NEXT 10 DELIVERY PLAN

2017-2026

Adopted on November 14, 2016

OCTA








Orange County Transportation Authority Board of Directors (Board) adopted an M2020 Plan on September 10, 2012 to set M2 project and program priorities over an eight year period from 2013 through 2020. Due to lower than forecasted sales tax revenue projections the Board directed staff to review the plan and make recommendations on moving forward. On November 14, 2016, its predecessor, the Next 10 Plan, was approved by the Board to reflect new cash flow, schedule, and project information available. Ten deliverables were included. Overall, original commitments have been carried over from the M2020 Plan with some refinements, which account for cost escalation and external funding constraints as well as new commitments covering the next ten years from 2017 through 2026.

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**For the latest version of the Next 10 Plan,
including any edits or corrections,
please visit: www.octa.net/next10**

**For status updates on M2 projects and programs,
including quarterly progress reports,
please visit: www.octa.net/m2**

Next 10 Plan Table of Contents

I. Next 10 Introduction

II. The Plan

III. Appendix

NEXT 10 DELIVERY PLAN

Introduction

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Introduction

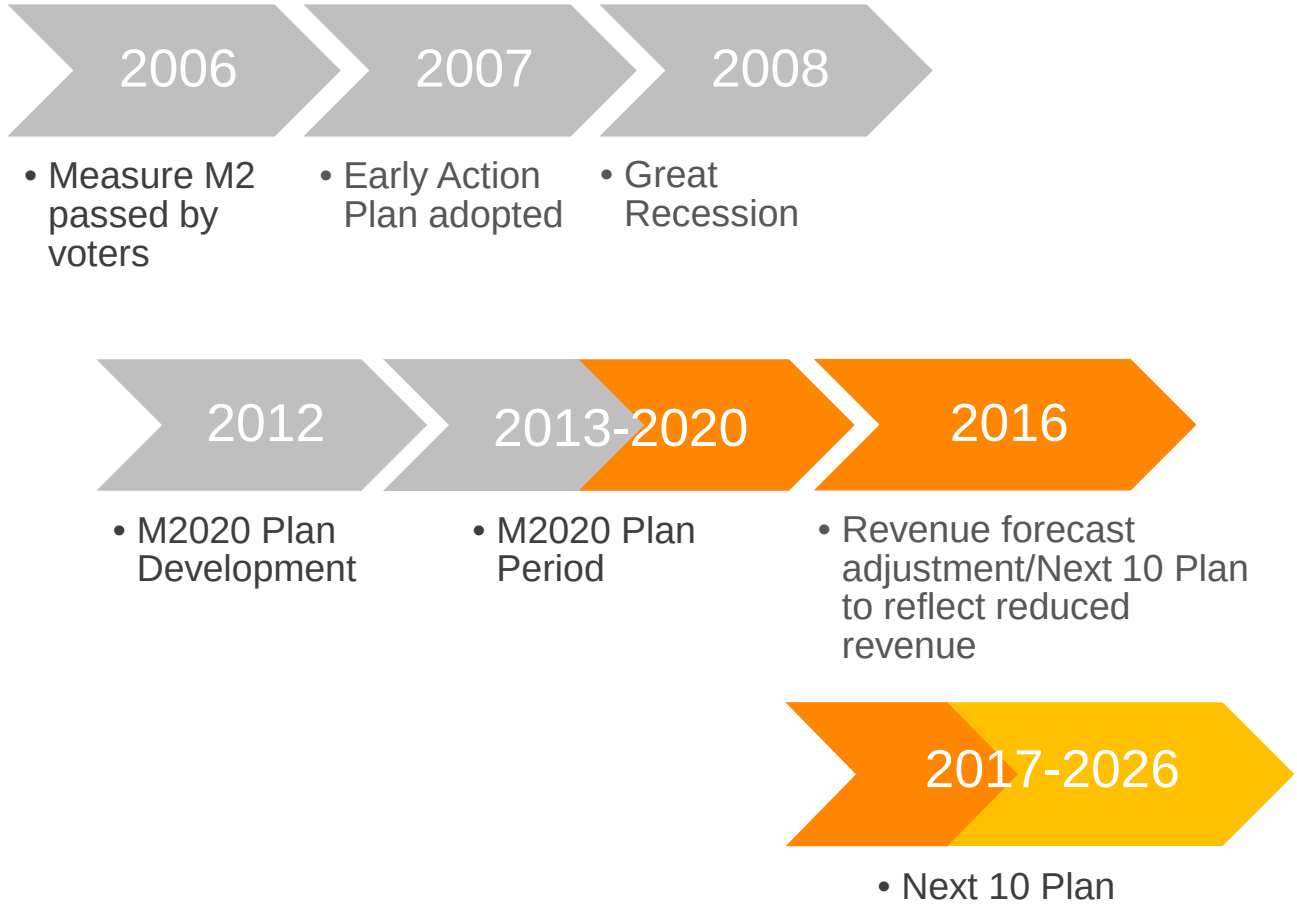
On November 7, 2006, Orange County voters, by a margin of 69.7 percent, approved the renewal of the Measure M one-half cent sales tax for transportation improvements. Voters originally endorsed Measure M in 1990 (M1) with a sunset in 2011. With the approval of Renewed Measure M (M2), the voters agreed to a continued investment of local tax dollars in Orange County's transportation infrastructure for another 30 years to 2041.

In 2007, the Board of Directors (Board) approved an Early Action Plan (EAP) to advance the implementation of M2 (subsequently updated in 2010). The EAP was a five-year plan providing guidance to staff through 2012. With the impact of the 2008 Great Recession resulting in a significant reduction in the M2 sales tax revenue forecast, the Board requested in early 2012 that staff review the M2 Plan and the ability to deliver on the promise to the voters. The Board's concern centered on the reduction in projected sales tax revenue from $24.3 billion in 2005 (when the M2 Plan was developed) to $15.5 billion. This effort resulted in the M2020 Plan which was approved by the Board on September 10, 2012, to provide guidance on program delivery priorities between 2013 and 2020. Originally, the M2 Plan was developed as a self-sustaining sales tax measure. Given the reduction in forecasted sales tax revenue collections, the M2020 Plan required the incorporation of external funding in order to continue to deliver the M2 Plan as promised. At that time, the Board made M2 projects the priority for external funding.

This M2020 Plan outlined 14 objectives which identified the projects and programs for all modes that were anticipated to be delivered on an expedited schedule by 2020, along with anticipated schedules and major milestones. However, with the effects of slower growth in M2 sales tax revenue proceeds (three consecutive years of lower-than-forecasted sales tax receipts), and the Board's decision to revise the methodology for forecasting revenues to ensure more realistic revenue assumptions, the 2016 revenue forecast including final actuals sales tax receipts for FY 2015-16 was further reduced to $14.2 billion. Given the reduction in the sales tax revenue forecast, at the half way mark of the M2020 Plan (year four of the eight year plan) the Board asked staff to revisit the M2020 Plan objectives to assess the implications of the revised long-term forecast, to determine what has been accomplished to date and what can be assumed moving forward. With much already accomplished, staff created

a new plan to replace the M2020 Plan which the plan herein is called Next 10 Delivery Plan. The Next 10 Delivery Plan provides guidance to staff on what can be accomplished over the next ten years between 2017 and 2026.

Measure M2 Timeline



Guiding Principles

During the development of the EAP, guiding principles were established that set the direction for staff on establishing priorities for freeway project acceleration. These guiding principles continue to guide us today.

- Project Readiness
- Congestion Relief and Demand
- External Funding Availability
- Public Opinion and Support
- Project Sequencing and Connectivity
- Project Duration and Cycle

Next 10 Deliverables

The Next 10 Plan is based on ten deliverables intended to provide guidance on program and project delivery for the next ten years.

Freeways

1. Deliver $3 billion of freeway improvements promised in M2020.
2. Invest approximately $1.2 billion more in revenues bringing the completed freeway program improvements to $4.2 billion.

Streets and Roads

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

Transit

4. Expand Metrolink service between Orange County and Los Angeles County, contingent upon cooperation and funding participation from route partners; complete six rail station improvements (Project R).
5. Complete design, construction and begin operating the OC Streetcar (Project S) and complete the Harbor Corridor Transit Study and the Orange County Transit Vision to guide development of future transit connections.
6. Provide up to $120 million in funding to expand mobility choices for seniors and persons with disabilities.
7. Support local agency efforts to deliver Board-approved community transit projects and provide grant opportunities for local agencies to implement effective local transit services (Project V).
8. Allocate $9 million in funding to improve the top 100 busiest bus stops in Orange County and support the modernization of the bus system to enhance the customer experience (Project W).

Environmental

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

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

In all, during the Next 10 time period, more than $6 billion in transportation improvements promised to the voters in M2 are planned to be completed or underway by 2026.

Oversight and Safeguards

The Next 10 Plan is taking place with the full oversight and regular reporting promised to the voters. Regular progress reports on implementing the Next 10 Plan will be included in the M2 Quarterly Report that is prepared for the Board and included on the OCTA website as well as other means, to ensure accessibility and transparency of the information. Contact information for the OCTA staff member responsible for each program or project will be included.

Additionally, as specified in the M2 Ordinance No. 3, Section 10, there will be three performance assessments conducted during the Next 10 time period. Performance assessments are to be conducted at least once every three years to evaluate the efficiency, effectiveness, economy, and program results of the authority in satisfying the provisions and requirements of the M2 Plan and Ordinance No. 3. These assessments will take place during years 2018, 2021, and 2024.

Also included in Ordinance No. 3, Section 11, the second ten-year comprehensive review of M2 programs and projects will be initiated at the end of the Next 10 time period. Due to the early initiation of project development activities prior to the start-up of revenue collection in 2011, the first review was completed in fiscal year 2015. The second review is planned to take place in fiscal year 2025, and will determine the basis for setting the direction of future refinements to the M2 Plan. The ten-year review includes a comprehensive review of all projects and programs implemented under the M2 Plan to evaluate the performance of the overall program and may result in revisions to further improve performance.

Sustainable Community Strategy

It is important to note that M2 also supports and enhances the ability of OCTA to support the regional Sustainable Communities Strategy (SCS) in Orange County. M2 projects and programs are part of a larger suite of transportation improvements included in the 30-year M2 Plan. More than 50 percent of the funds are intended to fulfill transit, system optimization, enhanced environmental elements and infrastructure preservation goals.

The M2 program was publicly reviewed through a Program Environmental Impact Report prior to voters approving the ballot measure in November 2006. Since 2008, the M2 program has been included in the Southern California Association of Governments' Regional Transportation Plans, Sustainable Community Strategies,

and the associated Program Environmental Impact Reports prepared by the Southern California Association of Governments.
In addition to funding freeway improvements, the M2 program dedicates funding for many transit and local street improvement projects. These include improvements such as:

- New transit connections between major Orange County activity areas that reduce the need for short automobile trips;
- Enhanced convenience and reliability for bus services and Metrolink commuter rail to encourage transit as a dependable commute option;
- Local funding for development of multimodal corridors and roadway preservation that improves the quality of mobility for all users; and,
- Signal synchronization on 750 miles of roadways throughout Orange County to reduce congestion and tailpipe emissions.

The freeway Environmental Mitigation Program has preserved 1,300 acres of wild lands that will be converted to conservation properties (Preserves) to enhance connectivity and wildlife movement between existing conservation areas such as the Cleveland National Forest, the Chino Hills State Park, the Irvine Ranch Conservancy lands, and to coastal areas. Furthermore, the program also provides critical habitat for endangered or listed species. Additionally, the Environmental Cleanup Program has funded over 140 projects totaling over $40 million to treat storm water runoff, and help keep waterways and beaches clean in Orange County. The aforementioned transit, local streets, and environmental programs collectively contribute to and enhance the quality of life, as well as provide a sustainable future, and an efficient transportation system that benefits the region.

Brief summaries of the specific programs are listed below.

- ✓ Projects A through N – Freeway improvements and Freeway Service Patrol to provide emission reductions through congestion relief
- ✓ Projects O and P – Signal synchronization and street improvements that provide emission reductions through congestion relief and allow for bike and pedestrian project elements
- ✓ Project Q – Local funding for city-selected transportation projects that provides for preservation of the streets and roads system and includes bike, pedestrian, water quality, and transit enhancements as eligible expenditures
- ✓ Project R – Expanded Metrolink train capacity including improvements to stations and parking to improve transit reliability and convenience and reduce reliance on highways while also supporting potential transit-oriented development
- ✓ Project S – Transit extensions to improve access between Metrolink stations and residential, and employment centers, and provide an alternative to driving

- ✓ Project T – Station improvements to connect to planned future High-Speed Rail services
- ✓ Project U – Sustain mobility choices for seniors and persons with disabilities and provides an alternative to driving
- ✓ Project V – Community-based circulators to complement regional transit services with local communities and provides an alternative to driving
- ✓ Project W – Transit stop improvements to support transfers between major bus lines, and support the implementation of mobile ticketing to ensure ease of fare purchase and convenience for bus passengers
- ✓ Project X – Water quality improvement programs/projects to meet federal Clean Water Act standards for urban runoff, and augment required mitigations
- ✓ Freeway Mitigation Program – Natural resource protection strategy to provide for more comprehensive mitigation of environmental impacts from M2 freeway improvements

Risks

The Next 10 deliverables for projects and programs are not without risks. In order to be successful, OCTA needs to be aware and prepared to manage risks in several areas. A table of the risks, explanations, and suggested management actions are identified on the following page and will be tracked and reported on in the M2 Quarterly Reports presented to the Board, following each fiscal year quarter.

	Delivery Risk	Explanation	Proposed Action
Financial			
1.	The long-term impact of the Great Recession resulted in a $10.1 billion decrease (or 42% reduction) in forecasted sales tax revenues, now totaling $14.2 billion. If sales tax revenue continues to come in lower than projections, this will further impact delivery.	The original projection in 2005 was $24.3 billion. With the revised Board-adopted forecast methodology in place to ensure more accurate assumptions, the new lower forecast results in a greater reliance on external funding in order to deliver the M2 Freeway Program.	Continue to actively pursue all available state and federal revenue. Staff to incorporate net excess 91 Express Lanes revenue for eligible projects to deliver the Freeway Program.
2.	The Next 10 Freeway Program Cash Flow includes two assumptions related to Project K (I-405) that carry risk.	The cash flow assumes receipt of $245 million in Transportation Infrastructure Finance and Innovation Act (TIFIA) proceeds and bid pricing in line with the current budget. While current information points to both of these assumptions being good, it will require careful watch.	If the TIFIA loan is not approved at the level assumed and/or if the I-405 Design-Build bid comes in above the current staff estimate, a revised cash flow will be required to determine next steps and adjust for changes.
3.	The inability to scale the Freeway Program to available revenue and still deliver the promise results in added pressure to contain project scopes. Additionally, there are large freeway capital projects moving forward in the Next 10 timeframe with cost escalation risks.	Management of project scopes and schedules is key to the successful delivery of the overall Freeway Program. Given the magnitude of upcoming projects (e.g. Project K), any length of delay with associated cost escalation can be impactful and will need to be managed.	Staff will work closely with project managers and Caltrans to seek cost saving measures on freeway projects through changes in design parameters where possible. Tight monitoring of project schedules and scopes will be required to ensure delivery of the entire Freeway Program.
4.	Maintaining Metrolink train service providing an attractive alternative to driving in Orange County.	Operational cost of Metrolink service continues to grow as new regulations are imposed, such as positive train control, track sharing arrangements with Burlington Northern Santa Fe, and new locomotive requirements. These regulations increase cost while providing the same level of service.	Staff will continue to work closely with Metrolink and our partners to ensure costs increases are minimized while service is optimized.
5.	Establishment of an endowment fund for long-term management of seven conservation properties (Preserves), as part of the Freeway Environmental Mitigation Program (EMP), may be delayed.	A portion of the annual revenues for the EMP will be dedicated to the endowment deposits. If sales tax revenues continue to decline, it may take longer to establish the endowment and OCTA will need to continue to pay for the interim management of the Preserves.	Staff will continue to engage state and federal resource agencies to minimize management costs for the Preserves. Where successful, this will reduce the overall endowment obligation, enabling OCTA to set up the endowment in the prescribed ten-to-twelve year period.

Organizational			
6.	Availability of specialized staff given the scope of right-of-way (ROW) activities for the various freeway construction activities.	Timely ROW acquisition and utility clearance has proven to be a key factor in reducing risk on construction projects. Early acquisition is challenged by the heavy demand on Caltrans' ROW resources. This is further challenged by a change in meeting frequency by the California Transportation Commission, a necessary step in ROW settlement.	Expert and timely coordination between OCTA and Caltrans is imperative to manage this risk. If resource issues become a problem, OCTA should consider taking full responsibility for ROW activities. Staff is currently conducting a ROW resource analysis and results from that effort will provide direction on next steps.
7.	New operational responsibilities with both the I-405 Express Lanes and OC Streetcar	With the implementation of both the I-405 Express Lanes and the OC Streetcar service, OCTA will be increasing its overall role in operations.	OCTA holds a strong track record in operating the 91 Express Lanes. Additionally, OCTA will look to strengthen staff's operations experience to provide guidance for operating the OC Streetcar.
Policy			
8.	New statewide directives create additional hurdles for the M2 Freeway Program in particular.	With new statewide directives focused on greenhouse gas reductions, it is becoming more difficult to environmentally clear the remaining nine freeway projects that add general purpose lanes. Additionally, within the recently completed Caltrans managed lanes study, inclusion of managed lanes is suggested for M2 project corridors where the promise to the voters is the addition of a general purpose lane. Projects currently in the environmental phase are at possible risk.	OCTA will need to ensure that when freeway improvement projects are being reviewed for environmental clearance that they are viewed as part of a larger suite of transportation improvements. OCTA staff will work closely with Caltrans to emphasize the importance of keeping the promise to the voters.
Market			
9.	Major capital work is underway in the Southern California region that may impact OCTA's ability to secure resources needed for project and program delivery.	Competition for available resources for capital projects in the Southern California region has increased with the major capital work currently underway in Riverside, Los Angeles, and San Diego county. For future projects going forward, engineers, right-of-way experts, and materials will be in higher demand. Staffing and resources to implement the Next 10 Plan will need to be evaluated.	A market research analysis will be conducted to help guide OCTA in navigating the bidding environment. Any identified resource needs for Plan implementation will be brought to the Board as part of future budget adoption or in separate Board requests.

Next 10 Plan Funding Assumptions

Funding assumptions are included in the Next 10 Plan. The revenue assumptions of $14.2 billion are based on the latest M2 revenue forecast methodology approved by the Board on March 28, 2016, and the FY 2015-16 final actuals sales tax receipts. The new revenue forecasting methodology results in a 42 percent reduction from the original 2005 sales tax projection of $24.3 billion. Additionally, the plan assumes availability of a viable amount of discretionary federal and/or state funds from 2017 to 2041, and makes specific assumptions about near-term grants such as New Starts, Cap-and-Trade, TIFIA financial assumptions, and net excess 91 Express Lanes revenues for eligible projects. Revenues and expenses are merged into a high-level cash flow model. Bond assumptions are also included to address projected negative ending balances by year (compared to a pay-as-you-go scenario) in the freeway program. Bond assumptions are constrained to minimum debt coverage ratios, and the appendix on page 92 of the Next 10 Plan includes a more detailed discussion on assumed revenues, costs, and debt service.

For the Next 10 Plan development, forecasted revenues and costs through 2041 were tested. This effort was conducted to ensure the complete M2 program could be delivered consistent with commitments provided to the voters as part of M2 approval in November 2006. While a reduction in revenues affects the M2 program as a whole, in many areas within the M2 Plan, programs can be scaled based on available revenues. The areas where this is not possible is in the freeway program, due to set scopes for project delivery, and the Fare Stabilization Program portion of Project U within the Transit Program.

The funding assumptions in the freeway mode assume $8.735 billion in total revenue, with costs for the same period totaling $8.688 billion. Without the inclusion of net excess 91 Express Lanes revenue and bonding assumptions, a 14-year deficit beginning in 2027 through 2040 exists where expenditures will exceed revenues. To bridge this funding gap and keep projects on schedule, bonding as well as net excess 91 Express Lanes revenue for eligible projects, and an expectation for receipt of external funding to augment the program is required. Although the full program (through 2041) is deliverable, the freeway mode remains tight.

The 2041 plan relies on the total receipt of $1.156 billion in state and federal revenues. This assumes $1.006 billion in prior programming commitments (this number is inclusive of $46 million from Caltrans for the SR-55 Project F), $245.4 million in TIFIA proceeds, and $10 million a year beginning in 2022 through 2036 in federal and/or state funds. Additionally, the program assumes $1.534 billion in bond proceeds, and $463.4 million in net excess 91 Express Lanes revenue. Even with these assumptions, there will be several points in the program with low year-by-year ending balances. Although these are positive balances, the margin leaves minimal flexibility to respond to economic uncertainties, or project scope changes and schedule delays that may result in project cost increases. The tight variance between the costs and funding plan

will require that project scopes and schedules be carefully managed and closely monitored given the small margin of safety.

The funding assumptions in the streets and roads mode assume $4.758 billion in total revenue, with costs for the same period totaling $4.758 billion. The projects within the streets and roads program are scaled to available revenue and are cash flowed on a pay-as-you-go basis. The streets and roads plan relies on the total receipt of $434.2 million in state and federal revenues primarily for the OC Bridges grade separation projects. More detailed program assumptions for the streets and roads mode can be found in the appendix on page 94.

For the transit mode, $4.278 billion in total revenue is assumed, with costs for the same period totaling $4.269 billion. The projects within the transit program are scaled to available revenue with the exception of one, Project U's Fare Stabilization Program. Ordinance No. 3 specifically requires that the Fare Stabilization Program subsidize fares for seniors and persons with disabilities to the extent of maintaining the reduced fare rate effective on July 24, 2006 through 2041. With the recent M2 amendment, which provided additional funding to sustain the Fare Stabilization Program, the cash flow supports this program. The remaining transit mode programs are assumed on a pay-as-you-go basis. Transit assumes the total receipt of $664.9 million in state and federal revenues. This number is inclusive of $148.96 million in Federal New Starts and $25.52 million in State Cap-and-Trade revenues to partially fund the OC Streetcar project. More detailed program assumptions for the transit program can be found in the appendix on page 94.

The Environmental Cleanup Program assumes $283.9 million in total revenue, with costs for the same period totaling $283.9 million. The projects within the Environmental Cleanup Program are scaled to available revenue and are cash flowed on a pay-as-you-go basis. More detailed program assumptions for the environmental cleanup program can be found in the appendix on page 95.

With careful management of the projects and use of financial resources, the full scope of the M2 program can be delivered as promised.

Funding and Financing

The Board's vision in developing the EAP created a great opportunity for the M2 program. While the economy took a significant downturn due to the 2008 Great Recession, OCTA advanced projects years before revenue became available. Projects were accelerated, making them shelf-ready. This allowed OCTA to capture significant one-time external funding provided through State Proposition 1B funds and American Recovery & Reinvestment Act funds.

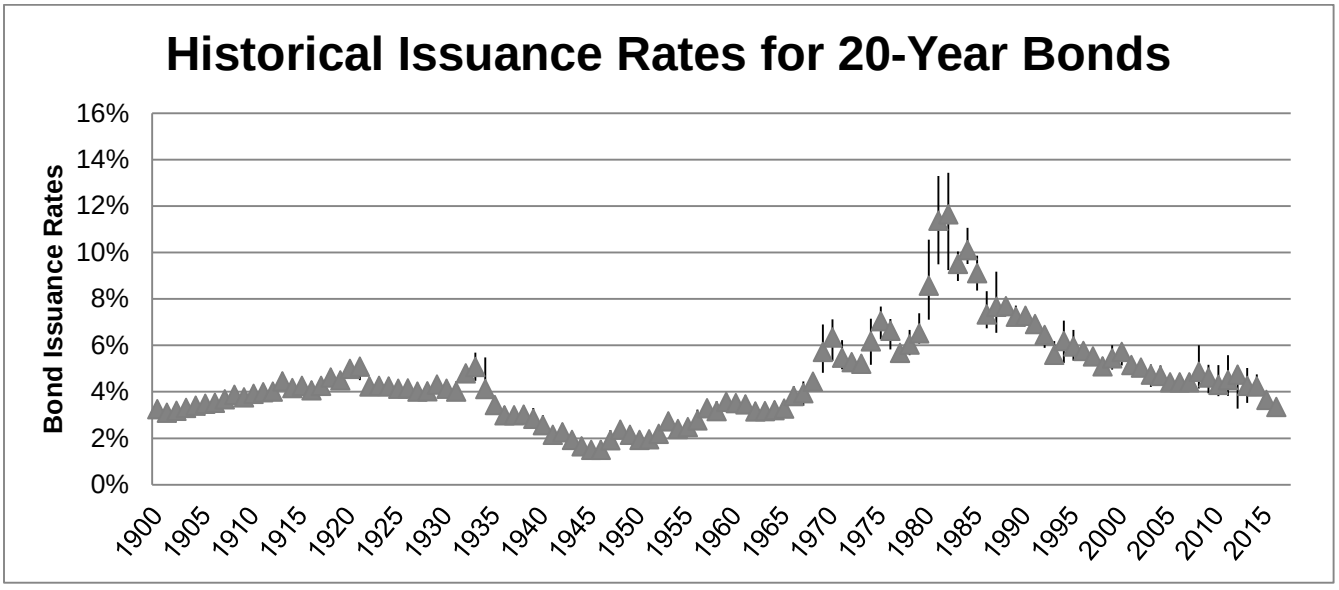
With the revised methodology implemented in March 2016, and the FY 2015-16 final actuals sales tax receipts, the new blended 2016 M2 sales tax revenue is $14.2 billion.

When the M2020 Plan was adopted in 2012, the plan was based on a revenue forecast of $15.5 billion. This projected revenue reduction, coupled with a sharp reduction in external revenues available to fund the freeway program, has greatly impacted the revenue assumptions for program delivery.

When it comes to the competitive bidding environment, OCTA has significantly benefited. When the M2020 Plan was adopted in late 2012, staff reported that freeway construction bids were consistently coming in between 10 and 20 percent below engineers' estimates since 2006. This was a marked change from the time period of FY 2001-02 through FY 2005-06 when bids were coming in higher.

Since that time, construction bids are starting to come in closer to the engineers' estimates. This is a result of several factors. First, with the economy picking up, the demand for contractors has increased which results in less competition and higher bids. At the same time, engineers' estimates have caught up and have adjusted to better reflect the current environment. Most recently, FY 2015-16 bids came in approximately 8 percent below engineers' estimates. This is still positive, though not quite the environment that was seen in 2012; however, this is certainly better than early and mid-2000.

Pay-as-you-go project funding is identified in Ordinance No. 3 as the preferred method of financing, while bond financing is an option that is within the purview of the Board. The current cost of debt is at a historic low. In fact, current 20-year bond issuance rates have not been this low since 1966. Staff identified this trend during the development of the M2020 Plan, and this trend continues into the Next 10 Plan. See the graph below showing historical issuance rates of 20-year bonds. OCTA has a strong track record of successfully delivering projects early by utilizing bond financing, as seen in M1, as well as M2, under the EAP and M2020 Plan. The Next 10 Plan anticipates bond financing for the freeway program as a means to deliver the freeway projects.



Staffing and Resources

As noted in the risks table on page 8, major capital work is underway in the Southern California region that may impact OCTA's ability to secure resources needed for future project and program delivery. Competition for available resources for capital projects has increased with the major capital work currently underway in Riverside, Los Angeles, and San Diego County. For future projects going forward, engineers, right-of-way experts, and materials will be in higher demand. Staffing and resources to implement the Next 10 Plan will need to be evaluated. A market research analysis will be conducted to help guide OCTA staff in navigating the bidding environment. Any identified resource needs for Next 10 implementation will be brought to the Board as part of a future budget adoption or in a separate Board request.

NEXT 10 DELIVERY PLAN

Freeway Program

M2 Freeway Projects

Environmental Mitigation Properties
(1,300 acres of permanent open space)

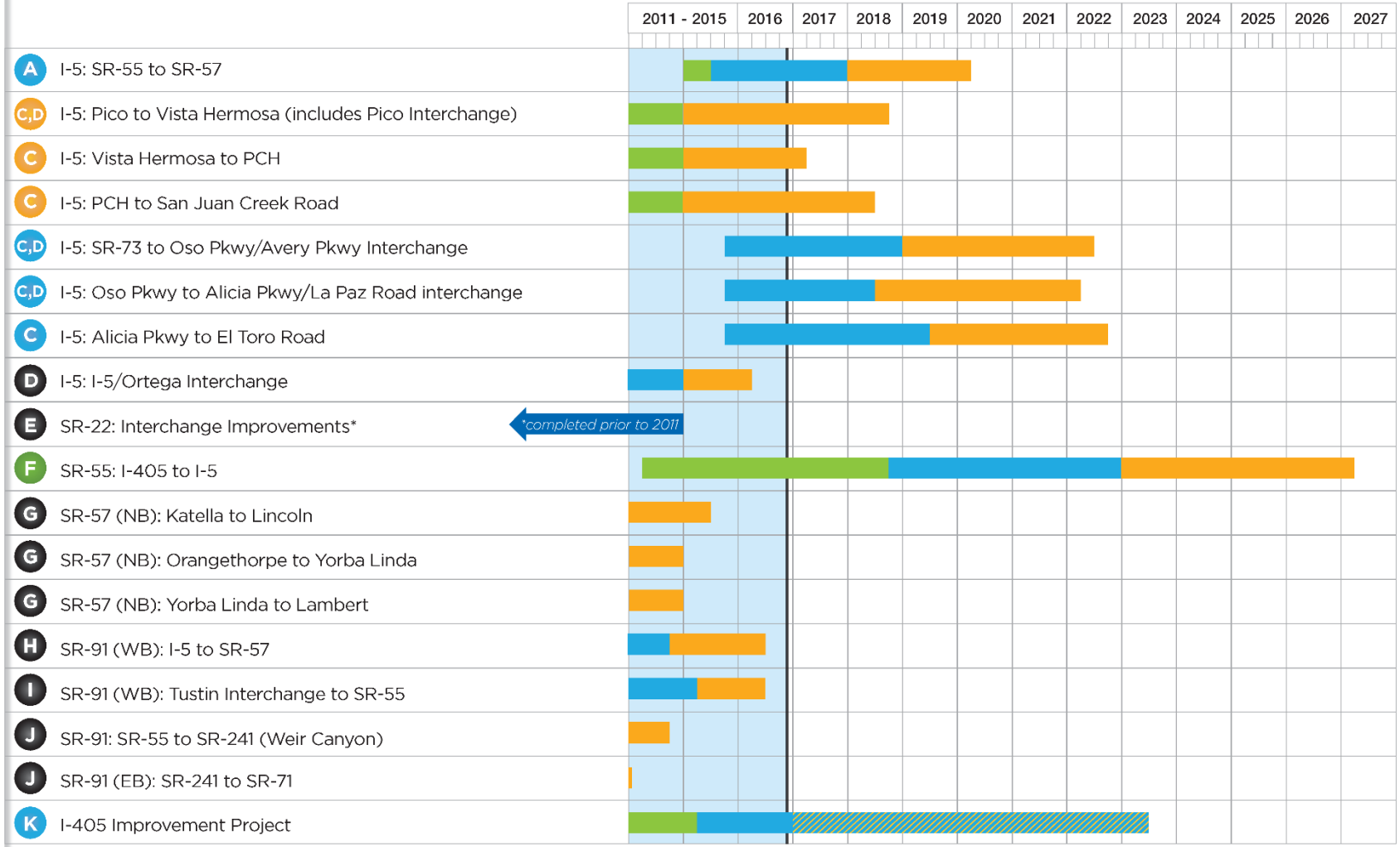
- **A** I-5 Widening (SR-55 to SR-57)
- **B** I-5 Widening (SR-55 to I-405)
- **C, D** I-5 Widening (PCH to Avenida Pico)
- **C, D** I-5 Widening (El Toro Road to SR-73)
- **D** I-5/SR-74 (Ortega Hwy) Interchange Improvements
- **D** I-5 at El Toro Road Interchange Improvements
- **E** SR-22 Access Improvements
- **F** SR-55 Widening (I-405 to I-5)
- **F** SR-55 Widening (I-5 to SR-22)
- **G** SR-57 Widening (Orangethorpe Ave. to Lambert Road)
- **G** SR-57 Widening (Katella Ave. to Lincoln Ave.)
- **G** SR-57 NB Widening (Orangewood Avenue to Katella Avenue)
- **G** SR-57 NB Widening (Lambert Road to County Line)
- **H** SR-91 Widening (I-5 to SR-57)
- **I** SR-91 Widening (SR-55 to Tustin Ave.)
- **I** SR-91 Widening (SR-57 to SR-55)
- **J** SR-91 Widening (SR-55 to SR-71)
- **J** SR-91 Widening (SR-241 to I-15)*
- **K** I-405 Widening (I-605 to SR-55)
- **L** I-405 Widening (SR-55 to I-5)
- **M** I-605/Katella Ave. Interchange Improvements

** Project environmentally cleared as part of the Riverside County Transportation Commission's Corridor Improvement Project.*

NEXT 10 DELIVERY PLAN

Environmental | Design/Advertise & Award | Design-Build | Construction | Completed

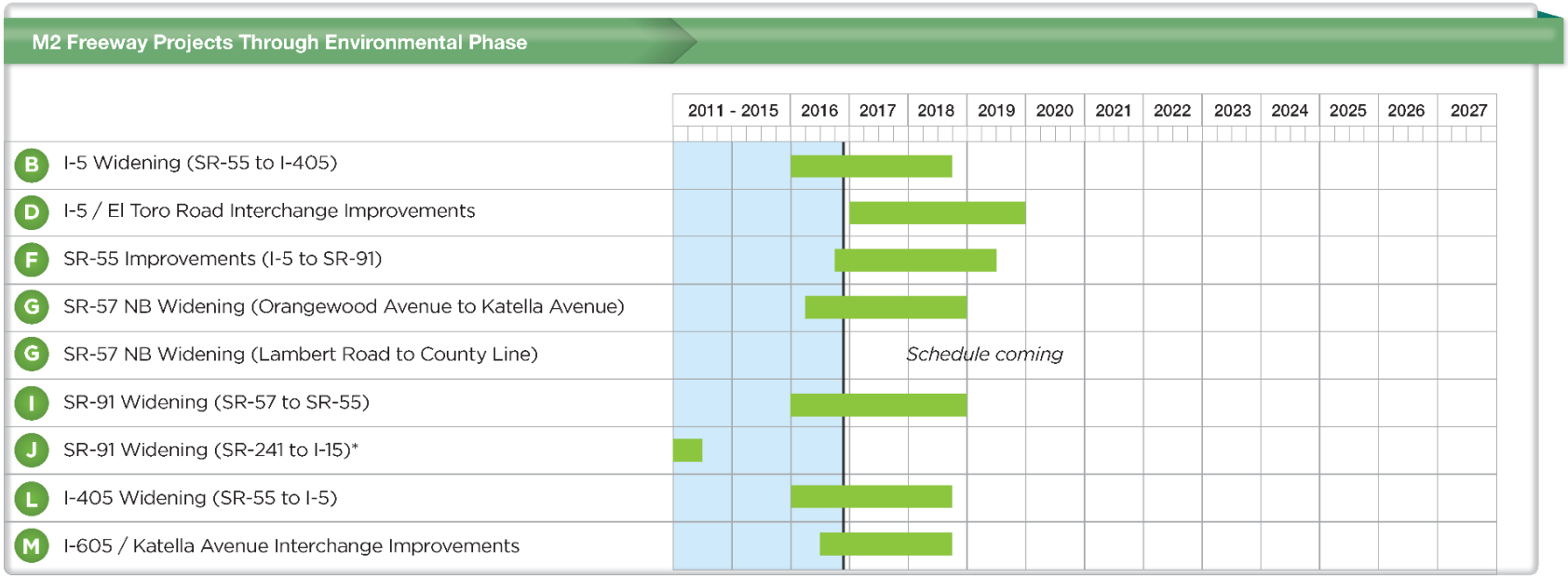
M2 Freeway Projects Through Construction



NEXT 10 DELIVERY PLAN

Environmental

M2 Freeway Projects Through Environmental Phase



** Project environmentally cleared in 2012 as part of the Riverside County Transportation Commision's Corridor Improvement Project.*

Freeway Program

Overview:
The Freeway Program accounts for 43 percent of the M2 Program. Over the life of M2, approximately $5.7 billion is expected to be generated in sales tax revenues for freeway Projects A-N (not including the five percent of net revenues apportioned to the Environmental Mitigation Program). Improving Orange County freeways is the greatest investment of the M2 Program.

To ensure delivery of the Freeway Program, the Next 10 Plan includes the following framework:

- Bring congestion relief.
- Deliver projects using the guiding principles of congestion relief, cost escalation risk, and readiness.
- Continue to make M2 projects the priority for external funding.
- Work with Caltrans to seek cost saving measures on freeway projects through changes in scope and design parameters where possible.
- Tightly manage project scopes and schedule to reduce cost escalation risk.

Next 10 Deliverables:
When originally passed, 13 freeway projects were highlighted in the M2 Transportation Investment Plan. Since then, these projects have been segmented into 27 projects. Of this amount, nine freeway projects have been completed to date. To adhere to the promise of M2, the Next 10 Plan includes the following deliverable goals for the Freeway Program through 2026, as they relate to the remaining 18 projects:

1. Deliver construction of nine freeway project segments; seven along Interstate 5 (I-5), one along Interstate 405 (I-405), and one along State Route 55 (SR-55) (Projects A, C/D, F, and K).
2. Complete the environmental phase for the remaining nine project segments to be shelf ready. This includes one on I-5, I-405, SR-55, and two along State Route 57 and State Route 91, and two interchange projects, one at El Toro Road/I-5 and one at Katella Avenue/Interstate 605 (Projects B, D, F, G, I, J, L, and M).
3. Invest approximately $1.2 billion in revenues (bringing the completed freeway program total to 78 percent) in revenues to move “shelf ready” projects forward using the guiding principles.

A. I-5 (SR-55 to SR-57)

Description:
Project A will reduce freeway congestion by adding a second High-Occupancy Vehicle (HOV) lane, northbound and southbound, on I-5 between State Route 55 (SR-55), and SR-57. The project will generally be constructed within the existing ROW.

Cost:
$37.1 million (YOE).

Status:
This project is currently in the design phase. Design is scheduled for completion in spring 2017. The project is expected to be open to traffic in early 2020.

Present Day:
The current daily traffic volume on this segment of I-5 is about 380,000 vehicles and is severely congested. Traffic volumes are expected to increase nearly seven percent by 2035, bringing it up to 406,000 vehicles per day. The HOV lanes experience more congestion in the peak period than the adjacent general purpose lanes, underscoring the need to add HOV capacity on this freeway segment.

Benefits:
This project will increase the capacity of the HOV facility on I-5 in Santa Ana to meet traffic demands and eliminate bottlenecks. Improvements are needed to accommodate HOV traffic from both the SR-55/I-5 and SR-57/I-5 direct HOV connectors.

Originally considered under this project, the extension of the auxiliary lane from southbound I-5 to southbound SR-55 through the McFadden Avenue exit ramp on SR-55 to Edinger Avenue, is now part of the SR-55 Project F.

External Funding:
The Board has approved funding that supports this project including $28.95 million in state funds, and $2.80 million in federal funds.

Risks:
Overall time, scope, costs, and quality risks are low with this project due to construction within the existing ROW and relatively straightforward design issues. However, risks are relatively high on potential delay due to STIP funding shortfall.

Related Projects:
Projects B and F.

Involved Agencies:
OCTA, City of Santa Ana, Caltrans, California Transportation Commission (CTC), Federal Highways

A. I-5 (SR-55 to SR-57)

Administration (FHWA), and Southern California Regional Rail Authority (SCRRA).

Assumptions:
Cost based on October 2016 M2 Program Cash Flow.

References:
- OCTA 2010 Long Range Transportation Plan
- 2015 Freeway Plan
- July 2016 Project Status Report
- Capital Funding Program Report – State Highway Project (September 2016)

B. I-5 (SR-55 to the El Toro "Y" Area)

Description:
Project B will increase I-5 freeway capacity and reduce congestion by constructing new northbound and southbound general purpose lanes and improving key interchanges in the area between SR-55 and State Route 133 (SR-133) (near the El Toro "Y"). This segment of I-5 is the major route serving activity areas in the Cities of Irvine, Tustin, Santa Ana, and north Orange County. The project will generally be constructed within the existing ROW.

Cost:
$720.87 million (YOE), including advancement to environmental phase.

Status:
This project is currently in the environmental phase. Continued from the M2020 Plan, the Next 10 Plan includes funding this project through the environmental phase. Environmental clearance is scheduled for late 2018.

Present Day:
The current traffic volume on this segment of I-5 is about 358,000 vehicles per day and is expected to increase by nearly 16 percent by 2035, bringing it up to 416,000 vehicles per day.

Benefits:
Project improvements would alleviate congestion and reduce delay.

External Funding:
The Board has approved funding that supports this project including $8 million in federal funds for preliminary engineering. Future phases are also eligible for state and federal funds. Any additional funding is expected to be submitted for Board approval at a later time.

Risks:
Overall time, scope, costs, and quality risks are medium with this project due to tight ROW and need for design variations.

B. I-5 (SR-55 to the El Toro "Y" Area)

Related Projects:
Projects A and F.

Involved Agencies:
OCTA, Cities of Tustin and Irvine, Caltrans, and FHWA.

Assumptions:
Cost based on October 2016 M2 Program Cash Flow.

References:
- OCTA 2010 Long Range Transportation Plan
- 2015 Freeway Plan
- July 2016 Project Status Report
- Capital Funding Program Report – State Highway Project (September 2016)

C. I-5 (El Toro Road to SR-73 includes Avery & La Paz Interchanges)

Description:
Project C will add new lanes to I-5 from El Toro Road in the City of Lake Forest to the vicinity of State Route 73 (SR-73) in the City of Mission Viejo. Improvements include continuous HOV access completion and major improvements at the Avery Parkway and La Paz Road interchanges, as part of Project D. The project will generally be constructed within the existing ROW. This project is divided into three segments as described below.

Segment 1:
This portion consists of the SR-73 to Oso Parkway segment, which will add one general purpose lane in each direction between SR-73 and Oso Creek (approximately 2.2 miles), reconstruct Avery Parkway interchange, and add auxiliary lanes where needed to increase freeway capacity and reduce congestion in Laguna Niguel, Mission Viejo, and Laguna Hills areas.

Segment 2:
This portion consists of the Oso Parkway to Alicia Parkway segment, which will add one general purpose lane in each direction between Oso Creek and Alicia Parkway (approximately 2.6 miles), reconstruct La Paz Road interchange, and add auxiliary lanes where needed to increase freeway capacity and reduce congestion in Mission Viejo, and Laguna Hills areas.

Segment 3:
This portion consists of the Alicia Parkway to El Toro Road segment, which will add one general purpose lane in the southbound direction between Alicia Parkway and El Toro Road (approximately 1.7 miles), continue the additional general purpose lane in the northbound direction from Segment 2 through Alicia Parkway, extend the second HOV lane in both directions from El Toro Road to Alicia Parkway, and add auxiliary lanes where needed to increase freeway

C. I-5 (El Toro Road to SR-73 includes Avery & La Paz Interchanges)

capacity and reduce congestion in Laguna Hills and Lake Forest areas.

Cost:
Segment 1: $151.87 million (YOE)
Segment 2: $196.17 million (YOE)
Segment 3: $133.55 million (YOE)

Status:
All segments of this project are currently in the design phase. Segment 2 is scheduled to complete design in late 2017. Segments 1 and 3 are scheduled to complete design in 2018. Construction is expected to start in 2017/18 for Segment 2, and in 2018/19 for Segments 1 and 3, with all segments open to traffic in 2022.

Present Day:
The current traffic volume on I-5 near the El Toro "Y" is about 343,000 vehicles per day. This volume will increase in the future by 22 percent by 2035, bringing it up to 420,000 vehicles per day.

Benefits:
This project will help alleviate congestion and reduce traffic delays. The second HOV extension for Segment 3 will enable more efficient operation of general purpose lanes and increase capacity for future projected traffic volumes. Adding an additional general purpose lane in Segment 1 and 2 will increase capacity of the freeway to accommodate future projected traffic volumes. The I-5/La Paz Road and I-5/Avery Parkway interchange improvement projects called for in M2 Project D will reduce chokepoints and congestion, as well as accommodate future traffic demands on the local roads at each interchange.

External Funding:
The Board has approved funding that supports this project including:

Segment 1: $78.03 million in state funds and $28.17 in federal funds. Additional funds may be required to support contingency for this segment, which would be eligible for state and federal funds.

Segment 2: $47.63 million in federal funds.

Segment 3: $39.13 million in federal funds.

STIP funds supporting Segment 1 were decreased in May 2016 due to a downward trend in the price-based excise tax and the diversion of truck weight fees to the state's general fund. As a result, the 2016 STIP funding available to start construction for this segment was delayed from Fiscal Year (FY) 2018-19 to FY 2020-21. This may impact overall project costs if Segment 1 is delayed further, and if Segments 2 and 3 are also delayed so the entire project can be delivered in the same time frame. Staff has been directed to find possible alternative funding or methods to keep these segments on their existing schedules.

Risks:
Overall time, scope, costs, and quality risks are high with this project due to potential ROW impacts and delay from STIP funding shortfall.

C. I-5 (El Toro Road to SR-73 includes Avery & La Paz Interchanges)

Related Projects:
Project C (Avenida Pico to San Juan Creek Road) and Project D (El Toro Road interchange).

Involved Agencies:
OCTA, Cities of Mission Viejo, Laguna Hills, and Laguna Niguel, Transportation Corridor Agencies, Caltrans, CTC, and FHWA.

Assumptions:
Costs based on October 2016 M2 Program Cash Flow.

References:
- OCTA 2010 Long Range Transportation Plan
- 2015 Freeway Plan
- July 2016 Project Status Report
- Capital Funding Program Report - State Highway Project (September 2016)

C. I-5 Avenida Pico to San Juan Creek Road (includes Pico Interchange)

Description:
Project C will reduce freeway congestion on I-5 by extending the HOV lanes from Avenida Pico to San Juan Creek Road in the Cities of San Juan Capistrano, Dana Point, and San Clemente. Major interchange improvements are also included at Avenida Pico, as part of Project D. The project will generally be constructed within the existing right of way. This project is divided into three segments as described below.

Segment 1:
This portion consists of the Avenida Pico to Avenida Vista Hermosa segment, which will add new continuous-access HOV lanes in each direction between Avenida Vista Hermosa Overcrossing and Avenida Pico Undercrossing. The Avenida Pico Interchange will be reconstructed to optimize the traffic movements within the interchange and provide bicycle lanes in both directions of Avenida Pico.

Segment 2:
This portion consists of the Avenida Vista Hermosa to Pacific Coast Highway (PCH) segment, which will add new continuous-access HOV lanes in each direction between Avenida Vista Hermosa Overcrossing and PCH Undercrossing. The project will also reconstruct on- and off-ramps at Avenida Vista Hermosa and Camino de Estrella, and re-establish existing auxiliary lanes. Avenida Vaquero Undercrossing will be widened in both directions to accommodate the new HOV lanes.

Segment 3:
This portion consists of the PCH to San Juan Creek Road segment, which will add new continuous-access HOV lanes in each direction between Camino Estrella Overcrossing to San Juan Creek Road Undercrossing. On- and off-ramps at Camino Las Ramblas/

C. I-5 Avenida Pico to San Juan Creek Road (includes Pico Interchange)

PCH will be reconstructed. Additionally, the I-5/PCH northbound connector and I-5/Camino Las Ramblas Undercrossing will also be widened in both directions.

Cost:
Segment 1: $90.51 million
Segment 2: $71.03 million
Segment 3: $71.21 million

Status:
All segments of Project C are currently under construction. Segment 2 is scheduled to be completed in early 2017. Segments 1 and 3 are scheduled to be completed in early 2018. All three segments will be opened to traffic at the same time in early 2018.

Present Day:
This portion of I-5 has high levels of traffic during the weekdays and weekends, as well as holidays, throughout the proposed project limits. The current traffic volume on this segment of I-5 is about 250,000 vehicles per day and is expected to increase by nearly six percent by 2035, bringing it up to 266,000 vehicles per day.

Benefits:
This project will eliminate a southbound lane drop at PCH by extending the southbound HOV lane between Camino Capistrano and Avenida Pico, and the northbound HOV lane between Avenida Pico and PCH. Elimination of the lane drop will enable more efficient operation of general purpose lanes and will also serve projected traffic volumes for the year 2040.

External Funding:
The Board has approved funding that supports these projects including:

Segment 1: $43.74 million in state funds and $33.34 in federal funds.

Segment 2: $46.78 million in state funds and $13.47 million in federal funds.

Segment 3: $20.79 million in state funds and $11.80 million in federal funds.

Risks:
Overall time, scope, costs, and quality risks are moderate with this project due to a soil issue that was identified in Segment 3, resulting in significantly increased project cost and delayed completion time. There is potential for further issues on this project or adjoining segments should additional soil issues surface.

Related Projects:
Project D.

Involved Agencies:
OCTA, Cities of San Clemente, Dana Point and San Juan Capistrano, Caltrans, CTC and FHWA.

Assumptions:
Costs based on October 2016 M2 Program Cash Flow.

References:
- OCTA 2010 Long Range Transportation Plan
- 2015 Freeway Plan
- July 2016 Project Status Report

C. I-5 Avenida Pico to San Juan Creek Road (includes Pico Interchange)

- Capital Funding Program Report - State Highway Project (September 2016)

D. I-5 (El Toro Interchange)

Description:
Proposed Project D improvements at I-5/El Toro Road Interchange include modifying entrance and exit ramps and modifying or replacing existing bridge structures.

Cost:
$113 million (YOE), including advancement of the environmental phase.

Status:
Planning work is complete. The environmental phase is expected to begin in early 2017. Continued from the M2020 Plan, the Next 10 Plan includes funding this project through environmental, with environmental clearance expected by 2020.

Present Day:
This portion of I-5 has high levels of traffic during the weekdays and weekends, as well as holidays, throughout the proposed project limits. The current traffic volume on this segment of I-5 is about 355,000 vehicles per day and is expected to increase nearly nine percent by 2035, bringing it up to 388,000 vehicles per day.

Benefits:
This project would reduce chokepoints and accommodate forecast traffic demands on the local roads. Modification of the entrance and exit ramps would alleviate congestion at adjacent intersections.

External Funding:
The Board has approved funding that supports this project including $4.4 million in federal funds for the environmental phase. Future phases are also eligible for state and federal funds. Any additional funding is expected to be submitted for Board approval at a later time.

Risks:
Overall time, scope, costs, and quality risks are high with this project due to

D. I-5 (El Toro Interchange)

community issues and high ROW impacts with most of the alternatives.

Related Projects:
Project C.

Involved Agencies:
OCTA, Cities of Laguna Hills and Lake Forest, Caltrans, and FHWA.

Assumptions:
Cost based on October 2016 M2 Program Cash Flow.

References:

- OCTA 2010 Long Range Transportation Plan
- 2015 Freeway Plan
- July 2016 Primavera Project Schedule
- Capital Funding Program Report - State Highway Project (September 2016)

D. I-5 (Ortega Highway Interchange)

Description:
Reconstruct the I-5 interchange at State Route 74 (SR-74) in south Orange County, including widening SR-74, modifying entrance and exit ramps, and replacing the existing bridge structure.

Cost:
The cost for this project was $80.29 million.

Status:
The project was opened to traffic on September 4, 2015, and was officially completed on January 15, 2016.

Present Day:
Prior to completion of the project, the existing freeway overcrossing and on- and off-ramps did not accommodate existing and projected to-and-from street/freeway traffic.

Benefits:
This project alleviated a major chokepoint and reduced congestion by widening the Ortega Highway Bridge and improving local traffic flow through reconfigured streets and on- and off-ramps.

External Funding:
$69.70 million in state funds, $2.5 million in M1 funds from the regional interchange program, and $5.01 million in other local funds were used for the project.

Risks:
None – project completed

Related Projects:
Project C.

Involved Agencies:
OCTA, City of San Juan Capistrano, Caltrans, and CTC.

Assumptions:
Cost based on October 2016 M2 Program Cash Flow.

D. I-5 (Ortega Highway Interchange)

References:

- OCTA 2010 Long Range Transportation Plan
- 2015 Freeway Plan
- July 2016 Project Status Report
- Capital Funding Program Report - State Highway Project (September 2016)

E. SR-22 Access Improvements

Description:
Construct interchange improvements at Euclid Street, Brookhurst Street, and Harbor Boulevard to reduce freeway and street congestion near these interchanges.

Cost:
The cost for this project was $25.8 million.

Status:
These projects were completed in 2006 as part of the SR-22 widening project completed in late 2007 using M1 funds.

Present Day:
Prior to completion of the project, the existing freeway overcrossings did not allow clearance for widening of these three streets to accommodate existing and projected traffic.

Benefits:
The project reconstructed the freeway overcrossings to allow these streets to be widened through the interchange area. These improvements reduced congestion and delay at all three interchanges.

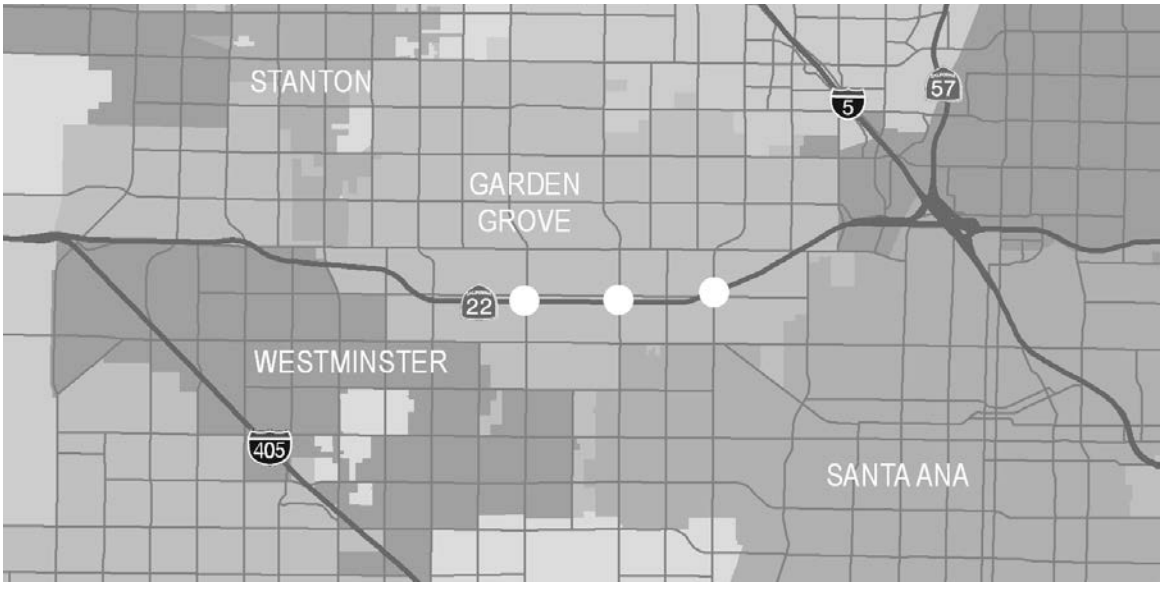
Additional improvements also include new freeway-to-freeway carpool ramps to the SR-22/I-405 and I-405/I-605 interchanges, which were completed in 2015 as part of a separate project.

External Funding:
$15.9 million of M1 funds and $9.9 million of other non-M2 (federal, state and city) funds were used for the project.

Risks:
None – project completed

Related Projects:
West County Connector (WCC) improvements at SR-22/I-405 and I-405/I-605 interchanges.

Involved Agencies:
OCTA, City of Garden Grove, and Caltrans.



E. SR-22 Access Improvements

Assumptions:
Cost based on October 2016 M2 Program Cash Flow.

References:
- 2015 Freeway Plan
- OCTA 2010 Long Range Transportation Plan

F. SR-55 (I-405 to I-5 and I-5 to SR-91)

Description:
Project F will increase freeway capacity and reduce congestion by adding lanes and operational improvements to SR-55 between I-405 and SR-91. This project is divided into two segments as described below.

South Segment:
This portion will add one general purpose lane (approximately six miles) between I-5 and I-405, including merging lanes between interchanges to smooth traffic flow. The South Segment will generally be constructed within the existing ROW. The general purpose lane will be funded with M2, state, and federal funds. Concurrent with these efforts, an additional, second HOV lane will also be constructed between I-5 and I-405. The HOV lane will only be funded with state and federal funds. $46.8 million is being contributed by the state for construction of the second HOV lane.

North Segment:
This future portion would add new lanes between SR-22 and I-5, including merging lanes between interchanges to smooth traffic low. Operational improvements between SR-22 and SR-91 would also be incorporated. Continued from the M2020 Plan, the Next 10 Plan includes advancing the North Segment through the environmental phase. The North Segment will generally be constructed within the existing ROW.

Cost:
Segment 1: $375.93 million (YOE).
Segment 2: $227.35 (YOE) including advancement of environmental phase.

Status:
The South Segment is currently in the environmental phase. Construction is expected to begin in 2023. The North Segment is expected to begin the environmental phase in late 2016, with the environmental document expected to be complete by 2019.

Present Day:
This freeway carries about 316,000 vehicles on a daily basis. This volume

F. SR-55 (I-405 to I-5 and I-5 to SR-91)

is expected to increase by nearly eight percent by 2035, bringing it up to 340,000 vehicles per day in the future.

Benefits:
This project will increase freeway capacity, improving mobility and reducing congestion in central Orange County areas, by adding new lanes and operational improvements that provide an improved level of operation for existing and forecasted traffic volumes (especially for weaving and lane efficiency at ramp junctions).

External Funding:
South Segment: The Board has approved funding that supports the environmental phase of this project including $12 million in federal funds. As previously mentioned, Caltrans has also committed $46.8 million in state (SHOPP) funds for this project. This project is eligible for future state and federal funds.

North Segment: The Board has approved $5 million in federal funds for this project to support the environmental phase. This project is eligible for future state and federal funds.

Risks:
Overall time, scope, costs, and quality risks remain high with this project due to South Segment ROW impacts which rely on design exceptions and increased project cost.

Related Projects:
Projects A and B.

Involved Agencies:
OCTA, Cities of Orange and Santa Ana, Caltrans, and FHWA.

Assumptions:
Costs based on October 2016 M2 Program Cash Flow.

References:
- OCTA 2010 Long Range Transportation Plan
- 2015 Freeway Plan
- July 2016 Project Status Report
- Capital Funding Program Report - State Highway Project (September 2016)

G. SR-57 Improvements

Description:
Project G will increase capacity and reduce congestion by adding one general purpose lane in the northbound direction from Orangewood Avenue in the City of Orange to approximately Tonner Canyon in the City of Brea. Select northbound undercrossings will also be widening and seismically retrofitted, as required. The project may add new auxiliary lanes in select locations. The project is divided into three segments as described below.

Segment 1:
This portion consists of three northbound sections including Katella Avenue to Lincoln Avenue, Orangethorpe to Yorba Linda Avenue, and Yorba Linda Boulevard to Lambert Road in the Cities of Anaheim, Placentia, Fullerton, and Brea. All three segments were completed and opened to traffic in 2014.

Segment 2:
This portion would include the addition of a northbound truck-climbing lane from Lambert Road in the City of Brea to one-half mile north of the Los Angeles County line (approximately Tonner Canyon Road). Continued from the M2020 Plan, the Next 10 Plan includes funding this segment through the environmental phase. Segment 2 is scheduled to begin the environmental phase by 2020.

Segment 3:
This portion would include adding one northbound general purpose lane from approximately Orangewood Avenue in the City of Orange to Katella Avenue in the City of Anaheim. Segment improvements would maintain the existing auxiliary lane between Orangewood Avenue and Katella Avenue. Continued from the M2020 Plan, the Next 10 Plan includes funding Segment 3 through the environmental phase.

Cost:
Segment 1: $148.19 million (YOE).
Segment 2: $167.55 million (YOE), including advancement of environmental phase.
Segment 3: $47.69 million (YOE), including advancement of environmental phase.

Status:
Segment 1 is complete. Segments 2 and 3 will be advanced to environmental clearance.

Present Day:
This freeway carries about 302,000 vehicles on a daily basis. This volume is expected to increase by nearly 13 percent by 2035, bringing it up to 342,000 vehicles per day in the future.

Benefits:
This project will substantially improve existing and future mobility, reduce congestion, improve mainline weaving, and merge/diverge movements, which will improve both traffic operations and safety. Combined improvements from Orangethorpe Avenue to Tonner Canyon Road could achieve a 40 percent reduction in total delay through the SR-57 northbound corridor.

External Funding:
Segment 1: $106.30 million in state funds were used for the project.

G. SR-57 Improvements

Segment 2: The Board has approved the use of state funds to support the environmental phase, however due to a downward trend in the price-based excise tax and the diversion of truck weight fees to the State's general fund, OCTA was not able to program the 2016 STIP funds that were planned to this project.

Segment 3: The Board has approved funding that supports the environmental phase of this project including $2.5 million in federal funds.

Segments 2 and 3 are eligible for future state and federal funds.

Risks:
Overall time, scope, costs, and quality risks are low with this project due to construction within the existing ROW and relatively straightforward design issues.

Related Projects:
Project H.

Involved Agencies:
OCTA, CTC, FHWA, Caltrans, and the Cities of Orange, Anaheim, Placentia, Fullerton, and Brea.

Assumptions:
Costs based on October 2016 M2 Program Cash Flow.

References:
- OCTA 2010 Long Range Transportation Plan
- 2015 Freeway Plan
- July 2016 Project Status Reports
- July 2016 Project Schedule
- Capital Funding Program Report - State Highway Project (September 2016)

H. SR-91 (I-5 to SR-57)

Description:
Widen westbound SR-91 by connecting existing auxiliary lanes through interchanges, thus forming a fourth continuous general purpose lane between SR-57 and I-5. Replace the existing auxiliary lanes on westbound SR-91 between State College Boulevard and Raymond Avenue, and between Euclid Street and Brookhurst Street, and add a new auxiliary lane between Raymond Avenue and Lemon Street.

Cost:
The cost for this project was $61.26 million.

Status:
The project was opened to traffic in March 2016, and was officially completed in June 2016.

Present Day:
SR-91 serves as a major commuting route connecting Orange County with Riverside and Los Angeles counties. SR-91 is also one of the most congested freeways in Southern California. This freeway carries about 290,000 vehicles on a daily basis. This volume is expected to increase by nearly 5 percent by 2035, bringing it up to 304,000 vehicles per day in the future.

Benefits:
This project alleviated congestion and increased mainline capacity by adding a continuous general purpose lane and replacing existing auxiliary lanes, which improved merging operations at each interchange.

External Funding:
$27.23 million in state funds were used for the project.

Risks:
None – project completed.

Related Projects:
Project I.

H. SR-91 (I-5 to SR-57)

Involved Agencies:
OCTA, Cities of Fullerton and Anaheim, Caltrans, and CTC.

Assumptions:
Cost based on October 2016 M2 Program Cash Flow.

References:
- OCTA 2010 Long Range Transportation Plan
- 2015 Freeway Plan
- July 2016 Project Status Report
- Capital Funding Program Report – State Highway Project (September 2016)

I. SR-91 (SR-55 to SR-57)

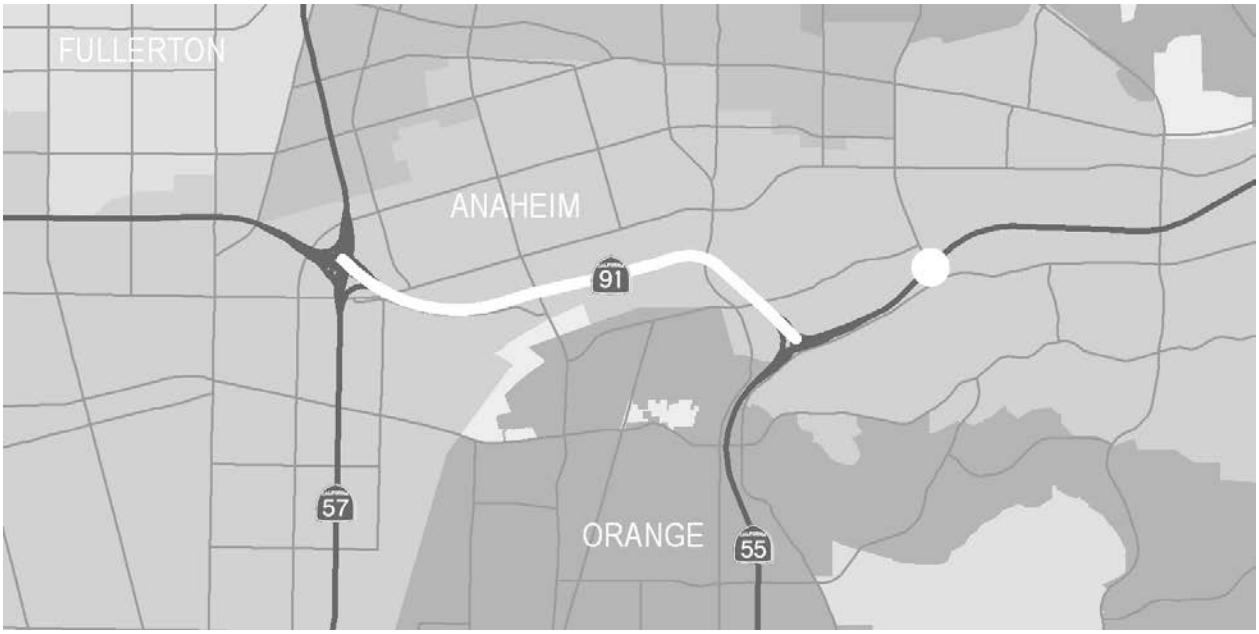
Description:
Project I will add an auxiliary lane in the westbound direction from the SR-55/SR-91 connector to Tustin Avenue, one westbound general purpose lane from Glassell Street to State College Boulevard, and one eastbound general purpose lane between SR-57 and SR-55. The project is divided into two segments as described below.

Segment 1:
This segment added a westbound auxiliary lane on SR-91, beginning at the northbound SR-55 to westbound SR-91 connector, through the Tustin Avenue interchange. The overall segment length was approximately two miles. Additional features of this project included widening the eastbound Santa Ana River Bridge to accommodate the auxiliary lane.

Segment 2:
This future segment would include adding an eastbound general purpose lane on SR-91 between SR-57 and SR-55 and a westbound general purpose lane from Glassell Street to State College Boulevard. Additional features would include improvements to the Glassell, Tustin, and Lakeview interchanges, and freeway-to-freeway connectors from northbound SR-57 to SR-91 and southbound SR-57 to westbound SR-91. Select auxiliary lanes would be added or re-established. Segment 2 would generally be constructed within the existing ROW. Continued from the M2020 Plan, the Next 10 Plan includes advancing this project through the environmental phase.

Cost:
Segment 1: The cost for this segment was $45.11 million.

Segment 2: $456.19 million (YOE), including advancement of the environmental phase of the project.



I. SR-91 (SR-55 to SR-57)

Status:
Segment 1 was opened to traffic and completed in July 2016.
Segment 2 is currently in the environmental phase. Environmental clearance is expected by late 2018.

Present Day:
Current freeway volume on this segment of the SR-91 is about 250,000 vehicles per day. This vehicular demand is expected to increase by 12 percent by 2035, bringing it up to 280,000 vehicles per day in the future.

Benefits:
Segment 1 addressed choke-point conditions and reduced operational problems, including weaving and merging maneuvers, which were primarily caused by extensive weaving between the northbound SR-55 to westbound SR-91 connector and the westbound SR-91 off-ramp to Tustin Avenue.

Segment 2 improvements are expected to alleviate congestion and reduce delay by improving the connection from SR-57 to southbound SR-55**.**

External Funding:
Segment 1: $27.93 million in state funds were used for the project.

Segment 2: The Board has approved funding supporting the environmental phase of this project including $7 million in federal funds. Segment 2 is eligible for future state and federal funds.

Risks:
Overall time, scope and costs risks are medium with Segment 2.

Related Projects:
Projects H and J.

Involved Agencies:
OCTA, Cities of Orange and Anaheim, Caltrans, CTC, and FHWA.

Assumptions:
Costs based October 2016 M2 Program Cash Flow.

References:
- OCTA 2010 Long Range Transportation Plan
- 2015 Freeway Plan
- July 2016 Project Status Report
- Capital Funding Program Report – State Highway Project (September 2016)

J. SR-91 (SR-55 to SR-71)

Description:
Project J adds capacity on the SR-91 beginning at SR-55 and extending to State Route 71 (SR-71) in Riverside County. The project is divided into three segments as described below.

Segment 1, which has been completed, improved the portion of SR-91 east of SR-241 by adding one eastbound lane from one mile east of SR-241 to SR-71 in Riverside County.

Segment 2, which has also been completed, improved the approximate 6-mile portion of SR-91 between SR-55 and SR-241 by adding one new lane in each direction and improving key interchanges. Additional improvements included the widening and seismic retrofitting for the Imperial Highway Undercrossing and Weir Canyon Road Undercrossing bridges.

Segment 3 would add additional capacity on SR-91 beginning at SR-241 and extending to I-15 in Riverside County. The Riverside County Transportation Commission (RCTC) is leading the two-phase delivery of this project. Improvements include adding an express lane and one general purpose lane in both directions east of SR-71 (Phase 1), and one general purpose lane in both directions between I-15 and SR-71 (Phase 2). The Orange County improvements (the lane addition between SR-421 to SR-71 portion of Phase 2) are contingent upon RCTC's delivery of the complementary improvements within Riverside County.

Cost:
Segment 1: The cost for this segment was $57.77 million.
Segment 2: The cost for this segment was $79.56 million.
Segment 3: $292.53 million (YOE).

Status:
Segment 1 was completed in January 2011, and Segment 2 was completed in December 2012.

J. SR-91 (SR-55 to SR-71)

Segment 3 is contingent on the future widening in Riverside County to match the planned lanes in Orange County. The environmental phase for the Orange County portion of Phase 2 has been completed. Phase 1 of RCTC's project is underway using a design-build contract, scheduled for completion in early 2017. A schedule for delivery of the Phase 2 improvements has not yet been established, and specific improvements will be subject to approved plans developed in cooperation with local jurisdictions and affected communities. Construction for Phase 2 is expected to take place post-2035.

Present Day:
Today, this freeway carries about 328,000 vehicles every day. This volume is expected to increase by 15 percent, bringing it up to 378,000 vehicles by 2035.

Benefits:
Segment 1 improvements added one general purpose lane, which improved weaving by reducing the volume of exiting vehicles in the SR-91 mainline through lanes that are exiting at Green River Road and SR-71.

Segment 2 improvements helped to alleviate congestion and reduce delay.

Segment 3 proposed improvements are expected to reduce congestion and improve safety and operational efficiency by increasing capacity and by reducing the existing chokepoints within the project limits.

External Funding:
$80.41 million in state funds and $47.89 million in federal funds were used for Segment 1 and 2.

There are currently no funds programmed for Segment 3, as this project requires coordination with the planned RCTC project.

Risks:
No risks for Segments 1 and 2, as they are complete. Overall time, scope, costs, and quality risks are high for Segment 3, due to required coordination with RCTC, local jurisdictions and affected communities.

Related Projects:
Project I and the Riverside County Corridor Improvement Project.

Involved Agencies:
OCTA, Cities of Anaheim and Yorba Linda, County of Orange, Caltrans, CTC, and FHWA.

Assumptions:
Costs based on October 2016 M2 Program Cash Flow.

References:
- OCTA 2010 Long Range Transportation Plan
- 2015 Freeway Plan
- July 2016 Project Status Report
- Capital Funding Program Report – State Highway Project (September 2016)

K. I-405 Widening (SR-55 to SR-605)

Description:
Project K will add new lanes to I-405 between SR-55 and I-605. The project will make the best use of available freeway property by staying generally within the freeway ROW and updating key local interchanges to current standards. The project will add one general purpose lane in each direction of I-405 from Euclid Street to I-605.

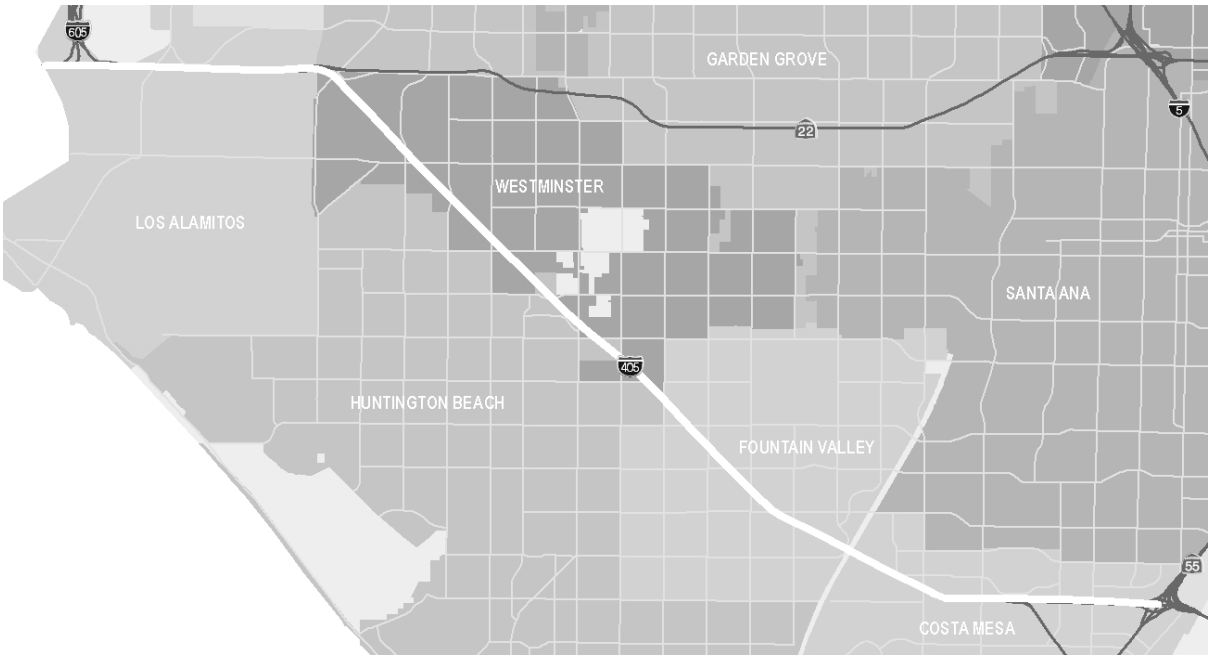
Concurrently with Project K, an additional lane will be added in each direction that would combine with the existing HOV lane to provide dual express lanes in each direction on I-405 from SR-73 to I-605. The general purpose lanes will be funded with M2, state, and federal funds; the express lanes will be funded primarily with toll revenues.

Cost:
M2 Portion: $1.425 billion (YOE).
Express Lanes Portion: $475 million (YOE).

Status:
Project K is currently in the preliminary design phase. This schedule is based on the design/build (D/B) project delivery method in which one team is hired to perform both the design and construction of the project. The project is expected to be open to traffic in 2023.

Present Day:
On average, I-405 carries between 392,000 vehicles daily. The volume is expected to increase by 20 percent by 2035, bringing it up to 472,000 vehicles daily. The project will increase freeway capacity, reduce congestion, enhance operations, increase mobility, improve trip reliability, and maximize throughput on I-405.

Benefits:
Project K includes the addition of auxiliary and general purpose lanes. These improvements would help reduce congestion and congestion-related accidents. Additional improvements include drainage to



K. I-405 Widening (SR-55 to SR-605)

reduce flooding, and a direct Express Lanes connector at the I-405/SR-73 Interchange.

The express lanes will operate congestion-free throughout the day, due to toll rates that vary based on traffic demand. The express lanes provide commuters with a reliable travel option compared to the adjacent, general purpose lanes.

M2 improvements, in combination with express lanes improvements, will provide the most throughput in the corridor. These improvements will add approximately 20 percent more freeway lanes to I-405 in both directions between Euclid Street to the I-605 interchange.

External Funding:
The Board has approved funding supporting this project including $82 million in a contribution of state funds, an additional $7.77 million in state funds (pending state approval), and $45.65 million in federal funds. Efforts are in progress to enter into a $627 million TIFIA loan which will be secured with toll revenues. If successful, M2 would receive $245.4 in TIFIA proceeds.

Risks:
Overall time, scope, costs, and quality risks are high with this project due to the relatively high costs and extensive project scope.

Related Projects:
Project L and West County Connector (WCC) improvements at SR-22/I-405 and I-405/I-605 interchanges (mentioned under Project E).

Involved Agencies:
OCTA, cities of Costa Mesa, Fountain Valley, Huntington Beach, Westminster, Seal Beach, the Community of Rossmoor, Caltrans, CTC, FHWA, and TIFIA Joint Program Office.

Assumptions:
Costs based on October 2016 M2 Program Cash Flow. Toll revenues will primarily pay for the 405 Express Lanes, and M2 will pay for the addition of general purpose lanes.

References:
- OCTA 2010 Long Range Transportation Plan
- 2015 Freeway Plan
- July 2016 Project Status Report
- Capital Funding Program Report – State Highway Project (September 2016)

L. I-405 (SR-55 to I-5)

Description:
Project L will add new lanes to I-405 from SR-55 to the vicinity of I-5 to alleviate congestion and reduce delay. The project could also improve chokepoints at interchanges and add merging lanes near on/off ramps (such as Lake Forest Drive, Irvine Center Drive, and SR-133) to improve the overall freeway operations in the I-405/I-5 El Toro "Y" area. The project will generally be constructed within the existing ROW.

Cost:
$323.60 million (YOE), including advancement to the environmental phase.

Status:
The project is currently in the environmental phase. Continued from the M2020 Plan, the Next 10 Plan includes funding this project through environmental. Environmental clearance is expected in 2018.

Present Day:
This segment of the freeway carries 296,000 vehicles a day. This number will increase by nearly 22 percent, bringing it up to 362,000 vehicles per day by 2035.

Benefits:
Improvements between SR-55 and the El Toro 'Y' would help alleviate congestion and reduce delay.

External Funding:
The Board has approved funding supporting the environmental phase of this project, including $8 million in federal funds. This project is eligible for future state and federal funds.

Risks:
Overall time, scope, costs, and quality risks are low with this project due to low ROW impacts and straightforward design.

Related Projects:
Project K.

L. I-405 (SR-55 to I-5)

Involved Agencies:
OCTA, City of Irvine, Transportation Corridor Agencies, Caltrans, CTC, and FHWA.

Assumptions:
Costs based on October 2016 M2 Program Cash Flow.

References:
- OCTA 2010 Long Range Transportation Plan
- 2015 Freeway Plan
- July 2016 Project Status Report
- Capital Funding Program Report – State Highway Project (September 2016)

M. I-605 Interchange Improvements

Description:
Project M will improve freeway access and arterial connection to Interstate I-605 at Katella Avenue, which serves the communities of Los Alamitos and Cypress. The project will be coordinated with other planned improvements along the SR-22 and the I-405. Specific improvements will be subject to approved plans developed in cooperation with local jurisdictions and affected communities. Operational improvements have been identified on I-605 and Katella in order to increase the efficiency and safety of the interchange.

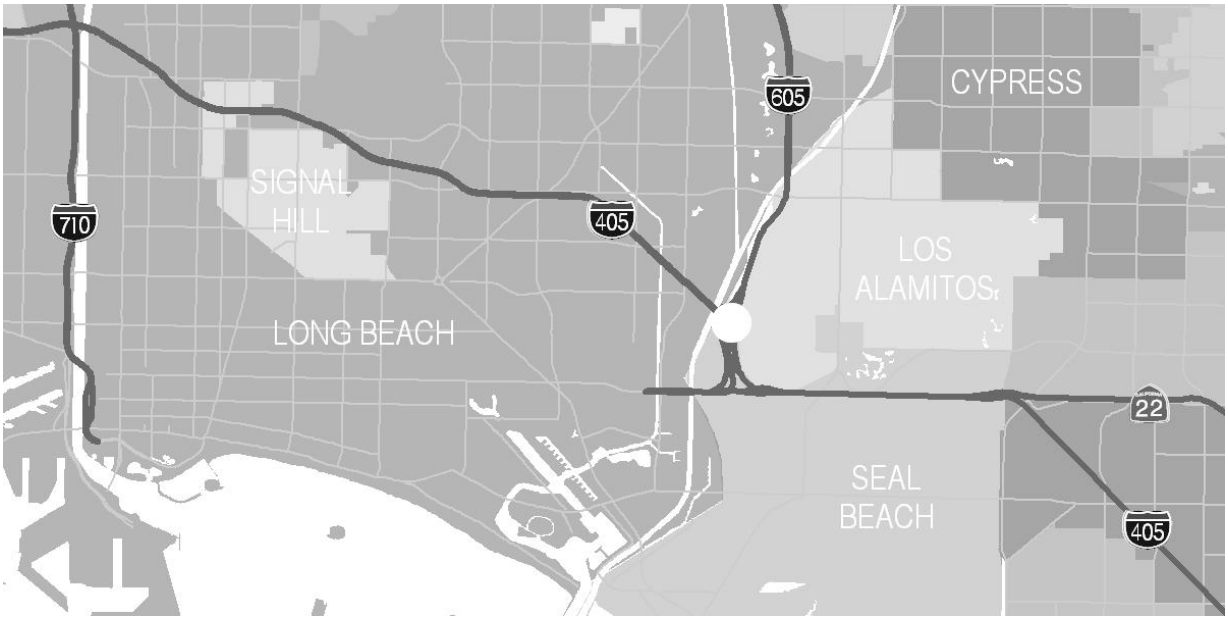
Cost:
The cost for this project is estimated to be $29.60 million (YOE).

Status:
The planning phase for this project is complete and was done in cooperation with the City of Los Alamitos. The environmental phase is scheduled to begin in 2016. Continued from the M2020 Plan, the Next 10 Plan includes funding this project through the environmental phase, which is expected to be completed in 2018.

Present Day:
The existing interchange design is outdated and results in both arterial congestion and freeway queuing in the interchange area.

Benefits:
The I-605/Katella Avenue interchange project would include both freeway and arterial improvements that would improve interchange traffic operations, enhance safety, and improve bicycle and pedestrian facilities while minimizing adjacent ROW and environmental impacts. Additionally, these improvements would reduce congestion, traffic queuing, and delay within the interchange area.

External Funding:
No external funding is currently programmed for this project. However, this project is eligible for future state and federal funds.



M. I-605 Interchange Improvements

Risks:
Overall time, scope, costs, and quality risks are low with this project due to low ROW impacts and straightforward design.

Related Projects:
I-405/I-605/SR-22 HOV connector project (West County Connector).

Involved Agencies:
OCTA, City of Los Alamitos, and Caltrans.

Assumptions:
Costs based on October 2016 M2 Program Cash Flow.

References:
- 2011 Measure M2 Freeway Strategic Plan
- 2015 Freeway Plan
- July 2016 Project Schedule
- Capital Funding Program Report - State Highway Project (September 2016)

N. Freeway Service Patrol

Description:
The Freeway Service Patrol (FSP) provides competitively-bid, privately-contracted tow truck service. This service helps stranded motorists, quickly clearing disabled vehicles and large debris from freeway lanes to minimize congestion caused by blocked traffic lanes and passing motorists rubbernecking. Currently FSP is available on various Orange County freeways, seven days a week. This project assures that this basic level of service will be continued through 2041.

Program Funding:
$43.2 million in M2 revenue between 2017 and 2026.

Status:
FSP is largely funded by State Highway Account (SHA) funds. OCTA meets matching fund requirements by utilizing its share of Service Authority for Freeway Emergencies (SAFE) funds, which are collected by the Department of Motor Vehicles (DMV) each year.

As demand and congestion levels increase, this project will permit service hours to be extended throughout the day and on weekends on additional freeway segments.

Measure M2 also helps support CHP as the partner responsible for field supervision. Currently, M2 funds a full time dispatcher to ensure coverage seven days a week.

Benefits:
To keep Orange County moving, FSP provides a range of free services from a jump start or a gallon of gas, to changing a flat tire or towing a disabled vehicle off the freeway.

For every dollar invested in this program, approximately $18 of congestion relief benefit is received. In FY 2014-15, this program eliminated 4 million vehicle hours of delay, saved 6.9 million gallons of gasoline, and reduced pollution emissions equivalent to 10,750 vehicles.

External Funding:
SHA allocation provided by Caltrans – approximately $2.6 million annually.
SAFE ($1 per vehicle registration fee) – approximately $2.8 million annually.

Risks:
Should the State of California stop funding FSP through the SHA, M2 will not be sufficient to maintain existing service levels.

Related Projects:
M2 Project N funds are also used to support FSP service for construction of Projects A-M.

Involved Agencies:
OCTA, Caltrans, and the California Highway Patrol

Assumptions:
Project N is assumed to be funded on a pay-as-you-go basis.

References:
- Measure M2 Project N Guidelines Freeway Service Patrol Project, Approved on February 13, 2012
- 2015 Freeway Plan

Environmental Mitigation Program

Overview:
The Environmental Mitigation Program (EMP) provides for allocation of five percent of the total M2 freeway budget for comprehensive environmental mitigation related to impacts from freeway improvements. The EMP was approved by Orange County voters under the M2 half-cent sales tax for transportation improvements in 2006.

A master agreement between OCTA, Caltrans, and state and federal resource agencies was approved in January 2010. This offers higher-value environmental benefits such as habitat protection, connectivity, and resource preservation in exchange for streamlined project approvals for the 13 (segmented into 27) M2 freeway projects.

To adhere to the promise of M2, the Next 10 Plan includes the following framework for the Mitigation Program as it relates to Projects A-M:

- Streamline freeway projects through the biological permitting process.
- Provide comprehensive environmental mitigation.
- Partner with state and federal resource and regulatory agencies.
- Provide higher-value environmental benefits such as habitat protection, connectivity, and resource preservation.

Next 10 Deliverables:
In 2009, the Board approved a policy to allocate approximately 80 percent of the revenues to acquisitions and 20 percent to fund restoration projects. This policy will need to be revisited periodically to ensure it continues to meet program needs. The Next 10 Plan recommends four major initiatives through 2026 consistent with the above framework:

1. Oversee and manage the Preserves while the endowment is being established and determine long term land manager(s) and endowment holder(s).
2. Focus environmental mitigation program resources funding as a first priority toward the establishment of the endowment for the Preserves.
3. Finalize the resource management plans on M2 Preserves including provisions for public access as appropriate (projects A-M).
4. Complete approximately 350 acres of restoration projects funded through M2 to fulfill the Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) commitments.

Environmental Mitigation Program

Description:
In July 2010, OCTA began preparing a conservation plan called the NCCP/HCP, which examines habitat resources within broad geographic areas and identifies conservation and mitigation measures to protect habitat and species. This analysis will be completed in late 2016; however, in accordance with the master agreement "advance credit" provision, funds were allocated prior to completion of the NCCP/HCP.

Concurrent with efforts made towards completing the NCCP/HCP and EIR/EIS, OCTA has been working with the United States Army Corps of Engineers (USACE) and the State Water Resources Control Board (SWRCB) - regulatory agencies - to streamline the regulatory permitting process.

In conjunction with the preparation of the final NCCP/HCP and EIR/EIS, RMPs are being developed to address biological monitoring requirements and management activities, including access provisions for each of the seven acquired properties (Preserves). The resource agencies will need to approve the RMPs, following the completion and approval of the NCCP/HCP. The RMPs for the Trabuco and Silverado Canyons Preserves (five Preserves total) were available for public review between late 2015 and early 2016. The RMPs for the remaining Preserves (Hayashi and Aliso Canyon) will be released at a later date and follow a similar public outreach process.

Cost:
In summer 2007, the Board approved approximately $55 million as part of the EAP. Accordingly, $42 million and $10.5 million were allocated for acquisition and restoration, respectively. An additional $2.5 million was allocated for development of the NCCP/HCP and other professional services, such as appraisals and conducting biological surveys.

Status:
Since 2011, OCTA has acquired seven Preserves totaling approximately 1,300 acres in Trabuco Canyon, Silverado Canyon, Brea, and Laguna Beach.

Since September 2010, a total of $10 million has been allocated for 11 projects to restore approximately 350 acres of open space lands throughout Orange County.

Present Day:
Approximately $2 million remains from the 2007 Board allocation.

The selection of the endowment fund manager was approved by the Board on September 26, 2016, and the first endowment deposit is expected to be made in 2017.

Benefits:
The completed NCCP/HCP and regulatory permitting process are tools by which OCTA obtains biological and regulatory permits/assurances for the 13 (27 segmented) M2 freeway projects. This comprehensive process enables OCTA to streamline future M2 freeway improvement projects.

Environmental Mitigation Program

External Funding:
Examples of external funding available for this program include:

- United State Fish and Wildlife Service (USFWS) contribution toward the acquisition of open space land in the Trabuco Canyon area.
- USFWS Habitat Conservation Planning Assistant Grant to help fund the completion of the NCCP / HCP.
- Restoration project sponsors utilize external funds and resources to implement their projects.

Risks:
Successful implementation of the restoration projects will support OCTA's NCCP/HCP and regulatory permitting process.

Related Projects:
Projects A-M.

Involved Agencies:
California Department of Fish and Wildlife, USFWS, Caltrans, USACE, SWRCB and the environmental community.

Assumptions:
This program is assumed to be funded primarily on a pay-as-you-go basis in the future, in addition to prior bonding issuances. More detailed assumptions are included in the appendices.

References:

- Draft NCCP / HCP and EIR/EIS
- Additional resources can be found online: www.octa.net/environmental

NEXT 10 DELIVERY PLAN

Streets and Roads Program

M2 Streets & Roads Program

Regional Capacity Program (not mapped)
- Up to 300 miles of roadway improvements
- Competitive Program with annual call for projects
- OC Bridges Grade Separation Projects (●)

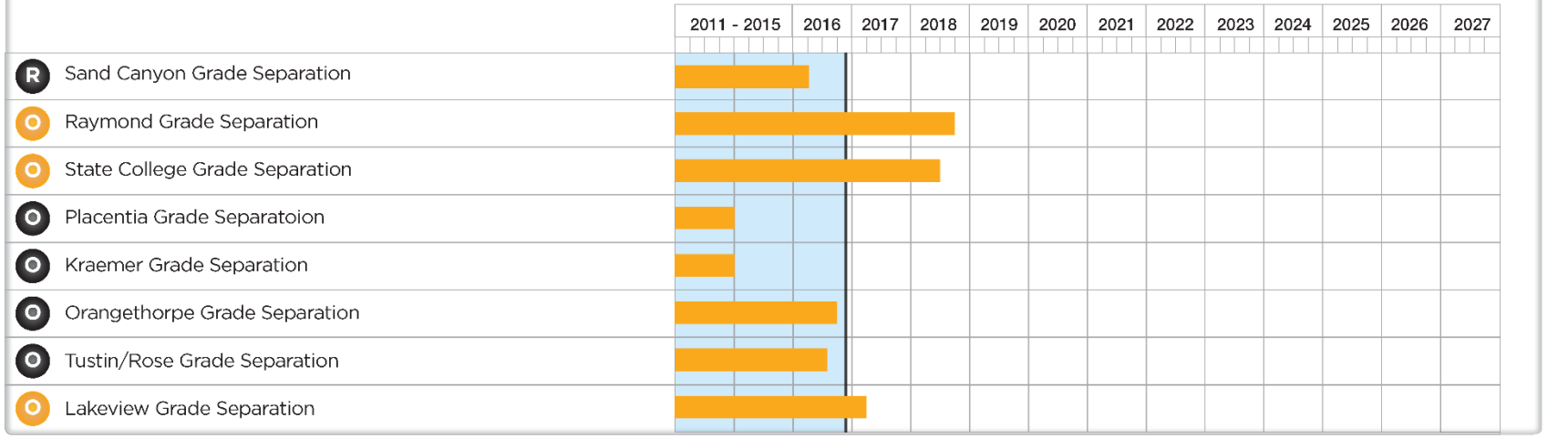
Regional traffic Signal Synchronization Program
(see grid above)
- Over 2,000 coordinated signals

Local Fair Share Program (not mapped)
- Street maintenance and improvements

NEXT 10 DELIVERY PLAN

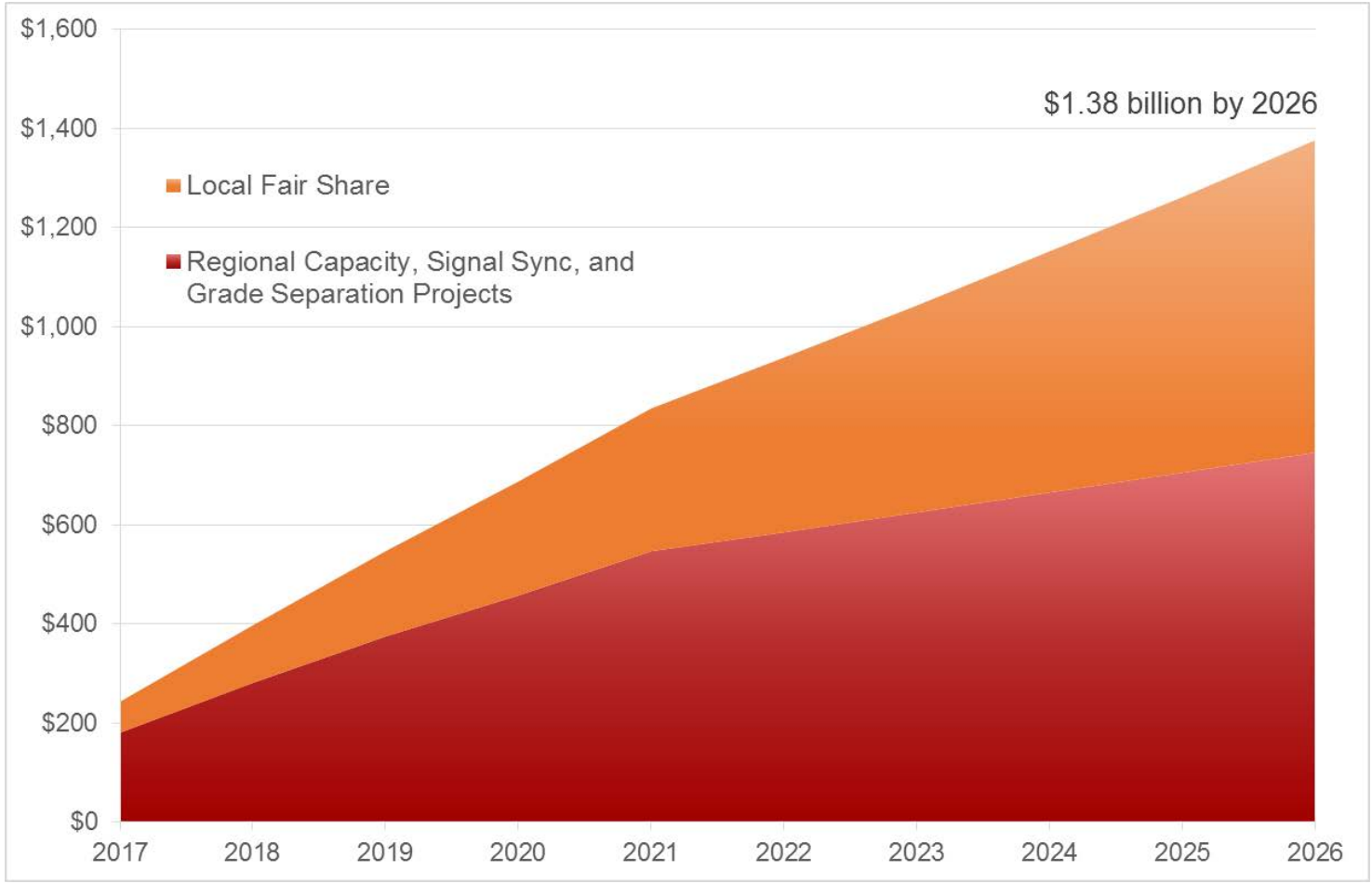
Environmental | Design/Advertise & Award | Design-Build | Construction | Completed

M2 Grade Separation Projects



NEXT 10 DELIVERY PLAN

M2 Streets and Roads Expenditures



Streets and Roads Program

Overview:
Local streets provide the capacity for the movement of people and goods which is essential to Orange County's commerce and vitality. Streets carry approximately half of Orange County's car and truck traffic and nearly all of Orange County's bicycle and pedestrian traffic. Keeping people moving on local streets is an essential function of the M2 funding programs for local streets. To meet this broad mobility goal, the Next 10 Plan includes the following framework for the streets and roads program:

- Target M2 competitive program funds for streets with the worst traffic congestion.
- Maintain the value of investments in streets by synchronizing traffic signals and keeping pavement in good condition.
- Keep traffic moving on Orange County streets by completing key grade separations along the Burlington Northern Santa Fe Railway (BNSF) corridor in north Orange County.
- Consider all modes of travel when planning for added street capacity.

Next 10 Deliverables:
Allocate approximately $1 billion in funding to improve the countywide network of streets and roads making them safer and more efficient. The Next 10 Plan for streets and roads recommends three major initiatives through 2026, consistent with the above framework:

1. Provide $400 million in competitive funding to local jurisdictions to expand roadway capacity and synchronize signals (Project O and P).
2. Complete remaining three OC Bridges grade separation projects by late 2018/early 2019.
3. Provide $630 million in flexible funding to local jurisdictions to help maintain aging streets or for use on other transportation needs as appropriate (Project Q).

O. Regional Capacity Program

Description:
Project O provides funding through a competitive process to local jurisdictions for recommended streets and roads projects which complete the Orange County Master Plan of Arterial Highways (MPAH), relieve congestion, are cost effective, and can proceed to construction quickly. These projects fall into one of two categories as described below.

Regional Capacity Program
This portion of Project O provides a funding source to complete the Orange County MPAH, a plan for future roadway improvements throughout Orange County, that includes considerations for bicycle and pedestrian components as part of each project as applicable to local conditions. This includes intersection improvements and other projects that help improve street operations and reduce congestion. The M2 goal for these projects is to complete roughly 1,000 miles of new street lanes, mostly in the form of widening existing streets to their ultimate planned width. Matching local funds are required for these projects.

OC Bridges
This portion of Project O includes funding for completion of seven over- or underpass grade separations that will eliminate car and train conflicts along the BNSF Railway (Orangethorpe corridor) in northern Orange County. These grade separations increase safety for everyone traveling through the intersections and eliminate the delays caused by trains.

Program Funding:
Project O and P: $400 million for new competitive RCP and Regional Traffic Signal Synchronization Program (RTSSP) calls for projects between 2017 and 2026.

OC Bridges: $346 million between 2017 and 2026. Pending Board approval on November 14, M2 is contributing a total of $144.52 million.

Status:
To date, OCTA has awarded Project O funds through six competitive RCP calls for projects, amounting to approximately $231 million. It is anticipated that there will be an additional 10 calls for projects between 2017 and 2026.

To date, four of the seven planned grade separation projects are complete (Placentia, Kraemer, Orangethorpe, and Tustin/Rose). The remaining three are under construction, with one expected to be complete in 2017 (Lakeview), and the other two to be complete in late 2018 (Raymond and State College).

Present Day:
Approximately 820 miles of new lanes remain to be completed, mostly in the form of widening existing streets to ultimate planned widths.

Benefits:
Improvements funded through this program are projected to improve peak period arterial speeds by nearly 25 percent by 2035 compared to not constructing those projects. Completion of the MPAH system, including grade separations and traffic signal synchronization, will result in

O. Regional Capacity Program

better traffic flow and a more efficient transportation system.

External Funding:
Local agencies are required to provide a 50 percent minimum local match. Matching funds may be reduced contingent on participation in pavement and signal programs, as well as use of non-M2 funds for local match. While other external state and federal funding is not typically used for RCP projects, there have been seven projects to date which qualified for and received SLPP state funds, amounting to approximately $22 million. OC Bridges funding includes 78 percent in external state, federal, and local funds.

Risks:
Local agencies must meet eligibility requirements to receive funding. Local agencies must meet timely use of funds provisions included in M2.

Based on updated OC Bridges cost-to-complete information, supplemental funding will be needed to complete the OC Bridges Program.

Related Projects:
Project P and Project Q.

Involved Agencies:
All local agencies (cities and County of Orange).

Assumptions:
Project O is assumed to be funded primarily on a pay-as-you-go basis with bonding for the seven OC Bridges projects. More detailed assumptions are included in the appendices.

References:
- Orange County Master Plan of Arterial Highways Guidelines
- Commuter Bikeways Strategic Plan
- Capital Funding Program Report – Local Road Project (June 2016)

P. Regional Traffic Signal Synchronization Program

Description:
Project P will provide funds to local agencies to implement new signal timing on a 750-mile regional network that covers most of Orange County. Optimizing traffic signal timing is a low-cost, high-benefit approach to reducing congestion and improving traffic flow. Better signal timing results in fewer traffic stops, delays, and pollution, and saves commuters gas and money.

Program Funding:
Project O and P: $400 million for new competitive RCP and RTSSP calls for projects between 2017 and 2026.

Status:
Including early efforts, OCTA and local agencies have implemented 38 corridor-based signal synchronization projects since 2008 for a cost of approximately $24 million (including non-M2 funds). Another 49 projects are planned or underway. From 2017-2026, the entire network of signals is anticipated to have been retimed or optimized at least two times. This equates to more than 4,000 intersections retimed over a 10-year period (2017 to 2026).

Present Day:
In the past, many traffic signal synchronization projects were limited to segments of roads in individual cities. M2 provides funds to expand these projects to benefit neighboring cities and regional corridors.

Benefits:
Optimizing signal timing offers substantial benefits in reducing traffic delays and improving air quality. To date, OCTA has implemented optimized signal timing on 38 corridors with 1,682 intersections covering 436 miles of roadway. On the average, each project resulted in a 13 percent travel time savings for corridor end-to-end travel, saving commuters time and money for a relatively low investment. Future projects may see comparable benefits when combined with capital improvements to reduce physical bottlenecks where appropriate.

External Funding:
Local agencies are required to provide a 20 percent minimum local match. Matching funds may be in-kind services. There may be future needs for more capital intensive investments as systems age. Projects started prior to the 2011 call for projects were funded with M1, CMAQ, and Prop 1B funds. The 2013 call for projects was partially funded with MSRC grant money. In all, external funding (not including funds provided by local agencies) contributed is approximately $11.8 million.

Risks:
Local agencies must meet eligibility requirements and timely-use-of-funds provisions to receive M2 funding.

Related Projects:
Project O (RCP) and Project Q.

Involved Agencies:
All local agencies (cities and County of Orange) and Caltrans.

Assumptions:
Project P is assumed to be funded on a pay-as-you-go basis.

P. Regional Traffic Signal Synchronization Program

References:

- M2 Eligibility Guidelines
- OCTA's Comprehensive Business Plan
- Capital Funding Program Report – Local Road Project (June 2016)

Q. Local Fair Share Program

Description:
Project Q provides formula "Local Fair Share" funds that local agencies may use for a variety of purposes and needs, including repairing aging streets, residential street projects, bicycle lanes, and pedestrian safety (plus other transportation uses).

Key among these needs includes pavement preservation, which involves extending the useful life of pavement and avoiding costly street reconstruction. Preserving and maintaining roads in good condition is a key goal of M2 and Project Q in particular.

Program Funding:
$630 million between 2017 and 2026.

Status:
Orange County streets are in generally good condition on average (with a pavement condition index of 77 based on a recent statewide report). As roadway pavement conditions deteriorate, however, the cost for repairs increases exponentially. For example, it costs 12 times less to maintain pavement in good condition compared to pavement that is at the end of its service life.

Present Day:
The cost of street rehabilitation has increased substantially in recent years, and gas tax revenues have not kept pace with these increases which has a direct impact on the ability to fund street maintenance and rehabilitation.

Benefits:
Investments in streets and roads save future costs, keeps traffic moving, and offers expanded travel choices.

Local Fair Share funds are also flexible and can be used as matching funds for bike and pedestrian facilities, as well as local transit services.

External Funding:
In addition to $600 million of M2 funds invested between 2017 and 2026.

Risks:
Local agencies must meet eligibility requirements and timely-use-of-funds provisions to receive M2 funding.

Related Projects:
Project O (RCP) and Project P.

Involved Agencies:
All local agencies (cities and County of Orange).

Assumptions:
Project Q is assumed to be funded on a pay-as-you-go basis.

References:
- M2 Eligibility Guidelines
- California Statewide Local Streets and Roads Needs Assessment
- OCTA's Comprehensive Business Plan
- Capital Funding Program Report – Local Road Project (June 2016)

NEXT 10 DELIVERY PLAN

Transit Program

M2 Transit Projects

(R) Metrolink Service Expansion Program
- Metrolink Grade Crossing Improvements (●)
- High Frequency Metrolink Service
  - existing rail line/station
  - proposed station

(S) Transit Extensions to Metrolink
- OC Streetcar (—)

(T) Metrolink Gateways (◣)

(U) Expand Mobility Choices for Seniors and Persons with Disabilities (countywide, not mapped)

(V) Community Based Transit/Circulators (countywide, not mapped)

(W) Safe Transit Stops (countywide, not mapped)

Transit Program

Overview:
The goal of the Transit Program is to build a visionary transit system that is safe, clean, and convenient, and one that focuses on Orange County's transportation future. Providing mobility choices and connectivity for Orange County residents and workers is a key component of the overall M2 Plan. To meet this broad mobility goal, the Next 10 Plan includes the following framework for the Transit Program:

- Ensure efficient and integrated Metrolink service for Orange County residents.
- Assess and deliver transit options providing commuters last mile connections and alternatives to driving.
- Provide services and programs to meet the growing transportation needs of seniors and persons with disabilities.
- Support local agency efforts to deliver Board-approved community-based transit projects.
- Advance improvements to the busiest transit stops across the County to provide passenger amenities that ease transfers between bus lines.

Next 10 Deliverables:
The Next 10 Plan for transit recommends nine major initiatives through 2026, consistent with the above framework.

1. Complete six rail station improvements.
2. Maintain existing Metrolink service levels.
3. Expand Metrolink service from Orange County into Los Angeles County, contingent upon cooperation and funding participation from route partners.
4. Complete design, construction and begin operating the OC Streetcar.
5. Complete the Harbor Corridor Transit Study and the Orange County Transit Vision and bring recommendations to the Board on future transit connections for consideration.
6. Provide $50 million to stabilize OCTA's bus fares for seniors and persons with disabilities, provide $34 million for senior community transportation programs and $34 million for senior non-emergency medical transportation services.
7. Support and provide grant opportunities for local agencies to implement effective local transit services.
8. Allocate $9 million in funding to improve the top 100 busiest bus stops in Orange County.
9. Support the modernization of the OC Bus system to enhance the customer experience.

R. High Frequency Metrolink Service

Description:
Project R provides for sustained and expanded rail service into Los Angeles along the three Metrolink lines serving Orange County (OC, IEOC, and 91 Lines). Project R also provides for safety and operational improvements to the railroad infrastructure necessary to support existing and expanded train service, including grade crossing improvements, track improvements, signal and communications system improvements, as well as other projects as necessary to support the rail system. Grade separation projects will be considered as available funding permits.

Program Funding:
$601 million between 2017 and 2026.

Status:
Metrolink is currently operating 54 weekday trains in Orange County. To date, rail safety enhancements at 52 at-grade rail-highway crossings have been completed, and as a result, quiet zones have been established in Anaheim, Dana Point, Irvine, Orange, San Clemente, Santa Ana, San Juan Capistrano, and Tustin (as part of the OCX improvements completed during the EAP).

Early station improvements completed during the EAP include parking expansion projects at the Fullerton Transportation Center, Tustin Station, and Laguna Niguel/Mission Viejo Station, and safety repairs to the San Clemente Pier Station platform. Six rail station improvements are currently underway: Laguna Niguel/Mission Viejo Metrolink Station Americans with Disabilities Act (ADA) ramps, Orange Transportation Center parking Structure, Placentia Metrolink Station, Anaheim Canyon Metrolink Station improvement project, Fullerton Transportation Center elevators, and San Clemente Pier Metrolink/Amtrak Station lighting. All projects are expected to be complete by 2020.

Completed rail corridor improvements include Control Point Stadium, the San Clemente Beach Trail Audible Warning System, and six Project Study Reports (PSRs) for potential grade separations along the LOSSAN corridor, including: Santa Ana Boulevard, Ball Road, Orangethorpe Avenue, Main Street, Grand Avenue, and 17th Street. Rail corridor improvements underway include: the Laguna Niguel to San Juan Capistrano Passing Siding project, San Juan Creek railroad bridge replacement, Control Point 4th Street, Railroad ROW Slope Stabilization Project, and continued implementation of Positive Train Control.

Present Day:
Most capital improvements required for expansion of Metrolink service during mid-day are complete. OCTA and partner agencies are working together with Metrolink and BNSF to implement improvements allowing expansion of service to Los Angeles. OCTA is also working with the Los Angeles-San Diego-San Luis Obispo Rail (LOSSAN) Corridor agencies to enact legislation to support better coordination of services in the corridor for greater integration.

Benefits:
Project R allows for sustained operation and enhanced capacity of

R. High Frequency Metrolink Service

Metrolink trains serving Orange County, providing a viable alternative to single-occupant vehicle travel, thereby reducing congestion on crowded roadways and freeways. During the peak hour, Metrolink carries the equivalent number of passengers that would fill one freeway lane on I-5.

External Funding:
State: STIP, Propositions 1A, 1B, and 116, totaling $269.3 million.

Federal: Congestion Mitigation and Air Quality Improvement (CMAQ) Program, Federal Transit Administration (FTA) Sections 5307, 5309, and 5337, totaling $327.1 million.

Local Other: Local funding from the cities as well as other entities is programmed for $61.4 million.

Total Other Funding: $657.8 million.

M1 also provided $142.3 million.

Risks:
The current sales tax revenue projections limit the ability to expand Metrolink service. Expansion to Los Angeles is contingent upon the cooperation and participation of route partner agencies.

Related Projects:
Project S, Project T, and Project V.

Involved Agencies:
Metrolink, Caltrans, CTC, FTA, Los Angeles County Metropolitan Transportation Authority, BNSF, California Public Utilities Commission, California Office of Emergency Services, and all corridor agencies.

Assumptions:
Funding and operating agreements with partner agencies will be successfully implemented.

References:
- OCTA Comprehensive Business Plan
- Capital Funding Program Report - Rail Project (September 2016)

S. Transit Extensions to Metrolink

Description:
Project S establishes a competitive program for local jurisdictions to broaden the reach of Metrolink to other Orange County cities, communities, and activity centers via transit, to connect passengers to their final destinations. With approximately 60 percent of Orange County's population and employment centers located within a four-mile radius of Metrolink stations, the emphasis of Project S is on expanding access to the core rail system and establishing connections to destinations that are not immediately adjacent to the Metrolink corridor, within the central core, north and south of Orange County. These connections may include a variety of transit technologies such as conventional bus or vanpool (Rubber Tire), bus rapid transit or high capacity rail transit systems (Fixed Guideways), as long as they can be fully integrated and provide seamless transition for the users.

Program Funding:
$636.7 million between 2017 and 2026 (for fixed guideways and rubber tire).

Status:
Fixed Guideway: Through a competitive process, one project, the OC Streetcar, is moving forward through the design process. This project will operate in the Cities of Santa Ana and Garden Grove. There is potential for future calls for projects at the Board's discretion.

Rubber Tire: One call for projects has been issued since 2012, providing approximately $680,700 for three projects in the Cities of Anaheim and Lake Forest.

Present Day:
Maintaining and growing Metrolink ridership relies on convenient and seamless bus and rail connections. Currently, OCTA fixed bus service and company shuttles are the prime providers of transit connections. However, more recently Uber/Lyft paid-ridesharing services have been a growing presence.

Benefits:
Project S will provide expanded transit access to the centralized Metrolink system, thereby allowing Metrolink commuters to connect to other parts of the County without using an automobile.

External Funding:
Fixed Guideways: External funds for two preliminary studies for the Cities of Anaheim and Santa Ana were funded with $2.4 million in federal FTA Section 5307 and city local funds. Additional external funding for the OC Streetcar project includes state Cap and Trade Transit and Intercity Rail Capital Program (TIRCP), federal CMAQ, and FTA Sections 5307 and 5309, and anticipated New Starts funding, totaling $297.91 million.

Rubber Tire: None. These projects are funded by M2 and local agency matching funds.

Risks:
As it relates to the OC Streetcar project, the New Starts federal capital funding grant program is a highly competitive and technically rigorous program. There is a consistent shortfall between the number of qualified projects

S. Transit Extensions to Metrolink

seeking New Starts and funding availability. As grantee, OCTA must demonstrate it has the technical, financial, and legal capacity to deliver the project on time and on budget, prior to the FTA allowing the project to move forward into engineering and subsequently into construction. To date, the OC Streetcar project has received high marks, which indicates a strong chance of receiving funds.

Related Projects:
Project R (High Frequency Metrolink Service), Project T, and Project V.

Involved Agencies:
Local jurisdictions, CTC, Caltrans, California State Transportation Agency (CalSTA), California Public Utilities Commission (CPUC), and FTA.

Assumptions:
Fixed Guideways: Local agencies will be able to provide their required match and OCTA, as grantee, is applying for New Starts funding for the guideway project.

Rubber Tire: Future calls for projects will be based on the level of interest from local jurisdictions.

References:
- M2 Eligibility Guidelines
- Federal 5309 Funding Guidelines
- OCTA's Comprehensive Business Plan
- Capital Funding Program Report - Rail Project (September 2016)

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

Description:
Provide funding for local improvements to stations along the LOSSAN Corridor in Orange County to facilitate connections to future high-speed rail systems, thereby ensuring Orange County's presence in the development and implementation of high-speed rail systems that will serve Orange County. One project, the moved forward to completion

Program Funding:
The cost for this program was $233.6 million. Of this amount, $230.4 million was dedicated to the Anaheim Regional Transportation Intermodal Center (ARTIC) project. M2 contributed $35.3 million.

Status:
As part of EAP efforts, OCTA held a competitive call for projects in 2009 for eligible station cities for the development and implementation of station projects in preparation of future high-speed rail systems. The Cities of Anaheim, Fullerton, Irvine, and Santa Ana were awarded funding for planning of major expansions of their Metrolink Stations. The City of Anaheim received environmental clearance for the Anaheim Regional Transportation Intermodal Center (ARTIC) project in early 2012. The completed facility opened to rail and bus service on December 6, 2014.

On December 14, 2015, the Board of Directors amended the M2 Ordinance No. 3 and Transportation Investment Plan to officially close out Project T by considering the completion of ARTIC as fulfilling the intent of Project T, as the only Orange County station on the planned High Speed Rail route. The remaining balance of M2 funds were then transferred to two projects in need: the Metrolink Service Expansion Program (part of Project R), and the Fare Stabilization Program for Seniors and Persons with Disabilities (part of Project U).

Present Day:
In partnership with transportation agencies, corridor cities, and stakeholders, the California High-Speed Rail Authority (CAHSRA) is building a High-Speed Rail (HSR) system that is planned to extend as far north as Sacramento and as far south as San Diego. The system will be constructed in two phases, with Phase 1 extending from San Francisco to Anaheim. Phase 2 will be constructed as two connecting lines extending north to Sacramento from Merced, and south to San Diego from Los Angeles via the Inland Empire. Phase 1 includes construction of the connection between Los Angeles Union Station and the Anaheim ARTIC station. Expanding service to Phase 1 stations is planned to take place in 2029.

Benefits:
Early completion of Project T allowed for early investment in the Orange County rail system to facilitate the ultimate integration of various high-speed rail systems within the County. This project will also provide convenient and efficient connections to planned or future high-speed systems for residents, workers, and visitors in Orange County.

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

External Funding:
State: STIP totaling $29.2 million.

Federal: CMAQ, Regional Surface Transportation Program (RSTP), FTA Sections 5309 and 5337, FTA Bus Livability, and Highway Safety Improvement Program, totaling $76.5 million.

M1 also provided $87.8 million.

Risks:
None – project completed.

Related Projects:
California High-Speed Rail System

Involved Agencies:
CTC, Caltrans, FTA, CAHSR, Metrolink and the Cities of Anaheim, Fullerton, Irvine, and Santa Ana.

Assumptions:
The California High-Speed Rail System will extend to the City of Anaheim as identified in their 2016 Business Plan.

References:
- M2 Eligibility Guidelines
- California High-Speed Rail 2016 Business Plan
- Capital Funding Program Report - Rail Project (September 2016)

U. Expand Mobility Choices for Seniors and Persons with Disabilities

Description:
Project U provides funding to support mobility choices for seniors and persons with disabilities. This project is divided into three programs as described below. Each of these programs support OCTA's effort to expand mobility options for seniors.

The Fare Stabilization Program ensures that fares for seniors and persons with disabilities continue to be discounted at the same percentage as 2006 levels.

The Senior Mobility Program (SMP), administered by OCTA, was first established in 2001. For the first ten years, this program was supported with Transit Development Act (TDA) funds. The allocation of M2 Project U funding ensures the continuation of dedicated resources to sustain this program for the next 25 years.

The Senior Non-Emergency Medical Transportation (SNEMT) Program was established by the County of Orange in 2003, utilizing Tobacco Settlement Revenue (TSR) to fund the program. M2 Project U funding supplements existing TSR resources to expand the capacity of the program and increase the number of available SNEMT trips.

Cost:
$119.2 million on a pay-as-you-go basis between 2017 through 2026.

Status:
Fare Stabilization: In December 2015, the Board approved an amendment to the M2 Ordinance No. 3 and Transportation Investment Plan that backfilled a funding shortfall identified in this program with remaining Project T funds. At present, projected Fare Stabilization revenues are expected to be solvent through the life of the M2 program.

SMP: This program offers a variety of senior transportation resources for medical, nutrition, shopping, and social trips to participating cities. Currently, there are 31 cities which participate.

SNEMT: This program is administered by the County of Orange Office on Aging and is carried out by two transportation contractors. This program provides approximately 140,000 annual trips under Project U for non-emergency services such as trips to doctor and dental appointments, therapy, dialysis, and pharmacy visits.

Present Day:
Studies of senior mobility needs have identified seniors' preference for utilizing local, community-based transportation services rather than countywide or regional services.

The SMP allows participating cities to identify the specific mobility needs of the seniors in their communities and develop transportation programs to best meet those needs with available funding.

The SNEMT fills a gap in senior transportation services, as trips are often provided to seniors who do not qualify for OCTA ACCESS service, or to seniors whose advanced age or

U. Expand Mobility Choices for Seniors and Persons with Disabilities

disposition make it difficult to use ACCESS service. Contracting with social service agencies to provide SNEMT services allows this program to provide enhanced service elements beyond the requirements of ACCESS, a paratransit service that complements OCTA's fixed route bus service and is provided to comply with ADA.

Benefits: M2 funding of these programs, combined with OCTA ACCESS service and other senior transportation services funded with public and private resources, provide a menu of mobility options for Orange County seniors, allowing them to select the service that most appropriately meets their transportation need.

External Funding:
Cities contribute a 20 percent match to their SMP services. A variety of funding sources are used by cities for their SMP match requirement, including general fund, Community Development Block Grants, sponsorships, advertising revenue, and administrative in-kind resources. The County of Orange utilizes primarily TSR funds to meet their maintenance of effort (MOE) requirement.

Risks:
Cities must provide matching funds for SMP.

Related Projects:
County of Orange SNEMT

Involved Agencies:
Nearly all local agencies – Participating SMP cities include: Aliso Viejo, Anaheim, Brea, Buena Park, Costa Mesa, Cypress, Dana Point, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, Laguna Hills, Laguna Niguel, Laguna Woods, La Habra, Lake Forest, Mission Viejo, Newport Beach, Orange, Placentia, Rancho Santa Margarita, San Clemente, San Juan Capistrano, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda. The Orange County Office on Aging administers the SNEMT Program.

Assumptions:
Project U is assumed to be funded on a pay-as-you-go basis.

References:
- Project U Funding and Policy Guidelines
- OCTA's Comprehensive Business Plan

V. Community Based Circulators

Description:
Project V provides funding to local jurisdictions through a competitive process to develop local bus transit services, such as community-based circulators, shuttles, and bus trolleys that complement regional bus and rail services, and meet local needs in areas not adequately served by regional transit. Projects will need to meet performance criteria for ridership, connection to bus and rail services, and financial viability to be considered for funding.

Program Funding:
$51.9 million on a pay-as-you-go basis between 2017 through 2026. Of this amount, a minimum of $9 million will be available for new calls.

Status:
To date, the Board has approved two rounds of funding, totaling over $36.8 million for 22 projects and 7 planning grants, located in the Cities of Anaheim, Costa Mesa, Dana Point, Fountain Valley, Garden Grove, Huntington Beach, Irvine, La Habra, Lake Forest, Laguna Beach, Laguna Niguel, Mission Viejo, Newport Beach, Placentia, Rancho Santa Margarita, San Clemente, San Juan Capistrano, Tustin, and Westminster.

Present Day:
Project V helps address the regularly-expressed need for local community-based transit service by Orange County communities.

Benefits:
Community based circulators can provide relief to arterials in high traffic areas, and provide non-auto based mobility options that meet specific local needs.

External Funding:
The local match requirement for both capital and any operating funds authorized by the Board is a minimum of 10 percent.

Risks:
Local agencies must meet eligibility requirements to receive funding. Ability to sustain service will be key to moving projects forward.

Related Projects:
Project S (some Project S and V routes could serve dual purposes).

Involved Agencies:
OCTA and 19 participating cities

Assumptions:
Project V is assumed to be funded on a pay-as-you-go basis.

References:
- M2 Eligibility Guidelines
- Project V Guidelines (under development)
- OCTA's Comprehensive Business Plan

W. Safe Transit Stops

Description:
Project W provides funding for passenger amenities at the 100 busiest transit stops across Orange County. The intent is to assist bus riders in the ease of transfer between bus lines and provide passenger amenities.

Cost:
$8.8 million on a pay-as-you-go basis between 2017 through 2026.

Status:
Eighty percent of available Project W funds will be provided to construct local bus stop amenities implemented by cities. Up to 20 percent of available Project W funds are proposed to be directed towards the development and implementation of regional, customer-facing technologies, such as real-time systems and other elements that benefit the 100 busiest stops, as well as the overall bus system.

Project W Guidelines were presented to the Board on March 10, 2014. Based on October 2012 ridership data (daily weekday passenger boardings), OCTA staff identified 15 cities eligible to receive Project W funding for city-initiated bus stop improvements. For the first call for projects, seven cities applied for funding and the Board approved up to $1.2 million for 51 projects. Upgrades to 13 of the busiest stops in the Cities of Brea, Costa Mesa, Irvine, and Westminster have been completed to date, with improvements underway for an additional 30 stops in the City of Santa Ana. To date, $370,000 has been contributed towards an OCTA-initiated improvement, such as a mobile ticketing application that will make it more convenient to purchase bus passes, obtain trip information, and board buses using smart phone devices to display bus passes as proof of payment. The app was recently launched for use on special OC Fair and Express Bus service, and will be expanded to fixed route and college pass users soon. In 2017, the app will be available for seniors and persons with disabilities.

Present Day:
OCTA bus stops currently do not have real-time schedule and arrival time information, and some high volume stops lack passenger amenities commensurate with the volume of riders.

Benefits:
Passenger information and amenities such as real-time information and better lighting at key stops will be a significant benefit for OC Bus customers.

External Funding:
None. These projects are funded by M2 only.

Risks:
City-initiated: Cities are responsible for amenities at bus stops. Depending on the amenities selected, long-term maintenance and operating costs could be hard to sustain.

OCTA-initiated: Purchased passes are saved to customers' mobile devices to avoid data/service connection issues, however digital passes are not accessible without battery power. While

W. Safe Transit Stops

mobile capabilities are a strong incentive to use OCTA services, customers in need of on-demand services will likely utilize Uber and Lyft real-time pick-up services as opposed to waiting for fixed-route, scheduled bus service.

Related Projects:
Not Applicable.

Involved Agencies:
All local agencies (cities and the County of Orange)

Assumptions:
Project W is assumed to be funded on a pay-as-you-go basis

References:
- M2 Eligibility Guidelines
- Project W Guidelines
- OCTA's Comprehensive Business Plan

NEXT 10 DELIVERY PLAN

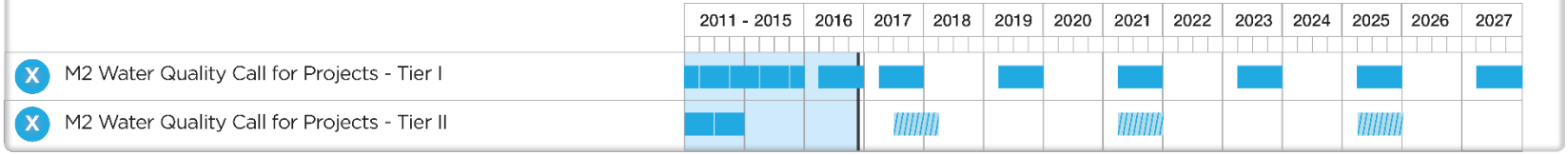
Environmental Cleanup Program

NEXT 10 DELIVERY PLAN

Call for Projects

Call for projects to be determined based on revenue flow

M2 Environmental Cleanup Grants and Call for Projects



Tier 1 grants program consists of funding for equipment purchases and upgrades to existing storm drains and related best management practices.

Tier 2 grants program consists of funding for regional, potentially multi-jurisdictional, capital-intensive projects.

Environmental Cleanup Program

Overview:
The Environmental Cleanup Program (Project X) allocates approximately $284 million toward improving overall water quality in Orange County from transportation-related pollution. Project X was approved by Orange County voters under the M2 half-cent sales tax for transportation improvements in 2006.

To adhere to the promise of M2, the Next 10 Plan includes the following framework for Project X:

- Provide supplemental funds (not supplant) for existing transportation related water quality programs
- Allocate funds on a competitive basis to improve water quality standards in Orange County
- Reduce transportation-generated pollutants along Orange County's streets, roads and freeways
- Implement best management practices to improve runoff from streets, roads and freeways

Additionally, as part of the overall M2 Plan, all M2 capital projects (freeway, street, and transit) must include water quality mitigation as part of their respective project scope and cost. Therefore, this source of funding is not eligible for environmental mitigation efforts.

Next 10 Deliverables:
The Next 10 Plan for Project X recommends two major initiatives through 2026 consistent with the above framework:

1. Protect Orange County beaches by removing 25 tons* of trash (during the ten year period) from entering waterways and inlets that ultimately lead to the ocean.
2. Work with the Environmental Cleanup Allocation Committee to develop the next tiers of water quality funding programs with a goal of providing up to $40 million of grants to prevent the flow of trash, pollutants and debris into waterways from transportation facilities. In addition, focus on improving water quality on a regional scale that encourages partnerships among the local agencies as part of the Environmental Cleanup Program (Project X).

*Trash removal achieved by funded projects will be additive with each new call for projects and will continue yielding greater benefits as equipment is in operation over time.

X. Environmental Cleanup Program

Description:
Project X implements street- and highway-related water quality improvement programs and projects that assist Orange County cities, the County of Orange and special districts in meeting federal Clean Water Act standards for urban runoff. Project X is intended to augment, not replace existing transportation-related water quality expenditures and to emphasize high-impact capital improvements over local operations and maintenance costs.

In May 2010, the Board approved a two-tiered approach to fund Project X. The Tier 1 grant program is designed to mitigate the more visible forms of pollutants, such as litter and debris that collect on roadways and in storm drains. Tier 1 consists of funding equipment purchases and upgrades to existing catch basins and related best management practices, such as screens and other low-flow diversion devices.

The Tier 2 Grant Program consists of funding regional, potentially multi-jurisdictional, and capital-intensive projects. Examples include constructed wetlands, detention/infiltration basins, and bioswales which mitigate pollutants such as heavy metals, organic chemicals, and sediment and nutrients.

Cost:
Up to $40 million will be available for the Tier 1 and Tier 2 grants funding programs over a ten-year period between 2017 and 2026, on a pay-as-you-go basis.

It is anticipated that there would be more frequency of calls for projects under the Tier 1 program, possibly on a biennial basis. Depending on the availability of revenues for this program, there may be one to two Tier 2 calls for project during this ten-year period.

Status:
To date, the Board has awarded approximately $17 million to fund 138 Tier 1 projects in 33 cities and the County of Orange, for the first six calls for projects. The Board has also awarded approximately $28 million for 22 Tier 2 projects in 12 cities and the County of Orange.

Present Day:
The seventh Tier 1 call for projects is anticipated to be released in spring 2017 for approximately $2.8 million. The timing and amount of the next Tier 2 calls for projects will be determined based on the availability of cash flow and project readiness.

Benefits:
Improvements funded through this program will improve overall water quality in Orange County. Funds allocated on a countywide competitive basis will assist jurisdictions in meeting federal Clean Water Act requirements for controlling transportation-generated pollution.

External Funding:
Local agencies are required to provide a 25 percent (Tier 1) and 50 percent (Tier 2) minimum local match. Tier 2 matching funds may be reduced, depending on project readiness and operations and maintenance above the ten-year minimum requirement.

Risks:
Local agencies must meet eligibility requirements and timely-use-of-funds provisions to M2 receive funding.

X. Environmental Cleanup Program

Related Projects:
Not Applicable.

Involved Agencies:
All local agencies (cities and County of Orange). Third parties such as water and wastewater public entities, environmental organizations, non-profit groups, and homeowner's associations cannot be a lead agency applicant; however, they could jointly apply with an eligible applicant.

Assumptions:
Funds will be allocated on a countywide competitive basis to assist jurisdictions with improving water quality related to transportation pollution.

References:
- Tier 2 Grant Program Planning Study
- OCTA's Comprehensive Business Plan

NEXT 10 DELIVERY PLAN

Appendix

To determine the status of the M2 program, staff developed cash flows for the Next 10 Plan for each of the program elements to test whether commitments provided to the voters as part of the M2 approval in November 2006 remain achievable. The Next 10 Plan cash flow will continue to be monitored and will be updated as major conditions change. The revenue assumptions were based on the latest M2 revenue forecast methodology approved by the Board on March 28, 2016. Additionally, the Next 10 Plan assumes availability of a viable amount of discretionary federal and/or state funds from 2017 to 2041, and makes specific assumptions about near term grants such as new starts, cap-and-trade, TIFIA financial assumptions, and net excess 91 Express Lanes revenues for eligible projects. Revenues and expenses were merged into a high-level cash flow model that will be subsequently refined in the upcoming plan of finance. Bond assumptions were also included to address projected negative ending balances by year (compared to a pay-as-you-go scenario) in the freeway program. Bond assumptions were constrained to minimum debt coverage ratios. Details on assumed revenues, costs, and debt service are provided below.

Freeway Program

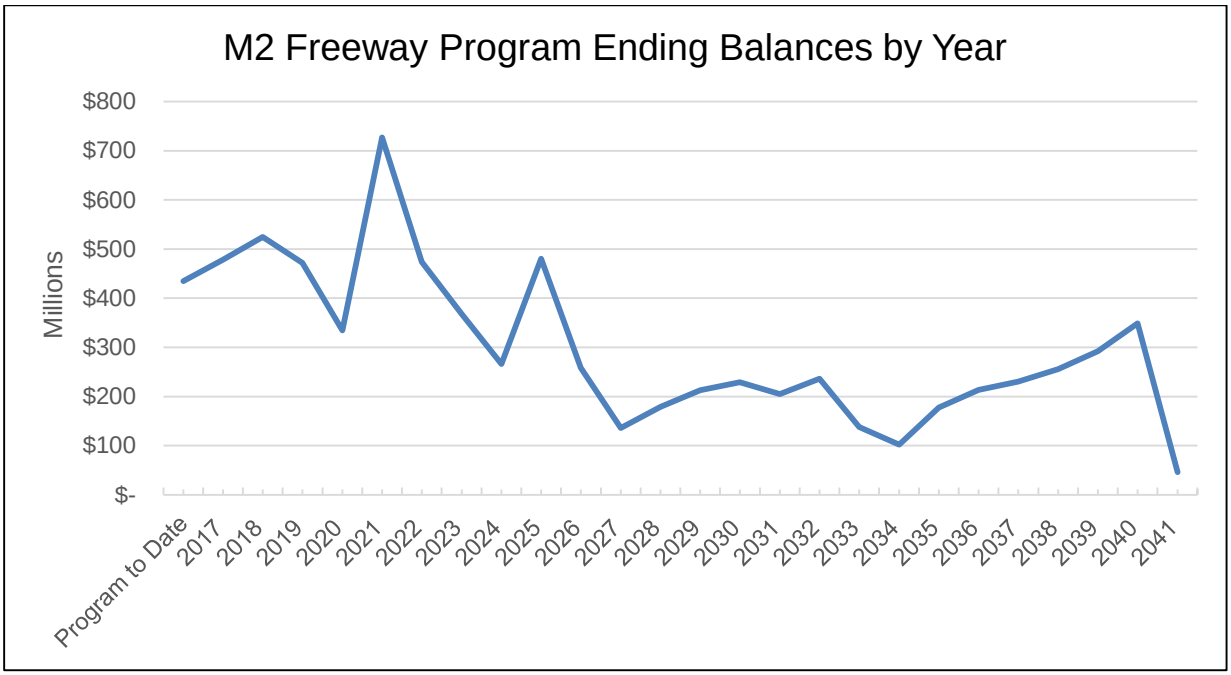
Revenues for the M2 Freeway Program assumed a proportional share (approximately 41 percent) of annual M2 revenue. From inception to 2026, the Freeway Program would receive approximately $2.069 billion in M2 revenue, $1.256 billion in bond proceeds (including $95.3 million in prior bond proceeds), and $1.054 billion in state/federal grants ($1003.6 billion of which is already programmed), $175.1 million in net excess 91 Express Lanes revenue for eligible projects, $108.3 million in interest, and $20 million transferred in from M1 for a total of $4.927 billion in total revenue. Costs for the same period would total $4.668 billion. The plan assumes two new bond issuances between 2021 and 2026. Bond issues (treated as revenue source for cash flow purposes) would exceed the forecasted freeway program shortfall since debt service payments follow each bond issue. Bonding would be constrained to legal debt coverage ratios, and the Plan of Finance will refine all bond assumptions.

For the Next 10 Plan Freeway Program development, forecasted revenues and costs through 2041 were also tested. This effort was conducted to ensure the complete M2 Freeway Program could be delivered consistent with commitments provided to the voters as part of M2 approval in November 2006. For ready-to-go projects (projects currently in environmental or final design), project schedules and costs were based on data provided by OCTA's Project Controls Department. For projects that have not yet entered the environmental phase, conceptual estimates were prepared based on a scoring of congestion relief, project readiness, and cost escalation risks (associated with project delays) and escalated to YOE dollars (with schedules and costs constrained to ending balances by year). These future projects may be advanced based on revenue availability. The table below summarizes revenues and costs assumed in the M2 Freeway Program through 2041 (in YOE dollars).

Projected M2 Freeway Program Revenues, Estimated Costs, and Ending Balances

(Millions of Dollars; Year of Expenditure)

M2 Freeway Project	M2 Projected Revenue A	Programmed Other Revenue B	Estimated Costs (YOE) C	Project Revenues - Costs D = A + B - C
Project A (I-5, SR-55 to SR-57)	519.74	31.75	37.06	514.43
Project B (I-5, SR-55 to "Y")	331.97	8.00	720.87	(380.90)
Project C (I-5, South of "Y")	693.35	362.82	714.34	341.83
Project D (I-5 interchanges)	285.30	83.03	193.29	175.05
Project E (SR-22 access improvements)	132.70	-	-	132.70
Project F (SR-55 improvements)	404.73	63.80	603.28	(134.75)
Project G (SR-57 improvements)	286.08	108.80	363.43	31.45
Project H (SR-91, I-5 to SR-57)	154.82	27.23	61.26	120.78
Project I (SR-91, SR-57 to SR-55)	460.58	39.27	501.30	(1.45)
Project J (SR-91, SR-55 to OC/RC line)	389.47	138.02	429.86	97.63
Project K (I-405, I-605 to SR-55)	1,186.33	135.42	1,425.00	(103.24)
Project L (I-405, SR-55 to I-5)	353.53	8.00	323.60	37.93
Project M (I-605 access improvements)	22.12	-	29.60	(7.48)
Project N (Freeway Service Patrol)	165.87	-	165.86	0.02
Mitigation Program @ 5%	283.51	-	285.19	(1.69)
Freeway Program Economic Uncertainties	-	-	475.00	(475.00)
Subtotal M2 Revenues and Costs	5,670.11	1,006.13	6,328.94	347.31
Projected Bond Interest Costs*			716.67	
Column D: Current Projected Balance	5,670.11	1,006.13	7,045.60	(369.35)
Additional Revenue to Delivery Program				
-- TIFIA Loan		245.40		
-- 91 Excess Revenues**		463.38	463.38	
-- External Revenue (projected, not programmed)		150.00		
-- Transfer of M1 funds		20.00		
Column D: 2041 Projected Balance	5,670.11	1,884.92	7,508.98	46.05



*Total debt service less bond proceeds and investment earnings

**Total utilization of 91 excess revenues is approximately $463.4 million. This amount is projected to be repaid by 2041, resulting in an ending balance of zero.

These assumptions result in several points in the program with low year-by-year ending balances. Although these are positive balances, the margin leaves minimal flexibility to respond to economic uncertainties, or project scope changes and schedule delays that may result in project cost increases. The tight variance between the costs and funding plan will require that project scopes and schedules be carefully managed and closely monitored given the small margin of safety.

In summary, the analysis shows that despite the economic downturn, the full scope of the M2 program can be delivered as promised with the inclusion of net excess 91 Express Lanes revenue. Although the full program (through 2041) is deliverable, the freeway mode remains tight.

Streets and Roads

The M2 Streets and Roads Program consists of Project O (Regional Capacity Program), Project P (Regional Traffic Signal Synchronization Program), and Project Q (Local Fair Share Program). Combined M2 revenues for these programs assume a proportional share (approximately 30.52 percent) of annual M2 revenue. From inception (2011) to 2026, the Streets and Roads Program would receive approximately $1.540 billion in M2 revenue, $104.6 million in prior bond proceeds, and $434.2 million in state/federal grants (primarily for the OC Bridges Program), for a total of $2.079 billion in total revenue. Costs for the same period would total approximately $2.369 billion (including debt service payments against prior bonding). While the overall Streets and Roads Program balance by 2026 runs a total deficit of $290.8 million, the program is solvent by 2041. There are several years where internal borrowing is necessary to address negative ending balances.

Transit Program

The M2 Transit Program consists of Project R (High Frequency Metrolink Service), Project S (Transit Extensions to Metrolink), Project T (Metrolink Gateways), Project U (Seniors/Disabled Persons Mobility Programs), Project V (Community Based Transit/Circulators), and Project W (Safe Transit Stops). Revenues for the M2 Transit Program assume a proportional share (approximately 23.85 percent) of annual M2 revenue. From inception to 2026, the Transit Program would receive approximately $1.203 billion in M2 revenue, $51.7 million in prior bond proceeds, $593.5 million in external revenue, and $64.1 million in interest for a total of $2.044 billion. Expenses for this same time period total $1.864 billion. With the exception of prior bonds issued for Project T, the Next 10 Plan assumes that annual proportional revenues will be adequate to meet program cash flow requirements. The cash flow includes the assumption of $148.96 million in Federal New Starts funding, $53.03 million in Federal CMAQ, and $25.52 million in State Cap-and-Trade for the OC Streetcar project. The un-programmed balance for Project S allows for capacity of an additional future transit connection project.

Environmental Cleanup Program

The M2 Environmental Cleanup Program consists of Project X (Cleanup Highway and Street Runoff that Pollutes Beaches). Revenues for the M2 Environmental Cleanup Program assume 2 percent of gross annual M2 sales tax revenue. From inception to 2026, the Environmental Cleanup Program would receive approximately $103.3 million in M2 revenue. Expenses for this same time period total $95.5 million. Conservation of water quality improvements are on schedule with significant accomplishments at or above the planned objectives goal.