IN THE MATTER OF an arbitration under the *Arbitration Act, 1991,* S.O. 1991, c.17 and an agreement to arbitrate under Appendix I, section 4 to the Subcontract Agreement between the parties made as of February 12, 2013

B E T W E E N :

ALSTOM TRANSPORT CANADA INC.

Alstom

- and –

OLRT CONSTRUCTORS,
an unincorporated joint venture comprising
SNC-LAVALIN CONSTRUCTORS (PACIFIC) INC., DRAGADOS CANADA, INC., and ELLISDON CORPORATION

OLRTC

AWARD

Michael Valo, Charles Powell, Lena Wang, Jacob McClelland, Patricia Joseph, Jackie van Leeuwen, Matthew DiBernardino & Kalimu Bagambiire for Alstom

Crawford Smith, James Renihan, Sapna Thacker, Brad Vermeersch & Mitchell Lightowler for OLRTC

Introduction

1. This arbitration arises out of a subcontract agreement for the delivery of light rail vehicles ("LRV" or "LRVs") to be utilized in the expansion of the Ottawa light rail transit system (the "Subcontract")[1]. The principal issues in dispute in this arbitration concern responsibility for the delays experienced in the delivery of the 34 LRVs, together with certain other damages claims, as set out in the parties' respective arbitration statements. In brief, Alstom is seeking payment of the balance of the Subcontract price, as well as damages in respect of certain enumerated claims. OLRTC defends those claims and asserts its own claims for damages related to liquidated damages, acceleration,

[1] All capitalized terms used in this decision correspond to defined terms in the Subcontract or the Project Agreement.

prolongation, and other enumerated compensatory relief. As more fully discussed below, each party delivered a Subcontract Arbitration Notice in respect of its claims.

Jurisdiction

2. On or before February 13, 2020, by agreement of the parties, I was appointed as sole arbitrator in respect of both Subcontract Arbitration Notices. Neither party has raised any objection to my jurisdiction over the parties or the subject matter of the dispute, as more particularly set out in the parties' respective Subcontract Arbitration Notices and their subsequent arbitration materials.

The Proceedings

3. Following the failure of a Senior Representative Panel convened under section 3.1 of Appendix I of the Subcontract to reach a unanimous resolution of various disputes, this arbitration was commenced by an Subcontract Arbitration Notice issued by OLRTC, dated January 13, 2020, seeking damages in the amount of $250 million, together with pre- and post-judgement interest and costs. Alstom, in turn, issued its own Subcontract Arbitration Notice, dated February 3, 2020, seeking payment of unpaid amounts under the Subcontract, plus interest, together with other enumerated damages. On or about February 14, 2020, the parties each issued a reply to the other's Subcontract Arbitration Notice. In the interests of simplicity, I have styled this Award without designating either party as the claimant or respondent, but it should be read in the context of the two Subcontract Arbitration Notices, and the proceedings are being treated as consolidated on consent, pursuant to section 8(6) of the *Arbitration Act, 1991*.

4. Pursuant to procedural orders issued on consent, the parties engaged in the various interlocutory steps leading to the evidentiary hearing, including exchanging pleadings, a Redfern document production process, the exchange of original and responding witness statements and expert reports, as well as the delivery of written pre-hearing submissions. Interlocutory motions were brought with respect to disputed document productions and a pleading amendment, which were the subject of separate rulings.

5. The evidentiary hearing was conducted by videoconference over 12 days on July 20-24, July 27-31, and August 27 & 28, 2020, inclusive. At the evidentiary hearing, fact and expert witnesses were cross-examined on their submitted witness statements and expert reports, and transcripts of the proceedings were prepared each day. Again, by agreement, the parties exchanged page-limited, post-hearing original and reply written submissions. Final oral argument occurred on November 6, 2020.

The Project

6. The Project, known as the Confederation Line, is the first phase of Ottawa's current light rail infrastructure expansion plan. It comprises thirteen train stations across a 12.5 km track and, at a cost of about $2.1 billion, is apparently the largest infrastructure project in Ottawa's history.

7. Following request for qualifications and request for proposal processes, the City of Ottawa, in late 2012, awarded the Project to the Rideau Transit Group General Partnership ("RTG" or "ProjectCo") pursuant to a design, build, finance and maintain Project Agreement dated February 12, 2013. Prior thereto, RTG had contracted with OLRTC to assist with its RFP response and, contemporaneously with entering into the Project Agreement, RTG and OLRTC executed a Prime Contract which transferred all of RTG's obligations to design and construct the Project to OLRTC.

8. In its proposal to the City, RTG had expressly contemplated using Alstom as the LRV manufacturer. Accordingly, also on February 12, 2013, OLRTC and Alstom executed the Subcontract by which Alstom undertook to design, engineer, manufacture, deliver, test, commission and provide warranties for 34 LRVs. On the same date, ORLTC contracted with Thales Canada Inc. ("Thales") to provide the automatic train control system for the Project, including the components to be installed in the LRVs to control their movements ("Thales Subcontract").

9. Contrary to the original expectation of the parties, for a variety of reasons, Revenue Service did not commence on the line until September 14, 2019, well beyond the originally contemplated date. As noted above, the main issues in dispute in this arbitration concern

the allocation of responsibility for the delays experienced in the delivery of the 34 LRVs and the consequences of those delays.

Summary of OLRTC's Claims

10. In addition to interest and costs, in its Subcontract Arbitration Notice, OLRTC asserts claims for damages in the amount of $250 million and seeks a declaration that Alstom is not entitled to limit its liability under certain provisions of the Subcontract. Although OLRTC cites various grounds, except for its claim for over $65 million in liquidated damages, it does not break down the balance of its claim in respect of the other enumerated grounds in its pleading.

11. OLRTC says that it relied on Alstom's express confirmation in the Subcontract that the Time for Completion of the Subcontracted Works was a realistic and achievable date. It also relied on the express requirement that Alstom perform its duties "in accordance with Good Industry Practices" and "in a timely and professional manner", together with representations as to its extensive experience and knowledge of the design, manufacturing, testing, and commissioning of LRVs.

12. It says that, in accordance with revisions made on consent to the Approved Subcontract Schedule, Alstom was obliged to manufacture, deliver, and successfully test all 34 LRVs by March 5, 2018, so that they would be available for Revenue Service Commencement by May 24, 2018. OLRTC claims entitlement to the aforementioned liquidated damages arising from Alstom's failure to achieve certain contractual milestones in the Subcontract beyond the stipulated one-month grace period.

13. OLRTC says that Alstom was "grossly negligent and blatantly in breach of its obligations under the Subcontract" resulting in "pervasive and significant" delay that "was reprehensible and an affront to the Subcontract". In support of these general accusations, it lists 14 allegations of breaches of contract, negligent acts and omissions, and wilful misconduct including:

a) negligent manufacture of the LRVs, necessitating extensive repairs, corrections, and retrofits;

b) failure to manufacture in accordance with accepted safety requirements pertaining to flammability and toxicity;

c) failure to comply with certain Subcontract requirements pertaining to hardware and equipment;

d) failure to manage its equipment supply;

e) procuring defective equipment;

f) failure to design appropriate brake calipers;

g) failure to coordinate the completion of vehicles in an orderly sequence;

h) failure to provide interface details to enable the CBTC equipment to be properly installed;

i) negligent design and engineering of the LRVs, including providing for inadequate heating and cooling systems in the driver cabs;

j) failure to coordinate its work with OLRTC and other subcontractors;

k) failure to employ sufficiently skilled and experienced staff;

l) failure to create or implement recovery plans, despite repeated failures to achieve Milestone dates;

m) failure to deliver accurate schedules "that reflected the actual extent of its delay"; and

n) repeated misrepresentations that distorted its progress and the date on which it would complete the Subcontracted Works.

14. OLRTC goes on to allege that "Alstom's extreme dereliction of its obligations … indicates that its failures were deliberate and intentional" and that it failed to prioritize its work under the Subcontract "preferring to dedicate resources to other, more lucrative jobs" while knowing that it was not providing sufficient manpower or resources to the Subcontract, and that this would result in a schedule failure and resulting damage.

15. OLRTC says that Alstom acted with "extreme disregard and delinquency of its obligations "to the point that it "intentionally neglected its responsibilities." It goes on to allege a breach of the obligation of good faith and honest performance under the Subcontract.

16. OLRTC denies that neither it nor any party for whom it was responsible contributed to any of these failures, problems, or delays. It says, "Responsibility for them all lies with Alstom."

17. OLRTC says that, given the nature of Alstom's misconduct, the limitation of liability capping liquidated damages at Component pricing of the Subcontract Price (i.e. $Component pricing) is inapplicable and that there is no limit to Alstom's exposure in this regard to liquidated damages that, as at the date of the Subcontract Arbitration Notice, were approximately $65,339,409.36.

18. In addition, OLRTC asserts claims against Alstom for certain Direct Losses related to systemic defects in the LRVs due to defective design and manufacturing, resulting in, among other things, delay liquidated damages that it is required to pay to RTG and additional prolongation and delay related claims. More specifically, OLRTC says that Alstom caused it to incur additional and unexpected costs with respect to:

a) premature wear of the rail profile;

b) damage to the maintenance and storage facility ("MSF") yard, including the maintenance gates, a signal mast and base, a Stinger connection cable, asphalt, and related to the use of certain specified equipment in the yard, including the costs incurred for internal and external consultants to oversee repairs of defects; and

c) the provision of OLRTC equipment, resources, and personnel at the MSF or costs incurred for the construction and use of additional space at the MSF, as well as the costs of keeping OLRTC staff mobilized due to delays in Alstom's LRV delivery.

19. Five days prior to the commencement of the evidentiary hearing, and following a contested motion to amend, OLRTC filed an Amended Subcontract Arbitration Notice, with leave, adding an additional claim seeking reimbursement of amounts paid and to be paid in respect of platform "spotters", until the spotters are no longer required. The costs incurred with respect to the spotters was alleged to be the direct result of the unreliability of the LRVs rear-view camera system. As the costs were ongoing, the Amended Subcontract Arbitration Notice did not specify a quantum of damages under this head, nor did the amendment seek to increase the overall demand for $250 million.

Summary of Alstom's Claims

20. In its Subcontract Arbitration Notice, after reviewing a number of Subcontract terms i) pertaining to the back-to-back nature of the Subcontract with the Project Agreement; ii) OLRTC's obligation to provide timely inputs; iii) Alstom's inability to carry out testing of LRVs due to the acts or omissions of OLRTC; iv) the consequences of the failure of OLRTC to make a test track available; and v) its entitlement to be indemnified for all Direct Losses caused by OLRTC, Alstom enumerated its claims.

21. It says that OLRTC failed to provide it with:

a) essential information, facilities and equipment by certain contractually specified dates;

b) certain necessary design interface information; and

c) proper and timely access to the site,

thereby resulting in delays and substantial compensable Direct Losses.

22. In particular, it says that OLRTC failed to provide it with:

a) design interface specifications, information, and other data, including for CBTC, track, OCS, Power Supply, Telecom, guideway, bridges, tunnels, stations, and other civil infrastructure by the contractually stipulated date of April 26, 2013;

b) access to the MSF and MSF equipment for the assembly, inspection, maintenance, cleaning, storage, and operation of vehicles by the contractually stipulated date July 1, 2015;

c) a 4 km section of test track to begin testing of the LRVs by the contractually stipulated date of August 31, 2016;

d) Communications Based Train Control ("CBTC") systems and radio equipment by December 16, 2013 and sufficient such equipment for installation into each LRV on a set schedule from November 17, 2014 to October 20, 2017; and

e) selection of a radio supplier and technical specifications by the contractually stipulated date of April 26, 2013.

23. Alstom alleges that the MSF was not ready for manufacturing by July 1, 2015 and that it was only provided with partial access to that facility for tooling and parts delivery in August of that year. The final vehicle assembly area was not ready until, at least, the end of November 2015.

24. In February 2016, it submitted a schedule revision, which was accepted by OLRTC in May 2016. This new approved schedule ("V5") required Alstom to significantly compress its work and incur substantial acceleration costs to mitigate the delays caused by the aforementioned OLRTC failures. The new schedule, it says, could only be met if, going forward, OLRTC met its own deadlines and contractual obligations. Alstom issued a request for a Variation for its acceleration costs, but OLRTC did not respond to the request.

25. Alstom says that OLRTC continued to fail to meet its critical deadlines, thereby causing further delay, such failures including limiting Alstom's access to the MSF, the MSF Equipment, the Project site, and the Wash Bay. Moreover, repeated power failures with the Overhead Catenary System ("OCS") impeded vehicle dynamic testing. Testing was further delayed by the "tardy and piecemeal access" to only portions of the 4 km test track.

26. In addition to the above, Alstom alleges that the late and deficient design and implementation of the CBTC system resulted in the need for extensive and costly retrofits on all LRVs, thereby delaying serial testing. The late selection of the P25 radio supplier meant that the necessary radio technical specifications were received more than three years after the stipulated date in the Subcontract. This, too, resulted in expensive retrofits to all LRVs and further delayed the manufacturing and serial testing, resulting in extra costs to Alstom.

27. Alstom says that the individual breaches taken in combination had a compounding impact on its ability to perform its work efficiently, resulting in extended duration, increased man-hours, equipment and material costs, and required it to incur acceleration costs.

28. It pleads that OLRTC has failed to pay outstanding invoices for work performed in the amount of $30,221,946.96, exclusive of taxes and interest. The unpaid invoices pertain to Payment Milestones 8, 9, and 10 and were issued on various dates between February 25, 2019 and September 14, 2019. Of the total outstanding, $25,730,581.60 is for the final invoice in the series.

29. Alstom alleges that OLRTC was consistently late in making payments to it and that the failure to pay its undisputed invoices within 30 days constitutes a Construction Contractor Event of Default under the Subcontract, thereby entitling Alstom to interest at the contractually stipulated rate.

30. In addition to delay damages, Alstom claims further damages for incurred extra costs that would entitle it to Variations, including the adoption of the highly-compressed V5 Schedule, delayed access to the test track, ongoing requests necessitating changes to the design and styling elements of the LRVs, development and testing of the interface with the high-speed data recorder ("HSDR"), and damage to certain LRVs caused by OLRTC or others for which it was responsible.

31. Further listed grounds for relief include interference by other OLRTC subcontractors in the MSF, imposed changes to the Project Schedule which impacted Alstom and entitled it to Variations, certain City Events, interference causing delay to the carrying out of Acceptance Testing and Integration Testing for more than 30 days, and the negligent acts, omissions, or wilful misconduct of OLRTC and its other subcontractor, Thales.

32. Alstom's claimed damages at the time of issuing its Subcontract Arbitration Notice, which it says, in aggregate, are estimated to be not less than $80 million, plus interest and costs, are as follows:

a) $30,221,946.96 for non-payment of Milestones due and owing;

b) $15 million for unpaid changes to the work;

c) $15 million for Direct Losses arising from OLRTC's negligent acts and omissions and uncured events of default;

d) $15 million for acceleration costs associated with the V5 Schedule; and

e) other Direct Losses arising out of OLRTC's interference with Alstom's work in an amount to be determined.

OLRTC's Response to Alstom's Claims

33. In a relatively brief Reply, OLRTC denies the allegations that Alstom suffered any damages as a result of OLRTC's conduct and says that any damages suffered were as a result of Alstom's own failure to complete its work in accordance with the schedule.

34. With respect to Alstom's claim for additional compensation arising out of the V5 Schedule, OLRTC denies that Alstom ever delivered a request for a Variation. Moreover, given the agreement by the parties to adopt this new schedule, any delays prior to May 20, 2016 are non-compensable.

35. In response to specific allegations made by Alstom, OLRTC says that:

a) any issues with respect to the handover of the MSF did not cause delay to Alstom, because it had partial access in June 2015 for the purpose of installing tooling and fixtures and to begin assembly of vehicles in accordance with Alstom's schedule at that time, even though Alstom was not ready to do so as a result of its own delay;

b) it did not disrupt or hamper Alstom's access to the MSF insofar as it had access to the Wash Bay and Scale Track for serial testing but, again, was delayed using these facilities due to its own delays, including extensive retrofit modifications that needed to be completed and the need to procure missing parts for the LRVs;

c) there were no major deficiencies with the OCS that prevented Alstom from using it, and any difficulties were the result of Alstom's improper use of the facilities or faults in its vehicles;

d) any need for additional operating space in the MSF was caused by Alstom's own extensive retrofit work, and fault lies with it for manufacturing LRVs with so many deficiencies;

e) it did not interfere with Alstom's access to the MSF as a result of any work undertaken for Phase 2 of Alstom's Subcontract. If work for both phases occurred simultaneously, this was due to Alstom's own delays in completing the first phase;

f) the test track was available on time, but Alstom was not ready to use it when provided;

g) any delays related to the CBTC system were the result of Alstom's failure to coordinate and collaborate with Thales, by, among other things, failing to provide Thales with the requisite vehicle information and requirements and to implement Thales's instructions on the installation of the CBTC equipment. In any event, the LRVs were not sufficiently completed to have the CBTC equipment installed by the date of delivery of the equipment; and

h) with respect to the P25 radios, Alstom never identified any delay associated with the required retrofits, failed to advise OLRTC of any schedule impacts, and failed to deliver a proper Variation Report outlining its costs resulting from this issue.

36. Relying on section 14 of the Subcontract, OLRTC denies that Alstom is entitled to seek compensation for Variations that were not submitted, supported and approved under the applicable Subcontract provisions.

37. OLRTC says that the adoption of the V5 Schedule was at the request of Alstom, due to delays caused by it. It denies that Alstom incurred any additional costs as a result of the late or partial delivery of the test track or with respect to the design and styling process for the LRVs. With respect to the HSDR system, it says that Alstom was responsible for the development and testing of that system and any delays are wholly attributable to its inability to solve issues relating to its own software.

38. With respect to the claim for unpaid invoices, OLRTC says that it is entitled to set off the liquidated damages resulting from Alstom's failure to meet certain contractual Milestones and further notes that, at the date of the Reply, Alstom had not yet fulfilled the requirements of the final Milestone and was, therefore, not entitled to payment of the last invoice.

Alstom's Response to OLRTC's Claims

39. In its Reply pleading, Alstom says that OLRTC's Subcontract Notice of Arbitration is nothing more than an inflated delay claim, grossly in excess of the liability for Delay Liquidated Damages ("Delay LDs") under the Subcontract, that it is without merit, and that

it, not Alstom, is the primary cause of delays to the Project generally and to the achievement of the Subcontract Milestones. It says that OLRTC cannot now benefit from its own failures and breaches which prevented Alstom from meeting the Milestone dates.

40. In particular, OLRTC failed to meet the contractual dates for certain critical design inputs, including the design interfaces for the CBTC system, the Track, the OCS, the Power Supply, and the Telecom, and P25 radio and technical specifications which were to be "frozen" by April 26, 2013, yet they continued to evolve requiring the issuance of new system configurations.

41. Alstom reiterates that OLRTC's failure to provide it with timely access to the entire test track, free of defects, and its late and ever-changing design inputs made it impossible for it to achieve the Subcontract Milestones. Despite this, OLRTC refused to modify the Milestones, despite Alstom's reasonable requests. As a result, Alstom says that OLRTC cannot now take advantage of its own breaches, delays, and unreasonable refusal to adjust the schedule in order to claim Delay LDs from Alstom.

42. Similarly, Alstom says that OLRTC's unparticularized claim for non-delay and Direct Losses of approximately $185 million is grossly inflated and wholly without merit.

43. Alstom relies on the contractual limitation of liability provisions that provide that its total liability cannot exceed the Subcontract Price, and OLRTC's entitlement to damages for delay are expressly limited to the Delay LDs only, which are, themselves, subject to a separate sub-limit of approximately $Component pricing, being Component pricing of the Subcontract Price. Neither of the two exceptions in the Subcontract are applicable, says Alstom, since the Subcontract was not terminated and the evidence does not support that any liquidated damages ultimately paid by OLRTC to RTG under the Project Agreement were caused by Alstom's late delivery of the LRVs. Those liquidated damages would have been paid in any event because of OLRTC's own delays in the completion of the Project infrastructure.

44. Alstom relies on sections 5.1 and 8.3.4 of the Subcontract that provide it with relief for any delays to the design review process or Subcontracted Works due to OLRTC's

failure to provide timely inputs, as described above. It also says that OLRTC's failure to provide timely inputs entitle it to Variations, extensions of time, and compensation for any Direct Losses caused by the failure to give it possession of the MSF and the test track.

45. Alstom reiterates that OLRTC failed to provide it with free issue CBTC equipment and radio equipment for the mock-up by the stipulated date of December 16, 2013, or VOBC equipment for installation into each vehicle on a set schedule from November 17, 2014 to October 20, 2017, in addition to its previously stated allegations concerning access to a fully functional MSF and MSF Equipment.

46. Noting that Alstom and OLRTC both have obligations with respect to the testing of vehicles, including Serial Tests needed for the fulfilment of Milestone 8 and Acceptance Testing and Integration Testing of the vehicles by OLRTC in respect of Milestone 9, Alstom says that OLRTC is responsible for damage caused to the vehicles while in the care and control of third parties, including OLRTC, other subcontractors, and the City. Delays to Integration Testing by OLRTC had a direct impact on Alstom's ability to achieve Milestones 9 and 10.

47. Alstom also relies on OLRTC's failure to fulfil the contractual requirement that the entire energized Confederation Line Track be available for Integration Testing by the Revenue Service Availability Date ("RSA Date") of May 24, 2018. Delays of more than 30 days to Acceptance or Integration Testing caused by OLRTC entitle Alstom to an extension of time and payment for its Direct Losses for delay.

48. It further relies on the provisions of Subcontract Appendix K1, sections 8.1 and 8.2 which stipulate that the failure to deliver the test track by the RSA Date constitutes a Variation and that Milestone 10 will be deemed automatically achieved on the RSA Date. Alstom repeats that OLRTC failed to provide it with access to a 4 km test track or the entire energized Confederation Line Track on time. When it was eventually provided, it was deficient and did not meet the requirements for testing or proper operation of the LRVs.

49. OLRTC's early delays in providing "frozen" design inputs caused knock-on effects to the overall Project schedule. Without the necessary information from OLRTC, Alstom says that it had to progress its detailed design based on reasonable assumptions, as provided for under the Subcontract. In addition, because of these late designs, the V5 Schedule was negotiated and adopted by the parties. This schedule was significantly compressed, requiring testing and manufacturing to proceed concurrently.

50. Based on this new schedule, Validation Testing, which typically occurs before the commencement of the manufacturing of vehicles, was to take place on the actual Confederation Line, contemporaneously with the serial production of the LRVs. Because OLRTC did not provide a sufficient length of energized, non-deficient track, this impacted the Validation Testing which, in turn, had a ripple effect throughout the manufacturing process.

51. With respect to Milestone 8, Alstom says that the late delivery and changing of the above-noted design inputs necessitated extensive retrofits and impacted Alstom's ability to perform and complete serial testing in accordance with the schedule. It was further impacted by the lack of available space in the MSF, because part of the available space was being used for CBTC/VOBC and P25 radio retrofits. Alstom's ability to complete serial testing was impacted, as well, by the failure of the OCS system in the Light Maintenance Bay and the lack of availability of the Wash Bay and the Scale Track. All of this impeded its ability to achieve Milestone 8, thereby depriving OLRTC of any entitlement to Delay LDs in respect of that Milestone.

52. Alstom raises similar issues with respect to the achievement of Milestone 9 by March 5, 2018. Since Integration Testing could not be performed until the entire Confederation Line was available, and this did not occur until, at the earliest, November 2018, no Delay LDs are payable in respect of missing this Milestone. Similarly, Integration Testing required that all vehicles be CBTC certified, which could not occur until Thales had performed its dynamic post-installation check out ("DPICO") testing, which was itself delayed until at least April 2019 as a result of changes to the Thales design, which, in turn, necessitated retrofits in the first quarter of that year. All LRVs were CBTC certified

on May 16, 2019, well over a year after the Milestone 9 date. For these reasons, Alstom could not achieve that Milestone by the stipulated date.

53. Additional causes of delay beyond Alstom's control included OLRTC's failure to coordinate acceptance by the City, the delay to tunnel availability for acoustic testing, the provision of deficient tracks, and a shortage of drivers to test trains. Again, OLRTC is, as a result, not entitled to Delay LDs with respect to this Milestone.

54. With respect to Milestone 10, again, Alstom relies on the deeming provision in Appendix K, section 8.2 and says that the failure to have the entire Confederation Line available results in that Milestone being automatically achieved on the RSA Date of May 24, 2018. OLRTC did not achieve Substantial Completion of the Confederation Line until July 27, 2019, thus no Delay LDs can accrue in relation to that Milestone.

55. Alstom relies on the fact that passenger service to the public started on September 14, 2019 and has been operating continuously since. It says there are no outstanding Subcontract requirements for the achievement of Revenue Service Commencement, as alleged. In light of the above, Alstom says that OLRTC is entitled to no Delay LDs.

56. With respect to OLRTC's claims for Direct Losses, Alstom denies all of the alleged failures, breaches of contract, or negligent acts and omissions alleged to have caused delay to the Project. To begin with, it says that any claims for Direct Losses resulting from Subcontractor Events of Default required notice of default under section 16.1.3 of the Subcontract, which OLRTC failed to give. Moreover, any non-conformities or deficiencies in the LRVs were addressed appropriately and accepted by OLRTC when it acknowledged that Milestone 9 was achieved. From that point forward, all risks in respect of the vehicles were transferred to OLRTC.

57. Contrary to OLRTC's allegations, the retrofits were not due to Alstom's deficient work but, rather, were the result of OLRTC's late critical design inputs, late changing design, late delivery of critical third-party equipment, and deficient third-party equipment that caused extensive rework. Moreover, Alstom was required to perform retrofits to damaged pantographs as a result of OLRTC's negligent testing of the LRVs and defects

in the OCS system, as well as other damage caused by OLRTC and its subcontractors during testing.

58. In any event, any impact to Alstom's work schedule resulting from the need to perform retrofits did not impact the Projects critical path schedule. Any such delays were concurrent with the extensive delays caused by OLRTC's own failures and breaches of the contract, and its Project-wide delays that had nothing to do with Alstom's performance.

59. Alstom denies the allegations with respect to negligent manufacturing, manufacturing defects, the failure to meet accepted safety requirements, or that it installed hardware and equipment that was not compliant with the requirements of the Subcontract. It further denies failing to manage its equipment supply process or that it failed to design appropriate equipment or procured defective equipment. Any non-sequential assembly of the LRVs were the result of steps taken to mitigate delays that were due to OLRTC's late design inputs, actions, and omissions.

60. Moreover, it denies failing to provide interface details sufficient to enable Thales to properly install its equipment and perform necessary software updates, or that it failed to coordinate its work with that of other subcontractors. It also denies all allegations with respect to its staffing, its failure to implement recovery plans, deliver accurate schedules, or misrepresenting its progress to OLRTC. Contrary to OLRTC's allegations, Alstom says that it provided consistent updates to the schedule, several recovery plans, and responded to requests for clarification, but it was OLRTC that rejected each of Alstom's updated schedules and recovery plans, notwithstanding that they were accurate, reasonable, and realistic.

61. Alstom denies causing premature wear to the rail profile, physical damage to the MSF or the MSF Equipment, or any damage to the Stinger equipment. To the extent that any such damage occurred, it would be considered normal wear of equipment used during production for over four years and would, in any event, be *de minimis.* Finally, it says that any costs associated with keeping OLRTC staff mobilized due to Alstom's alleged delays are delay damages expressly barred by section 8.6 of the Subcontract.

62. Alstom denies any indemnity claim alleged by OLRTC due to the failure to provide notice under section 17.3 of the Subcontract.

63. Alstom says that the allegations that its work amounted to wilful misconduct or gross negligence is completely baseless and without merit and have simply been alleged in an effort to breach the Subcontract's limit of liability. Even if applicable, such claims would not apply to the sub-limit for Delay LDs under section 8.6.

64. In their respective pre-hearing briefs and in the written evidence-in-chief filed in support, each party particularized the basis for and quantification of their respective claims which I will deal with, as necessary, in the analysis portion of this decision.

The Issues

65. Given that the quantum of outstanding Alstom invoices is not in dispute, subject to any successful set-off or counterclaim asserted by OLRTC, the issues that I must resolve in this arbitration are summarized below.

66. With respect to OLRTC's claims:

Is OLRTC entitled to apply Delay LDs in the amount claimed or in any amount against the amounts otherwise due to Alstom?

Is OLRTC entitled to damages for prolongation or acceleration, as claimed?

Is OLRTC entitled to compensation for its claimed non-delay and Direct Losses damages?

Is OLRTC entitled to compensation for its claim in respect of the spotters issue?

67. With respect to Alstom's claims:

Is Alstom entitled to damages for delay, prolongation, or acceleration?

Is Alstom entitled to damages for additional work or Direct Losses, as claimed?

Is Alstom entitled to be paid its outstanding invoices, with interest?

68. The answer to each of these questions will necessitate an examination of each party's compliance with the terms of the Subcontract and the extent to which it has met the burden of proof with respect to establishing a factual basis for entitlement and quantification of its claims. Because of the extent to which my disposition of this case depends on my interpretation of the Subcontract provisions, I move next to something of a deep dive into the relevant terms of that agreement.

The Subcontract

69. The Subcontract is a comprehensive and highly prescriptive agreement entered into by commercially sophisticated parties, presumably with the assistance of legal advisors. To a great extent, my disposition of the issues in dispute and the claims of each party is grounded in my interpretation of the terms of this agreement which are, in my view, largely straightforward and free of ambiguity. I begin with a brief overview of the principles of contract interpretation that guide my analysis.

Principles of Contract Interpretation

70. The principles of contract interpretation are now well established, yet worth repeating. The objective is to:

> (a) determine the intention of the parties in accordance with the language they have used in the written document, based upon the "cardinal presumption" that they have intended what they have said;
>
> (b) read the text of the written agreement as a whole, giving the words used their ordinary and grammatical meaning, in a manner that gives meaning to all of its terms and avoids an interpretation that would render one or more of its terms ineffective;
>
> (c) read the contract in the context of the surrounding circumstances known to the parties at the time of the formation of the contract. The surrounding circumstances, or "factual matrix", include facts that were known or reasonably capable of being known by the parties when they entered into the written agreement, such as facts concerning the genesis of the agreement, its purpose, and the commercial context in which the agreement was made; and

> (d) read the text in a fashion that accords with sound commercial principles and good business sense, avoiding a commercially absurd result, objectively assessed.
>
> (See *Sattva Capital Corp v. Creston Moly Corp*, 2014 SCC 53, *Weyerhaeuser Company Limited v Ontario (Attorney General)*, 2017 ONCA 1007, *Salah v Timothy's Coffees of the World Inc.*, 2010 ONCA 673, affirming (2009), 182 ACWS (3d) 83, (OSC), among others.)

71. Each provision in a contract should be read in the context of the agreement as a whole, but each word in the contract should not be "placed under the interpretative microscope in isolation and given a meaning without regard to the entire document." (See *Glimmer Resources Inc v. Exall Resources* (1999), 119 OAC 78, 76 OTC 270 (ONCA), reversing in part (1997) 47 OTC 371, 74 ACWS (3d) 954 (Ont. Gen. Div.), paras 16–17)

72. Finally, as per the Supreme Court of Canada, specific terms generally qualify and override more general terms in a contract dealing with the same subject. (See *BG Checo International Ltd. v. British Columbia Hydro & Power Authority*, [1993] 1 S.C.R. 12 (SCC))

73. Some of the listed interpretive tools are more important than others in analyzing the dispute between these parties. For example, in this case, there is no difficulty arising from the specific words used or any other syntactical complications. Rather, the principal task facing me is to reconcile various parts of the agreement by reading the text of the written agreement *as a whole in a manner that gives meaning to all of its terms and avoids an interpretation that would render one or more of its terms ineffective* or result in a commercially absurd result.

74. To resolve the issues in this dispute, there is no need to attempt to resolve ambiguities within the Subcontract with the aid of any parol or extraneous evidence or by examining the parties' post-contractual conduct or communications. In my opinion, the relevant portions of the agreement can be interpreted in a commercially reasonable way by reference to its terms alone, with the benefit of the commercial context in which the agreement was formed.

Overview

75. Many of the provisions of the Subcontract are of no significance to this dispute and do not warrant review in these reasons. Accordingly, I will limit this summary to a general overview of the basic structure of the agreement and highlight specific key provisions in greater detail only as they become relevant to my analysis. To put it simply, this was not a simple contract for the delivery of 34 LRVs by a specified date. Rather, the vehicles were but one component of a complex, technically sophisticated undertaking and, prior to being put into revenue service, needed to be made available to other parties for system integration, testing, and training purposes.

76. For an original fixed price of $Component pricing[2], plus tax, Alstom was obliged to deliver 34 completed LRVs in accordance with the Approved Subcontract Schedule. In addition to the vehicles themselves, the Subcontract also required the delivery of certain documentation and provided for a two-year warranty period.

77. By agreement between the parties, the majority of the manufacturing and testing of the LRVs was to happen in and on facilities owned and controlled by OLRTC, and driver training was the responsibility of another entity, OC Transpo, under the control of the City of Ottawa. Moreover, the completion of the vehicles required that they be equipped with the hardware and software that would allow them to operate automatically, using what is referred to as a Communications Based Train Control system ("CBTC"), which, as noted above, was the responsibility of Thales. The CBTC system comprised components incorporated into each vehicle, referred to as the Vehicle On Board Controls ("VOBC"), and wayside devices installed along the track and in the stations with which the VOBC communicated. Thales also required access to the vehicles at various times for testing of its systems, prior to delivery to OLRTC.

[2] Through the issuance of certain approved change orders, the Subcontract price was subsequently increased by $Component pricing bringing the revised total contract value to $Component pricing exclusive of tax.

78. As already alluded to in the summary of Alstom's claims, the Subcontract required that OLRTC provide certain design specifications and other inputs and to make certain facilities available for the manufacturing and testing of LRVs to Alstom by specified dates.

Commencement, Delays and Suspension Provisions of the Subcontract

79. Of particular importance in this arbitration are the provisions of Article 8.0 of the Subcontract entitled Commencement, Delays and Suspension. Section 8.3, entitled Schedule and Scheduling, begins in section 8.3.1 with the process for developing a preliminary schedule to be submitted by Alstom to OLRTC. Section 8.3.2 describes the iterative process by which the parties would move from a preliminary schedule to the Approved Contract Schedule, pursuant to which the parties were to work cooperatively and act reasonably.

80. Generally speaking, pursuant to section 8.3.4, Alstom was required to comply with the Approved Subcontract Schedule, as amended from time to time. Alstom was required to monitor the progress of the work and promptly advise OLRTC upon becoming aware of any material delays, however caused, together with proposed remedial steps. This section specifies that any amendments to the Approved Subcontract Schedule were to be made pursuant to section 8.3.8. It goes on to state that Alstom would not be responsible for any delay in the performance of the Subcontracted Works due to OLRTC's failure to provide "any inputs in a timely manner as specified in Appendix D (Vehicle Planning)." Where required inputs were not provided, Alstom was obliged to mitigate by proceeding based on reasonable assumptions to be communicated to OLRTC prior to proceeding.

81. Section 8.3.5 sets out a mechanism whereby OLRTC, acting reasonably, can require the delivery of a recovery plan from Alstom, if it determines, based on a critical path analysis, that the progress of the work would result in missing one or more Milestone dates and would be likely to result in a failure to meet the Completion Deadline. (Although capitalized in section 8.3.5, "Completion Deadline" does not appear to be a defined term in the Subcontract or the Project Agreement and only appears in this subsection.) If the parties cannot agree on the details of such a plan, OLRTC could provide written direction

to implement other acceleration measures. Pursuant to the concluding sentence in section 8.3.5, if a recovery plan or other acceleration measures were required due to a failure of OLRTC to provide inputs in a timely manner, as specified in Appendix D, Alstom would be entitled to a Variation, and further would be entitled to recover the costs of any necessary recovery plan or acceleration measures. Disagreements with respect to this section could be submitted to the Dispute Resolution Procedure provided for in the Subcontract.

82. Pursuant to section 8.3.7, OLRTC was also entitled to request an acceleration proposal, if it determined that it required the work to proceed in advance of the Approved Subcontract Schedule. In such case, following the acceptance of a proposal from Alstom, including cost estimates and an estimate of the time saved, the acceleration work would proceed at OLRTC's cost.

83. Through the provision of monthly updates required under section 8.3.8, changes to the Approved Subcontract Schedule dates were permitted, without approval by OLRTC, unless there were changes to stipulated Milestone dates or critical path items. In the latter case, OLRTC's approval, acting reasonably, was required, and the parties were required to repeat the iterative process set out in section 8.3.2. If approved, the new Milestone dates would be included in the Approved Subcontract Schedule.

84. Of particular importance, in my view, are the concluding words of section 8.3.8 which read:

> The Approved Subcontract Schedule will at all times be an accurate, reasonable and realistic representation of the Subcontractor's plans for the completion of the Design and Construction of the Subcontracted Works in accordance with the requirements of this Subcontract. Any permitted or agreed to adjustment to the Milestone Dates or Payment Milestone Dates will be included in the updated Approved Subcontract Schedule.

85. I highlight the importance of this provision because, although it is principally Alstom's responsibility to provide the required updates, given OLRTC's corresponding obligation to review and, acting reasonably, approve updates that require adjustments to the Milestones or critical path, the task of ensuring that the operative schedule meets the

requirement of being an "accurate, reasonable and realistic representation of the Subcontractor's plans" must be seen as a shared responsibility.

86. Section 8.4 of the Subcontract also entitled Alstom to apply for an extension of the Time for Completion in certain circumstances, including a) a Variation; b) a cause of delay giving an entitlement under a sub-clause of the agreement; c) a Project Co Event; or d) a City Event, the capitalized terms being defined in section 1.1, in many cases by reference to other capitalized terms either in the Subcontract or the Project Agreement.

87. Time for Completion is defined as "the time for completing the Subcontracted Works under Sub-Clause 8.2, as stated in Appendix D (Vehicle Planning)". This defined term is more fully described in section 8.2.1 as referring to "the whole of the Subcontracted Works", excluding Punch List Items, but including achieving Acceptance for each Vehicle, passing Integration Tests, and the receipt of certain deliverables. There is a further internal reference to section 11.1, which itself includes a circular reference back to section 8.2.1, before going on to define completion as including the issuance of an Acceptance Certificate for the Subcontracted Works. Interestingly, while section 8.4 references extensions of the Time for Completion of the whole of the Subcontracted Works, it makes no reference to Milestone dates, and Appendix D itself does not use the term Time for Completion, despite the internal reference.

88. In requesting an extension of time, Alstom was obliged to give notice to OLRTC and submit the request for determination, pursuant to section 3.5 of the Subcontract. OLRTC was then required to consult with Alstom and endeavour to reach an agreement. If agreement was not reached, OLRTC was further obliged to "make a fair determination in accordance with the Subcontract, having regard to all relevant circumstances." Where the issue for determination related to the appropriate mitigation measures to adopt in response to a delay for which OLRTC was responsible, OLRTC was required to provide the appropriate extension of time and compensation to which the Alstom was entitled.

89. In fulfilment of its responsibilities to evaluate requests for extensions of time, OLRTC was required to provide notice to Alstom of each determination with supporting particulars. If Alstom disputed the determination, either party could then refer the dispute

to the Subcontract Dispute Resolution Procedure. It is agreed that Alstom never formally requested an extension of time due to a Variation. This will become relevant in respect of my assessment of Alstom's own delay claim.

90. A key issue that requires resolution in this decision is the interplay between section 8.3.8 and section 8.4. The parties have divergent views on the interpretation of these two provisions. Whereas section 8.3.8 references adjustments to Milestone dates and the critical path requiring the approval of OLRTC, acting reasonably, section 8.4 only refers to extensions of Time for Completion, as defined above. Section 8.4 makes no reference to Milestone dates or critical path items. OLRTC says, in effect, that the two provisions must be read together, and that any extension requested by Alstom would have to be based on one of the four enumerated grounds in section 8.4, whereas Alstom says that the two sections address different issues and are independent of each other.

91. OLRTC goes on to argue that, if the two provisions are not read in tandem, then the Subcontract would provide no guidance as to what it means for OLRTC to act "reasonably" in considering any schedule adjustment under section 8.3.8, since that section does not set out any relevant criteria. This, OLRTC says, could not have been the intention of the parties.

92. Many contracts, however, include similar requirements for parties to act reasonably in exercising discretion, without providing specific criteria for the exercise of that discretion. In my view, in such circumstances, a party required to act reasonably must consider all relevant circumstances touching on the matter. In the case of a necessary schedule adjustment, a non-exhaustive list of such factors would include consideration of which party to the Subcontract caused the need for the adjustment, whether there was more than one such cause, whether the cause was due to the acts or omissions of a non-party to the Subcontract, has the party evaluating the request complied with all of its relevant contractual obligations, what, if any, harm would be suffered by the requested adjustments given all of the surrounding circumstances including other concurrent events, and what options exist to ameliorate any harm.

93. In my view, on the plain wording of the two competing provisions, section 8.4 is restricted in its ambit to applications for an extension of Time for Completion of the whole of the Subcontracted Works, excluding Punch List Items. It has no application to the necessary adjustment of Milestone dates or the critical path schedule. That process is governed exclusively by section 8.3.8, which makes no reference to the need to seek extensions of time or reliance on Variations but does require the reasonable exercise of discretion by OLRTC, taking all relevant factors into account.

94. Throughout its submissions, OLRTC makes much of Alstom's failure to seek an extension of time or a Variation with respect to the Delay LD Milestones. Moreover, it says that seeking extensions of time contemporaneously with the events in question is sensible and commercially prudent, because the parties could have engaged in an analysis of the causes of delay at that time, "rather than trying to conduct an autopsy of the project after its completion, with faded memories and departed employees." It maintains that, leaving aside the final Milestone, the Delay LD regime is designed to avoid the need for an after-the-fact reconstruction of the kind undertaken by the fact witnesses and the delay consultant expert witnesses.

95. Of course, I agree with this contention by OLRTC . That is the principal reason that contracts often contain provisions requiring regular schedule updates and notices of pending delays. Having reviewed the contract provisions carefully, however, I was unable to find any reference to Alstom's ability to request extensions of time based on a Variation or otherwise that would adjust the Milestone dates, as opposed to the "Time for Completion of the whole of the Subcontracted Works". The only provision in the entire Subcontract that I could find dealing with adjusting the internal Milestone dates within the Subcontract is section 8.3.8, which deals explicitly and precisely with that topic.

96. Given my obligation to read the agreement in a way that "gives meaning to all of its terms and avoids an interpretation that would render one or more of its terms ineffective," I conclude that sections 8.3.8 and 8.4 deal with different matters, and that Alstom was not obliged to seek an "extension of time" to seek an adjustment to the Milestone dates through the submission of an appropriate schedule revision.

Delay LDs

97. Given their central importance to this decision, I devote particular attention to the section of the Subcontract dealing with Delay LDs.

98. In its pre-hearing submissions, OLRTC claims entitlement to over $55 million of Delay LDs. Delay LDs are dealt with under section 8.6 of the Subcontract, within which a chart sets out the amount per calendar day that Alstom is liable to pay if certain Milestones are not achieved by the applicable dates. The provision affords Alstom a grace period of one month for all Milestones, other than the final one, which is linked to the achievement of Revenue Service Commencement. With respect to the final Milestone (M10), however, while there was no grace period, Delay LDs only applied if it was not achieved due to the acts or omissions of Alstom.

99. It is useful to set out the full text of section 8.6 for ease of reference:

> 8.6 Delay Liquidated Damages
>
> The Subcontractor shall pay Delay Liquidated Damages to the Construction Contractor in accordance with the below chart in the case the relevant Delay LD Milestone is not achieved by the relevant Delay LD Milestone Date, provided in the case of the final Delay LD Milestone, it is not achieved due to the acts or omissions of the Subcontractor. The Delay Liquidated Damages listed in the below chart are daily amounts, which shall be assessed per calendar day, for each calendar day which shall elapse between the relevant Delay LD Milestone Date and the date on which the Delay LD Milestone is actually achieved. The Subcontractor will be entitled to a grace period of one month during which Delay Liquidated Damages will not be assessed for all Delay LD Milestones other than the final Delay LD Milestone, which is linked to the achievement of Payment Milestone 10 (Revenue Service Commencement). The total amount due under this Sub-Clause shall not exceed the aggregate maximum amount of ten percent (10%) of the Subcontract Price.
>
> [Chart intentionally omitted]
>
> These Delay Liquidated Damages shall be the only damages due from the Subcontractor for such default, other than in the event of termination under Sub-Clause 16.1.1 prior to Completion of the Subcontracted Works or any liability of the Subcontractor under the indemnity given under Clause 17.1(g) for liquidated damages ultimately payable under Section 26.7 of the

> Construction Contract. These Delay Liquidated Damages shall not relieve the Subcontractor from its obligation to complete the Subcontracted Works, or from any other liabilities, duties, obligations or, responsibilities which it may have under the Subcontract.
>
> Delay Liquidated Damages shall accrue daily and shall be payable monthly on the 25th day of each month. [Emphasis added]

100. The Subcontract set out ten Milestones, each of which represented a Payment Milestone. The Delay LDs were tied to the same dates. If the Milestone was achieved, Alstom was entitled to certain payments, but if not, OLRTC was entitled to *per diem* damages at a specified amount, until it was achieved. Four of those Milestones are in issue in this arbitration. The Milestones and the relevant dates are set out in the following chart, which adopts the revised dates contained in the Approved Subcontract Schedule referred to as Version 5 ("V5"):

Description of Delay LD Milestones	**Delay LD Milestone Date**	**Delay Liquidated Damages (per diem amount)**
Milestone 8B: End of Serial Test for Vehicles 3-17	August 11, 2017	$ Component pricing
Milestone 8C: End of Serial Test for Vehicles 18-34	February 27, 2018	$ Component pricing
Milestone 9: Acceptance of Vehicles	March 5, 2018	$ Component pricing
Milestone 10: Revenue Service Commencement	May 24, 2018	$ Component pricing

101. An interesting aspect of these Milestones and the related Delay LDs is the manner in which they have been calculated. Milestone 8B which deals with the completion of serial testing for 15 vehicles has a daily rate of $ Component pricing per day, which equates to $ Component pricing per vehicle per day. Milestone 8C, requiring the completion of serial testing for 17 vehicles is also based on the same rate per vehicle per day of $ Component pricing for a total daily Delay LDs of $ Component pricing. Similarly, Milestone 9, which is tied to the Acceptance of all 34 vehicles is, once again, based on the same rate per vehicle per day, for a total of $ Component pricing per day. Finally, the daily Delay LDs for Milestone 10, tied to Revenue

Service Commencement, is based on double the above rate per vehicle, being $Component pricing, for a total of $Component pricing

102. The Subcontract provides no indication regarding the source or rationale behind the daily rate per vehicle. The agreement is also silent on how the parties determined that this was a genuine pre-estimate of damages that OLRTC would suffer, if any Milestone date was missed. In fact, the Subcontract does not even contain the typical acknowledgement by both parties that the Delay LDs represent a genuine pre-estimate of the damages that will be suffered as a result of each category of delay.

103. What is even more curious about this provision, however, is that the rate per day and, by definition, the daily damages claimed by OLRTC are the same, for example in the case of Milestone 8B, whether all 15 vehicles are late in meeting the requirements, or only one vehicle is late. It is difficult to understand how, in this context and absent any explanation, the genuine pre-estimate of damages could be the same in both circumstances. When viewed in this light, the Delay LDs have the appearance of a penal provision. Having said that, Alstom has not challenged the liquidated damages provisions in the contract on the basis that they are unenforceable as a penalty because they do not represent a genuine pre-estimate of damages, but rather on other grounds, and, as such, it is unnecessary for me to address this point any further.

104. The parties interpret section 8.6 differently. OLRTC argues that Alstom's liability to pay Delay LDs under all but the final Milestone is strict, because it is only with respect to Milestone 10 that the section expressly limits Alstom's liability to situations where the failure to achieve that Milestone is due to Alstom's own acts or omissions. The logical corollary, OLRTC says, is that Alstom is liable to all of the other Delay LDs, if those Milestones are not achieved by the relevant date, regardless of which party is at fault. According to paragraph 94 of OLRTC's post-hearing submissions, a literal reading of section 8.6 exposes Alstom to Delay LDs in respect of the other Milestones, even if OLRTC was wholly or partially responsible for the delay.

105. OLRTC says that the apparent harshness of this interpretation is alleviated by Alstom's ability to have sought an extension of time, if such was justified, under section

8.4. As already noted, however, section 8.4 only provides for extensions of time in respect of "Time for Completion of the whole of the Subcontracted Works". The only provision in the Subcontract for amending Milestone dates is section 8.3.8, which required OLRTC to act reasonably in considering proposed revisions to those dates.

106. In my view, OLRTC's suggested strict application not only highlights the potentially penal nature of this provision in the Subcontract, but the punitive manner in which OLRTC seeks to enforce it. It also ignores section 8.3.4 which expressly absolves Alstom from responsibility for delay due to OLRTC's failure to comply with certain of its contractual obligations. It is inconceivable that it would be within the reasonable expectation of the parties that Alstom would be liable to more than $25 million of liquidated damages, even if OLRTC was solely responsible for delays to the achievement of Milestones 8B, 8C, and 9. Such a reading would, in my respectful view, result in a commercial absurdity, nor is it a necessary implication of the words chosen by the parties.

107. The proviso that Alstom would only be exposed to Delay LDs in respect of Milestone 10, if due to its own acts or omissions, does not, by necessary implication, expose it to Delay LDs in respect of other Milestones, if missing those Milestones was caused or contributed to by OLRTC or those for whom it is responsible. In my view, a contextual reading of that provision recognizes that the final Milestone, being Revenue Service Commencement of the Confederation Line, more so than the other Milestones, required the completion of the entire infrastructure, as opposed to completion of the LRVs. As the achievement of this was beyond the control of Alstom, it was necessary to clarify that Alstom would only be exposed to Delay LDs in respect of this final Milestone, if it was solely responsible for the failure to achieve it.

108. While Alstom does not challenge the quantum of the Delay LDs on the basis that the specified amounts do not represent a genuine pre-estimate of damages, if damages have been suffered, it does assert, among other things, that their application would be penal in circumstances where OLRTC has suffered no actual damages as a result of the missed Milestone dates. In that regard, it relies on the decision of the Supreme Court of Canada in *Clarke Ltd. v. Thermidare Corp.*, [1974] 1 SCR 31 at para. 28 where the court

applied equitable jurisdiction and refused to apply liquidated damages where they were clearly disproportionate and unreasonable compared to the damages sustained. Similarly, in *Alden Contracting Limited. v. Newman Brothers Limited et al.*, [1997] O.J. 6542 the Court declined to award liquidated damages noting that "without a loss how can one say that the sum stipulated is compensation for damages rather than a penalty."

109. In this regard, Alstom proposes a completely different interpretation of section 8.6 of the Subcontract. Alstom reads the underlined portion of the provision to say that Delay LDs in respect of any of the intermediate Milestones, prior to Milestone 10, are only payable, if Milestone 10 is not achieved due to the acts or omissions of Alstom. Alstom argues that this interpretation is consistent with its position that, if its failure to achieve any of the intermediate Milestones did not cause a delay to Revenue Service Commencement, it could not be said that Alstom's late achievement of any of the earlier Milestones actually caused damages to OLRTC. It argues that this provision illustrates the intention of the parties that Alstom would only be liable for Delay LDs in respect of interim Milestones, if there was a commensurate delay to Revenue Service Commencement, thereby ensuring that Alstom only paid liquidated damages if actual damage was caused to OLRTC.

110. In this regard, Alstom says that the provisions of Schedule K2, which deem Milestone 10 to have been achieved if the Confederation track has not been completed by the RSA Date, are automatic and unconditional. Since it is uncontested that the Confederation track was not ready by May 24, 2018 and that failure had nothing to do with Alstom's work, Alstom says that it is deemed to have achieved Milestone 10 and is is relieved of any liability for its failure to achieve the earlier Milestones. As noted above, OLRTC interprets this differently.

111. Finally, the total amount due for Delay LDs was limited to 10% of the Subcontract Price. They are also the only damages to which Alstom would be exposed for delay to its work unless the Subcontract was terminated (which did not occur) or any liability of Alstom under the indemnity it gave under section 17.1(g) for liquidated damages ultimately payable under section 26.7 of the Prime Contract between OLRTC and RTG.

Subcontractor's Compensation and Relief Claims

112. Consideration of Alstom's claims, aside from its claim for the unpaid invoices, requires consideration of Article 9 of the Subcontract - Subcontractor's Compensation and Relief Claims. This portion of the Subcontract is very detailed, highly prescriptive, and occupies approximately 13 pages of the agreement. It begins with the following:

> 9.1 Basis of Claim
>
> Where the Subcontractor intends to claim any payment in addition to the Subcontract Price or other amounts payable, any reduction in any financial or other obligation hereunder or any extension of time (whether, in each case, pursuant to any term of this Subcontract, on the basis of breach of contract or any other ground related in any way to the Subcontracted Works) then this Clause 9 shall apply.
>
> 9.2 Scope of Claim
>
> The Subcontractor shall not have, and hereby waives, any right to seek, an increase in, or any payment in addition to, the Subcontract Price, any reduction in or relief from any financial or other obligation or any extension of time in connection with the Subcontracted Works, unless the Subcontractor has suffered a delay or an increase in the cost of performing the Subcontracted Works or Direct Losses or is prevented from performing any of its obligations, as a result of:
>
> (a) City Event;
> (b) Maintenance Contractor;
> (c) a Project Co Event;
> (d) a Construction Contractor Event of Default (as set forth in Sub-Clauses 9.6 and 16.5.2);
> (e) any circumstance giving rise to an indemnity in favour of the Subcontractor under Sub-Clause 17.2;
> (f) a Construction Contractor Variation or a Subcontractor's Variation (as set forth in a Variation Certificate); or
> (g) any other remedy expressly available to the Subcontractor under this Subcontract.
>
> Furthermore, in respect of any City Event, Project Co Event or claim arising due to the acts or omissions of the Maintenance Contractor or an MC Party, the Subcontractor's rights against the Construction Contractor will be limited to the Subcontractor's rights under Sub-Clause 9.3, 9.4 or 9.5, as applicable, or Sub-Clause 14.1, in the case of a City Variation or a Project Co Variation.

113. In order to seek an increase in, or any payment in addition to, the Subcontract Price against OLRTC in respect of any of the enumerated events, Alstom was required to give formal notice summarizing, to the extent that it had knowledge, the circumstances giving rise to the claim, together with the consequences and the amount or extension requested, as soon as practicable but, in any event, within two Business Days of becoming aware of the event. Within a further 10 days, Alstom was required to provide additional details, including available supporting documentation, and a detailed breakdown of all Direct Losses or delay incurred as a result of the event. The obligation to update the information provided was ongoing.

114. While the definition of a City Event is lengthy, for the purposes of these reasons, it refers to any act or omission of the City… an instruction issued by the City… any circumstance which is the responsibility of the City under the Project Agreement…, or any other event or circumstance which may entitle Project Co to any extension of time, financial compensation, or relief from obligations in accordance with the Project Agreement.

115. The only provisions that warrant specific mention at this point pertain to what the Subcontract defines as Equivalent Claims, being those claims advanced on behalf of Alstom by OLRTC against either RTG or the City in respect of Project Co Events or City Events. In such instances, in addition to requiring OLRTC to use its reasonable commercial efforts to pursue the claim, by virtue of section 9.9.1(d), Alstom is entitled to attend any meetings between OLRTC and RTG, and, at its sole cost and expense, appoint counsel to represent its interests, as well as being consulted concerning the appointment of OLRTC's own counsel and third-party advisors.

116. Moreover, OLRTC is not entitled to settle or compromise any Equivalent Claim, if such settlement or waiver would adversely affect any right of Alstom, without its consent, subject to Alstom's obligation to indemnify OLRTC in respect of any loss resulting from its refusal of consent. Finally, Alstom is entitled to require OLRTC to invoke the Dispute Resolution Procedures under its Construction Contract with RTG, in respect of matters related to the Subcontract.

117. Offsetting those entitlements, pursuant to section 9.9.2, Alstom's recovery is limited to OLRTC's entitlement under the Construction Contract, as determined through agreement or a determination made under the Construction Contract's or the Project Agreement's Dispute Resolution Procedures. Where the relief sought in an Equivalent Claim includes entitlement to an extension of time, Alstom is also entitled to a corresponding extension of time under the Subcontract.

Variations and Adjustments

118. Article 14 occupies a further roughly eight pages of the Subcontract and deals with what are referred to as Variations and Adjustments. Variations under the Subcontract appear to be similar to change orders under typical construction contracts. The highly prescriptive provisions for the request, evaluation, and granting of Variations provide for Variations at the instance of both the contractor and the subcontractor, pertaining to any "variation, addition, reduction, substitution, omission, modification, deletion, removal or other change to the whole or any part of the Project Scope … , as well as any change under the Construction Contract or the Subcontract.

119. The first 12 subsections of Article 14 deal with variations required by OLRTC whereas the last three subsections deal with requests for Variations by Alstom. A Variation must be initiated by either party by following the provisions of that section of the Subcontract.

Appendices

120. Certain provisions in the Appendices to the Subcontract have the effect of deeming things to have occurred. One such portion in contention between the parties is Schedule K-1 of the Subcontract dealing with what are referred to as Interfaces, more specifically the interaction between the work of Alstom, OLRTC, the City, and others, including Thales. This schedule recognizes the interrelationship between the work of various entities and the impact that any delay or failure on the part of any other entity will have on the work of Alstom.

121. For example, section 2 deals with the interface between the work of Alstom and Thales. In particular, it provided that, by April 26, 2013, OLRTC and Thales were required to provide a "finalized" Communications Based Train Control ("CBTC") Specification that complied with certain requirements. Failure to do so required Alstom to propose its own specification based on industry standards. It further provided that this specification would be deemed "frozen" and serve as the basis for all time to develop the corresponding interface for the vehicles. Any subsequent change after that date constituted a Variation under Section 14. Section 6 of Appendix K1 set out a virtually identical provision requiring the Telecom Specification to be provided to Alstom by the same date.

122. Section 7 of the same Appendix included detailed provisions with respect to the availability of the Maintenance and Storage Facility ("MSF") between June 2016 and May 2018 to allow Alstom to assemble and serial test 32 vehicles. The section provided certain milestone dates by which OLRTC was required to provide written confirmation that the MSF would be available on the specified date (January 31, 2014) and by which OLRTC was to confirm the date on which the facility would be fully and entirely open (January 31, 2015), in both cases to facilitate Alstom's project planning and prepare for the installation of the production lines. Section 7.2 included recognition that, "The level of risk of delay on the schedule is directly related to the accuracy of the forecast of the said date." Finally, by June 30, 2016, OLRTC was obliged to provide written confirmation to Alstom of MSF availability to allow it to prepare for the delivery and installation of tooling.

123. The first two notices required under section 7 of Appendix K1 set out alternative mitigating solutions, if the required notices were not provided on time. In the case of the second notice, it was further provided that the failure of OLRTC to confirm the full opening date of the MSF by January 31, 2015 "might" constitute a Variation; default under the third deadline requiring readiness by June 30, 2016 provided that this "will" constitute a Variation.

124. Section 8 of Appendix K1 is also of particular importance. This section begins by confirming that Alstom's "price and schedule are based on the condition that at least 4

km of the Confederation Energized Line track will be available for the Acceptance Test of the Vehicles"" by August 31, 2016 and "that the entire track would be available for Integration Tests of the Vehicles" no later than the start of the Revenue Service Availability ("RSA") Date, being May 24, 2018. Section 8.1 went on to provide that the failure to provide the test track by the required date would constitute a Variation and that Payment Milestone M10 would be deemed to be automatically achieved two weeks after the date of Payment Milestone M9 for those vehicles ready for Acceptance Testing but which could not be tested due to the lack of availability or congestion of the track.

125. Section 8.2 further provided that the failure of OLRTC to provide the complete track by the RSA Date would not only constitute a Variation, but that Payment Milestone M10 would be deemed to be automatically achieved on the RSA Date, and the General Warranty period would commence on the same date. Alstom says that, since the Confederation Line clearly was not provided for many months after the RSA Date, through no fault of Alstom, Milestone M10 was automatically deemed to have been achieved by it on the RSA Date.

126. Alstom says that, in this circumstance, while it was entitled to a Variation, the deemed achievement of Payment Milestone M10 was automatic and did not require any action on its part. OLRTC says, however, that section 8.2 has no application, because it is concerned with the availability of the complete track for Integration Tests and Trial Running, which activities are not performed by Alstom, but by others.

127. OLRTC says that Alstom is only entitled to the relief set out in section 8.2, if it has delivered 34 accepted vehicles by the RSA Date. It argues that the provision would then permit Alstom to receive its final Milestone payment two weeks after the specified RSA Date, without being held up by virtue of the delayed readiness of the track for Integration Testing and Trial Running purposes. Since it is undisputed that, by the RSA Date, Alstom had not achieved acceptance of 34 vehicles, OLRTC argues that section 8.2 should have no application.

128. While OLRTC's position has some logical cogency to it, that interpretation would require me to read in a number of conditions that are not set out in the provision. The relevant words of the section simply say:

> It is understood that the failure of the Construction Contractor to provide the Confederation track by the Start if [*sic*] Revenue Service Availability Date will constitute a Variation per Article 14 of the Subcontract, Payment Milestone M10 will be deemed automatically achieved at Revenue Service Availability Date and the General Warranty Period will start at the targeted Start of Revenue Service Availability. [Emphasis added]

129. The wording of section 8.2 must be contrasted with the similar but distinctly different wording of section 8.1, which deemed the automatic achievement of Payment Milestone M10 two weeks after August 31, 2016, but only "for those Vehicle [*sic*] ready for the Acceptance Test" which could not be tested due to the lack of availability or congestion on the track. OLRTC, in effect, is asking me to read in similar words to section 8.2, thereby restricting the application of the second deeming provision, only in respect of those vehicles that had achieved Payment Milestone M9.

130. In light of the parties' express agreement that the Alstom's price and schedule were based on track availability on certain dates, OLRTC's suggested interpretation would deprive Alstom of the benefit of a provision that, in the words of section 8, created agreed-upon milestones "to mitigate the consequence of any possible delay of the availability of the Confederation Energized Line track". In my view, OLRTC's proposed reading of the provision could result in significant penal consequences to Alstom, particularly in circumstances where OLRTC has failed to demonstrate that it suffered any damages as a consequence of the operation of this provision.

131. In comparison with its position that the liquidated damages provisions must be strictly enforced, OLRTC takes a contrary view with respect to its own obligations under the contract to meet certain deadlines and provide certain inputs. For example, it is dismissive of Alstom's claimed delay events, such as the late handover of the LMB, wash bay, and sand bay, the incontrovertible failure of OLRTC to deliver the test track in accordance with the Subcontract's terms, the failure of Thales to freeze its design by the specified date, together with the numerous amendments to that design causing the need

for multiple retrofits, the failure of Thales to deliver a "plug-and-play" VOBC rack, the late design and styling package from the City, as well as delayed delivery the P25 radio specifications, to name a few.

Analysis

The Evidence

132. While I have provided an overview of the project, the positions and claims of each party, and highlighted what I believe to be key provisions in the Subcontract, including the parties conflicting interpretations of certain provisions, it will be apparent that I have not engaged in a detailed synopsis of the fact and expert evidence submitted in writing and presented over the course of 12 hearing days. To describe the totality of that evidence as voluminous would be an gross understatement.

133. As already noted, evidence-in-chief was presented by way of written witness statements and expert reports filed well in advance of the evidentiary hearing. Each party tendered evidence from eight fact witnesses, in most cases tendering both affirmative statements and reply statements responding to the other party's claims. The statements included hyperlinked exhibits to hundreds of reference documents. Each party also filed lengthy original and rebuttal expert reports from witnesses dealing with schedule analysis, standard of care, and damages assessment.

134. Although I will deal with the evidence, as required, in my analysis of each issue, I am mindful of the recent admonition delivered by the Ontario Court of Appeal in the case of *Welton v. United Lands Corporation Limited*, 2020 ONCA 322 to the effect that judges should avoid the unfortunate "growing trend" of using a "blizzard of words" or a "factual data dump" in their rulings. Rather, I will restrict my fact-finding to the extent necessary to elucidate my conclusions.

135. As already mentioned, there was no quantitative deficit in the material presented in support of each party's claims. But this is an appropriate juncture to say a few words about the quality of the evidence presented in this case. At the conclusion of the evidentiary hearing and to provide some guidance in the preparation of their closing

written submissions, I provided counsel with a memorandum setting out issues that I hoped they would each address in their final arguments. I reproduce two portions of that memorandum here:

> **The Fact Witnesses**
>
> As was apparent, the witness statements of both parties are replete with hearsay, often on contentious issues. In many instances, in the opening paragraphs of their statements, despite indicating that they would identify the sources outside of their personal knowledge, the witnesses failed to do so. Sometimes, despite a lack of explicit references, the witness statements attached, as hyperlinks, letters, emails, or other documents as the source of information relied upon. In many cases, the source documents themselves contained substantial hearsay. In some instances, the correspondence was not written by, signed by, or even reviewed by the purported writer. Bearing in mind each party's burden of proof, how do you propose that I deal with the fact that I have very little direct first-hand evidence regarding the key delay events or alleged causation events leading to the parties' respective damages claims.
>
> I also note that each opposing counsel, after demonstrating [through cross-examination] the extent of the hearsay in the opposing witness statements, often then went on to lead further hearsay from those witnesses by referring to dozens of emails and letters written by others which, themselves were full of hearsay.
>
> It is acknowledged that the traditional rules of evidence may be relaxed in arbitrations, and no formal objections to the admissibility of any witness statements or answers to questions were made in respect of hearsay. Is it the position of each party that this deficiency in the quality of the evidence should go solely to weight rather than admissibility?
>
> ...
>
> **The Expert Reports**
>
> As noted above, a great deal of the evidence contained in the witness statements is blatant hearsay. It is also apparent that both experts, in performing their assessments, relied heavily on the contents of those witness statements and the attached documents, which in themselves often contain hearsay. Insofar as an independent expert witness's opinions are supposed to be based on a sound factual basis, how much reliance can be placed on the resulting opinions?

136. Before reviewing each party's response to this inquiry in their closing submissions, I hasten to add that my comments were not intended as a critique of counsel or their preparation of the case. Rather, I recognize that, in multi-year infrastructure projects, the focus is most often on completing the project rather than collecting and preserving evidence for possible future dispute resolution proceedings. Moreover, as was the situation here, over the course of the 5 to 6 years in question, both sides experienced significant personnel turnover that may have made it difficult, if not impossible, to submit first-hand evidence in many cases.

137. Each party responded to these questions in their closing written submissions. For its part, OLRTC acknowledged that much of the evidence advanced in the proceeding was hearsay and, relying on the Supreme Court of Canada decision in *R. v. Khelawon*, 2006 SCC 5, maintained that it was presumptively inadmissible, pointing to the inherent frailties of such evidence, including the impossibility of inquiring into the perception, memory, narration, or sincerity of the original source of the information, or whether it was accurately recorded, subject to mistakes, exaggerations, or deliberate falsehoods.

138. Focusing on examples of hearsay in the various Alstom witness statements, OLRTC noted the impossibility of cross-examining and testing the veracity of those statements where the maker did not have personal knowledge of the events. With reference to certain communications attached as exhibits to individual witness statements, OLRTC noted that the witnesses, in many cases, neither observed the events that form the contents of those communications, prepared the communications, or even signed them.

139. OLRTC conceded that some of its witness statements also advanced hearsay evidence and went on to assert:

> The fact that both parties were guilty of relying on hearsay obviously does nothing to make such evidence more reliable. OLRTC does not consent to the admission of hearsay evidence and submits that the normal rules of evidence in this regard ought to apply.

140. Having said that, OLRTC went on to argue that, if hearsay statements are admissible, its own hearsay evidence ought to be given more weight because its witnesses statements and testimony was supported by contemporaneous documents, including documents created by Alstom.

141. In its response, Alstom acknowledged that both parties rely on hearsay evidence in support of their respective cases but went on to argue that it was a matter to be evaluated with respect to the weight to be attributed to any particular piece of evidence. Devoting over 10 pages of its closing submissions to this issue, Alstom engaged in a detailed review of the admissibility of hearsay in arbitration proceedings in Ontario by virtue of section 15 of the *Statutory Powers Procedure Act,* coupled with the caution that such evidence must be weighed very carefully, including the obligation of an arbitrator to rely only on evidence that has cogency at law.

142. After pointing out that witness testimony supported by contemporaneous documents is generally more reliable, Alstom notes that not all contemporaneous documents should be afforded the same weight and that certain business records are inherently more reliable than others, such as those created in the normal course of business and contemporaneously with the issues in question.

143. For example, a typical project document, such as a monthly progress report, routinely circulated to OLRTC and subject to a "check and balance" should be afforded greater weight than a document advanced by either party to support or rebut a claim. Alstom sites, for example, an exchange in the cross-examination of OLRTC's Dr. Oakley, in which she confirmed that, when she discerned inaccuracies in such monthly reports, she wrote to Alstom requiring explanations or amendments. According to Alstom, even formal correspondence issued by either party should be accepted where statements contained in it are not the subject of contemporaneous controversy.

144. Acknowledging that many of its witnesses were obliged to rely on documents prepared by others before their tenure on the project, the weight to be attached to that evidence should be a function of the purpose for which it was tendered and the extent to which it is non-controversial or verifiable by other evidence. Alstom contrasts this with

evidence provided by OLRTC's Mr. Slade who admitted that he did not review any of the documents appended to the witness statement that he signed and adopted under affirmation.

145. In summary, Alstom says that, to the extent that hearsay is admissible in arbitration proceedings, the weight to be given to that evidence must be grounded in reason and that there must be some basis to disbelieve a document or a witness's testimony in order to justify attributing no weight to it. Where testimony is supported by documentary evidence, it generally should not be discounted, until it is impeached or disproven by contrary evidence.

146. With respect to the expert evidence, consistent with its response to the fact evidence, OLRTC says that, to the extent that the experts rely upon hearsay evidence, their opinions are not to be accepted. I do not believe that Alstom addressed this specific point in its closing submissions.

147. While I readily accept that hearsay evidence is admissible in arbitration proceedings more broadly than is the case in the civil courts, nonetheless, I have some hesitancy in relying on what is in some cases double and triple hearsay as a basis for allowing what are, in some instances, multi-million-dollar claims. And, while I agree that some of the frailties of hearsay evidence can be overcome by reference to reliable contemporaneous documents, this alone does not address the inability of the opposing party to cross-examine the maker of the indirectly tendered statements. In any event, I will return to this, as necessary, with respect to my analysis of each of the issues that I must now address.

Is OLRTC entitled to apply Delay LDs in the amount claimed or in any amount against the amounts otherwise due to Alstom?

148. Alstom argues that OLRTC is precluded from applying Delay LDs in any amount in respect of any Milestone. Alstom devotes more than one-half of its 119-page written closing submissions in support of this contention with detailed reference to the fact and expert evidence.

149. Alstom begins by asserting that a party in the position of OLRTC has an obligation to facilitate, not impair contract completion by its subcontractor. Referencing a 2011 article by Christopher J. O'Connor, QC and Dirk Laudan entitled *Time at Large in Canada*, 2011 J. Can. C. Construction Law 71, Alstom argues that various actions by OLRTC have had the effect of putting "time at large" which, in the words of the above-noted authors means that "there is no specific time for completion of a contract."

150. Acknowledging that the principles around this concept have not been commented upon much in Canada but have been considered in various forms by Canadian courts, the authors posit that the obligation to complete a contract by a fixed date is placed "at large" when the fixed completion date is lost by an intervening event not of the contractor's making and therefore replaced with an obligation on the part of the contractor to complete its work within a reasonable time. When this occurs, liquidated damages terms are necessarily rendered inoperative, not as a punishment of the owner for its interference of the contractor's work, but as a logical result of there being no fixed completion date.

151. The authors cite a significant number of cases where the concept has been applied in the common-law provinces of Canada and conclude that "time at large" is part of the Canadian common law of contract. They highlight four typical scenarios where this concept may be applicable as follows:

> a) interference by the owner or the consultant preventing the contractor from completing its work;
>
> b) a failure by the owner to stipulate a revised date in response to a request for a time extension; or the contract machinery for extensions has broken down;
>
> c) waiver by the owner of the completion date or where there is agreement that the completion date is not applicable;
>
> d) no completion date is identified in the contract. [Emphasis added]

Since liquidated damages must run from a specific date, where time has been put at large, there is no longer a fixed date and liquidated damages cannot be calculated or claimed.

152. According to the authors, the concept of time being put at large is an application of the "prevention principle" in contract law. Essentially, this principle holds that "a person to whom an obligation is owed cannot insist upon the performance of that obligation if he or she has prevented the other party from performing it." Sometimes referred to as the "duty of contractual cooperation", the acts of prevention need not relate to a breach of the terms of the construction contract. An owner may prevent timely completion simply by taking an action that is permitted under the contract, such as ordering extra work, failing to provide timely access to the site, failing to provide a complete or proper design, imposing significant design changes, or the late provision of materials.

153. Of particular importance to this case, the authors cite the decision of the British Columbia Court of Appeal in *Perini Pacific Ltd. v. Greater Vancouver Sewerage & Drainage District*, (1966), 57 D.L.R. (2d) 307; affirmed [1967] S.C.R. 189 (SCC) where the Court held that, even though the contractor would not have completed the work on schedule as a result of the its own unrelated difficulties, the owner could not claim liquidated damages, because it had failed to extend the contract time to take into account its own delay causing event. In other words, concurrent delay on the part of the contractor does not necessarily relieve the owner of its obligation to properly assess the impact of its own interference with the contractor's ability to complete the work on time.

154. The authors hasten to add that it would not be every insignificant interference on the part of the owner that would put time at large. Rather "the prevention principle requires that the delay must prevent the contractor from finishing the work on time" independent of any other contractor-related causes of delay. The act of prevention need not make it impossible for the work to be completed on time; a hindrance of the contractor's work in some cases may be sufficient.

155. I turn next to the second noted scenario where time may be put at large, being the failure by the owner to stipulate a revised date in response to a request for a time extension, or where the contract machinery for extensions has broken down. The authors note that, since most modern construction contracts include mechanisms for calculating extensions of time and adjusting schedules, when those mechanisms are properly

employed, they would extend the time to complete by a fixed period and thereby set a new completion date, with the other contractual rights and obligations of the parties otherwise unaffected.

156. In such cases, any liquidated damages would be calculated from the new fixed date or dates, as the case may be. Where, however, no such provisions exist or where they are not properly applied, in appropriate circumstances, "the contractor remains entitled to additional time to complete, but that time period is not defined and therefore time is put at large, with the result, among others, that the owner is not entitled to liquidated or delay damages at all."

157. A key quotation from the article, for my purposes, highlights the importance of considering the need for schedule adjustments as they arise, rather than after the fact. The authors note:

> We believe that the guiding principle is that the contractor should be permitted a proper extension of time so that it can effectively plan its work. It is artificial to analyse delays after the fact to determine if the event complained of caused the delay. The time to address the question of whether an act of prevention by the owner or the consultant will cause a delay is at the time it occurs rather than by the reconstruction of subsequent events with the benefit of hindsight.

158. This is consistent with the position put forward by OLRTC that, had Alstom applied for an extension of time, we would not be in the position of now attempting to conduct "an autopsy of the project after its completion, with faded memories and departed employees."

159. While the "prevention principle" is well-established in Canadian law, at this point in its development, I see the concept of "time at large" less as a rule of law or of contract interpretation, than as a useful lens through which to view the often complex scenarios surrounding construction schedule delay and the application of liquidated damages.

160. In its closing submissions, Alstom argues that the introduction of Provisional Acceptance under Change Order #7, effectively splitting Milestone 9 into two segments, had a profound impact on its execution strategy and ability to bring vehicles to Final

Acceptance in an orderly and timely manner. Since, following Provisional Acceptance, those vehicles were removed from Alstom's control for an indeterminate period of time and placed under the exclusive control of OLRTC for its own use, the use of Thales for testing, and the use by OC Transpo for driver training, Alstom lost control over the LRVs.

161. Although there were benefits for both parties arising from this change, including Alstom's ability to receive 80% of that Milestone payment before achieving Final Acceptance, the evidence is clear that the principal purpose for introducing this process modification was primarily to allow OLRTC to begin Integration Testing of vehicles that had passed Acceptance Tests and were, therefore, in an acceptable condition for that purpose. It would also allow Thales to perform its DPICO and ATC testing and make vehicles available for driver training at a point when the vehicles were sufficiently ready for those purposes, but still required additional retrofits and other work to be performed by Alstom.

162. In addition to removing those vehicles from Alstom's possession and control, the use by third parties resulted in additional maintenance and service, as well as some repair of damage caused during third-party testing and training operations which, according to the uncontested evidence of Mr. Lacaze, impacted Alstom's progress on vehicle production and testing by about 25%.

163. With a view to mitigating the impact on its own progress, Alstom requested the return of vehicles under OLRTC's control that were sitting idle while Thales was clearing its own backlog of LRVs to be DPICO tested, so that it could proceed with certain necessary retrofits to those trains. The fact that these requests were denied was confirmed by OLRTC's Mr. Marconi, but he was unable to explain why this occurred. Nonetheless, he acknowledged that at least part of the reason that the Configuration 2 retrofits fell behind was based on OLRTC's direction to Alstom to prioritize the Configuration 1 retrofits and the denial of access to trains that were waiting to be DPICO tested by Thales.

164. While it was entitled to do so, Alstom says that by OLRTC putting the needs of the overall Project schedule ahead of Alstom's ability to bring the LRVs to Final Acceptance

as soon as possible, OLRTC introduced a fundamental change that interfered with and hindered Alstom's progress and was deserving of a schedule adjustment.

165. OLRTC says that, with respect to this or any other alleged cause of delay, Alstom needed only to apply for an extension of time to obtain schedule relief if the circumstances warranted. Therefore, it says, having not made such an application, it is estopped from complaining. As a matter of basic contract interpretation, and, in particular, the obligation to read the words of the contract "in a manner that gives meaning to all of its terms and avoids an interpretation that would render one or more of its terms ineffective" as I have already discussed, above, section 8.3.8 and section 8.4 are distinctly different provisions in the contract intended to deal with different situations.

166. As already noted, section 8.4 deals with extensions of time to the Time for Completion, as that term is defined in the Subcontract. If Alstom was seeking such an extension, then it would have been obliged to do so in accordance with that provision of the Subcontract. That section, however, has no pertinence whatsoever to the adjustment of any of the Milestone dates, which is a subject expressly dealt with in section 8.3.8. While it is common ground that Alstom never formally applied for an extension of time, this fact is irrelevant to the issue of whether it was entitled to schedule relief in respect of the Milestone dates and the Delay LDs.

167. Pursuant to section 8.3.8, Alstom was required to update the Approved Subcontract Schedule monthly and to seek approval from OLRTC, acting reasonably, when those updates involved changes to the Milestone dates or to the critical path. The evidence is clear that Alstom did keep OLRTC well informed of its progress through the submission of Monthly Progress Reports and schedule updates. What is equally clear is that, after approving schedule Version 5 ("V5"), OLRTC became uninterested, in fact hostile, to the notion of considering any adjustment to the internal Milestone dates, or to engaging in an effort to understand the multiple factors affecting progress, including, but not limited to, significant delays to Thales's interfacing work.

168. Dr. Sharon Oakley was OLRTC's Rolling Stock Contract Manager from March 2017. According to her testimony, she attended weekly meetings with Alstom, circulated

minutes, and engaged in regular communications with Alstom. She reported to OLRTC's Integration Manager, Jacques Bergeron. The evidence discloses that between May 2017 and February 2018, in advance of the Milestone dates in contention here, Alstom submitted three further schedule updates that affected the Milestone dates, being V7, V8, and V9, as further defined and discussed below.

169. Curiously, in seeming contrast to OLRTC's current position regarding whether Alstom did seek Variations or extensions of time, paragraph 44 of Dr. Oakley's witness statement, adopted by her under affirmation, reads as follows:

> As part of its monthly report, Alstom listed all Variations and Claims, including the status of each and the relief requested. Alstom's list includes all requests for extension of time. The statuses of each Variation and Claim listed by Alstom in the monthly report often do not reflect the correct status. Any extensions of time referred to in the variation notification were never quantified by Alstom.

170. In 76 of her witness statement, Dr. Oakley says:

> Alstom was required to provide OLRT-C with schedule updates as a minimum on a monthly basis, which recorded the activities that Alstom completed and forecasted the completion dates of the remaining activities. The schedule updates were required to be detailed enough that OLRT-C could track the progress of individual LRVs in the assembly and testing process.

171. In subsequent paragraphs of her affidavit, the witness, while continuing to complain about inaccuracies in Alstom's monthly updates and what she refers to as the "rhetoric" about the delays, confirms that those updates did regularly disclose slippage in the schedule and resulted, in April 20, 2017, in OLRTC demanding a mitigation or recovery plan. Following discussions between the parties in late May 2017, Alstom submitted a proposed revised schedule Version 7 ("V7"). This proposed schedule was rejected, on June 22, 2017, solely because it did not meet the planned date for RSA. According to the witness, Alstom advised that it was not feasible to complete the LRVs for the then established RSA Date of May 24, 2018.

172. In early July 2017, Alstom submitted what was referred to as an optimized version of the V7 schedule, which contemplated Acceptance of the vehicles on May 31, 2018, being seven days after the RSA Date. On August 2, 2017, despite Dr. Oakley's concession that this was a more realistic schedule, OLRTC rejected it because it "did not meet the contractual dates for Substantial Completion (of the Project)" or the RSA Date and, therefore, "it could not be accepted." As an aside, it is worth noting and undisputed that meeting the date for Substantial Completion of the Project was not a requirement of the Subcontract.

173. In the correspondence surrounding these schedule discussions, Alstom attributed delay, in part, to the lack of readiness of portions of the MSF, the availability of the Overhead Catenary System ("OCS") power in the facility, and availability of the test track by the promised date. OLRTC summarily dismissed all of these concerns. Subsequently, Alstom presented two versions of another schedule referenced as Version 8 ("V8"), and a single version of what has been referred to as V9.

174. One of those schedules, V8, contemplated acceptance of all the LRVs by May 5, 2018, but contemplated certain retrofits to occur later in 2018. This too was rejected because OLRTC "could not accept an LRV for it to be taken back to replace parts and components." Ironically, this is precisely what the parties agreed to when they implemented the split of Milestone 9, which incorporated the concept of Provisional Acceptance and Final Acceptance. Even when, by letter dated October 26, 2017, Alstom proposed to adopt this schedule version without any adjustment of delay responsibility, but solely to comply with the overall schedule, it was rejected without any meaningful assessment.

175. Dr. Oakley records the fact that the parties met every other week between August 31, 2017 and March 28, 2018 to discuss progress and the retrofit schedule. Minutes were circulated with respect to all these meetings. It is clear from the witness's evidence that the relationship between the parties continued to deteriorate after this date. No revised schedule impacting Milestone dates was ever accepted by OLRTC after V5.

176. It is noteworthy, and unfortunate, that nowhere in her witness statement does Dr. Oakley allude to the fact that, in December 2017, OLRTC granted an extension of the RSA Date to Thales to November 2018, nor did it even inform Alstom of that fact, but rejected a similar request by Alstom two months later in mid-February 2018. Given the interrelationship of these two interfacing subcontractors, it is difficult to see how OLRTC can claim to have exercised its obligation to act reasonably and in good faith with respect to its obligations pursuant to section 8.3.8 of the Subcontract.

177. Leaving aside the witness's concerns with respect to the accuracy of the Alstom's progress reports, it seems that, in her initial witness statement, Dr. Oakley's view of the purpose of the monthly updates was consistent with my reading of section 8.3.8, even if her references to "extensions of time" and Variations, are not features of that section. As the witness testified, when she received a monthly progress report, she reviewed it as a priority and commented on it, challenging inaccuracies and errors "for the record".

178. Some further light was thrown onto this issue in Dr. Oakley's responding witness statement where, in the opening paragraphs, she disputes Alstom's claims that OLRTC unreasonably rejected new schedules proposed after V5. I think it best to quote the witness's own words, beginning at paragraph 3 of that statement:

> Alstom appears to misunderstand the purpose of the schedule and the impact of adopting a new schedule. The schedule is supposed to demonstrate how Alstom will comply with the required milestone dates in the subcontract. It is not meant to simply track actual progress. When OLRTC-C rejected Alstom's schedules, it was because they envisioned Alstom completing the LRVs later than the contractual revenue service availability date.

179. Later, in paragraph 5 of the same responding witness statement, after explaining that an adjustment to Milestone dates would provide relief to Alstom against the imposition of Delay LDs, the witness goes on to state:

> The fact that Alstom failed to meet several of the milestone dates in Schedule v5 and failed to complete the LRVs in time for revenue service in May 2018 is not a reason to grant it a new schedule. If Alstom's approach to the issue was correct, the milestone dates would be meaningless.

180. Finally, in paragraph 6, the witness says:

> If, during the Project, Alstom believed that it had been delayed by OLRT-C, it had the ability under the subcontract to seek an extension of time for completing its works. It never did so. Asking OLRT-C to approve a schedule that is non-compliant with the required completion dates is not appropriate.

181. Despite OLRTC's insistence that Alstom was required to seek and "extension of time" to obtain schedule relief in respect of Milestones, pursuant to section 8.3.8, I note that no such formal application for an extension of time was made when OLRTC agreed to Schedule V5. Under cross-examination, Dr. Oakley agreed that Alstom's V7, V8, and V9 schedules were rejected, in part, because they reflected later than planned achievement of critical milestones. Again, she reiterated the substance of the above-noted quote from her statement when she said, "This was not a working schedule that we were producing." In fact, acknowledging that the revised schedules reflected something closer to the reality of the status of the work, the witness confirmed, "if this was submitted as a working schedule, the outcome would be different than it being a proposed revision to the baseline."

182. This evidence discloses what I find to be a fundamental misunderstanding by Dr. Oakley of the mechanics of the Subcontract, as noted above. Providing monthly schedules to OLRTC that accurately reflected the status of the work, rather than how it could meet Milestone dates that had become impossible to meet, is exactly what section 8.3.8 required. Although I have replicated it above, it bears repeating here:

> The Approved Subcontract Schedule will at all times be an accurate, reasonable and realistic representation of the Subcontractor's plans for the completion of the Design and Construction of the Subcontracted Works in accordance with the requirements of this Subcontract. Any permitted or agreed to adjustment to the Milestone Dates or Payment Milestone Dates will be included in the updated Approved Subcontract Schedule.

183. There is no reference in the contract to what Dr. Oakley refers to as a "working schedule" or a "baseline schedule". There is only an Approved Subcontract Schedule that is to be updated and submitted monthly and which is to accurately, reasonably, and realistically representing the Subcontractors plans for the completion of the work.

Although OLRTC was not obliged to approve any changes to the Milestone dates if they were not warranted, pursuant to section 8.3.8, it was obliged to act reasonably and in good faith in evaluating schedule updates that involved adjustment to Milestone dates and the critical path, after considering all of the relevant circumstances.

184. I find it very disturbing that OLRTC, in reviewing these schedule revision submissions, unabashedly held Alstom to an RSA Date that it knew at the time was completely unrealistic given its own difficulties with the Project infrastructure and its awareness of Thales's failure to meet the schedule requirements for the project, as well as the granting of a significant and undisclosed extension of that date to that interfacing subcontractor. The extension granted to Thales made it impossible for Alstom to meet the Milestone dates set out in the Schedule V5, yet OLRTC sought to hold Alstom to dates that, on this basis alone, it had rendered impossible.

185. In light of this evidence, I find it difficult to understand OLRTC's complaint that Alstom's failure to formally request an extension of time or a Variation deprived it of the ability to engage in an analysis of the causes of delay at the relevant time, "rather than trying to conduct an autopsy of the project after its completion, with faded memories and departed employees." Given my conclusion that no application for an extension of time or Variation was required for Alstom to invoke the provisions of section 8.3.8, it appears that OLRTC had all the information it required contemporaneously and on a monthly basis to work cooperatively with Alstom to understand and deal with the various causes of delay when a schedule revision that required adjustment to the Milestone dates was requested.

186. During the course of Dr. Oakley's testimony, I observed her demeanour. More than any other witness called by either side, I had the distinct impression that she was uncomfortable in giving evidence in this hearing. In fairness to Dr. Oakley, early in her cross-examination, she revealed that she neither drafted her witness statements, nor did she meet with counsel in connection with their preparation, but only reviewed them and provided comments. Nor did she review the witness statements of other witnesses, despite referring to the evidence in those statements in her own written testimony.

Moreover, she acknowledged that she had no personal knowledge of many of the things to which she testified and was heavily reliant on input from other OLRTC personnel.

187. Under cross-examination, on a number of occasions when asked direct questions about decisions made on various relevant dates, for example in May 2018, the witness responded with the statement, "This is getting to be a long time ago and I am forgetting exactly what we were thinking at that time." Dr. Oakley also disclaimed any knowledge about the status of the Thales subcontract or of being aware that, by July 2017, that company had repeatedly communicated to OLRTC that a May 2018 RSA Date was not possible. She had no knowledge that, in March 2017, Thales had indicated that its forecast for RSA was November 2018, even as she was rejecting schedule V7, because it did not achieve RSA by May 2018.

188. In OLRTC's letter of July 6, 2017 rejecting the V7 schedule submission, it advised that the vehicles were required for trial running on April 24, 2018 and "*to successfully meet revenue service, 34 LRVs must be fully tested and integrated with the CBTC system before that date.*" Yet, four months earlier, in March 2017, Thales advised that it was working to a RSA Date of November 8, 2018. By June 20, 2017, OLRTC had acknowledged Thales's extension, but two weeks later was still trying to hold Alstom to a date that it knew was impossible, apparently so that it could impose millions of dollars Delay LDs.

189. The evidence further discloses that, by April 2017, Thales had pushed that date out to early December 2018, and attributed those delays, in part, to OLRTC's own critical path activities with respect to the infrastructure works. Again, Dr. Oakley says she had no awareness of the progress of this interfacing subcontractor. Despite acknowledging the importance of having integrated working schedules "so that all the parts fit together," she continued to insist that she was only concerned with Alstom's schedule. When asked whether she was aware that, in December 2017, OLRTC provided an extension of time to Thales for RSA to December 2018, the witness said she could not recall whether she was aware of this fact. Yet, in February 2018, OLRTC rejected Alstom's V9 schedule, because it failed to maintain the May 24, 2018 RSA Date.

190. Despite her apparent lack of awareness concerning the status of the Thales subcontract schedule, she candidly admitted that she did not submit Alstom's proposed schedule revisions to the person responsible for integrating the work of those two subcontractors or to the scheduling staff at OLRTC. She simply took it upon herself to reject the proposed schedule revisions with no analysis other than her determination that they would cause the now out of date RSA Date to be missed.

191. In each such rejection, Dr. Oakley repeated essentially the same reason for rejection as follows:

> The proposed schedule is not compliant with the contractual dates for substantial completion of the vehicle part [*sic*] and revenue service availability and is therefore rejected.

The general tenor of Dr. Oakley's responses to questions surrounding OLRTC's refusal to consider those subsequent schedule updates was repeated so often that it almost took on the air of a mantra.

192. It is clear that the schedule revisions were not reviewed by Dr. Oakley in any sense to determine whether they were reasonable in light of the circumstances that existed at the time and what factors caused slippage in the timetable. They were simply rejected if, as Dr. Oakley repeatedly put it under cross-examination, they changed what she referred to as the baseline and would provide schedule relief. It does not appear that there was any meaningful analysis, or that OLRTC understood its obligation to act reasonably in assessing those proposed schedule revisions, as required by section 8.3.8.

193. When confronted with OLRTC's knowledge that the RSA Date had become completely unrealistic for reasons unrelated to Alstom's performance, the witness acknowledged that the rejection of the revised schedules "had to do with the granting of schedule relief where it was not due." In other words, under no circumstances was OLRTC going to give up on its entitlement to Delay LDs, regardless of the circumstances giving rise to the delays and, more importantly, with full knowledge that it would suffer no actual damages given the extended RSA Date afforded to Thales, not to mention its own massive schedule delays related to the multiple difficulties it experienced in completing

the infrastructure, including the occurrence of a massive sinkhole in June 2016 that alone delayed completion of the infrastructure for about nine months.

194. In summary, Dr. Oakley acknowledged that she had made the decision to reject Alstom schedules on her own based on her understanding that the delays were due to Alstom. She admitted that she did not do any analysis of the causes of delay and made no investigation to determine whether Alstom's forecast was realistic. Moreover, she admitted that she did not bother "running Alstom's schedule up the flagpole" to anyone more senior, nor to any OLRTC project schedulers, who she admitted would have had a clearer picture than her of the status of the integrated project schedule.

195. It is clear that no analysis was done in connection with any subsequent schedule revision request by Alstom pursuant to section 8.3.8 at the relevant time by Dr. Oakley or by any other OLRTC representative. That is the only real reason why, as OLRTC suggests, we are forced to attempt to reconstruct a complex series of events long after the fact.

196. Alstom also relies on the AACE International Recommended Practice No. 53R-06 Schedule Update Review, which Dr. Oakley acknowledged to be a sound industry practice. That organization's recommended practice maintains that an owner should respond to schedule update submittals in a "fair manner that provides the contractor a clearer evaluation and detailed explanation of problem areas wherever possible". Moreover, the forecasted status of the schedule should be realistic, and it is not reasonable to require schedule update submittals to indicate on time completion, unless this is actually the case.

197. OLRTC was in an excellent position to fairly and reasonably evaluate all of the relevant circumstances at the time that each schedule revision was presented to it. Contrary to its contractual obligation, it chose not to do so, despite knowing that the original RSA Date had become completely unrealistic, that its own completion of the infrastructure was significantly behind schedule, and that it had granted a substantial extension of time to Thales that would have made it impossible for Alstom to meet the Schedule V5 Milestone dates regardless.

198. When each of those proposed schedule revisions was tendered by Alstom, OLRTC was fully aware that granting the relief requested in terms of adjusting the Milestone dates would have caused it no damages whatsoever, given the status of the Thales subcontract work and its own substantial problems and delays in completing the infrastructure works. All of this is not to mention its obligation to fairly evaluate whether any of the other continuing causes of delay within the control of OLRTC related to matters such as, but not limited to, the ever-changing Thales specifications and necessary retrofits, the P25 radio specifications, issues with the MFS facility and the OCS, as well as the late delivery of the test track had contributed or would contribute to Alstom's scheduling issues.

199. In light of this evidence, I find that OLRTC breached the requirements of section 8.3.8 and that it did so primarily, if not exclusively, to avoid providing schedule relief to Alstom with a view to preserving its rights to charge millions of dollars of Delay LDs, despite its awareness that it would suffer no damages, so long as Alstom's work met the evolving RSA Date.

200. The evidence also satisfies me that, after the repeated rejection of its schedule updates requesting changes to the Milestone dates, including the rejection of Schedule V9, Alstom understandably gave up on seeking schedule relief through this mechanism. I say "understandably" because the evidence of Dr. Oakley persuades me that any such further attempts after February 2018 to seek relief on account of delaying events that occurred after that date, would have met with a similar fate. Accordingly, my assessment of OLRTC's ability to impose Delay LDs is not limited to the factors that had arisen up to and including February 2018. Rather, I believe it is reasonable to consider additional hindrances introduced after that date, given my conclusion that OLRTC, through its representative, Dr. Oakley, was not going to consider any schedule changes that resulted in Alstom not achieving the original RSA Date of May 24, 2018.

201. If OLRTC had done what it was supposed to have done, acting reasonably, when those schedule revisions were presented to it and had followed the process for revising the Approved Subcontract Schedule, I am satisfied, on a balance of probabilities, that new Milestone dates would have been adjusted, for the reasons set out below. It is also

possible that, for reasons entirely within the control of Alstom, it may have missed one or more of those new Milestones, and Delay LDs would have accrued from those revised dates. But that did not occur as, in my view, there was what O'Connor and Laudan have referred to as a breakdown in the contract machinery for adjusting the construction contract schedule. As a result, there are no revised dates from which to measure Delay LDs.

202. OLRTC was required to undertake a reasonable assessment of the schedule revisions presented to it under section 8.3.8. As I have discussed above, the obligation to act reasonably, as that phrase is typically used in law, means that it was required to adopt the perspective of an objective observer looking at all the facts and circumstances in play to determine if schedule relief in respect of Milestone dates was warranted, as a result of actual or anticipated events that were wholly or partially outside of Alstom's control.

203. Moreover, a reasonable and objective observer would have been required to acquire the necessary information to undertake an informed evaluation. It is clear from the evidence that Dr. Oakley made no attempt to do that, even though admitting that she had no knowledge with respect to the interfacing work of Thales, among other things. Finally, the judgement of an objective observer acting reasonably would not have been clouded by the financial motivation to apply Delay LDs, whether warranted or not, in particular in circumstances where it was known that no actual damages would be suffered by allowing schedule relief.

204. Had a reasonable and objective evaluation being conducted at the time when the schedule revisions were proposed, a proper assessment would have included a number of factors, only some of which I will now discuss briefly. In doing so, I do not intend to undertake the kind of comprehensive assessment that I say should have been made at the time, nor is it within my power, on the limited evidence available to me, to fully inform myself in the way that Dr. Oakley or OLRTC could have done. My intent is simply to identify some of the factors that I believe would have led a properly motivated, reasonable

and objective person to have adjusted the Milestone dates and provided relief against the imposition of Delay LDs.

205. The evidence satisfies me, on a balance of probabilities, that the late, and at times limited, delivery of and access to the MSF and various portions of the MSF yard, and difficulties with some of the equipment in it, had ongoing impacts on Alstom's ability to progress its work in a logical and orderly fashion, especially as the need to implement retrofits in respect of Thales's design changes were introduced, in addition to Alstom's own necessary retrofits.

206. I am further satisfied, on a balance of probabilities, that the missed critical design freeze and interface dates for the CBTC/VOBC specifications, P25 radio data, and design and styling information, as well as the late delivery of the test track and the fully energized Confederation Line which, as set out in portions of Appendix K of the Subcontract, would have entitled Alstom to schedule relief, as they each caused or contributed to disruption and delay to Alstom's design, manufacturing, and testing progress. While some of these early-stage hindrances may have been partially accounted for in Schedule V5, approved in May 2016, it is clear from the evidence that they had ongoing impacts through to the Final Acceptance of the LRVs.

207. Of particular note, in my mind, were OLRTC's ongoing dealings with Thales which continued over a significant number of months, but with respect to which Alstom was kept completely in the dark if not, indeed, misled. Given the critical interfacing nature of their work, in my view, it bordered on unconscionable on the part of OLRTC to not make every effort to facilitate complete transparency concerning the scheduling of the respective scopes of work of these two subcontractors.

208. The evidence presented leads me to the unnecessary but reasonable inference that OLRTC adopted a different course of action with that subcontractor because Thales had significantly greater leverage over it, due to OLRTC's inability to give Thales access to portions of the infrastructure. It is also a reasonable inference that OLRTC was concerned that, if it revealed to Alstom the concessions that it was making to Thales, that Alstom would demand similar treatment. While it is unnecessary for me to reach any

settled conclusions with respect to OLRTC's motives, the lack of transparency clearly, in my opinion, hindered or interfered with Alstom's ability to plan and execute its work in an efficient way.

209. On this last point, although I have concluded that Alstom was not required to seek a formal "extension of time" to obtain Milestone relief under section 8.3.8, one could hardly have expected Alstom to make a formal request for an extension of time regarding circumstances about which it had no knowledge.

210. There is no doubt that there were many changes to the CBTC/VOBC specifications after April 26, 2013 in respect of which Alstom was required to implement design changes and ultimately introduce two unanticipated retrofit campaigns in 2017 and 2018. Alstom received Revision 10 of the VOBC Interconnection Schematic and was required to make wiring changes to accommodate Thales's equipment as late as mid-2018, very shortly before the RSA Date in the unrevised Schedule V5. Alstom did write letters to OLRTC seeking relief, including the potential need for schedule relief, but, in each case, these requests went unheeded.

211. One of the other contentious issues between the parties relates to the VOBC racks to be provided by Thales for installation in each train. Alstom says that, based on a reasonable reading of the Subcontract requirements, Thales was obliged to deliver a fully assembled and tested rack containing all of the necessary hardware components, such that it could be bolted onto the vehicles in the designated location and simply plugged into the power supply and internal communications wiring (referred to as "plug and play"). Instead, Thales delivered a rack with individual components unassembled with instructions requiring Alstom personnel to affix the components to each rack, connect the components to each other and test the operation of each component, before completing the installation of the racks in each LRV.

212. Based on my reading of the Subcontract requirements, and the expert evidence of Mr. Lerew (which I accept over the evidence of Mr. Whittington on this point), I am of the view that Alstom's expectation was reasonable, and that Thales was obliged to deliver a fully assembled and tested VOBC rack for each unit or, if that was not feasible to provide

the personnel needed to assemble and test the rack at the point of installation. While I understand that this eventually occurred, it was not before Alstom had to devote significant time and manpower dealing with a number of the VOBC units, with potential impact on its other work.

213. I take a similar view with respect to the division of Milestone 9 into two phases, as discussed above. The negotiation surrounding that change occurred between May and July 2017, roughly contemporaneously with Alstom's first schedule revision requests. While it may very well be that Alstom consented to this adjustment, initially without any schedule relief, it could not have reasonably anticipated the manner in which the vehicles would be used, the extent of the disruptive maintenance and repair work that it would be called upon to undertake, while at the same time trying to complete other vehicles, or the unpredictable way that the vehicles would be retained and returned to it for completion. While it may be true that Alstom always had one or more vehicles that it could work on following Provisional Acceptance, it cannot be said that it was in a position to plan its work in an orderly time- and cost-effective sequence.

214. Alstom says that these and other factors individually and collectively impacted its ability to achieve the Milestone dates. While the competing expert delay reports reach dramatically different overall conclusions, neither report addresses the impact of each of the alleged impediments on a day-by-day or vehicle-by-vehicle basis.

215. As discussed above, the liquidated damages provisions in the Subcontract are structured around groups of vehicles as opposed to individual LRVs. For example, if Alstom was obliged to complete serial testing on 17 vehicles by a specific date and achieved that goal on 16 of those vehicles, but was late with respect to a single vehicle, the full daily liquidated damages rate for all 17 vehicles would be imposed, until that last vehicle completed serial testing. That is simply the result of the way in which the provision was structured.

216. In light of the apparent harshness of this structure, one of the questions that I posed to counsel prior to their preparation of their post-hearing written submissions was as follows:

> Assume a hypothetical in which two LRVs are delivered one week late and the failure to deliver one of those LRV's is the fault of Alstom and the other either due to circumstances beyond the control of Alstom or caused by the fault of OLRT-C or one of the parties for which it is responsible. In the event of such concurrency, are liquidated damages exigible against Alstom? Is Alstom liable for liquidated damages if even one of its vehicles was delayed due to the fault of others for the period of time that that vehicle was late?

217. OLRTC answered that question in the affirmative saying that Alstom would be liable for Delay LDs for all of the vehicles in that group, if Alstom was responsible for even one of the LRVs being late. In other words, any concurrent delay to another vehicle caused by OLRTC would not relieve Alstom from exposure to the full impact of the Delay LDs for that group. Arguing that the relevant provisions imposed strict liability, OLRTC goes on to say that, if Alstom believed that it had been delayed by OLRTC or others, its remedy was to seek an extension of time. Aside from my conclusion that applications for extensions of time were not the contractually stipulated method of achieving schedule relief in respect of Milestones, there is nothing in section 8.6 that, in my view, imposes strict liability or would necessitate the harsh result suggested by OLRTC in the circumstances.

218. Concurrent delay issues in construction scheduling disputes generally is a somewhat contentious subject. A useful definition of concurrent delay is found in a publication of The Society of Construction Law Delay & Disruption Protocol, as follows:

> True concurrent delay is the occurrence of two or more delay events at the same time, one an Employer Risk Event, the other a Contractor Risk Event, and the effects of which are felt at the same time. True concurrent delay will be a rare occurrence. A time when it can occur is at the commencement date (where for example, the Employer fails to give access to the site, but the Contractor has no resources mobilised to carry out any work), but it can arise at any time.
>
> In contrast, a more common usage of the term 'concurrent delay' concerns the situation where two or more delay events arise at different times, but the effects of them are felt at the same time.
>
> In both cases, concurrent delay does not become an issue unless each of an Employer Risk Event and a Contractor Risk Event lead or will lead to Delay to Completion. Hence, for concurrent delay to exist, each of the Employer Risk Event and the Contractor Risk Event

must be an effective cause of Delay to Completion (not merely incidental to the Delay to Completion).

219. For our purposes, the word Milestone can be substituted for the word Completion in the above-noted definition. In the application of concurrent delay principles to typical construction delay claims, where a contractor is delayed in the progress of its work solely as a result of an act, omission, or scope change imposed by the owner, the period of delay will generally be categorized as "excusable", in that it will give rise to an extension of time for completion by the contractor of the contract work, and "compensable", in that the contractor will be entitled to compensation for the additional costs incurred by it attributable to the delay event.

220. Where, however, the consequences of the owner-caused delay overlaps, in whole or in part, with delays attributable to the contractor, the general rule is that, for the period of overlap, the delay will be treated as excusable, giving rise to an extension of time to the contractor, but not compensable, because the contractor would have incurred the extra costs in any event, as a result of its own delays. By analogy to this case, it seems to me that, to the extent that there are concurrent causes to the failure to achieve a Milestone in respect of one or more vehicles that, to the extent of that overlap of responsibility, Alstom's late delivery should be considered excusable, but not compensable. In other words, the Milestone date would be extended accordingly, but Alstom would not receive any additional compensation for the period of overlap.

221. If I were to accept OLRTC's position on concurrent causation, I would have to conclude that, if the acts or omissions of OLRTC were the sole cause of 16 of the vehicles failing to complete serial testing under Milestone 8C, but Alstom was concurrently responsible for only the 17th vehicle failing to achieve the requirements of that Milestone, Alstom would nonetheless be responsible for the entirety of the Delay LDs associated with that Milestone for all 17 vehicles, at least until Alstom was able to complete serial testing with respect to the 17th LRV. This example highlights what I submit is the commercial absurdity of OLRTC's interpretation of the application of section 8.6 of the Subcontract.

222. While these examples deal with either party's sole responsibility for the late Milestone achievement of individual vehicles, the situation becomes even more complicated when one considers that the acts or omissions of both parties may have concurrently contributed to the inability of one or more vehicles to achieve the requirements of any given Milestone. In this circumstance, can any fair reading of the liquidated damages provisions in this Subcontract entitle OLRTC to Delay LDs, if its own acts or omissions contributed, in combination with Alstom's problems, to the late achievement of one or more Milestones for one or more vehicles.

223. Given that a Milestone is missed and Delay LDs triggered if even one of the required vehicles is delivered late as a result of a single causal event or a combination thereof by even one day, it seems to me that OLRTC would be disentitled to apply Delay LDs, if its own acts or omissions caused or contributed to even one of the 15, 17, or 34 vehicles to miss the applicable Milestone date, even if one or more of the remaining vehicles were late due solely to the fault of Alstom. In other words, given the way that OLRTC chose to structure the liquidated damages provisions in respect of groups of vehicles, rather than individual LRVs, any reading of that provision that deprived Alstom of the benefit of concurrent causation would convert an otherwise legitimate liquidated damages provision into a penalty.

224. This is simply a consequence of the way that OLRTC chose to structure the liquidated damages provisions in the Subcontract, using an "all or nothing" application of liquidated damages in respect of each Milestone. While the theory of concurrent delay is simple enough to state, its application is another matter altogether. Ascertaining the impact on the critical path of any undertaking of multiple alleged delay events caused by two or more parties can be a daunting exercise, even for experts trained in schedule analysis. A simple critical path analysis based on only the contractor's ability or failure to achieve its own schedule, but without a highly nuanced examination of the other concurrent causes of delay to the contractor's work will be of little assistance in apportioning responsibility.

225. In light of my inability to perform an expert analysis of that many and varied alleged delay events had on each vehicle, this, in my view, highlights the importance of OLRTC having fulfilled its obligation under section 8.3.8 to assess the schedule and the alleged causes of delay to the Milestone dates contemporaneously with the events in question which, as I have found, OLRTC did not do.

226. I am also of the view that a reasonable assessment of the proposed changes to the Milestone dates pursuant to section 8.3.8 would also require OLRTC to consider whether allowing such changes would result in any actual damages to it. While delay liquidated damages provisions in contracts, when properly constructed, clearly obviate the need for the entitled party to prove the quantum of its actual damages, such provisions do not entitle a party to apply liquidated damages in cases where it is clear that no damages have or will be suffered. In such cases, the imposition of Delay LDs would represent an unwarranted windfall.

227. For reasons clearly arising from OLRTC's inability to complete the track and other infrastructure, unrelated to any delays experienced by Alstom in delivering the LRVs, Revenue Service Commenced on September 14, 2019, nearly 16 months later than the scheduled May 24, 2018 RSA Date to which OLRTC seeks to hold Alstom. There is no evidence that, even if Alstom had delivered every fully accepted vehicle by May 24, 2018, that revenue service would have commenced even one day sooner. In fact, all of the LRVs achieved Final Acceptance before OLRTC was otherwise able to commence revenue service.

228. OLRTC says that the burden falls to Alstom to demonstrate how each, any, or all of the above-noted events or circumstances caused it to miss specific Milestone dates. I consider this submission in contrast with OLRTC's erroneous contention that Alstom was obliged to seek an extension of time contemporaneously with the events in question as a "sensible and commercially prudent measure" that would have allowed the parties to have engaged in an analysis of the causes of delay at that time, "rather than trying to conduct an autopsy of the project after its completion, with faded memories and departed employees."

229. Given my conclusion that there was no obligation on Alstom to seek an extension of time in order to obtain an adjustment to the Milestone dates, it was OLRTC's failure to fulfil its obligations, under section 8.3.8, that deprived the parties of a "sensible and commercially prudent measure" that would have allowed them to have engaged in an analysis of the causes of delay at that time. Had OLRTC, acting reasonably, fairly evaluated Alstom's revised schedules at the time they were submitted and thereafter, contemporaneously with the events in question, there would be no need to conduct "an autopsy of the project".

230. It seems to me that, rather than requiring Alstom to demonstrate, several years after the events occurred, how each failure, hindrance, or interference for which OLRTC was responsible affected its ability to achieve the Milestone requirements for each individual LRV, in the face of clear evidence that OLRTC did not fulfil its contractual obligations under section 8.3.8 at the relevant time, it is sufficient if Alstom establishes that it is more likely than not that the collective impact of OLRTC's acts or omissions caused or contributed to its failure to achieve those Milestones, and that a reasonable assessment carried out by an objective party at the time would have resulted in schedule relief. Although I cannot now identify how, or the extent to which, any single causal event impacted any given LRV, I am persuaded that the individual and combined impacts of the various factors identified by Alstom, including but not limited to those discussed above, caused or contributed to Alstom failing to achieve Milestones 8B, 8C, 9, and 10.

231. Once it is established that OLRTC failed to meet one or more of those requirements on which Alstom's price and schedule were expressly said to be based, it remained open to OLRTC, despite its failure to carry out a reasonable assessment under section 8.3.8 at the time, to demonstrate to me that a reasonable, fully informed, and unbiased assessment would have resulted in no change to the Milestone dates in Schedule V5 had Dr. Oakley carried out the required assessment of the proposed schedule revisions. In my view, OLRTC has failed to do so through the fact or expert evidence presented.

232. In reaching this conclusion, I need to emphasize that I am not blinded to the significant delays that Alstom experienced in completing the LRVs due to causes that were entirely within its control and have nothing to do with the acts or omissions of OLRTC. In particular, it is clear that Alstom incurred delay as a result of difficulties with its undercarriage "bogie" supplier and with certain brake calipers. In view of the conclusions I have reached, I do not intend to review those issues or attempt to unravel the tangled ball of yarn that the various independent and concurrent delay events represent for the purposes of assessing OLRTC's entitlement to apply Delay LDs. I will, however, return to the subject in connection with Alstom's own delay claim.

233. Having concluded that, for the above-noted reasons, OLRTC has failed to establish its entitlement to Delay LDs with respect to any of the Milestones, given its breach of section 8.3.8, it is unnecessary for me to comment at length on the competing delay expert reports and testimony presented by each party. I do, however, offer certain observations.

234. The well-recognized purpose of expert opinion evidence is to assist the trier-of-fact by providing specialized scientific or other knowledge in relation to issues beyond the common understanding of the layperson. When successful, an expert opinion regarding project delay may be of enormous assistance in reducing a complex series of sequential and concurrent developments to a comprehensible assessment of excusable and non-excusable and compensable and non-compensable causation events.

235. In this regard, both as counsel and as an arbitrator of complex construction disputes, I have had occasion to read scores of claim analyses procured and presented in support or defence of delay claims. As a result of that exposure, I have acquired a good understanding of the methodologies and theoretical bases on which these opinions are formed and a level of competence in reading and evaluating the findings, opinions, and conclusions contained in those reports.

236. But I am not possessed of the expertise necessary to carry out such analyses myself, nor do I have access to the sophisticated software tools used by such experts to analyse the relevant data. And, even if I were fully capable of doing so, as an arbitrator,

I am obliged to decide a case on the basis of the evidence presented to me by the parties. I am not at liberty to substitute my own opinion for that of qualified expert witnesses.

237. As a result, I am limited to evaluating the quality of the expert evidence presented by each party. When the competing expert reports present divergent conclusions, as they usually do, I can prefer one opinion over the other, in whole or in part, or, in appropriate circumstances, I can reject both. If I adopt the latter approach, however, I am left with no assistance in evaluating the competing positions of the parties with respect to the causes and consequences of delay.

238. It is unfortunate that, in my experience, many delay claim reports appear to lack the independence and neutrality that is supposed to characterize expert evidence. It is not uncommon that each party presents a report that attributes 90% or more of the blame to the opposing party and 10% or less to the party that has retained the expert. Often, it is difficult to comprehend how opposing experts could possibly be assessing the same project. This is not necessarily a reflection of the integrity or professionalism of the expert witness or a lack of qualifications. Rather, giving the experts the benefit of the doubt, it may be fair to conclude that their assessments are skewed based on the limited or selective information that they have been provided with by the party that retained them. Perhaps, they are unaware of the competing evidence to the contrary. It is in this context that I offer the following observations on the evidence of Mr. Jasinski and Mr. Meyers.

239. Both individuals, based on their training, experience, and credentials appear highly qualified and competent to testify. Unfortunately, I found the BRG report prepared by Mr. Jasinski, I regret to say, to be singularly unhelpful, lacking in any in-depth analysis of the issues in play in this case, and presenting superficial conclusions. Mr. Jasinski utilized a well-recognized analysis of Alstom's as-built schedule tracing the critical path through serial testing activities. As pointed out under cross-examination, however, he treated serial testing as a single block of time, as opposed to a series or suite of tests conducted over a period of time with potential intervening events or causes of delay.

240. In my view, the analysis was one-dimensional and lacked nuance. I indirectly expressed this concern to Mr. Jasinski with a question during his direct examination as follows:

> …because when I read your report, I don't see a deep dive into why these things occurred. You have traced the critical path in the way you have. Exponent has done it in their way.
>
> But it doesn't illuminate for me what the real causal factors were, some of which were undoubtedly Alstom's problems with bogies or other factors, some of which may be related to waiting on things from Thales, some of which may be having to do with unexpected or unplanned retrofits caused by various parties, some of it may have related to waiting for a design and styling input from the City or P25 radio decisions. Ultimately, that is what I have to figure out --
>
> THE WITNESS: Yes, sir.
>
> ARBITRATOR MORRISON: ...is what were the causal factors, which ones are specifically attributable to which party, which ones create excusable delay to either the overall schedule or the milestone dates and so on. So, I am trying to understand how this analysis helps me answer those questions, which are the questions I have to ultimately determine.

241. Under cross-examination, Mr. Jasinski acknowledged that he had insufficient information to ascertain why serial testing was taking longer and Alstom was not "meeting their milestone durations." In its post-hearing submissions, Alstom asserts that Mr. Jasinski "appears to have abdicated his role to forensically investigate the causes of delay to the project, so as to allocate delay to any particular party." Regrettably, I share that view.

242. In any event, Mr. Jasinski's failure to analyse the impact of various factors, but most specifically the evolving revisions to Thales's design documentation, its impact on SPICO testing, the subsequent Thales post-vehicle assembly retrofits, including the capacity issues created in the Light Maintenance Bay, and the impact that all of this had on Alstom's production sequencing and serial testing, resulted in his evidence being of limited value to me.

243. I also found the witness to be, at times, unnecessarily combative under cross-examination, for example when questioned about his failure to analyse whether the critical path also passed through SPICO testing, the latter activity being a subset of the former. Although his report concluded that "critical path serial testing continued to be performed, unimpacted by additional retrofitting or static PICO testing", he ultimately acknowledged that he never actually analysed whether the critical path actually passed through that activity. He ultimately agreed, however, that SPICO could not be undertaken until the Thales retrofit work had been completed on each vehicle.

244. In comparison, although he used the same as-built critical path analysis methodology, I found the evidence of Mr. Meyers to be significantly more tethered to the facts, detailed, nuanced, three-dimensional, and informative, in that he examined the causes of delay to each Milestone in a more thorough and balanced manner. In my view, Mr. Meyers made a far greater effort to consider the capacity constraints and resulting impacts on the collective fleet of vehicles caused by, among other things, the above-noted issues with respect to Thales's work, including the prioritization of its retrofits over those of Alstom, so that Thales could use the trains to perform DPICO testing on the track and validate the ATC system.

245. In my view, his analysis of concurrent delay was significantly more helpful to me in understanding the interplay of the various factors at work that caused Alstom to be unable to meet the unrevised Milestone dates in Schedule V5. By simply tracing the progress of individual vehicle's serial testing on the critical path, in my opinion, Mr. Jasinski focused on the individual trees, but lost sight of the forest.

246. Does this mean that Mr. Jasinski's conclusions are wrong and Mr. Meyers are correct? No. It simply means that Mr. Meyers has presented what to my eye is a far more thorough, thoughtful, and realistic fact-based analysis and has expressed opinions that align more closely with my understanding of the progress of the project and the factors that affected Alstom's ability to achieve the Milestones in issue. Had it been necessary for me rely on one of these two experts, I would attach significantly greater weight to the evidence of Mr. Meyers over that of Mr. Jasinski.

247. In light of my conclusion with respect to OLRTC's entitlement to Delay LDs, it is unnecessary for me to consider OLRTC's position that its entitlement to Delay LDs is not limited to 10% of the Subcontract Price, based on its assertion that this limitation is not applicable in the face of Alstom's alleged gross negligence. OLRTC's argument that the clear limitation of liability in section 8.6 is not applicable because it does not apply in the face of circumstances of delay resulting from gross negligence is, at best, an interpretive stretch of the clear language of the Subcontract.

248. In support of this contention, OLRTC relied on the expert evidence of Mr. Vint. This gentleman relied on three key early-stage decisions to conclude that Alstom was grossly negligent. In particular, he referred to the relocation of prototype production from France to Hornell, New York, and subsequently to the MSF, as well as the relocation of validation testing from Pueblo, Colorado to the Project track in Ottawa. Alstom countered this with the expert opinion of Mr. Lerew. I prefer the evidence of Mr. Lerew over that of Mr. Vint.

249. The evidence discloses that each of the decisions relied upon by Mr. Vint was thoroughly vetted with OLRTC, RTG, and the City and approved, before they were implemented. Even if it could be said with the benefit of hindsight that it might have been better not to have implemented one or more of these changes, in my opinion, the decisions, and the circumstances under which they were made with the full concurrence of OLRTC, do not even reach the level of negligence, much less gross negligence. Despite all of the difficulties that Alstom encountered with respect to this project that were admittedly of its own making, the evidence does not come even remotely close to persuading me that its performance of the Subcontract was grossly negligent.

250. I noted earlier in this decision, when reviewing its pleaded position, that OLRTC referred to Alstom's performance of the Subcontract as "grossly negligent and blatantly in breach of its obligations", resulting in "pervasive and significant" delay that "was reprehensible and an affront to the Subcontract". OLRTC goes on to allege that "Alstom's extreme dereliction of its obligations … indicates that its failures were deliberate and intentional" and that it failed to prioritize its work under the Subcontract "preferring to

dedicate resources to other, more lucrative jobs". If these allegations were not strong enough, OLRTC says that Alstom acted with "extreme disregard and delinquency of its obligations" to the point that it "intentionally neglected its responsibilities." OLRTC concludes alleging a breach of the obligation of good faith and honest performance under the Subcontract. All of this coupled with a denial by OLRTC of "any responsibility for failures, problems, or delays."

251. While Alstom, to be sure, experienced significant difficulties in the course of performing its work under the Subcontract, many of which were of its own making, as did OLRTC with respect to its performance of the Project Agreement, I can only describe the above-noted allegations as "over the top" and unsupported by the evidence presented. The evidence put before me suggests that Alstom, while struggling to fulfil its obligations, kept in regular communication with OLRTC with respect to its progress, including the issues that it was encountering, both its own and those imposed upon it, and ultimately produced 34 accepted LRVs, prior to the date that the Project was otherwise ready for Revenue Service. Moreover, I heard no evidence whatsoever in support of the bad faith allegation that it diverted resources to other more lucrative jobs.

Is OLRTC entitled to damages for prolongation or acceleration, as claimed?

252. OLRTC's claim for direct losses in excess of the Delay LD cap, in the form of alleged prolongation damages and acceleration costs are, in my view, what is often referred to colloquially as a "Hail Mary pass". While OLRTC refers to them under the category of Direct Losses subject to indemnification under section 17.1 of the Subcontract, they are simply delay and impact damages by another name.

253. With respect to the claimed acceleration costs of $14,909,028, even if permitted, OLRTC has failed to prove them with admissible and cogent evidence. Presented through OLRTC's financial officer, Mr. Gomeza, this witness could not explain how or why the enumerated costs related to any act or omission by Alstom and, in fact, seemed to suggest that they were incurred in respect of delays after the sinkhole event in June 2016. Nor were they tied to any critical path delays identified by Mr. Jasinski.

254. Moreover, OLRTC's argument alleging that the acceleration costs were incurred as a result of Alstom's promise that it could complete the LRVs by November 2018 cannot be afforded any weight whatsoever in the face of OLRTC's own knowledge that this was impossible, based on its extension of time granted to Thales and its own separate problems in completing the infrastructure. It is clear that to the extent that OLRTC accelerated completion of the works, it was because of its own difficulties in bringing the project in on time.

255. Finally, I have no reliable evidence to support the contention that Alstom bears responsibility for any portion of the $12,381,000 paid to Thales in respect of three change orders for prolongation and acceleration costs. OLRTC's witness in this regard, Mr. Slade, lacked first-hand evidence with respect to this issue and conceded that he had not reviewed the exhibits to his witness statements on which he relied before he signed it. Moreover, OLRTC never performed any analysis to determine which portions of those costs, if any, could be attributable to Alstom's work.

256. Moreover, Mr. Gomeza candidly acknowledged that OLRTC did not prepare any contemporaneous analysis to assess whether the acceleration costs were necessary or to apportion them as between Alstom and other causes. It is not possible to attribute any acceleration costs incurred by OLRTC to Alstom. Aside from the fact that they are barred by the limitation of liability for delay provision, the evidence fails persuade to me, on a balance of probabilities, that these costs were caused by Alstom.

257. The same is true of the claimed prolongation costs of $143,302,695. Again, these are just delay costs by another name and are barred by the limitation in section 8.6. They are not supported by any expert analysis. The claim is also contrary to OLRTC's own claim advanced against the City, in which it alleged entitlement to $50 million in prolongation costs tied to the City's late approval of the design book for the LRVs.

258. Like the claimed acceleration damages, OLRTC's only fact witness in support of this category of claims was Mr. Gomeza who presented invoices with respect to many categories of costs but was unable to give evidence apportioning those costs as between Alstom and OLRTC, nor was he able to identify the duration of the periods for which

prolongation costs were being claimed against Alstom. The same is true with respect to the alleged staffing costs of $27,759,808.

259. Similarly, OLRTC's claim for $48,679,800 of the $76,869,273 in liquidated damages paid to RTG is dependent on my finding that Alstom's negligence delayed completion until June 18, 2019. Given my finding that Alstom was not negligent, this portion of the claim must also fail. Finally, OLRTC concedes that I have no direct evidence with respect to the $35,261,364 deducted by the City in respect of lane closures, lease extensions, and liquidated damages. Each of OLRTC's claims for acceleration and prolongation fails for, among other reasons, a lack of proof on a balance of probabilities that they are attributable to Alstom.

Is OLRTC entitled to compensation for its claimed non-delay damages?

260. OLRTC asserts 14 of what it refers to as non-delay damages claims totaling $8,922,650, the largest of which is for Additional Train Moves in the amount of $6,194,757.41. The individual items in the amount claimed with respect to each are as follows:

Rubbish removal costs that the MSF	$118,582.00
Thales additional DPICO tests for 18 LRVs	$240,449.00
MSF – LRV Wash Facility	$16,184.49
MSF – Sanding Station	$51,596.34
Damage to electric rail car movers at MSF	$287,144.05
Premature wear of the rail profile	$251,158.00
Damage to curb an asphalt at the MSF yard	$7,048.11
Damage to gate pillar at LMB	$519.00
Damage to Zamboni machine at MSF	$2,105.10
Unnecessary parts order	$543,940.23
Hiring external consultants	$537,807.12
VOBC LMC 2 Rack Stage 2	$104,408.00
Additional train moves	$6,194,757.41
Additional security at the MSF	$22,902.00

261. With the exception of the claim for damage to the gate pillar at the LMB for $519, which claim is admitted by Alstom, all of the remaining enumerated claims fail for lack of proof. All of the evidence with respect to these claims was tendered through Mr. Gomeza,

who had no direct first-hand evidence with respect to causation or allocation of costs incurred, in circumstances where the alleged costs may have been incurred in respect of the acts or omissions of more than one party. In simple terms, a stack of invoices does not constitute proof on a balance of probabilities of Alstom's responsibility for any of the alleged damages or the extent of its liability. It is not simply a case of insufficient evidence but, harkening back to OLRTC's position with respect to hearsay, there is virtually no admissible evidence to support these claims.

262. Not only did Mr. Gomeza admit that he had no knowledge of how most of the costs were incurred, he further acknowledged that the documents exhibited in his witness statement were assembled by another OLRTC employee who also had no first-hand knowledge of the incidents giving rise to the claims. In some cases, OLRTC witnesses who may have had some first-hand knowledge of the alleged incidents did not provide any evidence in respect of them.

263. So deficient in respect of direct evidence was the proof submitted in support of these claims that, even if they had some substance, there would have been no way, in many cases, for Alstom to have challenged them through cross-examination or otherwise. In light of my conclusion that OLRTC has not met the burden of proof with respect to these claims, I do not intend to go through them individually, but two examples will highlight the general deficiencies that I observed with respect to all of the claims.

264. The first involves the claim for $351,158 for re-grinding the rails caused, according to OLRTC, by wheel flange lubrication issues on the LRVs. Mr. Gomeza acknowledged that he is not a track expert and did not attend the walk-through regarding the condition of the track. He relied solely on a report prepared by Mr. Mark Turner whose conclusion was that "none of the rail damage seen can be directly attributed to the lack of flange lubrication". His report merely identified this as an issue of potential concern that might only manifest itself in the medium to longer-term.

265. Mr. Turner was not called to provide fact or expert evidence on this issue. Mr. Slade, who actually directed the rail grinding and gave evidence in this arbitration, did not provide any testimony regarding this claim. Despite all this, Mr. Gomeza insisted in his

witness statement and under cross-examination that the regrinding was caused by issues with the wheel flange lubrication system. With respect, Mr. Gomeza's evidence on this issue does not even rise to the level of hearsay.

266. The other example involves the claim for $6,194,757.41 in respect of additional train moves. By way of background, OLRTC was responsible for towing unpowered trains. There is no limit in the agreement on the number or type of train moves OLRTC was to perform. Although Mr. Ozorak suggested that OLRTC had estimated three moves per LRV at the time of entering into the agreement, he was not involved in the project at that time and acknowledged that he had never seen or reviewed it. Moreover, under cross-examination, he recalled that the estimate of three moves per LRVs was something "thrown around" by the testing and commissioning team long after the agreement was executed. In any event, the evidence discloses that this estimate was never conveyed to Alstom.

267. Subsequently, in 2017, when the volume of train moves became an issue, OLRTC tried to impose a limit of 10 manual moves per day based on its available capacity. It did not reference or rely upon the earlier estimate of three moves per LRV. Mr. Ozorak also confirmed that trains were being moved on a regular basis for Alstom, Thales, and OC Transpo, and he was unable to point to any evidence to establish the number of alleged additional train moves for which Alstom should be accountable. Even assuming there was some explicit or implicit limitation on the number of train moves to which Alstom was entitled (which was not established), there is simply no evidence in support of any particular number of out-of-scope train moves or cost per move on which to base this claim or any portion of it.

268. These two examples are typical of the near-total lack of admissible and cogent evidence that would be necessary to support claims of this magnitude. Accordingly, each of the above-listed claims is dismissed with the exception of the admitted claim for $519.

Is OLRTC entitled to compensation for its claim in respect of the spotters issue?

269. As noted above, this late arising claim was introduced by way of amendment to OLRTC's pleading shortly before the commencement of the arbitration, as a result of Alstom decision, on or about May 11, 2020, to cease paying for platform spotters pursuant to a mitigation plan previously adopted by the parties to deal with issues with the rear-view camera system on the LRVs and the hardware and software associated with the HSDR.

270. The system is designed to enable LRV drivers to see the platform area to determine whether they can safely leave the station. It is described as a safety critical system. In the fall of 2019, prior to the commencement of Revenue Service, the system experienced periodic transmission problems resulting in the cabs showing blank screens or incorrect station platform views. To address the safety concerns while the problem was being corrected, Alstom agreed to a mitigation plan that involved placing spotters at each station platform to ensure that the side of the train was clear of passengers before departure. Apparently, it was agreed that the spotters would remain in place until the system functioned properly for two consecutive weeks.

271. This mitigation plan was a precondition to the issuance of a temporary waiver, which allowed the trains to operate during Trial Running, but the problem was not resolved prior to Revenue Service, so the plan was kept intact and referenced in Alstom's Fleet Safety Certificate, which was required for the start of Revenue Service. Alstom disputes that there was any need for the spotters after May 2020 or that it ever agreed to pay for the spotters. OLRTC says that Alstom has failed to discharge its onus in proving either of these points.

272. Following the commencement of the mitigation plan, Alstom implemented a software upgrade in December 2019 and subsequently continued to make adjustments to the software. Nonetheless, OLRTC alleges that Alstom has failed to introduce any evidence proving that the rear-view camera system has been fault-free since version 7.1 of the software was introduced. Moreover, the platform rear-view camera display issue was included on the MDL (minor deficiency list) and has not yet been removed by the

Independent Certifier. Finally, OLRTC says that Alstom has not obtained City approval to lift the conditions from the Fleet Safety Certificate.

273. OLRTC maintains that, when Alstom removed the spotters, it had no choice but to assume the contract with Cancom and that, as of June 30, 2020, it had incurred costs of $562,631.52 and was continuing to incur these costs at a rate of approximately $189,000 per week.

274. Alstom responds by asserting that OLRTC has failed to meet its burden of proof or establish any entitlement to this claim. Alstom denies the existence of any agreement between the parties for it to pay the cost of the spotters and notes that there are no commercial terms in the mitigation plan setting out responsibility for those costs. It says that the issue of responsibility for these costs was always in dispute and, as early as October 2019, two weeks after the implementation of the mitigation plan, it advised OLRTC that, if OC Transpo wished to extend the use of the spotters, OLRTC should cover the costs. The ongoing dispute on this issue continued through an exchange of correspondence between the parties.

275. Alstom says that Dr. Oakley's witness statement on this issue categorically states that the HSDR failure logs demonstrate that Alstom had failed to meet its obligations under the mitigation plan. But she also admitted that she was not aware of any root cause analysis by OLRTC to establish that Alstom was the cause of the failure. She also acknowledged that she only had a high-level understanding of the problem and did not have a good grasp of the technical issues.

276. The background to this claim is reviewed in my decision on OLRTC's motion to amend its pleading. Prior to the motion to amend, a disagreement existed between the parties as to whether this claim was within the ambit of the arbitration, as set out in the parties' original Subcontract Arbitration Notices. OLRTC argued that the claim could not have been pleaded in its original Subcontract Arbitration Notice because, back then, Alstom was still providing spotters pursuant to the mitigation plan. It sought to reserve its rights to raise this claim in a subsequent proceeding.

277. Alstom took the position that the matter was already an issue in the arbitration, given OLRTC's generalized and unparticularized pleading with respect to deficiencies in the vehicles, specific allegations in relation to the HSDR system deficiencies, and its subsequent Redfern requests for documents in relation to that system. Alstom indicated that it was reserving its rights to plead *res judicata,* if OLRTC attempted to pursue the matter through a subsequent proceeding. At that time, there was no motion before me with respect to the matter, nor would it have been within my mandate to make any ruling in respect of a possible future *res judicata* defence.

278. OLRTC subsequently elected to seek leave to amend and file additional evidence in respect of the issue. On the basis that OLRTC could not have possibly pleaded this head of relief back in February 2020, and notwithstanding that it was aware of the issue of Alstom's actions in early May 2020, I determined that the prejudice caused to OLRTC by refusing the amendment would be greater than the prejudice caused to Alstom by allowing it to be dealt with in this arbitration.

279. Accordingly, I allowed the amendment, but on terms with respect to the extent of new evidence that could be filed, given that the date for filing evidence had long passed and the evidentiary hearing was to commence nine days later. I was of the view that it would be unfair to Alstom to allow OLRTC to introduce any additional evidence in support of allegations of defects or deficiencies with the system that should have been included in the previously filed witness statements or expert reports.

280. Accordingly, I limited the further evidence that could be tendered to one or more witness statements in support of the facts in the Amended Subcontract Arbitration Notice with respect to the existence of the mitigation plan, Alstom's decision to discontinue the retention of the spotters, and OLRTC's decision to retain them directly (and the reasons therefor), together with evidence of the expenses incurred by OLRTC in doing so. No new fact or expert evidence would be permitted, however, with respect to the underlying defects or deficiencies alleged to exist in the HSDR system, which evidence could and should have already been filed.

281. Alstom was also permitted to file witness statements responding to OLRTC's new evidence, but, given its position that the matter was already in issue in the arbitration prior to the pleading amendment, it too was not allowed to file any additional fact or expert evidence in respect of the technical issues underlying the claim or responsibility for the problem. As a result, while I was presented with some evidence concerning the mitigation plan and its original purpose, I have virtually no evidence regarding the underlying problem, or whether by early May 2020, it had been resolved or what, if anything, remained be done. Nor do I have any technical evidence to assist me in determining whether the City's failure to lift the condition from the Fleet Safety Certificate or the Independent Certifier's refusal to remove it from the MDL is warranted.

282. The underlined portions of several of the above paragraphs highlight what appears to be a discrepancy between the parties with respect to which party bears the burden of proof in respect of this claim. Clearly, this is OLRTC's claim, and it bears the burden of proof with respect to liability and damages.

283. To succeed, it would have to present cogent evidence with respect to the problems with the system, that responsibility for the problems lay with Alstom, that they had not been sufficiently resolved by May 2020, that Alstom had agreed to pay for the spotters, and that the spotters were still necessary. OLRTC's position that "Alstom has failed to introduce any evidence proving that the rear-view camera system has been fault-free since version 7.1 of the software was introduced," is a misconceived attempt to shift the burden of proof to Alstom in respect of OLRTC's claim.

284. OLRTC was clearly aware of issues with respect to the HSDR system for at least several months prior to the commencement of the arbitration and as evidenced by its Redfern request, which resulted in the production of approximately 500 documents. While it could not have been aware that Alstom would withdraw the spotters several months later, it had ample opportunity to file evidence with respect to the problems with the system. Regrettably, Dr. Oakley's evidence on this issue is "too little, too late."

285. As a result, OLRTC has not discharged the burden of proof in support of this claim, and it is dismissed.

Is Alstom entitled to damages for delay, prolongation, or acceleration?

286. Alstom asserts a claim for prolongation costs of $9,473,436 and relies primarily on the expert analysis of Mr. Meyers with respect to the critical path and Mr. Stigler's assessment of the daily rate for extended duration. OLRTC opposes this claim, first on the basis that Alstom did not follow the comprehensive process for seeking a Variation and extension of time in respect of its alleged prolongation costs.

287. While I have previously concluded that Alstom was not obliged to seek a Variation or an extension of time in order to obtain relief in respect of the Milestone dates and Delay LDs, I agree with OLRTC that it was required to follow the contractually stipulated procedure to assert a claim for delay, prolongation, or acceleration costs. It did not do so. On that ground alone, the claim must fail.

288. OLRTC also challenges the claim on the basis of its total reliance on Mr. Stigler's expert analysis of the claimed damages in the absence of any reliable fact witness evidence in relation to this claim. For example, Mr. Stigler relied on "time-related costs" information and instructions from Mr. Mordret in certain respects, but OLRTC notes that Mr. Mordret did not give any dependable evidence in support of the analysis. OLRTC says that Mr. Stigler was an advocate for Alstom, not an independent expert, and that he included certain costs in his assessment simply because he was instructed to do so.

289. Moreover, Mr. Mordret had no first-hand knowledge with respect to this head of damages and admitted that most of the information was provided to him by Thomas Demachy, Alstom's production manager, who did not himself provide a witness statement, even though he continues to be employed by Alstom. Mr. Mordret's lack of personal knowledge made it impossible for OLRTC to test the damages claimed.

290. While I will not go so far as to label Mr. Stigler an "advocate" for Alstom, it is my view that his analysis, in many respects, lacked the degree of rigour and circumspection that I would have expected in support of a claim for nearly $9.5 million. For the aforementioned reasons, this claim is dismissed.

Is Alstom entitled to damages for additional work or Direct Losses, as claimed?

291. In addition to its claim for unpaid invoices, Alstom asserts six claims for additional work or Direct Losses, as summarized in the following chart:

Thales CBTC Modification	$1,663,668
Additional SPICO Testing	$207,840
Configuration 1 Changes	$644,604
P25 Radio	$490,306
Damage to LRVs	$1,326,825
Design & Styling Changes	$1,931,973

292. In its post-hearing written submissions, OLRTC rejects each of the above-noted claims. It begins with a review of the claims process in the Subcontract which requires the issuance of a Variation Certificate, either at the initiation of OLRTC, in the case of a Construction Contractor Variation, or by Alstom, with respect to a Subcontractor Variation. OLRTC says that Variation Certificates were not issued with respect to any of the extra work claims and, for three of the six extra work claims, Alstom never even issued a Variation Report or sought a Subcontractor Variation.

293. OLRTC also cites Alstom's failure to initiate a dispute under section 14.9 of the Subcontract. I note, however, that section 14.9 only deals with disputes in respect of Construction Contractor Variations and does not appear to have any applicability to Subcontractor Variations under sections 14.13 to 14.15. The Subcontract does not appear to specifically provide recourse to the dispute resolution provisions where OLRTC refuses to issue a Variation Certificate in respect of a Subcontractor Variation.

294. On the other hand, the dispute resolution process in Appendix I of the Subcontract is not restricted to disputes surrounding Variations or any other specific kind of claim but, rather, refers to "all disputes, controversies, or claims arising out of or relating to any provision of this Subcontract, or the alleged wrongful exercise or failure to exercise by a Party of a discretionary power given to that Party under this Subcontract….". It goes on to provide that, if the parties are unable to resolve a dispute amicably after making *bona fide* efforts, either party can issue a Notice of Subcontract Dispute setting out the

particulars of the matter in dispute and describing the remedy or resolution sought by the Party issuing the Notice of Subcontract Dispute.

295. Appendix I also includes provisions for a Fast Track Subcontract Dispute Resolution Procedure for situations where the dispute relates to a matter that may reasonably be expected to have an adverse impact on the schedule. Finally, section 7.1 of the Appendix obliges both parties to carry out their respective obligations pending the resolution of any disputes pursuant to the procedures outlined therein.

296. Alstom maintains that there is no time limit for submitting disputes pursuant to these procedures and that it did, ultimately, issue a Notice of Dispute with respect to the claims herein, ultimately leading to this arbitration. OLRTC says that waiting two or three years to properly assert a claim is too long.

297. With respect to the CBTC Interface Modification claim, OLRTC acknowledges that Alstom did submit a Preliminary Variation report in January and again in September 2016 and that both reports were rejected by OLRTC on the basis that the changes contained in the reports were known to Alstom in late 2014 and should have been incorporated into Alstom's design. Accordingly, no Variation Certificate was issued, and Alstom performed the work at its own risk. OLRTC says that Alstom waived its right to pursue a dispute in respect of this matter, because it waited more than two years after the rejection of its Variation.

298. OLRTC goes on to challenge the claim on the merits. While there can be no doubt that the Thales's specifications were not frozen by April 26, 2013, OLRTC says that Alstom has not met the burden of demonstrating that the subsequent modifications entitle it to compensation, because Alstom knew about the changes to the third version of Thales's interface control document ("ICD") as early as July 2014, but simply failed to incorporate the changes into its own design. Had it done so, it would not have needed to retrofit the LRVs. It then reviews the circumstances related to the ongoing dialogue between the parties concerning this issue.

299. It notes that Alstom made a tactical choice to use the old version of Thales's ICD, unless OLRTC guaranteed compensation for the changes in Revision 3. It claims that Alstom did not incorporate items agreed to and memorialized in minutes following a workshop to discuss these and related issues in November 2014. When Alstom later submitted a Variation Report in 2016, OLRTC responded with a point-by-point refutation in respect of the 14 alleged items that Alstom claimed were Variations. OLRTC says that Alstom has not demonstrated that the items included in the Variation Reports constitute Variations or that all 14 items were, in fact, implemented as part of the retrofits.

300. OLRTC challenges Mr. Stigler's assessment of the damages in connection with this claim, for reasons already discussed. In particular, it notes inconsistencies between Mr. Stigler's analysis of work performed by Mr. Boucaut in respect of this issue to the effect that $102,000 of costs were incurred for work done in 2016 and 2017, but which fact was contradicted by Mr. Mordret's sworn evidence that Mr. Boucaut only worked on the CBTC system in 2017. It notes Mr. Stigler's acknowledgement in cross-examination that he was "instructed" to assume that Mr. Boucaut was working on the modifications during all of this time. Similarly, Mr. Stigler's conclusion that Alstom's labour for this work started in early 2017, which he quantified at more than $800,000, conflicts with Mr. Lacaze's evidence that this work only began in May 2017.

301. OLRTC says that Mr. Stigler stepped out of his role as an independent expert and coached Alstom on how it could improve or bolster its claims, rather than applying a critical eye to the analysis of the records provided to him. By way of example, it notes that Mr. Stigler asked Alstom to provide a witness statement from Mr. Boucaut to confirm that he performed the work within the stated time periods. Although Alstom did not submit the requested witness statement, Mr. Stigler nonetheless confirmed the full amount of the costs for this individual's work.

302. With respect to the claim for additional SPICO Testing, OLRTC says that Alstom failed to submit a Variation Report in respect of this testing and never provided it with an estimate of the costs associated with the additional work. Accordingly, Alstom never

received a Variation Certificate. Moreover, Alstom did not provide any direct evidence from personnel who perform the tests to verify which of the SPICO tests were performed.

303. Again, OLRTC challenges Mr. Stigler's assessment of this claim, insofar as he quantified Mr. Thompson's time spent on this task, even though it was coded in the manufacturing report in a manner that he was told pertained to retrofits.

304. OLRTC similarly disputes the Configuration 1 Retrofits Claim for retrofits implemented in 2018. Again, OLRTC says that Alstom failed to submit a Variation Report and, accordingly, never received a Variation Certificate and is, therefore, disentitled from receiving any compensation for this claim. It also challenges the evidence with respect to what constituted these changes in that Alstom's witnesses refer to them as Thales retrofits, but Jacques Bergeron deposed that the retrofits were not all Thales modifications and included P25 radio modifications, which may overlap with the outstanding Equivalent Claim.

305. Again, OLRTC also challenges the reliability of Mr. Mordret's evidence with respect to this claim insofar as he deposed that they are contained in job cost reports and post-June 2017 manufacturing hours reports, but that it is impossible to determine in those reports, which record thousands of transactions, what costs relate to those retrofits. Mr. Mordred's witness statement is the only statement that refers to the costs associated with this claim.

306. With respect to the substantial claim for damages caused to the LRVs arising out of 32 separate incidents which occurred during train moves at various locations, OLRTC says that these claims fail as a result of Alstom's inability to discharge its evidentiary burden. The only evidence in support of these claims submitted in this arbitration were letters appended to Mr. Bouteloup's witness statement describing the incident. Mr. Bouteloup admitted that he did not have any personal knowledge of the incidents and, in many cases, did not write the letters himself. OLRTC says that Alstom simply has not proven that the incidents were caused by OLRTC.

307. Dealing with these four claims as a group, while I have no doubt that Alstom may have incurred some additional costs with respect to each enumerated claim, in my view, the evidence falls short of meeting the burden of proof on a balance of probabilities and they must, therefore, be dismissed. Moreover, the evidence of Mr. Mordret did not persuade me that he had any real ability to reliably allocate costs in respect of these claims and, as already noted, I found the level of in-depth analysis by Mr. Stigler to be wanting.

308. I suspect that, if Alstom had properly assembled and preserved all of the necessary evidentiary documentation and first-hand witness accounts on a timely basis when the various claims occurred and submitted them pursuant to individual Notices of Dispute at that time, including using the Fast Track procedure provided for in Appendix I, it might have been successful in recovering some of the costs now claimed.

309. Unfortunately, letters indicating an intention to claim unsupported by full documentation, or Preliminary Variation Reports that are not pursued when rejected, are no substitute for pursuing a claim on a timely basis when first-hand evidence is available and when the claim can be properly responded to by the opposing party. Claims pursued years after the fact and largely supported by second- and third-hand evidence not only provide an unreliable basis for relief, but are unfair to the opposing party who, with the passage of time, may be unable to effectively respond, having lost the opportunity to preserve its own contradictory evidence, through lost documents, changes in personnel, or simply as a result of faded memories.

310. This leaves the P25 Radio and Design & Styling Changes claims, both of which are Equivalent Claims submitted by OLRTC to the City and which are still outstanding. Although OLRTC challenges each of these claims on the merits, its principal objection with respect to each is that it is not liable to compensate Alstom for any amount greater than what it receives under the provisions of the Project Agreement. Moreover, OLRTC relies on section 2.1 and 2.2 of Appendix I, which read:

> 2.1 Where any Subcontract Dispute relates to the same matter or is otherwise related to, or has issues in common with, a dispute between

> Project Co and the City, such Subcontract Dispute shall be referred to the Dispute Resolution Procedure in the Project Agreement, and the Construction Contractor and Subcontractor shall stay any and all proceedings commenced pursuant to the Subcontract Dispute Resolution Procedure with respect to such Subcontract Dispute and participate in proceedings referred to the Dispute Resolution Procedure in the Project Agreement, and the Subcontractor and the Construction Contractor shall comply with such requirement and be bound by any decision or determination made under the Dispute Resolution Procedure in the Project Agreement.
>
> 2.2 With respect to any Subcontract Dispute which gives rise to an Equivalent Claim, the Parties shall proceed in accordance with the applicable provisions of Clause 9 and not in accordance with the Subcontract Dispute Resolution Procedure. The foregoing sentence shall be without prejudice to the Parties' rights to refer matters to the Subcontract Dispute Resolution Procedure in relation to Equivalent Claims where the applicable provisions of Clause 9 include a right to do so.

311. Since these Equivalent Claims are still outstanding, OLRTC says that they must be stayed for the time being, and that I have no jurisdiction to deal with them. Based on my reading of the applicable portions of section 9 of the Subcontract, Alstom may have recourse to the Subcontract Dispute Resolution Procedure, if any amount received from the City does not separately identify each of OLRTC's and Alstom's respective entitlement and the parties cannot otherwise agree.

312. Section 9.9.7, however, preserves Alstom's rights to access the Subcontract Dispute Resolution Procedure to the extent that they "arise from or as a result of any failure on the part of the Construction Contractor to comply with its obligations to the Subcontractor under this Subcontract. Alstom complains that OLRTC has breached the provisions of section 9.9.1(d)(i) and (ii) by failing to include Alstom in meetings between OLRTC and RTG or the City at which the Equivalent Claims were discussed and by failing to consult with and use reasonable efforts to agree with Alstom with respect to the appointment of counsel and other third-party advisors. Accordingly, Alstom says that OLRTC can no longer rely on the stay provisions in Appendix I.

313. While I do not agree that any failure on the part of OLRTC to comply with section 9.9.1(d)(i) and (ii) of the Subcontract overrides the stay provisions in Appendix I, I do find

that it is within my jurisdiction to compel OLRTC to comply with those provisions to the extent still possible, pending the final resolution of the Equivalent Claims, all without prejudice to Alstom's right to later rely on any failure of OLRTC to do so from the outset in any subsequent proceeding, should the need arise, and I so order.

Is Alstom entitled to be paid its outstanding invoices, with interest?

314. OLRTC's claim for set-off in respect of the MDL items is disallowed. I accept Alstom submissions that this set-off was neither pleaded nor proven. None of OLRTC's witnesses led any evidence about the cost to correct any alleged defective work, and the claim is based on items outstanding as of September 2019. Even if I could consider this set-off claim, I have no evidence whatsoever with respect to the value of any outstanding items as at the date of the hearing or at present. I also agree that, given that the matter was not pleaded, either originally or by way of amendment, I have no jurisdiction to deal with it.

315. As a result of the above-noted findings, Alstom's claim for unpaid invoices in the amount of $30,799,428 ($30,799,947 - $519), plus HST of $4,003,925.64, for a total of $34,803,353.64 is awarded.

316. Alstom claims interest of $1,372,855 at the default interest rate on the outstanding invoices to July 19, 2020. This calculation is based on Mr. Stigler's Exhibit A to his first report. In paragraph 42 of that report, Mr. Stigler indicates that he quantified the interest due for each invoice by multiplying the outstanding invoice balance, including HST, by the Daily Default Interest Rate (without compounding).

317. I agree with OLRTC's submission that interest should not be charged on HST. There is no evidence that Alstom has paid any HST with respect to the outstanding amounts, and awarding interest on HST would, therefore, constitute a windfall.

318. Accordingly, interest will have to be recalculated to July 19, 2020, plus further interest from that date to the date of payment at the stipulated Daily Default Interest Rate. If the parties are unable to resolve the amount of interest payable to the date of payment, each party may send me its respective calculation together with an explanation of the

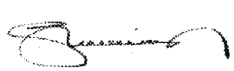
methodology used, and I will resolve the issue. If submissions in this regard are necessary, they should be provided following the same schedule as cost submissions, as set out below.

Costs

319. As requested, I have received but not yet reviewed bills of costs from each party. OLRTC was unsuccessful with respect to its claims in its Subcontract Notice of Arbitration. Alstom achieved significant but not complete success with respect to the claims in its Subcontract Notice of Arbitration. In my view, this is an appropriate case for me to invite submissions with respect to costs, if the parties are unable to resolve the matter on their own. This is also a case where it would be most useful to have cost submissions submitted sequentially. Accordingly, Alstom may deliver it submissions, not to exceed 15 pages, on or before the close of business on January 22, 2021, and OLRTC may deliver responding submissions, again not to exceed 15 pages, on or before the close of business on February 5, 2021. Alstom may deliver any brief reply submissions, not to exceed five pages, on or before the close of business on February 12, 2021.

Closing

320. In closing, I would like to thank counsel for both their exceptional professionalism and their extraordinary efforts in presenting an extremely complex case made all the more difficult by the need to conduct the entire evidentiary hearing by videoconference, due to the ongoing pandemic. Regardless of the result obtained, both parties have every reason to be grateful to their respective legal teams for the thorough and comprehensive manner with which their positions were presented, as do I for the courtesy shown to me throughout.



Stephen Richard Morrison,
LL.B., C. Med, C.Arb, FCIArb
Arbitrator

Date: December 30, 2020
Toronto, Ontario