

NOTE:

All exhibits in this report are presented at the end of the associated discussion in each section.

EXECUTIVE SUMMARY

This executive summary highlights the findings from the performance audit of the Marin County Transit District (MCTD/Marin Transit). In California, a performance audit must be conducted every three years of any transit operator receiving Transportation Development Act (TDA) Article 4 funds, to determine whether the operator is in compliance with certain statutory and regulatory requirements, and to assess the efficiency and effectiveness of the operator's services. The two service modes operated by MCTD, bus and paratransit, are the focus of this performance audit. The audit period is Fiscal Years 2017 through 2019 (from July 1, 2016 through June 30, 2019).

Performance Audit and Report Organization

The performance audit has been conducted for MTC in accordance with its established procedures for performance audits. The final audit report consists of these sections:

- An assessment of data collection and reporting procedures;
- A review of performance trends in TDA-mandated indicators and component costs;
- A review of compliance with selected PUC requirements;
- An evaluation of MCTD's actions to implement the recommendations from the last performance audit;
- An evaluation of functional performance indicator trends; and
- Findings, conclusions, and recommendations to further improve MCTD's performance based on the results of the previous sections.

Comments received from MCTD and MTC staff regarding the draft report have been incorporated into the final report. Highlights from the key activities are presented in this executive summary.

Results and Conclusions

Review of TDA Data Collection and Reporting Methods - The purpose of this review is to assess MCTD's compliance with the TDA requirements for data collection and reporting. The review is limited to the five data items needed to calculate the TDA-mandated performance indicators. This review has determined that MCTD is in compliance with the data collection and reporting requirements for all five TDA statistics. In addition, the statistics collected over the six-year review period appear to be consistent with the TDA definitions, and indicate general consistency in terms of the direction and magnitude of the year-to-year changes across the statistics.

<u>Performance Indicators and Trends</u> – MCTD's performance trends for the five TDA-mandated indicators were analyzed by mode. A six-year analysis period was used for all the indicators. In addition, component operating costs were analyzed.

- <u>Bus Service</u> The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2014 through FY2019. It should be noted that these results are based on FY2014 reporting that excluded MCTD bus services operated under contract by Golden Gate Transit.
 - In terms of cost efficiency, there was an average annual increase in the operating cost per hour of 1.3 percent, which amounted to a 1.5 percent decrease in inflation adjusted dollars.
 - Cost effectiveness improved, with the cost per passenger decreasing on average by 3.5 percent per year, or average annual decrease of 6.2 percent in constant FY2014 dollars.

 Passenger productivity demonstrated positive trends, with passengers per vehicle service hour increasing by 5.0 percent per year overall and passengers per vehicle service mile increasing by 9.3 percent.

The following is a brief summary of the component operating costs trend highlights for the bus service between FY2014 and FY2019:

- Purchased transportation costs comprised by far the largest category of operating costs, increasing from 54 percent of total costs in FY2014 to about 85 percent subsequently. The FY2014 results were based on NTD reporting that excluded MCTD bus services operated under contract by Golden Gate Transit.
- There were annual increases between five and 12 percent in purchased transportation costs in the last three years (all MCTD bus services included).
- In-house labor costs went up by 4.4 percent per year on average, while fringe benefits costs did not change much overall despite annual fluctuation. Together, these categories contributed about six percent of total costs except in FY2014, when the result was noticeably higher.
- Services costs generally contributed between one and two percent of the total operating cost and showed a net 2.1 percent annual decrease, while materials/supplies costs contributed between four and five percent and showed a net annual increase of 9.2 percent.
- The casualty/liability and other expenses categories each generally contributed one percent or less toward the total costs, and exhibited only minor overall change as well.
- <u>Paratransit</u> The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2014 through FY2019:
 - Cost efficiency improved after the new paratransit contract transferring some service to GGBHTD took effect in FY2016.
 Overall, there was an average annual decrease in the operating cost

per hour of 0.6 percent. This translated to a 3.4 percent decrease in inflation adjusted dollars.

- In terms of cost effectiveness, the cost per passenger increased an average of 2.3 percent per year in actual dollars, corresponding to a decrease of 0.6 percent per year in constant (inflation-adjusted) dollars.
- Passenger productivity demonstrated some losses, with passengers per vehicle service hour decreasing by 2.8 percent overall and passengers per vehicle service mile decreasing by 0.6 percent.

The following is a brief summary of the component operating costs trend highlights for paratransit between FY2014 and FY2019:

- Purchased transportation costs comprised the largest category of operating costs, contributing 75 to 85 percent of total costs though the period. Purchased transportation costs decreased an average by four percent annually.
- No in-house labor or fringe benefits costs were reported in FY2014.
 Subsequently, there was annual fluctuation in dollar amounts, but both of these categories together accounted for just five to seven percent of total costs.
- Services costs showed a net 25 percent annual increase, and increased from two to six percent of the total operating cost. At the same time, materials/supplies costs decreased on average by three percent annually in absolute terms, and went down from 11 to eight percent of total costs by FY2015 but increased again to 10.3 percent by FY2019.
- No casualty/liability costs were reported for FY2014. Otherwise the casualty/liability and other expenses categories each contributed two percent or less toward the total costs in each year.

<u>PUC Compliance</u> – MCTD is in compliance with the sections of the state PUC that were reviewed as part of this performance audit. The sections reviewed included

requirements concerning CHP safety inspections, labor contracts, reduced fares, Welfare-to-Work, revenue sharing, and evaluation of passenger needs.

<u>Status of Prior Audit Recommendations</u> – This section is not applicable since this is the first performance audit to be conducted of MCTD, and therefore there were no prior audit recommendations.

<u>Functional Performance Indicator Trends</u> - To further assess MCTD's performance over the past three years, a detailed set of systemwide and modal functional area performance indicators was defined and reviewed.

- <u>Systemwide</u> The following is a brief summary of the systemwide functional trend highlights between FY2017 and FY2019:
 - Administrative costs increased from 16 to 19 percent of total operating costs and increased by one third to \$22.08 per vehicle service hour.
 - Marketing expenditures decreased to 2.2 percent of total administrative costs while remaining at \$0.03 or \$0.04 per passenger trip.
 - The systemwide farebox recovery ratio decreased from 14.2 percent to 12.6 percent.
- <u>Bus Service</u> The following is a brief summary of the bus service functional trend highlights between FY2017 and FY2019:
 - Service Planning results showed the operating cost per passenger mile increasing by ten percent, more than 85 percent of all vehicle miles in service, more than 90 percent of all vehicle hours in service, and essentially steady passenger productivity.

- Operations results showed vehicle operations costs decreasing compared to total costs but increasing slightly per service hour, farebox recovery declining from 15.8 to 14.3 percent by FY2019, the TDA recovery ratio (reflecting local support and operating cost exclusions) at 80 percent or more, and modestly decreasing rates of complaints and missed trips. Schedule adherence results were only available for FY2017, when 81 percent on time performance was reported. Due to compatibility issues in the vehicle tracking systems used by MCTD's various contractors, comprehensive on-time performance data is only compiled every three years by passenger survey in conjunction with NTD ridechecks.
- Maintenance results showed total maintenance costs increasing slightly to 15.4 percent of total costs, vehicle maintenance costs per mile increasing by 20 percent, and the vehicle spare ratio decreasing slightly but remaining around 25 percent. In addition, the mean distance between major failures declined after FY2017 to 30,700 vehicle miles (nearly 30 percent), though the mean distance between all failures improved somewhat to 17,000 miles.
- In the safety area, there were no preventable accidents in the first two years but two in FY2019 -- pointing to a potentially burgeoning safety issue, while casualty/liability costs per service hour and mile both increased but remained relatively low in dollar amounts.
- <u>Paratransit</u> The following is a brief summary of the paratransit functional trend highlights between FY2017 and FY2019:
 - Service Planning results showed a 40 percent increase in the operating cost per passenger mile, more than 85 percent of all vehicle miles in service, 90 percent of all vehicle hours in service, passengers per vehicle service mile down by five percent, and passengers per vehicle service hour down by ten percent.
 - For Operations, the vehicle operations cost per service hour remained about 73 percent of total costs, but increased by six percent in relation to service hours. The paratransit farebox recovery declined from 4.6 to 3.8 percent while the TDA recovery ratio declined from about 80 percent in the first two years to 70 percent.

Schedule adherence ranged between 91 and 93 percent, there were no ADA trip denials and a 30 percent decrease in the rate of complaints, but also a notable increase in missed trips in FY2018. The trip cancellation rate, late trip cancellation rate and passenger no-shows all trended downward.

- In the Maintenance area, total maintenance costs remained near eight percent of total costs while vehicle maintenance costs remained about \$0.42 per mile, and the vehicle spare ratio decreased by onethird from 23.5 to 15.4 percent. In addition, the mean distance between major failures improved by 75 percent to over 175,000 vehicle miles and the mean distance between all failures improved overall by 67 percent.
- Safety results showed the rate of preventable accidents reduced by more than 50 percent over the three years.

Recommendations

1. <u>TAKE STEPS TO ADDRESS PREVENTABLE ACCIDENTS ON MCTD'S BUS SERVICE.</u>

[Reference Section: VI. Functional Performance Indicator Trends]

MCTD reported no preventable accidents on its bus system in the first two years of the audit period, but two such accidents in FY2019, the equivalent of 0.1 per 100,000 vehicle miles. Although the number of accidents in FY2019 was not inordinately high, the recent increase points to a potentially burgeoning safety issue which MCTD should address in coordination with its operating contractors. Efforts should include additional strategies to improve operator training and enhance monitoring activities to ensure that safety issues are identified and corrected before they have a chance to escalate further.

2. <u>MONITOR AND REPORT SCHEDULE ADHERENCE CONSISTENTLY AND</u> ON A REGULAR BASIS ACROSS THE BUS SYSTEM.

[Reference Section: VI. Functional Performance Indicator Trends]

During the conduct of the audit, MCTD staff indicated that schedule adherence on the bus service is monitored internally monthly by Planning and Operations staff and adjustments made to schedules to address poor performing routes. In conjunction with NTD ridechecks, comprehensive schedule adherence is also completed every three years through an onboard passenger survey. The most recent survey was done for FY2017 and showed 81 percent of trips operating ontime. Due to compatibility issues in reporting methodologies between the onboard tracking system on the vehicles operated by GGBHTD and MCTD's vehicle tracking system used by the other contractors, on-time performance data is not compiled and included as part of MCTD's regular reporting. Therefore, no schedule adherence results were available for FY2018 and FY2019.

In order to provide more reliable service to the public, and provide valuable and relevant performance information to the Board, MCTD and all of its contractors should be tracking bus system schedule adherence more formally and consistently. MCTD is encouraged to expand its efforts to collect and report comprehensive on-time performance results in all years, not just every third year.

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I. INTRODUCTION

Public Utilities Code (PUC) Section 99246 requires that a performance audit be conducted every three years of each public transit operator in California. The audit requirement pertains to recipients of Transportation Development Act (TDA) funds, and is intended to assure that the funds are being used efficiently. The substance and process of the performance audit is defined by the Regional Transportation Planning Agency (RTPA).

In the San Francisco Bay Area, the Metropolitan Transportation Commission (MTC) has been designated the RTPA and has this responsibility. By statute, the audit must be conducted in accordance with the U.S. Comptroller General's "Standards for Audit of Governmental Organizations, Programs, Activities, and Functions" (the "yellow book"). The performance audit is a systematic review to determine the extent to which a transit operator has complied with pertinent laws and regulations, and conducted operations in an efficient and economical manner. Relative to system compliance testing, all findings are reported regardless of materiality.

This report has been prepared as part of the performance audit of the Marin County Transit District (MCTD/Marin Transit). The two modes operated by MCTD, bus and paratransit, are the focus of this performance audit. The audit period is Fiscal Years 2017 through 2019 (from July 1, 2016 through June 30, 2019).

An overview of MCTD is provided in Exhibit 1. This is followed by a recent organization chart in Exhibit 2, which reflects the basic organizational structure during the audit period and beyond.

Performance Audit and Report Organization

This performance audit of MCTD has been conducted for MTC in accordance with its established procedures for performance audits. The audit consisted of two discrete steps:

- 1. Compliance Audit Activities in this phase included:
 - An overview of data collection and reporting procedures for the five TDA performance indicators;
 - Analysis of the TDA indicators; and
 - A review of compliance with selected state Public Utilities Code (PUC) requirements.
- 2. Functional Review Activities in this phase included:
 - A review of actions to implement the recommendations from the prior performance audit;
 - Calculation and evaluation of performance indicator trends; and
 - Findings, conclusions, and the formulation of recommendations.

This report presents the findings from both phases. Comments received from MCTD and MTC staff regarding the draft report have been incorporated into this final report.

Exhibit 1: System Overview

Location

Headquarters/Administrative Office:

711 Grand Avenue, Suite 110, San Rafael CA 94901

Establishment

MCTD was formed by a vote of the people of Marin County in 1964 and was given the responsibility for providing local transit service within the County. The District historically was primarily a "pass through" agency providing funds for local services managed by Golden Gate Transit, along with administering the contract for local and regional paratransit services. However, in 2003 MCTD began to take responsibility for planning, outreach, oversight, and management of local fixed route transit services throughout the county. MCTD does not own any facilities and does not employ its own drivers. Instead, it contracts other operators -- currently Golden Gate Transit, Marin Airporter, MV Transportation, and Whistlestop Transportation to operate local bus and paratransit services; and Michael's Transportation to operate yellow school bus service.

Board

MCTD is directed by a seven member Transit District Policy Board. The Board includes elected representatives from the County Board of Supervisors (all five districts), two city representatives, and an alternate city representative. City representatives are appointed by the Marin County Council of Mayors and Councilmembers (MCCMC) to two year terms. MCTD Board Members do not receive compensation for service on the Board. Each of the Board members and the City Alternate are elected officials of Marin County (Supervisors) or a City Council.

Facilities

MCTD's Administrative facility in San Rafael is a 3,600 square foot leased office space solely used for the administrative staff. It has 15 offices or workstations and two conference rooms. All vehicle storage, maintenance, and fueling is done under contract by the District's various service providers at their own facilities. MCTD does not own or maintain any park-and-ride lots, but many routes serve the 15 park-and-ride facilities in the County that other transit operators or Caltrans own and maintain.

Service Data

MCTD serves all major cities, towns, and communities within Marin County except Muir Beach, Nicasio and Peacock Gap (East San Rafael). There are a total of 29 fixed route transit services. They are organized based the "typology" of the service, which defines the function of each route and its intended market. There are seven typologies: Local Trunkline, Local Basic, Local Connector, Supplemental School, Rural, Recreational, and Partnership. Days of operation, service spans and frequencies vary significantly depending on the typology of the route.

MCTD has not increased local fares for over 15 years. The fixed-route adult base fare is \$2.00. The discounted fare for youth, seniors and disabled riders is \$1.00. Up to two children age 4 and under may ride free with a fare paying adult. Transfers are free with a paid fare, and are good

on all MCTD and Golden Gate buses in any direction within the county for two hours. MCTD also sells 1-day, 7-day and 31-day passes, and school-based youth passes good for six months or a year. In addition, Clipper cards are accepted and give a ten percent discount off the adult cash fare for travel within Marin County.

MCTD also provides five demand-response services, including Marin Transit Connect in northern San Rafael, Dillon Beach/Tomales Dial-a-Ride, Novato Dial-a-Ride, Point Reyes Dial-a-Ride, and Marin Access (ADA complementary paratransit). Marin Access ADA paratransit fares are \$2.00 within 3/4 mile of a fixed-route, or \$2.50 for extended trips. Fares on the other demand-response services vary by service.

In addition, MCTD provides varying levels of support to certain Marin County school districts, with transportation programs based on their needs. This includes contracting with a private operator to provide yellow school bus services. These activities are only addressed peripherally in this audit.

MCTD owns 113 revenue vehicles. Service and maintenance for these vehicles is provided by the contractors. The fleet includes:

- 13 Community Shuttles
- 6 Stagecoach Vehicles
- 35 Paratransit Vehicles
- 4 Connect Vans
- 15 Narrow-Bodied Rural Buses
- 28 Hybrid Diesel-Electric Buses
- 10 Articulated Buses
- 2 Battery Electric Buses

Recent Changes

The most recent service changes in 2016 were aimed at increasing service levels while minimizing any reduction in coverage. The improvements focused on select east-west and north-south corridors where travel demand and congestion were highest, to transition these corridors from a 15/30-minute peak and 30/60-minute off-peak frequency to a 15-minute daily service level. MCTD also focused these service improvements on reducing transit travel time.

Testing began in May 2018, and full revenue service began July 1, 2018 on Marin Transit Connect, an on-demand, fully accessible general public transit service designed to provide accessible same day service to those with disabilities and to increase first/last mile commuter connections to major employers in northern San Rafael.

Planned Changes

MCTD has adopted a new fare policy to take effect on July 1, 2020. It includes changes to local bus pass programs, demand-response fares, the reimbursement rate for volunteer driver programs, the Low-Income Fare Assistance program, and eligibility standards for Marin Access programs. There will be net fare increases for most demand-response programs, but a reduction in the price of 31-day bus passes (along with elimination of 7-

day passes). A second phase would further increase Paratransit and Catch-A-Ride base fares by \$1.00 in July 2023.

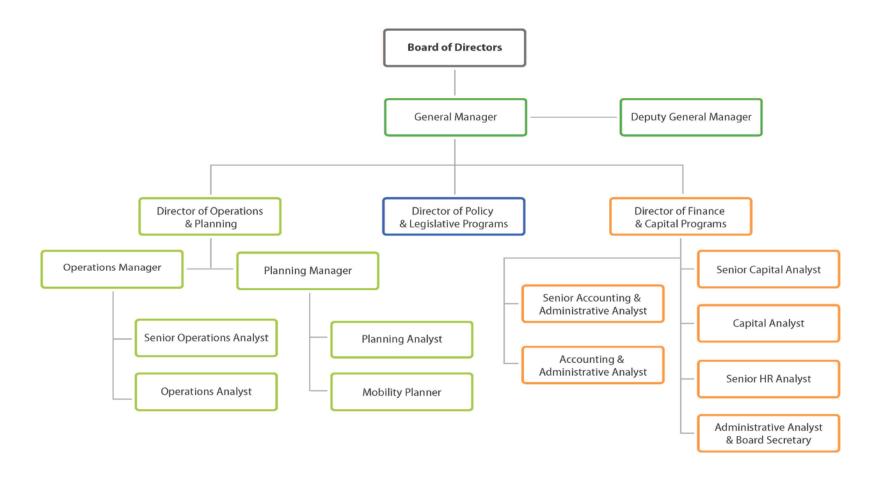
Future capital program adjustments are anticipated to comply with California's 2018 Innovative Clean Transit Rule (ICT), which calls for gradual transition to 100 percent zero emission bus fleets by 2040.

MCTD has completed a new Draft Short Range Transit Plan, which is expected to lead to various service and other changes in the future.

Staff

In 2019, MCTD had 15 full-time employees, compared with 14 in 2017 and 11 in 2015. Currently, three Director level positions and a Deputy General Manager report directly to the General Manager. The Director of Operations and Planning oversees an Operations Manager who in turn oversees two Operations Analysts, and a Planning Manager who in turn oversees two Planners. The Director of Finance and Capital Programs oversees a staff of six Analysts. The Director of Policy and Legislative Programs oversees compliance with federal requirements, develops intergovernmental policies and initiatives, and serves as MCTD's Civil Rights Officer.

Exhibit 2: Recent Organization Chart



II. REVIEW OF TDA DATA COLLECTION AND REPORTING METHODS

This section focuses on the five performance indicators required by TDA law. These indicators have been defined by the state PUC to evaluate the transit operator's efficiency, effectiveness and economy. The purpose of this review is to determine if MCTD is compliance with the data collection and reporting requirements necessary to calculate the TDA performance indicators. The review is limited to the data items needed to calculate the indicators:

- Operating costs
- Vehicle service hours
- Vehicle service miles
- Unlinked passengers
- Employees (full-time equivalents)

The TDA indicator analysis is based on these operating and financial statistics in the National Transit Database (NTD) reports submitted annually to the Federal Transit Administration (FTA). The information reported by MCTD covering the audit period has been reviewed. MCTD's NTD reports include its bus and paratransit services. However, consistent with FTA reporting requirements, MCTD does not submit employee hour information for purchased transportation service to the NTD.

Compliance with Requirements

To support this review, MCTD staff provided a detailed summary of its data collection and reporting procedures relating to the five TDA statistics. Based on the information provided, as shown in Exhibit 3.1, MCTD is in compliance with the requirements in this area.

Consistency of the Reported Statistics

The resulting TDA statistics for MCTD's bus and paratransit services are shown in Exhibits 3.2 and 3.3. Included in the exhibits are statistics covering each fiscal year of the three-year audit period, plus the immediately preceding three fiscal years, resulting in a six-year trend. NTD data covering the prior three year period (FY2014 through FY2016) was obtained from the NTD Database published annually by the FTA.

The statistics indicate general consistency in terms of the direction and magnitude of the year-to-year changes across the statistics. For example, increases or decreases in annual operating costs are relatively proportional to increases or decreases in annual vehicle service hours and miles.

It should be noted that in FY2016 MCTD signed a new paratransit contract with GGBHTD wherein the latter assumed responsibility from MCTD for approximately 25 percent of the intra-county paratransit trips. With this contract the two agencies also agreed that GGBHTD should begin reporting its own paratransit statistics to the NTD even though the services are passed through MCTD. Consequently, beginning in that year MCTD's NTD Report has excluded all hours, miles, and passengers associated with GGBHTD's paratransit service, while the costs associated with this service have been reported by MCTD under "Filing Separate Report". For consistency and accuracy, those costs have been removed from MCTD's reported statistics in this review.

It was also evident that the statistics for the bus service reported to the NTD for FY2014 are significantly lower across the board than in the following years. That is because the FY2014 reporting did not include the local Marin County bus services operated under contract by Golden Gate Transit.

Exhibit 3.1: Compliance with TDA Data Collection and Reporting Requirements

TDA Statistic	TDA Definition	Compliance Finding	Verification Information
Operating Cost	"Operating cost" means all costs in the operating expense object classes exclusive of the costs in the depreciation and amortization expense object class of the uniform system of accounts and records adopted by the Controller pursuant to Section 99243, and exclusive of all subsidies for commuter rail services operated under the jurisdiction of the Interstate Commerce Commission and of all direct costs for providing charter services, and exclusive of all vehicle lease costs.	In Compliance	MCTD reports operating costs based on NTD definitions. MCTD uses Abila accounting software, which allows precise coding of financial transactions so that data can be summarized and reported on many different indicators. This is used for reporting to the myriad funding agencies and for project and grant accounting. All financial transactions are coded with the applicable fund, function, program and project.
Vehicle Service Hours	"Vehicle service hours" means the total number of hours that each transit vehicle is in revenue service, including layover time.	In Compliance	MCTD reports hours based on NTD definitions for Vehicle Revenue Hours (VRH). In 2015, the District hired an outside consultant to review and audit its methodologies to calculate VRH; current practices are consistent with the recommendations from this effort. MCTD compiles all operations data in the TransTrack systems program, a cloud-based, data management platform. Additionally, the program integrates with other transit software to download and integrate data without the need for duplicate data entry. This helps to manage data generated by multiple service contractors operating out of an assortment of locations throughout the county. • Fixed-Route: At each signup (every three months), scheduled service hours are manually entered into
			TransTrack. All incidents, missed or adjusted services are entered and recorded in TransTrack as they occur. Hours reported are calculated based on the actual service operated for each period.

TDA Statistic	TDA Definition	Compliance Finding	Verification Information
			Paratransit – For most services, hours data are collected through the Trapeze PASS system and automatically transmitted from Trapeze PASS into TransTrack system. Statistics for Marin Transit Connect, an on-demand service offered since May 2018, are collected from Tableau (software dedicated to that program) and manually entered into TransTrack.
Vehicle Service Miles	"Vehicle service miles" means the total number of miles that each transit vehicle is in revenue service.	In Compliance	MCTD reports miles based on NTD definitions for Vehicle Revenue Hours (VRM). In 2015, the District hired an outside consultant to review and audit its methodologies to calculate VRM; current practices are consistent with the recommendations from this effort. As noted above, MCTD compiles all operations data in the TransTrack systems program, which helps to manage data generated by multiple service contractors operating out of an assortment of locations throughout
			 Fixed-Route: At each signup (every three months), scheduled service miles are manually entered into TransTrack. All incidents, missed or adjusted services are entered and recorded in TransTrack as they occur. Miles reported are calculated based on the actual service operated for each period.
			Paratransit – For most services, miles data are collected through the Trapeze PASS system and automatically transmitted from Trapeze PASS into TransTrack system. Statistics for Marin Transit Connect are collected from Tableau (software dedicated to that program) and manually entered into TransTrack.

TDA Statistic	TDA Definition	Compliance Finding	Verification Information
Unlinked Passengers	"Unlinked passengers" means the number of boarding passengers, whether revenue producing or not, carried by the public transportation system.	In Compliance	MCTD reports passengers based on NTD definitions for Unlinked Passenger Trips (UPT). In 2015, the District hired an outside consultant to review and audit its methodologies to calculate UPT; current practices are consistent with the recommendations from this effort.
			As noted above, MCTD compiles all operations data in the TransTrack systems program, which helps to manage data generated by multiple service contractors operating out of an assortment of locations throughout the county.
			Fixed-Route: Unlinked passenger trips are calculated using a combination of data from GFI validating fareboxes and Clipper for non-Golden Gate Transit operated routes, automatically transmitted into TransTrack system); Clipper and Golden Gate Transit Transat for GGT operated routes, automatically transmitted into TransTrack database; and GFI validating fareboxes and NPS online ticketing system for Muir Woods Shuttle, through manual entry into TransTrack.
			Paratransit – For most services, passenger data are collected through the Trapeze PASS system and automatically transmitted from Trapeze PASS into TransTrack system. Statistics for Marin Transit Connect are collected from Tableau (software dedicated to that program) and manually entered into TransTrack.
Employee Full- Time Equivalents	2,000 person-hours of work in one year constitute one employee.	In Compliance	MCTD reports FTEs from the State Controllers report, which uses the assumption that 2,000 person hours of work in one year constitutes one employee.

Exhibit 3.2: TDA Statistics – Bus Service

TDA Statistic	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019
Operating Cost (Actual \$)	\$6,270,207	\$18,004,066	\$17,681,468	\$19,971,498	\$21,216,949	\$22,452,872
Annual Change		187.1%	-1.8%	13.0%	6.2%	5.8%
Vehicle Service Hours	53,719	152,801	156,803	178,049	180,238	180,039
Annual Change		184.4%	2.6%	13.5%	1.2%	-0.1%
Vehicle Service Miles	845,345	2,133,375	2,166,258	2,307,555	2,300,458	2,316,247
Annual Change		152.4%	1.5%	6.5%	-0.3%	0.7%
Unlinked Passengers	696,464	3,252,116	3,031,450	2,925,522	3,001,619	2,978,991
Annual Change		366.9%	-6.8%	-3.5%	2.6%	-0.8%
Employee Full-Time Equivalents	(a)	(a)	(a)	(a)	(a)	(a)
Annual Change						

Sources: FY2014 through FY2016 - NTD Database

FY2017 through FY2019 - NTD Reports (FY2019 NTD not closed out yet)

(a) Contracted service - FTEs not applicable

Exhibit 3.3: TDA Statistics – Paratransit

TDA Statistic	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019
Operating Cost (Actual \$)	\$4,763,918	\$5,379,521	\$3,729,761	\$3,324,035	\$3,703,200	\$4,406,752
Annual Change		12.9%	-30.7%	-10.9%	11.4%	19.0%
Vehicle Service Hours	57,865	60,417	44,764	42,806	47,569	55,084
Annual Change		4.4%	-25.9%	-4.4%	11.1%	15.8%
Vehicle Service Miles	886,577	927,058	688,072	617,199	704,224	753,794
Annual Change		4.6%	-25.8%	-10.3%	14.1%	7.0%
Unlinked Passengers	130,764	137,131	98,483	93,410	98,068	108,076
Annual Change		4.9%	-28.2%	-5.2%	5.0%	10.2%
Employee Full-Time Equivalents	(a)	(a)	(a)	(a)	(a)	(a)
Annual Change						

Sources: FY2014 through FY2016 - NTD Database

FY2017 through FY2019 - NTD Reports (FY2019 NTD not closed out yet)

(a) Contracted service - FTEs not applicable

III. TDA PERFORMANCE INDICATORS AND TRENDS

The performance trends for MCTD's bus and paratransit service modes are presented in this section. Performance is discussed for the five TDA-mandated performance indicators as applicable:

- operating cost per vehicle service hour
- passengers per vehicle service hour
- passengers per vehicle service mile
- operating cost per passenger
- vehicle service hours per full-time equivalent employee (FTE)

The performance results in these indicators were developed from the information in the NTD reports filed with the FTA for the three years of the audit period. MCTD's NTD reports were the source of all operating and financial statistics (except for contractor FTEs, which are not included).

In addition to presenting performance for the three years of the audit period (FY2017 through FY2019), this analysis features two enhancements:

- <u>Six-Year Time Period</u> While the performance audit focuses on the three fiscal years of the audit period, six-year trend lines have been constructed for MCTD's service to provide a longer perspective on performance and to clearly present the direction and magnitude of the performance trends. In this analysis, the FY2017 to FY2019 trend lines have been combined with those from the prior three-year period (FY2014 through FY2016) to define a six-year period of performance.
- Normalized Cost Indicators for Inflation Two financial performance indicators (cost per hour and cost per passenger) are presented in both constant and current dollars to illustrate the impact of inflation in the Bay Area. The inflation adjustment relies on the All Urban Consumer Price

Index for Urban Wage Earners and Clerical Workers (CPI-W) for the San Francisco Metropolitan Area. The average CPI-W percent change for each fiscal year has been calculated based on the bi-monthly results reported on the U.S. Department of Labor – Bureau of Labor Statistics website. The CPI-W is used since labor is the largest component of operating cost in transit. Since labor costs are typically controlled through labor contracts, changes in normalized costs largely reflect those factors that are within the day-to-day control of the transit system.

The following discussion is organized to present an overview of MCTD's performance trends in each of the five TDA indicators. The discussion is organized by service mode -- MCTD's bus service is discussed first, followed by paratransit. The analysis is expanded to include a breakdown of the various component costs that contributed to the total and hourly operating costs during the last six years.

Bus Service Performance Trends

This section provides an overview of the performance of MCTD's bus service over the past six years. The analysis focuses on four of the five TDA performance indicators. Hours per FTE are not included in this analysis; FTE information was not available for the contracted service providers. The trends in the TDA indicators and input statistics are presented in Exhibit 4. The six-year trends are illustrated in Exhibits 4.1 through 4.3.

Operating Cost Per Vehicle Service Hour (Exhibit 4.1)

- A key indicator of cost efficiency, the cost per hour of bus service increased an average of 1.3 percent annually during the six-year review period.
- The cost per hour went down from about \$117 in the first two years to \$112 in FY2016 and FY2017, and then increased to \$124 by FY2019.
- In FY2014 constant dollars, there was an average annual decrease in this indicator of 1.5 percent.

Passengers per Vehicle Service Hour (Exhibit 4.2)

- A key indicator of passenger productivity, passengers per hour increased an average of 5.0 percent annually during the six-year period.
- In FY2014, 13 passengers per hour were carried -- based on reporting that excluded MCTD bus services operated under contract by Golden Gate Transit.
- In the remainder of the review period, wherein all MCTD bus services were included, passengers per hour decreased steadily from 21.3 in FY2015 to 16.5 in FY2019.

• Passengers per Vehicle Service Mile (Exhibit 4.2)

- Similar to passengers per hour, passengers per mile increased over the period, by 9.3 percent annually on average.
- In FY2014, 0.82 passengers per mile were carried -- based on reporting that excluded MCTD bus services operated under contract by Golden Gate Transit.
- In the remainder of the review period, wherein all MCTD bus services were included, passengers per mile decreased in every year except FY2018, from 1.52 in FY2015 to 1.29 in FY2019.

Operating Cost per Passenger (Exhibit 4.3)

- A key measure of cost effectiveness, the cost per passenger decreased an average of 3.5 percent annually during the six-year review period.
- The cost per passenger decreased overall from \$9.00 in FY2014 to \$7.54 in FY2019. However, when looking at only the years when all bus service was reflected (FY2015 and forward), there were increases in each year, from \$5.54 to \$7.54
- In FY2014 constant dollars, there was an average annual decrease in this indicator of 6.2 percent.

* * * * *

The following is a brief summary of the bus service TDA performance trend highlights over the six-year period of FY2014 through FY2019. It should be noted that these results are based on FY2014 reporting that excluded MCTD bus services operated under contract by Golden Gate Transit.

- In terms of cost efficiency, there was an average annual increase in the operating cost per hour of 1.3 percent, which amounted to a 1.5 percent decrease in inflation adjusted dollars.
- Cost effectiveness improved, with the cost per passenger decreasing on average by 3.5 percent per year, or average annual decrease of 6.2 percent in constant FY2014 dollars.
- Passenger productivity demonstrated positive trends, with passengers per vehicle service hour increasing by 5.0 percent per year overall and passengers per vehicle service mile increasing by 9.3 percent.

Exhibit 4: TDA Indicator Performance – Bus Service

	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	Av. Ann. Chg.
Performance Indicators							
Op. Cost per Vehicle Svc. Hour (Actual \$)	\$116.72	\$117.83	\$112.76	\$112.17	\$117.72	\$124.71	
Annual Change		0.9%	-4.3%	-0.5%	4.9%	5.9%	1.3%
Op. Cost per Vehicle Svc. Hour (Constant \$)	\$116.72	\$115.63	\$108.01	\$104.05	\$105.10	\$108.07	
Annual Change		-0.9%	-6.6%	-3.7%	1.0%	2.8%	-1.5%
Passengers per Vehicle Service Hour	13.0	21.3	19.3	16.4	16.7	16.5	
Annual Change		64.2%	-9.2%	-15.0%	1.4%	-0.6%	5.0%
Passengers per Vehicle Service Mile	0.82	1.52	1.40	1.27	1.30	1.29	
Annual Change		85.0%	-8.2%	-9.4%	2.9%	-1.4%	9.3%
Op. Cost per Passenger (Actual \$)	\$9.00	\$5.54	\$5.83	\$6.83	\$7.07	\$7.54	
Annual Change		-38.5%	5.4%	17.0%	3.5%	6.6%	-3.5%
Op. Cost per Passenger (Constant \$)	\$9.00	\$5.43	\$5.59	\$6.33	\$6.31	\$6.53	
Annual Change		-39.7%	2.8%	13.3%	-0.3%	3.5%	-6.2%
Vehicle Service Hours per FTE	(a)	(a)	(a)	(a)	(a)	(a)	
Annual Change							
Input Data							
Operating Cost (Actual \$)	\$6,270,207	\$18,004,066	\$17,681,468	\$19,971,498	\$21,216,949	\$22,452,872	
Annual Change		187.1%	-1.8%	13.0%	6.2%	5.8%	29.1%
Operating Cost (Constant \$)	\$6,270,207	\$17,668,367	\$16,936,272	\$18,526,436	\$18,943,704	\$19,456,562	
Annual Change		181.8%	-4.1%	9.4%	2.3%	2.7%	25.4%
Vehicle Service Hours	53,719	152,801	156,803	178,049	180,238	180,039	
Annual Change		184.4%	2.6%	13.5%	1.2%	-0.1%	27.4%
Vehicle Service Miles	845,345	2,133,375	2,166,258	2,307,555	2,300,458	2,316,247	
Annual Change		152.4%	1.5%	6.5%	-0.3%	0.7%	22.3%
Unlinked Passengers	696,464	3,252,116	3,031,450	2,925,522	3,001,619	2,978,991	
Annual Change		366.9%	-6.8%	-3.5%	2.6%	-0.8%	33.7%
Employee Full-Time Equivalents	(a)	(a)	(a)	(a)	(a)	(a)	
Annual Change							
Bay Area CPI - Annual Change		1.9%	2.5%	3.3%	4.0%	3.0%	
- Cumulative Change		1.9%	4.4%	7.8%	12.0%	15.4%	2.9%

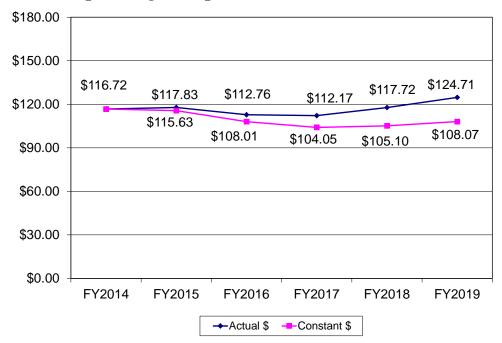
Sources: FY2014 through FY2016 - NTD Database

FY2017 through FY2019 - NTD Reports (FY2019 NTD not closed out yet)

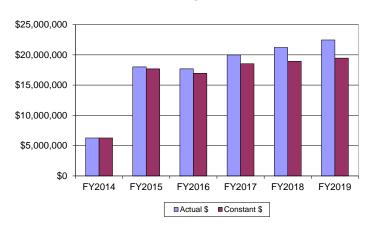
CPI Data - U.S. Department of Labor, Bureau of Labor Statistics

(a) Contracted service - FTEs not applicable

Exhibit 4.1: Operating Cost per Vehicle Service Hour – Bus Service



Operating Cost



Vehicle Service Hours

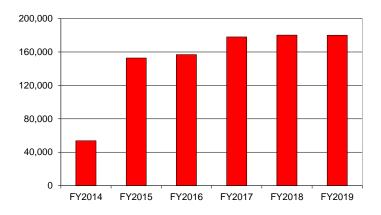
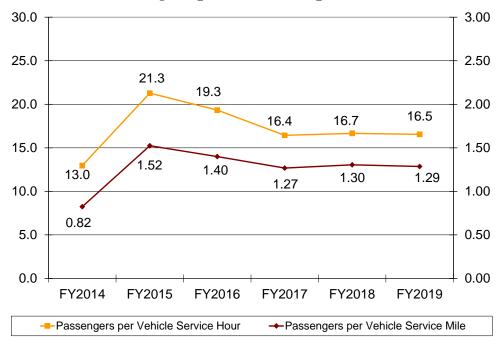


Exhibit 4.2: Passengers per Hour and per Mile – Bus Service



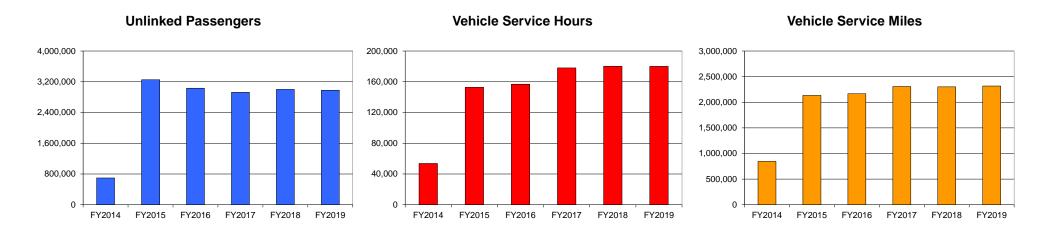
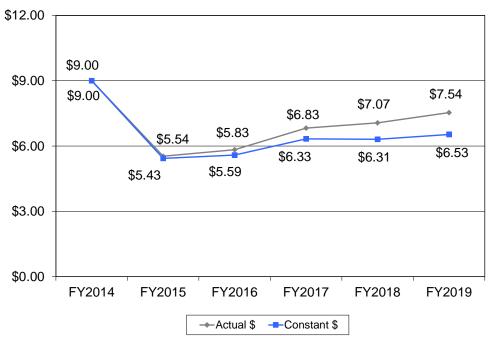


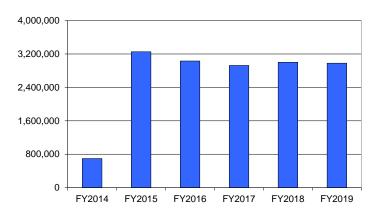
Exhibit 4.3: Operating Cost per Passenger – Bus Service



Operating Cost

\$25,000,000 \$20,000,000 \$15,000,000 \$10,000,000 \$5,000,000 \$5,000,000 \$0 FY2014 FY2015 FY2016 FY2017 FY2018 FY2019

Unlinked Passengers



Bus Service Component Costs

Year-to-year changes in selected operating cost categories over the past six years are presented in Exhibit 4.4. Examining components of operating costs (e.g., labor, fringes, fuel, and casualty/liability) may determine what particular components had the most significant impacts on the operating costs. Exhibit 4.4 also shows the concurrent changes in vehicle service hours and Exhibit 4.5 illustrates the portion of the cost per bus service hour that can be attributed to each included cost component.

- Not surprisingly for a contracted service, purchased transportation costs
 were by far the largest category of costs. In FY2014, purchased
 transportation accounted for 54 percent of total costs, but this was based on
 NTD reporting that excluded MCTD bus services operated under contract by
 Golden Gate Transit. In FY2015 and forward, with all MCTD bus services
 included, about 85 percent of total costs were attributed to purchased
 transportation.
- Purchased transportation costs increased substantially in absolute amounts with the inclusion of all MCTD bus services in FY2015. This was followed by a small reduction in FY2016, and then annual increases between five and 12 percent through the remainder of the period.
- In-house labor costs went up by 4.4 percent on average per year. Labor costs contributed about four percent of total costs in every year except FY2014, when the result was noticeably higher.
- Fringe benefits costs fluctuated from year to year, some years significantly, but they only went up overall by 0.1 percent per year. Fringe benefits costs contributed about two percent of total costs in every year except FY2014, when the result was noticeably higher.
- Services costs varied from year to year and showed a net 2.1 percent annual decrease over the six years. They contributed between one and two percent of the total operating cost in each year except FY2014, when the result was 6.6 percent.

- Materials/supplies costs went up in every year except FY2016, for an average annual increase of 9.2 percent. They contributed between four and five percent of the total operating cost in each year except FY2014, when the result was 12.4 percent.
- The casualty/liability and other expenses categories both varied from year to year, but showed only minor change overall and each generally contributed one percent or less toward the total costs.

* * * * *

The following is a brief summary of the component operating costs trend highlights for bus service between FY2014 and FY2019:

- Purchased transportation costs comprised by far the largest category of operating costs, increasing from 54 percent of total costs in FY2014 to about 85 percent subsequently. The FY2014 results were based on NTD reporting that excluded MCTD bus services operated under contract by Golden Gate Transit.
- There were annual increases between five and 12 percent in purchased transportation costs in the last three years (all MCTD bus services included).
- In-house labor costs went up by 4.4 percent per year on average, while fringe benefits costs did not change much overall despite annual fluctuation. Together, these categories contributed about six percent of total costs except in FY2014, when the result was noticeably higher.
- Services costs generally contributed between one and two percent of the total operating cost and showed a net 2.1 percent annual decrease, while materials/supplies costs contributed between four and five percent and showed a net annual increase of 9.2 percent.
- The casualty/liability and other expenses categories each generally contributed one percent or less toward the total costs, and exhibited only minor overall change as well.

Exhibit 4.4: TDA Component Costs Trends – Bus Service

	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	Av. Ann. Chg.
		(COST CATEGORIE	S			
Labor (Salaries/Wages)	\$829,780	\$679,980	\$789,608	\$894,540	\$922,989	\$1,028,801	
Annual Change		-18.1%	16.1%	13.3%	3.2%	11.5%	4.4%
Fringe Benefits	\$603,698	\$397,053	\$391,708	\$525,525	\$340,103	\$606,472	
Annual Change		-34.2%	-1.3%	34.2%	-35.3%	78.3%	0.1%
Services	\$411,239	\$286,051	\$196,449	\$281,836	\$554,104	\$369,694	
Annual Change		-30.4%	-31.3%	<i>4</i> 3.5%	96.6%	-33.3%	-2.1%
Materials/Supplies (b)	\$778,469	\$816,730	\$702,497	\$867,931	\$1,052,138	\$1,211,102	
Annual Change		4.9%	-14.0%	23.5%	21.2%	15.1%	9.2%
Casualty/Liability	\$25,738	\$27,295	\$22,442	\$14,239	\$23,908	\$27,988	
Annual Change		6.0%	-17.8%	-36.6%	67.9%	17.1%	1.7%
Purchased Transportation	\$3,410,861	\$15,599,682	\$15,359,511	\$17,180,832	\$18,102,302	\$19,067,356	
Annual Change		357.4%	-1.5%	11.9%	5.4%	5.3%	41.1%
Other Expenses (c)	\$210,422	\$197,275	\$219,253	\$206,595	\$221,405	\$141,459	
Annual Change		-6.2%	11.1%	-5.8%	7.2%	-36.1%	-7.6%
Total	\$6,270,207	\$18,004,066	\$17,681,468	\$19,971,498	\$21,216,949	\$22,452,872	
Annual Change		187.1%	-1.8%	13.0%	6.2%	5.8%	29.1%
		OP	ERATING STATIST	TICS .			
Vehicle Service Hours	53,719	152,801	156,803	178,049	180,238	180,039	
Annual Change		184.4%	2.6%	13.5%	1.2%	-0.1%	27.4%

Sources: FY2014 through FY2016 – NTD Database; FY2017 through FY2019 - NTD Reports

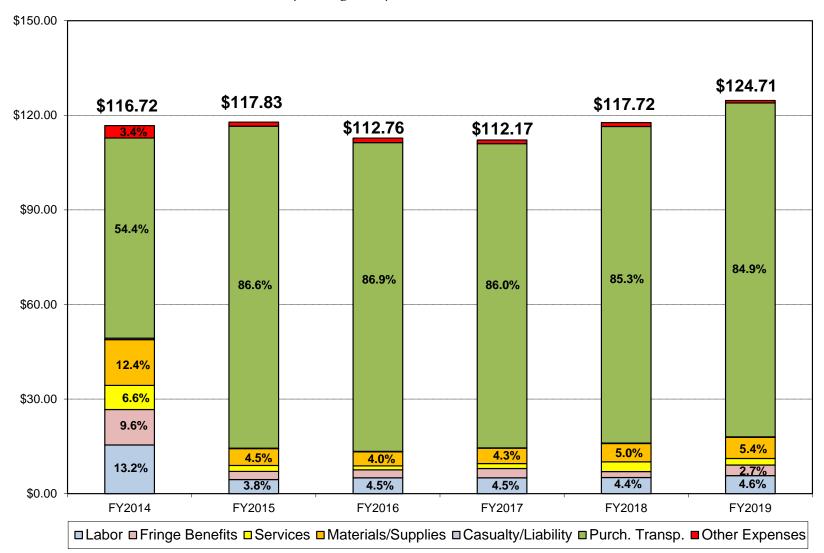
⁽a) Also includes Paid Absences (as reported separately in FY2019 NTD Report)

⁽b) Includes Fuel and Lubricants, Tires and Tubes, and Other Materials and Supplies

⁽c) Includes Taxes, Utilities and Miscellaneous Expenses

Exhibit 4.5: Distribution of Component Costs – Bus Service

Operating Cost per Vehicle Service Hour



<u>Paratransit Performance Trends</u>

This section provides an overview of the performance of MCTD's paratransit service over the six year analysis period. Similar to MCTD's fixed-route service, this analysis focuses on four of the five TDA performance indicators. Hours per FTE are not included as FTE information was not available for the contracted service providers. In addition, as noted previously, this review does not include the paratransit service managed by MCTD on behalf of GGBHTD, on a "pass through" basis under contract since FY2016. The trends in the TDA indicators and input data are presented in Exhibit 5. The six-year trends are illustrated in Exhibits 5.1 through 5.3.

Operating Cost per Vehicle Service Hour (Exhibit 5.1)

- The cost per hour of paratransit service decreased an average of 0.6 percent annually during the six-year review period.
- The cost per hour was in a range of \$82 to \$89 in the first two review years, followed by results as low as \$77 in the subsequent years (since the new paratransit contract has been in effect with GGBHTD).
- In FY2014 constant dollars, there was an average annual increase in this indicator of 3.4 percent over the period.

Passengers per Vehicle Service Hour (Exhibit 5.2)

- Passengers per hour decreased by an average of 2.8 percent annually.
 This is the result of a one percent overall decrease in service hours coupled with a 3.7 percent decrease in passengers.
- Passengers per hour decreased from about 2.3 toward the beginning of the period to 2.0 in FY2019. There were decreases in every year except FY2015.

Passengers per Vehicle Service Mile (Exhibit 5.2)

- Passengers per vehicle service mile demonstrated an average decrease of 0.6 percent annually, similar to passengers per hour but with a less pronounced trend.
- Passengers per mile remained in a range of 0.14 to 0.15 throughout the six year period.

• Operating Cost per Passenger (Exhibit 5.3)

- The cost per passenger increased an average of 2.3 percent annually during the six-year review period.
- Results ranged from a low of \$35.59 in FY2017 to a high of more than \$40 per passenger in the last year (FY2019).
- In FY2014 constant dollars, there was an average annual decrease in this indicator of 0.6 percent.

* * * * *

The following is a brief summary of the paratransit TDA performance trend highlights over the six-year period of FY2014 through FY2019.

- Cost efficiency improved after the new paratransit contract transferring some service to GGBHTD took effect in FY2016. Overall, there was an average annual decrease in the operating cost per hour of 0.6 percent. This translated to a 3.4 percent decrease in inflation adjusted dollars.
- In terms of cost effectiveness, the cost per passenger increased an average of 2.3 percent per year in actual dollars, corresponding to a decrease of 0.6 percent per year in constant (inflation-adjusted) dollars.
- Passenger productivity demonstrated some losses, with passengers per vehicle service hour decreasing by 2.8 percent overall and passengers per vehicle service mile decreasing by 0.6 percent.

Exhibit 5: TDA Indicator Performance – Paratransit

	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	Av. Ann. Chg.
Performance Indicators							
Op. Cost per Vehicle Svc. Hour (Actual \$)	\$82.33	\$89.04	\$83.32	\$77.65	\$77.85	\$80.00	
Annual Change		8.2%	-6.4%	-6.8%	0.3%	2.8%	-0.6%
Op. Cost per Vehicle Svc. Hour (Constant \$)	\$82.33	\$87.38	\$79.81	\$72.03	\$69.51	\$69.32	
Annual Change		6.1%	-8.7%	-9.7%	-3.5%	-0.3%	-3.4%
Passengers per Vehicle Service Hour	2.3	2.3	2.2	2.2	2.1	2.0	
Annual Change		0.4%	-3.1%	-0.8%	-5.5%	-4.8%	-2.8%
Passengers per Vehicle Service Mile	0.15	0.15	0.14	0.15	0.14	0.14	
Annual Change		0.3%	-3.2%	5.7%	-8.0%	3.0%	-0.6%
Op. Cost per Passenger (Actual \$)	\$36.43	\$39.23	\$37.87	\$35.59	\$37.76	\$40.77	
Annual Change		7.7%	-3.5%	-6.0%	6.1%	8.0%	2.3%
Op. Cost per Passenger (Constant \$)	\$36.43	\$38.50	\$36.28	\$33.01	\$33.72	\$35.33	
Annual Change		5.7%	-5.8%	-9.0%	2.1%	4.8%	-0.6%
Vehicle Service Hours per FTE	(a)	(a)	(a)	(a)	(a)	(a)	
Annual Change							
Input Data							
Operating Cost (Actual \$)	\$4,763,918	\$5,379,521	\$3,729,761	\$3,324,035	\$3,703,200	\$4,406,752	
Annual Change		12.9%	-30.7%	-10.9%	11.4%	19.0%	-1.5%
Operating Cost (Constant \$)	\$4,763,918	\$5,279,216	\$3,572,568	\$3,083,520	\$3,306,429	\$3,818,676	
Annual Change		10.8%	-32.3%	-13.7%	7.2%	15.5%	-4.3%
Vehicle Service Hours	57,865	60,417	44,764	42,806	47,569	55,084	
Annual Change		4.4%	-25.9%	-4.4%	11.1%	15.8%	-1.0%
Vehicle Service Miles	886,577	927,058	688,072	617,199	704,224	753,794	
Annual Change		4.6%	-25.8%	-10.3%	14.1%	7.0%	-3.2%
Unlinked Passengers	130,764	137,131	98,483	93,410	98,068	108,076	
Annual Change		4.9%	-28.2%	-5.2%	5.0%	10.2%	-3.7%
Employee Full-Time Equivalents	(a)	(a)	(a)	(a)	(a)	(a)	
Annual Change							
Bay Area CPI - Annual Change		1.9%	2.5%	3.3%	4.0%	3.0%	
- Cumulative Change		1.9%	4.4%	7.8%	12.0%	15.4%	2.9%

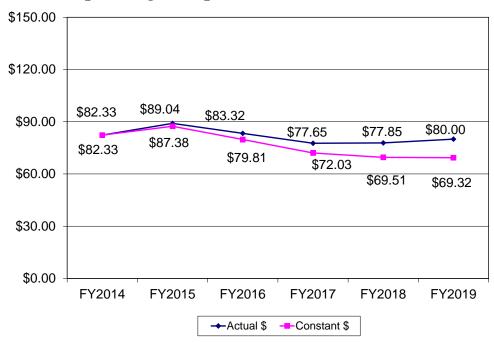
Sources: FY2014 through FY2016 - NTD Database

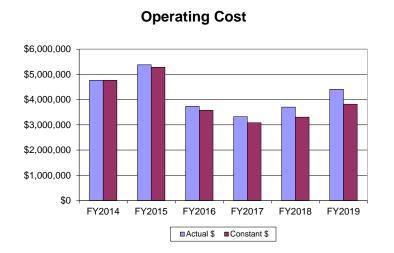
FY2017 through FY2019 - NTD Reports (FY2019 NTD not closed out yet)

CPI Data - U.S. Department of Labor, Bureau of Labor Statistics

(a) Contracted service - FTEs not applicable

Exhibit 5.1: Operating Cost per Vehicle Service Hour – Paratransit





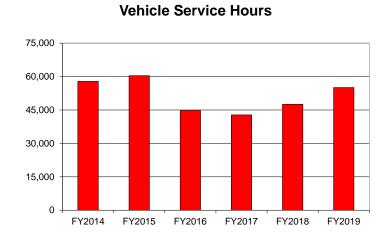
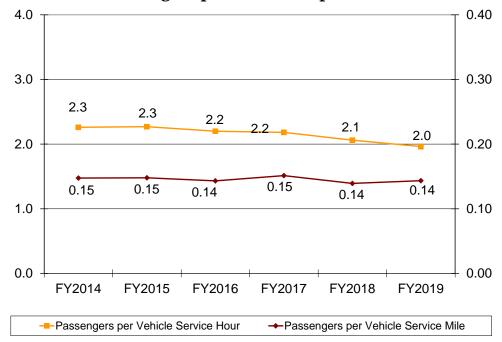


Exhibit 5.2: Passengers per Hour and per Mile – Paratransit



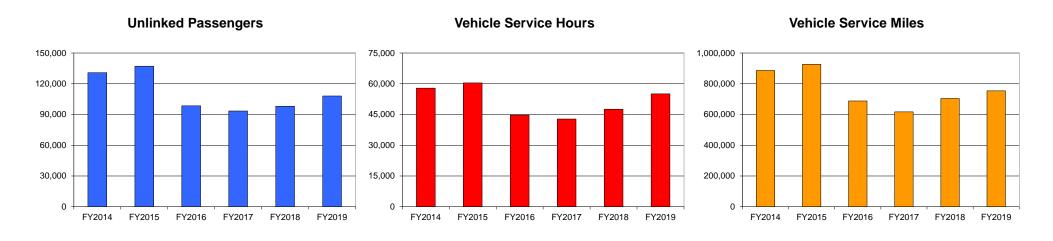
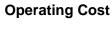


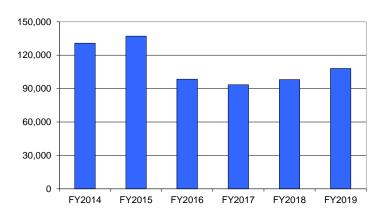
Exhibit 5.3: Operating Cost per Passenger – Paratransit





\$6,000,000 \$5,000,000 \$3,000,000 \$1,000,000 \$0 FY2014 FY2015 FY2016 FY2017 FY2018 FY2019

Unlinked Passengers



Paratransit Component Costs

The year-to-year changes in selected operating cost categories are presented in Exhibit 5.4, along with the concurrent changes in vehicle service hours. The portions of the cost per vehicle service hour that can be attributed to each included cost component are shown in Exhibit 5.5.

- Similar to MCTD's fixed-route service, purchased transportation costs for the contracted paratransit service were by far the largest category of costs, ranging between 75 and 85 percent of total costs through the period.
- Purchased transportation costs decreased significantly in absolute amounts after the new paratransit contract transferring some service to GGBHTD took effect in mid-FY2016, resulting in an average annual decrease during the period of four percent.
- No in-house labor costs were reported in FY2014. In the following years, there was some fluctuation but an overall increase. The largest annual increase was 21 percent in FY2019. Labor costs amounted to about three or four percent of total costs in FY2015 through FY2019.
- There were also no fringe benefits costs reported in FY2014. In the following years, there was noticeable fluctuation, with the largest annual decrease (41 percent) in FY2018 followed by an increase of more than 100 percent in FY2019. However, fringe benefits costs amounted to just two or three percent of total costs in FY2015 through FY2019.
- Services costs went up in every year except FY2016, and showed a net 25 percent annual increase over the six years. They contributed about two percent of the total operating cost in the first year, followed by increases to four percent in FY2015 and FY2016, and six percent subsequently.
- There was a three percent average annual decrease in materials/supplies costs over the period. They also decreased from 11 to eight percent of total costs in the first three years, but then increased again to 10.3 percent by FY2019.

• No casualty/liability costs were reported for FY2014. Otherwise, the casualty/liability and other expenses categories each contributed two percent or less toward the total costs in each year, and were relatively minimal amounts in absolute dollars.

* * * * *

The following is a brief summary of the component operating costs trend highlights for paratransit between FY2014 and FY2019:

- Purchased transportation costs comprised the largest category of operating costs, contributing 75 to 85 percent of total costs though the period. Purchased transportation costs decreased an average by four percent annually.
- No in-house labor or fringe benefits costs were reported in FY2014.
 Subsequently, there was annual fluctuation in dollar amounts, but both of these categories together accounted for just five to seven percent of total costs.
- Services costs showed a net 25 percent annual increase, and increased from two to six percent of the total operating cost. At the same time, materials/supplies costs decreased on average by three percent annually in absolute terms, and went down from 11 to eight percent of total costs by FY2015 but increased again to 10.3 percent by FY2019.
- No casualty/liability costs were reported for FY2014. Otherwise the casualty/liability and other expenses categories each contributed two percent or less toward the total costs in each year.

Exhibit 5.4: TDA Component Cost Trends – Paratransit

	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	Av. Ann. Chg.
			COST CATEGORIE	S			
Labor (Salaries/Wages)	\$0	\$158,393	\$173,620	\$158,984	\$152,844	\$185,626	
Annual Change			9.6%	-8.4%	-3.9%	21.4%	
Fringe Benefits	\$0	\$92,489	\$131,465	\$89,094	\$52,035	\$109,779	
Annual Change			42.1%	-32.2%	-41.6%	111.0%	
Services	\$86,856	\$218,471	\$154,760	\$206,649	\$230,259	\$267,059	
Annual Change		151.5%	-29.2%	33.5%	11.4%	16.0%	25.2%
Matariala (Overalia a (b.)	\$507.505	#404.000	\$207.405	#200.444	#204.000	#450.000	
Materials/Supplies (b)	\$527,585	\$464,239	\$297,125	\$302,144	\$361,820	, ,	
Annual Change		-12.0%	-36.0%	1.7%	19.8%	25.2%	-3.0%
Casualty/Liability	\$0	\$2,149	\$7,138	\$3,844	\$2,306	\$3,810	
Annual Change			232.2%	-46.1%	-40.0%	65.2%	
Purchased Transportation	\$4,075,868	\$4,355,097	\$2,889,401	\$2,506,510	\$2,855,404	\$3,321,359	
Annual Change		6.9%	-33.7%	-13.3%	13.9%	16.3%	-4.0%
Other Expenses (c)	\$73,609	\$88,683	\$76,252	\$56,810	\$48,532	\$66,210	
Annual Change		20.5%	-14.0%	-25.5%	-14.6%	36.4%	-2.1%
Total	\$4,763,918	\$5,379,521	\$3,729,761	\$3,324,035	\$3,703,200	\$4,406,752	
Annual Change		12.9%	-30.7%	-10.9%	11.4%	19.0%	-1.5%
		OF	ERATING STATIS	TICS			
Vehicle Service Hours	57,865	60,417	44,764	42,806	47,569	55,084	
Annual Change		4.4%	-25.9%	-4.4%	11.1%	15.8%	-1.0%

Sources: FY2014 through FY2016 - NTD Database; FY2017 through FY2019 - NTD Reports

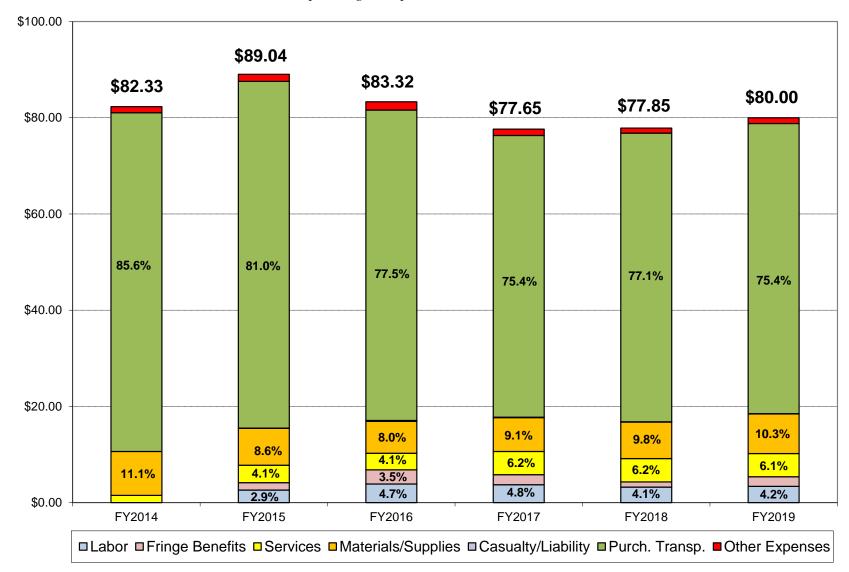
⁽a) Also includes Paid Absences (as reported separately in FY2019 NTD Report)

⁽b) Includes Fuel and Lubricants, Tires and Tubes, and Other Materials and Supplies

⁽c) Includes Taxes, Utilities and Miscellaneous Expenses

Exhibit 5.5: Distribution of Component Costs – Paratransit

Operating Cost per Vehicle Service Hour



IV. COMPLIANCE WITH PUC REQUIREMENTS

An assessment of MCTD's compliance with selected sections of the state Public Utilities Code (PUC) has been performed. The compliance areas included in this review are those that MTC has identified for inclusion in the triennial performance audit. Other statutory and regulatory compliance requirements are reviewed by MTC in conjunction with its annual review of MCTD's TDA-STA claim application.

The results from this review are detailed by individual requirement in Exhibit 6. MCTD is in compliance with all seven sections of the state PUC that were reviewed as part of this performance audit. These sections included requirements concerning CHP terminal safety inspections, labor contracts, reduced fares, Welfare-to-Work, revenue sharing, and evaluating passenger needs.

Exhibit 6: Compliance with State PUC Requirements

Code Reference	Operator Compliance Requirements	Compliance Finding	Verification Information
PUC99251	CHP Certification - The CHP has, within the 13 months prior to each TDA claim submitted by an operator, certified the operator's compliance with Vehicle Code Section 1808 following a CHP inspection of the operator's terminal	In Compliance	Satisfactory Facility Inspection Certificates (Four Contractors Total): - 2017 2018 2019 - GGBHTD 06/29 07/26 12/10 - Marin Airp. 03/22 08/08 08/08 - Whistlestop 06/12 07/12 07/16 - MV Transp. 04/11 10/10 02/20
PUC99264	Operator-to-Vehicle Staffing - The operator does not routinely staff with two or more persons public transportation vehicles designed to be operated by one person	In Compliance	No provision for excess staffing in audit period to current Operations and Maintenance Contracts/Amendments with: • GGBHTD • Marin Airporter • Marin Senior Coordinating Council (Whistlestop Transportation) • MV Public Transportation
PUC99314.5 (e)(1)(2)	Part Time Drivers - Operators receiving STA funds are not precluded by contract from employing part-time drivers or from contracting with common carriers	In Compliance	 Part Time Drivers – No prohibition of part-time employees in audit period to current Operations and Maintenance Contracts/Amendments. Contracting – MCTD contracts with several common carriers to operate its fixed-route and paratransit services.

Code Reference	Operator Compliance Requirements	Compliance Finding	Verification Information
PUC99155	Reduced Fare Eligibility - For any operator who received TDA Article 4 funds, if the operator offers reduced fares to senior citizens and disabled persons, applicant will honor the federal Medicare identification card, the California Department of Motor Vehicles disability ID card, the Regional Transit Connection Discount Card, or any other current identification card issued by another transit operator that is valid for the type of transportation service or discount requested; and if the operator offers reduced fares to senior citizens, it also offers the same reduced fare to disabled patrons	In Compliance	Reduced fare information in public information materials: Marin Transit Rider's Guide – Winter 2019/20 Marin Transit website – Fares section
PUC99155.1 (a)(1)(2)	Welfare to Work Coordination - Operators must coordinate with county welfare departments in order to ensure that transportation moneys available for purposes of assisting recipients of aid are expended efficiently for the benefit of that population; if a recipient of CalWORKs program funds by the county, the operator shall give priority to the enhancement of public transportation services for welfare-to-work purposes and to the enhancement of transportation alternatives, such as, but not limited to, subsidies or vouchers, van pools, and contract paratransit operations, in order to promote welfare-to-work purposes	In Compliance	MCTD is a stakeholder in the MTC Coordinated Public Transit-Human Services Transportation Plan, directed by MTC as the RTAP and MPO for the Bay Area.
PUC99314.7, Govt Code 66516, MTC Res. Nos. 3837, 4073	Joint Revenue Sharing Agreement - The operator has current joint fare revenue sharing agreements in place with transit operators in the MTC region with which its service connects, and submitted copies of agreements to MTC	In Compliance	 Clipper Agreement (with AC Transit, BART, CCCTA, GGBHTD, SFMTA, SamTrans, Caltrain, FAST, ECCTA, LAVTA, NVTA, Petaluma, Santa Rosa, SolTrans, SCT, SMART, Vacaville, VTA, WCCTA, WETA, Union City). Operations and Maintenance Contract with GGBHTD includes provisions for revenue sharing (Section 402).

Code Reference	Operator Compliance Requirements	Compliance Finding	Verification Information
PUC99246(d)	<u>Process for Evaluation of Passenger Needs</u> - The operator has an established process in place for evaluating the needs and types of passengers being served		MCTD completes an on-board survey of fixed route passengers every three years. Questions are asked about rider preferences, demographics, and how they use the service. The last survey was done in Spring 2017.
			 Marin Access ADA riders are surveyed on an annual basis for similar information.
		In Compliance	MCTD recently completed a focused survey on the Marin Transit Connect demand-response project.
			MCTD has a robust customer comment reporting system. As part of on-going service planning efforts this database is queried and service suggestions are used in long range planning.

V. STATUS OF PRIOR AUDIT RECOMMENDATIONS

Generally, MTC has used the recommendations from TDA performance audits as the basis for developing the Productivity Improvement Program (PIP) projects the transit operator is required to complete. MTC tracks PIP project implementation as part of its annual review of the operator's TDA-STA claim application. This section provides an assessment of actions taken by TDA-STA recipients toward implementing recommendations advanced in the prior audit. The assessment provides continuity between the current and prior audits, which allows MTC to fulfill its obligations where the recommendations were advanced as PIP projects.

This review would address MCTD's responses to any recommendations made in the prior performance audit, and whether MCTD made reasonable progress toward their implementation. However, this is the first performance audit to be conducted of MCTD, so there are no prior audit recommendations.

VI. FUNCTIONAL PERFORMANCE INDICATOR TRENDS

To further assess MCTD's performance over the past three years, a detailed set of functional area performance indicators was defined. This assessment consists of a three-year trend analysis of the functions in each of the following areas:

- Management, Administration and Marketing
- Service Planning
- Operations
- Maintenance
- Safety

The indicators selected for this analysis were primarily those that were tracked regularly by MCTD or for which input data were maintained by MCTD on an on-going basis, such as performance reports, contractor reports, annual financial reports and NTD reports. As such, there may be some overlap with the TDA indicators examined earlier in the audit process, but most indicators will be different. Some indicators were selected from the California Department of Transportation's Performance Audit Guidebook for Transit Operators and Regional Transportation Planning Entities as being appropriate for this evaluation. The input statistics for the indicators, along with their sources, are contained in Appendix A at the end of this report.

The trends in performance are presented over the three-year audit period to give an indication of which direction performance is moving for these indicators. The remainder of this section presents the findings from this review. The discussion presents the highlights of performance by mode (Systemwide, Bus Service and Paratransit), each followed by an exhibit illustrating the indicators by function as applicable.

Systemwide

For the purposes of this review, MCTD's functional indicators relating to Management, Administration and Marketing have been included generally on a systemwide basis. Audit period performance is discussed below and presented in Exhibit 7.

- Administrative costs increased from about 16 percent of total operating costs in FY2017 to more than 19 percent in FY2019.
- Administrative costs per vehicle service hour increased by one third over the audit period, from \$16.56 in the first year to \$22.08 by FY2019.
- Marketing costs decreased from 3.1 percent to 2.2 percent of total administrative costs but remained at \$0.03 or \$0.04 per passenger trip through the period.
- The systemwide farebox recovery ratio decreased steadily from 14.2 percent in FY2017 to 12.6 percent in the last year.

* * * * *

The following is a brief summary of the systemwide functional trend highlights between FY2017 and FY2019:

• Administrative costs increased from 16 to 19 percent of total operating costs and increased by one third to \$22.08 per vehicle service hour.

- Marketing expenditures decreased to 2.2 percent of total administrative costs while remaining at \$0.03 or \$0.04 per passenger trip.
- The systemwide farebox recovery ratio decreased from 14.2 percent to 12.6 percent.

Exhibit 7: Functional Performance Trends – Systemwide

	Actual Performance		
FUNCTION/Indicator	FY2017	FY2018	FY2019
MANAGEMENT, ADMINISTRATION & MARKETING			
Administrative Cost/Total Operating Cost	15.7%	17.3%	19.3%
Annual Percent Change		10.3%	11.6%
Three Year Percent Change			23.1%
Adminstrative Cost/Vehicle Service Hour	\$16.56	\$18.95	\$22.08
Annual Percent Change		14.4%	16.5%
Three Year Percent Change			33.3%
Marketing Cost/Total Administrative Cost	3.1%	2.3%	2.2%
Annual Percent Change		-27.7%	-1.0%
Three Year Percent Change			-28.4%
Marketing Cost/Unlinked Passenger Trip	\$0.04	\$0.03	\$0.04
Annual Percent Change		-16.8%	19.5%
Three Year Percent Change			-0.6%
Farebox Revenue/Operating Cost	14.2%	13.6%	12.6%
Annual Percent Change		-4.7%	-7.3%
Three Year Percent Change			-11.7%

Bus Service

MCTD's bus service functional area trends represent areas of cost efficiency, safety, productivity and service reliability. Audit period performance is discussed below and presented in Exhibit 8.

Service Planning

- The operating cost per passenger mile increased by ten percent from \$1.67 in FY2017 to \$1.84 in FY2019.
- More than 85 percent of all vehicle miles traveled were in service, as were more than 90 percent of all vehicle hours in all three years. However, there were small annual declines in both indicators.
- The trends in both passenger productivity measures were essentially steady during the audit period. There were about 1.3 passengers carried per service mile and 16.5 passengers per service hour.

Operations

- Vehicle operations costs as a percentage of total operating costs decreased from 71 percent to 65 percent over the three year period.
- Vehicle operations costs per service hour went up modestly overall, from just under \$80 in FY2017 to above \$81 in FY2018 and FY2019.
- The bus service farebox recovery declined from 15.8 percent in the first year to 14.3 percent by FY2019.
- The TDA recovery ratio, calculated as farebox revenue plus local support divided by operating costs less allowable exclusions, was about 80 percent in the first and last year. In the middle year, the result was more than 100 percent. MCTD staff indicated that depreciation was the only allowable exclusion item during the audit period, and that agency depreciation is not split by service mode but is fully reported under bus service on all external reporting.

- MCTD staff indicated that schedule adherence is monitored internally monthly by Planning and Operations staff and adjustments made to schedules to address poor performing routes. In conjunction with NTD ridechecks, comprehensive schedule adherence is also completed every three years through an onboard passenger survey. The most recent survey was done for FY2017 and showed 81 percent of trips operating on-time. Due to compatibility issues in reporting methodologies between the onboard tracking system on the vehicles operated by GGBHTD and MCTD's vehicle tracking system used by the other contractors, on-time performance data is not compiled and included as part of MCTD's regular reporting. Therefore, no schedule adherence results were available for FY2018 and FY2019.
- The rate of complaints decreased in each year, by nearly four percent over the three years.
- The incidence of missed trips also was reduced in each year, from 0.17 percent of total trips in FY2017 to 0.10 percent in FY2019.

Maintenance

- Total maintenance costs as a percentage of total operating costs increased from about 14 percent in the first two years to 15.4 percent by FY2019.
- Vehicle maintenance costs increased over the audit period from \$1.13 to
 \$1.35 per vehicle service mile, or nearly 20 percent.
- The vehicle spare ratio during the audit period decreased modestly from 25.7 percent in FY2017 to 23.9 percent subsequently.
- The mean distance between major failures declined by nearly 30 percent in FY2018, to 30,700 vehicle miles, and remained at that level in FY2019.
 At the same time, the mean distance between all failures improved somewhat from 16,000 to 17,000 miles.

Safety

 There were no preventable accidents in the first two years, but two such accidents in FY2019, or 0.1 per 100,000 vehicle miles. Although the number of accidents in FY2019 was not inordinately high, the recent increase points to a potentially burgeoning safety issue.

 Casualty/liability costs per service hour and mile both increased by nearly 100 percent overall, though remaining relatively low in dollar amounts.

* * * * *

The following is a brief summary of the bus service functional trend highlights between FY2017 and FY2019:

- Service Planning results showed the operating cost per passenger mile increasing by ten percent, more than 85 percent of all vehicle miles in service, more than 90 percent of all vehicle hours in service, and essentially steady passenger productivity.
- Operations results showed vehicle operations costs decreasing compared to total costs but increasing slightly per service hour, farebox recovery declining from 15.8 to 14.3 percent by FY2019, the TDA recovery ratio (reflecting local support and operating cost exclusions) at 80 percent or more, and modestly decreasing rates of complaints and missed trips. Schedule adherence results were only available for FY2017, when 81 percent on time performance was reported. Due to compatibility issues in the vehicle tracking systems used by MCTD's various contractors, comprehensive on-time performance data is only compiled every three years by passenger survey in conjunction with NTD ridechecks.
- Maintenance results showed total maintenance costs increasing slightly to 15.4 percent of total costs, vehicle maintenance costs per mile increasing by 20 percent, and the vehicle spare ratio decreasing slightly but remaining around 25 percent. In addition, the mean distance between major failures declined after FY2017 to 30,700 vehicle miles (nearly 30 percent), though the mean distance between all failures improved somewhat to 17,000 miles.

•	In the safety area, there were no preventable accidents in the first two years but two in FY2019 pointing to a potentially burgeoning safety issue, while casualty/liability costs per service hour and mile both increased but
	remained relatively low in dollar amounts.

Exhibit 8: Functional Performance Trends – Bus Service

	Actu	al Performa	nce
FUNCTION/Indicator	FY2017	FY2018	FY2019
SERVICE PLANNING			
Total Operating Cost/Passenger Mile	\$1.67	\$1.73	\$1.84
Annual Percent Change		3.5%	6.6%
Three Year Percent Change			10.4%
Vehicle Service Miles/Total Miles	87.2%	86.9%	85.6%
Annual Percent Change		-0.4%	-1.5%
Three Year Percent Change			-1.9%
Vehicle Service Hours/Total Hours	92.2%	91.6%	90.5%
Annual Percent Change		-0.7%	-1.1%
Three Year Percent Change			-1.8%
Passengers/Vehicle Service Mile	1.27	1.30	1.29
Annual Percent Change		2.9%	-1.4%
Three Year Percent Change			1.4%
Passengers/Vehicle Service Hour	16.4	16.7	16.5
Annual Percent Change		1.4%	-0.6%
Three Year Percent Change			0.7%
OPERATIONS			
Vehicle Operations Cost/Total Operating Cost	71.1%	69.3%	65.1%
Annual Percent Change		-2.5%	-6.1%
Three Year Percent Change			-8.4%
Vehicle Operations Cost/Vehicle Service Hour	\$79.73	\$81.59	\$81.15
Annual Percent Change		2.3%	-0.5%
Three Year Percent Change			1.8%
Farebox Revenue/Operating Cost	15.8%	15.2%	14.3%
Annual Percent Change		-3.8%	-6.2%
Three Year Percent Change			-9.8%
TDA Recovery Ratio (a)	80.0%	102.6%	81.4%
Annual Percent Change		28.3%	-20.7%
Three Year Percent Change			1.8%
Percentage of Trips On-Time	81.0%	(b)	(b)
Annual Percent Change			
Three Year Percent Change			
Complaints/100,000 Passenger Trips	24.5	23.7	23.6
Annual Percent Change		-3.5%	-0.4%
Three Year Percent Change			-3.8%
Missed Trips/Total Trips	0.17%	0.12%	0.10%
Annual Percent Change		-31.6%	-14.5%
Three Year Percent Change			-41.5%

	Actu	al Performa	nce
FUNCTION/Indicator	FY2017	FY2018	FY2019
MAINTENANCE			
Vehicle + Non-Veh. Maint. Cost/Total Operating Cost	14.0%	13.5%	15.4%
Annual Percent Change		-3.7%	14.3%
Three Year Percent Change			10.2%
Vehicle Maintenance Cost/Vehicle Service Mile	\$1.13	\$1.15	\$1.35
Annual Percent Change		1.7%	17.7%
Three Year Percent Change			19.7%
Spare Vehicles/Total Vehicles	25.7%	23.9%	23.9%
Annual Percent Change		-6.7%	0.0%
Three Year Percent Change			-6.7%
Mean Distance between Major Failures (Miles)	42,674	30,780	30,753
Annual Percent Change		-27.9%	-0.1%
Three Year Percent Change			-27.9%
Mean Distance between All Failures (Miles)	16,232	17,530	17,128
Annual Percent Change		8.0%	-2.3%
Three Year Percent Change			5.5%
SAFETY			
Preventable Accidents/100,000 Vehicle Miles	0.0	0.0	0.1
Annual Percent Change			
Three Year Percent Change			
Casualty & Liability Cost/Vehicle Service Hour	\$0.08	\$0.13	\$0.16
Annual Percent Change		65.9%	17.2%
Three Year Percent Change			94.4%
Casualty & Liability Cost/Vehicle Service Mile	\$0.01	\$0.01	\$0.01
Annual Percent Change		68.4%	16.3%
Three Year Percent Change			95.8%

⁽a) Farebox Revenue plus Local Support/Operating Cost less TDA Allowable Exclusions

⁽b) Not available

<u>Paratransit</u>

MCTD's paratransit functional area trends represent mostly similar areas to the bus service. Audit period performance is discussed below and presented in Exhibit 9.

• <u>Service Planning</u>

- The operating cost per passenger mile increased by 40 percent overall from \$4.39 in FY2017 to \$6.15 in FY2019. Most of the increase was between FY2018 and FY2019.
- Vehicle miles traveled in service was reduced from 88 to 86 percent, while vehicle hours in service remained at nearly 90 percent in all three years.
- Passenger productivity declined somewhat, with passengers per service mile down by five percent overall to 0.14, and passengers per service hour down by ten percent to 1.96.

Operations

- Vehicle operations costs per total operating cost remained in a range of
 72 to 74 percent over the three-year period.
- Vehicle operations costs per service hour increased in each year, by nearly six percent overall, to \$59.09 by FY2019.
- The paratransit farebox recovery declined steadily from 4.6 percent in the first year to 3.8 percent by FY2019.
- The TDA recovery ratio also declined, from about 80 percent in the first two years to 70 percent in FY2019.
- On-time trip performance ranged between 91 and 93 percent during the audit period.
- The rate of complaints decreased in each year, by nearly 30 percent over the three years.

- The incidence of missed trips more than tripled between FY2017 and FY2018, and then leveled off in FY2019.
- There were no reported ADA trip denials during the audit period.
- The trip cancellation rate decreased in each year, from 11.5 percent of total ADA trips in FY2017 to 10.3 percent by FY2019. Meanwhile, late trip cancellations went down from 1.9 percent to 1.1 percent.
- The passenger no-show rate decreased overall as well, but remained near one percent of total ADA trips.

• <u>Maintenance</u>

- Maintenance costs remained at just below eight percent of total operating costs, while vehicle maintenance costs increased from \$0.41 to \$0.43 per mile by the end of the period.
- The vehicle spare ratio dropped by one-third, from 23.5 percent in the first year to 20.5 percent in FY2018 and 15.4 percent more recently.
- The mean distance between major failures improved by 75 percent through the period, to more than 175,000 vehicle miles, while the mean distance between all failures improved overall by 67 percent despite some decline in the interim year.

Safety

 The rate of preventable accidents was reduced by more than 50 percent over the three years, from 0.7 per 100,000 vehicle miles to 0.3. This reflected five such accidents in FY2017 and three in each following year.

* * * * *

The following is a brief summary of the paratransit functional trend highlights between FY2017 and FY2019:

- Service Planning results showed a 40 percent increase in the operating cost per passenger mile, more than 85 percent of all vehicle miles in service, 90 percent of all vehicle hours in service, passengers per vehicle service mile down by five percent, and passengers per vehicle service hour down by ten percent.
- For Operations, the vehicle operations cost per service hour remained about 73 percent of total costs, but increased by six percent in relation to service hours. The paratransit farebox recovery declined from 4.6 to 3.8 percent while the TDA recovery ratio declined from about 80 percent in the first two years to 70 percent. Schedule adherence ranged between 91 and 93 percent, there were no ADA trip denials and a 30 percent decrease in the rate of complaints, but also a notable increase in missed trips in FY2018. The trip cancellation rate, late trip cancellation rate and passenger no-shows all trended downward.
- In the Maintenance area, total maintenance costs remained near eight percent of total costs while vehicle maintenance costs remained about \$0.42 per mile, and the vehicle spare ratio decreased by one-third from 23.5 to 15.4 percent. In addition, the mean distance between major failures improved by 75 percent to over 175,000 vehicle miles and the mean distance between all failures improved overall by 67 percent.
- Safety results showed the rate of preventable accidents reduced by more than 50 percent over the three years.

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Exhibit 9: Functional Performance Trends – Paratransit

	Actu	al Performa	nce
FUNCTION/Indicator	FY2017	FY2018	FY2019
SERVICE PLANNING			
Total Operating Cost/Passenger Mile	\$4.39	\$4.80	\$6.15
Annual Percent Change		9.2%	28.1%
Three Year Percent Change			40.0%
Vehicle Service Miles/Total Miles	88.2%	88.5%	85.9%
Annual Percent Change		0.3%	-2.9%
Three Year Percent Change			-2.6%
Vehicle Service Hours/Total Hours	89.3%	89.9%	89.5%
Annual Percent Change		0.6%	-0.5%
Three Year Percent Change			0.2%
Passengers/Vehicle Service Mile	0.15	0.14	0.14
Annual Percent Change		-8.0%	3.0%
Three Year Percent Change			-5.3%
Passengers/Vehicle Service Hour	2.18	2.06	1.96
Annual Percent Change		-5.5%	-4.8%
Three Year Percent Change			-10.1%
OPERATIONS			
Vehicle Operations Cost/Total Operating Cost	71.9%	74.0%	73.9%
Annual Percent Change		2.9%	-0.2%
Three Year Percent Change			2.7%
Vehicle Operations Cost/Vehicle Service Hour	\$55.83	\$57.58	\$59.09
Annual Percent Change		3.1%	2.6%
Three Year Percent Change			5.8%
Farebox Revenue/Operating Cost	4.6%	4.1%	3.8%
Annual Percent Change		-11.8%	-5.5%
Three Year Percent Change			-16.6%
TDA Recovery Ratio (a)	78.1%	80.0%	70.3%
Annual Percent Change		2.4%	-12.1%
Three Year Percent Change			-10.0%
Percentage of Trips On-Time	92.3%	93.3%	91.2%
Annual Percent Change		1.1%	-2.2%
Three Year Percent Change			-1.2%
Complaints/10,000 Passenger Trips	4.6	4.2	3.2
Annual Percent Change		-9.2%	-22.5%
Three Year Percent Change			-29.7%
Missed Trips/Total Trips	0.01%	0.03%	0.03%
Annual Percent Change		234.9%	-4.1%
Three Year Percent Change			221.3%

	Actual Performance		
FUNCTION/Indicator	FY2017	FY2018	FY2019
OPERATIONS (Continued)			
Total ADA Trip Denials	0	0	0
Annual Percent Change			
Three Year Percent Change			
Trip Cancellations/Total ADA Trips	11.5%	10.4%	10.3%
Annual Percent Change		-9.3%	-1.2%
Three Year Percent Change			-10.4%
Late Trip Cancellations/Total ADA Trips	1.9%	1.4%	1.1%
Annual Percent Change		-27.3%	-17.6%
Three Year Percent Change			-40.1%
No-Shows/Total ADA Trips	1.0%	1.0%	0.9%
Annual Percent Change		-2.5%	-6.8%
Three Year Percent Change			-9.1%
MAINTENANCE			
Vehicle + Non-Veh. Maint. Cost/Total Operating Cost	7.7%	7.9%	7.7%
Annual Percent Change		3.7%	-3.5%
Three Year Percent Change			0.1%
Vehicle Maintenance Cost/Vehicle Service Mile	\$0.41	\$0.41	\$0.43
Annual Percent Change		1.0%	2.6%
Three Year Percent Change			3.6%
Spare Vehicles/Total Vehicles	23.5%	20.5%	15.4%
Annual Percent Change		-12.8%	-25.0%
Three Year Percent Change			-34.6%
Mean Dist. betw. Major Failures (Miles)	100,005	132,671	175,517
Annual Percent Change		32.7%	32.3%
Three Year Percent Change			75.5%
Mean Dist. betw. All Failures (Miles)	87,504	66,336	146,264
Annual Percent Change		-24.2%	120.5%
Three Year Percent Change			67.2%
SAFETY			
Preventable Accidents/100,000 Vehicle Miles	0.7	0.4	0.3
Annual Percent Change		-47.2%	-9.3%
Three Year Percent Change			-52.1%

⁽a) Farebox Revenue plus Local Support/Operating Cost less TDA Allowable Exclusions

VII. CONCLUSIONS AND RECOMMENDATIONS

The preceding sections presented a review of MCTD's transit service performance during the three-year period of FY2017 through FY2019 (July 1, 2016 through June 30, 2019). They focused on TDA compliance issues including trends in TDA-mandated performance indicators and compliance with selected sections of the state Public Utilities Code (PUC). They also provided the findings from an overview of MCTD's data collection activities to support the TDA indicators, actions taken to implement recommendations from the prior performance audit, and a review of selected key functional performance results.

Conclusions

The key findings and conclusions from the individual sections of this performance audit are summarized below:

 <u>Data Collection</u> – MCTD is in compliance with the data collection and reporting requirements for all five TDA statistics. In addition, the statistics collected over the six-year review period appear to be consistent with the TDA definitions, and indicate general consistency in terms of the direction and magnitude of the year-to-year changes across the statistics.

• TDA Performance Trends

MCTD's performance trends for the five TDA-mandated indicators were analyzed by mode. A six-year analysis period was used for all the indicators. In addition, component operating costs were analyzed.

<u>Bus Service</u> – The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2014 through FY2019. It should be noted that these results are based on FY2014 reporting that excluded MCTD bus services operated under contract by Golden Gate Transit.

- In terms of cost efficiency, there was an average annual increase in the operating cost per hour of 1.3 percent, which amounted to a 1.5 percent decrease in inflation adjusted dollars.
- Cost effectiveness improved, with the cost per passenger decreasing on average by 3.5 percent per year, or average annual decrease of 6.2 percent in constant FY2014 dollars.
- Passenger productivity demonstrated positive trends, with passengers per vehicle service hour increasing by 5.0 percent per year overall and passengers per vehicle service mile increasing by 9.3 percent.

The following is a brief summary of the component operating costs trend highlights for the bus service between FY2014 and FY2019:

- Purchased transportation costs comprised by far the largest category of operating costs, increasing from 54 percent of total costs in FY2014 to about 85 percent subsequently. The FY2014 results were based on NTD reporting that excluded MCTD bus services operated under contract by Golden Gate Transit.
- There were annual increases between five and 12 percent in purchased transportation costs in the last three years (all MCTD bus services included).
- In-house labor costs went up by 4.4 percent per year on average, while fringe benefits costs did not change much overall despite annual fluctuation. Together, these categories contributed about six percent of total costs except in FY2014, when the result was noticeably higher.
- Services costs generally contributed between one and two percent of the total operating cost and showed a net 2.1 percent annual

- decrease, while materials/supplies costs contributed between four and five percent and showed a net annual increase of 9.2 percent.
- The casualty/liability and other expenses categories each generally contributed one percent or less toward the total costs, and exhibited only minor overall change as well.

<u>Paratransit</u> – The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2014 through FY2019:

- Cost efficiency improved after the new paratransit contract transferring some service to GGBHTD took effect in FY2016.
 Overall, there was an average annual decrease in the operating cost per hour of 0.6 percent. This translated to a 3.4 percent decrease in inflation adjusted dollars.
- In terms of cost effectiveness, the cost per passenger increased an average of 2.3 percent per year in actual dollars, corresponding to a decrease of 0.6 percent per year in constant (inflation-adjusted) dollars.
- Passenger productivity demonstrated some losses, with passengers per vehicle service hour decreasing by 2.8 percent overall and passengers per vehicle service mile decreasing by 0.6 percent.

The following is a brief summary of the component operating costs trend highlights for paratransit between FY2014 and FY2019:

- Purchased transportation costs comprised the largest category of operating costs, contributing 75 to 85 percent of total costs though the period. Purchased transportation costs decreased an average by four percent annually.
- No in-house labor or fringe benefits costs were reported in FY2014.
 Subsequently, there was annual fluctuation in dollar amounts, but both of these categories together accounted for just five to seven percent of total costs.
- Services costs showed a net 25 percent annual increase, and increased from two to six percent of the total operating cost. At the same time, materials/supplies costs decreased on average by three

percent annually in absolute terms, and went down from 11 to eight percent of total costs by FY2015 but increased again to 10.3 percent by FY2019.

- No casualty/liability costs were reported for FY2014. Otherwise the casualty/liability and other expenses categories each contributed two percent or less toward the total costs in each year.
- <u>PUC Compliance</u> MCTD is in compliance with all seven sections of the state PUC that were reviewed as part of this performance audit. These sections included requirements concerning CHP terminal safety inspections, labor contracts, reduced fares, Welfare-to-Work, revenue sharing, and evaluating passenger needs.
- <u>Status of Prior Audit Recommendations</u> This section is not applicable since this is the first performance audit to be conducted of MCTD, and therefore there were no prior audit recommendations.

• <u>Functional Performance Indicator Trends</u>

To further assess MCTD's performance over the past three years, a detailed set of systemwide and modal functional area performance indicators was defined and reviewed.

<u>Systemwide</u> – The following is a brief summary of the systemwide functional trend highlights between FY2017 and FY2019:

- Administrative costs increased from 16 to 19 percent of total operating costs and increased by one third to \$22.08 per vehicle service hour.
- Marketing expenditures decreased to 2.2 percent of total administrative costs while remaining at \$0.03 or \$0.04 per passenger trip.

 The systemwide farebox recovery ratio decreased from 14.2 percent to 12.6 percent.

<u>Bus Service</u> – The following is a brief summary of the bus service functional trend highlights between FY2017 and FY2019:

- Service Planning results showed the operating cost per passenger mile increasing by ten percent, more than 85 percent of all vehicle miles in service, more than 90 percent of all vehicle hours in service, and essentially steady passenger productivity.
- Operations results showed vehicle operations costs decreasing compared to total costs but increasing slightly per service hour, farebox recovery declining from 15.8 to 14.3 percent by FY2019, the TDA recovery ratio (reflecting local support and operating cost exclusions) at 80 percent or more, and modestly decreasing rates of complaints and missed trips. Schedule adherence results were only available for FY2017, when 81 percent on time performance was reported. Due to compatibility issues in the vehicle tracking systems used by MCTD's various contractors, comprehensive on-time performance data is only compiled every three years by passenger survey in conjunction with NTD ridechecks.
- Maintenance results showed total maintenance costs increasing slightly to 15.4 percent of total costs, vehicle maintenance costs per mile increasing by 20 percent, and the vehicle spare ratio decreasing slightly but remaining around 25 percent. In addition, the mean distance between major failures declined after FY2017 to 30,700 vehicle miles (nearly 30 percent), though the mean distance between all failures improved somewhat to 17,000 miles.
- In the safety area, there were no preventable accidents in the first two years but two in FY2019 -- pointing to a potentially burgeoning safety issue, while casualty/liability costs per service hour and mile both increased but remained relatively low in dollar amounts.

<u>Paratransit</u> – The following is a brief summary of the paratransit functional trend highlights between FY2017 and FY2019:

- Service Planning results showed a 40 percent increase in the operating cost per passenger mile, more than 85 percent of all vehicle miles in service, 90 percent of all vehicle hours in service, passengers per vehicle service mile down by five percent, and passengers per vehicle service hour down by ten percent.
- For Operations, the vehicle operations cost per service hour remained about 73 percent of total costs, but increased by six percent in relation to service hours. The paratransit farebox recovery declined from 4.6 to 3.8 percent while the TDA recovery ratio declined from about 80 percent in the first two years to 70 percent. Schedule adherence ranged between 91 and 93 percent, there were no ADA trip denials and a 30 percent decrease in the rate of complaints, but also a notable increase in missed trips in FY2018. The trip cancellation rate, late trip cancellation rate and passenger no-shows all trended downward.
- In the Maintenance area, total maintenance costs remained near eight percent of total costs while vehicle maintenance costs remained about \$0.42 per mile, and the vehicle spare ratio decreased by onethird from 23.5 to 15.4 percent. In addition, the mean distance between major failures improved by 75 percent to over 175,000 vehicle miles and the mean distance between all failures improved overall by 67 percent.
- Safety results showed the rate of preventable accidents reduced by more than 50 percent over the three years.

Recommendations

1. TAKE STEPS TO ADDRESS PREVENTABLE ACCIDENTS ON MCTD'S BUS SERVICE.

[Reference Section: VI. Functional Performance Indicator Trends]

MCTD reported no preventable accidents on its bus system in the first two years of the audit period, but two such accidents in FY2019, the equivalent of 0.1 per 100,000 vehicle miles. Although the number of accidents in FY2019 was not

inordinately high, the recent increase points to a potentially burgeoning safety issue which MCTD should address in coordination with its operating contractors. Efforts should include additional strategies to improve operator training and enhance monitoring activities to ensure that safety issues are identified and corrected before they have a chance to escalate further.

2. <u>MONITOR AND REPORT SCHEDULE ADHERENCE CONSISTENTLY AND</u> ON A REGULAR BASIS ACROSS THE BUS SYSTEM.

[Reference Section: VI. Functional Performance Indicator Trends]

During the conduct of the audit, MCTD staff indicated that schedule adherence on the bus service is monitored internally monthly by Planning and Operations staff and adjustments made to schedules to address poor performing routes. In conjunction with NTD ridechecks, comprehensive schedule adherence is also completed every three years through an onboard passenger survey. The most recent survey was done for FY2017 and showed 81 percent of trips operating ontime. Due to compatibility issues in reporting methodologies between the onboard tracking system on the vehicles operated by GGBHTD and MCTD's vehicle tracking system used by the other contractors, on-time performance data is not compiled and included as part of MCTD's regular reporting. Therefore, no schedule adherence results were available for FY2018 and FY2019.

In order to provide more reliable service to the public, and provide valuable and relevant performance information to the Board, MCTD and all of its contractors should be tracking bus system schedule adherence more formally and consistently. MCTD is encouraged to expand its efforts to collect and report comprehensive on-time performance results in all years, not just every third year.

APPENDIX A: INPUT STATISTICS FOR FUNCTIONAL PERFORMANCE MEASURES

Functional Performance Inputs – MCTD Systemwide

Data Item	FY2017	FY2018	FY2019	Source
Total Operating Costs	\$23,295,533	\$24,920,149	\$26,859,624	NTD F-40; MCTD Staff
Administrative Costs	\$3,657,378	\$4,316,983	\$5,191,243	NTD F-40
Vehicle Service Hours	220,855	227,807	235,123	NTD S-10 MB+DR
Marketing Costs	\$114,823	\$98,034	\$116,677	MCTD Staff (CAFR)
Unlinked Passenger Trips	3,018,932	3,099,687	3,087,067	NTD S-10 MB+DR
Farebox Revenue (All Modes)	\$3,311,952	\$3,377,967	\$3,373,591	NTD F-10; MCTD Staff

Functional Performance Inputs - MCTD Bus Service

Data Item	FY2017	FY2018	FY2019	Source
Vehicle Service Miles	2,307,555	2,300,458	2,316,247	NTD S-10 MB
Total Vehicle Miles	2,645,787	2,647,043	2,706,259	NTD S-10 MB
Vehicle Service Hours	178,049	180,238	180,039	NTD S-10 MB
Total Vehicle Hours	193,094	196,854	198,851	NTD S-10 MB
Unlinked Passenger Trips	2,925,522	3,001,619	2,978,991	NTD S-10 MB
Farebox Revenue	\$3,158,617	\$3,227,240	\$3,204,135	NTD F-10
Total Operating Costs	\$19,971,498	\$21,216,949	\$22,452,872	NTD F-30 MB
Passenger Miles	11,970,345	12,281,711	12,189,124	NTD S-10 MB
Vehicle Operations Costs	\$14,195,428	\$14,705,889	\$14,610,654	NTD F-30 MB
Local Support (a)	\$10,904,689	\$15,563,805	\$12,187,570	MCTD Staff; NTD Back-up
TDA Oper. Cost Exclusions - PUC 99247 (b)	\$2,387,889	\$2,908,165	\$3,549,061	MCTD Staff; Depreciation
TDA Oper. Cost Exclusions - PUC 99268.17 (c)	\$0	\$0	\$0	MCTD Staff
Trips On-Time	81.0%	(d)	(d)	NTD Ridechecks
Total Trips	214,530	216,158	215,296	TT/Plan Database
Complaints	718	711	703	TT/Daily Cust. Feedback
Missed Trips	363	250	213	TT/Operations/DailyActivity
Vehicle Maintenance Costs	\$2,607,949	\$2,643,257	\$3,133,167	NTD F-30 MB
Non-Vehicle/Facility Maintenance Costs	\$190,436	\$220,971	\$332,280	NTD F-30 MB
Spare Vehicles (Total less Maximum Service)	19	17	17	NTD S-10 MB
Total Vehicles	74	71	71	NTD S-10 MB
Revenue Vehicle Mechanical System Failures - Total	163	151	158	NTD R-20
Revenue Vehicle Mechanical System Failures - Major	62	86	88	NTD R-20
Preventable Accidents	0	0	2	TT/Daily Safety & Security
Casualty/Liability Costs	\$14,239	\$23,908	\$27,988	NTD F-30 MB

- (a) Local Support includes the following (USOA revenue class in parentheses):
 - Auxiliary transportation revenue (406)
 - Taxes directly levied (408)
 - Local cash grants and reimbursements (409)
 - Local special fare assistance (410)
 - Subsidy from other sectors of operation (440)
 - Other non-federal/non-state grant funds or other revenues
- (b) Operating expense object classes exclusive of the following pursuant to PUC Section 99247:
 - depreciation and amortization expenses
 - subsidies for commuter rail services operated on railroad lines under the jurisdiction of the Federal Railroad Administration
 - costs for providing charter services
 - vehicle lease costs
 - principal and interest payments on capital projects funded with certificates of participation
- (c) Operating expense object class exclusions pursuant to PUC Section 99268.17:
 - additional operating costs for federally required ADA paratransit service that exceed prior year costs (CPI adjusted)
 - cost increases beyond the CPI change for: fuel; alternative fuel programs; power (including electricity); insurance premiums/liability claims payouts; state and federal mandates
 - start-up costs for new services (not more than two years)
- (d) Not available

Functional Performance Inputs – MCTD Paratransit

Data Item	FY2017	FY2018	FY2019	Source
Vehicle Service Miles	617,199	704,224	753,794	NTD S-10 DR
Total Vehicle Miles	700,034	796,026	877,586	NTD S-10 DR
Vehicle Service Hours	42,806	47,569	55,084	NTD S-10 DR
Total Vehicle Hours	47,925	52,927	61,577	NTD S-10 DR
Unlinked Passenger Trips	93,410	98,068	108,076	NTD S-10 DR
Farebox Revenue	\$153,335	\$150,727	\$169,456	NTD F-10; MCTD Staff
Total Operating Costs	\$3,324,035	\$3,703,200	\$4,406,752	NTD F-30 DR; MCTD Staff
Passenger Miles	757,048	772,059	717,078	NTD S-10 DR
Vehicle Operations Costs	\$2,389,931	\$2,739,219	\$3,254,700	NTD F-30 DR; MCTD Staff
Local Support (a)	\$2,443,036	\$2,812,062	\$2,927,891	MCTD Staff; NTD Back-up
TDA Oper. Cost Exclusions - PUC 99247 (b)	\$0	\$0	\$0	MCTD Staff
TDA Oper. Cost Exclusions - PUC 99268.17 (c)	\$0	\$0	\$0	MCTD Staff
Trips On-Time	92.3%	93.3%	91.2%	PASS/On Time Perf. Report
Total Trips	166,193	171,757	167,093	PASS/On Time Perf. Report
Complaints	43	41	35	TT/Daily Customer Feedback
Missed Trips	13	45	42	PASS/Productivity Reports
Total ADA Trips	166,193	171,757	167,093	MCTD Staff
ADA Trip Denials	0	0	0	PASS/Operational Reports
Trip Cancellations	19,124	17,926	17,233	PASS/Productivity Reports
Late Trip Cancellations	3,127	2,350	1,883	PASS/Productivity Reports
No Shows	1,722	1,735	1,573	PASS/Productivity Reports
Vehicle Maintenance Costs	\$253,408	\$291,912	\$320,637	NTD F-30 DR
Non-Vehicle/Facility Maintenance Costs	\$1,003	\$1,918	\$16,943	NTD F-30 DR
Spare Vehicles (Total less Maximum Service)	8	8	6	NTD S-10 DR/MCTD Staff
Total Vehicles	34	39	39	NTD S-10 DR/MCTD Staff
Revenue Vehicle Mechanical System Failures - Total	8	12	6	NTD R-20
Revenue Vehicle Mechanical System Failures - Major	7	6	5	NTD R-20
Preventable Accidents	5	3	3	TT/Daily Safety & Security

- (a) Local Support includes the following (USOA revenue class in parentheses):
 - Auxiliary transportation revenue (406)
 - Taxes directly levied (408)
 - Local cash grants and reimbursements (409)
 - Local special fare assistance (410)
 - Subsidy from other sectors of operation (440)
 - Other non-federal/non-state grant funds or other revenues
- (b) Operating expense object classes exclusive of the following pursuant to PUC Section 99247:
 - depreciation and amortization expenses
 - subsidies for commuter rail services operated on railroad lines under the jurisdiction of the Federal Railroad Administration
 - costs for providing charter services
 - vehicle lease costs
 - principal and interest payments on capital projects funded with certificates of participation
- (c) Operating expense object class exclusions pursuant to PUC Section 99268.17:
 - additional operating costs for federally required ADA paratransit service that exceed prior year costs (CPI adjusted)
 - cost increases beyond the CPI change for: fuel; alternative fuel programs; power (including electricity); insurance premiums/liability claims payouts; state and federal mandates
 - start-up costs for new services (not more than two years)