

THOMAS P. DINAPOLI
STATE COMPTROLLER



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ALBANY, NEW YORK 12236

STATE OF NEW YORK
OFFICE OF THE STATE COMPTROLLER

May 3, 2023

Janno Lieber
Chairman and Chief Executive Officer
Metropolitan Transportation Authority
2 Broadway
New York, NY 10004

Re: Non-Revenue Service Vehicles and
On-Rail Equipment
Report 2020-S-29

Dear Mr. Lieber:

Pursuant to the State Comptroller's authority as set forth in Article X, Section 5 of the State Constitution and Section 2803 of the Public Authorities Law, we have conducted an audit of the Metropolitan Transportation Authority's (MTA) Long Island Rail Road (LIRR) highway vehicle fleet and on-rail equipment to determine whether LIRR maintains an inventory and consistently retires/disposes of its non-revenue service Highway Fleet Vehicles, and whether LIRR performs preventive maintenance on these vehicles and on-rail equipment and maintains an accurate inventory of parts required to repair the on-rail equipment. This audit covered the period from January 2018 to April 2022.

Background

The MTA is responsible for developing and implementing a unified mass transportation policy for New York City and Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk, and Westchester counties. MTA carries out these responsibilities directly and through its subsidiaries and affiliates, including LIRR.

Prior to March 7, 2020, LIRR was the busiest commuter railroad in North America, carrying an average of 301,000 customers each weekday on 735 trains. Due to the COVID-19 pandemic, LIRR ridership has significantly decreased, with an average daily ridership of 142,455 as of July 2022. LIRR is comprised of over 700 miles of track on 11 different branches and extends from four major NYC terminals – Penn Station, Grand Central Madison, Atlantic Terminal, and Hunters Point Avenue – through a major transfer hub at Jamaica to the easternmost tip of Long Island.

LIRR's published mission statement emphasizes its commitment to providing excellent rail transportation service that exceeds customer expectations and is worthy of the public's trust and support. In support of LIRR's mission, the Engineering Department (Engineering) is responsible for the design, construction, maintenance, and rehabilitation of LIRR's entire physical plant, excluding rolling stock. Vehicle Fleet Operations (VFO) and the Track Department (Track) are two of the nine subdivisions of Engineering.

VFO is responsible for the overall administration of fleet vehicles, including design, specifications, purchasing, coordination of maintenance through third-party vendors, fueling, and relinquishment. During the period from January 1, 2018 through March 8, 2021, VFO was responsible for an inventory of 1,034 active vehicles (731 owned and 303 leased) used by 26 LIRR departments and disposed of 282 vehicles (209 owned and 73 leased). The VFO fleet is made up of cars, SUVs, trailers, trucks, and vans. According to the LIRR Office of Management and Budget (OMB), from January 1, 2018 to December 31, 2020, VFO spent almost \$25 million on vehicle purchases and nearly \$16 million on vehicle repairs.

VFO does not service vehicles in-house. Instead, it has a maintenance contract with a vendor that schedules the preventive maintenance and repairs for the fleet, keeps the maintenance records, and coordinates billing with local independent mechanic shops. All these functions are done within the vendor's proprietary software. The software also has some cost monitoring functions. Additionally, VFO officials make unscheduled visits to mechanic shops daily to verify that work is progressing and that the repair costs are justified for the vehicles. VFO staff monitor the open invoices in the vendor's system and must authorize all invoices over \$450 before work can be undertaken. Costs are adjusted as needed prior to approval in the system.

Among Track's responsibilities is the maintenance of 243 pieces of on-rail equipment, with an estimated cost of almost \$57 million as of March 15, 2022. LIRR committed \$55 million in the 2020-24 Capital Program to construction equipment and geometry cars,¹ including ballast cars (a freight car for carrying gravel or coarse stone), a crane, and a tamper to compact the ballast. Track has a maintenance shop at the Hillside Support Facility (HSF) that provides both maintenance and repair services for its on-rail non-revenue service equipment. The Maintenance of Way Materials (MofW) unit maintains a warehouse at HSF to supply parts needed to perform maintenance and as-needed repairs on the on-rail equipment. On February 10, 2022, we received a copy of the MofW Parts Inventory listing as of January 31, 2022. The Inventory consisted of 9,373 different part numbers/types. The Inventory listing was valued at over \$10.2 million. The Inventory is reported at the end of every month to Track management and to Finance for financial statement reporting purposes.

Maintenance work is done by Track's 28 in-house mechanics at HSF and on-site in the field. Track's mechanics perform winter management and yearly maintenance for Track's tampers and for tie cranes (heavy-duty tie handling cranes for moving wood and concrete ties), which are used daily. Mechanics are also assigned to this equipment for as-needed maintenance and repairs in the field. The user departments are responsible for the daily and weekly maintenance of assigned equipment.

Results of Audit

VFO does not have written policies or procedures for maintaining its vehicle fleet inventory or performing vehicle maintenance. While it indicates it has undocumented practices for both, VFO is not in compliance with either of these practices. Further, although required folders are supposed to be used to maintain key information on every vehicle, the files for 30 of the 76 vehicles we sampled were missing one or more essential documents. In addition, VFO did not always complete preventive maintenance (PM) or the required New York State inspections. The 76 sampled vehicles required 343 PM services. We found 90 were done late and 28 were not done. For the 3-year period reviewed, 135 State inspections were required.

¹ Geometry cars use lasers and video to precisely measure the track alignment, cant or cross level (the difference in elevation between the two rails), curvature, rail gauge, warp, and the rail profile.

Of these, 42 were late (ranging from 3 days to 167 days) and four were not done. Moreover, while the fees for the inspections should have ranged from \$6 to \$45 as they are regulated by the State, we found the vendor was overpaid for 64 of 131 inspections done. As an example, for one vehicle, the fee should have been \$26; however, VFO paid \$130, or \$104 more than the required fee, but did not provide an explanation of the overpayment. In addition, we found the following:

- VFO has not followed LIRR Corporate Policy and Procedure for adding vehicles to the fleet. While all 20 of the vehicles in our sample were requested using the required form, all of the forms were missing critical information.
- VFO leases about 29% of the non-revenue service vehicles; however, it did not always complete the cost-benefit analysis comparing leasing to purchasing the vehicle. For five of the 20 leased vehicles sampled, VFO extended the leases beyond the initial request period – with one vehicle costing \$81,000 more to lease than to purchase.

Track does not have written policies or procedures for maintaining an accurate inventory of its equipment and parts. Ownership Document Files (Files) were often missing or incomplete, usually missing one or more of the required seven ownership documents. For a requested sample of Files for 30 pieces of equipment, Track was only able to provide five Files (17%). In addition, Track was not following LIRR's Corporate Policy and Procedure on required reconciliations. This is attributable, in part, to the use of multiple identifier systems to track inventory, which did not maintain consistent information. Of the 30 pieces of equipment in our sample, Track officials could not find eight in the database – with an original estimated cost of \$1.15 million.

Further, Track did not properly maintain documentation for required maintenance of individual pieces of equipment. The lack of regular PM increases the risk of emergency and/or unscheduled repairs, and the absence of reports or data on the performance and maintenance of equipment may negatively impact the decisions made on its use, care, and replacement.

Vehicle Fleet Inventory

VFO's practice is to maintain a hard-copy folder for each vehicle in its fleet containing its ownership documents. The folders include the title, registration, copy of the purchase receipt, and purchase order. The cover of the folder documents the Vehicle Identification Number (VIN), GPS device number, assignments, in-service date, fuel card number, and fuel tank size.

Thirty of the 76 vehicle folders (40%) in our sample were missing one or more documents, including one folder that was missing the title and five folders missing a purchase receipt. In addition, the information on the cover of 28 folders (37%) was incomplete. The missing information included the fuel tank size, tire size, fuel card number, and other intake and assignment information.

When asked about the missing documents during fieldwork, VFO officials stated that, due to the COVID-19 pandemic, the documents may not have been added to the folders. In response to the preliminary findings, officials noted that the information in the folders is not critical in terms of allowing VFO to manage its operation. VFO uses the MTA All-Agency all-inclusive third-party fleet management software as its primary tool for managing LIRR's vehicle fleet. The software contains all required vehicle information necessary for VFO to perform all related fleet tasks, including VIN, license plates, description, tire size, department assignments, and maintenance records. Vehicle information is also stored on the MTA LIRR in-house inventory software. We compared the data in the in-house inventory to the data

provided from the third-party software, and found that the data in the in-house software inventory was incomplete, missing 340 of the 1,316 (26%) vehicles accounted for in the third-party software.

Maintaining multiple systems with differing vehicle information and incomplete records, while simultaneously maintaining hard-copy records of much of the same information, is not an efficient or effective way of managing the VFO fleet inventory and can result in uncertainty as to which is the prevailing information of record. Moreover, certain hard-copy information cannot be replaced with electronic records, such as the vehicle's title. Additionally, for records that the MTA wishes to maintain solely electronically, it is important that backups are performed to ensure information can be recovered and restored if a system disruption occurs.

Vehicle Fleet Maintenance

VFO's practice requires PM be performed every 6 months or 6,000 miles for vehicles and once per year for trailers. PM services for scheduled vehicles must be completed within 30 days of the due date. Annual State inspections must be completed within 15 days of the due date.

We reviewed the maintenance records for the period from January 1, 2018 through July 15, 2021 for our sample of 76 (which included five trailers). We found that, of the 343 PM services that were required, 130 were done early, 95 were on time, 90 were late, and 28 were not done. Some PM services were completed as early as 183 days before they were due and as late as 737 days after they were due based on the prior PM date. Of the 135 State inspections that were required, 62 were done early, 42 were late, 27 were on time, and four were not done. State inspections were as late as 167 days. Though the fees for these inspections are regulated by the State, LIRR made 64 overpayments, with fees as high as \$104, and 29 underpayments, with fees up to \$45 lower than expected. Those lower-than-expected fees included 22 inspections that were done at no cost.

LIRR acknowledged the importance of PM services in its response to our preliminary findings. Officials noted, however, that LIRR has a limited number of vehicles, including specialized equipment that is critical to maintaining the safety of LIRR's operations and infrastructure. LIRR stated that it needs to manage fleet needs and balance performing required infrastructure needs critical for safe operations. These decisions enable LIRR to effectively address priority needs while still ensuring that fleet maintenance is performed. We requested but did not receive documentation supporting the decisions not to send the non-revenue service vehicles for PM. Nevertheless, VFO regularly notifies departments regarding motor vehicle maintenance requirements. Also, departments receive automated email notifications from the vehicle maintenance contractor identifying maintenance needs for specific vehicles.

While we recognize VFO's position regarding its needs to balance priorities, LIRR's Corporate Policy and Procedure ENG-007 establishes a method for tracking department compliance for scheduled maintenance and timely State inspections as well as the required coordination between VFO and the departments. Agency policy and procedure requires the department coordinators to work with department personnel to deliver the vehicle to the maintenance vendor on schedule to ensure completion by the due date provided by VFO.

In addition, VFO does not have a formal procedure for analyzing the causation of downtime for vehicles that are taken out of service. Its practice is to simply use a downtime report to track vehicle repairs and to determine the need to visit vehicles with delayed repairs at the vendor maintenance facility.

We reviewed the downtime reports for the month of January for the years 2018–2021, which showed the vehicles that were visited at repair shops during the period. The reports show that VFO officials visited 28 shops 366 times, finding some vehicles had up to 335 days of downtime. We note that 29% of the visits were related to PM work, with an average downtime of 9 days. The visits for vehicles with more than PM work averaged 14 days. The number of days of downtime for PM work needs to be evaluated, especially since VFO stated that it had a limited number of vehicles.

Vehicle Fleet Replacement or Additions

LIRR's Corporate Policy and Procedure outlines the process for replacement of or additions to the highway vehicle fleet. The process is used for permanent or short-term vehicle use and requires a cost-benefit analysis, including projected acquisition costs and operational benefit costs. This information is to be documented in "Attachment A" to the Corporate Policy and Procedure form. We reviewed the forms and cost-benefit analyses for the 20 leased vehicles in our sample to determine whether VFO followed the policies and procedures.

All 20 of the vehicles in our sample were requested using the form; however, none of the forms were fully completed. There are 11 items required when completing a form, including three items that are critical to decision making: cost projection, procurement, and the attachments. Of the 13 forms reviewed (multiple vehicles on one form), 12 did not have a completed cost projection; 10 did not have completed procurement information; and 11 were missing the required attachments. There were also eight forms that were missing all three items. We note that while these vehicles were eventually leased, seven forms were for purchasing and six forms were for leasing vehicles.

The Corporate Policy and Procedure also requires OMB to conduct a cost-benefit analysis upon receipt of the form to validate the request. This includes, but is not limited to, procurement financial options, lease versus purchase analysis, budget impact, and productivity enhancements and/or savings. We received analyses for nine of the 13 forms submitted. While on the original form five were for purchase and four were for lease of vehicles, for seven of the nine forms OMB conducted the analyses as leases. For the other two, one was for a purchase with an interim lease and the other was for a purchase. OMB did not make any determinations based on the analyses beyond providing the break-even year for four of the nine forms.

In response to our preliminary findings, LIRR stated that OMB is not required to provide any decisions regarding purchasing or leasing, nor does OMB approve or reject requests. The response further noted that the OMB analysis is done as part of the process as an informational tool and an independent analysis of data provided as a decision-making tool to be used in the department's concurrence process.

This explanation is not in line with LIRR's policy, which requires OMB to validate each request as noted above. Validating requests may not signify approval; however, defining the procurement financial options, lease versus buy analysis, budget impact, and productivity enhancements and/or savings is part of the concurrence process.

Moreover, per LIRR's policy, each approved form and analysis must have an attached Record of Concurrence Approval (ROCA). The ROCA must be completely approved prior to commencing the procurement requisition process. We requested the complete packages, including the ROCA, for the vehicles in our sample beginning November 8, 2021. However, as of May 4, 2022, LIRR had not provided any of the ROCA forms.

Vehicle Fleet Leasing

VFO leases about 29% of its non-revenue service vehicles; however, it did not always complete a cost-benefit analysis of leasing compared to purchasing the vehicle on a timely basis or at all. Additionally, we found VFO sometimes extended the lease beyond the initial period. We reviewed the invoice payments for the 20 leased vehicles in our sample, and found five vehicles with multiple purchase order numbers associated with the invoice payments. Multiple purchase order numbers for one vehicle represents an extension of the lease either due to the renewal of a contract or a request for additional funding to continue the lease with the current vendor. For the five vehicles, three had two lease extensions and two had one extension. These vehicles were leased for 44 to 62 months in total, with total lease costs ranging from \$37,109 to \$312,666.

One of the five vehicles was leased for a total of 58 months, costing LIRR \$312,666 – \$81,000 more than the vehicle’s purchase price. The lease began on February 23, 2015 with a monthly cost of \$5,500. The vehicle was taken out of service on September 29, 2018 and then returned to service in another department on December 21, 2018 at a new monthly cost of \$5,300. It was finally returned to the leasing company on March 9, 2020.

Recommendations

1. Verify that all required documents, such as vehicle title, are included in the hard-copy folder and ensure that documentation is periodically confirmed.
2. Establish a formal process for vehicle exemption from scheduled PM that includes documented rationale for exemption and formal notification of the department head and executive management.
3. Ensure that records are backed up in case the maintenance contract vendor’s system is compromised.
4. Revisit the ENG-006 Passenger and Work Vehicle Replacement and Additional Request Procedure to ensure a complete cost-benefit analysis occurs on a timely basis.
5. Develop and implement a procedure for visiting shops based on the nature of the repair, which at a minimum requires reporting on the vehicles examined and the expectation for their return to service, and document the visit.

Track Equipment and Parts

On-Rail Track Equipment Inventory

Pursuant to LIRR’s Corporate Policy and Procedure PL-025, each department must designate a Personal Property Custodian (PPC) for their department who is responsible for affixing Property Tags (Tags) and tracking and inventorying each piece of equipment. The equipment is to be tracked in a Property Control Register, which contains all pertinent information (e.g., department employee designated as PPC, Tag number, status, disposition date). Officials also indicated it is their practice to maintain an Ownership Document File (File) for each piece of equipment, containing seven documents and a copy of the Tags.

There were seven PPCs listed as responsible for one or more of the 231 pieces of Track equipment as of January 31, 2022; however, only one of the seven PPCs had documentation for any of the pieces of equipment. When questioned, the other PPCs gave contradictory

statements on what documents should be maintained and who is responsible for maintaining the File.

We selected a sample of equipment items for a total of 30 items valued at \$13.3 million. Of the 30 items, Track officials did not provide a file for 25, valued at \$8.6 million. For the remaining five items, four Files contained partial documentation and only one File was complete.

LIRR, in responding to our preliminary findings, stated that Engineering may choose to retain the other ownership documents but is not required to as an Invoice, Requisition, and Purchase Order are generated by and reside in the agency's electronic system (PeopleSoft). The Technical Scope of Work, Development Specs, and Estimate and Costs are also in PeopleSoft as attachments to the Requisition or as a separate file.

While we agree that this information, if maintained in PeopleSoft as attachments, could be sufficient, officials unsuccessfully searched PeopleSoft for these documents for all 30 pieces of equipment in our sample during our visit and could not locate the information.

The problem is attributable in part to the use of multiple systems to track inventory. Track, which uses a Microsoft Excel listing as its main inventory of equipment, uses Tag numbers. However, a Shop Database, used by the Track supervisors, tracks inventory by unit number. Further, while Track's Excel listing uses the Tag number as its the primary identifier, it captures the unit number for 203 of the 243 pieces of equipment.

Track officials stated that all equipment on the Excel listing should be found in the Shop Database. However, of the 30 pieces of equipment in our sample, there were eight pieces of equipment, with an original estimated cost of \$1,149,895, that Track officials could not find in the Shop Database using any of the available information.

The Excel listing noted four pieces of equipment labeled "Could Not Verify." These pieces had a total value of \$425,394. We began inquiring about this equipment on July 29, 2021. On March 29, 2022, after 8 months of inquiring, officials identified two of the four pieces of equipment (payloaders), noting that they were still in use by HSF; they stated that the other two pieces of equipment (rail dollies) were scrapped. Officials did not provide documentation to show that the process of scrapping the rail dollies was completed until May 3, 2022 – 9 months after our original inquiry.

Additionally, there were four pieces of equipment on the Excel listing that were labeled "Scrapped." Track officials provided a 2017 Decommissioning Program to document the disposal of three of the four pieces of equipment on August 12, 2017. However, there was nothing provided for the remaining item, which cost \$51,817 per the Excel listing. Officials did not provide a signed copy of the official Retirement/Disposal of Personal Property Request form for any of this scrapped equipment despite the forms being submitted for approval on March 18, 2022.

We note that Track is implementing an Enterprise Asset Management system (EAM), which appears to have the potential to record both its inventory and maintenance. However, Track officials provided documentation that only explains handling the work orders.

In response to our preliminary findings, Track officials stated that the EAM is used to manage assets and track asset activity and history. Also, they stated that Engineering is in the process of recording applicable assets in EAM, and it is an ongoing process. They further stated that officials are currently investigating utilizing the work order function in the EAM to assist the repair shop in tracking the maintenance on non-revenue equipment.

Recommendations

6. Ensure that the EAM system under development contains sufficient data to maintain both Track's inventory and maintenance history of on-rail equipment.
7. Perform internal periodic reconciliation of Track equipment inventory between the Track Excel listing and the Shop Database.
8. Ensure that LIRR Corporate Policy and Procedure PL-025 is followed, including all required reconciliations.
9. Revisit the retention policy for ownership documents to ensure that records are retained until the property is disposed.

On-Rail Equipment Maintenance

In the absence of formal procedures, Track advised that it primarily adheres to the American Railway Engineering and Maintenance-of-Way Association Manual and the operation manuals for the individual pieces of equipment. We were advised that Track uses the Daily Login sheets from MoFW's shop at HSF to assign jobs to each of their mechanics. Service tickets are used by the mechanic to document that the work was done. The service tickets are filed in a folder by equipment number. In addition, the equipment operator prepares an Engineering Equipment Operator Daily Report (Daily Report) to track daily and weekly tasks for PM. One copy goes to the supervisor/operator, one copy is sent to Track, and one copy remains in the vehicle.

Track officials could not document the maintenance done on the 30 pieces of equipment, valued at \$13.3 million, we sampled from January 2018 to May 2021. Five pieces were maintained by VFO and Maintenance of Equipment, and one piece of equipment does not require maintenance as it is periodically sent out for calibration. Six pieces of equipment did not have any service tickets to show that they were maintained.

The remaining 18 pieces of equipment had 768 service tickets. However, for six of the pieces, none of the service tickets were for PM. Further, only 178 of the 768 tickets documented maintenance as specified in the manual or the description on the service tickets. The other service tickets were for repairs, the moving of equipment from one location to another, or work done with the equipment such as tamping. An example of the impact of PM not performed was a service ticket completed on August 12, 2021, which found the equipment was being sent for service because it had low antifreeze and no engine oil – items that should be addressed as part of PM.

We found Daily Reports were interfiled with the service tickets and they were not forwarded to Track for the equipment we sampled. During our field visit to check the location of three pieces of equipment, we did observe Daily Reports in the cabs of the equipment.

Track officials stated that the equipment does not have to be periodically inspected and maintained because it is durable and will not be "spoiled" by the lack of maintenance. Officials also added that compliance with the inspection standards would require a larger staff at additional costs including administrative staff to enter information from service tickets. Rather, they stated that the equipment can be inspected and readied when it is required for a job. However, they provided no documentation to support any of these statements.

The absence of regular PM can put operators at risk and increase the risk of emergency and/or unscheduled repairs taking a piece of equipment out of service for longer than PM. In

addition, the absence of reports or data on the performance and maintenance of equipment may negatively impact the decisions made on the use, care, and replacement of equipment.

Recommendations

10. Establish a PM process that documents when maintenance is done or the reasons it was not done.
11. Ensure that the Daily Reports are completed and distribution procedures are followed.

MofW Parts Inventory

MofW has not established written inventory policies or controls for safeguarding the assets (i.e., parts). Without policies and procedures, MofW staff are advised to complete a charge-out sheet each time parts are removed from inventory. Staff are also instructed to complete a form when unused parts are returned to the storeroom at HSF.

MofW could not locate four of the 84 part types in our sample, valued at \$102,284. In addition, for nine part types, the quantity at HSF did not match the quantity in the Inventory records. For example, the Inventory records show that there are 100 items valued at \$118 each in stock. However, MofW officials could only locate 94. For the other eight part types, we found more “on the shelf” than listed in the Inventory.

The lack of a clear set of instructions/procedures when removing parts or returning them to the storeroom results in different methods used to account for parts. LIRR officials stated that they do not have enough staff to maintain an inventory of 61,767 individual parts.

Additionally, MofW officials were not in compliance with Business Service Center (BSC) policy that requires vendors to email invoices directly to BSC. Instead, vendors are requested to email the invoices to MofW officials. If MofW finds any discrepancies, it requests the vendor to modify the invoice and then the vendor submits it for payment. After review, MofW forwards the invoice to BSC, along with the receipt. In effect, MofW orders, receives, and creates receipts and verifies invoices for all parts in the shop. By not complying with BSC policy for submitting purchase orders for operating-funded expenditures, due to lack of separation of duties, MofW risks lack of oversight over the requisition and maintenance of an inventory valued at over \$10 million.

Recommendations

12. Develop and implement formal procedures for removing and returning parts from the MofW warehouse at HSF. Monitor compliance with the procedures.
13. Enforce the BSC policy for submitting purchase order invoices for operating-funded expenditures.

Audit Scope, Objectives, and Methodology

The objectives of our audit were to determine whether LIRR maintains an accurate inventory and consistently retires/disposes of its non-revenue service Highway Fleet Vehicles, and whether LIRR performs PM on its Highway Fleet Vehicles and on-rail equipment and maintains an accurate inventory of parts required to repair the on-rail equipment. This audit covered the period from January 2018 to April 2022.

LIRR maintains an inventory and consistently retires/disposes of its non-revenue service vehicles and equipment, including the parts required to repair the on-rail equipment. This

audit covered vehicles and on-rail equipment that were part of the fleet during the period from January 2018 to January 2022. The fieldwork was conducted from March 29, 2021 to April 9, 2022. (It was extended due to restrictions on access to LIRR personnel and records as a result of the COVID-19 pandemic.)

To accomplish our objectives and assess related internal controls, we interviewed VFO management, and reviewed policies, procedures, operation manuals, and practices related to inventory, maintenance, repair, and disposal of LIRR's vehicles and on-rail equipment. We verified whether LIRR officials maintained a complete and accurate inventory of vehicles and on-rail equipment; retained or had access to required ownership documents; conducted required PM in accordance with guidance; and disposed of vehicles and on-rail equipment in accordance with LIRR procedures.

We also interviewed officials from Track, OMB, and Procurement and reviewed records related to vehicles and equipment.

We selected a random sample of 76 VFO vehicles from the population of 1,316, with an expected rate of occurrence not over 5% or expected rate of occurrence not less than 95%, a confidence level of 90%, and a ± 4 confidence interval. We then used a random number generator to select the sample.

We also selected a judgmental sample of 30 of the 243 pieces of Track's on-rail equipment. The population was sorted into six strata based on cost, highest to lowest. We chose the sample size for each stratum based on the total items in the strata relative to the total number of items being selected for our sample of 30.

According to the Parts Inventory, Track had 9,973 part types in the 3 months reviewed (November 2021, December 2021, and January 2022). We filtered the inventory for items with individual costs of \$1,000 or more, changes in quantities, and items with a difference in total costs of \$1,000 or more across 3 months. This resulted in 1,171 part types. We selected a judgmental sample of 84 part types valued at \$2,251,186 (25 most expensive, nine with changes in quantities all 3 months, 25 with the highest difference, and 25 with the lowest difference). We counted the inventory on February 23, 2022 and March 22, 2022 for the 84 part types, verifying the quantity listed in the MofW's Parts Inventory as of the end of January 2022. These samples were not designed to be projected to the entire population. We tested the data used to select our samples and conduct our audit work and determined it was sufficiently reliable for the purposes of our audit objectives.

Statutory Requirements

Authority

This audit was performed pursuant to the State Comptroller's authority as set forth in Article X, Section 5 of the State Constitution and Section 2803 of the Public Authorities Law.

We conducted our performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In addition to being the State Auditor, the Comptroller performs certain other constitutionally and statutorily mandated duties as the chief fiscal officer of New York State,

including some duties on behalf of public authorities. For the MTA, these include reporting MTA as a discrete component unit in the State's financial statements and approving selected contracts. These duties could be considered management functions for purposes of evaluating organizational independence under generally accepted government auditing standards. In our professional judgment, these duties do not affect our ability to conduct this independent audit of MTA's oversight and administration of its non-revenue service vehicles and on-rail equipment.

Reporting Requirements

We provided a draft copy of this report to MTA LIRR officials for their review and formal comment. Their comments were considered in preparing this final report and are attached in their entirety at the end of it. MTA LIRR officials replied to our draft report that they have taken action to implement 11 of the 13 recommendations. They pointed out that some of the recommended practices are in place, but they will improve them. Our responses to certain MTA LIRR comments are included in the report's State Comptroller's Comments. Along with their response, MTA LIRR officials also provided confidential attachments, which are not included in this report but will be retained on file at the Office of the New York State Comptroller.

Within 180 days after the final release of this report, as required by Section 170 of the Executive Law, the Chairman and Chief Executive Officer of the Metropolitan Transportation Authority shall report to the Governor, the State Comptroller, and the leaders of the Legislature and fiscal committees, advising what steps were taken to implement the recommendations contained herein, and where the recommendations were not implemented, the reasons why.

Contributors to this report were Robert C. Mehrhoff, Anthony Belgrave, Ryan Wendolowski, Agnieszka Wolf, Inna Zenin, and Nafisa Rahman. We wish to thank the management and staff of the MTA Long Island Rail Road for the courtesies and cooperation extended to our auditors during this audit.

Very truly yours,

Carmen Maldonado
Audit Director

cc: M. Woods, Auditor General, MTA
D. Jurgens, Assistant Auditor General, MTA
Division of the Budget

Agency Comments

2 Broadway
New York, NY 10004
212 878-7000 Tel

Janno Lieber
Chairman and Chief Executive Officer



Metropolitan Transportation Authority

State of New York

April 3, 2023

VIA E-MAIL

Ms. Carmen Maldonado
Audit Director
The Office of the State Comptroller
Division of State Government Accountability
110 State Street, 11th Floor
Albany, NY 12236-0001

Re: Draft Report #2020-S-29 (Non-Revenue Service Vehicles and On-Rail Equipment)

Dear Ms. Maldonado:

This is in reply to your letter requesting a response to the above-referenced draft report.

I have attached for your information the comments of Catherine Rinaldi, Interim President, Long Island Rail Road, which address this report.

Sincerely,

A handwritten signature in blue ink that reads "Janno Lieber".

Janno Lieber

c: Laura Wiles, MTA Chief of Staff
Michele Woods, Auditor General, MTA Audit Services

The agencies of the MTA

MTA New York City Transit
MTA Long Island Rail Road

MTA Metro-North Railroad
MTA Bridges and Tunnels

MTA Construction & Development
MTA Bus Company



March 31, 2023

Mr. Janno Lieber
Chair and Chief Executive Officer
Metropolitan Transportation Authority
2 Broadway, 20th Floor
New York, NY 10017

**RE: Non-Revenue Service Vehicles and On-Rail Equipment
Report No. 2020-S-29**

Dear Chair Lieber,

This letter is in response to the Office of the New York State Comptroller (OSC) report issued on February 22nd 2023 on Long Island Rail Road's (LIRR) Non-Revenue Service Vehicles and On-Rail Equipment. The focus of the audit was to determine if LIRR maintains an asset inventory, performs preventive maintenance, and maintains an accurate inventory of parts required to repair the on-rail equipment.

Below please find detailed responses to the specific findings and recommendations. In addition, we wish to clarify some statements noted in the report.

Recommendation #1

- Verify that all required documents, such as vehicle title, are included in the hard-copy folder and ensure that documentation is periodically confirmed.

LIRR Response:

Agree. LIRR Engineering's Vehicle Fleet Office (VFO) has added a checklist to each file identifying which documents are required and have been placed in the folder. The checklist includes a signature line for a manager and each folder is not filed until it is complete, including manager verification and sign-off.

Implementation Status: **Implemented**

Recommendation #2

- Establish a formal process for vehicle exemption from scheduled PM that includes documented rationale for exemption formal notification of the department head and executive management.

LIRR Response:

Agree. VFO will provide quarterly reporting to applicable department heads detailing the status of their respective highway fleet's PM schedules. VFO will consider issuing an annual reminder to departments, either directly from VFO, or via a Chief's Notice from the Chief Engineer, reminding departments of their responsibility for ensuring their highway

The agencies of the MTA

fleet receive the required PMs. VFO will work with departments to assess the feasibility of having the departments document the reasons why PMs are not completed according to schedule (e.g., internal supervisory reviews).

Implementation Status: **Ongoing**

Recommendation #3

- Ensure that records are backed up in case the maintenance contract vendor's system is compromised.

LIRR Response:

Disagree. VFO will continue to maintain hard copies of documents associated with maintaining non-revenue vehicles. However, in compliance with its contractual obligation, the vendor, ARI, is required to have a disaster back-up plan to restore information in the event of any loss of data. To that end, ARI has in place Business Continuity and Disaster Recovery protocols and procedures if their system is compromised. The Disaster Avoidance & Redundancy section includes Data Center Facility Protection, Application/Infrastructure Redundancy and Data Protection. If it is determined that further protections are required, LIRR can request a regular back-up data file from ARI.

[Comment 1](#)

Implementation Status: **Not Applicable**

Recommendation #4

- Revisit the ENG-006 Passenger and Work Vehicle Replacement and Additional Request Procedure to ensure a complete cost-benefit analysis occurs on a timely basis.

LIRR Response:

Agree. The VFO and Office of Management & Budgets will begin discussions to revisit the process and update ENG-006.

Implementation Status: **Ongoing**

Recommendation #5

- Develop and implement a procedure for visiting shops based on the nature of the repair, which at a minimum requires reporting on the vehicles examined and the expectation for their return to service and document the visit.

LIRR Response:

Agree. VFO will work with MTA-Information Technology to update the INFOR Inventory Management System to include an on-line form for documenting shop visits. This will assist in the documentation of field shop visits that are currently being performed and avoid the time-consuming process of filing hard copies.

Implementation Status: **Ongoing**

Recommendation #6

- Ensure that the EAM system under development contains sufficient data to maintain both Track's inventory and maintenance history of on-rail equipment.

LIRR Response:

Agree. LIRR Engineering – Track uses Infor’s Enterprise Asset Management system (EAM) to manage assets and track asset activity and history (i.e., LIRR equipment) by monitoring various elements related to the equipment (e.g., location, warranties, repairs via trouble tickets and work orders, etc.). Engineering is in the process of recording applicable assets in EAM - an ongoing process as assets are purchased. To date, 50 out of the 243 pieces of equipment maintained by Track have been entered into Infor. Track continues to work with other Engineering personnel to enter the remainder. Additionally, Track officials are currently investigating utilizing the work order function in EAM to assist the Repair Shop in tracking the maintenance on non-revenue equipment.

Implementation Status: **Ongoing**

Recommendation #7

- Perform internal periodic reconciliation of Track equipment inventory between the Track Excel listing and the Shop Database.

LIRR Response:

Agree. Engineering - Track Operations will periodically reconcile Track equipment inventory between the Track Excel listing and the Shop database.

Implementation Status: **Ongoing**

Recommendation #8

- Ensure that LIRR Corporate Policy and Procedure PL-025 is followed, including all required reconciliations.

LIRR Response:

Agree. The documentation referenced in PL-025 pertains to Property Tags provided by LIRR Procurement - Stores. LIRR Engineering issued a Chief's Notice re-instructing its Personal Property Custodians that, as per PL-025, Property Tags should be maintained for as long as the department owns the property and to perform reconciliations as required by the policy. Additionally, Engineering is exploring a sturdier, more permanent tag replacement solution for property stored along the Right-of-Way for which exposure to outside elements can cause current paper tags to deteriorate. In the interim, Engineering's Excel equipment inventory listing is available to retrieve tag numbers as needed.

Implementation Status: **Implemented**

Recommendation #9

- Revisit the retention policy for ownership documents to ensure that records are retained until the property is disposed.

LIRR Response:

Agree. LIRR Engineering will follow up with Procurement and the BSC to ensure ownership documents are stored and maintained as required.

Implementation Status: **Ongoing**

Recommendation #10

- Establish a PM process that documents when maintenance is done or the reasons it was not done.

LIRR Response:

Agree. Track has a preventive maintenance (PM) process in place where equipment is maintained as per the Manufacturer's and American Railway Engineering and Maintenance-of-Way Association (AREMA) specifications. In addition, heavily used equipment is cycled through the shop annually for complete PM.

In contrast, equipment not heavily used, that does not meet the prescribed thresholds within the Manufacturer's and AREMA specifications will not have frequent PMs performed as they are not required.

Nevertheless, Track will evaluate to improve its current process, including re-instructing employees to ensure service tickets and daily reports are completed when PMs are performed as well as documenting when PMs are not necessary for applicable equipment. In addition, Track will research the sampled 30 pieces of equipment noted in the draft report as missing manuals/service tickets and provide relevant information to the auditors.

In the interim, Track has entered its equipment in, and is in the development stages of working with LIRR EAM to utilize, an application called Hexagon. The application will be used to track and maintain PM's, including but not limited to entering service tickets, running reports that show how much time is spent on maintaining equipment, which equipment requires the most maintenance, providing monthly maintenance schedules and developing future needs.

Implementation Status: **Ongoing**

Recommendation #11

- Ensure that the Daily Reports are completed, and distribution procedures are followed.

LIRR Response:

Agree. Engineering Management and Supervision will re-enforce the completion and return of daily reports to Track for its files during daily job briefings.

Implementation Status: **Ongoing**

Recommendation #12

- Develop and implement formal procedures for removing and returning parts from the MofW warehouse at HSF. Monitor compliance with the procedures.

LIRR Response:

Agree. Engineering management has drafted a Materials Management Standard Operating Procedure (SOP) for charging out parts from the Track Shop including the completion of Charge Out sheets. The final SOP will be posted in the area where parts are charged out as a reminder to employees of the process and procedure. Additionally, parts that are charged out are inserted in and become part of the equipment during repairs and are very rarely returned to inventory, if at all. Nevertheless, LIRR will ensure the SOP accounts for instances when previously charged out items need to be returned.

Implementation Status: **Ongoing**

Recommendation #13

- Enforce the BSC policy for submitting purchase order invoices for operating-funded expenditures.

LIRR Response:

Disagree. Original invoices are sent to the BSC for entry into PeopleSoft. MofW receives a duplicate set of originals for their review and is not circumventing the BSC's process. After their review, the MofW Material Staff Manager does not forward the invoices or receipts to the BSC. The individual who ordered the item ensures they received what they ordered via shipping/packing documents an inspection. They then acknowledge as such by receipting for the item in PeopleSoft through which the invoices are paid via a system-controlled three match (Purchase Order, Invoice, Receipting). Additional controls and management oversight occur in PeopleSoft during the requisition and purchase order process (including LIRR Procurement & Logistics and Office of Management & Budget based on pre-determined thresholds). There is no breakdown of internal controls.

[Comment 2](#)

Implementation Status: **Not Applicable**

OTHER CLARIFICATIONS

1. On pages 4-5 under Vehicle Fleet Maintenance the report states: *“We reviewed the downtime reports for the month of January for the years 2018-2021, which showed the vehicles that were visited at repair shops during the period. The reports show that VFO officials visited 28 shops 367 times, finding some vehicles had up to 335 days of downtime, with an average of 13 days. We note that 29% of the visits were related to PM work. Thirteen days of downtime appears excessive for PM work, especially since VFO stated that it had a limited number of vehicles.”*
The report implies the 13-day average pertains to preventative maintenance (PM’s) only. If the 13 days pertain to all repair shop visits, then the report language should be revised to reflect that. If the 13-day average is, indeed, being ascribed to PM’s then, as previously provided in our response to the OSC’s preliminary letter, this would be incorrect. Refer to **Attachment A** in support of the following:
 - The number of visits total 367, not 366.
 - The 13-day average is calculated based on all 367 work orders for a variety of work performed. However, if you extract the work orders categorized only as “PM Services” under the column for “WO Description”, total work orders equal 107 with 989 days of downtime and the average drops to 9 days.
 - Further, if you remove the 335 days from work order line #36 (as an anomaly for the sake of this exercise) as well as 62 and 15 days, respectively for duplicated work order line #303 (WO # 176395) and #323 (WO # 198631), total work orders equal 104 with 577 days of downtime and the average drops further to 6 days.
 - Finally, VFO identified 35 instances totaling 405 days (see “Extra Work” in the attachment) that, even though they were categorized as “PM Service”, included other work performed in addition to preventive maintenance. Removing these amounts leaves 69 work orders for 172 days and an average of 2 days of downtime for work orders that were strictly preventive maintenance.
 - See Out-of-Service Dates and duplicate records corrections in Attachment A.

Comment 3

Sincerely,

Catherine A. Rinaldi

- cc: Robert Free – LIRR
Paul Dietlin – LIRR
Ed McGoldrick – LIRR
Vinny LoRusso - LIRR
Christopher Schalik – LIRR
Dennis Varley – LIRR
Richard Mack – LIRR
Mike Reilly – MTA
Joel Traugot – MTA - OMB
Johanna Rosado - MTA
Howard Cutler – MTA
Darren Jurgens - MTA

State Comptroller's Comments

1. LIRR responded to the draft that adequate controls are in place to ensure vehicle fleet records are properly backed up. However, it did not mention if it has tested the process to determine whether it works as designed.
2. Although LIRR disagreed with our audit results related to the processing of invoices, the report reflects the practice followed for processing invoices for MofW parts.
3. We revised the report based on the information LIRR provided.