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February 11, 2026

Jim Peters
Director of Planning and Development
Municipality of Trent Hills
66 Front Street South
Campbellford, ON K0L 1L0

Reference: Proposed Single Family Homes – Traffic Brief
Trent River Road & Timberlane Drive
Trent Hills, Northumberland County, ON
Project N° 2481-26

DRAFT

Dear Mr. Peters,

Asurza Engineers Ltd. was retained to undertake a traffic review for a proposed residential development located at the southwest quadrant of Trent River Rd & Timberlane Dr in the Municipality of Trent Hills.

The analysis will estimate the possible trips generated by the development and evaluate any possible impact on the adjacent road network.

Background Information

The subject site is situated in the north part of Trent Hills, in proximity to the Burnt Point bay of the Trent River. Surrounding the site are various resorts, recreational areas and scattered residential properties. An aerial view is shown in ***Exhibit 1***.

At present, the site is a vacant parcel. It is intended for the development to provide 21 single-family homes, as well as an amenities building. Various walkways internal to the development are planned, allowing for better pedestrian connectivity.



Exhibit 1: *Location of the Subject Site.*

Five accesses are proposed along Timberlane Dr for vehicular access to the individual driveways of each home. Also, a total of 10 guest parking spaces will be provided at the south of the site. For further information, see the draft site plan attached to the end of this letter.

Trent River Road is a two-lane (one lane per direction) east-west roadway, presenting a rural cross-section with grassed shoulders and ditches for water drainage. This road provides a route for those accessing the nearby communities along the north shore of the Trent River. A posted speed of 50 km/h was noted along Trent River Rd.

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Timberlane Drive is a two-lane (one lane per direction) north-south granular roadway presenting a narrow rural cross-section with grassed shoulders. Very minimal development is featured along this roadway, which directly serves scattered residential properties. This road forms a three-leg intersection with Trent River Road, having a stop sign on Timberlane Dr. No posted speed was found; therefore, 50 km/h is adopted in accordance with the Ontario Highway Traffic Act.

Development Trip Generation and Trip Distribution

The estimation of trips generated was derived from the Trip Generation Manual, 12th Edition, published by the Institute of Transportation Engineers (ITE). The land use which most closely describes the proposed development is 'Single-Family Detached Housing – Land Use Code 210'.

According to the ITE, 'single-family detached housing' includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.

The trip equations and the estimated numbers of trips to be generated by the proposed development are shown in ***Table 1***.

Trip Generation Rates - Trip Generation Manual, 12th Ed.								
ITE Code	ITE Land Use	Unit of Measure	AM Pk. Hr. of Adj. Street			PM Pk. Hr. of Adj. Street		
			Eqn.	In	Out	Eqn.	In	Out
210	Single-Family Detached Housing	Dwelling Units	0.67(X) + 5.59	27%	73%	0.92 Ln(X) + 0.33	62%	38%

Trips Generated by the Proposed Development								
ITE Code	ITE Land Use	Total Units	AM Pk. Hr. of Adj. Street			PM Pk. Hr. of Adj. Street		
			Trips	In	Out	Trips	In	Out
210	Single-Family Detached Housing	21	20	5	15	23	14	9

Table 1: *Estimation of Trips Generated.*

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It is estimated that the proposed 21 single-family homes will generate 20 trips during a typical weekday morning peak hour and 23 trips during a typical weekday afternoon peak hour.

From the estimation, it is clear that the number of trips during peak hours is very minor and will have a negligible impact to the current traffic operations on the adjacent roads and intersections.

Discussion

The "Transportation Impact Analyses for Site Development – an ITE Recommended Practice", from the Institute of Transportation Engineers, provides guidelines to help in determining the need for a traffic impact analysis. One of them is that the generation of an additional 100 vehicles per hour by any proposed development can possibly create some traffic issues (i.e. reduction of capacity, extended queues, low level of service).

The publication also indicates that the 100 vehicles per hour should not be seen as a strict threshold for the initiation of a transportation impact analysis. Due to the sensitivity of densely populated areas where the environment includes diverse urban characteristics (i.e. high-rise buildings with commercial areas), many jurisdictions tend to use lower thresholds; these threshold levels may vary among agencies in response to particular local conditions and priorities.

Knowing that the proposed residential development is very minor, it is determined that any possible trips generated do not reach any threshold to require an in-depth traffic analysis.

Conclusion

Due to the very limited scale of the proposed development, the additional trips generated by the single family homes will impose virtually no impact on the adjacent road network; any minor traffic impact because of the new trips will be negligible to the current traffic operations.

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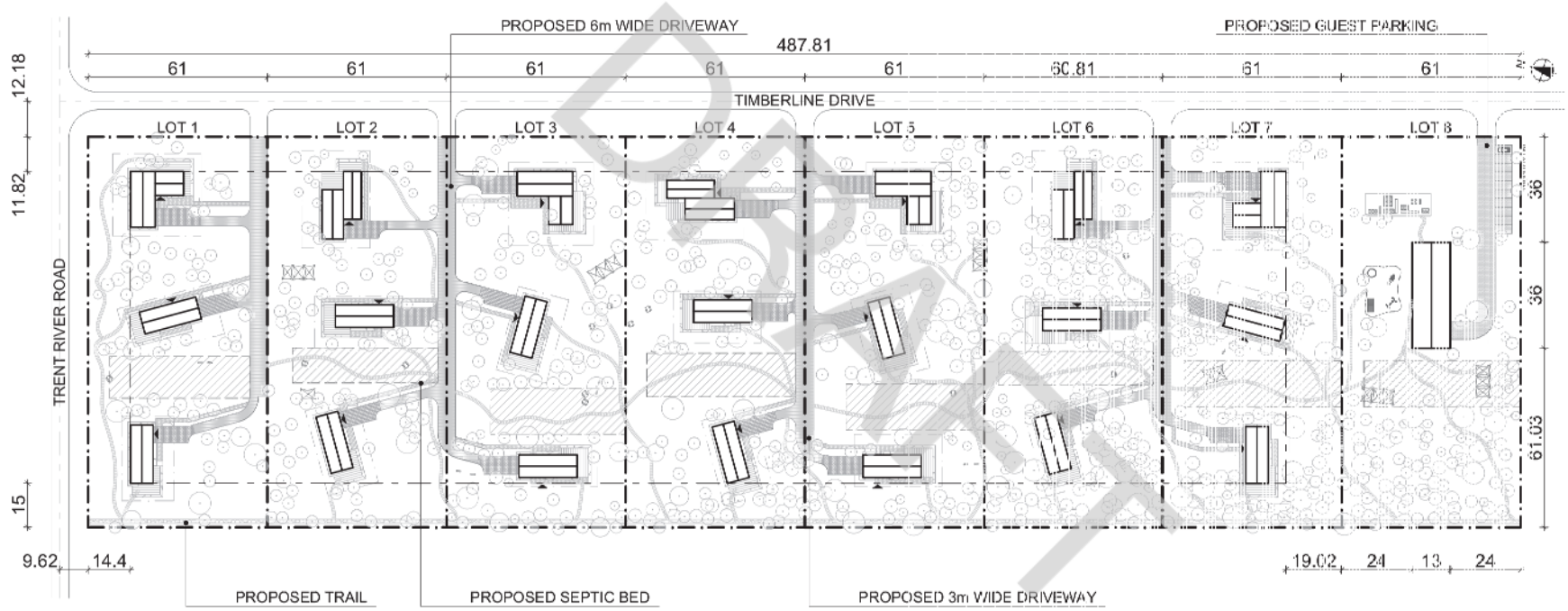
Additionally, it must be verified that the width of Timberlane Drive is at least 6 metres wide. This will ensure that the minimum clear width provided for fire department access is met in accordance with the Ontario Building Code Article 3.2.5.6.

Should you require any further information in consideration of the above, please contact the undersigned.

Sincerely,

Martin Asurza, M. Eng., P. Eng.
Senior Transportation/Traffic Engineer
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TRENT RIVER DEVELOPMENT
TRENT HILLS, ON

Siteplan

A103

Land Use: 210
Single-Family Detached Housing

Description

A single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.

Specialized Land Use

Data have been submitted for several single-family detached housing developments with homes that are commonly referred to as patio homes. A patio home is a detached housing unit that is located on a small lot with little (or no) front or back yard. In some subdivisions, communal maintenance of outside grounds is provided for the patio homes. The three patio home sites total 299 dwelling units with overall weighted average trip generation rates of 5.35 vehicle trips per dwelling unit for weekday, 0.26 for the AM adjacent street peak hour, and 0.47 for the PM adjacent street peak hour. These patio home rates, based on a small sample of sites, are lower than those for single-family detached housing (Land Use 210), lower than those for single-family attached housing (Land Use 215), and higher than those for senior adult housing—single-family (Land Use 251). (Source 1008)

Additional Data

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Alabama, Arizona, British Columbia (CAN), California, Delaware, Illinois, Kentucky, Massachusetts, Minnesota, Montana, New Jersey, New York, North Carolina, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Vermont, and West Virginia.

Source Numbers

356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 869, 903, 925, 936, 1005, 1007, 1008, 1010, 1033, 1066, 1077, 1078, 1079, 1204, 1221, 1225, 1236, 1251, 1265, 1267

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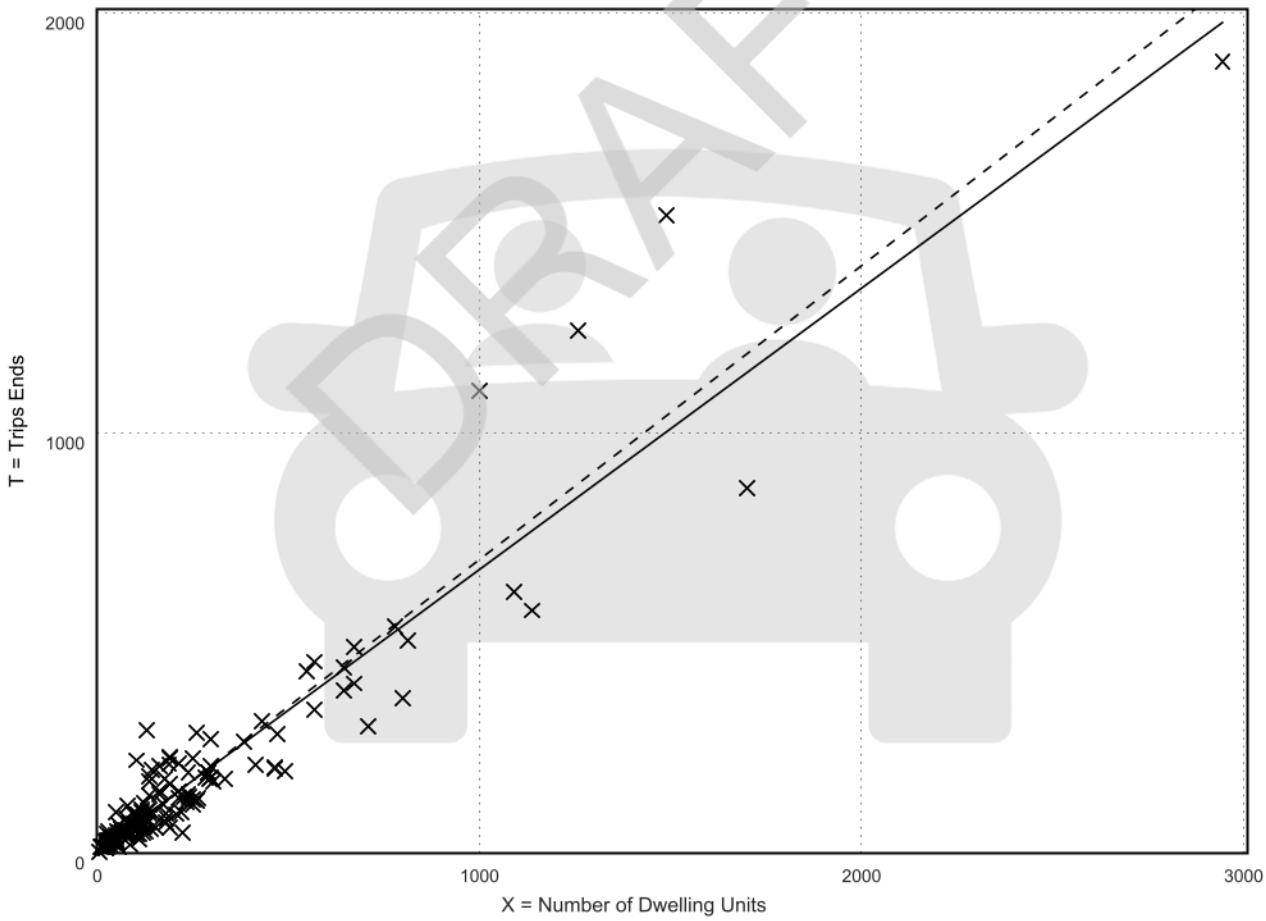
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	153
Avg. Num. of Dwelling Units:	239
Directional Distribution:	27% entering, 73% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.22 - 2.27	0.26

Data Plot and Equation



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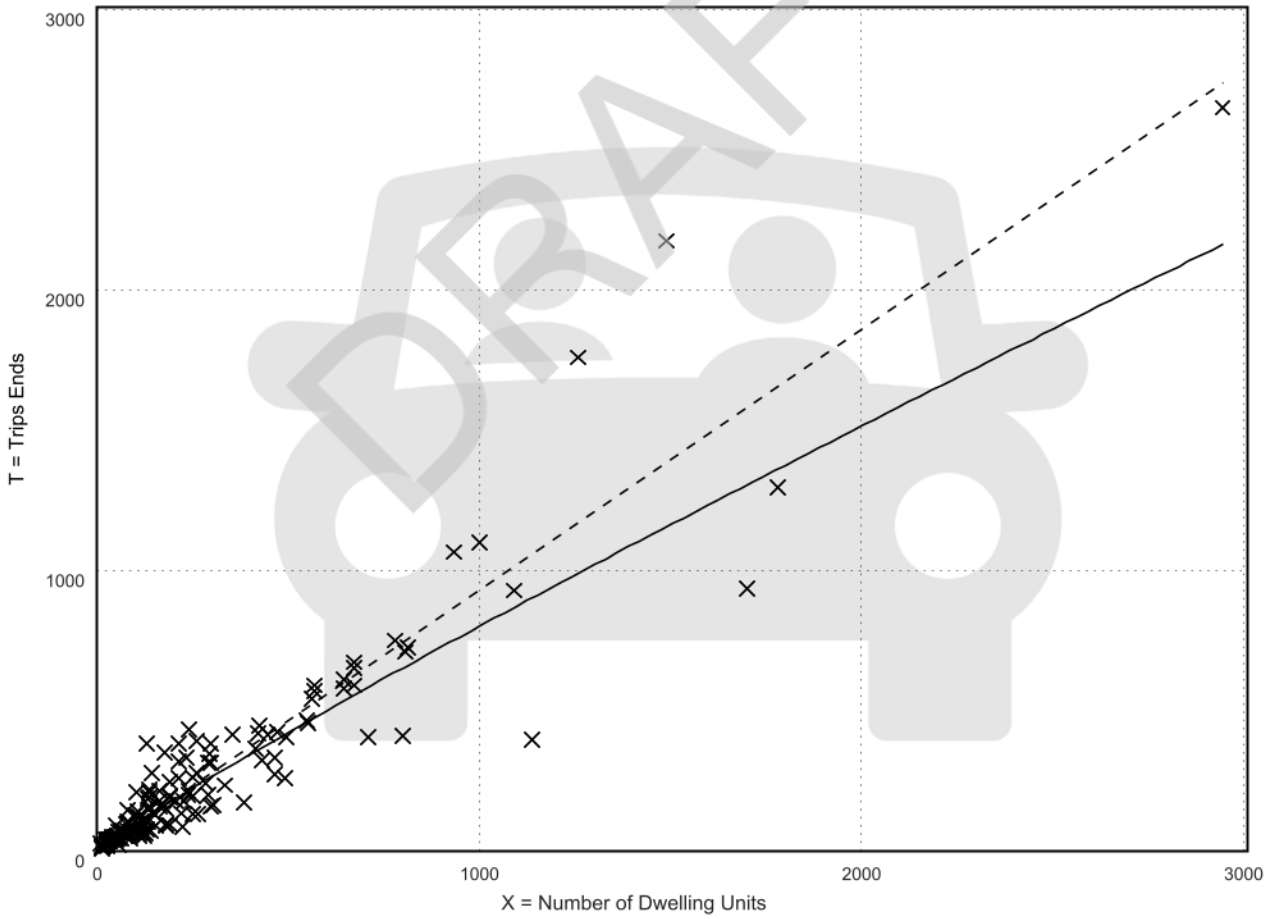
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs:	**Dwelling Units**
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:	166
Avg. Num. of Dwelling Units:	266
Directional Distribution:	62% entering, 38% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.93	0.35 - 2.98	0.33

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.92 Ln(X) + 0.33

R^2= 0.90

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