Orange County Transportation Authority

Triennial Performance Audit
of the Orange County
Transit District

FY 2019 to FY 2021

April 2022

FINAL REPORT

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Summary of Exhibits

1.   Executive Summary

This report presents the results of the triennial performance audit of Orange County Transportation Authority's (OCTA) public transit program operated by the Orange County Transit District (OCTD). The purpose of the audit is to provide a tool for OCTA , OCTD management, and the California State Department of Transportation (Caltrans) to review performance trends, evaluate compliance with California's Transportation Development Act (TDA), and obtain a high-level review of key functional achievements and challenges during the audit period. This triennial performance audit was conducted in accordance with the Caltrans TDA Performance Audit Guidebook under California Public Utilities Code (PUC) Section 99246.

The three-year period audited encompasses the period from July 1, 2018 through June 30, 2021. The performance audit included the following:

- **Compliance with PUC –** ensuring compliance with applicable PUC requirements.
- **Data Collection and Reporting –** verification of TDA data collection and reporting procedures.
- **Prior Audit Recommendations –** reporting on implementation of the prior triennial performance audit recommendations.
- **Performance Trends –** summaries of performance indicators for the audit period.
- **Functional Review –** high-level review of key functional areas surveyed as part of the process of conducting the audit, resulting in suggestions for operational and management improvements.

A brief summary of our findings and recommendations are presented on the following page. More details of our findings and recommendations are included in the body of this report.

COMPLIANCE WITH PUC

Orange County Transit District met all compliance requirements with respect to the PUC

Section 99246.

DATA COLLECTION AND REPORTING

OCTA's *Bus Operations Performance Measurements Reports* are a highly effective tool which allowed OCTD to monitor its system's key performance indicators in order to minimize service inefficiencies and reallocate service where it was most needed.

OCTD was mostly consistent with its reporting of key financial and operating statistics between the various agencies. Noted discrepancies among the compliance reports included non-financial data consistency between the State Controller's and National Transit Database (NTD) reports for passenger revenues, vehicle service hours, vehicle service miles, peak vehicles and active fleet. We recommend data reporting consistency be improved, specifically related to non-financial data reported in the State Controller's and NTD reports for demand response contracted services.

PRIOR AUDIT RECOMMENDATIONS

OCTD made considerable progress in addressing prior year performance audit recommendations.

PERFORMANCE TRENDS

OCTA's *Comprehensive Business Plan* establishes OCTD's overall system of goals and objectives and connects long range service plans to a fiscally responsible financial planning process. OCTD transit operations made significant plans to restructure its services to improve productivity and attract new riders prior to the COVID pandemic. Performance was significantly impacted by the coronavirus pandemic in FY 2020 and FY 2021.

FUNCTIONAL REVIEW

OCTD has made significant progress on its Board–directed initiatives, including its vehicle electrification program. It has also addressed many of its previous vehicle maintenance

useful life benchmark objectives and launched several pilot programs designed to increase productivity and attract new riders, such as its OC Mobile App and OC Flex microtransit demonstration program. OCTD should continue these pilot initiatives and consider environmental changes resulting from the pandemic that may have shifted employment and travel patterns within its service area.

Recommendation

Data inconsistencies were observed in several non-financial performance indicators reported in OCTD demand response modes. We recommend the data collection process for demand response services be reevaluated and monitored, specifically related to non-financial data compiled for State Controller's and NTD reports to ensure consistency in reporting. OCTD Management agrees with this recommendation.

More details of this finding and recommendation and management's response is included in the body of this report.

2. Performance Audit Approach and Methodology

The State mandates that all recipients of TDA funding undergo a performance audit every three years in order to remain eligible for future TDA funding. In FY 2022, OCTA retained BCA Watson Rice LLP (BCA) to conduct a Triennial Performance Audit of the OCTD.

The Triennial Performance Audit was conducted in accordance with Generally Accepted Government Auditing Standards (GAGAS). GAGAS requires that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our review objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

This performance audit was also conducted in accordance with the *Performance Audit Guidebook for Transit Operators and Regional Transportation Planning Entities, September, 2008, Third Edition* (Guidebook) produced by the California Department of Transportation, which outlines the processes for evaluating a transit organization's effectiveness and efficiency, pursuant to State requirements.

The Guidebook provides general information regarding performance audit requirements, suggested approaches and methodologies. More specific information necessary to understand and define the scope of these audits is included in the *Transportation Development Act, Statutes and California Code of Regulations, July 2018* (TDA Code). Various sections of these regulations are periodically updated through legislative action. However, the annual booklet of TDA Code has not been updated during this triennium. An overview of recent legislation was conducted to examine its potential impact on the FY 2019 - 2021 Triennial Performance Audit of Orange County Operators to ensure that this audit addressed legislative changes enacted in the past three years.

Legislative Issues Affecting the Triennial Performance Audit

Since 2018, three legislative bills were passed into law that may have implications on this performance audit. Assembly Bill (AB) 90, signed into law in June 2020 and AB 149

enacted in July 2021 mitigate penalties for noncompliance with requirements for allocation of State funding to the State Transit Assistance Program (STA), which result in funding reductions. Amendments to STA provisions provide stability for funding that could be impacted by service productivity losses experienced by transit operations statewide, due to the coronavirus pandemic.

A third bill, Senate Bill (SB) 1119, amends the Low Carbon Transit Operations Program (LCTOP) to permit the use of these funds for transit fare subsidies, including discounted and free student transit passes. This provision may impact how fare revenues are aggregated for the purpose of calculating TDA mandated farebox recovery ratios.

Statutory changes made by AB 90 and AB 149 waive funding penalties for noncompliance with farebox recovery ratio, reasonable progress toward implementing prior year performance audit recommendations, STA efficiency standard requirements and 50% expenditure limitation through FY 2022 – 2023. The Triennial Performance Audit does not consider compliance with the STA efficiency standard or the 50% expenditure limitation; however, it does assess compliance with farebox recovery ratio standards and progress on prior year audit recommendations.

Given this most recent legislative direction, our report will reflect any findings of noncompliance related to follow-up on prior performance recommendations (PUC 99244) or farebox recovery standards (PUC 99268.2 and 99268.3) as not being subject to funding penalties being imposed by the Regional Transportation Planning Entity.

This Triennial Performance Audit included a review of the following:

- **Compliance with PUC Section 99246** – evaluating the efficiency, effectiveness and economy of the operation of the entity being reviewed, including, but not limited to, a verification of the following performance indicators defined in PUC Section 99247:
  - Operating cost per passenger
  - Operating cost per vehicle hour

- o Passengers per vehicle service hour

- o Passengers per vehicle service mile; and

- o Vehicle service hours per employee

- **Data Consistency** – verification of TDA data collection and reporting procedures as well as consistency of data reporting between federal National Transit Database (NTD) and State Controller's Transit Operators Financial Transactions Report.

- **Prior Audit Recommendations** – reporting on implementation of prior triennial performance audit recommendations.

- **Performance Trends** – summaries of performance indicators for the audit period related specifically to operational performance, efficiency and effectiveness. This audit acknowledges the negative impacts of the coronavirus pandemic on transit ridership beginning in FY 2020 and will analyze performance to the extent possible to examine performance from both a pre-pandemic and post-pandemic perspective.

- **Functional Review** - high-level review of key functional areas which were surveyed as part of the audit process. Areas of review included departments within the purview of the OCTA Operations Division, which included general management, scheduling and operations support, operations administration, maintenance administration, and contracted transportation services. The functional area interviews will provide an opportunity to summarize best practices in the municipal transit emergency response to the pandemic and challenges to rebuild ridership as the region recovers economically.

The Guidebook details an approach to conducting the performance audit which consists of a review of key financial, administrative and operational documents and interviews with key management staff.

DOCUMENTS REVIEWED

The following compliance documents were reviewed to ascertain completion and timely submission to the appropriate reporting agency:

- National Transit Database (NTD) reports for FY 2019 through FY 2021

- State Controller Transit Operations Financial Transactions reports for FY 2019 through FY 2021

- Prior Triennial Performance Audit and written responses to the recommendations

- California Highway Patrol Inspection Reports for FY 2019 through FY 2021

- State Transit Assistance Fund Claims for FY 2019 through FY 2021

- Local Transportation Fund Claims for FY 2019 through FY 2021

- TDA Guidelines, February 2021, Revised

In conjunction with the functional area interviews, the following documents were provided by the OCTD:

- Bus Operations Performance Measurements Reports – Fourth Quarter Annual Summaries, FY 2019 through FY 2021 containing:

    o Operational key performance indicators

    o OCTD line level performance evaluations

    o OC Bus 360º Plan performance updates

- OCTA Approved Comprehensive Business Plans for FY 2019 and FY 2021 containing:

    o Organizational charts

    o Vision, Mission and Goals Statements

    o Planned service and capital improvement plans

    o Operating and capital cash flow statements

- Employment and Travel Survey Summary Report of Pandemic Impacts, August 2020

- OCTA Transit - Supportive Design Guidelines, June 30, 2021

- OC Streetcar Santa Ana/Garden Grove Operations and Maintenance Plan

- OCTA Progress on Accomplishments FY 2019 through FY 2021

- Zero - Emissions Bus Pilot Update

- OC Bus Book, February 2022

INTERVIEWS WITH KEY MANAGEMENT

The following management team members were interviewed as part of the Triennial Performance Audit:

- Jennifer Bergener, Deputy Chief Executive Officer
- Beth McCormick, General Manager, Transit
- Johnny Dunning, Department Manager, Scheduling and Bus Operations Support
- Jack Garate, Department Manager, Contracted Transportation Services
- Cliff Thorne, Director, Maintenance-Administration
- Dayle Withers, Manager, Maintenance-Administration
- Dinah Minteer, Department Manager, Rail Operations
- Cleve Cleveland, Department Manager, OC Streetcar Operations
- Ana Ripalda, Senior Department Manager, Bus Operations-Administration
- Sean Murdock, Director, Finance and Administration
- Victor Velasquez, Department Manager, Financial Planning and Analysis
- Sam Kaur, Department Manager, Revenue Administration

3. Background, Challenges, and Accomplishments

The OCTD was established by state legislation in 1972 and began with the operation of eight local fixed routes. It became a part of the OCTA when the regional planning agency was created in 1991. OCTA is governed by an 18–member Board of Directors.

OCTA GOALS and OBJECTIVES

OCTD is one of the OCTA's core business units which contains all transit operations, including fixed route, paratransit, and vanpool operations. The Operations Division is guided by the following goals established by the OCTA Board of Directors:

- **Mobility** – Deliver programs, projects and services to improve the movement of people and goods throughout Orange County and the region.
- **Public Service** – Enhance customer satisfaction by understanding, connecting with and serving our diverse communities and partners.
- **Fiscal Stewardship** – Ensure fiscal health through prudent financial management and by protecting and leveraging available revenue sources.
- **Stewardship** – Embrace responsible policies and practices designed to promote environmental sustainbllity and enhance the safety and quality of life in Orange County.
- **Organizational Excellence** – Continue the tradition of being a high-performing organization through employee development and efficient business practices.

Every two years, the OCTA Board of Directors approves a *Comprehensive Business Plan*, which includes a summary of OCTD's service, staffing, fleet and cash flow plans over a 20 – year horizon. OCTD reports progress on its plan objectives through OCTA's annual *Progress Report on OCTA Accomplishments.*

In February 2020, OCTD transit service (OC Bus) consisted of 58 bus routes and carried over 37 million annual passenger trips. The coronovirus pandemic (COVID–19), which has been the most significant challenge of this triennial period, resulted in the reduction

of OCTD bus routes from 58 to 50. Despite the impact of this global pandemic, OCTD has continued to provide essential transit services to the Orange County community and make significant strides toward achieving its agency's goals.

This report primarily focuses on the Operations Division, although consistent with TDA compliance requirements there will be inherent overlaps with other OCTA divisions responsible for reporting requirements related to transit operations and performance activities.

SYSTEM PROFILE

The OCTD service area is 436 square miles, serving approximately 3 million residents in 34 cities and unincorporated areas of Orange County and adjacent Riverside and Los Angeles Counties. The majority of fixed route service is concentrated in the cities of Anaheim, Costa Mesa, Fountain Valley, Fullerton, Garden Grove, La Habra, Orange, Placentia, Santa Ana, Stanton, Tustin and Westminster. The service includes the following modes of transportation:

- *OC Bus* – OCTD operates 36 local, 8 community, 3 limited–stop and 5 rail feeder fixed route services. These routes operate within a grid system that connects at major transfer areas in the cities of Orange, Fullerton, Santa Ana, Laguna Hills, and major trip generators including University of California at Irvine, John Wayne Airport and South Coast Plaza Mall. In FY 2021, service was temporarily suspended on eight commuter express services and one rail feeder line due to the pandemic. OC Bus operates over a 23 hour span of service, from approximately 3:26 a.m. to 2:26 a.m.
- *OC Flex* – OCTD implemented this shared-ride micro-transit pilot service in FY 2019 serving the communities of Aliso Viejo, Laguna Nigel and Mission Viejo. OC Flex provides riders the ability to purchase a $5.00 day pass for unlimited rides within its established zone, using a mobile app.

- *OC ACCESS* – is the complementary paratransit provider for the Orange County area, pursuant to provisions of the federal Americans with Disabilities Act (ADA). OCTD provides reservation-based service through a contracted service provider, who subcontracts with local taxi operators to provide supplemental advanced reservation trips. OC ACCESS also offers a premium same day taxi service to expand transportation options for eligible users. OC Access is available to persons aged 65 or older or with qualifying underlying health conditions and operates within the same service span as OC Bus.

- *Vanpools* – The Operations Division administers OCTA's vanpool program by providing contracts to private companies that offer vehicles, insurance, maintenance, and service to customers on a monthly basis. OCTA provides a monthly subsidy for each qualified vanpool to offset operational costs. In FY 2021, active vanpools serviced over 47 worksites in Orange County.

FARES

OCTD offers a variety of fare options. Fares may be paid using exact change when boarding. Passengers may also purchase One Day Passes when boarding or in advance from over 100 local retailers or in real time using the OC Bus Mobile App. Using the OC Bus Mobile App, customers can purchase any fare type accepted on the system.

The following Exhibit 1 is a summary of OCTD's fare structure:

Exhibit 1: Summary of Transit Fares					
				Prepaid	
Fare Type	Cash	One Day Pass	Transfer Upgrade	Day Pass	30-Day Pass
LOCAL					
Adult	$2.00	$5.00	N/A	$4.50	$69.00
Senior and Disabled	$0.75	$1.50	N/A	$1.35	$22.25
ACCESS Eligible Fixed Route	$0.25				
OC EXPRESS					
Adult	$4.00	$8.00	$2.00	N/A	$120.00
Senior and Disabled	$3.50	$7.00	$2.75	N/A	$105.00
EXPRESS					
Adult	$7.00	$14.00	$5.00	N/A	$210.00
Senior and Disabled	$6.00	$12.00	$5.25	N/A	$180.00

KEY CHALLENGES DURING THE AUDIT PERIOD

Challenges in addressing the coronavirus pandemic were the top priority for all transit operators during the triennial audit period, beginning in February 2020, as the first cases of the COVID-19 virus were being documented in the United States. Initially, transit agencies began providing personal protective equipment for employees, upgrading standard operating procedures for sanitizing vehicles and equipment, and implementing in-service social distancing protocols.

OCTD began its COVID response on March 16, 2020, with enhanced cleaning efforts on buses. The following month, OC Bus implemented rear-door boarding and seat spacing protocols to encourage social distancing. OC Bus provided face masks and hand

sanitizers to coach operators in April 2020 and strongly encouraged passengers to wear face coverings when riding the bus. By the following month, face coverings were required for passengers and all buses were equipped with hand sanitizers. It was almost a year later, January 29, 2021, before the Centers for Disease Control and Prevention (CDC) would issue an Order requiring the public to wear face masks while traveling on public transportation and in transportation hubs.

Employee safety measures were also a key priority for OCTD. Personal leave was provided for at-risk employees starting in March 2020. In June 2020, laser thermometer systems were installed at the agency's bases to begin daily temperature screenings and *Work Smart – Stay Safe* training began for Coach Operators, as employees began to return to work from COVID-19 leaves. By summer 2020, an approved driver shield configuration had been designed for installation on the entire OCTD fleet and a new voice annunciation message was deployed to assist operators informing customers about face covering requirements.

As buses were equipped with driver shields, hand sanitizers, face masks, social distancing and messaging systems, OC Bus began transitioning to front door boarding in September 2020. Buses, which average a seating capacity of 40 – 60 seats, were restricted with maximum passenger capacity of 25 to 35 passengers.

The following is a summary of other key challenges addressed specifically by OCTD during the audit period:

- Declining ridership, due to COVID -19, upended progress made in OC Bus 360 service reallocation plans.
- Staffing challenges, particularly for coach operators and mechanics, due to increased competition from private sector labor markets.
- Supply chain delays, impacting vehicle maintenance.

KEY ACCOMPLISHMENTS DURING THE AUDIT PERIOD

The following is a summary of the key accomplishments achieved by OCTD during the audit period:

- Implementation of the OC Flex Micro-transit Pilot Project.

- Initiation of the H2B Pilot, which included ten hydrogen buses and hydrogen fueling stations, capable of fueling up to 50 buses per day.

- The OCTA Board approved the purchase of ten plug-in Battery Electric Buses and charging stations.

- Completed fleet rehabilitation project, that repowered 175 compressed natural gas (CNG) buses to "near-zero" emissions.

- Implementation of OC Bus Mobile App, which allows passengers to purchase all fare media in real-time or in advance of boarding the bus.

4. Compliance Review

AREAS OF REQUIRED COMPLIANCE

The objective of this section is to detail compliance with the State's requirements for transit operations and regional planning, implementation of the recommendations set forth in the prior triennial performance audit and maintaining a consistent reporting of performance statistics to local, state and federal agencies.

COMPLIANCE WITH THE STATE PUC REQUIREMENT

Transit systems must comply with TDA requirements that are specified in PUC Regulations and the California Code of Regulations as noted in Exhibit 2. The compliance matrix provides the degree to which funds allocated to the claimant pursuant to TDA requirements were expended in conformance with applicable laws, rules and regulations. OCTD was found to be compliant with all applicable PUC requirements.

It should be noted that OCTD assigns its allocated regional funds in accordance with the SB 508 definition of *local subsidy*, as documented by its definition of "Qualifying Revenues" in OCTA's February 2021 TDA Guidelines.

Exhibit 2: OCTD Compliance with PUC Requirements		
Code Reference	**Operator Compliance Requirements**	**Compliance Finding**
PUC Section 99243	Submit annual reports to the State Controller, based on the Uniform System of Accounts and Records established by the State Controller, within seven months after the end of the fiscal year.	In Compliance
PUC Section 99245	Submit annual fiscal and compliance reviews to RTPE and State Controller within 180 days of the end of the fiscal year or receive 90-day extension.	In Compliance
PUC Section 99251	CHP has certified operator's compliance with Vehicle Code 1808.1 within 13 months prior to TDA claim submittal.	In Compliance

	Exhibit 2: OCTD Compliance with PUC Requirements	
Code Reference	**Operator Compliance Requirements**	**Compliance Finding**
PUC Section 99261	Claims for TDA funds are submitted in compliance with RTPE's rules and regulations.	In Compliance
PUC Section 99264	Public transportation vehicles designed to be operated by one person are not routinely staffed with two or more persons.	In Compliance
PUC Section 99266	Operating budget has not increased by more than 15% over preceding year unless reasonable justification has been provided.	In Compliance
PUC Section 99267	The operator's definitions of performance measures are consistent with the PUC.	In Compliance
PUC Section 99268.2 99268.3	Operator has maintained a ratio of fare revenues to operating costs at least equal to or exceeding 20% for the general public service in urban areas.	In Compliance
PUC Section 99271	The current cost of the operator's retirement system is fully funded with respect to the officers and employees of its public transportation system, or the operator is implementing an RTPE-approved plan to fully fund the retirement system within 40 years.	In Compliance
CA Code of Regs	Available federal funds are used prior to claiming STA funds.	In Compliance

CONSISTENCY OF DATA REPORTING

Operators are expected to consistently report performance statistics to local, state and federal agencies. Exhibit 3 provides a summary of key statistics provided to the following agencies:

- **National Transit Database (NTD)** - The Federal Transit Administration (FTA) requires that transit agencies which receive FTA grants annually submit financial and operating data in uniform categories.

- **State Controller's Office** - The state controller's office requires that all agencies submit an annual summary of financial statistics.

Orange County Transit District			
Exhibit 3: Compliance Data Consistency			
Source	Review Period		
	FY19	FY20	FY21
Operating Costs			
FTA National Transit Database	$ 288,993,915	$ 268,394,220	$ 255,226,861
State Controller's Report	$ 285,705,995	$ 265,646,597	$ 256,773,899
Farebox Revenues			
FTA National Transit Database	$ 54,749,719	$ 42,450,631	$ 16,511,249
State Controller's Report	$ 54,749,719	$ 38,290,473	$ 14,573,917
Local Subsidies and Auxiliary Revenues			
FTA National Transit Database	$ 53,898,608	$ 79,334,178	$ 10,324,350
State Controller's Report	$ 55,998,764	$ 61,402,559	$ 27,654,118
Unlinked Passengers			
FTA National Transit Database	40,743,654	33,009,047	20,607,369
State Controller's Report	40,987,200	33,349,139	20,607,369
Vehicle Service Hours			
FTA National Transit Database	2,638,126	2,232,009	1,579,914
State Controller's Report	2,606,749	2,400,359	1,579,970
Vehicle Service Miles			
FTA National Transit Database	40,333,507	33,526,485	21,394,468
State Controller's Report	39,792,394	37,042,800	21,403,019
Employee Full Time Equivalents			
FTA National Transit Database	927	912	899
State Controller's Report	1,991	1,721	867
Peak Vehicles			
FTA National Transit Database	1,470	1,330	678
State Controller's Report	1,314	1,313	628
Active Vehicles			
FTA National Transit Database	1,659	1,562	1,003
State Controller's Report	1,491	1,665	1,000

OCTD was somewhat consistent with its reporting of key financial and operating statistics between the federal and state reporting agencies. For the purpose of comparing operating costs, depreciation expenses were excluded from total operating costs in the State Controller's Report, consistent with NTD guidelines. This report did not adjust for other reconciling items noted in the federal report. It should also be noted that the Local Subsidies and Auxiliary Revenues category includes all Directly Generated Dedicated Funds and Local Government Funds expended on Operations identified in the NTD reports and all Operating Revenues (excluding passenger fares) and Local Government Funds identified in OCTD's State Controller's reports. This aggregation is intended to facilitate the calculation of farebox recovery ratio in accordance with SB 508.

Noted discrepancies in non-financial indicators include:

- Unlinked passengers – Inconsistencies appear in the reporting of unlinked passengers reported in the Demand Response modes.
- Vehicle Service Hours - Inconsistencies appear in the reporting of vehicle service hours reported in the Demand Response modes.
- Vehicle Service Miles - Inconsistencies appear in the reporting of vehicle service miles reported in the Demand Response modes.
- Peak Vehicles - Inconsistencies appear in the reporting of peak vehicles reported in the Demand Response and Vanpool modes.
- Active Vehicles - Inconsistencies appear in the reporting of active vehicles reported in the Motor Bus and Demand Response modes.

In November 2021, OCTD modified its internal procedures for demand response contracted services data collection to include additional monthly monitoring of source documentation.

PRIOR AUDIT RECOMMENDATIONS AND FINDINGS

TDA audit guidelines require a follow-up on implementation of recommendations from the prior period's audit. Recommendations for improvement from the prior triennial

performance audit are detailed in Exhibit 4 below.

	Exhibit 4: Prior Audit Recommendations and Implementation Progress	
#	**Prior Audit Recommendations**	**Implementation Progress**
2	Seek opportunities to increase ridership: a) Implement OC 360 bus strategy b) Document efficacy of college passes and mobile ticketing c) Evaluate OC Flex Pilot Program d) Strengthen regional partnerships with adjacent counties	OCTD implemented OC Bus 360, OC Flex Pilot, college passes and OC Mobile App., despite challenges presented by COVID-19. In FY2019, OCTD worked in coordination with L.A. Metro, Foothill Transit, Norwalk Transit, Long Beach Transit and Gateway Cities to study connections between the two counties. OCTD's ability to strengthen regional partnerships was impacted by the COVID-19 pandemic.
5	Plan for impacts of longer bus lives and clean fleets by updating Fleet and Facility Management Plan a) Clarify useful life benchmarks b) Improve documentation of current and planned fleet technology choices to assess tradeoffs of various fleet types	OCTD made significant progress in its zero-emissions bus program and establishing benchmarks in its Transit Assets Management Plan. OCTD was successful in rehabilitating 175 buses to extend their useful life to 18 years.
6	Demand Response - Set up recurring route efficiency review process. Determine appropriate level of engagement by OCTA and contractor staff to generate supporting data and analysis	Progress on this recommendation was adversely impacted by COVID, primarily due to the requirements for social distancing, which restricted the DAR service from providing shared rides.

5.   Operational Performance Trends

OVERVIEW

In this section we present the results of our analyses of performance statistics for the three-year audit period for services operated by OCTD. California PUC Section 99246 mandates that a triennial performance audit analyze an operator's performance of five key performance indicators:

1. Operating cost per vehicle service hour

2. Operating cost per passenger

3. Passengers per vehicle service hour

4. Passengers per vehicle service mile

5. Vehicle service hours per employee

Analysis of these indicators were compiled using data from NTD reports prepared by OCTD. The performance trends cover the period from FY 2019 through FY 2021, with FY 2018 used as a base year to provide a point of reference for the analyses.

While designed to assess efficiency and effectiveness trends system-wide over the audit period, this analysis has been affected by the impacts of the coronavirus pandemic (COVID).   The pandemic resulted in significant ridership losses due to "safer at home" restrictions and temporary shutdowns of nonessential businesses, beginning in March 2020. COVID effected transit system performance for one-third of FY 2020 and the entirety of FY 2021.

During this period, all transit operators, including OCTD were challenged to continue to provide a level of transit service sufficient to meet the needs of essential workers who were not subject to stay at home orders. Additionally, and foremost, the agency was required to implement safety protocols that maximized safety for its employees. These protocols were previously discussed in Section 3 of this report.

For the purposes of assessing OCTD performance trends, the TDA indicators are segmented into "pre-pandemic" and "post-pandemic" groupings.

It should be noted that OCTD's quarterly *Bus Operations Performance Reports* monitor operating costs per vehicle service hour by mode and by route. The quarterly metrics exclude general administrative and other overhead costs, which are included in the following exhibits.

OCTA's Bus Operations Performance Measurements Reports are a highly effective tool which allowed OCTD to monitor its system's key performance indicators in order to minimize service inefficiencies and reallocate service where it was most needed, particularly given the unprecedented shift in the operating environment during this audit period. Quarterly performance reports also provided effectiveness and efficiency benchmarks for its operations, vehicle maintenance and customer service functions, by monitoring:

- Preventable accidents
- Miles between road calls
- Customer complaints
- On-time performance
- Ridership and productivity, both system-wide and route-level

PERFORMANCE INDICATOR TABLES – SYSTEM-WIDE

A summary of high-level trends within key operational indicators is shown in Exhibit 5, which provides detailed reporting by fiscal year. System-wide indicators reflect all modes reported to the federal National Transit Database, including Motor Bus, Commuter Bus, Demand Response, Shared Ride Taxi and Vanpool. Looking at FY 2019 performance prior to the pandemic, OCTD's key base indicators reflected a modest decrease in ridership (-0.5%) and farebox revenues (-0.77%). This pre-pandemic trend is also shown in system-wide efficiency measures.

- **Operating Cost Per Vehicle Service Hour –** OCTD experienced an 8.02% increase in cost per hour.

- **Operating Cost Per Passenger –** Cost per passenger increased by 10.5%.

- **Passengers Per Vehicle Service Hour –** Passengers per vehicle service hour decreased by -2.24%.

- **Passengers Per Vehicle Service Mile –** Passengers per vehicle service mile decreased by -2.94%

- **Vehicle Service Hours Per Employee –** While all other data for system-wide performance indicators are derived from NTD reports, employee FTEs were taken from the agency's State Controller's reports. This distinction is made for two reasons: 1) NTD reports do not include employee counts from purchased transportation providers, while State Controller's reports provide FTEs for agency and contracted employees, and 2) the definition of FTE varies between the two reports. NTD defines an FTE as total employee hours divided by 2080 hours, while the State Controller's report defines FTEs as employee hours divided by 2000. Base year FY 2018 State Controller's data was not available for this analysis but is presented in the evaluation of trends for the current triennium.

Exhibit 5: OC Bus System-Wide Performance							
	Pre - pandemic				Post - pandemic		
Performance Measure[1]	Base Year FY18	FY19	Percent Change FY18 - 19	FY20	Percent Change FY19 - 20	FY21	Percent Change FY20 - 21
Key Base Measures							
Operating Costs	$ 270,833,203	$ 288,993,915	6.71%	$ 268,394,220	-7.13%	$ 255,226,861	-4.91%
Fare Revenue	$ 55,174,623	$ 54,749,719	-0.77%	$ 42,450,631	-22.46%	$ 16,511,249	-61.10%
Auxiliary + Local Revenues	$ 37,515,569	$ 53,898,608	43.67%	$ 79,334,178	47.19%	$ 10,324,350	-86.99%
Vehicle Service Hours	2,670,586	2,638,126	-1.22%	2,232,009	-15.39%	1,579,914	-29.22%
Vehicle Service Miles	40,537,480	40,333,507	-0.50%	33,526,485	-16.88%	21,394,468	-36.19%
Unlinked Passengers	42,191,691	40,743,654	-3.43%	33,009,047	-18.98%	20,607,369	-37.57%
Full Time Equivalents		1,991		1,721	-13.56%	867	-49.62%
Efficiency Measures							
Cost per VSH	$ 101.41	$ 109.55	8.02%	$ 120.25	9.77%	$ 161.54	34.34%
Cost per Passenger	$ 6.42	$ 7.09	10.50%	$ 8.13	14.63%	$ 12.39	52.32%
Passengers per VSH	15.80	15.44	-2.24%	14.79	-4.24%	13.04	-11.80%
Passengers per VSM	1.04	1.01	-2.94%	0.98	-2.53%	0.96	-2.17%
VSH per FTE*		1,325.03		1,296.93	-2.12%	1,822.28	40.51%
Farebox (Pure) Recovery Ratio	20.37%	18.94%	-7.01%	15.82%	-16.51%	6.47%	-59.10%
Farebox (+ Local/Aux) Ratio	34.22%	37.60%	9.85%	45.38%	20.69%	10.51%	-76.83%
Fare per Passenger	$ 1.31	$ 1.34	2.76%	$ 1.29	-4.30%	$ 0.80	-37.70%
CPI -- All Index	2.25%	2.25%		2.28%		2.30%	

[1] All data taken from NTD reports except FTE's, which were derived from the State Controller's reports.

In FY 2020 and FY 2021, the COVID-19 pandemic had a significant negative impact on system-wide performance. Exhibit 5 above reflects OCTD's efforts to adjust service costs to respond to decreases in ridership. The immediate response is demonstrated in FY 2020, with the -15.39% decrease in vehicle service hours, which corresponds to the -19.0% decrease in unlinked passengers. System-wide costs also decreased by -7.3% in that year. These performance trends reflect a pandemic that began in the last four months of the fiscal year, but at a time when the most severe protocols were being implemented, including government mandated "safer at home" mandates and closures of major business sectors throughout the state.

FY 2021 performance trends were even more severely impacted as the region experienced a full year of the pandemic. As shown in the following exhibits, OCTD took multiple steps to adapt to this unprecedented environment, despite the pandemic's further negative impacts on overall transit operations.

PERFORMANCE INDICATOR TABLES – DIRECTLY OPERATED FIXED ROUTE

Directly operated fixed route service represented 47% of the service provided by OCTD in FY 2018. This share grew to over 56% in FY 2021, primarily due to the temporary suspension of commuter express service as a result of the pandemic.

Below is a summary of efficiency trends within key operational indicators followed by Exhibit 6, which provides detailed reporting by fiscal year:

- **Operating Cost Per Vehicle Service Hour –** Operating cost per vehicle service hour increased by 5.15% and 5.67% in the first two years of the triennium, and by 24.76% in FY 2021.

- **Operating Cost Per Passenger –** Operating cost per passenger grew substantially due to the pandemic-induced losses in ridership.

- **Passengers Per Vehicle Service Hour –** Passengers per vehicle service hour decreased by -5.66%, -10.12%, and -20.8% in each successive year of the period.

- **Passengers Per Vehicle Service Mile –** Passengers per vehicle service mile decreased similarly, by -3.34%, -10.43% and -19.81% from FY 2019 to FY 2021.

- **Vehicle Service Hours Per Employee –** Vehicle service hours per FTE grew by a modest 0.43% in FY 2019 and decreased by -6.84% and -12.51% in FY 2020 and FY 2021.

Performance Measure	Base Year FY18		FY19		Percent Change FY18 - 19	FY20		Percent Change FY19 - 20	FY21		Percent Change FY20 - 21
	Pre - pandemic					**Post - pandemic**					

Exhibit 6: OC Bus
Fixed Route Performance (Directly Operated)

Performance Measure	Base Year FY18	FY19	Percent Change FY18 - 19	FY20	Percent Change FY19 - 20	FY21	Percent Change FY20 - 21
Key Base Measures							
Operating Costs	$ 127,276,998	$ 137,413,850	7.96%	$ 133,175,373	-3.08%	$ 143,293,645	7.60%
Fare Revenue	$ 29,830,590	$ 29,598,436	-0.78%	$ 21,461,482	-27.49%	$ 10,358,824	-51.73%
Vehicle Service Hours	956,029	981,577	2.67%	900,262	-8.28%	776,409	-13.76%
Vehicle Service Miles	11,312,975	11,336,954	0.21%	10,433,574	-7.97%	8,886,949	-14.82%
Unlinked Passengers	27,038,374	26,189,972	-3.14%	21,590,008	-17.56%	14,746,224	-31.70%
Full Time Equivalents[1]	907	927	2.23%	912	-1.55%	899	-1.43%
Efficiency Measures							
Cost per VSH	$ 133.13	$ 139.99	5.15%	$ 147.93	5.67%	$ 184.56	24.76%
Cost per Passenger	$ 4.71	$ 5.25	11.46%	$ 6.17	17.56%	$ 9.72	57.53%
Passengers per VSH	28.28	26.68	-5.66%	23.98	-10.12%	18.99	-20.80%
Passengers per VSM	2.39	2.31	-3.34%	2.07	-10.43%	1.66	-19.81%
VSH per FTE*	1,054	1,059	0.43%	987	-6.84%	863	-12.51%
Farebox (Pure) Recovery Ratio	23.44%	21.54%	-8.10%	16.12%	-25.18%	7.23%	-55.14%
Fare per Passenger	$ 1.10	$ 1.13	2.44%	$ 0.99	-12.04%	$ 0.70	-29.33%
CPI -- All Index	2.25%	2.25%		2.28%		2.30%	

[1] FTEs calculated using NTD employee hours divided by 2,000 (PUC definition)

PERFORMANCE INDICATOR TABLES – CONTRACTED FIXED ROUTE

The performance audit of purchased transportation services includes all modes of transportation contracted by OCTD, including fixed route, demand response, shared ride taxi and vanpool. Exhibit 7 presents a summary of key operational indicators for these services:

- **Operating Cost Per Vehicle Service Hour –** Operating cost per hour increased by 16.3%, 18.2%, and 20.08% in FY 2019, FY 2020,and FY 2021.

- **Operating Cost Per Passenger –** Operating cost per passenger increased by 8.48%, 25.74% and 72.23% in successive years.

- **Passengers Per Vehicle Service Hour –** Passengers per vehicle service hour increased by 7.21% in FY 2019 and decreased in -6.0% and -30.28% in FY 2020 and FY 2021, respectively.

- **Passengers per Vehicle Service Mile –** Passengers per vehicle service mile decreased by -3.16%, -5.43% and -31.66% from FY 2019 to FY 2021.

- **Vehicle Service Hours Per Employee –** Vehicle service hours per FTE increased by 33.85% in FY 2020 and decreased by -4.57% in FY 2021.

Exhibit 7: OC Bus Fixed Route Performance (Purchased Transportation)							
	Pre - pandemic				Post - pandemic		
Performance Measure	Base Year FY18	FY19	Percent Change FY18 - 19	FY20	Percent Change FY19 - 20	FY21	Percent Change FY20 - 21
Key Base Measures							
Operating Costs	$ 63,859,846	$ 66,055,228	3.44%	$ 65,814,293	-0.36%	$ 63,009,548	-4.26%
Fare Revenue	$ 12,086,278	$ 11,379,121	-5.85%	$ 7,819,173	-31.28%	$ 2,713,841	-65.29%
Vehicle Service Hours	724,986	644,817	-11.06%	543,559	-15.70%	433,359	-20.27%
Vehicle Service Miles	8,045,204	7,921,529	-1.54%	6,637,123	-16.21%	5,398,546	-18.66%
Unlinked Passengers	12,224,206	11,656,094	-4.65%	9,235,897	-20.76%	5,133,898	-44.41%
Full Time Equivalents[1]		566		357	-37.02%	298	-16.46%
Efficiency Measures							
Cost per VSH	$ 88.08	$ 102.44	16.30%	$ 121.08	18.20%	$ 145.40	20.08%
Cost per Passenger	$ 5.22	$ 5.67	8.48%	$ 7.13	25.74%	$ 12.27	72.23%
Passengers per VSH	16.86	18.08	7.21%	16.99	-6.00%	11.85	-30.28%
Passengers per VSM	1.52	1.47	-3.16%	1.39	-5.43%	0.95	-31.66%
VSH per FTE*		1,139		1,524	33.85%	1,455	-4.57%
Farebox (Pure) Recovery Ratio	18.93%	17.23%	-8.98%	11.88%	-31.03%	4.31%	-63.75%
Fare per Passenger	$ 0.99	$ 0.98	-1.26%	$ 0.85	-13.28%	$ 0.53	-37.56%
CPI -- All Index	2.25%	2.25%		2.28%		2.30%	

[1] FTE data for FY21 is based on percentage of fixed route purchased transportation peak vehicles operated.

PERFORMANCE INDICATOR TABLES – COMMUTER EXPRESS

OCTD's Commuter Express service, which represents less than 1% of total vehicle service hours operated, was temporarily suspended in FY 2021.

Below is a summary of key performance measures followed by Exhibit 8, which provides detailed reporting by fiscal year:

- **Operating Cost Per Vehicle Service Hour –** Cost per vehicle service hour increased by 16.55% in FY 2019 and 18.69% in FY 2020.

- **Operating Cost Per Passenger –** Cost per passenger increased by 4.87% in FY 2019 and decreased by -6.01% in FY 2020.

- **Passengers Per Vehicle Service Hour –** Passengers per vehicle service hour increased by 11.13% in FY 2019 and 26.29% in FY 2020.

- **Passengers Per Vehicle Service Mile –** Passengers per vehicle service mile grew by 12.89% and 16.15% in FY 2019 and FY 2020, respectively.

- **Vehicle Service Hours Per Employee –** The vehicle service hours per FTE is not reportable for this mode because the State Controller's report combines this mode with overall fixed route and NTD does report purchased transportation FTEs.

Performance Measure[1]	Base Year FY18		FY19		Percent Change FY18 - 19	FY20		Percent Change FY19 - 20	FY21		Percent Change FY20 - 21

Exhibit 8: OC Bus
Commuter Bus Performance

Performance Measure[1]	Base Year FY18	FY19	Percent Change FY18 - 19	FY20	Percent Change FY19 - 20	FY21	Percent Change FY20 - 21
	Pre - pandemic				**Post - pandemic**		
Key Base Measures							
Operating Costs	$ 3,692,395	$ 3,809,964	3.18%	$ 2,737,682	-28.14%	$ -	-100.00%
Fare Revenue	$ 307,240	$ 296,405	-3.53%	$ 210,800	-28.88%	$ -	-100.00%
Vehicle Service Hours	27,928	24,726	-11.47%	14,969	-39.46%	0	-100.00%
Vehicle Service Miles	601,638	524,366	-12.84%	345,142	-34.18%	0	-100.00%
Unlinked Passengers	206,593	203,263	-1.61%	155,402	-23.55%	0	-100.00%
Full Time Equivalents*							
Efficiency Measures							
Cost per VSH	$ 132.21	$ 154.09	16.55%	$ 182.89	18.69%	0	-100.00%
Cost per Passenger	$ 17.87	$ 18.74	4.87%	$ 17.62	-6.01%	0	-100.00%
Passengers per VSH	7.40	8.22	11.13%	10.38	26.29%	0	-100.00%
Passengers per VSM	0.34	0.39	12.89%	0.45	16.15%	0	-100.00%
Farebox (Pure) Recovery Ratio	8.32%	7.78%	-6.50%	7.70%	-1.03%	0	-100.00%
Fare per Passenger	$ 1.49	$ 1.46	-1.95%	$ 1.36	-6.98%	0	-100.00%
CPI -- All Index	2.25%	2.25%		2.28%		2.30%	

[1] Data taken from NTD reports. OCTD suspended Commuter Bus operations in FY 2021.

PERFORMANCE INDICATOR TABLES – DEMAND RESPONSE

In FY 2019, OCTD's demand reponse service performance was mixed, as indicated by an 8.1% increase in passenger revenues and a 1.21% increase in passengers. Service levels remained stable, with a 1.56% increase in service miles and service hours.

Below is a summary of high-level trends within key operational indicators followed by Exhibit 9, which provides detailed reporting by fiscal year:

- **Operating Cost Per Vehicle Service Hour –** Operating cost per vehicle service hour increased by 6.7%, 0.78% and 41.81% from FY 2019 to FY 2021.

- **Operating Cost Per Passenger –** Operating cost per passenger rose by 7.07% in FY 2019, 5.65% in FY 2020 and 92.0% in FY 2021.

- **Passengers Per Vehicle Service Hour –** Passengers per vehicle service hour decreased by -0.35%, -4.61%, and -26.14% in successive years.

- **Passengers Per Vehicle Service Mile –** Passengers per vehicle service mile declined similarly by -0.34%, -3.45%, and -24.49%.

- **Vehicle Service Hours Per Employee –** Vehicle service hours per FTE decreased by -12.02% in FY 2020 and increased by 20.45% in FY 2021.

Exhibit 9: OCTD Demand Response Performance (Including Taxi)							
	Pre - pandemic				**Post - pandemic**		
Performance Measure	**Base Year FY18**	**FY19**	**Percent Change FY18 - 19**	**FY20**	**Percent Change FY19 - 20**	**FY21**	**Percent Change FY20 - 21**
Key Base Measures							
Operating Costs	$ 73,551,059	$ 79,703,823	8.37%	$ 64,059,428	-19.63%	$ 47,101,521	-26.47%
Fare Revenue	$ 7,140,938	$ 7,719,206	8.10%	$ 7,553,037	-2.15%	$ 1,876,522	-75.16%
Vehicle Service Hours	744,746	756,391	1.56%	603,223	-20.25%	312,776	-48.15%
Vehicle Service Miles	11,969,770	12,155,912	1.56%	9,578,302	-21.20%	4,857,369	-49.29%
Unlinked Passengers	1,647,378	1,667,292	1.21%	1,268,429	-23.92%	485,746	-61.70%
Full Time Equivalents*		492		446	-9.35%	192	-56.95%
Efficiency Measures							
Cost per VSH	$ 98.76	$ 105.37	6.70%	$ 106.20	0.78%	$ 150.59	41.81%
Cost per Passenger	$ 44.65	$ 47.80	7.07%	$ 50.50	5.65%	$ 96.97	92.00%
Passengers per VSH	2.21	2.20	-0.35%	2.10	-4.61%	1.55	-26.14%
Passengers per VSM	0.14	0.14	-0.34%	0.13	-3.45%	0.10	-24.49%
VSH per FTE*		1,537		1,353	-12.02%	1,629	20.45%
Farebox (Pure) Recovery Ratio	9.71%	9.68%	-0.25%	11.79%	21.74%	3.98%	-66.21%
Fare per Passenger	$ 4.33	$ 4.63	6.81%	$ 5.95	28.62%	$ 3.86	-35.12%
CPI -- All Index	2.25%	2.25%		2.28%		2.30%	

[1] All data taken from NTD reports except FTE's, which were derived from the State Controller's reports.

PERFORMANCE INDICATOR TABLES – VANPOOL

In FY 2019, OCTD's vanpool service performance reflected the decline in demand for employer-based transportation demand mangement strategies, in lieu of pandemic-driven stay at home and social distancing protocols.

Below is a summary of high-level trends within key operational indicators followed by Exhibit 10, which provides detailed reporting by fiscal year:

- **Operating Cost Per Vehicle Service Hour –** Operating cost per vehicle service hour decreased by -9.18% in FY 2019 and increased by 26.76% and 9.91% in FY 2020 and FY 2021.

- **Operating Cost Per Passenger –** Operating cost per passenger decreased by 1.32% in FY 2019, and increased by 23.50% in FY 2020 and 29.12% in FY 2021.

- **Passengers Per Vehicle Service Hour –** Passengers per vehicle service hour decreased by -7.97% in FY 2019, increased by 2.64% in FY 2020 and decreased by -14.88% in FY 2021.

- **Passengers Per Vehicle Service Mile –** Passengers per vehicle service mile declined by -0.89%, -3.58%, and -19.36% in FY 2019, FY 2020 and FY 2021, respectively.

- **Vehicle Service Hours Per Employee –** Vehicle service hours per FTE decreased by -27.56% in FY 2020 and by -76.74% in FY 2021.

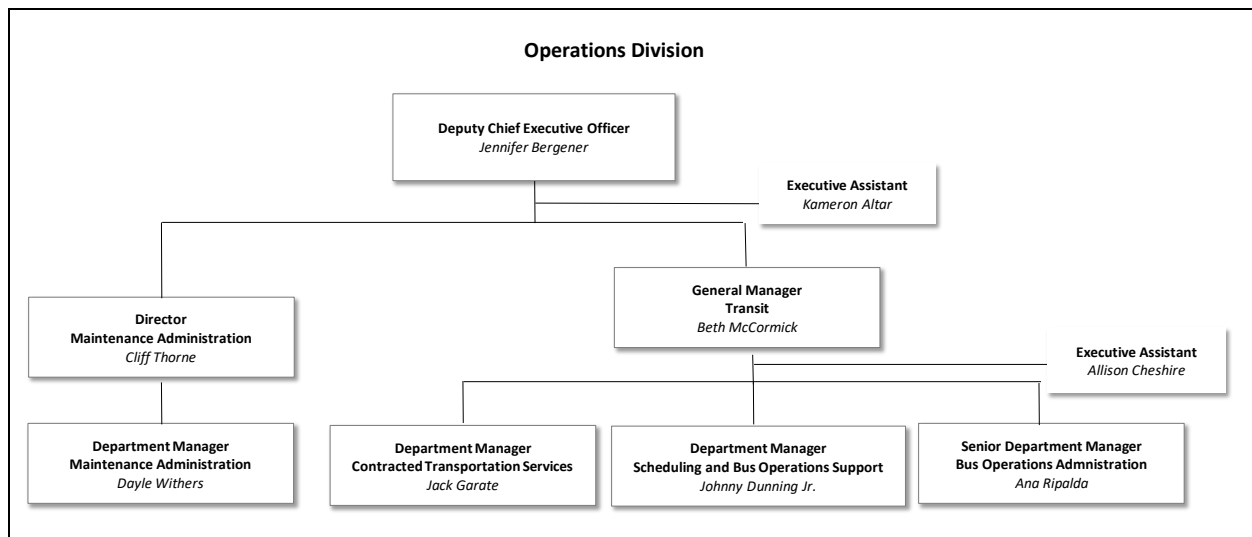| Performance Measure	Pre - pandemic			Post - pandemic			
	Base Year FY18	FY19	Percent Change FY18 - 19	FY20	Percent Change FY19 - 20	FY21	Percent Change FY20 - 21
Key Base Measures							
Operating Costs	$ 6,145,300	$ 5,821,014	-5.28%	$ 5,345,126	-8.18%	$ 1,822,147	-65.91%
Fare Revenue	$ 6,116,817	$ 6,052,956	-1.04%	$ 5,616,939	-7.20%	$ 1,562,062	-72.19%
Vehicle Service Hours	244,825	255,341	4.30%	184,965	-27.56%	57,370	-68.98%
Vehicle Service Miles	9,209,531	8,919,112	-3.15%	6,877,486	-22.89%	2,251,604	-67.26%
Unlinked Passengers	1,281,733	1,230,296	-4.01%	914,713	-25.65%	241,501	-73.60%
Full Time Equivalents*		6		6	0.00%	8	33.33%
Efficiency Measures							
Cost per VSH	$ 25.10	$ 22.80	-9.18%	$ 28.90	26.76%	$ 31.76	9.91%
Cost per Passenger	$ 4.79	$ 4.73	-1.32%	$ 5.84	23.50%	$ 7.55	29.12%
Passengers per VSH	5.24	4.82	-7.97%	4.95	2.64%	4.21	-14.88%
Passengers per VSM	0.14	0.14	-0.89%	0.13	-3.58%	0.11	-19.36%
VSH per FTE*		42,557		30,828	-27.56%	7,171	-76.74%
Farebox (Pure) Recovery Ratio	99.54%	103.98%	4.47%	105.09%	1.06%	85.73%	-18.42%
Fare per Passenger	$ 4.77	$ 4.92	3.09%	$ 6.14	24.81%	$ 6.47	5.33%
CPI -- All Index	2.25%	2.25%		2.28%		2.30%	

Exhibit 10: OCTD Vanpool Performance

[1] All data taken from NTD reports except FTE's, which were derived from the State Controller's reports.

6. Functional Review

Interviews with the leadership of key functional areas were conducted as part of the review process. Areas of review included departments within the purview of the OCTA Operations Division, which included general management, scheduling and operations support, operations administration, maintenance administration, and contracted transportation services, as shown on the following organizational chart in Exhibit 11. The functional area interviews provided an opportunity to summarize key accomplishments, challenges and best practices in the municipal transit emergency response to the pandemic, and challenges to rebuild ridership as the region recovers economically.
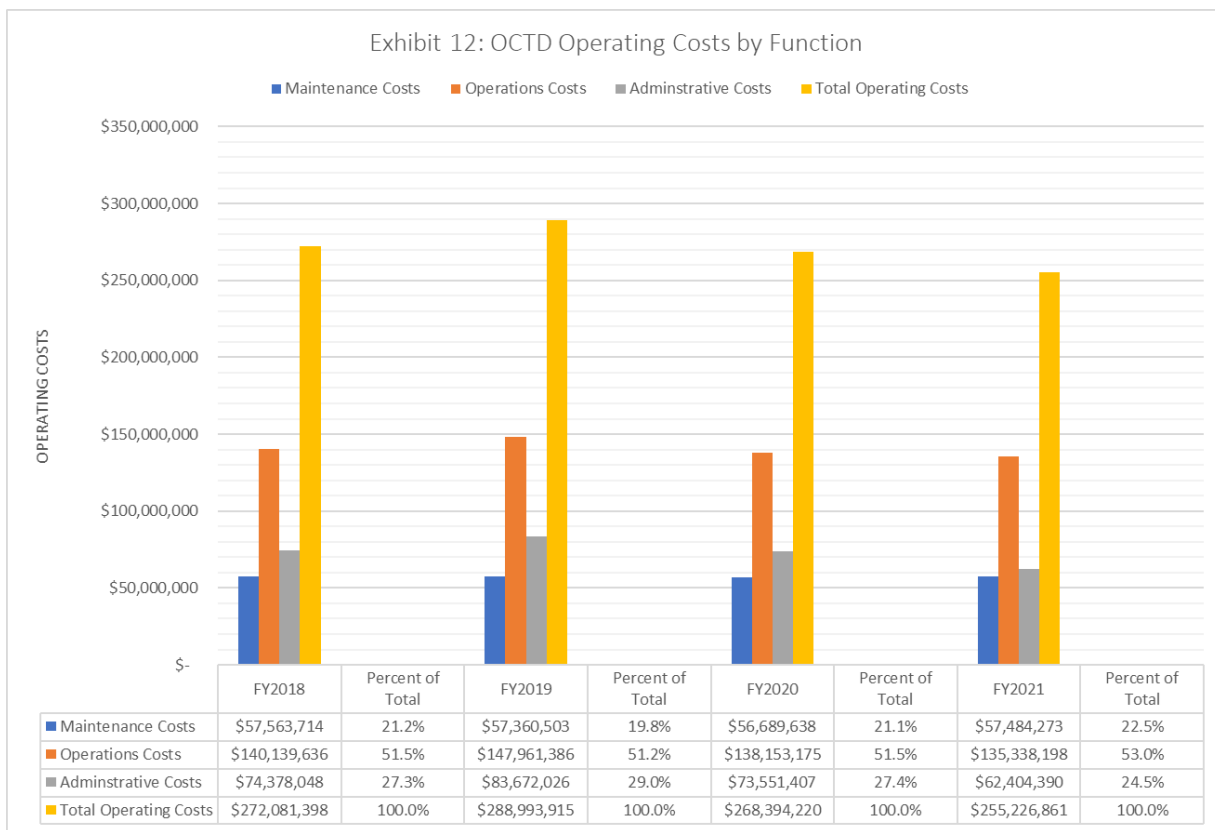
Exhibit 11

OCTD Organizational Chart[1]

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[1] During the conduct of this performance audit, OCTD was reorganized, concurrent with the retirement of the Transit General Manager and the promotion of the Manager of Scheduling and Bus Operations Support to Chief Operations Officer.

Accomplishments and challenges were addressed in the context of the OCTA Board of Directors established strategic objectives, which are guided by the agency's overall vision, mission and goals.

In addition to these interviews, a review of operating costs by division provided insights on performance trends aggregated by core operations, maintenance and administrative functional areas, taken from NTD reports. Exhibit 12 is a representation of OCTD operating costs aggregated to each of its core functions.

Exhibit 12: OCTD Operating Costs by Function

	FY2018	Percent of Total	FY2019	Percent of Total	FY2020	Percent of Total	FY2021	Percent of Total
Maintenance Costs	$57,563,714	21.2%	$57,360,503	19.8%	$56,689,638	21.1%	$57,484,273	22.5%
Operations Costs	$140,139,636	51.5%	$147,961,386	51.2%	$138,153,175	51.5%	$135,338,198	53.0%
Adminstrative Costs	$74,378,048	27.3%	$83,672,026	29.0%	$73,551,407	27.4%	$62,404,390	24.5%
Total Operating Costs	$272,081,398	100.0%	$288,993,915	100.0%	$268,394,220	100.0%	$255,226,861	100.0%

OPERATIONS

OCTD services are delivered through a combination of directly operated and contracted services. It provides multimodal transportation services including fixed route, limited stop and express commuter bus, advanced reservation demand response, on-demand taxi, Dial-A-Ride and subsidized vanpool services. Although the COVID pandemic took priority

for more than one-half of the audit period, significant progress was made prior to the pandemic to reallocate services to produce a more efficient operation, pursuant to its OC Bus 360 Plan.

During the audit period, other key accomplishments included:

- Implementation of the OC Flex Micro-transit Pilot Project.
- Implementation of OC Bus Mobile App, which allows passengers to purchase all fare media in real-time or in advance of boarding the bus.
- Launched the College Pass Program at Golden West College and Fullerton College, allowing those students to travel on all OC Bus routes for free.
- In FY 2021, OC Bus began to reintroduce service that was suspended in response to the pandemic.

Exhibit 12 shows the distribution of total operating costs across vehicle operations, maintenance, including facilities maintenance, and general administrative functions. This exhibit illustrates that the agency exercised fiscal restraint in the reallocation of these resources while maintaining its level of commitment to operations resources and to supporting employee and customer service and safety needs.

Exhibit 13, below, present specific performance metrics associated with system-wide operations. Operations costs in FY 2020 were reported as -6.63% from FY 2019, and -2.04% in FY 2021. Decreases in fare revenues and passengers in that year reflect the impact of the COVID pandemic on overall transit performance.

Exhibit 13: OCTD Operations Performance							
	Pre - pandemic			**Post - pandemic**			
Performance Measure	**Base Year** **FY18**	**FY19**	**Percent Change** **FY18 - 19**	**FY20**	**Percent Change** **FY19 - 20**	**FY21**	**Percent Change** **FY20 - 21**
Key Base Measures							
Operations Costs	$ 140,139,636	$ 147,961,386	5.5814%	$ 138,153,175	-6.63%	$ 135,338,198	-2.04%
Vehicle Service Hours	2,670,586	2,638,126	-1.2155%	2,232,009	-15.39%	1,579,914	-29.22%
Unlinked Passengers	42,191,691	40,743,654	-3.4320%	33,009,047	-18.98%	20,607,369	-37.57%
Fare Revenue	$ 55,174,623	$ 54,749,719	-0.7701%	$ 42,450,631	-22.46%	$ 16,511,249	-61.10%
Efficiency Measures							
Operations Cost per VSH	$ 52.48	$ 56.09	6.8805%	$ 61.90	10.36%	$ 85.66	38.40%
Passengers per Hour	$ 15.80	$ 15.44	-2.2439%	$ 14.79	-4.24%	$ 13.04	-11.80%
Fare per Passenger	$ 1.31	$ 1.34	2.7565%	$ 1.29	-4.30%	$ 0.80	-37.70%
CPI -- All Index	2.25%	2.25%		2.28%		2.30%	

MAINTENANCE

OCTD maintenance costs remained stable throughout the audit period, despite increased demands for cleaning and implementation of onboard vehicle safety measures.

Significant maintenance activities during the audit period include:

- Initiation of the H2B Pilot, which included ten hydrogen buses and hydrogen fueling station, capable of fueling up to 50 buses per day.
- The OCTA Board approved the purchase of ten plug-in Battery Electric Buses and charging stations.
- Completed fleet rehabilitation project that repowered 175 compressed natural gas (CNG) buses to "near-zero" emissions.
- Replaced 55 support vehicles that run on compressed natural gas (CNG) with an equal number of all electric alternatives.

Exhibit 14 provides a detailed reporting of maintenance performance indicators by fiscal year during the audit period:

Exhibit 14: OCTD Maintenance Performance							
		Pre - pandemic			Post - pandemic		
	Base Year		Percent Change		Percent Change		Percent Change
Performance Measure	FY18	FY19	FY18 - 19	FY20	FY19 - 20	FY21	FY20 - 21
Key Base Measures							
Maintenance Costs	57,563,714	57,360,503	-0.35%	56,689,638	-1.17%	57,484,273	1.40%
Vehicle Service Miles	40,537,480	40,333,507	-0.50%	33,526,485	-16.88%	21,394,468	-36.19%
Peak Vehicles	1,495	1,470	-1.67%	1,330	-9.52%	678	-49.02%
Road Calls	2,676	2,569	-4.00%	1,817	-29.27%	2,056	13.15%
Active Vehicles	1609	1659	3.11%	1562	-5.85%	1003	-35.79%
Efficiency Measures							
Maintenance Cost per VSM	$ 1.42	$ 1.42	0.15%	$ 1.69	18.90%	$ 2.69	58.90%
Miles Between Road Calls	15,148.54	15,700.08	3.64%	18,451.56	17.53%	10,405.87	-43.60%
Spare Ratio	7.09%	11.39%	60.79%	14.85%	30.37%	32.40%	118.16%
CPI -- All Index	2.25%	2.25%		2.28%		2.30%	

ADMINISTRATION

The OCTD administrative function addressed the following issues during the audit period:

- Established several training programs to ensure that employees are compliant with state and federal training requirements.

- Enriched coach operator safety programs to protect operators and deter unsafe behaviors.

- Established remote work capabilities through the utilization of internal networking software.

- Implemented a range of crisis planning strategies, in response to the onset of the pandemic.

- Established Return to the Workplace Team to create a plan, consistent with local, state and federal guidelines, to safely bring employees back into the workplace.

- Enhanced workforce diversity and inclusive work culture strategies, including conducting over 100 unconscious bias training sessions to ensure that all employees received the training.

Exhibit 15 below, provides a detailed listing of administrative performance indicators by fiscal year during the audit period:

	Pre - pandemic				Post - pandemic		
	Base Year		Percent Change		Percent Change		Percent Change
Performance Measure	**FY18**	**FY19**	**FY18 - 19**	**FY20**	**FY19 - 20**	**FY21**	**FY20 - 21**
Key Base Measures							
Adminstrative Costs	$ 74,378,048	$ 83,672,026	12.50%	$ 73,551,407	-12.10%	$ 62,404,390	-15.16%
Vehicle Service Hours	2,670,586	2,638,126	-1.22%	2,232,009	-15.39%	1,579,914	-29.22%
Vehicle Service Miles	42,191,691	40,743,654	-3.43%	33,009,047	-18.98%	20,607,369	-37.57%
Peak Vehicles	1,495	1,470	-1.67%	1,330	-9.52%	678	-49.02%
Efficiency Measures							
Admin. Cost per VSH	$ 27.85	$ 31.72	13.88%	$ 32.95	3.90%	$ 39.50	19.86%
Admin. Cost per VSM	$ 1.76	$ 2.05	16.49%	$ 2.23	8.50%	$ 3.03	35.90%
Admin. Cost per Peak Vehicle	$ 49,751.20	$ 56,919.75	14.41%	$ 55,301.81	-2.84%	$ 92,041.87	66.44%
CPI -- All Index	2.25%	2.25%		2.28%		2.30%	

Exhibit 15: OCTD Administrative Performance

7. Conclusions, Recommendation and Management Response

Despite the challenges of the COVID pandemic, which have impacted two of the three years of this triennium, OCTD remains fully compliant with TDA requirements. OCTD provided an immediate response to the pandemic threat and instituted protocols for employee safety, remote work frameworks, where appropriate, and on-site COVID screening for all employees entering OCTD facilities.

OCTA's *Bus Operations Performance Measurements Reports* are a highly effective tool which allowed OCTD to monitor its system's key performance indicators in order to minimize service inefficiencies and reallocate service where it was most needed and monitor the effectiveness of its vehicle maintenance program. OCTD also continued to make progress on its capital program, including its Transit Asset Management program, technology upgrades that improved customer experiences, and employee safety.

OCTD has improved its marketing outreach during the audit period by implementing its OC Mobile App, which allows customers to purchase fares in advance or at the time of boarding. OCTD has also been effective in its public relations by monitoring customer complaints as a key performance indicator in its quarterly performance reporting. OCTA was proactive in conducting an Employment and Travel Survey to analyze environmental changes resulting from the pandemic that may have shifted employment and travel patterns as efforts to restore service becomes a primary focus.

OCTA's *Comprehensive Business Plan* establishes OCTD's overall system of goals and objectives and connects long range service plans to a fiscally responsible financial planning process. Progress toward achieving its Board – directed initiatives is reported in OCTA's annual report on accomplishments.

The following functional recommendation is intended to support OCTD's ongoing efforts to recover from an unprecedented period of challenges and refocus areas where uncharacteristic reporting deficiencies were observed.

Recommendations:

Finding 1: Data inconsistencies were observed in several non-financial performance indicators reported in OCTD demand response modes.

OCTD reports data from multiple purchased transportation providers for its fixed route, demand response and vanpool operations. An examination of data consistency within these modal categories indicated repeated inconsistencies within the demand response mode, which included dial-a-ride and shared ride taxi service. The lack of data reliability impacts the agency's ability to evaluate the effectiveness and efficiency of these services.

Recommendation 1: The data collection process for demand response services should be reevaluated and monitored, specifically related to non-financial data compiled for State Controller's and NTD reports to ensure consistency in reporting.

Management Response 1: Management agrees with the recommendation to improve the consistency of data reporting associated to non-financial data for demand response contracted services. A project to automate the data reporting process using databases and dashboards has been initiated and prepared for FY 2022 to address these challenges and reduce the need for human entries which will improve the reporting processes.