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Transportation Impact Study - Addendum

PROPOSED RESIDENTIAL SUBDIVISION DEVELOPMENT

Belfountain
Caledon, ON

Second Submission: April 25, 2019
First Submission: January 23, 2018
Project No: NT-17-217

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NextEng Consulting Group Inc.

April 25, 2019

Mr. John Spina

The Manors of Belfountain Corp.
55 Blue Willow Drive
Woodbridge, ON L4L 9E8

Re: Transportation Impact Study
Belfountain Residental Subdivision
Our Project No. NT-17-217

Nextrans Consulting Engineers (A Division of NextEng Consulting Group Inc.) acknowledges receipt of Niagara Escarpment Commission comments dated September 21, 2018, the Town of Caledon comments dated October 3, 2018 and the Region of Peel comments dated July 31, 2018, with respect to our Transportation Study, dated January 23, 2018. The intention of this letter is to address these comments attached in **Appendix G**.

The subject site is currently vacant. Based on the preliminary Draft Plan of Subdivision prepared by The Manors of Belfountain Corp., dated March 2019, the development proposal is to develop the existing subject lands into 70 residential lots at approximately 0.53 ha per lot. Access to the plan is envisioned via two (2) proposed streets 'A' and 'C'. Access within the plan is envisioned via three (3) streets 'A', 'B', 'C'.

Based on the comments and discussion with the City staff, our responses are addressed in the accompanying revised TIS as follows:

NIAGARA ESCARPMENT COMMISSION COMMENTS

1. The introductory letter incorrectly notes that this study is in support of a zoning by-law amendment and site plan application, neither of which is correct.

Response: Acknowledged and addressed.

2. The volume of traffic estimated to be generated by the subdivision seems low. Did the analysis take into account the type of development? In the case of estate homes, there could be additional traffic from household staff, gardening services, parents driving children to school (if the walkway to the school is not supported), and parents commuting outside the area for work.

Response: As per the Town of Caledon TIS Terms of Reference and Guidelines dated March 2017, *all trip generation, trip distribution, assignment and transit use assumptions should be in accordance with the*

industry standard such as the ITE Trip Generation Manual, accepted techniques and based on local parameters. The methodology used to calculate the site generated trips is derived from the information contained in the Trip Generation Manual, 9th Edition published by the Institute of Transportation Engineers (ITE) for "Single-Family Detached Housing" (LUC 210) as established in the TOR approved by the Region of Peel and Town of Caledon. Furthermore, the morning peak hour calculation considers 292 studies for single-family detached homes on individual lots and the afternoon peak hour calculation considers 321 studies for single-family detached homes on individual lots. This land use included data from a wide variety of units with difference sizes, price ranges, locations and ages and a typical site surveyed is a suburban subdivision. On this basis, it is Nextrans opinion that the number of trips generated during the peak hours is representative of the proposed land use.

3. The fall colour season attracts large numbers of visitors to the area on weekends; was this factored into the traffic analysis?

Response: As established in the TOR approved by the Region of Peel and Town of Caledon, the analysis was to include typical weekday morning and afternoon peak periods for assessment purposes. There was no mention of fall seasonal counts to be undertaken. The TOR is provided in **Appendix H**.

4. Did the consultant review any traffic data from the EA undertaken by the Region to verify the single day traffic count?

Response: A review of the Peel Region EA was undertaken to verify the single day traffic counts. The volumes in the Peel Region EA are similar to the counts captured in our TMCs dated November 15, 2017. In addition, the James Dick Erin Pit Extension Haul Route was reviewed and is outside of our study area.

5. What are the implications of widening Shaws Creek Road on the hedgerow on the east side of the road?

Response: This can be reviewed and the limits of removal identified at the detailed design stage of the proposed road work.

6. Trip distribution: the report assumes that traffic will be going south on Shaws Creek Road to The Grange Sideroad. If Shaws Creek is not paved beyond the subdivision, would the traffic more likely go north through the village to Mississauga Road resulting in the need to widen Bush Street?

Response: As per conversation with City staff, the road paving on Shaws Creek Road south of the subject site limit may proceed. The site traffic has been reassigned to go northbound on Shaws Creek Road through the village to Mississauga Road. The sensitivity analysis is provided in the second submission. The results do not require a road widening for Bush Street.

7. Parking Assessment: the report concludes that there will be adequate parking for each dwelling but does not address whether the Town would require the provision of parking for the proposed parks and where such parking would be located.

Response: The parks are intended to serve the subject lands and the majority of visitors will be pedestrian or active transportation. Parking is available on street, as required.

8. Site Plan Review: the report concludes that a large vehicle could navigate the proposed streets. Did this analysis consider the terminus of Street C? Could a large vehicle turn around in the cul de sac without having to back up? Will there be a barrier at the end of Street C or is vehicle access to the park proposed?

Response: The AutoTURN analysis demonstrates that the waste collection vehicle can turn around in the cul de sac without reversing per the Waste Collection Design Standards Manual and Region Design Standards. A barrier will be provided at the end of Street C. There will be no vehicle access to the proposed park.

9. Pedestrian circulation: the report proposes a footpath through the Escarpment Natural Area to Old Main Street. NEC staff is concerned about the impact of such path on the natural environment. If this path is not allowed, did the consultant consider other means of active transportation to allow residents of the proposed subdivision to get to the village? (e.g. cycling routes – need for bike lane on Shaws Creek Road).

Response: Acknowledged and addressed in **Section 10.0**.

10. Conclusion: the report concludes that no external road improvements are necessary but page 2 of the report anticipates that Shaws Creek Road would need to be widened and paved.

Response: Shaws Creek Road does not need to be widened based on our findings. This has been revised and addressed in resubmission.

11. Appendix F is missing from our copy of the report.

Response: Acknowledged and addressed in resubmission.

TOWN OF CALEDON COMMENTS

1. The Belfountain area is subject to seasonal influx of visitors and vehicle traffic which is drawn to this area to enjoy the local businesses and natural features which at times already strain existing roadway infrastructure. Further residential development in this area will bring additional vehicle traffic, associated noise, and parking issues onto existing local Town and Regional roads in the area and consideration will have to be given to how this additional traffic will impact roads such as Main Street and Bush Street and their intersection in downtown Belfountain, as well as increased traffic on Shaw's Creek road which is at present an unpaved dirt road and likely unsuitable to accommodate a significant increase in traffic volumes. Based on current requests and calls for service to the Police and Town Bylaw from residents in relation to existing traffic, noise, and parking concerns in this area, any significant increase in daily vehicle traffic and associated noise in this area will no doubt lead to an increase in requests for Police and Town Bylaw assistance in this area. A detailed and careful review of existing traffic patterns and noise levels and the potential impact of any new development on them should be considered prior to approval.

Response: Existing patterns have been detailed in **Section 2.0.**

2. Sight distance analysis of the TIS report indicates a sightline concern at the intersection of Street C and Shaws Creek Road. This needs to be addressed during the next submission, and mitigation measures should be provided.

Response: Based on our review the proposed intersections allow for the design vehicles to safely make all maneuvers that are permitted by the layout without significantly affecting vehicles travelling along Shaws Creek Road with the exception of the South approach to Street 'C'. On this basis, it is recommended to implement an advisory warning sign for speed reduction to 50 km/h in accordance with TAC Figure 2.3.3.4, Sight Distance for Turning Movements from Stop.

3. From a transportation perspective and as directed by the Caledon Transportation Master Plan, the consultant should review and provide the recommendations on the appropriate Cycling Facilities within the subdivision according to OTM Book 18. Also, the sidewalk should be provided on the local roads based on the AODA standard. The findings should be provided in a drawing.

Response: Refer to draft plan for locations of sidewalk.

REGION OF PEEL COMMENTS

1. Capital Project: The Developer is advised that the Region has recently undertaken design for road improvements along Mississauga Road under project #14-4065. It is recommended the applicant contact the Region to clarify specific road improvement requirements prior to preparation of detailed engineering plans and/or reports. The capital project is currently at the 30% Detailed Design stage.

Response: Mississauga Road was not included in our TOR and therefore, no changes to be made to our report

2. All roads shall be designed to have a minimum width of 6 metres

Response: Requirement met. Refer to draft plan.

3. Road layouts shall be designed to permit a waste collection vehicle to drive forward without reversing for waste collection. Where the requirements for a road layout permitting forward movement of a waste collection vehicle cannot be met, a cul-de-sac or a T-turnaround shall be provided in accordance with the specifications shown in Appendices 2 and 3, respectively (Waste Collection Design Standards Manual).

Response: The AutoTURN demonstrates that the waste collection vehicle does not need to reverse for collection.

4. The turning radius from the centre line must be a minimum of 13 metres on all turns. This includes the turning radii to the entrance and exit of the site. Please show and label the turning radii in subsequent submissions.

Response: Requirement met. Refer to draft plan.

5. The proposed cul-de-sac on the East side of the site by Lot 55 and Lot 56 must have a minimum 13 metre turning radius from the centre line. Please show and label the turning radius from the centre line in subsequent submissions.

Response: Requirement met. Refer to draft plan.

With the revisions noted, the study concludes that the proposed development can adequately be accommodated by the existing transportation network with minimal traffic impact to the adjacent public roadways. The proposed site access will operate at excellent levels of services.

We trust the enclosed sufficiently addresses your needs. Should you have any questions, please do not hesitate to contact the undersigned.

Yours truly,

Nextrans Consulting Engineers
A Division of NextEng Consulting Group Inc.

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1.0 INTRODUCTION

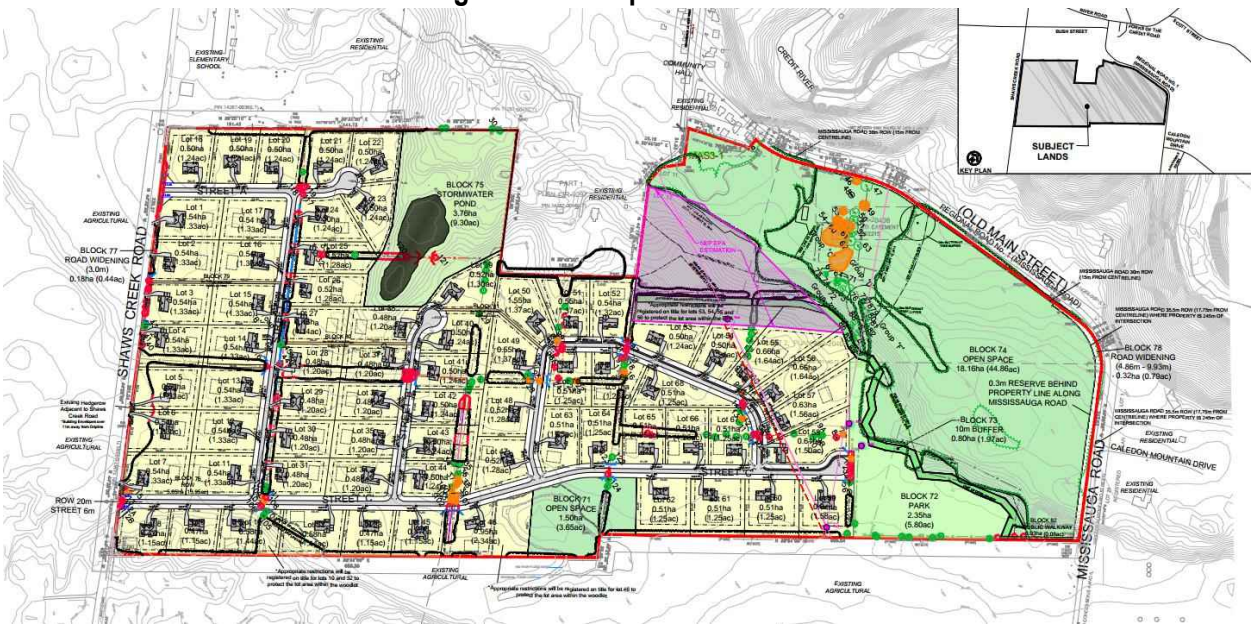
Nextrans Consulting Engineers was retained by The Manors of Belfountain Corp. (the 'Client') to undertake a Traffic Impact Study for a Development Permit and Draft Plan of Subdivision Application in support of a proposed estate residential subdivision development located along Shaws Creek Road, in the Town of Caledon. The location of the proposed development is illustrated in **Figure 1-1**.

Figure 1-1 – Site Location

The subject site is currently vacant. Based on the preliminary Draft Plan of Subdivision prepared by The Manors of Belfountain Corp., dated March 2019, the development proposal is to develop the existing subject lands into 70 residential lots at approximately 0.53 ha per lot. Access to the plan is envisioned via two (2) proposed streets 'A' and 'C'. Access within the plan is envisioned via three (3) streets 'A', 'B', 'C'. The preliminary draft plan is provided in **Figure 1-2**; **Appendix A** also provides a larger scale version of the proposed site plan.

Given the residential based nature of the development proposal, the analysis will include the weekday morning and afternoon peak periods for assessment purposes.

Figure 1-2 – Proposed Site Plan



2.0 EXISTING TRAFFIC CONDITIONS

2.1. Existing Road Network

The existing subject lands are located east of Shaws Creek Road, in the Town of Caledon. The road network is described as follows:

Shaws Creek Road: is classified as a collector road under the jurisdiction of the Town of Caledon. It has a two-lane cross section and maintains a posted speed limit of 60 km/h in the vicinity of the subject site.

Bush Street: is classified as an arterial road under the jurisdiction of Peel Region. It has a two-lane cross section and maintains a posted speed limit of 50 km/h in the vicinity of the subject site.

The Shaws Creek Road and Bush Street intersection features a flashing beacon and large stop signs at the all-way stop intersection.

2.2. Existing Active Transportation Network

Sidewalks

There are no dedicated sidewalks within the vicinity of the subject site.

Bicycle Lanes

There are dedicated bicycle lanes on both sides of Bush Street, east of Shaws Creek Road.

2.3. Existing Traffic Volumes

Existing traffic volumes at the study area intersections were undertaken by Spectrum Traffic on behalf of NexTrans Consulting Engineers on Wednesday, November 15, 2017 during the morning (7:00 a.m. to 10:00 a.m.) and afternoon (4:00 p.m. to 7:00 p.m.) peak periods. Detailed existing traffic data are provided in **Appendix B**.

2.4. Existing Traffic Assessment

The existing volumes are illustrated in **Figure 2-1**, and were analyzed using Synchro 9 software. The methodology of the software follows the procedures described and outlined in the Highway Capacity Manual, HCM 2000, published by the Transportation Research Board. The detailed results are provided in **Appendix C** and summarized in **Table 2.1**.

Figure 2-1 – Existing Traffic Volumes

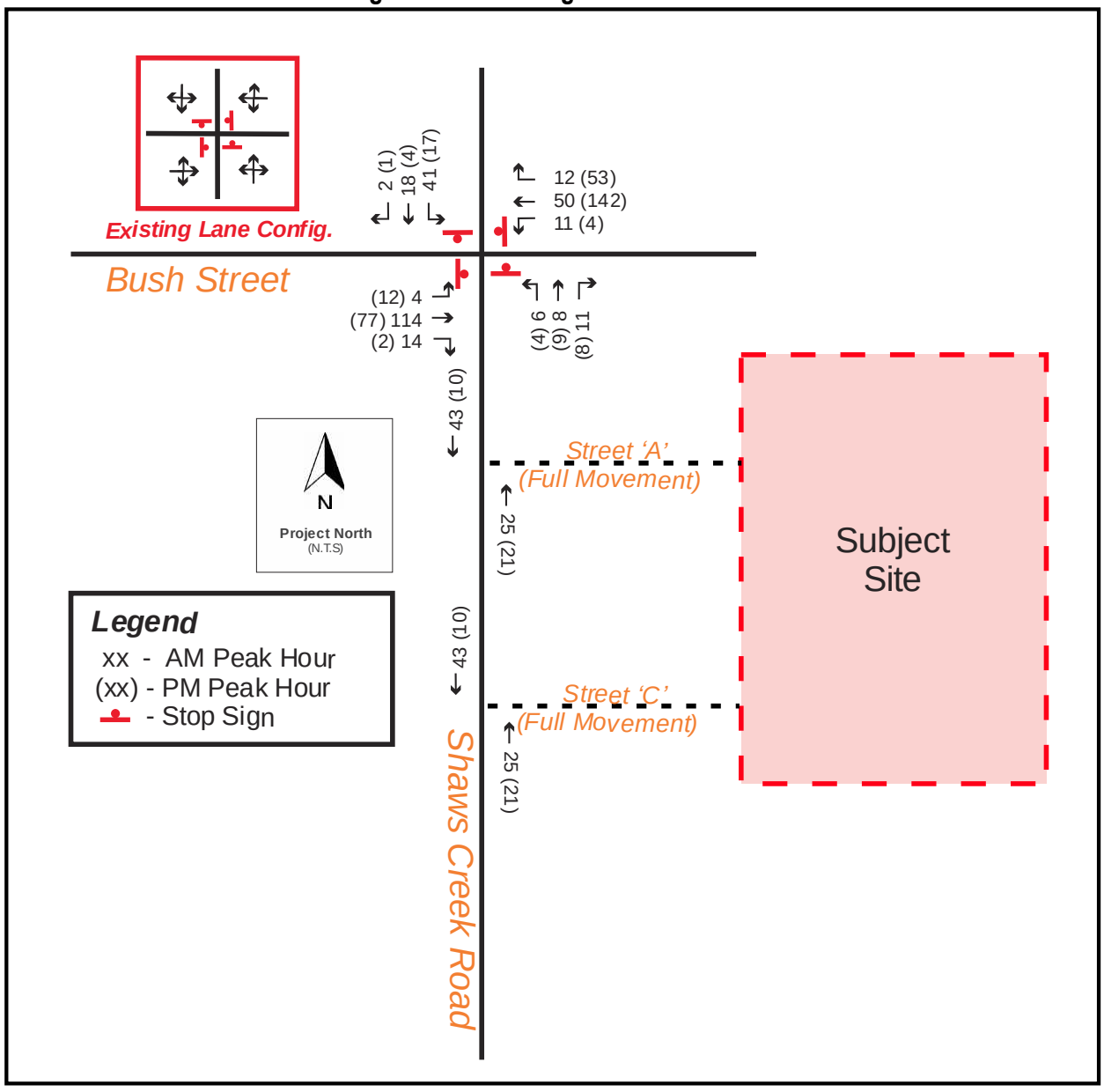


Table 2.1 – Level of Service – Existing Traffic Assessments

Intersection	Movement	Weekday AM Peak Hour		Weekday PM Peak Hour	
		LOS (v/c)	Delay (s)	LOS (v/c)	Delay (s)
Shaws Creek Road & Bush Street	EBLTR	A (0.22)	8.6	A (0.13)	8.0
	WBLTR	A (0.13)	8.1	A (0.28)	8.7
	NBLTR	A (0.08)	7.8	A (0.05)	7.8
	SBLTR	A (0.11)	8.3	A (0.05)	8.1

Under existing conditions, the study intersections are currently operating at excellent levels of service during both peak periods with no critical movements. During existing traffic conditions, the Shaws Creek Road & Bush Street and the Shaws Creek Road & The Grange Side Road intersection is operating at overall LOS 'A' during the peak hour periods.

3.0 FUTURE BACKGROUND CONDITIONS

A 5-year (2022) horizon period was selected and assumed in this analysis, which generally coincides with the full build out of the proposed development. For a conservative analysis, in conjunction with discussions from Town and Region staff, a 2% growth rate per annum is assumed for the north-south through traffic on Shaws Creek Road and for the east-west through traffic on Bush Street.

The future (2022) background traffic volumes are provided in **Figure 3-1.** **Table 3.1** summarizes the level of service at the given intersections under future background traffic conditions. Detailed output analysis can be found in **Appendix D**.

Figure 3-1 – Future (2022) Background Traffic Volumes

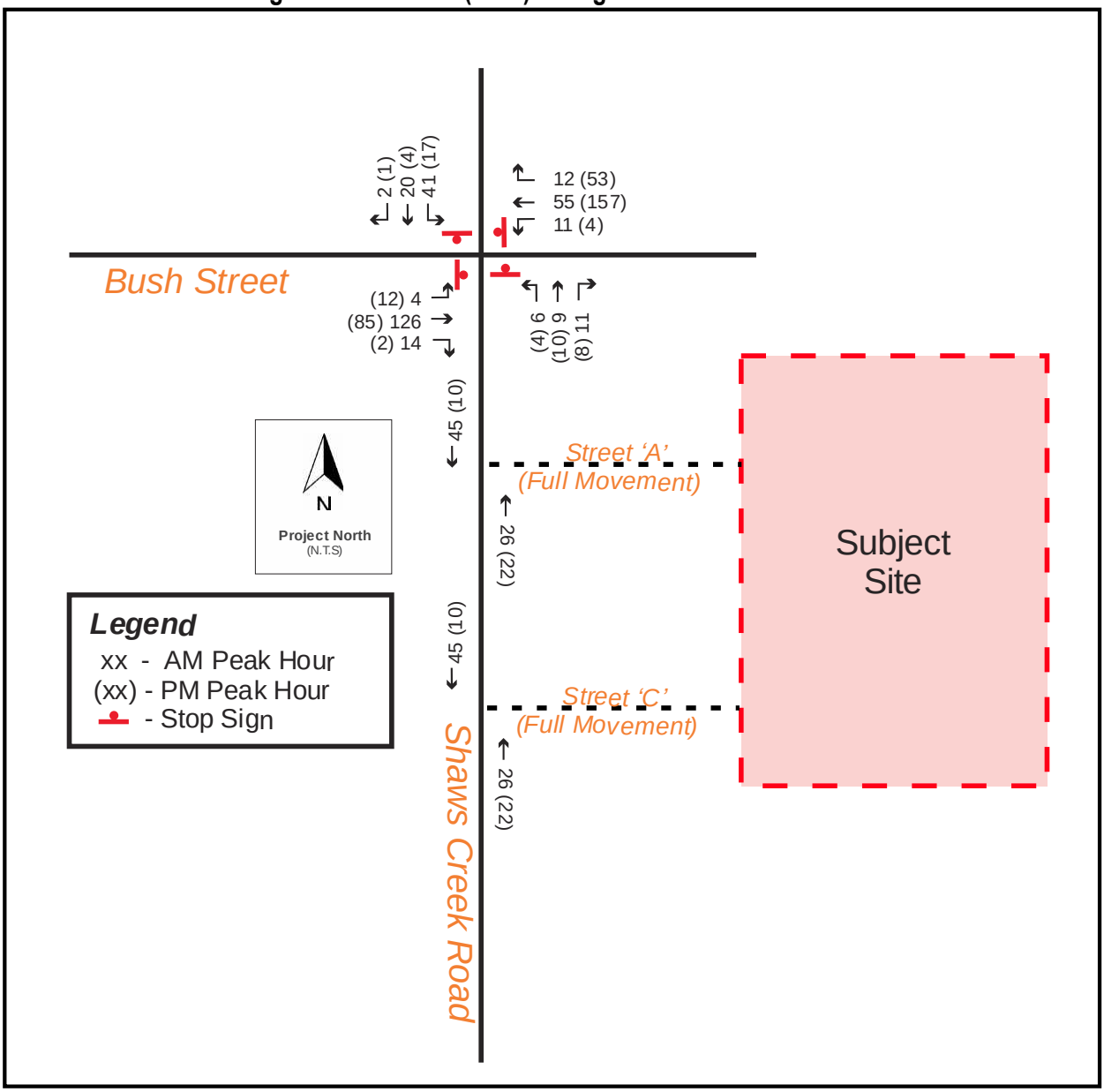


Table 3.1: Future (2022) Background Traffic Levels of Service

Intersection	Movement	Weekday AM Peak Hour		Weekday PM Peak Hour	
		LOS (v/c)	Delay (s)	LOS (v/c)	Delay (s)
Shaws Creek Road & Bush Street	EBLTR	A (0.24)	8.8	A (0.14)	8.1
	WBLTR	A (0.14)	8.2	A (0.31)	8.9
	NBLTR	A (0.09)	7.9	A (0.05)	7.9
	SBLTR	A (0.11)	8.4	A (0.05)	8.2

As summarized in **Table 3.1**, it is shown that during future background traffic conditions the subject study area intersections continue to operate at excellent level of services with no changes to expected operations. During future background traffic conditions, the Shaws Creek Road & Bush Street and the Shaws Creek Road & The Grange Side Road intersection is operating at overall LOS 'A' during the peak hour periods.

4.0 SITE TRAFFIC

The development proposal is to develop the existing subject lands into 70 lots. Trip rates and site generated trips were derived from the information contained in the *Trip Generation Manual, 9th Edition* published by the Institute of Transportation Engineers (ITE) for "Single-Family Detached Housing" (LUC 210). The trip generation summary is shown in **Table 4.1**.

Table 4.1 – Site Traffic Trip Generation (Based on ITE)

ITE Land Use	Parameter	Morning Peak Hour			Afternoon Peak Hour		
		In	Out	Total	In	Out	Total
Single-Family Detached Housing (70 Lots)	New Trips	16	44	60	48	28	76
	Trip Rate	0.21	0.63	0.84	0.69	0.40	1.09
Total	**New Trips**	**16**	**44**	**60**	**48**	**28**	**76**

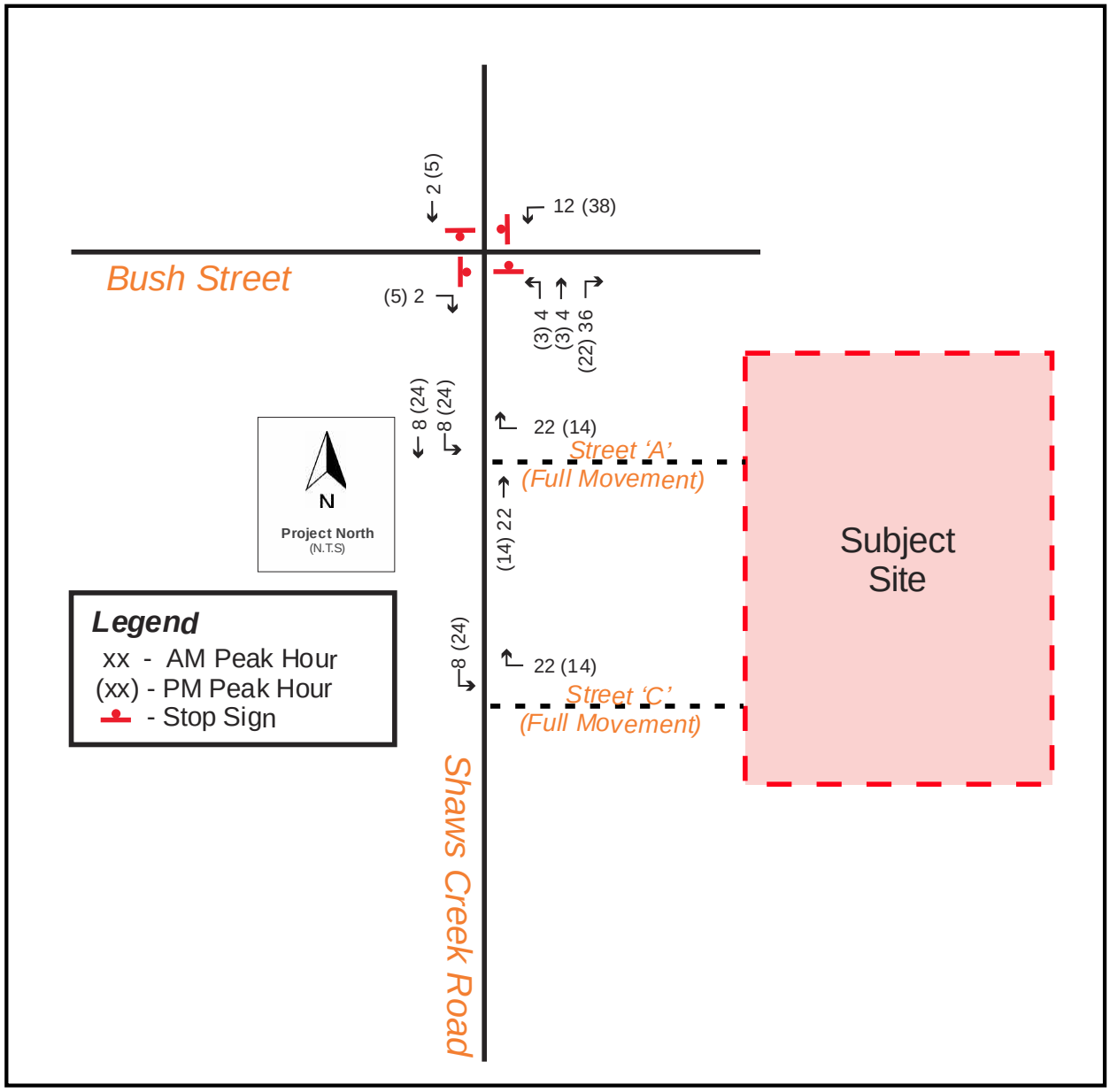
As shown in **Table 4.1**, the proposed development is anticipated to generate 56 two-way auto trips (16 inbound and 44 outbound) during the AM peak hours and 76 two-way auto trips (48 inbound and 28 outbound) during the PM peak hours.

The assumptions for the trip distribution rates are based on the information extracted from the 2011 Transportation Tomorrow Survey (TTS) and existing traffic patters and routes that drivers would likely take to access the subject site and engineering judgement based on ease of site access. As a result, site trip distribution is summarized for the inbound and outbound site traffic movements during the morning and afternoon peak hours in **Table 4.2** with the trip assignment illustrated in **Figure 4-1**.

Table 4.2 – Site Traffic Trip Distribution

Direction	Via	Inbound	Outbound
North	Shaws Creek Road	10%	10%
East	Bush Street	80%	80%
West	Bush Street	10%	10%
Total		**100%**	**100%**

Figure 4-1 – Site Generated Traffic Assignments



5.0 FUTURE TOTAL TRAFFIC CONDITIONS

The forecasted 2022 future total traffic volumes (future background volumes plus site generated traffic volumes) are illustrated in **Figure 5-1**, and were analyzed using Synchro 9 software with stopped controlled at the proposed site access. The detailed calculations are provided in **Appendix E** and summarized in **Table 5.1.**

Figure 5-1 – Future (2022) Total Traffic Volumes

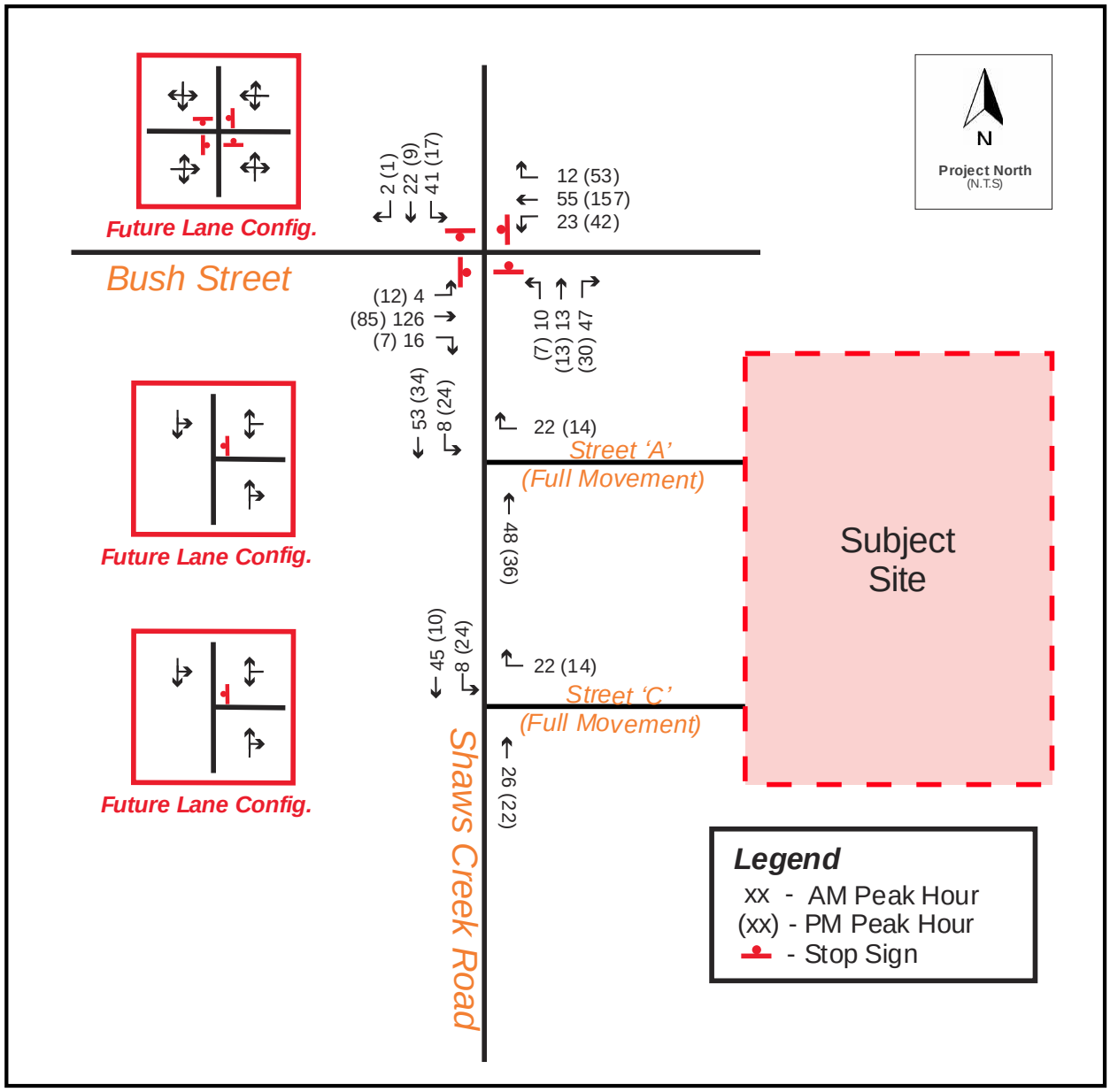


Table 5.1 – Future (2022) Total Traffic Levels of Service

Intersection	Movement	Weekday AM Peak Hour		Weekday PM Peak Hour	
		LOS (v/c)	Delay (s)	LOS (v/c)	Delay (s)
Shaws Creek Road & Bush Street	EBLTR	A (0.26)	9.5	A (0.16)	8.5
	WBLTR	A (0.20)	9.1	B (0.42)	10.5
	NBLTR	A (0.25)	9.0	A (0.11)	8.4
	SBLTR	A (0.12)	8.9	A (0.08)	5.6
Shaws Creek Road & Street 'A'	WBLR	A (0.02)	8.6	A (0.01)	8.5
	SBTL	A (0.01)	1.0	A (0.02)	3.1
Shaws Creek Road & Street 'C'	WBLR	A (0.02)	8.5	A (0.01)	8.5
	SBTL	A (0.01)	1.2	A (0.02)	5.2

Under future total traffic conditions, the study intersection and proposed accesses are expected to continue operating with excellent level of service during both peak periods. On this basis, no external road improvements are necessary to support the development application.

6.0 PARKING ASSESSMENT

Based on Town of Caledon Zoning By-law 2006-50 (Revised March 2016) Section 5 – Parking, Loading and Delivery, a minimum of 140 parking spaces will be required for the proposed development. Parking will be provided in accordance with the By-law requirement. The technical parking requirement for the proposed development is detailed in **Table 6.1**.

Table 6.1 – Vehicle Parking Requirements

Use	Units	Rate	Parking Requirement	Parking Provided	Difference
Dwelling, Detached	70 Lots	2 spaces per dwelling unit	140	140	0
Total			**140**	**140**	**0**

7.0 SITE PLAN REVIEW

It is recommended that the proposed site access design be consistent with the Town of Caledon's Site Plan Submission Guidelines.

AutoTURN software was used (MSU TAC – 2017) to generate a vehicular turning template to confirm and demonstrate the accessibility of the proposed parking spaces. As illustrated in **Figure 7-1**, the AutoTURN analysis demonstrates that a 10.0 m long Emergency Vehicle (MSU TAC – 2017) can effectively maneuver through the development area.

8.0 SIGHT LINE ASSESSMENT

Shaws Creek Road serves as a two-lane collector road with a speed limit of 60 km/h in the vicinity of the subject site. For the purpose of sight distance assessment, a design speed of 80 km/h under stop control will be utilized (posted speed plus 20 km/h). Sight distance requirements will be considered both for passenger vehicles approaching and departing from the stopped position at the intersection of Shaws Creek Road and Future Street 'A' and Future Street 'C'. The criteria applied for vehicles approaching the intersection is stopping sight distance, while turning departure maneuvers for left and right turns will be the applied criteria where vehicles are required to stop on the intersecting road, refer to TAC Figure 2.3.3.2, Departure Sight Triangles, attached in **Appendix F**. Under the stopping sight distance assessment, the target height applied is 0.38m for vehicle tail lights, and for intersection movements a top of car height of 1.3m is applied. A driver eye height of 1.05m is applied for all scenarios. Required stopping distance, adjusted for effect of grade, is determined using the formula:

$$\text{Stopping Sight Distance} = 0.278tV + d$$

Where:

t = perception / reaction time = 2.5s (TAC 1999, Table 1.2.5.3)
G = the percent grade divided by 100
$d = V^2 / 254(f +/- G)$
V = design speed
f = coefficient of friction (0.30) (TAC 1999, Table 1.2.5.2)

Future Street 'A'

Average G for North approach = 0.9%
Average G for South approach = 2.5%

Minimum sight dist. for North approach = $0.278 \times 2.5 \times 80 + 80^2 / 254(0.309)$
= 137.14 m
Minimum sight dist. for South approach = $0.278 \times 2.5 \times 80 + 80^2 / 254(0.325)$
= 133.13 m

Required turning departure sight distances, as shown on Figure 2.3.3.2 for left and right turns, are taken from TAC Figure 2.3.3.4, Sight Distance for Turning Movements from Stop, attached in **Appendix F**. Sight triangles for the various maneuvers are summarized as follows:

Left-turn movement: D-1 = **250m** (North approach)
D-2 = **160m** (South approach)
Right-turn movement: D-1 = **250m** (South approach)

Future Street 'C'

Average G for North approach = 2.5%
Average G for South approach = 3.5%

Minimum sight dist. for North approach = $0.278 \times 2.5 \times 80 + 80^2 / 254(0.325)$
= 133.13 m
Minimum sight dist. for South approach = $0.278 \times 2.5 \times 80 + 80^2 / 254(0.335)$
= 130.82 m

Required turning departure sight distances, as shown on Figure 2.3.3.2 for left and right turns, are taken from TAC Figure 2.3.3.4, Sight Distance for Turning Movements from Stop, attached in **Appendix F**. Sight triangles for the various maneuvers are summarized as follows:

Left-turn movement:	D-1 = **250m** (North approach)
	D-2 = **160m** (South approach)
Right-turn movement:	D-1 = **250m** (South approach)

Actual sight distances approaching the intersection have been determined through computer modeling, using the existing road topography of Shaws Creek Road and the proposed road grades for Street 'A' and Street 'C'. **Appendix G** illustrates our findings, indicating that for the North and South approach to Street 'A' on Shaws Creek Road a sight distance of 250 m can be obtained. On the North approach to Street 'C' a sight distance of 250 m is achievable and on the South approach to Street 'C' a sight distance of 150 m is achievable.

Based on our review the proposed intersections allow for the design vehicles to safely make all maneuvers that are permitted by the layout without significantly affecting vehicles travelling along Shaws Creek Road with the exception of the South approach to Street 'C'. On this basis, it is recommended to implement an advisory warning sign for speed reduction to 50 km/h in accordance with TAC Figure 2.3.3.4, Sight Distance for Turning Movements from Stop.

9.0 PEDESTRIAN CIRCULATION PLAN

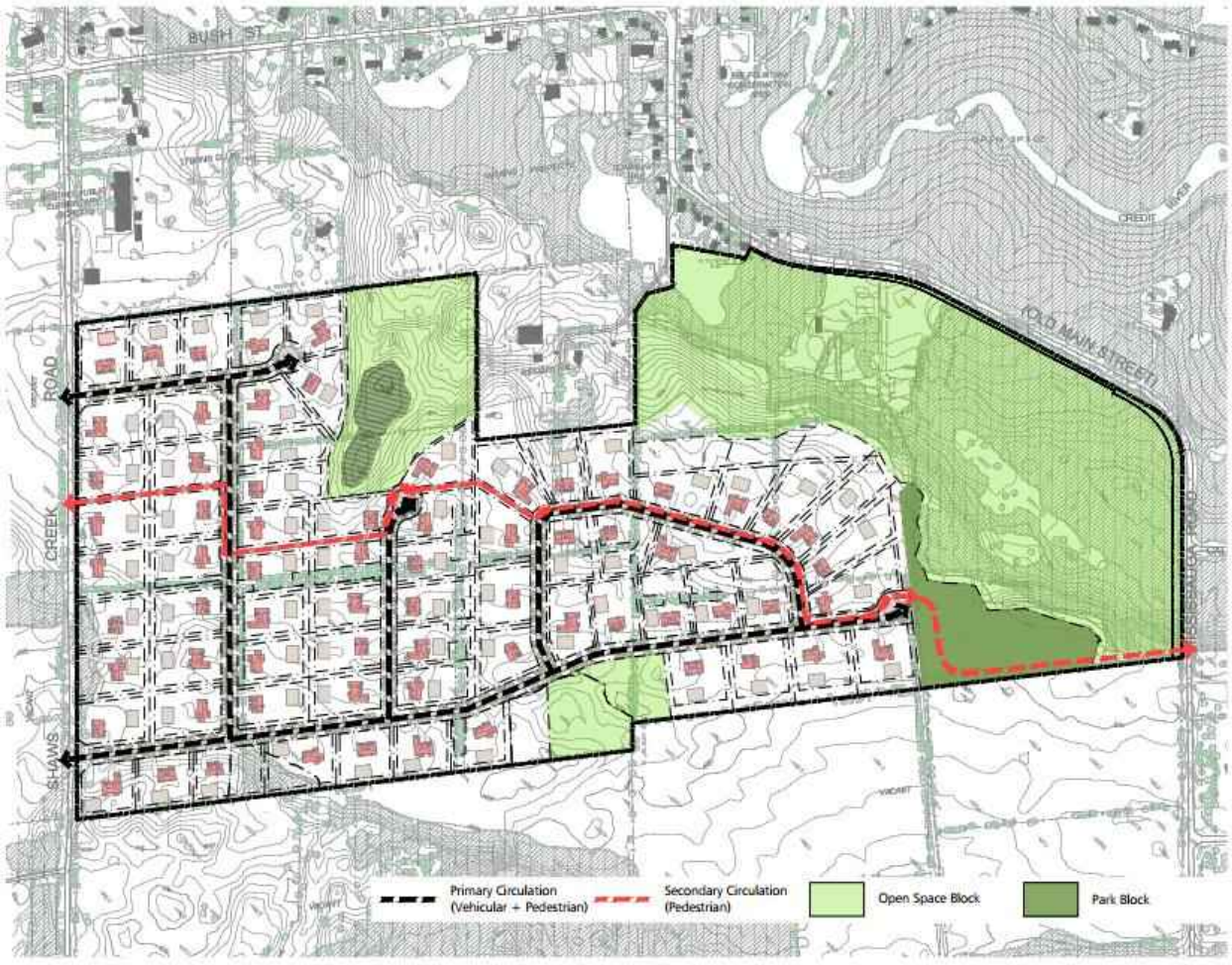
The proposed subdivision will build on the principles of walkability. The pedestrian network will include adequately sized roadways for walking, pathway blocks and walkways/trails within parks that will provide pedestrian connections to residential lots and various destinations within the site and the surrounding area.

The design of the open space system within the Manors of Belfountain and its components of parks and multi-use trail systems are linked within the broader pedestrian circulation system and provide for a balanced recreational program. The open space system has been designed to take advantage of existing site features and establish a distinct character within the community. Implementation strategies to enhance the Open Space System and complement the built environment include:

- Development of neighbourhood park spaces and gathering nodes.
- Trail systems will be located within the open spaces and park to provide connections with the road network and surrounding land uses.
- The Conceptual Circulation Plan illustrates the both the primary and secondary circulation system as they relate to one another and how they work together to connect all land uses within the development and surrounding areas.
- The draft plan provides a proposed public walkway location (Block 82) which connects the proposed park (Block 72) to the existing Bruce Trail near the adjacent Caledon Mountain Estates subdivision. This public walkway is important to providing a shared park facility. The proposed shared park facility supports creating healthy communities and connectivity to the community as per Region policies.

The pedestrian circulation plan is illustrated below in **Figure 9.1**.

Figure 9.1 Pedestrian Circulation Plan



10.0 TRANSPORTATION DEMAND MANAGEMENT

Transportation demand management (TDM) refers to a variety of strategies to reduce congestion, minimize the number of single-occupant vehicles, encourage non-auto modes of travel, and reduce vehicle dependency to create a sustainable transportation system. Typically, TDM strategies are for residential and office developments where large quantities of people congregate in one origin or destination.

The owner is committed to promote sustainable transportation systems. It actively encourages its residents to explore and take advantage of the primary and secondary circulation network which will include adequately sized roadways for walking, pathway blocks and walkways/trails within parks that will provide pedestrian connections to residential lots and various destinations within the site and the surrounding area.

11.0 CONCLUSION

The findings and conclusions of our analysis are as follows:

- The development proposal is to develop the existing subject lands into 70 residential lots at an average of 0.53 ha per lot.
- The proposed development is anticipated to generate 60 two-way auto trips (16 inbound and 44 outbound) during the AM peak hours and 76 two-way auto trips (48 inbound and 28 outbound) during the PM peak hours.
- The intersection capacity analysis results (based on the methodology and procedures outlined in the Highway Capacity Manual, HCM 2000, published by the Transportation Research Board) indicate that the study intersections and existing accesses are expected to operate with excellent levels of service.
- Based on Town of Caledon Zoning By-law 2006-50, a minimum of 140 parking spaces will be required for the proposed development. Parking will be provided in accordance with the By-law requirement.
- The proposed site plan is accessible from a circulation perspective. The AutoTURN analysis confirms that a 10.0 m long Emergency Vehicle (MSU TAC – 2017) can effectively maneuver through the development area.
- Based on our review the proposed intersections allow for the design vehicles to safely make all maneuvers that are permitted by the layout without significantly affecting vehicles travelling along Shaws Creek Road with the exception of the South approach to Street ‘C’. On this basis, it is recommended to implement an advisory warning sign for speed reduction to 50 km/h in accordance with TAC Figure 2.3.3.4, Sight Distance for Turning Movements from Stop.
- No external road improvements are necessary to support the development application.

KEY PLAN

BENCHMARK

REVISONS

NO	REVISION	DATE	BY

STAMP

nexTrans
CONSULTING ENGINEERS
520 Industrial Parkway South, Suite 201
Aurora, Ontario L4G 6W8
Tel: 905-503-2563
www.nextrans.ca

PROJECT NAME:

RESIDENTIAL DEVELOPMENT
Belfountain Subdivision
(TOWN OF CALEDON)

DRAWING TITLE:

AutoTURN Analysis
Fire/Emergency Truck
(MSU TAC-1999)

DESIGN BY: A.S.	DATE: April 12, 2019
CHECKED BY: R.P.	PROJECT NO. NT-17-217
DRAWN BY: A.S.	
SCALE: NTS	DRAWING NO. Figure 7-1

Appendix A - Proposed Site Plan

DEVELOPMENT CONCEPT PLAN
MANORS OF BELFOUNTAIN CORP

FILE # 21T-91015C

PART OF EAST HALF AND WEST HALF LOT 9
CONCESSION 5, W.H.S.
(HAMLET OF BELFOUNTAIN)
TOWN OF CALEDON,
REGIONAL MUNICIPALITY OF PEEL

SURVEYORS CERTIFICATE

I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AS SHOWN ON THIS PLAN AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE CORRECTLY AND ACCURATELY SHOWN.

SIGNED ______________________ DATE: ____________

ALISTER SANKEY, OLS
DAVID B. SEARLES SURVEYING LTD.
4255 SHERWOODTOWNE BLVD. SUITE 206
MISSISSAUGA, ON, L4Z 1Y5
PHONE: 905-273-6840
EMAIL: info@dbsearles.ca

ADDITIONAL INFORMATION

(UNDER SECTION 51(17) OF THE PLANNING ACT) INFORMATION REQUIRED BY CLAUSES A,B,C,D,E,F,G, & J ARE SHOWN ON THE DRAFT AND KEY PLANS.

H) DRILLED WELLS TO BE PROVIDED

I) SANDY LOAM AND CLAY LOAM

K) PRIVATE SEPTIC TO BE PROVIDED; STORMWATER DESIGN IN DISCUSSIONS WITH THE TOWN

NOTES

-Developable Area (excludes Open Space & Woodlot) = 45.90 ha (113.38 ac)
-5% of Developable Area (2.35ha, 5.81ac) required for Park land dedication
-70 Total Lots; average lot size: 0.53ha (1.32ac)
-20m ROW; 22m ROW where sidewalks to be provided; Length - 2,634m (8.642')
-3m Public Walkway Width; 1.5m Sidewalk Width
-6m Street Width; Pavement illustration is diagrammatic only
-22m/20m cul-de-sac Turning Radius
-Local to local radii - approx. 14m
-Streets 'A' & 'C' to Shaws Creek Rd. daylight triangles - 15.0 x 15.0
-Top of Slope as staked in 1994, reviewed September 4 & 12, 2014
-Dripline staked Septemer 4 & 12, 2014

LEGEND:

- Property Line
- Tree Protection - Snow Fence Hoarding
- Snow Fence to be Removed
- Existing Fence Line to Remain
- Existing Fence Line to be Removed
- Slope Direction and Percentage
- Existing Vegetation Grouping to Remain
- Existing Vegetation Grouping to be Removed
- Existing Vegetation Grouping to be Removed
- Existing Dead/Dying Vegetation Grouping to Remain
- Existing Tree to be Preserved
- Existing Tree to be Removed
- Existing Tree to be Removed Dead, Girdled or Dangerous
- Approximate Location and Extent of Stone Rock Wall
- Stone Rock Wall to be Removed
- Test Wells

LAND USE SCHEDULE

LAND USE	LOTS/BLOCKS	AREA (HA)	AREA (AC)	UNITS
ESTATE RESIDENTIAL	1-70	37.37	92.40	70
OPEN SPACE	71,74	19.66	48.51	
PARK	72	2.35	5.80	
10m BUFFER	73	0.80	1.97	
STORMWATER POND	75	3.76	9.30	
20.0m/22.0m ROW (2,634m LENGTH)	76	5.65	13.95	
ROAD WIDENING	77-78	0.50	1.23	
PUBLIC WALKWAYS	79-82	0.20	0.48	
TOTAL	82	70.28	173.67	70

Scale: 1=2000
March 26, 2019

Appendix B - Existing Traffic Data

NexTrans
4261-A14 Highway 7 East
Suite 489
Markham ON, CANADA, L3R 9W6

Turning Movement Count (1 . SHAWS CREEK RD & BUSH ST)

Start Time	N Approach SHAWS CREEK RD						E Approach BUSH ST						S Approach SHAWS CREEK RD						W Approach BUSH ST						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	0	4	9	0	0	13	3	13	2	0	0	18	1	0	1	0	0	2	3	29	1	0	0	33	66	
07:15:00	2	1	12	0	0	15	0	15	2	0	0	17	2	1	0	0	0	3	1	35	0	0	0	36	71	
07:30:00	0	3	9	0	0	12	3	10	0	0	0	13	2	1	0	0	0	3	4	39	2	0	0	45	73	
07:45:00	1	6	13	0	0	20	4	16	2	0	0	22	0	1	1	0	0	2	3	33	1	0	0	37	81	291
08:00:00	0	5	13	0	0	18	2	10	2	0	0	14	0	2	1	0	0	3	3	20	0	0	0	23	58	283
08:15:00	1	4	6	0	0	11	3	14	7	0	0	24	9	4	4	0	0	17	4	22	1	0	0	27	79	291
08:30:00	0	2	8	0	0	10	3	14	1	0	0	18	1	1	1	0	0	3	1	10	0	0	0	11	42	260
08:45:00	1	0	9	0	0	10	2	7	1	0	0	10	1	0	1	0	0	2	1	14	2	0	0	17	39	218
09:00:00	2	2	6	0	0	10	1	13	2	0	0	16	1	2	0	0	0	3	1	9	0	0	0	10	39	199
09:15:00	0	1	3	0	0	4	3	9	0	0	0	12	0	0	1	0	0	1	1	16	3	0	0	20	37	157
09:30:00	1	0	3	0	0	4	4	10	0	0	0	14	0	3	0	0	0	3	0	15	2	0	0	17	38	153
09:45:00	0	2	4	0	0	6	2	3	0	0	0	5	0	0	1	0	0	1	1	6	1	0	0	8	20	134
BREAK																										
16:00:00	0	3	3	0	1	6	15	39	3	0	0	57	5	2	2	0	0	9	1	11	5	0	0	17	89	
16:15:00	0	1	4	0	0	5	7	29	1	0	0	37	3	0	5	0	0	8	0	11	2	0	0	13	63	
16:30:00	1	1	3	0	0	5	14	39	1	0	0	54	0	1	1	0	0	2	0	11	1	0	0	12	73	
16:45:00	1	1	6	0	0	8	12	44	1	0	0	57	3	4	2	0	0	9	1	16	4	0	0	21	95	320
17:00:00	0	0	3	0	0	3	10	31	2	0	0	43	1	1	0	0	0	2	0	20	4	0	0	24	72	303
17:15:00	0	0	2	0	0	2	17	38	1	0	0	56	1	3	2	0	0	6	1	20	2	0	0	23	87	327
17:30:00	0	3	6	0	0	9	14	29	0	0	0	43	3	1	0	0	0	4	0	21	2	0	0	23	79	333
17:45:00	1	0	1	0	0	2	13	30	1	0	0	44	0	1	1	0	0	2	0	9	1	0	0	10	58	296
18:00:00	2	0	5	0	0	7	7	17	1	0	0	25	1	2	1	0	0	4	0	12	0	0	0	12	48	272
18:15:00	0	1	0	0	0	1	9	19	1	0	0	29	0	0	0	0	0	0	0	10	1	0	0	11	41	226
18:30:00	3	1	3	0	0	7	10	8	0	0	0	18	0	1	1	0	0	2	0	15	3	0	0	18	45	192
18:45:00	0	3	1	0	0	4	3	9	1	0	0	13	0	0	1	0	0	1	0	8	0	0	0	8	26	160
Grand Total	16	44	132	0	1	192	161	466	32	0	0	659	34	31	27	0	0	92	26	412	38	0	0	476	**1419**	-
Approach%	8.3%	22.9%	68.8%	0%		-	24.4%	70.7%	4.9%	0%		-	37%	33.7%	29.3%	0%		-	5.5%	86.6%	8%	0%		-	-	-
Totals %	1.1%	3.1%	9.3%	0%		13.5%	11.3%	32.8%	2.3%	0%		46.4%	2.4%	2.2%	1.9%	0%		6.5%	1.8%	29%	2.7%	0%		33.5%	-	-
Heavy	1	4	5	0		-	2	9	6	0		-	4	4	2	0		-	3	6	1	0		-	-	-
Heavy %	6.3%	9.1%	3.8%	0%		-	1.2%	1.9%	18.8%	0%		-	11.8%	12.9%	7.4%	0%		-	11.5%	1.5%	2.6%	0%		-	-	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-

NexTrans
4261-A14 Highway 7 East
Suite 489
Markham ON, CANADA, L3R 9W6

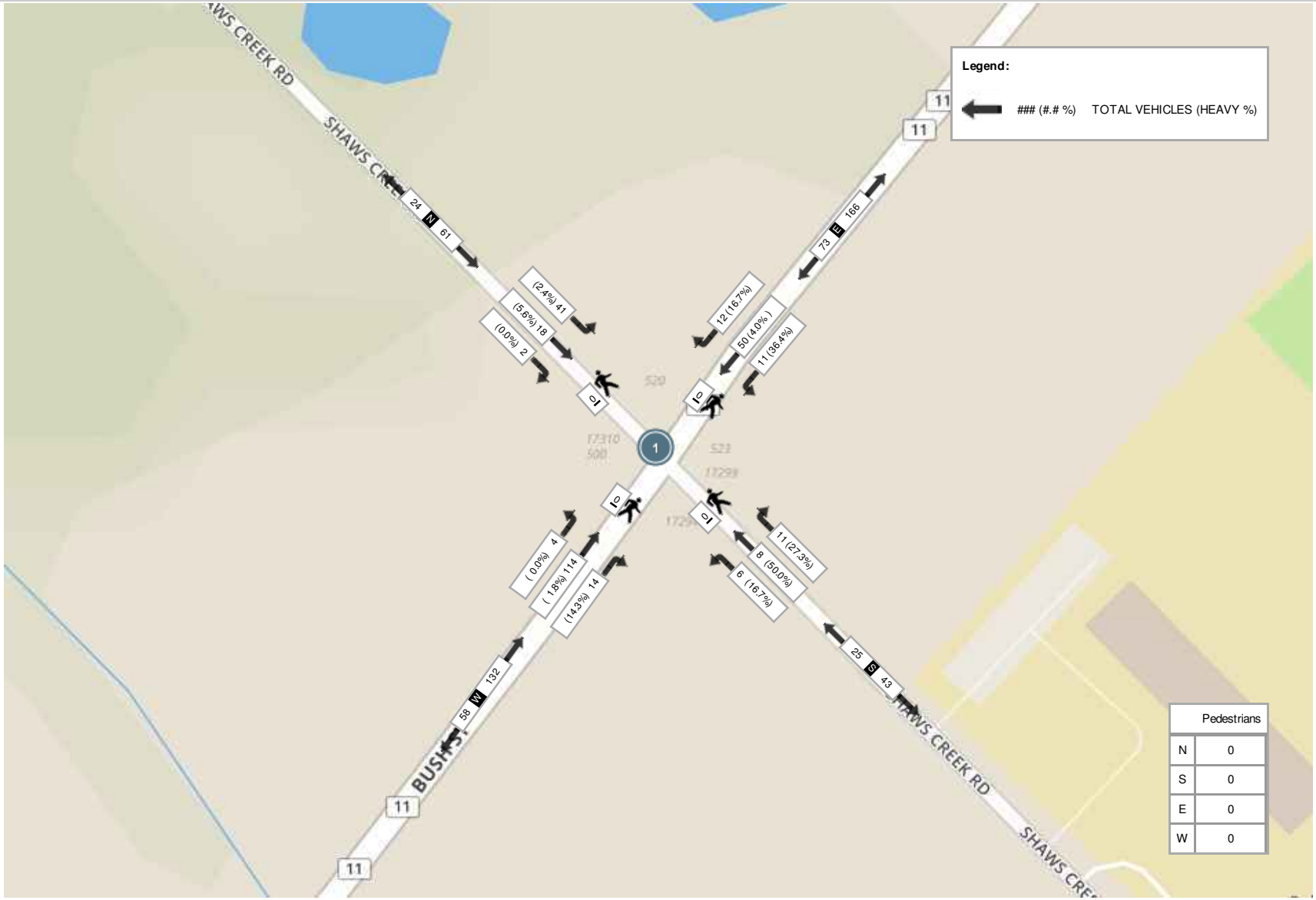
Peak Hour: 07:30 AM - 08:30 AM Weather: Mostly Cloudy (1.6 °C)

Start Time	N Approach SHAWS CREEK RD						E Approach BUSH ST						S Approach SHAWS CREEK RD						W Approach BUSH ST						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
07:30:00	0	3	9	0	0	12	3	10	0	0	0	13	2	1	0	0	0	3	4	39	2	0	0	45	73
07:45:00	1	6	13	0	0	20	4	16	2	0	0	22	0	1	1	0	0	2	3	33	1	0	0	37	81
08:00:00	0	5	13	0	0	18	2	10	2	0	0	14	0	2	1	0	0	3	3	20	0	0	0	23	58
08:15:00	1	4	6	0	0	11	3	14	7	0	0	24	9	4	4	0	0	17	4	22	1	0	0	27	79
Grand Total	2	18	41	0	0	61	12	50	11	0	0	73	11	8	6	0	0	25	14	114	4	0	0	132	**291**
Approach%	3.3%	29.5%	67.2%	0%		-	16.4%	68.5%	15.1%	0%		-	44%	32%	24%	0%		-	10.6%	86.4%	3%	0%		-	**-**
Totals %	0.7%	6.2%	14.1%	0%		21%	4.1%	17.2%	3.8%	0%		25.1%	3.8%	2.7%	2.1%	0%		8.6%	4.8%	39.2%	1.4%	0%		45.4%	**-**
PHF	0.5	0.75	0.79	0		0.76	0.75	0.78	0.39	0		0.76	0.31	0.5	0.38	0		0.37	0.88	0.73	0.5	0		0.73	**-**
Heavy	0	1	1	0		2	2	2	4	0		8	3	4	1	0		8	2	2	0	0		4	**-**
Heavy %	0%	5.6%	2.4%	0%		3.3%	16.7%	4%	36.4%	0%		11%	27.3%	50%	16.7%	0%		32%	14.3%	1.8%	0%	0%		3%	**-**
Lights	2	17	40	0		59	10	48	7	0		65	8	4	5	0		17	12	112	4	0		128	**-**
Lights %	100%	94.4%	97.6%	0%		96.7%	83.3%	96%	63.6%	0%		89%	72.7%	50%	83.3%	0%		68%	85.7%	98.2%	100%	0%		97%	**-**
Single-Unit Trucks	0	0	0	0		0	1	0	0	0		1	0	0	1	0		1	1	0	0	0		1	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	8.3%	0%	0%	0%		1.4%	0%	0%	16.7%	0%		4%	7.1%	0%	0%	0%		0.8%	**-**
Buses	0	1	1	0		2	1	2	4	0		7	2	4	0	0		6	0	2	0	0		2	**-**
Buses %	0%	5.6%	2.4%	0%		3.3%	8.3%	4%	36.4%	0%		9.6%	18.2%	50%	0%	0%		24%	0%	1.8%	0%	0%		1.5%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	1	0	0	0		1	1	0	0	0		1	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	9.1%	0%	0%	0%		4%	7.1%	0%	0%	0%		0.8%	**-**
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

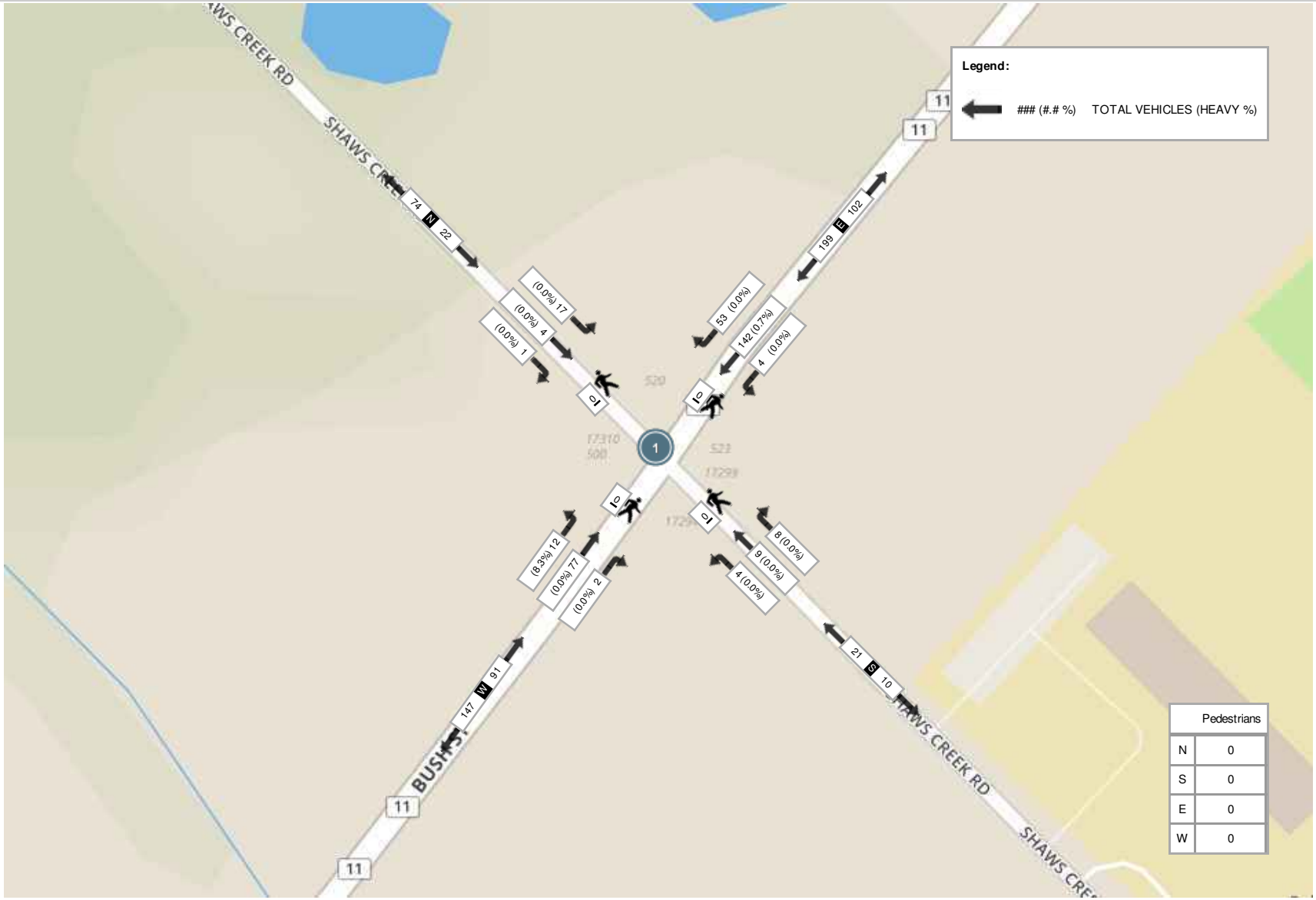
Peak Hour: 04:45 PM - 05:45 PM Weather: Rain (2.8 °C)

Start Time	N Approach SHAWS CREEK RD						E Approach BUSH ST						S Approach SHAWS CREEK RD						W Approach BUSH ST						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
16:45:00	1	1	6	0	0	8	12	44	1	0	0	57	3	4	2	0	0	9	1	16	4	0	0	21	95
17:00:00	0	0	3	0	0	3	10	31	2	0	0	43	1	1	0	0	0	2	0	20	4	0	0	24	72
17:15:00	0	0	2	0	0	2	17	38	1	0	0	56	1	3	2	0	0	6	1	20	2	0	0	23	87
17:30:00	0	3	6	0	0	9	14	29	0	0	0	43	3	1	0	0	0	4	0	21	2	0	0	23	79
Grand Total	1	4	17	0	0	22	53	142	4	0	0	199	8	9	4	0	0	21	2	77	12	0	0	91	**333**
Approach%	4.5%	18.2%	77.3%	0%		-	26.6%	71.4%	2%	0%		-	38.1%	42.9%	19%	0%		-	2.2%	84.6%	13.2%	0%		-	**-**
Totals %	0.3%	1.2%	5.1%	0%		6.6%	15.9%	42.6%	1.2%	0%		59.8%	2.4%	2.7%	1.2%	0%		6.3%	0.6%	23.1%	3.6%	0%		27.3%	**-**
PHF	0.25	0.33	0.71	0		0.61	0.78	0.81	0.5	0		0.87	0.67	0.56	0.5	0		0.58	0.5	0.92	0.75	0		0.95	**-**
Heavy	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	0	1	0		1	**-**
Heavy %	0%	0%	0%	0%		0%	0%	0.7%	0%	0%		0.5%	0%	0%	0%	0%		0%	0%	0%	8.3%	0%		1.1%	**-**
Lights	1	4	17	0		22	53	141	4	0		198	8	9	4	0		21	2	77	11	0		90	**-**
Lights %	100%	100%	100%	0%		100%	100%	99.3%	100%	0%		99.5%	100%	100%	100%	0%		100%	100%	100%	91.7%	0%		98.9%	**-**
Single-Unit Trucks	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0.7%	0%	0%		0.5%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Buses	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	1	0		1	**-**
Buses %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	8.3%	0%		1.1%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 07:30 AM - 08:30 AM Weather: Mostly Cloudy (1.6 °C)



Peak Hour: 04:45 PM - 05:45 PM **Weather: Rain (2.8 °C)**



NexTrans
4261-A14 Highway 7 East
Suite 489
Markham ON, CANADA, L3R 9W6

Turning Movement Count (2 . SHAWS CREEK RD & THE GRANGE SIDE RD)

Start Time	N Approach SHAWS CREEK RD						E Approach THE GRANGE SIDE RD						S Approach SHAWS CREEK RD						W Approach THE GRANGE SIDE RD						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	1	2	2	0	0	5	0	1	1	0	0	2	0	1	0	0	0	1	0	0	0	0	0	0	8	
07:15:00	0	1	0	0	0	1	2	2	0	0	0	4	0	0	2	0	0	2	0	2	0	0	0	2	9	
07:30:00	0	3	1	0	0	4	0	2	0	0	0	2	0	2	0	0	0	2	0	1	0	0	0	1	9	
07:45:00	0	3	4	0	0	7	0	2	0	0	0	2	0	1	0	0	0	1	0	2	0	0	0	2	12	38
08:00:00	0	2	1	0	0	3	2	2	0	0	0	4	0	1	0	0	0	1	0	2	1	0	0	3	11	41
08:15:00	0	2	0	0	0	2	1	2	0	0	0	3	0	1	0	0	0	1	0	0	0	0	0	0	6	38
08:30:00	1	2	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	1	5	34
08:45:00	0	0	2	0	0	2	2	3	0	0	0	5	0	0	1	0	0	1	0	2	0	0	0	2	10	32
09:00:00	1	1	3	0	0	5	0	1	0	0	0	1	0	0	0	0	1	0	0	1	1	0	0	2	8	29
09:15:00	0	1	1	0	0	2	1	0	0	0	0	1	1	0	1	0	0	2	0	0	0	0	0	0	5	28
09:30:00	0	1	1	0	0	2	1	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	3	6	29
09:45:00	0	0	2	0	0	2	0	2	0	0	0	2	0	1	0	0	0	1	1	1	0	0	0	2	7	26
BREAK																										
16:00:00	0	1	0	0	0	1	1	1	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	5	
16:15:00	0	0	3	0	0	3	0	3	0	0	0	3	0	1	0	0	0	1	0	1	0	0	0	1	8	
16:30:00	0	1	1	0	0	2	3	1	0	0	0	4	0	0	1	0	0	1	0	2	0	0	0	2	9	
16:45:00	0	1	2	0	0	3	3	2	0	0	0	5	0	2	0	0	0	2	0	0	0	0	0	0	10	32
17:00:00	0	0	1	0	0	1	1	2	0	0	0	3	0	2	0	0	0	2	0	2	0	0	0	2	8	35
17:15:00	0	0	0	0	0	0	3	4	0	0	0	7	0	2	1	0	0	3	0	0	0	0	0	0	10	37
17:30:00	0	2	0	0	0	2	1	1	0	0	0	2	0	1	0	0	0	1	0	0	0	0	0	0	5	33
17:45:00	0	0	1	0	0	1	1	1	0	0	0	2	0	1	1	0	0	2	0	0	0	0	0	0	5	28
18:00:00	0	0	0	0	0	0	1	0	0	0	0	1	0	2	0	0	0	2	0	2	0	0	0	2	5	25
18:15:00	0	1	1	0	0	2	1	0	0	0	0	1	0	1	0	0	0	1	0	2	1	0	0	3	7	22
18:30:00	0	1	1	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	2	0	0	0	2	6	23
18:45:00	0	1	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	3	21
Grand Total	3	26	27	0	0	56	24	33	1	0	0	58	1	22	7	0	1	30	1	29	3	0	0	33	**177**	-
Approach%	5.4%	46.4%	48.2%	0%		-	41.4%	56.9%	1.7%	0%		-	3.3%	73.3%	23.3%	0%		-	3%	87.9%	9.1%	0%		-	**-**	-
Totals %	1.7%	14.7%	15.3%	0%		31.6%	13.6%	18.6%	0.6%	0%		32.8%	0.6%	12.4%	4%	0%		16.9%	0.6%	16.4%	1.7%	0%		18.6%	**-**	-
Heavy	1	6	2	0		-	2	2	1	0		-	0	3	0	0		-	0	2	1	0		-	**-**	-
Heavy %	33.3%	23.1%	7.4%	0%		-	8.3%	6.1%	100%	0%		-	0%	13.6%	0%	0%		-	0%	6.9%	33.3%	0%		-	**-**	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-

NexTrans
4261-A14 Highway 7 East
Suite 489
Markham ON, CANADA, L3R 9W6

NexTrans
4261-A14 Highway 7 East
Suite 489
Markham ON, CANADA, L3R 9W6

Peak Hour: 07:15 AM - 08:15 AM Weather: Mostly Cloudy (1.6 °C)

Start Time	N Approach SHAWS CREEK RD						E Approach THE GRANGE SIDE RD						S Approach SHAWS CREEK RD						W Approach THE GRANGE SIDE RD						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
07:15:00	0	1	0	0	0	1	2	2	0	0	0	4	0	0	2	0	0	2	0	2	0	0	0	2	9
07:30:00	0	3	1	0	0	4	0	2	0	0	0	2	0	2	0	0	0	2	0	1	0	0	0	1	9
07:45:00	0	3	4	0	0	7	0	2	0	0	0	2	0	1	0	0	0	1	0	2	0	0	0	2	12
08:00:00	0	2	1	0	0	3	2	2	0	0	0	4	0	1	0	0	0	1	0	2	1	0	0	3	11
Grand Total	0	9	6	0	0	15	4	8	0	0	0	12	0	4	2	0	0	6	0	7	1	0	0	8	**41**
Approach%	0%	60%	40%	0%		-	33.3%	66.7%	0%	0%		-	0%	66.7%	33.3%	0%		-	0%	87.5%	12.5%	0%		-	**-**
Totals %	0%	22%	14.6%	0%		36.6%	9.8%	19.5%	0%	0%		29.3%	0%	9.8%	4.9%	0%		14.6%	0%	17.1%	2.4%	0%		19.5%	**-**
PHF	0	0.75	0.38	0		0.54	0.5	1	0	0		0.75	0	0.5	0.25	0		0.75	0	0.88	0.25	0		0.67	**-**
Heavy	0	0	0	0		0	0	1	0	0		1	0	1	0	0		1	0	1	1	0		2	**-**
Heavy %	0%	0%	0%	0%		0%	0%	12.5%	0%	0%		8.3%	0%	25%	0%	0%		16.7%	0%	14.3%	100%	0%		25%	**-**
Lights	0	9	6	0		15	4	7	0	0		11	0	3	2	0		5	0	6	0	0		6	**-**
Lights %	0%	100%	100%	0%		100%	100%	87.5%	0%	0%		91.7%	0%	75%	100%	0%		83.3%	0%	85.7%	0%	0%		75%	**-**
Single-Unit Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Buses	0	0	0	0		0	0	1	0	0		1	0	1	0	0		1	0	1	1	0		2	**-**
Buses %	0%	0%	0%	0%		0%	0%	12.5%	0%	0%		8.3%	0%	25%	0%	0%		16.7%	0%	14.3%	100%	0%		25%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

NexTrans
4261-A14 Highway 7 East
Suite 489
Markham ON, CANADA, L3R 9W6

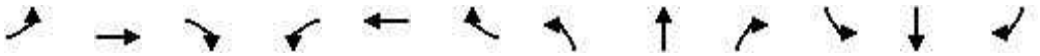
Peak Hour: 04:30 PM - 05:30 PM Weather: Rain (2.8 °C)

Start Time	N Approach SHAWS CREEK RD						E Approach THE GRANGE SIDE RD						S Approach SHAWS CREEK RD						W Approach THE GRANGE SIDE RD						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
16:30:00	0	1	1	0	0	2	3	1	0	0	0	4	0	0	1	0	0	1	0	2	0	0	0	2	9
16:45:00	0	1	2	0	0	3	3	2	0	0	0	5	0	2	0	0	0	2	0	0	0	0	0	0	10
17:00:00	0	0	1	0	0	1	1	2	0	0	0	3	0	2	0	0	0	2	0	2	0	0	0	2	8
17:15:00	0	0	0	0	0	0	3	4	0	0	0	7	0	2	1	0	0	3	0	0	0	0	0	0	10
Grand Total	0	2	4	0	0	6	10	9	0	0	0	19	0	6	2	0	0	8	0	4	0	0	0	4	**37**
Approach%	0%	33.3%	66.7%	0%		-	52.6%	47.4%	0%	0%		-	0%	75%	25%	0%		-	0%	100%	0%	0%		-	**-**
Totals %	0%	5.4%	10.8%	0%		16.2%	27%	24.3%	0%	0%		51.4%	0%	16.2%	5.4%	0%		21.6%	0%	10.8%	0%	0%		10.8%	**-**
PHF	0	0.5	0.5	0		0.5	0.83	0.56	0	0		0.68	0	0.75	0.5	0		0.67	0	0.5	0	0		0.5	**-**
Heavy	0	0	1	0		1	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Heavy %	0%	0%	25%	0%		16.7%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Lights	0	2	3	0		5	10	9	0	0		19	0	6	2	0		8	0	4	0	0		4	**-**
Lights %	0%	100%	75%	0%		83.3%	100%	100%	0%	0%		100%	0%	100%	100%	0%		100%	0%	100%	0%	0%		100%	**-**
Single-Unit Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Buses	0	0	1	0		1	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Buses %	0%	0%	25%	0%		16.7%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 07:15 AM - 08:15 AM **Weather: Mostly Cloudy (1.6 °C)**

Peak Hour: 04:30 PM - 05:30 PM **Weather: Rain (2.8 °C)**

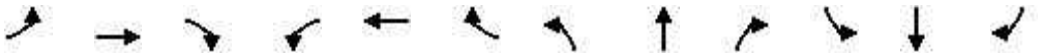
Appendix C - Existing Traffic Level of Service Calculations



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	4	114	14	11	50	12	6	8	11	41	18	2
Future Volume (vph)	4	114	14	11	50	12	6	8	11	41	18	2
Peak Hour Factor	0.50	0.73	0.88	0.39	0.78	0.75	0.38	0.50	0.31	0.79	0.75	0.50
Hourly flow rate (vph)	8	156	16	28	64	16	16	16	35	52	24	4

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	180	108	67	80
Volume Left (vph)	8	28	16	52
Volume Right (vph)	16	16	35	4
Hadj (s)	-0.01	0.00	-0.23	0.13
Departure Headway (s)	4.4	4.5	4.4	4.8
Degree Utilization, x	0.22	0.13	0.08	0.11
Capacity (veh/h)	794	765	753	700
Control Delay (s)	8.6	8.1	7.8	8.3
Approach Delay (s)	8.6	8.1	7.8	8.3
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.3			
Level of Service	A			
Intersection Capacity Utilization	23.3%	ICU Level of Service	A	
Analysis Period (min)	15			

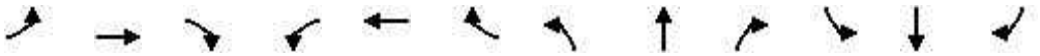


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	12	77	2	4	142	53	4	9	8	17	4	1
Future Volume (vph)	12	77	2	4	142	53	4	9	8	17	4	1
Peak Hour Factor	0.75	0.92	0.50	0.50	0.81	0.78	0.50	0.56	0.67	0.71	0.33	0.25
Hourly flow rate (vph)	16	84	4	8	175	68	8	16	12	24	12	4

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	104	251	36	40
Volume Left (vph)	16	8	8	24
Volume Right (vph)	4	68	12	4
Hadj (s)	0.04	-0.12	-0.12	0.09
Departure Headway (s)	4.4	4.1	4.6	4.8
Degree Utilization, x	0.13	0.28	0.05	0.05
Capacity (veh/h)	795	864	719	686
Control Delay (s)	8.0	8.7	7.8	8.1
Approach Delay (s)	8.0	8.7	7.8	8.1
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.4		
Level of Service	A		
Intersection Capacity Utilization	21.9%	ICU Level of Service	A
Analysis Period (min)	15		

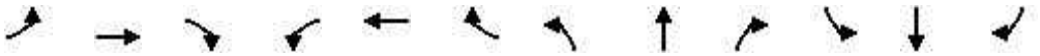
Appendix D – Future Background Level of Service Calculations



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	4	126	14	11	55	12	6	9	11	41	20	2
Future Volume (vph)	4	126	14	11	55	12	6	9	11	41	20	2
Peak Hour Factor	0.50	0.73	0.88	0.39	0.78	0.75	0.38	0.50	0.31	0.79	0.75	0.50
Hourly flow rate (vph)	8	173	16	28	71	16	16	18	35	52	27	4

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	197	115	69	83
Volume Left (vph)	8	28	16	52
Volume Right (vph)	16	16	35	4
Hadj (s)	-0.01	0.00	-0.22	0.13
Departure Headway (s)	4.4	4.5	4.5	4.8
Degree Utilization, x	0.24	0.14	0.09	0.11
Capacity (veh/h)	788	757	738	689
Control Delay (s)	8.8	8.2	7.9	8.4
Approach Delay (s)	8.8	8.2	7.9	8.4
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.5			
Level of Service	A			
Intersection Capacity Utilization	24.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	12	85	2	4	157	53	4	10	8	17	4	1
Future Volume (vph)	12	85	2	4	157	53	4	10	8	17	4	1
Peak Hour Factor	0.75	0.92	0.50	0.50	0.81	0.78	0.50	0.56	0.67	0.71	0.33	0.25
Hourly flow rate (vph)	16	92	4	8	194	68	8	18	12	24	12	4

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	112	270	38	40
Volume Left (vph)	16	8	8	24
Volume Right (vph)	4	68	12	4
Hadj (s)	0.04	-0.11	-0.11	0.09
Departure Headway (s)	4.4	4.1	4.7	4.9
Degree Utilization, x	0.14	0.31	0.05	0.05
Capacity (veh/h)	790	859	705	674
Control Delay (s)	8.1	8.9	7.9	8.2
Approach Delay (s)	8.1	8.9	7.9	8.2
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.6			
Level of Service	A			
Intersection Capacity Utilization	22.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix E – Future Total Level of Service Calculations

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	4	126	16	23	55	12	10	13	47	41	22	2
Future Volume (vph)	4	126	16	23	55	12	10	13	47	41	22	2
Peak Hour Factor	0.50	0.73	0.88	0.39	0.78	0.75	0.38	0.50	0.31	0.79	0.75	0.50
Hourly flow rate (vph)	8	173	18	59	71	16	26	26	152	52	29	4

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	199	146	204	85
Volume Left (vph)	8	59	26	52
Volume Right (vph)	18	16	152	4
Hadj (s)	-0.01	0.05	-0.39	0.13
Departure Headway (s)	4.8	4.9	4.5	5.2
Degree Utilization, x	0.26	0.20	0.25	0.12
Capacity (veh/h)	700	679	746	635
Control Delay (s)	9.5	9.1	9.0	8.9
Approach Delay (s)	9.5	9.1	9.0	8.9
Approach LOS	A	A	A	A

Intersection Summary				
Delay	9.2			
Level of Service	A			
Intersection Capacity Utilization	32.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	22	48	0	8	53
Future Volume (Veh/h)	0	22	48	0	8	53
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	24	52	0	9	58
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	128	52			52	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	128	52			52	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	98			99	
cM capacity (veh/h)	861	1016			1554	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	24	52	67
Volume Left	0	0	9
Volume Right	24	0	0
cSH	1016	1700	1554
Volume to Capacity	0.02	0.03	0.01
Queue Length 95th (m)	0.6	0.0	0.1
Control Delay (s)	8.6	0.0	1.0
Lane LOS	A		A
Approach Delay (s)	8.6	0.0	1.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	22	26	0	8	45
Future Volume (Veh/h)	0	22	26	0	8	45
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	24	28	0	9	49
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	95	28			28	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	95	28			28	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	98			99	
cM capacity (veh/h)	899	1047			1585	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	24	28	58
Volume Left	0	0	9
Volume Right	24	0	0
cSH	1047	1700	1585
Volume to Capacity	0.02	0.02	0.01
Queue Length 95th (m)	0.5	0.0	0.1
Control Delay (s)	8.5	0.0	1.2
Lane LOS	A		A
Approach Delay (s)	8.5	0.0	1.2
Approach LOS	A		

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	19.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	12	85	7	42	157	53	7	13	30	17	9	1
Future Volume (vph)	12	85	7	42	157	53	7	13	30	17	9	1
Peak Hour Factor	0.75	0.92	0.50	0.50	0.81	0.78	0.50	0.56	0.67	0.71	0.33	0.25
Hourly flow rate (vph)	16	92	14	84	194	68	14	23	45	24	27	4

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	122	346	82	55
Volume Left (vph)	16	84	14	24
Volume Right (vph)	14	68	45	4
Hadj (s)	-0.01	-0.04	-0.26	0.08
Departure Headway (s)	4.6	4.4	4.8	5.2
Degree Utilization, x	0.16	0.42	0.11	0.08
Capacity (veh/h)	741	796	679	625
Control Delay (s)	8.5	10.5	8.4	8.6
Approach Delay (s)	8.5	10.5	8.4	8.6
Approach LOS	A	B	A	A

Intersection Summary				
Delay	9.6			
Level of Service	A			
Intersection Capacity Utilization	31.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	14	36	0	24	34
Future Volume (Veh/h)	0	14	36	0	24	34
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	15	39	0	26	37
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	128	39			39	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	128	39			39	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			98	
cM capacity (veh/h)	852	1033			1571	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	15	39	63
Volume Left	0	0	26
Volume Right	15	0	0
cSH	1033	1700	1571
Volume to Capacity	0.01	0.02	0.02
Queue Length 95th (m)	0.3	0.0	0.4
Control Delay (s)	8.5	0.0	3.1
Lane LOS	A		A
Approach Delay (s)	8.5	0.0	3.1
Approach LOS	A		

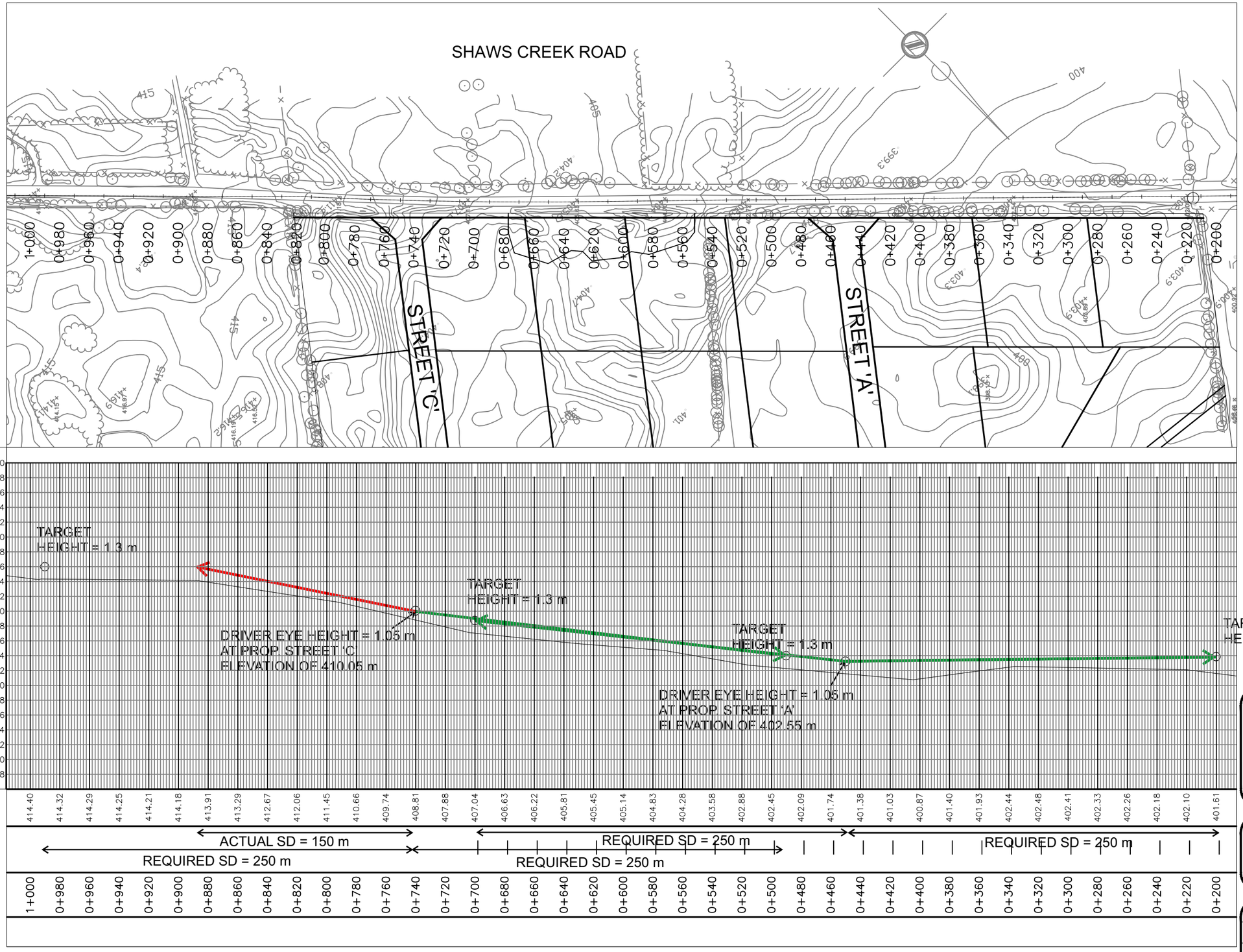
Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	19.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	14	22	0	24	10
Future Volume (Veh/h)	0	14	22	0	24	10
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	15	24	0	26	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	87	24			24	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	87	24			24	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			98	
cM capacity (veh/h)	899	1052			1591	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	15	24	37
Volume Left	0	0	26
Volume Right	15	0	0
cSH	1052	1700	1591
Volume to Capacity	0.01	0.01	0.02
Queue Length 95th (m)	0.3	0.0	0.4
Control Delay (s)	8.5	0.0	5.2
Lane LOS	A		A
Approach Delay (s)	8.5	0.0	5.2
Approach LOS	A		

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	18.5%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix F – Site Distance Analysis



nextrans ENGINEERING
Suite 201, 520 Industrial Parkway South, Aurora ON
L4G 6W8
Tel: 905-503-2563, Fax: 877-957-2929
Web: www.nextrans.ca

DRAWING TITLE:

SIGHT DISTANCES

DESIGN BY:	Z.G.	DATE:	DE 2017
CHECKED BY:	B.M.	PROJECT NO.	NT-17-217
DRAWN BY:	J.K.		
SCALE:	H: 1:2500 V: 1:500	DRAWING NO.	SD-1

Appendix G – Comments

Niagara Escarpment Commission
232 Guelph St.
Georgetown, ON L7G 4B1
Tel: 905-877-5191
Fax: 905-873-7452
www.escarpment.org

Commission de l'escarpement du Niagara
232, rue Guelph
Georgetown ON L7G 4B1
No de tel. 905-877-5191
Télécopieur 905-873-7452
www.escarpment.org

Niagara Escarpment Commission
An agency of the Government of Ontario

September 21, 2018

Ms. Karen Bennett, MCIP, RPP
Senior Associate
GSAI
10 Kingsbridge Garden Circle,
Suite 700
Mississauga, ON L5R 3K6

Dear Ms. Bennett:

Re: Manors of Belfountain subdivision, Town of Caledon
Draft Plan of Subdivision 21T-91015C
Niagara Escarpment Commission Development Permit Application
P/R/2017-2018/450

Staff of the Niagara Escarpment Commission (NEC) has reviewed the technical reports provided in support of the above-noted applications. We have the following initial comments and questions:

Review of technical reports

Stage 1 and 2 Archaeological Assessment

- Although no archaeological resources were located, the report notes that there is "potential for the presence of pre-contact aboriginal and Euro-Canadian archaeological resources". Have you consulted with First Nations or provided them with a copy of this report and the Cultural Heritage Resource Assessment? If not, NEC staff will provide a copy of the reports to the appropriate First Nation and invite their comments.
- The Recommendations of the report indicate that the Ministry of Tourism, Culture and Sport may require documentation indicating that development cannot take place on Block 78.Although these lands are in the Escarpment Natural Area designation, development is not prohibited. Since zoning is not in effect on these lands, how does your client intend to address the recommendation to prohibit development? If the lands are conveyed to Credit Valley Conservation, would an easement agreement be placed on the property or would your client be prepared to enter into a Development Permit agreement pursuant to Section 24.(2.1) to restrict the use of that Block?

Cultural Heritage Resource Assessment (CHRA)

- The January 2018 version of the CHRA did not contain an analysis of the policies of the Niagara Escarpment Plan, 2017 (NEP 2017). A revised version was provided by the applicant on July 30 but the policy analysis is lacking. The NEC was established in 1973 and the first Plan came into effect in 1985. Rather than simply referencing the policies in the NEP, NEC staff are seeking an analysis of how the development is not in conflict with NEP policies, particularly with respect to Part 2.10.2. The CHRA suggests that the heritage impact assessment (HIA) could be a condition of draft plan approval. NEC staff are of the opinion that NEP requires the submission of the HIA now, in order to inform a decision on the Development Permit application, which precedes subdivision approval.
- NEC staff has provided a copy of the comments from the Ministry of Tourism, Culture and Sport for review. There will be ongoing discussions with respect to the need for additional study in response to those comments.

Noise Impact Study

- Introduction: report does not acknowledge that a development permit is also required and incorrectly refers to Shaw Creek Road rather than Shaws Creek
- Site: the only land uses in the area that are acknowledged are residential, agricultural and institutional; parks, conservation areas, commercial and aggregate extraction uses are not mentioned
- Noise Sources: the report notes "two rooftop units" on top of the school and says noise was not audible; if these were AC units, they would not be operating in December
- The report contains no analysis of the noise that could be generated by the subdivision on the existing community of Belfountain and whether any mitigation is required.
- What would be the implications of the paving or widening of Shaws Creek Road on the proposed dwellings?
- Does the haul route from the James Dick pit use Shaws Creek Road and if so, what are the noise implications?

Traffic Impact Study

- The introductory letter incorrectly notes that this study is in support of a zoning by-law amendment and site plan application, neither of which is correct.
- The volume of traffic estimated to be generated by the subdivision seems low. Did the analysis take into account the type of development? In the case of estate homes, there could be additional traffic from household staff, gardening services, parents driving children to school (if the walkway to the school is not supported), and parents commuting outside the area for work.
- The fall colours season attracts large numbers of visitors to the area on weekends; was this factored into the traffic analysis?
- Did the consultant review any traffic data from the EA undertaken by the Region to verify the single day traffic count?

- What are the implications of widening Shaws Creek Road on the hedgerow on the east side of the road?
- Trip distribution: the report assumes that traffic will be going south on Shaws Creek Road to The Grange Sideroad. If Shaws Creek is not paved beyond the subdivision, would the traffic more likely go north through the village to Mississauga Road resulting in the need to widen Bush Street?
- Parking Assessment: the report concludes that there will be adequate parking for each dwelling but does not address whether the Town would require the provision of parking for the proposed parks and where such parking would be located.
- Site Plan Review: the report concludes that a large vehicle could navigate the proposed streets. Did this analysis consider the terminus of Street C? Could a large vehicle turn around in the cul de sac without having to back up? Will there be a barrier at the end of Street C or is vehicle access to the park proposed?
- Pedestrian circulation: the report proposes a footpath through the Escarpment Natural Area to Old Main Street. NEC staff is concerned about the impact of such path on the natural environment. If this path is not allowed, did the consultant consider other means of active transportation to allow residents of the proposed subdivision to get to the village? (e.g. cycling routes – need for bike lane on Shaws Creek Road).
- Conclusion: the report concludes that no external road improvements are necessary but page 2 of the report anticipates that Shaws Creek Road would need to be widened and paved.
- Appendix F is missing from our copy of the report.

Lighting report

- The letter assesses municipal street lighting based on an 18 metre right of way. The traffic report states that Shaws Creek Road would need to be widened to 26 metres. How does this impact the conclusion of the letter?
- Is it proposed that the Town parks would have lighting and could this include lit sports fields? If so, what are the implications for visual impact?
- How would the illumination of houses and residential properties be controlled to reduce excessive lighting (e.g. vanity lights under eaves, driveway runway lights)?
- The EIS states that the proposed path through the Escarpment Natural Area would be unlit. In the EIS (p.43) the proposed path to the School is suggested to be lit. What type of lighting is proposed in this area?

Tree inventory report

- Page 7 of the report suggests that the existing driveway, through the Escarpment Natural Area, would remain for construction access. NEC staff does not support construction access through this area. Access would have to be from Shaws Creek Road.
- The tree inventory was completed in 2014. The report should be updated to confirm the inventory and hence the amount of compensation. Many trees could have been lost to storms or disease in the 4 year period.

Region of Peel
working with you

Public Works

10 Peel Centre Dr.
Suite A
Brampton, ON
L6T 4B9
tel: 905-791-7800

peelregion.ca

July 31, 2018

Rob Hughes
Manager, Development
Community Services
Town of Caledon
6311 Old Church Road
Caledon ON L7C 1J6

Nancy Mott
Senior Strategic Advisor
Niagara Escarpment Commission
232 Guelph Street
Georgetown ON L7G 4B1

Re: Proposed Draft Plan of Subdivision and NEC Development Permit Application
P/R/2017-2018/450 and 21T-91015C
Part of Lot 9, Concession 5 (WHS)
Glen Schnarr and Associates Inc. on behalf of Manors of Belfountain Corp. c/o John Spina

Region of Peel staff have had the opportunity to review the proposed subdivision known as Manors of Belfountain, and preliminary comments are provided below.

Planning & Development Comments

The Planning Justification Report dated March 5, 2018 and prepared by Glen Schnarr and Associates was received. The Region understands that the proposal will proceed through revisions based on technical and environmental constraints and the report will be revised. Detailed comments on the report will be provided in subsequent submissions. The studies and reports submitted in support of the application and summarized in the Planning Justification Report must satisfiy all applicable provincial and municipal policy, particularly concerning but not limited to natural heritage protection and site servicing (i.e. the Niagara Escarpment Plan, MOECC D-Series Guidelines, PPS minor infill and rounding out policies etc.).

Healthy Development:
The Region has reviewed the Healthy Development Assessment (HDA) completed March 5, 2018. The small-scale HDA was completed. As Manors of Belfountain is a proposed draft plan of subdivision for a new residential community, the Region requires that a large-scale HDA be completed. Please prepare and forward a large-scale HDA with the second submission.

It is our understanding that comments from several agencies may lead to a revision in the proposed street network. In designing the street network, the Region recommends that connectivity be promoted to the nearby school and the Hamlet of Belfountain.

Natural Heritage:
Under the Niagara Escarpment Plan the subject lands are designated as Escarpment Natural Area and Escarpment Rural Area (NEP 1.3 & 1.5). Portions of the property are currently designated Core Areas of the Greenlands System as per Schedule A of the Regional Official Plan – where environmental protection policies apply (ROP 2.3.2.2. to 2.3.2.8). The applicant has proposed the woodlot on the

southwest border of the property to be encompassed by Open Space Block 75 and buffer Block 76, while the woodlot and valley on the east side of the property along Mississauga Road is encompassed by Open Space Block 73 and buffer Block 77. Block 74 is also proposed to preserve a depressed area as Open Space.

The site contains additional environmental features that may be deemed significant features or habitat requiring protection. Areas such as the grassland habitat and existing hedgerow/woodlot crossing proposed Lots 5, 6, and 7 must be further examined. The Region relies on the environmental expertise of the Credit Valley Conservation staff for the review of development applications located within the Greenlands Systems in Peel and their potential impacts on the natural environment. The Region will work in conjunction with the Town of Caledon, Niagara Escarpment Commission, Ministry of Natural Resources and Forestry, and Credit Valley Conservation to ensure the appropriate measures are taken to protect and enhance these and other natural heritage features on site.

Noise Study Comments:
A Noise Impact Study dated December 19, 2017 was prepared by Swallow Acoustic Consultants Ltd. The Region of Peel reviews noise reports to assess the impacts of noise generated from Regional Roads on residential uses. As Mississauga Road is separated from Lots 49 through 56 by the existing sizeable woodlot, the Region is not concerned with road traffic as a significant noise source.

Source Water Protection Comments:
The Wellhead Protection Area (WHPA) E for the Credit River and Peel's Inglewood wells overlaps a small portion of the property at its northern border. The applicant has not proposed a change in land use at that location – it is encompassed by Open Space Block 73.

Transportation Comments:
The proposed development abuts Mississauga Road, Regional Road 1.

- Region of Peel will not permit any changes to grading within the Mississauga Road right-of-way along the frontage of proposed development.
- No lots or blocks shall have direct access to Mississauga Road. Any future access shall be in accordance with the Region's Access Control By-law.
- Storm water flow shall be looked at in a holistic manner for all developments along Regional roadways. The relocation of storm systems across Regional roadways shall be done symmetrically, so that the distance between the inlet and outlet of the system onto the Regional roadway are the same or less as compared to the pre-development condition. Under no circumstance should the flow of storm water be diverted along the Regional right-of-way (by pipe or channel), in order to accomplish the relocation of a drainage feature with-in or adjacent to the Regional right of way, without the prior written consent of the Region.

Land Dedications:
The Developer shall gratuitously dedicate, free and clear of all encumbrances and to the satisfaction of the Region:

- A road widening pursuant to the Region's Official Plan along Mississauga Road (Regional Road #1). The Region's Official Plan road widening requirement for mid-block along Mississauga Road is 30 metres right-of-way (15.0 metres from the centerline). An additional 5.5 metres of property as per the Official Plan requirements will be required within 245 metres of intersections as a result of design necessities to protect for the provision of but not limited to; utilities, sidewalks, multiuse pathways and transit

bay/shelters. The total right of way required is 35.5 metres for a single left turn lane intersection configuration (17.75 metres from the centerline of Mississauga Road).
- A 0.3 metre reserve along the frontage of Mississauga Road behind the property line.

The draft plan must be revised to show the above noted components.

Capital Project:
The Developer is advised that the Region has recently undertaken design for road improvements along Mississauga Road under project #14-4065. It is recommended the applicant contact the Region to clarify specific road improvement requirements prior to preparation of detailed engineering plans and/or reports. The capital project is currently at the 30% Detailed Design stage.

Servicing Comments

This site does not have frontage on existing municipal sanitary or water services are there are no services in close proximity. The applicant is proposing private individual wells and septic systems to service each dwelling.

Water and Wastewater Program Planning Comments:

A Hydrogeological Investigation Report dated February 2018 and prepared by Cole Engineering Group Ltd. was received. The report provides a summary and analysis of existing reports prepared for previous iterations of development proposals on the property and includes monitoring of several wells from October 2017 to around January 2018.

- The water balance is based on the results from previous studies as follow:
    a. Terraprobe: Hydrogeological Investigation - 1988 and 1989
    b. Beatty Associates: Assessment of water supply based on the Terraprobe study - 2002
    c. RJ Burnside: Information on a monitoring program from 2014 to 2017 and pumping tests performed to five wells in 2014 and two wells in 2016
- A review of the well water records database dated 2017 is provided, but there is not updated door-to-door survey within the 500-metre area of influence.
- Cole Engineering is not clear on the specific sources of water proposed to be used for the development and did not provide information on the location of the wells in relation to the proposed design.
- The report is based on very general information from the site.

Conclusions:

- The report must be reviewed and adjusted to the most up to date information.
- A pumping test relevant to the proposed water takings must be performed and designed according to the depth of the wells to properly determine potential impact to the aquifer and the private wells being supplied by the same aquifer.
- A combined pumping test must be performed, where all proposed supply wells together with private wells must be pumped at maximum rate to prove there is enough water supply to avoid impact on neighbouring wells. Monitoring stations in the wetlands and surface water features must be added as well.
- A calculation of the water balance must be provided based on the most up to date information.

Waste Management Comments

The Region of Peel will provide curbside collection of garbage, recyclable materials, household organics and yard waste subject to the following conditions being met:

Waste Collection Vehicle Access Route Comments:

- All roads shall be designed to have a minimum width of 6 metres.
- Road layouts shall be designed to permit a waste collection vehicle to drive forward without reversing for waste collection. Where the requirements for a road layout permitting forward movement of a waste collection vehicle cannot be met, a cul-de-sac or a T-turnaround shall be provided in accordance with the specifications shown in Appendices 2 and 3, respectively (Waste Collection Design Standards Manual).
- Internal roadways must be constructed of a hard surface material, such as asphalt, concrete or lockstone, and designed to support a minimum of 35 tonnes, the weight of a fully loaded waste collection vehicle.
- The turning radius from the centre line must be a minimum of 13 metres on all turns. This includes the turning radii to the entrance and exit of the site. *Please show and label the turning radii in subsequent submissions.*
- The proposed cul-de-sac on the East side of the site by Lot 55 and Lot 56 must have a minimum 13 metre turning radius from the centre line. *Please show and label the turning radius from the centre line in subsequent submissions.*

Curbside Collection Area:

- Each dwelling unit within a development must have its own identifiable collection point. See Appendix 9 (Waste Collection Design Standards Manual) for an example of a collection point.
- The set-out area along the curb, adjacent to the driveway must be at least 3 square metres per unit in order to provide sufficient space for the placement of two carts: maximum 1 large garbage or recycling cart (360 litres) and 1 organics cart (100 litres), overflow waste (i.e. additional bags), yard waste receptacles and bulky items. Each unit within a development must have its own identifiable waste collection point (distinct set out area along the curb or the sod that cannot be shared with neighbouring units) as approved by Public Works Commissioner or Delegate.
- The waste set out location is to be as close as possible to the travelled portion of the roadway, directly adjacent to the private property of the unit occupier/owner, directly accessible to the waste collection vehicle and free of obstructions like parked cars and sidewalks.
- *Please show and label the designated set-out area for each dwelling in subsequent submissions.*

For more information, please consult the Waste Collection Design Standards Manual available at: http://peelregion.ca/pw/standards/design/waste-collection-design-manual-2016.pdf

Concluding Comments

If you have any questions or concerns, please contact me at your earliest convenience at 905-791-7800 ext. 8673, or by email at: joy.simms@peelregion.ca.

Yours truly,

Public Works

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Joy Simms
Development Services

Public Works

10 Peel Centre Dr., Suite A, Brampton, ON L6T 4B9
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TOWN OF CALEDON

August 15, 2018

Ms. Nancy Mott, MCIP, RPP
Senior Strategic Advisor, Niagara Escarpment Commission
232 Guelph Street,
Georgetown, Ontario, L7G 4B1

Via Email: Nancy.Mott@ontario.ca

Dear Ms. Mott:

RE: Resubmission of Rural Estate Residential Plan of Subdivision
and Niagara Escarpment Development Permit Application
Glen Schnarr & Associates on behalf of The Manors of Belfountain Corp.
Part of Lot 9, Concession 5, WHS (CAL)
Hamlet of Belfountain
Files: 21T-91015C & NEC 2017/2018-450

In regards to the above lands, the Town is in receipt of the resubmission of a Draft Plan of Subdivision application, as filed by the applicant, along with a corresponding NEC Development Permit application. Please note that this letter replaces in its entirety the document dated August 8, 2015, to include Heritage comments and some other minor modifications.

Introductory Background Information

The subject lands are approximately 70.28 hectares (173.67) acres) in area and are located on the east side of Shaws Creek Road, south and east of Mississauga Road in the Hamlet of Belfountain. The subject lands have an extensive history with respect to residential development proposals. A previous Plan of Subdivision application (File No. 21T-88024C) was initially submitted in 1988 by previous owners, and generally referred to as “Enterac”. This plan of subdivision initially proposed to create 73 estate residential lots within the subject lands. Related Development Permit applications were concurrently filed with the Niagara Escarpment Commission (NEC) to facilitate the proposed dwelling and infrastructure construction within the plan of subdivision. This subdivision application was ultimately referred to the Ontario Municipal Board (OMB) by the Town, applicant and a local ratepayers association under the *Planning Act*. The related NEC Development Permit applications were refused by the NEC and subsequently appealed to the Board by the applicant under the *Niagara Escarpment Planning and Development Act*. The collective referral/appeal of these applications to the Board resulted in a Joint Board Decision dated August 28, 1990 which refused the draft plan of subdivision application and confirmed the NEC decision to refuse the corresponding Development Permit application. The contents of this decision, however, acknowledged the potential for residential development on the subject lands outlined principles for any future residential development, to be considered as part of any future proposal submission.

Subsequent to the 1990 Joint Board Decision, the current draft Plan of Subdivision application (File: 21T-91015C) was submitted by Enterac on July 5, 1991 for the subject lands. The initial subdivision submission proposed to create 48 estate residential lots as well as a 17.37 hectare open space block. Based on review comments

received from Town departments and external public agencies, various technical reports were submitted in support of the proposed plan following the initial application submission. This review dialogue continued for several years and involved revised draft plan submissions in August 1997 and February 1998. Following this, the applicant attended Pre-Submission Consultation (DART) Meetings on July 26, 2012, June 12, 2014 and September 21, 2017, all in support of proposed revised submissions for this application. The latest DART Meeting of September 21, 2017 was followed by subsequent consultation between the applicant and pertinent Town, Region, CVC and NEC staff with respect to access, servicing, firefighting requirements, protection of natural features, visual impact and urban design submission requirements. On March 7, 2018, the current updated application submission package was received from Glen Schnarr & Associates Inc., on behalf of The Manors of Belfountain Corp, being the new owners of the subject lands. A related Development Permit application was submitted concurrently to the NEC and circulated to the Town (File 2017/2018-450) with respect to the proposed revised subdivision submission. The Draft Plan of Subdivision was appealed to the OMB/LPAT by the applicant dated March 27, 2018, on the basis of non-decision by the Town. Relevant documentation in this regard has been forwarded down to the Tribunal.

The current draft plan of subdivision proposes to create 67 estate residential lots, as well as a 2.6 hectare (6.42 acre) park block and an 18.92 hectare (46.75 acre) open space area associated with the northwest portion of the site. The residential lots are proposed to be serviced by individual private wells and wastewater (septic) systems. Belfountain is identified as a Minor Urban Centre in the Niagara Escarpment Plan and the area is subject to Niagara Escarpment Commission Development Control. Belfountain is designated as a Settlement Area Hamlet, and Environmental Policy Area (EPA) in the Town of Caledon Official Plan.

The following are preliminary comments as received through the circulation of the subject revised draft plan of subdivision application from internal Town departments. It is the Town's understanding that external agencies will file comments directly with the NEC, the status of which is summarized below. Please note that the following comments are preliminary at this time and may be amended and supplemented subject to further staff review. Detailed Planning & Development comments have yet to be finalized and will follow pending a full review of the filed Planning Justification study, and further review of applicable Caledon Official Plan policies and provisions.

The following is a brief summary of the major Town concerns that were identified through the circulation of the material, as identified in Town comments:

- Conformity with applicable Town of Caledon Official Plan policies and provisions, as it relates to proposed development, settlement, servicing and environmental policies of the Plan, remain under review. Further comment in this regard will follow. Matters of interest and concern from a Town perspective in this regard include housing density and compatibility, overall site servicing including impacts on water, and environmental and natural feature implications.

- Coordination of peer reviews of certain filed study documents will be required, at the expense of the applicant (noise and hydrogeological reports). Reviews will be coordinated with other commenting agencies, and will occur if and when its determined if any major changes are required to study documents as filed;

- The proposal for how the subject lands are to be serviced from a stormwater perspective remains unsatisfactory from a Town perspective. It is understood that additional documentation may be filed with the Town to support the proposal;

- There is concern from a Town perspective regarding the development of lands in the north central portion of the plan, and the impact on this area from a grading perspective;

- There is concern regarding the impact of development on the existing hedgerow fabric of the property. The applicant is encouraged to protect and enhance those portions of the hedgerow where feasible, as per Landscape, Heritage and Urban Design comments;

- Certain additions and changes are recommended for the Urban Design and Architectural Design Guideline document, as outlined in the control architect comments;

- Changes are requested regarding the location and programming of the proposed park features, as outlined in the comments;

- Demonstration of adequate water supply for firefighting purposes needs to be provided, to the satisfaction of Fire & Emergency Services staff.

Internal Town comments received are as follows:

A. Town of Caledon - Corporate Services, Legal Services
May 28, 2018

The Legal description is identified as follows: PIN: 14267-0114 (LT) being Part Lot 9, Concession 5 WHS (CAL) being Parts 2 & 4 on 43R-20408; Save and Except Parts 1 to 10 on 43R-23456; Subject To Part 4 on 43R-20408 as in VS302215; Town of Caledon; Regional Municipality of Peel.

Instrument No. VS302215 is an Easement Agreement registered on February 19, 1974 between The Caledon Mountain Estates Limited and John W. Neil on Part 4 of 43R-20408 for the purposes of a right to build, maintain and use a septic tank and tile fields for the normal purposes of a single family detached dwelling.

Part 4 on 43R-20408 appears to be situated in Block 73 of the draft plan (plot date Dec 5, 2017). This is not shown on Block 73 on the draft plan. If this Block is to be transferred to the Town, then the Town will have to determine if the Easement Agreement should be deleted.

Staff request that the following conditions be added as part of the draft approved conditions. These conditions are to be cleared by the Legal Services Office prior to final approval and registration of the M-plan.

1. The Owner shall enter into a Town of Caledon Subdivision Agreement or any other necessary agreements executed by the Owner, the Town and the Region or any other appropriate authority prior to any development within the plan to satisfy all financial, legal and engineering matters including land dedications, grading, easements, fencing, landscaping, provision of roads, stormwater management facilities, installation of municipal services, securities, parkland and cash contributions, and other matters of the Town and the Region respecting the development of these lands in accordance with the latest standards, including the payment of Town and Regional development charges in accordance with their applicable Development Charges By-laws.

2. Prior to the preparation of any agreement, the Owner shall pay to the Town all fees and costs set out in the Fees By-law for the preparation and registration of the agreement and all documents necessary to give effect to the approval of the Plan of Subdivision.

3. The Owner shall convey/dedicate, gratuitously and free and clear of all encumbrances, any required parks, open space, trails, road or highway widenings, 0.3m (1 ft.) reserves, walkways, daylight triangles, buffer blocks, stormwater management facilities, maintenance blocks and utility or drainage easements or any other easements as required to the satisfaction of the Town, the Region or other authority.

4. The Owner shall provide the Town with postponements of any outstanding encumbrances in favour of the Subdivision Agreement.

5. Prior to assumption, the Owner shall provide:
    a. a chart outlining all the terms and conditions of the Subdivision Agreement that must be fulfilled prior to assumption; and
    b. evidence of compliance with all terms and conditions of the subdivision agreement and any other applicable agreement, at its sole cost and expense.

B. Town of Caledon - Community Services, Open Space Design
July 5, 2018

The first submission for the Manors of Belfountain Subdivision has been reviewed for landscape and open space requirements. Comments on the material provided are detailed below. Please note that, any items below that pertain to the conditions of draft approval are in addition to our standard comments and development standards. Additional comments may apply on all future re-submissions.

Visual Impact Assessment Report, March 5, 2018 by BTI:

1. Views from Mississauga can be further mitigated through planting within the Park Block, subject to final Park Block location. The condition of the existing hedgerows along the southern boundary (particularly rear of lots 56 to 60) are to be further assessed through the Tree Inventory Report by BTI.
2. A planting buffer along the property line adjacent Shaw's Creek Road shall be considered at either the subdivision or site plan stage.

Urban Design and Architectural Guidelines, February 2018 by BTI, Architecture Unfolded and Weston Consulting:

3. See marked up document attached.

Tree Inventory Report, February 6, 2018 by BTI:

4. Add the following note to the document: 'During construction and prior to Assumption of the subdivision by the Town, the consulting Arborist along with appropriate Town staff shall inspect the entire site. Any noted hazardous trees must be identified and removed prior to assumption.'
5. Add the following note to the document: 'Any trees located on the property line or on the adjacent property that are proposed to be removed or pruned, will require written consent from the adjacent property owner. All correspondence is to be forwarded to the Town prior to final approval.'
6. Add the following note to the document: '2:1 tree compensation will be required for all tree a removals. Tree compensation planting will be in addition to the standard required planting. In the event that tree compensation cannot be accommodated for in the planting design, financial compensation shall be

collected at a rate (per tree) as determined by the Town.' The compensation ratio noted in this statement may be subject to change based on further discussions between the Town and the CVC.

7. Add the nesting note from section 7.5.2 in the SEIS by Savanta (March, 2018).
8. All trees 15cm (6") DBH and above are to be reviewed and included into the document. In addition, all trees included in the current document are to be reviewed again since many changes may have occurred since the last assessment performed in 2014.
9. The assessment of the large woodlot can be generalized, but any individual hazard trees adjacent the proposed lots are to be assessed accordingly.
10. Vine removals are to be proposed along any existing hedgerows that are to be preserved.
11. See marked up plan (TR1) attached, showing potential trees and hedgerows that should be reviewed and considered for preservation. The marked up plan is only a guideline. Please indicate if any other trees can be preserved on site.
12. Drawing ST1 from Cole shows the existing individual trees on the plan. This drawing may be a good reference for the updated TR1 drawing.

Scoped Environmental Impact Study, March 2018 by Savanta:

13. Section 4.4.2: Information to be modified once the Tree Inventory Report by BTI is updated.
14. Section 7.5.6: Confirm trail upgrades with CVC. They typically do not accept conveyance of lands with proposed infrastructure. The pathway between lots 16/17 is not encouraged. Preference is to have a sidewalk along the East side of Shaw's Creek Road to the existing school.
15. Section 8.0: Third paragraph pertaining to woodlot trail to be adjusted based on CVC comments.

Drawing ST-3 External Area Drainage Plan, January 2018 by Cole:

16. This drawing shows a rather large drainage area from the adjacent lands to the south into the proposed park block. How will this impact the potential park block location in terms of flow rates? If so, will any mitigation measures by required?

General Comments:

17. Consider relocating the park block (Block 68) to a more centralized location within the plan. This will improve access to the park and increase the probability of obtaining a minimum of 50% street access as per our standards.
18. Block 71 shall not be considered parkland. Consider merging with Open Space block 75.
19. Blocks 69 & 70 shall not be considered parkland. Consider merging with Open Space block 74.
20. The stub of Park block 68 in behind lots 54 & 55 shall not be considered parkland. Consider merging this stub with Open Space block 73.
21. The Town will not accept the conveyance of Open Space block 73.
22. Remove Walkway block 72 into the existing school block. A sidewalk connection from either Street C or A along the east side of Shaw's Creek Road to the existing school block should be considered.
23. Depending on the LID design within the internal ROW's, street trees in the boulevard may be considered along Street A & Street C (ending at Street B) off of Shaw's Creek road.
24. All chain link & paige wire fencing is to be installed entirely on private property adjacent all town, region and conservation authority owned lands.
25. The landscape construction drawings shall be completed in accordance with the Town of Caledon Official Plan, Recreation and Parks Masterplan, Site Specific Design Guidelines and the most current version of the Town of Caledon Development Standards.

26. Prior to executing the servicing agreement, the Owner shall prepare detailed landscape design, grading and construction drawings including all tender documents for park blocks for approval by the Town.
27. A clause in the subdivision agreement should indicate that the Owner shall implement the base park conditions to the satisfaction of the Town without any reimbursements by any means including development charges. The required base park condition items will be finalized at the time of final draft plan approval.
28. A clause in the subdivision agreement should indicate that the Owner will be responsible to maintain the park block including grass cutting and debris removal until park construction or assumption, whichever comes first.
29. A clause shall be included in the grading, servicing and subdivision agreements stating that the park block shall not be used for stock piling or storage of any construction materials, including topsoil.
30. The landscape consultant is to submit a park facility fit plan. The consulting landscape architect should follow up with Town staff to confirm requirements.
31. The owner shall pay cash-in-lieu of parkland dedication (CIL) to the Town for the portion of parkland that is under dedicated from the required parkland for the subdivision development. In order to determine the amount of CIL payment, the applicant shall have a market appraisal completed by an AACI certified appraiser. Prior to registration, the Owner shall reimburse the Town for the cost of any necessary peer review of the appraisal.
32. If gateways or entry ways are being proposed, they must be located on a separate block. In this instance, the Town shall secure twice the cost of the construction value to the Town for future maintenance/replacement purposes.
33. A warranty buyout option for replacement trees may be considered at time of Assumption. Wording of the clause will be finalized at time of Draft Plan Approval.

C. Town of Caledon - Community Services, Urban Design
May 14, 2018

1. See attached comments from John G. Williams Limited.

D. Town of Caledon, Corporate Services - Legislative Services, Accessibility
May 3, 2018

1. Please note that the Town will require as a condition of draft approval, that prior to offering units for sale and in a place readily available to the public, the owner will display information regarding universal design options that may be available for purchase within the development prior to offering units for sale.

2. Exterior travel routes (sidewalks) shall be a minimum of 1.5 m wide as per the Design of Public Spaces legislation of the AODA, pertaining to exterior travel routes.

3. All sidewalks shall be connected when crossing over to another street with accessible features, such as tactile surfaces and curb ramps.

4. Lighting on exterior routes of travel shall comply with the Town's lighting standard.

5. If a community mail box is installed, the area shall be well lit via a light standard and a curb depression from the sidewalk and/or roadway to the mail box landing area.

6. The park space shall have a travel route that is firm, stable and slip resistant.

7. If a play structure is incorporated into the park space area, accessibility features shall be incorporated into the design of the play structure, such as sensory and active play components for children and caregivers with various abilities.

E. Town of Caledon, Community Services – Fire and Emergency Services
June 18, 2018

1. Please note that any building constructed under the requirements of Part '3' of the Ontario Building Code shall be required to provided adequate water supply for firefighting (OBC 3.2.5.6.) and fire department access (OBC3.2.5.7).

2. The adequate water supply for firefighting would be on private property and would be on a lot to lot or building to building basis, as this subdivision does not require municipal water supply under the official plan.

F. Town of Caledon, Finance and Infrastructure Services - Transportation
May 18, 2018

1. Sight distance analysis of the TIS report indicates a sightline concern at the intersection of Street C and Shaws Creek Road. This needs to be addressed during the next submission, and mitigation measures should be provided.

2. From a transportation perspective and as directed by the Caledon Transportation Master Plan, the consultant should review and provide the recommendations on the appropriate Cycling Facilities within the subdivision according to OTM Book 18. Also, the sidewalk should be provided on the local roads based on the AODA standard. The findings should be provided in a drawing.

3. Town will require a 3 metre widening along the frontage of Shaws Creek Road. The ultimate right of way width of this road is 26 metres as per Schedule K of the Official Plan.

G. Town of Caledon, Community Services - Policy & Sustainability, Heritage
August 14, 2018

The following comments are in reference to the Cultural Heritage Resource Assessment: Built Heritage Resources and Cultural Heritage Landscapes, ASI file: 17CH-100, December 2017 (revised January 2018):

1. No grading, clearing or grubbing on site until the requested CHIS or BHR has been submitted to the Town and recommendations agreed upon by the Heritage Resource Officer.
2. Please check reference to dates of maps in 3.2 (1859 and 1877?)
3. Please ensure all heritage dates, references and are correct
4. Agree with recommendation points 1, 3, 4, 5, 6, 7, and 8.
5. Stronger protection of the development boundary identified in point 4 is required.

6. Amend point 7 to read " …….submitted to Douglas McGlynn, Heritage Resource Officer at the Town of Caledon ……"
7. CHL2 identifies the remnants of a farm complex with some of the remains to be substantial, including an intact silo. How will these be mitigated in the green space once the development has been completed? As noted, a CHIS or a Built Heritage Inventory report identifying all built heritage resources (including stone mounds and walls) should be conducted for the identified CHL 2.
8. Heritage Resources that have been acknowledged as tree lines, hedgerows and fence lines that identify the demarcation of fields will be maintained. However, further identification of the rubble stone mounds from the de-stoning of fields and the rubble stone walls that also demarcate field patterns specifically on the west half of the site need to be included in the Cultural Heritage Resource Assessment, ASI file: 17CH-100, December 2017 (Revised January 2018) or will require a separate CHIS recommending appropriate inclusion and retention in the development.
9. Recommendations will note that the identified heritage resources outlined in the CHRA will be avoided wherever possible and maintained/preserved throughout the development through protection strategies such as tree protection zones. These should be incorporated wherever possible in the design.
10. Once included in the CHRA the stone mounds and walls will require protection and should be mapped until appropriate recommendations for their inclusion in the project are brought forward. Where possible the stone mounds and walls will be preserved, however, should this strategy prove to be too inhibitive then mitigation of the stone mounds and stone fence lines as landscape features throughout the development such as property demarcation, stone landscape features, etc. will be designed into the development.

H. Town of Caledon, Community Services - Planning & Development, Engineering
July 25, 2018

1. Please see attached comments.

I. Town of Caledon, Finance and Infrastructure Services - Engineering Services
July 30, 2018

1. Please see attached comments.

J. External Comments

External comments received include the following, which have not been attached. Copies of any of the below material can be forwarded upon request.

- Credit Valley Conservation, dated July 26, 2018
- Region of Peel, dated July 31, 2018
- Bell Canada, dated May 28, 2018
- Canada Post, dated April 28, 2018
- Dufferin-Peel Catholic District School Board, dated April 27, 2018
- Peel District School Board, dated May 8, 2018
- Enbridge, dated May 2, 2018

K. Outstanding Comments

Comments from the following internal and external agencies/departments remain outstanding, as requested through the draft plan of subdivision circulation:

- Hydro One Networks Inc.
- Ontario Provincial Police
- Rogers Communication
- Town of Caledon, Building Services
- Town of Caledon, Planning & Development (see above for explanation)

Based on the comments provided herein, revised submission documentation is required for further review. I trust this information is of assistance to you. Please do not hesitate to contact the undersigned at extension 4246 or rob.hughes@caledon.ca should you have any questions.

Sincerely,

Rob Hughes, MCIP, RPP
Manager of Development - West
Community Services Department, Planning and Development
TOWN OF CALEDON

Enclosure

C (by email). Mark Atkinson, Senior Development Engineering Coordinator
Nick Pirzas, Senior Landscape Architect
Daniela Busca, Law Clerk
Margherita Bialy, Community Policy Planner
Paula Strachan, Senior Development Planner/Urban Designer
Arash Olia, Transportation Planning Technologist
Geoff Hebbert, Senior Project Manager
Douglas McGlynn, Heritage Coordinator
Wendy Sutherland, Legislative Specialist
Dave Pelayo, Chief Fire Prevention Officer
Joy Simms, Region of Peel
Lisa Hosale, Credit Valley Conservation

Appendix H **–** TOR

Zara Georgis

From: Richard Pernicky
Sent: Friday, November 10, 2017 1:32 PM
To: Zara Georgis
Subject: FW: The Manors of Belfountain TIS

From: Arash Olia [mailto:Arash.Olia@caledon.ca]
Sent: Monday, September 25, 2017 1:04 PM
To: Karen Bennett <karenb@gsai.ca>
Subject: RE: The Manors of Belfountain TIS

Hi Karen,

I reviewed the Terms of Reference, and the scope of work is confirmed. Also, you can have access to our Traffic Impact Study Guidelines from the link bellow:

https://www.caledon.ca/en/townhall/resources/Transportation-Impact-Studies-TOR-Guidelines.pdf

Should you have any questions, please let me know.

Thanks,
Arash

Arash Olia, Ph.D., P.Eng.
Coordinator, Transportation Development, Transportation
Finance & Infrastructure Services

Office: 905.584.2272 x.4073
Email: arash.olia@caledon.ca

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From: Karen Bennett [mailto:karenb@gsai.ca]
Sent: Friday, September 22, 2017 1:51 PM
To: Arash Olia
Cc: Brandon Ward; Will Maria; John Spina
Subject: The Manors of Belfountain TIS

Hello Arash – thanks again for your comments at DART yesterday re our Belfountain Draft Plan of Subdivision. As discussed, attached are the Terms of Reference prepared by GHD in Oct. 2015. We subsequently met with the Town

and discussed these Terms of Reference (I think it was Oct 16, 2015) and they were accepted. Pls advise if you have any suggested revisions at your earliest convenience as this TIS is now underway. Thanks!

Karen Bennett, MCIP, RPP | Senior Associate
700 - 10 Kingsbridge Garden Circle
Mississauga, ON L5R 3K6
T: 905-568-8888 x235 | **F:** 905-568-8894
www.gsai.ca

GSAI
Glen Schnarr & Associates Inc.

From: Karen Bennett
Sent: October-14-15 3:19 PM
To: 'brandon.ward@caledon.ca' <brandon.ward@caledon.ca>
Cc: Will Maria <William.Maria@ghd.com>; 'Ernie Groskopfs' <Ernie.Groskopfs@rjburnside.com>
Subject: Belfountain ORB Meeting on Friday Oct 16 at 1pm

Hi Brandon –

Please see below a run-down of proposed TIS terms of reference, to assist us with our meeting on Friday. As well, attached are some preliminary road grading, profiles and sections and we'll bring some hard copies for discussion on Friday. Hopefully this info will assist in our discussions on Friday.

The proposed terms of reference for the traffic study includes the following:

- Study intersection to include:
    a. Shaw Creek and Bush Street
    b. Shaw Creek and The Grange Sideroad
    c. Shaw Creek and site accesses
- Update traffic counts for the am and pm peak hours at the study intersections
- Provide a five year planning horizon for future conditions
- Background growth to be calculated based on historic counts
- Include any planned developments within the study area identified by staff
- Trip generation for single family detached housing using ITE trip generation 9th edition
- Distribution based on existing counts
- Analysis using Synchro 8

Karen Bennett, MCIP, RPP | Associate
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