

ANNUAL COMPLIANCE REPORT -

**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 RMCO prepared a multi-year work plan which was approved by the City on September 12, 2018, which outlines the methodology for performing compliance monitoring for City Regulations pertaining to safety and security.

Consistent with the multiyear Work Plan, and the RMCO mandate, regulatory compliance monitoring activities were started during the fourth quarter of 2019, shortly after revenue service inception.

The first regulatory area which was monitored focused on the training and certification of employees involved in the movement of trains and light rail vehicles for OC Transpo as well as RTM (Rideau Transit Maintenance) and its contractors.

As required by the RMCO mandate, this is the first annual compliance report which outlines regulatory compliance monitoring activities and findings. This report describes the approach used for carrying out regulatory monitoring, as well as compliance findings which have been robust.

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 and City Regulations were 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 with the OLRT Regulations (i.e. City Regulations). Further details on the background are shown in Annex 1.

The RMCO is tasked with performing regulatory compliance monitoring post-revenue service; specific duties and responsibilities are shown in Annexes 2 and 3.

Below are some important elements:

- The RMCO is responsible for regulatory compliance monitoring for the Confederation Line;
- The compliance monitoring relates primarily to safety and security Regulations;
- 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 is tasked with monitoring City Regulations on an ongoing basis and providing quarterly updates and annual reports;
- The RMCO has no duty or authority to assess the adequacy, sufficiency, or effectiveness of City Regulations.

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

As mentioned above, RMCO responsibilities require the preparation of an Annual Compliance Report which describes regulatory monitoring activities undertaken as well as results obtained. This document is the first Annual Compliance Report which describes monitoring activities performed in 2019 as well as the corresponding results.

This annual compliance report also provides detailed information on the monitoring approach and process (refer to Section 3), based on knowledge of City Regulations and monitoring experience to date, thus supplementing information provided in the Work Plan.

With respect to expenses for the RMCO, a statement of the budget and actual expenses is shown in Annex 4.

3. Regulatory Monitoring Approach:

3.1 Background:

The Work Plan prepared by the RMCO, and approved by City Council in September 2018, described the approach used for the selection of City Regulations to be monitored, as well as the methodology to undertake monitoring.

The approach used for the selection of City Regulations to be monitored consists of the following elements:

1. Review City Regulations to understand their content as well as how they relate to operations, rolling stock, track and infrastructure.
2. Familiarization with Confederation Line processes, operation, rolling stock and infrastructure.
3. Assessing compliance-criticality of City Regulations using a risk-based approach.

This part entailed 2 parts:

- Perform research on commuter rail hazards and accident / incident causation, to obtain insights on potential sources of hazards and risk.
 - Perform a high level risk assessment to enable the prioritization of City Regulations to be monitored.
4. Develop a specific monitoring plan identifying City Regulations to monitor, as well as the methodology for each Regulation to be monitored.

An overview of the potential hazards and risk-based methodology is shown in Annex 5.

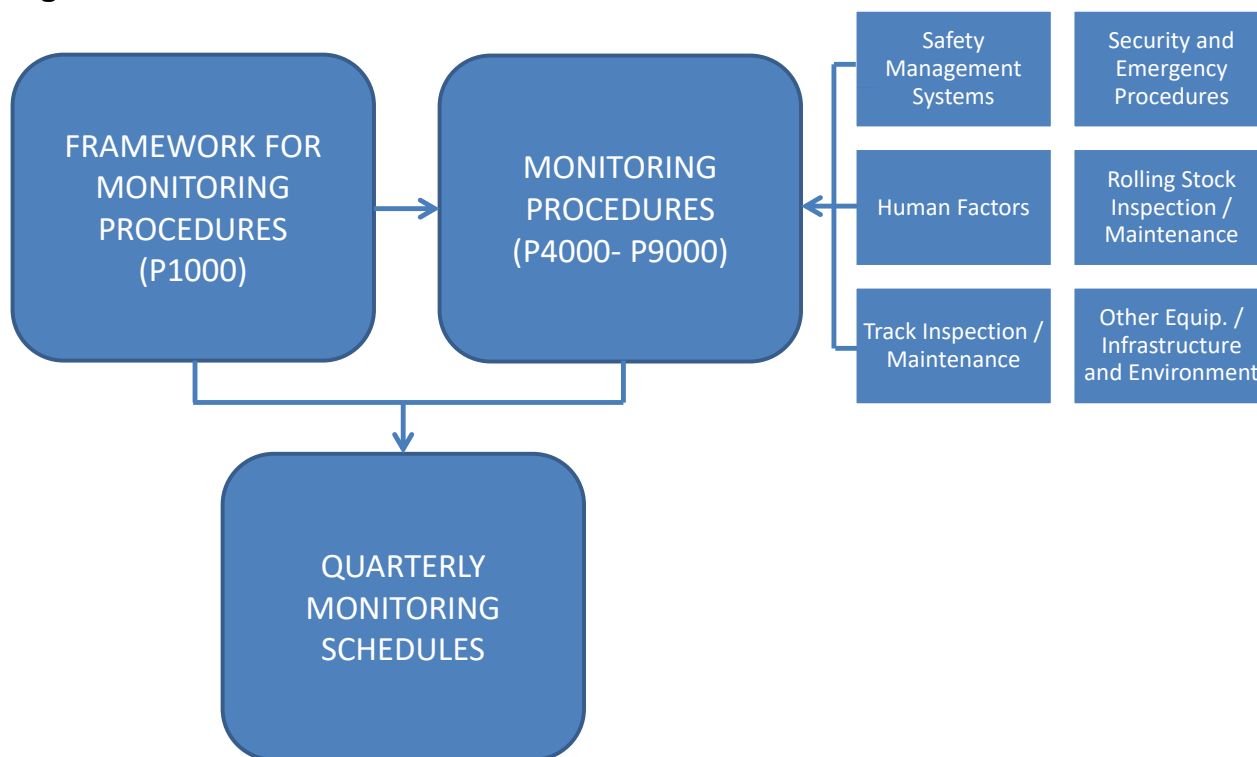
3.2 Framework for Monitoring - Documents and Procedures:

In order to perform regulatory monitoring in a structured and consistent manner, the RMCO will develop specific monitoring procedures for each area to be monitored. The research and analysis contained in the Work Plan provide the foundation for the selection of City Regulations to be monitored and for the development of such procedures.

As well, the RMCO developed a document entitled “Framework for Monitoring Procedures – Confederation Line Regulations – P1000” to guide the development of monitoring procedures according to a framework which uses risk-based principles and a consistent structure.

The figure below outlines the document structure and nomenclature for the various documents developed to carry out monitoring activities:

Figure 1:



The document types shown in this figure are described below:

1. Quarterly monitoring schedules are developed each calendar quarter to identify City Regulations to be monitored and key associated milestones;

2. For each of the six categories shown at the right of the figure, specific monitoring procedures will be developed for each Regulation to be monitored, thus ensuring clarity, consistency and effectiveness. Each monitoring procedure will have a unique number in the range of P4000 – P9000, corresponding to a particular risk area and the corresponding City Regulations (see Figure below);
3. As mentioned above, the document, entitled “Framework for Monitoring Procedures – Confederation Line Regulations – P1000”, outlines the documentation structure and risk-based principles used to develop procedures;

Figure 2:

Monitoring Procedures - Numbering		
		Procedure Series
1	Safety Management Systems	P9000
2	Security and Emergency Procedures	P8000
3	Human Factors	P7000
4	Rolling Stock Inspection / Maintenance	P6000
5	Track Inspection / Maintenance	P5000
6	Other Equipment / Infrastructure and Environment	P4000

Monitoring procedures will be designed to obtain objective evidence which enables the assessment of compliance using a combination of techniques, including quantitative and qualitative methods which encompass the following:

1. Review and analysis of documents / records / data;
2. Sample monitoring of records / data;
3. Interviews / Meetings;
4. Field Observations.

3.3 Monitoring Process:

The monitoring process is designed to carry out monitoring activities in an effective manner while engaging stakeholders such that they provide the necessary information and resources. This process is summarized in the Figure below:

Figure 3:

FREQUENCY	STEP	ACTIVITY	TIMELINE	RESPONSIBLE / INVOLVED
QUARTERLY - MONITORING SCHEDULE		PROVIDE QUARTERLY MONITORING SCHEDULE TO OC TRANSP. SCHEDULE TO IDENTIFY REGULATORY AREAS (i.e. SEGMENTS) TO BE MONITORED.	45 DAYS PRIOR TO START OF MONITORING FOR EACH QUARTER	RMCO
MONITORING SEGMENT - 1-2 / QUARTER	STEP 1	NOTIFICATION TO OC TRANSP 30 DAYS PRIOR TO STARTING MONITORING SEGMENT: 1) IDENTIFY SPECIFIC REGULATION(S) TO BE MONITORED. 2) REQUEST REGULATIONS / RECORDS / DATA . 3) PROVIDE MONITORING PROCEDURE. 4) DESCRIBE RESOURCES REQUIRED FOR INTERVIEWS / MEETINGS AND FIELD OBSERVATIONS.	30 DAYS PRIOR TO START OF MONITORING FOR EACH MONITORING SEGMENT	RMCO
		↓		
	STEP 2	PROVIDE RECORDS / DOCUMENTATION	WITHIN 2 WEEKS AFTER NOTICATION	OC TRANSP
		↓		
	STEP 3	REVIEW / ANALYSIS OF RECORDS / DOCUMENTATION	DURATION ABOUT 2 WEEKS FOLLOWING RECEIPT OF INFORMATION (STEP 2)	RMCO
		↓		
	STEP 4	PERFORM MONITORING ACTIVITIES INCLUDING MEETINGS, INTERVIEWS, FIELD OBSERVATIONS etc.	DURATION ABOUT 4-6 WEEKS (MAY VARY DEPENDING ON REGULATION)	RMCO IN COORDINATION WITH OC TRANSP / RTM
		↓		
	STEP 5	ANALYSIS OF MONITORING INFORMATION GATHERED BY RMCO AND REQUEST FOR ADDITIONAL INFORMATION AS REQUIRED	DURATION ABOUT 2 WEEKS	RMCO
		↓		
	STEP 6	PRELIMINARY ASSESSMENT OF COMPLIANCE BY RMCO	2 WEEKS AFTER ANALYSIS (STEP 5) AND RECEIPT OF ANY ADDITIONAL INFORMATION REQUESTED	RMCO
		↓		
	STEP 7	MEETING BETWEEN RMCO / OC TRANSP TO REVIEW PRELIMINARY FINDINGS AND DISCUSS POTENTIAL REMEDIAL ACTIONS AS REQUIRED	WITHIN 2 WEEKS FOLLOWING PRELIMINARY ASSESSMENT (STEP 6), DEPENDING ON AVAILABILITY OF STAKEHOLDERS	RMCO / OC TRANSP

The key principles used in this monitoring process are as follows:

- City Regulations to be monitored are selected using a risk-based approach;
- Quarterly monitoring schedules are developed and communicated prior to each quarter identifying City Regulations to be monitored and the timeline of monitoring activities;
- Each quarterly monitoring schedule encompasses 1 or 2 regulatory segments (i.e. regulatory areas to be monitored), depending on the scope;
- Quarterly schedules are communicated to involved stakeholders in order to facilitate planning, the allocation of resources and the delivery of requested documents / data / records.

In reference to the Figure above, following is a summary of the steps which follow the quarterly notification:

- Step 1: Prior to the start of monitoring for each regulatory segment, a further notification is provided regarding the intention to initiate monitoring. This notification includes the following:
 - Procedures which will be used to perform monitoring;
 - A request for current City Regulations as well as supplemental documents, data, and records relevant to the regulatory area to be monitored;
 - An overview of required resources related to interviews, meetings and field observations.
- Step 2: Following the notification, the requested information is to be provided to the RMCO within 2 weeks.
- Steps 3: Once the requested documents / records / data are provided, the RMCO reviews this information and performs any relevant analyses;
- Step 4: The RMCO undertakes monitoring using a combination of techniques, including interviews, meetings, review of documents / records / data, sample verifications of records / data, site visits and field observations. This enables the RMCO to collect relevant information and objective evidence required for the assessment of compliance;
- Step 5: Following monitoring activities, the RMCO reviews / analyzes the information collected, including observations, interviews and other information;
- Step 6: Based on the review outlined in step 5, the RMCO will make preliminary determinations relative to compliance;
- Step 7: The RMCO will consequently plan a meeting with OC Transpo and its contractors (as required), to review preliminary findings and compliance assessments, as well as discuss potential remedial action plans as required.

On the basis of monitoring activities performed during each quarter, and as described in Section 7 of the multi-year Work Plan (i.e. Reporting), the RMCO prepares a quarterly overview for the City Manager, as well as an annual compliance report for the City Manager, the Transit Commission and City Council.

3.4 Monitoring Breadth:

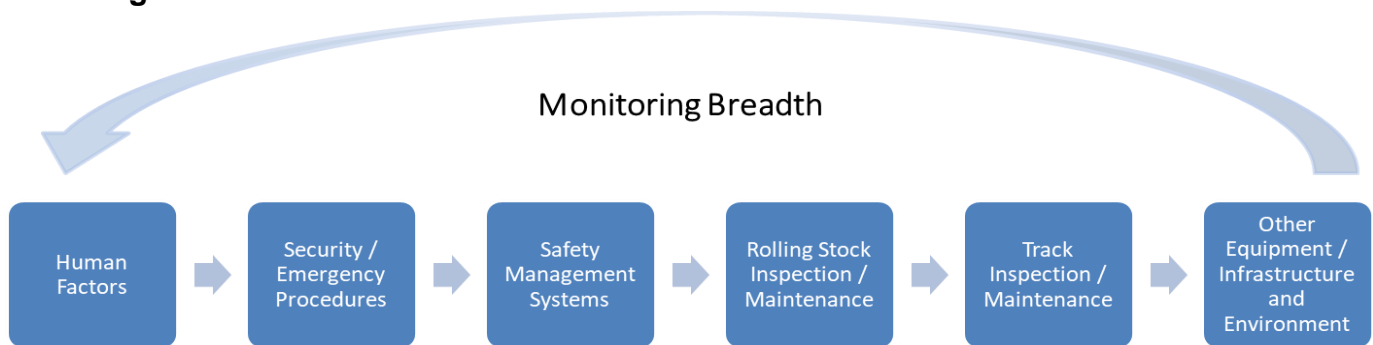
On the basis of the RMCO duties and responsibilities provided by the City, as outlined in Annexes 2 and 3 of this report, City Regulations are monitored on an ongoing basis using a risk-based approach.

In order to maintain a broad perspective in the selection of City Regulations to monitor, the RMCO considered the hazard / risk categories identified in the Work Plan (refer to Figure 4 below and Annex 5 of this report) to achieve adequate monitoring breadth. Further, the intent is to progressively monitor City Regulations in each of these categories to achieve a broad compliance picture over time.

In light of the robust City Regulations, it is to be noted that each category contains many sub-categories of Regulations and will require several monitoring segments to be substantially monitored. For example, the human factors category includes sub-categories such as Training and Certification, Fitness for Duty, Fatigue management, Hours of service etc.. Thus, the segment monitored during Q4 2019 relates to one sub-category within the broader human factors category and is therefore the first step in progressively monitoring this Regulatory area.

Based on the scope of City Regulations and monitoring experience to date, the intent will be for the RMCO to perform monitoring in all six categories (identified in Figure 4 below) per 12-18 month period. This approach will provide compliance assessment knowledge which grows incrementally as monitoring progresses, and represents a sensible approach to achieving adequate monitoring coverage over time, thus updating and supplementing the Work Plan.

Figure 4:



It is important to recognize that this progressive compliance assessment approach is to be distinguished from audits in 3 respects:

- Audits may assess compliance more broadly at a given point in time;
- Audits generally encompass the assessment of risks and required controls, governance etc., whereas this would generally not be part of the RMCO monitoring scope;
- The RMCO mandate does not include the assessment of the adequacy, sufficiency, or effectiveness of City Regulations.

4. Regulatory Monitoring Performed - Q4 2019:

4.1 Monitoring Inception:

As mentioned in Section 2 of this report, regulatory monitoring activities were initiated by the RMCO **after** the start of revenue service. The confederation line revenue service was inaugurated on September 14th, 2019.

Prior to the start of revenue service the RMCO was involved in the following activities:

- Review of City Regulations;
- Familiarization with Confederation line;
- Research and analysis relative to the development of a strategy for selection of City Regulations to be monitored, as well as methodology to undertake monitoring and reporting;
- Preparation / submission of multi-year Work Plan;
- Preparation of quarterly monitoring plan;
- Preparation of monitoring procedures;
- Meeting stakeholders and providing quarterly updates to City Manager;
- Mobilization and preparation for regulatory monitoring.

As mentioned in Section 2 this report, a risk-based approach is used to select City Regulations to monitor. On the basis of the research and analysis performed, it was determined that the first area to monitor would focus on human factors, specifically on the training and certification of employees involved in the movement of trains and light rail vehicles. It is to be noted that this monitoring activity encompasses OC Transpo as well as RTM* and its contractors since:

- OC Transpo employees operate trains (known as 'Electric Rail Operators' – ERO's);
- The control centre is staffed with OC Transpo controllers (ERC's);
- RTM employees control the movement of light rail vehicles and consists outside of the main track (e.g. Belfast yard including the maintenance and storage facility (MSF));
- Alstom hostlers operate light rail vehicles and consists outside of the main track (e.g. Belfast yard including the maintenance and storage facility (MSF)).

*** Note: RTG (Rideau Transit Group) is the entity that executed the Project Agreement in February 2013. RTM (Rideau Transit Maintenance) is the RTG entity responsible for inspection and maintenance on the confederation line.**

Subsequently, a monitoring procedure was developed to enable regulatory compliance assessment activities to be performed in a structured and consistent manner. The monitoring procedure entitled “Human Factors – Operating Employees – Training and Certification – P7001” was developed for this purpose.

During Q4 2019, the following key activities were performed relative to this monitoring segment:

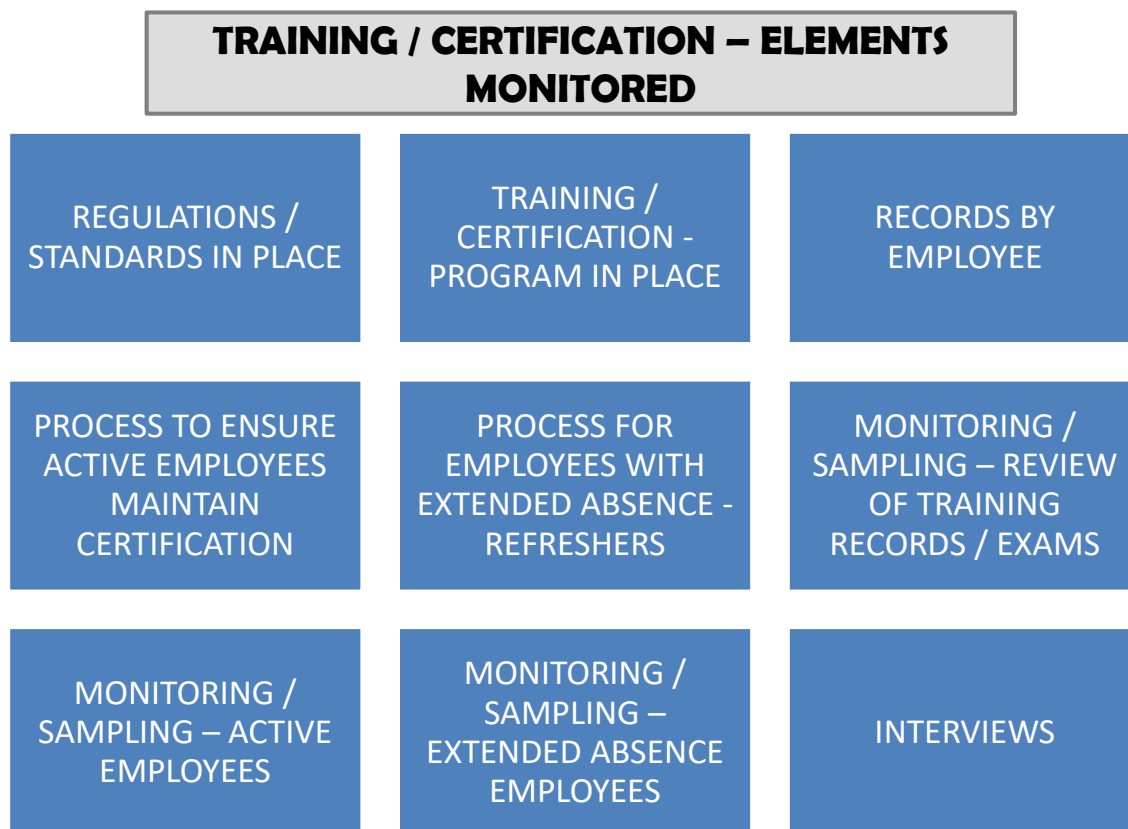
- Notification was provided to OC Transpo regarding the intention to initiate monitoring on October 15th, 2019;
- Documents, records and data were provided progressively to the RMCO during the following 2 weeks;
- Review of the documents, records and data was subsequently performed by the RMCO;
- Field monitoring activities, interviews and sample reviews of records / data were performed;
- Meetings were held with OC Transpo to review preliminary compliance results;
- The monitoring segment was completed in December;
- Follow-up meetings and discussions were held with OC Transpo, RTM and Alstom.

4.2 Monitoring Performed:

Monitoring was performed using the procedure entitled “Human Factors – Operating Employees – Training and Certification – P7001”. This procedure contains several elements used to collect information and objective evidence to assess compliance.

The Figure below provides an overview of the elements monitored:

Figure 5:



Following are highlights from this monitoring segment:

4.2.1 Regulations and Documents Reviewed:

The following City Regulations and supplemental documents were received and reviewed by the RMCO:

1. OC Transpo: 'Operator Training and Certification Plan'.
2. OC Transpo: 'Training and Development of Operator Reassessment'.
3. RTM: 'OLRT Training and Competency Plan'.
4. Alstom: 'Training and Competency Plan'.

As well, there were several supplemental documents received containing relevant information, such as active employee lists, training matrices etc.. However, the above list represents the key documents outlining training and certification requirements relative to this monitoring segment.

4.2.2 Monitoring Overview:

In summary, this monitoring segment reviewed the following areas:

- ✓ **Training Program:** The RMCO verified that a training program covering rules and relevant operational activities has been developed / implemented for each affected employee position; this includes Operators, Controllers and supervisors for OC Transpo, RTM and Alstom.
- ✓ **Certification Standards:** For employees requiring certification, the RMCO verified that a certification program which includes classroom training as well as field training is in place. The RMCO also verified that clear certification / recertification requirements / standards are established by position.
- ✓ **Training / Certification records:** The RMCO verified that training / certification records are kept and maintained by each organization for their respective employees.
- ✓ **Active Employees Certification:** The RMCO verified whether: i) Active employees have been trained / certified; ii) There is a process to ensure that employees being called for duty are certified; iii) There is a process to ensure that employees added to the active employee list, after an extended absence, are certified.

Monitoring consisted of the following elements:

I. Documents / Data / Records Required:

The following documents were requested:

- a. List of current City **Regulations and supplemental documents**, applicable to training and certification of operators, controllers and other applicable operating employees for OC Transpo, RTM and Alstom (i.e. involved in the movement of trains and/or light rail vehicles).
- b. Training / certification / recertification **requirements by position**;
- c. List of applicable **active employees** (OC Transpo, RTM and Alstom) showing name, position, years in position, years of service, work location, date trained and date certified.
- d. Overview of process which ensures that employees **called for duty** are trained / certified.
- e. Overview of process which ensures that **employees added to active** employee list are certified. This includes employees added to active employee list after an extended absence.
- f. List of employees who have **returned to work after an extended absence** during the past year (i.e. employees involved in the movement of light rail vehicles).
- g. **Training material**: training material to be made available for reference.
- h. **Test / Exam Records**: Records of training / certification tests / exams to be made available for reference.

II. RMCO Initial Review of Documents / Data / Records:

The following review was performed by the RMCO relative to the documents / data / records received:

- a) Review most up-to-date City Regulations (and supplemental documents) provided and training / certification requirements for affected employees; this includes OC Transpo, RTM and Alstom employees involved in the movement of trains and light rail vehicles. The RMCO verified the following:
 - ✓ *City Regulations contain clear requirements relative to training, certification and recertification by position;*
 - ✓ *City Regulations identify passing grade for training exams / certification.*

✓ *There are criteria for refreshers / recertification of employees who have been off work for extended periods of time, and are coming back to active employee list.*

- b) Review data / records showing active employees / management (who must be trained and / or certified), along with information showing when training / certification took place: Confirm that all applicable active employees are trained and / or certified.
- c) Review process which ensures that employees in positions requiring Operating Rules training / certification are trained / certified before being called to work: Confirm that process exists.
- d) Review process which ensures that employees coming into active employee list, after an extended absence are trained / certified: Confirm that process exists.

III. RMCO Specific Review of Documents / Data / Records:

The following specific review of documents / data / records was performed by the RMCO to monitor compliance:

a) Purpose: to validate through objective evidence that training / certification records are maintained (as per list(s) provided above):

- For each position requiring training / certification:
 - Identify randomly (from list provided) employee names (number based on employee population by position) that are showing as trained / certified;
 - Request to see their respective rules training / certification exams / records;
 - Confirm that exams have a passing grade;
 - Confirm that exam / certification dates correspond to list.

b) Purpose: to validate through objective evidence that active employees called to work are trained / certified:

- ✓ Request **list of employees who have worked during a specific week** (identified by RMCO);
- ✓ For each position, identify randomly employees from list;
- ✓ Verify if such employees are in active employee list and show as having been trained / certified.

c) Purpose: to validate through objective evidence that the process relative to employees who return to work after an extended absence is in place:

- ✓ Review list of employees who have been off-duty for an extended period of time (for personal, medical or performance reasons) and have come back to work over the past year.
- ✓ Select randomly such employees (depending on numbers in list) and verify that they have records which confirm that required training / certification has been completed before employees were placed back in active employee list.

Interviews / Meetings:

Sample interviews were carried out for each type of employee involved:

Management Interviews – Training / Certification Requirements:

Management interviews involved representatives from the training department. This included the training department leader and a trainer. The purpose of the interviews was to:

- Obtain an overview of training / certification process / Standards;
- Validate application of City Regulations;
- Confirm that training / certification data / records are kept in centralized database (for access);
- Assess if system used for scheduling / calling crews has verification of certification;
- Confirm Standards and process relative to retraining / recertification for employees absent for extended periods of time.

Employees / Supervisors – Confirm Training / Certification:

The following was verified by the RMCO in the interviews with employees:

- a) Confirm that they are certified and carry their certification card and any other required documents;
- b) Recall having been trained and certified;
- c) Know approximately when they are due for recertification; validate approximate date with training records ;
- d) Understand the requirements to maintain certification.

The following employee groups were interviewed:

1. ERO's (Electric Rail Operators)
2. ERC's (Electric Rail Controllers)
3. Managers / Supervisors
4. RTM Controllers;
5. Alstom Hostlers.

Field Observations:

In addition to interviews, the RMCO observed operations to further validate compliance. Such observations were passive in nature, did not involve dynamic testing, and did not disturb operations.

Observations included the following:

- Operational activities;
- Safe work practices;
- Monitoring radio communications.

5. Regulatory Monitoring Results – Q4 2019:

5.1 Findings - OC Transpo

In accordance with the procedure outlined in Section 4 of this report, the RMCO monitored regulatory compliance pertaining to training and certification of operators and controllers involved in the movement of trains and light rail vehicles. This subsection outlines the findings for OC Transpo.

The following information shows the elements which were monitored to assess compliance, as well as the corresponding findings for OC Transpo:

1. A review of City Regulations (and supplemental documents) was performed to verify whether such requirements are in place with respect to training and certification for such positions (i.e. ERO's and ERC's):
 - ✓ *Findings: The following two OC Transpo regulatory documents are in place relative to training / certification:*
 - a) OC Transpo: 'Operator Training and Certification Plan'.
 - b) OC Transpo: 'Training and Development of Operator Reassessment'.
2. A review of City Regulations to verify if there are clear requirements for training and certification, including ongoing prescribed refresher training.
 - ✓ *Findings: The above OC Transpo regulatory documents, as well as supplemental documents such as training matrices, identify training / certification requirements and prescribed refreshers for such employees.*
3. A review of training records to verify if relevant records are stored and maintained:
 - ✓ *Findings: Such records are stored and maintained by OC Transpo's training department.*
4. A review of active employee lists to monitor if such employees (ERO's and ERC's) have been trained and certified:
 - ✓ *Findings:*
 1. *Sample monitoring verifications of active employee lists confirmed that such employees are trained and certified.*
 2. *Sample monitoring verifications of employees who worked a specific week (identified by RMCO) confirmed that such employees are in the active employee list and received required training and certification.*

5. A review of process for ensuring employees obtain prescribed training / refreshers:
 - ✓ *Findings: Employee lists are maintained and monitored by OC Transpo training department. Each employee requiring certification has a file indicating all training requirements which are 'checked-off' to confirm completion prior to certification. Prescribed refresher training requirements are also monitored and delivered by training department.*
6. Monitor whether there is a process for managing training actions for employees absent for extended periods of time:
 - ✓ *Findings: The OC Transpo Regulation entitled "Training and Development of Operator Reassessment" outlines timelines for which specific training actions are required for such employees.*
7. A review of training records, including exams written by employees, to confirm that active employees have corresponding training records and passing grades for exams:
 - ✓ *Findings: Sample monitoring verifications of training records for active employees confirmed that such employees have appropriate records including passing grades for exams.*
8. Monitor training actions for employees absent for extended periods of time, to assess whether such employees received required training actions and / or refreshers:
 - ✓ *Findings: Sample monitoring verifications of such employees confirmed that appropriate training actions were taken.*
9. Interviews were performed with the following personnel:
 - ✓ Training department management to validate the implementation of training / certification City Regulations:
 - ✓ *Findings: Interviews were consistent with City Regulations and Training / certification processes.*
 - ✓ Interviews with Electric Rail Operators (ERO's) in the field:
 - ✓ *Findings: Interviews confirmed that such employees recall having been trained and certified. Such employees were confirmed to be in the active employee list with appropriate training / certification.*
 - ✓ Interviews with Electric Rail Controllers (ERC's) in the Control Centre:
 - ✓ *Findings: Interviews confirmed that such employees recall having been trained and certified. Such employees were confirmed to be in the active employee list with appropriate training / certification.*
10. Field observations:
 - ✓ *Findings: Field observations were consistent with the above information.*

Therefore, regulatory monitoring activities performed by the RMCO demonstrate full compliance by OC Transpo in all the above areas monitored; this is summarized in the Figure below:

Figure 6 – OC Transpo Findings Summary:

	OC TRANSP - MONITORING FINDINGS
1. REGULATIONS / STANDARDS FOR TRAINING / CERTIFICATION IN PLACE	COMPLIANT
2. REGULATIONS / TRAINING PROGRAM CONTAIN CLEAR REQUIREMENTS FOR TRAINING / CERTIFICATION	COMPLIANT
3. TRAINING AND CERTIFICATION RECORDS IN PLACE	COMPLIANT
4. ACTIVE EMPLOYEES ARE TRAINED AND CERTIFIED	COMPLIANT
5. PROCESS FOR ENSURING EMPLOYEES OBTAIN PRESCRIBED TRAINING / REFRESHERS	COMPLIANT
6. PROCESS FOR ENSURING EMPLOYEES ABSENT FOR EXTENDED PERIOD OBTAIN REQUIRED TRAINING UPON RETURN TO WORK	COMPLIANT
7. MONITORING / SAMPLING - TRAINING RECORDS AND EXAMS	COMPLIANT
8. MONITORING / SAMPLING - EMPLOYEES RETURNING TO WORK AFTER EXTENDED ABSENCE ARE TRAINED AND CERTIFIED	COMPLIANT
9. INTERVIEWS (ERO'S, ERC's, Management)	COMPLIANT

5.2 Findings – RTM and Alstom:

In accordance with the procedure outlined in Section 4 of this report, the RMCO monitored regulatory compliance pertaining to training and certification of RTM controllers and Alstom hostlers involved in the movement of light rail vehicles and consists in Belfast yard including the maintenance and storage facility (MSF). This subsection outlines the findings for RTM and Alstom.

The following information shows the elements which were monitored to assess compliance, as well as the findings for RTM and Alstom:

1. A review of City Regulations and supplemental documents was performed to verify whether training and certification requirements exist for such positions (i.e. RTM Controllers and Alstom Hostlers):
 - ✓ *Findings: The above information was found in the following documents:*
 - a) *RTM: 'OLRT Training and Competency Plan'.*
 - b) *Alstom: 'Training and Competency Plan'.*
2. A review of City Regulations and supplemental documents to verify if there are clear requirements for training and certification, including ongoing prescribed refresher training.
 - ✓ *Findings:*
 - ✓ *The above documents, as well as supplemental documents such as training matrices, identify training / certification requirements and prescribed refreshers for such employees.*
3. A review of training records to verify if relevant records are stored and maintained:
 - ✓ *Findings: Training records are stored and maintained in information systems managed by RTM and Alstom respectively.*
4. A review of active employee lists to monitor if such employees ((i.e. RTM Controllers and Alstom Hostlers) have been trained and certified:
 - ✓ *Findings:*
 1. *Sample monitoring verifications of active employee lists confirmed that such employees are trained and certified.*
 2. *Sample monitoring verifications of employees who worked a specific week (identified by RMCO) confirmed that such employees are in the active employee list and received required training and certification.*
5. A review of process for ensuring employees obtain prescribed training / refreshers:

- ✓ *Findings: RTM and Alstom use their respective training information systems where training records are maintained and refreshers are identified.*
- 6. Monitor whether there is a process for managing training actions for employees absent for extended periods of time:
 - ✓ *Findings:*
 - ✓ *RTM: The document entitled “OLRT Training and Competency Plan” has a section 3.6.2 which covers this matter in general terms. Since there is an opportunity to improve specificity, RTM agreed to strengthen their process using the OC Tranpo document “Training and Development of Operator Reassessment” as a model.*
 - ✓ *Alstom: Did not have a requirement to assess training after an extended absence. Alstom agreed to develop a process using the OC Tranpo document “Training and Development of Operator Reassessment” as a model.*
- 7. A review of training records, including exams written by employees, to confirm that active employees have corresponding training records and passing grades for exams:
 - ✓ *Findings: Sample monitoring verifications of training records for RTM and Alstom employees confirmed that such employees have appropriate records including passing grades for exams.*
- 8. Monitor training actions for employees absent for extended periods of time, to assess whether such employees received required training actions and / or refreshers:
 - ✓ *Findings:*
 - ✓ *RTM: Only one RTM employee met their criteria and was retrained prior to returning to work.*
 - ✓ *Alstom: No records available and no process was in place at the time of monitoring.*
- 9. Interviews were performed with the following personnel:
 - ✓ Training department management to validate the implementation of training / certification requirements:
 - ✓ *Findings: Interviews with RTM and Alstom personnel were consistent with requirements and training / certification processes.*
 - ✓ Interviews with RTM Controllers:
 - ✓ *Findings: Interviews confirmed that such employees recall having been trained and certified. Such employees were confirmed to be in the active employee list with required training / certification.*
 - ✓ Interviews with Alstom Hostlers:

- ✓ *Findings: Interviews confirmed that such employees recall having been trained and certified. Such employees were confirmed to be in the active employee list with required training / certification.*

10. Field observations:

- ✓ *Findings: Field observations were consistent with the above information.*

Therefore, regulatory monitoring activities performed by the RMCO demonstrate the following:

- i. RTM and Alstom showed compliance relative to the immediate training and certification of active employees.
- ii. RTM has a general process for training actions following employee extended absences, but there is an opportunity to strengthen this process to maintain ongoing compliance.
- iii. Alstom did not have a process for training actions following employee extended absences.
- iv. As noted earlier, both RTM and Alstom agreed to strengthen their processes for employees with extended absences to assure ongoing compliance. They both agreed to use the OC Tranpo document entitled “Training and Development of Operator Reassessment” as a model.

Figure 7 – RTM Findings Summary:

	RTM - MONITORING FINDINGS
1. DOCUMENTS SPECIFYING TRAINING / CERTIFICATION IN PLACE	COMPLIANT
2. TRAINING PROGRAM CONTAINS CLEAR REQUIREMENTS FOR TRAINING / CERTIFICATION	COMPLIANT
3. TRAINING AND CERTIFICATION RECORDS IN PLACE	COMPLIANT
4. ACTIVE EMPLOYEES ARE TRAINED AND CERTIFIED	COMPLIANT
5. PROCESS FOR ENSURING EMPLOYEES OBTAIN PRESCRIBED TRAINING / REFRESHERS	COMPLIANT
6. PROCESS FOR ENSURING EMPLOYEES ABSENT FOR EXTENDED PERIOD OBTAIN REQUIRED TRAINING UPON RETURN TO WORK	COMPLIANT. OPPORTUNITY TO IMPROVE*
7. MONITORING / SAMPLING - TRAINING RECORDS AND EXAMS	COMPLIANT
8. MONITORING / SAMPLING - EMPLOYEES RETURNING TO WORK AFTER EXTENDED ABSENCE ARE TRAINED AND CERTIFIED	COMPLIANT
9. INTERVIEWS (ERO'S, ERC's, Management)	COMPLIANT

*** Note: Process is general and lacks specificity. RTM agreed to improve.**

Figure 8 – Alstom Findings Summary:

	ALSTOM - MONITORING FINDINGS
1. DOCUMENTS SPECIFYING TRAINING / CERTIFICATION IN PLACE	COMPLIANT
2. TRAINING PROGRAM CONTAINS CLEAR REQUIREMENTS FOR TRAINING / CERTIFICATION	COMPLIANT
3. TRAINING AND CERTIFICATION RECORDS IN PLACE	COMPLIANT
4. ACTIVE EMPLOYEES ARE TRAINED AND CERTIFIED	COMPLIANT
5. PROCESS FOR ENSURING EMPLOYEES OBTAIN PRESCRIBED TRAINING / REFRESHERS	COMPLIANT
6. PROCESS FOR ENSURING EMPLOYEES ABSENT FOR EXTENDED PERIOD OBTAIN REQUIRED TRAINING UPON RETURN TO WORK	OPPORTUNITY*
7. MONITORING / SAMPLING - TRAINING RECORDS AND EXAMS	COMPLIANT
8. MONITORING / SAMPLING - EMPLOYEES RETURNING TO WORK AFTER EXTENDED ABSENCE ARE TRAINED AND CERTIFIED	OPPORTUNITY**
9. INTERVIEWS (ERO'S, ERC'S, Management)	COMPLIANT

* Note: No process in place. Alstom agreed to improve.

** Note: No records at time of monitoring since process was not in place.

6. Summary:

In accordance with the multiyear Work Plan, and the RMCO duties and responsibilities, regulatory compliance monitoring activities for the Confederation line were started October 15th 2019, shortly after revenue service inception.

The first regulatory area which was monitored focused on the training and certification of employees involved in the movement of trains and light rail vehicles for OC Transpo as well as RTM (Rideau Transit Maintenance) and its contractors. This annual compliance report describes the procedure used for carrying out monitoring activities, as well as compliance findings which are robust. Following the completion of monitoring activities, meetings were held with RTM and Alstom, with the presence of OC Transpo, to follow-up on the opportunities identified in Section 5.

The RMCO has initiated regulatory compliance monitoring activities in 2020, and will continue to move forward using the process and methodology which was developed for this purpose, as well as the approach outlined in Section 3.4 of this report.

This first annual compliance report is to be reviewed during the Transit Commission meeting of February 19th, followed by review at the City Council meeting of February 26th, 2020.

In accordance with the RMCO mandate, quarterly meetings will continue to be held with the City Manager in 2020, while the next annual compliance report will be prepared in early 2021, on the basis of full year monitoring results for 2020.

7. Monitoring Focus in 2020:

In accordance with the risk-based approach outlined in Section 3 of this report, quarterly monitoring plans will be developed to identify regulatory compliance monitoring activities to be performed in 2020, while maintaining adequate monitoring breadth to provide an increasing picture of compliance spanning the six key risk areas identified in Section 3.4 of this report.

Specifically, a quarterly monitoring schedule was communicated to OC Transpo and RTM on December 20, 2019, identifying monitoring activities for the first quarter of 2020.

Such regulatory monitoring activities will focus on the following 2 areas:

- Track / rail inspections
- Track / rail – management of inspection findings

Following the above monitoring activities, additional monitoring segments will be identified using the research and data presented in the multi-year work plan, this report, as well as emergent information. Such monitoring segments will be initiated using the quarterly monitoring schedules and notification process identified in Section 3 of this report.

Context / Disclaimers

This report, including any enclosures and attachments, 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 Contract executed March 2, 2018 between SAB Vanguard Consulting Inc. and the City of Ottawa, as well as the supplemental information in Annex 3 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 relevant regulatory background information on the Ottawa Light Rail Transit (OLRT) project which is considered in law to be a federal rail transportation undertaking:

On July 14, 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 and Regulations were 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 1, 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. 'Compliance Officer') was created to monitor and report on compliance with the Ottawa Light Rail Transit (OLRT) Regulations (i.e. City 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 Compliance Officer is tasked with specific responsibilities as follows:

1. Development of a **multi-year work plan** for monitoring compliance with the City Regulations as it relates to the safety and security of the system. The work plan is to detail the approach for the selection of City 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.
2. 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 City Regulations has been fully achieved; and report on areas where compliance has not been fully achieved. Based on an expected revenue service date of November 2018, the first Annual Compliance Report will be available the first quarter of 2020.

3. **Quarterly 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

RMCO (REGULATORY MONITOR AND COMPLIANCE OFFICER)- 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 Contract signed between the City of Ottawa and SAB Vanguard Consulting Inc. on March 2nd, 2018.

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.

ANNEX 3

RMCO (REGULATORY MONITOR AND COMPLIANCE OFFICER)- SUPPLEMENTAL INFORMATION RELATIVE TO SCOPE

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

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

- The RMCO is responsible for regulatory compliance monitoring for the Confederation Line.
- 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 compliance monitoring primarily relates to safety and security City Regulations adopted by the City through bylaw or by other means, including standards and requirements imposed by contract.
- The RMCO is not involved in the construction, implementation or revenue service availability activities for the confederation line. The RMCO regulatory monitoring activities **start after revenue service**.
- As stated in the statement of duties and responsibilities prepared by the City, the RMCO will *“provide timely and accurate advice to staff to consider improvements to the regulations and/or to the implementation and enforcement of regulations when required”*. As well, on specific request, the RMCO will provide input to and consult with City personnel in respect of particular matters relating to the City Regulations.
- The RMCO has no duty or authority to assess the adequacy, sufficiency, or effectiveness of the City Regulations.
- RMCO activities will consist of performing monitoring rather than audits. This implies that the assessment of controls, governance, etc. relative to regulatory compliance will generally not be part of the monitoring scope.
- The RMCO will monitor City Regulations on an ongoing basis according to quarterly schedules and will provide a progressive assessment of compliance.

ANNEX 4

<u>SUMMARY OF BUDGET AND EXPENSES - 2019</u>				
<u>RMCO (REGULATORY MONITOR AND COMPLIANCE OFFICER)</u>				
BUDGET*	DAYS BUDGETED	AMOUNT BUDGET (NO TAX)	TAXES	TOTAL
RMCO LABOUR	120	\$ 180,000.00	\$23,400.00	\$203,400.00
RMCO EXPENSES		\$ 25,200.00	\$ 3,276.00	\$ 28,476.00
RMCO TOTAL		\$ 205,200.00	\$26,676.00	\$231,876.00
ACTUALS	DAYS ACTUAL (2019)	AMOUNT ACTUAL (NO TAX)	TAXES	TOTAL
RMCO LABOUR	83	\$ 124,500.00	\$16,185.00	\$140,685.00
EXPENSES		\$ 8,385.21	\$ 1,090.08	\$ 9,475.29
RMCO TOTAL		\$ 132,885.21	\$17,275.08	\$150,160.29
VARIANCE	SURPLUS	\$ 72,314.79	\$ 9,400.92	\$ 81,715.71

* Budget numbers based on 2018 Contract (between City of Ottawa and SAB Vanguard Consulting Inc.) and subsequent correspondence

ANNEX 5

RISK-BASED MONITORING PRINCIPLES AND OVERVIEW OF POTENTIAL HAZARDS

Overview of Potential Hazards:

Risks to safety and security can result from multiple sources (hazards), each with their respective potential probability (i.e. likelihood) and consequence.

The multi-year Work Plan showed research performed on potential hazards and accident / incident causes. This resulted in the following hazard categories being identified:

- Human Factors
- Track / Infrastructure
- Rolling stock related
- Security / emergency preparedness related
- Other track / equipment, environmental and other
- Safety management system*

* Note: The safety management system category was added to reflect the importance of such processes on risk management.

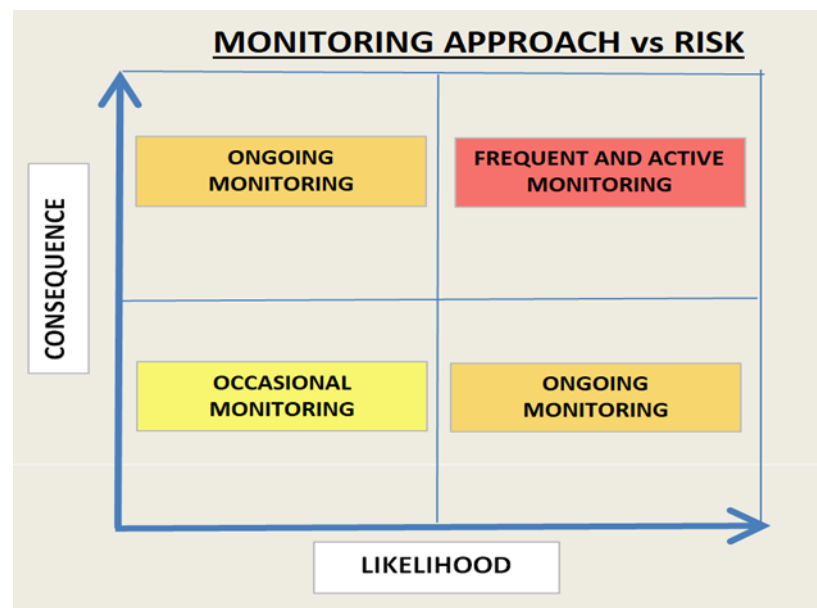
Risk-Based Principles for Determination of Monitoring Effort:

As explained in the Work Plan, risk based principles are used to:

- Select City Regulations to be monitored;
- Determine monitoring effort, in terms of frequency and level of detail.

Basic risk mitigation principles require that the monitoring effort, in terms of frequency and level of detail, should increase as a function of risk which is typically assessed in terms of the potential likelihood and consequence of a hazard.

This is outlined in the Figure below:



The development of the Regulatory monitoring approach utilizes the above principle, as well as information on potential hazards and risk provided in the work plan.

For purposes of practicality, a high level view of potential hazards and their respective risk is used for guiding the development of the Regulatory monitoring approach. It is to be noted that this high level risk assessment, coupled with the research performed (refer to Work Plan) is deemed adequate and appropriate for guiding the development of the Regulatory monitoring approach. A detailed risk assessment was not carried out since the RMCO mandate is focused primarily on the development of an effective compliance monitoring methodology, rather than performing a detailed risk assessment which would require substantial effort.