



The City of Ottawa

Confederation Line LRT Project – Stage 1

Closing Submissions of the City of Ottawa

Submitted to:

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CLOSING SUBMISSIONS OF THE CITY OF OTTAWA

A. INTRODUCTION AND OVERVIEW

The Order in Council creating this Inquiry¹ describes the mandate of this Commission as follows:

AND WHEREAS the City of Ottawa (“City”) Stage 1 Light Rail Transit System (“OLRT1 Project”) has experienced several issues that have had a negative impact on the people of Ottawa including, most recently, breakdowns and derailments which led to a system wide temporary shutdown and have raised concerns in the public about the safety of the OLRT1 Project (“OLRT1 Project Issues”);

...

AND WHEREAS it is considered in the public interest for the Government of Ontario to appoint a commission to identify **the circumstances and contributing factors that led to the OLRT1 Project Issues** and to make recommendations to assist in preventing such issues from happening again...”. [emphasis added]

In other words, the mandate of this Commission is to identify the circumstances and contributing factors that have led to several issues with the Stage 1 LRT (the “**LRT**” or “**Project**” or “**System**”)² since its launch in September, 2014, including the breakdowns and derailments.

The “several issues” described in the Terms of Reference are not in dispute and can be summarized as follows:

- (a) door software malfunctions and Train Control and Management System issues which caused service disruptions in October and November, 2019;
- (b) various failures which took place in the late fall 2019 and winter/spring 2020, including failures of the overhead catenary system, switch heater failures, inductor failures, and wheel flats;
- (c) the wheel cracking which was observed in July, 2020, which required the replacement of all affected wheels;
- (d) the August, 2021 mainline derailment of a Vehicle, which occurred when an axle hub failed as a result of an overheated bearing; and
- (e) the September, 2021 mainline 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.

It is **these** issues which have caused the service disruptions which have had a negative impact on the people of Ottawa. It is **these** issues which the Commission is charged with getting to the bottom of –

¹ Executive Council of Ontario, Order in Council 1859/2021.

² Capitalized Terms not defined herein shall bear their meanings as defined in the Project Agreement entered into between the City of Ottawa and Rideau Transit Group General Inc. and EllisDon RTG Partner Inc. (“**RTG**”), made as of February 12, 2013 (the “**Project Agreement**”).

what were the “circumstances and contributing factors” that led to these issues, and how can they be prevented in future?

The City of Ottawa is the owner of the Ottawa LRT. It paid RTG, a consortium made up of three large, sophisticated and experienced contractors with global expertise, to design and construct the system and to maintain it for a period of 30 years. It did so pursuant to a contract (the “**Project Agreement**”) which allocated design, construction, and maintenance responsibilities to RTG. RTG in turn reallocated certain of these obligations to its Subcontractors OLRT Constructors (“**OLRTC**”) and Rideau Transit Maintenance (“**RTM**”), who in turn retained Subcontractors such as Alstom.

The issues described above **all** involve failures in design, construction or maintenance, which are the responsibility of RTG and its Subcontractors (for whom RTG is responsible).³

In particular, the initial post-launch issues with the Train Control and Management System and passenger doors are directly related to the failure of OLRTC to fulfil its systems engineering and systems integration oversight and coordination obligations during design and construction. The inductor failures and cracked wheels appear to involve faulty design or manufacture by Alstom or its suppliers. The failure of the overhead catenary system appears to be linked to ongoing maintenance issues. The lack of a working wheel lathe to resolve wheel flats is tied directly to RTM’s failure to supply functioning critical maintenance equipment. The switch heater failures stem from poor design choices by OLRTC – electric switch heaters have now been replaced by gas heaters and the issues are largely resolved.

Although RTG, OLRTC, and Alstom are currently unable to agree on the root cause, 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 construction of that interface. The second derailment was (as RTG, RTM and Alstom have each admitted) human error – however, it is also indicative of poor maintenance practices, a lack of oversight by RTM, and a failure to follow a robust safety assurance protocol.

RTG’s failures to perform its design, construction and maintenance obligations cannot be blamed on the City. In particular, these failures do not arise from the City’s procurement approach, the structure and content of the Request for Proposals (“**RFP**”), the adequacy of the Project Agreement, the City’s oversight of the Project or any of the other criticisms of the City’s conduct raised by Commission counsel during this Inquiry. **None of those matters caused or contributed to the issues that led to the breakdowns and derailments.**

³ Project Agreement – Ottawa Light Rail Transit Project, February 12, 2013, Section 9.3(a) and 20.1(b), IFO0000375, Exhibit 79. The Courts have held that General Contractors are responsible for the work of their subcontractors. See *Dominion of Canada v Fortress*, 2006 CarswellOnt 5447, 151 ACWS (3d) 390 at para 15 and *Vandenbrink Farm Equipment Inc. v. Double-D Transport Inc.*, 1999 CarswellOnt 1917, [1999] OJ No. 2302 at para 50.

During this public inquiry, there has been a focus on the conduct of the City and its representatives, in the interview process and particularly during the public hearings. At times it has felt as if the public sector were on trial. Nevertheless, the City believes that a fair-minded and impartial observer can only come to one conclusion – the City’s conduct, and the conduct of its representatives, is not responsible for the previous and continuing issues facing the LRT.

RTG let the City down and it is RTG that should be called to account in respect of the issues affecting reliability of the system so that transit riders in the City can rely on this new System that they bought and paid for. Taxpayers should not bear the burden of private sector failures.

With regards to specific allegations made about the City’s conduct, the City responds as follows:

- The City chose the procurement model recommended by all of its advisors and promoted and supported by the Province’s own procurement agency, Infrastructure Ontario (“**IO**”). The City budget not only was adequate for the Project, but value engineering undertaken by City staff and its consultants saved the City \$440 million and improved the Project design. This Project was completed **on budget**, with contingency remaining.
- The geotechnical risk transfer under the Project Agreement was willingly accepted by RTG. The sinkhole illustrates the precise benefit that the City bargained and paid for – tunneling risk was transferred to the party best placed to bear that risk. In terms of the sinkhole costs, RTG was able to offset this risk as the insurers paid \$134 million to RTG in respect of both its direct costs and soft costs (including delay costs) for the sinkhole.⁴ RTG is no longer making any claim against the City for the sinkhole and the City has not had to pay any monies to RTG for the sinkhole. This is a much better outcome than under a traditional design bid build model.
- In respect of Revenue Service Availability (“**RSA**”) and the launch of the system:
 - The City was not responsible for meeting Substantial Completion and RSA - those were RTG’s responsibilities under the Project Agreement. The City acted reasonably in rejecting RTG’s first application for Substantial Completion in May, 2019 and then approving the second two months later, after RTG addressed significant incomplete Work. The remaining “deferred works” were outstanding items which were in fact addressed by RTG prior to RSA being achieved.⁵
 - The City was entitled to treat RSA as it is defined under the Project Agreement – the date on which the system is ready to open for service to the public. The City always

⁴ There was an initial payment by the insurers to RTG of \$40,000,000 for certain direct costs, then a second payment, following a settlement, was made to RTG in the amount of \$94,300,000, which covered both direct costs and certain soft costs (including delay costs) (See COW0593666, COW0593667 and COW0593668)

⁵ Negotiating for the deferred works to be completed prior to RSA was helpful to the City as otherwise such works would only need to be complete by Final Completion.

planned to open the system to the public within a short period of time after RSA was achieved. The City's rejections of RTG's suggestions for a soft launch or partial opening were driven by concerns about ensuring adequate service for transit riders.

- Trial running was a collaborative effort between the parties, in light of the fact that there were no detailed criteria outlined in the Project Agreement. The decision to return to the 2017 criteria was immaterial to passenger service and did not affect the validity of the testing. The City's decision to reduce morning peak service to 13 trains was based on projected passenger volume and had the additional benefit of giving RTG additional spare trains for launch. None of the changes agreed to by the parties during trial running affected the safety or reliability of the System. The fact that the initial period of trial running was unsuccessful is irrelevant to the outcome of the testing. Ultimately, the System was able to meet the criteria the parties had established to the satisfaction of the Independent Certifier.
- In respect of reporting:
 - In December, 2012 when Council approved the contract award, it delegated operational decisions relating to the Project to City staff. City staff reported to Council on a regular basis as they informed Council they would do, particularly in 2018 and 2019 as the Project approached completion. This reporting included not only written reports but regular presentations at the committee responsible for the oversight of the Project, Finance and Economic Development Committee ("FEDCO"). Prior to trial running commencing, the City Manager determined that staff would not report on the outcome until trial running was completed and advised FEDCO of his approach. FEDCO had the opportunity to ask for more frequent reporting but did not make this request. He properly exercised his delegated authority, in a manner consistent with the *Municipal Act*, good municipal governance and practice, and in good faith.
 - After trial running was complete and the Independent Certifier had validated the process, Council received a memorandum detailing the outcome of the trial running process and next steps for the Project. While that memorandum did not describe the day-by-day results of trial running or the changes made to the criteria during the process, those were operational details which, consistent with good municipal governance and practice, did not need to be provided to Council.
 - The evidence of the City witnesses fully explained the scope and content of that memorandum and how it conformed with the reporting commitment given to Council and was consistent with good municipal governance and practice. Regardless, even if one was to second guess the exercise of judgment by staff in good faith, it does not follow that those responsible for dissemination of the memorandum *intentionally* misled Council. Both Messrs. Kanellakos and Manconi explained why they viewed

the changes made to the criteria during trial running as not material in light of the advice given by expert advisors, namely Tom Prendergast of STV. In addition, their view, again informed by expert advice, was that failures in trial running at the beginning of that process were immaterial if trial running was ultimately successful. In other words, even if the memorandum could now be assessed as somehow inadequate, their decision-making involved, **at its highest**, a judgment call. On the evidence, their judgment was exercised in good faith and in a manner consistent with good municipal practice and governance.

- It is typical and appropriate in municipal government for certain public officials to receive more information than others. It was appropriate for the Mayor and Councillor Hubley, as chair of the Transit Commission, to receive information about trial running that was not then shared with other members of Council. The *Municipal Act* does **not** require that all councillors receive the same information and instead recognizes the special role of the Mayor. Mayor Watson was keenly interested in the progress of trial running and received regular updates through his staff, **but** there is no evidence that he interfered in the process in any way.

In summary, the Order In Council directs the Commission to examine the circumstances and contributing factors which led to the breakdowns and derailments which arose following the public launch of the System. Those issues are clearly the direct result of RTG's failures in construction, design and maintenance and do not arise from the City's procurement approach, the structure and contents of the RFP, the adequacy of the Project Agreement, the City's oversight of the Project, or the other issues raised by Commission counsel during this Inquiry.

B. THE CITY'S DECISION TO PROCURE THE PROJECT UNDER A DESIGN BUILD FINANCE MAINTAIN ("DBFM") MODEL

1. Introduction

As outlined in the Commission's Oversight Report: Origin of the OLRT Stage 1 Plan and Ottawa City Council Oversight, the City's decision to pursue an east-west light rail system began in 2007, following the decision of Council to terminate the Project Agreement for the North-South LRT project in December, 2006. In September, 2007 Council directed City staff to initiate an Environmental Assessment study for the Downtown Ottawa Transit Tunnel ("**DOTT**"). In January, 2010 Council approved the DOTT Study Recommended Plan report, which included the functional design for the Project.⁶

⁶ Commission Overview Report: Origin of the OLRT Stage 1 Plan and Ottawa City Council Oversight.

2. The Province Favoured a P3 Model

At the time this Project was procured, the P3 model was the Province's preferred model for major infrastructure projects. In fact, provincial funding of \$600 million for the LRT, announced in December, 2009, was conditional on a "P3 screen" or value for money analysis. As Matti Siemiatycki indicated in his evidence, at this time, P3s were recommended for any public infrastructure project valued at over \$50 million and for projects valued at over \$100 million, the P3 model was the model the Province wanted to be adopted. P3 screens were therefore conducted as a matter of course and "P3s became the model of choice and a question about the perception of whether they were the only game in town if officials wanted their projects funded and supported".⁷

Mr. Kirkpatrick, the City Manager at the time, testified in his formal interview that the Minister responsible for Infrastructure Ontario, Robert Chiarelli, called him to strongly advocate for IO's involvement in the Project.⁸ This is consistent with the evidence presented in the P3 expert panel, during which Professor Siemiatycki noted that this period was characterized by a "P3 first" approach.⁹

3. The City Obtained Advice from Experienced Advisors

The City retained Deloitte in the procurement period to provide expert advice on what contract model should be used. Deloitte had significant experience in this area.¹⁰ In February, 2011 Deloitte delivered a Procurement Options Report to the City which summarized 11 different procurement models which the City considered in connection with the Project, including the traditional Design Bid Build model.¹¹ This report summarized the City's objectives as including: (a) cost and schedule certainty, (b) appropriate transfer of risk to the private sector, and (c) service quality. The report ranked the models for different criteria and short-listed four models, including DBFM.

Deloitte also conducted a value for money analysis which was presented to the City's Executive Steering Committee ("ESC") in March, 2011. According to Deloitte, proceeding by way of a P3 model would generate value for money for the City.¹²

⁷ Hearing Transcript of P3 Panel, July 28, 2022, p. 33-34, line 23-4. See also, Article 14(a)(viii) to the *Provincial Contribution Agreement*, dated September 1, 2011 (COM0001313) which provided that funding was conditional on the City providing the Ministry of Transportation with written confirmation that it had consulted with Infrastructure Ontario "to determine whether Infrastructure Ontario would undertake a value for money study to determine whether an Alternative Financing And Procurement approach to Project delivery can generate a value for money advantage over traditional procurement and the result of such consultation".

⁸ Formal Interview Transcript of Kent Kirkpatrick, May 30, 2022, p. 44-45, lines 1-25, 1-11, TRN00000163.

⁹ In fact, during this period, the recently-opened Canada Line in Vancouver, the main precedent for the Ottawa LRT, had been procured as a DBFOM. Hearing Transcript of Remo Bucci, June 20, 2022, p. 50-51, line 1-6. In 2011, IO was already working on at least two Ontario transit projects (the Eglinton Crosstown and Waterloo projects) procured as a DBFM. Hearing Transcript of Remo Bucci, June 20, 2022, p. 51, lines 7-15.

¹⁰ Mr. Bucci testified that he has over 20 years' experience working on infrastructure projects and six or seven light rail projects (Hearing Transcript of Remo Bucci, p. 49, line 15-28).

¹¹ OLRT Project Delivery and Procurement Options Report, February 28, 2011, COW0543596, Exhibit 037.

¹² Ottawa LRT Project - Initial Preliminary Value for Money Assessment, March 25, 2011, COW0434469.

In its supplemental report dated June 29, 2011, Deloitte recommended the use of the DBFM model for this Project. Deloitte noted that, given the City's desire to expand the system in the future, it was preferable for the City to control the operational integration with the bus system (i.e. through OC Transpo), rather than leaving it to the private partner. As a result, the DBFOM model had been eliminated as a recommended option.¹³

4. Infrastructure Ontario ("IO") Recommended the DBFM Model

IO became involved in the Project in May, 2011. IO was asked for its views on what IO thought was the best delivery model.¹⁴ IO performed its own value for money analysis in 2011 and satisfied itself that the P3 model would have benefits to the City, largely because of the risk transfer.¹⁵ IO recommended a DBFM model over the DBM model because private financing would assist with the enforceability of the envisioned risk transfer under the agreement.¹⁶

5. City Council made the Decision to Proceed with the DBFM P3 Model

The Deputy City Manager's report to Council dated May 25, 2011¹⁷ recommended that the Project be procured as a Design-Build (P3) which would "ensure a faster project implementation, better cost certainty and control and better capture of private sector innovation that the Design Bid Build (DBB) approach traditionally used by the City". This report also recommended shifting responsibility for maintenance to the private sector, to help ensure better initial construction quality and superior vehicle and system reliability. It was recommended that operations be excluded, to enable the City to control the operational integration with the existing extensive bus system, and because it would introduce a significant complication to bidding and implementing future phases of the LRT¹⁸. It was clear from this report that staff was still considering the financing component and would return to Council with a further recommendation.

The Request for Qualifications ("RFQ") was released on June 30, 2011, just prior to Council's final approval of the procurement model for the Project.¹⁹ The RFQ contemplated that up to \$400 million

¹³ Letter from Deloitte to City of Ottawa, June 29, 2011, DEL0109898, Exhibit 083.

¹⁴ Hearing Transcript of John Traianopoulos, June 15, 2022, p. 17, lines 20-23.

¹⁵ Hearing Transcript of John Traianopoulos, June 15, 2022, p. 63-6, lines 25-28, 1-3; Email from John Traianopoulos to Robert Pattison, May 19, 2011, IFO0006453, Exhibit 033. IO reviewed the Deloitte analysis and also had the benefit of its own value for money analysis performed during an earlier engagement in 2009.

¹⁶ Hearing Transcript of Rob Pattison, June 14, 2022, p. 33, lines 1-8; Draft Memorandum from Infrastructure Ontario, p. 1-2, IFO0043843, Exhibit 018; Hearing Transcript of John Traianopoulos, June 15, 2022, p. 63, lines 6-8.

¹⁷ Ottawa's Light Rail Transit (OLRT) Project Schedule Acceleration and Procurement Option Selection, May 25, 2011, p. 16, COM0000012, Exhibit 081.

¹⁸ Ottawa's Light Rail Transit (OLRT) Project Schedule Acceleration and Procurement Option Selection, May 25, 2011, p. 16, COM0000012, Exhibit 081.

¹⁹ Request for Qualifications To Design, Build, Finance & Maintain The Proposed OLRTP at Tunny's Pasture to Blair Station, June 30, 2011, BDO0018525, Exhibit 015. Mr. Bucci testified that given the market soundings which had already taken place it was important to get the RFQ into the marketplace to signal that the Project was going ahead. He saw no issue with releasing the RFQ in advance of Council's final approval, given the May 2011 report, which made it clear that the only outstanding issue was the finance component of the model. Hearing Transcript of Remo Bucci, June 20, 2022, p. 16-17, lines 20-28, 1-3.

in private financing might be required for the Project. The purpose of the RFQ was to pre-qualify proponents and so the focus was on the assessment of the submissions of these proponents who explained their capability and experience that would enable them to perform the work.²⁰

In the Deputy City Manager's report to Council dated July 14, 2011²¹ she recommended proceeding with the DBFM model and the engagement of IO as procurement lead.

Council unanimously approved all the recommendations in the May and June 2022 reports.

6. Benefits of the DBFM Model

The following benefits of the DBFM model were identified during the evidence at the Inquiry:

- (a) Transfer of risk to the private sector, which was important to the City because, amongst other reasons, the Project involved tunnelling activity, and risk transfer of such an activity would benefit the City;
- (b) Price certainty, which was important to the City, given the cap on contributions from the Province and the Federal government, which left the City and taxpayers at risk for any cost overruns;
- (c) Third party lender financing, which was to provide some independence and due diligence during the procurement period, incentivize the Project Co to meet schedule, and enhance performance security;
- (d) Integration of design and maintenance, so that the design team would work with the build team and maintenance team to optimize the design for the 30 year Maintenance Term;
- (e) Innovation and value engineering, in order to meet the City's budget and needs;
- (f) A single point of responsibility that the City could look to, because under the DBFM model, the Project Co is responsible for project design, construction and commissioning following which it has to maintain that asset for 30 years.²²

The evidence of Ms. Schepers and Mr. Pattison on these issues is outlined in Appendix "A".

According to Antonio Estrada, ACS Dragados regularly bids on P3 projects around the world and is heavily invested in this model. ACS believes that the model works and that it is profitable for

²⁰ Section 1.1. of the RFQ states that the RFQ is to seek submissions from interested respondents "that can bring together all of the skills and experience required to deliver the Ottawa Light Rail Transit ("OLRT") Project in the manner required by the City, including on budget and on schedule. These skills and experience include, but are not limited to design, management, construction, system integration, testing, commissioning, and maintenance, of high capacity Light Rail Transit ("LRT") projects of similar scope and size as the OLRT Project." Request for Qualifications To Design, Build, Finance & Maintain The Proposed OLRT at Tunny's Pasture to Blair Station, June 30, 2011, BDO0018525, Exhibit 015.

²¹ Report to Council - Implementation of the OLRT Project, July 14, 2011, COW0434643.

²² Hearing Transcript of John Traianopoulos, June 15, 2022, p. 62-63, lines 18-28, 1-5.

contractors such as ACS.²³ Mr. Cosentino of RTG testified that a P3 can be well-suited for a program of this complexity²⁴

In fact, the only witness from RTG or OLRTC who directly took issue with the P3 model was Rupert Holloway, who testified that the P3 model with its allocation of risk does not lend itself to cooperation. Mr. Holloway favours the Alliance model which has been used in certain North Sea oil projects, among others. Mr. Holloway believes the Alliance model promotes greater cooperation and collaboration between partners. However, he acknowledged that (i) his evidence about the Alliance model was given from a contractor perspective²⁵ and (ii) the Alliance model is not a panacea and there have been unsuccessful projects under the Alliance model.²⁶ There was no evidence at the hearing that the Alliance model was in use anywhere in Canada in 2011.

7. Conclusion

In summary, the City stands behind its choice of the DBFM model as the most appropriate of the models presented to it at the time and given the advice it received from experts such as Deloitte and IO, given the following:

- (a) A hindsight analysis is inappropriate. Simply because the Project has had difficulties does not mean that the DBFM model is flawed. No contractual model is perfect – they all have advantages and disadvantages – there is no panacea. Over the course of the Inquiry, no attempt was made by the Commission to evaluate the DBFM model in comparison with other procurement models in common use in Canada in 2011. As was noted by Ms. Schepers, the likelihood is that a traditional DBB model would have led to gridlock and litigation after the sinkhole, which would have significantly delayed completion of the Project.²⁷ Nor did the evidence introduced compare the experience of Ottawa with other North American transit projects such as the Purple Line or the Denver Eagle Project²⁸ or even other Canadian projects which have been the subject of extensive litigation.
- (b) It is important to bear in mind that this Project was completed within budget, which is important for taxpayers and, according to Mr. Flyvbjerg, puts this project in the minority (30%) of projects that are completed within budget.²⁹

²³ Hearing Transcript of Antonio Estrada, June 17, 2022, p. 64-65, lines 26-28, 1-12.

²⁴ Hearing Transcript of Riccardo Cosentino, June 13, 2022, p. 151, lines 18-27.

²⁵ Hearing Transcript of Rupert Holloway, June 17, 2022, p.120, lines 23-24.

²⁶ Hearing Transcript of Rupert Holloway, June 17, 2022, p. 184-185, line 26-28.

²⁷ Of course, on this Project, litigation cannot be commenced until after Substantial Completion is achieved (see Schedule 27).

²⁸ Other LRT Projects internationally have encountered major claims, including: (a) the Purple Line where there was a \$800 Million claim for cost overruns as a result of delay and changes to the design of the line and (b) the Denver Eagle Project where there was a \$111 Million claim for rail flaggers, delay costs, and lost revenue.

²⁹ Hearing Transcript of P3 Panel, July 28, 2022, p. 3, line 27-28.

- (c) It is clear that at the time that the Province had a strong preference that this Project be procured as a P3.³⁰ This preference was supported by the advice of IO, the agency created by the Province for the express purposes of developing good project management practices,³¹ and by the City's financial advisor, Deloitte. This was a complex Project, which was well understood by the City, and the City clearly took advice from experienced experts on the appropriate model to be adopted.
- (d) The DBFM model does not incentivize Project Co to rush the system into operation prematurely. Project Co (and any maintenance subcontractors) have an incentive to open a system when they believed they can responsibly and reliably take on the maintenance function; otherwise they risk payment deductions under the terms of the payment mechanism, the owner's primary lever to enforce performance during the Maintenance Term.³²
- (e) It is important to emphasize that at the time, there was no shortage of private sector organizations ready and willing to participate in this P3 procurement. Six parties responded to the RFQ and three were ultimately chosen to participate in the RFP. As Mr. Pattison testified, these parties, including the parties making up RTG, consistently participated in P3 procurements and were very familiar with how the model worked and the risks they would be taking on.³³

C. THE CITY BUDGET AND THE AFFORDABILITY CAP

1. The 2009 Environmental Assessment Estimate

In December, 2009 the City completed an environmental assessment report which included a budget estimate of \$2.1 billion in 2009 dollars.³⁴ This estimate did not account for future inflation or financing costs, and was considered "Class D" or accurate to +/- 25%, as Commission counsel noted during the examination of various witnesses. However, it is also important to note that the estimate made clear that it was "**subject to refinement as the project progresses through subsequent design phases**".³⁵ [emphasis added]

³⁰ Hearing Transcript of P3 Panel, July 28, 2022, p. 33-34, line 23-4.

³¹ Hearing Transcript of Rob Pattison, June 14, 2022, p. 4, lines 18-23.

³² Timothy J. Murphy, *Public-Private Partnerships in Canada, Law, Policy and Value for Money*, (LexisNexis Canada, 2019) at 181-184. See also evidence of Rob Pattison, Appendix A.

³³ Hearing Transcript of Rob Pattison, June 14, 2022, p. 23, lines 3-7, p. 57-58, lines 16-28, 1-5.

³⁴ Transit Committee Report 34, January, 13 2010, COW000028, Exhibit 033.

³⁵ Downtown Ottawa Transit Tunnel Recommended Plan, December 2009, p. 54, COW000027, Exhibit 027.

2. Ensuring that the Design did not Exceed the Budget and that the Schedule was Appropriate

The evidence of Mr. Jensen and Ms. Simulik on the issues of the budgeting process and the schedule is set out in detail at Appendix “B”.³⁶ By way of brief summary, it is important to note that the phrase “design to budget” meant a target to work towards, without compromising the quality of the Project. While the Mayor and Council wanted to see if the schedule could be advanced, this was achieved by reducing the procurement time by six months and the construction schedule by six months, not by pushing the schedule “hard” as commission counsel suggested to him.

Design to budget is an accepted budgetary technique. On this Project, during the budgeting process, there was a continual evolution in the design. Contemporaneous documents indicate that by 2011 the design had moved from a Class D to a Class C (+/- 15%) estimate. While the 2009 budget estimate did not account for inflation, construction and financing costs totaling over \$600 million, much of that was accounted for by the shallowing of the tunnel, which saved the City more than \$440 million and substantially improved the design.³⁷

3. The Affordability Cap

The use of the affordability cap in the RFP was neither unusual nor did it make the Project unbidable. Mr. Bucci had personal experience with a number of rail projects, many of which were procured under a P3 model. The majority of those projects used an affordability cap. Ontario transit projects which have used an affordability cap are listed in Appendix C. He explained that the financial scoring mechanism set out in the RFP was beneficial to proponents, because it was weighted primarily to purely objective criteria, namely price, in comparison with the weighting on the technical side, which was subjective. During market soundings on this Project, the input from industry was to make the City budget available to bidders through the affordability cap, so that issues could be addressed during the in-market period.³⁸

No witness at the Inquiry gave evidence that the affordability cap was flawed or inadequate or in any way constrained RTG in its delivery of the Project. In fact, Mr. Cosentino acknowledged that RTG submitted a fixed price proposal based on its own internal analysis which concluded that RTG’s estimate was sufficient to deliver the Project. Moreover, RTG would not have compromised its internal risk analysis and due diligence processes just in order to meet the affordability cap gate in the RFP.³⁹

³⁶ In addition, we note that Mr. Flyvbjerg referenced the importance with design of being economical, for example in station designs, and using modular designs which are cheaper and generally emphasized designing so as to avoid the risk of cost overruns.

³⁷ In addition to the above, Mr. Bucci confirmed that Deloitte reviewed the budget and was comfortable that the City followed processes that it had seen on the majority of its projects, which were best practices. Hearing Transcript of Remo Bucci, June 20, 2022, p. 55, lines 9-22.

³⁸ Hearing Transcript of Remo Bucci, June 20, 2022, p. , page 57-58, lines 25-28, 1-2.

³⁹ Hearing Transcript of Riccardo Cosentino, June 13, 2022, p. 111, lines 22-24, p. 113, lines 9-12.

There was dialogue with the City on the affordability cap during the in-market period and that changes were made to the Project scope (for example with respect to architectural details of station roofs) as a result of feedback from RTG that allowed it to reduce costs and meet the affordability cap.⁴⁰ The City's own documents reflect upward changes to the cap totaling almost \$200 million in response to input from proponents.⁴¹

As to whether the City considered whether the affordability cap might lead bidders to "overpromise" on what they could deliver, the City had confidence in the bidders "... that they were professional and that they would, in fact, produce a bid that reflected what their costs were, or they expected them to be, to do this project."⁴² IO also assumed that these very sophisticated entities on the other side of these deals understood their risk, could price it, and would not take a risk they cannot honor.⁴³ RTG, as one of the proponents, performed its own sophisticated risk analysis, as was confirmed by multiple RTG witnesses.⁴⁴

It did not matter to IO that the two proponents who met the cap were close to it, according to Mr. Traianopoulos:

We took a lot of confidence that, you know, these sophisticated bidders, three of them multiple design build partners, multiple lenders, advisors, lender's technical advisors were all looking at the numbers and scrutinizing them. So, I would say, even if it was a dollar under, we would still take comfort that those bidders took the time and effort to price their bid with proper governance, and submitted to us that they can do the project for that cost.⁴⁵

4. On Time On Budget

There is no doubt that the incoming Watson administration wanted to keep the cost of the Project on time and within budget, particularly in light of the cancellation of the North/South project. The real question is why that is not a good thing. As was noted by the P3 panel repeatedly, it is important to avoid cost overruns and complete a project on time, as that is in the interests of taxpayers.⁴⁶

⁴⁰ Hearing Transcript of Riccardo Cosentino, June 13, 2022, p. 117, lines 14-28. p. 156, lines 3-18.

⁴¹ This evidence is confirmed in an ESC Presentation dated August 10, 2012, which indicates that "based on feedback from proponents; the affordability cap was raised from \$1.718 to \$1.9B ... to ensure three compliant bids". At an April 2012 ESC meeting, it had approved a series of project modifications to give greater flexibility to proponents and decrease project cost. See Ottawa's Light Rail Transit Project OLRT Executive Steering Committee, August 10, 2012, slides 14-15, COW0523188, Exhibit 085.

⁴² Hearing Transcript of Marian Simulik, June 14, 2022, p. 122, lines 6-9.

⁴³ See Appendix "A" to these Closing Submissions: Evidence Regarding DBFM Model.

⁴⁴ Hearing Transcript of Ricard Cosentino, June 13, 2022, p. 153, line 15-25; Hearing Transcript of Yves Declercq, June 16, 2022, p. 79, line 5-14; Hearing Transcript of Manuel Rivaya, June 16, 2022, p. 165, line 10-15; Hearing Transcript of Peter Lauch, June 29, 2022, p. 68, line 9-23.

⁴⁵ Hearing Transcript of John Traianopoulos, June 15, 2022, p. 29-30, lines 28, 1-5.

⁴⁶ See for example, Hearing Transcript of P3 Panel, July 28, 2022, p. 35, line 6-9.

In any event, the RFP was deliberately drafted to leave various options open to the City had all three bids come in above the cap, including descoping the Project or asking Council to approve an increase in the budget to accommodate the lowest number.⁴⁷

The phrase “on time, on budget” is commonly used by politicians and the P3 panel referenced this same concept.⁴⁸ Given her experience with Mayor Watson and his administration, it was the opinion of Ms. Schepers that if she had needed to advise Mayor Watson and his administrators the budget was no longer realistic and needed to be reconsidered, they would have listened.⁴⁹

5. Conclusion

It is not unusual for municipal politicians to seek to have projects delivered on time and on budget – and that is a good thing. This budget was refined and kept to the 2009 number of \$2.1 billion largely by innovation and value engineering, including the shallowing and realignment of the tunnel, which improved its design and aesthetics. The City’s achievement in bringing the Project in within budget is one of the most significant successful elements of this Project and should be recognized as such.

Use of an affordability cap is commonplace on these types of projects⁵⁰, and in this case was requested by proponents. Efforts were made during the in-market period to satisfy proponent’s concerns about the cap and upward adjustments were made totaling almost \$200 million in response to those concerns. Lastly, neither RTG nor OLRTC has complained about the affordability cap either during the procurement or at any time subsequently.

D. RISK TRANSFER, OPTIMISM BIAS AND THE GEOTECHNICAL RISK LADDER

1. Optimism Bias

Optimism bias is a well-known psychological theory that describes people’s tendency to overestimate their likelihood to experience positive events and underestimate their likelihood to experience negative events in future. In the context of project procurement, it is described in the UK Treasury Green Book as the demonstrated, systematic tendency for project appraisers to be overly optimistic.⁵¹

Optimism bias in megaproject procurement is not new; it has been around since at least the 1990’s in the work of Professor Flyvbjerg, Daniel Kahneman and others. In the UK, the concept can be traced to a report from Mott MacDonald in 2002.⁵² The UK Treasury Department recommends that appraisers include an optimism bias uplift as a fixed percentage of specified project costs when preparing

⁴⁷ Hearing Transcript of Marian Simulik, June 14, 2022, p. 178, lines 10-26; Hearing Transcript of John Jensen, June 13, 2022, p. 86, lines 9-15; Hearing Transcript of John Traianopoulos, June 15, 2022, p. 58, lines 14-27.

⁴⁸ See for example, Hearing Transcript of P3 Panel, July 28, 2022, p. 32, line 20-26.

⁴⁹ Hearing Transcript of Nancy Schepers, June 15, 2022, p. 186, lines 18-22.

⁵⁰ See Appendix “C” to these Closing Submissions: Affordability Cap - List of Ontario Projects Provided by Mr. Guest

⁵¹ HM Treasury, *The Green Book: appraisal and evaluation in central government*, (London: 2022) at Section 5.6.

⁵² Hearing Transcript of Riccardo Cosentino, June 13, 2022, p. 155, lines 17-25; *Review of Large Public Procurement in the UK*, [Mott MacDonald UK Report](#), July 2002; [The Green Book \(2022\)](#).

proposals involving public funding.⁵³ While there is no equivalent recommendation at an institutional level in Canada, contractors bidding on megaprojects are very familiar with the risk tools used to counter optimism bias and RTG witnesses, including Mr. Cosentino, Mr. Rivaya and Mr. Lauch, who conceded that such tools were in fact employed by RTG in the preparation of its proposal on the Project.

2. A Convenient Explanation

A single RTG witness, Mr. Cosentino, raised optimism bias as an explanation for the issues RTG experienced during the design and construction phase of the Project. Although he never expressly linked any specific issues with the Project to optimism bias, he agreed with Commission counsel that the City's affordability cap did not take it into account.⁵⁴ In his formal interview, Mr. Cosentino was more definitive and suggested that it was optimism bias that led RTG to bid below the affordability cap and take on geotechnical risk⁵⁵.

Mr. Cosentino characterized geotechnical risk as an "unknown risk"⁵⁶ which is incorrect, for the reasons set out below.

Mr. Cosentino, along with other RTG witnesses, had to concede the following:

- the members of the consortium were **large, sophisticated entities**;⁵⁷
- the RTG team included ACS Dragados, with **huge experience in contracting around the world** and a known specialization in complex tunneling;⁵⁸
- RTG chose a **specific tunneling method to mitigate some of the risks** associated with geotechnical conditions;⁵⁹
- the bid team had **all the resources it needed** to develop a comprehensive and realistic proposal;⁶⁰
- the team performed risk analysis and schedule analysis, all the tools the industry uses to understand risk, including **Monte Carlo analysis** (a simulation-based risk modelling technique);⁶¹

⁵³ De Reyck, Bert, et al. (2015) "Optimism Bias Study: Recommended Adjustments to Optimism Bias Uplifts", p. 2, UK Department for Transport, United Kingdom.

⁵⁴ Hearing Transcript of Riccardo Cosentino, June 13, 2022, p. 116, lines 11-14.

⁵⁵ Formal Interview Transcript of Riccardo Cosentino, May 13, 2022, p. 47-48, lines 21-25, 1-17.

⁵⁶ Hearing Transcript of Riccardo Cosentino, June 13, 2022, p. 128, lines 13-28, p. 129, lines 1-2.

⁵⁷ Hearing Transcript of Riccardo Cosentino, June 13, 2022, p. 153, line 7-10. Mr. Rivaya also acknowledged that ACS Dragados was a sophisticated entity (Hearing Transcript of Manuel Rivaya, p. 165, lines 13-15).

⁵⁸ Hearing Transcript of Riccardo Cosentino, June 13, 2022, p. 158, line 5-8. This was also acknowledged by Mr. Rivaya (Hearing Transcript of Manuel Rivaya, p. 165, line 10-15).

⁵⁹ Hearing Transcript of Riccardo Cosentino, June 13, 2022, p. 158, line 9-12.

⁶⁰ Hearing Transcript of Riccardo Cosentino, June 13, 2022, p. 153, line 11-14.

⁶¹ Hearing Transcript of Riccardo Cosentino, June 13, 2022, p. 153-154, line 15-1. Mr. Rivaya also testified that ACS Dragados had well-developed risk analysis tools to evaluate tunnelling projects (Hearing Transcript of Manuel Rivaya, p.

- the party best able to bear geotechnical risk was **RTG**, and not the City of Ottawa;⁶²
- RTG and OLRTC had **complete control over what RSA date** to select;⁶³
- RTG and OLRTC obtained insurance to cover off some of the geotechnical risks and made insurance claims after the sinkhole, ultimately recovering **\$134 million** in settlement;⁶⁴
- difficulties such as failures in systems integration during the construction period, cracked wheels from an Alstom supplier, and a derailment caused by a failure to tighten bolts cannot be put down to optimism bias.⁶⁵

The UK Treasury Green Book specifically recommends the use of risk management techniques such as Monte Carlo analysis to guard against optimism bias.⁶⁶ RTG used these techniques as its own witnesses including Mr. Cosentino admitted⁶⁷, and in doing so RTG was taking into account optimism bias in its proposal. However, this was never explored by Commission counsel. The notion that these large and sophisticated private sector entities who conduct their own risk analysis need to be protected by the public sector against a possible tendency to be overly optimistic is paternalistic and unnecessary.

3. RTG Understood and Accounted for Risks in Its Proposal

Mr. Cosentino's evidence should be contrasted to that of OLRTC's Mr. Holloway, who said categorically that "OLRTC went into this project with its eyes wide open" and "knew the risks it was taking on". According to Mr. Holloway: "No, we fully understood what we were committed to do and contracted to do and we undertook to do it, you know, and that was – and **we understood the risks we were taking and the challenge that was in front of us.**"⁶⁸[emphasis added] With respect to geotechnical risk, Mr. Lauch assumed that ACS, Dragados and Ellis Don knew what they were doing. RTG conducted a sophisticated risk analysis to forecast and analyze potential risks occurring over the life of the Project.⁶⁹

165, line 13-15). Likewise, Mr. Lauch testified that RTG conducted a sophisticated risk analysis to forecast and analyze potential risks occurring over the course of the project (Hearing Transcript of Peter Lauch, p. 68, line 9-19).

⁶² Hearing Transcript of Riccardo Cosentino, June 13, 2022, p. 158, line 13-20.

⁶³ Hearing Transcript of Peter Lauch, June 29, 2022, p. 74, line 15-27. This is consistent with Mr. Kanellakos' testimony (Hearing Transcript of Steve Kanellakos, July 4, 2022, p. 124, line 12-19).

⁶⁴ Hearing Transcript of Riccardo Cosentino, June 13, 2022, p. 158-159, line 21-16

⁶⁵ Hearing Transcript of Riccardo Cosentino, June 13, 2022, p. 159, lines 26-28, p. 160, lines 1-7.

⁶⁶ HM Treasury, *Green Book supplementary guidance: optimism bias*, (2013) at Section 2.2; Risk management tools are explored in: HM Treasury, *The Green Book: appraisal and evaluation in central government*, (London: 2022); De Reyck, Bert, et al. (2015) "Optimism Bias Study: Recommended Adjustments to Optimism Bias Uplifts", p. 2, UK Department for Transport, United Kingdom at p. 2, para 5, footnote 8 at p. 10 [Quantitative Risk Assessment refers to a risk analysis approach using Monte Carlo simulation].

⁶⁷ Hearing Transcript of Ricard Cosentino, June 13, 2022, p. 153, line 15-25; Hearing Transcript of Yves Declercq, June 16, 2022, p. 79, line 5-14; Hearing Transcript of Manuel Rivaya, June 16, 2022, p. 165, line 10-15; Hearing Transcript of Peter Lauch, June 29, 2022, p. 68, line 9-23.

⁶⁸ Hearing Transcript of Rupert Holloway, June 17, 2022, p. 123, lines 14-17, 21-24.

⁶⁹ Hearing Transcript of Peter Lauch, June 29, 2022, page 68, lines 9-17.

The evidence of the IO witnesses was that there were a lot of eyes on RTG's proposal during the bid process, given the involvement of the constructor OLRTC and its advisors, the long-term lenders and their advisors, and the short-term lenders and their advisors. All that oversight guarded against any type of optimism bias by the contractor in its bid proposal.⁷⁰

4. Risk Transfer in the Interests of Ottawa Citizens and Commercially Fair

IO was in favour of appropriate risk transfer to the private sector, which was in the interests of the citizens of Ottawa.⁷¹ Of course, not all risks were transferred to the RTG, as a review of the Project Agreement makes clear. By way of example, RTG was entitled to make claims for defined types of events arising out of issues such as Contamination, access to Lands, or a stop work order issued by a Governmental Authority.⁷² The geotechnical risk ladder which allowed the proponents to select the level of geotechnical risk they wanted to undertake was a "super-sensible" concept, according to IO. Allocation of risk for geotechnical conditions was very similar to what IO had traditionally done. The innovation from the City was the risk ladder, which minimized the likelihood of a failed procurement.⁷³

The geotechnical risk ladder (used in other procurements such as the Port of Miami tunnel) was a commercially fair mechanism which had taken into account input from the three teams, all of whom were qualified and had experience. Mr. Bucci could recall no complaint from any proponent about the geotechnical risk ladder.⁷⁴ His evidence on this issue is summarized at Appendix "D".

5. Geotechnical, Tunneling Due Diligence, and Risk Analysis

A key component of the procurement was the quality of the geotechnical due diligence done by the City. Proponents were given the opportunity during the in-market period to provide feedback, leading to more geotechnical due diligence. All the proponents accepted the highest level of geotechnical risk on the risk ladder, which suggested that it was not a case of a sole proponent being blinkered or improperly influenced in some way. As well, geotechnical risk was an insurable risk.⁷⁵

In respect of geotechnical risk, it was well recognized that such risks could materialize during tunnelling. It was a known risk, not an unknown risk, contrary to Mr. Cosentino's assertion. Even before the bid proposal was issued Mr. Rivaya of OLRTC attended an industry consultation meeting with the City involving tunneling. Mr. Rivaya confirmed that ACS Dragados brought expertise to the Project with respect to tunneling and had extensive experience in bidding on tunnel projects. ACS Dragados was and is a sophisticated entity that had well-developed risk analysis tools for the purpose

⁷⁰ Hearing Transcript of John Traianopoulos, June 15, 2022, p. 61, lines 1-26. See also Pattison, Appendix A.

⁷¹ Hearing Transcript of Rob Pattison, June 14, 2022, p. 56, line 16-24.

⁷² See for example, the Delay Events listed in Section 40 of the PA.

⁷³ Hearing Transcript of Rob Pattison, June 14, 2022, p. 61, lines 7-10.

⁷⁴ Hearing Transcript of Remo Bucci, June 20, 2022, p. 38, lines 6-28, p. 39, lines 1-10 and p. 57, lines 7-17

⁷⁵ Hearing Transcript of Rob Pattison, June 14, 2022, p. 61, lines 10-28, p. 62, lines 1-16; See also Hearing Transcript of Remo Bucci, June 20, 2022, p. 38, lines 9-10.

of evaluating tunneling risks. The bid team was aware that tunneling was a risk that needed to be addressed in its bid.⁷⁶ In respect of the risks associated with RTG's chosen means and methods for tunneling, those were risks within RTG's control and when those activities caused the sinkhole, RTG appropriately bore the consequences.⁷⁷

6. Conclusion

The City does not quarrel with the general proposition that optimism bias may be a factor in the tendency of large procurement projects to go over budget and behind schedule. However, the admission of Mr. Cosentino that RTG used risk management techniques such as the Monte Carlo analysis recommended in the Green Book strongly suggests that it was taken into account in RTG's proposal. Further, aside from Mr. Cosentino's unsupported opinion, there was no evidence that this alleged optimism bias was the reason for schedule delay on this Project (recognizing that of course, this Project was completed within the budget).

The Commission did not even attempt to analyze whatever risk analysis was done by the three members of the consortium during the bid process or obtain documents from RTG in this regard.⁷⁸ No evidence was led that the schedule was unrealistic or that the risk of a sinkhole or other geotechnical event was not accounted for in RTG's proposal. There was no evidence that RTG lost money on the Project; indeed, Commission counsel never explored that issue.

E. DELEGATED AUTHORITY AND THE CITY'S COMMUNICATIONS WITH COUNCIL REGARDING THE PROJECT

1. The Statutory Framework and Roles of Council, the Mayor and Chief Administrative Officer

Section 224 of the *Municipal Act* describes the role of council as including:

“(b) to develop and evaluate the policies and programs of the municipality;

...

(d) to ensure that administrative policies, practices and procedures are in place to implement the decisions of council;

(d.1) to ensure the accountability and transparency of the operations of the municipality, including the activities of the senior management of the municipality;”

Section 225 of the *Municipal Act* describes the role of mayor as including “(a) to act as chief executive officer of the municipality”.

⁷⁶ Hearing Transcript of Manuel Rivaya, June 16, 2022, p. 164, lines 7-15, 26-28, p. 166, lines 1.

⁷⁷ RTG was able to offset such risks through the Project-based insurance program, as described above.

⁷⁸ The City raised this procedural issue with Commission Counsel by way of letter dated July 6, 2022.

Section 229 of the *Municipal Act* provides that the municipality may appoint a chief administrative officer (“CAO”) for the City (in Ottawa, the City Manager) who exercises “general control and management of the affairs of the municipality”.

As set out in the expert report of Mary Ellen Bench, municipal council is the body that makes policy and exercises authority on behalf of the municipality, including any delegation. Municipal council also determines the governance structure for the municipality. The role of the mayor is often significantly larger than that of a councillor. The mayor has a leadership role and is called upon to advocate for the interests of the municipality with higher levels of government. It is expected that the mayor will have a close relationship with the CAO and will be more engaged than the rest of a municipal council in matters related to governance and operations. The CAO is the sole employee of council and council’s decisions and directions are communicated to staff through the CAO.⁷⁹ For this Project, the relationship between the Mayor, the Chair of Transit Commission, Council, and the City Manager functioned in accordance with the requirements of the *Municipal Act*, as described below.

2. Delegation of Authority

Authority for a municipal council to delegate its power is set out in section 23.1 of the *Municipal Act*. Council may delegate administrative or operational responsibility to an individual, or to a department or committee of council. In a large city there is extensive delegation of authority because of the number of decisions that need to be made. On large projects, it is common for authority to be delegated to the CAO or a specific commissioner, with sub-delegation to a steering committee or project team. Staff will often recommend a framework on when to report back for council to consider and adopt.⁸⁰

Ms. Bench described the City of Ottawa’s Delegation of Authority By-Law as clear about how City Council expects delegated authority to be exercised and she noted that Council can revoke any such authority at any time.⁸¹

In respect of this Project, on December 19, 2012, following a report from the Deputy City Manager on the outcome of the procurement process for Stage 1, Council unanimously delegated to the City Manager to, amongst other things: “... the authority to negotiate, approve, execute, deliver, amend and extend the Project Agreement and associated ancillary agreements for the OLRT project, the Highway 417 widening project and specific related civic works on and subject to the terms and conditions described in this report”.⁸²

On December 11, 2013, following a further report from the Deputy City Manager, Council delegated authority to the City Manager to: “... make required modifications to the Confederation Line project

⁷⁹ Affidavit of Mary Ellen Bench sworn July 29, 2022, Exhibit D.

⁸⁰ Affidavit of Mary Ellen Bench sworn July 29, 2022, Exhibit D.

⁸¹ Affidavit of Mary Ellen Bench sworn July 29, 2022, Exhibit D.

⁸² Ottawa City Council Meeting Minutes 47, December 19, 2012, p. 4, Section 3, COM0001571.

and component designs be delegated to the Deputy City Manager, Planning and Infrastructure, with the concurrence of the Ward Councillor and the Mayor in accordance with the principles set out in this report”.⁸³

Under the City’s Delegation of Authority By-Law, the City Manager has the authority to further delegate and authorize any further delegations of any powers, duties and functions delegated to him by Council to any General Manager or Director of the City.⁸⁴

3. Operational Decision-Making

It was Ms. Bench’s evidence that generally there is no role for a municipal council in operational matters where authority has been delegated. It is well-established that it is the responsibility of staff to implement council’s decisions, and staff need to be trusted to carry out their role to operationalize council’s decisions. The Ministry of Municipal Affairs and Housing describes a “fine line” between council’s overall stewardship role and the administration’s management of day-to-day activities. Generally, “council monitors the implementation of its approved policies and programs, but the practical aspects of its implementation and administration are a staff thing.” In the Bellamy Report⁸⁵ the Commissioner commented that many councillors and staff she interviewed did not understand the distinction between governing and managing in a large municipality. For this reason, clearly defined roles and responsibilities are required when a municipal council delegates authority. In Ms. Bench’s view, this was clearly set out in the City’s report to Council in relation to the delegation of authority.⁸⁶

On this Project, it would not have been appropriate for Council to make operational decisions about technical matters, such as trial running criteria, particularly as they would not have the technical expertise to make such decisions.⁸⁷

4. Reporting to Council

Ms. Bench has explained that council provides direction by approving reporting proposed in a staff report, and through policies on the exercise of delegated authority, accountability and other policies. When a council wants more frequent reports than what is recommended by staff, council will ask for additional reports. A councillor who is not satisfied with the timing and content of a staff report may at any time, in a council or committee meeting, put forward a motion or direction to staff to report more frequently or on a specific topic.⁸⁸

⁸³ Finance and Economic Development Committee Report 39, December 11, 2013, p. 343, COW0496904.

⁸⁴ Report to Finance and Economic Development Committee, November 9, 2016, p. 160, Section 3(1), COW0541839. See also By-law No. 2016-369, Section 3 and By-law No. 2018-397, Section 3.

⁸⁵ The Final Report of the Toronto Computer Leasing Inquiry and External Contracts Inquiry (the “**Bellamy Report**”).

⁸⁶ Affidavit of Mary Ellen Bench sworn July 29, 2022, Exhibit D.

⁸⁷ Affidavit of Mary Ellen Bench sworn July 29, 2022, Exhibit D.

⁸⁸ Affidavit of Mary Ellen Bench sworn July 29, 2022, Exhibit D.

The Project Charter dated October 26, 2011⁸⁹ required the RIO Departmental Management Team to keep FEDCO informed of project progress through a written quarterly report and subsequent meetings. In practice, during the design and construction phase, reporting included quarterly updates, regular presentations to FEDCO, and frequent memorandum to Council to brief it on significant issues. During the maintenance phase of the Project, City staff continued to brief Transit Commission and FEDCO, and the Project was discussed at numerous Transit Commission meetings.⁹⁰

Ms. Bench described the purpose of regular reports as to keep FEDCO informed. In the ordinary course that would be a report on what activity has taken place over the quarter, is the project still on time and is it still on budget. She described this information as being at a “fairly high level, unless an issue that requires a decision from Council arises.”

As outlined in the City’s opening, Schedule A, there was extensive reporting by City staff to FEDCO and to Council during the design and construction phase of the Project, including regular presentations at FEDCO meetings.

It is clear that FEDCO played no decision-making role with respect to the day-to-day operational management of the design and construction phase of the Project. For example, FEDCO was not consulted and did not approve City staff’s decision-making with respect to Substantial Completion or RSA. In compliance with the scope of delegated authority provided by Council, over 400 Variations to the Project Agreement were approved by Mr. Kanellakos during construction without approval by Council.

In fact, there is nothing in the *Municipal Act* or the City’s governance structure to suggest that either FEDCO or Council had any decision-making role with respect to any aspect of the design and construction phase of the project. These were purely operational matters which had been delegated by Council to the City Manager, who further delegated responsibility for them to his staff, and in particular Mr. Manconi and the Rail Implementation Office.

The suggestion to Mr. Manconi by Commission counsel that additional information should have been provided to FEDCO about trial running so that “...there’s more than one voice in the room and ***different people may have different opinions about how something should be done*** and it can lead to a healthy debate” [emphasis added] proceeds on an erroneous premise about the scope of Council’s authority and is simply misguided. As Mr. Manconi said in his evidence, this was about “general information sharing” not something to be debated or decided⁹¹. Council had no decision-making role

⁸⁹ Ottawa Light Rail Transit Project, Project Charter, p. 22, COM0000235, Exhibit 1.

⁹⁰ See Appendix A to the Opening Statement of the City of Ottawa, which sets out a non-exhaustive list of the reporting to Council on the Project from January 24, 2018 to March 30, 2022. In addition, Mr. Kanellakos testified that in practice, the commitment to keeping Council apprised of progress on the Project consisted of 150 memos to Council and attendance at eight of eight FEDCO meetings in 2018 and eight of ten FEDCO meetings in 2019. (Hearing Transcript of Steve Kanellakos, p. 39, line 16-23)

⁹¹ Hearing Transcript of John Manconi, June 28, 2022, p. 136, lines 3-13.

to play regarding the implementation of the Project, including in respect to trial running. Council had delegated the decision-making role to staff, as staff had the necessary expertise.

5. Information Provided to Mayor and Committee Chairs

According to Ms. Bench, the mayor and committee chairs in a municipality typically receive more information from staff than that provided to other members of council. The mayor as CEO has responsibility for oversight and committee chairs are responsible for oversight of the matters that their particular committee is responsible for. The mayor has an expectation that the CAO will keep the mayor informed of all matters of significance, including policy, labour relations, the status of large projects, program updates, upcoming events, potential controversies and other matters. The mayor's role as CEO is to provide oversight so the mayor needs access to this information. Committee chairs have a responsibility to be aware of how the municipality is operating in the matters that relate to the jurisdiction of the committee.⁹²

Ms. Bench's opinion is consistent with the witnesses who testified at the hearing. As Chair of Transit Commission, Councillor Hubley was on the WhatsApp chat in order to become aware of what was going on as the City got ready for revenue service and so he could advise the Mayor.⁹³ As he noted, "Every single committee chair had these kinds of briefings with staff."⁹⁴ Councillor Deans agreed that a chair is given a lot of information in that role. Her personal view was that she would make an assessment of what information was important, and relevant, and contextual for members of Council to have in the performance of their duty.⁹⁵

Mr. Kanellakos has worked for municipalities over 37 years with seven mayors and has colleagues who are city managers in other large cities. It is the norm in every municipality to update the Mayor and standing committee chairs do get information on files they are responsible for. That is the operating environment, and all councillors are aware of that. The Mayor has a different role and is CEO, spokesperson for Council, and chairs Council and FEDCO.⁹⁶

Mr. Manconi believed that there is nothing untoward in City staff giving the Mayor information on a regular basis that is not given to members of Council because of the special role he occupies. "Every mayor and head of council [Mr. Manconi has] worked for has expected that."⁹⁷

According to Mayor Watson, it is regular and ordinary for Chairs of Committees to be briefed and receive more information.⁹⁸ Chairs act as a conduit to staff and help set the legislative agenda. He was

⁹² Affidavit of Mary Ellen Bench sworn July 29, 2022, Exhibit D.

⁹³ Hearing Transcript of Councillor Allan Hubley, June 29, 2022, p. 162, lines 18-25.

⁹⁴ Hearing Transcript of Councillor Allan Hubley, June 29, 2022, p. 169, line 6.

⁹⁵ Hearing Transcript of Councillor Diane Deans, June 29, 2022, p. 169, lines 14-18.

⁹⁶ Hearing Transcript of Steve Kanellakos, dated July 4, 2022, p. 42, lines 6-28, p. 43, lines 1-7.

⁹⁷ Hearing Transcript of John Manconi, June 28, 2022, page 205, lines 1-16, 206, lines 13-26.

⁹⁸ Hearing Transcript of The Honourable Mayor Jim Watson, June 30, 2022, p. 138, lines 19-27.

both chair of the committee responsible (FEDCO) and the mayor and CEO of the organization, and “there’s nothing wrong with me getting more information because I have a city-wide mandate from across the city as opposed to a ward councillor.”⁹⁹

It was repeatedly asserted by Commission counsel to witnesses that the *Municipal Act* imposes a statutory obligation on the mayor to keep the rest of council informed about operational matters.¹⁰⁰ There is no such obligation in the *Municipal Act*.

Ms. Bench agreed that it was consistent with municipal governance and practice for Mayor Watson’s staff and Councillor Hubley to be receiving updates on trial running that were not provided to other members of Council. There was no reasons why this information would be provided to all of Council. She did not read sections 224(d.1) and 225(c.1) of the *Municipal Act* as imposing any regulatory obligation on either Mayor Watson or Councillor Hubley to report to Council on operational matters that came to their attention. She expressed concern over imposing such a requirement, stating that a key reason for delegating authority is to allow staff to do their job and implement council’s decisions.

¹⁰¹

As outlined further below, there was no breach of the *Municipal Act* or any City By-Law or procedure by the Mayor, Chair Hubley, Mr. Kanellakos, Mr. Manconi, or any other member of City Staff. These individuals carried out their designated roles in good faith and in the best interests of the Project.

F. OVERVIEW OF THE PROJECT AGREEMENT

The Project Agreement was executed on February 12, 2013, following a lengthy procurement period during which RTG was afforded multiple opportunities to review and comment upon the Project Agreement including by submitting Requests for Information and attending Commercially Confidential Meetings. As well, RTG had the opportunity to review and assess extensive Background Information.

Under the Project Agreement, RTG is, in broad terms, responsible at its own cost and risk for the design and construction of the Project, which includes all the infrastructure for the Project (such as the track, signalling, and systems), as well as the Vehicles. RTG then maintains the Project for a 30-year Maintenance Term. RTG, in designing, building and maintaining the Project, is required to satisfy the technical specifications of the Project Agreement (referred as the Output Specifications), as well as the other requirements of the Project Agreement.

⁹⁹ Hearing Transcript of The Honourable Mayor Jim Watson, June 30, 2022, p. 144, lines 26-28.

¹⁰⁰ Hearing Transcript of Steve Kanellakos, July 4, 2022, p. 43, lines 11-15; Hearing Transcript of The Honourable Mayor Jim Watson, June 30, 2022, p. 177, lines 24-27, p. 183, lines 22-28, p. 184, lines 1-3.

¹⁰¹ Alstom Ottawa LRT Vehicle and Train Control Prequalification Package, January 6th, 2012, page 3, BDO0002215, Exhibit 41.

Throughout the entirety of the Construction Period and Maintenance Term, RTG is obligated to ensure that the infrastructure and the Vehicles satisfy both the Output Specifications and the Maintenance and Rehabilitation Requirements as set out in Section 20.1(b) of the Project Agreement.

In addition, the City had responsibilities under the Project Agreement, including a responsibility to cooperate and minimize under interference.¹⁰² As well, there was a Variation regime set out in Schedule 22 to the Project Agreement, through which RTG was entitled to be compensated for changes to its Works. Under the Project Agreement, not all risks on the Project were risks borne by RTG.

Key provisions of the Project Agreement are set out in Appendix “E”.

It is important to note that RTG specifically represented to the City that it, and all of its Subcontractors, including OLRTC and RTM, have extensive experience and are knowledgeable in the design, construction and maintenance of light rail transit projects.¹⁰³ The City, acting reasonably, relied on these representations.

G. ALSTOM’S SERVICE PROVEN VEHICLE SOLUTION

1. Schedule 15-1 to the Project Agreement

The City’s Request for Proposals required proponents to provide a service proven vehicle solution in their proposals.¹⁰⁴ This requirement was ultimately included in Article 1, Schedule 15-1 to the Project Agreement which sets out specific technical requirements for a Service Proven Vehicle.¹⁰⁵

As a part of the Technical Submission Requirements of the RFP, Proponents were also asked to detail how the design of LRV and Systems would address climatic challenges.¹⁰⁶ In relation to the floor requirements, the City required that the LRV have a minimum 70% low floor.¹⁰⁷

¹⁰² Project Agreement, Section 8.1.

¹⁰³ Project Agreement - Ottawa Light Rail Transit Project, February 12, 2013, Section 5.1(a)(iv), IFO0000375, Exhibit 79.

¹⁰⁴ American Public Transportation Association (APTA) Light Rail Vehicle Request for Proposals (RFP) Procurement Guideline, July 25, 2011, p. 100, RTG00673935.0001.

¹⁰⁵ Project Agreement, Schedule 15-1 Technical Definitions and Reference Documents, Article 1, p. 15-16, COW0000295, Exhibit 280. In particular, Schedule 15-1 defines a “Service Proven Vehicle” as being substantially compliance with the following characteristics:

(a) the major vehicle sub systems (including trucks, braking systems, propulsion systems, articulation joints), have been integrated in a comparable LRV currently in revenue service; and
(b) a minimum of 10 of these vehicles have been in Revenue Service for a minimum of two years; and
(c) have been operated in similar climatic conditions and service conditions to those specified for the OLRT project; and
(d) have authority data confirming that the Vehicle has attained a minimum “in-service” MDBF of 50,000 km. Failures are defined as malfunctions that cause Revenue Service delays of 4 minutes or more.

¹⁰⁶ Including providing examples of vehicles and systems operating in similar environments, methodology of dealing with extremes of weather during testing, and performance, reliability and safety of the proposed vehicle in similar climatic conditions including details of the specific climatic enhancements for the proposed Vehicle to address the climatic conditions. See Schedule 3-1 to Request for Proposals Technical Submission Requirements – RFP Version 4.1, August 31, 2012, p. 26, 28, MHH0000255.

¹⁰⁷ These requirements were included in Article 3.1 of Schedule 15-2, Part 4 to the Project Agreement, May 31, 2012, BDO0051610.

During the procurement process, the City considered the vehicle solutions proposed by the various proponents and rejected vehicle suppliers who could not provide service proven solutions. For example, RTG's original vehicle supplier, CAF, was disqualified after the City determined that CAF had not provided a service proven vehicle solution.¹⁰⁸

2. Representations Made by Alstom and RTG in the Qualifications and Proposal

Throughout the proposal period, Alstom and RTG assured and represented to the City that Alstom could provide a service proven vehicle solution that met or exceeded all of the City's requirements.

In its January 6, 2012 pre-qualification package, Alstom made the following representations to the City regarding its ability to provide a service proven vehicle solution:

"We are confident in our ability to deliver an optimized system and services based on proven solutions that will meet or exceed the OLT requirements";¹⁰⁹

...

The "service proven Citadis Dualis vehicle...complies totally with the performance requirements for the OLRT Project";¹¹⁰

...

"The train features a full low floor while being able to run at a speed of 100km/hr";¹¹¹

...

"The specific environmental conditions encountered in Ottawa have been carefully accounted for in our proposal. Based on our extensive experience in Northern Europe (regional trains, in Sweden, high speed trains in Finland and tramways in Russia) Alstom will adapt certain equipment in the Citadis Dualis in order to provide a safe, reliable vehicle meeting the required operational performances under Ottawa climatic conditions"; and¹¹²

...

"Alstom is confident in achieving the local content requirement of 25%".¹¹³

After the City rejected RTG's initial vehicle supplier, CAF, RTG invited Alstom to join its consortium as the vehicle supplier.¹¹⁴ The suggestion by Commission counsel to some City witnesses that the disqualification of CAF led to the hasty choice of Alstom as the preferred vehicle supplier has no merit; the evidence demonstrates that Alstom became part of RTG's final proposal in June, 2012, with ample time for Alstom and RTG to participate in the RFP process.¹¹⁵

¹⁰⁸ Formal Interview Transcript of Riccardo Cosentino, May 13, 2022, p. 34, lines 1-19.

¹⁰⁹ Alstom Ottawa LRT Vehicle and Train Control Prequalification Package, January 6th, 2012, p. 3, BDO0002215, Exhibit 41.

¹¹⁰ Alstom Ottawa LRT Vehicle and Train Control Prequalification Package, January 6th, 2012, p. 3, BDO0002215, Exhibit 41.

¹¹¹ Alstom Ottawa LRT Vehicle and Train Control Prequalification Package, January 6th, 2012, p.3, BDO0002215, Exhibit 41.

¹¹² Alstom Ottawa LRT Vehicle and Train Control Prequalification Package, January 6th, 2012, p.3, BDO0002215, Exhibit 41.

¹¹³ Alstom Ottawa LRT Vehicle and Train Control Prequalification Package, January 6th, 2012, p.3, BDO0002215, Exhibit 41.

¹¹⁴ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 13, lines 15-20.

¹¹⁵ Hearing Transcript of John Jensen, June 13, 2022, p. 92, lines 12-23.

On September 10, 2012, RTG provided its Response to Request for Proposals. In Section 5.4 of the RTG Proposal, RTG set out the LRT systems and vehicles proposal and made the following representations to the City:

“From the outset of the OLRT bid process, the RTG team was intent on finding the “right” solution for Ottawa’s unique needs. We began by canvassing the globe in an international procurement process. For more than six months, the RTG team thoroughly reviewed submissions from the world’s leading suppliers of rail vehicles and systems. We measured and evaluated their products and performance against the Ottawa challenges - cold climate operations, state of the art vehicles and train control but proven in service, modern low floor convenience plus 100 km per hour capability to name just a few – with a goal of putting the “best of the best” together in one integrated package.”¹¹⁶

...

“The Citadis vehicle is the ONLY 100 per cent low floor vehicle operating at 100 km in the world today.”

...

“The total Canadian Content of the Vehicles shall comply with the Canadian Content policy. and specifically shall be at least 25%.”¹¹⁷

3. Alstom Witnesses confirmed the Vehicles were Service Proven and Met the Project Agreement Requirements

All of the Alstom witnesses advised that the Vehicle solution proposed for this Project, the Citadis Spirit, was service proven, including Mr. Declercq, the bid manager for Alstom.¹¹⁸ Mr. Declercq advised that the Citadis Spirit was substantively similar to the Citadis Dualis as it uses the same components.¹¹⁹ He explained that the Citadis Spirit is not a bespoke vehicle, but a vehicle of similar architecture, components and design to the Dualis, adapted to the requirements of the Ottawa specifications.¹²⁰

(i) Weather Requirements

In relation to the Vehicle’s ability to withstand Ottawa’s winter conditions, Alstom witnesses advised that:

- (a) the specific environmental conditions in Ottawa had been carefully accounted for, so Alstom was confident that it could meet any of the City’s needs in terms of winter climate;¹²¹

¹¹⁶ RTG Design Submission, 5.4 LRT Systems and Vehicles, September 30, 2012, p. 1, COW0523276, Exhibit 90.

¹¹⁷ RTG Design Submission Part 1, Appendix B – Canadian Content, September 10, 2012, p.253, COW0544752.

¹¹⁸ Similarly, Mr. Goudge, the Senior Train System Engineer and Vehicle Safety Certifier for Alstom, agreed that the Citadis Spirit was a service proven solution given that all the elements and components had been proven on other systems (Hearing Transcript of Lowell Goudge, June 21, 2022, p. 58, lines 8-28, p. 59, lines 1-2).

¹¹⁹ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 106, lines 5-24.

¹²⁰ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 106, lines 10-24

¹²¹ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 108, lines 15-21.

- (b) Alstom was offering and the City was choosing a vehicle solution that was appropriate for Ottawa's climate. It would be inaccurate to suggest that Alstom, RTG and the City chose to proceed with a vehicle that was not ready for Ottawa's climate.¹²²
- (c) Alstom supplied vehicles with winterized components in other places, including Sweden, Finland, Russia and Kazakhstan.¹²³
- (d) all of the components of the Citadis Spirit were tested in minus 40 degree Celsius;¹²⁴ and
- (e) it is normal course for Alstom to adjust vehicle materials based on temperature ranges for service.¹²⁵

Alstom confirmed that the Project Agreement does not require that the Vehicles run exactly the same regardless of weather, rather, the Project Agreement requires that the performance level of the system needs to be met consistently in various weather conditions, including winter conditions.¹²⁶ Mr. Declercq also admitted that Alstom represented to the City that the vehicles would be winter ready.¹²⁷

The first Citadis Spirit vehicle ran during the winter of 2017, with more and more vehicles running in subsequent winters. Mr. Bouteloup, Alstom's Project Manager, agreed that Alstom had an opportunity to see how the vehicles performed during the Ottawa winter, stating "...yes, we had the capacity to see the trains run before revenue service, yes."¹²⁸

RTG tested the Citadis Spirit at the National Research Centre. The conclusion of the testing was that the Citadis Spirit Vehicle generally demonstrated that it can withstand Ottawa's most severe weather conditions and provide a safe and comfortable ride to its passengers.¹²⁹

(ii) Low Floor

Alstom told the City that it could provide a vehicle with a minimum 70% low-floor,¹³⁰ which as Mr. Goudge explained, is used in most light rail vehicles in North America.¹³¹ Therefore, according to Alstom, this was the norm and not an unusual requirement.

¹²² Hearing Transcript of Lowell Goudge, June 21, 2022, p. 60, 26-28, p.61, lines 1-4.

¹²³ Hearing Transcript of Lowell Goudge, June 21, 2022, p. 60, lines 15-18; and Mr. Yang Liu, the Test and Commissioning Manager and later the Project Engineering Manager for Alstom, agreed that at the time Alstom agreed to join the Project, it marketed itself to the City as experienced in cold weather countries like Sweden, Finland, Russia and Kazakhstan (Hearing Transcript of Yang Liu, June 24, 2022, p. 179, lines 17-21).

¹²⁴ Hearing Transcript of Lowell Goudge, June 21, 2022, p. 60, lines 11-14.

¹²⁵ Hearing Transcript of Lowell Goudge, June 21, 2022, p. 60, lines 22-25.

¹²⁶ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 109, lines 6-23.

¹²⁷ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 108, lines 15-25, p.109, lines 1-17.

¹²⁸ Hearing Transcript of Bertrand Bouteloup (English), June 22, 2022, p. 94, lines 20-25, p.95, lines 1-6.

¹²⁹ Citadis Spirit Type Test Report, February 25, 2019, p. 40, COW0082357, Exhibit 095.

¹³⁰ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 106, line 5-10. Hearing Transcript of Lowell Goudge, June 21, 2022, p. 59, line 16-19.

¹³¹ Hearing Transcript of Lowell Goudge, June 21, 2022, p. 59, line 5-7 (note, there appears to be a transcript error whereby this statement is made by Mr. Gardner, but based on context it is clear that this statement is actually made by Mr. Goudge).

(iii) Length, Doors, and Speed

Alstom committed to providing a solution to meet the City's requirements, including the length of the vehicle, doors, and the speed.¹³² Also, Alstom advised that the 100km maximum speed requirement from the City is a common maximum speed in North America, and it was not an unusual requirement to see on this Project.¹³³

(iv) Canadian Content

Alstom also advised that it was able to meet the 25% Canadian Content requirements.¹³⁴

4. Conclusion

Based on the evidence provided during the hearing, it is clear that the City's selection of Alstom's Citadis Spirit was reasonable given the representations made by RTG and Alstom that the vehicle solution is service proven and winter ready. No evidence to the contrary was provided during the hearing. In fact, the witnesses from Alstom, RTG and the City agreed that the vehicle solution was service proven and winter ready.¹³⁵

H. RTG DELAYS DURING DESIGN AND CONSTRUCTION

After numerous delays RTG achieved RSA 15 months after the contractually stipulated Required Revenue Service Availability Date ("RRSAD") of May 24, 2018. The City has consistently taken the position that the delays to the Project are attributable to RTG, including delays in relation to systems engineering and integration, station construction, and the Vehicles. The City was entirely successful before the Independent Certifier on all of RTG's delay-related claims. In its evidence, RTG blamed the sinkhole for much of the delay – even though in relation to sinkhole delays, RTG has received compensation from its insurer and has released the City from any claims. Consistent with the IC's rulings, nothing has emerged from the evidence at the public inquiry hearing to suggest that the City is responsible for any of the delays.

1. OLRTC Initial Failure to Perform Systems Engineering and Integration Obligations

During the hearing, the evidence was clear and overwhelming that RTG and its Construction Contractor, OLRTC, initially failed to perform their systems engineering and integration obligations as required under the Project Agreement and that this caused delays to the Project include in relation to the Vehicles.

¹³² Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 107, lines 1-6.

¹³³ Hearing Transcript of Lowell Goudge, June 21, 2022, p. 59, lines 16-26.

¹³⁴ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 112, lines 7-12.

¹³⁵ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 126, lines 19-25, p. 127, lines 1-12.; Hearing Transcript of Lowell Goudge, June 21, 2022, P. 58, lines 20-28 p. 59, lines 1-2, and p. 61, lines 7-28 p. 62, lines 1-17.

The Project Agreement provides that 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”.¹³⁶

RTG subcontracted these obligations to OLRTC in Section 9.2(a)(v) of the Construction Contract which provides that the Construction Contractor shall be responsible for the Integration of the System.¹³⁷ The Project Agreement also provides that the Construction Contractor shall assume responsibility for the Integration of the System.¹³⁸

Mr. Bergeron became the Director of Integration for OLRTC in early February of 2014. Despite the role being crucial to the Project, no one had been in the role prior to his involvement.¹³⁹ He explained that his primary role was to manage integration between Thales and Alstom but that he was involved in systems integration for the broader Project.¹⁴⁰ He confirmed that if Alstom and Thales were not working well together, it was OLRTC’s responsibility to resolve that.¹⁴¹ It was not the City’s role to interfere with and take on the role of systems integrator.¹⁴²

Mr. Bergeron prepared a Systems Integration Plan dated June 1, 2016¹⁴³ which set out the roles and responsibilities of the various parties including the EJV, Alstom and Thales but Mr. Bergeron stated that the plan dealt almost exclusively with systems integration between Alstom and Thales.¹⁴⁴ No evidence was proffered to suggest that the EJV had a systems integration plan for other systems.¹⁴⁵

Mr. Bergeron acknowledged that it would have been preferable for OLRTC, as the systems integrator to take a more proactive approach in controlling systems integration.¹⁴⁶

Mr. Declercq of Alstom testified that the integration of the systems was the responsibility of OLRTC,¹⁴⁷ but that Alstom never felt the presence of a system engineer that understood the integration and interface issues between the Vehicle and the control train.¹⁴⁸ Mr. Declercq did not think OLRTC

¹³⁶ Project Agreement - Ottawa Light Rail Transit Project , Section 9.2(a)(ii)(v), February 12, 2013 COW0000280, Exhibit 299. Systems integration activities included developing and implementing the System Integration Test Plan (Schedule 15-2 Part 1 to the Project Agreement, Section 10.1(e), COW0000296) The Project Agreement also provides that RTG is responsible for managing the design process to ensure that all interfaces are properly defined, appropriate engineering expertise is allocated, and that challenges are dealt with. (Schedule 13 to the Project Agreement, Section 5.1.5(d), COW0573821.)

¹³⁷ Construction Contract Part 2, Section 9.2(a)(v), June 18, 2013, COM0001201.

¹³⁸ Project Agreement – Ottawa Light Rail Transit Project, Section 9.2(a)(ii)(vi), February 12, 2013, COW0000280, Exhibit 299.

¹³⁹ Hearing Transcript of Jacques Bergeron, June 21, 2022, p. 90, lines 8-14, p. 91, lines 3-6.

¹⁴⁰ Hearing Transcript of Jacques Bergeron, June 21, 2022, p. 92, lines 5-8, p. 93, lines 23-27.

¹⁴¹ Hearing Transcript of Jacques Bergeron, June 21, 2022, p. 142, lines 26-18, p. 143, lines 1-3.

¹⁴² Hearing Transcript of Jacques Bergeron, June 21, 2022, p. 143, lines 4-6.

¹⁴³ Ottawa Light Rail Project System Integration Program Plan dated June 1, 2016, RJV0015040.

¹⁴⁴ Hearing Transcript of Jacques Bergeron, June 21, 2022, p. 98, lines 16-28, p. 99, lines 1-10.

¹⁴⁵ Hearing Transcript of Jacques Bergeron, June 21, 2022, p. 100, lines 5-10.

¹⁴⁶ Hearing Transcript of Jacques Bergeron, June 21, 2022, p. 110, lines 22-26.

¹⁴⁷ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 161, lines 17-20.

¹⁴⁸ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 64, lines 5-8.

had the mandate of a complete systems manager as the discussions surrounding interfaces quickly turned into disputes.¹⁴⁹ Because Alstom did not receive the necessary data when it requested it and because OLRTC had difficulties in managing a number of disagreements, he asserted that Alstom lost a lot of time.¹⁵⁰

Mr. Burns, Project Manager for Thales, stated that OLRTC was responsible for systems integration, and had significant challenges in fulfilling that role and in providing “a competent system integrator that would be the mediator between two parties that are trying to come to a mutual agreement of how they’re going to interface with each other.”¹⁵¹

2. Integration of the Vehicle and CBTC Systems

Integration of the Vehicle system and the Thales CBTC system involved a collaborative effort between the two parties and included distributing different interface control documents (“**ICD**”) until both systems were sufficiently developed to integrate the two together.¹⁵²

According to Mr. Burns, Thales was to have a finalized, frozen ICD by the time of the final design review, meaning that Thales, according to its subcontract, was not expected to have a final or frozen ICD until August or September of 2014.¹⁵³ As a result, there was a significant misalignment in the schedule between the Thales subcontract and the Alstom subcontract.¹⁵⁴ Mr. Declercq explained that in Alstom’s subcontract, it was to receive Thales’ ICD by April 26, 2013 and be able to use this reference document from Thales at the interface level.¹⁵⁵ Therefore, the dates for the delivery of the Thales ICD were different in the Alstom and Thales subcontracts. In response to this misalignment of dates, Mr. Burns stated during the hearing that it would not have even been possible for Thales to provide a finalized ICD by the end of April 2013.¹⁵⁶ OLRTC’s Mr. Bergeron also confirmed that the requirement for OLRTC to deliver a finalized CBTC specification by April 2013 was not a realistic or achievable deadline.¹⁵⁷

3. Delays Caused by System Integration Issues

OLRTC’s failure to properly coordinate the timing of the ICD, which was a significant deliverable from a systems integration perspective resulted in a knock on effect causing significant delays in the performance of the work in the early stages of the Project.

¹⁴⁹ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 68, lines 11-18.

¹⁵⁰ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 161-162, lines 18-20, 1-5.

¹⁵¹ Hearing Transcript of Michael Burns, June 20, 2022, p. 81, lines 5-8.

¹⁵² Hearing Transcript of Jacques Bergeron, June 21, 2022, p. 114, lines 1-12.

¹⁵³ Hearing Transcript of Michael Burns, June 20, 2022, p. 86, lines 18-27.

¹⁵⁴ Hearing Transcript of Michael Burns, June 20, 2022, p. 87, lines 24-27.

¹⁵⁵ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 62, lines 10-28.

¹⁵⁶ Hearing Transcript of Michael Burns, June 20, 2022, p. 89, lines 10-13.

¹⁵⁷ Hearing Transcript of Jacques Bergeron, June 21, 2022, p. 113, lines 9-12.

Mr. Bergeron testified that there was back and forth between parties (Thales and Alstom) providing details in relation to the interface control documents until there was full integration.¹⁵⁸ He stated that integration continued throughout the testing and commissioning period and that discrepancies led to retrofits.¹⁵⁹ He confirmed that there were “numerous” integrations issues that arose during the integration process between Alstom and Thales.¹⁶⁰ Mr. Bergeron explained that there was confusion between Alstom and Thales with respect to the details of the ICD which resulted in retrofits to the Vehicles.¹⁶¹ He also confirmed that the retrofits resulting from the failure to properly integrate resulted in an impact to the timing of the delivery of the vehicles and the testing and commissioning.¹⁶²

The result of OLRTC’s early failures in relation to its systems integration obligations caused delay but did not affect the ultimate quality of work. Mr. Holder testified that the risks associated with the system integration tests were associated with delays,¹⁶³ but in terms of the validity of the tests, the layered approach taken ensured that the City would ultimately get the system that would be functioning as intended.¹⁶⁴ Ultimately, RTG provided the City with a signed and sealed testing conformance letter¹⁶⁵ and a final system completion letter¹⁶⁶ which confirmed that the systems integration tests were performed in accordance with the Project Agreement requirements and that the system was safe for use.

4. RTG’s Unrealistic Works Schedules and Delays to RSA

The Rideau sinkhole took place in July, 2016. Six months after the sinkhole, RTG advised the City that the delays to the Project caused by the sinkhole had been mitigated, and that OLRTC had provided a Mitigation Schedule aiming to maintain a May 24, 2018 RSA date.¹⁶⁷

The City began to be concerned about RTG’s Works Schedules and delays in 2017.¹⁶⁸ It was obvious to the City that progress on site was not consistent with RTG’s Work Schedule. The City was concerned about RTG’s transparency in the performance of its work. The evidence of Mr. Morgan and Mr. Cripps on this issue is found at Appendix “F”.

The City wrote to RTG a number of times to express its concern regarding RTG’s unrealistic Works Schedules, but had limited tools to use in the Project Agreement to compel RTG to improve performance or provide a more realistic Works Schedule.¹⁶⁹ When asked in his interview whether

¹⁵⁸ Hearing Transcript of Jacques Bergeron, June 21, 2022, p. 114, lines 7-18.

¹⁵⁹ Hearing Transcript of Jacques Bergeron, June 21, 2022, p. 114, lines 9-12.

¹⁶⁰ Hearing Transcript of Jacques Bergeron, June 21, 2022, p. 114, lines 27-28, p. 115, lines 1-4.

¹⁶¹ Hearing Transcript of Jacques Bergeron, June 21, 2022, p. 117, lines 4-27.

¹⁶² Hearing Transcript of Jacques Bergeron, June 21, 2022, p. 117, lines 28, p. 118, lines 1-28.

¹⁶³ Hearing Transcript of Richard Holder, June 23, 2022, p. 18, lines 23-25.

¹⁶⁴ Hearing Transcript of Richard Holder, June 23, 2022 p. 20, lines 24-26.

¹⁶⁵ Testing Conformance Letter from RTG to the City dated August 26, 2019, COW0436983, Exhibit 104.

¹⁶⁶ Final System Completion Letter from RTG to the City, August 26, 2019, COW0159023, Exhibit 134.

¹⁶⁷ Letter from RTG to the City dated December 20, 2016, page 2, COW0523321, Exhibit 136.

¹⁶⁸ Formal Interview Transcript of Steven Cripps, April 14, 2022, p. 114, lines 1-24.

¹⁶⁹ Hearing Transcript of Matthew Slade, June 24, 2022, p. 83, lines 8-17.

RTG provided a reason why it would not provide a detailed plan showing how they could meet May 2018 RSA, Mr. Cripps stated that:

“...they would provide us a schedule, and their view was that the PA requires us to provide you a schedule, and we’re providing you with a schedule. So, you know, perhaps their rationale was that the PA didn’t compel them to provide this plan, and that may be the case, but to us, as a prudent owner... if they’re continuing to hang their hat on May 24, 2018, we needed to see something that would give us some level of confidence that they were going to meet that, and again it comes back to Mr. Manconi and this huge switchover of the transit system from, you know, buses to light rail so we needed to know whether this was going to happen or not.”¹⁷⁰

On November 24, 2017, 6 months prior to the required RSA date of May 24, 2018, RTG provided notice that the required RSA date would be met.¹⁷¹ Rupert Holloway, in his evidence, confirmed that the purpose of requiring RTG to give 180-days notice of RSA to the City under the Project Agreement was to allow the City the time to make significant changes to its transit system including the rapid bus service prior to launch.¹⁷²

On February 5, 2018, the City was advised by RTG for the first time that the May 24, 2018 RSA Date would be rescheduled to November 2, 2018.¹⁷³ The November 2, 2018 date was not met.

These were not RTG’s only delays to meeting the RSA Date. On two further occasions RTG notified the City that it would meet a new RSA Date and on each occasion, RTG failed to meet the date:

- On January 3, 2019, RTG submitted a RSA Notice to the City advising that RSA would be achieved by March 31, 2019.¹⁷⁴ RTG failed to meet that date.¹⁷⁵
- On July 9, 2019, RTG submitted another RSA Notice to the City advising that RSA would be achieved by August 16, 2019.¹⁷⁶ RTG also failed to meet that date.

In total, there were **four occasions** when RTG committed to RSA dates which it then failed to meet.

The City attempted to manage public expectations with respect to RSA and launch but it was difficult due to the lack of reliability of RTG’s schedule and the RSA dates provided. All RSA dates reported

¹⁷⁰ Formal Interview Transcript of Steven Cripps, April 14, 2022, p.117-118, lines 21-14.

¹⁷¹ Letter from RTG to the City dated November 24, 2017, p. 2, COW0523285, Exhibit 049.

¹⁷² Hearing Transcript of Rupert Holloway, June 17, 2022, p. 152, lines 9-25.

¹⁷³ This was confirmed by Mr. Cripps in his formal interview and by Mr. Holloway in his evidence at the hearing (Hearing Transcript of Rupert Holloway, June 17, 2022, p. 152, lines 19-28).; and letter from RTG to the City dated February 5, 2018, COW0532703.

¹⁷⁴ Letter from RTG to the City dated January 3, 2019, COW0523226.

¹⁷⁵ Note, while Mr. Lauch presented this date at FEDCO, Mr. Manconi expressed skepticism that this date would be achieved. Article - “RTG ‘Confident’ it will Complete LRT by March 31; Manconi not Convinced”, Ted Raymond, February 12, 2019, COMH0000033, Exhibit 209.

¹⁷⁶ Letter from RTG to the City dated July 9, 2019, COW0523354, Exhibit 240.

by the City were based on the dates provided by RTG and the City expressed its skepticism regarding RTG's RSA dates.¹⁷⁷

5. Delays to the Vehicles – the Design Book Issue

In August, 2018 RTG delivered a Notice of Dispute alleging that the City caused delay to the Vehicles in 2014 after failing to deliver the “design book” on time.¹⁷⁸

This dispute was resolved by the Independent Certifier on March 9, 2021 who found in favour of the City. The Independent Certifier concluded that the City did not unduly interfere with the vehicle design review process through the timing and decisions related to the design book.¹⁷⁹ The Independent Certifier concluded that “the dominant cause of the delays as of December 21, 2016 was not the Vehicles but the Guideway Segments.¹⁸⁰ Mr. Goudge, who was Alstom's Senior Train System Engineer and Safety Certifier, confirmed in the hearing that the Design Book related only to interior and exterior appearance components of the Vehicles.¹⁸¹

The delays in delivering the Vehicles in fact related to issues with Alstom's design, supply chain, manufacturing, testing and commissioning and retrofit program. Mr. Declercq explained that there were many difficulties in meeting the Canadian content requirements, including due to the lack of local skilled labour, training and high turnover.¹⁸² Mr. Declercq stated that while Alstom normally manufactured vehicles in France, it relies on North American suppliers when manufacturing in Canada.¹⁸³ He acknowledged that there were supply chain issues, including in relation to defective frames and bolsters needed for the manufacturing of the bogies.¹⁸⁴ Mr. Declercq admitted that the defective parts contributed to the delay of the first trains.¹⁸⁵

¹⁷⁷ See for example, one occasion where Mr. Manconi expressed skepticism that this date would be achieved. Article - “RTG ‘Confident’ it will Complete LRT by March 31; Manconi not Convinced”, Ted Raymond, February 12, 2019, COMH0000033, Exhibit 209.

¹⁷⁸ Formal Interview Transcript of Lorne Gray, May 12, 2022, p. 79-80, lines 14-13.

¹⁷⁹ Independent Certifier Determination of the Dispute Between the City of Ottawa and RTG General Partnership – Alstom Design, March 9, 2021, COW0317237, pages 24- 25.

¹⁸⁰ In the hearing, Ms. Sechiari testified that the design book is not a defined term in the PA and stated that “the design book was from RTG's side... the design book wasn't a document that originated with the City. But there was a question to whether they should have provided sign off and you know the timely manner in which to do that, provide those approvals. And we did not find that there was a responsibility for that sign off. There were some items, I believe, if I recall correctly, that the City needed to advise on. It was more esthetics, colours, possibly seating layout, you know, the upholstery. It was more esthetics, and we did find that those were provided in accordance with Schedule 10.” (Hearing Transcript of Monica Sechiari, July 4, 2022, p.200-201, lines 17-3.)

Ms. Sechiari further confirmed that the design book was not the cause of the delay. (Hearing Transcript of Monica Sechiari, July 4, 2022, p. 201, lines 4-8.)

¹⁸¹ Hearing Transcript of Lowell Goudge, June 21, 2022, p. 63, lines 12-15.

¹⁸² Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 121, lines 11-19, p.122, lines 1-23 and p. 123, lines 1-9.

¹⁸³ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 150, lines 1-14.

¹⁸⁴ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 151, lines 10-20 and p. 152, lines 2-8.

¹⁸⁵ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 152, lines 13-17.

Mr. Liu of Alstom stated that the delays to the testing and commissioning of the vehicles were contributed to be delayed access to the maintenance bay or the MSF attributable to OLRTC.¹⁸⁶ He stated that there were periods of time where the OCS (overhead catenary system) would go down which would “extremely delay our testing progress”.¹⁸⁷ Mr. Liu further stated that the unavailability of the test track delayed serial testing.¹⁸⁸ However, at the end of the day, as Mr. Liu explained, regardless of any schedule compression, the necessary testing to validate the Vehicle design was completed by RSA.¹⁸⁹

For these reasons, among many others discussed during the hearing, the delivery of the Vehicles was significantly delayed through no fault of the City and was a primary cause of the delay to the achievement of RSA.

6. Delays to the Stations and Infrastructure – the Sinkhole Claim

In August, 2018, RTG also delivered a Notice of Dispute alleging that it was delayed as a result of the 2016 sinkhole, which it asserted was caused by a failure by the City to connect a watermain to a fire hydrant properly.

The Independent Certifier rejected RTG’s theory. In particular, the Independent Certifier concluded in its February 5, 2021 Determination Report on the Sinkhole that “Altus are ... persuaded by the City’s experts’ reports that due to the indicating factors identified above that it is very likely that the cause of the sinkhole was **RTG’s tunnelling activities**”¹⁹⁰ and that “even if we cannot say for certainty that the tunnelling was the cause of the sinkhole, it is undeniable that a geotechnical matter was at the heart of the event and RTG’s construction activities were at least contributory to the event and the ground risk/geotechnical was a matter RTG had assumed for an additional consideration at RTG’s own election.”¹⁹¹ [emphasis added] The Independent Certifier concluded that the sinkhole was very likely caused and certainly contributed to by RTG’s tunneling activities.

In respect of schedule impact, the Independent Certifier explained that “in reviewing RTG’s as-built schedules of the December 21, 2016 and December 21, 2018 we concluded firstly that 6 months after the occurrence of the sinkhole event RTG were still reporting the RSA had not been impacted and secondly, analysis of the December 2018 as-built demonstrates that the dominant causes of a failure

¹⁸⁶ Hearing Transcript of Yang Liu, June 24, 2022, p. 152, lines 9-28.

¹⁸⁷ Hearing Transcript of Yang Liu, June 24, 2022, p. 154, lines 28 and p. 155, lines 1-2.

¹⁸⁸ Hearing Transcript of Yang Liu, June 24, 2022, p. 156, lines 22-28.

¹⁸⁹ Hearing Transcript of Yang Liu, June 24, 2022, p. 181, line 16-27,

¹⁹⁰ Independent Certifier Determination of Dispute between the City of Ottawa and Rideau Transit Group General Partnership – Sinkhole Delay, February 5th, 2021, p. 10, COW0317235, Exhibit 076.

¹⁹¹ Independent Certifier Determination of Dispute between the City of Ottawa and Rideau Transit Group General Partnership – Sinkhole Delay, February 5th, 2021, p. 12, COW0317235, Exhibit 076.

to achieve RSA were other stations construction activities and vehicle delivery, testing and commissioning and not the sinkhole.”¹⁹²

7. Conclusion

To date, in various Disputes determined by the Independent Certifier, the City has not been found to be responsible for **any** of the delays to the Project. To the contrary, the delays and issues which occurred during the Project were caused by RTG’s failures including its failures to:

- manage systems engineering and integration;
- properly plan, coordinate and execute the Works in accordance with its schedule commitments;
- properly resource the Project with an adequate number of staff to progress the Works and adequately qualified staff;
- adopt proper means and methods (including in relation to its tunnelling activities which caused the sinkhole) and take into account known geotechnical conditions;
- properly address defects and deficiencies in the work performed; and
- in relation to the Vehicles:
 - to account for the 25% Canadian Content Requirement,¹⁹³
 - account for its use of the Maintenance and Storage Facility for Vehicle assembly,¹⁹⁴ and
 - manage its supply chain and the procurement of critical Vehicle components.¹⁹⁵

I. THE CITY’S APPROACH TO WORKING WITH RTG DURING THE DESIGN AND CONSTRUCTION PERIOD

The City’s overall approach during the design and construction period was to follow the Project Agreement to ensure that RTG met its obligations. However, this is not to say the City was not a collaborative and cooperative partner. In fact, the evidence establishes quite the opposite.

¹⁹² Independent Certifier Determination of Dispute between the City of Ottawa and Rideau Transit Group General Partnership – Sinkhole Delay, February 5, 2021, p. 20, COW0317235, Exhibit 076.

¹⁹³ Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 121-123, lines 5-9.

¹⁹⁴ Hearing Transcript of Rupert Holloway, June 17, 2022, p. 189, lines 8-28, p.190, lines 1-9; Hearing Transcript of Lowell Goudge, June 21, 2022, p. 12, lines 15-28, p. 13, lines 1-28.

¹⁹⁵ Hearing Transcript of Bertrand Bouteloup (English), June 22, 2022, p. 112, lines 12-25, p.113, lines 1-25; Hearing Transcript of Yves Declercq (English), June 16, 2022, p. 151, lines 10-25, p.152, lines 1-22.

Mr. Manconi confirmed that the City, as a guiding principle, wanted to be and in fact was collaborative with its partner, RTG.¹⁹⁶ Mr. Jensen testified that while direction is given to the project management team to ensure compliance with the Project Agreement, there is also a component of trying to work together cooperatively with RTG to get that done.¹⁹⁷ Examples of the City's cooperation including the following:

- The City did **not** note RTG in Default for missing the contractual Longstop Date, even though it was within the City's rights under the Project Agreement to do so when RTG missed this date.
- The City agreed to more than 400 Variations on the Project, resulting in an additional \$127 million being paid to RTG.¹⁹⁸
- The City was flexible with respect to milestones, for example with respect to tunnelling.¹⁹⁹
- The City acted reasonably when agreeing to allow RTG to run double Vehicles on the weekend instead of the single Vehicles contemplated in the PA.²⁰⁰
- as discussed below, the City acted cooperatively with RTG to resolve issues by changing the number of vehicles to 13 for morning weekday peak. The change helped RTG, Alstom and OLRTC finish the Minor Deficiencies on the Vehicles and have spares available.²⁰¹ Mr. Morgan explained that this change from 15 to 13 Vehicles demonstrated the parties' partnership.²⁰²

In addition to the above examples, a number of RTG witnesses testified as to the professionalism of the City staff on the Project. For instance, Mr. Estrada testified that he found the City's technical team to be very professional and experienced, and that his relationship with City staff, and in particular Mr. Cripps and Mr. Craig, was one of open communication and mutual respect.²⁰³ Likewise, Mr. Lauch testified that he found the City staff to be professional and experienced, and that the City had good qualified staff from the start of the Project.²⁰⁴ These City staff clearly understood the complexity of this Project.

¹⁹⁶ Hearing Transcript of John Manconi, dated June 28, 2022 p. 218, lines 19-22.

¹⁹⁷ Hearing Transcript of John Jensen, dated June 13, 2022, p. 61, lines 11-13.

¹⁹⁸ Hearing Transcript of Peter Lauch, June 29, 2022, p. 63, line 18-20; Hearing Transcript of Antonio Estrada, June 17, 2022, p. 51, lines 3-13.

¹⁹⁹ Interview Transcript of Claudio Colaiacovo, dated April 5, 2022, p. 97, lines 4-15. Hearing Transcript of Antonio Estrada, June 17, 2022, p. 49, line 10-22; Hearing Transcript of Peter Lauch, p. 63, lines 23-28, p. 64, line 1-7.

²⁰⁰ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 49, lines 1-3.

²⁰¹ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 145, lines 23-28, p. 146, lines 1-11.

²⁰² Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 149, lines 9-10.

²⁰³ Hearing Transcript of Antonio Estrada, June 17, 2022, p. 28, lines 19-28, p. 29, lines 1-2.

²⁰⁴ Hearing Transcript of Peter Lauch, June 29, 2022, p. 62, line 5-21.

With respect to the relationship between Mr. Lauch and Mr. Manconi, Mr. Lauch described it as “99 percent of the time it was very professional. And every once in a while sometimes emotions kicked in but that’s --- it wasn’t anything untoward.”²⁰⁵ While Mr. Manconi occasionally used strong language, it wasn’t the standard and was infrequent. These interactions had no impact on RTG’s ability to work as effectively as it could towards the successful completion of the Project. Nor did such interactions affect RTG’s ability to make suggestions that it thought would ultimately to the benefit of the Project and ridership.²⁰⁶

J. THE DEBT SWAP AND ALLEGED POWER IMBALANCE

Commission counsel focused at the hearing on the debt swap which was an issue not included in the Terms of Reference, and in the City’s submission, is entirely irrelevant to the circumstances leading to the breakdowns and derailments.

1. The Reason for the Debt Swap

In connection with Stage 2, market soundings showed that there would not be a lot of interest in bidding if RTG was at the table, because, given its role as design-builder of Stage 1, RTG would have an unfair advantage. As a result, the City decided to ask RTG to take over maintenance responsibilities on Stage 2 in lieu of being able to bid on Stage 1. This would require amendments to the Stage 1 Project Agreement and the consent of RTG’s long-term lenders.²⁰⁷

As a condition of providing their consent, the lenders insisted that to provide their consent they wanted an additional \$50 to \$100 million in equity, which would have increased the City’s costs. The City then considered other alternatives, including trying to “ring-fence” the long-term lenders for the additional risks associated with maintenance on Stage 2, and use of the “make whole” provisions in the Project Agreement (which would require terminating the Project Agreement and making the lenders whole for future interest payments) before settling on the debt swap as the most viable option.

²⁰⁸

The debt swap was preferred as a transaction which was relatively simple to implement, had no cost impact for the City, and would enable the City to meet the target date to move forward with Stage 2. While the debt swap gave the City additional remedial rights and the right to obtain more information from RTG, that was not the primary purpose of the transaction, as the evidence at the Inquiry has made clear.²⁰⁹

²⁰⁵ Hearing Transcript of Peter Lauch, June 29, 2022, p. 12, line 2-4.

²⁰⁶ Hearing Transcript of Peter Lauch, June 29, 2022, p. 13, lines 27-28, p. 14, line 1-3.

²⁰⁷ Hearing Transcript of Marian Simulik, June 14, 2022, p. 126, lines 20-27.

²⁰⁸ Hearing Transcript of Marian Simulik, June 14, 2022, p. 139-143. See also Stage 2 Light Rail Transit: RTG Long-term Debt Release Overview and Approach Briefing to General Manager and Staff, July 26, 2017, COW0525727, Exhibit 029.

²⁰⁹ Hearing Transcript of Remo Bucci, June 20, 2022, p. 40, lines 7-17, p. 59, lines 16-28, p. 60, lines 1-12.

2. Minimal Effect on DBFM Model

As a result of the debt swap, the City assumed the risk of RTG not paying the long-term lenders, which Ms. Simulik described as almost nil, given the security provided for in the Credit Agreement.²¹⁰ The City however obtained rights to access to information like those given to the original long-term lenders. The role of the Lenders' Technical Advisor did not change after the debt swap and they still did a detailed monthly review.²¹¹

The City had the option of packaging and reselling the debt to a third party once Stage 2 moved into operation.²¹² Unsuccessful efforts were made in 2018 to resell the debt to the Canadian Infrastructure Bank. Had those efforts been successful, it would have returned the parties to the initial position contemplated by the DBFM model.²¹³ In addition, it is important to keep in mind that the majority of lender oversight benefits are realized during the procurement and construction process. The debt swap had no impact on the short-term lenders which kept that independent oversight mechanism in place until RSA was achieved.

3. The City Has Never Exercised Its Rights as Lender

In connection with the debt swap the City established a credit committee which reported to Ms. Simulik. She understood the two roles, as lender and as authority or client, needed to be kept separate and as a result decisions that arose at Credit Committee were not raised at ESC. Deloitte, City finance staff and outside legal counsel sat on that committee.²¹⁴

Shortly before the public hearings, counsel for the City learned that, during their formal interviews, two RTG/OLRTC witnesses, Mr. Estrada and Mr. Cosentino, alleged that the City had refused two waiver requests; the first in 2018 relating to a reduction in daily liquidated damage payments to be made by OLRTC to RTG, and the second in January 2019 relating to RTG's anticipated failure to meet the senior creditors' long stop date under the Credit Agreement.

Counsel for the City advised Commission counsel of Ms. Simulik's recollection of these events and provided emails which demonstrated (a) that the City had consented to the 2018 waiver request; (b) that the 2019 request had been discussed at a meeting of the lenders and RTG at the MSF, at which Ms. Simulik recalled advising RTG that the City was prepared to agree to the request but that the short-term lenders did not agree.²¹⁵ Ms. Simulik testified to this effect at the hearing.²¹⁶

²¹⁰ Hearing Transcript of Marian Simulik, June 14, 2022, p. 128, lines 2-4.

²¹¹ Hearing Transcript of Peter Lauch, p. 67, line 10-20.

²¹² Stage 2 Light Rail Transit: RTG Long-term Debt Release Overview and Approach Briefing to General Manager and Staff, July 26, 2017, COW0525727, Exhibit 029.

²¹³ Hearing Transcript of Remo Bucci, June 20, 2022, p. 61, lines 6-22.

²¹⁴ Hearing Transcript of Marian Simulik, June 14, 2022, p. 132, lines 9-17 and 23-28, p. 133, lines 1-10.

²¹⁵ Letter from Peter Wardle re Answers to Undertakings of Marian Simulik, June 1, 2022, COMH0000001, Exhibit 016.

²¹⁶ Hearing Transcript of Marian Simulik, June 14, 2022, p. 134, lines 25-28, p. 135, lines 1-17.

Mr. Cosentino admitted that Ms. Simulik had made the statement she recalled making at the January, 2019 meeting, which he attended. However, he claimed that he had heard differently from a friend who was a participant in the lender group.²¹⁷ His evidence on this point is less than credible and should be disregarded.

Mr. Estrada claimed that RTG was surprised that the City became long-term lender, and testified that RTG had “no say” in that decision. He suggested there was an immediate change in the relationship, recalling that in a telephone conversation in or around May, 2018 Ms. Simulik advised him that the City was not inclined to provide the waiver of liquidated damages (of course, the City did ultimately provide its consent).²¹⁸

However, Mr. Estrada also agreed that RTG had to sign a Subordination Agreement to finalize the debt swap.²¹⁹ The City subordinated its rights to those of the short-term lenders through this document. The arrangements between the City and the long-term lenders did not become effective until RTG signed this agreement. Mr. Estrada agreed that this meant that RTG’s consent was required for the City to enter into the debt swap.²²⁰

Mr. Estrada also pointed to a letter dated November 27, 2017 from the City Manager to himself regarding the current state of progress of the project as an example of the City writing in its capacity as both owner and lender.²²¹

While the letter may have been unfortunately worded, the fact is that nothing flows from it. Aside from vague allegations that the relationship changed and became less collaborative, the RTG/OLRTC witnesses could point to nothing concrete which changed as a result of the debt swap which affected their interests.

The suggestion made to numerous witnesses during formal interviews that the debt swap led to a power imbalance between the City and three of Canada’s largest construction companies, two publicly traded, is meritless and simply demonstrates a focus to target the City.

4. Conclusion

In summary, the debt swap was carried out in connection with Stage 2, to avoid significant additional costs which the City would have had to pay the long-term lenders in return for their consent. While it gave the City additional remedial rights, those rights were never exercised. On one occasion, in formal correspondence, the City conflated its rights as lender with those as owner, something which the City

²¹⁷ Hearing Transcript of Riccardo Cosentino, June 13, 2022, p. 144, lines 18-28, p. 145, line 1.

²¹⁸ Hearing Transcript of Antonio Estrada, June 17, 2022, p. 20, lines 1-28, p. 21, lines 1-13.

²¹⁹ Subordination Agreement, National Bank Finance Inc. and City of Ottawa et al, September 22, 2017, COW0593677, Exhibit 069.

²²⁰ Hearing Transcript of Antonio Estrada, June 17, 2022, p. 57, lines 3-28, p. 58, lines 1-20.

²²¹ Letter from City of Ottawa to RTG, November 27, 2017, COW05234114, Exhibit 066.

had previously avoided. Whether the City could have better handled the conflict issues raised by the debt swap is irrelevant. There is no evidence that the City has ever used its additional leverage, and no consequences to the debt swap that have affected the advancement of the Project. Nor is there any evidence that the debt swap affected any of the issues with the system that are the subject of the Inquiry. Also, the removal of the oversight function of the long-term lenders five years into the Construction Period was of little moment, the LTA continued to perform a thorough and diligent review on a monthly basis, and the City planned at the time to repackage the debt and sell it to new long-term lenders, something which would have put the parties back to the position they were in originally. Lastly, even though RTG failed to meet the lender's Longstop Date, no notice of default was ever sent out under the Credit Agreement.

K. TESTING AND COMMISSIONING

RTG was required to perform all Commissioning and to support and facilitate the performance of all required commissioning by the City as set out in Section 26 and Schedule 14 to the Project Agreement.²²²

Testing and Commissioning involves testing systems at various levels with increasing complexity.²²³ Post-Installation Check Out tests relate to assessing equipment at the device level, Systems Acceptance Tests ("SATs") involve testing the functionality of a system and the Systems Integration Tests ("SITs") assess the integration and functionality between systems.²²⁴

1. All Systems Acceptance Tests and Systems Integration Tests Completed – Testing and Commissioning Completed Properly

The evidence of Mr. Holder with respect to testing and commissioning is outlined in Appendix "G". Mr. Holder confirmed that by the time Revenue Service Availability was achieved, the system had "completed a full round of testing".²²⁵

Mr. Liu testified that all necessary testing for the Vehicles had been completed, and that no corners had been cut.²²⁶ Every train coming off the production line met the City's requirements and was tested to validate the design.²²⁷ This is consistent with the Fleet Safety Certificate, which was signed and

²²² Project Agreement – Ottawa Light Rail Transit Project, February 12, 2013, Section 26.1, COW0000280, Exhibit 299. In particular, Section 1.1(a) of Schedule 14 to the Project Agreement provides that "Project Co shall plan, schedule, coordinate and execute the Project Co Commissioning of the complete operating System Infrastructure." Further, Section 1.3(a) of Schedule 14 to the Project Agreement requires that Project Co shall be responsible for preparing and executing a commissioning plan/strategy required to successfully demonstrate the performance of the System Infrastructure in accordance with the Project Agreement. The scope of the testing and commissioning plan/strategy will include Trial Running of the System in segments and as a fully integrated System to the extent necessary to demonstrate the functional capability and safety of the System.

²²³ Hearing Transcript of Richard Holder, dated June 23, 2022, p. 10, lines 27-28, p. 11, lines 1-3.

²²⁴ Hearing Transcript of Richard Holder, dated June 23, 2022, p. 11, lines 17-28, p. 12, line 1-28.

²²⁵ Hearing Transcript of Richard Holder, dated June 23, 2022, p. 24, lines 21-22.

²²⁶ Hearing Transcript of Yang Liu, June 24, 2022, p. 182, line 6-13.

²²⁷ Hearing Transcript of Yang Liu, June 24, 2022, p. 183, line 13-16.

stamped by Mr. Goudge and delivered to the City, and which certified that Vehicles were “[c]ompliant to the Project agreement with respect to the safety of the vehicle, and ...fit for its intended use, as evidenced by Alstom’s Safety Authorization and the attached Consolidated Safety File”.²²⁸ As Mr. Goudge testified, this certificate meant that when the fleet went into service it was safe, fit for use and met the requirements under the Project Agreement.²²⁹

RTG confirmed in its Testing Conformance Letter that Testing and Commissioning was completed properly.²³⁰ Mr. Holder explained that this letter was a key document for the City to receive that validated the systems, as designed and as tested, met all of the requirements as laid out in the Project agreement and would be expected to function as such in revenue service.²³¹

Mr. Slade confirmed that in order for RTG to achieve Revenue Service Availability, one of the conditions was compliance with the Testing and Commissioning requirements of the Project Agreement.²³² Mr. Lauch stated that the Testing Conformance Letter confirmed that all the SITs were performed in compliance with the Project Agreement.²³³

Mr. Bergeron testified that he was confident putting his seal on the documents confirming that the SITs had been completed in accordance with the Project Agreement, that the system could operate safely and that these sealed documents were intended to tell the City that the Systems Integration Tests were completed.²³⁴ Mr. Bergeron further confirmed that in his view, in his capacity as a professional engineer in Ontario, the system was safe for use, operation, and maintenance.²³⁵

Further, Mr. Slade confirmed that after Testing and Commissioning and subsequently Trial Running, RTG and OLRTC advised the City that they had met the requirements of Revenue Service Availability, which required RTG and OLRTC to pass these tests.²³⁶ Mr. Slade stated that at Revenue Service Availability, the system was ready for passenger service, safe, fit for use and that the City was under no obligation to conduct testing of its own of the system after it was handed over by RTG.²³⁷ Mr. Lauch also stated that providing the City with professional engineer signed and sealed documents, RTG was telling the City that the system is ready, safe and reliable for Revenue Service.²³⁸

With respect to the timing of Testing and Commissioning activities, Mr. Slade testified that he did not have any concerns regarding reliability of the system, confirming that the various activities, including

²²⁸ Fleet Safety Certificate, dated September 11, 2019, COW0593678, Exhibit 96.

²²⁹ Hearing Transcript of Lowell Goudge, June 21, 2022, p. 65, line 6-10.

²³⁰ Testing Conformance Letter from OLRTC to RTG, August 20, 2019 (attached to covering letter dated August 26, 2019 from RTG to the City), COW0436983, Exhibit 104.

²³¹ Hearing Transcript of Richard Holder, dated June 23, 2022, p. 113, lines 22-27.

²³² Hearing Transcript of Matthew Slade, dated June 24, 2022, p. 84, lines 19-28.

²³³ Hearing Transcript of Peter Lauch, dated June 29, 2022, p. 102, lines 2-5.

²³⁴ Hearing Transcript of Jacques Bergeron, dated June 21, 2022, p. 148, lines 4-22.

²³⁵ Hearing Transcript of Jacques Bergeron, dated June 21, 2022, p. 148, lines 17-22.

²³⁶ Hearing Transcript of Matthew Slade, dated June 24, 2022, p. 85, lines 3-14.

²³⁷ Hearing Transcript of Matthew Slade, dated June 24, 2022, p. 85, lines 21-28, p.86, lines 1-2.

²³⁸ Hearing Transcript of Peter Lauch, dated June 29, 2022, p. 102, lines 11-14.

the Testing and Commissioning, could be done and produce a reliable system based on the way these activities were sequenced and timed, even with acceleration.²³⁹

2. Conclusion

The evidence is clear and unrefuted that Testing and Commissioning was completed in accordance with the Project Agreement as was represented to the City by RTG at RSA. In fact there was no evidence to suggest that any of the issues experienced during the Maintenance Term, including the breakdowns and derailments are in any way connected to or the result of the Testing and Commissioning process.

L. SUBSTANTIAL COMPLETION AND DEFERRED WORKS

1. RTG's First Application for Substantial Completion

The requirement of the Project Agreement with respect to Substantial Completion are set out in Appendix "H".

RTG issued its first Substantial Completion Notice on April 26, 2019.²⁴⁰ In its response dated May 6, 2019,²⁴¹ the City took the position that the conditions had not been satisfied as there were significant outstanding issues that remained unresolved. In its negative opinion letter, the City listed a number of issues of outstanding work including in relation to safety, Vehicles, commissioning, the Transit Operation Control Centre, the CBTC, the stations, winter performance and the tunnel ventilation system. In relation to the Vehicles, issues identified by the City at this time related to the brake and doors.²⁴²

In issuing a negative opinion of RTG's first Substantial Completion Notice, the City was clearly prioritizing the reliability and safety of the System rather than rushing to launch the system before it was ready, contrary to the allegations made in questioning of witnesses. Mr. Morgan confirmed that accepting Substantial Completion was not rushed and that the City was supported at the political level.

²⁴³

²³⁹ Hearing Transcript of Matthew Slade, dated June 24, 2022, p. 10, lines 15-27.

²⁴⁰ Letter from RTG to the City re Substantial Completion Notice, April 26, 2019, COW0440406.

²⁴¹ Letter from the City to RTG re Substantial Completion Notice, May 6, 2019, COW0523391.

²⁴² For example, Mr. Morgan testified that there was a brake modification that was incomplete but that by the time RTG achieved Substantial Completion, this modification was completed across the fleet (Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 31, lines 4-7). Mr. Holder confirmed that there were outstanding matters such as brake defects and failures and door sensitivity issues that prohibited RTG from achieving Substantial Completion (Hearing Transcript of Richard Holder, dated June 23, 2022, p. 34-35, lines 24-27, 1-7).

Mr. Manconi confirmed that the City and the Independent Certifier agreed that RTG had not reached Substantial Completion at this time (Hearing Transcript of John Manconi, dated June 28, 2022 p. 81, lines 9-14) and that two of the issues that needed to be resolved were brake defects and door issues (Hearing Transcript of John Manconi, dated June 28, 2022 p. 82, lines 1-3).

²⁴³ Hearing Transcript of Michael Morgan, June 27, 2022, p. 84, line 1-12.

In rejecting RTG's first Substantial Completion Notice, Mr. Holder testified that the team at the City did not feel pressure to rush. The City felt that the system would be ready when it would be ready and that at the time of RTG's first Substantial Completion Notice, it was clear the system was not ready.²⁴⁴

On May 13, 2019, the Independent Certifier issued its negative opinion on the achievement of Substantial Completion.²⁴⁵ A comparison of the lists of outstanding issues from the City and the Independent Certifier confirm that the Independent Certifier's opinion was independent from that of the City. Ms. Sechiari testified that in assessing the requirements for Substantial Completion, the Independent Certifier independently, fairly, and impartially assessed Project Co's first Substantial Completion application and found that the requirements had not been satisfied.²⁴⁶ Ms. Sechiari further testified that the crux of having an Independent Certifier is to act fairly and impartially and in the interest of both parties to make sure that the Project Agreement is followed properly.²⁴⁷

3. The Deferred Works Discussions

After the Independent Certifier issued its opinion confirming that Substantial Completion had not been achieved, the City and RTG entered into commercial discussions to address concerns initially raised by RTG in its letter of May 10, 2019 regarding the status of outstanding work as at Substantial Completion, and in particular the fact that the definitions associated with Substantial Completion²⁴⁸ suggested that the System would be ready for public use when in fact the System was never intended to be open for public use at that time.²⁴⁹ The parties and the IC reached consensus that it was appropriate for the parties to agree to defer certain works to be completed prior to the achievement of RSA. The evidence of Mr. Morgan, Mr. Lauch, Mr. Manconi, Ms. Sechiari and Mr. Kanellakos on this issue is outlined in Appendix "I".

4. The Achievement of Substantial Completion

On July 22, 2019, RTG issued its second Substantial Completion Notice advising that the conditions for the issuance of the Substantial Completion Certificate had been satisfied.²⁵⁰

On July 26, 2019, the City wrote to RTG confirming the City's opinion that RTG had now satisfied the conditions for issuance of the Substantial Completion Certificate.²⁵¹ Mr. Holder testified that there had been a significant improvement in addressing the issues identified in the original Substantial Completion Notice. At the time of the second Substantial Completion Notice, the City was of the opinion that the remaining issues could be resolved between Substantial Completion and Revenue

²⁴⁴ Hearing Transcript of Richard Holder, dated June 23, 2022, p. 118, lines 12-17.

²⁴⁵ Independent Certifier's Report on Substantial Completion, dated May 13, 2019, RTG00010893, Exhibit 120.

²⁴⁶ Hearing Transcript of Monica Sechiari, dated July 4, 2022, p. 154, lines 12-16.

²⁴⁷ Hearing Transcript of Monica Sechiari, dated July 4, 2022, p. 154, lines 23-28, p. 155, lines 1-6.

²⁴⁸ In particular, the definition of "Minor Deficiencies".

²⁴⁹ Letter to the City from RTG re Substantial Completion, dated May 10, 2019, COW0468363, Exhibit 211.

²⁵⁰ Letter from the City to RTG re Second Substantial Completion Notice, dated July 26, 2019, COW0157023.

²⁵¹ Letter from the City to RTG re Second Substantial Completion Notice, July 26, 2019, COW0157023.

Service Availability.²⁵² Mr. Holder confirmed that with respect to RTG's second Substantial Completion Notice, he did not feel pressured or rushed to grant Substantial Completion.²⁵³

5. The Substantial Completion Agreement

On July 26, 2019 the City and RTG executed a Substantial Completion Agreement, which deferred the completion of certain works until prior to the achievement of RSA.²⁵⁴ The City entered into this agreement on the basis that:

- 1) the deferred work would be completed in accordance with the requirements of the Project Agreement prior to the achievement of RSA and as an express condition of RSA (section 1 of the Agreement); and
- 2) nothing in the Agreement acted as a waiver of any right or remedy of the City or Project Co including any other requirement in relation to Substantial Completion (section 8 of the Agreement).²⁵⁵

The Substantial Completion Agreement was executed in light of the fact that the requirements of Substantial Completion under the Project Agreement appeared to be tied to whether the System was ready to open to the public, a concept which should have been associated with RSA. The deferral of specific works to be completed by RSA simply acknowledged this conceptual problem, but did not in any way affect RTG's obligation to complete outstanding work.

Schedule A to the Substantial Completion Agreement set out all of the deferred works to be completed by RSA.²⁵⁶ Those works included the cab doors, the platform edge cameras, and passenger information system, which would be addressed or mitigated by the time of RSA.²⁵⁷

The Substantial Completion Agreement was within the delegated authority granted to the City Manager.²⁵⁸ Accordingly, the City had the authority to enter into this agreement to defer the completion of certain limited works, and in doing so it acted appropriately, reasonably and collaboratively with RTG. No witness has given evidence that the scope of delegated authority required City staff to report this in advance to Council, nor could they, given the power was clearly within the scope of authority delegated. Ms. Sechiari confirmed that the City, at its sole discretion, had the right to defer works for Substantial Completion under the Project Agreement.²⁵⁹

²⁵² Hearing Transcript of Richard Holder, dated June 23, 2022, p. 118, lines 18-26.

²⁵³ Hearing Transcript of Richard Holder, dated June 23, 2022, p. 118, lines 27-28, p. 119, lines 1-2.

²⁵⁴ Substantial Completion Agreement, dated July 26, 2019, RTG00332043.0002, Exhibit 143.

²⁵⁵ Substantial Completion Agreement Section 1, dated July 26, 2019, RTG00332043.0002, Exhibit 143.

²⁵⁶ Substantial Completion Agreement Schedule A, dated July 26, 2019, RTG00332043.0002, Exhibit 143.

²⁵⁷ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 87, lines 25-28, p. 88, lines 1-12.

²⁵⁸ Hearing Transcript of John Manconi, dated June 28, 2022, p. 201, lines 12-17.

²⁵⁹ Hearing Transcript of Monica Sechiari, dated July 4, 2022, p. 150, lines 7-9. See also Section 26.4(d) of the Project Agreement, February 12, IFO0000375, Exhibit 79.

After the achievement of Substantial Completion, RTG worked to complete the deferred works and to demonstrate to the City and the Independent Certifier that the works had been completed, resolved and/or mitigated. On August 30, 2019, RTG issued its Revenue Service Availability Notice which expressly represented to the City that the deferred works had been addressed. This was confirmed in the evidence of Peter Lauch, Steve Kanellakos and Michael Morgan.²⁶⁰

M. THE CITY'S LAUNCH PLAN

1. Project Agreement Requirements – RSA Means Ready for Passenger Service

As part of its commissioning activities under section 26.1(b) of the Project Agreement, Project Co “shall perform or cause to be performed all matters to ensure that Revenue Service Availability is achieved by the Required Revenue Service Availability Date.” The definition of “Revenue Service” found in Schedule 15-1 is “the carriage of paying Passengers on the System”.

It is clear from these provisions that the achievement of Revenue Service Availability means that the system is ready to carry paying passengers, as confirmed by Mr. Slade of RTG.²⁶¹

From the outset, the City's start-up plan was always that the System would start full service on day one and that there would be a complete transfer from the bus rapid transit system to the LRT on the first day of the System opening.²⁶² During the in-market period there were discussions at the Payment Working group and the ESC about whether a bedding in period should be included in the payment mechanism. However, it was important for the System to be fully operational at Day One and as a result a consensus was reached not to include a bedding in period.²⁶³

2. City Had Good Reason to Reject Soft Start Proposals

In September, 2018 RTG made an oral proposal to the City that involved a modification to the fleet size, partial station openings, and reducing trial running requirements. Other high level options were also tabled with the City at this time, such as partial line openings and soft starts.²⁶⁴

These proposals were made at a time when RTG was trying to achieve the November, 2018 RSA date. The City rejected these options because the City would have to agree to a reduced scope of work, was not prepared to relax RTG's contractual obligations, and was concerned about the impact on passengers at a time when there had already been a significant disruption to the rapid bus network as a result of all the construction activity.²⁶⁵ Mr. Holloway agreed that he was not an operator or expert

²⁶⁰ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 84, lines 4-12.

²⁶¹ Hearing Transcript of Matthew Slade, dated June 24, 2022, p. 85, lines 21-26.

²⁶² Hearing Transcript of Peter Lauch, June 29, 2022, p. 104, lines 1-14; Hearing Transcript of Larry Gaul, July 5, 2022, p. 51, lines 20-21.

²⁶³ Hearing Transcript of John Manconi, p. 188, line 16-24 and p. 195, line 1-11.

²⁶⁴ O-Train Confederation Line Project Update Transportation Services Department, September 10, 2018, COW0525224, Exhibit 077.

²⁶⁵ Hearing Transcript of Rupert Holloway, June 17, 2022, p. 161, lines 2-28, p. 162, lines 1-24.

in that area, that his evidence about a six month soft launch period was speculative, and that he did not have the expertise to provide a professional opinion regarding a soft launch.²⁶⁶

Mr. Slade, another OLRTC witness with no operational experience, testified that in early 2018 OLRTC proposed a partial opening of the east end of the line (Blair to University of Ottawa which the City rejected).²⁶⁷ Mr. Slade made a further proposal of a reduced service soft launch in a meeting in the RAMP room in the late spring or early summer of 2019 which he claimed STV's Tom Prendergast supported but the City rejected.²⁶⁸

The first proposal would have involved six trains running in a loop between Blair and the University, to get the system open and running. Running a partial system between those two points was not going to assist people from the east end of Ottawa in getting downtown for work, as it would require multiple transfers. Further, the bus schedule had already been highly disrupted because of the Stage 1 construction process. Mr. Manconi rejected the proposal for these reasons.²⁶⁹

As for Mr. Slade's proposal in the RAMP room in 2019, Mr. Prendergast's evidence is instructive. Mr. Prendergast, who has extensive experience in transit operations, recalled a short discussion about a soft start but did not recall giving a recommendation. He had seen both hard and soft starts, and generally speaking, organizations take a look at them to see what are the benefits, and then decide which one is best for their circumstances.²⁷⁰ The discussion was brief, because the level of information OLRTC provided was already something OC Transpo was aware of and had already decided upon.²⁷¹ If a soft start was necessary he would have mentioned it to the City. The IAT's position was that a soft start was not necessary.²⁷²

N. TRIAL RUNNING

1. The Project Agreement Requirements

The requirements for trial running are set out in Schedule 14 of the Project Agreement.²⁷³ Schedule 14 is the Commissioning Schedule and provided that Project Co's commissioning plan/strategy (which

²⁶⁶ Hearing Transcript of Rupert Holloway, June 17, 2022, p. 155, lines 16-24, p. 156, lines 4-21.

²⁶⁷ Hearing Transcript of Matthew Slade, June 24, 2022, p. 90, lines 3-28 to p. 93, line 1.

²⁶⁸ Hearing Transcript of Matthew Slade, June 24, 2022, p. 13, lines 7-28, p. 14, lines 1-26., p. 16, lines 4-28, p. 17, lines 1-4.

²⁶⁹ Hearing Transcript of Matthew Slade, June 24, 2022, p. 90, lines 17-28, p. 91, lines 1-25.

²⁷⁰ Hearing Transcript of Thomas Prendergast, June 28, 2022, p. 5, lines 1-13.

²⁷¹ Hearing Transcript of Thomas Prendergast, June 28, 2022, p. 6, lines 4-13.

²⁷² Hearing Transcript of Thomas Prendergast, June 28, 2022, p. 45, lines 17-28.

²⁷³ Schedule 15-1 of the Project Agreement defines Trial Running as a "twelve (12) consecutive day period that may commence upon the successful completion of testing and commissioning. Upon successful completion of trial running, the integrated system will be ready for revenue service." Schedule 14 (Commissioning) defines the fundamental objective of trial running as to "exercise the complete integrated System, including all subsystems, operating personal and operating procedures, to confirm readiness for Revenue Service Commencement." Schedule 14 further defines the objective as "...to operate a full regular scheduled service on the full line using the peak and non-peak schedules for an extended period. Passengers will not be carried." Validation of the Trial Running acceptance "shall be performed by the Independent

included trial running) was to be developed and modified as required to address the evolution of the Project, and to undergo review and modification as the Project progressed as agreed by the City and Project Co. In other words, it was open to the parties to change the requirements of trial running at any point.

2. RFI-O-266

In 2017 Joe North, a consultant with Capital Trust Partners (a technical advisor to the City) with experience in start-ups in the US, developed Trial Running Criteria in conjunction with Roger Schmidt of OLRT. This document went through a Request for Information process on or about May 11, 2017 as RFI-O-266.²⁷⁴

RFI-O-266 set out the general parameters for trial running, including the criteria for pass, repeat, restart, and pause. It described the twelve day period as being devoted to running regular scheduled service (weekday and weekend) and that there would be an evaluation scorecard which the IC would use to validate performance. The only detailed criteria contained in RFI-O-266 for Service Delivery were that an AVKR of 96% be achieved over 9 out of 12 days and that no three consecutive days would be below 94%.

3. The Trial Running Test Procedure

The Trial Running Test Procedure was developed by OLRTC between 2016 and 2019 and finalized on July 31, 2019.²⁷⁵ It outlined the objectives and scope of trial running, details of the service plan, members of trial running review team, responsibilities of each, the plan for the trial running process, and performance criteria for safety, travel time, headway, maintenance, vehicle reliability, station availability and customer systems and other major systems.

Section 4.1 provided that the system would be operated for 12 days in a realistic simulation of all phases of an every day operation and would be assessed against the criteria set out in section 3.1, either daily or averaged over the course of the trial, to be tracked on a simple scorecard. Detailed assessment criteria included the following:

- Trial running would be reviewed daily by the Trial Running Team. It was to be “at the discretion of the Team, comprising of OTC, OC Transpo, Independent Certifier, RTG, RTM and OLRTC to determine if a day is a pass, repeat or restart” (Section 3.2).
- The IC would provide final classification for the previous day as one of a pass, repeat or restart (fail) (section 4.1).

Certifier.” Trial running will demonstrate to the satisfaction of the IC that “the specified travel times, headways and operational performance requirements can be achieved”.

²⁷⁴ Request for Information – RFI-O – 266, May 11, 2017, COW0442401.

²⁷⁵ OLRT Project Trial Running Test Procedure, August 31, 2019, OTT03177178, Exhibit 122.

- Should a situation arise where one or more of the eighteen pass criteria is not considered a pass, the Trial Running Review Team would assess the conditions that led to the fail and make a determination. Any fails within a pass day would be justified and recorded on the scorecard and verified by the IC. If a dispute arose, the IC would make the final determination (section 4.1).
- After the final day of trial running, the IC would prepare a report stating whether the fully integrated system and operation could meet the specified operational performance requirements. The 12 “pass” scorecards signed by the IC were the validation for Trial Running (section 4.1).
- In some exceptional situations, the review team could agree to “pause” Trial Running for a pre-defined period of time, in which case Trial Running would start again from day 1 (section 4.1).

Scoring of trial running involved the exercise of discretion by the Commissioning Team. Mr. Slade agreed that the criteria allowed for a failure on some of the criteria but overall a pass for the day, and that a level of discretion was involved.²⁷⁶ Mr. Prendergast testified that trial running was about an exercise of good judgment in relation to the circumstances of any particular day. It was not just about statistical performance but the response of the maintainer, how they troubleshot the equipment, got equipment off the line or fixed the defect and got service running again.²⁷⁷ Mr. Charter understood the members of the team had to apply their collective discretion and took some comfort in the role played by the IC in the process in connection with failures to individual criteria.²⁷⁸

4. What Did Success In Trial Running Mean?

It was suggested by Commission counsel to a number of witnesses that the trial running process should be looked at in its entirety – counting all failed days and pause days. It was put to Mr. Manconi that for the first 10 or 11 days there were four passes and the rest were either fails, repeats or restarts, that he did not advise Council that trial running did not meet 96% on “a substantial portion of the trial running days”, nor was there any mention of four failure days and four pass days as of August 7.²⁷⁹

However, this reflects a fundamental misunderstanding of the requirements. The Project Agreement makes clear that trial running, like other elements of testing and commissioning, is about achieving certain targeted criteria. There is nothing in the Project Agreement or the Trial Running Test Procedure to suggest the length of time it takes to achieve success is factored into whether the test has been successful.

²⁷⁶ Hearing Transcript of Matthew Slade, June 24, 2022, p. 30, lines 10-18.

²⁷⁷ Hearing Transcript of Thomas Prendergast, June 28, 2022, p. 43, lines 1-8.

²⁷⁸ Hearing Transcript of Troy Charter, July 5, 2022, p. 196, lines 27-28, p. 197, lines 1-22.

²⁷⁹ Hearing Transcript of John Manconi, June 28, 2022, p. 118, lines 27-28, p. 124, lines 22-28, p. 126, lines 12-20.

Mr. Slade, who was involved in drafting the trial running test procedure, testified in response to a question from Commission counsel that 12 days in a row with a passing grade meant *however long it took* to get those 12 passing days: “Yes. I mean, it could take 12 takes; it could take six months, or whatever, right?” He agreed that this was generally accepted by all of the trial running team members and entities involved.²⁸⁰

Mr. Manconi understood that trial running was like an exam that Project Co takes until they can pass it. The fact that they failed on a number of days is completely irrelevant if ultimately they meet the criteria the parties have agreed to. The completion of the requirements “doesn’t come with an asterisk that says, ‘Oh but you failed four or five days at the beginning’. That’s completely irrelevant. All that matters is that ultimately you meet the criteria”.²⁸¹

Mr. Kanellakos understood that trial running is a process: “it’s over a period of time. It’s not day-to-day reporting. It’s about getting to the end and making a determination if the exam, the exercise, the process was passed or not.” Trial running is “like sitting down and writing a three hour exam in university. I don’t do well in the first three questions but I ace the next 15 and pass the exam. If I was to report out after Question 3 and I didn’t do well in ...question 3, what value of conversation are going to have after because I haven’t finished the next 17 questions. I have to finish the entire exam.”²⁸²

While imperfect, these analogies emphasize that all that matters is that the test is ultimately successful. They also inform the judgments made by City Staff, including with the benefit of expert advice, about the nature and degree of reporting on the Trial Running process.

5. 98% - A Demanding Target

The OLRTC Trial Running Test Procedure defined availability performance based on Aggregate Vehicle Km Availability Ratio (AVKR) as 98.0% (average over 12 days) and 90.0% (minimum daily (section 4.0)). Mr. Slade testified that this was deliberately set by OLRTC to be consistent with what RTM must maintain under the payment mechanism during service to avoid failure points accumulating.²⁸³

However, this was not a realistic target. Mr. Prendergast testified that it would not be best practice to impose requirements that were impossible to meet.²⁸⁴ He advised the City Manager that the criteria were very demanding and exceeded what the service requirements ever would be. Achieving 12 out of 12 days at an AVKR of 98% would take until Christmas.²⁸⁵ Mr. Lauch agreed that this was a high

²⁸⁰ Hearing Transcript of Matthew Slade, June 24, 2022, p. 32, lines 1-7.

²⁸¹ Hearing Transcript of John Manconi, June 28, 2022, p. 210, lines 7-21.

²⁸² Hearing Transcript of Steve Kanellakos, July 4, 2022, p. 41, lines 8-11, p. 127, lines 21-26.

²⁸³ Hearing Transcript of Matthew Slade, June 24, 2022, p. 32, lines 8-27.

²⁸⁴ Hearing Transcript of Thomas Prendergast, June 28, 2022, p. 14, lines 1-8.

²⁸⁵ Hearing Transcript of Thomas Prendergast, June 28, 2022, p. 13, lines 1-11.

percentage to achieve.²⁸⁶ Even Mr. Slade admitted that 98% was probably higher than what you would normally have.²⁸⁷ At the hearing he testified that the metrics were set at that level to “keep that pressure on”.²⁸⁸

According to Mr. Morgan, 98% would generate no service deductions for availability during the Maintenance Term. “As you kind of move down from that, 97, 96, 95, there was still –I would say the deductions were not huge. Once you drop below, like 90, 88 percent, that’s where we started to hit system events, and so there was kind of a scaling ... of the performance deductions...”²⁸⁹ Mr. Morgan described 98% as an “aggressive target for them”.²⁹⁰

6. Reliability of the Vehicles and the System Before and During Trial Running

The detailed evidence of Mr. Morgan, Mr. Manconi, Mr. Prendergast and Mr. Gaul on this issue is set out in Appendix “J”. By way of summary, while there were known issues ahead of trial running with the Vehicles, those issues were being addressed, and the system was in a very steady state. For instance, the Alstom vehicle report for August 3 to 16, 2019 demonstrated increased reliability of the Vehicles during this period. The signalling system and its integration with the other systems was stable and reliable. The key issue was maintenance, and the City pushed for more resources from RTM and Alstom and received assurances that those resources were being provided. The commitment from Alstom to provide additional resources was a watershed moment and something upon which the City was entitled to rely. While Mr. Gaul initially had concerns, he saw improvements in vehicle reliability as trial running continued.

7. The Parsons Evidence on Trial Running

The evidence of the Parsons witnesses is summarized at Appendix “K”. In summary, no one from Parsons was on the trial running team. The only Parsons witness who had any responsibilities connected with trial running was Mr. Fodor. Mr. Palmer’s emails, while colourful, amount to little more than speculation, and he had no firsthand knowledge of the Mayor’s involvement in City operations. Mr. Hulse’s concerns about the Alstom vehicles reliability growth curve are contradicted by witnesses with more firsthand knowledge, such as Bertrand Bouteloup, Matt Slade and Michael Morgan. Mr. Fodor was on vacation from August 10 to 26, 2019 (i.e. throughout the successful part of trial running).²⁹¹

²⁸⁶ Hearing Transcript of Peter Lauch, June 29, 2022, p. 87, lines 21-24.

²⁸⁷ Formal Interview Transcript of Matthew Slade, April 5, 2022, p. 131, lines 13-19.,

²⁸⁸ Hearing Transcript of Matthew Slade, June 24, 2022, p. 104, lines 1-8, p. 33, lines -26-28, p. 34, lines 1-3.

²⁸⁹ Hearing Transcript of Michael Morgan, June 27, 2022, p. 45, lines 1-7.

²⁹⁰ Hearing Transcript of Michael Morgan, June 27, 2022, p. 45, lines 12-13.

²⁹¹ Email from Thomas Fodor re O-Train Line 1 – TF Observations 20190808, August 8, 2019, COW0593743. “I would also like to provide advance notice that I will be on vacation after my shift ends this Saturday morning (aug 10) and I will not be back in the office until Aug 26”.

8. No Political Pressure

Commission counsel examined numerous City witnesses to attempt to establish that there was political pressure to pass trial running and launch the system. However, there is nothing in the WhatsApp chat that suggests that either there was political pressure to pass any given day in trial running or that the trial running team gave in to any alleged political pressure to pass certain days. In fact, on July 29, 2019, at the very start of trial running, Mr. Manconi sent the following message at 7:12 am: “On another matter, Councillor Menard’s comments to the press are not helpful and are out of line. *To suggest this team would launch and compromise safety in any way for politically [sic] reasons is inappropriate.*”²⁹² [emphasis added]

While the Mayor’s office wanted daily updates on the progress of trial running Mr. Manconi was under no political pressure from the Mayor’s office to pass trial running.²⁹³

Mr. Morgan was a participant in the WhatsApp message group involving a number of City staff and consultants.²⁹⁴ There were at least 16 people on the chat, there was no secrecy about the information being exchanged, and he saw nothing to cause him any concerns that the City was giving in to political pressure to open the system.²⁹⁵

Mr. Charter did not make decisions unilaterally on the instructions of Mr. Manconi. With respect to the decision to pass August 16, 2019, after a problem with the afternoon launch, Mr. Charter advised Mr. Manconi that “I will make notes on the scorecard that they missed the throughput due to two poor RTM decisions. As a result, recommend we use discretion and pass the day.”²⁹⁶ The team ultimately exercised its discretion to pass the day, given those poor decisions by the technician which would not be replicated during actual service.²⁹⁷

At no time was Mr. Charter under pressure from Mr. Manconi or others in the management chain or at the political level to do anything inappropriate or against his professional judgement: “No. Everyone was aligned in safe, reliable service. That was the focus.... no, I was not under any undue pressure from anyone.”²⁹⁸ The City’s priority was safe and reliable service, including in assessing trial running and planning for the System’s launch.

²⁹² WhatsApp Chat Log, 16 July 2019 to 31 December 2019, [message 2019-07-29, 7:12:17 am], COW0593740, Exhibit 206.

²⁹³ Hearing Transcript of John Manconi, June 28, 2022, p. 72, lines 25-28, p. 73, lines 1-7.

²⁹⁴ WhatsApp Chat Log City of Ottawa, 24 April 2019 to 29 December 2019, STV0002337, Exhibit 167.

²⁹⁵ Hearing Transcript of Michael Morgan, June 27, 2022, p. 97, lines 25-28, p. 98, lines 1-17.

²⁹⁶ WhatsApp Chat Log City of Ottawa, 24 April 2019 to 29 December 2019, message 385, STV0002337, Exhibit 167.

²⁹⁷ Hearing Transcript of Troy Charter, July 5, 2022, p. 196, lines 1-28, p. 197, lines 1.

²⁹⁸ Hearing Transcript of Troy Charter, July 5, 2022, p. 198, lines 23-26.

Mr. Gaul never felt under any pressure to give RTG a pass and stated that each time the team passed something when maybe there was justification for it to be rated as a fail, it would be thoroughly vetted.²⁹⁹

The WhatsApp chat involving members of the Mayor's staff (Exhibit 206) indicates that they repeatedly asked for updates on the progress of trial running. However, the only time the Mayor made a suggestion about the trial running process was on August 1, when John Manconi's message at 8:34 pm indicates that an idea brought forward by the Mayor to start Friday August 2 as a Saturday service (to reduce the number of trains required) after a restart could not be implemented. Nothing in this message suggests that the Mayor was pressuring staff to relax trial running criteria or pass days that were otherwise failures.³⁰⁰

Mr. Slade conceded that while there is often pressure to open in projects, particularly where there have been delays, it is simply a pressure the team has to deal with. He agreed that his obligation as project director was to act in a professional manner and not cut corners, and did not do so on this Project.³⁰¹ Mr. Holloway agreed that the City was not rushing to get the system into operation. The people working for OLRTC, as RTG approached substantial completion and trial running, were focussed on safety and reliability.³⁰²

9. The Commitment from Alstom to Provide Additional Resources

There is no question that the first few days of trial running were unsuccessful. The scorecards reflect three failed days before a pause was initiated on Friday August 1, 2019 followed by a repeat. Four pass days then took place before a second pause was initiated on August 7 and 8, which restarted trial running effective August 9, 2019. Only one of those four pass days had an AVKR greater than 98% and the last of the pass days, August 6, had a daily AVKR of 91.34%.

In the evening of August 7, 2019 there was a lengthy meeting between representatives of OLRTC, the City and Alstom, described in Mr. Lauch's email of same date; this was a "...very, very difficult meeting." The City was clearly unhappy and reminded the participants of "the many missed deadlines, lies and hollow promises".³⁰³ The email makes it clear that Alstom's failure to provide adequate resources during trial running was the key issue.

At the end of the meeting OLRTC and the City discussed trial running scoring. It is clear that OLRTC was "pushing" for August 7 to be scored as a fail but anticipating it would be scored as a restart (it was scored as a restart, despite the suggestion in the email that OLRTC needed "another favour from the client"). It was suggested that "someone talk to the Alstom CEO based in Paris".

²⁹⁹ Hearing Transcript of Larry Gaul, July 5, 2022, p. 51, lines 3-28, p. 39, lines 8-11.

³⁰⁰ Hearing Transcript of The Honourable Mayor Jim Watson, June 30, 2022, p. 119, lines 1-14.

³⁰¹ Hearing Transcript of Matthew Slade, June 24, 2022, p. 87, lines 4-23.

³⁰² Hearing Transcript of Rupert Holloway, June 17, 2022, p. 164, lines 3-24.

³⁰³ Email from Peter Lauch re City Meeting Summary, August 7, 2019, ALS0066772, Exhibit 195.

According to Mr. Lauch's email, Mr. Manconi then asked "what's in it for me" to "get you a PASS on trial running".³⁰⁴ Mr. Manconi testified that he might have said something like that sarcastically, but otherwise would not have made such a comment.³⁰⁵ It is worth noting that this was not a private conversation - the meeting was attended by members of the OC Transpo team and the OLRTC team. It is unlikely that Mr. Manconi would have made a comment like this in front of his team, unless it was meant to be sarcastic. Mr. Lauch could not recall the comment and as a result the context is lost. No favour was ever provided to Mr. Manconi by OLRTC in connection with trial running.

There was no discussion at this meeting regarding changing the criteria for trial running. The changes to the criteria were made over a week later.

However, it is clear that the discussion about Alstom not providing adequate resources to support trial running led Mr. Manconi to immediately take further steps. The WhatsApp for August 9, 2019 includes a message from Mr. Manconi at 4:11 pm stating "It's all part of a bigger strategy that I am bribing [sic] to you. Hang tight please...." and in his next message at 5:37 pm "Everyone please read email I just sent."³⁰⁶

Although Commission counsel suggested to Mr. Manconi during his evidence that the "bigger strategy" related to changing the AVKR criteria, this is simply not the case. The email referred to in the second message exists and is in the record - it is dated August 9, 2019 and was sent by Mr. Manconi at 5:36 pm. It indicates that he is "happy to advise that RTG/RTM has taken our advice and increased resources across the board" and then lists various resourcing commitments made by Alstom which could be used for a call between the Mayor and Alstom's CEO.³⁰⁷ The detail set out in the email includes Alstom's immediate commitment to add resources by way of onboard technicians for trains, vehicle repair, support staff and other individuals.

Following this email, the Mayor called Alstom's CEO, who he advised, was "committed to the plan and resourcing his team has agreed to".³⁰⁸ Mr. Manconi testified that during this period, the Mayor became involved because it was important to obtain the commitments from the top official regarding this resourcing.³⁰⁹ Mr. Lauch testified that "At a board level, we were --we were talking to Mr. Manconi and Mr. Kanellakos and **we were very much hoping that the mayor would place that call [to the Alstom CEO] just because we thought it would provide a bit more leverage.**"³¹⁰ [emphasis added]

³⁰⁴ Email from Peter Lauch re City Meeting Summary, August 7, 2019, ALS0066772, Exhibit 195.

³⁰⁵ Hearing Transcript of John Manconi, June 28, 2022, p. 121-123, line 27-20 and p. 212-213, line 26-6.

³⁰⁶ WhatsApp Chat Log, 16 July 2019 to 31 December 2019, [message 2019-08-09, 4:11:12pm to message 2019-08-09, 6:07:16 pm], COW0593740, Exhibit 206.

³⁰⁷ Email from John Manconi re Alstom/RTG Update, August 9, 2019, COW0451494, Exhibit 169.

³⁰⁸ Email from John Manconi re Alstom/RTG Update, August 9, 2019, COW0451494, Exhibit 169.

³⁰⁹ Hearing Transcript of John Manconi, June 28, 2022, p. 215, line 6-11.

³¹⁰ Hearing Transcript of Peter Lauch, June 29, 2022, p. 99, line 5-8.

As late as August 29, 2019 the City continued to request that Alstom commit additional resources for the Maintenance Term as it had agreed to do.³¹¹

In other words, following the “very, very difficult” meeting on August 7, 2019 the City had succeeded in convincing Alstom to commit further resources to maintenance to assist the trial running process. While the City cannot mandate any staffing levels under the Project Agreement,³¹² it did take steps to obtain various commitments from RTM and Alstom regarding their proposed staffing for Revenue Service. As Mr. Prendergast testified, this was a “watershed moment” for trial running.

10. The Change to the Trial Running Criteria

On August 6, 2019, at 6:07 pm Mr. Charter texted Mr Holder that “Fyi. John is not going to move off the 98%.”³¹³ On August 7, 2019 Mr. Manconi messaged his team at 7:47 am: “Michael two things. Can you send us the language on the PA relating to the 98%. I want a meeting with me you Troy Joce Pat Larry Tom and Pat immediately following OPS readiness.”³¹⁴

It is a reasonable inference from these messages that by this point RTG had raised with Mr. Manconi whether to depart from the AVKR criteria set out in the Test Procedure. Mr. Morgan testified that Mr. Manconi was trying to understand the 98% and whether it was a Project Agreement requirement, given the pass/fail criteria worked out at an earlier point in time.³¹⁵

Mr. Manconi recalled Mr. Lauch asking to return to the 96% used in RFI-O-266. He responded that he would need to work with his team to understand what that would mean and see both agreements. Mr. Manconi’s decision-making style was to get input from all and to review the Project Agreement before coming to a decision. He expected there were multiple meetings on this issue including the experts.³¹⁶

On August 14, 2019 Mr. Lauch emailed Mr. Morgan setting out proposed language for the change to AVKR criteria.³¹⁷ That same day at 9:19 pm John Manconi messaged his team: “Troy Tom Michael Larry Joe Jocelyne 11 am tomorrow RAMP room. Mtg to discuss **Peter’s suggestion.**”³¹⁸ [emphasis added] These contemporaneous communications strongly suggest that it was Mr. Lauch who suggested the change to the criteria. This was in fact the recollection of Mr. Manconi and Mr. Charter.³¹⁹

³¹¹ Email from Troy Charter to John Manconi et al re Resource Plan for Tech’s, August 29, 2019, COW0450734, Exhibit 262.

³¹² Hearing Transcript of Michael Morgan, June 27, 2022, p. 95, line 24-27.

³¹³ Text Messages between Troy Charter and Richard Holder, July and August 2019, p. 5, COMH0000018, Exhibit 194.

³¹⁴ WhatsApp Chat Log City of Ottawa 24 April 2019 to 29 December 2019, message 75, STV0002337, Exhibit 167.

³¹⁵ Hearing Transcript of Michael Morgan, June 27, 2022, p. 43, lines 4-12.

³¹⁶ Hearing Transcript of John Manconi, June 28, 2022, p. 107, lines 5-17, p. 112, lines 6-9.

³¹⁷ Email from Peter Lauch to Michael Morgan Re – AVKR, August 14, 2019, COW0467601, Exhibit 258.

³¹⁸ WhatsApp Chat Log City of Ottawa 24 April 2019 to 29 December 2019, message 286, STV0002337, Exhibit 167.

³¹⁹ Hearing Transcript of John Manconi, June 28, 2022, p. 109, lines 9-11; Hearing Transcript of Troy Charter, July 5, 2022, p. 93-97, line 2-24.

Mr. Gaul reviewed Mr. Manconi's message in advance of the hearing. It refreshed his memory that there had been a meeting at the RAMP room to discuss an OLRTC proposal to change the criteria.³²⁰ He was at the meeting and recalled Mr. Manconi describing the change as something suggested by Mr. Lauch.³²¹ Mr. Charter testified that it was Mr. Lauch who first raised the change to the criteria, not Mr. Manconi.³²² Mr. Manconi recalled it being discussed at a number of meetings, and ultimately that a consensus was reached to agree to the change.³²³ The change was ultimately documented in Mr. Lauch's letter dated August 16, 2019 to Mr. Morgan.³²⁴

Regardless of who first suggested the change, the key question is whether it was reasonable in the circumstances. Mr. Morgan discussed with Mr. Lauch whether the 98% was the right criteria, did the parties agree to something previously and if so was it acceptable to return to those criteria. The City had previously agreed to the numbers in RFI-O-266. "We were still comfortable that those numbers were strong and provided strong criteria for measuring trial running. So, there was no —I would say there was no overriding concern that we were watering down the numbers."³²⁵

Mr. Morgan would not agree that the City should have adhered to the 98% that RTM would be held to in the Maintenance Term: "We had already agreed to numbers that were different than that independently, and relied on experts to come up with those numbers. So the difference between the two, I think, you know the performance deductions between 98 and 97 percent are not significant ... You know, we were trying to be reasonable."³²⁶ The final AVKR of 96.9% was a "sufficiently robust number that you could rely on that to go into service."³²⁷ Those numbers continued to improve in the period after trial running finished and after the line was open to the public.³²⁸

Mr. Prendergast noted he had not been associated with any form of testing of a new piece of equipment or system where the criteria was not looked at and modified. He agreed that the difference between 98% and 96% was not very significant in terms of demonstrating the system's capability.³²⁹ As outlined earlier, Mr. Prendergast had previously advised Mr. Kanellakos that they could keep going until Christmas and that level would never be achieved for any rail system.³³⁰

Both 98% and 96% were high standards to achieve and for a long time Mr. Gaul doubted that 98% was even realistic. From a customer perspective they would never notice a difference between 96 and

³²⁰ Hearing Transcript of Larry Gaul, July 5, 2022, p. 40, lines 1-23.

³²¹ Hearing Transcript of Larry Gaul, July 5, 2022, p. 40, line 13-23.

³²² Hearing Transcript of Troy Charter, July 5, 2022, p. 96, lines 20-23.

³²³ Hearing Transcript of John Manconi, June 28, 2022, p. 110, lines 27-28, p. 111, lines 1-2.

³²⁴ Letter from Peter Lauch to Michael Morgan, August 16, 2019, COW0158931, Exhibit 137.

³²⁵ Hearing Transcript of Michael Morgan, June 27, 2022, p. 44, lines 7-14.

³²⁶ Hearing Transcript of Michael Morgan, June 27, 2022, p. 45, lines 20-25.

³²⁷ Hearing Transcript of Michael Morgan, June 27, 2022, p. 97, lines 11-12.

³²⁸ Hearing Transcript of Michael Morgan, June 27, 2022, p. 97, lines 13-21.

³²⁹ Hearing Transcript of Thomas Prendergast, June 28, 2022, p. 40, lines 28, p. 41, lines 1-3, p. 41, lines 16-28, p. 42, lines 1-2.

³³⁰ Hearing Transcript of Tom Prendergast, June 28, 2022, p. 13, line 1-11.

98%. While the average was now only for 9 out of 12 days, it was still a high bar to set and did not mean that reliability was being sacrificed. This was a new system and no system goes into service with 100% reliability.³³¹

11. The Change from 15 Trains to 13 Trains for Weekday Morning Peak Service

The change from 15 to 13 trains for weekday Morning Peak Service was made because the City had re-evaluated the passenger capacity projections set out in the Operations Service Plan which was an Appendix to Schedule 15-3. That Plan could be changed by the City in its sole discretion at any time.³³²

On September 3, 2018, Mr. Scrimgeour, the scheduling coordinator at OC Transpo, emailed Mr. Manconi about these projections.³³³ Mr. Scrimgeour commented that the Project Agreement projections were based on day one ridership of approximately 10,700 people per hour per direction, that ridership had declined, and current measured bus ridership through the downtown was between 8500 and 9000 people per hour per direction. As a result “it may be acceptable to have fewer trains in service, and a reduced line capacity, for a short period of time.” The email recommended various steps to adapt to reduced availability of trains, including a reduction to 13 trains in morning and afternoon peak.

These ridership projections were revisited in 2019 during trial running. The detailed evidence of the City witnesses on this issue is set out in Appendix “L”. In summary, the changes were made because ridership had declined and the City was satisfied it needed to only run 13 trains during weekday morning peak service. The change would also give RTG more spares for purposes of morning launch.

12. Summary of the City’s Position

In summary, the City responds as follows to the allegations made by Commission counsel in respect of trial running:

- (a) First, as outlined above, during the period leading up to the completion of trial running the System was developing reliability. That included both vehicle reliability and the ability of the maintainer and its subcontractor to respond to problems with trains in service. A snapshot in time in April or June or late July 2019 tells us little or nothing about the reliability of the trains in mid-August 2019. Trial running is not assessed on the basis of adding up all the days passed or failed and dividing by the total – what matters is that ultimately the system meets a certain standard of reliability at the end of the process, not at the beginning.
- (b) Second, there is no evidence that RTG cut corners to complete trial running; its witnesses all testified to the contrary. There was also no evidence of financial hardship on the part of RTG leading it to prematurely seek confirmation that it had met the requirements for RSA.

³³¹ Hearing Transcript of Larry Gaul, July 5, 2022, p. 41, lines 15-27.

³³² Hearing Transcript of Michael Morgan, June 27, 2022, p. 99, lines 20-28, p. 100, lines 1-2.

³³³ Email from Thomas Prendergast to John Manconi Re: Trains and Rideau, September 3, 2018, STV0000292, Exhibit 201.

- (c) Third, the parties jointly developed a robust testing process which included a significant trial running team, detailed written procedures and daily meetings. The trial running team included a member of the IC and outside consultants for the City.
- (d) Fourth, it was RTG that initially chose an AVKR standard of 98%, which Mr. Morgan described as a standard of perfection. The decision to return to the 2017 criteria for AVKR may have been made to assist RTG but it was a not material change. The change in the number of trains in service during morning peak was made on the basis of a reassessment of the City's requirements and gave RTG additional spare vehicles to "make score". In fact, it is a prime example of the parties acting collaboratively.

O. COMMUNICATIONS WITH COUNCIL REGARDING TRIAL RUNNING

1. The Commitment to Update Council at the end of Trial Running

There is no question that City staff advised Council that it was only once RTG had achieved all trial running requirement were complete that staff would inform Council. This is clear from at least four documents:

- (a) the FEDCO presentation dated July 10, 2019, which describes the trial running process and indicates that "Once RTG has achieved all Trial Running Requirements, staff will inform Council."³³⁴
- (b) the memorandum dated July 22, 2019 from Mr. Manconi to the Mayor and members of Council, reporting on RTG's submission of its notice of substantial completion, indicating "Once RTG has achieved all Trial Running Requirements, staff will inform Council and members of Transit Commission."³³⁵
- (c) the memorandum dated July 27, 2019 from Mr. Manconi to the Mayor and members of council, reporting on substantial completion, indicating "Once RTG has achieved all Trial Running Requirements, staff will inform Council and members of Transit Commission."³³⁶
- (d) Mr. Manconi's WhatsApp message at July 28, 2019 "Confirming holding line to media is we will advise council when rtg has completed the 12 consecutive days of testing."³³⁷

Mr. Kanellakos was clear that this was his decision, and that he believed it was consistent with the delegated authority he had been given.³³⁸ He explained that the City's delegation of authority by-law is quite extensive because it's a large, complex organization "and Council delegated most activities to

³³⁴ O-Train Confederation Line Project Update, July 10, 2019, slide 7, COW0104281, Exhibit 234.

³³⁵ City of Ottawa Memo from General Manager, Transportation Services to Mayor and Members of Council et al., July 22, 2019, COW0483089, Exhibit 241.

³³⁶ City of Ottawa Memo from General Manager, Transportation Services to Mayor and Members of Council et al. re RTG Achieves Substantial Completion, July 27, 2019, COW0529052, Exhibit 235.

³³⁷ WhatsApp Chat Log 16 July 2019 to 31 December 2019, [message 2019-07-28, 4:37:49 pm], COW0593740, Exhibit 206.

³³⁸ Hearing Transcript of Steve Kanellakos, July 4, 2022, p. 17, lines 15-28, p. 18, lines 1-25.

staff so that we don't bog down the efficient operation of the City. Otherwise, everything would have to go back to Council and committee on a monthly basis to get approval for fundamental operational issues...".³³⁹ It would not be practical on a project of this magnitude to bring every single issue to Council to debate, for example, technical issues in relation to which Council does not have expertise. It's always a judgement call on information given to Council because it's not black and white. "We don't bring it in piecemeal fashion and in dribs and drabs and threads. We try to bring complete information so that Council has the benefit."³⁴⁰

The City's expert Ms. Bench agreed; she questioned the benefit of reporting during the process, stating that they were possibly matters that could be mentioned in a quarterly report at the appropriate time, but not otherwise. She characterized this as a "matter of professional judgment."³⁴¹

Mr. Kanellakos understood that trial running was a **process**. "It's an exercise of the system. It's not about what happened one day, one hour, or one week. ...So advising people and Council when one day is not [sic] going bad, two days or even three days are going bad is I think an exercise that puts Council in a very difficult position because the testing wasn't done."³⁴² This was a process to exercise the system over a period of time, not on a day-to-day basis.³⁴³ Had the system not passed, Mr. Kanellakos clearly would have gone back and advised Council.

The Commissioner has been urged to play "Monday morning quarterback" and critique Mr. Kanellakos' decision making on this issue. While it would not be appropriate to do so without regard to all of the facts available to Mr. Kanellakos at the time of his decision, even if one could disagree with the judgments made by Mr. Kanellakos, it cannot be disputed on the record that he exercised his delegated authority in good faith, with a view to the best interests of the City.

Mr. Manconi did prepare a draft memorandum dated July 31, 2019 reporting on the fact that there was a pause in trial running³⁴⁴. However, this memorandum was never sent. Mr. Kanellakos instructed Mr. Manconi not to send the memorandum because it was inconsistent with the directive and what he had advised Council.³⁴⁵ Providing this partial information to Council would serve no purpose, because they could not make an assessment of whether it was going to be successful or not, which was the outcome.³⁴⁶ Mr. Kanellakos did not consider this decision to be political nor problematic, he simply did not find it necessary to inform the council every time there was a minor problem during testing.

³³⁹ Hearing Transcript of Steve Kanellakos, July 4, 2022, p. 87, lines 18-22. Even Councillor Deans conceded that the delegation of authority on this project was extensive.

³⁴⁰ Hearing Transcript of Steve Kanellakos, July 4, 2022, p. 89, lines 4-28, p. 90, lines 1-13.

³⁴¹ Affidavit of Mary Ellen Bench sworn July 29, 2022, Exhibit D.

³⁴² Hearing Transcript of Steve Kanellakos, July 4, 2022, p. 23, lines 25-28, p. 24, lines 1-5.

³⁴³ Hearing Transcript of Steve Kanellakos, July 4, 2022, p. 24, lines 2-12.

³⁴⁴ Draft City of Ottawa Memo from General Manager to Mayor and Members of Council et al. Re: RTG postpones Trial Running activities, July 31, 2019, COW0000366), Exhibit 197.

³⁴⁵ Hearing Transcript of Steve Kanellakos, July 4, 2022, p. 51, lines 7-9.

³⁴⁶ Hearing Transcript of Steve Kanellakos, July 4, 2022, p. 116, lines 5-13.

Mr. Kanellakos explained during a November 6, 2019 Transit Commission meeting that the draft memorandum was not sent to Council because staff had advised Council members that an update would only be provided once the testing was done and sending the memorandum to Council would have been inconsistent with staff's reporting plan.³⁴⁷ Mr. Kanellakos later explained his decision not to send the memorandum to Councillors in a FEDCO meeting on December 17, 2021.³⁴⁸

It was suggested to Mr. Kanellakos by Commission counsel repeatedly that in fact City staff ignored his own directive, by reporting on the status of trial running in memoranda dated August 7 and 16, 2019. This is a completely unfair characterization, for these reasons:

- (a) the August 7 memorandum³⁴⁹ was a routine quarterly update (for the second quarter ending June 30) to Council on the status of the Project as a whole. The section on "Systems, Vehicle, Testing and Commissioning" is clearly not about trial running. All the report says about trial running is that it commenced during the week of July 29. Mr. Manconi and Mr. Kanellakos both testified to this effect in his evidence. There was no evidence to the contrary.
- (b) the August 16 memorandum³⁵⁰ is clearly intended to advise the Mayor and Members of Council that there would be a briefing hosted by Councillor Hubley and City staff to provide a further update about trial running. Mr. Kanellakos testified to this effect.³⁵¹

With respect to the memorandum provided to Council on August 23, 2019 reporting on the outcome of trial running,³⁵² Commission counsel suggested to both Messrs. Manconi and Kanellakos that the document was misleading because it did not disclose the changes that had taken place to the criteria during trial running.

Mr. Manconi confirmed that the information found in this memorandum was accurate and was consistent with the IC's final report.³⁵³

Mr. Kanellakos denied the memorandum was misleading. He testified that there was nothing in the Project Agreement about criteria. In fact, Schedule 14 specifically allowed the parties to change the criteria and the criteria evolved as testing went on, as confirmed by Ms. Sechiari.³⁵⁴ As detailed above, the change in the trial running criteria was made jointly by the City and RTG, and it was understood by the City that the change would not compromise safety or reliability.³⁵⁵ Not advising Council of this

³⁴⁷ Transit Commission Meeting, November 6, 2019.

³⁴⁸ Hearing Transcript of Steve Kanellakos, July 4, 2022, p. 116, lines 14-28, p. 117, lines 1-2.

³⁴⁹ City of Ottawa Memo from Director, Rail Construction Program to Mayor and Members of Council Re: O-Train Light Rail Transit Stage 1 and Stage 2 Quarterly Update, August 7, 2019, COW0104401, Exhibit 196.

³⁵⁰ City of Ottawa Memo from General Manager, Transportation Services to Mayor, Members of Council et al., August 16, 2019, RTC00759323.0001.0002, Exhibit 236.

³⁵¹ Hearing Transcript of Steve Kanellakos, July 4, 2022, p. 27-28, line 13-7.

³⁵² City of Ottawa Memo from City Manager to Mayor and Members of Council Re – O-Train Confederation Line Trial Running, August 23, 2019, COW0104291, Exhibit 205.

³⁵³ Hearing Transcript of John Manconi, June 28, 2022, p. 204, lines 1-15.

³⁵⁴ Hearing Transcript of Monica Sechiari, July 4, 2022, p. 175-176, line 23-25.

³⁵⁵ Hearing Transcript of Steve Kanellakos, July 4, 2022, p. 31, lines 15-28, p. 32, lines 1-28, p. 33, lines 1-19.

change did not amount to misleading Council - Council was never advised what the criteria would be or that the criteria could not change during the normal course. As Mr. Kanellakos repeatedly testified: “We never stated that to them. We never got into that level of detail.”³⁵⁶

In short, the City Manager made a reasonable decision, wholly within his delegated authority, and in good faith, based on what he understood of the trial running process that it would be unhelpful to give Council ongoing updates during trial running and that staff should wait until trial running was over to provide the information. The August 23, 2019 memorandum was accurate; however, it did not disclose information about the changes made to the criteria because this was information that was unnecessary for Council to be provided with, given they were not involved in any of prior steps regarding the criteria. Again, operational decisions at a municipality are made by staff. FEDCO’s oversight of the Project would not have been improved by giving Councillors daily information about the details of trial running as it was taking place.

2. The Evidence of the “City Panel” Councillors and Transit Commissioner Wright Gilbert

Commission counsel chose to interview an unrepresentative group of councillors (and one citizen transit commissioner) who are typically in the minority vote for major issues and vocal critics of those who typically vote with the majority of Council, and specifically of Mayor Watson. It then chose three of those critics to present their already well-publicized views during the public hearings as the majority of the “City Panel”. The panel format was not well suited for this purpose and did not reflect the majority view of Council. Also, it is usually independent expert witnesses who testify in panels.

It is not surprising that these individuals testified that they were not given adequate information and that Councillor Deans testified that her impression was that the August 7, 2019 memorandum was misleading. It should be noted that Councillor Hubley disagreed and testified that he felt as a Committee chair he was satisfied with the amount of information he was given and believed it was accurate.³⁵⁷ Councillor McKenney, who also saw the memorandum, characterized it as “an indication from staff that they were continuing to move forward.”³⁵⁸

Several of the Councillors who participated in the panel testified that information withheld about trial running would have assisted them in fulfilling their oversight role. However, the key question is what that oversight role consisted of with respect to trial running. First, and as detailed above, there was no requirement in the delegation of authority that City staff seek guidance from Council on trial running or any other specific aspect of the design and construction process. As indicated earlier, other key decisions were made by Staff without any advance consultation with Council.

³⁵⁶ Hearing Transcript of Steve Kanellakos, July 4, 2022, p. 33, line 28, p. 34, lines 1-3.

³⁵⁷ Hearing Transcript of Councillor Panel, June 29, 2022, p. 193, line 10-14.

³⁵⁸ Hearing Transcript of Councillor Panel, June 29, 2022, p. 173, line 13-20.

More importantly, having Councillors debate technical issues, when they lack the technical knowledge possessed by City staff and its advisors, not only would have been unproductive, it could have risked improper and misinformed decisions being made. It is not the role of Council to weigh technical or operational issues and come to a decision regarding a path forward – that is the role of City staff and its advisors. As Ms. Bench put it in her opinion, “[t]hese are very technical matters that require expert decisions to be made in a short time period, and it would be improper to ask Council to make decisions that require technical expertise.”³⁵⁹ That a group of Councillors who do not reflect the majority view complained they were not as involved as they think they should have been is hardly evidence of a failure by the City Manager to respect his delegated authority or the role of Council.

In addition, where Council wants more specific oversight, it makes the decision by majority vote. Council was aware that Mr. Kanellakos made the decision not to provide updates during trial running. Council could have voted at any time to request more frequent updates or a change to the oversight and reporting but did not do so.

3. The WhatsApp Chat Involving the Mayor, his Staff and Councillor Hubley

On July 16, 2019 Mr. Manconi’s staff set up a WhatsApp messaging group that included Mr. Kanellakos, Councillor Hubley, the Mayor’s chief of staff Serge Arpin, and members of the Mayor’s staff. The Mayor himself was not added to the messaging group until October 23, 2019.³⁶⁰

The purpose of setting up this chat this was to keep the members informed, to update them - these were their committees and their files and they asked for updates.³⁶¹ Mr. Manconi indicated that the messaging app was for general information sharing; not about debating topics.³⁶² It was not a decision-making forum.³⁶³

As outlined above, it was the opinion of Ms. Bench that it was consistent with municipal governance and practice for the Mayor’s staff and Councillor Hubley to receive updates on trial running through WhatsApp messages that were not provided to other members of Council. She reviewed all the messages and saw nothing unusual or unexpected in what was communicated.

4. The Late Production of the WhatsApp messages

In response to a complaint from Commission counsel about late production of the WhatsApp records, counsel for the City advised by letter dated June 22, 2022³⁶⁴ of the process worked out between the

³⁵⁹ Affidavit of Mary Ellen Bench sworn July 29, 2022, Exhibit D

³⁶⁰ WhatsApp Chat Log 16 July 2019 to 31 December 2019, [message 2019-10-23, 3:25:29 PM] COW9593740, Exhibit 206.

³⁶¹ Hearing Transcript of John Manconi, June 28, 2022, p. 135, lines 8-12, 21-24.

³⁶² Hearing Transcript of John Manconi, June 28, 2022, p. 136, lines 12-13.

³⁶³ Hearing Transcript of Steve Kanellakos, July 4, 2022, p. 60, line 20-21 and p. 93-94, line 27-21.

³⁶⁴ Letter from Singleton Reynolds LLP to the Commission dated June 22, 2022, included in Appendix “M” – Singleton Reynolds Letters.

City and the Commission regarding document production. At no time did the Commission require that the City go beyond that agreement to locate and produce text or chat messages on personal devices of City representatives. Once one of the other participants to the Inquiry advised the City of the existence of WhatsApp chat messages, the City took appropriate steps to search and produce additional messages which could be recovered from the cellphones of various individuals.³⁶⁵

It was suggested to Mayor Watson that during his Commission interview he should have disclosed the existence of the WhatsApp messaging³⁶⁶. This was an unfair suggestion - nothing was drawn to the Mayor's attention during his formal interview or at any other point that would have led him to consider WhatsApp messages which he no longer had in his possession. Commission counsel added to the unfairness by suggesting as fact that when Mayor Watson was added to the chat in October 2019 "you had access to the whole thing, because that's the way it works when you get added."³⁶⁷ Not only was there no evidence to this effect; the later evidence of Mr. Kanellakos was that this was not how it worked.³⁶⁸

5. The City's Records Management Policy

The City has a records management policy which provides that the city has two types of records: Official Business Records and Temporary Records.³⁶⁹ Official Business Records are work-related decisions and actions including emails, charts, presentations, briefing notes, etc. "OBRs provide evidence of City decisions and decision-making, policies, procedures, services, operations...". These records have to be captured and classified in the City's record-keeping systems. Temporary records on the other hand "are of limited usefulness and can be destroyed immediately or when no longer needed". A temporary record is described as one of limited usefulness, created or received by staff in carrying out their activities, and which has no value beyond an immediate and minor action and are not required to meet legal or fiscal obligations.³⁷⁰

The WhatsApp messages from 2019 could be described as informational and did not involve decision-making, rather, a quick way of getting information back and forth to individuals.³⁷¹ These were temporary records which are transitory in nature, as they do not involve decision-making and as a result do not need to be kept. WhatsApp is an information sharing forum.³⁷²

³⁶⁵ Letter from Singleton Reynolds LLP to Commission Counsel dated June 19, 2022, included in Appendix "M" – Singleton Reynolds Letters.

³⁶⁶ Hearing Transcript of The Honourable Mayor Jim Watson, June 30, 2022, p. 146, lines 18-28, p. 147, lines 1-23.

³⁶⁷ Hearing Transcript of The Honourable Mayor Jim Watson, June 30, 2022, p. 147, lines 7-10.

³⁶⁸ Hearing Transcript of Steve Kanellakos, dated July 4, 2022, p. 97, lines 9-21.

³⁶⁹ City of Ottawa Records Management Policy, June 6, 2003 revised April 12, 2021, COMH0000053.

³⁷⁰ City of Ottawa Records Management Policy, June 6, 2003 revised April 12, 2021, COMH0000053.

³⁷¹ Hearing Transcript of The Honourable Mayor Jim Watson, June 30, 2022, p. 276, lines 20-25, p. 279, lines 19-20, p. 137, lines 10-11.

³⁷² Hearing Transcript of Steve Kanellakos, dated July 4, 2022, p. 97, lines 14-17, p. 94, lines 2-21.

It follows that no one involved in the WhatsApp messaging had any obligation to retain them under the City's policy. Criticism of City employees and the Mayor for not providing these messages to Commission counsel is unwarranted.

6. Mayor Watson Did Not Interfere with Staff Decision-Making or Intentionally Mislead Council

There is nothing in the WhatsApp messages of the OC Transpo team demonstrating that Mr. Manconi was being pressured to open the system prematurely by Mayor Watson.

Likewise, with respect to the messages involving members of the Mayor's staff, they certainly reflect that the Mayor had a keen interest (as he admitted) and desire to be updated daily on the progress of trial running.³⁷³ However, there is nothing in the messages demonstrating any pressure or direction from the Mayor.

Mr. Manconi confirmed this. While the Mayor is known for wanting a granular level of detail, asking a lot of questions, and wanting to understand the detail,³⁷⁴ he did not get into dictating trial running protocols. "The Mayor was not exerting pressure on me to get the system open. The Mayor and others wanted the system open, but they were not exerting pressure on me to do anything to get the system open."³⁷⁵ Regular texting from the Mayor (in fact it was from his staff) was not pressure on him to achieve RSA.³⁷⁶

Mayor Watson testified to the same effect: "Well, I was very clear in that period of time leading up to trial running that my number one priority was to ensure that we had a safe, and secure, and reliable system, so safety trumped everything else. So obviously, as time went on and we saw more and more challenges until we finally got trial run completed, I continued to be briefed and express my concerns and ask questions, and relied on the professional staff and consultants that we had to make sure that we had a system that was reliable, and safe, and secure".³⁷⁷

As outlined above, the Mayor occupies a special role in municipal governance and as such needs to be briefed regularly on operational matters, which is all that occurred in this case.

The tort of deceit requires a false representation of fact, made with knowledge of its falsehood, or recklessly, without belief in its truth; see *Fiorillo v. Krispy Kreme Doughnuts Inc.* 2009 CarswellOnt 3344. There is no basis on the evidence to conclude that Mayor Watson participated in the reporting made by Staff to Council about trial running, or that he knew it was false or acted recklessly, without belief in the truth of the reporting. There is also no evidence that he made a false representation to

³⁷³ Hearing Transcript of The Honourable Mayor Jim Watson, June 30, 2022, p. 111, lines 20-25.

³⁷⁴ Hearing Transcript of John Manconi, June 28, 2022, p. 153, lines 12-14.

³⁷⁵ Hearing Transcript of John Manconi, June 28, 2022, p. 155, lines 23-25.

³⁷⁶ Hearing Transcript of John Manconi, June 28, 2022, p. 156, lines 1-11.

³⁷⁷ Hearing Transcript of The Honourable Mayor Jim Watson, June 30, 2022, p. 117, lines 10-16.

Council. At its highest, the allegations involving the Mayor involve alleged failures on his part to inform Council of the details he knew of operational matters. **This does not amount to intentional wrongdoing.**

7. There Was No Information Provided to Mayor Watson That Needed to Be Shared with Council

Trial running was a dynamic process in which the objective was to meet a certain set of criteria by a point in time. The fact that there were failures or restarts along the way was irrelevant if the system ultimately met the criteria established by the parties and approved by the IC. If this position is accepted then nothing which took place during trial running required reporting to Council – all that mattered is reporting on the outcome, as Mr. Kanellakos explained.

Although Mayor Watson was not asked directly about his understanding of this aspect of trial running, his evidence is certainly consistent with it. He testified that while he at various points received information that caused him concern, he also had reason to be reassured. If he had felt action was needed in any area, he would have raised it with the City Manager.³⁷⁸ The Mayor had some degree of concern through trial running, was well-briefed by his staff, but was not involved in the details of the testing system because he did not have the expertise. If he believed there was something improper or unsafe, he would have taken action by meeting with the appropriate parties within the City.³⁷⁹ When it came to the criteria, 2017 versus 2018, nine days versus 12, 98 or 96, all of that information would have been handled by the staff and not by the politicians.³⁸⁰

P. ACHIEVEMENT OF REVENUE SERVICE AVAILABILITY

The Project Agreement sets out the requirements for Revenue Service Availability at Section 1.589. These requirements include, among other conditions, that the Substantial Completion requirements and the Schedule 15-13 maintenance and rehabilitation requirements have been achieved, RTG is compliant with testing and commissioning requirements, and the safety requirements have been met.³⁸¹

On August 30, 2019, RTG delivered its Revenue Service Availability Notice which stated that RTG was of the opinion that the requirements of RSA had been satisfied as of August 30, 2019.³⁸² RTG also stated in the notice that it looked forward to the official launch of the line on September 14, 2019 indicating that in its view the system was ready for launch.

³⁷⁸ Hearing Transcript of The Honourable Mayor Jim Watson, June 30, 2022, p. 117, lines 17-24.

³⁷⁹ Hearing Transcript of The Honourable Mayor Jim Watson, June 30, 2022, p. 133, lines 11-28, p. 134, lines 104.

³⁸⁰ Hearing Transcript of The Honourable Mayor Jim Watson, June 30, 2022, p. 141, lines 25-27.

³⁸¹ Project Agreement, Schedule 1, Section 1.589, COW0000281, page 55, Exhibit 133.

³⁸² Revenue Service Availability Notice, August 30, 2019, COW0159308, Exhibit 135.

Mr. Lauch testified that sending the RSA Notice represented to the City that the system was available for revenue service and safe for the public.³⁸³ He confirmed that the RSA Notice signified that RTG was prepared to provide reliable service.³⁸⁴ Mr. Guerra testified that it is RTG who delivers the RSA Notice which confirms that the system is ready for use.³⁸⁵

Mr. Holder testified that the City relied on the RSA Notice with respect to revenue service and launch and that the notice provided the City with confirmation from RTG that they were ready for revenue service availability and passenger service.³⁸⁶ Mr. Holder further testified that nobody had indicated to the City that the system was not safe prior to its launch and the City believed that it received accurate information from RTG about the system readiness for RSA.³⁸⁷

Mr. Kanellakos stated in relation to the RSA Notice, that he had a running conversation with City staff about RTG having to meet the certification requirements, and it was a non-starter that the City would move forward without these being achieved: “everyone understood that the mission was for RTG to meet the requirement of a safe and reliable system and get those certificates. There’s no way we could launch without having those signoffs. It was a non-starter.”³⁸⁸ Mr. Manconi testified that before the City accepted Revenue Service Availability, he held a meeting with all staff, advisors, and outside experts and canvassed them about whether the City was ready to accept Revenue Service Availability. Mr. Manconi agreed that the response from everyone, including all the outside consultants, was that the City was ready and it was time to proceed to revenue service availability.³⁸⁹

The systems integration requirements were fully satisfied by Revenue Service Availability. As multiple witnesses confirmed, when RSA was achieved and the system was launched, it was safe, fit for use and compliant with the Project Agreement.³⁹⁰ On August 26, 2019, RTG provided the City with a testing conformance letter³⁹¹ and a final system completion letter,³⁹² both signed by RTG’s CEO, Mr. Lauch which enclosed a letter from Mr. Nadon, OLRTC’s Testing and Commissioning Director, and signed and sealed by Mr. Bergeron. The letters confirmed that “the system is in general compliance with the PA requirements, drawings and system architectures, which will perform together and be safe for use, operation and maintenance, as required”.³⁹³ A more complete summary of the

³⁸³ Hearing Transcript of Peter Lauch, dated June 29, 2022, p. 100, lines 11-20.

³⁸⁴ Hearing Transcript of Peter Lauch, dated June 29, 2022, p. 100, lines 18-20.

³⁸⁵ Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 98, lines 24-26.

³⁸⁶ Hearing Transcript of Richard Holder, dated June 23, 2022, p. 129-30, lines 27-4.

³⁸⁷ Hearing Transcript of Richard Holder, dated June 23, 2022, p. 130, lines 6-9.

³⁸⁸ Hearing Transcript of Steve Kanellakos, dated July 4, 2022, p. 121, lines 20-26.

³⁸⁹ Hearing Transcript of John Manconi, dated June 28, 2022, p. 208, lines 9-20.

³⁹⁰ Hearing Transcript of Jacques Bergeron, June 21, 2022, p. 154-155, lines 25-28, 1-5. Hearing Transcript of Lowell Goudge, June 21, 2022, p. 65, line 6-10. Hearing Transcript of Richard Holder, p. 113, lines 22-27. Hearing Transcript of Peter Lauch, p. 102, lines 2-5. Hearing Transcript of Jacques Bergeron, p. 148, lines 17-22. Hearing Transcript of Matthew Slade, p. 85-86, lines 21-28, 1-2. Hearing Transcript of Peter Lauch, p. 102, lines 11-14

³⁹¹ Testing Conformance Letter from RTG to the City August 26, 2019 COW0436983, Exhibit 104.

³⁹² Final System Completion Letter from RTG to the City, August 26, 2019, COW0159023, Exhibit 134.

³⁹³ Testing Conformance Letter from RTG to the City, August 26, 2019, COW0436983, Exhibit 104.

evidence relating to the satisfaction of systems integration requirements can be found at Appendix “N”.

The parties entered into a Revenue Service Availability Term Sheet on August 30, 2019 to document the agreement between RTG and the City with respect to the achievement of Revenue Service Availability in relation to the Project Agreement.³⁹⁴ In particular, the agreement confirmed the completion of Trial Running based on the agreed upon criteria and the achievement of RSA with 13 double car trains. The RSA Term Sheet also set out a number of technical deliverables, and an agreement for increased monitoring and set-offs for the delivery of four vehicles and the completion of certain mitigated works.

The RSA Term Sheet also expressly addressed what would happen if RTG did not achieve RSA by September 15, 2019. Specifically, RTG would be required to provide a Proposed Date for RSA pursuant to Section 26.7 of the Project Agreement by October 7, 2019. Accordingly, any suggestion that the City, after having dealt with RTG missing four previous RSA dates, was going to grant RSA regardless of whether it had actually been achieved is baseless.

In his testimony, Mr. Kanellakos openly acknowledged that there was eagerness, excitement and expectation that the line would open from many quarters, but distinguished that from political interference in his decision to recommend opening of the line. The Mayor constantly told him not to put the line into service unless it was safe and reliable. Mr. Kanellakos stated that “quite frankly, receiving that kind of pressure would not have swayed what my decision would be because I could not succumb to any pressure based on the fact that I still needed the IC and ICA Certificates to be able to launch the train. I didn’t have that discretion to launch something despite when people wanted it launched without the establishment that it was safe and reliable by the people that were hired and that were retained with their expertise to make that judgement.” He further stated that “we were fully prepared to delay the launch and put it another date. In fact, that was contemplated because RTG would have had to give us another date by September 15th that they missed the August” date.³⁹⁵

Mr. Lauch, the Technical Director and later CEO of RTG, also agreed in the hearing that Section 4 of the August 30, 2019 RSA Term Sheet indicated that both parties appreciated that the achievement of RSA could extend well into the fall, which Lauch agreed contradicted any suggestion that the City was desperate to launch the system even if it was not ready.³⁹⁶

³⁹⁴ Revenue Service Availability Term Sheet, August 30, 2019, RTG00151032, Exhibit 141.

³⁹⁵ Hearing Transcript of Steve Kanellakos, dated July 4, 2022, p. 97-99, lines 25-5.

³⁹⁶ Hearing Transcript of Peter Lauch, dated June 29, 2022, p. 93, lines 1-14.

Q. SYSTEM READINESS FOR OPERATION

1. OC Transpo Operator Training

In relation to the training of OC Transpo operators and controllers, Mr. Duquette stated in his interview “Yes. I actually have a lot of confidence in our operators and controllers. They’ve been, like I’ve said, the unsung hero of this whole three year operations. And we continually do things to improve their skill.”³⁹⁷

In fact, as a result of the delay there was more time to train than was originally planned. According to Mr. Gaul, the operators and controllers “...far exceeded the hours that were required for certification.”³⁹⁸ All of the practice running experience, even at less than 15-train service scheduled for the weekday morning peak period, was good training for operators that should not be discounted. Including trial running and the practice-running periods before and after trial running, the operators got a full 8-weeks of practice running that Mr. Gaul identified as being ideal, or very close to it.³⁹⁹

Mr. Duquette stated that due to the delays that occurred in the testing and commissioning process “...we had longer to train people. We had more exposure to more failures, which, even to this day, our senior operators can coach some of our junior operators to things that they would rarely see on the line because of that exposure... I saw it from the other perspective. It actually gave us some advantages, the delays.”⁴⁰⁰

Mr. Charter stated in his interview that the delays allowed OC Transpo staff to become more experienced: “...originally I think it was May 2018, and we didn’t launch until September 2019. So just by that nature alone, there was more time driving trains, more time for our staff to become experienced in driving the trains, and more of an opportunity to develop troubleshooting materials and those types of things.”⁴⁰¹ Mr. Palmer testified that the operators were ready for launch – they demonstrated that they could deal with anything thrown at them by the system. He was of the view that they had reached a threshold with which they were safe and okay to operate the system.⁴⁰²

2. Assurances that the System was Safe For Public Use and Ready for Revenue Service

The City took all necessary and appropriate steps possible with respect to safety oversight throughout the design and construction phase of the Project. For example, the City retained the Independent Safety Auditor to provide a Safety Report prior to launch to confirm that the Project Agreement requirements had been met and the System was safe for public use.

³⁹⁷ Formal Interview Transcript of Duane Duquette, dated May 17, 2022, p. 141, lines 2-7.

³⁹⁸ Hearing Transcript of Larry Gaul, dated July 5, 2022, p. 58, lines 27-28.

³⁹⁹ Hearing Transcript of Larry Gaul, dated July 5, 2022, p. 59-60, lines 10-6 and p. 71-73, lines 7-8.

⁴⁰⁰ Formal Interview Transcript of Duane Duquette, dated May 17, 2022, p. 80, lines 1-9.

⁴⁰¹ Formal Interview Transcript of Troy Charter, dated April 13, 2022, p. 65-66, lines 18-1.

⁴⁰² Hearing Transcript of Parsons Panel, dated June 22, 2022, p. 153-154, lines 21-1.

Having been assured by Alstom that there would be sufficient maintenance resources for revenue service and with training having been successfully completed, the City looked to the documentation and certificates provided by RTG and its Subcontractors which assured the City that the system had been built in accordance with the Project Agreement requirements, was safe for public use and ready for revenue service.

Mr. Manconi stated at the hearing that the conditions of RSA required a safety certificate and bill of sale with respect to each Vehicle, and there also had to be a certificate from the Independent Safety Auditor upon RSA.⁴⁰³ On September 13, 2019, the Independent Safety Auditor issued its final report, which concluded that the “development and implementation of the safety and security requirements are sufficient for passenger carrying operations”.⁴⁰⁴ The report further stated that “given the scope and the findings of the safety audit report, as summarized above, the audit report supports the use of the OLRT for passenger carry operations”. As Mr. Mammoliti explained, the message from this conclusion was that, from a safety perspective, the System was fit for purpose based on the body of evidence reviewed (which included the Engineering Safety Assurance Case and the Reliability, Availability and Maintainability Report).⁴⁰⁵

Mr. Slade, the Project Director for OLRTC, agreed that ultimately, the Independent Certifier provides a certificate of RSA if she determines that the conditions have been satisfied, and that the phrase “Revenue Service Availability” means that the system is ready for passenger service and safe and fit for its intended use.⁴⁰⁶ In Mr. Slade’s formal interview, he stated “RTG, OLRTC, we went through Substantial Completion, we went through trial running, we had the independent certifier that all said, it’s ready. It meets the requirements. It’s safe.”⁴⁰⁷

In the hearing, Mr. Lauch agreed that the many letters and certificates provided to the City by RTG to support it’s achievement of RSA, including key elements such as the Fleet Safety Certificate, the Track Safety Justification Report, the Engineering Assurance Safety Case, the Safety Audit Report, the Testing Conformance Letter and the Final System Completion Letter were signed and sealed by many engineers, and meant that the system was ready, safe and reliable for revenue service, and that the system was safe for public use.⁴⁰⁸

With respect to the documentation provided, the City received dozens of certificates and documents many of which were signed and sealed by engineers with an Ontario P.Eng. designation. Some of the

⁴⁰³ Hearing Transcript of John Manconi, dated June 28, 2022, p. 207-208, lines 27-8.

⁴⁰⁴ TUV Rheinland Rail Safety Consulting Safety Audit Report of the Ottawa Stage 1 LRT System Rev. 5, September 13, 2019, COW0536897, Exhibit 131.

⁴⁰⁵ Hearing Transcript of Derek Wynne and Sergio Mammoliti, dated June 30, 2022, p, 72, line 1-9. Mr. Berrada provided further evidence with respect to the City’s compliance with various regulatory processes. Formal Interview Transcript of Sam Berrada, dated April 25, 2022 and Formal Interview Transcript of Sam Berrada, dated May 5, 2022.

⁴⁰⁶ Hearing Transcript of Matthew Slade, dated June 24, 2022, p. 85, lines 17-26.

⁴⁰⁷ Formal Interview Transcript of Matthew Slade, dated May 5, 2022, p. 104, lines 15.20.

⁴⁰⁸ Hearing Transcript of Peter Lauch, dated June 29, 2022, p. 101-102, lines 11-17.

primary documents included the Reliability, Availability and Maintainability Report,⁴⁰⁹ the Engineering Safety and Assurance Case,⁴¹⁰ the Final Systems Completion Letter,⁴¹¹ the Testing Conformance Letter,⁴¹² the Fleet Safety Certificate⁴¹³ and the Safety Audit Report.⁴¹⁴ A complete list of the certificates, reports and documents received by the City can be found at Appendix “O”.

RTG also prepared an Operational Restrictions Document which set out a number of recommendations with respect to operations and maintenance. The evidence provided during the hearing was that the substance of the recommendations relating to operations and maintenance have been implemented. Mr. Richards stated that the relevant portions of the Operational Restrictions Document were incorporated into the Hazard Log.⁴¹⁵ Mr. Guerra, stated that the information contained in the Operational Restrictions Document was included into RTM’s own operations documents as a step taken to ensure it was consistently implemented.⁴¹⁶

Mr. Liu of Alstom stated that Operational Restrictions Document recommendations were already being implemented prior to his arrival on the project in May 2020.⁴¹⁷ He gave examples of how the recommendations were being followed including: rail wear visual inspection as part preventative maintenance on the track, ultrasonic testing, monitoring of the wheel profile wear rates through visual inspection, measurement of the wheel profile and reprofiling of the wheels to the nominal wheel profile, and monitoring the effectiveness of the LRV-mounted lubricators.⁴¹⁸ In addition, Mr. France testified that the recommendations in the Operational Restrictions Document have and are being addressed.⁴¹⁹

During the hearing, no witness testified that the City, RTG and/or its subcontractors had failed to comply with the recommendations or that any issue arose in relation to the Operational Restrictions Document, nor was any technical or expert evidence proffered to support the suggestion that the performance issues and derailments during the Maintenance Term were related in any way to the Operational Restrictions Document.

⁴⁰⁹ OLRTC OLRT Reliability, Availability and Maintainability Report, May 23, 2019, ALS0012333, Exhibit 132.

⁴¹⁰ OLRT Project Confederation Line Phase 1 Engineering Safety and Assurance Case, August 16, 2019, ALS0084164, Exhibit 094.

⁴¹¹ Final Systems Completion Letter from RTG to the City, August 26, 2019, COW0159023, Exhibit 134.

⁴¹² Testing Conformance Letter from RTG to the City, August 26, 2019, COW0436983, Exhibit 104.

⁴¹³ Alstom Fleet Safety Certificate, September 11, 2019, COW0593678, Exhibit 96.

⁴¹⁴ TUV Rheinland Rail Safety Consulting Safety Audit Report of the Ottawa Stage 1 LRT System Rev. 5, September 13, 2019, COW0536897, Exhibit 131.

⁴¹⁵ Hearing Transcript of Brandon Richards, dated July 6, 2022, p. 120-121, lines 19-18, 1-12.

⁴¹⁶ Hearing Transcript of Mario Guerra, p. 53, lines 7-22.

⁴¹⁷ Hearing Transcript of Yang Liu, dated June 24, 2022, p. 174, lines 17-20.

⁴¹⁸ Hearing Transcript of Yang Liu, dated June 24, 2022, p. 174-175, lines 23-28, 1-7.

⁴¹⁹ Hearing Transcript of Richard France, dated July 6, 2022, p. 31, lines 12-18.

Mr. Wynne initially suggested he was concerned that the Operational Restrictions Document was not being followed, but he admitted that he was not involved in maintenance or operations and had no direct involvement or knowledge regarding whether the recommendations were being implemented.⁴²⁰

Mr. Wynne agreed in the hearing that he based his initial concern on a single meeting with RTM management, and that he was not involved or engaged in doing due diligence or walking along the railway to inspect maintenance activities. Mr. Wynne stated that he has no knowledge as to whether or not Alstom is actually performing the recommendations in the Operational Restrictions Document.⁴²¹

Accordingly, the City was assured by RTG that the system was ready for operation. No evidence was proffered by witnesses during the Commission that the system was not ready for operations or that it has ceased to be safe for operation.⁴²² Further the City and RTG implemented the operational and maintenance recommendations contained in the Operational Restrictions Document and no credible evidence to the contrary was proffered.

In addition, the City's safety oversight referenced above continued during the Maintenance Term, including by the City's Chief Safety Operator, Brandon Richards who provided detailed oversight with respect to the safe operation of the system. In addition, he worked collaboratively with Mr. Berrada who performed regulatory and risk-based monitoring of the system. Mr. Berrada is an industry expert who has played a key role in assessing safety issues.

R. THE LAUNCH OF THE SYSTEM ON SEPTEMBER 14, 2019

1. No Political Interference with Launch Date

On June 18, 2019 the Mayor met with representatives of RTG and Alstom, including Alstom's CEO, who had come from France for the meeting, and executives from EllisDon and Dragados. Following the meeting, the Mayor held a press conference.

RTG's counsel suggested to the Mayor that based on a news article⁴²³ he had told the press conference "without equivocation" that the system was going to open in September. "I am suggesting that you planted a flag. You made a line in the sand when you committed the City of Ottawa and its partners to opening in September before there was any sign or comfort yet that in fact they could meet substantial completion and trial running in that timeframe".⁴²⁴

⁴²⁰ Hearing Transcript of Derek Wynne, dated June 30, 2022, p. 78-79, lines 21-28, 1-11.

⁴²¹ Hearing Transcript of Derek Wynne, dated June 30, 2022, p. 79-80, lines 27-28, 1-24

⁴²² Mr. Mammoliti testified that he had no evidence that the content of the recommendations in the Operational Restrictions document were not followed (Hearing Transcript of Derek Wynne and Sergio Mammoliti, dated June 30, 2022, p. 70, line 24-28.

⁴²³ Article – Builder of Ottawa LRT sets new handover date of Aug. 16, July 10, 2019, COMH000052, Exhibit 238.

⁴²⁴ Hearing Transcript of The Honourable Mayor Jim Watson, June 30, 2022, p. 238, lines 3-5, p. 242, lines 18-21.

While this may have made for great theatre, it was not accurate. The article in fact made it clear that **RTG** had advised OC Transpo that it would hand over the system to the City on August 16, 2019. A second article reporting on the same news conference stated that at the meeting RTG had represented to the City that “it will now hand over the 2.1 billion Confederation Line in the second or third week of August...”.⁴²⁵

Mayor Watson confirmed that these representations formed the basis on which he provided the information about a September 2019 launch date in the press conference. The executives who attended the meeting were all aware of the steps needed under the contract to get to RSA, and made those representations nonetheless.⁴²⁶ Three weeks later, on July 9, 2019, RTG did in fact commit in writing that it would achieve RSA by August 16, 2019, **a date that it then missed.**⁴²⁷ The Mayor did not publicly announce the September 14, 2019 launch date until the end of trial running. In other words, if any party was being irresponsible about setting dates it was RTG, not the City.⁴²⁸

Finally, Mr. Charter’s evidence was that while there was a target date that the City wanted to land on for launch around September 14, that date was not officially confirmed until the completion of trial running. If a decision had been made on the last day of trial running to push the public launch back, there would have been some adjustments to be made to bus service, communications with the public, and dialogue with the union. It would have been a challenge but something OC Transpo was prepared to do.⁴²⁹

Mr. Slade asserted in his evidence that he was “surprised” to learn on August 30 that the launch date was September 14, only two weeks later, after he had understood that the launch would not take place until Q4 of 2019.⁴³⁰

But this was not the case. First, Exhibit 138, an email dated June 24, 2019 from Mr. Lauch to OLRTC’s executive committee regarding a meeting between RTG and the City to discuss the launch schedule, suggests OLRTC understood that there would be a three week period between RSA and launch.⁴³¹

Second, Mr. Slade was mistaken about the August 30 date, as he admitted in cross-examination. After the completion of trial running on August 23, 2019, the Mayor announced the launch date of September 14 that same day.⁴³² And Mr. Slade could not have been shocked, as OLRTC already knew

⁴²⁵ Article – RTG promises to hand over LRT to city in August, June 18, 2019, COMH0000048, Exhibit 239.

⁴²⁶ Hearing Transcript of The Honourable Mayor Jim Watson, June 30, 2022, p. 270, lines 23-28, p. 271, lines 1-24.

⁴²⁷ Letter from RTG to City of Ottawa, July 9, 2019, COW0523354, Exhibit 240.

⁴²⁸ Hearing Transcript of The Honourable Mayor Jim Watson, June 30, 2022, p. 273, lines 27-28, p. 274, lines 1-25.

⁴²⁹ Hearing Transcript of Troy Charter, July 5, 2022, p. 104, lines 10-28, p. 105, lines 1-15.

⁴³⁰ Email from Peter Lauch to OLRTC’s executive committee re Executive Committee Meeting, June 24, 2019, RTC00885419.0001, Exhibit 138.

⁴³¹ In addition, as publicly reported, in June 2019 RTG planned to hand over the LRT to the City in August 2019 and the City planned to open the System in September 2019 (see Article – RTG promises to hand over LRT to city in August, June 18, 2019, COMH0000048, Exhibit 239).

⁴³² Hearing Transcript of Matthew Slade, dated June 24, 2022, p. 108, lines 2-18.

that the City wanted a three week period before launch. Based on the evidence of other witnesses at the hearing, as detailed above, Mr. Slade's statements on this issue should be disregarded.

2. Three Week Bedding In Period Followed by Three Weeks of Parallel Bus Service

From the end of trial running on August 22, 2019 until revenue service commencement on Saturday, September 14 there was a three week period where the trains continued to be run every day. In Dallas, there was a "practice running period" of four weeks to simulate revenue service between handover and launch on the opening of the new system, and as little as two weeks for extensions. In Ottawa, there was a week of practice running with 15 trains before trial running and then a further three weeks of practice running after trial running had concluded.⁴³³

It is not unusual to open a full system and feed buses into the system on opening day. By having parallel bus service for the first three weeks, there was a soft opening and riders had the opportunity to get on the train and try it out.⁴³⁴ Mr. Gaul described this period as "...it gave the City and RTM three extra weeks of running trains that weren't being tested to their full capacity."⁴³⁵

The City took the full three weeks after trial running to operate the system and to verify that things were working as required. During the period where the system was open and there was parallel bus service, the service ran quite well and achieved 98%, so the City was further satisfied.⁴³⁶

More than 90 drills took place in the period between RSA and launch and dress rehearsals took place to simulate the system's service and flow by using 400 City volunteers.⁴³⁷

In conclusion, Mayor Watson did not unilaterally select a launch date; his public comments were based on representations of RTG. The City had time – and used the time – between trial running and launch to conduct further testing on the System. That and the three week period of parallel bus service was an adequate bedding-in period.

S. RTG AND SUBCONTRACTOR FAILURES DURING THE MAINTENANCE TERM

There is no doubt that the City and its transit riders experienced numerous failures with the System in the first two years of operation. Specifically, the first winter saw a number of failures with regards to both the Vehicles and infrastructure. Then, in July 2020, a significant wheel cracking issue was discovered, the remediation of which took more than 19 months. And just when it seemed like performance had turned the corner, two trains derailed on the mainline within a six-week period in

⁴³³ Hearing Transcript of Larry Gaul, July 5, 2022, p. 15, lines 23-28, p. 16, lines 1-3, p. 71, lines 17-28, p. 72, lines 1-28, p. 73, lines 1-8.

⁴³⁴ Hearing Transcript of Larry Gaul, July 5, 2022, p. 51, lines 3-28, p. 52, lines 2-12.

⁴³⁵ Hearing Transcript of Larry Gaul, July 5, 2022, p. 52, lines 11-12.

⁴³⁶ Hearing Transcript of Michael Morgan, June 27, 2022, p. 64, lines 23-28, p. 65, lines 1-28, p. 66, lines 1-4, p. 97, lines 13-21.

⁴³⁷ O-Train Confederation Line FEDCO Presentation, September 10, 2019, slide 5, COW0000118.

August and September 2021, shutting down the System and thereby impacting transit riders in Ottawa significantly.

There are two critical facts, confirmed by a number of witnesses during the hearings, which must be noted with regards to the issues that have arisen during the Maintenance Term:

- 1) Nothing the City did caused any of the failures in the winter of 2019/2020, the wheel cracking in July 2020, or the derailments in August and September 2021; and
- 2) None of the issues that have arisen during the Maintenance Term were anticipated or even discoverable during trial running or at any other time prior to the launch of the System in September 2019.

Throughout the Maintenance Term, the City has operated the system as it was intended to be operated.⁴³⁸

1. RTG Solely Responsible to the City

As its contracting partner, the City looks to RTG as a single point of contact for any issues that arise either during the Construction Period **or** the Maintenance Term. The Project Agreement is clear:

if, at any time during the Project Term, any of the Design and Construction Works, the System or any parts thereof do not fully satisfy the Output Specifications and/or any other term or condition of this Project Agreement (other than the Project Co Proposal Extracts), Project Co shall, at its own cost and expense, rectify the Design and Construction Works, the System and any part thereof so that:

(i) the Design and Construction Works, the System and all parts thereof shall, at all times, comply with and satisfy in full the Output Specifications and the other terms and conditions of this Project Agreement (other than the Project Co Proposal Extracts); and

(ii) the Design and Construction Works, the System and all parts thereof will, at all times, be able to meet all safety and performance standards and other requirements set out in Schedule 15-3 – Maintenance and Rehabilitation Requirements.⁴³⁹
[Emphasis added]

As Mr. Truchon confirmed, one of the benefits to the City in entering into this type of agreement is precisely the fact that there is one, single point of contact responsible for the entirety of the Project Term. This structure should lead to better integration and better communication.⁴⁴⁰

However, as the evidence at the hearing demonstrated, RTG failed to ensure that it coordinated its Subcontractors and failed to provide the City with a single point of contact to deal with, and failed to manage the issues that arose during the Project Term. Rather, it is clear that RTG, OLRTC, RTM and

⁴³⁸ Some suggestion was made about excessive braking by operators but it was not shown that the City deviated from appropriate practices, including the relevant agreed upon procedures for braking in winter conditions. See section F3.

⁴³⁹ Project Agreement, Section 20.1(b), IFO0000375, Exhibit 79.

⁴⁴⁰ Hearing Transcript of Nicolas Truchon, dated July 7, 2022, p. 150, line 11-17.

Alstom each acted in silos, which often created delays or an inability to properly correct or rectify deficiencies as these entities blamed each other for their respective failures to perform. In the end, this finger pointing between the RTG Subcontractors, which RTG failed to address, meant that transit riders in Ottawa were not provided with the service that the City had contracted for RTG to provide.

2. RTG's Failure to Coordinate RTM and Alstom

As the Project Co, it was incumbent on RTG to appropriately coordinate its Subcontractors, since RTG is ultimately responsible for the performance of all its Subcontractors.⁴⁴¹ However, there are numerous examples of instances where RTG failed to coordinate its Subcontractors, which affected the service provide by RTG.

By way of example, as Mr. Guerra testified, RTG failed to consult with RTM regarding the Minor Deficiencies List until just prior to Revenue Service Availability.⁴⁴² This resulted in RTM being unaware of the amount of work to be performed during the Maintenance Term, which according to Mr. Guerra, meant there was less time to spend performing corrective or preventative maintenance.⁴⁴³ While RTM certainly had its own issues regarding staffing, as detailed further below, there is no doubt that failing to include the maintainer in the review and ultimate finalization of the Minor Deficiencies List affected RTM's ability to perform (or ensure that Alstom performed) the Maintenance Services.

A similar complaint regarding RTG's lack of coordination was raised by both Mr. France and Mr. Guerra during the hearing. Specifically, RTG failed to ensure that OLRTC provided each of Alstom and RTM with the necessary documentation regarding the construction of the System in a timely manner.⁴⁴⁴ In fact, the evidence has established that this documentation was provided in March 2020 and April 2021, well into the Maintenance Term, and even then, was incomplete and piecemeal.⁴⁴⁵ As explained by Mr. France, these delayed and incomplete documents impaired Alstom's ability to address complex corrective issues which required higher levels of investigation: "without that information...we'll be slower to be able to do these thorough investigations into – into more complicated problems".⁴⁴⁶ In addition, a lack of documentation affected the ability to adequately plan and prepare for the longer term lifecycle maintenance.⁴⁴⁷

Each of these examples illustrates RTG's failure to coordinate its Subcontractors, thereby impacting the delivery of the Maintenance Services. Even Mr. Truchon himself recognised that the transition

⁴⁴¹ Hearing Transcript of Nicolas Truchon, dated July 7, 2022, p. 228, line 3-5.

⁴⁴² Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 13, line 13-14.

⁴⁴³ Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 13-14, line 26-9

⁴⁴⁴ Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 34, line 13-24; Hearing Transcript of Richard France, dated July 6, 2022, p. 31-32, line 28-11.

⁴⁴⁵ Hearing Transcript of Richard France, dated July 6, 2022, p. 32, line 6-28. See also Minutes of Meeting, April 27, 2021, RTM00661110.0001, Exhibit 317 and RTM Board of Directors Presentation, September, 2021, RTM00659452.0001, Exhibit 318.

⁴⁴⁶ Hearing Transcript of Richard France, dated July 6, 2022, p. 33, line 12-21.

⁴⁴⁷ Hearing Transcript of Richard France, dated July 6, 2022, p. 33, line 22-28.

into Revenue Service could have been executed very differently for the benefit of all the parties.⁴⁴⁸ As Mr. Guerra suggested, involving the maintainer earlier during the construction period could have addressed the various issues described above.⁴⁴⁹

The failures on the part of RTG to coordinate its Subcontractors represent a palpable failure on the part of RTG to provide the integration promised to the City under this Project Agreement. As admitted by Mr. Truchon, RTG clearly failed to deliver in this regard:

MR. JOHN ADAIR: Okay. And just lastly on this, is it your view, sir, that the perceived benefit of integration and communication was not realized on this project?

MR. NICOLAS TRUCHON: Not as -- certainly, didn't live up to our expectations.⁴⁵⁰

3. RTM and Alstom Understaffed in the Early Days Until the Derailments

As noted above, though the City was not able to directly mandate minimum staffing levels of RTM or any of its subcontractors, including Alstom,⁴⁵¹ in August 2019, the City specifically sought commitments from the executives of RTG, RTM and Alstom regarding the staffing levels necessary for the Maintenance Term.⁴⁵² However, as the evidence established, it was not until the second derailment on the mainline that RTM and Alstom finally added sufficient resources to the Project.

Mr. Guerra was clear that in his view, Alstom was not sufficiently resourced at the beginning of the Maintenance Term.⁴⁵³ In this regard, Mr. Guerra noted that he expected Alstom personnel to attend to issues on the line in a timely manner, not taking more than an hour to respond.⁴⁵⁴ The failure to do so evidenced an organization that was not sufficiently staffed. Mr. Guerra further testified that it was not until the second derailment that Alstom's staffing approach changed for the better.⁴⁵⁵

Mr. Truchon also testified that RTM did not have the appropriate staff to deal with the new System and again it was not until the derailments that RTM re-organized and was appropriately staffed.⁴⁵⁶ It was only after the derailments that RTM devoted 24 hour/7 days a week management oversight to the

⁴⁴⁸ Hearing Transcript of Nicolas Truchon, dated July 7, 2022, p. 166, line 12-13.

⁴⁴⁹ Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 35, line 11-25.

⁴⁵⁰ Hearing Transcript of Nicolas Truchon, dated July 7, 2022, p. 169, line 5-9.

⁴⁵¹ Hearing Transcript, Michael Morgan, dated June 27, 2022, p. 95, line 20-27.

⁴⁵² Hearing Transcript of John Manconi, p. 214-216, line 7-5. See also Email from John Manconi to Jocelyn Begin et al Re Alstom RTG Update, August 12, 2019, COW0451494, Exhibit 169.

⁴⁵³ Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 65, lines 23-25. Mr. Liu also testified that it was his view that Alstom would have benefitted from additional supervisors during the maintenance period (Hearing Transcript of Yang Liu, dated June 24, 2022, p. 192, line 15-20)

⁴⁵⁴ Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 104, line 21-24.

⁴⁵⁵ Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 24, line 14-16. See also Alstom Letter to Mayor Jim Watson and Councillor Hubley, September 24, 2021, COW0593599, Exhibit 156, wherein Mr. Keroullé, President and CEO of Alstom Americas commits to uplifting the competencies of the Alstom team onsite both in terms of site leadership and supervision at the MSF and in terms of better coverage during all shifts.

⁴⁵⁶ Hearing Transcript of Nicolas Truchon, dated July 7, 2022, p. 173-174, lines 25-1, and p. 231-232.

business, including all Subcontractors, as well as bringing in subject-matter experts to provide technical oversight.⁴⁵⁷

The evidence clearly demonstrates that, notwithstanding making representations to the City with regards to adequate staffing, neither Alstom nor RTM made efforts to honour these representations until after two mainline derailments within a six-week period. It bears repeating that the City has no ability to compel staffing levels, but RTG, as the entity responsible for the performance of all of its Subcontractors, in respect of design, construction, and maintenance could have exerted stronger oversight and asked that more resources staffed by individuals with the right skill sets be applied in each of these spheres. It is telling that the Commission did not investigate or ask any questions of any RTG, RTM or Alstom witnesses regarding the current staffing levels.

4. Approach to Maintenance Activities was Short-Term and did not Plan for the Life of the Asset

In an addition to failing to ensure that the Subcontractors were coordinated, staffed and prepared to perform, their performance during the Maintenance Term has been characterized by a reactive and ad hoc approach to the Maintenance Services rather than executing a carefully planned program.

This is confirmed in two separate reports discussed during the hearing. First, Mott MacDonald provided an independent expert opinion to the City regarding, among other things, the maintenance services provided by RTG and its Subcontractors during the maintenance term. Mott MacDonald found that, based on Alstom's own MSC Monthly Reliability & Maintainability reports "in January 2020, there were 235 deferred [maintenance] items, and in January of 2021 there were 575, more than double."⁴⁵⁸ As a result, Mott MacDonald concluded that "[t]his data is an indication that the open maintenance tasks are increasing, rather than reducing or staying relatively constant. This analysis also highlights a high number of possible Vehicles being stopped for long periods of time due to components either missing due to them being reused to keep other revenue vehicles operational or defective."⁴⁵⁹

Mr. Guerra agreed that the increasing backlog of deferred maintenance was obviously not the downward trend that one would have expected of the maintenance provider.⁴⁶⁰ And while Mr. Guerra attempted to downplay the growth of deferred maintenance over time, he admitted that the increasing backlog of deferred maintenance occurred during a period when Alstom had insufficient resources.⁴⁶¹

⁴⁵⁷ Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 56, lines 15-19.

⁴⁵⁸ Mott MacDonald Independent Review Report, Section 3.1.2.3, Volume 5: Revenue Vehicles, dated April 2022, COM0010116, Exhibit 157.

⁴⁵⁹ *Ibid.*

⁴⁶⁰ Hearing Transcript, Mario Guerra, dated July 7, 2022, p. 90-91, line 27-1.

⁴⁶¹ Hearing Transcript, Mario Guerra, dated July 7, 2022, p. 92, line 1-4.

Furthermore, Mr. Truchon agreed that RTM and Alstom should strive for a more proactive approach in the provision of the Maintenance Services, as recommended by Mott MacDonald.⁴⁶²

The conclusion reached by Mott MacDonald that “open maintenance tasks are increasing, rather than reducing or staying relatively constant” is supported by the fact that Alstom was understaffed during this period. Put another way, given its understaffing, Alstom could not keep up with the maintenance required and the backlog of maintenance tasks grew.

A second report was prepared by Network Rail, dated December 5, 2021.⁴⁶³ Network Rail was asked to provide a technical assessment of the effectiveness of RTM and its Subcontractors’ maintenance framework and organization.⁴⁶⁴ Network Rail found that:

- Asset Management Planning: The plans, reports and the organization are focused on delivering day-to-day maintenance. There is very little in the way of planning for heavy maintenance or renewals. The network is relatively new, but we have worked with organizations where this view has persisted for decades, meaning that nobody had planned for sustaining asset life. The asset will not remain new for long and we observed that there are sections of rail that have already sustained more than half of their allowable wear.
- Supervision and Oversight: The structure of the preventative maintenance process is quite thin. All the inspections are completed by front line staff and there are no documented requirements for anyone else to review asset condition. There does not appear to be particularly strong oversight of the work done by front line staff. The shift supervisors are predominantly office based and their role in the verification of completed work appears to be limited to confirming that the paperwork is complete.
- Reporting: We did not see a structured reporting and review process. In a single week, we would not expect to see a full cycle of reviews, but we came away with the impression that a lot of reviews are done at a low level with little aggregation or trending. Discussions seem to be dominated by individual issues, sometimes down to work order level, rather than prioritizing and tackling the biggest risks and trends... We conclude that it is difficult to for management to get a high-level picture of what is going on and to be able to drill down into detail to identify and prioritize appropriate actions.

Mr. Guerra testified that, after receiving the Network Rail report in December 2021 and addressing the issues set out in the report via RTM’s reorganization, there has been a significant improvement from the perspective of dealing with issues openly among RTM, Alstom and the City, including

⁴⁶² Hearing Transcript of Nicolas Truchon, dated July 7, 2022, p. 218, line 17-19.

⁴⁶³ Rideau Transit Maintenance Assessment – Ottawa LRT, December 5, 2021, NRC0000001, Exhibit 266.

⁴⁶⁴ Rideau Transit Maintenance Assessment – Ottawa LRT, December 5, 2021, p. 11, NRC0000001, Exhibit 266.

bringing the City into daily meetings, leading to an improved ability to deal with issues and ensuring the same mistakes are not repeated.⁴⁶⁵

While there may have been some improvements made following the return to service in the fall of 2021 after the derailments, prior to that time, the provision of Maintenance Services suffered from serious lack of resourcing and coordinated, thoughtful and proactive planning, which clearly affected the performance of the System and the service to transit riders of Ottawa.

5. Issues in the Maintenance Term Not Related to Trial Running

As discussed below, a number of witnesses testified that the issues experienced since the public launch were not discoverable or otherwise known prior to launch. Moreover, **no** witness testified to the contrary. In particular, no witness testified that there were issues in trial running which disclosed or otherwise foretold the issues which arose after public launch.

(i) Winter 2019 and 2020 Failures Unexpected

Starting in the late fall of 2019 and into the winter of 2020, the System experienced a number of failures.

Specifically, starting in the fall of 2019, after the parallel bus service had ended, the software for the Alstom Train Control Monitoring System started to experience networking problems resulting in the need to effectively reboot the train when the train would get to the end of the line, causing delays in service.⁴⁶⁶ In fact, as Mr. Morgan noted, as the issue became more and more prevalent it undermined the service since passengers were being asked to change trains at platforms, inconveniencing customers.⁴⁶⁷

Mr. Morgan further explained that in and around the same period, the doors on the Vehicles started behaving erratically, where the doors would sometimes function as normal even when being held open, and other times the doors would malfunction with a minor bump.⁴⁶⁸ It was not until spring 2020 that the door software was finally updated.⁴⁶⁹

In addition, in the winter of 2020, there were issues with both the inductors and the switch heaters.⁴⁷⁰ Mr. Morgan explained that the inductors were essentially blowing up, causing the train to come to a

⁴⁶⁵ Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 58, line 1-6.

⁴⁶⁶ Hearing Transcript, Michael Morgan, dated June 27, 2022, p. 101, line 13-15. See also City Letter dated December 18, 2019, COW0487417.

⁴⁶⁷ Hearing Transcript, Michael Morgan, June 27, 2022, p. 101, line 16-22. See also City of Ottawa Letter to RTG dated December 18, 2019, COW0487417, Exhibit 296.

⁴⁶⁸ Hearing Transcript, Michael Morgan, dated June 27, 2022, p. 101, line 23-27. See also City of Ottawa Letter to RTG dated December 18, 2019, COW0487417, Exhibit 296.

⁴⁶⁹ Hearing Transcript, Michael Morgan, dated June 27, 2022, p. 102, line 7-10.

⁴⁷⁰ City of Ottawa Letter to RTG dated December 18, 2019, COW0487417, Exhibit 296; and City of Ottawa Letter to RTG dated January 9, 2020, COW0489797, Exhibit 297; and City of Ottawa Letter to RTG dated January 24, 2020, COW0523348, Exhibit 298.

stop.⁴⁷¹ With regards to the switch heaters, Mr. Morgan noted that it was either poor design selection or lack of maintenance which caused the issues with the switch heaters, depending on who you asked in the RTG consortium.⁴⁷²

Mr. Morgan also explained that during this same period there were a number of failures, or pull-downs, of the overhead catenary system, with the one in the St. Laurent tunnel on January 15, 2020 being described as catastrophic.⁴⁷³ Mr. Morgan further explained that there were issues with the parafil rope attached to the catenary, which suffered from corrosion due to highway salts.⁴⁷⁴

As described by Mr. Morgan, “the service in January, February, and March 2020 just hit rock bottom.”⁴⁷⁵ This led to the City’s decision to issue a Notice of Project Co Event of Default on March 10, 2020, which stated that “[s]imply put, the System that RTG has supplied is not performing consistently or reliably.”⁴⁷⁶ The Notice of Project Co Event of Default also clearly stated that “under the Project Agreement, RTG is the single point of responsibility for its Subcontractors and the City will not accept any attempt by RTG to avoid its own responsibility by blaming others further down the contractual chain, such as OLRTC and Alstom.”⁴⁷⁷

Specifically, the Notice of Project Co Event of Default of March 2020 relied on the following:

- RTG’s accumulation of 5,810 Failure Points in the categories of Vehicle Availability, Station Availability and System Events from September 2019 to February 2020, thereby exceeding the contractual default thresholds for the three, six and twelve-rolling Contract Month totals.
- RTG’s breaches of its obligations under the Project Agreement leading to the unavailability of the System on numerous occasions.
- RTG’s misrepresentation to the City that it had extensive experience and was knowledgeable in relation of the maintenance of LRT projects and that it possessed the requisite skill and capacity to perform the activities within the Project Scope in a timely and professional manner as set out in the Project Agreement.

Each of these three categories constitutes a Project Co Event of Default under the Project Agreement.

⁴⁷¹ Hearing Transcript, Michael Morgan, dated June 27, 2022, p. 102, line 17-21.

⁴⁷² Hearing Transcript, Michael Morgan, dated June 27, 2022, p. 102, line 22-25.

⁴⁷³ Hearing Transcript, Michael Morgan, dated June 27, 2022, p. 102, line 25-26. See also City of Ottawa Letter to RTG dated January 24, 2020, COW0523348, Exhibit 298.

⁴⁷⁴ Hearing Transcript, Michael Morgan, dated June 27, 2022, p. 102, line 27-28.

⁴⁷⁵ Hearing Transcript, Michael Morgan, dated June 27, 2022, p. 103, line 10-11.

⁴⁷⁶ City of Ottawa Letter to RTG, March 10, 2020, COW0523248 Exhibit 213.

⁴⁷⁷ *Ibid.*

There were no indications during trial running or any other time prior to RSA of any of these issues, as confirmed by a number of witnesses.⁴⁷⁸

(ii) Wheel Cracking not Related to Trial Running

In July 2020, after the issues which arose in the fall of 2019 and winter of 2020 seemed to have largely been addressed, Alstom discovered significant wheel cracking during a proactive bogie retrofit program.⁴⁷⁹

Mr. Liu testified that the cracked wheels involved the Lucchini resilient wheels installed on the fleet and the installation of the jacking screws.⁴⁸⁰ Mr. Liu further testified that Alstom committed to investigate the fleet and replace all cracked wheels⁴⁸¹ which was consistent with the Transportation Safety Board's recommendation that the replacement of the resilient wheels be expedited.⁴⁸² However, notwithstanding this commitment, it took 17 months for the replacement of the cracked wheels to be completed.⁴⁸³

Again, various witnesses were asked whether the wheel cracking that was discovered in July 2020 could have been discovered with additional trial running, with each witness answering no.⁴⁸⁴

6. Derailments Not Related to Trial Running

(i) August 2021 Derailment - Axle Bearing Assembly Failure

The derailment in August 2021 occurred as a result of the failure in the axle bearing assembly on one of the Vehicles.⁴⁸⁵ Specifically, as Mr. Morgan explained, the axle and wheel assembly became loose and the resulting friction caused heat and broke down the assembly, causing the axle bearing assembly to fall apart.⁴⁸⁶

With regards to the issue of the heat caused by the friction of the loose components, the Transportation Safety Board in its Rail Safety Advisory Letter to the City dated September 27, 2021, noted that:

⁴⁷⁸ Hearing Transcript, Matthew Slade, dated June 24, 2022, p. 109, line 13-15; Hearing Transcript of Yang Liu, dated June 24, 2022, p. 187-188, line 27-14; Hearing Transcript of Richard France, dated July 6, 2022, p. 60, line 9-13; Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 105,-106, line 21-9.

⁴⁷⁹ Hearing Transcript, Yang Liu, dated June 24, 2022, p.188, line 19-21.

⁴⁸⁰ Hearing Transcript, Yang Liu, dated June 24, 2022, p.188-189, line 25-3.

⁴⁸¹ Hearing Transcript, Yang Liu, dated June 24, 2022, p.189, line 4-6.

⁴⁸² Transportation Safety Board Letter to City of Ottawa, December 17, 2020, p.8, COW0489340, Exhibit 263. See also Hearing Transcript, Brandon Richards, July 6, 2022, p. 155, line 19-20.

⁴⁸³ Hearing Transcript of Nicolas Truchon, dated July 7, 2022, p. 186-187, line 26-1. See also COW0534279

⁴⁸⁴ Hearing Transcript of Matthew Slade, June 24, 2022, p. 109, line 13-15; Hearing Transcript of Michael Morgan, p. 105,-106, line 21-9.

⁴⁸⁵ Transportation Safety Board Letter to City of Ottawa, September 27, 2021, p. 3, COM0000218, Exhibit 302, and Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 77, line 1-3.

⁴⁸⁶ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 104, line 9-12.

Cartridge assemblies for OLRT LRVs are always located inboard of the wheels. With this arrangement, the condition of the roller bearings cannot be effectively inspected visually and their operating temperatures cannot be monitored by traditional wayside hot bearing detectors that are set up to monitor roller bearings located outboard of the wheels on freight cars. Furthermore, OLRT has no wayside or on-board system in place to monitor the operating temperature of axle roller bearings that are located inboard of the wheels. Consequently, an overheated roller bearing within the cartridge assembly can potentially fail catastrophically without being observed or detected. As demonstrated in this occurrence, such a failure can also lead to derailment if there is no intervention.⁴⁸⁷

Put another way, the Transportation Safety Board observed that as a result of the location of the cartridge assemblies, it is not possible to either visually inspect the bearings or monitor their operating temperatures, such that an overheated bearing within the assembly could potentially fail catastrophically without being detected, which is precisely the situation that occurred with the August 2021 derailment.

The Transportation Safety Board further noted that “[a]s demonstrated by this derailment, there can be serious consequences resulting from an overheated roller bearing failure on an LRV and commuter passenger service”.⁴⁸⁸

As a result of the importance of heat detection vis-à-vis the possible overheating of the bearings, the Transportation Safety Board also noted that “OLRT may wish to ensure that it has heat detection systems in place to monitor temperatures of LRV cartridge roller bearing assemblies in order to detect overheated roller bearings in a timely manner and intervene before an in-service catastrophic roller bearing failure occurs.”⁴⁸⁹

The City requested that RTG implement the necessary engineering to add on-board heat detection systems, as suggested by the Transportation Safety Board, however Alstom refused to commence this work, citing the fact that since the root cause analysis of the August 2021 derailment was still ongoing it would be “premature to jump to a Heat Detection System”.⁴⁹⁰

The City rejected Alstom’s position that a full root cause analysis is necessary before undertaking the engineering necessary to implement a Heat Detection System. It bears noting that if the City had agreed with Alstom’s position, no steps would have been taken even as of the date of these submissions, since a final root cause analysis remains outstanding almost a full year after the derailment.

The City also noted that Alstom’s own LRV19 Derailment - 8D summary document referenced heat detection methods and as such, the City requested that RTG undertake the necessary engineering for

⁴⁸⁷ Transportation Safety Board Letter to City of Ottawa, September 27, 2021, p.10/13, COM0000218, Exhibit 302.

⁴⁸⁸ Transportation Safety Board Letter to City of Ottawa, September 27, 2021, COM0000218, Exhibit 302.

⁴⁸⁹ Transportation Safety Board Letter to City of Ottawa, September 27, 2021, p.12/13, COM0000218, Exhibit 302.

⁴⁹⁰ RTG Letter to City of Ottawa, October 18, 2021, COW0523362, Exhibit 303; Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 78, line 15-18 and p. 79, line 5-12.

these methods, which Alstom eventually did.⁴⁹¹ As noted in further detail below, it was only with the City's urging that the appropriate investigations regarding early heat detection were started in response to the August 2021 derailment. In addition, while RTM and Alstom have put in place temporary mitigations to address the August 2021 derailment, no permanent solution has been proposed or put into place.

(ii) September 2021 Derailment – Failure to Tighten Bolts

Only six weeks after the August 2021 derailment, there was a second derailment on the mainline, this time with passengers on board.⁴⁹² As explained by Mr. Morgan, the September 2021 derailment was caused by a maintenance technician replacing the axle and failing to tighten the bolts, resulting in the gear box falling off, becoming an anchor for the Vehicle and pulling it off the track. As Mr. Morgan stated, the cause of the derailment was very simple: "Somebody didn't tighten bolt[s]."⁴⁹³

The maintenance work being performed when the technician failed to tighten the bolt was the refurbishment operation that Alstom undertook in response to the first derailment.⁴⁹⁴ Furthermore, Mr. France agreed that Alstom's own preliminary analysis of the September 2021 derailment indicated that the refurbishment activities were "conducted on an expeditious basis with a climate of intense pressure from all stakeholders"⁴⁹⁵ thereby contributing to the bolts not being tightened and oversight failing to notice the bolts were not tightened.

Notwithstanding the clear evidence, counsel for Alstom attempted to, understandably, deflect from the fact that Alstom technicians failed to perform a basic task in torquing bolts, by attempting to argue that the OC Transpo driver could have identified possible signs of derailment or mechanical issues. However, Mr. Guerra agreed that nothing the OC Transpo driver did could have prevented the derailment from occurring, given the cause was the improperly torqued bolts by the Alstom maintenance staff.⁴⁹⁶

To be clear, there was nothing that the OC Transpo driver could have done to prevent the derailment, unlike Mr. Nadon, RTM's Maintenance Manager who in fact was on the train with his family but took no steps to prevent the train from leaving the station:

⁴⁹¹ RTG Letter to City of Ottawa, October 18, 2021, COW0523362, Exhibit 303; Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 81, line 15-18 and p. 79, line 2-7.

⁴⁹² Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 82, line 1-3

⁴⁹³ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 104-105, line 27-3.

⁴⁹⁴ Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 82, line 1-2.

⁴⁹⁵ Hearing Transcript of Richard France, dated July 6, 2022, p. 68-69, line 4-9

⁴⁹⁶ Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 83, line 14-16.

“took it from Blair and then, right after, between St. Laurent and Tremblay, I’d heard a clinging sound beneath and I thought a cable had come loose or something was dragging, and so I told my wife We’re going to get off at the next station because I don’t think this train is going to make it to our final destination. It’s going to get pulled out of service. We’ll just take the next one.’ So we got off the train at the station and I was on my phone calling the control centre to say, ‘Take this train out of service’ when the train departed.”⁴⁹⁷

As with the August 2021 derailment, the Transportation Safety Board wrote to the City in a Rail Safety Advisory letter, wherein the Transportation Safety Board expressed the following: “This accident has demonstrated that there could be serious consequences resulting from the inconsistent and incomplete maintenance of safety-critical components on an LRV in commuter passenger service.”⁴⁹⁸ Mr. Guerra agreed that, at least in part, the Transportation Safety Board was concerned with the overall oversight that led to the bolts not being tightened.⁴⁹⁹

As a result of the two derailments, the City issued a second Notice of Project Co Event of Default, based on RTG’s accrual of Failure Points in excess of the contractual thresholds.⁵⁰⁰

Again, a number of witnesses have confirmed that the cause of the August 2021 derailment, involving an axle bearing assembly issue and the September 2021 derailment, which was the result of improperly torqued bolts, would not have been identified with additional trial running.⁵⁰¹

Finally, it is important to note that since the conclusion of the hearings, there have been additional issues with RTG and its Subcontractor’s performance, causing service interruptions and delays. Interestingly, it appears that the Commission is not considering any of the issues which recently arose on the System. A number of trains have been taken out of service as a result of another wheel hub assembly failure which was identified on July 23, 2022. In addition, on July 24, 2022, a section of the overhead catenary system was damaged during a storm. When asked by media whether the Commission was going to consider these new issues on the System, the Commission advised:

The Commission has a mandate to investigate the commercial and technical circumstances that led to Stage 1 breakdowns and derailments of the Ottawa Light Rail Transit system.

The commission continues to monitor events that affect the Confederation Line and will produce a report with recommendations to prevent future problems.

At this stage, we do not expect to call further evidence.

It is surprising that the Commission is not going to address these two new issues directly related to the breakdowns of the System. Such issues have an impact on the reliability of the system, which is the City’s focus.

⁴⁹⁷ Formal Interview Transcript of Steven Nadon, dated April 21, 2022, p. 109, lines 3-20.

⁴⁹⁸ Transportation Safety Board Letter to City of Ottawa, November 2, 2021, COW0104775, Exhibit 265; Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 83, lines 25-28.

⁴⁹⁹ Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 83, lines 25-28.

⁵⁰⁰ City of Ottawa Letter to RTG, September 24, 2021, COW0523375, Exhibit 306.

⁵⁰¹ Hearing Transcript of Nicolas Truchon, dated July 7, 2022, p. 190, lines 14-18; Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 105,-106, line 21-9.

T. THE CITY'S APPROACH TO THE PAYMENT MECHANISM

The payment mechanism set out in Schedule 20 to the Project Agreement sets out how Project Co will be paid the Monthly Service Payment during the Maintenance Term.⁵⁰² Among other things, the payment mechanism contains a regime by which Project Co accrues payment deductions and Failure Points for various failures during any given Contract Month. Accrual of Failure Points over certain thresholds results in various options becoming available to the City under the Project Agreement, including increased monitoring, exercise of remedial rights and noting Project Co in Default.

Mr. Morgan explained that the City's primary mechanism to enforce RTG's maintenance obligations during the Maintenance Term is through the payment mechanism.⁵⁰³ Mr. Manconi explained that the City's guiding principle was to rely on the rights and obligations under the Project Agreement.⁵⁰⁴ It is a payment for performance regime.

Deloitte noted in its report prepared during the procurement period that since deductions could be applied in the case of poor performance during the Maintenance Term this form of security was highly liquid and provided the City with a "hammer" to enforce compliance and therefore maximize value for money. Mr. Bucci explained that this was poorly worded but was intended to make it clear that the City would have additional tools to ensure that Project Co's obligations could be met during the Maintenance Term.⁵⁰⁵

While some RTG witnesses have attempted to cast the City's approach as "punitive" in nature, there is no doubt that:

- RTG represented to the City that it was prepared to enter into the Maintenance Term, and thereby submit to the Payment Mechanism, by delivering its RSA Notice;
- As set out below, there were numerous issues during the Maintenance Term which were not caused by the City and which affected the performance of the System. These issues triggered the payment deductions and the accrual of Failure Points pursuant to the Payment Mechanism. Many of these issues are the subject of ongoing litigation or other dispute resolution pursuant to the Dispute Resolution Procedure under the Project Agreement, and as such, have not been canvassed by this Inquiry;
- Where there have been perceived excessive payment deductions, the City has worked with RTG to negotiate and reduce the deductions.

It is self-serving for RTG to complain of the City's so-called punitive behaviour when it is simply enforcing the payment mechanism. Rather than accept responsibility for its lack of performance during

⁵⁰² Hearing Transcript of John Traianopoulos, dated June 15, 2022, p. 31, line 5-9.

⁵⁰³ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 96, line 12-15.

⁵⁰⁴ Hearing Transcript of John Manconi, dated June 28, 2022, p. 218, line 19-25.

⁵⁰⁵ Hearing Transcript of Remo Bucci, dated June 20, 2022, p. 24-25, lines 23-28, 1-11, 24-35.

the Maintenance Term, RTG attempts to shift the responsibility back to the City. In fact, as Mr. Truchon acknowledged, whether RTG takes a view that any deductions were overly punitive or not, some degree of deductions and financial consequences were appropriate for the failure to perform.⁵⁰⁶

At the end of the day, the City pays for performance – the City cannot use taxpayer funds to advance payment to a non-performing contractor and should not be held to any such standard as the steward of the public purse.

U. THE CITY’S APPROACH TO DEALING WITH RTG DURING THE MAINTENANCE TERM

Similar to the City’s approach during the Construction Period, where it was possible and for the overall benefit of the Project, the City provided accommodations and demonstrated a cooperative attitude towards RTG during the Maintenance Term. As noted above, there is nothing in the Project Agreement which required the City to take these steps; rather, the City acted in a manner so as to attempt to ensure the success of the overall Project and secure safe and reliable service for the transit riders of Ottawa.

1. Cure for March 2020 Notice of Project Co Events of Default

Notwithstanding that it had no contractual obligation to do so, the City offered RTG an opportunity to cure all of the March 2020 Events of Default, including the Failure Points Events of Default in relation to which there is no contractual cure right. This is an obvious example of the City offering to assist RTG for the good of the Project – if RTG could cure the Events of Default, then service would be improved and transit riders would benefit.

2. Reduced Service Term Sheets

There is no question that the COVID-19 pandemic affected ridership numbers for the LRT. However, the pandemic also occurred at a time where RTG and its Subcontractors were experiencing significant reliability issues, which in fact led to the March 2020 Notice of Project Co Event of Default.

As a result, the City agreed to a Variation for a Service Level Decrease implemented on March 27, 2020.⁵⁰⁷ As a result of this Variation, RTG was only required to run nine double car trains during the morning peak period and nine double car trains during the afternoon peak period, rather than the contractually required 15 and 13 double car trains, respectively.

Then, in March 2021, the City agreed to another Temporary Service Level Decrease by way of a term sheet as a result of both the reduced ridership because of the pandemic and so that RTG could take advantage of the lower ridership and improve the reliability of the System.⁵⁰⁸ As a result of this

⁵⁰⁶ Hearing Transcript of Nicholas Truchon, July 7, 2022, p. 161, lines 16-20.

⁵⁰⁷ Ottawa LRT Variation Directive No. 192, May 19, 2020, COW0156171 and Schedule A – Reduced Service Level, May 15, 2020, COW0150019.

⁵⁰⁸ RTG Letter to City of Ottawa, March 16, 2021, COW0523357, Exhibit 307.

temporary service level decrease, RTG was only required to run 11 double car trains during the morning peak period, rather than the contractual requirement of 15 double car trains.

In May 2021, this Temporary Service Level Decrease was extended by the parties to August 2021.⁵⁰⁹ Then, as a result of the August and September 2021 derailments, the parties agreed to another Temporary Service Level Decrease in December 2021 (after RTG had returned to service in mid November 2021 with 11 double car trains).⁵¹⁰

Mr. Guerra agreed that each of these service reductions were examples of the City and RTG working collaboratively together to try to ensure better and more reliable service for customers.⁵¹¹

3. Negotiations of Work Orders from Fall 2019

An additional example of the City providing concessions to RTG are the various occasions where the City has modified deductions for various work orders.⁵¹² In fact, where RTG and RTM asserted dedication were disproportionate, the City not only reviewed the deductions with RTG and RTM, but also, in many cases, agreed to modify or reduce the deductions.

V. RTG, OLRTC, ALSTOM AND RTM'S LACK OF COMMITMENT TO RELIABILITY

1. Ongoing Attitude is to Finger-Point and not Take Responsibility

The evidence during the hearings has demonstrated that, at key times during the Project, there has been an adversarial relationship between each of OLRTC, RTM and Alstom. As Mr. Truchon admitted, this resulted in “the common goal of having a system that works as described in the PA and is capable of being maintained as envisioned in the PA for the entire life cycle **not followed.**”⁵¹³ [Emphasis added]

One such example of this adversarial relationship occurs as a result of the different deliverables of the different parties – i.e. where there is an issue that RTM or Alstom might point to OLRTC under the warranty, but OLRTC might not agree and assert it is a maintenance issue.⁵¹⁴ As Mr. Guerra testified, the lack of cooperation between the partners in the consortium – RTG, RTM and Alstom⁵¹⁵ resulted in a siloed approach.⁵¹⁶

⁵⁰⁹ RTG Letter to City of Ottawa, May 12, 2021, COW0495244, Exhibit 308.

⁵¹⁰ Term Sheet Regarding Variation for Temporary Service Level Decrease, December 24, 2021, COW0505470, Exhibit 309.

⁵¹¹ Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 89, line 16-18.

⁵¹² Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 68, line 14-16.

⁵¹³ Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 31, line 4-10, p. 33, line 21-25

⁵¹⁴ Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 30, line 17-22.

⁵¹⁵ Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 132, line 20-23.

⁵¹⁶ Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 38, line 5-8.

As noted above, from the City's perspective, this finger-pointing and failure to take responsibility not only results in delays but is contrary to the very thing which the City contracted for – a single point of responsibility to ensure a smooth and consistent provision of services and fulfillment of all contractual obligations. At the end of the day, from the City's perspective it does not matter whether an issue is a warranty issue as between OLRTC and Alstom or RTM or not, all the City wants is the System it paid for.

W. RECOMMENDATIONS OF THE CITY

1. Introduction

The City welcomed the Inquiry as an opportunity to advance its understanding of the challenges faced by all participants in the Project and to adopt and refine lessons learned to apply to future projects. The City has found that the inquiry has shed some light on areas for improvement and therefore, sets out its recommendations to the Commissioner below.⁵¹⁷ These recommendations are prioritized such that the key priority recommendations are identified first, followed by ancillary recommendations which have or can be implemented by participants on LRT projects in the Province.

2. Role of Funders

The City entered into contribution agreements with each of the provincial and federal governments at the outset of the Project in order to assist in funding the Project.⁵¹⁸ It was the City's expectation that its funding partners would each bear one third of the costs of the Project, in accordance with the usual federal/provincial/municipal funding mechanism.⁵¹⁹

The funding relationship established through these agreements is set out in Section C2⁵²⁰ and sets out the respective obligations of the parties.

⁵¹⁷ As well, these recommendation are informed in part by efforts undertaken by the City of its own initiative in respect of the Project which was used in the development of the procurement and implementation of Stage 2 of the LRT. See, for example, [Lessons Learned from Confederation Line & Stage 2 Implementation Implications](#) report, prepared by Deloitte and Boxfish Infrastructure Group. In addition On February 27, 2019, City Council received the "[Contract Award of Ottawa's Stage 2 Light Rail Transit Projects and Related Matters](#)" report. The report outlined several key lessons learned from Stage 1 that had been incorporated into the Stage 2 project. Lessons learned have also been included in the following documents:

- [Audit of Stage 2 Light Rail Transit Project Procurement](#) report to Council, November 26, 2019;
- [Audit of Ottawa Light Rail Transit \(OLRT\) Stage 1 Contingency Fund](#) report to Council, tabled at the Audit Committee, November 24, 2020;
- [Independent Reports on LRT Stage 2 Lessons Learned and LRT Stage 3 Procurement Options Analysis and Project Governance Best Practices](#) report to Council, July 21, 2021;
- OC Transpo Line 1 Oversight Plan, November 12, 2021; and
- O-Train Light Rail Transit Line 1 and Line 2 Comparison memo to Council, December 16, 2021.

⁵¹⁸ Canada and City of Ottawa, Contribution Agreement between Her Majesty the Queen in Right of Canada, as represented by the Minister of Transport and City of Ottawa, December 19, 2012, COM0001314. Ontario and City of Ottawa, Contribution Agreement between Her Majesty the Queen in Right of Ontario, represented by the Minister of Transportation and City of Ottawa for the City of Ottawa Light Rail Transit Project, September 1, 2011, COW0523215.

⁵¹⁹ *Ibid.*

⁵²⁰ *Ibid.*

The relationships with the funders largely proceeded well over the Project. It is important to recognize that this Project was actually completed **within the budget** and there is still room within the contingency fund, unlike many other large infrastructure projects.

The provincial and federal funders capped their contributions at \$600 million each prior to completion of the procurement process such that all additional amounts incurred due to market escalation or other factors would be to the City's account, putting an undue financial burden on the City, in the event of overruns.

The provincial and federal funders, in setting their contributions, did not account for such potential cost overruns nor did they perform their own risk analyses, to the City's knowledge, though the Inquiry did not seek out the evidence of any provincial or federal government representatives in this regard. Further, the administration by the funders, including the unanticipated withholding of funds from the City in the fall of 2021, placed an unexpected burden on the City.⁵²¹ The current timing for funding allocations for municipal projects occurs very early in the life of a project and often well in advance of the procurement process. Having the funders at the table during procurement to assist in assessing cost, scope, and value assists in ensuring that funding contributions are properly calibrated and ensures that appropriate funding arrangements are in place. Equally, the funding approach and, as a result, the procurement methodology, need to align with market expectations for early and mature design processes to inform construction pricing.

In terms of lessons learned, if the funders had conducted their own analysis and had been more flexible in the amounts they were prepared to contribute and the timing of such funding commitments, it would have assisted in ameliorating any alleged optimism bias. For this Project the relevance of such alleged bias is unclear given that the Project was completed within budget. In any event, it is not clear that a mechanism as detailed as that set out in the UK's Green Book⁵²² is appropriate in the Canadian context where contributions are made by multiple levels of government. However, the provincial government, using its existing crown agency responsible for procurement of major public infrastructure, being Infrastructure Ontario, may want to consider whether it should take into consideration the guidance adopted in the UK. This guidance on addressing optimism bias originated in the United Kingdom following a study performed in 2002 by Mott MacDonald on optimism bias.⁵²³ Ultimately, certain of the recommendations made by Mott MacDonald were incorporated in part in a Guide known as the Green Book produced by the UK Treasury Department as a tool for the appraisal of policies, programmes, and projects.⁵²⁴ In assessing the need for such an analysis, the sophistication of the construction industry participants in the P3 sector needs to be taken into account, including in relation

⁵²¹ Hearing Transcript of Steve Kanellakos, dated July 4, 2022, p. 85, line 2-11.

⁵²² [The Green Book \(2022\)](#), updated March 30, 2022, UK Treasury.

⁵²³ Hearing Transcript of Ricardo Cosentino, dated June 13, 2022, p. 154-155, line 28-5.

⁵²⁴ *Review of Large Public Procurement in the UK*, [Mott MacDonald UK Report](#), July 2002; [The Green Book \(2022\)](#).

to the risk analysis tools these participants bring to bear to assess and price risk.⁵²⁵ The market's ability to determine its risk tolerance should be evaluated before a paternalistic approach is adopted in relation to funders' assessment of risk.

As an ancillary point, in terms of the funding agreements themselves, if the funding partners intend to conduct their own analyses as a project progresses, mechanisms can be built into the agreements to do so, such that arbitrary withholdings of funding are avoided and the project owner is kept apprised of any concerns on the part of the funding partners.⁵²⁶

Therefore, in terms of recommendations the City recommends the following in respect of key recommendations for the funding of P3 infrastructure Projects in Ontario:

Recommendation No. 1

In funding agreements, contribution agreement levels should be calibrated to the procurement process outcomes rather than being tied to early stage environmental assessment estimates. In addition, the process for funding and cost sharing of megaprojects should be organized to reflect the complexity of these projects and to account for procurement and delivery risks.

Recommendation No. 2

Infrastructure Ontario could be tasked with considering its risk analysis process to determine if issues such as the factors set out in the UK's Green Book are sufficiently taken into account. This review could be conducted with active industry stakeholder engagement as these sophisticated entities who utilize their own risk analysis tools will have useful insights.

3. Design

The technical specifications for large public infrastructure projects need to be sufficiently detailed so that the Project Co understands the technical performance requirements to be met. For P3 design-build projects, as the literature suggests,⁵²⁷ it is important to ensure that the requirements are based on performance requirements. In drafting the specifications, it is important to balance the desire not to stifle innovation against the need to ensure that required outcomes are met. An owner will want to ensure that the design builder uses reputable suppliers, but will not want to mandate requirements that are prescriptive – the focus should be on outcomes.

⁵²⁵ RTG witnesses, including Mr. Lauch agreed that RTG would perform a sophisticated risk analysis to forecast and analyze potential risks arising over the course of the Project and the risk matrix was reviewed monthly with the City over the course of the project (Hearing Transcript of Peter Lauch, dated June 29, 2022, p. 68, lines 9-23)

⁵²⁶ These analyses would be in addition to any reports provided to the funding partner in accordance with the Independent Engineer Agreement.

⁵²⁷ Flyvbjerg, B., Bruzelius, N., & Rothengatter, W. (2003). "Megaprojects and risk: An Anatomy of Ambition." *Cambridge University Press*, Chapter 10: Four Instruments of Accountability p. 115-117.

On this Project, as was confirmed by Mr. Cosentino, the technical specifications were based on performance requirements.⁵²⁸ RTG noted that it was able to adopt innovative design as a result. However, it did note that in relation to the Vehicles, certain requirements were prescriptive. For example, one area of the specification where concerns were raised is the Canadian content requirements for the Vehicles.

This Canadian content was a requirement imposed on the City by the Province which, in the result, constrained proponents as to what Vehicle manufacturer they could use.⁵²⁹ This constraint created unintended consequences for the overall Project and, according to RTG and its Subcontractors, had material impacts on their ability to deliver the Project in a timely way.⁵³⁰

As matters evolved, meeting this requirement meant that Alstom chose to set up an assembly facility at the Maintenance and Storage Facility in Ottawa. OLRTC was late in completing construction of this facility which caused delays to Alstom. As well, Alstom recruited and trained new staff which proved challenging for Alstom.⁵³¹ Alstom had previously not manufactured vehicles in Canada but had well-developed assembly facilities in other jurisdictions. If the Canadian content requirement had not been in place, Alstom would have been able to use existing mature supply chains, which may have avoided delays to manufacturing and testing. Alstom has since established a long term assembly facility in Brampton, Ontario to deliver vehicles for Ottawa, Finch, and Hurontario LRTs, and the City is optimistic that this change will help ensure an improved product for a number of Ontario LRT projects.

It bears noting that the province of British Columbia did not impose the same Canadian content requirements for the Canada Line in Vancouver.⁵³² Similarly, other projects such as the REM in Montreal are outsourcing the manufacture of vehicles out of the country.⁵³³

Separately, on this Project, there was a lack of focus by RTG and its Subcontractors on systems engineering and systems integration, as described in Section H1 of these submissions. Further detail and reference to detailed standards would be of assistance so that a Project Co is required to address systems engineering issues from the outset of the design process.

⁵²⁸ Hearing Transcript of Ricard Cosentino, dated June 13, 2022, p. 131-132, line 25-13.

⁵²⁹ Hearing Transcript of Ricard Cosentino, dated June 13, 2022, p. 118, line 16-24.

⁵³⁰ Hearing Transcript of Yves Declercq (English), dated June 16, 2022, p. 121, lines 11-19, p. 122, lines 1-23 and p. 123, lines 1; Hearing Transcript of Bertrand Bouteloup, dated June 22, 2022, p. 77, line 17-28; Hearing Transcript of the Honourable Mayor Watson, dated June 30, 2022, p. 78, line 9-19.

⁵³¹ Hearing Transcript of Yang Liu, dated June 24, 2022, p.177, lines 13-25

⁵³² Hearing Transcript of Remo Bucci, dated June 20, 2022, p. 50, lines 13-20.

⁵³³ Building a Network for Greater Montreal, Rolling Stock: <https://rem.info/en/rolling-stock>; The First REM Cars have Arrived, Published October 21, 2020: <https://rem.info/en/news/first-cars-arrival#:~:text=Production%20of%20the%20first%20REM,to%20the%20Greater%20Montr%C3%A9al%20area.&text=The%20Metropolis%20cars%20are%20now%20in%20Brossard.>

For the purposes of these recommendations, given that the Commission did not retain or consult with, to the City's knowledge, any experts in relation to any of the design issues associated with defects or deficiencies in respect of any of RTG's designs, the City has not addressed specific design issues for the purposes of these recommendations. However, the City has done its own review of design issues and adopted lessons learned from Stage 1 on Stage 2, as shown in the chart attached as Appendix "P".

The City recommends as follows in respect of key recommendations for the technical specifications for P3 transit infrastructure projects in Ontario:

Recommendation No. 3

The Province should assess the impact of Canadian Content requirements for light rail vehicles on LRT projects and assess whether the policy has had unintended consequences on market competition and project delivery in Ontario.

Recommendation No. 4

The Province should consider tasking Infrastructure Ontario with performing an industry consultation process with public transit operators and relevant engineering associations to develop guidelines around the preparation of performance-based output specifications for transit projects.

4. Project Controls and Scheduling

No witness indicated that the City was under-resourced and many spoke in positive terms about the capability and qualifications of City Staff.⁵³⁴

In respect of RTG Staff and those of its Subcontractors, witnesses expressed concern about the sufficiency of the staffing and also the qualifications of individuals. Concerns were expressed about the lack of a Systems Integrator as a role that remained unfilled by RTG.⁵³⁵ Also, it became apparent that two RTG Key Individuals did not even know they were Key Individuals – Mr. Bergeron and Mr. France. The City asked that one of these Key Individuals be removed, being Mr. France, but he was not aware of the request for his removal and RTG has continued to allow him to work on the Project, despite the concern expressed about his competence and performance, particularly in light of the lack of oversight associated with the second mainline derailment.

As was acknowledged during the hearing, other than by requiring the Key Individual positions to be filled, the City had no other mechanism in the Project Agreement to require any particular staffing

⁵³⁴ Hearing Transcript of John Traianopoulos, dated June 15, 2022, p. 64, lines 4-7; Hearing Transcript of Antonio Estrada, dated June 17, 2022, p. 54, lines 22-25; Hearing Transcript of Peter Lauch, dated June 29, 2022, p.62, lines 8-21.

⁵³⁵ Hearing Transcript of Yves Declercq (English), dated June 16, 2022, p. 64, lines 5-8; Hearing Transcript of Michael Burns, dated June 20, 2022, p. 81, lines 5-8.

level by RTG, OLRTC, or RTM.⁵³⁶ Accordingly, one of the City's primary oversight tools was rendered ineffective by RTG. The Key Individual provisions in these project agreements can be difficult to prepare, particularly for a Maintenance term of 30 years into the future. Also, overly restrictive qualification requirements can create unnecessary barriers.

The scheduling requirements of the Project Agreement are difficult to enforce. On this Project, this meant that RTG did not accurately report its schedule delays or the reasons for those delays as described in Section H.⁵³⁷

The City hired an Independent Assessment Team to review the Works and this team prepared 13 reports on RTG's schedules which showed that RTG's schedules were not accurate. This team performed an important challenge function and this independent review was useful. However, under the Project Agreement, the City had limited tools to require RTG to be more transparent about its schedules.

After the sinkhole, RTG used the existence of an alleged Delay Event as a way to avoid giving a firm schedule commitment on when it would achieve RSA. When it finally did commit to certain dates, it missed the dates it committed to meet on four separate occasions, knowing the only consequence it would face would be a relatively small deduction of \$1 million on each occasion it committed to a date, then failed to meet it. Surprisingly, the City is criticized for publicizing dates provided by RTG (which it was contractually obligated to provide) as doing so allegedly put pressure on RTG.⁵³⁸ How asking an entity to meet its contractual commitments constitutes pressure is difficult to understand. In any event, the scheduling provisions of the Project Agreement could be strengthened so as to give the City an ability to require RTG to provide a reliable schedule to mitigate delays, even where a Delay Event is alleged. The allegation of a Delay Event should not prevent a schedule from being delivered.

In addition, in respect of claims being pursued by a Project Co, the notice provisions of the Project Agreement could be strengthened so as to avoid circumstances where a Project Co sits on claims, sometimes for years, and then brings them forward when convenient.

Therefore, the City recommends as follows in respect of key recommendations for project controls and scheduling requirements:

⁵³⁶ Hearing Transcript of Peter Lauch, dated June 29, 2022, p.66, lines 13-23.

⁵³⁷ See for example Mr. Morgan's evidence who stated that "there was absolutely a loss of confidence and a loss of trust in the schedules that were being brought forward by RTG. So every time we would get a schedule from them, they would deliver that to us; we had little to no confidence in that schedule. Time and time again, they missed those schedule dates, and so after a while, there was a sense that we didn't have clear information from RTG on the schedule and when the project was going to be completed." Hearing Transcript of Michael Morgan, dated June 27, 2022, p.12, lines 14-22.

⁵³⁸ See Section R.1 above.

Recommendation No. 5

The Key Individual provisions of the Project Agreement should be strengthened to increase the number and general guidelines as to qualifications of Key Individuals, including a Systems Integrator and make the process of replacing Key Individuals more efficient and provide explicit remedies for the refusal of a Project Co to remove Key Individuals promptly.

Recommendation No. 6

The Project Agreement provide that a reliable Recovery Schedule must be delivered, even after a Delay Event is alleged, and even if the original key milestones cannot be achieved so that all participants on the project understand what schedule the project Co is working to. The failure to deliver a Recovery Schedule promptly should have specific consequences.

5. Testing, Commissioning, and Completion

The testing and commissioning process on a complex infrastructure project is extensive. In this Project Agreement, Schedule 14 sets out testing and commissioning requirements. These were robust in large measure, but for the final stage, being the trial running stage, further specificity as to performance requirements would have been helpful, particularly in respect of the requirement to conduct trial running over the course of “12 consecutive days”.⁵³⁹ There are no specific pass/fail criteria set out in the Project Agreement or any specific re-start criteria.

In relation to completion, the inclusion of two milestones, Substantial Completion and RSA, created confusion for RTG. As the line would not be open for public use until after RSA, there was disagreement about what needed to be complete as of Substantial Completion. RTG took the position that not all components of the System needed to be complete by Substantial Completion.⁵⁴⁰ The City, acting reasonably, worked with RTG to determine what was specially needed to be complete by Substantial Completion as opposed to RSA.

Other subsequent Project Agreements for LRTs in the Province have utilized just one milestone in this regard – Substantial Completion. Doing so avoids certain potential disagreements.

The City therefore recommends as follows in respect of key recommendations for trial running requirements:

⁵³⁹ Project Agreement, Schedule 14 – Commissioning, section 1.5(e)(ii)(A), June 24, 2013, COM0001123. For Stage 2, this period was increased to 21 days.

⁵⁴⁰ Hearing Transcript of Peter Lauch, dated June 29, 2022, p.77-78, lines 14-22

Recommendation No. 7

Specific pass/fail criteria should be articulated in the Project Agreement for trial running at the outset of the Project to ensure clarity and enforceability. In addition, the duration and content of the testing to be performed needs to be expanded to include a quantifiable demonstration of system reliability and maintenance capability.

6. Maintenance

For the Maintenance Term, as Mr. Guerra of RTM noted, it would be helpful to have the maintainer more intensively involved prior to Substantial Completion. Mr. Guerra acknowledged that a Lessons Learned Document prepared by SNCL in March 2021⁵⁴¹ provided that the Operation and Maintenance Group should exhaustively inspect the entire deliverable from the Constructor for inclusion on the deficiencies list at the time of Substantial Completion.

It was noted that OLRTC has been reluctant to address issues not on the Minor Deficiencies List. As a result, these issues have fallen to RTM and have taken longer to address.⁵⁴²

In addition, this SNCL Lessons Learned document notes that the Interface Agreement between OLRTC and RTM could be improved so as to allow for the transfer of the Construction Project as a facet of the Maintenance Agreement and include:

- Integrated deliverables
- Budgets and change orders
- Liabilities and vendor warranties
- Facilitating design to installation
- Open items⁵⁴³

In general, the handover of documentation from OLRTC to RTM was not well handled, resulting in a greater burden on RTM which took away from its ability to focus on maintenance.

The maintenance provisions of the Project Agreement are based on payment for performance. The measure of performance is tied primarily to Project Co's ability to keep trains in service rather than the performance of maintenance activities. The result has been a maintenance program that lacks discipline in certain respects and a lack of key staff. With set Monthly Service Payments, Project Co's profit margin is driven by how lean its maintenance services can be.

⁵⁴¹ OLRT Lessons Learned Mitigation Plan – 03 – Minor Deficiency List, 05-Transition into Revenue Service, 07-Premature Integration, March 2021, RTM00592807.0002.

⁵⁴² Hearing Transcript of Mario Guerra, dated July 7, 2022, p. 13-15, line 4-17.

⁵⁴³ OLRT Lessons Learned Mitigation Plan/01 – Interface Agreement Alignment, March 2021, RTM00592807.0008.

The City therefore recommends the following in respect of key recommendations for the Maintenance Term:

Recommendation No. 8

An independent review could be conducted for the first year of service by an independent entity agreed to by both parties to review performance, deductions, and the administration of the payment mechanism and report to Council quarterly.

Recommendation No. 9

The requirements for Key Individuals during the Maintenance Term should be expanded and could, depending on the project and the timeframe, include roles such as Chief Safety Officer, Technical Director, Track Supervisor, and other key functions that are known to be industry best practices for staffing a complex LRT operation.

7. Governance

In relation to governance, the City understands the importance of establishing a governance structure that complies with the *Municipal Act*,⁵⁴⁴ which clearly delineates between policy development and oversight, which is the responsibility of City Council, and operational decision-making, which is reserved for the City Manager and his staff.⁵⁴⁵

For its major projects, the City's internal governance structure needs to take a lifecycle approach, rather than just being in place for construction. Governance should begin at the earliest planning phase of a project and continue through implementation and ultimately into operations. A lifecycle approach will help ensure that project objectives and risks cover the entire life of the project and not only its implementation.

Therefore, in respect of an internal governance model for managing decision-making with respect to the Project, the following overarching best practice principles need to be considered:

- (a) Ensure a single point of accountability at each level for the success of the Project to enable clarity of leadership and timeliness of decision-making;
- (b) Be clear in setting objectives, and define trade-offs between objectives, to help support aligned decision-making;
- (c) Ensure a degree of separation between project governance and corporate governance; interface and integration should be considered;

⁵⁴⁴ *Municipal Act*, 2001, S.O. 2001, c. 25, as amended.

⁵⁴⁵ The respective roles of City Council and City staff are described in Section E.

- (d) Use a line-of-sight variation reporting feature so that the Executive Steering Committee has sufficient, accurate and timely information to make responsive and informed decisions;
- (e) Enable efficient and effective project decision-making through clear unambiguous delegations of authority and ensure the right targeted people are involved (e.g., effective use of sub-committees);
- (f) Minimize layers of the governance structure (increasing flatness) to influence the ability to escalate issues quickly; and
- (g) Align internal stakeholders around their role and support required for the Project.

The City has implemented these best practices.

In addition, the City appreciates that Councillors want to receive regular updates and the quality and nature of the information received is important to them. Staff need to be aware of potential ambiguities and lack of clarity in reporting on highly technical issues and need to ensure that adequate opportunities are given for Council to ask questions and receive fulsome answers. This does not mean that Councillors should be making operational decisions about technical matters such as pass/fail criteria in a Commissioning process. Councillors do not have the skill set to be involved in decision making in such matters.

However, when a project involves a new system, it is particularly important for Councillors to be given sufficient information so that they can understand what decisions are being made under delegated authority and why.

Therefore the City recommends as follows in respect of lessons learned regarding governance:

Recommendation No. 10

The City should more clearly articulate an internal governance model for managing decision-making with respect to Projects taking into account best practice principles, including the recommendations in the Bellamy Report about the proper role of Council, the Mayor, Committee Chairs, and Staff in procurement decisions, and undertake further education of Councillors and City Staff as to the nature and role of delegated authority, the manner in which Council can amend or vary delegated authority, and municipal best practices in reporting to and oversight by Council so that key players share a common understanding of the respective roles and best practices.

Recommendation No. 11

The City should clearly communicate to Council when it plans to report and about what, at the outset of a project. Council should consider and evaluate the reporting framework over the life of a project as appropriate and make any changes to that delegated authority that need to be made. Also, Council should clearly communicate its expectations to City Staff.

8. Ancillary Recommendations

In addition to the key recommendations above, the City makes the following ancillary recommendations, again recognizing that certain of these recommendations have or are in the process of being implemented:

(i) Funding

Recommendation No. 12

In the funding agreements between levels of government, increased specificity about the level of reporting required by municipal participants would be useful as well as a process and conditions for withholding any payments due, including a notice period and a dispute resolution mechanism.

(ii) Design

Recommendation No. 13

The technical specifications be carefully reviewed on a design-build project to ensure they are based on performance requirements. Agencies like Infrastructure Ontario and municipal entities need to ensure that a holistic review of the technical specifications is performed to ensure these specifications work with the rest of the Project Agreement and are not too prescriptive.

Recommendation No. 14

Project Agreements should require robust processes including the use of specified EN standards to properly address requirements for systems engineering and systems integration on complex LRT systems from the outset of a project.

(iii) Project Controls and Scheduling

Recommendation No. 15

There should be clearer requirements around staffing levels in the Project Agreement, including:

- a) Providing Monthly Organization Charts with Monthly Works Reports with applicable key performance metrics which should have designated non-conformance deductions associated with them; and
- b) Specific requirements in relation to minimum staffing for certain tasks, particularly those related to maintenance.

Recommendation No. 16

An Independent Schedule Assessor role could be added to the Project Agreement either through the Independent Certifier's role or otherwise so that when the Owner requests a recovery schedule it would not be held up in dispute, rather, the Independent Schedule Assessor would make a prompt determination as to whether a recovery schedule is needed. If it is, then Project Co would be required to prepare one.

Recommendation No. 17

The notice provisions for claims could be strengthened so that the failure to raise issues and disputes could be a bar to advancing claims to incentivize transparency.

(iv) Testing, Commissioning and Completion

Recommendation No. 18

In relation to the Specific pass/fail criteria to be articulated in the Project Agreement for trial running the following specific issues should be considered:

- a) Percentage of AKVR required;
- b) Pass/fail criteria for each day;
- c) When a re-start is required;
- d) The service level to be used for the performance of trial running;
- e) Whether physical demonstration is required for the entire period or whether simulations are permitted; and
- f) Careful consideration of the number of days required (for example on Stage 2 the number of days was increased from 12 to 21)

Recommendation No. 19

There should just be one milestone – Substantial Completion (not an additional milestone for Revenue Service Availability) which should occur **after** successful completion of trial running.

Recommendation No. 20

The reliability of the system as a whole or certain components or systems could be tested periodically during the Maintenance Term to ensure that the reliability requirements are met. If not, there would be an obligation to perform rework.

(v) Maintenance

Recommendation No. 21

The Project Agreement should have more specific performance-based requirements for early engagement by the maintainer prior to Substantial Completion.

Recommendation No. 22

The Interface Agreement should be more clearly drafted to add further specificity to the respective roles of OLRTC and RTM.

Recommendation No. 23

Schedule 15-3 of the Project Agreement should be more detailed in terms of performance-based requirements and performance should not just be tied to whether trains are put in service but to the performance of specific categories of maintenance services.

X. CONCLUSION

Given the very tight timelines and broad scope of this Inquiry, the City had concern at the outset that the Inquiry was called by the Province as much for political reasons as to help the public understand the problems with the System and that, as a consequence, the short time frame prescribed for delivery of the final report would make it impossible for the Commission to adequately review the extensive matters outlined in the terms of reference, including the technical issues that led to the breakdowns and derailments.

Those concerns were accentuated by the approach taken by Commission counsel in its investigation and in cross-examination of City representatives and consultants during the public hearings, in contrast with witnesses for other parties. It has appeared at times that the public sector was on trial. The City was criticized both for being too hard on RTG (e.g. in respect of the geotechnical risk ladder, the debt swap, the sinkhole, and enforcing the Payment Mechanism) and too soft (trial running, deferred works). A significant amount of time was spent examining the City's conduct with respect to trial running, while almost no time was devoted to examining the technical issues which have and some of

which continue to plague the System. No expert evidence was called by the Commission on those issues.

As stated at the outset, the questions the Commissioner's report are these: what were the "circumstances and contributing factors" that led to the issues with the System, including the breakdowns and derailments, and how can they be prevented in future? These failures do not arise from the City's procurement approach, the structure and content of the RFP, the adequacy of the Project Agreement, the City's oversight of the Project or any of the other criticisms of the City's conduct raised by Commission counsel during this Inquiry. **None of those matters caused or contributed to the issues that led to the breakdowns and derailments.**

The City looks forward to receiving the Commissioner's report in the expectation that it will be based on a fair and comprehensive review of all of the evidence and, as the Order-in-Council prescribes, will not in any way interfere or conflict with ongoing litigation between the City and RTG.

ALL OF WHICH IS RESPECTFULLY SUBMITTED this 12th day of August, 2022.



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APPENDIX A

APPENDIX “A” – EVIDENCE REGARDING DBFM MODEL

1. Nancy Schepers

Ms. Schepers testified that both IO and Deloitte recommended a P3 model and specifically DBFM.⁵⁴⁶ She confirmed the advantages of a DBFM as including the benefit of innovation, responsibility for all aspects of the Project remaining with a single entity, a financial incentive to include maintenance in design and construction considerations, and financing to incentivize the Project Co to meet schedule and have lenders play an oversight role. She noted that risk is allocated through the contract and then the City enforces the contract, with upfront work required to define the risks being transferred and the output, so that there is a very clear definition to be able to monitor and fulfill the City’s responsibilities post contract award.⁵⁴⁷

It was suggested to Ms. Schepers by Commission counsel that if RTG became late and had financial pressures it had only three options – first, to get killed financially, second, to ask the City not to enforce the contract, and third, to turn over a system that was not ready. Ms. Schepers responded that the model gives the lenders options in the event of a default to step into the shoes of Project Co and remedy the default at their own risk and expense, that RTG would have priced the challenges and delays of the work into their bid and would have had a buffer and anticipated common delays and challenges, and that the wording of the Project Agreement, and specifically the definition of Revenue Service Availability, is there to ensure that certain conditions have been met before RTG can obtain its final payment.⁵⁴⁸

Ms. Schepers also confirmed in her evidence that under a traditional DBB model the sinkhole would have caused the project to come to a stop; something which would have been a significant challenge for the City to deal with, including the possibility of having to direct that the work proceed under a cost plus basis.⁵⁴⁹ Instead, as confirmed by other witnesses, RTG was able to recover from the sinkhole quite quickly and effectively.⁵⁵⁰ Ms. Schepers, who had significant experience as a senior engineer with the Ministry of Transportation, described a P3 as “top of list for me”.⁵⁵¹ Lastly, she confirmed that in evaluating the risks and benefits of the DBFM, it has to be evaluated in the context of the other alternatives available at the time.⁵⁵²

⁵⁴⁶ Hearing Transcript of Nancy Schepers, dated June 15, 2022, p. 105, lines 26-28, p. 106, lines 1-28, p. 107, lines 1-13.

⁵⁴⁷ Hearing Transcript of Nancy Schepers, dated June 15, 2022, p. 114, lines 5-8.

⁵⁴⁸ Hearing Transcript of Nancy Schepers, dated June 15, 2022, p. 162, lines 4-15, p. 163, lines 1-28, p. 164, lines 1-28.

⁵⁴⁹ Hearing Transcript of Nancy Schepers, dated June 15, 2022, p. 188, lines 13-26..

⁵⁵⁰ Hearing Transcript of Antonio Estrada, dated June 17, 2022, p. 14, lines 11-17.

⁵⁵¹ Hearing Transcript of Nancy Schepers, dated June 15, 2022, p. 188, lines 10-12.

⁵⁵² Hearing Transcript of Nancy Schepers, dated June 15, 2022, p. 188, lines 27-28, p. 189, lines 1-5.

2. Evidence of Rob Pattison

Rob Pattison's evidence on behalf of IO was that financing is key to the P3 model: "the key principle in all of those models is that the private sector builder or design builder puts their capital at risk through the construction period and gets paid out either substantially in arrears, so they've always got a lot of their own money in the ground before they begin getting paid; in fact, on many of our projects, particularly the early projects, they would have to reach substantial completion of the project to be paid anything. And then under a DBFM project, on substantial completion, when the facility is built, there's a payment of part of that private capital and the balance is paid out over the 30-year maintenance term..."⁵⁵³

According to Mr. Pattison, the purpose of having financing in the project is to give the owner a lever to enforce the contract. On a traditional model, where the contractor is cash-flow neutral and they get a certain distance into the project, they can down tools and pick a fight where they see they have the greatest leverage.⁵⁵⁴ Performance security through financing is intended to address this type of behaviour.

As Mr. Pattison described it, because the design builders are going to have to finance the project using Project Co as a vehicle, the designer and builder will be in creative tension to make sure they get a good product at the cheapest price. The design builder and the maintainer will be in tension to make sure that what is delivered will be maintainable for 30 years and will be a safe, durable, high-quality, reliable product. And the project team is in tension both with internal equity providers and from independent short-term lenders and long-term lenders who get paid out over the maintenance term.⁵⁵⁵

As Mr. Pattison put it, given all the enforcement tools in the model, "you'd be crazy to bid one of these without doing extensive due diligence about the risk that you were taking on."⁵⁵⁶ The proponents understand the 30 year financial risk they are taking on with respect to long-term lenders and build that into schedule analysis and pricing of the bid.⁵⁵⁷

Private financing also adds a monitoring component by the third party lenders because the lenders have capital at risk. Private capital also incentivizes the project co to finish the work on schedule, although Mr. Pattison was clear that regardless of the owner's contractual deadline any contractor will build a schedule and finance the project around that schedule.⁵⁵⁸

⁵⁵³ Hearing Transcript of Rob Pattison, dated June 14, 2022, p. 6, line 1, p. 7, lines 1-8.

⁵⁵⁴ Hearing Transcript of Rob Pattison, dated June 14, 2022, p. 11, lines, 2-12.

⁵⁵⁵ Hearing Transcript of Rob Pattison, dated June 14, 2022, p. 12, lines 6-15.

⁵⁵⁶ Hearing Transcript of Rob Pattison, dated June 14, 2022, p. 12, lines 16-19.

⁵⁵⁷ Hearing Transcript of Rob Pattison, dated June 14, 2022, p. 58, lines 14-28.

⁵⁵⁸ Hearing Transcript of Rob Pattison, dated June 14, 2022, p. 16, lines 6-9.

Mr. Pattison was unable to think of any drawbacks of private financing other than the fact that for some contractual variations lender's consent was required. He would not agree that private finance meant that the public sector paid more for the project, because of the offsetting benefits. He would not agree that the time pressure created by private financing might be at odds with quality, reliability and performance, stating that there would always be that tension in any contractual model.⁵⁵⁹ When it was suggested to him that the private partner might make a bad decision at handover because of this pressure, Mr. Pattison responded that the contract is intended to make the contractor perform and "we're always looking to how are we going to be able to enforce those obligations". He would not characterize the \$1 million liquidated damage provision in the PA for failing to meet the targeted RSA Date as material, given the size of the Project.⁵⁶⁰

Mr. Pattison agreed that the P3 model prioritizes cost certainty and increases the likelihood that the private partner will meet the selected schedule. He would not agree that it does not consider reliable performance in a meaningful way, noting the existence of the payment mechanism and various incentives the model provides for safe, durable high-quality design, construction and maintenance.⁵⁶¹ In his view, the whole purpose of the model is to make sure that for 30 years the asset supports the service being provided by the public sector.⁵⁶²

Mr. Pattison did **not** agree that IO did not identify risks associated with private financing, stating that there were many discussions about the risks of the project during its development.⁵⁶³

Mr. Pattison agreed that he was in favour of maximum risk transfer to the private sector. When writing the contract, the idea is to find the balance point where every risk that is best controlled by Project Co in terms of their ability to influence it is also owned by Project Co under the contractor. IO has to assume that these "very sophisticated entities that are on the other side of these deals understand their risk, can price it, and will not take a risk they cannot honour." ACS Dragados, Ellis Don and SNC Lavalin were all frequently involved in many IO projects, either bidding or executing. He described them as extremely sophisticated, experienced and financially astute organizations. The owner counts on the proponents to price the bid properly so that they can execute the job.⁵⁶⁴

Commission counsel repeatedly suggested to Mr. Pattison that there various incentives in the P3 model that result in time pressure (private financing, the liquidated damages component, milestone

⁵⁵⁹ Hearing Transcript of Rob Pattison, dated June 14, 2022, p. 17, lines 10-28, p. 18, line 1, p. 19, lines 1-7.

⁵⁶⁰ Hearing Transcript of Rob Pattison, dated June 14, 2022, p. 21, lines 13-17.

⁵⁶¹ Hearing Transcript of Rob Pattison, dated June 14, 2022, p. 26, lines 6-25.

⁵⁶² Hearing Transcript of Rob Pattison, dated June 14, 2022, p. 26, line 28, p. 27, lines 1-2.

⁵⁶³ Hearing Transcript of Rob Pattison, dated June 14, 2022, p. 34, lines 12-17.

⁵⁶⁴ Hearing Transcript of Rob Pattison, dated June 14, 2022, p. 56, lines 22-28, p. 57, lines 1-28, p. 58, lines 1-10.

chasing, materialization of geotechnical risk). It was suggested that this was in tension with reliability, quality and performance. Again, Mr. Pattison would not agree:

The Project Co. will be under cost pressure, there's no question. Under this model, by design, the contractor has a 30-year obligation. They don't get their loan paid back, they don't get their equity, they get deductions made against them, and so on, and so on, and so forth for 30 years, and there's no escape from that. And so, a contractor that's thinking in an extraordinary -- or a Project Co., I should say, that is thinking in an extraordinarily short-sighted way, or thinking on just about getting the substantial, might be tempted to think about it that way, like a traditional contractor would be. But they are going to have the maintainer within their own family and the LTA breathing down their throats on behalf of the lenders. And their ---And their equity people, to make sure that they don't hand over a piece of junk. And, on top of all that, there are the provisions of the contract that they have to comply to in terms of, you know, whatever provisions are in there for commissioning, testing, and operationalizing the system, and the long-term payment.⁵⁶⁵

If the private sector properly took into account the financial and other risks associated with the Maintenance Term at the time of procurement, then the time pressures associated with those issues were assumed by the proponents when they finalized their bids. Those risks were transferred to Project Co, something which was in the interests of the citizens of Ottawa.⁵⁶⁶

⁵⁶⁵ Hearing Transcript of Rob Pattison, dated June 14, 2022, p. 51, lines 17-28, p. 52, lines 1-3.

⁵⁶⁶ Hearing Transcript of Rob Pattison, dated June 14, 2022, p. 59, lines 1-12.

APPENDIX B

APPENDIX “B” – CITY BUDGET

1. Evidence of John Jensen

Commission counsel suggested to Mr. Jensen that in March 2011 the new Watson administration directed him to design to the 2009 \$2.1 billion budget⁵⁶⁷. Mr. Jensen described this as a target to work towards “without compromising quality of the project, to scrub the project for any extra costs, any design efficiencies, to see how close we can get to that without compromising the project”. He agreed that the 2009 estimate was created before design and preliminary engineering work had taken place in 2010 and 2011 and therefore before a meaningful constructability review had taken place.⁵⁶⁸ He did not say that no constructability review ever took place.

On schedule, Mr. Jensen agreed that in March 2011 meeting of FEDCO staff were directed to explore opportunities to accelerate the Project schedule, which ultimately was achieved by reducing the procurement period by six months and the construction schedule by six months.⁵⁶⁹ Mr. Jensen ultimately agreed that the desire to accelerate the schedule came from the Mayor and council, in part to see if downtown Ottawa could be in good shape for the sesquicentennial celebrations planned for July 2017. It was repeatedly suggested to him by Commission counsel that pushing the schedule “hard” created risks (although as noted the initial construction schedule was only abbreviated by six months). Mr. Jensen responded that part of the procurement process was to push for the best schedule, the best outcome and the best cost. And as part of that process the bidders would evaluate that and incorporate it into their bids. The process was being evaluated by experts, and if those experts had felt the City was pushing too aggressively on the schedule, the City was expecting the experts to advise them accordingly.⁵⁷⁰ Mr. Jensen never received advice from any of the consultants working with the City that the acceleration of the project schedule was unrealistic or not achievable.

2. Evidence of Marian Simulik

Ms. Simulik, the City Treasurer, was examined in detail by Commission counsel about the budget. The \$2.1 billion estimate found in the December, 2009 EA included approximately \$1.8 billion for the cost of construction of the tunnel, underground stations, transitway conversion, MSF and vehicles, which was the basis for the Province’s \$600 million contribution and an equal contribution from the federal government.⁵⁷¹ Ms. Simulik agreed that the preliminary engineering

⁵⁶⁷ Memo to Mayor and Councillors re Update on Ottawa’s Light Rail Transit (OLRT) Project, March 1, 2011, COW0148252, Exhibit 004.

⁵⁶⁸ Hearing Transcript of John Jensen, dated June 13, 2022, p. 27, lines 9-14, p. 28, lines 11-17.

⁵⁶⁹ Hearing Transcript of John Jensen, dated June 13, 2022, p. 31, lines 7-20, 25-28, p. 32, lines 1-15.

⁵⁷⁰ Hearing Transcript of John Jensen, dated June 13, 2022, p. 33, lines 2-28, p. 36, lines 6-27.

⁵⁷¹ Hearing Transcript of Marian Simulik, dated June 14, 2022, p. 98, lines 26-28, p. 99, lines 1-26.

teams were directed to design to that budget, which she described as typical for the budget process for capital works. “You come up with a very high level estimate, in this case Class D. And then the architects, engineers go away and try to accommodate that capital work within that budget”.⁵⁷² In her examination she explained that there was a progression in the design and that there was a continual evolution of the design during the in-bid period taking it from a D to an A in terms of level.⁵⁷³ Design to budget she described as an accepted budgetary technique at the municipal level.⁵⁷⁴

Ms. Simulik’s evidence about the evolution of the design is supported by contemporaneous documents, which include the following:

- (a) During a March 1, 2011 FEDCO meeting and “Update to Ottawa’s Light rail Transit (OLRT) Project”, Ms. Schepers and Mr. Jensen answered questions from Councillor Deans about the Class D and +/- 25%. Mr. Jensen advised that the estimate that would be presented in July [2011] would be a Class C, which is typically considered to be +/- 15%.⁵⁷⁵
- (b) Ms. Scheper’s May 25, 2011 report advised that the “baseline design is specified in the RFP, in this case bringing the OLRT project to an appropriate level of design (~30%) for procurement and providing a Class C project cost estimate (+/- 15%)”.⁵⁷⁶

In other words, by July 2011 the Project estimate had been significantly refined from that made in the EA.

Ms. Simulik agreed that the 2009 budget did not include approximately \$440 million in anticipated inflation, and a further \$177 million in construction period financing and transaction costs.⁵⁷⁷ As a result, when staff was working to keep the estimated cost of the Project within the 2009 \$2.1 billion budget, they had to find a way to absorb over \$600 million in costs for inflation and project financing.⁵⁷⁸ She agreed that there were a number of value engineering steps taken to “contain the costs and also make it a better system”.⁵⁷⁹

However, Ms. Simulik explained that the \$600 million differential was largely accounted for by the changes to the alignment and tunnel and station configuration described in the July 2011 report,

⁵⁷² Hearing Transcript of Marian Simulik, dated June 14, 2022, p. 103, lines 4-11.

⁵⁷³ Hearing Transcript of Marian Simulik, dated June 14, 2022, p. 176, lines 6-12.

⁵⁷⁴ Hearing Transcript of Marian Simulik, dated June 14, 2022, p. 177, lines 9-16.

⁵⁷⁵ *Finance and Economic Development Committee Minutes*, March 1, 2011, COW0561367.

⁵⁷⁶ Ottawa’s Light Rail Transit (OLRT) Project Schedule Acceleration and Procurement Option Selection, May 25, 2011 COM0000012, Exhibit 081.

⁵⁷⁷ Report to Council - Design, Build, Finance and Maintenance of Ottawa’s Light Rail Transit (OLRT) Project, December 4, 2012, COW0000040, Exhibit 028.

⁵⁷⁸ Hearing Transcript of Marian Simulik, dated June 14, 2022, p. 105, lines 9-13.

⁵⁷⁹ Hearing Transcript of Marian Simulik, dated June 14, 2022, p. 106, lines 1-5.

which resulted in an overall budget reduction of more than \$440 million.⁵⁸⁰ The realignment and shallowing made the system better for actual users. The final budget was \$2.13 billion (inflation adjusted) set out in the December 4, 2012 report to Council, plus a \$100 million contingency.

⁵⁸⁰ Finance and Economic Development Committee Report 18 OLRT Design Improvement Update, March 28, 2012, COW0000068, Exhibit 30.

APPENDIX C

APPENDIX “C” – AFFORDABILITY CAP - LIST OF ONTARIO PROJECTS

Sponsor	Project	Deal Structure	Financial Close	Affordability Cap	Affordable bid received	Details
City of Ottawa	Stage 1 Confederation Line LRT	DBFM	2013	Yes	Yes	<p>Applied to Capital Only (did not include Maintenance + Lifecycle Payments)</p> <p>All unaffordable projects received a 0 out of 500 for Financial Score (Technical score was out of 500).</p> <p>If all bids unaffordable then Affordability Cap was not applied and RFP Salvage Rights invoked.</p>
Region of Waterloo	ION LRT	DBFOM	2014	Yes	Yes	<p>Applied to Capital, Maintenance + Lifecycle (all ASPs)</p> <p>All unaffordable projects received a 0 out of 500 for Financial Score (Technical score was out of 500).</p> <p>If all bids unaffordable then Affordability Cap was not applied and RFP Salvage Rights invoked.</p>
Metrolinx / Infrastructure Ontario	ECLRT	DBFM	2015	Yes	Yes	<p>Applied to Capital, Maintenance + Lifecycle (all ASPs)</p> <p>All unaffordable projects received a 0 out of 500 for Financial Score (Technical score was out of 500).</p> <p>If all bids unaffordable then Affordability Cap was not applied and RFP Salvage Rights invoked.</p>
Metrolinx / Infrastructure Ontario	Finch West LRT	DBFM	2018	Yes	Yes	<p>Applied to Capital, Maintenance + Lifecycle (all ASPs)</p> <p>All unaffordable projects received a 0 out of 500 for Financial Score (Technical score was out of 500).</p> <p>If all bids unaffordable then Affordability Cap was not applied and RFP Salvage Rights invoked.</p>

Sponsor	Project	Deal Structure	Financial Close	Affordability Cap	Affordable bid received	Details
City of Ottawa	Stage 2 Confederation Line LRT	DBF	2019	Yes	No	<p>Only Capital (DBF) with no Maintenance as this was with Stage 1.</p> <p>All unaffordable projects received a 0 out of 500 for Financial Score (Technical score was out of 500).</p> <p>If all bids unaffordable then Affordability Cap was not applied. RFP Salvage Rights amended to clarify that the City would negotiate with the 1st Ranked proponent to amend deal as required</p> <p>If negotiations with 1st Ranked Proponent failed, City could proceed with 2nd Ranked and then 3rd Ranked.</p> <p>Timelines for the negotiations were established to avoid expiry of the Bid Validity Period.</p> <p>In this case Council voted to accept the proposal despite the cap being exceeded.</p>
City of Ottawa	Stage 2 Trillium Line Extension	DBFM	2019	Yes	Yes	<p>Applied to Capital, and Maintenance + Lifecycle (all ASPs)</p> <p>All unaffordable projects received a 0 out of 500 for Financial Score (Technical score was out of 500).</p> <p>If all bids unaffordable then Affordability Cap was not applied. RFP Salvage Rights amended to clarify that the City would negotiate with the 1st Ranked proponent to amend deal as required.</p> <p>If negotiations with 1st Ranked Proponent failed, City could proceed with 2nd Ranked and then 3rd Ranked.</p> <p>Timelines for the negotiations were established to avoid expiry of the Big Validity Period.</p>

APPENDIX D

APPENDIX “D” – GEOTECHNICAL RISK LADDER

1. Evidence of Mr. Bucci

Mr. Bucci testified that the geotechnical risk ladder gave the proponents a financial incentive to take on the maximum geotechnical risk. Taking on the highest level of risk gave proponents a \$60 million increase to the affordability cap and a \$80 million deduction from the Net Present Value calculation for purposes of their financial submission.⁵⁸¹

Mr. Bucci confirmed that all three bidders accepted the highest level of geotechnical risk. However, Mr. Bucci would not agree that there was no other practical option open for a bidder. Mr. Bucci also explained that there were a significant number of commercially confidential meetings with each bidder. The geotechnical risk issue and the City’s assessment of it was not done in a vacuum, but with input from the proponents. The risk ladder was not a new idea but had been used in other projects, such as the Port of Miami tunnel. Given the back and forth with proponents during the in-market period, the City had gotten to a place where it believed it was biddable and would allow proponents to meet their needs. This was a commercially fair mechanism which had taken into account input from the three teams, all of whom were qualified and had experience.⁵⁸² Mr. Bucci could recall no complaint from any proponent about the geotechnical risk ladder.⁵⁸³

⁵⁸¹ Ottawa’s Light Rail Transit Project OLRT Executive Steering Committee, August 10, 2012, slide 18, COW0523188), Exhibit 085.

⁵⁸² Hearing Transcript of Remo Bucci, dated June 20, 2022, p. 38, lines 6-28, p. 39, lines 1-10.

⁵⁸³ Hearing Transcript of Remo Bucci, dated June 20, 2022, p. 57, lines 7-17.

APPENDIX E

APPENDIX “E” – RELEVANT PROJECT AGREEMENT PROVISIONS

1. Project Co Design and Construction Obligations

At the time it entered into the Project Agreement, Project Co made certain representations with respect to its experience and knowledge in respect of light rail transit projects and represented that it had the required ability, experience, skill, and capacity:

5.1 Project Co Representations and Warranties

(a) Project Co represents and warrants to the City that as of Commercial Close:

(iv) **Project Co and the Project Co Parties, collectively, have extensive experience and are knowledgeable in the design, construction and maintenance of light rail transit projects** and have extensive experience in the construction of highways and other public roads similar to the Project in scale, scope, type and complexity **and have the required ability, experience, skill and capacity to perform the activities within the Project Scope in a timely and professional manner as set out in this Project Agreement including, without limitation, the services required by the Contract Documents**, to review and interpret the Contract Documents and to complete the Highway Work in accordance with the standard of care set out in Section 11.2(a)(viii) of Schedule 40-Highway Work;

(A) Project Co and certain of the Project Co Parties have conducted an investigation and examination of the Contract Documents, and any other documents made available to Project Co by the City...[Emphasis added]

Project Co’s general obligations are set out in Section 9.2 of the Project Agreement, all of which obligations are to be carried out at its own cost and risk:

9.2 General

(a) Project Co shall, **at its own cost and risk**:

(i) observe all provisions of this Project Agreement in compliance with Applicable Law;

(ii) perform all activities within the Project Scope:

(A) in compliance with Applicable Law;

(B) in compliance with all Permits, Licences and Approvals and so as to preserve the existence and continued effectiveness of any such Permits, Licences and Approvals;

(C) so as to satisfy the Output Specifications;

(D) in accordance with Good Industry Practice (Works) and Good Industry Practice (Highway Work);

(E) in a manner consistent with the Quality Plans and the Project Co Proposal Extracts;

(F) in a timely and professional manner;

(G) with due regard to the health and safety of persons and property;

(H) subject to the other provisions of this Project Agreement, in a manner which will not impair the ability of the City or City Party to comply with Applicable Law;

(I) subject to the other provisions of this Project Agreement, in a manner which will not impair the performance of the Governmental Activities;

(J) in accordance with all other terms of this Project Agreement (including, for greater certainty, Schedule 40 - Highway Work);

(iii) cooperate with the City in the fulfillment of the purposes and intent of this Project Agreement, provided however that Project Co shall not be under any obligation to perform any of the City's obligations under this Project Agreement;

(iv) in accordance with Schedule 15-4 - Regulatory Standards, develop and implement regulatory standards relating to the design, construction, operation, safety, security and maintenance of a light rail transit system, including the System and the Project;

(v) Project Co shall be 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; and

(vi) in addition to Project Co having responsibility for Integration, as amongst the Contractors, the Construction Contractor shall assume responsibility for the Integration of the System.

(b) Project Co shall, in performing all activities within the Project Scope, cooperate with the City by, amongst other things, participating in meetings, committees and subcommittees related to the Project in respect of which the City requires Project Co's participation and, in the event that such participation is determined by Project Co and the City to constitute a material expense to Project Co, Project Co's participation shall, subject to and in accordance with Schedule 22 - Variation Procedure, result in a Variation.

In addition to the above, Project Co's overall responsibility for design and construction is clearly set out at Section 20, an obligation that continues throughout the Construction Period and the Maintenance Term:

20.1 Overall Responsibility

...

(b) Without prejudice to Section 20.1(a), but subject to Section 16.5 and to the provisions of the Maintenance and Rehabilitation Requirements, Schedule 20 – Payment Mechanism and Schedule 24 – Expiry Transition Procedure, **if, at any time during the Project Term, any of the Design and Construction Works, the System or any parts thereof do not fully satisfy the Output Specifications and/or any other term or condition of this Project Agreement** (other than the Project Co Proposal Extracts), **Project Co shall, at its own cost and expense, rectify the Design and Construction Works**, the System and any part thereof so that:

- (i) the Design and Construction Works, the System and all parts thereof shall, at all times, comply with and satisfy in full the Output Specifications and the other terms and conditions of this Project Agreement (other than the Project Co Proposal Extracts); and
- (ii) the Design and Construction Works, the System and all parts thereof will, at all times, be able to meet all safety and performance standards and other requirements set out in Schedule 15-3 – Maintenance and Rehabilitation Requirements. [Emphasis added]

Project Co is responsible for the activities of its Subcontractors who are Project Co Parties:

9.3 Project Co Parties

- (a) Project Co shall not be relieved of any liability or obligation under this Project Agreement by the appointment of any Project Co Party, and Project Co shall cause each Project Co Party, to the extent such Project Co Party performs or is specified hereunder to perform the activities within the Project Scope, to comply with the obligations of Project Co hereunder in the same manner and to the same extent as Project Co.

2. Systems Integration and Systems Engineering

The Project Agreement assigns responsibility for Systems Integration and Systems Engineering to Project Co, including ensuring that the integration of the vehicle with the track, signalling and train control systems are properly carried out:

9.2 General

- (a) Project Co shall, at its own cost and risk:
 - ...
- (ii) perform all activities within the Project Scope:
 - ...
- (v) Project Co shall be 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; and
- (vi) in addition to Project Co having responsibility for Integration, as amongst the Contractors, the Construction Contractor shall assume responsibility for the Integration of the System.

In addition, Project Co is responsible for safety and security certification:

Schedule 15-2, Part 1, Article 10 Safety and Security Certification

10.1 Safety and Security Certification

...

- e) Project Co's responsibilities are defined in the following table. The responsibilities are identified as Primary (P) or Secondary (S). For tasks identified as primary responsibility (P) Project Co shall

be responsible for the performance of the activity. For tasks identified as secondary responsibility (S) Project Co shall be responsible to provide support, as required, to accomplish the task. The SSCP describes comprehensive primary and secondary responsibilities for the tasks identified below...

3. Commissioning and Trial Running

Project Co is responsible for Commissioning and trial running activities under the Project Agreement. Its responsibilities in respect of Commissioning as defined in the main body of the Project Agreement include the following:

26.1 Commissioning Activities

- (a) Project Co shall perform all Project Co Commissioning, and shall support and facilitate the performance of all required commissioning by the City, as set forth in this Section 26 and in Schedule 14 – Commissioning in respect of Milestone Acceptance, Substantial Completion, Revenue Service Availability and Final Completion, as applicable.
- (b) Project Co shall perform or cause to be performed all matters to ensure that Revenue Service Availability is achieved by the Required Revenue Service Availability Date.

Schedule 14 of the Project Agreement sets out Project Co's detailed Commissioning responsibilities including the following:

3.1 Applicable Standards

- (a) Project Co shall plan, schedule, coordinate and execute the Project Co Commissioning of the complete operating System Infrastructure. The System Infrastructure provided as part of the Works shall be in accordance with the standards set out in this Schedule 14.
- (b) Commissioning includes required work for LEED Certification at the MSF. Project Co shall be responsible for achieving all commissioning prerequisites and credits to achieve the LEED Certification of the MSF administration building and maintenance building.
- (c) Project Co shall comply with Good Industry Practice (Works) for Project Co Commissioning for all commissioning activities set out in this Schedule 14. Project Co shall provide all of the documentation to the City in accordance with the requirements of Schedule 10 - Review Procedure.

1.3 Project Co Commissioning Parameters

- (a) Project Co shall be responsible for preparing and executing a commissioning plan/strategy required to successfully demonstrate the performance of the System Infrastructure in accordance with the Project Agreement. The scope of the testing and commissioning plan/strategy will include Trial Running of the System in segments and as a fully integrated System to the extent necessary to demonstrate the functional capability and safety of the System.
- (b) The testing and commissioning plan/strategy shall include, but not be limited to, the following:
 - (i) Relationship to safety and security management and other related System safety and security requirements;
 - (ii) Resumes of key personnel involved detailing years of experience;

- (iii) Organization chart of the testing and commissioning team and their discipline responsibilities;
 - (iv) Planned resources;
 - (v) Specific requirements for the City interfaces;
 - (vi) Testing regime and test documentation procedures; and
 - (vii) Scheduling of the testing and commissioning activities.
- (c) The testing and commissioning plan/strategy shall demonstrate how Project Co intends to validate and verify that the functional and technical requirements, Trial Running, performance criteria, quality and safety aspects of the system have been met or exceeded and that the overall OLRT System is fit for purpose.
 - (d) The commissioning plan/strategy shall be developed and modified as required to address the evolution of the Project.
 - (e) Project Co is solely responsible for all checking and verification activities relating to individual components, sub-systems, Vehicles, System, all associated equipment and facilities required prior to the formal testing and commissioning and acceptance testing programs necessary to demonstrate the fully integrated operation of the System Infrastructure to the satisfaction of Independent Certifier.
 - (f) Project Co shall formally issue the test and commissioning plan/strategy 60 days in advance of the test and commissioning program. The test and commissioning plan/strategy shall undergo review and modification as the project progresses as agreed by the City and Project Co.
 - (g) The test and commissioning plan/strategy shall permit the oversight and monitoring of testing and commissioning activities for the duration of the Project.
 - (h) With the exception of the obligation to supply drivers and controllers for commissioning, the City accepts no responsibility for Project Co Commissioning. Each element of the System Infrastructure shall be, wherever possible, thoroughly tested and commissioned as standalone subsystems operating in simulated worst case environments prior to being placed into service. This shall be demonstrated at FAI, FAT or SAT, whichever is applicable.
 - (i) Project Co shall prepare a test plan within six months of Financial Close. The test plan shall be subject to review and acceptance by the City, in accordance with Schedule 10 - Review Procedure.
 - (j) In addition to the tests specified in Schedule 15-2, the City (and its representatives) shall have the right, when acting reasonably, to identify specific testing requirements that will require validation.
 - (k) Project Co shall prepare individual test plans for each System test, and provide advance notice to the City 30 days prior to such testing. Individual test plans shall be subject to review and acceptance by the City, in accordance with Schedule 10 - Review Procedure.
 - (l) The Project Co Commissioning Coordinator shall convene a meeting of the Commissioning Team to review the Project Co Commissioning plan/strategy, set commissioning parameters, designate the responsibilities of the various parties and establish the documentation requirements for each stage of the Works and the Project Co Commissioning.
 - (m) Project Co shall create a schedule of commissioning activities (the “**Commissioning Schedule**”) and shall incorporate the Commissioning Schedule into the Works Schedule.

- (n) The Project Co Commissioning Coordinator shall submit monthly reports to the City in regards to progress of Project Co Commissioning.
- (o) Project Co is responsible for the supply, installation, start-up, testing, adjustment and cleaning of each item of the System provided as part of the Works. Where applicable, Project Co Commissioning shall be completed in accordance with the equipment vendor's guidance.
- (p) Project Co in implementing the Project Co Commissioning plan/strategy shall verify that:
 - (i) the System Infrastructure have been installed and are operating in accordance with the requirements of this Project Agreement;
 - (ii) the System Infrastructure performance meets or exceeds the requirements of the Output Specifications and this Project Agreement;
 - (iii) training has been provided and meets or exceeds the requirements of this Project Agreement;
 - (iv) As-Built Drawings and operating and maintenance manuals have been provided in accordance with this Project Agreement;
 - (v) LEED commissioning documentation required for achieving the LEED Certification has been prepared and copied to the City; and
 - (vi) LEED commissioning documentation for achieving the LEED Certification has been submitted per the requirements of LEED.
- (q) Project Co shall provide System Infrastructure orientation to the Ottawa Emergency Services, including; the Fire Departments, Paramedics, and Police pursuant to Schedule 15-2 Part 1 Article 26.

1.4 Commissioning Team

- (a) The Commissioning Team (the "**Commissioning Team**") shall be comprised of:
 - (i) a representative of Project Co including, where applicable, subcontractors;
 - (ii) a representative of the City;
 - (iii) the Project Co Commissioning Coordinator;
 - (iv) the Independent Certifier; and
 - (v) where applicable, representatives of the relevant Vehicle manufacturers and Equipment manufacturers.
- (b) Project Co and each of its Subcontractors shall assign, where applicable, individuals from each relevant trade to the Commissioning Team and shall ensure that representatives of the relevant Equipment manufacturers and testing agencies are present during the relevant Project Co Commissioning meetings.
- (c) Project Co shall provide all necessary labour, materials, equipment, testing apparatus and incidentals necessary to completely start-up, verify, performance test and commission each item System Infrastructure provided as part of the Works.
- (d) After Financial Close, the Commissioning Team shall, when applicable, meet monthly to review the progress of the Project Co Commissioning.

1.5 Commissioning Procedures

- (a) Project Co shall ensure that all regulation and code references in the Reference Documents, in addition to the provisions of Schedule 15-4 – OLRT Regulatory Framework, have been fully complied with.
- (b) Project Co and the Project Co Commissioning Coordinator shall plan, prepare documentation and execute the Project Co Commissioning plan/strategy, process and procedures.
- (c) Project Co shall ensure that each of the requirements set out in this Schedule 14 and those identified in Schedule 15 are completed.
- (d) Training:
 - (i) Project Co shall provide a training schedule and agenda for each training session to the City for acceptance in accordance with Schedule 10 - Review Procedure. Operational and maintenance training shall be provided for all System Infrastructure. A complete listing of all training programs that Project Co is responsible for is located in Schedule 15-2 Part 1 Article 26.
 - (ii) The Project Co Commissioning Coordinator or designated delegate shall attend a sample of every training session to ensure the agenda is maintained and that quality training is provided. One training session for each category shall be video recorded in digital format. The disks shall be submitted to the City and labelled accordingly.
 - (iii) Project Co's design consultants shall provide an overview of the System Infrastructure, including an explanation as to why types of systems and Equipment were selected, identification of the design intent and discussion of the operating procedures required to maintain the design intent. These sessions shall be video recorded in digital format.
 - (iv) A portion of the training sessions for Equipment shall be conducted at the location of the Equipment.
 - (v) A portion of the training sessions for the System shall be conducted at the System operating stations (workstations).
 - (vi) All training sessions shall be logged and personnel shall be recorded as receiving training. Further refreshers shall be scheduled in line with safety, quality and training requirements.
- (e) Integrated Revenue Service Availability Testing:
 - (i) Trial Running Objectives
 - (A) Project Co shall conduct Trial Running when the integrated System has been tested and is essentially ready for Revenue Service Commencement. Trial Running will be the final step in confirming readiness for Revenue Service Commencement.
 - (B) 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. This can be subdivided into the following key objectives:
 - (1) to familiarize the operating and maintenance staff with the operation of the integrated system and Standard Operating Procedures;

- (2) to exercise and validate the operating schedules and operational performance requirements; and
 - (3) to exercise and confirm the operating reliability of the subsystems simulated under various operating conditions (normal and emergency). The basic design requirements and safety and security requirements will have been verified through the testing and commissioning program prior to this stage of Trial Running.
- (ii) Scope of Trial Running
- (A) **Project Co shall conduct the trial running for final acceptance which will be conducted for a period of 12 consecutive days following successful completion of testing and commissioning; verification by Project Co that there are no deficiencies to prevent safe running of the System; and verification that there are an adequate number of trained staff to operate the System. At the end of this exercise, the integrated system will be ready for Revenue Service Commencement.**
 - (B) **Trial Running shall be reviewed on a day by day basis by the Commissioning Team.**
 - (C) **The objective of this stage is to operate a full regular scheduled service on the full line using the peak and non-peak schedules for an extended period. Passengers will not be carried. The tests will include a variety of failure management scenarios that could reasonably be expected to occur in regular Revenue Service. The City will have the opportunity to review and approve the failure management scenarios that will be tested during Trial Running.**
- (iii) Performance Criteria for Trial Running Acceptance
- (A) Project Co shall use the trial running period to collect operating data and evaluate system reliability, availability, and maintainability performance and to demonstrate that the process to collect, evaluate, and validate the operating data has been properly established. Using prescribed procedures, data on service deviations will be collected and assigned against the Vehicles and specific subsystems down to the LRU level. The database shall provide verification of system reliability to the LRU level. If the cumulative failure of any LRU exceeds 10% of the total LRU population, up to and including the completion of the Reliability Acceptance Test; Project Co shall redesign and replace the defective LRU's.
 - (B) **Validation of the Trial Running acceptance shall be performed by the Independent Certifier.**
 - (C) **The Trial Running of the System will demonstrate to the satisfaction of the Independent Certifier that the specified travel times, headways and operational performance requirements can be achieved. [Emphasis added]**

1.7 Coordination with the City and the Independent Certifier

- (a) The Project Co Commissioning Coordinator shall co-ordinate with the City and the Independent Certifier, throughout the Project Co Commissioning process.
- (b) This co-ordination shall include:

- (i) review of test, verification and performance test forms;
- (ii) review of commissioning progress management forms and performance testing;
- (iii) review of the Project Co Commissioning plan/strategy;
- (iv) review of the Commissioning Schedule;
- (v) sample witnessing of tests and performance testing;
- (vi) review of the training curriculum and materials as outlined in Schedule 15-2 Part 1 Article 26 and scheduling;
- (vii) review of the maintenance manuals;
- (viii) sample witnessing of seasonal performance testing;
- (ix) review of the commissioning reports;
- (x) attend commissioning meetings; and
- (xi) report to the City regarding the progress of commissioning.

1.8 Light Rail Systems and Vehicles to be Commissioned

- (a) The Project Co Commissioning shall include the commissioning of all System and Vehicle items of the System Infrastructure provided as part of the Works including, but not limited to, the following:
 - (i) Traction Power System;
 - (ii) Revenue Vehicles;
 - (iii) Non-Revenue Vehicles;
 - (iv) Train Control Systems;
 - (v) Communication system;
 - (vi) YCC/BCC and TSCC;
 - (vii) Corrosion control system;
 - (viii) Tracks; and
 - (ix) OCS.

1.9 Guideway and Building Systems to be Commissioned

- (a) The Project Co Commissioning shall include the commissioning of all Guideway and building system items of the System Infrastructure provided as part of the Works including, but not limited to, the following:
 - (i) SCADA system;
 - (ii) Maintenance equipment systems;

- (iii) Site development;
- (iv) Building envelope;
- (v) Elevators and escalators;
- (vi) Fire protection systems;
- (vii) Plumbing systems;
- (viii) HVAC systems;
- (ix) Building automation systems;
- (x) Electrical systems;
- (xi) Security and safety systems;
- (xii) Communication systems (excluding radio system);
- (xiii) CCTV;
- (xiv) Interfaces with buildings connected to OLRT stations;
- (xv) Passenger information systems; and
- (xvi) Intrusion detection systems.

Trial Running is defined in Schedule 15-1 to the Project Agreement as follows:

Trial Running means a twelve (12) consecutive day period that may commence upon the successful completion of testing and commissioning. Upon successful completion of trial running, the integrated system will be ready for revenue service.

4. Notices

There are a number of notice provisions in the Project Agreement relevant to the achievement of both Substantial Completion and Revenue Service Availability including the following:

26.2 Milestone Acceptance Certificate, Substantial Completion Certificate and Revenue Service Availability Certificate

- (a) Project Co shall give the Independent Certifier and the City Representative at least 10 Business Days' notice prior to the date upon which Project Co anticipates all requirements for a Milestone Acceptance, Substantial Completion or Revenue Service Availability, as applicable, shall be satisfied.
- (b) Project Co shall give the Independent Certifier and the City Representative notice:
 - (i) (the "Milestone Acceptance Notice") upon the satisfaction of all requirements for a Milestone Acceptance;
 - (ii) (the "Substantial Completion Notice") upon the satisfaction of all requirements for Substantial Completion; or

(iii) (the “Revenue Service Availability Notice”) upon the satisfaction of all requirements for Revenue Service Availability, which Milestone Acceptance Notice, Substantial Completion Notice, or Revenue Service Availability Notice, as applicable, shall describe, in reasonable detail, the satisfaction of the requirements for the relevant Milestone Acceptance, Substantial Completion, or Revenue Service Availability, together with Project Co’s opinion as to whether the conditions for issuance of the Milestone Acceptance Certificate, Substantial Completion Certificate, or Revenue Service Availability Certificate have been satisfied.

(c) The City shall, within 5 Business Days after receipt of a Milestone Acceptance Notice, Substantial Completion Notice or Revenue Service Availability Notice provide the Independent Certifier and Project Co with the City’s opinion as to whether the conditions for issuance of the Milestone Acceptance Certificate, Substantial Completion Certificate or Revenue Service Availability Certificate have been satisfied and, if applicable, any reasons as to why it considers that the Milestone Acceptance Certificate, Substantial Completion Certificate, or Revenue Service Availability Certificate should not be issued.

(d) Within 5 Business Days after Project Co’s receipt of the City’s opinion pursuant to Section 26.2(c), the Parties shall cause the Independent Certifier to determine whether the conditions for issuance of the Milestone Acceptance Certificate, Substantial Completion Certificate, or Revenue Service Availability Certificate have been satisfied, having regard for the opinions of both Project Co and the City, and in the case of Milestone Acceptance or Substantial Completion to determine whether any Minor Deficiencies exist, if applicable, and to issue to the City and to Project Co either:

(i) the relevant Milestone Acceptance Certificate, the Substantial Completion Certificate or the Revenue Service Availability Certificate setting out in such certificate the relevant Milestone Acceptance Date, the Substantial Completion Date or the Revenue Service Availability Date, as applicable, and the Minor Deficiencies List (if applicable) in accordance with Section 26.4; or

(ii) a report detailing the matters that the Independent Certifier considers are required to be performed by Project Co to satisfy the conditions for issuance of the Milestone Acceptance Certificate, the Substantial Completion Certificate, or the Revenue Service Availability Certificate.

(e) Where the Independent Certifier has issued a report in accordance with Section 26.2(d)(ii) and Project Co has not referred a Dispute in relation thereto for resolution in accordance with Schedule 27 – Dispute Resolution Procedure, Project Co shall, within 5 Business Days after receipt of such report, provide the Independent Certifier and the City Representative with:

(i) a detailed list indicating the rectification actions proposed for all matters raised in such report;

(ii) the schedule for completion of all such rectification actions; and

(iii) any additional Project Co Commissioning that needs to be undertaken as a result of the rectification actions, and Project Co shall perform all such additional rectification actions and Project Co Commissioning in a timely manner. Upon completion thereof, Project Co may give a further Milestone Acceptance Notice, a further Substantial Completion Notice, or a further Revenue Service Availability Certificate and Sections 26.2(c) to (e), inclusive, shall be repeated until the Milestone Acceptance Certificate, the Substantial Completion Certificate, or the Revenue Service Availability Certificate has been issued.

(f) The Independent Certifier’s decision to issue or not to issue a Milestone Acceptance Certificate, or the Revenue Service Availability Certificate shall be final and binding on the Parties solely in respect of determining the relevant payment date, and a Dispute in relation to a Milestone Payment Date, or the Revenue Service Availability Payment Date shall not be subject to resolution pursuant to Schedule 27 - Dispute Resolution Procedure, provided, however, that any other Dispute in relation to the Independent Certifier’s decision to issue or not to issue a Milestone Acceptance Certificate, the 2017 Readiness Certificate, the

Substantial Completion Certificate, the Revenue Service Availability Certificate or the Final Completion Certificate may be referred for resolution pursuant to the Dispute Resolution Procedure.

26.3 Countdown Notice for Milestones and Substantial Completion

(a) Project Co shall deliver a notice (a “Countdown Notice”) to the City and the Independent Certifier specifying the date with respect to each Milestone on which Project Co anticipates the Milestone Acceptance to occur (the “Anticipated Milestone Acceptance Date”) in relation to the Scheduled Milestone Acceptance Date for such Milestone.

(b) Project Co shall also deliver a Countdown Notice to the City and the Independent Certifier specifying the date on which Project Co anticipates that Substantial Completion will be achieved (the “Anticipated Substantial Completion Date”) in relation to the Scheduled Substantial Completion Date.

(c) The Countdown Notice with respect to subparagraph (a) or subparagraph (b) shall be delivered not less than 60 days prior to the Anticipated Milestone Acceptance Date or the Anticipated Substantial Completion Date, as the case may be. If Project Co fails to deliver the Countdown Notice not less than 60 days prior to the Scheduled Milestone Acceptance Date or the Scheduled Substantial Completion Date, as the case may be, the Anticipated Milestone Acceptance Date or the Anticipated Substantial Completion Date, as the case may be, shall be deemed to be the same date as the Scheduled Milestone Acceptance Date or the Scheduled Substantial Completion Date, as applicable.

(d) In accordance with Section 22.4(a), any Anticipated Milestone Acceptance Date shall not be earlier than the Scheduled Milestone Acceptance Date of the relevant Milestone, without the prior written consent of the City, in its Discretion.

5. Substantial Completion

The Substantial Completion provisions of the Project Agreement set out the process and requirements for Project Co’s achievement of Substantial Completion. Substantial Completion itself is comprised of various elements, defined as follows:

1.684 “**Substantial Completion**” means Substantial Completion of the Fixed Component and Substantial Completion of the Vehicle Component.

1.687 “**Substantial Completion of the Civic Works**” means: (i) in each case, as certified by the Independent Certifier, the point at which the Queen Street Work, the Albert Street Work, the Rock Stabilization Work, the Utilities Work and the CSST Work respectively has been completed in accordance with the Project Agreement, including the Civic Works Specifications in respect of the Queen Street Work, the Albert Street Work, the Rock Stabilization Work, the Utilities Work and the CSST Work respectively and (ii) as certified by the Consultant, the point at which the Coventry Bridge Work has been completed in accordance with the Project Agreement, including the Civic Works Specifications in respect of the Coventry Bridge Work.

1.688 “**Substantial Completion of the Fixed Component**” means the point at which the Fixed Component shall be completed to the same extent as a “contract” being “substantially performed” in accordance with the CLA; a certificate of substantial performance of the Design and Construction Works in respect of the Fixed Component (other than the construction period operations and maintenance services described in the Output Specifications) is published pursuant to Section 32(1) of the CLA; and all requirements of Substantial Completion described in Schedule 14 – Commissioning, have been satisfied in respect of the Fixed Component.

1.690 “**Substantial Completion of the Vehicle Component**” means:

(a) that all of the “Vehicles” required by this Project Agreement have been delivered at the location designated by the City in accordance with this Project Agreement and have been completed to the same extent as the Fixed Component, as referred to in the definition of Substantial Completion of the Fixed Component, but for clarity, there shall be no requirement for the publication of a certificate of substantial performance; and

(b) Project Co shall have caused compliance with “SAT 3” level of testing as described in the Integrated Test Plan outlined in Schedule 15 – Output Specifications.

(c) Project Co shall have demonstrated compliance with the test and commissioning requirements as provided for in Part 4 of Schedule 15 2 – Output Specifications– Design and Construction Requirements and Schedule 14 – Commissioning.

At the time of Substantial Completion, Minor Deficiencies may exist, defined as follows:

26.4 Minor Deficiencies

...

(d) The City may, in its Discretion, waive any requirement for Substantial Completion, and the failure to meet any such requirement shall constitute a Minor Deficiency.

6. Revenue Service Availability

Revenue Service Availability is defined as follows in the Project Agreement:

1.589 “**Revenue Service Availability**” means following the following conditions in respect of the System are achieved:

- (a) the Substantial Completion in accordance with Schedule 15-2 – Output Specifications– Design and Construction Requirements, and Schedule 15-3 – Output Specifications – Maintenance and Rehabilitation Requirements;
- (b) the commissioning and preliminary Operation of the System to ensure Integration and ability for the Operation of the System as contemplated in the Output Specifications;
- (c) compliance with the test and commissioning requirements as provided for in Part 4 of Schedule 15-2 – Output Specifications– Design and Construction Requirements and Schedule 14 – Commissioning.
- (d) compliance at that time with the Safety Requirements, as approved by the Safety Auditor;
- (e) the receipt by the City of the Bill of Sale respecting the Vehicles and the Vehicle and Fixed Equipment Warranties referred to in Section 29.5 of the Project Agreement;
- (f) staff training of staff provided by the City with respect to the Operation of the System has been completed and the requisite number of staff have been certified as required in accordance with “Training Plan” provided in Article 26 of Part 1 of Schedule 15-2 – Output Specifications– Design and Construction Requirements; and
- (g) the Substantial Completion of the Civic Works;

as evidenced by the issuance by the Independent Certifier of a certificate acknowledging Revenue Service Availability (the “**Revenue Service Availability Certificate**”).

APPENDIX F

APPENDIX “F” – WORK SCHEDULES

1. Evidence of Michael Morgan

Mr. Morgan stated that “there was absolutely a loss of confidence and a loss of trust in the schedules that were being brought forward by RTG. So every time we would get a schedule from them, they would deliver that to us; we had little to no confidence in that schedule. Time and time again, they missed those schedule dates, and so after a while, there was a sense that we didn’t have clear information from RTG on the schedule and when the project was going to be completed.”⁵⁸⁴

Mr. Morgan further stated that “...we would get in a room, we would have an independent assessment team review the dates, they would look at the scope of work that was outstanding, we would look at the state of the stations, the state of the fleet, and none of it was ready. And then we would get information from RTG saying ‘don’t worry; we’ll be ready in May. Don’t worry; we’ll be ready in November’ and it never came to pass. They were never ready, and so it became this kind of conflict where that we saw on the ground wasn’t matching what they were telling us. So that was a huge challenge. Probably the biggest challenge for the project was just the lack of understanding of when the project was going to be finished.”⁵⁸⁵

2. Evidence of Mr. Cripps

Mr. Cripps explained in his interview that this is around the time the City brought in the Independent Assessment Team (“IAT”) to review RTG’s Works Schedules.⁵⁸⁶ The IAT, which was made up of consultants from the engineering and construction management consulting company, STV Inc., and AECOM.⁵⁸⁷ The role of the IAT was to observe the progress of the work and to present updates to the City which analyzed, among other things, RTG’s progress against its schedules. The IAT reported to the City fourteen times, each time confirming the City’s analysis that RTG was performing behind schedule.⁵⁸⁸

⁵⁸⁴ Hearing Transcript of Michael Morgan, dated June 27, 2022, p.12, lines 14-22.

⁵⁸⁵ Hearing Transcript of Michael Morgan, dated June 27, 2022, p.12-13, lines 26-6.

⁵⁸⁶ Formal Interview Transcript of Steven Cripps, dated April 14, 2022, p. 114, lines 1-24.

⁵⁸⁷ Formal Interview Transcript of Keith MacKenzie, dated April 13, 2022, p. 91, lines 3-13.

⁵⁸⁸ Fourteen OTC IAT Assessment, April 4, 2019, COW0451979.

APPENDIX G

APPENDIX “G” – TESTING AND COMMISSIONING

1. Evidence of Richard Holder

Mr. Holder testified that the risks relating to the SITs were associated with delays⁵⁸⁹ but in terms of the validity of the tests, the layered approach taken ensured that the City would ultimately get the system that would be functioning properly.⁵⁹⁰ Accordingly, while there was a delay to the performance of the Testing and Commissioning, quality and the validity of the tests was never compromised and no evidence was presented to the contrary.

The City was involved in all of the SITs that were undertaken and reviewed all the documentation for all of the SATs and SITs.⁵⁹¹ The City applied a risk-based approach in determining which tests to attend and observe,⁵⁹² but City staff committed to ensuring that all SAT reports and documentation were reviewed.⁵⁹³ The City challenged many of RTG’s test reports that RTG considered passed and as a result those tests were repeated.⁵⁹⁴

Mr. Holder explained that some of the tests performed as a part of Testing and Commissioning were deferred to be completed prior to Revenue Service Availability.⁵⁹⁵ However, RTG represented to the City prior to the achievement of Revenue Service Availability that the Testing and Commissioning requirements had been satisfied. Mr. Holder confirmed that by Revenue Service Availability, the system had “completed a full round of testing”.⁵⁹⁶

⁵⁸⁹ Hearing Transcript of Richard Holder, dated June 23, 2022, p. 18, lines 23-25.

⁵⁹⁰ Hearing Transcript of Richard Holder, dated June 23, 2022, p. 20, lines 24-26.

⁵⁹¹ Hearing Transcript of Richard Holder, dated June 23, 2022, p. 112, lines 9-17.

⁵⁹² Hearing Transcript of Richard Holder, dated June 23, 2022, p. 9, lines 27-28, p.10 lines 1-4 , p.14, lines 2-11.

⁵⁹³ Hearing Transcript of Richard Holder, dated June 23, 2022, p. 14, lines 2-11.

⁵⁹⁴ Hearing Transcript of Richard Holder, dated June 23, 2022, p. 14, lines 12-17.

⁵⁹⁵ Hearing Transcript of Richard Holder, dated June 23, 2022, p. 23, lines 1-6.

⁵⁹⁶ Hearing Transcript of Richard Holder, dated June 23, 2022, p. 24, lines 21-22.

APPENDIX H

APPENDIX “H” – SUBSTANTIAL COMPLETION – REQUIREMENTS OF THE PROJECT AGREEMENT

Substantial Completion is defined in Section 1.684 of Schedule 1 to the Project Agreement as Substantial Completion of the Fixed Component and Substantial Completion of the Vehicle Component.⁵⁹⁷

Substantial Completion of the Fixed Component is defined at Section 1.688 of Schedule 1 to the Project Agreement as the point at which the Fixed Component is completed to the same extent as a “contract” being “substantially performed” in accordance with the Construction Lien Act (“CLA”); a certificate of substantial performance of the Design and Construction Works in respect of the Fixed Component (other than the construction-period operations and maintenance services described in the Output Specifications) is published pursuant to Section 32(1) of the CLA; and all requirements of Substantial Completion described in Schedule 14 – Commissioning, have been satisfied in respect of the Fixed Component.⁵⁹⁸

Section 1.690 of Schedule 1 to the Project Agreement defines Substantial Completion of the Vehicle Component as (a) all of the “Vehicles” required have been delivered at the location designated by the City in accordance with this Project Agreement and have been completed to the same extent as the Fixed Component; (b) Project Co must be in compliance with “SAT 3” level of testing as described in the Integrated Test Plan outlined in Schedule 15 – Output Specifications; and (c) Project Co must have demonstrated compliance with the test and commissioning requirements as provided for in Part 4 of Schedule 15 2 – Output Specifications– Design and Construction Requirements and Schedule 14 – Commissioning.⁵⁹⁹

Section 26.4(d) of the Project Agreement provides that the City may in its Discretion, waive any requirement for Substantial Completion.⁶⁰⁰

Section 26.4 of the Project Agreement provides that in the event Minor Deficiencies exist when Project Co gives a Substantial Completion Notice, the Independent Certifier must prepare a list of all Minor Deficiencies and an estimate of the cost and time for rectifying them. The Independent Certifier must prepare the Minor Deficiencies List before the Substantial Completion Certificate is issued, but shall not withhold the Certificate by reason solely that there are Minor Deficiencies.

Section 1.399 of Schedule 1 defines “Minor Deficiencies” to mean “...any defects, deficiencies and items of outstanding work ... arising from or related to the work required to achieve Final Completion

⁵⁹⁷ Schedule 1 to the Project Agreement, Section 1.684, COW0000281, Exhibit 133.

⁵⁹⁸ Schedule 1 to the Project Agreement, Section 1.688, COW0000281, Exhibit 133.

⁵⁹⁹ Schedule 1 to the Project Agreement, Section 1.690, COW0000281, Exhibit 133.

⁶⁰⁰ Project Agreement, Section 26.4(d), COW0000280, Exhibit 299.

or Milestone Acceptance in the case of any Milestone, and which would not materially impair: (a) the public's or the City's use and enjoyment of the System...".

APPENDIX I

APPENDIX “I” – DEFERRED WORKS

1. Evidence of Michael Morgan

Mr. Morgan testified that while Substantial Completion referenced terms such as “use and enjoyment” and “availability for the public”, Alstom, Thales and many others, were tying trial running, Testing and Commissioning and their safety certifications to RSA.⁶⁰¹ Mr. Morgan testified that Substantial Completion should be where the system is handed over to the public with all the safety certificates completed, with trial running completed and where the system is ready to go into service. Mr. Morgan further testified that the definition of Substantial Completion in the Project Agreement was awkward, as this milestone should not be occurring four weeks prior to the system being ready for public use.⁶⁰² He explained that he had discussions with Mr. Lauch regarding the conflation of the two milestones in order to deal with the ambiguity.⁶⁰³

Mr. Morgan testified that there is a conflation of Substantial Completion with RSA in the Project Agreement and that these milestones should have been one in the same. Mr. Morgan explained that there is a large disconnect in the Project Agreement as the earlier milestone of Substantial Completion essentially requires the system to be ready for public use, however, the System was never intended to be made available for public use until RSA.⁶⁰⁴ Mr. Morgan testified that this issue of conflating milestones has been resolved in subsequent projects.⁶⁰⁵ Subsequent projects have outlined one final milestone of Substantial Completion in their project agreements.⁶⁰⁶

Mr. Morgan stated that the concept of Minor Deficiencies being applied at Substantial Completion were also misaligned in the Project Agreement. As Minor Deficiencies do not impact the use or enjoyment of the system by the public, Mr. Morgan confirmed that this concept does not apply at Substantial Completion as the system was not being made available to the public at this time.⁶⁰⁷ He testified that it is normal industry practice to get the safety certificates at the end when the system can be made available to the public and that Alstom would not be signing off on vehicles and providing safety certificates until Trial Running was complete.⁶⁰⁸

⁶⁰¹ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 85, lines 7-12.

⁶⁰² Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 86, lines 6-10.

⁶⁰³ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 85, lines 20-25.

⁶⁰⁴ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 85, lines 6-14.

⁶⁰⁵ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 85, line 25-26.

⁶⁰⁶ The public versions available on Infrastructure Ontario’s website of the Finch West LRT Project Agreement and the Eglinton Crosstown LRT Project Agreement provide Substantial Completion as the final Key Works Milestone. Revenue Service Availability is not a milestone in these Project Agreements.

⁶⁰⁷ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 86, lines 13-21.

⁶⁰⁸ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 86, lines 21-24.

2. Evidence of Peter Lauch

Mr. Lauch confirmed that there were discussions between the City and RTG about the issue surrounding the Project Agreement tying the achievement of Substantial Completion to the requirements that the system be ready for public use and how this did not make sense that this requirement would be tied to Substantial Completion when the RSA requirements were intended to assess the system's availability for revenue service to the public.⁶⁰⁹

Mr. Lauch testified during the hearing that there is nothing nefarious about a deferred works agreement and that these types of agreements are commonly used to not hold up a project from progressing.⁶¹⁰ Mr. Lauch explained that since the system was not going to be used by the public until RSA, the City was reasonable in deferring certain works until RSA.⁶¹¹

Mr. Lauch confirmed that in the Substantial Completion Agreement, RTG committed to complete the deferred works by RSA⁶¹² and that the works could be deferred because it would have no impact on the system's safety, functionality or the public's use or enjoyment of the system since the system wouldn't be used until after RSA.⁶¹³ Further, Mr. Lauch confirmed that when faced with confusion in the Project Agreement regarding the ambiguity between Substantial Completion and RSA and when Project Co was asking for the City to be reasonable, the City was reasonable in its assessment of the second Substantial Completion Notice without sacrificing the public's safety and use and enjoyment of the system after RSA.⁶¹⁴

Mr. Lauch testified that no work was actually waived in regards to the Substantial Completion Agreement, confirming that the works were deferred, not waived.⁶¹⁵

3. Evidence of John Manconi

Mr. Manconi testified regarding the common occurrence of deferred works agreements on large-scale projects.⁶¹⁶

4. Evidence of Steve Kanellakos

Mr. Kanellakos stated that the Substantial Completion Agreement came about as a result of RTG raising that there was confusion about the two significant events of Substantial Completion and

⁶⁰⁹ Hearing Transcript of Peter Lauch, dated June 29, 2022 p. 82, lines 12-21,

⁶¹⁰ Hearing Transcript of Peter Lauch, dated June 29, 2022 p. 86-87, lines 26-28, 1-4.

⁶¹¹ Hearing Transcript of Peter Lauch, dated June 29, 2022 p. 81, lines 3-8.

⁶¹² Hearing Transcript of Peter Lauch, dated June 29, 2022 p. 83, lines 2-4.

⁶¹³ Hearing Transcript of Peter Lauch, dated June 29, 2022 p. 83, lines 21-25.

⁶¹⁴ Hearing Transcript of Peter Lauch, dated June 29, 2022 p. 83-84, lines 26-28, 1-3.

⁶¹⁵ Hearing Transcript of Peter Lauch, dated June 29, 2022 p. 85, lines 12-14.

⁶¹⁶ Hearing Transcript of John Manconi, dated June 28, 2022 p. 102, lines 19-21.

Revenue Service Availability and that the City, acting reasonably and cooperatively, deferred certain limited works.⁶¹⁷

Mr. Kanellakos testified that the City, being reasonable and cooperative, agreed to defer certain limited works at Substantial Completion to be completed by RSA and that these deferred works were not waived but rather deferred for a short period of time.⁶¹⁸

5. Evidence of Monica Sechiari

Ms. Sechiari testified that the requirements for Substantial Completion are not waived and still have to be met and that the deferred work still has to be completed before RSA.⁶¹⁹ Ms. Sechiari further confirmed that while these requirements do not need to be met for Substantial Completion to be achieved, these requirements are not waived and need to be met prior to RSA.⁶²⁰

In fact, Ms. Sechiari stated that in her experience, the majority of the 22 projects she has been involved in have had items waived for substantial completion which is set out in agreements. The agreements may have different names but it is very common.⁶²¹ She confirmed that if the Independent Certifier thought there was a significant problem or concern regarding this agreement, the Independent Certifier would have raised that.⁶²² Therefore, not only did the City have the authority to enter into a Substantial Completion Agreement for deferred works, but it is the norm.

⁶¹⁷ Hearing Transcript of Steve Kanellakos, dated July 4, 2022, p. 111-112, lines 21-28, 1-2.

⁶¹⁸ Hearing Transcript of Steve Kanellakos, dated July 4, 2022, p. 111-112, lines 26-28, 1-5.

⁶¹⁹ Hearing Transcript of Monica Sechiari, dated July 4, 2022, p. 188, lines 3-6.

⁶²⁰ Hearing Transcript of Monica Sechiari, dated July 4, 2022, p. 188, lines 19-21.

⁶²¹ Hearing Transcript of Monica Sechiari, dated July 4, 2022, p. 189, lines 24-28, p. 191, lines 1-2.

⁶²² Hearing Transcript of Monica Sechiari, dated July 4, 2022, p. 188-189, lines 24-28, 1-7, 13-15.

APPENDIX J

APPENDIX “J” – TRIAL RUNNING

1. Evidence of Michael Morgan

Reliability issues were typically directly connected to maintenance activities.⁶²³ Reliability is about being able to respond quickly – you can have a brake or door fault, but it is about being able to reset that quickly and keep the system going, do the right thing to get the train out of the way.⁶²⁴

Mr. Morgan testified that there were known issues ahead of trial running with respect to the vehicles, particularly the PACIS onboard IT system and its integration, and emerging issues such as cracked cab doors. However, we had worked through a series of issues over the spring and the system was in a very steady state in the summer of 2019. Brake issues had been resolved with a modification completed across the fleet in advance of substantial completion. In response to STV0000510⁶²⁵, in which Mr. Gaul questioned whether troubleshooting skills and processes were adequate, Mr. Morgan explained that initially Alstom was reluctant to have City staff reset breakers or troubleshoot issues, so that they could examine the conditions under which a failure occurred and feed that information back to their engineering team. Over time, Alstom relaxed and gave operators more opportunities and was helpful in advancing troubleshooting support.⁶²⁶

Mr. Morgan was taken to one of the weekly Alstom vehicle reports for the period August 3 to 16, 2019, earlier reviewed with Alstom’s Bouteloup. He testified that the chart on page 3 indicated a number of areas where performance was very good, in particular zero door failures, with the exception of the CCTV/PA/PIS systems (essentially the platform edge cameras dealt with in the RSA term sheet). The mileage chart on the next page showed mileage increasing substantially. The trend lines (one showing all failures per 1000 km, one without the platform edge camera issue) shows a very good trend, number of failures going down, the mileage going way up. “Here we are accumulating a lot of mileage across the fleet, so we’re getting those numbers to really make sure that any issues are shaken out of the system.”⁶²⁷

With respect to the signalling system and the integration of that system with the vehicles and control room, Mr. Morgan described that system as stable and reliable in the period leading up to revenue service.

Mr. Morgan did not say there were no issues in trial running. He stated as follows:

⁶²³ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 88, lines 23-26.

⁶²⁴ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 89, lines 5-9.

⁶²⁵ Email from Thomas Prendergast to John Manconi et al Re – Final Update: Immobilized Train between STL and CYR, track 2, September 9, 2019, STV0000510, Exhibit 165

⁶²⁶ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 33, lines 12-21.

⁶²⁷ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 91, lines 5-22.

“That first week of trial running, it was clear that there was some -- probably within their organization, they hadn’t fully transitioned to say, “Okay. We need to stop. We’re no longer manufacturing these vehicles; now we’re running these vehicles.” So they kind of needed to pause, stop, restart. Once they did that, they got into a pattern of behaviour that achieved the numbers we expected, and the service improved substantially.”⁶²⁸

Mr. Morgan testified that for himself and Mr. Manconi, the key issue and concern was readiness for maintenance, and that the City was attempting to get RTM and Alstom focused on putting enough resources to ensure that any issues after launch would be addressed. He agreed that there calls made by the mayor and meetings involving RTG executives where we were pushing to provide the right number of people. The August 9, 2019 email from Mr. Manconi⁶²⁹ reports on Alstom’s promises in the middle of trial running to bring in additional resources, including vehicle technicians, vehicle repair technicians and support staff, to assist with maintenance. The email made it clear that as of this date both RTG/RTM and Alstom had increased resources and that significant improvements were already being seen. The subsequent call on August 11, 2019 between Mayor Watson and the Alstom CEO indicated that he “is committed to the plan and resourcing his team has agreed to.”

2. Evidence of John Manconi

Mr. Manconi agreed that Alstom was a critical piece in the maintenance readiness. “We knew that Alstom, a world leader in vehicles and vehicle maintenance, could do everything that was required to run this operation if they focused and did what we recommended, which was to add additional resources both in the yard, out in the field, and during and after launch period.” (86)

3. Evidence of Tom Prendergast

Tom Prendergast was taken to an email to John Manconi dated June 24, 2019 regarding RTM Readiness⁶³⁰ in which he assessed the readiness of RTM for revenue service as 3 or 4 out of 10. He agreed he was not confident of their preparedness at this point, a month before trial running began. He also noted that Alstom’s staff were inexperienced for troubleshooting defects and making repairs, and that there was a strong possibility vehicle availability could suffer. He agreed that STV’s Scott Krieger advised by email on August 8, 2019⁶³¹ that Alstom was not where they needed to be in terms of dependable service and needed more technicians. However, Mr. Prendergast also testified that following Mr. Krieger’s email the City went to Alstom and pushed

⁶²⁸ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 92, lines 1-6.

⁶²⁹ Email from John Manconi to Jocelyne Begin et al Re- Alstom RTG Update, August 12, 2019, COW0451494, Exhibit 169.

⁶³⁰ Email from Thomas Prendergast to John Manconi et al. Re: RTM Readiness, June 24, 2019, STV0000565, Exhibit 181.

⁶³¹ Email from Jocelyne Begin to Scott Krieger et al. Re: Asks of Alstom, August 8, 2019, COW0451394, Exhibit 182.

for more resources for maintenance, as appears from Exhibit 169. He described it as a watershed moment – the highest person in the City (the Mayor) talking to the highest person in Alstom and confirming their commitment.⁶³² In his view the issues regarding maintenance had been addressed at the highest level over a month before launch. It was reasonable for the City to rely on Alstom’s assurances and on the improvements in maintenance resources they were already observing.⁶³³ He agreed that over the course of trial running RTG’s performance did improve. Running more days of trial running wouldn’t have made a difference in terms of the reliability of the system.⁶³⁴

4. Evidence of Larry Gaul

Larry Gaul testified that the system in the period leading up to turnover was dynamic and involved a continuous adjustment process. Alstom, RTM, City operators and controllers were learning to work together in the period leading up to trial running. He agreed that initially there were issues ensuring effective communication and coordination between OC Transpo and RTM regarding troubleshooting vehicle issues, but OC Transpo was finally successful in having RTM put a vehicle technician in the control centre during certain hours.⁶³⁵ While he agreed that he had initially expected trial running to take much longer than it did, he also stated that reliability issues improved as trial running approached. “I was concerned that, you know, that the vehicle reliability is not up to what I would have wanted, entering in the trial running, but that was the purpose of trial running. It was to validate that the system was reliable, and if it wasn’t, if the vehicles were having reliability issues, then you’d never successfully get through trial running.”⁶³⁶ Those reliability improvements carried through into revenue service for a number of weeks. With respect to Exhibit 253⁶³⁷, an email exchange between Mr. Gaul and Troy Charter dated August 7, 2019 relating to inspection sheets being completed before trains were launched in the morning, in which Mr. Gaul complained that RTM was unprepared for trial running and was been given passing grades, Mr. Gaul explained that the delivery of inspection sheets was a very easy process and was not being audited through the scorecard process. He didn’t have concerns about the inspection process.⁶³⁸ He described maintenance process failures on the scoresheets as typically involving documentation process errors which would have been discussed and reviewed by the trial running team.⁶³⁹

⁶³² Hearing Transcript of Thomas Prendergast, dated June 28, 2022, p. 52, lines 1-28.

⁶³³ Hearing Transcript of Thomas Prendergast, dated June 28, 2022, p. 53, lines 8-28, p. 54, lines 1-4.

⁶³⁴ Hearing Transcript of Thomas Prendergast, dated June 28, 2022, p. 43, lines 15-25.

⁶³⁵ Hearing Transcript of Larry Gaul, dated July 5, 2022, p. 28, lines 10-17, p. 65, lines 25-28, p. 66, lines 1-28, p. 67, lines 1-28, p. 68, lines 1-7.

⁶³⁶ Hearing Transcript of Larry Gaul, dated July 5, 2022, p. 30, lines 24-28.

⁶³⁷ Email Larry Gaul to Troy Charter Re: Final update: ATS SCADA Lost, August 7, 2019, STV0000646, Exhibit 253.

⁶³⁸ Hearing Transcript of Larry Gaul, dated July 5, 2022, p. 32, lines 21-28, p. 33, lines 1-13, p. 35, lines 23-24.

⁶³⁹ Hearing Transcript of Larry Gaul, dated July 5, 2022, p. 37, lines 18-27.

APPENDIX K

APPENDIX “K” – THE PARSONS WITNESSES

With respect to the Parsons witnesses, the City notes first that no member of the Parsons team was part of the trial running test team. Mr. Palmer conceded that he had no role during trial running or in determining whether the system met the requirements of revenue service. In fact, his involvement with the project was to assist OC Transpo in operational readiness. His emails, while colourful and opinionated, are little more than speculation, as he himself admitted. In particular, Exhibit 112,⁶⁴⁰ his internal email dated July 26, 2019, is full of speculation and innuendo regarding the project, the status of trial running (this email was sent before it began), and his opinion, uninformed, that RTG would be unable to get 15 two car consists to run on the line (as it turned out, he was wrong about that). His comment that “it then becomes a race to the top/bottom for Alstom and Thales to sort their issues out” is inconsistent with Michael Morgan’s evidence that those issues had been sorted out. His characterization of the Mayor making a “promise” of August 16 was actually a reference to the scheduled RSA date, “a date for people to head towards”.⁶⁴¹ His “guess” that the Mayor and Mr. Manconi were taking a “calculated guess that the remaining issues can be cleared up through the 12-plus days of trial running, and the 28 days of OC playing trains” is idle speculation. It was clear from his own evidence that he had no knowledge of the Mayor’s involvement in City decision-making.⁶⁴²

Mr. Hulse testified that he was concerned that the vehicles had not gone through the required reliability growth curve, and that there may be bugs that had not been discovered or completely ironed out.⁶⁴³ However, Parson’s mandate did not extend to assessing the reliability of the Alstom vehicles, and Mr. Hulse’s involvement in the project involved safety, not vehicle readiness. He was unaware of how many kilometres the Alstom vehicles had to complete in operation before delivery⁶⁴⁴, in contrast to witnesses such as Matt Slade, who testified that the vehicles had gone through thousands of hours of running, and Michael Morgan, who testified regarding the Alstom chart demonstrating significant mileage being accumulated on the vehicles during trial running.

Mr. Fodor, the so-called maintenance expert on the Parsons team, testified that “most days, if not all days, the required number of trains that were supposed to go out was not achieved. . . Basically, the fleet that was supposed to be out there for the full time frame was rarely, if ever, achieved.”⁶⁴⁵ If true this statement would contradict the evidence of all the members of the trial test team who testified as well as all of the trial running scorecards. Mr. Fodor was in fact unaware of who those

⁶⁴⁰ Email from Mike Palmer to Glen McCurdy et al Re: Substantial Completion Confederation Line, July 26, 2019, PAR0008018, Exhibit 112.

⁶⁴¹ Hearing Transcript of the Parsons Panel, dated June 22, 2022, p. 118, lines 19-21.

⁶⁴² Hearing Transcript of the Parsons Panel, dated June 22, 2022, p. 120, lines 9-13, p. 161, lines 10-19.

⁶⁴³ Hearing Transcript of the Parsons Panel, dated June 22, 2022, p. 127, lines 1-17.

⁶⁴⁴ Hearing Transcript of the Parsons Panel, dated June 22, 2022, p. 158, lines 8-10, 18-26.

⁶⁴⁵ Hearing Transcript of the Parsons Panel, dated June 22, 2022, p. 130, lines 10-14.

people were.⁶⁴⁶ Mr. Fodor was shown an email from City staff dated August 7, 2019⁶⁴⁷ outlining that RTM was understaffed and were not able to follow through planned maintenance activities or even corrective maintenance. However, this email was sent before RTM and Alstom committed to providing additional maintenance resources to the City. Mr. Fodor also claimed to have advised the City that corrective maintenance requirements were overwhelming the maintenance staff. However, none of the forms Mr. Fodor completed for the City contained any such observations.⁶⁴⁸ Despite the obvious answers on the form to the question “Are the scheduled number of vehicles and trains prepared and available for service at the scheduled launch times?”, to which he invariably answered “Y” Mr. Fodor would not agree that he never advised the City in writing of his alleged concerns about trial running.

It would have been helpful if Mr. Fodor had advised the Commission that he was on vacation for much of trial running when giving his evidence. COW0593743 is an email from Mr. Fodor to Richard Holder and others at the City dated August 8, 2019 which reads in full as follows:

I would also like to provide advance notice that I will be on vacation after my shift ends this Saturday morning (Aug 10) and I will not be back in the office until Aug 26. If any of you can assist in filling my midnight shift for this time period, it would be greatly appreciated.”

⁶⁴⁶ Hearing Transcript of the Parsons Panel, dated June 22, 2022, p. 163, lines 6-18.

⁶⁴⁷ Email Chain between Stephen Rocque, Rashid Dorj et al Re: Trial Running – August 7 – Guideway Maintenance Observations & Week #1 feedback, August 7, 2019, COW0459540, Exhibit 113.

⁶⁴⁸ Guideway Maintenance Observations, August 2, 2019, COW0593679, Exhibit 115; Vehicle Maintenance Observations, August 9, 2019, COW0537247, Exhibit 118.

APPENDIX L

APPENDIX “L” – EVIDENCE OF CITY WITNESSES REGARDING CHANGE FROM 15 TO 13 TRAINS DURING MORNING PEAK

Mr. Manconi’s evidence was that this issue was reconsidered during trial running in 2019. The issue was twofold: (a) the City did not need the vehicles; and (b) it helped RTG, Alstom, and OLRTC finish the minor deficiencies on the vehicles and have spares available.⁶⁴⁹

Mr. Morgan testified that 15 train availability had been demonstrated a number of times, and the parties moved on to practicing with the morning and afternoon peak using 13. That had a huge benefit for protecting service for riders because of the extra spare capacity and provided OLRTC with some additional capacity and time to take the pressure off that peak period in the morning. In his view, “we were mimicking what we were going to do in service, and so it was perfectly reasonable.”⁶⁵⁰

Mr. Prendergast’s evidence was that the level of ridership would depend on projections. The 15 train service requirement was one that needed to be affirmed, but wasn’t necessarily required on day one, where you were not going to see that level of ridership. He saw nothing wrong with testing 13 trains and saying “it’s okay to put them into revenue service” as long as there was verification before the final payment was made that the system could operate 15 trains.⁶⁵¹

Mr. Gaul’s evidence was that when he heard about the change he immediately asked himself what that did to capacity versus demand. As a result he spoke to Scrimgeour, who assured him that the ridership projections had never materialized like they thought it would so this *slight increase in headways* was not going to cause any capacity issues across the system. There would still be enough capacity to carry the demand.⁶⁵²

Mr. Slade for his part conceded that this change was appropriate because it was the City that would know how many trains they were going to need for passenger service.⁶⁵³

⁶⁴⁹ Hearing Transcript of John Manconi, dated June 28, 2022, p. 145, lines 26-28, p. 146, lines 1-4.

⁶⁵⁰ Hearing Transcript of Michael Morgan, dated June 27, 2022, p. 38, lines 8-10, 14-20.

⁶⁵¹ Hearing Transcript of Thomas Prendergast, dated June 28, 2022, p. 12, lines 1-10.)

⁶⁵² Hearing Transcript of Larry Gaul, dated July 5, 2022, p. 40, line 28, p. 41, lines 1-9.

⁶⁵³ Hearing Transcript of Matthew Slade, dated June 24, 2022, p. 104, line 28, p. 105, lines 1-6.

APPENDIX M

APPENDIX “M” – SINGLETON REYNOLDS LETTERS

Peter Wardle
D 416 585 8604
pwardle@singleton.com
Our File: 15057.006

June 19, 2022

BY EMAIL

Adair Goldblatt Bieber LLP
95 Wellington Street West
Suite 1830
Toronto, ON M5J 2N7

Attention: John Adair (jadair@agbllp.com)

Dear Mr. Adair:

Re: Ottawa Light Rail Transit Public Inquiry

We write in response to your letter dated June 17, 2022, written in your capacity as Co-Lead Counsel to the Commission in the above-referenced inquiry (the “**Letter**”).

We, as counsel for the City of Ottawa (the “City”) only recently became aware of the WhatsApp chat message threads (the “**Documents**”) provided by Mr. O’Brien, counsel to STV. Mr. O’Brien provided us with the WhatsApp messages on Sunday, June 12, 2022. We immediately reviewed the messages for privilege and provided the redacted version to STV’s counsel on Tuesday, June 14, 2022.

Our responses to the Letter, based on information currently available to us, is set out below.

1. Scope of City of Ottawa Document Production

As your colleagues will recall, the City began making document production to the Commission in February, 2022 on a rolling basis, starting with the e-Builder project database. Over a period of several months the City produced in excess of 500,000 documents to the Commission in electronic form.

On March 8, 2022, in relation to the Document Production Reports required pursuant to Procedural Order 1, the Commission directed the parties to include in their biweekly document production report proposals to narrow productions, stating as follows:

3. Proposals to narrow productions to documents that are materially relevant to Commission’s Terms of Reference, which focus on the OLRT1 breakdowns and derailments. For example: (1) Producing email correspondence from the three key decision-makers as opposed to producing all email correspondence; (2) producing a final report on a piece of work as opposed to producing all related work product;

and (3) producing documents from a specific time frame as opposed to documents from the entire life of the project.

During a call with Commission counsel on March 8, 2022 to discuss the City's document production, including the narrowing the scope of document production for the City, Commission counsel asked that the City produce Teams chat messages from City platforms, but did not request any chats, texts or messages from any personal devices. Commission Counsel indicated they welcomed any proposal to focus document production.

As a result, on March 11, 2022, the City of Ottawa provided its first Biweekly Document Production Update. Under Section 2, the City specifically addressed the Commission's request to propose a means for narrowing the document production. Specifically, the City proposed the following:

The City appreciates the Commission's request for parties to present proposals to narrow documentary production to documents that are "materially relevant to [the] Commission's Terms of Reference, which focus on the OLRT1 breakdowns and derailments."

In this regard, the City proposes to produce emails from the following key custodians:

- Gary Craig
- John Manconi
- Kent Kirkpatrick
- Lorne Gray
- Michael Morgan
- Mona Monkman
- Nancy Schepers
- Richard Holder
- Steve Cripps
- Troy Charter

In addition, the City proposes to use the following key timeframes for the production of emails from the key custodians identified above:

- May 1, 2011, when City Council approved the use of the DBFM model through to December 19, 2012, when City council approved the award of the contract to Rideau Transit Group.
- June 8, 2016, when the sinkhole on Rideau Street appeared through to September 14, 2019, when the LRT opened for public service.
- September 15, 2019 to present (the "City Proposal").

Peter Wardle
D 416 585 8604
pwardle@singleton.com
Our File: 15057.006

June 22, 2022

VIA EMAIL

Adair Goldblatt Bieber LLP
95 Wellington Street West, Suite 1830
Toronto, ON M5J 2N7

Attention: John Adair (*jadair@agbllp.com*)

Dear Mr. Adair:

Re: Ottawa Light Rail Transit Public Inquiry

Further to our letter dated June 21, 2022, we enclose text messages between Richard Holder and Michael Morgan obtained from Mr. Holder's cellphone. We note that these messages are screenshots which is the form that the City's IT department was able to provide to Mr. Holder quickly. We will investigate the export of these text messages. As we previously noted, we have confirmed with Mr. Holder that he does not have any WhatsApp messages on his cellphone.

Please note that these messages have been redacted only for personal or medical information, consistent with the previously produced messages and Justice Marrocco's order. Given Justice Marrocco's orders, no privilege is being claimed by the City over the messages themselves; however, the City does not waive any privilege over related communications arising out of specific messages.

Yours truly,
Singleton Urquhart Reynolds Vogel LLP



Peter Wardle
Partner

PCW/tl

Enclosures

cc. Kate McGrann (*kate.mcgrann@olrtpublicinquiry.ca*)
Christine Mainville (*christine.mainville@olrtpublicinquiry.ca*)

In response to the City Proposal, Ms. McGrann, Co-Lead Counsel for the Commission responded: “Further to your biweekly production report of last week, **thank you for your proposal to focus your client’s email productions. We agree with your proposed approach as a starting point. We will advise if there is a need to broaden the timeframes, add custodians to the list, or otherwise expand the scope of documents produced as the Commission’s investigation proceeds.**” [emphasis added]

The City’s subsequent document productions followed the parameters set out in the City Proposal and each of the City’s subsequent Biweekly Document Production Updates contained reference to the City Proposal. As discussed with Commission Counsel on March 8, 2022, document production by the City included Teams chat messages from City platforms for key individuals during key time periods. Commission counsel did not ask that the scope of production be widened to include any messages from personal messaging applications or devices. As a result, the City’s collection process focused on the emails set out above in addition to formal Project correspondence and submittals which resulted in the City ultimately producing a significant number of documents in a short period of time, as noted above, just as the other participants have done. To our knowledge, prior to STV’s delivery of the Documents, no party had delivered documents from personal devices.

In summary, the City worked collaboratively with Commission counsel to comply with the requests made and in accordance with the City Proposal, within the tight timelines required by the Commission.

2. Additional Document Production

In response to your letter, the City is taking immediate steps to collect and review electronic messages on WhatsApp or similar messaging platforms for the period of June 1, 2019 through December 31, 2020 among any two or more of Messrs. Holder, Morgan, Charter, Manconi, Kanellakos, and the Mayor in relation to the Project.

With respect to Mr. Cripps, we note that he had retired by June 1, 2019 and was no longer involved in the Project. Further, both Mr. Cripps’ and Mr. Manconi’s City provided mobile devices were erased upon their retirement from the City of Ottawa, in accordance with City standard practice.

With respect to your request relating to members of Council, it would be helpful if the Commission could narrow the inquiry as there are 23 councillors and we expect that many of them will have difficulty responding to the request in a timely fashion. We will make ourselves available to discuss this further if that would be of assistance.

3. Contact Information

We understand that Mr. O’Brien has now provided this information to you. The City believes the list provided by Mr. O’Brien is accurate. There are a handful of telephone numbers which Mr. O’Brien was unable to identify. The City has been able to identify those numbers as follows:

- 613-799-8084 - Katie Rossolatos, Manager Strategic Projects (City)
- 613-223-6965 - Derek Moran, Director Rail (City)
- 613-282-3407 - Nelson Gauvreau, Manager of Transit Fleet Services (City)
- 617-908-4529 - Brian P. Dwyer, (STV)
- 613-868-7643 - David Pepper, Former Manager of Customer Service (City)

4. FEDCO – 2018 and 2019

With regards to the request relating to the 2018 and 2019 FEDCO presentations, the City Clerk's procedure for posting Council and Committee meeting documents is as follows:

- Agendas for Committee and Council meetings are posted to the City of Ottawa eAgenda website in accordance with the timelines set out in the Council Procedure By-law (2021-24).
- Written reports prepared by City staff, which include recommendations to Committee, are posted with the agenda. These reports remain posted publicly with the minutes of the meeting.
- Any resolutions, decisions or formal directions made by the Committee/Council in accordance with the Procedure By-law are recorded by the Office of the City Clerk in the Minutes, in accordance with Subsection 73(1)(a) of the Municipal Act, 2001.
- PowerPoint presentations, be it those delivered by City staff to accompany their written reports, or those that accompany stand-alone verbal presentations, are not ordinarily posted to the City of Ottawa website. PowerPoints that are used at public meetings of Committees and/or Council are on file with the Clerk's Office and available to anyone who asks for them. The Minutes posted publicly for that meeting generally include reference that the presentation is "held on file with the City Clerk."

In addition to the above, the City's standard practice to provide PowerPoint presentations presented at Committees or Council to the media via a shared folder during each Committee or Council meeting. Furthermore, such PowerPoint presentations, along with other records considered at a meeting, are available for public inspection, upon request, in accordance with section 253 of the *Municipal Act*, 2001. In addition, these records are considered "Permanent: Sent to City Archives" under the City's Records Retention and Disposition By-law (2021-183, as amended) and, as such, are all preserved and sent to City Archives once they have completed their Inactive cycle.

With respect to the Confederation Line presentations for 2018 and 2019 referenced in your letter, we understand that these presentations were never posted to the City's Agenda website. We believe that these were considered to be updates rather than formal presentations and as a result they were available on request.

Lastly, we note that the City has already produced FEDCO presentations for 2018 and 2019 as part of its productions in this inquiry.

Yours truly,
Singleton Urquhart Reynolds Vogel LLP

A handwritten signature in blue ink, appearing to read "Peter Wardle".

Peter Wardle
Partner

PCW/JL

cc Kate McGrann (kate.mcgrann@olrtpublicinquiry.ca)
Christine Mainville (christine.mainville@olrtpublicinquiry.ca)

APPENDIX N

APPENDIX “N” – SYSTEMS INTEGRATION AT RSA

Mr. Bergeron explained that while there were challenges with system integration early on, communications improved and the parties worked together to find solutions. Relations between Thales, Alstom and OLRTC improved dramatically over the course of the Project.⁶⁵⁴ Mr. Bergeron confirmed that over the course of the project, the system integration issues were addressed to the point whereby the time RSA arrived, everyone could have confidence that the system was safe, and that the Project Agreement requirements had been met.

Prior to the achievement of Revenue Service Availability, RTG provided the City with documentation to support that the system was safe, ready for Revenue Service and that the system integration testing had been properly completed. All documentation provided to the City was signed and sealed by engineers with Ontario P.Eng designations.

On August 26, 2019, RTG provided the City with a testing conformance letter signed by RTG’s CEO, Mr. Lauch which enclosed a letter from Mr. Nadon, OLRTC’s Testing and Commissioning Director and signed and sealed by Mr. Bergeron. The letter confirmed that all of the systems integration tests had been completed “in accordance with standard practice, the requirements of Ottawa Light Rail Transit Project Agreement, and professional industry standards.”⁶⁵⁵ RTG advised the City that “the system is in general compliance with the PA requirements, drawings and system architectures, which will perform together and be safe for use, operation and maintenance, as required “. ⁶⁵⁶

Mr. Bergeron confirmed that in this letter, OLRTC was advising RTG that the systems integration tests were completed and in general compliance with the Project requirements.⁶⁵⁷ In particular, Mr. Bergeron confirmed that he signed the letter in his capacity as a professional engineer to confirm that the systems integration tests had been completed in accordance with the Project Agreement and that the system could operate safely and for use, operation and maintenance.⁶⁵⁸

On the same day, RTG delivered to the City a “final system completion” letter which enclosed a letter from Mr. Nadon, which was signed and sealed by Mr. Bergeron.⁶⁵⁹ This letter advised the City that there were a few “remaining deficiencies that OLRTC felt were not critical to revenue

⁶⁵⁴ Hearing Transcript of Jacques Bergeron, dated June 21, 2022, p. 113, lines 3-8.

⁶⁵⁵ Testing Conformance Letter from OLRTC to RTG, August 20, 2019 (attached to covering letter dated August 26, 2019 from RTG to the City), COW0436983, Exhibit 104.

⁶⁵⁶ Testing Conformance Letter from OLRTC to RTG, August 20, 2019 (attached to covering letter dated August 26, 2019 from RTG to the City), COW0436983, Exhibit 104.

⁶⁵⁷ Hearing Transcript of Jacques Bergeron, dated June 21, 2022, p. 147, lines 12-28.

⁶⁵⁸ Hearing Transcript of Jacques Bergeron, dated June 21, 2022, p. 148, lines 4-10.

⁶⁵⁹ Final System Completion Letter from OLRTC to RTG, August 20, 2019 (attached to covering letter dated August 26, 2019 from RTG to the City), COW0159023, Exhibit 134.

service.”⁶⁶⁰ Mr. Nadon stated in the letter that “As the Testing and Commissioning Director responsible for systems, I undertake the responsibility of rectifying all items on this list within the timelines indicated. We can confidentially believe that all remaining items shall not hinder proceeding with revenue service, nor do these effect the safety of the train riders.”⁶⁶¹

In addition, the Engineering Safety and Assurance Case which was signed and sealed by Mr. Bergeron on August 20, 2019 concluded that “with the evidence available, it was possible to determine that the highest level system engineering in its systems assurance argument, namely, the Confederation line phase 1, is fit for operation could be made.” Mr. Bergeron confirmed that he agreed and that it was accurate when he signed the document.⁶⁶² Mr. Bergeron further confirmed that when the system launched, it was fit for operation and safe for use.⁶⁶³

Mr. Slade testified that by Substantial Completion “all the tests had been complete, so other than any of the integration tests that were on the list...that we agreed with the City we’d deal with during RSA, the integration was complete.”⁶⁶⁴ Mr. Slade testified that the major disruptive issues experienced in the fall of 2019 on the system, did not have root causes related to system integration.⁶⁶⁵

The evidence presented during the hearing was clear that while there were significant issues with systems integration in the early stages of the Project which caused delays, the systems integration requirements were fully satisfied by Revenue Service Availability. Mr. Bergeron confirmed that when RSA was achieved and the system was launched, it was safe, fit for use and compliant with the Project Agreement.⁶⁶⁶

⁶⁶⁰ Final System Completion Letter from OLRTC to RTG, August 20, 2019 (attached to covering letter dated August 26, 2019 from RTG to the City), COW0159023, Exhibit 134.

⁶⁶¹ Final System Completion Letter from OLRTC to RTG, August 20, 2019 (attached to covering letter dated August 26, 2019 from RTG to the City), COW0159023, Exhibit 134.

⁶⁶² Hearing Transcript of Jacques Bergeron, dated June 21, 2022, p. 153, lines 18-28, p. 154, lines 1-10.

⁶⁶³ Hearing Transcript of Jacques Bergeron, dated June 21, 2022, p. 154, lines 10-13.

⁶⁶⁴ Hearing Transcript of Matthew Slade, dated June 24, 2022, p. 140, lines 8-12.

⁶⁶⁵ Hearing Transcript of Matthew Slade, dated June 24, 2022, p.141, lines 11-13.

⁶⁶⁶ Hearing Transcript of Jacques Bergeron, dated June 21, 2022, p. 154-155, lines 25-28, 1-5.

APPENDIX O

APPENDIX “O” – PROJECT CERTIFICATES AND SIGN-OFF

Document	Date	Signature/Seal	Conclusion
Mainline Safety Certification [CBTC system]	11-Jan-19	Signed by Rebecca Whiteside (Ontario P.Eng.) Signed by Alain Cruz	“[T]he Thales CBTC system identified herein is safe and suitable for trial operation, handover, and revenue...”
Safety Certification -- Additional Vehicles [CBTC system]	5-Feb-19	Signed by Michael Burns	An additional seven trains identified in the letter are “safe and suitable for trial operation, handover, and revenue...”
Climate Comfort and Climactic Conditions Test Report	25-Feb-19	Approved by Lowell Goudge (Ontario P.Eng.)	“Climatic testing of the Citadis Spirit 404 Light Rail Vehicle generally demonstrated that it can withstand Ottawa’s most severe weather conditions and provide a safe and comfortable ride to its passengers.”
Safety Certification -- Additional Vehicles [CBTC system]	11-Mar-19	Signed by Michael Burns	An additional four trains identified in the letter are “safe and suitable for trial operation, handover, and revenue...”
Preliminary Fleet Safety Certificate	18-Apr-19	Signed by Lowell Goudge (Ontario P.Eng.)	“All Citadis Spirit Trains for the Ottawa LRT project are certified as operational for test and commissioning use and training operations...”
Reliability, Availability and Maintainability (RAM) Report	23-May-19	Agreed/Accepted by Sean Derry	“Availability modelling provides evidence that the Ottawa Confederation Line Phase 1 is capable of achieving an operational service availability of 99.07%. However, this is considered to be based upon conservative assumptions and steady state operational performance is considered to exceed this level.” “It is considered that the Ottawa Confederation Line Phase 1

Document	Date	Signature/Seal	Conclusion
			infrastructure is adequately reliable and suitable for the onset of RSA.”
Safety Certificate (Trial Running)	7-Jun-19	Signed by Derek Wynne Signed by John Blowfield Signed by Sean Derry	“[I]t is Safe to undertake Trial Running of the railway using operations personnel (OC Transpo and RTM).”
Substantial Completion Certificate	26-Jul-19	Signed by Monica Sechiari	Substantial Completion has been achieved.
Track Safety Justification Report	14-Aug-19	Agreed/Accepted by Sean Derry Sealed and signed by Jacques Bergeron (Ontario P.Eng.)	“Ottawa Confederation Line Phase 1 Track is considered to be acceptably safe and suitable for the onset of Revenue Service subject to the conditions identified in section 1.3, section 5.2 and in the Confederation Line Phase 1 Operational Restrictions Document [12].”
Case for Safety	14-Aug-19	Agreed/Accepted by Sean Derry Sealed and signed by Jacques Bergeron (Ontario P.Eng.)	“Based on the evidence presented, it is considered that Ottawa Confederation Line Phase 1 Railway is acceptable for revenue service...”
Stations Safety Justification Report	14-Aug-19	Agreed/Accepted by Sean Derry Sealed and signed by Jacques Bergeron (Ontario P.Eng.)	“Based on the evidence presented, it is considered that Ottawa Confederation Line Phase 1 Stations are acceptable for revenue services...”
Tunnels Safety Justification Report	14-Aug-19	Agreed/Accepted by Sean Derry	“Based on the evidence presented, it is considered that Ottawa Confederation

Document	Date	Signature/Seal	Conclusion
		Sealed and signed by Jacques Bergeron (Ontario P.Eng.)	Line Phase 1 Tunnels are acceptable for revenue services...”
Transport Control Centre (TSCC) & Back-up Control Centre (BCC) Safety Justification Report	14-Aug-19	Agreed/Accepted by Sean Derry Sealed and signed by Jacques Bergeron (Ontario P.Eng.)	“Based on the evidence presented, it is considered that Ottawa Confederation Line Phase 1 TSCC is acceptable for revenue services...”
Maintenance and Storage Facility (MSF) Safety Justification Report	14-Aug-19	Agreed/Accepted by Sean Derry Sealed and signed by Jacques Bergeron (Ontario P.Eng.)	“Based on the evidence presented, it is considered that hazards associated with the MSF have been reduced to acceptable levels and Confederation Line Phase 1 is suitable for the onset of revenue service...”
Operations and Support Hazard Analysis	14-Aug-19	Agreed/Accepted by Sean Derry Sealed and signed by Jacques Bergeron (Ontario P.Eng.)	“Based on the evidence presented, it is considered that hazards associated with Operations and Support have been reduced to acceptable levels and Confederation Line Phase 1 is suitable for the onset of revenue service...”
Interface Hazard Analysis	14-Aug-19	Agreed/Accepted by Sean Derry Sealed and signed by Jacques Bergeron (Ontario P.Eng.)	“Based on the evidence presented, it is considered that interface hazards have been reduced to acceptable levels and Confederation Line Phase 1 is suitable for the onset of revenue service...”
Communication & Control Systems Safety Justification Report	14-Aug-19	Agreed/Accepted by Sean Derry Sealed and signed by Jacques Bergeron (Ontario P.Eng.)	“Based on the evidence presented, it is considered that Ottawa Confederation Line Phase 1 Communication and Control systems are acceptable for revenue services...”
Energy Safety Justification Report	14-Aug-19	Agreed/Accepted by Sean Derry	“Based on the evidence presented, it is considered that Ottawa Confederation

Document	Date	Signature/Seal	Conclusion
		Sealed and signed by Jacques Bergeron (Ontario P.Eng.)	Line Phase 1 Energy systems are acceptable for Revenue Service...”
Engineering Safety and Assurance Case	16-Aug-19	Sealed and signed by Jacques Bergeron (Ontario P.Eng.)	“With the evidence available it was possible to determine that the highest level Systems Engineering and Systems Assurance argument, namely that Confederation Line Phase 1 is ‘Fit for Operation, could be made.”
Operational Restrictions Document	19-Aug-19	Agreed/Accepted by Sean Derry Sealed and signed by Jacques Bergeron (Ontario P.Eng.)	<p>“Correct design, construction and integration has been verified by Engineers of Record and recorded in Design Certification Letters (DCL), Integration Certification Letters (ICL) and Construction Certification Letters (CCL). Safety Assurance is further supported by Ontario Building Control (OBC) Certificates, Ottawa Fire Service (OFS) Certificates and Technical Standards and Safety Authority (TSSA) approvals. Furthermore, Systems Integration Testing (SIT) and Systems Acceptance Testing (SAT) have been successfully completed. The Confederation Line Phase 1 RAM Report [8] underpins these Safety Analyses and Assurances confirming the infrastructure can deliver long term availability.”</p> <p>“Based upon evidence presented in the Confederation Line Phase 1 Engineering Safety and Assurance Case [7] and subordinate Case for Safety [4], and subject to the Restrictions, Conditions and Limitations described herein being adhered to, the Ottawa Confederation Line Phase 1 Railway is considered fit for safe operation.”</p> <p>“RAM analysis shown in the</p>

Document	Date	Signature/Seal	Conclusion
			<p>Confederation Line Phase 1 RAM Report [8] provides confidence that failures and the consequences of failures have been adequately managed and the Confederation Line Phase 1 is capable delivering long term safe, reliable and cost-effective performance.”</p> <p>“Safety risks have been reduced by using mature and proven systems that have been integrated using processes that have been demonstrated to be robust and traceable.”</p>
Final Systems Completion Letter	20-Aug-19	<p>Signed by Steven Nadon</p> <p>Sealed and signed by Jacques Bergeron (Ontario P.Eng.)</p>	<p>“Please find within this letter an outline of remaining deficiencies that the OLRTC feels is not critical to revenue service, In conjunction with this letter provided, is a spreadsheet outlining all remaining works beyond completion of Ottawa’s LRT, As of August 20th, 2019 all Systems works are complete with the exception of the following minor deficiencies within these spreadsheets...”</p>
Testing Conformance Letter	20-Aug-19	<p>Signed by Steven Nadon</p> <p>Sealed and signed by Jacques Bergeron (Ontario P.Eng.)</p>	<p>This letter is to confirm that during the course of systems integration testing, OLRTC has carried out the requisite site surveillance inspections and testing in accordance with standard practice, the requirements of Ottawa Light Rail Transit Project Agreement, and professional industry standards.”</p> <p>“It is our opinion that in relation to the SITs listed in Appendix A the system is in general compliance with the PA requirements, drawings and system architectures, which will perform together and be safe for use, operation and maintenance, as required.”</p>

Document	Date	Signature/Seal	Conclusion
Technical Compliance Report	20-Aug-19	Sealed and signed by Jacques Bergeron (Ontario P.Eng.)	<p>“As at 14 August 2019, a design compliance statement (compliant, compliant with explanation, partial or non-compliant) has been declared for 99.0% of applicable requirements (see section 1.3.3). Where a compliance statement has been declared, 98.7% have been declared as compliant.”</p> <p>“As at 14 August 2019, a final product compliance statement has been declared for 90.7% of applicable requirements. Where a compliance statement has been declared, 97.2% have been declared as compliant. A further 8.3% of applicable requirements have a product compliance statement of “Compliant Pending”. These requirements are pending an item of evidence to be received or an open NCR or deficiency to be closed.”</p>
Validation of Trial Running Acceptance	23-Aug-19	Signed by Kyle Campbell Signed by Jennifer Fitzpatrick	“[B]ased on the attached Trial Running Scorecards for 12 consecutive days with the result of Pass, this letter shall serve as validation of the Trial Running Acceptance.”
Consolidated Safety File	27-Aug-19	Approved by Lowell Goudge (Ontario P.Eng.)	“As evidenced within this report and subject to the above noted waivers, the Rolling Stock is safe and suitable for its intended use in revenue service.”
Revenue Service Availability Certificate	30-Aug-19	Signed by Monica Sechiari	Revenue Service Availability has been achieved
Fleet Safety Certificate	11-Sep-19	Sealed and signed by Lowell Goudge (Ontario P.Eng.)	“This certifies the Citadis Spirit vehicle...as Compliant to the Project agreement with respect to the safety of the vehicle, as is fit for its intended use, as evidenced by Alstom’s Safety

Document	Date	Signature/Seal	Conclusion
			Authorization and the attached Consolidated Safety File.”
Safety Audit Report	13-Sep-19	Prepared by Sergio Mammoliti	“Given the scope and findings of this Safety Audit Report, as summarized in Section 3.1 above, this Audit Report supports the use of the OLRT for passenger-carry operations.”

APPENDIX P

APPENDIX “P” – CHART REGARDING DESIGN ISSUES – STAGE 1 AND STAGE 2

Technical Areas	Line 1 Current Status	Stage 2 Line 2 Trillium Line
<p>Fleet Overview</p>	<p>Fleet manufactured in Ottawa based on Alstom TTNG and Alstom Citadis platform.</p>	<p>Existing Alstom LINT vehicles in service since 2015. New Stadler FLIRT vehicles based on proven platform used in many European countries.</p>
<p>Switch Heaters</p>	<p>Electric switch heaters on the eastern portion of the alignment were replaced with gas heaters to improve performance.</p>	<p>Gas switch heaters will be used throughout the Line 2 alignment.</p>
<p>Overhead Catenary System (OCS)</p>	<p>Reliability issues that occurred during the first 6 months of service have been resolved.</p>	<p>Not applicable.</p>
<p>Mainline Track Design: Curves <i>Can contribute to noise issues if not properly managed</i></p>	<p>The sharpest (smallest radius) curve on the Confederation Line is located east of Hurdman Station with a radius of 110m.</p>	<p>The sharpest (smallest radius) curve on the Trillium Line will be located north of Bowesville Station with a radius of 290m.</p>
<p>Mainline Track Design: Wheel-Rail Interface <i>Affects external noise, vibration and overall ride quality</i></p>	<p>Specialized grinding was undertaken to help reduce noise and vibration. A detailed technical review is underway to assess opportunities for improvement.</p>	<p>Line 2 uses the same wheel type and rail profile as the original Trillium Line system (APTA 220 wheels and 115 RE rail). The interaction between the wheel and rail profile has not resulted in past issues.</p>
<p>Mainline Track Design: Rail Neutral Temperature <i>Affects trackwork performance during high temperatures</i></p>	<p>The rail is stressed to 15C (10C to 20C) to balance tensile and compressive forces during the temperature extremes are generally alike. A plan to adjust and increase the rail neutral temperature is under review.</p>	<p>The ballasted track rail will be stressed to 32C (29C to 35C) such that the rail will be in tension for most of the year. This is in line with practices adopted by VIA Rail and Metrolinx given the similar climatic conditions.</p>

Technical Areas	Line 1 Current Status	Stage 2 Line 2 Trillium Line
<p>Yard Track Design: Curves <i>Sharp yard curves have greater risk of derailment due to wheel climb</i></p>	<p>The sharpest curve in the lead tracks (West Connector and East Connector) is 55m in radius. The sharpest curve in the yard is 35m in radius.</p>	<p>The sharpest curves in the lead tracks (the North Connecting and South Connecting Tracks) are 158m in radius. The sharpest curve in the yard is 150m in radius.</p>
<p>Vehicle HVAC <i>Affects general comfort for Operator and customers</i></p>	<p>Alstom will continue to monitor, fine tune, and make seasonal adjustments to the vehicle cabin HVAC system to improve the comfort for operators and to ensure the desired performance results are achieved.</p>	<p>The Stadler vehicle has a dedicated HVAC system for the Driver’s Cab which should address any cab concerns. Issues have not been previously identified with the existing Alstom LINT fleet.</p>
<p>Vehicle Braking <i>Excessive braking results in wheel flats and poor ride quality; commonly linked to integration issues</i></p>	<p>High incidence of wheel flats during first 6 months of service.</p>	<p>The Alstom LINT trains did not suffer from excessive braking and wheel flats from 2015 – 2020 and this is not expected to occur on the Stadler vehicles.</p>
<p>Vehicle Doors</p>	<p>RTG installed updated door software, which has improved the overall operation of the vehicle doors.</p>	<p>The door system on the existing Line 2 Alstom LINT vehicles operated without issue and this specific issue is not expected to occur on the Stadler vehicles.</p>
<p>Vehicle Onboard Systems</p>	<p>Various challenges with train control monitoring software and passenger information software. RTG installed software upgrades, which has improved overall system performance.</p>	<p>The Alstom LINT passenger information system was reliable. New systems on the Stadler vehicles will need to go through a commissioning process.</p>
<p>Vehicle Traction Power: Inductors</p>	<p>All vehicle inductor replacement work has been completed.</p>	<p>Not applicable.</p>

Technical Areas	Line 1 Current Status	Stage 2 Line 2 Trillium Line
Traction Power Substations	Some power integration issues were experienced but have since been resolved.	Not applicable.