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**SCHEDULE 15-2  
DESIGN AND CONSTRUCTION**

**PART 7  
DESIGN AND CONSTRUCTION REQUIREMENTS – TRAFFIC AND TRANSIT  
MANAGEMENT AND CONSTRUCTION ACCESS**

**ARTICLE 1      GENERAL TRAFFIC      AND      TRANSIT      MANAGEMENT  
REQUIREMENTS**

**1.1      Order of Precedence**

- (a) Project Co's Traffic and Transit Management Plan and traffic control operations shall comply with the criteria contained in this Part 7, and all standards, regulations, policies, Applicable Law, guidelines or practices applicable to the Project, including but not limited to each of the following Reference Documents. In the event of a conflict between the criteria, commitments or requirements contained within one document when compared with another, the more stringent shall apply:
- (i) OC Transpo Transitway and Station Design Guidelines;
  - (ii) City of Ottawa Transportation Master Plan;
  - (iii) City of Ottawa Road Corridor Planning & Design Guidelines, Urban & Village Collectors / Rural Arterials & Collectors;
  - (iv) Region of Ottawa-Carleton Regional Road Corridor Design Guidelines, July 2000, Region of Ottawa-Carleton;
  - (v) City of Ottawa Right of way Lighting Policy;
  - (vi) City of Ottawa Pedestrian Plan;
  - (vii) City of Ottawa Cycling Plan;
  - (viii) City of Ottawa Traffic and Parking By-Laws;
  - (ix) The City of Ottawa, Department of Public Works and Environmental Services, Infrastructure Services Branch, Standard tender documents for Unit Price Contracts (Volume No.1- Construction Specifications; Volume No. 2 - Materials Specifications & Standard Detail Drawings);
  - (x) City of Ottawa Area Traffic Management Principles and Guidelines;
  - (xi) City of Ottawa Emergency Management Plan;

- (xii) City of Ottawa Maintenance and Quality Standards for Roads, Sidewalks and Pathways
- (xiii) Geometric Design Guide for Canadian Roads (TAC);
- (xiv) Urban Supplement to the Geometric Design Guidelines for Canadian Roadways (TAC);
- (xv) Guidelines for the Design of Roadway Lighting (TAC);
- (xvi) Turning Vehicle Templates (TAC);
- (xvii) Geometric Design Standards for Ontario Highways (MTO);
- (xviii) City of Ottawa Transportation Impact Assessment Guidelines;
- (xix) City of Ottawa Delivery Standards for CADD Drawing Files;
- (xx) Roadside Safety Manual (MTO);
- (xxi) Ontario Traffic Manuals;
- (xxii) Ontario Provincial Standards Specifications and Standard Drawings (OPSS and OPSD);
- (xxiii) Accessibility for Ontarians with Disabilities Act (AODA);
- (xxiv) Ottawa Accessibility Design Standards;
- (xxv) City of Ottawa Operation Policy, Procedures and Guidelines;
- (xxvi) City Operating Policy and Procedures;
- (xxvii) City of Ottawa Park and Pathway Development Manual;
- (xxviii) Multi-Modal Level of Service (MMLOS) Guidelines;
- (xxix) NCHRP Report 280 Work Zone Practices – Table 3: General Guidelines on Vehicle Capacity Through Work Zones;
- (xxx) Other relevant MTO Policy, Procedures and Guidelines;
- (xxxi) Bikeways Design Manual;
- (xxxii) Guidelines for Reducing Speed Limits in Construction Work Zones;
- (xxxiii) NCC Standard Sign System Manual; and,
- (xxxiv) OC Transpo, Interaction Zone Design Guidelines for Bus Stops and Bike Lanes.

## 1.2 General Requirements

- (a) Project Co shall manage the traffic and transit impacts of the Project and shall develop a TTMP for the Project and work to meet the requirements of this Part 7.
- (b) Project Co shall develop and submit a traffic and transit management strategy and TTMP in accordance with Schedule 10 – Review Procedure that is acceptable to the City. Project Co shall cooperate with the City and OC Transpo with respect to the development of the traffic management strategy.
- (c) Further to the requirements of Schedule 15-2, Part 1, Article 10 – Construction Safety Management, Project Co shall identify in each Site Specific Safety Plan, the safety concerns and mitigation measures associated with each Work Site as pertains to the health and safety of the traveling public, from the perspectives of pedestrians, cyclists, general vehicle traffic, transit traffic and transit customers. Project Co shall include a copy of each relevant Site Specific Safety Plan as an Annex to the TCP submission in accordance with Schedule 10 – Review Procedure. Project Co shall keep the Site Specific Safety Plan and the TCP current to the changes on Site, and resubmit the TCP accordingly. Project Co shall not proceed with any Work on Site without an accepted TCP which is current to the present-day Site Conditions.
- (d) Project Co shall work closely and in a reasonable manner with the City and OC Transpo, Stakeholders, other City service providers, and the Governmental Authorities so that transit service is maintained during the performance of the construction in terms of travel time and frequency.
- (e) Construction shall be scheduled so that the duration and extent of the proposed Work and traffic control measures minimize the impact to all modes of transportation and adjacent land owners, and shall not prohibit any part of the traveling public prior to receiving the required authorization to do so.
- (f) Project Co shall collect, record, document, and file with the City, the travel times between Existing Trillium Line and Transitway Stations and stops for all bus routes and Facilities, prior to the commencement of any Work activity which would alter bus travel times. Project Co is advised to coordinate their collection of this data in advance with OC Transpo, as OC Transpo may be able to facilitate the collection of the data using their bus tracking system. This information shall be used by Project Co as the baseline travel times for comparison/evaluation of alternate/temporary bus routes. Baseline data shall be validated by the City to ensure that it is representative of normal operations and not affected by other road works.
- (g) All traffic data used for analysis for traffic management purposes shall be based on the most current data and shall be no older than two years. The information to be collected shall include, but not be limited to, all of the hourly traffic volumes and AADTs for all modes of travel on all Roadways, bus Facilities, bike facilities and pedestrian facilities which will be affected by the Project, including any potential detour routes. Project Co shall be responsible for obtaining or collecting all traffic data necessary for its traffic

analysis, if traffic data less than two years old is not relevant to the traffic management analysis due to temporary conditions that existed at the time the data was collected. Project Co shall confirm with the City that the data is appropriate prior to conducting an analysis using said data.

- (h) Project Co shall undertake a traffic management study, if road capacity and LOS is reduced, to determine the impact of the construction on other routes and to determine appropriate mitigation measures. The traffic management study shall involve area wide traffic modeling to determine impacts to all modes of transportation including adjacent corridors impacted by the construction. The study shall include Project Co's forecast for, but not limited to, routes, diverted traffic volumes, speeds, and travel times for all modes of travel on all routes subject to the study. The traffic management study shall be submitted as a part of the TTMP document in accordance with Schedule 10 – Review Procedure.
- (i) The traffic management strategy shall address the impact on residential streets of any diverted traffic through appropriate temporary and permanent traffic calming measures in accordance with City of Ottawa Area Traffic Management Principles and Guidelines, and in consultation with the City along any detoured bus routes.
- (j) The OTM supersedes all reference in this Project Agreement to the Ministry of Transportation MUTCD. The supply and placement of all necessary temporary TCDs shall be performed under the sole direction of Project Co and in accordance with Project Co's submitted/reviewed TTMP and associated TCP, prior to commencing any construction on or adjacent to a City street or provincial highway/freeway. The TCP shall be developed in accordance with guidelines established by the most recent version of the OTM, the OHSA, and this Part 7 which details the required contents and submission of the TTMP and associated TCPs.
- (k) Vehicular and pedestrian/cyclist traffic control within the Project shall remain the sole responsibility of Project Co as the City delegates this authority to Project Co in accordance with the submitted/reviewed TTMP. Notwithstanding the foregoing, Project Co shall, at its own expense, remove any equipment or material, which in the City's opinion, constitute a Hazard to traffic, pedestrians, and cyclists.
- (l) Project Co shall be fully and solely responsible to ensure the development and implementation of a submitted/reviewed TTMP as required in this Part 7. The TTMP, its sub-plans, and all required TCDs shall be designed/installed, monitored, operated/Maintained, and removed, utilizing only competent persons and workers as defined under the OHSA. Project Co shall be responsible for coordination of this Work with the City.
- (m) Project Co shall not store any equipment or materials on a federal, provincial, or municipal road or the Roadway shoulders and, Transitway, Park and Rides, or boulevards, unless the storage areas are identified in the TCP and appropriate TCDs have been implemented to protect the equipment or materials. The City shall review and approve any storage of equipment and/or materials within the Lands. Project Co shall be

- permitted to use temporary closed lanes as a construction laydown and staging area where temporary lane closures are permitted and approved by the City. Construction shall be scheduled so that the duration and extent of the proposed Work and traffic control measures minimize the impact on the traveling public. Project Co shall remove all dirt and debris from all paved or concrete surfaces outside of the staging area at the close of each workday, and shall be responsible for any repairs or Maintenance associated with the construction activity, to City standards.
- (n) The permitted periods for closures outlined in this Part 7 shall be the basis for the development of the TTMP. Variations to the applicable Permitted Periods for Closures, at specific locations, may be permitted for such specific locations, but only if substantiated through a plan by Project Co that addresses, at a minimum, traffic requirements, analyses, and Stakeholder consultation, where applicable, and such plan is submitted to and accepted by the City in accordance with Schedule 10 – Review Procedure.
- (o) All vehicle, transit, transit customer activity, pedestrian, and cycling data used for analysis for traffic management purposes shall be based on the most current data, and no older than two years with growth factors acceptable to the City. Project Co shall be responsible for obtaining any vehicle, pedestrian, and cycling data necessary for its traffic management analysis where the City does not already have the data or cannot provide the data within Project Co’s required timelines.
- (p) Implementation and removal of any closure, full closures, detour routes, Lane Shifts, and diversions and/or other changes in traffic patterns shall not be permitted outside of the applicable Permitted Periods for Closures as defined in this Part 7 and elsewhere in this Project Agreement. The City may, acting in a reasonable manner, temporarily adjust the applicable permitted periods for any closure in circumstances considered appropriate by the City including but not limited to, holidays, as further addressed in Clause 1.4 - Holidays and Special Events of this Part 7, incidents, and Maintenance.
- (q) The City may direct Project Co, on 7 Business Days advance notice, to eliminate or modify any or all closures and restore free-flow traffic for a 24-hour period on the day of any event other than a holiday, as per this Part 7.
- (r) Project Co shall temporarily cease any relevant construction activities that are affecting traffic and make all the necessary travel lanes available to traffic as quickly as possible, if the City determines that vehicular queues related to closure, full closures, detour routes, Lane Shifts and/or diversions are excessive. For example, where the extent of vehicular queues affect traffic operations such as at intersections or interchanges or the ability of vehicles on a highway mainline to exit at upstream interchange ramps.
- (s) At any time during the Project, the City Representative may, acting in a reasonable manner, temporarily adjust the applicable Permitted Periods for Closures identified in this Part 7, including but not limited to holidays (as further addressed in this Clause), incidents and Maintenance.

- (t) Any proposed Project Co initiated closure, full closures, detour routes, Lane Shifts, and diversions, not included in Project Co's accepted TCP, shall be submitted to the City in an updated TCP in accordance with Schedule 10 - Review Procedure. Project Co shall not proceed with implementation of the closure, full closure, detour, Lane Shift, or diversion without an accepted TCP. Project Co shall not commence any Work on Site without an applicable current accepted TCP.
- (u) All Transitway, bus lanes, municipal Roadway, cycle, and pedestrian facility permanent modifications not specifically described or depicted in the EA for the Project, or specifically referenced or shown in the Project Agreement, require Council approval prior to their construction. Project Co shall provide to the City a RMA report for the proposed modifications in accordance with requirements of the City's Transportation Impact Assessment Guidelines. A sample RMA report has been provided in Appendix A of this Part 7. The RMA shall be submitted to the City in accordance with Schedule 10 - Review Procedure. Project Co shall attend committee and Council meetings with the City, and provide assistance to the City in preparing a presentation for committee and Council, and assisting the City in answering any questions which arise at the meetings. Given that modifications vary in size and complexity, and that committee and Council agendas may become full, Project Co shall confirm with the City regarding the lead time required to have each particular item prepared and placed on a committee agenda for consideration, thence, forwarded to Council agenda for approval and final disposition, and allow for this time in their scheduling of the Works.
- (v) Multiple construction zones that impact each other along existing provincial highways, existing municipal Roadways, existing Transitway, and other affected federal Roadways or routes between them, such that traffic encounters multiple disruptions and/or discontinuity in the lane geometries, shall not be permitted.
- (w) Access to/from construction zones along existing provincial highways, existing Transitway, and existing Major Municipal Roads shall not be permitted outside of the applicable Permitted Periods for Closures, unless separate acceleration and deceleration lanes are provided to/from such construction zones. Acceleration and deceleration lanes shall be designed in accordance with the Reference Documents and Applicable Codes and design standards taking into account all construction vehicle/equipment types.
- (x) Construction vehicles/equipment shall only use accesses to/from construction zones in the same direction of traffic thereby diverging/merging with the flow of traffic, in order to avoid crossing opposing traffic. The City reserves the right to close any access to/from any construction zone that it deems to be unsafe or which constitutes a Hazard to the public.
- (y) There shall be no open excavation adjacent to a lane carrying traffic including cyclists at any time, except where a barrier designed to restrain errant vehicles or cyclists is located between the traffic and the excavation.
- (z) Project Co shall remove materials and construction vehicles/equipment which, in the opinion of the City, constitute a Hazard or sight distance obstruction.



- (aa) Project Co shall be responsible for identifying to the City in advance all Roadways being utilized for haul routes. Project Co shall be responsible for ensuring haul routes are kept clean and free of construction dust and debris. Project Co shall submit a plan for the cleaning of haul routes in accordance with Schedule 10 – Review Procedure. Haul routes shall comply with City’s by-laws for goods movement and use of truck routes.
- (bb) The City shall be granted access to the Work zone to install portable cameras or other devices required for monitoring, audit, public communication, data collection, or other purposes.
- (cc) Project Co shall be responsible for providing, installing, and Maintaining all TCDs and protective devices identified in the approved TTMP.
- (dd) Seasonal Load Restriction Period
  - (i) Project Co shall abide by the City’s SLR period. If Project Co’s schedule requires that an ODV exceeding the half-load limit be used on a non-full load truck route during the SLR period, Project Co shall conduct non-destructive Pavement deflection testing (such as falling weight deflectometer) during the summer prior to the SLR period, and again during the SLR period, and submit the results to the City a minimum of five calendar days prior to the required vehicle movement. The City will not issue an ODV permit during the SLR period without receipt of this data demonstrating that the road can accommodate vehicle loads exceeding the half-load limit.

### **1.3 Accommodation of Transit Services**

- (a) Project Co shall be responsible for liaising and coordinating with all applicable municipal transit agencies for any modifications to bus routes and/or bus stops that may be required due to closures, full closures, detour routes, Lane Shifts, and diversions and/or other changes in traffic patterns.
- (b) Project Co shall maintain access for transit customers to all adjacent existing and temporary Transitway and transit facilities, bus lanes, Transit Priority Lanes, and non-Transitway routes through detours or otherwise as detailed elsewhere in this Part 7 and elsewhere in this Project Agreement, unless exceptions have been approved.
- (c) Project Co shall provide the City and OC Transpo at least 35 calendar days’ notice to coordinate adjustments required to their facilities as a result of construction. Access by buses, pedestrians, and cyclists to all existing bus stops or Platforms located within the Work zone shall be maintained at all times, except where otherwise stated in this Part 7, elsewhere in this Project Agreement, or agreed upon by the City and OC Transpo. Where access cannot be maintained and temporary facilities are required, these facilities shall be comparable to the existing facilities in form/function, to the satisfaction of OC Transpo.
- (d) Proposed modifications to bus routes and/or bus stops shall be submitted in accordance with Schedule 10 – Review Procedure.

- (e) Any relocation of bus stops or shelters shall be preceded with signage prepared and posted by Project Co at the existing bus stops, Station, or Platforms indicating the location of the relocated bus stops, Station or Platforms with advance notification to the public of at least 30 calendar days, subsequent to the review and acceptance of the relocation proposal by the applicable authority. Any relocation of bus stops shall include the provision of appropriate customer or operational facilities or infrastructure including but not limited to: Platforms, shelters, lighting, benches, operator washroom facilities, supervisor facilities, bus lay-up stalls, Station/route/regulatory/wayfinding signage, bike racks, and safety and security systems (i.e. emergency phones and CCTV cameras/stanchions), to City and OC Transpo standards and specifications. Project Co shall be responsible for liaising and coordinating with all applicable municipal transit agencies.
- (f) Project Co shall contact OC Transpo Transit Planning Staff at least 5 Business Days prior to starting construction, where the TTMP has indicated that the proposed Work will interfere with bus or pedestrian access to/from a transit stop, in order to coordinate the temporary relocation of the affected transit stop(s) as may be required.
  - (i) Project Co shall contact OC Transpo Transit Planning Staff at least 20 Business Days prior to the relocation or removal of a bus shelter.
  - (ii) A temporary concrete shelter pad shall be required for the relocation of a bus shelter if the planned duration of Work is longer than 30 calendar days, unless otherwise indicated by OC Transpo staff.

**1.4 Holidays and Special Events**

- (a) Project Co shall comply with the following requirements when scheduling hours of Work or Project Co initiated closures during the holidays identified in Tables 7-1.1 and 7-1.2:
  - (i) Project Co shall not commence the implementation of any closures on any of the holidays, after 12:00 hrs on Fridays or a day proceeding a holiday weekend, and before 12:00 hrs on a day following a holiday or on the first Business Day following a holiday weekend.

**TABLE 7-1.1 – ONTARIO STATUTORY HOLIDAYS**

New Year’s Day	Civic Holiday
Family Day	Labour Day
Good Friday	Thanksgiving Day
Victoria Day	Christmas Day
Canada Day	Boxing Day

**TABLE 7-1.2 – OTHER HOLIDAYS**

Easter Monday	Remembrance Day
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- (b) Project Co shall minimize traffic disruptions on existing provincial highways, existing Major Municipal Roads, existing or detoured Transitway, bus detour routes, federal roads, existing Minor Municipal Roads, and other affected municipal and federal Roadways during special events. Project Co shall be responsible for obtaining a listing of planned special events on an as required basis from the City of Ottawa Events Central Office, the Traffic Management Special Events office, and the NCC, recognizing that the special events calendar is updated by the City and the NCC on a regular basis.

**1.5 Detour Route, Lane Shift, Diversion, Closure, and Construction Requirements**

(a) General

- (i) Project Co shall not implement any closure, detour, Lane Shift, or diversion without an applicable current accepted TTMP and TTMP sub-plans.
- (ii) Project Co shall pave all detour routes, Lane Shifts, and diversions and have appropriate Pavement markings and signs placed in accordance with the OTM, King’s Highway Guide Signing Policy Manual (MTO Roadways), and City of Ottawa Operation Policies, Procedures and Transitway and Station Design Guidelines.
- (iii) Project Co shall be responsible for all Pavement markings and non-regulatory signage on all detour routes, in preparation for the detour and during detour operations.
- (iv) Project Co shall ensure that the Pavement structure and condition of any new, existing, or temporary Roadway, bus lanes, bus detour route, cycling facility, and pedestrian facility used for all detour routes, Lane Shifts, and diversions, including detour routes prescribed by the City, is designed and constructed for its intended purpose in accordance with the requirements set out in Schedule 15-2, Part 2, Clause 6.10 - Pavement, and does not adversely impact the safety and intended function of such detour routes, Lane Shifts, and diversions for all road users of the facilities.
- (v) Project Co shall schedule construction activities such that no milled surface shall remain for more than five calendar days or over weekends. Each milled surface shall have a uniform texture, not be raveled, and not allow standing water on the surface.

- (vi) Project Co shall prepare an engineered design for each detour route, Lane Shift and diversion that shall conform to the Design Criteria requirements in the Reference Documents identified in Clause 1.1 of this Part 7.
- (vii) Project Co shall provide detour routes, Lane Shifts, and diversions with Drainage facilities to prevent standing water and flow of water across the Roadway, bus lanes, cycling facilities, and pedestrian facilities, including bus stops and Platforms.
- (viii) Project Co shall replace all on-street catch basins with curb inlet catch basins, in accordance with City Standards, on transit detour routes where buses will be travelling in the curbside lane.
- (ix) Implementation and removal of any closure, full closures, detour routes, Lane Shifts, and diversions and/or other changes in traffic patterns shall not be permitted outside of the applicable Permitted Periods for Closures.
- (x) Lane closure duration shall be limited to the time required to execute the necessary construction activities. Project Co shall not close a lane for purposes other than actual construction Work, such as but not limited to material and equipment storage, and staff parking, unless approved by the City.
- (xi) Project Co shall maintain access to all adjacent properties through all partial closures, full closures, detour routes, Lane Shifts, and diversions.
- (xii) Detour routes, Lane Shifts, and diversion requirements and any modifications thereto, shall be submitted in accordance with Schedule 10 – Review Procedure. The Work Submittal shall in addition include modifications to the various TTMP sub-plans as applicable.
- (xiii) All Project related closures associated with traffic of any kind shall be the responsibility of Project Co, as well as any associated requirements for traffic control (such as, but not limited to, signage, temporary Pavement markings, line painting, TCD, barriers, flag persons, point duty police, etc.). Closures and their ancillary requirements shall be submitted in accordance with Schedule 10 – Review Procedure.
- (xiv) Project Co shall prepare and submit Record Drawings to the City in accordance with the requirements of Schedule 15-2, Part 1, Article 15 – Record Drawings where new traffic signals, temporary traffic signals or modifications are being made to existing traffic signals, within 30 calendar days of signal activation.
- (xv) All closures, detour routes, Lane Shifts, and diversions shall be identified and included in Schedule 7 – Mobility Matters.
- (xvi) Project Co shall have independent Road Safety Audits and Road Safety Design Reviews completed for any temporary or permanent Roadway, Roadway detour,

Transitway, or Transitway detour, in accordance with the criteria set out in Schedule 15-2, Part 2, Article 6 – Roadways, Bus Terminals, and Lay-Bys.

- (xvii) Project Co shall reinstate to original condition, unless otherwise indicated elsewhere in the documents, and at Project Co expense, all Lands, Roadways, MUPs and assets affected by the implementation of the Trillium Line Extension
- (b) Traffic Control Devices
- (i) Project Co shall supply, install, and Maintain PVMS as required to supplement the TCP and shall use the same to provide advance notification and advance warning of traffic pattern changes and other operational changes for traffic and/or transit. Sign locations and messages shall be as shown in the TTMP which shall be submitted to the City in accordance with Schedule 10 – Review Procedure. The City retains the right to require Project Co to provide additional PVMS in support of the TCP.
- (ii) Project Co shall provide PVMS(s) to provide advance notification and advance warning of incidents as deemed necessary by the Emergency Traffic Plan. Sign messages and the duration that the PVMS is deployed and displayed shall be submitted to the City for acceptance prior to being implemented, and the TTMP shall be updated to record the messages which were used.
- (iii) PVMS signs shall meet the following requirements:
- A. Be capable of displaying a sequence of up to 6 panels;
  - B. Each display panel shall be capable of displaying up to three lines;
  - C. Each line of text shall accommodate up to 12 characters; and,
  - D. Messages shall be legible from 50 to 300m.
- (iv) Project Co shall utilize bilingual messages on all PVMS signs and message boards.
- (c) Traffic Counting Equipment
- (i) Project Co shall be responsible for the replacement of any counting loops or any other traffic counting equipment negatively impacted or damaged by the construction Work.
- (d) Temporary Barrier Requirements
- (i) Project Co shall supply and install temporary barriers based on the requirements of the OTM, OHSA, and the Roadside Safety Manual.

- (ii) Project Co shall show the temporary barriers in the TCP which shall be submitted in accordance with Schedule 10 – Review Procedure.
  - (iii) Temporary barriers used for closures, full closures, detour routes, Lane Shifts, and diversions, including those along the Transitway, shall meet the OPSS and have appropriate flare offsets, end treatments, and crash cushions. Temporary barriers shall have reflectors installed. Project Co shall make adequate provision for Drainage and removal of snow, ice, and debris where temporary barriers are used.
  - (iv) Project Co shall install anti-glare screens, on or adjacent to barriers, in order to avoid driver distraction and headlight glare in locations adjacent to existing provincial highways, existing Major Municipal Roads, existing Transitway, existing Minor Municipal Roads and other affected municipal, provincial and federal Roadways. Anti-glare screen requirements shall also be applicable during construction in these areas, and driver protection shall be provided. Project Co shall submit the documentation and product samples proposed for anti-glare screens in accordance with Schedule 10 – Review Procedure.
- (e) Signage
- (i) Project Co shall be responsible for the design supply, installation, relocation, Maintenance, and removal of all temporary signage and Pavement markings, including warning, guide, advisory, and directional signs in accordance with this Part 7, Schedule 15-2, Part 2 - Civil and Guideway, and City Special Provision D-005.
  - (ii) Project Co shall provide all temporary signage in accordance with the City, OTM and MTO standards. The location, size and type of each sign shall be indicated on the TCP.
  - (iii) Project Co shall supply and install bilingual signs, with translations accepted by the City.
  - (iv) There shall be no temporary signage placed between the bullnose of an off-ramp and the bullnose of a downstream on-ramp with the exceptions noted below:
    - A. Wa-33LR Object Marker Sign;
    - B. Wa-132 Ramp Speed km/h Sign;
    - C. Wa-109 Chevron;
    - D. Post-mounted Delineators;
    - E. Wa-175 Truck Overturning Sign & Wa-32t km/h tab Sign; and,
    - F. G.f-104 Ground Mounted Exit Sign.

- (v) Project Co shall prepare and submit as a part of the TTMP sub-plans a temporary signing plan and a temporary signing table a minimum of 30 calendar days prior to the implementation of the plan. The temporary signing table shall include, but, not be limited to information detailing sign location (station of final location, removal location, and on which side of the road to be installed in relation to the direction of travel), height to bottom of sign, lateral offset to post #1, support type with dimensions, alpha-numeric sign code with dimensions, and the message/description.
- (vi) Project Co shall be responsible during construction to identify to the City any requirements to remove, install, or modify any necessary regulatory signage due to the requirements of the TCP sub-plan. Project Co shall notify the City 14 calendar days prior to requiring any modifications of signage. Project Co and the City shall provide and install regulatory signage in accordance with their respective responsibilities per this Part 7, Schedule 15-2, Part 2 - Civil and Guideway, and City of Ottawa Special Provision D-005
- (vii) Project Co shall be responsible to install and remove all necessary construction signage for any proposed detour routes. Project Co shall notify the City a minimum of 14 calendar days in advance of the requirement for the detour.
  - A. Six months advance notice shall be required when an extended Existing Trillium Line detour is required.
  - B. 20 Business Days shall be required where a detour requires bus shelter relocation.
- (viii) After the completion of construction, the City will provide and install all required regulatory signage.
- (ix) Project information signage will be provided by the City. Project Co shall install Project information signage at locations designated by the City.
- (x) Project Co shall be responsible for contacting the appropriate City representative to confirm, in writing, the official municipal road names as well as Civic Address Signs (911 Identification Numbers and signing) requirements, and incorporate such signs in the permanent and temporary Pavement and signing design drawings. The location, size, and type of each sign shall be also indicated on Project Co's TCP.
  - A. Project Co shall ensure that the above noted signs are in place at all times.
  - B. Temporary relocation due to construction operations shall be permitted but the address numbers shall be in the proximity of the entrance and be made visible throughout the duration of construction.
  - C. Project Co shall replace any damaged signs immediately.

- (xi) The temporary signing plan and temporary signing table shall be submitted to the City in accordance with Schedule 10 - Review Procedure 30 calendar days prior to implementation of the plan.
- (f) Temporary Lighting During Construction
  - (i) Project Co shall be responsible for all temporary street light relocation.
  - (ii) All existing lighting in each staging phase shall be maintained in operational order to applicable standards during construction on the relevant construction phase until such time as replacement temporary or permanent lighting is energized.
  - (iii) Temporary illumination shall be provided to applicable standards for the roads to accommodate traffic detours and diversions in accordance with City of Ottawa's Right of Way Lighting Policy Guidelines and standards, the OPSS 601.
  - (iv) Project Co shall ensure existing street light levels are maintained at all times. Where existing lighting needs to be removed as part of the Work, Project Co shall install replacement temporary lighting until such time as the new permanent lighting is energized.
- (g) Pavement Drop-Offs
  - (i) Project Co shall perform all construction activities so as to minimize any drop-offs (abrupt changes in Roadway elevation) left exposed to traffic, pedestrians and cyclists during non-working hours. Work shall be performed in accordance with Schedule 15-2, Part 2 - Civil and Guideway. Drop-offs left exposed to traffic, pedestrians, and cyclists during non-working hours shall be delineated as follows:
    - A. Drop-offs up to 40mm may remain exposed with appropriate TCDs alerting motorists of the condition. However, no drop-offs shall be allowed between adjacent lanes of traffic;
    - B. Drop-offs greater than 40mm that are in the Roadway or shoulder shall be delineated with appropriate TCDs and further delineated as described in Clauses C and D below;
    - C. Drop-offs greater than 40mm shall be protected based on the OHS/CCOHS requirements;
    - D. Ramping shall be provided for vehicular traffic at a slope of 10:1 if the elevation difference, where unavoidable.
      - i. The provisions for temporary ramping shall also meet the requirements of OPSS 313.



- ii. Project Co shall ensure that adequate and positive Drainage is maintained along and across the Roadway at all times and during all construction stages.
      - iii. Temporary ramp downs of the longitudinal joint shall not be permitted between travel lanes in the same direction. Transverse and longitudinal ramp downs shall not form part of the permanent Pavement, and shall be cut back to its full depth and width on a straight line to expose a vertical face prior to placing the adjacent lane.
    - E. All transverse edge drops located on roads utilized by transit shall be ramped at a slope of 10:1.
  - (ii) All areas of excavation near areas of traffic and their proposed safety measures shall be shown in the TTMP.
  - (iii) All Work shall meet AODA requirements at all times.
- (h) Pavement markings, symbols and devices
  - (i) Project Co shall be responsible for the execution of all Pavement markings and symbols in accordance with this Part 7, and Schedule 15-2, Part 2 - Civil and Guideway.
  - (ii) Project Co shall be responsible for the installation, application, Maintenance, and removal of all temporary Pavement markings, symbols, Roadway Pavement markers, channelizing devices, barricades, reflective devices, etc., in accordance with the OTM, and all of which shall be specified and detailed in the TTMP which shall be submitted to the City in accordance with Schedule 10 – Review Procedure.
  - (iii) Project Co shall eradicate all redundant temporary or permanent Pavement markings that are not required for the intended traffic pattern when traffic lanes will be redefined for a duration of more than an Intermittent Period.
    - A. Eradication of Pavement markings shall be in accordance with City of Ottawa Special Provision D-005, such that removal of Pavement markings, when necessary, shall be by means of asphalt grinding, sandblasting, soda blasting, or some other form of mechanical removal and not by the use of black paint.
    - B. On arterial roads the City may specify that soda blasting be the means of Pavement marking eradication, in the event that clear Pavement marking visibility is seen to be essential to the safe operation of the Roadway.
  - (iv) Temporary Pavement markings materials shall be in accordance with OPSS 710, and shall be specified and detailed in the TTMP.

- (v) Project Co shall apply all temporary Pavement markings in accordance with OPSS 710, the accepted Signing and Pavement markings drawings, and the closure, detour route, Lane Shift, and diversion drawings as submitted to the City in accordance with Schedule 10 – Review Procedure.
- (i) Speed limits and safe passage through Project Site
  - (i) The City reserves the right to determine speed limits through the Project Site. Unless specified in this Part 7 or agreed to in writing by the City, the existing regulatory speed limits shall be maintained.
  - (ii) Speed limits on all existing provincial highways, existing Major Municipal Roads, existing Transitway, Minor Municipal Roads, and other affected municipal, provincial, and federal Roadways shall remain unchanged outside of construction zones. Project Co shall prepare the necessary designation of MTO construction zone forms, (PH-M-101), if Work occurs on a provincial highway, and submit them to the Governmental Authority.
  - (iii) Construction activities on all existing provincial highways, existing Major Municipal Roads, existing Transitway, Minor Municipal Roads, and other affected municipal and federal Roadways shall maintain the following lane widths at all times during construction activities, unless specified elsewhere in this Part 7 or in Schedule 15-2, Part 2 – Civil and Guideway:

**Table 7-1.3**

	Speed Limit = 50 km/h or less		Speed Limit = greater than 50 km/h	
	Not Shared	Shared Lane*	Not Shared	Shared Lane*
General Traffic	3.0 m	3.75 m	3.2 m	3.75 m
Truck Route	3.2 m	3.75 m	3.5 m	3.75 m
Transit Operating in Lane	3.65 m	4.0 m	3.65 m	4.0 m
Lateral Offsets between Traffic and Temporary Barriers	0.25 m		0.50 m	

\* Shared lanes are all right-most traffic lanes that are not adjacent to an on-road cycling facility.

\*\*Where bus only lanes are constructed and physically separated from other roadways (i.e. Transitway), a 1m wide Maintenance strip shall be provided on the outside of each lane, in addition to the standard minimum lane width

- (iv) Floodlighting used to illuminate areas of the Work during construction shall be adjusted so as to not interfere with the vision of drivers on the affected or opposing lane, and also so as to not be directed towards residences or businesses

near the construction zone. Project Co shall design floodlighting in accordance with Schedule 15-2, Part 2, Article 6 – Roadways, Bus Terminals and Lay-bys.

- (v) All street lighting design and performance shall be in accordance with Schedule 15-2, Part 2, Article 6 – Roadways, Bus Terminals and Lay-bys.
- (j) Maintenance of closures, detours, diversions, Lane Shifts, pathways, and sidewalks
  - (i) Project Co shall keep existing Roadways open to traffic, and Project Co shall be responsible for providing and Maintaining a road through the Work for the duration of the Work, whether along an existing Roadway, including the road under construction, or on detours, diversions, or Lane Shifts.
  - (ii) Project Co shall Maintain and repair closures, detours, diversions, Lane Shifts, pathways and sidewalks and their appurtenances, which are built as permanent infrastructure, as per the Maintenance provisions set out in this Part 7 for temporary infrastructure until such time as they are turned over to the City and accepted by the City.
  - (iii) Project Co shall be responsible for all aspects of Maintenance and repair for all temporary closures, detours, diversions, Lane Shifts, pathways, and sidewalks and their appurtenances throughout their duration of use.
  - (iv) Project Co shall execute the Maintenance services on temporary infrastructure, including Platforms, pathways, and sidewalks throughout its duration of use:
    - A. in accordance with Applicable Law and Good Industry Practice;
    - B. in accordance with the accepted TTMP;
    - C. to ensure that the condition of the Project Co temporary infrastructure is sufficient to meet the design, construction, and operational requirements for the intended use; and
    - D. in coordination with the City, so as to permit the City to operate City infrastructure, while minimizing any adverse impact on third parties.
  - (v) Project Co shall convene a meeting with the City, including but not limited to, City Road Services Department and City Traffic Services Department, in order to coordinate Maintenance activities at the interface between existing City infrastructure and the Project Co temporary or permanent infrastructure, prior to putting a piece of temporary or permanent transportation infrastructure into service. Project Co shall take minutes of the meeting and distribute the documented proceedings and conclusions to the participants.
  - (vi) On the first Monday after Thanksgiving each year, Project Co shall convene a meeting with the City, including but not limited to, City Road Services Department and City Traffic Services Department, to discuss “winter readiness”,

so that all parties know their respective roles prior to a sudden onset of winter weather. Project Co shall take minutes of the meeting and distribute the documented proceedings and conclusions to the participants.

- A. The City shall be responsible for winter Maintenance on all public roads, including bus detour routes, as per the City of Ottawa Maintenance and Quality Standards for Roads, Sidewalks and Pathways. Project Co shall be responsible for winter Maintenance at locations where construction conditions do not allow for the City to provide this Maintenance without changing their means/methods;
- B. Project Co shall be responsible for the winter Maintenance of any construction Roadways or accesses to construction Sites.
- C. Project Co shall provide to the City a map indicating the Project Co contact person for each construction Site.

#### **1.6 Accommodation of Pedestrians and Cyclists During Construction**

- (a) Project Co shall not close or relocate any pedestrian walkway without a TTMP that has been accepted by the City. The TTMP and TCP sub-plans shall identify any pedestrian walkway closure, relocation, and alternate route in accordance with Schedule 10 - Review Procedure, complete with a detailed explanation of why the pedestrian walkway is required to be closed or relocated and the signs which shall be installed as a part of the closure or relocation.
- (b) All pedestrian and cyclist accommodations during construction shall be in accordance with Schedule 15-2, Part 6 – Urban Design, Landscape Architecture and Connectivity Requirements.
- (c) Project Co shall identify all school crossings within a detour route, Lane Shift or diversion, and determine appropriate measures to maintain safe and efficient operation of the crossings as may be affected by increased vehicle traffic on the detour, Lane Shift, or diversion.
- (d) Project Co shall ensure that pedestrian access at and approaching intersections is maintained at all times at least on one side to accommodate the north-south and east-west crossings, and extending to the adjacent intersections.
- (e) Project Co shall ensure that pedestrian access at least on one side across any Bridge structures is maintained at all times, and extend to the nearest intersection.
- (f) Project Co shall install a TC-68 “Bike Lane Closed” at a location where cyclists can safely merge with traffic, and provide the following signage should it be necessary to close a bike lane or cycle track:
  - (i) For lane widths greater than 4m: a WC-19 and WC-19S “Car and Bike Share the Road”; and

- (ii) For lane widths 4m or less: a WC- 24 and WC-24T “Shared Use Lane Single File”.
- (g) Project Co shall post advanced on-Site notification for any closures or relocation of pedestrian and cycling routes at least 15 Business Days prior to the closure, subsequent to the review and acceptance of the proposed closure by the Governmental Authority. Signage shall indicate the dates and duration of any closure as well as a map of alternative routes available.
- (h) Project Co shall undertake a safety study for situations where a construction access must cross a sidewalk, pathway, MUP or cycling facility, in order to evaluate the potential conflict between pedestrian/cyclist versus construction traffic, and develop appropriate safety measures in order to maintain a safe and efficient crossing at all times. Project Co shall incorporate the safety study and measures into the TTMP, TCPs and the Site Pedestrian Control Plan.
- (i) Detour routes for pedestrians and cyclists shall be designed in accordance with City standards including but not limited to those set out below;
  - (i) The detour route shall be illuminated to at least the level of lighting either direct or indirect, which was in existence on the original sidewalk, pathway, cycling facility, or MUP;
  - (ii) The vertical and horizontal separation from vehicle traffic shall be as per the original sidewalk.

### **1.7 Working within Vicinity of a Traffic Control Signal**

- (a) Project Co shall notify and be responsible for all costs associated with OPS being on duty to control traffic, when Project Co is required to work within 30m of a traffic control signal, and there is a need to control traffic within this area that would contradict the traffic control display. Advanced notice of 48 hours shall be provided to OPS. No traffic control person shall be permitted to direct traffic in this area, nor may they direct traffic from more than one direction at any time. Project Co shall notify the City of this situation prior to OPS contact.
  - (i) Project Co shall provide OPS if the visibility of the signal display will be blocked by equipment, lanes are skewed through the intersection or traffic control persons are required within 30m of a signalized intersection.

### **1.8 Parking and Designated Use Zones**

- (a) Parking regulations on City streets in the vicinity of the construction zone will be enforced and shall be subject to the City’s Parking By-Law.
- (b) Project Co shall designate safe parking areas suitably located so as to facilitate practical Site inspections related to traffic monitoring and, attendance at Project meetings, in the TTMP. These areas shall be for the use of the City for the duration of the construction.

Each parking area shall accommodate a minimum of two vehicles and be reserved for City staff.

- (c) Project Co shall be responsible for identifying in their TCPs any locations where existing parking or designated usage zones will be impacted by its construction activities. Project Co shall develop and submit in conjunction with their TCP submittals, a plan to provide alternative parking location(s) and usage zones, in accordance with Schedule 10 – Review Procedure, for review and acceptance a minimum of 30 calendar days in advance of impacting any parking locations.

### **1.9 Temporary Traffic Control Signals**

- (a) All traffic signal design and performance requirements shall be in accordance with Schedule 15-2, Part 2, Article 6 – Roadways, Bus Terminals, and Lay-bys.
- (b) Where required to complete the Work, the City will supply temporary traffic control signals, for existing and new locations identified in Project Co’s approved TTMP. Following the completion and acceptance of civil and traffic signal designs, Project Co shall contact the City’s designated traffic control signal contact person at least 30 calendar days in advance to arrange for a mutually acceptable date and time to have City forces available to perform the installation, relocation modification, and connection of the traffic control signal.
- (c) Project Co shall complete the related civil Work at least 14 calendar days prior to the date when City forces are available in order for appropriate inspections to occur. Prior to the crew arriving on Site, Project Co shall provide adequate space and time for the Work to be completed.
- (d) Where there is active ongoing construction Work and Project Co personnel are present within an intersection where there are existing traffic control signals to be temporarily modified, or new temporary traffic control signals to be installed, then Project Co shall arrange and pay for OPS paid-duty officers to provide point duty within an intersection while the City modifies or installs the traffic control signals.
- (e) At an intersection where there are existing traffic control signals to be modified temporarily, or there are temporary traffic control signals to be installed, and only City forces will be working at the intersection, then the City will arrange for the OPS services and charge the costs back to Project Co as part of the costs for the signal modifications/installation where Project Co personnel are not present.

### **1.10 Record Keeping of Traffic Control Devices/Collisions**

- (a) Project Co shall maintain accurate records of the traffic controls that are in place within Project Co’s construction Work areas.

- (b) Project Co shall maintain an accurate daily record of the inspection of the traffic accommodations, and provide copies of the information to the City immediately upon request. The daily record shall include the following:
- (i) A semi-weekly video (hand held, dash-cam, etc.) in both or all directions as applicable, such that all portions of the Work are recorded in sufficient detail to accurately see and distinguish/read all of the TCD in place on Site;
  - (ii) Condition and placement including changes, additions, and removals of all TCDs;
  - (iii) Confirmation of compliance with the TTMP and its sub-plans;
  - (iv) All traffic collisions;
  - (v) The dates, times, and content of all messages on all PVMS;
  - (vi) The date and time of lane closures; and
  - (vii) All other information required for accurate reconciliation of the lane closures adjustments pursuant to Schedule 7 - Mobility Matters.

#### **1.11 Traffic Systems Management Provisions**

- (a) Project Co shall be responsible for costs related to City forces to supply and install traffic camera monitoring systems for the Project corridors and Stations, and also any temporary facilities/infrastructure operated during construction. The City shall procure the equipment and provide labour, however, for clarity, Project Co shall reimburse the City for these costs. Project Co shall be responsible for providing power and system connectivity to the specific locations selected by the City. Traffic cameras shall be required within the Project corridors, Stations, and temporary facilities/infrastructure, at the City's discretion, for the purposes of observing traffic flow, with the capability of zooming in for more specific detail where required to monitor a specific incident. The cameras shall be linked into the City of Ottawa Traffic Control Centre for monitoring purposes. Cameras shall comply with City of Ottawa specifications.
- (b) Project Co shall develop and execute a monitoring plan, as per the TTMP, that utilizes new and existing City traffic camera systems that provides full coverage of the Project corridors, Stations, and temporary facilities/infrastructure. Project Co's plan shall include strategically located cameras to achieve this goal. The City will provide Project Co with an inventory of existing City traffic camera coverage within the Project corridors.
- (c) New traffic camera locations shall include, but not be limited to, the following signalized intersections: Bronson Avenue at Holmwood Avenue and Somerset Street at Bayview Road.
- (d) Project Co shall consult with the City to prepare an inventory of the location of existing traffic cameras and ITS devices that will be impacted by road construction. Project Co

shall provide the City with 30 calendar days' notice prior to the impact on the devices and shall work with the City to relocate the devices.

- (i) Project Co shall be responsible for providing a new location and Utility hook ups where required.
- (ii) The City shall be responsible for equipment relocation and connections.

### **1.12 Communications**

- (a) Project Co shall ensure that all communications and stakeholder engagements in relation to the TTMP are in accordance with Schedule 18 – Communications and Stakeholder Engagement Obligations and as further detailed in Clause 1.12 of this Part 7
- (b) Project Co shall be responsible for providing road closure and detour information to the City for the purposes of public notification.
- (c) Project Co shall schedule and attend TTMP meetings and workshops with the City in order to obtain TTMP approvals and with key Stakeholders prior to implementation. The frequency of the meetings shall vary at the City's discretion. Project Co shall record and distribute minutes for these meetings to the City within five Business Days of the meeting, including but not limited to attendance sheets, agenda, record copy of material presented, comments received, issues raised, and the follow up action proposed by Project Co to resolve each issue. Resolution of the issues shall be raised and recorded by Project Co at the regularly scheduled TTMP meetings.
- (d) Project Co shall attend any public meetings that are held prior to detour implementation, and shall be responsible for addressing issues raised at the public meetings in the forum of the technical TTMP meetings.
- (e) Project Co shall provide the City with a process as part of the Communication and Stakeholder Engagement Plan detailed in Schedule 18 – Communications and Stakeholder Engagement Obligations, and a contact person to whom the City can rely on to respond to any stakeholder relations obligations pertaining to traffic management. Issues and the resolutions thereto shall be raised and recorded by Project Co at the regularly scheduled Traffic Management Committee meetings.
- (f) Project Co shall assist the City and attend stakeholder events and stakeholder outreach meetings in relation to the TTMP in accordance with Schedule 18, Part 4 Communications and Stakeholder Engagement Activities. At these events and meetings, Project Co shall explain in terms easily communicated to the public, the process of how the specific segment of the Project will be built, with a focus on an overview of the proposed traffic closures and detours/alternate routes for pedestrians, cyclists, and vehicles, and how the related traffic/transit management staging is proposed to be performed.



- (g) Project Co shall provide design illustrations, display boards, and narratives to the City for the traffic related information such as, traffic volumes, traffic detours/alternate routes, traffic Emergency/contingency plans, collision data, truck routes, construction traffic routes, etc. All material provided shall be dated and include a contact name and contact coordinates (Project Co & City jointly). All materials shall be provided in quantity for distribution in both hard copy and electronically, in both official languages.
- (h) Project Co shall provide timely e-mail content for the City's distribution regarding traffic/transit updates, including major cycling route impacts.
- (i) Project Co shall provide to the City, content for weekly traffic/transit information/forecast updates, for release to the City's website.
- (j) Project Co shall provide a quarterly newsletter reflecting key traffic milestones and forecast traffic events to the City for release to the public.
- (k) Project Co shall provide timely content for social media updates to the City for release on the City's social media accounts so as to inform followers as to quick updates about on-the-ground traffic control implementation.
- (l) Project Co's Director of Communications and Stakeholder Engagement shall be the spokesperson whom the City will contact to address all Project related complaints pertaining to traffic/transit management issues which are reported to the City, unless an alternative spokesperson has been agreed to by the City. The spokesperson shall provide pertinent and timely information to the City in response to the complaint.

## ARTICLE 2            EXISTING MUNICIPAL ROADWAYS

### 2.1      General Requirements – Municipal Roadways

- (a)      Project Co shall not perform any Work on municipal Roadways during the following Peak Periods unless noted as an exception in this Part 7:
  - (i)      Monday to Friday inclusive: 06:30 to 09:30 hrs and 15:00 to 18:30 hrs
- (b)      Project Co shall not close the reserved transit/Transit priority lanes from 06:00 to 18:30 hrs, Monday to Friday.
- (c)      Project Co shall be permitted to partially close portions of Municipal arterial and collector Roadways due to construction activities while always maintaining local traffic access, based on the principle of maintaining at least one lane per direction (or two lanes per direction for segments with three existing lanes in each direction) and sufficient lane widths to accommodate bus travel.
- (d)      Project Co shall schedule intersection disruptions during Off Peak Periods, Night Periods or Weekend Periods only. During those periods, there shall be at least one lane of traffic per street permitted at all times. Flagging shall be required if a single lane of traffic is in operation during construction activities. No active Work shall be performed in an intersection during Peak Periods.
- (e)      Project Co shall develop a sequencing plan to minimize the length of the municipal Roadway that is closed at any one time.

### 2.2      Conditions of Work on Municipal Roadways

- (a)      Project Co shall provide at least 28 Business Days advance notice in the form of an e-mail to the designated City representative for all closures, detours, and diversions.
- (b)      Project Co shall only be permitted to close any existing municipal Roadways for purposes of carrying out Work under this Project after all other safe and reasonable methods of construction have been investigated by Project Co and deemed not to be feasible or practicable.
- (c)      Project Co shall maintain two-way traffic at successive intersections on either side of a closed intersection at times of the closure.
- (d)      Project Co shall maintain a pedestrian sidewalk to the City design standards at all times during the construction. Project Co shall be responsible for all design, approvals, construction, and Maintenance of the sidewalk for the duration of time the detour is in service.
- (e)      Project Co shall not use accesses to/from construction zones, shoulder closures, and the loading and unloading of materials and construction vehicles/equipment to/from the

travelled portion of existing municipal Roadways during Peak Periods on any weekday. Exceptions to this shall be made for the delivery of concrete.

- (f) Project Co shall accommodate all turning movements at intersections at all times, unless specified elsewhere in this Schedule 15-2 – Design and Construction Requirements. This includes all protected auxiliary turn lanes.
- (g) Project Co shall make all travel lanes available during non-work times unless construction Work has rendered them temporarily unsuitable for traffic use, or unless a closure was approved by the City.

### **2.3 Permits from the City of Ottawa**

- (a) Project Co shall follow the approach, with regards to obtaining the relevant permits and approvals, outlined in the City of Ottawa Permits, Business Licenses and Applications – ROW.
- (b) Road Cut Permit
  - (i) Project Co shall obtain a Road Cut Permit prior to the start of Work on any municipal Roadway. The requirements of the Road Cut Permit are outlined in City of Ottawa By-Law — Road Activity By-Law No. 2003-445.
  - (ii) Project Co shall ensure that an application for a Road Cut Permit contains a reference to the Project and shall include the TCP sub-plan (as submitted to and accepted by the City in accordance with Schedule 10 – Review Procedure) with their application. If as a result of the Road Cut Permit approval process the TCP is revised, Project Co shall submit the revised TCP to the City in accordance with Schedule 10 - Review Procedure for re-acceptance and shall update and resubmit the TCP sub-plans to reflect the changes found in the approved Road Cut Permit version of the TCP.
- (c) Road Close Permit
  - (i) Project Co is required to obtain Road Close Permits prior to closing municipal Roadways as specified elsewhere. Project Co shall submit the road closure request forms no later than 4 weeks prior to each closure event.
  - (ii) Project Co shall ensure that an application for Road Close Permit contains a reference to the Project and shall include in their application, the relevant portion of the TTMP as submitted to and accepted by the City in accordance with Schedule 10 – Review Procedure. If as a result of the Road Closed Permit approval process the TCP is revised, Project Co shall submit the revised TCP to the City in accordance with Schedule 10 – Review Procedure for re-acceptance. It shall include the updated TCP and sub-plans to reflect the changes found in the approved Road Close Permit version of the TCP.
- (d) Private Approach Permit

- (i) Project Co shall obtain a Private Approach Permit for any Site access from a municipal Roadway.
  - (ii) Project Co shall ensure that an application for a Private Approach Permit contains a reference to the Project and shall include in their application, the relevant portion of the TTMP as submitted to and accepted by the City in accordance with Schedule 10 – Review Procedure. If as a result of the Private Approach Permit approval process the TTMP is revised, Project Co shall submit the revised TTMP to the City in accordance with Schedule 10 – Review Procedure for re-acceptance. It shall include the updated TTMP and sub-plans to reflect the changes found in the approved Private Approach Permit version of the TTMP.
- (e) OC Transpo Permits
- (i) Project Co shall not carry out any Work on the Existing Trillium Line, the Transitway, or any bus facilities, without completing the Transitway Access Permits and receiving approval from the City, OC Transpo, and Capital Rail.
  - (ii) When an application for an OC Transpo Permit is made for the Project or any portion thereof, Project Co shall ensure that an application for an OC Transpo Permit contains a reference to the Project and shall include in their application, the TCP as submitted to and accepted by the City in accordance with Schedule 10 – Review Procedure. If as a result of the OC Transpo approval process the TCP is revised, Project Co shall submit the revised TCP to the City in accordance with Schedule 10 - Review Procedure for re-acceptance, and shall update and resubmit the TTMP and sub-plans to reflect the changes found in the approved OC Transpo version of the TCP.
    - A. The TCP shall be approved by the City at least 14 calendar days prior to any detour or construction activity that has operational impacts on transit service. If the action is an extended detour or requires a shelter relocation, notification shall be provided as otherwise specified in this Part 7.
    - B. The submission of a TCP does not constitute advance notice, which does not include timelines for potential revisions to the TCP.
- (f) Noise Bylaw Exemption
- (i) Project Co shall apply and obtain an exemption to the City Noise Bylaw if required for evening/night Work. Note: a Noise Bylaw exemption is not required for Work conducted Monday through Saturday between 7:00 and 22:00 hrs and Sunday between 9:00 and 22:00 hrs.

## **2.4 Hunt Club Road (Arterial)**

- (a) Project Co's TTMP and sub-plans shall consider the requirement to maintain traffic and transit operations in this area, providing for the Airport Parkway and South East

Transitway ramps throughout construction, or providing an acceptable alternative. Transit movements between ramps shall be protected for at all times.

- (b) Within the Hunt Club Road corridor, the following constraints shall be followed:
  - (i) No lane reductions on weekdays between 06:00 and 19:00 hrs;
  - (ii) No lane reductions on weekends between 10:00 and 18:00 hrs; and
  - (iii) Maintain a minimum of one lane in each direction during all other times.

## **2.5 Airport Parkway (Arterial)**

- (a) Project Co's TTMP and sub-plans shall consider the requirement to maintain two-way traffic operations at all times. Project Co shall stage the Work through the Work area by constructing Roadway widening and localized detouring that maintains uninterrupted two-way traffic.
- (b) Within the Airport Parkway corridor, the following constraints shall be followed:
  - (i) No lane reductions on weekdays between 06:00 and 19:00 hrs; and,
  - (ii) Maintain a minimum of one lane in each direction during all other times.
- (c) The Airport Parkway is the transportation route that is used for dignitaries visiting Ottawa. The OPS and RCMP may restrict public access to the Airport Parkway during these events. Project Co shall immediately cease all activities and evacuate the Work Site as directed by the OPS and RCMP.
- (d) Project Co shall be permitted to perform full mainline closures for installation of Bridge girders, prefabricated Bridge components, falsework, and overhead electrical wiring installations. The installation over the traveled portion of the Airport Parkway shall require the stoppage of traffic across the full width of the affected traffic lanes. Closure of all lanes shall only be performed as follows:
  - (i) OPS shall be employed to perform the full closures;
  - (ii) The closure shall take place between 02:00 and 05:00 hrs; and
  - (iii) The duration of nightly closures is restricted to fifteen minutes per any 1 hour period or until the end of the traffic queue passes.
- (e) No lane reductions on the Airport Parkway shall be permitted to occur a minimum of three hours prior to, during, or three hours following, an event at the [REDACTED]. Project Co shall coordinate with the [REDACTED] to determine at the scheduled events and adjust their construction schedule accordingly;

- (f) Project Co shall maintain uninterrupted transit access to the Airport Parkway bus stops at all times.

## **2.6 Uplands Drive (Collector)**

- (a) Within the Uplands Drive corridor, the following constraints shall be followed:
  - (i) No lane reductions on weekdays between 06:00 and 19:00 hrs;
  - (ii) No lane reductions on Uplands Drive shall be permitted to occur a minimum of three hours prior to, during, or three hours following, an event at the [REDACTED]. Project Co shall coordinate with the [REDACTED] to determine at the scheduled events and adjust their construction schedule accordingly;
  - (iii) Project Co shall not restrict or reduce lanes for access/egress Roadways into and out of the EY Centre during any event. Project Co shall coordinate with the [REDACTED] to obtain the events listing/schedule;
  - (iv) Project Co shall maintain uninterrupted transit access to the [REDACTED] and Uplands Drive bus stops at all times; and,
  - (v) No lane reductions of Uplands Drive shall be permitted at any time if the interchange ramps at Airport Parkway and Hunt Club Road are closed, or if Airport Parkway is closed at any point south of Hunt Club Road.

## **2.7 Lester Road (Arterial)**

- (a) Within the Lester Road corridor, the following constraints shall be followed:
  - (i) No lane reductions on weekdays between 06:00 and 19:00 hrs; and,
  - (ii) Traffic management plans shall maintain two-way traffic operations at all times. Project Co shall stage the Work through the Work area by constructing Roadway widening and localized detouring that maintains two-way traffic.
- (b) Full mainline closures shall be permitted for installation of Bridge girders, prefabricated Bridge components, falsework, and overhead electrical wiring installations. The installation over the traveled portion of Lester Road shall require the stoppage of traffic across the full width of the affected traffic lanes. Closure of both lanes shall only be performed as follows:
  - (i) OPS shall be employed to perform the full closures;
  - (ii) The closure shall take place between 02:00 and 05:00 hrs; and
  - (iii) The duration of nightly closures is restricted to 15 minutes per any one hour period or until the end of the traffic queue passes.

- (c) No lane reductions on Lester Road shall be permitted to occur a minimum of three hours prior to, during, or three hours following, an event at the [REDACTED]. Project Co shall coordinate with the [REDACTED] to determine at the scheduled events and adjust their construction schedule accordingly;
- (d) Project Co shall maintain uninterrupted transit access to the Lester Road bus stops at all times.
- (e) Project Co's TTMP and TCP sub-plan shall specifically identify provisions for ensuring that the at-grade rail crossing regulatory requirements are met throughout all stages of the Work to the satisfaction of the City and OC Transpo.

## **2.8 Leitrim Road (Arterial)**

- (a) Leitrim Road is an arterial Roadway which serves traffic and transit in an east to west direction immediately south of the OMCIAA. This is an important transportation route in the weekday Peak Periods. Leitrim Road also provides access to the existing Leitrim Station and transit facilities via Gilligan Road.
- (b) The following constraints shall be followed within the Leitrim Road corridor:
  - (i) No lane reductions on weekdays between 06:00 and 19:00 hrs.
  - (ii) Project Co shall maintain one lane of traffic in each direction throughout the duration of construction.
  - (iii) Project Co shall maintain access at all times to private homes and business fronting on the south side of the existing Leitrim Road between Gilligan Drive and the LRT Elevated Guideway.
  - (iv) The City has major watermains within this section of Leitrim Road. Project Co shall ensure the City has uninterrupted access to this infrastructure at all times for monitoring and Maintenance purposes.
- (c) Full mainline closures shall be permitted for installation of Bridge girders, prefabricated Bridge components, falsework, and overhead electrical wiring installations. The installation over the traveled portion of Leitrim Road shall require the stoppage of traffic across the full width of the affected traffic lanes. Closure of both lanes shall only be performed as follows:
  - (i) OPS shall be employed to perform the full closures;
  - (ii) The closure shall take place between 02:00 and 05:00 hrs; and,
  - (iii) The duration of nightly closures is restricted to 15 minutes per any one hour period or until the end of the traffic queue passes.

## **2.9 Albion Road (Arterial)**

- (a) Project Co's TTMP sub-plans shall address the requirement to maintain traffic and transit operations in this area, or providing an acceptable alternative.
- (b) The following constraints shall be followed within the Albion Road corridor:
  - (i) No lane reductions on weekdays between 06:00 and 20:00 hrs;
  - (ii) Maintain a minimum of one lane in each direction during all other times; and,

## **2.10 Gilligan Road (Local)**

- (a) Construction on Gilligan Road shall not be performed during the following Peak Periods unless noted as an exception in this Part 7:
  - (i) Monday to Friday inclusive: 06:00 to 09:30 hrs and 15:00 to 20:00 hrs
- (b) Project Co shall maintain uninterrupted access to and from the Leitrim Park and Ride and transit Station at all times during construction activities that may restrict access to Gilligan Road from Leitrim Road.
- (c) Project Co shall maintain private access to lands fronting on Gilligan Road at all times.
- (d) Project Co shall maintain pedestrian and cycling access to the Park and Ride lot from the MUP which connects to Quinn Road at all times.
- (e) Project Co shall maintain access to the Leitrim Park and Ride stormwater facility and maintenance Roadways at all times.

## **2.11 Bronson Avenue (Arterial)**

- (a) Project Co's TTMP sub-plans shall address the requirement to maintain traffic and transit operations in this area, or provide an acceptable alternative.
- (b) The following constraints shall be followed within the Bronson Avenue corridor:
  - (i) No lane reductions on weekdays between 06:00 and 19:00 hrs;
  - (ii) No lane reductions on Saturdays between 06:00 and 19:00 hrs; and
  - (iii) Maintain a minimum of one lane in each direction during all other times.

## **2.12 Earl Armstrong Road (Arterial)**

- (a) Earl Armstrong Road is an arterial Roadway which serves traffic and transit in an east to west direction south of the OMCIAA. This is an important transportation route in the weekday Peak Periods. The following constraints shall be followed within the Earl Armstrong Road corridor:



- (i) No lane reductions on weekdays between 06:00 and 19:00 hrs;
- (ii) Project Co shall maintain one lane of traffic in each direction throughout the duration of construction; and,
- (b) The full closure of Earl Armstrong Road, between Bowesville Road and High Road, shall be permitted in order to construct the new Bridge, if a road over rail option is selected.
  - (i) Prior to the full closure of Earl Armstrong Road, Project Co shall develop a detour plan to be approved by the City.
- (c) If a rail over road option is selected, then full mainline closures shall be permitted for installation of Bridge girders, prefabricated Bridge components, falsework, and overhead electrical wiring installations. The installation over the traveled portion of Earl Armstrong Road shall require the stoppage of traffic across the full width of the affected traffic lanes. Closure of both lanes shall only be performed as follows:
  - (i) OPS shall be employed to perform the full closures;
  - (ii) The closure shall take place between 02:00 and 05:00 hrs; and,
  - (iii) The duration of nightly closures is restricted to 15 minutes per any one hour period or until the end of the traffic queue passes.

### **2.13 Bowesville Road (Collector)**

- (a) Project Co's TTMP sub-plans shall address the requirement to maintain traffic and transit operations in this area, or provide an acceptable alternative.
- (b) The following constraints shall be followed within the Bowesville Road corridor:
  - (i) No lane reductions on weekdays between 06:00 and 20:00 hrs;
  - (ii) Project Co shall maintain a minimum of one lane in each direction during all other times; and,
- (c) If a rail over road option is selected, then full mainline closures shall be permitted for installation of Bridge girders, prefabricated Bridge components, falsework, and overhead electrical wiring installations. The installation over the traveled portion of Bowesville Road shall require the stoppage of traffic across the full width of the affected traffic lanes. Closure of both lanes shall only be performed as follows
  - (i) OPS shall be employed to perform the full closures;
  - (ii) The closure shall take place between 02:00 and 05:00 hrs; and.
  - (iii) The duration of nightly closures is restricted to 15 minutes per any one hour period or until the end of the traffic queue passes.

- (d) The full closure of Bowesville Road, between Earl Armstrong Road and Ficko Crescent, shall be permitted in order to construct the new Bridge, if a road over rail option is selected.
  - (i) Prior to the full closure of Bowesville Road, Project Co shall develop a detour plan to be approved by the City.

#### **2.14 Limebank Road (Arterial)**

- (a) Project Co's TTMP sub-plans shall address the requirement to maintain traffic and transit operations in this area, or provide an acceptable alternative.
- (b) The following constraints shall be followed within the Limebank Road corridor:
  - (i) No lane reductions on weekdays between 06:00 and 20:00 hrs;
  - (ii) Project Co shall maintain a minimum of one lane in each direction during all other times; and,
  - (iii) Project Co shall maintain existing street light levels at all times. Where existing lighting needs to be removed as part of the Work, Project Co shall install replacement temporary lighting until such time as the new permanent lighting is energized.
- (c) If a rail over road option is selected, then full mainline closures shall be permitted for installation of Bridge girders, prefabricated Bridge components, falsework, and overhead electrical wiring installations. The installation over the traveled portion of Limebank Road shall require the stoppage of traffic across the full width of the affected traffic lanes. Closure of both lanes shall only be performed as follows:
  - (i) OPS shall be employed to perform the full closures;
  - (ii) The closure shall take place between 02:00 and 05:00 hrs; and
  - (iii) The duration of nightly closures is restricted to 15 minutes per any one hour period or until the end of the traffic queue passes.
- (d) If a road over rail option is selected, Project Co shall be permitted to close Limebank Road in order to construct the grade separation of Limebank Road over the Trillium Line alignment. Project Co shall provide a traffic detour route within the Lands on the west side the closed portion of Limebank Road to accommodate all modes of transportation to be detoured, including vehicles, pedestrians and cyclists.
  - (i) Project Co shall conduct a traffic management study, to be submitted for review under Schedule 10 – Review Procedure, in order to determine the required facilities and intersection controls necessary to operate the Roadway detour such that it meets the City level of service standards.

- (ii) Project Co shall design and construct these facilities prior to the closure of Limebank Road. These facilities shall remain in operation until Limebank Road has reopened, and the facilities shall be removed / reinstated to pre-existing condition once they are no longer required (with the exception of new permanent infrastructure that has been used as a portion of the detour, which would not need to be removed or reinstated).

**ARTICLE 3 EXISTING TRANSITWAY SYSTEM**

**3.1 General Requirements**

- (a) The requirements in this Article 3 shall apply to the following Transitway sections of the Project:
  - (i) Southeast Transitway (Billings Bridge Station to South Keys Station, including the bus turnaround loop south of Hunt Club Road); and
  - (ii) Leitrim Park & Ride Station and Facility.
- (b) Project Co shall maintain all bus services by utilizing staging, lane closures or detouring of transit services and other traffic away from the various Sites under construction. Project Co shall include the Transitway detouring and staging in the TTMP to the satisfaction of the City and in accordance with the provisions of this Part 7, Schedule 7 - Mobility Matters, Schedule 17 – Environmental Obligations, and Schedule 15-2, Part 1, Article 5 – Implementation Constraints and Schedule 15-2, Part 2, Article 6 – Roadways, Bus Terminals and Lay-bys.
- (c) Project Co shall reimburse the City for any additional operational or maintenance costs incurred by the City occasioned as a result of any City changes required to City operations, due to changes or revisions to the TTMP made by Project Co after the TTMP has been reviewed and accepted by the City.
- (d) Project Co shall apply the following key Transit performance principles to the TTMP:
  - (i) Safety of all users of the Work shall be the paramount principle;
  - (ii) Maintain existing local and rapid transit services as closely as possible to the frequency of service of the 2018 Post-LRT Stage 1 Transit Service Plan. Project Co shall be responsible for contacting the City prior to the service change dates identified in Table 7-3.1 to identify any changes to the transit service plans and how they may impact the frequency of service for transit;

**Table 7-3.1–Tentative Transit Route Schedule Change Dates**

<b>Year</b>	<b>April</b>	<b>June</b>	<b>September</b>	<b>December</b>
<b>2018</b>	22	24	2	23
<b>2019</b>	21	23	1	22
<b>2020</b>	19	21	6	20
<b>2021</b>	18	20	5	19
<b>2022</b>	17	26	4	25
<b>2023</b>	23	25	3	24

- (iii) Maximize the continued transit services use of the existing Transitway and Stations during construction;
  - (iv) Minimize the travel time variability on transit routes;
  - (v) Minimize additional transit customer travel times including walking distances to and from bus stops, Stations, and Platforms;
  - (vi) Minimize additional transfers points for transit customers;
  - (vii) Minimize additional OC Transpo resources required (buses, kms travelled, lay-bys, disruption of services, service changes, temporary Fitups);
  - (viii) Minimize redundancies;
  - (ix) Minimize disruption to other road users;
  - (x) Minimize and mitigate impact on adjacent lands and occupants thereof; and
  - (xi) Minimize additional bus traffic in residential areas.
- (e) Project Co shall develop Transitway staging and detour plans subject to the requirements in this Part 7. Project Co's Transitway staging and detour plans shall be submitted in accordance with Schedule 10 – Review Procedure and subject to evaluation and acceptance by the City.
- (f) Project Co may schedule Work within the existing Transitway utilizing one lane closures during Off Peak Periods and Night Periods as detailed elsewhere in this Article 3. Project Co shall be responsible for obtaining the required City approvals and permits to undertake this Work. A suitable alternative location shall be required if the closure of one lane impacts a bus stop or Platform.
- (g) Project Co shall provide 35 calendar days' notice to the City for construction access to any component of the existing Transitway. Notice shall be provided in the form of a document explaining the request for construction access to the relevant component of the existing Transitway, submitted by Project Co to the City in accordance with Schedule 10 – Review Procedure, and, the simultaneous transmission of an electronic message sent to the City's Lead Traffic and Mobility and the designated OC Transpo representative, informing them that the request Notice has been submitted.
- (h) Project Co shall be responsible for minimizing the overall duration required for the closure of any parts of the existing Transitway.
- (i) Project Co's TTMP Transitway staging and detour plans shall be founded upon the following key principles and constraints:

- (i) Safety of all users shall be the primary principle;
- (ii) Transit shall be given priority on the road system to the greatest extent possible (e.g. temporary bus-only lanes shall be provided);
- (iii) Transit priority measures shall be implemented at key intersections on transit detour routes to reduce transit delays;
- (iv) Construction Work shall be staged and phased to minimize disruption to public transit and general traffic throughout design, construction and implementation;
- (v) Project Co's approved Transitway staging and detour plans for any segment of the existing Transitway shall be Commissioned and operational to the satisfaction of the City prior to full closure of any portion of the Transitway.
- (vi) Project Co's Transitway staging and detour plans shall be developed to ensure continuity of transit route origins and destinations and Station locations for all transit services that utilize either portion of the Transitway or Stations in the context of access for buses and pedestrians and network coverage;
- (vii) Project Co shall not close any component of the Transitway prior to Commissioning the detour route for the corresponding Transitway closure, and when Transitway lane closures are in place during the permitted hours, an alternative shall be made available for transit;
- (j) Project Co shall provide at least six months advance notice to the City for all lane closures and diversions impacting the existing Transitway.
- (k) Project Co shall coordinate with OC Transpo to ensure that all TTMP and TCP submissions and updates to those submissions reflect the most current OC Transpo transit operations.
- (l) Project Co shall coordinate the proposed closure, and timing of the closure, of each segment or segments, with the City including OC Transpo, and to the satisfaction of the City and OC Transpo, such that OC Transpo may adequately administer the closure.
- (m) Project Co shall design and construct all Transitway staging plans and detour routes according to the Reference Documents listed in Clause 1.1 of this Part 7.
- (n) Project Co shall design and construct all permanent and temporary bus stops during all the construction staging, including safe and secure pedestrian access to and from bus stops, and all shelters and COADS requirements that meet the requirements of the City and OC Transpo's standard drawings.

### **3.2 Construction On or Adjacent To the Existing Transitway**

- (a) Project Co shall provide 35 calendar days' notice to the City for access to the Transitway. Project Co shall obtain all required approvals and permits from the City and OC Transpo.

- Project Co shall complete the required submissions in accordance with Schedule 10 – Review Procedure and subject to evaluation and acceptance by the City, prior to submitting permit applications.
- (b) All required traffic control and protection systems identified in the approved TTMP shall be installed, operated, Maintained, and removed by Project Co to the satisfaction of the City.
  - (c) Project Co shall perform the required traffic control the for lane closure(s) identified in the approved TTMP to the satisfaction of the City and OC Transpo, where construction requires Transitway lane closure(s).
    - (i) Project Co shall provide the temporary Station/stop and the temporary Station/stop facilities in kind, such as shelters or benches, as well as the accesses to/from the Station/stop, operational features such as bike racks, lighting, etc., and including traffic camera/OC Transpo security camera coverage of the temporary Station/stop and its surroundings, where construction shall require any change to, or relocation of an existing Transitway Station or bus stop, to the satisfaction of the City. This shall include staff washrooms equipped with key access system to the satisfaction of the City.
    - (ii) Project Co shall include all alterations to existing Stations or bus stops, and all temporary Station or bus stop designs in the TTMP submission to the City in accordance with Schedule 10 - Review Procedure.
  - (d) Project Co shall provide 15 Business Days’ notice to the City prior to the day on which any changes to existing signage or new sign placement required for construction shall be required.
  - (e) Loading or unloading of materials or construction equipment that will adversely affect the existing Transitway, bus only lanes, or Transitway detour traffic, shall not be performed during the following periods:
    - (i) On Transitway bus only lanes or Transitway detour:
      - A. 06:00 to 18:30 hrs
    - (ii) Adjacent to Transitway:
      - A. 06:00 to 09:30 hrs
      - B. 15:00 to 18:30 hrs
    - (iii) Where loading or unloading of materials is done by means of lifting overhead, overhead protection shall be provided to all impacted pathways, sidewalks, and Platforms.

- (f) Project Co shall not store any equipment or materials on the travelled portion of the Transitway, bus only lanes, or Transitway detour, or its shoulders or boulevards, unless the equipment or materials are protected by traffic control and protection systems previously approved by the City and OC Transpo.
- (g) Project Co shall ensure that vehicles transporting materials to, from, or on the Transitway or bus only lanes do not interfere with or interrupt Transitway or bus only lanes operations. Where the transportation of materials to or from construction Sites cannot be accomplished without interfering or interrupting Transitway operations, a separate dedicated construction access shall be established at Project Co's cost.
- (h) Project Co shall require construction vehicles to enter and/or exit in the same direction as buses so that vehicles merge with the bus traffic without crossing traffic lanes, unless specified otherwise.
- (i) Project Co shall ensure that vehicles shall at all times use the access point on the Transitway or bus only lanes operations that is closest to the Works Site.
- (j) Project Co shall ensure that all traffic controls are operational before commencing Works affecting Transitway, bus only lanes or Transitway detour operations.
- (k) Project Co shall contact the OC Transpo Control Centre 30 minutes prior to setup each day that they are working in or adjacent to a Transitway lane.

### **3.3 Pedestrian and Cycling Access to the Transitway During Construction**

- (a) Project Co shall maintain barrier free pedestrian and cycling access, associated with active and temporary Stations and across all pedestrian Bridges at all times.
- (b) Project Co shall maintain pedestrian and cycling access across the local route lanes at all times.
- (c) Project Co shall provide a new alternate route pathway, sidewalk, or MUP of equivalent length, or within 20% additional length, to current City standards in the event that a pathway, sidewalk or MUP leading to a Station connection is to be closed or relocated due to construction, unless prescribed otherwise by the City.
- (d) Any disruption of a pathway, sidewalk, or MUP that impacts the accessibility to a Transitway Station shall be done in accordance with the provisions of Schedule 15-2, Part 6 - Urban Design, Landscape Architecture and Connectivity Requirements

### **3.4 Transitway Lane Closures**

- (a) The requirements in this Article 3 shall be applicable to the following Transitway sections of the relevant phase of the Project:
  - (i) Southeast Transitway – Billings Bridge Station to South Keys Station, including the bus turnaround loop south of Hunt Club Road; and



- (ii) Leitrim Park & Ride Station and Facility.
- (b) Project Co shall apply all applicable requirements in this Part 7.
- (c) Project Co shall be required to include the Transitway staging in the TTMP and sub-plans, demonstrating how traffic and transit will be maintained throughout construction.
- (d) Permitted temporary single-lane closure periods for Transitway Segments shall be as follows:
  - (i) Southeast Transitway – Billings Bridge Station to South Keys Station, including the bus turnaround loop south of Hunt Club Road; and,
  - (ii) Leitrim Park & Ride Station and Facility.

**Table 7-3.2**

<b>Closure</b>	<b>Monday to Friday</b>	<b>Saturday</b>	<b>Holiday or Sunday</b>
One lane closure	18:30 - 06:00 hrs  9:30 - 15:00 hrs	00:01 - 24:00 hrs	00:01 - 24:00 hrs

- (e) Permitted temporary full closure periods for the following Transitway Segments shall only be permitted for two continuous periods during the Project. The closures shall only be permitted for the following purposes: demolition of the rail bridge over the Transitway and erecting the new [REDACTED] Grade Separation at Ellwood Diamond Structure, and shall be as follows:
  - (i) Southeast Transitway – Billings Bridge Station to Walkley Station.

**Table 7-3.3**

<b>Closure</b>	<b>Monday</b>	<b>Tuesday to Thursday</b>	<b>Friday</b>	<b>Saturday</b>	<b>Holiday or Sunday</b>
Full closure*	0:00 – 5:00 hrs	Not permitted	22:00 – 23:59 hrs	0:00 – 23:59 hrs	0:00 – 23:59 hrs

\*The full closure of the Transitway shall only be permitted twice, within the hours identified In Table 7-3.3 above.

**3.5 Circulation Roadway Closures within Transitway Stations**

- (a) Project Co shall ensure the continuance of all of the operational functions of the existing Transitway Stations throughout the construction and commissioning period. Project Co

shall develop TCPs identifying all changes to operational functions and submit to the City in accordance with Schedule 10 – Review Procedure for areas where construction requires lane closures to bus circulation Roadways, Platforms, or bus lay-by areas within Transitway Stations. Project Co shall provide 35 calendar days’ notice prior to the day on which the closures will be required.

- (i) Project Co shall perform all modifications required for the temporary bus terminal with no interruption to the regular bus service.
  - (ii) Where changes to the operational function of a Transitway Station results in a routing for buses that causes additional travel time to be incurred, six months’ notice shall be provided.
- (b) Project Co shall ensure the continuance of all operational functions of detoured transit services throughout construction and commissioning periods.
- (c) Project Co shall coordinate all closures with the City. The following conditions shall apply:
- (i) Monday to Friday inclusive:
    - A. 06:00 to 09:30 hrs and 15:00 to 18:30 hrs: Bus circulation Roadways shall be fully operational; and,
    - B. 09:30 to 15:00 hrs and 18:30 to 06:00 hrs: One-way bus circulation Roadways may be reduced to one lane. Two-way bus circulation Roadways may be reduced to one lane only in each direction, providing that all appropriate approvals and plans are in place.
  - (ii) Saturday, Sunday and holiday:
    - A. 00:01 to 24:00 hrs: One-way bus circulation Roadways may be reduced to one lane. Two-way bus circulation Roadways may be reduced to one lane only in each direction.
- (d) Project Co shall simulate the operation of the Station, including but not limited to VISSIM modeling, to demonstrate to the City and OC Transpo that any modified Stations will function in an acceptable manner. This information shall be included in the TTMP submissions in accordance with Schedule 10 - Review Procedure. Project Co shall monitor and make adjustments to the Station if the switchover is not performing in accordance with that forecast in the TTMP and sub-plans as reviewed and accepted by the City.

### **3.6 South-East Transitway - Walkley Station to South Keys Station**

- (a) Project Co shall maintain full transit operation and services to the Greenboro Transitway Station at all times. Project Co shall replace in kind any part of Greenboro Transitway Station impacted by construction.

- (b) Project Co shall maintain full transit operation and services to the South Keys Station at all times. During construction of the new pedestrian underpass, the Work shall be completed in such a manner that maintains pedestrian and bus access to the full northbound and southbound Platforms.
- (c) Project Co shall be permitted one weekend (Saturday and Sunday) in order to install decking. Project Co shall be required to develop staging drawings that shall be included in the TCP to detail the detour requirements and Platform serviceability during this Work. The design speed for the buses within the detour may be reduced to a 40 km/hr design speed. The restrictions for lane closures outlined in Article 3.5 of this Part 7 apply.
- (d) Project Co shall be permitted one weekend (Saturday and Sunday) in order to remove the decking and reinstate the Transitway. Project Co shall be required to develop staging drawings that shall be included in the TCP to detail the detour requirements and Platform serviceability during this Work. The design speed for the buses within the detour may be reduced to 40 km/hr. The restrictions for lane closures outlined in Article 3.5 of this Part 7 apply.

### **3.7 Leitrim Park & Ride Station and Facilities**

- (a) Project Co shall ensure that OC Transpo's transit operations and services are maintained for Leitrim Park & Ride at all times. Project Co shall provide the following prior to decommissioning any component of the existing Leitrim Station:
  - i) Maintain the existing facilities in operation or provide new/temporary facilities to the City and OC Transpo standards and specifications, including but not limited to: Platforms, shelters, lighting, benches, bus lay-up stalls, Station and route signage, bike racks, and safety and security systems (i.e. emergency phones and CCTV cameras);
  - ii) Dedicated bus access roads to and from Gilligan Road to the Leitrim Station facilities. Where required, Project Co shall provide detours to the City and OC Transpo standards and specifications;
  - iii) Project Co shall ensure MUP access to the Park & Ride facilities is maintained utilizing existing MUPs and new or temporary MUPs as required to maintain connectivity. MUPs shall meet all standards as outlined in Schedule 15-2, Part 6 – Urban Design, Landscape Architecture and Connectivity Requirements;
  - iv) Project Co shall be responsible to ensure the bus turnaround is available to facilitate Leitrim Station operations at all times. Project Co shall use the OC Transpo/City of Ottawa Transitway and Station Design Guidelines to design the bus turnaround; and,
  - v) The existing Leitrim Park & Ride lot has capacity for approximately 290 vehicles. Project Co shall be responsible for ensuring that there are a minimum of 150 vehicle stalls during the construction of the expanded Park & Ride lot. The

reduction in capacity shall only be permissible during the construction of the lot modifications and expansion. The existing capacity of 290 vehicle stalls shall be maintained at all other times. A dedicated access road to the parking, Site lighting, communications, and safety and security systems (i.e. emergency phones and CCTV cameras) shall be maintained in accordance with the requirements of OC Transpo/City of Ottawa Transitway and Station Design Guidelines.

## ARTICLE 4            EXISTING AIRPORT ROADWAYS

### 4.1      General Requirements

- (a)      The closure of any existing OMCIAA roads for purposes of performing Work for this Project shall only be considered after all other safe and reasonable methods of construction have been investigated and deemed not to be feasible or practicable. Application for closure of any existing OMCIAA roads shall be submitted in accordance with Schedule 10 – Review Procedure.
  - (i)      Successive intersections on either side of a closed intersection shall be open to two-way traffic at times of the closure.

### 4.2      Lane Closures on Airport Roadways

- (a)      Project Co shall not perform construction during the following peak periods unless noted as an exception in this Part 7:
  - (i)      Monday to Friday inclusive: 06:30 to 09:30 hrs and 15:00 to 18:30 hrs.

### 4.3      Restrictions on Construction Operations on OMCIAA Roadways

- (a)      Project Co shall liaise with the City and the OMCIAA which has governance over the subject OMCIAA Roadways, and arrange all Work utilizing OMCIAA Roadways for access to the Work Sites to the written satisfaction of OMCIAA. Project Co shall include in its submission of the TTMP and TTMP sub-plans in accordance with Schedule 10 – Review Procedure, all of the documentation and drawings relevant to traffic management prepared in accordance with this Article, as accepted by the OMCIAA.
- (b)      Project Co shall not proceed with any Work affecting OMCIAA Roadways without an accepted TTMP and TTMP sub-plans applicable to said Work.
- (c)      Project Co shall maintain one lane of traffic in each direction on Paul Benoit Driveway, Silverstar Private and Tracker Private between 05:00 and 22:00 hrs.
- (d)      Nightly closures of the Paul Benoit Driveway-Silverstar Private-Tracker Private connection shall be minimized and shall be subject to the approval of the City and the OMCIAA.
- (e)      Project Co shall maintain full access/egress to/from the loading dock at all times, except during the shutdown period noted below:
  - (i)      Project Co shall be permitted one nine-month period where access/egress to/from the loading dock may be completely restricted;
  - (ii)     During the shutdown period, Project Co shall permit site access to the OMCIAA or their designate to the loading dock for the purpose of servicing OMCIAA equipment, such as, but not limited to, the re-fuelling of generators, subject to 48

hours' notice, coordination and in accordance with Project Co's Site Safety Plan;  
and

- (iii) During the shutdown period, Project Co shall maintain their Site such that a route to and from the loading dock is provided for at all times, in the case of an Emergency response to the loading dock area or an Emergency egress from the loading dock area.
- (f) Project Co shall maintain access to all parking lots at all times.
  - (i) To maintain access to parking lot E1, Project Co shall provide a connection from parking lot E1 to Kiowa Private.
- (g) Project Co shall ensure that there is a pedestrian access point maintained beneath the elevated Guideway at all times, providing access between the terminal building and all affected parking lots.
- (h) OMCIA Roadways may be reduced to one lane of traffic in each direction using partial lane closures in accordance with the OTM for short duration Work during Off-Peak Hours and/or as detailed in this Part 7.
  - (i) All short duration Works shall be re-opened to two-lane, two-way traffic prior to the peak periods each working day.
  - (j) Drainage along OMCIA Roadways shall be maintained at all times.
- (k) Project Co shall abide by the OMCIAA Traffic Control SOP for any work on OMCIA roadways. The OMCIAA Traffic Control SOP is provided in Appendix E of this Part 7.
- (l) Project Co shall not be permitted to use Airport Parkway Private for construction or for access to construction Sites.

#### **4.4 Protection of Public Traffic**

- (a) Project Co shall follow the requirements below when working on a traveled way:
  - (i) Place equipment in position to present minimum interference and Hazard to traveling public;
  - (ii) Keep equipment units as close together as working conditions permit and preferably on same side of traveled way; and
  - (iii) Not leave equipment on traveled way overnight.
- (b) Project Co shall not close any lanes of OMCIA Roadways without approval of the City and the OMCIAA. Before re-routing traffic, erect suitable signs and devices in accordance with instructions contained in the OTM.

- (c) Project Co shall keep traveled way graded, free of pot holes, and of sufficient width for required number of lanes of traffic as per Table 7-1.3 in this Part 7.
- (d) Project Co shall provide and Maintain road access and egress to properties fronting along the Work area and in other areas as indicated, unless other means of road access exist that meet approval of the City and the OMCIAA.

#### **4.5 Informational and Warning Devices**

- (a) Project Co shall provide and Maintain signs, flashing warning lights, temporary signals, and other devices required to indicate construction activities or other temporary and unusual conditions resulting from Works which requires road user response.
- (b) Project Co shall supply and erect signs, delineators, barricades, and miscellaneous warning devices as specified in the OTM. All signs shall be bilingual.
- (c) Project Co shall place signs and other devices in locations recommended in the OTM.
- (d) Project Co shall arrange and attend a meeting with the City and the OMCIAA at least five Business Days prior to commencement of Work to review the list of signs and other devices required for Project. Project Co shall revise the list if the situation on Site changes, to the approval of the City and Governmental Authority, and, resubmit the TTMP and applicable TTMP sub-plans in accordance with Schedule 10- Review Procedure.
- (e) Project Co shall continually Maintain TCDs in use by:
  - (i) Checking signs daily for legibility, damage, suitability, and location. Clean, repair, or replace to ensure clarity and reflectance; and
  - (ii) Removing or covering signs which do not apply to conditions existing from day to day.

#### **4.6 Control of Public Traffic**

- (a) Project Co shall provide flag persons in the following situations:
  - (i) When public traffic is required to pass working vehicles or equipment which block all or part of the traveled Roadway;
  - (ii) When it is necessary to institute a one-way traffic system through the Work area or other blockage where traffic volumes are heavy, approach speeds are high, and traffic signal system is not in use. Flag persons shall be provided (one at each access point to the Site) during peak periods when one-way traffic is operational;
  - (iii) When personnel or equipment are employed on the traveled way over brow of hills, around sharp curves, or at other locations where oncoming traffic would not otherwise have adequate warning;

- (iv) Where temporary protection is required while other TCDs are being erected or taken down;
  - (v) For Emergency protection when other TCDs are not readily available; and
  - (vi) In situations where complete protection for personnel, working equipment, and public traffic is not provided by other TCDs.
- (b) Project Co shall keep the City informed of all ongoing Work related discussions with Governmental Authority, and shall maintain all applicable TTMP and TTMP sub-plans current with respect to the Work as accepted by OMCIAA.

#### **4.7 Bus Transit, Taxi, Ride Sharing, Commercial and Public Traffic**

- (a) Project Co shall not interrupt bus transit, taxi, ride sharing, commercial, and public traffic services to and from the Airport Lands at any time.

#### **4.8 Accommodation of Pedestrians and Cyclists**

- (a) Project Co shall maintain pedestrian and cycling access and egress to the existing sidewalks, pedestrian pathways, and MUPs as outlined in Schedule 15-2, Part 6 – Urban Design, Landscape Architecture and Connectivity Requirements.

#### **4.9 Information Signs**

- (a) Project Co shall provide bilingual information signs as follows:
- (i) The locations of all signage shall be shown on the Project Co's TCP. The text to appear on the signs shall be approved by the City and OMCIAA prior to fabrication of the signs.
- (b) Signs to remain in place for the duration of the construction in the area affected by the Work.

#### **4.10 Portable Variable Message Signs**

- (a) If PVMS are required on OMCIAA Roadways, they shall be supplied, installed, and Maintained as per Article 1.5 of this Part 7.



## ARTICLE 5            EXISTING [REDACTED] ROADWAYS

### 5.1      General Requirements

- (a)      Project Co shall only consider the closure of any existing [REDACTED] Roadways for purposes of performing Work after all other safe and reasonable methods of construction have been investigated and deemed not to be feasible or practicable. Application for closure of any existing [REDACTED] Roadways shall be submitted in accordance with Schedule 10 – Review Procedure.
  - (i)      Successive intersections on either side of any full Roadway closure shall be open to two-way traffic at times of the closure.

### 5.2      Permitted Periods of Closures on [REDACTED] Roadways

- (a)      Project Co shall not perform construction during the following Peak Periods unless noted as an exception in this Part 7:
  - (i)      Monday to Friday inclusive: 06:30 to 09:30 hrs and 15:00 to 18:30 hrs.

### 5.3      Restrictions on Construction Operations on [REDACTED] Roadways

- (a)      Project Co shall liaise with the City, and the Governmental Authority which has governance over the subject [REDACTED] Roadways and arrange all Work utilizing [REDACTED] Roadways for access to the Works Sites to the written satisfaction of said Governmental Authority, and, Project Co shall include in their TTMP and TTMP sub-plans in accordance with Schedule 10 – Review Procedure, all of the documentation and drawings relevant to traffic management prepared in accordance with this Article, as accepted by the Governmental Authority..
- (b)      Project Co shall not proceed with any Work affecting [REDACTED] Roadways without an accepted TTMP and TTMP sub-plans applicable to the Work.
- (c)      [REDACTED] Roadways may be reduced to one lane of traffic in each direction using partial lane closures in accordance with the OTM for short duration Work during off-peak hours and/or as detailed in this Part 7.
- (d)      All short duration Works shall be re-opened to two-lane, two-way traffic prior to the Peak Periods each working day.
- (e)      Drainage along [REDACTED] Roadways shall be maintained at all times.

### 5.4      Protection of Public Traffic

- (i)      Project Co shall follow the requirements below when working on a traveled way:
  - A.      Place equipment in position to present minimum interference and Hazard to traveling public;

- B. Keep equipment units as close together as working conditions permit and preferably on same side of traveled way; and
- C. Not leave equipment on traveled way overnight.
- (ii) Project Co shall not close any lanes of [REDACTED] Roadways without approval of the City and the Governmental Authority. Before re-routing traffic, Project Co shall erect suitable signs and devices in accordance with the OTM.
- (iii) Project Co shall keep traveled way graded, free of pot holes, and of sufficient width for required number of lanes of traffic, as per Table 7-1.3 in this Part 7.
- (iv) Project Co shall provide and Maintain road access and egress to properties fronting along the Work area and in other areas as indicated, unless other means of road access exist that meet approval of the City and the applicable Governmental Authority.

### 5.5 Informational and Warning Devices

- (i) Project Co shall provide and Maintain signs, flashing warning lights, temporary signals, and other devices required to indicate construction activities or other temporary and unusual conditions resulting from Project Work which requires road user response.
- (ii) Project Co shall supply and erect signs, delineators, barricades, and miscellaneous warning devices as specified in the OTM. All signs shall be bilingual.
- (iii) Project Co shall place signs and other devices in locations recommended in the OTM.
- (iv) Project Co shall arrange and attend a meeting with the City and the Governmental Authority at least five Business Days prior to commencement of Work to review the list of signs and other devices required for Project. Project Co shall revise the list if the situation on Site changes, to the approval of the City and Governmental Authority, and, resubmit the TTMP and applicable TTMP sub-plans in accordance with Schedule 10 - Review Procedure.
- (v) Project Co shall continually Maintain TCD in use by:
  - A. Checking signs daily for legibility, damage, suitability, and location. Clean, repair, or replace to ensure clarity and reflectance; and,
  - B. Removing or covering signs which do not apply to conditions existing from day to day.

### 5.6 Control of Public Traffic

- (i) Project Co shall provide flag persons in the following situations:

- A. When public traffic is required to pass working vehicles or equipment which block all or part of the traveled Roadway;
  - B. When it is necessary to institute a one-way traffic system through the Work area or other blockage where traffic volumes are heavy, approach speeds are high and traffic signal system is not in use, flag persons shall be provided (one at each access point to the Site) when one-way traffic is operational;
  - C. When personnel or equipment are employed on the traveled way over brow of hills, around sharp curves, or at other locations where oncoming traffic would not otherwise have adequate warning;
  - D. Where temporary protection is required while other TCDs are being erected or taken down;
  - E. For emergency protection when other TCDs are not readily available; and
  - F. In situations where complete protection for personnel, working equipment, and public traffic is not provided by other TCDs.
- (ii) Project Co shall keep the City informed of all ongoing Work related discussions with the Governmental Authority, and shall maintain all applicable TTMP and TTMP sub-plans current with respect to the Work as accepted by [REDACTED].

### **5.7 Transit Service, Detours, and Station**

- (a) Project Co shall maintain bus services to and from [REDACTED] on [REDACTED] Roadways to access the University Station, bus stops, and bus lay-up areas. Project Co shall provide uninterrupted access to the bus routes and the Station and stops for buses and Passengers at all times. In the event that Project Co must impact a bus stop, Platform or lay-up area, Project Co shall be responsible for planning and accommodating alternative space within the campus, in consultation with [REDACTED] and OC Transpo.

### **5.8 Accommodation of Pedestrians and Cyclists**

- (a) Project Co shall maintain pedestrian and cycling access and egress to the existing sidewalks, pedestrian pathways, and MUP as outlined in Schedule 15-2, Part 6 – Urban Design, Landscape Architecture and Connectivity Requirements.

### **5.9 Ground Mounted Signs**

- (a) Project Co shall provide bilingual information signs as follows:
- (i) The locations of all signage shall be shown on the Project Co's TCP. The text to appear on the signs shall be approved by the City and [REDACTED] prior to fabrication of the signs.

- (b) Signs to remain in place for the duration of the construction in the area affected by the Work.

**5.10 Portable Variable Message Signs**

- (a) If PVMS are required on **[REDACTED]** Roadways, they shall be supplied, installed and Maintained as per Article 1.5 of this Part 7.

## ARTICLE 6 TRILLIUM LINE TRANSIT SERVICES

### 6.1 General Requirements

- (a) The requirements in this Article are applicable to the following Expanded Trillium Line sections of the relevant phase of the Project:
  - (i) Existing Trillium Line - Bayview Station to Greenboro Station; and
  - (ii) Future Trillium Line Extension – Greenboro Station to Bowesville Station.
- (b) Project Co shall apply all applicable requirements in this Part 7.
- (c) Project Co shall reimburse the City for any additional operational or maintenance costs incurred by the City occasioned as a result of any City changes required to City operations, due to changes or revisions to the TTMP by Project Co after the TTMP has been reviewed and accepted by the City
- (d) Project Co shall provide 30 calendar days' notice to the City for access to the Existing Trillium Line. Project Co shall obtain all required approvals and permits from the City and OC Transpo. Prior to submitting Permit applications, Project Co shall complete the required Works Submittals in accordance with Schedule 10 – Review Procedure and subject to evaluation and acceptance by the City.
- (e) Project Co shall provide at least a six months advance notice to the City for any Work impacting the Existing Trillium Line.
- (f) Project Co's TTMP for the Existing Trillium Line shall be founded upon the following key principles and constraints:
  - (i) Construction Work shall be staged and phased to minimize disruption to the Existing Trillium Line, public transit, and general traffic throughout design and construction;
  - (ii) Minimize the travel time variability on replacement transit routes;
  - (iii) Minimize additional transit customer travel times, including walking distances to/from Existing Trillium Line Stations/Platforms;
  - (iv) Minimize additional transfer points for transit customers;
  - (v) Minimize additional bus traffic in residential areas;
  - (vi) When the Existing Trillium Line is in service, Project Co's access to corridor shall be scheduled during the daily non service period from 0:00 to 0:500 to the greatest extent possible; and

- (vii) Project Co shall coordinate and grant access to the Existing Trillium Line corridor by third parties to maintain their existing infrastructure.
- (g) Project Co shall be responsible for minimizing the overall duration required for the closure of the Existing Trillium Line.

## **6.2 Construction On or Adjacent to the Expanded Trillium Line**

- (a) Loading or unloading of materials shall not be performed during hours when the Existing Trillium Line is in service, including but not limited to crane swing over the Existing Trillium Line corridor.
  - (i) Any encroachment over the Existing Trillium Line corridor by a crane or load of materials taking place during hours when the Existing Trillium Line is not in service, shall be coordinated by Project Co with the City and shall be subject to any Crane Swing Agreement entered into between Project Co and the City.
- (b) Project Co shall not store any equipment or materials within ten metres of the Existing Trillium Line Tracks, when the Existing Trillium Line is in service.
- (c) Project Co shall ensure that vehicles transporting materials to, from, or on the Existing Trillium Line do not interfere with or interrupt Existing Trillium Line operations.
- (d) Project Co shall require construction vehicles to enter and/or exit the Existing Trillium Line at designated points and with prior authorization from the City.
- (e) Project Co shall ensure that vehicles at all times use the approved access points that are closest to the Work Site.
- (f) Project Co shall ensure that all safety systems (including flag person) from the City are operational before commencing Works affecting Existing Trillium Line operations.
- (g) Future Trillium Line Extension: A portion of this corridor has an operational rail service for freight deliveries to the NRC Facility located along Lester Road. The remainder of the corridor south of the NRC spur to Bowesville Station currently has no rail services. Project Co shall be responsible for ensuring the NRC delivery service is maintained.
- (h) The NRC spur line access to and from the Existing Walkley Yard shall remain active at all times. If a closure is required, 30 days prior authorization shall be required from the City.
- (i) Future Trillium Line Extension: Project Co shall maintain the access road to the City's water plant facilities located adjacent to the corridor between Lester Road and Leirim Road at all times.
- (j) Project Co shall prepare a TTMP that addresses intended hours of Work, Maintenance of local access points, Maintenance of Existing Trillium Line access for Emergency vehicles, access road closures, and impacts to Existing Trillium Line service.

### **6.3 Permits & Approvals**

- (a) Project Co shall be responsible to obtain all permits, licenses, certificates, and approvals such as locates for Utilities (gas, water, electrical, sewers, etc.), railway Utilities such as Signals and Communications, Tracks, Stations, adjacent roads, overpasses, underpasses, Tunnels, rock cuts, and others prior to starting any Work.

## ARTICLE 7 TRAFFIC AND TRANSIT MANAGEMENT PLAN

### 7.1 General Requirements

- (a) Project Co shall submit an initial TTMP to the City in accordance with Schedule 10 – Review Procedure no later than 60 calendar days following Financial Close, and at least 30 calendar days in advance of the start of any construction activity, and in accordance with the requirements of this Part 7. 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. As a minimum the initial TTMP shall be updated and submitted on an annual basis in accordance with Schedule 10 – Review Procedure. The initial TTMP is required to demonstrate Project Co's:
  - (i) general plan for achieving specific TTMP and TTMP sub-plan requirements for all construction elements having significant traffic impacts, as well as all transit detours, in coordination with Project Co's planned Project Schedule; and,
  - (ii) specific plan for managing traffic during the Initial Works.
- (b) The TTMP shall outline how public traffic, transit, transit customers, pedestrians, and cyclists as well as the traffic generated by construction activities, are to be managed. It shall include all aspects of traffic management as set out in this Part 7, as well as any traffic management related matters which may arise as a result of the execution of any aspect of the Work.
- (c) The TTMP and all updates thereto shall be consistent with and comply with all of the requirements set forth in this Part 7 and all other relevant provisions of this Project Agreement, the OTM, and City of Ottawa Operation Policies, Procedures and Guidelines.
- (d) The final submission of the TTMP or TTMP sub-plans shall be stamped by Project Co's designated Traffic Engineer, and signed off by Project Co's designated Traffic Manager, both of whom shall be as identified in Article 7.3 – Project Co Responsibilities, of this Part 7.
- (e) The TTMP and all updates thereto shall include a traffic and transit schedule which shall be adapted from the Works Schedule. The traffic and transit schedule shall show start and finish dates for all the information pertinent to traffic management for the Project, such as but not limited to, segment and Station closures, detours and diversions, and relevant submissions.
- (f) The TTMP shall show proof of constructability in terms of schedule (traffic and transit schedule versus Project schedule), and, in terms of on Site construction activities and physical Work area requirements versus spatial accommodations for TTMP and TTMP sub-plan traffic management requirements.
- (g) Project Co's TTMP shall consider all impacts relating to the construction both direct and indirect, that pertain to the existing operations of the City, and the street network within



- and include impacts on all road users, pedestrians, cyclists, transit customers, transit vehicles, and private vehicles of all types.
- (h) Project Co's TTMP shall reference and interface with Project Co's Traffic QMP as described in Schedule 11 – Integrated Management System, Project Co's Emergency Traffic Plan as described in this Part 7, the OTM, and City of Ottawa Operation Policy and Procedures.
  - (i) Project Co's updates to the TTMP shall be prepared and submitted in accordance with Schedule 10 – Review Procedure for any and all Project activities which may result in changes to the traffic management strategies set out in the TTMP. The initial TTMP shall be updated and submitted on an annual basis in accordance with Schedule 10 – Review Procedure.
  - (j) Project Co shall not conduct any construction activity that affects traffic without a signed and sealed TTMP that is current to the activities on Site, and has been accepted by the City.
  - (k) Project Co's TTMP shall comply with the definitions and guidelines provided in the OTM and City of Ottawa Operation Policy, Procedures and Guidelines.
  - (l) Project Co's TTMP shall include the Pedestrian Access Plan as outlined in Schedule 15-2, Part 1, Article 5 – Implementation Constraints, the construction Site Pedestrian Control Plan as required by City of Ottawa Special Provision D-005, the specific requirements as identified in Schedule 15-2, Part 6 – Urban Design, Landscape Architecture and Connectivity Requirements and as documented in COADS.
  - (m) Project Co shall prepare detailed TCPs complete with traffic control layout drawings and fully integrated with the approved Works Schedule, outlining the provision of all forms of traffic control required throughout the duration of the Project. The plans shall be consistent with the TTMP and submitted in accordance with Schedule 10 – Review Procedure.
  - (n) Project Co shall prepare drawings that address stage-specific activities and requirements for each stage of the Work that affects traffic. These drawings shall accompany the TTMP submissions in accordance with Schedule 10 – Review Procedure.
  - (o) Any lane closure shall be approved in writing by the Governmental Authority and the City, and, that closure and the Governmental Authority shall be identified in the approved TTMP.
  - (p) Project Co shall not perform any Work on Site without a TTMP and TTMP sub-plans which are current to the activities on Site, and, are accepted by the City.
  - (q) The TTMP shall provide detailed drawings for Project-related designated truck access and egress points, the applicable haul and heavy vehicle routes through the City, and applicable staging areas. The drawings shall be consistent with the TTMP and submitted

in accordance with Schedule 10 – Review Procedure. As a minimum the designated truck route drawings shall be updated and submitted on an annual basis in accordance with Schedule 10 – Review Procedure. The City may, at its discretion, require that Project Co Lands, where contiguous with an active construction Site, be utilized for haul and heavy vehicle routes in order to reach the City’s truck route network in a manner acceptable to the City.

- (r) The following TTMP sub-plans for Project Co’s TTMP are required and shall be submitted in accordance with Schedule 10 – Review Procedure. The TTMP sub-plans shall be:
  - (i) Traffic Control Plan;
  - (ii) Emergency Traffic Plan;
  - (iii) Traffic Incident Management Plan;
  - (iv) Traffic Management Implementation Plan;
  - (v) Transit Management Plan;
  - (vi) Traffic Advisory Temporary Signage Plan;
  - (vii) Traffic Risk Assessment Plan;
  - (viii) Traffic and Transit Management Communications Plan;
  - (ix) Traffic and Transit Management Monitoring Plan;
  - (x) Lane Closure Measurement and Verification Plan; and,
  - (xi) Property Access and Business Continuity Plan.

## **7.2 Traffic and Transit Management Sub-Plans**

- (a) Traffic Control Plans
  - (i) Project Co shall prepare and submit Project specific TCPs in accordance with Schedule 10 – Review Procedure. The TCPs shall be prepared in accordance with the OTM, City of Ottawa Policies, Procedures and Guidelines and other Reference Documents for all activities that affect traffic operations, and shall include the following:
    - A. start and completion dates of Work;
    - B. hours of Work and also indicate if there is a requirement to Work during peak hours;

- C. Work zone locations and direction and distance to nearest landmarks;
- D. size of the Work zone;
- E. lanes affected by the Works;
- F. lane configuration in the Work zone;
- G. confirmation of whether accesses or intersections will be affected by the Work zone or by TCD;
- H. traffic volume capacity during the Project;
- I. proposed delays or closure times;
- J. show that local traffic access is maintained;
- K. scale drawing(s) in CADD identifying:
  - i. the location of the Work zone using landmarks and LKI where applicable;
  - ii. accesses or intersections affected by the Work zone or by TCDs;
  - iii. traveled lanes affected;
  - iv. resultant lane configuration including widths;
  - v. location of restricted width lanes;
  - vi. required lane closures;
  - vii. lane use requirements;
  - viii. posted speeds;
  - ix. requirements for road closure;
  - x. on-street parking spaces and parking meters/paystation affected by the Work;
  - xi. replacement strategy for affected on-street parking spaces;
  - xii. requirement for temporary no stopping signs;
  - xiii. handicap, bus, taxi, loading, hotel, diplomat, tour bus, or other zones affected by the Work, and the replacement strategy for each zone;

- xiv. any bus routes and bus stops affected by Work activity;
  - xv. traffic and transit routing and detour requirements;
  - xvi. location of hazardous areas created by road geometry or local geography;
  - xvii. the location of vehicle storage areas if delays are anticipated;
  - xviii. any local roads used for a detour route;
  - xix. the design speed and the design vehicle for each road used as a detour route;
  - xx. any traffic signal changes required by the detour route or Project Works;
  - xxi. any signing impacted by the Work;
  - xxii. location of construction accesses and safety provisions applied in instances where a construction access crosses a sidewalk, pathway, MUP, or cycling facility; and
  - xxiii. pedestrian and cyclist facilities, which shall be in conformance with the requirements of the Pedestrian Access Plan as required in Schedule 15-2, Part 1, Article 5 - Implementation Constraints, the Construction Site Pedestrian Control Plan as required by City of Ottawa Special Provision D-005, and the requirements set out elsewhere in this Part 7.
- L. Should Project Co adopt a traffic control layout exactly as shown in OTM Book 7 with no changes, Project Co shall provide a reference to the OTM Book 7 layout. For any deviations to OTM Book 7, Project Co shall submit a custom traffic control layout as described in (ii) below.
- M. include scale custom traffic control layouts showing the placement of all TCD and Traffic Control Persons;
- N. be sealed by a Professional Engineer; and
- O. include a summary description of the public notification undertaken wherein the subject matter of this specific TCP is mentioned.
- (ii) Custom traffic control layouts shall:
- A. be in CADD format and submitted to the City in PDF format;
  - B. show schematically the placement of all TCDs;

- C. place all TCDs in accordance with the standards contained in the OTM;
  - D. follow symbol conventions for identifying TCDs as per the OTM;
  - E. show on the drawings the locations and details of all signs, PVMS, Pavement markings, barriers, and protective Works;
  - F. have all dimensions and explanatory notes on the drawing;
  - G. show traffic operations at all phases of the Project; and,
  - H. be signed and sealed custom traffic control layouts.
- (iii) Project Co shall document any proposed Project Co-initiated closures, full closures, detour routes, Lane Shifts, and diversions in the TCP. The TCP shall be updated and amended as required such that it is current at all times with respect to the existing and proposed traffic control measures in the field.
- (iv) Project Co shall conduct traffic analysis including modelling on the TCP for each construction stage of the design and construction within each phase where traffic operations are affected. The traffic analysis shall determine the effect of each TCP on the capacity and operation, including the resulting vehicle delays, queue lengths, and traffic signal timing. The traffic analysis shall be conducted for the representative hour(s) and day(s) that each TCP is in operation. The analysis and the results and recommendations shall be provided to the City in accordance with Schedule 10 – Review Procedure.
- (v) Project Co shall be responsible for including construction generated traffic in the TCP and any associated analysis such as but not limited to the potential for conflict between construction generated traffic and pedestrian and cyclist movements.
- (vi) Project Co shall continuously measure the effectiveness of TCPs and, if those measurements indicate a TCP is non-compliant with the OTM, accepted TCPs and other Reference Documents, Project Co shall immediately adjust the TCP to bring it into compliance.
- (vii) Auxiliary lane lengths at existing signalized intersections shall not be reduced unless analysis confirms operation is acceptable to the City.
- (viii) Project Co shall implement the accepted TCPs and accepted revisions thereto.
- (b) Emergency Traffic Plan
- (i) Project Co shall prepare and submit an Emergency Traffic Plan in accordance with Schedule 10 – Review Procedure. The Emergency Traffic Plan shall specify how Project Co shall facilitate access for Emergency vehicles to and through affected Sites. Project Co shall consult with local municipalities and ESP in

developing the Emergency Traffic Plan, and liaise closely with them throughout the design and construction as it evaluates and updates the plan on an annual basis, or, whenever there is a change in the Site conditions which materially alters the ability to execute the accepted Emergency Traffic Plan.

- (ii) Project Co shall provide specific scenarios for Emergency vehicle access to and through the Site for each of the cases identified in the Traffic Incident Management Plan and the Traffic Risk Assessment Plan.
  - (iii) Project Co shall implement the accepted Emergency Traffic Plan and accepted revisions thereto.
  - (iv) Project Co shall update the plan such that the information therein is kept current with the upcoming and ongoing construction activities. Project Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
  - (v) Project Co shall not commence any Work on Site without an applicable current accepted Emergency Traffic Plan.
- (c) Traffic Incident Management Plan
- (i) Project Co shall prepare and submit a TIMP in accordance with Schedule 10 – Review Procedure. It shall be in accordance with the City of Ottawa Emergency Management Plan. The TIMP shall include a process flow chart which includes but is not limited to - occurrence of the incident, nature and timing of notifications to partner agencies, names and coordinates of contacts, actions to address the incident, post incident review of process, and revisions thereto to the TIMP as appropriate. The primary objectives are to support the City in facilitating incident response and moving traffic safely and expeditiously around the incident. The plan shall specify how Project Co will provide access for Emergency vehicles and assistance to ESP, and how Project Co shall work with the City’s Traffic Incident Management Group in responding to the incident.
  - (ii) A traffic incident includes, but is not limited to, any of the following occurrences on or adjacent to a construction Site or detour route:
    - A. motor vehicle accidents;
    - B. pedestrian and cycling accidents;
    - C. Emergency road repairs;
    - D. Emergency Utility repairs;
    - E. Emergency road closures for fire, gas leak, etc.;
    - F. disabled vehicles; and

- G. debris on the road.
- (iii) Project Co's TIMP shall:
  - A. Work closely and effectively deal with major incidents with partner agencies including City, OPS, OC Transpo, STO, RCMP, OPP, MTO, City of Gatineau, Sureté du Québec, and the Ministry of Transportation of Québec;
    - i. These efforts shall include the provision of temporary TCDs and/or OPS in the vicinity of Project Co's construction Sites or detour routes as requested by the City's Traffic Incident Management Group.
  - B. Coordinate with the City of Ottawa Office of Emergency Management the communications to the public regarding the impacts to the road network of the incident, via the City, media, and VMSs, and in accordance with established communication protocols; and
  - C. Define a process to review incidents and propose modifications to the Project that shall reduce the severity and frequency of incidents.
- (iv) Project Co shall document all incidents, including but not limited to, date location, details of the incident, comments of the incident reporter, actions taken, partner agency and agency representatives contacted, follow-up action recommended to be taken and by whom, signed and dated. A copy of the document shall be given to the City within 48 hours of the occurrence of the incident.
- (v) Project Co shall implement the accepted TIMP and accepted revisions thereto.
- (vi) Project Co shall update the plan such that the information therein is kept current with the upcoming and ongoing construction activities. Project Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
- (vii) Project Co shall not commence any Work on Site without an applicable current accepted TIMP.
- (d) Traffic Management Implementation Plan
  - (i) Project Co shall prepare and submit a TMIP in accordance with Schedule 10 – Review Procedure. The TMIP shall identify the Traffic Control Supervisor, Traffic Engineer, and Traffic Manager, along with the qualifications and experience of those named individuals demonstrating they meet the qualifications and experience identified in this Part 7.

- (ii) The TMIP shall define processes to ensure that the TTMP and each of the individual TTMP sub-plans are developed and implemented efficiently and appropriately, and that they are kept up-to-date with necessary modifications during the Project. In addition, the processes shall be set out in flow charts, one for the TTMP and one for each of the sub-plans, with an accompanying explanation provided to describe the activities represented by each box in each of the flow charts.
  - (iii) Project Co shall implement the accepted TMIP and accepted revisions thereto.
  - (iv) Project Co shall update the plan such that the information therein is kept current with the upcoming and ongoing construction activities. Project Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
  - (v) Project Co shall not commence any Work on Site without an applicable current accepted TMIP.
- (e) Transit Management Plan
- (i) Project Co shall develop a Transit Management Plan that is integrated with the TTMP.
  - (ii) Project Co shall prepare and submit the Transit Management Plan in accordance with Schedule 10 – Review Procedure. It shall outline how the quality of transit services shall be maintained during all phases of construction. The Transit Management Plan shall contain the following information with respect to how Project Co intends to maintain transit service routes and comply with the requirements:
    - A. Accommodation of transit service routes as detailed in this Part 7;
    - B. Accommodation of the requirements in Article 3 – Existing Transitway System of this Part 7;
    - C. Overall strategy and approach that Project Co intends to implement to maintain the quality of transit service routes throughout the construction period and minimize disruption to the Passengers;
    - D. Identify Project Co’s scheduled construction activities, closures, detour routes, Lane Shifts, and diversions that have an impact on the existing transit service;
    - E. Overall strategy for administering the Transit Management Plan with the City that as a minimum demonstrates how Project Co will manage the notice requirements, reviews and approvals, permits, and commissioning that shall be completed prior to implementing lane closures, diversions, or detours; and,



- F. Minimize the travel time for the pedestrians to access the existing Transit facilities.
- (iii) Project Co shall implement the accepted Transit Management Plan and accepted revisions thereto.
- (iv) Project Co shall update the plan such that the information therein is kept current with the upcoming and ongoing construction activities. Project Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
- (v) Project Co shall not commence any Work on Site without an applicable current accepted Transit Management Plan.
- (f) Traffic Advisory Temporary Signage Plan
  - (i) Project Co shall prepare and submit a Traffic Advisory Temporary Signage Plan in accordance with Schedule 10 – Review Procedure. The primary objective of the plan is to notify the City and other Stakeholders in advance of scheduled construction activities, closures, full closures, detour routes, Lane Shifts, and diversions.
  - (ii) The Traffic Advisory Temporary Signage Plan shall be prepared in accordance with the requirements set out in Schedule 15-2, Part 2, Article 6 – Roadways, Bus Terminals, and Lay-bys.
  - (iii) Project Co shall update the plan such that the information therein is kept current with the upcoming and ongoing construction activities. Project Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
  - (iv) Project Co shall implement the accepted Traffic Advisory Temporary Signage Plan and accepted revisions thereto.
  - (v) Project Co shall not commence any Work on Site without an applicable current accepted Traffic Advisory Temporary Signage Plan.
- (g) Traffic Risk Assessment Plan
  - (i) Project Co shall prepare and submit a Traffic Risk Assessment Plan in accordance with Schedule 10- Review Procedure. Project Co shall identify all risks which may have an impact on traffic and state the measures to be implemented to manage, reduce, or eliminate the risks.
  - (ii) Project Co shall perform an independent assessment to identify any risks that could have an impact on traffic management or special conditions that shall be addressed through Project Co’s Traffic Risk Assessment Plan.

- (iii) Project Co shall update the plan such that the information therein is kept current with the upcoming and ongoing construction activities. Project Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
  - (iv) Project Co shall implement the accepted Traffic Risk Assessment Plan and accepted revisions thereto.
  - (v) Project Co shall not commence any Work on Site without an applicable current accepted Traffic Risk Assessment Plan.
- (h) Traffic and Transit Management Communications Plan
- (i) Project Co shall prepare and submit a Traffic and Transit Management Communications Plan in accordance with Schedule 10 – Review Procedure. It shall describe clearly how Project Co shall communicate to the City and other Stakeholders about all matters relating to traffic flow, including specifically, how it shall provide timely notice of construction related delays, closures, detours, traffic incidents, and emergencies.
  - (ii) Project Co shall craft the Traffic and Transit Management Communications Plan to show how Project Co shall incorporate and carry out each of the requirements set out in Clause 1.12 of this Part 7.
  - (iii) Project Co shall implement the Traffic and Transit Management Communications Plan to apply throughout the Project Term.
  - (iv) Project Co shall ensure that the plan is maintained current as related to the activities on Site. Project Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
  - (v) Project Co shall not commence any Work or Site preparations for same without an accepted Traffic and Transit Management Communications Plan.
  - (vi) Project Co shall consult with the City to identify the major user groups affected by the Project. Major user groups may include, but are not limited to, the following:
    - A. emergency and police services;
    - B. transit operating companies;
    - C. motorists;
    - D. cyclists;
    - E. pedestrians;

- F. transport and tour bus companies;
  - G. taxi and limousine companies;
  - H. MTO;
  - I. NCC;
  - J. NRC;
  - K. OMCIAA;
  - L. **[REDACTED]**;
  - M. property owners and businesses;
  - N. community organizers; and
  - O. Special Event organizers.
- (vii) Project Co shall develop and document a process which shall be integrated with the City's communication procedures for traffic management (such as the City Traffic Report and Public Service Announcements) to keep major user groups informed of planned traffic pattern changes, including, but not limited to the following: hauling and truck routes, transit impacts, detours, Lane Shifts, lane closures, sidewalk/MUP closures, access restrictions, schedule changes, and other traffic control procedures. Procedures for disseminating information related to unplanned traffic pattern changes shall be addressed in the Traffic Incident Management Plan. Project Co shall ensure that this process is acceptable to the Governmental Authorities.
- (viii) All public inquiries or complaints that Project Co receives shall be documented and handled immediately in the field and forwarded simultaneously to the City, 24 hours a day, seven days of a week.
- (i) Traffic and Transit Management Monitoring Plan
- (i) Project Co shall prepare and submit a Traffic and Transit Management Monitoring Plan in accordance with Schedule 10 – Review Procedure. Project Co shall demonstrate how they will ascertain whether or not the TTMP Plan and the TTMP sub-plans are working as forecast. In cases where the forecasts are not being met, Project Co shall describe the means to adjust the plans such that the forecasts are met or exceeded.
  - (ii) Within each TTMP sub-plan submission, Project Co shall identify performance indicators tailored to the specifics of the sub-plan including but not limited to traffic volumes, travel times, and peak hour queue lengths. Upon acceptance of the sub-plan by the City, Project Co shall use those indicators on an ongoing basis

to assess the effectiveness of the subject sub-plan. Project Co shall review the parameters of performance indication, and adjust the indicators accordingly in the event that a sub-plan undergoes an update due to changes in Project as a result of any and all Project activities which may result in changes to the traffic management strategies set out in the TTMP.

- (iii) Project Co shall identify in their TTMP and their TTMP sub-plans, the acceptable level of performance achievable for each of the performance indicators, based on the calculations used in support of the accepted TTMP and TTMP sub-plans.
- (iv) The performance of the TTMP or TTMP sub-plan shall be deemed to be acceptable from each of a) a general traffic perspective, b) a transit perspective, c) a cycling perspective, and d) a pedestrian perspective, if the level of performance measured in the field during the execution of the TTMP traffic management measures meets or exceeds the level forecast in the TTMP for each of the respective perspectives. If the performance of any one or more of the perspectives is less than that forecast in the TTMP, then Project Co shall immediately formulate mitigation measures to bring the performance of that perspective up to the forecast standard.
- (v) Project Co shall perform field monitoring in advance of and during each stage or closure.
- (vi) Project Co shall be responsible for all means, methods and techniques used to undertake the monitoring services and shall provide all aspects necessary for the performance of the monitoring services, including labour, supervision, management, plant, equipment, tools, and materials.
- (vii) The field monitoring shall include as a minimum, Peak Period traffic volumes, travel time surveys, queue and delays and intersection operational performance within the impacted Roadway network. The monitoring plan shall include travel time and delay data specific to transit vehicles, if impacts to transit routes are anticipated.
- (viii) Field monitoring shall occur five Business Days after stage, detour implementation, or closure implementation, and every 20 Business Days thereafter for the duration of the Work. The frequency of monitoring post-implementation may be increased at the request of the City should issues be noted as a result of the field monitoring or the daily Site reviews.
- (ix) Within five Business Days of conducting the field monitoring, Project Co shall evaluate the data and submit a report summarizing the monitoring results and evaluating the performance of the stage, detour implementation, or closure implementation compared to Project Co's current TTMP and TTMP sub-plan.
- (x) Where applicable, the data collected shall include, but not be limited to:

- A. General Traffic
    - i. Traffic volumes – Peak Periods and AM and PM peak hour, at major intersections and other locations representative of the Roadway network impacted by the execution of the Project;
    - ii. Travel times – AM and PM peak hour along major Roadways or Project Segments, and other streets representative of the Roadway network impacted by the execution of the Project; and,
    - iii. AM and PM queue lengths for traffic movements at signalized intersections and other intersections representative of the Roadway network impacted by the execution of the Project;
  - B. Transit
    - i. Travel times - AM and PM peak hour travel times, as determined from OC Transpo GPS data, to be provided to Project Co upon request
  - C. Cyclists
    - i. Volumes – AM and PM Peak Periods; and,
    - ii. Condition of surface of cycling lanes and MUPs.
  - D. Pedestrians
    - i. Volumes – AM and PM Peak Periods; and,
    - ii. Surface condition of sidewalks.
- (xi) Project Co shall ensure that the plan is maintained current as related to the activities on Site. Project Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
  - (xii) Project Co shall create and execute a Daily Traffic Management Site Record as set out in Appendix B of this Part 7.
  - (xiii) Project Co shall create and execute a Daily Traffic Monitoring Report as set out in Appendix C of this Part 7.
  - (xiv) Project Co shall create and execute a Daily Lane Closure Report as set out in Appendix D of this Part 7.
- (j) Lane Closure Measurement and Verification Plan

- (i) Project Co shall prepare and implement a Lane Closure Measurement and Verification Plan prior to implementation of any planned lane closures. The Lane Closure Measurement and Verification Plan shall describe how Project Co will evaluate their performance on lane closure progress in relation to the lane closure plan it has submitted based on the requirements in Schedule 7 – Mobility Matters. This plan shall also describe the verification process through which the City can audit Project Co’s lane closure performance.
  
- (k) Property Access and Business Continuity Plan
  - (i) Project Co shall prepare and submit a Property Access and Business Continuity Plan, in accordance with Schedule 10 - Review Procedure. The goal of the plan is to support the business community in the construction Work zone and to maintain existing or equivalent vehicle and pedestrian access to all buildings and properties. This plan shall address elements of ensuring accessibility to business (for customers as well as deliveries) as well as promotion of the businesses in the affected corridors to assist them during the construction period.
  - (ii) The Property Access and Business Continuity Plan shall address the following elements:
    - A. Maintaining effective access for all relevant modes currently available to all properties, including but not limited to, vehicles, deliveries, pedestrians, and cyclists;
    - B. To the extent possible, maintain visual sight lines and facilitate Maintenance of a clean and attractive environment despite construction;
    - C. A strategy for implementing temporary replacement of parking which is unavailable during construction. This strategy shall address provision of temporary parking lots and changes to on-street parking regimes; and
    - D. City and Project Co responsibilities for communication and stakeholder engagement shall be as defined in Schedule 18 – Communications and Stakeholder Engagement Obligations.
  - (iii) The plan shall demonstrate how Project Co shall achieve the following property access requirements;
    - A. Maintain front door pedestrian access to all properties;
    - B. When front door pedestrian access cannot be maintained, provide a minimum of 60 calendar days’ notice to the affected property owner and tenants;
    - C. Maintain existing or provide equivalent vehicle access (i.e. maintain existing driveway location and width, maintain rear laneway width and configuration);

- D. Identify when OPS traffic assistance shall be provided in accordance with City requirements;
  - E. Minimize delay for vehicles and pedestrians accessing retail stores; and
  - F. Provide Traffic Control Personnel where appropriate to maintain safe and adequate vehicle and pedestrian access.
- (iv) The Plan shall demonstrate how Project Co shall achieve the following wayfinding and visibility requirements:
- A. Maximize the visibility of business frontages, including front doors;
  - B. Maintain locations and visibility of current business signage;
  - C. Where locations and/or visibility of current business signage cannot be maintained, relocate or design, supply, and install new signs at locations which continue to provide high visibility and clear sightlines. These shall be conducted in consultation with the affected businesses;
  - D. Design, supply, and install additional signs to direct pedestrians and vehicles to business access routes; and
  - E. Maintain all signage as described above throughout the construction period.
- (v) The plan shall demonstrate how Project Co shall achieve the following communications requirements;
- A. Conduct ongoing community liaison during construction;
  - B. Provide adequate and specific notice to affected property owners and tenants for each stage of construction, including anticipated impacts and durations;
  - C. Provide sufficient notice and description of impacts to allow businesses to take actions to offset and/or mitigate business loss;
  - D. Maintain records of all notices;
  - E. Provide prompt, formal written responses to complaints and provide document specific follow-up actions; and
  - F. Provide contacts for construction or a Community Liaison staff member outside normal business hours.
- (vi) Project Co shall support the City in accordance with Schedule 18 – Communications and Stakeholder Engagement Obligations, to engage with

property owners and tenants throughout the corridor and BIAs throughout the Project, to inform them of upcoming changes in construction activity, facilitate mitigation of any construction-related access or parking issues between the properties and Project Co, and assist in ensuring that Project Co maintains access for each relevant mode and keeps the street clean to the extent possible.

- (vii) Project Co shall update the plan such that the information therein is kept current with the upcoming and ongoing construction activities. Project Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
- (viii) Project Co shall implement the accepted Property Access and Business Continuity Plan and accepted revisions thereto.
- (ix) Project Co shall not commence any Work on Site without an applicable current accepted Property Access and Business Continuity Plan.

### **7.3 Project Co Responsibilities**

- (a) Project Co shall accept full responsibility for quality control and quality assurance of all activities affecting the TTMP. The TTMP quality control process shall be included in the TTMP. Project Co shall ensure that all personnel identified in the TTMP are suitably qualified and licensed.
- (b) Traffic Manager
  - (i) Project Co shall designate a Traffic Manager who shall be responsible for the following:
    - A. development, implementation, and management of the TTMP;
    - B. ensuring the City is kept informed of all upcoming traffic activities and any revisions to the TTMP;
    - C. ensuring that appropriate modifications are made to the TTMP if the specified traffic control measures are not achieving the requirements;
    - D. coordinating with persons carrying out Work in areas adjacent to the Project;
    - E. co-chairing with the City the Traffic Management Committee;
    - F. ensuring the timing and organized delivery of public and Stakeholders communication information;
    - G. participating as Project Co’s representative in coordinating with the City’s Traffic Demand Management program and the Traffic Incident Management Group; and



- H. sign-off of each and every TTMP and TTMP sub-plan prior to their submission to the City.
  - I. review and sign off the Lane Closure Analysis Report required in Schedule 7 – Mobility Matters; and,
  - J. Attend the Mobility Matters Review Meetings described in Schedule 7 – Mobility Matters.
- (ii) The Traffic Manager shall be a Professional Engineer with the following qualifications:
- A. 20 years of experience overall in the traffic engineering field;
  - B. 10 years of experience specifically related to traffic management and construction staging during construction; and
  - C. Experience in design/build type projects where Roadways and/or Highways were constructed within an existing urban area.
- (c) Traffic Engineer
- (i) Project Co shall designate a Traffic Engineer who is a Professional Engineer and has Project Co's authority to review, and shall seal, the TTMP and associated sub-plans and take responsibility for ensuring that all traffic engineering issues and requirements are taken into account.
  - (ii) The Traffic Engineer shall attend the Project's regularly scheduled Traffic Management Committee meetings and be Project Co's representative at the City's Traffic Control Centre when required.
  - (iii) The Traffic Engineer shall oversee and direct record keeping, reporting, and accounting of temporary and permanent traffic signal installations and ensure that all traffic signal notification timelines (as detailed in Schedule 15-2, Part 2 – Civil and Guideway, and this Part 7) are met.
  - (iv) The Traffic Engineer shall have the following qualifications:
    - A. 15 years of experience overall in the traffic engineering field;
    - B. 10 years of experience specifically related to traffic modeling, intersection design, and construction staging, and traffic signal infrastructure;
    - C. Experience in design/build type projects where Roadways and/or highways were constructed within an existing urban area.
- (d) Traffic Control Supervisors

- (i) Project Co shall designate Traffic Control Supervisors, each of whom shall have Project Co's authority to respond to traffic control requirements, and each of whom shall personally perform all the duties of the Traffic Control Supervisor, in accordance with this Part 7.
- (ii) A Traffic Control Supervisor shall be on the Site full-time when construction activities are underway.
- (iii) The duties of the Traffic Control Supervisor shall include but not be limited to the following:
  - A. Directing all traffic control operations for construction;
  - B. The Traffic Control Supervisor shall have direct line authority over all of Project Co's Traffic Control Personnel and procedures on the Site;
  - C. Liaising with the City, OC Transpo, as required;
  - D. Recording the actual duration of lane closures, full closures, detours and Lane Shifts, and unauthorized traffic delays and forwarding this information, on a daily basis to the City's Lead Traffic and Mobility for information and appropriate action;
  - E. Monitoring queue lengths in active construction zones and implementing appropriate measures when such queues affect the operation and safety of existing provincial Roadways, existing Transitway, existing Major and Minor Municipal Roads, and other federal and municipal Roadways and providing the City with documentation outlining the date, location, queue lengths, and measures taken;
  - F. Monitoring, and recording on a daily basis, the transit travel times through construction zones and detour routes, at a frequency and duration sufficient to identify operational performance issues. Coordinate with OC Transpo ahead of time to establish "geofence" points in the system before measurements are to take place in order to facilitate the collection of accurate date, route, time, and location data. Document and evaluate the transit travel times versus the forecast times established in the TTMP submissions. Identify operational performance issues and the Project Co recommended mitigation measures immediately to the City. Provide a copy of the record, issues, and mitigation measures to the City daily. Prepare and submit to the City on a monthly basis, a monthly summary report of the daily reports. Report the operational performance issues and their resolution at the next Traffic Management Committee meeting and record the same in the notes of the meeting;
  - G. Respond to traffic related incidents resulting from construction and traffic management activities. All major incidents shall be documented within 48

hours of the incident and provided to the City per Clause 7.2 (c) (iv) of this Part 7

- H. Documenting traffic control measures and activities in accordance with this Part 7 and producing a Daily Traffic Monitoring Report and Daily Lane Closure Report as set out in Appendices C and D of this Part 7, respectively;
  - I. Documenting site instructions and items noted on daily (site) reports which pertain to or affect traffic control, and updating the Traffic Control Plans immediately to reflect the changes on Site, and then promptly submitting the revised plans to the City in accordance with Schedule 10 - Review Procedure, as updates to the TTMP and applicable TTMP sub-plans;
  - J. Overseeing all requirements that contribute to the safety, convenience, and orderly movement of vehicular, cycling, and pedestrian traffic;
  - K. Attending the Project's regularly scheduled traffic management meetings; and
  - L. Traffic control supervision shall be provided by Traffic Control Supervisors on the Site on a 24 hour per day basis when construction activities are underway. During non-work periods, the Traffic Control Supervisor or accepted alternate shall be on the Site within 30 minutes of being notified. The Traffic Control Supervisors shall have appropriate personnel and equipment available on call, at all times.
- (e) Traffic Control Personnel
- (i) All Traffic Control Personnel shall be qualified in accordance with the OHSA/CCOHS and the regulations thereunder.
- (f) Traffic Management Committee
- (i) Project Co shall be responsible for forming a Traffic Management Committee that shall be comprised of Project Co, City, OC Transpo, and representatives of Governmental Authorities that shall meet on a weekly basis. The purpose of this committee shall be to coordinate, plan, and take action with respect to current and future traffic and transit impacts that may be caused by the design and construction Works.