

SCHEDULE 7

MOBILITY MATTERS

1. DEFINITIONS

Any capitalized term not defined in this Schedule 7 shall have the meaning given to such term in the Project Agreement. In this Schedule 7, the following definitions shall have the following meanings:

- 1.1 “**Aggregate Actual Lane Closures**” or “**AALC**” means the actual number of Lane Closures, measured in hours per hour type (“Peak,” Off Peak,” and “Night”).
- 1.2 “**Aggregate Actual Lane Closures Cost**” or “**AALCC**” means the total cost of Lane Closures.
- 1.3 “**Aggregate Target Lane Closures**” or “**ATLC**” means the total target Lane Closures, which,
 - (a) are set forth in the Lane Closure Target Letter; and
 - (b) include and account for all requirements of Schedule 15 - Output Specifications.
- 1.4 “**Aggregate Target Lane Closure Cost**” or “**ATLCC**” means the total cost of the target Lane Closures, as set forth in the Lane Closure Target Letter submitted by Project Co at Commercial Close and which has been accepted by the City.
- 1.5 “**Arterial**” has the meaning given in the City of Ottawa’s Road Classification System (City of Ottawa).
- 1.6 “**Blocks**” are the physical units upon which Lane Closure Costs are to be calculated for the purposes of this Schedule 7, and,
 - (a) for any streets proposed to be occupied by Project Co are delineated between two adjacent intersections, irrespective of whether the intersections are signalized or unsignalized.

For clarity, a laneway opening shall not constitute an intersection for the purposes of this Section 1.6.

- 1.7 “**Carleton University Roadways**” meaning roadways under the ownership and operations of Carleton University
- 1.8 “**Collector**” has the meaning given in the City of Ottawa’s Road Classification System (City of Ottawa).
- 1.9 “**Federal Roadways**” means roadways under the ownership and operation of the Federal Government and Ottawa International Airport Authority (OIAA).
- 1.10 “**High Cost Measures**” means, in respect of a Milestone period, discrete Lane Closure saving measures that incur capital expenditure greater than [REDACTED]% of the discrete Lane Closure savings cost.

- 1.11 **“Lane Closure” or “Lane Closures** “means any restriction or closure of a lane in any Block, as a result of Works, to bus or vehicular traffic or parking and loading between two intersecting streets, including tapers with the exception of where an equivalent facility to the one that has been closed has been provided in accordance with Section 1.11(c). All partial restrictions or closures within any Block will be considered as a full Lane Closure. Lane Closures will be measured on a per Block, per hour basis. **“Peak”** means Monday through Friday between the hours of 0630h – 0930h, or 1500h – 1830h. **“Night”** means the hours between 2200h – 0500h. **“Off Peak”** means all other hours not defined as “Peak” or “Night”. Lane Closures will no longer be in effect once Substantial Completion has been achieved:
- (a) lanes that have limited openings such as “local traffic only” shall be considered not available for use for the purpose of this Section 1.11; and
 - (b) any restriction or closure of a lane that is solely as a result of a Utility Company carrying out activities with respect to its own New Utility Company Infrastructure following the Handover of the applicable New Utility Company Infrastructure to such Utility Company shall be deemed not to constitute a Lane Closure or contribute to any Lane Closure for the purposes of this Schedule 7.
 - (c) where the traffic management associated with a lane closure provides an equivalent facility to the one closed with respect to a) traffic level of service, b) truck level of service, c) transit level of service, d) lane width, e) posted speed, and f) on-road cycling facilities, such a lane closure shall not be considered a “Lane Closure” for the purposes of this Schedule 7.
- 1.12 **“Lane Closure Adjustment” or “LCA”** means the deduction which may be made by The City from Project Co (which amount will be deducted from the Substantial Completion Payment) as calculated pursuant to Section 5.
- 1.13 **“Lane Closure Analysis Report”** has the meaning given to it in Section 2.2.
- 1.14 **“Lane Closure Measurement and Verification Plan”** has the meaning given to it in Section 7.2(j) of Part 7 to Schedule 15-2 – Design and Construction Requirements – Traffic Management and Construction Access of the Project Agreement.
- 1.15 **“Lane Closure Target Letter”** means the letter set out in Appendix D.
- 1.16 **“Left Turn Lane Closure”** means any restriction of an exclusive left turn lane within the Road Sections, of Arterial or Collector road classification, at the Site, such that the lane is not available for use by the public due to the Works. For clarity, lanes that have limited openings such as “local traffic only” shall be considered not available for use by the public for the purposes of this Section 1.16.
- 1.17 **“Local”** has the meaning given in City of Ottawa’s Road Classification System (City of Ottawa).
- 1.18 **“Arterial”** has the meaning given in the City of Ottawa’s Road Classification System (City of Ottawa).
- 1.19 **“Major Collector”** has the meaning given in the City of Ottawa’s Road Classification System (City of Ottawa).

- 1.20 “**Mobility Matters Review Meeting**” has the meaning given in Section 3.7.
- 1.21 “**Monthly Lane Closure Adjustment Contribution**” means the value for any given month that shall contribute to the Lane Closure Adjustment as calculated pursuant to Section 5.
- 1.22 “**Peak Hour Lane Interruptions**” means unplanned interruptions to the operation of roadway lanes, excluding BRT lanes, during Peak periods by either an unplanned event or a planned event exceeding the time restrictions granted. For further clarity Peak Hour Lane Interruptions would only be for interruptions caused by the actions of Project Co or their subcontractors.. Peak Hour Lane Interruptions as defined above are not included in AALC.
- 1.23 “**Right Turn Lane Closure**” means any restriction of an exclusive right turn lane within the Road Sections, of Arterial or Collector road classification, at the Site, such that it is not available for use by the public due to the Works. For clarity, lanes that have limited openings such as “local traffic only” shall be considered “not available for use by the public” for the purposes of this Section 1.23.
- 1.24 “**Road Sections**” means the defined portions of the Site where Works are to be undertaken in which the Unit Rate Prices for Lane Closure are to be applied for any Lane Closure, Left Turn Lane Closure or Right Turn Lane Closure. Each of the Road Sections has a Unit Price structure for Lane Closure costs per Block, defined in Appendix B to this Schedule, and based on the City’s roadway classification. Any portion of an individual roadway requiring Lane Closures shall be considered a Road Section. A Road Section can be a single isolated block, or a continuous stretch of adjacent blocks having the same roadway classification.. The Road Sections are delineated as follows:
- (a) Road Section 1 – Leitrim Road-Albion Road to Bowesville Road;
 - (b) Road Section 2 - Lester Road –Albion Road to Alert Road ;
 - (c) Road Section 3 – Hunt Club Road – Mac Street to McCarthy Road ;
 - (d) Road Section 4 – Uplands Drive – Breadner Blvd to Alert Road;
 - (e) Road Section 5 - Airport Parkway – Hunt Club Road to Lester Road/Uplands Drive;
 - (f) Road Section 6 – Earl Armstrong Road – Bowesville Road to High Road;
 - (g) Road Section 7 – Bowesville Road – Leitrim Road to Ficko Crescent;
 - (h) Road Section 8 - Carleton University Roadways;
 - (i) Road Section 9 – Federal Roadways (Ottawa International Airport); and
 - (j) Project Co shall include any additional Road Sections not identified in this Schedule 7, where Project Co identified lane closures requirements.
- 1.25 “**Traffic and Transit Management Plan**” or “**TTMP**” means the plan for the manner in which traffic and transit will be managed during construction activities and the method used to determine the magnitude of the impacts.

1.26 “**Unit Rate Price**” for each Lane Closure, Left Turn Lane Closure or Right Turn Lane Closure means the prices for each Block of each Road Section, and for each type of lane, as set out in Appendix B. The prices are hourly rates.

2. CONTENT AND FORMAT OF THE LANE CLOSURE ANALYSIS REPORT

2.1 Project Co shall quantify its projected occupation of lanes on City roadways on the basis of the formulae and procedures contained in this Schedule 7. Project Co shall monitor its occupation of the lanes on a monthly basis.

2.2 Project Co shall deliver to the City a report summarizing the findings of AALC (the “**Lane Closure Analysis Report**”), on a monthly basis, no later than 5 Business Days after the end of each month.

2.3 Project Co shall include copies of all documents to fully support the Lane Closure Analysis Report.

2.4 The Lane Closure Analysis Report shall, at a minimum, include the following information for the relevant month:

- (a) using the template shown in Appendix A to this Schedule, a summary of target and actual Lane Closures by Road Section and breakdown by road classification (Arterial, Major Collector, Collector, Local), location, time, date and duration, indicating Weekday Peak, Weekday Off Peak or Night/Weekend, including any exceptional changes forecasted for the upcoming monthly period (being changes of plus or minus [REDACTED] %);
- (b) projected Lane Closures for the remaining duration of the Construction Period along with trends and potential risks associated with these Lane Closures;
- (c) accurate and precise data in support of the items set out in Sections 2.4(a) and 2.4(b);
- (d) presentation of AALC and the AALCC for the applicable month, and on a cumulative basis as of the applicable month;
- (e) establishment of a basis for continued monitoring of Lane Closures and adjustments to the AALC;
- (f) outline of any outstanding issues from any previous Lane Closure Analysis Reports and mitigating strategies to address those issues;
- (g) adjustments to the ATLC and the ATLCC for the applicable month, and on a cumulative basis as of the applicable month;
- (h) Project Co’s estimate of the Monthly Lane Closure Adjustment Contribution;
- (i) measurement and verification of lane closures in accordance with Lane Closure Measurements and Verification Plan in Section 3.6; and
- (j) summary tables from all previous Lane Closure Analysis Reports delivered by Project Co to the City.

2.5 Following the review of the final Lane Closure Analysis Report by the City Representative, the data set out in the Lane Closure Analysis Report will be used by the City to determine the Monthly Lane Closure Adjustment Contribution.

3. PROCEDURES FOR DETERMINING MONTHLY LANE CLOSURE ADJUSTMENT CONTRIBUTIONS

3.1 The City shall not consider the following closures of lanes to be Lane Closures for the purposes of this Schedule 7, and such closures of lanes shall not contribute to the Monthly Lane Closure Adjustment Contribution:

(a) where an existing lane width is less than the minimum lane width requirements during construction, specified in Schedule 15-2 Part 7 Table 7-1.3, maintaining the lane as open for traffic operations at its existing width.

3.2 Project Co shall not use lane configurations that will remain after Substantial Completion to determine Lane Closures. For clarity, the lane configuration of each roadway as of Financial Close shall be the configuration used to calculate Lane Closures.

3.3 The City shall assess Project Co for the cost of Lane Closures based on the total Lane Closures that occur during Peak, Off Peak, and Night hours. All Lane Closures shall be included in the calculation of the Monthly Lane Closure Adjustment Contribution as provided in Section 5.

3.4 The ATLC shall form the benchmark for calculating the Lane Closure cost with respect to the AALC. The AALCC shall be used to calculate the Monthly Lane Closure Adjustment Contribution. The Lane Closure Target shall not be amended, altered or adjusted except by the process described in Section 4.

3.5 No later than 30 calendar days prior to the first Lane Closure, Project Co shall deliver to the City the initial Traffic and Transit Management Plan (TTMP). Following the acceptance of the initial TTMP by the City, Project Co shall submit all subsequent proposed changes to the TTMP to the City in accordance with Schedule 10 – Review Procedure. Project Co shall deliver to the City the Traffic Control Plans that address the Lane Closure(s) associated with the initial areas of the Site at which it plans to commence Works as part of the initial TTMP submission.

3.6 No later than 30 days prior to the initial Lane Closure within any Road Section, Project Co shall provide The City with a Lane Closure Measurement and Verification Plan. All subsequent Lane Closure Analysis Reports are to be based on this plan.

3.7 No later than 5 Business Days following the submission of the Lane Closure Analysis Report (or as agreed to between the Parties), Project Co and the City shall convene a review meeting (the “**Mobility Matters Review Meeting**”) to be attended by the Project Co Representative and the City Representative. At the Mobility Matters Review Meeting, Project Co shall present the Lane Closure Analysis Report to the City. The City and Project Co shall discuss the Aggregate Actual Lane Closure for the preceding period as well as review any proposed “equivalent facilities” as described in Section 1.10(c). Project Co’s measurement and verification of Lane Closure(s) shall be reviewed and confirmed by the City Representative.

3.8 Project Co shall assist the City Representative by providing information with respect to Lane Closures and access to the Lane Closure records, and by other means as may reasonably be

required to confirm the information in the Lane Closure Analysis Report. The City shall promptly give Notice to Project Co of the details of any disagreement with respect to all or any aspect of the Lane Closure Analysis Report, and the Parties shall then seek to agree to any matters in dispute. The process shall be as follows:

- (a) AALC and AALCC shall be determined at the Mobility Matters Review Meeting.
 - (b) No later than 20 Business Days following each Mobility Matters Review Meeting, or within such period as may be otherwise agreed between the City Representative and the Project Co Representative, acting reasonably:
 - (i) The City shall confirm their acceptance of all or any aspect of the Lane Closure Analysis Report; and
 - (ii) Subject to Section 4, Project Co and the City shall agree to any adjustments to the ATLC and ATLCC.
 - (c) If the City dispute Project Co's estimate of the Monthly Lane Closure Adjustment Contribution in the Lane Closure Analysis Report, the City shall, no later than 10 Business Days following receipt of the Lane Closure Analysis Report, or within such other period as may be agreed by the City Representative and Project Co, acting reasonably, submit an account to Project Co setting out their calculations and justifying the quantification of Project Co's estimate of the Monthly Lane Closure Adjustment Contribution. If either Project Co or the City wish to dispute any account presented pursuant this Section 3.8(c), they must do so by written Notice to the other Party no later than ten Business Days following receipt of such account. The City Representative and the Project Co Representative shall use reasonable efforts to resolve the dispute for an additional ten Business Days. If there is no agreement within a further 10 Business Days, then either Party may refer the matter to the Dispute Resolution Procedure.
 - (d) If neither Party objects in accordance with Section 3.8(c), or, following final determination of the disputed account in accordance with Section 3.8(c), Project Co shall use the relevant Monthly Lane Closure Adjustment Contribution to determine the Lane Closure Adjustment. The Lane Closure Adjustment shall be shown as a separate item within the invoice for the Substantial Completion Payment.
- 3.9 For the purpose of calculating the Lane Closure Adjustment, the calculation shall be completed 60 days prior to the Scheduled Substantial Completion Date (or at a later date as mutually agreed to by the City Representative and Project Co), comparing the total AALCC of each Road Section for the entire Construction Period to the total ALTCC for that same Road Section for the entire Construction Period. If, subsequent to this calculation being completed, there is a change to the Scheduled Substantial Completion Date, Project Co shall amend their Lane Closure Target (in accordance with Section 4) and the Lane Closure Adjustment. For clarity, over-performance of any one Road Section cannot be added to underperformance of any other.
- 4. PROCESS FOR AMENDING THE AGGREGATE TARGET LANE CLOSURE AND ASSOCIATED COST**
- 4.1 In all cases, corrections to the ATLC and ATLCC must be consistent with the principles outlined in the TTMP.

- 4.2 Project Co and the City shall, acting reasonably, agree to make any adjustments to the ATLC, ATLCC, AALC and AALCC, but only in the event of changes implemented due to an amendment of the Project Agreement or a Variation that would cause Lane Closure changes. The City, at its discretion, may allow a revision to the Target Letters to reflect an agreed-upon change in the project schedule, in the absence of an amendment of the Project Agreement or a Variation.
- 4.3 The Party requesting an amendment to the ATLC in accordance with Section 4.2 shall initiate a Variation in accordance with Schedule 21 – Variation Procedure. The amended TTMP shall include a detailed analysis of the impacts to traffic and transit services, including an analysis of Lane Closure requirements. The amended TTMP shall include a recommendation regarding amendments to the ATLC. Both the City and Project Co shall agree to the amended ATLC no later than 20 Business Days following receipt of amended TTMP. If there is no agreement within a further 10 Business Day period, then either Party may refer the matter to the Dispute Resolution Procedure.

5. CALCULATION OF MONTHLY LANE CLOSURE ADJUSTMENT CONTRIBUTION AND LANE CLOSURE ADJUSTMENT

5.1 Comparing Aggregate Actual Lane Closures Costs to Aggregate Target Lane Closure Costs:

- (a) After the acceptance of the final Lane Closure Analysis Report described in Section 0 and no later than 30 Business Days before the Scheduled Substantial Completion Date, Project Co shall compare the total AALCC for each Road Section to the total ATLCC for each Road Section, and if the AALCC is more than [REDACTED]% greater than the ATLCC, for any Road Section, then Project Co shall calculate the Monthly Lane Closure Adjustment Contribution set out in Section 5.2 and deduct the amount of the Lane Closure Adjustment from the Substantial Completion Payment to be made in accordance with the Project Agreement. For clarity, the Lane Closure Adjustment deduction from the Substantial Completion Payment shall not be subject to the limitations set out in Section 55.4 of the Project Agreement.
- (b) If the AALCC is greater than [REDACTED]% of the ATLCC for any monthly period for any Road Section, then Project Co shall submit a detailed remediation plan no later than 10 Business Days following the end of the month to explain how it will reduce the AALCC for the Road Section in subsequent period(s), such that the variance will not exceed the [REDACTED]% for the subsequent periods. Project Co shall present progress and achievements of the remediation plan at subsequent Mobility Matters Review Meeting(s).

5.2 The formulae to calculate the Monthly Lane Closure Adjustment Contribution are set out in this Section 5.2.

- (a) For the purposes of Section 5.2(b), in respect of each Road Section:
- A = the AALCC for each Road Section in the relevant month
- B = the ATLCC for each Road Section in the relevant month

- (b) In respect of any given month during the period leading up to Substantial Completion for each Road Section:
 - (i) If [REDACTED], then Monthly Lane Closure Adjustment Contribution = [REDACTED];
 - (ii) If [REDACTED], then Monthly Lane Closure Adjustment Contribution = [REDACTED];
 - (iii) If [REDACTED], then Monthly Lane Closure Adjustment Contribution = \$[REDACTED];
 - (iv) if the sum of all Monthly Lane Closure Adjustment Contributions in each month prior to Substantial Completion <\$[REDACTED], then Lane Closure Adjustment for that Road Section = \$[REDACTED]; and
 - (v) if the sum of all Monthly Lane Closure Adjustment Contributions in each month prior to Substantial Completion >\$[REDACTED], then Lane Closure Adjustment for that Road Section = the sum of all Monthly Lane Closure Adjustment Contributions in each month prior to Substantial Completion.

5.3 For the purposes of calculating the Lane Closure Adjustment in accordance with this Schedule 7, the Parties shall have regard to Sections 38.2(k) and 42.2(e) of the Project Agreement.

6. PEAK HOUR LANE INTERRUPTIONS

6.1 The City will assess Project Co for Peak Hour Lane Interruptions in accordance with Table 6.1 for the following non-performance measures per lane that is not open.

Table 6.1

ROAD CLASSIFICATION* INCLUDING TRANSIT ROUTES AND LANES	Initial value to be assessed if lane is not open as required	Additional value to be assessed at the end of each additional 10 minute period that the lane is not open.
Federal Roadways	\$[REDACTED]	\$[REDACTED]
Federal Roadways with Transit	\$[REDACTED]	\$[REDACTED]
Carleton University Roadways	\$[REDACTED]	\$[REDACTED]
Carleton University Roadways with Transit	\$[REDACTED]	\$[REDACTED]
Arterial	\$[REDACTED]	\$[REDACTED]
Arterial with Transit	\$[REDACTED]	\$[REDACTED]
Major Collector	\$[REDACTED]	\$[REDACTED]
Major Collector with Transit	\$[REDACTED]	\$[REDACTED]
Collector	\$[REDACTED]	\$[REDACTED]
Collector with Transit	\$[REDACTED]	\$[REDACTED]
Transit Only Lane	\$[REDACTED]	\$[REDACTED]

* See the following link for City Road Classifications: <http://ottawa.ca/en/city-hall/planning-and-development/official-plan-and-master-plans/official-plan/volume-1-official-11>

6.2 Any time assessed in the cost associated with Peak Hour Lane Interruptions will not be included in calculations of Lane Closure Adjustments.

6.3 The City shall assess Project Co for the cost of Peak Hour Lane Interruptions. All Peak Hour Lane Interruptions shall be formulated into a Monthly Peak Hour Lane Interruption Report to be submitted by Project Co with the Lane Closure Analysis Report.

6.4 Project Co shall calculate the cost of Peak Hour Lane Interruptions and the City shall deduct this amount from the next Construction Period Payment or Substantial Completion Payment, as applicable, following the most recent Monthly Peak Hour Lane Interruption Report in accordance with Schedule 20 – Construction Period Payments.

7. APPLICATION

7.1 The Lane Closure provisions of this Schedule 7 will no longer be in effect once Substantial Completion has been achieved.

APPENDIX A

LANE CLOSURE REPORT SUBMITTAL REQUIREMENTS

Total Lane Closure Summary	Lane Closure Unit Rate	Lane Closure Target		Actual Lane Closures		Percent Variance between columns v and iii of this table	Monthly Lane Closure Adjustment Contribution
	Unit Rate based on roadway classification and time of day	Number of Target Closures	Cost of Lane Closure for monthly period (calculated based on number of closures multiplied by Unit Price Rate, multiplied by number of hours)	Usage	Cost of Lane Closures for monthly period (calculated based on number of closures multiplied by Unit Price Rate, multiplied by number of hours)		
Column reference	i	ii	iii	iv	v	vi	vii
Road Section 1 Peak							
Road Section 1 Off Peak							
Road Section 1 Night							
<i>Sub-total: Road Section 1</i>							
Road Section 2 Peak							
Road Section 2 Off Peak							
Road Section 2 Night							
<i>Subtotal: Road</i>							

<i>Section 2</i>							
Road Section 3 Peak							
Road Section 3 Off Peak							
Road Section 3 Night							
<i>Subtotal:-Road Section 3</i>							
Road Section 4 Peak							
Road Section 4 Off Peak							
Road Section 4 Night							
<i>Subtotal: Road Section 4</i>							
Road Section 5 Peak							
Road Section 5 Off Peak							
Road Section 5 Night							
<i>Subtotal: Road Section 5</i>							
Road Section 6 Peak							
Road Section 6 Off Peak							
Road Section 6 Night							
<i>Subtotal: Road</i>							

<i>Section 6</i>							
Road Section 7 Peak							
Road Section 7 Off Peak							
Road Section 7 Night							
<i>Subtotal: Road Section 7</i>							
Road Section 8 Peak							
Road Section 8 Off Peak							
Road Section 8 Night							
<i>Subtotal: Road Section 8</i>							
Road Section 9 Peak							
Road Section 9 Off Peak							
Road Section 9 Night							
<i>Subtotal: Road Section 9</i>							
Substantial Completion Weekday Peak							
Substantial Completion Weekday Off Peak							

Substantial Completion Night/Weekend							
<i>Total: Substantial Completion</i>							

APPENDIX B

UNIT RATES FOR EACH LANE CLOSURE, LEFT TURN LANE CLOSURE AND RIGHT TURN LANE CLOSURE

1. UNIT RATE PRICES FOR LANE CLOSURES (Price per Hour per Block)

	Unit Rates (\$)		
	Peak *	Off Peak **	Night ***
Arterial			
Major Collector / Carleton University Roadways			
Collector / Federal Roadways (Ottawa Internation al Airport) / Local Roadways			

* As defined in Section 1.11

** As defined in Section 1.11

*** As defined in Section 1.11

UNIT RATES FOR EACH LANE CLOSURE, LEFT TURN LANE CLOSURE AND RIGHT TURN LANE CLOSURE

APPENDIX C

LANE CLOSURE COSTING BLOCK DELINEATION ALONG CITY, FEDERAL AND CARLETON UNIVERSITY ROADWAYS

ROAD SECTION	BLOCK	Roadway Classification	BLOCK DELINEATION
Road Section 1 – Leitrim Road-Albion Road to Bowesville Road	1-A	Arterial	Albion Road to Gilligan Road
	1-B	Arterial	Gilligan Road to Bowesville Road
Road Section 2 – Lester Road –Albion Road to Alert Road	2-A	Arterial	Albion Road to Alert Road
Road Section 3 – Hunt Club Road – Mac Street to McCarthy Road	3-A	Arterial	Mac Street to Transitway
	3-B	Arterial	Transitway to Airport Parkway Ramps east of Airport Parkway
	3-C	Arterial	Airport Parkway Ramps east of Airport Parkway to Airport Parkway Ramps west of Airport Parkway
	3-D	Arterial	Airport Parkway Ramps west of Airport Parkway to McCarthy Road
Road Section 4 – Uplands Drive – Breadner Blvd to Airport Parkway	4-A	Collector	Breadner Blvd to north road entrance to EY Centre
	4-B	Collector	North road entrance to EY Centre to Research Road
	4-C	Arterial	Research Road to Airport Parkway Off Ramp
	4-D	Arterial	Airport Parkway Off Ramp to Alert Road
Road Section 5 – Airport Parkway – Hunt Club Road to Lester Road/Uplands Drive	5-A	Arterial	Hunt Club Road to Lester Road/Uplands Drive
Road Section 6 – Earl Armstrong Road – Bowesville Road to High Road	6-A	Arterial	Limebank Road to Bowesville Road
	6-B	Local	Bowesville Road to High Road
Road Section 7 – Bowesville Road – Leitrim Road to Ficko Crescent	7-A	Collector	Leitrim Road to Earl Armstrong Road
	7-B	Local	Earl Armstrong Road to Ficko Crescent
Roadway Section 8- Carleton University Roadways	8-A	Major Collector	University Drive North to Library Road
Campus Avenue – University Drive N to University Drive South	8-B	Major Collector	Library Road to University Drive West

ROAD SECTION	BLOCK	Roadway Classification	BLOCK DELINEATION
	8-C	Major Collector	University Drive West to University Drive East
Road Section 9 – Federal Roadways (OIAA) 9A Canadair Private –Kiowa Private to Silver Star Private 9B Tracker Private –Silver Star Private to Airport Parkway Private 9C Airport Parkway Private – Tracker Private to Airport 2 Avenue	9-A	Collector	Canadair Private -Kiowa Private to Silver Star Private
	9-B	Collector	Tracker Private –Silver Star Private to Airport Parkway Private
	9-C	Collector	Airport Parkway Private – Tracker Private to Airport 2 Avenue

APPENDIX D
LANE CLOSURE TARGET LETTER

[Attached]

March 20, 2019

Attention: [REDACTED]
Norton Rose Fulbright Canada LLP
45 O'Connor Street, Suite 1500
Ottawa, ON
K1P 1A4

Canada

Re: Trillium Line Extension Project - Lane Closure Target Letter

Dear Sir/Madam:

As per the requirements of Schedule 3, Part 1, TransitNEXT is pleased to provide this Lane Closure Target Letter as part of our technical and financial submission for the Trillium Line Extension Project (the Project). This letter adheres to the requirements of Schedule 3, Part 1 of this RFP.

Primary Traffic and Transit Management Plan (TTMP) Features and Construction Management Plans

We have explored construction staging options that will minimize lane closures, traffic impacts, and associated costs by adopting the following approaches. We will:

- Design structural elements as far from traffic as practical
- Use construction methodologies that allow the shortest occupancy of traffic lanes
- Schedule just-in-time material deliveries during off-peak hours when feasible
- Schedule major-impact construction on weekends or during off-peak hours
- Maximize progress during shutdown periods for trains and airport roads
- Provide detours where possible

By designing all bridge structures as rail-over-road, construction interference will be minimized compared to the road over rail method. This will simplify the required traffic control requirements, lowering the impact on traffic, and consequently reducing the number of lane closures required to complete the project. This also de-risks the project with respect to potential delays and safety hazards.

The traffic impact zones in this project are mostly localized to structure sites on the alignment of the proposed track extension. Because of the physical separation between sites, there will be no traffic interference between adjacent sites; hence, individual sites should have their own TTMPs. Based on our proposed construction staging approach, the individual TTMP sites are listed below:

- Rail-over-road structure at Transitway for the Ellwood Diamond grade separation
- Hunt Club Road rail-over-road and MUP bridge structures
- Lester Road rail-over-road and MUP bridge structures
- Leitrim Road rail-over-road and MUP bridge structures
- Earl Armstrong Road rail-over-road and MUP bridge structures and Earl Armstrong/Bowesville Road intersection reconfiguration
- Bowesville Road rail-over-road bridge structure
- Uplands Road rail-over-road bridge structure
- Airport Road rail-over-road bridge structure
- Airport elevated guideway adjacent to Airport Station
- Limebank Road rail-over-road bridge structure

Target Lane Closure Estimate Process including Software and Calculations Used

From our preliminary TTMPs of each site and stage of this Project, TransitNEXT has extracted the Total Target Lane Closures with respect to sections and prices as defined in PA Schedule 7 - Mobility Matters, and RFP Schedule 8 - Price Form. Using several macro-enabled spreadsheets with linkages to construction dates, we estimated the Aggregate Target Lane Closure Cost (ATLCC) to be \$[REDACTED]. The ATLC values estimated include closures for lanes, left turns and right turns. We will update these closures according to any change of dates in the construction schedule, enabling the monthly Aggregate Target Lane Closure summaries to be calculated.

During execution of the Project, TransitNEXT will use this same tool for lane closure tracking, allowing monthly Aggregate Actual Lane Closures (AALC) summaries and Monthly Lane Closure Adjustment Contributions to be made.

Variation between TTMP and Aggregate Target Lane Closure

The Traffic Control Plans (TCPs) in each site-specific TTMP submission will depict the lane closures specific to each stage of construction on the individual site. We will also summarize these in the Lane Closure Measurement and Verification Plan as part of each site-specific TTMP submission. The ATLCs derived from these TCPs do not include the closures required for the following short duration tasks as their locations are unknown at this phase of the Project. However, the necessity for these is foreseeable and may or may not cause variation between the AALCCs and ATLCs. These activities may include:

- Additional site investigations
- Closed-circuit television installation as required by the City for monitoring a construction site
- Deficiency rectification
- Emergency safety mitigations
- Changes in construction schedule
- Any work delay caused by third parties not affiliated with TransitNEXT

Sincerely,

TransitNEXT