

Council  
Township of Puslinch  
7404 Wellington Road 34  
Puslinch, ON  
N0B 2J0

May 7, 2025  
File: 10779

**Re: Response to Access Road Comments – Zoning By-law Amendment D14/WDD  
11 Main Street, Morriston  
Township of Puslinch**

Weston Consulting is the planning consultant for WDD Main Street Inc., the registered owner of the lands located at 11 Main Street (Lot 31, Concession 8) in the Township of Puslinch (the “Subject Lands”). As part of the 2<sup>nd</sup> Public Meeting for the proposed development, further comments were raised regarding the proposed site access providing connection to Back Street and Badenoch. A few comments from residents recommended the proposed development’s road network be revised to have a direct connection to Main Street.

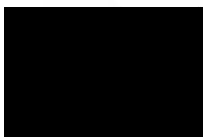
Based on the comments regarding the access, and a request for a direct comparison, the following table assesses both site accesses and the various constraints that were evaluated to inform the proposed road network.

As demonstrated within the following table, the Main Street access has more significant constraints including the wetland, proximity to Highway 6, and the right-of-way width. Removal of the wetland is not supported. Relocating the access closer to the intersection of a County Road and a Provincial Arterial Road is also not supported.

The constraints of Back Street can be mitigated by way of relocation of the retaining wall and reconstruction of the municipal road per Township standards to provide a safer street and intersection for current and future residents.

Should you have any questions please contact the undersigned at ext. 315 or Michael Pizzimenti at ext. 365.

Yours truly,  
**Weston Consulting**  
Per:



Kayly Robbins, MPL, MCIP, RPP  
Associate

c. WDD Main Street Inc.

Constraint   
 Opportunity   
 Neutral

	Item	Main Street Access	Back Street Access
1	<b>Ministry of Transportation Comments</b>	Does not need MTO's access spacing requirements.  (Refer to Appendix A - MTO comments dated March 27, 2024).	Meets MTO access spacing requirements.
2	<b>County of Wellington Comments</b>	Reiterated concerns from MTO for Main Street access.  (See Appendix B - correspondence dated February 19, 2025)	No concerns subject to relocation of retaining wall and reconstruction of Ochs Street. (See Appendix B - correspondence dated February 19, 2025)
3	<b>Environmental</b>	Encumbered by wetland. Requires removal of wetland.  (See Appendix C – Environmental Impact Study page 26).	No constraints.
4	<b>Right-of-Way</b>	Existing right-of-way width is approximately 15m, requiring land acquisition to provide an upgraded street in accordance with municipal standards of a 20m ROW.  (See Appendix D - geowarehouse report of Main Street boulevard, survey and municipal standards of 20m ROW).	Existing right-of-way width is more than 20m. No constraints to reconstruct to municipal standards of a 20m ROW.  (See Appendix D - geowarehouse report of Back Street boulevard, survey and municipal standards of 20m ROW).
5	<b>Road Geometry /Design</b>	Requires road reconstruction per Township standards.	Requires road reconstruction per Township standards.
6	<b>Sightlines</b>	Some sightline deficiencies looking east due to no clear daylight triangles at the intersection; however, this could be mitigated with upgrades. Satisfies County's Entrance Permit Policy sightline requirements (approximately 180 metre sightline).	With the planned relocation of the retaining wall and shifting of the road alignment to the east, there are sufficient sightlines provided both east and west of the intersection. Satisfies County's Entrance Permit Policy sightline requirements (136.5 metre sightline).  (See Appendix E – Traffic Impact Study Extracts)

7	<b>Queuing and Traffic</b>	<p>Substandard access spacing on Badenoch Street from Highway 6 does not meet MTO requirements, increasing the risk of queuing and intersection blockages at Main Street with its associated safety and operational impacts.</p>	<p>The Back Street access is located at a greater distance from the nearest adjacent intersection, providing sufficient separation to accommodate vehicle queues without interference.</p> <p>Based on the current spacing and expected traffic volumes, queuing or blockage of this intersection or adjacent driveways will not be a concern.</p> <p>(See Appendix E – Traffic Impact Study Extracts)</p>
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## Appendix A: MTO Comments Dated March 27, 2024



**Ministry of Transportation**

West Operations  
Corridor Management Section West

659 Exeter Road  
London, Ontario N6E 1L3  
Telephone: (226) 973-8580  
Facsimile: (519) 873-4228

**Ministère des Transports**

Opérations ouest  
Section de la gestion des couloirs routiers de l'Ouest

659, chemin Exeter  
London (Ontario) N6E 1L3  
Téléphone: (226) 973-8580  
Télécopieur: (519) 873-4228



**Date:** March 27, 2024

**To:** Lynne Banks, Township of Puslinch

**Re:** ZBA Second Submission – 11 Highway 6 - WDD Main Street (Morriston)

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The Ministry of Transportation (MTO) has completed our review of the 2<sup>nd</sup> submission of the revised draft plan of subdivision prepared by Weston Consulting dated December 20, 2023, for 11 Highway 6, Morriston ON. The plans were reviewed in accordance with the requirements of MTO's highway access control policies, and the *Public Transportation and Highway Improvement Act* (PTHIA), MTO's Highway Corridor Management Manual (HCMM) and all related guidelines and policies. The following outlines our comments:

Highway 6 in close proximity to the subject property is a **Class 2B – Provincial Arterial** with a posted speed of 80 km/hr, and designated as a **Controlled Access Highway** (CAH). As such, all requirements, guidelines and best practices in accordance with this classification and designation shall apply.

The owner should be aware that the property lies within MTO's Permit Control Area (PCA), and as such, MTO Permits are required before any demolition, grading, construction or alteration to the site commences. In accordance with the Ontario Building Code, municipal permits may not be issued until such time as all other applicable requirements (i.e.: MTO permits/approvals) are satisfied.

The MTO does not oppose the proposed zoning amendments, however the following comments will need to be addressed as conditions of draft plan approval or MTO permit.

**Blocks and Land Use:**

It is premature to comment on any block configuration until a municipal road configuration is determined to be acceptable by MTO and supported by an approved Traffic Impact Study (TIS), MTO comments on the TIS detailed below.

- The draft plans achieve MTO required 14.0m setback, however future submission should clearly show/label the setback along the Highway 6 frontage.

## Stormwater Management:

- To ensure that stormwater runoff from this property does not adversely affect our highway drainage system or highway corridor, MTO requires the owner to submit a Storm Water Management Report (SWMR) along with the above-noted grading/drainage plans for the proposed development for our review and approval. MTO Stormwater Management Requirements for Land Development Proposals can be obtained from the following website:  
<https://www.ontario.ca/page/resources-transportation-planners#section-5>
  - The owner's drainage consultant should refer to the ministry website for applicable IDF curves and the ministry's Stormwater Management Requirements for Land Development Proposals.  
[http://www.mto.gov.on.ca/IDF\\_Curves/terms.shtml](http://www.mto.gov.on.ca/IDF_Curves/terms.shtml)
  - The owner's drainage consultant shall ensure that all return periods are assessed (2yr, 5yr, 10yr, 25yr, 50yr, 100yr and Regional).
- Stormwater Management Blocks are to be assumed and owned by the Township of Puslinch.

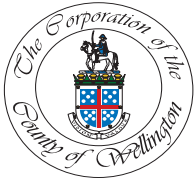
## Site access & Traffic Impact Review

All access to the development shall be from the County and Municipal Road network. The MTO preferred access is to be from Ochs St, to meet MTO access spacing requirements (400m minimum and 800m desirable) from the Highway 6 and Badenoch St intersection, as the existing Main St intersection does not meet access spacing requirements.

MTO would be willing to review a sight line analysis as proposed by Township/County staff to review both locations to further support access, pending the following comments are addressed in a TIS resubmission:

- MTO will require the MTO/TAC protocol analysis to be completed for all four legs of the intersection of Highway and Badenoch St.
  - Page 18, Section 7.1.1, only provides analysis for SBLT lane, analysis for the NB, WB, EB lanes shall be included in the resubmission.
- MTO will require the MTO/TAC protocol to be completed for the right turn lane analysis.
  - Page 19, Section 7.1.2, notes it is not possible, please see section below for information to perform right turn lane analysis.
- The Synchro files show a PHF= 0.95-96 for future horizon years, MTO policy requires PHF= 0.88 (rural), or 0.92 (urban/suburban).
  - See section below regarding MTO PHF Policy to prepare the resubmission.

## Appendix B: County of Wellington Comments dated February 19, 2025



COUNTY OF WELLINGTON

OFFICE OF THE COUNTY ENGINEER  
ADMINISTRATION CENTRE  
T 519.837.2601  
F 519.837.8138

74 WOOLWICH STREET  
GUELPH, ONTARIO  
N1H 3T9

## MEMORANDUM

**TO:** Lynne Banks, Manager of Development Planning – County of Wellington

**FROM:** Pasquale Costanzo, Technical Services Supervisor – County of Wellington

**RE:** 23T-23002 WWD Main Street Inc – Draft Plan of Subdivision  
Morrison, Township of Puslinch

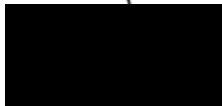
**DATE:** February 19, 2025

In reviewing the supplied documents and pre-consultation reviews with various agencies for the above noted Draft Plan of Subdivision the Wellington Roads have the follow comments.

### Traffic Impact Study

- The findings of the report were found to be acceptable.
- During the pre-consultation meetings, MTO Corridor Management had provided concerns with the use of Main Street as an access point for the subdivision due to the proximity of the Queen Street (Highway 6) at Badenoch Street East (WR 36) intersection and taper lanes providing that only viable access for the proposed development is via Ochs Street onto Badenoch Street East (Wellington Road 36). At this location there is sightline concern westerly due to the existing retaining wall and in an effort to alleviate the issue it's relocation closer to property line is recommended. The County will require the proponent to complete the retaining wall relocation during the reconstruction of Ochs Street and prior to the work the resident at 40 Badenoch ST E is to be contacted.

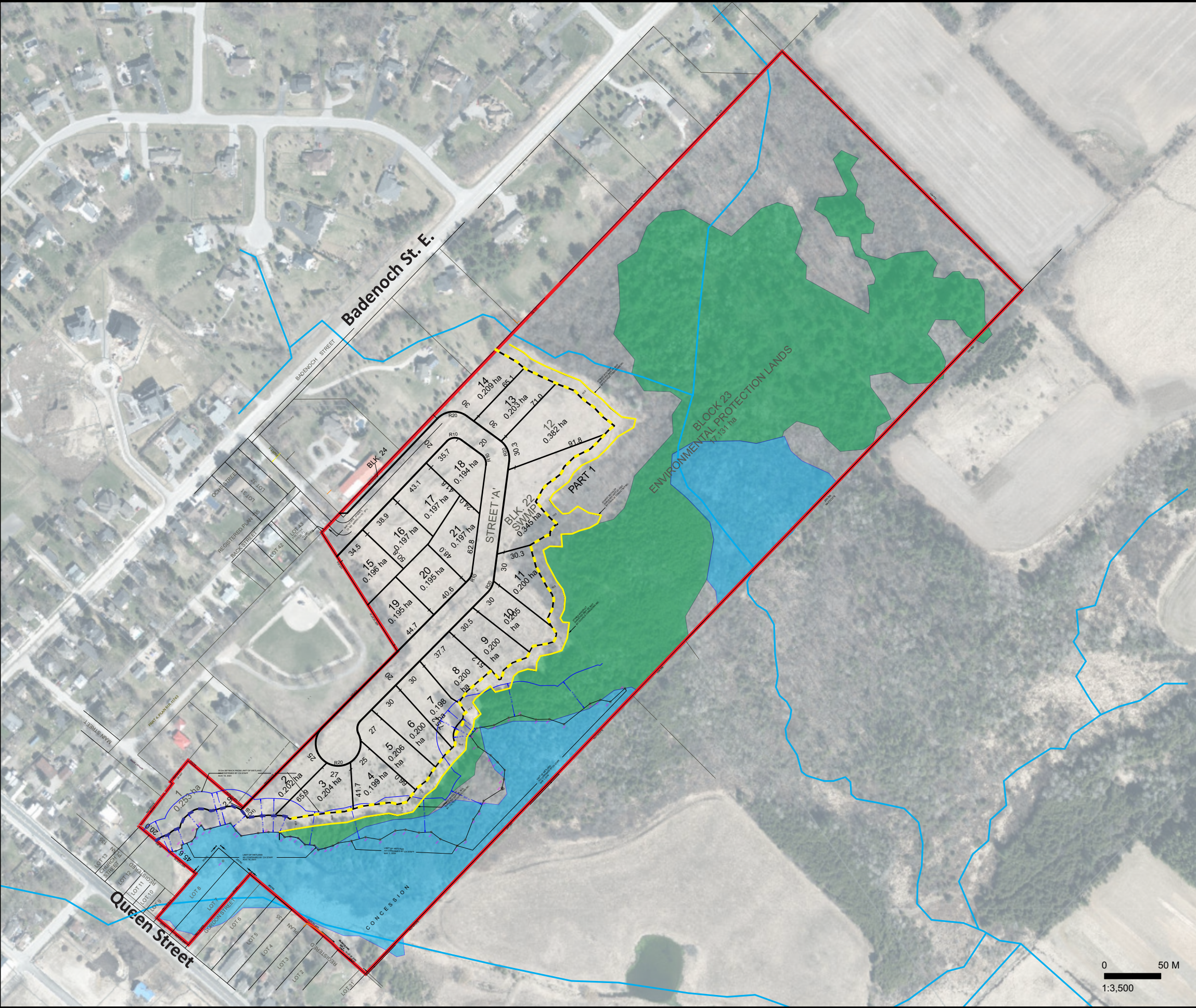
Sincerely



Pasquale Costanzo C.E.T.  
Technical Services Supervisor

## Appendix C: Environmental Impact Study (extract)





- Legend**
- Subject Property
  - Watercourse
  - Extent of Significant Wildlife Habitat
  - 10m Significant Wildlife Habitat Buffer
  - 15m Wetland Buffer
  - Refined Significant Woodland
  - Refined Wetland

**Figure 4**  
**Refined Extent of Natural Heritage Features**  
**on the Subject Property**

**Environmental Impact Study for**  
**11 Main Street, Morriston**

Prepared for: **WDD International**

Prepared by: **COLVILLE CONSULTING INC.**

DATE: August 2024

FILE: C22059



Appendix D: Geowarehouse Reports for Main  
Street and Back Street, Survey and Municipal  
Road Standard

## Property Details

GeoWarehouse Address:  
Not Available

PIN:	711940104
Land Registry Office:	WELLINGTON (61)
Land Registry Status:	Active
Registration Type:	Certified (Land Titles)
Ownership Type:	Freehold



## Ownership

Owner Name:  
THE CORPORATION OF THE TOWNSHIP OF PUSLINCH

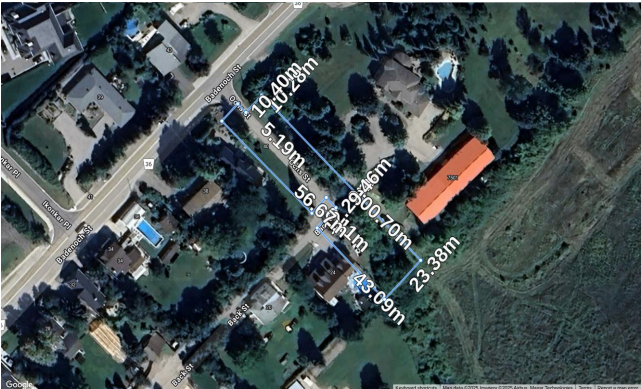
## Legal Description

OCHS STREET, Plan 135 , OCH'S PORTION ; PT Lot 31, Concession 8 , Township OF PUSLINCH, PT 1, 61R6904 ; TOWNSHIP OF PUSLINCH



Lot Size

Area:	2169.0 sq.m
Perimeter:	277.0 m
Measurements:	6.11m x 12.29m x 43.09m x 23.38m x 100.7m x 10.28m x 5.19m x 10.4m x 56.67m x 9.46m
	<div>Lot Measurement Accuracy : LOW</div> <div>These lot boundaries may have been adjusted to fit within the overall parcel fabric and should only be considered to be</div>



## Property Details

GeoWarehouse Address:

11 MAIN  
MORRISTON

PIN:	711940157
Land Registry Office:	WELLINGTON (61)
Land Registry Status:	Active
Registration Type:	Certified (Land Titles)
Ownership Type:	Freehold



## Ownership

Owner Name:

THE CORPORATION OF THE TOWNSHIP OF PUSLINCH

## Legal Description

LOT 40, PLAN 135, OCHS PORTION; PT LOT 31, CON 8, TOWNSHIP OF PUSLINCH, AS IN IS13908 SAVE AND EXCEPT ROS274842 & PT 3, 61R11743; S/T THE RIGHTS OF OWNERS OF ADJOINING PARCELS, IF ANY, UNDER RO722846 & MS88941 TOWNSHIP OF PUSLINCH

## Lot Size

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Area: 21024.0 sq.m

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Perimeter: 928.0 m

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Measurements: 62.19m x 15.15m x 41.9m x 97.46m x  
101.31m x 123.69m x 126.65m x 57.94m x  
42.65m x 15.64m x 42.51m x 201.62m

**Lot Measurement Accuracy : LOW**

These lot boundaries may have been  
adjusted to fit within the overall parcel fabric  
and should only be considered to be  
estimates.

## Sales History

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Sale Date	Sale Amount	Type	Party To	Notes
Aug 21, 2003	\$0	Transfer by Personal Representative	THE CORPORATION OF THE TOWNSHIP OF PUSLINCH;	

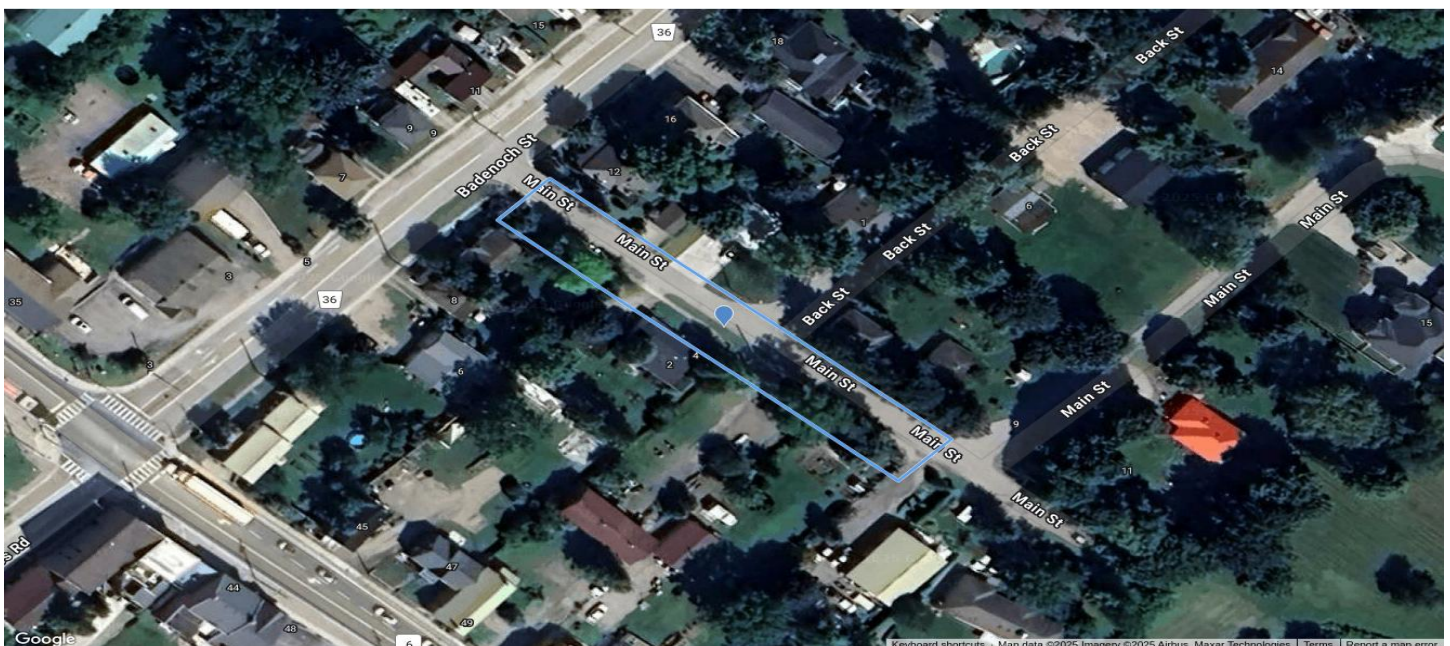
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## Property Details

GeoWarehouse Address:  
Not Available

PIN:	711940085
Land Registry Office:	WELLINGTON (61)
Land Registry Status:	Active
Registration Type:	Certified (Land Titles)
Ownership Type:	Freehold



## Ownership

Owner Name:  
THE CORPORATION OF THE TOWNSHIP OF PUSLINCH

## Legal Description

MAIN ST, Plan 135 , OCH'S PORTION ; TOWNSHIP OF PUSLINC

## Lot Size

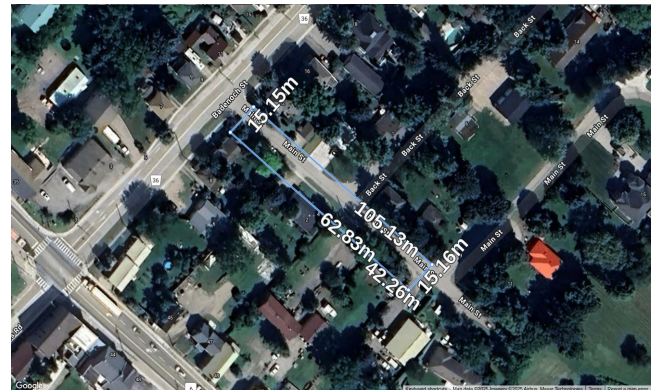
Area: 1587.0 sq.m

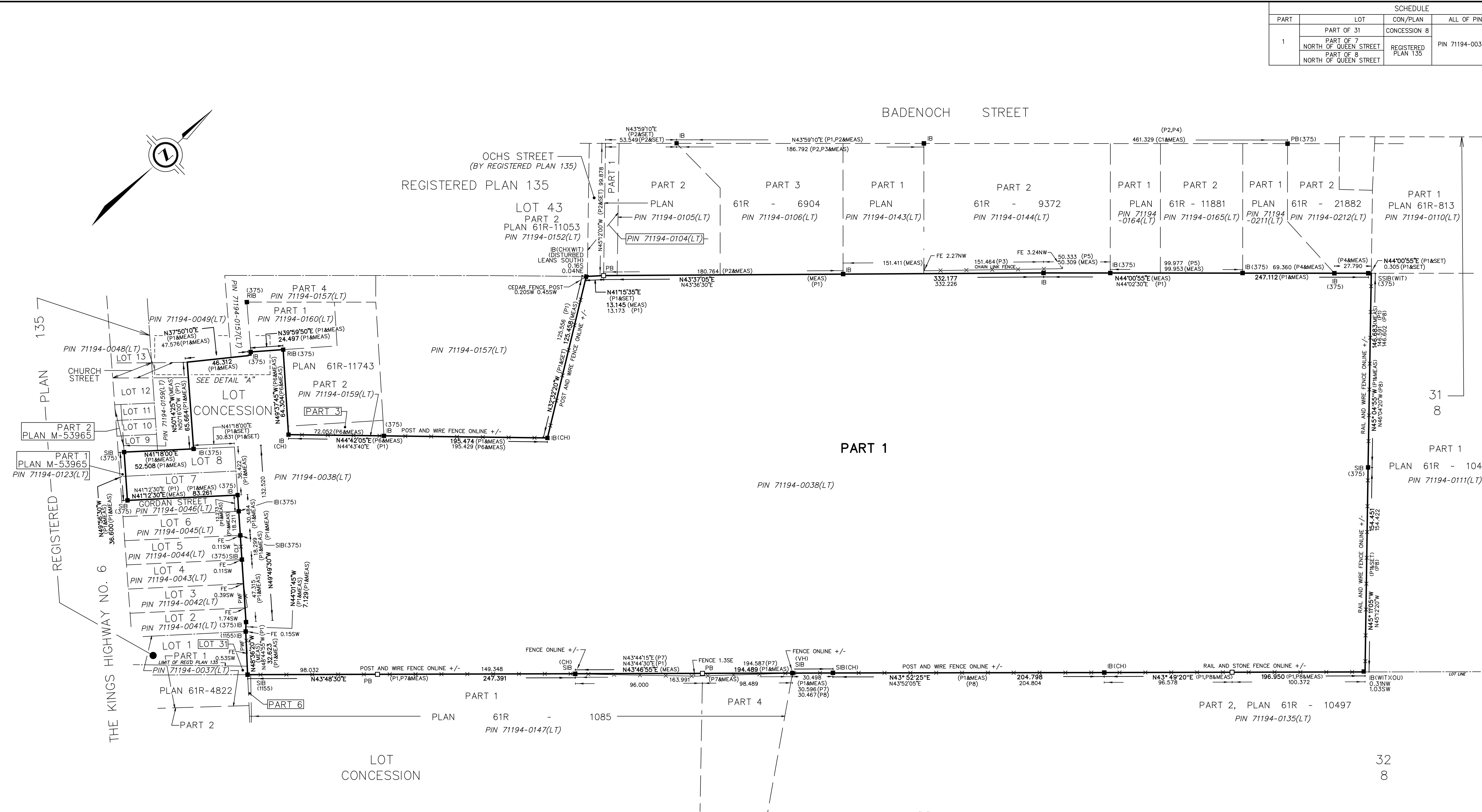
Perimeter: 240.0 m

Measurements: 42.26m x 15.16m x 105.13m x 15.15m x 62.83m

**Lot Measurement Accuracy : LOW**

These lot boundaries may have been adjusted to fit within the overall parcel fabric and should only be considered to be estimates.





SCHEDULE			
PART	LOT	CON/PLAN	ALL OF PIN
1	PART OF 31	CONCESSION 8	PIN 71194-0038(LT)
	PART OF 7	REGISTERED PLAN 135	
	NORTH OF QUEEN STREET		
	PART OF 8		
	NORTH OF QUEEN STREET		

I REQUIRE THIS PLAN TO BE DEPOSITED UNDER THE LAND TITLES ACT.	<b>PLAN 61R-</b>
DATE -----	RECEIVED AND DEPOSITED
----- RAYMOND J. SIBTHORP ONTARIO LAND SURVEYOR	DATE -----  ----- REPRESENTATIVE FOR THE LAND REGISTRAR FOR THE LAND TITLES DIVISION OF WELLINGTON (No 6T)

PLAN OF SURVEY OF  
**PART OF LOT 31  
CONCESSION 8  
AND  
PART OF LOTS 7 AND 8,  
NORTH OF QUEEN STREET**  
(DONALD McEDWARD'S PORTION)  
**REGISTERED PLAN 135**  
**TOWNSHIP OF PUSLINCH**  
**COUNTY OF WELLINGTON**

SCALE 1 : 1500  
0 30 60 90 metres

THE INTENDED PLOT SIZE OF THIS PLAN IS 915mm IN WIDTH BY 609mm IN HEIGHT WHEN PLOTTED AT A SCALE OF 1:1500

J.D. BARNES LIMITED

**METRIC** DISTANCES AND/OR COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

**NOTES**

BEARINGS ARE UTM GRID, DERIVED FROM OBSERVED REFERENCE POINTS A AND B, BY REAL TIME NETWORK (RTN) OBSERVATIONS, UTM ZONE 17, NAD83 (CSRS) (2010.0).

DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.999620.

FOR BEARING COMPARISONS, A ROTATION OF 1°02'00" COUNTER-CLOCKWISE WAS APPLIED TO BEARINGS ON P1, A ROTATION OF 0°38'45" COUNTER-CLOCKWISE WAS APPLIED TO BEARINGS ON P7, A ROTATION OF 1°02'10" COUNTER-CLOCKWISE WAS APPLIED TO BEARINGS ON P8.

- LEGEND**
- |      |         |  |
|------|---------|--|
| ■    | DENOTES | SURVEY MONUMENT FOUND (C&H UNLESS SHOWN OTHERWISE)       |
| □    | DENOTES | SURVEY MONUMENT SET                                      |
| SIB  | DENOTES | STANDARD IRON BAR  |
| SSIB | DENOTES | SHORT STANDARD IRON BAR                                  |
| IB   | DENOTES | IRON BAR   |
| PB   | DENOTES | PLASTIC BAR  |
| WIT  | DENOTES | WITNESS  |
| MEAS | DENOTES | MEASURED   |
| 375  | DENOTES | BLACK SHOEMAKER ROBINSON & DONALDSON                     |
| CH   | DENOTES | CARTER AND HORWOOD                                       |
| VH   | DENOTES | VAN HARTEN SURVEYING                                     |
| OU   | DENOTES | ORIGIN UNKNOWN   |
| P1   | DENOTES | PLAN BY 375 DATED FEBRUARY 18, 1992, PROJECT No. 90-7090 |
| P2   | DENOTES | DEPOSITED PLAN 61R-6904                                  |
| P3   | DENOTES | DEPOSITED PLAN 61R-9372                                  |
| P4   | DENOTES | DEPOSITED PLAN 61R-21882                                 |
| P5   | DENOTES | DEPOSITED PLAN 61R-11881                                 |
| P6   | DENOTES | DEPOSITED PLAN 61R-11743                                 |
| P7   | DENOTES | DEPOSITED PLAN 61R-1085                                  |
| P8   | DENOTES | DEPOSITED PLAN 61R-10497                                 |
| FE   | DENOTES | FENCE END  |
| PWF  | DENOTES | POST AND WIRE FENCE                                      |

ALL SET SSIB AND PB MONUMENTS WERE USED DUE TO LACK OF OVERBURDEN AND/OR PROXIMITY OF UNDERGROUND UTILITIES IN ACCORDANCE WITH SECTION 11 (4) OF O.REG. 525/91.

**SURVEYOR'S CERTIFICATE**

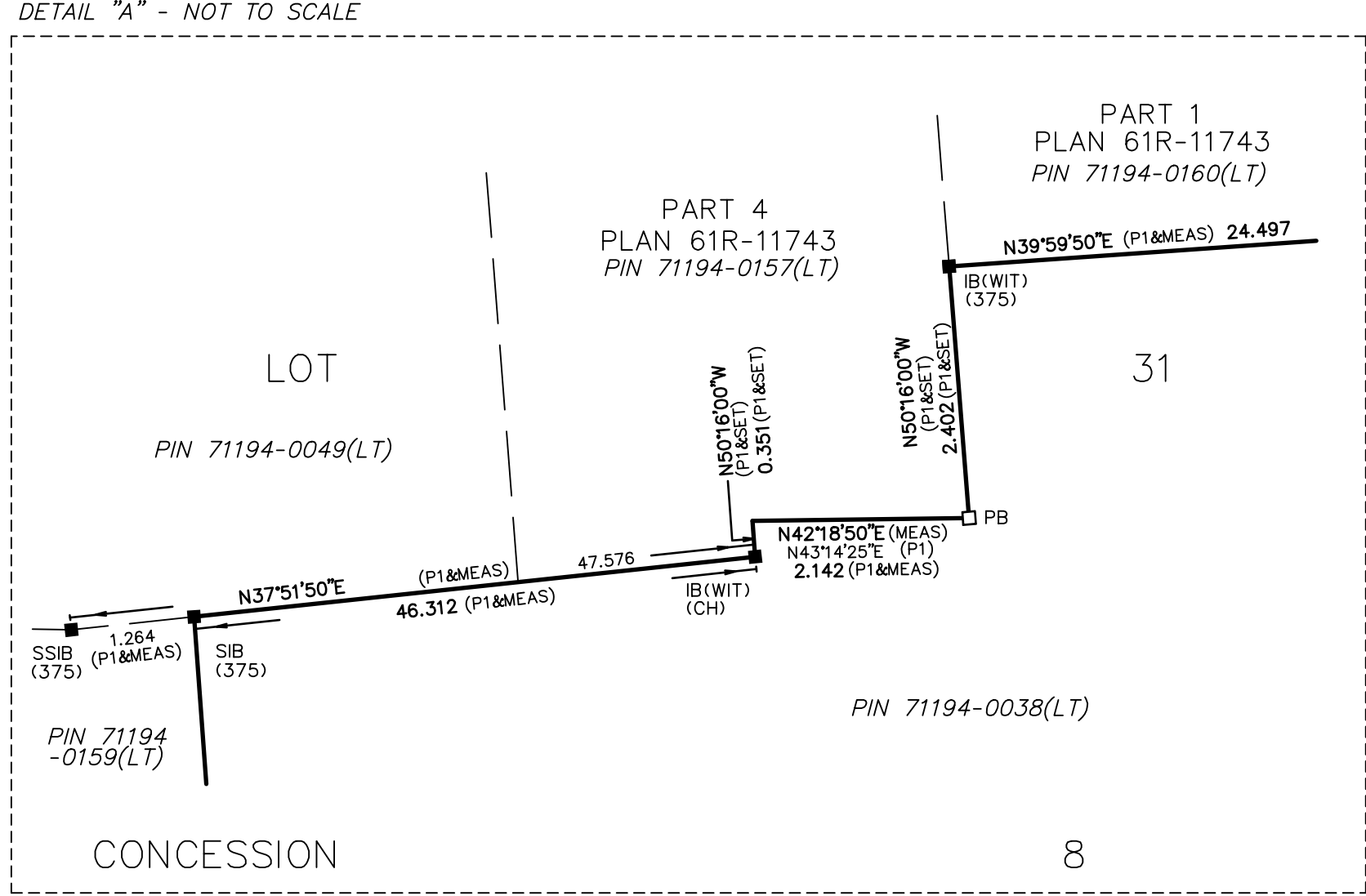
I CERTIFY THAT:

- THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM.
- THE SURVEY WAS COMPLETED ON AUGUST 8, 2022.

-----  
AUGUST 26, 2022  
DATE

-----  
RAYMOND J. SIBTHORP  
ONTARIO LAND SURVEYOR

INTEGRATION DATA		
OBSERVED REFERENCE POINTS (ORPs): UTM ZONE 17, NAD83 (CSRS) (2010.0).		
COORDINATES TO URBAN ACCURACY PER SECTION 14 (2) OF O.REG. 216/10.		
POINT ID	EASTING	NORTHING
ORP (A)	571 819.11	4 810 772.78
ORP (B)	572 189.46	4 811 593.30
COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.		
THE RESULTANT TIE BETWEEN ORP (A) AND ORP (B) IS 900.588 N241°731'E		

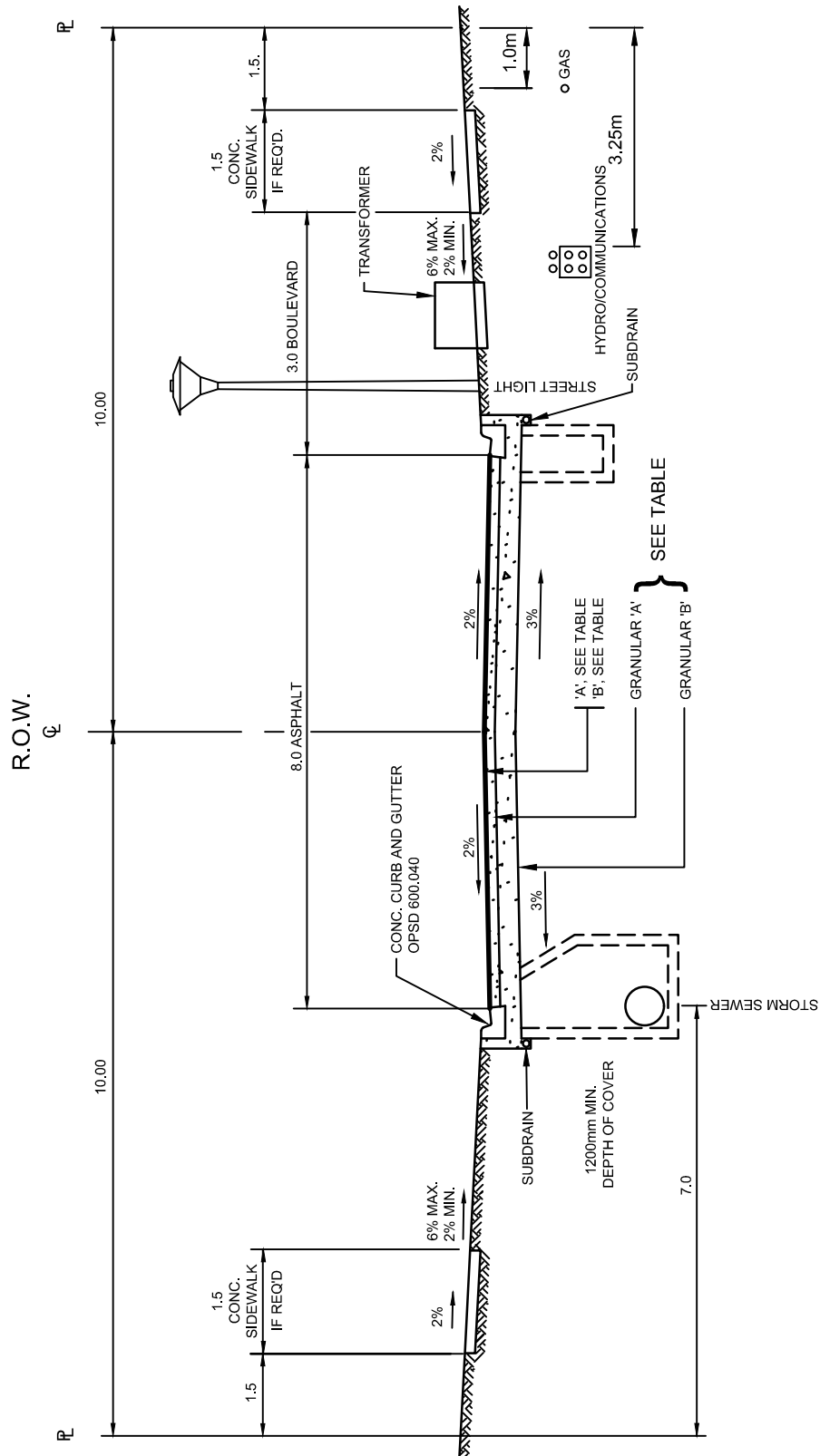


THIS PLAN OF SURVEY RELATES TO AOLS PLAN SUBMISSION FORM NUMBER 2196345

**J.D. BARNES**  
LIMITED  
LAND INFORMATION SPECIALISTS  
257 WOODLAWN ROAD WEST, UNIT 101, GUELPH, ON N1H 8J1  
T: (519) 822-4031 F: (519) 822-1220 www.jdbarnes.com

DRAWN BY: RJS	CHECKED BY: RJS	REFERENCE NO.: 22-14-718-00
PLOTTED: 8/26/2022		DATED: AUG. 26, 2022





ROAD CLASS	'A'	'B'	GRAN 'A'	GRAN 'B'
RESIDENTIAL - LOCAL	35mm HL3	60mm HL4	150mm	300mm
RESIDENTIAL - COLLECTOR	35mm HL3	60mm HL4	150mm	400mm
INDUSTRIAL - LOCAL	50mm HL4	60mm HL8	150mm	450mm
INDUSTRIAL - COLLECTOR	50mm HL4	60mm HL8	200mm	450mm

GRANULAR BASE TO BE CONFIRMED BY SOILS REPORT

## Appendix E: Traffic Impact Study Extracts



## 7. Capacity Analysis

The capacity analysis identifies how well the intersections and driveways are operating. The analysis contained within this report utilized the Highway Capacity Manual (HCM) 2000 procedure within the Synchro Version 10 Software package. The reported intersection volume-to-capacity ratios (v/c) are a measure of the saturation volume for each turning movement, while the levels-of-service (LOS) are a measure of the average delay for each turning movement. Queuing characteristics are reported as the predicted 95th percentile queue for each turning movement. Both pedestrian crossing volumes and heavy vehicle proportions are included in the analyses. The peak hour factors from the traffic counts were used to analyze existing and future traffic conditions.

The analysis includes identification and required modifications and improvements (if any) at intersections where the addition of background growth or background growth plus site-generated traffic volumes causes the following:

'Critical' intersections and movements for a signalized intersection include:

- V/C ratios for overall intersections operations, through movements, or shared through/turning movements increase to 0.85 or above;
- V/C ratios for exclusive movements increase to 0.90 or above; or
- 95<sup>th</sup> percentile queue length for individual movements that are projected to, or exceed, the storage length.

'Critical' intersections and movements for an unsignalized intersection include:

- Level of Services (LOS), based on average delay per vehicle, on individual movements exceeds LOS "D",
- Queue length for individual movements that exceeds the lesser of 5 vehicles or the available queue storage.

For signalized intersections under the jurisdiction of the MTO, movements with v/c ratios greater than 0.85 are deemed to be "critical".

The following tables summarize the HCM capacity results for the study intersections during the weekday a.m. and p.m. peak hours under existing (2023), future background (2024, 2029 & 2034) and future total (2024, 2029 & 2034) traffic conditions. The detailed calculation sheets are provided in **Appendix B**.

### 7.1 Highway 6 and Badenoch Street/Calfass Road

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic condition are summarized in the following table.

**Table 3** Capacity analysis of Highway 6 and Badenoch Street/Calfass Road

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 <sup>th</sup> % Que.	V/C (LOS) seconds	95 <sup>th</sup> % Que
Existing 2023	Overall: 0.70 (B) 14 EBTLR = 0.21 (D) 37 WBTL = 0.45 (D) 44 WBR = 0.03 (C) 34 NBL = 0 (A) 0 NBTR = 0.75 (B) 12 SBL = 0.08 (A) 4 SBTR = 0.73 (B) 12	EBTLR = 15 m WBTL = 30 m WBR = 10 m NBL = 0 m NBTR = 135 m SBL = 5 m SBTR = 120 m	Overall: 0.79 (B) 16 EBTLR = 0.08 (C) 30 WBTL = 0.57 (D) 36 WBR = 0.03 (C) 30 NBL = 0.01 (A) 4 NBTR = 0.8 (B) 13 SBL = 0.12 (A) 5 SBTR = 0.84 (B) 15	EBTLR = 10 m WBTL = 50 m WBR = 10 m NBL = 5 m NBTR = 170 m SBL = 5 m SBTR = 200 m
Future Background 2024	Overall: 0.71 (B) 13 EBTLR = 0.24 (D) 40 WBTL = 0.54 (D) 50 WBR = 0.03 (D) 36 NBL = 0 (A) 0	EBTLR = 15 m WBTL = 30 m WBR = 10 m NBL = 0 m	Overall: 0.77 (B) 16 EBTLR = 0.1 (D) 46 WBTL = 0.71 (E) 62 WBR = 0.03 (D) 45 NBL = 0.01 (A) 3	EBTLR = 10 m WBTL = 50 m WBR = 10 m NBL = 5 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 <sup>th</sup> % Que.	V/C (LOS) seconds	95 <sup>th</sup> % Que
	NBTR = 0.74 (B) 11 SBL = 0.08 (A) 4 SBTR = 0.72 (B) 10	NBTR = 125 m SBL = 5 m SBTR = 115 m	NBTR = 0.74 (B) 11 SBL = 0.09 (A) 4 SBTR = 0.77 (B) 12	NBTR = 180 m SBL = 5 m SBTR = 210 m
Future Total 2024	<u>Overall: 0.72 (B) 14</u> EBTLR = 0.25 (D) 40 WBTL = 0.59 (D) 53 WBR = 0.03 (D) 36 NBL = 0 (A) 0 NBTR = 0.74 (B) 11 SBL = 0.08 (A) 4 SBTR = 0.72 (B) 10	EBTLR = 15 m WBTL = 35 m WBR = 10 m NBL = 0 m NBTR = 125 m SBL = 5 m SBTR = 115 m	<u>Overall: 0.77 (B) 16</u> EBTLR = 0.1 (D) 46 WBTL = 0.73 (E) 64 WBR = 0.03 (D) 45 NBL = 0.01 (A) 4 NBTR = 0.74 (B) 12 SBL = 0.12 (A) 4 SBTR = 0.78 (B) 13	EBTLR = 10 m WBTL = 50 m WBR = 10 m NBL = 5 m NBTR = 185 m SBL = 5 m SBTR = 210 m
Future Background 2029	<u>Overall: 0.79 (B) 16</u> EBTLR = 0.27 (D) 41 WBTL = 0.6 (D) 54 WBR = 0.03 (D) 36 NBL = 0 (A) 0 NBTR = 0.82 (B) 14 SBL = 0.11 (A) 4 SBTR = 0.8 (B) 13	EBTLR = 15 m WBTL = 35 m WBR = 10 m NBL = 0 m NBTR = 165 m SBL = 5 m SBTR = 150 m	<u>Overall: 0.84 (B) 20</u> EBTLR = 0.1 (D) 46 WBTL = 0.77 (E) 68 WBR = 0.05 (D) 45 NBL = 0.01 (A) 4 NBTR = 0.82 (B) 15 SBL = 0.13 (A) 5 <b>SBTR = 0.86 (B) 17</b>	EBTLR = 15 m WBTL = 60 m WBR = 15 m NBL = 5 m NBTR = 225 m SBL = 5 m SBTR = 275 m
Future Total 2029	<u>Overall: 0.80 (B) 16</u> EBTLR = 0.27 (D) 41 WBTL = 0.64 (E) 57 WBR = 0.04 (D) 36 NBL = 0 (A) 0 NBTR = 0.82 (B) 14 SBL = 0.12 (A) 4 SBTR = 0.8 (B) 13	EBTLR = 15 m WBTL = 40 m WBR = 10 m NBL = 0 m NBTR = 165 m SBL = 5 m SBTR = 150 m	<u>Overall: <b>0.85 (C) 20</b></u> EBTLR = 0.1 (D) 46 WBTL = 0.78 (E) 69 WBR = 0.05 (D) 45 NBL = 0.01 (A) 4 NBTR = 0.82 (B) 15 SBL = 0.17 (A) 6 <b>SBTR = 0.86 (B) 17</b>	EBTLR = 15 m WBTL = 60 m WBR = 15 m NBL = 5 m NBTR = 230 m SBL = 10 m SBTR = 275 m
Future Background 2034	<u>Overall: <b>0.87 (C) 22</b></u> EBTLR = 0.31 (D) 42 WBTL = 0.66 (E) 58 WBR = 0.03 (D) 36 NBL = 0 (A) 0 <b>NBTR = 0.91 (C) 20</b> SBL = 0.17 (A) 6 <b>SBTR = 0.88 (B) 18</b>	EBTLR = 20 m WBTL = 40 m WBR = 10 m NBL = 0 m NBTR = 265 m SBL = 5 m SBTR = 240 m	<u>Overall: <b>0.93 (C) 27</b></u> EBTLR = 0.13 (D) 46 <b>WBTL = 0.87 (F) 85</b> WBR = 0.08 (D) 46 NBL = 0.02 (A) 4 <b>NBTR = 0.90 (C) 20</b> SBL = 0.2 (A) 7 <b>SBTR = 0.94 (C) 26</b>	EBTLR = 15 m WBTL = 75 m WBR = 15 m NBL = 5 m NBTR = 340 m SBL = 10 m SBTR = 380 m
Future Total 2034	<u>Overall: <b>0.88 (C) 22</b></u> EBTLR = 0.31 (D) 42 WBTL = 0.71 (E) 62 WBR = 0.04 (D) 36 NBL = 0 (A) 0 <b>NBTR = 0.91 (C) 20</b> SBL = 0.18 (A) 6 <b>SBTR = 0.88 (B) 18</b>	EBTLR = 20 m WBTL = 45 m WBR = 10 m NBL = 0 m NBTR = 265 m SBL = 5 m SBTR = 240 m	<u>Overall: <b>0.94 (C) 28</b></u> EBTLR = 0.13 (D) 46 <b>WBTL = 0.89 (F) 90</b> WBR = 0.09 (D) 46 NBL = 0.02 (A) 4 <b>NBTR = 0.90 (C) 21</b> SBL = 0.25 (A) 8 <b>SBTR = 0.94 (C) 26</b>	EBTLR = 15 m WBTL = 75 m WBR = 15 m NBL = 5 m NBTR = 345 m SBL = 10 m SBTR = 380 m

Under existing conditions, the intersection of Highway 6 and Badenoch Street is operating at acceptable levels with an overall v/c ratio of 0.70 LOS B and 0.79 LOS B during the a.m. and p.m. peak hours, respectively. The longest delays are observed in the westbound through-left movement, reporting delays of 44 and 36 seconds during the a.m. and p.m. peak hours, respectively.

Under the 2024 future background horizon year, including the addition of corridor growth and signal timing improvements to minimize delays, the intersection continues to operate at satisfactory levels with overall v/c ratios of 0.71 LOS B and 0.77 LOS B during the a.m. and p.m. peak hours, respectively. The westbound through-left movement continues to operate with the longest delays with a 50 second delay during the a.m. peak hour and 62 seconds during the p.m. peak hour.

Under the 2024 future total traffic condition, with the addition of the site generated traffic, the overall intersection continues to operate at a satisfactory level with a slight increase to the overall v/c ratio from 0.71 to 0.72 LOS B during the a.m. peak hour and remains unchanged at 0.77 LOS during the p.m. peak hour. With the addition of the site traffic, the delays to the westbound through/left movements reports a nominal increase of 3 seconds during the a.m. peak hour and 2 seconds during the p.m. peak hour.

Under the 2029 future background scenario, which includes corridor growth and signal improvements, the intersection continues to operate at satisfactory levels with an overall v/c ratio of 0.79 LOS B during the a.m. peak hour and 0.84 LOS B during the p.m. peak hour. The delays along the westbound through-left movement have increased to 54 and 68 seconds during the a.m. and p.m. peak hour, respectively, as a result of corridor growth.

With the addition of site generated traffic under the 2029 future total scenario, the overall v/c ratios of the intersection continue to operate satisfactorily and an increase of 0.01 to 0.80 LOS B during the a.m. peak hour and 0.01 to 0.85 LOS C during the p.m. peak hour. With the addition of the proposed development site traffic, the delays along the westbound through-left movement increase by 3 seconds and 1 second during the a.m. and p.m. peak hour, respectively.

Under the 2034 future background scenario, which includes corridor growth and signal improvements, the intersection continues to operate at satisfactory levels with an overall v/c ratio of 0.87 LOS C during the a.m. peak hour and 0.93 LOS C during the p.m. peak hour. The westbound through-left movement continues to operate with the longest delays with a 58 second delay during the a.m. peak hour and 85 second delay during the p.m. peak hour.

With the addition of site generated traffic under the 2034 future total scenario, the overall v/c ratios of the intersection continue to operate satisfactorily and an increase of 0.01 to 0.88 LOS C during the a.m. peak hour and 0.01 to 0.94 LOS C during the p.m. peak hours. The reported delays to the westbound through-left movement increase by 4 seconds to 62 seconds during the a.m. peak hour and 5 seconds to 90 seconds during the p.m. peak hour.

No improvements are recommended at this intersection as a result of the proposed development. The majority of the intersection capacity issues are a result of the 2034 horizon year and are a result of the assumed corridor growth rate along Highway 6. Furthermore, there are limited options to improve the geometry of the intersection given the available right-of-way, proximity to existing buildings and unique configuration of the intersection. The delays are expected to be significantly reduced once the Morriston Bypass is constructed and volumes along the existing Highway 6 alignment are reduced through the study area.

### 7.1.1 Queuing Analysis – Left-Turn Lane, MTO Protocol

As requested by the MTO, a queueing analysis was completed at the intersection of Highway 6 and Badenoch Street/Calfass Road based on the MTO's Protocol using the MTO's Geometric Design Standards.

The findings are summarized in the table below and are based on the Future Total 2034 volumes for the auxiliary southbound left-turn. The recommended storage length (in vehicles) has been retrieved from the MTO's Geometric Design Standards for Ontario Highways, Chapter B, Table B7-5 for urban/commuter intersections.

**Table 4 MTO Queuing Protocol - Highway 6 and Badenoch Street/Calfass Road (FB 2034)**

Lane	Future Background Volumes (2034)	Heavy Vehicle%	PCU	Cycle Length (in seconds)	Arrival Rate (vehicles/cycle)	Recommended Storage, MTO Table B7-5 (vehicles)	Recommended Storage (in metres, 7.5 m/vehicle)	Available Storage (metres)
<b>AM Peak Hour</b>								
<b>SBL</b>	22	27.8%	28	91	0.8	2	15	40
<b>NBL</b>	14	0%	14	91	0.4	2	15	20
<b>PM Peak Hour</b>								
<b>SBL</b>	35	0%	35	120	1.2	3	22.5	40
<b>NBL</b>	2	0%	2	120	0.1	1	7.5	20

**Table 5 MTO Queuing Protocol - Highway 6 and Badenoch Street/Calfass Road (FT 2034)**

Lane	Future Total Volumes (2034)	Heavy Vehicle%	PCU	Cycle Length (in seconds)	Arrival Rate (vehicles/cycle)	Recommended Storage, MTO Table B7-5 (vehicles)	Recommended Storage (in metres, 7.5 m/vehicle)	Available Storage (metres)
<b>AM Peak Hour</b>								
<b>SBL</b>	24	27.8%	31	91	0.8	2	15	40
<b>NBL</b>	14	0%	14	91	0.4	2	15	20
<b>PM Peak Hour</b>								
<b>SBL</b>	42	0%	42	120	1.4	4	30	40
<b>NBL</b>	2	0%	2	120	0.1	1	7.5	20

As summarized in the table above, under the Future Total 2034 scenario, the auxiliary southbound left-turn and would have a recommended storage length of 30 metres based on the MTO's protocol. The southbound left-turn lane has 40 metres of available storage satisfying the recommended storage length. The northbound left-turn lane has a recommended storage length of 15 and 7.5 metres during the a.m. and p.m. peak hours, respectively, during both peak hours. The northbound left-turn lane has 20 metres of available storage satisfying the recommended storage length.

As a result, no improvements are recommended for the southbound left-turn lane at this intersection as a result of the proposed development.

### 7.1.2 Queuing Analysis – Right-Turn Lane, MTO Protocol

As directed by MTO staff, the right-turn lane queuing assessment was completed based methodology provided from MTO staff based on Chapter 9 of TAC's Geometric Design Guide for Canadian Roads. The queueing assessment was completed as follows:

- For right-turn movements do not convert trucks to passenger vehicles, use VPH only.
- For right-turn taper with auxiliary lanes at signalized intersections, the storage lane length should accommodate:
  - 1.5 times the average number of passenger vehicles to be stored per cycle for roadway design speed  $\leq 60$ kph
  - 2 times the number of pass vehicles for design speed  $\geq 60$ kph

- For right-turn storage length calculations based on TAC Chapter 9, use 90 sec signal cycle length.

The right-turn lane queueing analysis is summarized in the table below.

**Table 6 MTO Queuing Protocol - Right-Turn Lane at Highway 6 and Badenoch Street/Calfass Road**

Design Speed	Scenario	Lane	Future Volumes (2034)	Cycle Length (in seconds)	Arrival Rate (vehicles/cycle)	Recommended Storage (2x arrival rate, 7.5 metre vehicle)	Available Storage (metres)
60 km/h	AM Peak Hour						
	FB2034	WBR	50	90	1.3	19	30
	FT2034	WBR	57	90	1.4	22	30
	PM Peak Hour						
	FB2034	WBR	52	90	1.3	20	30
	FT2034	WBR	56	90	1.4	21	30

As summarized in the table above, the auxiliary westbound right-turn lane would have a recommended storage length of 10 and 11 metres under future background and future total 2034 volumes, respectively based on the MTO's protocol. The westbound right-turn lane has 30 metres of available storage satisfying the recommended storage length.

### 7.1.3 Queuing Analysis – SimTraffic

GHD also completed a SimTraffic analysis of the intersection using a 15-minute seed time, 60-minute run time, and an average of 5 runs. The results of the analysis are provided in the table below.

**Table 7 Highway 6 and Badenoch Street/Calfass Road SimTraffic Queueing Analysis (2034)**

Scenario	SimTraffic 95 <sup>th</sup> Percentile Queue Length	
	AM Peak Hour	PM Peak Hour
Future Background 2034	EBTLR = 22 m WBTL = 44 m WBR = 25 m NBL = 0 m NBTR = 213 m SBL = 25 m SBTR = 126 m	EBTLR = 14 m WBTL = 66 m WBR = 28 m NBL = 3 m NBTR = 242 m SBL = 27 m SBTR = 125 m
Future Total 2034	EBTLR = 27 m WBTL = 46 m WBR = 26 m NBL = 0 m NBTR = 231 m SBL = 28 m SBTR = 122 m	EBTLR = 14 m WBTL = 68 m WBR = 27 m NBL = 3 m NBTR = 276 m SBL = 40 m SBTR = 120 m

As summarized in the table above, the westbound right-turn lane operates with a 95<sup>th</sup> percentile queue length of 25 metres during the a.m. peak hour and 28 metres during the p.m. peak hour under the 2034 future background conditions.

With the addition of site generated traffic under the 2034 future total condition, the queuing in the westbound right-turn lane is reported to increase by one 1 metre during the a.m. peak hour to 26 metres and is not reported to increase during the p.m. peak hour.

There is approximately 30 metres of available storage for the westbound right turn lane on Badenoch Street, as a result, no improvements are recommended for the westbound right-turn lane at this intersection as a result of the proposed development.

## 7.2 Badenoch Street and Ochs Street

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions out are summarized in the following table.

**Table 8** Capacity analysis of Badenoch Street and Ochs Street

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 <sup>th</sup> % Que.	V/C (LOS) seconds	95 <sup>th</sup> % Que
Existing 2023	EBTR = 0.05 (A) 0 WBTL = 0 (A) 0 NBLR = 0 (A) 0	EBTR = 0 m WBTL = 0 m NBLR = 0 m	EBTR = 0.05 (A) 0 WBTL = 0 (A) 0 NBLR = 0 (A) 9	EBTR = 0 m WBTL = 0 m NBLR = 5 m
Future Background 2024	EBTR = 0.05 (A) 0 WBTL = 0 (A) 0 NBLR = 0.02 (A) 0	EBTR = 0 m WBTL = 0 m NBLR = 0 m	EBTR = 0.05 (A) 0 WBTL = 0 (A) 0 NBLR = 0 (A) 9	EBTR = 0 m WBTL = 0 m NBLR = 5 m
Future Total 2024	EBTR = 0.05 (A) 0 WBTL = 0 (A) 0 NBLR = 0.02 (A) 10	EBTR = 0 m WBTL = 0 m NBLR = 5 m	EBTR = 0.06 (A) 0 WBTL = 0 (A) 0 NBLR = 0.02 (A) 10	EBTR = 0 m WBTL = 0 m NBLR = 5 m
Future Background 2029	EBTR = 0.05 (A) 0 WBTL = 0 (A) 0 NBLR = 0 (A) 0	EBTR = 0 m WBTL = 0 m NBLR = 0 m	EBTR = 0.06 (A) 0 WBTL = 0 (A) 0 NBLR = 0 (A) 9	EBTR = 0 m WBTL = 0 m NBLR = 5 m
Future Total 2029	EBTR = 0.06 (A) 0 WBTL = 0 (A) 0 NBLR = 0.02 (A) 10	EBTR = 0 m WBTL = 0 m NBLR = 5 m	EBTR = 0.07 (A) 0 WBTL = 0 (A) 0 NBLR = 0.02 (A) 10	EBTR = 0 m WBTL = 0 m NBLR = 5 m
Future Background 2034	EBTR = 0.06 (A) 0 WBTL = 0 (A) 0 NBLR = 0 (A) 0	EBTR = 0 m WBTL = 0 m NBLR = 0 m	EBTR = 0.06 (A) 0 WBTL = 0 (A) 0 NBLR = 0 (A) 10	EBTR = 0 m WBTL = 0 m NBLR = 5 m
Future Total 2034	EBTR = 0.06 (A) 0 WBTL = 0 (A) 0 NBLR = 0.02 (B) 10	EBTR = 0 m WBTL = 0 m NBLR = 5 m	EBTR = 0.07 (A) 0 WBTL = 0 (A) 0 NBLR = 0.02 (B) 10	EBTR = 0 m WBTL = 0 m NBLR = 5 m

Under existing conditions, the intersection of Badenoch Street and Ochs Street is operating at acceptable levels with no delays during the a.m. peak hour and a 9 second delay during the p.m. peak hour along the northbound approach.

Under all three future background conditions, with the addition of corridor growth along Badenoch Street, the northbound approach from Ochs Street continues to operate with only a 9 second delay during the p.m. peak hour and increases to 10 seconds during the 2034 horizon year.

With the addition of site generated traffic under the three future horizon years, nominal changes to the intersection delays are reported with the northbound approach showing a maximum delay of ten seconds during both the a.m. and p.m. peak hours.

No improvements are recommended at this intersection as a result of the proposed development.

## 7.3 Ochs Street and Back Street

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions are summarized in the following table.

**Table 9 Capacity analysis of Ochs Street and Back Street**

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 <sup>th</sup> % Que.	V/C (LOS) seconds	95 <sup>th</sup> % Que
Future Total 2024	EBLR = 0 (A) 9 NBTL = 0 (A) 0 SBTR = 0 (A) 0	EBLR = 0 m NBTL = 0 m SBTR = 0 m	EBLR = 0 (A) 9 NBTL = 0 (A) 0 SBTR = 0.01 (A) 0	EBLR = 0 m NBTL = 0 m SBTR = 0 m
Future Total 2029	EBLR = 0 (A) 9 NBTL = 0 (A) 0 SBTR = 0 (A) 0	EBLR = 0 m NBTL = 0 m SBTR = 0 m	EBLR = 0 (A) 9 NBTL = 0 (A) 0 SBTR = 0.01 (A) 0	EBLR = 0 m NBTL = 0 m SBTR = 0 m
Future Total 2034	EBLR = 0 (A) 9 NBTL = 0 (A) 0 SBTR = 0 (A) 0	EBLR = 0 m NBTL = 0 m SBTR = 0 m	EBLR = 0 (A) 9 NBTL = 0 (A) 0 SBTR = 0.01 (A) 0	EBLR = 0 m NBTL = 0 m SBTR = 0 m

With the addition of the south leg and site generated traffic under all three future total scenarios, a maximum delay of 9 seconds is expected along the eastbound approach during each peak hour.

No improvements are recommended at this intersection as a result of the proposed development as the subject site is expected to introduce a very low volume of additional traffic to this intersection.

## 8. Parking Provision

Application of the current Township of Puslinch's Comprehensive Zoning By-Law parking rates to the subject site results in a requirement of a minimum of 2 parking spaces per dwelling unit. The minimum By-law parking requirement of 2 spaces per dwelling unit will be satisfied with the provision of garage and driveway parking.

The subject site proposes to generally use the Township's 20-metre urban cross-section along Street "A" as discussed in **Section 10** with an 8-metre pavement width. The proposed cross-section provides two travel lanes and on-street parking.

## 9. Sightline Assessment

Adjacent to the proposed site, Badenoch Street has a posted speed limit of 50 km/h with a crest in the road located between Main Street and Ochs Street. For the purpose of Stopping Sight Distance requirements a design speed of 60 km/h was used for the assessment on Badenoch Street based on the 50 km/h posted speed limit. Per Transportation Association of Canada's Geometric Design Guide for Canadian Roads (TAC GDGCR) Table 2.5.2, the minimum stopping sight-distance for level roadways with a design speed of 60 km/h is 85 metres for level roadways.

A speed study was completed along Badenoch Street along the crest in the roadway to the west of Och Street in the general location of Ikondar Place. The speed study was undertaken during a 24-hour period on Thursday, March 21<sup>st</sup>, 2024, in both the eastbound and westbound directions. A driver looking towards the crest in the road to the west is observing vehicles travelling in the eastbound direction, with the results of the speed study indicating that the 85<sup>th</sup> percentile speed in that direction is 61 km/h and generally consistent with the assumed design speed based on the posted speed limit. The results of the speed study are provided in **Appendix E**.

Section 9.9 of the TAC GDCR provides intersection sight distances for different scenarios, with the following scenarios used to complete the intersection sight distance analysis:

- Case B1 – Left turn from the minor road
- Case B2 – Right turn from the minor road

- Case F – Left turns from the major road

For the purpose of the assessment, the minor road is assumed to be Ochs Street for the assessment. A vehicle entering the major road (Badenoch Street) from Ochs Street is assumed to stop a distance of approximately 4.5 to 5.4 metres to the pavement edge of Badenoch Street as recommended by TAC. In this stopped position, the driver will be required to look left and right in order to perceive and react to approaching vehicles prior to initiating a turning movement onto the intersecting drive aisle.

The required intersection sight distances are provided in TAC GDGCR Tables 9.9.4, 9.9.6 and 9.9.12 for passenger vehicles turning left from stop, turning right from stop, or turning left from the major road, respectively, and are summarized in the following table. The required intersection sight distances summarized in the tables below are based on a 60 km/h design speed along the major road. As requested by Township and County staff, the assessment was completed for both passenger vehicles and single unit trucks in order to complete an assessment of a snowplow entering Badenoch Street from Ochs Street.

**Table 10 Intersection Sight Distance Requirement**

Case (Design Speed of 60 km/h)	Required Intersection Sight Distance for Passenger Cars (TAC 2017)	Required Intersection Sight Distance for Single Unit Trucks (TAC 2017)	TAC Reference
B1: Vehicles turning left from stop	125.1 m	158.4 m	Table 9.9.4
B2: Vehicles turning right from stop	108.4 m	141.8 m	Table 9.9.6
F: Left turns from the major road	91.7 m	108.4.5 m	Table 9.9.12

The required intersection sight distance is calculated from the equation:

$$ISD = 0.278 V_{major} t_g$$

Where:

$$ISD = \text{intersection sight distance}$$

$$V_{major} = \text{design speed of the major road} \left( \frac{km}{h} \right)$$

$$t_g = \text{time gap for the minor road vehicle to enter the major road (s)}$$

The intersection sight distance requirement for passenger cars was determined by the equation above, where the time gap for the minor road vehicle to enter the major road for trucks is 7.5 seconds for vehicles turning left from stop, 6.5 seconds for vehicles turning right from a stop and 5.5 seconds for left turns from the major road.

The intersection sight distance requirement for trucks was determined by the equation above, where the time gap for the minor road vehicle to enter the major road for trucks is 9.5 seconds for vehicles turning left from stop, 8.5 seconds for vehicles turning right from a stop and 6.5 seconds for left turns from the major road.

The available sight distances along Badenoch Street to the west of Ochs Street meet the minimum required stopping sight distance for a 60 km/h design speed. Due to the crest in the road along Badenoch Street located between Main Street and Ochs Street, the sightline assessment was completed using the vertical profile for Badenoch Street contained within the “Approved for Construction” drawings which was provided by the County and was confirmed through measurements taken on site.

The use of the vertical profile drawings is considered less accurate as it is based on “Approved Construction Drawings” and not “As Builts” which measure the actual vertical profile of what was constructed in the field which can differ significantly. Based on the vertical profile, there should be 129 metres of sightline available, however, the sightline measured in the field confirmed that there is currently 136.5 metres of available sight distance looking to the west from Och Street, satisfying the required intersection sight distance requirement for passenger vehicles.



The sightline assessment was also completed for a single unit truck to consider a snowplow truck exiting onto Badenoch Street. Township staff confirmed that the height of the driver's eye for the snowplow truck is 2.6 metres.

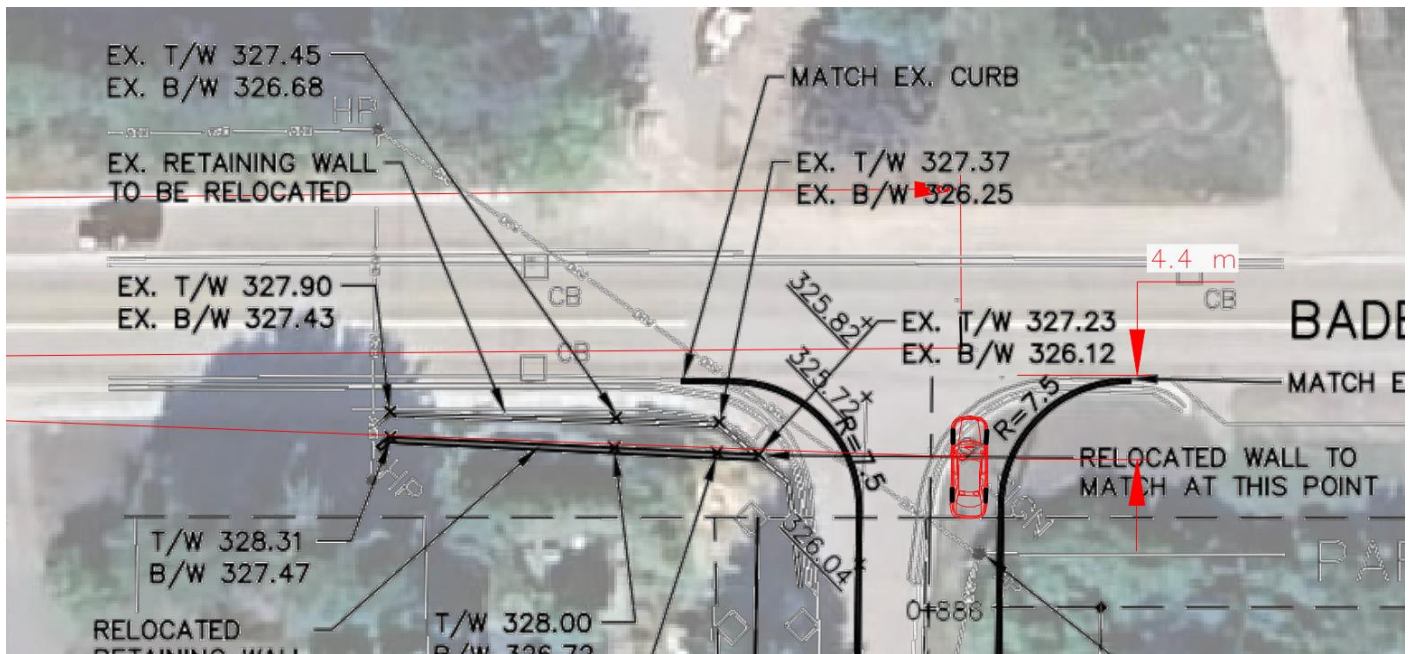
Based on the vertical profile, there should be 165 metres of sightline available, satisfying the required intersection sight distance requirement for snowplow vehicles.

The sightline assessment completed using the vertical profile drawings is provided in **Appendix D**, while the results from the field observations are provided in **Figure 14**.



**Figure 14**    *Field Observations*

As can be seen in **Figure 14**, the existing retaining wall in the southwest corner of the intersection is located within the right-of-way and limits the sightline visibility along Badenoch Street. To provide the required sightline measured 4.4 metres back from the edge of pavement, it is recommended that the existing retaining wall on the west side of the intersection be shifted to be further away from sidewalk as illustrated in **Figure 15**. The assessment using the requirement for Scenario B1 in **Table 10** is provided in **Appendix D**.

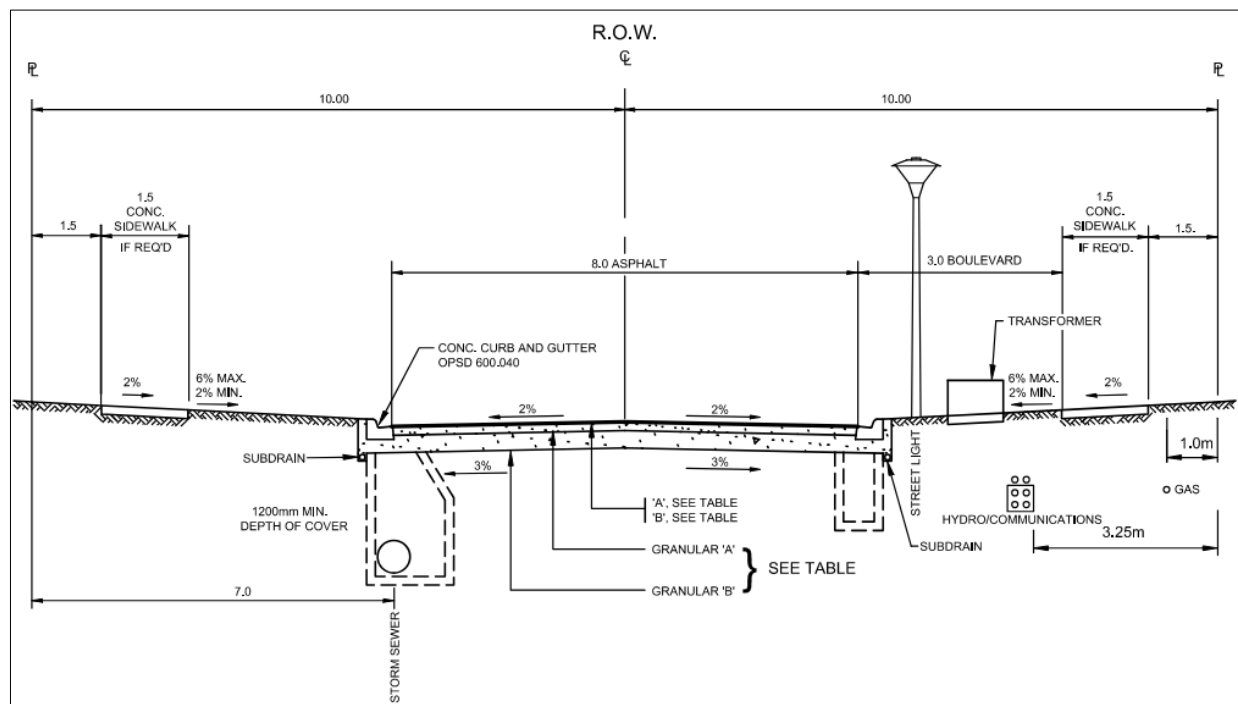


**Figure 15** Recommended Retaining Wall Relocation

## 10. Internal Road Geometric Review

The subject site proposes to use the Township's 20-metre wide urban cross-section along Street "A". The 20-metre right-of-way includes a pavement width of 8 metres and allows for on-street parking. The 20-metre right-of-way includes a 1.5 metre sidewalk on each side of the road, however it is proposed to only provide a sidewalk on the west side of the road due to the small number of units and limited sidewalk connectivity.

The Township's 20-metre wide cross-section is provided in **Figure 16**.



**Figure 16** Township of Puslinch 20-metre Urban Cross-Section