Qatar Embassy Traffic Impact Assessment

City of Ottawa

Type of Document:
Final Report

Project Name:
Qatar Embassy Traffic Impact Assessment

Date:
2022-02-07

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EXP Quality System Checks			
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1. Introduction

EXP was retained by GRC Architects on behalf of the Qatar Embassy to prepare a Traffic Impact Assessment (TIA) in support of the development of a new embassy at 187 Boteler Street to replace its current operating embassy at 150 Metcalfe Street. The proposed development is a mid-size office of 44 employees with a total gross office area of 1,532 m² and a total of 25 parking spots including five spots for authorized visitors. The embassy will be providing consular services and on-street parking on Boteler St will accommodate the limited expected number of visitors.

According to the discussion[1] with the City, a full traffic impact assessment will not be required for this proposed development. A development site plan is provided and attached to this report as **Appendix A**.

2. Screening

A TIA screening form for the proposed development was completed to identify the needs of the traffic impact report. A copy of the completed screening form is attached to this report as **Appendix B** and the findings are as follow:

- **Trip Generation Trigger** The development has an office land use and a total gross office floor area of 1,532 m² which is lower than the 3,500 m² minimum development size trigger and thus does not trigger the trip generation component of the TIA. Subsequently, no trip generation, distribution, assignment, and intersection LOS assessment has been performed. It is anticipated that with such a low trip generation that the existing area infrastructure will adequately facilitate the embassy development. A detailed gross office floor area drawing is attached and can be found in **Appendix C**.

- **Location Trigger** The development is on the edge of the design priority area and thus the locations trigger is satisfied. However, due to the nature of the development, the size of the embassy proposed and based on the discussion with City of Ottawa staff, no further work is necessary for this element of the TIA, and thus the location component is considered as not triggered.

- **Safety Trigger** No Safety triggers are satisfied.

Upon review of the Screening assessment by the City, the development has been exempt from the completion of a full traffic impact assessment. The City did however require the need for a design review for the sustainable modes part of the development design review, and this has been addressed in Section 4.

[1] Email from Neeti Paudel, 12/20/2021

3. Site Evaluation

3.1 Proposed Development

The Qatar Embassy is proposing an Embassy facility development at 187 Boteler Street, as shown in **Figure 1**. The subject site is designated as 'General Urban Area' on Schedule 'B' of the City of Ottawa's Official Plan.

Figure 1: Site Location Plan

The proposed development will consist of:

- 4 storey building with 44 employees over a total office gross floor area of 1,532 m^2.
- 25 parking spaces including accessible parking spaces.

The proposed development is anticipated to be completed in one phase.

3.2 Existing Conditions

3.2.1. Roadways

Boteler Street is an east-west municipal local road which extends from Sussex Drive in the west to King Edward Avenue in the east with a 1-lane cross section in the section between Dalhousie Street and King Edward Avenue and a 2-lane urban cross section in the section between Sussex Drive and Dalhousie Street and on-street parking on the section between Gilberte-Paquette Avenue and King Edward Avenue.

King Edward Avenue is a north-south arterial road which extends from the Macdonald-Cartier Bridge to Mann Avenue with a 4-lane urban cross section in the section between the Macdonald-Cartier bridge and Laurier Avenue East and a 2-lane urban cross section in the section between Laurier Avenue East and Mann Avenue. The posted speed limit is 40 km/h.

Dalhousie Street is a north-south municipal collector road extending from Besserer Street to Boteler Street with a 2-lane urban cross section and on-street parking.

Cumberland Street is north-south municipal local road which extends from Laurier Avenue East to Boteler Street with a 2-lane urban cross section and on-street parking.

The roadway network classification surrounding the subject site is illustrated in **Figure 2,** all roadways within the study area fall under the jurisdiction of the City of Ottawa:

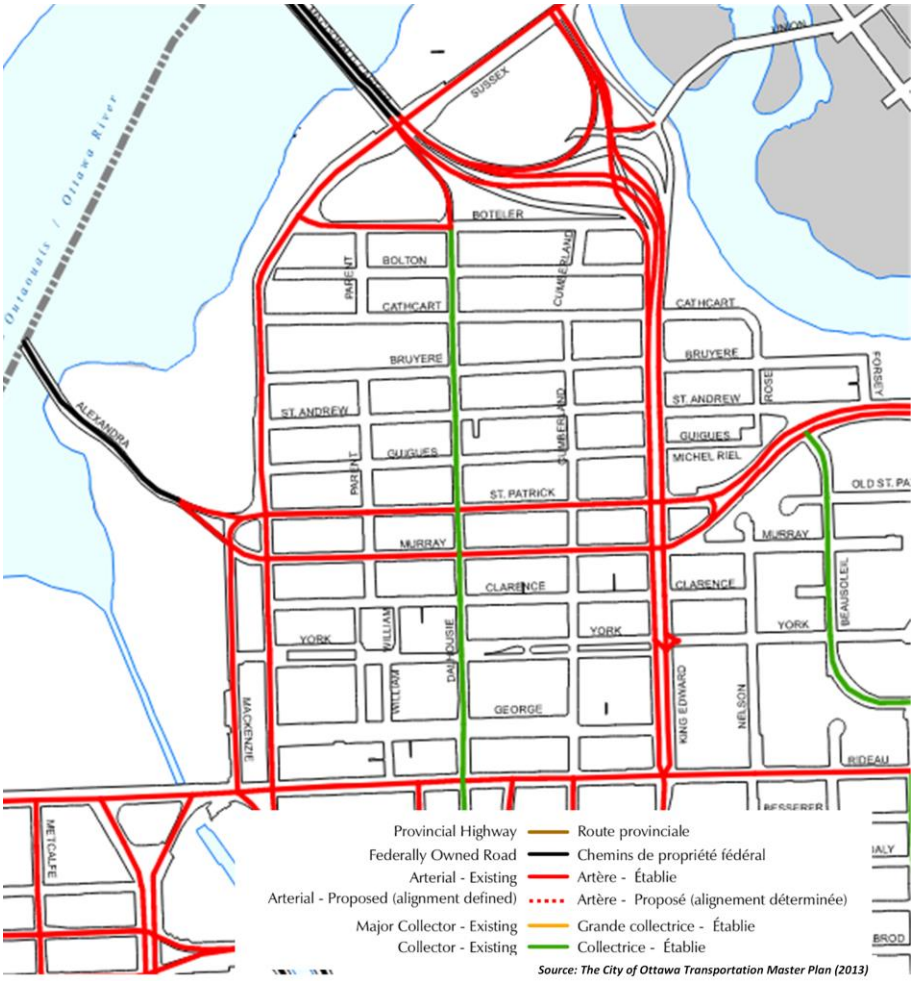
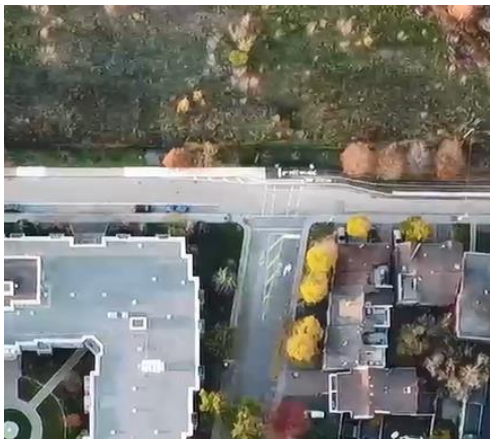


Figure 2: Roadway Classifications

3.2.2. Intersections

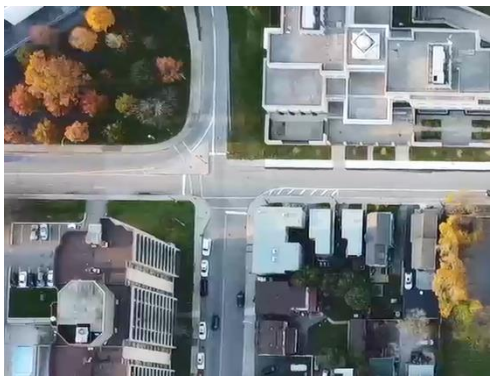
Boteler Street / King Edward Avenue

- Unsignalized T intersection with 'Stop' control sign on the west approach of the intersection (Boteler St).
- Both the west approach as well as the north approach are one-way legs with single lane.
- A pedestrian crossing is provided on the west approach.



Boteler Street / Cumberland Street

- Unsignalized T intersection with 'Stop' control sign on the south approach.
- Only restriction is the Northbound left turn with Boteler St being a one-way street in the eastbound direction.
- A pedestrian crossing is provided on the south approach.
- A portion of sidewalk is currently not provided on the north side of Boteler St, east of Cumberland St.



Boteler Street / Dalhousie Street

- Unsignalized 4-leg intersection with All-Way 'Stop' control signs.
- All the approaches are single-lanes.
- The northbound through and left turn movements are prohibited.
- The eastbound left turn movement is prohibited.
- The southbound right turn is a channelized right turn slip lane.
- Pedestrian crossings are provided on the south and west approaches.

3.2.3. Driveways to Adjacent Developments

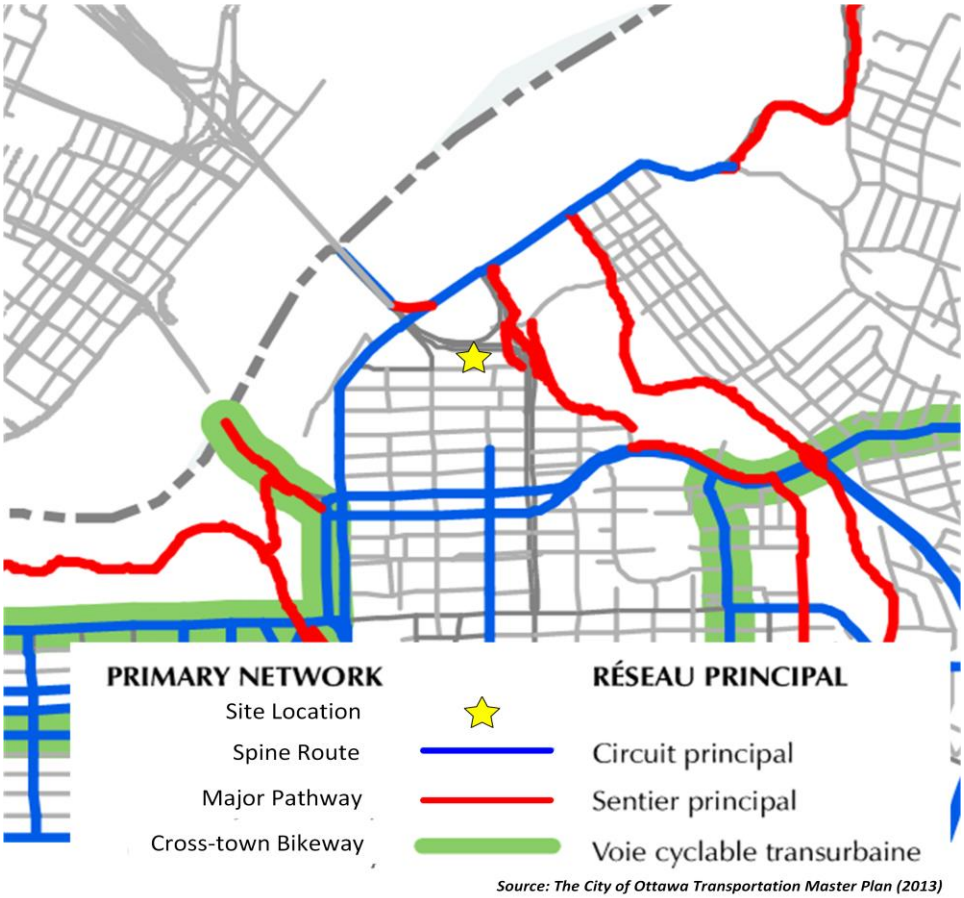
In a radius of 200 m around the site access are multiple driveways on Boteler Street, most of them serve private residential detached houses and apartments. One driveway on the opposite side of the road serves the Republic of Korea embassy, whereas west of the site, there is an access to the embassy of the United Arab Emirates embassy.

3.2.4. Pedestrian and Cycling Facilities

The study area consists of roads having sidewalks on both sides of the road, which is the case for Boteler Street as well as Sussex Drive, Dalhousie Street, Cumberland Street and Gilberte-Paquette Avenue. The Macdonald-Cartier Bridge off-Ramp has a sidewalk/pathway facility on one side of the road that connects with the pathway going across to the Quebec side of the bridge, which is also the case for King Edward Avenue, north of its intersection with Cathcart Street.

As for the cycling network, a Spine Route runs along Sussex Drive and provides a bike lane in both directions. A major pathway also runs in parallel with King Edward Avenue and connects the east end of Boteler Street, providing a separated pathway for cyclists. The proposed development will be located in close proximity to an extensive active transportation network, facilitating pedestrian and cycling travel choices.

Figure 3 below represents the Area Cycling Network according to the City of Ottawa Transportation Master plan 2013.



Source: The City of Ottawa Transportation Master Plan (2013)

Figure 3: Existing Cycling Network

3.2.5. Transit

Two different types of transit services are offered in the area: Transit services provided by OC Transpo (City of Ottawa) and transit services provided by STO (City of Gatineau). As for STO services, they all run along King Edward Avenue and don't interact within the study area, with the exception of a courtesy bus stop provided at the east end of Boteler Street.

As for OC Transpo services, a bus route runs through the study area: **Route #9 (Rideau – Hurdman)** connecting the downtown area to Hurdman Station. This route makes stops at Rideau Station, Sussex Drive northbound, Dalhousie Street southbound and travels along the Vanier Parkway for much of its length. It is identified as a local route by OC Transpo, operates 7 days a week and runs every 30 minutes in both direction during weekday AM and PM peak periods. The closest stop is the Boteler/Dalhousie stop, which is located approximately 200 m west of the proposed development location. In addition, a peak period only Route 56 travels along King Edward Avenue, connecting the Department of Global Affairs offices at King Edward Avenue/Union Street with Lees Station. **Figure 4** below shows the transit services that operates within the study area.

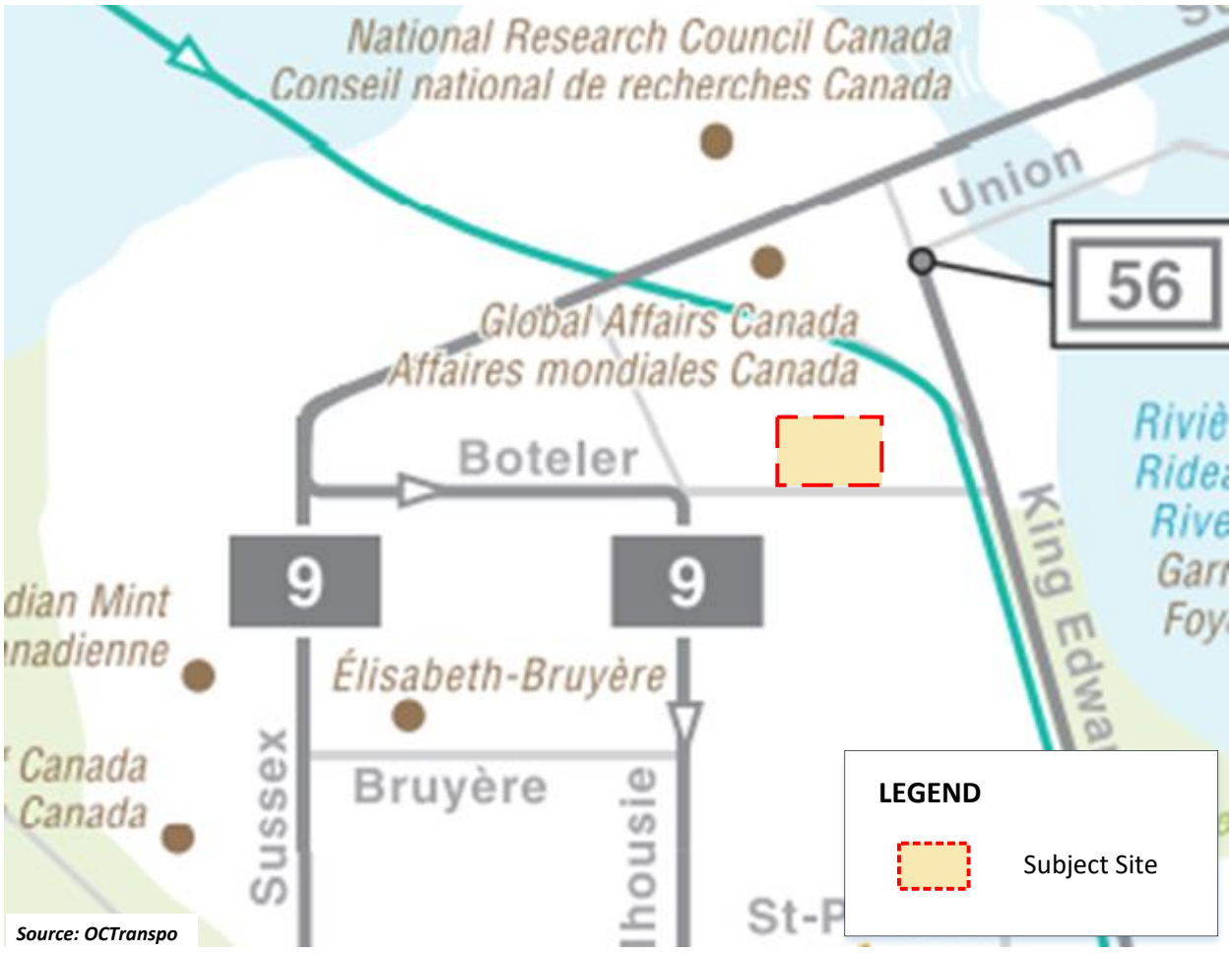


Figure 4: OC Transpo System Map

3.2.6 Traffic Management Measures

The traffic management measures already adopted in the area includes:

- Heavy trucks prohibited on Dalhousie Street
- Heavy trucks prohibited on Boteler Street between Dalhousie Street and King Edward Avenue
- Separated parking lane by painting along Boteler Street
- On-street parking on Dalhousie Street and Cumberland Street
- Traffic signals are at the Sussex Drive/Boteler Street and Dalhousie Street/Bolton Street intersections.
- Traffic calmed neighborhood along Dalhousie Street

3.2.7 Traffic Volumes

Traffic counts were provided by the City of Ottawa within the study area and analysed in order to determine the existing pedestrian, cyclist and vehicular traffic volumes. The existing traffic count data is summarized as follows:

- Boteler Street / Dalhousie Street (November 21, 2019)
    - AM Peak: 7:00 - 8:00
    - PM Peak: 15:00 - 16:00

Figure 5 illustrates the existing traffic volumes for the weekday AM and PM peak hours and **Table 1** summarizes the existing intersection operations. The level of service is based on the HCM criteria for average delay at unsignalized intersection. Peak hour summary sheets of the above traffic counts are included in **Appendix D**.

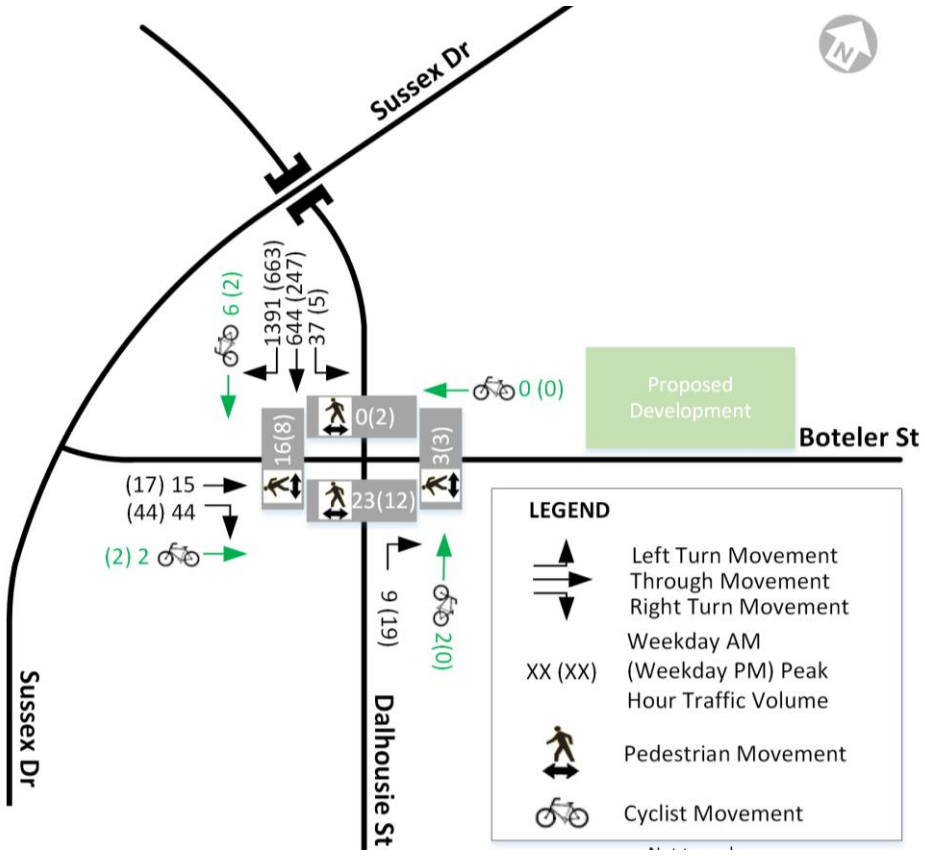


Figure 5: Existing Traffic Volumes

The results of the analysis indicate that movements at the study area intersections are operating at acceptable LOS and residual capacity under existing conditions during all weekday peak hours.

Table 1: Existing Traffic Operations

Intersections	Key Movements	AM Peak Hour			PM Peak Hour		
		v/c Ratio	LOS	Queue Length 95th (m)	v/c Ratio	LOS	Queue Length 95th (m)
Boteler Street / Dalhousie Street (Unsignalized, multi-way stop controlled)	EBT	0.10	A	0	0.08	A	0
	EBR	0.10	A	0	0.08	A	0
	NBR	0.01	A	0	0.02	A	0
	SBL	0.92	D	0	0.34	A	0
	SBT	0.92	D	0	0.34	A	0
	SBR	1.44	F	0	0.69	B	0

3.2.8 Collision Records

Historical collision data from the last five years was obtained from the City's Public Works and Service Department for the study area intersection. Copies of the collision summary report are included in **Appendix E**.

The collision data has been evaluated to determine if there are any identifiable collision patterns. **Table 2** summarizes the number of collisions at Boteler Street/ Dalhousie Street intersection from January 1, 2014 to December 31, 2018.

Table 2: Reported Collisions

Intersection	Impact Types					Total Number of Collisions
	Angle	Sideswipe	Read End	Turning Movement	SMV/Other	
Boteler Street / Dalhousie Street		1				1

3.3 Exemptions Review

The TIA Guidelines provide exemption considerations for elements of the Design Review and Network Impact components. **Table 3** summarizes the TIA modules that are either applicable or not applicable to this study:

Table 3: Possible Exemptions Review

TIA Module	Element	Exemption Criteria	Exempt/Required
Design Review Component			
4.1. Development Design	4.1.2. Circulation and Access	Only required for site plans	Required
	4.1.3. New Street Network	Only required for plans subdivision	Exempt
4.2. Parking	4.2.1. Parking Supply	Only required for site plans	Required
	4.2.2. Spillover Parking	Only required for site plans where parking supply is 15% below unconstrained demand	Exempt
Network Impact Component			
4.5. Transportation Demand Management	All Elements	Not required for site plans expected to have fewer than 60 employees and/or students on location at any given time	Exempt
4.6. Neighborhood Traffic Management	4.6.1. Adjacent Neighborhoods	Only required when the development relies on local or collector streets for access and total volume exceed ATM capacity thresholds	Exempt
4.8. Network Concept		Only required when proposed development generates more than 200 person-trips during the peak hour in excess of the equivalent volume permitted by established zoning	Exempt

4. Analysis

4.1 Development Design

4.1.1. Design for Sustainable Modes

The development will have two access points – one an at-grade access connecting directly to Boteler Street, and one to the east side of the embassy building for VIP entrance and visitor parking users. Currently there is an existing sidewalk on both north and south sides on Boteler Street. Pedestrian facilities will be provided between the main building entrances, and the existing sidewalks along Boteler Street. Within the site, sidewalks are provided throughout the site to connect visitors to the surrounding parking facilities. The pedestrian network throughout the site is shown in **Figure 6**.

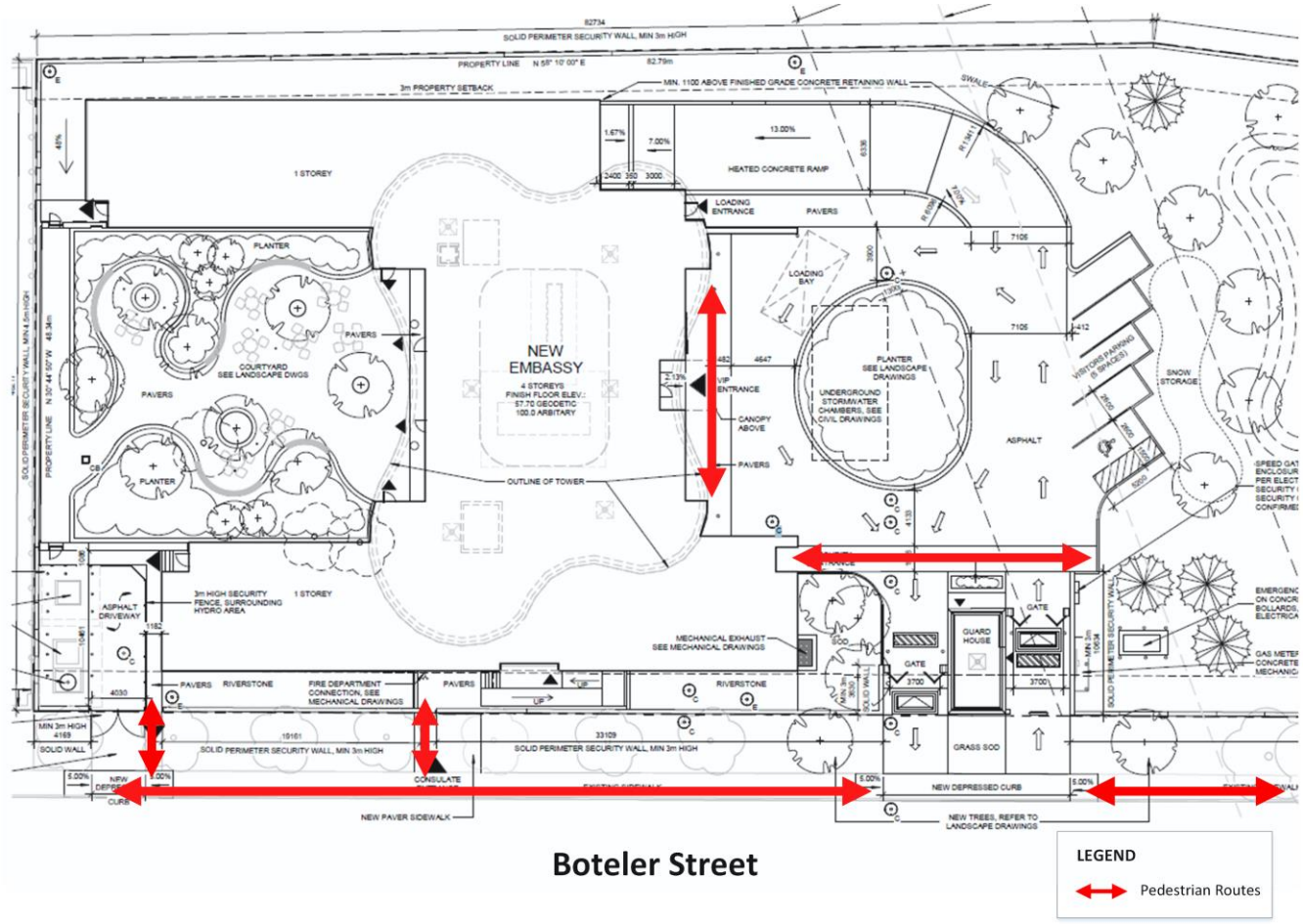


Figure 6: Site Pedestrian Network

The main gates, located on the southeast portion of the development land via Boteler Street, will serve to the underground parking lot, as well as five surface visitor parking spaces, and a small roundabout loop near the main entrance to the building for passenger drop-off purpose.

Bicycle parking will be provided at a rate that satisfies the minimum City By-Law requirements of 7 bicycle parking spaces, for General Office land use. All bicycle parking will be provided indoors in a secure area, located in the underground parking garage.

A total of 25 parking spots including 20 underground parking and 5 authorised visitors parking spots will be provided within the development which satisfies the City By-Law requirements for Diplomatic Mission land use.

The subject site is located less than 400m walking distance from existing OC Transpo routes, including stops for OC Transpo routes #9 and #56.

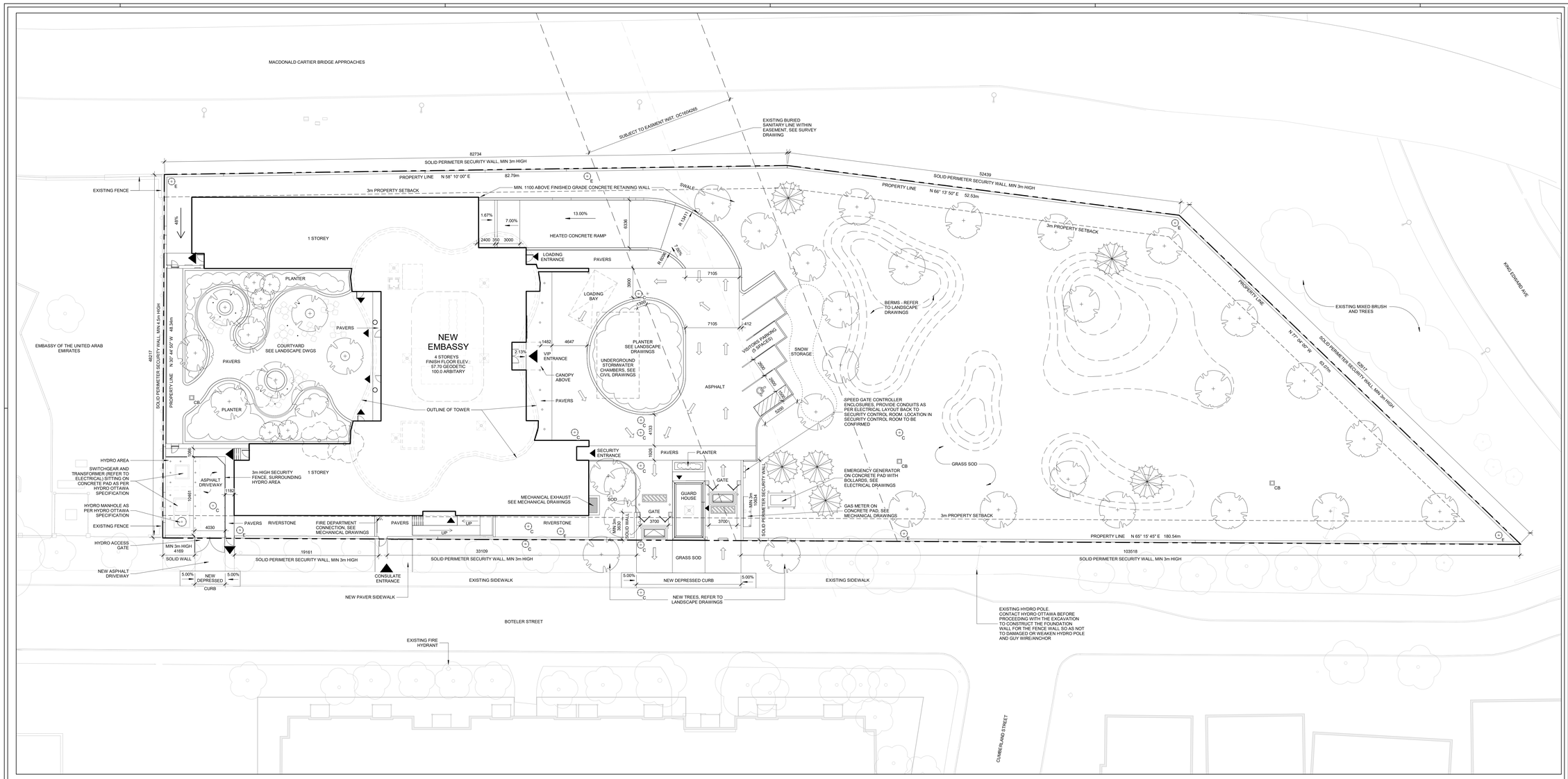
A review of the Transportation Demand Management (TDM) Checklist has been conducted with a copy of the TDM checklist included in **Appendix F**. All required TDM-supportive design and infrastructure measures in the TDM checklist are met.

5. Conclusions

The proposed embassy development is situated on Boteler Street between Dalhousie Street and King Edward Avenue. It sits well with the area's urban environment with the corridor housing several embassies. Its size at 1,532 m² of gross office floor area has a relatively small footprint and has little traffic impact. The existing area infrastructure has the capacity and ability to facilitate all modes of travel to and from the site and includes sidewalks, nearby cycling facilities and major pathway routes. At this time, the City is not planning any additional changes to the active transportation network along Boteler Street and no changes are required to serve the proposed development. TDM measures exist within the area of the development to adequately support walking, cycling and transit use. Accordingly, no new City transportation network infrastructure is recommended as a result of this proposed development.

Appendix A: Site Plan

2650 Queensview Drive, Suite 100 | Ottawa, ON K2B 8H6 | CANADA
t: +1.613.688.1899 | f: +1.905.793.0641 | exp.com



1 A001 SITE PLAN
1 : 200

SITE PLAN LEGEND

- EXISTING TREES TO REMAIN (REFER TO LANSDSCAPE)
- EXISTING TREES TO BE REMOVED (REFER TO LANSDSCAPE)
- VARIOUS EXISTING PLANTINGS (REFER TO LANSDSCAPE)
- NEW TREES (REFER TO LANSDSCAPE)
- NEW TREES (REFER TO LANSDSCAPE)
- VARIOUS NEW PLANTINGS (REFER TO LANSDSCAPE)
- PROPOSED MANHOLE, FOR ITEMS INDICATED E REFER TO ELECTRICAL DRAWINGS, FOR ITEMS INDICATED C REFER TO CIVIL DRAWINGS
- CB — CATCH BASIN (REFER TO CIVIL DRAWINGS)
- BOLLARD
- NEW SIAMESE CONNECTION
- EXISTING FIRE HYDRANT
- HB — HOSE BIB
- DC — DEPRESSED CURB
- LS — LIGHT STANDARD
- PROPERTY LINE
- BUILDING SETBACK
- BOUNDARY OF PROPERTY EASMENT INST. OC1604265
- ENTRANCE / EXIT
- VEHICULAR CIRCULATION

DRAWING INFORMATION LEGEND

LEGAL DESCRIPTION
PART OF LOTS 3 & 7
REGISTRAR'S COMPILED PLAN 611769
CITY OF OTTAWA

MUNICIPAL ADDRESS
187 BOTELER STREET
OTTAWA, ONTARIO

ZONING
NORTH PORTION OF SITE: GM
SOUTH PORTION OF SITE: GM[1344] F(2.0)

AREA INFORMATION
SITE AREA = 7498 m²

GROSS FLOOR AREA (BY-LAW DEFINED):
GROSS GROUND FLOOR AREA = 654 m²
GROSS SECOND FLOOR AREA = 0
GROSS THIRD FLOOR AREA = 389 m²
GROSS FOURTH FLOOR AREA = 489 m²
TOTAL GROSS FLOOR AREA = 1532 m²

BUILDING HEIGHT:
14.95m

PARKING:
REQUIRED (N/59 Office = 1/100m² GFA) = 16
PROVIDED = 25

ACCESSIBLE PARKING:
REQUIRED (5-19 PARKING SPOTS) = 0
PROVIDED = 2

LOADING BAY:
REQUIRED = 1
PROVIDED = 1

BICYCLE PARKING:
REQUIRED (Office = 1/250m² GFA) = 7
PROVIDED = 13

SURVEY INFORMATION:
LEGAL AND TOPOGRAPHIC INFORMATION TAKEN FROM TOPOGRAPHIC SURVEY BY FAIRHALL MOFFATT & WOODLAND LTD. DATED JANUARY 22, 2015

GENERAL NOTES:

1. REFER TO LANDSCAPE DRAWINGS BY JAMES B. LENNOX & ASSOCIATES INC. FOR ALL PLANTING DETAILS/LOCATIONS AND FOR ALL LANDSCAPED GROUND FINISHES
2. REFER TO CIVIL DRAWINGS BY EXP SERVICES INC. FOR STORM WATER DRAINAGE, GRADING, AND SITE SERVICES

CONTACT INFORMATION

APPLICANT / ARCHITECT:
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EMBASSY OF THE STATE OF QATAR
150 Metcalfe Street, 8th Floor
Ottawa, Ontario K2P 1P1
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CIVIL ENGINEER:
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Ottawa, Ontario K2B 8H6
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STRUCTURAL ENGINEER:
Cunliffe & Associates
200-1550 Carling Avenue
Ottawa, Ontario K1Z 8S8
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Nepean, Ontario K2E 7J5
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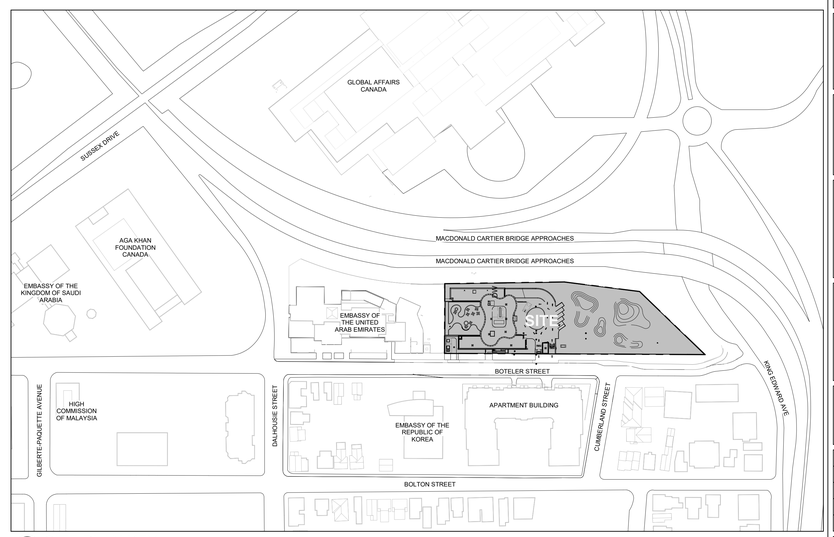
ONTARIO LAND SURVEYOR:
Fairhall Moffatt & Woodland Ltd.
100-600 Terry Fox Drive
Ottawa, Ontario K2L 4B6
t: 613-591-2580



2 A001 SITE PLAN KEY
1 : 1500
0 3 15 37.5 75

no.	date	revision	by

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info@grcarchitects.com www.grcarchitects.com

consultant

northpoint

professional stamp

project title
NEW QATAR EMBASSY AND CONSULATE
address address

drawing title
SITE PLAN

date	January 31, 2022	job. no.	1218
scale	As indicated		
drawn	DH/TL	drawing no.	A001
approved	CJ/PD		
plot date	JAN 12,2022		

1. DO NOT SCALE FROM THIS DRAWING
2. CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE WORK COMMENCES
3. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE FOLLOWING DRAWINGS: STRUCTURAL, MECHANICAL, ELECTRICAL

2/4/2022 4:23:15 PM

Appendix B: Screening Form

City of Ottawa 2017 TIA Guidelines Screening Form

1. Description of Proposed Development

Municipal Address	187 Boteler Street, Ottawa, ON, K1N 0A4
Description of Location	North of Boteler St between Cumberland ST and Dalhousie St
Land Use Classification	Mid Size Office
Development Size (units)	N/A
Development Size (m^2)	1,532
Number of Accesses and Locations	1 Full movement Access Northbound and Southbound and 1 drop off
Phase of Development	1
Buildout Year	2022

If available, please attach a sketch of the development or site plan to this form.

2. Trip Generation Trigger

Considering the Development's Land Use type and Size (as filled out in the previous section), please refer to the Trip Generation Trigger checks below.

Land Use Type	Minimum Development Size
Single-family homes	40 units
Townhomes or apartments	90 units
Office	3,500 m^2
Industrial	5,000 m^2
Fast-food restaurant or coffee shop	100 m^2
Destination retail	1,000 m^2
Gas station or convenience market	75 m^2

** If the development has a land use type other than what is presented in the table above, estimates of person-trip generation may be made based on average trip generation characteristics represented in the current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual.*

If the proposed development size is greater than the sizes identified above, the Trip Generation Trigger is satisfied.

3. Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Spine Bicycle Networks?		X
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?*	X	

**DPA and TOD are identified in the City of Ottawa Official Plan (DPA in Section 2.5.1 and Schedules A and B; TOD in Annex 6). See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA).*

If any of the above questions were answered with 'Yes,' the Location Trigger is satisfied.

4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street are 80 km/hr or greater?		X
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?		X
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)?		X
Is the proposed driveway within auxiliary lanes of an intersection?		X
Does the proposed driveway make use of an existing median break that serves an existing site?		X
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?		X
Does the development include a drive-thru facility?		X

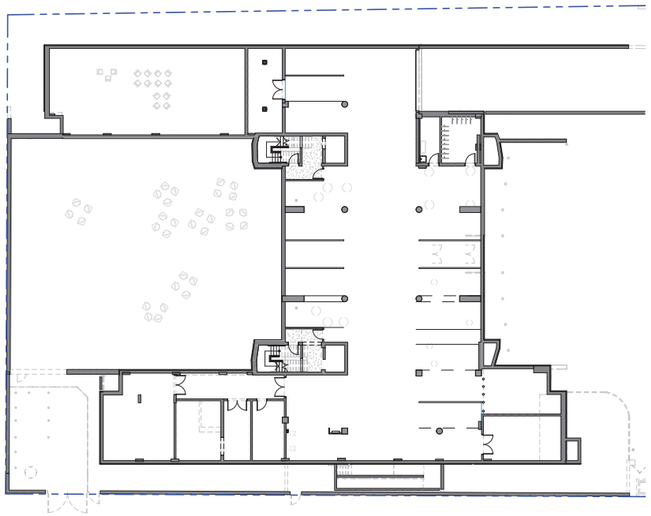
If any of the above questions were answered with 'Yes,' the Safety Trigger is satisfied.

5. Summary

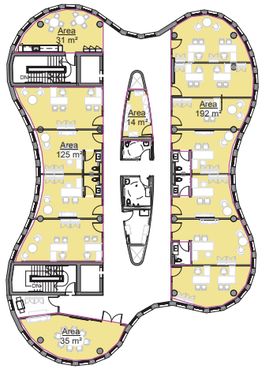
	Yes	No
Does the development satisfy the Trip Generation Trigger?		X
Does the development satisfy the Location Trigger?	X	
Does the development satisfy the Safety Trigger?		X

If none of the triggers are satisfied, the TIA Study is complete. If one or more of the triggers is satisfied, the TIA Study must continue into the next stage (Screening and Scoping).

Appendix C: Gross Office Floor Area Drawing

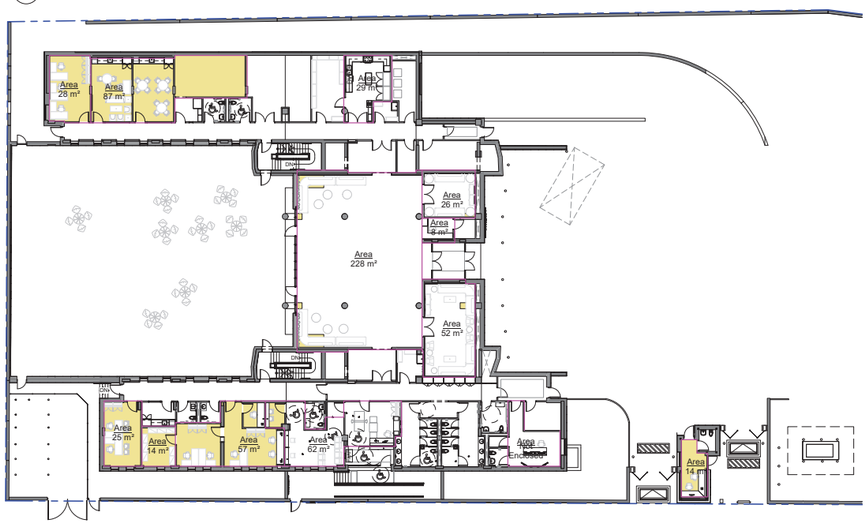


1 X02 BASEMENT H.P.
1 : 200

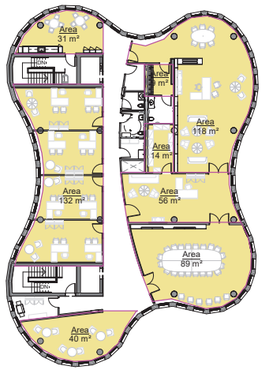


4 X02 SECOND FLOOR
1 : 200

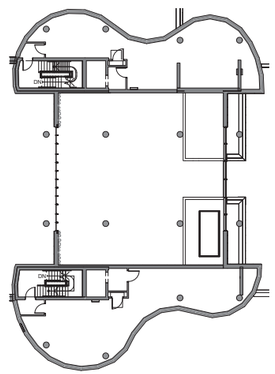
Gross Floor Area Schedule		
Level	Name	Area
GROUND FLOOR	Area	Not Enclosed
GROUND FLOOR	Area	9 m²
GROUND FLOOR	Area	14 m²
GROUND FLOOR	Area	14 m²
GROUND FLOOR	Area	25 m²
GROUND FLOOR	Area	26 m²
GROUND FLOOR	Area	28 m²
GROUND FLOOR	Area	29 m²
GROUND FLOOR	Area	52 m²
GROUND FLOOR	Area	57 m²
GROUND FLOOR	Area	62 m²
GROUND FLOOR	Area	87 m²
GROUND FLOOR	Area	228 m²
GROUND FLOOR		630 m²
SECOND FLOOR	Area	14 m²
SECOND FLOOR	Area	31 m²
SECOND FLOOR	Area	35 m²
SECOND FLOOR	Area	125 m²
SECOND FLOOR	Area	192 m²
SECOND FLOOR		398 m²
THIRD FLOOR	Area	9 m²
THIRD FLOOR	Area	14 m²
THIRD FLOOR	Area	31 m²
THIRD FLOOR	Area	40 m²
THIRD FLOOR	Area	56 m²
THIRD FLOOR	Area	89 m²
THIRD FLOOR	Area	118 m²
THIRD FLOOR	Area	132 m²
THIRD FLOOR		489 m²
Grand total		1517 m²



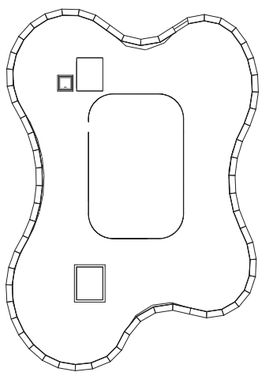
2 X02 GROUND FLOOR
1 : 200



5 X02 THIRD FLOOR
1 : 200



3 X02 MEZZANINE
1 : 200



6 X02 T.O. ROOF SLAB @ L.P.
1 : 200

no.	date	revision	by

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address address

drawing title
GROSS FLOOR AREAS

date	January 31, 2022	job. no.	1218
scale	1 : 200		
drawn	TL	drawing no.	X02
approved	Checker		
plot date	08/13/21		

1. DO NOT SCALE FROM THIS DRAWING
2. CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE WORK COMMENCES
3. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE FOLLOWING DRAWINGS: STRUCTURAL, MECHANICAL, ELECTRICAL

24/2022 11:21:48 PM

Appendix D: Traffic Counts

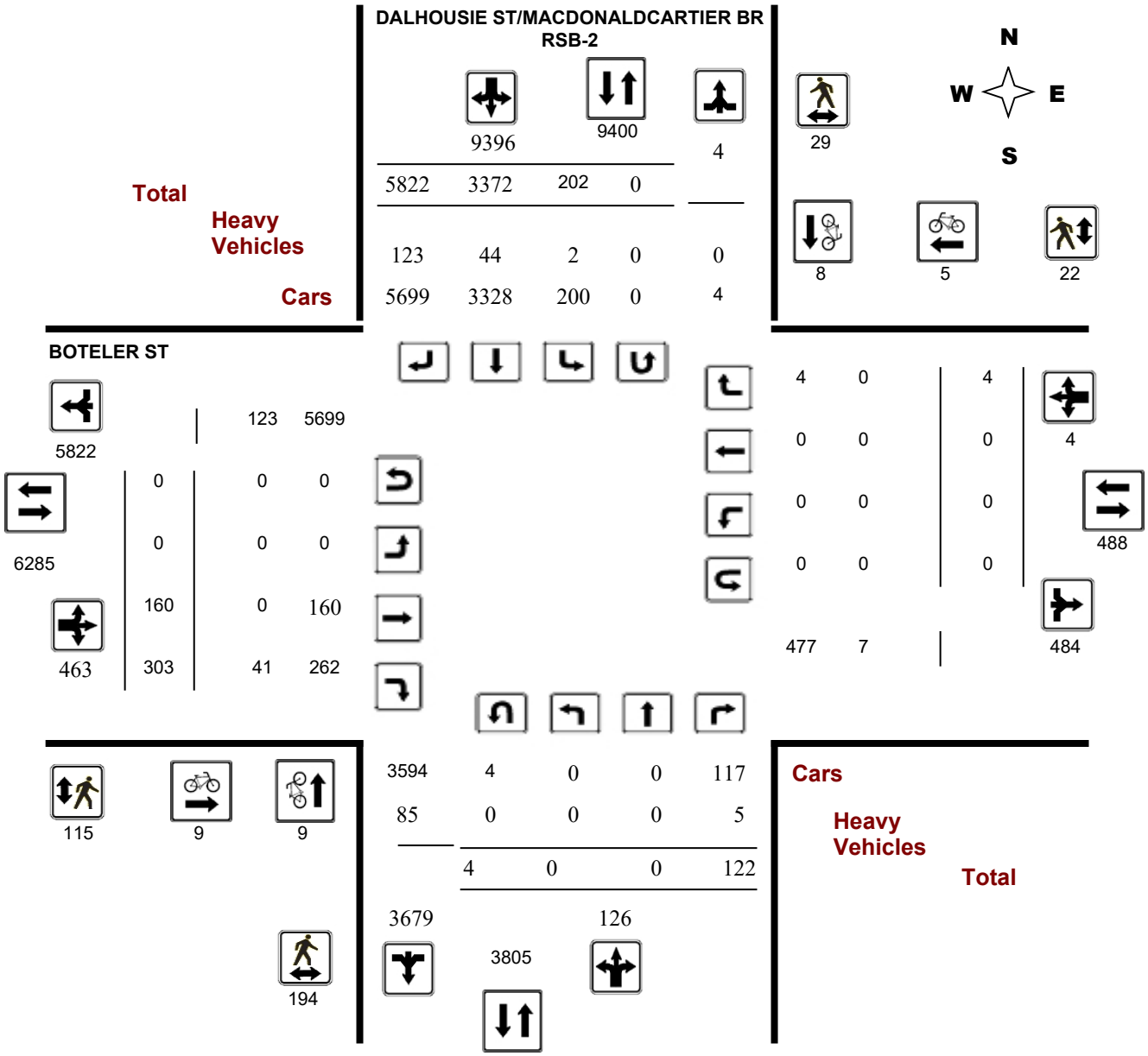
Transportation Services - Traffic Services

Turning Movement Count - Study Results

BOTELER ST @ DALHOUSIE ST/MACDONALDCARTIER BR

Survey Date: Thursday, November 21, 2019
Start Time: 07:00
WO No: 39072
Device: Miovision

Full Study Diagram



Transportation Services - Traffic Services

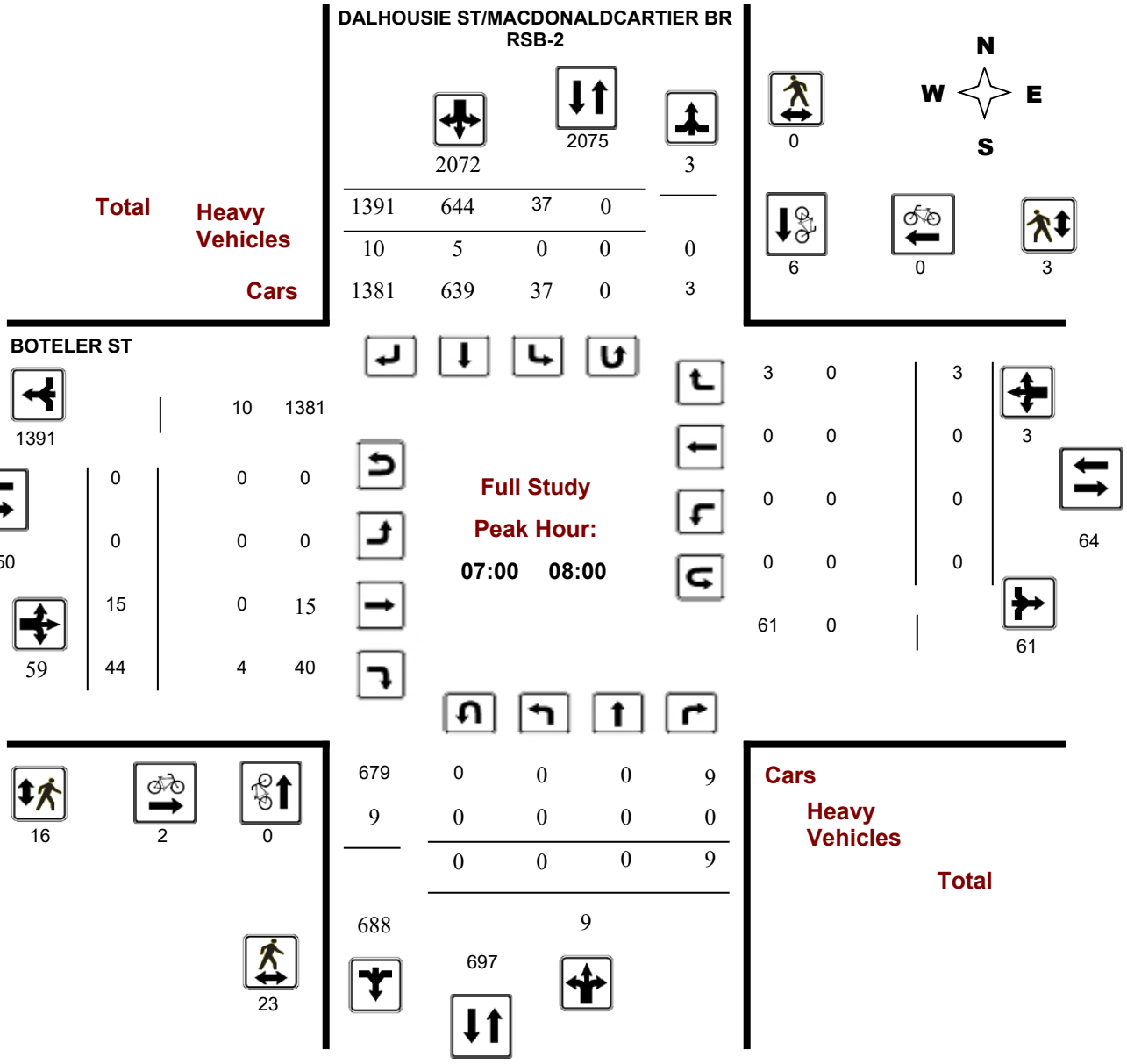
Turning Movement Count - Study Results

BOTELER ST @ DALHOUSIE ST/MACDONALDCARTIER BR

Survey Date: Thursday, November 21, 2019 **WO No:** 39072

Start Time: 07:00 **Device:** Miovision

Full Study Peak Hour Diagram



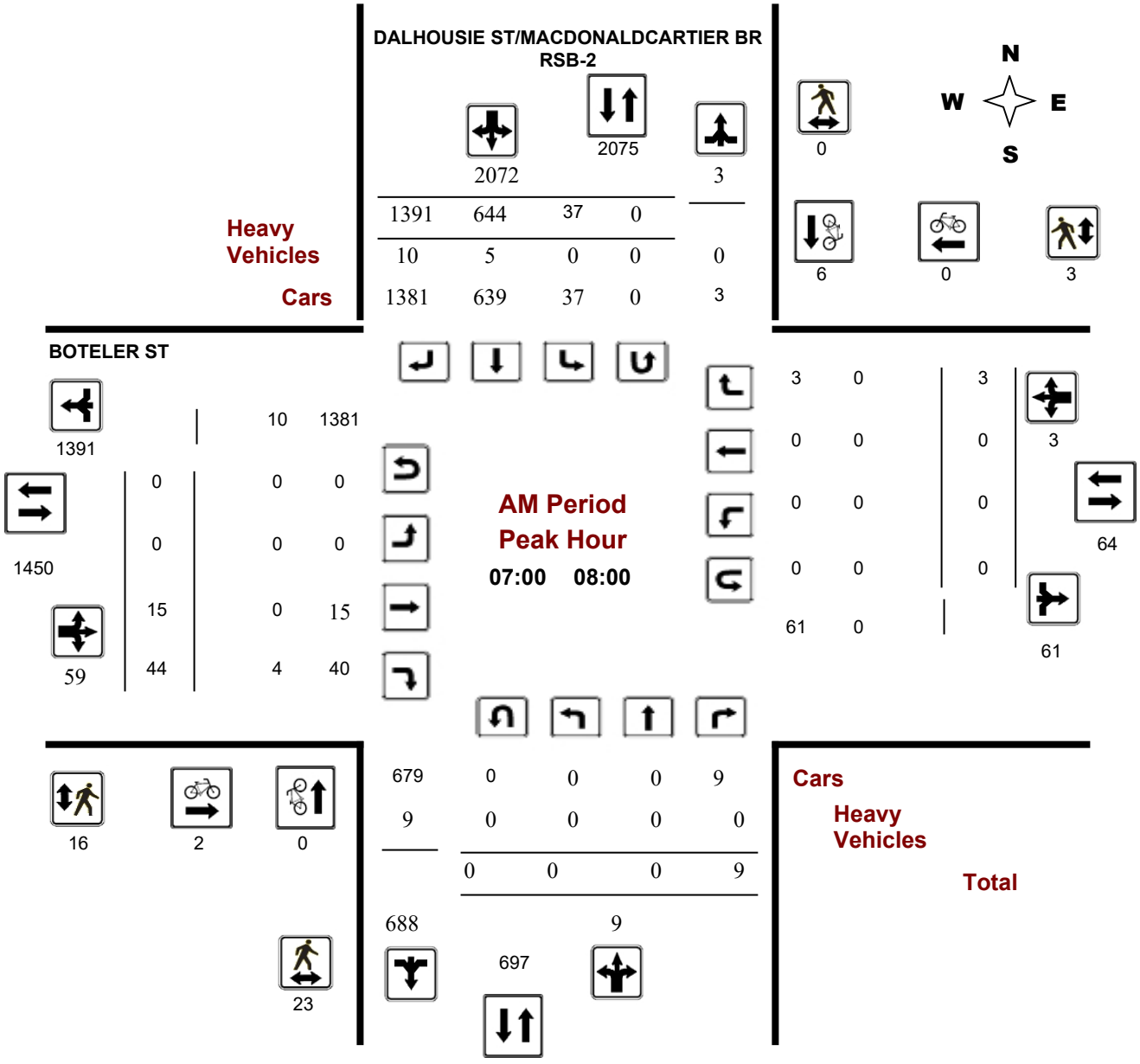
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BOTELER ST @ DALHOUSIE ST/MACDONALDCARTIER BR

Survey Date: Thursday, November 21, 2019 **WO No:** 39072

Start Time: 07:00 **Device:** Miovision



Comments

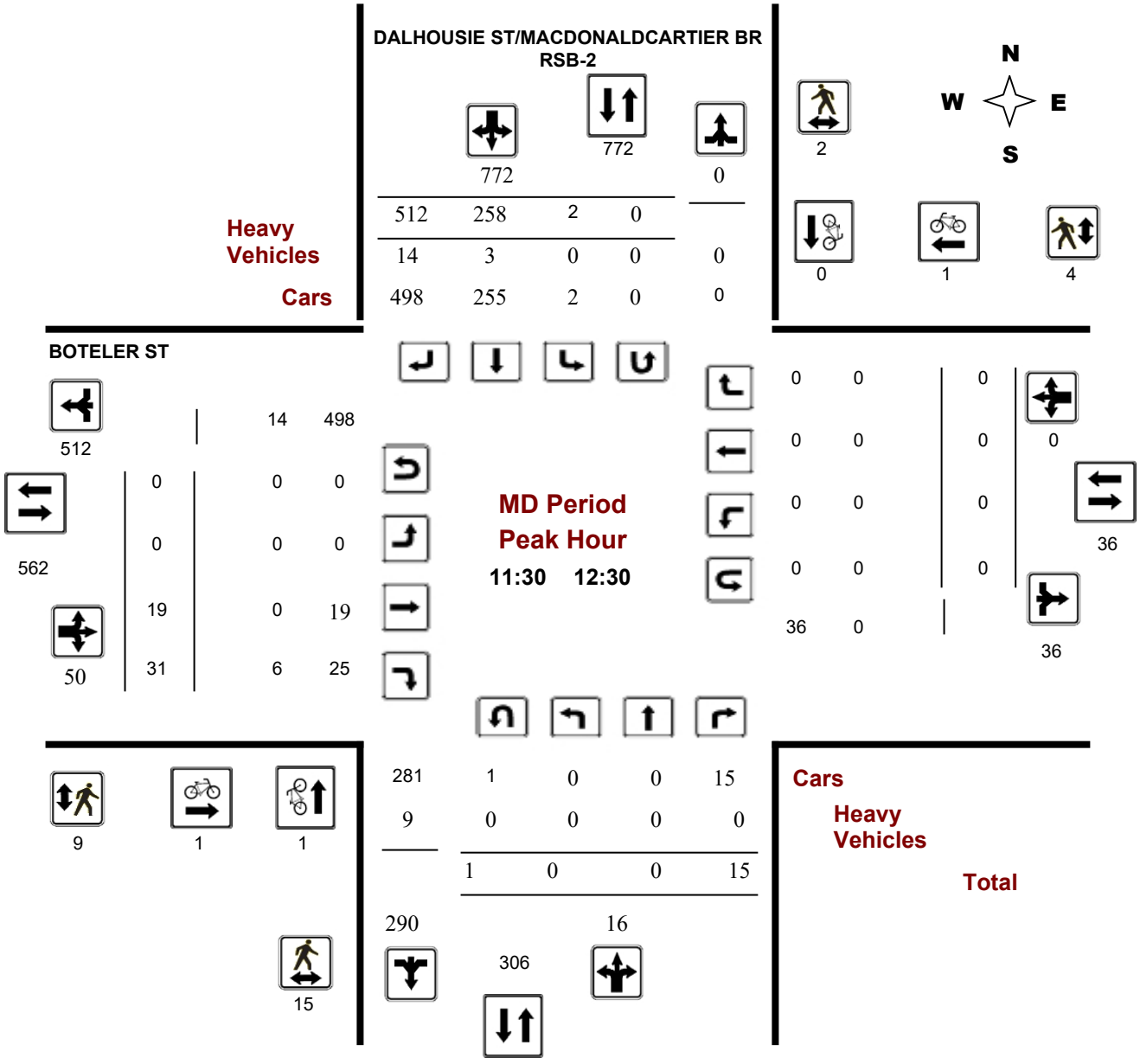
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BOTELER ST @ DALHOUSIE ST/MACDONALDCARTIER BR

Survey Date: Thursday, November 21, 2019 **WO No:** 39072

Start Time: 07:00 **Device:** Miovision



Comments

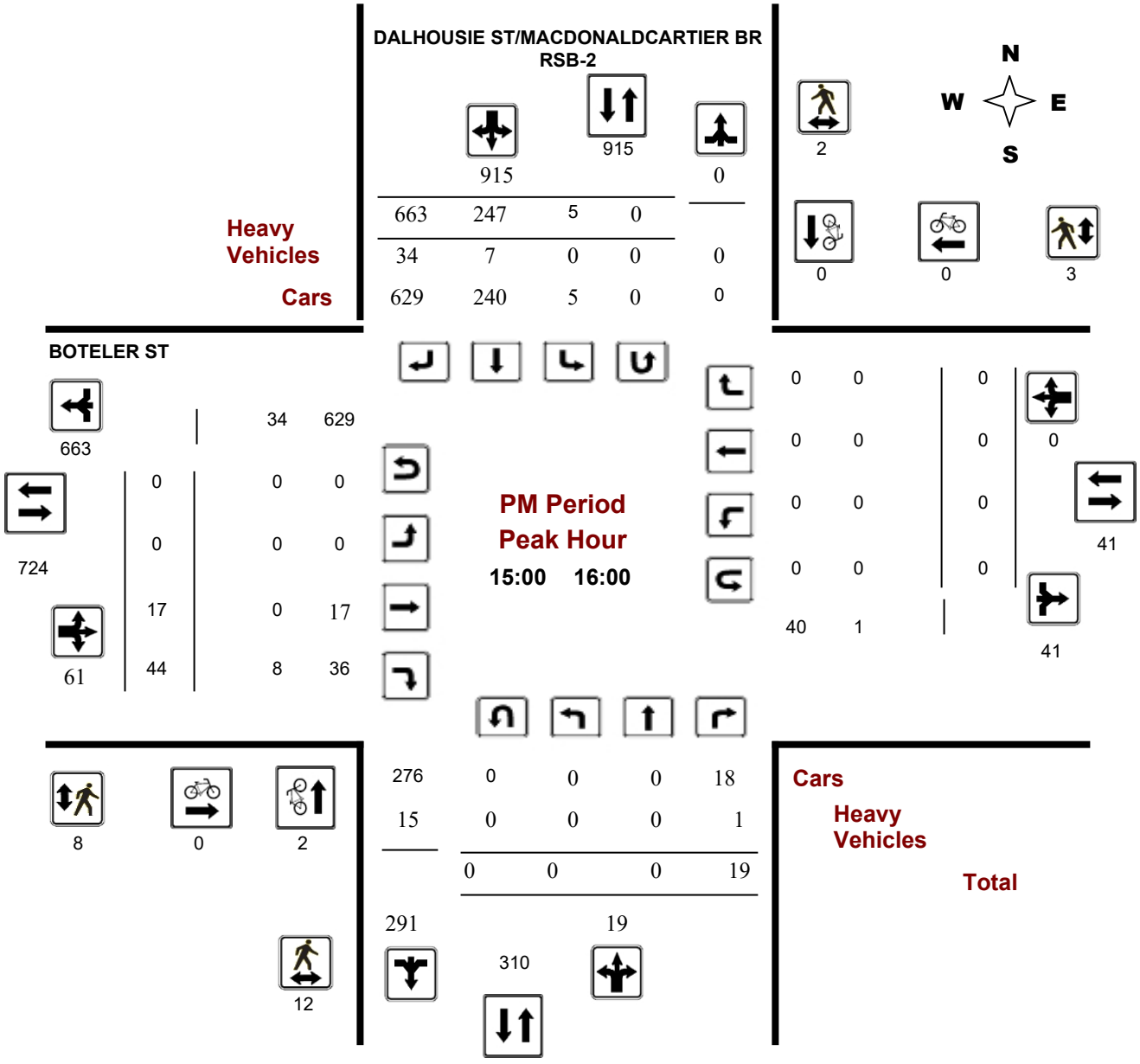
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BOTELER ST @ DALHOUSIE ST/MACDONALDCARTIER BR

Survey Date: Thursday, November 21, 2019 **WO No:** 39072

Start Time: 07:00 **Device:** Miovision



Comments

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BOTELER ST @ DALHOUSIE ST/MACDONALDCARTIER BR

Survey Date: Thursday, November 21, 2019 **WO No:** 39072

Start Time: 07:00 **Device:** Miovision

Full Study Summary (8 HR Standard)

Survey Date: Thursday, November 21, 2019

Total Observed U-Turns

Northbound: 4 Southbound: 0

Eastbound: 0 Westbound: 0

AADT Factor

1.25

DALHOUSIE ST/MACDONALDCARTIER BR RSB-2

BOTELER ST

Period	Northbound LT	Northbound ST	Northbound RT	NB TOT	Southbound LT	Southbound ST	Southbound RT	SB TOT	STR TOT	Eastbound LT	Eastbound ST	Eastbound RT	EB TOT	Westbound LT	Westbound ST	Westbound RT	WB TOT	STR TOT	Grand Total
07:00 08:00	0	0	9	**9**	37	644	1391	**2072**	**2081**	0	15	44	**59**	0	0	3	**3**	**62**	**2143**
08:00 09:00	0	0	18	**18**	93	639	1153	**1885**	**1903**	0	39	67	**106**	0	0	0	**0**	**106**	**2009**
09:00 10:00	0	0	18	**18**	27	462	841	**1330**	**1348**	0	22	34	**56**	0	0	1	**1**	**57**	**1405**
11:30 12:30	0	0	15	**15**	2	258	512	**772**	**787**	0	19	31	**50**	0	0	0	**0**	**50**	**837**
12:30 13:30	0	0	16	**16**	5	204	461	**670**	**686**	0	13	20	**33**	0	0	0	**0**	**33**	**719**
15:00 16:00	0	0	19	**19**	5	247	663	**915**	**934**	0	17	44	**61**	0	0	0	**0**	**61**	**995**
16:00 17:00	0	0	13	**13**	19	540	296	**855**	**868**	0	20	30	**50**	0	0	0	**0**	**50**	**918**
17:00 18:00	0	0	14	**14**	14	378	505	**897**	**911**	0	15	33	**48**	0	0	0	**0**	**48**	**959**
Sub Total	0	0	122	**122**	202	3372	5822	**9396**	**9518**	0	160	303	**463**	0	0	4	**4**	**467**	**9985**
U Turns				**4**				**0**	**4**				**0**				**0**	**0**	**4**
Total	0	0	122	**126**	202	3372	5822	**9396**	**9522**	0	160	303	**463**	0	0	4	**4**	**467**	**9989**
EQ 12Hr	0	0	170	**175**	281	4687	8093	**13060**	**13236**	0	222	421	**644**	0	0	6	**6**	**649**	**13885**

Note: These values are calculated by multiplying the totals by the appropriate expansion factor. **1.39**

AVG 12Hr	0	0	153	**158**	253	4218	7283	**11754**	**11912**	0	200	379	**579**	0	0	5	**5**	**584**	**12496**

Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor. **0.9**

AVG 24Hr	0	0	200	**206**	331	5526	9541	**15398**	**15604**	0	262	497	**759**	0	0	7	**7**	**766**	**16370**

Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor. **1.31**

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BOTELER ST @ DALHOUSIE ST/MACDONALDCARTIER BR

Survey Date: Thursday, November 21, 2019 **WO No:** 39072

Start Time: 07:00 **Device:** Miovision

Full Study 15 Minute Increments

		DALHOUSIE ST/MACDONALDCARTIER BR RSB-2									BOTELER ST									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	0	3	3	2	132	367	501	644	0	2	5	7	0	0	3	3	644	514
07:15	07:30	0	0	2	2	4	179	354	537	727	0	3	9	12	0	0	0	0	727	551
07:30	07:45	0	0	1	1	9	171	351	531	718	0	7	15	22	0	0	0	0	718	554
07:45	08:00	0	0	3	3	22	162	319	503	683	0	3	15	18	0	0	0	0	683	524
08:00	08:15	0	0	2	2	24	167	296	487	673	0	4	17	21	0	0	0	0	673	510
08:15	08:30	0	0	4	4	30	156	295	481	658	0	6	17	23	0	0	0	0	658	508
08:30	08:45	0	0	9	9	11	159	293	463	652	0	13	21	34	0	0	0	0	652	506
08:45	09:00	0	0	3	3	28	157	269	454	626	0	16	12	28	0	0	0	0	626	485
09:00	09:15	0	0	6	6	16	159	283	458	634	0	9	10	19	0	0	1	1	634	484
09:15	09:30	0	0	5	5	5	118	240	363	496	0	3	10	13	0	0	0	0	496	381
09:30	09:45	0	0	3	3	4	83	170	257	350	0	5	7	12	0	0	0	0	350	272
09:45	10:00	0	0	4	4	2	102	148	252	365	0	5	7	12	0	0	0	0	365	268
11:30	11:45	0	0	2	2	1	68	152	221	300	0	4	9	13	0	0	0	0	300	236
11:45	12:00	0	0	4	4	1	75	108	184	269	0	3	6	9	0	0	0	0	269	197
12:00	12:15	0	0	5	6	0	60	117	177	248	0	7	4	11	0	0	0	0	248	194
12:15	12:30	0	0	4	4	0	55	135	190	261	0	5	12	17	0	0	0	0	261	211
12:30	12:45	0	0	3	3	0	57	122	179	245	0	5	6	11	0	0	0	0	245	193
12:45	13:00	0	0	6	6	1	61	108	170	244	0	1	7	8	0	0	0	0	244	184
13:00	13:15	0	0	5	6	2	52	118	172	234	0	1	3	4	0	0	0	0	234	182
13:15	13:30	0	0	2	2	2	34	113	149	189	0	6	4	10	0	0	0	0	189	161
15:00	15:15	0	0	5	5	0	63	212	275	353	0	1	10	11	0	0	0	0	353	291
15:15	15:30	0	0	5	5	1	62	156	219	301	0	4	15	19	0	0	0	0	301	243
15:30	15:45	0	0	6	6	0	51	160	211	275	0	6	7	13	0	0	0	0	275	230
15:45	16:00	0	0	3	3	4	71	135	210	296	0	6	12	18	0	0	0	0	296	231
16:00	16:15	0	0	5	5	4	126	79	209	349	0	7	9	16	0	0	0	0	349	230
16:15	16:30	0	0	2	2	4	142	69	215	364	0	4	5	9	0	0	0	0	364	226
16:30	16:45	0	0	2	2	4	122	85	211	341	0	2	6	8	0	0	0	0	341	221
16:45	17:00	0	0	4	4	7	150	63	220	384	0	7	10	17	0	0	0	0	384	241
17:00	17:15	0	0	2	2	5	156	65	226	398	0	4	14	18	0	0	0	0	398	246
17:15	17:30	0	0	5	7	3	92	143	238	348	0	5	9	14	0	0	0	0	348	259
17:30	17:45	0	0	3	3	3	64	152	219	290	0	4	4	8	0	0	0	0	290	230
17:45	18:00	0	0	4	4	3	66	145	214	290	0	2	6	8	0	0	0	0	290	226
Total:		0	0	122	126	202	3372	5822	9396	13205	0	160	303	463	0	0	4	4	13205	9,989

Note: U-Turns are included in Totals.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BOTELER ST @ DALHOUSIE ST/MACDONALDCARTIER BR

Survey Date: Thursday, November 21, 2019 **WO No:** 39072

Start Time: 07:00 **Device:** Miovision

Full Study Cyclist Volume

		DALHOUSIE ST/MACDONALDCARTIER BR RSB-2			BOTELER ST			
Time Period		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	0	1	1	0	0	0	1
07:15	07:30	0	1	1	0	0	0	1
07:30	07:45	0	1	1	0	0	0	1
07:45	08:00	0	3	3	2	0	2	5
08:00	08:15	0	0	0	0	0	0	0
08:15	08:30	0	0	0	0	0	0	0
08:30	08:45	0	0	0	0	0	0	0
08:45	09:00	0	0	0	0	0	0	0
09:00	09:15	0	1	1	3	0	3	4
09:15	09:30	1	0	1	0	0	0	1
09:30	09:45	0	0	0	0	0	0	0
09:45	10:00	0	0	0	0	0	0	0
11:30	11:45	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0
12:00	12:15	1	0	1	0	1	1	2
12:15	12:30	0	0	0	1	0	1	1
12:30	12:45	0	0	0	1	0	1	1
12:45	13:00	0	0	0	0	0	0	0
13:00	13:15	1	0	1	0	0	0	1
13:15	13:30	1	0	1	0	0	0	1
15:00	15:15	1	0	1	0	0	0	1
15:15	15:30	0	0	0	0	0	0	0
15:30	15:45	0	0	0	0	0	0	0
15:45	16:00	1	0	1	0	0	0	1
16:00	16:15	0	1	1	0	0	0	1
16:15	16:30	0	0	0	0	0	0	0
16:30	16:45	0	0	0	0	0	0	0
16:45	17:00	1	0	1	0	1	1	2
17:00	17:15	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	1	1	1
17:30	17:45	2	0	2	2	2	4	6
17:45	18:00	0	0	0	0	0	0	0
Total		9	8	**17**	9	5	14	31

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BOTELER ST @ DALHOUSIE ST/MACDONALDCARTIER BR

Survey Date: Thursday, November 21, 2019 **WO No:** 39072

Start Time: 07:00 **Device:** Miovision

Full Study Pedestrian Volume

Time Period	DALHOUSIE ST/MACDONALDCARTIER BR RSB-2			BOTELER ST			
	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	**Total**	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	**Total**	**Grand Total**
07:00 07:15	2	0	**2**	3	2	**5**	**7**
07:15 07:30	5	0	**5**	2	0	**2**	**7**
07:30 07:45	4	0	**4**	4	0	**4**	**8**
07:45 08:00	12	0	**12**	7	1	**8**	**20**
08:00 08:15	8	0	**8**	4	0	**4**	**12**
08:15 08:30	7	4	**11**	6	1	**7**	**18**
08:30 08:45	9	1	**10**	1	0	**1**	**11**
08:45 09:00	5	3	**8**	4	0	**4**	**12**
09:00 09:15	9	0	**9**	6	2	**8**	**17**
09:15 09:30	15	0	**15**	1	0	**1**	**16**
09:30 09:45	7	0	**7**	3	1	**4**	**11**
09:45 10:00	2	0	**2**	3	1	**4**	**6**
11:30 11:45	4	0	**4**	5	0	**5**	**9**
11:45 12:00	1	1	**2**	0	2	**2**	**4**
12:00 12:15	7	1	**8**	0	0	**0**	**8**
12:15 12:30	3	0	**3**	4	2	**6**	**9**
12:30 12:45	4	1	**5**	3	0	**3**	**8**
12:45 13:00	5	4	**9**	5	1	**6**	**15**
13:00 13:15	3	0	**3**	0	2	**2**	**5**
13:15 13:30	10	0	**10**	1	0	**1**	**11**
15:00 15:15	3	0	**3**	1	2	**3**	**6**
15:15 15:30	3	0	**3**	2	0	**2**	**5**
15:30 15:45	2	1	**3**	3	0	**3**	**6**
15:45 16:00	4	1	**5**	2	1	**3**	**8**
16:00 16:15	3	0	**3**	3	0	**3**	**6**
16:15 16:30	4	0	**4**	3	0	**3**	**7**
16:30 16:45	10	2	**12**	6	0	**6**	**18**
16:45 17:00	4	4	**8**	8	2	**10**	**18**
17:00 17:15	11	0	**11**	7	1	**8**	**19**
17:15 17:30	14	1	**15**	7	0	**7**	**22**
17:30 17:45	5	2	**7**	5	0	**5**	**12**
17:45 18:00	9	3	**12**	6	1	**7**	**19**
Total	194	29	**223**	115	22	**137**	**360**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BOTELER ST @ DALHOUSIE ST/MACDONALDCARTIER BR

Survey Date: Thursday, November 21, 2019 **WO No:** 39072

Start Time: 07:00 **Device:** Miovision

Full Study Heavy Vehicles

		DALHOUSIE ST/MACDONALDCARTIER BR RSB-2									BOTELER ST									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	0	0	**2**	0	1	3	**4**	**6**	0	0	1	**4**	0	0	0	**0**	**4**	**5**
07:15	07:30	0	0	0	**2**	0	1	0	**1**	**3**	0	0	1	**1**	0	0	0	**0**	**1**	**2**
07:30	07:45	0	0	0	**2**	0	1	4	**5**	**7**	0	0	1	**5**	0	0	0	**0**	**5**	**6**
07:45	08:00	0	0	0	**3**	0	2	3	**5**	**8**	0	0	1	**4**	0	0	0	**0**	**4**	**6**
08:00	08:15	0	0	0	**1**	0	0	1	**1**	**2**	0	0	1	**2**	0	0	0	**0**	**2**	**2**
08:15	08:30	0	0	0	**4**	1	3	2	**6**	**10**	0	0	1	**3**	0	0	0	**1**	**4**	**7**
08:30	08:45	0	0	0	**3**	0	1	1	**2**	**5**	0	0	2	**3**	0	0	0	**0**	**3**	**4**
08:45	09:00	0	0	0	**2**	0	2	1	**3**	**5**	0	0	0	**1**	0	0	0	**0**	**1**	**3**
09:00	09:15	0	0	0	**3**	0	2	2	**4**	**7**	0	0	1	**3**	0	0	0	**0**	**3**	**5**
09:15	09:30	0	0	1	**2**	0	0	5	**5**	**7**	0	0	1	**6**	0	0	0	**1**	**7**	**7**
09:30	09:45	0	0	0	**2**	0	1	6	**7**	**9**	0	0	1	**7**	0	0	0	**0**	**7**	**8**
09:45	10:00	0	0	0	**2**	0	2	6	**8**	**10**	0	0	0	**6**	0	0	0	**0**	**6**	**8**
11:30	11:45	0	0	0	**1**	0	0	5	**5**	**6**	0	0	1	**6**	0	0	0	**0**	**6**	**6**
11:45	12:00	0	0	0	**1**	0	1	4	**5**	**6**	0	0	0	**4**	0	0	0	**0**	**4**	**5**
12:00	12:15	0	0	0	**5**	0	2	0	**2**	**7**	0	0	3	**3**	0	0	0	**0**	**3**	**5**
12:15	12:30	0	0	0	**2**	0	0	5	**5**	**7**	0	0	2	**7**	0	0	0	**0**	**7**	**7**
12:30	12:45	0	0	1	**2**	0	1	4	**5**	**7**	0	0	0	**4**	0	0	0	**1**	**5**	**6**
12:45	13:00	0	0	0	**4**	0	3	7	**10**	**14**	0	0	1	**8**	0	0	0	**0**	**8**	**11**
13:00	13:15	0	0	1	**2**	0	0	4	**4**	**6**	0	0	1	**5**	0	0	0	**1**	**6**	**6**
13:15	13:30	0	0	0	**2**	0	0	4	**4**	**6**	0	0	2	**6**	0	0	0	**0**	**6**	**6**
15:00	15:15	0	0	0	**3**	0	1	8	**9**	**12**	0	0	2	**10**	0	0	0	**0**	**10**	**11**
15:15	15:30	0	0	1	**7**	0	5	10	**15**	**22**	0	0	1	**11**	0	0	0	**1**	**12**	**17**
15:30	15:45	0	0	0	**3**	0	1	8	**9**	**12**	0	0	2	**10**	0	0	0	**0**	**10**	**11**
15:45	16:00	0	0	0	**3**	0	0	8	**8**	**11**	0	0	3	**11**	0	0	0	**0**	**11**	**11**
16:00	16:15	0	0	1	**4**	0	2	5	**7**	**11**	0	0	1	**6**	0	0	0	**1**	**7**	**9**
16:15	16:30	0	0	0	**5**	0	3	0	**3**	**8**	0	0	2	**2**	0	0	0	**0**	**2**	**5**
16:30	16:45	0	0	0	**3**	0	2	3	**5**	**8**	0	0	1	**4**	0	0	0	**0**	**4**	**6**
16:45	17:00	0	0	0	**5**	0	2	3	**5**	**10**	0	0	3	**6**	0	0	0	**0**	**6**	**8**
17:00	17:15	0	0	0	**6**	1	5	0	**6**	**12**	0	0	1	**1**	0	0	0	**1**	**2**	**7**
17:15	17:30	0	0	0	**2**	0	0	6	**6**	**8**	0	0	2	**8**	0	0	0	**0**	**8**	**8**
17:30	17:45	0	0	0	**1**	0	0	4	**4**	**5**	0	0	1	**5**	0	0	0	**0**	**5**	**5**
17:45	18:00	0	0	0	**1**	0	0	1	**1**	**2**	0	0	1	**2**	0	0	0	**0**	**2**	**2**
Total:	None	0	0	5	**90**	2	44	123	**169**	**259**	0	0	41	**164**	0	0	0	**7**	**171**	**215**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BOTELER ST @ DALHOUSIE ST/MACDONALDCARTIER BR

Survey Date: Thursday, November 21, 2019 **WO No:** 39072

Start Time: 07:00 **Device:** Miovision

Full Study 15 Minute U-Turn Total

Time Period		DALHOUSIE ST/MACDONALDCARTIER BR RSB-2		BOTELER ST		
		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	0	0	0	0	0
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	0	0	0
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	0	0	0
11:30	11:45	0	0	0	0	0
11:45	12:00	0	0	0	0	0
12:00	12:15	1	0	0	0	1
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
12:45	13:00	0	0	0	0	0
13:00	13:15	1	0	0	0	1
13:15	13:30	0	0	0	0	0
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	0	0	0
15:30	15:45	0	0	0	0	0
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	0	0	0
16:15	16:30	0	0	0	0	0
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	0	0	0
17:00	17:15	0	0	0	0	0
17:15	17:30	2	0	0	0	2
17:30	17:45	0	0	0	0	0
17:45	18:00	0	0	0	0	0
Total		4	0	0	0	4

Appendix E: Collision Records

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2019

Location: BOTELER ST @ DALHOUSIE ST/MACDONALDCARTIER BR

Traffic Control: Stop sign **Total Collisions:** 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Jun-06, Thu,12:20	Clear	Sideswipe	P.D. only	Dry	East	Pulling away from shoulder or curb	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	

Appendix F: Transportation Demand Management (TDM) Checklist

TDM-Supportive Development Design and Infrastructure Checklist:
Non-Residential Developments (office, institutional, retail or industrial)

Legend

REQUIRED	The Official Plan or Zoning By-law provides related guidance that must be followed
BASIC	The measure is generally feasible and effective, and in most cases would benefit the development and its users
BETTER	The measure could maximize support for users of sustainable modes, and optimize development performance

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	1.	**WALKING & CYCLING: ROUTES**	
	1.1	**Building location & access points**	
BASIC	1.1.1	Locate building close to the street, and do not locate parking areas between the street and building entrances	☑
BASIC	1.1.2	Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	☑
BASIC	1.1.3	Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	☑
	1.2	**Facilities for walking & cycling**	
REQUIRED	1.2.1	Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations *(see Official Plan policy 4.3.3)*	☑ No Rapid Transit routes or station within 600 m.
REQUIRED	1.2.2	Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing weather protection through canopies, colonnades, and other design elements wherever possible *(see Official Plan policy 4.3.12)*	☑ Safe and direct entrance provided from north sidewalk of Boteler St to Embassy through consulate pedestrian entrance (as shown in Detailed Design Plan)

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
REQUIRED	1.2.3	Provide sidewalks of smooth, well-drained walking surfaces of contrasting materials or treatments to differentiate pedestrian areas from vehicle areas, and provide marked pedestrian crosswalks at intersection sidewalks *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.4	Make sidewalks and open space areas easily accessible through features such as gradual grade transition, depressed curbs at street corners and convenient access to extra-wide parking spaces and ramps *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.5	Include adequately spaced inter-block/street cycling and pedestrian connections to facilitate travel by active transportation. Provide links to the existing or planned network of public sidewalks, multi-use pathways and on-road cycle routes. Where public sidewalks and multi-use pathways intersect with roads, consider providing traffic control devices to give priority to cyclists and pedestrians *(see Official Plan policy 4.3.11)*	☑ Provided
BASIC	1.2.6	Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	☑
BASIC	1.2.7	Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	☑
BASIC	1.2.8	Design roads used for access or circulation by cyclists using a target operating speed of no more than 30 km/h, or provide a separated cycling facility	☐
	1.3	**Amenities for walking & cycling**	
BASIC	1.3.1	Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails	☐
BASIC	1.3.2	Provide wayfinding signage for site access (where required, e.g. when multiple buildings or entrances exist) and egress (where warranted, such as when directions to reach transit stops/stations, trails or other common destinations are not obvious)	☐

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	2.	**WALKING & CYCLING: END-OF-TRIP FACILITIES**	
	2.1	**Bicycle parking**	
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible *(see Official Plan policy 4.3.6)*	☑ Bicycle parking provided in inderground parking
REQUIRED	2.1.2	Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas *(see Zoning By-law Section 111)*	☑
REQUIRED	2.1.3	Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored *(see Zoning By-law Section 111)*	☑
BASIC	2.1.4	Provide bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met), plus the expected peak number of customer/visitor cyclists	☐
BETTER	2.1.5	Provide bicycle parking spaces equivalent to the expected number of commuter and customer/visitor cyclists, plus an additional buffer (e.g. 25 percent extra) to encourage other cyclists and ensure adequate capacity in peak cycling season	☐
	2.2	**Secure bicycle parking**	
REQUIRED	2.2.1	Where more than 50 bicycle parking spaces are provided for a single office building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers *(see Zoning By-law Section 111)*	☑ N/A
BETTER	2.2.2	Provide secure bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met)	☐
	2.3	**Shower & change facilities**	
BASIC	2.3.1	Provide shower and change facilities for the use of active commuters	☐
BETTER	2.3.2	In addition to shower and change facilities, provide dedicated lockers, grooming stations, drying racks and laundry facilities for the use of active commuters	☐
	2.4	**Bicycle repair station**	
BETTER	2.4.1	Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	☐

	TDM-supportive design & infrastructure measures: *Non-residential developments*		Check if completed & add descriptions, explanations or plan/drawing references
	3.	**TRANSIT**	
	3.1	**Customer amenities**	
BASIC	3.1.1	Provide shelters, lighting and benches at any on-site transit stops	☐
BASIC	3.1.2	Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	☐
BETTER	3.1.3	Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	☐
	4.	**RIDESHARING**	
	4.1	**Pick-up & drop-off facilities**	
BASIC	4.1.1	Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	☐
	4.2	**Carpool parking**	
BASIC	4.2.1	Provide signed parking spaces for carpools in a priority location close to a major building entrance, sufficient in number to accommodate the mode share target for carpools	☐
BETTER	4.2.2	At large developments, provide spaces for carpools in a separate, access-controlled parking area to simplify enforcement	☐
	5.	**CARSHARING & BIKESHARING**	
	5.1	**Carshare parking spaces**	
BETTER	5.1.1	Provide carshare parking spaces in permitted non-residential zones, occupying either required or provided parking spaces *(see Zoning By-law Section 94)*	☐
	5.2	**Bikeshare station location**	
BETTER	5.2.1	Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	☐

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	6.	**PARKING**	
	6.1	**Number of parking spaces**	
REQUIRED	6.1.1	Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	☑
BASIC	6.1.2	Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	☑
BASIC	6.1.3	Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly *(see Zoning By-law Section 104)*	☐
BETTER	6.1.4	Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking *(see Zoning By-law Section 111)*	☐
	6.2	**Separate long-term & short-term parking areas**	
BETTER	6.2.1	Separate short-term and long-term parking areas using signage or physical barriers, to permit access controls and simplify enforcement (i.e. to discourage employees from parking in visitor spaces, and vice versa)	☐
	7.	**OTHER**	
	7.1	**On-site amenities to minimize off-site trips**	
BETTER	7.1.1	Provide on-site amenities to minimize mid-day or mid-commute errands	☐

Appendix G: Certification Form for TIA Study PM

Certification Form for TIA Study PM

TIA Plan Reports

On 14 June 2017, the Council of the City of Ottawa adopted new Transportation Impact Assessment (TIA) Guidelines. In adopting the guidelines, Council established a requirement for those preparing and delivering transportation impact assessments and reports to sign a letter of certification.

Individuals submitting TIA reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Ottawa's Official Plan, the Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines.

By submitting the attached TIA report (and any associated documents) and signing this document, the individual acknowledges that s/he meets the four criteria listed below.

CERTIFICATION

☑ I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines;

☑ I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;

☑ I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and

☑ I am either a licensed[1] or registered[2] professional in good standing, whose field of expertise

- ☑ is either transportation engineering
- ☐ or transportation planning .

[1,2] License of registration body that oversees the profession is required to have a code of conduct and ethics guidelines that will ensure appropriate conduct and representation for transportation planning and/or transportation engineering works.

City Of Ottawa
Infrastructure Services and Community Sustainability
Planning and Growth Management
110 Laurier Avenue West, 4th fl.
Ottawa, ON K1P 1J1
Tel. : 613-580-2424
Fax: 613-560-6006

Dated at Ottawa (City) this 7 day of February, 20 22.

Name : Greg Kent

Professional title: Manager, Traffic Engineering

Signature of individual certifier that s/he meets the above criteria

Office Contact Information (Please Print)	
Address:	2650 Queensview Drive, Suite 100 | Ottawa, ON
City / Postal Code:	K2B 8H6
Telephone / Extension:	613 617 0907
E-Mail Address:	greg.kent@exp.com

Stamp