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Metropolitan Transportation Authority

State of New York

January 23, 2019

Honorable Andrew M. Cuomo
Governor of New York State
NYS State Capitol Building
Albany, NY 12224

Honorable Thomas P. DiNapoli ✓
Office of the State Comptroller
59 Maiden Lane, 31st Floor
New York, NY 10038

RE: Response to Report #2017-S-6 – New York City Transit: Signal Maintenance, Inspections, and Testing

Gentlemen:

On October 17, 2018, the Office of the State Comptroller issued the above referenced audit report. As required by Section 170 of the Executive Law, I am providing you with the attached response which addresses the recommendations contained in the report.

A copy of the final audit report is attached for your convenience.

Sincerely,

Fernando Ferrer

c: Helene Fromm, MTA Chief of Staff
Michael J. Fucilli, Auditor General, MTA Audit Services

Attachment

Memorandum



Date January 11, 2019

To Fernando Ferrer, Acting Chairman, MTA

From Andy Byford, President, New York City Transit

Re **New York State Comptroller Report #2017-S-6 – Signal Maintenance, Inspections, and Testing: 90 Day Response**

In response to the requirements of Section 170 of the Executive Law to respond 90 days after receipt of the above-referenced audit report from the State Comptroller, we hereby provide you with steps taken by MTA New York City Transit (NYCT) to implement the recommendations outlined in the audit report and, where recommendations were not implemented, the reasons are set forth below. The stated purpose of the audit was to determine if NYCT performed signal maintenance, inspections, and testing in compliance with federal, state, agency, and manufacturer standards.

It is important to note that the Subway Action Plan, started last year, has dramatically increased signal maintenance and repair, stabilizing and beginning to turn the tide in reliability, and President Byford's Fast Forward Plan, if funded, will bring about the complete overhaul of the entire signal system.

Comptroller Recommendation #1: Remind Signal Maintainers and Maintenance Supervisors of logbook and iSEIS policies and guidelines.

NYCT Response: This recommendation has been implemented. NYCT issued Directive #017-36 in October 2017 and Directive #F18-07 in February 2018 which reminded all Signals Division personnel of the policies and guidelines for logbook and iSEIS database entries. The division will continue to issue these directives annually. Hard copies are distributed through the local field offices, and each supervisor is required to discuss the issues outlined in the directive with all staff members.

Comptroller Recommendation #2: Periodically review logbook entries to ensure compliance with Electrical Division guidelines and document such review.

NYCT Response: This recommendation has been implemented. To ensure compliance with guidelines, Signals Division management performs monthly logbook audits and discusses corrective actions at management and divisional staff meetings. To address the lack of proper documentation of such audits, Directive #F18-07 was issued February 2018 to reinforce existing procedures. In addition, NYCT's EAM group, which is independent from the Signals Division, performs 20 to 25 logbook audits (representing a sample of approximately 15 percent). These audits require a formal response. Compliance is also monitored through the annual internal control process.

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Comptroller Recommendation #3: Timely update the SSPP to reflect any procedural modifications to the SSPP internally.

NYCT Response: NYCT already complies with this recommendation. The Comptroller's comment to NYCT's 30-day response states that "we noted changes in intervals for signals and stops from 90 days to 180 days that were not reflected in the 2017 SSPP." However, as the auditors were previously informed, the changes they noted were limited to a pilot program at Pelham and did not deviate from the SSPP. Based on condition-based maintenance (which factors in the equipment age, criticality, track and structural conditions, environmental exposure, duty cycles, and past equipment ratings), the devices in the pilot program received a minor maintenance at 90 days and a major maintenance at 180 days. So, while the pilot separated maintenance activities into "minor" maintenance and "major" maintenance, there were no changes to the overall maintenance frequency standards contained in the SSPP. Maintenance on all equipment is still performed at 90 days, although a minor maintenance consists of fewer activities than a major maintenance. The evaluation of the pilot will be completed by mid-2019, and a decision as to whether the change will be made permanent will be made at that time.

Comptroller Recommendation #4: Timely document and communicate procedural changes and updates to the SSPP to the PTSB.

NYCT Response: As stated in the 30-day response, NYCT already complies with this recommendation. 49 CFR 659 requires an annual submittal of SSPP updates to the PTSB and requires PTSB to review and recertify the SSPP annually. PTSB recertified the 2017 SSPP update on September 19, 2017. The 2018 update was submitted to the PTSB in November 2018.

Comptroller Recommendation #5: Ensure iSEIS lists only valid Task Codes.

NYCT Response: This recommendation has been implemented. As stated in the 30-day response, NYCT modified the database so that no entries can be made for Task 103, which was duplicative with another Task 107. The Controller's comment states that "NYCT is not in compliance... because it was not limited to Task 103." However, NYCT knows of no other instances of invalid task codes, nor does the report note any such instances.

Comptroller Recommendation #6: Review and allocate resources to ensure that all signal devices are maintained, inspected, and tested in accordance with applicable standards.

NYCT Response: As stated in the 30-day response, NYCT already complies with this recommendation. Staffing needs associated with maintenance and testing compliance requirements are regularly reviewed and positions are budgeted accordingly. As noted in the response, NYCT has taken significant steps and implemented various strategies to address the labor shortage of skilled-trade titles.

Comptroller Recommendation #7: Ensure inventory of parts is up to date to prevent delays in repairs.

NYCT Response: NYCT already complies with this recommendation. As stated in the 30-day response, NYCT maintains a stock of parts that can be used for all emergency repairs and corrective maintenance. As explained to the auditors, 56 percent of signal equipment is more than 50 years old. Many replacement parts are no longer manufactured and must be custom built. NYCT has a dedicated staff of approximately 80 mechanics who proactively refurbish existing equipment and fabricate specialized components so parts that are not available for purchase from suppliers are in inventory and available for immediate use when they are needed.

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The Comptroller's comment focuses on four trouble calls at the New Technology Unit in East New York, which they claim were the result of obsolete devices at the time of installation. The devices in question are Field Element Controls, and NYCT is working closely with the manufacturer to determine the cause of the failures and to ensure an adequate supply of spare parts is on hand.

Comptroller Recommendation #8: Ensure weekly reports are submitted, reviewed and approved timely, and develop procedures to address when reports are submitted.

NYCT Response: This recommendation has been implemented. NYCT issued Directive #F18-08 in February 2018 reminding employees of proper procedures. As stated in the 30-day response, in conjunction with EAM, NYCT is revisiting its procedures for capturing inspection data and identifying how it can leverage technology to streamline the process by replacing the current paper reports with real-time electronic reporting.

Comptroller Recommendation #9: Review the resources allocated to the Compressor Squad and the logistics of assignments and equipment.

NYCT Response: See response to Recommendation #6.

Comptroller Recommendation #10: Develop and document the following for new technology equipment:

- *Written procedures or responsibilities for staff in charge of the trouble call desk to ensure consistency and continuity in services for each tour, and*
- *Standards for handling trouble calls and documenting the actions taken, including when follow-up is required.*

NYCT Response: As stated in the 30-day response, NYCT agrees with the first bullet of this recommendation and already complies with the second bullet. NYCT is in the process of developing formalized written procedures regarding new technology equipment, to be finalized by the third quarter of 2019. In June 2018, NYCT implemented a system that addresses trouble calls in a consistent manner.

Comptroller Recommendation #11: Ensure all changes to maintenance interval levels comply with NYCT policies and procedures.

NYCT Response: NYCT agrees with this recommendation. As stated in the 30-day response, NYCT has drafted revised internal processes to more clearly define the approval requirements for interval changes. These updated processes are currently under review, with final signoff expected by the end of the first quarter of 2019.

Comptroller Recommendation #12: Revise the Master List Change Form to require that the originator and the approver state the reason for the change and attach supporting documents.

NYCT Response: This recommendation has been implemented. The Master List Change Form has been revised to include the reason for change with appropriate signature approvals. Previously, the reason for the change had only been included in the database.

Comptroller Recommendation #13: Require that all Master List Change Forms be approved by the Engineering Division.

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NYCT Response: NYCT continues to disagree with this recommendation. As stated in the 30-day response, only changes that may impact safety require Engineering Division approval. Routine maintenance interval changes are based on recommended practices from operations staff, including the maintenance division, which has first-hand understanding of asset performance. The Comptroller's comment suggests that all signal maintenance is related to safety, because a failure could lead to overcrowding, creating a "potential issue of safety of a different nature." However, by that logic, almost every maintenance activity that NYCT performs would be considered a safety issue, subject to a higher-level review by the Engineering Division.

Comptroller Recommendation #14: Periodically review Supervisory Inspection form records to ensure compliance with procedures.

NYCT Response: This recommendation has been implemented. While the 30-day response noted that the supervisory inspections were performed and entered into the database, much of the corresponding backup documentation was not completed. NYCT has therefore issued Directive # M18-15 on March 1, 2018, reminding supervisors of proper documentation procedures, and will review compliance through its internal control process beginning in 2019. The EAM system under development will capture real-time testing and maintenance data through hand-held devices, eliminating the need for paper forms.

Comptroller Recommendation #15: Develop reporting systems which alert management personnel of instances of non-compliance with supervisory inspections.

NYCT Response: As stated in the 30-day response, NYCT agrees with this recommendation. The EAM system previously referenced will be configured to alert management of instances of non-compliance via email and/or auto-generated reports. In the meantime, NYCT periodically reviews the inspection records and addresses instances of non-compliance at management staff meetings.

Comptroller Recommendation #16: Periodically review logbook entries and information recorded in the Supervisory Validation to ensure compliance with departmental guidelines.

NYCT Response: NYCT agrees with this recommendation and, as stated in the response to recommendation #2, additional controls related to logbook entries have been implemented. As noted in the 30-day response, the Supervision Validation procedure will be revised by the first quarter of 2019 to reflect the test that the maintainer routinely performs.

Comptroller Recommendation #17: Implement a control in iSEIS to check whether Signal Maintainers have been proficiency tested within the prior six months every time a device test is entered.

NYCT Response: NYCT continues to disagree with this recommendation. NYCT is not devoting resources to enhancements of iSEIS because the EAM system under development will replace this legacy system. The Comptroller's comments appear to be in agreement with this response.

Comptroller Recommendation #18: Develop a perpetual inventory system for signal maintenance equipment.

NYCT Response: As noted in the 30-day response, NYCT agrees with this recommendation. The current NYCT inventory system for signal maintenance equipment includes over 44,000 assets, but does not include all the individual component parts of these assets. NYCT is developing a much larger inventory system through the EAM initiative, which will include major component parts.