Triennial Performance Audit

of

Santa Clara Valley Transportation Authority (VTA)

Fiscal Years 2021/22, 2022/23 and 2023/24

FINAL AUDIT REPORT

prepared for the

METROPOLITAN TRANSPORTATION COMMISSION

by

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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 Santa Clara Valley Transportation Authority (VTA). 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 four service modes operated by VTA, bus, light rail, rail shuttle, and paratransit, are the prime focus of this performance audit. The audit period is Fiscal Years 2022 through 2024 (from July 1, 2021 through June 30, 2024).

Performance Audit and Report Organization

The performance audit was 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 VTA'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 VTA's performance based on the results of the previous sections.

Comments received from VTA and MTC staff regarding the draft report have been incorporated into this final report. Highlights of 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 determine if VTA is in compliance with the TDA requirements for data collection and reporting. The review is limited to the data items needed to calculate the TDA-mandated performance indicators. This review has determined that VTA is in compliance with the data collection and reporting requirements for these performance indicators. 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 Indicators and Trends – VTA'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.

- Bus Service TDA Performance Indicators – The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2019 through FY2024:
  - The COVID pandemic had a major impact on the current audit period performance indicators. Declines in ridership, service levels and operating costs, particularly in FY2020 and FY2021, negatively affected all VTA bus performance indicators. As the pandemic waned, improving numbers in these indicators between FY2022 and FY2024 created an overall decrease in performance, but not to the extent of the pandemic years.
  - There was an average annual increase in the operating cost per hour of 4.0 percent, and 0.3 percent in inflation adjusted dollars. Cost per hour peaked

in FY2021, before decreasing to a steadier level in the last three years examined.

- Passenger productivity decreased due to overall lower ridership during the pandemic and the slow return of passengers to almost pre-pandemic levels. Passengers per vehicle service hour decreased 3.5 percent and passengers per vehicle service mile decreased 3.3 percent per year overall.

- The cost per passenger increased on average by 7.8 percent per year, which amounted to an average annual increase of four percent in constant FY2019 dollars. This is a significant improvement from the 20 percent plus average annual increases seen in the prior audit report.

- Employee productivity also decreased slightly, an average of 2.2 percent per year.

- Bus Service Component Costs – The following is a brief summary of the component operating costs trend highlights for the bus service between FY2019 and FY2024:

  - Labor and benefit costs represented the largest portion of the total costs, representing about 80 percent in all six years. Labor costs increased an average of four percent annually, while fringe benefit costs remained almost unchanged with a 1.8 percent annual increase.

  - There were modest changes in most component cost categories, with average annual increases of five percent or less in four of the six cost categories examined, and moderate increases in materials/supplies and services costs.

  - Services and materials/supplies contributed about 15 to 18 percent of total costs, while the remaining categories contributed less than two percent of total costs over the six year period.

- Light Rail Service – The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2019 through FY2024:

  - Cost efficiency declined, with an average annual increase in the operating cost per hour of five percent (1.3 percent in constant 2019 dollars). Annual operating costs rose by an average of 1.3 percent

annually, with an average annual decrease of 7.7 percent in service delivery.

- Passenger productivity worsened, with passengers per hour decreasing 7.7 percent per year on average and passengers per mile decreasing 5.4 percent annually on average.

- The operating cost per passenger averaged an annual increase of 13.8 percent, which amounted to a 9.7 percent increase when normalized in FY2019 dollars.

- Employee productivity decreased overall during the period, due to the combination of average annual increases in FTEs and average annual decreases in service hours over the review period.

The following is a brief summary of the component operating costs trend highlights for the light rail service between FY2019 and FY2024:

- There was a small average annual increase in total costs over the audit period, with an average annual increase of 1.3 percent.

- Costs increased in six of the seven cost categories, with the average annual cost increases generally less than five percent in each category. VTA experienced cost decreases in the first three years of the review period, with moderate cost increases occurring in the current audit period (FY2019 through FY2024).

- The labor and fringe benefits costs contributed between 68 and 72 percent of total hourly costs.

- The share of total operating cost for services remained between 15 to 17 percent during the period, while the share of materials/supplies costs to total costs decreased from about 12 percent to seven percent. The remaining cost component categories contributed about eight percent of the total costs.

- Rail Shuttle Service – The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2019 through FY2024:

  – VTA's rail shuttle service was particularly hard hit by the COVID pandemic. During the current audit period (FY2022-FY2024), unlinked passengers increased an average of almost 80 percent annually, with an average decrease in service hours of 2.6 percent and an average annual increase in service miles of 1.6 percent in that same period.

  – Cost efficiency declined overall, with an average annual increase in the operating cost per hour of 5.5 percent (1.7 percent in inflation adjusted dollars). Higher operating costs combined with slightly lower service levels influenced this indicator.

  – Passenger productivity was also lower, with passengers per hour decreasing 14.8 percent and passengers per mile decreasing 14.2 percent per year on average.

  – The operating cost per passenger averaged an annual increase of 23.8 percent, or 19.4 percent in normalized FY2019 dollars. Passenger levels decreased an average of 15.4 percent per year over the six-year period, while operating costs increased by 4.8 percent per year.

  The following is a brief summary of the component operating costs trend highlights for the rail shuttle service between FY2019 and FY2024:

  – Purchased transportation costs, the largest component cost category at about 90 percent of total costs, increased by 5.3 percent per year on average, similar to the overall 4.8 percent annual increase in operating costs.

  – Costs in the labor and fringe benefit categories decreased an average of 1.4 and 3.1 percent per year, respectively. All the remaining cost categories, services, materials/supplies. casualty/liability, and other expenses experienced modest annual average increases. These remaining cost categories combined comprise about five percent of the total hourly costs.

- Paratransit TDA Performance Indicators – The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2019 through FY2024:

  - VTA demand response service experienced almost equal average annual decreases in ridership and service levels, resulting in generally steady performance in passenger productivity, and lower performance in the cost efficiency and effectiveness indicators examined.

  - Cost efficiency decreased overall, with an average annual increase in the operating cost per hour of 10.5 percent (6.5 percent in inflation adjusted dollars).

  - Passenger productivity was almost unchanged, with passengers per hour increasing an average of 0.1 percent annually and passengers per mile increasing 0.4 percent per year on average.

  - The operating cost per passenger averaged an annual increase of 10.3 percent, or 6.4 percent when normalized in FY2019 dollars. On average, operating costs increased by 2.5 percent per year over the period, while ridership decreased by 7.1 percent per year.

- Paratransit Component Costs – The following is a brief summary of the component operating costs trend highlights for paratransit between FY2019 and FY2024:

  - Purchased transportation costs, by far the largest component cost category, increased by 4.1 percent per year on average.

  - Labor and fringe benefit costs increased about four and six percent per year on average, but both categories combined comprised less than seven percent of the total operating costs per year.

  - Costs in other categories such as materials/supplies, casualty/liability and miscellaneous cost categories were negligible, while services costs fluctuated throughout the audit period. Total costs in all these categories comprised less than one percent of the total operating costs over the period.

Compliance with Statutory Requirements – VTA 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.

Status of Prior Audit Recommendations – There were no recommendations made in VTA's prior audit.

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

- Systemwide (All Modes) – The following is a brief summary of the systemwide functional trend highlights between FY2022 and FY2024:
  - Administrative costs compared to total costs increased by 1.9 percent while administrative costs compared to vehicle service hours decreased by 1.3 percent during this audit period.
  - Marketing cost as a percentage of total costs increased almost 23 percent overall, from 3.5 percent to 4.3 percent, while marketing cost per passenger trip decreased by eight percent over the audit period.
  - The systemwide farebox recovery ratio increased by 18 percent between FY2022 and FY2024.
- Bus Service – The following is a brief summary of the bus service functional trend highlights between FY2022 and FY2024:
  - Service Planning results showed total operating cost per passenger mile decreased by 15.6 percent and vehicle miles and hours in service remained steady at about 87 and 94 percent, respectively. This may be reflecting the increase in ridership as VTA begins recovering from the COVID pandemic years. Bus fare recovery ratio increased over 14 percent between FY2022 and FY2024.

- In Operations, vehicle operations cost as a percentage of total operating cost was mostly steady, with a 0.8 percent increase over the audit period, while vehicle operations cost per service hour increased by 1.6 percent from $147.70 to $150.04. Operator scheduled and unscheduled absences both decreased about four percent against total hours worked. Schedule adherence dipped slightly about six percent, while the number of missed trips decreased about 20 percent. Both passenger complaints and passenger commendations per 100,000 unlinked passenger trips decreased over the audit period.

- Maintenance results showed total maintenance costs decreasing slightly overall, by 2.6 percent, averaging about 27 percent of total operating cost each year. Vehicle maintenance costs per service mile increased just over two percent. The spare ratio decreased from 23.6 percent to 19.8 percent. Service reliability declined with mean distance between major failures decreasing by about 40 percent while distance between all failures declined almost 60 percent during the audit period. This continues a pattern from the prior audit period, where deceased vehicle reliability was attributed to a higher number of mechanical failures in the new battery powered buses integrated into the fleet in FY2021. VTA attributes the current decrease to about 40 percent of its current bus fleet being at or well over its Useful Life Benchmark for vehicle age. The ratio of maintenance pay hours to vehicle service hours decreased by 10 percent, maintenance employee scheduled absences decreased by nine percent, while unscheduled employee absences remained steady at about 16 percent.

- Safety results showed significant decreases of over 45 percent in casualty and liability costs per service mile and hour during the period. Preventable accidents per 100,000 vehicle miles increased less than 10 percent over the audit period but lost days due to industrial accidents increased almost 259 percent, from 287 days to 1,030 days during the audit period.

- Light Rail – The following is a brief summary of the light rail functional trend highlights between FY2022 and FY2024:

  - Service Planning results revealed a 40 percent decrease in total operating cost per passenger mile and both vehicle miles and hours in service of between 93 and 94 percent of total hours. Farebox recovery ratio increased 51 percent overall, from 2.4 percent to 3.6 percent, between FY2022 and FY2024.

- Operations results included a 2.5 percent increase in vehicle operations cost as a percentage of total operating cost and a 38 percent decrease in vehicle operations costs per service hour. Schedule adherence improved 9.3 percent over the audit period from 77.5 to 84.7 percent. Operator scheduled absences increased modestly, while unscheduled absences decreased almost 50 percent compared to total hours worked. Schedule adherence improved almost 10 percent and passenger complaints and commendations both decreased, by 43.1 and 67.5 percent, respectively. The percentage of missed trips compared to total trips missed trips increased more than 1400 percent overall, due to service shout downs in FY2024 for maintenance of way and rehabilitation projects for stations that required the use of bus bridges to fill in the service gaps caused by the construction.

- In Maintenance, total maintenance costs were almost unchanged as a percentage of total operating cost, with a 1.5 percent increase over the audit period. Vehicle maintenance costs per service mile decreased 29.1 percent. The car spare ratio decreased about 12 percent, and the mechanical failure rate improved overall for both major and all failures. The ratio of maintenance pay hours to vehicle service hours decreased more than 40 percent during the audit period. Scheduled employee absences increased by about 10 percent, while unscheduled employee absences decreased over 40 percent.

- Safety results showed significant decreases in casualty and liability costs per service mile and hour during the period. Preventable accidents went from seven to zero over the three years. The number of lost days due to industrial accidents increased over 500 percent from 24 to 149 between FY2022 and FY2024.

- Rail Shuttle – The following is a brief summary of the rail shuttle functional trend highlights between FY2022 and FY2024:

  - Service Planning showed total operating cost per passenger mile decreased more than 65 percent overall as VTA begins to recover from the pandemic. The farebox recovery ratio increased by 16.5 percent overall, from 3.4 percent to four percent over the audit period. There was a 4.5 percent improvement in performance in

vehicle service miles as a percentage of total miles and service hours per total hours remained steady at about 92 percent.

- Operations exhibited steady performance in vehicle operations costs as a percentage of total operating cost. Vehicle operations cost per service hour increased by 8.5 percent. There were no reported complaints or commendations throughout the audit period. Data for on-time performance and missed trips was unavailable. The shuttle contractor is responsible for shuttle operations and does not track that data, as it is heavily influenced by the ACE commuter rail service schedules and performance.

- Maintenance results revealed vehicle maintenance costs decreased slightly as a percentage of total costs, as did maintenance cost per vehicle service mile, decreasing just under two percent overall. The spare ratio increased to 8.3 percent over the period. There were only three reported mechanical failures reported in both FY2023 and FY2024.

- VTA did not report any preventable accidents during the current audit period.

- Paratransit – The following is a brief summary of the paratransit functional trend highlights between FY2022 and FY2024:

  - Service Planning results showed an overall 16.5 percent decrease in the cost per passenger mile, farebox recovery increasing from 4.4 to 5.1 percent, and improvements of two percent in vehicle miles in service and 7.8 percent in vehicle hours in service.

  - Operations results showed steady results in vehicle operations costs as a portion of total operating costs with a 0.6 percent decrease, and a more significant decrease of 6.6 percent in vehicle operations cost per hour. Trips completed within the on-time window increased by 7.5 percent and even though there were significant percentage increases in both complaints and missed trips, there were very few when compared to the total number of trips taken. There were no ADA trip denials. The rate of passenger no-shows and trip cancellations both decreased, while late cancellations increased by about 11 percent.

- Maintenance results showed total maintenance costs compared to total operating costs increased by 2.7 percent over the three years. At the same time vehicle maintenance costs per service mile decreased by 13.1 percent. The spare ratio increased from 16 percent to 28.2 percent. Mean distance between major and all mechanical failure decreased over 55 percent each from FY2022 to FY2024.

- Safety results showed that the rate of preventable accidents decreased by 22.4 percent during this audit period.

Recommendations

1. EXAMINE MAINTENANCE ACTIVITIES AND DEVELOP STRATEGIES TO ADDRESS INCREASING MECHANICAL FAILURE RATES IN THE BUS AND PARATRANSIT MODES.
[Reference Section: VI. Functional Performance Indicator Trends]

   Audit period maintenance results for VTA bus and paratransit services showed service reliability generally declining across the audit period. For Bus service, the mean distance between major failures decreased by 40.9 percent overall, although there was some improvement between FY2023 and FY2024. A similar trend was seen with mean distance between all failures, with performance worsening each year, resulting in a 58.2 percent overall decline during the audit period. For paratransit, the mean distance between major failures worsened by 57.4 percent overall, with a similar trend observed when looking at all failures at a 59.9 percent annual decline overall.

   In the prior audit period VTA experienced deceased vehicle reliability for its bus fleet, attributed to a higher number of mechanical failures in the new battery powered buses integrated into the fleet in FY2021. It is unknown if the mechanical failure rate of those buses has continued into the current audit period. For paratransit, VTA experienced fluctuating year to year

results, but ultimately declining service reliability in the prior audit period, although at a lesser rate of decline that in the current audit period.

Efforts should be made by VTA to improve its maintenance functions to increase vehicle reliability and reduce the growing rates of mechanical failures for its bus and paratransit fleets.

2. EXAMINE THE SIGNIFICANT INCREASES IN LOST DAYS DUE TO INDUSTRIAL ACCIDENTS IN THE BUS AND PARATRANSIT MODES.
[Reference Section: VI. Functional Performance Indicator Trends]

A significant worker safety issue observed during the audit period was the increasing incidence of lost hours due to industrial accidents, impacting VTA bus and light rail services. For motorbus, there was a 258 percent increase in work hours lost due to industrial accidents, from 287 days in FY2022 to 1,030 days in FY2024. For light rail, there was an increase of 954 percent between FY2022 and FY2023 from 24 to 253 days, though there was a 41 percent decrease to 149 days in the last year.

VTA staff did not have an explanation for the increase in lost days, whether it was a true increase in accidents or a change in recording the data. VTA should investigate the reasons for the above increases in lost hours due to industrial accidents and develop policies as necessary to reduce occurrences and provide a safer workplace for all employees.

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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 Santa Clara Valley Transportation Authority (VTA). Four modes operated by VTA (bus, light rail, rail shuttles and paratransit) are the prime focus of this performance audit. VTA also co-sponsors commuter rail services and intercounty express bus services, with various other agencies. The audit period is Fiscal Years 2022 through 2024 (from July 1, 2021 through June 30, 2024).

An overview of VTA is provided in Exhibit 1. This is followed by a current agency organization chart in Exhibits 2.1, 2.2, and 2.3, which reflect the basic in-house organizational structure.

Performance Audit and Report Organization

This performance audit of VTA was conducted for MTC in accordance with its established procedures for performance audits. The audit consisted of two discrete phases:

- 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.
- Functional Review – Activities in this phase included:
  - A review of actions to implement the recommendations from the prior performance audit;
  - Calculation and evaluation of functional performance indicator trends; and
  - Findings, conclusions, and the formulation of recommendations.

This final report presents the findings from both phases, Compliance Audit and Functional Review. Comments received from VTA and MTC staff regarding the Draft Audit Report were incorporated into this final report.

Exhibit 1: System Overview

Location	3331 North First Street, San Jose, CA 95134
Establishment	Santa Clara County Transit District (SCCTD) was created in 1969 by the California state legislature. In 1974, the Santa Clara County Board of Supervisors created the Santa Clara County Transportation Agency (SCCTA) to provide administrative and management support for all County transportation functions. In January 1995, SCCTD merged with the Santa Clara County Congestion Management Agency, to form the Santa Clara Valley Transportation Authority (VTA). VTA is an independent special district responsible for bus, light rail, and paratransit operations, congestion management, delivery of specific highway, bicycle, and pedestrian improvement projects, sales tax program implementation, and countywide transportation planning.
Board	The Board of Directors is composed of twelve voting members and six alternates, all elected officials appointed to represent the jurisdiction they represent. Fifteen Directors are city council members and three are County supervisors. In addition, the three non-voting ex-officio members are the MTC Commissioners representing Santa Clara County. Board members serve two year terms and there are no term limits.
Facilities	VTA owns an administration complex, three bus operating divisions (one including an overhaul and repair facility), and one light rail operating and maintenance facility. The LRT system has a total of 62 station locations (59 individual stations/platforms). VTA utilizes 23 transit centers and also operates 27 park-and-ride lots.
Service Data	VTA provides bus, light rail, and paratransit service. VTA also sponsors a rail shuttle program, commuter rail service (Caltrain, Capitol Corridor and Altamont Corridor Express), and intercounty express bus service (Dumbarton Express, San Jose-Monterey Express, and Highway 17 Express). In addition, VTA expanded BART commuter rail service from Alameda County into Santa Cara County, directly connecting to the entire BART system. This expansion of the existing BART system, funded and owned by VTA, includes two new transit centers, the Milpitas Transit Center, and the Berryessa Transit Center. This new service began on June 13, 2020. VTA provides fixed-route bus service on 60 routes, which includes 4 Rapid routes, 16 frequent routes, 22 local/community routes, 5 express/limited stop routes, and 13 shuttle routes (FY24). Most fixed-route services operate during weekday peak, midday periods, and a less frequent weekend service. There currently are 441 buses in the active fleet, 3,188 active bus stops, and 600 shelters along the bus routes. The light rail system is 42.2 miles long, utilizing 62 stations and a fleet of 99 active low-floor cars. There are three services: the Orange Line from Alum Rock to Mountain View, the Green Line from Old Ironsides to

	Winchester, and the Blue Line from Baypointe to Santa Teresa. VTA also owns several historic trolleys for operation in downtown San Jose, but their operation is limited to weekends and special occasions. The adult base one-way fare is $2.50 for regular buses and light rail, $5.00 for Express services, $1.25 for youths ages 5-17, and $1.00 for seniors, people with disabilities and Medicare card holders. Transfers are free for 2 hours across VTA buses and light rail with single ride purchase through Clipper. The senior/disabled/Medicare fares are valid on Express Bus service, and children under five years of age ride free. VTA also offers unlimited use monthly and annual passes. The VTA-managed light rail/ACE shuttles currently charge no fares and are jointly financed through grant funds from the Bay Area Air Quality Management District (BAAQMD), STA funds, and by local partners served by the shuttles. The shuttles connect downtown San Jose and major employment centers with VTA's light rail lines, and the ACE and Caltrain commuter rail lines. VTA operates most of the shuttles with some contracted private vendors. ADA paratransit service is provided through a contracted independent service provider, MV Public Transportation, Inc. The contractor conducts ADA eligibility certification and provides paratransit service delivery. The fare for a regular one-way paratransit trip is established at twice the one-way adult cash fare of VTA's fixed-route bus and light rail services (currently $5.00). Personal care attendants ride at no charge.
Recent Changes	Changes within the past three years to VTA services include: Completion of VTA's BART Silicon Valley Extension - Phase 1, including a 229-foot-long pedestrian bridge to allow safe crossing over Montague Expressway, two new BART stations that are part of two bigger transit Centers: Milpitas Transit Center and Berryessa Transit Center. This new regional commuter service began in June 2020 under the conditions of the COVID-19 Pandemic. VTA's Title VI Program was updated and implemented, with updates to VTA's Limited English Proficiency Plan (LEP) and Public Participation Plan (PPP). Completed construction of VTA's new Paratransit facility and the Capitol Expressway Pedestrian Connection at the Eastridge Transit Center. Completed construction of the first electric bus charging stations at VTA's Cerone Division. Completed Stelling Road bus stop improvement to speed up travel time and accommodate increased transportation needs in the DeAnza College area by implementing the Rapid 523 bus service. Completed Sustainability Plan 2020 that recommended short-term (2025) and stretch (2040) targets for key performance indicators: greenhouse gas

	emissions, criteria air pollutants, energy, water, and waste with approval of the final plan by the VTA Board of Directors. Completed a light rail track intrusion prevention project that included security fencing at locations with trespassing along the light rail alignment and traction power substations. Completed construction for rail rehabilitation for special track improvements, including a new crossover at Cropley, a new switch at Hostetter, a new crossing at Sonora, new track joints at Devine, Market, and Almaden, and trackwork fabrication for the replacement of the Younger Half Grand. Implemented the Transit Sustainability Policy and Service Design Guidelines, including integration and connectivity with VTA's BART – Phase 1 expansion into Santa Clara County at the Milpitas station. Completed the bus arrival and departure real-time information (RTI) predictions improvement project, resulting in a 25-50% improvement and the availability of new prediction data to key partners such as Transit App and solar digital bus stop signage. Upgraded VTA's Mobile Ticketing application to include single and day passes. Implemented VTA's transit service network redesign, the 2019 New Transit Service Plan, on December 28, 2019. Implemented a new first-/last-mile shuttle route, the SCVMC Shuttle, on June 14, 2021. August 29 to September 18, 2021 – began implementing light rail re-opening phases 1 through 4 to fully operated services. October 11, 2021 – reset light rail to one-car consists due to low demand and limited car availability. Implemented new bus route Rapid 568 on October 11, 2021. March 7, 2022 – restored light rail Blue Line to two-car consists. July 11, 2022 – restored light rail Orange Line to two-car consists. August 15, 2022 – restored light rail Green Line to two-car consists; restored all light rail service spans to generally normal levels. October 31, 2022 – restored light rail service to 15-minute weekday headways. January 16, 2023 – end of COVID Emergency Network. January 15, 2024 -- Upgraded Route 71 from a local to a frequent route, operating at 15-minute weekday headways and 20-minute Saturday headways.

Planned Changes	Planned and on-going VTA transit projects include: Eastridge to BART Regional Connector. VTA's BART to Silicon Valley Phase II. Full implementation of CAD/AVL system in the bus and light rail fleet to provide real time information to customers, as well as real-time passenger load counts to staff to enable them to right-size service and increase operational efficiencies. Light Rail Efficiency. Light Rail Speed and Safety Enhancements. Implementation of the Electric Bus Pilot Project. ADA Upgrades at Facilities and Bus Stops. Restoration of light rail service to 20-minute weekend headways. Post-Pandemic Transit Service Plan, updated and adopted annually. Visionary Transit Network implementation (increased headways and service time spans).
Staff	VTA is organized into eight divisions plus the office of the General Manager. Employee headcount by division for FY2024 is summarized below: Office of the General Manager – 18 General Counsel – 18 Operations – 1,950 Administrative Services – 64 Engineering & Program Delivery – 79 Office of CFO, Finance, Budget & Real Estate – 215 Planning & Programming – 59 External Affairs – 71 System Safety and Security – 36 TOTAL – 2,510

Exhibit 2.1: VTA Organization Chart – FY2022

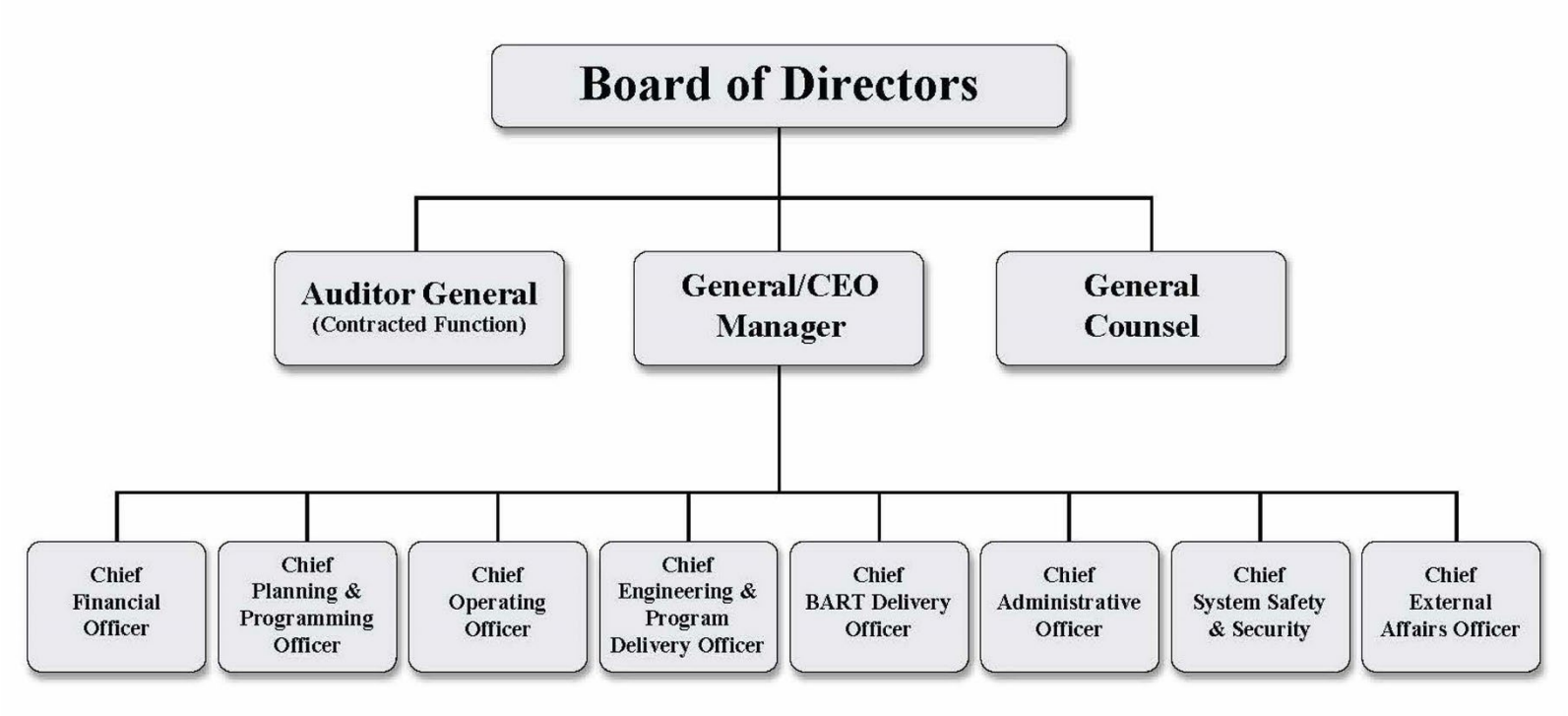


Exhibit 2.2: VTA Organization Chart – FY2023

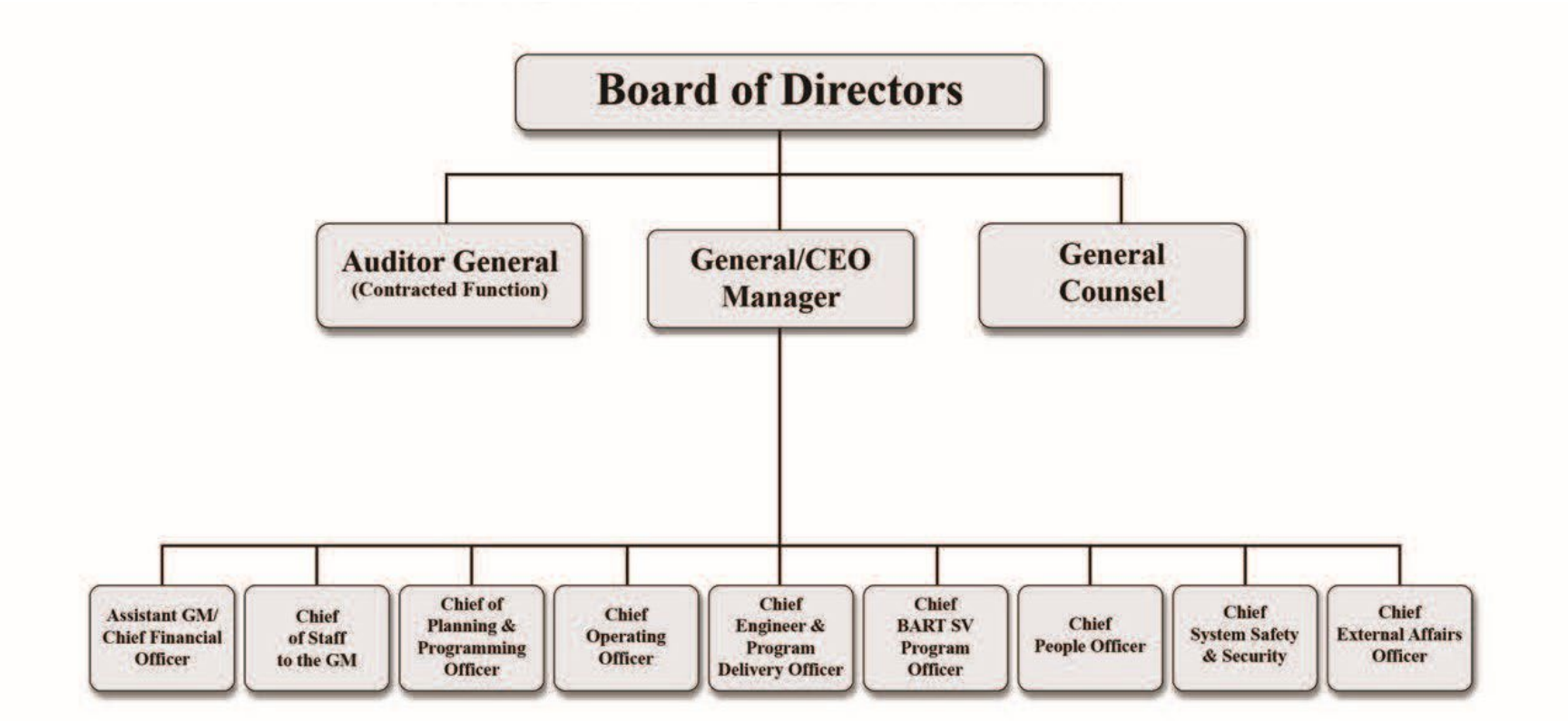
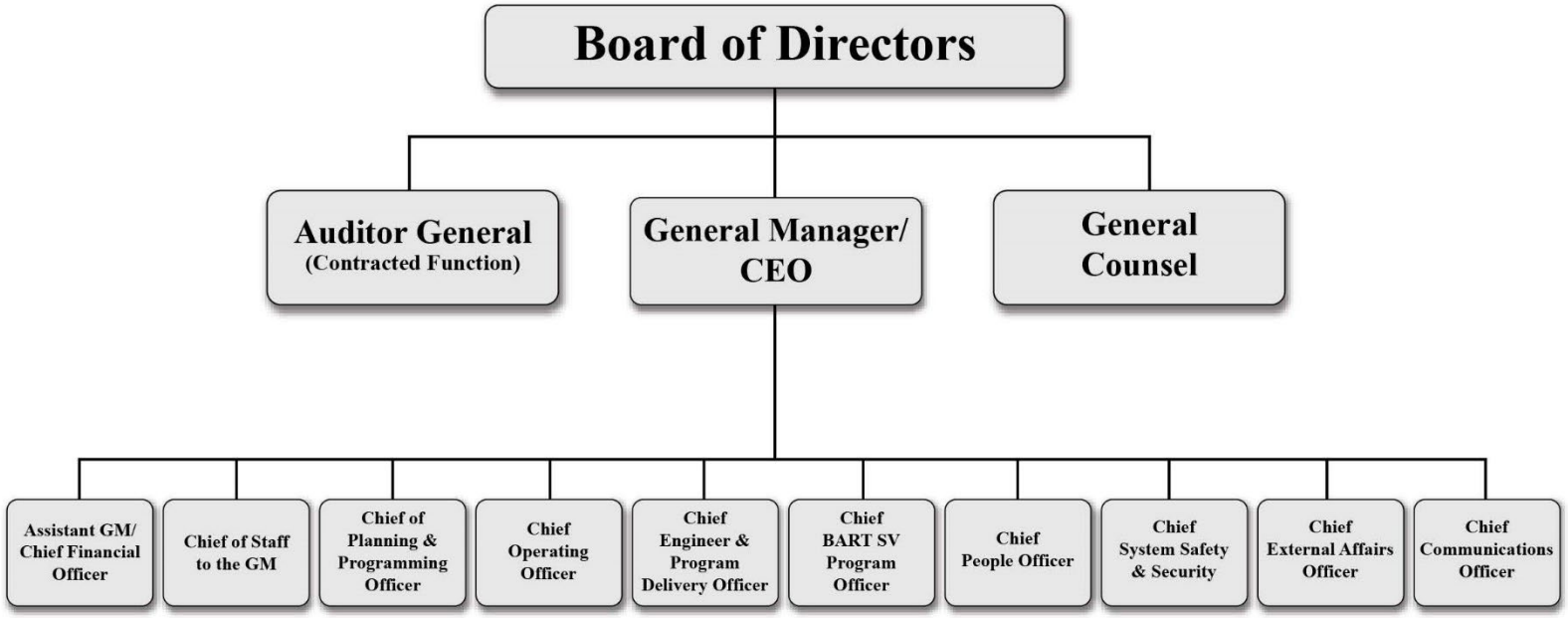


Exhibit 2.3: VTA Organization Chart – FY2024



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 VTA is in 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 VTA covering the audit period has been reviewed. VTA's NTD reports include its bus, light rail, rail shuttle and paratransit services. Consistent with FTA reporting requirements, VTA does not submit employee hour information for purchased transportation service to the NTD.

Compliance with Requirements

Two departments within VTA have the primary responsibility for collecting and reporting this information. The Fiscal Resources Division provides the cost-related information. The Operations Analysis Department is responsible for operating data such as service hours, service miles, and passengers. Also, data collection and reporting for

paratransit service is coordinated between VTA and its contractor, MV Public Transportation, Inc. (MVT). The contractor is responsible for collecting and compiling data for the paratransit service.

To support this review, VTA also provided information to confirm and/or update its data collection and reporting procedures as described in the prior performance audit. The staff indicated that the definitions and procedures used to derive the TDA indicator statistics are consistent with those used for the NTD reporting system.

Based on the information provided, as shown in Exhibit 3.1, VTA is in compliance with the data collection and reporting requirements for the TDA statistics.

Consistency of the Reported Statistics

The TDA statistics for VTA's bus, light rail, rail shuttle and paratransit services are presented in Exhibits 3.2 through 3.5, respectively. Included 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. The following is a brief summary of the results:

- VTA is in compliance with the definition and methodology for collection and reporting of TDA statistics
- There is 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 tend to be relatively proportional to increases or decreases in annual vehicle service hours and miles.

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	Financial information is tracked by Fiscal Resources Division in accordance with NTD Uniform System of Accounts procedures. Operating cost reported in NTD is obtained from VTA's general ledger system (SAP). Financials are primarily driven by ridership demand and predetermined contractual revenue vehicle hour and taxi trip rates. VTA reports all contractor and internal related paratransit costs together as one. Revenue vehicle hours and passenger trip is provided by a computerized scheduling system.
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	Scheduled Hours are computed by the Trapeze FX application and updated quarterly when schedule changes are made. For routing changes, the new segments are mapped by a built-in component of the Trapeze FX application and recorded into the system. Operations Analysis calculates the actual hours of service operated. The number of service hours missed is monitored daily. Service missed is based on road calls, outlates and incidents/ accidents. The Actual Hours formula is: Scheduled Hours - Service Hours Missed + Special Trip Services Hours.

TDA Statistic	TDA Definition	Compliance Finding	Verification Information
Vehicle Service Miles	"Vehicle service miles" means the total number of miles that each transit vehicle is in revenue service.	In Compliance	Scheduled Miles are computed by the Trapeze FX application and updated quarterly when schedule changes are made. For routing changes, the new service hours are mapped by a built in component of the Trapeze FX application and recorded into the system. Operations Analysis calculates the actual miles of service operated. The Percentage of Service Hours Operated factor is determined. This is calculated using the formula: [1 - (Service Hours Missed / Scheduled Hours)]. The number of service hours missed is monitored daily. Service missed is based on road calls, outlates and incidents/ accidents. The Actual Miles formula is: (Percentage of Service Hours Operated factor * Scheduled Miles) + Special Trip Services Miles.
Unlinked Passengers	"Unlinked passengers" means the number of boarding passengers, whether revenue producing or not, carried by the public transportation system.	In Compliance	Bus ridership is captured using the APC (Automatic Passenger Counter) System. Electronic counters are installed in approximately 68 percent of the active bus fleet. Light Rail ridership is similarly calculated through the use of Automatic Passenger Counters placed on 100 percent of the active light rail fleet. VTA follows a sampling methodology (for both bus & light rail) that is approved by the FTA Paratransit ridership is based on computerized scheduling information and cross-checked by driver logs and MDT (Mobile Data Terminal) input; adjustments as needed are entered into the

TDA Statistic	TDA Definition	Compliance Finding	Verification Information
			computer and tallied. This ridership is tracked by total passenger trips, including trips taken by ADA-paratransit eligible riders, their companions, and/or their personal care attendants. Information regarding shared trips and average weekday ridership is also tracked.
Employee Full-Time Equivalents	2,000 person-hours of work in one year constitute one employee.	In Compliance	Employee Labor hours and Actual Person Count are maintained by Fiscal Resources (Payroll) and Administrative Services, respectively. Labor hours are divided by 2000 to arrive at FTEs for TDA reporting purposes.

Exhibit 3.2: TDA Statistics – Bus Service

TDA Statistics	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	*Av. Ann. Chg.*
Operating Cost (Actual $)	$265,151,513	$256,941,752	$261,670,528	$282,008,665	$305,975,159	$320,325,060	- -
Annual Change	- -	*-3.1%*	*1.8%*	*7.8%*	*8.5%*	*4.7%*	*3.9%*
Operating Cost (Constant $)	$265,151,513	$253,568,524	$247,607,617	$248,013,307	$263,008,764	$267,365,159	- -
Annual Change	- -	*-4.4%*	*-2.4%*	*0.2%*	*6.0%*	*1.7%*	*0.2%*
Vehicle Service Hours	1,358,083	1,237,046	1,044,611	1,194,509	1,279,460	1,346,452	- -
Annual Change	- -	*-8.9%*	*-15.6%*	*14.3%*	*7.1%*	*5.2%*	*-0.2%*
Vehicle Service Miles	15,761,582	14,252,936	12,086,143	14,058,542	14,957,419	15,510,253	- -
Annual Change	- -	*-9.6%*	*-15.2%*	*16.3%*	*6.4%*	*3.7%*	*-0.3%*
Unlinked Passengers	27,027,693	21,702,539	9,687,282	15,121,268	19,266,958	22,433,782	- -
Annual Change	- -	*-19.7%*	*-55.4%*	*56.1%*	*27.4%*	*16.4%*	*-3.7%*
Employee Full-Time Equivalents	1410.3	1378.0	1305.0	1397.9	1386.6	1560.2	- -
Annual Change	- -	*-2.3%*	*-5.3%*	*7.1%*	*-0.8%*	*12.5%*	*2.0%*
Bay Area CPI - Annual Change	- -	1.3%	4.3%	7.6%	2.3%	3.0%	- -
Cumulative Change	- -	1.3%	5.7%	13.7%	16.3%	19.8%	*3.7%*

Sources: *FY2019 through FY2021 - Prior Performance Audit Report*
FY2021 through FY2024 - NTD Reports (FY2024 initial draft version)
CPI Data - U.S. Department of Labor, Bureau of Labor Statistics

Exhibit 3.3: TDA Statistics – Light Rail Service

TDA Statistics	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	*Av. Ann. Chg.*
Operating Cost (Actual $)	$127,886,958	$121,214,969	$115,792,171	$116,619,835	$122,428,199	$136,390,816	- -
Annual Change	- -	*-5.2%*	*-4.5%*	*0.7%*	*5.0%*	*11.4%*	*1.3%*
Operating Cost (Constant $)	$127,886,958	$119,623,613	$109,569,174	$102,561,639	$105,236,286	$113,841,084	- -
Annual Change	- -	*-6.5%*	*-8.4%*	*-6.4%*	*2.6%*	*8.2%*	*-2.3%*
Vehicle Service Hours	223,054	194,253	216,177	117,560	227,892	186,281	- -
Annual Change	- -	*-12.9%*	*11.3%*	*-45.6%*	*93.9%*	*-18.3%*	*-3.5%*
Vehicle Service Miles	3,539,847	2,837,267	2,839,165	1,584,635	3,202,370	2,618,995	- -
Annual Change	- -	*-19.8%*	*0.1%*	*-44.2%*	*102.1%*	*-18.2%*	*-5.8%*
Unlinked Passengers	8,437,926	6,281,578	2,168,096	2,301,457	4,147,807	4,723,010	- -
Annual Change	- -	*-25.6%*	*-65.5%*	*6.2%*	*80.2%*	*13.9%*	*-11.0%*
Employee Full-Time Equivalents	475.1	454.9	412.1	457.5	446.4	602.3	- -
Annual Change	- -	*-4.3%*	*-9.4%*	*11.0%*	*-2.4%*	*34.9%*	*4.9%*
Bay Area CPI - Annual Change	- -	1.3%	4.3%	7.6%	2.3%	3.0%	- -
Cumulative Change	- -	1.3%	5.7%	13.7%	16.3%	19.8%	*3.7%*

Sources: *FY2019 through FY2021 - Prior Performance Audit Report*
FY2021 through FY2024 - NTD Reports (FY2024 initial draft version)
CPI Data - U.S. Department of Labor, Bureau of Labor Statistics

Exhibit 3.4: TDA Statistics – Rail Shuttle Service

TDA Statistics	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	*Av. Ann. Chg.*
Operating Cost (Actual $)	$1,812,859	$1,834,392	$1,817,752	$2,245,301	$2,204,624	$2,289,273	- -
Annual Change	- -	*1.2%*	*-0.9%*	*23.5%*	*-1.8%*	*3.8%*	*4.8%*
Operating Cost (Constant $)	$1,812,859	$1,810,309	$1,720,061	$1,974,636	$1,895,041	$1,910,784	- -
Annual Change	- -	*-0.1%*	*-5.0%*	*14.8%*	*-4.0%*	*0.8%*	*1.1%*
Vehicle Service Hours	17,720	17,835	13,441	18,080	18,157	17,157	- -
Annual Change	- -	*0.6%*	*-24.6%*	*34.5%*	*0.4%*	*-5.5%*	*-0.6%*
Vehicle Service Miles	186,843	189,133	130,222	168,465	174,241	173,819	- -
Annual Change	- -	*1.2%*	*-31.1%*	*29.4%*	*3.4%*	*-0.2%*	*-1.4%*
Unlinked Passengers	444,393	307,036	27,051	59,895	114,740	192,736	- -
Annual Change	- -	*-30.9%*	*-91.2%*	*121.4%*	*91.6%*	*68.0%*	*-15.4%*
Employee Full-Time Equivalents	(a)	(a)	(a)	(a)	(a)	(a)	- -
Annual Change	- -	- -	- -	- -	- -	- -	- -
Bay Area CPI - Annual Change	- -	1.3%	4.3%	7.6%	2.3%	3.0%	- -
Cumulative Change	- -	1.3%	5.7%	13.7%	16.3%	19.8%	*3.7%*

(a) Not applicable as service is provided by a private contractor

Sources: FY2019 through FY2021 - Prior Performance Audit Report
FY2021 through FY2024 - NTD Reports (FY2024 initial draft version)
CPI Data - U.S. Department of Labor, Bureau of Labor Statistics

Exhibit 3.5: TDA Statistics – Paratransit

TDA Statistics	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	*Av. Ann. Chg.*
Operating Cost (Actual $)	$23,815,675	$23,269,348	$19,868,741	$23,564,275	$23,462,990	$26,883,858	- -
Annual Change	- -	*-2.3%*	*-14.6%*	*18.6%*	*-0.4%*	*14.6%*	*2.5%*
Operating Cost (Constant $)	$23,815,675	$22,963,859	$18,800,939	$20,723,667	$20,168,212	$22,439,103	- -
Annual Change	- -	*-3.6%*	*-18.1%*	*10.2%*	*-2.7%*	*11.3%*	*-1.2%*
Vehicle Service Hours	343,558	293,280	164,469	196,342	207,660	235,793	- -
Annual Change	- -	*-14.6%*	*-43.9%*	*19.4%*	*5.8%*	*13.5%*	*-7.3%*
Vehicle Service Miles	5,641,377	4,530,564	2,041,268	3,026,133	3,445,265	3,817,480	- -
Annual Change	- -	*-19.7%*	*-54.9%*	*48.2%*	*13.9%*	*10.8%*	*-7.5%*
Unlinked Passengers	522,951	416,392	173,267	274,955	324,434	361,254	- -
Annual Change	- -	*-20.4%*	*-58.4%*	*58.7%*	*18.0%*	*11.3%*	*-7.1%*
Employee Full-Time Equivalents	*(a)*	*(a)*	*(a)*	*(a)*	*(a)*	*(a)*	- -
Annual Change	- -	- -	- -	- -	- -	- -	- -
Bay Area CPI - Annual Change	- -	1.3%	4.3%	7.6%	2.3%	3.0%	- -
Cumulative Change	- -	1.3%	5.7%	13.7%	16.3%	19.8%	*3.7%*

(a) Not applicable as service is provided by a private contractor
Sources: FY2019 through FY2021 - Prior Performance Audit Report
FY2021 through FY2024 - NTD Reports (FY2024 initial draft version)
CPI Data - U.S. Department of Labor, Bureau of Labor Statistics

III. TDA PERFORMANCE INDICATORS AND TRENDS

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

- 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. VTA's NTD reports were the source of all operating and financial statistics except for contractor FTEs. As noted in Section II: Review of TDA Data Collection and Reporting Methods, VTA contracts for its rail shuttle and paratransit services, and does not report FTE data for those services in its NTD reports. The operating contractors are responsible for staffing and employee productivity; therefore, contracted service FTE data and results are not included as part of this audit report.

In addition to presenting performance for the three years of the audit period (FY2022 through FY2024), this analysis features two enhancements:

Six-Year Time Period – While the performance audit focuses on the three fiscal years of the audit period, six-year trend lines have been constructed for VTA'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 FY2022 to FY2024 trend lines

have been combined with those from the prior audit period (FY2019 through FY2021) 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 VTA's performance trends in the five TDA performance indicators included. The discussion is organized by service mode -- bus service is discussed first, followed by light rail, rail shuttles, and then paratransit. The analysis is also expanded to include a breakdown of the various component costs that contributed to the total and hourly operating costs during the last six years. This expanded analysis normally is not included for contracted services such as rail shuttles and paratransit, where the cost breakdowns are internal contractor issues; however, we have included them in this report to illustrate the trends in contracted cost categories.

Bus Service Performance Trends

This section provides an overview of the performance of VTA's bus service over the past six years. 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 4.4.

- Operating Cost per Vehicle Service Hour (Exhibit 4.1) [MTC Bullet, add underlining when necessary]
  - Operating cost per vehicle service hour, a key indicator of cost efficiency, increased an average of 4.0 percent annually. This reflects modest annual average increases in operating costs combined with overall annual average decreases in vehicle service hours, both factors largely attributed to the COVID-19 pandemic cost and service reductions in the first three years of the audit period, followed by a return to pre-pandemic service levels in the last three audit years.
  - The cost per hour ranged from $195.24 in FY2019 to $237.90 in FY2024. The cost per hour peaked in FY2021, the height of the COVID pandemic.
  - In constant FY2019 dollars, there was an average annual increase in this indicator of 0.3 percent.
- Passengers per Vehicle Service Hour (Exhibit 4.2)
  - Passengers per vehicle service hour, an indicator of passenger productivity, decreased an average of 3.5 percent annually during the six-year period.
  - The decrease reflects ridership decreasing at a more rapid pace than service hours over the period, but especially in the first three years of the audit period, due to the COVID pandemic. Both ridership and service hours have increased in each year of the current audit period.
  - Passengers per hour decreased overall from 19.9 in FY2019 to 16.7 in FY2024, with the lowest point of 9.3 occurring in FY2021.
- Passengers per Vehicle Service Mile (Exhibit 4.2)
  - The six-year trend in passengers per vehicle service mile, another passenger productivity indicator, also decreased by an annual average of 3.3 percent.

- As with passengers per hour, this performance reflects the overall decreases in both ridership and vehicle service miles, again, with the most significant decreases occurring in the first three years of the review period.

- Passengers per mile decreased from 1.71 in FY2016, to 1.45 in FY2024, with the lowest average of 0.80 occurring in FY2021.

- Operating Cost per Passenger (Exhibit 4.3)

  - A measure of cost effectiveness, VTA's operating cost per passenger was $9.81 in FY2019, increasing each year to a high of $27.01 per passenger in FY2021, before ending at $14.28 in FY2024, an average annual increase of 7.8 percent per year.

  - Total operating costs increased modestly but ridership was lower overall, with declines during the pandemic years resulting in an overall 3.7 percent decrease per year on average.

  - With the impact of inflation removed (normalization), the six-year result was an average annual increase of four percent in the cost per passenger.

- Vehicle Service Hours per Employee (FTE) (Exhibit 4.4)

  - Employee productivity, measured as vehicle service hours per full-time employee, decreased by an average of 2.2 percent per year over the six years.

  - Hours per FTE decreased overall from 963 in FY2019 to 863 in FY2024, reflecting a small average annual decrease in service hours combined with a two percent average yearly increase in FTEs over the entire period.

* * * * *

The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2019 through FY2024:

- The COVID pandemic had a major impact on the current audit period performance indicators. Declines in ridership, service levels and operating costs, particularly in FY2020 and FY2021, negatively affected all VTA bus performance indicators. As the pandemic waned, improving numbers in these

indicators between FY2022 and FY2024 created an overall decrease in performance, but not to the extent of the pandemic years.

- There was an average annual increase in the operating cost per hour of 4.0 percent, and 0.3 percent in inflation adjusted dollars. Cost per hour peaked in FY2021, before decreasing to a steadier level in the last three years examined.

- Passenger productivity decreased due to overall lower ridership during the pandemic and the slow return of passengers to almost pre-pandemic levels. Passengers per vehicle service hour decreased 3.5 percent and passengers per vehicle service mile decreased 3.3 percent per year overall.

- The cost per passenger increased on average by 7.8 percent per year, which amounted to an average annual increase of four percent in constant FY2019 dollars. This is a significant improvement from the 20 percent plus average annual increases seen in the prior audit report.

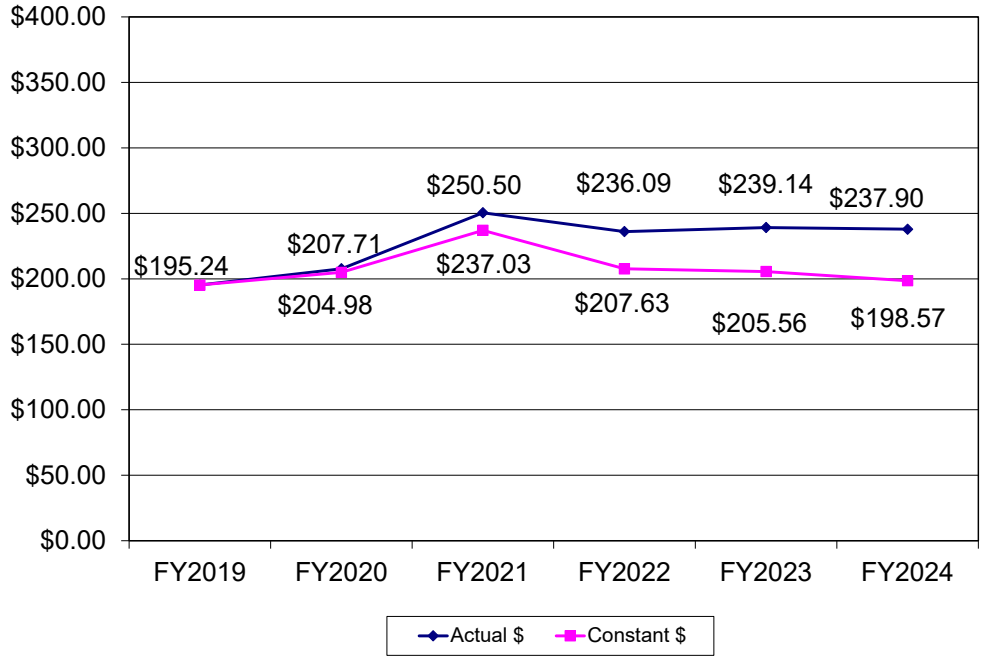
- Employee productivity also decreased slightly, an average of 2.2 percent per year.

Exhibit 4: TDA Indicator Performance – Bus Service

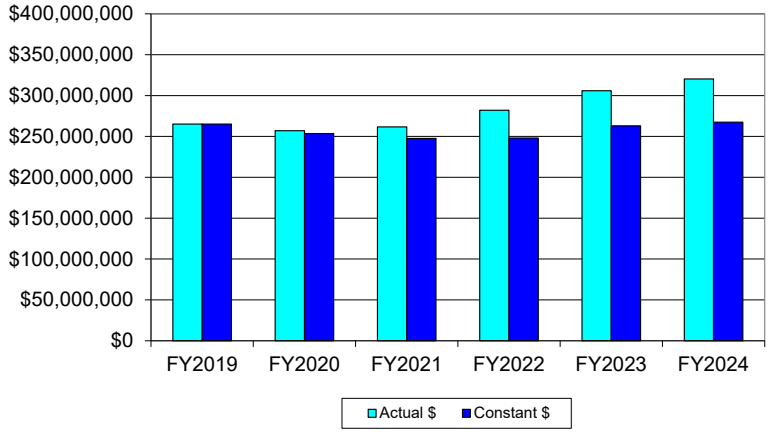
TDA Performance Indicator	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	*Av. Ann. Chg.*
Op. Cost per Vehicle Svc. Hour (Actual $)	$195.24	$207.71	$250.50	$236.09	$239.14	$237.90	- -
Annual Change	- -	*6.4%*	*20.6%*	*-5.8%*	*1.3%*	*-0.5%*	*4.0%*
Op. Cost per Vehicle Svc. Hour (Constant $)	$195.24	$204.98	$237.03	$207.63	$205.56	$198.57	- -
Annual Change	- -	*5.0%*	*15.6%*	*-12.4%*	*-1.0%*	*-3.4%*	*0.3%*
Passengers per Vehicle Service Hour	19.9	17.5	9.3	12.7	15.1	16.7	- -
Annual Change	- -	*-11.8%*	*-47.1%*	*36.5%*	*19.0%*	*10.6%*	*-3.5%*
Passengers per Vehicle Service Mile	1.71	1.52	0.80	1.08	1.29	1.45	- -
Annual Change	- -	*-11.2%*	*-47.4%*	*34.2%*	*19.8%*	*12.3%*	*-3.3%*
Op. Cost per Passenger (Actual $)	$9.81	$11.84	$27.01	$18.65	$15.88	$14.28	- -
Annual Change	- -	*20.7%*	*128.2%*	*-31.0%*	*-14.8%*	*-10.1%*	*7.8%*
Op. Cost per Passenger (Constant $)	$9.81	$11.68	$25.56	$16.40	$13.65	$11.92	- -
Annual Change	- -	*19.1%*	*118.8%*	*-35.8%*	*-16.8%*	*-12.7%*	*4.0%*
Vehicle Service Hours per FTE	963.0	897.7	800.5	854.5	922.7	863.0	- -
Annual Change	- -	*-6.8%*	*-10.8%*	*6.8%*	*8.0%*	*-6.5%*	*-2.2%*

Sources: *FY2019 through FY2021 - Prior Performance Audit Report*
FY2021 through FY2024 - NTD Reports (FY2024 initial draft version)
CPI Data - U.S. Department of Labor, Bureau of Labor Statistics

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



Operating Cost



Vehicle Service Hours

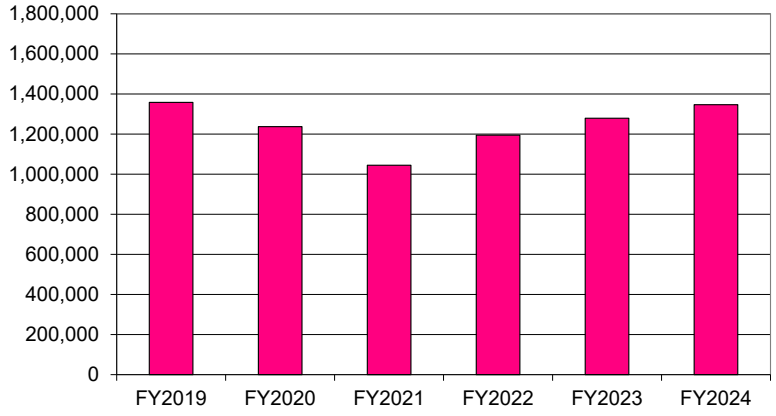
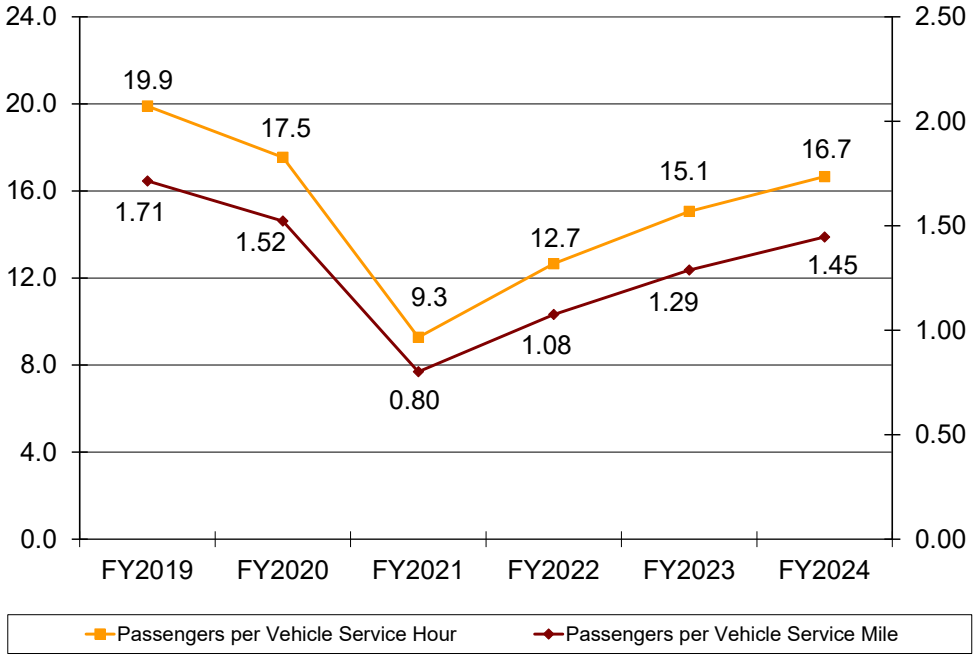
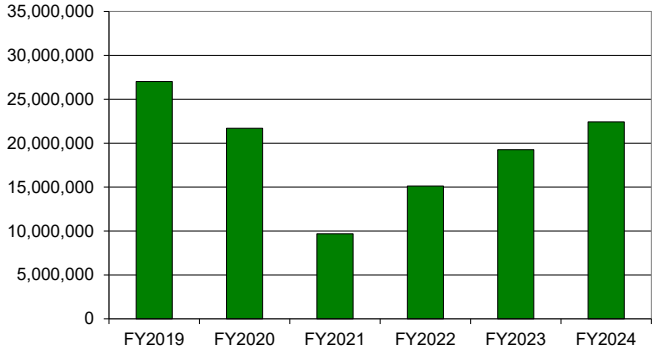


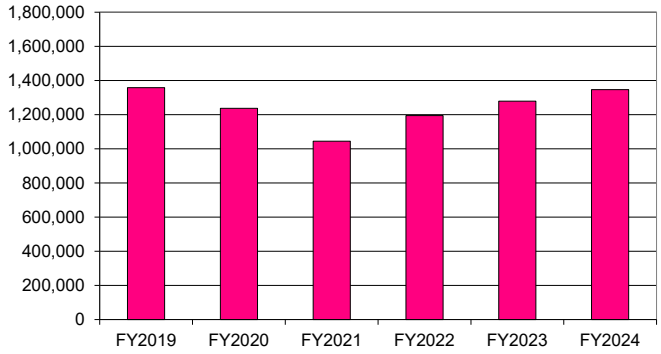
Exhibit 4.2: Passengers per Hour and per Mile – Bus Service



Unlinked Passengers



Vehicle Service Hours



Vehicle Service Miles

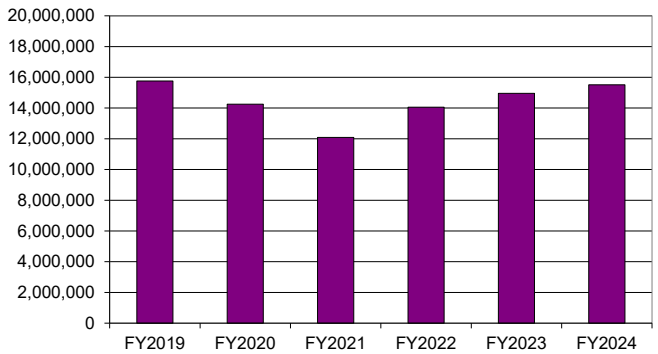
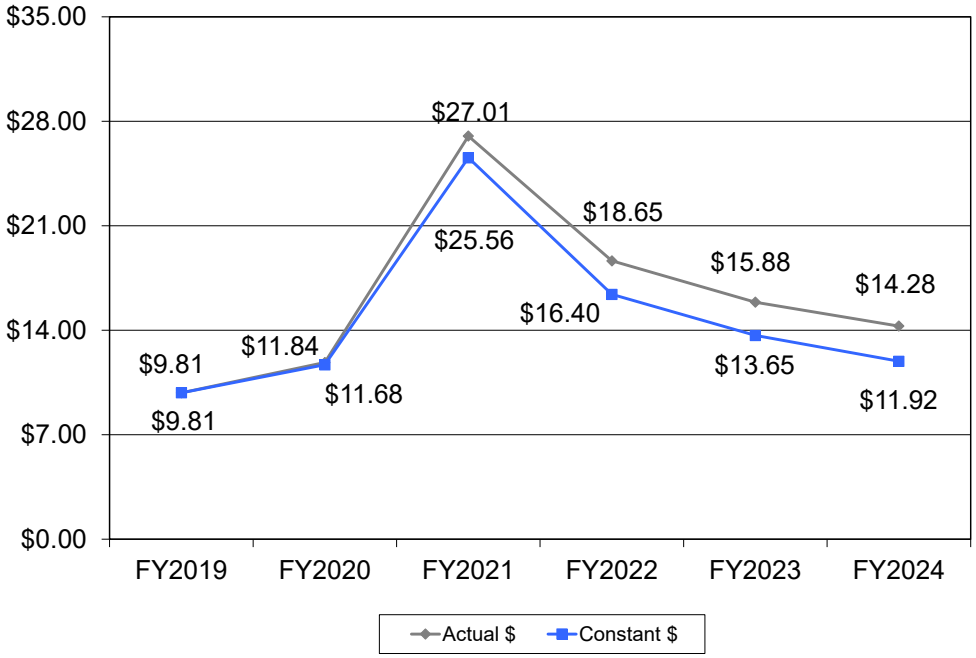
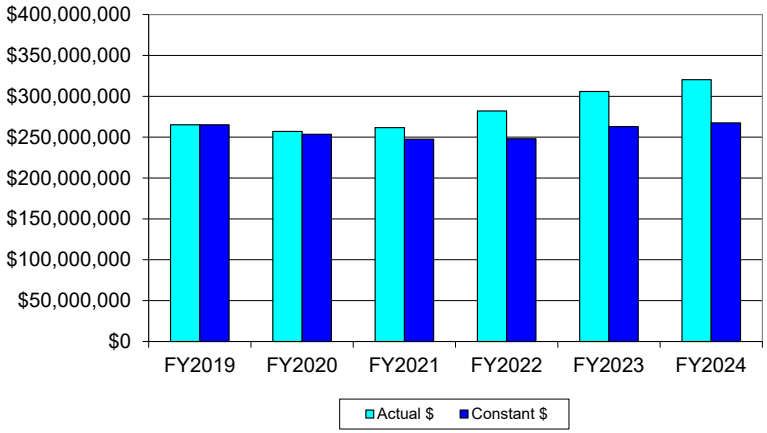


Exhibit 4.3: Operating Cost per Passenger – Bus Service



Operating Cost



Unlinked Passengers

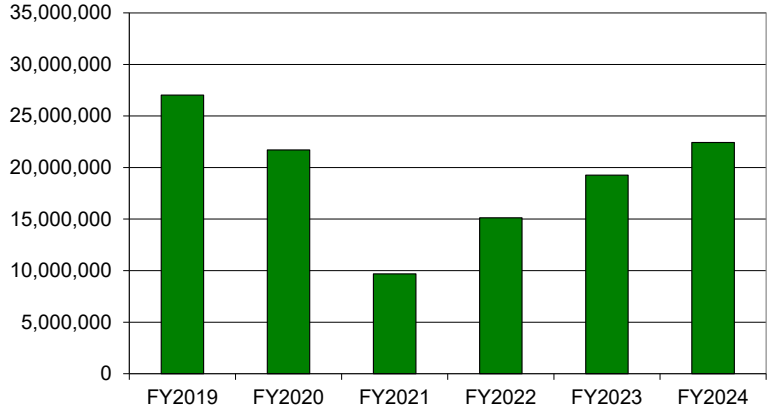
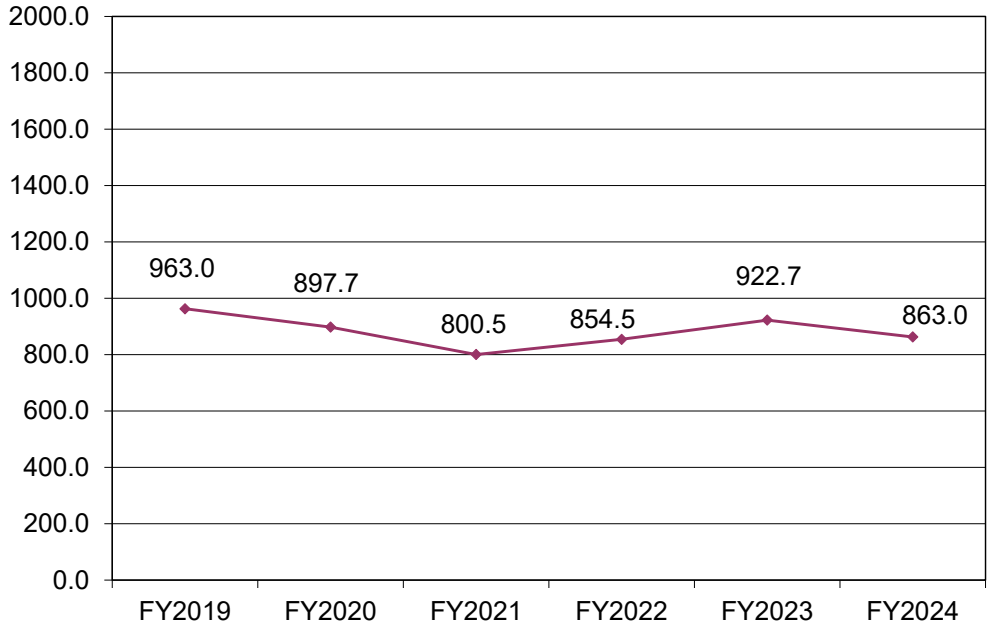
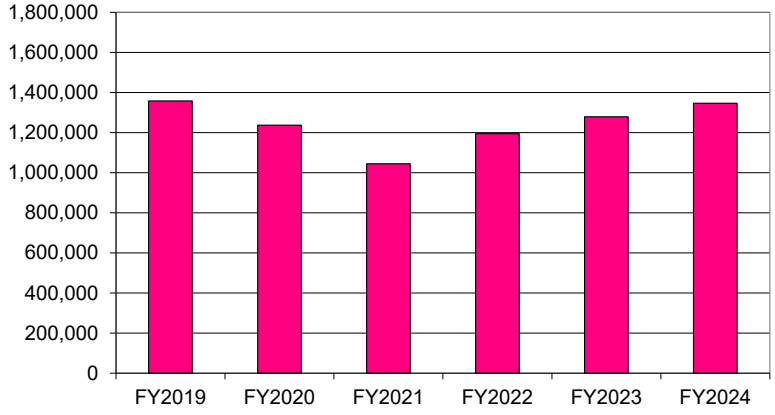


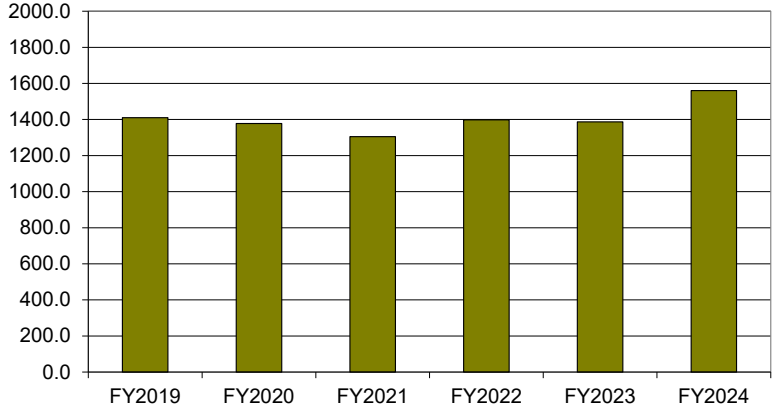
Exhibit 4.4: Vehicle Service Hours per FTE – Bus Service



Vehicle Service Hours



Full-time Equivalents



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.

- There were modest changes in most component cost categories between FY2019 and FY2024. Overall, operating costs increased by 3.9 percent annually.
- Labor costs increased overall, an average of four percent per year. Fringe benefits costs increased modestly, with an average annual increase of 1.8 percent over the six-year period. Labor and fringe benefit costs represented the largest portion of the total costs, comprising between 78 and 82 percent of total operating costs in all six years.
- Services increased and annual average of 11.7 percent while materials/supplies costs increased an average six percent. These categories contributed about 15-18 percent of total costs.
- Representing less than two percent of total costs, casualty/liability and miscellaneous expense costs increased an annual average of 3.7 and 4.6 percent, respectively, over the period.

* * * * *

The following is a brief summary of the component operating costs trend highlights between FY2019 and FY2024:

- Labor and benefit costs represented the largest portion of the total costs, representing about 80 percent in all six years. Labor costs increased an average

of four percent annually, while fringe benefit costs remained almost unchanged with a 1.8 percent annual increase.

- There were modest changes in most component cost categories, with average annual increases of five percent or less in four of the six cost categories examined, and moderate increases in materials/supplies and services costs.

- Services and materials/supplies contributed about 15 to 18 percent of total costs, while the remaining categories contributed less than two percent of total costs over the six year period.

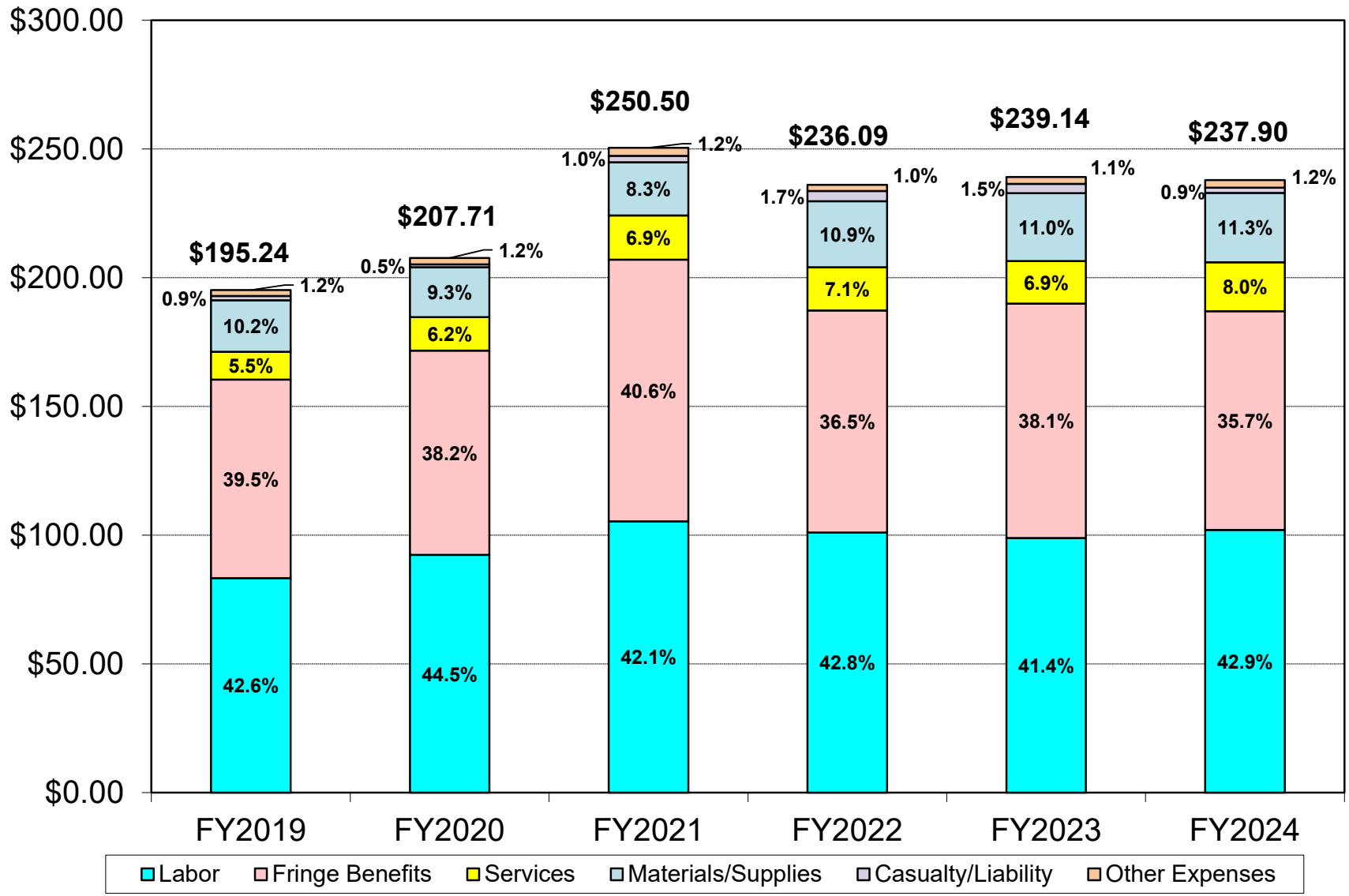
Exhibit 4.5: Component Cost Trends – Bus Service

	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	*Av. Ann. Chg.*
COST CATEGORIES							
Labor (Salaries/Wages)	$113,086,715	$114,222,472	$110,096,678	$120,642,417	$126,524,211	$137,402,098	- -
Annual Change	- -	*1.0%*	*-3.6%*	*9.6%*	*4.9%*	*8.6%*	*4.0%*
Fringe Benefits *(a)*	$104,822,731	$98,217,101	$106,180,593	$103,030,475	$116,507,062	$114,427,195	- -
Annual Change	- -	*-6.3%*	*8.1%*	*-3.0%*	*13.1%*	*-1.8%*	*1.8%*
Services	$14,659,153	$16,037,433	$17,935,669	$20,046,971	$21,114,325	$25,531,887	
Annual Change	- -	*9.4%*	*11.8%*	*11.8%*	*5.3%*	*20.9%*	*11.7%*
Materials/Supplies *(b)*	$27,134,559	$23,978,440	$21,609,116	$30,636,429	$33,745,703	$36,285,840	- -
Annual Change	- -	*-11.6%*	*-9.9%*	*41.8%*	*10.1%*	*7.5%*	*6.0%*
Casualty/Liability	$2,303,662	$1,378,208	$2,587,262	$4,741,286	$4,686,213	$2,757,477	- -
Annual Change	- -	*-40.2%*	*87.7%*	*83.3%*	*-1.2%*	*-41.2%*	*3.7%*
Other Expenses (c)	$3,144,693	$3,108,098	$3,261,210	$2,911,087	$3,397,645	$3,920,563	- -
Annual Change	- -	*-1.2%*	*4.9%*	*-10.7%*	*16.7%*	*15.4%*	*4.5%*
Total	$265,151,513	$256,941,752	$261,670,528	$282,008,665	$305,975,159	$320,325,060	- -
Annual Change	- -	*-3.1%*	*1.8%*	*7.8%*	*8.5%*	*4.7%*	*3.9%*
OPERATING STATISTICS							
Vehicle Service Hours	1,358,083	1,237,046	1,044,611	1,194,509	1,279,460	1,346,452	- -
Annual Change	- -	*-8.9%*	*-15.6%*	*14.3%*	*7.1%*	*5.2%*	*-0.2%*

(a) Includes paid absences
(b) Includes tires/tubes, fuels/lubricants, and other materials/supplies
(c) Includes utilities, taxes, and miscellaneous expenses

Exhibit 4.6: Distribution of Component Costs – Bus Service

Operating Cost per Vehicle Service Hour



Light Rail Performance Trends

This section provides an overview of the performance of VTA's light rail service over the six year analysis period. The trends in the five TDA indicators and input data are presented in Exhibit 5. The six-year trends are illustrated in Exhibits 5.1 through 5.4.

- Operating Cost per Car Service Hour (Exhibit 5.1)
  - VTA's light rail cost per hour increased overall from $573.35 in FY2019 to $732.18 in FY2024, or an average of five percent per year over the six years.
  - Operating costs decreased over the first three years of the period but increased in the last three years, resulting in an average annual cost increase of 1.3 percent annually, while car service hours fluctuated over the six-year period, decreasing and average of 3.5 percent per year. The light rail service was also impacted in early FY2022 by a criminal incident at VTA's Guadalupe light rail facility which closed the light rail system from late May 2021 to mid-September 2021. The loss of service caused a spike in cost per hour in FY2022, seen in the chart below.
  - Presented in constant FY2019 dollars, there was an average annual increase of 1.3 percent over the six years.
- Passengers per Car Service Hour (Exhibit 5.2)
  - Overall performance decreased from 37.8 passengers in FY2019 to 25.4 in FY2024.
  - This trend resulted in an average annual decrease of 7.7 percent over the six years, as annual passenger levels decreased an average of eleven percent per year while service hours decreased 3.5 percent on average per year.
  - As with bus service, the decline in passenger productivity was impacted by the large decrease in ridership during the COVID pandemic years of the review period.
- Passengers per Car Service Mile (Exhibit 5.2)

- Performance in passengers per car service mile was similar, as passengers per mile decreased overall from 2.38 to 1.80 between FY2019 and FY2024. As with passengers per hour, passengers per mile decreased in the first three years of the review period before improving between FY2022 and FY2024.

- Passengers per service mile decreased an annual average of 5.4 percent, as service miles decreased an average of 5.8 percent annually, while unlinked passengers decreased at an eleven percent annual rate, especially during the pandemic years of the review period (FY2020 and FY2021).

- Operating Cost per Passenger (Exhibit 5.3)

  - Cost effectiveness declined by 13.8 percent per year on average through the review period, from $15.16 per passenger in FY2019 to $28.88 in FY2024.

  - The double digit decreases in unlinked passengers over the period exceeded the moderate average annual operating cost increases over the six-year review period, but especially over the pandemic years.

  - With the impact of inflation removed from the cost side (normalization), the result was an average annual increase in the cost per passenger of 9.7 percent over the six years.

- Car Service Hours per FTE (Exhibit 5.4)

  - Employee productivity decreased from 469 hours per FTE in FY2019 to 309 hours in FY2024, with the lowest level of the period occurring in FY2022 (257).

  - Overall, hours per FTE decreased an average of eight percent per year, due to an average annual 3.5 percent decrease in car service hours during the six-year period, while FTEs increased at a 4.9 percent annual average.

* * * * *

The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2019 through FY2024:

- Cost efficiency declined, with an average annual increase in the operating cost per hour of five percent (1.3 percent in constant 2019 dollars). Annual operating costs rose by an average of 1.3 percent annually, with an average annual decrease of 7.7 percent in service delivery.

- Passenger productivity worsened, with passengers per hour decreasing 7.7 percent per year on average and passengers per mile decreasing 5.4 percent annually on average.

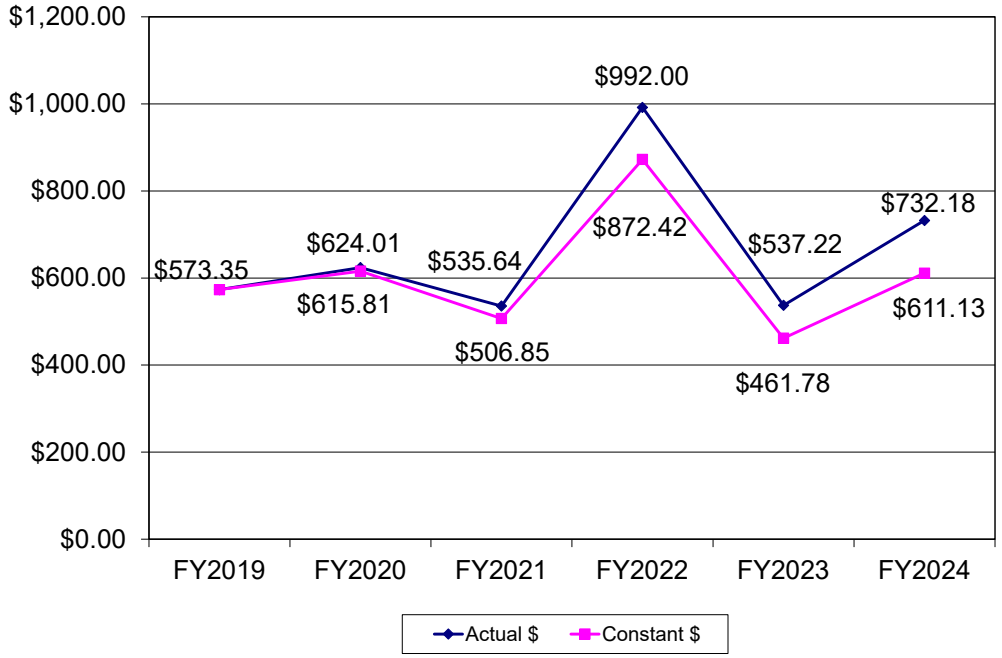
- The operating cost per passenger averaged an annual increase of 13.8 percent, which amounted to a 9.7 percent increase when normalized in FY2019 dollars.

- Employee productivity decreased overall during the period, due to the combination of average annual increases in FTEs and average annual decreases in service hours over the review period.

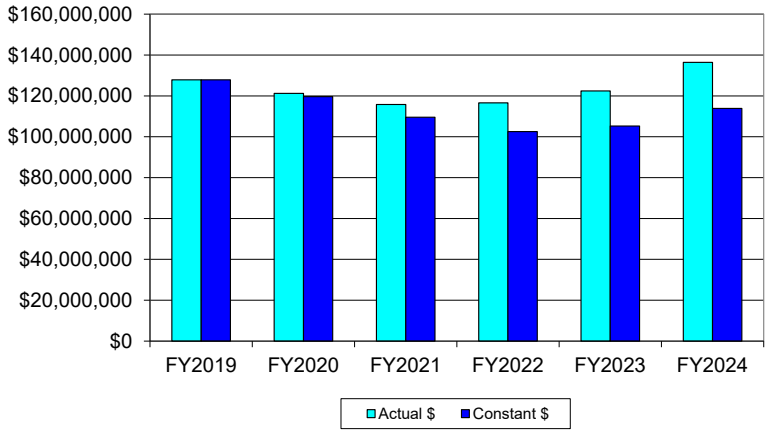
Exhibit 5: TDA Indicator Performance – Light Rail

TDA Performance Indicator	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	*Avg. Annual Change*
Op. Cost per Vehicle Svc. Hour (Actual $)	$195.24	$207.71	$250.50	$236.09	$239.14	$237.90	- -
Annual Change	- -	*6.4%*	*20.6%*	*-5.8%*	*1.3%*	*-0.5%*	*4.0%*
Op. Cost per Vehicle Svc. Hour (Constant $)	$195.24	$204.98	$237.03	$207.63	$205.56	$198.57	- -
Annual Change	- -	*5.0%*	*15.6%*	*-12.4%*	*-1.0%*	*-3.4%*	*0.3%*
Passengers per Vehicle Service Hour	19.9	17.5	9.3	12.7	15.1	16.7	- -
Annual Change	- -	*-11.8%*	*-47.1%*	*36.5%*	*19.0%*	*10.6%*	*-3.5%*
Passengers per Vehicle Service Mile	1.71	1.52	0.80	1.08	1.29	1.45	- -
Annual Change	- -	*-11.2%*	*-47.4%*	*34.2%*	*19.8%*	*12.3%*	*-3.3%*
Op. Cost per Passenger (Actual $)	$9.81	$11.84	$27.01	$18.65	$15.88	$14.28	- -
Annual Change	- -	*20.7%*	*128.2%*	*-31.0%*	*-14.8%*	*-10.1%*	*7.8%*
Op. Cost per Passenger (Constant $)	$9.81	$11.68	$25.56	$16.40	$13.65	$11.92	- -
Annual Change	- -	*19.1%*	*118.8%*	*-35.8%*	*-16.8%*	*-12.7%*	*4.0%*
Vehicle Service Hours per FTE	963.0	897.7	800.5	854.5	922.7	863.0	- -
Annual Change	- -	*-6.8%*	*-10.8%*	*6.8%*	*8.0%*	*-6.5%*	*-2.2%*

Exhibit 5.1: Operating Cost per Vehicle Service Hour – Light Rail



Operating Cost



Car Service Hours

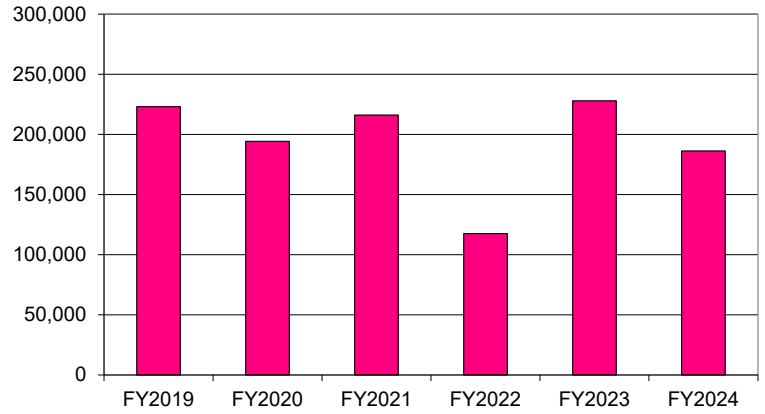
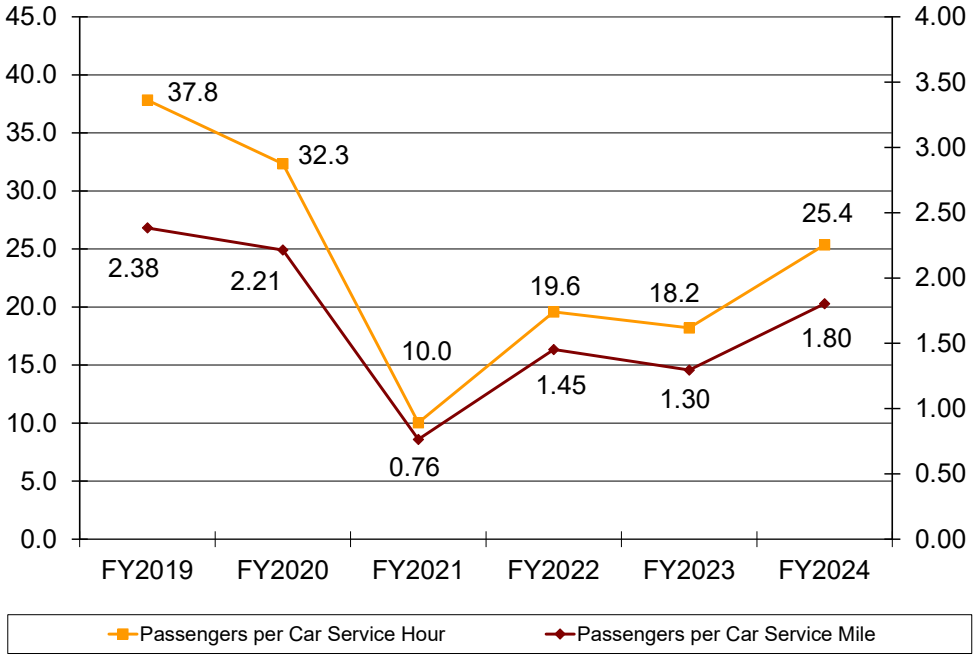
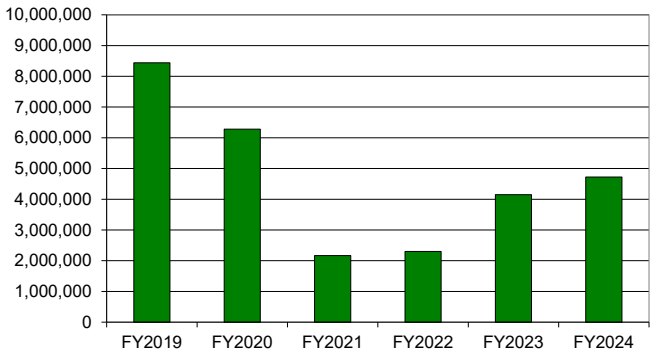


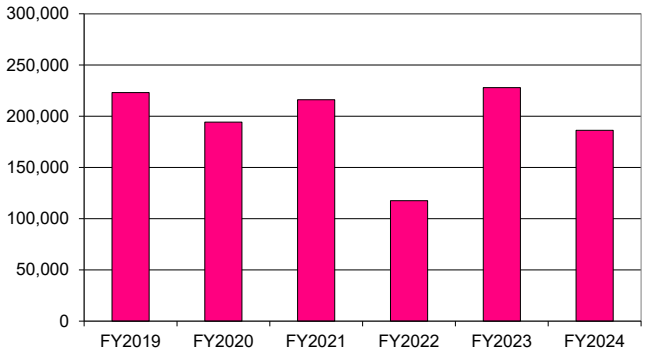
Exhibit 5.2: Passengers per Hour and per Mile – Light Rail



Unlinked Passengers



Car Service Hours



Car Service Miles

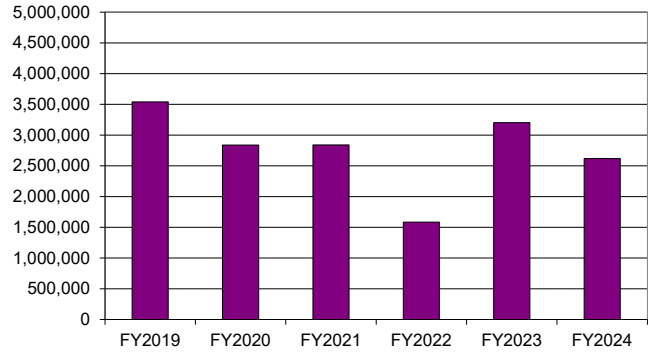
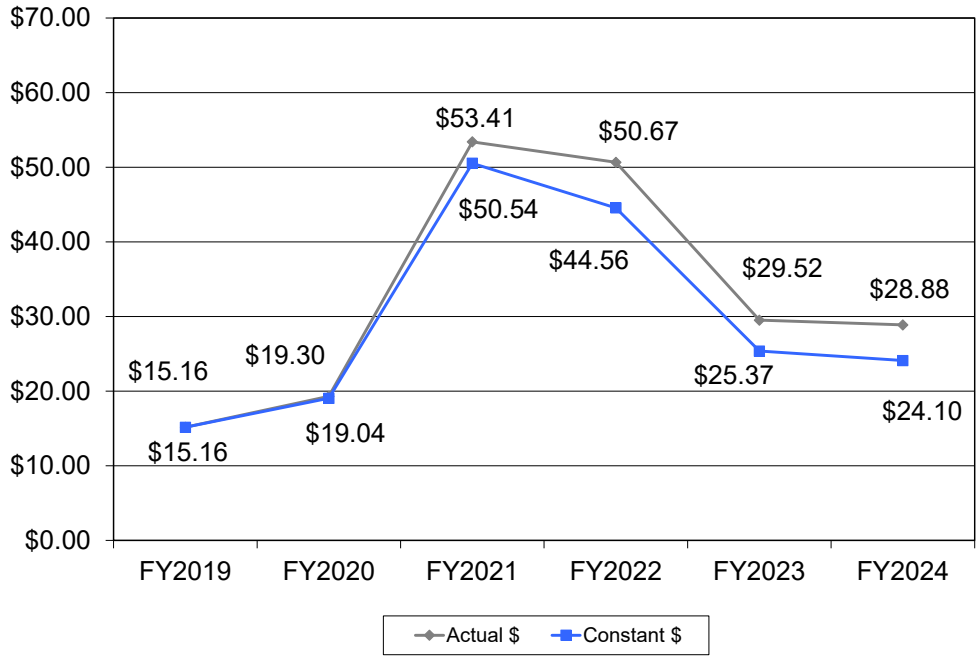
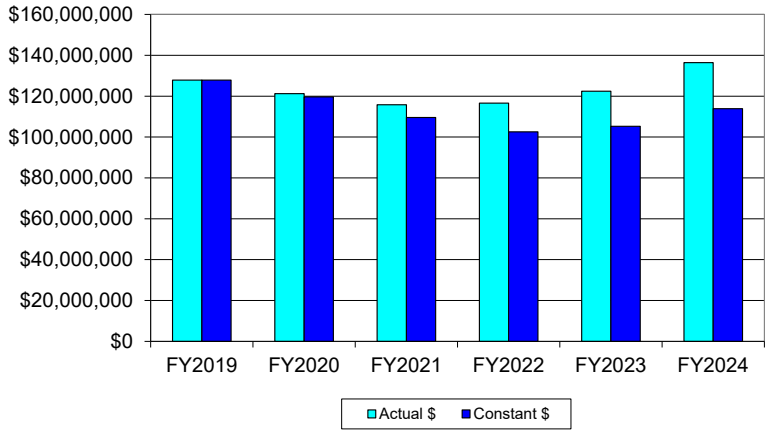


Exhibit 5.3: Operating Cost per Passenger – Light Rail



Operating Cost



Unlinked Passengers

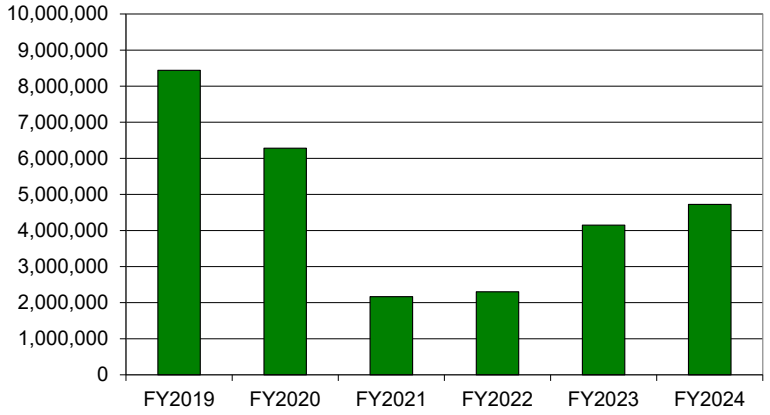
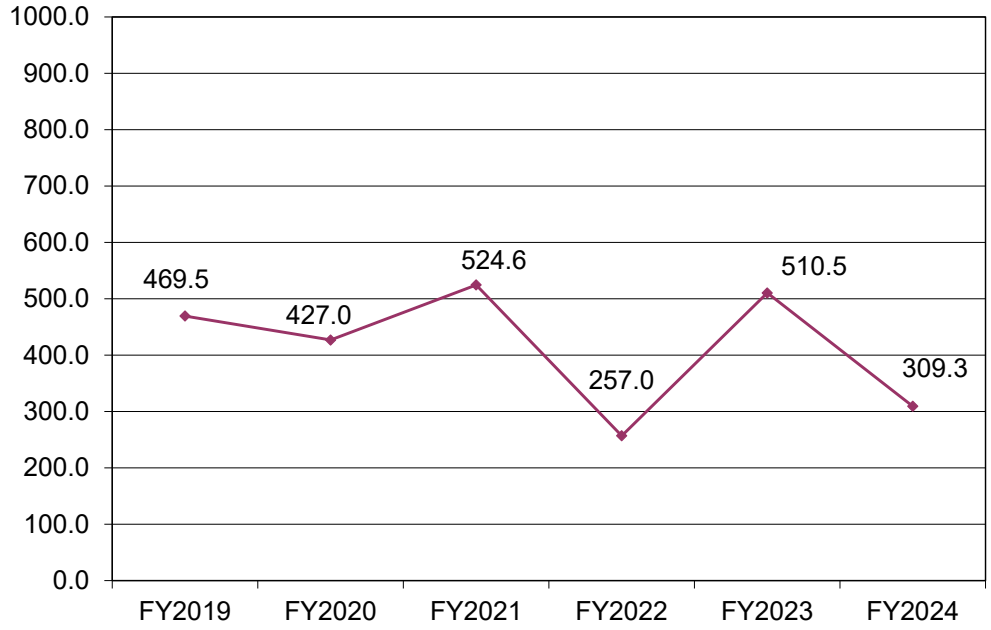
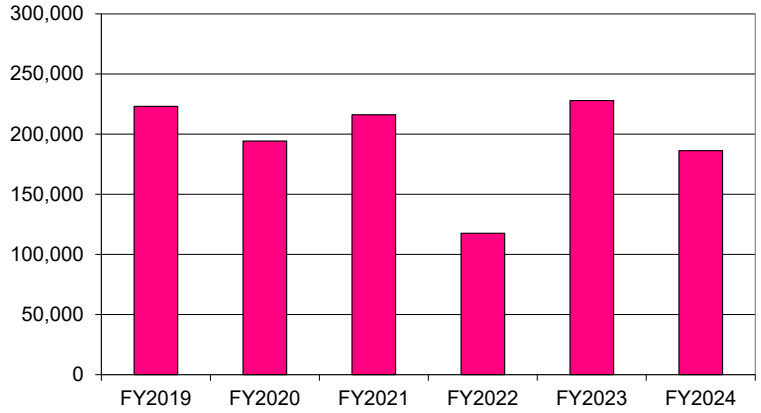


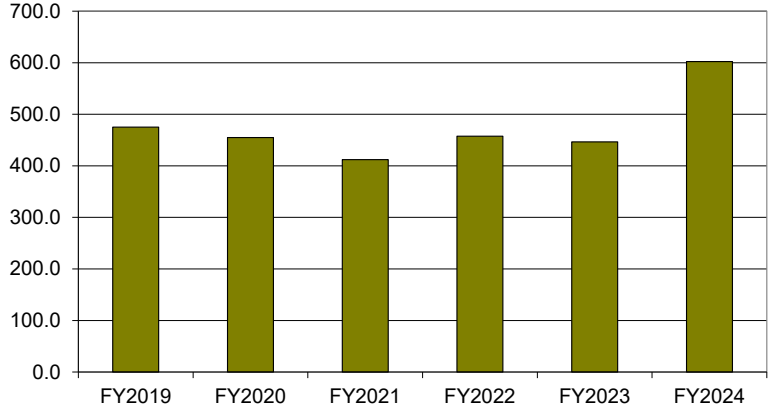
Exhibit 5.4: Car Service Hours per FTE – Light Rail



Car Service Hours



Full-time Equivalents



Light Rail Component Costs

The year-to-year changes in selected operating cost categories are presented in Exhibit 5.5, along with the concurrent changes in car service hours. The portions of the cost per car service hour that can be attributed to each included cost component are shown in Exhibit 5.6.

- There were annual increases in six of the seven cost categories examined across the board between FY2019 and FY2024, resulting in an overall average increase in operating costs of 1.3 percent per year.
- Operating costs actually decreased during the beginning of the review period (FY2019 – FY2021), likely due to the pandemic, with annual increases occurring in the latter half of the review period as operations tried to return to pre-pandemic levels.
- Labor and fringe costs rose an annual average of 2.5 percent and 0.1 percent, respectively. Labor and fringe benefits costs combined contributed between about 68 to 72 percent of total hourly costs in all six years.
- Service costs increased an average of 3.8 percent per year and comprised between 15 to 17 percent of the total hourly cost per hour each year.
- The costs of materials/supplies decreased during the six-year period, by an annual average of 7.1 percent. The share of materials/supplies costs decreased over the review period, from about 12 percent in FY2019 to seven percent of total operating cost by FY2024.
- Costs for casualty/liability and other expense categories rose an annual average of 2.2 percent and 6.7 percent, respectively, while costs increased an average 12.4 percent per year. The casualty/liability, and other cost component categories contributed about seven percent of total operating costs consistently over the six-year period.

* * * * *

The following is a brief summary of the component operating costs trend highlights between FY2019 and FY2024:

- There was a small average annual increase in total costs over the audit period, with an average annual increase of 1.3 percent.
- Costs increased in six of the seven cost categories, with the average annual cost increases generally less than five percent in each category. VTA experienced cost decreases in the first three years of the review period, with moderate cost increases occurring in the current audit period (FY2019 through FY2024).
- The labor and fringe benefits costs contributed between 68 and 72 percent of total hourly costs.
- The share of total operating cost for services remained between 15 to 17 percent during the period, while the share of materials/supplies costs to total costs decreased from about 12 percent to seven percent. The remaining cost component categories contributed about eight percent of the total costs.

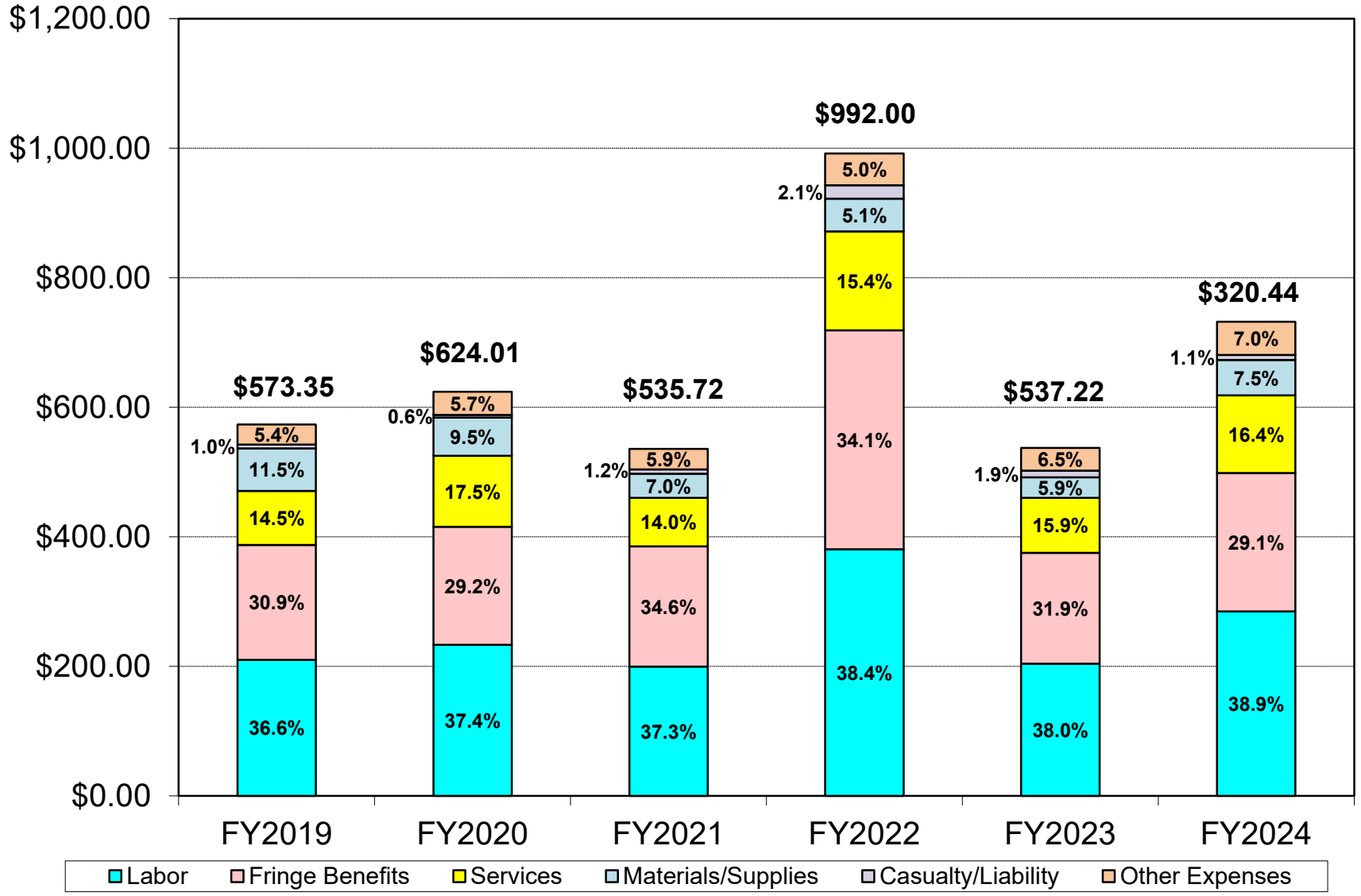
Exhibit 5.5: Component Costs Trends – Light Rail

	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	*Av. Ann. Chg.*
COST CATEGORIES							
Labor (Salaries/Wages)	$46,868,440	$45,289,884	$43,152,036	$44,755,554	$46,489,120	$53,088,937	- -
Annual Change	- -	*-3.4%*	*-4.7%*	*3.7%*	*3.9%*	*14.2%*	*2.5%*
Fringe Benefits *(a)*	$39,567,054	$35,452,122	$40,096,244	$39,753,075	$38,997,924	$39,752,343	- -
Annual Change	- -	*-10.4%*	*13.1%*	*-0.9%*	*-1.9%*	*1.9%*	*0.1%*
Services	$18,556,987	$21,260,297	$16,233,209	$17,981,182	$19,405,301	$22,365,293	
Annual Change	- -	*14.6%*	*-23.6%*	*10.8%*	*7.9%*	*15.3%*	*3.8%*
Materials/Supplies *(b)*	$14,683,919	$11,494,464	$8,065,116	$5,917,572	$7,181,748	$10,171,741	- -
Annual Change	- -	*-21.7%*	*-29.8%*	*-26.6%*	*21.4%*	*41.6%*	*-7.1%*
Casualty/Liability	$1,286,948	$768,130	$1,387,930	$2,420,682	$2,385,997	$1,440,318	- -
Annual Change	- -	*-40.3%*	*80.7%*	*74.4%*	*-1.4%*	*-39.6%*	*2.3%*
Other Expenses (c)	$6,923,610	$6,950,072	$6,875,636	$5,791,770	$7,968,109	$9,572,184	- -
Annual Change	- -	*0.4%*	*-1.1%*	*-15.8%*	*37.6%*	*20.1%*	*6.7%*
Total	$127,886,958	$121,214,969	$115,810,171	$116,619,835	$122,428,199	$136,390,816	- -
Annual Change	- -	*-5.2%*	*-4.5%*	*0.7%*	*5.0%*	*11.4%*	*1.3%*
OPERATING STATISTICS							
Vehicle Service Hours	223,054	194,253	216,177	117,560	227,892	186,281	- -
Annual Change	- -	*-12.9%*	*11.3%*	*-45.6%*	*93.9%*	*-18.3%*	*-3.5%*

(a) Includes paid absences
(b) Includes tires/tubes, fuels/lubricants, and other materials/supplies
(c) Includes utilities, taxes, and miscellaneous expenses

Exhibit 5.6: Distribution of Component Costs – Light Rail

Operating Cost per Vehicle Service Hour



Rail Shuttle Performance Trends

This section provides an overview of the performance of VTA's paratransit service over the six-year analysis period. The trends in the TDA indicators and input data are presented in Exhibit 6. The six-year trends are illustrated in Exhibits 6.1 through 6.3.

- Operating Cost per Vehicle Service Hour (Exhibit 6.1)
  - VTA's shuttle bus cost per hour increased from $102.31 in FY2019 to $133.43 in FY2024.
  - The largest annual increase (31.5 percent) occurred in FY2021, when service hours decreased almost 25 percent, while operating costs decreased less than one percent. The decrease in service levels was caused by the COVID pandemic that year.
  - Overall, the cost per hour increased an average of 5.5 percent per year over the six years.
  - In constant FY2019 dollars, there was an average annual increase of 1.7 percent over the same period.
- Passengers per Vehicle Service Hour (Exhibit 6.2)
  - Passengers per vehicle service hour decreased over the review period, from 25.1 passengers per hour in FY2019 to 11.2 passengers per hour in FY2024.
  - This trend was driven by decreasing ridership over the period, especially during the pandemic years of FY2020 and FY2021. Ridership is recovering during the current audit period (FY2022 to FY2024), with the number of unlinked passengers increased an average of almost 80 percent per year, while service hours decreased an average of 2.6 percent per year.
  - Overall, there was an average annual decrease of 14.8 percent in passenger productivity over the six-year period.
- Passengers per Vehicle Service Mile (Exhibit 6.2)
  - Performance in passengers per vehicle service mile mirrored that of passengers per hour as passengers per mile decreased from 2.37 in FY2019

to 1.11 passengers per mile in FY2024. While ridership overall was down, vehicle service miles increased at 1.6 percent rate during the current three-year audit period.

- Overall, there was an average annual decrease in this indicator of 14.2 percent.

- Operating Cost per Passenger (Exhibit 6.3)

  - Cost effectiveness declined by 23.8 percent per year on average throughout the review period, from $4.08 per passenger in FY2019 to $11.88 in FY2024.

  - This was due to passenger levels decreasing by about 16 percent per year over the period, while operating costs increased by 4.8 percent per year on average.

  - With the impact of inflation removed from the cost side (normalization), the result is an average annual increase in cost per passenger of 19.4 percent over the six years.

* * * * *

The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2019 through FY2024:

- VTA's rail shuttle service was particularly hard hit by the COVID pandemic but is showing signs of recovery. During the current audit period (FY2022-FY2024), unlinked passengers increased an average of almost 80 percent annually, with an average decrease in service hours of 2.6 percent and an average annual increase in service miles of 1.6 percent in that same period.

- Cost efficiency declined overall, with an average annual increase in the operating cost per hour of 5.5 percent (1.7 percent in inflation adjusted dollars). Higher operating costs combined with slightly lower service levels influenced this indicator.

- Passenger productivity was also lower, with passengers per hour decreasing 14.8 percent and passengers per mile decreasing 14.2 percent per year on average.

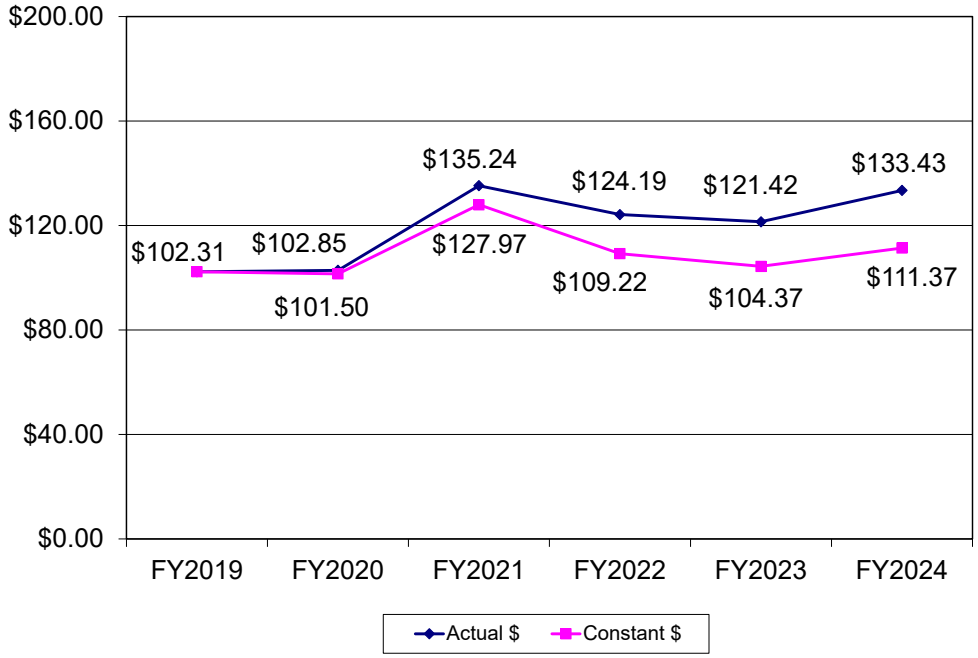
- The operating cost per passenger averaged an annual increase of 23.8 percent, or 19.4 percent in normalized FY2019 dollars. Passenger levels decreased an average of 15.4 percent per year over the six-year period, while operating costs increased by 4.8 percent per year.

Exhibit 6: TDA Indicator Performance – Rail Shuttle

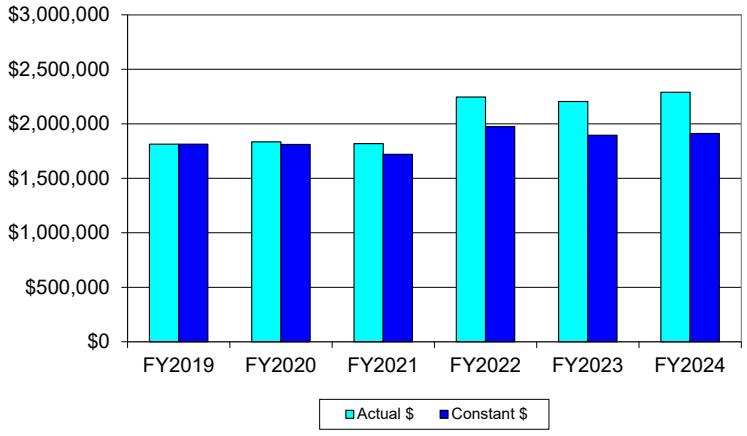
Performance Indicators	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	*Av. Ann. Chg.*
Op. Cost per Vehicle Svc. Hour (Actual $)	$102.31	$102.85	$135.24	$124.19	$121.42	$133.43	- -
Annual Change	- -	*0.5%*	*31.5%*	*-8.2%*	*-2.2%*	*9.9%*	*5.5%*
Op. Cost per Vehicle Svc. Hour (Constant $)	$102.31	$101.50	$127.97	$109.22	$104.37	$111.37	- -
Annual Change	- -	*-0.8%*	*26.1%*	*-14.7%*	*-4.4%*	*6.7%*	*1.7%*
Passengers per Vehicle Service Hour	25.1	17.2	2.0	3.3	6.3	11.2	- -
Annual Change	- -	*-31.4%*	*-88.3%*	*64.6%*	*90.8%*	*77.8%*	*-14.8%*
Passengers per Vehicle Service Mile	2.38	1.62	0.21	0.36	0.66	1.11	- -
Annual Change	- -	*-31.7%*	*-87.2%*	*71.2%*	*85.2%*	*68.4%*	*-14.2%*
Op. Cost per Passenger (Actual $)	$4.08	$5.97	$67.20	$37.49	$19.21	$11.88	- -
Annual Change	- -	*46.5%*	*1024.7%*	*-44.2%*	*-48.7%*	*-38.2%*	*23.8%*
Op. Cost per Passenger (Constant $)	$4.08	$5.90	$63.59	$32.97	$16.52	$9.91	- -
Annual Change	- -	*44.5%*	*978.4%*	*-48.2%*	*-49.9%*	*-40.0%*	*19.4%*
Vehicle Service Hours per FTE	(a)	(a)	(a)	(a)	(a)	(a)	- -
Annual Change	- -	- -	- -	- -	- -	- -	- -

(a) Not applicable as LAVTA service is provided by a private contractor (as needed)

Exhibit 6.1: Operating Cost per Vehicle Service Hour – Rail Shuttle



Operating Cost



Vehicle Service Hours

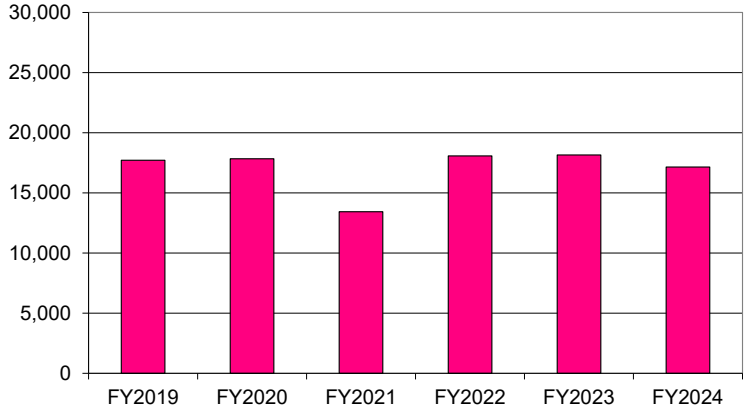
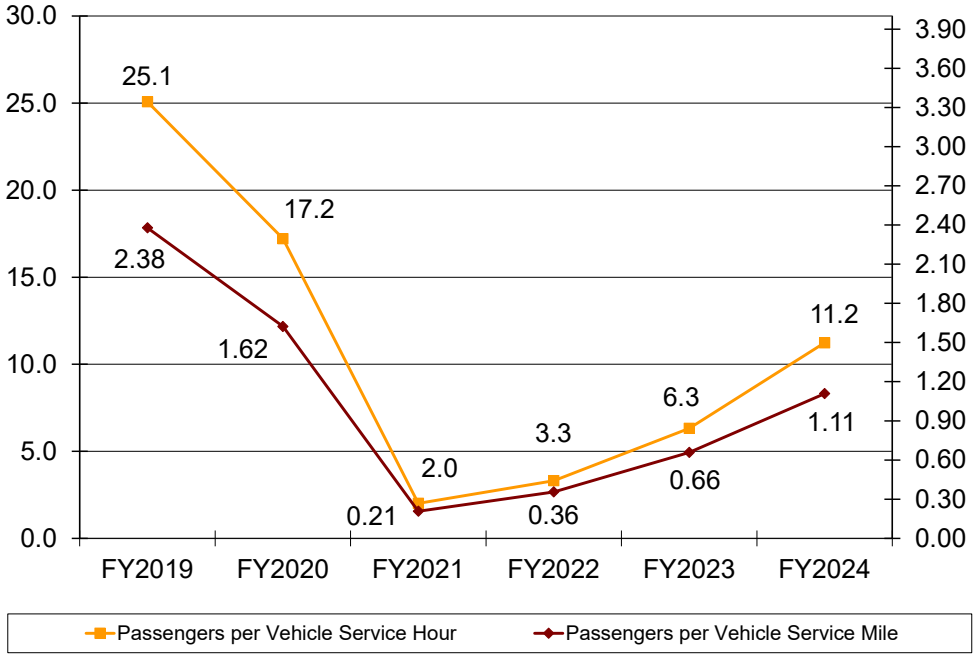
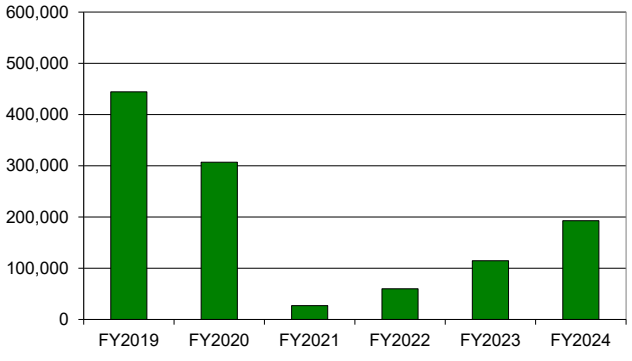


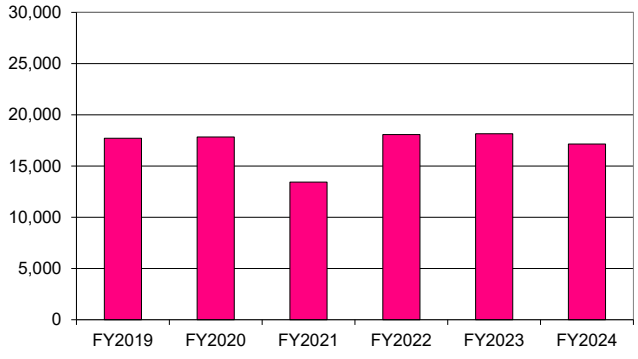
Exhibit 6.2: Passengers per Hour and per Mile – Rail Shuttle



Unlinked Passengers



Vehicle Service Hours



Vehicle Service Miles

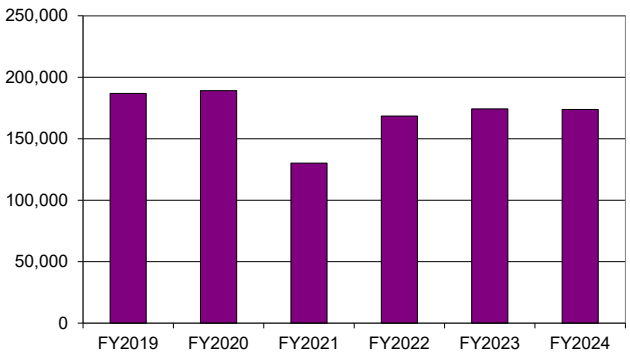
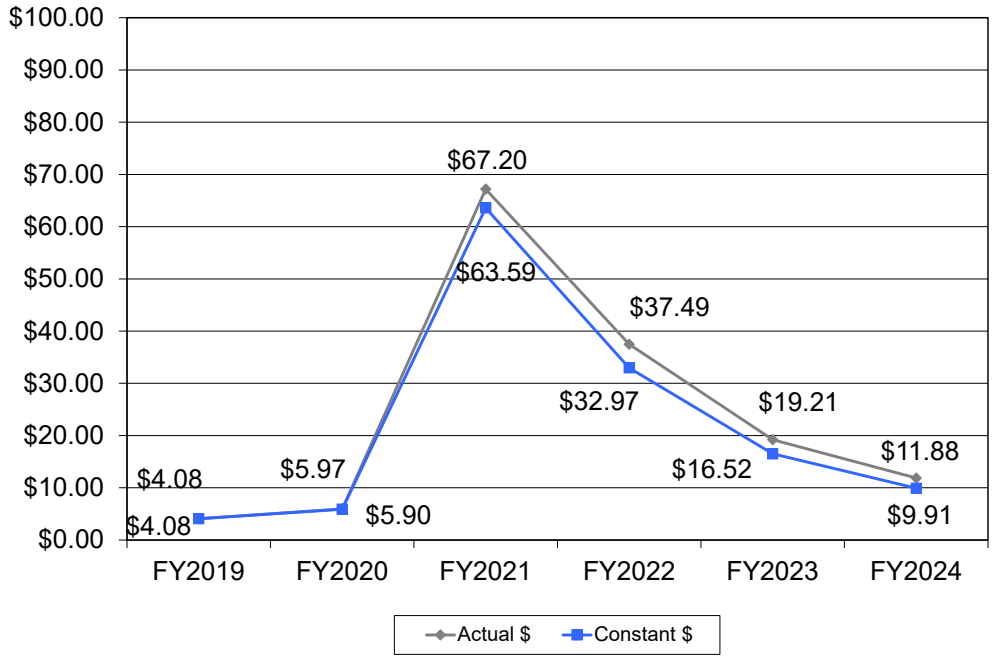
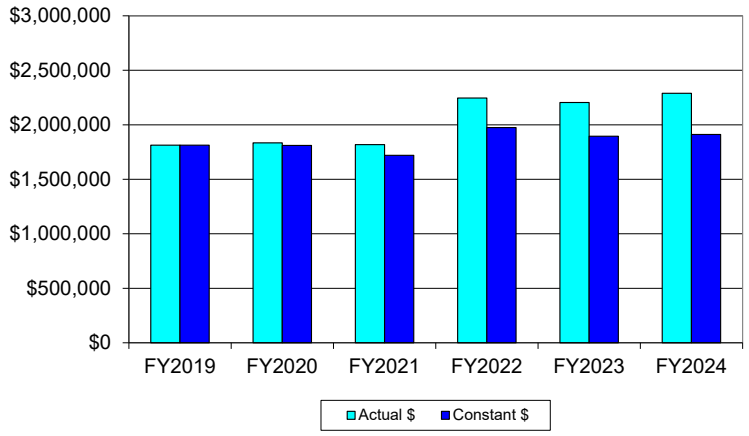


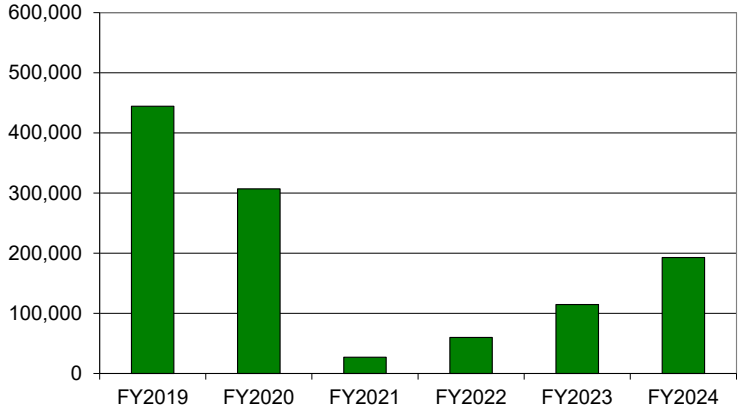
Exhibit 6.3: Operating Cost per Passenger – Rail Shuttle



Operating Cost



Unlinked Passengers



Rail Shuttle Component Costs

The year-to-year changes in selected operating cost categories are presented in Exhibit 6.4, along with the concurrent changes in car service hours. The portions of the cost per car service hour that can be attributed to each included cost component are shown in Exhibit 6.5.

- Total annual costs increased modestly, increasing by 4.8 percent on average between FY2019 and FY2024. The increase in total costs was driven by a similar average annual increase of 5.3 percent in purchased transportation costs, which is the largest component cost category.
- Purchased transportation costs were the source of about 90 percent of all costs throughout the six-year period.
- Labor and fringe benefit costs comprise about six percent of total costs and decreased an annual average of 1.4 percent and 3.1 percent, respectively, during the audit period.
- Modest average annual increases were also seen in the services, other expenses, materials/supplies, and casualty/liability categories over the six-year period. All these remaining cost categories comprise less than five percent of the total hourly costs.

* * * * *

The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2019 through FY2024:

- Purchased transportation costs, the largest component cost category at about 90 percent of total costs, increased by 5.3 percent per year on average, similar to the overall 4.8 percent annual increase in operating costs.
- Costs in the labor and fringe benefit categories decreased an average of 1.4 and 3.1 percent per year, respectively. All the remaining cost categories, services, materials/supplies. casualty/liability, and other expenses experienced modest

annual average increases. These remaining cost categories combined comprise about five percent of the total hourly costs.

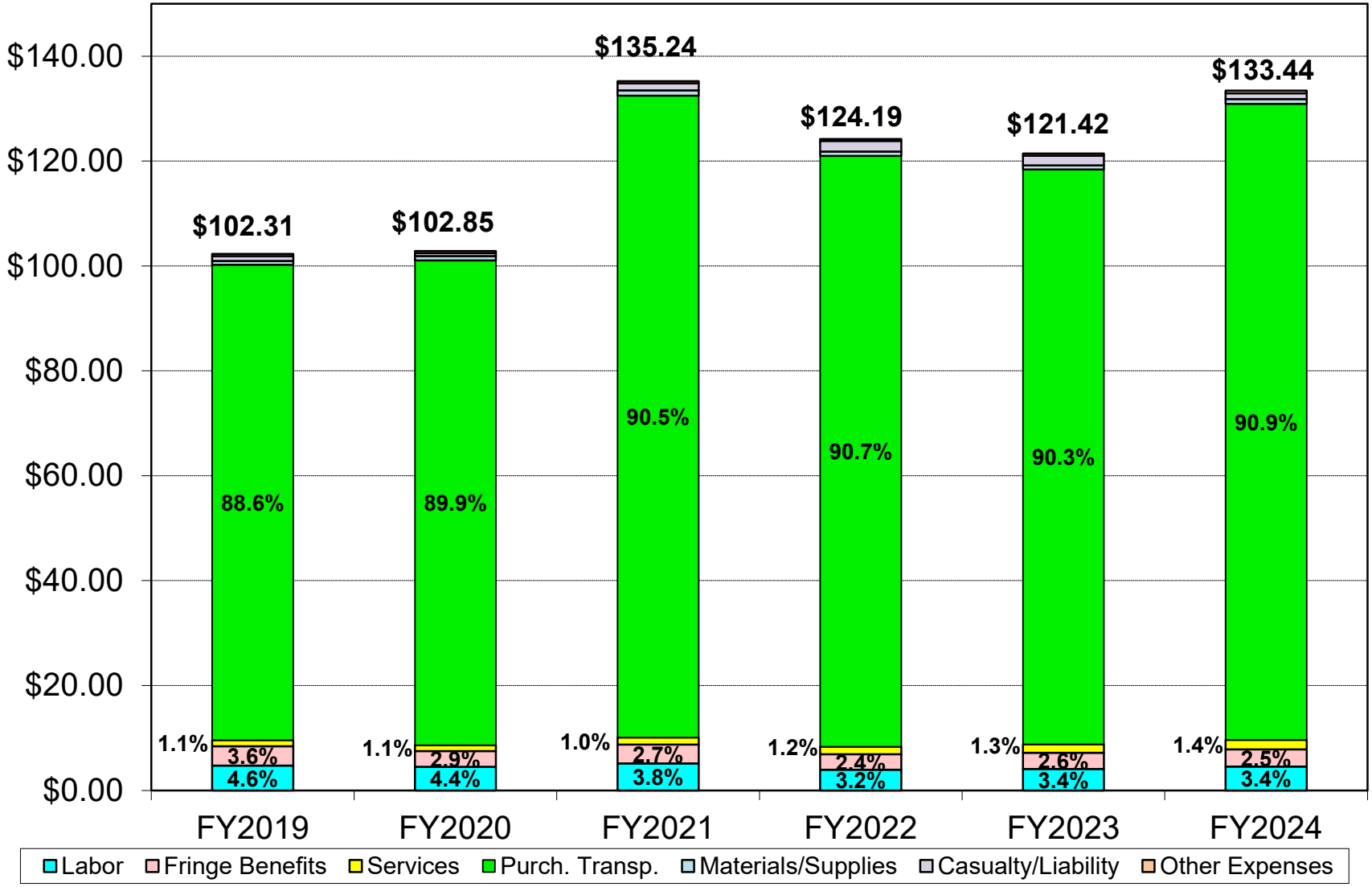
Exhibit 6.4: Component Costs Trends – Rail Shuttle

	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	*Av. Ann. Chg.*
COST CATEGORIES							
Labor (Salaries/Wages)	$83,624	$80,033	$69,183	$71,183	$74,105	$77,871	- -
Annual Change	- -	*-4.3%*	*-13.6%*	*2.9%*	*4.1%*	*5.1%*	*-1.4%*
Fringe Benefits *(a)*	$65,719	$53,622	$48,247	$53,692	$56,247	$56,101	- -
Annual Change	- -	*-18.4%*	*-10.0%*	*11.3%*	*4.8%*	*-0.3%*	*-3.1%*
Services	$20,559	$19,526	$17,982	$26,005	$29,192	$31,147	- -
Annual Change	- -	*-5.0%*	*-7.9%*	*44.6%*	*12.3%*	*6.7%*	*8.7%*
Purchased Transportation	$1,605,627	$1,648,849	$1,645,184	$2,036,646	$1,990,448	$2,080,481	- -
Annual Change	- -	*2.7%*	*-0.2%*	*23.8%*	*-2.3%*	*4.5%*	*5.3%*
Materials/Supplies *(b)*	$13,580	$15,316	$13,538	$14,507	$13,581	$16,285	- -
Annual Change	- -	*12.8%*	*-11.6%*	*7.2%*	*-6.4%*	*19.9%*	*3.7%*
Casualty/Liability	$15,962	$9,736	$17,982	$36,871	$33,880	$18,582	- -
Annual Change	- -	*-39.0%*	*84.7%*	*105.0%*	*-8.1%*	*-45.2%*	*3.1%*
Other Expenses (c)	$7,788	$7,310	$5,636	$6,397	$7,171	$8,806	- -
Annual Change	- -	*-6.1%*	*-22.9%*	*13.5%*	*12.1%*	*22.8%*	*2.5%*
Total	$1,812,859	$1,834,392	$1,817,752	$2,245,301	$2,204,624	$2,289,273	- -
Annual Change	- -	*1.2%*	*-0.9%*	*23.5%*	*-1.8%*	*3.8%*	*4.8%*
OPERATING STATISTICS							
Vehicle Service Hours	17,720	17,835	13,441	18,080	18,157	17,157	- -
Annual Change	- -	*0.6%*	*-24.6%*	*34.5%*	*0.4%*	*-5.5%*	*-0.6%*

(a) Includes paid absences
(b) Includes tires/tubes, fuels/lubricants, and other materials/supplies
(c) Includes utilities, taxes, and miscellaneous expenses

Exhibit 6.5: Distribution of Component Costs – Rail Shuttle

Operating Cost per Vehicle Service Hour



Paratransit Performance Trends

This section provides an overview of the performance of VTA's paratransit service over the six-year analysis period. The trends in the TDA indicators and input data are presented in Exhibit 7. The six-year trends are illustrated in Exhibits 7.1 through 7.3. As was noted in the Review of TDA Data Collection and Reporting Methods Section of this report, this section includes data from the VTA demand taxi service for FY2019 and FY 2020 only, as the demand response service was discontinued in FY2021.

- Operating Cost per Vehicle Service Hour (Exhibit 7.1)
  - VTA's paratransit cost per hour increased from $69.32 in FY2019 to $114.01 in FY2024.
  - Cost per hour increased in the first three years of the review period, due to significant service hour reductions in FY2020 and FY2021, before some of those hours were regained over the last three years of the period.
  - Overall, the cost per hour increased an average of 10.5 percent per year over the six years, or of 6.5 percent in constant FY2019 dollars.
- Passengers per Vehicle Service Hour (Exhibit 7.2)
  - Passengers per vehicle service hour remained fairly steady, beginning and ending the review period at 1.5 passengers per hour, with some fluctuations in between .
  - Service hours decreased by 7.3 percent on average per year over the period. At the same time, ridership averaged a 7.1 percent decrease over the same period, resulting in the steady performance. This resulted in an average annual increase of 0.1 percent in passengers per hour.
- Passengers per Vehicle Service Mile (Exhibit 7.2)
  - Similar to passengers per hour, performance in passengers per vehicle service mile was mostly unchanged, with passengers per mile remaining at 0.09 in all but one year of the review period.

- The annual decrease in service miles (7.3 percent) over the period was slightly higher than the rate of decrease in unlinked passengers (7.1 percent). The net effect was an average annual increase in this indicator of 0.4 percent.

- Operating Cost per Passenger (Exhibit 7.3)

  - Paratransit cost effectiveness also declined, decreasing 10.3 percent per year on average, from $45.54 per passenger in FY2019 to $62.11 in FY2024.

  - Operating costs increased by 2.5 percent per year over the period, while passenger levels decreased by more than seven percent on average per year.

  - With the impact of inflation removed, the result was an average annual increase in cost per passenger of 6.4 percent over the six years.

* * * * *

The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2019 through FY2024:

- VTA demand response service experienced almost equal average annual decreases in ridership and service levels, resulting in generally steady performance in passenger productivity, and lower performance in the cost efficiency and effectiveness indicators examined.

- Cost efficiency decreased overall, with an average annual increase in the operating cost per hour of 10.5 percent (6.5 percent in inflation adjusted dollars).

- Passenger productivity was almost unchanged, with passengers per hour increasing an average of 0.1 percent annually and passengers per mile increasing 0.4 percent per year on average.

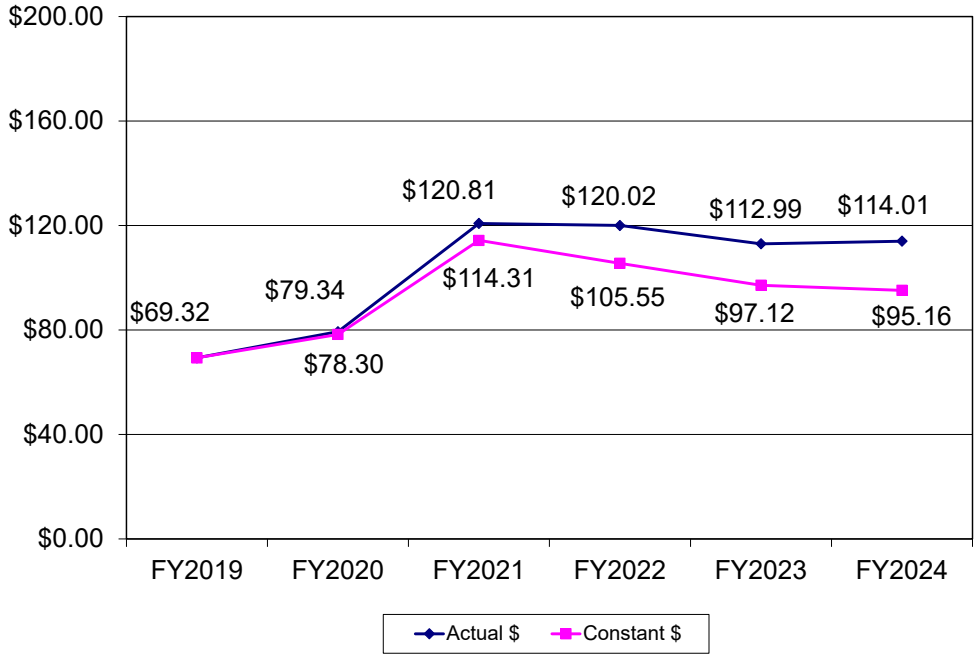
- The operating cost per passenger averaged an annual increase of 10.3 percent, or 6.4 percent when normalized in FY2019 dollars. On average, operating costs increased by 2.5 percent per year over the period, while ridership decreased by 7.1 percent per year.

Exhibit 7: TDA Indicator Performance – Paratransit

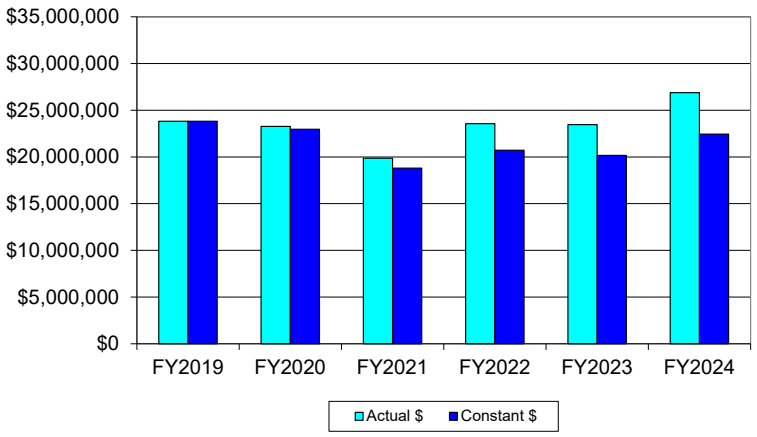
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	*Av. Ann. Chg.*
Op. Cost per Vehicle Svc. Hour (Actual $)	$69.32	$79.34	$120.81	$120.02	$112.99	$114.01	- -
Annual Change	- -	*14.5%*	*52.3%*	*-0.7%*	*-5.9%*	*0.9%*	*10.5%*
Op. Cost per Vehicle Svc. Hour (Constant $)	$69.32	$78.30	$114.31	$105.55	$97.12	$95.16	- -
Annual Change	- -	*13.0%*	*46.0%*	*-7.7%*	*-8.0%*	*-2.0%*	*6.5%*
Passengers per Vehicle Service Hour	1.5	1.4	1.1	1.4	1.6	1.5	- -
Annual Change	- -	*-6.7%*	*-25.8%*	*32.9%*	*11.6%*	*-1.9%*	*0.1%*
Passengers per Vehicle Service Mile	0.09	0.09	0.08	0.09	0.09	0.09	- -
Annual Change	- -	*-0.9%*	*-7.6%*	*7.0%*	*3.6%*	*0.5%*	*0.4%*
Op. Cost per Passenger (Actual $)	$45.54	$55.88	$114.67	$85.70	$72.32	$74.42	- -
Annual Change	- -	*22.7%*	*105.2%*	*-25.3%*	*-15.6%*	*2.9%*	*10.3%*
Op. Cost per Passenger (Constant $)	$45.54	$55.15	$108.51	$75.37	$62.16	$62.11	- -
Annual Change	- -	*21.1%*	*96.8%*	*-30.5%*	*-17.5%*	*-0.1%*	*6.4%*
Vehicle Service Hours per FTE	*(a)*	*(a)*	*(a)*	*(a)*	*(a)*	*(a)*	- -
Annual Change	- -	- -	- -	- -	- -	- -	- -

(a) Not applicable as LAVTA service is provided by a private contractor (as needed)

Exhibit 7.1: Operating Cost per Vehicle Service Hour – Paratransit



Operating Cost



Vehicle Service Hours

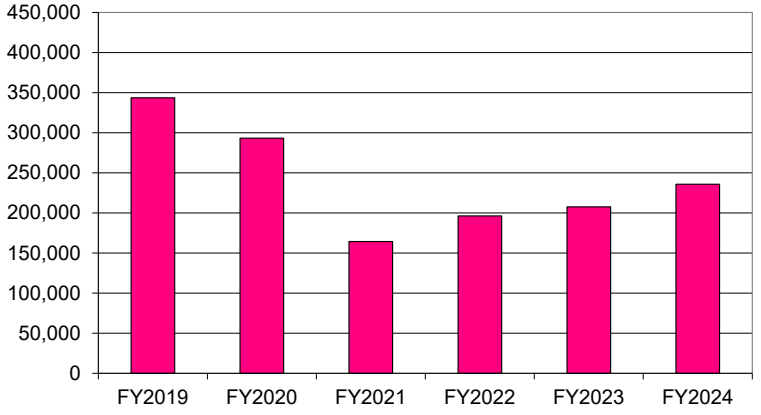
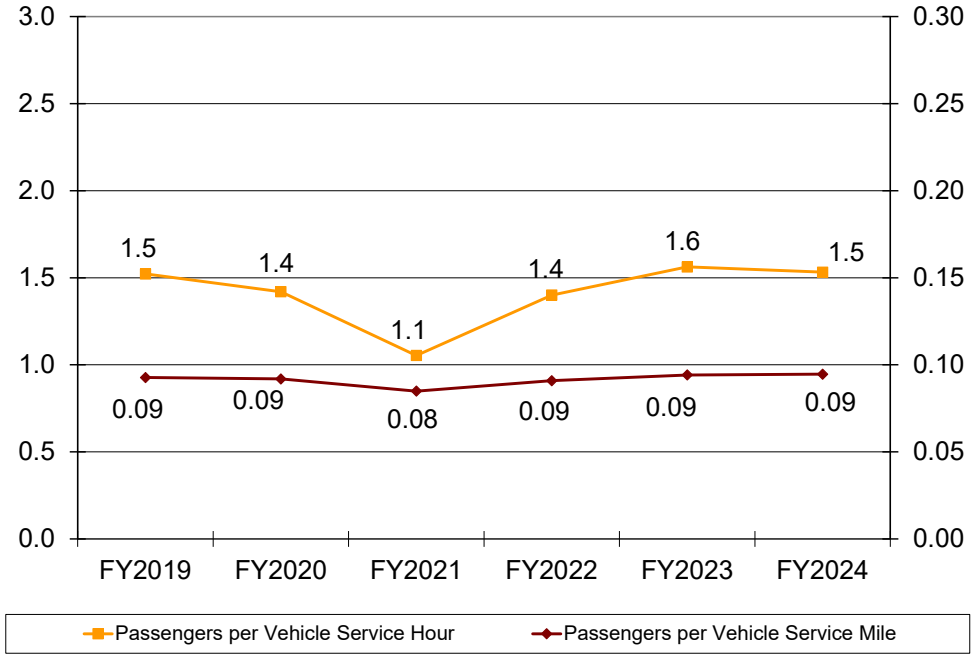
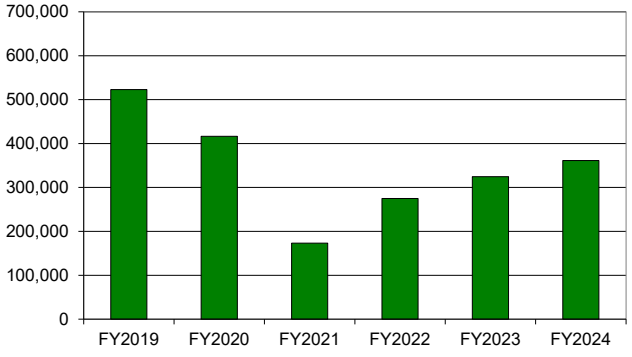


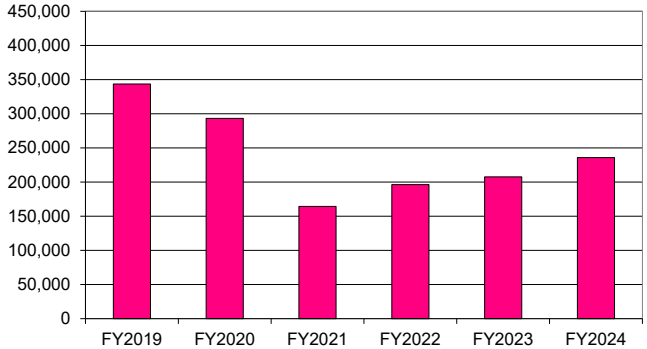
Exhibit 7.2: Passengers per Hour and per Mile – Paratransit



Unlinked Passengers



Vehicle Service Hours



Vehicle Service Miles

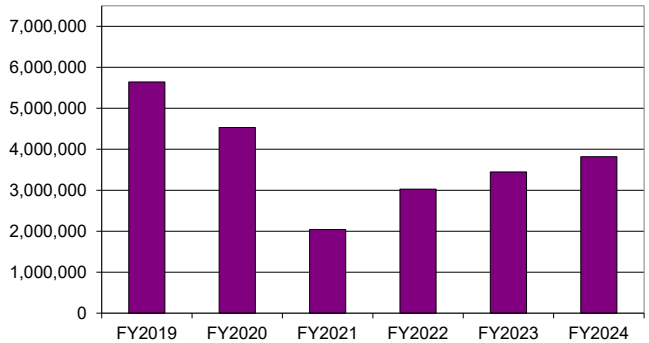
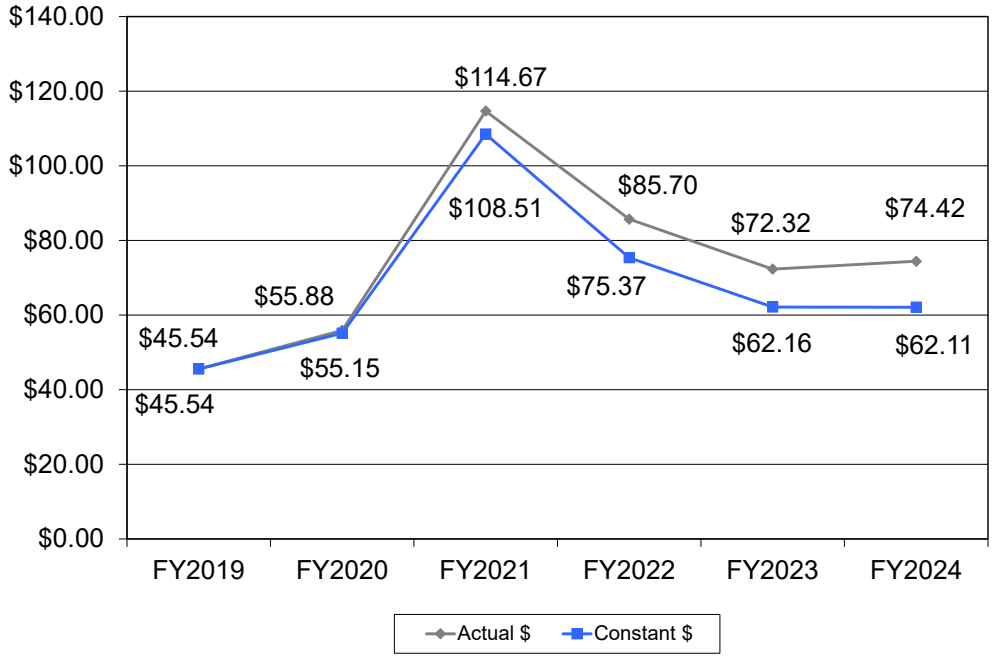
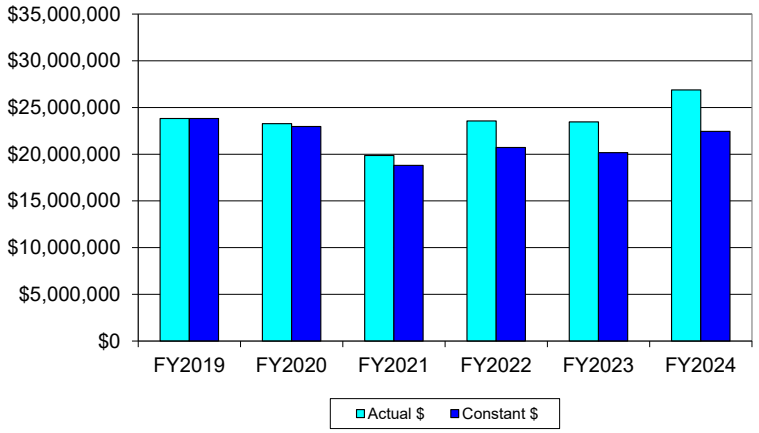


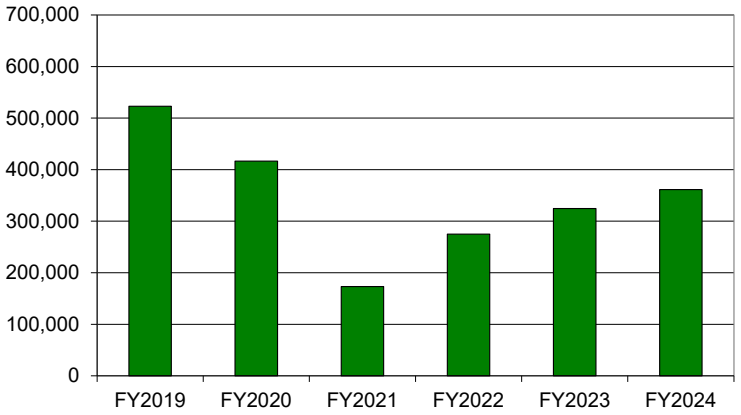
Exhibit 7.3: Operating Cost per Passenger – Paratransit



Operating Cost



Unlinked Passengers



Paratransit Component Costs

The changes in selected operating cost categories over the past six years are presented in Exhibit 7.4, along with the concurrent changes in vehicle service hours and the portion of the cost per vehicle service hour that can be attributed to each included cost component. Exhibit 7.5 illustrates the portion of the cost per vehicle service hour that can be attributed to each included cost component.

- Total annual costs increased by 4.1 percent on average between FY2019 and FY2024. The increase was driven by an equal 4.1 percent annual increase in purchased transportation costs over the six-years.
- Purchased transportation costs accounted for between 93 and 96 percent of total operating costs between FY2019 and FY2024. Purchased transportation cost increased in FY2020, FY2022 and FY2024 but decreased FY2021 and FY2023.
- In-house labor costs increased an average of 3.6 percent annually and fringe benefit costs increased 6.6 percent annually, with those costs comprising about six to seven percent of the total operating costs.
- Costs for services fluctuated throughout the audit period, from zero in some years to as much as $111,283 in FY2019, however, services costs never comprised more than 0.5 percent of the total operating costs.

* * * * *

The following is a brief summary of the component operating costs trend highlights for paratransit between FY2019 and FY2024:

- Purchased transportation costs, by far the largest component cost category, increased by 4.1 percent per year on average.
- Labor and fringe benefit costs increased about four and six percent per year on average, but both categories combined comprised less than seven percent of the total operating costs per year.

- Costs in other categories such as materials/supplies, casualty/liability and miscellaneous cost categories were negligible, while services costs fluctuated throughout the audit period. Total costs in all these categories comprised less than one percent of the total operating costs over the period.

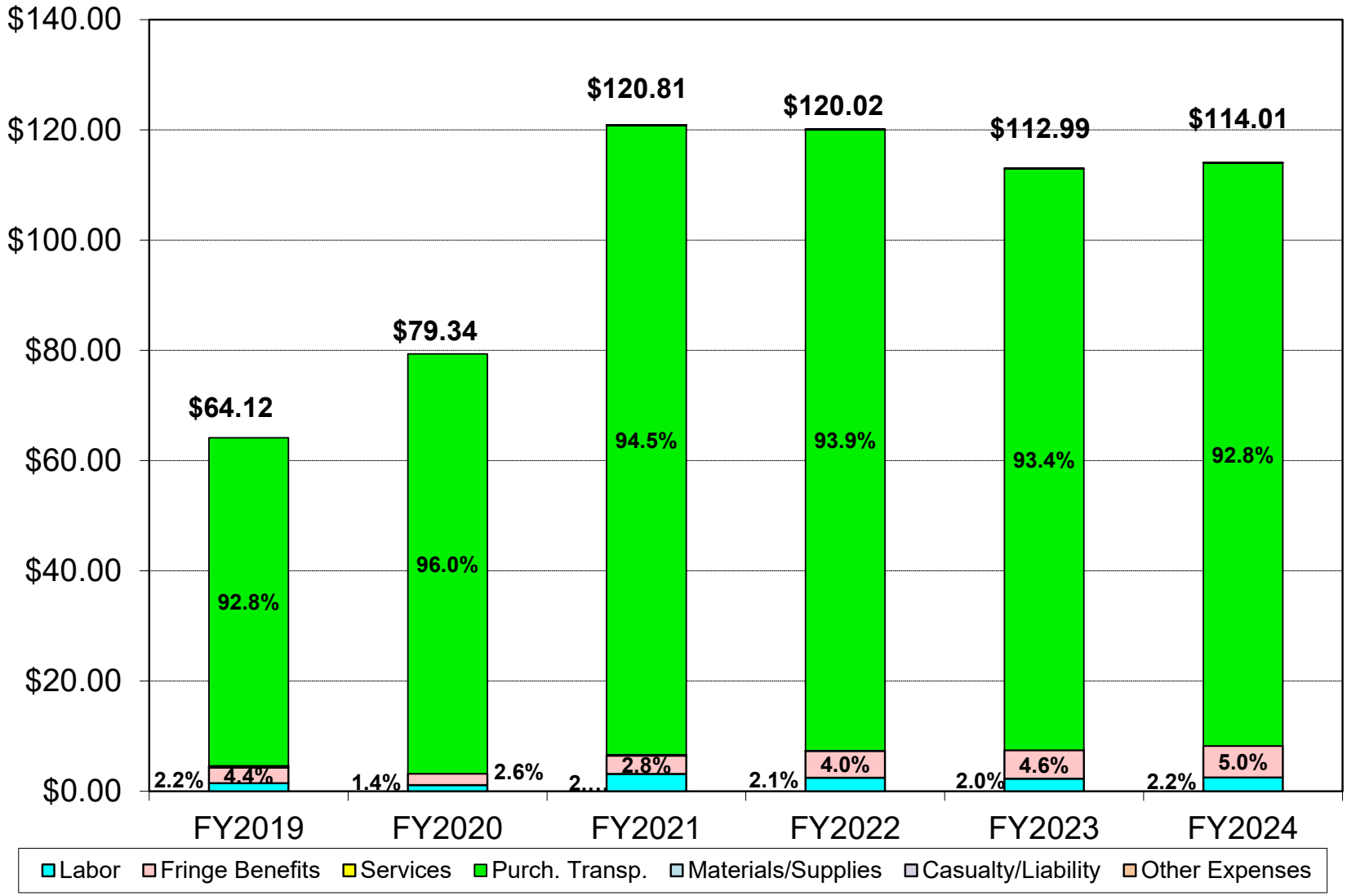
Exhibit 7.4: TDA Component Costs Trends – Paratransit

	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	*Av. Ann. Chg.*
COST CATEGORIES							
Labor (Salaries/Wages)	$494,377	$331,626	$515,859	$483,471	$470,385	$589,366	- -
Annual Change	- -	*-32.9%*	*55.6%*	*-6.3%*	*-2.7%*	*25.3%*	*3.6%*
Fringe Benefits *(a)*	$980,349	$604,057	$547,012	$954,130	$1,074,783	$1,348,175	- -
Annual Change	- -	*-38.4%*	*-9.4%*	*74.4%*	*12.6%*	*25.4%*	*6.6%*
Services	$111,283	$0	$24,578	$5,257	$0	$0	- -
Annual Change	- -	*-100.0%*	*100.0%*	*-78.6%*	*-100.0%*	- -	*-100.0%*
Purchased Transportation	$20,444,632	$22,333,665	$18,778,340	$22,121,042	$21,916,570	$24,943,918	- -
Annual Change	- -	*9.2%*	*-15.9%*	*17.8%*	*-0.9%*	*13.8%*	*4.1%*
Materials/Supplies *(b)*	$0	$0	$2,314	$21	$1,251	$1,291	- -
Annual Change	- -	- -	*100.0%*	*-99.1%*	*5857.1%*	*3.2%*	*100.0%*
Casualty/Liability	$0	$0	$0	$0	$0	$0	- -
Annual Change	- -	- -	- -	- -	- -	- -	- -
Other Expenses (c)	$0	$0	$638	$354	$0	$1,108	- -
Annual Change	- -	- -	*100.0%*	*-44.5%*	*-100.0%*	*100.0%*	*100.0%*
Total	$22,030,641	$23,269,348	$19,868,741	$23,564,275	$23,462,989	$26,883,858	- -
Annual Change	- -	*5.6%*	*-14.6%*	*18.6%*	*-0.4%*	*14.6%*	*4.1%*
OPERATING STATISTICS							
Vehicle Service Hours	343,558	293,280	164,469	196,342	207,660	235,793	- -
Annual Change	- -	*-14.6%*	*-43.9%*	*19.4%*	*5.8%*	*13.5%*	*-7.3%*

(a) Includes paid absences
(b) Includes tires/tubes, fuels/lubricants, and other materials/supplies
(c) Includes utilities, taxes, and miscellaneous expenses

Exhibit 7.5: Distribution of Component Costs – Paratransit

Operating Cost per Vehicle Service Hour



IV. COMPLIANCE WITH PUC REQUIREMENTS

An assessment of VTA'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 VTA's TDA-STA claim application.

The results from this review are detailed by individual requirement in Exhibit 8. VTA is in compliance with each of the 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.

Some missing documents were noted for the CHP terminal safety inspections. VTA did not have copies of the FY2022 inspection certificate for the Cheboya terminal facility and the FY2023 inspection certificate for the North terminal facility. VTA explained that due to the pandemic, the CHP inspection schedule was upended, causing gaps in inspections that spanned longer than the normal 12-13 months. As a result, it appears that some inspections were not conducted, when in fact, they were just delayed. All three VTA terminals have valid inspection certificates for FY2024.

Exhibit 8: 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 1808.1 following a CHP inspection of the operator's terminal	In Compliance	Satisfactory Inspections: Cerone: 05/17/22, 08/08/23; 09/26/24 Chaboya: 02/08/23; 04/18/24 North: 08/09/22; 03/14/24
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 Agreement with ATU Local 265; 9/25/15. No provision for excess staffing in agreement for Altamont Corridor Express (ACE) with Worldwide Ground Transportation and Avalon Transportation LLC (10/30/15 – 12/31/24). No provision for excess staffing in Contract S17197 (Amendment 7), between VTA and MV Public Transportation, Inc. 07/05/17 – 06/30/24.

Code Reference	Operator Compliance Requirements	Compliance Finding	Verification Information
PUC99314.5(e) (1)(2)	Part-Time Drivers and Contracting - If the operator receives STA funds, the operator is not precluded by contract from employing part-time drivers or from contracting with common carriers.	In Compliance	Part time employee provisions included in Section 18 of the Agreement with ATU Local 265; 9/9/19 – 9/8/22. Contract S17197 (Amendment 7), for MV Public Transportation, Inc. paratransit services (07/05/17 – 6/30/24) allows for part time operators. All ACE operators are full time per Contract S15084,Amendment 3 of agreement between Worldwide Ground Transportation and Avalon Transportation LLC (10/30/15 – 12/31/24).
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	Fare information in public information material: Valley Transportation Authority web site: http://www.vta.org/go/fares

Code Reference	Operator Compliance Requirements	Compliance Finding	Verification Information
PUC99155.1(a) (1)(2)	Welfare-to-Work - The operator coordinates 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	Coordination efforts include: VTA has agreements with Santa Clara County for the Transit Assistance Program (TAP), and Universal Pass for Life Improvement from Transportation (UPLIFT). VTA is a stakeholder in the MTC Coordinated Public Transit-Human Services Transportation Plan (2024), directed by MTC as the RTAP and MPO for the Bay Area. The plan includes services such as paratransit services and vouchers expanding outreach and transportation support by partnering with community-based organizations. VTA implemented the Mobility Assistance Program (MAP) in August 2023 to provide reduced-cost and no-cost transportation options for seniors, individuals with disabilities, and low-income persons seeking to find and retain employment.

Code Reference	Operator Compliance Requirements	Compliance Finding	Verification Information
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	Valid revenue sharing/transfer agreements with: 2022 Amended and Restated Clipper Memorandum, October 1, 2022; (AC Transit, GGBHTD, BART, SFMTA, SamTrans, Caltrain, CCCTA, VTA, Petaluma, ECCTA, LAVTA, MCTD, NCTPA, SolTrans, SCT, SMART, Vacaville, WCCTA, WETA, Santa Rosa, Union City) RTC Agreement (AC Transit, GGBHTD, BART, SFMTA, SamTrans, Caltrain, CCCTA, Petaluma, ECCTA, LAVTA, SolTrans, SCT, STA, Santa Rosa) Dumbarton Express (AC Transit) BART Capital Corridor Joint Powers Authority (CCJPA) Monterey-Salinas Transit (MST) San Mateo County Transit District (SamTrans) Santa Cruz MTD/ San Joaquin Joint Powers Authority (SJJPA) San Joaquin Regional Rail Commission

Code Reference	Operator Compliance Requirements	Compliance Finding	Verification Information
PUC99246(d)	Process for Evaluation of Passenger Needs - The operator has an established process in place for evaluating the needs and types of passengers being served	In Compliance	The following mechanisms are utilized to evaluate passenger needs: VTA Short Range Transit Plans (FY2014- 2023) (FY2024-2028 Draft) VTA Passenger Needs – Sustainability Plans 2019-2021 VTA Transit Service Guidelines (2023) VTA Transportation Plan 2050 (2022-2024) VTA Better Bus Stops Update (2021, 2022, 2023) Bus Stop Placement, Closures, and Relocations Policy (2022) VTA Transit Service Plans (FY2023 - 2024) VTA Bus Stop Placement, Closures and Relocations Update (2022) VTA Fast Transit Program – Speed and Reliability Analysis (2019)

V. STATUS OF PRIOR AUDIT RECOMMENDATIONS

VTA's prior performance audit was completed in June 2024. Generally, MTC has used the audit recommendations as the basis for developing the Productivity Improvement Program (PIP) projects the 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 the recommendations advanced in the prior audit. This 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 addresses VTA's responses to the recommendations made in the prior performance audit, and whether VTA made reasonable progress toward their implementation. There were no recommendations made in VTA's prior audit.

VI. FUNCTIONAL PERFORMANCE INDICATOR TRENDS

To further assess VTA'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 VTA or for which input data were maintained by VTA 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. It should be noted that data for several indicators in the systemwide, bus, and light rail sections was not provided for this analysis, limiting the analysis for those modes. 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, each followed by an exhibit illustrating the indicators by function as applicable.

Systemwide (All Modes)

For the purposes of this review, VTA's functional indicators relating to Management, Administration and Marketing have been included generally on a systemwide basis. Systemwide audit period performance is discussed below and presented in Exhibit 9.

- Administrative costs increased from 10.9 percent of total operating costs in the first year to 11.2 percent in the last year of the audit. Overall, this was a 1.9 percent decrease in this indicator during the audit period.
- Administrative costs remained mostly unchanged from $30.76 per vehicle service hour in the first year to $30.35 in the last year, a decrease of 1.3 percent over three years.
- Marketing cost as a percentage of total costs increased from 3.5 percent to 4.3 percent, while marketing cost per passenger trip dipped from $0.09 to $0.08 over the audit period.
- The systemwide farebox recovery ratio increased from 5.2 percent in FY2022 to 6.0 percent in FY2023. Data for FY2024 was not provided.

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The following is a brief summary of the systemwide functional trend highlights between FY2022 and FY2024:

- Administrative costs compared to total costs increased by 1.9 percent while administrative costs compared to vehicle service hours decreased by 1.3 percent during this audit period.

- Marketing cost as a percentage of total costs increased almost 23 percent overall, from 3.5 percent to 4.3 percent, while marketing cost per passenger trip decreased by eight percent over the audit period.

- The systemwide farebox recovery ratio increased by 18 percent between FY2022 and FY2024.

Exhibit 9: Functional Performance Trends – Systemwide (All Modes)

	Actual Performance		
	FY2022	**FY2023**	**FY2024**
MANAGEMENT, ADMINISTRATION & MARKETING			
Administrative Cost/Total Operating Cost	10.9%	11.3%	11.2%
Annual Percent Change	- -	*2.8%*	*-0.9%*
Three Year Percent Change	- -	- -	*1.9%*
Administrative Cost/Vehicle Service Hour	$30.76	$29.49	$30.35
Annual Percent Change	- -	*-4.1%*	*2.9%*
Three Year Percent Change	- -	- -	*-1.3%*
Marketing Cost/Total Administrative Cost	3.5%	2.9%	4.3%
Annual Percent Change	- -	*-15.9%*	*46.2%*
Three Year Percent Change	- -	- -	*22.9%*
Marketing Cost/Unlinked Passenger Trip	$0.09	$0.06	$0.08
Annual Percent Change	- -	*-31.1%*	*33.4%*
Three Year Percent Change	- -	- -	*-8.1%*
Farebox Recovery Ratio (Farebox Rev./Oper. Cost)	5.2%	6.0%	6.2%
Annual Percent Change	- -	*16.4%*	*2.0%*
Three Year Percent Change	- -	- -	*18.70%*

Bus Service

VTA'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 10.

- Service Planning
  - Operating costs per passenger mile decreased overall from $3.62 in FY2022 to $3.05 in FY2024, a 15.6 percent decrease, possibly reflecting the increase in ridership as VTA begins recovering from the COVID pandemic years.
  - On average about 87 percent of vehicle miles traveled were in service in all three years.
  - Similarly, about 94 percent of vehicle hours traveled were in service in all three years.
  - The bus service farebox recovery ratio increased by 14.3 percent between FY2022 and FY2024.
- Operations
  - Vehicle operations costs remained steady from 62.6 percent of total operating costs in FY2022 to 63.1 percent by FY2024.
  - Vehicle operations costs per service hour increased slightly overall from $147.70 in FY 2022 to $150.04 in FY2024.
  - Operator scheduled and unscheduled absences both decreased by about four percent over the audit period.
  - On-time performance dipped slightly, from 83 percent in FY2022 to 77.4 percent in FY2024, while the number of missed trips decreased from 2.6 to 2.1 percent over the audit period.
  - Complaints per 100,000 passenger trips declined from 32.2 to 23.4, while commendations decreased from 1.5 to 1.2 per 100,000 passenger trips.

- Maintenance
  - Total maintenance costs decreased slightly from 27.2 to 26.5 percent of total operating costs during the audit period.
  - Vehicle maintenance costs per service mile increased slightly over the audit period from $4.63 to $4.74.
  - The vehicle spare ratio increased from 23.6 percent in FY2022 to 24.3 percent in FY2023, before ending at 19.8 percent in the last year.
  - The mean distance between major failures declined from 24,169 mile to 11,100 miles in the first two years but improved to 14,273 in the last year. Mean distance between all failures decreased overall from 1,173 miles to 491 miles during the audit period. VTA indicated this may be due to about 19 percent of the bus fleet being well over their Useful Life Benchmark (ULB), while another 21 percent are right at their ULB.
  - Mechanic pay hours as a percentage of vehicle service hours decreased from about 44 percent to 40 percent during the audit period.
  - Maintenance employee scheduled absences decreased by almost nine percent overall, while unscheduled absences remained steady at about 16 percent in all three years.
- Safety
  - Casualty and liability costs per service hour and mile both declined more than 40 percent each from FY2022 to FY2024, with casualty/liability cost per hour decreasing from $3.97 to $2.05, and casualty/liability cost per mile decreasing from $0.34 to $0.18.
  - The rate of preventable accidents increased slightly from 1.24 to 1.35, less than nine percent, over the audit period.
  - The number of lost days due to industrial accidents increased significantly over the audit period, from 287 in FY2022 to 1,030 in FY2024, an increase of more than 250 percent.

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The following is a brief summary of the bus service functional trend highlights between FY2022 and FY2024:

- Service Planning results showed total operating cost per passenger mile decreased by 15.6 percent and vehicle miles and hours in service remained steady at about 87 and 94 percent, respectively. This may be reflecting the increase in ridership as VTA begins recovering from the COVID pandemic years. Bus fare recovery ratio increased over 14 percent between FY2022 and FY2024.

- In Operations, vehicle operations cost as a percentage of total operating cost was mostly steady, with a 0.8 percent increase over the audit period, while vehicle operations cost per service hour increased by 1.6 percent from $147.70 to $150.04. Operator scheduled and unscheduled absences both decreased about four percent against total hours worked. Schedule adherence dipped slightly about six percent, while the number of missed trips decreased about 20 percent. Both passenger complaints and passenger commendations per 100,000 unlinked passenger trips decreased over the audit period.

- Maintenance results showed total maintenance costs decreasing slightly overall, by 2.6 percent, averaging about 27 percent of total operating cost each year. Vehicle maintenance costs per service mile increased just over two percent. The spare ratio decreased from 23.6 percent to 19.8 percent. Service reliability declined with mean distance between major failures decreasing about 40 percent while distance between all failures declined almost 60 percent during the audit period. This continues a pattern from the prior audit period, where deceased vehicle reliability was attributed to a higher number of mechanical failures in the new battery powered buses integrated into the fleet in FY2021. VTA attributes the current decrease to about 40 percent of its current bus fleet being at or well over its Useful Life Benchmark for vehicle age. The ratio of maintenance pay hours to vehicle service hours decreased by 10 percent, maintenance employee scheduled absences decreased by nine percent, while unscheduled employee absences remained steady at about 16 percent.

- Safety results showed significant decreases of over 45 percent in casualty and liability costs per service mile and hour during the period. Preventable accidents per 100,000 vehicle miles increased less than 10 percent over the audit period but lost days due to industrial accidents increased almost 259 percent, from 287 days to 1,030 days during the audit period.

Exhibit 10: Functional Performance Trends – Bus Service

	Actual Performance		
	FY2022	FY2023	FY2024
SERVICE PLANNING			
Total Operating Cost/Passenger Mile	$3.62	$3.34	$3.05
Annual Percent Change	- -	*-7.8%*	*-8.5%*
Three Year Percent Change	- -	- -	*-15.6%*
Vehicle Service Miles/Total Miles	87.7%	87.5%	87.3%
Annual Percent Change	- -	*-0.3%*	*-0.2%*
Three Year Percent Change	- -	- -	*-0.5%*
Vehicle Service Hours/Total Hours	93.8%	94.0%	93.8%
Annual Percent Change	- -	*0.2%*	*-0.1%*
Three Year Percent Change	- -	- -	*0.1%*
Farebox Recovery Ratio (Farebox Rev./Oper. Cost)	6.4%	7.0%	7.3%
Annual Percent Change	- -	*9.5%*	*4.4%*
Three Year Percent Change	- -	- -	*14.32%*
OPERATIONS			
Vehicle Operations Cost/Total Operating Cost	62.6%	63.0%	63.1%
Annual Percent Change	- -	*0.7%*	*0.1%*
Three Year Percent Change	- -	- -	*0.8%*
Vehicle Operations Cost/Vehicle Service Hour	$147.70	$150.67	$150.04
Annual Percent Change	- -	*2.0%*	*-0.4%*
Three Year Percent Change	- -	- -	*1.6%*
Operator Sched. Absences/Total Hours Worked	11.0%	10.9%	10.6%
Annual Percent Change	- -	*-1.4%*	*-2.5%*
Three Year Percent Change	- -	- -	-3.87%
Operator Unsched. Absences/Total Hours Worked	20.4%	19.1%	19.6%
Annual Percent Change	- -	*-6.3%*	*2.3%*
Three Year Percent Change	- -	- -	-4.11%
Trips On-Time/Total Trips	83.0%	78.9%	77.4%
Annual Percent Change	- -	*-4.9%*	*-1.9%*
Three Year Percent Change	- -	- -	-6.77%
Complaints/100,000 Unlinked Passenger Trips	32.2	24.3	23.4
Annual Percent Change	- -	*-24.7%*	*-3.9%*
Three Year Percent Change	- -	- -	-27.56%
Commendations/100,000 Unlinked Passenger Trips	1.5	1.4	1.2
Annual Percent Change	- -	*-8.4%*	*-12.5%*
Three Year Percent Change	- -	- -	-19.92%
Missed Trips/Total Trips	2.6%	2.5%	2.1%
Annual Percent Change	- -	*-3.3%*	*-17.4%*
Three Year Percent Change	- -	- -	-20.15%

	Actual Performance		
	FY2022	FY2023	FY2024
MAINTENANCE			
Vehicle + Non-Veh. Maint. Cost/Total Operating Cost	27.2%	26.6%	26.5%
Annual Percent Change	- -	*-2.3%*	*-0.3%*
Three Year Percent Change	- -	- -	*-2.6%*
Vehicle Maintenance Cost/Vehicle Service Mile	$4.63	$4.72	$4.74
Annual Percent Change	- -	*2.0%*	*0.3%*
Three Year Percent Change	- -	- -	*2.3%*
Maintenance Pay Hours/Vehicle Service Hours	44.2%	42.2%	39.7%
Annual Percent Change	- -	*-4.4%*	*-5.9%*
Three Year Percent Change	- -	- -	*-10.1%*
Maintenance Employee Scheduled Absences	11.9%	13.1%	10.9%
Annual Percent Change	- -	*9.6%*	*-16.5%*
Three Year Percent Change	- -	- -	*-8.46%*
Maintenance Employee Unscheduled Absences	16.2%	16.2%	16.3%
Annual Percent Change	- -	*0.0%*	*0.6%*
Three Year Percent Change	- -	- -	*0.56%*
Spare Vehicles/Total Vehicles	23.6%	24.3%	19.8%
Annual Percent Change	- -	*2.9%*	*-18.7%*
Three Year Percent Change	- -	- -	*-16.3%*
Mean Distance between Major Failures (Miles)	24,169	11,100	14,273
Annual Percent Change	- -	*-54.1%*	*28.6%*
Three Year Percent Change	- -	- -	*-40.9%*
Mean Distance between All Failures (Miles)	1,173	600	491
Annual Percent Change	- -	*-48.9%*	*-18.2%*
Three Year Percent Change	- -	- -	*-58.2%*
SAFETY			
Preventable Accidents/100,000 Vehicle Miles	1.24	1.36	1.35
Annual Percent Change	- -	*10.3%*	*-1.3%*
Three Year Percent Change	- -	- -	*8.85%*
Casualty & Liability Cost/Vehicle Service Hour	$3.97	$3.66	$2.05
Annual Percent Change	- -	*-7.7%*	*-44.1%*
Three Year Percent Change	- -	- -	*-48.4%*
Casualty & Liability Cost/Vehicle Service Mile	$0.34	$0.31	$0.18
Annual Percent Change	- -	*-7.1%*	*-43.3%*
Three Year Percent Change	- -	- -	*-47.3%*
Lost Days Due to Industrial Accidents	287	336	1,030
Annual Percent Change	- -	*17.1%*	*206.5%*
Three Year Percent Change	- -	- -	*258.89%*

Light Rail Service

VTA's light rail service functional area trends represent areas of cost efficiency, safety, productivity, and service reliability. Audit period performance is discussed below and presented in Exhibit 11.

- Service Planning
  - Operating costs per passenger mile went from $9.34 in FY2022 to $5.59 in FY2024, a 40 percent decrease, again possibly reflecting the increase in ridership as VTA begins recovering from the COVID pandemic years.
  - Approximately 93 percent of all vehicle miles and vehicle hours traveled were in service in all three years.
  - The light rail farebox recovery ratio increased over 51 percent overall from 2.4 percent in FY2022 to 3.6 percent in FY2024.
- Operations
  - Vehicle operations costs as a percentage of total operating cost decreased slightly during the audit period, from 36.8 percent to 35.9 percent.
  - Vehicle operations costs per car service hour also decreased overall, from $423.60 in FY2022 to $262.82 in FY2024. Overall cost per hour decreased 38 percent.
  - Schedule adherence improved from 77.5 percent to 84.7 percent during the audit period.
  - Operator scheduled absences remained relatively stable at about eight percent overall, while unscheduled absences deceased almost 50 percent, from 27.3 percent of total hours worked in FY2022 to 13.8 percent in FY2024.

- Complaints and commendations per 100,000 passenger trips both decreased by 43 percent and 67 percent, respectively.

- The percentage of missed trips increased significantly, from 1.4 percent in FY2022 to 21.6 percent in FY2024, due to service shout downs for maintenance of way and rehabilitation projects for stations that required the use of bus bridges to fill in the service gaps caused by the construction.

- Maintenance

  - Total maintenance costs as a percentage of total operating costs remained steady at approximately 50 percent over the audit period.

  - Vehicle maintenance costs per car service mile decreased over the audit period from $19.90 to $14.12, a 29 percent decrease

  - The car spare ratio decreased from 69.4 percent in the first year to 61.2 percent in the last year.

  - The mean distance between both major failures and all failures fluctuated over the audit period, but both indicators ultimately improved. Mean distance between major failures increased by over 200 percent between FY2022 and FY2023, before decreasing by 62 percent in FY20024. Distance between all failures decreased from 2,507 in FY2022 to 1,487 miles in FY2023, before increasing to 4,178 in FY2024.

  - The percentage of maintenance worker pay hours per car service hours decreased more than 40 percent between FY2022 and FY2024.

  - Maintenance employee scheduled and unscheduled absences both increased about 11 percent during the audit period.

- Safety

  - Casualty and liability cost per vehicle service hour and mile showed significant decreases over the audit period. Casualty/liability cost per service hour decreased from $23.88 in FY2022 to $7.73 in FY2024 (67.6 percent), while cost per service mile decreased from $1.53 to $0.55 (64 percent) at the same time.

- The number of preventable accidents decreased from seven in FY2022 to zero in FY2024.

- Similar to the bus service, the number of lost days due to industrial accidents increased significantly from 24 in FY2022 to 253 in FY2023, before declining to 149 in FY2024. Overall lost days due to industrial accidents increased more than 500 percent during the audit period.

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The following is a brief summary of the light rail functional trend highlights between FY2022 and FY2024:

- Service Planning results revealed a 40 percent decrease in total operating cost per passenger mile and both vehicle miles and hours in service of between 93 and 94 percent of total hours. Farebox recovery ratio increased 51 percent overall, from 2.4 percent to 3.6 percent, between FY2022 and FY2024.

- Operations results included a 2.5 percent increase in vehicle operations cost as a percentage of total operating cost and a 38 percent decrease in vehicle operations costs per service hour. Schedule adherence improved 9.3 percent over the audit period from 77.5 to 84.7 percent. Operator scheduled absences increased modestly, while unscheduled absences decreased almost 50 percent compared to total hours worked. Schedule adherence improved almost 10 percent and passenger complaints and commendations both decreased, by 43.1 and 67.5 percent, respectively. The percentage of missed trips compared to total trips missed trips increased more than 1400 percent overall, due to service shout downs in FY2024 for maintenance of way and rehabilitation projects for stations that required the use of bus bridges to fill in the service gaps caused by the construction.

- In Maintenance, total maintenance costs were almost unchanged as a percentage of total operating cost, with a 1.5 percent increase over the audit period. Vehicle maintenance costs per service mile decreased 29.1 percent. The car spare ratio decreased about 12 percent, and the mechanical failure

rate improved overall for both major and all failures. The ratio of maintenance pay hours to vehicle service hours decreased more than 40 percent during the audit period. Scheduled employee absences increased by about 10 percent, while unscheduled employee absences decreased over 40 percent.

- Safety results showed significant decreases in casualty and liability costs per service mile and hour during the period. Preventable accidents went from seven to zero over the three years. The number of lost days due to industrial accidents increased over 500 percent from 24 to 149 between FY2022 and FY2024.

Exhibit 11: Functional Performance Trends – Light Rail

	Actual Performance		
	FY2022	FY2023	FY2024
SERVICE PLANNING			
Total Operating Cost/Passenger Mile	$9.34	$5.52	$5.59
Annual Percent Change	- -	*-40.9%*	*1.3%*
Three Year Percent Change	- -	- -	*-40.2%*
Car Service Miles/Total Miles	92.7%	93.4%	93.4%
Annual Percent Change	- -	*0.8%*	*0.0%*
Three Year Percent Change	- -	- -	*0.8%*
Car Service Hours/Total Hours	93.1%	93.7%	93.6%
Annual Percent Change	- -	*0.7%*	*-0.2%*
Three Year Percent Change	- -	- -	*0.5%*
Farebox Recovery Ratio (Farebox Rev./Oper. Cost)	2.4%	3.8%	3.6%
Annual Percent Change	- -	*56.8%*	*-3.6%*
Three Year Percent Change	- -	- -	*51.2%*
OPERATIONS			
Vehicle Operations Cost/Total Operating Cost	36.8%	37.8%	35.9%
Annual Percent Change	- -	*2.6%*	*-5.0%*
Three Year Percent Change	- -	- -	*-2.5%*
Vehicle Operations Cost/Car Service Hour	$423.60	$202.91	$262.82
Annual Percent Change	- -	*-52.1%*	*29.5%*
Three Year Percent Change	- -	- -	*-38.0%*
Operator Sched. Absences/Total Hours Worked	7.7%	7.8%	8.0%
Annual Percent Change	- -	*1.3%*	*2.9%*
Three Year Percent Change	- -	- -	*4.3%*
Operator Unsched. Absences/Total Hours Worked	27.3%	15.0%	13.8%
Annual Percent Change	- -	*-45.2%*	*-8.0%*
Three Year Percent Change	- -	- -	*-49.6%*
Trips On-Time/Total Trips	77.5%	84.3%	84.7%
Annual Percent Change	- -	*8.8%*	*0.5%*
Three Year Percent Change	- -	- -	*9.3%*
Complaints/100,000 Unlinked Passenger Trips	10.2	7.3	5.8
Annual Percent Change	- -	*-28.2%*	*-20.9%*
Three Year Percent Change	- -	- -	*-43.1%*
Commendations/100,000 Unlinked Passenger Trips	0.4	0.3	0.1
Annual Percent Change	- -	*-26.0%*	*-56.1%*
Three Year Percent Change	- -	- -	*-67.5%*
Missed Trips/Total Trips	1.4%	5.6%	21.6%
Annual Percent Change	- -	*299.7%*	*285.2%*
Three Year Percent Change	- -	- -	*1439.7%*

	Actual Performance		
	FY2022	FY2023	FY2024
MAINTENANCE			
Vehicle + Non-Veh. Maint. Cost/Total Operating Cost	49.8%	48.3%	50.6%
Annual Percent Change	- -	*-3.2%*	*4.8%*
Three Year Percent Change	- -	- -	*1.5%*
Vehicle Maintenance Cost/Car Service Mile	$19.90	$10.17	$14.12
Annual Percent Change	- -	*-48.9%*	*38.8%*
Three Year Percent Change	- -	- -	*-29.1%*
Maintenance Pay Hours/Car Service Hours	318.7%	141.2%	185.9%
Annual Percent Change	- -	*-55.7%*	*31.7%*
Three Year Percent Change	- -	- -	*-41.7%*
Maintenance Employee Scheduled Absences	8.0%	9.3%	8.8%
Annual Percent Change	- -	*16.7%*	*-5.2%*
Three Year Percent Change	- -	- -	*10.6%*
Maintenance Employee Unscheduled Absences	20.1%	10.2%	11.4%
Annual Percent Change	- -	*-49.2%*	*11.2%*
Three Year Percent Change	- -	- -	*-43.5%*
Spare Cars/Total Cars	69.4%	44.9%	61.2%
Annual Percent Change	- -	*-35.3%*	*36.4%*
Three Year Percent Change	- -	- -	*-11.8%*
Mean Distance between Major Failures (Miles)	43,837	137,078	51,911
Annual Percent Change	- -	*212.7%*	*-62.1%*
Three Year Percent Change	- -	- -	*18.4%*
Mean Distance between All Failures (Miles)	2,507	1,487	4,178
Annual Percent Change	- -	*-40.7%*	*180.9%*
Three Year Percent Change	- -	- -	*66.7%*
SAFETY			
Preventable Accidents/100,000 Car Miles	0.4	0.0	0.0
Annual Percent Change	- -	*-92.9%*	*-100.0%*
Three Year Percent Change	- -	- -	*-100.0%*
Casualty & Liability Cost/Car Service Hour	$23.88	$10.47	$7.73
Annual Percent Change	- -	*-56.2%*	*-26.2%*
Three Year Percent Change	- -	- -	*-67.6%*
Casualty & Liability Cost/Car Service Mile	$1.53	$0.75	$0.55
Annual Percent Change	- -	*-51.2%*	*-26.2%*
Three Year Percent Change	- -	- -	*-64.0%*
Lost Days Due to Industrial Accidents	24	253	149
Annual Percent Change	- -	*954.2%*	*-41.1%*
Three Year Percent Change	- -	- -	*520.8%*

Rail Shuttle Service

VTA's rail shuttle service functional area trends represent mostly similar areas to the bus service. Audit period performance is discussed below and presented in Exhibit 12.

- Service Planning

  - VTA's rail shuttle operating cost per passenger mile decreased over 65 percent from $8.71 in FY2022 to $2.98 in FY2024, likely due to increasing ridership and service levels as VTA recovers from the pandemic.

  - Vehicle service miles of total miles traveled increased from 79.3 percent to 82.9 percent, while vehicle service hours of total hours was almost unchanged between 91 and 92 percent during the audit period.

  - The farebox recovery ratio increased from 3.4 percent to four percent during the audit period.

- Operations

  - Vehicle operations costs as a percentage of total costs remained around 57 percent over the entire period.

  - Vehicle operation cost per service hour increased 8.5 percent overall, from $70.47 to $76.48 during the three-year period.

  - There were no complaints or commendations reported in any year of the audit period.

  - Data for on-time performance and missed trips was unavailable. As the shuttle service is linked to the ACE commuter rail system, the rail schedule has significant influence on the commuter shuttle schedule in terms of delays, missed trips, etc. The contractor is solely responsible for shuttle operations and does not track this data.

- Maintenance

  - Total maintenance costs as a percentage of total operating costs decreased slightly from 26.9 percent to 26.1 percent during the audit period.

  - Vehicle maintenance costs per service mile decreased just under two percent, from $2.79 in FY2022 to $2.75 in FY2024.

  - The vehicle spare ratio increased to 8.3 percent over the three-year period.

  - Service reliability showed no reported major mechanical failures for the audit period, and only three total mechanical failures for both FY2023 and FY2024.

- Safety

  - VTA did not report any preventable accidents during the current audit period.

* * * * *

The following is a brief summary of the rail shuttle functional trend highlights between FY2022 and FY2024:

- Service Planning results showed total operating cost per passenger mile decreased more than 65 percent overall as VTA begins to recover from the pandemic. The farebox recovery ratio increased by 16.5 percent overall, from 3.4 percent to four percent over the audit period. There was a 4.5 percent improvement in performance in vehicle service miles as a percentage of total miles and service hours per total hours remained steady at about 92 percent.

- Operations exhibited steady performance in vehicle operations costs as a percentage of total operating cost. Vehicle operations cost per service hour increased by 8.5 percent. There were no reported complaints or commendations throughout the audit period. Data for on-time performance and missed trips was unavailable. The shuttle contractor is responsible for shuttle operations and does not track that data, as it is

heavily influenced by the ACE commuter rail service schedules and performance.

- Maintenance results revealed vehicle maintenance costs decreased slightly as a percentage of total costs, as did maintenance cost per vehicle service mile, decreasing just under two percent overall. The spare ratio increased to 8.3 percent over the period. There were only three reported mechanical failures reported in both FY2023 and FY2024.

- VTA did not report any preventable accidents during the current audit period.

Exhibit 12: Functional Performance Trends – Rail Shuttle

FUNCTION/Indicator	Actual Performance		
	FY2022	FY2023	FY2024
SERVICE PLANNING			
Total Operating Cost/Passenger Mile	$8.71	$4.73	$2.98
Annual Percent Change	- -	*-45.7%*	*-37.1%*
Three Year Percent Change	- -	- -	*-65.8%*
Farebox Recovery Ratio (Farebox Rev./Oper. Cost)	3.4%	3.8%	4.0%
Annual Percent Change	- -	*10.9%*	*5.1%*
Three Year Percent Change	- -	- -	*16.5%*
Vehicle Service Miles/Total Miles	79.3%	81.0%	82.9%
Annual Percent Change	- -	*2.2%*	*2.3%*
Three Year Percent Change	- -	- -	*4.5%*
Vehicle Service Hours/Total Hours	91.1%	91.5%	92.1%
Annual Percent Change	- -	*0.5%*	*0.6%*
Three Year Percent Change	- -	- -	*1.2%*
OPERATIONS			
Vehicle Operations Cost/Total Operating Cost	56.7%	56.9%	57.3%
Annual Percent Change	- -	*0.2%*	*0.8%*
Three Year Percent Change	- -	- -	*1.0%*
Vehicle Operations Cost/Vehicle Service Hour	$70.47	$69.05	$76.48
Annual Percent Change	- -	*-2.0%*	*10.8%*
Three Year Percent Change	- -	- -	*8.5%*
On-Time Percentage	*(a)*	*(a)*	*(a)*
Annual Percent Change	- -	- -	- -
Three Year Percent Change	- -	- -	- -
Complaints/10,000 Unlinked Passenger Trips	0.00	0.00	0.00
Annual Percent Change	- -	- -	- -
Three Year Percent Change	- -	- -	- -
Commendations/10,000 Unlinked Passenger Trips	0.00	0.00	0.00
Annual Percent Change	- -	- -	- -
Three Year Percent Change	- -	- -	- -
Missed Trips/Total Trips	*(a)*	*(a)*	*(a)*
Annual Percent Change	- -	- -	- -
Three Year Percent Change	- -	- -	- -

(a) Not applicable

FUNCTION/Indicator	Actual Performance		
	FY2022	FY2023	FY2024
MAINTENANCE			
Vehicle + Non-Veh. Maint. Cost/Total Operating Cost	26.9%	26.0%	26.1%
Annual Percent Change	- -	*-3.1%*	*0.5%*
Three Year Percent Change	- -	- -	*-2.7%*
Vehicle Maintenance Cost/Vehicle Service Mile	$2.79	$2.64	$2.75
Annual Percent Change	- -	*-5.4%*	*4.1%*
Three Year Percent Change	- -	- -	*-1.6%*
Spare Vehicles/Total Vehicles	7.7%	7.7%	8.3%
Annual Percent Change	- -	- -	*8.3%*
Three Year Percent Change	- -	- -	*8.3%*
Mean Distance between Major Failures (Miles)	*(b)*	*(b)*	*(b)*
Annual Percent Change	- -	- -	- -
Three Year Percent Change	- -	- -	- -
Mean Distance between All Failures (Miles)	*(b)*	71,678	69,921
Annual Percent Change	- -	- -	*-2.5%*
Three Year Percent Change	- -	- -	- -
SAFETY			
Preventable Accidents/100,000 Vehicle Miles	*(b)*	*(b)*	*(b)*
Annual Percent Change	- -	- -	- -
Three Year Percent Change	- -	- -	- -

(b) None reported

Paratransit

VTA's paratransit functional area trends represent mostly similar areas to the bus service. Audit period performance is discussed below and presented in Exhibit 13.

- Service Planning
  - Operating costs per passenger mile decreased from $8.50 in the first year to $7.09 by the last year, a 16.5 percent decrease.
  - There were slight increases in both the vehicle service mile and hour per total miles and hours measures throughout the period. Between 78 and 80 percent of all vehicle miles traveled were in service, while the number of vehicle hours in service increased from 66.2 percent to 71.3 percent.
  - The paratransit farebox recovery ratio increased overall from 4.4 percent in the first year to 5.1 percent by FY2024.
- Operations
  - Vehicle operations costs were almost unchanged, decreasing overall from 76.2 percent of total operating costs in FY2022 to 75.8 percent by FY2024.
  - Vehicle operations costs per service hour decreased overall as well, from $91.48 in FY2022 to $86.38 in FY2024, a 5.6 percent decrease.
  - On-time performance also improved from 84.4 percent to 90.7 percent during the audit period.
  - The rate of complaints per 1,000 passenger trips increased from 0.6 percent in FY2022 to 1.0 in FY2024.
  - There were no ADA trip denials reported throughout the audit period but the number of missed trips, while small compared to total trips, increased from 0.06 to 0.14, a more than 130 percent increase, likely reflecting the increase in trips and services as VTA recovers riders from the pandemic.
  - The rate of trip cancellations and no shows both declined during the audit period but the number of late cancellations increased modestly.
- Maintenance

  - Total maintenance costs compared to total operating costs increased by 2.7 percent, from 16.1 percent in FY2022 to 16.6 percent in FY2024.

  - Vehicle maintenance costs per service mile decreased overall during the audit period from $0.84 to $0.73, down 13.1 percent.

  - The vehicle spare ratio increased from 16 percent in FY2021 to 28.2 percent in FY2024.

  - The mean distance between major failures and between all failures both declined in each of the three audit years. For major failures, the decline was 57.4 percent and for all failures it was 59.9 percent.

- Safety

  - The rate of preventable accidents per 100,000 miles decreased from 0.64 to 0.50 during this audit period.

* * * * *

The following is a brief summary of the paratransit functional trend highlights between FY2022 and FY2024:

- Service Planning results showed an overall 16.5 percent decrease in the cost per passenger mile, farebox recovery increasing from 4.4 to 5.1 percent, and improvements of two percent in vehicle miles in service and 7.8 percent in vehicle hours in service.

- Operations results showed steady results in vehicle operations costs as a portion of total operating costs with a 0.6 percent decrease, and a more significant decrease of 6.6 percent in vehicle operations cost per hour. Trips completed within the on-time window increased by 7.5 percent and even though there were significant percentage increases in both complaints and missed trips, there were very few when compared to the total number of trips taken. There were no ADA trip denials. The rate of passenger no-shows and trip cancellations both decreased, while late cancellations increased by about 11 percent.

- Maintenance results showed total maintenance costs compared to total operating costs increased by 2.7 percent over the three years. At the same time

vehicle maintenance costs per service mile decreased by 13.1 percent. The spare ratio increased from 16 percent to 28.2 percent. Mean distance between major and all mechanical failure decreased over 55 percent each from FY2022 to FY2024.

- Safety results showed that the rate of preventable accidents decreased by 22.4 percent during this audit period.

Exhibit 13: Functional Performance Trends – Paratransit

FUNCTION/Indicator	Actual Performance		
	FY2022	FY2023	FY2024
SERVICE PLANNING			
Total Operating Cost/Passenger Mile	$8.50	$6.82	$7.09
Annual Percent Change	- -	*-19.7%*	*3.9%*
Three Year Percent Change	- -	- -	*-16.5%*
Vehicle Service Miles/Total Miles	77.2%	80.0%	78.8%
Annual Percent Change	- -	*3.6%*	*-1.5%*
Three Year Percent Change	- -	- -	*2.0%*
Vehicle Service Hours/Total Hours	66.2%	68.8%	71.3%
Annual Percent Change	- -	*3.9%*	*3.7%*
Three Year Percent Change	- -	- -	*7.8%*
Farebox Recovery Ratio (Farebox Rev./Oper. Cost)	4.4%	5.1%	5.1%
Annual Percent Change	- -	*16.5%*	*-1.1%*
Three Year Percent Change	- -	- -	*15.3%*
OPERATIONS			
Vehicle Operations Cost/Total Operating Cost	76.2%	75.1%	75.8%
Annual Percent Change	- -	*-1.5%*	*0.9%*
Three Year Percent Change	- -	- -	*-0.6%*
Vehicle Operations Cost/Vehicle Service Hour	$91.48	$84.87	$86.38
Annual Percent Change	- -	*-7.2%*	*1.8%*
Three Year Percent Change	- -	- -	*-5.6%*
On-Time Performance	84.4%	91.7%	90.7%
Annual Percent Change	- -	*8.6%*	*-1.0%*
Three Year Percent Change	- -	- -	*7.5%*
Complaints/1,000 Unlinked Passenger Trips	0.6	0.8	1.0
Annual Percent Change	- -	*33.9%*	*29.1%*
Three Year Percent Change	- -	- -	*72.9%*
Missed Trips/Total Trips	0.06%	0.15%	0.14%
Annual Percent Change	- -	*156.7%*	*-8.9%*
Three Year Percent Change	- -	- -	*133.9%*
ADA Trip Denials/Total ADA Trips	0.0%	0.0%	0.0%
Annual Percent Change	- -	- -	- -
Three Year Percent Change	- -	- -	- -

FUNCTION/Indicator	Actual Performance		
	FY2022	FY2023	FY2024
OPERATIONS , *continued*			
Trip Cancellations/Total ADA Trips	28.7%	30.8%	27.8%
Annual Percent Change	- -	*7.3%*	*-9.8%*
Three Year Percent Change	- -	- -	*-3.2%*
Late Trip Cancellations/Total ADA Trips	2.0%	2.3%	2.2%
Annual Percent Change	- -	*14.6%*	*-3.2%*
Three Year Percent Change	- -	- -	*10.9%*
No-Shows/Total ADA Trips	1.3%	1.2%	1.2%
Annual Percent Change	- -	*-8.8%*	*-4.6%*
Three Year Percent Change	- -	- -	*-12.9%*
MAINTENANCE			
Vehicle + Non-Veh. Maint. Cost/Total Operating Cost	16.1%	17.0%	16.6%
Annual Percent Change	- -	*5.2%*	*-2.3%*
Three Year Percent Change	- -	- -	*2.7%*
Vehicle Maintenance Cost/Vehicle Service Mile	$0.84	$0.76	$0.73
Annual Percent Change	- -	*-9.0%*	*-4.5%*
Three Year Percent Change	- -	- -	*-13.1%*
Spare Vehicles/Total Vehicles	16.0%	19.4%	28.2%
Annual Percent Change	- -	*21.7%*	*44.9%*
Three Year Percent Change	- -	- -	*76.4%*
Mean Dist. betw. Major Failures (Miles)	195,883	187,262	83,534
Annual Percent Change	- -	*-4.4%*	*-55.4%*
Three Year Percent Change	- -	- -	*-57.4%*
Mean Dist. betw. All Failures (Miles)	170,333	148,518	68,239
Annual Percent Change	- -	*-12.8%*	*-54.1%*
Three Year Percent Change	- -	- -	*-59.9%*
SAFETY			
Preventable Accidents/100,000 Vehicle Miles	0.64	0.53	0.50
Annual Percent Change	- -	*-16.3%*	*-7.2%*
Three Year Percent Change	- -	- -	*-22.4%*

VII. CONCLUSIONS AND RECOMMENDATIONS

The preceding sections presented a review of VTA's transit service performance during the three-year period of FY2022 through FY2024 (July 1, 2021 through June 30, 2024). 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 VTA'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:

Data Collection – VTA is in compliance with the data collection and reporting requirements for the 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 – VTA'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.

- Bus Service – The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2019 through FY2024:
  - The COVID pandemic had a major impact on the current audit period performance indicators. Declines in ridership, service levels and operating

costs, particularly in FY2020 and FY2021, negatively affected all VTA bus performance indicators. As the pandemic waned, improving numbers in these indicators between FY2022 and FY2024 created an overall decrease in performance, but not to the extent of the pandemic years.

- There was an average annual increase in the operating cost per hour of 4.0 percent, and 0.3 percent in inflation adjusted dollars. Cost per hour peaked in FY2021, before decreasing to a steadier level in the last three years examined.

- Passenger productivity decreased due to overall lower ridership during the pandemic and the slow return of passengers to almost pre-pandemic levels. Passengers per vehicle service hour decreased 3.5 percent and passengers per vehicle service mile decreased 3.3 percent per year overall

- The cost per passenger increased on average by 7.8 percent per year, which amounted to an average annual increase of four percent in constant FY2019 dollars. This is a significant improvement from the 20 percent plus average annual increases seen in the prior audit report.

- Employee productivity also decreased slightly, an average of 2.2 percent per year.

- The following is a brief summary of the component operating costs trend highlights for the bus service between FY2019 and FY2024:

  - Labor and benefit costs represented the largest portion of the total costs, representing about 80 percent in all six years. Labor costs increased an average of four percent annually, while fringe benefit costs remained almost unchanged with a 1.8 percent annual increase.

  - There were modest changes in most component cost categories, with average annual increases of five percent or less in four of the six cost categories examined, and moderate increases in materials/supplies and services costs.

  - Services and materials/supplies contributed about 15 to 18 percent of total costs, while the remaining categories contributed less than two percent of total costs over the six year period.

- Light Rail Service – The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2019 through FY2024:

- Cost efficiency declined, with an average annual increase in the operating cost per hour of five percent (1.3 percent in constant 2019 dollars). Annual operating costs rose by an average of 1.3 percent annually, with an average annual decrease of 7.7 percent in service delivery.

- Passenger productivity worsened, with passengers per hour decreasing 7.7 percent per year on average and passengers per mile decreasing 5.4 percent annually on average.

- The operating cost per passenger averaged an annual increase of 13.8 percent, which amounted to a 9.7 percent increase when normalized in FY2019 dollars.

- Employee productivity decreased overall during the period, due to the combination of average annual increases in FTEs and average annual decreases in service hours over the review period.

- The following is a brief summary of the component operating costs trend highlights for the light rail service between FY2019 and FY2024:

  - There was a small average annual increase in total costs over the audit period, with an average annual increase of 1.3 percent.

  - Costs increased in six of the seven cost categories, with the average annual cost increases generally less than five percent in each category. VTA experienced cost decreases in the first three years of the review period, with moderate cost increases occurring in the current audit period (FY2019 through FY2024).

  - The labor and fringe benefits costs contributed between 68 and 72 percent of total hourly costs.

  - The share of total operating cost for services remained between 15 to 17 percent during the period, while the share of materials/supplies costs to total costs decreased from about 12 percent to seven percent. The remaining cost component categories contributed about eight percent of the total costs.

- Rail Shuttle Service – The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2019 through FY2024:

- VTA's rail shuttle service was particularly hard hit by the COVID pandemic. During the current audit period (FY2022-FY2024), unlinked passengers increased an average of almost 80 percent annually, with an average decrease in service hours of 2.6 percent and an average annual increase in service miles of 1.6 percent in that same period.

- Cost efficiency declined overall, with an average annual increase in the operating cost per hour of 5.5 percent (1.7 percent in inflation adjusted dollars). Higher operating costs combined with slightly lower service levels influenced this indicator.

- Passenger productivity was also lower, with passengers per hour decreasing 14.8 percent and passengers per mile decreasing 14.2 percent per year on average.

- The operating cost per passenger averaged an annual increase of 23.8 percent, or 19.4 percent in normalized FY2019 dollars. Passenger levels decreased an average of 15.4 percent per year over the six-year period, while operating costs increased by 4.8 percent per year.

- The following is a brief summary of the component operating costs trend highlights for the rail shuttle service between FY2019 and FY2024:

  - Purchased transportation costs, the largest component cost category at about 90 percent of total costs, increased by 5.3 percent per year on average, similar to the overall 4.8 percent annual increase in operating costs.

  - Costs in the labor and fringe benefit categories decreased an average of 1.4 and 3.1 percent per year, respectively. All the remaining cost categories, services, materials/supplies. casualty/liability, and other expenses experienced modest annual average increases. These remaining cost categories combined comprise about five percent of the total hourly costs.

- Paratransit Service – The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2019 through FY2024:

  - VTA demand response service experienced almost equal average annual decreases in ridership and service levels, resulting in generally steady performance in passenger productivity, and lower performance in the cost efficiency and effectiveness indicators examined.

- Cost efficiency decreased overall, with an average annual increase in the operating cost per hour of 10.5 percent (6.5 percent in inflation adjusted dollars).

- Passenger productivity was almost unchanged, with passengers per hour increasing an average of 0.1 percent annually and passengers per mile increasing 0.4 percent per year on average.

- The operating cost per passenger averaged an annual increase of 10.3 percent, or 6.4 percent when normalized in FY2019 dollars. On average, operating costs increased by 2.5 percent per year over the period, while ridership decreased by 7.1 percent per year.

- The following is a brief summary of the component operating costs trend highlights for paratransit between FY2019 and FY2024:

  - Purchased transportation costs, by far the largest component cost category, increased by 4.1 percent per year on average.

  - Labor and fringe benefit costs increased four and six percent per year on average, but both categories combined comprised less than seven percent of the total operating costs per year.

  - Costs in other categories such as materials/supplies, casualty/liability and miscellaneous cost categories were negligible, while services costs fluctuated throughout the audit period. Total costs in all these categories comprised less than one percent of the total operating costs over the period.

Compliance with Statutory Requirements – VTA is in compliance with the 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.

Status of Prior Audit Recommendations – There were no recommendations made in VTA's prior audit.

Functional Performance Indicator Trends – to further assess VTA's performance over the past three years, a detailed set of systemwide and modal functional area performance indicators was defined and reviewed.

- Systemwide (All Modes) – The following is a brief summary of the systemwide functional trend highlights between FY2022 and FY2024:
  - Administrative costs compared to total costs increased by 1.9 percent while administrative costs compared to vehicle service hours decreased by 1.3 percent during this audit period.
  - Marketing cost as a percentage of total costs increased almost 23 percent overall, from 3.5 percent to 4.3 percent, while marketing cost per passenger trip decreased by eight percent over the audit period.
  - The systemwide farebox recovery ratio increased by 18 percent between FY2022 and FY2024.
- Bus Service – The following is a brief summary of the bus service functional trend highlights between FY2022 and FY2024:
  - Service Planning results showed total operating cost per passenger mile decreased by 15.6 percent and vehicle miles and hours in service remained steady at about 87 and 94 percent, respectively. This may be reflecting the increase in ridership as VTA begins recovering from the COVID pandemic years. Bus fare recovery ratio increased over 14 percent between FY2022 and FY2024.
  - In Operations, vehicle operations cost as a percentage of total operating cost was mostly steady, with a 0.8 percent increase over the audit period, while vehicle operations cost per service hour increased by 1.6 percent from $147.70 to $150.04. Operator scheduled and unscheduled absences both decreased about four percent against total hours worked. Schedule adherence dipped slightly about six percent, while the number of missed trips decreased about 20 percent. Both passenger complaints and passenger commendations per 100,000 unlinked passenger trips decreased over the audit period.
  - Maintenance results showed total maintenance costs decreasing slightly overall, by 2.6 percent, averaging about 27 percent of total operating cost

each year. Vehicle maintenance costs per service mile increased just over two percent. The spare ratio decreased from 23.6 percent to 19.8 percent. Service reliability declined with mean distance between major failures decreasing about 40 percent while distance between all failures declined almost 60 percent during the audit period. This continues a pattern from the prior audit period, where deceased vehicle reliability was attributed to a higher number of mechanical failures in the new battery powered buses integrated into the fleet in FY2021. VTA attributes the current decrease to about 40 percent of its current bus fleet being at or well over its Useful Life Benchmark for vehicle age. The ratio of maintenance pay hours to vehicle service hours decreased by 10 percent, maintenance employee scheduled absences decreased by nine percent, while unscheduled employee absences remained steady at about 16 percent.

- Safety results showed significant decreases of over 45 percent in casualty and liability costs per service mile and hour during the period. Preventable accidents per 100,000 vehicle miles increased less than 10 percent over the audit period but lost days due to industrial accidents increased almost 259 percent, from 287 days to 1,030 days during the audit period.

- Light Rail – The following is a brief summary of the light rail functional trend highlights between FY2022 and FY2024:

  - Service Planning results revealed a 40 percent decrease in total operating cost per passenger mile and both vehicle miles and hours in service of between 93 and 94 percent of total hours. Farebox recovery ratio increased 51 percent overall, from 2.4 percent to 3.6 percent, between FY2022 and FY2024.

  - Operations results included a 2.5 percent increase in vehicle operations cost as a percentage of total operating cost and a 38 percent decrease in vehicle operations costs per service hour. Schedule adherence improved 9.3 percent over the audit period from 77.5 to 84.7 percent. Operator scheduled absences increased modestly, while unscheduled absences decreased almost 50 percent compared to total hours worked. Schedule adherence improved almost 10 percent and passenger complaints and commendations both decreased, by 43.1 and 67.5 percent, respectively. The percentage of missed trips compared to total trips missed trips increased more than 1400 percent overall, due to service shout downs in FY2024 for maintenance of way and rehabilitation projects for stations that required the use of bus bridges to fill in the service gaps caused by the construction.

- In Maintenance, total maintenance costs were almost unchanged as a percentage of total operating cost, with a 1.5 percent increase over the audit period. Vehicle maintenance costs per service mile decreased 29.1 percent. The car spare ratio decreased about 12 percent, and the mechanical failure rate improved overall for both major and all failures. The ratio of maintenance pay hours to vehicle service hours decreased more than 40 percent during the audit period. Scheduled employee absences increased by about 10 percent, while unscheduled employee absences decreased over 40 percent.

- Safety results showed significant decreases in casualty and liability costs per service mile and hour during the period. Preventable accidents went from seven to zero over the three years. The number of lost days due to industrial accidents increased over 500 percent from 24 to 149 between FY2022 and FY2024.

- Rail Shuttle – The following is a brief summary of the rail shuttle functional trend highlights between FY2022 and FY2024:

  - Service Planning showed total operating cost per passenger mile decreased more than 65 percent overall as VTA begins to recover from the pandemic. The farebox recovery ratio increased by 16.5 percent overall, from 3.4 percent to four percent over the audit period. There was a 4.5 percent improvement in performance in vehicle service miles as a percentage of total miles and service hours per total hours remained steady at about 92 percent.

  - Operations exhibited steady performance in vehicle operations costs as a percentage of total operating cost. Vehicle operations cost per service hour increased by 8.5 percent. There were no reported complaints or commendations throughout the audit period. Data for on-time performance and missed trips was unavailable. The shuttle contractor is responsible for shuttle operations and does not track that data, as it is heavily influenced by the ACE commuter rail service schedules and performance.

  - Maintenance results revealed vehicle maintenance costs decreased slightly as a percentage of total costs, as did maintenance cost per vehicle service mile, decreasing just under two percent overall. The spare ratio increased to 8.3 percent over the period. There were only three reported mechanical failures reported in both FY2023 and FY2024.

- VTA did not report any preventable accidents during the current audit period.

- Paratransit – The following is a brief summary of the paratransit functional trend highlights between FY2022 and FY2024:

  - Service Planning results showed an overall 16.5 percent decrease in the cost per passenger mile, farebox recovery increasing from 4.4 to 5.1 percent, and improvements of two percent in vehicle miles in service and 7.8 percent in vehicle hours in service.

  - Operations results showed steady results in vehicle operations costs as a portion of total operating costs with a 0.6 percent decrease, and a more significant decrease of 6.6 percent in vehicle operations cost per hour. Trips completed within the on-time window increased by 7.5 percent and even though there were significant percentage increases in both complaints and missed trips, there were very few when compared to the total number of trips taken. There were no ADA trip denials. The rate of passenger no-shows and trip cancellations both decreased, while late cancellations increased by about 11 percent.

  - Maintenance results showed total maintenance costs compared to total operating costs increased by 2.7 percent over the three years. At the same time vehicle maintenance costs per service mile decreased by 13.1 percent. The spare ratio increased from 16 percent to 28.2 percent. Mean distance between major and all mechanical failure decreased over 55 percent each from FY2022 to FY2024.

  - Safety results showed that the rate of preventable accidents decreased by 22.4 percent during this audit period.

Recommendations

1. EXAMINE MAINTENANCE ACTIVITIES AND DEVELOP STRATEGIES TO ADDRESS INCREASING MECHANICAL FAILURE RATES IN THE BUS AND PARATRANSIT MODES.
   [Reference Section: VI. Functional Performance Indicator Trends]

   Audit period maintenance results for VTA bus and paratransit services showed service reliability generally declining across the audit period. For

Bus service, the mean distance between major failures decreased by 40.9 percent overall, although there was some improvement between FY2023 and FY2024. A similar trend was seen with mean distance between all failures, with performance worsening each year, resulting in a 58.2 percent overall decline during the audit period. For paratransit, the mean distance between major failures worsened by 57.4 percent overall, with a similar trend observed when looking at all failures at a 59.9 percent annual decline overall.

In the prior audit period VTA experienced deceased vehicle reliability for its bus fleet, attributed to a higher number of mechanical failures in the new battery powered buses integrated into the fleet in FY2021. It is unknown if the mechanical failure rate of those buses has continued into the current audit period. For paratransit, VTA experienced fluctuating year to year results, but ultimately declining service reliability in the prior audit period, although at a lesser rate of decline that in the current audit period.

Efforts should be made by VTA to improve its maintenance functions to increase vehicle reliability and reduce the growing rates of mechanical failures for its bus and paratransit fleets.

2. EXAMINE THE SIGNIFICANT INCREASES IN LOST DAYS DUE TO INDUSTRIAL ACCIDENTS IN THE BUS AND PARATRANSIT MODES.
[Reference Section: VI. Functional Performance Indicator Trends]

A significant worker safety issue observed during the audit period was the increasing incidence of lost hours due to industrial accidents, impacting

VTA bus and light rail services. For motorbus, there was a 258 percent increase in work hours lost due to industrial accidents, from 287 days in FY2022 to 1,030 days in FY2024. For light rail, there was an increase of 954 percent between FY2022 and FY2023 from 24 to 253 days, though there was a 41 percent decrease to 149 days in the last year.

VTA staff did not have an explanation for the increase in lost days, whether it was a true increase in accidents or a change in recording the data. VTA should investigate the reasons for the above increases in lost hours due to industrial accidents and develop policies as necessary to reduce occurrences and provide a safer workplace for all employees.

APPENDIX A:
INPUT STATISTICS FOR
FUNCTIONAL PERFORMANCE MEASURES

Functional Performance Inputs - Systemwide (All Modes)

Data Item	FY2022	FY2023	FY2024	Source
Total Operating Costs	$424,438,076	$454,070,971	$485,889,007	NTD F-40; FY24 initial report
Administrative Costs	$46,457,308	$51,110,941	$54,195,630	NTD F-40; FY24 initial report
Vehicle Service Hours	1,510,307	1,733,169	1,785,683	NTD S-10; FY24 initial report (all modes)
Marketing Costs	$1,615,559	$1,494,235	$2,315,920	SAP Marketing Cost Center Report
Unlinked Passenger Trips	17,757,575	23,853,939	27,710,782	NTD S-10; FY24 initial report
Farebox Revenue (All Modes)	$21,998,144	$27,388,902	$29,893,154	NTD F-10; FY24 initial report

Functional Performance Inputs – Bus Service

Data Item	FY2022	FY2023	FY2024	Source
Vehicle Service Miles	14,058,542	14,957,419	15,510,253	NTD S-10; FY24 initial report
Total Vehicle Miles	16,023,899	17,093,422	17,769,404	NTD S-10; FY24 initial report
Vehicle Service Hours	1,194,509	1,279,460	1,346,452	NTD S-10; FY24 initial report
Total Vehicle Hours	1,273,866	1,361,477	1,434,788	NTD S-10; FY24 initial report
Unlinked Passenger Trips	15,121,268	19,266,958	22,433,782	NTD S-10; FY24 initial report
Farebox Revenue	$18,080,143	$21,485,352	$23,478,545	NTD F-10; FY24 initial report
Total Operating Costs	$282,008,665	$305,975,159	$320,325,060	NTD F-30; FY24 initial report
Passenger Miles	77,955,015	91,725,853	104,965,619	NTD S-10; FY24 initial report
Vehicle Operations Costs	$176,423,064	$192,776,225	$202,021,821	NTD F-30; FY24 initial report
Total Operator Work Hours	1,603,224	1,663,394	1,771,740	Emp. Utilization Analysis (SAP)
Operator Scheduled Absences (Hours)	176,545	180,548	187,550	Emp. Utilization Analysis (SAP)
Operator Unscheduled Absences (Hours)	327,032	317,905	346,566	Emp. Utilization Analysis (SAP)
Trips On-Time	205,052	795,810	823,943	CAD AVL Op.Stats Report
Total Trips	246,991	1,008,375	1,064,526	CAD AVL Op.Stats Report
Complaints	4,875	4,680	5,239	SalesForce
Commendations	234	273	278	SalesForce
Missed Trips	6,510	25,691	22,403	Clever Devices CAD AVL
Maintenance Pay Hours	527,582	540,294	534,884	Emp. Utilization Analysis (SAP)
Total Maintenance Employee Work Hours	436,433	451,517	453,722	Emp. Utilization Analysis (SAP)
Maint. Emp. Scheduled Absences (Hours)	52,085	59,038	49,566	Emp. Utilization Analysis (SAP)
Maint. Emp. Unscheduled Absences (Hours)	70,778	73,204	73,996	Emp. Utilization Analysis (SAP)
Vehicle Maintenance Costs	$65,093,724	$70,670,079	$73,500,124	NTD F-30; FY24 initial report

Data Item	FY2022	FY2023	FY2024	Source
Non-Vehicle Maintenance Costs	$11,751,186	$10,756,063	$11,482,510	NTD F-30; FY24 initial report
Spare Vehicles (Total less Maximum Service)	103	106	84	NTD S-10; FY24 initial report
Total Vehicles	436	436	425	NTD S-10; FY24 initial report
Rev. Veh. Mechanical System Failures - Total	13,660	28,498	36,214	NTD R-20; FY24 initial report
Rev. Veh. Mechanical System Failures - Major	663	1,540	1,245	NTD R-20; FY24 initial report
Preventable Accidents	198	233	239	Vector Solutions NTD Major Thresholds for Preventable Events Summary
Casualty/Liability Costs	$4,741,286	$4,686,213	$2,757,477	NTD F-30; FY24 initial report
Lost Days - Industrial Accidents	287	336	1,030	Claims Program Manager's Report

Functional Performance Inputs – Light Rail

Data Item	FY2022	FY2023	FY2024	Source
Car Service Miles	1,584,635	3,202,370	2,618,995	NTD S-10; FY24 initial report
Total Car Miles	1,709,639	3,426,954	2,803,219	NTD S-10; FY24 initial report
Car Service Hours	101,376	227,892	186,281	NTD S-10; FY24 initial report
Total Car Hours	108,873	243,109	199,051	NTD S-10; FY24 initial report
Unlinked Passenger Trips	2,301,457	4,147,807	4,723,010	NTD S-10; FY24 initial report
Farebox Revenue	$2,804,855	$4,617,615	$4,960,487	NTD F-10; FY24 initial report
Total Operating Costs	$116,619,835	$122,428,199	$136,390,816	NTD F-30; FY24 initial report
Passenger Miles	12,485,050	22,191,575	24,410,341	NTD S-10; FY24 initial report
Vehicle Operations Costs	$42,942,788	$46,240,536	$48,958,506	NTD F-30; FY24 initial report
Total Operator Time (Hours)	286,912	302,062	326,099	Emp. Utilization Analysis
Operator Scheduled Absences (Hours)	21,956	23,425	26,023	Emp. Utilization Analysis
Operator Unscheduled Absences (Hours)	78,325	45,212	44,891	Emp. Utilization Analysis
Trips On-Time	25,377	115,232	101,618	Operating statistic reports
Total Trips	25,738	122,075	112,243	Schedules, adjusted for revisions from rehabs/station closures
Complaints	234	303	273	SalesForce
Commendations	9	12	6	SalesForce
Missed Trips	361	6,843	24,239	CAD AVL/Operating statistics, % Service lost
Maintenance Pay Hours	323,078	321,684	346,382	Emp. Utilization Analysis
Total Maint. Employee Time (Days or Hours)	311,790	307,094	310,308	Emp. Utilization Analysis
Maint. Emp. Sched. Absences (Days or Hours)	24,872	28,581	27,374	Emp. Utilization Analysis
Maint. Emp. Unsched. Absences (Days or Hours)	62,697	31,396	35,279	Emp. Utilization Analysis

Data Item	FY2022	FY2023	FY2024	Source
Vehicle Maintenance Costs	$31,539,556	$32,577,999	$36,979,533	NTD F-30; FY24 initial report
Non-Vehicle Maintenance Costs	$26,595,114	$26,510,226	$32,023,185	NTD F-30; FY24 initial report
Spare Cars (Total less Maximum Service)	68	44	60	NTD S-10; FY24 initial report
Total Cars	98	98	98	NTD S-10; FY24 initial report
Rev. Veh. Mechanical System Failures - Total	682	2,304	671	NTD R-20; FY24 initial report
Rev. Veh. Mechanical System Failures - Major	39	25	54	NTD R-20; FY24 initial report
Preventable Accidents	7	1	0	NTD Thresholds for Preventable Events
Casualty/Liability Costs	$2,420,682	$2,385,997	$1,440,318	NTD F-30; FY24 initial report
Lost Days - Industrial Accidents	24	253	149	Claims Program Manager's Report

Functional Performance Inputs – Rail Shuttle

Data Item	FY2022	FY2023	FY2024	Source
Vehicle Service Miles	168,465	174,241	173,819	NTD S-10; FY24 initial report
Total Vehicle Miles	212,477	215,033	209,763	NTD S-10; FY24 initial report
Vehicle Service Hours	18,080	18,157	17,157	NTD S-10; FY24 initial report
Total Vehicle Hours	19,854	19,833	18,623	NTD S-10; FY24 initial report
Unlinked Passenger Trips	59,895	114,740	192,736	NTD S-10; FY24 initial report
Farebox Revenue	$77,075	$83,936	$91,588	NTD F-10; FY24 initial report
Total Operating Costs	$2,245,301	$2,204,624	$2,289,273	NTD F-30; FY24 initial report
Passenger Miles	257,922	466,359	769,369	NTD S-10; FY24 initial report
Vehicle Operations Costs	$1,274,126	$1,253,783	$1,312,159	NTD F-30; FY24 initial report
Complaints	0	0	0	SalesForce
Commendations	0	0	0	SalesForce
Vehicle Maintenance Costs	$470,058	$459,793	$477,470	NTD F-30; FY24 initial report
Non-Vehicle Maintenance Costs	$132,957	$113,881	$120,939	NTD F-30; FY24 initial report
Spare Vehicles (Total less Maximum Service)	1	1	1	NTD S-10; FY24 initial report
Total Vehicles	13	13	12	NTD S-10; FY24 initial report
Rev. Veh. Mechanical System Failures - Total	0	3	3	NTD R-20; FY24 initial report
Rev. Veh. Mechanical System Failures - Major	0	0	0	NTD R-20; FY24 initial report
Preventable Accidents	0	0	0	Contractor Monthly Invoices

Functional Performance Inputs – Paratransit

Data Item	FY2022	FY2023	FY2024	Source
Vehicle Service Miles	3,026,133	3,445,265	3,817,480	NTD S-10; FY24 initial report
Total Vehicle Miles	3,917,651	4,307,019	4,844,970	NTD S-10; FY24 initial report
Vehicle Service Hours	196,342	207,660	235,793	NTD S-10; FY24 initial report
Total Vehicle Hours	296,684	301,925	330,649	NTD S-10; FY24 initial report
Unlinked Passenger Trips	274,955	324,434	361,254	NTD S-10; FY24 initial report
Farebox Revenue	$1,036,071	$1,201,999	$1,362,534	NTD F-10; FY24 initial report
Total Operating Costs	$23,564,280	$23,462,989	$26,883,858	NTD F-30; FY24 initial report
Passenger Miles	2,773,895	3,438,248	3,790,920	NTD S-10; FY24 initial report
Vehicle Operations Costs	$17,960,742	$17,623,993	$20,366,721	NTD F-30; FY24 initial report
Trips On-Time	207,791	266,272	291,150	Trapeze On Time Compliance Report
Total Trips	246,165	290,462	320,901	VTA Staff
Complaints per 1,000 passenger trips	0.59	0.79	1.02	Annual Transit Operation Report Performance (TOPR)
Missed Trips	124.0	446.0	448.0	Contractor Progress Report
Total ADA Trips	274,955	324,434	361,254	Trapeze On Time Compliance Report
ADA Trip Denials	0	0	0	Contractor Progress Report
Trip Cancellations	79,033	100,037	100,514	Contractor Progress Report
Late Trip Cancellations	5,526	7,472	8,055	Contractor Progress Report
No Shows	3,653	3,932	4,179	Contractor Progress Report
Vehicle Maintenance Costs	$2,528,149	$2,619,308	$2,771,039	NTD F-30; FY24 initial report
Non-Vehicle/Facility Maintenance Costs	$1,269,304	$1,358,144	$1,679,370	NTD F-30; FY24 initial report
Spare Vehicles (Total less Maximum Service)	23	28	51	NTD S-10; FY24 initial report

Data Item	FY2022	FY2023	FY2024	Source
Total Vehicles	144	144	181	NTD S-10; FY24 initial report
Rev. Veh. Mechanical System Failures - Total	23	29	71	NTD R-20; FY24 initial report
Rev. Veh. Mechanical System Failures - Major	20	23	58	NTD R-20; FY24 initial report
Preventable (Chargeable) Accidents	25	23	24	Contractor Monthly Invoices