

OCTOBER 1, 2025

SENT BY E-MAIL: C/O  
JESS@JASPERGROUP.CA

Town of The Blue Mountains  
32 Mill Street, Box 310  
Thornbury, Ontario N0H 2P0

Ministry of Transportation  
Highway Corridor Management Section  
659 Exeter Road  
London, ON N6E 1L3

**Attention:** Shawn Postma  
Manager of Community Planning, Town of The Blue Mountains

**RE: TRAFFIC IMPACT BRIEF  
209791 HIGHWAY 26 (THE LAKE AT BLUE MOUNTAINS)  
THE TOWN OF THE BLUE MOUNTAINS, COUNTY OF GREY**

Dear Shawn,

Jasper Group Inc. retained C.F. Crozier & Associates Inc. ("Crozier") to prepare a Traffic Impact Brief to support the Site Plan Application for the renovation and addition to an existing building located at 209791 Highway 26, The Town of the Blue Mountains. An original submission was made to the Town and the MTO in April 2024. This letter has been updated to address comments received on the first submission and reviews the following aspects of the development from a transportation perspective:

- Trip Generation of the site
- Site Access Safety
- Parking Review
- Vehicle Circulation

We have divided this memo into the following sections:

1. Existing Conditions
2. Boundary Road Network
3. Development Proposal
4. Trip Generation and Distribution
5. Access Safety
6. Parking Requirements
7. Conclusions

## 1 Existing Conditions

The subject property is located on the north side of Highway 26 and is approximately 75 m west of Blue Mountain Drive. The subject property is approximately 0.37 ha and bound by Highway 26 to the south, residential homes to the east and west, and Blue Mountain Drive to the North. The subject lands contain three existing structures which are part of The Lake at Blue Mountains, a vacation resort offering chalet and suite accommodations. The remaining area of the site is comprised primarily of grass, trees, and a gravel parking lot located to the north of the existing structures. The site is accessed by a gravel entrance from Highway 26 and through the parking area fronting Blue Mountain Drive to the north.

## 2 Boundary Road Network

**Table 1** describes the boundary road network. The roadway classifications were obtained from Schedule “B-1: Transportation” of the Town of The Blue Mountains Official Plan.

**Table 1: Boundary Road Network Summary**

Roadway	Highway 26	Blue Mountain Drive
Direction	East-West	East-West and North-South
Classification	2B Arterial Highway	Local Heritage Road
Jurisdiction	MTO	Town of the Blue Mountains
Posted Speed Limit (km/h)	60 km/h	No limit posted – assumed 40 km
Total Number of Lanes	2	Unpaved – assumed 2 lanes
Pedestrian Facilities	None	None
Cycling Facilities	None	None

A Municipal Class Environmental Assessment for improvements to Highway 26 and Grey Road 21 commenced in July 2024. As part of the adjacent Aquavil subdivision the closure of Blue Mountain Drive and Highway 26 will occur. Access between the subject site and Highway 26 would be provided through the development to the east.

## 3 Development Proposal

The proposed site plan (prepared by Crozier, September 2025) includes renovations and an addition to the log cabin structure on the west side of the site. The three-story building will contain five separate suites (11 bedrooms total). 13 new parking spaces will be added to the property. The gravel parking area on the north side of the site will be expanded to add 11 parking spaces. Two parking spaces will be installed on the south side of the existing building adjacent to the gravel laneway. The 10 existing parking stalls will be retained or reconfigured. The two existing sheds structures will be demolished and removed from the property.

The existing site access from Highway 26 and Blue Mountain Drive will remain. On Blue Mountain Drive the existing continual entry along the gravel parking area will remain, while the single lane existing gravel driveway entrance to the west will be decommissioned. The proposed gravel parking area will have landscaping along Blue Mountain Drive, maintaining the length of the existing entry. Vehicles will be able to enter and exit anywhere along the entrance length.

The site plan proposed a total of 23 parking spaces to accommodate the additional units and visitors. **Attachment A** contains the Site Plan.

## 4 Trip Generation and Distribution

As noted previously, The Lake at Blue Mountains Hotel is an existing site which already contributes to trips present on the boundary road network. Site-generated traffic was calculated using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11<sup>th</sup> Edition, using Land Use Category 310 "Hotel". The independent variable of “rooms” was used based on the number of individual bedrooms and not the number of suites, as is reviewed in the Town’s By-law. It is noted that hotel was selected over motel (LUC 320) as it provided weekend data. The net difference in trip generation for the p.m. peak hour of a motel is lower than the hotel land use reviewed.

The weekday p.m. peak hour and Sunday peak hour were selected as the most appropriate timeframes to represent peak site operations for the hotel. The average rate has been used to establish trip generation as the development is too small in scale to produce a result based on the fitted curve equation. **Attachment B** contains relevant ITE excerpts. The existing trip generation, the expected trip generation, and the net difference of the development are tabulated in **Table 2**.

**Table 2: ITE Trip Generation**

Land Use	Units	Peak Hour	Number of Trips		
			Inbound	Outbound	Total
LUC 310 Hotel	12 Bedrooms	Weekday P.M.	4	3	7
		Sunday	3	4	7
	23 Bedrooms	Weekday P.M.	7	7	14
		Sunday	6	7	13
<b>Net Difference</b>		<b>Weekday P.M.</b>	<b>3</b>	<b>4</b>	<b>7</b>
		<b>Sunday</b>	<b>3</b>	<b>3</b>	<b>6</b>

As shown in **Table 2**, the proposed development is expected to generate an additional 7 trips during the weekday p.m. peak hour and 6 trips during the Sunday peak hour. This volume of trips is not associated with operational issues.

## 5 Access Safety

Blue Mountain Drive is an unpaved roadway in the vicinity of the existing site access. Due to the nature of the roadway an assumed speed limit of 40 km/h and design speed of 50 km/h have been used for the following assessment. It is noted that vehicles turning onto the crescent portion of Blue Mountain Drive are not expected to attain roadway operating speeds prior to the site access.

Through conversations between the MTO and the Town of the Blue Mountains, the access to Highway 26 will remain open. Along the site frontage Highway 26 has a posted speed of 60 km/h and a design speed of 80 km/h has been used for the following assessment.

The Transportation Association of Canada (TAC) Geometric Design Guidelines for Canadian Roads (GDGCR) provides the minimum requirements for intersection sight distance and stopping sight distance. **Attachment C** includes relevant TAC GDGCR excerpts. **Table 3** outlines the required and available sight distances on Blue Mountain Drive.

**Table 3: Sight Distance**

Roadway	Sight Distance	Direction	Required	Available
Blue Mountain Drive	Intersection	East	105 m	110 m
		West	105 m	140 m
	Stopping	East	65 m	100 m
		West	65 m	140 m
Highway 26	Intersection	East	170 m	>200 m
		West	170 m	>200 m
	Stopping	East	130 m	>200 m
		West	130 m	>200 m

Access to the site can continue to be supported from a sight distance perspective.

## 6 Parking Requirements

The Town of the Blue Mountains Comprehensive Zoning By-Law 2018-65 Section 5.4.3 outlines the parking requirements for non-residential uses. Based on Table 5.3 a Hotel/Motel is required to have 1.3 parking spaces per room. It is noted that the use of the Commercial Resort Unit rate was discussed with the MTO, however the zoning for the site retains the Hotel/Motel land use. Section 5.1.4 provision (a) of the Zoning By-Law outlines that the required number of new parking spaces is only to be based on the expansion. The addition of five suites, totalling 11 bedrooms was reviewed, requiring 7 parking spaces. With the addition of the existing 10 spaces on site, a total of 17 parking spaces are required, while 23 parking spaces will be provided. **Table 4** outlines the parking supply.

**Table 4: Parking Supply**

By-Law	Required Rate	Number of Units	Required Spaces	Provided Spaces
2018-65	1.3 spaces/ room	5 (new)	7	13
Existing Facilities	-	8 (existing)	10	10 <sup>1</sup>
<b>Total</b>			<b>17</b>	<b>23<sup>1</sup></b>

Note 1: Two spaces are within the MTO setback and cannot be counted within the by-law requirement.

## 7 Vehicle Maneuverability

An assessment of vehicle swept path was undertaken using the AutoTURN software in AutoCAD. **Attachment D** includes the diagrams of passenger car movements in key parking spaces and the waste collection vehicle on Blue Mountain Drive.

The west side of the rear parking lot provides additional area for reversal movements of larger vehicles to the accessible parking spaces. The new parking spaces along the east side of the rear lot accommodate five vehicles. As illustrated, vehicles can egress these spaces without conflict with neighbouring spaces and the existing air conditioning unit.

The existing waste bin on site has been relocated further east to allow for the new parking spaces. Similar to existing conditions, the bin will be required to be angled towards Blue Mountain Drive to allow for pickup by private collection.

## 8 Conclusions

The proposed redevelopment is not expected to impact the overall operations of the boundary road network. The increase of 5 units (11 bedrooms) is expected to generate an additional 7 trips during the weekday p.m. peak hour and 6 trips during the Sunday peak hour. This volume of trips is not associated with operational issues.

Access to the site will remain from Blue Mountain Drive and Highway 26. The Town's Zoning By-law requires 7 new parking spaces for the addition of 5 suites, at a rate of 1.3 spaces per room. The addition of 13 parking spaces, as outlined on the Site Plan, exceeds the By-Law requirement. The total number of parking spaces on site will be 23, with two within the MTO setback.

In conclusion, the proposed redevelopment can be supported from a transportation engineering perspective. The analysis herein was prepared using the most recent Site Plan. Any minor changes to the Plan will not materially affect the conclusions within this letter.

Should you have any questions or require any further information, please do not hesitate to contact the undersigned.

Respectfully submitted,

**C.F. CROZIER & ASSOCIATES INC.**



Kerianne Hagan, P.Eng.  
Project Engineer, Transportation

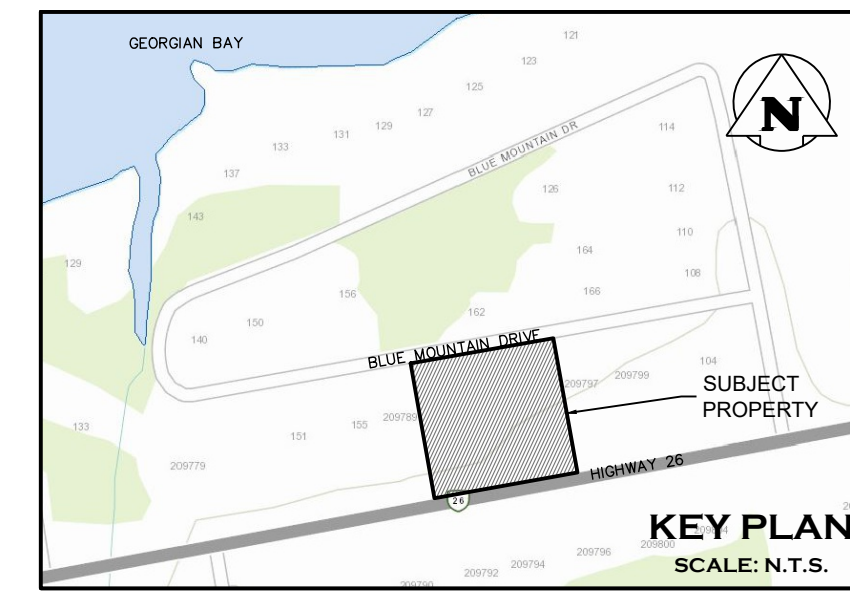
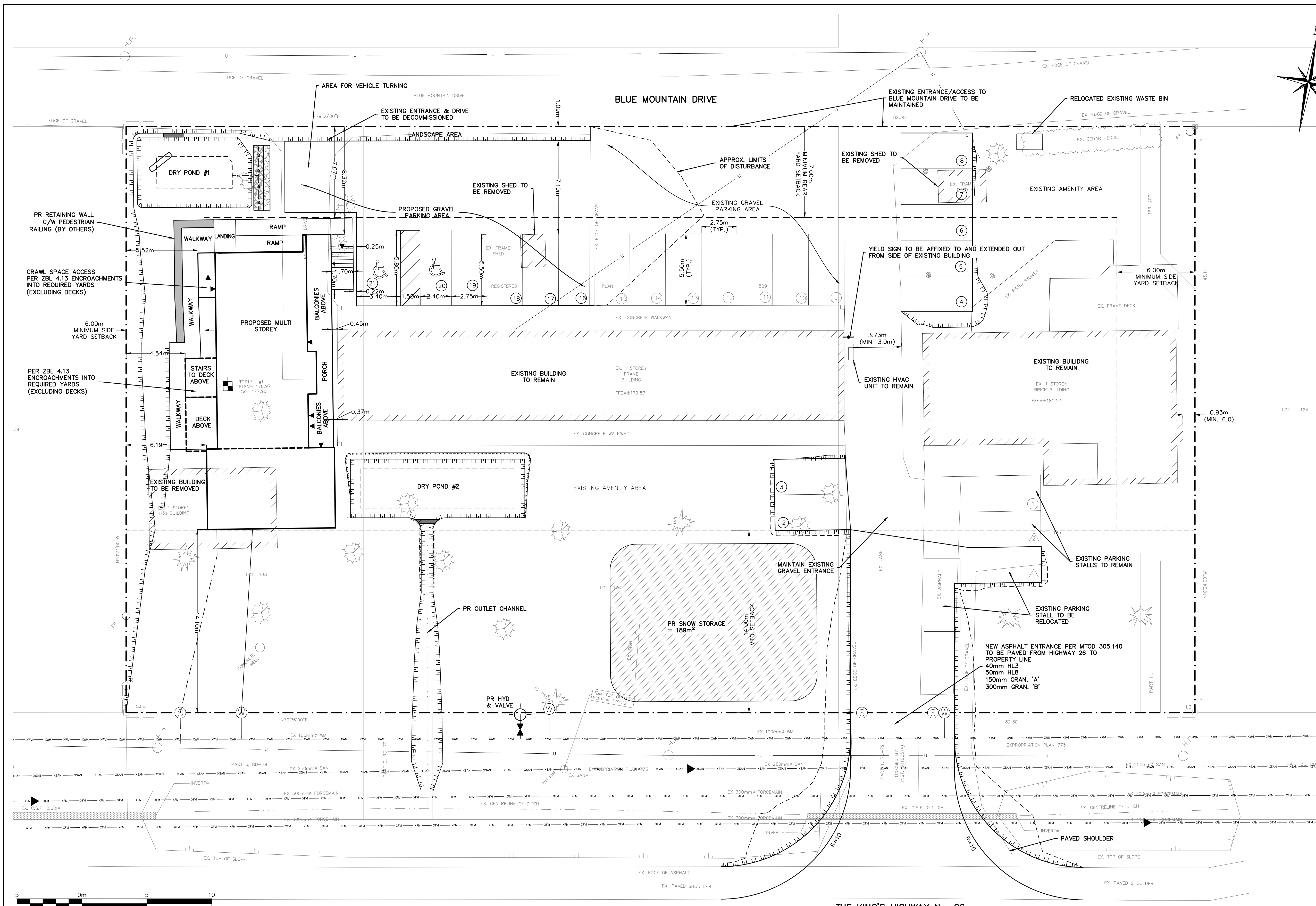
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Encl.

- Attachment A:** Site Plan (Crozier, September 2025)
- Attachment B:** ITE Trip Generation Manual, 11<sup>th</sup> Edition Excerpts
- Attachment C:** TAC GDGCR Excerpts
- Attachment D:** Vehicle Swept Path Diagrams

# Attachment A

## Site Plan



SITE STATISTICS - ZONING C2		
	REQUIRED	PROVIDED
LOT AREA	450m <sup>2</sup>	3712.6m <sup>2</sup>
LOT FRONTAGE	15m	82m
LOT COVERAGE	40% (MAX)	674.3m <sup>2</sup>
		TOTAL LOT COVERAGE = 18.2%
BUILDING SETBACKS	FRONT YARD - 3.0m	14.1m
	EXTERIOR SIDE YARD - 2.0m	N/A
	INTERIOR SIDE YARD - 6.0m	6.19m
	REAR YARD - 7.0m	8.32m
PARKING	EXISTING - 10	10
	PROPOSED - 7	13
	TOTAL - 17 (NOTE 3)	23
	ACCESSIBLE - 2	2
MTO SETBACK	MTO - 14.0m	14.1m
HEIGHT	11 m	10.99m

- PARKING REQUIREMENTS:**
- 1.3 SPACES PER UNIT
- EXISTING: 8 UNITS, 10 PARKING SPACES PROVIDED UNDER EXISTING CONDITIONS (NOTE 2)
- PROPOSED: 5 x 1.3 = 7 PARKING SPACES
- ACCESSIBLE: 25-50 TOTAL SPACES REQUIRED, 2 ACCESSIBLE SPACES
- NOTES:**
- 1. PROPOSED BUILDING TO CONTAIN 5 UNITS
- 2. TOTAL PARKING REQUIREMENTS PER SECTION 5.1.4 (A) ARE THE SUM OF THE EXISTING PARKING PROVIDED AND THE REQUIRED PARKING BASED ON THE EXPANSION OR ENLARGEMENT ONLY.

- LEGEND**
- ⚠ EXISTING PARKING SPACE WITHIN MTO SETBACK
  - ① EXISTING PARKING SPACE
  - ② PROPOSED PARKING SPACE



THE KING'S HIGHWAY No. 26

1. THIS DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZIER & ASSOCIATES INC. AND THE REPRODUCTION OF ANY PART WITHOUT PRIOR WRITTEN CONSENT OF THIS OFFICE IS STRICTLY PROHIBITED.

2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATUMS ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO CONSTRUCTION.

3. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT.

4. DO NOT SCALE THE DRAWINGS.

5. ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

**TEMPORARY BENCHMARKS**

ELEVATIONS HEREON ARE GEODETIC AND ARE REFERRED TO THE GEODETIC MONUMENT NO. 72U313 HAVING AN ELEVATION OF 179.633 METRES (CGVD 28.78).

TBM#1 - TOP OF MANHOLE RIM NEAR THE SOUTH SIDE OF THE PROPERTY HAVING AN ELEVATION OF 179.22

TOPOGRAPHIC SURVEY PER ZUBEK, EMO, PATTEN & THOMSEN LIMITED. O.L.S. RECEIVED 2021.01.18

No.	ISSUE	DATE: YYYY/MM/DD
0	ISSUED FOR 1st SUBMISSION	2023/04/05
1	ISSUED FOR 2nd SUBMISSION	2025/10/01

Engineer

**J. J. ELDER**  
100522626  
2/1/2025  
PROVINCE OF ONTARIO

Engineer

**L.Y. WANG**  
100178087  
10/1/2025  
PROVINCE OF ONTARIO

Project

**THE LAKE AT BLUE TOWN OF THE BLUE MOUNTAINS**

Drawing

**SITE PLAN**

**CROZIER CONSULTING ENGINEERS**

Drawn By: J.A.P. Design By: J.E./P.N.R. Project: **1527-5838**

Check By: J.E. Check By: N.O. Scale: 1:150 Drawing: **C101**

# **Attachment B**

## ITE Trip Generation Excerpts

# Land Use: 310

## Hotel

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### Description

A hotel is a place of lodging that provides sleeping accommodations and supporting facilities such as a full-service restaurant, cocktail lounge, meeting rooms, banquet room, and convention facilities. A hotel typically provides a swimming pool or another recreational facility such as a fitness room. All suites hotel (Land Use 311), business hotel (Land Use 312), motel (Land Use 320), and resort hotel (Land Use 330) are related uses.

### Additional Data

Twenty-five studies provided information on occupancy rates at the time the studies were conducted. The average occupancy rate for these studies was approximately 82 percent.

Some properties in this land use provide guest transportation services (e.g., airport shuttle, limousine service, golf course shuttle service) which may have an impact on the overall trip generation rates.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, District of Columbia, Florida, Georgia, Indiana, Minnesota, New York, Ontario (CAN), Pennsylvania, South Dakota, Texas, Vermont, Virginia, and Washington.

***For all lodging uses, it is important to collect data on occupied rooms as well as total rooms in order to accurately predict trip generation characteristics for the site.***

***Trip generation at a hotel may be related to the presence of supporting facilities such as convention facilities, restaurants, meeting/banquet space, and retail facilities. Future data submissions should specify the presence of these amenities. Reporting the level of activity at the supporting facilities such as full, empty, partially active, number of people attending a meeting/banquet during observation may also be useful in further analysis of this land use.***

### Source Numbers

170, 260, 262, 277, 280, 301, 306, 357, 422, 507, 577, 728, 867, 872, 925, 951, 1009, 1021, 1026, 1046

# Hotel (310)

## Vehicle Trip Ends vs: Rooms

On a: **Weekday,**

**Peak Hour of Adjacent Street Traffic,**

**One Hour Between 4 and 6 p.m.**

**Setting/Location: General Urban/Suburban**

Number of Studies: 31

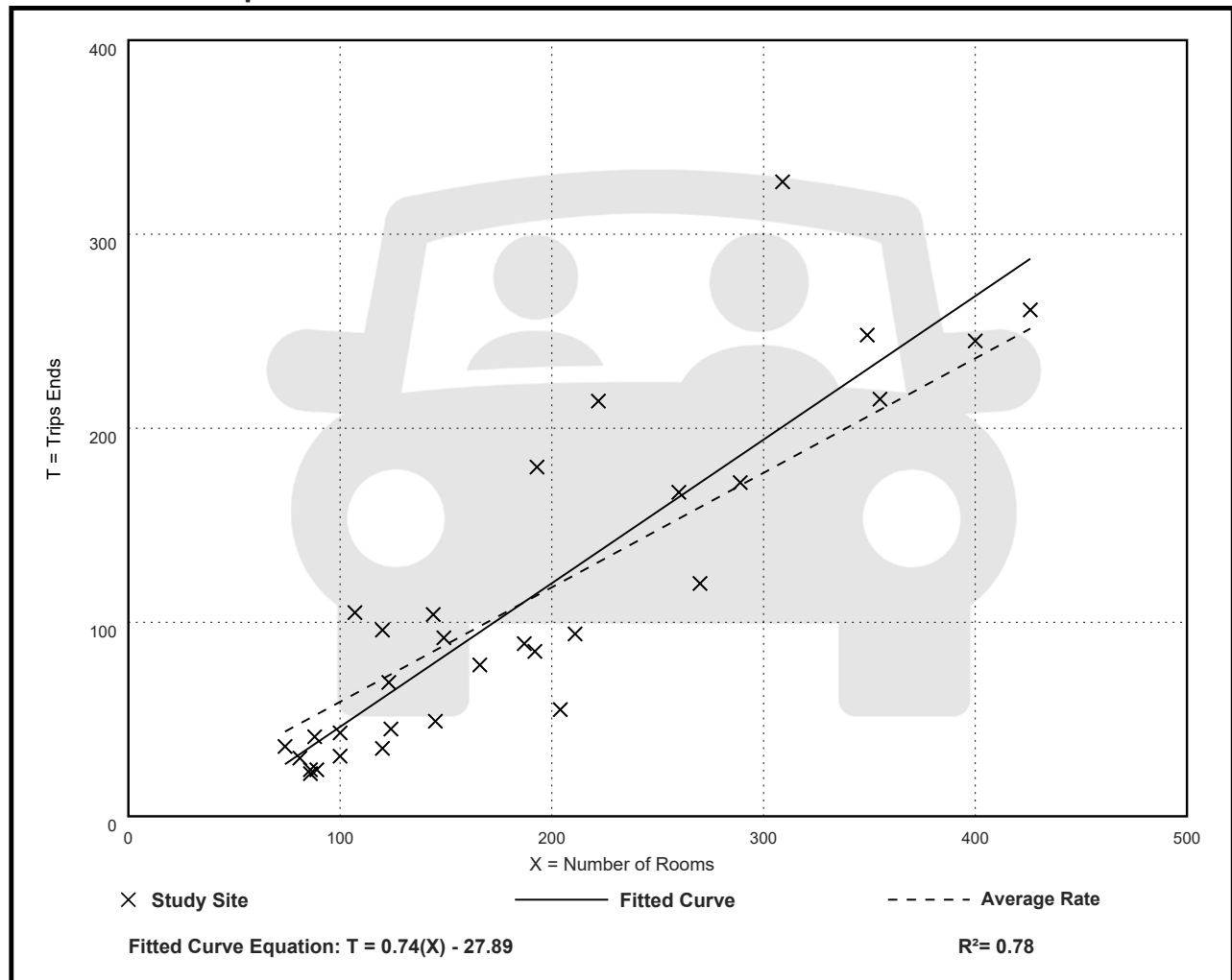
Avg. Num. of Rooms: 186

Directional Distribution: 51% entering, 49% exiting

## Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
0.59	0.26 - 1.06	0.22

## Data Plot and Equation



# Hotel (310)

## Vehicle Trip Ends vs: Rooms

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 9

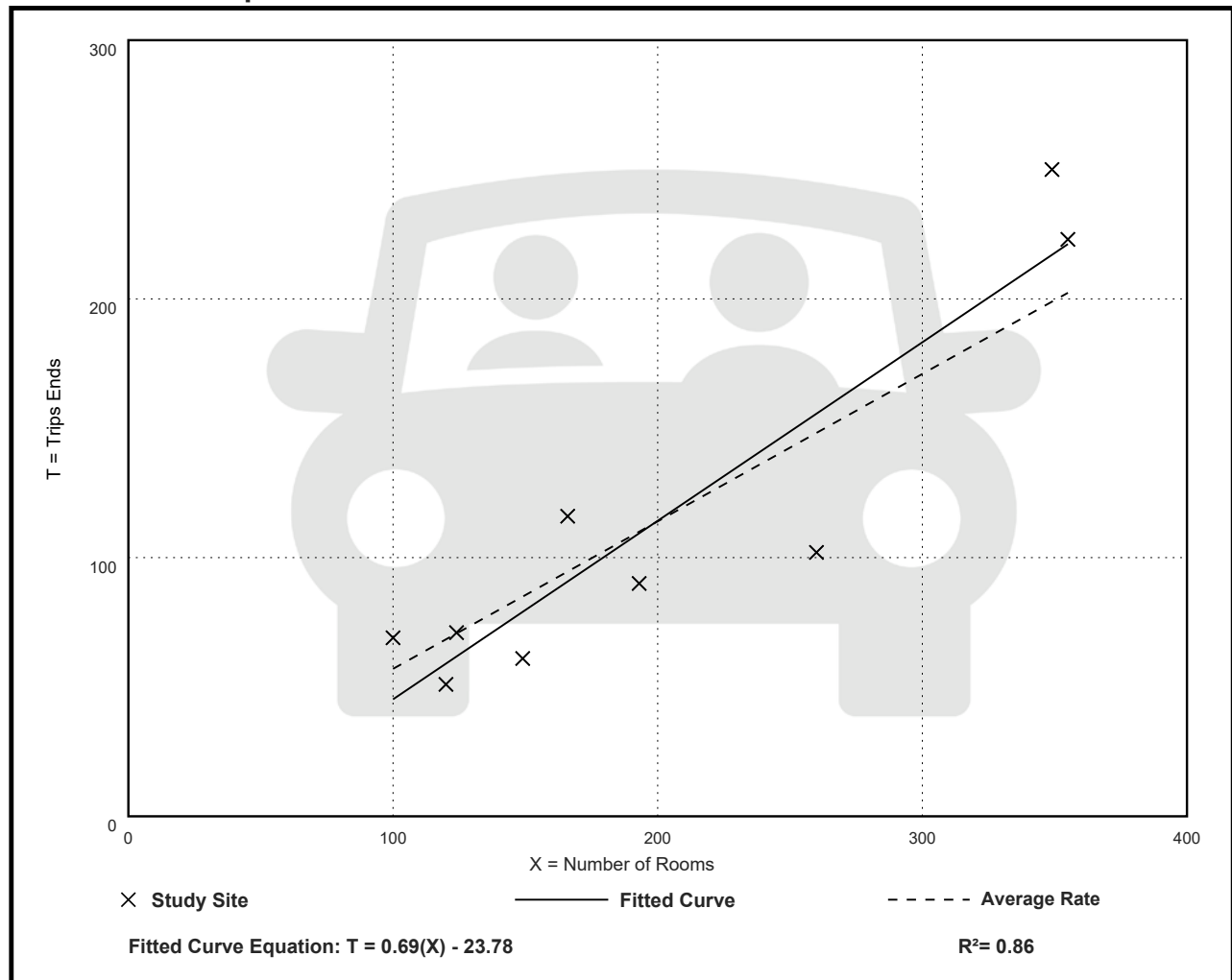
Avg. Num. of Rooms: 202

Directional Distribution: 48% entering, 52% exiting

### Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
0.57	0.39 - 0.72	0.14

### Data Plot and Equation



# Attachment C

## TAC GDGCR Excerpts



Transportation Association of Canada

# Geometric Design Guide for Canadian Roads



June 2017

### **Case B1 – Left Turn from the Minor Road**

Departure sight triangles for traffic approaching from either the right or the left, like those shown in **Figure 9.9.2**, should be provided for left turns from the minor road onto the major road for all stop-controlled approaches. The length of the leg of the departure sight triangle along the major road in both directions, shown as distance *b* in **Figure 9.9.2**, is the recommended intersection sight distance for Case B1.

The vertex (decision point) of the departure sight triangle on the minor road should be 4.4 m from the edge of the major-road traveled way. This represents the typical position of the minor-road driver's eye when a vehicle is stopped relatively close to the major road. Field observations of vehicle stopping positions found that, where needed, drivers will stop with the front of their vehicle 2.0 m or less from the edge of the major-road traveled way. Measurements of passenger cars indicate that the distance from the front of the vehicle to the driver's eye for the current North American passenger car population is nearly always 2.4 m or less.<sup>68</sup> Where practical, it is desirable to increase the distance from the edge of the major-road traveled way to the vertex of the clear sight triangle from 4.4 m to 5.4 m. This increase allows 3.0 m from the edge of the major-road traveled way to the front of the stopped vehicle, providing a larger sight triangle. The length of the sight triangle along the minor road (distance *a* in **Figure 9.9.2**) is the sum of the distance from the major road plus ½ lane width for vehicles approaching from the left, or 1½ lane widths for vehicles approaching from the right.

Field observations of the gaps in major-road traffic actually accepted by drivers turning onto the major road have shown that the values in **Table 9.9.3** provide sufficient time for the minor-road vehicle to accelerate from a stop and complete a left turn without unduly interfering with major-road traffic operations. The time gap acceptance time does not vary with approach speed on the major road. A constant value of time gap, independent of approach speed, can be used as a basis for intersection sight distance determinations. Observations have also shown that major-road drivers will reduce their speed to some extent when minor-road vehicles turn onto the major road. Where the time gap acceptance values in **Table 9.9.3** are used to determine the length of the leg of the departure sight triangle, most major-road drivers should not need to reduce speed to less than 70% of their initial speed.<sup>69</sup>

The intersection sight distance in both directions should be equal to the distance traveled at the design speed of the major road during a period of time equal to the time gap. In applying **Table 9.9.3**, it can usually be assumed that the minor-road vehicle is a passenger car; however, road authorities may provide more precise guidance on selection of the required design vehicle. Where substantial volumes of heavy vehicles enter the major road (e.g., from a ramp terminal), the use of tabulated values for single-unit or combination trucks should be considered.

**Table 9.9.3** includes appropriate adjustments to the gap times for the number of lanes on the major road and for the approach grade of the minor road. The adjustment for the grade of the minor-road approach is needed only if the rear wheels of the design vehicle would be on an upgrade that exceeds 3% when the vehicle is at the stop line of the minor-road approach.

**Table 9.9.3: Time Gap for Case B1, Left Turn from Stop**

Design Vehicle	Time Gap ( $t_g$ )(s) at Design Speed of Major Road
Passenger car	7.5
Single-unit truck	9.5
Combination truck (WB 19 and WB 20 )	11.5
Longer truck	To be established by road authority

Notes: Time gaps are for a stopped vehicle to turn left onto a two-lane highway with no median and with grades of 3% or less. The table values should be adjusted as follows:

- For multi-lane highways: For left turns onto two-lane highways with more than two lanes, add 0.5 s for passenger cars and 0.7 s for trucks for each additional lane, from the left, in excess of one, to be crossed by the turning vehicle.
- For minor approach grades: If the approach grade is an upgrade that exceeds 3%, add 0.2 s for each percent grade for left turns.
- Some road authorities use higher values for certain specialized vehicles (e.g., Alberta uses 22 s for very long log trucks).

The intersection sight distance along the major road (distance  $b$  in **Figure 9.9.2**) is determined by:

$$ISD = 0.278 V_{\text{major}} t_g \quad (9.9.1)$$

Where:

ISD = intersection sight distance (length of the leg of sight triangle along the major road) (m)

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

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

For example, a passenger car turning left onto a two-lane major road should be provided sight distance equivalent to a time gap of 7.5 s in major-road traffic. If the design speed of the major road is 100 km/h, this corresponds to a sight distance of  $0.278(100)(7.5) = 208.5$  or 210 m, rounded for design.

A passenger car turning left onto a four-lane undivided roadway will need to cross two near lanes, rather than one. This increases the recommended gap in major-road traffic from 7.5 to 8.0 s. The corresponding value of sight distance for this example would be 223 m. If the minor-road approach to such an intersection is located on a 4% upgrade, then the time gap selected for intersection sight distance design for left turns should be increased from 8.0 to 8.8 s, equivalent to an increase of 0.2 s for each percent grade.

The design values for intersection sight distance for passenger cars are shown in **Table 9.9.4**. **Figure 9.9.4** includes design values, based on the time gaps for the design vehicles included in **Table 9.9.3**.

No adjustment of the recommended sight distance values for the major-road grade is generally needed because both the major- and minor-road vehicle will be on the same grade when departing from the intersection. However, if the minor-road design vehicle is a heavy truck and the intersection is located near a sag vertical curve with grades over 3%, then an adjustment to extend the recommended sight distance based on the major-road grade should be considered.

**Table 9.9.4: Design Intersection Sight Distance – Case B1, Left Turn From Stop**

Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (m)	Design (m)
20	20	41.7	45
30	35	62.6	65
40	50	83.4	85
50	65	104.3	105
60	85	125.1	130
70	105	146.0	150
80	130	166.8	170
90	160	187.7	190
100	185	208.5	210
110	220	229.4	230
120	250	250.2	255
130	285	271.1	275

Note: Intersection sight distance shown is for a stopped passenger car to turn left onto a two-lane highway with no median and grades 3% or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.

Sight distance design for left turns at divided-highway intersections should consider multiple design vehicles and median width. If the design vehicle used to determine sight distance for a divided-highway intersection is larger than a passenger car, then sight distance for left turns will need to be checked for that selected design vehicle and for smaller design vehicles as well. If the divided-highway median is wide enough to store the design vehicle with a clearance to the through lanes of approximately 1 m at both ends of the vehicle, no separate analysis for the departure sight triangle for left turns is needed on the minor-road approach for the near roadway to the left. In most cases, the departure sight triangle for right turns (case B2) will provide sufficient sight distance for a passenger car to cross the near roadway to reach the median. Possible exceptions are addressed in the discussion of case B3.

# Attachment D

## Vehicle Swept Path Diagrams





