Orange County Transportation Authority

July 1, 2018 to June 30, 2021 M2 Performance Assessment

February 2022

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At-A-Glance Executive Summary

Sjoberg Evashenk Consulting, Inc. (Sjoberg Evashenk) was contracted by the Orange County Transportation Authority (OCTA) to conduct the fifth Measure M2 (M2) performance assessment for the three-year period covering July 1, 2018 through June 30, 2021 to evaluate efficiency, effectiveness, economy, and program results of OCTA in meeting Ordinance No. 3 (M2 Ordinance) requirements. Key review results are summarized below and review recommendations are highlighted on the next page.

OCGO Local Tax Dollars at Work

FISCAL YEARS 2018-19 — 2020-21

KEY REVIEW RESULTS

Program Goals and Delivery

- OCTA continued to make progress towards six M2 goals. After ten years of sales tax collection, OCTA has demonstrated significant progress across all program areas

Program Management

- OCTA's M2 Project Management Office employed strong practices with clearly defined roles and functions throughout the agency.
- OCTA closely monitored and reported the impacts of the global pandemic on M2 delivery. Where possible, OCTA proactively took action to make adjustments within the limits of the M2 Ordinance.
- Administrative costs were were closely monitored to ensure compliance with the M2 Ordinance.

Cyber Security

- OCTA established an information security framework with many of the necessary controls in place to protect the M2 program from cyber threats and continued to improve its existing policies and procedures throughout the assessment period.
- A formal process to review and remove access rights for staff role changes has not been established, increasing the risk of information being accessed inappropriately.
- A decentralized approach to monitor contractor cyber security training, that allows contractors to self-certify completion of external training and relies on individual project managers to monitor contractor's compliance with OCTA-provided security policy, creates a potential gap in security controls and increases the risk that contractor security training requirements are not met.

Compliance, Transparency, and Accountability

- OCTA established a robust, well-organized system to track compliance with the M2 Ordinance.
- OCTA conducted extensive formal eligibility determinations of local jurisdictions with technical due diligence protocols performed on an annual basis that questioned, discussed, collaborated, and documented reasonableness and adherence to the M2 Ordinance's goals. OCTA also followed solid grant award and management practices to ensure that M2 funds were awarded for purposes that would help achieve the M2 goals.
- When compared against other transportation and transit agencies, OCTA employed the most communication and outreach methods, with more consistency across mediums.
- OCTA continued to garner a generally positive public perception with Attitudinal and Awareness Survey participants familiar with OCTA. However, the percent of survey respondents that had heard of OC Go increased marginally (just over one percent) between the 2018 and 2021 surveys, despite enhanced outreach efforts.
- The M2 Taxpayer Oversight Committee continued to function as envisioned in the Ordinance and fulfilled its responsibilities over the review period.

Finance

- OCTA continued to utilize sound fiscal practices, as well as adopt new practices meant to ensure financial security in the face of an ever-changing economic environment and shifting transportation funding priorities.

OCGO
Local Tax Dollars at Work

FISCAL YEARS 2018-19 — 2020-21

REVIEW RECOMMENDATIONS

Program Goals and Delivery

- In conjunction with the 2015 framework, identify when to beginning efforts to engage with potential external caretakers for long-term management of the seven conservation properties.

Cyber Security

- Develop a process for role-based access changes and ensure that program managers and supervisors understand access protocols and expectations. The Information Systems (IS) team should continue to work with Human Resources to develop a better notification system for determining when staff access should be altered due to staff role changes.
- Require contractors with OCTA email addresses and network access to take and pass internal OCTA security training as a contract condition.

Compliance, Transparency, Accountability

- Rephrase the survey question, or add an additional question, concerning Orange County residents' awareness of OC Go, such that the question provides an OC Go frame of reference in the context of transportation and infrastructure improvements made possible by OC Go, rather than basing residents' awareness solely off of awareness of OC Go in the context of the voter-approved, half-cent sales tax.

Introduction and Background

In November 2006, Orange County voters passed a 30-year extension of the Measure M half-cent sales tax. The Renewed Measure M (M2) is governed by Ordinance No. 3 (M2 Ordinance) and continues local transportation investments from 2011 through 2041. These funds are designated for use towards congestion relief, improved accessibility, and reduced pollution through various freeway, roadway, transit, and environmental projects called for in the Renewed Measure M Transportation Investment Plan (Transportation Investment Plan). The Orange County Transportation Authority (OCTA), in its capacity as the Regional Transportation Planning Agency and administrator of the sales tax, is responsible for administering M2 programs and projects in coordination with the California Department of Transportation (Caltrans) and several local partner agencies.

M2 Goals

- ✓ Relieve Congestion
- ✓ Fix Potholes & Resurface Streets
- ✓ Expand Metrolink
- ✓ Synchronize traffic Lights
- ✓ Provide Transit, at Reduced Rates, to Seniors & Disabled Persons
- ✓ Reduce Air & Water Pollution

Official Ballot General Election Orange County, November 2006

Specifically, the ballot promised to relieve congestion on the Interstate 5 (I-5), Interstate 405 (I-405), State Route 22 (SR-22), State Route 55 (SR-55), State Route 57 (SR-57), and State Route 91 (SR-91) freeways, fix potholes and resurface local streets, expand Metrolink rail service, provide additional transit options and transit services at reduced rates to seniors and persons disabilities, synchronize traffic lights, reduce air and water pollution, and protect local beaches from oil runoff from roadways.

As shown in Exhibit 1, 24 specific projects and programs were outlined for completion over the 30-year timeframe of M2. These project and programs were initially estimated to amount $11.9 billion in 2005 dollars.[1] Except for specific highway capital construction projects identified, many of the M2 projects or programs are scalable to available funds—meaning the Transportation Investment Plan can be delivered as promised, based on the available revenue, while still meeting commitments to voters. One other exception is related to Project U-Fare Stabilization Program where M2 is to provide fare discounts for seniors and persons with disabilities "in an amount equal to the percentage of partial funding of fares" as of the effective date of the M2 Ordinance.

[1] The 2021 sales tax revenue forecast estimate is $13.2 billion (year of collection dollars) over the life of the program.

EXHIBIT 1. MEASURE M2 PROJECTS

Source: Renewed Measure M Transportation Investment Plan.

Legend: Freeways Streets & Roads Transit Environmental Cleanup

The M2 Ordinance also included taxpayer safeguards through annual independent audits and taxpayer reports, ongoing monitoring and spending reviews by the Taxpayer Oversight Committee, regular quarterly project progress reports, triennial performance assessments, and a comprehensive review of M2 every ten years.

Scope and Methodology

As a taxpayer safeguard in the M2 Ordinance, OCTA must undergo a performance assessment once every three years to evaluate efficiency, effectiveness, economy, and program results of OCTA in satisfying the provisions and requirements of the M2 Ordinance. Four performance assessments have been completed to date covering program activities since fiscal year (FY) 2006-07. This report provides results of the fifth performance assessment for the three-year period covering July 1, 2018 through June 30, 2021, except where we needed to obtain contextual or underlying support data from periods prior to July 1, 2018 or more recent information to fully analyze program activities or practices.

Scope

Sjoberg Evashenk was contracted by OCTA to examine OCTA's performance on a range of activities surrounding the planning, management, and delivery of M2 Program components to ensure necessary tools and practices were in place to successfully implement the plan over its remaining life. This included, but was not limited to, a review of OCTA's:

- Effectiveness and efficiency in developing and implementing the M2 projects and programs;
- Approach to program management with regard to addressing prior assessment findings, interdivisional coordination, progress reporting mechanisms, function and functionality of the M2 Program Management Office (PMO), and security over cyber-attacks;
- Practices to ensure compliance with monitoring and reporting on M2 Ordinance provisions;
- Fiscal responsibilities when funding local grants and reporting on expenditures in addition to established practices surrounding long-term financial and investment decisions given anticipated revenue shortfalls; and
- Transparency and accountability in informing the public and decision-makers on M2 matters, public involvement when planning for M2 projects, and functionality of safeguards such as the Taxpayer Oversight Committee.

Objectives

The primary objectives identified for this performance assessment were as follows:

1. Evaluate the status of findings from the fourth performance assessment and the effectiveness of the changes implemented;
2. Assess the performance of the agency on the efficient delivery of M2 projects and programs; and
3. Identify and evaluate any potential barriers to success and opportunities for process improvements.

Methodology

To fulfill these objectives, we conducted a series of detailed tasks involving data mining and analysis, documentary examinations, peer comparisons, source data verification, and interviews. This included, but was not limited to, a review of OCTA's:

- Effectiveness and efficiency in developing and implementing the M2 projects and programs;
- Approach to program management with regard to addressing prior assessment findings, interdivisional coordination, progress reporting mechanisms, function and functionality of the M2 PMO, and security over cyber-attacks;
- Practices to ensure compliance with monitoring and reporting on M2 Ordinance provisions.
- Fiscal responsibilities when funding local grants, reporting on expenditures, and establishing practices surrounding long-term financial and investment decisions given anticipated revenue shortfalls; and
- Transparency and accountability in informing the public and decision-makers on M2 matters, public involvement when planning for M2 projects, and functioning and functionality of taxpayer safeguards such as the Taxpayer Oversight Committee.

To assess OCTA's effectiveness and efficiency in developing and implementing M2 projects and programs, we performed the following:

- Reviewed various delivery plans including the Early Action Plan, M2020 Plan, Updated Next 10 Delivery Plan, Capital Project Selection Guiding Principles, the M2 Ordinance and Transportation Investment Plan, as well as other underlying documents to gain an understanding of the full complement of programs, projects, and promises made.
- Assessed the status of the M2 programs and projects as of June 30, 2021 using M2 progress reports such as the M2 Quarterly Reports, M2 website, capital project documents, PMO tracking files, and other available budget and cost data.
- For a sample of projects, verified scope for completed projects aligned with intent of the M2 Ordinance by reconciling the improvement made to the recommendations from the final Program Environmental Impact Report that served as the guiding document in developing the M2 Ordinance.
- Compiled a universe of M2 programs and capital projects (see Appendix A) to compare budgets to actuals for both costs and schedules, as well as to identify the current status of projects.
- Reviewed program and construction management procedures for elements found in leading practices as determined by the Project Management Institute's Construction Extension to the Project Management Body of Knowledge Guide, Construction Management Association's Construction Management Standards of Practice, Federal Highway Administration guidance, and Caltrans Local Assistance Manual.
- Tested a sample of M2 contract files for compliance with OCTA procurement guidelines as established in its Contracts Administration and Materials Management manual.
- Reviewed successes and challenges with the environmental mitigation program.

To understand OCTA's approach to program management, we:

- Reviewed OCTA's M2 PMO charter.

- Reviewed all prior performance assessments reports to determine the current status of prior recommendations, whether findings were adequately addressed, or if there were any carryover items or follow-ups needed.
- Assessed OCTA's processes for calculating and monitoring administrative costs to ensure limits complied with the M2 Ordinance.
- Reviewed OCTA's cyber security policies, procedures, and protocols, and determined whether those aligned with industry standards established by the United States Department of Commerce National Institute of Standards and Technology, United States Department of Transportation Cybersecurity, California Office of Information Security, Information Systems Audit and Control Association, among others.

To evaluate practices in place to ensure compliance with M2 monitoring and reporting provisions, we:

- Identified all compliance areas required by the M2 Ordinance and reviewed OCTA's Ordinance Compliance Tracking Matrix for completeness.
- Assessed compliance with M2 local eligibility guidelines, including testing a sample of eligibility reviews conducted on local city and county jurisdictions to ensure that each required eligibility compliance category was reviewed, eligibility guidelines were followed, and focused questions were asked and resolved by the local jurisdictions.
- Assessed grant practices, including testing a sample of approved grants to determine if selection process was robust and had supporting documentation, such as scoring sheets, technical reviews, and overall adherence to grant purpose and proposed project.
- Verified capital project schedule and cost data presented to the public reconciled with and across internal reports.

To evaluate fiscal responsibilities, we:

- Assessed OCTA's management of sales tax revenues with regard to revenue projection methodologies, leveraging of funds, debt financing, investment practices, and cash flow planning.
- Determined whether fiscal practices in place allow for the delivery of the entire program within the M2 prescribed timeframe. This included a review of safeguards put in place to mitigate for impacts of future projected revenue shortfalls.

To review OCTA's public transparency and accountability, involvement of the public when planning for M2 projects, and the functioning of the Taxpayer Oversight Committee, we:

- Reviewed outreach tools employed and content provided to inform the public about M2 programs and projects. Summarized and assessed surveys of public awareness and attitude towards M2 looking for trends and compared OCTA practices to similar entities.
- Determined whether the Taxpayer Oversight Committee functions as intended by the M2 Ordinance by reviewing meeting minutes for items discussed or issues raised.

- Compared the Taxpayer Oversight Committee to similar entities in terms of selection process, structure, and expertise.

Finally, we also met with OCTA executives, managers, staff, and consultants over areas related to planning, finance/administration, internal audits, capital programs, and external affairs on multiple occasions to understand, assess, and vet practices employed implementing the M2 Program. Additional M2 Program stakeholders were interviewed to garner views and perspective, including representatives from the M2 Program Consultant for the Highway Program, Southern California Association of Governments, Auto Club of SoCal, Rancho Mission Viejo, Orange County Business Council – Infrastructure Committee, Citizen Advisory Committee, Environmental Oversight Committee, M2 Environmental Cleanup Committee, Orange County Taxpayer Association, Taxpayer Oversight Committee, Technical Advisory Committee, and Caltrans.

Chapter 1: Program Goals Have Been Met Thus Far

Over the three-year period reviewed, OCTA continued to make progress towards meeting the six goals identified in the M2 Ordinance, including:

- ✓ Relieve congestion on the I-5, I-405, SR-22, SR-55, SR-57 and SR-91 freeways;
- ✓ Fix potholes and resurface streets;
- ✓ Expand Metrolink rail and connect it to local communities;
- ✓ Provide transit services, at reduced rates, for seniors and disabled persons;
- ✓ Synchronize traffic lights in every community; and
- ✓ Reduce air and water pollution, and protect local beaches by cleaning up oil runoff from roadways.

Further, OCTA continued to focus on delivering the projects listed in the Renewed Measure M Transportation Investment Plan under the premise that those efforts would address the Ordinance purpose and goal. For instance, in reviewing congestion levels in Orange County over the assessment period, we noted that while overall congestion slightly increased from 2018 to 2019 before declining in the first half of 2020, an area with an M2 funded transportation improvement actually showed less congestion. Specifically, our review of the three project segments spanning from San Diego Interstate 5 (I-5): Avenida Pico to San Juan Creek Road that that are part of Project "C" and "D"— I-5 Improvements South of the El Toro "Y" and I-5 Local Interchange Upgrades — found that congestion over the nearly six-mile freeway span declined from 2013 to 2019.[2] Other goals of the M2 Ordinance have also been met including maintaining improvements made to highway and roadway pavement conditions, and synchronizing more than 3,000 traffic signals.

M2 Goals have Mostly Been Met Thus Far

Specific M2 Ordinance language set forth funding of six overarching programs or goals to relieve traffic congestion, through highway improvements, street resurfacing and traffic light synchronization, transit options, and environmental activities. As summarized in Exhibit 2 and described in the subsequent sections of this chapter, we find that these M2 goals have mostly been met thus far.

EXHIBIT 2. STATUS TOWARD MEETING M2 GOALS THROUGH JUNE 30, 2021

#	M2 Ordinance Goal	Measure	Results Thus Far
1	Relieve Congestion on I-5, I-405, SR-22, SR-55, SR-57, and SR-91	• Commute Time • Hours of Delay	• Congestion increased slightly from 2018 to 2019, and sharply declined in the first half of 2020. • Vehicle miles traveled (VMT) declined from 2019 to 2021.[3] • Delay was less on the I-5 projects reviewed.

[2] Vehicle Hours of Delay or travel time delay is a measure of additional time driven on a roadway relative to the amount of time it would have taken at "free-flow" speeds (60 mph).
[3] VMT is a widely-known industry measure of the number of miles traveled by all vehicles in a region over a specific time period. It is determined by either actual odometer readings or by estimated modeling calculations.

#	M2 Ordinance Goal	Measure	Results Thus Far
2	Fix Potholes & Resurface Streets	• Pavement Condition Index	• Improvements in Pavement Condition Index (PCI) noted in 2016 have remained at 79 in 2020. • Orange County continues to have the best pavement condition in the State.
3	Expand Metrolink Rail & Connect with Local Communities	• Projects Completed	• 11 of 13 identified Metrolink rail expansion capital projects to accommodate future increased service frequency were completed which include 50 at-grade rail crossing safety enhancements. • In March and November 2020, three lines servicing Orange County reduced service by 24% from 54 to 41 weekday trains due to pandemic initiated stay-at-home orders and its effects on ridership. • OC Streetcar construction began in November 2018. • $52 million awarded to 35 projects and 10 planning studies for local community-based transit circulators.
4	Provide Reduced Cost Transit Services to Seniors and Persons with Disabilities	• Number of Issued Passes • Number of Boardings • Funding Provided	• $26.5 million and 2.5 million boardings provided under the Senior Mobility Program. Due to COVID-19, several jurisdictions modified or suspended service. • $28.6 million and 1.38 million boardings provided to the County of Orange to supplement existing Senior Non-Emergency Medical Transportation Program services. • $36 million and 123 million boardings provided to stabilize fares and provide fare discounts to seniors and persons with disabilities.
5	Synchronize Traffic Lights	• Number of Lights Synced	• 3,108 traffic lights synchronized.
6	Reduce Air and Water Pollution and Protect Local Beaches through Cleanup of Roadway Oil Runoff	• Better Air Quality and Less Water Pollution	• 45 million gallons of trash removed • 1,300 acres preserved as open space • 350 acres restored

Source: Generated from OCTA Quarterly Progress Reports and OC Go Website.

It is important to note that while performance results have proven to be promising thus far, M2 is a program that will span 30 years. As such, performance results over a three-year assessment period represent a snapshot of where the program is at a particular time and may not be truly indicative of performance results over the life of the program. Further, there are several forces that constantly affect transportation demand and performance outcomes as described in the following section.

A Combination of Internal and External Forces Continue to Impact Goals and Outcomes

OCTA developed a variety of tools and mechanisms to report its progress in meeting the goals and objectives identified in the M2 Ordinance, such as quarterly and annual M2 progress reports and on the OC Go website. While OCTA has made much progress in its delivery of the projects and programs promised to voters, over the review period of FY 2018-19 thru FY2020-21, there were several factors outside of OCTA's sphere of influence that impacted both project and program delivery. In Exhibit 3, we provide a list of factors that are both within OCTA's sphere of influence and external factors that OCTA has no control over.

External factors include challenges related to a global pandemic/health crisis, natural disasters, population changes, employment levels, the economy, and driver preferences.

EXHIBIT 3. INTERNAL AND EXTERNAL FORCES IMPACTING M2

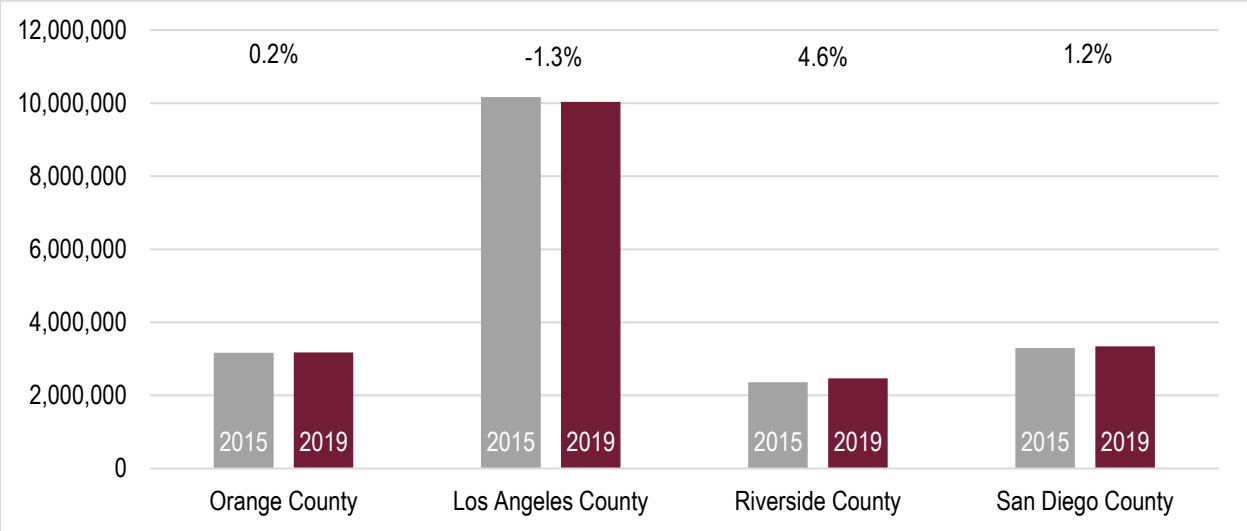
During the period of review, there was an unprecedented global pandemic outbreak that began in early 2020 and continued through 2021, referred to as the coronavirus (COVID-19) pandemic. As a result of the pandemic, California's governor issued orders, that included requirements for non-essential workers to stay home. As a result, OCTA, like others, had to adapt and change the way it conducted business, including its approach to public outreach, virtual Board of Directors (Board) and committee meetings, and remote access to OCTA systems and tools for OCTA staff and project partners. The impacts of the pandemic reached beyond general operations, impacting both OCTA's and local agencies' implementation of projects and programs. As discussed throughout this report, the pandemic impacted project schedules and costs due to the availability of labor resources and materials, some projects and services were cancelled or delayed by local agencies, and transit ridership significantly declined resulting in service reductions and revisions.

Additionally, the availability of outside information and reports, such as population and congestion reports, that are used to assess performance in the following sections of this report, were not always available for the entire period of review. As a result, in the following sections performance is assessed based on the latest information available. In instances where there was either limited or no data for 2020 and/or 2021, or data reflected irregular performance, we compared data over a five-year period from 2015 to 2019.

Orange County's Population Has Remained Fairly Stable and Traffic Demand Declined

Two significant external forces on a region's transportation performance are population and traffic demand on the roadways. According to the US census's one-year estimates, Orange County's population of approximately 3.2 million for calendar year 2019 has been fairly stable since 2015, as shown in Exhibit 4.[4]

EXHIBIT 4. ESTIMATED POPULATION CHANGE IN CALIFORNIA COMPARISON COUNTIES, CALENDAR YEAR 2015 TO 2019



Source: US Bureau's Population Estimates.

In terms of traffic demand on roadways, a common industry measure is vehicles miles of travel or VMT. Specifically, VMT measures the total miles driven by all of the vehicles over a freeway segment during a specified time period.[5] When population grows, there could be more potential drivers in the region that would tend to increase VMT and often lead to more congestion.

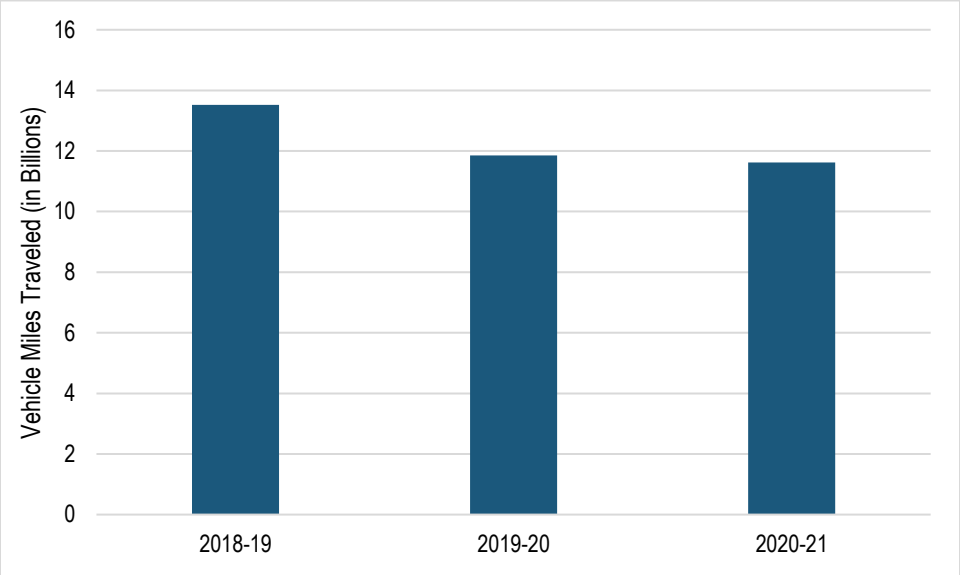
While OCTA's Regional Transportation Modeling section indicated that the VMT in Orange County increased approximately one percent, from 2016 to 2019, over the period reviewed traffic demand decreased between FYs 2018-19 and 2020-21 from 13.5 billion in FY 2018-19 to 11.6 billion in FY 2020-21—a decrease of approximately 14 percent, as shown in Exhibit 5. This decline can likely be attributed to the impacts of the COVID-19 pandemic and statewide stay-at-home orders that were in place in 2020 and 2021. In addition, it is important to note that while information reported from Caltrans Performance

[4] The most recent population data available was through 2019.

[5] Caltrans calculates the VMT for the state highways system through detectors by collecting data in individual travel lanes. Detectors report flow, occupancy, and/or speed. This data is captured by FY.

Measurement System (PeMS) is the best available information for VMT over the review period, the accuracy of the information reported is impacted by the number and health of lane points used to gather information. According to OCTA, there have been some issues with PeMS data due to limited maintenance and construction disabling a number of detector locations. During the review period, PeMS reported a data quality score of 75 percent.

EXHIBIT 5. CHANGE IN ANNUAL VMT FOR ORANGE COUNTY, FY 2018-19 TO FY 2020-21



Source: Caltrans PeMS.

M2 Projects Had Positive Impact on Congestion

As stated in the M2 Ordinance, one of the measures key goals was to "relieve congestion on the I-5, I-405, SR-22, SR-55, SR-57, and the SR-91." To determine whether that goal has been met thus far, we reviewed a combination of annual hours of delay, average daily traffic per lane, and average monthly urban freeway speeds from the Orange County Mobility Indicators 2020 report. As discussed, in the following sections the annual hours of delay slightly increased from 2018 to 2019, then sharply declined in the first half of 2020, when the California Governor issued stay at home orders in response to the COVID-19 pandemic. In addition, we found that the average daily vehicle flow per lane decreased after M2 improvements were made, particularly where a new lane was added, which effectively spread vehicles across more lanes. Lower vehicle flow rates per lane are typically associated with higher speeds and less congestion. Average monthly freeway speeds generally stayed the same, despite downward trends statewide. Finally, improvements in congestion were noted over three M2 project freeway segments completed in 2018 that spanned from I-5: Avenida Pico to San Juan Creek Road.

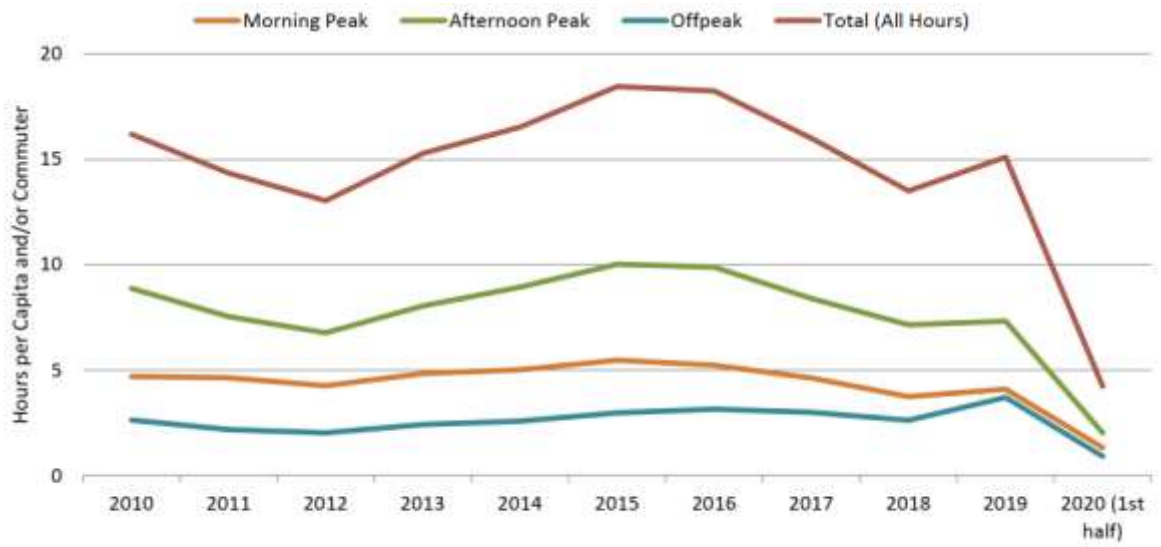
Although Annual Hours of Delay in Orange County Slightly Increased From 2018 to 2019, Other Indicators of Congestion Show Improvement

The Orange County Mobility Indicators 2020 report describes how vehicle flow was used to measure the change in daily vehicle volume at nine points on the Orange County freeway before and after M2-funded improvements were made. Data reflects average daily traffic per lane on Tuesdays, Wednesdays and

Thursdays in the month of October in the years shown in general purpose lanes and managed lanes (HOV and toll express lanes). Points within each M2 project area were selected by the reliability of detector data. Data reflecting real-time observations of less than 50 percent were omitted from the charts; data reflecting 50-75 percent real-time observations were included if the data were consistent with years posting 75 percent or more real-time observations.[6] Overall, among the nine points measured, most show that the average daily vehicle flow per lane decreased after M2 improvements were made, particularly where a new lane was added.

In addition, another metric to assess congestion is the annual hours of delay. As shown in Exhibit 6, annual hours of delay at speeds of less than 60 miles per hour on freeways in Orange County varied from year-to year. In 2019, the average Orange County traveler experienced an estimated 15.1 hours in freeway traffic congestion, up from 2018 when the average annual delay was 13.5 hours. The hours of delay were reduced to an unprecedented 4.2 hours in the first half of 2020.

EXHIBIT 6. ANNUAL HOURS OF DELAY PER CAPITA OR PER COMMUTER AT SPEEDS LESS THAN 60 MILES PER HOUR ON FREEWAYS IN ORANGE COUNTY: CALENDAR YEARS 2010-2020 (1ST HALF)



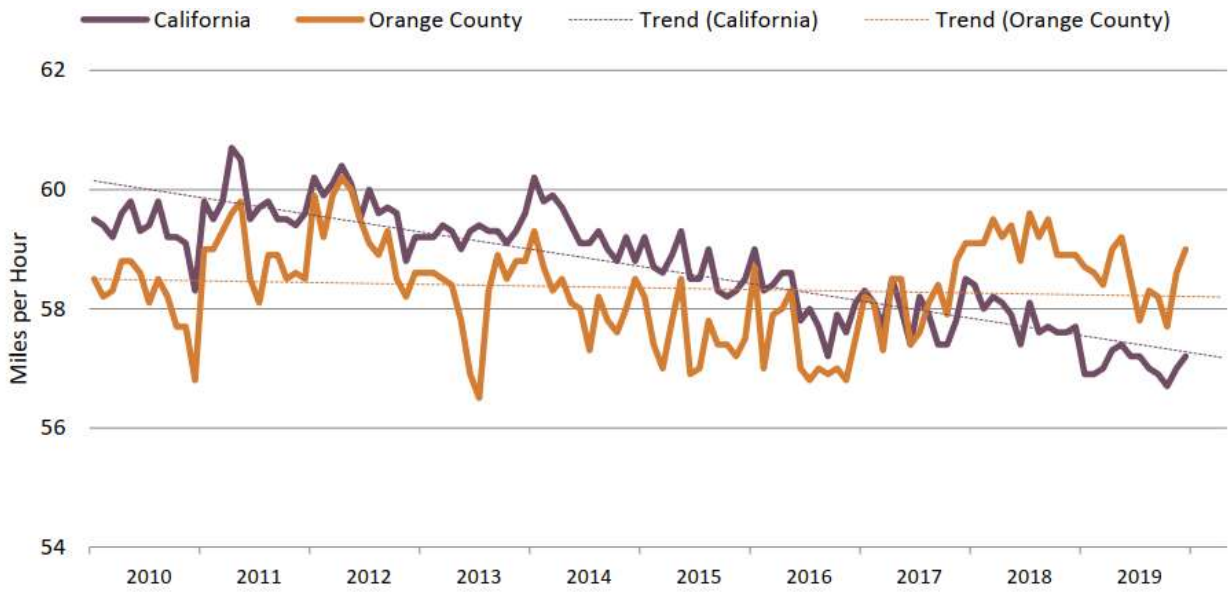
Note: Data for peak hours reflect annual hours of delay per commuter at speeds less than 60 miles per hour on freeways in Orange County. Data for off-peak hours are per capita. Counts of commuters in 2019 and 2020 are projected estimates based on historical trends and change in vehicle miles traveled; consequently, morning and afternoon peak estimates of delay per commuter should be interpreted with caution.

Source: Orange County Mobility Indicators 2020.

Additionally, average monthly freeway speeds can be used as an indicator of congestion. As shown in Exhibit 7, prior to 2020 the average monthly Orange County freeway speeds were variable with no obvious trend over the ten-year period reviewed by OCTA. In the last five years, average speeds were slightly faster in 2018 and 2019 (59 miles per hour) than the three years prior (58 miles per hour). Comparatively, overall speeds in California have steadily decreased.

[6] The percent observed for any given period refers to the percentage of results that were recorded (observed) by the detector in the roadway vs. estimated (imputed) when the detector was not functioning. The point selected may not represent the flow rate for the entire segment; factors such as on- and off-ramps add or remove traffic along a given segment.

EXHIBIT 7. AVERAGE MONTHLY URBAN FREEWAY SPEEDS: ORANGE COUNTY AND CALIFORNIA, CALENDAR YEARS 2010-2019

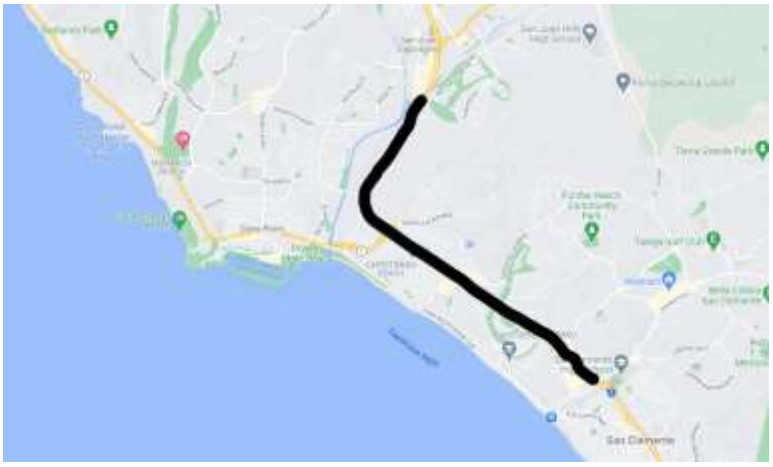


Source: Orange County Mobility Indicators 2020.

Vehicle Hours of Delay Decreased on I-5 Projects

While countywide statistics can give context to factors impacting a region, measuring outcomes of transportation projects generally need to be at a more focused level. For example, according to the M2 Early Action Plan, the proposed benefits of Project "C"—I-5 Improvements South of the El Toro "Y"—were to increase freeway capacity and reduce congestion. Three segments of this project were completed as of 2018 that spanned from I-5: Avenida Pico to San Juan Creek Road.

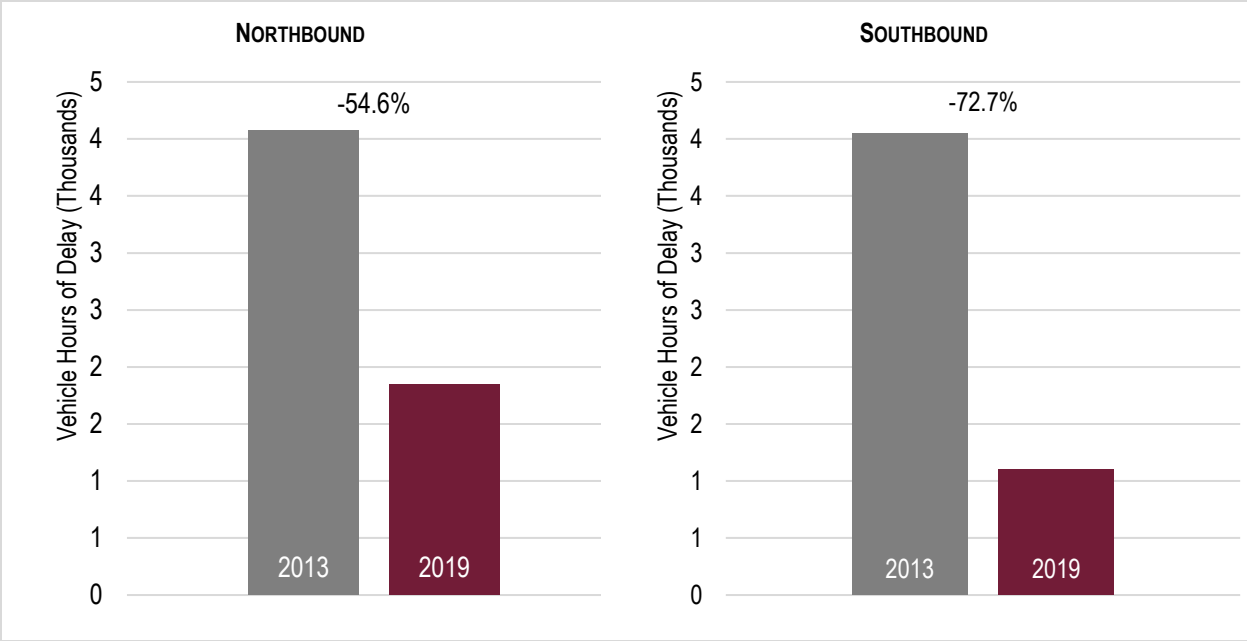
EXHIBIT 8. MAP OF PROJECT C – I-5: AVENIDA PICO TO SAN JUAN CREEK ROAD FREEWAY IMPROVEMENT



The projects included nearly six-miles of new high occupancy vehicle (HOV) lanes going in both directions. Delay data from Caltrans PeMS was available for the year before construction started in 2014 and was compared to the congestion data from the year after all three segments were open to traffic in 2018. As

shown in Exhibit 9, there was a decrease in vehicle hours of delay over the three segments in 2019 compared to 2013.

EXHIBIT 9. CHANGE IN VEHICLE HOURS OF DELAY ON PROJECT C CORRIDOR—NORTH AND SOUTH BOUND I-5 BETWEEN AVENIDA PICO AND SAN JUAN CREEK ROAD, DURING PEAK PM HOURS (3:00PM–8:00PM)[7]



Source: Generated from Caltrans PeMS.

Pavement Condition Generally Stayed the Same Over the Assessment Period

Another project goal delineated in the M2 Ordinance was to "fix potholes and resurface streets." While we describe accomplishments related to projects commissioned to fixing potholes and resurfacing streets in Chapter 2, we also assessed overall pavement condition that allows safe and free-flow travel to help address congestion. We found that both highway pavement and local road conditions have improved.

Pavement condition can be assessed by a variety of methods. Two standardized methods include the International Roughness Index (IRI) and the Pavement Condition Index (PCI). The IRI is measured by a modified vehicle that is equipped with sensors and computers to automatically collect and analyze the road condition as the driver travels the roadway. The IRI is a measure of the "roughness" of ride quality, or in simpler terms, a measure of how bumpy the road is. Another method of assessing pavement condition is with the PCI. PCI was initially developed by the U.S. Army Corps of Engineers and is calculated from a visual survey—which may be aided by video capture from a modified vehicle—of pavement distress with a score ranging from 0 (failed) to 100 (perfect). Points are deducted from the 100-point total for distress such as cracking, rutting, and other distortions.

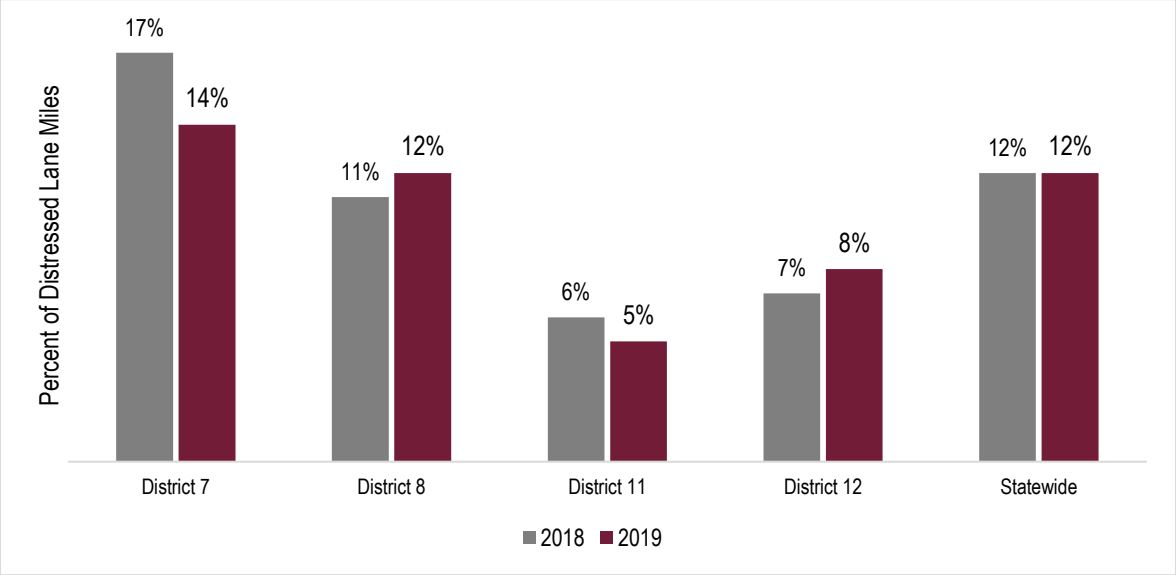
[7] Data from PeMS is available on the corridor level, specifically, travel time delay. Travel time delay is a measure of additional time driven on a roadway relative to the amount of time it would have taken at "free-flow" speeds (non-congested conditions). Caltrans allows the user to set the free-flow" for the system to perform the delay calculations. In the Exhibit 9 comparisons, 60mph was used as the free-speed.

For highway pavement condition, Caltrans conducts an automated pavement condition survey to collect pavement data. For roadways, local entities use PCI to report results to the Metropolitan Transportation Commission as part of an annual Local Streets & Roads Needs Assessment.

Highway Pavement Condition Has Improved Since 2013, Although There Was a Slight Decline From 2018 to 2019

While the percent of distressed highway lane miles at the statewide level has remained constant from 2018 to 2019, Caltrans District 12, which includes only Orange County, slightly declined with an increase from seven percent of distressed lane miles in 2018 to eight percent in 2019—lower than the statewide average as shown in Exhibit 10. When compared to other nearby Caltrans Districts, only Caltrans District 11 reported a lower percent of distressed highway lanes than Caltrans District 12.

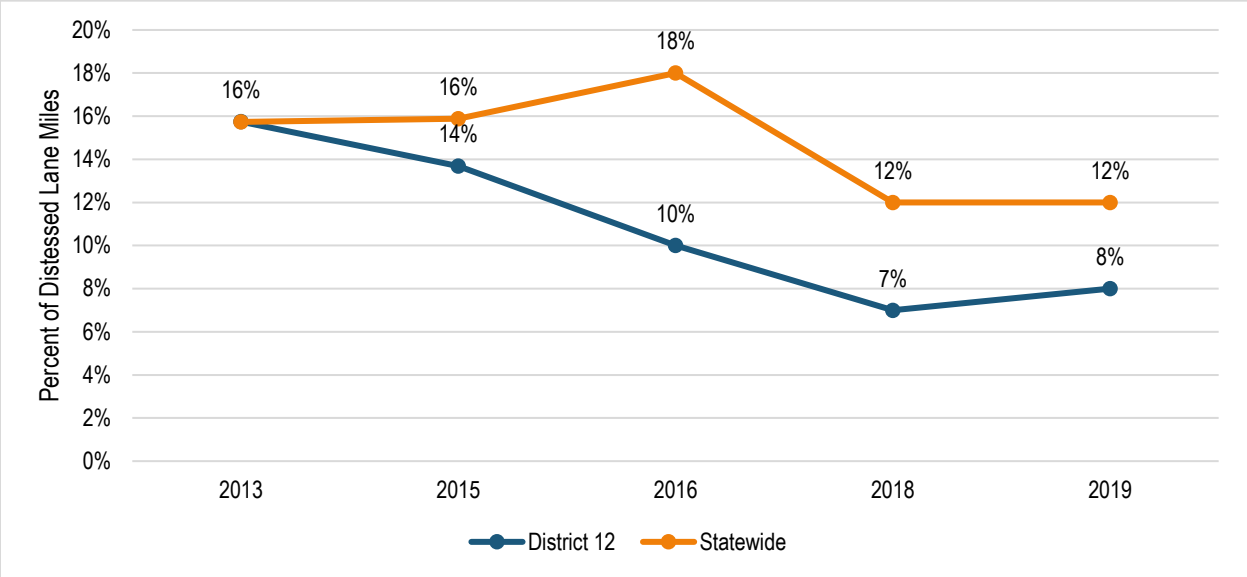
EXHIBIT 10. CHANGE IN SHARE OF DISTRESSED LANE MILES FROM 2018 TO 2019



Source: Caltrans State of the Pavement reports, 2018 & 2019.
Note: District 7 (Los Angeles and Ventura counties), District 8 (Riverside and San Bernardino counties), District 11 (San Diego and Imperial counties) and District 12 (Orange County).

Although Caltrans District 12 showed a slight increase in the percent of distressed highway lane miles from 2018 to 2019, there have been notable improvements since 2013, with the percent of distressed highway lane miles declining from 16 percent in 2013 to eight percent in 2019—a greater improvement than the statewide average, as shown in Exhibit 11.

EXHIBIT 11. CHANGE IN SHARE OF DISTRESSED LANE MILES IN CALTRANS DISTRICT 12 COMPARED TO STATEWIDE, 2013 TO 2019

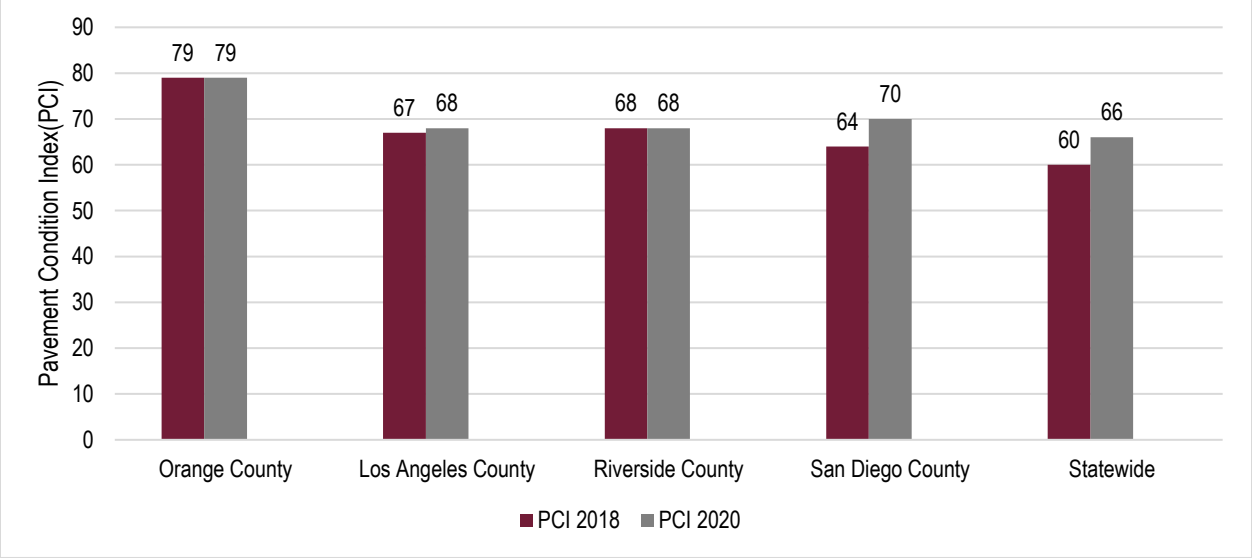


Source: Caltrans State of the Pavement reports, 2018 & 2019.

Local Streets and Roads Condition Has Improved since 2014 and Remained Constant Since Last Review

Pavement condition for local streets and roads have been reported on by the Metropolitan Transportation Commission in its California Local Streets & Roads Needs Assessment through a survey to California's 58 counties, 482 cities, and 48 Regional Transportation Planning Agencies. The survey demonstrated that Orange County PCI remained steady from 2018 to 2020, and better than the statewide average and surrounding peers, as shown in Exhibit 12.

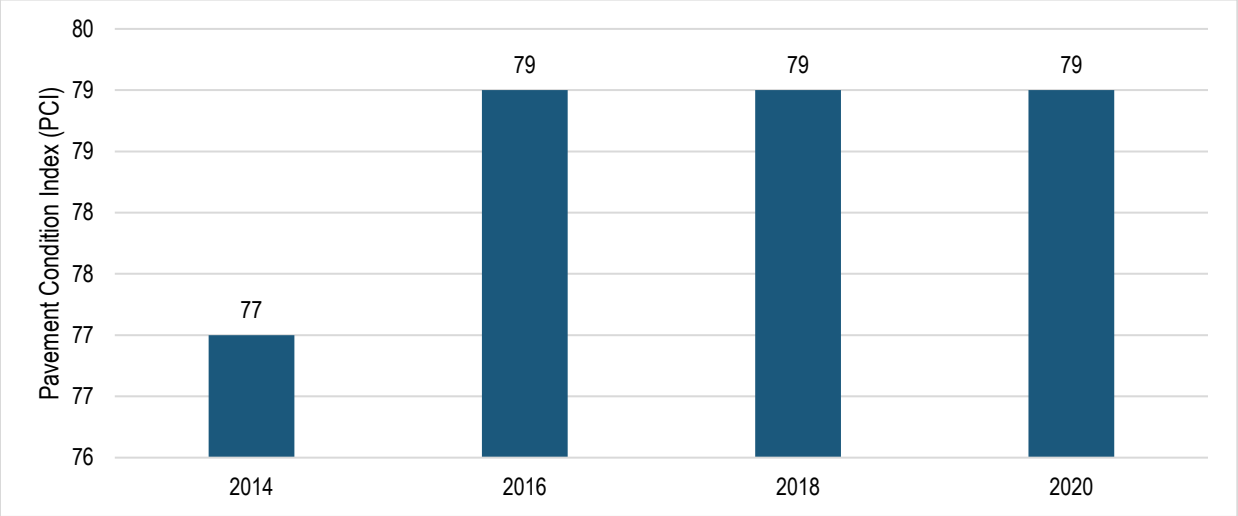
EXHIBIT 12. CHANGE IN PAVEMENT CONDITION INDEX BY COMPARISON COUNTIES



Source: California Statewide Local Streets and Roads Needs Assessment.

Further, as shown in Exhibit 13, after initial improvements from 2014 to 2016, which led to a PCI increase from 77 to 79, overall pavement condition improvements for Orange County have remained steady.

EXHIBIT 13. ORANGE COUNTY CHANGE IN PAVEMENT CONDITION INDEX, 2014-2020



Source: California Statewide Local Streets and Roads Needs Assessment.

Transit Performance Continued to Show Progress Towards Goals

Twenty-five percent of funding from M2 is directed toward Metrolink operations, extending the reach of Metrolink services, expanding mobility choices for senior citizens and persons with disabilities, developing localized transit services, and improving passenger amenities at the busiest transit stops. These transit projects are guided by principles of value, safety, convenience, and reliability. Goals include utilizing the existing operational commuter rail system and rail stations in order to further develop a coordinated regional transportation system providing congestion relief, cost effectiveness and connectivity.

To date, OCTA has completed 11 Metrolink grade crossing, safety, and station projects under Projects R and S. Both the Anaheim Canyon Metrolink Station and Placentia Metrolink Station projects completed the design phase, with the Anaheim Canyon Station project beginning construction in May 2021. Construction for the Placentia Metrolink Station is pending advertisement due to delays with the BNSF Railway Company (BNSF) agreement. Additionally, Project T was designed to expand Metrolink services and connect with local communities. This included the completion of the Anaheim Regional Transportation Center (ARTIC) project, a multi-modal transit center serving existing rail and bus as well as future high-speed trains that was opened in December 2014.[8]

Further, an additional goal of the M2 Ordinance is to provide reduced-cost transit services to seniors and persons with disabilities through Project U, and includes the Senior Mobility Program, Senior Non-

[8] On December 14, 2015, the M2 Ordinance was amended to authorize additional funding from Project T to be "allocated to the Fare Stabilization Program by changing Attachment B language to reflect a 1.47% delegation (rather than 1%) of Project U funding towards Fare Stabilization. Corrected amendment language was presented to the Board on March 14, 2016."

Emergency Medical Transportation Program, and Fare Stabilization Program. Since inception, more than $91.7 million in Project U funding has been provided under M2.[9]

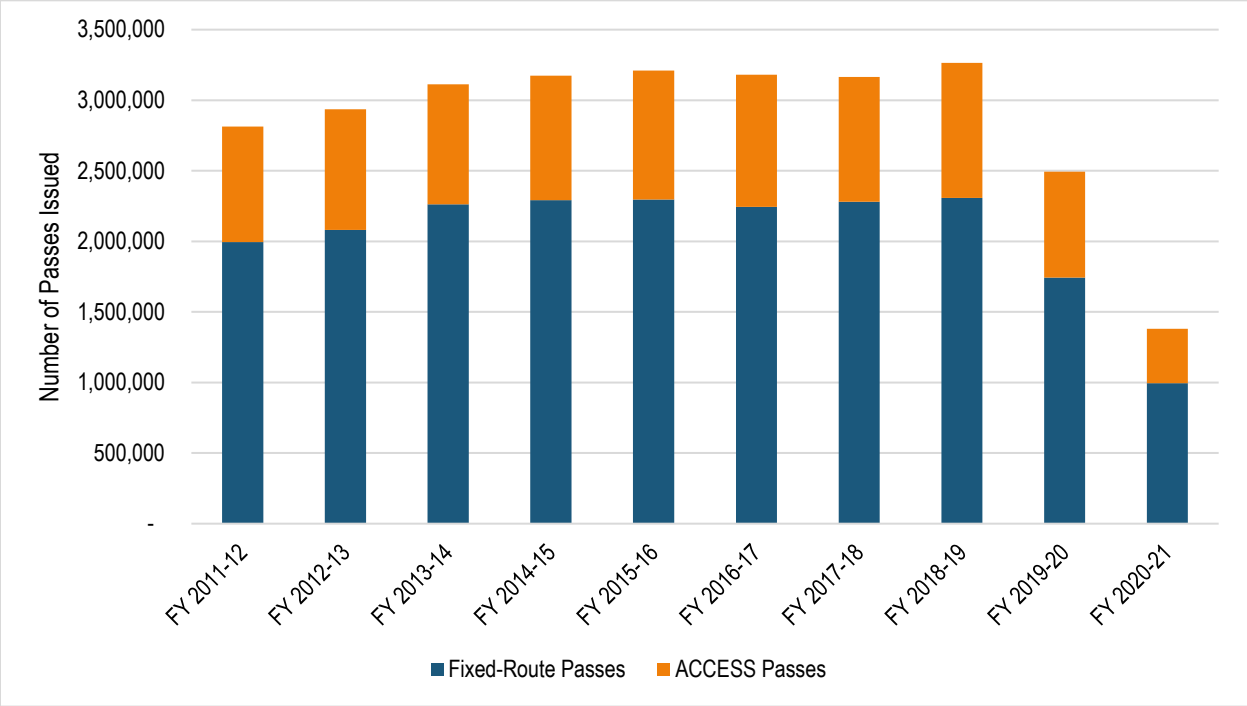
- **Senior Mobility Program**: This program provides one percent of net M2 revenues to eligible local jurisdictions to provide transit services that best meet the needs of seniors living in their community. In October 2020, the Board approved a temporary exception to Senior Mobility Program guidelines allowing OCTA to hold allocations for such suspended services "until the State lifts the State of Emergency or the agency resumes transportation services, whichever occurs first." Since inception, OCTA has provided more than $26.5 million of M2 revenues and provided nearly 2.5 million boardings under the Senior Mobility Program. This included transportation to medical appointments and community centers, as well as providing access to shopping and nutrition programs.

- **Senior Non-Emergency Medical Transportation Program:** This program is operated by the County of Orange Office on Aging and provides one percent of net M2 revenues to supplement existing countywide Senior Non-Emergency Medical Transportation services. As of June 30, 2021, two of the 32 participating cities still had temporarily suspended services due to COVID-19. Under the Senior Non-Emergency Medical Transportation Program, OCTA provides funding to the County of Orange Office on Aging to supplement existing non-medical senior transportation services. Since inception, approximately $28.6 million has been allocated to support 1.38 million boardings for the Senior Non-Emergency Medical Transportation Program.

- **Fare Stabilization Program:** This program uses M2 revenue to lower the cost of transit for seniors and persons with disabilities by discounting fares in an amount equal to the percentage of partial fare funding of fares as of the effective date of the M2 Ordinance. As of June 30, 2021, OCTA has allocated nearly $36.6 million and nearly 124 million program-related boardings have been provided. The Fare Stabilization program experienced a significant decline in issued passes during the COVID-19 pandemic. Similar to nationwide trends in transit, statewide stay at home orders have had a large impact on the number of OCTA transit passes issued. While the number of reduced fare senior passes slightly increased from FYs 2017-18 to 2018-19, from 2.28 million to 2.31 million, the number of reduced fare passes issued significantly declined to 1.74 million during FY 2019-20. This trend extended into FY 2020-21, with the number of fixed-route reduced senior fare passes declining to 961,162, a 43 percent decline from the prior FY. Likewise, ACCESS passes for persons with disabilities displayed a similar pattern of slight increases between FYs 2017-18 and 2018-19, and a decline in FYs 2019-20 and 2020-21. In FY 2020-21, the number of ACCESS passes issued significantly declined with only 385,053 ACCESS passes issued, nearly half as the many as the prior year.

[9] "Payments are made every other month (January, March, May, July, September, and November). July payments are based on June accruals, and therefore counted as June payments. The amount totaled for one fiscal year quarter either covers one or two payments, depending on the months that fall within that quarter."

EXHIBIT 14. FARE STABILIZATION PROGRAM FIXED ROUTE AND ACCESS PASSES ISSUED



Source: Summary of Fare Stabilization Data Q4 FY 2020-21.

OCTA recognizes that the need for such programs will continue to grow increase in conjunction with projected growth in the population of older Americans. In efforts to meet this demand, OCTA is continuing their support of senior mobility programs and working to develop and promote supplementary services outside of existing paratransit options.

Under Project V, OCTA has held four calls for projects (calls), which awarded 35 projects and ten planning studies totaling approximately $52 million. As of June 30, 2021,12 projects are currently active, nine have been cancelled (primarily due to low ridership due to the impact of the COVID-19 pandemic), 11 are currently suspended (or not initiated) due to COVID-19, and three have been completed.

In an effort to improve passenger safety at the busiest transit stops across Orange County, OCTA implemented Project W. Utilizing competitive grants, Project W has provided funding for passenger amenities at the 100 busiest transit stops. This included efforts to ease transfers between bus lines and provide passenger amenities such as improved shelters, lighting, ticketing machines, and arrival timetables. As of June 30, 2021, OCTA reported that 43 bus stop improvements were completed, 69 improvements were in various stages of implementation, and 10 improvements had been cancelled by the awarded agency. In total, the Board has approved $3.1 million for advancements to passenger safety at bus stops.

More Traffic Lights Have Been Synchronized Than Expected

To maximize efficiency of the street system, the M2 Ordinance set aside funding for a coordinated countywide traffic signal synchronization program. It is expected that, once completed, this program will increase street capacity and reduce delay by over six million hours annually at more than 2,000 signalized

intersections. With one-third of the M2 Program completed, OCTA has now implemented signal synchronization at 3,108 intersections with 89 projects completed.

According to the June 7, 2021 Regional Traffic Signal Synchronization Program update, travel time improvement had stayed consistent from 2017 to 2020, at 13 percent, while the average speed improvements identified in 2017, slightly declined from 15 percent to 14 percent in 2020. Stop improvements noted in 2017, were also marginally reduced from 31 percent to 29 percent in 2020. While the COVID-19 pandemic reduced the number of drivers on the roads, the travel time collection for all completed projects took place prior to the March 2020 Executive Stay-at-Home Order, and was thus not a contributing factor. By decreasing the number of vehicle stops, smoothing the flow of traffic, and reducing the amount of vehicle acceleration and deceleration over the three-year project cycle, OCTA estimates that the improvements noted would result in an estimated 919 million pounds of greenhouse gas savings over the project life cycle.

Environmental Mitigation Program Currently Focused on Building Endowment Fund

The M2 Ordinance sets aside five percent of M2 freeway revenues to mitigate the biological resources impacts of construction activities on the environment. The M2 Freeway Environmental Mitigation Program (EMP) activities include land acquisition, restoration, and land management. When the M2 Ordinance was established, it was estimated that EMP funding would total approximately $243.5 million through the life of M2 (revised to $238 million in 2021). The program is overseen by OCTA's Environmental Oversight Committee (EOC) that meets quarterly and is comprised of 12 members, including two OCTA Board representatives, Caltrans, state and federal resource agencies, United States Army Corps of Engineers, non-governmental environmental organizations, the public and a Taxpayer Oversight Committee representative.

From program inception through June 30, 2021, a total of $48.4 million has been expended on each of the program's three main activities:[10]

- Conservation Property Acquisitions—$35.4 million to purchase seven properties (Preserves) totaling 1,300 acres. Costs include conservation property acquisitions & support, which includes property appraisals, environmental site assessment, right-of-way consultant, property taxes, start-up costs, and interim land management.
- Habitat Restoration Projects—$10.4 million for 12 habitat restoration projects totaling approximately 350 acres and US Forest Service Dam Removal.
- Conservation Plan—$2.6 million for conservation plan development.

Another $14.4 million has been set aside to establish an endowment fund for future management of the seven properties. The total principal needed for the endowment is estimated to be $34.5 million, with deposits made over a ten to twelve-year period. Note that endowment deposits started in February of 2017 and, as of June 30, 2021, the balance of the endowment fund was at $19.2 million.

[10] An additional $7.1 million (approximate) expended on program miscellaneous costs associated with the EMP.

During our review period, July 1, 2018 to June 30, 2021, the primary focus was continuing to build the endowment, which $8.63 million was deposited in the fund. An additional $3.31 million was expended during the period on the following program activities:[11]

- Conservation Property Acquisitions—$1.71 million related to ongoing costs associated with interim management of the seven properties, including patrol services to mitigate trespassing and other illegal activities; property maintenance including fuel modification, weed abatement, and access road maintenance work; biological resources monitoring; land surveying; and general environmental support services associated with the Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) implementation
- Habitat Restoration—$1.59 million related to payments to multiple habitat restoration project sponsors that cover various activities, such as weed removal, biological monitoring, installing container plants and irrigation lines, seeding, and removing historic dams to facilitate aquatic species passage.
- $10,000 for conservation plan development including environmental document.

OCTA faced challenges presented by three significant fires that occurred between October and December 2020 and impacted Orange County. While none of the preserves were affected, two of the three fires impacted multiple habitat restoration projects, sponsored by OCTA; these restoration projects were within close proximity to several of the Preserves. OCTA is working with restoration project sponsors and Wildlife Agencies to determine how best to facilitate the recovery process. The OCTA M2 NCCP/HCP required that OCTA begin developing fire management plans for the Preserves in 2018. Each Preserve is required to have its own management plan, which provides guidelines for decision-making at all states including fire prevention and suppression activities. The plans were started in 2018 as required and were originally anticipated to be completed in 2020. However, due to delays associated with Southern California Edison easement confirmation (has since been confirmed), changes with staffing with the California Department of Fish and Wildlife, and spring 2021 biological data being included in the fire management plans, the completion date was pushed to 2022. According to OCTA, the delay will have no material impact with complying with the NCCP/HCP.

OCTA Expects EMP Endowment to be Fully Funded by 2028

In 2016, the Board approved an approximate 12-year plan to set aside approximately $2.9 million annually to reach the $46.2 million endowment goal with expectations that it will be fully funded by 2028.[12] As of June 30, 2021, the endowment balance was $19.2 million, which consists of $14.4 million from five principal deposits plus $4.8 million in investment earnings. After the endowment is funded, OCTA plans to transfer the management of the Preserves to third-party land management entities. As OCTA is well into building the endowment fund, OCTA should identify when to begin engaging with potential external long-term caretakers for the Preserves.

[11] An additional $1.53 million (approximate) expended on administrative costs associated with the EMP.
[12] Includes $34.5 million in deposits plus anticipated $11.7 million in investment returns.

Also, once the endowment is fully funded, OCTA estimates that a significant amount of the EMP allocation could remain and Board direction would be needed at that time to determine the appropriate use of the funds consistent with the M2 Ordinance. Once the existing obligations are fulfilled, such as funding the endowment and repaying bond interest, OCTA will establish overall priorities and spending recommendations for the remaining anticipated funding available. Note that in 2015, the Board approved a long-term funding strategy, developed by the Environmental Oversight Committee, to establish a framework for future expenditures. The framework both defined overall priorities and provided a timetable for future spending recommendations.

Environmental Cleanup Program Continues to Demonstrate Successes, Yet, Some Grant Funding Not Used During Review Period

The M2 Ordinance sets aside two percent of gross M2 revenues to improve water quality and comply with the Clean Water Act, such as removing trash and debris. When the M2 Ordinance was established, it was estimated that the M2 Project "X" - Environmental Cleanup Program (ECP) funding would total approximately $237.2 million through the life of M2 (revised to $227.3 million in 2021). Funds are allocated to projects and programs that assist Orange County cities, the County of Orange and special districts via competitive grants. OCTA's Environmental Cleanup Allocation Committee makes competitive funding recommendations and is comprised of 14 members, which includes experts in the field from local environmental groups, universities, Caltrans and local city and county agencies.

The ECP involves two types of grants: Tier 1 grants are designed to mitigate more visible forms of pollutants, such as litter and debris on roadways and catch basins, while Tier 2 grants are more regional, capital-intensive projects, such as construct wetlands or detention basins to mitigate pollutants. In total, $55.3 million in environmental cleanup project funding has been awarded through Tier 1 and Tier 2 grants through June 30, 2021, of which OCTA has issued $41 million in grant payments.[13]

- Tier 1—From program inception through June 30, 2021, there have been eleven rounds of funding totaling $27.4 million for 189 projects and OCTA expended $19.6 million. During the review period July 1, 2018 to June 30, 2021, 35 grants were awarded, associated with $7.3 million in allocated funds. Reported results of the Tier 1 grant indicate over 45 million gallons trash have been captured since the inception of the program.

- Tier 2—From program inception through June 30, 2021, there have been two rounds of funding totaling $27.9 million for 22 projects and OCTA expended $21.3 million. OCTA estimates that the funded Tier 2 projects, once fully functional, will have an annual groundwater recharge potential of approximately 157 million gallons of water from infiltration or through pumped and treated recharge facilities.

  Due to lack of local jurisdiction interest and qualified projects, there were no Tier 2 calls during the review period July 1, 2018 and June 30, 2021. OCTA's 2020 Next 10 Delivery Plan suggests that the cash flow could support a $8-10 million call for Tier 2 projects during FY 2021-22. OCTA staff is

[13] An additional $5 million (approximate) expended on administrative costs associated with the ECP.

sending out questionnaires to ascertain whether cities have any Tier 2-related projects that would qualify for funding; however, it does not appear that many have capital intensive projects planned.

Recommendation

To enhance its environmental mitigation planning practices, OCTA should consider identifying:

1. When to begin efforts to engage with potential external caretakers for long-term management of the seven conservation properties in conjunction with the 2015 framework.

Chapter 2: OCTA Demonstrated Strong Program Management

When Orange County voters approved the M2 program in 2006, OCTA was tasked with administering a nearly $11.9 billion program over a 30-year period. To ensure the programs and projects promised in the M2 Ordinance were delivered, OCTA developed strong program management practices and implemented and PMO to oversee M2 implementation. In addition, OCTA has developed clearly defined roles and responsibilities for all divisions that work with the PMO to deliver M2 projects and programs. OCTA has also established a strong tone at the top, where issues and challenges that arose over the course of the review were openly discussed and staff collaborated to identify ways to best mitigate potential associated risks and address concerns. Further, OCTA proactively addressed and implemented prior review recommendations.

OCTA's PMO Continues to Employ Strong Practices

In 2006, the OCTA Board created the PMO to oversee the implementation of promised transportation improvements. "While other organizational units within OCTA carry out the Transportation Investment Plan's individual projects and programs, the PMO monitors and as appropriate, analyzes, assesses, facilitates, coordinates, and reports on M2 activities and progress." Operating under five goals related to compliance, effective management, fiscal responsibility, transparency, and taxpayer safeguards, the PMO formally defined eleven functional responsibilities with regard to management of the program and importance of public trust as shown in Exhibit 15.

EXHIBIT 15. PMO FUNCTIONAL RESPONSIBILITIES

PMO Goal	Functional Responsibilities
Compliance & Consistency	1. Ensure projects, programs, and taxpayer safeguards are developed and delivered according to processes and procedures included in the Ordinance.
	2. Coordinate development of delivery plans to ensure delivery of all projects and programs included in M2.
	3. Monitor completion of activities related to implementation of M2.
Management	4. Ensure projects, programs, and taxpayer safeguards are developed and delivered according to processes and procedures included in the Ordinance.
	5. Coordinate M2 program and project management policies and procedures for use by all OCTA divisions.
	6. Serve as a clearinghouse for ensuring critical interdivisional Ensure projects, programs, and taxpayer safeguards are developed and delivered according to processes and procedures included in the Ordinance.
Fiscal Responsibility	7. Ensure proper reporting and review of M2 receipts, expenditures, and accounting of M2 proceeds to meet business and agency standards.
	8. Ensure uses of M2 and related external funding follow Ordinance provisions.
Transparency	9. Coordinate and oversee reporting of M2 Program status/information to the Board, general public, and stakeholders.

PMO Goal	Functional Responsibilities
	10. Ensure consistent and appropriate reporting of information related to M2 project activities.
	11. Provide access to relevant M2-related policy and procedures.
Safeguards	12. Ensure implementation of safeguard measures called for in the Ordinance, including the Taxpayers Oversight Committee, quarterly reports to the Board, annual expenditure reports, Triennial Performance Assessments, Ten-Year Review, annual Local Transportation Authority audit, and reporting from the local jurisdictions.

Source: PMO Charter 2019 Revision.

Through a combination of interviews and review of key documents, we found that the PMO has a clear understanding of their roles and responsibilities and continued efforts to enhance and improve its processes to oversee the implementation of M2. During the review period, we found OCTA had implemented a prior review recommendation related to its ordinance tracking as discussed later in this report.

Clear Roles and Functions Continue to Help Coordinate M2 Program Within OCTA

While the PMO is the primary program area responsible for overseeing the implementation of promised M2 improvements, other divisions within OCTA help to with the implementation and delivery of the M2 program. OCTA continued to have clearly defined roles and responsibilities, with key functions generally assigned to the same division as the prior review. One area related to the review of annual expenditure statements submitted by the local jurisdictions was transferred back from the PMO to the Finance Division as planned. During interviews, the PMO and divisions all had a clear understanding of roles and responsibilities, such as program oversight, public reporting and outreach, schedule and cost controls, and grants to locals. In Exhibit 16, we provide a table of key functions and responsibilities and the responsible area.

EXHIBIT 16. ASSIGNMENT OF KEY M2 FUNCTIONS AND RESPONSIBILITIES

Key Function and Responsibility	PMO	Planning/ Programming	Capital Programs	Project Controls	Local Programs	Finance	Transit Ops	External Affairs
Program Delivery	✓		✓		✓		✓	✓
Compliance with Ordinance	✓	✓	✓		✓	✓		✓
Program Oversight	✓							
Project Oversight & Management			✓		✓			✓
Schedule & Cost Control	✓	✓	✓	✓	✓			
Schedule & Budget Adherence	✓	✓	✓	✓	✓			
Change Order Management			✓	✓	✓			
Determining Local Eligibility					✓			
Grants to Locals					✓	✓		
Monitoring Local Projects & Expenditures					✓	✓		
Senior Passes							✓	

Key Function and Responsibility	PMO	Planning/ Programming	Capital Programs	Project Controls	Local Programs	Finance	Transit Ops	External Affairs
Forecasting & Cash Flows	✓	✓				✓		
Revenue Projections	✓	✓				✓		
Revenue Monitoring	✓	✓				✓		
Reporting to Decision Makers	✓	✓	✓		✓	✓		
Reporting to Public	✓	✓	✓		✓	✓		✓

Source: OCTA Organizational Chart and results of assessment interviews.

Formalized M2 Program Management Committee Continues to Ensure Knowledge Sharing

OCTA established an M2 Program Management Committee with regular bi-weekly meetings to ensure a strong communication structure is in place. At these meetings, that include executives and key managers from all OCTA divisions, OCTA discusses cross-divisional data, ideas, issues, information, and solutions. OCTA prepares written agendas and meeting notes that summarize items discussed, updates provided, and action items and owners identified. A review of meeting minutes and agendas over a six-month period from January through June 2021, found that members openly discussed issues and collaborated, with topics such as impacts of the COVID-19 pandemic, revenue forecasts, project delivery, Next 10 Plan, and funding for local streets and roads. There was also evidence that supported OCTA's on-going efforts to ensure transparency. For example, at an April 2021 meeting while discussing updates to the Senior Mobility Program, members discussed on-going communication and coordination with City Managers to ensure transparency.

Impacts and Risks of Global Pandemic on Project Delivery Were Well Documented and Monitored

During the course of the period reviewed, there was an unprecedented global pandemic outbreak that began in early 2020 and continued through 2021. The pandemic had a significant impact on capital projects throughout the country. According to the Third Quarter 2021 North America Quarterly Construction Cost Report, supply chain upheavals, and pandemic-induced labor contractors, among other factors, have led to periodic uncertainty in the architecture, engineering, and construction industries, which "59 percent of construction firms reporting to the Associated General Contractors of America they had projects scheduled to start in 2020 but were delayed until 2021, while 44 percent saw jobs completely canceled." Further, during the period of review the National Construction Cost Index, increased from 189.80 in the second quarter of 2018 to 218.06 in the second quarter of 2021—an increase of nearly 15 percent.[14] In the neighboring Los Angeles region, the Construction Cost Index rose 5.13 percent from 2020 to 2021.

OCTA closely monitored and reported the impact of the pandemic on its M2 program and project delivery within the limits of the M2 Ordinance. For instance, in the M2 Quarterly Status Reports, OCTA reported the impact of the pandemic on program and project delivery and closely monitored associated risks. For

[14] Similar to the Consumer Price Index, the National Construction Cost Index shows the changing cost of construction over a period of time.

example, in the Measure M2 Quarterly Progress Report 4th Quarterly FY 2020-21, OCTA reported for Project V, nine projects had been cancelled (primarily due to low ridership) and 11 were suspended (or not initiated) due to the COVID-19 pandemic. In response, on January 25, 2021, the Board approved changes to the Project V program guidelines to better support these key community services as they are reinitiated post-COVID-19. In addition, as part of OCTA's on-going risk analysis reporting, OCTA discussed potential impacts on projects schedules and costs if workforce shortages continued. In another example, at the April 2021 Measure M2 Program Management Committee meeting, OCTA indicated that it had developed one-page fact sheets for each city and the County of Orange, with updates through December 2020 that included "a section highlighting OCTA's adjustments to help cities manage COVID-19 impacts, with specific adjustments noted as applicable for each city." Further in discussions with OCTA staff and external stakeholders, both indicated that OCTA actively monitored and reported the impacts of the pandemic and proactively identified ways to minimize and address challenges identified to reduce the impact on M2 program and project delivery. Concerns were raised by several stakeholders regarding the on-going impacts that inflation and shortages of skilled labor may have on project delivery, including potential schedule delays and budget overages. As OCTA moves forward, it should continue to monitor these risks and work with program partners to mitigate the impact to the greatest extent feasible.

Continuous Improvement Was Valued Through Implementation of Prior Assessment Recommendations

With the Ordinance requiring a performance assessment every three years to evaluate the efficiency, effectiveness, and economy of OCTA organization in delivering M2, we found that the OCTA continues to actively address recommendations as necessary. Specific to the 2018 performance assessment, OCTA has either completed or efforts are ongoing to address all recommendations, as reflected in Exhibit 17.

EXHIBIT 17. 2018 PERFORMANCE ASSESSMENT RECOMMENDATION STATUS

No.	Category	Prior Recommendation	Addressed
1.	Project Delivery	Consider identifying measures to capture progress towards each of the six key M2 Ordinance goals and, on a periodic basis, report on how results achieved correlate to those goals.	✓ **Implemented**
2.	Program Management/ Responsiveness	Implement in-progress plans to update security training policy and require annual cybersecurity training as well as establish a timeline for implementation.	✓ **Implemented**
3.	Program Management/ Responsiveness	Regularly monitor the training status of all employees to ensure employees complete cybersecurity training within the required timeframe including defining specific roles and responsibilities, timelines and frequency of monitoring, verification methods, and documentation of status.	✓ **Implemented**
4.	Program Management/ Responsiveness	Create a methodology to gather quantitative accomplishment data and track project outputs and accomplishments against Transportation Investment Plan anticipated goals.	✓ **Implemented**
5.	Program Management/ Responsiveness	Demonstrate a stronger link between capital project selection guiding principles and the actual implementation order for capital projects by formally memorializing discussions and decisions made.	✓ **Implemented**

No.	Category	Prior Recommendation	Addressed
6.	M2 Compliance	Include additional links, where appropriate, to underlying support documentation to validate compliance efforts and activities tracked and evaluated in the PMO's Compliance Matrix.	✓ **Implemented**
7.	Transparency & Accountability	Enhance awareness of the M2/OC Go Program, M2-funded projects, and related M2 accomplishments on social media through posts on currently existing OCTA social media pages or through using separate social media dedicated to M2.	✓ **Implemented**
8.	Transparency & Accountability	Add a short biography on the OCTA website highlighting Taxpayer Oversight Committee members' experience and expertise to enhance transparency of those providing oversight.	✓ **Implemented**

Source: Generated using data from 2019-2020 Next 10 Delivery Plans and Prior M2 Performance Assessment.

Status of Project Delivery Recommendation

In response to recommendations to developing measures to track progress toward M2 Ordinance goals, OCTA considered setting specific targets to measure progress made toward each M2 goal. Ultimately, OCTA determined that setting specific targets would be an inaccurate way to measure true progress toward M2 goals due to the impact of outside variables that change travel behaviors and patterns. For instance, COVID-19 reduced overall traffic congestion due to the stay-at-home orders. The I-5 project between SR-55 and SR-57 where OCTA just completed a new HOV lane that opened to traffic in August 2020. OCTA found that determining which factor had more impact on reducing traffic volume was arbitrary in nature. OCTA does indicate some project progress through key output measurements as detailed on the OC Go website. This includes output measurements such as the number of traffic lights synchronized, the number of reduced fare passes issued, or total invested in street improvements to date. As specific outcome measurements are not stipulated by the M2 Ordinance, the M2 management team is effectively meeting the six high level goals placed on the M2 Ordinance voter ballot through ensuring project and program delivery.

Status of Program Management/Responsiveness Recommendations

To address recommendations related to cyber security training, OCTA staff are now ineligible for merit-based raises without completion of the security training, and are given hard deadlines by which the training must be completed. To make security tailored more directly to staff needs, OCTA also developed new training which links to continuing education modules, and can also be tailored to the needs of specific staff members or groups. Between 2018 and 2020, all OCTA staff successfully completed the annual required training; however, as of October 2021, only 61 employees have completed the Annual Refresher Training for 2021. The Information Security team is confident that, similar to prior years, all staff will complete the training as required by the June 2022 deadline.

Additionally, to demonstrate a stronger link between capital project selection guiding principles and the actual implementation order for capital projects, OCTA staff worked to formalize decisions on adopted delivery plans. The 2019 Next 10 Plan included the recommendation to advance five freeway projects through construction. Because these projects have been completed, the recommendation to demonstrate a stronger link to the guiding principles only impacted the four ongoing freeway projects—D, G, J, and L—whose schedules do not yet include design and construction. OCTA staff also added sections to the 2019

and 2020 Next 10 Delivery Plans to link staff reasoning to the guiding principles. Specifically, OCTA noted that due to the guidelines of Readiness and Public support specified in the M2 Ordinance, these projects required additional time to coordinate efforts with local agencies.

Recommendations one and four of the prior assessment discussed the need to develop methodologies capture progress measurements, gather quantitative accomplishment data and track project outputs and accomplishments against Transportation Investment Plan anticipated goals. To do so, OCTA enhanced tracking of performance measures by dedicating specific fields to the existing OCFundTracker site to more easily export data.

While OCFundTracker has been utilized since the inception of Measure M, OCTA continually works to enhance the site to ensure improved tracking, clarity and navigation. OCTA has confirmed that all data Local Programs has been updated back to the 2011 inception, and that all completed project phase data has been included and verified in the OCFundTracker database. Because the number and type of performance measurements may change up until completion of a project due to scope modifications, OCTA requires city project managers to make update performance measures during semi-annual review cycles. OCTA also reviews the final performance measure input at project closeout.

Status of Ordinance Compliance Recommendation

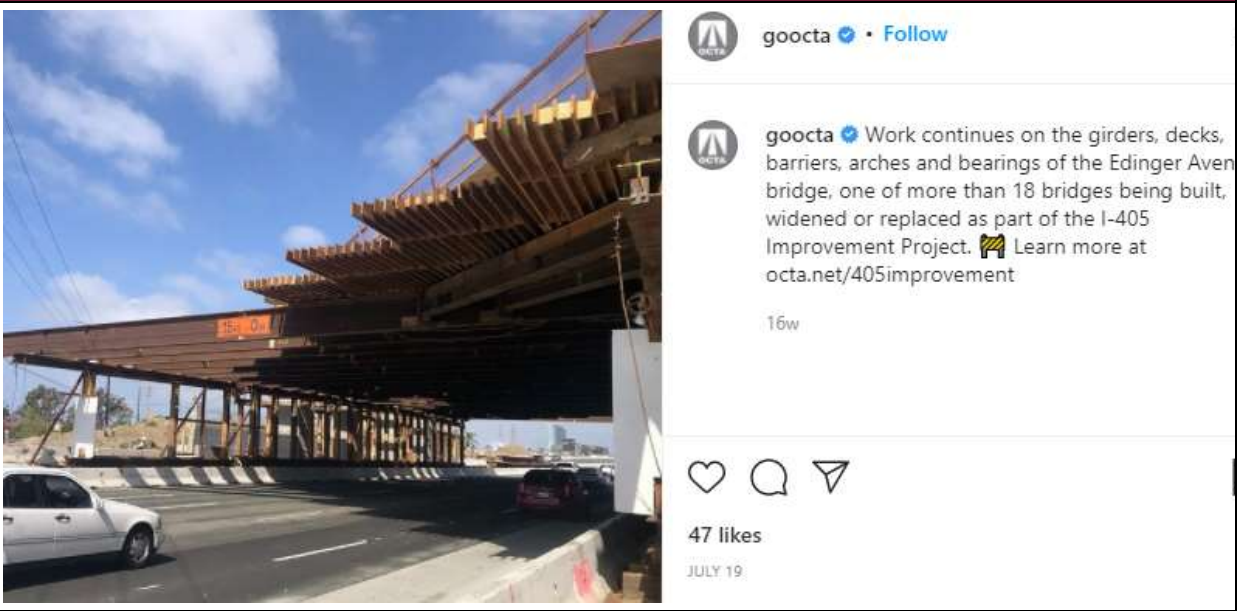
A recommendation for improvement was offered to utilize the new Document Center to hyperlink supporting documentation in the Tracking Matrix to validate compliance efforts and activities. This recommendation was implemented.

Status of Transparency and Accountability Recommendations

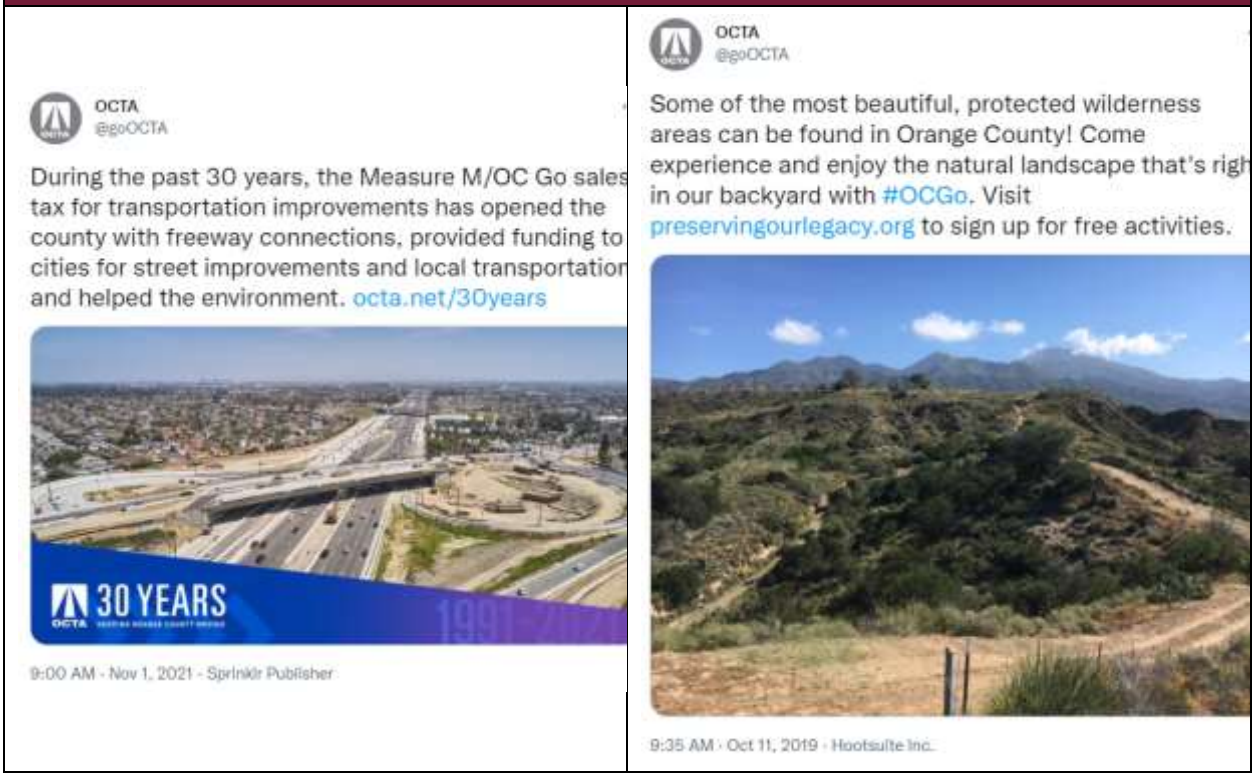
To address the recommendation related to enhancing awareness of M2 (and its rebranding as OC Go), M2-funded projects, and related M2 accomplishments via social media, OCTA improved the types and content of posts related to M2. For example, as illustrated by Exhibit 18, OCTA has made the most of its social media posts by using direct links to M2 projects and activities on OCTA's website as well as publishing photos of OCTA's progress on construction efforts on the I-405 Improvement Project on its Instagram account. OCTA also uses hashtags to increase project recognition and awareness, such as the OCTA-specific #OCGO and more general #MilestoneMonday, a method used in social media to draw attention to, organize, promote, and connect to particular topics and events.

EXHIBIT 18. ILLUSTRATIONS OF OCTA SOCIAL MEDIA POSTS BY SOCIAL MEDIA ACCOUNT

Instagram



Twitter



Source: OCTA's Twitter (@goOCTA) and Instagram (@goocta) pages.

Moreover, OCTA added short biographies on the OCTA website to highlight Taxpayer Oversight Committee members' experience and expertise.

Administrative Costs Were Limited to Comply With Ordinance and Closely Monitored

Recognizing the inherent cost of monitoring and overseeing the M2 Program, the Ordinance set forth provisions allowing M2 funds to pay for administrative salaries, wages, benefits, and overhead up to a ceiling of one percent of annual M2 revenues.[15] We found OCTA limits administrative expenses to one percent of M2 revenues as required.

Specifically, per the independent accountant's agreed upon procedure (AUP) report on the Measure M2 Status, as of June 30, 2020, Measure M2 sales tax collected, including interest, totaled $2.82 billion, providing $28.16 million for administrative cost—during the same time, salaries and benefit administration and overhead expenditures totaled $27.91 million, less than the one percent cap.

During the early years of the program and prior to the start of revenue collection, OCTA's administrative costs did not have M2 revenues sources and, as a result, administrative costs significantly exceeded the one percent cap. The OCTA Board approved the use of its separate Orange County Unified Transportation Trust (OCUTT) fund to reimburse M2 administrative costs exceeding the one percent limit—in 2012, OCTA borrowed $5.2 million dollars from the fund. This funding came with the understanding that those funds would be repaid with interest in the future when administrative expenditures underrun one percent, which has occurred annually since FY 2015-16. For FYs 2018-19 and 2019-20 specifically, administrative expenditures were well below the one percent cap—0.74 percent and 0.86 percent of M2 revenues, respectively. These efficiencies helped offset past overages from the early action planning phase and reduced the balance owed to the OCUTT fund. In fact, according to the 3rd Quarter Measure M2 Progress Report 2020-21 and information presented to the Taxpayer Oversight Committee, the outstanding principal balance owed to OCUTT was $0 and the remaining interest owed was $0.6 million. As of June 30, 2021, the principal and interest balance due was $0.

According to financial statement information as of March 31, 2021 presented to the Taxpayer Oversight Committee, through the end of the program, forecasts suggest that M2 revenues will total $11.9 billion and administrative expenditures will total $118.5 million, just under the one percent cap.

Moreover, we found that OCTA diligently monitored administrative costs in compliance with M2 provisions, had good controls in place to ensure proper charges in keeping within M2 Ordinance limits, and reported expenses in annual reports as required. Specifically, OCTA's PMO tracked costs quarterly and annually. For instance, at each quarter end, management met as part of a labor review meeting to discuss timesheet charges and ensured staff were billing time to correct projects. Costs were tracked by person, project, and hours spent on M2 activities. Additionally, the accounting department tracked administrative costs annually by FY, which were reviewed by the Finance Director. Quarterly administrative expenditure and revenue reports were provided to the Taxpayer Oversight Committee for review and the information was reflected in annual reports, as required.

[15] Does not include project direct administrative expenses.

OCTA Implemented Several Improvements to Its Cybersecurity Operations, Though Additional Opportunities For Improvement Remain

In general, a cyber security framework should have periodic and continuous monitoring in place, as well as routine assessments of each area of control to ensure that the organization has implemented the necessary controls to safeguard against cybersecurity threats. Our high-level review of OCTA's cybersecurity policies and practices found that OCTA has established an information security framework with many of the necessary controls in place to protect the M2 program from cyber threats.

Using guidance from cyber security best practices, Exhibit 19 reflects seven key cyber security controls most commonly used across the industry.[16] We found that, generally, OCTA established many of the controls necessary to secure its operations; however, we identified two areas where cyber security controls could be strengthened: role-based access controls and external partner management and oversight.

EXHIBIT 19. SEVEN KEY AREAS OF CYBER SECURITY CONTROLS

Key Areas of Cyber Security Controls	OCTA Implementation	Description of Controls in Place
Conducting Regular Security Awareness Training for Staff	✓	OCTA has successfully implemented annual cybersecurity training for all staff, including training modules that can be tailored to individual staff needs.
Planning for Disaster Recovery and Continuity	✓	After the breach in 2016, the IS team updated practices and response time. IS staff state that future recovery would only take minutes rather than days due to comprehensive planning.
Utilizing Strong Authentication Practices	✓	OCTA has implemented an Access Control Security Policy that includes strong authorization practices such as conditional access and multi-factor authentication for remote logins.
Configuring and Monitoring Access to Information Systems	✗	OCTA does not have a formal system in place to monitor role-based access changes. Currently, project managers are responsible for requesting staff access changes.
Implementing Incident Response and Reporting Policy	✓	OCTA's Incident Response Policy provides employees and third parties with effective means to identify, respond, and resolve incidents.
Applying Remote and Wireless Network Access Restrictions	✓	OCTA's control policy specifies that remote access is only allowed through approved methods approved by the IS team.
Providing Oversight and Monitoring External Partner Training	✗	Contractors who access or manage OCTA systems and networks are not currently required to take OCTA administrative security training. This assessment found that because internal cyber security training is not mandatory, only 42 of OCTA's 345 contractors completed OCTA's internal training courses.

Source: Generated based on review of best practices and OCTA security controls.

[16] Cybersecurity best practices are drawn from US Department of Commerce National Institute of Standards and Technology, US Department of Transportation Cybersecurity Policy, California Office of Information Security, Information Systems Audit and Control Association, and American Institute of Certified Public Accountants.

OCTA Does Not Have a Formal Process in Place to Review or Remove Access Rights For Staff Role Changes

According to the National Institute of Standards and Technology, it is imperative that organizations ensure access to information systems is removed in a timely manner when an employee leaves an organization. These industry best practices recommend configuration of system access to the lowest privilege level needed to carry out legitimate business functions. The purpose of this principle is to reduce the risk of inappropriate use and disclosure of Personal Identifiable Information, reduce the risk of malicious actions occurring from security breaches, and better ensure the accuracy and integrity of data.

Currently, OCTA's Human Resources team handles all access changes during the onboarding and offboarding process. All passwords are changed immediately, and accounts are deleted after a brief review period. For terminations, all access is removed immediately. However, OCTA does not have a similar system in place to review internal role-based access changes. Per OCTA's Access Control Policy, a process should be in place to ensure that access to an OCTA resource should be revoked when it is no longer required. Further, this policy specifies that upon a change in employment status or role within OCTA, access privileges should be revoked or reassigned accordingly. While OCTA maintains a formal procedure for access changes when staff leave the company, internal role-based access changes are primarily left to the request of individual managers. This decentralized approach to role-based access changes is potentially problematic as the absence of formal guidance may lead to inconsistent application of user access. Further, some staff may continue to possess access to systems not necessary to perform their assigned duties.

OCTA has made positive changes to their access management, including the recent utilization of new software that enables them to set access permissions by group rather than by individual. This use of a CyberArk Privileged Access Management solution is in place and being used to manage administrative remote access to internal systems. Despite this, the lack of formal guidance for role-based access changes presents continuing risk to information security. To reduce the risk of information being accessed inappropriately, and to ensure that OCTA actively employs the principle of least privilege, OCTA should review its processes for granting and monitoring access during internal role changes. Once internal guidance is developed, OCTA should work with program managers and supervisors to ensure that they understand protocols and expectations for granting access to information systems. Finally, the IS team should continue to coordinate with Human Resources to develop a formalized notification system to determine when staff role-based access needs to be changed.

Most OCTA Contractors With OCTA Email Addresses Did Not Complete Internal OCTA Cyber Security Training

Industry best practices per National Institute of Standards and Technology guidelines recommend that contractors comply with the security roles and responsibilities established by the organization. Further, these best practices stipulate that organizations should monitor provider compliance with personal security requirements. This is key because the human error element of information security is a key control in developing appropriate cyber security safeguards.

OCTA offers four cyber security training modules to their staff, including an additional annual security refresher training. While OCTA makes this training available to contractors who have OCTA email addresses (and thus access to the OCTA network), current OCTA's security policies do not mandate that these contractors complete internal security training. We found that this resulted in most contractors opting out of OCTA-provided training—our review of April and September 2021 training logs indicated that of the 345 individuals under contract with OCTA only 18 completed the OCTA Security Awareness Training Module and 24 completed the OCTA Phishing Training Module.

OCTA's Third Party Security Policy requires that contractors with access to the OCTA network have security practices in place that are comparable or superior to OCTA security policies, which includes security training requirements. However, OCTA takes a decentralized approach to monitoring contractor training, allowing contractors to self-certify completion of external training and relying on individual project managers to monitor contractor's compliance with OCTA-provided security policy. This creates a potential gap in security controls and increases the risk that contractor security training is not being actively monitored for compliance with OCTA policy.

OCTA Continues to Improve Existing Cyber Security Policies and Practices

OCTA has made several improvements related to its existing Cyber Security control during the current assessment period, including:

- **Ongoing Changes to Existing Security Training and Processes.** OCTA's security policies specifies that regular security training conforming to federal and state regulations be provided to all OCTA employees. In response to the 2018 performance assessment, OCTA recently implemented annual general user training requirements which links completion to yearly staff merit raises. Additionally, OCTA's updated annual general user security awareness training links to their initial four training modules which can now be targeted to meet the specific needs of groups or individuals. The fifth module - General User Annual Refresher Training - opens each September and must be completed by the following June. Between July 1, 2018 and June 30, 2020, all staff successfully completed the General User Annual Refresher Training; however, as of October 2021, only 61 of 2,100 employees have completed the Annual Refresher Training for FY 2020-21. The IS team is confident that as per prior years, all staff will complete the training as required by the June 2022 deadline.

- **Successes in Disaster Recovery Process.** OCTA's Emergency Operations Plan requires yearly disaster recovery testing. It also adequately describes emergency organization, as well as the roles, responsibilities, authorities and actions to be taken during an emergency response and subsequent recovery. Industry best practices recommend that data centers are not co-located in the same physical location. OCTA's backup data infrastructure is located in a Las Vegas data center, while their disaster recovery services are stored at a separate physical location. With recent updates to hardware, firewalls and backups, OCTA IS team now anticipates that it will now be able to restore OCTA's data in the case of a breach or hack within minutes as opposed to days.

- **COVID-19 Protocols.** The COVID-19 pandemic presented new challenges for OCTA in terms of access control management. Per OCTA's access control policies, remote access to OCTA computing resources must be pre-approved by the IS Department. Currently, OCTA requires all remote workers to use a direct access or secure virtual private network on OCTA devices. All users have unique IDs, and are granted least privileges—access to only what is necessary for their job functions. Staff also have remote cloud access to Office 365, and both conditional access and multi-factor authentication are utilized for all remote login requests. At OCTA, once a user has been authenticated, their device receives a security token that is used for subsequent logins rather than using multi-factor authentication during each individual login. In the case of device theft, this security certificate is reset.

- **Ongoing Challenges and Solutions.** Phishing campaigns present an ongoing threat to cyber security at OCTA. The IS team utilizes artificial intelligence to monitor system users who are members of the upper management and executive staff, as their system permissions make them high risk targets for phishing campaigns. Both artificial intelligence and machine learning are used to continuously monitor for supply chain attacks—attackers usually use elevated credentials to gain backdoor system access. Per OCTA policy, no system user ever possesses global access or administrative rights. This separation of duties mitigates the access a potential cyber threat would stand to gain once inside the system.

These improvements to OCTA's cybersecurity framework are indicative of OCTA's proactive approach to managing its cyber security controls and practices.

Recommendations

To enhance its already strong program management practices, OCTA should consider:

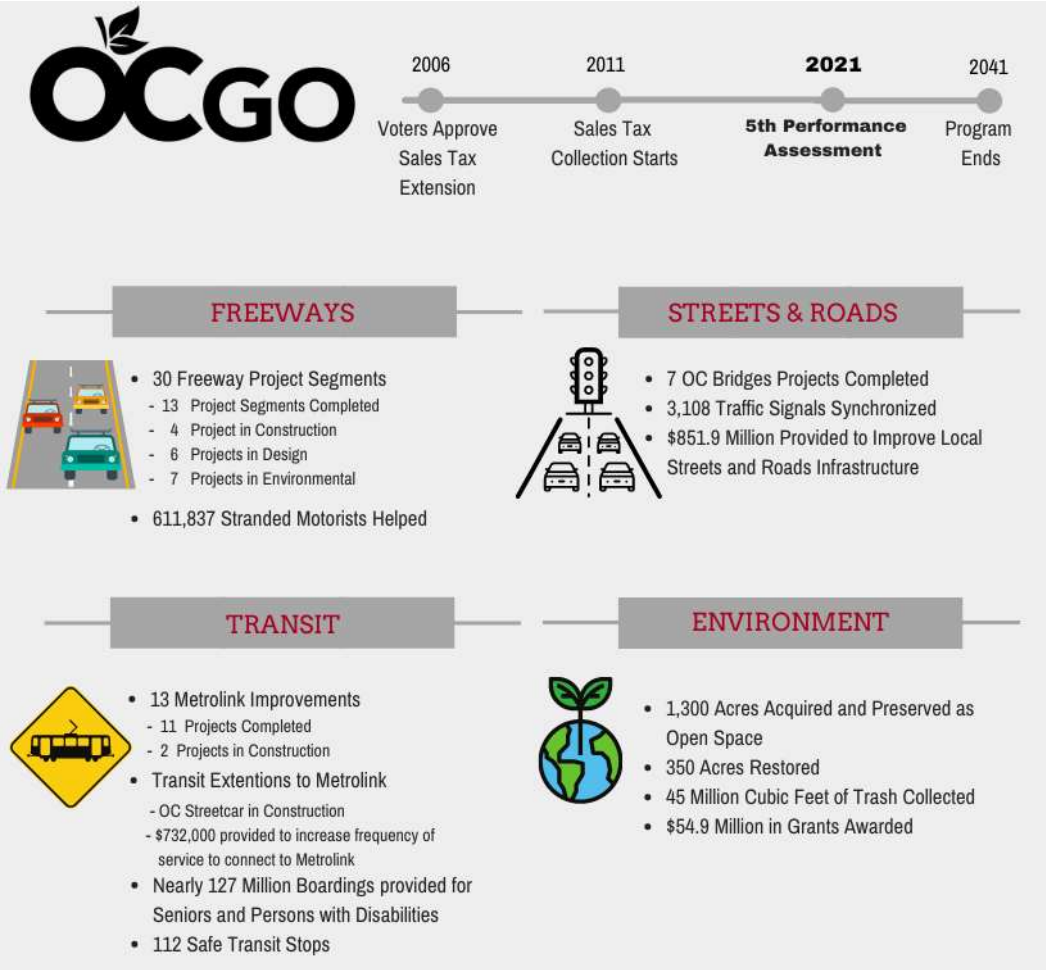
2. Developing a process for role-based access changes and ensure that program managers and supervisors understand access protocols and expectations. The IS team should continue to work with Human Resources to develop a better notification system for determining when staff access should be altered due to staff role changes.

3. Requiring that contractors with OCTA email addresses and network access to take and pass internal OCTA security training as a contract condition.

Chapter 3: A Third of the Way Through the M2 Life Cycle, Substantial Progress Has Been Made Across All Program Areas

When Orange County voters approved Measure M (referred to as OC Go) in November 2006, they agreed to continue the half-cent sales tax in Orange County for an additional 30 years to help transportation infrastructure and offset related environmental impacts in essentially four program areas: Freeways, Streets and Roads, Transit, and Environment. Similar to other transportation agencies, OCTA was able to take advantage of favorable conditions in the construction industry and financial markets during the Great Recession to jump start projects prior to the OC Go sales tax collection start in 2011 through its Early Action Program (EAP). As a result, with ten years passed since the start of the sales tax collection, OCTA has demonstrated significant progress across all program areas as shown in Exhibit 20 and discussed in the sections that follow.

EXHIBIT 20. M2 ACCOMPLISHMENTS THROUGH JUNE 30, 2021[17]



Source: Generated from OCTA OC Go Website and M2 Quarterly Report 4th Quarter FY 2020-21.

[17] The freeway stranded motorists helped figure represents total Freeway Service Patrol services, which assists stranded motorists and clears lanes from congestion causing debris.

Many Accomplishments Realized To-Date Early in M2 Timeframe

After the passage of the Ordinance in 2006, OCTA immediately embarked on a mission to deliver the programs and projects promised to voters. To-date, improvements completed included a total of 49.6 new freeway lane miles and five new interchanges along the seven freeway corridors. All seven BNSF railroad crossings and 11 of 13 projects related to improving Metrolink grade crossings and stations have been completed. In addition, mobility options increased for seniors and persons with disabilities with nearly 127 million boardings provided to-date. Local jurisdictions received nearly $851.9 million to improve local transportation infrastructure, directly contributing among other areas to pavement condition on local roads being the highest in the State. On the environmental side, 45 million gallons of trash has been collected and 1,300 acres preserved as open space in an effort to offset the impact of transportation projects. Refer to Exhibit 21.

EXHIBIT 21. ACCOMPLISHMENTS ACROSS ALL PROGRAM AREAS AS OF JUNE 30, 2021

Project Letter	Project Name	Planned Improvement per M2 Ordinance Transportation Investment Plan	Improvement Planned/Anticipated	Status as of June 30, 2021
Freeway Projects				
A	Santa Ana Freeway (I-5) Improvements between Costa Mesa Freeway (SR-55) and "Orange Crush" Area (SR-57)	Improve interchanges. Add capacity.	New high occupancy vehicle lane (HOVL), 3 miles in both directions	✓ 6 miles of HOVL open to traffic.
B	Santa Ana Freeway (I-5) Improvements from the Costa Mesa Freeway (SR-55) to El Toro "Y" Area	Add new lanes. Improve interchanges.	2 Segments: New general purpose lane (GPL), 4.5 miles in both directions for each segment; 18 miles.	✓ Both segments in design.
C	San Diego Freeway (I-5) Improvements South of the El Toro "Y"	Add new lanes.	6 Segments: • 3 segments, 5.7 miles of HOVL in both directions. • 3 segments, new GPL (4.8 in both directions and 1.7 southbound) and 1 mile of HOVL in both directions	6 Segments: ✓ 3 HOVL segments completed; 11.4 miles open to traffic ✓ 3 GPL/HOVL segments totaling 13.3 miles of new lanes under construction
D	Santa Ana Freeway/San Diego Freeway (I-5) Local Interchange Upgrades	Improve interchanges.	5 Interchanges	✓ 2 Interchanges open to traffic ✓ 2 Interchanges under construction ✓ 1 Interchange in environmental
E	Garden Grove Freeway (SR-22) Access Improvements	Improve interchanges.	3 Interchanges	✓ 3 Interchanges open to traffic
F	Costa Mesa Freeway (SR-55) Improvements	Add new lanes.	2 Segments: • 1 segment with new GPL and HOVL, 4 miles in both directions.	2 Segments: ✓ 1 GPL and HOVL segment in design

Project Letter	Project Name	Planned Improvement per M2 Ordinance Transportation Investment Plan	Improvement Planned/Anticipated	Status as of June 30, 2021
			• 1 segment with new GPL, 2.5 miles in both directions and operational improvements	✓ 1 GPL segment and operational improvements, environmental phase complete.
G	Orange Freeway (SR-57) Improvements	Add new lane.	5 Segments: • 3 NB GPL segments, totaling 7.7 miles • 1 segment, northbound (NB) GPL, 1 mile • 1 segment, NB truck climbing lane, approximately 2.5 mile	5 Segments: ✓ 3 NB GPL segments, 7.7 miles open to traffic ✓ 1 NB GPL segment in design ✓ 1 NB truck climbing lane segment, schedule TBD
H	Riverside Freeway (SR-91) Improvements from the Santa Ana Freeway (I-5) to the Orange Freeway (SR-57)	Add capacity.	New GPL, westbound (WB); 4.5 miles	✓ 4.5 GPL miles open to traffic
I	Riverside Freeway (SR-91) Improvements from Orange Freeway (SR-57) to the Costa Mesa Freeway (SR-55) Interchange Area	Improve interchanges. Add capacity.	4 Segments: • 1 Segment, new WB auxiliary lane 2 miles. • 3 Segments, new GPL, 3.1 miles WB and 2.7 miles EB	4 Segments: ✓ 1 segment, 2 miles of auxiliary lane open to traffic ✓ 3 segments of GPL in design
J	Riverside Freeway (SR-91) Improvements from Costa Mesa Freeway (SR-55) to the Orange/Riverside County Line	Add capacity by adding new lanes.	3 Segments: • 1 Segment, new GPL, 6 miles, both directions • 1 Segment, new EB GPL; 6 miles • 1 New GPL segment. Initial Phase Complete/Alternative Analysis Underway.	3 Segments: ✓ 1 GPL segment, 12 miles open to traffic ✓ 1 EB GPL segment, 6 miles open to traffic
K	San Diego Freeway (I-405) Improvements between the I-605 Freeway in Los Alamitos Area and Costa Mesa Freeway (SR-55)	Add new lanes. Update interchanges. Widen local overcrossings.	New GPL, both directions; 14miles.	✓ Under Construction (Design-Build)
L	San Diego Freeway (I-405) Improvements between Costa Mesa Freeway (SR-55) and Santa Ana Freeway (I-5)	Add new lanes.	New GPL, 8.5 miles, both directions	✓ Environmental complete
M	I-605 Freeway Access Improvements	Improve freeway access and arterial connections.	Modify northbound and southbound ramps, widen Katella Avenue, and enhance bicycle and pedestrian facilities.	✓ In Design.
N	Freeway Service Patrol	Continuing service through 2041.	611,837 assists to stranded motorists provided.	
Streets & Roads Projects				

Project Letter	Project Name	Planned Improvement per M2 Ordinance Transportation Investment Plan	Improvement Planned/Anticipated	Status as of June 30, 2021
O	Regional Capacity Program	✓ Complete the Orange County Master Plan for Arterial Highways (MPAH), add roughly 1,000 miles of new street lanes. ✓ Construct BNSF railroad over or underpasses in Northern Orange County.	✓ $339 million provided to approximately 164 projects. ✓ 7 BNSF railroad grade separations open to traffic.	
P	Regional Traffic Signal Synchronization Program	Synchronize over 2,000 Signals.	3,108 Signals Synchronized.	
Q	Local Fair Share Program	Provide flexible funding to cities to address local transportation needs (e.g., residential streets, safety near schools, etc.)	✓ $512.9 million provided to cities by formula. ✓ Pavement is in good condition; best in State.	
Transit Projects				
R	High Frequency Metrolink Service	✓ Increase rail service, upgrade stations, add parking capacity, improve safety, and add quiet zones. ✓ Improve grade crossings and construct over or underpasses at high volume arterial streets that cross Metrolink tracks.	11 of 13 Metrolink grade crossing, safety, and station projects completed.	
S	Transit Extension to Metrolink	Competitive programs for local jurisdictions to connect to Metrolink service (e.g., conventional bus, bus rapid transit, high-capacity rail transit, etc.)	✓ OC Streetcar project under construction. ✓ $732,000 awarded to increase frequency of service to connect to Metrolink.	
T	Metrolink Gateways	Provide local improvements necessary to connect Metrolink stations to the future high-speed rail system.	Anaheim Regional Transportation Intermodal Center (ARTIC) completed.	
U	Expand Mobility Choices for Seniors and Persons with Disabilities	3 programs to accomplish mobility goals for seniors and persons with disabilities.	$91.7 million provided to three programs to expand mobility choices for seniors and persons with disabilities.	

Project Letter	Project Name	Planned Improvement per M2 Ordinance Transportation Investment Plan	Improvement Planned/Anticipated	Status as of June 30, 2021
			✓ $26.5 million and 2.5 million boardings provided under the Senior Mobility Program. Due to COVID-19 pandemic, several jurisdictions modified or suspended service. ✓ $28.6 million provided to Senior Non-Emergency Medical Transportation Program to support 1.38 million boardings. ✓ $36 million provided to stabilize fares and provide fare discounts to seniors and persons with disabilities.	
V	Community Based Transit/Circulators	Competitive program for local jurisdictions to develop local bus transit services (e.g., community-based circulators, shuttles, trolley buses, etc.)	Awarded 35 projects and 10 planning studies to local jurisdictions totaling $52 million.	
W	Safe Transit Stops	Provide passenger amenities (e.g., shelters, lighting, timetable information, ticket vending machines, etc.) at 100 busiest transit stops across the County.	$3.1 million awarded to enhance 122 safe transit stop projects.	
Environmental Cleanup				
X	Clean Up Highway and Street Runoff that Pollutes Beaches	Implement street and highway related water quality improvement programs and projects to meet federal Clean Water Act standards for urban runoff.	✓ 45 million Gallons of Trash Collected ✓ 1,300 Acres Acquired and Preserved as Open Space ✓ 350 Acres restored. ✓ $54.9 million in Grants Awarded	

Source: Generated from M2 Quarterly Report 4th Quarter FY 2020-21.

Capital Projects Show Substantial Progress To-Date Although Some Budget and Schedule Challenges Exist

With a decade elapsed of the M2 30-year program, OCTA continued to make substantial progress on capital projects towards fulfilling the promises made to voters in 2006. Specifically, for the freeway program, improvements outlined along the seven freeway corridors evolved into currently 30 projects of which 13 are already open to traffic. Further, since inception, OCTA has competitively awarded approximately $455.6 million in funding through the Regional Capacity Program (Project O) and Regional Traffic Signal Synchronization Program (Project P). In addition, $512.9 million in Local Fair Share (Project Q) funds have been distributed to local jurisdictions. Transit capital projects have also shown progress with 11 of 13 projects related to connecting and transit services to Metrolink complete; however, due to ridership declines and the lockdowns associated with the global pandemic, Metrolink implemented temporary service reductions in March and November 2020. The largest transit capital project, the OC Streetcar, has faced

continued budget and schedule challenges and, as of June 30, 2021, expected to be completed by October 2023.

Freeway Capital Projects Completed Under Budget (Ordinance Projects A – M)

For the freeway program, the improvements on the 13 freeway corridors (Projects A – M) are built as 30 individual project segments—all with activity as of June 30, 2021 as shown in Exhibit 21. Specifically, 13 project segments are already open to traffic with another 13 projects in construction or in or nearing design. The remaining 4 projects are planned to be environmentally cleared by 2030. Only the "SR-91: SR-241 to Riverside County Line" project is delayed past 2035 due to coordination with the Riverside County Transportation Commission for the continuation of the project beyond the Orange County line.

Especially noteworthy, for the freeway program, OCTA delivered the projects as promised to voters without any modifications to the scope provided for in the M2 Ordinance. Although the M2 Ordinance and the Transportation Investment Plan contained only general direction on improvements to be made such as "adding new lanes or adding capacity", the Final Program Environmental Impact Report (PEIR) developed for OCTA's Long-Range Transportation Plan in July 2006, that was used as the underlying guiding document to identify improvement options, had specific recommendations on the types of capacity increasing projects.

Of the 13 project freeway segments already open to traffic, three were completed during this assessment period. One of the three projects was completed under budget and the remaining two were completed slightly over-budget, with overages of three percent and five percent. All three projects experienced schedule delays ranging from 1 month to 12 months, as shown in Exhibit 22. For the I-5: SR-55 to SR-57 project, there were delays during the Environmental and Design phases related to scoping decisions and subsequent changes. Construction was also delayed due to funding changes and the project had to be rebid after all bidders dropped out. These circumstances led to a 12-month delay in project completion.

EXHIBIT 22. BUDGET & SCHEDULE ADHERENCE FOR FREEWAY PROJECTS COMPLETED JULY 1, 2018 – JUNE 30, 2021

	($ Millions)			
Project	Baseline	Actual	Baseline	Actual
I-5: SR-55 to SR-57	$38.12	$39.37 ✗	Feb-20	Jan-21 ✗
I-5: Pico to Vista Hermosa	$113.01	$83.60 ✓	Jun-18	Jul-18 ✗
I-5: PHC to San Juan Creek Rd	$70.67	$74.27 ✗	Jun-18	Jul-18 ✗

Source: Generated from M2 Monthly Status Reports and PMO M2 Tracking.

Local Streets & Roads Capital Projects (Ordinance Projects O and P)

Since 2011, through 11 calls, the Board has awarded 164 projects through the Local Streets and Roads Program (Project O) totaling more than $339 million including $24 million in external funding. Additionally, as part of the Regional Traffic Synchronization Program (Project P), OCTA and local agencies have synchronized more than 3,108 intersections over more than 799 miles of streets (91 completed projects). Through 11 calls, 104 projects totaling more than $115.8 million have been awarded. Overall, OCTA has funded 123 projects totaling more than $140.8 million, including $25.5 million in leveraged external funding.

Transit Capital Projects (Ordinance Projects R – W)

Transit capital projects have also shown significant progress with majority of projects named in the M2 Ordinance already open to traffic.[18] Specifically, of the 13 projects related to increasing Metrolink rail service (Project R), 11 are complete. For instance, the Orange Transportation Center Metrolink Parking Structure was completed in February 2019. The project provided a 608-space, five-level, shared-use parking structure. In addition, in October 2019, several intracounty trains were extended to Los Angeles; however, in March 2020, all Metrolink services were impacted by the COVID-19 pandemic. Metrolink implemented temporary service reductions in March and November 2020 due to the decline in ridership. Weekday trains for the three lines serving Orange County were reduced from 54 to 41. Once ridership improves, service needs in Orange County will be reassessed and various trains will be reinstated.

The largest transit capital project, the OC Streetcar (Project S), continued to face schedule and budget challenges. As of June 30, 2021, the project is currently expected to cost $440 million when completed, an increase of over $131 million, or 42 percent from when costs were estimated at the time design was completed and is anticipated to be operational by October 2023. Although the project began construction in November 2018, the project is facing a 22-month delay due to a combination of unforeseen utility conflicts and conditions, contaminated materials, construction quality control, compliance, added oversight and approvals, and an extensive number of change requests.

To improve the 100 busiest transit stops (Project W), the Board has approved $3.1 million to improve 122 city-initiated improvement projects at the busiest OCTA transit stops, of which 43 improvements have been completed, 69 improvements are in progress, and 10 improvements have been cancelled by the awarded agency.

Solid Policies and Procedures Are in Place Over Construction Management

Similar to the prior review, we found that that OCTA continued to have a strong framework to monitor and report on capital projects and is following typical project management practices.[19] OCTA uses the same Program Management Procedures manual that was in place during 2018 to "manage and monitor projects and develop strategies for delivering the entire capital improvement program." As noted previously, the PMP contains typical elements such as defining roles and responsibilities of OCTA, partner agencies, and

[18] Refer to Appendix C for project names.
[19] Best Practices considered include Project Management Institute's Construction Extension to the Project Management Body of Knowledge Guide, Construction Management Association's Construction Management Standards of Practice, Federal Highway Administration guidance, Caltrans Local Assistance Manual, and the California Multi-Agency CIP Benchmarking Study.

consultant staff; controlling schedules and costs; reporting progress; evaluating risks; ensuring standards of quality; or managing consultants. Through discussions with staff, we found that OCTA continues to use this manual to guide its capital project management practices and processes described aligned with the PMP. We found OCTA existing policies, procedures, and practices include many leading practices, such as cost risk assessments, progress payment reviews, change order negotiations, use of primavera for scheduling, on-going project cost analysis, and lessons learned assessments. To further assess OCTA's practices, we compared OCTA's current practices to those implemented by other California Agencies and reported in the California Multi-Agency CIP Benchmarking Study Lead Practices.

EXHIBIT 23. BEST PRACTICES COMPARISON

As shown in Exhibit 23, OCTA's current capital project management practices align with leading industry practices.

Procurement Practices and Activities Generally Comply With OCTA Policies

With 110 M2 related contracts totaling more than $640 million awarded during the three-year assessment period, strong contract administration is critical. We found that OCTA established a robust procurement framework with key control points at several stages. As shown in Exhibit 24, OCTA has appropriately segregated procurement related duties to help ensure a strong control environment over the solicitation process.

EXHIBIT 24. PROCUREMENT SEGREGATION OF DUTIES MATRIX

Procurement Activity	Responsible Party/Staff						
	Budget Analysist	Contract Administrator	Section Manager	Project /Program Manager	Department Manager	Board	Proposal Evaluation Committee
Review Requisition	✓						
Assign Requisition to Contract Administrator			✓		✓		
Develop Procurement Plan and Schedule		✓		✓			
Review Procurement Plan and Schedule			✓	✓	✓		
Develop Scope of Work & Independent Cost Estimate				✓			
Approve RFP					✓	✓ A	
Review Proposals							✓
Conduct Negotiations between Vendor & OCTA		✓		✓			
Prepare Summary Memo of Negotiations		✓					
Approve Contract[B]					✓	✓	
Issue NTP		✓					

Source: Interviews with OCTA staff.

Notes: [A]OCTA Board approves solicitation where expected contract value is over $1 million.

[B] Approval varies by contract value.

To determine whether OCTA complied with its policies, we reviewed three M2 contracts and found that each procurement complied with the critical policies and procedures requirement reviewed as shown in Exhibit 25.

EXHIBIT 25. RESULTS OF PROCUREMENT FILE TESTING FOR COMPLIANCE WITH PROCUREMENT POLICIES

	Contract Number		
Requirement	C71904	C81418	C61445
Scope of Work Defined	✓	✓	✓
Independent Cost Estimates Performed	✓	✓	✓
Cost Price Analysis Conducted	✓	✓	✓
Sole Source Justified	N/A	N/A	N/A
Conflict of Interest Forms Signed by Selection Panel	N/A	✓	✓
Evidence of Negotiated Price, where applicable	N/A	✓	✓
Evidence of Sealed Bid, where applicable	✓	N/A	N/A
Properly Approved	✓	✓	✓

Source: Contract/Procurement files, CAMM Procurement Policy Manual.

Key: ✓= Documentation retained demonstrating procedure was followed.

Chapter 4: OCTA's Processes Ensure Compliance with M2 Ordinance

Gaining public trust and confidence is critical for any successful government entity, in particular for those with sales tax measures placed on ballots before local residents funding transportation or other types of public services. OCTA employed a philosophy of strict adherence to promises made to voters and compliance with ballot provisions that permeated through all levels of the organization from executive management to newly hired employees. Staff developed strong approaches and practices to track compliance and ensure rigorous observance to the promises made.

Robust System Used to Track Compliance with Ordinance

The M2 Ordinance and Transportation Investment Plan detailed provisions for funding, maintenance of effort (MOE), and a Taxpayer Oversight Committee among several other requirements. To track compliance with the Ordinance provisions, the M2 PMO developed a comprehensive and detailed matrix involving many owners and experts throughout the organization as coordinated by the PMO.

Matrix Used Was Comprehensive and Effectively Tracked Compliance

According to the PMO, the tracking matrix was designed to include all M2 Ordinance areas especially where specific language "shall" and "must" were present. The requirements were presented in a question format with responses to answer compliance with the question. With 190 Ordinance requirements tracked, the PMO sorted the matrix into eight major categories including administration and general, specific projects by mode (freeway, local streets and roads, transit, and environmental), and safeguards and audits. We found the matrix was well organized into sub-categories with many matrix requirements needing action annually and other provisions only requiring actions at start-up or not required until the M2 Program is nearing completion. Based on our review of the OCTA tracking sheet as compared with key elements of the M2 Ordinance, we found the matrix was complete and reliable. We also found that OCTA annually updated the matrix on a calendar year basis, assigned task owners for each area, and typically included a link to a specific document or file providing access to the necessary underlying support from its Document Center.

OCTA continues efforts to improve and make more efficient processes. OCTA uses a SharePoint "Document Center" to house all final M2 material, staff reports, and accounting documents and recently added additional historical data storage to preserve archived project material. The Document Center was successfully transitioned from SharePoint 2013 to SharePoint 2016 and a global search function was added to enhance user experience with finding documents.

EXHIBIT 26. M2 ORDINANCE MAJOR REQUIREMENT CATEGORIES

Requirement Categories	Number of Requirements
Administrative and General	24
Allocation of Net Revenues	9
All Freeway Projects	17
Specific Freeway Projects	43
Eligible Jurisdictions	20
Specific Streets and Roads Projects	17
All Transit Projects	3
Specific Transit Projects	28
Project X	15
Safeguards and Audits	14
Total	**190**

Source: Generated from 2020 Ordinance Compliance Matrix.

We also found that OCTA's process to annually update the matrix at the end of each calendar year beginning in October is a collaborative effort between multiple OCTA divisions. As shown in Exhibit 27, there are nine OCTA divisions responsible for tracking compliance with the M2 Ordinance and updating the matrix with the Planning Division responsible for tracking compliance for more than half of the requirements.

EXHIBIT 27. OCTA DIVISIONS RESPONSIBLE FOR TRACKING COMPLIANCE WITH M2 ORDINANCE

Departments Tracking Ordinance Compliance	Number of Requirements Assigned
Finance & Administration	22
Planning	94
External Affairs	12
PMO	5
Government Relations	1
Capital Programs-Highway	48
Capital Programs-Rail	4
Capital Programs-Transit	1
Operations	3
Total	**190**

Source: Generated from 2020 Ordinance Compliance Matrix.

Each division has an assigned owner in charge of updating the matrix with the compliance status and providing supporting documentation that is verified by the PMO.

As of the period ending December 31, 2020, OCTA indicated that the necessary activities were taken to comply with 150 of the Ordinance's 190 requirements, as shown in Exhibit 28. The remaining 40 requirements are being monitored for compliance, but are not yet completed and/or required.

EXHIBIT 28. OCTA'S COMPLIANCE STATUS WITH ORDINANCE REQUIREMENTS AS OF DECEMBER 31, 2020

Compliance Status	Status Description	Count
Compliant	"Done"—Actions taken to establish M2 Ordinance maintenance or monitoring components, such as the establishment of a Taxpayer Oversight Committee, or the development of a transportation special revenue fund.	29
	"Done to Date"—Actions that must be taken quarterly, annually, or during a set yearly cycle, such as ensuring that MOE levels are adjusted every three years.	116
	"Completed"—Specific required freeway or interchange projects that were completed, such as interchange improvements along the Garden Grove Freeway.	5
Compliance Not Yet Required	Action Plan in Place—Activities associated with reoccurring items, such as ensuring that M2 revenues utilized for salaries and benefits of Authority administrative staff remain within a one percent per year limit.	3
	Not yet Required— These refer to Ordinance Requirements such as Item 83, which specifies that new lanes be added to the San Diego Freeway between SR-55 and the I-5. Due to significant freeway construction projects currently underway, this segment is planned later in the program to avoid unnecessary delays for the public. As such, the M2 Ordinance requirements are not yet required.	33
	Modified—Specifically, this refers to Items 48.01 and 48.02, which originally included an interchange area between 4th Street and Newport Blvd on I-5. This plan needed to be altered in order to adhere to M2 requirements regarding collaboration and consensus with local agencies.	2
	N/A—No actions needed as no occurrence of the requirement's trigger, such as jurisdictions misusing M2 revenues.	1
	Awaiting Funding— Item 124 evaluates whether funding was included for improving grade crossings and constructing over underpasses at high volume Metrolink stations. Currently, there are five grade crossings awaiting funding to proceed further.	1
	Total	**190**

Source: Generated from 2020 Ordinance Compliance Matrix.

Depth and Comprehensiveness of Matrix

As part of our assessment, we selected ten of the 190 M2 Ordinance requirements to verify the accuracy and completeness of OCTA's M2 Ordinance tracking process. We located each of the ten requirements on

the M2 Ordinance Tracking Matrix, ensured the corresponding narrative updates were supported with sufficient documentation, and verified OCTA complied with each requirement. Our review concluded that the narrative updates in the Tracking Matrix for all ten Ordinance requirements reviewed accurately conveyed the compliance status and were supported with adequate documentation—nine updates included supporting information hyperlinked to the M2 Document Center and support for the last update was provided by OCTA.

Tthe 2018 M2 performance assessment noted that the tracking matrix was generally well organized and comprehensive, but many fields lacked supporting details explaining how compliance was justified. A recommendation for improvement was offered to utilize the new Document Center to hyperlink supporting documentation in the Tracking Matrix to validate compliance efforts and activities. The recommendation was implemented.

Challenges Presented by the COVID-19 Pandemic

While our review verified that OCTA had strong processes in place to ensure compliance with all M2 Ordinance requirements, the COVID-19 pandemic presented several challenges in adhering to some components. For instance, the state-wide stay at home order led to a decline in travel, especially for seniors, who were most vulnerable. This reduced senior ridership and transportation needs leading several senior centers to close and at least one senior mobility transportation provider to cease operations altogether. To address these challenges while ensuring compliance with spirit of the M2 Ordinance, the Board approved:

- A one-year suspension of competitive procurement requirements due to a transportation provider ceasing operations to allow cities to quickly secure a replacement provider for seniors to continue to have mobility options.

- Temporary exceptions to Senior Mobility Program guidelines to provide meal delivery in lieu of transporting seniors to nutrition programs until the Governor lifts the State of Emergency.

- Allowed program funds to be held temporarily in reserve for cities with suspended Senior Mobility Program services until the Governor lifts the State of Emergency or the city resumes services, whichever happens first.

Additionally, the Board approved two amendments to the M2 Ordinance related to MOE requirements. Specifically, these amendments stipulated local jurisdictions would meet all submittal requirements, but could report actual MOE that may be below the established requisite MOE amounts for FY 2019-20. For FYs 2020-21 and 2021-22, local jurisdictions would only be required to meet the MOE in the same proportional share of streets and roads discretionary expenditures to general fund revenues.[20]

[20] Proportion is based on the FY 2020-21 proportion of MOE benchmarked to the general fund revenues as reported in each jurisdiction's Comprehensive Annual Financial Reports for FY 2018-19.

Local Eligibility Requirements Were Rigorous and Thoroughly Reviewed

The M2 Ordinance allocates revenues to local jurisdictions for environmental cleanup, transit, and streets and roads projects. These revenues are allocated through grant programs, including:

- Environmental Cleanup
- Transit Extensions to Metrolink
- Metrolink Gateways
- Community Based Transit/Circulators
- Safe Transit Stops
- Regional Capacity Program
- Regional Traffic Signal Synchronization Program

Revenues are also allocated via the Local Fair Share Program, which is a formula-based allocation provided to eligible jurisdictions for use on allowable transportation planning and implementation activities.

To receive M2 net revenues through either formula or competitive grant programs, local jurisdictions must annually satisfy eligibility requirements.

Requirements Were Rigorous

According to the M2 Ordinance, the 35 local city and county jurisdictions must satisfy requirements within 13 eligibility categories before receiving M2 funds.

To meet these requirements, local jurisdictions are required to report and provide supporting documentation to demonstrate compliance with nearly 100 pages of M2 Eligibility Guidelines, which are updated each FY. Some reporting methods leveraged tools routinely used by local jurisdictions in their public planning processes, while others required specialized OCTA-developed tools. Local jurisdictions used a series of templates, forms, and report formats to submit required plans, certifications, and checklists to OCTA. Documents are submitted on annual, biennial, or other timeframe as dictated by OCTA policies and feasibility.

Not all 13 eligibility components require verification each year. The standard due date for each submission is June 30, except for the expenditure report requirement that is due December 31 and project final reports

that must be submitted within six months of project completion. Exhibit 29 reflects the 13 eligibility requirement submission frequencies along with the due dates for FY 2019-20 submittals.

EXHIBIT 29. M2 ELIGIBILITY REQUIREMENTS AND SUBMITTAL SCHEDULE SUMMARY, FY 2019-20

Compliance Category	Frequency	Submittals Due for FY 2019-2020
Capital Improvement Program	Annual	June 28, 2019
Circulation Element/Master Plan of Arterial Highways Consistency	Biennial	June 28, 2019
Congestion Management Program	Biennial	June 28, 2019
Expenditure Report	Annual	December 31, 2019
Maintenance of Effort	Annual	June 28, 2019
Local Signal Synchronization Plan	Every Three Years	--
Mitigation Fee Program	Biennial	June 28, 2019
No Supplanting of Developer Fees	Annual	June 28, 2019
Pavement Management Plan	Biennial	June 28, 2019
Timely Submittal of Project Final Reports	Within Six Months of Project Completion	Within Six Months of Project Completion
Timely Use of Net Revenues	Annual	June 28, 2019
Traffic Forum Participation	Annual	June 28, 2019
Transit and Non-Motorized Transportation Land-Use Planning Strategies	Annual	June 28, 2019

Eligibility Reviews Were Extensive and Diligent; Two Cities Deemed Ineligible

Overall, we found OCTA conducted extensive formal eligibility determinations of local jurisdictions with technical due diligence protocols performed on an annual basis that questioned, discussed, collaborated, and documented reasonableness and adherence to the M2 Ordinance's goals.

Using the M2 Eligibility Guidelines and the Comprehensive Transportation Funding Program Guidelines that specify the verification methods to be utilized, OCTA staff conducts extensive reviews of data submitted by the 35 local city and county jurisdictions to verify eligibility with all M2 eligibility requirements. Additionally, the Taxpayer Oversight Committee (TOC), as required by the M2 Ordinance, reviews five eligibility requirements: Congestion Management Program, Mitigation Fee Programs, Local Signal Synchronization Plans, Pavement Management Plans, and Expenditure Reports. Following the annual eligibility cycle, the TOC directs OCTA's internal auditor to carry out audits to confirm that funds had been spent in accordance with the M2 Ordinance and that each agency had sufficient expenditures to meet the MOE requirement.

For eligibility reviews conducted July 1, 2018 through June 30, 2021, all local jurisdictions were deemed eligible to receive M2 revenues except for two cities—in May 2019, OCTA found that the cities of Santa Ana and Stanton did not meet the MOE requirement. As a result, the Board found both cities ineligible to

receive M2 revenues and directed OCTA staff to suspend payments until the cities could demonstrate compliance with M2 eligibility requirements. In April 2020, the Board reinstated Santa Ana and Stanton's M2 eligibility status as OCTA's Internal Audit determined that the cities complied with the MOE requirement.

To assess the eligibility review processes undertaken by OCTA for FY 2019-20, we selected two of the 35 local city and county jurisdictions reviewed—the City of Anaheim and Orange County. As reflected in Exhibit 30, our review of underlying documentation found that each required eligibility compliance category was reviewed, eligibility guidelines were followed, and focused questions were asked and resolved by the local jurisdictions.

EXHIBIT 30. ELIGIBILITY SUBMITTALS REVIEWED FOR CITY OF ANAHEIM AND ORANGE COUNTY, FY 2019-20

Compliance Category	Anaheim	Orange County
Capital Improvement Program	✓	✓
Circulation Element/Master Plan of Arterial Highways Consistency	✓	✓
Congestion Management Program	✓	✓
Expenditure Report	✓	✓
Maintenance of Effort	✓	N/A
Mitigation Fee Program	✓	✓
No Supplanting of Developer Fees	✓	✓
Pavement Management Plan	✓	✓
Timely Submittal of Project Final Reports	✓	✓
Timely Use of Net Revenues	✓	✓
Traffic Forum Participation	✓	✓
Transit and Non-Motorized Transportation Land-Use Planning Strategies	✓	✓

Specifically, we found that the reviews conducted were well-documented and OCTA staff developed verification checklists to streamline the review processes and ensure consistency of review. Additionally, annual expenditure reports were studied to identify patterns, ensure expenditures reported agreed with audited financial statements, and determine whether expenditure categories aligned with OCTA disbursement reports.

Amendments to Eligibility Requirements Address Challenges Associated With COVID-19 Pandemic

In June 2020, the OCTA Board amended the M2 Ordinance eligibility requirements related to the MOE compliance category. Specifically, MOE spending benchmarks are established and updated every three years specifying the annual amount local jurisdictions must spend on local streets and roads using discretionary revenues, such as General Fund Revenues. The intent of the requirement was to ensure that M2 revenues supplement, but do not replace the amounts local jurisdictions were previously spending on streets and roads activities. Due to COVID-19, OCTA conducted an informal poll to understand if local jurisdictions expected revenues to decline. OCTA found that local jurisdictions expected, on average, a

seven percent reduction in revenues for FYs 2019-20 and 2020-21, likely impacting their ability to meet MOE benchmark requirements. In response, the Board approved an amendment to the M2 Ordinance No. 3, Section 6, MOE Section to:

- Allow local agencies to report actual MOE spending for FY 2019-20 that may be below the established benchmark.
- Allow local jurisdictions meet an MOE target in FY 2020-21 that is based on the percent of the MOE benchmark value to General Fund Revenues.

The amendment permits the changes only for FYs 2019-20 and 2020-21. On May 24, 2021, the OCTA Board approved the extension of the FY 2020-21 revised MOE requirement through FY 2021-22. According to OCTA, it is expected that in future years the MOE requirement will be based solely on local jurisdictions meeting the traditional MOE benchmark.

Additionally, the Board made additional accommodations related to local entities ability to meet the Master Plan of Arterial Highways (MPAH) eligibility requirement due to the COVID-19 pandemic. Specifically, some cities closed arterials that are included in the MPAH for purposes of providing outdoor dining; however, closing streets that are in the MPAH renders the cities ineligible to receive M2 funding. For example, in December 2020, OCTA issued a letter agreement with one city related to street closures, which allowed the city to continue to be eligible for M2 funding with the understanding that traffic operations must be restored at the end of the public health emergency. In November 2021, the city requested the Board remove a street from the MPAH to allow for recurring seasonal closures. Although local jurisdictions self-certify confirming that the circulation element of their General Plan is in conformance with the MPAH through a resolution adopted by their governing body, according to OCTA, it continues to monitor city street closures to ensure compliance with the M2 eligibility requirement of MPAH consistency.

Grant Award Amounts Declined During Assessment Period, But Practices Remained Solid

Once deemed eligible, local jurisdictions could apply to receive M2 funds through OCTA's Comprehensive Transportation Funding Programs (CTFP), which is a collection of grant programs offered to local agencies for streets and roads, transit, and environmental activities through Projects O, P, S, T, V, W, and X.

Exhibit 31 lists the grant amounts that were awarded between July 1, 2018 through June 30, 2021.

EXHIBIT 31. GRANT FUNDING AWARDED JULY 1, 2018 THROUGH JUNE 30, 2021

M2 Project	Description	Amounts Awarded 7/1/15 through 6/30/18	Amounts Awarded 7/1/18 through 6/30/21	Disbursement Method
O	Regional Capacity Program (RCP)	$102,243,642	$44,403,521	Advance 75%/ Reimburse 25%
P	Reginal Traffic Signal Synchronization	$23,837,626	$28,221,429	Advance 75%/ Reimburse 25%

M2 Project	Description	Amounts Awarded 7/1/15 through 6/30/18	Amounts Awarded 7/1/18 through 6/30/21	Disbursement Method
S	Transit Connections to Metrolink	$0	$0	Reimbursement
T	Transit Metrolink Stations/High-Speed Rail	$0	$0	Reimbursement
V	Transit Circulators (Community-Based)	$33,838,803	$10,107,596	Reimbursement
W	Safe Transit Stops	$0	$1,902,300	Reimbursement
X	Environmental Cleanup Tier 1	$8,766,095	$7,305,597	Advance 75%/ Reimburse 25%
X	Environmental Cleanup Tier 2	$0	$0	Advance 75%/ Reimburse 25%
	Total Awarded	**$168,686,166**	**$91,940,443**	

Source: M2 Ordinance and OCTA M2 Allocation spreadsheet.

During the current assessment period, there was a significant decline in grant amounts awarded compared to the previous assessment periods, particularly related to the Regional Capacity Program (RCP) (Project O) and Transit Circulators Program (Project V). According to OCTA, overall, the M2 Program is further along and, as a result, many of the cities' roads and transit projects were already funded or completed. For example, only $9 million was made available for the Transit Circulators Program 2020 call for projects based on feedback from local agencies regarding interest in applying these projects.

OCTA also noted other factors that also affected the number and quality of the grant applications submitted. For instance, related to RCP, during FY 2018-2019, OCTA received seven applications requesting a total of about $8 million in RCP funding. Based upon OCTA's eligibility reviews, only one application was recommended to receive $835,000 in funding; others were denied funding because the city was determined to be ineligible to receive M2 funding, applications were incomplete, or the proposed project did not meet funding definition. Additionally, OCTA noted that the volume of these RCP applications submitted for consideration was significantly lower than what has traditionally been submitted due to 1) Senate Bill 1 diverting local agencies' local match resources away from the RCP to secure new state resources and 2) local agencies are actively involved in current RCP project development efforts rather than focusing on developing new projects. However, OCTA believes the low volume is an anomaly rather than a structural shift in project delivery efforts.

Moreover, OCTA indicated that the low application volume was also likely due to unforeseen COVID-19 impacts, including a lack of local matching funds due to the pandemic and uncertainty as when/how projects could be conducted during the pandemic as well as a larger shifting in transportation policy away from capacity enhancing projects.

Based on our review of five grants awarded between June 1, 2018 and June 30, 2021 totaling $13.4 million, OCTA followed solid practices to ensure that M2 funds were awarded for purposes that would help achieve the M2 goals. For example, OCTA had comprehensive formal guidelines and procedures for local agencies to use to apply for funding and used robust selection practices that included detailed scoring sheets and technical reviews where applicable. Additionally, OCTA monitored its grants through a variety of methods such as semi-annual reviews, annual expenditures reviews, and other periodic audits.

Chapter 5: Sound Fiscal Practices Has Allowed OCTA to Mitigate Impacts of COVID-19 Pandemic; However, Rising Costs Remain a Risk

To deliver the freeway and transit projects outlined in the M2 Ordinance and Transportation Investment Plan by 2041, OCTA must effectively manage M2 funds, leverage those local funds with additional state and federal dollars, and carefully program financial resources over the life of the M2 Program. Over the last three years, OCTA continued to utilize sound fiscal practices, as well as adopt new practices meant to ensure financial security in the face of an ever-changing economic environment and shifting transportation funding priorities. Many of these practices contributed to OCTA's ability to weather the COVID-19 pandemic that led to nationwide shelter-in-place mandates, increases in unemployment, increases in supply chain costs, and inflation, in addition to increasing construction costs.

While sales tax collections were initially forecasted to bring in $24.3 billion over the life of M2, OCTA's FY 2020-21 estimates forecasted $11.6 billion in sales tax collections, a reduction of 52 percent, driven largely by the Great Recession and most recently, the COVID-19 pandemic. In fact, the FY 2020-21 forecast of $11.6 billion reflected a $1.8 billion drop in sales tax revenues from the prior year's forecast as a direct result of the pandemic. Fortunately, OCTA's most recent estimates, presented to the Board in October 2021, forecast an improved outlook with M2 generating $13.2 billion in sales tax revenues by 2041. Moreover, the impact to OCTA's M2 sales tax revenues during the pandemic was relatively minimal with FY 2020-21 representing the highest amount of M2 sales tax receipts in any FY since collections began, totaling $345 million.

Despite initially dire projections, OCTA has continued to ensure it has the revenues necessary to fund its obligations throughout the pandemic by reserving projected balances through the Freeway Program Economic Uncertainty line item since FY 2016-17. Though the creation of the Freeway Program Economic Uncertainty line item, OCTA staff responsible for developing the M2 cashflow projections factor in project expense timelines and planned debt issuances, whereby OCTA decreases the line item if more debt is issued, and increases the line item if less is issued. This practice has allowed OCTA to continue its use of "pay as you go" financing while reducing the need for bonds, with the number of future bond issuances being reduced from seven in OCTA's FY 2018-19 cashflow projections to one planned issuance in the FY 2019-20 projections.

Diligence by OCTA's Programming Department has allowed OCTA to continue leveraging external funds over the course of the last three years. The latest FY 2021-22 M2 cashflow reflects that OCTA anticipates over $3.6 billion in state, federal, and local funds over the course of Measure M2. OCTA has leveraged roughly half of every M2 dollars; that is, for every dollar in M2 funding, OCTA secured $0.45 from state, federal, and local sources. Of the $3.6 billion in external funds expected over the life of the program, OCTA has received half to-date, and has programmed all remaining funds for the duration of M2. Additionally, OCTA's investment practices further secured the ability to fund its M2 obligations with the use of four external investment firms managing OCTA's short-term investment portfolio. Over the three-year period of

review, the investment firms nearly always secured rates of return greater than or equal to OCTA's Board-approved benchmarks throughout FYs 2018-19 to 2020-21.

OCTA's Use of External Forecasting Service Continues to be a Sound Practice, Providing Reasonable Assurance That OCTA Will Meet Its Measure M2 Commitments

Since the inception of the initial Measure M in 1991, OCTA relied on revenue forecasts produced by external third parties. For more than a decade, OCTA used forecasts produced by three local universities—Chapman University, California State University Fullerton, and University of California, Los Angeles (UCLA). All three universities were regionally and nationally-known for their economic forecasts, which were used by a variety of private and public entities. OCTA took the three forecasts and combined them into a single blended growth rate, providing an average of future economic growth. Revenue forecasts are presented to the OCTA Board of Directors for approval.

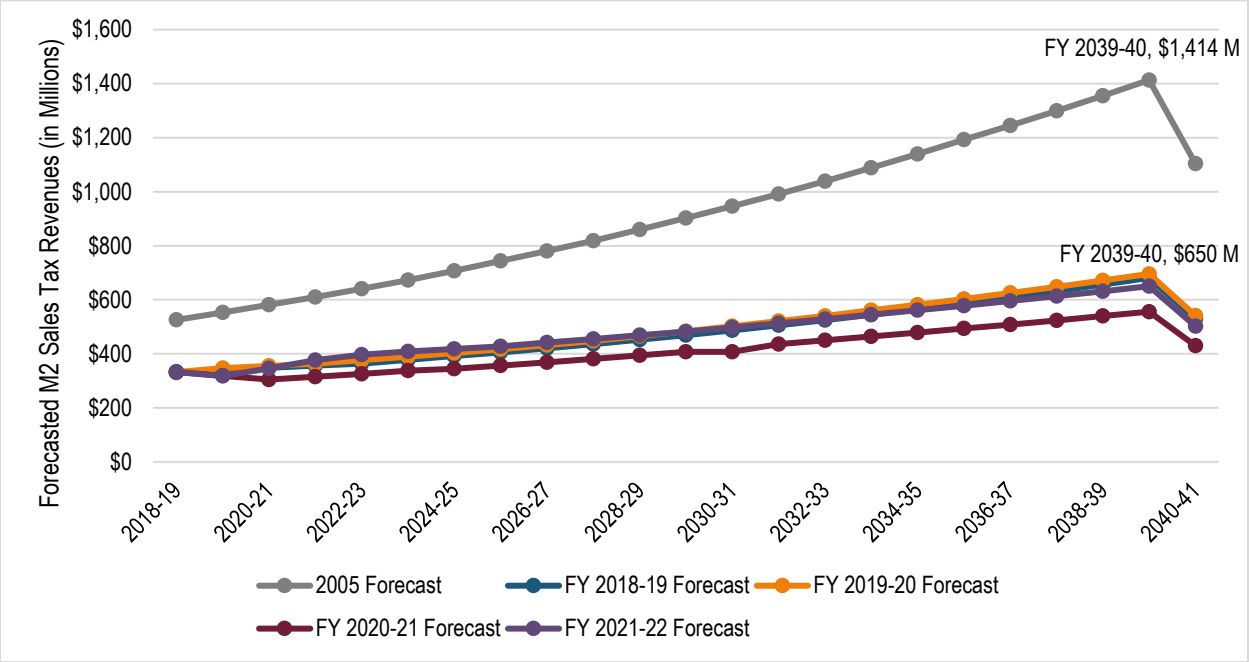
To address concerns over the accuracy of forecasts, OCTA staff re-evaluated their forecast methodology in 2016. As part of the process, OCTA compared the forecasts produced by a variety of universities and nationally-known firms to actual growth rates and sales tax collections. In March 2016, staff recommended the Board adopt a forecast produced by MuniServices, LLC which regularly produced shorter-term five-year forecasts as opposed to forecasting revenues over a longer term such as the remaining life of M2.

OCTA's use of MuniServices forecasts in the short-term, and blended forecasts from the three universities in the long-term, continues to be a reasonable practice that provides assurance that OCTA will meet its M2 commitments. Moreover, OCTA's use of the forecasts to inform other aspects of the agency's financial operations (e.g., debt issuance, contingency reserves, etc.) suggest that OCTA continues to be a good steward of M2 revenues.

FY 2020-21 Projections Forecasted $1.8 Billion Reduction in Sales Taxes Due to COVID-19, Though Most Recent Estimates Show Revenues Back to Near Pre-Pandemic Levels

In 2005, the initial forecast for M2 projected that the measure would generate $24.3 billion between FYs 2010-11 and 2040-41. Subsequent forecast updates lowered the estimated total collections—by October 2019, the forecast total had fallen to $13.4 billion. Roughly five months later, the World Health Organization declared COVID-19 a pandemic, and soon after, shelter-in-place orders were implemented throughout California as cases grew. Within Orange County, a reduction of travel into the region coupled with business closures and mass layoffs in the leisure and hospitality sector led to a bleak outlook for Orange County's economy, and by extension, M2 sales tax collections. As a direct result, OCTA's FY 2020-21 forecast estimated that sales tax revenues would drop by approximately $1.8 billion and projected M2 would generate a total of $11.6 billion. However, OCTA's most recent forecast suggests many of these concerns may not be actualized to the extent previously predicted, with the FY 2021-22 forecast estimating that Measure M2 should generate $13.2 billion by 2041. Moreover, OCTA reported that FY 2020-21 represented the highest amount of M2 sales tax receipts in any FY since sales tax collections began for the M2 program, totaling $345 million. The results of the FYs 2018-19 through 2021-22 forecasts are reflected in Exhibit 32.

EXHIBIT 32. OCTA M2 SALES TAX FORECASTS, FY 2018-19 THROUGH FY 2021-22[21]



Source: OCTA forecast data.

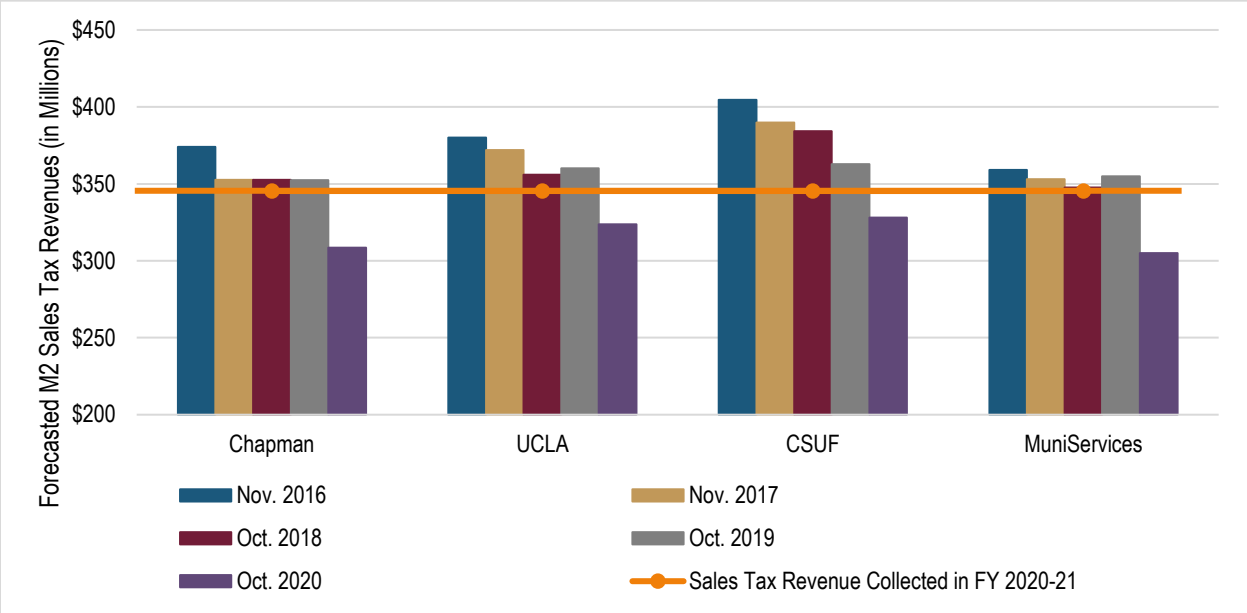
OCTA's Decision to Use MuniServices for Short-Term Sales Tax Forecasting is Reasonable

In 2015, OCTA's Finance and Administration Committee directed staff to review the forecasting performance of the three universities and look at other potential forecast providers to improve the accuracy of revenue estimates. In 2016, OCTA staff recommended using a new provider, MuniServices, to forecast short-term sales tax revenue projections—specifically the first five years in the cash flow projections—and using the average of the three universities forecasts for the remaining years.

To determine if the new approach improved forecast accuracy, we compared FY 2020-21 sales tax projections generated by MuniServices and the universities against the $345,345,181 actually collected that year. As shown in Exhibit 33, the yearly projections of the amount of sales tax revenue that would be collected in FY 2020-21 generally became more accurate as FY 2020-21 drew closer, except for the outlier year due to the COVID-19 pandemic. The overall trend among the three universities and MuniServices suggests that MuniServices forecasts generally reflect more pessimistic, though more accurate, projected revenues for the short-term. As such, the current approach of using MuniServices for short-term projections appears to be a sound process.

[21] The decrease in sales tax revenues observed for FY 2040-41 represents forecasted sales tax receipts for three quarters.

EXHIBIT 33. ANNUAL SALES TAX FORECASTS FOR FY 2020-21 COMPARED AGAINST SALES TAX REVENUE COLLECTED IN FY 2020-21

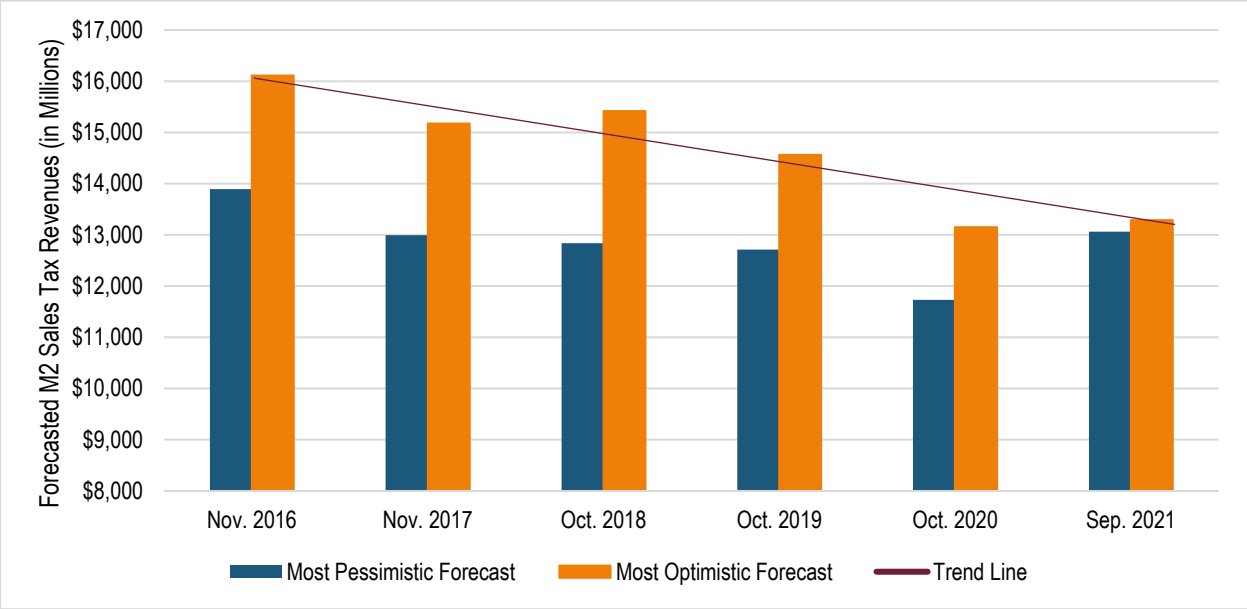


Source: OCTA forecast data.

OCTA's Practice of Using Three Universities to Project Long-Term Sales Tax Revenues Appears Reasonable, Though OCTA Should Remain Cautious with Long-Term Forecasts

As previously mentioned, OCTA uses three universities to forecast longer-term sales tax revenue in its cash flow projections—starting with year six through the end of M2. Generally, on a year-by-year basis, forecasts from the three universities had an average range of roughly $26.6 million between the most optimistic and pessimistic forecasts for any given forecasted year, as of the September 2021 forecast. Added up, these differences equate to a $223.6 million difference between the most pessimistic and optimistic program-end projections for M2 sales tax revenues. Among the three university forecasts, Chapman University's 2021 forecast had the most optimistic long-term forecast, projecting $13.3 billion in sales tax revenues over the life of M2 while UCLA had the most pessimistic long-term forecast, projecting $13.1 billion. As reflected in Exhibit 34, which compares the most optimistic and pessimistic program-end sales tax revenue projections, the 2021 forecasts made by the three universities are significantly closer than prior year estimates. As the forecasts approach the end of the program, it is reasonable to expect a lesser degree of variance between the three forecasts due to less overall uncertainty. That is, the shorter the duration from the starting point of the forecast to the end point of the forecast, the more accurate the forecast should be.

EXHIBIT 34. COMPARISON OF THE LONG-TERM FORECASTS GENERATED BY THE THREE UNIVERSITIES DURING THE 2022 FORECASTING PROCESS



Source: OCTA 2022 forecast data.

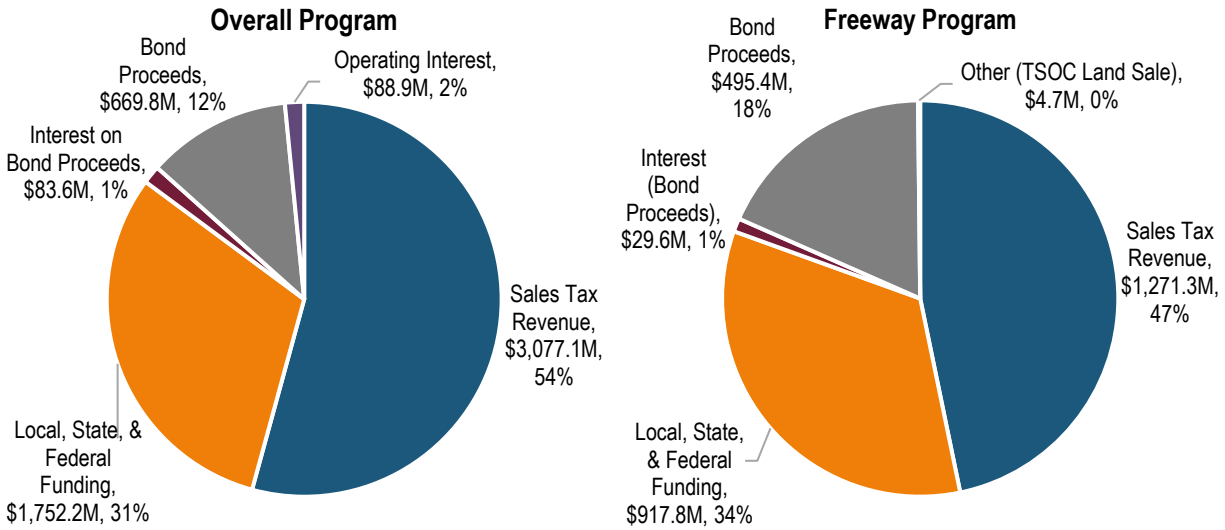
Overall, the roughly $223.6 million difference between the most pessimistic and optimistic projections for sales tax revenues (Chapman University and UCLA, respectively) remains relatively small in the context of total revenues, with Chapman University's forecast being 1.7 percent greater than UCLA's. OCTA's process for blending the forecasts of the three universities to project long-term revenues appears reasonable, though OCTA should remain cautious against overly optimistic forecasts and continue maintaining existing safeguards for ensuring OCTA has enough to funding to meet project costs and M2 commitments. As discussed later, OCTA's conservative approach to financial planning has led OCTA to reduce the number of bond issuances needed, achieve greater than market-average rates of return on investments, remain cautious about project costs, and develop a contingency line-item to address risks from economic uncertainty (e.g., reduced sales tax revenues, increasing labor and materials costs, etc.). Collectively, these strategies provide reasonable assurance that OCTA has, and will continue to be, a good steward of M2 monies and will have the funding necessary to meet its commitments.

Though Sales Tax Revenues Outpaced External Funds Received Over the Last Three Years, OCTA Leveraged Nearly Half of Every Dollar in M2 Funding

When the M2 Ordinance was passed in 2006, the spending plan did not include revenues from state or federal sources. OCTA did not initially expect to leverage sales tax funds with other state and federal funding and took a conservative approach to financial planning. This conservative approach shielded OCTA from much of the impact of the Great Recession and the COVID-19 pandemic. While initial revenue forecasts estimated sales tax collections would total roughly $4.7 billion between FYs 2010-11 and 2020-21 and actual collections totaled approximately $3.1 billion, OCTA has more than offset the difference through securing approximately $1.8 billion from federal, state, and other local sources as shown in Exhibit 35. This external funding resulted in a program-wide leverage ratio where for every $1 in M2 funding, OCTA

secured $0.45 from state, federal, and other local sources. These results were similar when focused solely on the capital projects within the freeway program—the largest component of the M2 Ordinance. For the freeway program, OCTA leveraged M2 funds between FYs 2010-11 and 2020-21 such that for every $1 in M2 funding allocated to the freeway program, OCTA secured a similar $0.51 from state, federal, and other local sources.

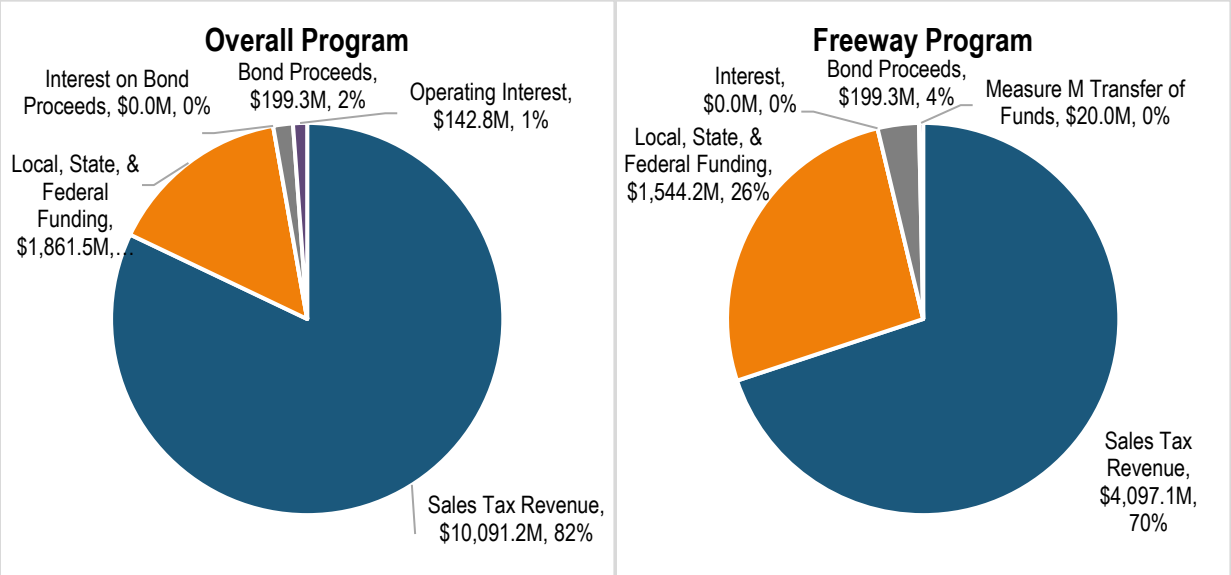
EXHIBIT 35. ACTUAL M2 PROGRAM SOURCES OF FUNDS, FY 2010-11 THROUGH FY 2020-21, IN MILLIONS



Source: OCTA cash flow data.

As shown in Exhibit 36, OCTA's most recent cash flow planning documents included external funding for FYs 2021-22 through 2040-41 totaling approximately $1.5 billion within the freeway program and $1.9 billion for the M2 Program as a whole.

EXHIBIT 36. ESTIMATED M2 FREEWAY PROGRAM FUTURE SOURCES OF FUNDS, FY 2021-22 THROUGH FY 2040-41, IN MILLIONS



Source: OCTA cash flow data.

Exhibit 36 reflects that external funding within the freeway program accounts for 26 percent of the roughly $5.9 billion in planned revenue over the remaining period of Measure M2, and 16 percent of the $12.3 billion in total planned M2 Program revenues. Meeting those totals would require OCTA to leverage freeway program funds by raising $0.40 in external funding for every $1 dollar of projected M2 funding; for the M2 Program as a whole, the planned leveraging ratio suggests that for every $1 dollar of M2 funding, OCTA expects to secure $0.25 in external funding from federal, state, and other local sources.

Despite initial concerns about the impact of COVID-19 on projected sales tax revenues, OCTA's overall leveraging ratio for the M2 program increased by $0.10 since the FY 2015-16 through 2017-18 triennial performance review, with OCTA now forecasted to leverage $0.40 for every $1 of projected M2 funding (previously $0.30 for every projected M2 dollar). Moreover, OCTA's projected $3.6 billion in external funds by 2041 represents a $387 million increase in external funds over the life of the program, despite the economic impacts of COVID-19 on the public and private sector in 2020.

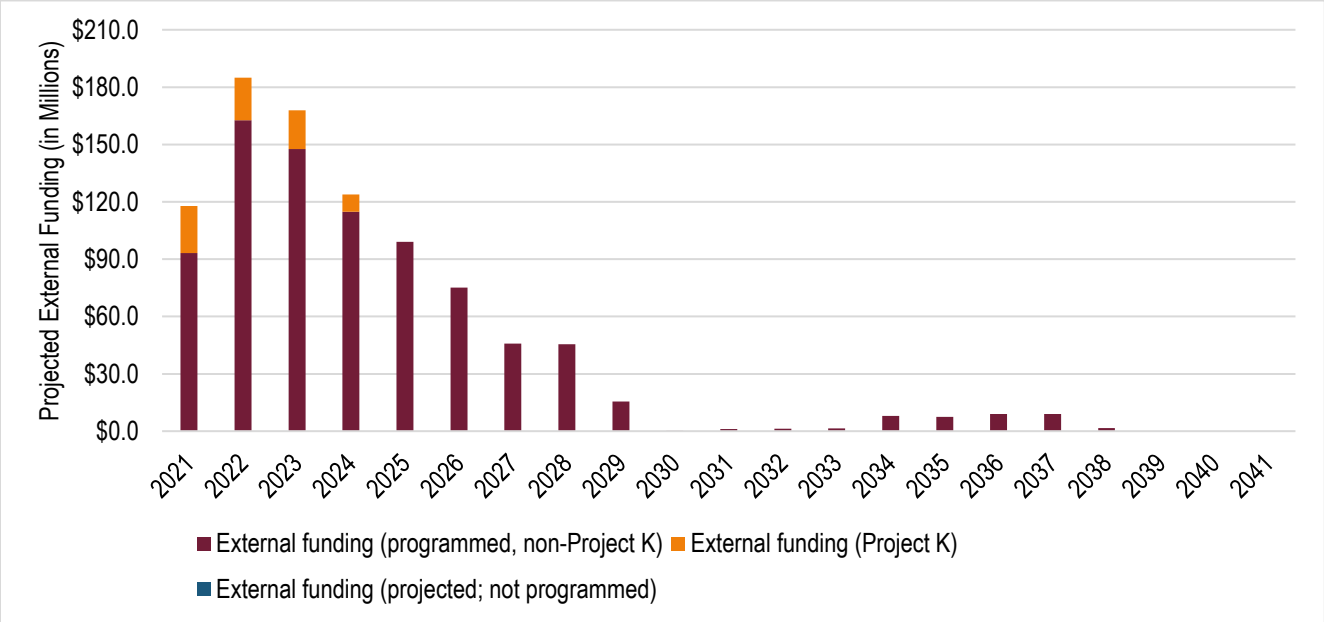
Forecasted Sales Tax Funding and Leveraged Funds Appropriately Considered the Impact of Changing Federal and State Priorities on External Funds

As of the FY 2020-21 Comprehensive Business Plan, all external revenue that OCTA is reasonably certain to obtain has been programmed. Up to the FY 2019-20 cash flow summary, OCTA had projected $10 million per year in external funding for FYs 2021-22 through 2035-36. Per OCTA's Finance and Administration Division, the roughly $150 million in projected, not programmed, external revenue was removed in the FY 2020-21 cash flow summary because staff did not anticipate future investment into freeways by the state and federal government. Additionally, staff in OCTA's Finance and Administration Division and Programming Division indicated that even with expectations that changing state and federal transportation and transit priorities may result in less external funding for freeway projects, OCTA's current

forecasting methodology and reallocation of SR-91 excess toll revenues to freeway projects provides greater assurance that OCTA will be able to ensure adequate funding for project delivery.

As illustrated by Exhibit 37, OCTA's FY 2020-21 cash flow assumes no unprogrammed external funds throughout the remainder of the life of the program, with the vast majority of programmed funds to be used by FY 2028-29.

EXHIBIT 37. FY 2020-21 PROGRAMMED AND PROJECTED STATE AND FEDERAL FUNDING



Source: OCTA forecast data.

The majority of external funding anticipated over the remaining life of M2 are from the following state and federal formula funds, block grants, and project-specific awards—all historically stable funding sources with amounts that can reasonably be estimated and programmed for projects in the near term:

- **State Transportation Improvement Program (STIP)**: The State Transportation Improvement Program is a multi-year capital improvement program of transportation projects on and off the State Highway system, with programming for local transportation agencies generally occurring every two years. Fund estimates of proposed funding are released in odd years (e.g., 2019) and formally adopted by the California Transportation Commission (CTC) in even years, over a five-year period.
- **Surface Transportation Block Grant Program (STBG)**: Under the Fixing America's Surface Transportation Act (FAST Act), this program provides flexible funding that can be used for a variety of highway, road, bridge, and transit work, as well as pedestrian and bicycle infrastructure. Funds are allocated to local transportation in proportion to their relative shares of the State's population.
- **Congestion Mitigation and Air Quality Improvement Program (CMAQ)**: Under the FAST ACT, the CMAQ provides another flexible funding source for state and local governments, though it is differentiated from the STBG in that the CMAQ is intended to be used for projects and programs to help meet the requirements of the Clean Air Act. Funding may be used for transportation projects

and programs that are likely to contribute to the attainment or maintenance of a national ambient air quality standard with high level of effectiveness, among other stipulations.

- **Senate Bill 1, The Road Repair and Accountability Act of 2017 (SB 1)**: Passed through state legislation in 2017, SB 1 increased several gasoline and transportation-related taxes and fees to create new revenue sources for transportation infrastructure including both formula and competitive funding elements. Additionally, SB 1 funding augments three existing funding programs: the Active Transportation Program, the State Highway Operation and Protection Program (SHOPP), and the STIP.
- **Miscellaneous Other State/Federal Funds**: Several other funding sources are available, such as the SHOPP, which provides funding for the rehabilitation and reconstruction of state highways and bridges, as well as traffic safety improvements and roadside rest areas, though does not provide funding for increasing lane capacity.

STIP funds represented the single largest programmed source of external funds, with $456 million programmed for freeway projects as of July 12, 2021. The next largest source of programmed external funds were STBG and CMAQ, of which OCTA programmed $502 million amongst the Agency's various freeway projects as of June 14, 2021. Another $269 million was provided through the 2006 Proposition 1B program. SB 1 funds made up $194 million and miscellaneous state and federal funds, totaled to $173 million. Finally, $46 million in Federal American Reinvestment and Recovery Act funding made up the smallest bucket of programmed external funds.

OCTA's Board of Directors Adopted a Comprehensive Debt Management Policy

In November 2010, the OCTA Board of Directors adopted a comprehensive debt management policy, allowing the issuance of debt to help fulfill OCTA's mission to enhance the quality of life in Orange County by delivering safer, faster, and more efficient transportation solutions. While the policy states that pay-as-you go is the preferred method of financing, it also allows OCTA to use bond financing as an alternative if the scope of expenditures makes pay-as-you-go unfeasible. OCTA has previously issued bonds secured by sales tax receipts in order to help fund capital transportation projects promised to voters as part of the original Measure M (M1) (1991-2011) and the subsequent M2 (2011-2041). In addition, OCTA issued bonds to purchase the 91 Express Lanes, secured by toll revenues and other earnings from operation of the express lanes themselves.

The policy outlines several high-level goals guiding the issuance of debt:

- Obtain the lowest possible cost of funds for each of OCTA's borrowing programs
- Obtain the highest possible credit ratings that allow sufficient flexibility
- Minimize risk exposure to variable rate debt and/or derivatives
- Maintain the required secondary market disclosure with the rating agencies, institutional and retail investors

In addition, the policy details the process for appointing financial advisors, legal counsel, and underwriters who help facilitate the bond issuance, management of the sales process, and the process for disclosing

material information after the sale of debt. The Debt Financing policy also requires OCTA to maintain a minimum projected debt coverage ratio of 1.3 times for M2 sales tax revenue bonds.

OCTA's Bond Issuance Plans Shifted During Recent Years, But Debt Financing Approach Remained Sound

Between FYs 2010-11 and 2020-21, bond financing comprised $669.8 million out of total M2 funding of roughly $5.7 billion, or nearly 12 percent—up from 7 percent between FYs 2010-11 and 2017-18 due to a bond issuance in 2019, as shown in Exhibit 38.

EXHIBIT 38. BOND PROCEEDS AS A PERCENTAGE OF TOTAL M2 FUNDING, IN MILLIONS

	2011 to June 30, 2018	2011 to June 30, 2021
Gross Sales Tax Revenue	$2,080.7	$3,077.1
Local, State, & Federal Funding	$1,456.5	$1,752.2
Bond Proceeds	$269.8	$669.8
Interest on Bonds Proceeds	$49.0	$83.6
Total	**$3,856.0**	**$5,671.6**
Bond Proceeds as a % of Total Funding	**7.0%**	**11.81%**

Source: OCTA Cashflow Projections.

Through June 30, 2021, OCTA's bond proceeds were raised through three issuances totaling $729.2 million, as shown in Exhibit 39. The 2010 Series B bonds were retired in 2020.

EXHIBIT 39. M2 SALES TAX REVENUE BOND ISSUANCES THROUGH JUNE 30, 2021, IN MILLIONS[22]

Year Issued	Description	Secured By	Final Maturity	Total Issued
2010	Build America Bonds, 2010 Series A	M2 Sales Tax Revenues	2041	$293.5
2010	Sales Tax Bonds, 2010 Series B	M2 Sales Tax Revenues	2020	$59.0
2019	Sales Tax Bonds, Series 2019	M2 Sales Tax Revenues	2041	$376.7
			Total	**$729.2**

Source: OCTA's FY 2018-19 and FY 2019-20 Comprehensive Annual Financial Reports.

While Section 5 of the M2 Ordinance states that pay-as-you-go project funding is the preferred method of financing, OCTA considers bond financing an attractive option available to the Board as the current cost of

[22]OCTA also issued bonds for the purchase of the 91 Express Lanes, and for the construction of the I-405 Express Lanes secured a Transportation Infrastructure Finance and Innovation Act (TIFIA) loan and issued bond anticipation notes (BANS). Both the bonds for the 91 Express Lanes and the TIFIA loan are secured by toll revenues while the BANS are secured by the other revenue sources.

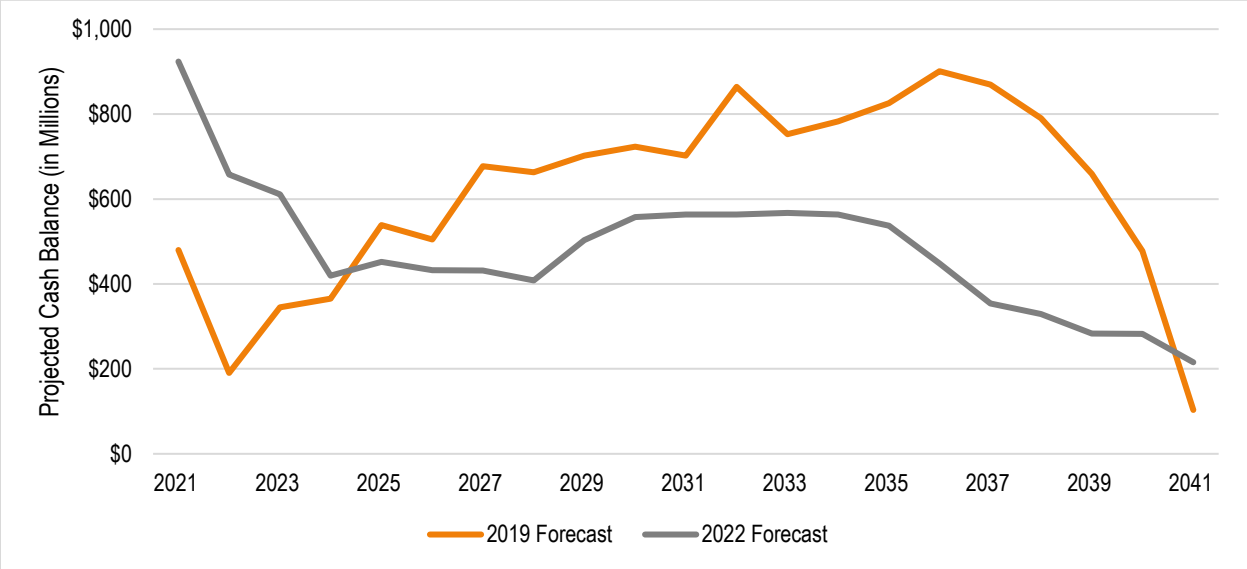
debt is low with 20-year bond rates consistently falling over the last several decades and currently sitting just under two percent.

As such, OCTA's FY 2018-19 cashflow forecast reflected seven planned bond issuances between 2019 and 2041 that were expected to raise an additional $1.77 billion. However, according to the Next 10 Delivery Plan 2019 Update (November 2019) increased revenue forecasts and refined project costs resulting from completing higher level engineering studies led OCTA to reduce its planned multiple bond issuances through the end of the program to just one in 2023 for $300 million.

In 2020, OCTA's debt financing plans changed again. Specifically, the Next 10 Delivery Plan 2020 Update (April 2021) described impacts from the COVID-19 pandemic on projected sales tax revenues, which were forecasted to fall to $11.6 billion. Even with the lowered revenue estimates, OCTA staff believed the M2 Program remained deliverable when considering the external revenue currently programmed and refined project cost estimates; however, the 2023 planned bond issuance was nearly doubled to $573 million to maintain project delivery schedules and guard against potential cost increases in the freeway capital program. As bond financing assumptions change, an updated Plan of Finance must be brought to the Board for approval.

The lowered sales tax revenue expected combined with reduced bond financing plans between 2019 and 2020 projections resulted in significantly lowering the excessive cash balances that were anticipated. Exhibit 40 compares the projected cash balances in the 2019 forecast that assumed a total of $2.04 billion in bond financing would be generated through 2041 to the projected cash balances in the 2022 forecast assumed a total of just $869 million in bond financing.

EXHIBIT 40. 2019 AND 2022 CASH BALANCE FORECASTS COMPARISON

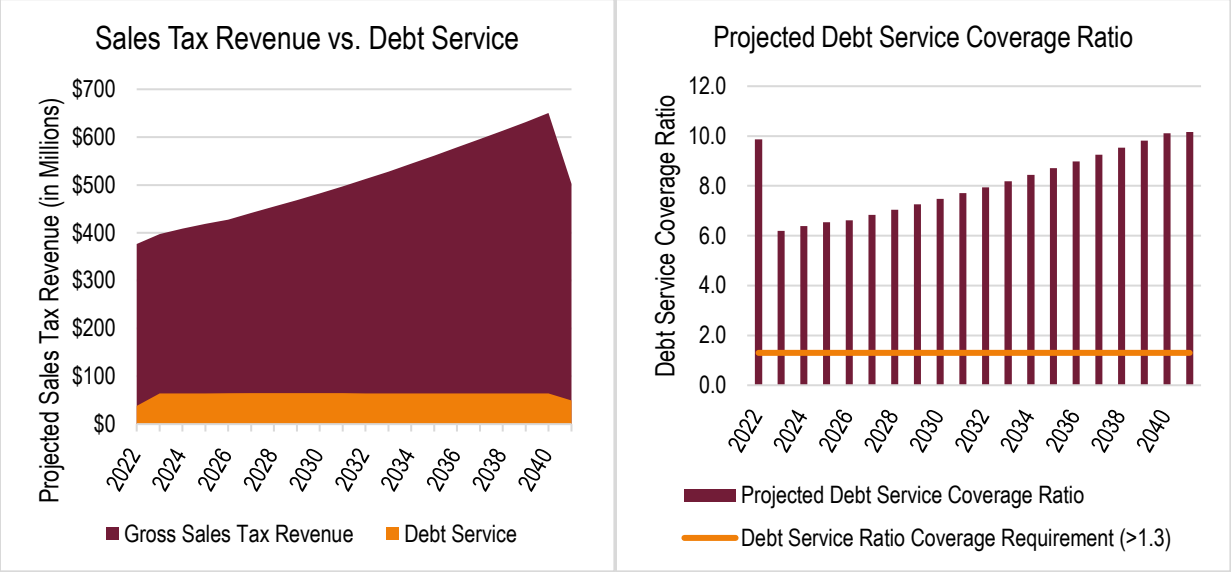


Source: OCTA Cashflow Projections.

OCTA's Projected Debt Service Coverage Met Board Requirements and Appeared Sufficient to Meet Future Repayment Obligations

Board policy required OCTA to maintain a debt service coverage ratio of 1.3 — meaning projected sales tax revenues should be 1.3 times greater than debt service obligations each year over the life of M2. As shown in Exhibit 41, revenues were projected to be significantly higher than planned debt service over the remaining life of the program. Based on OCTA's cash flows, debt service coverage for the M2 Program is expected to be three times or greater in each year between FY 2021-22 and FY 2040-41.

EXHIBIT 41. OVERALL M2 PROJECTED SALES TAX REVENUE AND DEBT ANNUAL COMPARISON, FY 2021-22 THROUGH FY 2040-41

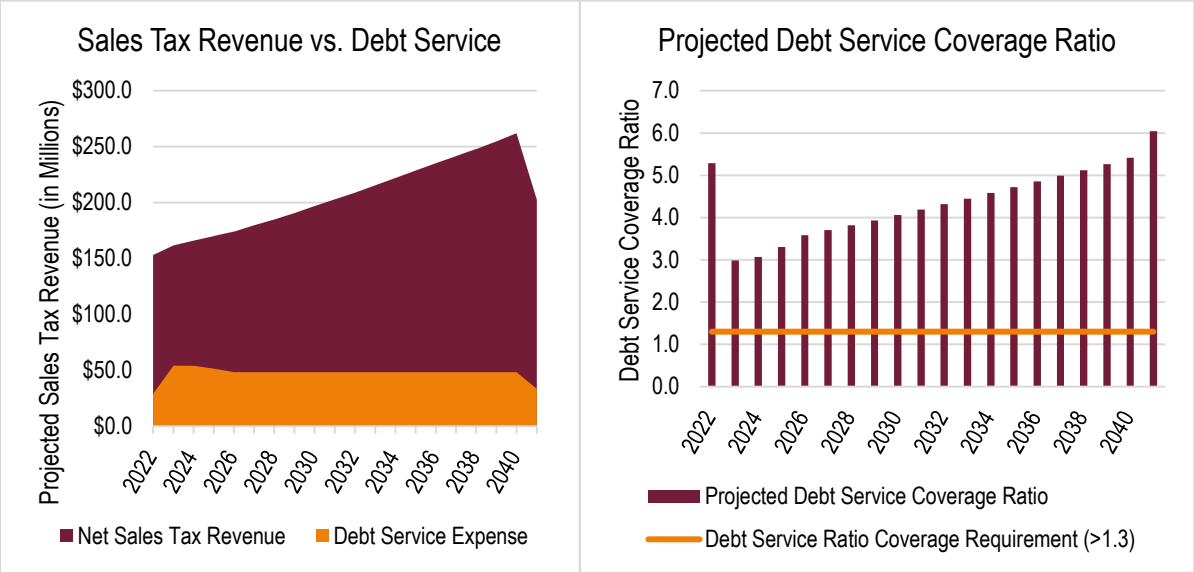


Source: OCTA M2 Cashflows.

Within the M2 program, 79.9 percent of the more than $869 million in total bond proceeds (actual proceeds through FY 2021-22 plus a planned FY 2022-23 issuance) were anticipated to be used to fund the freeway capital construction projects because the other M2 Program areas, including environmental mitigation and funding for local streets and roads, can be scaled to match available revenues. While most bond funds will be directed to the freeway program, the bonds issued by OCTA are secured by all M2 sales tax revenues, not just the portion of revenues allocated to the freeway program. Current cash flow projections show that while 79.9 percent of bond proceeds will be allocated to the freeway program, debt service for the freeway program is expected to account for 72.1 percent of total M2 debt service costs.

Exhibit 42 shows forecasted sales tax revenues and debt service expenses just for the freeway program within M2. Debt service coverage for the freeway program was projected to be 4.4x in total between FYs 2020-21 and 2040-41, indicating that coverage is projected to be comfortably above the 1.3x required by Board policy.

EXHIBIT 42. M2 PROJECTED SALES TAX REVENUE AND DEBT ANNUAL COMPARISON FOR FREEWAY PROGRAM, FY 2021 THROUGH 2041



Source: OCTA M2 Cashflows.

Overall, OCTA's debt service was structured in an appropriate manner that should continue to provide positive cash flow from sales tax revenues each year within the freeway program while also minimizing the risk that debt service for the freeway program will impact other program areas. Given the economic uncertainties associated with the COVID-19 pandemic, OCTA's debt coverage could be negatively impacted if sales tax revenues are leveraged more than currently planned or growth in sales tax revenues is slower than expected, although significant bonding capacity remains.

OCTA's Use of Debt More Conservative Than Peers

As shown in Exhibit 43, like OCTA, many peer transportation agencies also issued debt secured by future sales tax revenues to fund their capital improvement programs; however, OCTA's use of debt was more conservative. Compared to peers that utilize debt financing, OCTA was underleveraged with a much higher debt coverage ratio.

EXHIBIT 43. OCTA DEBT SECURED BY SALES TAX REVENUE COMPARED TO OTHER SIMILAR ENTITIES

Agency	Program Duration	Financing Method	Budgeted Sales Tax Revenue for FY 2020-21	2020-21 Debt Service	Debt Coverage Ratios	Outstanding Debt as of June 30, 2020
Riverside County Transportation Commission, Riverside, CA	12th year of 30-year program	Debt	$160.0 M	$66.5 M	2.4x	$805.8 M
San Diego Association of Governments, San Diego, CA	13th Year of 40-year program	Debt (2008-2021) Pay-as-you-go (2022-2048)	$285.2 M	$103.7 M	2.8x	$1,884.9 M

Agency	Program Duration	Financing Method	Budgeted Sales Tax Revenue for FY 2020-21	2020-21 Debt Service	Debt Coverage Ratios	Outstanding Debt as of June 30, 2020
Regional Transportation Authority, Tucson, AZ	16th year of 20-year program	Debt	$83.3 M	$29.7 M	2.8x	$178.5 M
Maricopa Association of Governments, Phoenix, AZ	15th year of 20-year program	Pay-as-you-go	$527.3 M	N/A	N/A	N/A
OCTA	**10th year of 30-year program**	**Debt**	**$282.9 M**	**$43.8 M**	**6.5x**	**$626.7 M**

Source: Budget and financial documentation published by comparable transportation entities.

For instance, the Riverside County Transportation Committee and San Diego Association of Governments both had significantly more outstanding debt than OCTA, but with a much smaller or similar sales tax base. However, not all transportation agencies relied on debt financing—the Maricopa Association of Governments, with a much larger sales tax base than OCTA, used the pay-as-you-go approach to fund their capital improvement program.

How an entity approached funding capital programs (pay-as-you-go vs. debt) and timing of debt (whether consistent over the life of the program or taking on large debt early in the program) was heavily influenced by the structure of each entity's capital transportation improvement program and the specific commitments made to voters and residents. OCTA's approach to debt was consistent with the preference for pay-as-you-go expressed in the Ordinance and OCTA's generally conservative approach to cash flow planning.

OCTA's Investment Practices Achieved Rates of Return Greater Than the Market Average

To deliver the promised M2 projects, OCTA needs adequate revenues at the appropriate time to coincide with project expenses. To that end, OCTA invested funds to preserve capital and provide necessary cash flows with a goal of achieving a market-average rate of return on invested funds.

OCTA's investment activities are guided by a Board-adopted investment policy that is updated annually. While most annual updates involve minor revisions to improve clarity, approved changes to the policy in 2019 included significant adjustments aimed at better aligning OCTA's more conservative investment guidelines with California Government Code (Code), including:

- Allow investment in all Federal Agencies and Government Sponsored Entities.
- Allow investment in non-California municipal debt, but require strong credit ratings and issuer limitations.
- Increase maturities on commercial paper and negotiable certificates of deposit to match the Code.
- Require only one credit rating for investments in Medium-Term Notes and State of California and California Local Agency obligations, but maintain issuer limitation.

- Change requirements for mortgage-backed and asset-backed securities to match the Code by reducing credit rating requirements from AAA to AA and removing ten percent limitation on asset-backed securities.
- Allow investments in Supranationals.
- Allow investments in Joint Powers Authority Investment Pools, but maintain limitations on pooled investments as a percentage of the portfolio to ten percent.

As shown in Exhibit 44, OCTA's investment portfolio was consistent with the maximum percentages outlined in the investment policy as of June 30, 2021.

EXHIBIT 44. OCTA INVESTMENT PORTFOLIO, AS OF JUNE 30, 2021

Investment Instruments	Dollar Amount Invested	Percent of Portfolio	Investment Policy Maximum
U.S Treasury Obligations	$563,875,544	29.7%	100%
Federal Agencies & U.S. Government Sponsored-Entities	$347,561,994	18.3%	100%
Municipal Debt	$121,392,836	6.4%	30%
Negotiable Certificates of Deposit	$21,800,000	1.1%	30%
Medium Term Maturity Corporate Securities	$204,661,458	10.8%	30%
Money Market Funds & Mutual Funds	$177,086,558	9.3%	20%
Mortgage and Asset-backed Securities	$174,466,196	9.2%	20%
Supranationals	$30,904,063	1.6%	20%
Local Agency Investment Fund	$70,996,561	3.7%	$75 Million
Orange County Investment Pool	$15,221,463	0.8%	10%
Bank Deposits	$26,313,126	1.4%	5%
Variable & Floating Rate Securities	$145,152,496	7.6%	30%
Total (including instruments not shown)	**$1,899,432,295**[23]	**100.0%**	

Source: Values derived from OCTA's Investment and Debt Programs Report – June 2021, issued July 28, 2021.

Prior to FY 2020-21, OCTA prepared and presented a monthly report to the Finance and Administration Committee detailing the current investment portfolio, performance relative to benchmarks, and compliance with board policy and provided a similar quarterly report to the Board. In addition to presenting portfolio information, the monthly report detailed both the liquid portfolio, which was used to meet immediate cash needs, and the short-term portfolio which included investments maturing over the next 5 years to meet project funding needs. Beginning in FY 2020-21, staff began providing the monthly report to the Finance and Administration Committee and the Board.

[23] Actual balance is $1,996,169,783 that includes other instruments not shown in the list subject to indenture.

To manage its short-term portfolio, OCTA used four external investment firms—MetLife Investment Management, Chandler Asset Management, Payden and Rygel Investment, and Public Financial Management.[24] Previous Board Policy stated that OCTA's portfolio shall be designed to attain a market-average rate of return with rates of return compared against four nationally-recognized performance benchmarks—two 1-3 year benchmarks for short-term portfolio and two 1-5 year benchmarks for the extended fund. With the 2020 Investment Policy Update, the requirement was changed to use the two 1-3 year Treasury and Corporate/Government performance benchmarks to evaluate return on all investments. As shown in Exhibit 45, over the last several years, the funds managed by the OCTA's external investment firms generally achieved annual rates-of-return consistent with these benchmarks; however, a few instances in 2019 where returns were slightly lower than benchmarks.

EXHIBIT 45. OCTA SHORT-TERM INVESTMENT PORTFOLIO PERFORMANCE AGAINST BENCHMARKS, FY 2018-19 TO FY 2020-21

	Logan Circle Partners	MetLife Investment Management	Chandler Asset Management	Public Financial Management	Payden & Rygel
As of June 30, 2019					
12 Month Return	**3.45%**		**4.10%**	**4.27%**	**4.17%**
TSY Benchmark	3.96%		3.96%	3.96%	3.96%
Gov/Corp Benchmark	4.16%		4.16%	4.16%	4.16%
As of June 30, 2020					
12 Month Return		**4.18%**	**4.18%**	**4.22%**	**4.21%**
TSY Benchmark		4.07%	4.07%	4.07%	4.07%
Gov/Corp Benchmark		4.18%	4.18%	4.18%	4.18%
As of June 30, 2021					
12 Month Return		**0.81%**	**0.30%**	**0.43%**	**0.50%**
TSY Benchmark		0.07%	0.07%	0.07%	0.07%
Gov/Corp Benchmark		0.27%	0.27%	0.27%	0.27%

Source: Orange County Transportation Authority Investment and Debt Programs Report, Short-Term Portfolio Maturity Schedules for FY 2018-19, FY 2019-20, and FY 2020-21.
Key: **Red Text** = Indicates when external investment firms' returns fell below Treasury and Corporate/Government performance benchmarks.

Overall, OCTA's investment program was consistent with the investment policy established by the Board with investments that were within policy's percentage limits and rates of return that were within the established benchmarks. In addition, detailed monthly reporting to the Finance and Administration Committee, and the Board of Directors (beginning with the 2020 Investment Policy), ensured that decision-makers were provided timely, accurate information with respect to OCTA's investment program.

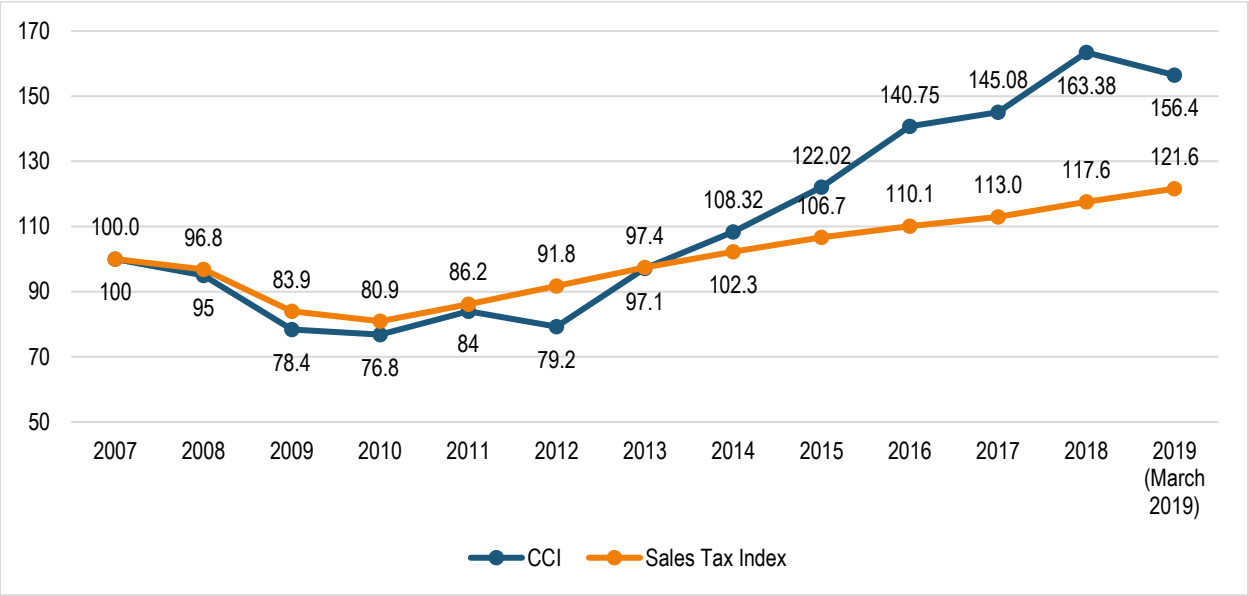
Construction Cost Increases Continue to Pose a Significant Future Risk to OCTA's Ability to Deliver the Promised M2 Freeway and Transit Projects

As reflected in Exhibit 46, since 2013 the growth in construction costs according to Caltrans' Construction Cost Index (CCI) has rapidly outpaced the growth in sales tax revenues, resulting in the need to generate

[24] MetLife acquired Logan Circle Partners.

additional revenues to cover rising costs; however, CCI growth began to slow in 2019. If costs continue to outpace revenues, it could jeopardize OCTA's ability to deliver the promised M2 projects by FY 2040-41.

EXHIBIT 46. SALES TAX AND CONSTRUCTION COST GROWTH RATES, 2007-2019



Sources: California Department of Transportation Construction Cost Index as of March 31 2019; OCTA forecast data.

In recognition of these risks, OCTA commissioned a market condition forecast and risk analysis from the Orange County Business Council (OCBC) to provide insight into potential project delivery cost drivers that could affect the Measure M2 Next 10 Delivery Plan. The first report was presented to the Executive Committee in September 2017. The analysis is updated annually in September and OCTA staff incorporates the information into its cash flow projections.

As part of the analysis, the OCBC created an Infrastructure Construction Cost Pressure (ICCP) Index to track near-term (three-years) cost pressures. The ICCP Index provides a range of potential cost fluctuations based on economic trends (captured through building permits and unemployment), material costs, wage pressures, and general economic conditions. While OCTA has no influence over the cost pressures themselves, the index can serve as an early warning indicator providing some advanced notice of potentially large increases that staff can begin to address before they materialize.

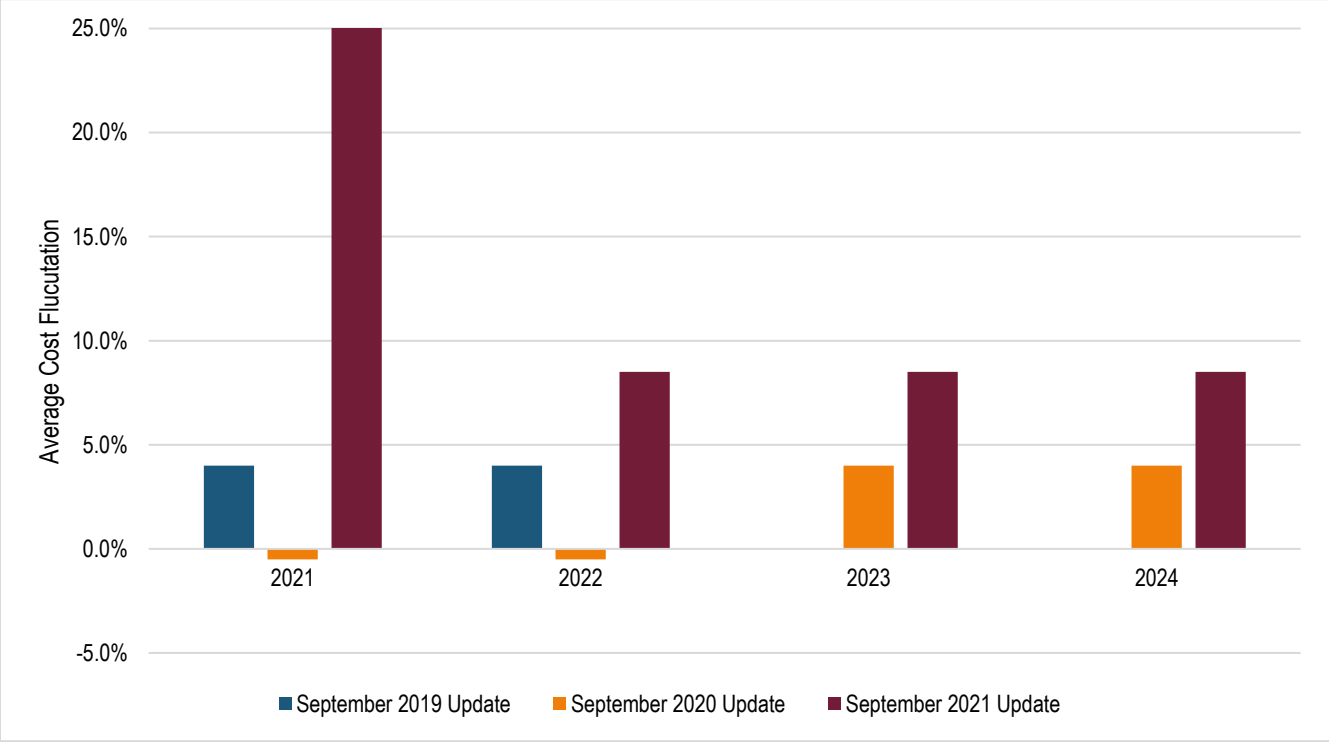
The last couple of years has shown dramatic volatility in projections of cost fluctuations. Specifically, OCBC's September 2018 and 2019 Updates indicated that OCTA would likely experience normal inflationary cost environments between 2019 and 2022 with potential cost increases averaging 4 percent (ranging from 2 percent to 6 percent).

However, OCBC's September 2020 Update dropped the previous forecast that cost fluctuations would average 4 percent in 2021 and 2022 to averaging negative 0.5 percent between (ranging from negative 2 percent to 1 percent) in those years. To explain the anticipated low inflation cost environment, OCBC pointed to the switch from a low unemployment economy to that of a high unemployment economy due to the COVID-19 pandemic that began in early 2020 and lowered the risk for higher labor costs. In addition,

building permits in California had slowed down and building material costs stabilized. In response, OCTA anticipated taking advantage of such a tempered cost environment as it was seeking construction bids during that timeframe for Project F, the State Route 55 Widening project. While the 2020 Update estimated that a return to a normal inflationary environment would occur in 2023 with cost fluctuations averaging 4 percent, the cost environment began increasing in early 2021, eliminating the anticipated advantage for low construction bids.

In fact, the September 2021 Update reversed the forecasted range of cost fluctuations from averaging 0.5 percent in 2021 and 2022 to averaging 25.5 percent in 2021—the highest inflationary environment observed in about 20 years—and 8.5 percent in 2022 through 2024. The OCBC contributes the change in inflationary pressures to an increase in building permits and decrease in employment rate in 2021. Exhibit 47 reflects the volatility in the cost increase projections between the three most recent report updates.

EXHIBIT 47. OCTA INFRASTRUCTURE COST INDEX ANNUAL UPDATE FORECASTED VOLATILITY, CALENDAR YEARS 2021 TO 2024



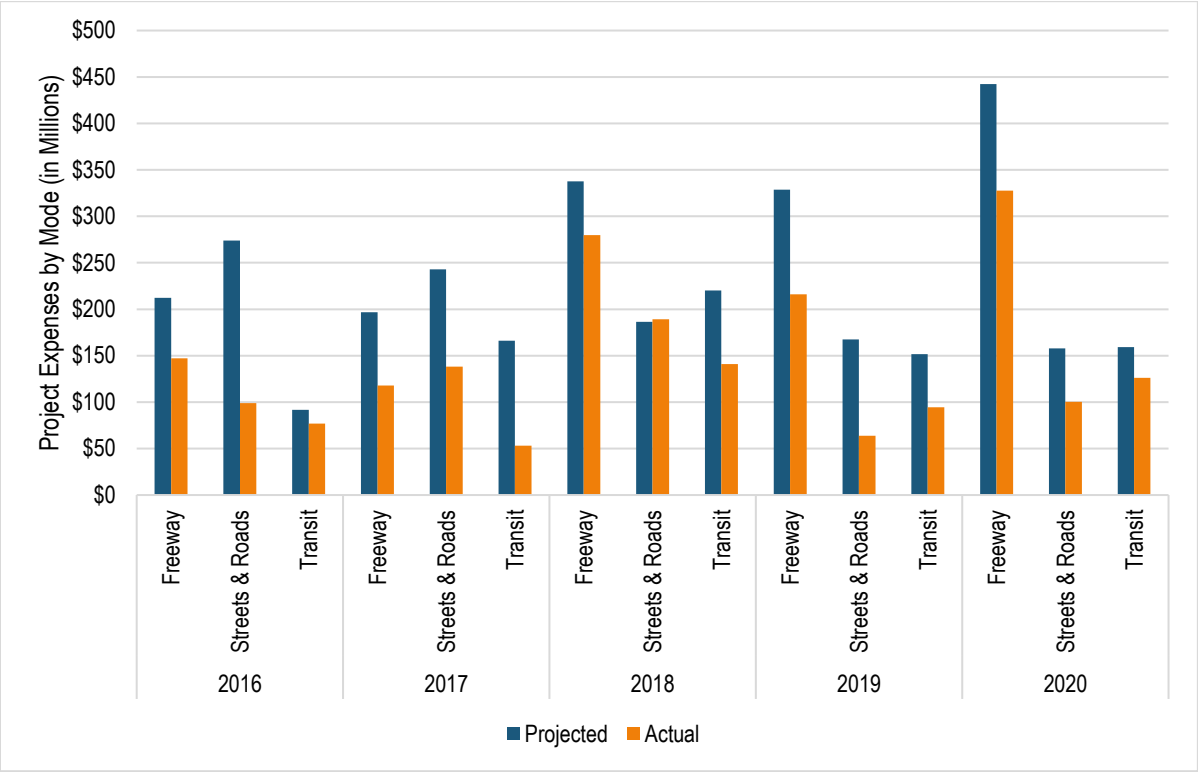
Source: Generated from OCBC's range of cost fluctuation data in annual updates to its ICCP Index.

OCTA's Projections Over-Estimated Expenditures Incurred During Specific Periods, Consistent With the Agency's Conservative Approach to Managing Finances

OCTA's Financial Planning and Analysis section compile anticipated expenditure information obtained from the Freeway, Streets & Roads, and Transit program project managers as part of the cash flow projection process. As shown in Exhibit 48, when comparing projections at the start of the FY against actuals at the end of the year, OCTA's recent annual cash flow projections over-estimated the amount of expenditures that would be realized each year. For instance, projections prepared for FYs 2015-16 through 2019-20

anticipated an average of about $303 million in Freeway program expenditures each year, but only an average of about $217 million was spent—a difference of about $86 million between anticipated and actual expenditures each year over the period, for a total of nearly $409 million in fewer expenses than planned.

EXHIBIT 48. ONE-YEAR-OUT PROJECTED V. ACTUAL PROJECT MODE EXPENSES, BY FY[25]



Source: OCTA cash flow data.

According to OCTA's Financial Planning and Analysis section, some project expenses are planned, but do not happen because it is difficult to precisely predict when certain expenses will occur, such as those associated with relocating utilities, and the expenses roll forward in subsequent projections. For instance, per OCTA's Project Controls section, roughly $26 million has been expended on the SR-55 freeway project for right-of-way acquisition condemnation deposits; however, staff conveyed that OCTA has no way of knowing with certainty when property owners will settle property acquisitions or withdraw condemnation deposit funds. As such, to address the unpredictability of right-of-way acquisition timing, OCTA projections use a right-of-way cost distribution curve to revise timing of projected expenses on a quarterly basis. Another contributing factor is project delays. According to OCTA's Project Controls section, one of the primary causes of the freeway mode variances between projected and actual expenses for FYs 2018-19 and 2019-20 was the design-build contractor for the I-405 Improvement Project not meeting the schedule. However, as of November 2021, Project Controls' projections suggest that the variance between the I-405 project's (as well as the freeway mode overall) projected and actual expenses is much less.

[25] The large uptick in freeway expenses in FY 2019-20 shown in Exhibit 48 relates to increased construction costs associated with Project K.

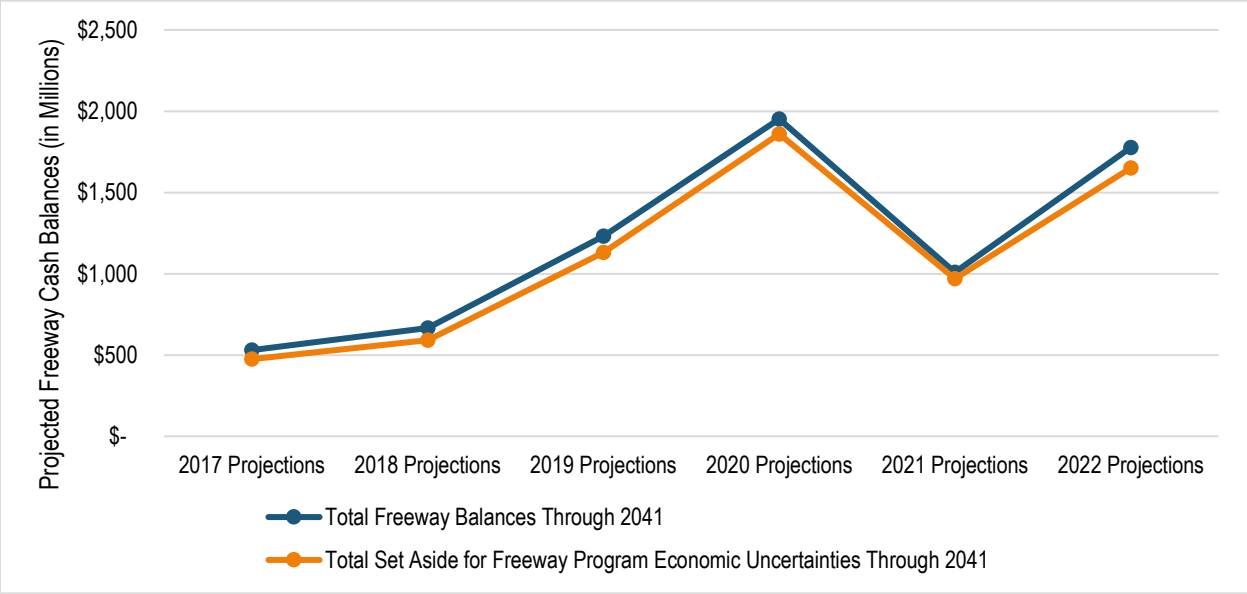
OCTA staff expressed confidence that the expenses will ultimately materialize in later years. In fact, cash flow projections prepared for FY 2015-16 anticipated spending about $3.6 billion between FYs 2020-21 and 2040-41, but as expenses roll forward, projections prepared for FY 2020-21 reflect that $5.5 billion will be spent between FYs 2020-21 and 2040-41.

OCTA's Conservative Approach Involves Reserving Balances to Guard Against Potential Economic Uncertainties

To guard against potential construction cost increases, OCTA's staff began including a contingency line-item expense in the Freeway cash flow projections in 2017—initially $475 million of the projected 2041 balance was set-aside for economic uncertainties associated with freeway construction projects. According to OCTA, the basic premise is that as anticipated net revenues increase, cash balances and the amount available to set-aside for economic uncertainties increase, and vice versa.

Exhibit 49 illustrates that the amount set aside for freeway program economic uncertainties is directly correlated to the anticipated freeway balances. Specifically, prior projections of freeway balances expected in 2041 increased each year, particularly as OCTA planned seven future bond issuances that increased the amount available to be set-aside for economic uncertainties. Starting with the 2020 projections, both total freeway balances and economic uncertainty set-asides decreased, which corresponds to OCTA's decision to reduced its planned bond issuances to one.

EXHIBIT 49. FY 2016-17 TO FY 2021-22 PROJECTIONS FOR THE FREEWAY PROGRAM THROUGH 2041—ANTICIPATED FREEWAY BALANCES IN 2041 COMPARED TO AMOUNTS SET ASIDE FOR ECONOMIC UNCERTAINTY



Source: OCTA cash flow data.

Relatedly, we noted an uptick in the percentage of projected freeway ending balances that OCTA reserves for economic uncertainties across the last several cash flow projections, as reflected in Exhibit 50. However, as of OCTA's FY 2020-21 cash flow projections, the overall amounts for both OCTA's program-

end, freeway ending balance and economic uncertainty balance decreased as a result of concerns related to the potential impact of COVID-19 and other factors on revenues and expenses.

EXHIBIT 50. PROJECTED FREEWAY PROGRAM ECONOMIC UNCERTAINTY AS A PERCENT OF FREEWAY ENDING BALANCES, FY 2016-17 TO FY 2021-22

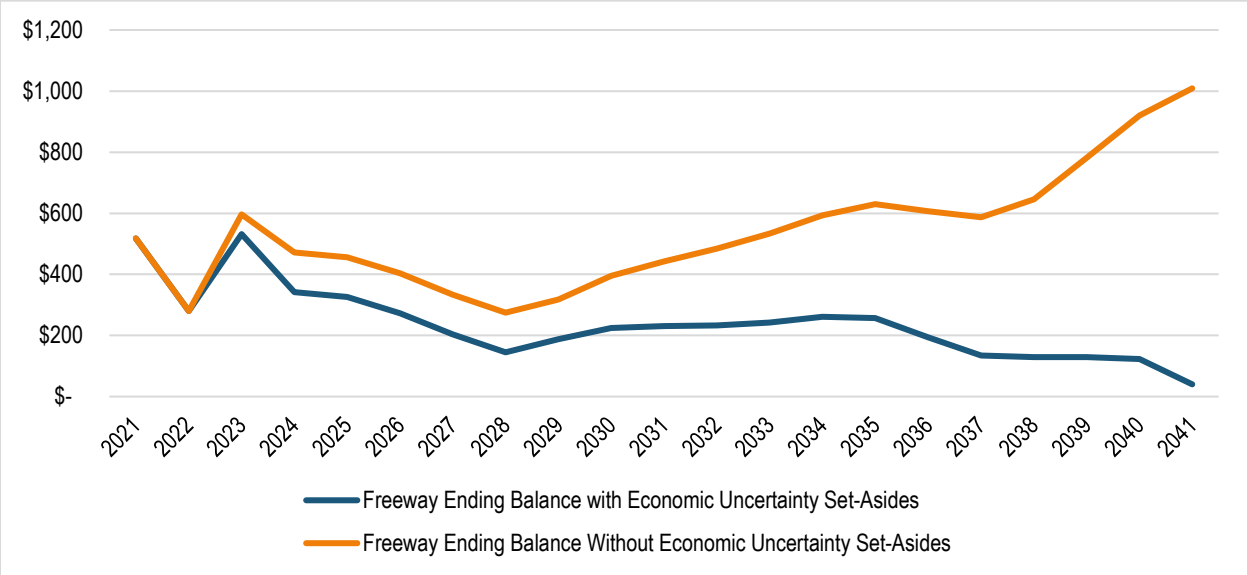
	FY 2016-17 Projections	FY 2017-18 Projections	FY 2018-19 Projections	FY 2019-20 Projections	FY 2020-21 Projections	FY 2021-22 Projections
Projected Freeway Ending Balances Through 2041	$530	$667	$1,231	$1,952	$1,009	$1,778
Total Set Aside for Freeway Program Economic Uncertainties Through 2041	$475	$592	$1,131	$1,860	$969	$1,651
% of Projected Ending Freeway Balances Reserved for Freeway Program Economic Uncertainties Through 2041	90%	89%	92%	95%	96%	93%

Source: OCTA cash flow data.

Further, Exhibit 50 reflects that as of the most recent cashflow projections in FY 2021-22, both projected freeway ending balance and the economic uncertainty balance are nearly back to pre-pandemic levels. These projections also suggest that the freeway program's financial picture will start to improve more rapidly in FY 2027-28 and cash balances will be around $127 million by FY 2040-41, after reserving $1.7 billion for contingencies between FYs 2021-22 and 2040-41.

As shown in Exhibit 51, the freeway program balance could amount to $1.8 billion by FY 2040-41 if the need to utilize the amounts set-aside for economic uncertainty does not materialize; however, as OCTA has already faced and weathered two global events since the M2 program's inception, both the Great Recession and COVID-19 pandemic, it is entirely possible another type of event could occur during the remaining 20 years of the program. As such, we find that OCTA's current approach to establishing and maintaining an economic uncertainty reserve line-item leaves OCTA well-positioned to handle future events that pose a risk to OCTA's ability to deliver M2 projects.

EXHIBIT 51. COMPARISON OF PROJECTED CASH BALANCES IN FY 2040-41 WITH AMOUNTS SET-ASIDE FOR ECONOMIC UNCERTAINTY AND WITHOUT, IN MILLIONS



Source: OCTA cash flow data.

Chapter 6: OCTA is Transparent and Accountable to the Public

Transparency and accountability are paramount to OCTA's mission and culture in addition to being a critical measure of success of the M2 Program. As such, we found OCTA is highly focused on accountability with the promises made in the Ordinance and transparency in its outreach, actions, decisions, and data communicated to its Board, the Taxpayer Oversight Committee, stakeholders, and the general public.

Our review noted that OCTA effectively informs the general public and stakeholders about M2 programs and projects through a variety of traditional and digital methods. OCTA resourcefully utilizes strategic outreach methods including website, subscriber email blasts and mailers, social media, videos, blogs, press releases and various community events to inform and involve the public. Surveys and the M2 rebranding, or OC Go, efforts were regularly employed to gauge and enhance public awareness. Further, there seems to be continuous effort to keep the community and stakeholders heavily involved including OCTA's use of the Taxpayer Oversight Committee in accordance with M2 Ordinance provisions.

OCTA Employs a Number of Efforts to Advance Transparency and Accountability

OCTA has incorporated various efforts to ensure compliance with the M2 Ordinance requirement. There are multiple divisions that have collaborated to efficiently ensure transparency in informing and involving the public, most notably the External Affairs Division. The External Affairs Division is responsible for providing overall management and strategic direction for the promotion, outreach, and customer engagement for all OCTA's projects, programs, and services. The division is divided into two departments, Public Outreach and Marketing and Customer Engagement.

- **Public Outreach** is responsible for public outreach on all phases of project development, from planning studies and environmental design to construction and project completion. In addition to working closely with project managers in other divisions on capital projects communications, Public Outreach staff also hire and manage outreach consultants to provide project-phase-specific analyses and strategies for outreach. One key function of Public Outreach is to communicate with the public and implement involvement programs to inform affected parties and advance the development of transportation projects. Additionally, Public Outreach informs the public about upcoming construction activities and helps to mitigate construction impacts.

- **Marketing and Customer Engagement** is responsible for OCTA's promotion and customer relations activities. The department works to ensure the successful delivery of agency-wide marketing programs by way of strategizing and developing digital and marketing campaigns. Whereas Public Outreach is generally more capital construction project focused, Marketing and Customer Engagement focuses efforts on communications related to OCTA's M2 compliance (e.g., overall utilization of M2 sales tax revenues and project implementation progress), as well as communications about OCTA's operations as a whole. The department also gathers customer feedback through customer roundtables and the Special Needs in Transit Advisory Committee.

The External Affairs Division's Director of Marketing and Public Outreach also has a key role in External Affairs' activities, in addition to management and oversight of the Public Outreach and Marketing and Customer Engagement departments. The Director of Marketing and Public Outreach also oversees the coordination of OCTA's public committees (e.g., the Taxpayer Oversight Committee). Collectively, the various roles and responsibilities of the External Affairs Division work together, and with other OCTA divisions, to advance transparency and accountability of OCTA's operations and capital projects.

OCTA Continues to Use a Variety of Communication and Outreach Methods to Advance Transparency, and in Many Cases, is Ahead of Peers

When compared against other transportation and transit agencies, OCTA employed the most communication and outreach methods. In addition, when comparing the various methods used by comparable agencies, OCTA's communication and outreach methods were generally more consistent across mediums, with OCTA frequently utilizing social media, consistent logos, hashtags, and themes. Though not comprehensive of all of OCTA's communication and outreach methods, Exhibit 52 highlights many of OCTA's outreach practices and compares them against other transportation and transit agencies.

EXHIBIT 52. COMPARISON OF OCTA'S VARIOUS COMMUNICATION AND OUTREACH METHODS AGAINST COMPARABLE ENTITIES

Types of Communication and Outreach Methods	OCTA	SANDAG	SFCTA	MAG	RTA	PAG
Consistent Logo	✓	✓	✓	✓		✓
Website	✓	✓	✓	✓	✓	✓
Mobile Friendly Website	✓		✓	✓	✓	✓
Website—Interactive for real-time detours	✓	✓	✓	✓		
Website- Projects Map	✓	✓	✓	✓		
Website links to Social Media	✓	✓	✓	✓	✓	✓
Social Media—General	✓	✓	✓	✓	✓	✓
Facebook	✓	✓	✓	✓	✓	✓
Twitter	✓	✓	✓	✓	✓	✓
Instagram	✓	✓	✓	✓	✓	✓
LinkedIn	✓	✓	✓	✓	✓	✓
YouTube	✓	✓	✓	✓	✓	✓
Social Media—Project Specific	✓	✓		✓		
Email blasts/Newsletter to subscribers	✓	✓	✓	✓	✓	✓
Mobile Apps for real time traffic and detours	✓		✓		✓	

Types of Communication and Outreach Methods	OCTA	SANDAG	SFCTA	MAG	RTA	PAG
Press Release	✓	✓	✓	✓	✓	✓
Newsletter	✓	✓	✓	✓	✓	✓
Direct Mail	✓	✓				
Neighborhood Door Hangers	✓	✓	✓			
Open Meetings	✓	✓	✓	✓	✓	✓
Meetings Audio/Video Posted Online	✓	✓	✓	✓	✓	✓

Source: Table developed based on visits to each transportation and transit agency website, social media pages and internet searches done in October 2021.

Among the many practices utilized by OCTA's External Affairs Division during our period of review, a few stood out due to their successful implementation, in spite of and due to the COVID-19 pandemic:

- ✓ **OCTA Implemented Geofencing For Capital Projects, Greatly Improving Outreach to Orange County Commuters Using the I-405 Freeway.** Since the prior assessment, OCTA has significantly improved their outreach efforts through the use of geofencing. Geofencing is a service that triggers an action when a device enters a pre-set geographic location. OCTA uses geofencing to identify individuals likely to be impacted by current or upcoming capital projects by capturing the location of a device within a specific range and displaying relevant advertisements within mobile applications. For example, an individual driving or living in the Orange County region would receive advertisements on upcoming road closures and other relevant information related to the I-405-Improvement Project. Geofencing has proven highly effective in vastly increasing OCTA's reach to members of the public impacted by OCTA's projects. OCTA staff reported that since implementation of geofencing, OCTA has beat the industry average for impressions and click throughs.[26] Between 2018-2021, geofencing accounted for 2,775,441 impressions. This number is significant when considering other outreach methods during the same time period, such as the mobile app and social media advertising with 31,968 and 46,191 impressions, respectively.

- ✓ **COVID and the Transition to Online Format.** OCTA has adjusted to the impacts of COVID-19 by shifting their attention to virtual engagement practices. Online web presence has significantly increased as website updates, social media, and meetings have shifted to a more virtually-oriented format, stemming from the initial shelter-in-place mandates. Anecdotally, OCTA staff reported that the transition from in-person to virtual meetings led to an increase in participation by three-fold. Staff have further indicated that OCTA intends to keep having virtual meetings available to continue encouraging participation within the community. Among our discussions with OCTA stakeholders, all stakeholders generally had positive comments about OCTA's transition to an

[26] Impressions are just one metric used to determine the effectiveness of outreach methods, measuring how many times the intended content was displayed to an organization's targeted audience. Click-throughs measure the number of times members of the targeted audience actually clicked on the displayed content.

online format, both for meetings and communication as a whole. In the long term, OCTA anticipates transitioning to a more hybrid format for outreach activities, neither entirely physically-oriented as pre-pandemic life, nor entirely online as has been done for much of the pandemic.

- ✓ **OCTA Has Employed Various Methods to Ensure Information is Equitably Distributed Throughout the Community.** While the transition to an online environment creates more opportunity for engagement, it also creates new barriers and obstacles for certain demographics (e.g., access to internet). This creates a potential issue when considering public engagement and feedback. As government organizations continue to adopt to virtual practices, it is important to consider the demographics of stakeholders and account for potential risks in sampling bias when soliciting feedback. OCTA has employed various methods to ensure resources and information are equitably distributed throughout the community. This includes the creation of a diverse community leaders group that has expanded OCTA's outreach to various community groups in Orange County, as well as securing advertisements through Spanish, Vietnamese, and Chinese newspapers. OCTA also conducted a study of southern Orange County, utilizing geographic information system mapping to identify disadvantaged communities and send them surveys, garnering over 1,700 responses.

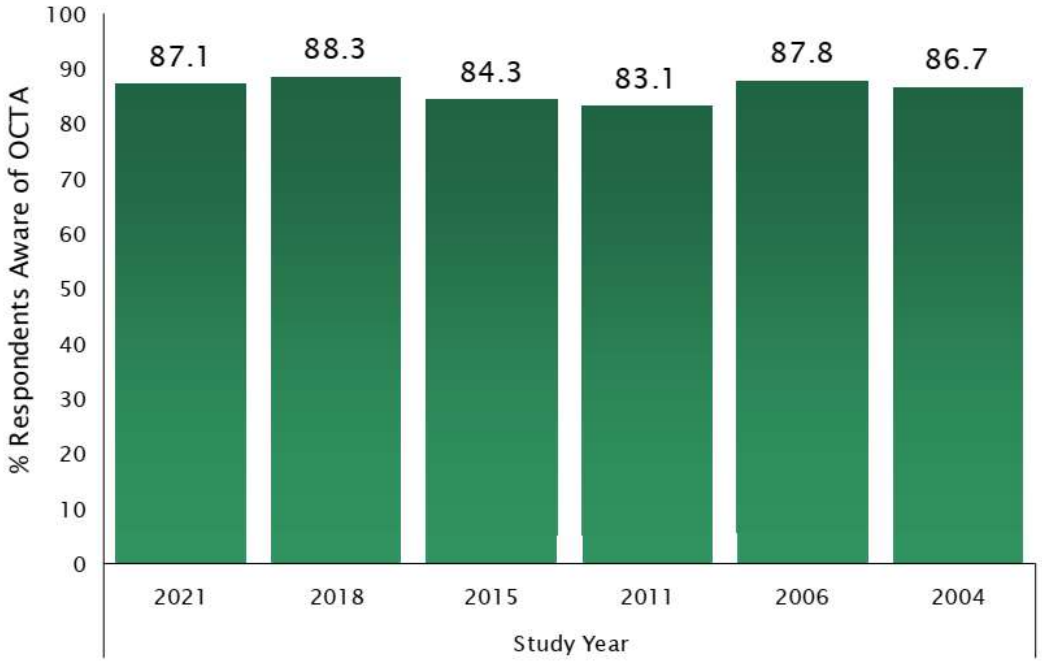
Public Perception of OCTA Has Significantly Improved, Though Awareness of OC Go Since OCTA's Rebranding Effort Has Lagged

External Affairs, on behalf of OCTA, continued to seek public opinion and feedback through various methods, including the use of surveys, such as an Attitudinal and Awareness Survey. Since 2011, OCTA has conducted an Attitudinal and Awareness survey roughly every three years intended to gauge overall public awareness and perceptions of OCTA, as well as understand Orange County residents' travel behavior, use of transportation systems, primary source of information, and demographic factors. The survey, conducted by True North Research, was developed so that a representative sample of Orange County adult residents was selected; that is the results of the survey can be used to reliably estimate the opinions of all adult residents in Orange County. Overall, the survey found that OCTA continued to garner a generally positive public perception with survey participants familiar with OCTA. However, the percent of survey respondents that had heard of OC Go increased marginally (just over one percent) between the 2018 and 2021 surveys, a relatively small increase since OCTA's rebranding of M2 to OC Go in 2017 and changes in in outreach methods in recent years, such as geofencing.

Public Awareness and Opinion Survey Results Continued to be Notably Positive, With More Than Half of All Respondents Having a Favorable Opinion of OCTA

Public awareness and opinion of OCTA has continued to be notably positive for OCTA, with roughly nine out of every ten residents aware of OCTA, as shown by Exhibit 53. Overall, there has been a slight increase in residents' awareness of OCTA since 2004, with the highest level of awareness reported in 2018. According to the 2021 survey's results, there was a roughly one percent decrease in awareness of OCTA, from 88.3 percent in 2018 to 87.1 percent in 2021, though generally the number of survey respondents reporting awareness of OCTA has remained relatively stable.

EXHIBIT 53. NUMBER OF SURVEY RESPONDENTS AWARE OF OCTA, BY STUDY YEAR



Source: OCTA's 2021 Attitudinal and Awareness Survey Summary Report, Figure 7.

Despite this small increase, residents' overall opinion of OCTA has improved significantly, with 53.2 percent of survey participants giving OCTA a favorable rating—a nearly five percent increase from 2018—with another 25.7 percent of respondents preferring not to answer. When looking only at the percentage of respondents that had an opinion of OCTA, positive opinions were more than two times greater than negative opinions, as illustrated in Exhibit 54.

EXHIBIT 54. OPINION OF OCTA, BY STUDY YEAR

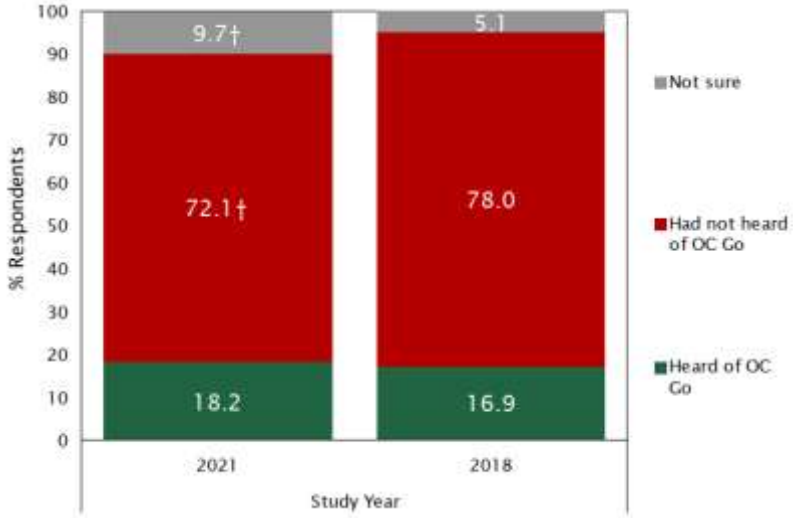
† Statistically significant change ($p < 0.05$) between the 2018 and 2021 studies.

Source: OCTA's 2021 Attitudinal and Awareness Survey Summary Report, Figure 11.

Since Rebranding From M2 to OC Go, Awareness Has Improved Slightly

As part of its regular Attitudinal and Awareness Surveys, OCTA assessed the public's awareness of the OC Go, among other items. The 2021 survey revealed a slight increase in the percentage of respondents reporting they were aware of OC Go, with 18.2 percent of respondents reporting they aware of OC Go prior to taking the survey, compared to 16.9 percent reporting awareness in 2018.

EXHIBIT 55. SURVEY RESPONDENTS' AWARENESS OF OC GO, BY STUDY YEAR



Source: OCTA's 2021 Attitudinal and Awareness Survey Summary Report, Figure 35.

To increase awareness and reduce possible confusion with a similar measure in Los Angeles County, OCTA approved moving forward with a rebranding of M2 as OC Go in 2017 as well as developed signage guidelines and material development for each of the Ordinance areas—freeway, streets and roads, transit, and environmental projects. During the 2018 Attitudinal Awareness Survey, which occurred a year after OCTA's official rebranding of M2, the percentage of survey participants reporting awareness of the measure in was approximately 33 percent; however, when OCTA utilized a follow-up question intended to gauge the depth of respondents' understanding of the measure, 33 percent had only heard of the measure and knew nothing beyond its name, suggesting a lower percentage of Orange County residents aware of OC Go than the initial 33 percent indicating awareness of OC Go.

Overall, the 2021 survey's results *suggest* the M2 rebranding and OC Go marketing efforts have only marginally improved awareness of OC Go; however, several survey design factors are worthy of additional consideration. First, as the survey asked, "Prior to taking this survey, had you heard of OC Go Orange County's voter-approved half cent transportation sale tax?", a survey result of 18.2 percent does not necessarily indicate that only 18.2 percent of residents are familiar with the work OCTA is completing by way of OC Go, only that they may be unfamiliar with the sales tax measure. Second, of the 14 non-demographic questions respondents were asked, none were phrased such that participants were asked whether they were familiar with improvements (e.g., by freeway, transit, and/or streets and roads) being made possible by OC Go. In essence, the survey question could be constructed in a way such that respondents may not make a connection between OC Go and the sales tax as easily as they might between OC Go and transportation and infrastructure improvements, potentially leading to a larger degree of respondents reporting not having heard of OC Go. In both cases, additional questions in future surveys related to OC Go may provide OCTA with greater assurance regarding the actual percentage of Orange County residents familiar with OC Go.

Traffic Congestion Continued to Rank as the Most Pressing Issue Facing Orange County Among One Out of Every Ten Residents

Among Orange County residents' rankings of top issues affecting Orange County, the 2021 Attitudinal and Awareness Survey identified traffic as residents' fourth-greatest priority issue, behind homelessness, none (no most pressing issue), and real estate/housing. Traffic has continued to be one of residents' highest priority issues since 2011, though it should be noted that over the last decade, the percentage of respondents indicating traffic as the greatest priority has never been greater than respondents reporting no greatest priority, as illustrated in Exhibit 56.

EXHIBIT 56. SURVEY RESPONDENTS' TOP 10 MOST IMPORTANT ISSUES FACING ORANGE COUNTY, BY STUDY YEAR

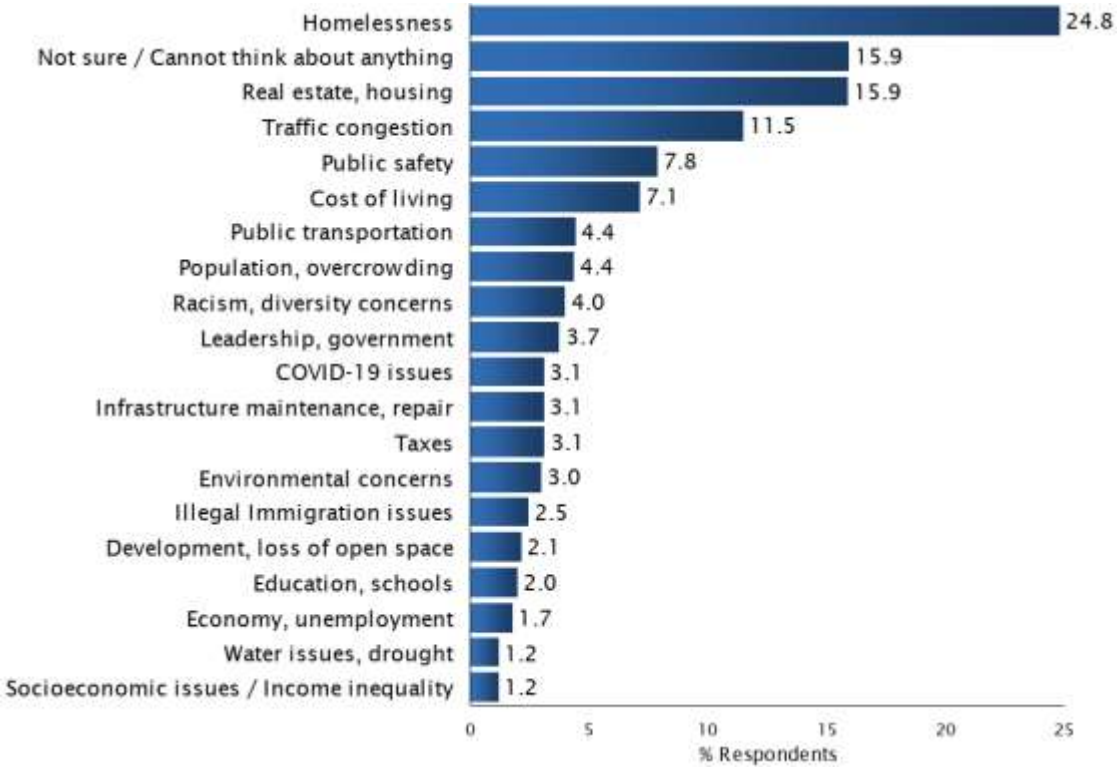
Study Year			
2011	2015	2018	2021
Economy, unemployment	Water issues, drought ↑	Homelessness ↑	Homelessness ↑↓
Not sure / Can't think of anything	Not sure / Can't think of anything ↑↓	Real estate, housing ↑	Not sure / Can't think of anything ↑↓
Education, schools	Traffic ↑	Not sure/ Can't think of anything ↓	Real estate, housing ↓

Study Year							
2011	2015		2018		2021		
Traffic	Economy, unemployment	↓	Traffic congestion	↓	Traffic congestion	↑↓	
Public safety / Crime	Real estate, housing	↑	Cost of Living	↑	Public Safety	↑	
Budget, spending	Cost of Living	↑	Population, overcrowding	↑	Cost of Living	↓	
Real estate, housing	Public safety	↓	Illegal immigration issues	↑	Public Transportation	↑	
Transportation infrastructure	Population, overcrowding	↑	Public transportation	↑	Population, overcrowding	↓	
Population, overcrowding	Education, schools	↓	Public safety	↓	Racism, diversity concerns	↑	
Cost of Living	Homelessness	↑	Infrastructure maintenance, repair	↑	Leadership, government	↑	

Source: OCTA's 2021 Attitudinal and Awareness Survey Summary Report, Table 1.

In terms of the strength of survey respondents' most pressing concerns, homelessness accounted for 25 percent of respondents' most pressing issue, with traffic congestion trailing at fourth place, indicated by 11.5 percent of responses, as illustrated in Exhibit 57. In other words, traffic congestion was considered the most pressing issue facing Orange County for only one in ten residents.

EXHIBIT 57. SURVEY RESPONDENTS' MOST IMPORTANT ISSUES FACING ORANGE COUNTY



Source: OCTA's 2021 Attitudinal and Awareness Survey Summary Report, Figure 6.

The Taxpayer Oversight Committee Continues to Function as Envisioned in the Ordinance

According to the M2 Ordinance, the TOC was formed as a safeguard to ensure taxpayer revenues were spent in accordance with the M2 Ordinance and Transportation Investment Plan. The TOC was charged with annually reviewing and certifying whether expenditures were in compliance with the M2 Ordinance and independently and discretionarily performed ongoing monitoring and reviews to ensure M2 was implemented as approved by voters. Our assessment found that the TOC has continued to fulfill its responsibilities.

M2 stipulates several key responsibilities for the TOC:

1. Vote on M2 Transportation Investment Plan amendments;
2. Hold annual public meeting to determine whether OCTA is proceeding in accordance with the Plan;
3. Update procedural, rules, regulations to operate, as necessary;
4. Annually certify whether M2 revenues have been spent in compliance with the Plan;
5. Determine local agency eligibility by reviewing Congestion Management Program, Mitigation Fee Program, Expenditure Reports, Local Signal Synchronization Plans, and Pavement Management Plans;
6. Receive and review the triennial performance assessment.

Based on our review of TOC meeting minutes, the TOC generally met on a bi-monthly basis and fulfilled their responsibilities as established in its procedures and as required by the M2 Ordinance, as summarized in Exhibit 58. Moreover, the TOC formed two subcommittees to help fulfill responsibilities—an Audit Subcommittee and an Annual Eligibility Review Subcommittee. Meeting minutes demonstrated a general commitment from both TOC and OCTA to follow set procedures and operate in an open and transparent environment where issues were brought to light and discussed as necessary.

EXHIBIT 58. COMPARISON OF OCTA WEBSITE ACCESSIBILITY AGAINST COMPARABLE ENTITIES

	TOC List of Responsibilities	Frequency of TOC Responsibility	Responsibility Fulfilled for Review Period
1	Approve by 2/3 vote any funding changes to plan	Ongoing as needed	✓
2	Hold annual public hearings	Annually	✓
3	Update procedural, rules, regulations necessary to operate	Initial and ongoing as needed	✓
4	Review five (5) of the twelve local eligibility requirements	As determined by each category	✓
5	Chair shall certify Annually that Revenues are spent in compliance to the plan	Annually	✓
6	Receive and review Triennial Performance Assessments	Every three (3) years	✓

Source: OCTA Taxpayer Oversight Committee Meeting Agendas and Minutes.

Recommendation

To improve the quality and depth of information captured by the triannual Attitudinal and Awareness Survey, OCTA should consider:

4. Rephrasing the survey question, or adding an additional question, concerning Orange County residents' awareness of OC Go, such that the question provides an OC Go frame of reference in the context of transportation and infrastructure improvements made possible by OC Go, rather than basing residents' awareness solely off of awareness of OC Go in the context of the voter-approved, half-cent sales tax.

Appendix A: Universe of M2 Projects

24 Project Letters	Project Title	Ordinance Budget (Millions, 2005$)	Segments	Current Baseline (Millions, YOE)	Current Estimate (Millions, YOE)	Dollar Variance	Percent Variance	Completion Status as of June 30, 2021	Project Scope
A	Santa Ana Freeway (I-5) Improvements between Costa Mesa Freeway (SR-55) and "Orange Crush" Area (SR-57)	$470.0	Not applicable	$38.1	$39.4	$1.3	3%	Jan-21	Add new HOVL; 3 miles; both directions
B	Santa Ana Freeway (I-5) Improvements from the Costa Mesa Freeway (SR-55) to El Toro "Y" Area	$300.2	Not applicable	$9.6	$8.4	-$1.1	-12%	Jan-20	New GPL, both directions; 9 miles
			I-405 to Yale Avenue Actual	$230.5	$230.5	$0.00	0%	Feb-29	New GPL both directions; 4.5 miles
			Yale Avenue to SR-55 Actual	$200.4	$200.4	$0.00	0%	Sep-28	New GPL both directions; 4.5 miles
C	San Diego Freeway (I-5) Improvements South of the El Toro "Y"	$627.0	I-5: SR-73 to Oso Pkwy	$195.8	$195.8	-$0	0%	Apr-25	New GPL, both directions; reconstruction Avery Parkway Interchange, 2.2 miles
			I-5: Oso Pkwy to Alicia Pkwy	$196.2	$203.1	$6.90	4%	Dec-23	New GPL; both directions; reconstruction La Paz Road Interchange. 2.6 miles
			I-5: Alicia Pkwy to El Toro Rd	$165.9	$165.9	$0	0%	Oct-24	New GPL, extend HOVL; both directions; 1.7 miles

24 Project Letters	Project Title	Ordinance Budget (Millions, 2005$)	Segments	Current Baseline (Millions, YOE)	Current Estimate (Millions, YOE)	Dollar Variance	Percent Variance	Completion Status as of June 30, 2021	Project Scope
			I-5: SR-73 to El Toro Rd Landscape	Not applicable - project not yet started.	$12.4	Not applicable	Not applicable	Dec-23	Replace landscape, both directions; 6.5 miles
			I-5: Avenida Pico to Vista Hermosa	$113.0	$83.6	-$29.4	-26%	Aug-18	New HOVL, both directions; 0.7 miles
			I-5: Avenida Vista Hermosa to Pacific Coast Highway (PCH)	$75.6	$75.3	-$0.4	0%	Jul-17	New HOVL, both directions; 2.5 miles
			I-5: PCH to San Juan Creek Rd	$70.7	$74.3	$3.6	5%	Jul-18	New HOVL, both directions; 2.5 miles
D	Santa Ana Freeway/San Diego Freeway (I-5) Local Interchange Upgrades	$258.0	I-5/El Toro Road Interchange	$5.4	$5.5	$0.1	3%	Not applicable	Reconstruct interchange. Overall Project length approximately one mile.
			I-5/Ortega Highway Interchange	$91.0	$79.8	-$11.1	-12%	Jan-16	Reconstruct interchange
E	Garden Grove Freeway (SR-22) Access Improvements	$120.0	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Improvements at 3 interchanges along SR-22 completed in 2008 as "bonus project" paid for by M1

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F	Costa Mesa Freeway (SR-55) Improvements	$366.0	SR-55: I-405 to I-5	$410.9	$503.2	$92.3	22%	Apr-26	New GPL, HOVL, both directions; 4 miles
			SR-55: I-5 to SR-91	$131.3	$131.3	$0.00	0%	Jul-29	New lanes, both directions; 7.5 miles
G	Orange Freeway (SR-57) Improvements	$258.7	SR-57: NB Orangewood to Katella	$71.8	$71.8	$0.00	0%	Oct-27	New GPL, NB; Approx. 1 mile
			SR-57: Katella to Lincoln	$78.7	$38.0	-$40.7	-52%	Apr-15	New GPL, NB; 2.8 miles
			SR-57: Orangethorpe to Yorba Linda	$80.3	$52.3	-$28.0	-35%	Nov-14	New GPL, NB, widen existing lanes to standard widths; 2.4 miles
			SR-57: Yorba Linda to Lambert	$79.3	$54.1	-$25.2	-32%	May-14	New GPL, NB, widen existing lanes to standard widths; 2.5 miles
			SR-57: Lambert to Tonner Canyon	$0.00	Not applicable – Environmental Design not yet completed	Not applicable	Not applicable	Not applicable	New GPL; NB, 2.5 miles
H	Riverside Freeway (SR-91) Improvements from the Santa Ana Freeway (I-5) to the Orange Freeway (SR-57)	$140.0	SR-91: WB I-5 to SR-57	$78.1	$59.2	-$18.9	-24%	Jun-16	New GPL, WB; 4.5 miles
I	Riverside Freeway (SR-91)	$416.5	SR-91: Tustin Avenue to SR-55 Interchange	$49.9	$42.5	-$7.4	-15%	Jul-16	New AUXL, WB; 2 miles

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	Improvements from Orange Freeway (SR-57) to the Costa Mesa Freeway (SR-55) Interchange Area		SR-91, SR-55 to Lakeview Avenue (Segment 1)	$100.9	$100.9	$0.0	0%	Sept -27	Westbound operational improvements (approximately 1.5 miles)
			SR-91, La Palma Avenue to SR-55 (Segment 2)	$208.4	$208.4	$0	0%	Mar -28	Additional eastbound general purpose lane (approximately 2.8 miles)
			SR-91, Acacia Street to La Palma Ave (Segment 3)	$116.2	$116.2	$0	0%	Sept -28	Westbound operational improvements (approximately 1.8 miles)
J	Riverside Freeway (SR-91) Improvements from Costa Mesa Freeway (SR-55) to the Orange/Riverside County Line	$352.0	SR-91: SR-241 to SR-71	$104.5	$57.8	-$46.8	-45%	Jan-11	New GPL, EB, widen existing lanes to standard widths; 6 miles
			SR-91: SR-55 to SR-241/East of Weir Canyon	$128.4	$79.7	-$48.7	-38%	Mar-13	New GPL, both directions, widen existing lanes to standard widths; 6 miles
			SR-91: SR-241 to Riverside County Line	Not applicable - project not started	Not applicable	Not applicable	Not applicable	Not applicable	New GPL
K	San Diego Freeway (I-405) Improvements between the I-605 Freeway in Los Alamitos Area and Costa Mesa Freeway (SR-55)	$1,072.8	I-405: SR-55 to I-605 Design-Build	$1,560.2	$2,080.2	$520	33%	Feb-24	New GPL, new HOV, both directions; Approximately 16 miles

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L	San Diego Freeway (I-405) Improvements between Costa Mesa Freeway (SR-55) and Santa Ana Freeway (I-5)	$319.7	I-405: I-5 to SR-55	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Widen freeway both directions; Alternative proposal: GPL, one direction. Approximately 8.5 miles
M	I-605 Freeway Access Improvements	$20.0	I-605/Katella Ave. IC	$29.0	$29.0	$0.0	0%	Nov-25	Modify interchange ramps and lane configurations; Approximately 0.5 miles
N	Freeway Service Patrol	$150.0	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	M2 funded program to assist stranded motorists on the freeway network.
Sub-Total Freeway		**$4,870.9**		**$4,620.0**	**$4,999.0**	**$379.0**	**8%**		
O	Regional Capacity Program	$1,132.8	Raymond Ave. Undercrossing	$77.2	$126.2	$49.0	64%	May-18	New rail undercrossing
			State College Blvd. Undercrossing	$73.7	$99.6	$25.9	35%	Mar-18	New rail undercrossing
			Placentia Ave. Undercrossing	$78.2	$64.5	-$13.7	-17%	Dec-14	New rail undercrossing
			Kraemer Blvd. Undercrossing	$70.4	$63.8	-$6.6	-9%	Dec-14	New rail undercrossing
			Orangethorpe Ave. Overcrossing	$117.4	$105.9	-$11.5	-10%	Oct-16	New rail overcrossing
			Tustin Ave./Rose Dr. Overcrossing	$103.0	$96.6	-$6.4	-6%	Oct-16	New rail overcrossing
			Lakeview Ave. Overcrossing	$70.2	$110.7	$40.6	58%	Jun-17	New rail overcrossing and connector road.

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			Orange County Master Plan for Arterial Highways (MPAH) Local Match	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Awarded to locals via competitive grants, requiring local match.
P	Regional Traffic Signal Synchronizati on Program	$453.1	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Provides funding and assistance to implement multi-agency signal synchronization. been funded.
Q	Local Fair Share Program	$2,039.1	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Awarded on a formula basis to all locals on a bi-monthly basis.
Sub-Total Streets & Roads		**$3,625.0**		**$590.0**	**$667.4**	**$77.32**	**13%**		
R	High Frequency Metrolink Service	$1,129.8	Sand Canyon Grade Separation	$55.6	$61.9	$6.3	11%	Jan-16	Creating a grade separated crossing.
			Rail-Highway Grade Crossing Safety Enhancement	$94.4	$90.4	-$4.0	-4%	Dec-11	50 at-grade rail-highway crossings with focus on safety improvements (new medians, new gate arms, upgrading traffic signals, new pedestrian swing gates, etc.)
			17th Street Grade Separation - LOSSAN (Environmental Only)	$3.2	$2.5	-$0.7	-23%	Nov-17	Construct highway-rail grade separation in City of Santa Ana
			Laguna Niguel/San Juan Capistrano Passing Siding	$25.3	$36.4	$11.1	44%	Nov-20	Construct 1.8 miles of new passing siding track adjacent to existing main track
			Laguna Niguel/Mission Viejo Station Surface Parking Lot	$4.3	$4.1	-$0.2	-5%	Oct-13	Construct parking lot

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			Laguna Niguel/Mission Viejo Station ADA Ramps	$3.6	$5.0	$1.4	40%	Sep-17	Upgrade station facilities to be ADA compliant
			Placentia Metrolink Station & Parking Structure	$34.8	$40.1	$5.3	15%	Jan-24	Construct new station including parking structure, bus stop, and passenger loading zone
			Anaheim Canyon Station	$27.9	$34.3	$6.3	23%	Jan-23	Construct 3400 linear ft of second station tracks, new second platform and upgrade parking lot to be ADA compliant.
			Orange Station Parking Expansion	$33.2	$30.9	-$2.3	-7%	Feb-19	Construct new parking structure
			Tustin Station Parking Expansion	$17.6	$15.4	-$2.2	-13%	Sep-11	Construct new parking structure
			Fullerton Station Parking Expansion	$42.0	$29.8	-$12.2	-29%	Jun-12	Construct new parking structure
			Fullerton Transportation Center Elevator Upgrades	$3.5	$4.2	$0.7	21%	May-19	Modify pedestrian bridge, add elevators
			San Clemente Beach Trail Safety Enhancements	$6.0	$5.0	-$1.0	-17%	Mar-14	Enhancing safety features at pedestrian crossings.

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S	Transit Extension to Metrolink	$1,000.0	OC Streetcar	$424.4	$440.0	$15.6	4%	Oct-23	Construct 4.15-mile streetcar line connecting the SRTC to Downtown Santa Ana
			Bus and Station Van Extension Projects	not applicable	not applicable	not applicable	not applicable	not applicable	Projects intended to increase frequency of service to connect to Metrolink.
T	Convert Metrolink Station(s) to Regional Gateway that Connect Orange County with High-Speed Rail System	$57.9	Anaheim Regional Transportation Center (ARTIC)	$227.4	$232.2	$4.8	2%	Dec-14	Construct multi-modal transit center serving existing rail and bus and future CA high-speed train
U	Expand Mobility Choices to Seniors and Persons with Disabilities	$392.8	Senior Mobility Program	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Projects intended to expand transportation services for seniors.
			Senior Non-Emergency Medical Transportation Program	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Projects intended to supplement existing non-emergency medical transportation to seniors.
			Fare Stabilization Program	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Program intended to stabilize fares and provide fare discounts to seniors and persons with disabilities.
V	Community Based Transit/Circulators	$226.5	not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	This program provides funding for local jurisdictions to develop local bus transit services that complement regional bus and rail services to meet needs in areas not adequately served by regional transit.

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W	Safe Transit Stops	$25.0	not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Provides funding for passenger amenities at the busiest transit stops across Orange County.
Sub-Total Transit		**$2,832.0**		**$1,003.2**	**$1,032.1**	**$28.9**	**3%**		
X	Environmental Cleanup	$237.2	Tier 1	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Implements street and highway-related water quality improvement programs and projects that assist agencies countywide with federal Clean Water Act standards for urban runoff.
			Tier 2	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	
Total		**$11,565.1**		**$6,213.2**	**$6,698.4**	**$485.2**	**8%**		