

FY2019 – FY2021 Triennial Performance Audit of the Metropolitan Transit System (MTS)

FINAL AUDIT REPORT

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EXECUTIVE SUMMARY

Transit operators that receive Transportation Development Act (TDA) funds are required to undergo triennial performance audits in the State of California. Triennial performance audits are a requirement for the continued receipt of State TDA funds for public transit under California Public Utilities Code (PUC) Section 99246. This performance audit is administered by the San Diego Association of Governments (SANDAG) and prepared by Kimley-Horn and Associates. This report represents the State-mandated performance audit of the San Diego Metropolitan Transit System (MTS) for Fiscal Years 2019, 2020, and 2021, the period from July 1, 2018 through June 30, 2021.

The TDA triennial performance audit of MTS includes evaluations of:

- Compliance with pertinent sections of the Public Utilities Code
- Progress to implement prior performance audit recommendations
- Agency goals and objectives and performance monitoring systems
- Systemwide and functional area performance trends. The objective of the performance audit is to assess compliance with PUC requirements, identify significant achievements as well as opportunities for improvement, and develop recommendations for short- and long-term efficiency and effectiveness improvements.

Several audit period accomplishments and challenges were noted. Major accomplishments include:

- MTS delivered ridership increases (3.2% bus and 3.9% rail) up until March 2020 (Covid-19 shutdown), a reversal of a three-year trend of rider declines.
- MTS prepared to open the mid-county Trolley extension, which successfully opened in November 2021.
- MTS received the Certificate of Achievement for Excellence in financial reporting for the 15th consecutive year.
- MTS planned and began the zero-emissions bus pilot, preparing for a greener service.
- Cost growth (i.e., total, cost per hour, cost per mile) was managed below the rate of inflation for the duration of the audit period
- MTS supported the regional upgrade of the Pronto mobile payment system (launched in September 2021).
- MTS advanced the state of good repair during the audit period, and now has a 100% state of good repair across the system.

- The global pandemic was the greatest challenge over the audit period, with resulting economic shutdowns, isolation requirements, and a choppy recovery. Some travel changes are long lasting – work from home and remote learning both continue with partial or complete remote opportunities for a significant part of the economy. The decrease in ridership associated with Covid-19 and the government shutdown response is noted as the most significant performance impact during the audit period. The pandemic brought additional issues to bear – labor shortages, supply chain disruption, recurring shut downs and stay at home orders. MTS responded quickly and effectively, for example:
 - MTS changed processes and procedures to provide for social distancing by switching to rear door boarding, increasing space around drivers, posting signs at stations, stops and on-board. MTS moved all Trolley inspections to platforms in the open air.
 - Drivers/operators/supervisors were provided masks, gloves and sanitizer, along with guidelines on safe operations.
 - MTS doubled down on cleaning vehicles, stations, stops and facilities. All vehicles were cleaned and fogged daily, all surfaces were wiped down with disinfectant, and personal hygiene rules posted widely.
 - MTS made a financially sustainable decision to retain roughly 75% of services, focusing reductions on routes where trip generators were closed. The expectation was that customers are more likely to return if the service is viable and meets their needs. This has proven effective as MTS seems to be recovering ridership faster than most transit systems, but has a difficult road ahead.

MTS is in compliance with Public Utilities Code (PUC) requirements and the implementation of prior audit recommendations:

- Compliance with PUC Requirements: MTS is in compliance with all PUC requirements.
- Progress to Implement Prior Audit Recommendations: MTS reasonably addressed the prior audit recommendation on farebox recovery reporting, opting for consistency in reporting over using new flexibility in State reporting (e.g., adding locally generated funds to fare revenue)...

Performance indicator trends show the following:

- Systemwide operating cost per revenue vehicle hour, a measure of cost efficiency, increased by 3.2% during the audit period to \$114.95. During the same period inflation rose 7.7%. The trend is a result of MTS' concerted cost control measures, keeping total cost, cost per hour and cost per mile below the rate of inflation. This in-spite of significantly increased costs for cleaning, disinfecting, training and responding to the pandemic. Also notable, MTS completed the backlog in state of good repair over the audit period, refreshing the system and introducing new vehicles.

- Like transit operators nationally, MTS lost significant amounts of ridership due to economic shutdowns, the “great retirement”, remote learning, work from home and other major changes to the daily travel patterns of residents. Ridership actually increased for the first nine months of the audit period (FY 2018-19), a reversal of a three-year trend in declining riders. The service change implemented at the end of the prior audit period was a major driver of the ridership growth. In the final quarter of FY19, the governor shut down California’s economy with the exception of essential services. Stay at home orders abounded as the government struggled to understand the nature of the pandemic threat and best responses. Schools and business were behind the learning curve in remote activities, and pressed to catch up. Even when people could travel, fear of the contagion reduced travel to a minimum. All of this combined to drive transit ridership down, with a loss of just over 50% occurring over the audit period. While the percentage decline varies by operator (many at 80% decline), the massive ridership loss is universal to transit during the pandemic.
- Maintaining full employment was a challenge over the audit period due to Covid-19. The combination of extended sick leave, the great retirement, and reticence of the labor market to return to work presented challenges for MTS. MTS responded with increased recruiting, referrals, sign-on bonuses, frequent and better communications with employees, and more to capture and retain valued employees. MTS succeed in maintaining full, or close to full, staffing. Service hours per employee grew slightly, by 6.3% resulting in higher productivity.
- The State of California forgave farebox recovery requirements for the pandemic period across California transit operators in recognition of catastrophic ridership losses. MTS farebox recovery increased from 31.7% in FY18 to 32.7% in FY19, a result of ridership growth. Farebox recovery fell to 16.4% in FY21, the final audit year, as a result of the 54% ridership loss. MTS is appropriately focused on recovering ridership as the pandemic fades. Some changes (e.g., remote learning and work from home) may continue in some form, resulting in a smaller urban travel base. The extent and nature of transit use forward, as well as the timing, are opaque at best (at the time of writing, ridership represents approximately 75% of the pre-COVID baseline).
- The average fare per passenger trip increased by 15.6% during the audit period, from \$1.06 to \$1.11. This is attributable to a fare simplification change (which increased day pass prices by \$1) and a change in travel patterns (fewer passes sold as people traveled less frequently).

The systemwide TDA performance trends overall demonstrate a solid and responsible performance during a period of global calamity. And the future is focused on encouraging riders to return.

One recommendation is offered for MTS’s consideration, detailed in Section V:

- Recommendation 1: MTS should work with SANDAG TDA staff to achieve greater alignment with respect to the various uses and external reporting of farebox recovery ratio (for example, California TDA eligibility, annual financial accounting, NTD reporting, industry measure).

SECTION I: INTRODUCTION

The TDA triennial performance audit of the San Diego Metropolitan Transit System (MTS) follows state guidelines. Triennial performance audits are a requirement for the continued receipt of State Transportation Development Act (TDA) funds for public transit under California Public Utilities Code (PUC) Section 99246. The San Diego Association of Governments (SANDAG) is responsible for administering the conduct of performance audits in the San Diego Region. SANDAG has retained Kimley-Horn & Associates to conduct the performance audit of MTS. This report represents the State-mandated performance audit of MTS for Fiscal Years 2019, 2020, and 2021, the period from July 1, 2018 through June 30, 2021.

The TDA triennial performance audit of MTS includes evaluations of:

- Compliance with pertinent sections of the Public Utilities Code
- Progress to implement prior performance audit recommendations
- System wide performance trends for efficiency and effectiveness
- Functional area performance results
- Opportunities to improve the efficiency and effectiveness of operations.

The objective of the performance audit is to identify significant achievements as well as opportunities for improvements, and to provide recommendations for short- and long-term efficiency and effectiveness improvements.

The methodology for the MTS audit included site visits, interview, and data collection and analysis. Interviews were conducted with personnel responsible for the management and oversight of MTS services:

- Chief Executive Officer
- Chief Financial Officer
- Chief Operating Officer, Trolley
- Chief Operating Officer, Transit
- Chief Technology Officer
- Director of Fleet and Facility Maintenance
- Chief of Staff
- Director of Human Resources and Labor Relations
- Director of Marketing and Communications
- Chief of Police

- General Counsel
- Internal Auditor
- Director of Financial Planning & Analysis
- Procurement Manager
- Manager of Planning
- Assistant Superintendent of Transportation
- Superintendent of Light Rail Vehicle Maintenance
- Assistant Superintendent of Light Rail Vehicle Maintenance
- Director of Transportation
- Manager of Training (Bus)
- Manager of Transportation Communication and Technology
- Transit Operations Specialist
- Senior Transportation Planner
- Enterprise Business Solutions Manager
- Operating Budget Supervisor
- TransDev Project Manager
- Manager of South Bay and East County Operations/Manager of Contract Operations & Passenger Facilities
- Manager of Fleet and Facility Maintenance
- Manager of Paratransit and Mini Bus
- Transit Services Data Analyst
- Rail Operations Analyst/Manager of Service Quality (Rail)
- Systems Safety Manager
- Director of Capital Projects.

Background documents and other written information including those identified in Exhibit I-1 were collected and reviewed:

Exhibit I-1: MTS Background Documents and Written Information Reviewed

Organization and staffing charts	National Transit Database (NTD) Reports, FY19-FY21	Labor Agreements
Maps & Brochures Re-Services	State Controller Reports, FY19-FY21	Service Contracts
Organization Goals, Objectives, Policies and Procedures, FY19-FY21	Annual Budget Documents, FY19-FY21	Sample Monthly Reports and Invoice Contractors
Form C Reports-Formerly B10, B11	Financial Audit Reports and Letters, FY19-FY21	Short Range Transit Plan
Year-End Performance Reports to Board and Management, FY19-FY21	Sample Routine Performance Reports by Functional Managers, FY19-FY21	CHP Terminal Inspection & Pull-out Notice Reports, FY19-FY21
Customer Satisfaction Survey, FY19	Bus Maintenance Plan, FY21	Mobile Phone Usage Survey
Rail Fleet Management Plan, FY21	Community Impact Report	System Safety Program Plan, FY19, FY20
Vehicle Assignment Policy		Transit Asset Management Plan, 2021

The audit team also:

- Conducted tele-conference interviews with MTS management and staff responsible for administering, managing, and operating the transit system, including staff from MTS Bus Operations, MTS Rail Operations, and other functions (e.g., marketing, finance, planning, human resources, and legal).
- Assessed compliance with applicable Public Utilities Code Sections, including progress and performance results relative to prior audit recommendations.
- Compiled and analyzed performance indicator trend information for the system and the individual operations, as well as for major functional areas.

1.1. Overview

MTS operates motorbus, light rail, and demand response services throughout the southern portion of the urbanized areas of San Diego County, as well as rural parts of east San Diego County not served by the North County Transit District (NCTD). The name MTS began being used in 2005, reflecting a name change of the former Metropolitan Transit Development Board (MTDB). Just after the end of the audit period, the

MTS transit system includes four light rail lines with 62 stations, 100 fixed bus routes and ADA complementary paratransit (MTS Access). MTS Bus operations has a fleet of about 750 buses and operates more than 2 million revenue hours. MTS rail operations operates 160 light rail vehicles over 65 miles of track. The service area includes the cities of San Diego, Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, Santee and a portion of the unincorporated area of San Diego County.

MTS responsibilities include service planning, performance monitoring and analysis, and the activities required to administer, fund and deliver transit services within this service area either directly or through contracts with other service providers. These services include:

- Directly Operated Bus
- Trolley
- Contracted Fixed Route
- Commuter Express
- Rural Service
- General Public Paratransit - Sorrento Valley Coaster Connection (SVCC)
- Americans with Disabilities Act (ADA) Demand Response Service (MTS Access).

Each of these services that MTS provides is described in Section IV: Performance Trends and Functional Review. The section provides TDA performance indicators for the MTS system as a whole, as well as performance indicators for each service type individually.

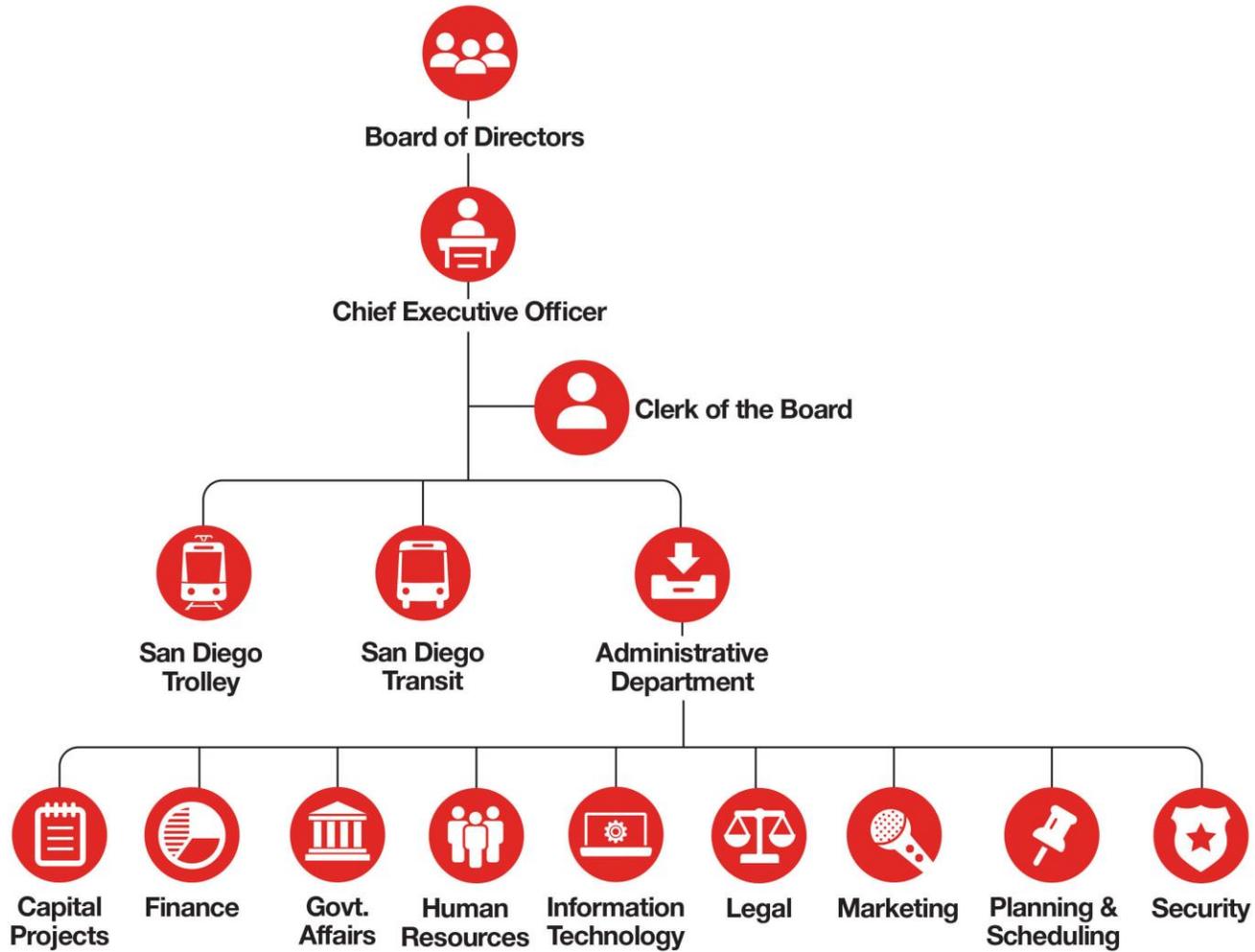
MTS is governed by a 15-member Board of Directors that includes:

- Four appointed from the City of San Diego (the Mayor of San Diego and 3 San Diego City Council members)
- Two appointed from the City of Chula Vista (the Mayor of Chula Vista and a Chula Vista City Council Member)
- One appointed from each city council of Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway and Santee
- One appointed from the San Diego County Board of Supervisors.

Exhibit I-2 shows the high-level MTS organization chart. San Diego Transit includes all motorbus (directly operated and contracted) and demand response services. San Diego Trolley is the light rail system.

Figure 1: MTS Organization Chart (2022)

MTS Organization Chart



MTS fare pricing policy is controlled by SANDAG and a fare change was implemented September 2019, and another proposed in 2021. The primary fare types at present, are the cash fare (\$2.50 for local, *Rapid* routes 201/202, 204, and 215, urban and shuttle routes, \$2.50 for the Trolley, *Rapid* routes 235 and 237, and express routes, \$5.00 for *Rapid* express/premium routes, and \$5 to \$10 for rural routes); the Day Pass (\$6.00 for most services), and the Monthly Pass (\$72 for regional, \$100 for rapid express/premium). Discounts are applicable for seniors and persons with disabilities, and special fare products for college students, youth, social service agencies, stadium services, and class trips. SANDAG is responsible for fare policy and fare setting in San Diego County.

1.2. Audit Period Accomplishments and Challenges

MTS accomplishments during the audit period can be summarized as follows:

- Ridership increases and recovery
- Final preparations to open the mid-Coast Trolley extension
- Financial sustainability
- Regional fare simplification and mobile payment system upgrade
- State of good repair and zero emissions bus pilot.

Ridership and Changes to Service – In response to declining ridership in the prior audit period, MTS launched the Transit Optimization Plan (TOP) study. It had several components: Market Analysis, Service Evaluation, Implementation Plan. Service changes made occurred over four shake ups from January 2018 to January 2019 (i.e., spanning two audit periods). Ridership experienced growth (after three consecutive years of declines) in FY19 (3.2% bus and 3.9% Trolley), up until the government shut down in response to Covid-19.

The “stay at home” orders resulted in huge declines in ridership (about half). MTS engaged in many activities to stimulate ridership, including:

- MTS sustained about 75% of transit services, the single largest driver of ridership, anticipating a return to transit use. The services cut generally focused on service to trip generators that have remained closed. The services are sustainable financially, and cost has been managed at or below inflation.
- MTS opened the Mid-Coast extension in fall 2021. The new Trolley line also resulted in changed bus services for feeder routes and eliminated competing service.
- MTS offered a free week of service with the launch of Pronto as an extra inducement to convert mobile fare payment and ride the system.
- Buses, Trolleys and stops were cleaned rigorously, multiple times per day, and the cleaning regime well published to give riders confidence in transit safety.
- The MTS Board adopted a transit-oriented development (TOD) policy demonstrating a preference for low-cost public housing and services used by transit riders. A low-cost housing project has been approved and is expected to contribute to increased ridership around the development.
- State of good repair was improved over the audit period, replacing vehicles, painting and deep cleaning of vehicles and facilities, creating an attractive environment for transit riders. MTS is now in a 100% state of good repair.

- MTS has engaged in aggressive marketing activities to attract riders, demonstrate safety, promote green environment benefits, highlight new services and new programs.

Mid-Coast Trolley – The Mid-Coast extension opened in November 2021 (just after the current audit period) and significant work occurred during the audit period for operations readiness, revised bus routes for feeder services and to eliminate competing services, safety plans, marketing plans, and so forth. MTS partnered effectively with SANDAG, who constructed the new Trolley line, for joint planning, marketing and opening of the service.

Financial Sustainability – MTS constantly evaluates financial sustainability decisions, ranging from investing into computer systems, rehabilitating infrastructure, holding the line on wages, to energy purchases. One of the first operators in the country to do so, MTS secured new long-term revenue sources through naming rights of two trolley lines, expanded to three with the opening of the Mid-Coast Trolley. The decision to retain 75% of transit services for the public was a financially sustainable decision.

Fare Simplification – SANDAG has the decision rights for transit fare pricing policy in the County. In September 2019 fares were simplified and aligned countywide, and MTS leveraged this change to increase riders. In September 2021, the region launched Pronto, a mobile payment solution intended to simplify payment and use of the transit system. MTS provided a free week of service to riders who switched to Pronto during the launch month.

State of Good Repair -- MTS developed its own Transit Asset Management (TAM) plan at the end of the prior audit period. Through this effort, MTS assessed many of its assets useful lives to optimize the lifecycle cost. For example, MTS analyzed operating costs per mile for a given age of a bus and found diminishing returns after the 13th year. Asset useful lives are an integral assumption that feeds into the agency 20-year Capital Improvement Program (CIP). During the current audit period, MTS refurbished vehicles and stations, improved bus stops, replaced vehicles on a steady pace, and improved the appearance of the system overall. New rail vehicles were purchased and recently retired vehicles are being prepped for shipping to South America for use on a system there. The pandemic shut down provided additional time and availability of facilities for deep cleaning, painting and general state of good repair maintenance.

MTS challenges during the audit period can be summarized as follows:

- Ridership
- Unfunded mandates
- Recruiting in a tight economy
- Planning for new technology in a new environment.

Ridership – In FY19, MTS experienced ridership growth in both Trolley and bus services, following three years of rider declines. Alas, this reversal of fortunes was not to last, as the Covid-19 pandemic entered the scene in late FY 2019 and sustained its adverse impact on transit ridership throughout the audit period. Transit was prominent on the US Center for Disease Control (CDC) and state health care websites as places to avoid during the pandemic due to potential exposure to the disease. During the California economic shutdown in response to Covid-19, MTS lost over half of all riders (some have since returned, to about 75% of pre-pandemic levels). MTS took extraordinary measures to protect employees and customers from exposure through a wide variety of progressive actions. These proved effective during the crisis and have helped encourage the public to return to transit as Covid-19 restrictions have eased. While some riders began to return to transit toward the end of the audit period (June 2021), demand remains well below the FY19 levels. At least some of this is attributable to work at home employment shifts, remote learning

and reduced travel overall. MTS continues with many programs and activities aimed at increasing ridership forward..

Unfunded Mandate – Chief among the unfunded mandates is the upcoming California Air Resources Board (CARB) Innovative Clean Transit rule. The regulation includes a 25 percent zero source emissions bus purchase requirement in 2023, with increasing purchase requirements in future years, culminating in a 100 percent zero source emissions purchase requirement by 2029. Currently two technologies meet the zero-emission bus requirements: hydrogen fuel cell and battery electric. Both have performance limitations and operational, implementation and funding challenges. A pilot program, initiated in the current audit period, includes 13 battery electric buses with charging capabilities installed at four locations. MTS has also invested in facility modifications to allow charging, maintenance and storage of the zero-emission buses. Training staff in safe practices in a high voltage environment has been a key component of the conversion process. MTS continues to evaluate the vehicle performance, and ways to address limitations on distance traveled between charges.

The pilot program enables MTS to observe the electric fleet's effectiveness handling existing topography and route ranges. MTS is also examining hydrogen fuel cell pilot options. A CNG bus in MTS's operating environment averages 500 miles between fueling. Electric buses are averaging 150 miles per full charge, and scheduling routes around these limits has been challenging. Also, given downtime to recharge vehicles, a larger fleet is needed to cover the same services as the CNG buses. MTS is working towards meeting the California 2023 requirement of 25% zero source emissions fleet, which includes new bus procurement plans and significant infrastructure changes at the electric bus facility. Construction is challenging as MTS must continue to operate out of the division while constructing electric bus servicing, maintenance and storage capabilities.

Recruiting in a Tight Economy – The post pandemic economy in Southern San Diego county has proven difficult in terms of available labor. Termed "the great retirement," many workers reported that they are no longer seeking work and jobs available generally exceed workers seeking employment in Southern California. MTS has proven nimble in this tight labor market, relying on employee referrals, recruiting events, hiring bonuses, competitive pay and benefits, shorter recruiting cycles with streamlined decisions (including on the spot job offers and training schedules), and a safe working environment to help with recruiting. Likewise, MTS has doubled down on retention activities, including increased communications with employees, safe working conditions (onsite testing, increasing space, work at home, protections for customer facing staff), effective and timely training, and career growth opportunities. MTS has maintained full or near full staffing throughout the pandemic, considering the level of service provided.

Planning for and Implementing New Technology – MTS continued with its technology upgrade and modernization across the organization. Computer aided design/automatic vehicle location (CAD/AVL) capability was added with the new radio system during the audit period providing increased security, better planning information, and faster response to traffic delays. While opened shortly after the audit period (November 2021), significant effort focused on preparing for the Mid-County Trolley line opening. A new fare collection system was planned, developed and tested for the successful launch in September 2022. This represents significant changes – moved from card based to account-based payments, cloud hosted databases, and implemented best fares (a pay as you go system that gives riders pass discounts based on amount of travel). Multiple new technologies were implemented to support the electric bus fleet pilot underway as well.

1.3. Report Outline

The remainder of the performance audit report is organized into four sections:

- II. Compliance Review: Assesses MTS compliance with specific PUC requirements and discusses the status of prior audit recommendations.
- III. Management Control and Reporting: Examines the management structure and performance monitoring systems in place to help reach MTS goals and objectives.
- IV. Performance Trends and Functional Review: Examines system wide performance trends as well as trends in the major functional areas: operations, maintenance, and planning and administration.
- V. Conclusions and Recommendations: Outlines recommendations and potential implementation strategies for MTS to capitalize on improvement opportunities.

SECTION II: COMPLIANCE REVIEW AND PRIOR AUDIT RECOMMENDATIONS

The compliance review assesses compliance with PUC requirements and implementation of prior audit recommendations. Activities conducted by MTS and each of the MTS service providers to comply with TDA requirements are described in this section. TDA performance indicator results and trends are discussed in Section IV – Performance Trends and Functional Review.

PUC requirements verified as part of this performance audit include the compliance requirements for transit operators stipulated in the California Department of Transportation TDA Performance Audit Guidebook for Transit Operators and Regional Transportation Planning Entities (2008) and TDA Statutes and California Codes of Regulations (2009).

With the consolidation of operations in the MTS service area, some of the compliance findings have been made for MTS as a whole. Where appropriate (e.g., where operators continue to file separate financial audits and State Controller reports), findings have been made for particular MTS services. Please note that Chula Vista Transit (CVT) information is provided where appropriate and merged with MTS Contracted Service, also where appropriate, due to the absorption of CVT by MTS in January 2015.

Compliance is assessed at three levels:

- Fully compliant.
- Partially compliant, with additional actions required to achieve full compliance.
- Non-compliant or not applicable.

Compliance to measure progress towards implementing prior audit recommendations has been measured in three categories:

- Fully implemented.
- Partially implemented but further progress is warranted.
- Not implemented or not applicable.

II.1. Compliance Review

MTS and its contractors are in compliance with the PUC and CAC requirements for urban operators.

Code Reference	Operator Compliance Requirements, Findings, Verification					
PUC Section 99243	Requirement – Uniform System of Accounts and Records: Annual reports based on the Uniform System of Accounts and Records established by the State Controller. Report is due to the State Controller within seven (7) months after the end of the fiscal year (on or before January 31).					
	Findings		State Controller Report Submittal Dates			
	MTS Bus: fully compliant Source: State Controller Annual Report All reports were submitted electronically		FY19: 29-January-2020 FY20: 13-January-2021 FY21: 28-January-2022			
	MTS Contracted Bus and Demand Response: fully compliant Source: State Controller Annual Report All reports were submitted electronically		FY19: 29-January-2020 FY20: 13-January-2021 FY21: 28-January-2022			
	MTS Rail: fully compliant Source: State Controller Annual Report All reports were submitted electronically		FY19: 29-January-2020 FY20: 19-January-2021 FY21: 28-January-2022			
PUC Section 99245	Requirement – Annual Fiscal Audit: Certified annual fiscal and compliance audits are submitted to the RTPA and State Controller within 180 days of the end of the fiscal year (December 31), or receive 90-day extension (March 31).					
	Findings		Annual Fiscal Audit Submittal Dates			
	MTS: fully compliant Source: Annual fiscal audits were included as part of the Comprehensive Annual Financial Report.		MTS: FY19: 29-October-2019 FY20: 5-November-2020 FY21: 4-November-2021			
PUC Section 99251	Requirement – CHP Certifications: Following inspection of the operator's terminal, CHP has certified operator's compliance with Vehicle Code 1808.1 within 13 months prior to each TDA claim submittal.					
	Findings		CHP Certification Dates			
	MTS: Fully Compliant Source: CHP Transit Operator Compliance Certificates			FY19	FY20	FY21
			Imperial Ave	26-Jul-19	24-Jul-20	12-Aug-21
			Kearny Mesa	12-Jun-19	9-Jun-20	8-Jun-21
MTS Contracted Bus and Demand Response: Fully Compliant Source: CHP Transit Operator Compliance Certificates			FY19	FY20	FY21	
		First Transit, Copley Park	3-Oct-19	6-Oct-20	9-Nov-21	
		Transdev, El Cajon	6-Sep-18	4-Oct-19	4-Nov-20	
		Transdev, South Bay	15-Mar-19	10-Mar-20	1-Apr-21	

Code Reference	Operator Compliance Requirements, Findings, Verification	
	MTS Rail: not applicable	MTS Rail: Vehicle Code 1801.1 does not apply to rail operators.
PUC Section 99261	Requirement – Transportation Planning Agency Regulations: Claims for TDA funds are submitted in compliance with RTPA's rules and regulations for such claims.	
	Findings	Verification
	Fully compliant – MTS submits its TDA claims and proper documentation to SANDAG each year.	Review of full claims packet including checklist submitted to SANDAG for the audit period. SANDAG's annual schedule of monthly TDA allocation payments to MTS exemplifies compliance.
PUC Section 99266	Requirement – Budget Changes: Operating budget has not increased by more than 15% over the preceding year unless reasonable justification has been provided.	
	Findings	Percent Growth in Budget
	MTS Bus: fully compliant Source: Annual adopted budgets FY19-21	FY19: -1.1% FY20: +6.9% FY21: +13.0%
	MTS Contracted Bus and Demand Response: fully compliant Source: Annual adopted budgets FY19-21	FY16: +9.5% FY17: +1.1% FY18: -1.4%
	MTS Rail: fully compliant Source: Annual adopted budgets FY19-21	FY16: +4.5% FY17: +9.1% FY18: +7.3%
PUC Section 99247	Requirement – Performance Measures Definitions: The operator's definition of performance measures are consistent with Public Utilities Code Section 99247, including (a) operating cost, (b) operating cost per passenger, (c) operating cost per vehicle service hour, (d) passengers per vehicle service hour, (e) passengers per vehicle service mile, (f) total passengers, (g) transit vehicle, (h) vehicle service hours, (i) vehicle service miles, and (j) vehicle service hours per employee.	
	Findings	Verification
	Fully compliant	MTS operating statistics are collected and performance measures are calculated in accordance with PUC requirements. In annual the Performance Monitoring Report, revenue hours are defined by MTS as in-service hours plus layover hours.
PUC, Sections 99268.2 99268.3 99268.4 99268.5 99269	Requirement – Revenue Ratios: Operator has maintained a ratio of fare revenues to operating costs at least equal to: 20% for urban areas, and 10% for services for elderly and disabled persons.	
	Findings	Farebox Recovery Ratios
	MTS Combined (bus, trolley, and contracted services): partially compliant Source: Annual Comprehensive Financial Report	FY19: 34.21% FY20: 28.05% FY21: 16.10%
	MTS Bus: partially compliant	FY19: 21.03% FY20: 18.67% FY21: 13.22%

Code Reference	Operator Compliance Requirements, Findings, Verification	
	Source: State Controller's Report, San Diego Transit Corp	
	MTS Contracted Bus and Demand Response: partially compliant Source: State Controller's Report, MTS Contracted Services	FY19: 31.10% FY20: 25.62% FY21: 15.81%
	MTS Rail: partially compliant Source: State Controller's Report, San Diego Trolley Inc	FY19: 48.75% FY20: 37.90% FY21: 18.98%
	MTS Elderly and Disabled: partially compliant Source: Annual Adopted Budget	FY19: 14.8% FY20: 14.9% FY21: 4.2%
PUC Section 99271	Requirement – Employee Retirement System: 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 RTPA-approved plan to fully fund the retirement system within 40 years.	
	Findings	Verification
	MTS: fully compliant	Comprehensive Annual Financial Report MTS CalPERS Plans SDTI CalPERS Plans SDTI PARS Plan SDTC Retirement Plan
CAC Section 6754(a)(3)	Required Findings: If the operator received STA funds, the operator makes full use of funds available from the Federal Transit Administration before TDA claims are granted.	
	Findings	Verification
	MTS: fully compliant	MTS utilizes federal funds that are available to the agency, as reported in the annual comprehensive financial reports. MTS receives FTA Section 5307, Section 5337, Section 5339, Section 5311 and Section 5311F grants. MTS also received federal CARES Act funding in FY20 (\$18 million) and FY21 (\$72 million).

II.2. Prior Audit Recommendations

The prior audit had one recommendation, discussed below:

Issues and Opportunities. MTS suffered fare erosion across its system during the last three years. MTS has not raised fares in 10 years, since 2009. The combined farebox recovery ratio for all modes in FY2018 was 31.7%. For FY2018, the farebox recovery ratio is 43.6% for rail and 20.8% for directly operated bus. While farebox recovery for rail is still very healthy, the bus number is 9% lower than where it started the audit period (30%).

Two developments have occurred in the audit period:

- Passage of SB 508, enabling MTS to report local revenues in the farebox calculations to the State
- SANDAG fare change, implementation in September 2019 and designed to harmonize fares across NCTD and MTS, to simplify the structure and raise more revenues.

SB 508 provides an opportunity to report farebox differently. SANDAG's fare change, the first since 2009, affects mostly passes (reduction for youth passes, increase for senior/disabled/Medicare patrons, day pass went up by one dollar). The new INIT fare collection system is expected to reduce the need for passes by calculating the best fare possible for each rider. MTS expects that once the fare change goes into effect, an additional four to five million dollars will be generated, with a positive impact on the farebox recovery ratio.

Recommended Actions. This is a two-part recommendation. First, MTS should track and document the farebox recovery ratio side by side over the next several years both with SB 508 reporting and without. SB 508 provides an opportunity for MTS shine a light on local revenue generation as well as further develop cost efficiencies. For the second part, a fare increase would bring back farebox revenue back to historical average. Given the other constraints (ballot measure, coordination with new regional fare structure, new fare collection system implementation) a new fare increase is not expected in the immediate near term but ought to be considered at the earliest opportunity.

Expected Results. Maximize local fund contribution to operations. Increased fare revenues to maintain farebox recovery above 20%.

MTS Response.

- MTS is in compliance with the TDA FRR thresholds and has already obtained approval from our Board and the SANDAG Board to simplify fares and increase revenue (primarily driven by the \$1 increase in the day pass) by approximately \$5M. Since historically we haven't had challenges meeting the FRR target and thus haven't needed to look at other "local funds" to enhance our revenue streams, we can track these sources of revenues and determine the impacts on FRR with and without these revenue sources.
- Our focus in the coming years are to drive additional riders to our system through a simplified fare structure, and a significant enhancement of our transit network as we pursue additional sales taxes through a November 2020 ballot measure. With this as the short-term focus, there are no considerations for additional fare increases in the coming years.

Updated Response from MTS (2022). MTS notes that while this response was accurate for the prior audit period at the time, the MTS Board of Directors decided not to pursue the ballot measure at this time due to the pandemic. Now, our focus in the coming years is to attract additional riders to our system through a simplified fare structure, improved transit network and continued outreach to the community to communicate the benefits of the transit system for our ridership.

MTS has considered and reasonably responded to the prior audit recommendation. During the current audit period, the State of California gave a temporary stay to all transit operators in the state on meeting the farebox recovery targets in response to the COVID ridership losses. When the requirement returns, MTS should continue with their strategy to track both traditional fares and local funding, using the combination to meet future farebox recovery targets as needed. The choice to favor consistency in reporting over increased reporting flexibility is reasonable.

SECTION III: MANAGEMENT CONTROL AND REPORTING

On June 23, 2005, the MTS Board of Directors approved the following vision for MTS services (still valid through the audit period).

A Vision for MTS Services

- Develop a **Customer-Focused System**: Provide services that reflect the travel needs and priorities of our customers.
- Develop a **Competitive System**: Provide services that are competitive with other travel options by meeting market segment expectations.
- Develop an **Integrated System**: Develop transit services as part of an integrated network rather than a collection of individual routes.
- Develop a **Sustainable System**: Provide appropriate types and levels of service that are consistent with market demands and are maintainable under current financial conditions.

To achieve this vision of a customer-focused, competitive, integrated, and sustainable system, MTS Board Policy No. 42 establishes a process for evaluating existing transit services. The policy provides a set of measures for annual evaluation, listed in Exhibit III-1.

Exhibit III-1: MTS Transit Service Performance Indicators

CUSTOMER FOCUSED / COMPETITIVE								INTEGRATED			SUSTAINABLE								
PRODUCTIVITY				QUALITY				CONNECTIVITY			RESOURCES			EFFICIENCY					
Total Passengers	Average Weekday Passengers	Passengers/Revenue Hour	Passengers/In Service Hour	Passenger Load Factor	On-Time Performance	Mean Distance between Failures	Accidents/100,000 Miles	Comments/100,000 Passengers	Route Headway	Span of Service Consistency	Service Availability	In-Service Miles	In-Service Hours	Peak Vehicle Requirement	In-Service Speeds	In-Service/Total Miles	In-Service/Total Hours	Farebox Recovery Ratio	Subsidy/Passenger

Bold – Key indicators used for ranking route performance.

Source: MTS Policies and Procedures: Transit Service Evaluation and Adjustment (Revised September 9, 2016)

For each indicator, MTS establishes performance targets every three years. These targets represent aggressive, yet realistic service expectations based on service design, route characteristics, and operating environments. At the conclusion of each fiscal year, MTS conducts an annual service evaluation to compare actual performance of the system with the targets and to identify opportunities for adjustments and improvements based on this analysis. Overall system performance is documented in the Annual Performance Monitoring Report.

Routes in the bottom quartile for each route group for passengers per in service hour and subsidy per passenger are identified for further analysis on a segment basis (temporal and geographic) as well as closer look at other aspects of the route's performance. MTS has established policies and procedures for service changes.

- MTS develops and publishes annual performance incentive goals by department and tracks performance against these specific goals annually for accountability and results. While goals vary by department, key goal areas or themes include: Financial accountability (e.g., achieve a favorable expense budget variance annually)
- Ridership growth and recovery (e.g., number of riders, riders per hour) with a focus on increasing riders after the significant loss due to Covid-19 impacts
- Improving service quality and safety is evident in multiple departments, with a particular focus on Covid-19 safety measures for passengers and employees Human capital development (recruiting, retention and training)
- Green goals are also common (e.g., Trolley extension and zero emissions buses).

Statuses for performance in each of these areas are reported annually and form the basis for assessing the individual departments' performance. Performance also features directly into staff compensation as part of the annual assessment process, further increasing accountability for results.

MTS' success in delivering excellent public transit services is enhanced by its sophisticated and robust performance tracking which includes daily, weekly and monthly reports across every major activity center of MTS. Managers broadly use daily reports to identify issues or areas of opportunity for better performance and act on them. Operationalizing strategic goal areas into daily monitoring and actionable components, increases MTS's adaptability and resilience. During interviews, nearly every manager provided examples of daily performance reports and how they use them to deliver quality results. What gets measured gets done. MTS is leveraging its performance monitoring and management systems to achieve exemplary results.

SECTION IV: PERFORMANCE TRENDS AND FUNCTIONAL REVIEW

This section of the report provides results of the analysis of TDA and functional performance indicators. This section of the audit report discusses performance results, beginning with the five TDA performance indicators required under Section 99246 (c) of the Public Utilities Code (PUC):

- **Operating Cost per Service Hour:** a measure of cost efficiency
- **Operating Cost per Passenger:** a measure of cost effectiveness
- **Passengers per Service Hour:** a measure of service productivity
- **Passengers per Service Mile:** another measure of service productivity
- **Vehicle Service Hours per Employee Full-Time Equivalent (FTE):** a measure of labor productivity.

TDA performance indicators are provided for MTS first at the Systemwide level (i.e., MTS Bus, MTS Contracted Bus, and MTS Rail combined), then for each individual service type. Functional level performance is reviewed at the service type level. The performance trends cover the audit period, from FY19 through FY21, with FY18 used as a base year to provide a point of reference for the analysis.

Most primary data elements for this analysis are extracted from the National Transit Database (NTD). Other sources (e.g., MTS Annual Performance Monitoring Reports, State Controller, financial audit, and internal reports) have been used as necessary either to augment the information reported, or to improve data accuracy and availability. Most of the tables presented include inflation, measured by the change in the Consumer Price Index (CPI) for San Diego county. Inflation was up 7.7% over the three years of the audit period.

Data collection and reporting procedures for the five TDA performance indicators were reviewed to verify that the data reported are consistent with data definitions. TDA performance indicators are used to assess service efficiency and effectiveness and to provide a point of departure to drill down into functional performance indicators and trends, to provide additional clarification of performance results. Additional performance indicators were also evaluated regarding the efficiency, effectiveness, and general performance of MTS's public transportation services

In addition to the five required indicators, the **farebox recovery ratio** is calculated to determine whether an operator is eligible for funding under PUC. A summary of what is include is under PUC sections 99243 and 99247. The ratio of fare revenues to operating cost is 20% as the claimant is serving an urbanized area.

Recognizing the severe impact of the Covid-19 pandemic and associated government economic shut downs, the California legislature eliminated transit farebox recovery requirements for the audit period. The number is still to be reported, but actual results do not impact funding eligibility over the FY19, FY20 and FY21 audit period.

IV-1. System-wide Performance

Exhibit IV-1 shows MTS systemwide TDA performance indicators during the audit period.

Exhibit IV-1: MTS Systemwide TDA Performance Indicators

Verified TDA Statistics & Performance Indicators	Base Year	Audit Review Period			% Change FY18 – FY21
	FY18	FY19	FY20	FY21	
Operating Costs	\$284,436,283	\$281,913,694	\$291,553,478	\$291,601,775	2.5%
Unlinked Passengers	85,429,212	85,357,495	71,224,080	39,214,848	-54.1%
Vehicle Service Hours	2,554,405	2,615,111	2,527,232	2,536,782	-0.7%
Vehicle Service Miles	33,323,214	34,225,743	32,930,893	32,674,630	-1.9%
Employee FTEs	2,494	2,527	2,454	2,331	-6.5%
Operating Cost per Revenue Vehicle Hour	\$111.35	\$107.80	\$115.36	\$114.95	3.2%
Operating Cost per Passenger	\$3.33	\$3.30	\$4.09	\$7.43	123.2%
Passengers per Revenue Vehicle Hour	33.44	32.64	28.18	15.47	-53.7%
Passengers per Revenue Vehicle Mile	2.56	2.49	2.16	1.20	-53.1%
Service Hours per Employee FTE	1,024	1,035	1,030	1,088	6.3%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: NTD Reports, Form-C Reports

The Transit Optimization Plan (TOP) study approved by the MTS Board in September 2017 resulted in significant changes to allocation of services. Service changes were implemented between June 2017 and January 2019. The impacts were shown in the first 9-months of FY19 with ridership growth in both bus and Trolley systems, a reversal of the prior three years. The improvements quickly dissolved when California closed down all non-essential economic activity in response to the Covid-19 pandemic, with losses of about 75% of riders for the final months of FY 2019. The remaining two years of the audit period were plagued with major travel changes resulting from the public response to the pandemic (e.g., shut downs across major economic sectors, work from home employer solutions, and warnings about the hazards of public transit from the US CDC and State of California). The net effect is a 54% reduction in systemwide ridership between the base year (FY18) and the final audit year (FY21). This ridership loss is shared among transit systems nationally, and MTS appears to be recovering faster than the norm, albeit they have a long ways yet to go.

MTS leadership and employees instituted heroic efforts to make the system safe for employees and riders to encourage return to public transit as the economy opened back up. Among the pandemic related safety changes are:

- MTS changed processes and procedures to provide for social distancing by switching to rear door boarding, increasing space around drivers, posting signs at stations, stops and on-board. MTS moved all Trolley inspections to platforms in the open air.
- Drivers/operators/supervisors were provided masks, gloves and sanitizer, along with guidelines on safe operations.
- MTS doubled down on cleaning vehicles, stations, stops and facilities. All vehicles were cleaned and fogged daily, all surfaces were wiped down with disinfectant, and personal hygiene rules posted widely. Hand sanitizing stations were added at Trolley stops.
- MTS made a financially sustainable decision to retain roughly 75% of services, focusing reductions on routes where trip generators were closed. The expectation was that customers

are more likely to return if the service is viable and meets their needs. This has proven effective as MTS seems to be recovering ridership faster than most transit systems.

Systemwide, operating costs were up 2.5% from FY18 levels compared to inflation of 7.7%, demonstrating effective cost management over the audit period. This positive cost performance is also demonstrated when comparing costs to service output (i.e., operating cost per revenue vehicle hour increased by 3.2% during the audit period from \$111.35 in FY18 to \$114.95 in FY21. Operating cost per passenger was impacted by the massive loss in riders and increased 123.2% from \$3.33 in FY18 to \$7.43 in FY21. Service productivity declined during the audit period. Passengers per revenue vehicle hour decreased by 53.7% while passengers per revenue service mile decreased by 53.1%. Service hours per employee FTE, a measure of labor productivity, increased by 6.3% though there was a 6.5% decrease in employee FTEs. Overall, costs and employee productivity are well managed, and ridership losses from the pandemic negatively impact several indicators.

Exhibit IV-2 shows MTS systemwide fare revenue indicators during the audit period.

Exhibit IV-2: MTS Systemwide Revenue Performance Indicators

Date Item and Farebox Ratio	Base Year	Audit Review Period			% Change FY18 – FY21
	FY18	FY19	FY20	FY21	
Operating Costs	\$284,436,283	\$281,913,694	\$291,553,478	\$291,601,775	2.5%
Farebox Revenues	\$90,235,809	\$92,225,166	\$78,709,562	\$47,913,391	-46.9%
Net Cost	\$194,200,474	\$189,688,528	\$212,843,916	\$243,688,384	25.5%
Unlinked Passenger Trips	85,429,212	85,357,495	71,224,080	39,244,848	-54.1%
Farebox Recovery Ratio	31.7%	32.7%	27.0%	16.4%	-48.2%
Average Fare per Passenger Trip	\$1.06	\$1.08	\$1.11	\$1.22	15.6%
Net Cost per Passenger Trip	\$2.27	\$2.22	\$2.99	\$6.21	173.2%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: NTD Reports

The main findings for systemwide MTS revenue are as follows:

- The MTS systemwide farebox recovery ratio increased from 31.7% in FY18 to 32.7% in FY19, largely based on ridership increases in the first 9 months of FY19. Thereafter, results are hampered by the global pandemic. Ridership declined 48.2% since the base year.
- The average fare per passenger trip increased by 15.6% during the audit period, from \$1.06 to \$1.22, resulting from the fare change and ridership changes.
- The net cost per passenger trip increased by 173.2%, from \$2.27 in FY18 to \$6.21 in FY21. This reflects the combined effect of modestly increased net costs and significantly decreased ridership.

Systemwide tallies provide average performance across all modes. Individual modal calculations (separated by directly operated and contracted operations) break out these statistics at a more granular level for all service types. While results vary by mode of service, the pandemic driven loss of ridership drives results for every mode. The rest of this chapter includes the following sections:

- IV-2: MTS Bus Operations

- IV-3: MTS Contracted Bus Operations, including ADA paratransit services.
- IV-3: MTS Rail Operations.

Each section includes an overview of performance against TDA performance indicators, followed by a discussion of performance at the functional level.

IV-2. MTS – Directly Operated Bus Operations Performance

Exhibit IV-3 shows MTS Bus Operations TDA performance indicators during the audit period.

Exhibit IV-3: MTS Bus TDA Performance Indicators

Verified TDA Statistics & Performance Indicators	Base Year	Audit Review Period			% Change FY18- FY21
	FY18	FY19	FY20	FY21	
Operating Costs	\$110,955,049	\$104,949,061	\$105,627,845	\$106,927,041	-3.6%
Unlinked Passengers	22,866,573	22,396,771	18,383,114	8,603,980	-62.4%
Vehicle Service Hours	820,677	822,638	781,729	814,134	-0.8%
Vehicle Service Miles	9,683,731	9,738,607	9,236,042	9,631,608	-0.5%
Employee FTEs	1,020	1,033	1,014	976	-4.3%
Operating Cost per Revenue Vehicle Hour	\$135.20	\$127.58	\$135.12	\$131.34	-2.9%
Operating Cost per Passenger	\$4.85	\$4.69	\$5.75	\$12.43	156.1%
Passengers per Revenue Vehicle Hour	27.86	27.23	23.52	10.57	-62.1%
Passengers per Revenue Vehicle Mile	2.36	2.30	1.99	0.89	-62.2%
Service Hours per Employee FTE	805	796	771	834	3.7%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: NTD Reports

The main drivers for TDA performance for directly-operated bus include operations cost and ridership. MTS Bus Operations experienced a 3.6% decrease in operating costs, a rate significantly below inflation of 7.7%. Root causes for the cost decrease are sound financial management coupled with a reduction in bus service. Bus services were reduced selectively, focused on routes serving businesses and services that were shut down. Roughly 75% of services were maintained, as a financially sustainable strategy to encourage ridership as the economy reopened. The pandemic also resulted in the “great retirement,” a national reduction in the available workforce. MTS adjusted strategies to the market to fill positions, with significant success (e.g., improved wages and benefits, career training, enhanced communications with employees, and immediate jobs offers and training schedules). FTE’s fell about 4% over the audit period, reflecting a reduction in service.

One of the big stories of this audit period is the decline in bus ridership – 62.4% – which is about 8 percentage points higher than the systemwide ridership loss. The volume of service provided as measured by revenue vehicle hours and miles, decreased slightly from FY18 to FY21 by 0.8% and 0.5%, respectively, reflecting MTS strategies to encourage ridership recovery.

TDA Performance measures include:

- Cost efficiency increased as the operating cost per service hour decreased by 2.9%, in spite of inflationary growth of 7.7% over the same period. Like all ridership-based performance measures, bus operating cost per passenger increased by 156.1% reflecting the massive ridership loss
- The ridership’s decline also affected service productivity. Passengers per service hour and per service mile decreased by about 62%, the same as bus ridership overall. Because the volume of service provided in the region was stable, the reduction in service productivity measures was highly driven by the ridership decline driven by the global pandemic and the response to that pandemic.
- Service hours per employee FTE, a measure of labor productivity, increased over the audit period by 3.7%. Again, this demonstrates solid cost management.

Exhibit IV-4 shows MTS Bus Operations fare revenue indicators during the audit period.

Exhibit IV-4: MTS Bus Revenue Performance Indicators

Base Data and Performance Indicators	Base Year	Audit Review Period			% Change FY18-FY21
	FY18	FY19	FY20	FY21	
Operating Costs	\$110,955,049	\$104,949,061	\$105,627,845	\$106,927,041	-3.6%
Farebox Revenues	\$23,034,059	\$22,041,356	\$19,749,139	\$14,430,094	-37.4%
Net Cost	\$87,920,990	\$82,907,705	\$85,878,706	\$92,496,947	5.2%
Unlinked Passenger Trips	22,866,573	22,396,771	18,383,114	8,603,980	-62.4%
Farebox Recovery Ratio	20.8%	21.0%	18.7%	13.5%	-35.0%
Average Fare per Passenger Trip	\$1.01	\$0.98	\$1.07	\$1.68	66.5%
Net Cost per Passenger Trip	\$3.84	\$3.70	\$4.67	\$10.75	179.6%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: NTD Reports

Main findings for MTS Bus revenue indicators are driven by the significant loss in ridership as follows:

- The farebox recovery ratio decreased nearly one third from 20.8% to 13.5%, as a result of the ridership declines. The TDA-mandated farebox recovery ratio (20% for urban systems) was waived by the California legislature in response to the Covid-19 pandemic.
- The average fare per passenger trip increased significantly over the audit period (\$1.01 to \$1.68) reflecting a change in how people paid for fares (far fewer discount passes were sold due to limited riding opportunities).
- Due to significant decreases in ridership and stable costs, the net cost per passenger trip increased by 180% over the audit period.

Exhibit IV-5 shows MTS Bus Operations performance indicators. Sources for the data include NTD reports but also MTS annual performance monitoring reports.

Exhibit IV-5: MTS Bus Operations Performance Indicators

Base Data and Performance Indicators	Base Year	Audit Review Period			% Change FY18-FY21
	FY18	FY19	FY20	FY21	
Vehicle Operations FTEs	800.9	825.0	810.0	773.0	-3.5%
Vehicle Operations Costs	\$67,132,804	\$65,965,413	\$64,287,968	\$64,889,369	-3.3%
Vehicle Service Hours (VSH)	820,677	822,638	781,729	814,134	-0.8%
Vehicle Service Miles (VSM)	9,683,731	9,738,607	9,236,042	9,631,608	-0.5%
Total Vehicle Hours	888,098	883,401	838,438	873,847	-1.6%
Total Vehicle Miles	11,210,583	11,069,835	10,478,722	10,950,858	-2.3%
Unlinked Passenger Trips	22,866,573	22,396,771	18,383,114	8,603,980	-62.4%
Passenger Miles	104,544,729	98,896,442	80,855,104	45,773,653	-56.2%
VSH per Operations FTE	1,025	997	965	1,053	2.8%
VSM per Operations FTE	12,091	11,804	11,403	12,460	3.1%
Service Miles per Service Hour	11.8	11.8	11.8	11.8	0.3%
Service Hours / Total Hours	92.4%	93.1%	93.2%	93.2%	0.8%
Service Miles / Total Miles	86.4%	88.0%	88.1%	88.0%	1.8%
Vehicle Operations Cost per Passenger Trip	\$2.94	\$2.95	\$3.50	\$7.54	156.9%
Vehicle Operations Cost per Passenger Mile	\$0.64	\$0.67	\$0.80	\$1.42	120.8%
Average Passenger Miles per Passenger Trip	4.6	4.4	4.4	5.3	16.4%
Preventable Accidents per 100,000 Total Vehicle Miles	1.19	1.24	1.36	0.95	-20.2%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: NTD Reports, Annual Performance Monitoring Reports

The amount of service provided for bus transportation remained fairly constant over the audit period with a reduction of less than 1% in terms of hours and miles of service.

Bus operations FTEs decreased modestly, -3.5% to 773 FTEs during the period and vehicle operating costs decreased 3% to \$64.9 million. Unlinked passenger trips were down 62% over the audit period, which is about 8 percentage points higher than the systemwide ridership decrease.

Main findings from Exhibit IV-5 are as follows:

- Most of the service effectiveness measures (e.g., service miles / total miles) were stable over the audit period.
- Vehicle operations cost per passenger trip and per passenger mile were up considerably, by 157% and by 121% respectively, due to the massive decrease in ridership and well managed costs.
- Preventable accidents per 100,000 total vehicle miles were down by 20.2% during the audit period. This is remarkable as a sustained performance result of MTS, which has increased safety by reducing preventable accidents by almost 60% over the past nine years. MTS's focus on safety is apparent and influences all aspects of bus service provision, resulting in safer passenger and employee travel, and numerous safety awards and recognition.

Exhibit IV-6 below presents performance indicators for Bus Maintenance.

Exhibit IV-6: MTS Bus Maintenance Performance Indicators

Base Data and Performance Indicators	Base Year	Audit Review Period			% Change FY18-FY21
	FY18	FY19	FY20	FY21	
Maintenance FTEs	198.0	188.0	184.0	183.0	-7.6%
Maintenance Costs	\$27,396,429	\$26,887,806	\$29,284,904	\$28,581,813	4.3%
Total Vehicle Hours	888,098	883,401	838,438	873,847	-1.6%
Total Vehicle Miles	11,210,583	11,069,835	10,478,722	10,950,858	-2.3%
Peak Vehicles	232	222	223	225	-3.0%
Total Vehicles	270	270	276	272	0.7%
Vehicle Hours per Maintenance FTE	4,485	4,699	4,557	4,775	6.5%
Vehicle Miles per Maintenance FTE	56,619	58,882	56,950	59,841	5.7%
Maintenance Cost per Active Vehicle	\$101,468	\$99,584	\$106,105	\$105,080	3.6%
Maintenance Cost per Vehicle Hour	\$30.85	\$30.44	\$34.93	\$32.71	6.0%
Maintenance Cost per Vehicle Mile	\$2.44	\$2.43	\$2.79	\$2.61	6.8%
Vehicle Hours per Active Vehicle	3,289	3,272	3,038	3,213	-2.3%
Vehicle Miles per Active Vehicle	41,521	40,999	37,966	40,261	-3.0%
Mean Distance between Failures	10,980	16,303	4,816	5,680	-48.3%
Spare Ratio	16.4%	21.6%	23.8%	20.9%	27.5%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: NTD Reports, Annual Performance Monitoring Reports

At the top level for maintenance, the service output remained fairly stable during the audit period. While the total fleet remained stable, the number of vehicles in peak service decreased by 3%. Fluctuations in the number of buses are normal, given the procurement cycles and accounting for inactive buses that may be ready to retire. MTS procures its buses annually to avoid the peaks and valleys issues in procurements, a best practice. The number of miles the vehicles traveled remained remarkably stable during the period, at about 11 million miles. Labor shortages nationwide contributed to a decline of 7.6% in the maintenance workforce.

Main findings of the performance indicators on the bottom half of Exhibit IV-6 are as follows:

- Maintenance cost per active vehicle increased by 3.6%, well below inflation of 7.7% in the same period.
- Maintenance cost per vehicle hour and mile increased by 6% and 6.8% respectively, again below the rate of inflation.
- Vehicle hours and miles per active vehicle decreased by 2.3% and 3%, reflecting modest reductions in service and a stable fleet.
- Reported mean distance between failures (MDBF) decreased by 48.3% over the audit period. In 2019, MTS realized it was reporting mean distance between failures using the funding goal definition which measures only breakdowns that negatively impact riders. The NTD report is intended to provide a measure of maintenance effectiveness, and counts breakdowns whether or not a passenger is delayed. This measure is now reported consistent with the NTD definition of

MDBF, and a failure is a mechanical failure that presents a vehicle from starting or completing its trip (for safety, movement, or policy reasons). Beginning in July 2020, MTS corrected this error forward, and now reports both measures. The 4,816 MDBF reporting in FY20 and the 5,680 reported in FY21 both reflect solid performance for MTS' fleet age (about 5.5 years).

- FTA recommends operators carry spares at no more than 20% of the peak vehicle requirement. Note the NTD measure for spare ratio is a point in time measurement as of June 30 and may include deliveries not yet in service and retired buses awaiting disposal. Nationally, many transit agencies exceed the guidance as a result of pandemic induced service cuts. MTS has maintained the number close to the guidance, reflecting a fiscally sustainable decision to reduce service only modestly.

During the audit period, MTS decreased its directly operated bus administration staffing, and administration costs decreased as well. This is shown in **Exhibit IV-7**.

Exhibit IV-7: MTS Bus Administration Performance Indicators

Base Data and Performance Indicators	Base Year FY18	Audit Review Period			% Change FY18-FY21
		FY19	FY20	FY21	
Administration FTEs	20.9	20.0	20.0	20.0	-4.3%
Administration Costs	\$16,425,816	\$12,095,842	\$12,054,973	\$13,455,859	-18.1%
Vehicle Service Hours (VSH)	820,677	822,638	781,729	814,134	-0.8%
Vehicle Service Miles (VSM)	9,683,731	9,738,607	9,236,042	9,631,608	-0.5%
VSH per Administration FTE	39,267	41,132	39,086	40,707	3.7%
VSM per Administration FTE	463,336	486,930	461,802	481,580	3.9%
Complaints per 100,000 Passengers	4.8	5.3	5.5	8.0	66.7%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: NTD Reports, Annual Performance Monitoring Reports

Bus administration FTEs went from 20.9 to 20.0, a modest reduction. Meanwhile costs related to administration decreased 18% compared to an increase in inflation of 7.7%. As a result, vehicle service hours and miles per administration FTE improved by just under 4%.

Customer satisfaction over the audit period was impacted by the pandemic rules, including mask wearing on board all vehicles. MTS has an impressive centralized complaint system where all complaints, regardless of point of entry (website, mobile application, call, voicemail, social media), are recorded and investigated. MTS reviews onboard and in station video for all complaints where available, and responds to 100% of passengers lodging the complaint. MTS routinely seeks opportunities to implement improvements driven by complaints to fix the issue forward, benefitting all riders. The growth in complaint frequency is predominantly driven by passenger complaints against another passenger due to Covid rule violations (e.g., social distancing, correctly wearing masks).

IV-3. MTS – Contracted Bus Operations

Performance reporting for MTS Contracted Bus Operations is reported in the annual MTS NTD reports and is identified by service type:

- *Fixed Route Services*
- *Commuter Express Bus*

- Rural Bus Services
- General Public Demand Response
- ADA Demand Response Service

This structure has been followed for this and prior performance audits. Rural is maintained as a separate service because SANDAG's TDA Claims Manual has retained the State's 10% farebox recovery requirement for Rural Services (as well as 10% for paratransit). For each service type, there is a review of TDA-mandated performance indicators and revenue performance indicators. As a reminder, in January 2015, all Chula Vista Transit service and supporting functions were absorbed by the MTS and relocated to the MTS South Bay facility. Chula Vista Transit is no longer identified as a separate service type.

IV-3.1. MTS – Contracted Bus Fixed Route Services

Overall performance of MTS Contracted Fixed Route Bus Operations was similar to that experienced on the directly-operated fixed route side. **Exhibit IV-8** provides TDA performance indicators for MTS Contracted Fixed Route Services exclusive of Commuter Express and Rural services.

Exhibit IV-8: MTS Contracted Fixed Route Bus Operations TDA Performance Indicators

Verified TDA Statistics & Performance Indicators	Base Year	Audit Review Period			% Change FY18-FY21
	FY18	FY19	FY20	FY21	
Operating Costs	\$58,626,688	\$63,312,551	\$64,228,792	\$68,402,791	16.7%
Unlinked Passengers	24,606,833	24,488,064	19,657,709	10,651,553	-56.7%
Vehicle Service Hours	980,624	1,031,955	1,005,154	1,036,022	5.6%
Vehicle Service Miles	9,802,569	10,192,536	9,878,517	10,187,224	3.9%
Employee FTEs	856	882	865	865	1.1%
Operating Cost per Revenue Vehicle Hour	\$59.79	\$61.35	\$63.90	\$66.02	10.4%
Operating Cost per Passenger	\$2.38	\$2.59	\$3.27	\$6.42	169.5%
Passengers per Revenue Vehicle Hour	25.09	23.73	19.56	10.28	-59.0%
Passengers per Revenue Vehicle Mile	2.51	2.40	1.99	1.05	-58.3%
Service Hours per Employee FTE	1,146	1,170	1,162	1,197	4.5%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: Form-C Reports

Operating costs for contracted fixed route services increased by 16.7% over the audit period, compared to inflation of 7.7%. When adjusted for modest service increases (5.6% hours and 3.9% miles), cost growth reduced to 10.4%. While still higher than inflation, these costs include efforts to protect employees and customers from Covid-19 transmission while using transit services. It also includes a higher cost of labor to get new drivers in the door (e.g., \$2,000 sign-on bonus was added to encourage new hires). Note that employee productivity has improved 4.5% with more service hours provided per full time equivalent employee. Similar to MTS directly operated fixed route services,, ridership declined 56.7% as a result of Covid-19 and associated economic shut down.. Passengers per hour and mile declined similar to overall ridership, at -59.0% and 58.3%, respectively.

Fare revenue indicators for MTS Contracted Fixed Route Bus decreased over the audit period, as a result of the massive decline in ridership (driven by Covid-19) and the fare simplification undertaken in support of new fare system capabilities. This is shown in **Exhibit IV-9**.

Exhibit IV-9: MTS Contracted Fixed Route Revenue Performance Indicators

Base Data and Performance Indicators	Base Year	Audit Review Period			% Change FY18- FY21
	FY18	FY19	FY20	FY21	
Operating Costs	\$58,626,688	\$63,312,551	\$64,228,792	\$68,402,791	16.7%
Farebox Revenues	\$23,759,622	\$23,595,783	\$19,498,982	\$12,881,480	-45.8%
Net Cost	\$34,867,066	\$39,716,768	\$44,729,809	\$55,521,311	59.2%
Unlinked Passenger Trips	24,606,833	24,488,064	19,657,709	10,651,553	-56.7%
Farebox Recovery Ratio	40.5%	37.3%	30.4%	18.8%	-53.5%
Average Fare per Passenger Trip	\$0.97	\$0.96	\$0.99	\$1.21	25.2%
Net Cost per Passenger Trip	\$1.42	\$1.62	\$2.28	\$5.21	267.9%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: Form-C Reports

The State of California eliminated the farebox recovery requirement for the current audit period, recognizing the extreme impact of Covid-19 on ridership and associated fare revenue. In FY19 farebox recovery nearly doubled the 20% TDA target at 37.3%. Covid inspired ridership loss brought that same number down to 18.8% by FY21. Average fare per passenger trip increased over the audit period, largely due to the fare change directed by SANDAG which focused on simplifying fares countywide. .

IV-3.2. MTS – Commuter Express Services

Although operated by the same contractor, Commuter Express Services are treated separately for reporting purposes. Given the economic shutdown in response to Covid-19 and the sustained “work from home” changes for commuters, commuter express services were hardest hit over the audit period. Service was reduced due to a 77.4% loss in riders, by nearly half. This resulted in cost savings and fewer operating costs, hours, miles and employees (FTE’s dedicated to commuter express were reduced by half from 13 FTE’s in FY18 to 6 FTE’s in FY21. **Exhibit IV-10** provides Commuter Express TDA performance indicators.

Exhibit IV-10: MTS Contracted Commuter Express TDA Performance Indicators

Verified TDA Statistics & Performance Indicators	Base Year	Audit Review Period			% Change FY18-FY21
	FY18	FY19	FY20	FY21	
Operating Costs	\$2,384,988	\$2,503,342	\$2,161,480	\$1,269,249	-46.8%
Unlinked Passengers	283,135	281,240	207,372	34,017	-88.0%
Vehicle Service Hours	11,657	11,719	9,824	5,860	-49.7%
Vehicle Service Miles	342,749	342,662	287,136	167,598	-51.1%
Employee FTEs	13	12	11	6	-55.6%
Operating Cost per Revenue Vehicle Hour	\$204.60	\$213.61	\$220.02	\$216.60	5.9%
Operating Cost per Passenger	\$8.42	\$8.90	\$10.42	\$19.83	135.4%
Passengers per Revenue Vehicle Hour	24.29	24.00	21.11	10.92	-55.0%
Passengers per Revenue Vehicle Mile	0.83	0.82	0.72	0.38	-53.8%
Service Hours per Employee FTE	870	965	920	985	13.2%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: NTD Reports, Form-C Reports

It is notable that operating costs per hour grew below the rate of inflation (5.9% versus 7.7%), and employee productivity increased by 13.2%. The overriding story for commuter services is one of severe ridership loss during the global pandemic, with thoughtful response by management in reducing service and costs.

Fare revenue indicators for MTS Contracted Commuter Express services reflect ridership losses, with an overall fare revenue reduction of 80.7% (compared to a ridership loss of 88.0%). The fare simplification directed by SANDAG contributed to the average fare reduction from \$4.23 in FY18 to \$3.60 in FY21. This is shown in **Exhibit IV-11**.

Exhibit IV-11: MTS Contracted Commuter Express Revenue Performance Indicators

Base Data and Performance Indicators	Base Year	Audit Review Period			% Change FY18-FY21
	FY18	FY19	FY20	FY21	
Operating Costs	\$2,384,988	\$2,503,342	\$2,161,480	\$1,269,249	-46.8%
Farebox Revenues	\$1,197,246	\$1,172,721	\$699,562	\$230,630	-80.7%
Net Cost	\$1,187,742	\$1,330,621	\$1,461,918	\$1,038,619	-12.6%
Unlinked Passenger Trips	283,135	281,240	207,372	64,017	-77.4%
Farebox Recovery Ratio	50.2%	46.8%	32.4%	18.2%	-63.8%
Average Fare per Passenger Trip	\$4.23	\$4.17	\$3.37	\$3.60	-14.8%
Net Cost per Passenger Trip	\$4.19	\$4.73	\$7.05	\$16.22	286.8%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: NTD Reports

The State of California eliminated the farebox recovery requirement for the audit period, recognizing the unprecedented impact of Covid-19 on ridership loss. Farebox recovery for commuter express services fell from 50.2% in FY18 to 18.2% in FY21, a 63.8% decline. While commuter services were reduced by half, ridership fell 77.4% resulting in a and average fare revenue by 14.8%, having a combined effect of increasing the net cost per passenger trip in excess of 286%.

IV-3.3. MTS – Contracted Bus Rural Services

Rural transit services link the sparsely populated central and eastern portions of San Diego County to the San Diego urban core. **Exhibit IV-12** provides TDA performance indicators for MTS Contracted Bus Rural Services.

Exhibit IV-12: MTS Contracted Bus Rural Services TDA Performance Indicators

Verified TDA Statistics & Performance Indicators	Base Year	Audit Review Period			% Change
	FY18	FY16	FY19	FY20	FY18-FY21
Operating Costs	\$905,621	\$903,717	\$929,478	\$913,011	0.8%
Unlinked Passengers	80,771	84,908	54,435	34,329	-57.5%
Vehicle Service Hours	6,144	5,357	5,117	5,236	-14.8%
Vehicle Service Miles	162,860	137,276	135,138	137,470	-15.6%
Employee FTEs	5	5	5	5	-2.7%
Operating Cost per Revenue Vehicle Hour	\$147.40	\$168.70	\$181.66	\$174.36	18.3%
Operating Cost per Passenger	\$11.21	\$10.64	\$17.08	\$26.60	137.2%
Passengers per Revenue Vehicle Hour	13.15	15.85	10.64	6.56	-50.1%
Passengers per Revenue Vehicle Mile	0.50	0.62	0.40	0.25	-49.6%
Service Hours per Employee FTE	1,262	1,115	1,080	1,105	-12.4%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: Form-C Reports

Rural services provide lifeline services and connection to urban areas and affiliated services (e.g., health care, education) for a population reliant on public transport. While passengers declined 57.5%, rural bus services were reduced by about 15%. The reasons were simple. The rural network is quite small and had infrequent service before Covid-19. Opportunities to reduce service are limited, and in many cases would result in elimination. MTS compassionately retained most rural service, in the expectation that riders would resume more quickly if some services remained. Also, it provides a lifeline service for populations in need.

This small service absorbed the costs of cleaning and disinfecting during Covid-19, and while total operating costs grew less than 1%, coupled with the service decline cost per hour and mile of service increased about 50%. Employees remained constant over the audit period (5 FTEs) and coupled with service reductions employee productivity dropped by just over 12%. Percentages tell only part of the story – there are only 5 FTEs providing rural service and the number remained constant throughout the audit period.

Exhibit IV-13 provides revenue performance indicators for MTS Contracted Bus Rural Services.

Exhibit IV-13: MTS Contracted Bus Rural Services Revenue Performance Indicators

Base Data and Performance Indicators	Base Year FY18	Audit Review Period			% Change FY18-FY21
		FY19	FY20	FY21	
Operating Costs	\$905,621	\$903,717	\$929,478	\$913,011	0.8%
Farebox Revenues	\$204,180	\$198,382	\$153,050	\$122,672	-39.9%
Net Cost	\$701,441	\$705,335	\$776,428	\$790,339	12.7%
Unlinked Passenger Trips	80,771	84,908	54,435	34,329	-57.5%
Farebox Recovery Ratio	22.5%	22.0%	16.5%	13.4%	-40.4%
Average Fare per Passenger Trip	\$2.53	\$2.34	\$2.81	\$3.57	41.4%
Net Cost per Passenger Trip	\$8.68	\$8.31	\$14.26	\$23.02	165.1%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: Form-C Reports

While farebox recovery fell from 22.5% in FY18 to 13.4% in FY21, it still exceeded the 10% farebox recovery target set by California’s TDA. Average fare per passenger grew 41.4% as a result of both the fare simplification effort led by SANDAG and passengers travelling less often and choosing to pay cash instead of with discounted passes. Net cost per passenger trip grew 165%, similar to systemwide results.

IV-3.4 MTS - Sorrento Valley Coaster Connection (SVCC)

The SVCC service was designed to provide direct access to regional transit. **Exhibit IV-14** provides SVCC TDA performance indicators for the audit period.

Exhibit IV-14: MTS Demand Response SVCC TDA Performance Indicators

Verified TDA Statistics & Performance Indicators	Base Year FY18	Audit Review Period			% Change FY18-FY21
		FY19	FY20	FY21	
Operating Costs	\$315,280	\$306,430	\$274,886	\$275,079	-12.8%
Unlinked Passengers	90,726	84,188	64,750	9,961	-89.0%
Vehicle Service Hours	5,976	5,546	4,845	3,605	-39.7%
Vehicle Service Miles	68,607	64,249	56,799	36,781	-46.4%
Employee FTEs	5	5	6	2	-50.9%
Operating Cost per Revenue Vehicle Hour	\$52.76	\$55.25	\$56.73	\$76.30	44.6%
Operating Cost per Passenger	\$3.48	\$3.64	\$4.25	\$27.62	694.7%
Passengers per Revenue Vehicle Hour	15.18	15.18	13.36	2.76	-81.8%
Passengers per Revenue Vehicle Mile	1.32	1.31	1.14	0.27	-79.5%
Service Hours per Employee FTE	1,195	1,109	881	1,468	22.8%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: Form-C Reports

MTS Contracted SVCC Services were significantly impacted by the Covid-19 pandemic and economic impacts thereof. Schools and employment centers were shut down for extended periods, and then work from home and remote learning became a common model to engage. As a result, SVCC ridership fell 89% over the audit period, and service was slashed by 40 to 50%. FTEs dedicated to this service fell from 5 to only 2 FTEs by FY21.

Exhibit IV-15 provides revenue performance indicators for MTS SVCC Services.

Exhibit IV-15: MTS Demand Response SVCC Revenue Performance Indicators

Base Data and Performance Indicators	Base Year FY18	Audit Review Period			% Change FY18-FY21
		FY19	FY20	FY21	
Operating Costs	\$315,280	\$306,430	\$274,886	\$275,079	-12.8%
Farebox Revenues	\$88,862	\$83,113	\$64,569	\$8,773	-90.1%
Net Cost	\$226,418	\$223,317	\$210,317	\$266,306	17.6%
Unlinked Passenger Trips	90,726	84,188	64,750	9,961	-89.0%
Farebox Recovery Ratio	28.2%	27.1%	23.5%	3.2%	-88.7%
Average Fare per Passenger Trip	\$0.98	\$0.99	\$1.00	\$0.88	-10.1%
Net Cost per Passenger Trip	\$2.50	\$2.65	\$3.25	\$26.73	971.3%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: Form-C Reports

Revenue results reflect ridership loss and service cuts on this small service. The nearly 90% loss in riders overwhelm every other measure. .

IV-3.5 MTS – ADA Paratransit Services

MTS provides MTS Access Paratransit services in central and southern San Diego. Operating funding for these services is provided by local TDA and *TransNet* revenue sources. MTS Access provides the complementary paratransit services required by the Americans with Disabilities Act (ADA).

Personal Care Attendants may travel without paying a fare. Children five years and younger travel free with a fare paying adult. Reservations are accepted from 48 hours in advance up to 5:00 p.m. the day before travel. Reservations can be booked online or via telephone, 7 days per week. MTS provides paratransit services through a private contractor. The service is operated with zero denials of service (the law requires no patterns of denials), and the contractor has the flexibility to add vehicles and drivers, if needed to meet demand, and can use supervisors to drive. MTS also has a taxi contract focused on long trips and trips outside the service area, which can be used for overflow demand. MTS uses a third party for intake and to determine eligibility to use services as a customer or ride along health care provider. The intake process reviews the nature and severity of conditions preventing a person from using mass transit services, and completes the assessment within 21 days.

Exhibit IV-16 provides TDA performance indicators for MTS Access services.

Exhibit IV-16: MTS Demand Response ADA TDA Performance Indicators

Verified TDA Statistics & Performance Indicators	Base Year FY18	Audit Review Period			% Change FY18-FY21
		FY19	FY20	FY21	
Operating Costs	\$20,159,479	\$19,641,968	\$15,968,173	\$10,499,932	-47.9%
Unlinked Passengers	505,973	492,475	343,960	107,193	-78.8%
Vehicle Service Hours	251,152	230,661	171,400	73,654	-70.7%
Vehicle Service Miles	4,606,212	4,528,073	3,302,697	1,558,475	-66.2%
Employee FTEs	293	267	200	85	-71.1%
Operating Cost per Revenue Vehicle Hour	\$80.27	\$85.16	\$93.16	\$142.56	77.6%
Operating Cost per Passenger	\$39.84	\$39.88	\$46.42	\$97.95	145.8%
Passengers per Revenue Vehicle Hour	2.01	2.14	2.01	1.46	-27.8%
Passengers per Revenue Vehicle Mile	0.11	0.11	0.10	0.07	-37.4%
Service Hours per Employee FTE	856	864	857	868	1.4%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: Form-C Reports

- During the Covid-19 shutdowns, nearly all adult day care centers and the San Diego Regional Center were closed, eliminating more than 40% of ADA paratransit trips. In addition, most non-essential trips disappeared. Ridership went from about 40,000 per day in FY18 to 20,000 and then down to 4,000 per day by FY21. The net effect was a 90% loss in paratransit ridership. FTEs providing these services dropped from 293 to 85 over the same period. Service was reduced by roughly 70%. MTS adopted a social distancing policy for passenger and driver safety, limiting ridership to one passenger (plus health care provider if one) per trip

MTS completed the process of converting the fleet to propane during the audit period, striving for a greener service profile.

Exhibit IV-17 provides revenue performance indicators for MTS Access Services.

Exhibit IV-17: MTS Demand Response ADA Revenue Performance Indicators

Base Data and Performance Indicators	Base Year FY18	Audit Review Period			% Change FY18-FY21
		FY19	FY20	FY21	
Operating Costs	\$20,159,479	\$19,641,968	\$15,968,173	\$10,499,932	-47.9%
Farebox Revenues	\$2,598,019	\$2,913,926	\$2,385,694	\$461,622	-82.2%
Net Cost	\$17,561,461	\$16,728,042	\$13,582,480	\$10,038,309	-42.8%
Unlinked Passenger Trips	505,973	492,475	343,960	107,193	-78.8%
Farebox Recovery Ratio	12.9%	14.8%	14.9%	4.4%	-65.9%
Average Fare per Passenger Trip	\$5.13	\$5.92	\$6.94	\$4.31	-16.1%
Net Cost per Passenger Trip	\$34.71	\$33.97	\$39.49	\$93.65	169.8%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: Form-C Reports

All revenue performance indicators are impacted by the nearly 90% loss in riders. Farebox recovery fell below 10%, but California provided operators a farebox recovery target exemption during the audit period.

IV-4. MTS – Rail Operations Performance

The Trolley system performance over the audit period echoes that of bus, with continued excellence in FY 2019 followed by the ridership crash with Covid-19. That said, Trolley prepared for launch of the mid-coast line in November 2022, including many activities related to that opening in FY21 (e.g., training, testing, integration, staffing). **Exhibit IV-18** shows MTS Rail Operations TDA performance indicators during the audit period.

Exhibit IV-18: MTS Rail TDA Performance Indicators

Verified TDA Statistics & Performance Indicators	Base Year FY18	Audit Review Period			% Change FY18-FY21
		FY19	FY20	FY21	
Operating Costs	\$90,313,010	\$86,423,252	\$95,660,861	\$99,668,853	10.4%
Unlinked Passengers	36,995,201	37,293,757	32,003,027	19,516,337	-47.2%
Vehicle Service Hours	478,175	487,132	508,259	555,064	16.1%
Vehicle Service Miles	8,656,486	8,820,704	9,210,076	10,077,479	16.4%
Employee FTEs	600	606	602	583	-2.7%
Operating Cost per Revenue Vehicle Hour	\$188.87	\$177.41	\$188.21	\$179.56	-4.9%
Operating Cost per Passenger	\$2.44	\$2.32	\$2.99	\$5.11	109.2%
Passengers per Revenue Vehicle Hour	77.37	76.56	62.97	35.16	-54.6%
Passengers per Revenue Vehicle Mile	4.27	4.23	3.47	1.94	-54.7%
Service Hours per Employee FTE	797	804	844	951	19.3%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: NTD Reports

Total operating costs grew by 10.4%, slightly higher than the 7.7% inflation rate, largely due to Covid-19 cleaning response, and preparation for the new line opening. Cost per service hour, however, fell by nearly 5 percent over the same period. MTS successfully reversed a three year trend of rider losses on Trolley in FY19 with growth of 1% for the year (note the final quarter faced an economic shutdown). The subsequent two years were plagued with economic shutdowns, home schooling and work from home widely in San Diego County. Ridership fell 47.2% over the audit period. Service miles and hours were up, mostly in FY21 in preparation of the new line opening. Full time employees (FTEs) declined slightly, due to retirements and sick outages from Covid, resulting in greater productivity (19.3% improvement in services hours per employee).

Notable, over the audit period MTS brought the rail system into a 100% state of good repair, focusing manpower on cleaning, maintaining and improving the state of the tracks, stations, signals, vehicles and facilities. MTS purchased 45 new LRT vehicles before the mid-coast opening. Retired vehicles are scheduled for shipping to Mendoza, Argentina where they will engage in a second life of service. On-time performance and safety experienced excellence in all three years, with accidents the lowest in in the Trolley's 41 year history. Among MTS responses to Covid-19 are many changes improving safety for employees and customers (e.g., social distancing, cleaning stations and tools, off board fare inspection, routine deep cleaning and disinfecting). MTS gained industry recognition with the APTA Gold Award for MTS' response to Covid. .

Exhibit IV-19 shows MTS Rail Operations fare revenue indicators during the audit period.

Exhibit IV-19: MTS Rail Revenue Performance Indicators

Base Data and Performance Indicators	Base Year FY18	Audit Review Period			% Change FY18-FY21
		FY19	FY20	FY21	
Operating Costs	\$90,313,010	\$86,423,252	\$95,660,861	\$99,668,853	10.4%
Farebox Revenues	\$39,353,823	\$42,005,525	\$36,463,573	\$19,337,502	-50.9%
Net Cost	\$50,959,187	\$44,417,727	\$59,197,288	\$80,331,351	57.6%
Unlinked Passenger Trips	36,995,201	37,293,757	32,003,027	19,516,337	-47.2%
Farebox Recovery Ratio	43.6%	48.6%	38.1%	19.4%	-55.5%
Average Fare per Passenger Trip	\$1.06	\$1.13	\$1.14	\$0.99	-6.9%
Net Cost per Passenger Trip	\$1.38	\$1.19	\$1.85	\$4.12	198.8%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: NTD Reports

The main findings for MTS Rail revenue mirror bus and include the ridership loss related to the Covid outbreak overwhelmed all revenue measures, reducing revenue and ridership by about half. Average fare per passenger fell slightly (6.9%). Farebox recovery dropped from 48.9% in FY19 to 19.4% in FY21. The State of California has eliminated the farebox recovery requirement during the Covid impact period.

During the audit period, MTS response to Covid included operating with fewer staff reflecting retirements, employee sickness, and a difficult recruiting environment.. This is shown in **Exhibit IV-20**.

Exhibit IV-20: MTS Rail Operations Performance Indicators

Base Data and Performance Indicators	Base Year	Audit Review Period			% Change FY18- FY21
	FY18	FY19	FY20	FY21	
Vehicle Operations FTEs	376.8	376.3	376.6	365.7	-2.9%
Vehicle Operations Costs	\$31,982,876	\$33,715,952	\$35,881,846	\$38,015,765	18.9%
Car Service Hours (CSH)	478,175	487,132	508,259	555,064	16.1%
Car Service Miles (CSM)	8,656,486	8,820,704	9,210,076	10,077,479	16.4%
Total Vehicle Hours	486,523	495,882	527,144	570,684	17.3%
Total Vehicle Miles	8,758,506	8,937,028	9,410,942	10,242,855	16.9%
Unlinked Passenger Trips	36,995,201	37,293,757	32,003,027	19,516,337	-47.2%
Passenger Miles	214,376,455	219,453,215	194,284,885	123,388,853	-42.4%
CSH per Operations FTE	1,269	1,295	1,350	1,518	19.6%
CSM per Operations FTE	22,974	23,441	24,456	27,554	19.9%
Service Miles per Service Hour	18.1	18.1	18.1	18.2	0.3%
Service Hours / Total Hours	98.3%	98.2%	96.4%	97.3%	-1.0%
Service Miles / Total Miles	98.8%	98.7%	97.9%	98.4%	-0.5%
Vehicle Operations Cost per Passenger Trip	\$0.86	\$0.90	\$1.12	\$1.95	125.3%
Vehicle Operations Cost per Passenger Mile	\$0.15	\$0.15	\$0.18	\$0.31	106.5%
Average Passenger Miles per Passenger Trip	5.8	5.9	6.1	6.3	9.1%
Preventable Accidents per 100,000 Total Vehicle Miles	1.16	1.09	0.91	0.92	-20.7%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: NTD Reports, Annual Performance Monitoring Reports

Base data for rail operations show that MTS kept the service output stable over the audit period, with modest increases for testing and training operators in late FY21 related to the mid-county connector which opened in November 2021. Service miles per hour remained stable at about 18 miles per hour. Passenger trip length grew slightly, likely due to the loss in short trips. Preventable accidents per 100k miles showed superior performance with a drop of 21% resulting in the best safety record in the 41 years of Trolley operations in San Diego.

During the audit period, MTS slightly decreased its rail maintenance staffing. This is shown in **Exhibit IV-21**.

Exhibit IV-21: MTS Rail Maintenance Performance Indicators

Base Data and Performance Indicators	Base Year FY18	Audit Review Period			% Change FY18-FY21
		FY19	FY20	FY21	
Maintenance FTEs	216.6	224.3	219.7	211.8	-2.2%
Maintenance Costs	\$32,711,904	\$29,255,308	\$36,414,353	\$38,250,205	16.9%
Total Car Hours	486,523	495,882	527,144	570,684	17.3%
Total Car Miles	8,758,506	8,937,028	9,410,942	10,242,855	16.9%
Peak Cars	97	103	103	96	-1.0%
Total Cars	130	148	173	173	33.1%
Car Hours per Maintenance FTE	2,246	2,211	2,399	2,695	20.0%
Car Miles per Maintenance FTE	40,436	39,844	42,835	48,372	19.6%
Maintenance Cost per Active Vehicle	\$251,630	\$197,671	\$210,488	\$221,099	-12.1%
Maintenance Cost per Car Hour	\$67.24	\$59.00	\$69.08	\$67.03	-0.3%
Maintenance Cost per Car Mile	\$3.73	\$3.27	\$3.87	\$3.73	0.0%
Car Hours per Active Car	3,742	3,351	3,047	3,299	-11.9%
Car Miles per Active Car	67,373	60,385	54,399	59,207	-12.1%
Mean Distance between Failures (MDBF)	9,239	10,392	12,874	13,567	46.8%
Spare Ratio	34.0%	43.7%	68.0%	80.2%	135.8%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: NTD Reports, Annual Performance Monitoring Reports

MTS maintained service levels in spite of the Covid-19 economic shutdowns, providing both lifeline services and an inducement for riders to return when they felt it was safe to do so. Also MTS had to prepare for the new line opening and added service and staff for testing, training and operations readiness in FY21. MTS maintenance employee productivity increased 20%, and operating cost per active vehicle and service hour both declined compared to inflation which grew 7.7% over the audit period. The addition of 45 new light rail vehicles provided a newer fleet, and drove the increase in active rail cars. Soon, retired cars will be shipped to Mendoza, Argentina, reducing the fleet size. A notable achievement is a significant increase in vehicle reliability with mean miles between failures up 46.8%. The spare ratio is above the FTA guidance of 20% and stands at 35.8% at the end of the audit period. The excess is expected to disappear in FY22 as a result of opening the mid-coast line and transferring retiring vehicles to Argentina. MTS delivered excellent rail service throughout the audit period, and is in a 100% state of good repair entering FY22

During the audit period, MTS decreased its rail administration staffing slightly, and significantly reduced administration too. This is shown in **Exhibit IV-22**.

Exhibit IV-22: MTS Rail Administration Performance Indicators

Base Data and Performance Indicators	Base Year FY18	Audit Review Period			% Change FY18-FY21
		FY19	FY20	FY21	
Administration FTEs	6.2	5.0	6.0	6.0	-3.4%
Administration Costs	\$25,618,230	\$23,451,992	\$23,364,662	\$23,402,883	-8.6%
Car Service Hours (CSH)	478,175	487,132	508,259	555,064	16.1%
Car Service Miles (CSM)	8,656,486	8,820,704	9,210,076	10,077,479	16.4%
CSH per Administration FTE	77,125	97,426	84,710	92,665	20.1%
CSM per Administration FTE	1,396,207	1,764,141	1,535,013	1,682,384	20.5%
Complaints per 100,000 Passengers	1.3	1.5	1.5	1.3	0.0%
Percent Change, Consumer Price Index		3.2%	1.7%	2.6%	7.7%

Source: NTD Reports, Annual Performance Monitoring Reports

For base data reported to NTD, administrative costs for Rail decreased 8.6% over the audit period, compared to 7.7% for the San Diego County CPI. The number of administration FTEs has been fairly stable over the audit period, dropping by about 3.4% by FY21. Customer satisfaction remained steadfast and positive during the audit period as complaints per 100,000 passengers remained flat in spite of concerns over Covid-19 and new procedures and requirements. Notable, a significant number of complaints were about other passengers (social distancing, proper mask wearing). Without these new areas of concern for passengers, the rate of complaints fell significantly. MTS does an excellent job of tracking and responding to all complaints no matter where they enter the system.

SECTION V: CONCLUSIONS AND RECOMMENDATIONS

MTS is in compliance with PUC requirements and has made satisfactory progress to implement prior audit recommendations:

- Compliance with PUC Requirements: MTS is in compliance with applicable PUC requirements.
- Progress to Implement Prior Audit Recommendations: MTS has worked cooperatively with SANDAG on the fare simplification change, implemented a new fare collection system (Pronto), and engaged in ridership growth strategies. Covid-19 resulted in a massive ridership loss and current efforts are focused on regaining riders.

The systemwide TDA performance trends overall are indicative of the continued attention that MTS placed on cost containment during the audit period (total cost, cost per hour and cost per mile all grew at a rate below inflation). The Transit Optimization Plan implemented near the end of the prior audit period had beneficial outcomes in this audit. In the first three-quarters of FY19 (before Covid), ridership grew on both Trolley and bus systems, reversing a three-year decline. Then, Covid-19 struck and the world changed dramatically. Non-essential goods and services were shut down, home learning became the school model and work at home for those jobs allowed to continue. As a result, MTS experienced a massive ridership loss, similar to results across the nation. MTS used the time wisely, catching up on the backlog for state of good repair investments, preparing for the successful opening of the Mid-Coast Trolley line, and preparing for the implementation of Pronto, the new fare payment system. The Trolley safety record over this audit period was the best since its inception 41 years ago. Note also that MTS won a gold award from the American Public Transportation Association for Covid-19 safety and innovation. MTS took extraordinary steps to keep employees and customers safe by making a wide array of process changes (e.g., cleaning and disinfecting widely, social distancing, off board fare inspection, rear door boarding, limiting demand responsive trips to a single client per vehicle).

Going forward, recovering ridership is foremost in all management decisions and staff actions. MTS has an impressive strategy encompassing marketing, service changes, transit-oriented development plans, service quality and safety improvements, outreach, new vehicles and attractive stations and stops, better customer information, responding to complaints and questions, and customer technology all to induce more riders. While the audit team assessed and brainstormed on possible additional actions, it is the belief of this auditor that MTS is doing an admirable job of regaining ridership. We offer just one non-related recommendation at this time, as follows.

Recommendation 1: MTS should work with SANDAG TDA staff to achieve greater alignment with respect to the various uses and external reporting of farebox recovery ratio (for example, California TDA eligibility, annual financial accounting, NTD reporting, industry measure).

Issues and Opportunities – Since 2015, there have been multiple changes to legislation when it comes to the definition of farebox recovery in relation to TDA eligibility, and exemptions as of result of COVID-19. California, due to funding regulation, uses the common industry term for farebox recovery to mean operating costs with some exclusions covered by fares and other system generated revenue. This is different than the commonly used industry metric farebox recovery and is not comparable to transit systems nationally or globally. Both metrics have merit.

MTS and NCTD ceded fare policy decision rights to SANDAG. Because MTS has not needed the cost exclusions or revenue enhancements to meet and exceed recovery requirements, they continue to report the simple industry measure (fare revenue divided by operating cost). SANDAG is required to ensure a fare policy supportive of state mandates, including farebox recovery. Doing so with a consistent measure of

farebox recovery among MTS and NCTD is preferred, as it gives all three parties (SANDAG, MTS and NCTD) information on a level playing field, and consistent with state regulation.

While there are complications, confusion and potential errors, resulting from having different measures for the same metric, it is still of value given the complexities of the region and state. The auditor has recommended that SANDAG establish an annual review process for Policy 27 and the TDA Claim Manual, and communicate with the operators. Through this process, there is an opportunity to have a comparable measure regionally and for state reporting purposes, while also providing an opportunity to measure the common definition for comparability to the larger transit industry. Having full and complete information on TDA farebox recovery is also a benefit for the entity responsible for fare policy.

Recommended Actions – MTS should work with SANDAG TDA staff to achieve greater understanding and alignment with respect to the various uses and external reporting of farebox recovery (for example, California TDA eligibility, annual financial accounting, NTD reporting, industry measure). In addition, MTS should provide related guidance to its Certified Public Accountants when they prepare to work on fiscal audits/Comprehensive Annual Financial Reports.

Expected Results – Enhanced clarity in understanding for staff and Board members, and a comparable regional approach for farebox recovery calculations while retaining ability to measure the common global definition for comparability to the transit industry.

MTS Response – MTS can provide all of the various layers of operating and non-operating revenues with SANDAG and delineate which are eligible for inclusion within the farebox recovery ratio (FRR) for complete transparency in the calculation. MTS will then have a complete set of metrics that have the traditionally calculated FRR as well as an FRR that includes other eligible sources of revenues. This transparency will be needed as we work with the Federal Transit Administration and their calculations of FRR in the annual National Transit Database report, and it will provide insight to our CPAs as they validate the calculation of our final agency FRR metric.