Attachment 2
Management Responses – Pending further assessment and potential resourcing

All recommendations in this attachment remain 'Pending further assessment and potential resourcing' as of March 11, 2026. Management responses have been updated to reflect the latest information.

Section 7.2.7 Streetcar OHL Maintenance

i. UITP Recommendation

Considering international best practices and safety standards – as well as the safety of maintenance personnel—it is not recommended to perform heavy, long or structural maintenance on overhead lines (OHL) under live-line conditions. Minor tasks such as inspection, cleaning, or tension adjustment may be carried out while the system is energized, but only with highly skilled personnel, specialized tools, appropriate, double insulated maintenance vehicles for OHL, and strict adherence to safety procedures. Additionally, risk analysis should be reviewed regularly to ensure that safety measures remain appropriate and effective.

Due to the distributed nature of overhead line (OHL) systems, response times for corrective maintenance can be high and limited intervention time considering service frequency. Therefore, preventive maintenance is crucial. In line with international best practices, OHL maintenance should be carried out according to an annual maintenance plan, with each maintenance window used effectively to reduce unexpected failures and service interruptions.

Extending the maintenance window could be a practical way to further enhance reliability and safety, provided it can be accommodated within the operational plan and passenger demand is effectively managed through alternative modes and operational model. Similarly, multi-day closures could be managed in the same manner, with single-line operations considered where appropriate and supported by robust safety measures.

The use of Artificial Intelligence / Machine Learning (AI/ML)-based inspection and monitoring systems - equipped with high-resolution cameras and sensors installed on service vehicles - can enable real-time monitoring, diagnostics, and geo-localization. These technologies allow for predictive maintenance by measuring overhead line parameters such as wire profile, thickness, stagger (zigzag), and pantograph condition. Potential defects and degradation from the normal state can be detected early. Integration with the Maintenance Management Software (MMS), it allows for automatic generation of maintenance tasks based on detected anomalies. Leveraging such smart tools can significantly reduce service interruptions, lower maintenance costs, and improve operational safety.

ii. TTC Management Response Update

Streetcar Infrastructure has a robust maintenance plan and highly trained personnel who use specialized equipment and PPE, and who undergo extensive training under established procedures for any work conducted in live conditions. Streetcar Infrastructure will conduct a feasibility assessment for performing maintenance under de-energized conditions that considers operational, safety, and service impacts including the need for partial streetcar service suspensions to accommodate de-energized sections of the network by Q2 2026. A follow-up request for information has been sent to UITP to clarify their definitions of heavy versus minor live work.

Section 7.6.4 Streetcar Turnouts

i. UITP Recommendation

It is recommended that certain specific turnouts should be converted to motorized two-switch operations, activated by the destination or route transmitted from the vehicle. Each location should be linked to locking detection of the switch and associated confirmation by visual route indicator signal.

The purpose of the conversion would be to eliminate regular use of the “stop-look-go” operation in normal service with the objective of reducing journey time. It would also improve safe movement through turnouts.

The initial choice of turnouts for the upgrade should be directed to those turnouts used for the standard routing of vehicles. Eventually, all turnouts should be equipped with this system. The investment required should be part of the Capital Plan. This is normal practice for most streetcar operators.

ii. TTC Management Response Update

TTC is developing a comprehensive business case to evaluate the feasibility, benefits, and full lifecycle costs of implementing double-point switches at select locations. The assessment will examine whether double-point switches would materially reduce reliance on the current Stop-Check-Go safety procedure, improve operational performance, or deliver measurable journey-time benefits. It will also compare these outcomes against other potential investments, such as stop consolidation and State of Good Repair initiatives, to determine which options provide the strongest return on investment and best support system reliability. The business case will incorporate performance data from the double-point switches installed at Leslie Barns and will include a detailed cost-benefit analysis, risk assessment, and implementation considerations. Target completion for the assessment is Q3 2026 to support any required Capital funding requests in alignment with future budget submissions.

Section 7.7.1 The Hands-On Training Center

i. UITP Recommendation

The peer review team recommends harmonizing the training plans for track and signaling maintenance with the procedures implemented for other training at the TTC. In order to make track training more attractive and to attract more staff, it could be an option to make the training multi-level and link the acquired qualifications to the possibility of promotion to a higher stage in the salary scheme (at least for employees who are embedded in a fixed salary scheme).

Another suggestion would be to include training for additional qualifications to make staff more flexible, for example for a breakdown service.

Additional qualifications such as a crane license for the truck loading crane, forklift license or similar training could be introduced here.

ii. TTC Management Response Update

Track and Signal Maintainers have fundamentally different training requirements than Vehicle Maintainers and Operators. Their work occurs in live subway environments, including tunnels and energized electrical systems, which significantly limits the ability to deliver effective training in traditional classroom settings.

To address this, Subway Infrastructure created a temporary Hands On Training Centre at Wilson Yard. A business case has been developed to establish sustainable, permanent funding for a dedicated Hands On Training Centre for Track and Signal Maintenance. This facility is intended to support safe, practical skills development using controlled environments, tools, and simulators that reflect real operating conditions.

In addition to facility funding, incremental investment is required for curriculum development. While there are no formal professional licenses specific to Track Maintainers, the program would incorporate graduated training pathways, including relevant certifications, such as the current welding program, to support skills progression and workforce development. A business case is currently with the Finance Department, and an update will be provided in Q3 2026.