



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, February 27, 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 M. Murphy

Pledge of Allegiance

Director Delgleize



BOARD AGENDA

Special Calendar

Orange County Transportation Authority Special Calendar Matters

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

Present Orange County Transportation Authority Resolutions of Appreciation Nos. 2017-010, 2017-011, and 2017-012 to Stephen King, Coach Operator; Patrick Courchaine, Maintenance, and Dennis Mak, Administration, as Employees of the Month for February 2017.

2. Recognition of the 2017 Leadership Development Academy

Julie Espy/Maggie McJilton

The Leadership Development Academy is the Orange County Transportation Authority's (OCTA) senior professional development program designed to grow and support the next generation of leaders at OCTA.

Chief Executive Officer, Darrell Johnson, will introduce the fifteen members of the third cohort of OCTA's Leadership Development Academy to the Board of Directors.

Consent Calendar (Items 3 through 5)

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

Orange County Transportation Authority Consent Calendar Matters

3. Approval of Minutes

Approval of the Orange County Transportation Authority and affiliated agencies' regular meeting minutes of February 13, 2017.



BOARD AGENDA

4. Audit Responsibilities of the Finance and Administration Committee

Janet Sutter

Overview

The Finance and Administration Committee of the Board of Directors of the Orange County Transportation Authority serves as an audit committee in its oversight of audit activities. Annually, the Board of Directors approves the Audit Responsibilities of the Finance and Administration Committee to reaffirm the responsibilities of the Finance and Administration Committee with regard to audits.

Recommendation

Approve the Audit Responsibilities of the Finance and Administration Committee.

5. Fiscal Year 2016-17 Internal Audit Plan, Second Quarter Update

Janet Sutter

Overview

The Orange County Transportation Authority Board of Directors adopted the Fiscal Year 2016-17 Internal Audit Plan on July 25, 2016. This update is for the second quarter of the fiscal year.

Recommendation

Receive and file the second quarter update to the Orange County Transportation Authority Fiscal Year 2016-17 Internal Audit Plan as an information item.



BOARD AGENDA

Regular Calendar

Orange County Transportation Authority Regular Calendar Matters

6. Interstate 405 Improvement Project Financing Update
Kirk Avila/Andrew Oftelie

Overview

Over the past several months, Orange County Transportation Authority representatives have been discussing a Transportation Infrastructure Finance and Innovation Act loan for the Interstate 405 Improvement Project with the Build America Bureau Credit Programs Office. One of the requirements for the loan includes receiving investment grade ratings for the project from two of the nationally recognized statistical rating organizations approved by the Securities and Exchange Commission. During the week of December 19, 2016, Orange County Transportation Authority representatives met with five rating agencies in New York to discuss the loan. A detailed summary report on the meetings has been prepared by Sperry Capital Inc., and is attached to this staff report. Also included is a summary of the project and financing activities to date.

Recommendation

Receive and file as an information item.

Discussion Items

7. Mobile Ticketing & On-Demand Service
Lloyd Sullivan/Andrew Oftelie

Exploring OCTA partnerships with Transit Network Providers for On-Demand services utilizing OCTA's existing Mobile Ticketing Application.



BOARD AGENDA

8. 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.

9. Chief Executive Officer's Report

10. Directors' Reports

11. Closed Session

There are no Closed Session items scheduled.

12. Adjournment

The next regularly scheduled meeting of this Board will be held at **9:00 a.m. on Monday, March 13, 2017**, at the Orange County Transportation Authority Headquarters, 550 South Main Street, Board Room – Conf. Room 07 - 08, Orange, California.

Leadership Development Academy 2017

Supplemental Information

The Leadership Development Academy is the Orange County Transportation Authority's (OCTA) senior professional development program designed to grow and support the next generation of leaders at OCTA.

The Leadership Development Academy prepares employees for their next step on the leadership ladder by focusing on strengths-based leadership and strategic perspective.

OCTA launched our first Leadership Development Academy in 2011 in support of our goal to cultivate a top-notch workforce and provide developmental opportunities in the critical leadership core competencies for our employees. Our efforts to date have been recognized as innovative and serve as best practices within the transportation industry, as well as outside the industry among public and private sector organizations. In 2017, OCTA launched the third cohort of the Leadership Development Academy.

The Leadership Development Class of 2017 includes:

Ryan Armstrong, External Affairs

Christina Byrne, External Affairs

Edwin Byrne, Human Resources and Organizational Development

Adriann Cardoso, Capital Programs

Steven King, Capital Programs

Charlie Larwood, Planning

Jeannie Lee, Capital Programs

Jeff Mills, Capital Programs

Carolyn Patterson, Transit

Ric Teano, Government Relations

Benjamin Torres, Finance & Administration

Pia Veesapen, Finance & Administration

Rene Vega, Finance & Administration

Andrea West, Government Relations

Tom Young, Finance & Administration

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 February 13, 2017 regular meeting of the Orange County Transportation Authority (OCTA) and affiliated agencies was called to order by Chairman Hennessey at 9:00 a.m. at the Orange County Transportation Authority Headquarters, 550 South Main Street, Board Room – Conference Room 07-08, Orange, California.

Chairman Hennessey recognized former OCTA Chairman Paul Glaab who recently passed away due to an extended illness, and a moment of silence was observed.

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
Al Murray
Miguel Pulido
Tim Shaw
Todd Spitzer
Michelle Steel
Gregory T. Winterbottom
Ryan Chamberlain, Governor's Ex-Officio Member

Directors Absent: Richard Murphy
Shawn Nelson
Tom Tait

Also Present: Darrell Johnson, 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 Year for 2016

Darrell Johnson, Chief Executive Officer (CEO), presented the Orange County Transportation Authority Resolutions of Appreciation Nos. 2017-07, 2017-08, and 2017-09 to Ruben Rodriguez, Coach Operator; Debora Munguia, Maintenance, and Gina Jimenez, Administration, as Employees of the Year for 2016.

Consent Calendar (Items 2 through 13)

Chairman Hennessey stated that 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

2. Approval of Minutes

A motion was made by Director Murray, seconded by Director Davies, and declared passed by those present, to approve the Orange County Transportation Authority and affiliated agencies' regular meeting minutes of January 23, 2017.

3. Approval of Board Member Travel

A motion was made by Director Murray, seconded by Director Davies, and declared passed by those present, to approve the travel to Washington, D.C., for Chairman Michael Hennessey and Legislative and Communications Committee Chairman Shawn Nelson the week of February 13, 2017, for the Orange County Transportation Authority's Washington, D.C., Advocacy trip.

4. Second Quarter Fiscal Year 2016-17 Procurement Status Report

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

5. 91 Express Lanes Property Insurance Renewal

A motion was made by Director Murray, seconded by Director Davies, and declared passed by those present, to authorize the Chief Executive Officer to negotiate and execute Purchase Order No. A36602, in the amount of \$500,000, to Marsh Risk and Insurance Services, Inc., to purchase the 91 Express Lanes' property, flood, and earthquake insurance on behalf of the Orange County Transportation Authority for the policy period of March 1, 2017 to March 1, 2018.

Orange County Transit District Consent Calendar Matters

6. Amendment to Agreement for Additional Consulting Services to Develop Specifications for an Account-Based, Open Payment Fare Collection System

A motion was made by Director Murray, seconded by Director Davies, and declared passed by those present, to authorize the Chief Executive Officer to negotiate and execute Amendment No. 4 to Agreement No. C-2-2095 between the Orange County Transportation Authority and Four Nines Technologies, in the amount of \$50,000, for additional consulting services for the account-based, open payment fare collection system, and extend the contract term of the agreement through December 31, 2017. The amendment will increase the maximum obligation of the agreement to a total contract value of \$294,500.

7. Low Carbon Transit Operations Program Recommendations for Fiscal Year 2016-17 Funds

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

- A. Approve the use of fiscal year 2016-17 Low Carbon Transit Operations Program funding, currently estimated to be \$1.7 million, for a fare adjustment program and for the purchase and installation of three-position bike racks on buses and spares, both intended to increase bus system ridership.
- B. Approve Resolution 2017-002, consistent with the Low Carbon Transit Operations Program Guidelines.
- C. Authorize staff to make all necessary amendments to the Federal Transportation Improvement Program, as well as execute any necessary agreements to facilitate the above recommendations.

8. Approval to Release Request for Proposals for Vanpool Service Providers

Director Donchak pulled this item and referenced Items 10 and 16 on this Board of Directors (Board) meeting agenda regarding the bus subsidy, and stated that the subsidy for OCTA's vanpool program is \$1.87 per boarding.

Director Donchak urged staff to market the vanpool service providers to the Orange County city councils, in order to exceed the growth rate to 10 or 20 percent, instead of the current rate of 4 percent.

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

- A. Approve the proposed evaluation criteria and weightings for Request for Proposals 7-1546 for selection of vanpool service providers.
- B. Approve the release of Request for Proposals 7-1546 to select firm(s) to provide subsidized commuter vanpool services and Measure M2 Project V Station Van Program services for a five-year initial term with one, two-year option term.

9. Cooperative Agreement to Accept Grant Funding for the Hydrogen Fuel Cell Electric Bus Project

Director Pulido pulled this item and thanked staff and the previous Boards for bringing this project along, and also asked staff to continue to monitor the project.

Director Murray stated that the University of California, Irvine, has been using the hydrogen fuel cell electric bus with success and felt that this project will be helpful.

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

- A. Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-7-1538 between the Orange County Transportation Authority and the Center for Transportation and the Environment, in the amount of \$13,241,092, to provide for the purchase of ten hydrogen fuel cell electric buses, construction of a liquid hydrogen station, and modification of maintenance facilities.
- B. Amend the Orange County Transportation Authority's Fiscal Year 2016-17 Adopted Budget, in the amount of \$13,241,092, to accommodate the hydrogen fuel cell electric bus project and available grant funding from the California Air Resources Board and the South Coast Air Quality Management District.

10. Transit Division Performance Measurements Report for the Second Quarter of Fiscal Year 2016-17

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

Orange County Local Transportation Authority Consent Calendar Matters

11. Capital Programs Division - Second Quarter Fiscal Year 2016-17 Capital Action Plan Performance Metrics

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

12. Amendment to Agreement for Additional Environmental Phase Services for the State Route 91 Widening Project Between State Route 57 and State Route 55

A motion was made by Director Murray, seconded by Director Davies, and declared passed by those present, to authorize the Chief Executive Officer to negotiate and execute Amendment No. 5 to Agreement No. C-3-1701 between the Orange County Transportation Authority and Michael Baker International, Inc., in the amount of \$477,514, for additional environmental phase services for the State Route 91 Widening Project between State Route 57 and State Route 55. This will increase the maximum cumulative obligation of the agreement to a total contract value of \$7,042,519.

13. Measure M2 Environmental Mitigation Program Request to Approve the United States Forest Service Restoration Project and Program Update

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

- A. Approve the United States Forest Service Restoration Project, taking into consideration the recommendations of the Environmental Oversight Committee, as discussed herein.
- B. Authorize the Chief Executive Officer to negotiate and execute a grant agreement consistent with the scope and funding amount of \$185,000.

Regular Calendar

Orange County Transportation Authority Regular Calendar Matters

14. Central Harbor Boulevard Transit Corridor Study Update

Darrell Johnson, CEO, provided opening comments that this item was presented to the Transit Committee on February 9th, and also referenced the handout provided to the Board at the dais.

Eric Carlson, Senior Transportation Analyst, provided a PowerPoint presentation as follows:

- Study Focus;
- Study Phases and Schedule;
- Mobility Needs;
- Evaluation Criteria Recommendations;
- Alignment Options;
- Mode/Feature Options;
- 12 Draft Alternatives;
- Outreach Plan; and
- Next Steps.

A discussion ensued regarding:

- Attachment A of the Staff Report about the OCTA letter to the City of Anaheim and the City's resolution and concerns;
- All modes will be studied with feedback from the stakeholders;
- OCTA's General Counsel explained that OCTA would go into an agreement with the City if right-of-way was needed in Anaheim;
- Consider the City of Garden Grove's development along the corridor;
- The Anaheim resort gets very congested in the late evening and a streetcar by Disneyland would be a challenge;
- Going forward, OCTA would study connections beyond this corridor;
- Concerns about spending money on a study that Anaheim does not want, and instead putting money into the bus system;
- Less expensive to study transit options that work best in high density areas;
- Review a connection to the OC Streetcar;
- There is no discount if the streetcar mode is removed from the study; and
- Consider moving the study boundary as noted in slide three of the PowerPoint presentation.

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

Orange County Local Transportation Authority Regular Calendar Matters

15. Overview of Options for OC Streetcar Operations and Maintenance

Darrell Johnson, CEO, provided opening comments that this item was presented to the Transit Committee on February 9th, and the Committee provided feedback about the preference for Option 2.

Jim Beil, Executive Director of Capital Programs, and Beth McCormick, General Manager of Transit, provided a PowerPoint presentation as follows:

- OC Streetcar Operations and Maintenance Characteristics;
- Organization Options;
- In-House Operations;
- Operations and Maintenance Contractor;
- Management by Private Contractor;
- In-House Operations/Maintenance Contractor;
- Key Considerations; and
- Next Steps.

Director Donchak provided feedback for the key considerations to add either proven performance or demonstrated success into the evaluation in terms of managing the risks.

After a discussion ensued, a motion was made by Director Pulido, seconded by Director Murray, to direct staff to return to the Board of Directors with an evaluation of the OC Streetcar operations and maintenance plan Option 2.

Director Steel requested the OC Streetcar ridership and revenue numbers.

Chairman Hennessey requested the OC Streetcar operations costs.

After a discussion ensued, Director Pulido withdrew his motion and, instead, staff was directed to return to the Board with an evaluation of the OC Streetcar operations and maintenance organization based upon the key considerations.

Director Spitzer, noted for the record, his objection to the action taken by the Board.

Discussion Items

16. Bus Program Assumptions

Sean Murdock, Director of Finance and Administration, provided a PowerPoint presentation for this item as follows:

- Declining Demand for Bus Service;
- Trends;
- OC Bus 360 Efforts Underway;
- Constraints;
- Potential Options to Address Demand;
- Financial Impacts to Fiscal Year 2018 Budget;
- Bus Program Operating Revenue;
- Plan Going Forward; and
- Calendar.

A discussion ensued regarding:

- Staff and the contractor were complimented for keeping the customer complaints within range;
- Review ACCESS service alternatives in order to address costs;
- Nationally, light rail service has not seen a decrease in ridership;
- Bus only properties are seeing a decline in ridership; and
- “San Clemente Rideshare Service” fare subsidy is about \$6.10 per boarding and is a competitive financial option.

Chairman Hennessey requested light rail and bus services national comparison data.

17. 2016 Chief Executive Officer Initiatives and Action Plan - End-of-Year Report

Mr. Johnson, CEO, highlighted the 2016 end-of-year report milestones, and no discussion ensued.

18. 2017 Chief Executive Officer’s Initiatives and Action Plan

Mr. Johnson, CEO, presented a slide of the 2017 CEO’s Initiatives and Action Plan, and stated that the Board will continue to receive quarterly reports. No discussion ensued.

Discussion Items

19. Public Comments

Public comments were received as follows:

1. Tracy Hausdorder, representing her brother, commented that the ACCESS service cuts in the City of San Juan Capistrano are having negative health impacts on her disabled brother who no longer has service to the Rehabilitation Institute of Southern California (RIO) in San Clemente.

Ms. Hausdorder requested that the ACCESS service be reinstated in South Orange County.

2. Marshall Pleczentkowski, representing his son, commented that the ACCESS service cuts in South Orange County are having negative health impacts on his significantly disabled son.

He stated that for 16 years, his son used ACCESS roundtrip from his board and care location to the RIO facility, and the October service change no longer provides the same service.

Mr. Pleczentkowski provided recommendations on how OCTA can provide service for his son to use for travel to the RIO facility.

3. Joyce Benevides, representing her daughter, commented that her disabled daughter for 16 years, used ACCESS roundtrip to the RIO facility. She stated that since the October service change, ACCESS service is no longer available in the San Juan Capistrano area.

Ms. Benevides asked that OCTA restore ACCESS services to the San Juan Capistrano area, as the service cuts are having negative health impacts to her daughter and other disabled people that need to get to the RIO facility.

20. Chief Executive Officer's Report

Mr. Johnson, CEO, reported that:

- Last week, Governor Brown submitted his list of high-priority transportation projects to the National Governors Association. The Interstate 405 Improvement Project and the OC Streetcar Project are among the 51 projects to be included for consideration in the development of a federal infrastructure funding package.

20. (Continued)

- This week, Chairman Hennessey, Legislative and Communications Committee Chairman Nelson, and he will be in Washington, D.C., to meet with OCTA's federal delegation.
- Yesterday, the February service change went into effect. He stated that a number of changes were implemented with the service change as part of the overall OC Bus 360°.
- This morning, the new bus Route 53 Xpress was introduced which will provide faster weekday service with fewer stops along Main Street, and OCTA hosted two outreach events for the new service at the Main Place Mall.

21. Directors' Reports

Director Chamberlain reported that Ortega Highway remains closed, and this Thursday, it will re-open to traffic providing there is no additional rain.

Director Murray thanked staff and Stella Lin, Manager of Marketing, for the February 4th Lunar New Year celebration at the Irvine Metrolink Station.

Director Davies thanked staff for the tour of the ACCESS and Garden Grove facilities.

22. Closed Session

Closed Session items were held for the following:

- A. Pursuant to Government Code Section 54957.6 to discuss negotiations with Teamsters Local 952 regarding the maintenance unit. The lead negotiator for the Orange County Transportation Authority is Maggie McJilton, Executive Director of Human Resources and Organizational Development and for Teamsters Local 952 is Patrick Kelly or his designee.
- B. Pursuant to Government Code 54957.6 to discuss collective bargaining agreement negotiations with the Transportation Communications International Union (TCU) regarding the parts/stock room clerks and facilities maintenance employee unit. The lead negotiator for the Orange County Transportation Authority is Maggie McJilton, Executive Director of Human Resources and Organizational Development, and for TCU is Robert Ragland or his designee.

There was no report out for the Closed Session items.

Directors Pulido and Steel were not present for the Closed Session items.

23. Adjournment

The meeting was adjourned at 10:52 a.m. in memory of former OCTA Chairman Paul Glaab who recently passed away.

The next regularly scheduled meeting of this Board will be held at **9:00 a.m. on Monday, February 27, 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

February 27, 2017

To: Members of the Board of Directors
From: Laurena Weinert, Clerk of the Board
Subject: Audit Responsibilities of the Finance and Administration Committee

Finance and Administration Committee Meeting of February 8, 2017

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

Committee Vote

This item was passed by the Members present.

Committee Recommendation

Approve the Audit Responsibilities of the Finance and Administration Committee.



February 8, 2017

To: Finance and Administration Committee

From: Darrell Johnson, Chief Executive Officer
Janet Sutter, Executive Director
Internal Audit Department

Subject: Audit Responsibilities of the Finance and Administration Committee

Overview

The Finance and Administration Committee of the Board of Directors of the Orange County Transportation Authority serves as an audit committee in its oversight of audit activities. Annually, the Board of Directors approves the Audit Responsibilities of the Finance and Administration Committee to reaffirm the responsibilities of the Finance and Administration Committee with regard to audits.

Recommendation

Approve the Audit Responsibilities of the Finance and Administration Committee.

Background

The Internal Audit Department (Internal Audit) is an independent appraisal function whose purpose is to examine and evaluate the Orange County Transportation Authority's (OCTA) operations and activities. Internal Audit also coordinates and monitors the activities of external auditors, including the independent financial statement auditors. The Finance and Administration Committee (Committee) serves as OCTA's audit committee, having primary responsibility for the oversight of all audit activities.

Discussion

The Committee receives and reviews the annual Internal Audit Plan, all audit reports and management responses, and quarterly updates to the Internal Audit

Plan. The Committee reviews the independently audited financial statements of OCTA and its related entities, as well as the external auditor's required communications, including the management letter.

The Board of Directors originally adopted the Audit Responsibilities of the Finance and Administration Committee to establish responsibilities of the Committee with regard to audit. The responsibilities include an annual affirmation of the roles and responsibilities of the Committee in fulfilling this role.

Summary

Audit responsibilities of the Committee include Committee review of OCTA's audited financial statements, oversight of its Internal Audit function, and communication with its external auditors. These responsibilities are presented for Committee approval.

Attachment

- A. Orange County Transportation Authority, Audit Responsibilities of the Finance and Administration Committee

Prepared by:



Janet Sutter
Executive Director, Internal Audit
714-560-5591

**Orange County Transportation Authority
Audit Responsibilities of the Finance and Administration Committee**

The Finance and Administration Committee (Committee) of the Board of Directors (Board) of the Orange County Transportation Authority (OCTA) will assist the Board in fulfilling its audit oversight responsibilities with regard to (1) the integrity of OCTA's financial statements, (2) OCTA's compliance with legal and regulatory requirements, (3) the independent auditor's qualifications and independence, and (4) the performance of OCTA's internal audit function. In providing this assistance to the Board, the Committee will assume audit responsibilities as provided herein and recommend action on all audit matters to the full Board.

All Committee members will participate in fulfilling these responsibilities. At least one of the Committee members will have financial experience sufficient to provide guidance and assistance to other Committee members on matters related to accounting, auditing, budgeting, and finance.

Audit responsibilities of the Committee will include, but not be limited to, the following:

Financial Statements

- Review with management and the external auditors:
 - The annual financial audit reports and related footnotes, schedules, unadjusted differences, and management letter, including OCTA accounting principles and significant estimates or judgments impacting the financial statements.
 - Any serious difficulties or disputes with management encountered during the audit.
 - Matters required to be discussed by Statements on Auditing Standards issued by the Auditing Standards Board of the American Institute of Certified Public Accountants or other state or federal agencies.
- Inquire of the Chief Executive Officer and the Executive Director of Finance and Administration regarding the fiscal health of OCTA as well as the financial status of OCTA in relation to its adopted budget.

External Audit

- Review the external auditors' proposed audit scope and approach, including coordination of audit effort with the Internal Audit Department (Internal Audit).
- Inquire of the external auditors, internal auditors, and management about significant risks or exposures facing OCTA and assess the steps management has taken or proposes to take to minimize such risks.
- Review the performance of the external auditors, including any issues arising during their most recent quality control or peer review, their independence as it relates to OCTA and recommend to the Board the appointment or discharge of the external auditors.
- Make recommendations to the Board on procurement of the external auditors and ensure compliance with Government Code Section 12410.6 with regard to assignment of partners.

**Orange County Transportation Authority
Audit Responsibilities of the Finance and Administration Committee**

Internal Audit

- Review with management and the Executive Director of Internal Audit the annual audit plan and quarterly reports of audit activity.
- Review the activities, staffing, budget, independence, and organizational structure of the internal audit function, including the effectiveness of the function and its compliance with the Government Accountability Office's *Government Auditing Standards* (Yellow Book).
- Review all internal audit reports, including management responses thereto.
- Ensure there are no unjustified restrictions or limitations placed upon Internal Audit.
- Review and concur in the appointment, replacement, or dismissal of the Executive Director of Internal Audit.

Internal Control

- Understand the scope of internal and external auditors' review of internal control over financial reporting, and obtain reports on significant findings and recommendations, together with management's responses.
- Consider the effectiveness of OCTA's internal control system, including information technology security and control.

Other

- Review the Audit Responsibilities of the Finance and Administration Committee annually to reassess their adequacy and recommend any proposed changes.
- Review the Committee's effectiveness in carrying out its responsibilities.
- Other matters deemed appropriate by the Committee Chairman or as directed by the Chairman of the Board.



COMMITTEE TRANSMITTAL

February 27, 2017

To: Members of the Board of Directors
From: Laurena Weinert, Clerk of the Board
Subject: Fiscal Year 2016-17 Internal Audit Plan, Second Quarter Update

Finance and Administration Committee Meeting of February 8, 2017

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

Committee Vote

This item was passed by the Members present.

Committee Recommendation

Receive and file the second quarter update to the Orange County Transportation Authority Fiscal Year 2016-17 Internal Audit Plan as an information item.



February 8, 2017

To: Finance and Administration Committee

From: Darrell Johnson, Chief Executive Officer

Janet Sutter, Executive Director
Internal Audit Department

Subject: Fiscal Year 2016-17 Internal Audit Plan, Second Quarter Update

Overview

The Orange County Transportation Authority Board of Directors adopted the Fiscal Year 2016-17 Internal Audit Plan on July 25, 2016. This update is for the second quarter of the fiscal year.

Recommendation

Receive and file the second quarter update to the Orange County Transportation Authority Fiscal Year 2016-17 Internal Audit Plan as an information item.

Background

The Internal Audit Department (Internal Audit) is an independent appraisal function, the purpose of which is to examine and evaluate the Orange County Transportation Authority's (OCTA) operations and activities to assist management in the discharge of its duties and responsibilities.

Internal Audit performs a wide range of auditing services that include overseeing the annual financial and compliance audits, conducting operational and contract compliance reviews, investigations, pre-award price reviews, and Buy America reviews. Audits initiated by entities outside of OCTA are coordinated through Internal Audit.

Discussion

The OCTA Fiscal Year (FY) 2016-17 Internal Audit Plan (Plan) (Attachment A) reflects the status of each audit project. At quarter end, several audit projects are in process.

During the second quarter of the FY, Internal Audit issued the Review of Investments: Compliance, Controls, and Reporting for the period January 1 through June 30, 2016, concluding that OCTA complied with its debt, investment, and reporting policies and procedures.

Financial and compliance audits of eight Measure M2 Comprehensive Transportation Funding Programs Projects were also issued by the external audit firm BCA Watson Rice, LLP. The auditors recommended OCTA recover \$4,500 from the City of Laguna Niguel (City) to reimburse an overpayment due to a calculation error in the City's final cost claim. Also, the auditors recommended the City enhance controls to ensure accuracy of final cost claims. OCTA staff has received the recommended reimbursement, and the City has asserted that enhanced controls have been implemented. In addition to the auditors' recommendations, Internal Audit issued a supplemental recommendation to OCTA management to include procedures for monitoring the progress of local agencies' match expenditures under the Environmental Cleanup Program, and report shortfalls to the Board of Directors (Board) through the semi-annual review reports. Management agreed and indicated that procedures will be incorporated into the semi-annual review manual.

The primary focus of Internal Audit during the quarter was to provide coordination of the annual financial and compliance audits by OCTA's independent financial statement auditor, Vavrinek, Trine, Day & Company, LLP (VTD). In connection with the audits, VTD made four recommendations to management related to enhanced information system security. Management agreed with the recommendations and outlined actions to address the issues. The Finance and Administration Committee requested additional detail relating to the management responses which was incorporated into the Board agenda presented on January 23, 2017.

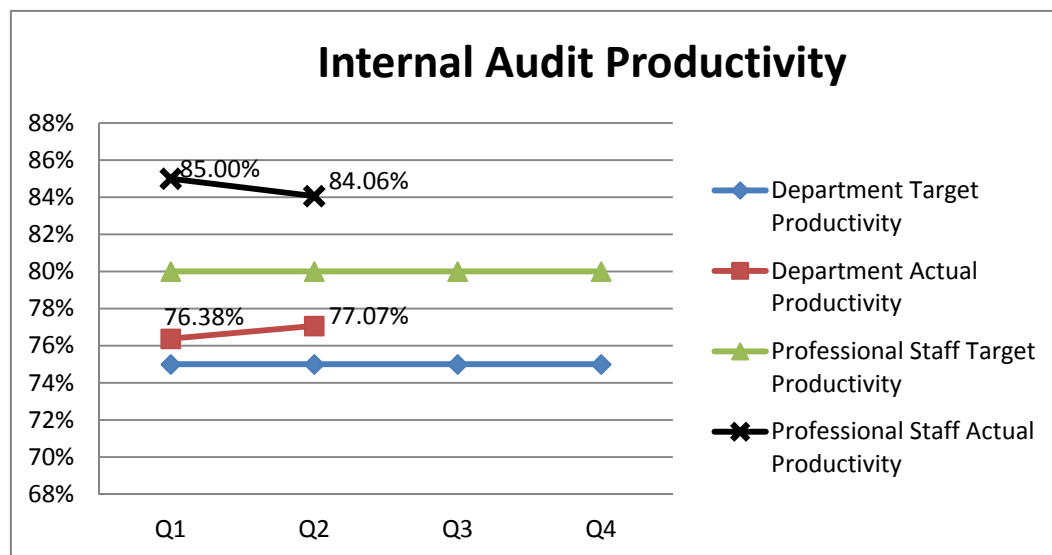
During the third quarter, Internal Audit will continue to provide coordination of Measure M2 agreed-upon procedures reviews of several cities and the County of Orange.

Finally, an audit by the Department of Finance, on behalf of the California Department of Transportation, of Proposition 1B funds utilized on five grade separation projects and the Oso Parkway Widening Project will commence early in the third quarter. Internal Audit will provide coordination and oversight and will report final results once they are available.

Internal Audit Productivity

Internal Audit measures the productivity of the department by calculating a productivity ratio. The ratio, used broadly throughout the audit industry, measures the amount of time auditors spend on audit projects versus time spent on administrative duties. Productivity goals are established for both the professional staff and for the department as a whole. Because the Executive Director regularly participates in non-audit management activities such as planning and committee meetings, the department-wide target is set at 75 percent. The target for internal audit professional staff, not including the Executive Director, is 80 percent.

For the quarter ended December 31, 2016, Internal Audit achieved productivity of 77 percent, and the professional staff achieved productivity of 84 percent.



Price Reviews

At the request of the Contracts Administration and Materials Management Department (CAMP), and consistent with OCTA procurement policy, Internal Audit conducts reviews of single bid procurements to ensure that CAMP handled the procurement in a fair and competitive manner. Internal Audit also reviews prices proposed by architectural and engineering firms, and sole source contractors to ensure that the prices are fair and reasonable. Internal Audit makes recommendations to adjust proposed rates where they exceed the rates per review. When the value of recommended adjustments can be estimated, Internal Audit tracks and reports the potential savings, as noted below. During the quarter ended December 31, 2016, Internal Audit

conducted two pre-award agreed-upon procedures reviews and recommended price adjustments, as indicated below:

Quarter	Price Reviews Recommended Adjustments
1	\$ 662,136
2	197,557
3	
4	
Total	\$ 859,693

Fraud Hotline

During the quarter ended December 31, 2016, Internal Audit received and investigated two reports through OCTA's Fraud Hotline, www.ethicspoint.com. No findings or recommendations resulted from these investigations.

Internal Audit is committed to responding to all hotline complaints within eight business days. During the quarter ended December 31, 2016, Internal Audit made initial contact within two business days.

Monitoring Activities – Metrolink Audit Results

Independent accounting firm Moss Adams, LLP, issued an unmodified opinion on Metrolink's financial statements for the year ended June 30, 2016; however, the accompanying report included five deficiencies in internal control that were considered to be material weaknesses or significant deficiencies. The acting Internal Audit Manager, Ms. Lazuardi, has indicated that an update on the status of management actions to address these findings will be provided at the Executive Management and Audit Committee meeting scheduled for May 2017.

Findings and Recommendations Tracking

At the request of the Finance and Administration Committee, unresolved audit recommendations are included with the quarterly updates to the Plan as Attachment B. Internal Audit includes findings and recommendations generated internally, as well as those provided by regulatory auditors and OCTA's independent financial statement auditors.

During the quarter ended December 31, 2016, Internal Audit performed follow-up of fourteen unresolved audit recommendations. Nine

recommendations were addressed by management and were removed from the list. Two recommendations relating to the Investigation of the Deferred Compensation Plan Administration were partially addressed and remain open pending additional actions. Follow-up review of another recommendation relating to the Accounts Payable audit resulted in the identification of additional exceptions and recommendations. As such, the item will be reviewed again in six months. Lastly, two recommendations related to the audit of the Bristol Street Widening Project remain open pending implementation of management reviews of the City of Santa Ana's quarterly reconciliation documentation. Implementation of this oversight process was held up due to delays in executing an amendment to the cooperative agreement, which was completed in January 2017.

One supplemental recommendation made by Internal Audit resulting from the financial and compliance audits of eight Measure M2 Comprehensive Transportation Funding Programs Projects was added to the list. Also added to the list were the recommendations made by VTD in connection with their financial audit.

Summary

Internal Audit will continue to implement the Plan, report on performance metrics, follow-up on outstanding audit recommendations, and report progress on a quarterly basis.

Attachments

- A. Orange County Transportation Authority Internal Audit Department Fiscal Year 2016-17 Internal Audit Plan, Second Quarter Update
- B. Outstanding Audit Findings and Recommendations (Audit Reports Issued Through December 31, 2016)

Prepared by:



Janet Sutter
Executive Director, Internal Audit
714-560-5591

**Orange County Transportation Authority
Internal Audit Department
FY 2016-17 Internal Audit Plan
Second Quarter Update**

Audit Activity	Project Number	Description	Primary Audit Type	Planned Staff Hours	Staff Hours to Date	Under (Over)	Status (Date Issued)	External Auditor
Mandatory External Independent Audits								
Annual Financial Audits and Agreed-Upon Procedures Reviews	FY17-001 through FY17-004	Coordinate and report on annual financial and agreed-upon procedures reviews for fiscal year 2016-17.	Financial	375	195	180	Complete	
External Regulatory Audits	FY17-005	Coordinate and report on external audits by regulatory or funding agencies.	Compliance	60	7	53		
Internal Audit Department Projects								
Risk Assessment and Annual Audit Plan	FY17-100	Annual preparation of the audit plan, quarterly updates to the audit plan and periodic assessment of risk throughout the year.	Audit Plan and Updates	180	53	127		
Quality Assurance and Self-Assessment	FY17-101	Update of Internal Audit Policies & Procedures. Annual self assessment of the Internal Audit Department's (Internal Audit) compliance with Government Auditing Standards.	Quality Assurance	180	4	176		
Fraud Hotline Activities	FY17-102	Administrative duties related to maintenance of the Fraud Hotline and work related to investigations of reports of fraud, waste, or abuse.	Fraud Hotline	250	255	(5)	9 Reports Received	
Automated Workpaper Solution	FY17-103	Purchase, training, and implementation of a new automated workpaper solution.	Workpaper System	280	96	185		
On-Call Audit Services	FY17-104	Prepare scopes of work and establish bench of independent audit firms to provide assistance with (1) performance audits and (2) application of agreed-upon procedures relating to price reviews and Buy America compliance reviews.	On-Call Audit Services	160	32	128		
Internal Audits								
Security and Emergency Preparedness								
Transit Police Services Contract	FY17-5XX	Review oversight controls and contract compliance with agreement for provision of Transit Police services.	Compliance	240		240		
Human Resources and Organizational Development								
Benefits: Health Insurance Plans and Health Savings Accounts	FY17-5XX	Review controls in place to ensure proper enrollment, accounting, and compliance with laws, regulations, policies, and procedures.	Operational	320	17	303	In Process	
Coach Operator Health Insurance Benefits	FY16-805	Review and test compliance with collective bargaining agreement for the coach operators as it relates to provision of health insurance benefits.	Compliance	300	208	92	In Process	
Storm Water Pollution Prevention Plan	FY17-5XX	Review oversight controls, policies, and procedures to ensure compliance with Environmental Protection Agency regulations.	Compliance	80	52	28	In Process	

**Orange County Transportation Authority
Internal Audit Department
FY 2016-17 Internal Audit Plan
Second Quarter Update**

Audit Activity	Project Number	Description	Primary Audit Type	Planned Staff Hours	Staff Hours to Date	Under (Over)	Status (Date Issued)	External Auditor
Capital Programs								
Project Controls	FY16-507	Assess and test operating controls of the project controls function within the Capital Projects Division.	Compliance	40	170	(130)	Issued 9-14-16	
Project K: Right-of-Way Acquisition Activities	FY17-5XX	Assess and test controls to ensure compliance with Real Property Department Policies and Procedures for acquisition of property rights related to the Interstate 405 Project K.	Compliance	225		225		
Planning								
Competitive Transportation Funding Program Projects	FY16-5XX	Review selected projects for compliance with Measure M Ordinance, policies, and procedures.	Compliance	60	77	(17)	Issued 10-12-16	
Transit Operations								
Fleetwatch Fluid Management System	FY17-5XX	Assess adequacy of system controls and data reporting related to dispensing of fuel.	Operational	240		240		
Contracted Fixed Route Operations	FY17-5XX	Assess adequacy of oversight controls and contract compliance with key provisions of the agreement with First Transit.	Compliance	325	12	313	In Process	
Finance and Accounting								
Treasury	FY17-501	Semi-annual review of investments compliance, controls, and reporting.	Compliance	210	104	106	Issued 10-3-16	
Grant Closeouts	FY16-502	As-needed financial and compliance audits of grants at closeout to ensure propriety of expenditures.	Compliance	40	36	4	Issued 9-14-16	
Budget Development and Monitoring	FY16-509	Review and test controls in place over the preparation, monitoring, and reporting related to the annual OCTA budget.	Operational	325	274	52	In Process	
OCTA Policies and Procedures	FY17-5XX	Review controls in place to ensure proper development, update, and communication of OCTA policies and procedures.	Operational	185	94	91	In Process	
Investment Manager Contracts	FY17-504	Review procurement of, contract compliance, and invoice controls related to investment manager contracts.	Compliance	185	147	39	In Process	
Information Systems								
Payment Card Industry/Data Security Standard (PCI/DSS) Compliance	FY17-502	Review of OCTA's compliance with PCI/DSS, including review and evaluation of annual self-assessment to ensure protection of credit card data.	Compliance	225	439	(214)	In Process	

**Orange County Transportation Authority
Internal Audit Department
FY 2016-17 Internal Audit Plan
Second Quarter Update**

Audit Activity	Project Number	Description	Primary Audit Type	Planned Staff Hours	Staff Hours to Date	Under (Over)	Status (Date Issued)	External Auditor
Contract Administration and Materials Management								
Price Reviews	PR17-XXX	Cost and price analyses as requested by OCTA's Contract Administration and Materials Management Department.	Price Review	1,000	364	636	7 Reports Issued	
Buy America	FY17-503	Pre-award and post-delivery reviews to ensure vendors and OCTA are in compliance with federal Buy America requirements.	Compliance	250	97	153	1 Report Issued 9-14-16	
External Affairs								
Customer Relations	FY16-508	Review in-house Customer Relations operation.	Operational	80	195	(115)	Issued 9-14-16	
Public Outreach - West County Connectors Project	FY16-5XX	Review of oversight controls and contract compliance related to agreement for public outreach.	Compliance	180		180		
Unscheduled Reviews and Special Requests								
Unscheduled Reviews and Special Requests	FY17-800	Time allowed for unplanned audits, coordination of external agency audits, and requests from the Board of Directors and management.	Varies	260	13	247		
Monitoring Activities								
Measure M Taxpayers Oversight Committee	FY17-601	Coordination of audit activities on behalf of the Audit Subcommittee of the Measure M Taxpayers Oversight Committee.	Administrative Support	100	10	90		
Metrolink Audit Activities	FY17-602	Obtain and review audit results of Metrolink activities	Non-Audit Service	60	46	14		
Bus Base Inspections	FY17-603	At the request of Transit Division, participate on annual bus base inspections.	Non-Audit Service	32	51	(19)	Complete	
Follow-up Reviews								
Follow-up Reviews and Reporting	FY17-700	Follow-up on outstanding audit recommendations.	Follow-up	300	303	(3)		
Total Audit Project Planned Hours (A)				6,747	3,349	3,398		

**Orange County Transportation Authority
Internal Audit Department
FY 2016-17 Internal Audit Plan
Second Quarter Update**

Audit Activity	Project Number	Description	Primary Audit Type	Planned Staff Hours	Staff Hours to Date	Under (Over)	Status (Date Issued)	External Auditor
Internal Audit Administration								
Board of Directors and Committee Meetings				260	70	191		
Executive Steering and Agenda Setting Meetings				180	77	104		
Internal Audit Staff Meetings				150	32	118		
Other Administration				1,500	816	684		
Total Hours (B)				8,837	4,343	4,494		
Department Target Efficiency				75%				
Target Efficiency - Professional Staff				80%				

OUTSTANDING AUDIT FINDINGS AND RECOMMENDATIONS

(Audit Reports Issued Through December 31, 2016)

Audit Issue Date	Report Number	Division / Department / Agency	Audit Name	Recommendation	Initiate Next Update	Management Response	Auditor	Notes
10/3/2014	N/A	Finance and Administration (F&A) and Transit	Performance Audit of the Orange County Transportation Authority's (OCTA) Continuity Plan	Auditors recommended that management update the Business Impact Analysis (BIA) and the Continuity of Operations Plan (Plan) to address the 13 weaknesses noted.	Jun-17	Management responded that efforts are underway to update certain portions of the BIA and the Plan. Also, at the direction of the F&A Committee Chairman, staff has agreed to specifically address each issue and planned corrective actions with the Security Working Group of the Board of Directors (Board). <u>Update September 2015:</u> Management has taken actions to adequately address seven of the thirteen weaknesses noted in the audit. The remaining six are expected to be corrected upon completion of the Threat and Hazard Identification and Risk Assessment project and the comprehensive revision of the BIA. The Internal Audit Department (Internal Audit) will follow-up on the remaining issues in one year. <u>Update September 2016:</u> Internal Audit requested update; management indicated that documents will not be completed until May 2017.	Bonelli	Initiate next update in June 2017
10/15/2015	N/A	Human Resources and Operational Development (HROD)	Investigation and Limited Scope Review of Administration of the Deferred Compensation Plan and the Plan Revenue Reimbursement Account	Internal Audit recommends management formalize and document the plan governance structure and committee structure. Committee configuration should be reviewed and consideration given to appointing a member to represent employee groups participating in the plan. Committee members should be appointed and policies should be approved by OCTA.	Jun-17	The Investment Policy (IP) Statement will be formally approved and made available to participants electronically. Management will also post the quarterly meeting minutes, the quarterly reports, and the Account Policy. The committee composition will be included in the IP Statement, with consideration given to expanding the committee. These tasks will be completed by the end of calendar year 2015. <u>Update May 2016:</u> Management has not fully implemented all recommendations. Additional recommendations were provided to encourage management to research and implement best practices with regard to the Committee charter, the IP Statement, and Committee composition. <u>Update December 2016:</u> Management has partially implemented this recommendation; however, an updated IP statement and revisions to the Personnel and Salary Resolution are not yet complete.	Sutter	Initiate next update June 2017

OUTSTANDING AUDIT FINDINGS AND RECOMMENDATIONS

(Audit Reports Issued Through December 31, 2016)

Audit Issue Date	Report Number	Division / Department / Agency	Audit Name	Recommendation	Initiate Next Update	Management Response	Auditor	Notes
10/15/2015	N/A	HROD	Investigation and Limited Scope Review of Administration of the Deferred Compensation Plan and the Plan Revenue Reimbursement Account	Internal Audit recommends management: 1. Ensure committee members annually reaffirm the IP Statement. 2. Provide training and require committee members to monitor fees charged to the plan and its participants and, when applicable, attempt to negotiate fees to a reasonable level. 3. Exercise oversight of Benefit Funding Services Group (BFSG) to ensure all deliverables required by the agreement are provided. 4. Review invoices for compliance with the agreement terms and obtain proper approval before submitting to Nationwide Retirement Solutions (NRS) for payment.	Jun-17	1. The IP Statement will be annually reaffirmed by the committee. 2. BFSG will provide training to committee members on an annual basis and committee members will review annual reports provided by BFSG and will work with the Contracts Administration and Materials Management Department (CAMP) to negotiate fees if they are deemed unreasonable. 3. Management will ensure that OCTA receives all deliverables specified in the contract. Management will ensure that required annual fee reports are provided by BFSG. 4. BFSG will be required to include the appropriate certification language on all future invoices. All future BFSG invoices will be properly reviewed for compliance with the agreement terms and two authorized parties will approve the invoices before submitting to NRS for payment. <u>Update May 2016:</u> Management has taken some actions; however, additional recommendations were provided in order for management to properly address weaknesses. <u>Update December 2016:</u> Management has partially addressed recommendations; however a revised IP statement is pending and committee member training has not yet occurred.	Sutter	Initiate next update June 2017
1/19/2016	N/A	Transit	City of Santa Ana, Senior Mobility Program (SMP)	Internal Audit recommends management: 1. Develop program guidelines, including definition of allowable trip types, requirements for revenue reporting, acceptable allocation of costs, and retention of supporting documentation. 2. Amend cooperative agreements to include detailed information on program requirements. 3. Provide training to cities and exercise oversight to ensure compliance with the Ordinance, cooperative agreements, and program guidelines.	Feb-17	Management will review the current agreement language and scopes of work for each SMP and revise to address the collection and recording of program fees/revenue. In addition, the SMP monthly report template will be revised to specifically document fares/revenue received, the source of city contributions, and documentation to identify how revenues collected are used to support the program. During the annual visit, staff will review the process used to collect and report fares/revenues received. <u>Update August 2016:</u> Management has addressed parts 1 and 2 of the recommendation. Since the new monitoring/site visits will not begin until September 2016, part 3 will remain open.	Ng	Initiate next update in February 2017

OUTSTANDING AUDIT FINDINGS AND RECOMMENDATIONS

(Audit Reports Issued Through December 31, 2016)

Audit Issue Date	Report Number	Division / Department / Agency	Audit Name	Recommendation	Initiate Next Update	Management Response	Auditor	Notes
2/29/2016	FY15-515	Capital Programs	Oversight Controls, Contract Compliance, and Billings Related to the Bristol Street Widening Project	Internal Audit recommends management request the City of Laguna Niguel (Laguna Niguel) strengthen controls over timekeeping and periodically review supporting documentation to ensure accuracy of labor charges to the project. Management should also consider disallowing sub-consultant markups through update of contract language in cooperative agreements.	Jul-17	The gas tax agreement will be amended to require Laguna Niguel to certify that their quarterly reconciliation report of actual expenses versus monthly payment requests, including labor hours charged, are true and correct. Staff will review a sample of supporting documents to verify actual expenses and that labor hours billed are supported by time sheets on file. The gas tax agreement will be amended to specifically disallow sub-consultant markups. <u>Update September 2016</u> : The amendment has not been executed due to Laguna Niguel's disagreement with certain terms. After the amendment is executed, staff will review a sample of supporting documentation from quarterly reconciliation reports. <u>Update January 2017</u> : Amendment No. 6 was executed to require that the quarterly reconciliation reports include supporting documentation, as well as certification that Laguna Niguel has deducted all sub-consultant markup costs. Since staff will begin periodically reviewing a sample of supporting documentation to verify labor and other costs charged now that the amendment is executed, Internal Audit will return in six months to assess staff's review of costs charged.	Ng	Initiate next update in July 2017

OUTSTANDING AUDIT FINDINGS AND RECOMMENDATIONS

(Audit Reports Issued Through December 31, 2016)

Audit Issue Date	Report Number	Division / Department / Agency	Audit Name	Recommendation	Initiate Next Update	Management Response	Auditor	Notes
2/29/2016	FY15-515	Capital Programs	Oversight Controls, Contract Compliance, and Billings Related to the Bristol Street Widening Project	Internal Audit recommends that management design and implement a cost review process that includes review of a sample of city costs charged to the gas tax agreement. Internal Audit also recommends management instruct the city to correct its quarterly reconciliation reports and implement procedures to reconcile city reports with OCTA records.	Jul-17	Staff will periodically sample supporting documentation for costs charged to verify the charges are project-related, supported, and reasonable. Also, the city will be instructed to correct quarterly reconciliation reports based on these audit findings and staff will reconcile each quarterly report with records of payments made under the gas tax agreement. <u>Update September 2016:</u> After the amendment is executed, staff will review a sample of supporting documentation from the city's quarterly reconciliation reports. As of follow-up review, the city made an attempt to adjust its quarterly reconciliation report but did not implement the adjustment fully and correctly; therefore, Internal Audit will keep the recommendation open and ask management to provide suggestions to the city on how to correct its quarterly reconciliation reports. <u>Update January 2017:</u> The city has corrected the overstatement of funding received in the Revised 2nd Quarter 2016 Report. Since staff will begin periodically reviewing a sample of supporting documentation to verify costs charged now that Amendment 6 is executed, Internal Audit will return in six months to assess staff's review of costs charged.	Ng	Initiate next update in July 2017
4/4/2016	FY15-513	F&A	Accounts Payable (AP)	Internal Audit recommends management provide training to ensure consistent enforcement of policies and procedures by AP staff and advise department staff responsible for the exceptions of OCTA's policies and procedures.	Jun-17	The AP supervisor meets bi-weekly with staff and has included training on AP procedures and responsibilities and has/will communicate to departments responsible for the related exceptions as to OCTA's Policies and Procedures. <u>Update January 2017:</u> During the course of the follow-up review, Internal Audit identified additional instances of violations of the Payment Request Policy and the Payment Authorization Policy. Four additional recommendations were made to F&A, CAMM, and Capital Programs related to the use of Payment Requests for payments against contracts for goods/services not authorized by the contract at the time the expenses were incurred.	Bonelli	Initiate next update June 2017

OUTSTANDING AUDIT FINDINGS AND RECOMMENDATIONS

(Audit Reports Issued Through December 31, 2016)

Audit Issue Date	Report Number	Division / Department / Agency	Audit Name	Recommendation	Initiate Next Update	Management Response	Auditor	Notes
8/31/2016	FY16-508	External Affairs	Customer Relations	Management should implement a quality control review process to ensure the accuracy of monthly reports.	Feb-17	Customer Relations will implement a quality control review process to ensure accuracy. In addition, Customer Relations is already working with Information Systems Department staff to automate reports through the dashboard, which will reduce the incidence of human error and increase accuracy.	Dunning	
8/31/2016	FY16-508	External Affairs	Customer Relations	Internal Audit recommends that management establish criteria and procedures for performing documented reconciliations and periodic, independent verifications of bus pass inventories maintained by Customer Relations and Marketing staff.	Feb-17	Customer Relations has updated the policies and procedures for performing documented reconciliations and independent verifications of bus pass inventories. An independent verification has begun and will be performed quarterly.	Dunning	
9/29/2016	FY16-511	Planning	Comprehensive Transportation Funding Programs Audits - Supplemental Recommendation Related to Environmental Cleanup Program	Internal Audit recommended management include procedures for monitoring the progress of local agencies' operations and maintenance expenditures into the semi-annual review manual, including a requirement that short-falls in match obligations be reported to the Board in the semi-annual review reports.	Mar-17	Planning staff will update the semi-annual review manual to include checklist items documenting tracking and reporting of Form 10-17. Local agencies have reported any short-falls to date. Should these short-falls develop at the end of the ten-year period, these issues will be included in the semi-annual review.	Ng	
10/31/2016	N/A	F&A	Fiscal Year 2015-16 Management Letter	Vavrinek, Trine, Day & Co. LLP auditors made four recommendations related to enhancements to information systems security.	Jan-18	Management responded that recommendations would be evaluated and implemented as appropriate.	Tang	



COMMITTEE TRANSMITTAL

February 27, 2017

To: Members of the Board of Directors

From: Laurena Weinert, Clerk of the Board

Subject: Interstate 405 Improvement Project Financing Update

Finance and Administration Committee Meeting of February 8, 2017

Present: Directors Jones, Murphy, Spitzer, and Steel

Absent: Directors Do, Hennessey, and Pulido

Committee Vote

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

Staff Recommendation

Receive and file as an information item.



February 8, 2017

To: Finance and Administration Committee
From: Darrell Johnson, Chief Executive Officer
Subject: Interstate 405 Improvement Project Financing Update

Overview

Over the past several months, Orange County Transportation Authority representatives have been discussing a Transportation Infrastructure Finance and Innovation Act loan for the Interstate 405 Improvement Project with the Build America Bureau Credit Programs Office. One of the requirements for the loan includes receiving investment grade ratings for the project from two of the nationally recognized statistical rating organizations approved by the Securities and Exchange Commission. During the week of December 19, 2016, Orange County Transportation Authority representatives met with five rating agencies in New York to discuss the loan. A detailed summary report on the meetings has been prepared by Sperry Capital Inc., and is attached to this staff report. Also included is a summary of the project and financing activities to date.

Recommendation

Receive and file as an information item.

Background

The Orange County Transportation Authority (OCTA), in cooperation with the California Department of Transportation (Caltrans), is implementing the Interstate 405 (I-405) Improvement Project between State Route 73 (SR-73) and Interstate 605 (I-605) (Project). The Project will add one general purpose lane from Euclid Street to I-605, consistent with Measure M2 Project K, and will add an additional lane in each direction that would combine with the existing high-occupancy vehicle lane to provide dual express lanes in each direction on I-405 from SR-73 to I-605, otherwise known as the 405 Express Lanes.

In April 2015, the OCTA Board of Directors (Board) approved the terms and conditions negotiated with Caltrans that established the roles and responsibilities related to project delivery, funding and financing, and operations for the Project.

The Board also authorized staff to pursue financing opportunities through the Transportation Infrastructure Finance and Innovation Act (TIFIA).

In February 2016, OCTA submitted a Letter of Interest (LOI) to the Build America Bureau (Bureau) Credit Programs Office (formerly known as the TIFIA Joint Program Office) requesting a loan for the Project. In March 2016, the United States Department of Transportation (USDOT) notified OCTA that the LOI met the requirements for TIFIA participation and was ready to advance to the next phase.

The next phase involved receiving an indicative investment grade rating opinion letter on the Project's plan of finance and the feasibility of the anticipated pledged revenue stream. In June 2016, OCTA presented an overview of the Project and the preliminary financial model in San Francisco to Standard & Poor's and received notification that their Credit Committee assigned the Project an investment grade rating of "BBB-."

In July 2016, OCTA submitted a copy of the Standard & Poor's indicative rating letter, a detailed preliminary financial model, and the application fee to the Bureau's Credit Programs Office. OCTA also provided an oral presentation on the Project to Bureau representatives in Washington, D.C. in August 2016.

In November 2016, OCTA's Board awarded a design-build (DB) contract to the joint venture (JV) team, OC 405 Partners, for the Project. OC 405 Partners is a team of firms led by OHL USA, Inc. (OHL) and Astaldi Construction Corporation (Astaldi). The contract award for Project design and construction totaled \$1.2 billion. The total Project cost is \$1.9 billion and will be funded with a combination of local, state, and federal funds.

Discussion

Since the selection of OC 405 Partners in November 2016, significant progress has been made in delivering the project. Staff has worked diligently to execute the contract and on delivering a prudent financial plan for the completion of the Project. Biweekly conference calls began in October 2016, with the Bureau to monitor the progress of the TIFIA loan for the Project, and meetings were held with five rating agencies in December 2016. Right-of-way (ROW) activities continued, and OCTA continues to enjoy many successes related to the "Sign in 60" ROW acquisition program.

Project Status

An important element of the Project is the timely acquisition of ROW so that the design-builder can deliver the Project on schedule. While there are no residential relocations necessary for the Project, there are ROW impacts to 304 parcels. The majority of the impacts relate to temporary construction easements. As of January 30, 2017, 211 Notices to Appraise have been issued, 113 offers have been presented, 97 agreements have been signed, and 85 escrows have been closed. OCTA is utilizing a federally-approved ROW acquisition incentive program, coined "Sign in 60," and a Board-approved modified delegation authority to expedite ROW acquisition. This program allows OCTA to provide impacted land owners with an incentive payment of 20 percent of the appraised value, up to a maximum of \$200,000, if the offer is accepted and signed within 60 days of receipt. This helps OCTA to minimize legal costs and protracted negotiations with property owners that could potentially delay the project. To date, over 90 percent of all "Sign in 60" ROW acquisition offers have been accepted.

Similarly, there are approximately 120 utility conflicts requiring some level of relocation to accommodate the Project. All utility prior-rights determinations have been made, and utility relocation notices have been sent. To date, 95 percent of utility preliminary engineering agreements are executed and final draft utility agreements (UA) have been prepared with each utility owner, when necessary. The draft UAs will be finalized and a construction notice sent to each utility owner when OC 405 Partners, as the DB entity, provides their intermediate design to integrate, verify, and finalize the relocation plans.

An execution version of the DB contract was sent to OC 405 Partners for signature in January 2017. Per the Instructions to Proposers, OC 405 Partners had ten days to return the signed DB contract to OCTA. The signed contract was received from OC 405 Partners and was executed by OCTA's Chief Executive Officer (CEO) on January 31, 2017. Notice to Proceed (NTP) No. 1 was also issued on the date the CEO executed the agreement. As required by the Instructions to Proposers, OC 405 Partners agreed to provide an opinion of counsel regarding, among other matters, the due authorization and enforceability of the contract and parent guarantees. The opinion of counsel has been provided to OCTA.

OC 405 Partners Update

On November 16, 2016, two days after the Board action on the contract award, Moody's Investors Services downgraded the parent company of one member of the JV team, OHL, from B3 to Caa1, with a negative outlook. On

November 28, 2016, Fitch downgraded OHL to B+ from BB- with a negative outlook. The rationale for the ratings downgrades is driven by a further slump in earnings of OHL's core engineering and construction business in the third quarter of 2016. This decline in the third quarter follows other declines in the previous four quarters that translated into negative free cash flow generation and rising debt levels. It was also noted that OHL's weaker performance was driven by negative margins in legacy projects, the delay in the launch of construction projects for their own concessions, as well as increased exposure to the U.S. market with generally lower margins.

Despite the relatively low ratings for OHL, one of the elements that provided assurance to OCTA's financial compliance review team was that the other JV partner, Astaldi, demonstrated a higher degree of financial strength. Since both partners provided parent guarantees and liability is joint and several, having Astaldi as part of the team was viewed as extremely favorable. Astaldi is rated B2 by Moody's with a negative outlook, B by Standard and Poor's with a negative outlook and B+ by Fitch with a stable outlook. The current ratings for the two JV firms are listed below:

	<u>OHL</u>	<u>Astaldi</u>
Moody's Investor Service	Caa1	B2
Standard & Poor's	N/A	B
Fitch Ratings	B+	B+

As part of the review of the Project proposals, all bidders had to submit financial information for each member of the JV team and all proposed guarantors, in their proposals. This included current financial statements, rating reports, report of any material financial changes, and any off balance sheet items. In addition, OCTA's compliance teams reviewed Dun and Bradstreet reports. The purpose of the review was to confirm that the teams could demonstrate the financial capacity to carry out their obligations under the contract. In the case of the Project, the JV teams are being asked to perform DB services to construct the project, not provide any equity or their own long-term debt financing to get the project built. As such, so long as the vendor provides an adequate monthly invoice, OCTA will pay that invoice within 30 days so there is no material, long-term cash flow responsibility being placed on the JV team. However, in order to ensure the Project gets completed, the security package is a critical part of the contract.

Security Package in DB Contract with OC 405 Partners

In general, the security package OCTA has obtained from OC 405 Partners includes 5 percent retention on each monthly invoice, as well as payment and performance bonds of 5 percent of the contract amount at contract execution,

that increases to 50 percent of the contract value at NTP No. 2 to be issued for commencement of major construction activities. In addition, OCTA has received guarantees from the parent companies of both members of the JV team (OHL and Astaldi) and confirmation of the joint and several liability for the JV team members and their parent company guarantors, meaning that both firms and their parent companies are wholly responsible for completing the contract independently, even if one of the firms is unable to perform their duties.

The ability to acquire the required bonds was a critical element in determining the JV team's financial capacity to deliver the job. The sureties have made their own assessment of the JV team's financial capacity and ability to deliver the project or they would not have provided the associated bonds. In this case, the sureties are: Liberty Mutual Insurance Company, Zurich American Insurance Company, Berkshire Hathaway Specialty Insurance Company, and American Home Assurance Company. Under California law, in order for these sureties to operate and provide bonds in California, each must demonstrate its financial stability, reputation, and integrity to the California Department of Insurance, while adhering to specific solvency standards established under the California Insurance Code. They each must also maintain defined minimum capital and surplus reserves at all times. All sureties are issued a letter grade from A++ to F, and a roman numeral ranging anywhere from I (less than \$1,000,000) to XV (greater than \$2,000,000,000). These ratings evidence the surety's financial strength and ability to pay claims. These ratings are published by the A.M. Best Company. For this procurement, each surety was required to possess a rating of A- VIII in order to provide bonds for this project.

The DB contract provides various rights and remedies in favor of OCTA, if OC 405 Partners fails to comply with its obligations. These rights and remedies comprise the "security package" and, in part, include the following:

Proposal Bond – At the time of submission of their price proposal, OC 405 Partners provided a bond, in the amount of approximately \$61 million (5 percent of contract amount), to secure their obligations to sign the DB contract based on their financial and technical proposal. The proposal bond is currently held by OCTA.

Payment and Performance Bonds – At the time of execution of the DB contract, OCTA returned the proposal bond to OC 405 Partners and received payment and performance bonds each in the amount of approximately \$61 million (5 percent of contract amount). The bonds each contain a rider pursuant to which the bond amounts will be increased to approximately \$609 million (50 percent of contract amount) at the issuance of Notice to Proceed No. 2, which authorizes the commencement of construction activities.

Retainage – OCTA retains 5 percent of each monthly invoice from the DB team.

Joint and Several Liability of the JV Members – As part of their proposal, OHL, and Astaldi provided OCTA with a signed joint venture agreement that included a statement acknowledging that the JV members were jointly and severally liable for the obligations of the DB team under the contract and that each would be responsible for continuing work under the contract regardless of internal disputes between the JV members.

Parent Guaranties – As part of their proposal, each of the members of the joint venture agreed to provide a parent guaranty in the form required by the contract. The parent guaranties from OHL and Astaldi acknowledge the joint and several liability of each of the members of the joint venture and guaranty those obligations. The signed parent guaranties have been provided to OCTA.

Partnering and Dispute Resolution - Disputes between the parties are to be resolved first through informal partnering processes, followed by review by a dispute resolution board. The next step is mediation, followed by court action.

Limit of Liability – Consistent with other projects of this type, the DB contract includes a \$125 million limit of liability; however, the following are not included in the limit of liability:

- Insurance proceeds
- Claims under the payment bond
- OCTA's cost to complete and/or correct the work
- Fraud, gross negligence, or criminal conduct

Liquidated Damages – The DB team is charged \$140,000 for each day of delay in achieving substantial completion (defined as 2,049 days after NTP No. 2). The DB team is charged \$30,000 for each day of delay in achieving Project completion (defined as 120 days after substantial completion). The DB team is charged \$20,000 for each day of delay in achieving final acceptance (defined as 120 days after Project completion).

Financing Update

OCTA began biweekly conference calls in October 2016, with the Bureau to monitor the progress of the TIFIA loan. The calls include OCTA staff from the Capital Projects Division, Finance and Administration Division, OCTA's Project team including Sperry Capital Inc., Nossaman, Bank of America Merrill Lynch, Stantec, Woodruff, Spradlin & Smart, and representatives from the

Bureau. Over the past few months, the discussions have revolved around the traffic and revenue study and the financial model.

In early December 2016, Bureau staff requested 15 separate sensitivity scenarios of the Project traffic and revenue model. These were extensive scenarios requiring weeks to complete. Stantec, OCTA's traffic and revenue consultant, ran those scenarios and completed the analysis in mid-January 2017. The results of these 15 scenarios were each entered into the financial model and were provided to the Bureau.

In order to close on the TIFIA loan, OCTA will need to provide two investment grade ratings to the Bureau. On December 20, 2016 and December 21, 2016, OCTA's Chair and Vice-Chair from 2016, along with OCTA staff, and consultants met with five ratings agencies in New York to discuss the Project and TIFIA loan. OCTA met with Standard and Poor's, Moody's Investment Service, Fitch Ratings, Kroll Bond Rating Agency, and DBRS.

During the meetings, OCTA representatives discussed the background and importance of the Project, TIFIA loan, and the current schedule for Project funding. The meetings focused on risk mitigations, ROW acquisition, utility relocation, design-build selection, toll operating agreement, a review of the traffic and revenue study, and the financial model used to forecast future revenues and operations.

A detailed summary report on all the meetings has been prepared by Sperry Capital Inc. and has been included as Attachment A. The report provides an account of the meetings and the participants. A copy of the New York presentation book is provided as Attachment B.

Next Steps

As OCTA staff has stressed in the past, the timing of the TIFIA loan is dependent upon the Bureau staff and their outside consultants completing their credit/due diligence review of the project before major structural terms and the loan agreement can be negotiated. Over the next 45 days, the Bureau and their financial advisor will be preparing and submitting an initial Project report to their Credit Review Team. To facilitate the drafting of this Project report, OCTA representatives will be traveling to Washington, D.C. during the week of February 20, 2017, to discuss and negotiate commercial terms and conditions for the TIFIA loan. Final terms and conditions would be subject to OCTA Board approval. If the Credit Review Team provides an initial approval, they will invite OCTA to submit a formal TIFIA application.

After the formal TIFIA loan application is submitted, Bureau staff will prepare a final Project report and make a second presentation to the Credit Review Team and seek another approval. The next step would be a USDOT Credit Council recommendation to the Secretary of Transportation (Secretary). The Secretary makes the final determination on awarding the loan. Although originally anticipated to close by the end of first quarter of 2017, OCTA is anticipating a financial close for the Project during the second quarter of 2017. This is a more reasonable timetable given the length of time it took to determine which traffic and revenue model sensitivity testing the Bureau wanted OCTA to perform.

Also, over the next 45 days, OCTA will continue to engage all five rating agency firms and select two agencies to provide the two investment grade ratings. OCTA representatives will be traveling to New York to meet with the selected firms to discuss the negotiated TIFIA loan terms and conditions. The rating agencies will take approximately four to six weeks to complete the investment grade ratings.

Summary

Staff is providing the Board of Directors a summary of the project and financing activities to date for the Interstate 405 Improvement Project. A summary report of the most recent rating agency meetings in New York is provided as an attachment along with the presentation update materials.

Attachments

- A. Sperry Capital Inc. Letter dated January 27, 2017, to Kirk Avila on OCTA's December 2016 New York Meetings.
- B. Orange County Transportation Authority I-405 Improvement Project Rating Agency Update dated December 2016.

Prepared by:



Kirk Avila
Treasurer/General Manager
Treasury/Toll Roads
(714) 560-5674

Approved by:



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

Sperry Capital Inc.

January 27, 2017

Mr. Kirk Avila
 Treasurer, General Manager of the 91 Express Lanes
 Orange County Transportation Authority
 550 South Main Street
 Orange, California 92863-1584

Dear Kirk:

OCTA received the BBB- indicative rating from S&P Global required by Build America Bureau in July in order to submit a formal credit review for OCTA's requested \$627 million TIFIA loan. OCTA needs two investment grade ratings from "national recognized statistical rating organizations" (NRSROs) approved by the Securities and Exchange Commission (SEC) for the requested TIFIA loan financial closing. The SEC currently approves 10 firms as NRSROs. Only five of the SEC-approved rating agencies have rated TIFIA loans.

OCTA flew to New York to update the five SEC-approved rating agencies on December 20 and 21 on the I-405 Improvement Project (405 Project) and the preliminary plan of finance for the TIFIA loan. The purpose of meetings was to update Moody's, S&P, and Fitch on progress since July and introduce the 405 Project to Kroll and DBRS as well as to respond to questions. OCTA told the credit analysts that, after discussions with the rating agency's business development officers (who generally do not participate in credit rating meetings), it plans to engage two rating agencies in January and proceed with formal rating agency presentations required to close the TIFIA loan. OCTA met with the five following rating agencies in New York.

Moody's	Moody's rates OCTA's Measure M2 Sales Tax Revenue Bonds Aa2 and 91 Express Lanes Bonds A1. Moody's has rated multiple TIFIA credits.
Fitch Ratings	Fitch rates OCTA's Measure M2 Sales Tax Revenue Bonds AA+ and 91 Express Lanes Bonds A. Fitch has rated multiple TIFIA credits.
Kroll Bond Rating Agency	Kroll is a relatively new SEC-approved rating agency. Kroll does not currently rate any OCTA credits. Kroll has recently rated multiple TIFIA loans.
S&P Global Ratings	S&P rates OCTA's Measure M2 Sales Tax Revenue Bonds AA+, 91 Express Lanes Bonds AA- and gave the TIFIA Loan a BBB- indicative rating last July. S&P has rated multiple TIFIA credits.
DBRS	DBRS, headquartered in Toronto, does not currently rate any OCTA credits. DBRS has recently rated TIFIA loans for managed lanes project in North Carolina and Texas.

Chair Lori Donchak, Vice-Chair Michael Hennessey, as well as Darrell Johnson, Andy Oftelie, Jeff Mills, joined you in representing OCTA at the New York meetings. Steven Abendschein from Stantec, Barney Allison from Nossaman, Kevin O'Brien from Bank of American Merrill Lynch and I attended the updates as well.

The Treasury/Toll Roads Department and the Capital Projects Department, with support from many departments throughout OCTA, worked diligently in December to update the comprehensive 99-page spiral bound PowerPoint presentation, entitled "I-405 Improvement Project Update December 2016", which was presented at each of OCTA's meetings.



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The December 2016 update presentation was organized as follows:

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Tuesday, December 20

Moody's: We arrived at Moody's, across the street from 7 World Trade Center, for a 9:00 a.m. meeting. Moody's was represented by Maria Matesanz, Michael Mulvaney, and Jenna Schlags from their New York office. Maria and Jenna are infrastructure specialists and Michael Mulvaney heads Moody's project finance group.

Moody's started the meeting with a 30-minute "transparency presentation" handout based on key metrics which explained the methodology of Moody's existing rating of the 91 Express Lanes. Maria Matesanz explained that Moody's is currently updating its toll road credit metrics and that she doubted that the new metrics anticipated to be released in March will impact Moody's existing A1 rating of the 91 Express Lanes.

After the "transparency presentation", Chair Donchak introduced the 405 Project discussion by describing the importance of the 405 Project, "It's a bridge that connects Los Angeles county to the heart of Orange County. The 16 miles will take almost two hours in 2040 if the 405 Project is not done. We have our eye on the opening in January 2023, which is just around the corner in a conversation about infrastructure."

Vice-Chair Michael Hennessey spoke next. He emphasized, "We have delivered all the projects from our M1 sales tax measure. We stress our slogan, promises made, promises kept. We have the confidence of our community."

Darrell Johnson presented the 405 Project Overview section. He used the artist's rendition of the completed 405 Project that the Board has seen many times on page 15 to show the Moody's analysts how the completed 405 Project will look, "As you can see, there's no congestion. But this is a utopian view. It never looks empty like this. The yellow lanes are the new shoulder lanes and the green lanes are the new dual-lane 405 Express Lanes. All you normally see is congestion and brake lights in both directions."

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Jeff Mills presented the sections entitled 405 Project Design-Builder and 405 Project Risks and Mitigation. Jeff said, “The \$1.9 billion project presents OCTA with opportunities and challenges. The arterials are laid out on a grid basis but the bridges are skewed at an angle. This adds to the project complexity. However, actual construction of the bridges and adding the new shoulder lanes is relatively straightforward.”

Jeff described the program and construction management risk mitigations and Barney Allison described the security package in the Design-Build contract.

Steven Abendschein gave an overview of the Stantec traffic and revenue forecast.

Fitch Ratings: We arrived at Fitch for an 11 a.m. meeting. Fitch was represented by Cherian George and Tanya Langman from Fitch’s New York office and Scott Monroe from Fitch’s San Francisco office. OCTA enjoyed a lively two-hour dialogue with the Fitch credit analysts during the December 2016 update.

Chair Lori Donchak introduced the OCTA presentation and 405 Project team and summarized the highlights of the presentation. She emphasized the importance of the 405 Project to Orange County, “The 405 is the busiest corridor in the U.S. Every day we are not pushing the project, people want to know why.”

Darrell Johnson focused on the travel time benefits of the 405 Project, “Page 18 is my favorite page. It graphically shows the time savings. In the no-build scenario in 2040, it will take more than two hours to travel the 16 miles in the general purposes as well as in the HOV lanes in 2040.”

Jeff Mills described the details of the 405 Project Design-Builder’s scope and milestones. Jeff also described the members of the OC 405 Partners team. Fitch appreciated hearing about OHL’s recent Orange County experience and the number of major participants and subcontracts with California experience. The Fitch analysts asked many technical questions about the 405 Project scope and its impact on local arterials as well as the Pacific Coast Highway.

Barney Allison described the security package in the Design-Build contract. Fitch asked several technical questions about the Design-Build contract including questions about the parent guarantees of OHL and Astaldi and their joint and several obligations. Fitch’s Tanya Langman also asked questions about the status of OCTA’s ROW mitigation approach. Fitch was pleased to hear that OCTA has carefully planned its ROW strategy and had doubled its original ROW mitigation contingencies.

Kroll: We arrived at Kroll for a 2 p.m. meeting at Kroll’s mid-town office. Kroll was represented by credit analysts Karen Daly, Kate Hackett, Harvey Zachmen, and Andrew Clarke of their New York office.

Chair Lori Donchak introduced the OCTA presentation, her OCTA colleagues and the 405 Project consultants. The meeting was the first time OCTA has met with Kroll. Chair Lori Donchak said, “You’ll hear us use the word conservative today a lot. We take pride in the fact that our forecasts are conservative.”

Vice-Chair Michael Hennessey presented the section entitled Orange County Transportation Authority. He described OCTA’s history and successful project delivery experience and said, “We do two things very well, we successfully deliver projects and we manage a project just like the 405 Express Lanes which is the 91 Express Lanes. We’ve managed the 91 Express Lanes through difficult economic cycles. We implemented

Mr. Kirk Avila
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our Toll Policy in 2003 and haven't changed it and we've maintained the quality of the 91 Express Lanes asset."

Jeff Mills described OCTA's approach to risk mitigation for the 405 Project, "We have a laser focus on identifying and mitigating risk. We've focused on four primary risks. ROW acquisition, utility relocation, third-party agreements, and permits as well a fifth key risk, geotechnical. In my experience, if you address these risks, you'll have a successful project."

Wednesday, December 21

Standard & Poor's: We arrived at 10:00 a.m. at their offices at 55 Water Street. S&P was represented by Peter Murphy in New York and Todd Spence via telephone from Dallas. Due to S&P's indicative rating presentation in June, the OCTA team gave the S&P credit analysts a one hour update.

After introductions, Chair Lori Donchak told the S&P analysts, "To put you in the California frame of mind, the 405 corridor is the busiest corridor in the U.S. Our constituents want the 405 Project. Over 70% of Orange County voters approved the M2 vote which included funds for the 405 general purpose lanes." Chair Lori Donchak also emphasized that Caltrans wants the 405 Project, "Caltrans is a true partner. They have contributed \$82 million to the 405 Project and they have reviewed the 405 Express Lanes Toll Policy. Their support is based in part on their growing interest in managed lanes."

Vice-Chair Michael Hennessey added, "Our reputation is based on two things. We know how to build things and operate managed lanes. In short, we know how to get things done."

Darrell Johnson emphasized the importance of two major milestones reached at OCTA's November 14, 2016 Board meeting, "The Board awarded the 405 Project Design-Build contract to OC 405 Partners. In addition, the Board approved for the Toll Operating Agreement negotiated with Caltrans. Toll Operating Agreement allows OCTA to charge 405 Express Lanes for 40 years after opening and gives OCTA total control over the use of excess toll revenues. Local control was critical to OCTA's Board."

Jeff Mills described the program and construction management risk mitigations, Barney Allison described the security package in the Design-Build contract and Andy Oftelie provided an overview of the preliminary TIFIA loan financial model and the 405 Project source of funds and uses outlined on page 66.

Darrell Johnson described the Summary of Requested TIFIA Loan Credit Strengths outlined on pages 72 and 73. The S&P credit analysts were impressed and told OCTA that they looked forward to the opportunity to participate in the formal investment grade rating process beginning in January.

DBRS: We arrived at 11:00 a.m. at their offices at 140 Broadway Street. DBRS was represented by Eric Beauchemin, Kevin Li, and Andrew Chiu of their Toronto, Canada, headquarters office. DBRS has significant experience in Canadian project finance projects and has used their experience to rapidly build a presence in rating TIFIA loans.

Mr. Kirk Avila
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After Chair Lori Donchak introduced the presentation team and 405 Project team, she gave the DBRS credit analysts an overview of the 16-mile 405 Project and its importance to OCTA and to drivers throughout Southern California. Vice Chair Michael Hennessey gave a thorough overview of OCTA's history and services as well as OCTA's success in delivering projects and managing the 91 Express Lanes.

Darrell Johnson provided an overview of the 405 Project. DBRS's Eric Beauchemin was intrigued with Darrell's discussion of OCTA's managing environmental opposition. "Large infrastructure projects frequently face environmental opposition." acknowledged Darrell. "OCTA has a master mitigation plan. We have 1,300 acres that we have purchased and set aside. We have also set aside funds for the annual maintenance of the environmentally sensitive areas. We looked at our needs and the environmentalist's needs and we successfully brought them together."

Jeff Mills described the program and construction management risk mitigations and Barney Allison described the security package in the Design-Build contract, Steven Abendschein gave an overview of the Stantec traffic and revenue forecast, and Andy Oftelie provided a brief description of the preliminary TIFIA loan financial plan.

Eric Beauchemin and his colleagues asked a series of technical questions about the Stantec traffic and revenue forecast, the Design-Builder's financial and technical capabilities, the traffic management plan, ROW, and the Design-Build contract security package. The questions from the Canadian firm, based on their project finance experience, were helpful to receive and address with the DBRS credit analysts.

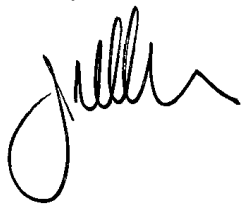
After the OCTA update on the 405 Project, Eric Beauchemin provided OCTA with an overview DBRS.

Summary:

The December 2016 New York Update meetings were well received. The credit analysts at the rating agencies thanked OCTA for the detailed information in the December 2016 Update book and reiterated that their business development officers were available for questions in January.

I have attached a complete list of the rating agency credit analysts who participated in OCTA's December 2016 New York update meetings.

Sincerely,



James W. Martling
Principal

Mr. Kirk Avila

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Agency	Name	Title	Location
Moody's	Maria Matesanz	Senior VP, Global Project & Infrastructure Group	New York, NY
Moody's	Michael Mulvaney	Managing Director, Global Project & Infrastructure Group	New York, NY
Moody's	Jenna Schlags	Assistant VP, Global Project & Infrastructure Group	New York, NY
Fitch	Cherian George	Managing Director, Project & Infrastructure Finance	New York, NY
Fitch	Scott Monroe	Director, Project & Infrastructure Finance	San Francisco
Fitch	Tanya Langman	Director, Project & Infrastructure Finance	New York, NY
Kroll	Karen Daly	Senior Managing Director, Public Finance	New York, NY
Kroll	Kate Hackett	Managing Director, Public Finance	New York, NY
Kroll	Harvey Zachem	Managing Director, Public Finance	New York, NY
Kroll	Andrews Clarke	Senior Director, Public Finance	New York, NY
S&P Global	Peter Murphy	Managing Director & Analytical Manager, Public Finance	New York, NY
S&P Global	Todd Spence	Director, Public Finance	Dallas, TX
DBRS	Eric Beauchemin	Managing Director, Global Corporate	Toronto
DBRS	Kevin Li	Vice President, Infrastructure Finance	Toronto
DBRS	Andrew Chiu	Vice President, Infrastructure Finance	Toronto



Orange County Transportation Authority

I-405 Improvement Project

Rating Agency Update

December 2016



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Appendix A – 405 Project Details

Appendix B – Measure M Programs

Appendix C – Orange County Employment Update

Appendix D – Toll Policy Details

Appendix E – TIFIA Model Assumptions





1. Presentation Participants and Experience

Presentation Participants

- ❑ Lori Donchak, *Chair*, OCTA Board of Directors
- ❑ Michael Hennessey, *Vice-Chair*, OCTA Board of Directors
- ❑ Darrell Johnson, *Chief Executive Officer* – OCTA
- ❑ Andy Oftelie, *Executive Director, Finance & Administration* – OCTA
- ❑ Jeff Mills, *405 Program Manager* – OCTA
- ❑ Kirk Avila, *Treasurer and General Manager of the 91 Express Lanes* – OCTA
- ❑ Steven Abendschein, *Senior Principal* – Stantec
- ❑ Barney Allison, *Bond/Procurement Counsel* – Nossaman LLP
- ❑ Kevin O'Brien, *Managing Director*, – BAML
- ❑ Sandra Brinkert, *Managing Director* – BAML
- ❑ Jim Martling, *Principal* – Sperry

405 Project Team

- ❑ Orange County Transportation Authority, *Sponsor and Project Manager*
- ❑ Caltrans, *Partner*
- ❑ Federal Highway Administration, *Partner*
- ❑ Stantec Consulting Services Inc., *Traffic and Revenue Study Consultant*
- ❑ Woodruff, Spradlin & Smart, *General Counsel*
- ❑ Nossaman LLP, *Bond/Procurement Counsel*
- ❑ Parsons Transportation Group, *Program Management Consultant*
- ❑ Jacobs Engineering Group, *Construction Management Consultant*
- ❑ HNTB, *O&M, Non-Toll Revenue, Leakage, Major Maintenance Assumptions Consultant*
- ❑ Kleinfelder/Simon Wong Engineering, *Public Outreach*
- ❑ Sperry Capital Inc., *Financial Advisor*
- ❑ Bank of America Merrill Lynch, *TIFIA Advisor/Underwriter*
- ❑ Toll Lane System Integrator, *initiate procurement in 2017*
- ❑ Toll Lanes Operator, *initiate procurement in 2018*
- ❑ OC 405 Partners, *Design Builder*



Why We Are Here

- ❑ OCTA is here today to present an overview of the 405 Project including the 405 Express Lanes, the Stantec Investment Grade 405 Express Lanes Traffic and Revenue Study, and discuss the preliminary TIFIA loan features in the financial model
- ❑ OCTA submitted a Letter of Interest (LOI) February 17, 2016 for a \$561 million TIFIA loan based on an assumed \$1.7 billion 405 Project Cost
- ❑ S&P Global provided OCTA with a BBB- indicative credit rating on July 20, 2016, after a review of 405 Project documents and the preliminary financial model based on the \$1.9 billion 405 Project cost and \$627 million TIFIA loan
- ❑ OCTA made an oral presentation to the Build America Bureau August 18, 2016 and is currently in the credit review process
- ❑ The estimated 405 Project Cost (based on the Design-Builder Contract bid amount) is \$1.9 billion
- ❑ OCTA needs two investment grade ratings for the TIFIA loan financial close
- ❑ OCTA plans to engage two credit rating agencies to rate the TIFIA loan in January and to initiate a formal investment grade request process shortly thereafter
- ❑ OCTA expects the TIFIA loan to reach financial close in March 2017



Recent Board of Directors Actions on the I-405 Project

☐ April 2015

- Terms and Conditions with Caltrans approved
- Authorization to acquire right-of-way

☐ May 2015

- Awarded construction management contract

☐ October 2015

- 405 Express Lanes toll policy goals approved
- 405 Express Lanes other policy decisions approved

☐ May 2016

- Initial toll policy selected for the 405 Express Lanes (first 3.5 years has HOV2+ free during non-peak hours and HOV3+ free all day, after 3.5 years allows HOV3+ free all day only)
- Preliminary finance plan approved

☐ November 2016

- Design-build team selected and approved
- Toll Operating Agreement with Caltrans approved for the 405 Express Lanes





2. Orange County Transportation Authority

Orange County Transportation Authority

- ❑ OCTA is a multi-modal transportation agency created 25 years ago in 1991 with the consolidation of seven separate agencies
- ❑ Governed by a 17-member Board of Directors consisting of 5 county supervisors, 10 city members, 2 public members and also includes the Director of Caltrans as a non-voting member
- ❑ OCTA serves Orange County residents and commuters by managing and providing:
 - Countywide bus and paratransit service
 - Metrolink commuter rail
 - Freeway improvements
 - Street and road improvements
 - 91 Express Lanes
 - LOSSAN Corridor services
 - Motorist aid services
 - Taxi program regulation
 - Bike trail and rideshare programs
- ❑ OCTA administered the Measure M1 (M1) 20-year sales tax program (1991-2011) and is currently administering the Measure M2 (M2) 30-year sales tax program (2011-2041)



OCTA Experience

❑ OCTA's history includes:

- Experienced team of executive staff
- Operating the 91 Express Lanes for 14 years
- Issued approximately \$2 billion of M1 and M2 bonds (rated AA+/Aa2/AA+) and 4 issues of non-recourse 91 Express Lanes bonds which are now rated AA-/A1/A
- Major project delivery experience with highways and grade separation projects

❑ Successful project delivery history includes:

- Delivered a \$4 billion M1 20-year sales tax program
- Major improvements on most Orange County freeways
- \$550 million design-build project on the SR-22 freeway, the largest design-build project completed on an active freeway in California
- Delivered over \$1.5 billion of M2 projects to date including various freeway, local streets and roads, and transit projects



OCTA's Managed Lanes Experience

- ❑ 91 Express Lanes were developed as a P3 concession and opened in 1995 as the first U.S. toll road to use all-electronic tolling to collect tolls based on congestion management pricing; OCTA purchased the 91 Express Lanes on January 3, 2003
- ❑ OCTA runs the 91 Express Lanes like a business:
 - Operations
 - Working with private and public sectors to manage the facility that currently has average daily traffic volumes of approximately 36,000
 - Demonstrated operating success through experience in strong and recessionary economies which resulted in upgrades by S&P and Fitch
 - Debt
 - Issued closed-lien \$195 million non-recourse toll road revenue bonds in November 2003
 - Closed \$100 million private placement in 2007 and \$100 million private placement in 2010
 - Refinanced 2003 bonds in 2013 with an open-lien indenture and \$124 million in non-recourse toll road revenue bonds
 - 2013 bonds are rated AA-/A1/A
 - Customer service
 - 91 percent of customers indicated they were satisfied with their experiences when using the 91 Express Lanes





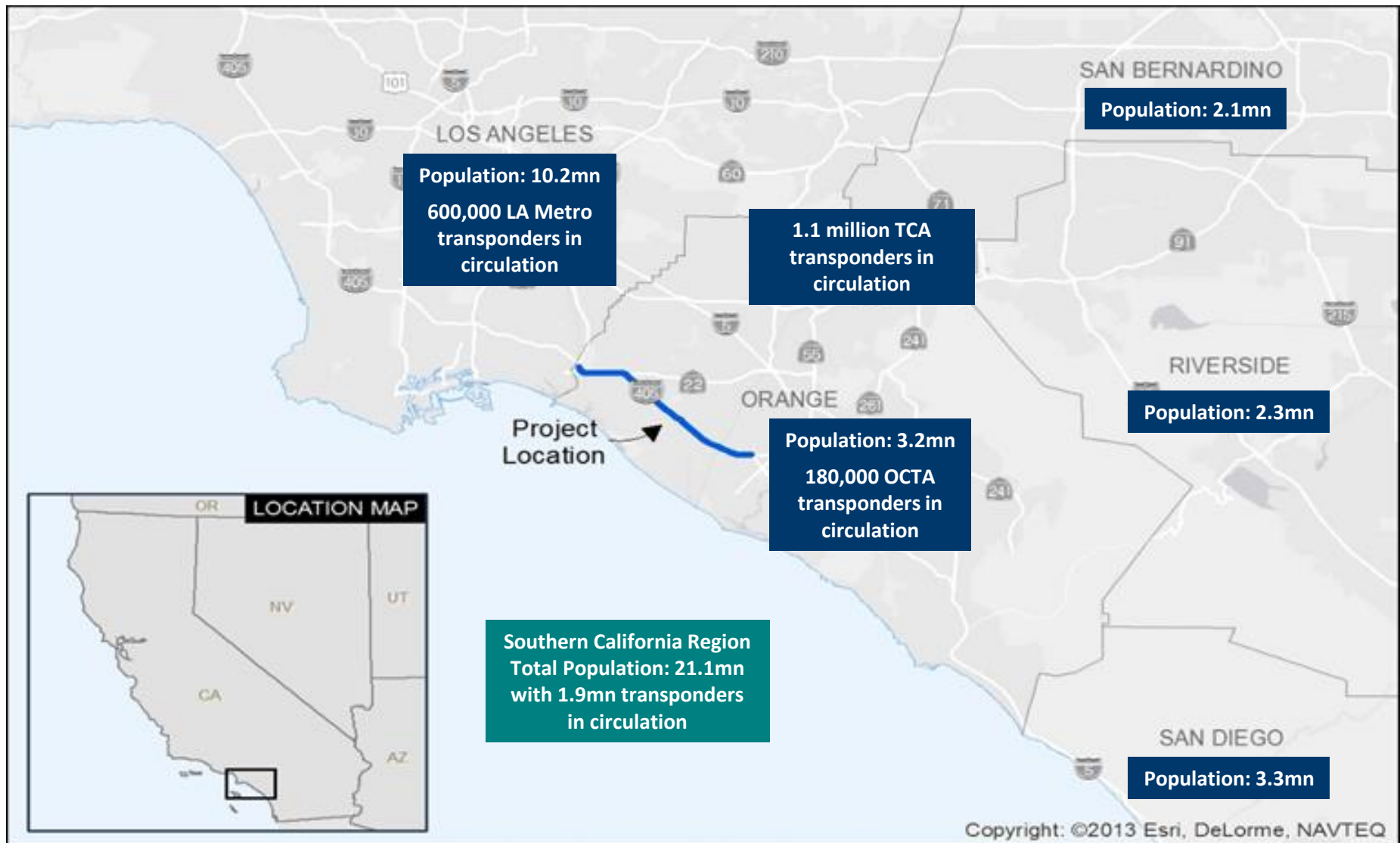
3. 405 Project Overview

Purpose and Need

- ❑ I-405 is an essential part of the National Highway System and an integral part of the FHWA's Primary Freight Network
- ❑ The 405 Project is a 16-mile corridor that runs north from the SR-73 to the I-605 and passes through, or adjacent to, the cities of Costa Mesa, Fountain Valley, Huntington Beach, Westminster, Garden Grove, Seal Beach, Long Beach, and the community of Rossmore
- ❑ The 405 Project corridor carries between 257,000 to 370,000 vehicles per day (by 2040, these figures are projected to grow to 288,000 to 427,000 vehicles per day)
- ❑ There is insufficient capacity within the 405 Project corridor on the I-405 to accommodate existing and projected travel demands
- ❑ The 405 Project corridor mainline general purpose (GP) lanes and high occupancy vehicle (HOV) lanes have operational and geometric deficiencies
- ❑ The interchanges in the 405 Project area have geometric, storage, and operational capacity deficiencies
- ❑ The 405 Project corridor currently has limitations in detecting traffic incidents and providing rapid response and clearance due to lack of capacity and technological infrastructure



405 Project Map

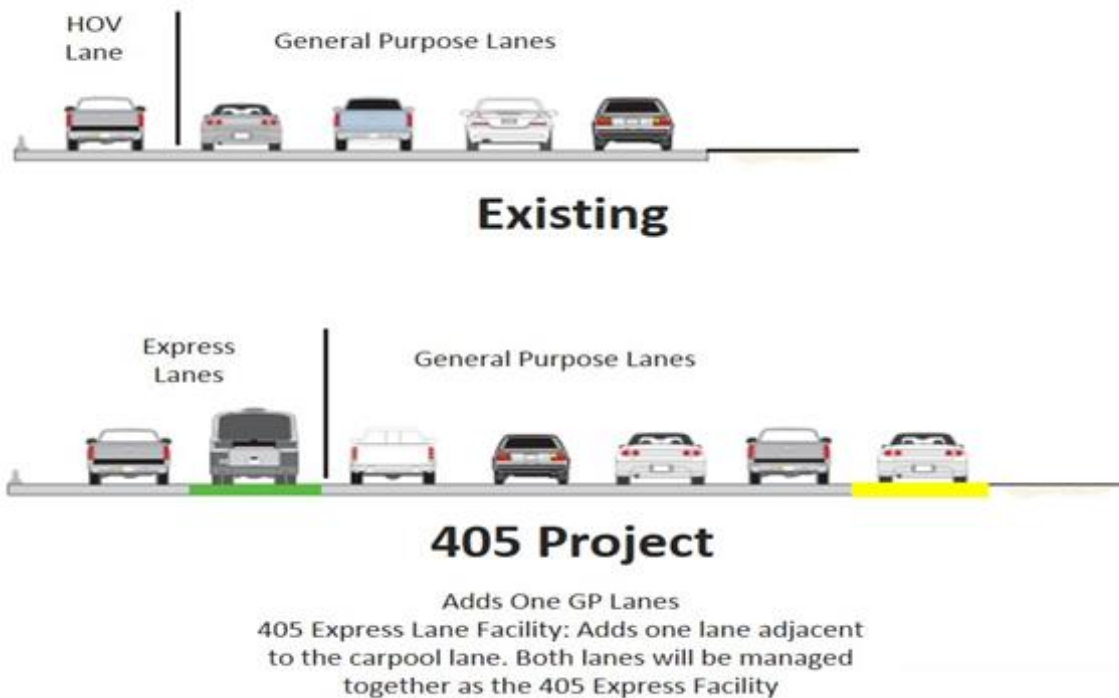


Source: (Population) California Department of Finance
Transponder sources: LA Metro, TCA, and OCTA



405 Project Schematic View

The new GP lane is highlighted in yellow and the new 405 Express Lane in the I-405 median is highlighted in green



405 Project Artist's Rendition

The new GP lanes are highlighted in yellow. Existing carpool lanes that will be combined with the new 405 Express Lanes to provide a dual-lane express lanes facility highlighted in green



405 Project Overview

- ❑ The estimated \$1.9 billion 405 Project improves mobility and fixes operational deficiencies along one of the most congested highway corridors in the nation
- ❑ The 405 Project will add one GP lane to I-405 from Euclid Street north to the I-605 interchange near the Los Angeles county line in each direction and add a tolled express lane in each direction from the SR-73 north to the SR-22 that will combine with the existing HOV lanes to create 2x2 405 Express Lanes in the I-405 median from SR-73 to I-605
- ❑ Significant 405 Project Scope features include:
 - 18 bridge replacements (overcrossings) plus new and widened bridges
 - Interchange reconfigurations
 - Auxiliary lane improvements
 - Arterial improvements
 - Drainage improvements
 - Tolling infrastructure
 - Utility relocations
 - Ramp improvements
 - Aesthetics and landscaping
 - New and replaced soundwalls
 - Transportation System Management (TSM) and Transportation Demand Management (TDM) improvements



Benefits

- ❑ The 405 Project will significantly enhance local and regional mobility, increase operational efficiencies, goods movement and economic competitiveness, air quality, and safety. The benefits of the 405 Project include:
 - Ability to provide reliable, congestion-free travel in the 405 Express Lanes
 - Stantec estimates that the 405 Express Lanes will initially offer about 14 to 17 minutes of travel time savings in each direction versus the GP lanes
 - Improves traffic flow on arterial routes
 - More efficient use of the Orange County and regional transportation system by encouraging transit and carpools
 - Improvement of safety and congestion by addressing operational and geometric deficiencies, and reducing accidents
 - Enhancement of the quality of life for 405 Project corridor communities by reducing demand on local streets
 - Elimination of HOV lane degradation as defined in Federal regulations
 - The offset of biological impacts from OCTA's county wide highway improvement projects due to the 405 Project's inclusion in OCTA's M2 Environmental Mitigation Program
 - The generation of excess net toll revenues must be reinvested in transportation projects in the I-405 corridor pursuant to AB 194



Travel Time Benefit Comparison

Northbound PM Peak Hour Travel Time from SR-73 to I-605

	Existing Conditions	Year 2040		
		No Build	Add One GP Lane	Add One GP Lane and Express Lane
General Purpose Lanes	25 minutes	133 minutes	57 minutes	29 minutes
High-Occupancy Vehicle/Express Lanes	19 minutes	121 minutes	54 minutes	13 minutes

Express Lanes assume high-occupancy vehicles with three or more individuals traveling for free at all times of the day

405 Project Development and Approvals

- ☐ February 2006: Major Investment Study
- ☐ July 2008: Project Study Report/Project Development Support
- ☐ May to July 2012: DEIR/EIS public review period
- ☐ February 2015: Caltrans identifies \$82 million for the 405 Project
- ☐ April 2015: Board agrees to Terms and Conditions with Caltrans, which include the 405 Express Lanes
- ☐ April 2015: OCTA Board authorization to acquire ROW
- ☐ May 2015: OCTA Board awards construction management contract
- ☐ May 15, 2015: The Record of Decision signed by Caltrans
- ☐ June 17, 2015: The Notice of Determination filed with the State
- ☐ April 11, 2016: Stantec releases the draft investment grade 405 Express Lanes traffic and revenue results that analyzed toll options A, B, and C
- ☐ April 28, 2016: FHWA completes Construction-Level Cost Estimate Review
- ☐ May 18, 2016: pursuant to AB 194, the California Transportation Commission approves tolling facility for the 405 Express Lanes
- ☐ May 23, 2016: the OCTA Board of Directors selects preliminary toll policy
- ☐ August 23, 2016: FHWA approval of Project Oversight Agreement
- ☐ September 6, 2016: FHWA approval of the Project Management Plan
- ☐ September 13, 2016: FHWA approval of Initial Financial Plan



Toll Operating Agreement Approved

- ❑ On November 14, 2016, OCTA's Board approved the Toll Operating Agreement with Caltrans
- ❑ Agreement addresses all matters related to the design, construction, maintenance, and operations of the 405 Express Lanes
- ❑ Key points of the Agreement include:
 - Term of the lease for the 405 Express Lanes shall be 40 years, beginning on the first day the 405 Express Lanes opens for public use
 - If toll revenues are found to be insufficient and refinancing of the debt is required, the lease term may be renegotiated and extended to provide for an extended term
 - OCTA shall be responsible for:
 - Operations of the 405 Express Lanes, including the collection of tolls and setting toll policy
 - Maintenance of the 405 Express Lanes
 - Overall funding and finance plans
 - Maintaining adequate reserves
 - OCTA, in partnership with Caltrans, shall develop and annually update an Expenditure Plan for potential excess toll revenue
- ❑ At the end of the term of the lease, all 405 Express Lanes property, equipment, and systems shall be transferred back to Caltrans



4. 405 Project Design-Build

405 Project Design-Builder Scope

The 405 Project will be built in a 16-mile corridor from the Los Angeles county line south to the SR-73 in Costa Mesa just north of the John Wayne Airport

Conceptual staging plans have been prepared to examine the sequence of construction to ensure a logical progression of activities

Reasonable durations have been applied in the schedule to each element of the construction and activities linked according to the sequence developed during preliminary engineering

From a technical standpoint, this is a relatively straight-forward construction project involving widening an existing freeway and typical bridge construction

Overview

16 miles total, 14 miles of 2x2 405 Express Lanes

One new GP lane in each direction

Direct connectors to/from SR-73, SR-22 and I-605

Two additional intermediate access points

Bridge improvements

6 bridge widenings

8 new bridges

18 bridge replacements

Additional improvements

Improvement of local arterials

Auxiliary lanes improvements

Improved ramp metering

New, improved sidewalks and bike facilities

Toll infrastructure CCTV, ETTM, and ETC facilities

Drainage improvements



Design-Build Recent Milestones and Next Steps

Recent Milestones	Date
Board approved award of the design-build contract to OC 405 Partners	November 14, 2016

Next Steps	Date
Notice to Proceed No. 1 for Administration and Design	January 2017
Notice to Proceed No. 2 for Construction	May 2017
Design and construction	2017-2022
405 Express Lanes open	January 2023



Design-Build Team

OC 405 Partners, Joint Venture	
Principal Participants	Notes
OHL USA	International construction firm with local Orange County experience
Astaldi Construction Corporation	International construction firm with significant experience in Florida
Major Participants	
Myers & Sons Construction	California-based heavy civil construction contractor
MCM Construction	California-based heavy civil construction contractor
All American Asphalt	California-based paving contractor
Pacific Infrastructure 405 Designers (Joint Venture) <ul style="list-style-type: none"> • Moffatt & Nichol • H.W. Lochner • Arup North America 	<ul style="list-style-type: none"> • Moffatt & Nichol has significant California design experience • Lochner has significant US design-build experience • Arup has significant California design experience
Key Subcontractors	
Advanced Civil Technologies	Local roadway design firm
Betkon	Local safety firm
Circlepoint	Local public outreach firm
Fugro Consultants	Local geotechnical design firm
Hout Construction Services	Local construction services firm
ICF International	Environmental compliance firm
Iteris	Traffic and ITS design firm
Lynn Capouya Landscape Architects	Local landscape architecture firm
TEC Management Consultants	Local utility coordination firm
The Solis Group	Local DBE coordination/compliance firm



Toll Contractor Procurements

- ☐ OCTA plans to initiate the procurement for the Toll Lanes System Integrator (TLSI) in early 2017
- ☐ The TLSI services address the design, development, implementation, testing, and maintenance of the physical roadside toll and ITS equipment and systems including the electronic toll and traffic management (ETTM) sites and other hardware used in creating and archiving toll transactions and transmitting license plate videos
- ☐ The TLSI contract award is timed to account for DB progress
- ☐ OCTA also plans to initiate the procurement for a Toll Lanes Operator (TLO) in early 2018
- ☐ The TLO will perform daily management activities such as collecting tolls, maintaining the tolling infrastructure, setting tolls based on the Board of Directors' Toll Policy, undertaking all of the back-office operations necessary for toll collection, and operating customer service centers



5. 405 Project Risks and Mitigation

Program and Construction Management

OCTA selected Parsons/HNTB in 2014 as the program management consultant (PMC) for the 405 Project. The PMC's responsibilities include:

Project Development	Project Implementation
Development of Project Management Plan (PMP) that meets requirements of federal legislation	Maintain critical path schedule in Primavera 6.0 to track progress and costs
Development of Risk Management Plan	Oversee efficient quality management program
Review of the financial and technical competence of three short-listed DB proposers	Provide proactive utility agency coordination approach
Evaluation and mitigation of geologic, utility, environmental/permitting, regulatory, ROW risks	Provide effective project controls, communications, and reporting requirements
Definition and mitigation of stakeholder and third party agency risks	Oversee detailed control of ROW acquisition
Preparation of independent Engineer's Technical Report for rating agencies and lenders	Oversee detailed control of utility conflicts and relocations

OCTA retained Jacobs Engineering Group as construction management consultant (CMC) to assist with supervising construction; OCTA, Caltrans, the PMC, the CMC, and the Design-Builder will be co-located in one office near the 405 Project corridor for improved daily management



Federal Oversight Responsibilities

Federal Oversight

☐ Cost Estimate Review (CER)

- NEPA-Level FHWA CER in 2015; Construction-Level FHWA CER in April 2016 with 95% level of confidence (FHWA requires 70% level of confidence)

☐ Project Oversight Agreement was approved by the FHWA on August 23, 2016

- Agreement assigns specific project responsibilities among FHWA and Caltrans that are necessary for development and delivery of the project
- Covers design, construction and operational phases
- Project identified by FHWA as Project of Corporate Interest (PoCI). FHWA is willing to commit additional resources to help ensure successful project delivery

☐ The PMP was approved by the FHWA on September 6, 2016

- Documents roles, responsibilities, procedures, delivery schedule, applicable standards, communications and other processes used to manage the project
- Monthly status meetings between OCTA, FHWA, Caltrans and PMC
- Risk management and other project management controls described in detail

☐ Initial Financial Plan was approved by the FHWA on September 13, 2016

- Updated annually



Caltrans Oversight Responsibilities

Caltrans Oversight

- ❑ Project Terms and Conditions Between OCTA and Caltrans
 - Approved in May 2015
 - Govern roles and responsibilities for project delivery, funding/financing, operations and net excess revenue
- ❑ NOD/ROD
 - Executed by Caltrans May 15, 2015 and June 16, 2015
- ❑ Design-Build Cooperative Agreement
 - Executed June 30, 2015
 - Governs DB, funding, oversight, construction, and ROW
 - Assigned Caltrans Corridor Manager – all key personnel co-located
 - Funds Caltrans Enhanced Oversight – personnel 100% dedicated to project
 - Funds Caltrans construction inspection oversight pursuant to AB 401
 - Active and engaged partner with aligned goals
- ❑ Toll Operating Agreement
 - Approved Project Terms and Conditions are basis of agreement
 - Approved by Board on November 14, 2016 and in signature cycle for execution

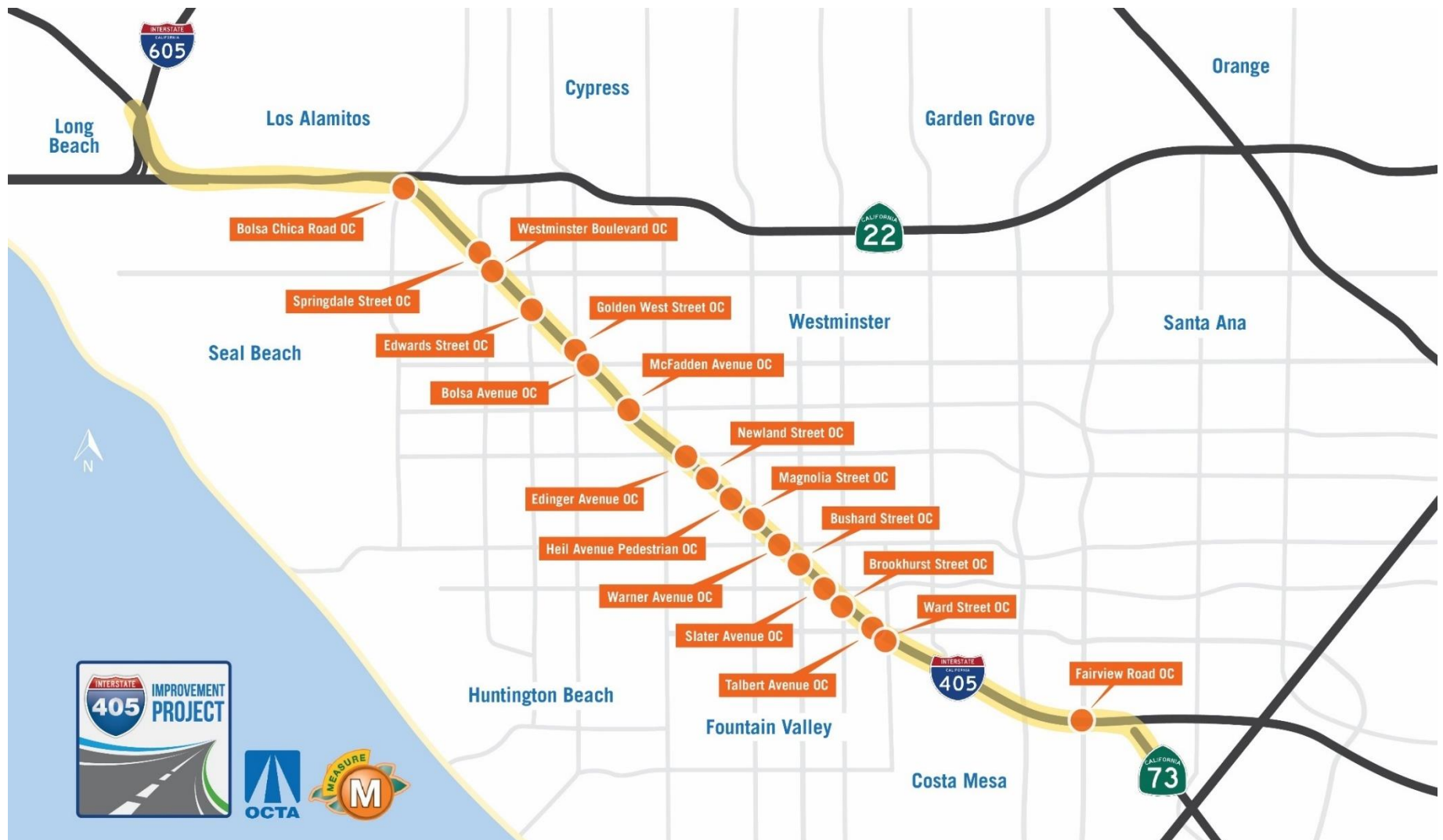


Local Oversight Responsibilities

Local Oversight

- ❑ Cooperative Agreements executed with the five cities along corridor
 - Funds City staff time to expedite design and TMP reviews, provide inspection oversight services and city police traffic services during construction
 - Sets scope of improvements and review periods for submittals
- ❑ Cooperative Agreement executed with Orange County Flood Control District
 - Funds District staff time to expedite design reviews, and provide inspection oversight services
 - Sets scope of improvements and review periods for submittals
 - Establishes and advances design concepts for various flood control improvements along Project corridor
- ❑ Cooperative Agreement executed with Orange County Sanitation District
 - Funds District staff time to expedite design reviews, and provide inspection oversight services
 - Sets review periods for submittals
 - Advances design concept for Sanitation District facility impacts

18 Bridge (Overcrossing) Replacements



Mitigating Right of Way Acquisition Risks

As of December 2, 2016, 183 Notices to Appraise have been issued; 108 offers have been presented, all residential temporary construction easements; 90 agreements have been signed; 70 escrows have been closed

OCTA is utilizing federal incentive payment program (“Sign in 60”) and Board-approved modified settlement delegation for this project to expedite right of way (ROW) acquisition

No residential relocations are required, and currently no parcels requiring eminent domain

Embedded into master schedule is a 5,000+ activity schedule to closely track the ROW acquisition progress; schedule assumes each parcel requires eminent domain and contingencies included in the schedule activities

One Union Pacific (UP) spur line railroad crossing; preliminary Agreement executed with UP for review of design plans; Construction and Maintenance Agreement contractually required one year after Design-Builder submits final plans for railroad crossing

ROW impacts to 293 parcels

76 partial fee acquisitions

24 permanent easements

193 temporary construction easements

171 residential parcels

80 commercial parcels

42 public properties

ROW 100% available to DB in October 2020



Mitigating Utility Conflict Risks

- ☐ 22 Utility Owners
- ☐ 120 Utility Conflicts
 - 70 dry utility conflicts and 50 wet utility (water and sewer) conflicts
 - Prior rights determined and confirmed with utility owner on 121 conflicts
 - Conceptual relocation plans prepared for all 122 conflicts and obtained utility owner and Caltrans concurrence
 - Conceptual relocation plans provided to Design-Builders as Reference Materials
- ☐ 38 Preliminary Engineering Agreements
 - 35 executed and the remaining three are in final stages of being executed
 - Utilized to advance design of relocation plans at OCTA's expense
- ☐ 103 Utility Agreements
 - Utility Agreements will be executed after the Design-Builder prepares final design
 - Majority of Draft Utility Agreements prepared and provided to Design-Builders as Reference Materials
- ☐ Utility performance and delivery durations negotiated with utility owners and included in Design-Build contract documents

Risk Mitigation – Security Package in DB Contract

- ☐ Proposal bond equal to 5% of the contract amount
- ☐ Performance bond equal to 50% of the contract amount
- ☐ Payment bond equal to 50% of the contract amount
- ☐ 5% retainage of payment to Design-Builder for work performed
- ☐ Joint venture team members acknowledge their joint and several liability and provide parent guarantees
- ☐ Termination for convenience
- ☐ Partnering and dispute resolution provisions
- ☐ \$125 million limit of liability with carve outs for:
 - Insurance proceeds
 - Claims under the Payment Bond
 - OCTA's cost to complete and/or correct the work
 - Fraud, gross negligence, criminal conduct

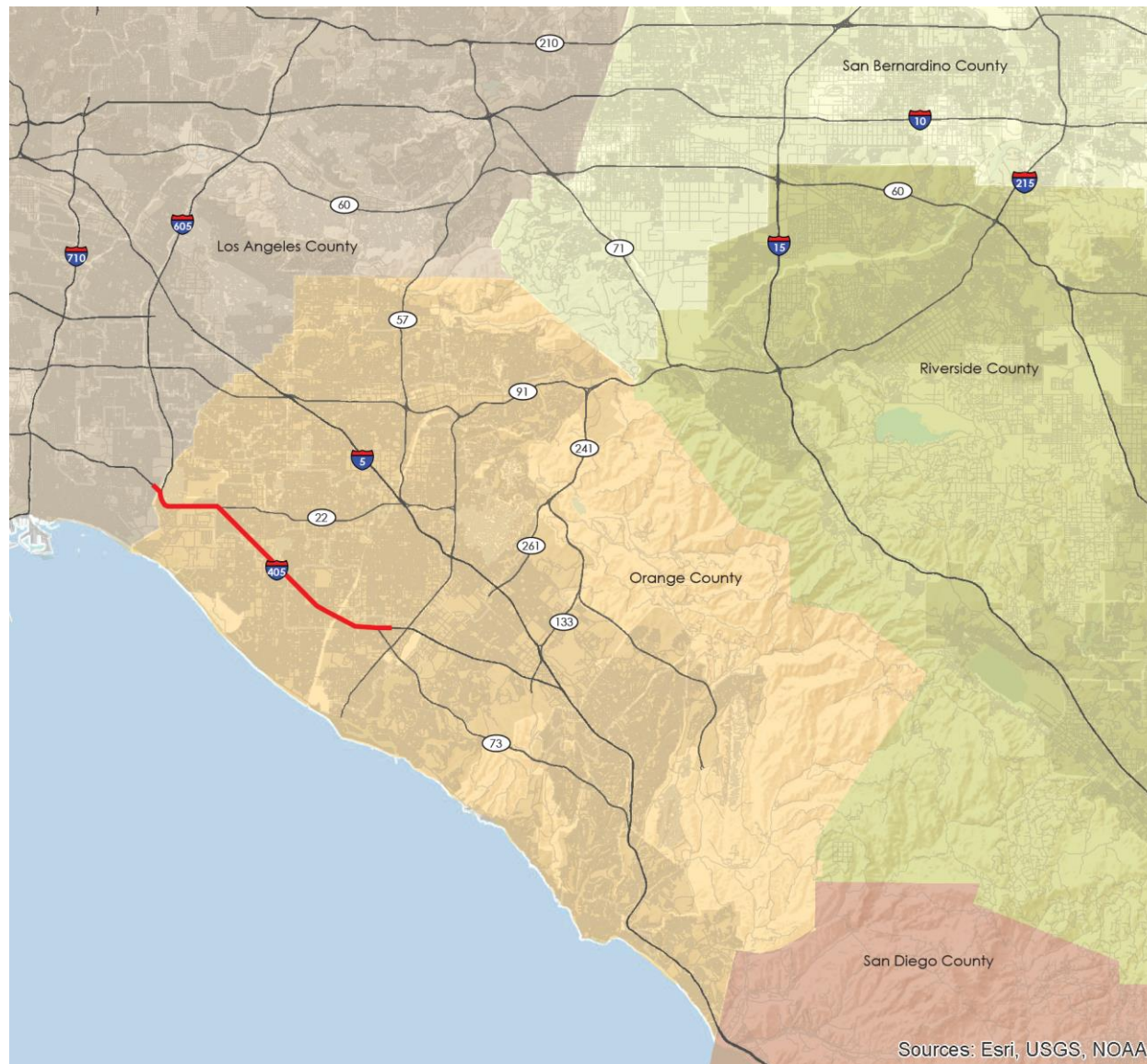
Risk Mitigation – Security Package in DB Contract (continued)

- ☐ DB shall achieve Substantial Completion within 2,049 days of NTP No. 2
- ☐ \$140,000 liquidated damages (LD's) for each day of delay in achieving Substantial Completion beyond the Substantial Completion Deadline through the date of Substantial Completion, not to exceed 365 days
- ☐ DB shall achieve Project Completion within 120 days of Substantial Completion
- ☐ \$30,000 LD's for each day after the Project Completion Deadline through the date of Project Completion, not to exceed 365 days
- ☐ DB shall achieve Final Acceptance within 120 days of Project Completion
- ☐ \$20,000 LD's for each day after the Final Acceptance Deadline and through the Final Acceptance Date, not to exceed 365 days

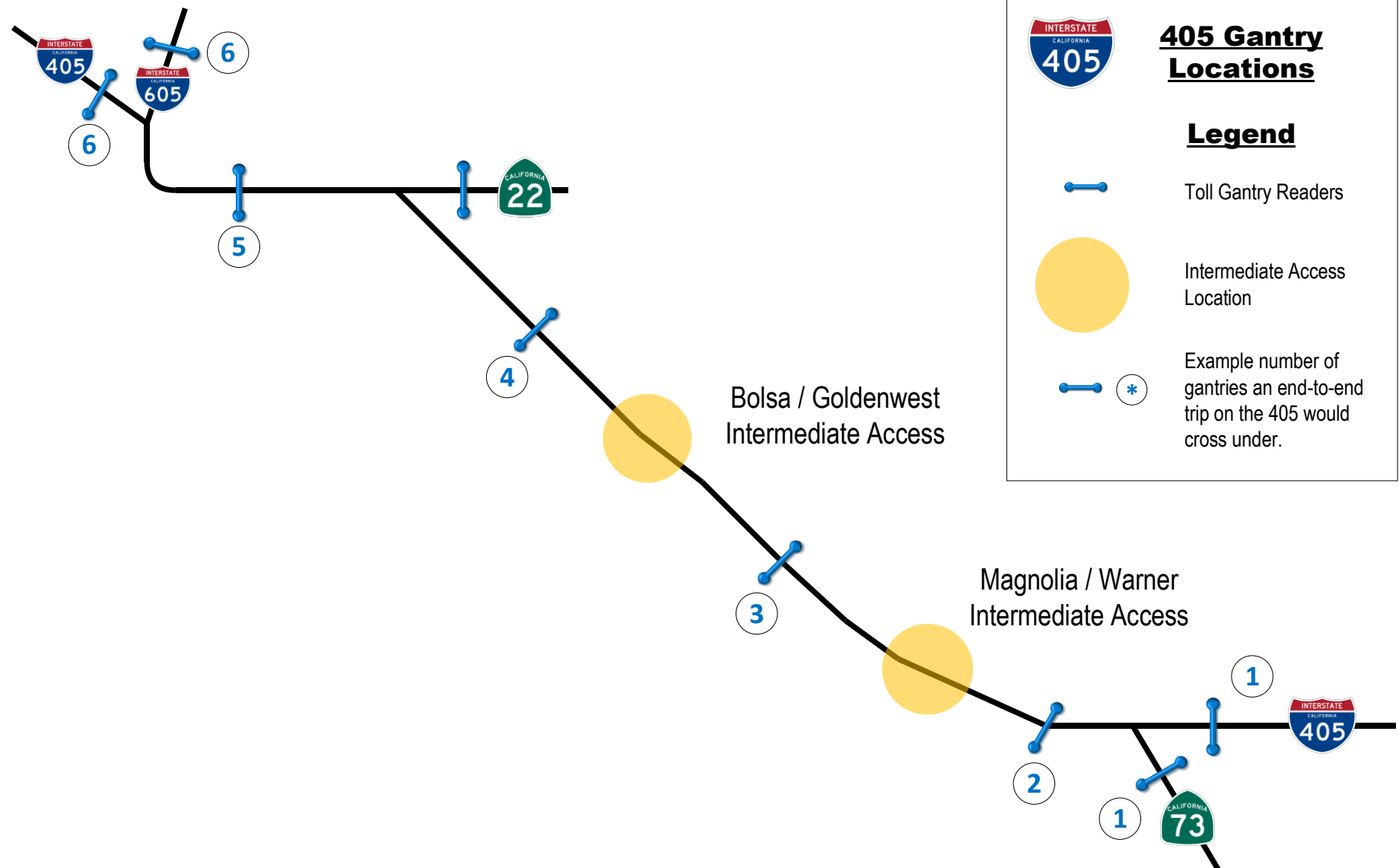


6. Stantec Traffic and Revenue Study

Regional Map



Project Configuration



I-405 Count Program

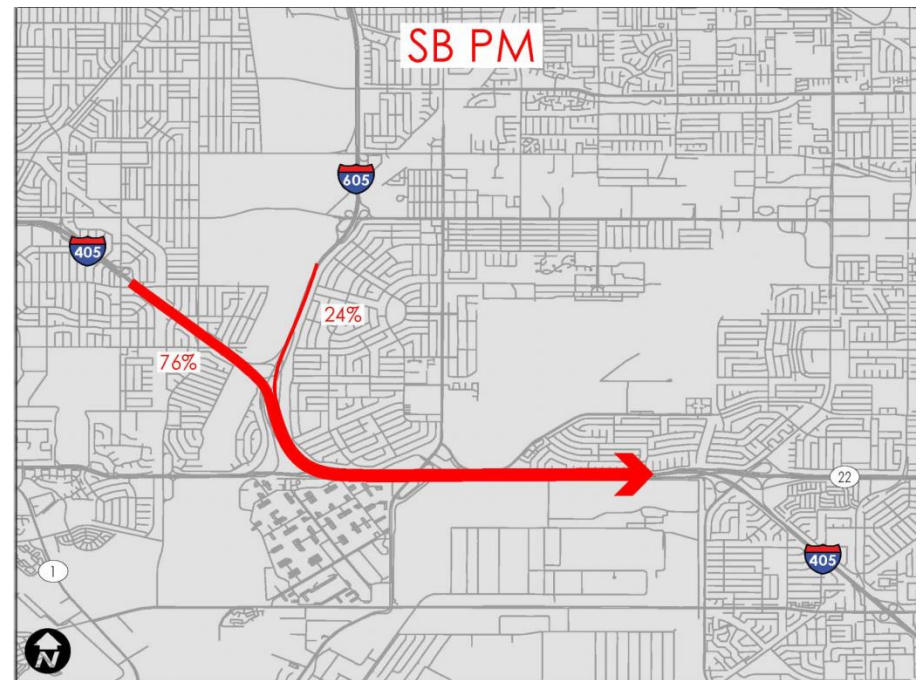
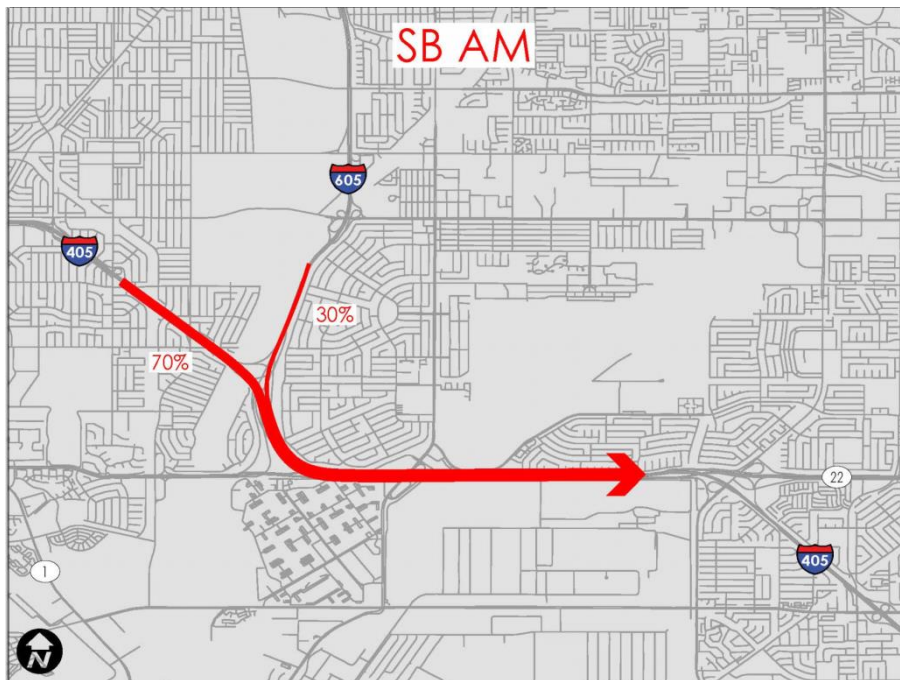
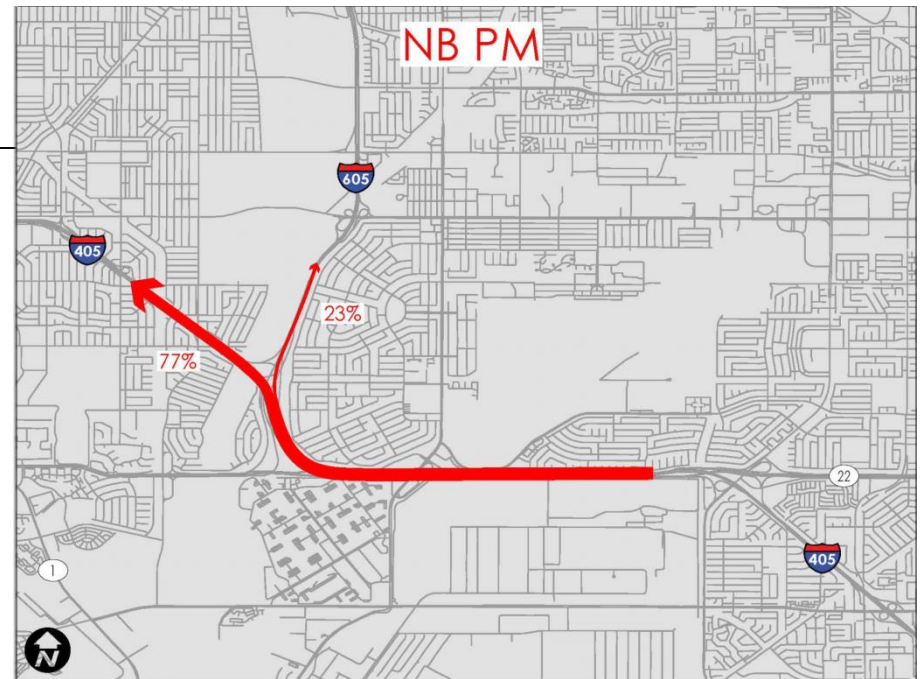
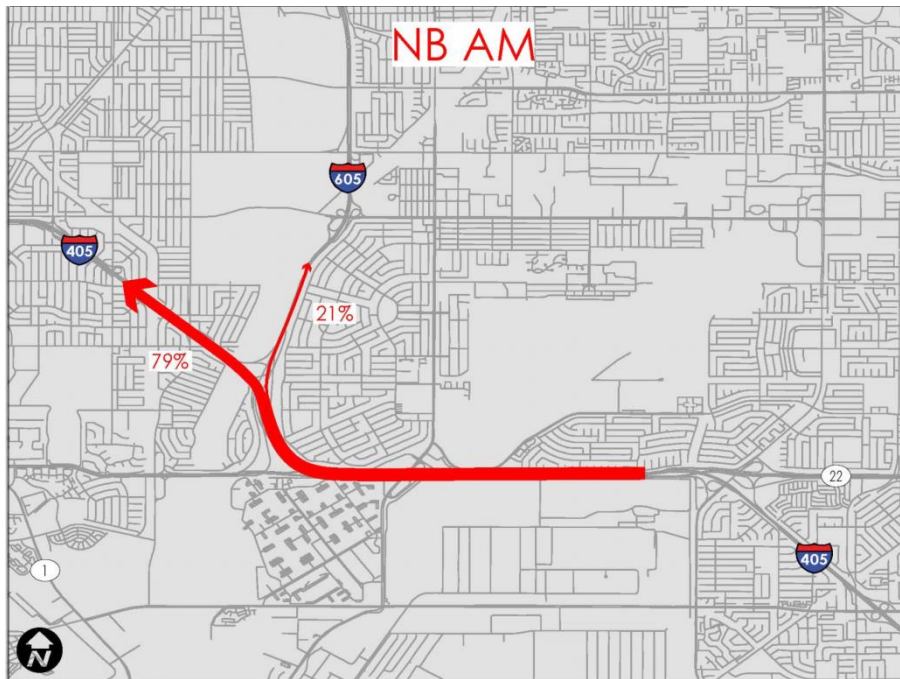






Corridor Speeds – Thursday, June 11, 2015

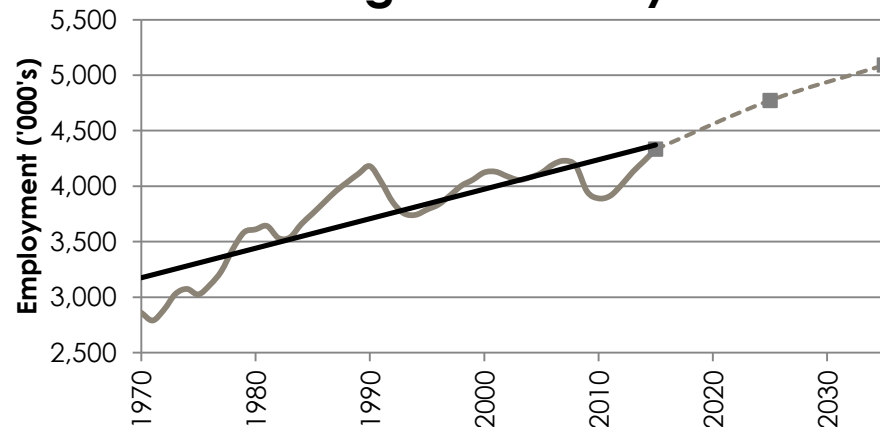
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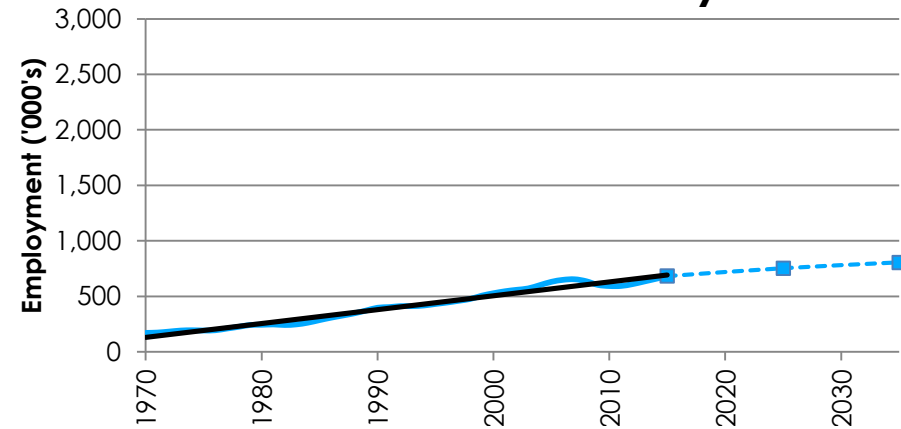
Socio-economic Forecast

Historical Employment

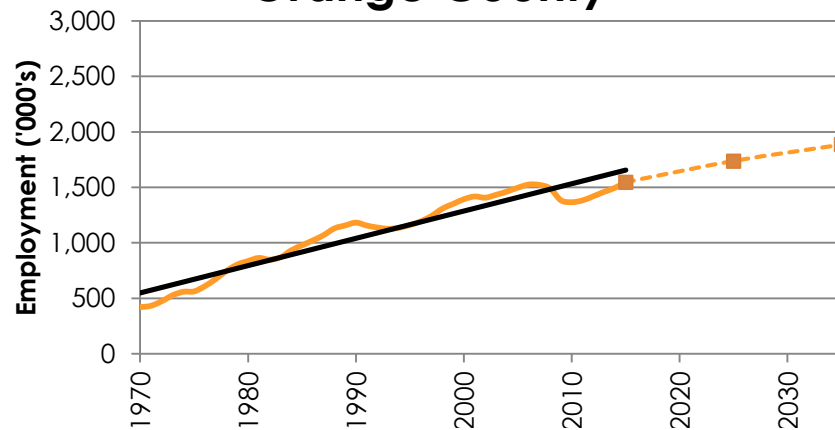
Los Angeles County



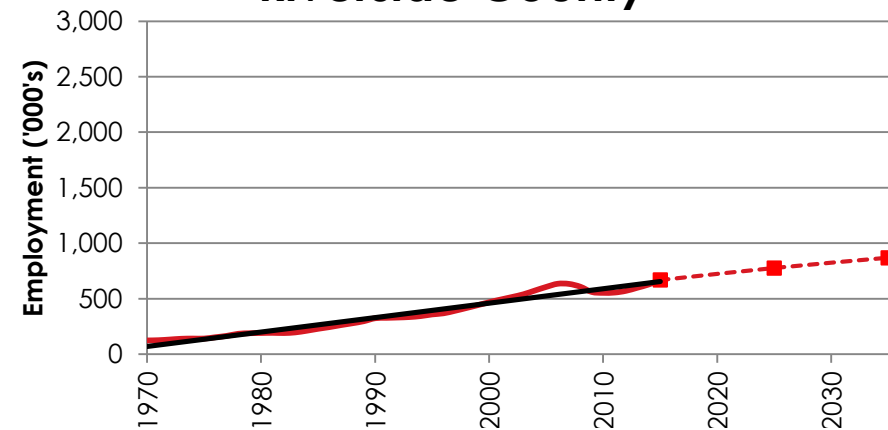
San Bernardino County



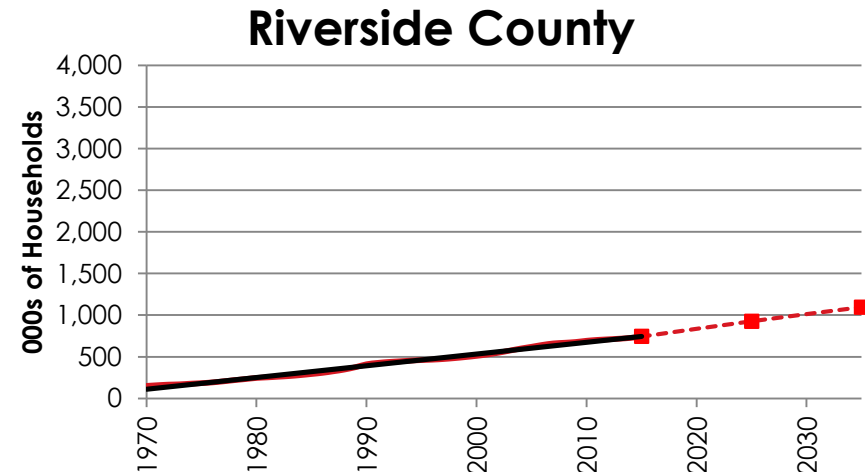
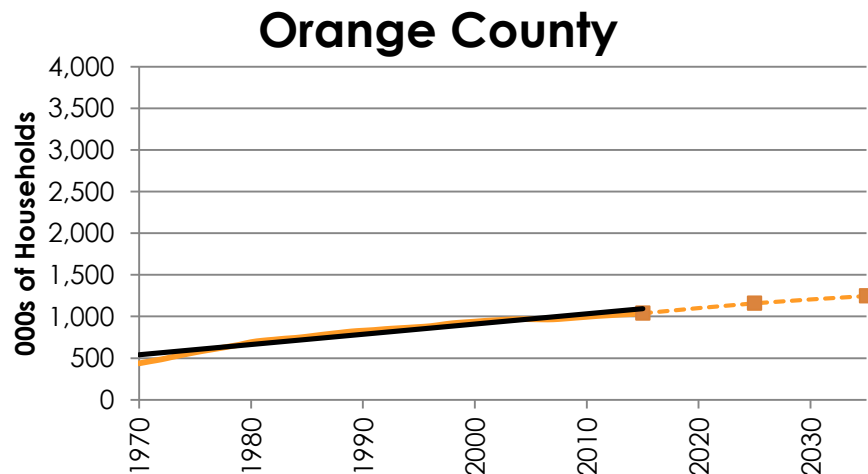
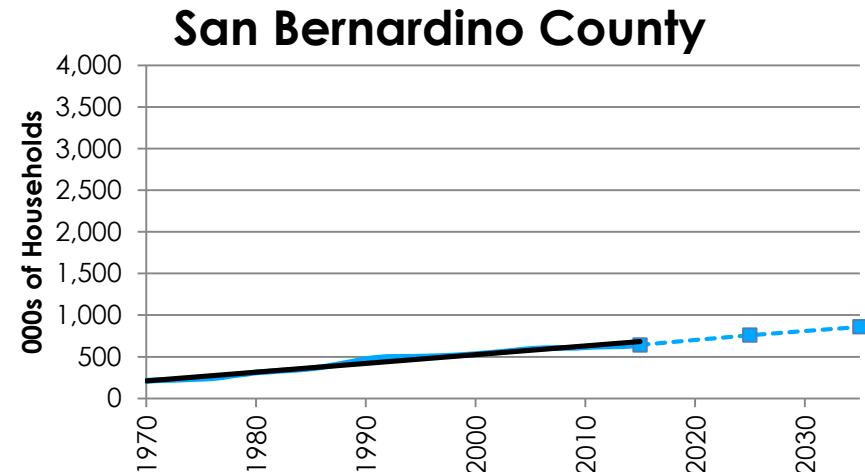
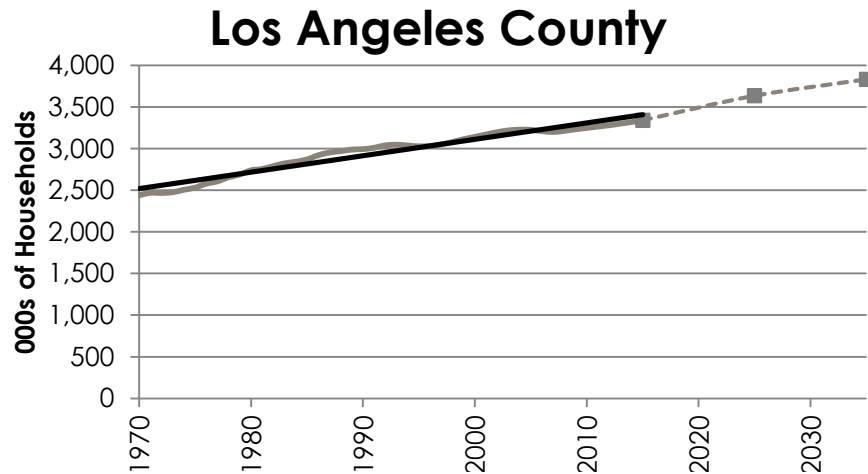
Orange County



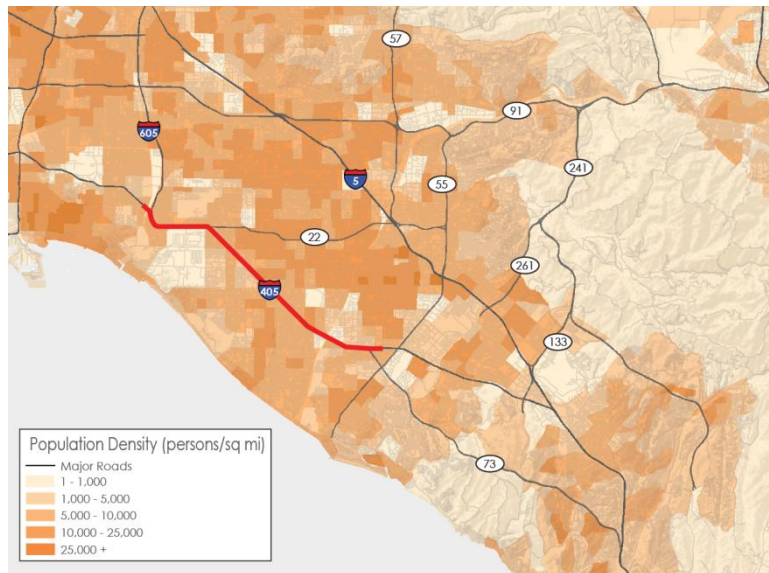
Riverside County



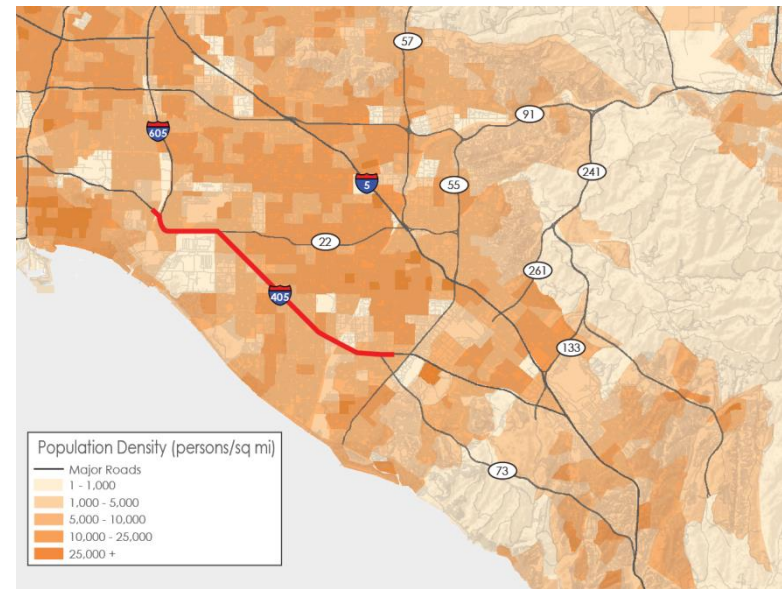
Historical Number of Households



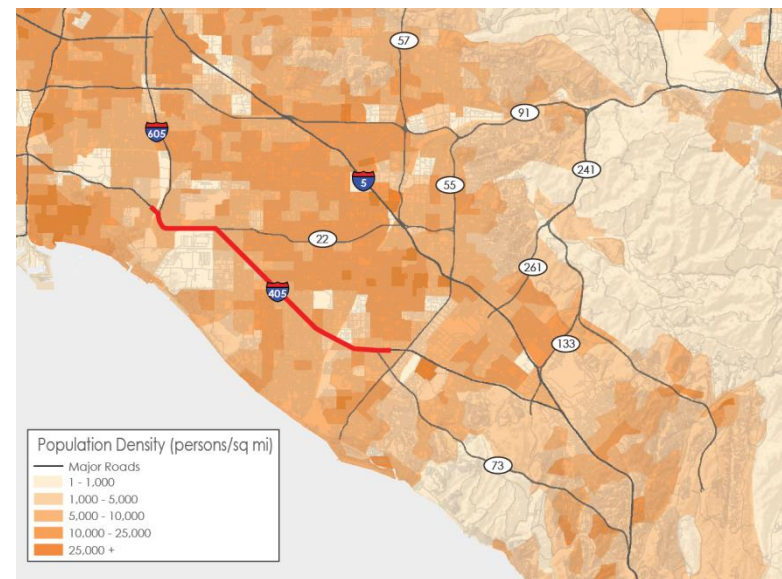
Population Density



2015

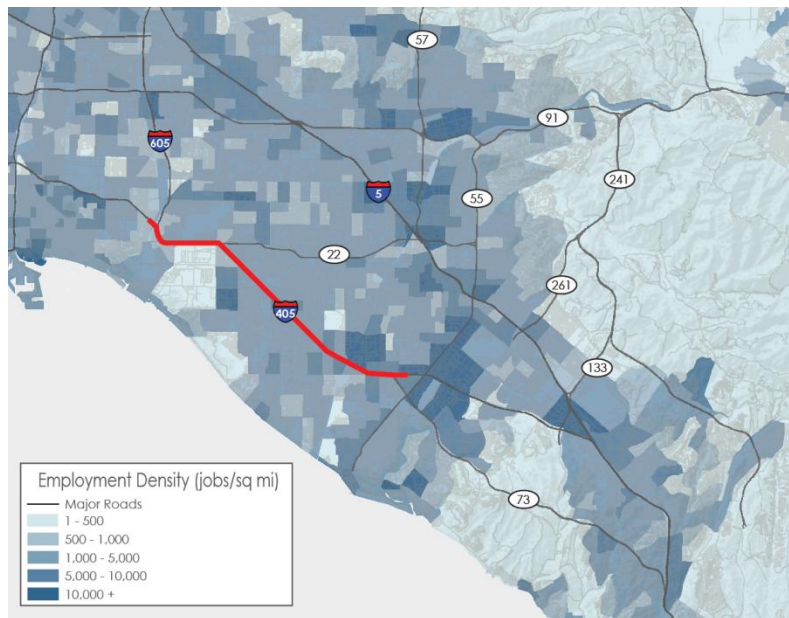


2025

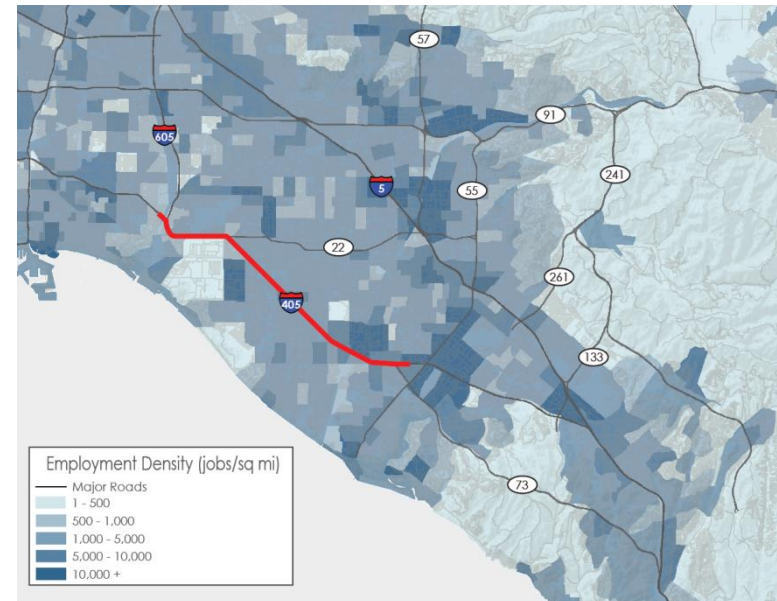


2035

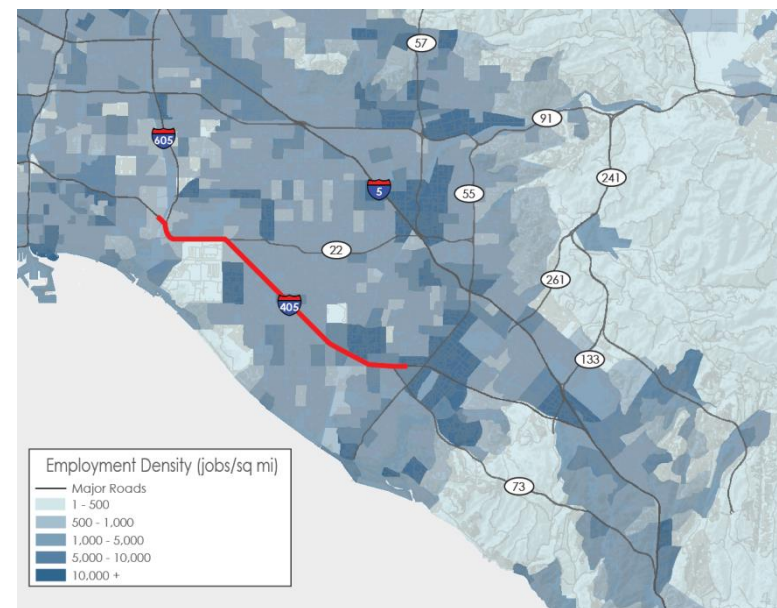
Employment Density



2015



2025



2035

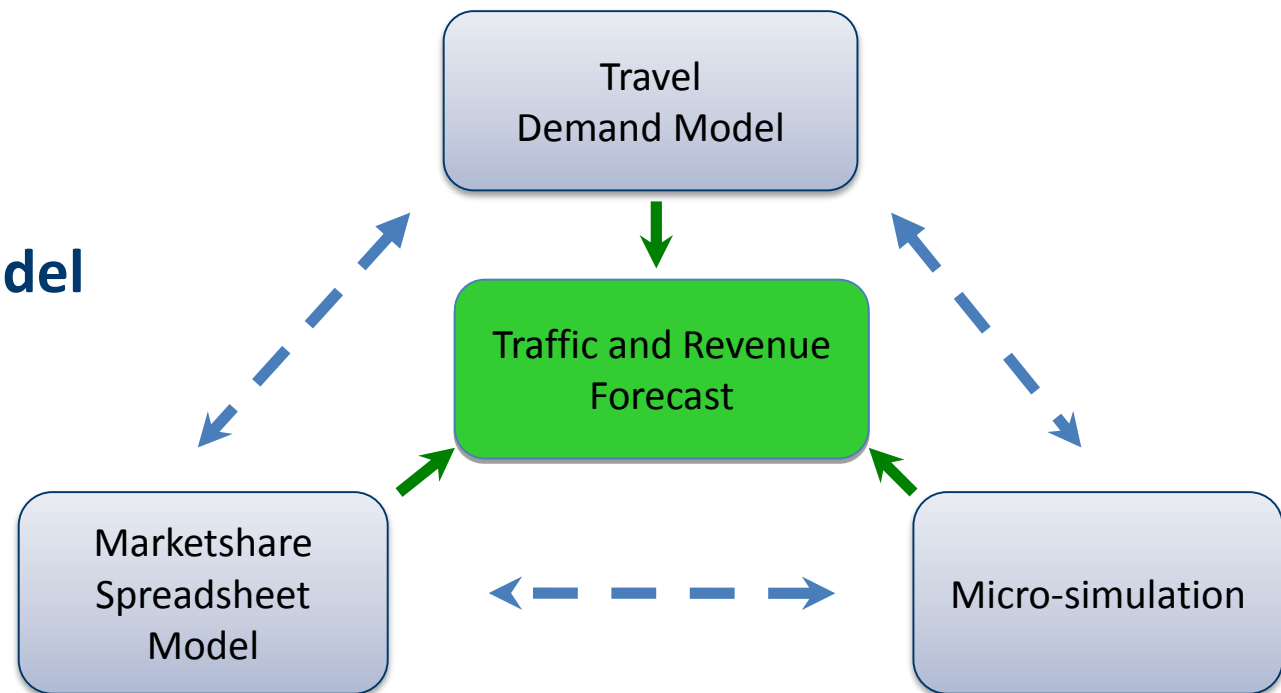
Model Calibration and Development

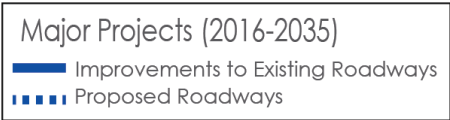
Modeling Process

Travel Demand Model

Microsimulation

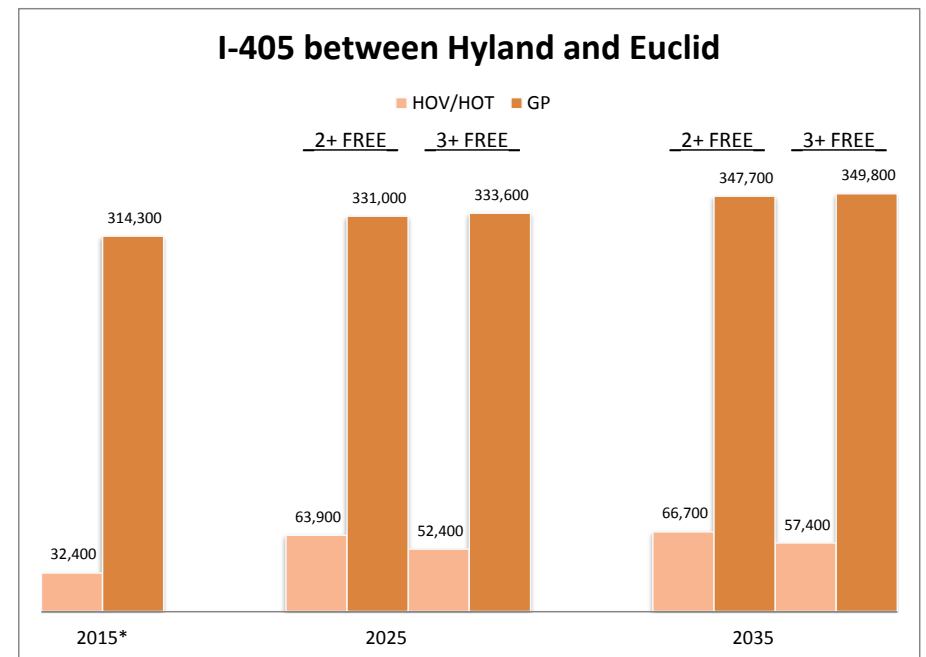
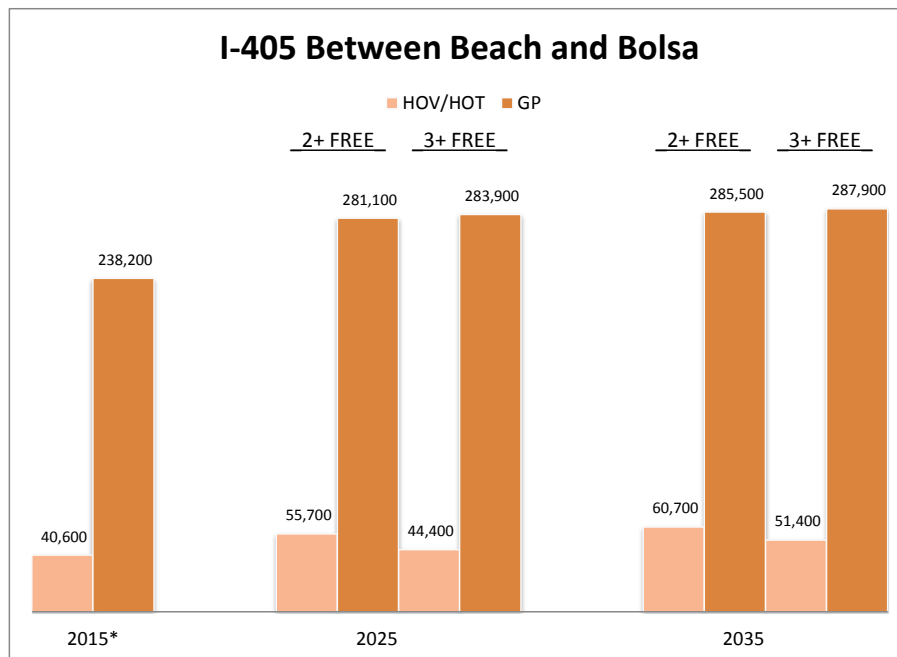
Marketshare Model





Trip and Corridor Growth

Year	Total Trips	CAGR	Total HOV2 Trips	CAGR	Total HOV3 Trips	CAGR
2015	39,743,116		6,907,970		4,170,942	
2025	45,340,830	1.3%	7,765,441	1.2%	4,690,274	1.2%
2034	49,454,863	1.0%	8,474,031	1.0%	5,129,227	1.0%
2035	49,361,237	-0.2%	8,227,215	-2.9%	5,282,417	3.0%



- Corridor grows by 1.1 to 1.9% per year between 2015 and 2025
- Corridor grows by 0.3 to 0.5% per year between 2025 and 2035

Traffic and Revenue Forecasts

Key Assumptions

□ Peak Period Definitions:

- 6 to 10 AM (weekday)
- 3 to 8 PM (weekday)
- 1 to 6 PM (weekend)

□ Static Variable Hourly Toll Schedule

□ Toll Options:

Toll Scenario	SOV	HOV2	HOV3+
A	Tolled all times	Free all times	Free all times
B	Tolled all times	Free Non-Peak Tolled in Peak	Free Non-Peak 50% toll in peak
B1	Tolled all times	Free Non-Peak Tolled in Peak	Free all times
C	Tolled all times	Tolled all times	Free Non-Peak 50% toll in peak
C1	Tolled all times	Tolled all times	Free all times
D ¹	Tolled all times	Tolled all times	Free Non-Peak 50% toll in peak

¹Option D contains the same occupancy assumptions as Option C but toll rates are set to maximize revenue

Approved Toll Option B1/C1:

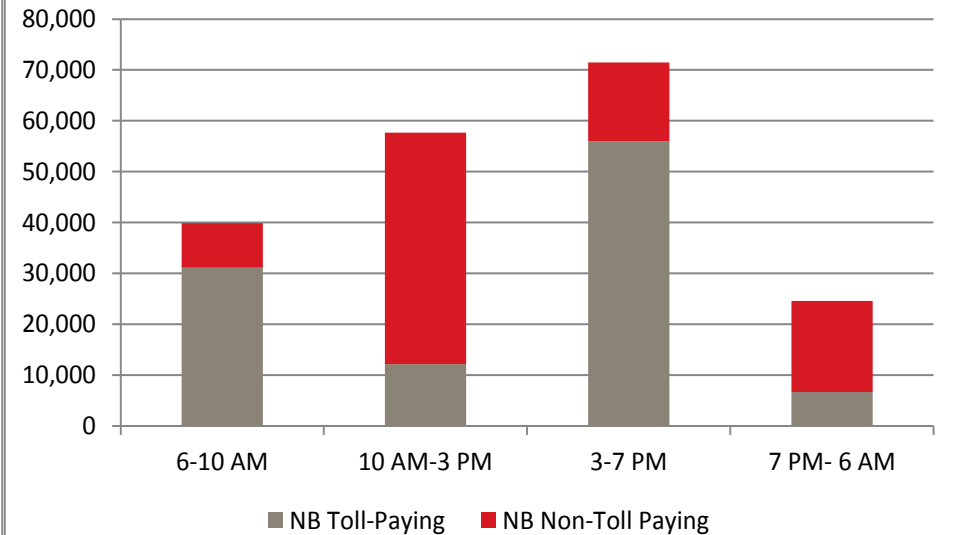
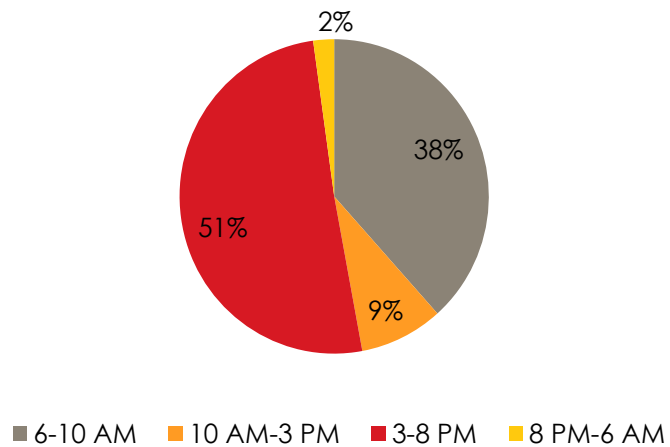
B1: HOV-2+ Free Off-Peak (3.5 years)

C1: HOV-3+ Free Off-Peak (31.5 years)

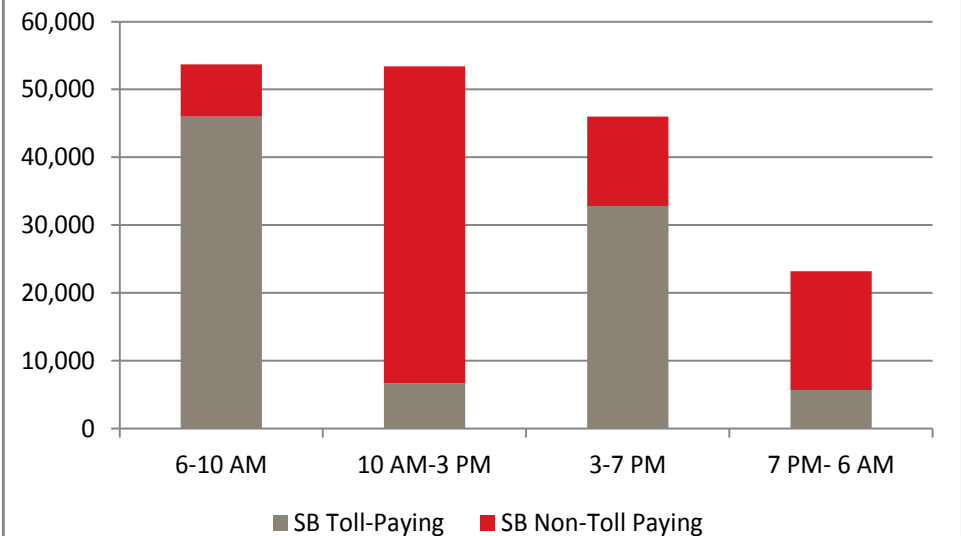
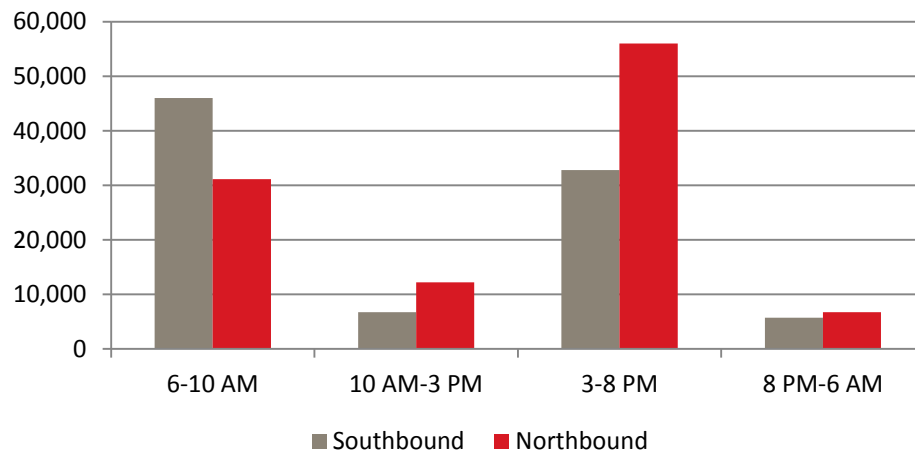
B1/C1: HOV-3+ Free Peak (all years)

Option B1: 2025 T&R Results

revenue by period

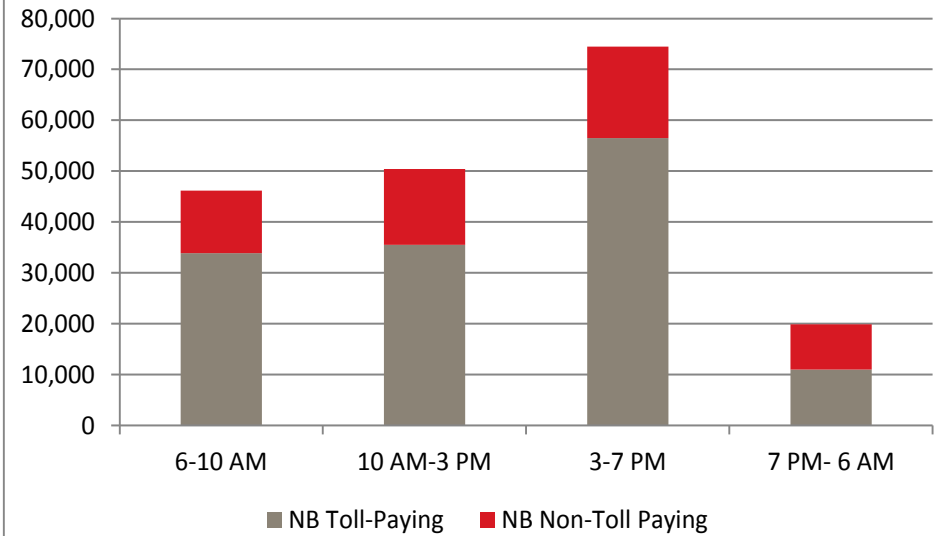
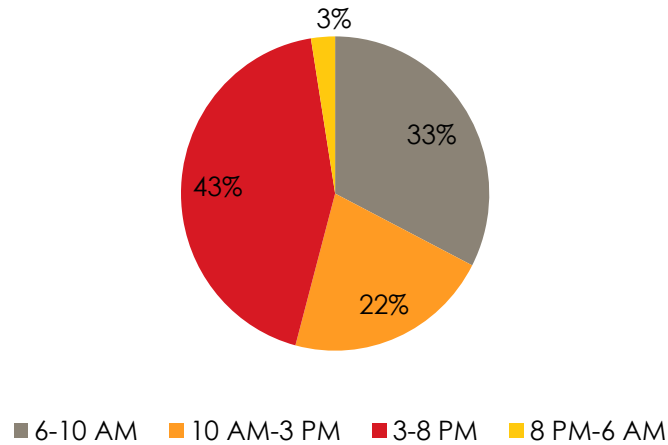


weekday toll transactions

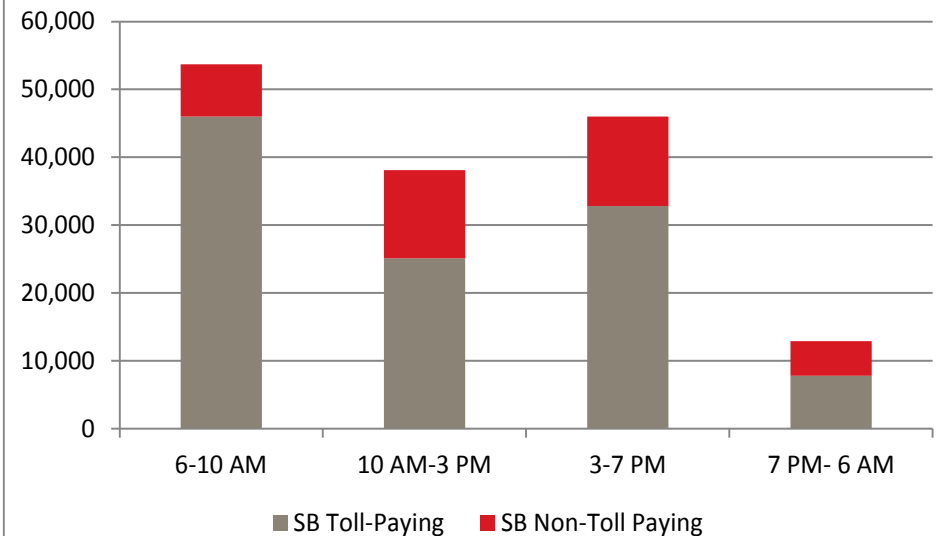
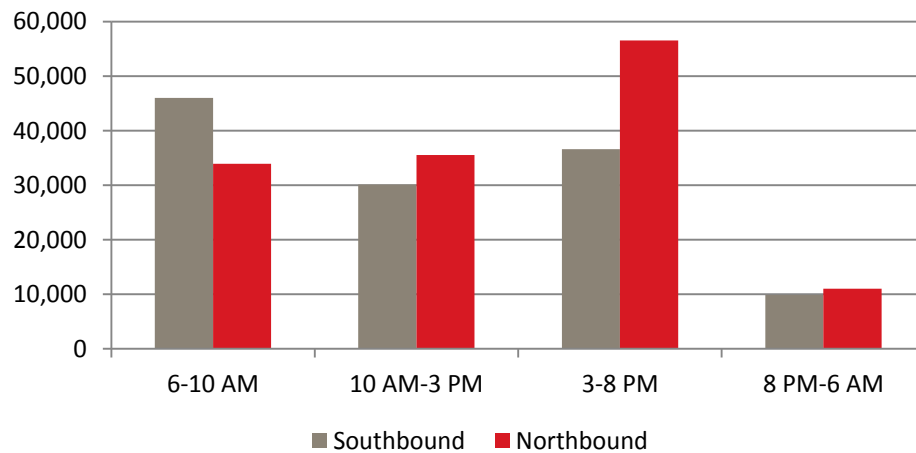


Option C1: 2035 T&R Results

revenue by period



weekday toll transactions



Toll Rates by Segment – 2025 (Toll Option B1)

2025 TOLL													
Northbound	Dist	AM0	AM1	AM2	AM3	AM4	MD	PM1	PM2	PM3	PM4	PM5	NT
405N NB HOT DC	0.36	\$ 0.14	\$ 0.23	\$ 0.50	\$ 0.39	\$ 0.29	\$ 0.21	\$ 1.70	\$ 0.72	\$ 1.88	\$ 1.88	\$ 0.20	\$ 0.06
605 NB HOT DC	1.43	\$ 0.21	\$ 0.36	\$ 0.50	\$ 0.46	\$ 0.50	\$ 0.48	\$ 0.68	\$ 0.61	\$ 0.71	\$ 0.78	\$ 0.43	\$ 0.23
22-605	2.02	\$ 0.50	\$ 0.87	\$ 1.01	\$ 1.01	\$ 1.01	\$ 0.85	\$ 1.15	\$ 1.11	\$ 1.21	\$ 1.25	\$ 0.81	\$ 0.34
22 NB HOT DC	0.65	\$ 0.13	\$ 0.19	\$ 0.16	\$ 0.19	\$ 0.18	\$ 0.14	\$ 0.16	\$ 0.14	\$ 0.26	\$ 0.26	\$ 0.16	\$ 0.10
Bolsa-22	3.14	\$ 0.64	\$ 0.94	\$ 1.26	\$ 1.26	\$ 1.32	\$ 1.10	\$ 1.60	\$ 1.57	\$ 1.32	\$ 1.41	\$ 1.04	\$ 0.50
Magnolia-Bolsa	3.11	\$ 0.59	\$ 0.78	\$ 1.15	\$ 1.09	\$ 1.18	\$ 1.03	\$ 1.71	\$ 1.56	\$ 1.56	\$ 1.56	\$ 1.31	\$ 0.50
73-Magnolia	4.24	\$ 0.81	\$ 1.06	\$ 1.70	\$ 1.70	\$ 1.82	\$ 2.12	\$ 3.05	\$ 2.46	\$ 2.30	\$ 3.05	\$ 2.97	\$ 0.68
73 NB HOT DC	0.74	\$ 0.11	\$ 0.19	\$ 0.26	\$ 0.30	\$ 0.31	\$ 0.31	\$ 1.04	\$ 0.54	\$ 0.52	\$ 0.59	\$ 1.49	\$ 0.11
405S NB HOT DC	0.28	\$ 0.06	\$ 0.08	\$ 0.11	\$ 0.12	\$ 0.12	\$ 0.18	\$ 0.35	\$ 0.17	\$ 0.45	\$ 0.83	\$ 0.25	\$ 0.04
Full Length Toll	13.14	\$ 2.74	\$ 3.96	\$ 5.72	\$ 5.56	\$ 5.74	\$ 5.49	\$ 9.56	\$ 7.58	\$ 8.72	\$ 9.99	\$ 6.57	\$ 2.13
Southbound	Dist	AM0	AM1	AM2	AM3	AM4	MD	PM1	PM2	PM3	PM4	PM5	NT
405S SB HOT DC	0.36	\$ 0.06	\$ 0.14	\$ 0.21	\$ 0.36	\$ 0.25	\$ 0.21	\$ 0.26	\$ 0.25	\$ 0.36	\$ 0.27	\$ 0.16	\$ 0.06
605 SB HOT DC	1.43	\$ 0.21	\$ 0.61	\$ 0.57	\$ 0.64	\$ 0.57	\$ 0.54	\$ 0.36	\$ 0.43	\$ 0.50	\$ 0.54	\$ 0.36	\$ 0.23
605-22	2.02	\$ 0.39	\$ 0.81	\$ 0.91	\$ 1.19	\$ 1.05	\$ 0.91	\$ 0.91	\$ 0.93	\$ 1.01	\$ 0.97	\$ 0.71	\$ 0.34
22 SB HOT DC	0.65	\$ 0.10	\$ 0.10	\$ 0.19	\$ 0.12	\$ 0.10	\$ 0.14	\$ 0.19	\$ 0.16	\$ 0.18	\$ 0.13	\$ 0.16	\$ 0.10
22-Bolsa	3.14	\$ 0.57	\$ 1.16	\$ 1.10	\$ 1.66	\$ 1.63	\$ 1.22	\$ 1.10	\$ 1.26	\$ 1.26	\$ 1.41	\$ 0.94	\$ 0.50
Bolsa-Magnolia	3.11	\$ 0.53	\$ 1.49	\$ 1.15	\$ 1.71	\$ 1.77	\$ 1.21	\$ 1.00	\$ 1.34	\$ 1.18	\$ 1.34	\$ 0.78	\$ 0.50
Magnolia-73	4.24	\$ 0.67	\$ 1.91	\$ 2.46	\$ 2.67	\$ 2.42	\$ 1.48	\$ 1.36	\$ 1.70	\$ 1.48	\$ 1.48	\$ 1.05	\$ 0.68
73 SB HOT DC	0.74	\$ 0.11	\$ 0.37	\$ 0.48	\$ 0.52	\$ 0.46	\$ 0.24	\$ 0.26	\$ 0.28	\$ 0.28	\$ 0.28	\$ 0.19	\$ 0.11
405S SB HOT DC	0.28	\$ 0.06	\$ 0.14	\$ 0.16	\$ 0.21	\$ 0.18	\$ 0.12	\$ 0.08	\$ 0.10	\$ 0.10	\$ 0.11	\$ 0.07	\$ 0.04
Full Length Toll	13.14	\$ 2.27	\$ 5.65	\$ 5.98	\$ 7.80	\$ 7.31	\$ 5.17	\$ 4.70	\$ 5.57	\$ 5.39	\$ 5.58	\$ 3.71	\$ 2.13

AM0	5-6am	PM1	3-4pm
AM1	6-7am	PM2	4-5pm
AM2	7-8am	PM3	5-6pm
AM3	8-9am	PM4	6-7pm
AM4	9-10am	PM5	7-8pm
MD	10am-3pm	NT	8pm-5am



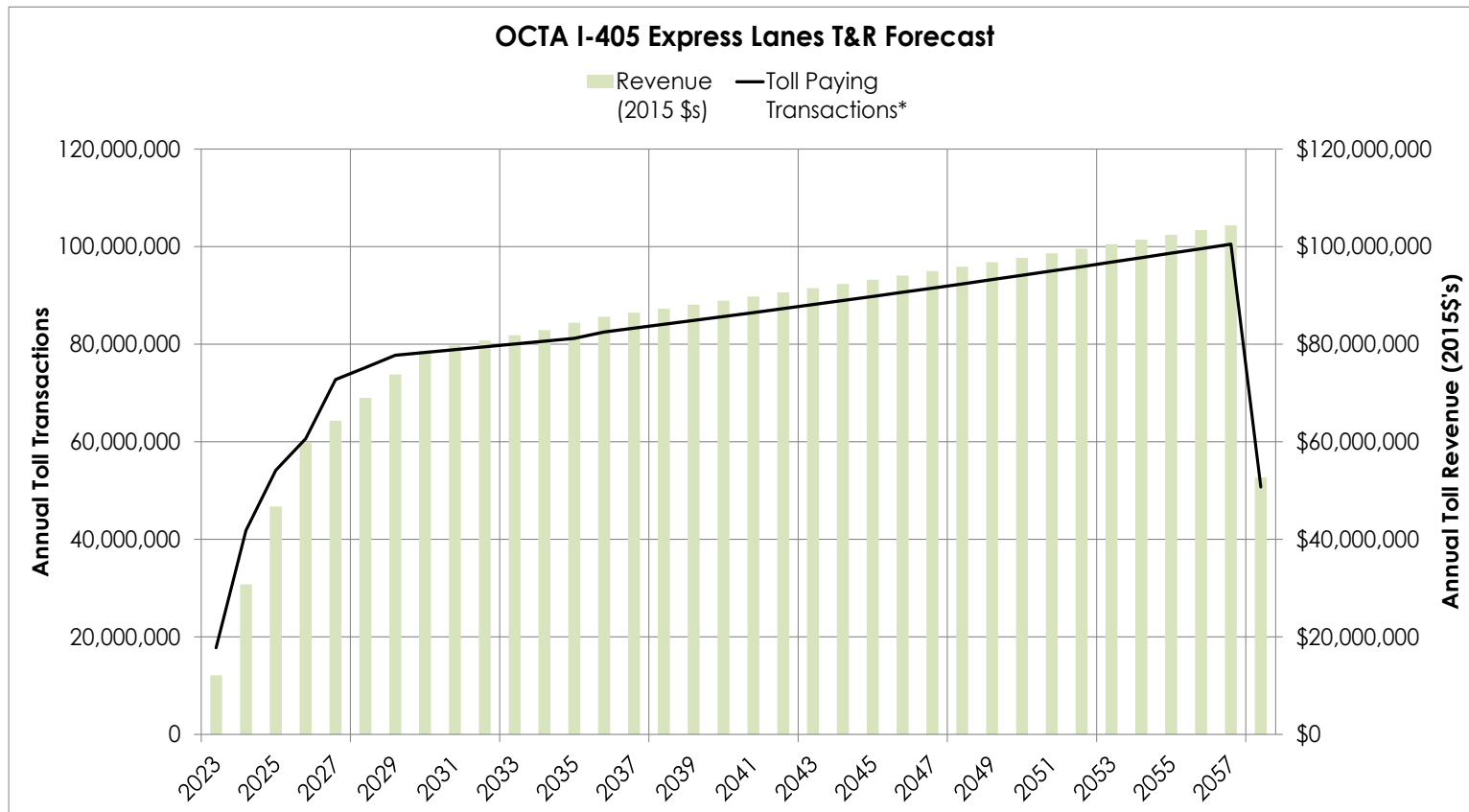
Toll Rates by Segment – 2035 (Toll Option C1)

2035 TOLL													
Northbound	Dist	AM0	AM1	AM2	AM3	AM4	MD	PM1	PM2	PM3	PM4	PM5	NT
405N NB HOT DC	0.36	\$ 0.14	\$ 0.54	\$ 1.43	\$ 0.90	\$ 0.90	\$ 0.19	\$ 2.69	\$ 1.79	\$ 2.87	\$ 2.60	\$ 0.32	\$ 0.06
605 NB HOT DC	1.43	\$ 0.23	\$ 0.47	\$ 0.66	\$ 0.64	\$ 0.64	\$ 0.47	\$ 0.74	\$ 0.64	\$ 0.71	\$ 0.78	\$ 0.44	\$ 0.21
22-605	2.02	\$ 0.52	\$ 0.97	\$ 1.13	\$ 1.07	\$ 1.05	\$ 0.87	\$ 1.13	\$ 1.17	\$ 1.13	\$ 1.21	\$ 0.85	\$ 0.30
22 NB HOT DC	0.65	\$ 0.16	\$ 0.24	\$ 0.19	\$ 0.20	\$ 0.21	\$ 0.14	\$ 0.16	\$ 0.17	\$ 0.27	\$ 0.24	\$ 0.19	\$ 0.10
Bolsa-22	3.14	\$ 0.63	\$ 1.10	\$ 1.44	\$ 1.35	\$ 1.35	\$ 1.10	\$ 1.51	\$ 1.51	\$ 1.45	\$ 1.41	\$ 1.10	\$ 0.47
Magnolia-Bolsa	3.11	\$ 0.62	\$ 0.93	\$ 1.34	\$ 1.31	\$ 1.18	\$ 1.12	\$ 1.62	\$ 1.49	\$ 1.60	\$ 1.62	\$ 1.24	\$ 0.47
73-Magnolia	4.24	\$ 0.81	\$ 1.19	\$ 1.82	\$ 1.82	\$ 1.82	\$ 1.91	\$ 2.76	\$ 2.42	\$ 2.72	\$ 2.97	\$ 2.67	\$ 0.64
73 NB HOT DC	0.74	\$ 0.11	\$ 0.20	\$ 0.32	\$ 0.33	\$ 0.36	\$ 0.36	\$ 1.56	\$ 0.74	\$ 0.79	\$ 1.11	\$ 2.04	\$ 0.11
405S NB HOT DC	0.28	\$ 0.06	\$ 0.08	\$ 0.11	\$ 0.12	\$ 0.11	\$ 0.12	\$ 0.49	\$ 0.17	\$ 0.19	\$ 0.69	\$ 0.19	\$ 0.05
Full Length Toll	13.14	\$ 2.77	\$ 4.81	\$ 7.28	\$ 6.56	\$ 6.41	\$ 5.31	\$ 10.18	\$ 8.54	\$ 9.96	\$ 10.50	\$ 6.38	\$ 1.99
Southbound	Dist	AM0	AM1	AM2	AM3	AM4	MD	PM1	PM2	PM3	PM4	PM5	NT
405N SB HOT DC	0.36	\$ 0.07	\$ 0.14	\$ 0.20	\$ 0.72	\$ 0.28	\$ 0.18	\$ 0.27	\$ 0.29	\$ 0.90	\$ 0.36	\$ 0.16	\$ 0.06
605 SB HOT DC	1.43	\$ 0.24	\$ 0.60	\$ 0.47	\$ 0.64	\$ 0.63	\$ 0.54	\$ 0.54	\$ 0.54	\$ 0.54	\$ 0.63	\$ 0.47	\$ 0.21
605-22	2.02	\$ 0.38	\$ 0.85	\$ 0.93	\$ 1.07	\$ 1.07	\$ 0.87	\$ 0.97	\$ 1.03	\$ 1.07	\$ 1.07	\$ 0.81	\$ 0.30
22 SB HOT DC	0.65	\$ 0.08	\$ 0.10	\$ 0.17	\$ 0.12	\$ 0.10	\$ 0.13	\$ 0.17	\$ 0.14	\$ 0.17	\$ 0.13	\$ 0.15	\$ 0.10
22-Bolsa	3.14	\$ 0.53	\$ 1.26	\$ 1.19	\$ 1.60	\$ 1.60	\$ 1.22	\$ 1.29	\$ 1.41	\$ 1.44	\$ 1.35	\$ 1.04	\$ 0.47
Bolsa-Magnolia	3.11	\$ 0.53	\$ 1.68	\$ 1.18	\$ 1.65	\$ 1.87	\$ 1.28	\$ 1.24	\$ 1.49	\$ 1.37	\$ 1.43	\$ 0.93	\$ 0.47
Magnolia-73	4.24	\$ 0.76	\$ 2.21	\$ 2.38	\$ 2.63	\$ 2.50	\$ 1.57	\$ 1.61	\$ 1.82	\$ 1.70	\$ 1.70	\$ 1.19	\$ 0.64
73 SB HOT DC	0.74	\$ 0.11	\$ 0.41	\$ 0.59	\$ 0.67	\$ 0.56	\$ 0.28	\$ 0.30	\$ 0.32	\$ 0.30	\$ 0.30	\$ 0.21	\$ 0.11
405S SB HOT DC	0.28	\$ 0.05	\$ 0.14	\$ 0.14	\$ 0.17	\$ 0.16	\$ 0.10	\$ 0.10	\$ 0.12	\$ 0.11	\$ 0.11	\$ 0.08	\$ 0.05
Full Length Toll	13.14	\$ 2.33	\$ 6.28	\$ 6.02	\$ 7.84	\$ 7.48	\$ 5.22	\$ 5.48	\$ 6.16	\$ 6.58	\$ 6.02	\$ 4.21	\$ 1.99

AM0	5-6am	PM1	3-4pm
AM1	6-7am	PM2	4-5pm
AM2	7-8am	PM3	5-6pm
AM3	8-9am	PM4	6-7pm
AM4	9-10am	PM5	7-8pm
MD	10am-3pm	NT	8pm-5am



Traffic and Revenue Forecast



- Annualization of weekday T&R
 - Toll transactions = 315
 - HOV transactions = 350
 - Revenue = 300
- T&R Ramp-up
 - Fully ramped up by end of FY 2026
 - Toll Transactions, FY 2023 = 60%, FY 2024 = 70%, FY 2025 = 90%
 - Revenue, FY 2023 = 40%, FY 2024 = 50%, FY 2025 = 75%, FY 2026 = 95%

Traffic and Revenue Forecast

Forecast Year	Fiscal Year	Toll Paying Transactions*	y/y % Change	Total Transactions	y/y % Change	Non-Toll Paying Transactions	y/y % Change	% HOV	Revenue (2015 \$)	y/y % Change	Average Toll / Transaction	y/y % Change
0.5	2023	17,786,500		35,433,500		17,647,000		50%	\$12,143,500		\$0.68	
1.5	2024	41,813,000	135.1%	83,577,000	135.9%	41,764,000	136.7%	50%	\$30,751,000	153.2%	\$0.74	7.7%
2.5	2025	54,164,000	29.5%	108,625,000	30.0%	54,461,000	30.4%	50%	\$46,721,000	51.9%	\$0.86	17.3%
3.5	2026	60,635,000	11.9%	122,009,000	12.3%	61,374,000	12.7%	50%	\$59,944,000	28.3%	\$0.99	14.6%
4.5	2027	72,745,000	20.0%	101,930,000	-16.5%	29,185,000	-52.4%	29%	\$64,305,000	7.3%	\$0.88	-10.6%
5.5	2028	75,212,000	3.4%	106,162,000	4.2%	30,950,000	6.0%	29%	\$68,984,000	7.3%	\$0.92	3.8%
6.5	2029	77,711,000	3.3%	110,513,000	4.1%	32,802,000	6.0%	30%	\$73,775,000	6.9%	\$0.95	3.5%
7.5	2030	78,287,000	0.7%	112,181,000	1.5%	33,894,000	3.3%	30%	\$78,681,000	6.6%	\$1.01	5.9%
8.5	2031	78,866,000	0.7%	113,889,000	1.5%	35,023,000	3.3%	31%	\$79,717,000	1.3%	\$1.01	0.6%
9.5	2032	79,450,000	0.7%	115,639,000	1.5%	36,189,000	3.3%	31%	\$80,766,000	1.3%	\$1.02	0.6%
10.5	2033	80,038,000	0.7%	117,433,000	1.6%	37,395,000	3.3%	32%	\$81,830,000	1.3%	\$1.02	0.6%
11.5	2034	80,631,000	0.7%	119,271,000	1.6%	38,640,000	3.3%	32%	\$82,907,000	1.3%	\$1.03	0.6%
12.5	2035	81,208,000	0.7%	118,862,000	-0.3%	37,654,000	-2.6%	32%	\$84,401,000	1.8%	\$1.04	1.1%
13.5	2036	82,496,000	1.6%	119,109,000	0.2%	36,613,000	-2.8%	31%	\$85,643,000	1.5%	\$1.04	-0.1%
14.5	2037	83,276,000	0.9%	119,979,000	0.7%	36,703,000	0.2%	31%	\$86,453,000	0.9%	\$1.04	0.0%
15.5	2038	84,063,000	0.9%	120,856,000	0.7%	36,793,000	0.2%	30%	\$87,270,000	0.9%	\$1.04	0.0%
16.5	2039	84,858,000	0.9%	121,741,000	0.7%	36,883,000	0.2%	30%	\$88,095,000	0.9%	\$1.04	0.0%
17.5	2040	85,661,000	0.9%	122,633,000	0.7%	36,972,000	0.2%	30%	\$88,928,000	0.9%	\$1.04	0.0%
18.5	2041	86,470,000	0.9%	123,533,000	0.7%	37,063,000	0.2%	30%	\$89,769,000	0.9%	\$1.04	0.0%
19.5	2042	87,288,000	0.9%	124,442,000	0.7%	37,154,000	0.2%	30%	\$90,617,000	0.9%	\$1.04	0.0%
20.5	2043	88,113,000	0.9%	125,358,000	0.7%	37,245,000	0.2%	30%	\$91,474,000	0.9%	\$1.04	0.0%
21.5	2044	88,946,000	0.9%	126,282,000	0.7%	37,336,000	0.2%	30%	\$92,339,000	0.9%	\$1.04	0.0%
22.5	2045	89,787,000	0.9%	127,214,000	0.7%	37,427,000	0.2%	29%	\$93,212,000	0.9%	\$1.04	0.0%
23.5	2046	90,636,000	0.9%	128,155,000	0.7%	37,519,000	0.2%	29%	\$94,093,000	0.9%	\$1.04	0.0%
24.5	2047	91,493,000	0.9%	129,103,000	0.7%	37,610,000	0.2%	29%	\$94,983,000	0.9%	\$1.04	0.0%
25.5	2048	92,358,000	0.9%	130,060,000	0.7%	37,702,000	0.2%	29%	\$95,881,000	0.9%	\$1.04	0.0%
26.5	2049	93,231,000	0.9%	131,026,000	0.7%	37,795,000	0.2%	29%	\$96,788,000	0.9%	\$1.04	0.0%
27.5	2050	94,113,000	0.9%	132,000,000	0.7%	37,887,000	0.2%	29%	\$97,703,000	0.9%	\$1.04	0.0%
28.5	2051	95,003,000	0.9%	132,982,000	0.7%	37,979,000	0.2%	29%	\$98,626,000	0.9%	\$1.04	0.0%
29.5	2052	95,901,000	0.9%	133,973,000	0.7%	38,072,000	0.2%	28%	\$99,559,000	0.9%	\$1.04	0.0%
30.5	2053	96,808,000	0.9%	134,973,000	0.7%	38,165,000	0.2%	28%	\$100,500,000	0.9%	\$1.04	0.0%
31.5	2054	97,723,000	0.9%	135,982,000	0.7%	38,259,000	0.2%	28%	\$101,450,000	0.9%	\$1.04	0.0%
32.5	2055	98,647,000	0.9%	136,999,000	0.7%	38,352,000	0.2%	28%	\$102,409,000	0.9%	\$1.04	0.0%
33.5	2056	99,579,000	0.9%	138,025,000	0.7%	38,446,000	0.2%	28%	\$103,378,000	0.9%	\$1.04	0.0%
34.5	2057	100,521,000	0.9%	139,061,000	0.8%	38,540,000	0.2%	28%	\$104,355,000	0.9%	\$1.04	0.0%
35	2058	50,735,500	-49.5%	70,053,000	-49.6%	19,317,500	-49.9%	28%	\$52,671,000	-49.5%	\$1.04	0.0%

*Transactions are defined as toll gantry readings. Each time a vehicle passes through a gantry they are recorded as a transaction. A full-length trip is recorded as 6 transactions.



7. 405 Project Preliminary TIFIA Loan Plan of Finance

Financial Model Inputs for the 405 Express Lanes

☐ Traffic and revenue projections

- Toll policy includes HOV2 free in non-peak and HOV3+ free all day for first 3.5 years
- After initial 3.5 years, toll policy switches to HOV3+ free all day only
- Toll revenues escalated by 2 percent per year
- 3 year ramp up period
- Projections are provided by Stantec

☐ Leakage assumptions

- Year 1: 6 percent pursuable, 6 percent non-pursuable, and 20 percent mis-declaration of HOV trips
- Year 2: 4.5 percent pursuable, 4.5 percent non-pursuable, and 15 percent mis-declaration of HOV trips
- Year 3+: 3 percent pursuable, 3 percent non-pursuable, and 10 percent mis-declaration of HOV trips

☐ Non-toll revenues

- 90 percent of trips by other agency transponder accounts
- Comprised of monthly minimum account fees and violation fines
- Projections are provided by HNTB



Financial Model Inputs for the 405 Express Lanes - continued

☐ Operating expense assumptions

- Based on stand-alone 405 Express Lanes operations
- Similar contract structure to the 91 Express Lanes
- Customer service center, back-office system, and roadway tolling system included at anticipated market cost
- Additional California Highway Patrol enforcement for the first 3 years
- Operating contract escalated at 3 percent and general expense escalation at 2 percent
- Projections are provided by HNTB

☐ General financial assumptions

- Interest rate at 3.35 percent (12/5/16 rate plus 25 basis points)
- Ascending debt structure with 2 percent growth
- Debt service reserve account funded within 1 year of substantial completion and is equal to the total debt service due in the next 12 months
- Operations and maintenance reserve account funded with net toll revenues and equal to \$6.25 million
- Major maintenance reserve account funded with net toll revenues and equal to \$14 million



Estimated 405 Project Sources and Uses

- ❑ As of November 30, 2016, OCTA has spent approximately \$64.6 million on the 405 Project
- ❑ OCTA currently plans to spend \$423.7 million in Pay-as-you-Go M2 funding and then issue M2 Sales Tax Revenue Bonds to generate 405 Project construction proceeds of \$714 million in 2021
- ❑ OCTA has pledged up to \$1.254 billion of M2; the preliminary financial model shows \$1.138 billion needed from M2 funds

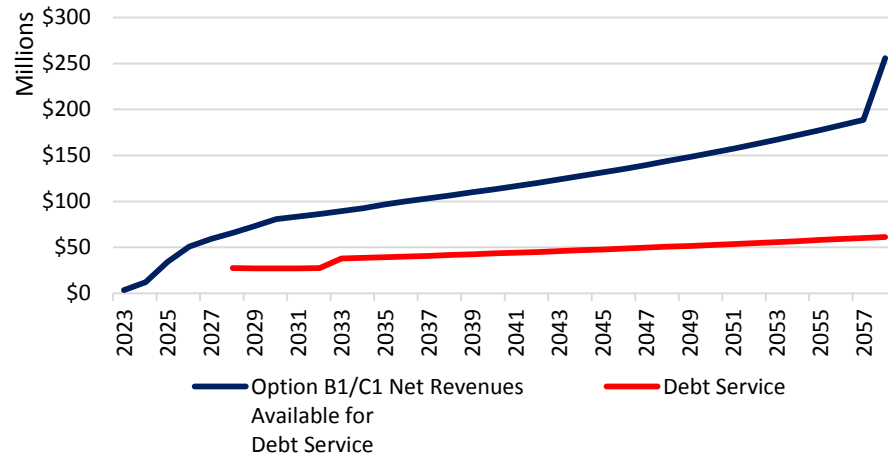
Sources of Funds (\$000's)		Uses of Funds During Construction (\$000's)	
M2 Pay-as-you-Go Funds	\$423,629	Design-Builder Costs (4)	\$1,316,131
M2 Bond Proceeds	\$714,000	OCTA Costs (4)	\$583,869
TIFIA Loan(1)	\$627,000		
\$82,000 from Caltrans, \$7.771 from TCIF (2)	\$89,771		
Federal Grants(3)	\$45,600		
Total Sources	\$1,900,000	Total Uses	\$1,900,000

1. The non-recourse TIFIA loan will be solely secured by pledged revenues generated by tolls charged on the 405 Express Lanes
2. Transportation Corridor Improvement Fund authorized by California Transportation Commission October 2016
3. The Federal grants include \$35 million from Surface Transportation Program (renamed under the FAST Act to Surface Transportation Block Grant), \$1.13 million from Interstate Maintenance Discretionary (IMD) Program, \$8.528 million from High Priority Projects earmarks from TEA-21 and SAFETEA-LU, and \$990,000 from 2006 appropriations bill earmarks
4. Contingencies and escalation included

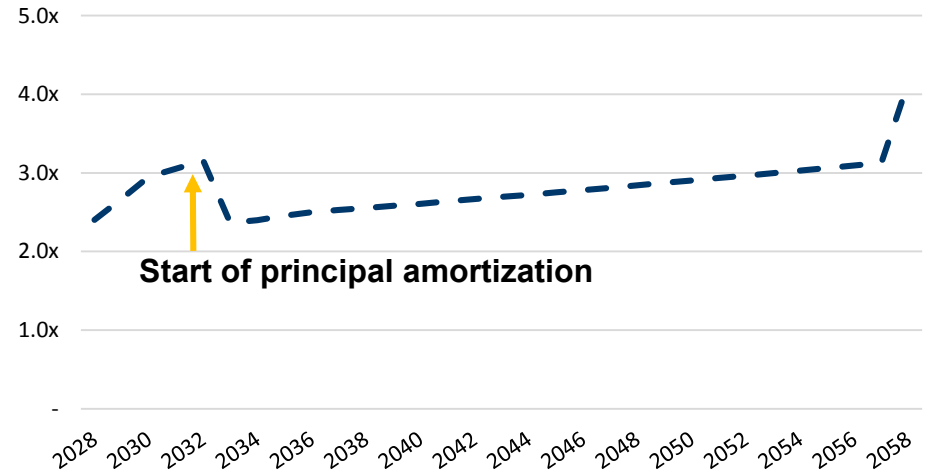


Option B1/C1 Projected Net Revenues Available for TIFIA Debt Service

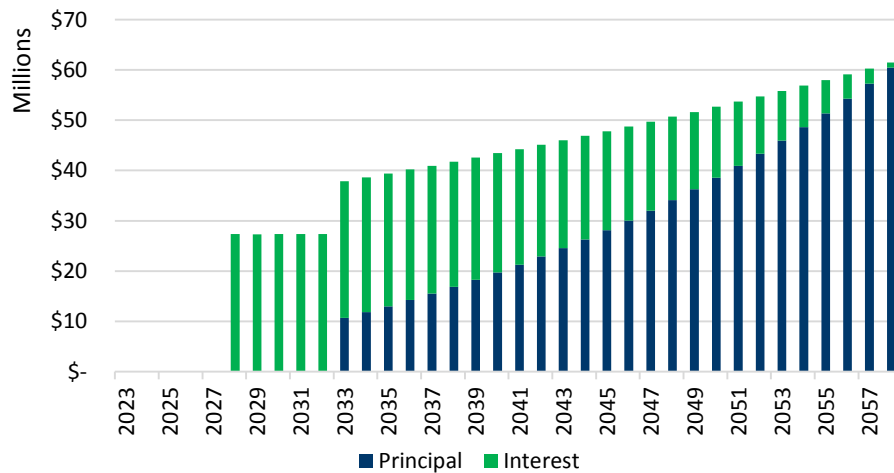
Net Revenues Available for Debt Service vs. Debt Service



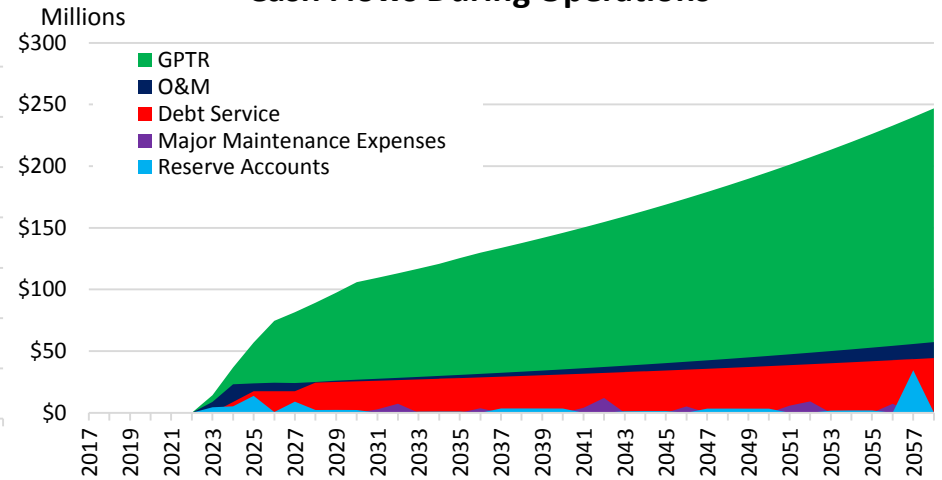
Debt Service Coverage Ratio



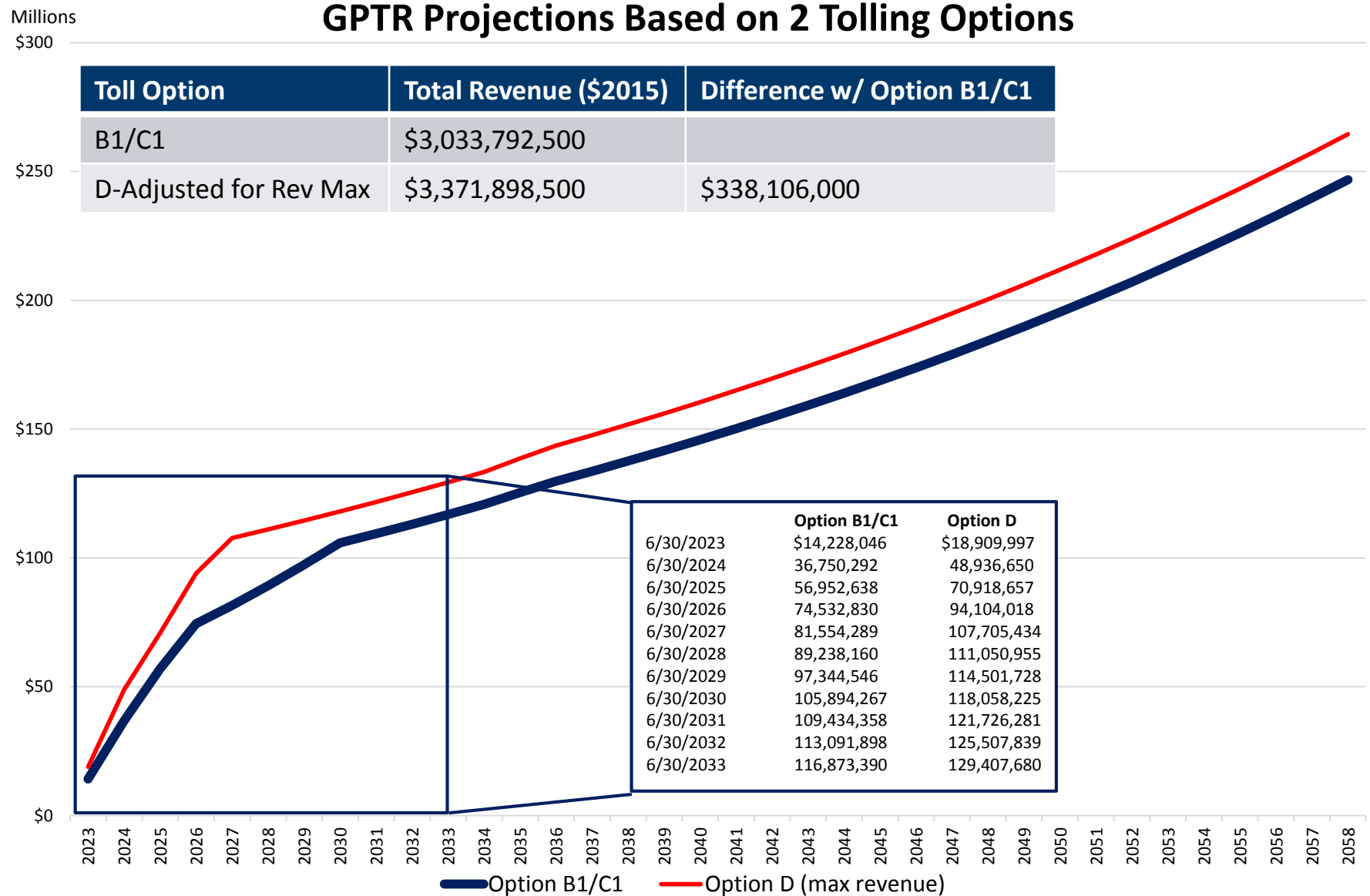
Debt Service



Cash Flows During Operations



Toll Option D Illustrates Pricing Power in 405 Project Corridor



OCTA Has Ample M2 Debt Capacity to Fund the 405 Project

OCTA currently expects to spend a total of \$423.7 million of M2 pay-go funds prior to issuing M2 bonds in 2021

The 2021 M2 bond issue allocates \$714 million of proceeds to the 405 Project

OCTA's outstanding \$325.5 million of Series 2010 Sales Tax Revenue Bonds are currently rated Aa2/AA+/AA+

OCTA currently plans to issue additional bonds in 2025 and 2032 for non 405 projects

Fiscal Year	M2 Revenues (1)(2)		Estimated Future M2 Issues			Debt Service Coverage Ratio
			\$352,570,000 2010 Sales Tax Revenue Bonds Debt Service ⁽³⁾	\$721,215,000 2021 Sales Tax Revenue Bonds ⁽⁴⁾ Debt Service	\$1,073,785,000 Total Parity Sales Tax Revenue Bond Debt Service	
2011	\$47,207,102		\$2,228,051		\$2,228,051	21.19x
2012	\$191,782,613		\$15,424,967		\$15,424,967	12.43x
2013	\$203,624,645	5.8%	\$21,834,967		\$21,834,967	9.33x
2014	\$213,733,920	4.7%	\$21,832,667		\$21,832,667	9.79x
2015	\$222,921,031	4.1%	\$21,833,967		\$21,833,967	10.21x
2016	\$229,293,187	2.8%	\$21,835,417		\$21,835,417	10.50x
2017	\$237,547,742	3.5%	\$21,834,417		\$21,834,417	10.88x
2018	\$245,386,817	3.2%	\$21,835,417		\$21,835,417	11.24x
2019	\$253,729,969	3.3%	\$21,836,667		\$21,836,667	11.62x
2020	\$263,117,978	3.6%	\$21,836,167		\$21,836,167	12.05x
2021	\$273,642,697	3.8%	\$21,837,317	\$4,066,351	\$25,903,668	10.56x
2022	\$284,835,178	3.9%	\$21,834,955	\$56,665,142	\$78,500,097	3.63x
2023	\$296,354,436	3.9%	\$21,836,015	\$56,661,867	\$78,497,882	3.78x
2024	\$308,427,497	3.9%	\$21,833,275	\$56,660,624	\$78,493,899	3.93x
2025	\$320,951,069	3.9%	\$21,836,046	\$56,663,024	\$78,499,069	4.09x
2026	\$333,187,801	3.7%	\$21,837,543	\$56,661,204	\$78,498,746	4.24x
2027	\$346,308,232	3.8%	\$21,836,928	\$56,665,199	\$78,502,126	4.41x
2028	\$360,759,642	4.0%	\$21,834,535	\$56,660,552	\$78,495,087	4.60x
2029	\$376,271,831	4.1%	\$21,834,467	\$56,665,065	\$78,499,532	4.79x
2030	\$392,782,258	4.2%	\$21,835,601	\$56,664,202	\$78,499,802	5.00x
2031	\$410,245,775	4.3%	\$21,836,814	\$56,660,027	\$78,496,841	5.23x
2032	\$426,988,927	3.9%	\$21,836,984	\$56,660,213	\$78,497,197	5.44x
2033	\$444,216,239	3.9%	\$21,834,989	\$56,663,066	\$78,498,054	5.66x
2034	\$462,339,166	3.9%	\$21,834,705	\$56,662,250	\$78,496,954	5.89x
2035	\$481,333,403	3.9%	\$21,834,785	\$56,660,130	\$78,494,915	6.13x
2036	\$500,968,684	3.9%	\$21,833,884	\$56,664,210	\$78,498,093	6.38x
2037	\$521,043,919	3.9%	\$21,835,653	\$56,662,694	\$78,498,346	6.64x
2038	\$541,817,799	3.8%	\$21,838,521	\$56,661,625	\$78,500,146	6.90x
2039	\$563,226,660	3.8%	\$21,835,916	\$56,662,343	\$78,498,259	7.18x
2040	\$585,371,587	3.8%	\$21,836,492	\$56,664,425	\$78,500,916	7.46x
2041	\$456,023,428	-28.4%	\$21,838,452	\$56,662,200	\$78,500,652	5.81x

1 Actual FY 2011 - FY 2016; Sales Tax assumed to grow at approximately 4.1% annually thereafter

2 Revenues equals all Sales Tax Revenues plus interest income. Sales Tax Revenues means 100% of Sales Tax collected by Board of Equalization less the sum of (i) 1.5% paid BOE, (ii) 1% paid to OCTA for administration, 2% for environmental clean up, and (iii) 18% for a local fair share to cities.

3 After Build America Bonds Subsidy Payments

4 Based on market rates as of December 12, 2016 Aa2/AA+/AA+ scale plus 150 basis points



Preliminary TIFIA Loan Flow of Funds

Order	Revenue Accounts
1 st	Operation and Maintenance Expenses
2 nd	Fees, Administrative Costs, and Expenses due under Parity Bond Indenture and Second Lien Bond Indenture
3 rd	Mandatory Interest portion of TIFIA Debt Service and Parity Bond Interest
4 th	Mandatory Principal portion of TIFIA Debt Service and Parity Bond Principal
5 th	TIFIA Debt Service Reserve Account and Parity Bond Debt Service Reserve Account
6 th	Scheduled interest portion of TIFIA Debt Service
7 th	Scheduled Principal portion of TIFIA Debt Service (if any)
8 th	Second Lien Bond Interest (if any)
9 th	Second Lien Principal (if any)
10 th	Second Lien Bond Debt Service Reserve Account (if any)
11 th	Operations and Maintenance Reserve Account
12 th	Major Maintenance Reserve Account
13 th	Capital Improvement Fund
14 th	Revenues Available for Capital Expenditures Account



8. Summary of Requested TIFIA Loan Credit Strengths

Summary of 405 Project TIFIA Loan Credit Strengths

OCTA Attributes	<p>14 years of successfully operating the 91 Express Lanes</p> <p>Issued 4 non-recourse 91 Express Lanes Toll Bonds totaling \$519 million; currently rated AA-/A1/A</p> <p>OCTA's Capital Program team experience, recent SR-22 \$550 million DB success</p> <p>Executive team continuity and experience</p> <p>Approximately \$2 billion of M1 and M2 debt issuance and investment management experience</p>
405 Project Attributes	<p>The I-405 is the most congested freeway in the U.S. and has significant weekday, weekend peak periods</p> <p>OCTA has pledged up to \$1.254 billion of M2 and \$82 million Caltrans contribution, \$45.6 million grants</p> <p>Financial model shows \$1.138 billion needed for M2 funds</p> <p>T&R Option D, revenue maximum sensitivity case, underscores pricing power in the 405 Project corridor</p>
Ramp-up Mitigation	<p>405 Express Lanes customers will understand congestion management pricing and tolling. OCTA's 91 Express Lanes has 180,000 transponders in circulation, LA Metro's 10 and 110 Express Lanes have 600,000, and the Orange County TCAs have 1.1 million transponders in circulation. HNTB estimates that 90% of 405 Express Lanes customers will use transponder issued by a different entity</p>
405 Express Lanes Pledged Revenue Security	<p>100% of net toll revenues secures TIFIA loan</p> <p>Provision to issue parity lien completion obligations in amount up to 15% of original TIFIA loan amount</p> <p>Absence of initial senior toll obligations at financial close increases TIFIA loan DSCRs</p> <p>1.30x rate covenant backed by pricing power of 405 Project corridor protects TIFIA lender</p> <p>DSRA funded within 12 months Substantial Completion at sum equal to next year's debt service</p> <p>Operations & Maintenance and Major Maintenance Reserves built up through monthly deposits</p> <p>Above normal DSCRs, based on 2% ascending debt structure, provides increased loan repayment flexibility</p>



Summary of 405 Project TIFIA Loan Credit Strengths Continued

DB Risk Mitigation	Project development and oversight partnership with Caltrans HQ and District 12 (the District 12 Director is an ex-officio member of the OCTA Board of Directors)
	Project development and oversight partnership with local FHWA division
	Caltrans has agreed to fund \$82 million for the 405 Project
	Experience of OCTA's Capital Programs leadership
	PMC and CMC major projects and managed lanes experience working with Caltrans
	Lump-sum, schedule limits in DB Contract
	DB Contract has strong security package
	Comprehensive critical path method schedule developed with contingencies included
	Right of way and utility relocation risks identified and mitigation in place to minimize risk
	FHWA Construction-Level CER in April 2016 based on 95% level of confidence
T&R	\$1.9 billion cost estimate includes 10.5% risk contingency based on risk profile
	Board adopted Preferred Toll Policy and preliminary Financial Plan which maximizes throughput and results in strong DSCRs
	Value of time, pricing power of 405 Project corridor allows for substantial toll increase flexibility
	Stantec has completed recent T&R studies for OCTA's and RCTC's 91 Express Lanes, TCA toll roads
	Detailed HNTB analysis of projected annual O&M, Non-toll Revenues, Leakage



9. Schedule

Schedule

Milestones	Date
Rating agencies updates in New York	December 2016
OCTA engages two rating agencies for TIFIA loan investment grade ratings	January 2017
Rating agency presentations	January/February 2017
Receive two investment grade ratings	February/March 2017
TIFIA Loan financial close	March 2017



10. Contacts

Contact Information



Financial Advisor

- | | | |
|------------------------------------|--|-----------------------------|
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(415) 250-0870 (cell) | jmartling@sperrycapital.com |
|------------------------------------|--|-----------------------------|



Orange County Transportation Authority

- | | | |
|---|----------------|-------------------|
| ■ Andy Oftelie
<i>Executive Director, Finance & Administration</i> | (714) 560-5649 | aoftelie@octa.net |
| ■ Kirk Avila
<i>Treasurer, General Manager 91 Express Lanes</i> | (714) 560-5674 | kavila@octa.net |



Appendix A – 405 Project Details

Legislation that Allows the 405 Project

❑ Assembly Bill 401 (Chapter 586, Statutes of 2013)

- OCTA will select a Design-Builder by implementing a two-step procurement process resulting in a best value selection, in accordance with the Code of Federal Regulations and AB 401 (codified in the California Public Contract Code Sections 6820 -6829 and the California Streets and Highways Code Section 91.2).

❑ Assembly Bill 194 (Chapter 687, Statutes of 2015)

- Last year the California Legislature passed and Governor signed Assembly Bill (AB) 194 by Assembly Member Jim Frazier (D-Oakley)
- AB 194 was sponsored by the Self-Help Counties Coalition which authorizes regional transportation agencies and Caltrans to apply to the California Transportation Commission (CTC) to implement high-occupancy toll (HOT) facilities
- AB 194 puts in place a workable framework that will govern the planning and operation of HOT facilities in the state, while ensuring the recognition and preservation of local transportation needs and priorities
- The bill requires a strict and thorough CTC application process, requiring that local communities are afforded the opportunity to comment on proposed HOT Lane projects, and that the administrative and operational responsibility of locally sponsored HOT lane projects are retained at the local level



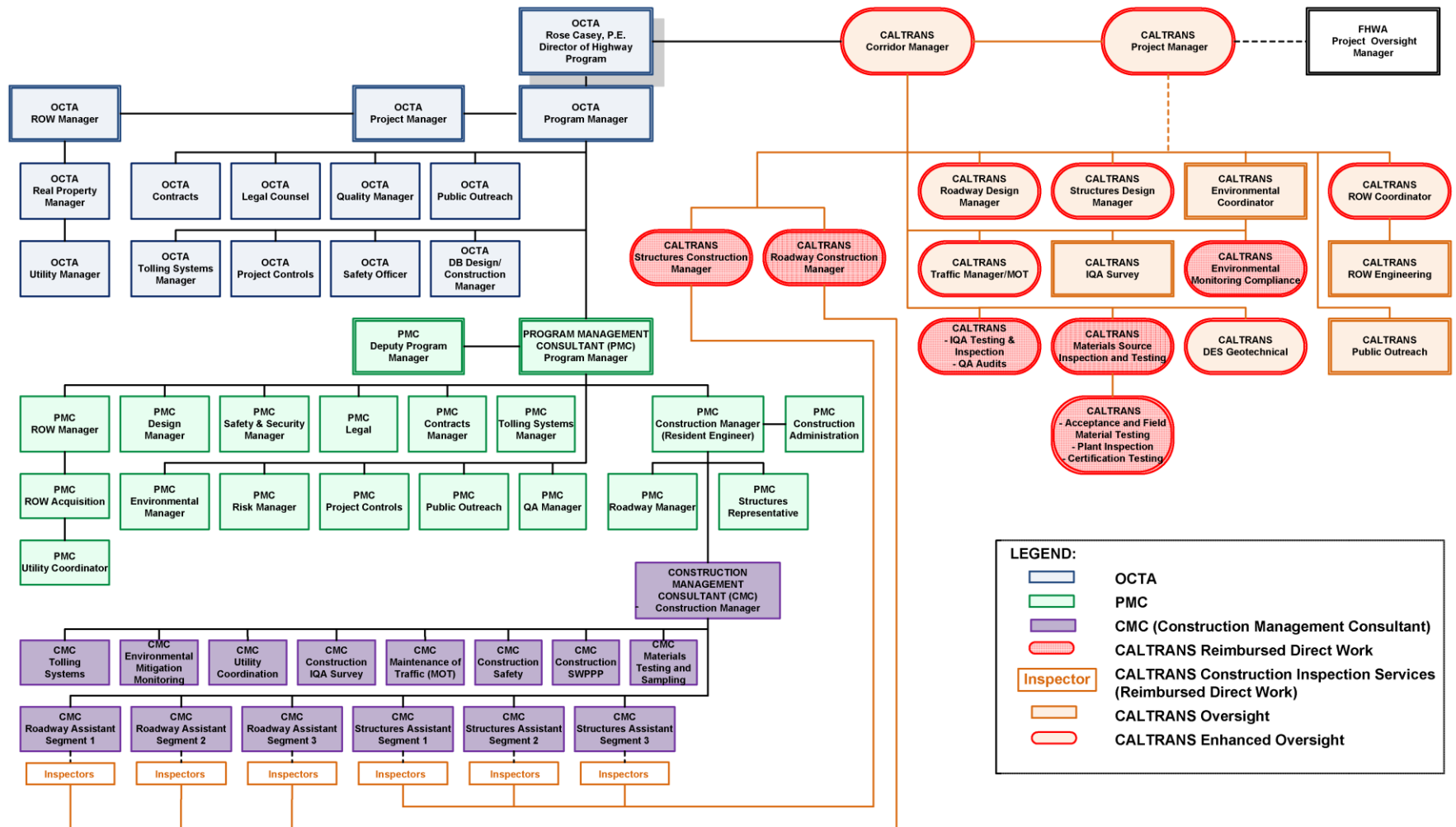
405 Project Detailed Cost (Including DB Bid Amount)

Cost Category	Summary Cost Element	Value (000's)
Design-Builder Costs	Project Management and Professional Services	\$332,375
	Construction Management	\$159,500
	Wet Utilities and Railroad Coordination	\$6,500
	Earthwork	\$35,800
	Pavements	\$95,000
	Roadway and Drainage	\$105,000
	Bridges and Walls	\$294,000
	Traffic Elements and Maintenance of Traffic	\$135,000
	Landscaping and Aesthetics	\$30,000
	Allowance Priced Items	\$23,890
	Subtotal Design-Builder Bid Amount	\$1,217,065
	Contingency for Design-Builder Costs	\$99,066
	Subtotal Design-Builder Costs	\$1,316,131
OCTA Costs	Right of Way Acquisition	\$99,727
	Dry Utilities	\$57,153
	Third Party Agreements	\$16,700
	OCTA Program Management	\$75,516
	Consultant Program and Construction Management	\$122,040
	Caltrans Enhanced Oversight and Inspection Services	\$55,400
	Toll Systems Integration	\$39,928
	Preliminary Engineering and Environmental Documentation	\$17,800
	Contingency for OCTA Costs	\$99,605
	Subtotal OCTA Costs	\$583,869
Total Program Costs		\$1,900,000



Organizational Chart

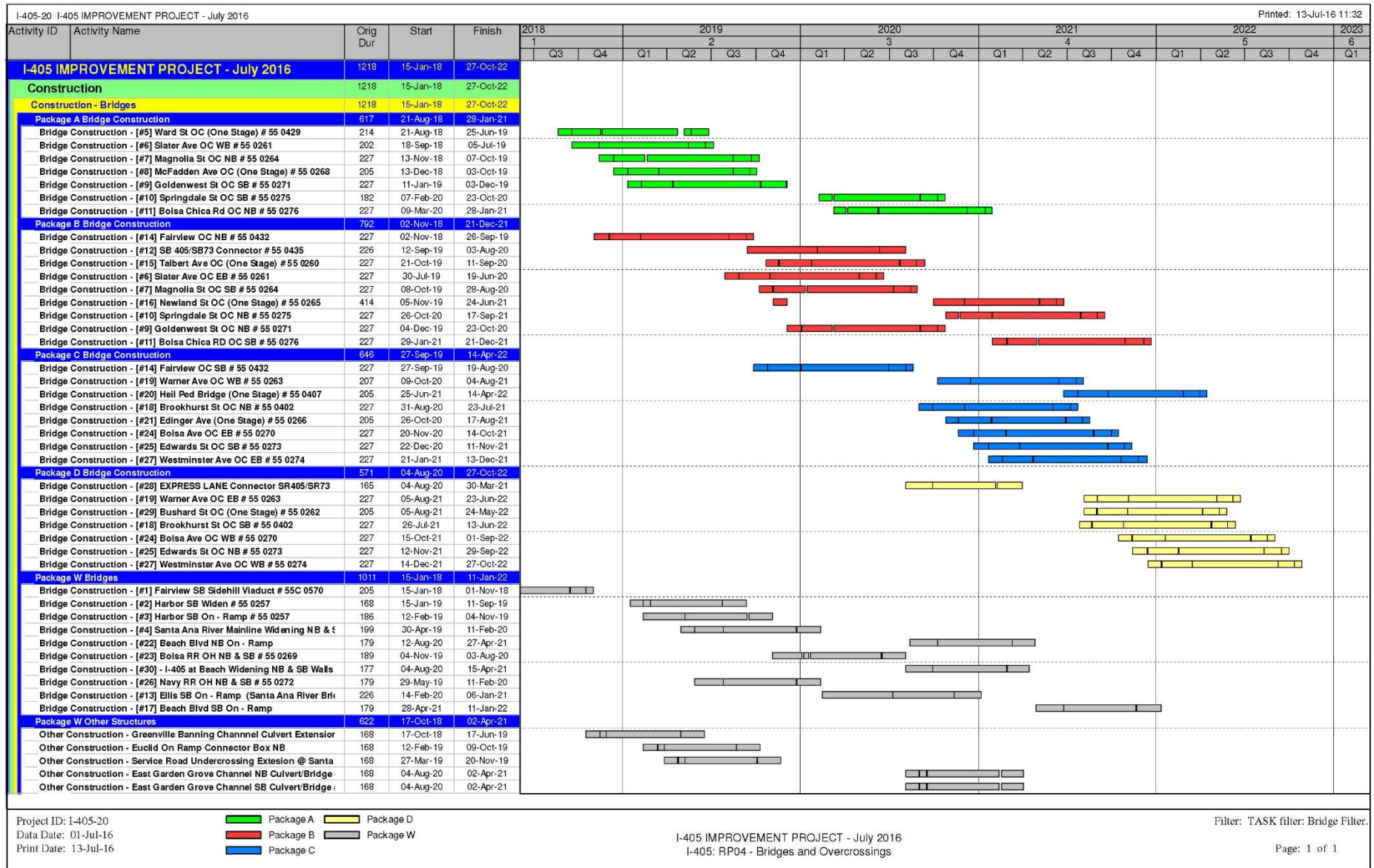
I-405 IMPROVEMENT PROJECT DESIGN-BUILD ORGANIZATION CHART



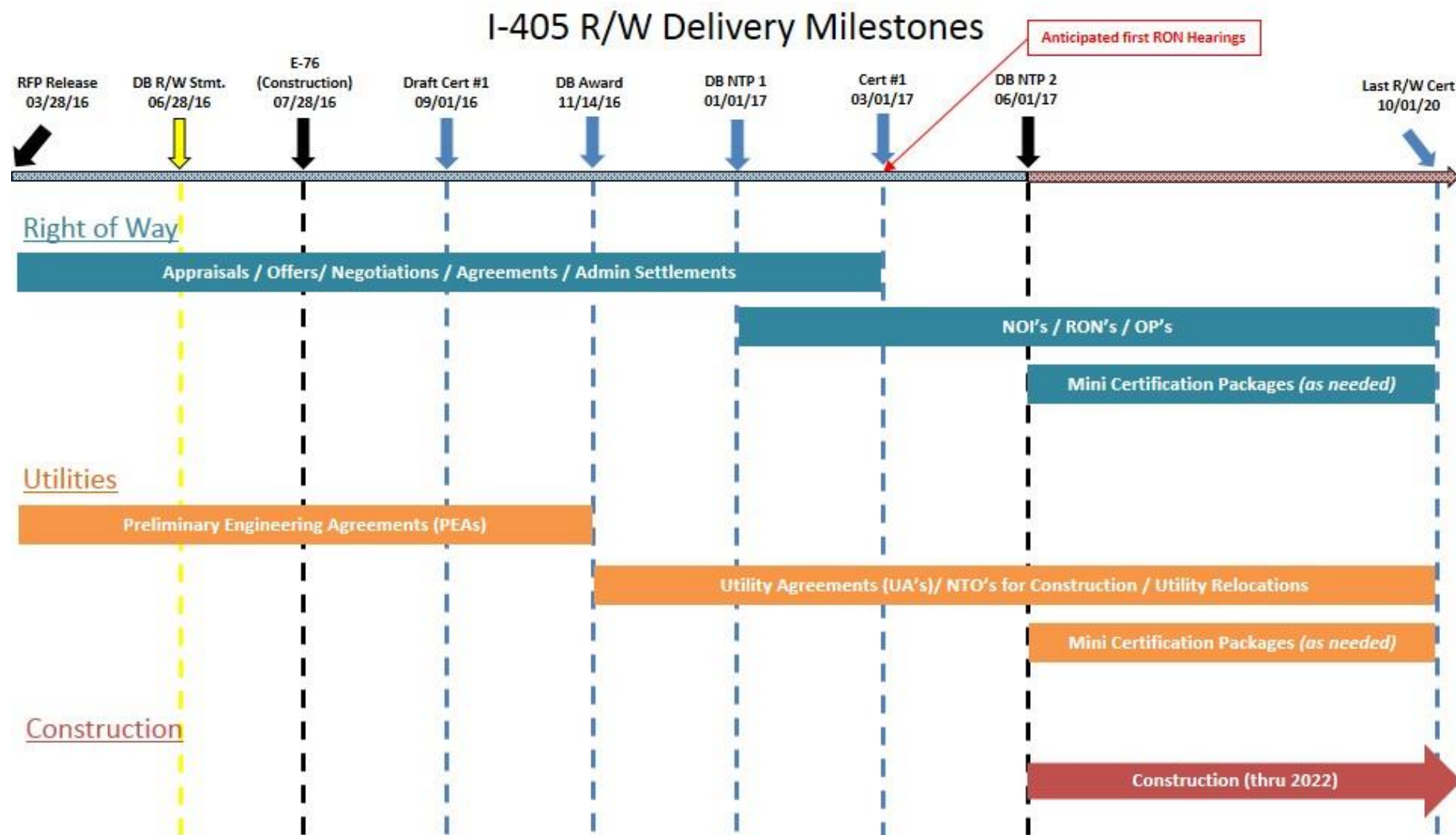
July 15, 2015



Construction Sequencing Development and Risk Mitigation



ROW Delivery Program





Appendix B – Measure M Programs

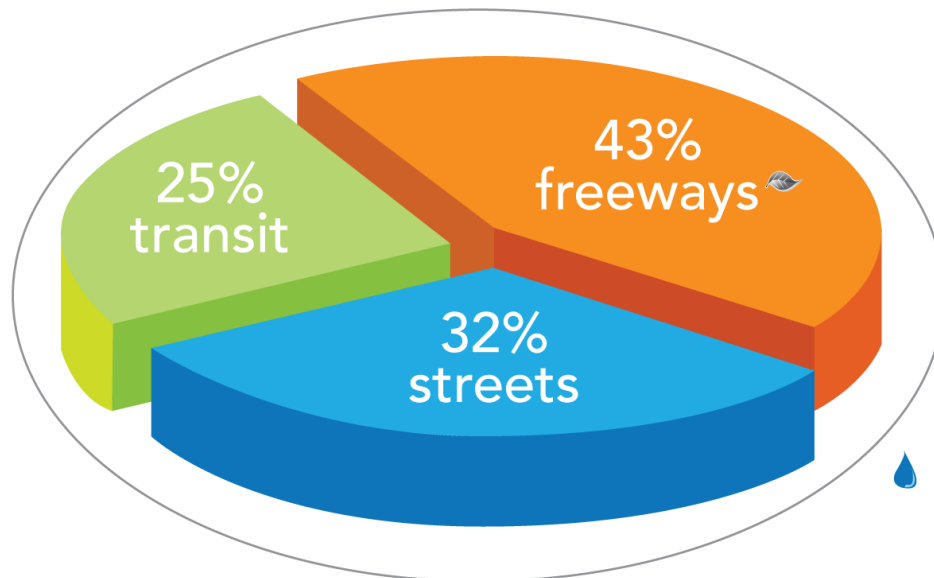
Measure M

- ❑ Half-cent transportation sales tax
- ❑ Passed in 1990 for 20 years (M1)
 - Delivered over \$4 billion of improvements
 - Leveraged \$1.2 billion external funds
 - Accelerated M1 delivery with bonding (allowable by ordinance)
 - Provided mobility benefit sooner
 - Realized cost savings
 - Delivered bonus project – added SR-22 widening
 - M1 close-out effective June 30, 2015
- ❑ Renewed in 2006 for 30 years (M2)
 - Passed by nearly 70% of voters
 - Forecasted to generate approximately \$14.8 billion



Measure M2 Investment Plan

Funding Distribution




🌿 A total of 5% of M2 Freeway Program funds is allocated to the Freeway Environmental Mitigation Program

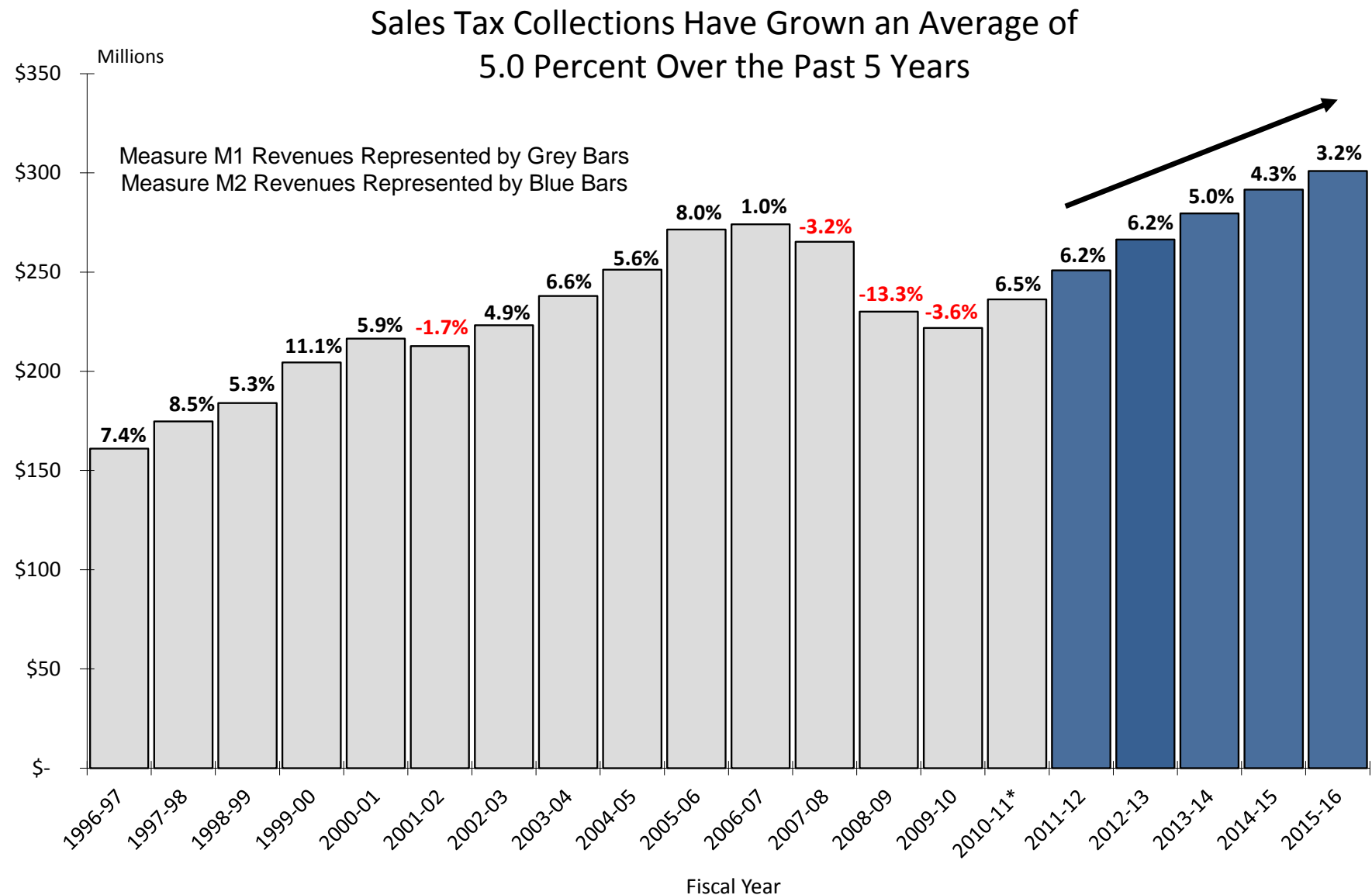
💧 A total of 2% of the overall M2 Program funds is allocated to the Environmental Cleanup Program

1% Administrative Cap

1 ½ % State Board of Equalization

 M2 Projects and Programs		
Freeway Projects		
I-5	Santa Ana Freeway Interchange Improvements	A
I-5	Santa Ana/San Diego Freeway Improvements	B C D
SR-22	Garden Grove Freeway Access Improvements	E
SR-55	Costa Mesa Freeway Improvements	F
SR-57	Orange Freeway Improvements	G
SR-91	Riverside Freeway Improvements	H I J
I-405	San Diego Freeway Improvements	K L
I-605	Freeway Access Improvements	M
All	Freeway Service Patrol	N
Streets & Roads Projects		
	Regional Capacity Program	O
	Regional Traffic Signal Synchronization Program	P
	Local Fair Share Program	Q
Transit Projects		
	High Frequency Metrolink Service	R
	Transit Extensions to Metrolink	S
	Metrolink Gateways	T
	Expand Mobility Choices for Seniors and Persons with Disabilities	U
	Community Based Transit/Circulators	V
	Safe Transit Stops	W
Environmental Cleanup		
	Clean Up Highway and Street Runoff that Pollutes Beaches	X
Taxpayer Safeguards and Audits		
	Collect Sales Taxes (State charges required by law)	
	Oversight and Annual Audits	

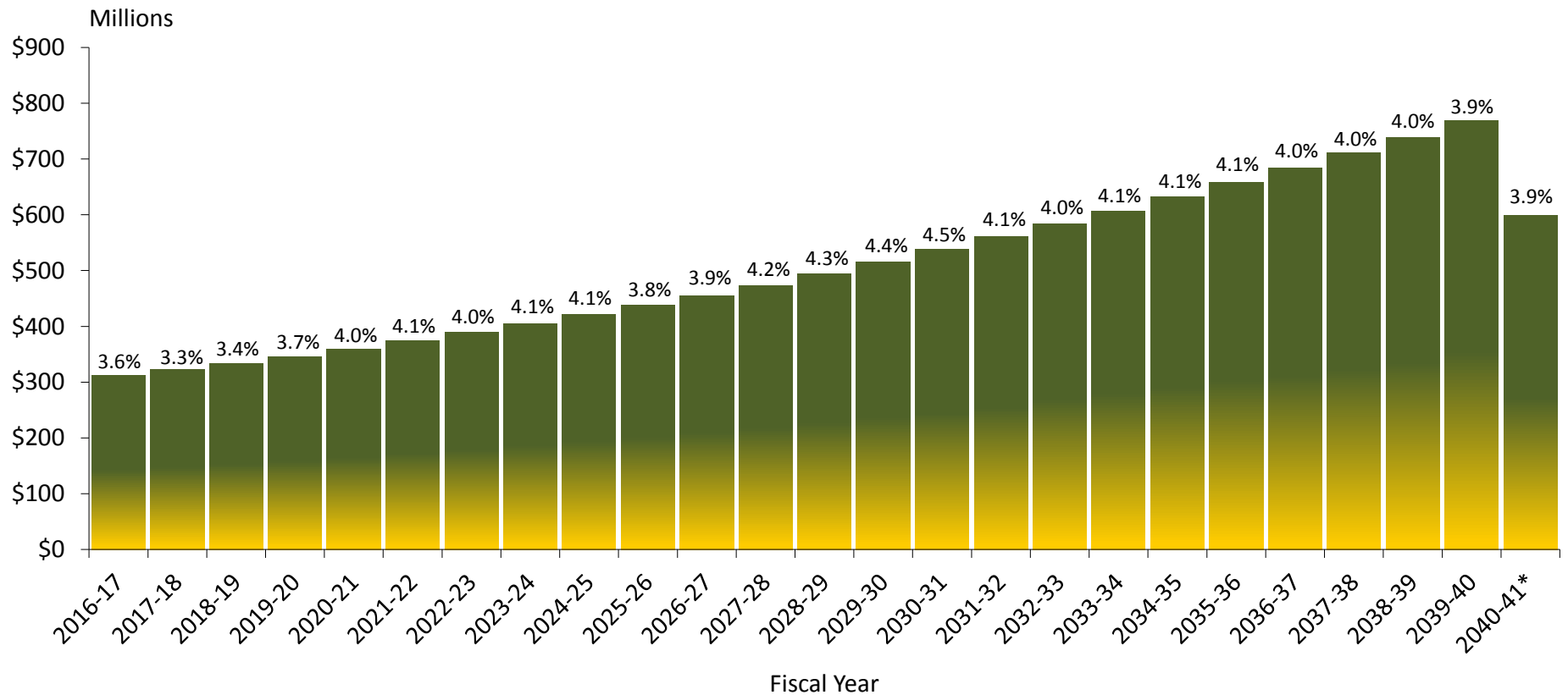
Historical Sales Tax Collections (Measure M1 and M2)



* Fiscal Year 2010-11 represents a combination of Measure M1 (three quarters of the year) and Measure M2 (one quarter of the year) sales tax revenues.

Measure M2 Nominal Forecast Totals \$14.2 Billion

Annual Sales Tax Revenue Forecast



* Represents three quarters of a year of sales tax collections





Appendix C – Orange County Employment Update

Unemployment Rate Comparison

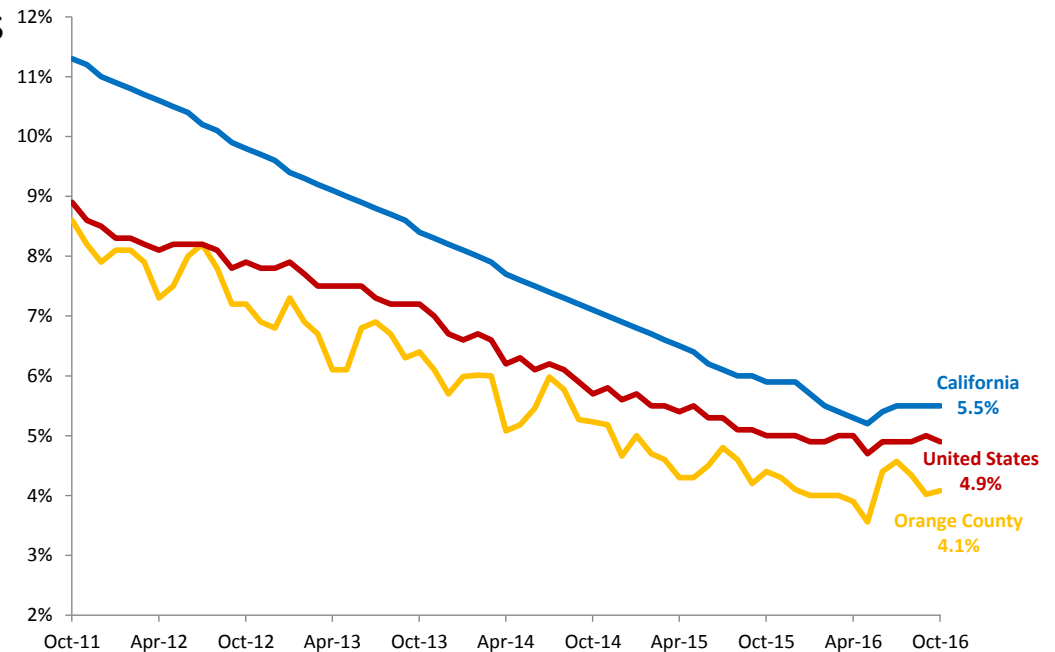
- ❑ Orange County's unemployment rate decreased to 4.1 percent in October 2016

- ❑ Orange County's rate of 4.1 percent is the sixth lowest in the state (out of 58 counties)

- ❑ Orange County has the lowest unemployment rate in the Southern California region:

Orange	4.1%
San Diego	4.8%
Los Angeles	5.1%
Ventura	5.3%
Riverside/San Bernardino	6.3%

Monthly Unemployment Rates Since 2011



Source: State of California Employment Development Department, November 2016



Employment Growth by County

- ❑ Since the recession, Orange County has seen strong employment growth over the past five years
- ❑ Orange County's employment growth averaged 1.43 percent over the past 20 years exceeding the state average

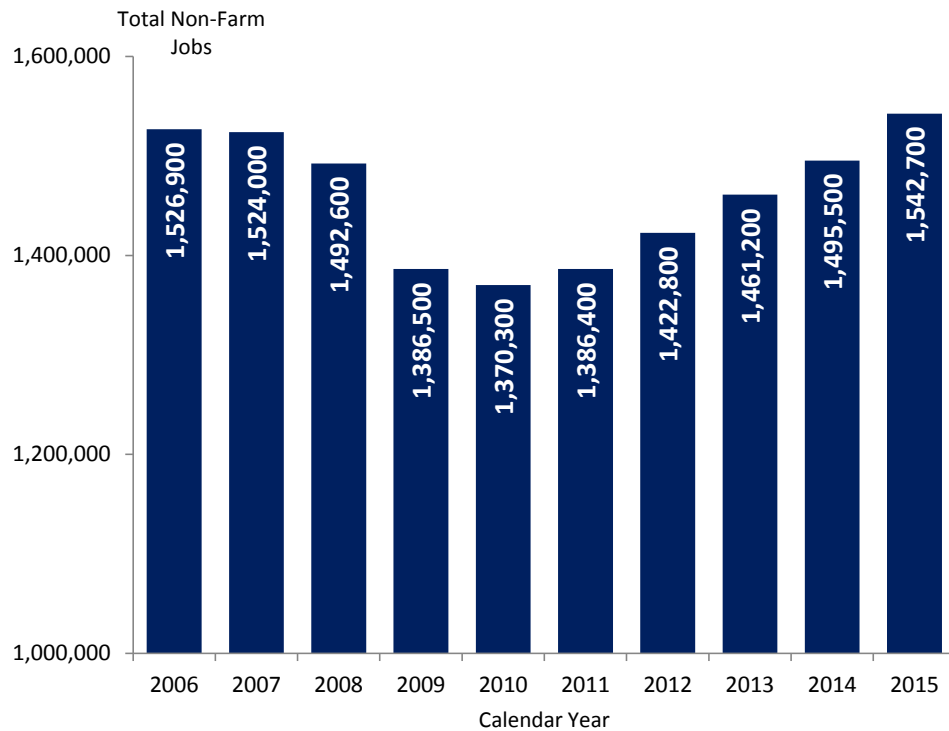
County	1995	2000	2005	2010	2015
Orange	1,161,200	1,393,200	1,498,300	1,370,300	1,542,700
Period	1995-00	2000-05	2005-10	2010-15	1995-15
Incremental Growth	232,000	105,100	(128,000)	172,400	381,500
Average Annual Growth	46,400	21,020	(25,600)	34,480	19,075
Compound Annual Growth Rate	3.71%	1.47%	-1.77%	2.40%	1.43%
Los Angeles	3,789,000	4,125,000	4,138,500	3,923,200	4,274,200
Period	1995-00	2000-05	2005-10	2010-15	1995-15
Incremental Growth	336,000	13,500	(215,300)	351,000	485,200
Average Annual Growth	67,200	2,700	(43,060)	70,200	24,260
Compound Annual Growth Rate	1.71%	0.07%	-1.06%	1.73%	0.60%
San Diego	988,600	1,200,000	1,294,500	1,242,000	1,386,400
Period	1995-00	2000-05	2005-10	2010-15	1995-15
Incremental Growth	211,400	94,500	(52,500)	144,400	397,800
Average Annual Growth	42,280	18,900	(10,500)	28,880	19,890
Compound Annual Growth Rate	3.95%	1.53%	-0.82%	2.22%	1.71%
California	12,481,000	14,585,300	15,045,200	14,282,500	16,051,500
Period	1995-00	2000-05	2005-10	2010-15	1995-15
Incremental Growth	2,104,300	459,900	(762,700)	1,769,000	3,570,500
Average Annual Growth	420,860	91,980	(152,540)	353,800	178,525
Compound Annual Growth Rate	3.17%	0.62%	-1.04%	2.36%	1.27%

Source: State of California Employment Development Department, July 2016

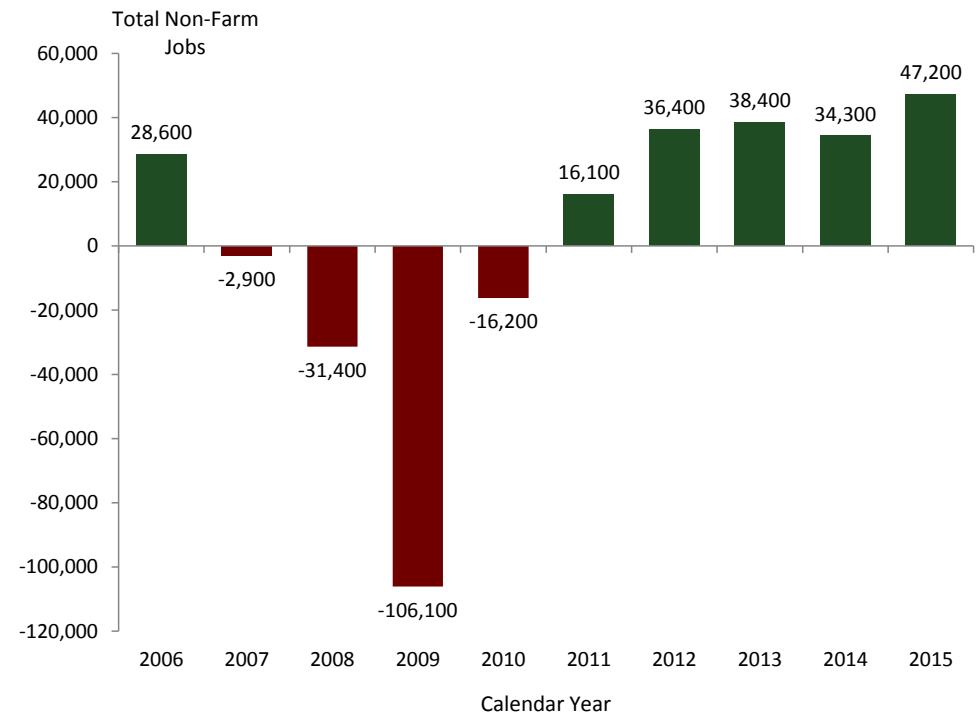


Orange County Employment Surpasses Pre-Recessionary Highs

Employment History



Job Creation and Loss History



Source: State of California Employment Development Department, June 2016



Appendix D - Toll Policy Details

OCTA Board Guidelines for a Balanced Toll Policy

- ❑ In October 2015, the OCTA Board adopted Toll Policy Goals and approved the 405 Express Lanes policy decisions for the initial toll policy

Toll Policy Goals

- Provide 405 Express Lanes customers with safe, reliable, predictable commute
- Optimize throughput at free flow speeds
- Increase average vehicle occupancy
- Balance capacity and demand to service customers who pay tolls as well as people who rideshare or use transit
- Generate sufficient revenue to sustain the financial viability of the 405 Express Lanes
- Ensure all covenants in the 405 Express Lanes financing documents are met
- Ensure that net excess revenues are used for I-405 corridor improvements

Policy Decisions Approved by the Board

Description	Action
Toll Policy Goals	Approved
Pricing Methodology	Time of Day, One Hour Static Variable
Peak Toll Adjustments	OCTA 91 Express Lanes (91 EL)
Non-Peak Toll Adjustments	Riverside County Transportation Commission 91 EL
Hours of Operation	24/7
Access Points	Intermediate Access
Non-Toll Revenues: Account Fees, Violations	OCTA 91 EL
Enforcement Approach	Manual and Automated
Prohibited Vehicles, Discounts, Exemptions	Large trucks (over 10,000 lbs) and towed trailers
Toll Collection	Title 21-Compliant Transponder (monitor technology improvements)
Toll Policy Options for Analysis	Four*

*Plus two sensitivity analyses were modeled



Preferred Toll Policy Option Summary

- ☐ Initial Policy adopted by the OCTA Board in May 2016
- ☐ Traffic volumes are monitored on an hourly basis
- ☐ Policy establishes trigger points to adjust tolls up or down, depending on traffic volume and compliance with covenants
- ☐ Toll adjustments are performed on a quarterly basis
- ☐ Policy includes COLA annual adjustments and three ride free
- ☐ Board of Directors and customers are notified at least ten days prior to an adjustment

405 Express Lanes Toll Policy Decision Process - Peak

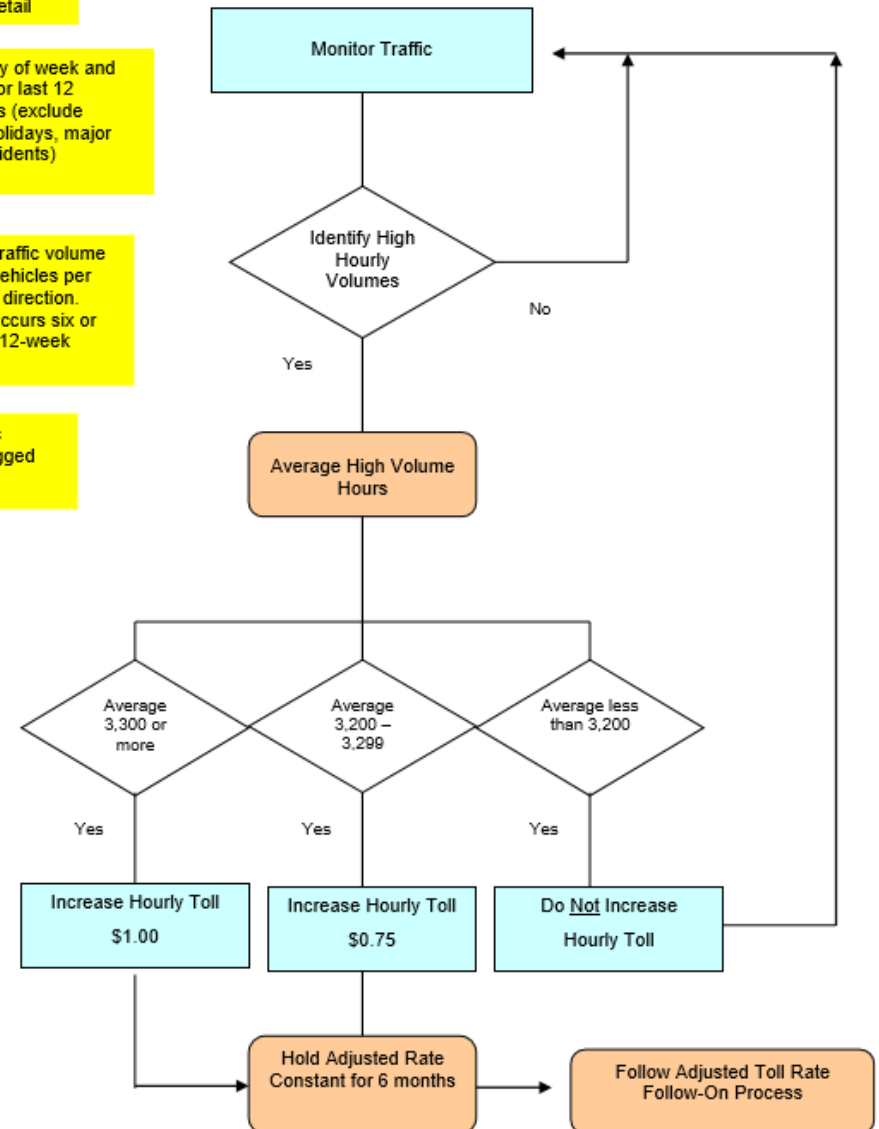
Toll Policy Decision Process Congestion Management Pricing in Peak Hours

Definitions / Detail

Monitor hourly, day of week and directional traffic for last 12 consecutive weeks (exclude days/hours with holidays, major incidents, and accidents)

Flag hours when traffic volume is 3,128 or more vehicles per hour, per day, per direction. Determine if this occurs six or more times in the 12-week period.

Average the traffic volume for the flagged hours.





Appendix E – TIFIA Model Assumptions

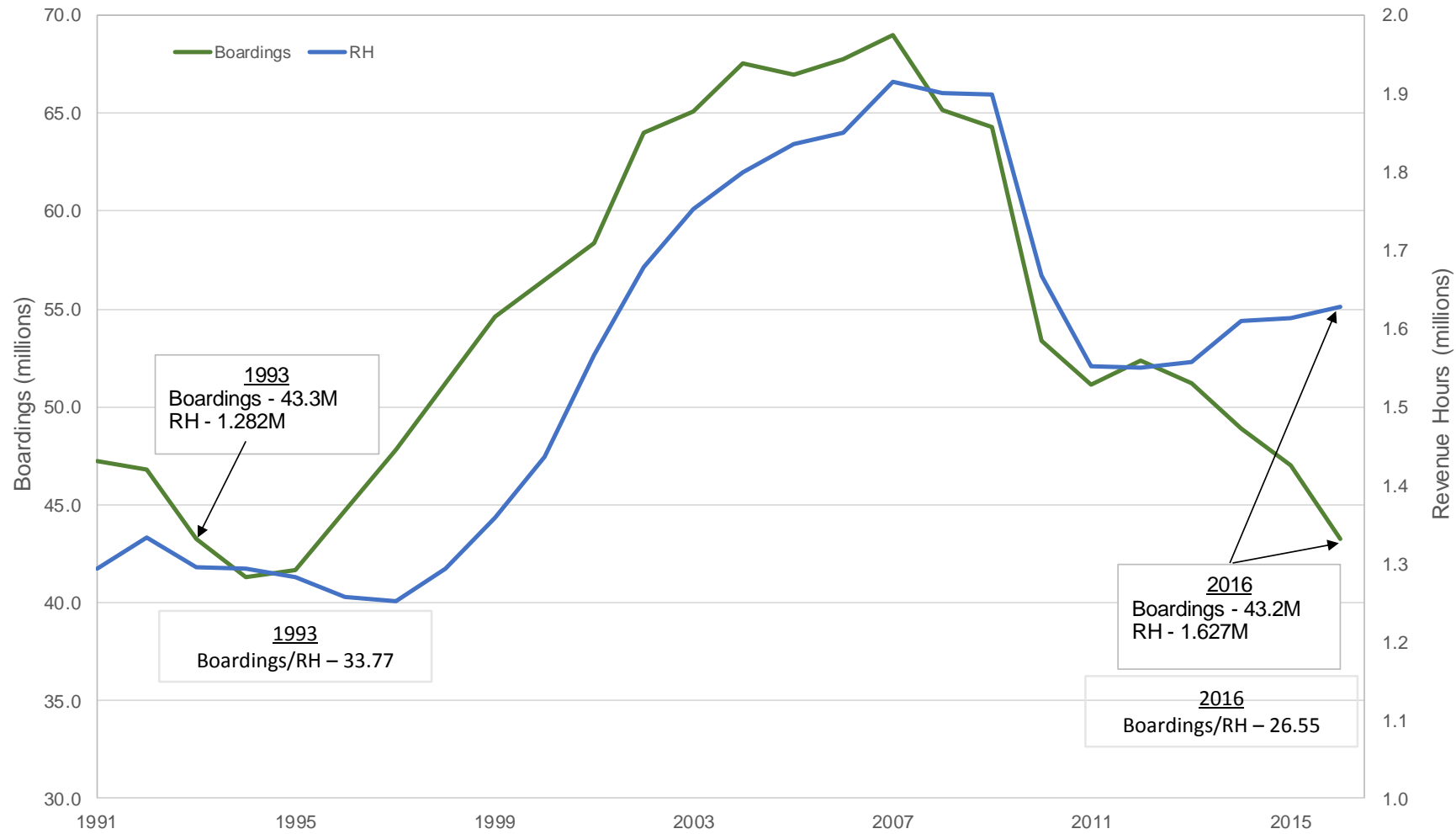
General TIFIA Loan Assumptions

Substantial Completion Date	12/31/2022
TIFIA Loan Amount (Principal)	\$627,000,000
Debt Service Commencement Date	12/1/2027
Principal Amortization Commencement Date	12/1/2032
Amortization Payment Schedule	Annual
Final Maturity Date	12/1/2057
TIFIA Interest Rate ¹	3.35%
Capitalized Interest Through	12/1/2027
Debt Service Structure	Ascending at 2% Annually

¹ TIFIA Rate as of December 5, 2016 plus 25 basis points

Mobile Ticketing & On-Demand Service

Fixed-Route Boardings and Revenue Hours



Replace lower-productivity service with private, shared-mobility services to reduce capital requirements (OC Bus 360).

Current Situation

- Transit Network Providers (TNC's) Agreements
 - Uber, Lyft, Bridge, Curb, Via, etc.
 - Limited flexibility and challenging to execute
- Federal Transit Administration Regulations,
 - On-demand service would have to be accessible to persons with disabilities, including those who use wheelchairs
- Office of Innovation
 - Worked in conjunction with a cross-divisional team to find a solution

Proposed Solution

- OCTA Mobile Ticketing Application via moovel North America
 - Board of Directors approved five-year contract with two additional option years
 - Expires December 2020
 - Leverage to provide seamless customer integration to all participating TNC's
- American Disability Act (ADA) Requirements
 - Addressed through customer choice of participating TNC providers equipped with ADA compliant vehicles
- Geofence technology
 - Allows for specific transit stops, routes, and geographic areas to be targeted for customer subsidies

