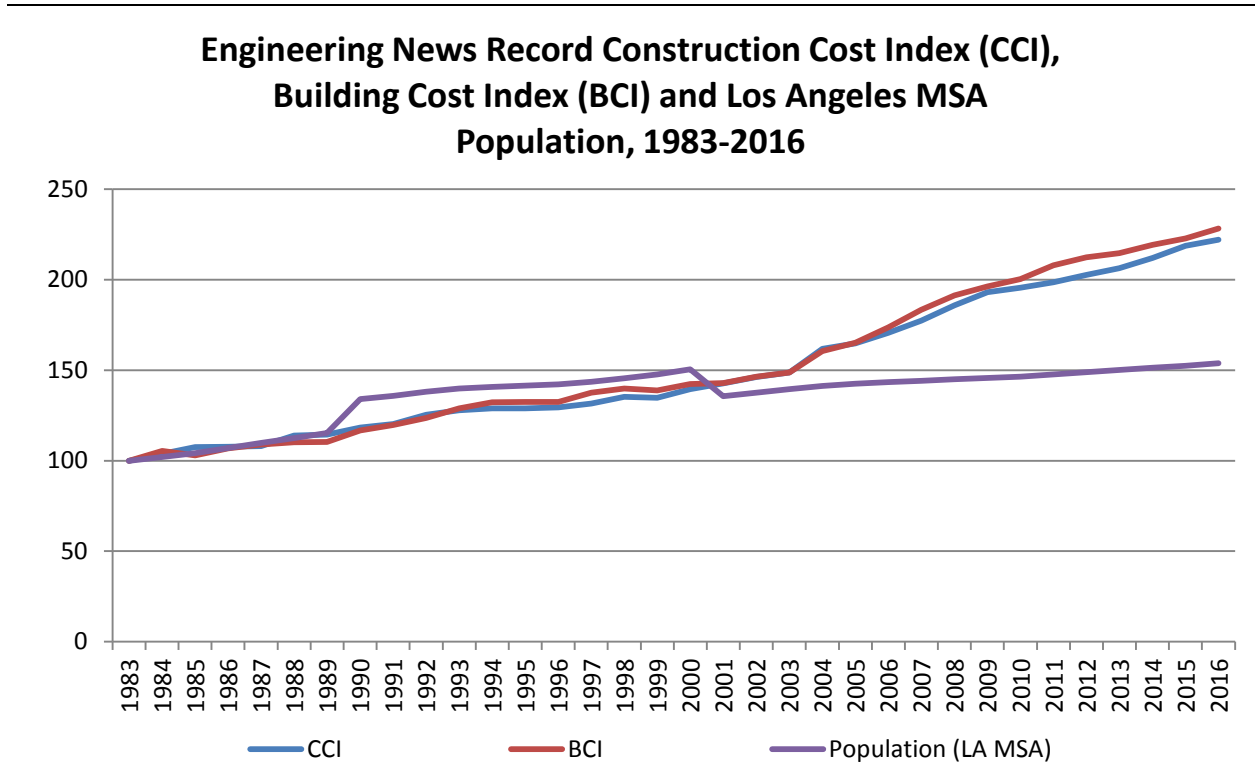
²¹ http://www.dot.ca.gov/hq/tpp/offices/eab/index_files/2016/FullReport2016.pdf

Appendix Figure A-1: Engineering News Record Construction Cost Index (CCI), Building Cost Index (BCI) and Los Angeles Metropolitan Statistical Area Building Permits (1983-2016); Normalized to 1983



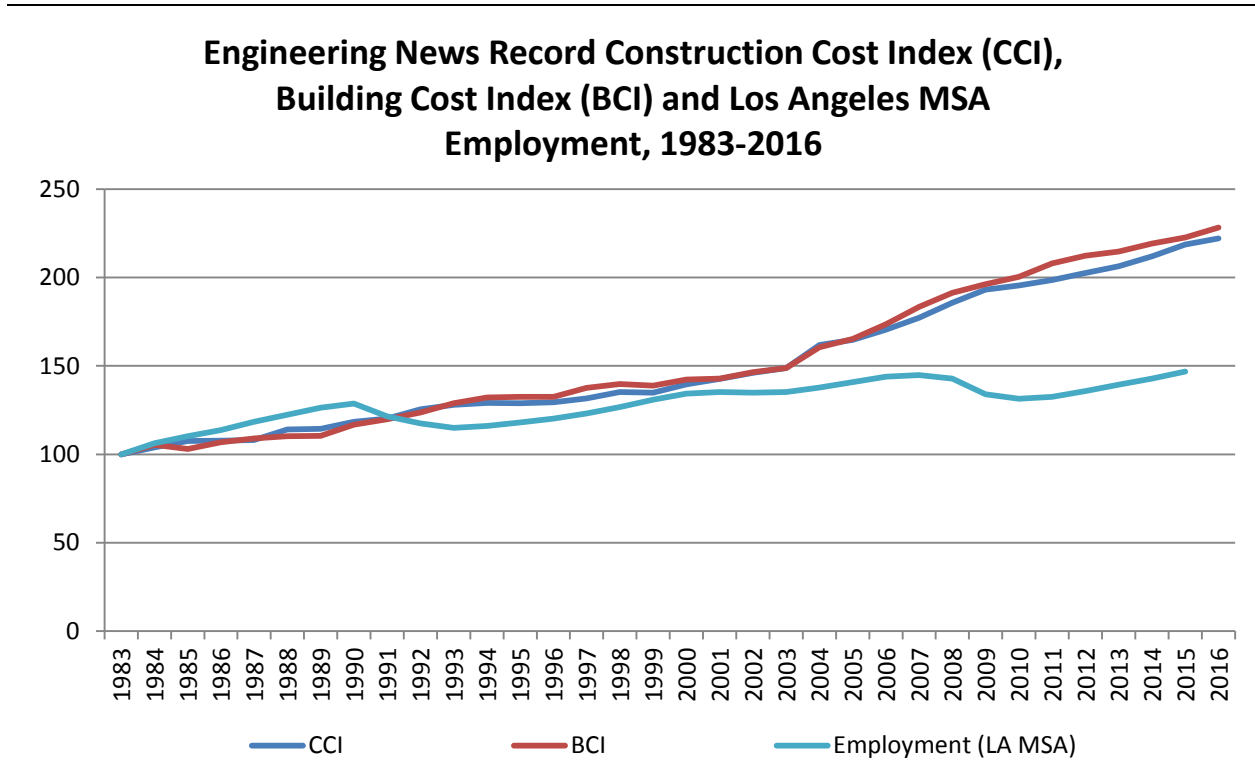
Source: Engineering News Record Monthly Release, U.S. Census Bureau Building Permit Survey

Appendix Figure A-2: Engineering News Record Construction Cost Index (CCI), Building Cost Index (BCI) and Los Angeles Metropolitan Statistical Area Population (1983-2016); Normalized to 1983



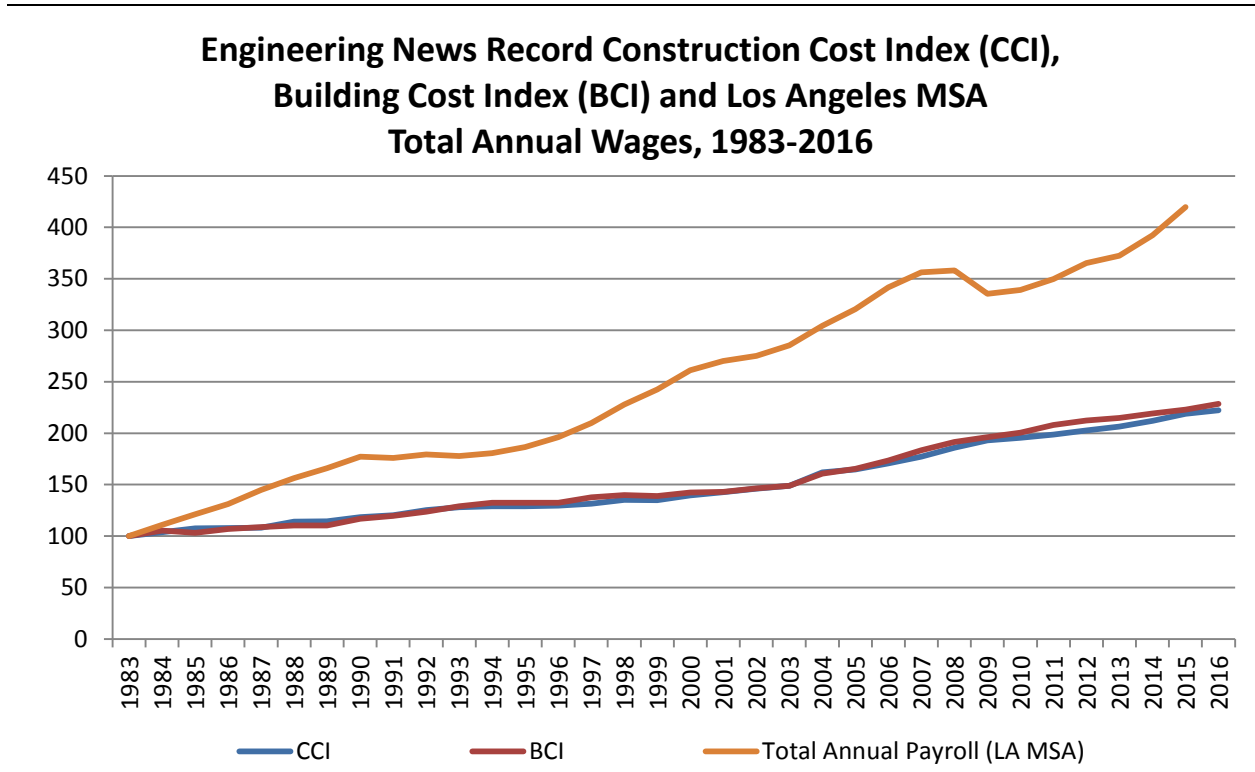
Source: Engineering News Record Monthly Release, U.S. Census Bureau

Appendix Figure A-3: Engineering News Record Construction Cost Index (CCI), Building Cost Index (BCI) and Los Angeles Metropolitan Statistical Area Employment (1983-2016); Normalized to 1983



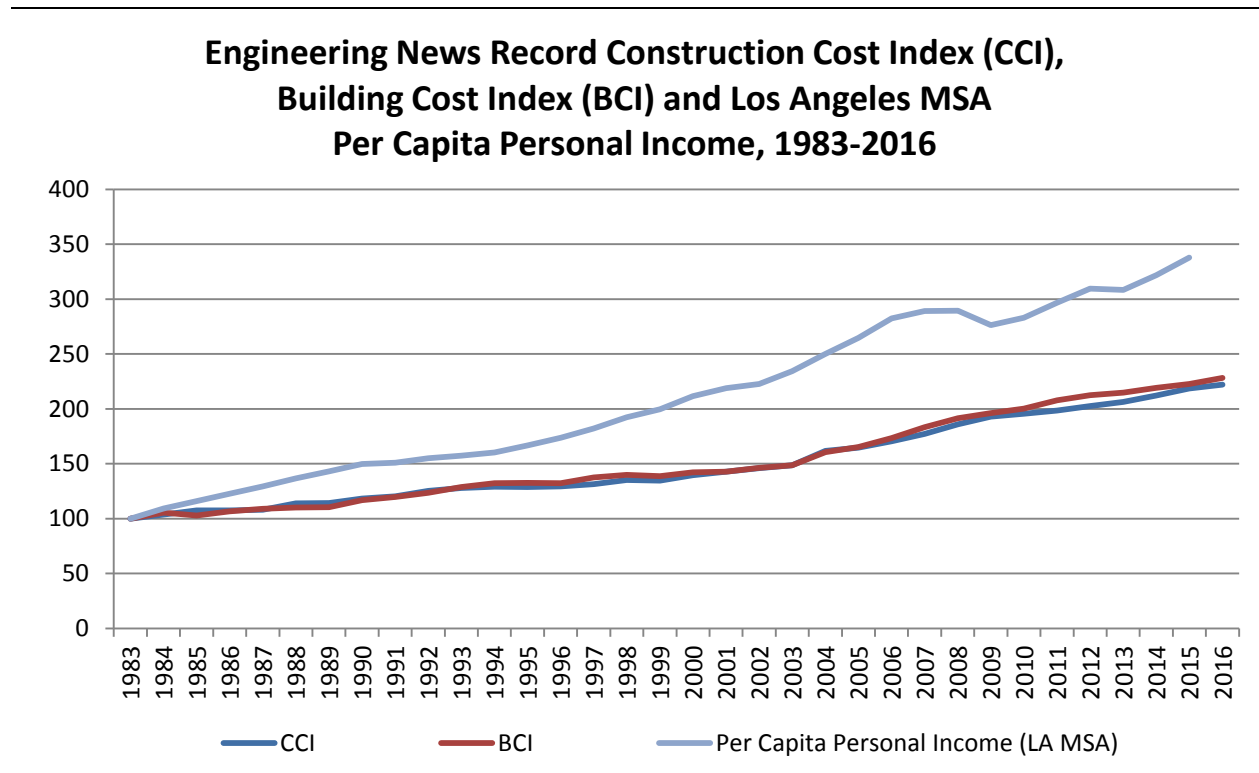
Source: Engineering News Record Monthly Release, California Employment Development Department

Appendix Figure A-4: Engineering News Record Construction Cost Index (CCI), Building Cost Index (BCI) and Los Angeles Metropolitan Statistical Area Total Annual Wages (1983-2016); Normalized to 1983



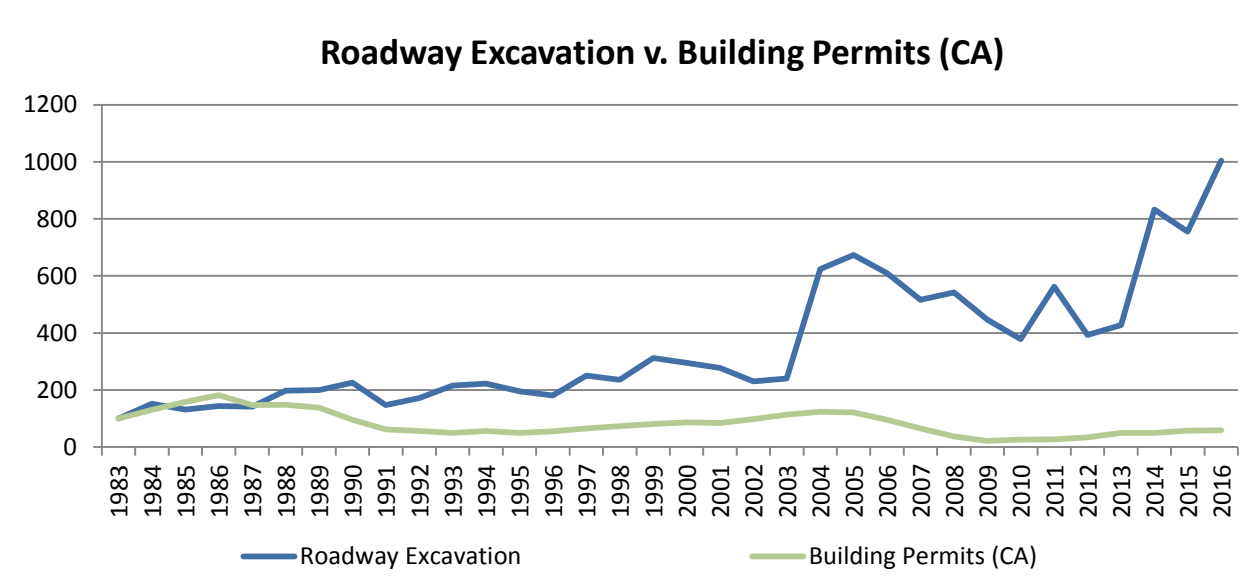
Source: Engineering News Record Monthly Release, California Employment Development Department

Appendix Figure A-5: Engineering News Record Construction Cost Index (CCI), Building Cost Index (BCI) and Los Angeles Metropolitan Statistical Area Per Capita Personal Income (1983-2016); Normalized to 1983



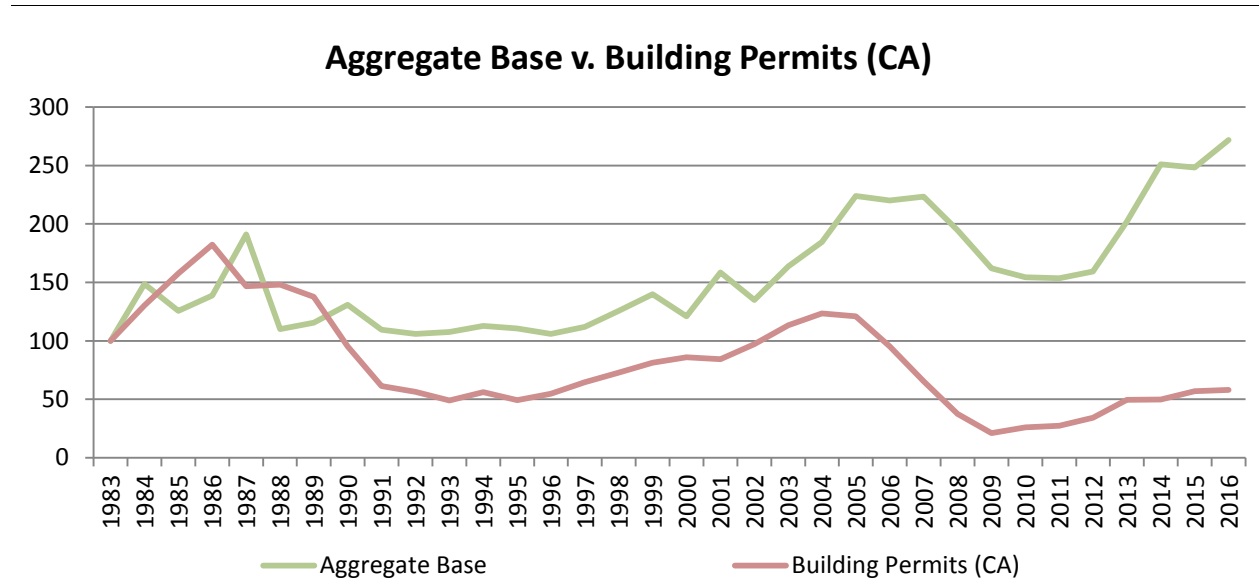
Source: Engineering News Record Monthly Release, U.S. Bureau of Economic Analysis

Appendix Figure A6: Roadway Excavation Costs versus California Building Permits, Normalized to 1983 = 100



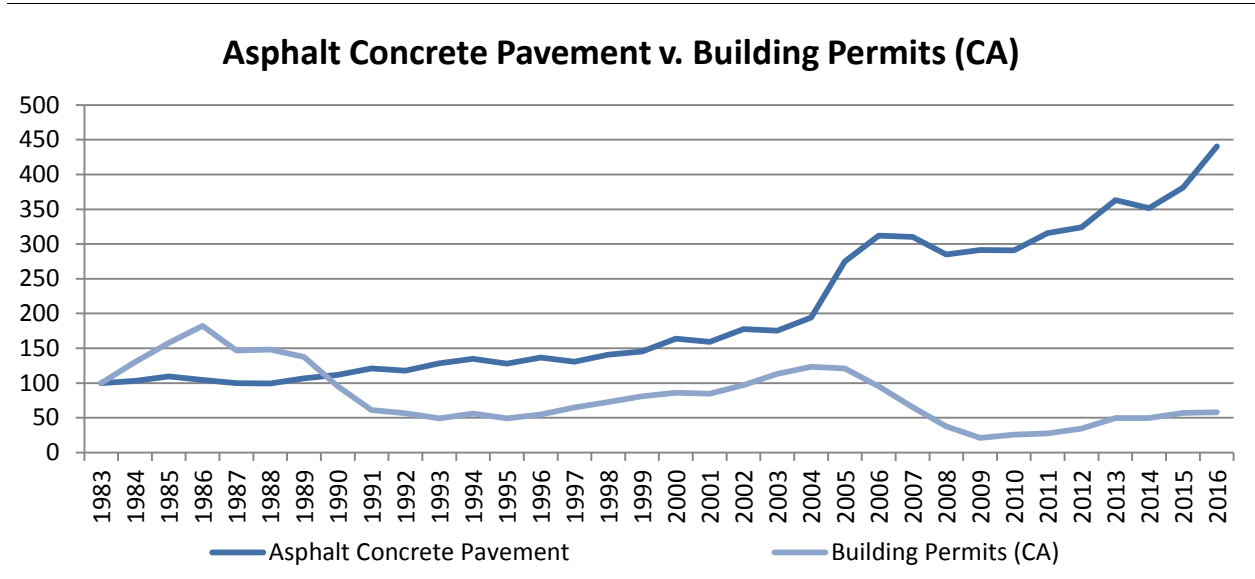
Source: California Department of Transportation, U.S. Census Bureau Building Permit Survey

Appendix Figure A7: Aggregate Base Cost versus California Building Permits, Normalized to 1983 = 100



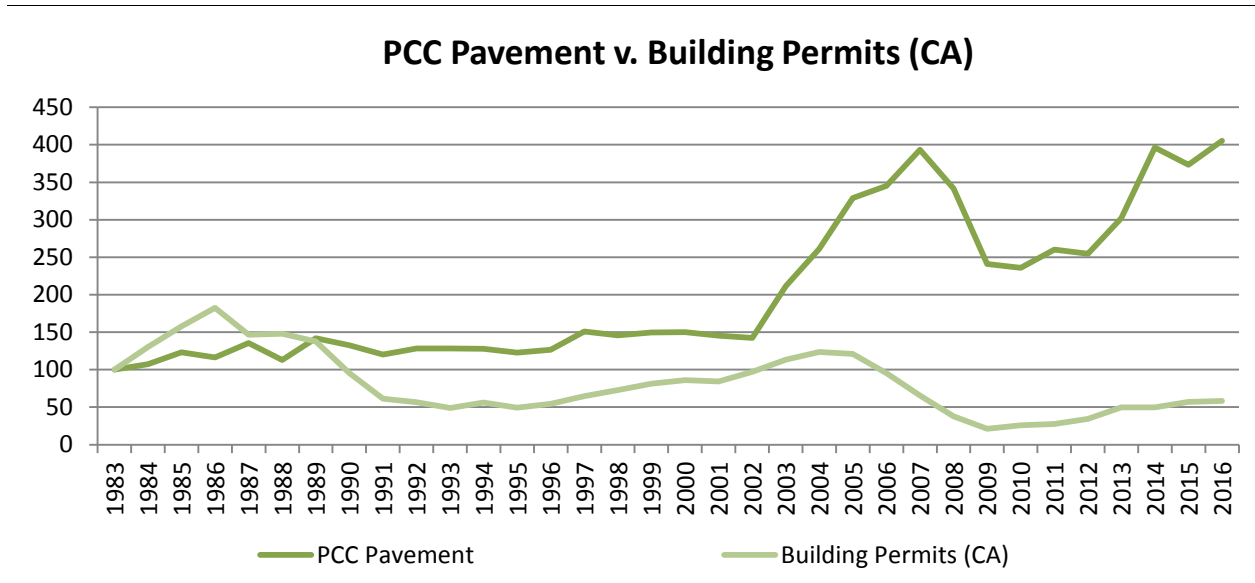
Source: California Department of Transportation, U.S. Census Bureau Building Permit Survey

Appendix Figure A8: Asphalt Concrete Cost versus California Building Permits, Normalized to 1983 = 100



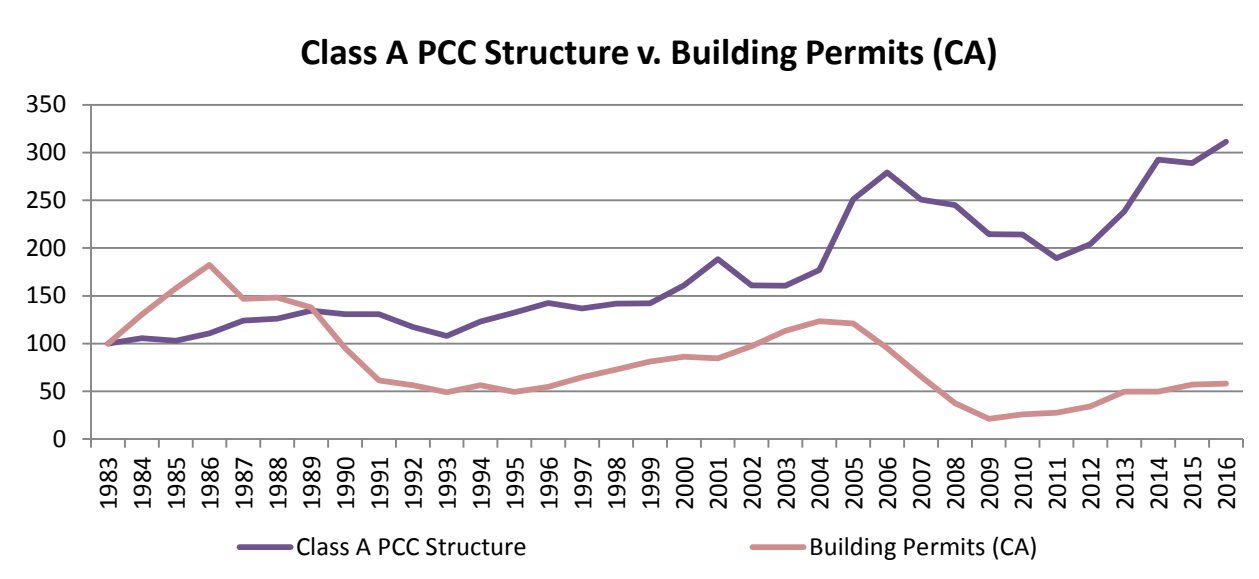
Source: California Department of Transportation, U.S. Census Bureau Building Permit Survey

Appendix Figure A9: PCC Pavement Cost versus California Building Permits, Normalized to 1983 = 100



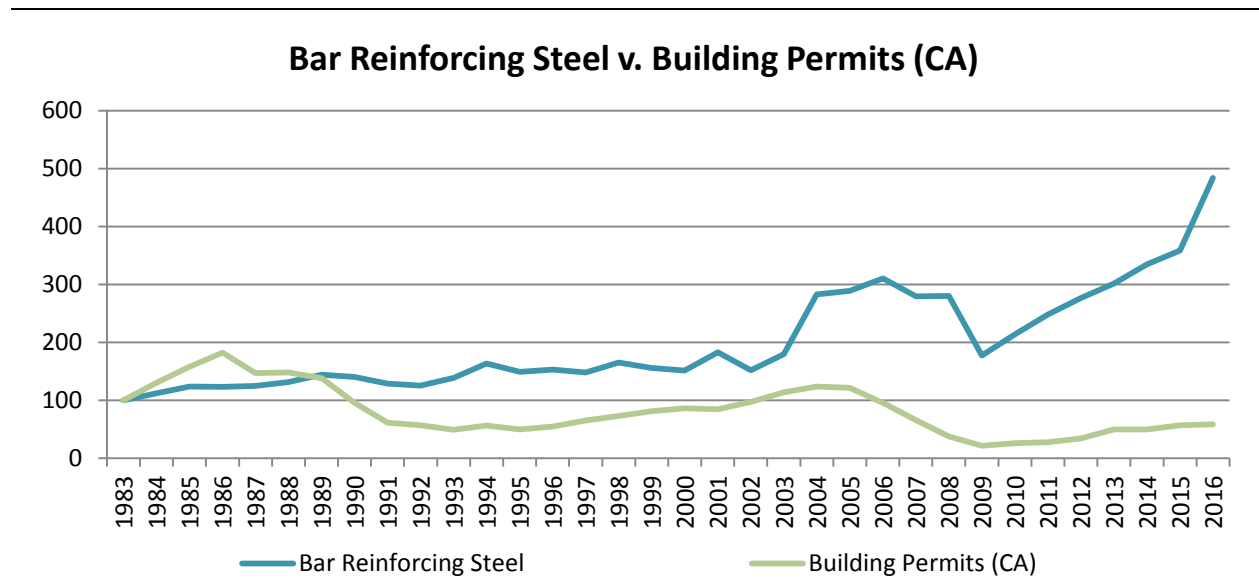
Source: California Department of Transportation, U.S. Census Bureau Building Permit Survey

Appendix Figure A10: Class A PCC Structure Cost versus California Building Permits, Normalized to 1983 = 100



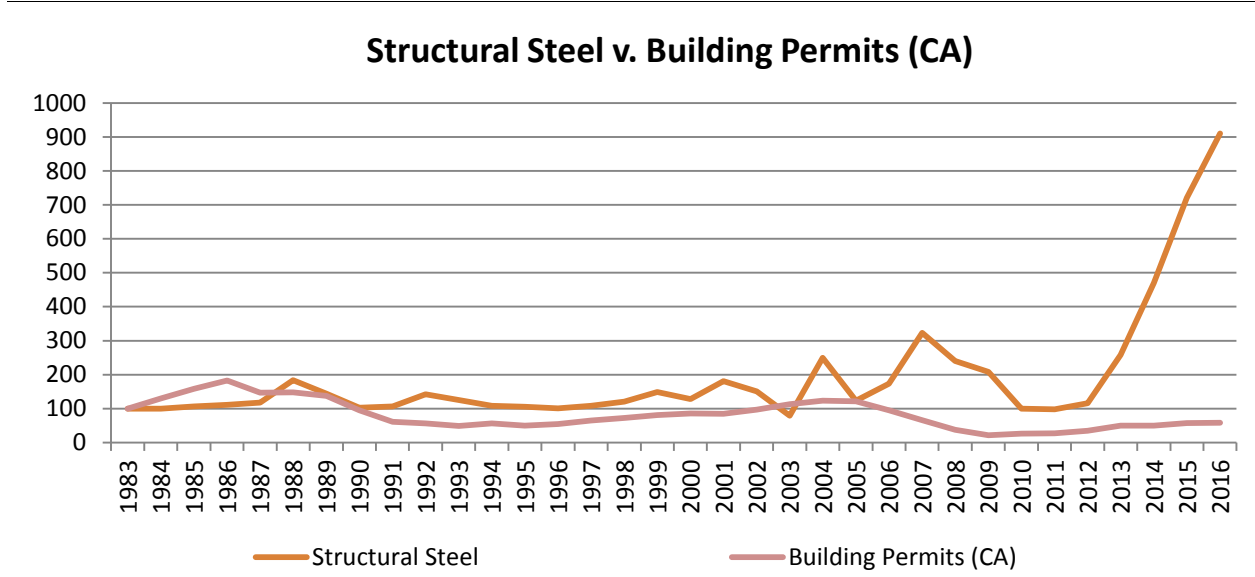
Source: California Department of Transportation, U.S. Census Bureau Building Permit Survey

Appendix Figure A11: Bar Reinforcing Steel Cost versus California Building Permits, Normalized to 1983 = 100



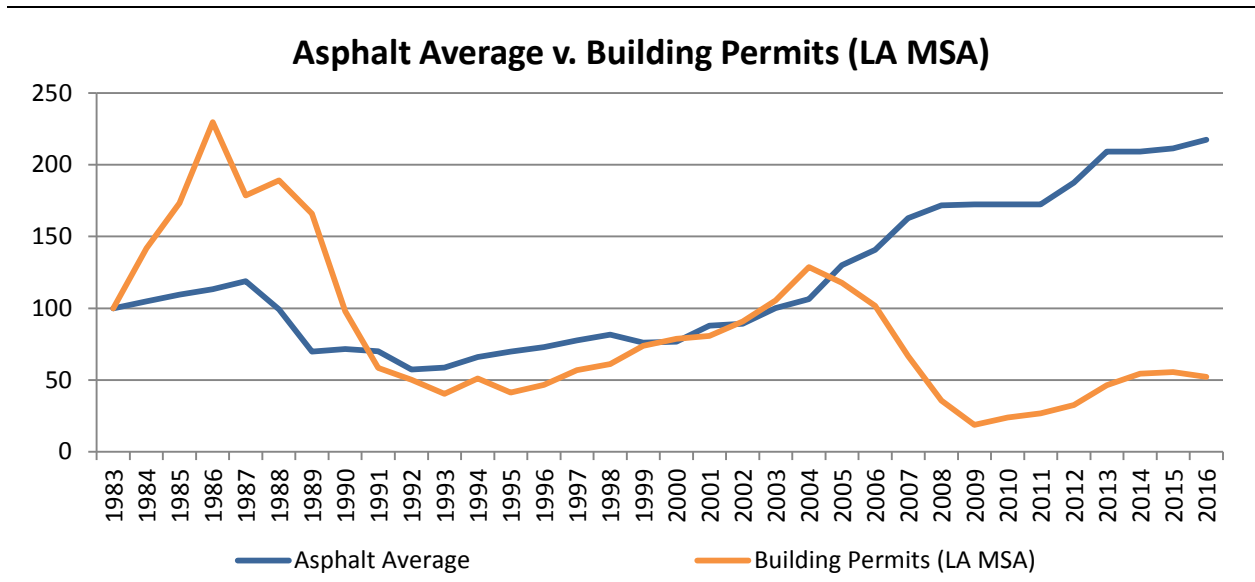
Source: California Department of Transportation, U.S. Census Bureau Building Permit Survey

Appendix Figure A12: Structural Steel Cost versus California Building Permits, Normalized to 1983 = 100



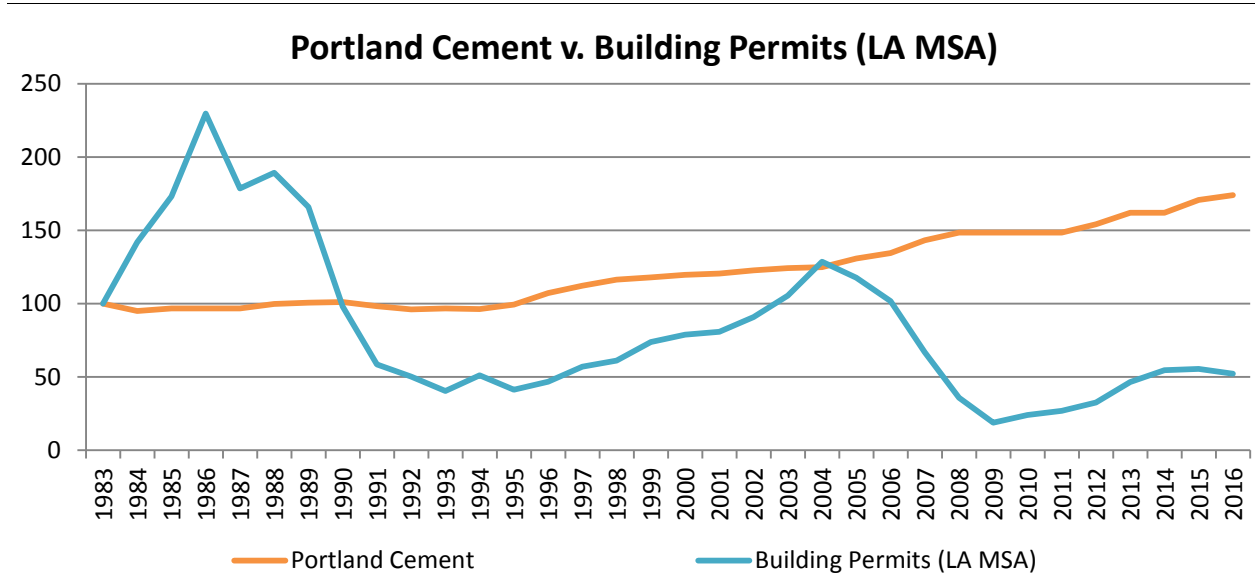
Source: California Department of Transportation, U.S. Census Bureau Building Permit Survey

Appendix Figure A13: Asphalt Cost (average) versus Los Angeles Metropolitan Area Building Permits, Normalized to 1983 = 100



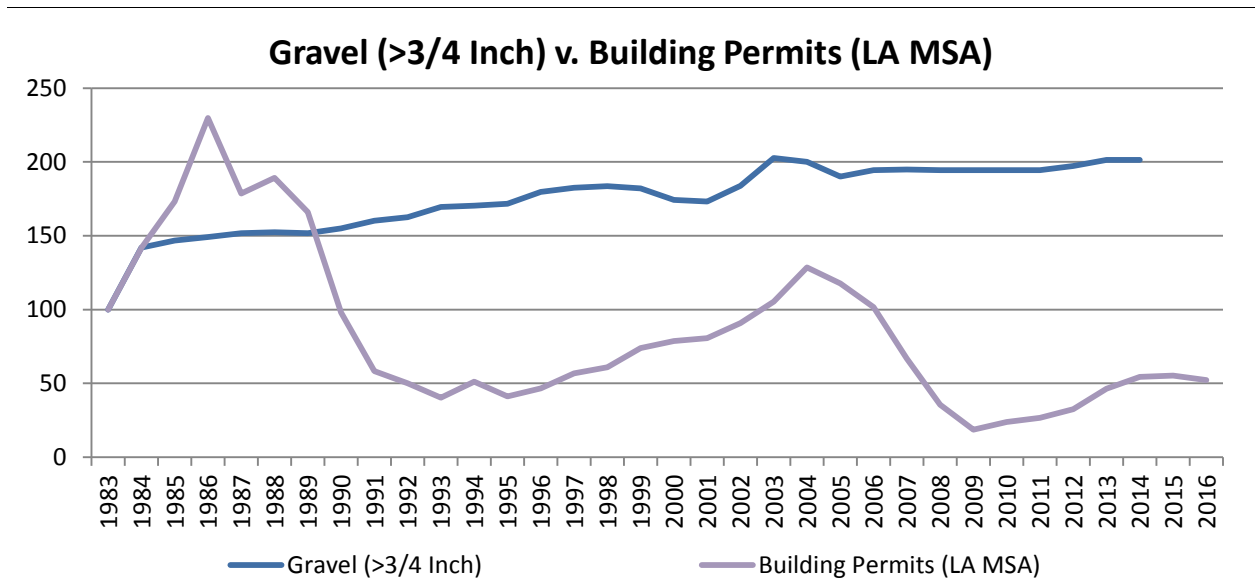
Source: Engineering News Record, U.S. Census Bureau Building Permit Survey

Appendix Figure A14: Portland Cement Cost versus Los Angeles Metropolitan Area Building Permits, Normalized to 1983 = 100



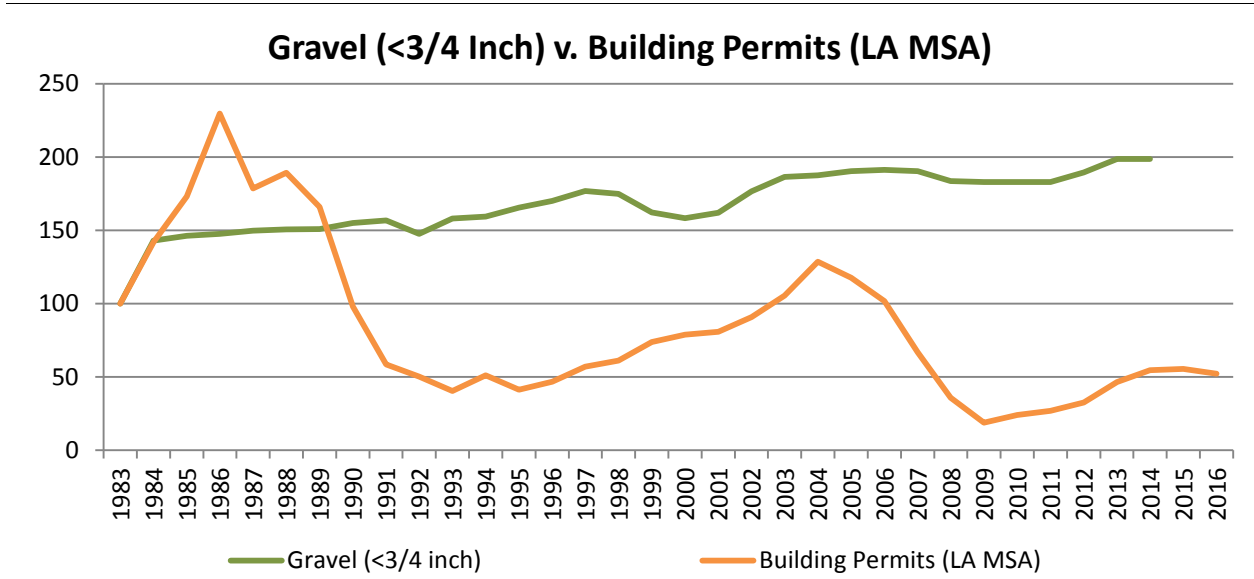
Source: Engineering News Record, U.S. Census Bureau Building Permit Survey

Appendix Figure A15: Gravel (>3/4 inch) Cost versus Los Angeles Metropolitan Area Building Permits, Normalized to 1983 = 100



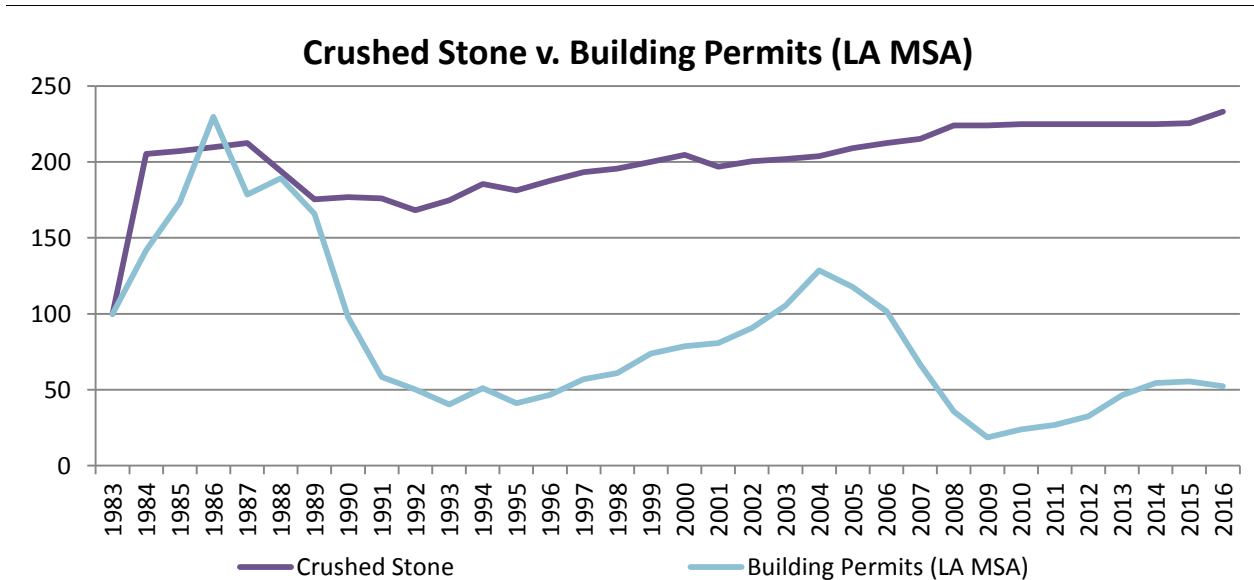
Source: Engineering News Record, U.S. Census Bureau Building Permit Survey

Appendix Figure A16: Gravel (<3/4 inch) Cost versus Los Angeles Metropolitan Area Building Permits, Normalized to 1983 = 100



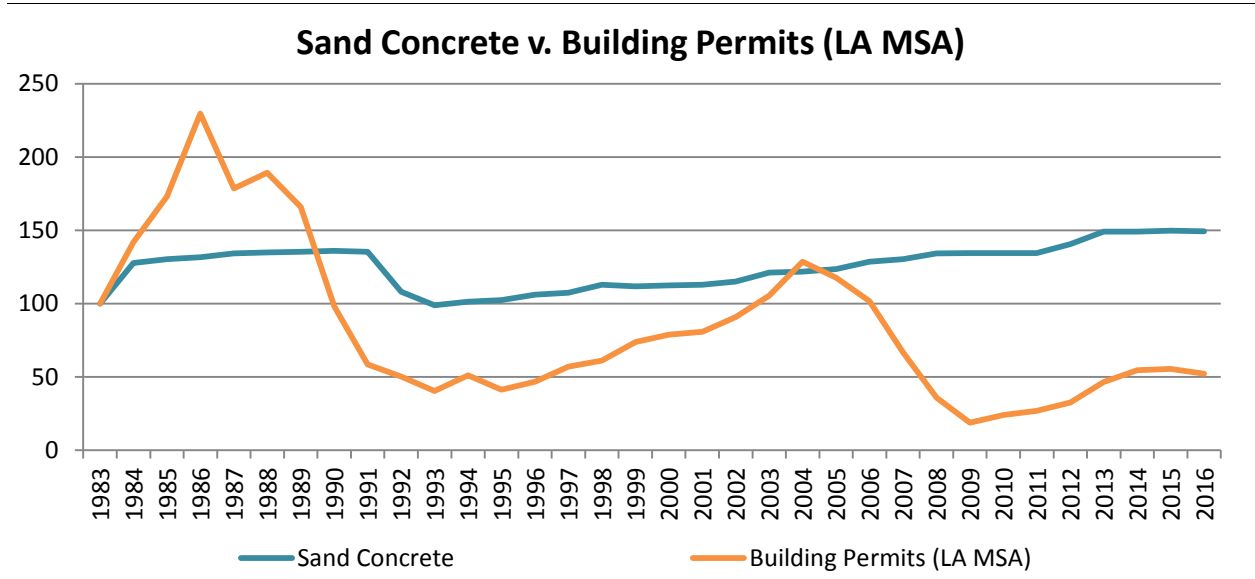
Source: Engineering News Record, U.S. Census Bureau Building Permit Survey

Appendix Figure A17: Crushed Stone Cost versus Los Angeles Metropolitan Area Building Permits, Normalized to 1983 = 100



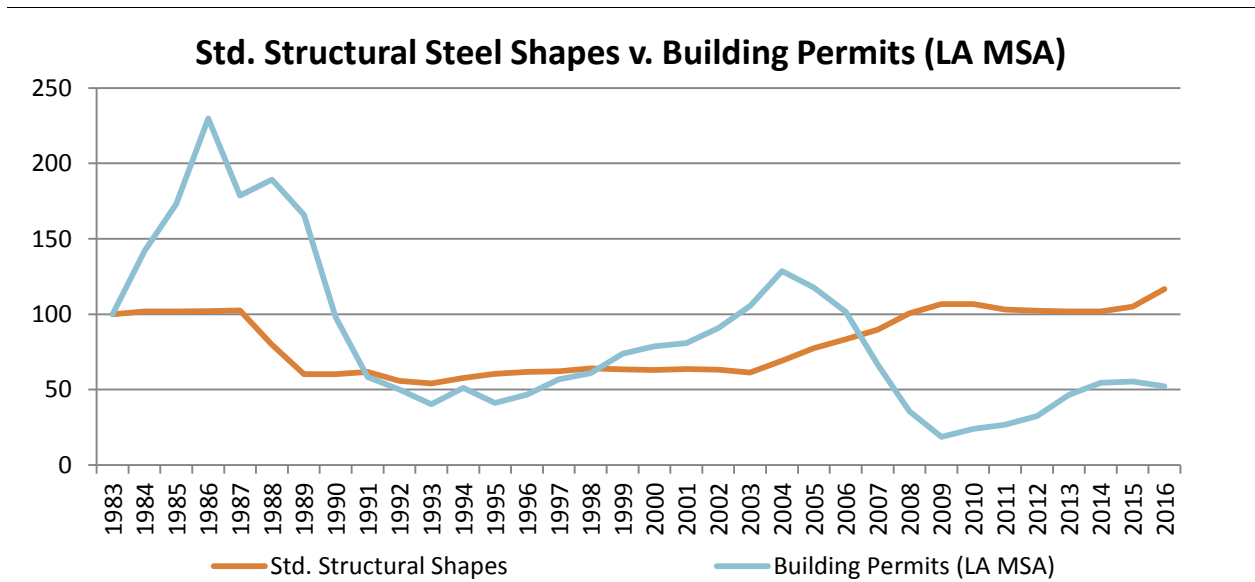
Source: Engineering News Record, U.S. Census Bureau Building Permit Survey

Appendix Figure A18: Sand Concrete Cost versus Los Angeles Metropolitan Area Building Permits, Normalized to 1983 = 100



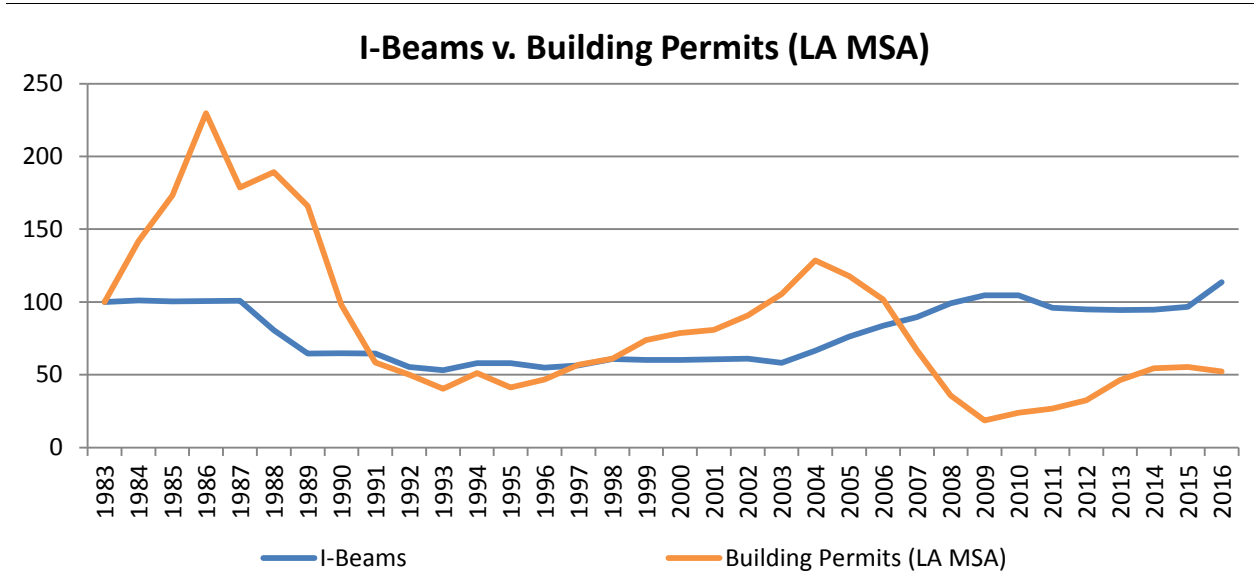
Source: Engineering News Record, U.S. Census Bureau

Appendix Figure A19: Std. Structural Steel Shapes Cost versus Los Angeles Metropolitan Area Building Permits, Normalized to 1983 = 100



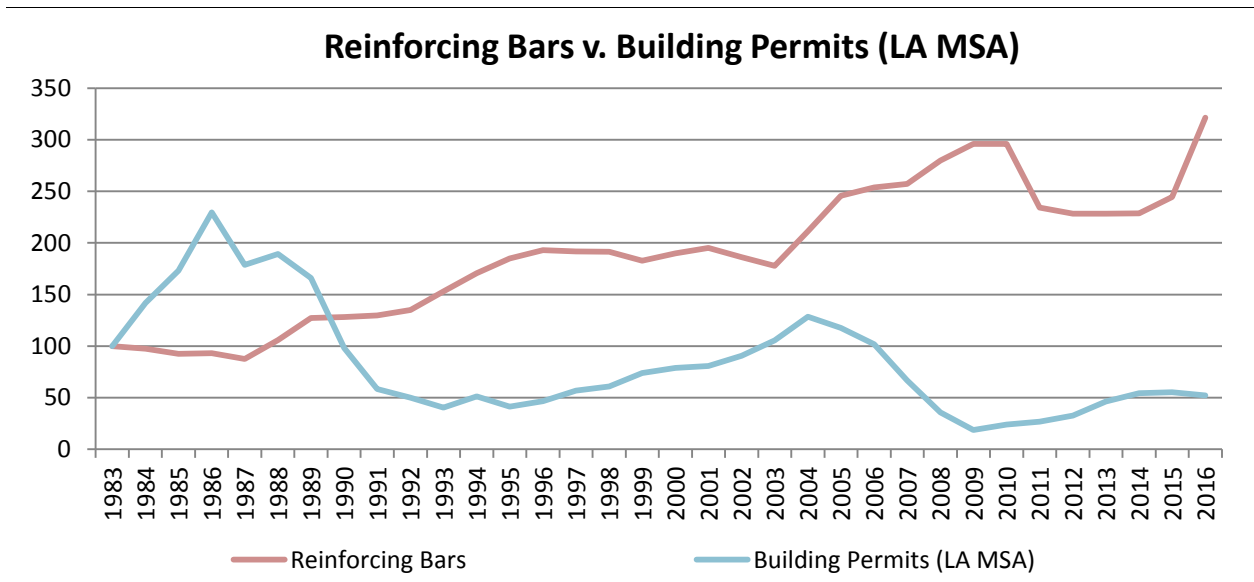
Source: Engineering News Record, U.S. Census Bureau Building Permit Survey

Appendix Figure A20: I-Beam Cost versus Los Angeles Metropolitan Area Building Permits, Normalized to 1983 = 100



Source: Engineering News Record, U.S. Census Bureau Building Permit Survey

Appendix Figure A21: Reinforcing Bars Cost versus Los Angeles Metropolitan Area Building Permits, Normalized to 1983 = 100



Source: Engineering News Record, U.S. Census Bureau Building Permit Survey

Risk Factors, Effect on Public Works Costs, and Some Possible OCTA Mitigations

Risk Factor	Impact on Costs	Likelihood	Comments	Possible OCTA Mitigations
Sustained low unemployment	Increases costs beyond Table 5 model prediction	Likely in the next 2 to 5 years	Wage pressure is still low, suggests that the economy has continued room to expand without necessitating policy efforts (i.e. interest rate increases) that would induce a recession	Accelerate the next 2 to 3 years of the Next 10 Plan Increase the supply of contractors
Increased Building Permitting (and hence residential construction)	Increases costs	Unlikely given long-term political factors, but regulatory change could be sudden	Increasing permitting depends in part on state or local political changes, but Inland Empire construction has been increasing rapidly	Accelerate next 2 to 3 years of the Next 10 Plan Labor force training to increase supply of skilled construction labor
Continued Consolidation in Construction and Architecture/Engineering Industry	Increases costs in near-term, then pressure for costs to remain high	Likely, given recent consolidation trends	The industry has been consolidating. Unclear whether that trend has played out or will continue.	OCTA becomes a preferred client Reduce barriers to new entrants into OCTA bid process Innovate in ease of doing business with OCTA
Interest Rate Increases	Short-term cost increases as financing costs, for OCTA and contractors, increase – long-term downward cost pressure if recession ensues	Highly likely to have moderate interest rate increases in next 2 to 5 years	U.S. is near historically low interest rates; global savings glut will exert downward pressure on interest rates; on net, rate increases likely to be moderate and sustained	Complete financing agreements in the near-term to avoid higher interest rates

Risk Factor	Impact on Costs	Likelihood	Comments	Possible OCTA Mitigations
Neighboring County Transportation Programs Exert Cost Pressure	Increases Costs	Highly Likely; current work programs in neighboring counties meet or exceed level in Orange County	Recent self-help sales tax increases “lock in” sustained demand for public works contractors in Southern California	OCTA becomes a client of choice Simplify the bid process and process of doing business with OCTA Accelerate Next 10 Plan to lock in prices before peak market pressure from neighboring counties
Increasing Construction Wage Pressure	Increases Costs	Likely in foreseeable future, unless residential market reverses course (which would likely coincide with a recession)	Construction wages increases by from 4.39 to 5.3 percent annually, 2014 to 2016, in Orange and neighboring SCAG region counties	Accelerate Next 10 Plan in advance of additional increases in construction wages Support efforts to increase the pool of construction labor
Recession	Decreases Costs	Likely within the next 10 years, but timing highly uncertain	Recession will reduce demand for private sector residential and commercial construction, but public sector demand will remain although sales tax revenues will drop in a recession	Timing uncertainty makes mitigation measures, beyond those listed above, difficult to implement

OCTA – Orange County Transportation Authority

SCAG – Southern California Association of Governments

Next 10: Market Conditions Forecast and Risk Analysis

Orange County Business Council

Objectives

- Forecast and Analyze
 - Public infrastructure market impact from anticipated work in the next 5 to 10 years
 - Likelihood of competitive cost pressures
 - Availability of materials, equipment, labor, and qualified professional services
- Provide OCTA with Information to Manage Market Impacts and Guide Delivery of the Next 10 Plan



Timeline

- 2006: Measure M renewal approved
- 2007: Expedited delivery of Measure M2 begins
- 2008: Official Beginning of Great Recession & Original Market Analysis Report
- 2009: Official End of Great Recession
- 2012: M2020 Plan adopted
- 2016: New forecasting methodology to reflect lower tax revenue; Next 10 Plan approved



Seven Risk Factors

- Sustained low unemployment
- Increases in residential construction
- Consolidation in the public works construction industry
- Increases in interest rates
- Neighboring County transportation construction programs
- Construction wage pressure
- Future recession



Near Term Cost Risks

- Neighboring County Transportation Construction Programs

Southern California Regional Construction Costs 2016-2025 Period Freeways and Transit (\$'s shown in billions)	
Los Angeles	\$47.7
San Bernardino	\$11.9
Riverside	\$10.0
Orange County Measure M (Next 10 Projects) Total	\$ 4.8

- Construction Wage Pressures

County	Construction Wage, % annual growth	
	2012-2014	2014-2016
Los Angeles	1.97%	4.53%
San Bernardino	0.49%	4.61%
Riverside	2.36%	5.30%
Orange	1.34%	4.39%

- Sustained Low Unemployment
- Increases in Residential Construction

Looking Forward

Cost Mitigation Recommendations

- Monitor early warning indicators
 - Building permits
 - Construction employment and wages
 - Executive opinion of local economy
 - Construction commodity costs
- Consider partnering on apprenticeship programs
- Continue to be a preferred client for public works construction companies
- Look for acceleration opportunities for Next 10 Delivery Plan



Questions



COMMITTEE TRANSMITTAL

September 11, 2017

To: Members of the Board of Directors
From: Laurena Weinert, Clerk of the Board
Subject: Measure M2 Sales Tax Forecast

Finance and Administration Committee Meeting of August 23, 2017

Present: Directors Do, Hennessey, Jones, R. Murphy, and Steel
Absent: Directors Pulido and Spitzer

This item was agendized as a Discussion item for the August 23, 2017 Finance and Administration Committee meeting.

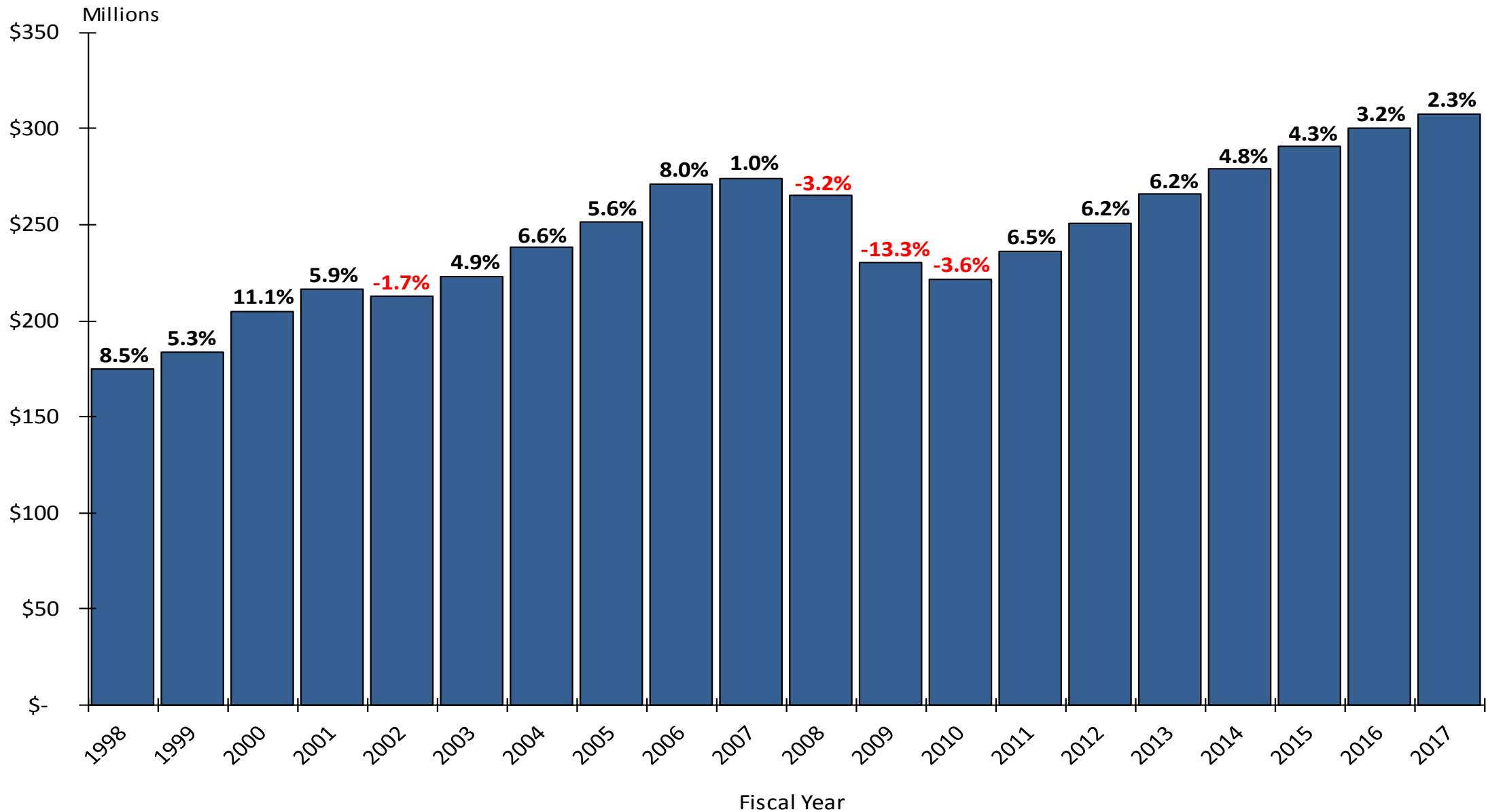
A discussion ensued, and no action was taken on this item.

Measure M2 Sales Tax Forecast

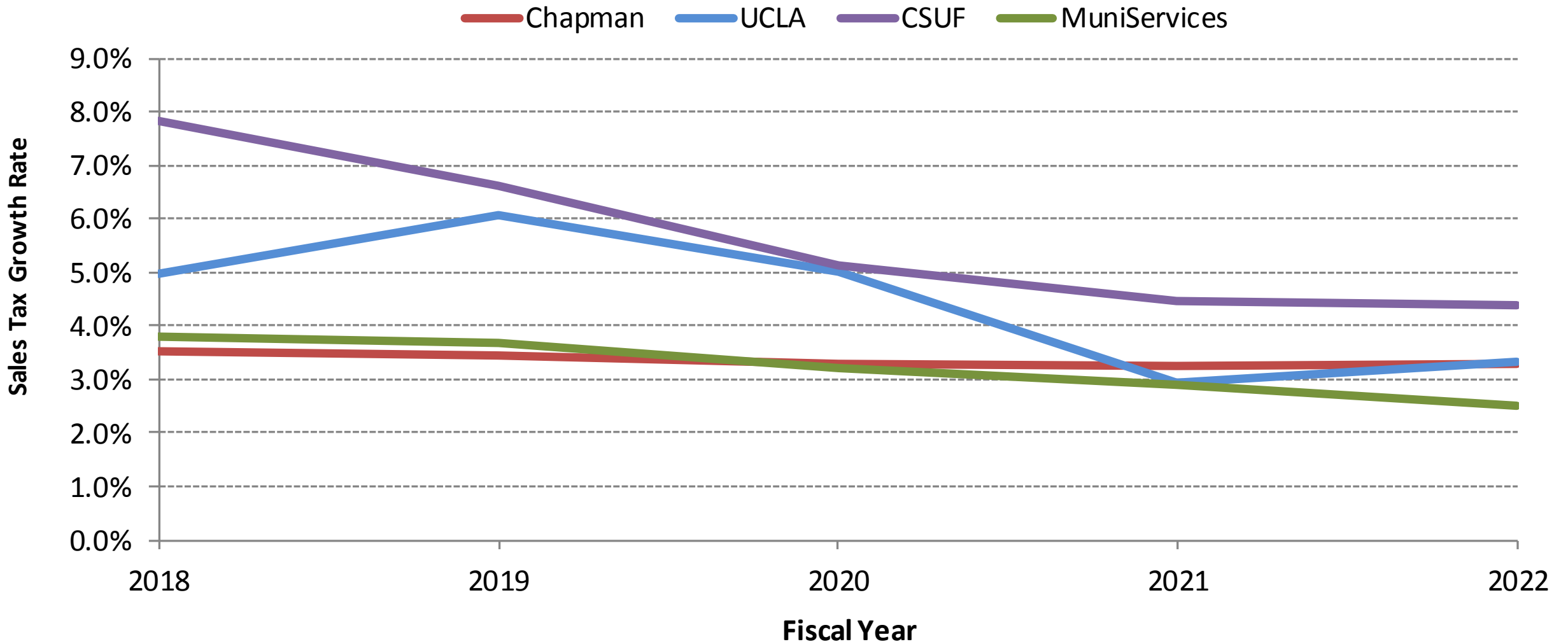
Background

- Sales tax forecasting methodology changed in March 2016
- Methodology uses MuniServices, LLC forecast for the first five years and the three university forecasts for the remaining years
 - MuniServices, LLC forecasts for fiscal years 2018 – 2022
 - Three universities forecasts for fiscal years 2023 - 2041

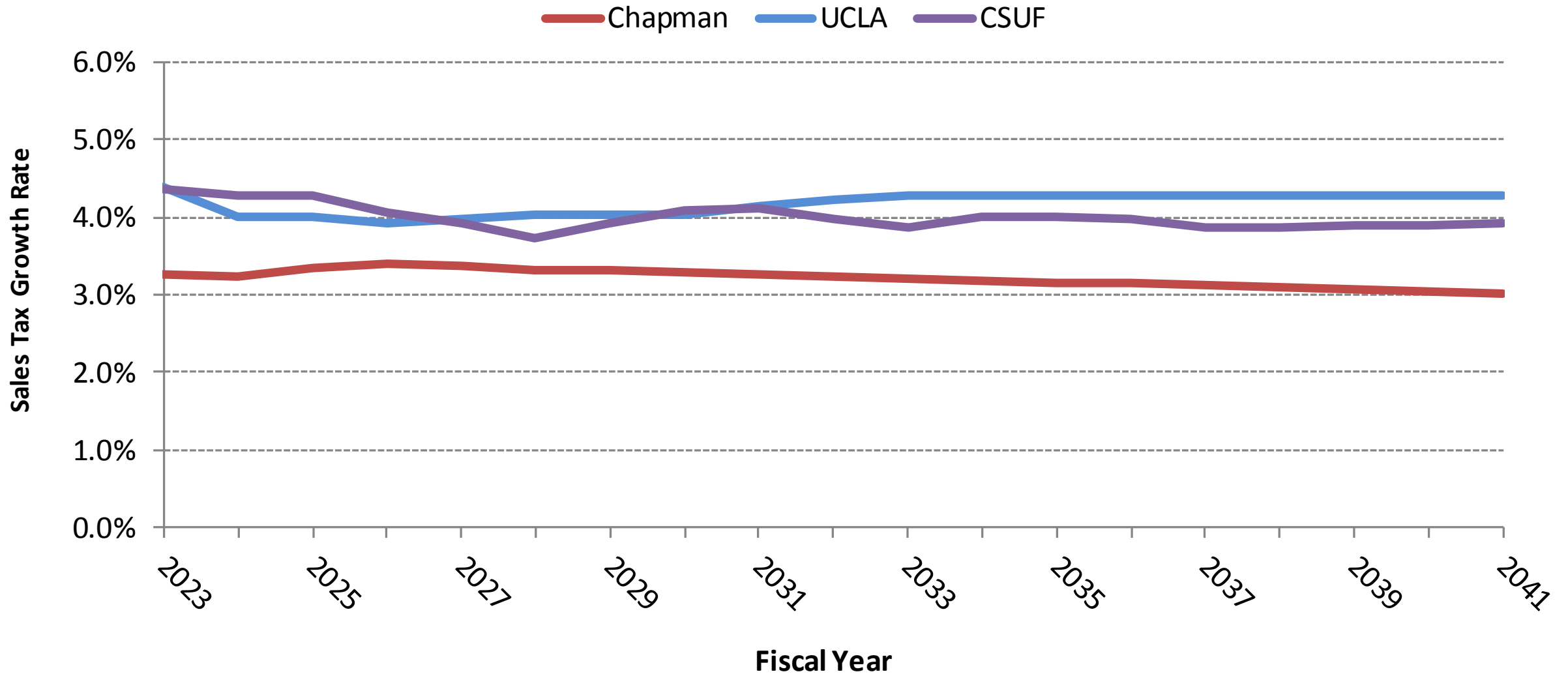
Historical Measure M Sales Tax Revenues



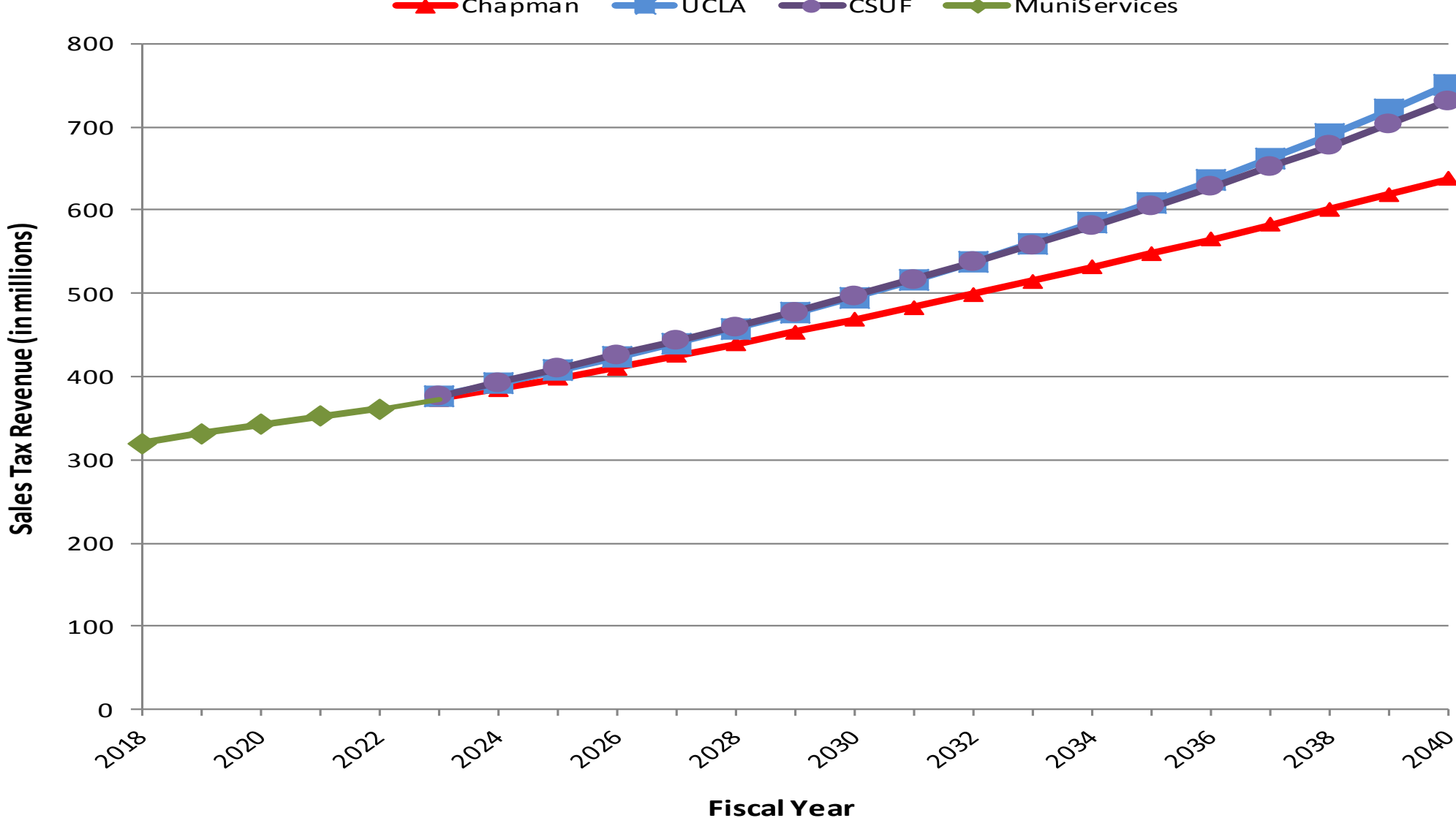
Short Term Growth Rate Forecasts



Long Term Growth Rate Forecasts



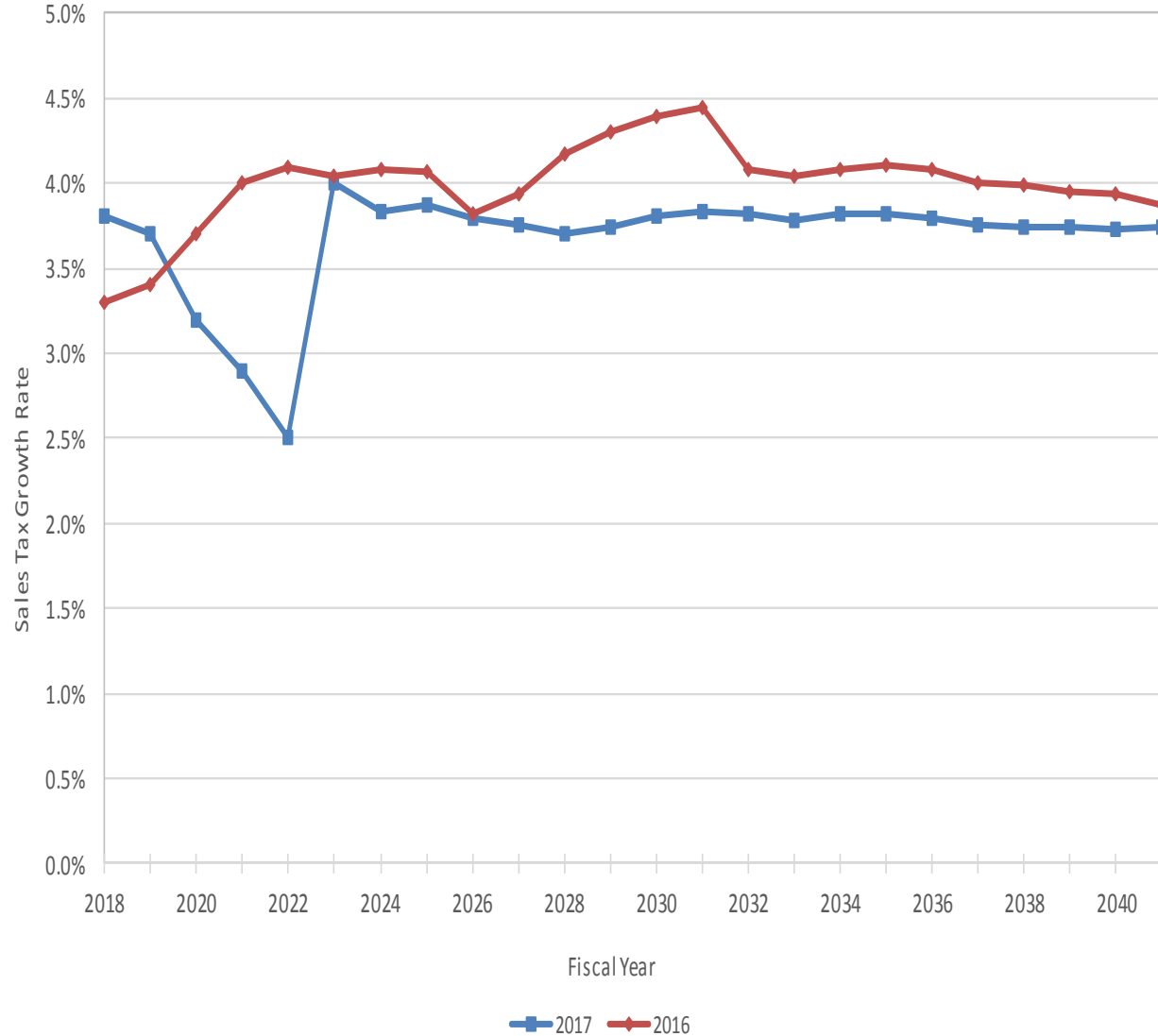
Annual M2 Sales Tax Revenue Forecast



Results of Updated Forecasts

- Sales tax for the M2 Program is forecasted to be \$13.5 billion
 - Sales tax receipts from April 1, 2011 through March 31, 2017 total \$1.7 billion
- Represents a decrease of \$700 million compared to last year's forecasts of \$14.2 billion
- The primary drivers are lower growth rates in both the short and long term periods
 - MuniServices average annual short term growth rate decreased by 0.4 percent
 - Each of the three universities decreased their long term forecasted growth rates

Forecast Comparison – 2017 vs 2016



- Reasons for lower forecast
- Short-term
 - Lower growth in general retail as online sales grow
 - Growth in new auto sales to taper off
 - New construction to slow
- Long-term
 - Lower inflation
 - Lower population growth
 - Lower migration

Next Steps

- Incorporate forecast into OCTA's planning documents
 - Next 10 Plan
 - Comprehensive Business Plan
 - Long Range Transportation Plan
- Determine impacts of forecast to M2 programs and projects
- Return to the Board with options to address the decrease in projected sales tax revenue