

2026-04-22
Project: 260150

Rob Stovel Jr.
Stovel and Associates Inc.
c/o
Cox Construction Limited
965 York Road
Guelph, ON N1E 6Y9

RE: PROPOSED RESIDENTIAL DEVELOPMENT, SOUTHEAST CORNER OF FORESTELL ROAD AND SIDEROAD 10 N, TOWNSHIP OF PUSLINCH, TRAFFIC IMPACT BRIEF

Cox Construction Limited retained Paradigm Transportation Solutions Limited (Paradigm) to prepare this Traffic Impact Brief in support of a proposed residential development in the Township of Puslinch. **Figure 1** (attached) illustrates the site location on the southeast corner of Forestell Road and Sideroad 10 N.

Purpose and Scope

The purpose of this study is to identify and assess the potential transportation impact(s) of the development. The scope of this study is consistent with the Wellington County *Traffic Impact Study Guidelines*¹ for developments generating fewer than 100 peak hour auto trips. This study includes an estimate of the site vehicular trip generation in both the weekday AM peak hour and weekday PM peak hour, and a review of the available sight distance at each proposed access connection to the site.

Existing Conditions

Forestell Road is an east-west road with a two-lane rural cross-section comprising one travel lane per direction. The speed limit is not posted and is assumed to be 80 km/h in accordance with the Ontario *Highway Traffic Act*. Sidewalks or other active transportation facilities are not provided on either side of the road, and trucks (other than local deliveries) are prohibited on the section between County Road 32 and County Road 35. Forestell Road operates under Township of Puslinch jurisdiction.

¹ Wellington County, Appendix G “*Traffic Impact Study Guidelines*” in *Road Master Action Plan*, (Guelph: Wellington County, 2021).

Sideroad 10 N is a north-south road with a two-lane rural cross-section comprising one travel lane per direction. The segments north of Forestell Road and south of Concession Road 4 operate with a posted speed limit of 60 km/h; however, the speed limit between Forestell Road and Concession Road 4 is not posted and is assumed to be 80 km/h. Sidewalks or other active transportation facilities are not provided on either side of the road. Sideroad 10 N operates under Township of Puslinch jurisdiction.

Development Description

The subject site is on the southeast corner of Forestell Road and Sideroad 10 N and is vacant. The property owner is planning to redevelop the site into a residential subdivision with 39 lots. Vehicle access to the site is proposed via an all-moves street connection to Sideroad 10 N (Road A) and an all-moves street connection to Forestell Road (Road B). Vehicular access to lots 36 through 39 is assumed via private driveway connections to Forestell Road (for lots 37 to 39) and Sideroad 10 N (for Lot 36). **Figure 2** (attached) illustrates the conceptual plan of subdivision and the locations of the proposed road connections.

Traffic Impact Assessment

Trip Generation

The estimated site trip generation is based on data published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*² for LUC 210 (Single-Family Detached Housing). LUC 210 is described as “any single-family detached home on an individual lot; a typical site surveyed is a suburban subdivision.”

Table 1 summarizes the estimated trip generation and indicates the site is estimated to generate 32 trips in the weekday AM peak hour and 40 trips in the weekday PM peak hour. Assuming an equal distribution of trips within each peak hour, this trip generation activity equates to approximately one trip every two minutes. This volume of hourly traffic would not be expected to significantly impact traffic operations at Forestell Road and Sideroad 10 N.

TABLE 1: ESTIMATED TRIP GENERATION

Land Use Code (LUC) and Description	AM Peak Hour				PM Peak Hour			
	Rate	In	Out	Total	Rate	In	Out	Total
LUC 210 – 39 units (Single-Family Detached Housing)	Eqn. ^[1]	9	23	32	Eqn. ^[2]	25	15	40

Notes:

- LUC 210 (AM): $T = 0.67(X) + 5.59$, (27% entering, 73% exiting)
- LUC 210 (PM): $\ln(T) = 0.92\ln(X) + 0.33$, (62% entering, 38% exiting)

² Institute of Transportation Engineers, *Trip Generation Manual*, 12th ed., (Washington, DC: ITE, 2025).



Sight Distance Assessment

Paradigm staff conducted a site visit on Monday April 13, 2026 to determine the available sight distance at each new street connection in accordance with guidance published in both the Township of Puslinch *Entrance By-law*³ and the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads (TAC GDGCR)*.⁴ The *Entrance By-law* prohibits new entrances where the “clear vision is less than 150 metres in each direction from which traffic may approach on a Township road” whereas the TAC *GDGCR* defines minimum sight distances based on the design speed of the road; typically 10 km/h to 20 km/h above the speed limit. **Table 2** summarizes the respective design parameters used in the sight distance assessments and **Table 3** summarizes the minimum sight distances published by TAC at a design speed of 90 km/h, and those outlined in the *Entrance By-law*.

TABLE 2: SIGHT DISTANCE PARAMETERS

Parameter	TAC GDGCR ^[1]	Puslinch Township ^[2]
Vehicle Tail or Brake Light Height	0.60 m	1.05 m
Top of Passenger Car	1.30 m	Not Referenced
Driver Eye Height – Passenger Car	1.08 m	1.05 m

Notes:

1. Intersection sight distance is measured from a point at least 4.4 metres from the edge of pavement at a driver eye height of 1.08 metres looking for the top of a car at 1.30 metres. Stopping sight distance is measured from the centre of the travel lane for a driver (1.08 metres) looking for a vehicle tail or brake light (0.60 metres).
2. Sight distance is measured from the centreline of the entrance at a driver eye height of 1.05 metres, offset 3.0 metres from the edge of pavement to a point on the centreline of the upstream and downstream lane at a height of 1.05 metres.

TABLE 3: MINIMUM SIGHT DISTANCES

Sight Distance Measurement	TAC GDGCR 90 km/h (Design)	Township of Puslinch <i>Entrance By-law</i>
Minimum Stopping Sight Distance ⁵	160 metres	150 metres
Intersection Sight Distance ⁶ (Left Turn from Stop – Passenger Car)	190 metres	150 metres
Intersection Sight Distance ⁷ (Right Turn from Stop – Passenger Car)	165 metres	150 metres

³ Township of Puslinch, *By-law Number 032/2020*, (Puslinch, Township of Puslinch, 2020).

⁴ TAC, “Intersections,” Chap. 9 in *Geometric Design Guide for Canadian Roads*, (Ottawa: TAC, 2017).

⁵ Ibid. *Table 2.5.2: Stopping Sight Distance on Level Roadways for Automobiles*.

⁶ Ibid. *Table 9.9.4: Design Intersection Sight Distance – Case B1, Left Turn from Stop*.

⁷ Ibid. *Table 9.9.6: Design Intersection Sight Distance – Case B2, Right Turn from Stop*.



Forestell Road along the site's frontage is relatively straight and flat. From the proposed location of Road B, visibility is unobstructed to both Sideroad 10 N (a distance of nearly 400 metres) and Sideroad 12 N (a distance of 425 metres). These distances exceed those published in both the *Entrance Policy* and the TAC *GDGCR*.

The proposed connection to Sideroad 10 N (Road A) is opposite the existing driveway to 4670 Sideroad 10 N near the crest of a vertical curve. Sight distance to and from the north is unobstructed to and beyond Forestell Road, which is approximately 185 metres from the proposed location of Road A. Sight distance to and from the south is generally unobstructed beyond 200 metres for both outbound motorists, and motorists on Sideroad 10 N approaching Road A.

Given the time of year of the site visit, the deciduous foliage on the east side of Sideroad 10 N was not in bloom, thereby providing greater sight distance than when this foliage would be in bloom. Removal of the deciduous foliage on the east side of Sideroad 10 N immediately along the western edge of Lot 1, and ensuring Road A intersects the crest of the vertical curve on Sideroad 10 N would improve visibility for outbound motorists from the site.

Findings, Conclusions, and Recommendations

Based on the analysis contained herein, the findings of this study are as follows:

- ▶ The site is estimated to generate 32 trips in the weekday AM peak hour and 40 trips in the weekday PM peak hour, equivalent to one trip every two minutes.
- ▶ The location of the proposed street connections to both Sideroad 10 N (Road A) and Forestell Road (Road B) provide sufficient sight distance in accordance with the guidance published in the Transportation Association of Canada *Geometric Design Guide for Canadian Roads* and the Township of Puslinch *Entrance By-law*.
- ▶ Removal of the deciduous foliage on the east side of Sideroad 10 N immediately along the western edge of Lot 1, and ensuring Road A intersects the crest of the vertical curve on Sideroad 10 N would improve visibility for outbound motorists from the site.

Based on the findings of this study it is concluded that development of the site is not forecast to significantly impact traffic operations at Sideroad 10 N and Forestell Road. It is recommended that the site be considered for approval with no requirement for off-site transportation network improvements.

To improve visibility for outbound motorists from the site (given the time of year of the site visit conducted during this study) it is recommended that the deciduous foliage on the east side of Sideroad 10 N immediately along the western edge of Lot 1 be removed. Consideration could also be given to ensuring Road A intersects Sideroad 10 N at the crest of the vertical curve, just south of the driveway to 4670 Sideroad 10 N.

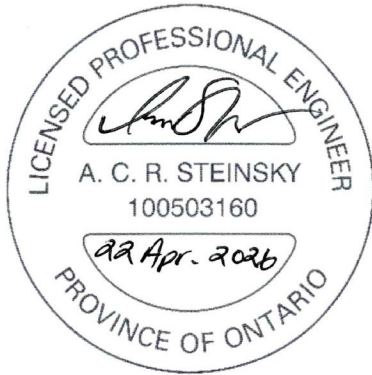


Yours very truly,

PARADIGM TRANSPORTATION SOLUTIONS LIMITED



Andrew Steinsky, P.Eng., PTOE, PTP, RSP1
Operations Principal, Southwestern Ontario



Attachments

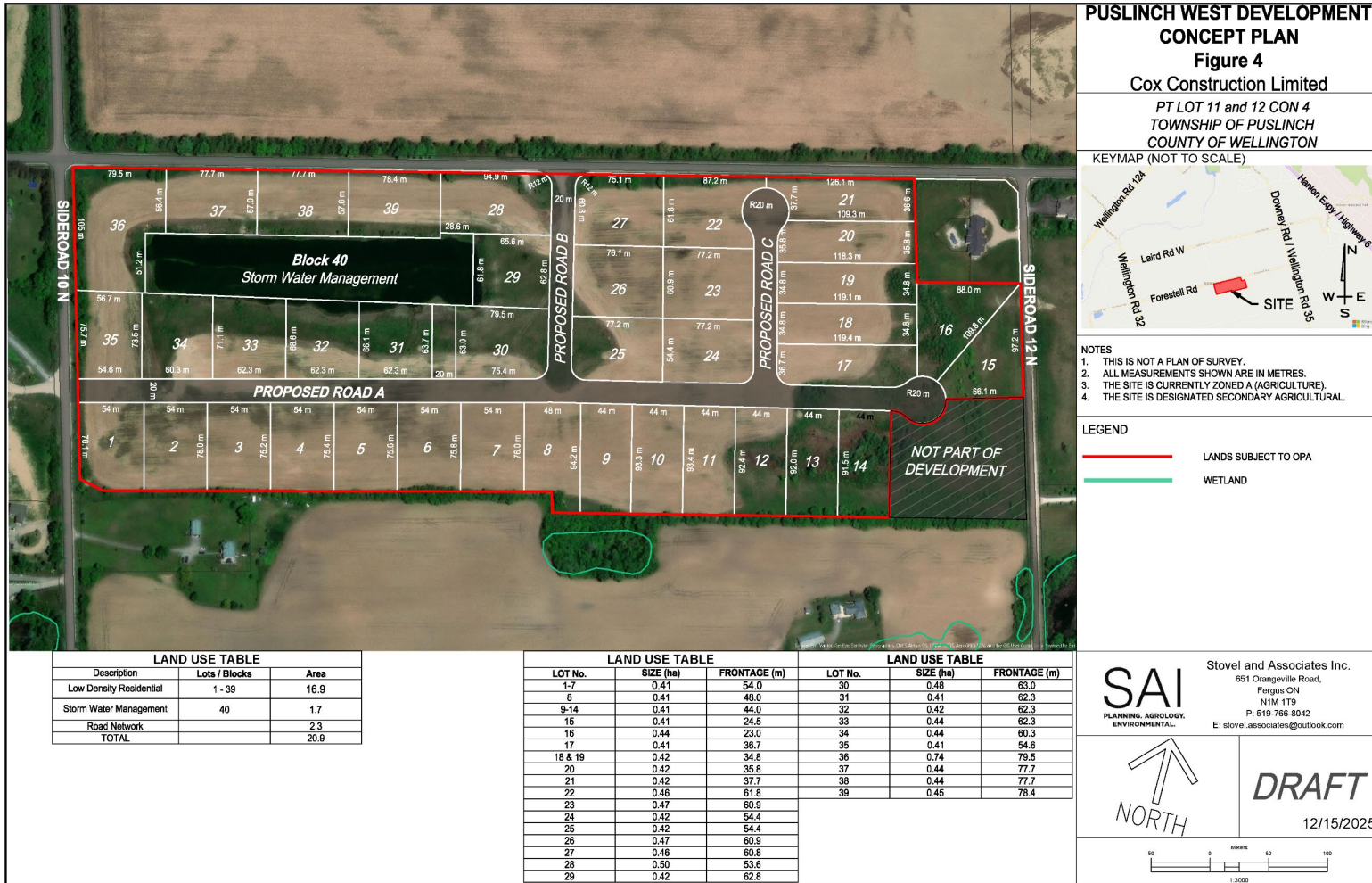




**approximate subject lands boundary
Image Source: SnazzyMaps, licensed under creative commons (<https://snazzymaps.com/>)*



Site Location



Conceptual Plan of Subdivision