

4788 Albion Road

Transportation Impact Assessment

Step 1 Screening Report

Step 2 Scoping Report

Prepared for:

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Prepared by:



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January 2020

PN: 2019-72

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Appendix B – Hard Rock Ottawa 4837 Albion Road TIA Existing Study Area Traffic Operations

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1 Screening

This study has been prepared according to the City of Ottawa's 2017 Transportation Impact Assessment (TIA) Guidelines. Accordingly, a Step 1 Screening Form has been prepared and is included as Appendix A, along with the Certification Form for TIA Study PM. As shown in the Screening Form, a TIA is warranted due to the Location Trigger as Albion Road is classified as a cycling spine route. This trigger results in the need to produce a Step 2 Scoping Report, however Network Impact Component is not required.

2 Existing and Planned Conditions

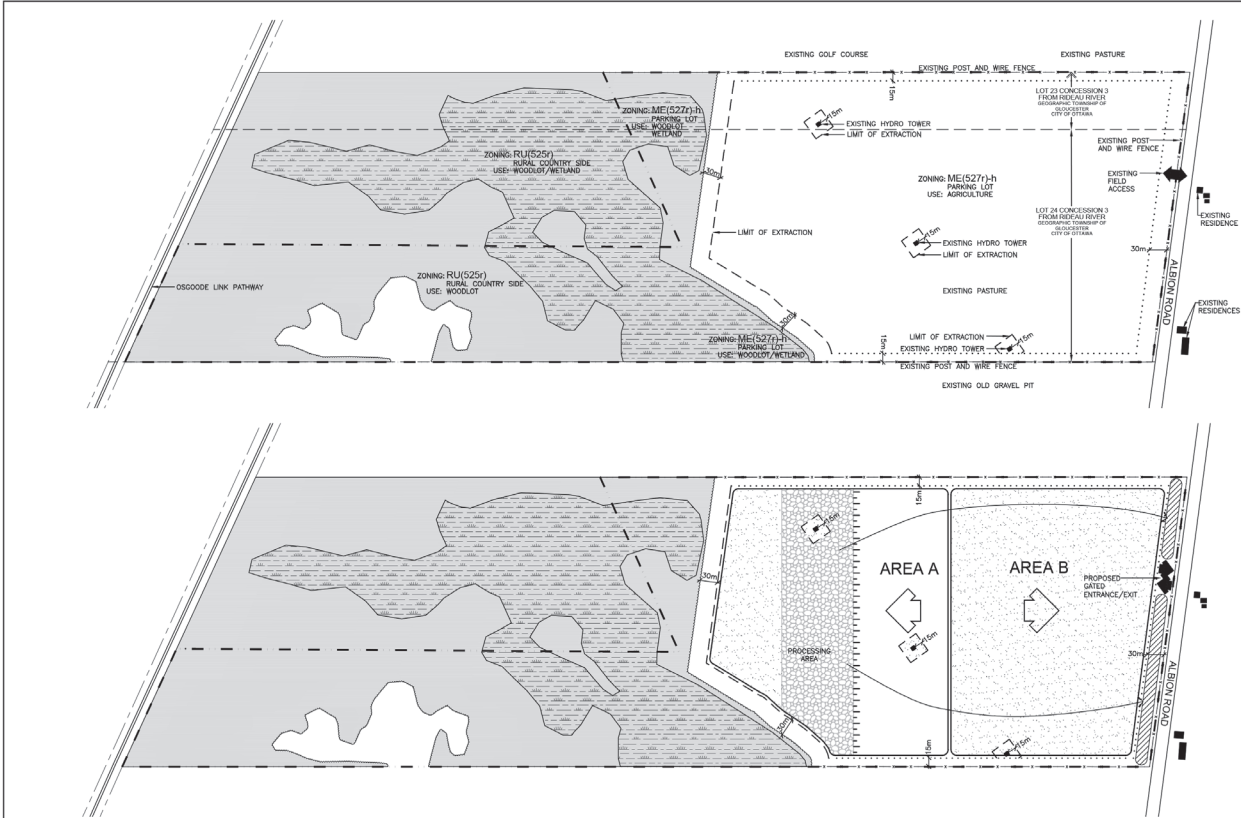
2.1 Proposed Development

4788 Albion Road is federally owned land zoned as Mineral Extraction (ME) and the proponent is planning to commence operations in 2020. The site is located outside the urban boundary and no City design priority, CDP or secondary plans cover this area. The proposed extraction site will be in operation for approximately 5 to 10 years. Figure 1 illustrates the Study Area Context. Figure 2 illustrates the proposed Concept Plan.

Figure 1: Area Context Plan



Source: <http://maps.ottawa.ca/geoOttawa/> Accessed: January 22, 2020



PHASE A
PHASE A NOTES

1. ESTABLISH ENTRANCED LIMIT FROM ALBION ROAD WHERE SHOWN ON SITE PLANS, ACCORDING TO MUNICIPAL STANDARDS AND APPROVAL.
2. PRIOR TO EXTRACTION COMMENCING IN AREA A, CONTRACTOR TO UPDATE THE FENCING ON THE BOUNDARY OF THE LICENSE. ALL FENCING SHALL BE MAINTAINED.
3. BEGIN STRIPPING TOPSOIL AND/OR OVERBURDEN SEPARATELY FROM AREA A AND USE THE MATERIAL TO CONSTRUCT ACQUATIC BERMS AS SHOWN. EXCESS MATERIAL MAY BE STOCKPILED ON THE PIT FLOOR OR USED TO BEGIN PROGRESSIVE REHABILITATION.
4. BEGIN EXTRACTION IN AREA A IN DIRECTION SHOWN. TEMPORARY STOCKPILES MAY BE LOCATED ON PIT FLOOR NEAR THE PIT FACE DURING EXCAVATION OF AGGREGATE.
5. MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION.

PHASE B (NOT SHOWN)
PHASE B NOTES

1. COMPLETE EXTRACTION IN AREA A.
2. BEGIN STRIPPING TOPSOIL AND/OR OVERBURDEN SEPARATELY FROM AREA B AND USE THE MATERIAL TO BEGIN PROGRESSIVE REHABILITATION OF AREA A.
3. COMPLETE REHABILITATION OF AREA A AND EXTRACTION OF AREA B.
4. COMPLETE REHABILITATION IN AREA B USING MATERIAL STORED IN BERMS.
5. REMOVE ALL EQUIPMENT, STRUCTURES AND SCRIP FROM THE SITE AND REHABILITATE ALL SMALL BODIES.

TECHNICAL RECOMMENDATIONS

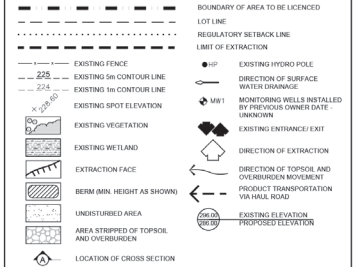
THE FOLLOWING ARE THE TECHNICAL RECOMMENDATIONS FROM ALL OF THE EXPERTS' REPORTS. ADDITIONAL RECOMMENDATIONS MAY BE INCLUDED AS A RESULT OF THE LICENSE REVIEW PROCESS.

ARCHAEOLOGICAL ASSESSMENT - DATED: SHOULD DEEPLY BURIED ARCHAEOLOGICAL MATERIAL BE FOUND ON THE PROPERTY DURING DEVELOPMENT ACTIVITIES, THE MINISTRY OF CULTURE SHOULD BE NOTIFIED IMMEDIATELY AT 800-367-9100. IN THE EVENT THAT HUMAN REMAINS ARE ENCOUNTERED DURING EXCAVATION, THE PROPRIETOR SHOULD IMMEDIATELY CONTACT BOTH THE MINISTRY OF CULTURE AND THE REGULATORY UNIT OF THE MINISTRY OF CONSUMER AND COMMERCIAL RELATIONS, (416) 325-5147.

KEY MAP



LEGEND



NO. DATE REVISION	UNREV. IN	NO. DATE REVISION	UNREV. IN

Pre Licence Review Site Plan Amendments

41 Main Street, Unit 102
Ottawa, Ontario K1M 2E5
Tel: 905-294-8282 Fax: 905-294-7623
www.herringtonmcavan.com

EXISTING FEATURES NOTES

- GENERAL SITE PLAN INFORMATION**
1. THIS SITE PLAN CONSISTS OF 2 DRAWINGS AND MUST BE READ COLLECTIVELY.
 2. ALL MEASUREMENTS SHOWN ON THIS SITE PLAN ARE IN METRES.
- LICENSE INFORMATION**
3. THIS SITE PLAN IS PREPARED FOR SUBMISSION TO THE CITY OF OTTAWA.
 4. APPLICANT: THOMAS CAVANAGH CONSTRUCTION LTD., 808 CAVANAGH ROAD, AUSTIN, ONTARIO K0A 1B0
- TOTAL AREA TO BE LICENSED:** 62.9 ha
TOTAL AREA TO BE EXTRACTION: 23.8 ha
TOTAL AREA TO REHABILITATE: 33.9 ha
- BASE INFORMATION**
6. PROPERTY BOUNDARY INFORMATION FOR PART OF LOTS 23 AND 24, CONFESSION 3 FROM RIDEAU RIVER, CITY OF OTTAWA WAS OBTAINED FROM ANNETT, KENNETH, ROGEE, AND JASON SURVEYING LTD. LEGAL SURVEY, DATED NOVEMBER 24, 1988. ALL ELEVATIONS ARE GEODETIC AND ABOVE SEA LEVEL (ASL).
 7. THE SITE WAS FIELD CHECKED BY _____
 8. ZONING INFORMATION OBTAINED FROM 'SCHEMULE 'W' MUNICIPALITY OF STRATHROY-CANADOC ZONING BY-LAW NO. 41/88, 8/27/89, NO. 79, DATED FEBRUARY 2018.
- HYDROGEOLOGICAL INFORMATION**
9. HYDROGEOLOGICAL INFORMATION INCLUDING GROUNDWATER ELEVATION WAS OBTAINED FROM REPORT BY _____ DATED _____ (REFER TO SHEET _____ FOR TECHNICAL RECOMMENDATIONS).
 10. THE WATER TABLE ELEVATION WITHIN THESE PROPERTIES IS ESTIMATED TO BE AT _____ M ABOVE SEA LEVEL (ASL) BASED ON THE HYDROGEOLOGICAL REPORT (SEE ABOVE).

OPERATIONS NOTES

- GENERAL INFORMATION**
1. THIS PLAN DEPICTS A SCHEMATIC OPERATIONS AND REHABILITATION SEQUENCE FOR THIS PROPERTY BASED ON THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION. PHASES SHOWN ARE SCHEMATIC AND MAY SLIGHTLY VARY WITH MATERIAL QUALITY, SITE HYDROLOGY AND HYDROGEOLOGY OR MARKET DEMAND. PHASES DO NOT REPRESENT ANY SPECIFIC OR FINAL TIME PERIOD.
 2. EXTRACTION SHALL GENERALLY FOLLOW THE SEQUENCE SHOWN. WHEN PARALLEL REHABILITATION OF A PHASE IS POSSIBLE IT SHALL BE CARRIED OUT. NOT WITHSTANDING THE EXTRACTION AND REHABILITATION PROCESSES ABOVE, DEMAND FOR CERTAIN PRODUCTS OR ENDINGS OF MATERIALS MAY REQUIRE SOME DEVIATION IN THE EXTRACTION AND REHABILITATION PHASING. ANY MAJOR DEVIATIONS FROM THE OPERATIONS SEQUENCE SHOWN WILL REQUIRE APPROVAL FROM MINE.
- EXTRACTION/PROCESSING/Hauling INFORMATION**
2. TOTAL AREA TO BE EXTRACTION IS 23.8 HECTARES.
 3. MAXIMUM NUMBER OF TONNES OF AGGREGATE TO BE REMOVED FROM THE SITE IN ANY CALENDAR YEAR IS _____ TONNES.
 4. EXTRACTION OF SAND AND GRAVEL WILL TAKE PLACE IN ONE OR TWO BENCHES WITH A MAXIMUM HEIGHT OF _____ METRES. THE GROUNDWATER TABLE IS ESTIMATED TO BE BETWEEN _____ AND _____ ASL (SEE _____ GROUNDWATER SOURCE COPY).
- OTHER SITE ACTIVITIES WILL INCLUDE STRIPPING AND REHABILITATION. OPERATIONAL EQUIPMENT MAY INCLUDE TRUCKS, LOADERS, EXCAVATOR, BACKHOES, BULLDOZERS, SCRAPERS, CONVOYERS AND OTHER RELATED EQUIPMENT. PRODUCT STOCKPILES WILL NOT EXCEED 10 METRES IN HEIGHT AND WILL BE LOCATED ON THE PIT FLOOR. MATERIAL FROM OTHER PROPERTIES MAY BE IMPORTED INTO THE SITE FOR BLENDING, CUSTOM PRODUCTS AND/OR REUSE. THIS MAY INCLUDE AGGREGATE ON THE PROCESSING AREA AND/OR PLANT AND TOPSOIL (IN AREA 1).
- 4. OFFICE/STORAGE BUILDING AND/OR SCALE/HOUSE MAY BE CONSTRUCTED WHERE SHOWN.

HYDROGEOLOGICAL INFORMATION

 5. THE WATER TABLE ELEVATION VARIES ACROSS THIS LICENSE FROM APPROXIMATELY _____ M ABOVE SEA LEVEL (ASL) BASED ON THE _____ HYDROGEOLOGICAL REPORT (SEE ABOVE). REFER TO SECTIONS ON SHEET _____.
 6. SURFACE DRAINAGE WILL BE DIRECTED TO LOW AREAS FOR WATER TO INFILTRATE INTO THE GRANULAR MATERIALS ON THE PIT FLOOR. THERE WILL BE NO OFF-SITE DITCHING/DISCHARGE.

AIR QUALITY INFORMATION

WATER OR COLLECTION/SLURRY WILL BE APPLIED TO INTERNAL HAUL ROADS AND PROCESSING AREAS AS OFTEN AS REQUIRED TO MITIGATE DUST.

SITE MANAGEMENT INFORMATION

2. EXISTING VEGETATION WITHIN THE LICENSED AREA SHALL BE MAINTAINED IN A HEALTHY VIGOROUS GROWING CONDITION UNTIL STRIPPING BEGINS OR UNTIL THE REHABILITATION IS COMPLETE. ANY VEGETATION PLANTED AS PART OF SITE IMPROVEMENTS OR PROGRESSIVE AND FINAL REHABILITATION WILL ALSO BE MAINTAINED IN A HEALTHY, VIGOROUS GROWING CONDITION.

FENCING INFORMATION

3. BOUNDARIES OF THE AREA TO BE LICENSED THAT ARE PRESENTLY FENCED ARE SHOWN ON DRAWING 1 OF 2 EXISTING FEATURES. PRIOR TO ANY STRIPPING OR PREPARATION, FENCING ON THE LICENSED BOUNDARIES ADJACENT TO PARISHOUSE DRIVE WILL BE UPGRADED TO 1.2m HIGH POST AND WIRE, EXCEPT WHERE THERE IS A SITE PLAN OVERLAP. TO COMPLY WITH THE AGGREGATE RESOURCES ACT, UNFENCED BOUNDARIES WILL BE DEMARCATED WITH HIGHLY VISIBLE 1.2m HIGH MARKER POSTS AT CORNERS. 1.8 METRE TENSION FENCING WILL BE CONSTRUCTED ONCE STRIPPING OCCURS WITHIN 5m OF THE BACKS ADJACENT TO THE NATURAL HERITAGE FEATURES IDENTIFIED ON SITE. ALL FENCING SHALL BE MAINTAINED.

TOPSOIL/SUBSOIL/OVERBURDEN STORAGE INFORMATION

4. TOPSOIL AND OVERBURDEN SHALL BE STRIPPED AND STOCKPILED SEPARATELY IN BERMS WHERE SHOWN AND STOCKPILES ON PIT FLOOR CLOSE TO EXTRACTION FACE.
11. BERMS SHALL CREATE AN EFFECTIVE VISUAL BARRIER AND BE A MINIMUM OF 2.0 METRES ABOVE THE EXISTING GRADE. BERMS SHALL NOT EXCEED 2:1. REFER TO TYPICAL BERM CROSS SECTION ON DRAWING 2 OF 2. ALL BERMS SHALL BE SEEDING USING GRASS/LEGUME MIXTURE. SEE REHABILITATION PLAN, NOTE #7) IMMEDIATELY UPON COMPLETION TO MINIMIZE NOISE, DUST AND EROSION.

BERM INFORMATION

15. ON COMPLETION OF THE BERMS, EXCESS ON SITE OVERBURDEN WILL BE USED TO PROGRESSIVELY BACKFILL AND REHABILITATE THE SITE. TOPSOIL CAN BE TEMPORARILY STOCKPILED ON THE PIT FLOOR.

SCRAP STORAGE INFORMATION

16. ALL SCRAP USE MACHINERY AND STAMPS GENERATED THROUGH THE OPERATIONS WITHIN THIS LICENSE WILL BE STOCKPILED IN THE PROCESSING AREA. A MINIMUM OF 30m FROM AN ONGOING BASIS STAMPS/POOD MATERIALS MAY BE CHIPPED AND USED FOR SOIL ENHANCEMENT DURING PROGRESSIVE REHABILITATION. TREES WILL BE HARVESTED AND SOLD AS LUMBER OR UTILIZED FOR FIREWOOD AND/OR THEIR BEST USE. UPON COMPLETION OF EXTRACTION, ALL SCRAP EQUIPMENT AND USED MACHINERY SHALL BE REMOVED.

PETROLEUM STORAGE INFORMATION

7.7 LITRE, OIL, SOLID AND HYDROCARBONIC FLUID, AND OTHER CHEMICALS NEEDED FOR THE MAINTENANCE AND FUNCTIONING OF ON SITE AGGREGATE PROCESSING EQUIPMENT SHALL BE APPROPRIATELY STORED IN AN OIL CONTAINER AND SHALL MEET THE REQUIREMENTS OF THE ENVIRONMENTAL PROTECTION ACT AS AMENDED, AND THE OILS AND HAZARDOUS WASTE ACT AND REGULATIONS, AS AMENDED BY THE TECHNICAL STANDARDS AND SAFETY ACT TRENDS AND LIQUID HANDLING CODE, AND IN ACCORDANCE WITH THE MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS CHEMICAL STORAGE GUIDELINES. ALL REFUELLING SHALL BE WITHIN A CONTAINMENT PAD. ALL SPILLS OF MATERIALS SHALL BE IMMEDIATELY REPORTED TO THE SPILLS ACTION CENTRE OF MECP. ANY SPILLS SHALL BE REMOVED AND DISPOSED OF AT AN APPROPRIATE MECP APPROVED FACILITY.

IMPORTATION OF FILL INFORMATION

18. IN ORDER TO MAXIMIZE RESOURCE RECOVERY, IMPORTATION OF CLEAN INERT FILL (EG. TOPSOIL AND/OR OVERBURDEN) MAY BE IMPORTED TO FACILITATE AGRICULTURAL REHABILITATION.

IMPORTED MATERIAL SHALL MEET THE MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS PARAMETERS UNDER TABLE 17 OF MECP'S 'SOIL, GROUND WATER AND SEDIMENT STANDARDS FOR USE UNDER PART XV OF THE ENVIRONMENTAL PROTECTION ACT'.

SAMPLING AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A QP UNDER EPA. A QP SHALL ALSO DESIGN A FILL MONITORING PROGRAM. RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MINE.

THE LICENSEE SHALL KEEP DETAILED RECORDS OF THE AMOUNT OF MATERIAL BROUGHT ON SITE FOR REHABILITATION AND THE TESTING RESULTS OF ALL SAMPLES. ALL RECORDS AND TESTING RESULTS SHALL BE AVAILABLE UPON REQUEST BY MINE OR MECP.

Project Name

CAVANAGH OTTAWA AIRPORT PIT

PART OF LOTS 23 AND 24, CONFESSION 3 FROM RIDEAU RIVER
GEOGRAPHIC TOWNSHIP OF GLOUCESTER
CITY OF OTTAWA

Scale 1:4000 North

DRAFT

Drawing Status: PRELIMINARY FOR DISCUSSION

Drawn: S.B. Checked: M.H. Issue Date: 19-27

Drawing Title: EXISTING FEATURES AND OPERATIONAL PLAN

Drawing Number: 1 OF 2

FILE NAME: 19-27-CAVAN/PIT27-1-LEGS
PLOT NAME: AUGUST 20, 2019

2.2 Existing Conditions

2.2.1 Area Road Network

Albion Road: Albion Road is a City of Ottawa arterial road with a two-lane rural cross-section with paved shoulders on both sides of the road. The posted speed limit is 60 km/h adjacent to the site and increases to 80 km/h approximately 50 metres south of the site. The existing right-of-way provided varies between 26.0 and 33.0 metres along the frontage of the site. Albion Road is a designated truck route.

Rideau Road: Rideau Road is a City of Ottawa collector road with a two-lane rural cross-section. The posted speed limit is 80 km/h and the existing right-of-way provided is 26.0 metres. Rideau Road is a truck route.

High Road: High Road is a City of Ottawa local road with a two-lane rural cross-section. The posted speed limit is 50 km/h and the existing right-of-way provided is 20.0 metres.

2.2.2 Existing Intersections

The existing area intersections adjacent to the proposed site and signalized intersections within 1.0 km have been summarized below:

Albion Road & High Road

The intersection of Albion Road and High Road is a minor-road-only stop-controlled intersection. The northbound approach consists of a shared left-turn/through lane, and the southbound approach consists of a shared through/right-turn lane. The eastbound approach consists of a shared left-turn/right-turn lane. No turn restrictions are noted.

Albion Road & Hard Rock Main Access

The intersection of Albion Road and the Hard Rock main access is a signalized intersection. The northbound approach consists of a through lane and an auxiliary right-turn lane and the southbound approach consists of an auxiliary left-turn lane and a through lane. The westbound approach consists of a left-turn lane and a right-turn lane. No turn restrictions are noted.

Albion Road & Rideau Road

The intersection of Albion Road and Rideau Road is a signalized intersection. The northbound and southbound approaches have each an auxiliary left-turn lane and a shared through/right-turn lane. The eastbound and westbound approaches have each an auxiliary left turn lane and a shared through/right-turn lane. No turn restrictions are noted.

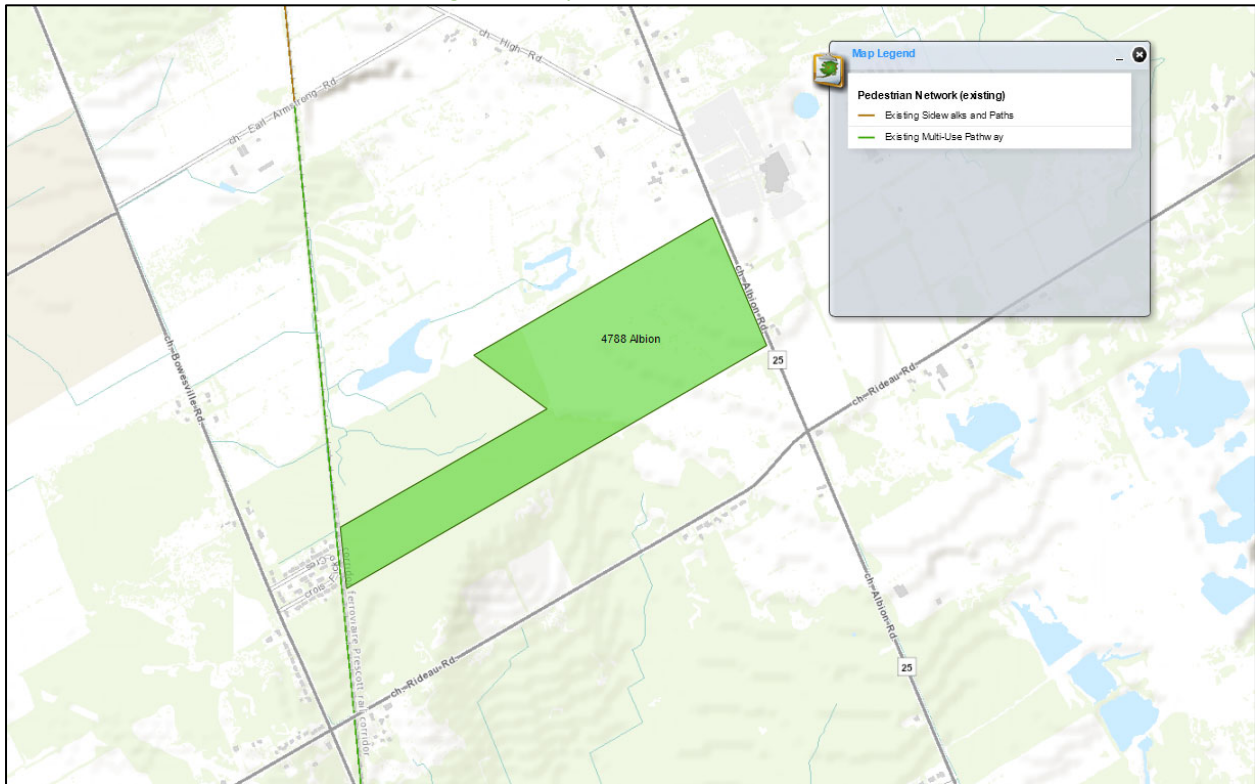
2.2.3 Existing Driveways

Within 200 metres of the proposed site access, there are two additional accesses for the on the east side of Albion Road for the Rideau Carleton Casino/Hard Rock, a private access for the racetrack barn and stables, and three residential driveways.

2.2.4 Cycling and Pedestrian Facilities

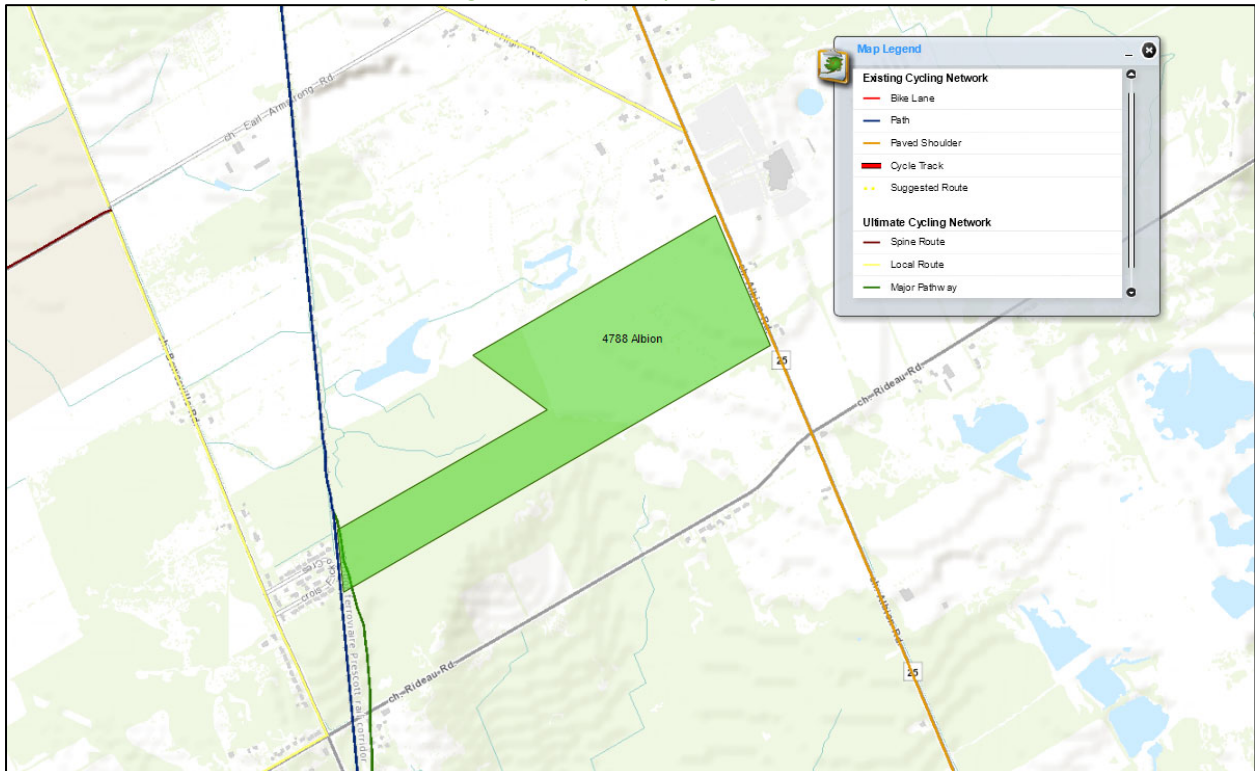
As illustrated in Figure 3, no substantial pedestrian facilities are located within the study area. Figure 4 illustrates the cycling network in the study area, consisting of Albion Road being designated as a spine route and having a paved shoulder, and High Road designated as a local cycling route.

Figure 3: Study Area Pedestrian Facilities



Source: <http://maps.ottawa.ca/geoOttawa/> Accessed: January 22, 2020

Figure 4: Study Area Cycling Facilities

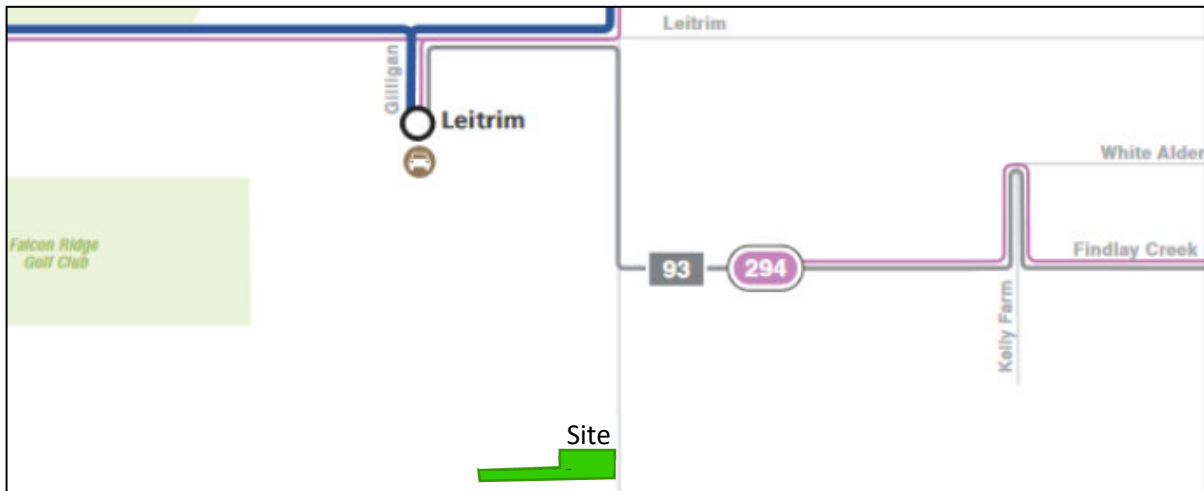


Source: <http://maps.ottawa.ca/geoOttawa/> Accessed: January 22, 2020

2.2.5 Existing Transit

There is no existing transit service operates within proximity to the site.

Figure 5: Existing Transit Service



Source: <http://maps.ottawa.ca/geoOttawa/> Accessed: January 8, 2020

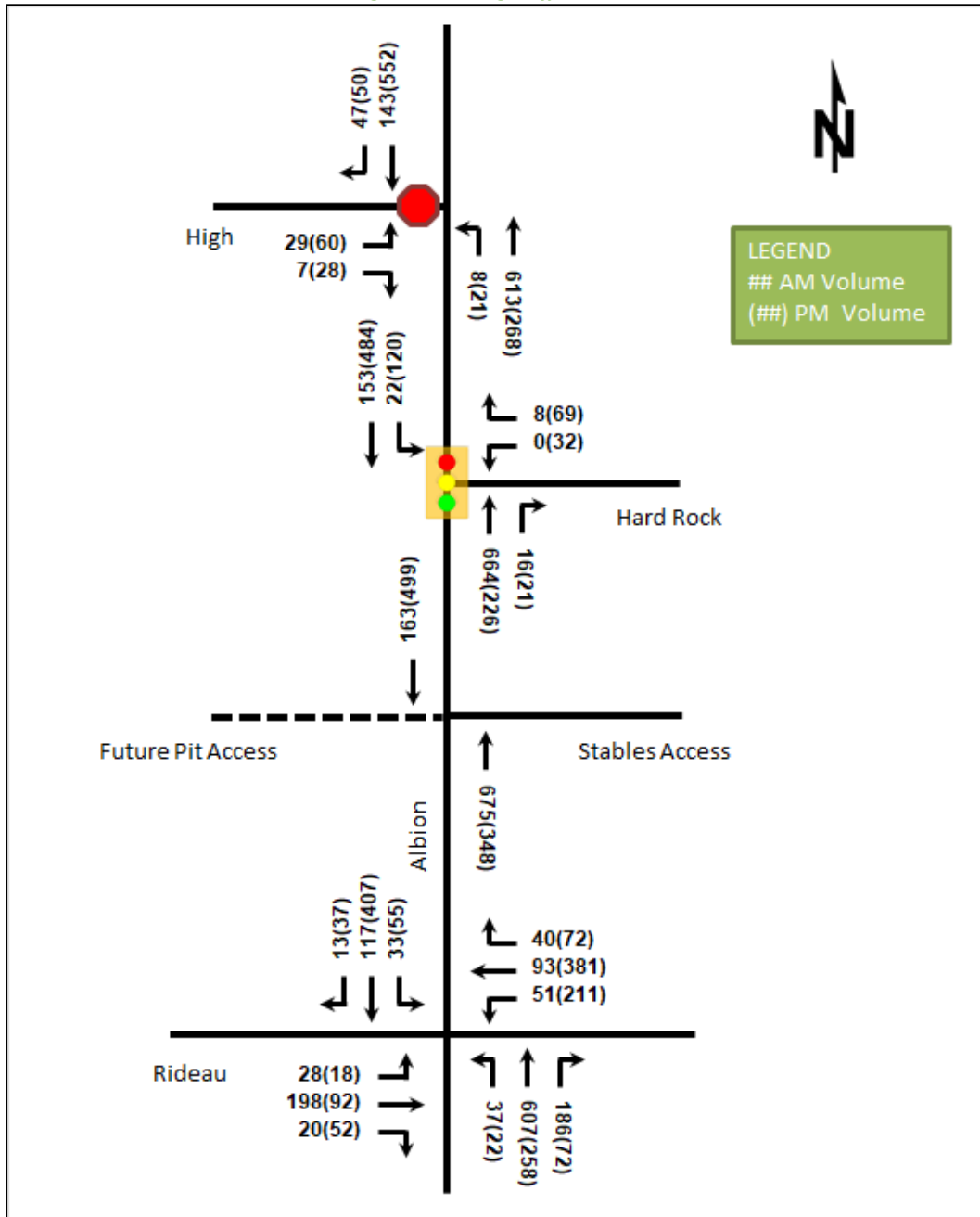
2.2.6 Existing Area Traffic Management Measures

There are no existing area traffic management measures within the study area.

2.2.7 Existing Peak Hour Travel Demand

Existing turning movement counts, as summarized in the Parsons (January 2018) and Novatech (November 2019) TIAs for the Hard Rock have been illustrated in Figure 6. The operational analysis on the existing conditions, as reported by Novatech has been provided in Appendix B.

Figure 6: Existing Traffic Counts



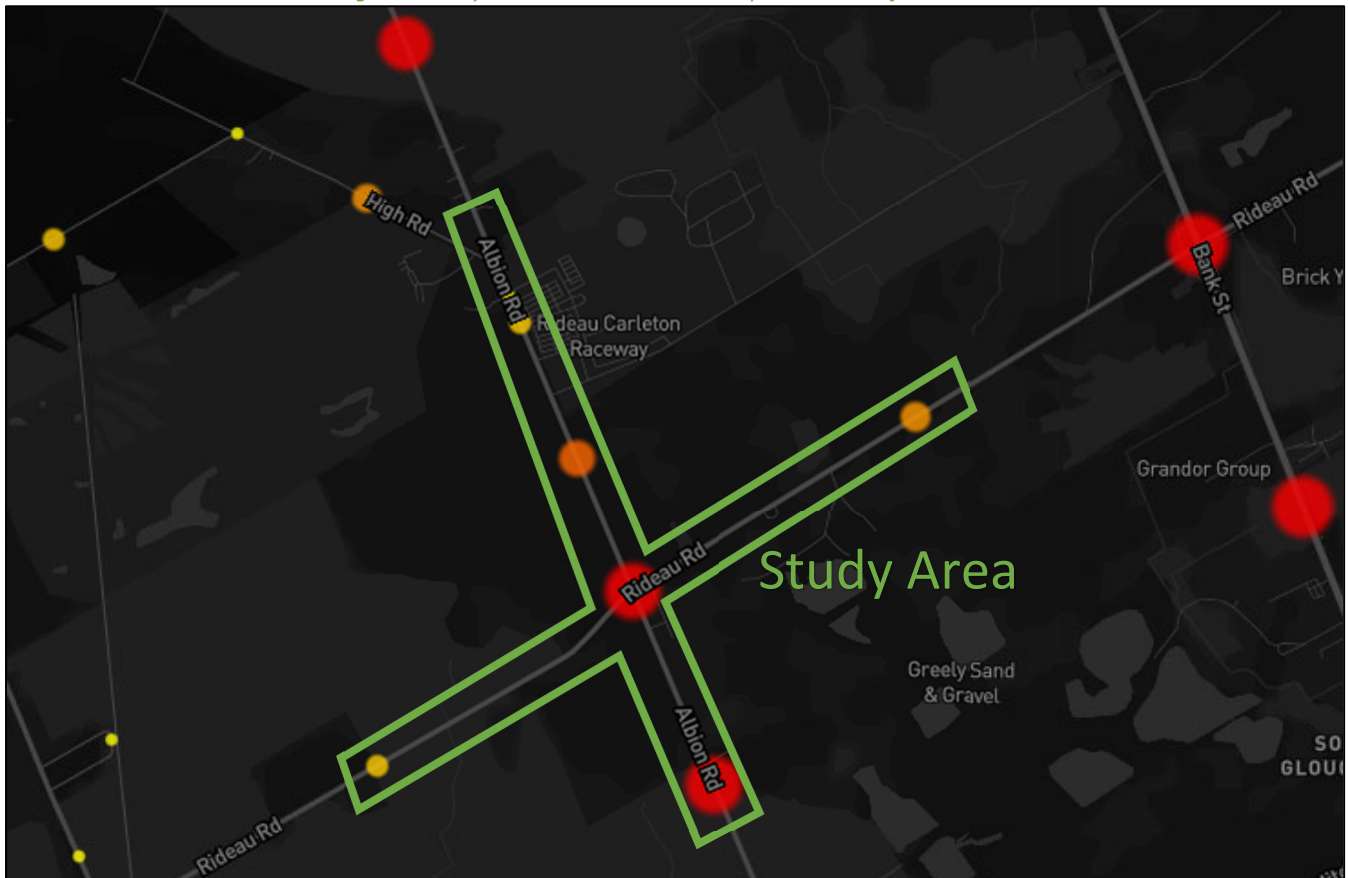
2.2.8 Collision Analysis

Collision data has been acquired from the City of Ottawa open data website (data.ottawa.ca) for five years prior to the commencement of this TIA for the surrounding road network. Table 1 summarizes the collision types and conditions in the study area, Figure 7 illustrates the intersections and segments analyzed, and Table 2 summarizes the total collisions for each of these locations. Collision data is included in Appendix C.

Table 1: Study Area Collision Summary, 2014-2018

		Number	%
Total Collisions		63	100%
Classification	Fatality	1	2%
	Non-Fatal Injury	19	30%
	Property Damage Only	43	68%
Initial Impact Type	Approaching	3	5%
	Angled	9	14%
	Rear end	9	14%
	Sideswipe	3	5%
	Turning Movement	10	16%
	SMV Unattended	0	0%
	SMV Other	29	46%
	Other	0	0%
Road Surface Condition	Dry	36	57%
	Wet	12	19%
	Loose Snow	3	5%
	Slush	3	5%
	Packed Snow	2	3%
	Ice	6	10%
Pedestrian Involved		1	2%
Cyclists Involved		3	5%

Figure 7: Study Area Collision Records – Representation of 2014-2016



Source: <https://maps.bikeottawa.ca/collisions/> Accessed: January 8, 2020

Table 2: Summary of Collision Locations, 2014-2018

	Number	%
Intersections / Segments	82	100%
Albion Rd @ High Rd	5	8%
Albion Rd @ 210 S of High Rd/Earl Armstrong Rd	4	6%
Albion Rd @ Rideau Rd	17	27%
Albion Rd btwn High Rd/Earl Armstrong Rd & 210 S of High Rd/Earl Armstrong Rd	2	3%
Albion Rd btwn 210 S of High Rd/Earl Armstrong Rd/Rideau Carleton Race	9	14%
Albion Rd btwn Rideau Rd & Tullamore St	17	27%
Rideau Rd btwn Bowesville Rd & Albion Rd	6	10%
Rideau Rd btwn Albion Rd & Bank St	3	5%

Within the study area, the intersection of Albion Road and Rideau Road and the road segment of Albion Road between Rideau Road and Tullamore Street were noted to have experienced higher collisions than other intersections. Table 3 and Table 4 summarize the collision types and conditions for these locations.

Table 3: Albion Road and Rideau Road Collision Summary

		Number	%
Total Collisions		17	100%
Classification	Fatality	0	0%
	Non-Fatal Injury	6	35%
	Property Damage Only	11	65%
Initial Impact Type	Angle	8	47%
	Rear end	5	29%
	Turning Movement	2	12%
	SMV Other	2	12%
Road Surface Condition	Dry	8	47%
	Wet	5	29%
	Loose Snow	1	6%
	Slush	1	6%
	Packed Snow	1	6%
	Ice	1	6%
Pedestrian Involved		0	0%
Cyclists Involved		1	6%

The intersection of Albion Road and Rideau Road had a total of 17 collisions during the 2014-2018 time period with 11 involving property damage only and the remaining six involving non-fatal injuries. Eight of the collisions were angle collisions, five were rear end and the remaining four were split between turning movement and SMV Other. The angled collisions may warrant an adjustment to the signal timing as no sight line obstructions are noted. This modification could provide protected movements to reduce the collisions at the intersection for the auxiliary left-turn lanes already provided. The weather conditions may impact the number of rear end collisions and all occurred around the AM and PM peak hours.

Table 4: Albion Road between Rideau Road and Tullamore Street Collision Summary

Total Collisions		Number	%
		17	100%
Classification	Fatality	1	6%
	Non-Fatal Injury	3	18%
	Property Damage Only	13	76%
Initial Impact Type	Sideswipe	1	6%
	Approaching	3	18%
	SMV Other	13	76%
Road Surface Condition	Dry	7	41%
	Wet	4	24%
	Loose Snow	1	6%
	Loose Sand or Gravel	1	6%
	Ice	1	6%
Pedestrian Involved		0	0%
Cyclists Involved		0	0%

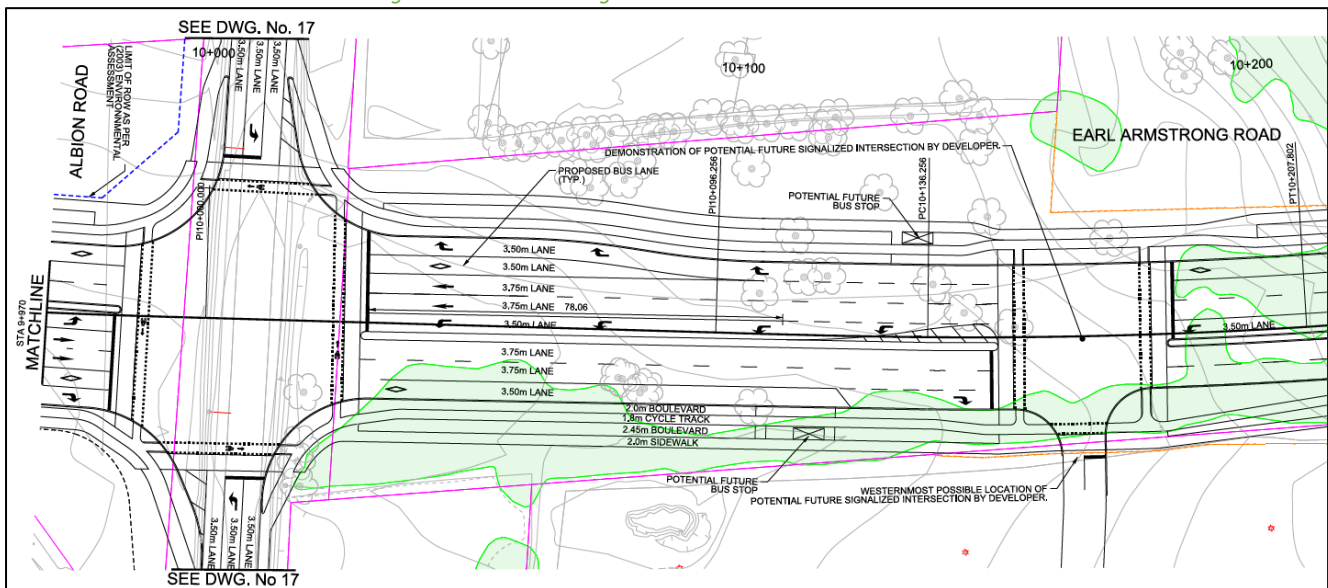
The segment of Albion Road between Rideau Road and Tullamore Street had a total of 17 collisions during the 2014-2018 time period with 13 involving property damage only, three involving non-fatal injuries and one collision involving a fatality. The fatal collision occurred as an approaching collision at 2:07 pm in the afternoon on a Sunday in September in 2015 with dry road conditions. No cyclists or pedestrians were involved in collisions on this road. Thirteen of the collisions were SMV Other collisions and may be the result of animals, weather conditions, and driving on a rural road at night/early morning.

2.3 Planned Conditions

2.3.1 Changes to the Area Transportation Network

The Earl Armstrong Road Extension EA was completed in 2019 and proposed a 4-lane extension from Albion Road to Hawthorne Road. The new intersection on Albion Road is located north of the existing High Road intersection. Figure 8 illustrates the proposed EA plan. The extension of Earl Armstrong Road is beyond the Affordable 2031 plan within the TMP. No other planned improvements are noted in the study area.

Figure 8: Earl Armstrong Road EA – Albion Road Intersection



2.3.2 Other Study Area Developments

4837 Albion Road

The application includes a site plan for the expansion of the existing casino and the addition of a hotel and a number of restaurants, to be completed in three phases by 2021. Expected to add 41 new AM peak hour two-way auto trips and 308 new PM peak hour two-way auto trips (Novatech 2019).

2610 Rideau Road

The application includes a site plan for the addition of one storey to an existing manufacturing facility, to be built out in two phases, phase one by 2020 and phase two by 2025. This addition is expected to generate 32 two-way AM peak hour trips and 37 two-way PM peak hour trips (Halpenny, 2019)

3 Study Area and Time Periods

3.1 Study Area

The study area will include the intersections of Albion Road and High Road, Albion Road and Rideau Carleton Racetrack and Casino, and Albion Road and Rideau Road which are all of the intersections that fall within a one-kilometer radius of the site.

3.2 Time Periods

As the proposed development has a uniform trip generation throughout weekdays, to determine the maximum impact, the weekday AM and PM peak periods will be examined.

3.3 Horizon Years

The anticipated build-out year is 2020. As a result, the full build-out plus five years horizon year is 2025. It is estimated that the site will close by 2030.

4 Exemption Review

Table 5 summarizes the exemptions for this TIA.

Table 5: Exemption Review

Module	Element	Explanation	Exempt/Required
Design Review Component			
4.1 Development Design	4.1.2 Circulation and Access	Only required for site plans	Required
	4.2.3 New Street Networks	Only required for plans of subdivision	Exempt
4.2 Parking	4.2.1 Parking Supply	Only required for site plans	Exempt (only 2-4 employees)
	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 Neighbourhood Traffic Management	4.6.1 Adjacent Neighbourhoods	Only required when the development relies on local or collector streets for access and total volumes exceed ATM capacity thresholds	Exempt

Module	Element	Explanation	Exempt/Required
4.8 Network Concept		Only required when proposed development generates more than 200 person-trips during the peak hour in excess of equivalent volume permitted by established zoning	Exempt

In addition to the above TIA requirements and exemptions, the following exemptions in Table 6 are also recommended for this TIA.

Table 6: Recommended Additional Exemptions

Module	Element	Explanation
Forecasting		
3.1 Development Generated Travel Demand	All Elements	<p>Trip generation trigger was not met, therefore trip and mode share forecasting is not required for the subject site. An estimation of the on-site activity provides a typical operation of 90 two-way trips per day (7:00am and 7:00pm) to a maximum of 130 two-way trips per day for limited time high demand projects. Between 2 and 4 employees are expected to be on site. The resulting peak hour trips would be approximately:</p> <ul style="list-style-type: none"> • AM Peak: 9-17 inbound trips, 5-13 outbound trips • PM Peak: 5-13 inbound and outbound trips <p>The anticipated trip distribution will be predominantly south to Rideau Road, with only local delivery immediately north of the site requiring trips to travel north.</p>
3.2 Background Network Travel Demand	All Elements	<p>As per the 4837 Albion Road Hard Rock Ottawa TIA, no intersection constraints were noted for the existing volumes and the background growth would continue to be accommodated within the existing transportation network.</p> <p>Please refer to the 4837 Albion Road Hard Rock Ottawa TIA for additional information on background road network and intersection operations.</p>
3.3 Demand Rationalization	All Elements	As per the 4837 Albion Road Hard Rock Ottawa TIA, no network constraints were noted.
Design Review Component		
4.1 Development Design	4.1.1 Design for Sustainable Modes	<p>The rural nature of the site does not provide any pedestrian, cycling, and transit service/facilities. Furthermore, the internal site is a function of the pit requirements and has been prepared to support that operation.</p> <p>Therefore, the need to for a TIA to outline the internal auto parking and pedestrian access to the site office is not required.</p>
4.3 Boundary Street Design	All Elements	Limited opportunity exists to increase the MMLOS of Albion Road due to the rural nature of Albion Road and the presence of existing paved shoulders for bike travel.

Module	Element	Explanation
4.4 Access Intersection Design	All Elements	The access intersection is anticipated to be a typical private approach design, completed as per City standards and operational requirements for site vehicles. Therefore, the need for a TIA to review the access is not required and the access design will be completed as part of the site plan review process within the existing submission.
Network Impact Components		
4.7 Transit	All Elements	No transit service is provided in the area.
4.9 Network Intersections	All Elements	As outlined previously, the low traffic generation will have minimal impact on network intersections and sufficient capacity if currently provided to accommodate an increase in line with background growth. Please refer to the 4837 Albion Road Hard Rock Ottawa TIA for additional information on future road network and intersection operations.

5 Summary and Conclusion

The need for a TIA, as per the Step 1 Screening Form, is identified solely on the classification of Albion Road as a spine cycling route across the frontage of the proposed site. Through the review of the existing conditions in this Step 2 Scoping Report, no items were identified that required additional consideration for the site.

The remaining modules and elements of the TIA Guidelines, outlined in Table 5, are internal to the site and will be reviewed as part of the existing site plan submission without the need for a TIA. The access will be located at the existing intersection for the barn/stables access on Albion Road and the existing painted gore area on the northbound approach allows for a left-turn lane to be located in this space.

Given the above, it is the recommendation of this Scoping Report that the TIA requirements for the proposed mineral extraction site have been met and no further review or assessment of the development is required.

Prepared By:



Andrew Harte, P.Eng.
Senior Transportation Engineer

Reviewed By:

Christopher Gordon, P.Eng.
Senior Transportation Engineer

Appendix A

TIA Screening Form and PM Certification Form

City of Ottawa 2017 TIA Guidelines
Step 1 - Screening Form

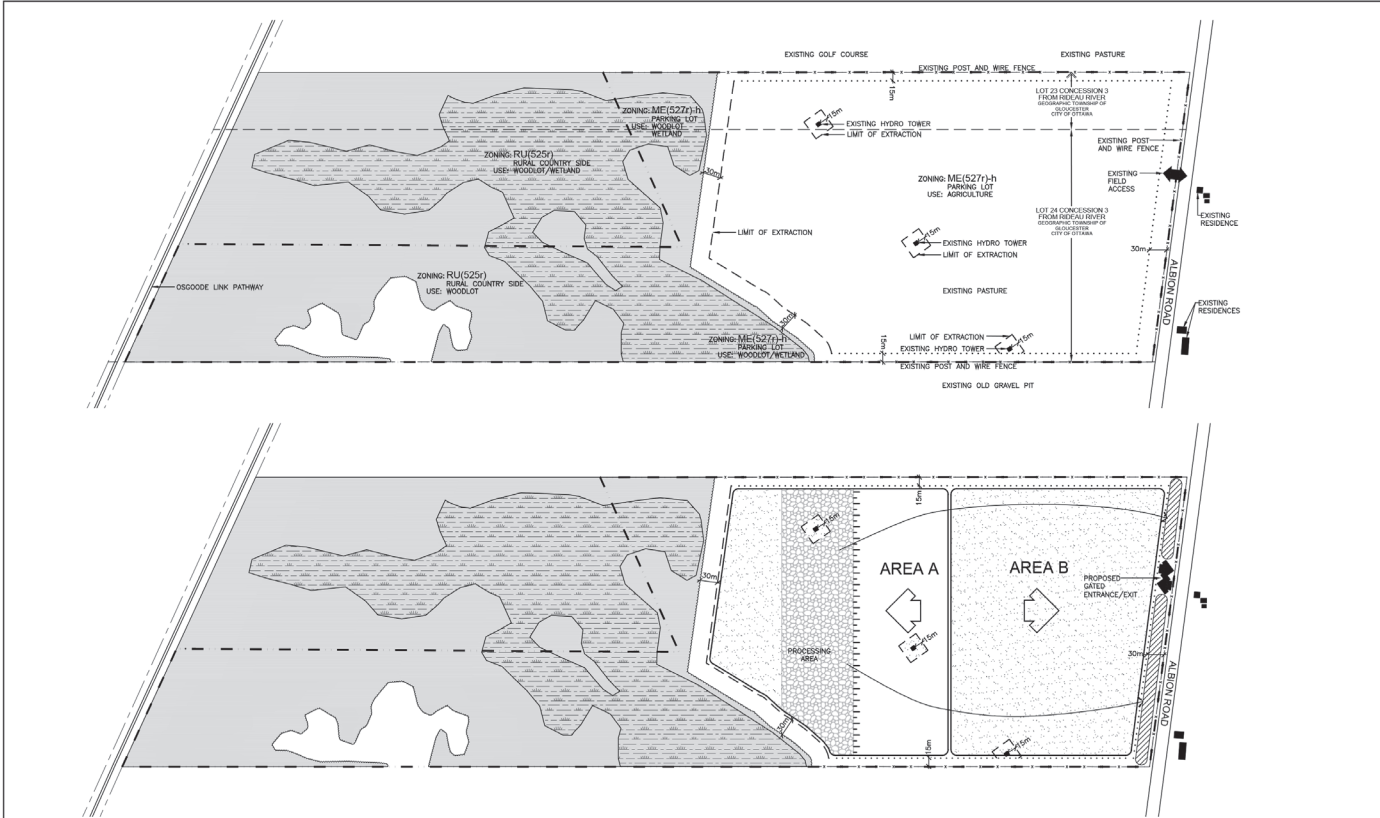
Date: 22-Jan-20
Project Number: 2019-72
Project Reference: Cavanagh Ottawa Airport Pit

1.1 Description of Proposed Development	
Municipal Address	4788 Albion Road
Description of Location	Pin: 043280158
Land Use Classification	Mineral Extraction (ME[527r]-h)
Development Size	Mineral Extraction Site
Accesses	One to Albion Road
Phase of Development	Single Phase
Buildout Year	2020
TIA Requirement	Design Review Component

1.2 Trip Generation Trigger	
Land Use Type	Mineral Extraction Site
Development Size	2 Employees
Trip Generation Trigger	No

1.3 Location Triggers	
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?	Yes
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?	No
Location Trigger	Yes

1.4. Safety Triggers	
Are posted speed limits on a boundary street 80 km/hr or greater?	No
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?	No
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)?	No
Is the proposed driveway within auxiliary lanes of an intersection?	No
Does the proposed driveway make use of an existing median break that serves an existing site?	No
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?	No
Does the development include a drive-thru facility?	No
Safety Trigger	No



PHASE A

PHASE A NOTES

1. ESTABLISH ENTRANCES/EXIT FROM ALBION ROAD WHERE SHOWN ON SITE PLANS, ACCORDING TO MUNICIPAL STANDARDS AND APPROVAL.
2. PRIOR TO EXTRACTION COMMENCING IN AREA A, CONTRACTOR TO UPGRADE THE FENCING ON THE ROBERTS OF THE LICENSE. ALL FENCING SHALL BE MAINTAINED.
3. BEGIN STRIPPING TOPSOIL AND/OR OVERBURDEN SEPARATELY FROM AREA A AND USE THE MATERIAL TO CONSTRUCT ACQUATIC BERMS AS SHOWN. EXCESS MATERIAL MAY BE STOCKPILED ON THE PIT FLOOR OR USED TO BEGIN PROGRESSIVE REHABILITATION.
4. BEGIN EXTRACTION IN AREA A IN DIRECTION SHOWN. TEMPORARY STOCKPILES MAY BE LOCATED ON PIT FLOOR NEAR THE PIT FACE DURING EXCAVATION OF AGGREGATE.
5. MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION.

PHASE B (NOT SHOWN)
PHASE B NOTES

1. COMPLETE EXTRACTION IN AREA A.
2. BEGIN STRIPPING TOPSOIL AND/OR OVERBURDEN SEPARATELY FROM AREA B AND USE THE MATERIAL TO BEGIN PROGRESSIVE REHABILITATION OF AREA A.
3. COMPLETE REHABILITATION OF AREA A AND EXTRACTION OF AREA B.
4. COMPLETE REHABILITATION IN AREA B USING MATERIAL STORED IN BERMS.
5. REMOVE ALL EQUIPMENT, STRUCTURES AND SCRIP FROM THE SITE AND REHABILITATE ALL SMALL BODIES.

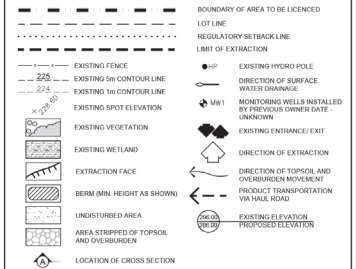
TECHNICAL RECOMMENDATIONS

THE FOLLOWING ARE THE TECHNICAL RECOMMENDATIONS FROM ALL OF THE EXPERTS' REPORTS. ADDITIONAL RECOMMENDATIONS MAY BE INCLUDED AS A RESULT OF THE LICENSE REVIEW PROCESS.

ARCHAEOLOGICAL ASSESSMENT - DATED: SHOULD DEEPLY BURIED ARCHAEOLOGICAL MATERIAL BE FOUND ON THE PROPERTY DURING DEVELOPMENT ACTIVITIES, THE MINISTRY OF CULTURE SHOULD BE NOTIFIED IMMEDIATELY AT 800-367-9170. IN THE EVENT THAT HUMAN REMAINS ARE ENCOUNTERED DURING EXCAVATION, THE PROPRIETOR SHOULD IMMEDIATELY CONTACT BOTH THE MINISTRY OF CULTURE AND THE REGULATORY UNIT OF THE MINISTRY OF CONSUMER AND COMMERCIAL RELATIONS, (416) 325-5414.

KEY MAP

LEGEND



NO. DATE	REVISION	UNSET	NO.	NO. DATE	REVISION	UNSET	NO.

EXISTING FEATURES NOTES

- GENERAL SITE PLAN INFORMATION**
1. THIS SITE PLAN CONSISTS OF 2 DRAWINGS AND MUST BE READ COLLECTIVELY.
 2. ALL MEASUREMENTS SHOWN ON THIS SITE PLAN ARE IN METRES.
- LICENSE INFORMATION**
3. THIS SITE PLAN IS PREPARED FOR SUBMISSION TO THE CITY OF OTTAWA.
 4. APPLICANT: THOMAS CAVANAGH CONSTRUCTION LTD., 808 CAVANAGH ROAD, AUSTIN, ONTARIO K0A 1B0
- TOTAL AREA TO BE LICENSED:** 62.9 ha
TOTAL AREA TO BE EXTRACTED: 23.8 ha
TOTAL AREA TO REHABILITATE: 33.9 ha
- BASE INFORMATION**
6. PROPERTY BOUNDARY INFORMATION FOR PART OF LOTS 23 AND 24, CONFESSION 3 FROM RIDEAU RIVER, CITY OF OTTAWA WAS OBTAINED FROM ANNETT, KENNETH, ROGEE, AND JASON SURVEYING LTD., LEGAL SURVEY, DATED NOVEMBER 24, 1988. ALL ELEVATIONS ARE GEODETIC AND ABOVE SEA LEVEL (ASL).
 7. THE SITE WAS FIELD CHECKED BY _____
 8. ZONING INFORMATION OBTAINED FROM 'SCHEMULE 'W' MUNICIPALITY OF STRATHROY-CANADOC ZONING BY-LAW NO. 4518, 827 RMO, NO. 79, DATED FEBRUARY 2018.

OPERATIONS NOTES

- GENERAL INFORMATION**
1. THIS PLAN DEPICTS A SCHEMATIC OPERATIONS AND REHABILITATION SEQUENCE FOR THIS PROPERTY BASED ON THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION. PHASES SHOWN ARE SCHEMATIC AND MAY SLIGHTLY VARY WITH MATERIAL QUALITY, SITE HYDROLOGY AND HYDROGEOLOGY OR MARKET DEMAND. PHASES DO NOT REPRESENT ANY SPECIFIC OR FINAL TIME PERIOD.
 2. EXTRACTION SHALL GENERALLY FOLLOW THE SEQUENCE SHOWN. WHEN PARALLEL REHABILITATION OF A PHASE IS POSSIBLE IT SHALL BE CARRIED OUT, NOT WITHSTANDING THE EXTRACTION AND REHABILITATION PROCESSES ABOVE. DEMAND FOR CERTAIN PRODUCTS OR ENDINGS OF MATERIAL MAY REQUIRE SOME DEVIATION IN THE EXTRACTION AND REHABILITATION PHASING. ANY MAJOR DEVIATIONS FROM THE OPERATIONS SEQUENCE SHOWN WILL REQUIRE APPROVAL FROM MINE.
- EXTRACTION/PROCESSING/HAULING INFORMATION**
2. TOTAL AREA TO BE EXTRACTED IS 23.8 HECTARES.
 3. MAXIMUM NUMBER OF TONNES OF AGGREGATE TO BE REMOVED FROM THE SITE IN ANY CALENDAR YEAR IS _____ TONNES.
- EXTRACTION OF SAND AND GRAVEL WILL TAKE PLACE IN ONE OR TWO BENCHES WITH A MAXIMUM HEIGHT OF # METRES. THE GROUNDWATER TABLE IS ESTIMATED TO BE BETWEEN _____ AND _____ ASL (SEE _____ GROUNDWATER SOURCE COPY).
- OTHER SITE ACTIVITIES WILL INCLUDE STRIPPING AND REHABILITATION. OPERATIONAL EQUIPMENT MAY INCLUDE TRUCKS, LOADERS, EXCAVATOR, BACKHOES, BULLDOZERS, SCRAPERS, CONVOYERS AND OTHER RELATED EQUIPMENT. PRODUCT STOCKPILES WILL NOT EXCEED 10 METRES IN HEIGHT AND WILL BE LOCATED ON THE PIT FLOOR. MATERIAL FROM OTHER PROPRIETIES MAY BE IMPORTED INTO THE SITE FOR BLENDING, CUSTOM PRODUCTS AND/OR RESALE. THIS MAY INCLUDE AGGREGATE ON THE PROCESSING AREA AND/OR PLOT AND TOPSOIL (IN AREA 1).
- 4. OFFICE/STORAGE BUILDING AND/OR SCALE/WEIGH HOUSE MAY BE CONSTRUCTED WHERE SHOWN.

AIR QUALITY INFORMATION

WATER OR COLLECTION DUST WILL BE APPLIED TO INTERNAL HAUL ROADS AND PROCESSING AREAS AS OFTEN AS REQUIRED TO MITIGATE DUST.

SITE MANAGEMENT INFORMATION

2. EXISTING VEGETATION WITHIN THE LICENSED AREA SHALL BE MAINTAINED IN A HEALTHY VIGOROUS GROWING CONDITION UNTIL STRIPPING BEGINS OR UNTIL THE REHABILITATION IS COMPLETE. ANY VEGETATION PLANTED AS PART OF SITE IMPROVEMENTS OR PROGRESSIVE AND FINAL REHABILITATION WILL ALSO BE MAINTAINED IN A HEALTHY, VIGOROUS GROWING CONDITION.

FENCING INFORMATION

3. BOUNDARIES OF THE AREA TO BE LICENSED THAT ARE PRESENTLY FENCED ARE SHOWN ON DRAWING 1 OF 2 EXISTING FEATURES. PRIOR TO ANY STRIPPING OR PREPARATION FENCING ON THE LICENSED BOUNDARIES ADJACENT TO PARISHOUS DRIVE WILL BE UPGRADED TO 1.2m HIGH POST AND WIRE, EXCEPT WHERE THERE IS AN EXISTING OVERSIDE. TO COMPLY WITH THE AGGREGATE RESOURCES ACT UNFENCED BOUNDARIES WILL BE DEMARKATED WITH HIGHLY VISIBLE 1.2m HIGH MARKER POSTS AT CORNERS. 1.8 METRE TUBULAR FENCING WILL BE CONSTRUCTED ONCE STRIPPING OCCURS WITHIN 50m OF THE BACKS ADJACENT TO THE NATURAL HERITAGE FEATURES IDENTIFIED ON SITE. ALL FENCING SHALL BE MAINTAINED.

TOPSOIL/SUBSOIL/OVERBURDEN STORAGE INFORMATION

4. TOPSOIL AND OVERBURDEN SHALL BE STRIPPED AND STOCKPILED SEPARATELY IN BERMS WHERE SHOWN AND STOCKPILES ON PIT FLOOR CLOSE TO EXTRACTION FACE.

BERM INFORMATION

11. BERMS SHALL CREATE AN EFFECTIVE VISUAL BARRIER AND BE A MINIMUM OF 2.0 METRES ABOVE THE EXISTING GRADE. BERMS SHALL NOT EXCEED 2.1 METRES IN HEIGHT. REFER TO TYPICAL BERM CROSS SECTION ON DRAWING 2 OF 2. ALL BERMS SHALL BE SEEDED USING GRASS/LEGUME MIXTURE. SEE REHABILITATION PLAN, NOTE #11 IMMEDIATELY UPON COMPLETION TO MINIMIZE NOISE, DUST AND EROSION.

SCRAP STORAGE INFORMATION

12. ALL SCRAP USED IN MACHINERY AND STAMPS GENERATED THROUGH THE OPERATIONS WITHIN THIS LICENSE WILL BE STOCKPILED IN THE PROCESSING AREA A MINIMUM OF 30m FROM THE PIT FLOOR OF THE SITE AND NOT WITHIN 30m OF ANY BODY OF WATER AND SHALL BE DISPOSED OF ON AN ONGOING BASIS. STAMPS/PROOF MATERIALS MAY BE CHIPPED AND USED FOR SOIL ENHANCEMENT DURING PROGRESSIVE REHABILITATION. TREES WILL BE HARVESTED AND SOLD AS LUMBER OR UTILIZED FOR FIREWOOD AND/OR THEIR BEST USE. UPON COMPLETION OF EXTRACTION, ALL SCRAP EQUIPMENT AND USED MACHINERY SHALL BE REMOVED.

PETROLEUM STORAGE INFORMATION

7 LITRE, OIL, TOXIC AND/OR HYDROCARBON FLUID, AND OTHER CHEMICALS NEEDED FOR THE MAINTENANCE AND FUNCTIONING OF ON-SITE AGGREGATE PROCESSING EQUIPMENT SHALL BE APPROPRIATELY STORED IN AN OIL CONTAINER AND SHALL MEET THE REQUIREMENTS SET FORTH IN THE HANDBOOK AS AMENDED, AND THE OILS, NE HAZARD CODE AND REGULATIONS, AS AMENDED BY THE TECHNICAL STANDARDS AND SAFETY ACT, TESTS AND LIQUID HANDLING CODE, AND IN ACCORDANCE WITH THE MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS CHEMICAL STORAGE GUIDELINES. ALL REFUELLING SHALL BE WITHIN A CONTAINMENT PAD. ALL SPILLS OF MATERIALS SHALL BE IMMEDIATELY REPORTED TO THE SPILLS ACTION CENTRE OF MCCC. ANY SPILLS SHALL BE REMOVED AND DISPOSED OF AT AN APPROPRIATE MCCC APPROVED FACILITY.

IMPORTATION OF FILL INFORMATION

13. IN ORDER TO MAXIMIZE RESOURCE RECOVERY, IMPORTATION OF CLEAN INERT FILL (EG. TOPSOIL AND/OR OVERBURDEN) MAY BE IMPORTED TO FACILITATE AGRICULTURAL REHABILITATION.

IMPORTED MATERIAL SHALL MEET THE MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS PARAMETERS UNDER TABLE 'F' OF MCCC'S 'SOIL, GROUND WATER AND SEDIMENT STANDARDS FOR USE UNDER PART XV OF THE ENVIRONMENTAL PROTECTION ACT'.

SAMPLING AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ONTO THE LICENSED SITE BY A QP UNDER EPA. A QP SHALL ALSO DESIGN A FILL MONITORING PROGRAM. RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MINE.

THE LICENSEE SHALL KEEP DETAILED RECORDS OF THE AMOUNT OF MATERIAL BROUGHT ON SITE FOR REHABILITATION AND THE TESTING RESULTS OF ALL SAMPLES. ALL RECORDS AND TESTING RESULTS SHALL BE AVAILABLE UPON REQUEST BY MINE OR MCCC.

Pre Licence Review

Herrington
Avan Ltd.

41 Main Street, Unit 102
Ottawa, Ontario K1M 2E5
Tel: 905-294-8382 Fax: 905-294-7623
www.herringtonavan.com

Project Name

CAVANAGH
OTTAWA AIRPORT
PIT

PART OF LOTS 23 AND 24, CONFESSION 3 FROM RIDEAU RIVER
GEOGRAPHIC TOWNSHIP OF GLOUCESTER
CITY OF OTTAWA

Scale 1:4000

North

0 50 100 150m

Stamp

DRAFT

Drawing Status	PRELIMINARY FOR DISCUSSION
Drawn	S.B.
Checked	M.H.
Issue Date	19-27

Drawing Title

EXISTING FEATURES AND OPERATIONAL PLAN

Project Number

1 OF 2



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

1. 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;
2. 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;
3. 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
4. I am either a licensed¹ or registered² professional in good standing, whose field of expertise [check appropriate field(s)] 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

Ville d'Ottawa
Services d'infrastructure et Viabilité des
collectivités
Urbanisme et Gestion de la croissance
110, avenue Laurier Ouest
Ottawa (Ontario) K1P 1J1
Tél. : 613-580-2424
Télécopieur: 613-560-6006

Dated at Ottawa this 20 day of September, 2018.
(City)

Name: Andrew Harte
(Please Print)

Professional Title: Professional Engineer



Signature of Individual certifier that s/he meets the above four criteria

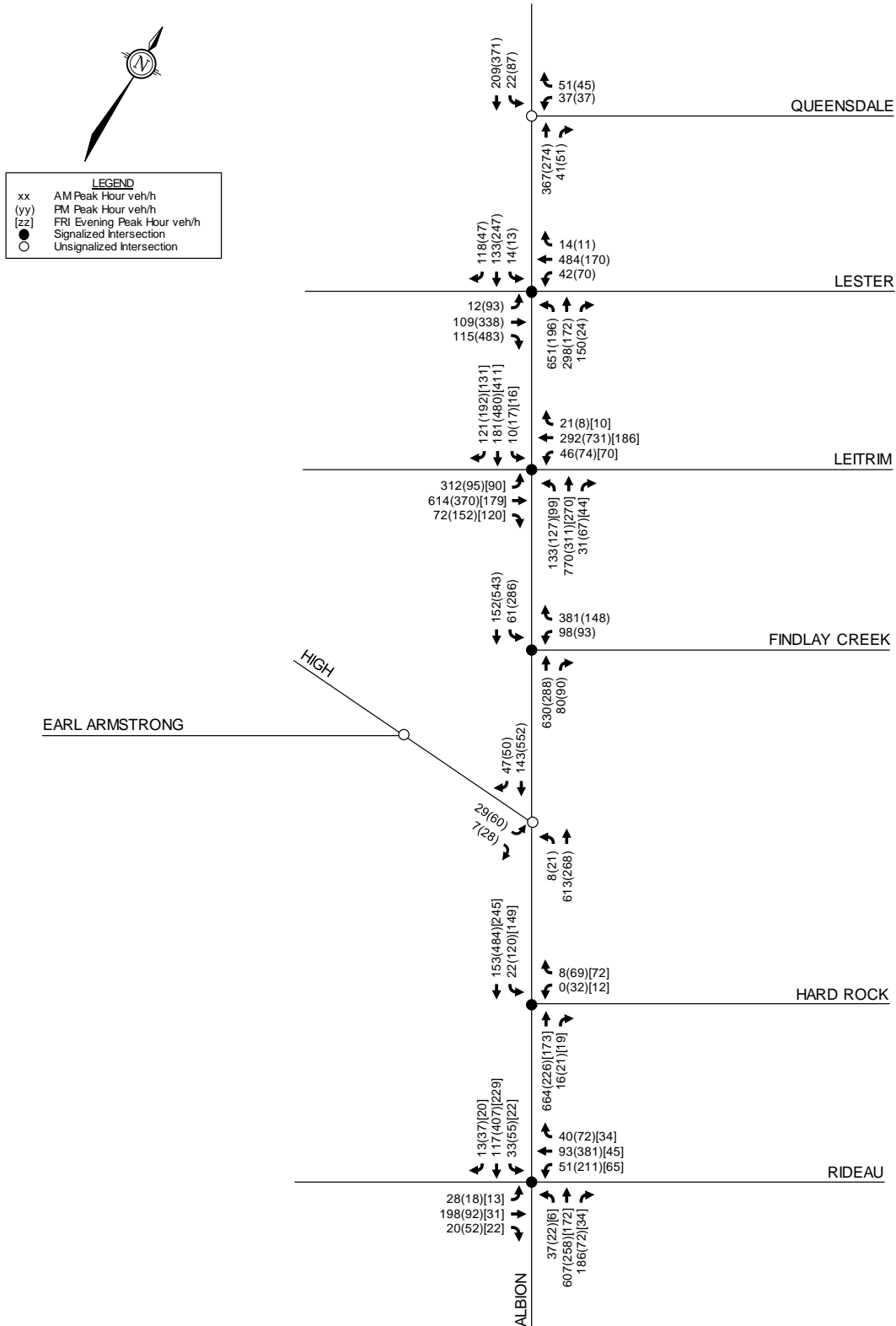
Office Contact Information (Please Print)
Address: 13 Markham Avenue
City / Postal Code: Ottawa / K2G 3Z1
Telephone / Extension: (613) 697-3797
E-Mail Address: Andrew.Harte@CGHTransportation.com



Appendix B

Hard Rock Ottawa 4837 Albion Road TIA Existing Study Area Traffic Operations

Figure 2: Existing Traffic Volumes



F during the weekday afternoon peak hour. All other critical movements at all other intersections were shown to operate at an acceptable LOS D or better. The results of the existing analysis from the previous TIA are included in **Table 4**. Detailed Synchro reports prepared by Parsons are included in **Appendix I**.

Table 4: Intersection Capacity Analysis – Existing Traffic

Intersection	Weekday Morning Peak			Weekday Afternoon Peak		
	Max v/c or delay	LOS	Mvmt	Max v/c or delay	LOS	Mvmt
Albion/Queensdale ¹	12.2 sec	B	NBT	14.8 sec	B	SBT
Albion/Lester	1.07	F	NBL	0.72	C	SBT
Albion/Leitrim	1.00	E	EBT	1.11	F	WBT
Albion/Findlay Creek	0.78	C	WBR	0.48	A	WBR
Albion/High ¹	15.6 sec	C	EB	20.0 sec	C	EB
Albion/Hard Rock	0.43	A	NBT	0.35	A	SBT
Albion/Rideau	0.67	B	NBT	0.83	D	WBT

1. Unsignalized intersection

Planned intersection improvements at Albion Road/Lester Road will address the failing level of service. Widening of Leitrim Road is not included in the Affordable Network, however interim improvements at Albion Road/Leitrim Road include additional through and right turn lanes. These interim improvements are planned as part of the Stage 2 LRT project, and are anticipated to be in place by 2021.

6.7.2 2028 Total Intersection Operations

The performance of the study area intersections during the weekday morning, weekday afternoon, and Friday evening peak hours are shown below, and taken from the previous TIA and TIA Addendum. Analysis of the weekday morning peak has remained unchanged since the previous TIA, while analysis of the weekday afternoon peak was updated and analysis of the Friday evening peak was included in the TIA Addendum. As shown in **Table 2**, the additional 30 restaurant seats and 25 hotel rooms since the previous analysis are anticipated to add as many as seven vehicle trips during the peak hours. Therefore, the previous analysis stands.

All 'new' site-generated traffic is assumed to use the signalized Hard Rock access to Albion Road, and the planned roadway modifications at the Albion Road/Leitrim Road and Albion Road/Lester Road intersection are assumed to be in place. In addition, the signal timing at Albion Road/Leitrim Road was adjusted to improve the level of service for the critical movement. The results from the previous TIA and TIA Addendum are shown in **Table 5**. Detailed Synchro reports prepared by Parsons and Novatech are included in **Appendix I**.

Appendix C

Collision Data

Accident Date	Accident Year	Accident Time	Location	Environment Condition	Light	Traffic Control	Classification Of Accident	Initial Impact Type	Road Surface Condition
2014-05-06	2014	17:58	ALBION RD @ 210 S OF HIGH RD/EARL ARMSTRONG RD	01 - Clear	01 - Daylight	01 - Traffic signal	02 - Non-fatal injury	03 - Rear end	01 - Dry
2016-02-10	2016	15:30	ALBION RD @ 210 S OF HIGH RD/EARL ARMSTRONG RD	01 - Clear	01 - Daylight	01 - Traffic signal	03 - P.D. only	02 - Angle	02 - Wet
2018-05-03	2018	16:59	ALBION RD @ 210 S OF HIGH RD/EARL ARMSTRONG RD (0012478)	01 - Clear	01 - Daylight	01 - Traffic signal	03 - P.D. only	05 - Turning movement	01 - Dry
2018-05-14	2018	6:18	ALBION RD @ 210 S OF HIGH RD/EARL ARMSTRONG RD (0012478)	01 - Clear	01 - Daylight	01 - Traffic signal	03 - P.D. only	05 - Turning movement	01 - Dry
2016-08-16	2016	8:36	ALBION RD @ HIGH RD	01 - Clear	01 - Daylight	02 - Stop sign	03 - P.D. only	03 - Rear end	01 - Dry
2018-06-20	2018	7:26	ALBION RD @ HIGH RD (0004208)	01 - Clear	01 - Daylight	02 - Stop sign	02 - Non-fatal injury	05 - Turning movement	01 - Dry
2018-09-13	2018	14:18	ALBION RD @ HIGH RD (0004208)	01 - Clear	01 - Daylight	02 - Stop sign	02 - Non-fatal injury	05 - Turning movement	01 - Dry
2018-12-06	2018	20:06	ALBION RD @ HIGH RD (0004208)	01 - Clear	07 - Dark	02 - Stop sign	02 - Non-fatal injury	03 - Rear end	01 - Dry
2018-08-31	2018	15:50	ALBION RD @ HIGH RD (0004208)	01 - Clear	01 - Daylight	02 - Stop sign	03 - P.D. only	05 - Turning movement	01 - Dry
2017-08-14	2017	8:17	ALBION RD @ RIDEAU RD	01 - Clear	01 - Daylight	01 - Traffic signal	02 - Non-fatal injury	03 - Rear end	01 - Dry
2017-02-09	2017	12:09	ALBION RD @ RIDEAU RD	01 - Clear	01 - Daylight	01 - Traffic signal	02 - Non-fatal injury	02 - Angle	01 - Dry
2016-05-24	2016	17:45	ALBION RD @ RIDEAU RD	01 - Clear	01 - Daylight	01 - Traffic signal	02 - Non-fatal injury	05 - Turning movement	01 - Dry
2016-11-16	2016	9:51	ALBION RD @ RIDEAU RD	02 - Rain	01 - Daylight	01 - Traffic signal	02 - Non-fatal injury	02 - Angle	02 - Wet
2015-02-04	2015	13:15	ALBION RD @ RIDEAU RD	03 - Snow	01 - Daylight	01 - Traffic signal	02 - Non-fatal injury	02 - Angle	05 - Packed snow
2014-01-09	2014	8:44	ALBION RD @ RIDEAU RD	01 - Clear	01 - Daylight	01 - Traffic signal	02 - Non-fatal injury	05 - Turning movement	01 - Dry
2017-06-29	2017	16:43	ALBION RD @ RIDEAU RD	02 - Rain	01 - Daylight	01 - Traffic signal	03 - P.D. only	03 - Rear end	02 - Wet
2017-01-02	2017	10:29	ALBION RD @ RIDEAU RD	01 - Clear	01 - Daylight	01 - Traffic signal	03 - P.D. only	02 - Angle	01 - Dry
2016-08-04	2016	9:22	ALBION RD @ RIDEAU RD	01 - Clear	01 - Daylight	01 - Traffic signal	03 - P.D. only	03 - Rear end	01 - Dry
2016-02-11	2016	16:16	ALBION RD @ RIDEAU RD	03 - Snow	01 - Daylight	01 - Traffic signal	03 - P.D. only	03 - Rear end	06 - Ice
2016-01-27	2016	0:00	ALBION RD @ RIDEAU RD	03 - Snow	00 - Unknown	01 - Traffic signal	03 - P.D. only	07 - SMV other	02 - Wet
2016-04-11	2016	6:59	ALBION RD @ RIDEAU RD	04 - Freezing Rain	01 - Daylight	01 - Traffic signal	03 - P.D. only	03 - Rear end	04 - Slush
2015-08-06	2015	13:30	ALBION RD @ RIDEAU RD	01 - Clear	01 - Daylight	01 - Traffic signal	03 - P.D. only	02 - Angle	01 - Dry
2015-06-01	2015	23:00	ALBION RD @ RIDEAU RD	02 - Rain	07 - Dark	01 - Traffic signal	03 - P.D. only	07 - SMV other	02 - Wet
2015-09-17	2015	18:56	ALBION RD @ RIDEAU RD	01 - Clear	05 - Dusk	01 - Traffic signal	03 - P.D. only	02 - Angle	01 - Dry
2018-01-02	2018	18:00	ALBION RD @ RIDEAU RD (0009356)	03 - Snow	07 - Dark	01 - Traffic signal	03 - P.D. only	02 - Angle	03 - Loose snow
2018-02-12	2018	9:41	ALBION RD @ RIDEAU RD (0009356)	01 - Clear	01 - Daylight	01 - Traffic signal	03 - P.D. only	02 - Angle	02 - Wet
2016-04-15	2016	18:17	ALBION RD btwn 210 S OF HIGH RD/EARL ARMSTRONG RD/RIDEAU CARLETON RACE	01 - Clear	01 - Daylight	10 - No control	02 - Non-fatal injury	05 - Turning movement	01 - Dry
2015-02-02	2015	5:44	ALBION RD btwn 210 S OF HIGH RD/EARL ARMSTRONG RD/RIDEAU CARLETON RACE	03 - Snow	07 - Dark	10 - No control	02 - Non-fatal injury	05 - Turning movement	03 - Loose snow
2014-05-25	2014	16:35	ALBION RD btwn 210 S OF HIGH RD/EARL ARMSTRONG RD/RIDEAU CARLETON RACE	01 - Clear	01 - Daylight	10 - No control	02 - Non-fatal injury	04 - Sideswipe	01 - Dry
2017-05-08	2017	14:50	ALBION RD btwn 210 S OF HIGH RD/EARL ARMSTRONG RD/RIDEAU CARLETON RACE	01 - Clear	01 - Daylight	10 - No control	03 - P.D. only	07 - SMV other	01 - Dry
2017-07-19	2017	20:23	ALBION RD btwn 210 S OF HIGH RD/EARL ARMSTRONG RD/RIDEAU CARLETON RACE	01 - Clear	05 - Dusk	10 - No control	03 - P.D. only	07 - SMV other	01 - Dry
2014-05-07	2014	20:35	ALBION RD btwn 210 S OF HIGH RD/EARL ARMSTRONG RD/RIDEAU CARLETON RACE	01 - Clear	05 - Dusk	10 - No control	03 - P.D. only	07 - SMV other	01 - Dry
2018-01-14	2018	7:31	ALBION RD btwn 210 S OF HIGH RD/EARL ARMSTRONG RD/RIDEAU CARLETON RACE (__3ZA350B)	01 - Clear	03 - Dawn	10 - No control	03 - P.D. only	07 - SMV other	05 - Packed snow
2018-01-23	2018	1:15	ALBION RD btwn 210 S OF HIGH RD/EARL ARMSTRONG RD/RIDEAU CARLETON RACE (__3ZA350B)	04 - Freezing Rain	07 - Dark	10 - No control	03 - P.D. only	07 - SMV other	04 - Slush
2018-05-28	2018	18:41	ALBION RD btwn 210 S OF HIGH RD/EARL ARMSTRONG RD/RIDEAU CARLETON RACE (__3ZA350B)	01 - Clear	01 - Daylight	10 - No control	03 - P.D. only	07 - SMV other	01 - Dry
2016-04-23	2016	18:01	ALBION RD btwn HIGH RD/EARL ARMSTRONG RD & 210 S OF HIGH RD/EARL ARMST	01 - Clear	01 - Daylight	10 - No control	02 - Non-fatal injury	07 - SMV other	01 - Dry
2017-05-05	2017	8:56	ALBION RD btwn HIGH RD/EARL ARMSTRONG RD & 210 S OF HIGH RD/EARL ARMST	02 - Rain	01 - Daylight	10 - No control	03 - P.D. only	07 - SMV other	02 - Wet
2015-09-06	2015	14:07	ALBION RD btwn RIDEAU RD & TULLAMORE ST	01 - Clear	01 - Daylight	10 - No control	01 - Fatal injury	01 - Approaching	01 - Dry
2017-03-15	2017	9:30	ALBION RD btwn RIDEAU RD & TULLAMORE ST	03 - Snow	01 - Daylight	10 - No control	02 - Non-fatal injury	07 - SMV other	03 - Loose snow
2016-12-26	2016	19:06	ALBION RD btwn RIDEAU RD & TULLAMORE ST	04 - Freezing Rain	07 - Dark	10 - No control	02 - Non-fatal injury	07 - SMV other	06 - Ice
2017-06-27	2017	14:37	ALBION RD btwn RIDEAU RD & TULLAMORE ST	01 - Clear	01 - Daylight	10 - No control	03 - P.D. only	07 - SMV other	02 - Wet
2017-04-07	2017	0:24	ALBION RD btwn RIDEAU RD & TULLAMORE ST	02 - Rain	07 - Dark	10 - No control	03 - P.D. only	07 - SMV other	02 - Wet
2016-07-18	2016	8:39	ALBION RD btwn RIDEAU RD & TULLAMORE ST	01 - Clear	01 - Daylight	10 - No control	03 - P.D. only	07 - SMV other	01 - Dry
2016-11-30	2016	23:55	ALBION RD btwn RIDEAU RD & TULLAMORE ST	02 - Rain	07 - Dark	10 - No control	03 - P.D. only	07 - SMV other	02 - Wet
2015-04-24	2015	7:57	ALBION RD btwn RIDEAU RD & TULLAMORE ST	01 - Clear	01 - Daylight	10 - No control	03 - P.D. only	07 - SMV other	01 - Dry
2015-02-04	2015	18:51	ALBION RD btwn RIDEAU RD & TULLAMORE ST	03 - Snow	07 - Dark	10 - No control	03 - P.D. only	01 - Approaching	06 - Ice
2015-02-05	2015	3:44	ALBION RD btwn RIDEAU RD & TULLAMORE ST	01 - Clear	07 - Dark	10 - No control	03 - P.D. only	07 - SMV other	06 - Ice
2015-07-20	2015	7:36	ALBION RD btwn RIDEAU RD & TULLAMORE ST	01 - Clear	01 - Daylight	10 - No control	03 - P.D. only	07 - SMV other	01 - Dry
2015-11-28	2015	10:36	ALBION RD btwn RIDEAU RD & TULLAMORE ST	01 - Clear	01 - Daylight	10 - No control	03 - P.D. only	07 - SMV other	01 - Dry
2015-11-05	2015	4:37	ALBION RD btwn RIDEAU RD & TULLAMORE ST	01 - Clear	07 - Dark	10 - No control	03 - P.D. only	07 - SMV other	01 - Dry
2015-11-27	2015	18:48	ALBION RD btwn RIDEAU RD & TULLAMORE ST	02 - Rain	07 - Dark	10 - No control	03 - P.D. only	01 - Approaching	02 - Wet
2014-07-14	2014	13:22	ALBION RD btwn RIDEAU RD & TULLAMORE ST	01 - Clear	01 - Daylight	10 - No control	03 - P.D. only	04 - Sideswipe	08 - Loose sand or gravel
2018-02-05	2018	7:01	ALBION RD btwn RIDEAU RD & TULLAMORE ST (__5RGNJ)	01 - Clear	03 - Dawn	10 - No control	02 - Non-fatal injury	07 - SMV other	06 - Ice
2018-05-20	2018	22:27	ALBION RD btwn RIDEAU RD & TULLAMORE ST (__5RGNJ)	01 - Clear	07 - Dark	10 - No control	03 - P.D. only	07 - SMV other	01 - Dry
2015-11-04	2015	16:22	RIDEAU RD btwn ALBION RD & BANK ST	01 - Clear	05 - Dusk	10 - No control	02 - Non-fatal injury	04 - Sideswipe	01 - Dry
2016-04-26	2016	19:20	RIDEAU RD btwn ALBION RD & BANK ST	01 - Clear	01 - Daylight	10 - No control	03 - P.D. only	05 - Turning movement	01 - Dry
2014-09-07	2014	17:20	RIDEAU RD btwn ALBION RD & BANK ST	01 - Clear	01 - Daylight	10 - No control	03 - P.D. only	07 - SMV other	01 - Dry
2017-11-14	2017	15:00	RIDEAU RD btwn BOWESVILLE RD & ALBION RD	01 - Clear	01 - Daylight	10 - No control	03 - P.D. only	07 - SMV other	01 - Dry
2017-03-07	2017	2:25	RIDEAU RD btwn BOWESVILLE RD & ALBION RD	04 - Freezing Rain	07 - Dark	10 - No control	03 - P.D. only	07 - SMV other	06 - Ice
2016-04-06	2016	17:42	RIDEAU RD btwn BOWESVILLE RD & ALBION RD	03 - Snow	01 - Daylight	10 - No control	03 - P.D. only	03 - Rear end	04 - Slush
2016-11-19	2016	3:33	RIDEAU RD btwn BOWESVILLE RD & ALBION RD	01 - Clear	07 - Dark	10 - No control	03 - P.D. only	07 - SMV other	01 - Dry
2018-04-17	2018	21:30	RIDEAU RD btwn BOWESVILLE RD & ALBION RD (__3ZBOY3)	03 - Snow	07 - Dark	10 - No control	02 - Non-fatal injury	07 - SMV other	02 - Wet
2018-02-03	2018	10:32	RIDEAU RD btwn BOWESVILLE RD & ALBION RD (__3ZBOY3)	01 - Clear	01 - Daylight	10 - No control	03 - P.D. only	07 - SMV other	01 - Dry