



December 13, 2024

Jeff Chesher  
P.O. Box 100  
Buckhorn, ON  
K0L 1J0

**Attention: Jeff Chesher, Proponent**

**Re: Site Entrance Assessment – Addendum  
Bridgenorth Townhouse Development  
949 Eighth Line, Bridgenorth, Township of Selwyn  
D.M. Wills Project No. 22-85260**

PARTNERS IN  
ENGINEERING, PLANNING &  
ENVIRONMENTAL SERVICES

D.M. Wills Associates Limited (Wills) is pleased to submit the following addendum to the Site Entrance Assessment Brief dated May 25, 2022, that was prepared by our team to support a proposed Townhouse Development on the lands known municipally as 949 Eighth Line, in the Village of Bridgenorth (Subject Property).

This addendum addresses the change in the total number of dwelling units planned for the Subject Property.

## 1.0 Existing and Planned Site Conditions

Currently, the Subject Property has only one single detached house that is using an existing driveway. Three triplexes (i.e. a total of 9 dwelling units) in addition to the existing townhouse are proposed. The existing building will be demolished. This means that the total number of units within the Subject Property will be 9 dwelling units.

## 2.0 Existing and Future Traffic Conditions

Since there will be a total of 9 dwelling units on the Subject Property and to account for the worst-case scenario from trip generation perspective, the trip generation rate for these units is estimated based on Single-Family Detached Housing land use in the ITE Trip Generation Manual 11<sup>th</sup> edition as shown in **Table 1**. **Table 2** summarizes the estimated trips that will be generated from the Subject Property based on the worst-case assumption mentioned above. Despite the worst-case assumption, the number of trips from the Subject Property will be minimal during the peak hour, and it will not have any impact on the traffic operation.



wsib 2020

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**Table 1 – Trip Generation Rates per Dwelling Unit during AM and PM Peak Hours**

Land Use	ITE Code	AM Peak			PM Peak		
		Avg. Rate	Entering	Exiting	Avg. Rate	Entering	Exiting
Single detached dwelling unit	210	0.70	26%	74%	0.94	63%	37%

**Table 2 – The Estimated Entering and Exiting Trips during AM and PM Peak Hours**

Land Use	Number of Unit	AM Peak			PM Peak		
		Avg. Rate	Entering	Exiting	Avg. Rate	Entering	Exiting
Single detached dwelling unit	9	6	2	5	8	5	3

### 3.0 Conclusions and Recommendations

Although the anticipated trip generation from the Subject Property will increase by only one trip due to the additional dwelling units, the conclusions and recommendations discussed in the SEA as shown in **Appendix A** are still valid, which is the trips generated by the proposed development will not have any impact on the traffic operation of CR 18.

Sincerely,



Mostafa Tawfeek Mohammed, Ph.D., P.Eng., PTOE, RSP1  
 Transportation/Traffic Engineer  
 D.M. Wills Associates Limited

MT/xx

# Appendix A

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Site Entrance Assessment – May 25, 2022





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D.M. Wills Associates Limited (Wills) is pleased to submit the following Site Entrance Assessment Brief to support a proposed Townhouse Development on the lands known municipally as 949 Eighth Line, in the Village of Bridgenorth (Subject Property).

## 1.0 Roadway Existing Conditions

The Subject Property is located on the south side of Peterborough County Road 18 (8<sup>th</sup> Line Smith). The surrounding area is mostly residential homes with some commercial uses and undeveloped lands. The Subject Property is currently serviced by one unpaved driveway on County Road (CR) 18.

This section of CR 18 is a two-way two-lane roadway segment with double solid yellow centerline marking with a typical urban curb and gutter cross section. This urban cross section ends just to the east of the Subject Property. The alignment of this section of CR 18 has a horizontal curve that almost ends at the existing entrance of the Subject Property. The posted speed limit in this section is 50 km/hr.

## 2.0 Existing and Planned Site Conditions

Currently, the Subject Property has only one single detached house that is using an existing driveway. Two triplexes (i.e. a total of 6 dwelling units) in addition to the existing townhouse are proposed. Currently, there is no plan to change the existing building.



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### 3.0 Existing and Future Traffic Conditions

Based on the traffic counts acquired from the County of Peterborough at the intersection of CR 18 and CR 20 on June 7<sup>th</sup>, 2021, the AM peak hour is between 9:45 and 10:45, while the PM peak hour is between 4:30 and 5:30. The AM peak hour volume is 620 vehicles per hour and the PM peak hour volume is 788 vehicles per hour for both eastbound and westbound directions combined.

Since there will be a total of 7 dwelling units on the Subject Property and to account for the worst-case scenario from trip generation perspective, the trip generation rate for these units is estimated based on Single-Family Detached Housing land use in the ITE Trip Generation Manual 11<sup>th</sup> edition as shown in **Table 1**. **Table 2** summarizes the estimated trips that will be generated from the Subject Property based on the worst-case assumption mentioned above. Despite the worst-case assumption, the number of trips from the Subject Property will be minimal during the peak hour, and it will not have any impact on the traffic operation.

**Table 1 – Trip Generation Rates per Dwelling Unit during AM and PM Peak Hours**

Land Use	ITE Code	AM Peak			PM Peak		
		Avg. Rate	Entering	Exiting	Avg. Rate	Entering	Exiting
Single detached dwelling unit	210	0.70	26%	74%	0.94	63%	37%

**Table 2 – The Estimated Entering and Exiting Trips during AM and PM Peak Hours**

Land Use	Number of Unit	AM Peak			PM Peak		
		Avg. Rate	Entering	Exiting	Avg. Rate	Entering	Exiting
Single detached dwelling unit	7	5	1	4	7	3	4

#### 4.0 Collision Review

In discussions with the County staff, it was indicated that there is no collision history at the existing entrance of the Subject Property and within 50 m to the east or the west of this entrance.

#### 5.0 Visibility Requirements Assessment

A site visit was conducted on Thursday, March 31, 2022, to check the sight lines at the existing entrance of the Subject Property. Based on the sight line review, the available sight distance exceeds 100 m at the location of the existing entrance and looking to the east on CR 18. On the other hand, the available sight distance on the west side on CR 18 from the existing entrance is less than 100 m because of multiple sightline obstructions including parked cars on driveway of adjacent property and trees as shown in **Figure 1**. The measurement of the sight lines assumed an observer's eye at 1.1 m above the shoulder of CR 18 and an object height of 1.3 m above the centreline of the on-coming lane as indicated in the Peterborough County by-law no. 2012-26 in the visibility requirement section. **Figure 1** shows pictures taken in both directions at the existing entrance of the Subject Property.

**Figure 1 - Pictures taken in the field at the existing entrance of the Property on CR 18 – looking west on CR 18 [on the left] and looking east on CR 18 [on the right]**



As an alternative entrance, the same process was repeated 39.5 m to the west of the existing entrance on CR 18. At this proposed alternative entrance, the available sight distances fulfilled the County's requirements of 100 m for a speed limit of 50 km/hr. **Figure 2** shows the pictures taken at the proposed alternative entrance.

**Figure 2 - Pictures taken in the field at an alternative entrance of the Property on CR 18 – looking west on CR 18 [on the left] and looking east on CR 18 [on the right]**



## 6.0 Conclusions and Recommendations

This brief reviewed the visibility requirements at the existing entrance of the Subject Property, which is located on Peterborough CR 18. This brief assessed the trips that are anticipated to be generated from the property assuming a worst case scenario for the trip generation. The results indicated significantly low volume (a total of 5 and 7 trips during the AM and PM peak hours) of traffic is anticipated which will have no impact on the traffic operation of CR 18.



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To review the visibility requirements, a field visit was conducted to collect the necessary measures as indicated before in this brief. Based on the measures taken in the field and the County of Peterborough by-law no. 2012-26, the visibility requirements on CR 18 at the existing entrance of the Subject Property are not satisfied based on a speed limit of 50 km/hr.

Therefore, an alternative entrance is proposed to be located 39.5 m to the west of the existing entrance on CR 18 where the visibility requirements will be fulfilled as per County's by-law. It is assumed that the entrance will be designed and constructed according to the standards shown in **Appendix B.**

Sincerely,

A handwritten signature in blue ink that reads "Mostafa Tawfeek".

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Mostafa Tawfeek Mohammed, Ph.D., P.Eng., RSP1  
Transportation/Traffic Engineer  
D.M. Wills Associates Limited

MT/jh

# Appendix A

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## Location Plan



**Figure – Location Plan**

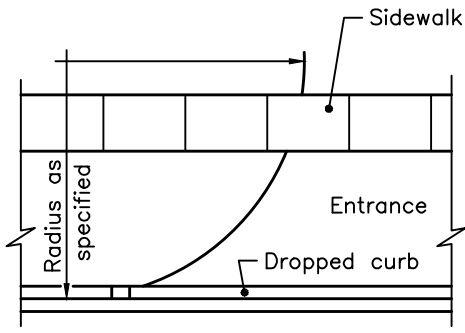


# **Appendix B**

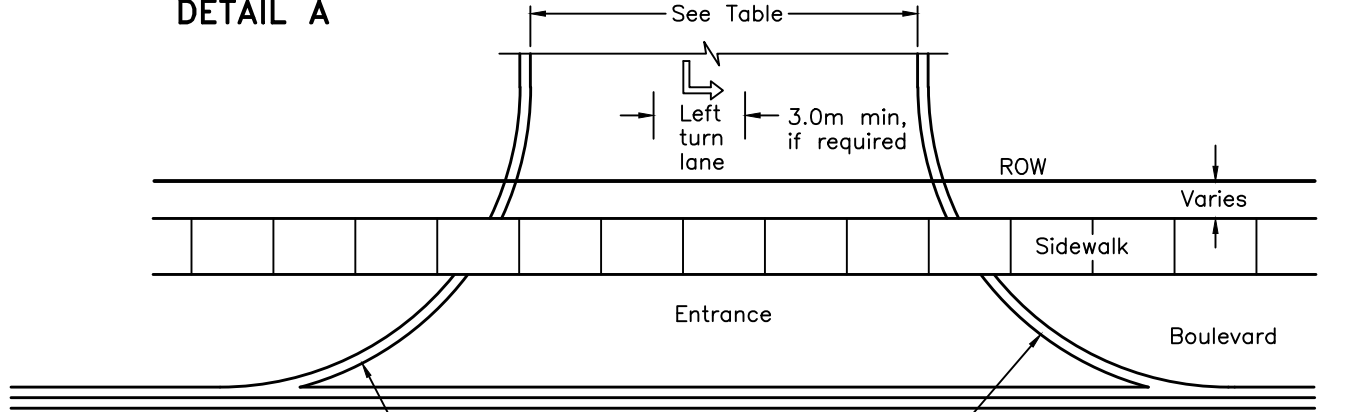
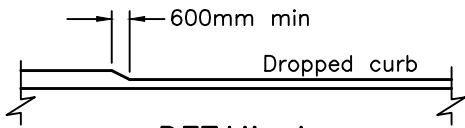
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## **Entrance Standards**





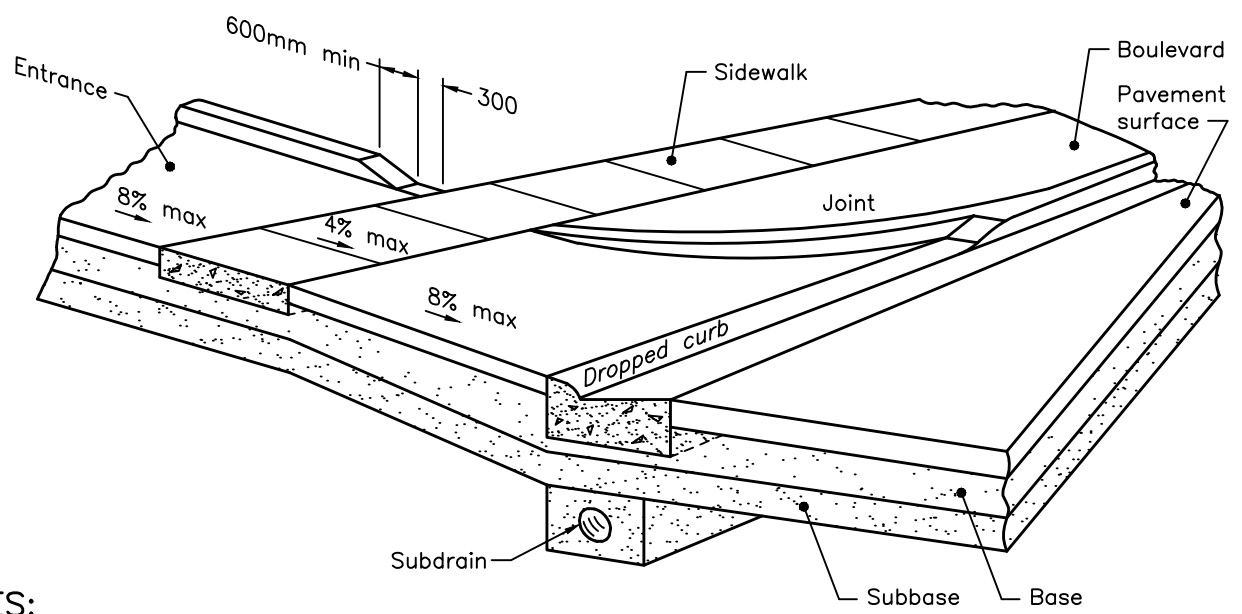
DRIVEWAY DIMENSIONS						
LAND USE	WIDTH m				RADIUS m	
	One-Way		Two-Way		min	max
	min	max	min	max		
Light Industrial, Commercial, and Apartment	4.5	7.5	7.2	12.0	4.5	12.0
Heavy Industrial	5.0	9.0	9.0	15.0	9.0	15.0



Concrete curb or curb with gutter. For entrance without curb or curb with gutter see Detail A

**PLAN**

See table for driveway radius



**NOTES:**

A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING

Nov 2018 Rev 2

**URBAN  
INDUSTRIAL, COMMERCIAL, AND  
APARTMENT ENTRANCES**

**OPSD 350.010**

