



The City of Ottawa

Confederation Line LRT Project – Stage 1

Opening Statement of the City of Ottawa

Submitted to:

Ottawa Light Rail Transit Commission
2 Bloor Street East, Suite 1802
Toronto, ON M4W 1A8
Attention: Kate McGrann, Christine Mainville and John Adair

Counsel for the City of Ottawa:

Singleton Urquhart Reynolds Vogel LLP
150 King Street West, Suite 2512, P.O. Box 24
Toronto, ON M5H 1J9
Peter Wardle, Jesse Gardner, Betsy Segal and Catherine Gleason-Mercier

TABLE OF CONTENTS

1.	PROCUREMENT	1
	(a) The DBFM Model.....	1
	(b) The City Budget and Affordability Cap.....	2
	(c) The Contract Award to RTG.....	2
	(d) The Project Agreement	3
2.	DESIGN AND CONSTRUCTION	4
	(a) The City Team	4
	(b) Delegation of Authority and Reporting to Council.....	4
	(c) The Long Term Lender Debt Release.....	4
	(d) RTG’s Delays in Progressing Design and Construction.....	5
	(e) RTG’s Proposal for a Partial Opening	6
	(f) RTG’s Notices of Substantial Completion	7
	(g) Trial Running	7
	(h) Revenue Service Availability	8
	(i) Launch of Public Service	9
3.	THE MAINTENANCE PERIOD	9
	(a) Initial Issues with the System	9
	(b) The Wheel Cracking and Derailments	10
	(c) Faulty Design, Manufacture or Maintenance	10
	(d) Reporting to Transit Commission and Council	11
4.	CONCLUSION	12
	APPENDIX “A”	13

OPENING STATEMENT OF THE CITY OF OTTAWA

The City of Ottawa (the “City”) welcomes the opportunity to set out its position with respect to the issues being explored by the Commission in advance of the public hearings.

1. Procurement

(a) The DBFM Model

In July, 2011 City Council unanimously approved the procurement of Stage 1 of its Light Rail Transit (“LRT”) project (the “Project”) on the basis of a Design Build Finance Maintain (“DBFM”) procurement model, with a budget of \$2.1 billion. This form of Public-Private Partnership (“P3”) model was at that time and remains the dominant model for large infrastructure projects in the Province and is a common contract model for transit systems globally.

Infrastructure Ontario (“IO”), the Provincial agency responsible for major infrastructure projects in the Province, recommended that the City proceed with the P3 model. The DBFM model was chosen to meet the City’s objectives, which included cost and schedule certainty, and transfer of risk to the private sector. In particular, the model provides that the risks associated with design, construction and maintenance are borne by the private sector, the contracting party best able to bear those risks. The P3 model also forces the Project Co to attempt to resolve issues internally as it is the single point of responsibility and the use of the model is intended to avoid engagement in the kinds of disputes that can gridlock a project over the course of design and construction.

Under the DBFM model used for Stage 1, the successful proponent is responsible for designing and building a quality product that it must maintain for a period of 30 years. As set out in the Deputy Manager’s report to Council dated May 17, 2011,¹ the procurement methodology ensures “a faster project implementation, better cost certainty and control and better capture of private sector innovation than the Design Bid Build (DBB) approach traditionally used by the City.” Having the Project Co be responsible for the design and construction of the vehicle as well as the civil works requires the Project Co to be responsible for the integration of the vehicle with the rest of the system, including the track, signalling and train control systems.

In the design-build context used on P3 projects, an owner will set out in the Project Agreement, including in the output specifications, the performance requirements for the project and other specifications, i.e. what it wants built and how it wants the system to perform. Unlike a design-bid build project, in general the Owner does not prescribe how to achieve the desired outcomes and Project Co is entitled to design and build the system as it chooses, subject to satisfying the output specifications. An owner on a P3 Project has a limited role in respect of overseeing Project Co’s work and its conformance with the output specifications. From an owner’s perspective the use of the model has the advantage of encouraging design innovation and value engineering by a Project Co to achieve performance requirements.

In this case, the Project went through an appropriate P3 screening process, including a value for money analysis conducted by Deloitte, a key City consultant throughout Stage 1. IO was engaged as procurement lead on the Project and the Project Agreement was based on a well-established IO

¹ COW0000031.

template adapted for use on this LRT project. The improvements made by the City to the IO template, such as the geotechnical risk ladder, mobility matters, and energy matters, were innovations which improved the final agreement and protected the City's interests.

(b) The City Budget and Affordability Cap

Although there was shared funding from all three levels of government with respect to the Project, the contributions of the Province and Canada were capped at \$600 million each, meaning that the City was solely responsible for any cost inflation as the Project developed. The City was further responsible for accommodating funding conditions including a 25% Canadian Content requirement on a transit vehicle required as a condition of funding from the Province.²

In 2010-11, the City engaged in extensive value engineering efforts, including the reconsideration of the depth of the tunnel, to ensure that the best pricing could be obtained for this taxpayer-funded project. An affordability cap was included in the Request for Proposals (“**RFP**”) to ensure that this was the case. Two of the three proponents bid below the affordability cap, demonstrating that the market was satisfied that the Project had been fairly priced.

The RFP process lasted over a year and included opportunities for proponents to ask questions through a Request for Information process and by attending multiple rounds of Commercially Confidential Meetings. The RFP was led by representatives of IO and reviewed by a Fairness Commissioner. No biddability issues were encountered, including in respect of the payment mechanism found in the Project Agreement which would apply during the Maintenance Term. In respect of the geotechnical risk ladder, proponents were given an opportunity to select the level of risk they were comfortable with and the successful proponent chose to take on the highest level of geotechnical risk.

(c) The Contract Award to RTG

In December, 2012 the contract was awarded to Rideau Transit General Partnership (“**RTG**”), a consortium consisting of entities controlled by ACS, one of the world's largest construction companies, SNC-Lavalin, one of Canada's leading construction and engineering companies, and Ellis-Don, one of Canada's largest construction companies. RTG represented in the Project Agreement that it and its construction and maintenance contractors had extensive experience and was knowledgeable in the design, construction and maintenance of light rail transit projects and had the required “ability, experience, skill and capacity” to perform the activities within the Project scope in a “timely and professional manner”.³ The best example of a successful light rail P3 project in Canada at the time was the Vancouver Canada Line constructed by SNC Lavalin.

The construction contractor retained by RTG for the Project, OLRT Constructors (“**OLRTC**”), entered into a subcontract for vehicle supply with Alstom SA, one of the largest suppliers of light rail vehicles in the world. The Citadis Spirit designed for Stage 1 was based on Alstom's Citadis vehicle, a vehicle in use in many cities internationally. The Citadis was an attractive option for the

² COW0523215, section 6.1, COW0523277.

³ Project Agreement, section 5.1(iv).

City given Alstom's experience in manufacturing vehicles for environments with heavy snow and extreme cold conditions⁴.

The City sponsored the development of Alstom's Citadis Spirit model through the Project, underwrote the establishment of new supply chains and workforce development, and was the model for operation of this vehicle in North America.

The City expected a first-class product, to be designed and constructed under a fixed price contract by world class organizations with direct experience with light rail and which had been the subject of a lengthy and comprehensive procurement process.

(d) The Project Agreement

Under the Project Agreement, RTG has sole responsibility for all issues that arise over the entirety of the 30 year project term relating to the design, construction and maintenance of the Project.⁵ The City relies on RTG to optimize design choices at the design phase to ensure performance during the 30 year maintenance term.

RTG is "responsible for the Integration of the System and shall cause the System to be constructed and Integrated such that Revenue Service Availability shall have occurred on or before the Required Revenue Service Availability Date"⁶ which was May 24, 2018.⁷

RTG is obligated to ensure that the infrastructure and vehicles satisfy the performance specifications set out in the Project Agreement. The specifications clearly set out the City's expectations that RTG deliver a project that meets customers' needs: a safe system with frequent, reliable, high capacity trains.

Under the Project Agreement, the risks associated with tunnelling under the City centre are transferred to RTG, which willingly chose the highest level of risk set out in the geotechnical risk ladder in the RFP. This transfer of risk is logical given that RTG was in the best position to address geotechnical risk and represented to the City that it had the experience to do so. The City paid a premium for this allocation of risk.

The Project Agreement does not create a joint venture or partnership relationship between the City and RTG or OLRTC; indeed, it specifically states the contrary.⁸ The City looks to RTG as a single point of responsibility when any problem arises.

⁴ COW0544752, Design submission Part 1 at 36.

⁵ Project Agreement, section 3.1, 20.1, 27.1.

⁶ Project Agreement, section 9.2(a) (iv).

⁷ Project Agreement, Schedule 1, s. 1.579.

⁸ The Project Agreement, section 64.3(a), states as follows: "The Parties are independent contractors. This Project Agreement is not intended to and does not create or establish between the Parties, or between the City and any Project Co Party, any relationship as partners, joint venturers, employer and employee, master and servant, or ...of principal and agent...".

2. Design and Construction

(a) The City Team

The City had a highly qualified team throughout the Project. In the period leading up to contract award, the Rail Implementation Office was led by John Jensen, who had extensive experience with light rail transit at Calgary Transit and had managed the City's Trillium diesel line for a period of time. During design and construction, the City's team was initially led by Stephen Cripps, a highly respected former chief engineer of the Ministry of Transportation, and later by Michael Morgan, an engineer with significant international LRT experience, including in New York and Australia. A key member of the City's technical team was Richard Holder, an engineer who was responsible for City oversight relating to vehicles, systems engineering, and safety. Throughout the procurement and design and construction phases of the Project, the Rail Office was assisted by subject matter experts from Capital Transit Partners ("CTP"), the owner's engineers. CTP is made up of some of Canada's largest engineering firms, including STV Canada, Jacobs Associates, AECOM Canada and Morrison Hershfield.

(b) Delegation of Authority and Reporting to Council

In unanimously approving the results of the procurement process on December 19, 2012 Council delegated to the City Manager the authority to "negotiate, approve, execute, deliver, amend and extend the Project Agreement and associated ancillary agreements for the OLRT project..."⁹. Throughout the procurement and design and construction phases of the Project, the City had an executive steering committee chaired by the City Manager which regularly met to review the status of the Project.

Following contract award, the Rail Implementation Office reported to Council's Finance & Economic Development Committee ("FEDCO") on a quarterly basis. As issues developed during the later stages of construction, more frequent reporting was delivered to FEDCO and later to Transit Commission, including memoranda to the Mayor and Council and regular briefings by senior City staff. Attached as Appendix A is a summary of the reporting to Council and various committees in the period 2018-2021.

(c) The Long Term Lender Debt Release

In 2016, in connection with Stage 2 of the Project, the City began negotiations with RTG about having it maintain the planned extension of the line and to provide additional vehicles. This was important for the City given that it wanted to have the same maintainer and vehicles for the extension.

During those negotiations, the City became aware that the long-term lenders to RTG would require additional equity to be injected into the Project in order to provide their consent to a significant expansion of the scope of the Project Agreement. In 2017, a number of commercial options were considered by the City and rejected for various reasons. Ultimately, and based on professional advice, the City concluded that it should enter into an agreement with the lenders pursuant to which

⁹ COW0000046

the City assumed their loans to RTG in return for the issuance of new debt to the lenders by the City (the “**Long Term Lender Debt Release**”).¹⁰

The Long Term Lender Debt Release was determined to be the preferred option, as it was relatively simple to implement, did not have the cost impact to the City of the equity injection solution, and enabled the City to meet the target implementation date for Stage 2.¹¹ Although the Long Term Lender Debt Release gave the City certain additional step-in rights in the event of default, it was not implemented for that reason, but rather in order to allow the amendment of the Project Agreement in connection with Stage 2. In any event, such step-in rights have not been exercised by the City.

(d) RTG’s Delays in Progressing Design and Construction

As many witnesses have testified in Commission interviews, there was a collaborative and cooperative working relationship between the City and RTG through most of the design and construction period. For example, after the Rideau Street sinkhole event in July, 2016 RTG mitigated delays to the Project by working swiftly to address the sinkhole with the City’s cooperation. In addition, while the City held RTG to the obligations set out in the Project Agreement, including with respect to the achievement of Milestones, there were instances where RTG would raise an issue or make a request that was reasonable and/or in the best interest of the Project but which did not comply with the Project Agreement. As with any project, there were adaptations, changes and compromises made by the parties in the interest of the Project. In relation to Milestones, RTG requested changes to the requirements for a few milestones such as the Tunneling Milestone, and after extensive review, the City agreed that the request was reasonable and appropriate and granted RTG’s request.

Beginning in 2017, the City began to develop concerns regarding delays to the schedule for the Project, based on what it could observe in its capacity as owner with limited insight into the relationships between RTG and its Subcontractors. It now appears that these delays were a combination of a number of factors including but not limited to the following:

- a failure by OLRTC to take responsibility for systems integration among its subcontractors and to adequately plan for systems engineering requirements of the Project until very late in the day, and to comply with the requisite engineering standards in respect of systems engineering;
- delays in the design effort by RTG’s engineering joint venture and the completion of design work in silos;
- ongoing disputes between Alstom and Thales over the technical requirements of the CBTC system;
- failures by OLRTC to coordinate schedules as between its key subcontractors, particularly Alstom and Thales;

¹⁰ COW0525714.

¹¹ COW0525714.

- problems with Alstom’s North American supply chain; and
- challenges with assembling vehicles in the Maintenance and Service Facility with an inexperienced work force.

RTG maintained that it was progressing on schedule and would meet the Required Revenue Service Availability Date (“**RRSAD**”) of May 24, 2018. It was not being transparent with the City about the above issues nor was it producing monthly Works Schedules that accurately reflected its actual progress.

Once the City became aware of the extent of RTG’s design and construction delays, this was of great concern because of the significant changes which needed to be made to its existing rapid bus transit system (“**BRT**”) in connection with the handover of Stage 1. A large team at OC Transpo led by its General Manager John Manconi had planned those changes for a period of years through its Ready for Rail Program and Rail Activation Management Program. The City was cutting out the heart of its rapid bus system, which had one of the highest passenger volumes in North America, to replace it with a light rail transit system. It was important to have some certainty over when the system would be ready to be handed over to the City.

RTG chose to insist (even publicly) that it would meet deadlines that it now appears its own executives knew at the time were unrealistic. RTG failed to disclose to the City the true nature of OLRTC’s progress in its Works Schedules which were inaccurate and unrealistic. Given the City’s growing concerns regarding the lack of transparency from RTG, the City was forced to establish and retain an Independent Assessment Team (“**IAT**”) (outside experts with significant light rail transit construction and delivery experience) to review RTG’s schedules on 14 occasions. Invariably, the IAT advised the City that each of RTG’s Work Schedules were unrealistic, noting that the status of the work as indicated in the Works Schedules did not reflect the progress of work on site.¹²

Despite the fact that RTG was obviously behind schedule, it continued to insist to the City that it would meet the RRSAD of May 24, 2018. This date was important to the City because OC Transpo needed to prepare for the transfer from the BRT to LRT system and needed to prepare its communication strategy to the public based on a fixed date. The RRSAD was rescheduled three times after the initial date of May 24, 2018 was missed, before ultimately being achieved on August 30, 2019, fifteen months late. RTG asserted that one of the dominant causes of the delays was the Rideau Street sinkhole, but the IC later confirmed that this was not the case.¹³ In fact, delays in vehicle manufacture and testing and station construction delayed the achievement of Substantial Completion as is clear from a review of OLRTC’s Works Schedules, Works Reports, the Project correspondence, and the IAT Reports.

(e) **RTG’s Proposal for a Partial Opening**

Throughout the delays, the City consistently took the position that it was guided by and would follow the terms of the Project Agreement with RTG. In September, 2018 the City refused to consider RTG’s proposal for a “partial opening” which would have involved a modification to the

¹² See for example COW0450823; COW0451979.

¹³ COW0317235.

fleet size, partial station openings, and trial running with some single cars.¹⁴ Given the state of the system at that time including the large volume of outstanding works, unfinished stations, and incomplete testing, the request was a non-starter. The City rejected the proposal because of the risks and major customer impacts involved and because it would have amounted to a major deviation from the Project Agreement.

(f) RTG’s Notices of Substantial Completion

In May, 2019 the City refused to approve RTG’s first Notice of Substantial Completion because of the significant deficiencies outstanding at that time. The Independent Certifier confirmed the City’s position that Substantial Completion had not been achieved. The City was not in a rush to open the system, as demonstrated by its refusal to agree that Substantial Completion had been achieved when it obviously had not. The City’s focus was and is on public safety, reliability and the customer experience for light rail in Ottawa.

When RTG delivered its second Substantial Completion Notice in late July, 2019, the City, after conducting appropriate due diligence was able to render a positive opinion that Substantial Completion had been achieved. The Independent Certifier was also able to render a positive opinion because RTG had demonstrated that issues had been resolved or mitigated to the satisfaction of the City and the Independent Certifier. In particular, RTG expressly represented to the City that the deficiencies, defects and concerns outstanding at the time of the first Notice of Substantial Completion had been satisfactorily addressed.

The City understands that RTG’s delays led to a compression of the time necessary for RTG to conduct necessary testing and commissioning, something which is not uncommon on a project of this size and complexity. However, the City anticipates that the evidence will show that it accepted RTG’s assurances that the system and its components were adequately tested to the requirements of the Project Agreement before Substantial Completion was achieved.

(g) Trial Running

Once Substantial Completion was achieved, RTG commenced the trial running process. The fundamental objective of trial running is “to exercise the complete integrated System, including all subsystems, operating personnel and operating procedures, to confirm readiness for Revenue Service Commencement.”¹⁵ It is RTG’s obligation to demonstrate that the system is ready for Revenue Service and the Maintenance Term. Schedule 14 - Commissioning of the Project Agreement does not spell out detailed criteria for trial running, except that it is to be “conducted for a period of 12 consecutive days”, “is to operate a full regular scheduled service on the full line using the peak and non-peak schedules for an extended period”, is to include “a variety of failure management scenarios” and is to demonstrate to the satisfaction of the IC “that the specified travel times, headways and operational performance requirements can be achieved”.¹⁶ The Operations Service Plan appended to Schedule 15-3 of the Project Agreement set out a projected minimum morning peak service capacity for 2018-19 of 10,700 passengers. In 2019, the City’s morning peak passenger service was well below this number.

¹⁴ COW0526008.

¹⁵ Project Agreement, Schedule 14, section 1.5(e).

¹⁶ Project Agreement, Schedule 14, section 1.5(e).

The City's view was that the Project Agreement criteria were not sufficiently clear. As a result, in 2017 a CTP consultant worked with OLRTC to develop RFI-O-266, which set out general parameters for trial running, including that an Aggregate Vehicle Availability Kilometre Ratio ("AVKR") of 96% be achieved over 9 out of 12 days and no three consecutive days below 94%. In the City's view, this was a higher performance standard than the vague general requirements set out in the Project Agreement.

In July, 2019, in the period leading up to trial running, a team made up of representatives of OLRTC and the City developed the Trial Running Test Procedure, which set out more detailed requirements for trial running, including the format and content of daily scorecards. We expect the evidence will be that OLRTC replaced the original AVKR criteria with a slightly higher standard of 98% in this document for its own reasons. It is important to note however that AVKR was only one of a number of criteria used for trial running. In particular, any major safety issue experienced during trial running would have led to a failure score for any particular day.

Trial running took place between July 29 and August 21, 2022. The system faced challenges during the early period, and there were a number of failure days, restarts and pauses. In mid-August, 2019 OLRTC and the City decided to return to the 2017 AVKR criteria. This change back to the originally agreed upon criteria was acceptable to the City as it was viewed in 2017 and in 2019 as sufficient to demonstrate the readiness of the system for Revenue Service and was a higher standard than what was generally provided in the Project Agreement.

In addition, the City agreed to reduce the number of trains to be made available to handle the morning peak from 15 to 13, in recognition of the fact that ridership had not met the projected targets set out in the Project Agreement. It was anticipated that this change (which did not affect AVKR) would give RTM more spare vehicles and make it easier to meet the demands of the morning peak period.

Following these changes, the system successfully passed trial running on August 21, 2019 with an AVKR of 96.9% over 9 out of 12 days. The IC attended all of the days of trial running and certified that the parties had met the requirements of the Project Agreement.¹⁷

(h) Revenue Service Availability

On August 30, 2019, following the successful completion of trial running and confirmation that the Independent Safety Auditor would certify that the system was safe to go into service, the City accepted that RTG had met the requirements of Revenue Service Availability ("RSA"). The City and RTG executed a term sheet¹⁸ setting out various agreements reached with respect to RSA, including that RTG was permitted to achieve RSA with 13 double car trains; that RTG would provide vehicle technicians onboard trains as mitigation for the continuing problem with the rear facing cameras; and that RTG would provide door technicians on board trains following RSA until certain door software was installed.

Ultimately, the decision to open the system for revenue service was made by the City Manager, Steve Kanellakos, under the delegated authority given by Council in December, 2012.

¹⁷ COW0270758.

¹⁸ COW0527467.

(i) Launch of Public Service

The Project Agreement did not provide for a bedding-in period or “soft start” and there is no industry consensus as to whether one is required or what it would entail in terms of duration and/or performance criteria. The City was entitled to expect that once the system was handed over it was ready to go into service. In fact, RTG expressly represented to the City when RSA was achieved, that the system was ready to open to the public for service and that it was ready to be maintained.

Regardless, the City ran more than 90 drills over the two week period between RSA and the public launch of the system on September 14, 2019, effectively a form of soft start. It then ran a parallel bus service for a further three week period to ensure a smooth transition. No issues of significance arose until later in the fall, well after the parallel bus service was discontinued.

The strong performance of the system at the outset of Revenue Service validated the achievement of RSA and in effect, supported RTG’s representation that the system was ready for use. The system’s performance issues since launch have primarily been the result of poor performance of RTM’s maintenance obligations, RTG’s latent design and quality defects discovered during operations, and areas where RTG’s design and RTG’s application of the design-build-maintain risk transfer were not effective.

At no time did RTG or OLRTC suggest that the system was not ready for operation or that RTM was not ready to take on its maintenance obligations. In fact, the reverse was the case, as RTG was anxious to complete RSA and obtain its final milestone payment of \$202 million. RTG was aware of the City’s September 14, 2019 launch date well in advance and it was consulted in relation to the City’s launch plans. RTG did not at any time object or take the position that an additional debugging or bedding-in period was required. In fact, it actively prepared for the launch.¹⁹

3. The Maintenance Period

(a) Initial Issues with the System

As the Commission is aware, commencing in the late fall, 2019 significant problems developed with the system that ultimately led the City to deliver Notice of Project Co Events of Default in March, 2020. These problems included:

- (a) issues with the train control monitoring system;
- (b) problems with Vehicle passenger doors;
- (c) failures of the overhead catenary system;
- (d) switch heater failures;
- (e) failure of inductors; and
- (f) wheel flats.

¹⁹ August 2019 Works Report COW0587458.

(b) The Wheel Cracking and Derailments

In July, 2020, significant wheel cracking of the Vehicles was observed, requiring replacement of the wheels.

Following some improvement in performance of the system in late 2020 and the first seven months of 2021, the system then experienced two derailments both of which are attributable solely to RTG or its subcontractors:

- (a) the August, 2021 derailment when an axle hub failed as a result of an overheated bearing; and
- (b) the September, 2021 derailment of a vehicle with passengers on board, as a result of Alstom maintenance staff not tightening axle bolts following disassembly of wheel bogies for inspection following the first derailment.

The second derailment led to an extensive period where the system was out of service and required the City to retain an independent safety expert, TRA, to review RTM's return to service plan. It also led to the City's delivery to RTG of a second notice of default and the City's current application for the Court to confirm that default.

(c) Faulty Design, Manufacture and/or Maintenance

An LRT system needs to be properly and consistently maintained. RTG, which is made up of nominees of three large multi-national, experienced corporations, failed to bring the appropriate resources to bear for the Maintenance Term and still does not have all of the necessary Subcontractors in place to perform the maintenance services. Essentially, RTG expects to receive the full monthly service payment while providing skeletal maintenance services.

The Payment Mechanism was designed not to be prescriptive with respect to specific maintenance tasks or requirements but rather based on the maintainer's ability to provide consistently reliable service. Failure to do so results in deductions from the Monthly Service Payments. The Payment Mechanism was structured so as to incentivize Project Co to perform its Maintenance Services to a high standard so as to obtain full payment.

RTG's failure to perform its obligations and the resulting issues noted above cannot be blamed on the City. The issues with the Alstom's train control monitoring system and passenger doors are directly related to the failure of OLRTC to take on responsibility for systems integration during design and construction. The inductor failures, and cracked wheels appear to involve faulty design or manufacture by Alstom or its suppliers. The lack of a working wheel lathe to remove wheel flats following braking events is tied directly to RTM's lack of maintenance on the MSF equipment. The switch heater failures stem from poor design choices by OLRTC – electric switch heaters have now been replaced by gas heaters. The performance of the track in high summer temperatures continues to be an issue to this day. This list of issues does not speak highly of RTG's design and construction of the system nor of its maintenance of the system.

With respect to the derailments, the first derailment appears to relate to a combination of factors including poor design (track and vehicles), lack of system integration of the wheel-rail interface

and lack of coordination of the vehicle and track interface generally. The second derailment was (as Alstom has admitted) human error – poor maintenance practices including lack of supervision and a lack of oversight by RTM, and a failure to follow a robust safety protocol within the maintenance facility. None of these issues are connected to trial running or the City’s launch plan. As noted, the first month of Revenue Service went well and no significant problems arose.

(d) Reporting to Transit Commission and Council

It is understandable that given the poor performance of the system some councillors have been frustrated and at times angry with RTG, its subcontractors and senior City staff involved in the Project. However, it is important that the Commission understand that during the period from August 30, 2019 to today there has been regular and fulsome reporting by the Rail Office and OC Transpo staff to the Transit Commission and Council regarding all of the issues encountered relating to the Project. For example: on November 6, 2019 there was a special meeting of the Transit Commission to discuss issues with breakdowns and service delays;²⁰

- on January 23, 2020, there was a presentation by John Manconi to Transit Commission about service issues, and representatives of RTG/RTM were questioned;²¹
- in February, 2020, councillors were provided with memoranda explaining the requirements of the Project Agreement and information about payments withheld from RTG;²²
- In March, 2020, there was a special meeting of FEDCO to receive a privileged briefing on the notice of default;²³
- In June, 2020, OC Transpo staff presented to Transit Commission regarding a proposed service recovery plan;²⁴
- In September, 2020, OC Transpo staff presented to Transit Commission regarding various aspects of the Transit Service Rectification/Corrective Action Plan;²⁵
- Confederation Line updates were provided to Transit Commission in October to December, 2020 and February to June, 2021;²⁶
- In August and September, 2021, Council was provided with memoranda dealing with the two derailments;²⁷

²⁰ See COW0561664, COW0000217.

²¹ See COW0000245, COW0000247.

²² See COW0104397, COW0104347.

²³ See COW0561368.

²⁴ See COW0561682.

²⁵ See COW0561677.

²⁶ COW0000243, COW0000222, COW0561672, COW0000257, COW0000259, COW0000265, COW0000271, COW00000252.

²⁷ COW0104410, COW0104814.

- The two derailments were discussed in detail at Transit Commission meetings in September and October, 2021,²⁸
- Recently, the Mott McDonald report was discussed at an in camera briefing of FEDCO on April 29, 2022 and was then made public.

4. Conclusion

When issues develop during the maintenance period of a DBFM project, the owner's primary remedy is to enforce its right to withhold monthly maintenance payments and if necessary to seek redress under the dispute resolution provisions of the Project Agreement. The City believes that it has taken the appropriate steps to protect the interests of transit users by insisting that the payment mechanism in the Project Agreement is followed and by withholding maintenance payments for months where service has been poor or non-existent.

At the same time, the City has attempted to work with RTG to create the conditions for their success and the success of the system. The City has provided access to the infrastructure with shutdowns for additional repairs and rework, has reduced the number of required vehicles in service for extensive periods of time, and has provided access to additional Stage 2 vehicles to bolster the size of the fleet. The City has also coordinated independent technical reports to assess and validate the performance of the system. The City extended the maintenance contract of RTG to include all of the Stage 2 assets to give RTG certainty over the growth of the system.

The City contracted with RTG to supply a world class LRT system and it is entitled to receive the System it purchased. The issues affecting the reliability and performance of the System are related to RTG's own performance and management of its subcontractors. When RTG exerts itself, performance improves. However, as noted by the independent expert retained by the City, Mott MacDonald, RTG has failed to implement a proactive approach to maintenance and asset management, which has led to RTG's short-sighted and ad hoc responses to issues arising during the Maintenance Term. The City remains concerned about the ability and commitment of RTG and its subcontractors to properly maintain the system and believes that it is taking all necessary steps available to it under the Project Agreement to ensure that the issues with the system are resolved to the satisfaction of the residents of Ottawa.

June 6, 2022

²⁸ COW0561715, COW0561708.

APPENDIX “A”

SUMMARY OF REPORTING TO COUNCIL²⁹

Date	Nature of Reporting	Summary	Production Number
January 24, 2018	Memo to Council	Update to Council regarding RSA Date	COW0104444
February 6, 2018	FEDCO Meeting	Presentation to FEDCO – Stage 1 Update: <ul style="list-style-type: none"> • RSA Requirements • Revised RSA Date • Tools under Project Agreement to protect the taxpayer • City commitments 	Presentation COW0000095 Minutes COW0000085
February 7, 2018	Memo to Council	Clarification on LRT Revenue Service Availability and associated Liquidated Damages	COW0104446
February 14, 2018	Memo to Council	Overview of Project Agreement	COW0567466
February 14, 2018	Memo to Council	Next Confederation Line Update at FEDCO on March 6, 2018	COW0104178
March 6, 2018	FEDCO Meeting	Presentation to FEDCO – Project Update: <ul style="list-style-type: none"> • RSA and RSA Date timelines • Liquidated Damages • Delay Claims/Events • City Costs • Negotiations • Lessons Learned for Stage 2 	Presentation COW0523177 Minutes COW0000086
April 3, 2018	FEDCO Meeting	Presentation to FEDCO - Project Update: <ul style="list-style-type: none"> • Schedule update • Construction updates 	Presentation COW0000096 Minutes COW0000087

²⁹ Note, this summary does not include any in camera, privileged and confidential briefings to Council, which also took place during the relevant period.

Date	Nature of Reporting	Summary	Production Number
May 1, 2018	FEDCO Meeting	Presentation to FEDCO – Project Update: <ul style="list-style-type: none"> • Construction Update • Systems • CBTC and CBTC Testing and Commissioning • Vehicles and Testing • Operator Training • Upcoming Works • Key Activities to Monitor 	Presentation COW0000090 Minutes COW0000088
May 10, 2018	Memo to Council	Quarterly Update – Q1 2018	COW0104398
<i>May 27, 2018</i>	<i>RSA Date</i>		
June 5, 2018	FEDCO Meeting	Presentation to FEDCO – Project Update: <ul style="list-style-type: none"> • Train Testing • Public Art • MSF • RTG Operations Overview • Key Activities to Monitor 	Presentation COW0000091 Minutes COW0000081
July 3, 2018	FEDCO Meeting	Presentation to FEDCO – Project Update: <ul style="list-style-type: none"> • Project Metrics • Activities to Monitor 	Presentation COW0000092 Minutes COW0000082
August 13, 2018	Memo to Council	Quarterly Update – Q2 2018	COW0104400
September 10, 2018	FEDCO Meeting	Presentation to FEDCO – Project Update: <ul style="list-style-type: none"> • CBTC and CBTC Testing and Commissioning • Vehicles and Testing and Commissioning of Vehicles 	Presentation COW0000093 Minutes COW0000083

Date	Nature of Reporting	Summary	Production Number
		<ul style="list-style-type: none"> • RSA Requirements and RTG representations regarding RSA Date • Key Activities to Monitor • Protecting the City's Investments 	
October 2, 2018	Memo to Council	Confederation Line Project Update	COW0104275
November 2, 2018	Second RSA Date		
November 2, 2018	Memo to Council	Clarification on LRT Revenue Service Availability and associated Liquidated Damages	COW0104450
November 14, 2018	FEDCO Meeting	Presentation to FEDCO – Project Update: <ul style="list-style-type: none"> • Key Milestones • Testing and Commissioning • Vehicles and CBTC • Operational Systems Testing • Operational Readiness and Testing • Training • Key Activities to Monitor 	Presentation COW0000094 Minutes COW0000084
November 20, 2018	Memo to Council	Quarterly Update – Q3 2018	COW0104428
December 5, 2018	Memo to Council	Financial Implications of LRT – Stage 1 Delay	COW0523428
January 3, 2019	Memo to Council	O-Train Confederation Line Revenue Service Availability Date	COW0104358
February 1, 2019	Memo to Council	Quarterly Update – Q4 2018	COW0104430
February 12, 2019	FEDCO Meeting	Presentation to FEDCO – Project Update:	Presentation COW0000112

Date	Nature of Reporting	Summary	Production Number
		<ul style="list-style-type: none"> • Monitoring of critical elements to RSA • Fleet Availability • TVS • Monitoring and Control Systems • Power Systems • RSA Requirements • Negotiations 	Minutes COW0000108
March 5, 2019	FEDCO Meeting	Presentation to FEDCO – Project Update: <ul style="list-style-type: none"> • Monitoring of critical elements to RSA • Alstom Citadis Spirit and cold weather testing • Fleet Availability • Station Occupancies • TVS • CBTC • Control Centre and System Testing • Power System Testing • System Assurance • Practice Plan Running • Winter Operations • Handover Requirements • RSA • Negotiations 	Presentation COW0000113 Minutes COW0000101
March 31, 2019	Third RSA Date		
April 2, 2019	FEDCO Meeting	Presentation to FEDCO – Project Update:	Presentation COW0000114

Date	Nature of Reporting	Summary	Production Number
		<ul style="list-style-type: none"> • Monitoring of critical elements to RSA • Fleet Availability • Station Occupancies • TVS • CBTC • Control Centre and System Testing • Power System Testing • System Assurance • Practice Plan Running • Winter Operations • Ready for Rail • Handover Requirements • RSA • Negotiations 	Minutes COW0000103
April 26, 2019	<i>RTG submits Notice of Substantial Completion</i>		
May 10, 2019	FEDCO Meeting	Presentation to FEDCO – Project Update: <ul style="list-style-type: none"> • Derailment – May 3, 2019 • Safety Management System • Stations • Substantial Completion Process • Monitoring of critical elements to RSA • City Preparation 	Presentation COW0000115 Minutes COW0000104
May 15, 2019	Memo to Council	Substantial Completion Assessment Update	COW0104285
May 22, 2019	Memo to Council	Substantial Completion Process Update	COW0104286

Date	Nature of Reporting	Summary	Production Number
June 4, 2019	FEDCO Meeting	Presentation to FEDCO – Project Update: <ul style="list-style-type: none"> • Project Status • Substantial Completion Requirement • Monitoring of critical elements to RSA • RSA and Launch • Long Stop Date • Fare Freeze • City Preparation 	Presentation COW0000116 Minutes COW0000105
June 7, 2019	Memo to Council	Quarterly Update – Q1 2019	COW0104399
June 19, 2019	Memo to Council	Financial Implications of LRT – Stage 1 Delay	COW0568312
<i>June 30, 2019 Fourth RSA Date</i>			
July 10, 2019	FEDCO Meeting	Presentation to FEDCO – Project Update: <ul style="list-style-type: none"> • Substantial Completion • RSA • Trial Running • Handover to the City • Public Launch 	Presentation COW0000117 Minutes COW0000109
<i>July 26, 2019</i>	<i>Substantial Completion milestone achieved and confirmed by the Independent Certifier</i>		
August 7, 2019	Memo to Council	Quarterly Update – Q2 2019	COW0104401
<i>August 30, 2019</i>	<i>RSA milestone achieved and confirmed by the Independent Certifier Confirmation of Project safety requirements by the Independent Safety Auditor</i>		
September 3, 2019	Memo to Council	Achievement of the Revenue Service Availability	
September 10, 2019	FEDCO Meeting	Presentation to FEDCO – Update	Presentation COW0000118

Date	Nature of Reporting	Summary	Production Number
		<ul style="list-style-type: none"> • Practice Running Drills • Public Opening • System Integration and Expansion 	Minutes COW0000106
September 14, 2019	Revenue Service Begins / R1 Service		
September 18, 2019	Transit Commission Meeting	Presentation to Transit Commission – Update <ul style="list-style-type: none"> • Launch Event 	Presentation COW0561602 Minutes COW0561600
October 31, 2019	Memo to Council	Quarterly Update – Q3 2019	COW0104405
November 6, 2019	Transit Commission Meeting	Presentation to Transit Commission – Update: <ul style="list-style-type: none"> • Rail Service and Service Interruptions • Train Control and Monitoring System • Vehicle On Board Control • Doors • Switches • Rail Track Update • Ongoing Improvements • Winter Operations 	Presentation COW0561664 Minutes COW0000217
November 20, 2019	Transit Commission Meeting	Presentation to Transit Commission – Update: <ul style="list-style-type: none"> • Rail Service • Ongoing Improvements to Stations and Issues • Winter Operations 	Presentation COW0561658 Minutes COW0561610

Date	Nature of Reporting	Summary	Production Number
January 23, 2020	Transit Commission Meeting	Presentation to Transit Commission – Update: <ul style="list-style-type: none"> • Review of Rail Service • RTG 	Presentation COW0000247 Minutes COW0000245
February 8, 2020	Memo to Council	RTG/RTM Payments	COW0104397
February 14, 2020	Memo to Council	Project Agreement Provisions for Payments to RTG	COW0104347
February 19, 2020	Transit Commission Meeting	RMCO Report	Presentation (RMCO) COW0561689 Minutes COW0000239 RMCO Report COW0000226
<i>March 10, 2020</i>	<i>Notice of Default</i>		
March 12, 2020	Memo to Council	Notice of Default and Rectification Notice	COW0104297
June 17, 2020	Transit Commission Meeting	Presentation to Transit Commission – Transit Service Recovery Plan Update <ul style="list-style-type: none"> • Update • Next Steps • System Improvements • Completed Work • Upcoming Work 	Presentation COW0561679 Minutes COW0561682
July 30, 2020	Memo to Council	Quarterly Update – Q2 2020	COW0104418
August 4, 2020	Memo to Council	Fleet Availability Update	COW0104301
August 19, 2020	Memo to Council	Maintenance Service Payment to RTG	COW0568372
September 16, 2020	Transit Commission Meeting	Presentation to Transit Commission – Update: <ul style="list-style-type: none"> • Performance 	Presentation COW0561675

Date	Nature of Reporting	Summary	Production Number
		<ul style="list-style-type: none"> • Rectification Plan • Corrective Action Plan • Track Work • Wheel Cracks • Service 	Minutes COW0561677
October 21, 2020	Transit Commission Meeting	Presentation to Transit Commission – Update: <ul style="list-style-type: none"> • Performance • Rectification Plan • Wheel Cracks 	Presentation COW0000241 Minutes COW0000243
November 12, 2020	Memo to Council	Quarterly Update – Q3 2020	COW0104406
November 18, 2020	Transit Commission Meeting	Presentation to Transit Commission – Update: <ul style="list-style-type: none"> • Performance • Rectification Plan • Switch Heaters • Wheel Cracks • Winter Operations 	Presentation COW0000220 Minutes COW0000222
December 16, 2020	Transit Commission Meeting	Presentation to Transit Commission – Update: <ul style="list-style-type: none"> • Performance • Rectification Plan • Switch Heaters • Wheel Cracks 	Presentation COW0561667 Minutes COW0561672
February 17, 2021	Transit Commission Meeting	Presentation to Transit Commission – Update: <ul style="list-style-type: none"> • Development of Performance Metrics and Public Reporting • Reporting to Transit Commission 	Presentations COW0000254 COW0000255 Minutes COW0000257
March 1, 2021	Memo to Council	Quarterly Update – Q4 2020	COW0104422

Date	Nature of Reporting	Summary	Production Number
March 17, 2021	Transit Commission Meeting	Presentation to Transit Commission – Update: <ul style="list-style-type: none"> • Performance • Rectification Plan • System Performance during weather events • Rail Reliability and Continued Monitoring • Train Wheels 	Presentation COW0000259 Minutes COW0000263
April 21, 2021	Transit Commission Meeting	Presentation to Transit Commission – Update: <ul style="list-style-type: none"> • Performance • Rectification Plan and other works • Train Wheels Presentation to Transit Commission – Performance Measurement Presentation to Transit Commission – Transit Service Evaluation Criteria	Presentations COW0561718 COW0561722 COW0561726 Minutes COW0000265
April 30, 2021	Memo to Council	Quarterly Update – Q1 2021	COW0104338
May 19, 2021	Transit Commission Presentation	Presentation to Transit Commission – Update: <ul style="list-style-type: none"> • Performance • Rectification Plan and other works • Train Wheels 	Presentation COW0000269 Minutes COW0000271
June 16, 2021	Transit Commission Presentation	Presentation to Transit Commission – Update: <ul style="list-style-type: none"> • Performance • Rectification Plan • Track Remediation • Additional Work • Train Wheels 	Presentation COW0000249 Minutes COW0000252

Date	Nature of Reporting	Summary	Production Number
August 3, 2021	Memo to Council	Quarterly Update – Q2 2021	COW0104343
August 9, 2021	Line 1 Derailment		
August 9, 2021	Memo to Council	Temporary Closure – August 9, 2021	COW0104409
August 9, 2021	Memo to Council	Update re Temporary Closure	COW0104410
September 19, 2021	Line 1 Derailment		
September 20, 2021	Transit Commission Meeting	Presentation to Transit Commission – Update <ul style="list-style-type: none"> • August 8 Derailment • September 19 Derailment • Performance • Train Wheels • Vehicle Incident Response Protocols 	Presentation COW0561711 Minutes COW0561715
September 24, 2021	Notice of Default		
October 5, 2021	Memo to Council	Rideau Transit Group – New Notice of Default	COW0104386
October 20, 2021	Transit Commission Meeting	Presentation to Transit Commission – Update: <ul style="list-style-type: none"> • Safe Return to Service Plan • Reliability and Safety Incidents • September 19 Derailment Update • Replacement Bus Service Presentation to Transit Commission – Performance Measurement and Reporting TRA Presentation	Presentations COW0000274 COW0000275 COW0000276 Minutes COW0561708

Date	Nature of Reporting	Summary	Production Number
October 26, 2021	Memo to Council	Rideau Transit Group Proposed Full Return-to-Service	COW0104321
<i>November 17, 2021</i>	<i>Public Inquiry announced</i>		
November 17, 2021	Transit Commission Meeting	Presentation to Transit Commission – Update: <ul style="list-style-type: none"> • Safe Return to Service • Replacement Bus Service 	Presentation COW0000267 Minutes COW0000268
December 15, 2021	Memo to Council	Confirmation of Notice of Default Court Filing	COW0104389
December 15, 2021	Memo to Council	Update on Line 1 Service	COW0104319
March 30, 2022	Transit Commission Meeting	Presentation to Transit Commission – Update: <ul style="list-style-type: none"> • Key Performance Indicators • Performance RMCO Annual Report for 2021	Presentations COW0558614 COW0558611 RMCO Report COW0558613