

**ANNUAL COMPLIANCE
REPORT FOR 2025 -
Regulatory Monitor and
Compliance Officer –
Ottawa Light Rail Transit**



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For City of Ottawa**

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1. Executive Summary:

In accordance with the Delegation Agreement signed between the City of Ottawa and the Minister of Transport in 2011, the City appointed the Regulatory Monitor and Compliance Officer (RMCO) in 2018 to perform regulatory compliance monitoring for the Confederation Line following revenue service inception.

The specific duties and responsibilities established by the City for the RMCO are provided in Annexes 2 and 3, while the regulatory context is provided in Annexes 1, 4 and 13. As such, the RMCO is responsible to monitor compliance relative to City LRT Regulations (refer to Annex 4) which identify the following responsibilities for OC Transpo:

- Adopt and Implement designated ‘Programs’;
- Provide Direction and Oversight to city employees and contractors;
- Maintain Program related Records;
- Require contractors to Implement and follow substantially consistent Programs.

Following revenue service inception in September 2019, the RMCO has been performing regulatory monitoring activities focused on Programs identified in City LRT Regulations.

In 2025, the RMCO monitored the following areas:

- 1) Traction Power Supply System (TPSS) – Inspections and Maintenance;
- 2) Communications Systems – Inspections and Maintenance.

The above areas were selected for monitoring using a risk-based approach – an overview of the areas monitored by the RMCO since revenue service inception is shown in Annex 6.

This document constitutes the seventh RMCO Annual Compliance Report which describes the specific areas monitored during 2025, including the work that was undertaken to verify compliance, as well as the compliance assessment findings for each area monitored.

For both areas monitored, OC Transpo was fully compliant relative to its regulatory responsibilities, while RTM and its subcontractors achieved a high level of conformance and execution for inspections and maintenance of these systems. Specific findings and opportunities identified during the monitoring are presented in Sections 5 and 6 of this Report.

This Annual Compliance Report will be submitted for review at the Transit Committee meeting scheduled on April 9, 2026 and will be in the agenda of the City Council meeting scheduled on April 22, 2026.

2. Background:

On July 14, 2011, Ottawa City Council approved the implementation of the Ottawa Light Rail Transit (OLRT) project which is considered in law to be a federal rail transportation undertaking.

Since federal legislation was not developed for application to municipal light rail systems, the City of Ottawa was provided with the authority to regulate its light rail transit system. This was formalized with an agreement between the Minister of Transport and the City of Ottawa on October 1, 2011, known as the ‘Delegation Agreement’.

In accordance with the Delegation Agreement, and By-Law No. 2015 – 301, the position of ‘Light Rail Regulatory Monitor and Compliance Officer’ (i.e. ‘Regulatory Monitor and Compliance Officer – RMCO’) was created to monitor and report on compliance relative to the OLRT Regulations (i.e. City LRT Regulations). Further details on the regulatory background are provided in Annex 1.

The RMCO is tasked with performing regulatory compliance monitoring post-revenue service - specific duties and responsibilities are provided in Annexes 2 and 3, while the regulatory context is provided in Annexes 1, 4 and 13.

Below are some important elements relative to the RMCO duties and responsibilities:

- The RMCO is responsible for regulatory compliance monitoring of the Confederation Line (i.e. does not include Trillium line, bus transit or other OC Transpo operations);
- The compliance monitoring relates primarily to City LRT Regulations and the designated ‘Programs’ relating to safety and security;
- The RMCO was not involved in the construction, implementation or revenue service availability activities for the Confederation Line;
- The RMCO regulatory monitoring activities started after revenue service;
- The RMCO performs monitoring on an ongoing basis and provides quarterly updates to the City Manager as well as annual reports to the Transit Committee and City Council;
- The RMCO does not have the authority or duty to assess the adequacy, sufficiency, or effectiveness of City LRT Regulations, Programs or the Confederation Line infrastructure / equipment / technology.

One of the early RMCO responsibilities consisted of developing a multi-year Work Plan for carrying out monitoring of regulatory compliance relative to City LRT Regulations – this was submitted to City Council and approved on September 12, 2018.

City LRT Regulations were formalized through the ‘City Manager Designation – Light Rail Regulations’ dated 12 February 2021, and subsequently updated on 18 July 2024 through the ‘Confederation Line Designated Regulations’; relevant excerpts are provided in Annex 4.

Sections 3 and 8 of this Report provide information on the RMCO monitoring approach, which is based on City LRT Regulations and monitoring experience to date, thus supplementing the information provided in the Work Plan.

Following revenue service inception in September 2019, the RMCO initiated regulatory monitoring activities which have been carried out annually since that date. The areas monitored by the RMCO since revenue service inception are shown in Annex 6.

In 2025, the RMCO risk-based analysis (refer to Subsection 3.3) identified two major areas to monitor as follows:

- 1) Traction Power Supply System (TPSS) – Inspections and Maintenance;
- 2) Communications Systems – Inspections and Maintenance.

The RMCO proceeded to monitor both of these areas in 2025 with a focus on assessing whether the regime of regulatory inspections and maintenance was performed in accordance with the requirements stipulated in the Project Agreement and associated Program documents. The monitoring findings are provided in Sections 5 and 6 of this Report.

The RMCO responsibilities require the preparation of an Annual Compliance Report which describes regulatory monitoring activities undertaken as well as findings identified – this document constitutes the seventh Annual Compliance Report which presents monitoring activities performed in 2025 as well as the corresponding findings.

To further assist readers with a proper review of this Report, please refer to Annex 13, which provides the regulatory context, including the limits on the scope of the RMCO’s monitoring work; the monitoring and Oversight work carried out and confirmed by others; and the coordinated interplay between these various Oversight functions.

3. Regulatory Monitoring Approach:

3.1 Summary - Process for RMC0 Regulatory Monitoring:

The RMC0 monitoring process is designed to perform monitoring activities in an objective manner while engaging stakeholders such that they understand the process and have the time and opportunity to provide the necessary information and resources.

Monitoring is carried out using a fact and evidence-based approach, coupled with principles of transparency, structure and engagement.

Moreover, the monitoring approach is anchored on the following principles:

- A risk-based approach is used to select the regulatory areas / Programs to be monitored on the basis of several inputs / considerations which are described in Subsections 3.2 - 3.4 of this Report;
- To maintain a structured and consistent approach for monitoring, specific procedures are developed for each area to be monitored, thus providing clear expectations for all stakeholders;
- Monitoring procedures are designed to obtain objective evidence to enable the assessment of regulatory compliance using a fact and evidence-based approach. Objective evidence is gathered through the review / analysis of documents and Records, as well as interviews and field observations;
- As explained in Section 2 of this Report, the RMC0 monitoring process is aligned with City LRT Regulations (i.e. 'Confederation Line Designated Regulations'). The Confederation Line Designated Regulations (specifically Appendix B Sections 1 and 5) reaffirm the responsibility for OC Transpo to Adopt and Implement specific Programs, including providing Direction and Oversight, and maintaining Records. With respect to contractors, their obligations are based on contractual agreements as well as OC Transpo Direction – this includes the need for contractors to Adopt and Implement substantially consistent Programs identified in City LRT Regulations.

Further details are provided in the following Subsections.

3.2 Monitoring Focus on City LRT Regulations:

As explained in Section 2 of this Report, the RMCO monitoring approach is aligned with City LRT Regulations.

Specifically, the City LRT Regulations identify the following key responsibilities for OC Transpo (refer to Annex 4):

- Adopt and Implement designated Programs;
- Provide Direction and Oversight to City employees and contractors;
- Monitor, maintain Program-related Records and provide access to these Records;
- Require contractors to Implement and follow substantially consistent Programs – to the extent relevant to their assigned work.

Therefore, RMCO monitoring activities focus primarily on assessing compliance relative to the above noted OC Transpo responsibilities – this is outlined in the Figure below. Further, the RMCO’s mandate is focused on Programs which relate to safety and security.

Figure 1 – Overview of City Regulatory Responsibilities Relative to Designated Programs



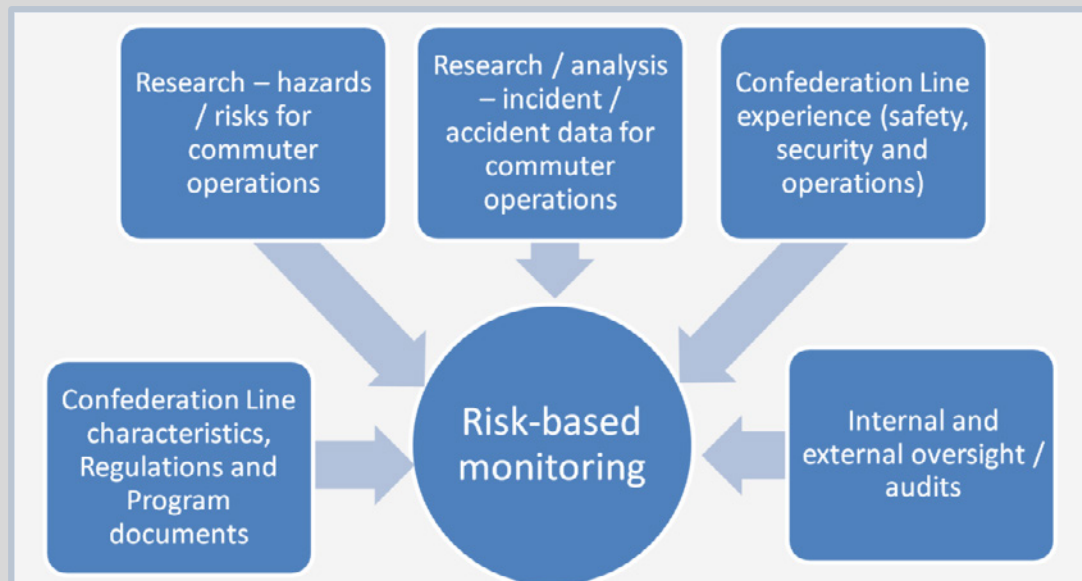
As such, RMCO monitoring activities encompass OC Transpo and contractors. The reason that contractor activities are monitored is to assess Program implementation and to cross-check and assess whether appropriate Direction and Oversight was provided to the contractors regarding these Programs; and that appropriate Program-related Records are being maintained. This inherently provides an understanding of whether contractors are conforming to contractual requirements for the areas monitored.

Moreover, it is important to clarify that the responsibilities identified in the City LRT Regulations apply directly to OC Transpo, whereas contractor obligations are identified in their contractual agreements.

3.3 Risk-Based Monitoring:

In accordance with the multi-year Work Plan, a risk-based approach is used to select regulatory Programs / areas to be monitored – this approach uses the inputs shown in the Figure below:

Figure 2 – Inputs for Risk-Based Analysis:



The risk-based approach uses the following key inputs:

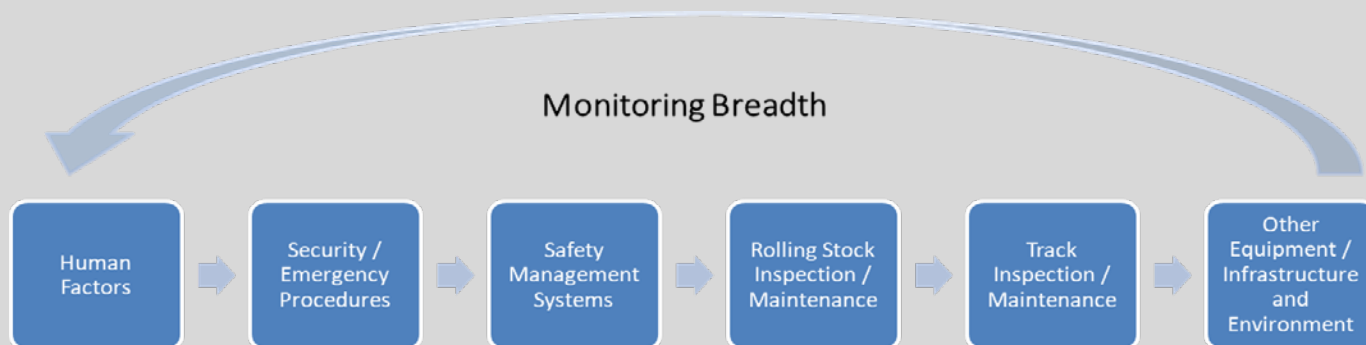
- 1) Research relative to hazards and risks for commuter operations;
- 2) Research and analysis relative to incident / accident data for commuter operations;
- 3) Consideration for Confederation Line characteristics (e.g. technology and infrastructure) as well as Regulations and Programs;
- 4) Consideration for Confederation Line experience (e.g. incidents / accidents, service issues etc.);
- 5) Consideration for internal and external Oversight / monitoring activities and their respective findings (e.g. RMCO monitoring, OC Transpo Oversight) as well as audits and investigations.

The consideration of multiple inputs, as outlined above, contributes to the selection of regulatory Programs / areas for monitoring which have the greatest potential impact on safety and security, thus complementing the City's efforts to achieve the highest possible level of safety and security.

3.4 Monitoring Breadth:

In accordance with the RMCO duties and responsibilities provided by the City (refer to Annexes 2 and 3), regulatory Programs relating to safety and security are monitored using a risk-based approach. The following risk areas, which are typical in commuter rail operations, are considered in the selection process of regulatory Programs to be monitored:

Figure 3 – Key Risk Areas Considered for Monitoring:



In order to maintain a broad perspective in the selection of regulatory Programs to monitor, the RMCO considers the hazard / risk areas identified in the Work Plan (refer to the above Figure and Annex 5 of this Report) to progressively monitor Programs in each of these categories thereby obtaining a broad understanding of compliance over time.

In light of the nature of City LRT Regulations, it is to be noted that each risk area identified in the above Figure corresponds to specific Programs referenced in the City LRT Regulations. Further, each risk area may contain different Programs and associated documents which require progressive monitoring over several segments. For example, the “Human Factors” risk area inherently encompasses OCT Programs and associated materials such as “LRT Operating Rules and Procedures”, “Safety Management System”, “Fatigue Management Plan”, “Hours of Service” etc. – such Programs have been monitored progressively by the RMCO since RSA.

This approach provides compliance assessment knowledge which increases incrementally over time, and represents a practical approach to achieving broad monitoring breadth over time.

It is important to recognize that this progressive monitoring and compliance assessment approach used by the RMCO is to be distinguished from audits in the following respects:

- Audits typically encompass both compliance monitoring as well as the identification / assessment of risks, adequacy of controls, governance etc., whereas the RMCO mandate consists primarily of monitoring compliance relative to City LRT Regulations and designated Programs;
- As stated in Section 2, as well as Annexes 2 and 3 of this Report, the RMCO mandate does not encompass the assessment of the adequacy, sufficiency, or effectiveness of City LRT Regulations, or the performance of audits;

As such, the RMCO monitoring scope provides meaningful information which relates to regulatory compliance, safety and security, but does not encompass all aspects covered in audits.

4. Regulatory Monitoring Overview for 2025:

As explained in Section 3 of this Report, the selection of regulatory Programs / risk areas to be monitored is based on two key considerations:

- a) Risk-based analysis performed using the key inputs identified in Subsection 3.3;
- b) Monitoring is distributed over the six key risk areas identified in Subsection 3.4 to achieve broad monitoring breadth over time.

This approach ensures that RMCO monitoring activities are prioritized in a manner which corresponds to potential risks relating to regulatory compliance, safety and security, while progressively monitoring the six key risk areas to provide the City with broad regulatory compliance knowledge for such areas and associated regulatory Programs.

In 2025, the RMCO risk-based analysis identified two major areas to monitor as follows:

- 1) Traction Power Supply System (TPSS) – Inspections and Maintenance;
- 2) Communications Systems – Inspections and Maintenance.

The above areas had not been previously monitored by the RMCO since revenue service inception (refer to Annex 6 for the areas monitored by the RMCO since RSA).

The rationale for monitoring these risk areas is further discussed in Sections 5 and 6.

The next Sections of this Report describe the monitoring process and findings for the two areas monitored in 2025.

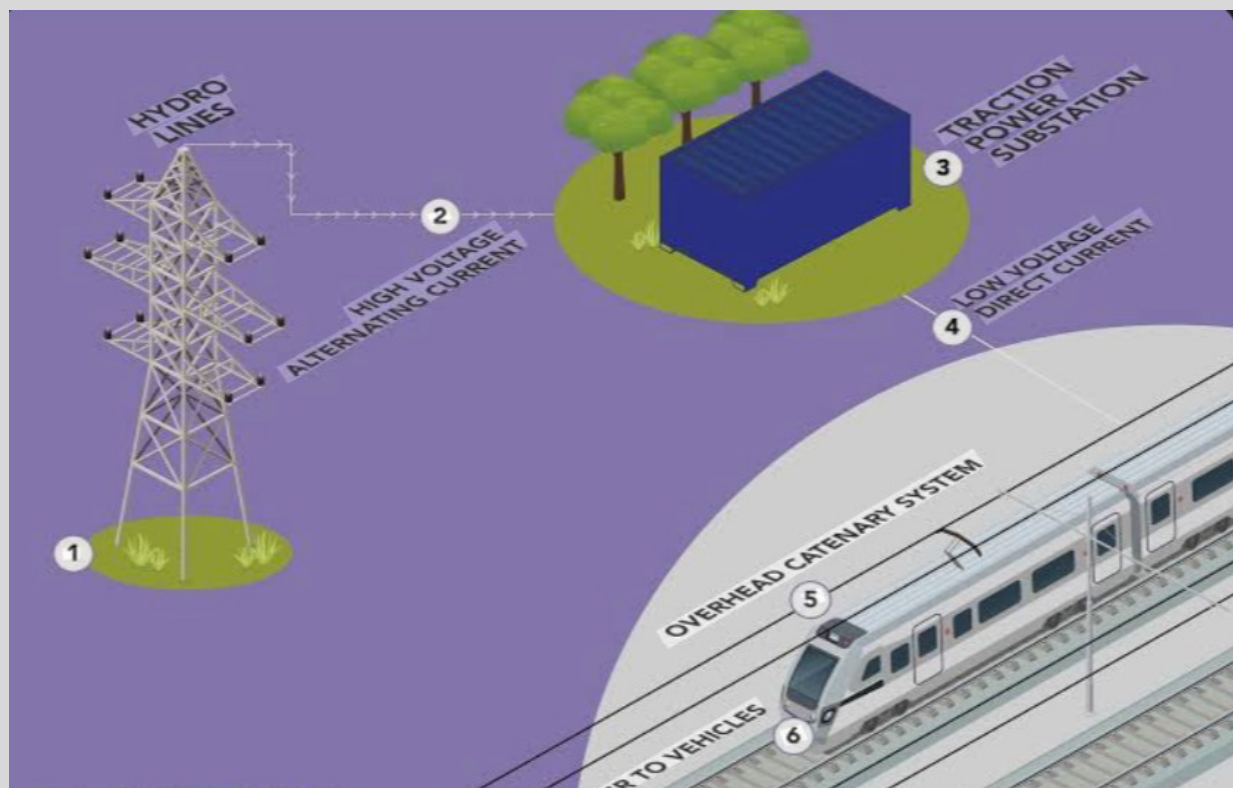
5. Monitoring of Traction Power Supply System:

5.1 Background and Rationale for Monitoring the Traction Power Supply System:

Prior to describing the monitoring process and findings, it is important to provide background relative to the Traction Power Supply System (TPSS) on the Confederation Line.

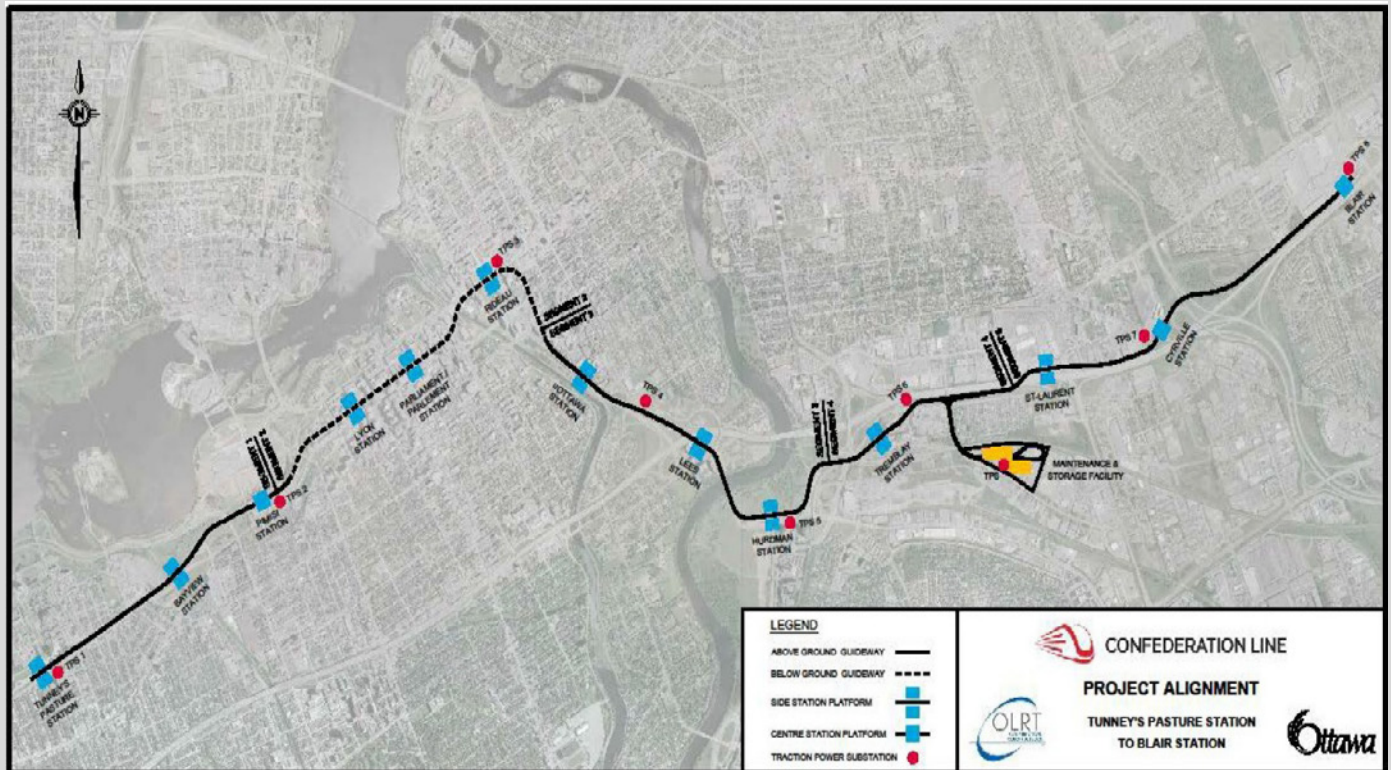
The TPSS is the electrical infrastructure that converts utility power into usable DC traction power and delivers it to trains through the overhead catenary system – this is depicted in the Figure below. The TPSS also provides electrical power to certain stations in the Confederation Line.

Figure 4 – Traction Power Supply System Illustration:



There are 10 Traction Power Sub Stations in the Confederation Line (excluding the East Extension) – the stations are shown in the Figure below. The stations use electrical transformers to step down the voltage, as well as rectifiers which convert the AC power to DC power (1500 VDC) which is suitable for the light rail vehicles (i.e. LRV's) used in the Confederation Line. LRV's use pantographs which contact the overhead catenary wires to conduct the DC power to the electrical traction motors.

Figure 5 – Traction Power Supply System – Stations in Confederation Line:



In light of the above, the risk-based analysis performed in the second quarter of 2025 identified the TPSS as a key area for the RMCO to monitor because of the following key reasons:

- a) The TPSS plays a fundamental role in the operation of the Confederation Line;
- b) From a risk perspective, the TPSS can have a significant impact on safety, security and service;
- c) There are specific inspection / maintenance requirements identified in the PA and Program documents – such monitoring is aligned with the RMCO scope;
- d) The TPSS had not been monitored by the RMCO since revenue service inception (refer to Annex 6 for the areas monitored by the RMCO since RSA).

5.2 Applicable Regulations and Program Documents:

The Project Agreement and Confederation Line Regulations contain specific requirements for the inspections and maintenance of the TPSS, as follows:

Project Agreement:

Schedule 15-3 “Maintenance and Rehabilitation Requirements” identifies specific responsibilities for Project Company (i.e. RTG / RTM):

- i) Appendix A – Attachment 3 “Systems Maintenance Service” contains Section 2(b) titled “Traction Power”;

- ii) Appendix A – Attachment 15 “Maintenance Responsibility Table” identifies TPSS elements under the responsibility of Project Company (i.e. RTG / RTM) - refer to Annex 7.

Confederation Line Designated Regulations (i.e. “CLR”):

The Confederation Line Designated Regulations stipulate specific regulatory responsibilities for OC Transpo as summarized below:

- A) Appendix B (Part 1) of the CLR identifies the following responsibilities for OC Transpo:
- **Adopt** and **Implement** designated Programs;
 - Provide **Oversight** and **Direction** to contractors hired to perform the related work;
 - Monitor and maintain Program-related **Records** and provide access to such Records
- B) **OC Transpo** is responsible to manage the contractual requirements (i.e. PA) with RTG / RTM. This includes the responsibility to provide Direction and Oversight for the Programs which relate to TPSS as follows (refer to CLR Appendix B (Part 1.3):
- RTM Maintenance and Rehabilitation Plan (RTM-MC-PLN-042);
 - RTM Asset Management Plan (RTM-MC-PLN-459).

5.3 Roles and Responsibilities:

This Subsection provides information on the roles and responsibilities of the stakeholders involved in the inspections and maintenance of the Traction Power Supply System (TPSS), as well as how they relate to City LRT Regulations and the Project Agreement (i.e. “PA”) – this is summarized below:

1) OC Transpo:

- a) OC Transpo is the public transit agency for the City of Ottawa;
- b) The City LRT Regulations (i.e. ‘Confederation Line Designated Regulations’ Appendix B Part 1) provide specific responsibilities for OC Transpo relative to the Implementation of designated Programs. This includes the Adoption, Implementation, Direction, Oversight and Records for such Programs. As well, it is required that the Direction and Oversight performed by OC Transpo encompass both the City’s internal operation as well as contractors;
- c) City LRT Regulations identify specific ‘OCT Programs’ in Appendix B part 1.3 – the ‘Maintenance and Rehabilitation Plan’ and ‘Asset Management Plan’ are specific Programs which relate to the TPSS;
- d) The inspections and maintenance of the TPSS was contracted by the City to RTG through the Project Agreement – this is detailed in Schedule 15-3 (Attachment 15) of the PA “Maintenance Responsibility Table” under “Project Co.” responsibility.

2) RTG (Rideau Transit Group) and RTM (Rideau Transit Maintenance):

- a) RTG is the top concessionaire contractor which signed the 30-year Project Agreement (i.e. Contract) for the Confederation Line with the City of Ottawa;
- b) RTG is a General Partnership Firm of ACS Infrastructure Canada, SNC-Lavalin, and Ellis Don;
- c) It is the RMCO’s understanding that RTG conveyed the maintenance obligations set-out in the P.A. to RTM (Rideau Transit Maintenance);
- d) The PA and the Programs identified in the “Confederation Line Designated Regulations” contain specific requirements relative to the inspections and maintenance of the TPSS (refer to item 1(c) above);
- e) RTM subcontracted the great majority of TPSS inspections and maintenance to Alstom.

5.4 Monitoring Process:

As explained in the Section 3, the RMCO develops monitoring procedures for each area monitored in order to use a structured and transparent approach with clear responsibilities for each stakeholder. As such, specific procedures were developed for each party (i.e. OC Transpo, RTG / RTM) to monitor the inspections and repairs of the TPSS. A summary of the monitoring process is outlined below:

5.4.1 Monitoring Approach:

The monitoring is performed using a fact and evidence-based approach consisting of the following:

- 1) Review and analysis of documents and Records in order to assess if the inspection / maintenance activities are performed in accordance with requirements stipulated in Program documents;
- 2) Interviews;
- 3) Field observations.

The TPSS monitoring was performed using two segments using two separate monitoring procedures, as summarized below:

- Segment 1 (procedure P4008) engaged OC Transpo with the objective to monitor their regulatory responsibilities which include Program Direction and Oversight relative to the work performed by RTG / RTM and their subcontractors;
- Segment 2 (procedure P4009) engaged RTG / RTM with the objective to monitor their responsibilities outlined in the Project Agreement and the regulatory Programs which relate to the inspections and maintenance of the TPSS.

5.4.2 Elements Verified During Monitoring:

The RMCO performed a number of verifications to determine if the inspections and maintenance of the TPSS are being performed in accordance with Regulatory Program documents – following are the elements verified:

- i) **Execution of Inspections / Maintenance:** the monitoring assessed the completeness of inspections / maintenance activities by requesting and verifying inspection Records for TPSS components in relation to requirements identified in Program documents (refer to Figure below);
- ii) **Execution of Repairs:** the monitoring assessed the execution of repairs by requesting a sample of repair Records selected from the inspection records. The repair records provided enabled the RMCO to determine if the repairs were performed on the basis of objective evidence;
- iii) **Oversight:** the monitoring assessed whether each party had an Oversight plan and whether Records confirmed that Oversight activities were performed;
- iv) **Training:** the monitoring reviewed the training of employees (i.e. Alstom power technicians) involved in the inspection / maintenance of the TPSS to determine if

such employees received the full complement of mandatory courses. The monitoring also verified if subcontractor employees working for “Broder Electric” were qualified under provincial Regulations.

Figure 6 – TPSS Inspection / Maintenance Requirements (excerpt from “Asset Management Plan”):

B-5. Maintenance for TPSS (Traction Power Sub Station)

Frequency	Asset	Maintenance Activity	Reference Code
Monthly	Building assembly	TPSS Visual Inspection	OTT-TPS10-MTN10-WMS-001
	HVAC (<i>Visual inspection</i>)		
	Fire detection system		
Bi-Annual	Building	TPSS Cleaning	OTT-TPS10-MTN10-WMS-003
	Eye wash Station	Eye wash station refilling	OTT-TPS-MTN10-WMS-007
Seasonal	HVAC Inspection	HVAC Seasonal Inspection	OTT-TPS-MTN10-WMS-006
Annual	DC (<i>Direct Current</i>) Breaker	TPSS Annual inspection	OTT-TPS10-MTN10-WMS-002
	AC (<i>Alternating Current</i>) Breaker		
	Rectifier Transformer		
	Battery Charger + Battery bank		
	Disconnect Switch		
	Auxiliary Transformer		
	Fire detection system		
	Distribution panels		
Cable inspection			

5.4.4 Time Period Monitored:

Inspection Records were requested for the time period spanning Jan. 1, 2024 to March 31, 2025. The rationale for this time period is to ensure that inspection Records for all TPSS inspection types and frequencies (frequency ranging from daily to annual inspections) were assessed.

5.4.5 Interviews:

The RMCO performed interviews with staff from each of the three stakeholders to validate the observations identified from the documents and Records received during the monitoring and to confirm the findings – below is a summary of the staff interviewed for each stakeholder:

- 1) Three staff working for OC Transpo involved in Direction, Oversight and technical aspects.
- 2) Seven staff working for RTM / Alstom involved in the coordination / planning of inspections, execution of inspections, maintenance and repairs, as well as Oversight.

5.4.6 Field Observations:

The RMCO performed field observations on August 26 with the participation of OC Transpo, RTM and Alstom. This covered specific TPSS stations in the Confederation Line with the purpose to review components inspected, to verify specific repairs performed and to ascertain the proper understanding of processes used for the inspection / maintenance and oversight. It should be noted that the field observations were not technical in nature, but were rather focused on gathering further objective evidence to ascertain the monitoring findings.

5.4.7 Monitoring Timeline:

The timeline for these monitoring segments is summarized below:

- 1) Inception of monitoring with stakeholders (i.e. OC Transpo and RTG/ RTM): June 2, 2025
- 2) RMCO reviews documents / Records and identifies sample repair Records to be provided: July 16, 2025
- 3) RMCO completes review / analysis of repair Records: July 30, 2025
- 4) Field observations: August 26, 2025
- 5) Interviews: August 20, 21, 2025
- 6) Completion of monitoring segments: Sept. 12, 2025

5.4.8 Collaboration:

Throughout the monitoring segments, collaboration was excellent by all stakeholders (i.e. OC Transpo, RTG / RTM and Alstom). This included the following:

- i) Providing the requested documents and Records in a timely manner;
- ii) Providing the requested repair Records in a timely manner;
- iii) Staff availability for interviews;
- iv) Staff availability for field observations;
- v) Staff availability to review draft findings and conclude monitoring segments.

5.5 Monitoring Findings – Inspections / Maintenance of Traction Power Supply System (TPSS):

The monitoring findings for each of the two stakeholders involved in the inspections and repairs of the TPSS is provided below.

5.5.1 Findings for OC Transpo – Inspections / Maintenance of TPSS:

As explained in Subsection 5.3, OC Transpo is responsible to provide Direction / Oversight to RTG / RTM who have been contracted through the Project Agreement to perform the inspections / maintenance of the TPSS.

Figure 7 provides a compliance assessment summary for OC Transpo on the basis of the objective evidence collected during monitoring activities. A description of the compliance findings is provided below, while a detailed Table of Findings is available in Annex 8.

Compliance Findings for OC Transpo¹ – Overview:

Overall, there were 5 elements monitored for OC Transpo, of which all 5 were fully compliant relative to the responsibilities identified in the “Confederation Line Designated Regulations” – below is a summary description of the findings:

1) Adoption: Compliant

- Regulatory program documents developed / Adopted are identified in the ‘Confederation Line Designated Regulations’ as well as associated supplementary documents.

2) Direction: Compliant

- OC Transpo provided a number of Programs and documents which specify requirements for the inspections and repairs of the TPSS - these include the following:
 - a) Project Agreement (Schedule 15-3, Appendix A – Attachment 3 “Traction Power System”)
 - b) P.A. Sched. 15-2; 2.4 Traction Power Substations; 2.5 Traction Power
 - c) RTM Maintenance and Rehabilitation Plan (RTM-MC-PLN-042)
 - d) RTM Asset Management Plan (RTM-MC-PLN-459)
 - e) RTM Preventative Maintenance Plan (RTM-MC-PLN-641)

¹ Note: “Implementation” is not assessed for OC Transpo because the inspections / maintenance of TPSS is performed by RTG / RTM and their subcontractors, while OC Transpo provides Direction / Oversight to RTG / RTM (i.e. OCT does not perform inspections / maintenance).

3) Oversight Plan: Compliant

- i) OC Transpo has a substantive Oversight plan (i.e. “Line 1 Oversight Plan”) which is updated annually and includes detailed schedules of monitoring activities for each year.
- ii) OC Transpo has dedicated Oversight resources focused on monitoring – this includes specific oversight activities for the TPSS and related contractor activities.

4) Oversight Activities: Compliant

- OC Transpo provided documents and records which support regulatory compliance relative to Oversight activities – this includes the following:
 - i) OC Transpo Oversight activities encompass the inspection / maintenance of TPSS;
 - ii) OCT Transpo prepares an annual 'Rail Systems Oversight Schedule' which requires the review of TPSS records and performing field inspections;
 - iii) A review of OCT Transpo’s Oversight Records confirms that there were oversight activities on TPSS assets during the period monitored by the RMCO.
 - iv) OC Transpo provided contractual correspondence requesting TPSS information from RTG / RTM.

5) Records: Compliant

- OC Transpo provided documents and records which support regulatory compliance relative to Oversight responsibilities:
 - OC Transpo has an information system (i.e. “CleverCAD”) used to store and maintain Oversight Records;
 - OC Transpo provided a number of different Records – this includes Oversight Records and schedules, contractual correspondence, as well Records relating to the PA and program documents.
 - Refer to the opportunity below.

Opportunity Identified for OC Transpo:

An opportunity was identified for OC Transpo to strengthen their record keeping of Oversight Activities.

Some of OC Transpo’s oversight Records for the TPSS were provided in excel format, although the 'Rail Systems Oversight Schedule' specifies that such Oversight activities are to be recorded in CleverCAD. Such information should be entered in CleverCAD (rather than excel) to remain consistent with the Oversight Schedule, as well as to enhance visibility, accessibility and to facilitate internal monitoring.

It should be noted that the above opportunity is not a compliance issue relative to OC Transpo’s regulatory responsibilities because the requirement to perform

oversight and to maintain records are being fulfilled through the objective evidence provided.

Figure 7 – Summary of TPSS Compliance Findings for OC Transpo:

Regulatory Responsibility	Compliance Finding - OCT	Comments
Adoption	Compliant	Regulatory program documents developed / adopted are identified in 'Confederation Line Designated Regulations' and suppl. documents.
Direction	Compliant	OC Transpo providing Direction to RTG / RTM relative to: - Execution of TPSS inspections / maintenance; - Contract deliverables
Implementation	Not Assessed	- "Implementation" not assessed for OC Transpo because TPSS inspections / maintenance are performed by RTG / RTM as stipulated in the Project Agreement ('Maint. Responsibility Table' - Sched. 15-3 att. 15). - OC Transpo conveyed requirements to RTG / RTM through the Project Agreement and Regulatory Program Documents
Oversight - Plan	Compliant	OC Transpo has a substantive Oversight Plan (i.e. 'Line 1 Oversight Plan') which is updated annually and includes detailed schedules; OC Transpo has dedicated oversight resources focused on monitoring, including the TPSS.
Oversight - Activities	Compliant	OC Transpo Oversight activities encompass the inspection / maintenance of the TPSS including records and field observations.
Records	Compliant	OC Transpo has systems (e.g. "Clever-Cad") to store and maintain Records; OC Transpo provided Records relative to: i) P.A. and Program Documents; ii) Contractual correspondence; iii) Oversight Plan and schedules; iv) Oversight activities

5.5.2 Findings for RTG / RTM – Inspections / Maintenance of Traction Power Supply System:

Figure 8 provides a conformance assessment summary for RTG / RTM on the basis of the objective evidence collected during monitoring activities.

A description of the conformance findings is provided below, while a detailed Table of Findings is available in Annex 8.

Conformance² Findings for RTG / RTM - Overview:

Overall, there were 6 elements monitored for RTG / RTM, of which 4 were fully conformant while 2 were mostly conformant – below is a summary description of the findings:

1) Adoption / Direction: Conformant

RTM provided a number of documents which confirm the Adoption of documents which constitute Direction relative to the inspection and maintenance of TPSS - the adopted documents include the following:

- RTM Maintenance and Rehabilitation Plan (RTM-MC-PLN-042)
- RTM Asset Management Plan (RTM-MC-PLN-459)
- RTM Preventative Maintenance Plan (RTM-MC-PLN-641)

2) Implementation – Inspections: Conformant

- RTM provided about 260 inspection records for the regime of inspections detailed in Alstom's Work Methods Statement (WMS) procedures.
- The review / analysis of inspection / maintenance records shows a high level of execution which is conformant.

3) Implementation – Repairs: Mostly Conformant

- The RMCO identified a sample of inspection service orders which contained conditions requiring repairs / remediation associated with Alstom work order numbers.
- RTM provided the corresponding Alstom work orders for the conditions identified (eleven).
- A review of these work orders shows that the repair duration and severity vary significantly. 3 of the 11 items were not closed at the time of the monitoring.

4) Implementation – Training: Mostly Conformant

- The training matrices for Alstom employees (power technicians) involved in TPSS inspections / maintenance appear to be mostly conformant.

² Note: The term 'conformant' is used for contractors, rather than 'compliant', since findings relate to contractual requirements (i.e. Project Agreement) and Direction from OC Transpo, rather than City LRT Regulations.

- As well, RTM provided confirmation and substantiation for Broder employees which are qualified electricians – certification numbers were validated by the RMCO in the provincial website.

5) Oversight: Conformant

- RTM provided the following information:
 - An Oversight Plan (RTM-OP-PLN-739);
 - An “Oversight Tracker” document which shows specific monitoring activities performed for TPSS;
 - Three records were provided to corroborate oversight and audit activities on TPSS and related equipment.

6) Records: Conformant

- RTM has an information system which is used to record inspections, prioritize repairs and record their completion.
- RTM also provided oversight records.

Figure 8 – Summary of TPSS Conformance* Findings for RTG / RTM:

Responsibility	Conformance Finding – RTG / RTM	Comments
Adoption / Direction	Conformant	RTM provided a number of documents which confirm the Adoption of documents which constitute Direction relative to the inspection and maintenance of TPSS - the adopted documents include the following: - RTM Maintenance & Rehabilitation Plan (RTM-MC-PLN-042) - RTM Asset Management Plan (RTM-MC-PLN-459) - RTM Preventative Maintenance Plan (RTM-MC-PLN-641)
Implementation - Inspections	Conformant	RTM provided about 260 inspection records for the regime of inspections detailed in Alstom's (WMS) procedures. The review / analysis of inspection / maintenance records shows a high level of execution which is conformant.
Implementation - Repairs	Mostly Conformant	The RMCO identified a sample of inspection service orders which contained conditions requiring repairs / remediation associated with Alstom work order numbers. RTM provided 11 Alstom work orders for the conditions identified. A review of these work orders shows that the repair duration and severity vary significantly. 3 of the 11 items were not closed at the time of the monitoring.
Implementation - Training	Mostly Conformant	A review of training Records for Alstom technicians involved in the inspections / maintenance of the TPSS shows that some employees were not current with some mandatory courses
Oversight	Conformant	RTM provided the following information: An Oversight Plan (RTM-OP-PLN-739); An "Oversight Tracker" document which shows specific monitoring activities performed for TPSS; Three records were provided to corroborate oversight and audit activities on TPSS and related equipment.
Records	Conformant	RTM has an information system which is used to record inspections, prioritize repairs and record their completion. RTM also provided oversight records.

* Refer to Annex 8 for definitions for conformance ratings

6. Monitoring of Communications Systems:

6.1 Background, Rationale and Scope - Monitoring of Communications Systems:

Prior to describing the monitoring process, this Subsection provides background and context relative to Communications Systems.

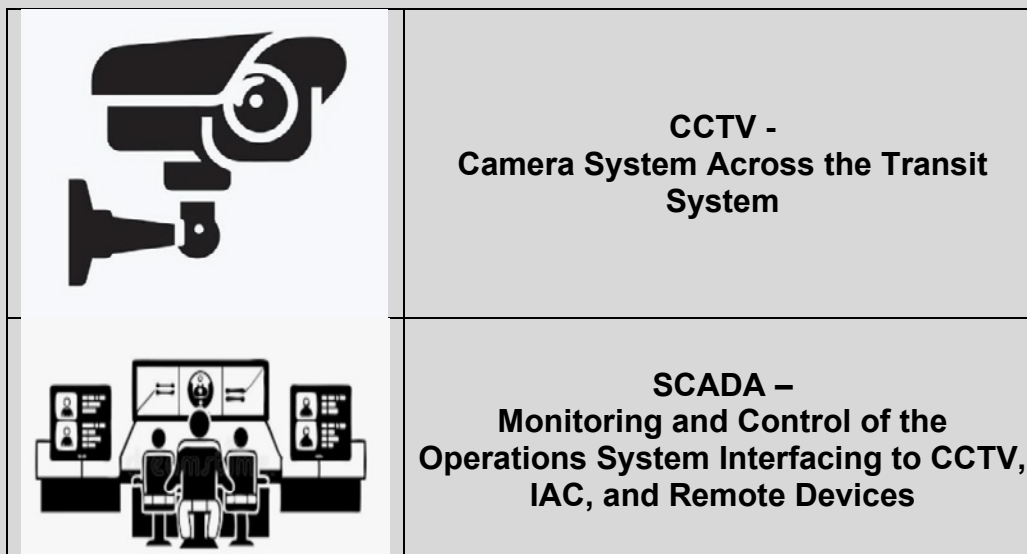
Background and Rationale for Monitoring:






The term “Communications Systems” refers to a number of components defined in the Project Agreement and Program documents which include the following:



- a) Closed Caption Television (CCTV)
- b) Public Address System (PA)
- c) Passenger Information System (PIS)
- d) Telephony System (TS)
- e) Guideway Intrusion Detection System (GIDS)
- f) Communication Transmission System (CTS)
- g) High Speed Data Receivers (HSDR)
- h) Intrusion Access Control (IAC)
- i) Supervisory Control and Data Acquisition (SCADA)

These components are described in the Figure below:

Figure 9 – Description / Illustration of Communications Systems Components:



	<p>CTS – System-Wide Network System including Fiber Optics, Firewalls, Network Management System, and Network Switches</p>
	<p>TS – Telephone System for Emergency, Operational, and Information Calls Across the Transit System (Excludes Emergency Intercoms in LRV's)</p>
	<p>GIDS – Guideway Intrusion Detection System: Detects Intrusion To Guideway At Stations And Tunnel Portals</p>
	<p>HSDR – High Speed Data Receivers: Wayside Devices Which Receive And Transmit LRV Video Recordings</p>
	<p>PA – Public Address System for Passengers</p>

	<p style="text-align: center;">PIS – Passenger Information System (Screens) Display Train Information At Stations</p>
	<p style="text-align: center;">IAC – Intrusion Access Control System: Prevents / Controls Access To Key Assets (e.g. TPSS Stations)</p>

Communications Systems play an important role in the safe and reliable service of the Confederation line. As such, they were identified in the RMCO risk-based analysis as a key area to monitor in 2025 for the following key reasons:

- i) Potentially high impact on safety, security and service
- ii) Not monitored by RMCO since RSA (i.e. revenue service availability)
- iii) There are specific inspection / maintenance requirements identified in the PA and Program documents – such monitoring is aligned with the RMCO scope

It is to be noted that “Communications Based Train Control” (CBTC) was not part of the 2025 monitoring activities because this was previously monitored by the RMCO in 2023.

6.2 Applicable Regulations and Program Documents:

The PA and Confederation Line Regulations contain specific requirements for the inspections and maintenance of the Communications Systems, as follows:

Project Agreement:

Schedule 15-3 “Maintenance and Rehabilitation Requirements” identifies specific responsibilities for Project Company (i.e. RTG / RTM):

- i) Appendix A – Attachment 3 “Systems Maintenance Service” contains Section 2(d) titled “Communications Systems”;
- ii) Appendix A – Attachment 15 “Maintenance Responsibility Table” identifies 17 elements which relate to Communications Systems under the responsibility of Project Company (i.e. RTG / RTM) - refer to Annex 7.

Confederation Line Designated Regulations (i.e. “CLR”):

The Confederation Line Designated Regulations stipulate specific regulatory responsibilities for OC Transpo as summarized below:

A) Appendix B (Part 1) of the CLR identifies the following responsibilities for OC Transpo:

- **Adopt** and **Implement** designated Programs;
- Provide **Oversight** and **Direction** to contractors hired to perform the related work;
- Monitor and maintain Program-related **Records** and provide access to such Records

B) **OC Transpo** is responsible to manage the contractual requirements (i.e. PA) with RTG / RTM. This includes the responsibility to provide Direction and Oversight for the Programs which relate to Communications Systems as follows (refer to CLR Appendix B (Part 1.3):

- RTM Maintenance and Rehabilitation Plan (RTM-MC-PLN-042);
- RTM Asset Management Plan (RTM-MC-PLN-459).

6.3 Roles and Responsibilities:

Refer to Subsection 5.3 which provides relevant information regarding roles and responsibilities for OC Transpo and RTG / RTM.

6.4 Monitoring Process:

As explained in the Section 3, the RMCO develops monitoring procedures for each area monitored in order to use a structured and transparent approach with clear responsibilities for each stakeholder. As such, specific procedures were developed for each party (i.e. OC Transpo, RTG / RTM) to monitor the inspections and maintenance of the Communications Systems. A summary of the monitoring process is outlined below:

6.4.1 Monitoring Approach:

The monitoring is performed using a fact and evidence-based approach consisting of the following:

- 1) Review and analysis of documents and Records in order to assess if the inspection / maintenance activities are performed in accordance with requirements stipulated in Program documents;
- 2) Interviews;
- 3) Field observations.

The Communications Systems monitoring was performed using two segments with two separate monitoring procedures, as summarized below:

- Segment 1 (procedure P4010) engaged OC Transpo with the objective to monitor their regulatory responsibilities which include Program Direction and Oversight relative to the work performed by RTG / RTM and their subcontractors;
- Segment 2 (procedure P4011) engaged RTG / RTM with the objective to monitor their responsibilities outlined in the Project Agreement and the regulatory Programs which relate to the inspections and maintenance of Communications Systems.

6.4.2 Elements Verified During Monitoring:

The RMCO performed a number of verifications to determine if the inspections and maintenance of Communications Systems are being performed in accordance with Regulatory Program documents – following are the elements verified:

- i) **Execution of Inspections / Maintenance:** the monitoring assessed the completeness of inspections / maintenance activities by requesting and verifying inspection Records for Communications Systems components in relation to requirements identified in Program documents (refer to Figure below);
- ii) **Execution of Repairs:** the monitoring assessed the execution of repairs by requesting a sample of repair Records selected from the inspection records. The repairs records provided enabled the RMCO to determine if the repairs were performed on the basis of objective evidence;
- iii) **Oversight:** the monitoring assessed whether each party had an Oversight plan and whether Records confirmed that Oversight activities were performed;
- iv) **Training:** the monitoring reviewed the training of employees (i.e. Signals and Communications technicians) involved in the inspection / maintenance of

Communications Systems to determine if such employees received the full complement of mandatory courses.

Figure 10 – Communications Systems Inspection / Maintenance Requirements (excerpt from “Asset Management Plan”):

B-3. Maintenance for Communications System			
Frequency	Asset	Maintenance Activity	Reference Codes
Daily	Communication Systems	Inspection via SCADA	OTT-COM-MTN10-WMS-020
Monthly	Communication Systems	Inspection - Systems	OTT-COM-MTN10-WMS-021
Quarterly	PIDS	Inspection – Stations/BCC/YCC/TOCC	OTT-COM-MTN10-WMS-003
	PA		OTT-COM-MTN10-WMS-006
	IAC		OTT-COM-MTN10-WMS-014
	CTS		OTT-COM-MTN10-WMS-018
	CCTV		OTT-COM-MTN10-WMS-029
	HSDR		OTT-COM-MTN10-WMS-024
	Telephony		OTT-COM-MTN10-WMS-026
	SCADA		OTT-COM-MTN10-WMS-022
	IAC		OTT-COM-MTN10-WMS-014
	CCTV		Inspection - TP55
Telephony	OTT-COM-MTN10-WMS-026		
Bi -Annual	GIDS	Inspection - GIDS	OTT-COM-MTN10-WMS-012
	Workstations	Workstation Cleaning	OTT-COM-MTN10-WMS-005

6.4.3 Time Period Monitored:

Inspection Records were requested for the time period spanning Jan. 1, 2024 to June 30, 2025. The rationale for this time period is to ensure that inspection Records for all Communications Systems inspection types and frequencies (frequency ranging from daily to 6 month inspections) were assessed.

6.4.4 Interviews:

The RMCO performed interviews with staff from each of the three stakeholders to validate the observations identified from the documents and Records received during the monitoring and to confirm the findings – below are the staff interviewed for each stakeholder:

- 1) Three staff working for OC Transpo involved in Direction, Oversight and technical responsibilities.
- 2) Seven staff working for RTM / Alstom involved in the coordination / planning of inspections, execution of inspections, maintenance and repairs, as well as Oversight.

6.4.5 Field Observations:

The RMCO performed field observations on December 9th with the participation of OC Transpo, RTM and Alstom. This covered all the Communications Systems components and reviewed specific inspections and repairs which were performed during the monitoring period. It should be noted that the field observations were not technical in nature, but were rather focused on gathering further objective evidence to ascertain the monitoring findings.

6.4.6 Monitoring Timeline:

The timeline for these monitoring segments is summarized below:

- 1) Inception of monitoring with stakeholders (i.e. OC Transpo and RTG/ RTM): September 24, 2025
- 2) RMCO reviews documents / Records and identifies sample repair Records to be provided: Sept. 24 – Oct. 29, 2025
- 3) RMCO completes review / analysis of repair Records: November 12, 2025
- 4) Interviews: Dec. 4, 2025
- 5) Field observations: Dec. 9, 2025
- 6) Completion of monitoring segments: Dec. 10, 2025

6.4.7 Collaboration:

Throughout the monitoring segments, collaboration was excellent by all stakeholders (i.e. OC Transpo, RTG / RTM and Alstom). This included the following:

- i) Providing the requested documents and Records in a timely manner;
- ii) Providing the requested repair Records in a timely manner;
- iii) Staff availability for interviews;
- iv) Staff availability for field observations;
- v) Staff availability to review draft findings and conclude monitoring segments.

6.5 Monitoring Findings – Inspections / Maintenance of Communications Systems:

The monitoring findings for each of the two stakeholders involved in the inspections and repairs of Communications Systems is provided below.

6.5.1 Findings for OC Transpo – Inspections / Maintenance of Communications Systems:

Figure 11 provides a compliance assessment summary for OC Transpo on the basis of the objective evidence collected during monitoring activities. A description of the compliance findings is provided below, while a detailed Table of Findings is available in Annex 9.

Compliance Findings for OC Transpo³ – Overview:

Overall, there were 5 elements monitored for OC Transpo, of which all 5 were fully compliant relative to the responsibilities identified in the “Confederation Line Designated Regulations” – below is a summary description of the findings:

1) Adoption: Compliant

- Regulatory program documents developed / Adopted are identified in the ‘Confederation Line Designated Regulations’ as well as associated supplementary documents.

2) Direction: Compliant

- OC Transpo provided a number of Programs and documents which specify requirements for the inspections and maintenance of Communications Systems - these include the following:
 - a) Project Agreement (Schedule 15-3, Appendix A – Attachment 3 “Systems Maintenance Service” contains Section 2(d) titled “Communications Systems)
 - b) RTM Maintenance and Rehabilitation Plan (RTM-MC-PLN-042)
 - c) RTM Asset Management Plan (RTM-MC-PLN-459)
 - d) RTM Preventative Maintenance Plan (RTM-MC-PLN-641)

3) Oversight Plan: Compliant

- OC Transpo has a substantive Oversight plan (i.e. “Line 1 Oversight Plan”) which is updated annually and includes detailed schedules of monitoring activities for each year.

³ Note: “Implementation” is not assessed for OC Transpo because the inspections / maintenance of TPSS is performed by RTG / RTM and their subcontractors, while OC Transpo provides Direction / Oversight to RTG / RTM (i.e. OCT does not perform inspections / maintenance).

- OC Transpo has dedicated Oversight resources focused on monitoring – this includes the Communications Systems.

4) Oversight Activities: Compliant

- OC Transpo provided documents and records which support regulatory compliance relative to Oversight responsibilities – this includes the following:
 - i) OC Transpo Oversight activities encompass the inspection / maintenance of Communications Systems;
 - ii) OCT Transpo prepares an annual 'Rail Systems Oversight Schedule' which requires the review of Communications Systems records and the performance of field inspections;
 - iii) A review of OCT Transpo's Oversight Records* confirms that there were oversight activities on Communications Systems assets during the period monitored by the RMCO.

5) Records: Compliant

- OC Transpo provided documents and records which support regulatory compliance relative to Oversight responsibilities:
 - OC Transpo has an information system (i.e. "CleverCAD") to store and maintain Oversight Records;
 - OC Transpo provided a number of different Records – this includes Oversight Records and schedules, contractual correspondence, as well Records relating to the PA and program documents.

Opportunities Identified for OC Transpo:

The following opportunities were identified for OC Transpo in this monitoring segment:

- 1) A large proportion of the oversight Records for the 'quarterly review of Records' was created in CleverCAD several months after the monitoring was performed. OCT is considering the implementation of a guideline requiring staff to enter oversight activities in CleverCAD within 30 days
- 2) Following a contract variation in Dec. 2023, RTM has been responsible to inspect / maintain GIDS devices outside of downtown tunnel. However, the objective evidence provided by RTM indicates that GIDS inspections were performed using an inconsistent frequency and procedure. OC Transpo is reviewing internal processes relative to oversight following contract variations.

Figure 11 – Summary of Compliance Findings for OC Transpo (Communications Systems):

Regulatory Responsibility	Compliance Finding - OCT	Comments
Adoption	Compliant	<ul style="list-style-type: none"> - Regulatory program documents developed / adopted are identified in 'Confederation Line Designated Regulations' and suppl. documents. - OCT provided a number of documents relative to the inspection and maintenance of Communications Systems .
Direction	Compliant	<ul style="list-style-type: none"> - Direction for Communications Systems inspections / maintenance is provided to RTG / RTM through the Project Agreement as well as City Designated Programs and supplementary documents. - The Confederation Line Regulations contain Designated Programs which identify inspection / maintenance requirements for communications systems. There are also supplementary documents such as Alstom 'WMS' procedures which specify detailed inspection / maintenance requirements.
Implementation	Not Assessed	<ul style="list-style-type: none"> - "Implementation" not assessed for OC Transpo because Communications Systems inspections / maintenance are performed by RTG / RTM as stipulated in the Project Agreement ('Maintenance Responsibility Table' - Sched. 15-3 att. 15). - OC Transpo conveyed requirements to RTG / RTM through the Project Agreement and Regulatory Program Documents .
Oversight - Plan	Compliant	<p>OC Transpo has a substantive Oversight Plan (i.e. 'Line 1 Oversight Plan') which is updated annually and includes detailed schedules; OC Transpo has dedicated oversight resources focused on monitoring, including Communications Systems.</p>
Oversight - Activities	Compliant	<p>OC Transpo Oversight activities encompass the inspection / maintenance of Communications Systems including records and field observations.</p>
Records	Compliant	<p>OC Transpo has systems (e.g. "Clever-Cad") to store and maintain Records; OC Transpo provided Records relative to: i) P.A. and Program Documents; ii) Contractual correspondence; iii) Oversight Plan and schedules; iv) Oversight activities</p>

6.5.2 Findings for RTG / RTM – Inspections / Maintenance of Communications Systems:

Figure 12 (below) provides a conformance assessment summary for RTG / RTM on the basis of the objective evidence collected during monitoring activities.

A description of the conformance findings is provided below, while a detailed Table of Findings is available in Annex 9.

Conformance⁴ Findings for RTG / RTM - Overview:

Overall, there were 6 elements monitored for RTG / RTM, of which 3 were fully conformant while 3 were mostly conformant – below is a summary description of the findings:

1) Adoption / Direction: Conformant

RTM provided a number of documents which confirm the Adoption of documents which constitute Direction relative to the inspection and maintenance of Communications Systems - the adopted documents include the following:

- RTM Maintenance and Rehabilitation Plan (RTM-MC-PLN-042)
- RTM Asset Management Plan (RTM-MC-PLN-459)
- RTM Preventative Maintenance Plan (RTM-MC-PLN-641)

2) Implementation – Inspections: Mostly Conformant

- RTM provided about 800 inspection records for the regime of inspections detailed in Alstom's Work Methods Statement (WMS) procedures.
- The review / analysis of inspection / maintenance records shows a high level of execution which is fully conformant for all inspections identified in Figure 10. The only exception relates to GIDS inspections performed following the contract variation which was initiated in January 2024.

3) Implementation – Repairs: Conformant

- The RMCO identified a sample of inspection service orders which contained conditions requiring repairs / remediation associated with Alstom work order numbers.
- RTM provided work orders for all the conditions identified which confirmed resolution. A review of these work orders shows a good level of follow-up from identification to resolution.

4) Implementation – Training: Mostly Conformant

- The training matrices for Alstom employees involved in Communications Systems inspections / maintenance appear to be mostly conformant.

⁴ Note: The term 'conformant' is used for contractors, rather than 'compliant', since findings relate to contractual requirements (i.e. Project Agreement) and Direction from OC Transpo, rather than City LRT Regulations.

- More than half of the 11 Signals & Communications technicians were missing at least 1 mandatory course (there are a total of 20 mandatory courses). This does not fully conform to the conformance expectations established by OC Transpo.

5) Oversight: Mostly Conformant

- RTM has an Oversight Plan and performed specific audits on Communications Systems. However, the RTM Oversight Plan requires additional Oversight activities which do not appear to have been performed:

6) Records: Conformant

- RTM provided records for inspections, repairs, training and oversight.

Figure 12 – Summary of Conformance* Findings for RTG / RTM (Communications Systems):

Responsibility	Conformance Finding – RTG / RTM	Comments
Adoption / Direction	Conformant	RTM provided a number of documents which confirm the Adoption of documents which constitute Direction relative to the inspection and maintenance of Communications Systems - the Adopted documents include the following: - RTM Maintenance & Rehabilitation Plan (RTM-MC-PLN-042) - RTM Asset Management Plan (RTM-MC-PLN-459) - RTM Preventative Maintenance Plan (RTM-MC-PLN-641)
Implementation - Inspections	Mostly Conformant	RTM provided about 800 inspection records for the regime of inspections detailed in Alstom's (WMS) procedures. The review / analysis of inspection / maintenance records shows a high level of execution . The only exception relates to GIDS inspections performed since the contract variation initiated 2024.
Implementation - Repairs	Conformant	RMCO identified a sample of inspection service orders which contained conditions requiring repairs / remediation associated with Alstom work order numbers. RTM provided 12 Alstom work orders for the conditions identified. A review of these work orders shows that the execution of repairs appears to be good with documented actions until resolution.
Implementation - Training	Mostly Conformant	A review of training Records for Alstom technicians involved in the inspections / maintenance of communications systems shows that some employees were not current with some mandatory courses
Oversight	Mostly Conformant	RTM provided audit reports performed on Communications Systems in fall 2024 and 2025. No additional information was provided regarding ongoing monitoring stipulated in RTM Oversight Plan.
Records	Conformant	RTM has an information system which is used to record inspections, prioritize repairs and record their completion. RTM also provided oversight audit records and training matrices.

* Refer to Annex 9 for definitions for conformance ratings

7. Remedial Actions for RMCO Monitoring Findings:

7.1 Remedial Actions for RTG / RTM Findings:

Section 3 of this Report explains that the RMCO monitoring process involves the ongoing review of findings with stakeholders for two key reasons:

- Provide an opportunity for stakeholders to submit objective evidence which contributes to the accuracy and completeness of findings;
- Provide the ability for stakeholders to develop remedial actions expediently.

Further, OC Transpo has been requesting remedial actions from contractors for all RMCO findings, and has been monitoring their resolution.

In an effort to support structured and timely follow-up, OC Transpo has established and communicated to RTG / RTM a process map which identifies expectations and timelines relative to the submission of remedial action plans as well as their implementation (refer to Annex 10).

In accordance with the above, the RMCO continues to work closely with OC Transpo to provide detailed information on findings, and to jointly engage contractors in an effort to clarify findings and expectations for appropriate remedial actions which address findings.

Remedial actions are reviewed periodically in meetings with OC Transpo, RTG / RTM and the RMCO. The level of collaboration by RTG / RTM has been good with updates on remedial actions provided regularly, as well as participation in the meetings to review progress. Notwithstanding the good collaboration, and progress made on many findings, the resolution of some items is prolonged due to factors such as the following:

- The regime of inspections for each asset (e.g. track) requires numerous types of inspections to be performed with a high level of execution meeting the City's conformance requirements (refer to Annex 12) – although there have been improvements over time, the level of execution for some assets is just short of the City's requirements;
- Training delivery continues to improve but not all mandatory courses are current for some employees - refer to the City's conformance expectations for training in Annex 12;
- Some areas, such as the FIDS (Fence Intrusion Detection System) have undergone significant development and testing – the system is nearing commissioning as the final issues identified during testing are being resolved;
- A fact-based approach is being used to establish the status of open items which remain open until data and objective evidence demonstrate that they are resolved conclusively.

Moreover, there are several processes which provide conformance visibility and drive progress towards the resolution of open findings, as follows:

- Monthly Activity Reports are being provided by RTM which show conformance of regulatory inspections for major assets versus conformance expectations established by OCT;
- Oversight performed by OCT and the RMCO provide ongoing conformance findings which also serve to validate the Monthly Activity Reports;
- OC Transpo and the RMCO engage RTG / RTM throughout the year to review the status of open findings and their respective remedial actions, while expediting resolution.

A summary of the findings identified by the RMCO since RSA, as well as the open findings and remedial actions are shown in the Figure below and in Annex 11. A summary is presented below:

- Since revenue service inception, the RMCO’s monitoring activities have identified a total of 59 findings, of which 51 have been addressed and closed through remedial actions provided by RTG / RTM. It should be noted that such closed items remain the subject of ongoing Oversight by OC Transpo and monitoring by the RMCO;
- Of the 8 findings which are open, OC Transpo has requested and received remedial action plans for all such findings, however these items remain open until objective evidence is provided to demonstrate a conclusive resolution. Below is a summary of the open findings:
 - 5 findings relate to the most recent monitoring performed in 2025 on the TPSS and Communications Systems. The remedial actions implemented by RTG / RTM are under review to confirm their effectiveness;
 - 1 finding relates to HOS Regulations monitored in 2024 – 3 of the 4 findings for HOS Regulations were closed, while the remaining open item (i.e. RTM Oversight) is being reviewed by OC Transpo;
 - 1 finding relates to the execution of track inspections which have improved but are short of full conformance expectations; this finding is being reviewed through ongoing meetings and oversight, while RTM’s monthly activity reports provide conformance results on an ongoing basis;
 - 1 finding relates to the Security Management Plan (i.e. “SeMP”) - specifically the fence intrusion detection system (i.e. “FIDS”) has been tested and is nearing commissioning;

During 2026, remedial actions will continue to be the subject of ongoing follow-up by OC Transpo with support from the RMCO.

Figure 13 – Summary of RMCO Monitoring Findings and Remedial Actions Status:

REGULATORY AREA / PROGRAM	PERIOD MONITORED	NUMBER OF FINDINGS	NUMBER OF FINDINGS CLOSED	NUMBER OF FINDINGS OPEN
RULES TRAINING - OPERATING EMPLOYEES	Q4 - 2019	1	1	0
TRACK INSPECTIONS	Q1 / Q2 - 2020	8	8	0
LRV INSPECTIONS	Q3 / Q4 - 2020	5	5	0
CATENARY INSPECTIONS	Q3 / Q4 - 2020	5	5	0
SMS	Q2 / Q3 - 2021	6	6	0
ERP	Q4 - 2021	6	6	0
INSPECTIONS LRV, TRACK, CATENARY	Q2 / Q3 - 2022	4	3	1
SECURITY MANAGEMENT SYSTEM	Q4 - 2022	6	5	1
TUNNEL INSPECTIONS	Q2 / Q3 - 2023	5	5	0
CBTC INSPECTIONS	Q3 / Q4 - 2023	2	2	0
BRIDGE INSPECTIONS / REPAIRS	Q2 / Q3 - 2024	2	2	0
HOS REGULATIONS	Q4 - 2024	4	3	1
TPSS	Q2 / Q3 - 2025	2	0	2
COMMUNICATIONS SYSTEMS	Q4 - 2025	3	0	3
	TOTAL	59	51	8

8. Monitoring Focus in 2026:

In accordance with the risk-based approach outlined in Section 3 of this Report, as well as City LRT Regulations, the RMCO performs and updates risk-based analyses to identify areas / Programs to be monitored – this approach will continue to be used in 2026 to identify specific areas to be monitored.

The risk-based selection process will review the following risk inputs (refer to Subsection 3.2 of this Report):

- Confederation line experience, including safety, security and operations;
- Oversight and monitoring findings, including RMCO monitoring, Oversight performed by OC Transpo and Oversight / investigations performed by other parties;
- Typical hazards / risks and occurrences faced by similar commuter operations (based on research performed and presented in the Work Plan and updated annually based on current data⁵);
- Confederation Line characteristics and regulatory Programs.

The risk-based analysis will be revisited during the second quarter of 2026 and will be followed with the development of a monitoring plan and procedures which will be communicated to stakeholders to initiate monitoring.

The risk-based analysis will give significant consideration to evolving areas such as the East Extension, the special regime of inspections instituted as risk mitigation for LRV cartridge bearing assemblies (i.e. CBA), as well as areas which have not been monitored by the RMCO since RSA (e.g. stations inspection / maintenance, medical fitness for duty).

During 2026, the RMCO will continue to perform regulatory monitoring in accordance with the City's mandate using a structured approach and the principles described in Section 3 of this Report. The intent will be to monitor two risk areas during the year – the first area will be monitored from June to August, while the second area will be monitored from September to December. This approach will continue to provide regulatory compliance knowledge which increases incrementally over time and which corresponds to the major risk areas experienced by rail commuter operations as well as the Confederation Line's experience – this will be valuable in complementing the City's efforts to achieve the highest possible level of safety and security.

⁵ External inputs, such as the following, are reviewed on an ongoing basis to inform the risk-based analysis:

- 1) Safety statistics and reports from the Transportation Safety Board
<https://www.tsb.gc.ca/eng/stats/rail/stats.html>
- 2) Safety statistics and reports from the Federal Railroad Administration
<https://railroads.dot.gov/safety-data/new-safety-data-site>
- 3) Publications and safety statistics from the American Public Transportation Association and Federal Transit Administration
<https://www.apta.com/>

Context / Disclaimers

This Report, including any enclosures, attachments and annexes, has been prepared for the exclusive use of the City of Ottawa solely for the purpose for which it is provided under the Terms of the Contracts executed March 2nd 2018 and April 26th 2023 between the City of Ottawa and SAB Vanguard Consulting Inc., as well as the supplementary information in Annexes 1-3 and 13 of this Report.

Any use, decisions or actions taken as a result of this work shall be the responsibility of the parties directly involved in the decisions or actions.

ANNEXES

ANNEX 1

Ottawa Light Rail Transit (OLRT) – Regulatory Background

This Annex provides background information on the Ottawa Light Rail Transit (OLRT) project which is considered in law to be a federal rail transportation undertaking:

On July 14th, 2011, Ottawa City Council approved the implementation plan for the Ottawa Light Rail Transit (OLRT) project which is considered in law to be a federal rail transportation undertaking.

Since Federal legislation was not developed for application to municipal light rail systems, the City of Ottawa was provided with the authority to regulate its light rail transit system. This was formalized with a **Delegation Agreement** between the Minister of Transport and the City of Ottawa on October 1st, 2011, which provides authority to the City to regulate any matters covered by Part III and IV of the *Canada Transportation Act* as well as the *Railway Safety Act*. This delegated authority applies only to the Confederation Line and does not extend to other OC Transpo operations (i.e. Trillium Line, Bus, Para).

In accordance with the Delegation Agreement, and By-Law No. 2015 – 301, the position of 'Light Rail Regulatory Monitor and Compliance Officer' (i.e. 'Regulatory Monitor and Compliance Officer – RMCO', or 'Compliance Officer') was created to monitor and report on compliance with the Ottawa Light Rail Transit (OLRT) Regulations (i.e. City LRT Regulations); the duties and responsibilities of this position are shown in Annex 2. The Compliance Officer is independent of the Transportation Services department and reports directly to the City Manager and City Council.

The RMCO is tasked with specific responsibilities as follows:

1. Development of a **multi-year Work Plan** for monitoring compliance relative to City LRT Regulations as they relate to the safety and security of the system;
2. Perform ongoing compliance monitoring in accordance with the RMCO mandate and Work Plan;
3. Prepare **Annual Compliance Reports** that describe the specific areas of the regulatory framework that were reviewed during the past year; report on the work that was undertaken to verify compliance in these areas; identify areas where compliance with City LRT Regulations has been fully achieved; and report on areas where compliance has not been fully achieved;
4. **Ongoing monitoring** and reporting of any potential regulatory compliance gaps to the City Manager, in order for City staff to correct any compliance deficiencies.

ANNEX 2

Regulatory Monitor and Compliance Officer (RMCO) – Duties and Responsibilities

The following schedule was prepared by the City of Ottawa to describe the duties and responsibilities of the RMCO. It is part of the Contracts signed between the City of Ottawa and SAB Vanguard Consulting Inc. on March 2nd, 2018 and April 26th, 2023.

SCHEDULE "A"

STATEMENT OF DUTIES AND RESPONSIBILITIES

The Light Rail Regulatory Monitor and Compliance Officer ("Compliance Officer") is responsible for reviewing, investigating, monitoring and reporting on compliance with the Ottawa Light Rail Transit (OLRT) regulations.

The Compliance Officer will be independent of the Transportation Services Department and will report directly to the City Manager and City Council.

The Compliance Officer will be responsible for the development of a multi-year workplan for monitoring compliance with the OLRT regulations as it relates to the safety and security of the system. The workplan will detail the strategy for the selection of regulations, rules, and procedures to be monitored, the overall methodology to undertake monitoring and reporting, the specific regulatory areas to be monitored, and the timeframes for undertaking the work. The multi-year workplan will be submitted to both the Transit Commission and Ottawa City Council. Prior to developing the multi-year workplan, the Compliance Officer will be required to review and understand the City's comprehensive regulatory framework.

The role is expected to involve monitoring regulatory compliance through site visits, interviews with City staff and contractors, and review of relevant documentation, records, and performance reporting. These tasks are expected to include but not be limited to:

- Reviewing regulations, policies and procedures;
- Conducting interviews and meetings with field staff and senior management;
- Conducting field observations of operations, maintenance and/or safety management activities;
- Reviewing technical submissions;
- Analyzing data and performance records;
- Assessing compliance with regulations;
- Providing timely and accurate advice to staff to consider improvements to the regulations and/or to the implementation and enforcement of regulations when required; and,
- Monitoring implementation of staff recommended improvements, developments and new initiatives in respect to the OLRT Regulations.

The Compliance Officer will prepare an Annual Compliance Report that will describe the specific areas of the regulatory framework that were reviewed during the past year; report on the work that was undertaken to verify compliance in these areas; identify areas where compliance with Regulations has been fully achieved; and report on areas where compliance has not been fully achieved. The Annual Compliance Report will also include any revisions to the multi-year workplan.

After preparing a draft of the report and taking input from the City Manager and affected persons as determined necessary, the Annual Compliance Report will be submitted annually to the City’s Transit Commission and City Council. The City Manager will prepare a Management Response Companion Report that will be considered by Transit Commission and Council alongside the Annual Compliance Report.

The Compliance Officer will also be responsible for quarterly monitoring and reporting of any potential regulatory compliance gaps to the City Manager, in order for City staff to correct any compliance deficiencies.

Please refer to Annexes 3 and 13 of this report for further information on the RMCO responsibilities and regulatory context.

ANNEX 3

Regulatory Monitor And Compliance Officer (RMCO) – Supplementary Information Relative to Scope / Responsibilities

In accordance with the Delegation Agreement referenced in Annex 1, and the report submitted to City Council on September 23rd, 2015, the duties and responsibilities of the RMCO are described in Annex 2.

In addition, the following information is provided to further clarify the scope and responsibilities of the RMCO:

- The RMCO is responsible for regulatory compliance monitoring for the Confederation Line after revenue service.
- This mandate covers the Confederation Line exclusively and any expansions or extensions to this transit system or other light rail systems. This mandate does **not** cover commuter rail operations such as the Capital / Trillium railway, bus transit operations, or Para Transpo operations.
- The RMCO regulatory compliance monitoring primarily relates to City LRT Regulations Adopted by the City through bylaw or by other means, including standards and requirements imposed by Contract. Specifically, the basis for RMCO regulatory monitoring is the ‘Confederation Line Designated Regulations’ dated July 2024 (refer to excerpt Annex 4 of this Report).
- The RMCO was not involved in the construction, implementation, independent safety certification or revenue service availability activities for the Confederation Line.
- RMCO activities consist of performing regulatory compliance monitoring rather than audits. This implies that the assessment of risks, controls, governance, etc. are not part of the RMCO monitoring scope.
- The RMCO monitors compliance relative to City LRT Regulations / Programs on a progressive basis according to monitoring schedules and provides quarterly updates to the City Manager as well as Annual Compliance Reports to City Council and the Transit Committee. This provides a progressive assessment of compliance.
- The development and follow-up for remedial actions required as a result of RMCO monitoring findings are the responsibility of the City. This applies to findings relative to the City’s departments (e.g. OC Transpo) as well as contractors.

The following additional information provides further detail on the RMCO monitoring scope:

- The RMCO monitors compliance with operations and maintenance (“O&M”) related LRT Regulations by OC Transpo (OCT) as per the ‘Confederation Line Designated Regulations’.

- OCT must Adopt and Implement, provide Oversight and Direction and maintain Records in relation to designated O&M Programs, including the Direction to relevant Contractors to do the same and to adhere to Program requirements.
- The RMCO monitors Contractor work activities in relation to the requirements of these O&M Programs as one method of assessing whether OCT is complying with its regulatory obligation to provide meaningful Oversight and Direction to Contractors in relation to these Programs.
- The RMCO does not: (a) assess the adequacy, sufficiency or effectiveness of Programs or their terms; (b) adjudicate possible legal defaults or breaches by Contractors in the performance of their Program related work activities; or (c) enforce Contractor performance obligations.
- The RMCO will be guided by OCT interpretations of Program requirements in monitoring and reporting on conformance by Contractors with their P.A. (Project Agreement) related obligations, including in relation to OCT requested remedial actions by Contractors.
- OCT management, together with internal and/or external legal support, will determine whether RMCO findings of non-conformance according to any of the categories described in the Report Tables (refer to Sections 5 and 6 of this Report), on their own or on a cumulative, sustained or unrectified basis, constitute a contractual default or breach by Contractor according to relevant contract terms.
- The RMCO's findings are primarily intended to assist OCT and its Contractors in making ongoing improvements to the performance of Program work activities, including OCT Oversight practices. These findings are not intended to ascribe legal fault or failure.

ANNEX 4

Excerpts From City LRT Regulations– Appendix B of 'Confederation Line Designated Regulations' (i.e. "CLR") Dated July 2024

The following excerpts are provided because of their relevance to the regulatory monitoring activities performed by the RMCO.

APPENDIX B – MASTER LIST OF CONFEDERATION LINE REGULATIONS

UPDATED AS OF: July , 2024

Introduction: The City's delegated self –regulatory regime is based fundamentally on:

- (a) City imposed obligations on various Designated City Organizations to adopt and manage specified programs, plans, procedures and practices in relation to the Confederation Line (collectively "**Programs**"); and
- (b) the City's reliance on various oversight mechanisms, procedures and practices that the City has adopted to manage or direct those persons who are responsible for complying with the requirements of these Programs.

1. OC Transpo Regulations & Programs

1.1 OC Transpo Regulatory Obligations: OC Transpo shall comply with the following Confederation Line Regulations and shall generally follow and apply Good Industry Practice in:

- (a) Approving and adopting the Programs described in paragraph 1.3 below (the "**OC Transpo Programs**");
- (b) Implementing, either directly or through its Contractors, the OC Transpo Programs described in paragraph 1.3 below;
- (c) Overseeing OC Transpo employees, Contractors and other persons over whom it has lawful authority to ensure proper implementation and timely compliance with the requirements of the OC Transpo Programs;
- (d) Directing OC Transpo employees, Contractors and other persons over whom it has lawful authority to ensure activities are being conducted and timely compliance with the requirements of the OC Transpo Programs
- (e) Monitoring and maintaining records, providing access to records and responding to enquiries from the RMCO and reporting to the City Manager, in relation to the compliance with the OC Transpo Programs by those who are responsible for compliance;

1.3 OC Transpo Programs: OC Transpo is responsible for the following Programs:

- (a) Safety Management System Plan (SMS) for the Confederation Line which includes but is not limited to:
 - (i) A hazard identification and risk analysis (hazard log) procedures;
 - (ii) Safety Incident Management plan(s) and procedures;
 - (iii) Accident and Incident Investigation and Reporting Requirements;
 - (iv) Risk/change management procedures;
 - (v) Knowledge management procedures; and
 - (vi) Safety concern generation and escalation procedures
- (b) Security Management System Plan (SeMS) for the Confederation Line which includes but is not limited to:
 - (i) Emergency response plan/procedures
 - (ii) Threat and vulnerability assessment
 - (iii) Risk management procedures
 - (iv) Security management plan/procedures
- (c) Standard Operating Procedures (SOP);
- (d) Confederation Line Operating Rules and Procedures;
- (e) Maintenance and Rehabilitation Plan;
- (f) Track Safety and Inspection Rules;
- (g) Asset Management Plan which includes but is not limited to:

5. Infrastructure and Water Services Department Programs

5.1 LRT Regulation: IWSD shall, respectively and as applicable, comply with the following Confederation Line Regulations and shall generally follow and apply Good Industry Practice in:

- (a) Approving and adopting the Programs described in paragraph 5.3 below (the "**Asset Management Services and Infrastructure Services Programs**");
- (b) Implementing, either directly or through its Contractors, the Infrastructure and Water Services Programs described in paragraph 3.3 below;
- (c) Overseeing Infrastructure and Water Services Department employees, Contractors and other persons over whom it has lawful authority to ensure proper implementation and timely compliance with the requirements of the Asset Management Services and Infrastructure Services Programs;
- (d) Directing Infrastructure and Water Services Department employees, Contractors and other persons over whom it has lawful authority to ensure activities are being conducted and timely compliance with the requirements of the Asset Management Services and Infrastructure Services Programs;
- (e) Monitoring and maintaining records, providing access to records and responding to enquiries from the RMCO and reporting to the City Manager, in relation to the compliance with the Asset Management Services and Infrastructure Services Programs by those who are responsible for compliance;

5.3 Asset Management Services and Infrastructure Services Programs: IWSD, in collaboration and/or coordination with OC Transpo and RCP and other City personnel, must establish, adopt and/or apply Programs in relation to the:

- (a) Transit Asset Management Plan for those Confederation Line assets the City is responsible for including Inventory, condition assessment inspections, maintenance, repair, replacement, rehabilitation and lifecycle of those assets identified and in accordance with the provisions of the Project Agreement; and
 - (i) Asset inventory and condition assessment plan
 - (ii) Maintenance and rehabilitation plan
 - (iii) Inspection plan and procedures
 - (iv) Asset Management Plan includes but not limited to:
 - (1) Structures: bridge, culverts, retaining walls, tunnels
 - (2) Stations, facilities,
- (b) Design and Construction process and procedure
- (c) Project management process and procedures
- (d) Documentation process
- (e) Other Programs: the City Manager may direct IWSD to adopt from time to time in relation to the Confederation Line.

ANNEX 5

Risk-Based Approach for Monitoring

Risk-Based Selection of Areas / Regulations to Monitor:

As described in Section 3 of this Report, a number of factors are considered in the risk-based selection of Regulations / Programs to be monitored - this is summarized below:

- 1) Research relative to hazards and risks for commuter operations (refer to Work Plan);
- 2) Research and analysis relative to incident / accident data for commuter operations (refer to Work Plan);
- 3) Consideration for Confederation Line characteristics (e.g. technology and infrastructure) as well as Regulations and Program documents;
- 4) Consideration for Confederation Line experience (e.g. incidents / accidents, service issues etc.);
- 5) Consideration for internal and external Oversight activities (e.g. RMCO monitoring, OC Transpo Oversight) as well as audits.

This approach is dynamic since key inputs such as those identified in items 4 and 5 (above) are reviewed periodically to better understand risk and to make appropriate selections for Programs to monitor. In this manner, such inputs are considered in the ongoing risk-based selection of Programs to be monitored.

Overview of Potential Hazards / Risks:

The City mandate for the RMCO states that the focus of regulatory monitoring is on safety and security. As such, related risks can result from multiple sources (hazards), each with their respective potential probability (i.e. likelihood) and consequence (i.e. severity).

The multi-year Work Plan presented research performed on potential hazards, accident / incident causes for commuter operations, and other relevant research. This enabled the identification of the following broad hazard / risk categories:

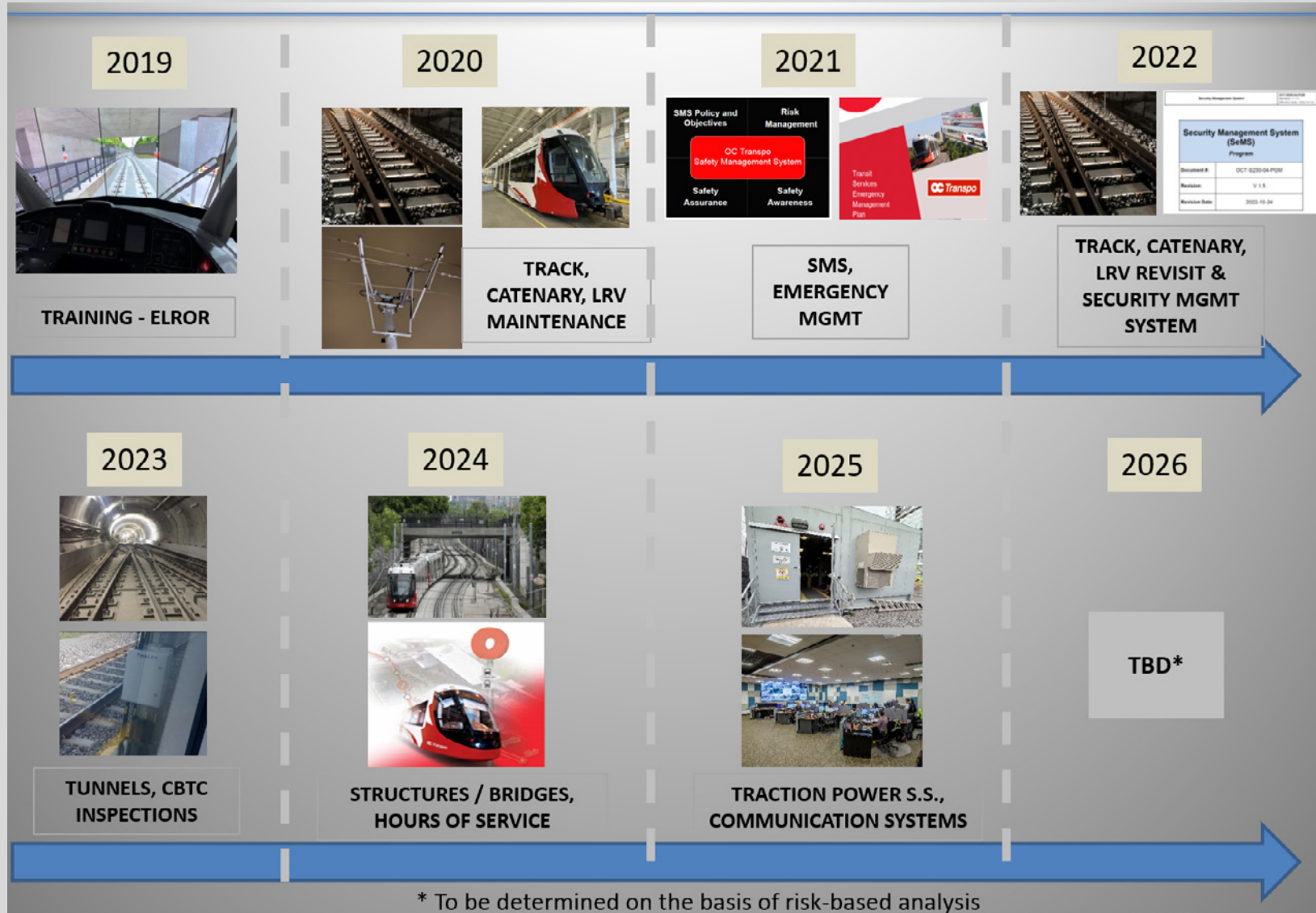
- Human Factors;
- Security Management System and Emergency Procedures;
- Rolling stock inspection / maintenance (i.e. light rail vehicles);
- Track inspection / maintenance;
- Other equipment / infrastructure, environmental and other.

Safety Management Systems has been added to the above categories since this is an integral part of managing safety and operations.

The above risk areas and the corresponding 'OCT Programs' identified in City LRT Regulations are the focus of the RMCO's regulatory monitoring activities.

ANNEX 6

Areas Monitored by RMCO Since Revenue Service Inception



ANNEX 7 – Project Agreement Excerpt (Sched. 15-3, Appendix A, Attach. 15)

TRACTION POWER SUPPLY SYSTEM

Ottawa Light Rail Transit Project		Schedule 15-3 to Project Agreement Execution Version	
MAINTENANCE RESPONSIBILITY TABLE		Project Co	City / Other
Traction Power		✓	
Traction Power substations		✓	
Traction Power rectifier units		✓	
Rectifier transformer		✓	
Substation AC switchgear & protection devices		✓	
Substation DC switchgear & protection devices		✓	
HVAC		✓	
Substation Grounding System		✓	
DC feeder system		✓	
Battery subsystem		✓	
Auxiliary power equipment		✓	

Fire/Smoke Detection	✓	
Intrusion alarm subsystem	✓	
Lightning protection	✓	
Negative disconnect switch	✓	
Positive disconnect switch	✓	
Telephone equipment [Footnote 1)]	✓	
Protective devices and metering	✓	
Cable and raceway subsystem	✓	
Substation foundation	✓	
Negative return rail overvoltage detection	✓	
Tie in equipment to Hydro Ottawa Alignment Supply points / demarcation [Footnote 2)]	✓	

COMMUNICATIONS SYSTEMS

Ottawa Light Rail Transit Project	Schedule 15-3 to Project Agreement Execution Version	
MAINTENANCE RESPONSIBILITY TABLE	Project Co	City / Other
Communications and Control systems	✓	
Communication Transmission System (CTS) [Footnote 12])	✓	✓
Public address (PA)	✓	
Passenger information display system (PIDS)	✓	
Closed circuit television (CCTV)	✓	
Workstations [Footnote 3])	✓	

Monitors [Footnote 3]]	✓	
Application Servers [Footnote 3]]	✓	
Database Servers [Footnote 3]]	✓	
Network Recorders [Footnote 3]]	✓	
Intrusion access control system (IAC)	✓	
Telephone and Intercom System [Footnote 1)]	✓	✓
SCADA	✓	
Train control	✓	
LRT Consoles	✓	
LRT Signaling Room	✓	
Backup & Yard Control Centre	✓	
Radio communication systems [Footnote 13)]		✓
Master clock	✓	

ANNEX 8 – Table of Findings for Monitoring of TPSS

Findings for OC Transpo – Traction Power Supply System (TPSS)

RMCO REGULATORY MONITORING - OC TRANSPO - INSPECTIONS AND MAINTENANCE OF TRACTION POWER SUPPLY SYSTEM (TPSS)					
OVERVIEW OF ELEMENTS MONITORED AND FINDINGS					2025-09-12
PRIVILEGED AND CONFIDENTIAL - PREPARED BY RMCO (REGULATORY MONITOR AND COMPLIANCE OFFICER). DO NOT REPRODUCE OR DISTRIBUTE.					
ITEM	REGULATORY REQUIREMENT	REGULATORY REFERENCE	ELEMENT	OC TRANSPO	NOTES
1A	PROGRAM ADOPTION	CONFEDERATION LINE DESIGNATED REGULATIONS -	PROGRAM ADOPTION	COMPLIANT	REGULATORY PROGRAM DOCUMENTS DEVELOPED / ADOPTED ARE IDENTIFIED IN CONFEDERATION LINE DESIGNATED REGULATIONS AND SUPPLEMENTARY DOCUMENTS. OC TRANSPO PROVIDED A NUMBER OF DOCUMENTS RELATIVE TO THE INSPECTION AND MAINTENANCE OF THE TPSS - THESE INCLUDE THE FOLLOWING: - PROJECT AGREEMENT (SCHEDULE 15-3, APPENDIX A – ATTACHMENT 3 “TRACTION POWER SYSTEM” - P.A. SCHED. 15-2; 2.4 TRACTION POWER SUBSTATIONS; 2.5 TRACTION POWER - RTM MAINTENANCE AND REHABILITATION PLAN (RTM-MC-PLN-042) - RTM ASSET MANAGEMENT PLAN (RTM-MC-PLN-459) - RTM PREVENTATIVE MAINTENANCE PLAN (RTM-MC-PLN-611)
2A	PROGRAM IMPLEMENTATION	CONFEDERATION LINE DESIGNATED REGULATIONS -	IMPLEMENTATION	NOT APPLICABLE TO OC TRANSPO (REFER TO RTM FINDINGS)	1) “IMPLEMENTATION” IS NOT ASSESSED FOR OC TRANSPO BECAUSE TPSS INSPECTIONS / MAINTENANCE ARE PERFORMED BY RTG / RTM AND THEIR SUBCONTRACTORS AS STIPULATED IN THE PROJECT AGREEMENT (SCHEDULE 15-3, APPENDIX A – ATTACHMENT 3 “TRACTION POWER SYSTEM”) AND THE ASSOCIATED PROGRAM DOCUMENTS WHICH WERE CONTRACTED BY THE CITY TO RTG. 2) THE CITY CONVEYED REQUIREMENTS TO RTG / RTM THROUGH THE PROJECT AGREEMENT, REGULATORY PROGRAM DOCUMENTS (i.e MAINTENANCE AND REHAB. PLAN) AND SUPPLEMENTARY DOCUMENTS (e.g. ASSET MANAGEMENT PLAN). 3) IMPLEMENTATION COMPLIANCE IS ASSESSED THROUGH MONITORING OF CONTRACTORS (REFER TO RTG / RTM FINDINGS). 4) OC TRANSPO IS MONITORING THE WORK DONE BY RTG / RTM THROUGH THEIR OVERSIGHT PROCESS (REFER TO ITEMS 4A / 4B BELOW)
3A	PROGRAM DIRECTION	CONFEDERATION LINE DESIGNATED REGULATIONS -	DIRECTION	COMPLIANT	1) DIRECTION FOR TPSS INSPECTIONS / MAINTENANCE IS PROVIDED TO RTG / RTM THROUGH PROJECT AGREEMENT AS WELL AS CITY DESIGNATED PROGRAMS AND SUPPLEMENTARY DOCUMENTS. 2) THE CONFEDERATION LINE REGULATIONS IDENTIFY DESIGNATED PROGRAMS (i.e. ‘RTM MAINTENANCE & REHABILITATION PLAN’ AND ‘ASSET MGMT ASSET MANAGEMENT PLAN’) WHICH IDENTIFY INSPECTION / MAINTENANCE REQUIREMENTS FOR TPSS. THERE ARE ALSO SUPPLEMENTARY DOCUMENTS SUCH AS ASLTM ‘WMS’ PROCEDURES WHICH SPECIFY INSPECTION PROCEDURES.
4A	PROGRAM OVERSIGHT	CONFEDERATION LINE DESIGNATED REGULATIONS -	OVERSIGHT PLAN / PROCESSES	COMPLIANT	1) OC TRANSPO HAS A SUBSTANTIVE OVERSIGHT PLAN (i.e. ‘LINE 1 OVERSIGHT PLAN’) WHICH IS UPDATED ANNUALLY AND INCLUDES DETAILED SCHEDULES OF MONITORING ACTIVITIES FOR EACH YEAR. 2) OC TRANSPO HAS DEDICATED OVERSIGHT RESOURCES FOCUSED ON MONITORING, INCLUDING TPSS.
4B			OVERSIGHT ACTIVITIES	COMPLIANT	1) OC TRANSPO OVERSIGHT ACTIVITIES ENCOMPASS THE INSPECTION / MAINTENANCE OF TPSS - OC TRANSPO PREPARES AN ANNUAL ‘RAIL SYSTEMS OVERSIGHT SCHEDULE’ WHICH REQUIRES THE REVIEW OF TPSS RECORDS AND FIELD INSPECTIONS. 2) A REVIEW OF OC TRANSPO’S OVERSIGHT RECORDS* CONFIRMS THAT THERE WERE OVERSIGHT ACTIVITIES ON TPSS ASSETS DURING THE PERIOD MONITORED BY THE RMCO. 3) OC TRANSPO PROVIDED CONTRACTUAL CORRESPONDENCE REQUESTING TPSS INFORMATION FROM RTG / RTM. * OPPORTUNITY: OC TRANSPO PROVIDED AN EXCEL DOCUMENT TO SUBSTANTIATE THEIR OVERSIGHT OF TPSS RECORDS. THE ‘RAIL SYSTEMS OVERSIGHT SCHEDULE’ SPECIFIES THAT THESE ARE TO BE ENTERED IN CLEVERCAD. SUCH INFORMATION SHOULD BE ENTERED IN CLEVERCAD (RATHER THAN EXCEL) TO ENHANCE VISIBILITY, ACCESS AND MONITORING.
5A	PROGRAM RECORDS	CONFEDERATION LINE DESIGNATED REGULATIONS -	RECORDS	COMPLIANT	1) OC TRANSPO HAS SYSTEMS TO STORE AND MAINTAIN RECORDS; 2) OC TRANSPO PROVIDED RECORDS RELATIVE TO THE P.A. AND PROGRAM DOCUMENTS, CONTRACTUAL CORRESPONDENCE, OVERSIGHT PLAN / SCHEDULES AND OVERSIGHT ACTIVITIES.

Findings for RTG / RTM - Traction Power Supply System (TPSS)

ITEM	ELEMENT	CONTRACTUAL REFERENCE	ELEMENT	OC TRANSP	NOTES
1	PROGRAM ADOPTION / DIRECTION	SCHEDULE 15-3 MAINTENANCE AND REHAB. REQUIREMENTS / APPDX.	ADOPTION / DIRECTION	CONFORMANT	RTM PROVIDED A NUMBER OF DOCUMENTS WHICH CONSTITUTE DIRECTION RELATIVE TO THE INSPECTION AND MAINTENANCE OF TPSS - THESE INCLUDE THE FOLLOWING: - RTM MAINTENANCE AND REHABILITATION PLAN (RTM-MC-PLN-042) - RTM ASSET MANAGEMENT PLAN (RTM-MC-PLN-459) - RTM PREVENTATIVE MAINTENANCE PLAN (RTM-MC-PLN-641)
2A	PROGRAM IMPLEMENTATION	SCHEDULE 15-3 MAINTENANCE AND REHAB. REQUIREMENTS / APPDX.	IMPLEMENTATION - INSPECTIONS	CONFORMANT	RTM PROVIDED ABOUT 260 INSPECTION RECORDS FOR THE REGIME OF INSPECTIONS DETAILED IN ALSTOM'S WMS PROCEDURES. - THE REVIEW / ANALYSIS OF THESE INSPECTION RECORDS SHOWS A HIGH LEVEL OF EXECUTION - RTM PROVIDED RECORDS DEMONSTRATING CONFORMANCE
			IMPLEMENTATION - MAINTENANCE / REPAIRS	MOSTLY CONFORMANT	RMCO identified a sample of inspection Service Orders which contained conditions requiring repairs / remediation associated with Alstom work order numbers. RTM provided 11 Alstom Work Orders for the conditions identified. A review of these Work Orders shows that the repair duration can vary significantly: - 5 of 11 appear to have been addressed on a timely basis (<100 days); - 3 took more than 1 year to address - While 3 remain open after more than 1 year. The conditions identified appear to vary in severity, but some appear to require prompt attention – examples below: - S/O 62361531 "Negative Bus Overvoltage State Tripped device into alarm state 97 times in a few months" (remained open 18 months from May 2023 to Dec. 2024); - S/O 61874239: "TP10-SCC panel battery hi-voltage alarm after replacing the HMI card - please investigate" (remained open 18 months from Oct. 2022 to April 2024); - As well, there are minor conditions (e.g. LED to change) which take more than 1 year to address (e.g. 62434893 took > 1 year)
2B			IMPLEMENTATION - TRAINING	MOSTLY CONFORMANT	1) The Alstom training matrices provided appear to be mostly conformant, with at least 1 mandatory course missing or expired for half the employees. When we consider all employees and all mandatory courses, about 6% of mandatory courses are missing or expired. 2) RMCO requested confirmation that Broder employees are qualified electricians; RTM provided the certification numbers which were validated by the RMCO in the Provincial website.
3	PROGRAM OVERSIGHT	SCHEDULE 15-3 MAINTENANCE AND REHAB. REQUIREMENTS / APPDX.	OVERSIGHT	CONFORMANT	RTM PROVIDED THE FOLLOWING INFORMATION: 1) AN OVERSIGHT PLAN (RTM-OP-PLN-739). 2) OVERSIGHT TRACKER WHICH SHOWS SPECIFIC ACTIVITIES FOR TPSS 3) THREE RECORDS CORROBORATING OVERSIGHT ACTIVITIES ON TPSS AND RELATED EQUIPMENT
4	PROGRAM RECORDS	SCHEDULE 15-3 MAINTENANCE AND REHAB. REQUIREMENTS / APPDX.	RECORDS	CONFORMANT	RTM HAS AN INFORMATION SYSTEM WHICH IS USED TO RECORD INSPECTIONS, PRIORITIZE REPAIRS AND RECORD THEIR COMPLETION. RTM ALSO PROVIDED OVERSIGHT RECORDS.

ANNEX 9 – Table of Findings for Monitoring of Communications Systems

Findings for OC Transpo - Communications Systems

ITEM	REGULATORY REQUIREMENT	REGULATORY REFERENCE	ELEMENT	OC TRANSPO	NOTES
1A	PROGRAM ADOPTION	CONFEDERATION LINE DESIGNATED REGULATIONS -	PROGRAM ADOPTION	COMPLIANT	REGULATORY PROGRAM DOCUMENTS DEVELOPED / ADOPTED ARE IDENTIFIED IN CONFEDERATION LINE DESIGNATED REGULATIONS AND SUPPLEMENTARY DOCUMENTS. OC TRANSPO PROVIDED A NUMBER OF DOCUMENTS RELATIVE TO THE INSPECTION AND MAINTENANCE OF COMMUNICATIONS SYSTEMS - THESE INCLUDE THE FOLLOWING: - PROJECT AGREEMENT (SCHEDULE 15-3, APPENDIX A – ATTACHMENT 3 “COMMUNICATIONS SYSTEMS” AND ATTACHMENT 15 “MAINTENANCE RESPONSIBILITY TABLE” - P.A. SCHED. 15-2; MAINTENANCE AND REHABILITATION REQUIREMENTS - RTM MAINTENANCE AND REHABILITATION PLAN (RTM-MC-PLN-042) - RTM ASSET MANAGEMENT PLAN (RTM-MC-PLN-459) - RTM PREVENTATIVE MAINTENANCE PLAN (RTM-MC-PLN-641)
2A	PROGRAM IMPLEMENTATION	CONFEDERATION LINE DESIGNATED REGULATIONS -	IMPLEMENTATION	NOT APPLICABLE TO OC TRANSPO (REFER TO RTM FINDINGS)	1) "IMPLEMENTATION" IS NOT ASSESSED FOR OC TRANSPO BECAUSE INSPECTIONS / MAINTENANCE OF COMMUNICATIONS SYSTEMS ARE PERFORMED BY RTG / RTM AND THEIR SUBCONTRACTORS AS STIPULATED IN THE PROJECT AGREEMENT. 2) THE CITY CONVEYED REQUIREMENTS TO RTG / RTM THROUGH THE PROJECT AGREEMENT, REGULATORY PROGRAM DOCUMENTS (i.e. MAINTENANCE AND REHAB. PLAN) AND SUPPLEMENTARY DOCUMENTS (e.g. ASSET MANAGEMENT PLAN). 3) IMPLEMENTATION COMPLIANCE IS ASSESSED THROUGH OVERSIGHT OF CONTRACTORS PERFORMED BY OC TRANSPO STAFF (REFER TO ITEMS 4A AND 4B BELOW) AND CONTRACTUAL CORRESPONDENCE (REFER TO RTG / RTM FINDINGS).
3A	PROGRAM DIRECTION	CONFEDERATION LINE DESIGNATED REGULATIONS -	DIRECTION	COMPLIANT	1) DIRECTION FOR COMMUNICATIONS SYSTEMS INSPECTIONS / MAINTENANCE IS PROVIDED TO RTG / RTM THROUGH THE PROJECT AGREEMENT AS WELL AS CITY DESIGNATED PROGRAMS AND SUPPLEMENTARY DOCUMENTS. 2) THE CONFEDERATION LINE REGULATIONS CONTAIN DESIGNATED PROGRAMS (i.e. 'RTM MAINTENANCE & REHABILITATION PLAN' AND 'ASLTM ASSET MANAGEMENT PLAN') WHICH IDENTIFY INSPECTION / MAINTENANCE REQUIREMENTS FOR COMMUNICATIONS SYSTEMS. THERE ARE ALSO SUPPLEMENTARY DOCUMENTS SUCH AS ASLTM 'WMS' PROCEDURES WHICH SPECIFY DETAILED INSPECTION / MAINTENANCE REQUIREMENTS.
4A	PROGRAM OVERSIGHT	CONFEDERATION LINE DESIGNATED REGULATIONS -	OVERSIGHT PLAN / PROCESSES	COMPLIANT	1) OC TRANSPO HAS A SUBSTANTIVE OVERSIGHT PLAN (i.e. 'LINE 1 OVERSIGHT PLAN') WHICH IS UPDATED ANNUALLY AND INCLUDES DETAILED SCHEDULES OF MONITORING ACTIVITIES FOR EACH YEAR. 2) OC TRANSPO HAS DEDICATED OVERSIGHT RESOURCES FOCUSED ON MONITORING, INCLUDING COMMUNICATIONS SYSTEMS.
4B			OVERSIGHT ACTIVITIES	COMPLIANT	1) OC TRANSPO OVERSIGHT ACTIVITIES ENCOMPASS THE INSPECTION / MAINTENANCE OF COMMUNICATIONS SYSTEMS - OC TRANSPO PREPARES AN ANNUAL 'RAIL SYSTEMS OVERSIGHT SCHEDULE' WHICH REQUIRES THE REVIEW OF COMMUNICATIONS SYSTEMS RECORDS AND FIELD INSPECTIONS. 2) A REVIEW OF OC TRANSPO'S OVERSIGHT RECORDS* CONFIRMS THAT THERE WERE OVERSIGHT ACTIVITIES ON COMMUNICATIONS SYSTEMS DURING THE PERIOD MONITORED BY THE RMCO. * OPPORTUNITIES: 1) A SIGNIFICANT PROPORTION OF CLEVERCAD OVERSIGHT RECORDS FOR THE MONITORING PERIOD (JAN. 2024 - JUNE 2025) WERE CREATED ON SEPT. 25, 2005 OR LATER. ALTHOUGH THESE RECORDS INDICATE THAT THE OVERSIGHT ACTIVITIES WERE PERFORMED DURING THE MONITORING PERIOD, THE CLEVERCAD ENTRIES WERE PERFORMED SEVERAL MONTHS LATER - AS SUCH THERE IS AN OPPORTUNITY TO IMPROVE THE TIMELINESS OF CLEVERCAD RECORDS ENTRIES. 2) FOLLOWING A CONTRACT VARIATION IN DEC. 2023, RTM HAS BEEN RESPONSIBLE TO INSPECT / MAINTAIN GIDS DEVICES OUTSIDE OF DOWNTOWN TUNNEL. HOWEVER, THE OBJECTIVE EVIDENCE PROVIDED BY RTM INDICATES THAT GIDS INSPECTIONS WERE PERFORMED USING AN INCONSISTENT FREQUENCY AND PROCEDURE. OC TRANSPO IS REVIEWING INTERNAL PROCESS RELATIVE TO OVERSIGHT FOLLOWING CONTRACT VARIATIONS
5A	PROGRAM RECORDS	CONFEDERATION LINE DESIGNATED REGULATIONS -	RECORDS	COMPLIANT	1) OC TRANSPO HAS SYSTEMS TO STORE AND MAINTAIN RECORDS; 2) OC TRANSPO PROVIDED RECORDS RELATIVE TO THE P.A. AND PROGRAM DOCUMENTS, OVERSIGHT PLAN / SCHEDULES AND OVERSIGHT ACTIVITIES.

Findings for RTG / RTM – Communications Systems

ITEM	ELEMENT	CONTRACTUAL REFERENCE	ELEMENT	RTG / RTM	NOTES
1	PROGRAM ADOPTION / DIRECTION	1) P.A. (SCHED. 15-3, APPENDIX A – ATTACHMENT 3 "COMM. SYSTEMS" AND ATTACH. 15 "MAINTENANCE RESP. TABLE" 2) P.A. SCHED. 15-2; MAINTENANCE AND REHAB. REQUIREMENTS 3) PROGRAM DOCUMENTS SUCH AS RTM MAINTENANCE AND REHAB. PLAN (RTM-MC-PLN-042)	ADOPTION / DIRECTION	CONFORMANT	RTM PROVIDED A NUMBER OF DOCUMENTS WHICH CONSTITUTE DIRECTION RELATIVE TO THE INSPECTION AND MAINTENANCE OF COMMUNICATIONS SYSTEMS - THESE INCLUDE THE FOLLOWING: - RTM MAINTENANCE AND REHABILITATION PLAN (RTM-MC-PLN-042) - RTM ASSET MANAGEMENT PLAN (RTM-MC-PLN-459) - RTM PREVENTATIVE MAINTENANCE PLAN (RTM-MC-PLN-641)
2A	PROGRAM IMPLEMENTATION	1) P.A. (SCHED. 15-3, APPENDIX A – ATTACHMENT 3 "COMM. SYSTEMS" AND ATTACH. 15 "MAINTENANCE RESP. TABLE" 2) P.A. SCHED. 15-2; MAINTENANCE AND REHAB. REQUIREMENTS 3) PROGRAM DOCUMENTS SUCH AS RTM MAINTENANCE AND REHAB. PLAN (RTM-MC-PLN-042)	IMPLEMENTATION - INSPECTIONS	MOSTLY CONFORMANT	RTM PROVIDED OVER 800 INSPECTION RECORDS FOR THE REGIME OF INSPECTIONS FOR COMMUNICATIONS SYSTEMS DETAILED IN ALSTOM'S WMS PROCEDURES. - THE REVIEW / ANALYSIS OF THESE INSPECTION RECORDS A HIGH LEVEL OF EXECUTION WHICH APPEARS TO BE MOSTLY CONFORMANT FOLLOWING ARE RECORDS WHICH APPEAR TO BE EXCEPTIONS: - <u>3 MONTH INSPECTIONS</u> : TPSS08 PERFORMED BEYOND TIME TOLERANCE - <u>6 MONTH GIDS INSPECTIONS</u> : SINCE 2024 CONTRACT VARIATION REQUIRED RTM TO PERFORM GIDS INSPECTIONS IN LOCATIONS OTHER THAN RIDEAU, PARLIAMENT AND LYON. RTM PROVIDED RECORDS WHICH DO NOT APPEAR TO MEET 6M FREQUENCY - AS WELL PROCEDURE WAS NOT PROVIDED.
2B			IMPLEMENTATION - MAINTENANCE / REPAIRS	CONFORMANT	RMCO IDENTIFIED A SAMPLE OF INSPECTION SERVICE ORDERS WHICH CONTAINED CONDITIONS REQUIRING REPAIRS / REMEDIATION ASSOCIATED WITH ALSTOM WORK ORDER NUMBERS. RTM PROVIDED 12 ALSTOM WORK ORDERS FOR THE CONDITIONS IDENTIFIED. A REVIEW OF THESE WORK ORDERS SHOWS EXECUTION OF REPAIRS APPEARS TO BE GOOD WITH DOCUMENTED FOLLOW-UP UNTIL RESOLUTION. - SIX of 11 ISSUES RESOLVED < 48 hrs; - ONE < 1 WEEK; THREE < 3 MONTHS; - ONE COMPLEX CASE (SEVERAL ATTEMPTS UNTIL RESOLUTIONS) 9 MONTHS; - ONE WAS HANDLED BY RTM (IMRS RECORD 291280) - PROVIDED NOV. 28
2C			IMPLEMENTATION - TRAINING	MOSTLY CONFORMANT	1) TRAINING APPEARS TO BE MOSTLY CONFORMANT WITH MORE THAN HALF EMPLOYEES NOT CURRENT (i.e. 1 OR 2 MANDATORY COURSES (EXCLUDES NEW HIRES) 2) TWO EMPLOYEES FOUND IN INSPECTIONS SERVICE ORDERS ARE NOT SHOWN IN TRAINING MATRIX / RECORDS - REQUEST RTM TO PROVIDE RECORDS FOR HARSH UPPAL (497149) AND ALEX MUREFU (540738) 3) STATISTICS FOR MANDATORY COURSES FOR EMPLOYEES SHOWN (EXCL NEW HIRE): 10 EMPLOYEES; 20 MANDATORY COURSES; 3 EMPLOYEES FULLY CURRENT; 6 EMPLOYEES MISSING 1 OR 2 MANDATORY COURSES; 1 EMPL. MISSING 5 MANDATORY COURSES 4) MANDATORY COURSES WHICH ARE NOT CURRENT FOR SOME EMPLOYEES INCLUDE A MIX OF TECHNICAL AND H&S COURSES (e.g. ERROR (1); LOCK-OUT/TAG-OUT (3); LADDER SAFETY (3); RAIL SWITCH (3); WHMIS (4) etc.)

3	PROGRAM OVERSIGHT	1) P.A. (SCHED. 15-3, APPENDIX A – ATTACHMENT 3 "COMM. SYSTEMS" AND ATTACH. 15 "MAINTENANCE RESP. TABLE" 2) P.A. SCHED. 15-2; MAINTENANCE AND REHAB. REQUIREMENTS 3) PROGRAM DOCUMENTS SUCH AS RTM MAINTENANCE AND REHAB. PLAN (RTM-MC-PLN-042)	OVERSIGHT	MOSTLY CONFORMANT	RTM PROVIDED AUDIT REPORTS PERFORMED ON COMMUNICATIONS SYSTEMS IN FALL 2024 AND 2025. NO ADDITIONAL INFORMATION WAS PROVIDED REGARDING ONGOING MONITORING IDENTIFIED IN RTM OVERSIGHT PLAN.
4	PROGRAM RECORDS	1) P.A. (SCHED. 15-3, APPENDIX A – ATTACHMENT 3 "COMM. SYSTEMS" AND ATTACH. 15 "MAINTENANCE RESP. TABLE" 2) P.A. SCHED. 15-2; MAINTENANCE AND REHAB. REQUIREMENTS 3) PROGRAM DOCUMENTS SUCH AS RTM MAINTENANCE AND REHAB. PLAN (RTM-MC-PLN-042)	RECORDS	CONFORMANT	RTM AND ALSTOM HAVE INFORMATION SYSTEMS USED TO RECORD INSPECTIONS AND REPAIRS. RTM PROVIDED RECORDS FOR INSPECTIONS, REPAIRS, TRAINING AND OVERSIGHT

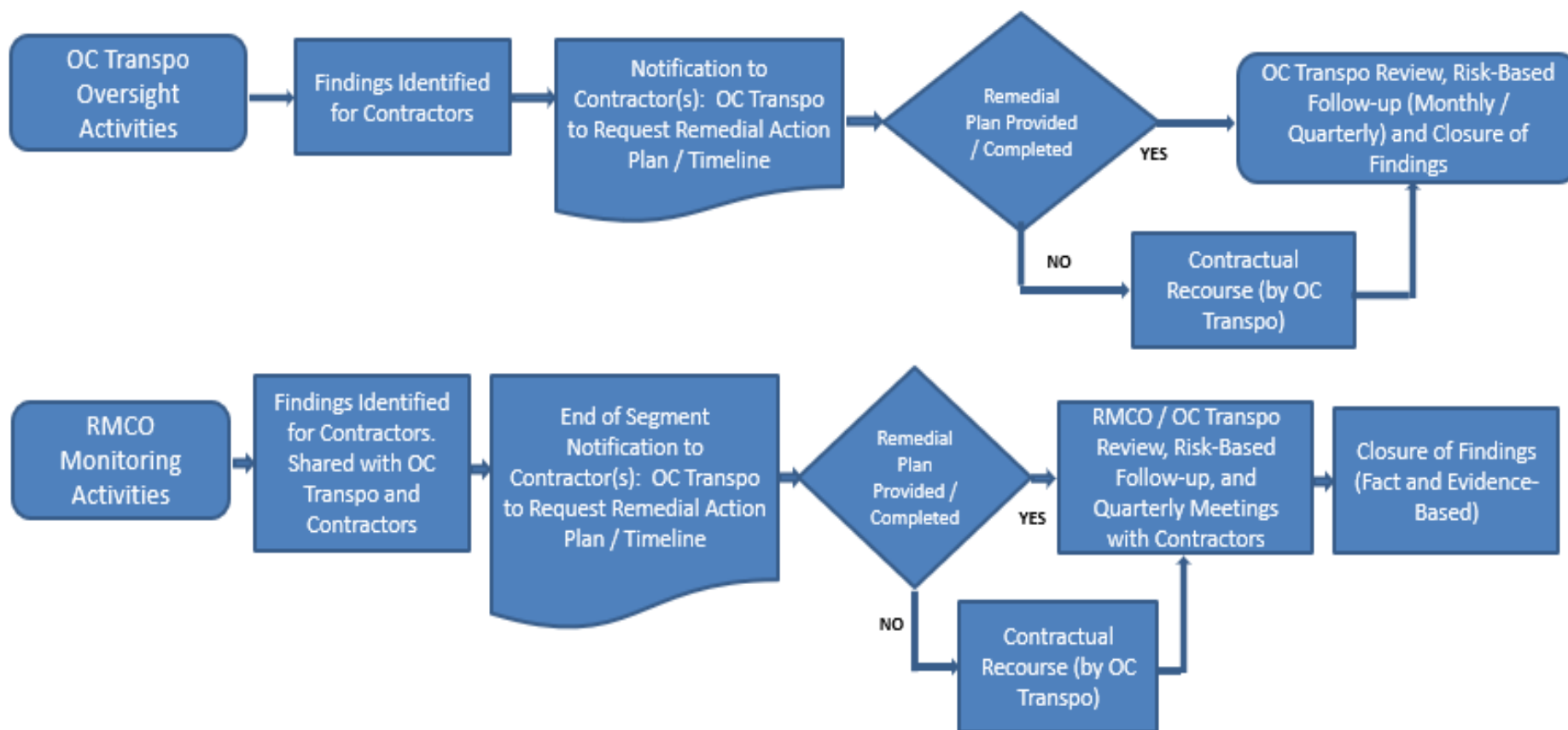
INFORMATION RELATIVE TO TABLE :

() CONFORMANCE SCALE:

C = CONFORMANT	Conformant: means that monitoring activities have identified conformant results in accordance with Contractual / Program requirements
MC = MOSTLY CONFORMANT	Mostly Conformant means that monitoring activities have identified predominantly conformant results, with some exceptions.
PC = PARTIALLY CONFORMANT	Partially Conformant means that monitoring activities identified mixed results, with some conformant areas, as well as some non-conformant areas.
NC = NOT CONFORMANT	Not Conformant means that monitoring activities have identified mostly non-conformant results.

ANNEX 10 – Remedial Actions Process

PROCESS MAP FOR FOLLOW-UP OF FINDINGS AND REMEDIAL ACTIONS - CONTRACTORS



Notes:

- Findings will be shared with Contractors progressively for purposes of diligent and timely response / action.
- Timeline requested by OC Transpo for Contractor **submission of remedial action plans to be 30 days; Implementation of remedial actions to be required within 30, 90 or 180 days, based on potential severity, complexity and / or scope.**
- Contractual recourse (if required) to be decided by OC Transpo based on particulars of each monitoring situation.
- Risk-based follow-up to include activities such as: review of documents / records, sampled monitoring, monthly / quarterly meetings, etc.

ANNEX 11 – RMCO Monitoring Findings and Remedial Actions Status

SUMMARY OF RMCO MONITORING - OPEN FINDINGS AND REMEDIAL ACTIONS STATUS - 18 FEB. 2026

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Finding #	Area Monitored	Monitoring Period	Finding Description	Relevant Program Document(s)	Status	Comments / Next Steps Requested by OC Transpo
<u>34</u>	Inspections of LRV, Track and Catenary	JUNE - AUG. 2022	<p><u>2022-8 Inspections of Track (i.e. Guideway):</u></p> <p>.....</p> <p><u>Finding:</u> Monitoring of Track inspections show about 30% of records missing for three types of inspections (3 month mainline, 1 day mainline, 1 month turnout) and 15% of records missing for 3 day mainline inspections. Track inspections relative to extreme weather were conformant.</p>	<p>i) P.A. Schedule 15-3 Maintenance and Rehabilitation Requirements;</p> <p>ii) City adopted Program "Maintenance and Rehabilitation Plan RTM-MC-PLN-042";</p> <p>iii) City adopted Program "Track Safety and Inspection Rules RTM-ENG-RUL-132"</p>	OPEN	<p>1) RTM actions in progress;</p> <p>2) OCT reviewing with RTM reporting required to demonstrate conformance objectively</p>
<u>35</u>	Inspections of LRV, Track and Catenary	JUNE - AUG. 2022	<p><u>2022-9 Inspections of Catenary / OCS:</u></p> <p>.....</p> <p><u>Finding:</u> Monitoring of Catenary inspections show 5 of 12 records missing for 6 month OCS tensioning WMS002, and 3 of 12 records missing for two types of inspections (6 month WMS001 and 1 year WMS005). As well, inspection records for 2M inspections identified 2 inspections which were done late.</p>	<p>i) P.A. Schedule 15-3 Maintenance and Rehabilitation Requirements;</p> <p>ii) City adopted Program "Maintenance and Rehabilitation Plan RTM-MC-PLN-042";</p> <p>iii) City adopted Program "Track Safety and Inspection Rules RTM-ENG-RUL-132"</p>	CLOSED NOV. 2025	
<u>39</u>	Security Management System	OCT. - DEC. 2022	<p><u>2022-13 Fence Intrusion Detection System:</u></p> <p>.....</p> <p><u>Finding:</u> Fence Intrusion Detection System (FIDS) does not appear to be operational as per PA requirements and RTM SeMP.</p>	<p>i) RTM SeMP 4.7</p>	OPEN	<p>RTG / RTM working on full functionality before final commissioning</p>
<u>47</u>	CBTC Inspections / Maintenance	SEPT. - NOV. 2023	<p><u>2023-6 CBTC Inspections / Maintenance :</u></p> <p>.....</p> <p><u>Finding:</u> Several CBTC inspection types were mostly conformant (1Y, 6M, 1M, 1W, 1D)</p>	<p>i) P.A. Schedule 15-2 Part 4 Article 5;</p> <p>ii) P.A. Schedule 15-3 (Maintenance and Rehabilitation Requirements);</p> <p>iii) City adopted Program "Maintenance and Rehabilitation Plan RTM-MC-PLN-042";</p>	CLOSED NOV. 2025	

50	Bridge / Structure inspections	JUNE - AUG. 2024	<p><u>2024-2 Bridge / Structure Repairs :</u> <u>Finding:</u> The information provided by RTM shows that most of the short terms repairs (i.e. 0-2 years) in the sample of structures were not completed on a timely basis. RTM to develop process to record, review, prioritize, address and close / record repairs identified in OSIM reports.</p>	<p>i) P.A. Sched. 15-3 Maintenance and Rehabilitation Requirements / Appendix A Attachment 9 ii) Program documents such as "Maintenance and Rehabilitation Plan"</p>	CLOSED FEB. 2026	
51	HOS Regulations	SEPT. - DEC. 2024	<p><u>2024-3 HOS Regulations - Adoption / Direction:</u> <u>Finding:</u> RTG / RTM does not appear to have adopted or provided Direction relative to Federal HOS Regulations in accordance with City Direction</p>	<p>i) P.A. Sched. 15-4 Regulatory Standards ii) Regulatory Work Group minutes and City "Work Submittal Response SUB-2428"</p>	CLOSED FEB. 2026	
52	HOS Regulations	SEPT. - DEC. 2024	<p><u>2024-4 HOS Regulations - Implementation:</u> <u>Finding:</u> RTG / RTM appear to have implemented hours of work requirements under the CLC – this does not follow Direction provided by the City to implement Federal HOS Regulations.</p>	<p>i) P.A. Sched. 15-4 Regulatory Standards ii) Regulatory Work Group minutes and City "Work Submittal Response SUB-2428"</p>	CLOSED FEB. 2026	
53	HOS Regulations	SEPT. - DEC. 2024	<p><u>2024-5 HOS Regulations - Oversight :</u> <u>Finding:</u> RTG / RTM appear to be performing a limited amount of Oversight focused on payroll – this should be expanded to include internal and external (i.e. contractors) monitoring specific to work hours conformance.</p>	<p>i) P.A. Sched. 15-4 Regulatory Standards ii) Regulatory Work Group minutes and City "Work Submittal Response SUB-2428"</p>	OPEN	OCT and RTM reviewing resolution
54	HOS Regulations	SEPT. - DEC. 2024	<p><u>2024-6 HOS Regulations - Records:</u> <u>Finding:</u> A number of Records were provided by RTG / RTM – Records should be expanded to include Direction and Oversight.</p>	<p>i) P.A. Sched. 15-4 Regulatory Standards ii) Regulatory Work Group minutes and City "Work Submittal Response SUB-2428"</p>	CLOSED FEB. 2026	

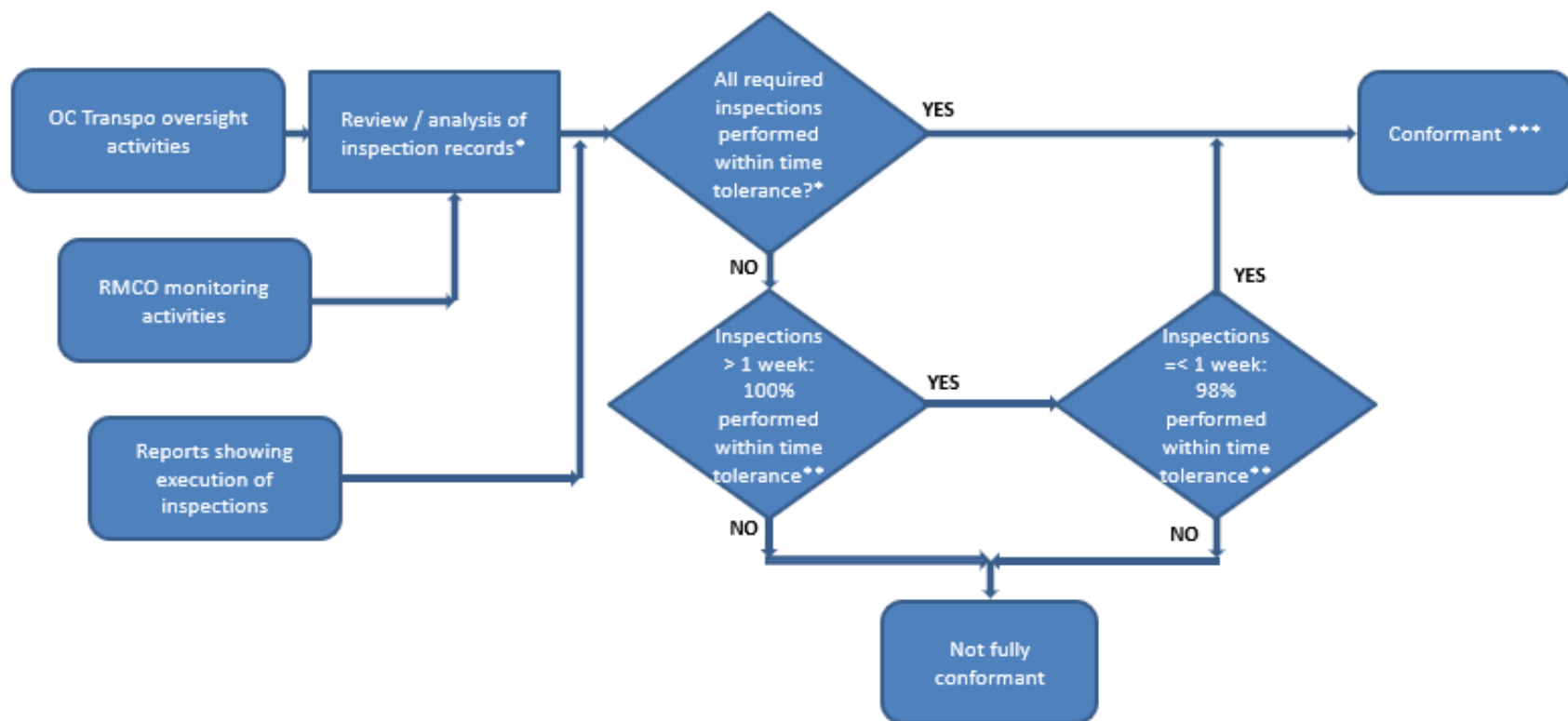
<u>55</u>	TPSS - REPAIRS / MAINTENANCE	JUNE - SEPT. 2025	<p>2025-S1A TPSS REPAIRS / MAINTENANCE</p> <p>Finding: A review of these Work Orders shows that the repair duration can vary significantly: - 5 of 11 appear to have been addressed on a timely basis (= <100 days); - 3 took more than 1 year to address - While 3 remain open after more than 1 year.</p>	P.A. Sched. 15-3 'Maintenance and Rehabilitation Requirements' and associated Program documents (e.g. Alstom Asset Management Plan)	OPEN	Action Plans submitted by RTM / Alstom Oct. 29 - these are under review and are the subject of discussion with OCT
<u>56</u>	TPSS - TRAINING	JUNE - SEPT. 2025	<p>2025-S1B TPSS TRAINING</p> <p>Finding: The Alstom training matrices provided appear to be mostly conformant, with at least 1 mandatory course missing or expired for half the employees. When we consider all employees and all mandatory courses, about 6% of mandatory courses are missing or expired.</p>	P.A. Sched. 15-3 'Maintenance and Rehabilitation Requirements' and associated Program documents (e.g. Alstom Asset Management Plan)	OPEN	Action Plans submitted by RTM / Alstom Oct. 29 - these are under review and are the subject of discussion with OCT
<u>57</u>	COMMUNICATIONS SYSTEMS - INSPECTIONS	SEPT. - DEC. 2025	<p>2025-S2A INSPECTIONS - COMM. SYSTEMS</p> <p>Finding: "6M GIDS inspections": Since 2024, as a result of a contract variation, RTM has been responsible for GIDS inspections / maintenance in locations not performed by Alstom (i.e. outside of downtown tunnel) – however the information provided shows that the frequency of inspections is not consistent and the inspection process has not been provided</p>	<p>1) P.A. (Sched. 15-3, Appendix A – Attachment 3 "Comm. Systems" and Attach. 15 "Maintenance Resp. Table"</p> <p>2) P.A. Sched. 15-2; Maintenance And Rehab. Requirements</p> <p>3) Program Documents such as RTM Maintenance and Rehab. Plan (RTM-MC-PLN-042)</p>	OPEN	Action Plans requested by OC Transpo Dec. 19, 2025
<u>58</u>	COMMUNICATIONS SYSTEMS - TRAINING	SEPT. - DEC. 2025	<p>2025-S2B TRAINING - COMM. SYSTEMS</p> <p>Finding: The Alstom training matrices provided appear to be mostly conformant. Remedial action to be submitted to achieve conformance expectations established by OCT.</p>	<p>1) P.A. (Sched. 15-3, Appendix A – Attachment 3 "Comm. Systems" and Attach. 15 "Maintenance Resp. Table"</p> <p>2) P.A. Sched. 15-2; Maintenance And Rehab. Requirements</p> <p>3) Program Documents such as RTM Maintenance and Rehab. Plan (RTM-MC-PLN-042)</p>	OPEN	Action Plans requested by OC Transpo Dec. 19, 2025
<u>59</u>	COMMUNICATIONS SYSTEMS - OVERSIGHT	SEPT. - DEC. 2025	<p>2025-S2C OVERSIGHT - COMM. SYSTEMS</p> <p>Finding: Although RTM provided an audit report on Communications Systems, there is no evidence of ongoing oversight. RTM to provide remedial action for Oversight of Communications Systems which is aligned with RTM's "Maintenance Oversight Plan" (RTM-OP-PLN-739).</p>	<p>1) P.A. (Sched. 15-3, Appendix A – Attachment 3 "Comm. Systems" and Attach. 15 "Maintenance Resp. Table"</p> <p>2) P.A. Sched. 15-2; Maintenance And Rehab. Requirements</p> <p>3) Program Documents such as RTM Maintenance and Rehab. Plan (RTM-MC-PLN-042)</p>	OPEN	Action Plans requested by OC Transpo Dec. 19, 2025

*** Footnotes:**

1. OC Transpo has established a process which requires that RTG / RTM provide remedial actions for each RMCO Finding in accordance with established timelines.
2. Remedial actions are reviewed and assessed by OC Transpo
3. The status of remedial actions and required next steps are determined by OC Transpo
4. Closed Items remain subject to OC Transpo Oversight and RMCO monitoring

ANNEX 12 - OC Transpo Conformance Expectations for Contractors

CONFORMANCE EXPECTATIONS FOR CONTRACTORS – TIME AND MILEAGE-BASED INSPECTIONS



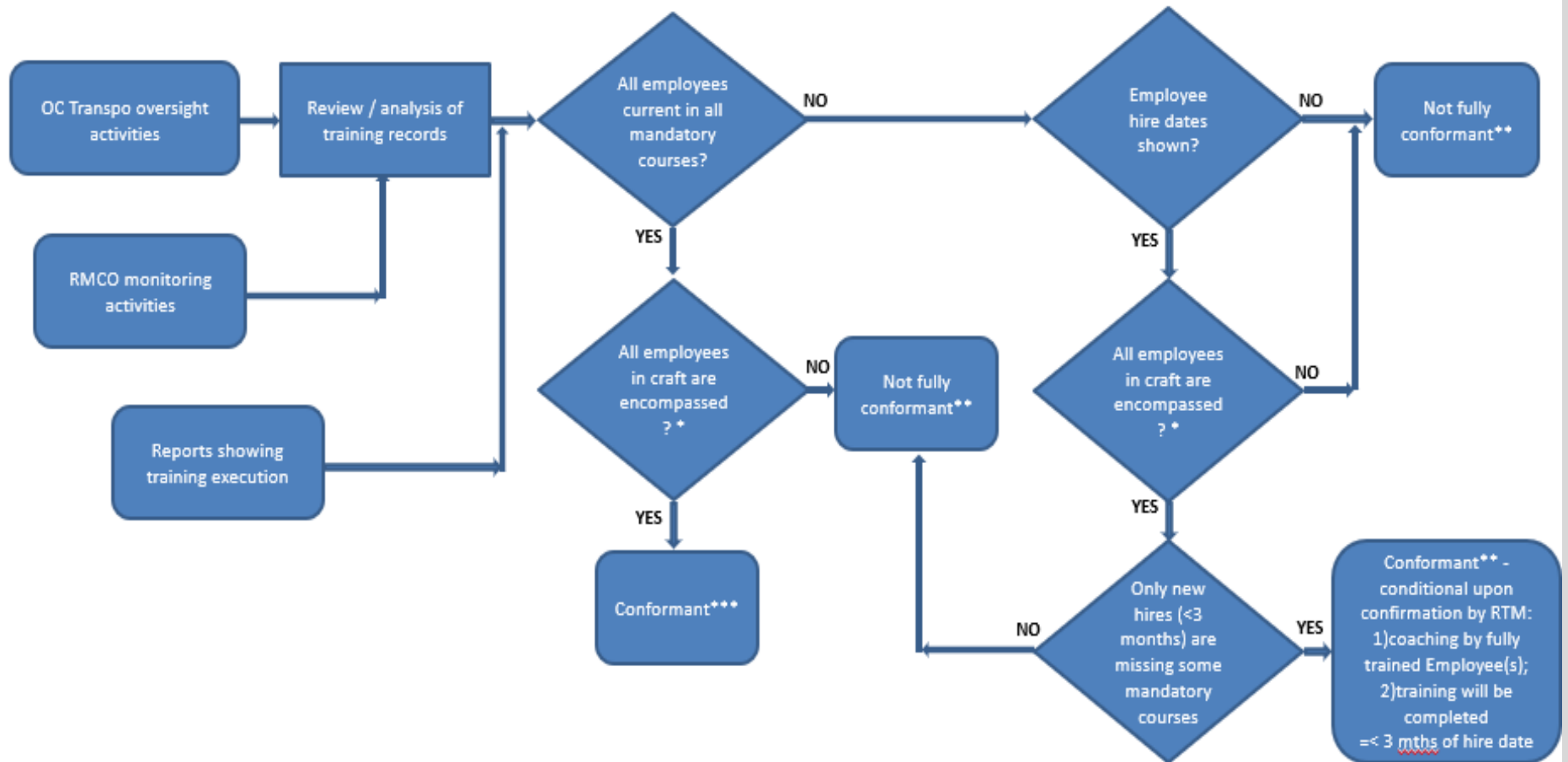
* Analysis of records based on actual inspections performed versus Contractual requirements (i.e. P.A., Program documents etc.)

** Risk-based conformance requirements:

- i) All time-based inspections > 1 week frequency must be performed within allowable tolerance;
- ii) Time-based Inspections =< 1 week must be performed within 98% execution / time tolerance and cannot be consecutive. In such instances, an adequate risk assessment (i.e. concession management) is required. Further, conformance requirements include quality and documentation expectations.
- iii) Mileage-based inspections for LRV's must be **fully** conformant.

*** Conformance is subject to ongoing monitoring by OC Transpo, RMCO etc.

CONFORMANCE EXPECTATIONS FOR CONTRACTORS – TRAINING



Note: Training Conformance is based on 2 criteria: i) All employees in craft must be encompassed in assessment; ii) All employees must be current with all mandatory courses, with the exception of new hires (<3 months) which need to be identified clearly and have 3 months (with appropriate coaching) to complete mandatory courses.

* Assessment to ensure that all employees (in same craft) working during period are encompassed

** "Not fully conformant" is based on the available information. Depending on the circumstances, the assessor can request the missing information if time permits.

*** Conformance is subject to ongoing monitoring by OC Transpo, RMCO etc.

ANNEX 13 - **Regulatory And Legal Context**

The information below is provided to further assist readers with a proper review of this Report. This provides guidance regarding the limits on the scope of the RMCO's monitoring work; the monitoring and Oversight work carried out and confirmed by others; and the coordinated interplay between these various Oversight functions:

1. Limited Scope: The RMCO only monitors regulatory compliance for OC Transpo (OCT) and IWSD obligations and commenced doing so after revenue service inception.

This means the RMCO Monitoring is limited to operations and maintenance (O&M) activities and OCT's compliance with its LRT regulatory obligations (i.e. Adopt, Implement, provide Direction, Oversight and maintain Records relative to designated Programs).

2. Other Compliance Monitoring: The monitoring and reporting of compliance with LRT Regulations applicable to other Confederation Line activities and other designated Programs, is carried out by designated representatives for the other City Departments responsible for these other activities.

These other activities include design, construction, testing and commissioning activities, property planning and land management matters, Oversight of accident and safety incident investigations and other LRT regulatory management matters.

3. Review of Contractor Performance: There are no LRT Regulations that apply to contractors directly. The LRT Regulations only apply to OCT and other City Departments.

The RMCO reviews contractor work activities as one method by which to assess whether or not OCT is complying with its LRT regulatory obligation to provide responsible Oversight and Direction to the contractors regarding their compliance with O&M related Programs (e.g. SMS Plan, SeMS Plan, Maintenance and Rehabilitation Plan etc.).

4. Interplay with Other Oversight Activities: The RMCO obtains information from, and periodically exchanges observations and insights regarding contractor work activities, with OCT who are involved with contract Oversight procedures and practices to the extent these relate to the O&M matters and Programs being monitored by the RMCO.

This provides the RMCO with an opportunity to compare and cross check his findings with the findings arising from these other Oversight functions.

There is however no expectation that the findings of the RMCO for a particular reviewed O&M segment at a particular point in time will fully align with the findings from these other Oversight functions because of differences in the:

- (a) Timing of the monitoring, Oversight and reporting activities;
- (b) The nature and scope of the RMCO monitoring work compared to the OCT and RCP contract Oversight investigations and reviews; and
- (c) The nature and scope of the information being relied upon in these different proceedings (e.g. prescriptive PA related performance metrics and reports versus

tailored information requests, inspections, interviews and other RMCO required information identified at time of review).

7. Limits on RMCO Role: The RMCO monitors and reports on compliance with LRT Regulations that apply to OCT (i.e. Adopt, Implement, provide Direction, Oversight and maintain Records relative to designated Programs). There are related activities and responsibilities which are not assigned to or vested with the RMCO:

(a) No Enforcement of Regulations: The RMCO is not a regulatory officer with powers to enforce compliance by OCT with LRT Regulations.

In a self – regulatory model of Regulation enforcement against OCT (and other City Departments) is the responsibility of the City Manager or designate as the senior regulatory officer for the City.

Enforcement and / or corrective actions that may be taken or directed by the City Manager at her/his discretion will most likely be process and continuous improvements, and / or employer/employee based (e.g. possible Directions to rectify, reprimands, compensation adjustments, warnings, suspension, termination or other).

(b) No P.A. (i.e. Project Agreement) Enforcement: The RMCO does not enforce conformance with PA obligations by RTG/ RTM or other contractors. This is the responsibility of the City through designated OCT/RCP representatives and according to PA remedies and recourse rights in favor of the City.

The RMCO however will confer with OCT and RTG/RTM representatives regarding potential PA enforcement matters in relation to outstanding remedial actions and plans as part of the RMCO's ongoing monitoring of OCT's Oversight and Direction responsibilities.

(c) No Auditing: The RMCO is not a safety and/or security auditor. Audits are carried out on a scheduled basis by other contracted professional safety and security audit firms.

(d) No Adjudication: The RMCO does not make legal determinations regarding possible breaches or non - compliances with LRT Regulations. This is the responsibility of OCT and RCP management, City legal advisors (internal/external) and potentially a formally appointed adjudicator and/or Court.

(e) No Assessment: The RMCO does not assess the adequacy, suitability or completeness of the LRT Regulations or the terms of the PA and is not required or expected to make recommendations for change.

This is the responsibility of the City Manager with input and recommendations from designated representatives for the City Departments who have the responsibility to comply with LRT Regulations.

(f) Informal Observations: The RMCO may, but is not required to, provide informal non-binding observations and insights in relation to any of the above and in relation to other Confederation Line activities, developments or matters on a voluntary basis in the course of carrying out the RMCO mandated work activities.