Wildfield Village
Town of Caledon
Transportation Impact Study

Paradigm Transportation Solutions Limited

2025-08-28
240562

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Project Summary

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Town of Caledon
Transportation Impact Study



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Executive Summary

Content

Global Properties Inc. retained Paradigm Transportation Solutions Limited (Paradigm) to update the Transportation Impact Study (TIS) which was originally completed in January 2025 by Paradigm for a proposed residential subdivision in the Town of Caledon. The proposed development lands are generally bound by The Gore Road by the east, Centreville Creek Road to the west, Healey Road to the north, and vacant lands to the south within the Town of Caledon. The lands are currently undeveloped, and form part of the wider Wildfield Village Secondary Plan area.

The TIS includes an assessment of future traffic conditions (with and without the proposed development), with the purpose to determine the net impacts of the development site traffic on surrounding road network, and to identify any remedial measures required to accommodate the site traffic, if any.

The findings, conclusions, and recommendations of this study are summarized below and outlined in further detail in the body of the report.

Development Concept

The subject site is generally bound by The Gore Road by the east, Centreville Creek Road to the west, Healey Road to the north, and Mayfield Road to the south within the Town of Caledon.

The property owner proposes to construct a residential subdivision providing a total of 397 single-family detached dwellings, 828 single-family attached dwellings and 1378 street townhouse units. It is noted that on the plan of subdivision 173 lots are noted as dual-purpose, these lots are assumed to consist of two single-family attached dwellings or a total of 347 dwelling units. As we understand, the development is anticipated to be constructed via two phases:

- **Phase 1 is** proposed to consist of 98 single-family detached dwellings, 213 single-family attached dwellings, and 199 street townhouse units, for a total of 510 units within Phase 1.
- **Phase 2** is proposed to consist of 299 single-family detached dwellings, 615 single-family attached dwellings, and 1,179 street townhouse units, for a total of ,2093 units.
- **The Full Build-Out (Phase 1 + Phase 2)** is proposed to consist of 397 single-family dwellings, 828 single-family attached

dwellings, and 1,378 street townhouse units, for a total of 2,603 units.

Regarding vehicular access, upon Full Build-Out, the residential subdivision will be served by three full-movement connections along Centreville Creek Road, and one full-movement connection to The Gore Road. The Secondary Plan Transportation Study identified that these will be signalized. However, the traffic analysis in this report assumes they will be built as unsignalized intersections, to determine whether signalization will be justified.

Conclusions

- **Development Trip Generation:**
  - Phase 1 of the proposed development is forecast to generate 377 and 452 vehicular trips during the weekday AM and PM peak hour, respectively.
  - Phase 2 is forecast to generate an additional 1,750 and 2,067 vehicular trips during the weekday AM and PM peak hours, respectively.
  - Full Build-Out of the proposed development is forecast to generate 2,127 AM and 2,519 PM weekday peak hour trips.
- **Phase 1 Background Traffic Conditions:** The study area intersections are forecast to operate with acceptable levels of service, with all movements within capacity.
- **Phase 1 Total Traffic Conditions:** The study area intersections operations are reported to be slightly worse with the addition of the site generated traffic in comparison to background traffic conditions. It is noted the study area intersections are forecast to continue to operate at acceptable levels of service and within all movements within capacity.
- **Full Build-Out Background Traffic Conditions:** The study area intersections are forecast to operate with acceptable levels of service, will all movements within capacity.
- **Full Build-Out Total Traffic Conditions:** The study area intersections operations are reported to be slightly worse with the addition of the site generated traffic in comparison to background traffic conditions. With the addition of site traffic new critical movements are forecast to occur at the intersection of Street B at Street E during the AM and PM peak hours on the eastbound/southbound and eastbound/westbound approaches, respectively.

It is noted that other than the Street B and Street E intersection, all other study area intersections are forecast to continue to operate at acceptable levels of service and with all movements within capacity.

- **Remedial Measures:** All unsignalized study area intersections were reviewed to determine whether traffic signal control would be warranted for consideration. None of the proposed unsignalized intersection meet the warrant threshold under full build-out total traffic conditions.
- **Auxiliary left-turns lanes:** These were examined as a potential way to reduce delay at two-way stop-controlled intersections on major roads. This situation only occurs at the intersection of Centreville Creek Road and Street E during Phase 1. The warrant nomograph indicates that that auxiliary left-turn lane is not warranted at this intersection after Phase 1 is constructed.
- **Auxiliary right-turns lanes:** The only situation where a right-turn lane may be plausible is at the two-way stop-controlled intersection of Centreville Creek Road and Street E during Phase 1. The detailed operational analysis indicates this intersection does not have any operational issues that would justify the addition of a right-turn lane in Phase 1 Conditions.
- **Parking:** The proposed development would have approximately 486 on-street spaces for 2,581 units. This figure excludes potential off-street parking in front of parks, to be conservative. It equates to roughly 0.2 off-street spaces per unit, which would be in addition to the 2.0 off-street spaces per unit required by the Town's Zoning By-Law.
- **Swept path analysis:** Heavy vehicle circulation for temporary conditions was assessed using AutoTURN swept path analysis software. The swept path analysis with the design vehicles noted in **Chapter 7.3** results in no conflicts with the internal site geometry.
- **Pedestrian and cycling plan**:
  - **Local roads**: Sidewalks will be provided on both sides of all roads, with no dedicated cycling facilities
  - **Collector roads (23.5m):** A multi-use path will be provided on both sides
  - **Collector roads (26m):** A sidewalk and one-way cycle track will be provided on both sides

  There is also potential for local trails to be added around stormwater ponds.

- **Transit**: there is sufficient space to accommodate the bus stops proposed by the Secondary Plan transportation study. There is also space for bus shelters being available on the 26m collector roads. All parts of the proposed development are within 400m of a proposed bus stop.

Recommendations

Based upon the findings of this study, the following is recommended:

- It is suggested that the Region of Peel continue with the widening of Mayfield Road to support background traffic volumes within the study area. Additionally, the Region of Peel and the Town of Caledon should consider the suggested improvements within the Wildfield Transportation Study to support future growth within the overall secondary plan area.
- It is suggested that the Region of Peel continues to monitor the traffic volumes at The Gore Road intersections with Healey Road and Mayfield Road to determine if signal timing plan modifications are required.
- It is suggested that traffic volumes are monitored to determine if changes to traffic signal control are required.
- It is recommended the internal study area intersections provide the noted lane configurations and traffic control as documented within **Figure 7.1** and **Figure 7.2**.

From a transportation perspective, the planning applications sought should be approved as the development can be accommodated by the anticipated future transportation network.

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1 Introduction

Global Properties Inc. retained Paradigm Transportation Solutions Limited (Paradigm) to conduct the Transportation Impact Study (TIS) for a proposed residential subdivision in the Town of Caledon. The proposed development is generally bound by The Gore Road by the east, Centreville Creek Road to the west, Healey Road to the north and a future road (running parallel to Mayfield Road), within the Town of Caledon. The site is situated within the Wildfield Village Secondary Plan area.

Figure 1.1 illustrates the location of the subject site. The scope of this study is as follows:

- **Transportation Impact Study**
  - Assess the internal and external study area intersections.
  - Conduct traffic forecast for year 2031 to determine if any Conduct mitigation is required for Phase 1.
  - Conduct traffic forecasts for year 2051, which aligns with the Secondary Plan's Transportation Study[1], to determine the effects of the build-out development on the future transportation network; *and*
  - Analyse time periods comprising the weekday AM and PM peak hours (that is, typical commuter periods).
- A review of **Access and Circulation**, including parking, vehicle swept path analysis, pedestrian and cyclist circulation, and transit.

The study area is proposed to consist of the following intersections:

- Existing intersections:
  - Centreville Creek Road and Mayfield Road (signalized);
  - Centreville Creek Road and Healey Road (signalized);
  - The Gore Road and Mayfield Road (signalized); *and*
  - The Gore Road and Healey Road (signalized).
- Future external intersections:
  - Street B and Centreville Creek Road;
  - Street D and Centreville Creek Road;
  - Street E and Centreville Creek Road; *and*

[1] BA Group. *Wildfield Village Transportation Study*. (May 2025).

- Street E and The Gore Road.

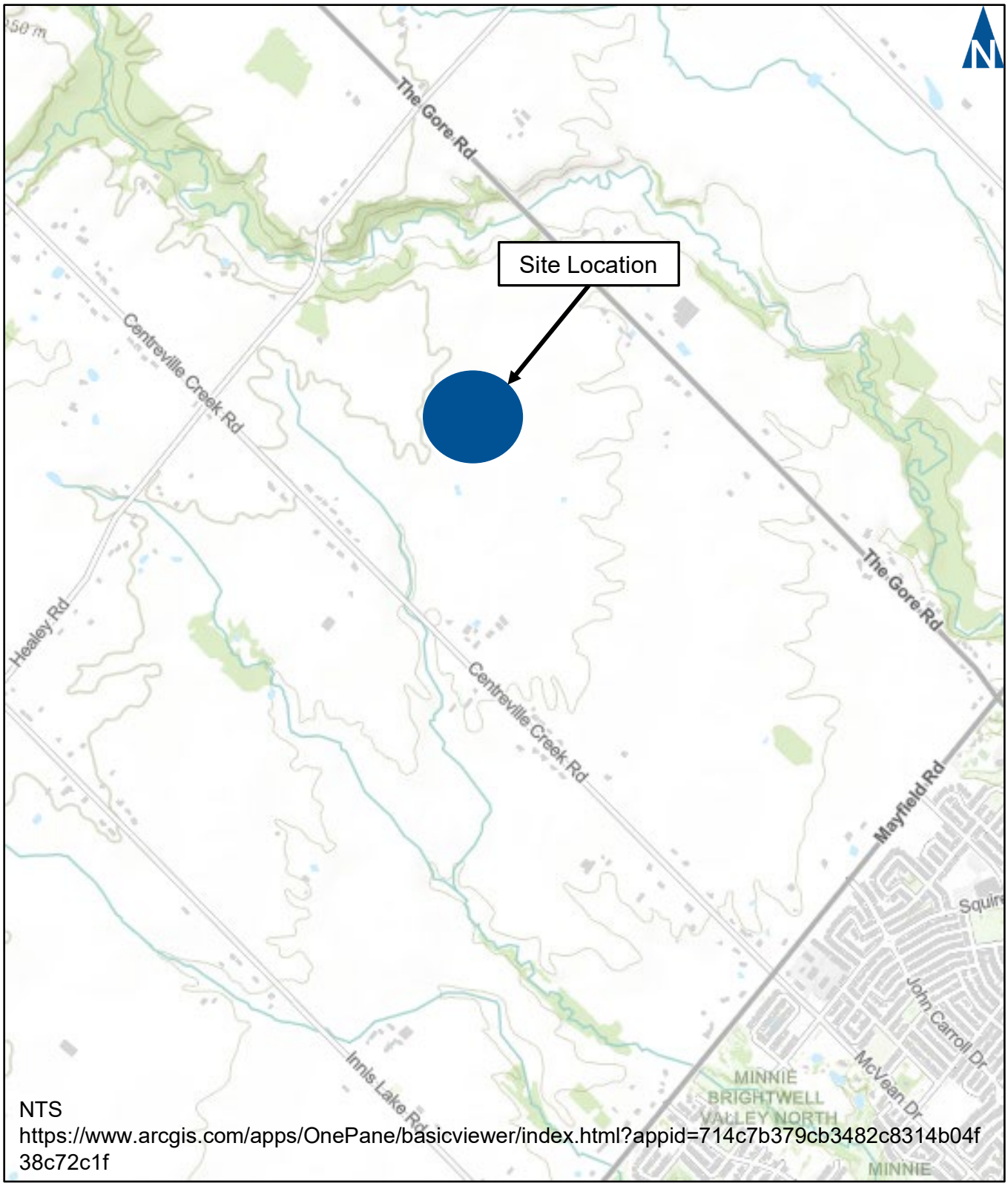
- Future internal intersections:
  - Street A and Street E
  - Street A and Street D
  - Street A and Street B
  - Street B and Street D; *and*
  - Street B and Street E

This study has been completed in general accordance with the Town of Caledon *Transportation Impact Studies Terms of Reference and Guidelines* [2]. Prior to the commencement of the study the terms of reference were provided to Ministry of Transportation Ontario (MTO), Region of Peel, and Town of Caledon staff for review. A detailed report outline was also provided to Town staff.

Appendix A contains the pre-study consultation material provided to MTO, Regional and Town staff, and responses received. At the time of writing no response was received from MTO staff.

The requirements outlined in the Active Transportation Plan have been addressed within the Community Design Guidelines prepared for the Wildfield Village Secondary Plan. As demonstrated in the Healthy Development Assessment for the Wildfield Village Secondary Plan, the community scores “Gold” regarding active transportation infrastructure and connections.

[2] Town of Caledon, *Transportation Impact Studies Terms of Reference and Guidelines*, March 2017.



NTS
https://www.arcgis.com/apps/OnePane/basicviewer/index.html?appid=714c7b379cb3482c8314b04f38c72c1f

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Site Location

Wildfield Village
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Figure 1.1

2 Existing Conditions

2.1 Roadways

The characteristics of the roads and intersections in vicinity of the subject site are described below. Reference was made to the Town of Caledon *Official Plan*, *Schedule J – Long Range Road Network*.[3]

The existing major in roads within the study area consist of:

- **Centreville Creek Road** is a north-south medium-capacity arterial roadway within the study area. The roadway currently provides a two-lane rural cross section. The roadway has a posted speed limit of 60 km/h within the study area.
- **The Gore Road** is a north-south collector roadway within the study area. The roadway currently provides a two-lane rural cross-section. The roadway has a posted speed limit of 80 km/h within the study area. The intersection with Healey Road and Mayfield Road is signalized.
- **Mayfield Road** is an east-west high-capacity arterial roadway within the study area. The roadway currently provides a two-lane rural cross-section. Concrete curb and gutter is noted on all four corners of the intersection with The Gore Road. The roadway has a posted speed limit of 60 km/h within the study area.
- **Healey Road** is an east-west collector roadway within the study area. The roadway currently provides a two-lane rural cross-section. The roadway has a posted speed limit of 60 km/h east of The Gore Road and 70 km/h west of The Gore Road.

Based on the Secondary Plan Transportation Study, the following roadway improvements are assumed to be in place after the development of Phase 1, but prior to the development of Phase 2:

- **Mayfield Road** is anticipated to be improved and widened from a two-lane rural cross-section to a five-lane urban cross-section. The roadway is anticipated to have a reduced maximum posted speed limit of 60 km/h within the study area.
- **The Gore Road** is anticipated to be improved and widened from a two-lane rural cross-section to a four-lane urban-cross section. The roadway is anticipated to have a reduced maximum posted speed limit of 60 km/h within the study area.

[3] Town of Caledon, *Official Plan, Schedule J – Long Range Road Network*, April 2018.

Given the analysis conducted within the Secondary Plan Transportation Study, and in line with the Terms of Reference, existing traffic conditions have not been analysed within this study.

2.2 Transit

The Town of Caledon does not provide any frequent regular transit service within the study area. However, there are two on-demand specialized transit services currently available:

- **TransHelp** is a specialized transit service that provides specific trips, flexible trips, subscription trips, return trips and cross-boundary trips to people with disabilities across Peel Region;[4] and
- **Caledon Community Services (CCS)** is a door-to-door transportation service available for seniors and people with disabilities, that is, those unable to drive on their own.[5]

2.3 Active Transportation

2.3.1 Walking

There are currently no dedicated pedestrian infrastructure or facilities provided along The Gore Road or along Centreville Creek Road within the study area.

The Town's *Multi-Modal Transportation Master Plan* includes sidewalks on urban roads. The Gore Road and Centreville Creek Road would presumably be considered urban roads if the Secondary Plan area develops.

2.3.2 Cycling

According to cycling facility descriptions in the Town of Caledon *Transportation Master Plan*,[6] and the Peel Region *Long Range Transportation Plan*[7], there are no dedicated cycling facilities provided along Centreville Creek Road and The Gore Road.

However, under future conditions the Peel Region *Long Range Transportation Masterplan* identifies and proposes cycling facilities along The Gore Road. The type of facility and implementation date is currently unknown. The Town of Caledon *Multi-Model Transportation*

[4] Region of Peel, *My Trips*, Accessed 7 December 2022. https://www.peelregion.ca/transhelp/my-trips#fares
[5] Caledon Community Services, *Specialized Transportation Application*, Accessed 7 December 2022. https://ccs4u.org/specialized-transportation-application
[6] Town of Caledon, *Transportation Master Plan*, October 2017, p651 of PDF.
[7] Peel Region. *Let'sMovePeel Long Range Transportation Plan*. (Peel. 2019).

Masterplan[8] proposes visually separated cycling lanes along Centreville Creek Road.

2.4 Data Collection

Paradigm collected turning movement counts at the following intersections:

- Centreville Creek Road and Healey Road;
- Centreville Creek Road and Mayfield Road;
- The Gore Road and Mayfield Road; *and*
- The Gore Road and Healey Road.

The counts took place on Wednesday, October 30, 2024, during the AM and PM peak periods. The data was counted in 15-minute intervals and vehicles were classified by type.

Appendix B contains the raw turning movement count data for reference.

[8] Town of Caledon. *Multi-Modal Transportation Masterplan. (*Burnside. June 2024*).*

3 Development Concept

The property owner is proposing to construct a residential subdivision on the lands which are generally bound by The Gore Road by the east, Centreville Creek Road to the west, Healey Road to the north and vacant lands to the south within the Town of Caledon. The subject site lands are currently undeveloped, and form part of the wider Wildfield Village Secondary Plan area.

The subject site is proposed to be constructed over two phases. An interim phase, Phase 1, which is anticipated to built and occupied by Year 2031 and then full-build out and occupancy which is expected to occur by Year 2051. Phasing of the residential subdivision is subject to market conditions.

Table 3.1 summarizes the development by type and phase.

TABLE 3.1: NUMBER OF UNITS BY TYPE AND PHASE

Phases	Single	Semi	Town	Total
Phase 1	86	220	194	**500**
Phase 2	311	586	1184	**2093**
Full-Build Out	**397**	**806**	**1378**	**2603**

The traffic analysis was based on a version of the development plan with a higher number of all types of units. This means the trip generation errs on the high side, providing a conservative estimate of the effects.

Vehicular access to Phase 1 is proposed via one full-movement municipal street connection (Street E) to The Gore Road operating under traffic signal control, and one full-movement municipal street connection (Street E) to Centreville Creek Road operating under stop control on the minor road approach.

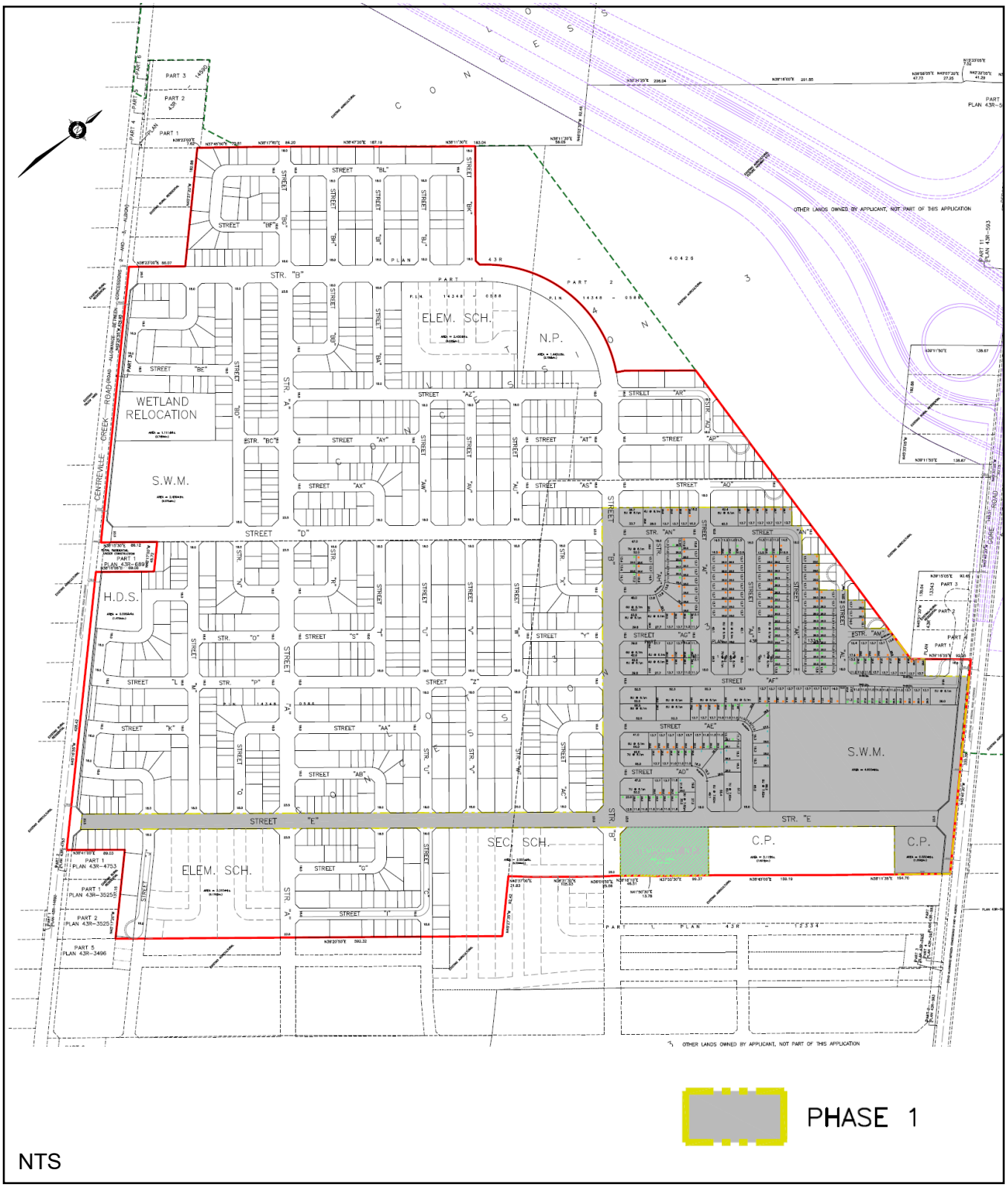
Upon Full Build-Out, vehicular access to the development is proposed via one full-movement connection (Street E) to The Gore Road and three full-movement municipal street connections (Street B, Street D, and Street E) to Centreville Creek Road. At the time of Full Build-Out it is assumed that all street connections (Street B, Street D, and Street E) to Centreville creek road are assumed to operating under traffic signal control.

The Street E connection to The Gore Road is proposed approximately 1.76 km south of Healey Road while the three street connections (Street B, Street D, and Street E) to Centreville Creek Road are respectfully proposed approximately 815 metres, 1.21 km and 2.05 km south of Healey Road.

The Gore Road and Centreville Creek Road street connections are proposed as a portion of a larger internal road network. The site's internal roadways provide two travel lanes (one lane in each direction) with 18 to 26 metre cross-sections. **Appendix F** contains the proposed cross-sections for the internal roadways.

Additionally, once adjacent properties to the south are developed, additional vehicular connections to the larger external transportation network will be available.

Figure 3.1 illustrates the proposed development concept. The Phase 1 lands are outlined in yellow and shaded in dark grey.



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Development Concept

Wildfield Village
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Figure 3.1

4 Forecast Traffic Volumes

Traffic forecasts and analyses have been completed for two planning horizons: **Phase 1** (Year 2031) and **Full Build-Out** (Year 2051).

The Phase 1 planning horizon aligns with the assumed build-out and occupancy of the development's interim phase while the Full Build-Out planning horizon aligns with the assumed total build-out and occupancy of the entire subdivision. Phase 1 traffic volumes are assumed to consist of generalized background traffic growth and Phase 1 forecast traffic volumes.

Year 2051 aligns with the Secondary Plan Transportation Study[9] and the Town of Caledon's *Multi-Modal Transportation Master Plan.* Full Build-Out traffic volumes are assumed to consist of background traffic volumes consistent with the Secondary Plan Transportation Study[9] and Phase 1/Phase 2 forecast traffic volumes.

4.1 Background Traffic Volumes

General background traffic reflects the increase in traffic unrelated to developments within the immediate vicinity of the subject site and does not include traffic from the proposed residential subdivision.

4.1.1 Phase 1 Background Traffic Volumes

Phase 1 background traffic volumes consist of generalized background traffic growth. Feedback from Town staff indicated that a rate of 3% per annum would be appropriate. Region of Peel staff advised during pre-consultation that 2% per annum would be appropriate for The Gore Road. However, a uniform rate of 3% per annum has been used for all existing roads, to be conservative (that is, err on the high side).

The Phase 1 background traffic volumes traffic conditions were therefore derived by applying an annual growth rate of 3% per annum to the existing traffic volumes collected in December 2024 along The Gore Road, Centreville Creek Road, Healey Road and Mayfield Road.

Figure 4.1A and **Figure 4.2B** illustrates the Phase 1 forecast background traffic volumes for the weekday AM and PM peak hours.

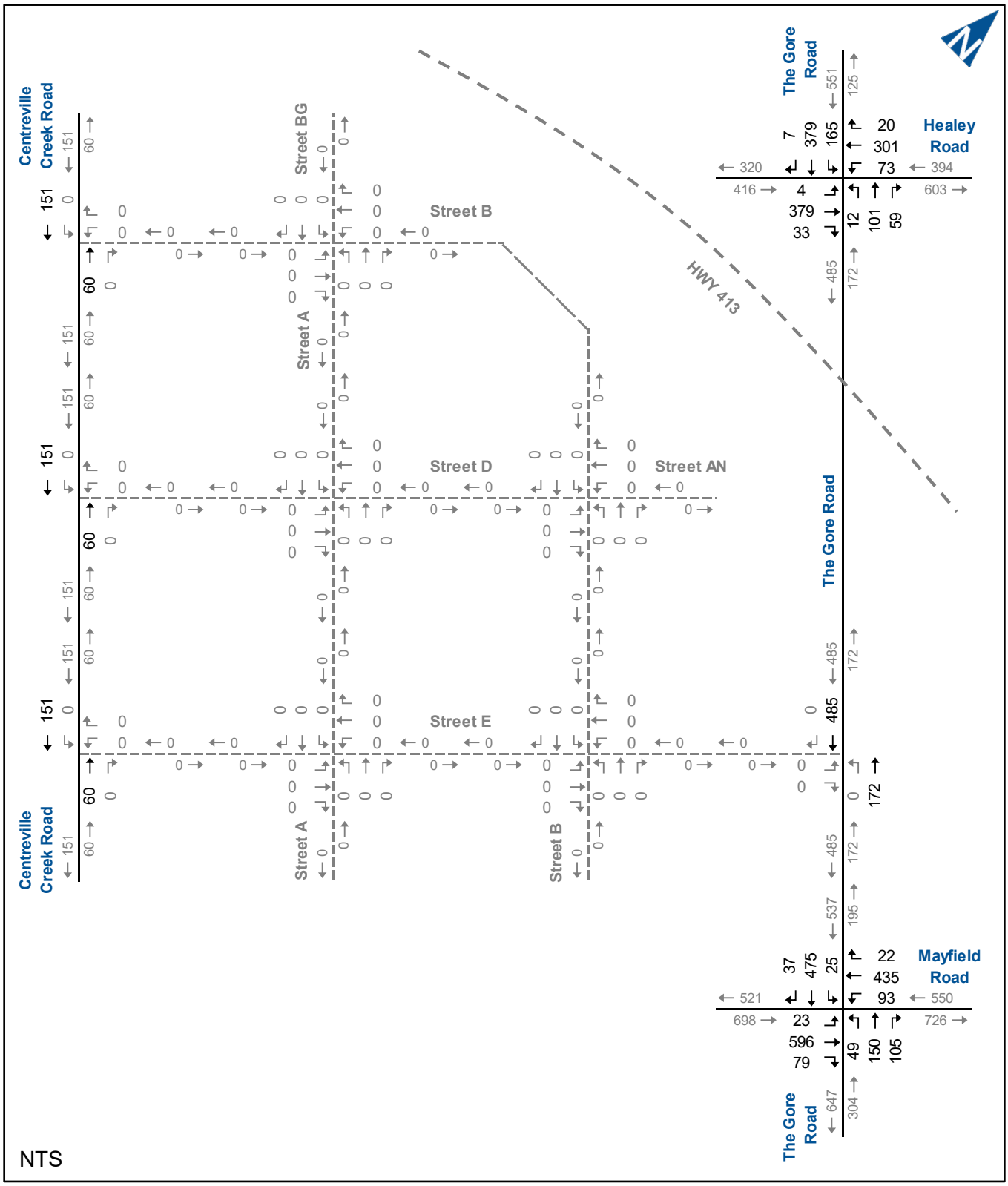
[9] BA Group. *Wildfield Village Transportation Study.* (May 2025).

4.1.2 Full Build-Out Background Growth

Full Build-Out background traffic volumes are assumed to consist of the *Assigned TMP Traffic Volumes* from *Figure 9* of the Secondary Plan Transportation Study[9]. The Secondary Plan Transportation Study *Assigned TMP Traffic Volumes* background traffic assumptions were formed from the Year 2051 background traffic assumptions provided in the *Town of Caledon's Future Caledon Official Plan*[10].

Figure 44.2A and **Figure 4.2B** illustrates the Full Build-Out background traffic volumes for the weekday AM and PM peak hours, respectively.

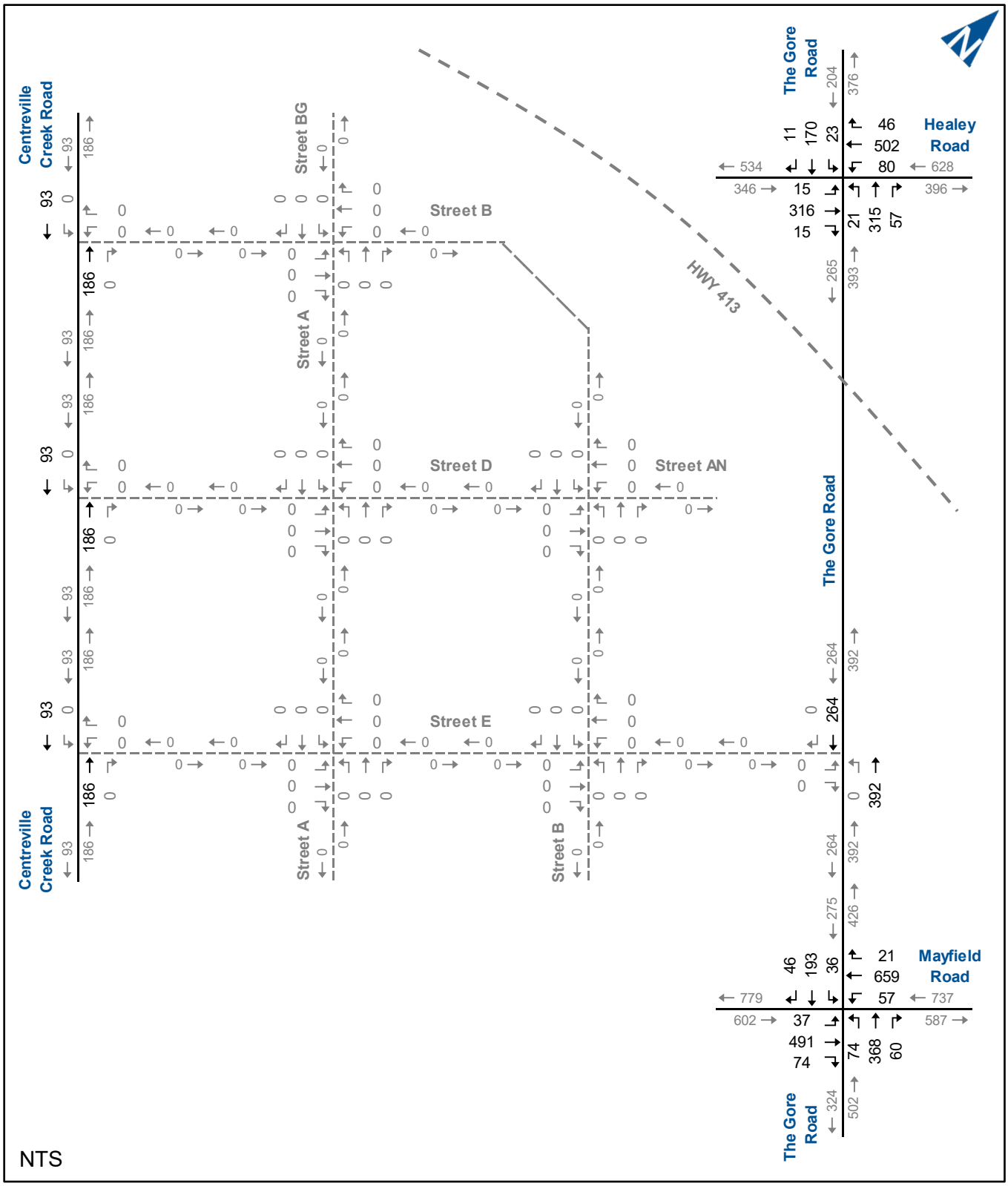
[10] Town of Caledon. *Town of Caledon's Future Caledon Official Plan*. (Caledon. March, 2024).



Phase 1 (AM Peak Hour) Background Traffic Volumes

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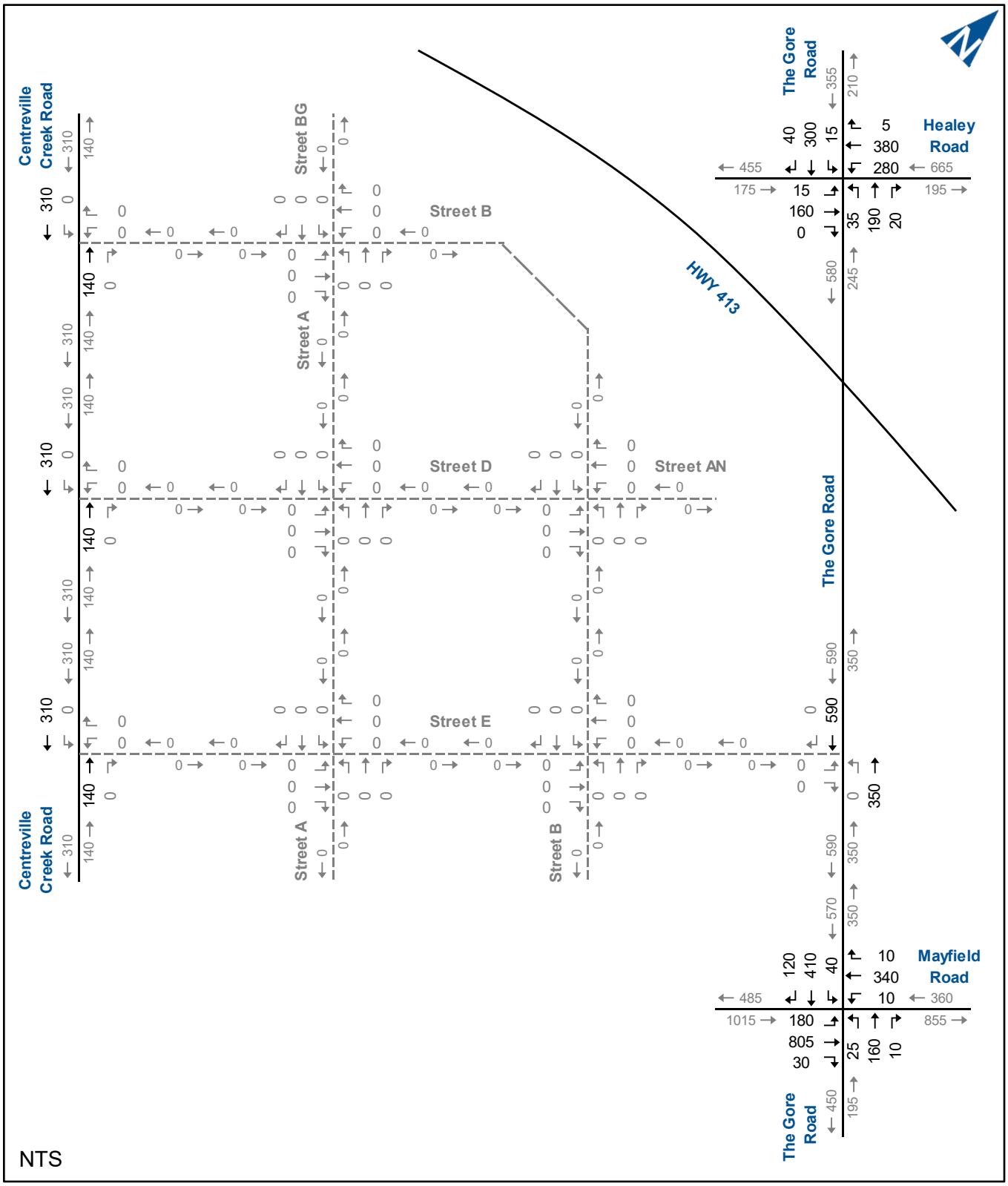
Figure 4.1A



Phase 1 (PM Peak Hour) Background Traffic Volumes

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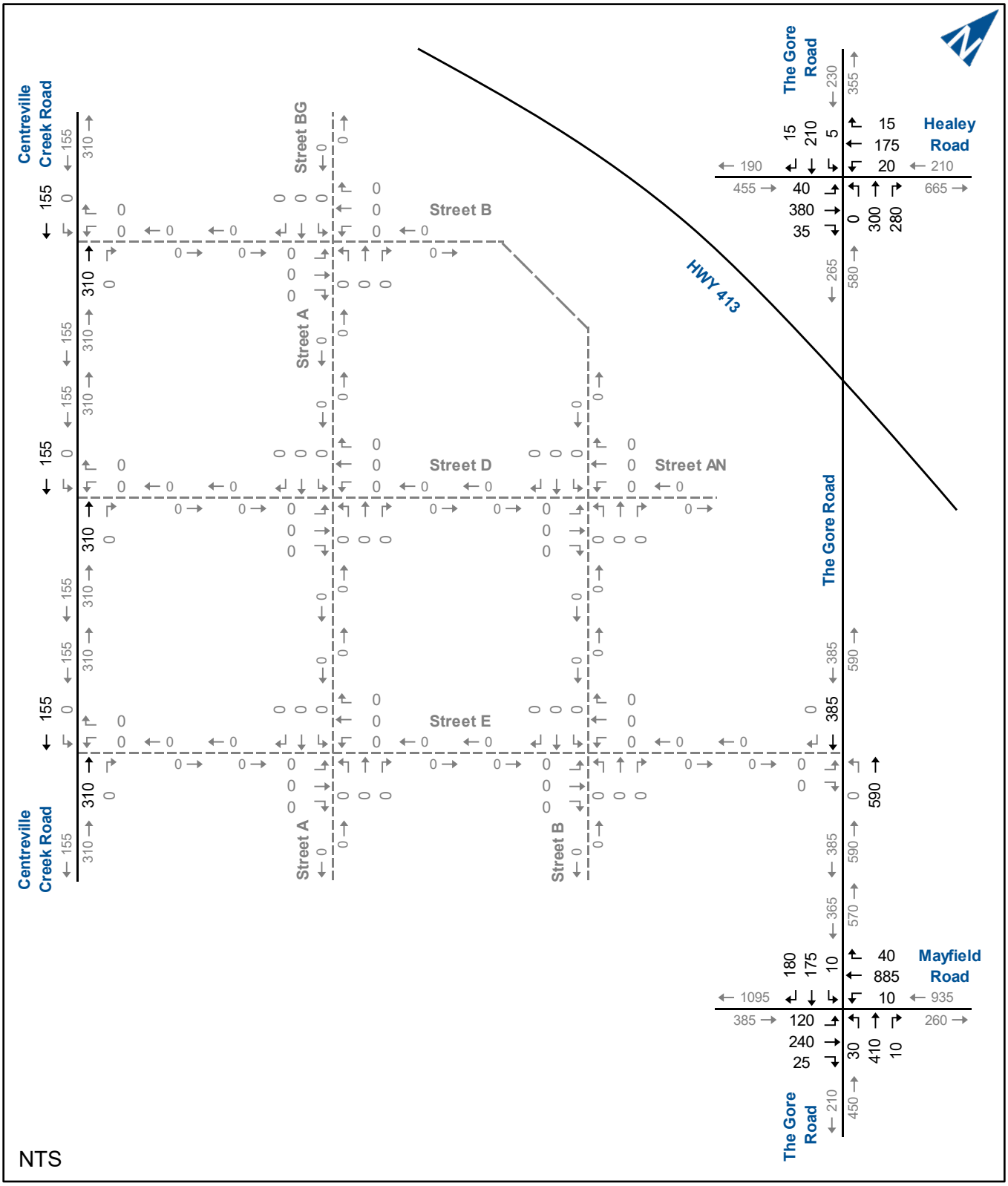
Figure 4.1B



Full Build-Out (AM Peak Hour) Background Traffic Volumes

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Figure 4.2A



Full Build-Out (PM Peak Hour) Background Traffic Volumes

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Figure 4.2B

4.2 Site Trip Generation

Trip generation for the proposed development has been estimated using data from the Institute of Transportation Engineer's (ITE) publication, *Trip Generation Manual (11th Edition)*,[11] which includes trip generation rates/equations for the following land-use codes (LUC):

- LUC 210 – Single-Family Detached Housing: "single-family detached home on an individual lot"
- LUC 215 – Single-Family Attached Housing: "any single-family housing unit that shares a wall with an adjoining dwelling unit … This land use includes duplexes… and townhouses/rowhouses"

Fitted curve equations were utilized to calculate the site generated traffic. For assessment purposes a conservative approach was taken by which no modal split reductions are applied.

In addition to residential dwelling units, various other land-uses are proposed within the plan of subdivision. These include community park space and institutional lands. Trips were not forecasted for these land-uses as it was assumed that any trips to/from these land uses would be local trips generally contained within the residential subdivision.

Table 4.1 summarizes the resultant weekday AM and PM peak hour site trip generation.

TABLE 4.1: SITE TRIP GENERATION

	Land Use	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
PHASE 1	LUC 210 - 98 units	18	55	73	62	36	98
	LUC 215 - 596 units	76	228	304	209	145	354
	Total Phase 1	**94**	**283**	**377**	**271**	**181**	**452**
PHASE 2	Land Use	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
	LUC 210 - 299 units	50	152	202	175	103	278
	LUC 215 - 2988 units	387	1161	1548	1056	733	1789
	Total Phase 2	**437**	**1313**	**1750**	**1231**	**836**	**2067**
Full Build-Out Total		**531**	**1596**	**2127**	**1502**	**1017**	**2519**

LUC 210: AM Peak Hour - Ln(T) = 0.91 Ln(X) + 0.12, PM Peak Hour Ln(T) = 0.94 Ln(X) + 0.27
LUC 215: AM Peak Hour - T = 0.52(X) - 5.70, PM Peak Hour T = 0.60(X) - 3.93

As shown in the table, Phase 1 of the proposed development is forecast to generate a total of 377 and 452 vehicular trips during the

[11] Institute of Transportation Engineers, *Trip Generation Manual*, 11th ed., (Washington, DC: ITE, 2021).

weekday AM and PM peak hours while Phase 2 is forecast to generate an additional 1,750 and 2,067 vehicular trips during the weekday AM and PM peak hours.

Full Build-Out of the proposed development is anticipated to consist of 2,127 AM and 2,519 PM weekday peak hour trips.

4.3 Site Trip Distribution and Assignment

Directional distribution of traffic approaching and departing the subject lands is a function of several variables, including population densities, existing travel patterns and efficiency of the roadways leading to the site. Slight differences with respect to the trip generation estimates are due to rounding.

During both Phase 1 and Full Build-Out planning horizons it was assumed that all trips entering/departing Mayfield Road in the westbound direction would use Centreville Creek Road while all trips in entering/departing in the eastbound direction were assumed to use The Gore Road. Additionally, all trips entering/departing to Healey Road in the eastbound and westbound directions were assumed to use The Gore Road.

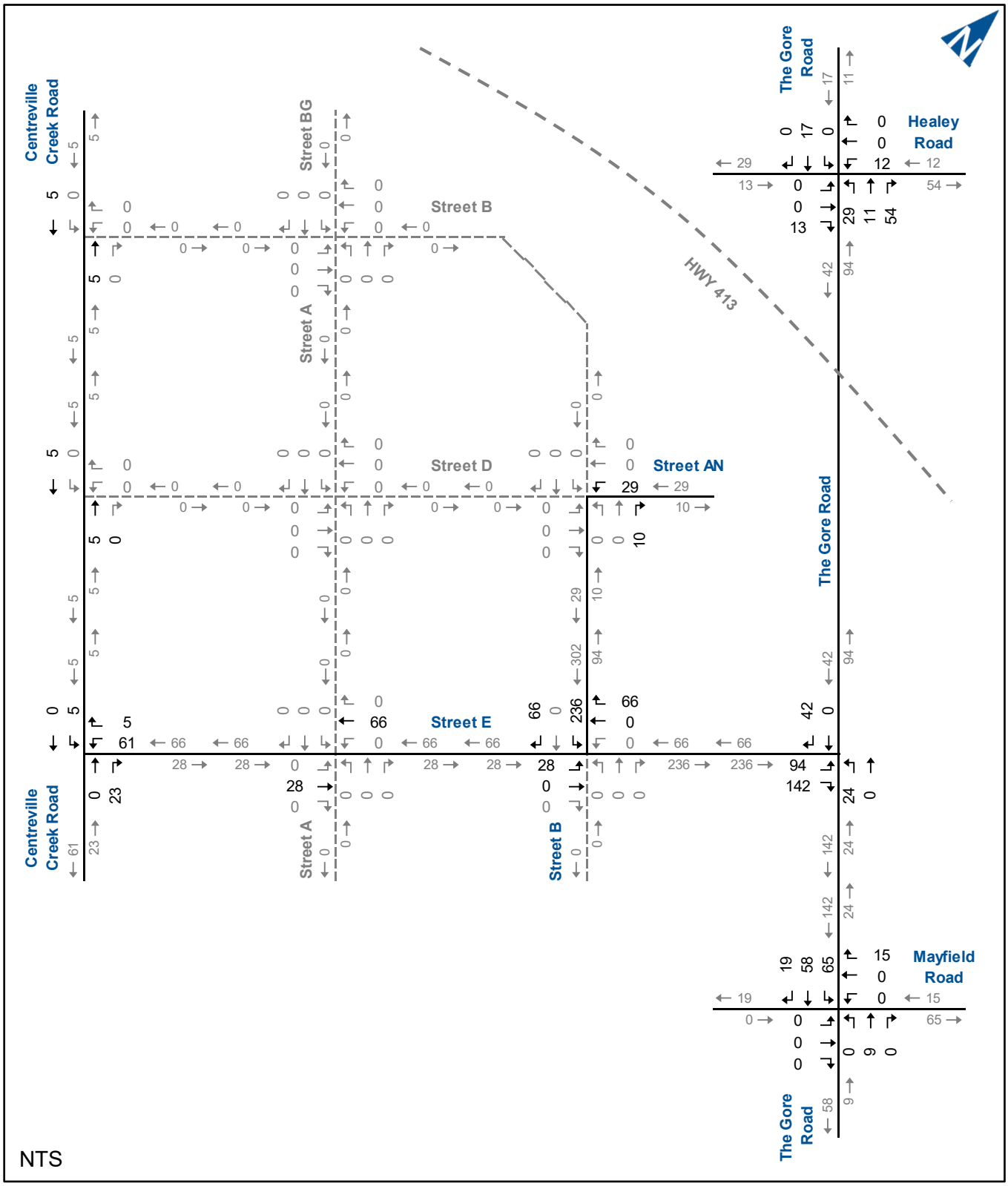
4.3.1 Phase 1

The Phase 1 site distribution followed the existing traffic patterns which were derived from the existing traffic volumes collected in December 2024. **Table 4.2** summarizes the Phase 1 traffic distribution.

TABLE 4.2: PHASE 1 TRIP DISTRIBUTION

Origin/Destination	AM Peak Hour		PM Peak Hour	
	In	Out	In	Out
East via Healey Road	13%	19%	19%	12%
West via Healey Road	13%	10%	10%	16%
North via The Gore Road	18%	4%	6%	11%
South via The Gore Road	10%	21%	15%	10%
East via Mayfield Road	18%	23%	22%	18%
West via Mayfield Road	22%	17%	18%	24%
North via Centreville Creek Road	5%	2%	3%	6%
South via Centreville Creek Road	2%	5%	6%	3%
Total	**100%**	**100%**	**100%**	**100%**

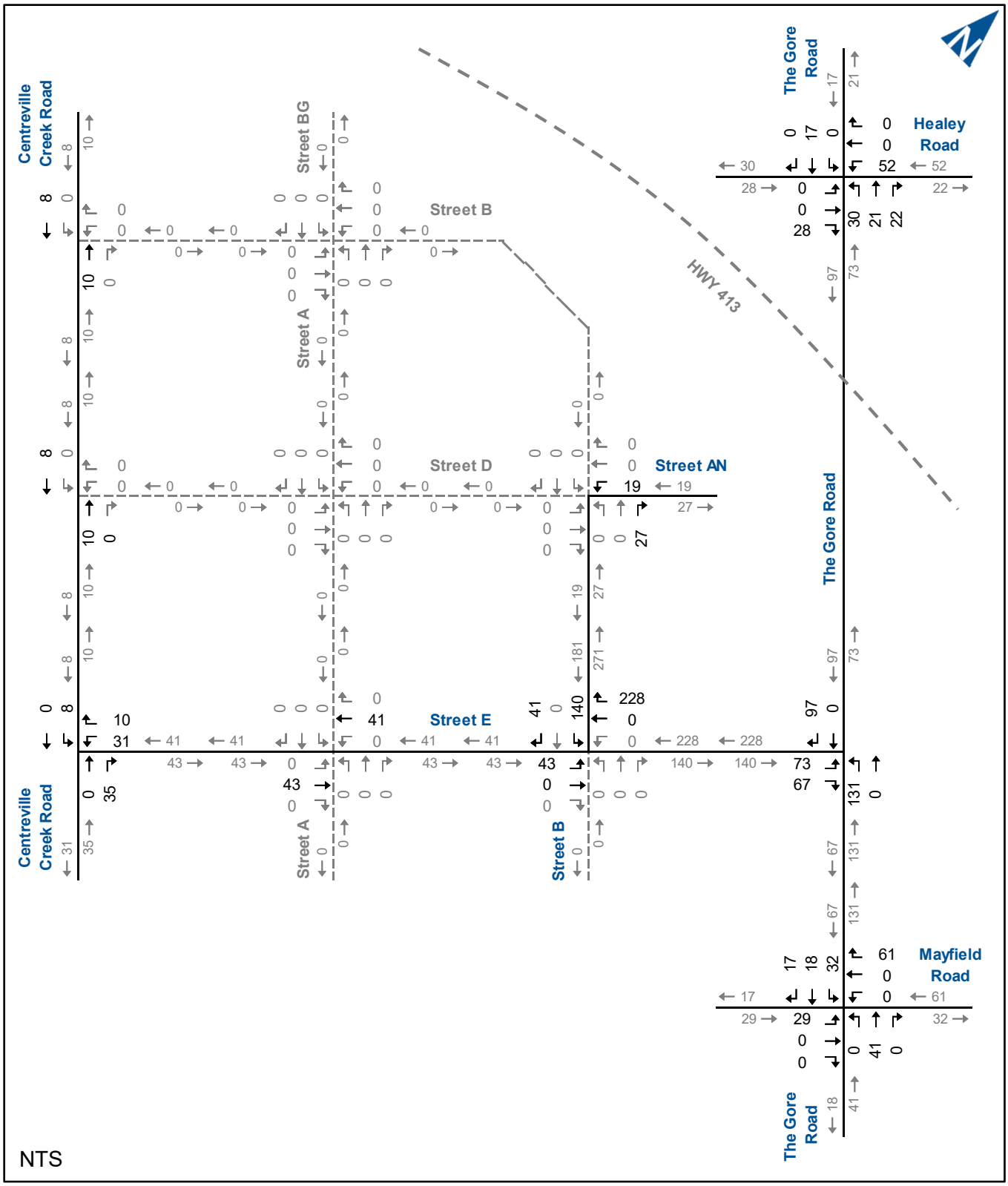
Figure 44.4A and **Figure 4.3B** illustrates the Phase 1 site generated traffic volumes for the weekday AM and PM peak hours



Phase 1 (AM Peak Hour) Site Traffic Volumes

Wildfield Village
240562

Figure 4.3A



Phase 1 (PM Peak Hour) Site Traffic Volumes

Wildfield Village
240562

Figure 4.3B

4.3.2 Full Build-Out

A significant shift in travel patterns is anticipated to occur with the construction of Highway 413 which is planned to generally travel east-east in the vicinity of the subject site. Highway 413 as currently proposed, intersects The Gore Road between Healey Road and Street E. Highway 413 is assumed to be constructed and operational before the Year 2051, so an alternative trip distribution was used for the Full Build-Out planning horizon.

The trip distribution for the Full Build-Out traffic conditions followed the distribution established outlined within the Secondary Plan Transportation Study. **Appendix E** contains the Secondary Plan Transportation Study site distribution assumptions for reference.

Table 4.3 summarizes the Full Build-Out trip distribution.

TABLE 4.3: FULL BUILD-OUT TRIP DISTRIBUTION

Origin/Destination	Peak Hour (Residential)	
	In	Out
East via HWY 413	11%	16%
West via HWY 413	29%	20%
North via The Gore Road	2%	1%
South via The Gore Road	15%	13%
East via Mayfield Road	3%	9%
West via Mayfield Road	21%	31%
North via Centreville Creek Road	6%	1%
South via Centreville Creek Road	10%	8%
East via Healey Road	0%	0%
West via Healey Road	3%	1%
Total	**100%**	**100%**

For the Full Build-Out scenario, both the Phase 1 and Phase 2 site-generated traffic were distributed within the study area network to align with the trip distribution summarized in **Table 5.3**.

Ten transportation assignment zones (TAZs) were established to assign the estimated Full Build-Out site traffic trips to the study area network. **Figure 4.4** illustrates the ten TAZs. Residential land-uses within each TAZ was tallied and compared to the forecast Full Build-Out traffic volumes to determine the proportional number of trips travel to/from each TAZ zone.

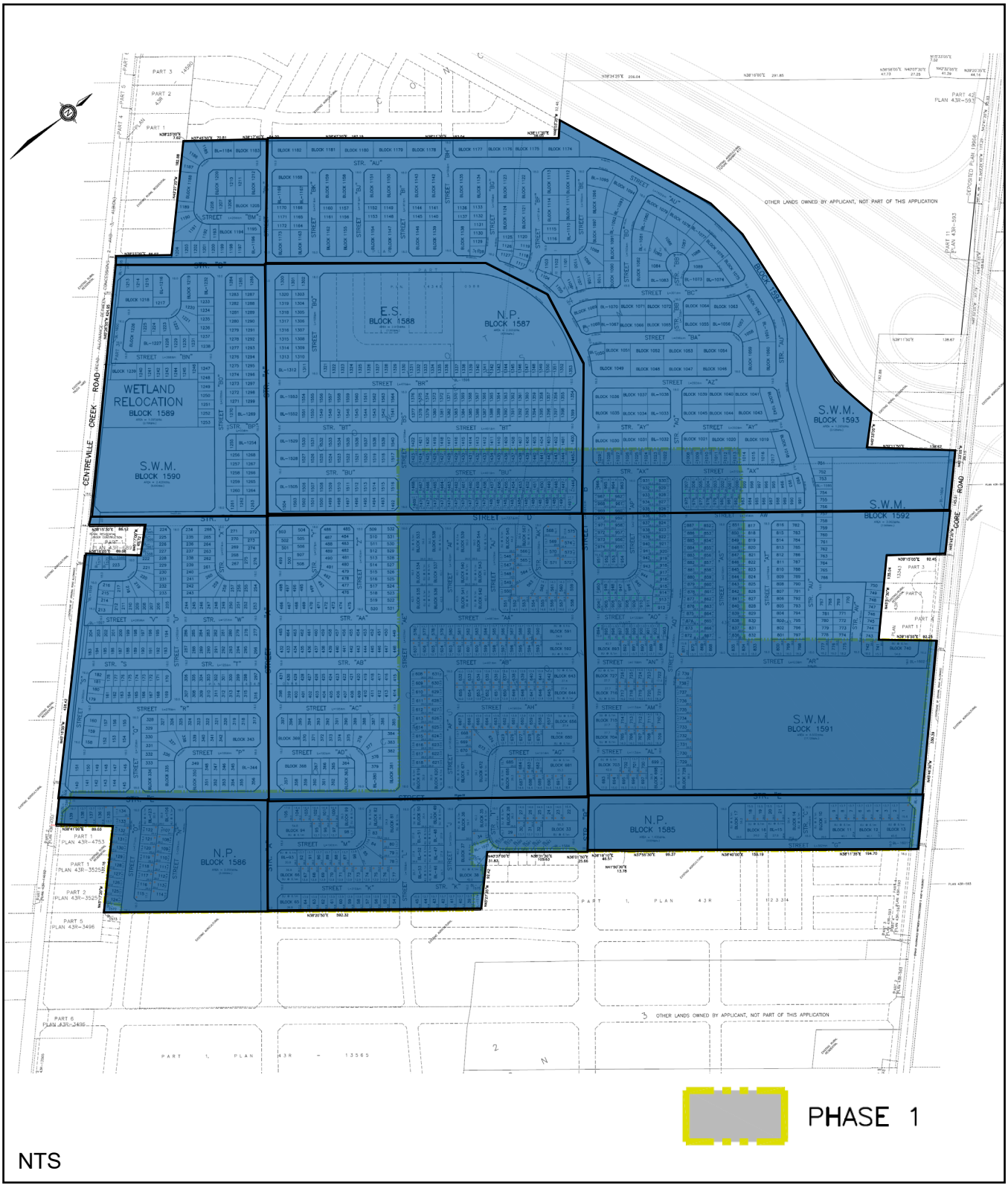
Logical travel paths were established to each zone, these paths assumed that the trips originating/departing each TAZ would enter/exit

mid-block within the internal study area network. **Table 4.4** summarizes the individual TAZ trips.

TABLE 4.4: TAZ FORECAST SITE TRAFFIC VOLUMES

Trips				
TAZ	**AM IN**	**AM OUT**	**PM IN**	**PM OUT**
Taz 1	18	52	49	34
Taz 2	34	102	98	66
Taz 3	61	184	174	118
Taz 4	6	17	17	11
Taz 5	82	246	222	154
Taz 6	87	262	247	167
Taz 7	121	365	346	233
Taz 8	24	72	68	45
Taz 9	98	296	281	189
Taz 10	0	0	0	0
Total	**285**	**882**	**925**	**574**

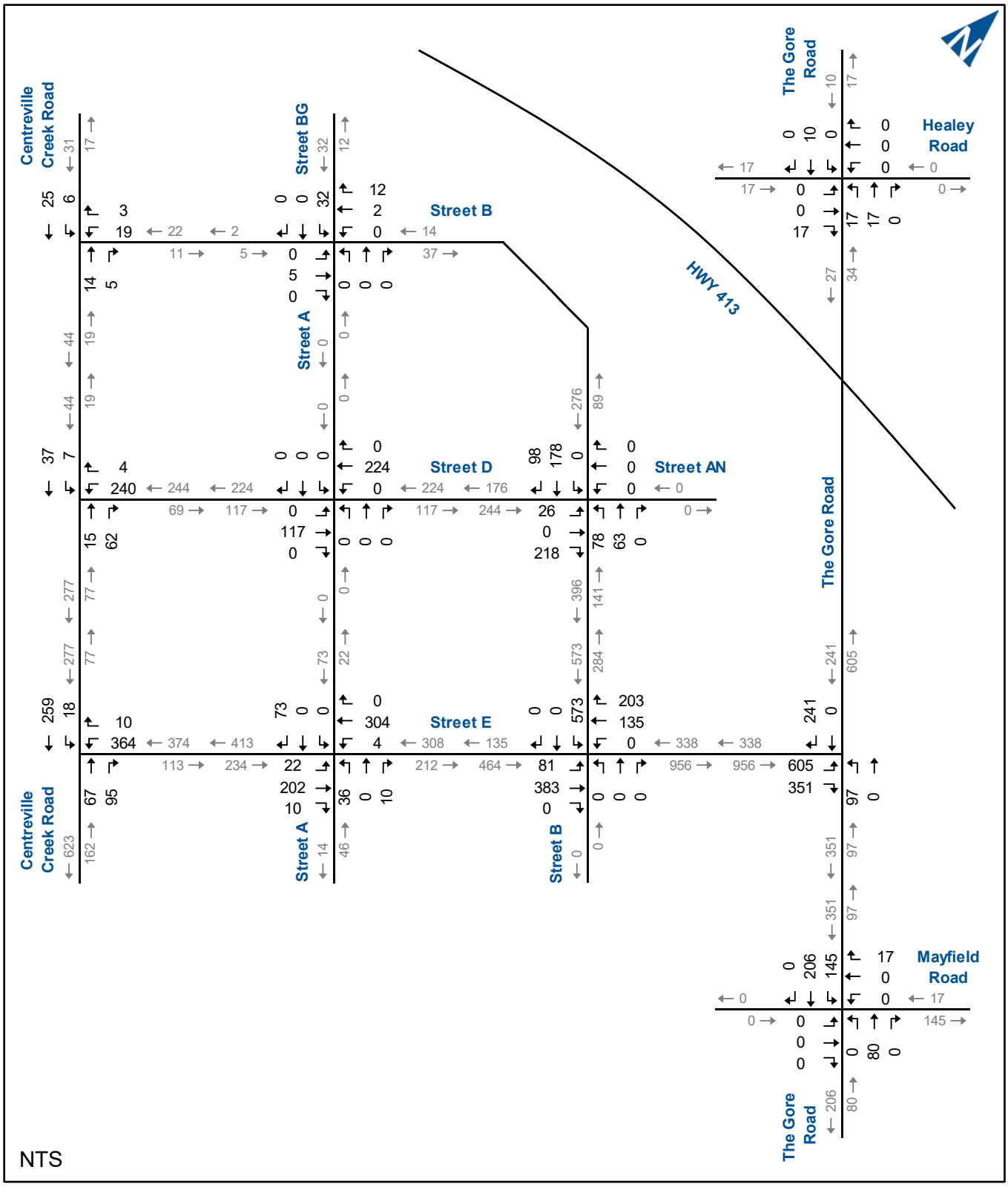
Figure 44.5A and **Figure 4.5B** illustrates the Full Build-Out (Phase 1 + Phase 2) site generated traffic volumes for the weekday AM and PM peak hours.



Transportation Assignment Zones

Wildfield Village
240562

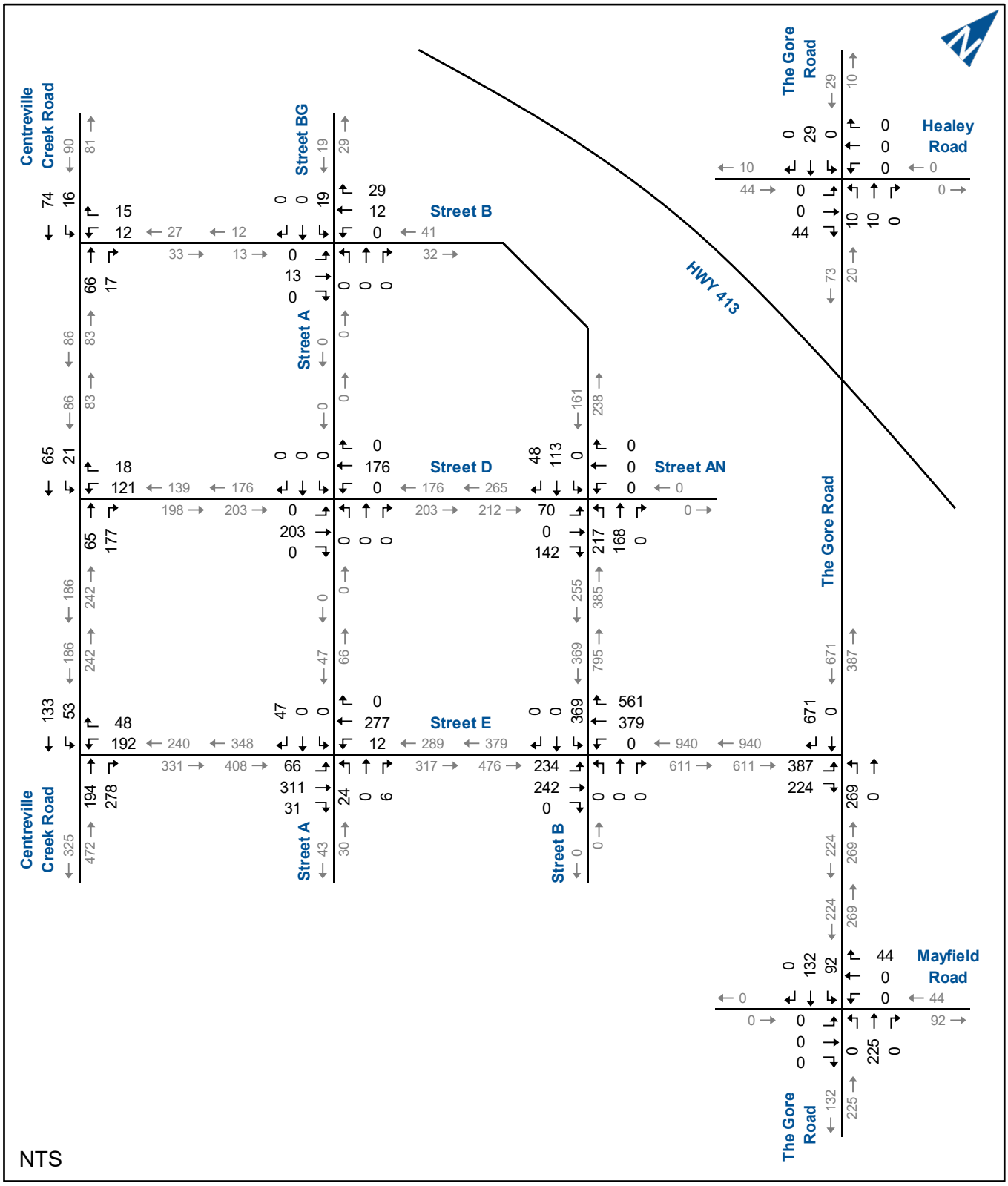
Figure 4.4



Full Build-Out (AM Peak Hour) Site Traffic Volumes

Wildfield Village
240562

Figure 4.5A



Full Build-Out (PM Peak Hour) Site Traffic Volumes

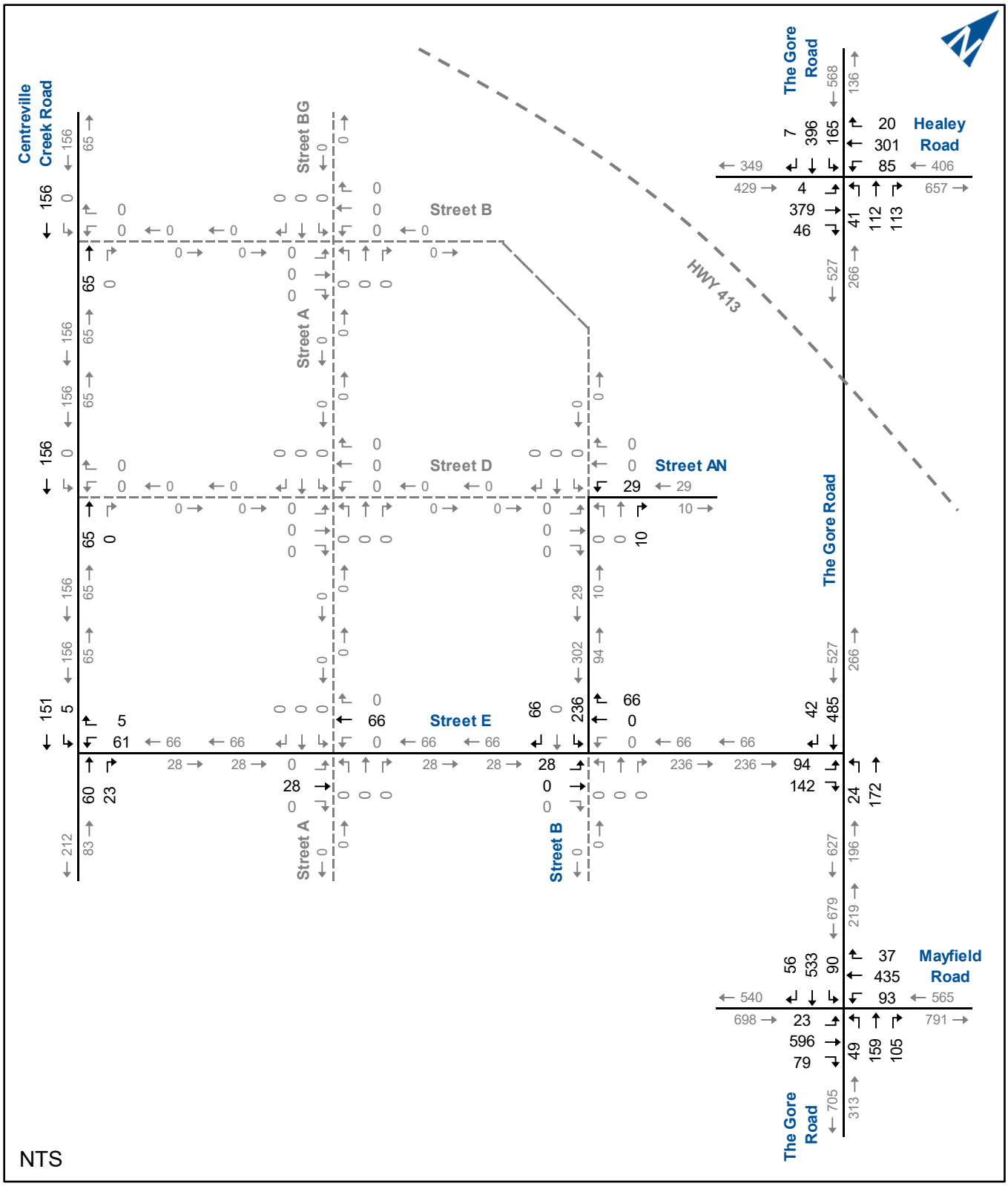
Wildfield Village
240562

Figure 4.5B

4.4 Total Traffic Volumes

Total traffic volumes during the Phase 1 and Full Build-Out traffic scenarios are assumed to consist of the background traffic volumes established in **Section 4.1** and the site traffic volumes established in **Section 4.3**. Full Build-Out site traffic volumes are assumed to be a combination of Phase 1 and Phase 2 forecasted site traffic volumes.

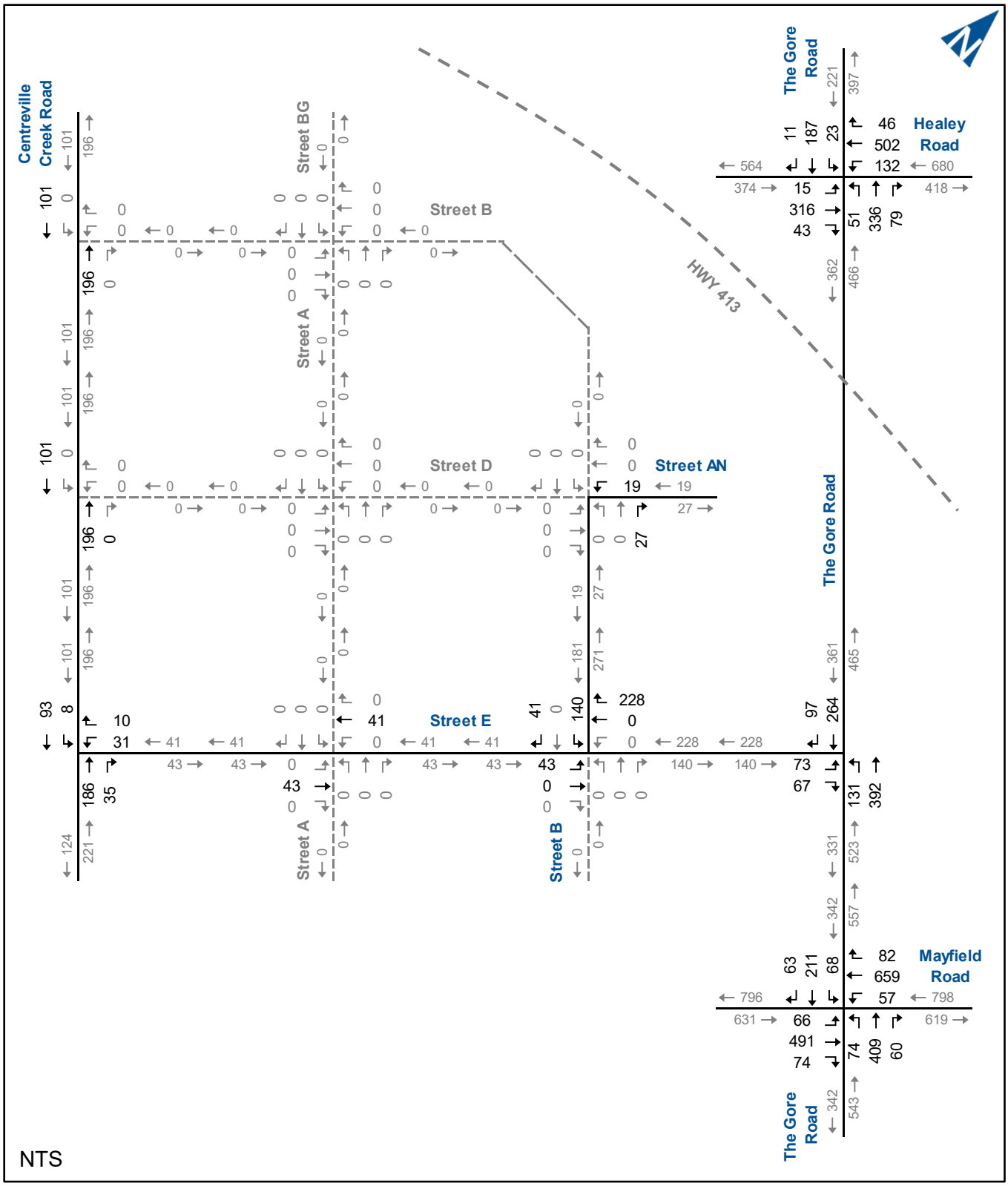
Figure 44.**6A** and **Figure 4.6B** illustrates the Phase 1 total traffic volumes for the weekday AM and PM peak hours. Figure 4.**7A** and **Figure 4.7B** illustrates the Full Build-Out total traffic volumes for the weekday AM and PM peak hours.



Phase 1 (AM Peak Hour) Total Traffic Volumes

Wildfield Village
240562

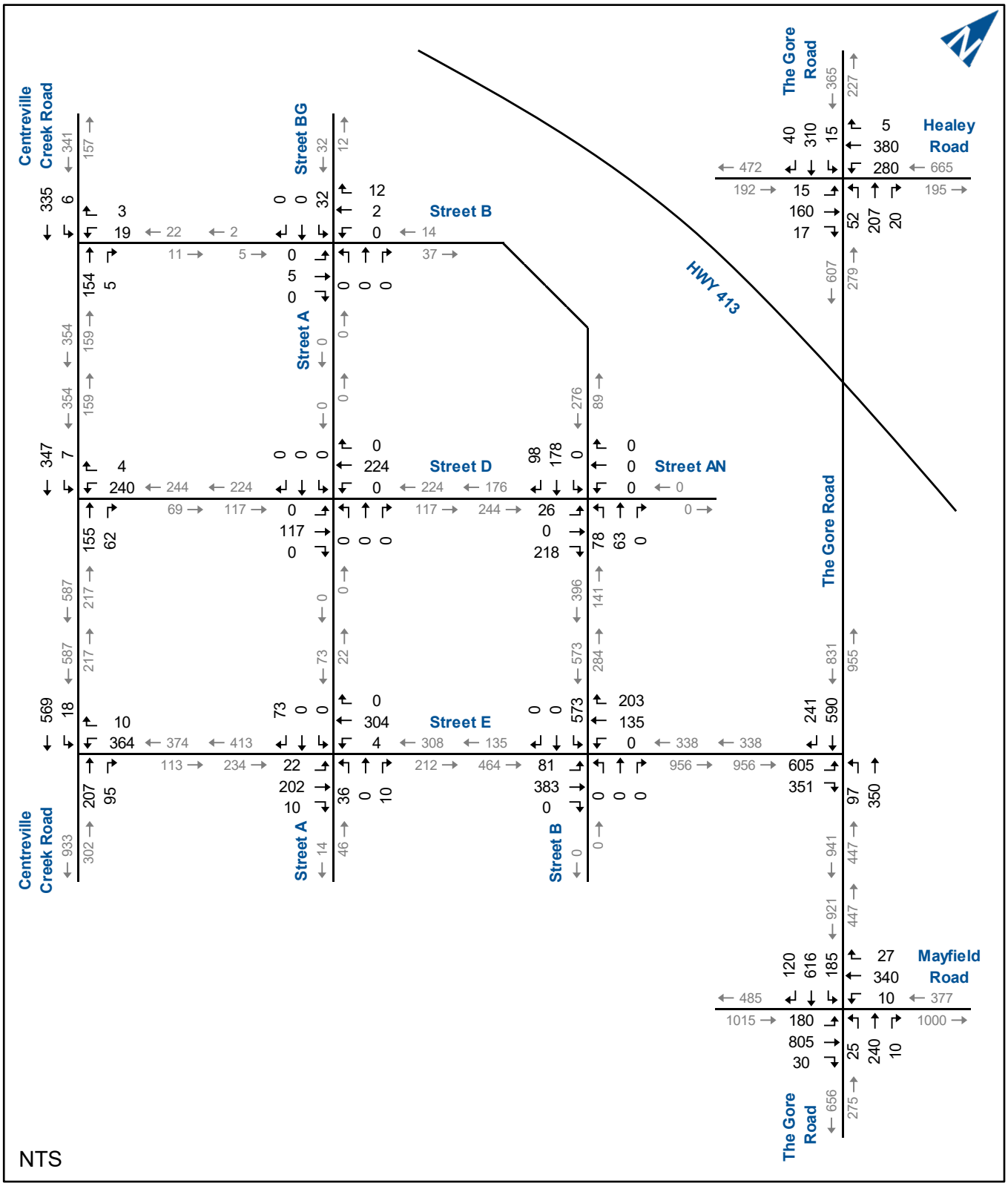
Figure 4.6A



Phase 1 (PM Peak Hour) Total Traffic Volumes

Wildfield Village
240562

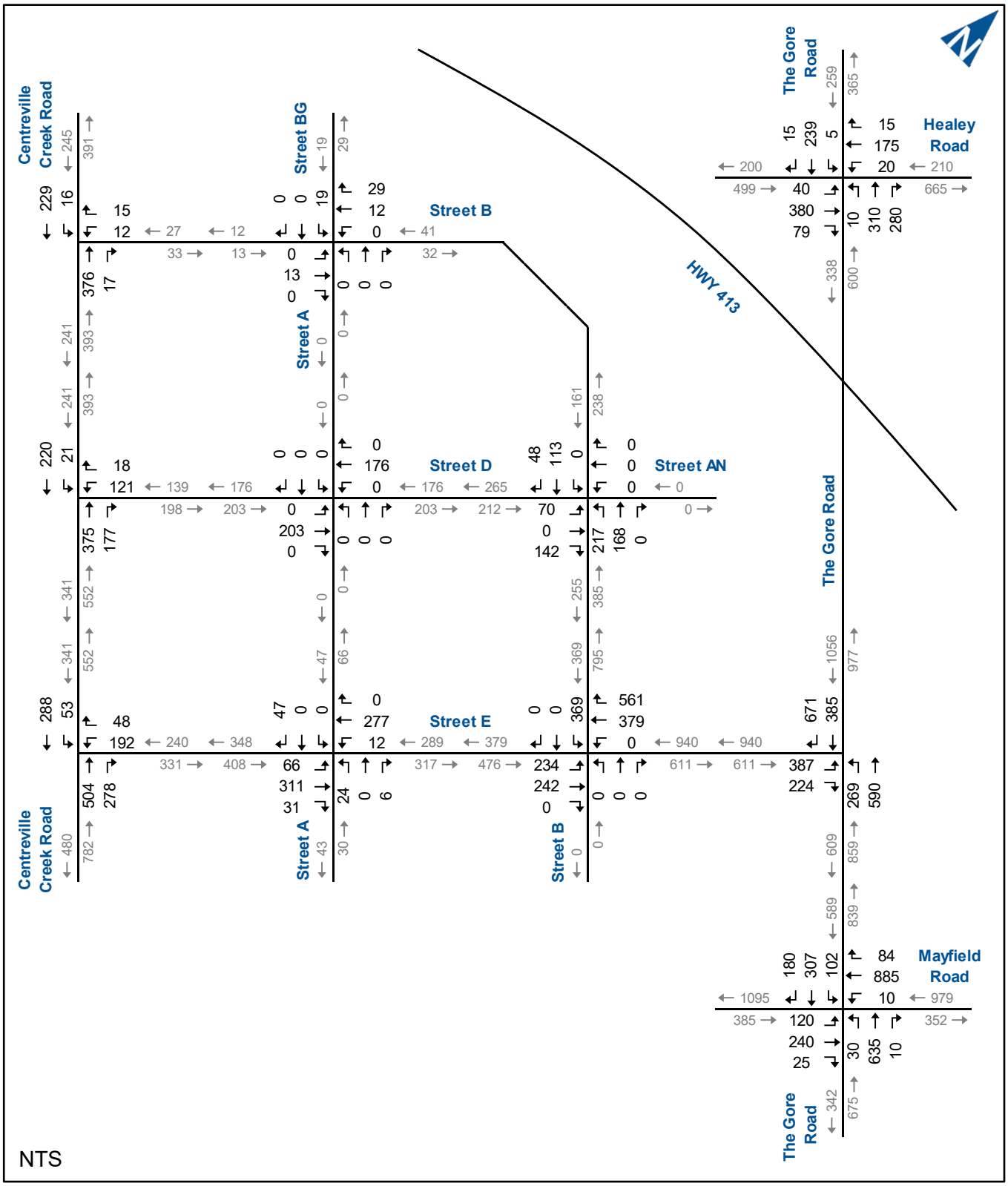
Figure 4.6B



Full Build-Out (AM Peak Hour) Total Traffic Volumes

Wildfield Village
240562

Figure 4.7A



Full Build-Out (PM Peak Hour) Total Traffic Volumes

Wildfield Village
240562

Figure 4.7B

5 Future Traffic Operations

Intersection level of service (LOS) is a recognized method of quantifying the delay experienced by drivers at intersections. The term "level of service" denotes how well (or poorly) a traffic movement operates under given traffic demands, lane arrangements, and controls. Control delay is the total delay associated with stopping for a signal or stop sign and includes four components; deceleration delay, stopped delay, queue move-up time and final acceleration delay. Each level is determined by the average amount of control delay per vehicle. The delay is related to the number of vehicles desiring to make a movement, compared to the estimated capacity for that movement. The capacity is based on several criteria related to the opposing traffic flows and intersection geometry.

Table 5.1 summarizes the level of service criteria for signalized and stop-controlled intersections. LOS A indicates small, average control delays (less than 10 seconds per vehicle). In contrast, LOS F indicates intersection failure, which results in extensive vehicular queues and long delays (over 50 seconds per vehicle at an unsignalized intersection and over 80 seconds per vehicle at a signalized intersection). LOS D is typically considered acceptable peak hour performance in an urban setting, and lower LOS values are tolerable for short-term periods during peak hours when heavier traffic volumes are expected.

TABLE 5.2: VEHICLE LEVEL OF SERVICE DEFINITIONS

Level of Service	Signalized Intersections Average Total Delay (sec/veh)	Unsignalized Intersections Average Total Delay (sec/veh)
A	<= 10	<= 10
B	> 10 & <= 20	> 10 & <= 15
C	> 20 & <= 35	> 15 & <= 25
D	> 35 & <= 55	> 25 & <= 35
E	> 55 & <= 80	> 35 & <= 50
F	> 80	> 50

The Town of Caledon *Transportation Impact Studies Terms of Reference and Guidelines* [12] identifies critical movements as follows:

- Signalized intersections:
  - Volume to capacity (v/c) ratio for overall intersections, through movements or shared through/turning movements increased to 0.90 or above;
  - v/c ratios for individual through or turning movements increase to 1.00 or higher; or
  - 95th percentile queue lengths for an individual movement exceed available lane storage.
- Unsignalized intersections:
  - LOS, based on average delay per vehicle, on individual movements, exceed LOS E; or
  - The estimated maximum queue length for an individual movement exceeds the available lane storage.

To assess the Phase 1 and Full Build-Out peak hour traffic conditions, an operational analysis was conducted for the weekday AM and PM peak hour traffic volumes at the study area intersections using Synchro 12 software, which implements the methods of the Highway Capacity Manual. The key parameters used in the analysis include:

- Heavy vehicle percentages, PHF and pedestrian volumes from the collected TMC data.
- Synchro default values for all other inputs.

5.1 Future Road Network

5.1.1 Phase 1

The Phase 1 operational analysis used the existing lane configuration and traffic control within the study area. Vehicle access for Phase 1 assumes that the proposed intersection of The Gore Road and Street E would be signalized with dedicated left-turn lanes on all approaches while the Street E intersection with Centreville Creek Road would be stop controlled on the minor approach (Street E).

[12] Town of Caledon, *Transportation Impact Studies Terms of Reference and Guidelines*, March 2017.

5.1.2 Full Build-Out

The Full Build-Out operational analyses assumed the improvements to The Gore Road and Centreville Creek Road as prescribed in the *Wildfield Village Transportation Study* would be implemented by Year 2051. The assumed improvements for the full-build out operational analysis include:

- The urbanization and expansion of The Gore Road to a four-lane cross-section.
- The expansion of Mayfield Road to a five-lane cross-section (three eastbound/two westbound) from The Gore Road westward.
- The signalization of the proposed site accesses to Centreville Creek Road. These intersections are assumed to operate with dedicated left-turn lanes on newly proposed minor approaches only.
- The build-out of Highway 413 along the northern property limit of the subject site.

5.2 Phase 1 Background Traffic Operations

The Full Build-Out background operational analysis follows the same methodology, parameters, and heavy vehicle movements set out under the Phase 1 traffic conditions. Future lane arrangements and traffic control devices set out under **section 5.1.1** were used.

Optimized signal timings and splits were used at all signalized intersections within the study area. Signal timings and splits at the intersection of The Gore Road at Mayfield Road, and Healey Road are assumed.

Table 5.3 summarizes the results of the operational analysis for Phase 1 background traffic conditions during the AM and PM peak hours. Any movements identified as critical movements are highlighted within the results tables. The following critical movements are noted without the addition of site traffic:

<u>AM Peak Hour:</u>

- The Gore Road & Mayfield Road (Signalized)
  - Eastbound Approach: A v/c ratio of 0.97, 40 second delay, LOS D.
  - Westbound Approach: A v/c ratio of 0.99, 49 second delay, LOS D.

PM Peak Hour:

- The Gore Road & Mayfield Road (Signalized)
  - Westbound Approach: A v/c ratio of 0.97, 37 second delay, LOS D.
  - Northbound Approach: A v/c ratio of 1.03, 68 second delay, LOS E.

Appendix C contains the Synchro analysis outputs for reference.

The 95th percentile queue lengths were checked for all through lanes against provided storage lengths. No spillback issues are identified.

TABLE 5.3: PHASE 1 BACKGROUND TRAFFIC OPERATIONS

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																	
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	The Gore Road & Healey Road	TCS	LOS	<	B	>	**B**	<	C	>	**C**	<	A	>	**A**	<	C	>	**C**	**B**
			Delay	<	16	>	**16**	<	24	>	**24**	<	8	>	**8**	<	21	>	**21**	**19**
			V/C	<	0.68	>		<	0.81	>		<	0.20	>		<	0.82	>		**0.82**
			Q	<	59	>		<	76	>		<	16	>		<	103	>		
	The Gore Road & Mayfield Road	TCS	LOS	<	D	>	**D**	<	D	>	**D**	<	B	>	**B**	<	C	>	**C**	**C**
			Delay	<	40	>	**40**	<	49	>	**49**	<	15	>	**15**	<	24	>	**24**	**34**
			V/C	<	0.97	>		<	0.99	>		<	0.49	>		<	0.80	>		**0.91**
			Q	<	127	>		<	109	>		<	36	>		<	93	>		
PM Peak Hour	The Gore Road & Healey Road	TCS	LOS	<	A	>	**A**	<	C	>	**C**	<	B	>	**B**	<	B	>	**B**	**B**
			Delay	<	10	>	**10**	<	22	>	**22**	<	17	>	**17**	<	13	>	**13**	**17**
			V/C	<	0.45	>		<	0.86	>		<	0.62	>		<	0.34	>		**0.75**
			Q	<	41	>		<	116	>		<	62	>		<	31	>		
	The Gore Road & Mayfield Road	TCS	LOS	<	B	>	**B**	<	D	>	**D**	<	E	>	**E**	<	C	>	**C**	**D**
			Delay	<	18	>	**18**	<	37	>	**37**	<	68	>	**68**	<	22	>	**22**	**37**
			V/C	<	0.80	>		<	0.97	>		<	1.03	>		<	0.57	>		**0.99**
			Q	<	125	>		<	168	>		<	132	>		<	53	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
V/C - Volume to Capacity Ratio
Q - 95th Percentile Queue Length (m)
TCS - Traffic Control Signal
< / > - Shared with through movement

5.3 Phase 1 Total Traffic Operations

The Full Build-Out background operational analysis follows the same methodology, parameters, and heavy vehicle movements set out under the Phase 1 traffic conditions. Future lane arrangements and traffic control devices set out under **section 5.1.1** were used.

Optimized signal timings and splits were used at all signalized intersections within the study area. Signal timings and splits at the intersection of The Gore Road at Mayfield Road, and Healey Road are assumed.

Table 5.4 summarizes the results of the operational analysis for Phase 1 total traffic conditions for the weekday AM and PM peak hours. The critical movements noted under the background traffic conditions are forecast to continue to occur with the addition of site traffic. Any movements identified as critical movements are highlighted within the results tables.

With the addition of site generated traffic, all intersections and traffic movements are forecast to operate at similar levels of service as the background traffic conditions. No new critical movements are noted.

The 95th percentile queue lengths were checked for all through lanes against provided storage lengths. No spillback issues are identified.

All new internal and external intersection are forecast to operate well under future total traffic conditions. The new Street E intersection with The Gore Road and Centreville Creek Road are forecast to operate with delays in the A-B range and with V/C ratios less than 0.55 during the AM and PM peak hours.

Appendix C contains the Synchro analysis outputs for reference.



TABLE 5.4: PHASE 1 TOTAL TRAFFIC OPERATIONS

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																	
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	The Gore Road & Healey Road	TCS	LOS	<	B	>	**B**	<	C	>	**C**	<	A	>	**A**	<	C	>	**C**	**C**
			Delay	<	16	>	**16**	<	27	>	**27**	<	10	>	**10**	<	27	>	**27**	**21**
			V/C	<	0.69	>		<	0.85	>		<	0.35	>		<	0.88	>		**0.87**
			Q	<	61	>		<	82	>		<	24	>		<	110	>		
	The Gore Road & Mayfield Road	TCS	LOS	<	E	>	**E**	<	F	>	**F**	<	B	>	**B**	<	C	>	**C**	**E**
			Delay	<	74	>	**74**	<	155	>	**155**	<	16	>	**16**	<	32	>	**32**	**74**
			V/C	<	1.06	>		<	1.26	>		<	0.44	>		<	0.88	>		**1.06**
			Q	<	195	>		<	181	>		<	50	>		<	168	>		
	Centreville Creek Road & Street E	TWSC	LOS					B		A	**B**		A	>	**A**	<	A		**A**	**A**
			Delay					10		9	**10**		0	>	**0**	<	0		**0**	**2**
			V/C					0.08		0.00*			0.05	>		<	0.00*			
			Q					2		0.1			0	>		<	0.1			
	The Gore Road & Street E	TCS	LOS	B		B	**B**					A	A		**A**		A	>	**A**	**A**
			Delay	16		15	**16**					5	3		**3**		8	>	**8**	**9**
			V/C	0.30		0.09						0.05	0.15				0.55	>		**0.48**
			Q	20		12						3	13				67	>		
	Street B & Street D	AWSC	LOS					A			**A**			A	**A**					**A**
			Delay					7			**7**			6	**6**					**7**
			V/C					0.03						0.01						
	Street E & Street B	AWSC	LOS	<	A		**A**		A	>	**A**					A		>	**A**	**A**
			Delay	<	8		**8**		7	>	**7**					9		>	**9**	**9**
			V/C	<	0.04				0.07	>						0.35		>		
PM Peak Hour	The Gore Road & Healey Road	TCS	LOS	<	A	>	**A**	<	C	>	**C**	<	C	>	**C**	<	B	>	**B**	**C**
			Delay	<	9	>	**9**	<	22	>	**22**	<	35	>	**35**	<	17	>	**17**	**22**
			V/C	<	0.43	>		<	0.88	>		<	0.87	>		<	0.43	>		**0.88**
			Q	<	40	>		<	134	>		<	114	>		<	42	>		
	The Gore Road & Mayfield Road	TCS	LOS	<	C	>	**C**	<	D	>	**D**	<	F	>	**F**	<	D	>	**D**	**E**
			Delay	<	27	>	**27**	<	54	>	**54**	<	105	>	**105**	<	45	>	**45**	**57**
			V/C	<	0.89	>		<	1.03	>		<	1.13	>		<	0.88	>		**1.07**
			Q	<	150	>		<	198	>		<	156	>		<	95	>		
	Centreville Creek Road & Street E	TWSC	LOS					B		A	**B**		A	>	**A**	<	A		**A**	**A**
			Delay					11		9	**10**		0	>	**0**	<	1		**1**	**1**
			V/C					0.04		0.01			0.13	>		<	0.00*			
			Q					1		0			0	>		<	0.1			
	The Gore Road & Street E	TCS	LOS	B		B	**B**					A	A		**A**		A	>	**A**	**A**
			Delay	16		15	**16**					4	4		**4**		9	>	**9**	**7**
			V/C	0.26		0.04						0.18	0.35				0.45	>		**0.42**
			Q	14		8						8	28				41	>		
	Street B & Street D	AWSC	LOS					A			**A**			A	**A**					**A**
			Delay					7			**7**			6	**6**					**7**
			V/C					0.02						0.03						
	Street E & Street B	AWSC	LOS	<	A		**A**		A	>	**A**					A		>	**A**	**A**
			Delay	<	8		**8**		8	>	**8**					9		>	**9**	**8**
			V/C	<	0.06				0.24	>						0.23		>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
V/C - Volume to Capacity Ratio
Q - 95th Percentile Queue Length (m)
Stor. - Existing Storage (m)
Avail. - Available Storage (m)
TCS - Traffic Control Signal
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control
< / > - Shared with through movement
** - V/C <0.01*

5.4 Full Build-Out Background Traffic Operations

The Full Build-Out background operational analysis follows the same methodology, parameters, and heavy vehicle movements set out under the Phase 1 traffic conditions. Future lane arrangements and traffic control devices set out under **section 5.1.2** were used.

Optimized signal timings and splits were used at all signalized intersections within the study area. Signal timings and splits at the intersection of The Gore Road at Mayfield Road, and Healey Road are assumed.

Table 5.5 summarizes the results of the operational analysis for Full Build-Out background traffic conditions for the AM and PM peak hours. With the improvements detailed in **Section 5.1.2**, no critical movements are noted under the background traffic conditions (without the addition of site traffic).

The 95th percentile queue lengths were checked for all through lanes against provided storage lengths. No spillback issues are identified.

Appendix C contains the Synchro analysis outputs for reference.



TABLE 5.5: FULL BUILD-OUT BACKGROUND TRAFFIC OPERATIONS

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																	
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	The Gore Road & Healey Road	TCS	LOS	<	A	>	**A**	<	C	>	**C**	<	B	>	**B**	<	B	>	**B**	**B**
			Delay	<	6	>	**6**	<	21	>	**21**	<	19	>	**19**	<	20	>	**20**	**19**
			V/C	<	0.19	>		<	0.87	>		<	0.32	>		<	0.40	>		**0.71**
			Q	<	18	>		<	122	>		<	30	>		<	41	>		
	The Gore Road & Mayfield Road	TCS	LOS	<	B		**B**	<	A	>	**A**	<	A	>	**A**	<	B	>	**B**	**B**
			Delay	<	13		**13**	<	10	>	**10**	<	9	>	**9**	<	11	>	**11**	**12**
			V/C	<	0.70			<	0.33	>		<	0.16	>		<	0.41	>		**0.56**
			Q	<	38			<	18	>		<	11	>		<	28	>		
PM Peak Hour	The Gore Road & Healey Road	TCS	LOS	<	B	>	**B**	<	A	>	**A**	<	A	>	**A**	<	A	>	**A**	**B**
			Delay	<	15	>	**15**	<	10	>	**10**	<	9	>	**9**	<	8	>	**8**	**11**
			V/C	<	0.71	>		<	0.32	>		<	0.33	>		<	0.17	>		**0.51**
			Q	<	57	>		<	23	>		<	20	>		<	14	>		
	The Gore Road & Mayfield Road	TCS	LOS	<	A	>	**A**	<	B	>	**B**	<	B	>	**B**	<	B	>	**B**	**B**
			Delay	<	9	>	**9**	<	15	>	**15**	<	11	>	**11**	<	10	>	**10**	**12**
			V/C	<	0.30	>		<	0.79	>		<	0.38	>		<	0.29	>		**0.60**
			Q	<	13	>		<	58	>		<	27	>		<	19	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
V/C - Volume to Capacity Ratio
Q - 95th Percentile Queue Length (m)
TCS - Traffic Control Signal
< / > - Shared with through movement

5.5 Full Build-Out Total Traffic Operations

The Full Build-Out total operational analysis follows the same methodology, parameters, and heavy vehicle movements set out under the background traffic conditions. Future lane arrangements and traffic control devices set out under **section 5.1.2** were used.

Optimized signal timings and splits were used at all signalized intersections within the study area. Signal timings and splits at the intersections of The Gore Road and Mayfield Road, and The Gore Road and Healey Road are assumed.

Table 5.6A and **Table 5.6B** summarize the results of the operational analysis for Full Build-Out total traffic conditions for the weekday AM and PM peak hours, respectively. With the improvements detailed in **Section 5.1.2**, no critical movements are noted under the total traffic conditions (with the addition of site traffic).

With the addition of site generated traffic, all intersections and traffic movements are forecast to operate at similar levels of service as the background traffic conditions. The following new critical movements are noted:

AM Peak Hour:

- Street B & Street E (Unsignalized)
  - Eastbound Approach: A v/c ratio of 0.85, 36 second delay, LOS E.
  - Southbound Approach: A v/c ratio of 1.05, 79 second delay, LOS F.

PM Peak Hour:

- Street B & Street E (Unsignalized)
  - Eastbound Approach: A v/c ratio of 0.86, 37 second delay, LOS E.
  - Westbound Approach: A v/c ratio of 1.56, 276 second delay, LOS F.

The 95th percentile queue lengths were checked for all through lanes against provided storage lengths. No spillback issues are identified.

Other than the Street B and Street E intersection, all new internal and external intersection are forecast to operate well under future total traffic conditions. The new external and major internal intersections are forecast to operate with delays in the A-C range and with V/C ratios less than 0.85 during the AM and PM peak hours.

Appendix C contains the Synchro analysis outputs for reference.

It is suggested that the Region of Peel continues to monitor the traffic volumes at The Gore Road intersections with Healey Road and Mayfield Road to determine if signal timing plan modifications are required.

TABLE 5.6A: AM PEAK HOUR – FULL BUILD-OUT TOTAL TRAFFIC OPERATIONS

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	The Gore Road & Healey Road	TCS	LOS	<	A	>	A	<	C	>	C	<	C	>	C	<	C	>	C	B
			Delay	<	6	>	6	<	22	>	22	<	20	>	20	<	20	>	20	19
			V/C	<	0.20	>		<	0.87	>		<	0.39	>		<	0.41	>		0.72
			Q	<	18	>		<	124	>		<	34	>		<	42	>		
	The Gore Road & Mayfield Road	TCS	LOS	<	B	>	B	<	B	>	B	<	A	>	A	<	B	>	B	B
			Delay	<	14	>	14	<	10	>	10	<	9	>	9	<	17	>	17	14
			V/C	<	0.73	>		<	0.35	>		<	0.22	>		<	0.78	>		0.75
			Q	<	40	>		<	20	>		<	14	>		<	69	>		
	Centreville Creek Road & Street B	TCS	LOS					C		C	C		A		A	A	A		A	A
			Delay					27		26	27		4		4	1	2		2	4
			V/C					0.17		0.00			0.11			0.01	0.22			0.22
			Q					7		2			29			1	16			
	Centreville Creek Road & Street D	TCS	LOS					C		B	C		B		B	A	A		A	B
			Delay					22		18	22		10		10	4	5		5	12
			V/C					0.57		0.00			0.17			0.01	0.30			0.37
			Q					39		2			39			2	32			
	Centreville Creek Road & Street E	TCS	LOS					C		B	C		A	>	A	A	B		B	B
			Delay					24		15	23		7	>	7	6	11		11	14
			V/C					0.71		0.01			0.27	>		0.03	0.56			0.61
			Q					60		3			26	>		2	65			
	The Gore Road & Street E	TCS	LOS	B		A	B					B	B		B		C	>	C	B
			Delay	12		8	11					12	11		11		23	>	23	15
			V/C	0.71		0.29						0.37	0.29				0.84	>		0.73
			Q	66		14						17	27				88	>		
	Street A & Street B	AWSC	LOS	<	A	>	A	<	A	>	A	<	A	>	A	<	A	>	A	A
			Delay	<	7	>	7	<	6	>	6	<	7	>	0	<	7	>	7	7
			V/C	<	0.01	>		<	0.01	>		<	0.00	>		<	0.04	>		
	Street A & Street D	AWSC	LOS	<	A	>	A	<	A	>	A	<	A	>	A	<	A	>	A	A
			Delay	<	8	>	8	<	8	>	8	<	8	>	0	<	8	>	0	8
			V/C	<	0.13	>		<	0.25	>		<	0.00	>		<	0.00	>		
	Street A & Street E	AWSC	LOS	<	A	>	A	<	B	>	B	<	A	>	A	<	A	>	A	A
			Delay	<	10	>	10	<	10	>	10	<	9	>	9	<	8	>	8	10
			V/C	<	0.30	>		<	0.39	>		<	0.07	>		<	0.09	>		
	Street B & Street D	AWSC	LOS	<	A	>	A	<	A	>	A	<	A	>	A	<	A	>	A	A
			Delay	<	9	>	9	<	8	>	0	<	9	>	9	<	10	>	10	10
			V/C	<	0.30	>		<	0.00	>		<	0.19	>		<	0.34	>		
	Street B & Street E	AWSC	LOS	<	E	>	E	<	C	>	C	<	B	>	A	<	F	>	F	E
			Delay	<	36	>	36	<	19	>	19	<	11	>	0	<	79	>	79	50
			V/C	<	0.85	>		<	0.61	>		<	0.00	>		<	1.05	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
V/C - Volume to Capacity Ratio
Q - 95th Percentile Queue Length (m)
Stor. - Existing Storage (m)
Avail. - Available Storage (m)
TCS - Traffic Control Signal
AWSC - All-Way Stop Control
< / > - Shared with through movement

TABLE 5.6B: PM PEAK HOUR – FULL BUILD-OUT TOTAL TRAFFIC OPERATIONS

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																	
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
PM Peak Hour	The Gore Road & Healey Road	TCS	LOS	<	B	>	**B**	<	A	>	**A**	<	A	>	**A**	<	A	>	**A**	**B**
			Delay	<	16	>	**16**	<	10	>	**10**	<	10	>	**10**	<	9	>	**9**	**12**
			V/C	<	0.76	>		<	0.31	>		<	0.37	>		<	0.20	>		**0.56**
			Q	<	64	>		<	23	>		<	22	>		<	15	>		
	The Gore Road & Mayfield Road	TCS	LOS	<	A	>	**A**	<	B	>	**B**	<	B	>	**B**	<	B	>	**B**	**B**
			Delay	<	9	>	**9**	<	16	>	**16**	<	14	>	**14**	<	16	>	**16**	**14**
			V/C	<	0.29	>		<	0.81	>		<	0.59	>		<	0.66	>		**0.74**
			Q	<	13	>		<	63	>		<	43	>		<	38	>		
	Centreville Creek Road & Street B	TCS	LOS					C		C	**C**		A		**A**	A	A		**A**	**A**
			Delay					27		27	**27**		3		**3**	1	2		**2**	**3**
			V/C					0.11		0.01			0.26			0.02	0.15			**0.25**
			Q					5		4			39			1	10			
	Centreville Creek Road & Street D	TCS	LOS					C		C	**C**		A		**A**	A	A		**A**	**A**
			Delay					24		22	**24**		4		**4**	3	3		**3**	**7**
			V/C					0.45		0.01			0.42			0.04	0.17			**0.42**
			Q					24		4			42			3	16			
	Centreville Creek Road & Street E	TCS	LOS					B		B	**B**		A	>	**A**	A	A		**A**	**A**
			Delay					17		15	**17**		9	>	**9**	5	5		**5**	**10**
			V/C					0.45		0.03			0.71	>		0.20	0.28			**0.63**
			Q					38		7			94	>		8	28			
	The Gore Road & Street E	TCS	LOS	B		B	**B**					B	A		**A**		B	>	**B**	**B**
			Delay	20		13	**17**					12	7		**8**		17	>	**17**	**14**
			V/C	0.70		0.14						0.63	0.31				0.62	>		**0.72**
			Q	68		13						36	26				35	>		
	Street A & Street B	AWSC	LOS	<	A	>	**A**	<	A	>	**A**	<	A	>	**A**	<	A	>	**A**	**A**
			Delay	<	7	>	**7**	<	7	>	**7**	<	7	>	**0**	<	7	>	**7**	**7**
			V/C	<	0.01	>		<	0.04	>		<	0.00	>		<	0.02	>		
	Street A & Street D	AWSC	LOS	<	A	>	**A**	<	A	>	**A**	<	A	>	**A**	<	A	>	**A**	**A**
			Delay	<	8	>	**8**	<	8	>	**8**	<	8	>	**0**	<	8	>	**0**	**8**
			V/C	<	0.23	>		<	0.20	>		<	0.00	>		<	0.00	>		
	Street A & Street E	AWSC	LOS	<	B	>	**B**	<	B	>	**B**	<	A	>	**A**	<	A	>	**A**	**B**
			Delay	<	12	>	**12**	<	10	>	**10**	<	9	>	**9**	<	8	>	**8**	**11**
			V/C	<	0.50	>		<	0.37	>		<	0.05	>		<	0.06	>		
	Street B & Street D	AWSC	LOS	<	A	>	**A**	<	A	>	**A**	<	B	>	**B**	<	A	>	**A**	**B**
			Delay	<	10	>	**10**	<	9	>	**0**	<	13	>	**13**	<	9	>	**9**	**11**
			V/C	<	0.29	>		<	0.00	>		<	0.51	>		<	0.21	>		
	Street B & Street E	AWSC	LOS	<	E	>	**E**	<	F	>	**F**	<	B	>	**A**	<	D	>	**D**	**F**
			Delay	<	37	>	**37**	<	276	>	**276**	<	12	>	**0**	<	26	>	**26**	**160**
			V/C	<	0.86	>		<	1.56	>		<	0.00	>		<	0.72	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
V/C - Volume to Capacity Ratio
Q - 95th Percentile Queue Length (m)
Stor. - Existing Storage (m)
Avail. - Available Storage (m)
TCS - Traffic Control Signal
AWSC - All-Way Stop Control
< / > - Shared with through movement

6 Remedial Measures

6.1 Operational Analysis

6.1.1 Phase 1 Traffic Operations

Critical movements are noted at the intersection of The Gore Road and Mayfield Road on the eastbound/westbound approaches during the AM peak hour and on the westbound/northbound approaches during the PM peak hour. The critical movements are forecast to occur with or without the addition of site traffic.

The Region of Peel has initiated the process of widening of Mayfield Road from Hurontario Street to Chinguacousy Road from two to six lanes[13]. Within the study area, widening of Mayfield Road to five-lanes (three eastbound/two westbound) is planned to occur before Year 2029. It is assumed that the widening of Mayfield Road would increase the overall intersection capacity, which in turn would reduce the level of delay experienced in the eastbound, westbound and northbound approaches.

A five-lane cross section along Mayfield Road has been implemented in the future full build-out traffic horizon. The Phase 1 total traffic analysis indicates that the overall impact of site generated traffic is minor and should not require any mitigation measures to be implemented.

6.1.2 Full Build-Out Traffic Operations

With the improvements noted in Chapter 5 implemented, no critical movements are noted during the AM and PM peak hours under both the background and total scenarios.

It is suggested that the Region of Peel continue with the widening of Mayfield Road to support background traffic volumes within the study area. Additionally, the Region of Peel and the Town of Caledon should consider the suggested improvements within the Wildfield Transportation Study to support future growth within the overall secondary plan area.

[13] Region of Peel. https://peelregion.ca/press-releases/peel-region-awarded-161m-major-mayfield-road-expansion. (August, 2025).

6.2 Traffic Control Improvements

The provision of traffic signal control at all unsignalized study area intersections were assessed using the Ontario Traffic Manual *OTM Book 12* Justification 7 signal warrant[14] procedures and Phase 1/Full Build-Out total traffic volumes.

To warrant the consideration for installation of traffic signal control with forecast traffic volumes (peak hour volumes), at least one warrant must be fulfilled by 120% for an existing intersection or 150% for a proposed new intersection. **Appendix D** contains the warrant analysis for reference.

None of the proposed unsignalized intersection meet the warrant threshold under Full Build-Out total traffic conditions. Further, the intersection of Centreville Creek Road and Street E does not meet the warrant threshold under Phase 1 total traffic conditions. It is suggested that traffic volumes are monitored under to determine if traffic signal control is required.

Under Full Build-Out conditions, the intersection of Street B and Street E has operational issues as an all-way stop. The results in **Appendix D** show that it is over 100% for both thresholds for Warrant 1, but not over the required 150% for part A. Consequently, it is suggested that traffic volumes are monitored as Phase 2 develops to determine if traffic signal control is required.

6.3 Auxiliary Turn Lanes

6.3.1 Left-Turn Lanes

Auxiliary left-turns lanes are a potential way to reduce delay at two-way stop-controlled intersections on major roads. This situation only occurs at the intersection of Centreville Creek Road and Street E during Phase 1.

The Ministry of Transportation's (MTO) *Design Supplement* for the Transportation Association of Canada (TAC*) Geometric Design Guide for Canadian Roads*[15] provides guidance on the assessment and/or need for auxiliary left-turn lanes. To be conservative, the higher left-turn percentage nomograph was selected in all scenarios (for example, 6% left-turning volumes utilized the 10% left-turning nomograph).

[14] Ontario Ministry of Transportation, Ontario Traffic Manual Book 12: Traffic Signals, (Toronto: Queen's Printer for Ontario, 2012).
[15] Ministry of Transportation, Ontario. *MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads. "*Appendix 9 for Chapter 9: Intersections". (June 2017)

The need for auxiliary left-turn lanes was assessed using the MTO left-turn lane warrant nomographs under Phase 1 conditions was assessed for Centreville Creek Road and Street E. The warrant nomograph (shown in **Appendix G**) indicates that that auxiliary left-turn lane is not warranted at this intersection after Phase 1 is constructed.

This intersection is planned to be signalized in Full Build-Out conditions. The other new intersections on Centreville Creek Road and The Gore Road are also planned to be signalized when built. This means they will include left-turn lanes, and hence no further analysis is needed.

6.3.2 Right-Turn Lanes

The traffic analysis detailed in **Chapter 6** show that none of the signalized intersections in Phase 1 and Full Build-Out conditions have operational issues that would justify the addition of a right-turn lane.

The only situation where a right-turn lane may be warranted is at the two-way stop-controlled intersection of Centreville Creek Road and Street E during Phase 1. As shown in **Figure 4.6**, the northbound right-turn movement is forecast to have 15 vehicles per hour in the AM peak hour period, and 26 vehicles per hour in the PM peak hour period.

Centreville Creek Road is owned by the Town of Caledon, but the Town does not have published standards for the implementation of auxiliary right-turn lanes on major roads. Consequently, the Peel Region's standards were used. Table 4 in the Region's *Road Characterization Study*[16] indicates that the placement of auxiliary right-turn lanes at full-movement intersections on roads like Centreville Creek Road is "conditional" – that is, "based on the results of a Transportation Impact Assessment".

The detailed operational analysis in **Chapter 5** shows this intersection does not have any operational issues that would justify the addition of a right-turn lane in Phase 1 Conditions.

[16] Region of Peel. *Road Characterization Study*. Table 4: Auxiliary Lane Placement. (May 2013).

7 Access and Circulation

7.1 Intersection Configuration

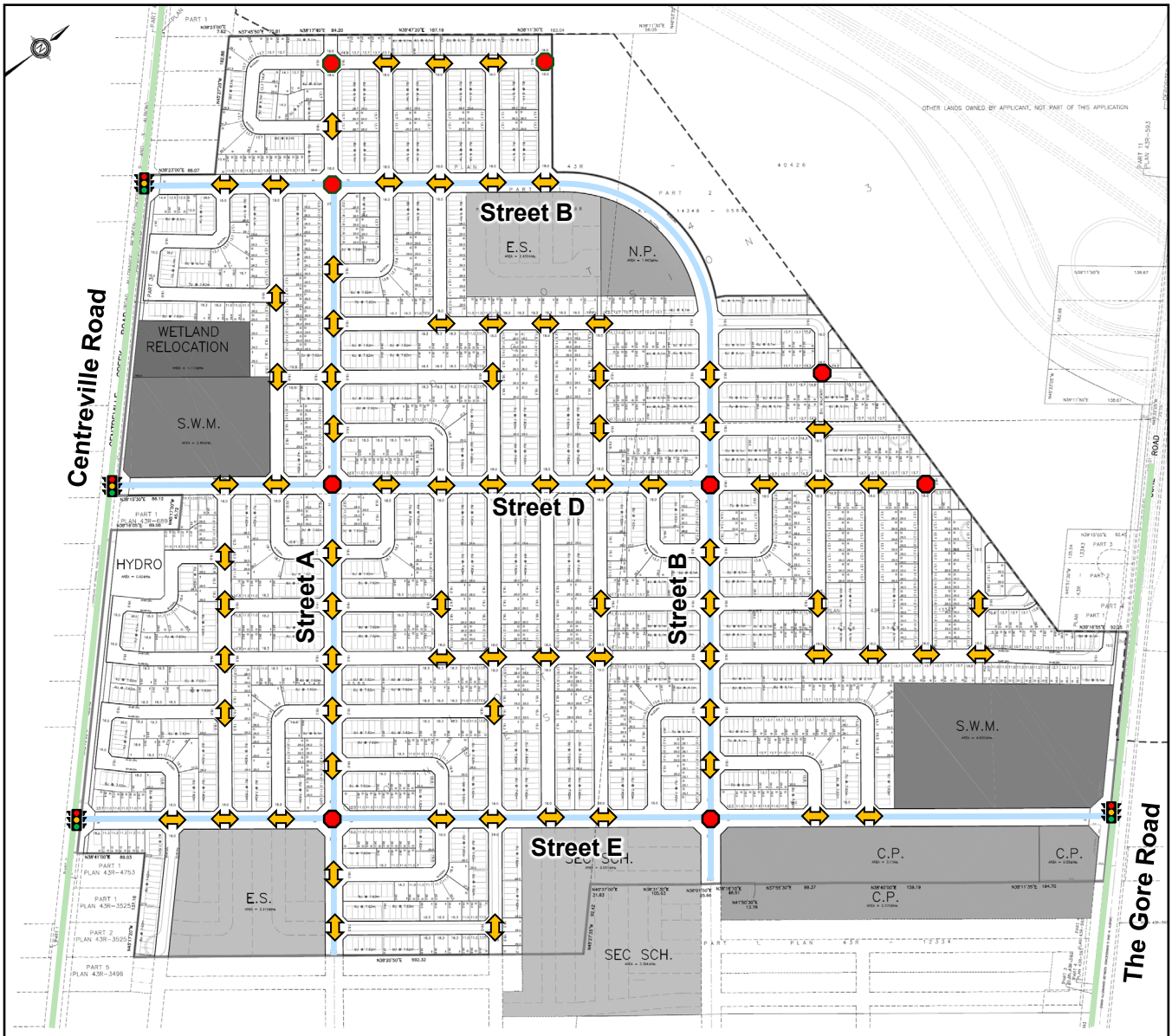
The proposed intersection types under Full Build-Out are shown in **Figure 7.1**. This was based on the following approach:

- Intersection on Centreville Creek Road and The Gore Road are signalized, in line with the recommendations of the Secondary Plan's transportation study
- Intersections of two collector roads have an all-way stop
- Two-way stops were generally used elsewhere, with the major (non-controlled) leg being the first of:
  - The collector road
  - The continuous road on a "T" intersection
  - The direction matching nearby intersections on a four-legged intersection
- Intersections forming a "T" with a very short leg leading to the edge of the proposed subdivision have an all-way stop as a safety precaution

Under Phase 1, the proposed intersection types match those shown in **Figure 7.1**, except that the intersection of Centreville Creek Road and Street E is a two-way stop control with Centreville Creek Road as the major leg.

The lane configurations for the various new signalised intersections under Full Build-Out conditions are shown in **Figure 7.2**. No changes are proposed to the intersections on Mayfield Road and on Healey Road.

Under Phase 1 conditions, the signalized intersection at The Gore Road and Street E will have the configuration shown in **Figure 7.2**. The intersection at Centreville Creek Road and Street E will have separate eastbound left-turn and right-turn lanes, with northbound movements and for southbound movements both having single shared lane.



Legend

- External road
- Collector road
- Traffic signal
- All-way stop
- Two-way stop (north-south major)
- Two-way stop (east-west major)

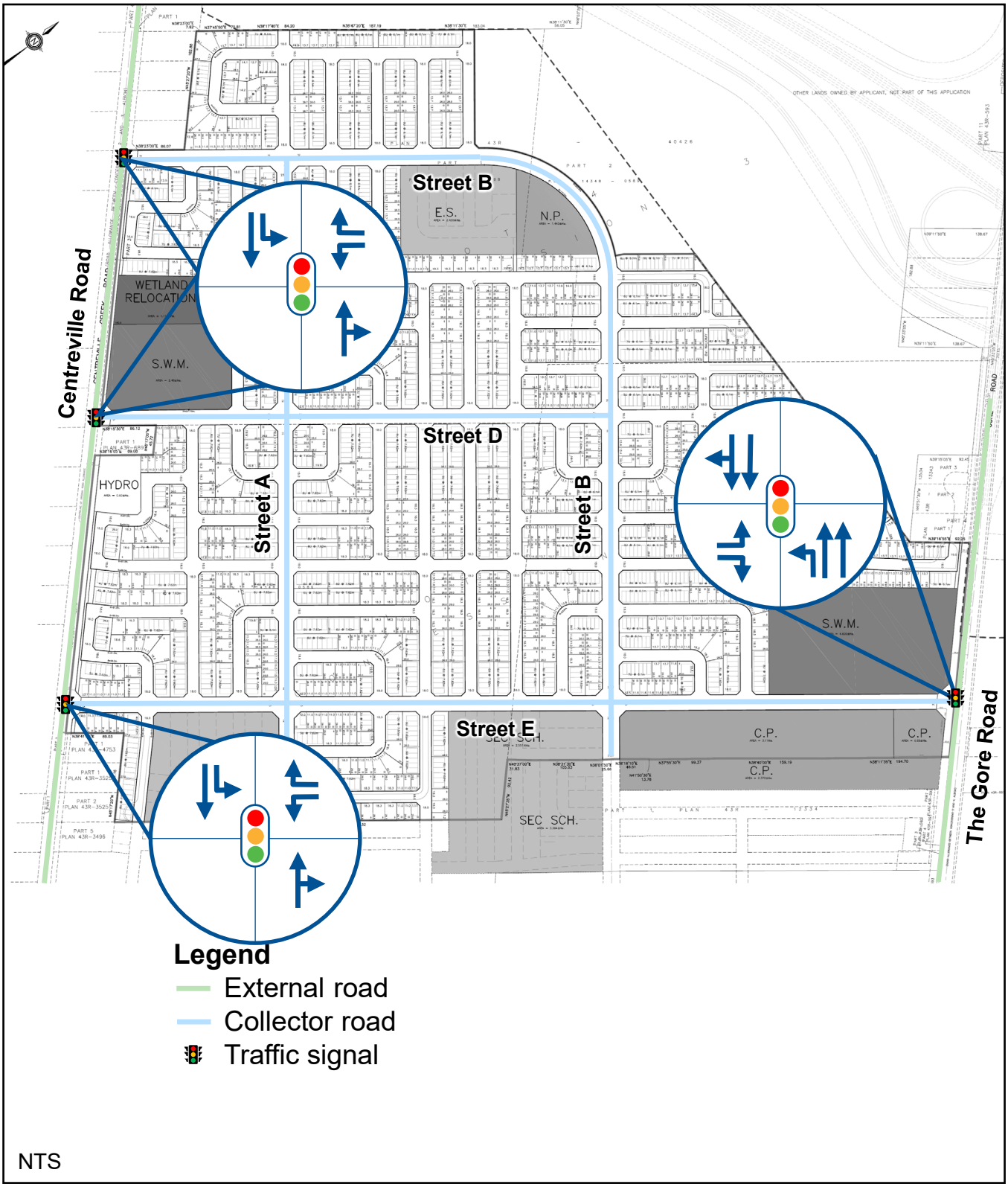
NTS

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Intersection Controls (Full Build-Out)

Wildfield Village
240562

Figure 7.1



Signalized Intersection Lane Configuration (Full Build-Out)

Wildfield Village
240562

Figure 7.2

7.2 Parking Plan

The estimated number of on-street and off-street parking spaces for the proposed development is shown in **Table 7.1**.

The number of on-street parking space for each unit type was estimated by taking the width of each lot, subtracting 3 m (for a driveway), dividing by 5 m (the length of a parking space) and then rounding down to the nearest integer. This was then divided by two, as almost all streets allow parking on one side only (per proposed cross-sections from the Secondary Plan Transportation Study shown in **Appendix F**.

The number of off-street parking spaces is assumed to be the two spaces per unit required by Caledon's zoning by-law

TABLE 7.1: ON-STREET AND OFF-STREET PARKING SUPPLY

Type	11m Single	13.7m Semi	18.3m Semi	Town-house	Total
Total lots	397	230	173	226	1,026
On-street spaces per lot	0.5	0.5	1	0	--
Total on-street spaces	**198**	**115**	**173**	**0**	**486**
Total units	397	460	346	1,378	2,581
Off-street spaces per unit	2	2	2	2	--
Total off-street spaces	**794**	**920**	**692**	**2,756**	**5,162**

As shown in the table, the proposed development would have approximately 486 on-street spaces for 2,581 units. This figure excludes potential off-street parking in front of parks, to be conservative. It equates to roughly 0.2 off-street spaces per unit, which would be in addition to the 2.0 off-street spaces per unit.

7.3 Vehicle Swept Path Analysis

In general, all internal intersections will be constructed in accordance with Town standards. This means that vehicles will be able to maneuver around those corners in a satisfactory manner.

Town staff raised concerns about temporary conditions at two types of locations:

- **Temporary cul-de-sacs**, pending the construction of roads extending to Phase 2 lands or lands to the north or south. An example is the south end of Street J, in the southeast corner of the site.

  The proposed temporary cul-de-sacs within the plan of subdivision adhere to the Town of Caledon *RESIDENTIAL CUL-DE-SAC* standard drawing No.216. The cul-de-sac proposed on the temporary terminus of Street J, Street AP, and Street AO are reversed compared to the standard drawing.
- **Temporary elbow curves**, pending the construction of intersections serving roads to the Phase 2 lands or lands to the north or south. An example is where Street I meets Street C, close to the southern boundary of the site.

Consequently, heavy vehicle circulation for these layouts has been assessed using AutoTURN swept path analysis software. Three design vehicles were used in the analysis:

- TAC Heavy Signal Unit (HSU);
- 2015 Tandem Plow Truck (MnDOT 2007 (US)), representative of a snow plough
- Region of Peel garbage truck; and
- Pumper Fire Truck.

The swept path analysis with the design vehicles noted above results in no conflicts with the internal site geometry. **Appendix H** contains the AutoTURN swept path analysis.



7.4 Pedestrian and Cycling Plan

Appropriate active transportation infrastructure will be provided with the development of the residential subdivision to provide connections with the larger future municipal networks. **Appendix F** shows the planned cross-sections for roads in the Secondary Plan area, including for the proposed development. The roads will therefore have the following active transportation facilities.

- **Local roads**: Sidewalks on either both sides (drawings XS-1A and XS-1B) or one side (drawings XS-2A and XS-2B); no dedicated cycling facilities
- **Collector roads (22m and 23.5m):** multi-use path on both sides, for use by cyclists and pedestrians (drawings XS-3 and XS-4)
- **Collector roads (26m):** sidewalk and one-way cycle track on both sides (drawing XS-5).

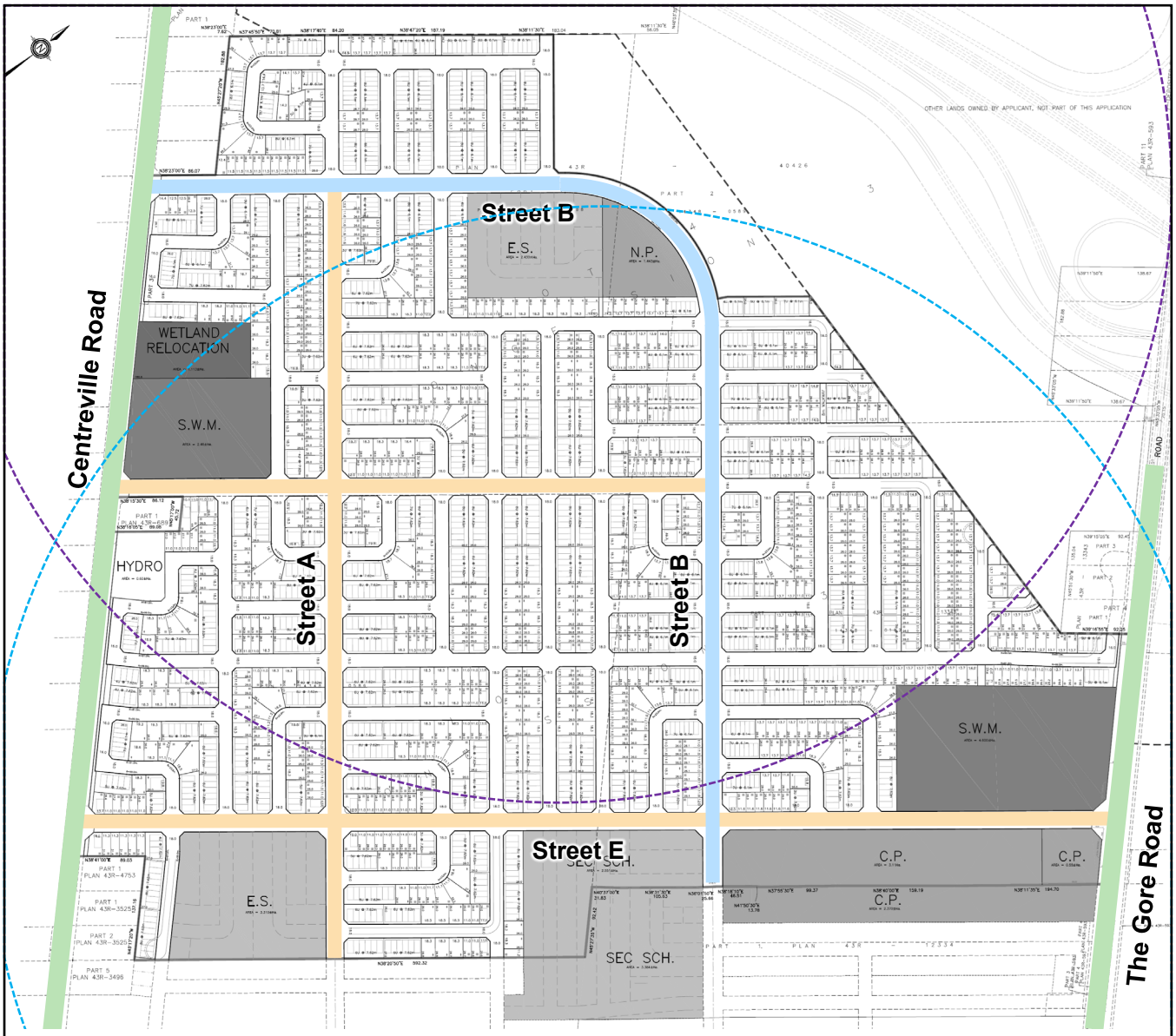
Figure 7.3 shows the road designations and associated active transportation facilities within the proposed development area.

The Town of Caledon's *Active Transportation Master Plan* states that sidewalks are to be provided on both sides of streets within 800 m of a school.[17] **Figure 7.3** includes circles with a radius of 800m centred on the elementary school on Street B (purple dashed line), and the secondary school on Street E (blue dashed line). They show that the entirety of the proposed development is within 800m of at least one of these schools. Consequently, all local roads in the proposed development will have sidewalks on both sides. There is also potential for local trails to be added around stormwater ponds. **Figure 7.4** shows the resulting sidewalk and trail network.

The street network is based on a grid system, with blocks almost all no more than approximately 220 m long. This means that pedestrian routes to community amenities and external intersections are direct rather circuitous. Consequently, the time savings from providing mid-block connections would be minimal

The development's internal pedestrian and cycling network will connect to the greater active transportation network as detailed in the Town of Caledon's *Multi-Modal Transportation Master Plan* (2024).

[17] Town of Caledon. *Active Transportation Master Plan.* Table 10: Pedestrian facility implementation policy. (June 2024)



Legend

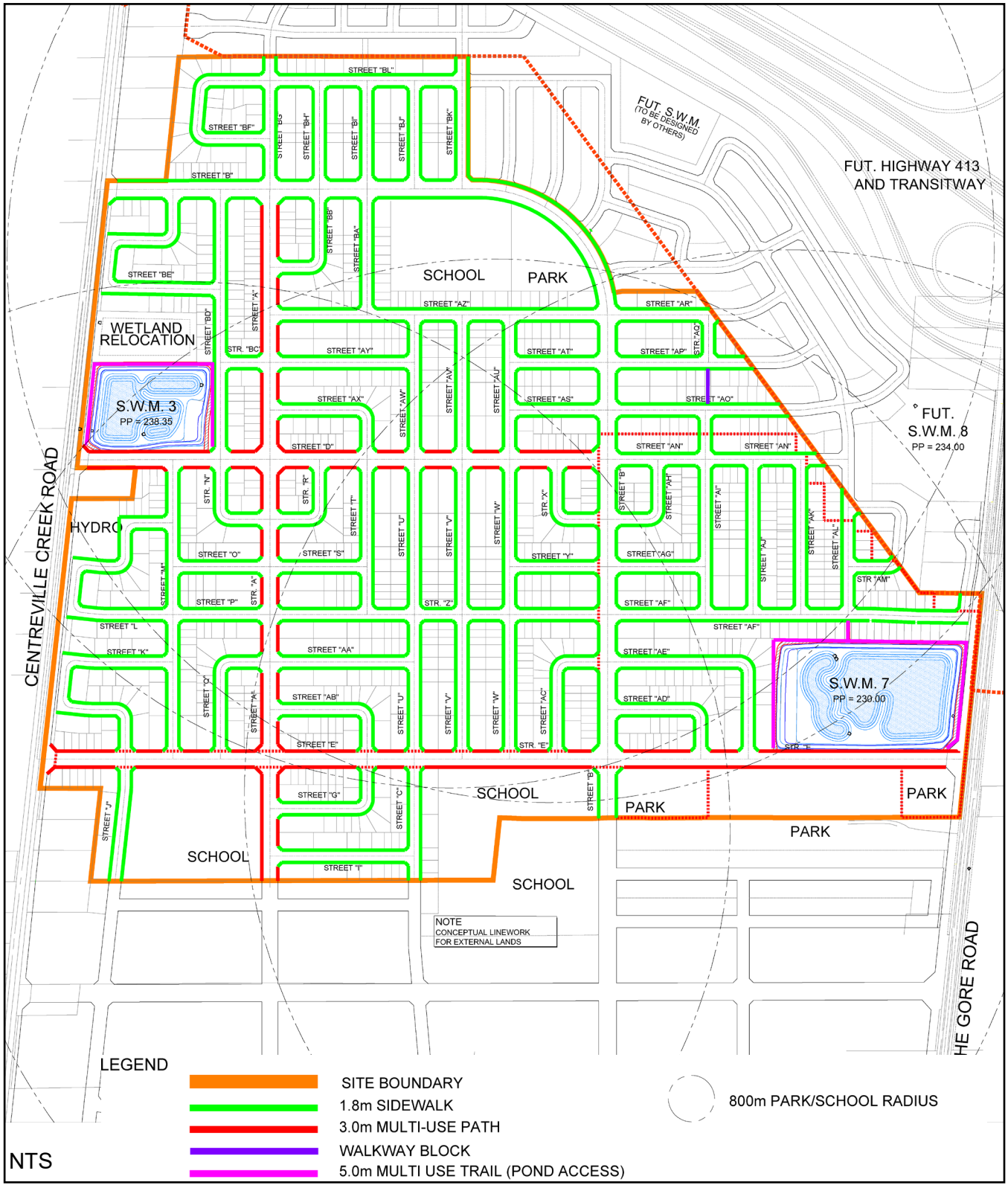
- External road (*facilities by others*)
- 26.0m Collector road (*sidewalk + cycle track*)
- 23.5m Collector road (*multi-use path*)
- 18m Local road (*sidewalks only*)
- 800m radius for Street B Elementary School
- 800m radius for Street E Secondary School

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Pedestrian and Cycling Network

Wildfield Village
240562

Figure 7.3



Sidewalk and Trail Network

Wildfield Village
240562

Figure 7.4

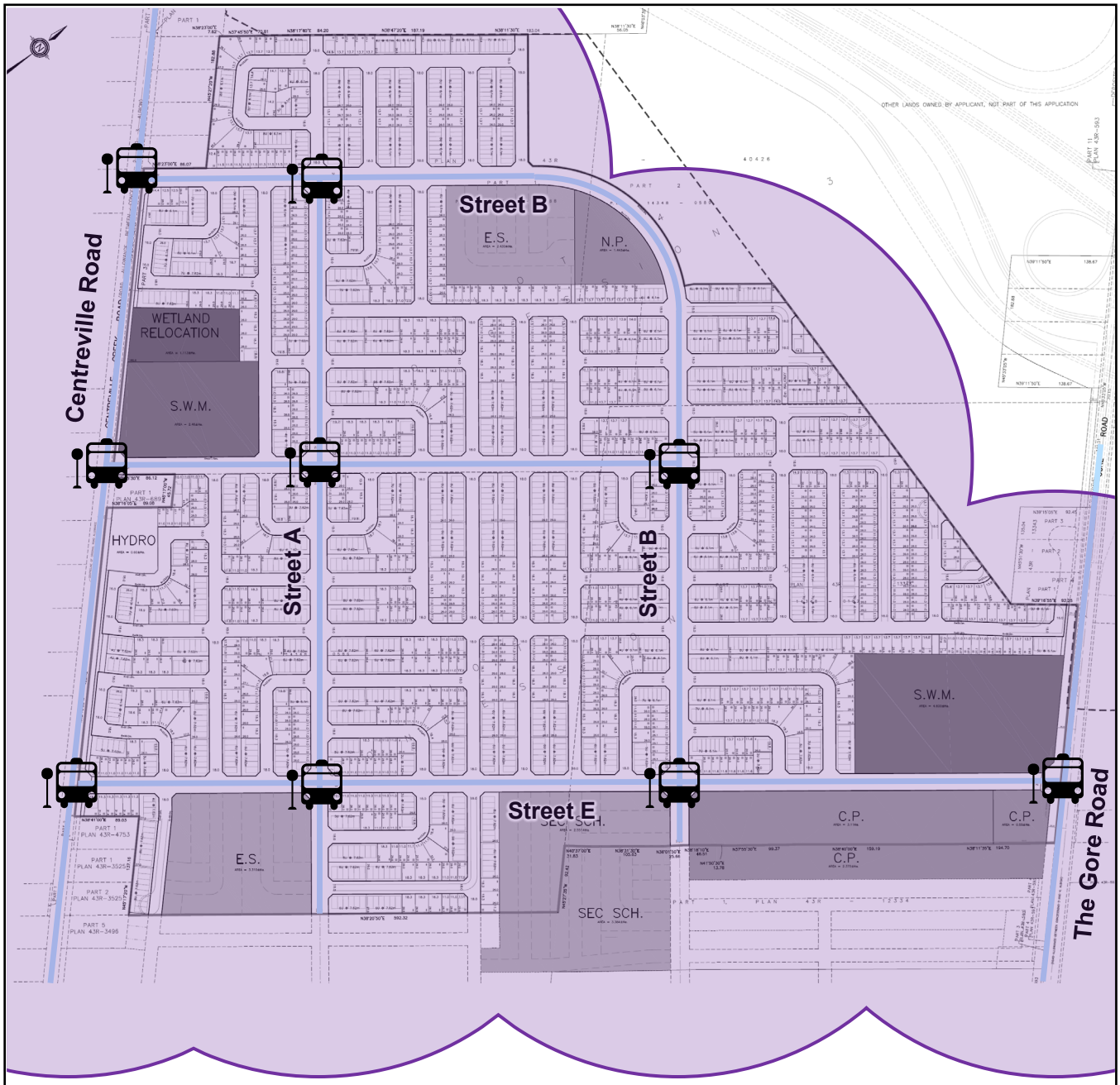
7.5 Transit

Figure 7.5 shows the proposed transit routes and bus stop locations, in line with the Secondary Plan transportation study.[18] The purple shading indicates the area within 400m of a bus stop. As shown, this covers the entirety of the proposed development.

Town staff indicated that transit service would likely be operated by Brampton Transit, and the available space for bus stop facilities needs to conform to City of Brampton requirements. The City's standard drawing 260 for a concrete bus pad shows that at least 3m must be available to accommodate a bus shelter.

Appendix F shows the planned cross-sections for roads in the Secondary Plan area, including for the proposed development. The bus stops are located on either 23.5m collector roads (drawing XS-4) or 26.0m collector roads (drawing XS-5). For a 23.5m collector road, only 2.55m of planting space is available, and hence either the multi-use path would need to be narrowed, or no bus stop provided. For a 26.0m collector road, 3.2m is available, sufficient for a bus shelter.

[18] BA Group. *Wildfield Village Transportation Study.* Figure 6: Transit Network Plan. (May 2025).



Legend

- Road with transit
- Bus stop
- 400m radius from bus stop

NTS

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Transit Network and Stops

Wildfield Village
240562

Figure 7.5

8 Conclusions and Recommendations

8.1 Conclusions

- **Development Trip Generation:**
  - Phase 1 of the proposed development is forecast to generate 377 and 452 vehicular trips during the weekday AM and PM peak hour, respectively.
  - Phase 2 is forecast to generate an additional 1,750 and 2,067 vehicular trips during the weekday AM and PM peak hours, respectively.
  - Full Build-Out of the proposed development is forecast to generate 2,127 AM and 2,519 PM weekday peak hour trips.
- **Phase 1 Background Traffic Conditions:** The study area intersections are forecast to operate with acceptable levels of service, with all movements within capacity.
- **Phase 1 Total Traffic Conditions:** The study area intersections operations are reported to be slightly worse with the addition of the site generated traffic in comparison to background traffic conditions. It is noted the study area intersections are forecast to continue to operate at acceptable levels of service and with all movements within capacity.
- **Full Build-Out Background Traffic Conditions:** The study area intersections are forecast to operate with acceptable levels of service, will all movements within capacity.
- **Full Build-Out Total Traffic Conditions:** The study area intersections operations are reported to be slightly worse with the addition of the site generated traffic in comparison to background traffic conditions. With the addition of site traffic new critical movements are forecast to occur at the intersection of Street B at Street E during the AM and PM peak hours on the eastbound/southbound and eastbound/westbound approaches, respectively.

  It is noted that other than the Street B and Street E intersection, all other study area intersections are forecast to continue to operate at acceptable levels of service and with all movements within capacity.
- **Remedial Measures:** All unsignalized study area intersections were reviewed to determine whether traffic signal control would be warranted for consideration. None of the proposed unsignalized intersection meet the warrant threshold under full build-out total traffic conditions.

- **Auxiliary left-turns lanes:** These were examined as a potential way to reduce delay at two-way stop-controlled intersections on major roads. This situation only occurs at the intersection of Centreville Creek Road and Street E during Phase 1. The warrant nomograph indicates that that auxiliary left-turn lane is not warranted at this intersection after Phase 1 is constructed.
- **Auxiliary right-turns lanes** The only situation where a right-turn lane may be plausible is at the two-way stop-controlled intersection of Centreville Creek Road and Street E during Phase 1. The detailed operational analysis indicates this intersection does not have any operational issues that would justify the addition of a right-turn lane in Phase 1 Conditions.
- **Parking:** the proposed development would have approximately 486 on-street spaces for 2,581 units. This figure excludes potential off-street parking in front of parks, to be conservative. It equates to roughly 0.2 off-street spaces per unit, which would be in addition to the 2.0 off-street spaces per unit required by the Town's Zoning By-Law..
- **Swept path analysis:** Heavy vehicle circulation for temporary conditions was assessed using AutoTURN swept path analysis software. The swept path analysis with the design vehicles noted in **Chapter 7.3** results in no conflicts with the internal site geometry.
- **Pedestrian and cycling plan**:
  - **Local roads**: Sidewalks will be provided on both sides of all roads, with no dedicated cycling facilities
  - **Collector roads (23.5m):** A multi-use path will be provided on both sides
  - **Collector roads (26m):** A sidewalk and one-way cycle track will be provided on both sides

  There is also potential for local trails to be added around stormwater ponds.
- **Transit**: there is sufficient space to accommodate the bus stops proposed by the Secondary Plan transportation study. There is also space for bus shelters being available on the 26m collector roads. All parts of the proposed development are within 400m of a proposed bus stop.

8.2 Recommendations

Based upon the findings of this study, the following is recommended:

- It is suggested that the Region of Peel continue with the widening of Mayfield Road to support background traffic



volumes within the study area. Additionally, the Region of Peel and the Town of Caledon should consider the suggested improvements within the Wildfield Transportation Study to support future growth within the overall secondary plan area.

- It is suggested that the Region of Peel continues to monitor the traffic volumes at The Gore Road intersections with Healey Road and Mayfield Road to determine if signal timing plan modifications are required.
- It is suggested that traffic volumes are monitored to determine if changes to traffic signal control are required.
- It is recommended the internal study area intersections provide the noted lane configurations and traffic control as documented within **Figure 7.1** and **Figure 7.2**.

From a transportation perspective, the planning applications sought should be approved as the development can be accommodated by the anticipated future transportation network.

Appendix A

Study Terms of Reference / Correspondence

5A-150 Pinebush Road
Cambridge ON N1R 8J8
p: 416.479.9684
905.381.2229
519.896.3163

www.ptsl.com

2023-12-XX
Project number: 240562

Kavleen S. Younan, P.Eng.
Transportation Engineer
Town of Caledon
6311 Old Church Road,
Caledon, ON
L7C 1J6

Dear Kavleen:

RE: TERMS OF REFERENCE FOR TRANSPORTATION STUDY – RESIDENTIAL DEVELOPMENT, WILDFIELD VILLAGE, CALEDON, ONTARIO

Paradigm Transportation Solutions Limited is pleased to provide our terms of reference for a transportation study in support of the above development. The following outlines our understanding of the assignment and details our work plan.

Project Understanding

The subject site is generally bound by The Gore Road on the east, Centreville Creek Road on the west, Mayfield Road on the south and the future Hwy 413 on the north. It is located in the northern portion of the Mayfield Community Secondary Plan Area. The attached site plan illustrates the location of internal and external roads in the proposed development. The proposed development is in the lands outlined in red.

The property owner is proposing to create a residential subdivision with approximately 3335 dwelling units. These units will be a mix of detached homes, semi-detached homes and townhouses. Development is likely to occur in two Phases where Phase 1 will consist of approximately 1000 units while Phase 2 will consist of approximately 2335 units. Vehicle access is proposed via three municipal street accesses to Centreville Creek Road and one municipal street access to The Gore Road.

We will be conducting the following investigations:

- A **Transportation Impact Assessment (TIA)** to evaluate the effects of the proposed development on the transportation system and recommend improvements, if necessary,

to address potential impacts. With the information we have to date, we believe that a reasonable study area would include the following four intersections:

- Street B and Centreville Creek Road;
- Street D and Centreville Creek Road;
- Street E and Centreville Creek Road; and
- Street E and The Gore Road.

We will also conduct a qualitative assessment of internal intersections to confirm traffic control types. Traffic forecasts and analysis will be completed for two planning horizons (the planned opening year for Phase 1; and 2051 for Phase 2, to align with BA Group's *Wildfield Village Transportation Study*) and two analysis periods (weekday AM and PM peak hours).

- An **Access and Circulation Review** to ensure compliance of the proposed development plan with review agency requirements and applicable industry guidelines. This will include a **Pedestrian and Cyclist Circulation Plan** in line with the Town of Caledon's requirements.
- A **Transportation Demand Management (TDM) Plan** outlining existing and proposed TDM measures, assessing their likely effectiveness for the proposed development and determining implementation requirements to facilitate their use.

The study will follow the Town of Caledon's *Traffic Impact Study: Terms of Reference and Guidelines* (March 2017) and *Peel Region's Traffic Impact Study - Terms of Reference (2008)*.

Work Plan

The following outlines our proposed work plan to carry out this assignment:

Task 1 – Pre-Study Consultation and Data Assembly

We will contact the Town of Caledon and Peel Region (the review agencies) to request their feedback on the scope of work, study area and other assumptions.

We will gather available data, relevant background reports (BA Group's *Wildfield Village Transportation Study*) and any other information about the study area pertinent to the assessment (e.g. other approved developments in the vicinity, zoning by-law provisions). Any apparent data gaps or discrepancies will be addressed with the review agencies.

We will visit the site to observe traffic and parking conditions on roads in the study area. Roadway configuration and traffic control will be documented, with a figure illustrating the study area prepared. Other related features such as pedestrian and cycling facilities and transit stops will be noted.

Task 2 – Forecasting and Analysis

Transportation Impact Assessment

We will prepare vehicle traffic forecasts for each planning horizon and analysis period. The components of the forecasts are as follows:

- **Future Traffic** background traffic volumes consistent with BA Group's *Wildfield Village Transportation Study*
- **Future roadway improvements** will align with the findings within BA Group's *Wildfield Village Transportation Study*
- The **total trips generated** by the proposed development will be forecast based on the rates contained in the Institute of Transportation Engineers (ITE) *Trip Generation Manual (11th Edition)* or as directed by the review agencies. The following land-use codes are proposed: Single-Family Detached Housing (210), Single-Family Attached Housing (215), and Multifamily Housing (Low-Rise) - Not Close to Rail Transit (220).
- The **site-generated vehicle trips** will be distributed and assigned to the study area intersections based on BA Group's *Wildfield Village Transportation Study*
- The resulting site traffic assignments will be added to the Future Background estimates to produce **Future Total** volumes for the future horizon year and analysis period.
- The TIS will include all planned infrastructure proposed by the planner that will be implemented for all modes of transportation in the proposed development; missing links will be addressed to ensure that the proposed development is accessible for all modes of transportation;

We will analyze the operation of the study area intersections for the Future Background (without the development) and Future Total (with the development Phase 1 and Phase 2) traffic conditions for each analysis period using Synchro software. Volume-to-capacity (v/c) ratios, Level of Service (LOS) and queuing will be assessed. Qualitative analysis will be performed for the site's internal intersections.

Based on the analysis results, we will identify any operational deficiencies as well as the net impact of the proposed development on the study area road network. The need for road improvements (e.g. auxiliary turn lanes) and/or other mitigating measures (e.g. traffic control device modifications) to address deficiencies will be determined. We will assess whether these measures are required due to non-site traffic (i.e. Existing or Future Background) or the increase in volumes resulting from the proposed development (i.e. Future Total).

We will assess the potential impact and requirements of the site for non-auto modes of transportation. This would include identifying existing and planned transit, walking, and cycling routes and facilities that would enhance connectivity both within the subdivision and with the rest of the municipality for these modes.

Access and Circulation Review

We will review the concept plans to assess the design and operation of the proposed accesses and internal roadways and laneways. This includes the adequacy of sight lines, spacing and location of the proposed site access locations, and a review of the roadway and intersection design for the intended functional classifications.

A **Pedestrian and Cyclist Circulation Plan** will be conducted which will also show the boundary connections. Clearances will be confirmed as specified in TAC are met for collector roadways. The intersection spacing and sight distance will be reviewed for all new roads along Town Roads.

Transportation Demand Management (TDM)

We will prepare a TDM Plan for the proposed development. The plan will capture:

- Existing TDM opportunities near the development site (such as proximity to existing or planned transit or active transportation networks); and
- Proposed TDM measures to be implemented on the site. This list of measures to encourage greater use of more sustainable modes of transportation (transit, walking, cycling) and trip decision making that reduces, combines, or shortens vehicle trips will be developed in consultation with the client (and/or its agents).

The plan will summarize existing and proposed measures, assess their likely effectiveness for the proposed development and determine implementation requirements to facilitate their use (e.g. bike racks, showers).

Task 3 – Report Preparation

We will document the study methodologies, findings and conclusions in a report for review by the client, prior to their submission to the Town. The final report will include detailed analysis, results, and any data collected. The report will be stamped by a suitably-qualified Professional Engineer in line with the requirements of Professional Engineers Ontario.

Conclusion

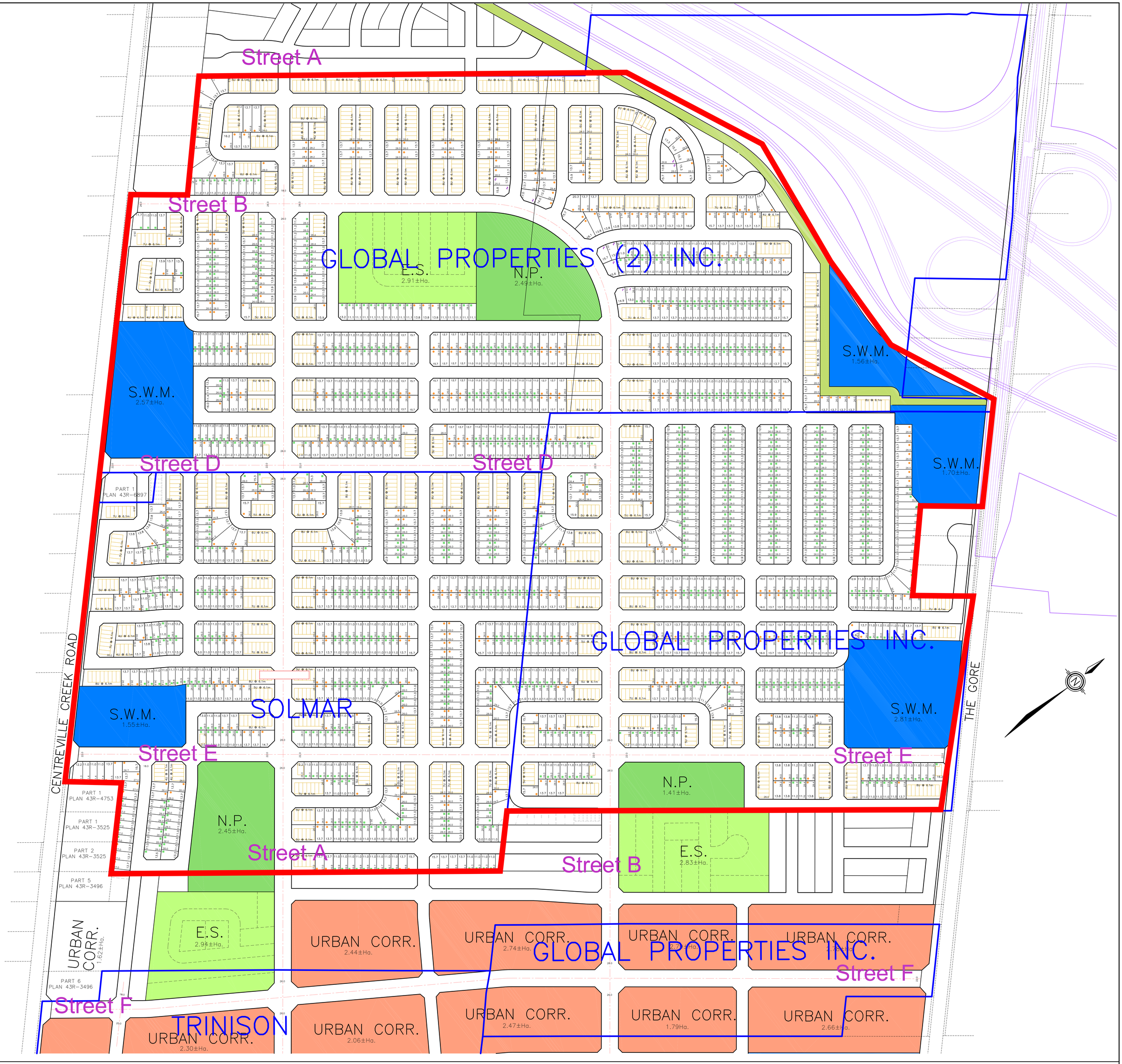
Please contact Tom Willis, the Project Manager for this assignment, at (416) 479 9684 x503 or by e-mail at twillis@ptsl.com if you have any questions related to this project.

Yours truly,

PARADIGM TRANSPORTATION SOLUTIONS LIMITED



Tom Willis
MMath
Senior Project Manager



SOLMAR UNIT STATISTICS (FREEHOLD WHOLE LOTS NOT INCLUDING PART LOTS):

SYMBOL	TYPE	LOTS/BK	UNITS
■	11.0m SINGLE	1049	1049
✦	SPECIAL DESIGN SINGLE	10	10
●	13.7m DUAL ZONED	513	513–1026
	6.1m STREET TOWNHOUSE	193	1250
	TOTAL	1765	2822–3335

ALL LOTTING STATISTICS SUBJECT TO REVISION AND CONFIRMATION.

WILDFIELD VILLAGE

PRELIMINARY DEVELOPMENT CONCEPT

(SOLMAR LOTTING LAYOUT - 4)

BOUNDARY LINES FROM RPE, SUBJECT TO CONFIRMATION.

ENVIRONMENTAL FEATURES ARE UNEVALUATED WETLAND + BUFFERS AS PER GEORGE BUCKTON.

CONCEPT SUBJECT TO REVISION.

3210ADES47–LOTTING4 (xref: 3210MAS1)
1:2000 AUG. 15, 2024

MEMORANDUM

Transportation Engineering
Public Works & Transportation Department

Date: **January 30, 2025**

To: **Tom Willis, MMath, Senior Project Manager**
Paradigm Transportation Solutions Limited

From: **Kavleen S. Younan, P.Eng., Transportation Engineer**
Transportation Engineering, Public Works, & Transportation Department

Subject: **(240562) Wildfield Village - TIS Terms of Reference Response**

Transportation Engineering Staff have reviewed the proposed terms of reference for the draft plan of subdivision and offer the following comments:

1. The MTO and Region of Peel should provide comments on this Terms of Reference.

2. Coordinate with the proposed developments to the east and west to ensure aligned roadways.

3. The Secondary Plan Application needs to be sufficiently advanced for the Transportation Engineering Staff to review and comment on the subdivision and studies' draft plan. Please note that Town Transportation Engineering Staff recommend awaiting approval of the Mobility Plan (or Transportation Study) supporting the Secondary Plan before proceeding with the transportation study for the subject development. Be aware that collector roadways are subject to a multidisciplinary review; staff have provided comments based on the current information available; however, be advised that comments could change.

4. It is noted that the proposed scope of work includes several references of BA Group's Wildfield Village Transportation Study. Please note that the mentioned study is not yet approved by Town Staff and is subject to change.

5. The Town of Caledon is completing EA's (for Centerville Creek Road, and a potential east-west collector that may affect the site). The study recommendations of these EA's should be protected for in the current proposal.

6. Please update the proposed horizon years. The current scope of work proposes to utilize the same horizon years as the 'Wildfield Village Transportation Study' prepared by BA Group as part of a Secondary Plan-level study. At the Draft Plan of Subdivision stage, more detailed and tailored horizon years should be reviewed to accurately reflect and account for any potential improvements that may be required.

7. The proposed roads should follow the recommendations of the Town's Development Standards Manual (DSM), MMTMP, and ATMP.

8. Ensure that all traffic controls are recommended for all new intersections.

9. Please include the below intersections:
    a. The Gore Road at Mayfield Road
    b. Centerville Creek Road at Mayfield Road
    c. Mayfield Road at Street B
    d. Mayfield Road at Street A
    e. The Gore Road at Healy Road
    f. Centerville Creek Road at Healy Road

10. A phasing plan with interim improvements for the broader road network should be established until the ultimate secondary plan network improvements are constructed. The Transportation Impact Study (TIS) should provide approximate buildout numbers for each phase and identify when improvements to the existing north-south roads will be required to support full buildout. The analysis should assume that the Wildfield lands will not have internal connections to Mayfield Road.

11. Confirm there is sufficient sight distance and corner clearance on proposed roadways and intersections (Omit roads which have already been reviewed in other studies). Propose mitigation measures or design alternatives as required.

12. Please include Autoturn Analysis, specifically fire trucks and snowplows turning on the elbow bends. Note that on-street parking layouts may change pending this analysis.

13. Propose Transit stop locations and Traffic Calming Measures as required.

14. Estimate the total number of anticipated parking spaces, including driveway, garage, and on-street parking spaces. Compare these values to the Town's DSM. Include these values in the on-street parking plan. Recommend parking restrictions as required to facilitate sight lines and maneuverability.

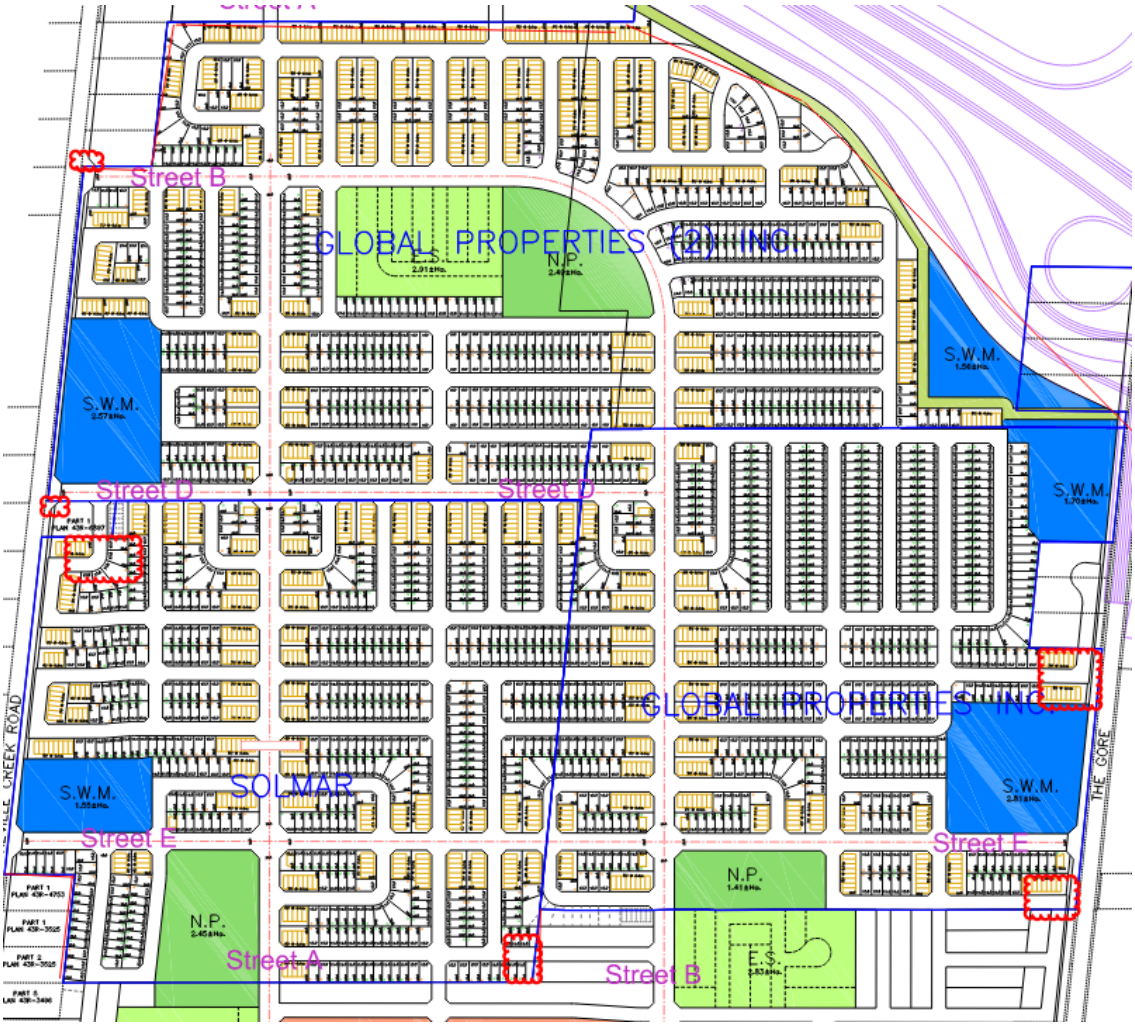
15. Note that information could change between the secondary plan and the draft plan. Update if the changes materially impacts the findings of the report (refer to the Town's Current Development Map for Background Developments, Town’s current Growth management Plan, and owner’s internal plans).

16. Review Safety and Maneuverability of the interim conditions circled in red below with consideration of the planned phasing of the surrounding lands. Suggest mitigation measures or design alternatives as required.

17. Consideration should be given to maximizing the distances between residential driveways and intersections (stop bars/stop signs, etc)

MEMORANDUM

Transportation Engineering
Public Works & Transportation Department



Please let me know if you have any questions or require any additional information.

Regards,

Kavleen S. Younan, P.Eng.
Transportation Engineer
Engineering, Public Works, & Transportation Department

5A-150 Pinebush Road
Cambridge ON N1R 8J8
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2025-07-31
Project: 240562

Emma Howlett, EIT
Transportation Coordinator
Engineering, Public Works, & Transportation Department
Town of Caledon
6311 Old Church Rd
Caledon ON L7C 1J6

Dear Emma:

RE: WILDFIELD VILLAGE SUBDIVISION (12561 & 12735 CENTREVILLE CREEK RD AND 12706 & 12494 THE GORE RD) – TRANSPORTATION REPORT OUTLINE

The purpose of this letter is to provide a detailed report outline terms of reference (TOR) for the second submission of the Wildfield Village Transportation Impact Study (TIS) initially completed by Paradigm Transportation Solutions Limited (Paradigm) in January 2025.

A working copy of the lotting plan is attached for information; this may be revised prior to submission. The site is proposed to ultimately have approximately 2,700 residential units, in a mix of detached, semi-detached, and townhouse units.

The ultimate road network will be per the Wildfield Village Secondary Plan. However, to provide a conservative analysis, it will be assumed the new roads outside the subdivision will not be place. Access to the subdivision will therefore be assessed with three intersections on Centreville Creek Road and one on The Gore Road.

The transportation study will consider two stages: “Phase 1”, with roughly half of units, and “full build-out”, with all units in place.

Report outline

Introduction

This section will describe the general purpose and structure of the report. The proposed study area will be:

- The following external intersections:
  - Street B and Centreville Creek Road;
  - Street D and Centreville Creek Road;
  - Street E and Centreville Creek Road; *and*
  - Street E and The Gore Road.
- The following internal intersections:
  - Street A and Street E
  - Street A and Street D
  - Street A and Street B
  - Street B and Street D; *and*
  - Street B and Street E

Existing Conditions

A detailed list of the existing and proposed cycling, walking, transit and roadway infrastructure within the study area will be provided.

Turning movement count data (TMC) was collected intersections of Mayfield Drive at The Gore Road and Centreville Creek Road on Wednesday, October 30, 2024, to establish baseline volumes for The Gore Road and Centreline Creek Road (NB/SB) in front of the proposed development.

Development Concept

The development concept will be outlined including the anticipated number of units, proposed internal roadway network and phasing plans. Preliminary concept plans indicate two phases are proposed with horizon year and specific unit counts by phase will be detailed within the report.

Future Background Traffic Volumes

Background traffic forecasts for the Phase 1 (Year 2031) will be estimated by applying a generalized background growth rate of **2% per annum** to the existing traffic volumes along Centreville Road and The Gore Road which were collected on Wednesday, October 30, 2024. No inline background developments will be included within the background traffic forecasts as

it is assumed that the generalized background growth rate will account for these developments.

Background traffic forecasts for the Full Build-Out (Year 2051) will be estimated similarly to the first submission TIS (Paradigm, 2025). BA Group's *Secondary Plan Transportation Study* and the Town of Caledon's *Multi-Modal Transportation Master Plan* will be utilized to derive the background traffic volumes.

The background traffic volumes are forecast to consist of generalized background growth (derived from the Town of Caledon's *Multi-Modal Transportation Master Plan*) and inline background development traffic (derived from BA Group's *Secondary Plan Transportation Study*). No generalized background growth rate is proposed.

Site Trip Generation

The development's forecasted traffic volumes with be estimated with a combination of the following Institute of Transportation Engineer's (ITE) publication, *Trip Generation Manual (11th Edition)*, land use codes:

- LUC 210 – Single-Family Detached Housing (detached houses) (General Urban/Suburban)
- LUC 215 – Single-Family Attached Housing (semi-detached houses) (General Urban/Suburban)
- LUC 220 – Multifamily Housing (Low-Rise) - Not Close to Rail Transit (General Urban/Suburban)

Phase 1 traffic distribution will follow the existing traffic distribution patterns.
Full Build-Out traffic distribution will follow what is outlined within BA Group's *Secondary Plan Transportation Study*.

Operational Analysis

Detailed traffic forecasts and operational analysis will be provided for all intersections within the proposed study area for the weekday AM and PM peak hours for two horizon years. Preliminary the phases are Phase 1 build-out (Year 2031) and Full build-out (Year 2051). Any critical issues with the operational analysis will be noted as outlined within the Town of Caledon *Transportation Impact Studies Terms of Reference and Guidelines.*

Synchro 12 will be used to assess the study area intersections; the following key parameters will be used:

- Phase 1:
  - Assessment the impacts of Phase 1 forecast traffic on the existing transportation network;
  - Lane configuration and intersection control type per existing transportation network.

- Heavy vehicle percentages, PHF, conflicting pedestrian volumes derived from turning movement counts conducted by Paradigm on October 30, 2024
- Optimized signal timings for any proposed signals;
- Ontario Traffic Manual pedestrian crossing times for any proposed signals; *and*
- Synchro default values for all other inputs.

- Full Build-out (Phase 1 + Phase 2)
  - Assessment of the entire development on the future transportation network.
  - Heavy vehicle percentages, PHF, conflicting pedestrian volumes, lane configuration and intersection control type based on BA Group's *Wildfield Village Transportation Study*;
  - Optimized signal timings for any proposed signals;
  - Ontario Traffic Manual pedestrian crossing times for any proposed signals; *and*
  - Synchro default values for all other inputs.

Required Changes

Any operational impacts to the study area directly related to the development's forecast traffic volumes will be analyzed and suggestions will be provided for any mitigation measures, if possible, for each horizon year / phase.

Ontario Traffic Manual Book 12 (Justification 7) will be completed for all intersections within the study area for the weekday AM and PM peak hours to determine whether signalization is warranted.

Auxiliary right-turn lanes and left-turn lanes warrants will be completed for all study area intersections under the Full Build-Out total traffic conditions. Functional drawings will be provided for any auxiliary turn lanes recommended on regional roadways. Storage lengths will be estimate for the study area intersections using SIMTraffic 95th percentile queue length. Taper and deceleration lengths will be recommended based on TAC Geometric Design Guide guidance.

Diagrams of the proposed interim/ultimate traffic control layout will be provided for all intersections. Diagrams of the proposed interim/ultimate traffic control and lane configuration layout will be provided for all study area intersections. Spacing of study area and AWS intersections will be checked against municipal standards, OTM, and TAC guidelines.

Auxiliary left-turn lane warrants (Ministry of Transportation Ontario (MTO) Transportation Association of Canada (TAC) supplement nomographs) will be completed for all external intersections in the study area.

Access and Circulation Review

We will review the site access and circulation design to ensure compliance with review agency requirements and applicable industry guidelines.

The analysis will be completed using AutoTURN and include assessments of snow plough, garbage truck and fire truck movements around “elbows” (90 degree turns on local roads). We will compare the proposed road design and layout against the Town’s Design Standards Manual (DSM). Where the design differs from the DSM, we will conduct AutoTURN analysis to confirm the design is viable.

We will review the provision of sight triangles provision and compare with Town requirements. We will review of sight distances and corner clearances, and provide a quantitative review of potential issues.

We will also review the safety and maneuverability of any the interim conditions (such as the. temporary elbow on south side beside the secondary school).

For traffic calming, we will provide information on the recommended traffic calming locations and features.

Parking Plan

We will provide a quantitative estimate of on-street parking supply, based on number of possible on-street spaces per unit by type, allowing for street type. The number of off-street parking spaces will be based on local zoning by-law.

Pedestrian and Cyclist Circulation Plan:

We provide information / mapping about the location of proposed sidewalks and cycling facilities, including connections to the wider active transportation network (both existing and planned). We review the potential need for mid-block pedestrian connections, given the likely pedestrian flows within the community and the time that would be saved. We will also examine the potential for local trails around stormwater ponds.

Transit

We will show the proposed transit routes and bus stop locations (based on Secondary Plan transportation study); confirm there is sufficient space for bus stop facilities (based on City of Brampton standards); and analyses walk distance from bus stops (to show what proportion is of the subdivision within 400m walk distance of a stop).

Recommendations

We will summarize of recommended changes by horizon year. This will include changes to traffic control method, lane configuration, and provision of turn lanes.



Conclusion

We trust that this report outline covers all the information you are expecting to see in our transportation report. If you have any questions or concerns, please don't hesitate to contact me.

Yours very truly,

PARADIGM TRANSPORTATION SOLUTIONS LIMITED



Tom Willis
MMath
Senior Project Manager

Tom Willis

From: Emma Howlett <Emma.Howlett@caledon.ca>
Sent: August 27, 2025 1:42 PM
To: Tom Willis
Cc: Dan Terzievski
Subject: RE: (240562) Wildfield Village subdivision - transportation report outline

Hi Will,

I have reviewed and offer the following comments:

General: Town Transportation staff defer to the Region of Peel regarding roadways and intersections under their jurisdiction. Accordingly, it is recommended that the TOR be circulated to the Region and MTO.
Background Volumes:
- Regarding the proposed 2% growth rate: I'm calculating a 5.5% growth rate between 2015 and 2024, but only 3% between 2022 and 2024 (bellow). Additional Historical Traffic data can be requested from Smeeta Adiga (smeeta.adiga@caledon.ca).

Year	AADT
2024	2591
2023	2636
2022	2473

•Considering changes in our historical traffic data, would background traffic be available from the Region's models for 2031 or 2041? (If not make a reasonable assumption). MMTMP has data for the 2041 horizon year in appendix E.

•Regarding the proposed 2031 and 2051 horizon years, please confirm whether these are consistent with the planned phasing horizons for the development. If not, revise to better reflect the phasing plan.

•Would a phasing plan be included for internal and external roadway improvements? Specifically, does Phase 2 require specific improvements (e.g., widenings) to proceed?

Site Generated Trips
•Ensure all proposed uses are captures, including but not limited to, how are the impacts of the school (and its planned catchment area) on site-generated trips and transportation network improvement needs being considered?
•Please confirm the phase in which these schools will be added.
•

Operational analysis
•Ensure horizon years are consistent with the development phasing. A phasing plan outlining when external improvements are triggered would be helpful.

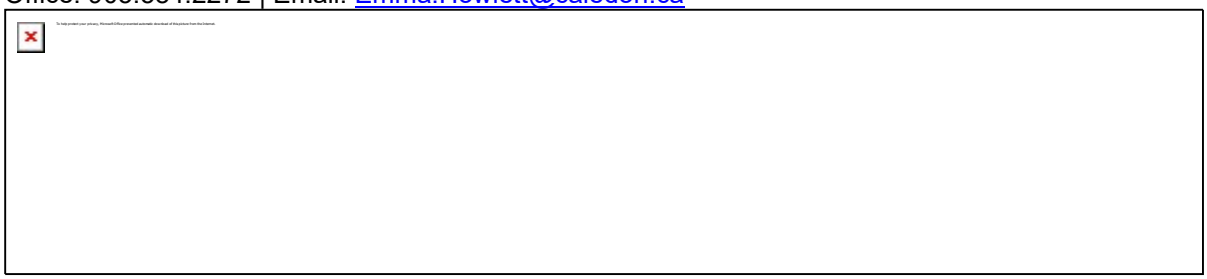
Required Changes:

•Review the need for turn lanes under both the widened cross-section (ultimate condition) and the existing two-lane cross-section. This will help determine land requirements whether or not widening occurs.
•If warrants indicate turn lanes are not required, consider their safety benefits and discuss with Town staff.
•Include traffic signal warrants for both interim and ultimate conditions.
•Access and Circulation review: Review land requirements under both unsignalized and signalized conditions, based on the findings above

Parking Plan
•The number of off- and on-street spaces should be based on the Development Standards Manual. Ensure locations conform to the Town's Traffic By-law 2024-0048.
•Include any locations where additional parking restrictions are required to facilitate sightlines or maneuverability (commonly at curves).

Regards,

Emma Howlett, P.Eng.
Transportation Coordinator
Engineering, Public Works, & Transportation Department
Office: 905.584.2272 | Email: Emma.Howlett@caledon.ca



From: Tom Willis <twillis@ptsl.com>
Sent: Thursday, July 31, 2025 9:42 AM
To: Emma Howlett <Emma.Howlett@caledon.ca>
Cc: Dan Terzievski <Dan.Terzievski@caledon.ca>; Creighton Chartier <cchartier@ptsl.com>
Subject: RE: (240562) Wildfield Village subdivision - transportation report outline

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Hi Emma,

My apologies – I should have also attached the current version of the lotting plan for your reference. This may change prior to submission, but I am not anticipating any significant alterations.

With thanks,

Tom Willis, MMath
Senior Project Manager
(He/Him)

5A-150 Pinebush Road, Cambridge ON, N1R 8J8
p: 416.479.9684 x503
w: www.ptsl.com

Paradigm operates on a four-day workweek. Our offices are closed on Fridays.

From: Tom Willis
Sent: 31-Jul-25 9:40 AM
To: Emma Howlett <emma.howlett@caledon.ca>
Cc: Dan Terzievski <dan.terzievski@caledon.ca>; Creighton Chartier <cchartier@ptsl.com>
Subject: (240562) Wildfield Village subdivision - transportation report outline

Dear Emma,

As previously discussed, please find attached a detailed outline of our proposed transportation report for the Wildfield Village subdivision for your review and comment. If you have any questions or are concerned that something is missing, please don't hesitate to get in touch. That will ensure we can include it in our report, and minimize your potential comments after the application submission.

Regards,

Tom Willis, MMath
Senior Project Manager
(He/Him)

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2025-07-31
Project: 240562

Damon Recagno, MASc
Technical Analyst, Transportation Development
Region of Peel
10 Peel Centre Drive, Suite B, 4th Floor
Brampton, ON
L6T 4B9

Dear Damon:

RE: WILDFIELD VILLAGE SUBDIVISION (12561 & 12735 CENTREVILLE CREEK RD AND 12706 & 12494 THE GORE RD) – TRANSPORTATION REPORT OUTLINE

Paradigm Transportation Solutions Limited is pleased to provide our terms of reference for a transportation study in support of the above development. The following outlines our understanding of the assignment and details our work plan. A working copy of the lotting plan is attached for information; this may be revised prior to submission.

Project Description

The site is located between Centreville Creek Road and The Gore Road (Regional Road 8), just south of the proposed Highway 413 corridor. The lands in the north part of the Wildfield Village Secondary Plan area, as recently approved by Caledon Town Council. The work for the Secondary Plan included a transportation study conducted by BA Group. We understand the Region has been part of the review process for that study.

The project is a residential subdivision. It is proposed to ultimately have approximately 2,700 residential units, in a mix of detached, semi-detached, and townhouse units.

The ultimate road network will be per the Wildfield Village Secondary Plan, shown in the attached. However, to provide a conservative analysis, it will be assumed the new roads outside the subdivision will *not* be place. Access to the subdivision will therefore be assessed with three intersections on Centreville Creek Road and one on The Gore Road.

The transportation study will consider two stages: “Phase 1”, with roughly half of units, and “full build-out”, with all units in place. During that phase, there will be one intersection on Centreville Creek Road and one on The Gore Road.

The transportation study will include a **Transportation Impact Assessment (TIA)** to evaluate the effects of the proposed development on the transportation system and recommend improvements, if necessary, to address potential impacts. The study area agreed with the Town covers the following intersections:

- Three intersections on Centreville Creek Road;
- One intersection on The Gore Road.
- Five internal intersections of collector roads

The study will follow the Town of Caledon's *Traffic Impact Study: Terms of Reference and Guidelines* (March 2017) and Peel Region's *Traffic Impact Study - Terms of Reference* (2008).

The transportation study will also include various other elements relating to access and circulation by vehicles, pedestrians and cyclists; transit planning; and parking supply.

The remainder of this letter provides a detailed outline of the information to be included in the report.

Report outline

Introduction

This section will describe the general purpose and structure of the report. The proposed study area will be:

Existing Conditions

A detailed list of the existing and proposed cycling, walking, transit and roadway infrastructure within the study area will be provided.

Turning movement count data (TMC) was collected intersections of Mayfield Drive at The Gore Road and Centreville Creek Road on Wednesday, October 30, 2024, to establish baseline volumes for The Gore Road and Centreline Creek Road (NB/SB) in front of the proposed development.

Development Concept

The development concept will be outlined including the anticipated number of units, proposed internal roadway network and phasing plans. Preliminary concept plans indicate two phases are proposed with horizon year and specific unit counts by phase will be detailed within the report.

Future Background Traffic Volumes

Background traffic forecasts for the Phase 1 (Year 2031) will be estimated by applying a generalized background growth rate of **2% per annum** to the existing traffic volumes along

Centreville Road and The Gore Road which were collected on Wednesday, October 30, 2024. No inline background developments will be included within the background traffic forecasts as it is assumed that the generalized background growth rate will account for these developments.

Background traffic forecasts for the Full Build-Out (Year 2051) will be estimated similarly to the first submission TIS (Paradigm, 2025). BA Group's *Secondary Plan Transportation Study* and the Town of Caledon's *Multi-Modal Transportation Master Plan* will be utilized to derive the background traffic volumes.

The background traffic volumes are forecast to consist of generalized background growth (derived from the Town of Caledon's *Multi-Modal Transportation Master Plan*) and inline background development traffic (derived from BA Group's *Secondary Plan Transportation Study*). No generalized background growth rate is proposed.

Site Trip Generation

The development's forecasted traffic volumes with be estimated with a combination of the following Institute of Transportation Engineer's (ITE) publication, *Trip Generation Manual (11th Edition)*, land use codes:

- LUC 210 – Single-Family Detached Housing (detached houses) (General Urban/Suburban)
- LUC 215 – Single-Family Attached Housing (semi-detached houses) (General Urban/Suburban)
- LUC 220 – Multifamily Housing (Low-Rise) - Not Close to Rail Transit (General Urban/Suburban)

Phase 1 traffic distribution will follow the existing traffic distribution patterns.
Full Build-Out traffic distribution will follow what is outlined within BA Group's *Secondary Plan Transportation Study*.

Operational Analysis

Detailed traffic forecasts and operational analysis will be provided for all intersections within the proposed study area for the weekday AM and PM peak hours for two horizon years. Preliminary the phases are Phase 1 build-out (Year 2031) and Full build-out (Year 2051). Any critical issues with the operational analysis will be noted as outlined within the Town of Caledon *Transportation Impact Studies Terms of Reference and Guidelines.*

Synchro 12 will be used to assess the study area intersections; the following key parameters will be used:

- Phase 1:
  - Assessment the impacts of Phase 1 forecast traffic on the existing transportation network;

- Lane configuration and intersection control type per existing transportation network.
- Heavy vehicle percentages, PHF, conflicting pedestrian volumes derived from turning movement counts conducted by Paradigm on October 30, 2024
- Optimized signal timings for any proposed signals;
- Ontario Traffic Manual pedestrian crossing times for any proposed signals; *and*
- Synchro default values for all other inputs.

- Full Build-out (Phase 1 + Phase 2)
  - Assessment of the entire development on the future transportation network.
  - Heavy vehicle percentages, PHF, conflicting pedestrian volumes, lane configuration and intersection control type based on BA Group's *Wildfield Village Transportation Study*;
  - Optimized signal timings for any proposed signals;
  - Ontario Traffic Manual pedestrian crossing times for any proposed signals; *and*
  - Synchro default values for all other inputs.

Required Changes

Any operational impacts to the study area directly related to the development's forecast traffic volumes will be analyzed and suggestions will be provided for any mitigation measures, if possible, for each horizon year / phase.

Ontario Traffic Manual Book 12 (Justification 7) will be completed for all intersections within the study area for the weekday AM and PM peak hours to determine whether signalization is warranted.

Auxiliary right-turn lanes and left-turn lanes warrants will be completed for all study area intersections under the Full Build-Out total traffic conditions. Functional drawings will be provided for any auxiliary turn lanes recommended on regional roadways. Storage lengths will be estimate for the study area intersections using SIMTraffic 95th percentile queue length. Taper and deceleration lengths will be recommended based on TAC Geometric Design Guide guidance.

Diagrams of the proposed interim/ultimate traffic control layout will be provided for all intersections. Diagrams of the proposed interim/ultimate traffic control and lane configuration layout will be provided for all study area intersections. Spacing of study area and AWS intersections will be checked against municipal standards, OTM, and TAC guidelines.

Auxiliary left-turn lane warrants (Ministry of Transportation Ontario (MTO) Transportation Association of Canada (TAC) supplement nomographs) will be completed for all external intersections in the study area.

Access and Circulation Review

We will review the site access and circulation design to ensure compliance with review agency requirements and applicable industry guidelines.

The analysis will be completed using AutoTURN and include assessments of snow plough, garbage truck and fire truck movements around “elbows” (90 degree turns on local roads). We will compare the proposed road design and layout against the Town’s Design Standards Manual (DSM). Where the design differs from the DSM, we will conduct AutoTURN analysis to confirm the design is viable.

We will review the provision of sight triangles provision and compare with Town requirements. We will review of sight distances and corner clearances, and provide a quantitative review of potential issues.

We will also review the safety and maneuverability of any the interim conditions (such as the. temporary elbow on south side beside the secondary school).

For traffic calming, we will provide information on the recommended traffic calming locations and features.

Parking Plan

We will provide a quantitative estimate of on-street parking supply, based on number of possible on-street spaces per unit by type, allowing for street type. The number of off-street parking spaces will be based on local zoning by-law.

Pedestrian and Cyclist Circulation Plan:

We provide information / mapping about the location of proposed sidewalks and cycling facilities, including connections to the wider active transportation network (both existing and planned). We review the potential need for mid-block pedestrian connections, given the likely pedestrian flows within the community and the time that would be saved. We will also examine the potential for local trails around stormwater ponds.

Transit

We will show the proposed transit routes and bus stop locations (based on Secondary Plan transportation study); confirm there is sufficient space for bus stop facilities (based on City of Brampton standards); and analyses walk distance from bus stops (to show what proportion is of the subdivision within 400m walk distance of a stop).

Recommendations

We will summarize of recommended changes by horizon year. This will include changes to traffic control method, lane configuration, and provision of turn lanes.



Conclusion

We trust that this report outline covers all the information you are expecting to see in our transportation report. If you have any questions or concerns, please don't hesitate to contact me.

Yours very truly,

PARADIGM TRANSPORTATION SOLUTIONS LIMITED



Tom Willis
MMath
Senior Project Manager

TOWN OF CALEDON

OFFICIAL PLAN

Schedule H34

Wildfield Village
Community Structure & Land Use

- Secondary Plan Boundary
- Priority Residential Community Area
- Neighbourhood Park
- Community Park
- Elementary School
- Secondary School
- Potential Linkage
- Natural Features and Areas
- Supporting Features and Areas
- Potential Enhancement Area
- Neighbourhood Area
- Urban Corridor
- Neighbourhood Centre
- Stormwater Ponds
- Conceptual Collector Road
- Multi-use Path

Highway 413 Legend

- Planned Highway 413 and NWGTA Transmission Corridor Protection Area
- Highway 413 Focused Analysis Area
- Highway 413 Road Right-of Way

June 2025

Date of print: 6/30/2025
Sources: Town of Caledon, Regional Municipality of Peel
Contains information licensed under the Open Government Licence – Ontario

This map forms part of the Future Caledon Official Plan of the Town of Caledon and must be read in conjunction with the text, other schedules and secondary plans. The boundaries/alignments of designations on this schedule are approximate and are not intended to be scaled.

HEALEY RD
HEALEY RD
INNIS LAKE RD
CENTREVILLE CREEK RD
THE GORE RD
THE GORE RD
MAYFIELD RD
MAYFIELD RD
0
500
1,000
1,500
2,000
m
N

WILDFIELD VILLAGE

PRELIMINARY LOTTING CONCEPT-WORK IN PROGRESS

SOLMAR UNIT STATISTICS (FREEHOLD WHOLE LOTS NOT INCLUDING PART LOTS):

SYMBOL	TYPE	LOTS/BK	UNITS
■	11.0m SINGLE	450	450
●	13.7m SEMI-DETACHED	209	418
♦	18.3m SEMI-DETACHED	177	354
	6.1m STREET TOWNHOUSE	101	618
	7.62m STREET TOWNHOUSE	121	719
	TOTAL	1058	2559

ALL LOTTING STATISTICS SUBJECT TO REVISION AND CONFIRMATION.

DRAFT PLAN BOUNDARY

HIGHWAY 413 FOCUSED ANALYSIS AREA (DEC 2024)

BOUNDARY LINES FROM RPE, SUBJECT TO CONFIRMATION.

HIGHWAY 413 FAA BOUNDARY SUBJECT TO CONFIRMATION.

CONCEPT SUBJECT TO REVISION.

JULY 18, 2025

3210ADES58 (xref: 3210MAS7)

Region of Peel
working with you

April 23, 2025

Graham Richards
MHBC, on behalf of the Town of Caledon
6311 Old Church Road,
Caledon ON, L7C 1J6

Public Works

10 Peel Centre Dr.
Suite B
Brampton, ON
L6T 4B9
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peelregion.ca

Re: **Proposed Draft Plan of Subdivision in the Wildfield Secondary Plan Area**
2561 & 12735 Centreville Creek Road and 12706 & 12494 The Gore Road
KLM Planning Partners Inc. on behalf of Global Properties Inc., Global Properties (1) Inc. and Global Properties (2) Inc. (c/o Solmar Development Inc.)
Town/Region File File: 21T-25001C

Comments:
The Region has reviewed the above noted Draft Plan of Subdivision application and offer the following comments and conditions of draft approval.

Development Engineering:
The subject lands are within the Wildfield Secondary Plan Area which remains under review under file OZ-24-010C. At this time, the required secondary plan wide FSR, and the DSSP remain outstanding. Development of this draft plan of subdivision must occur in accordance with the policies of the Secondary Plan and DSSP – once they have been approved.

Sanitary Sewer Facilities

- Existing municipal sanitary sewer facilities consist of a1200mm diameter sewer on The Gore Road, north of Beamish Court and a 675mm dia sanitary sewer on McVean Drive, south of Countryside Drive.
- Based on the 2025 DC Wastewater map, servicing of the subdivision lands requires construction of a 675mm dia sanitary sewer on McVean Drive, 600/525mm dia sanitary trunk sewers on Centreville Road and a 1200mm dia. trunk sewer on The Gore Road (2025).
- Functional Servicing Report showing proposed sanitary sewer servicing plans for the subdivision lands and provision for the adjacent lands is required for review and approval by the Region prior to the engineering submission.
- External easements and construction will be required.

Water Facilities

- The lands are located within Water Pressure Zone 6 supply system.
- Existing watermain infrastructure consist of a 200mm watermain on The Gore Road (Pressure Zone 6) and a 200mm watermain on Centreville Road (Pressure Zone 6). Based on the future detail FSR review, the Region will determine what interim (if any) upgrades to the existing water system within and around the

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subdivision's lands might be required to accommodate the development. All costs associated with the interim upgrades will be 100% the Developer's cost. The scope of planned watermain upgrades (if any) by the Developer will be subject to Region's further fine tuning and updates

- Based on the 2025 DC Water map, ultimate servicing of the subdivision lands requires construction of a 400mm dia. watermain on Centreville Road (2025), a 400mm dia. watermain on the east-west collector road (2026) and a 600mm dia watermain on The Gore Road (2026). Functional Servicing Report (FSR) showing proposed water servicing plans for the subdivision lands and provision for the adjacent lands is required for review and approval by the Region prior to the engineering submission.
- External easements and construction will be required.

Development Charges

- The Developer acknowledges that the lands are subject to the Region's Development Charges By-law in effect from time to time. The applicable development charges shall be paid in the manner and at the times provided by this By-law.

Capital Budget

- Servicing of the subdivision Plan will require construction of oversized watermains and sanitary sewers which are the financial responsibility of the Region as per Development Charges By-law and Policy F40-06. Should the Developer wish to proceed with the works in order to obtain clearance of the Draft Plan Conditions at a time when the Region is not prepared to fund the works, then the Developer will be required to enter into a Front-Ending Agreement prior to the construction of the works. This Agreement will be subject to the Region's determination that it has or will have sufficient funds to justify entering into the Front-Ending Agreement, Regional Council approval and according to Policy F40-06.

Stormwater Management:

- The Region will not accept uncontrolled flow onto the ROW of The Gore Road for areas greater than 0.1 ha. It appears that a catchment near The Gore Road entrance on Street E (0.24 ha) drains to the ROW.
- Pond 7 and Pond 8 - For SWM facilities adjacent to a regional road, emergency overland flows shall not cause flooding of regional roads, please confirm.
- Drawing 2 – Conceptual Storm Servicing Plan: Please confirm size of culvert crossing The Gore Road for the pond 8 outfall, our records show it is 900mm. Please also verify capacity of culverts accepting outflow from Pond 7 and Pond 8.
- Drawing 8 – Siltation Plan: show locations of any temporary sediment basins and their outlet clearly identified, with flow rate

Transportation Development:

Standards, Specifications, and Submission Requirements

Please review the Public Works Design, Specifications & Procedures Manuals, and the Region of Peel's Standard Drawings which can be found at the following links. Digital copies can be provided upon request.

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- Linear Infrastructure – Site Plan Process: Public Works Design, Specifications & Procedures Manual - Linear Infrastructure - Site Plan Process - Revised November 2009 (peelregion.ca)
- Public Works Design, Specifications and Procedures Manual: Design, standards specification and procedures - Region of Peel (peelregion.ca)
- Public Works Design, Specifications and Procedures Manual – Linear Infrastructure: Public Works - Design, Specifications & Procedures Manual - Linear Infrastructure - CAD Submission Requirements - Capital Works - June 2015 (peelregion.ca)
- Public Works CAD Submission Requirements – Development: Microsoft Word - Development Submission Requirements Manual - Nov2017.docx (brampton.ca)
- Standard Drawings - Roads & Traffic : Roads and traffic - standards drawings - Region of Peel (peelregion.ca)

Access/Study Requirements

- A Traffic Impact Study (TIS) was received; terms of reference were not submitted to the Region for review and comment prior to study commencement;
- The Region will require some additional information to be addressed in the TIS, including a signals warrant analysis as no appendix is noted for The Gore Road and Street E. The TIS states no signals warranted under phase 1, but required under full build-out, the Region would like to review the analysis.
- The intersection of The Gore Road and Street E may require auxiliary turn lanes, this should be addressed in the TIS, and a functional design should be submitted in the next submission that addresses the intersection design with auxiliary turn lanes and all geometrics. A truck turning template will also be required.
- The Region in theory is in support of the proposed Street E, at its current location as it does meet the Region of Peel Controlled Access By-Law.

General Comments

- Any proposed connection to The Gore Road must adhere to the spacing requirements set out within the Region's Road Characterization study. This portion of The Gore Road is designated as a Rural Road, which outlines a spacing requirement of 600 metres between any full movement accesses.
- Please be advised that there is a planned Capital Project #22-4685 along the Gore Road for corridor improvements from King Street to Healy Road. The Project Manager for this project is Umair Keen (Umair.keen@peelregion.ca) . Please reach out to the project manager to obtain additional information on the capital project including additional property requirements and infrastructure requirements.
- MTO must be circulated for comment and approval, as a significant portion of the subject lands fall within the Preferred Route and Route Planning Study Area boundaries.
- Arthur Lee (arthur.lee@peelregion.ca) is the Regional project lead for the 413 GTA West Corridor project and will need to be consulted for comment regarding the impacts of the proposed Bram West Secondary Plan.

Property Requirements

- The Region requests the gratuitous dedication of lands to meet the Region of Peel's Official Plan requirement for Regional Road 8 (The Gore Road) which has

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a midblock right of way of 45 metres, 22.5 metres from the centreline of the road allowance; Additional property pursuant to the Region's Official Plan will be required within 245 metres of an intersection to protect for the provision of but not limited to: utilities, sidewalks, multiuse pathways and transit bay/shelters;
    - 50.5 metres for a single left turn lane intersection configuration (25.25 metres from the centerline of The Gore Road).
    - 54.0 metres for a double left turn lane intersection configuration (27.0 metres from the centerline of The Gore Road).
- The Region will require the gratuitous dedication of a 15 x 15 metre daylight triangle at the intersection of The Gore Road and Street E.
- The Region will require the gratuitous dedication of a 0.3 metre reserve along the frontage Regional Road 8 (The Gore Road) behind the property line and daylight triangle, except at any approved access point;
- The applicant is required to gratuitously dedicate these lands to the Region, free and clear of all encumbrances. All costs associated with the transfer are the responsibility of the applicant. The applicant must provide the Region with the necessary title documents and reference plan(s) to confirm the Regions right-of-way;
- A draft reference plan will be required for our review and approval prior to the plans being deposited. All costs associated with preparation of plans and the transfer of the lands will be solely at the expense of the applicant.

Landscaping/Encroachments

- Landscaping, signs, fences, cranes, gateway features or any other encroachments are not permitted within the Region's easements and/or Right of Way limits.
- Cranes will not be permitted to swing over a Regional Road unless a crane swing licence has been granted.

Draft Plan of Subdivision

- All comments provided should be reflected on the draft plan of subdivision, Including;
- Centreline of roadways with property dimensions reflected;

Engineering Requirements

- A detailed engineering submission of road and access works will be required for our review and comment, designed, stamped and signed by a Licensed Ontario Professional Engineer. The engineering submission MUST include the removals, new construction and grading, typical sections and pavement markings and signing drawings. All works within Region of Peel's right of way must be designed in accordance to the Public Works, "Design Criteria and Development Procedures Manual" and "Material Specifications and Standard Drawings Manual";
- The Owner shall submit to the Region a detailed cost estimate, stamped and signed by a Licensed Ontario Professional Engineer, of the proposed road and access works within the Regional right of way;
- Securities shall be submitted in the form of either a letter of credit or certified cheque, in the amount of 100% of the approved estimated cost of road and access works along Regional Road 8 (The Gore Road);

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- A 10.8% engineering and inspection fee shall be paid to the Region based on the approved estimated cost of road and access works (minimum $1,724.41);
- The Owner will be required to submit the following prior to commencement of works within the Region's right-of-way:
    - Completed Road Occupancy Permit and a permit fee as per the Region's user fees and charges By-law;
    - Completed Notice to Commence Work ;
    - Provide proof of insurance with the Region of Peel added to the certificate as an additional insured with $5 million minimum from the Contractor;
    - Please note that any proposed construction within the Region of Peel's right of way is pending PUCC approval (minimum six week process). Please note that PUCC circulation requirements have recently changed. We require PDF version of the full drawing set it is to be sent via email, and cannot exceed 10MB per email.
- All costs associated with the design and construction of road and access works will be 100% paid by the Owner;

ESA:

- Based on the information provided in the Phase One and Phase Two ESA reports for the subjec properties, the identified APECs were effectively addressed as no contaminant exceedances were identified at these sites. Given the findings of the reports Regional Staff have no concerns about the environmental condition of potential land being dedicated to the Region of Peel.

Waste Management:

For Single Detached Dwelling Units, Street Townhouses and Semi-Detached Units:
The Region of Peel will provide curbside collection of garbage, recyclable materials, household organics and yard waste. Prior to Plan of Subdivision Approval, the developer is required to submit a Waste Management Plan that complies with the specifications detailed in Section 2.0 and 3.0 of the Waste Collection Design Standards Manual (WCDSM).

The Waste Management Plan Sample Drawing(s) are to include the following:

- Vehicle Access Route:
    - Please use WCDSM Appendix 1, for waste collection vehicle dimensions.
    - The Waste Collection Vehicle access route throughout the site must be clearly demonstrated on the drawing.
    - Internal Roadways: Outside the collection point, a clear height of 4.4 meters from the top of the access road, along the waste collection vehicle access and egress route, is required. This area must be free of obstructions such as sprinkler systems, ducts, wires, trees, or balconies.
    - The **centre line** Turning Radius along the waste collection vehicle access route within the development must be a minimum of **13 meters.**
    - Turning Radius for all turns must be labelled on the drawing.

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- Internal roadways must be constructed of a solid surface material, such as asphalt, concrete, or interlocking stone, and designed to support a minimum of 35 tonnes, the weight of a fully loaded waste collection vehicle.
- The maximum grade permitted along the waste collection vehicle access route is 8 percent.
- All roads shall be designed to have a minimum width of 6 meters.
- Road layouts shall be designed to permit a waste collection vehicle to drive forward without reversing for waste collection. Where forward movement is not possible, a cul-de-sac or a T-turnaround shall be provided in accordance with the specifications shown in the WCDSM Appendices 2 and 3, respectively.
- In a situation where a waste collection vehicle must reverse, the maximum straight back-up distance is 15 meters.

- Collection Point:
  - 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 collection point must be located along the curb, adjacent to the driveway, and must be directly accessible to the waste collection vehicle and free of obstructions such as parked cars. Please indicate the set-out area for each unit on the drawing.
  - Each dwelling unit's collection point along the curb must be at least 3 square meters (32 square feet) to provide sufficient space for the placement of carts: a maximum of one (1) large garbage cart or recycling cart (360 liters) and one (1) source-separated organics cart (100 liters), overflow waste (i.e., additional bags), yard waste, and bulky items.
  - A minimum of 3.75 square meters (2.5 meters by 1.5 meters) must be provided in the garage, backyard, or side for storage of carts, with direct access to the collection point location.

<u>Schools:</u>

On-site waste collection will be required through a private waste hauler. Region of Peel will provide **front-end** or **semi-automated collection** recyclable materials subject to the following requirements:

- **Site Plan Compliance**: At the site plan stage, the developer is required to submit a Sample Drawing that complies with the specifications within Sections 2, 4, and 6.2 of the Waste Collection Design Standards Manual. *Please note that the collection of recycling material must occur within the property.*
- **Access Route**: The internal access route for collection vehicles across the site must be clearly demonstrated in the Waste Management Plan.
- **Roadway Width**: The internal access route must have a minimum width of **6 metres**.

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- **Overhead Clearance**: Outside the Collection Point, a clear height of **4.4 metres** from the top of the access road along the Waste Collection Vehicle access and egress route is required. This height must be free of obstructions such as sprinkler systems, ducts, wires, trees, or balconies. This must be shown and labeled in subsequent revised submissions.
- **Turning Radius**: The turning radius from the centerline along the waste collection vehicle access route must be a minimum of **13 metres** on all turns.

  Roadway Construction: Internal roadways must be constructed of a hard surface material (e.g., asphalt, concrete) and designed to support a minimum of **35 tonnes**, the weight of a fully loaded waste collection vehicle.

- **School Bin and Cart Requirements:**
  - One cubic yard of capacity for every **200 students** to be enrolled in the school will be required. The following table can be used to calculate the required number of front-end recycling bins:

Type of Bin	**3 yd^3**	**4 yd^3**	**6 yd^3**
Students/Bin	600	800	1200

  - For schools designed to accommodate fewer than **600 students, faculty, and staff:** one Recycling Cart is required for every 150 persons.

Health Planning:

- With the proposed highway running along the Secondary Plan, we encourage buffering sensitive land uses away from the highway. Please confirm how wide both Street AU and buffer block 1593 will be.

- Please confirm if sidewalks will be included on both sides of the street.

- We look forward to reviewing the future Site Plan applications based on what will be developed in the various blocks throughout the subdivision. Please be advised that future development may require submission of additional small-scale HDA tools to confirm fulfillment of standards. We may have additional comments upon review. The tool can be found under the 'Resources' tab here: Healthy communities - peelregion.ca .

Draft Plan Conditions:

1. Prior to registration of the subdivision, the Developer shall execute a Subdivision Agreement with the local municipality and Region for the construction of municipal sanitary sewers, watermains, and Regional roads associated with the lands. The Developer shall construct and design these services in accordance with the latest Region standards and requirements.

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2. Provision shall be made in the Subdivision Agreement that Developer acknowledges and agrees that upon execution of the Subdivision Agreement by the Region, the Developer shall:
   a) obtain and submit to the Region a Residential Development Charges Payment Form, completed to the best of the Developer's knowledge at the time of submission and to the satisfaction of the Region in accordance with the engineering drawings and final draft M–plan;
   b) pay to the Region the appropriate hard service residential development charges (water, wastewater and road service components), pursuant to the Region's Development Charges By-law, as amended from time to time, calculated based on the information provided in the Residential Development Charges Payment Form; and
   c) if it is determined that there is an underpayment of hard service residential development charges, the Developer will be responsible for payment thereof forthwith upon written request by the Region.

3. The Developer shall acknowledge and agree that:
   a) payment to the Region of appropriate soft service development charges and any outstanding hard service development charges shall be payable prior to issuance of building permits; and
   b) payment of all Region development charges for future residential development (non-freehold townhouses or apartment blocks) and commercial blocks shall be payable prior to issuance of building permits pursuant to the Region's Development Charges By-law, as amended from time to time.

4. A clause shall be included in the subdivision Agreement that the Developer shall acknowledge and agree that:
   a) prior to registration of the plan of subdivision, the Developer shall pay to the Region the appropriate water meter fees, in accordance with the Region's Fees By-law, as amended from time to time for residential building lots (singles, semi-detached and freehold townhomes) to the satisfaction of the Region in accordance with the engineering drawings and final draft M-plan for the Lands;
   b) payment of water meter fees for future residential development (non–freehold townhouses or apartment blocks) and commercial blocks shall be payable to the Region prior to issuance of building permits, in accordance with the Region's Fees By-law, as amended from time to time; and
   c) in the event of an underpayment of water meter fees, the Developer shall be responsible for payment thereof forthwith upon request by the Region.

<u>Easements</u>

5. The Developer shall gratuitously transfer to the Region, free and clear of all encumbrances and contamination, and to the satisfaction of the Region:
   a) all necessary easements for proposed and existing Regional infrastructures as required by the Region to service the proposed Plan and external lands; and
   b) all costs associated with easements dedication shall be the sole responsibility of the Developer.

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Clauses shall be included in the Subdivision Agreement in respect of same.

6. The Developer shall acknowledge and agree that landscaping, cranes, signs, fences, gateway features, and any other encroachments will not be permitted within the Region's easements and rights-of-ways. A clause shall be included in the Subdivision Agreement in respect of same.

7. Prior to a satisfactory engineering submission, the Developer shall submit to the Region for review and approval:
   a) Functional Servicing Report (FSR) showing proposed watermain and sanitary sewer servicing plan for the subdivision development and provision for the external lands if applicable;
   b) Storm Drainage Study Report to determine and demonstrate, to the satisfaction of the Region, that there is no adverse effect of the proposal on the existing structures and drainage along Regional Road #8 (The Gore Road).
   c) a noise abatement report for lots adjacent to The Regional Road #8 (The Gore Road).

Clauses shall be included in the Subdivision Agreement in respect of same.

8. Provision shall be made in the Subdivision Agreement that the Developer shall acknowledge and agree to pay all engineering, administrative and other applicable fees pursuant to Region's latest User Fee By-law, as amended from time to time.

9. The Developer shall acknowledge and agree that financing and construction of all temporary/permanent infrastructures not covered by the Current Development Charges By-law (watermains, sanitary sewers and Regional roads) shall be at the sole risk and sole financial responsibility of the Developer. A clause shall be included in the Subdivision Agreement in respect of same.

10. The Developer shall acknowledge and agree that the Developer is responsible for all costs associated with the relocation of existing services to accommodate the development. The Developer shall made appropriate arrangements with the Region regarding financing and relocation of Regional services prior to execution of this agreement.
11. The Developer shall acknowledge and agree that prior to servicing, their engineering consultant shall submit a satisfactory engineering submission to the Region for review and approval and shall submit all engineering drawings in the digital format in accordance with the latest Region's Digital Format Guidelines.

12. Provision shall be made in the Subdivision Agreement that the Developer shall acknowledge and agree that prior to the issuance of building permits for all Blocks and/or Lots within the Plan that will be developed in the future, satisfactory arrangements must be made with the Region with regards to water and sanitary sewer servicing applications and payments of the required connection charges.

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13. The Developer shall acknowledge and agree that their Engineer consultant is required to provide all "as constructed" drawings within (60) days of Preliminary Acceptance of the underground services. The "as constructed" drawings must be submitted in digital format, in accordance with the Region's latest Digital Format Guidelines. The Developer's Engineer shall also provide ties to all main line valves, ties to individual water service boxes, linear ties to sanitary sewer services and GPS coordinates of all watermain and sanitary sewer appurtenances in accordance with the latest requirements of the Region's "Development Procedure Manual". A clause shall be included in the Subdivision Agreement in respect of same.

14. The Developer shall acknowledge and agree that a suitable amount will be held back on the Letter of Credit until the "as-constructed" drawings have been received in accordance with the requirements specified in the Region's, Public Works Design, Specifications & Procedures Manual.

15. The Developer shall acknowledge and agree that the Region shall hold back 20% of the Letter of Credit to cover the costs of services completed on the Developer's behalf by the Region calculated and charged on a time and material basis pursuant to the current Region's User Fee By-Law.

16. The Developer shall acknowledge and agree that if it proceeds with the construction of any internal works in advance of the completion of any external works to service the Lands, the Developer is doing so completely at its own risk.

17. Provision shall be made in the Subdivision Agreement that the Developer shall acknowledge and agree that the Developer's representative, engineering consultant, contractor and sub-contractor are responsible to ensure that their design, construction practices and material specifications conform to the latest Region of Peel Design, Standards Specifications and Procedures, posted on the Region of Peel's website (www.peelregion.ca/pw/standards).

18. The Developer shall acknowledge and agree that satisfactory arrangements are to be made with the Region with respect to construction and looping of watermains within and outside the limits of the subdivision. The works are at the sole financial responsibility of the Developer. The Developer is responsible to ensure that their design, materials and construction practices conform to the latest Region's standards, specifications, materials and design criteria.

19. The Developer shall acknowledge and agree that location and off-sets for the Region's infrastructure such as watermains and sanitary sewers must be acceptable to the Region.

20. The Developer shall acknowledge and agree that Lots or Blocks fronting laneways within the Plan can be serviced by municipal water and wastewater services in accordance with the Town's current approved standard drawings where Region's underground services are permitted and in accordance with the Region's latest Standards and Specifications. Any new proposed standards, or modifications to the existing standards, would need to be submitted and

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reviewed through the Town's Standards Committee for approval. A Clause shall be included in the Subdivision Agreement in respect of same.

21. Provision shall be made in the Subdivision Agreement that the Developer shall acknowledge and agree that if the development does not proceed to construction phase within one calendar year from the date of issuing pre-servicing approval for the development, the former approval is voided. The Developer is required to resubmit a pre-servicing engineering submission for Region's review and approval. Required fees will be reassessed as per current fees By-Law and new approval letter will be issued.

22. Provision shall be made in the Subdivision Agreement that the Developer shall acknowledge and agree that it shall assume full responsibility for any Claims related to any impact on the affected neighbouring properties, their servicing or otherwise, related to the proposed works for the development. Prior to the construction commencement of the proposed works for the development, the Developer shall conduct a Pre-construction Survey of the neighbouring lands within the zone of influence at the developer's cost and shall provide to the Region upon request the final report and all background material relating thereto. The Developer shall assume all costs and expenses relating to the resolution of any such Claims.

23. Provision will be required in the Subdivision Agreement for the following clauses in respect of servicing existing properties within the zone of influence in the event that existing private services (wells) deteriorate due to the servicing of the proposed plan of subdivision;
    a) Until the issuance of Final Acceptance, a portion of the Letter of Credit shall be held back to serve as protection for the private wells in the zone of influence of the plan of subdivision. This amount shall be based on the anticipated cost of replacing water supplies within the zone of influence as shown in the schedules of the agreement. The minimum amount shall be $20,000.00. If the private well systems in the zone of influence deteriorate due to the servicing of the plan of subdivision the Developer shall provide temporary water supply to the residents upon notice by the Region and the Developer shall continue supplying the water to the effected residents until the issue is resolved to the satisfaction of involved parties. If the quantity of water in the existing wells is not restored to its original condition within a month after first identification of the problem, the Developer shall engage the services of a recognized hydrogeologist to evaluate the wells and recommend solutions including deepening the wells or providing a permanent water service connection from the watermain to the dwelling unit.
    b) The Developer shall inspect, evaluate and monitor all wells within the zone of influence prior to, during and after the construction has been completed. Progress Reports should be submitted to the Region as follows:
        i. Base line well condition and monitoring report shall be submitted to the Region prior to the pre-servicing or registration

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of the plan (whichever occurs first) and shall include as a minimum requirement the following tests:

a) Bacteriological Analysis - Total coliform and E-coli counts
b) Chemical Analysis - Nitrate Test
c) Water level measurement below existing grade

ii. In the event that the test results are not within the Ontario Drinking Water Standards, the Developer shall notify in writing the Homeowner, the Region of Peel's Health Department (Manager - Environmental Health) and Public Works Department (Development Supervisor) within 24 Hours of the test results.

iii. Well monitoring shall continue during construction and an interim report shall be submitted to the Region for records. Well monitoring shall continue for one year after the completion of construction and a summary report shall be submitted to the Region prior to Final Acceptance.

24. Provision shall be made in the Subdivision Agreement that the Developer acknowledges the Region's responsibility to provide safe drinking water in Peel and to provide reliable delivery of wastewater services, including protection of the environment. The Developer shall confirm its familiarity with the Region's Drinking Water Quality Management System (QMS) and Wastewater Integrated Management System (IMS), which require that drinking water and municipal wastewater meet all applicable legislative and regulatory requirements and that the QMS/IMS be continually maintained and improved.

25. Provision shall be made in the Subdivision Agreement that the Developer shall acknowledge that the Region's drinking water systems are governed by Province of Ontario legislation, and that every person authorized to carry out work on any aspect of the Region's drinking water system, including construction, extension, system modification, and operation, must be familiar with the Safe Drinking Water Act, 2002, applicable regulations, and the Drinking Water Works Permit and the Municipal Drinking Water License issued to the Region by the Ministry of the Environment, Conservation and Parks (MECP). The design and construction of any aspect of the drinking water system shall be conducted in compliance with the conditions of the Drinking Water Works Permit and the Region's Design, Standards Specification, and Procedures.
26. Provision shall be made in the Subdivision Agreement that the Developer shall acknowledge that Region's wastewater systems are governed by Province of Ontario legislation, and every person authorized to carry out work, including construction, extension, system modification, and operation of any aspect of the Region's wastewater system, must be familiar with the Environmental Protection Act, Ontario Water Resources Act and applicable regulations, including the Environmental Compliance Approval (ECA) issued to the Region by the MECP for wastewater infrastructure within the subdivision, and any required reporting and notification. The design and construction of any aspect of the wastewater system shall be conducted in compliance with the conditions of the ECA and the Region's Design, Standards Specification, and Procedures.

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27. Provision shall be made in the Subdivision Agreement that the Developer shall acknowledge and agree that the Region may require the Developer to construct one or more water sampling stations at the Developer's sole cost within the plan of subdivision. The location of and the requirement for a water sampling station will be determined at the engineering review stage.

28. Provision shall be made in the Subdivision Agreement that the Developer shall acknowledge that prior to the issuance of Preliminary Acceptance, the Developer shall review the Drinking Water QMS, available on the Region's website at https://www.peelregion.ca/construction/, including sections on compliance with applicable legislation, and confirm its familiarity of the same.

29. Provision shall be made in the Subdivision Agreement that the Developer shall acknowledge to maintain adequate chlorine residuals in the watermains within the subdivision from the time the watermains are connected to the municipal system until the Region issues final acceptance. To maintain adequate chlorine residuals, the Developer shall be required to either install automatic flushing devices or to retain Regional staff to carry out manual flushing. Regional staff will conduct the water quality monitoring and testing for chlorine residuals. The costs associated with the monitoring and flushing shall be the responsibility of the Developer pursuant to the Region's Fees By-law, as amended.

30. Provision shall be made in the Subdivision Agreement that the Developer shall acknowledge that if the development of the Lands is delayed such that the Developer does not proceed with the planned development within one calendar year from the Preliminary Acceptance of the watermain(s), the Region may require that any watermain(s) be cut and capped at the cost of the Developer. Re-commissioning of the watermain(s), as required by legislation, will be at the sole cost of the Developer.

31. Provision shall be made in the Subdivision Agreement that the Developer shall acknowledge that they will be solely responsible for all utility locates of infrastructure works servicing the subdivision from the time of their installation until final assumption of the subdivision.

32. The Developer shall acknowledge that the Developer has full responsibility to ensure compliance with the Environmental Protection Act (EPA) and all other legislative requirements including Ontario Regulation (O.Reg.) 406/19- Onsite and Excess Soil Management. The Developer shall be familiar with and meet the objectives of O.Reg. 406/19 for all work completed. A Clause shall be included in the Subdivision Agreement in respect of same.

Construction inspection maintenance

33. Provision shall be made in the Subdivision Agreement that the Developer shall acknowledge and agree that Preliminary Acceptance of Regional services will not be issued for the plan of subdivision or any phase thereof, until the external sanitary sewers and watermains that service the Lands are constructed to the Region's satisfaction and are in service.

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34. Provision shall be made in the Subdivision Agreement that the Developer shall acknowledge and agree that if the subdivision is developed in stages, the Developer shall submit a payment of a non-refundable staging fee to the Region pursuant to the Region's Fees By-law, as amended from time to time.

35. The Developer shall agree that neither Developer nor any Builder shall apply for building permits for any lots or blocks within the plan of subdivision until the Region's Public Works Department has issued Preliminary Acceptance and provided notice to the local municipality stating that the sanitary sewers and watermains, including fire protection, have been completed to the Region's satisfaction. The Developer's consulting engineer shall certify in writing that the sanitary sewers and watermains have been constructed, inspected and shall function in accordance with the detailed design as approved by the Region. A clause shall be included in the Subdivision Agreement in respect of same.

36. Provision shall be made in the Subdivision Agreement that the Developer shall acknowledge and agree that:
    a) it shall maintain all Regional underground and aboveground works for a period of Two (2) years from the date of Preliminary Acceptance by the Region. All Regional works must be constructed and approved prior to any maintenance period commencing;
    b) prior to the end of the maintenance period, the Developer's Engineer consultant shall confirm in writing that the works met all Regional standards and specifications and are ready for final acceptance; and
    c) should the Region be involved in any re-inspection or maintenance works, the rates charged by the Region will be as set out in accordance with the latest requirements of the Region's Design, Standards Specifications and Procedures.

37. Provision shall be made in the Subdivision Agreement that the Developer shall acknowledge and agree that municipal sanitary sewers, watermains, and roadworks shall be assumed by the Region after the maintenance period is complete, a final acceptance inspection is conducted, and all deficiencies are rectified by the Developer at its sole expense, to the satisfaction of the Region. After fulfilling all its required maintenance obligations by the Developer, the Region will clear the requirements and conditions for assuming the Works. The Final Assumption by the Region will occur at the same time as the Assumption By-law is enacted by City Council.
38. The Developer shall include warning clauses in any agreement of purchase and sale advising prospective purchasers of Region's access requirements for the maintenance, operation, replacement, and repair of its infrastructure as follows:
    a) Should the Region undertake any maintenance, replacement, or repair of its infrastructure, including water shut off valves, main line valve boxes and hydrant, and water and sanitary sewer pipes, the Region will restore the disturbed area, which includes the public right of way and private-side, with grass in soft landscape areas and asphalt in hard landscape areas. Should the purchaser/homeowner choose to utilize other more expensive soft or hard landscaping, the purchaser/homeowner will be responsible for the restoration of the

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disturbed area to the original condition at the purchaser/homeowner's expense. For further clarity, the Region will not be responsible for any restoration costs of disturbed areas above that of grass and/or asphalt upon completion of infrastructure works.

b) This clause shall be inserted into any succeeding lease, sublease or sales agreement, and shall be binding not only on the purchaser but also their respective successors and assigns.

39. The Developer shall indemnify and hold the Region harmless from and against any and all actions, suites, claims, demands, and damages which may arise either directly or indirectly by reason of the development of the subject lands and/or construction of works, save and except for any actions, causes of action, claims, demands and damages arising out of the negligence of the Region or those for whom it is in law responsible. A clause shall be included in the Subdivision Agreement in respect of same.

40. Servicing of the subdivision will require:
    a) Construction of 400mm dia. watermains, 1200mm-525mm dia. sanitary sewers which are the financial responsibility of the Region as per Development Charges By-Law and Policy F40-06;

    b) The Developer shall make appropriate financial arrangement with the Region prior to construction of such works. The construction will be subject to the Region's determination that it has or will have sufficient funds to finance the works.

Clauses shall be included in the Subdivision Agreement in respect of same.

41. Restriction on transfer or charge for all lots and blocks within the plan of subdivision, save and except those to be conveyed to the Town and the Region, shall be registered on title to said lots and blocks prohibiting any transfer or charge of said lots and blocks without the consent of the Region until external sanitary sewers and watermains to service this Plan have been completed to the Region's satisfaction. The Developer shall be responsible for all costs in respect of said restriction on title. A clause shall be included in the Subdivision Agreement in respect of same.

42. Provision shall be made in the Subdivision Agreement that the Developer shall acknowledge that prior to registration of the Plan of subdivision, the Developer shall submit draft reference plan(s) for the Region's review and approval prior to such plans being deposited. All costs associated with preparation and depositing of the plans and transfer of lands shall be at the sole expense of the Developer.

43. The Developer shall acknowledge and agree that prior to the Region granting clearance of the draft plan conditions of subdivision approval, the following shall require to be forwarded to the Region's Legal Services Division:
    a) a signed copy of the final M-Plan;
    b) a copy of the final draft 43R-Plan(s); and

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c) Easement and conveyance documents required pursuant to the Subdivision Agreement and the registration of this plan.

44. As a condition of registration of this Plan or any phase thereof, the Developer shall gratuitously dedicate, free and clear of all encumbrances and any environmental contamination, and to the satisfaction of the Region:
    a) A road widening pursuant to the Region's Official Plan along Regional Road 9. The Region's Official Plan road widening requirement for mid-block along Regional Road is 30 metres right-of-way (15.0 metres from the centerline). Additional property as per the Official Plan requirement 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: 35.5 metres for a single left turn lane intersection configuration (17.75 metres from the centerline of Regional Road);
    b) 15m x 15m daylight triangle at the intersection of Regional Road/Humber Station Road;
    c) A 0.3 metre reserve along the frontage of Regional Road and behind the property line and behind the daylight triangles, lifted over any approved accesses; and
    d) 4.5m buffer block along the frontage of Mayfield Road, in front of Lot 15 and Block 29.
    e) All costs associated with land transfers shall be 100% the responsibility of the Developer. Clauses shall be included in the Subdivision Agreement in respect of same.

45. The Developer shall acknowledge and agree in the Subdivision Agreement that road works and access works to Block 45 might be required along Regional Road to facilitate this development.

46. The Developer shall acknowledge in the Subdivision Agreement that the intersection of Regional Road and Humber Station Road is not included in the Region's Development Charges By-law. As such, all costs associated with the interim and ultimate intersection improvement works, as required by the Region, are 100% the Developer's responsibility.

47. The Developer shall acknowledge and agree in the Subdivision Agreement that pedestrian infrastructure may be required along the frontage of the site along Regional Road. The Developer shall construct the required sidewalk or multi-use path along the frontage of the site as requested by the Region. The typical configuration of the cross section would be; splash pad, or shoulder, separated by a grass buffer/boulevard (1.0m width min.), adjacent to a 3.0m multi-use path as per the Regions satisfaction and at the sole cost of the Developer.

48. The Developer shall acknowledge in the Subdivision Agreement that, the following will be required at 100% cost of the Developer prior to the commencement of works within the Region's right-of-way;
    a) A Letter of Credit in the amount of 100% of the estimated cost to construct the required roads, intersections, access, and improvement works within the Region's right-of-way; and

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b) Engineering and inspection fees in the amount of 5.5% of the estimated cost of the required roads, intersections, access, and improvement works for Regional Road within the Region's right-of-way.
c) A Letter of Credit in the amount of $74,557.08 for Traffic Signal Maintenance fees for Regional Road and Humber Station Road.
d) A Letter of Credit in the amount of $380,000.00 (each) for the traffic control signals at the intersection of Regional Road and Humber Station Road. All costs associated with the traffic control signals at the intersection shall be 100% the Developers expense.

49. The Developer shall agree in the Subdivision Agreement that any violations of the clauses related to the intersection works and improvement works on Regional Road will result in the Region exercising the right to draw of the Letter of Credits or physically close the intersections on Regional Road at 100% cost of the Developer.

50. Prior to the registration of the Subdivision Plan, or any phase thereof, the Developer shall provide to the Region's Public Works Department a Letter of Credit in the amount of $10,000.00 for pavement markings on Regional Road and Humber Station Road. The Developer shall also be responsible for pavement markings maintenance. The Letter of Credit will be released once all necessary pavement markings are completed and the intersection improvement works are assumed by the Region. Pavement markings along Regional roads shall be in accordance with the Region's specifications and standards, as amended from time to time.

51. A clause shall be included in the Subdivision Agreement in respect of same.

52. The Developer shall remove any existing driveway/accesses along the frontage of Regional Road that do not conform to the approved plans at its sole cost, and the boulevard, if any, reinstated along with curb and gutter at the Developer's sole cost and expense.
    a) No lots or blocks shall have direct access to Regional Road 9;

    Clauses shall be included in the Subdivision Agreement in respect of same.

53. The Developer shall agree in the Subdivision Agreement that the location, design and implementation of the construction access for the subdivision work must be acceptable to the Region and interim road works may be required to that effect. All costs associated with the construction access works to facilitate the development shall be 100% borne by the Developer. A Letter of Credit for 100% of the estimated cost of construction access works shall be required by the Region prior to any approvals.

54. The Developer shall agree in the Subdivision Agreement that prior to any grading, servicing and construction, the Developer shall obtain from the Region's Public Works Department a road occupancy/construction access permit for all works within the Region's road right-of-way and obtains such permit at least 48 hours prior to the commencement of work. Additional documentation, fees and securities shall be required with respect to the works

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for which the permit was obtained. All costs associated with the road works within the Region's right-of-way shall be borne entirely by the Developer. A clause shall be included in the Subdivision Agreement in respect of same.

55. The Developer shall agree in the Subdivision Agreement that the Region will not permit any alteration to grading within Regional Road right-of-way along the frontage of the Lands.

56. The Developer shall acknowledge and agree in the Subdivision Agreement that storm water from the Plan shall not be diverted by any means whatsoever to or along the Regional roads right of way, including any required road widenings or re-alignments thereto. All costs associated with the on- or off-site management of storm water required for the purposes of the Plan shall be the responsibility of the Developer.

57. Prior to a satisfactory engineering submission, the Developer shall submit to the Region for review and approval:
    a) Traffic Impact Study (TIS) detailing the impact of the Development on the Regional road network and identifying any mitigation measures. The intersection geometrics, signals requirements and turning lanes requirements will be provided at such time the TIS is acceptable to the Region; and
    b) A Functional Design Plan for the interim and ultimate intersection improvements works, for all proposed accesses, which considers any Regional Road improvements required.

58. The Developer shall acknowledge and agree in the Subdivision Agreement that noise walls adjacent to Regional roads shall be installed at the property line and be to the City of Brampton's Noise Wall specifications with steel posts. Region's requirements to be referenced in the noise abatement repot and on all applicable drawings.

Concluding Comments

For further questions or concerns please contact the undersigned by email at: dylan.prowse@peelregion.ca, or by phone at: 289-305-7948.

Dylan Prowse,
Intermediate Planner, Development Services

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2025-08-06
Project: 240562

Meagan Stockwell
Senior Policy Advisor
Ontario Ministry of Transportation

Dear Meagan:

RE: WILDFIELD VILLAGE SUBDIVISION (12561 & 12735 CENTREVILLE CREEK RD AND 12706 & 12494 THE GORE RD) – TRANSPORTATION REPORT OUTLINE

Paradigm Transportation Solutions Limited is pleased to provide our terms of reference for a transportation study in support of the above development. The following outlines our understanding of the assignment and details our work plan. A working copy of the lotting plan is attached for information; this may be revised prior to submission.

Project Description

The site is located between Centreville Creek Road and The Gore Road (Regional Road 8), just south of the proposed Highway 413 corridor. The lands in the north part of the Wildfield Village Secondary Plan area, as recently approved by Caledon Town Council. The work for the Secondary Plan included a transportation study conducted by BA Group. We understand the Region has been part of the review process for that study.

The project is a residential subdivision. It is proposed to ultimately have approximately 2,700 residential units, in a mix of detached, semi-detached, and townhouse units.

The ultimate road network will be per the Wildfield Village Secondary Plan, shown in the attached. However, to provide a conservative analysis, it will be assumed the new roads outside the subdivision will *not* be place. Access to the subdivision will therefore be assessed with three intersections on Centreville Creek Road and one on The Gore Road.

The transportation study will consider two stages: “Phase 1”, with roughly half of units, and “full build-out”, with all units in place. During that phase, there will be one intersection on Centreville Creek Road and one on The Gore Road.

The transportation study will include a **Transportation Impact Assessment (TIA)** to evaluate the effects of the proposed development on the transportation system and recommend

improvements, if necessary, to address potential impacts. The study area agreed with the Town covers the following intersections:

- Three intersections on Centreville Creek Road;
- One intersection on The Gore Road.
- Five internal intersections of collector roads

The study will follow the Town of Caledon's *Traffic Impact Study: Terms of Reference and Guidelines* (March 2017) and Peel Region's *Traffic Impact Study - Terms of Reference* (2008).

The transportation study will also include various other elements relating to access and circulation by vehicles, pedestrians and cyclists; transit planning; and parking supply.

The remainder of this letter provides a detailed outline of the information to be included in the report.

Report outline

Introduction

This section will describe the general purpose and structure of the report. The proposed study area will be:

Existing Conditions

A detailed list of the existing and proposed cycling, walking, transit and roadway infrastructure within the study area will be provided.

Turning movement count data (TMC) was collected intersections of Mayfield Drive at The Gore Road and Centreville Creek Road on Wednesday, October 30, 2024, to establish baseline volumes for The Gore Road and Centreline Creek Road (NB/SB) in front of the proposed development.

Development Concept

The development concept will be outlined including the anticipated number of units, proposed internal roadway network and phasing plans. Preliminary concept plans indicate two phases are proposed with horizon year and specific unit counts by phase will be detailed within the report.

Future Background Traffic Volumes

Background traffic forecasts for the Phase 1 (Year 2031) will be estimated by applying a generalized background growth rate of **2% per annum** to the existing traffic volumes along Centreville Road and The Gore Road which were collected on Wednesday, October 30, 2024. No inline background developments will be included within the background traffic forecasts as

it is assumed that the generalized background growth rate will account for these developments.

Background traffic forecasts for the Full Build-Out (Year 2051) will be estimated similarly to the first submission TIS (Paradigm, 2025). BA Group's *Secondary Plan Transportation Study* and the Town of Caledon's *Multi-Modal Transportation Master Plan* will be utilized to derive the background traffic volumes.

The background traffic volumes are forecast to consist of generalized background growth (derived from the Town of Caledon's *Multi-Modal Transportation Master Plan*) and inline background development traffic (derived from BA Group's *Secondary Plan Transportation Study*). No generalized background growth rate is proposed.

Site Trip Generation

The development's forecasted traffic volumes with be estimated with a combination of the following Institute of Transportation Engineer's (ITE) publication, *Trip Generation Manual (11th Edition)*, land use codes:

- LUC 210 – Single-Family Detached Housing (detached houses) (General Urban/Suburban)
- LUC 215 – Single-Family Attached Housing (semi-detached houses) (General Urban/Suburban)
- LUC 220 – Multifamily Housing (Low-Rise) - Not Close to Rail Transit (General Urban/Suburban)

Phase 1 traffic distribution will follow the existing traffic distribution patterns.
Full Build-Out traffic distribution will follow what is outlined within BA Group's *Secondary Plan Transportation Study*.

Operational Analysis

Detailed traffic forecasts and operational analysis will be provided for all intersections within the proposed study area for the weekday AM and PM peak hours for two horizon years. Preliminary the phases are Phase 1 build-out (Year 2031) and Full build-out (Year 2051). Any critical issues with the operational analysis will be noted as outlined within the Town of Caledon *Transportation Impact Studies Terms of Reference and Guidelines.*

Synchro 12 will be used to assess the study area intersections; the following key parameters will be used:

- Phase 1:
  - Assessment the impacts of Phase 1 forecast traffic on the existing transportation network;
  - Lane configuration and intersection control type per existing transportation network.

- Heavy vehicle percentages, PHF, conflicting pedestrian volumes derived from turning movement counts conducted by Paradigm on October 30, 2024
- Optimized signal timings for any proposed signals;
- Ontario Traffic Manual pedestrian crossing times for any proposed signals; *and*
- Synchro default values for all other inputs.

- Full Build-out (Phase 1 + Phase 2)
  - Assessment of the entire development on the future transportation network.
  - Heavy vehicle percentages, PHF, conflicting pedestrian volumes, lane configuration and intersection control type based on BA Group's *Wildfield Village Transportation Study*;
  - Optimized signal timings for any proposed signals;
  - Ontario Traffic Manual pedestrian crossing times for any proposed signals; *and*
  - Synchro default values for all other inputs.

Required Changes

Any operational impacts to the study area directly related to the development's forecast traffic volumes will be analyzed and suggestions will be provided for any mitigation measures, if possible, for each horizon year / phase.

Ontario Traffic Manual Book 12 (Justification 7) will be completed for all intersections within the study area for the weekday AM and PM peak hours to determine whether signalization is warranted.

Auxiliary right-turn lanes and left-turn lanes warrants will be completed for all study area intersections under the Full Build-Out total traffic conditions. Functional drawings will be provided for any auxiliary turn lanes recommended on regional roadways. Storage lengths will be estimate for the study area intersections using SIMTraffic 95th percentile queue length. Taper and deceleration lengths will be recommended based on TAC Geometric Design Guide guidance.

Diagrams of the proposed interim/ultimate traffic control layout will be provided for all intersections. Diagrams of the proposed interim/ultimate traffic control and lane configuration layout will be provided for all study area intersections. Spacing of study area and AWS intersections will be checked against municipal standards, OTM, and TAC guidelines.

Auxiliary left-turn lane warrants (Ministry of Transportation Ontario (MTO) Transportation Association of Canada (TAC) supplement nomographs) will be completed for all external intersections in the study area.

Access and Circulation Review

We will review the site access and circulation design to ensure compliance with review agency requirements and applicable industry guidelines.

The analysis will be completed using AutoTURN and include assessments of snow plough, garbage truck and fire truck movements around “elbows” (90 degree turns on local roads). We will compare the proposed road design and layout against the Town’s Design Standards Manual (DSM). Where the design differs from the DSM, we will conduct AutoTURN analysis to confirm the design is viable.

We will review the provision of sight triangles provision and compare with Town requirements. We will review of sight distances and corner clearances, and provide a quantitative review of potential issues.

We will also review the safety and maneuverability of any the interim conditions (such as the. temporary elbow on south side beside the secondary school).

For traffic calming, we will provide information on the recommended traffic calming locations and features.

Parking Plan

We will provide a quantitative estimate of on-street parking supply, based on number of possible on-street spaces per unit by type, allowing for street type. The number of off-street parking spaces will be based on local zoning by-law.

Pedestrian and Cyclist Circulation Plan:

We provide information / mapping about the location of proposed sidewalks and cycling facilities, including connections to the wider active transportation network (both existing and planned). We review the potential need for mid-block pedestrian connections, given the likely pedestrian flows within the community and the time that would be saved. We will also examine the potential for local trails around stormwater ponds.

Transit

We will show the proposed transit routes and bus stop locations (based on Secondary Plan transportation study); confirm there is sufficient space for bus stop facilities (based on City of Brampton standards); and analyses walk distance from bus stops (to show what proportion is of the subdivision within 400m walk distance of a stop).

Recommendations

We will summarize of recommended changes by horizon year. This will include changes to traffic control method, lane configuration, and provision of turn lanes.



Conclusion

We trust that this report outline covers all the information you are expecting to see in our transportation report. If you have any questions or concerns, please don't hesitate to contact me.

Yours very truly,

PARADIGM TRANSPORTATION SOLUTIONS LIMITED



Tom Willis
MMath
Senior Project Manager

Appendix B

Turning Movement Count Data

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Healey Road & Centreville Creek Road
Site Code: 240562
Start Date: 10/30/2024

Turning Movement Data

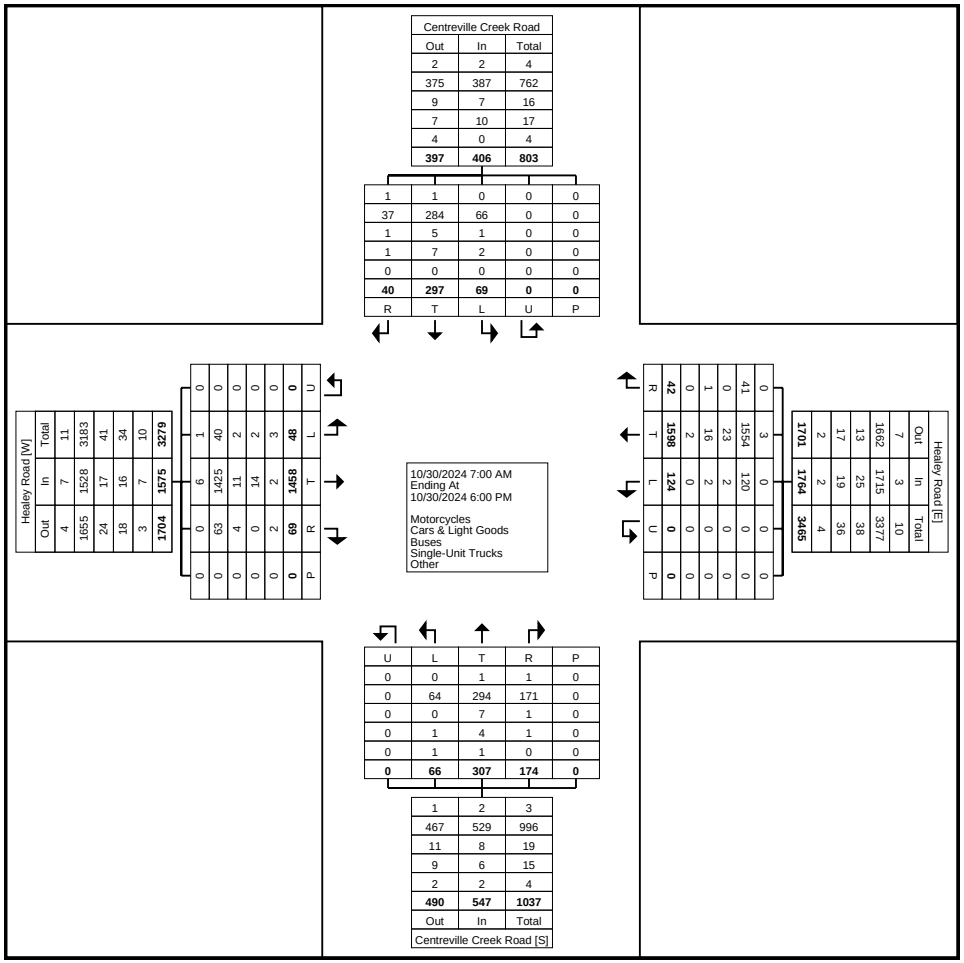
Start Time	Healey Road Eastbound						Healey Road Westbound						Centreville Creek Road Northbound						Centreville Creek Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	2	60	4	0	0	66	3	32	0	0	0	35	1	3	5	0	0	9	2	14	1	0	0	17	127
7:15 AM	1	78	3	0	0	82	3	32	1	0	0	36	1	6	9	0	0	16	1	15	0	0	0	16	150
7:30 AM	3	71	3	0	0	77	3	40	0	0	0	43	3	3	6	0	0	12	2	20	0	0	0	22	154
7:45 AM	0	95	8	0	0	103	5	63	1	0	0	69	2	7	4	0	0	13	6	21	1	0	0	28	213
Hourly Total	6	304	18	0	0	328	14	167	2	0	0	183	7	19	24	0	0	50	11	70	2	0	0	83	644
8:00 AM	0	71	4	0	0	75	8	56	0	0	0	64	1	5	5	0	0	11	4	22	1	0	0	27	177
8:15 AM	0	69	4	0	0	73	6	63	2	0	0	71	0	7	8	0	0	15	2	19	1	0	0	22	181
8:30 AM	3	78	2	0	0	83	12	59	2	0	0	73	1	3	6	0	0	10	3	12	2	0	0	17	183
8:45 AM	1	78	2	0	0	81	3	52	3	0	0	58	2	6	3	0	0	11	7	13	1	0	0	21	171
Hourly Total	4	296	12	0	0	312	29	230	7	0	0	266	4	21	22	0	0	47	16	66	5	0	0	87	712
9:00 AM	1	59	3	0	0	63	5	35	2	0	0	42	0	15	4	0	0	19	11	13	2	0	0	26	150
9:15 AM	3	44	1	0	0	48	4	25	1	0	0	30	0	8	7	0	0	15	3	15	1	0	0	19	112
9:30 AM	1	33	1	0	0	35	2	22	0	0	0	24	0	1	2	0	0	3	2	8	1	0	0	11	73
9:45 AM	1	36	1	0	0	38	5	22	0	0	0	27	0	5	5	0	0	10	1	2	1	0	0	4	79
Hourly Total	6	172	6	0	0	184	16	104	3	0	0	123	0	29	18	0	0	47	17	38	5	0	0	60	414
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	2	51	2	0	0	55	8	64	0	0	0	72	1	15	8	0	0	24	1	11	2	0	0	14	165
3:15 PM	1	91	6	0	0	98	2	82	1	0	0	85	5	18	11	0	0	34	2	4	1	0	0	7	224
3:30 PM	5	56	5	0	0	66	5	80	1	0	0	86	4	14	8	0	0	26	6	8	4	0	0	18	196
3:45 PM	6	55	5	0	0	66	5	98	3	0	0	106	4	18	16	0	0	38	0	15	6	0	0	21	231
Hourly Total	14	253	18	0	0	285	20	324	5	0	0	349	14	65	43	0	0	122	9	38	13	0	0	60	816
4:00 PM	2	54	1	0	0	57	4	85	6	0	0	95	11	19	14	0	0	44	1	6	2	0	0	9	205
4:15 PM	4	49	1	0	0	54	8	104	4	0	0	116	0	24	9	0	0	33	1	10	2	0	0	13	216
4:30 PM	1	65	2	0	0	68	5	104	4	0	0	113	7	18	11	0	0	36	1	14	2	0	0	17	234
4:45 PM	4	53	4	0	0	61	7	90	2	0	0	99	8	22	5	0	0	35	1	12	1	0	0	14	209
Hourly Total	11	221	8	0	0	240	24	383	16	0	0	423	26	83	39	0	0	148	4	42	7	0	0	53	864
5:00 PM	0	48	1	0	0	49	4	93	2	0	0	99	3	26	5	0	0	34	3	15	0	0	0	18	200
5:15 PM	2	52	2	0	0	56	7	106	1	0	0	114	1	17	9	0	0	27	3	6	0	0	0	9	206
5:30 PM	2	51	3	0	0	56	4	101	3	0	0	108	4	28	8	0	0	40	3	7	4	0	0	14	218
5:45 PM	3	61	1	0	0	65	6	90	3	0	0	99	7	19	6	0	0	32	3	15	4	0	0	22	218
Hourly Total	7	212	7	0	0	226	21	390	9	0	0	420	15	90	28	0	0	133	12	43	8	0	0	63	842
Grand Total	48	1458	69	0	0	1575	124	1598	42	0	0	1764	66	307	174	0	0	547	69	297	40	0	0	406	4292
Approach %	3.0	92.6	4.4	0.0	-	-	7.0	90.6	2.4	0.0	-	-	12.1	56.1	31.8	0.0	-	-	17.0	73.2	9.9	0.0	-	-	-
Total %	1.1	34.0	1.6	0.0	-	36.7	2.9	37.2	1.0	0.0	-	41.1	1.5	7.2	4.1	0.0	-	12.7	1.6	6.9	0.9	0.0	-	9.5	-
Motorcycles	1	6	0	0	-	7	0	3	0	0	-	3	0	1	1	0	-	2	0	1	1	0	-	2	14

% Motorcycles	2.1	0.4	0.0	-	-	0.4	0.0	0.2	0.0	-	-	0.2	0.0	0.3	0.6	-	-	0.4	0.0	0.3	2.5	-	-	0.5	0.3
Cars & Light Goods	40	1425	63	0	-	1528	120	1554	41	0	-	1715	64	294	171	0	-	529	66	284	37	0	-	387	4159
% Cars & Light Goods	83.3	97.7	91.3	-	-	97.0	96.8	97.2	97.6	-	-	97.2	97.0	95.8	98.3	-	-	96.7	95.7	95.6	92.5	-	-	95.3	96.9
Buses	2	11	4	0	-	17	2	23	0	0	-	25	0	7	1	0	-	8	1	5	1	0	-	7	57
% Buses	4.2	0.8	5.8	-	-	1.1	1.6	1.4	0.0	-	-	1.4	0.0	2.3	0.6	-	-	1.5	1.4	1.7	2.5	-	-	1.7	1.3
Single-Unit Trucks	2	14	0	0	-	16	2	16	1	0	-	19	1	4	1	0	-	6	2	7	1	0	-	10	51
% Single-Unit Trucks	4.2	1.0	0.0	-	-	1.0	1.6	1.0	2.4	-	-	1.1	1.5	1.3	0.6	-	-	1.1	2.9	2.4	2.5	-	-	2.5	1.2
Articulated Trucks	0	2	0	0	-	2	0	2	0	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	4
% Articulated Trucks	0.0	0.1	0.0	-	-	0.1	0.0	0.1	0.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Road	3	0	2	0	-	5	0	0	0	0	-	0	1	1	0	0	-	2	0	0	0	0	-	0	7
% Bicycles on Road	6.3	0.0	2.9	-	-	0.3	0.0	0.0	0.0	-	-	0.0	1.5	0.3	0.0	-	-	0.4	0.0	0.0	0.0	-	-	0.0	0.2
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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519-896-3163 cbowness@ptsl.com

Count Name: Healey Road & Centreville Creek Road
Site Code: 240562
Start Date: 10/30/2024



Turning Movement Data Plot

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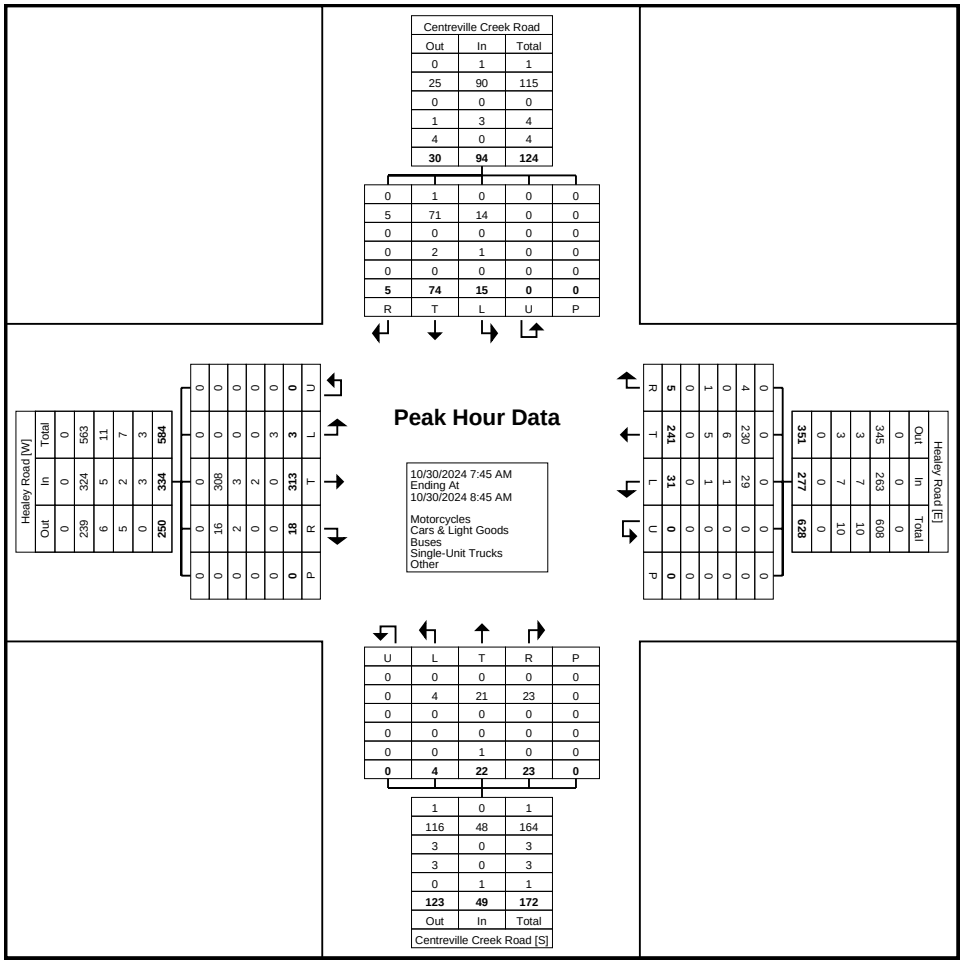
Turning Movement Peak Hour Data (7:45 AM)

Start Time	Healey Road Eastbound						Healey Road Westbound						Centreville Creek Road Northbound						Centreville Creek Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:45 AM	0	95	8	0	0	103	5	63	1	0	0	69	2	7	4	0	0	13	6	21	1	0	0	28	213
8:00 AM	0	71	4	0	0	75	8	56	0	0	0	64	1	5	5	0	0	11	4	22	1	0	0	27	177
8:15 AM	0	69	4	0	0	73	6	63	2	0	0	71	0	7	8	0	0	15	2	19	1	0	0	22	181
8:30 AM	3	78	2	0	0	83	12	59	2	0	0	73	1	3	6	0	0	10	3	12	2	0	0	17	183
Total	3	313	18	0	0	334	31	241	5	0	0	277	4	22	23	0	0	49	15	74	5	0	0	94	754
Approach %	0.9	93.7	5.4	0.0	-	-	11.2	87.0	1.8	0.0	-	-	8.2	44.9	46.9	0.0	-	-	16.0	78.7	5.3	0.0	-	-	-
Total %	0.4	41.5	2.4	0.0	-	44.3	4.1	32.0	0.7	0.0	-	36.7	0.5	2.9	3.1	0.0	-	6.5	2.0	9.8	0.7	0.0	-	12.5	-
PHF	0.250	0.824	0.563	0.000	-	0.811	0.646	0.956	0.625	0.000	-	0.949	0.500	0.786	0.719	0.000	-	0.817	0.625	0.841	0.625	0.000	-	0.839	0.885
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	1.4	0.0	-	-	1.1	0.1
Cars & Light Goods	0	308	16	0	-	324	29	230	4	0	-	263	4	21	23	0	-	48	14	71	5	0	-	90	725
% Cars & Light Goods	0.0	98.4	88.9	-	-	97.0	93.5	95.4	80.0	-	-	94.9	100.0	95.5	100.0	-	-	98.0	93.3	95.9	100.0	-	-	95.7	96.2
Buses	0	3	2	0	-	5	1	6	0	0	-	7	0	0	0	0	-	0	0	0	0	0	-	0	12
% Buses	0.0	1.0	11.1	-	-	1.5	3.2	2.5	0.0	-	-	2.5	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	1.6
Single-Unit Trucks	0	2	0	0	-	2	1	5	1	0	-	7	0	0	0	0	-	0	1	2	0	0	-	3	12
% Single-Unit Trucks	0.0	0.6	0.0	-	-	0.6	3.2	2.1	20.0	-	-	2.5	0.0	0.0	0.0	-	-	0.0	6.7	2.7	0.0	-	-	3.2	1.6
Articulated Trucks	0	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	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	3	0	0	0	-	3	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	4
% Bicycles on Road	100.0	0.0	0.0	-	-	0.9	0.0	0.0	0.0	-	-	0.0	0.0	4.5	0.0	-	-	2.0	0.0	0.0	0.0	-	-	0.0	0.5
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Turning Movement Peak Hour Data Plot (7:45 AM)

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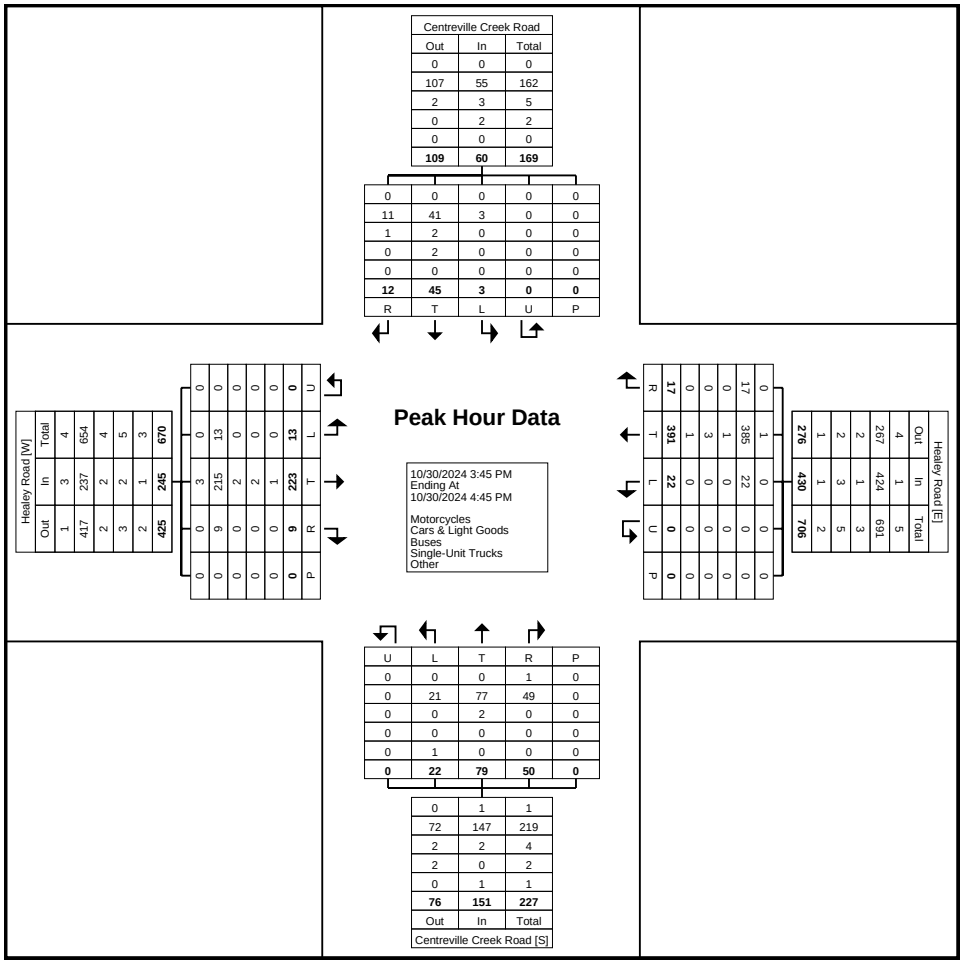
Turning Movement Peak Hour Data (3:45 PM)

Start Time	Healey Road Eastbound						Healey Road Westbound						Centreville Creek Road Northbound						Centreville Creek Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
3:45 PM	6	55	5	0	0	66	5	98	3	0	0	106	4	18	16	0	0	38	0	15	6	0	0	21	231
4:00 PM	2	54	1	0	0	57	4	85	6	0	0	95	11	19	14	0	0	44	1	6	2	0	0	9	205
4:15 PM	4	49	1	0	0	54	8	104	4	0	0	116	0	24	9	0	0	33	1	10	2	0	0	13	216
4:30 PM	1	65	2	0	0	68	5	104	4	0	0	113	7	18	11	0	0	36	1	14	2	0	0	17	234
Total	13	223	9	0	0	245	22	391	17	0	0	430	22	79	50	0	0	151	3	45	12	0	0	60	886
Approach %	5.3	91.0	3.7	0.0	-	-	5.1	90.9	4.0	0.0	-	-	14.6	52.3	33.1	0.0	-	-	5.0	75.0	20.0	0.0	-	-	-
Total %	1.5	25.2	1.0	0.0	-	27.7	2.5	44.1	1.9	0.0	-	48.5	2.5	8.9	5.6	0.0	-	17.0	0.3	5.1	1.4	0.0	-	6.8	-
PHF	0.542	0.858	0.450	0.000	-	0.901	0.688	0.940	0.708	0.000	-	0.927	0.500	0.823	0.781	0.000	-	0.858	0.750	0.750	0.500	0.000	-	0.714	0.947
Motorcycles	0	3	0	0	-	3	0	1	0	0	-	1	0	0	1	0	-	1	0	0	0	0	-	0	5
% Motorcycles	0.0	1.3	0.0	-	-	1.2	0.0	0.3	0.0	-	-	0.2	0.0	0.0	2.0	-	-	0.7	0.0	0.0	0.0	-	-	0.0	0.6
Cars & Light Goods	13	215	9	0	-	237	22	385	17	0	-	424	21	77	49	0	-	147	3	41	11	0	-	55	863
% Cars & Light Goods	100.0	96.4	100.0	-	-	96.7	100.0	98.5	100.0	-	-	98.6	95.5	97.5	98.0	-	-	97.4	100.0	91.1	91.7	-	-	91.7	97.4
Buses	0	2	0	0	-	2	0	1	0	0	-	1	0	2	0	0	-	2	0	2	1	0	-	3	8
% Buses	0.0	0.9	0.0	-	-	0.8	0.0	0.3	0.0	-	-	0.2	0.0	2.5	0.0	-	-	1.3	0.0	4.4	8.3	-	-	5.0	0.9
Single-Unit Trucks	0	2	0	0	-	2	0	3	0	0	-	3	0	0	0	0	-	0	0	2	0	0	-	2	7
% Single-Unit Trucks	0.0	0.9	0.0	-	-	0.8	0.0	0.8	0.0	-	-	0.7	0.0	0.0	0.0	-	-	0.0	0.0	4.4	0.0	-	-	3.3	0.8
Articulated Trucks	0	1	0	0	-	1	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	2
% Articulated Trucks	0.0	0.4	0.0	-	-	0.4	0.0	0.3	0.0	-	-	0.2	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	4.5	0.0	0.0	-	-	0.7	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Healey Road & Centreville Creek Road
Site Code: 240562
Start Date: 10/30/2024



Turning Movement Peak Hour Data Plot (3:45 PM)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Healey Road & The Gore Road
Site Code: 240562
Start Date: 10/30/2024

Turning Movement Data

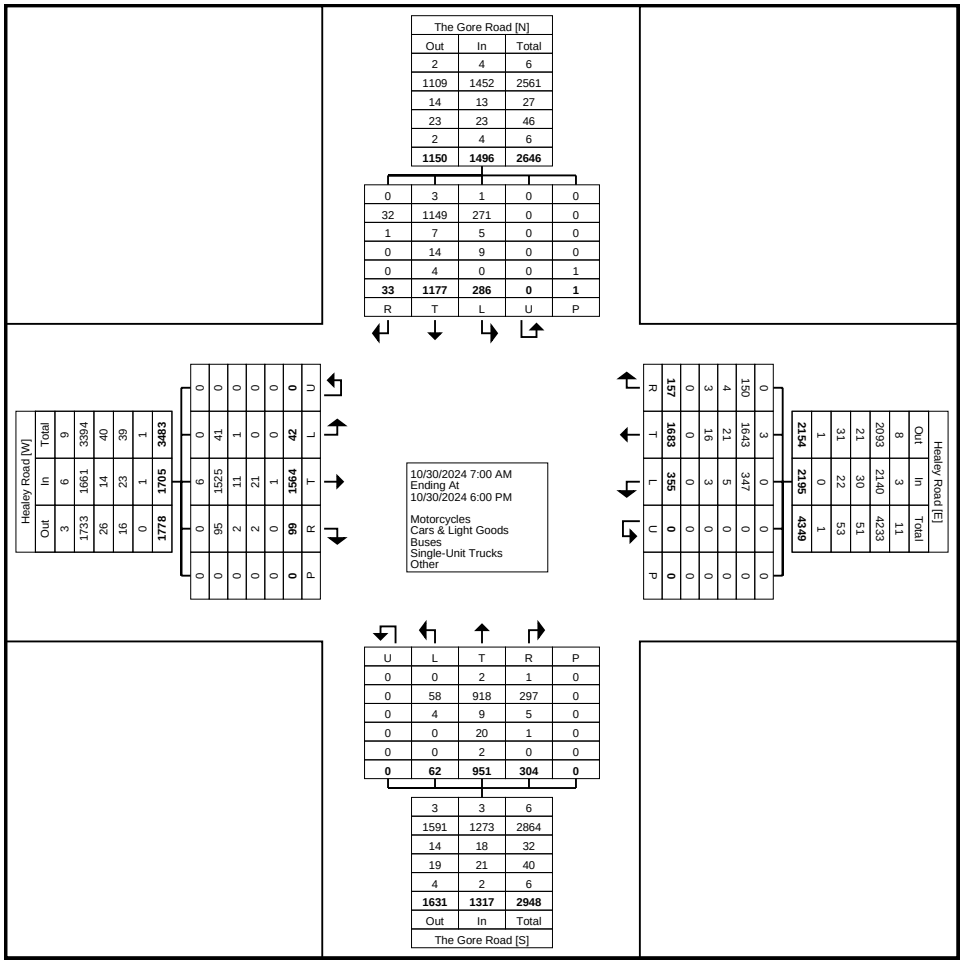
Start Time	Healey Road Eastbound						Healey Road Westbound						The Gore Road Northbound						The Gore Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	1	68	2	0	0	71	18	36	4	0	0	58	0	13	20	0	0	33	1	73	0	0	0	74	236
7:15 AM	0	83	6	0	0	89	5	38	0	0	0	43	1	14	23	0	0	38	3	81	2	0	0	86	256
7:30 AM	0	68	6	0	0	74	19	47	0	0	0	66	2	15	21	0	0	38	6	81	0	0	0	87	265
7:45 AM	3	97	9	0	0	109	13	61	0	0	0	74	1	22	15	0	0	38	8	84	1	0	0	93	314
Hourly Total	4	316	23	0	0	343	55	182	4	0	0	241	4	64	79	0	0	147	18	319	3	0	0	340	1071
8:00 AM	1	69	11	0	0	81	21	64	2	0	0	87	0	18	10	0	0	28	19	95	1	0	0	115	311
8:15 AM	0	80	3	0	0	83	18	70	4	0	0	92	4	30	14	0	0	48	26	76	1	0	0	103	326
8:30 AM	1	75	4	0	0	80	6	57	0	0	0	63	5	15	8	0	0	28	25	66	3	0	0	94	265
8:45 AM	1	84	9	0	0	94	14	54	10	0	0	78	1	19	16	0	0	36	64	71	1	0	0	136	344
Hourly Total	3	308	27	0	0	338	59	245	16	0	0	320	10	82	48	0	0	140	134	308	6	0	0	448	1246
9:00 AM	0	73	2	0	0	75	5	37	10	0	0	52	2	19	7	0	0	28	11	47	3	0	0	61	216
9:15 AM	1	51	3	0	0	55	8	28	5	0	0	41	0	20	10	0	0	30	48	41	1	0	0	90	216
9:30 AM	0	36	4	0	0	40	6	23	5	0	0	34	0	17	8	0	0	25	12	45	0	0	0	57	156
9:45 AM	2	38	3	0	0	43	13	29	6	0	0	48	1	9	6	0	0	16	8	36	1	0	0	45	152
Hourly Total	3	198	12	0	0	213	32	117	26	0	0	175	3	65	31	0	0	99	79	169	5	0	0	253	740
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	1	54	2	0	0	57	14	71	11	0	0	96	1	51	20	0	0	72	2	16	2	0	0	20	245
3:15 PM	4	100	1	0	0	105	23	83	9	0	0	115	3	61	18	0	0	82	5	24	1	0	0	30	332
3:30 PM	3	62	4	0	0	69	25	86	9	0	0	120	4	64	12	0	0	80	2	42	1	0	0	45	314
3:45 PM	5	65	1	0	0	71	17	97	12	0	0	126	1	58	12	0	0	71	5	32	3	0	0	40	308
Hourly Total	13	281	8	0	0	302	79	337	41	0	0	457	9	234	62	0	0	305	14	114	7	0	0	135	1199
4:00 PM	2	57	7	0	0	66	19	95	6	0	0	120	5	60	8	0	0	73	3	26	3	0	0	32	291
4:15 PM	3	59	1	0	0	63	13	115	11	0	0	139	5	65	5	0	0	75	5	47	2	0	0	54	331
4:30 PM	2	76	3	0	0	81	16	101	8	0	0	125	6	73	21	0	0	100	6	33	1	0	0	40	346
4:45 PM	2	52	3	0	0	57	9	91	11	0	0	111	4	63	12	0	0	79	3	36	1	0	0	40	287
Hourly Total	9	244	14	0	0	267	57	402	36	0	0	495	20	261	46	0	0	327	17	142	7	0	0	166	1255
5:00 PM	4	45	3	0	0	52	14	97	7	0	0	118	4	64	13	0	0	81	7	26	1	0	1	34	285
5:15 PM	3	49	7	0	0	59	25	104	8	0	0	137	3	71	6	0	0	80	6	38	1	0	0	45	321
5:30 PM	1	61	3	0	0	65	19	107	9	0	0	135	4	60	9	0	0	73	9	27	2	0	0	38	311
5:45 PM	2	62	2	0	0	66	15	92	10	0	0	117	5	50	10	0	0	65	2	34	1	0	0	37	285
Hourly Total	10	217	15	0	0	242	73	400	34	0	0	507	16	245	38	0	0	299	24	125	5	0	1	154	1202
Grand Total	42	1564	99	0	0	1705	355	1683	157	0	0	2195	62	951	304	0	0	1317	286	1177	33	0	1	1496	6713
Approach %	2.5	91.7	5.8	0.0	-	-	16.2	76.7	7.2	0.0	-	-	4.7	72.2	23.1	0.0	-	-	19.1	78.7	2.2	0.0	-	-	-
Total %	0.6	23.3	1.5	0.0	-	25.4	5.3	25.1	2.3	0.0	-	32.7	0.9	14.2	4.5	0.0	-	19.6	4.3	17.5	0.5	0.0	-	22.3	-
Motorcycles	0	6	0	0	-	6	0	3	0	0	-	3	0	2	1	0	-	3	1	3	0	0	-	4	16

% Motorcycles	0.0	0.4	0.0	-	-	0.4	0.0	0.2	0.0	-	-	0.1	0.0	0.2	0.3	-	-	0.2	0.3	0.3	0.0	-	-	0.3	0.2
Cars & Light Goods	41	1525	95	0	-	1661	347	1643	150	0	-	2140	58	918	297	0	-	1273	271	1149	32	0	-	1452	6526
% Cars & Light Goods	97.6	97.5	96.0	-	-	97.4	97.7	97.6	95.5	-	-	97.5	93.5	96.5	97.7	-	-	96.7	94.8	97.6	97.0	-	-	97.1	97.2
Buses	1	11	2	0	-	14	5	21	4	0	-	30	4	9	5	0	-	18	5	7	1	0	-	13	75
% Buses	2.4	0.7	2.0	-	-	0.8	1.4	1.2	2.5	-	-	1.4	6.5	0.9	1.6	-	-	1.4	1.7	0.6	3.0	-	-	0.9	1.1
Single-Unit Trucks	0	21	2	0	-	23	3	16	3	0	-	22	0	20	1	0	-	21	9	14	0	0	-	23	89
% Single-Unit Trucks	0.0	1.3	2.0	-	-	1.3	0.8	1.0	1.9	-	-	1.0	0.0	2.1	0.3	-	-	1.6	3.1	1.2	0.0	-	-	1.5	1.3
Articulated Trucks	0	1	0	0	-	1	0	0	0	0	-	0	0	2	0	0	-	2	0	4	0	0	-	4	7
% Articulated Trucks	0.0	0.1	0.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	-	-	0.2	0.0	0.3	0.0	-	-	0.3	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Healey Road & The Gore Road
Site Code: 240562
Start Date: 10/30/2024



Turning Movement Data Plot

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Healey Road & The Gore Road
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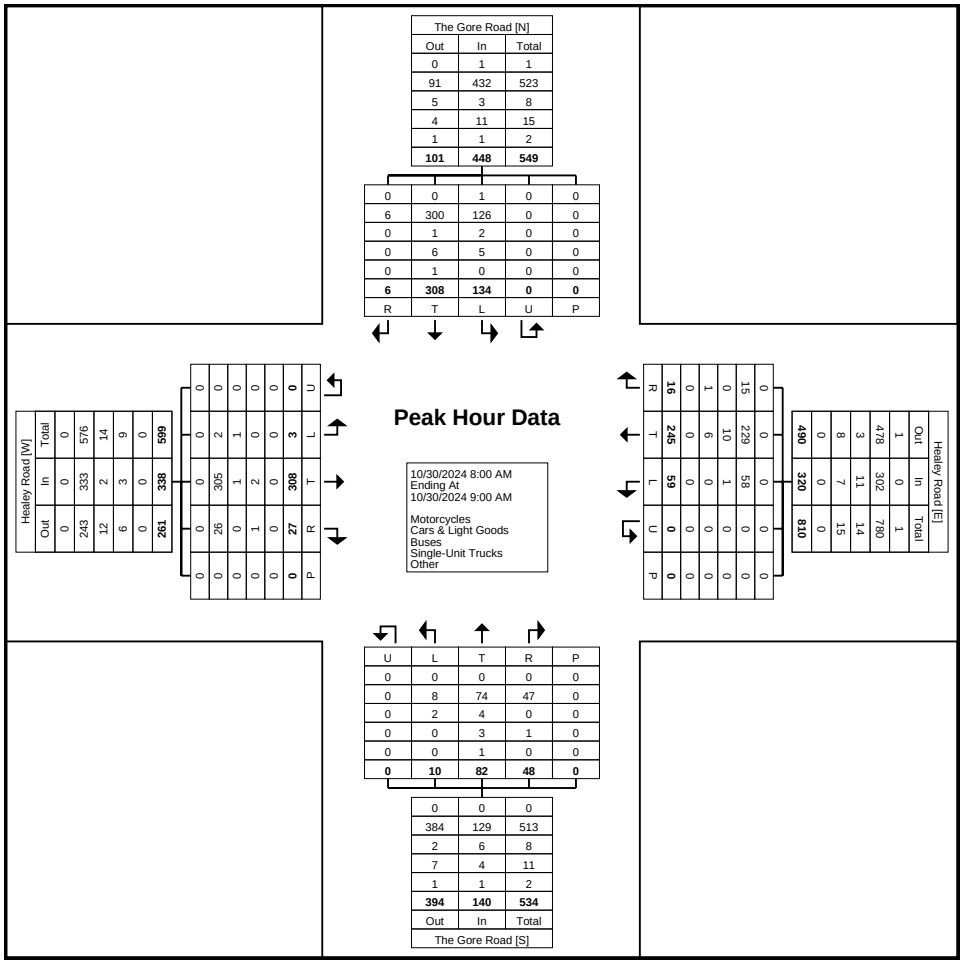
Turning Movement Peak Hour Data (8:00 AM)

Start Time	Healey Road Eastbound						Healey Road Westbound						The Gore Road Northbound						The Gore Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
8:00 AM	1	69	11	0	0	81	21	64	2	0	0	87	0	18	10	0	0	28	19	95	1	0	0	115	311
8:15 AM	0	80	3	0	0	83	18	70	4	0	0	92	4	30	14	0	0	48	26	76	1	0	0	103	326
8:30 AM	1	75	4	0	0	80	6	57	0	0	0	63	5	15	8	0	0	28	25	66	3	0	0	94	265
8:45 AM	1	84	9	0	0	94	14	54	10	0	0	78	1	19	16	0	0	36	64	71	1	0	0	136	344
Total	3	308	27	0	0	338	59	245	16	0	0	320	10	82	48	0	0	140	134	308	6	0	0	448	1246
Approach %	0.9	91.1	8.0	0.0	-	-	18.4	76.6	5.0	0.0	-	-	7.1	58.6	34.3	0.0	-	-	29.9	68.8	1.3	0.0	-	-	-
Total %	0.2	24.7	2.2	0.0	-	27.1	4.7	19.7	1.3	0.0	-	25.7	0.8	6.6	3.9	0.0	-	11.2	10.8	24.7	0.5	0.0	-	36.0	-
PHF	0.750	0.917	0.614	0.000	-	0.899	0.702	0.875	0.400	0.000	-	0.870	0.500	0.683	0.750	0.000	-	0.729	0.523	0.811	0.500	0.000	-	0.824	0.906
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	1	1
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.7	0.0	0.0	-	-	0.2	0.1
Cars & Light Goods	2	305	26	0	-	333	58	229	15	0	-	302	8	74	47	0	-	129	126	300	6	0	-	432	1196
% Cars & Light Goods	66.7	99.0	96.3	-	-	98.5	98.3	93.5	93.8	-	-	94.4	80.0	90.2	97.9	-	-	92.1	94.0	97.4	100.0	-	-	96.4	96.0
Buses	1	1	0	0	-	2	1	10	0	0	-	11	2	4	0	0	-	6	2	1	0	0	-	3	22
% Buses	33.3	0.3	0.0	-	-	0.6	1.7	4.1	0.0	-	-	3.4	20.0	4.9	0.0	-	-	4.3	1.5	0.3	0.0	-	-	0.7	1.8
Single-Unit Trucks	0	2	1	0	-	3	0	6	1	0	-	7	0	3	1	0	-	4	5	6	0	0	-	11	25
% Single-Unit Trucks	0.0	0.6	3.7	-	-	0.9	0.0	2.4	6.3	-	-	2.2	0.0	3.7	2.1	-	-	2.9	3.7	1.9	0.0	-	-	2.5	2.0
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	1	0	0	-	1	2
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	1.2	0.0	-	-	0.7	0.0	0.3	0.0	-	-	0.2	0.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Healey Road & The Gore Road
Site Code: 240562
Start Date: 10/30/2024



Turning Movement Peak Hour Data Plot (8:00 AM)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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519-896-3163 cbowness@ptsl.com

Count Name: Healey Road & The Gore Road
Site Code: 240562
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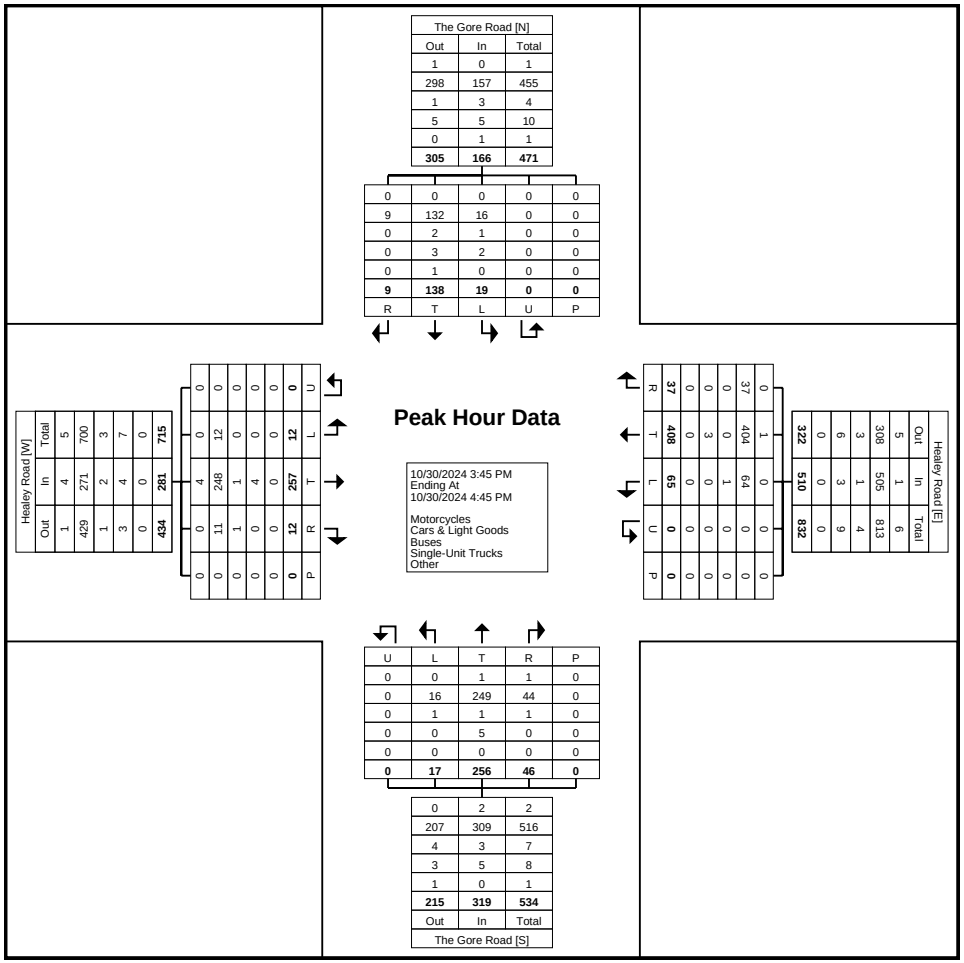
Turning Movement Peak Hour Data (3:45 PM)

Start Time	Healey Road Eastbound						Healey Road Westbound						The Gore Road Northbound						The Gore Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
3:45 PM	5	65	1	0	0	71	17	97	12	0	0	126	1	58	12	0	0	71	5	32	3	0	0	40	308
4:00 PM	2	57	7	0	0	66	19	95	6	0	0	120	5	60	8	0	0	73	3	26	3	0	0	32	291
4:15 PM	3	59	1	0	0	63	13	115	11	0	0	139	5	65	5	0	0	75	5	47	2	0	0	54	331
4:30 PM	2	76	3	0	0	81	16	101	8	0	0	125	6	73	21	0	0	100	6	33	1	0	0	40	346
Total	12	257	12	0	0	281	65	408	37	0	0	510	17	256	46	0	0	319	19	138	9	0	0	166	1276
Approach %	4.3	91.5	4.3	0.0	-	-	12.7	80.0	7.3	0.0	-	-	5.3	80.3	14.4	0.0	-	-	11.4	83.1	5.4	0.0	-	-	-
Total %	0.9	20.1	0.9	0.0	-	22.0	5.1	32.0	2.9	0.0	-	40.0	1.3	20.1	3.6	0.0	-	25.0	1.5	10.8	0.7	0.0	-	13.0	-
PHF	0.600	0.845	0.429	0.000	-	0.867	0.855	0.887	0.771	0.000	-	0.917	0.708	0.877	0.548	0.000	-	0.798	0.792	0.734	0.750	0.000	-	0.769	0.922
Motorcycles	0	4	0	0	-	4	0	1	0	0	-	1	0	1	1	0	-	2	0	0	0	0	-	0	7
% Motorcycles	0.0	1.6	0.0	-	-	1.4	0.0	0.2	0.0	-	-	0.2	0.0	0.4	2.2	-	-	0.6	0.0	0.0	0.0	-	-	0.0	0.5
Cars & Light Goods	12	248	11	0	-	271	64	404	37	0	-	505	16	249	44	0	-	309	16	132	9	0	-	157	1242
% Cars & Light Goods	100.0	96.5	91.7	-	-	96.4	98.5	99.0	100.0	-	-	99.0	94.1	97.3	95.7	-	-	96.9	84.2	95.7	100.0	-	-	94.6	97.3
Buses	0	1	1	0	-	2	1	0	0	0	-	1	1	1	1	0	-	3	1	2	0	0	-	3	9
% Buses	0.0	0.4	8.3	-	-	0.7	1.5	0.0	0.0	-	-	0.2	5.9	0.4	2.2	-	-	0.9	5.3	1.4	0.0	-	-	1.8	0.7
Single-Unit Trucks	0	4	0	0	-	4	0	3	0	0	-	3	0	5	0	0	-	5	2	3	0	0	-	5	17
% Single-Unit Trucks	0.0	1.6	0.0	-	-	1.4	0.0	0.7	0.0	-	-	0.6	0.0	2.0	0.0	-	-	1.6	10.5	2.2	0.0	-	-	3.0	1.3
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	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	0.0	-	-	0.0	0.0	0.7	0.0	-	-	0.6	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Healey Road & The Gore Road
Site Code: 240562
Start Date: 10/30/2024



Turning Movement Peak Hour Data Plot (3:45 PM)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Mayfield Road & The Gore Road
Site Code: 240562
Start Date: 10/30/2024

Turning Movement Data

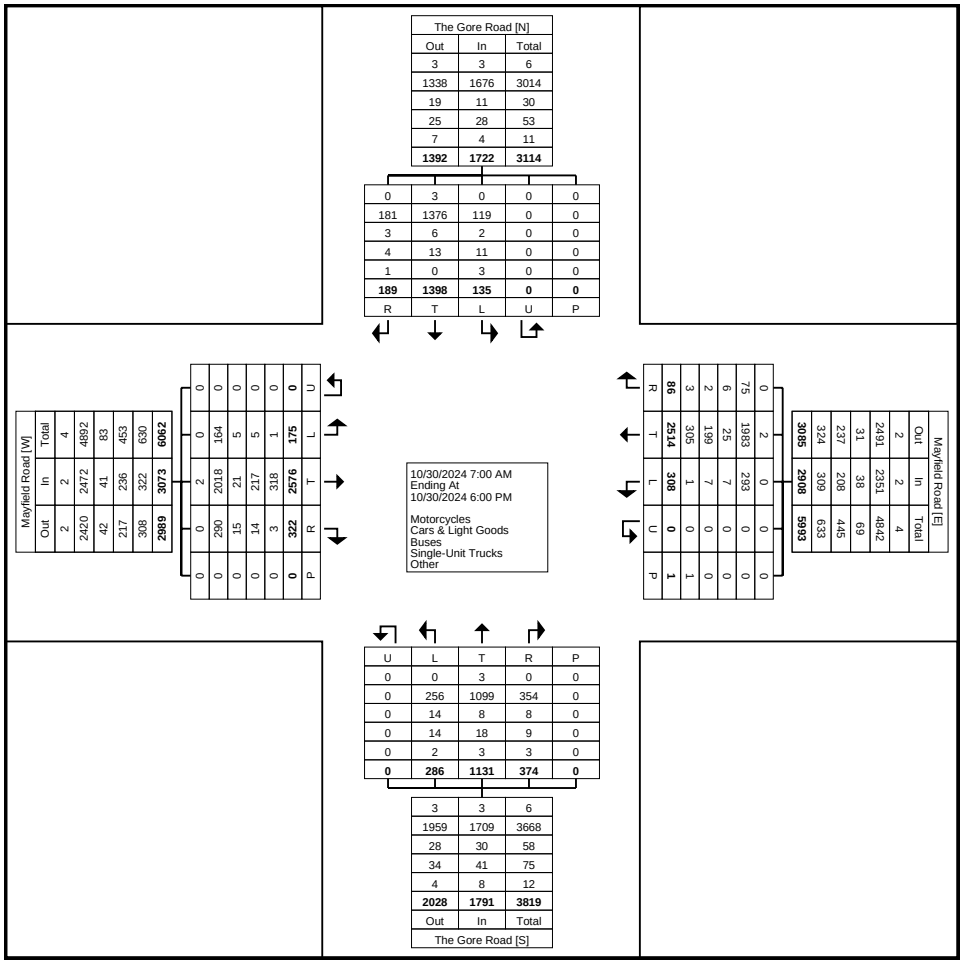
Start Time	Mayfield Road Eastbound						Mayfield Road Westbound						The Gore Road Northbound						The Gore Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	6	88	15	0	0	109	5	67	7	0	0	79	3	26	23	0	0	52	0	80	6	0	0	86	326
7:15 AM	7	106	20	0	0	133	10	79	1	0	0	90	8	26	21	0	0	55	1	99	4	0	0	104	382
7:30 AM	9	131	15	0	0	155	15	84	4	0	0	103	10	29	17	0	0	56	3	87	5	0	0	95	409
7:45 AM	5	120	10	0	0	135	20	81	3	0	0	104	7	30	17	0	0	54	3	112	9	0	0	124	417
Hourly Total	27	445	60	0	0	532	50	311	15	0	0	376	28	111	78	0	0	217	7	378	24	0	0	409	1534
8:00 AM	6	110	21	0	0	137	18	95	2	0	0	115	8	27	12	0	0	47	3	119	6	0	0	128	427
8:15 AM	6	121	20	0	0	147	22	82	3	0	0	107	9	45	27	0	0	81	5	89	11	0	0	105	440
8:30 AM	2	134	13	0	0	149	16	96	10	0	0	122	16	20	29	0	0	65	9	66	4	0	0	79	415
8:45 AM	9	124	7	0	0	140	14	91	2	0	0	107	16	28	23	0	0	67	12	80	6	0	0	98	412
Hourly Total	23	489	61	0	0	573	70	364	17	0	0	451	49	120	91	0	0	260	29	354	27	0	0	410	1694
9:00 AM	4	106	11	0	0	121	7	87	1	0	0	95	10	24	21	0	0	55	11	53	1	0	0	65	336
9:15 AM	5	101	12	0	0	118	9	63	2	0	0	74	4	17	10	0	0	31	7	48	4	0	0	59	282
9:30 AM	5	105	18	0	0	128	12	78	0	0	0	90	8	21	15	0	0	44	7	43	4	0	0	54	316
9:45 AM	3	110	18	0	0	131	10	78	1	0	0	89	5	17	17	0	0	39	8	44	4	0	0	56	315
Hourly Total	17	422	59	0	0	498	38	306	4	0	0	348	27	79	63	0	0	169	33	188	13	0	0	234	1249
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	9	96	8	0	0	113	13	153	1	0	0	167	17	63	8	0	0	88	2	28	5	0	0	35	403
3:15 PM	11	92	10	0	0	113	10	114	4	0	0	128	15	79	11	0	0	105	5	34	15	0	0	54	400
3:30 PM	7	133	15	0	0	155	12	135	4	0	1	151	11	61	13	0	0	85	3	42	9	0	0	54	445
3:45 PM	7	93	15	0	0	115	16	133	1	0	0	150	16	66	13	0	0	95	6	50	10	0	0	66	426
Hourly Total	34	414	48	0	0	496	51	535	10	0	1	596	59	269	45	0	0	373	16	154	39	0	0	209	1674
4:00 PM	10	97	8	0	0	115	16	98	8	0	0	122	20	65	9	0	0	94	5	46	13	0	0	64	395
4:15 PM	16	88	8	0	0	112	13	122	5	0	0	140	8	70	16	0	0	94	7	42	14	0	0	63	409
4:30 PM	14	89	25	0	0	128	9	128	5	0	0	142	13	78	13	0	0	104	7	39	7	0	0	53	427
4:45 PM	6	109	13	0	0	128	6	123	2	0	0	131	13	72	15	0	0	100	5	40	5	0	0	50	409
Hourly Total	46	383	54	0	0	483	44	471	20	0	0	535	54	285	53	0	0	392	24	167	39	0	0	230	1640
5:00 PM	3	113	14	0	0	130	21	156	5	0	0	182	13	79	11	0	0	103	7	35	8	0	0	50	465
5:15 PM	7	88	8	0	0	103	10	129	5	0	0	144	21	70	10	0	0	101	10	43	17	0	0	70	418
5:30 PM	6	108	11	0	0	125	13	118	6	0	0	137	16	70	10	0	0	96	4	50	8	0	0	62	420
5:45 PM	12	114	7	0	0	133	11	124	4	0	0	139	19	48	13	0	0	80	5	29	14	0	0	48	400
Hourly Total	28	423	40	0	0	491	55	527	20	0	0	602	69	267	44	0	0	380	26	157	47	0	0	230	1703
Grand Total	175	2576	322	0	0	3073	308	2514	86	0	1	2908	286	1131	374	0	0	1791	135	1398	189	0	0	1722	9494
Approach %	5.7	83.8	10.5	0.0	-	-	10.6	86.5	3.0	0.0	-	-	16.0	63.1	20.9	0.0	-	-	7.8	81.2	11.0	0.0	-	-	-
Total %	1.8	27.1	3.4	0.0	-	32.4	3.2	26.5	0.9	0.0	-	30.6	3.0	11.9	3.9	0.0	-	18.9	1.4	14.7	2.0	0.0	-	18.1	-
Motorcycles	0	2	0	0	-	2	0	2	0	0	-	2	0	3	0	0	-	3	0	3	0	0	-	3	10

% Motorcycles	0.0	0.1	0.0	-	-	0.1	0.0	0.1	0.0	-	-	0.1	0.0	0.3	0.0	-	-	0.2	0.0	0.2	0.0	-	-	0.2	0.1
Cars & Light Goods	164	2018	290	0	-	2472	293	1983	75	0	-	2351	256	1099	354	0	-	1709	119	1376	181	0	-	1676	8208
% Cars & Light Goods	93.7	78.3	90.1	-	-	80.4	95.1	78.9	87.2	-	-	80.8	89.5	97.2	94.7	-	-	95.4	88.1	98.4	95.8	-	-	97.3	86.5
Buses	5	21	15	0	-	41	7	25	6	0	-	38	14	8	8	0	-	30	2	6	3	0	-	11	120
% Buses	2.9	0.8	4.7	-	-	1.3	2.3	1.0	7.0	-	-	1.3	4.9	0.7	2.1	-	-	1.7	1.5	0.4	1.6	-	-	0.6	1.3
Single-Unit Trucks	5	217	14	0	-	236	7	199	2	0	-	208	14	18	9	0	-	41	11	13	4	0	-	28	513
% Single-Unit Trucks	2.9	8.4	4.3	-	-	7.7	2.3	7.9	2.3	-	-	7.2	4.9	1.6	2.4	-	-	2.3	8.1	0.9	2.1	-	-	1.6	5.4
Articulated Trucks	1	316	3	0	-	320	1	303	3	0	-	307	2	3	3	0	-	8	3	0	1	0	-	4	639
% Articulated Trucks	0.6	12.3	0.9	-	-	10.4	0.3	12.1	3.5	-	-	10.6	0.7	0.3	0.8	-	-	0.4	2.2	0.0	0.5	-	-	0.2	6.7
Bicycles on Road	0	2	0	0	-	2	0	2	0	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	4
% Bicycles on Road	0.0	0.1	0.0	-	-	0.1	0.0	0.1	0.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Mayfield Road & The Gore Road
Site Code: 240562
Start Date: 10/30/2024



Turning Movement Data Plot

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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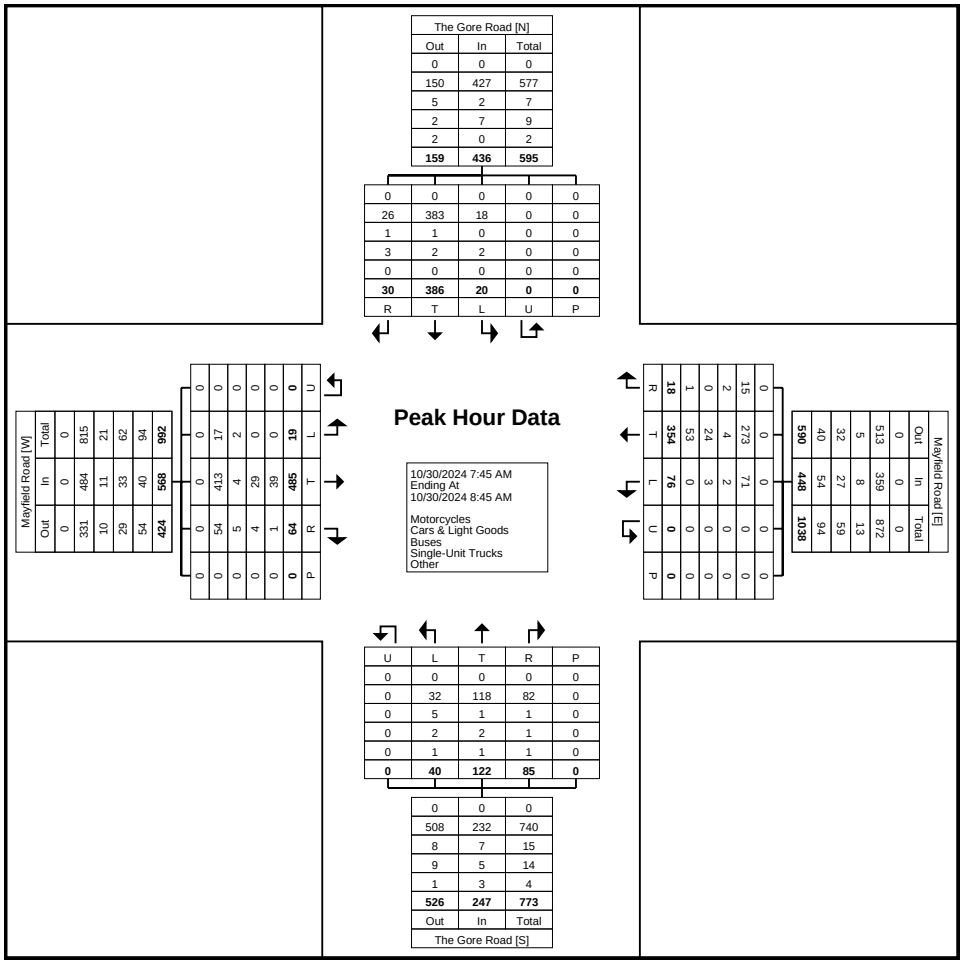
Turning Movement Peak Hour Data (7:45 AM)

Start Time	Mayfield Road Eastbound						Mayfield Road Westbound						The Gore Road Northbound						The Gore Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:45 AM	5	120	10	0	0	135	20	81	3	0	0	104	7	30	17	0	0	54	3	112	9	0	0	124	417
8:00 AM	6	110	21	0	0	137	18	95	2	0	0	115	8	27	12	0	0	47	3	119	6	0	0	128	427
8:15 AM	6	121	20	0	0	147	22	82	3	0	0	107	9	45	27	0	0	81	5	89	11	0	0	105	440
8:30 AM	2	134	13	0	0	149	16	96	10	0	0	122	16	20	29	0	0	65	9	66	4	0	0	79	415
Total	19	485	64	0	0	568	76	354	18	0	0	448	40	122	85	0	0	247	20	386	30	0	0	436	1699
Approach %	3.3	85.4	11.3	0.0	-	-	17.0	79.0	4.0	0.0	-	-	16.2	49.4	34.4	0.0	-	-	4.6	88.5	6.9	0.0	-	-	-
Total %	1.1	28.5	3.8	0.0	-	33.4	4.5	20.8	1.1	0.0	-	26.4	2.4	7.2	5.0	0.0	-	14.5	1.2	22.7	1.8	0.0	-	25.7	-
PHF	0.792	0.905	0.762	0.000	-	0.953	0.864	0.922	0.450	0.000	-	0.918	0.625	0.678	0.733	0.000	-	0.762	0.556	0.811	0.682	0.000	-	0.852	0.965
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	17	413	54	0	-	484	71	273	15	0	-	359	32	118	82	0	-	232	18	383	26	0	-	427	1502
% Cars & Light Goods	89.5	85.2	84.4	-	-	85.2	93.4	77.1	83.3	-	-	80.1	80.0	96.7	96.5	-	-	93.9	90.0	99.2	86.7	-	-	97.9	88.4
Buses	2	4	5	0	-	11	2	4	2	0	-	8	5	1	1	0	-	7	0	1	1	0	-	2	28
% Buses	10.5	0.8	7.8	-	-	1.9	2.6	1.1	11.1	-	-	1.8	12.5	0.8	1.2	-	-	2.8	0.0	0.3	3.3	-	-	0.5	1.6
Single-Unit Trucks	0	29	4	0	-	33	3	24	0	0	-	27	2	2	1	0	-	5	2	2	3	0	-	7	72
% Single-Unit Trucks	0.0	6.0	6.3	-	-	5.8	3.9	6.8	0.0	-	-	6.0	5.0	1.6	1.2	-	-	2.0	10.0	0.5	10.0	-	-	1.6	4.2
Articulated Trucks	0	38	1	0	-	39	0	52	1	0	-	53	1	1	1	0	-	3	0	0	0	0	-	0	95
% Articulated Trucks	0.0	7.8	1.6	-	-	6.9	0.0	14.7	5.6	-	-	11.8	2.5	0.8	1.2	-	-	1.2	0.0	0.0	0.0	-	-	0.0	5.6
Bicycles on Road	0	1	0	0	-	1	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	2
% Bicycles on Road	0.0	0.2	0.0	-	-	0.2	0.0	0.3	0.0	-	-	0.2	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
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Count Name: Mayfield Road & The Gore Road
Site Code: 240562
Start Date: 10/30/2024



Turning Movement Peak Hour Data Plot (7:45 AM)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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Count Name: Mayfield Road & The Gore Road
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Start Date: 10/30/2024

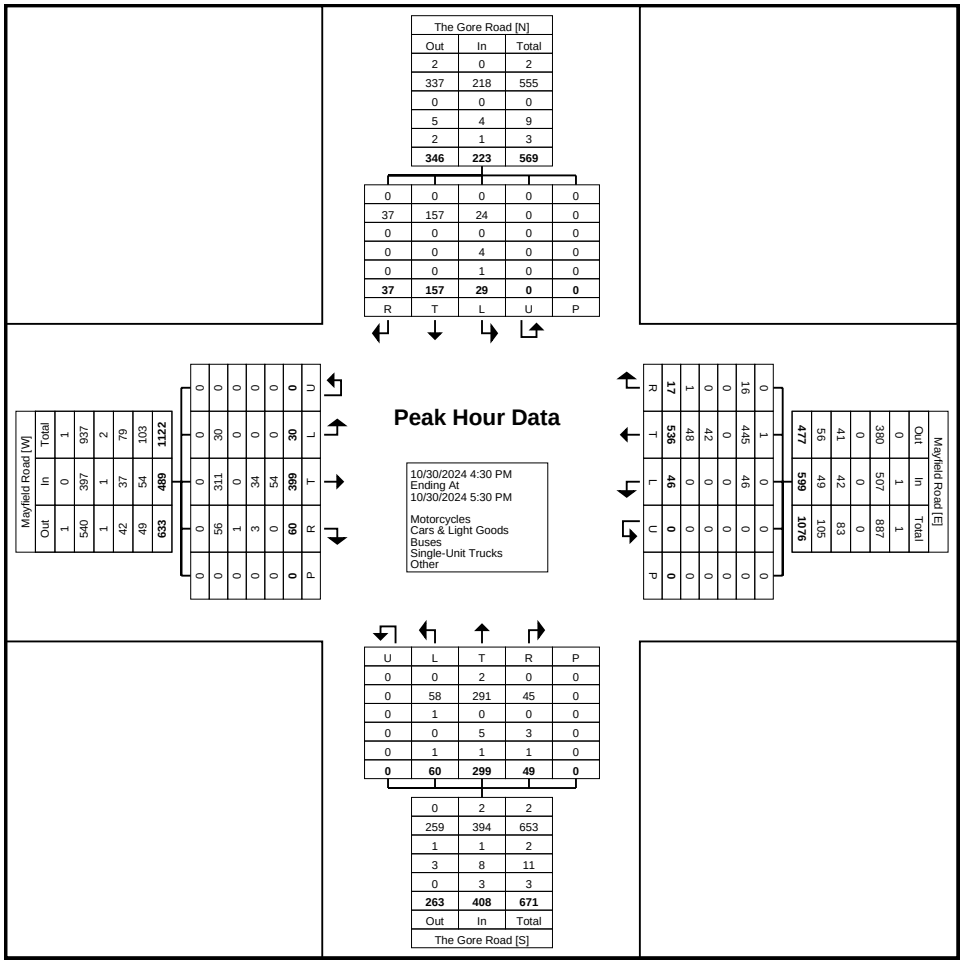
Turning Movement Peak Hour Data (4:30 PM)

Start Time	Mayfield Road Eastbound						Mayfield Road Westbound						The Gore Road Northbound						The Gore Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
4:30 PM	14	89	25	0	0	128	9	128	5	0	0	142	13	78	13	0	0	104	7	39	7	0	0	53	427
4:45 PM	6	109	13	0	0	128	6	123	2	0	0	131	13	72	15	0	0	100	5	40	5	0	0	50	409
5:00 PM	3	113	14	0	0	130	21	156	5	0	0	182	13	79	11	0	0	103	7	35	8	0	0	50	465
5:15 PM	7	88	8	0	0	103	10	129	5	0	0	144	21	70	10	0	0	101	10	43	17	0	0	70	418
Total	30	399	60	0	0	489	46	536	17	0	0	599	60	299	49	0	0	408	29	157	37	0	0	223	1719
Approach %	6.1	81.6	12.3	0.0	-	-	7.7	89.5	2.8	0.0	-	-	14.7	73.3	12.0	0.0	-	-	13.0	70.4	16.6	0.0	-	-	-
Total %	1.7	23.2	3.5	0.0	-	28.4	2.7	31.2	1.0	0.0	-	34.8	3.5	17.4	2.9	0.0	-	23.7	1.7	9.1	2.2	0.0	-	13.0	-
PHF	0.536	0.883	0.600	0.000	-	0.940	0.548	0.859	0.850	0.000	-	0.823	0.714	0.946	0.817	0.000	-	0.981	0.725	0.913	0.544	0.000	-	0.796	0.924
Motorcycles	0	0	0	0	-	0	0	1	0	0	-	1	0	2	0	0	-	2	0	0	0	0	-	0	3
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	-	-	0.2	0.0	0.7	0.0	-	-	0.5	0.0	0.0	0.0	-	-	0.0	0.2
Cars & Light Goods	30	311	56	0	-	397	46	445	16	0	-	507	58	291	45	0	-	394	24	157	37	0	-	218	1516
% Cars & Light Goods	100.0	77.9	93.3	-	-	81.2	100.0	83.0	94.1	-	-	84.6	96.7	97.3	91.8	-	-	96.6	82.8	100.0	100.0	-	-	97.8	88.2
Buses	0	0	1	0	-	1	0	0	0	0	-	0	1	0	0	0	-	1	0	0	0	0	-	0	2
% Buses	0.0	0.0	1.7	-	-	0.2	0.0	0.0	0.0	-	-	0.0	1.7	0.0	0.0	-	-	0.2	0.0	0.0	0.0	-	-	0.0	0.1
Single-Unit Trucks	0	34	3	0	-	37	0	42	0	0	-	42	0	5	3	0	-	8	4	0	0	0	-	4	91
% Single-Unit Trucks	0.0	8.5	5.0	-	-	7.6	0.0	7.8	0.0	-	-	7.0	0.0	1.7	6.1	-	-	2.0	13.8	0.0	0.0	-	-	1.8	5.3
Articulated Trucks	0	54	0	0	-	54	0	48	1	0	-	49	1	1	1	0	-	3	1	0	0	0	-	1	107
% Articulated Trucks	0.0	13.5	0.0	-	-	11.0	0.0	9.0	5.9	-	-	8.2	1.7	0.3	2.0	-	-	0.7	3.4	0.0	0.0	-	-	0.4	6.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

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519-896-3163 cbowness@ptsl.com

Count Name: Mayfield Road & The Gore Road
Site Code: 240562
Start Date: 10/30/2024



Turning Movement Peak Hour Data Plot (4:30 PM)

Appendix C

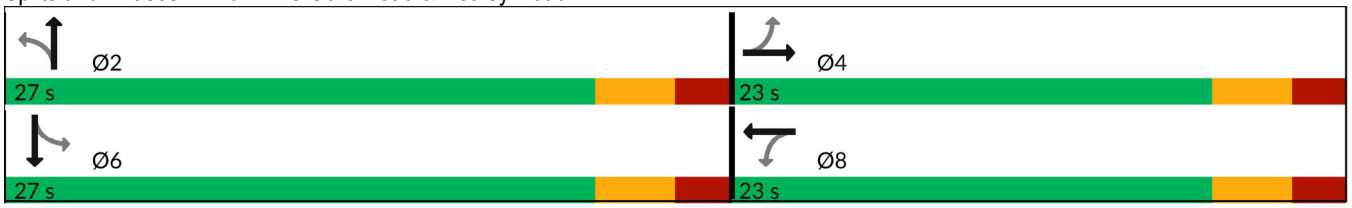
Synchro Reports

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	379	33	73	301	20	12	101	59	165	379	7
Future Volume (vph)	4	379	33	73	301	20	12	101	59	165	379	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.993			0.954			0.998	
Flt Protected					0.991			0.997			0.985	
Satd. Flow (prot)	0	1851	0	0	1776	0	0	1674	0	0	1798	0
Flt Permitted		0.996			0.823			0.956			0.841	
Satd. Flow (perm)	0	1844	0	0	1475	0	0	1605	0	0	1535	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			6			65			2	
Link Speed (k/h)		70			60			80			80	
Link Distance (m)		342.2			229.1			1858.8			201.4	
Travel Time (s)		17.6			13.7			83.6			9.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	33%	1%	4%	2%	6%	6%	20%	10%	2%	6%	3%	0%
Adj. Flow (vph)	4	416	36	80	331	22	13	111	65	181	416	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	456	0	0	433	0	0	189	0	0	605	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2			2			2			2	
Detector Template		Thru			Thru			Thru			Thru	
Leading Detector (m)		10.0			10.0			10.0			10.0	
Trailing Detector (m)		0.0			0.0			0.0			0.0	
Detector 1 Position(m)		0.0			0.0			0.0			0.0	
Detector 1 Size(m)		0.6			0.6			0.6			0.6	
Detector 1 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0			0.0			0.0	
Detector 1 Queue (s)		0.0			0.0			0.0			0.0	
Detector 1 Delay (s)		0.0			0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	23.0	23.0		23.0	23.0		27.0	27.0		27.0	27.0	
Total Split (%)	46.0%	46.0%		46.0%	46.0%		54.0%	54.0%		54.0%	54.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		22.0	22.0		22.0	22.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.3			17.3			23.1			23.1	
Actuated g/C Ratio		0.36			0.36			0.48			0.48	
v/c Ratio		0.69			0.82			0.24			0.83	
Control Delay (s/veh)		19.0			29.1			6.4			24.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		19.0			29.1			6.4			24.7	
LOS		B			C			A			C	
Approach Delay (s/veh)		19.0			29.1			6.4			24.7	
Approach LOS		B			C			A			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 48.4			
Natural Cycle: 50			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay (s/veh): 22.2		Intersection LOS: C	
Intersection Capacity Utilization 95.7%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 101: The Gore Road & Healey Road



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	456	433	189	605
v/c Ratio	0.69	0.82	0.24	0.83
Control Delay (s/veh)	19.0	29.1	6.4	24.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	19.0	29.1	6.4	24.7
Queue Length 50th (m)	32.8	33.5	6.3	46.6
Queue Length 95th (m)	58.7	#75.9	15.7	#103.4
Internal Link Dist (m)	318.2	205.1	1834.8	177.4
Turn Bay Length (m)				
Base Capacity (vph)	732	585	799	733
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.62	0.74	0.24	0.83

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	379	33	73	301	20	12	101	59	165	379	7
Future Volume (vph)	4	379	33	73	301	20	12	101	59	165	379	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.95			1.00	
Flt Protected		1.00			0.99			1.00			0.99	
Satd. Flow (prot)		1851			1776			1673			1799	
Flt Permitted		1.00			0.82			0.96			0.84	
Satd. Flow (perm)		1844			1475			1605			1536	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	4	416	36	80	331	22	13	111	65	181	416	8
RTOR Reduction (vph)	0	6	0	0	4	0	0	34	0	0	1	0
Lane Group Flow (vph)	0	450	0	0	429	0	0	155	0	0	604	0
Heavy Vehicles (%)	33%	1%	4%	2%	6%	6%	20%	10%	2%	6%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.3			16.3			22.1			22.1	
Effective Green, g (s)		17.3			17.3			23.1			23.1	
Actuated g/C Ratio		0.36			0.36			0.48			0.48	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		659			527			766			733	
v/s Ratio Prot												
v/s Ratio Perm		0.24			c0.29			0.10			c0.39	
v/c Ratio		0.68			0.81			0.20			0.82	
Uniform Delay, d1		13.2			14.1			7.3			10.9	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.9			9.4			0.6			10.2	
Delay (s)		16.1			23.5			7.9			21.1	
Level of Service		B			C			A			C	
Approach Delay (s/veh)		16.1			23.5			7.9			21.1	
Approach LOS		B			C			A			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	48.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	596	79	93	435	22	49	150	105	25	475	37
Future Volume (vph)	23	596	79	93	435	22	49	150	105	25	475	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.995			0.954			0.991	
Flt Protected		0.998			0.992			0.992			0.998	
Satd. Flow (prot)	0	1625	0	0	1562	0	0	1700	0	0	1838	0
Flt Permitted		0.974			0.787			0.861			0.975	
Satd. Flow (perm)	0	1586	0	0	1239	0	0	1476	0	0	1796	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			6			61			9	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		265.3			265.9			254.2			1282.4	
Travel Time (s)		15.9			16.0			15.3			76.9	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	10%	15%	16%	7%	23%	17%	20%	3%	3%	10%	1%	13%
Adj. Flow (vph)	24	614	81	96	448	23	51	155	108	26	490	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	719	0	0	567	0	0	314	0	0	554	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2			2			2			2	
Detector Template		Thru			Thru			Thru			Thru	
Leading Detector (m)		10.0			10.0			10.0			10.0	
Trailing Detector (m)		0.0			0.0			0.0			0.0	
Detector 1 Position(m)		0.0			0.0			0.0			0.0	
Detector 1 Size(m)		0.6			0.6			0.6			0.6	
Detector 1 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0			0.0			0.0	
Detector 1 Queue (s)		0.0			0.0			0.0			0.0	
Detector 1 Delay (s)		0.0			0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	27.0	27.0		27.0	27.0		23.0	23.0		23.0	23.0	
Total Split (%)	54.0%	54.0%		54.0%	54.0%		46.0%	46.0%		46.0%	46.0%	
Maximum Green (s)	22.0	22.0		22.0	22.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		23.0			23.0			19.0			19.0	
Actuated g/C Ratio		0.46			0.46			0.38			0.38	
v/c Ratio		0.97			0.99			0.53			0.81	
Control Delay (s/veh)		44.6			53.5			13.4			25.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		44.6			53.5			13.4			25.6	
LOS		D			D			B			C	
Approach Delay (s/veh)		44.6			53.5			13.4			25.6	
Approach LOS		D			D			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 50			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay (s/veh): 37.5		Intersection LOS: D	
Intersection Capacity Utilization 108.6%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 102: The Gore Road & Mayfield Road



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	719	567	314	554
v/c Ratio	0.97	0.99	0.53	0.81
Control Delay (s/veh)	44.6	53.5	13.4	25.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.6	53.5	13.4	25.6
Queue Length 50th (m)	59.6	48.2	17.0	43.8
Queue Length 95th (m)	#126.9	#108.6	36.3	#92.6
Internal Link Dist (m)	241.3	241.9	230.2	1258.4
Turn Bay Length (m)				
Base Capacity (vph)	738	573	598	688
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.97	0.99	0.53	0.81

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	596	79	93	435	22	49	150	105	25	475	37
Future Volume (vph)	23	596	79	93	435	22	49	150	105	25	475	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.95			0.99	
Flt Protected		1.00			0.99			0.99			1.00	
Satd. Flow (prot)		1625			1561			1699			1837	
Flt Permitted		0.97			0.79			0.86			0.98	
Satd. Flow (perm)		1586			1239			1475			1795	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	24	614	81	96	448	23	51	155	108	26	490	38
RTOR Reduction (vph)	0	9	0	0	3	0	0	38	0	0	6	0
Lane Group Flow (vph)	0	710	0	0	564	0	0	276	0	0	548	0
Heavy Vehicles (%)	10%	15%	16%	7%	23%	17%	20%	3%	3%	10%	1%	13%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		22.0			22.0			18.0			18.0	
Effective Green, g (s)		23.0			23.0			19.0			19.0	
Actuated g/C Ratio		0.46			0.46			0.38			0.38	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		729			569			560			682	
v/s Ratio Prot												
v/s Ratio Perm		0.45			c0.45			0.19			c0.31	
v/c Ratio		0.97			0.99			0.49			0.80	
Uniform Delay, d1		13.2			13.4			11.8			13.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		26.7			35.2			3.1			9.8	
Delay (s)		39.9			48.6			14.9			23.6	
Level of Service		D			D			B			C	
Approach Delay (s/veh)		39.9			48.6			14.9			23.6	
Approach LOS		D			D			B			C	

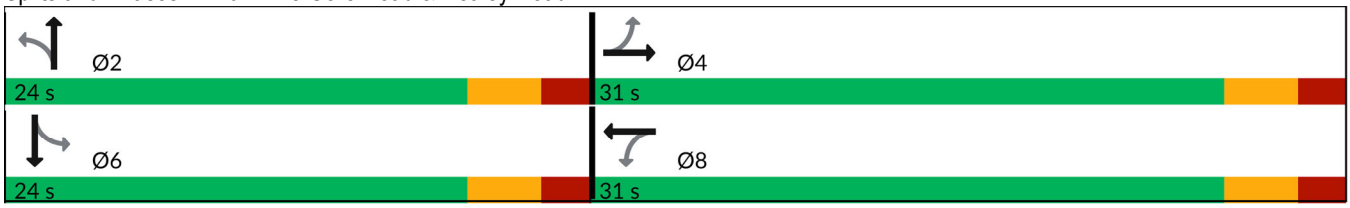
Intersection Summary			
HCM 2000 Control Delay (s/veh)	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	108.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	316	15	80	502	46	21	315	57	23	170	11
Future Volume (vph)	15	316	15	80	502	46	21	315	57	23	170	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.990			0.980			0.993	
Flt Protected		0.998			0.994			0.997			0.994	
Satd. Flow (prot)	0	1828	0	0	1853	0	0	1797	0	0	1784	0
Flt Permitted		0.966			0.912			0.978			0.932	
Satd. Flow (perm)	0	1770	0	0	1700	0	0	1763	0	0	1673	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			10			17			6	
Link Speed (k/h)		70			60			80			80	
Link Distance (m)		342.2			229.1			1858.8			201.4	
Travel Time (s)		17.6			13.7			83.6			9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	8%	1%	1%	0%	6%	3%	4%	16%	4%	0%
Adj. Flow (vph)	16	343	16	87	546	50	23	342	62	25	185	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	375	0	0	683	0	0	427	0	0	222	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2			2			2			2	
Detector Template		Thru			Thru			Thru			Thru	
Leading Detector (m)		10.0			10.0			10.0			10.0	
Trailing Detector (m)		0.0			0.0			0.0			0.0	
Detector 1 Position(m)		0.0			0.0			0.0			0.0	
Detector 1 Size(m)		0.6			0.6			0.6			0.6	
Detector 1 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0			0.0			0.0	
Detector 1 Queue (s)		0.0			0.0			0.0			0.0	
Detector 1 Delay (s)		0.0			0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	31.0	31.0		31.0	31.0		24.0	24.0		24.0	24.0	
Total Split (%)	56.4%	56.4%		56.4%	56.4%		43.6%	43.6%		43.6%	43.6%	
Maximum Green (s)	26.0	26.0		26.0	26.0		19.0	19.0		19.0	19.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		24.3			24.3			20.1			20.1	
Actuated g/C Ratio		0.46			0.46			0.38			0.38	
v/c Ratio		0.46			0.86			0.62			0.34	
Control Delay (s/veh)		11.3			25.8			18.3			14.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		11.3			25.8			18.3			14.0	
LOS		B			C			B			B	
Approach Delay (s/veh)		11.3			25.8			18.3			14.0	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 52.5			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay (s/veh): 19.2		Intersection LOS: B	
Intersection Capacity Utilization 86.2%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 101: The Gore Road & Healey Road



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	375	683	427	222
v/c Ratio	0.46	0.86	0.62	0.34
Control Delay (s/veh)	11.3	25.8	18.3	14.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	11.3	25.8	18.3	14.0
Queue Length 50th (m)	22.8	54.9	34.6	16.0
Queue Length 95th (m)	40.6	#115.5	61.5	30.9
Internal Link Dist (m)	318.2	205.1	1834.8	177.4
Turn Bay Length (m)				
Base Capacity (vph)	918	883	685	644
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.41	0.77	0.62	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	316	15	80	502	46	21	315	57	23	170	11
Future Volume (vph)	15	316	15	80	502	46	21	315	57	23	170	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		1.00			0.99			1.00			0.99	
Satd. Flow (prot)		1829			1852			1798			1784	
Flt Permitted		0.97			0.91			0.98			0.93	
Satd. Flow (perm)		1771			1700			1763			1672	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	343	16	87	546	50	23	342	62	25	185	12
RTOR Reduction (vph)	0	3	0	0	5	0	0	10	0	0	4	0
Lane Group Flow (vph)	0	372	0	0	678	0	0	417	0	0	218	0
Heavy Vehicles (%)	0%	3%	8%	1%	1%	0%	6%	3%	4%	16%	4%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.3			23.3			19.1			19.1	
Effective Green, g (s)		24.3			24.3			20.1			20.1	
Actuated g/C Ratio		0.46			0.46			0.38			0.38	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		821			788			676			641	
v/s Ratio Prot												
v/s Ratio Perm		0.21			c0.40			c0.24			0.13	
v/c Ratio		0.45			0.86			0.62			0.34	
Uniform Delay, d1		9.5			12.5			13.0			11.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.4			9.3			4.2			1.4	
Delay (s)		9.9			21.8			17.2			12.9	
Level of Service		A			C			B			B	
Approach Delay (s/veh)		9.9			21.8			17.2			12.9	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	52.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	491	74	57	659	21	74	368	60	36	193	46
Future Volume (vph)	37	491	74	57	659	21	74	368	60	36	193	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.996			0.984			0.977	
Flt Protected		0.997			0.996			0.993			0.994	
Satd. Flow (prot)	0	1567	0	0	1634	0	0	1792	0	0	1805	0
Flt Permitted		0.929			0.917			0.892			0.859	
Satd. Flow (perm)	0	1460	0	0	1504	0	0	1610	0	0	1560	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			4			11			16	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		265.3			265.9			254.2			1282.4	
Travel Time (s)		15.9			16.0			15.3			76.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	22%	7%	0%	17%	6%	3%	3%	8%	17%	0%	0%
Adj. Flow (vph)	40	534	80	62	716	23	80	400	65	39	210	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	654	0	0	801	0	0	545	0	0	299	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2			2			2			2	
Detector Template		Thru			Thru			Thru			Thru	
Leading Detector (m)		10.0			10.0			10.0			10.0	
Trailing Detector (m)		0.0			0.0			0.0			0.0	
Detector 1 Position(m)		0.0			0.0			0.0			0.0	
Detector 1 Size(m)		0.6			0.6			0.6			0.6	
Detector 1 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0			0.0			0.0	
Detector 1 Queue (s)		0.0			0.0			0.0			0.0	
Detector 1 Delay (s)		0.0			0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	40.0	40.0		40.0	40.0		25.0	25.0		25.0	25.0	
Total Split (%)	61.5%	61.5%		61.5%	61.5%		38.5%	38.5%		38.5%	38.5%	
Maximum Green (s)	35.0	35.0		35.0	35.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		35.5			35.5			21.0			21.0	
Actuated g/C Ratio		0.55			0.55			0.33			0.33	
v/c Ratio		0.81			0.97			1.03			0.58	
Control Delay (s/veh)		21.5			41.0			71.1			22.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		21.5			41.0			71.1			22.5	
LOS		C			D			E			C	
Approach Delay (s/veh)		21.5			41.0			71.1			22.5	
Approach LOS		C			D			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 64.5			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.03			
Intersection Signal Delay (s/veh): 40.2		Intersection LOS: D	
Intersection Capacity Utilization 97.7%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 102: The Gore Road & Mayfield Road



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	654	801	545	299
v/c Ratio	0.81	0.97	1.03	0.58
Control Delay (s/veh)	21.5	41.0	71.1	22.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.5	41.0	71.1	22.5
Queue Length 50th (m)	58.7	87.1	~75.4	29.3
Queue Length 95th (m)	#124.7	#168.3	#132.2	52.9
Internal Link Dist (m)	241.3	241.9	230.2	1258.4
Turn Bay Length (m)				
Base Capacity (vph)	822	841	531	518
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.80	0.95	1.03	0.58

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	491	74	57	659	21	74	368	60	36	193	46
Future Volume (vph)	37	491	74	57	659	21	74	368	60	36	193	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			1.00			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1568			1634			1791			1805	
Flt Permitted		0.93			0.92			0.89			0.86	
Satd. Flow (perm)		1461			1504			1610			1561	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	534	80	62	716	23	80	400	65	39	210	50
RTOR Reduction (vph)	0	8	0	0	2	0	0	7	0	0	11	0
Lane Group Flow (vph)	0	646	0	0	799	0	0	538	0	0	288	0
Heavy Vehicles (%)	0%	22%	7%	0%	17%	6%	3%	3%	8%	17%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		34.5			34.5			20.0			20.0	
Effective Green, g (s)		35.5			35.5			21.0			21.0	
Actuated g/C Ratio		0.55			0.55			0.33			0.33	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		804			827			524			508	
v/s Ratio Prot												
v/s Ratio Perm		0.44			c0.53			c0.33			0.18	
v/c Ratio		0.80			0.97			1.03			0.57	
Uniform Delay, d1		11.7			13.9			21.8			18.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		5.9			23.1			46.1			4.5	
Delay (s)		17.5			37.1			67.8			22.5	
Level of Service		B			D			E			C	
Approach Delay (s/veh)		17.5			37.1			67.8			22.5	
Approach LOS		B			D			E			C	

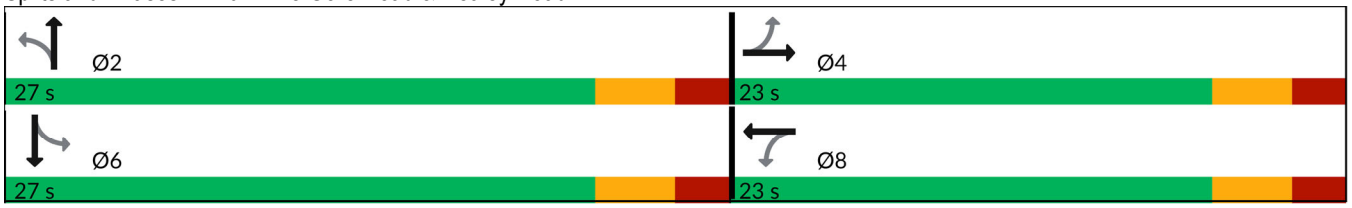
Intersection Summary			
HCM 2000 Control Delay (s/veh)	36.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	64.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	379	46	85	301	20	41	112	113	165	396	7
Future Volume (vph)	4	379	46	85	301	20	41	112	113	165	396	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.993			0.943			0.998	
Flt Protected					0.990			0.992			0.986	
Satd. Flow (prot)	0	1842	0	0	1776	0	0	1644	0	0	1801	0
Flt Permitted		0.996			0.786			0.882			0.822	
Satd. Flow (perm)	0	1835	0	0	1410	0	0	1461	0	0	1501	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			6			98			2	
Link Speed (k/h)		70			60			80			80	
Link Distance (m)		342.2			229.1			1462.6			201.4	
Travel Time (s)		17.6			13.7			65.8			9.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	33%	1%	4%	2%	6%	6%	20%	10%	2%	6%	3%	0%
Adj. Flow (vph)	4	416	51	93	331	22	45	123	124	181	435	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	471	0	0	446	0	0	292	0	0	624	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2			2			2			2	
Detector Template		Thru			Thru			Thru			Thru	
Leading Detector (m)		10.0			10.0			10.0			10.0	
Trailing Detector (m)		0.0			0.0			0.0			0.0	
Detector 1 Position(m)		0.0			0.0			0.0			0.0	
Detector 1 Size(m)		0.6			0.6			0.6			0.6	
Detector 1 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0			0.0			0.0	
Detector 1 Queue (s)		0.0			0.0			0.0			0.0	
Detector 1 Delay (s)		0.0			0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	23.0	23.0		23.0	23.0		27.0	27.0		27.0	27.0	
Total Split (%)	46.0%	46.0%		46.0%	46.0%		54.0%	54.0%		54.0%	54.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		22.0	22.0		22.0	22.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		18.0			18.0			23.0			23.0	
Actuated g/C Ratio		0.37			0.37			0.47			0.47	
v/c Ratio		0.69			0.86			0.40			0.88	
Control Delay (s/veh)		19.0			33.6			7.7			30.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		19.0			33.6			7.7			30.9	
LOS		B			C			A			C	
Approach Delay (s/veh)		19.0			33.6			7.7			30.9	
Approach LOS		B			C			A			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 49			
Natural Cycle: 50			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay (s/veh): 24.8		Intersection LOS: C	
Intersection Capacity Utilization 103.5%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 101: The Gore Road & Healey Road



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	471	446	292	624
v/c Ratio	0.69	0.86	0.40	0.88
Control Delay (s/veh)	19.0	33.6	7.7	30.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	19.0	33.6	7.7	30.9
Queue Length 50th (m)	34.0	35.6	10.5	49.7
Queue Length 95th (m)	60.9	#82.0	24.4	#110.0
Internal Link Dist (m)	318.2	205.1	1438.6	177.4
Turn Bay Length (m)				
Base Capacity (vph)	720	551	738	706
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.65	0.81	0.40	0.88

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	379	46	85	301	20	41	112	113	165	396	7
Future Volume (vph)	4	379	46	85	301	20	41	112	113	165	396	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.94			1.00	
Flt Protected		1.00			0.99			0.99			0.99	
Satd. Flow (prot)		1842			1776			1644			1801	
Flt Permitted		1.00			0.79			0.88			0.82	
Satd. Flow (perm)		1836			1411			1460			1502	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	4	416	51	93	331	22	45	123	124	181	435	8
RTOR Reduction (vph)	0	9	0	0	4	0	0	52	0	0	1	0
Lane Group Flow (vph)	0	462	0	0	442	0	0	240	0	0	623	0
Heavy Vehicles (%)	33%	1%	4%	2%	6%	6%	20%	10%	2%	6%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		17.0			17.0			22.0			22.0	
Effective Green, g (s)		18.0			18.0			23.0			23.0	
Actuated g/C Ratio		0.37			0.37			0.47			0.47	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		674			518			685			705	
v/s Ratio Prot												
v/s Ratio Perm		0.25			c0.31			0.16			c0.41	
v/c Ratio		0.69			0.85			0.35			0.88	
Uniform Delay, d1		13.1			14.3			8.3			11.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.9			12.9			1.4			15.1	
Delay (s)		16.0			27.2			9.7			26.8	
Level of Service		B			C			A			C	
Approach Delay (s/veh)		16.0			27.2			9.7			26.8	
Approach LOS		B			C			A			C	

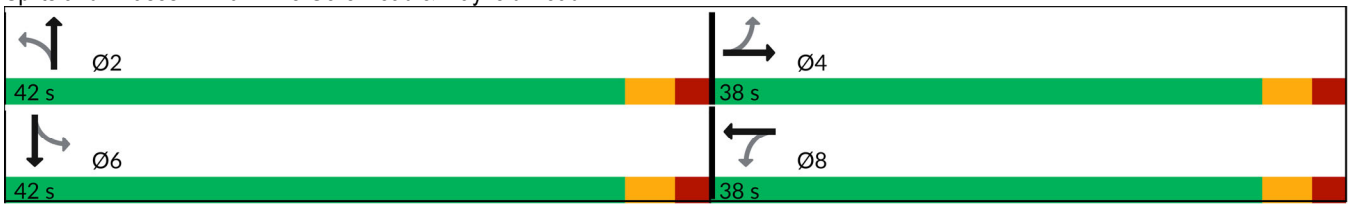
Intersection Summary			
HCM 2000 Control Delay (s/veh)	21.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	49.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	103.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	596	79	93	435	37	49	159	105	90	533	55
Future Volume (vph)	23	596	79	93	435	37	49	159	105	90	533	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.991			0.955			0.989	
Flt Protected		0.998			0.992			0.992			0.993	
Satd. Flow (prot)	0	1625	0	0	1557	0	0	1703	0	0	1809	0
Flt Permitted		0.974			0.693			0.846			0.912	
Satd. Flow (perm)	0	1586	0	0	1088	0	0	1453	0	0	1661	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			5			43			8	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		265.3			265.9			254.2			1282.4	
Travel Time (s)		15.9			16.0			15.3			76.9	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	10%	15%	16%	7%	23%	17%	20%	3%	3%	10%	1%	13%
Adj. Flow (vph)	24	614	81	96	448	38	51	164	108	93	549	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	719	0	0	582	0	0	323	0	0	699	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2			2			2			2	
Detector Template		Thru			Thru			Thru			Thru	
Leading Detector (m)		10.0			10.0			10.0			10.0	
Trailing Detector (m)		0.0			0.0			0.0			0.0	
Detector 1 Position(m)		0.0			0.0			0.0			0.0	
Detector 1 Size(m)		0.6			0.6			0.6			0.6	
Detector 1 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0			0.0			0.0	
Detector 1 Queue (s)		0.0			0.0			0.0			0.0	
Detector 1 Delay (s)		0.0			0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	38.0	38.0		38.0	38.0		42.0	42.0		42.0	42.0	
Total Split (%)	47.5%	47.5%		47.5%	47.5%		52.5%	52.5%		52.5%	52.5%	
Maximum Green (s)	33.0	33.0		33.0	33.0		37.0	37.0		37.0	37.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		34.0			34.0			38.0			38.0	
Actuated g/C Ratio		0.43			0.43			0.48			0.48	
v/c Ratio		1.06			1.25			0.45			0.88	
Control Delay (s/veh)		76.2			154.8			14.5			33.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		76.2			154.8			14.5			33.9	
LOS		E			F			B			C	
Approach Delay (s/veh)		76.2			154.8			14.5			33.9	
Approach LOS		E			F			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.25			
Intersection Signal Delay (s/veh): 74.6		Intersection LOS: E	
Intersection Capacity Utilization 121.7%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 102: The Gore Road & Mayfield Road



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	719	582	323	699
v/c Ratio	1.06	1.25	0.45	0.88
Control Delay (s/veh)	76.2	154.8	14.5	33.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	76.2	154.8	14.5	33.9
Queue Length 50th (m)	~127.5	~118.6	28.1	95.3
Queue Length 95th (m)	#195.1	#181.4	49.5	#167.6
Internal Link Dist (m)	241.3	241.9	230.2	1258.4
Turn Bay Length (m)				
Base Capacity (vph)	679	465	712	793
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.06	1.25	0.45	0.88

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	596	79	93	435	37	49	159	105	90	533	55
Future Volume (vph)	23	596	79	93	435	37	49	159	105	90	533	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.95			0.99	
Flt Protected		1.00			0.99			0.99			0.99	
Satd. Flow (prot)		1625			1557			1703			1809	
Flt Permitted		0.97			0.69			0.85			0.91	
Satd. Flow (perm)		1586			1087			1451			1661	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	24	614	81	96	448	38	51	164	108	93	549	57
RTOR Reduction (vph)	0	6	0	0	3	0	0	23	0	0	4	0
Lane Group Flow (vph)	0	713	0	0	579	0	0	300	0	0	695	0
Heavy Vehicles (%)	10%	15%	16%	7%	23%	17%	20%	3%	3%	10%	1%	13%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0			37.0			37.0	
Effective Green, g (s)		34.0			34.0			38.0			38.0	
Actuated g/C Ratio		0.43			0.43			0.48			0.48	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		674			461			689			788	
v/s Ratio Prot												
v/s Ratio Perm		0.45			c0.53			0.21			c0.42	
v/c Ratio		1.06			1.26			0.44			0.88	
Uniform Delay, d1		23.0			23.0			13.9			19.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		51.1			132.0			2.0			13.6	
Delay (s)		74.1			155.0			15.9			32.5	
Level of Service		E			F			B			C	
Approach Delay (s/veh)		74.1			155.0			15.9			32.5	
Approach LOS		E			F			B			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	73.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	121.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	61	5	60	23	5	151
Future Volume (vph)	61	5	60	23	5	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	55.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.963			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1770	1583	1794	0	0	1859
Flt Permitted	0.950					0.998
Satd. Flow (perm)	1770	1583	1794	0	0	1859
Link Speed (k/h)	50		50			50
Link Distance (m)	1097.0		211.0			177.0
Travel Time (s)	79.0		15.2			12.7
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	61	5	60	23	5	151
Shared Lane Traffic (%)						
Lane Group Flow (vph)	61	5	83	0	0	156
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	100	100		100	100	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	22.0%	ICU Level of Service	A
Analysis Period (min)	15		

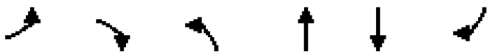


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	61	5	60	23	5	151
Future Volume (Veh/h)	61	5	60	23	5	151
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	61	5	60	23	5	151
Pedestrians						
Lane Width (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	233	72			83	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	233	72			83	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	99			100	
cM capacity (veh/h)	753	991			1514	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1
Volume Total	61	5	83	156
Volume Left	61	0	0	5
Volume Right	0	5	23	0
cSH	753	991	1700	1514
Volume to Capacity	0.08	0.00*	0.05	0.00*
Queue Length 95th (m)	2.1	0.1	0.0	0.1
Control Delay (s/veh)	10.2	8.7	0.0	0.3
Lane LOS	B	A		A
Approach Delay (s/veh)	10.1		0.0	0.3
Approach LOS	B			

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	22.0%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.

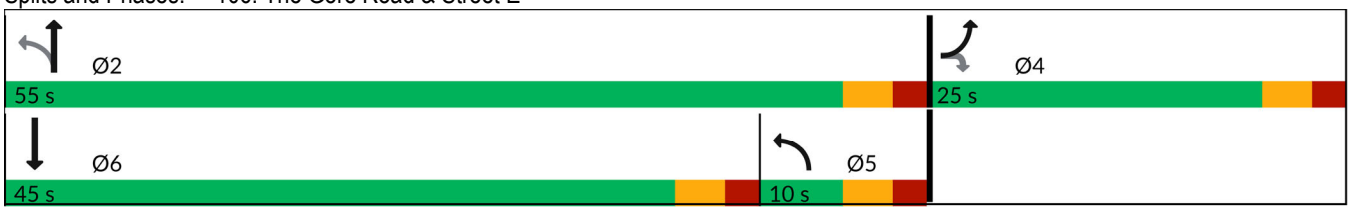


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	94	142	24	172	485	42
Future Volume (vph)	94	142	24	172	485	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	55.0	0.0	55.0			50.0
Storage Lanes	1	1	1			0
Taper Length (m)	7.5		7.5			
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850			0.989	
Flt Protected	0.950		0.950	0.999		
Satd. Flow (prot)	1770	1583	1681	1768	1842	0
Flt Permitted	0.950		0.384	0.997		
Satd. Flow (perm)	1770	1583	680	1764	1842	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		142			8	
Link Speed (k/h)	50			80	80	
Link Distance (m)	268.1			396.2	1462.6	
Travel Time (s)	19.3			17.8	65.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	94	142	24	172	485	42
Shared Lane Traffic (%)			10%			
Lane Group Flow (vph)	94	142	22	174	527	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25			15
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	2.0	2.0	2.0	10.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	2.0	2.0	0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	23.0	23.0	10.0	23.0	23.0	
Total Split (s)	25.0	25.0	10.0	55.0	45.0	
Total Split (%)	31.3%	31.3%	12.5%	68.8%	56.3%	
Maximum Green (s)	20.0	20.0	5.0	50.0	40.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	
Act Effct Green (s)	9.3	9.3	28.1	25.1	23.8	
Actuated g/C Ratio	0.24	0.24	0.72	0.64	0.61	
v/c Ratio	0.22	0.29	0.03	0.15	0.47	
Control Delay (s/veh)	16.2	6.1	2.6	4.7	8.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	16.2	6.1	2.6	4.7	8.7	
LOS	B	A	A	A	A	
Approach Delay (s/veh)	10.1			4.4	8.7	
Approach LOS	B			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 39			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.47			
Intersection Signal Delay (s/veh): 8.2		Intersection LOS: A	
Intersection Capacity Utilization 43.5%		ICU Level of Service A	
Analysis Period (min) 15			

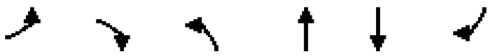
Splits and Phases: 106: The Gore Road & Street E





Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	94	142	22	174	527
v/c Ratio	0.22	0.29	0.03	0.15	0.47
Control Delay (s/veh)	16.2	6.1	2.6	4.7	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	16.2	6.1	2.6	4.7	8.7
Queue Length 50th (m)	3.7	0.0	0.3	4.7	16.8
Queue Length 95th (m)	20.4	12.3	2.6	12.8	66.6
Internal Link Dist (m)	244.1			372.2	1438.6
Turn Bay Length (m)	55.0		55.0		
Base Capacity (vph)	1021	973	654	1709	1724
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.09	0.15	0.03	0.10	0.31

Intersection Summary



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	94	142	24	172	485	42
Future Volume (vph)	94	142	24	172	485	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1681	1769	1843	
Flt Permitted	0.95	1.00	0.38	1.00	1.00	
Satd. Flow (perm)	1770	1583	679	1764	1843	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	94	142	24	172	485	42
RTOR Reduction (vph)	0	117	0	0	4	0
Lane Group Flow (vph)	94	25	22	174	523	0
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	6.7	6.7	27.2	27.2	21.6	
Effective Green, g (s)	7.7	7.7	28.2	28.2	22.6	
Actuated g/C Ratio	0.18	0.18	0.64	0.64	0.51	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	310	277	472	1133	948	
v/s Ratio Prot	c0.05		0.00	c0.01	c0.28	
v/s Ratio Perm		0.02	0.03	0.09		
v/c Ratio	0.30	0.09	0.05	0.15	0.55	
Uniform Delay, d1	15.8	15.2	4.9	3.1	7.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	0.1	0.0	0.1	0.7	
Delay (s)	16.3	15.3	5.0	3.2	7.9	
Level of Service	B	B	A	A	A	
Approach Delay (s/veh)	15.7			3.4	7.9	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	43.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	29	0	0	10	0	0
Future Volume (vph)	29	0	0	10	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.865		
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	0	1611	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	1611	0	0
Link Speed (k/h)	50		50			50
Link Distance (m)	149.6		433.7			110.9
Travel Time (s)	10.8		31.2			8.0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	29	0	0	10	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	0	0	10	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Sign Control	Stop		Stop			Stop

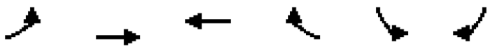
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	29	0	0	10	0	0
Future Volume (vph)	29	0	0	10	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	29	0	0	10	0	0

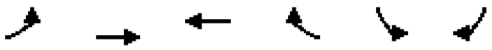
Direction, Lane #	WB 1	NB 1
Volume Total (vph)	29	10
Volume Left (vph)	29	0
Volume Right (vph)	0	10
Hadj (s)	0.23	-0.57
Departure Headway (s)	4.2	3.4
Degree Utilization, x	0.03	0.01
Capacity (veh/h)	859	1046
Control Delay (s/veh)	7.3	6.4
Approach Delay (s/veh)	7.3	6.4
Approach LOS	A	A

Intersection Summary			
Delay	7.1		
Level of Service	A		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	28	0	0	66	236	66
Future Volume (vph)	28	0	0	66	236	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865		0.970	
Flt Protected		0.950			0.962	
Satd. Flow (prot)	0	1770	1611	0	1738	0
Flt Permitted		0.950			0.962	
Satd. Flow (perm)	0	1770	1611	0	1738	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		1097.0	268.1		433.7	
Travel Time (s)		79.0	19.3		31.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	28	0	0	66	236	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	28	66	0	302	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.6	3.6		3.6	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Sign Control		Stop	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	28	0	0	66	236	66
Future Volume (vph)	28	0	0	66	236	66
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	28	0	0	66	236	66

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	28	66	302
Volume Left (vph)	28	0	236
Volume Right (vph)	0	66	66
Hadj (s)	0.23	-0.57	0.06
Departure Headway (s)	4.9	4.1	4.2
Degree Utilization, x	0.04	0.07	0.35
Capacity (veh/h)	680	817	843
Control Delay (s/veh)	8.1	7.4	9.4
Approach Delay (s/veh)	8.1	7.4	9.4
Approach LOS	A	A	A

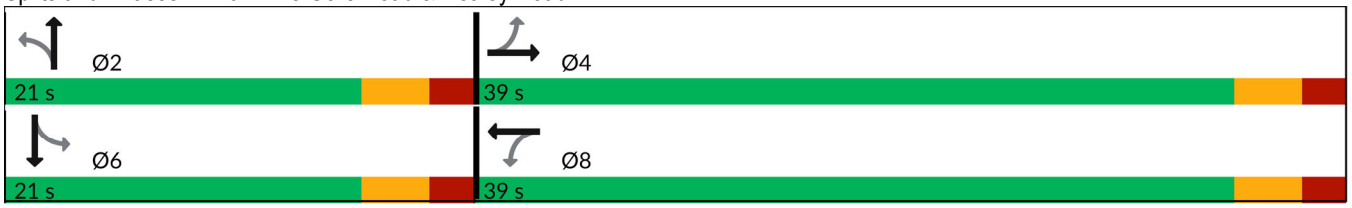
Intersection Summary			
Delay	9.0		
Level of Service	A		
Intersection Capacity Utilization	32.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	316	43	132	502	46	51	336	79	23	187	11
Future Volume (vph)	15	316	43	132	502	46	51	336	79	23	187	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.984			0.991			0.977			0.993	
Flt Protected		0.998			0.990			0.995			0.995	
Satd. Flow (prot)	0	1803	0	0	1847	0	0	1785	0	0	1787	0
Flt Permitted		0.968			0.853			0.945			0.929	
Satd. Flow (perm)	0	1749	0	0	1591	0	0	1695	0	0	1668	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			10			17			4	
Link Speed (k/h)		70			60			80			80	
Link Distance (m)		342.2			229.1			1462.6			201.4	
Travel Time (s)		17.6			13.7			65.8			9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	8%	1%	1%	0%	6%	3%	4%	16%	4%	0%
Adj. Flow (vph)	16	343	47	143	546	50	55	365	86	25	203	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	406	0	0	739	0	0	506	0	0	240	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2			2			2			2	
Detector Template		Thru			Thru			Thru			Thru	
Leading Detector (m)		10.0			10.0			10.0			10.0	
Trailing Detector (m)		0.0			0.0			0.0			0.0	
Detector 1 Position(m)		0.0			0.0			0.0			0.0	
Detector 1 Size(m)		0.6			0.6			0.6			0.6	
Detector 1 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0			0.0			0.0	
Detector 1 Queue (s)		0.0			0.0			0.0			0.0	
Detector 1 Delay (s)		0.0			0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	39.0	39.0		39.0	39.0		21.0	21.0		21.0	21.0	
Total Split (%)	65.0%	65.0%		65.0%	65.0%		35.0%	35.0%		35.0%	35.0%	
Maximum Green (s)	34.0	34.0		34.0	34.0		16.0	16.0		16.0	16.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		30.2			30.2			19.2			19.2	
Actuated g/C Ratio		0.53			0.53			0.33			0.33	
v/c Ratio		0.44			0.88			0.88			0.43	
Control Delay (s/veh)		9.4			25.9			39.4			19.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		9.4			25.9			39.4			19.2	
LOS		A			C			D			B	
Approach Delay (s/veh)		9.4			25.9			39.4			19.2	
Approach LOS		A			C			D			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 57.5			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay (s/veh): 25.1		Intersection LOS: C	
Intersection Capacity Utilization 100.6%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 101: The Gore Road & Healey Road



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	406	739	506	240
v/c Ratio	0.44	0.88	0.88	0.43
Control Delay (s/veh)	9.4	25.9	39.4	19.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.4	25.9	39.4	19.2
Queue Length 50th (m)	23.2	63.4	57.0	22.6
Queue Length 95th (m)	40.2	#134.4	#114.3	41.5
Internal Link Dist (m)	318.2	205.1	1438.6	177.4
Turn Bay Length (m)				
Base Capacity (vph)	1084	983	578	560
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.37	0.75	0.88	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	316	43	132	502	46	51	336	79	23	187	11
Future Volume (vph)	15	316	43	132	502	46	51	336	79	23	187	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.99	
Flt Protected		1.00			0.99			0.99			0.99	
Satd. Flow (prot)		1804			1847			1784			1787	
Flt Permitted		0.97			0.85			0.95			0.93	
Satd. Flow (perm)		1750			1591			1696			1669	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	343	47	143	546	50	55	365	86	25	203	12
RTOR Reduction (vph)	0	9	0	0	5	0	0	11	0	0	3	0
Lane Group Flow (vph)	0	397	0	0	734	0	0	495	0	0	237	0
Heavy Vehicles (%)	0%	3%	8%	1%	1%	0%	6%	3%	4%	16%	4%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.2			29.2			18.2			18.2	
Effective Green, g (s)		30.2			30.2			19.2			19.2	
Actuated g/C Ratio		0.53			0.53			0.33			0.33	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		920			837			567			558	
v/s Ratio Prot												
v/s Ratio Perm		0.23			c0.46			c0.29			0.14	
v/c Ratio		0.43			0.88			0.87			0.43	
Uniform Delay, d1		8.3			12.0			17.9			14.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.3			10.3			16.8			2.4	
Delay (s)		8.7			22.2			34.7			17.2	
Level of Service		A			C			C			B	
Approach Delay (s/veh)		8.7			22.2			34.7			17.2	
Approach LOS		A			C			C			B	

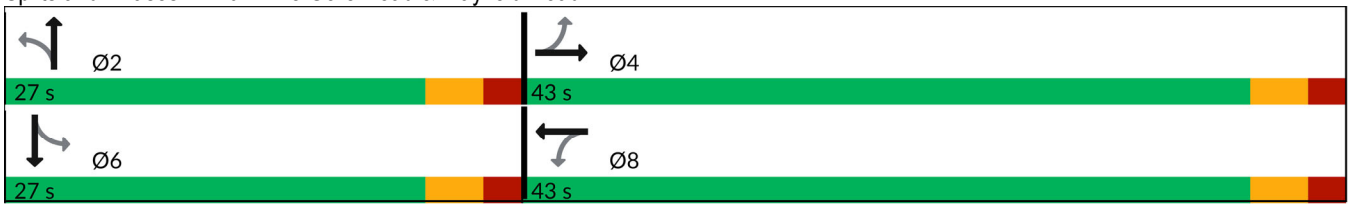
Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	57.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	491	74	57	659	82	74	409	60	68	211	63
Future Volume (vph)	66	491	74	57	659	82	74	409	60	68	211	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.984			0.986			0.985			0.975	
Flt Protected		0.995			0.996			0.993			0.990	
Satd. Flow (prot)	0	1577	0	0	1627	0	0	1795	0	0	1774	0
Flt Permitted		0.861			0.921			0.869			0.696	
Satd. Flow (perm)	0	1365	0	0	1505	0	0	1571	0	0	1247	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			13			9			17	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		265.3			265.9			254.2			1282.4	
Travel Time (s)		15.9			16.0			15.3			76.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	22%	7%	0%	17%	6%	3%	3%	8%	17%	0%	0%
Adj. Flow (vph)	72	534	80	62	716	89	80	445	65	74	229	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	686	0	0	867	0	0	590	0	0	371	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2			2			2			2	
Detector Template		Thru			Thru			Thru			Thru	
Leading Detector (m)		10.0			10.0			10.0			10.0	
Trailing Detector (m)		0.0			0.0			0.0			0.0	
Detector 1 Position(m)		0.0			0.0			0.0			0.0	
Detector 1 Size(m)		0.6			0.6			0.6			0.6	
Detector 1 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0			0.0			0.0	
Detector 1 Queue (s)		0.0			0.0			0.0			0.0	
Detector 1 Delay (s)		0.0			0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	43.0	43.0		43.0	43.0		27.0	27.0		27.0	27.0	
Total Split (%)	61.4%	61.4%		61.4%	61.4%		38.6%	38.6%		38.6%	38.6%	
Maximum Green (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		39.0			39.0			23.0			23.0	
Actuated g/C Ratio		0.56			0.56			0.33			0.33	
v/c Ratio		0.89			1.03			1.13			0.88	
Control Delay (s/veh)		30.9			56.6			106.1			46.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		30.9			56.6			106.1			46.5	
LOS		C			E			F			D	
Approach Delay (s/veh)		30.9			56.6			106.1			46.5	
Approach LOS		C			E			F			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay (s/veh): 59.7		Intersection LOS: E	
Intersection Capacity Utilization 94.0%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 102: The Gore Road & Mayfield Road



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	686	867	590	371
v/c Ratio	0.89	1.03	1.13	0.88
Control Delay (s/veh)	30.9	56.6	106.1	46.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.9	56.6	106.1	46.5
Queue Length 50th (m)	74.7	~120.1	~96.2	45.6
Queue Length 95th (m)	#150.5	#198.2	#156.4	#95.4
Internal Link Dist (m)	241.3	241.9	230.2	1258.4
Turn Bay Length (m)				
Base Capacity (vph)	767	844	522	421
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.89	1.03	1.13	0.88

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

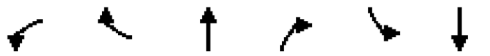
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	491	74	57	659	82	74	409	60	68	211	63
Future Volume (vph)	66	491	74	57	659	82	74	409	60	68	211	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.99			0.98	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1577			1628			1795			1775	
Flt Permitted		0.86			0.92			0.87			0.70	
Satd. Flow (perm)		1365			1504			1571			1247	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	534	80	62	716	89	80	445	65	74	229	68
RTOR Reduction (vph)	0	7	0	0	6	0	0	6	0	0	11	0
Lane Group Flow (vph)	0	679	0	0	861	0	0	584	0	0	360	0
Heavy Vehicles (%)	0%	22%	7%	0%	17%	6%	3%	3%	8%	17%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		38.0			38.0			22.0			22.0	
Effective Green, g (s)		39.0			39.0			23.0			23.0	
Actuated g/C Ratio		0.56			0.56			0.33			0.33	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		760			837			516			409	
v/s Ratio Prot												
v/s Ratio Perm		0.50			c0.57			c0.37			0.29	
v/c Ratio		0.89			1.03			1.13			0.88	
Uniform Delay, d1		13.7			15.5			23.5			22.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		12.9			38.7			81.2			22.6	
Delay (s)		26.6			54.2			104.7			44.8	
Level of Service		C			D			F			D	
Approach Delay (s/veh)		26.6			54.2			104.7			44.8	
Approach LOS		C			D			F			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	57.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	30	10	186	35	8	93
Future Volume (vph)	30	10	186	35	8	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	55.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.979			
Flt Protected	0.950					0.996
Satd. Flow (prot)	1770	1583	1824	0	0	1855
Flt Permitted	0.950					0.996
Satd. Flow (perm)	1770	1583	1824	0	0	1855
Link Speed (k/h)	50		50			50
Link Distance (m)	1097.0		211.0			177.0
Travel Time (s)	79.0		15.2			12.7
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	10	186	35	8	93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	10	221	0	0	101
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	100	100		100	100	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.9%		ICU Level of Service A	
Analysis Period (min) 15			

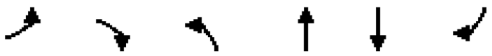


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	30	10	186	35	8	93
Future Volume (Veh/h)	30	10	186	35	8	93
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	30	10	186	35	8	93
Pedestrians						
Lane Width (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	313	204			221	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	313	204			221	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	99			99	
cM capacity (veh/h)	676	837			1348	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1
Volume Total	30	10	221	101
Volume Left	30	0	0	8
Volume Right	0	10	35	0
cSH	676	837	1700	1348
Volume to Capacity	0.04	0.01	0.13	0.00*
Queue Length 95th (m)	1.1	0.3	0.0	0.1
Control Delay (s/veh)	10.6	9.4	0.0	0.7
Lane LOS	B	A		A
Approach Delay (s/veh)	10.3		0.0	0.7
Approach LOS	B			

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	21.9%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.

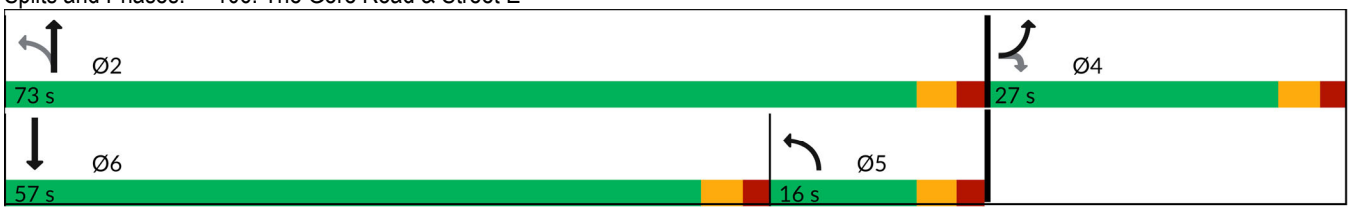


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	73	67	131	392	264	97
Future Volume (vph)	73	67	131	392	264	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	55.0	0.0	55.0			50.0
Storage Lanes	1	1	1			0
Taper Length (m)	7.5		7.5			
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850			0.964	
Flt Protected	0.950		0.950	0.998		
Satd. Flow (prot)	1770	1583	1681	1766	1796	0
Flt Permitted	0.950		0.494	0.992		
Satd. Flow (perm)	1770	1583	874	1755	1796	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		67			28	
Link Speed (k/h)	50			80	80	
Link Distance (m)	268.1			396.2	1462.6	
Travel Time (s)	19.3			17.8	65.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	73	67	131	392	264	97
Shared Lane Traffic (%)			10%			
Lane Group Flow (vph)	73	67	118	405	361	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25			15
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	2.0	2.0	2.0	10.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	2.0	2.0	0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	23.0	23.0	10.0	23.0	23.0	
Total Split (s)	27.0	27.0	16.0	73.0	57.0	
Total Split (%)	27.0%	27.0%	16.0%	73.0%	57.0%	
Maximum Green (s)	22.0	22.0	11.0	68.0	52.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	
Act Effct Green (s)	8.4	8.4	26.4	27.6	19.3	
Actuated g/C Ratio	0.21	0.21	0.66	0.69	0.48	
v/c Ratio	0.20	0.17	0.16	0.34	0.41	
Control Delay (s/veh)	16.5	6.6	4.7	5.0	11.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	16.5	6.6	4.7	5.0	11.6	
LOS	B	A	A	A	B	
Approach Delay (s/veh)	11.8			4.9	11.6	
Approach LOS	B			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 40.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.41			
Intersection Signal Delay (s/veh): 8.2		Intersection LOS: A	
Intersection Capacity Utilization 54.6%		ICU Level of Service A	
Analysis Period (min) 15			

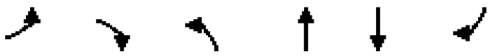
Splits and Phases: 106: The Gore Road & Street E





Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	73	67	118	405	361
v/c Ratio	0.20	0.17	0.16	0.34	0.41
Control Delay (s/veh)	16.5	6.6	4.7	5.0	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	16.5	6.6	4.7	5.0	11.6
Queue Length 50th (m)	4.5	0.0	3.0	12.6	19.1
Queue Length 95th (m)	14.2	7.6	8.3	27.7	41.2
Internal Link Dist (m)	244.1			372.2	1438.6
Turn Bay Length (m)	55.0		55.0		
Base Capacity (vph)	1055	971	908	1756	1796
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.07	0.07	0.13	0.23	0.20

Intersection Summary



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	73	67	131	392	264	97
Future Volume (vph)	73	67	131	392	264	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1681	1767	1795	
Flt Permitted	0.95	1.00	0.49	0.99	1.00	
Satd. Flow (perm)	1770	1583	874	1755	1795	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	73	67	131	392	264	97
RTOR Reduction (vph)	0	56	0	0	16	0
Lane Group Flow (vph)	73	11	118	405	345	0
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	5.8	5.8	26.6	26.6	17.1	
Effective Green, g (s)	6.8	6.8	27.6	27.6	18.1	
Actuated g/C Ratio	0.16	0.16	0.65	0.65	0.43	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	283	253	673	1143	766	
v/s Ratio Prot	c0.04		0.02	c0.05	c0.19	
v/s Ratio Perm		0.01	0.09	0.18		
v/c Ratio	0.26	0.04	0.18	0.35	0.45	
Uniform Delay, d1	15.6	15.0	3.8	3.4	8.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	0.1	0.1	0.2	0.4	
Delay (s)	16.1	15.1	4.0	3.5	9.0	
Level of Service	B	B	A	A	A	
Approach Delay (s/veh)	15.6			3.6	9.0	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	42.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	0	0	27	0	0
Future Volume (vph)	19	0	0	27	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.865		
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	0	1611	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	1611	0	0
Link Speed (k/h)	50		50			50
Link Distance (m)	149.6		433.7			110.9
Travel Time (s)	10.8		31.2			8.0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	19	0	0	27	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	0	27	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Sign Control	Stop		Stop			Stop

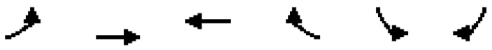
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	19	0	0	27	0	0
Future Volume (vph)	19	0	0	27	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	19	0	0	27	0	0

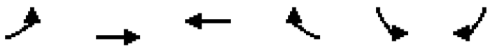
Direction, Lane #	WB 1	NB 1
Volume Total (vph)	19	27
Volume Left (vph)	19	0
Volume Right (vph)	0	27
Hadj (s)	0.23	-0.57
Departure Headway (s)	4.2	3.4
Degree Utilization, x	0.02	0.03
Capacity (veh/h)	849	1057
Control Delay (s/veh)	7.3	6.5
Approach Delay (s/veh)	7.3	6.5
Approach LOS	A	A

Intersection Summary			
Delay	6.8		
Level of Service	A		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	43	0	0	228	140	41
Future Volume (vph)	43	0	0	228	140	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865		0.969	
Flt Protected		0.950			0.963	
Satd. Flow (prot)	0	1770	1611	0	1738	0
Flt Permitted		0.950			0.963	
Satd. Flow (perm)	0	1770	1611	0	1738	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		1097.0	268.1		433.7	
Travel Time (s)		79.0	19.3		31.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	43	0	0	228	140	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	43	228	0	181	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.6	3.6		3.6	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Sign Control		Stop	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	43	0	0	228	140	41
Future Volume (vph)	43	0	0	228	140	41
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	43	0	0	228	140	41

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	43	228	181
Volume Left (vph)	43	0	140
Volume Right (vph)	0	228	41
Hadj (s)	0.23	-0.57	0.05
Departure Headway (s)	4.8	3.8	4.5
Degree Utilization, x	0.06	0.24	0.23
Capacity (veh/h)	701	901	755
Control Delay (s/veh)	8.1	8.0	8.8
Approach Delay (s/veh)	8.1	8.0	8.8
Approach LOS	A	A	A

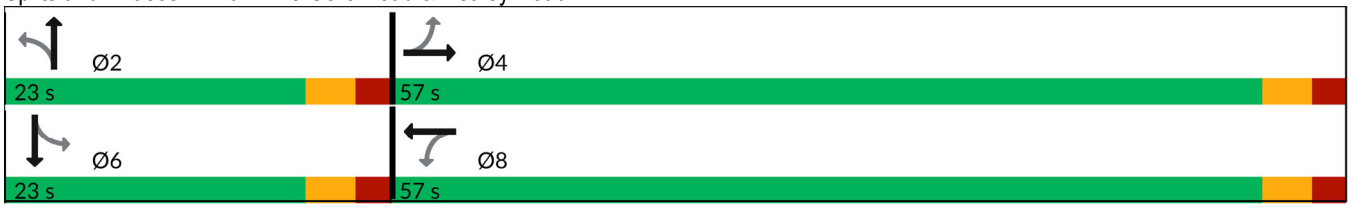
Intersection Summary				
Delay	8.4			
Level of Service	A			
Intersection Capacity Utilization	37.7%	ICU Level of Service	A	
Analysis Period (min)	15			

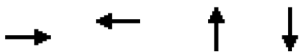
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	160	0	280	380	5	35	190	20	15	300	40
Future Volume (vph)	15	160	0	280	380	5	35	190	20	15	300	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt					0.999			0.988			0.983	
Flt Protected		0.996			0.979			0.993			0.998	
Satd. Flow (prot)	0	1825	0	0	1781	0	0	3198	0	0	3446	0
Flt Permitted		0.939			0.789			0.863			0.937	
Satd. Flow (perm)	0	1721	0	0	1436	0	0	2779	0	0	3235	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1			11			16	
Link Speed (k/h)		70			60			80			80	
Link Distance (m)		342.2			229.1			1858.8			201.4	
Travel Time (s)		17.6			13.7			83.6			9.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	33%	1%	4%	2%	6%	6%	20%	10%	2%	6%	3%	0%
Adj. Flow (vph)	16	176	0	308	418	5	38	209	22	16	330	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	192	0	0	731	0	0	269	0	0	390	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2			2			2			2	
Detector Template		Thru			Thru			Thru			Thru	
Leading Detector (m)		10.0			10.0			10.0			10.0	
Trailing Detector (m)		0.0			0.0			0.0			0.0	
Detector 1 Position(m)		0.0			0.0			0.0			0.0	
Detector 1 Size(m)		0.6			0.6			0.6			0.6	
Detector 1 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0			0.0			0.0	
Detector 1 Queue (s)		0.0			0.0			0.0			0.0	
Detector 1 Delay (s)		0.0			0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	57.0	57.0		57.0	57.0		23.0	23.0		23.0	23.0	
Total Split (%)	71.3%	71.3%		71.3%	71.3%		28.8%	28.8%		28.8%	28.8%	
Maximum Green (s)	52.0	52.0		52.0	52.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		38.7			38.7			19.6			19.6	
Actuated g/C Ratio		0.58			0.58			0.29			0.29	
v/c Ratio		0.19			0.88			0.33			0.40	
Control Delay (s/veh)		6.3			24.2			21.9			22.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		6.3			24.2			21.9			22.2	
LOS		A			C			C			C	
Approach Delay (s/veh)		6.3			24.2			21.9			22.2	
Approach LOS		A			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 66.5			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay (s/veh): 21.1		Intersection LOS: C	
Intersection Capacity Utilization 75.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 101: The Gore Road & Healey Road





Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	192	731	269	390
v/c Ratio	0.19	0.88	0.33	0.40
Control Delay (s/veh)	6.3	24.2	21.9	22.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.3	24.2	21.9	22.2
Queue Length 50th (m)	10.1	69.4	14.0	20.7
Queue Length 95th (m)	17.7	121.5	29.6	41.0
Internal Link Dist (m)	318.2	205.1	1834.8	177.4
Turn Bay Length (m)				
Base Capacity (vph)	1393	1163	825	963
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.14	0.63	0.33	0.40

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	160	0	280	380	5	35	190	20	15	300	40
Future Volume (vph)	15	160	0	280	380	5	35	190	20	15	300	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		1.00			1.00			0.99			0.98	
Flt Protected		1.00			0.98			0.99			1.00	
Satd. Flow (prot)		1825			1782			3197			3446	
Flt Permitted		0.94			0.79			0.86			0.94	
Satd. Flow (perm)		1721			1436			2777			3235	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	16	176	0	308	418	5	38	209	22	16	330	44
RTOR Reduction (vph)	0	0	0	0	0	0	0	8	0	0	11	0
Lane Group Flow (vph)	0	192	0	0	731	0	0	261	0	0	379	0
Heavy Vehicles (%)	33%	1%	4%	2%	6%	6%	20%	10%	2%	6%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		37.7			37.7			18.5			18.5	
Effective Green, g (s)		38.7			38.7			19.5			19.5	
Actuated g/C Ratio		0.58			0.58			0.29			0.29	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1006			839			817			952	
v/s Ratio Prot												
v/s Ratio Perm		0.11			c0.51			0.09			c0.12	
v/c Ratio		0.19			0.87			0.32			0.40	
Uniform Delay, d1		6.4			11.6			18.2			18.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.1			9.8			1.0			1.2	
Delay (s)		6.5			21.4			19.2			19.9	
Level of Service		A			C			B			B	
Approach Delay (s/veh)		6.5			21.4			19.2			19.9	
Approach LOS		A			C			B			B	

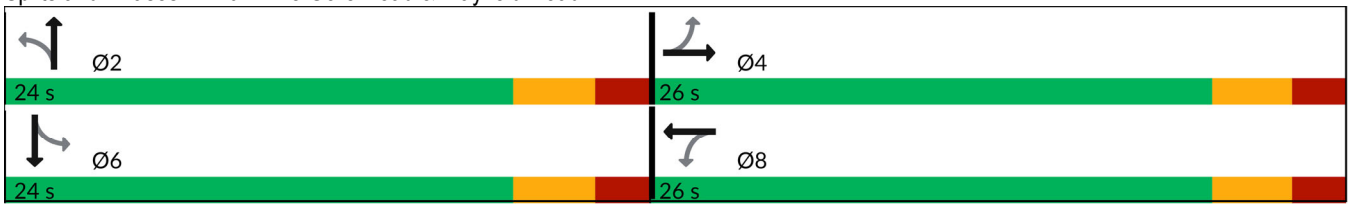
Intersection Summary			
HCM 2000 Control Delay (s/veh)	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	66.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	805	30	10	340	10	25	160	10	40	410	120
Future Volume (vph)	180	805	30	10	340	10	25	160	10	40	410	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.996			0.996			0.993			0.968	
Flt Protected		0.991			0.999			0.994			0.997	
Satd. Flow (prot)	0	4485	0	0	2934	0	0	3387	0	0	3345	0
Flt Permitted		0.800			0.920			0.868			0.924	
Satd. Flow (perm)	0	3621	0	0	2702	0	0	2958	0	0	3100	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			7			10			80	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		265.3			265.9			254.2			1282.4	
Travel Time (s)		15.9			16.0			15.3			76.9	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	10%	15%	16%	7%	23%	17%	20%	3%	3%	10%	1%	13%
Adj. Flow (vph)	186	830	31	10	351	10	26	165	10	41	423	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1047	0	0	371	0	0	201	0	0	588	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2			2			2			2	
Detector Template		Thru			Thru			Thru			Thru	
Leading Detector (m)		10.0			10.0			10.0			10.0	
Trailing Detector (m)		0.0			0.0			0.0			0.0	
Detector 1 Position(m)		0.0			0.0			0.0			0.0	
Detector 1 Size(m)		0.6			0.6			0.6			0.6	
Detector 1 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0			0.0			0.0	
Detector 1 Queue (s)		0.0			0.0			0.0			0.0	
Detector 1 Delay (s)		0.0			0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	26.0	26.0		26.0	26.0		24.0	24.0		24.0	24.0	
Total Split (%)	52.0%	52.0%		52.0%	52.0%		48.0%	48.0%		48.0%	48.0%	
Maximum Green (s)	21.0	21.0		21.0	21.0		19.0	19.0		19.0	19.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		19.5			19.5			20.1			20.1	
Actuated g/C Ratio		0.41			0.41			0.42			0.42	
v/c Ratio		0.70			0.33			0.16			0.43	
Control Delay (s/veh)		14.4			10.2			9.2			10.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		14.4			10.2			9.2			10.0	
LOS		B			B			A			B	
Approach Delay (s/veh)		14.4			10.2			9.2			10.0	
Approach LOS		B			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 47.6			
Natural Cycle: 50			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay (s/veh): 12.1		Intersection LOS: B	
Intersection Capacity Utilization 65.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 102: The Gore Road & Mayfield Road



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	1047	371	201	588
v/c Ratio	0.70	0.33	0.16	0.43
Control Delay (s/veh)	14.4	10.2	9.2	10.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	14.4	10.2	9.2	10.0
Queue Length 50th (m)	26.0	10.8	5.5	16.4
Queue Length 95th (m)	38.1	18.5	11.1	28.1
Internal Link Dist (m)	241.3	241.9	230.2	1258.4
Turn Bay Length (m)				
Base Capacity (vph)	1687	1258	1254	1354
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.62	0.29	0.16	0.43

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	805	30	10	340	10	25	160	10	40	410	120
Future Volume (vph)	180	805	30	10	340	10	25	160	10	40	410	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.95			0.95			0.95	
Frt		1.00			1.00			0.99			0.97	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		4484			2933			3384			3345	
Flt Permitted		0.80			0.92			0.87			0.92	
Satd. Flow (perm)		3619			2703			2956			3101	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	186	830	31	10	351	10	26	165	10	41	423	124
RTOR Reduction (vph)	0	6	0	0	4	0	0	6	0	0	46	0
Lane Group Flow (vph)	0	1041	0	0	367	0	0	195	0	0	542	0
Heavy Vehicles (%)	10%	15%	16%	7%	23%	17%	20%	3%	3%	10%	1%	13%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		18.5			18.5			19.1			19.1	
Effective Green, g (s)		19.5			19.5			20.1			20.1	
Actuated g/C Ratio		0.41			0.41			0.42			0.42	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1482			1107			1248			1309	
v/s Ratio Prot												
v/s Ratio Perm		c0.29			0.14			0.07			c0.17	
v/c Ratio		0.70			0.33			0.16			0.41	
Uniform Delay, d1		11.6			9.6			8.5			9.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.5			0.2			0.3			1.0	
Delay (s)		13.2			9.8			8.8			10.6	
Level of Service		B			A			A			B	
Approach Delay (s/veh)		13.2			9.8			8.8			10.6	
Approach LOS		B			A			A			B	

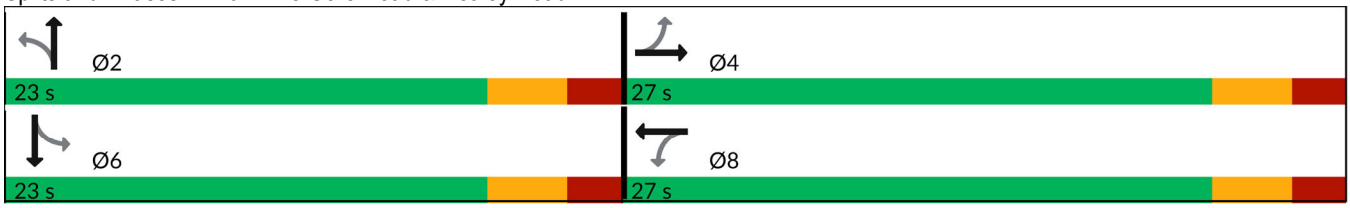
Intersection Summary			
HCM 2000 Control Delay (s/veh)	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	47.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	380	35	20	175	15	0	300	280	5	210	15
Future Volume (vph)	40	380	35	20	175	15	0	300	280	5	210	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.990			0.991			0.928			0.990	
Flt Protected		0.996			0.995						0.999	
Satd. Flow (prot)	0	1817	0	0	1856	0	0	3237	0	0	3434	0
Flt Permitted		0.957			0.939						0.943	
Satd. Flow (perm)	0	1746	0	0	1752	0	0	3237	0	0	3241	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			10			304			16	
Link Speed (k/h)		70			60			80			80	
Link Distance (m)		342.2			229.1			1858.8			201.4	
Travel Time (s)		17.6			13.7			83.6			9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	8%	1%	1%	0%	6%	3%	4%	16%	4%	0%
Adj. Flow (vph)	43	413	38	22	190	16	0	326	304	5	228	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	494	0	0	228	0	0	630	0	0	249	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2			2			2			2	
Detector Template		Thru			Thru			Thru			Thru	
Leading Detector (m)		10.0			10.0			10.0			10.0	
Trailing Detector (m)		0.0			0.0			0.0			0.0	
Detector 1 Position(m)		0.0			0.0			0.0			0.0	
Detector 1 Size(m)		0.6			0.6			0.6			0.6	
Detector 1 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0			0.0			0.0	
Detector 1 Queue (s)		0.0			0.0			0.0			0.0	
Detector 1 Delay (s)		0.0			0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	27.0	27.0		27.0	27.0		23.0	23.0		23.0	23.0	
Total Split (%)	54.0%	54.0%		54.0%	54.0%		46.0%	46.0%		46.0%	46.0%	
Maximum Green (s)	22.0	22.0		22.0	22.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.6			17.6			19.2			19.2	
Actuated g/C Ratio		0.39			0.39			0.43			0.43	
v/c Ratio		0.71			0.33			0.40			0.18	
Control Delay (s/veh)		17.4			10.1			6.0			9.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		17.4			10.1			6.0			9.0	
LOS		B			B			A			A	
Approach Delay (s/veh)		17.4			10.1			6.0			9.0	
Approach LOS		B			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 44.9			
Natural Cycle: 50			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay (s/veh): 10.6		Intersection LOS: B	
Intersection Capacity Utilization 55.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 101: The Gore Road & Healey Road



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	494	228	630	249
v/c Ratio	0.71	0.33	0.40	0.18
Control Delay (s/veh)	17.4	10.1	6.0	9.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	17.4	10.1	6.0	9.0
Queue Length 50th (m)	31.4	11.7	8.5	5.9
Queue Length 95th (m)	56.7	23.1	20.5	13.5
Internal Link Dist (m)	318.2	205.1	1834.8	177.4
Turn Bay Length (m)				
Base Capacity (vph)	908	910	1556	1393
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.54	0.25	0.40	0.18

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	380	35	20	175	15	0	300	280	5	210	15
Future Volume (vph)	40	380	35	20	175	15	0	300	280	5	210	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.99			0.99			0.93			0.99	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		1815			1856			3236			3435	
Flt Permitted		0.96			0.94			1.00			0.94	
Satd. Flow (perm)		1745			1751			3236			3243	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	413	38	22	190	16	0	326	304	5	228	16
RTOR Reduction (vph)	0	7	0	0	6	0	0	174	0	0	9	0
Lane Group Flow (vph)	0	487	0	0	222	0	0	456	0	0	240	0
Heavy Vehicles (%)	0%	3%	8%	1%	1%	0%	6%	3%	4%	16%	4%	0%
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.6			16.6			18.2			18.2	
Effective Green, g (s)		17.6			17.6			19.2			19.2	
Actuated g/C Ratio		0.39			0.39			0.43			0.43	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		685			687			1386			1389	
v/s Ratio Prot								c0.14				
v/s Ratio Perm		c0.28			0.13						0.07	
v/c Ratio		0.71			0.32			0.33			0.17	
Uniform Delay, d1		11.5			9.5			8.5			7.9	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		3.5			0.3			0.6			0.3	
Delay (s)		15.0			9.7			9.2			8.2	
Level of Service		B			A			A			A	
Approach Delay (s/veh)		15.0			9.7			9.2			8.2	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	44.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	240	25	10	885	40	30	410	10	10	175	180
Future Volume (vph)	120	240	25	10	885	40	30	410	10	10	175	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.990			0.994			0.997			0.926	
Flt Protected		0.985			0.999			0.997			0.999	
Satd. Flow (prot)	0	4430	0	0	3081	0	0	3480	0	0	3324	0
Flt Permitted		0.695			0.949			0.912			0.939	
Satd. Flow (perm)	0	3125	0	0	2927	0	0	3183	0	0	3124	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			12			5			67	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		265.3			265.9			254.2			1282.4	
Travel Time (s)		15.9			16.0			15.3			76.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	22%	7%	0%	17%	6%	3%	3%	8%	17%	0%	0%
Adj. Flow (vph)	130	261	27	11	962	43	33	446	11	11	190	196
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	418	0	0	1016	0	0	490	0	0	397	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2			2			2			2	
Detector Template		Thru			Thru			Thru			Thru	
Leading Detector (m)		10.0			10.0			10.0			10.0	
Trailing Detector (m)		0.0			0.0			0.0			0.0	
Detector 1 Position(m)		0.0			0.0			0.0			0.0	
Detector 1 Size(m)		0.6			0.6			0.6			0.6	
Detector 1 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0			0.0			0.0	
Detector 1 Queue (s)		0.0			0.0			0.0			0.0	
Detector 1 Delay (s)		0.0			0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	27.0	27.0		27.0	27.0		23.0	23.0		23.0	23.0	
Total Split (%)	54.0%	54.0%		54.0%	54.0%		46.0%	46.0%		46.0%	46.0%	
Maximum Green (s)	22.0	22.0		22.0	22.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		20.8			20.8			19.1			19.1	
Actuated g/C Ratio		0.43			0.43			0.40			0.40	
v/c Ratio		0.30			0.79			0.39			0.31	
Control Delay (s/veh)		8.7			17.0			11.8			9.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		8.7			17.0			11.8			9.5	
LOS		A			B			B			A	
Approach Delay (s/veh)		8.7			17.0			11.8			9.5	
Approach LOS		A			B			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 47.9			
Natural Cycle: 50			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay (s/veh): 13.1		Intersection LOS: B	
Intersection Capacity Utilization 70.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 102: The Gore Road & Mayfield Road



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	418	1016	490	397
v/c Ratio	0.30	0.79	0.39	0.31
Control Delay (s/veh)	8.7	17.0	11.8	9.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.7	17.0	11.8	9.5
Queue Length 50th (m)	7.6	37.7	16.7	10.7
Queue Length 95th (m)	12.8	58.1	26.9	19.1
Internal Link Dist (m)	241.3	241.9	230.2	1258.4
Turn Bay Length (m)				
Base Capacity (vph)	1519	1416	1269	1283
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.28	0.72	0.39	0.31

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	240	25	10	885	40	30	410	10	10	175	180
Future Volume (vph)	120	240	25	10	885	40	30	410	10	10	175	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.95			0.95			0.95	
Frt		0.99			0.99			1.00			0.93	
Flt Protected		0.98			1.00			1.00			1.00	
Satd. Flow (prot)		4430			3081			3478			3322	
Flt Permitted		0.70			0.95			0.91			0.94	
Satd. Flow (perm)		3127			2927			3181			3125	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	130	261	27	11	962	43	33	446	11	11	190	196
RTOR Reduction (vph)	0	15	0	0	7	0	0	3	0	0	40	0
Lane Group Flow (vph)	0	403	0	0	1009	0	0	487	0	0	357	0
Heavy Vehicles (%)	0%	22%	7%	0%	17%	6%	3%	3%	8%	17%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		19.8			19.8			18.1			18.1	
Effective Green, g (s)		20.8			20.8			19.1			19.1	
Actuated g/C Ratio		0.43			0.43			0.40			0.40	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1357			1271			1268			1246	
v/s Ratio Prot												
v/s Ratio Perm		0.13			c0.34			c0.15			0.11	
v/c Ratio		0.30			0.79			0.38			0.29	
Uniform Delay, d1		8.8			11.7			10.2			9.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.1			3.5			0.9			0.6	
Delay (s)		8.9			15.2			11.1			10.4	
Level of Service		A			B			B			B	
Approach Delay (s/veh)		8.9			15.2			11.1			10.4	
Approach LOS		A			B			B			B	

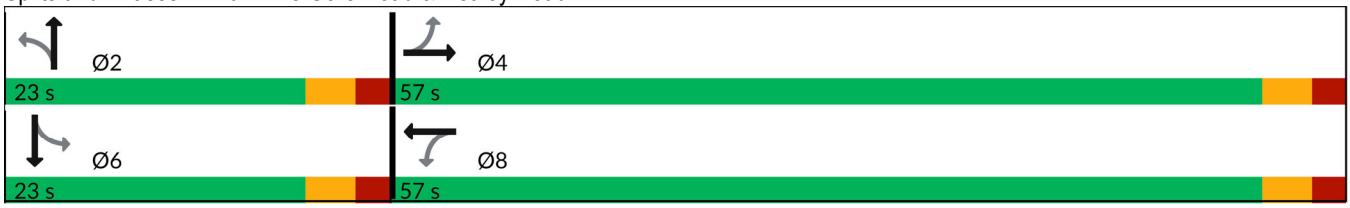
Intersection Summary			
HCM 2000 Control Delay (s/veh)	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	47.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	160	17	280	380	5	52	207	20	15	310	40
Future Volume (vph)	15	160	17	280	380	5	52	207	20	15	310	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.988			0.999			0.989			0.984	
Flt Protected		0.996			0.979			0.991			0.998	
Satd. Flow (prot)	0	1803	0	0	1781	0	0	3179	0	0	3449	0
Flt Permitted		0.944			0.781			0.821			0.936	
Satd. Flow (perm)	0	1709	0	0	1421	0	0	2634	0	0	3235	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			1			9			16	
Link Speed (k/h)		70			60			60			60	
Link Distance (m)		342.2			229.1			1462.6			201.4	
Travel Time (s)		17.6			13.7			87.8			12.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	33%	1%	4%	2%	6%	6%	20%	10%	2%	6%	3%	0%
Adj. Flow (vph)	16	176	19	308	418	5	57	227	22	16	341	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	211	0	0	731	0	0	306	0	0	401	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2			2			2			2	
Detector Template		Thru			Thru			Thru			Thru	
Leading Detector (m)		10.0			10.0			10.0			10.0	
Trailing Detector (m)		0.0			0.0			0.0			0.0	
Detector 1 Position(m)		0.0			0.0			0.0			0.0	
Detector 1 Size(m)		0.6			0.6			0.6			0.6	
Detector 1 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0			0.0			0.0	
Detector 1 Queue (s)		0.0			0.0			0.0			0.0	
Detector 1 Delay (s)		0.0			0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	57.0	57.0		57.0	57.0		23.0	23.0		23.0	23.0	
Total Split (%)	71.3%	71.3%		71.3%	71.3%		28.8%	28.8%		28.8%	28.8%	
Maximum Green (s)	52.0	52.0		52.0	52.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		39.3			39.3			19.6			19.6	
Actuated g/C Ratio		0.59			0.59			0.29			0.29	
v/c Ratio		0.21			0.88			0.40			0.42	
Control Delay (s/veh)		6.0			24.6			23.2			22.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		6.0			24.6			23.2			22.6	
LOS		A			C			C			C	
Approach Delay (s/veh)		6.0			24.6			23.2			22.6	
Approach LOS		A			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 67.1			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay (s/veh): 21.5		Intersection LOS: C	
Intersection Capacity Utilization 77.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 101: The Gore Road & Healey Road



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	211	731	306	401
v/c Ratio	0.21	0.88	0.40	0.42
Control Delay (s/veh)	6.0	24.6	23.2	22.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.0	24.6	23.2	22.6
Queue Length 50th (m)	10.5	70.2	16.7	21.8
Queue Length 95th (m)	18.5	124.3	34.0	42.2
Internal Link Dist (m)	318.2	205.1	1438.6	177.4
Turn Bay Length (m)				
Base Capacity (vph)	1376	1142	774	954
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.15	0.64	0.40	0.42

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	160	17	280	380	5	52	207	20	15	310	40
Future Volume (vph)	15	160	17	280	380	5	52	207	20	15	310	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.99			1.00			0.99			0.98	
Flt Protected		1.00			0.98			0.99			1.00	
Satd. Flow (prot)		1803			1782			3179			3447	
Flt Permitted		0.94			0.78			0.82			0.94	
Satd. Flow (perm)		1708			1421			2635			3232	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	16	176	19	308	418	5	57	227	22	16	341	44
RTOR Reduction (vph)	0	5	0	0	0	0	0	6	0	0	11	0
Lane Group Flow (vph)	0	206	0	0	731	0	0	300	0	0	390	0
Heavy Vehicles (%)	33%	1%	4%	2%	6%	6%	20%	10%	2%	6%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		38.3			38.3			18.5			18.5	
Effective Green, g (s)		39.3			39.3			19.5			19.5	
Actuated g/C Ratio		0.59			0.59			0.29			0.29	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1004			836			769			943	
v/s Ratio Prot												
v/s Ratio Perm		0.12			c0.51			0.11			c0.12	
v/c Ratio		0.20			0.87			0.39			0.41	
Uniform Delay, d1		6.4			11.7			18.9			19.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.1			10.0			1.5			1.3	
Delay (s)		6.5			21.7			20.4			20.4	
Level of Service		A			C			C			C	
Approach Delay (s/veh)		6.5			21.7			20.4			20.4	
Approach LOS		A			C			C			C	

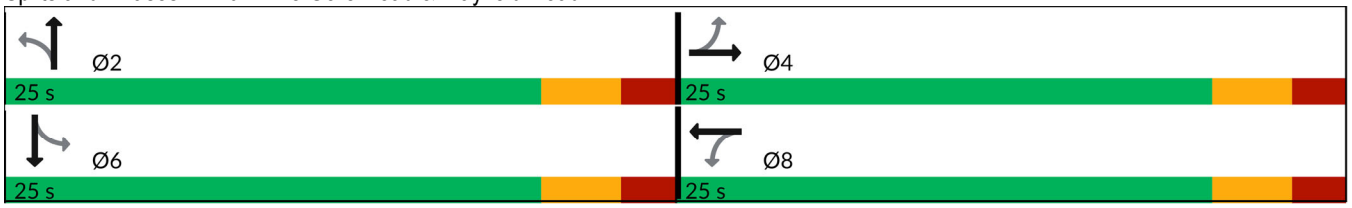
Intersection Summary			
HCM 2000 Control Delay (s/veh)	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	66.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	805	30	10	340	27	25	240	10	185	616	120
Future Volume (vph)	180	805	30	10	340	27	25	240	10	185	616	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.996			0.989			0.995			0.980	
Flt Protected		0.991			0.999			0.995			0.990	
Satd. Flow (prot)	0	4485	0	0	2920	0	0	3418	0	0	3356	0
Flt Permitted		0.796			0.921			0.853			0.808	
Satd. Flow (perm)	0	3603	0	0	2692	0	0	2930	0	0	2739	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			20			9			41	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		265.3			265.9			254.2			1282.4	
Travel Time (s)		15.9			16.0			15.3			76.9	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	10%	15%	16%	7%	23%	17%	20%	3%	3%	10%	1%	13%
Adj. Flow (vph)	186	830	31	10	351	28	26	247	10	191	635	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1047	0	0	389	0	0	283	0	0	950	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2			2			2			2	
Detector Template		Thru			Thru			Thru			Thru	
Leading Detector (m)		10.0			10.0			10.0			10.0	
Trailing Detector (m)		0.0			0.0			0.0			0.0	
Detector 1 Position(m)		0.0			0.0			0.0			0.0	
Detector 1 Size(m)		0.6			0.6			0.6			0.6	
Detector 1 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0			0.0			0.0	
Detector 1 Queue (s)		0.0			0.0			0.0			0.0	
Detector 1 Delay (s)		0.0			0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		19.2			19.2			21.1			21.1	
Actuated g/C Ratio		0.40			0.40			0.44			0.44	
v/c Ratio		0.73			0.36			0.22			0.78	
Control Delay (s/veh)		15.6			10.6			9.3			17.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		15.6			10.6			9.3			17.9	
LOS		B			B			A			B	
Approach Delay (s/veh)		15.6			10.6			9.3			17.9	
Approach LOS		B			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 48.3			
Natural Cycle: 50			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay (s/veh): 15.0		Intersection LOS: B	
Intersection Capacity Utilization 77.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 102: The Gore Road & Mayfield Road



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	1047	389	283	950
v/c Ratio	0.73	0.36	0.22	0.78
Control Delay (s/veh)	15.6	10.6	9.3	17.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.6	10.6	9.3	17.9
Queue Length 50th (m)	27.3	11.5	8.1	37.1
Queue Length 95th (m)	40.0	19.8	14.5	#69.4
Internal Link Dist (m)	241.3	241.9	230.2	1258.4
Turn Bay Length (m)				
Base Capacity (vph)	1577	1185	1282	1218
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.66	0.33	0.22	0.78

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	805	30	10	340	27	25	240	10	185	616	120
Future Volume (vph)	180	805	30	10	340	27	25	240	10	185	616	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.95			0.95			0.95	
Frt		1.00			0.99			0.99			0.98	
Flt Protected		0.99			1.00			1.00			0.99	
Satd. Flow (prot)		4484			2920			3418			3357	
Flt Permitted		0.80			0.92			0.85			0.81	
Satd. Flow (perm)		3603			2693			2931			2740	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	186	830	31	10	351	28	26	247	10	191	635	124
RTOR Reduction (vph)	0	7	0	0	12	0	0	5	0	0	23	0
Lane Group Flow (vph)	0	1040	0	0	377	0	0	278	0	0	927	0
Heavy Vehicles (%)	10%	15%	16%	7%	23%	17%	20%	3%	3%	10%	1%	13%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		18.2			18.2			20.0			20.0	
Effective Green, g (s)		19.2			19.2			21.0			21.0	
Actuated g/C Ratio		0.40			0.40			0.44			0.44	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1435			1072			1276			1193	
v/s Ratio Prot												
v/s Ratio Perm		c0.29			0.14			0.09			c0.34	
v/c Ratio		0.73			0.35			0.22			0.78	
Uniform Delay, d1		12.3			10.1			8.5			11.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.9			0.2			0.4			5.0	
Delay (s)		14.1			10.3			8.9			16.6	
Level of Service		B			B			A			B	
Approach Delay (s/veh)		14.1			10.3			8.9			16.6	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	48.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

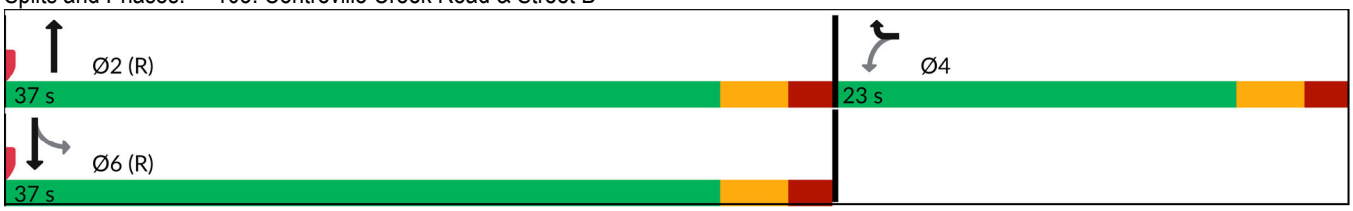


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	3	154	5	6	335
Future Volume (vph)	19	3	154	5	6	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	55.0	0.0		0.0	55.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.996			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1855	0	1770	1863
Flt Permitted	0.950				0.656	
Satd. Flow (perm)	1770	1583	1855	0	1222	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		3	4			
Link Speed (k/h)	50		60			60
Link Distance (m)	408.6		525.3			150.0
Travel Time (s)	29.4		31.5			9.0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	19	3	154	5	6	335
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	3	159	0	6	335
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		3.6			3.6
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Prot	NA		Perm	NA
Protected Phases		4	2			6
Permitted Phases	4				6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0
Total Split (s)	23.0	23.0	37.0		37.0	37.0
Total Split (%)	38.3%	38.3%	61.7%		61.7%	61.7%
Maximum Green (s)	18.0	18.0	32.0		32.0	32.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Don't Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effct Green (s)	7.2	7.2	53.6		53.6	53.6
Actuated g/C Ratio	0.12	0.12	0.89		0.89	0.89
v/c Ratio	0.09	0.02	0.10		0.01	0.20
Control Delay (s/veh)	23.9	16.7	4.8		2.0	1.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	23.9	16.7	4.8		2.0	1.9
LOS	C	B	A		A	A
Approach Delay (s/veh)	23.0		4.8			1.9
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.20			
Intersection Signal Delay (s/veh): 3.7		Intersection LOS: A	
Intersection Capacity Utilization 28.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 103: Centreville Creek Road & Street B





Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	19	3	159	6	335
v/c Ratio	0.09	0.02	0.10	0.01	0.20
Control Delay (s/veh)	23.9	16.7	4.8	2.0	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	23.9	16.7	4.8	2.0	1.9
Queue Length 50th (m)	2.0	0.0	0.0	0.0	0.0
Queue Length 95th (m)	7.2	2.1	28.9	0.8	16.5
Internal Link Dist (m)	384.6		501.3		126.0
Turn Bay Length (m)	55.0			55.0	
Base Capacity (vph)	560	503	1657	1091	1663
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.03	0.01	0.10	0.01	0.20

Intersection Summary



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	3	154	5	6	335
Future Volume (vph)	19	3	154	5	6	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1855		1770	1863
Flt Permitted	0.95	1.00	1.00		0.66	1.00
Satd. Flow (perm)	1770	1583	1855		1222	1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	19	3	154	5	6	335
RTOR Reduction (vph)	0	3	1	0	0	0
Lane Group Flow (vph)	19	0	158	0	6	335
Turn Type	Perm	Prot	NA		Perm	NA
Protected Phases		4	2			6
Permitted Phases	4				6	
Actuated Green, G (s)	2.8	2.8	47.2		47.2	47.2
Effective Green, g (s)	3.8	3.8	48.2		48.2	48.2
Actuated g/C Ratio	0.06	0.06	0.80		0.80	0.80
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	112	100	1490		981	1496
v/s Ratio Prot		0.00	0.09			c0.18
v/s Ratio Perm	c0.01				0.00	
v/c Ratio	0.17	0.00	0.11		0.01	0.22
Uniform Delay, d1	26.6	26.3	1.3		1.2	1.4
Progression Factor	1.00	1.00	3.09		1.00	1.00
Incremental Delay, d2	0.7	0.0	0.1		0.0	0.3
Delay (s)	27.3	26.3	4.1		1.2	1.8
Level of Service	C	C	A		A	A
Approach Delay (s/veh)	27.2		4.1			1.8
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay (s/veh)	3.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	28.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

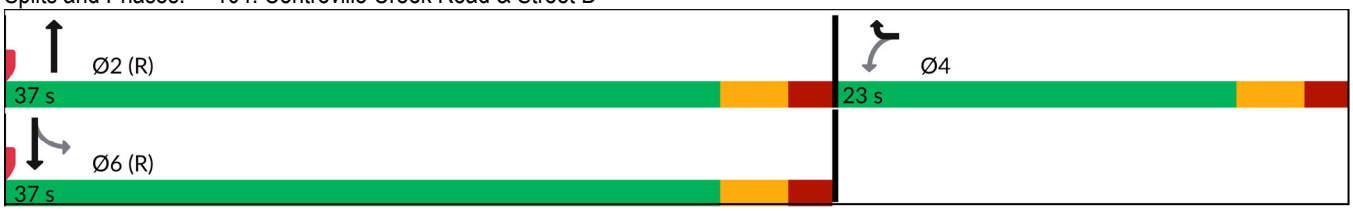


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	240	4	155	62	7	347
Future Volume (vph)	240	4	155	62	7	347
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	55.0	0.0		0.0	55.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.961			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1790	0	1770	1863
Flt Permitted	0.950				0.622	
Satd. Flow (perm)	1770	1583	1790	0	1159	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		4	53			
Link Speed (k/h)	50		60			60
Link Distance (m)	431.6		570.6			525.3
Travel Time (s)	31.1		34.2			31.5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	240	4	155	62	7	347
Shared Lane Traffic (%)						
Lane Group Flow (vph)	240	4	217	0	7	347
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		3.6			3.6
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Prot	NA		Perm	NA
Protected Phases		4	2			6
Permitted Phases	4				6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0
Total Split (s)	23.0	23.0	37.0		37.0	37.0
Total Split (%)	38.3%	38.3%	61.7%		61.7%	61.7%
Maximum Green (s)	18.0	18.0	32.0		32.0	32.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Don't Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effct Green (s)	14.2	14.2	37.8		37.8	37.8
Actuated g/C Ratio	0.24	0.24	0.63		0.63	0.63
v/c Ratio	0.57	0.01	0.19		0.01	0.30
Control Delay (s/veh)	25.1	10.3	9.6		5.6	6.3
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	25.1	10.3	9.6		5.6	6.3
LOS	C	B	A		A	A
Approach Delay (s/veh)	24.9		9.6			6.3
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay (s/veh): 12.7		Intersection LOS: B	
Intersection Capacity Utilization 38.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 104: Centreville Creek Road & Street D





Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	240	4	217	7	347
v/c Ratio	0.57	0.01	0.19	0.01	0.30
Control Delay (s/veh)	25.1	10.3	9.6	5.6	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.1	10.3	9.6	5.6	6.3
Queue Length 50th (m)	24.5	0.0	6.3	0.3	14.5
Queue Length 95th (m)	39.4	1.7	39.1	m1.6	31.9
Internal Link Dist (m)	407.6		546.6		501.3
Turn Bay Length (m)	55.0			55.0	
Base Capacity (vph)	560	504	1147	730	1173
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.43	0.01	0.19	0.01	0.30

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	240	4	155	62	7	347
Future Volume (vph)	240	4	155	62	7	347
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.96		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1791		1770	1863
Flt Permitted	0.95	1.00	1.00		0.62	1.00
Satd. Flow (perm)	1770	1583	1791		1160	1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	240	4	155	62	7	347
RTOR Reduction (vph)	0	3	20	0	0	0
Lane Group Flow (vph)	240	1	197	0	7	347
Turn Type	Perm	Prot	NA		Perm	NA
Protected Phases		4	2			6
Permitted Phases	4				6	
Actuated Green, G (s)	13.2	13.2	36.8		36.8	36.8
Effective Green, g (s)	14.2	14.2	37.8		37.8	37.8
Actuated g/C Ratio	0.24	0.24	0.63		0.63	0.63
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	418	374	1128		730	1173
v/s Ratio Prot		0.00	0.11			c0.19
v/s Ratio Perm	c0.14				0.01	
v/c Ratio	0.57	0.00	0.17		0.01	0.30
Uniform Delay, d1	20.2	17.5	4.6		4.1	5.0
Progression Factor	1.00	1.00	2.11		0.98	0.93
Incremental Delay, d2	1.9	0.0	0.3		0.0	0.6
Delay (s)	22.1	17.5	10.1		4.1	5.4
Level of Service	C	B	B		A	A
Approach Delay (s/veh)	22.1		10.1			5.3
Approach LOS	C		B			A

Intersection Summary			
HCM 2000 Control Delay (s/veh)	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

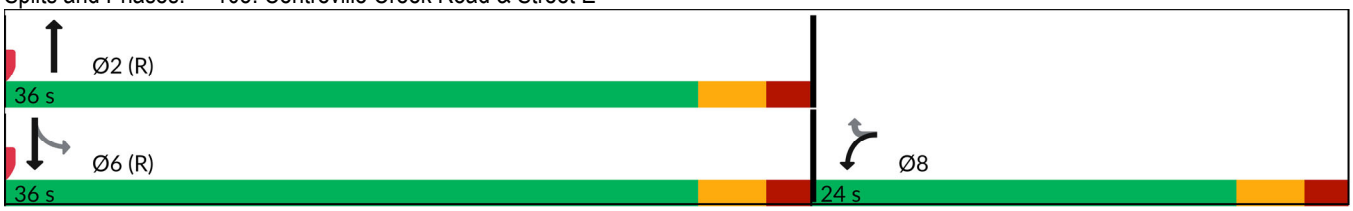


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	364	10	207	95	18	569
Future Volume (vph)	364	10	207	95	18	569
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0	0.0		0.0	55.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.850	0.958			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1785	0	1681	1770
Flt Permitted	0.950				0.557	0.999
Satd. Flow (perm)	1770	1583	1785	0	986	1768
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		10	59			
Link Speed (k/h)	50		60			60
Link Distance (m)	458.6		211.0			570.6
Travel Time (s)	33.0		12.7			34.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	364	10	207	95	18	569
Shared Lane Traffic (%)					10%	
Lane Group Flow (vph)	364	10	302	0	16	571
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		3.6			3.6
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	100	100		100	100	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0
Total Split (s)	24.0	24.0	36.0		36.0	36.0
Total Split (%)	40.0%	40.0%	60.0%		60.0%	60.0%
Maximum Green (s)	19.0	19.0	31.0		31.0	31.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Min		C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Don't Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effct Green (s)	17.4	17.4	34.6		34.6	34.6
Actuated g/C Ratio	0.29	0.29	0.58		0.58	0.58
v/c Ratio	0.71	0.02	0.29		0.03	0.56
Control Delay (s/veh)	26.9	8.1	6.6		7.3	12.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	26.9	8.1	6.6		7.3	12.1
LOS	C	A	A		A	B
Approach Delay (s/veh)	26.4		6.6			12.0
Approach LOS	C		A			B

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay (s/veh): 15.0		Intersection LOS: B	
Intersection Capacity Utilization 49.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 105: Centreville Creek Road & Street E





Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	364	10	302	16	571
v/c Ratio	0.71	0.02	0.29	0.03	0.56
Control Delay (s/veh)	26.9	8.1	6.6	7.3	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	26.9	8.1	6.6	7.3	12.1
Queue Length 50th (m)	36.4	0.0	12.7	0.8	36.9
Queue Length 95th (m)	59.6	2.7	26.3	m2.2	65.3
Internal Link Dist (m)	434.6		187.0		546.6
Turn Bay Length (m)	70.0			55.0	
Base Capacity (vph)	593	537	1058	570	1023
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.61	0.02	0.29	0.03	0.56

Intersection Summary

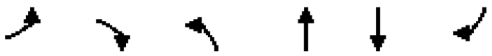
m Volume for 95th percentile queue is metered by upstream signal.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	364	10	207	95	18	569
Future Volume (vph)	364	10	207	95	18	569
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		0.95	0.95
Frt	1.00	0.85	0.96		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1784		1681	1769
Flt Permitted	0.95	1.00	1.00		0.56	1.00
Satd. Flow (perm)	1770	1583	1784		986	1768
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	364	10	207	95	18	569
RTOR Reduction (vph)	0	7	25	0	0	0
Lane Group Flow (vph)	364	3	277	0	16	571
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	16.4	16.4	33.6		33.6	33.6
Effective Green, g (s)	17.4	17.4	34.6		34.6	34.6
Actuated g/C Ratio	0.29	0.29	0.58		0.58	0.58
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	513	459	1028		568	1019
v/s Ratio Prot	c0.21		0.16			
v/s Ratio Perm		0.00			0.02	c0.32
v/c Ratio	0.71	0.01	0.27		0.03	0.56
Uniform Delay, d1	19.0	15.2	6.4		5.5	7.9
Progression Factor	1.00	1.00	1.00		1.05	1.08
Incremental Delay, d2	4.5	0.0	0.6		0.1	2.1
Delay (s)	23.5	15.2	7.0		5.8	10.7
Level of Service	C	B	A		A	B
Approach Delay (s/veh)	23.3		7.0			10.6
Approach LOS	C		A			B

Intersection Summary			
HCM 2000 Control Delay (s/veh)	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

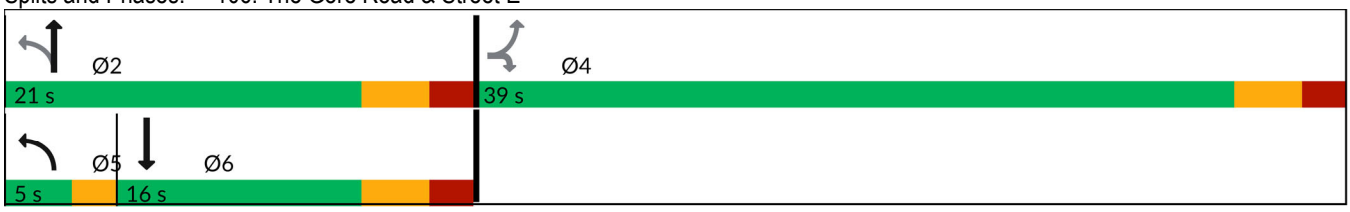


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	605	351	97	350	590	241
Future Volume (vph)	605	351	97	350	590	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0	0.0	55.0			50.0
Storage Lanes	1	1	1			0
Taper Length (m)	7.5		7.5			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.956	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3383	0
Flt Permitted	0.950		0.296			
Satd. Flow (perm)	1770	1583	551	3539	3383	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		249			92	
Link Speed (k/h)	50			60	60	
Link Distance (m)	294.3			396.2	1462.6	
Travel Time (s)	21.2			23.8	87.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	605	351	97	350	590	241
Shared Lane Traffic (%)						
Lane Group Flow (vph)	605	351	97	350	831	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25			15
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	2.0	2.0	2.0	10.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	2.0	2.0	0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Perm	pm+pt	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4	4	2			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	3.0	5.0	5.0	
Minimum Split (s)	23.0	23.0	5.0	23.0	23.0	
Total Split (s)	39.0	39.0	5.0	21.0	16.0	
Total Split (%)	65.0%	65.0%	8.3%	35.0%	26.7%	
Maximum Green (s)	34.0	34.0	3.0	16.0	11.0	
Yellow Time (s)	3.0	3.0	2.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	0.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0	1.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	
Act Effct Green (s)	22.3	22.3	18.3	15.2	12.6	
Actuated g/C Ratio	0.49	0.49	0.40	0.33	0.27	
v/c Ratio	0.70	0.39	0.29	0.30	0.84	
Control Delay (s/veh)	14.1	3.6	13.9	13.9	28.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	14.1	3.6	13.9	13.9	28.2	
LOS	B	A	B	B	C	
Approach Delay (s/veh)	10.3			13.9	28.2	
Approach LOS	B			B	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 45.9			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 17.7		Intersection LOS: B	
Intersection Capacity Utilization 72.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 106: The Gore Road & Street E

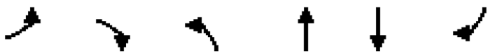




Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	605	351	97	350	831
v/c Ratio	0.70	0.39	0.29	0.30	0.84
Control Delay (s/veh)	14.1	3.6	13.9	13.9	28.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	14.1	3.6	13.9	13.9	28.2
Queue Length 50th (m)	38.8	4.6	4.9	11.0	32.7
Queue Length 95th (m)	65.7	14.5	17.0	26.7	#87.9
Internal Link Dist (m)	270.3			372.2	1438.6
Turn Bay Length (m)	70.0		55.0		
Base Capacity (vph)	1388	1295	331	1374	994
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.44	0.27	0.29	0.25	0.84

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	605	351	97	350	590	241
Future Volume (vph)	605	351	97	350	590	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	1.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	3539	3385	
Flt Permitted	0.95	1.00	0.30	1.00	1.00	
Satd. Flow (perm)	1770	1583	552	3539	3385	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	605	351	97	350	590	241
RTOR Reduction (vph)	0	129	0	0	67	0
Lane Group Flow (vph)	605	222	97	350	764	0
Turn Type	Perm	Perm	pm+pt	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	21.3	21.3	15.1	15.1	11.5	
Effective Green, g (s)	22.3	22.3	16.1	16.1	12.5	
Actuated g/C Ratio	0.48	0.48	0.35	0.35	0.27	
Clearance Time (s)	5.0	5.0	2.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	850	760	259	1227	911	
v/s Ratio Prot			c0.02	0.10	c0.23	
v/s Ratio Perm	c0.34	0.14	0.11			
v/c Ratio	0.71	0.29	0.37	0.29	0.84	
Uniform Delay, d1	9.5	7.3	11.2	11.0	16.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.8	0.2	0.9	0.1	6.8	
Delay (s)	12.3	7.5	12.1	11.1	22.8	
Level of Service	B	A	B	B	C	
Approach Delay (s/veh)	10.6			11.3	22.8	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	46.4	Sum of lost time (s)	10.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	5	0	0	2	12	0	0	0	32	0	0
Future Volume (vph)	0	5	0	0	2	12	0	0	0	32	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.884							
Flt Protected											0.950	
Satd. Flow (prot)	0	1863	0	0	1647	0	0	1863	0	0	1770	0
Flt Permitted											0.950	
Satd. Flow (perm)	0	1863	0	0	1647	0	0	1863	0	0	1770	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		408.6			371.7			511.4			99.8	
Travel Time (s)		29.4			26.8			36.8			7.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	5	0	0	2	12	0	0	0	32	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	5	0	0	14	0	0	0	0	0	32	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		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)	0	5	0	0	2	12	0	0	0	32	0	0
Future Volume (vph)	0	5	0	0	2	12	0	0	0	32	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	5	0	0	2	12	0	0	0	32	0	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	5	14	0	32
Volume Left (vph)	0	0	0	32
Volume Right (vph)	0	12	0	0
Hadj (s)	0.03	-0.48	0.00	0.23
Departure Headway (s)	4.0	3.5	4.0	4.2
Degree Utilization, x	0.01	0.01	0.00	0.04
Capacity (veh/h)	882	1014	900	855
Control Delay (s/veh)	7.0	6.5	7.0	7.3
Approach Delay (s/veh)	7.0	6.5	0.0	7.3
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.1			
Level of Service	A			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	117	0	0	224	0	0	0	0	0	0	0
Future Volume (vph)	0	117	0	0	224	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		431.6			576.7			581.5			511.4	
Travel Time (s)		31.1			41.5			41.9			36.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	117	0	0	224	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	117	0	0	224	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.1%		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)	0	117	0	0	224	0	0	0	0	0	0	0
Future Volume (vph)	0	117	0	0	224	0	0	0	0	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	117	0	0	224	0	0	0	0	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	117	224	0	0
Volume Left (vph)	0	0	0	0
Volume Right (vph)	0	0	0	0
Hadj (s)	0.03	0.03	0.00	0.00
Departure Headway (s)	4.1	4.0	4.6	4.6
Degree Utilization, x	0.13	0.25	0.00	0.00
Capacity (veh/h)	856	883	736	736
Control Delay (s/veh)	7.8	8.4	7.6	7.6
Approach Delay (s/veh)	7.8	8.4	0.0	0.0
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.2		
Level of Service	A		
Intersection Capacity Utilization	15.1%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	202	10	4	304	0	36	0	10	0	0	73
Future Volume (vph)	22	202	10	4	304	0	36	0	10	0	0	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994						0.971			0.865	
Flt Protected		0.995			0.999			0.962				
Satd. Flow (prot)	0	1842	0	0	1861	0	0	1740	0	0	1611	0
Flt Permitted		0.995			0.999			0.962				
Satd. Flow (perm)	0	1842	0	0	1861	0	0	1740	0	0	1611	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		458.6			612.1			145.9			581.5	
Travel Time (s)		33.0			44.1			10.5			41.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	22	202	10	4	304	0	36	0	10	0	0	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	234	0	0	308	0	0	46	0	0	73	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.8%		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)	22	202	10	4	304	0	36	0	10	0	0	73
Future Volume (vph)	22	202	10	4	304	0	36	0	10	0	0	73
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	22	202	10	4	304	0	36	0	10	0	0	73

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	234	308	46	73
Volume Left (vph)	22	4	36	0
Volume Right (vph)	10	0	10	73
Hadj (s)	0.03	0.04	0.06	-0.57
Departure Headway (s)	4.6	4.5	5.3	4.7
Degree Utilization, x	0.30	0.39	0.07	0.09
Capacity (veh/h)	758	768	603	683
Control Delay (s/veh)	9.5	10.3	8.7	8.1
Approach Delay (s/veh)	9.5	10.3	8.7	8.1
Approach LOS	A	B	A	A

Intersection Summary				
Delay	9.7			
Level of Service	A			
Intersection Capacity Utilization	40.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	0	218	0	0	0	78	63	0	0	178	98
Future Volume (vph)	26	0	218	0	0	0	78	63	0	0	178	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.879									0.952	
Flt Protected		0.995						0.973				
Satd. Flow (prot)	0	1629	0	0	1863	0	0	1812	0	0	1773	0
Flt Permitted		0.995						0.973				
Satd. Flow (perm)	0	1629	0	0	1863	0	0	1812	0	0	1773	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		576.7			182.5			599.3			475.8	
Travel Time (s)		41.5			13.1			43.1			34.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	0	218	0	0	0	78	63	0	0	178	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	244	0	0	0	0	0	141	0	0	276	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.9%		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)	26	0	218	0	0	0	78	63	0	0	178	98
Future Volume (vph)	26	0	218	0	0	0	78	63	0	0	178	98
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	26	0	218	0	0	0	78	63	0	0	178	98

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	244	0	141	276
Volume Left (vph)	26	0	78	0
Volume Right (vph)	218	0	0	98
Hadj (s)	-0.48	0.00	0.14	-0.18
Departure Headway (s)	4.4	5.2	5.0	4.5
Degree Utilization, x	0.30	0.00	0.19	0.34
Capacity (veh/h)	758	617	683	760
Control Delay (s/veh)	9.3	8.2	9.1	9.8
Approach Delay (s/veh)	9.3	0.0	9.1	9.8
Approach LOS	A	A	A	A

Intersection Summary				
Delay	9.5			
Level of Service	A			
Intersection Capacity Utilization	47.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	383	0	0	135	203	0	0	0	573	0	0
Future Volume (vph)	81	383	0	0	135	203	0	0	0	573	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.919							
Flt Protected		0.991									0.950	
Satd. Flow (prot)	0	1846	0	0	1712	0	0	1863	0	0	1770	0
Flt Permitted		0.991									0.950	
Satd. Flow (perm)	0	1846	0	0	1712	0	0	1863	0	0	1770	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		612.1			294.3			153.7			599.3	
Travel Time (s)		44.1			21.2			11.1			43.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	81	383	0	0	135	203	0	0	0	573	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	464	0	0	338	0	0	0	0	0	573	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 85.9%		ICU Level of Service E	
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)	81	383	0	0	135	203	0	0	0	573	0	0
Future Volume (vph)	81	383	0	0	135	203	0	0	0	573	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	81	383	0	0	135	203	0	0	0	573	0	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	464	338	0	573
Volume Left (vph)	81	0	0	573
Volume Right (vph)	0	203	0	0
Hadj (s)	0.07	-0.33	0.00	0.23
Departure Headway (s)	6.6	6.5	8.2	6.6
Degree Utilization, x	0.85	0.61	0.00	1.05
Capacity (veh/h)	539	546	398	539
Control Delay (s/veh)	36.2	19.1	11.2	78.9
Approach Delay (s/veh)	36.2	19.1	0.0	78.9
Approach LOS	E	C	A	F

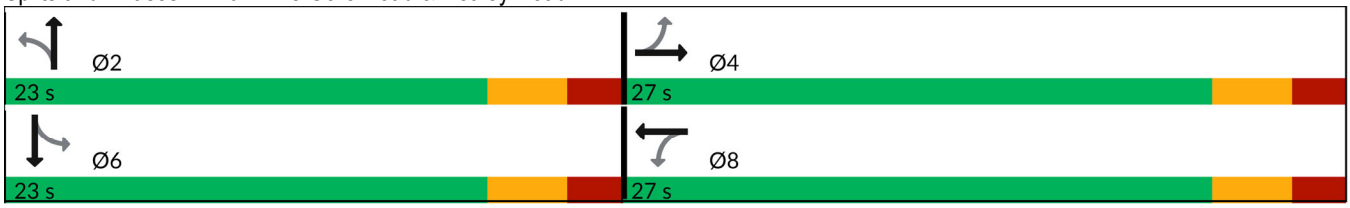
Intersection Summary				
Delay	49.8			
Level of Service	E			
Intersection Capacity Utilization	85.9%	ICU Level of Service	E	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	380	79	20	175	15	10	310	280	5	239	15
Future Volume (vph)	40	380	79	20	175	15	10	310	280	5	239	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.979			0.991			0.930			0.991	
Flt Protected		0.996			0.995			0.999			0.999	
Satd. Flow (prot)	0	1789	0	0	1856	0	0	3240	0	0	3437	0
Flt Permitted		0.961			0.937			0.949			0.944	
Satd. Flow (perm)	0	1726	0	0	1748	0	0	3078	0	0	3248	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			10			304			14	
Link Speed (k/h)		70			60			60			60	
Link Distance (m)		342.2			229.1			1462.6			201.4	
Travel Time (s)		17.6			13.7			87.8			12.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	8%	1%	1%	0%	6%	3%	4%	16%	4%	0%
Adj. Flow (vph)	43	413	86	22	190	16	11	337	304	5	260	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	542	0	0	228	0	0	652	0	0	281	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2			2			2			2	
Detector Template		Thru			Thru			Thru			Thru	
Leading Detector (m)		10.0			10.0			10.0			10.0	
Trailing Detector (m)		0.0			0.0			0.0			0.0	
Detector 1 Position(m)		0.0			0.0			0.0			0.0	
Detector 1 Size(m)		0.6			0.6			0.6			0.6	
Detector 1 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0			0.0			0.0	
Detector 1 Queue (s)		0.0			0.0			0.0			0.0	
Detector 1 Delay (s)		0.0			0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	27.0	27.0		27.0	27.0		23.0	23.0		23.0	23.0	
Total Split (%)	54.0%	54.0%		54.0%	54.0%		46.0%	46.0%		46.0%	46.0%	
Maximum Green (s)	22.0	22.0		22.0	22.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		18.5			18.5			19.2			19.2	
Actuated g/C Ratio		0.40			0.40			0.42			0.42	
v/c Ratio		0.76			0.32			0.45			0.21	
Control Delay (s/veh)		18.8			9.8			6.6			9.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		18.8			9.8			6.6			9.6	
LOS		B			A			A			A	
Approach Delay (s/veh)		18.8			9.8			6.6			9.6	
Approach LOS		B			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 45.8			
Natural Cycle: 50			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 11.4		Intersection LOS: B	
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 101: The Gore Road & Healey Road



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	542	228	652	281
v/c Ratio	0.76	0.32	0.45	0.21
Control Delay (s/veh)	18.8	9.8	6.6	9.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	18.8	9.8	6.6	9.6
Queue Length 50th (m)	34.7	11.7	9.9	7.3
Queue Length 95th (m)	63.8	23.1	22.0	15.3
Internal Link Dist (m)	318.2	205.1	1438.6	177.4
Turn Bay Length (m)				
Base Capacity (vph)	887	890	1465	1368
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.61	0.26	0.45	0.21

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	380	79	20	175	15	10	310	280	5	239	15
Future Volume (vph)	40	380	79	20	175	15	10	310	280	5	239	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.98			0.99			0.93			0.99	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		1788			1856			3241			3439	
Flt Permitted		0.96			0.94			0.95			0.94	
Satd. Flow (perm)		1726			1748			3077			3249	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	413	86	22	190	16	11	337	304	5	260	16
RTOR Reduction (vph)	0	15	0	0	6	0	0	176	0	0	8	0
Lane Group Flow (vph)	0	527	0	0	222	0	0	476	0	0	273	0
Heavy Vehicles (%)	0%	3%	8%	1%	1%	0%	6%	3%	4%	16%	4%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		17.5			17.5			18.2			18.2	
Effective Green, g (s)		18.5			18.5			19.2			19.2	
Actuated g/C Ratio		0.40			0.40			0.42			0.42	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		698			707			1292			1365	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.13			c0.15			0.08	
v/c Ratio		0.76			0.31			0.37			0.20	
Uniform Delay, d1		11.7			9.3			9.1			8.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		4.7			0.3			0.8			0.3	
Delay (s)		16.3			9.5			9.9			8.7	
Level of Service		B			A			A			A	
Approach Delay (s/veh)		16.3			9.5			9.9			8.7	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	45.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	240	25	10	885	84	30	635	10	102	307	180
Future Volume (vph)	120	240	25	10	885	84	30	635	10	102	307	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.990			0.987			0.998			0.954	
Flt Protected		0.985			0.999			0.998			0.991	
Satd. Flow (prot)	0	4430	0	0	3072	0	0	3488	0	0	3315	0
Flt Permitted		0.694			0.950			0.909			0.697	
Satd. Flow (perm)	0	3121	0	0	2921	0	0	3177	0	0	2332	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			26			3			67	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		265.3			265.9			254.2			1282.4	
Travel Time (s)		15.9			16.0			15.3			76.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	22%	7%	0%	17%	6%	3%	3%	8%	17%	0%	0%
Adj. Flow (vph)	130	261	27	11	962	91	33	690	11	111	334	196
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	418	0	0	1064	0	0	734	0	0	641	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2			2			2			2	
Detector Template		Thru			Thru			Thru			Thru	
Leading Detector (m)		10.0			10.0			10.0			10.0	
Trailing Detector (m)		0.0			0.0			0.0			0.0	
Detector 1 Position(m)		0.0			0.0			0.0			0.0	
Detector 1 Size(m)		0.6			0.6			0.6			0.6	
Detector 1 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0			0.0			0.0			0.0	
Detector 1 Queue (s)		0.0			0.0			0.0			0.0	
Detector 1 Delay (s)		0.0			0.0			0.0			0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	27.0	27.0		27.0	27.0		23.0	23.0		23.0	23.0	
Total Split (%)	54.0%	54.0%		54.0%	54.0%		46.0%	46.0%		46.0%	46.0%	
Maximum Green (s)	22.0	22.0		22.0	22.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.4			21.4			19.0			19.0	
Actuated g/C Ratio		0.44			0.44			0.39			0.39	
v/c Ratio		0.30			0.81			0.59			0.67	
Control Delay (s/veh)		8.6			17.9			14.4			15.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		8.6			17.9			14.4			15.5	
LOS		A			B			B			B	
Approach Delay (s/veh)		8.6			17.9			14.4			15.5	
Approach LOS		A			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 48.5			
Natural Cycle: 50			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay (s/veh): 15.1		Intersection LOS: B	
Intersection Capacity Utilization 84.3%		ICU Level of Service E	
Analysis Period (min) 15			

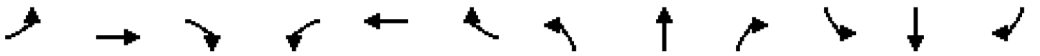
Splits and Phases: 102: The Gore Road & Mayfield Road



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	418	1064	734	641
v/c Ratio	0.30	0.81	0.59	0.67
Control Delay (s/veh)	8.6	17.9	14.4	15.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.6	17.9	14.4	15.5
Queue Length 50th (m)	7.6	39.8	27.7	22.5
Queue Length 95th (m)	12.8	#62.7	42.6	38.5
Internal Link Dist (m)	241.3	241.9	230.2	1258.4
Turn Bay Length (m)				
Base Capacity (vph)	1497	1401	1248	955
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.28	0.76	0.59	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	240	25	10	885	84	30	635	10	102	307	180
Future Volume (vph)	120	240	25	10	885	84	30	635	10	102	307	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.95			0.95			0.95	
Frt		0.99			0.99			1.00			0.95	
Flt Protected		0.98			1.00			1.00			0.99	
Satd. Flow (prot)		4430			3074			3487			3317	
Flt Permitted		0.69			0.95			0.91			0.70	
Satd. Flow (perm)		3121			2921			3175			2331	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	130	261	27	11	962	91	33	690	11	111	334	196
RTOR Reduction (vph)	0	15	0	0	14	0	0	2	0	0	41	0
Lane Group Flow (vph)	0	403	0	0	1050	0	0	732	0	0	600	0
Heavy Vehicles (%)	0%	22%	7%	0%	17%	6%	3%	3%	8%	17%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.5			20.5			18.0			18.0	
Effective Green, g (s)		21.5			21.5			19.0			19.0	
Actuated g/C Ratio		0.44			0.44			0.39			0.39	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1383			1294			1243			913	
v/s Ratio Prot												
v/s Ratio Perm		0.13			c0.36			0.23			c0.26	
v/c Ratio		0.29			0.81			0.59			0.66	
Uniform Delay, d1		8.6			11.7			11.7			12.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.1			4.0			2.1			3.7	
Delay (s)		8.7			15.7			13.7			15.8	
Level of Service		A			B			B			B	
Approach Delay (s/veh)		8.7			15.7			13.7			15.8	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	48.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

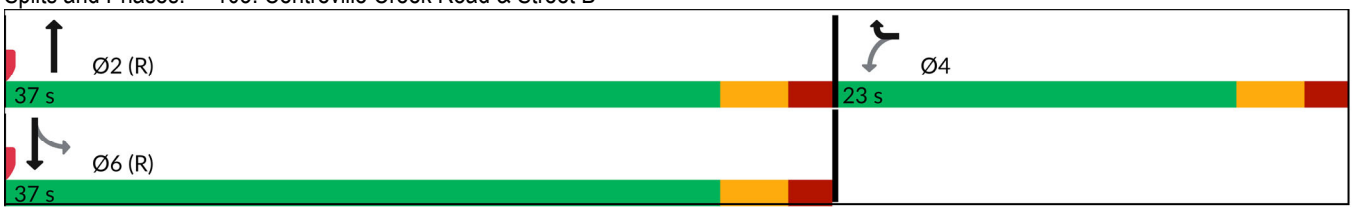


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	15	376	17	16	229
Future Volume (vph)	12	15	376	17	16	229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	55.0	0.0		0.0	55.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.994			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1852	0	1770	1863
Flt Permitted	0.950				0.530	
Satd. Flow (perm)	1770	1583	1852	0	987	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		15	6			
Link Speed (k/h)	50		60			60
Link Distance (m)	408.6		525.3			150.0
Travel Time (s)	29.4		31.5			9.0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	15	376	17	16	229
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	15	393	0	16	229
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		3.6			3.6
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Prot	NA		Perm	NA
Protected Phases		4	2			6
Permitted Phases	4				6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0
Total Split (s)	23.0	23.0	37.0		37.0	37.0
Total Split (%)	38.3%	38.3%	61.7%		61.7%	61.7%
Maximum Green (s)	18.0	18.0	32.0		32.0	32.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Don't Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effct Green (s)	7.0	7.0	53.8		53.8	53.8
Actuated g/C Ratio	0.12	0.12	0.90		0.90	0.90
v/c Ratio	0.06	0.08	0.24		0.02	0.14
Control Delay (s/veh)	23.9	13.4	3.2		1.9	1.6
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	23.9	13.4	3.2		1.9	1.6
LOS	C	B	A		A	A
Approach Delay (s/veh)	18.1		3.2			1.6
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.24			
Intersection Signal Delay (s/veh): 3.2		Intersection LOS: A	
Intersection Capacity Utilization 31.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 103: Centreville Creek Road & Street B





Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	12	15	393	16	229
v/c Ratio	0.06	0.08	0.24	0.02	0.14
Control Delay (s/veh)	23.9	13.4	3.2	1.9	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	23.9	13.4	3.2	1.9	1.6
Queue Length 50th (m)	1.3	0.0	0.0	0.0	0.0
Queue Length 95th (m)	5.3	4.5	38.8	1.4	10.5
Internal Link Dist (m)	384.6		501.3		126.0
Turn Bay Length (m)	55.0			55.0	
Base Capacity (vph)	560	511	1660	884	1669
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.02	0.03	0.24	0.02	0.14

Intersection Summary



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	15	376	17	16	229
Future Volume (vph)	12	15	376	17	16	229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1852		1770	1863
Flt Permitted	0.95	1.00	1.00		0.53	1.00
Satd. Flow (perm)	1770	1583	1852		987	1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	15	376	17	16	229
RTOR Reduction (vph)	0	14	1	0	0	0
Lane Group Flow (vph)	12	1	392	0	16	229
Turn Type	Perm	Prot	NA		Perm	NA
Protected Phases		4	2			6
Permitted Phases	4				6	
Actuated Green, G (s)	2.6	2.6	47.4		47.4	47.4
Effective Green, g (s)	3.6	3.6	48.4		48.4	48.4
Actuated g/C Ratio	0.06	0.06	0.81		0.81	0.81
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	106	94	1493		796	1502
v/s Ratio Prot		0.00	c0.21			0.12
v/s Ratio Perm	c0.01				0.02	
v/c Ratio	0.11	0.01	0.26		0.02	0.15
Uniform Delay, d1	26.7	26.5	1.4		1.1	1.3
Progression Factor	1.00	1.00	1.88		1.00	1.00
Incremental Delay, d2	0.5	0.0	0.4		0.0	0.2
Delay (s)	27.2	26.6	3.1		1.2	1.5
Level of Service	C	C	A		A	A
Approach Delay (s/veh)	26.8		3.1			1.5
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay (s/veh)	3.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	31.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

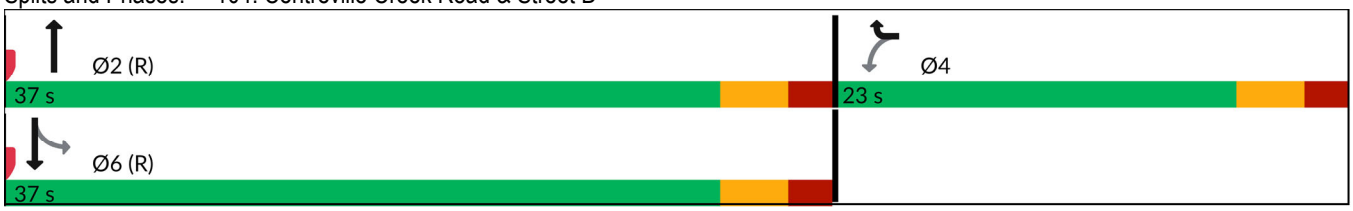


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	121	18	375	177	21	220
Future Volume (vph)	121	18	375	177	21	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	55.0	0.0		0.0	55.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.957			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1783	0	1770	1863
Flt Permitted	0.950				0.419	
Satd. Flow (perm)	1770	1583	1783	0	780	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		18	63			
Link Speed (k/h)	50		60			60
Link Distance (m)	431.6		570.6			525.3
Travel Time (s)	31.1		34.2			31.5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	121	18	375	177	21	220
Shared Lane Traffic (%)						
Lane Group Flow (vph)	121	18	552	0	21	220
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		3.6			3.6
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Prot	NA		Perm	NA
Protected Phases		4	2			6
Permitted Phases	4				6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0
Total Split (s)	23.0	23.0	37.0		37.0	37.0
Total Split (%)	38.3%	38.3%	61.7%		61.7%	61.7%
Maximum Green (s)	18.0	18.0	32.0		32.0	32.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Don't Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effct Green (s)	10.4	10.4	44.6		44.6	44.6
Actuated g/C Ratio	0.17	0.17	0.74		0.74	0.74
v/c Ratio	0.40	0.06	0.41		0.04	0.16
Control Delay (s/veh)	25.0	10.0	5.0		3.8	3.7
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	25.0	10.0	5.0		3.8	3.7
LOS	C	A	A		A	A
Approach Delay (s/veh)	23.1		5.0			3.8
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.41			
Intersection Signal Delay (s/veh): 7.3		Intersection LOS: A	
Intersection Capacity Utilization 43.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 104: Centreville Creek Road & Street D





Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	121	18	552	21	220
v/c Ratio	0.40	0.06	0.41	0.04	0.16
Control Delay (s/veh)	25.0	10.0	5.0	3.8	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.0	10.0	5.0	3.8	3.7
Queue Length 50th (m)	12.6	0.0	18.6	0.6	6.5
Queue Length 95th (m)	24.1	4.3	42.5	2.7	15.5
Internal Link Dist (m)	407.6		546.6		501.3
Turn Bay Length (m)	55.0			55.0	
Base Capacity (vph)	560	513	1340	579	1383
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.22	0.04	0.41	0.04	0.16

Intersection Summary



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	121	18	375	177	21	220
Future Volume (vph)	121	18	375	177	21	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.96		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1782		1770	1863
Flt Permitted	0.95	1.00	1.00		0.42	1.00
Satd. Flow (perm)	1770	1583	1782		781	1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	121	18	375	177	21	220
RTOR Reduction (vph)	0	15	18	0	0	0
Lane Group Flow (vph)	121	3	534	0	21	220
Turn Type	Perm	Prot	NA		Perm	NA
Protected Phases		4	2			6
Permitted Phases	4				6	
Actuated Green, G (s)	8.2	8.2	41.8		41.8	41.8
Effective Green, g (s)	9.2	9.2	42.8		42.8	42.8
Actuated g/C Ratio	0.15	0.15	0.71		0.71	0.71
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	271	242	1271		557	1328
v/s Ratio Prot		0.00	c0.30			0.12
v/s Ratio Perm	c0.07				0.03	
v/c Ratio	0.45	0.01	0.42		0.04	0.17
Uniform Delay, d1	23.1	21.5	3.5		2.5	2.8
Progression Factor	1.00	1.00	1.00		0.96	0.95
Incremental Delay, d2	1.2	0.0	1.0		0.1	0.3
Delay (s)	24.3	21.6	4.5		2.6	2.9
Level of Service	C	C	A		A	A
Approach Delay (s/veh)	23.9		4.5			2.9
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay (s/veh)	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

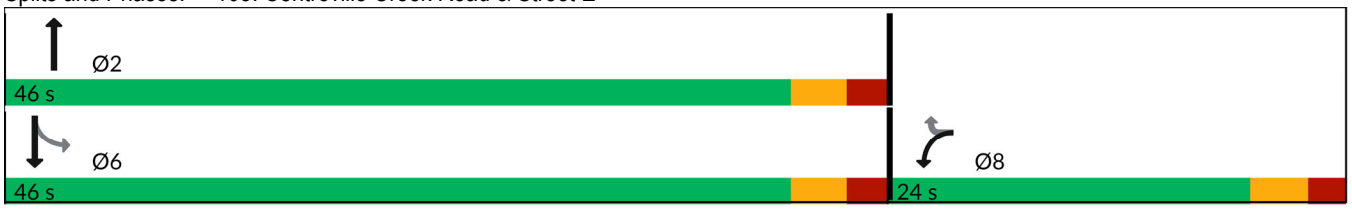


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	192	48	504	278	53	288
Future Volume (vph)	192	48	504	278	53	288
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0	0.0		0.0	55.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.850	0.952			
Flt Protected	0.950				0.950	0.999
Satd. Flow (prot)	1770	1583	1773	0	1681	1768
Flt Permitted	0.950				0.229	0.990
Satd. Flow (perm)	1770	1583	1773	0	405	1752
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		48	71			
Link Speed (k/h)	50		60			60
Link Distance (m)	458.6		211.0			570.6
Travel Time (s)	33.0		12.7			34.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	192	48	504	278	53	288
Shared Lane Traffic (%)					10%	
Lane Group Flow (vph)	192	48	782	0	48	293
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		3.6			3.6
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	100	100		100	100	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0
Total Split (s)	24.0	24.0	46.0		46.0	46.0
Total Split (%)	34.3%	34.3%	65.7%		65.7%	65.7%
Maximum Green (s)	19.0	19.0	41.0		41.0	41.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Min		Min	Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Don't Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effct Green (s)	12.2	12.2	30.3		30.3	30.3
Actuated g/C Ratio	0.24	0.24	0.60		0.60	0.60
v/c Ratio	0.45	0.12	0.72		0.20	0.28
Control Delay (s/veh)	21.1	7.3	11.6		7.8	6.2
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	21.1	7.3	11.6		7.8	6.2
LOS	C	A	B		A	A
Approach Delay (s/veh)	18.3		11.6			6.4
Approach LOS	B		B			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 50.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay (s/veh): 11.5		Intersection LOS: B	
Intersection Capacity Utilization 60.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 105: Centreville Creek Road & Street E





Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	192	48	782	48	293
v/c Ratio	0.45	0.12	0.72	0.20	0.28
Control Delay (s/veh)	21.1	7.3	11.6	7.8	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.1	7.3	11.6	7.8	6.2
Queue Length 50th (m)	13.0	0.0	36.7	1.6	11.1
Queue Length 95th (m)	38.5	7.2	94.4	7.8	28.4
Internal Link Dist (m)	434.6		187.0		546.6
Turn Bay Length (m)	70.0			55.0	
Base Capacity (vph)	719	672	1524	346	1496
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.27	0.07	0.51	0.14	0.20

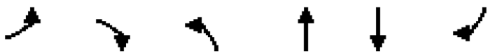
Intersection Summary



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	192	48	504	278	53	288
Future Volume (vph)	192	48	504	278	53	288
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		0.95	0.95
Frt	1.00	0.85	0.95		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1773		1681	1768
Flt Permitted	0.95	1.00	1.00		0.23	0.99
Satd. Flow (perm)	1770	1583	1773		405	1751
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	192	48	504	278	53	288
RTOR Reduction (vph)	0	36	28	0	0	0
Lane Group Flow (vph)	192	12	754	0	48	293
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	11.2	11.2	29.3		29.3	29.3
Effective Green, g (s)	12.2	12.2	30.3		30.3	30.3
Actuated g/C Ratio	0.24	0.24	0.60		0.60	0.60
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	427	382	1063		243	1050
v/s Ratio Prot	c0.11		c0.42			
v/s Ratio Perm		0.01			0.12	0.17
v/c Ratio	0.45	0.03	0.71		0.20	0.28
Uniform Delay, d1	16.3	14.6	7.0		4.6	4.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.8	0.0	2.2		0.4	0.1
Delay (s)	17.0	14.7	9.2		5.0	5.0
Level of Service	B	B	A		A	A
Approach Delay (s/veh)	16.6		9.2			5.0
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay (s/veh)	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	50.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

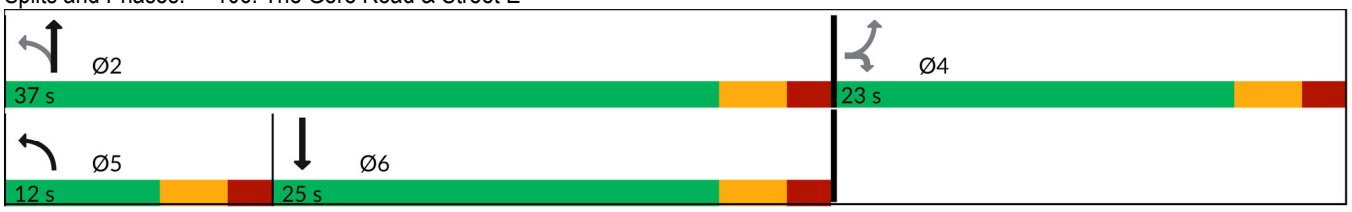


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	387	224	269	590	385	671
Future Volume (vph)	387	224	269	590	385	671
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0	0.0	55.0			50.0
Storage Lanes	1	1	1			0
Taper Length (m)	7.5		7.5			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.905	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3203	0
Flt Permitted	0.950		0.208			
Satd. Flow (perm)	1770	1583	387	3539	3203	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		224			671	
Link Speed (k/h)	50			60	60	
Link Distance (m)	294.3			396.2	1462.6	
Travel Time (s)	21.2			23.8	87.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	387	224	269	590	385	671
Shared Lane Traffic (%)						
Lane Group Flow (vph)	387	224	269	590	1056	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25			15
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	2.0	2.0	2.0	10.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	2.0	2.0	0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Perm	pm+pt	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4	4	2			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	23.0	23.0	10.0	23.0	23.0	
Total Split (s)	23.0	23.0	12.0	37.0	25.0	
Total Split (%)	38.3%	38.3%	20.0%	61.7%	41.7%	
Maximum Green (s)	18.0	18.0	7.0	32.0	20.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	
Act Effct Green (s)	16.0	16.0	27.4	27.4	15.1	
Actuated g/C Ratio	0.31	0.31	0.53	0.53	0.29	
v/c Ratio	0.71	0.35	0.63	0.31	0.75	
Control Delay (s/veh)	25.1	4.5	15.7	7.6	9.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	25.1	4.5	15.7	7.6	9.5	
LOS	C	A	B	A	A	
Approach Delay (s/veh)	17.5			10.1	9.5	
Approach LOS	B			B	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 51.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay (s/veh): 11.6		Intersection LOS: B	
Intersection Capacity Utilization 78.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 106: The Gore Road & Street E

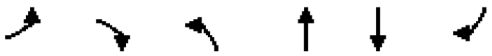




Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	387	224	269	590	1056
v/c Ratio	0.71	0.35	0.63	0.31	0.75
Control Delay (s/veh)	25.1	4.5	15.7	7.6	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.1	4.5	15.7	7.6	9.5
Queue Length 50th (m)	33.2	0.0	14.0	16.4	16.2
Queue Length 95th (m)	#68.5	12.9	#36.4	25.8	34.9
Internal Link Dist (m)	270.3			372.2	1438.6
Turn Bay Length (m)	70.0		55.0		
Base Capacity (vph)	669	737	425	2324	1729
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.58	0.30	0.63	0.25	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	387	224	269	590	385	671
Future Volume (vph)	387	224	269	590	385	671
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.90	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	3539	3202	
Flt Permitted	0.95	1.00	0.21	1.00	1.00	
Satd. Flow (perm)	1770	1583	388	3539	3202	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	387	224	269	590	385	671
RTOR Reduction (vph)	0	154	0	0	473	0
Lane Group Flow (vph)	387	70	269	590	583	0
Turn Type	Perm	Perm	pm+pt	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	15.0	15.0	26.4	26.4	14.2	
Effective Green, g (s)	16.0	16.0	27.4	27.4	15.2	
Actuated g/C Ratio	0.31	0.31	0.53	0.53	0.30	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	550	492	427	1886	946	
v/s Ratio Prot			c0.10	0.17	0.18	
v/s Ratio Perm	c0.22	0.04	c0.24			
v/c Ratio	0.70	0.14	0.63	0.31	0.62	
Uniform Delay, d1	15.6	12.8	9.2	6.7	15.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.1	0.1	2.9	0.1	1.2	
Delay (s)	19.7	12.9	12.1	6.8	16.8	
Level of Service	B	B	B	A	B	
Approach Delay (s/veh)	17.2			8.5	16.8	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	51.4	Sum of lost time (s)	13.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	13	0	0	12	29	0	0	0	19	0	0
Future Volume (vph)	0	13	0	0	12	29	0	0	0	19	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.905							
Flt Protected											0.950	
Satd. Flow (prot)	0	1863	0	0	1686	0	0	1863	0	0	1770	0
Flt Permitted											0.950	
Satd. Flow (perm)	0	1863	0	0	1686	0	0	1863	0	0	1770	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		408.6			371.7			511.4			99.8	
Travel Time (s)		29.4			26.8			36.8			7.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	13	0	0	12	29	0	0	0	19	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	13	0	0	41	0	0	0	0	0	19	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		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)	0	13	0	0	12	29	0	0	0	19	0	0
Future Volume (vph)	0	13	0	0	12	29	0	0	0	19	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	13	0	0	12	29	0	0	0	19	0	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	13	41	0	19
Volume Left (vph)	0	0	0	19
Volume Right (vph)	0	29	0	0
Hadj (s)	0.03	-0.39	0.00	0.23
Departure Headway (s)	4.0	3.6	4.0	4.2
Degree Utilization, x	0.01	0.04	0.00	0.02
Capacity (veh/h)	885	998	886	834
Control Delay (s/veh)	7.1	6.7	7.0	7.3
Approach Delay (s/veh)	7.1	6.7	0.0	7.3
Approach LOS	A	A	A	A

Intersection Summary				
Delay	6.9			
Level of Service	A			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	203	0	0	176	0	0	0	0	0	0	0
Future Volume (vph)	0	203	0	0	176	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		431.6			576.7			581.5			511.4	
Travel Time (s)		31.1			41.5			41.9			36.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	203	0	0	176	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	203	0	0	176	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Stop			Stop	

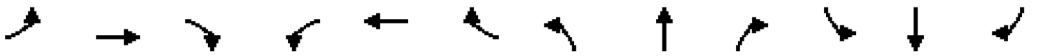
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	203	0	0	176	0	0	0	0	0	0	0
Future Volume (vph)	0	203	0	0	176	0	0	0	0	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	203	0	0	176	0	0	0	0	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	203	176	0	0
Volume Left (vph)	0	0	0	0
Volume Right (vph)	0	0	0	0
Hadj (s)	0.03	0.03	0.00	0.00
Departure Headway (s)	4.1	4.1	4.7	4.7
Degree Utilization, x	0.23	0.20	0.00	0.00
Capacity (veh/h)	867	863	709	709
Control Delay (s/veh)	8.3	8.2	7.7	7.7
Approach Delay (s/veh)	8.3	8.2	0.0	0.0
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.3		
Level of Service	A		
Intersection Capacity Utilization	14.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	311	31	12	277	0	24	0	6	0	0	47
Future Volume (vph)	66	311	31	12	277	0	24	0	6	0	0	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990						0.973			0.865	
Flt Protected		0.992			0.998			0.962				
Satd. Flow (prot)	0	1829	0	0	1859	0	0	1744	0	0	1611	0
Flt Permitted		0.992			0.998			0.962				
Satd. Flow (perm)	0	1829	0	0	1859	0	0	1744	0	0	1611	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		458.6			612.1			145.9			581.5	
Travel Time (s)		33.0			44.1			10.5			41.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	66	311	31	12	277	0	24	0	6	0	0	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	408	0	0	289	0	0	30	0	0	47	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.5%		ICU Level of Service B	
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)	66	311	31	12	277	0	24	0	6	0	0	47
Future Volume (vph)	66	311	31	12	277	0	24	0	6	0	0	47
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	66	311	31	12	277	0	24	0	6	0	0	47

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	408	289	30	47
Volume Left (vph)	66	12	24	0
Volume Right (vph)	31	0	6	47
Hadj (s)	0.02	0.04	0.07	-0.57
Departure Headway (s)	4.5	4.6	5.6	5.0
Degree Utilization, x	0.50	0.37	0.05	0.06
Capacity (veh/h)	791	756	550	626
Control Delay (s/veh)	11.9	10.3	8.9	8.3
Approach Delay (s/veh)	11.9	10.3	8.9	8.3
Approach LOS	B	B	A	A

Intersection Summary				
Delay	11.0			
Level of Service	B			
Intersection Capacity Utilization	55.5%	ICU Level of Service	B	
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	0	142	0	0	0	217	168	0	0	113	48
Future Volume (vph)	70	0	142	0	0	0	217	168	0	0	113	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.910									0.960	
Flt Protected		0.984						0.973				
Satd. Flow (prot)	0	1668	0	0	1863	0	0	1812	0	0	1788	0
Flt Permitted		0.984						0.973				
Satd. Flow (perm)	0	1668	0	0	1863	0	0	1812	0	0	1788	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		576.7			182.5			599.3			475.8	
Travel Time (s)		41.5			13.1			43.1			34.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	70	0	142	0	0	0	217	168	0	0	113	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	212	0	0	0	0	0	385	0	0	161	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.3%		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)	70	0	142	0	0	0	217	168	0	0	113	48
Future Volume (vph)	70	0	142	0	0	0	217	168	0	0	113	48
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	70	0	142	0	0	0	217	168	0	0	113	48

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	212	0	385	161
Volume Left (vph)	70	0	217	0
Volume Right (vph)	142	0	0	48
Hadj (s)	-0.30	0.00	0.15	-0.14
Departure Headway (s)	4.9	5.6	4.8	4.8
Degree Utilization, x	0.29	0.00	0.51	0.21
Capacity (veh/h)	670	560	724	701
Control Delay (s/veh)	9.9	8.6	12.8	9.1
Approach Delay (s/veh)	9.9	0.0	12.8	9.1
Approach LOS	A	A	B	A

Intersection Summary				
Delay	11.2			
Level of Service	B			
Intersection Capacity Utilization	52.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	234	242	0	0	379	561	0	0	0	369	0	0
Future Volume (vph)	234	242	0	0	379	561	0	0	0	369	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.919							
Flt Protected		0.976									0.950	
Satd. Flow (prot)	0	1818	0	0	1712	0	0	1863	0	0	1770	0
Flt Permitted		0.976									0.950	
Satd. Flow (perm)	0	1818	0	0	1712	0	0	1863	0	0	1770	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		612.1			294.3			153.7			599.3	
Travel Time (s)		44.1			21.2			11.1			43.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	234	242	0	0	379	561	0	0	0	369	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	476	0	0	940	0	0	0	0	0	369	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 110.5%		ICU Level of Service H	
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)	234	242	0	0	379	561	0	0	0	369	0	0
Future Volume (vph)	234	242	0	0	379	561	0	0	0	369	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	234	242	0	0	379	561	0	0	0	369	0	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	476	940	0	369
Volume Left (vph)	234	0	0	369
Volume Right (vph)	0	561	0	0
Hadj (s)	0.13	-0.32	0.00	0.23
Departure Headway (s)	6.5	6.0	8.5	7.1
Degree Utilization, x	0.86	1.56	0.00	0.72
Capacity (veh/h)	544	607	385	369
Control Delay (s/veh)	37.1	275.7	11.5	26.3
Approach Delay (s/veh)	37.1	275.7	0.0	26.3
Approach LOS	E	F	A	D

Intersection Summary			
Delay	160.5		
Level of Service	F		
Intersection Capacity Utilization	110.5%	ICU Level of Service	H
Analysis Period (min)	15		

Appendix D

Signalization Warrant Analysis

Signal Justification Calculation for Forecasted Volumes (OTM Book 12 - Justification 7)

Horizon Year: Phase 1
Region/City/Township: Town of Caledon

Major Street: Centreville Creek Road North/South: Y
Minor Street: Street B

Number of Approach Lanes: 1
Tee Intersection? Y
Flow Conditions: Restricted

PM Forecast Only? N

Warrant Results		
150% Satisfied	**No**	Justification for new intersections with forecast traffic
120% Satisfied	**No**	Justification for existing intersections with forecast traffic

Time Period	Major Street						Minor Street						Peds Crossing Main Road
	Centreville Creek Road						Street B						
	Northbound			Southbound			Eastbound			Westbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
AM Peak Hour	0	0	23	5	0	0	0	0	0	61	0	5	0
PM Peak Hour	0	0	35	8	0	0	0	0	0	31	0	10	0
Average Hourly Volume	**0**	**0**	**15**	**3**	**0**	**0**	**0**	**0**	**0**	**23**	**0**	**4**	**0**

Warrant 1 - Minimum Vehicular Volume

Warrant	AHV
1A - All	44
1B - Minor	27
2A - Major	18
2B - Cross	23

	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
1A	All Approaches	480	720	600	900	44
					% Fulfilled	**6.2%**

	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
1B	Minor Street Approaches	180	255	180	255	27
					% Fulfilled	**10.5%**

Warrant 2 - Delay To Cross Traffic

	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
2A	Major Street Approaches	480	720	600	900	18
					% Fulfilled	**2.5%**

	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
2B	Traffic Crossing Major Street	50	75	50	75	23
					% Fulfilled	**30.6%**

Signal Justification Calculation for Forecasted Volumes (OTM Book 12 - Justification 7)

Horizon Year: Phase 1 Total Traffic
Region/City/Township: Town of Caledon

Major Street: Street B
Minor Street: Street D
North/South: Y

Number of Approach Lanes: 1
Tee Intersection? N
Flow Conditions: Restricted

PM Forecast Only? N

Warrant Results		
150% Satisfied	**No**	Justification for new intersections with forecast traffic
120% Satisfied	**No**	Justification for existing intersections with forecast traffic

Time Period	Major Street						Minor Street						Peds Crossing Main Road
	Street B						Street D						
	Northbound			Southbound			Eastbound			Westbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
AM Peak Hour	0	0	10	0	0	0	0	0	0	29	0	0	0
PM Peak Hour	0	0	27	0	0	0	0	0	0	19	0	0	0
Average Hourly Volume	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**0**

Warrant 1 - Minimum Vehicular Volume

Warrant	AHV
1A - All	21
1B - Minor	12
2A - Major	9
2B - Cross	12

	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
1A	All Approaches	480	720	600	900	21
					% Fulfilled	**3.0%**

	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
1B	Minor Street Approaches	120	170	120	170	12
					% Fulfilled	**7.1%**

Warrant 2 - Delay To Cross Traffic

	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
2A	Major Street Approaches	480	720	600	900	9
					% Fulfilled	**1.3%**

	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
2B	Traffic Crossing Major Street	50	75	50	75	12
					% Fulfilled	**16.0%**

Signal Justification Calculation for Forecasted Volumes (OTM Book 12 - Justification 7)

Horizon Year: Phase 1 Total Traffic
Region/City/Township: Town of Caledon

Major Street: Street B
Minor Street: Street E
North/South: Y

Number of Approach Lanes: 1
Tee Intersection? N
Flow Conditions: Restricted

PM Forecast Only? N

Warrant Results		
150% Satisfied	**No**	Justification for new intersections with forecast traffic
120% Satisfied	**No**	Justification for existing intersections with forecast traffic

Time Period	Major Street						Minor Street						Peds Crossing Main Road
	Street B						Street E						
	Northbound			Southbound			Eastbound			Westbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
AM Peak Hour	0	0	0	236	0	66	28	0	0	0	0	66	0
PM Peak Hour	0	0	0	140	0	41	43	0	0	0	0	228	0
Average Hourly Volume	**0**	**0**	**0**	**94**	**0**	**27**	**18**	**0**	**0**	**0**	**0**	**74**	**0**

Warrant 1 - Minimum Vehicular Volume

Warrant	AHV
1A - All	212
1B - Minor	91
2A - Major	121
2B - Cross	18

1A	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	All Approaches	480	720	600	900	212
					% Fulfilled	**29.4%**

1B	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Minor Street Approaches	120	170	120	170	91
					% Fulfilled	**53.7%**

Warrant 2 - Delay To Cross Traffic

2A	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Major Street Approaches	480	720	600	900	121
					% Fulfilled	**16.8%**

2B	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Traffic Crossing Major Street	50	75	50	75	18
					% Fulfilled	**23.7%**

Signal Justification Calculation for Forecasted Volumes (OTM Book 12 - Justification 7)

Horizon Year: Full Build-Out Total Traffic
Region/City/Township: Town of Caledon

Major Street: Street A North/South: Y
Minor Street: Street B

Number of Approach Lanes: 1
Tee Intersection? N
Flow Conditions: Restricted

PM Forecast Only? N

Warrant Results		
150% Satisfied	**No**	Justification for new intersections with forecast traffic
120% Satisfied	**No**	Justification for existing intersections with forecast traffic

Time Period	Major Street						Minor Street						Peds Crossing Main Road
	Street A						Street B						
	Northbound			Southbound			Eastbound			Westbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
AM Peak Hour	0	0	0	32	0	0	0	5	0	0	2	12	0
PM Peak Hour	0	0	0	19	0	0	0	13	0	0	12	29	0
Average Hourly Volume	**0**	**0**	**0**	**13**	**0**	**0**	**0**	**5**	**0**	**0**	**4**	**10**	**0**

Warrant 1 - Minimum Vehicular Volume

Warrant	AHV
1A - All	31
1B - Minor	18
2A - Major	13
2B - Cross	5

1A	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	All Approaches	480	720	600	900	31
					% Fulfilled	**4.3%**

1B	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Minor Street Approaches	120	170	120	170	18
					% Fulfilled	**10.7%**

Warrant 2 - Delay To Cross Traffic

2A	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Major Street Approaches	480	720	600	900	13
					% Fulfilled	**1.8%**

2B	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Traffic Crossing Major Street	50	75	50	75	5
					% Fulfilled	**6.0%**

Signal Justification Calculation for Forecasted Volumes (OTM Book 12 - Justification 7)

Horizon Year: Full Build-Out Total Traffic
Region/City/Township: Town of Caledon

Major Street: Street A North/South: Y
Minor Street: Street D

Number of Approach Lanes: 1
Tee Intersection? N
Flow Conditions: Restricted

PM Forecast Only? N

Warrant Results		
150% Satisfied	**No**	Justification for new intersections with forecast traffic
120% Satisfied	**No**	Justification for existing intersections with forecast traffic

Time Period	Major Street						Minor Street						Peds Crossing Main Road
	Street A						Street D						
	Northbound			Southbound			Eastbound			Westbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
AM Peak Hour	0	0	0	0	0	0	0	117	0	0	224	0	0
PM Peak Hour	0	0	0	0	0	0	0	203	0	0	176	0	0
Average Hourly Volume	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**80**	**0**	**0**	**100**	**0**	**0**

Warrant 1 - Minimum Vehicular Volume

Warrant	AHV
1A - All	180
1B - Minor	180
2A - Major	0
2B - Cross	100

	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
1A	All Approaches	480	720	600	900	180
					% Fulfilled	**25.0%**

	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
1B	Minor Street Approaches	120	170	120	170	180
					% Fulfilled	**105.9%**

Warrant 2 - Delay To Cross Traffic

	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
2A	Major Street Approaches	480	720	600	900	0
					% Fulfilled	**0.0%**

	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
2B	Traffic Crossing Major Street	50	75	50	75	100
					% Fulfilled	**133.3%**

Signal Justification Calculation for Forecasted Volumes (OTM Book 12 - Justification 7)

Horizon Year: Full Build-Out Total Traffic
Region/City/Township: Town of Caledon

Major Street: Street A North/South: Y
Minor Street: Street D

Number of Approach Lanes: 1
Tee Intersection? N
Flow Conditions: Restricted

PM Forecast Only? N

Warrant Results		
150% Satisfied	**No**	Justification for new intersections with forecast traffic
120% Satisfied	**No**	Justification for existing intersections with forecast traffic

Time Period	Major Street						Minor Street						Peds Crossing Main Road
	Street A						Street D						
	Northbound			Southbound			Eastbound			Westbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
AM Peak Hour	36	0	10	0	0	73	22	202	10	4	304	0	0
PM Peak Hour	24	0	6	0	0	47	66	311	31	12	277	0	0
Average Hourly Volume	**15**	**0**	**4**	**0**	**0**	**30**	**22**	**128**	**10**	**4**	**145**	**0**	**0**

Warrant 1 - Minimum Vehicular Volume

Warrant	AHV
1A - All	359
1B - Minor	310
2A - Major	49
2B - Cross	171

1A	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	All Approaches	480	720	600	900	359
					% Fulfilled	**49.8%**

1B	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Minor Street Approaches	120	170	120	170	310
					% Fulfilled	**182.2%**

Warrant 2 - Delay To Cross Traffic

2A	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Major Street Approaches	480	720	600	900	49
					% Fulfilled	**6.8%**

2B	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Traffic Crossing Major Street	50	75	50	75	171
					% Fulfilled	**228.3%**

Signal Justification Calculation for Forecasted Volumes (OTM Book 12 - Justification 7)

Horizon Year: Full Build-Out Total Traffic
Region/City/Township: Town of Caledon

Major Street: Street B
Minor Street: Street D
North/South: Y

Number of Approach Lanes: 1
Tee Intersection? N
Flow Conditions: Restricted

PM Forecast Only? N

Warrant Results		
150% Satisfied	**No**	Justification for new intersections with forecast traffic
120% Satisfied	**No**	Justification for existing intersections with forecast traffic

Time Period	Major Street						Minor Street						Peds Crossing Main Road
	Street B						Street D						
	Northbound			Southbound			Eastbound			Westbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
AM Peak Hour	78	63	0	0	178	98	26	0	218	0	0	0	0
PM Peak Hour	217	168	0	0	113	48	70	0	142	0	0	0	0
Average Hourly Volume	**74**	**58**	**0**	**0**	**73**	**37**	**24**	**0**	**90**	**0**	**0**	**0**	**0**

Warrant 1 - Minimum Vehicular Volume

Warrant	AHV
1A - All	355
1B - Minor	114
2A - Major	241
2B - Cross	24

1A	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	All Approaches	480	720	600	900	355
					% Fulfilled	**49.3%**

1B	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Minor Street Approaches	120	170	120	170	114
					% Fulfilled	**67.1%**

Warrant 2 - Delay To Cross Traffic

2A	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Major Street Approaches	480	720	600	900	241
					% Fulfilled	**33.4%**

2B	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Traffic Crossing Major Street	50	75	50	75	24
					% Fulfilled	**32.0%**

Signal Justification Calculation for Forecasted Volumes (OTM Book 12 - Justification 7)

Horizon Year: Full Build-Out Total Traffic
Region/City/Township: Town of Caledon

Major Street: Street B
Minor Street: Street E
North/South: Y

Number of Approach Lanes: 1
Tee Intersection? N
Flow Conditions: Restricted

PM Forecast Only? N

Warrant Results		
150% Satisfied	**No**	Justification for new intersections with forecast traffic
120% Satisfied	**No**	Justification for existing intersections with forecast traffic

Time Period	Major Street						Minor Street						Peds Crossing Main Road
	Street B						Street E						
	Northbound			Southbound			Eastbound			Westbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
AM Peak Hour	0	0	0	573	0	0	81	383	0	0	135	203	0
PM Peak Hour	0	0	0	369	0	0	234	242	0	0	379	561	0
Average Hourly Volume	**0**	**0**	**0**	**236**	**0**	**0**	**79**	**156**	**0**	**0**	**129**	**191**	**0**

Warrant 1 - Minimum Vehicular Volume

Warrant	AHV
1A - All	790
1B - Minor	555
2A - Major	236
2B - Cross	235

	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
1A	All Approaches	480	720	600	900	790
					% Fulfilled	**109.7%**

	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
1B	Minor Street Approaches	120	170	120	170	555
					% Fulfilled	**326.2%**

Warrant 2 - Delay To Cross Traffic

	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
2A	Major Street Approaches	480	720	600	900	236
					% Fulfilled	**32.7%**

	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
2B	Traffic Crossing Major Street	50	75	50	75	235
					% Fulfilled	**313.3%**

Appendix E

Secondary Plan Transportation Study Trip Distribution

Tue Jul 16 2024 10:08:37 GMT-0400 (Eastern Daylight Time) - Run Time: 2802ms

Cross Tabulation Query Form - Trip - 2016

Row: Planning district of destination - pd_dest
Column: 2006 GTA zone of origin - gta06_orig

Filters:
Start time of trip - start_time In 600-859
and
Trip purpose of origin - purp_orig In H,
and
Primary travel mode of trip - mode_prime In d, m, p, t, U, P,
and
2006 GTA zone of origin - gta06_orig In 3443, 3442, 3469

Trip 2016
Table:

	3442	3443	3469	sum
PD 1 of Toronto	27	0	0	27
PD 3 of Toronto	35	0	17	52
PD 4 of Toronto	0	0	9	9
PD 7 of Toronto	24	0	0	24
PD 8 of Toronto	54	0	0	54
PD 9 of Toronto	0	18	162	180
PD 10 of Toronto	32	56	58	146
PD 13 of Toronto	0	0	21	21
Richmond Hill	38	60	0	98
Markham	38	6	0	44
Vaughan	168	80	260	508
Caledon	14	75	11	100
Brampton	824	450	469	1743
Mississauga	427	88	252	767
Oakville	0	0	19	19
Burlington	0	0	19	19
Cambridge	0	55	0	55
Shelburne	24	0	0	24

Wildfield

8155-03

Residential Vehicular Site Traffic Distribution (AM Peak Hour)

Outbound (NO 413)

BA Group - COF

2025-05-30

To the

			Traffic Volume Allocation										
Zone	Trips	%	NORTH The Gore Rd	SOUTH The Gore Rd	EAST Mayfield Rd	WEST Mayfield Rd	NORTH Centreville Creek Rd	SOUTH Centreville Creek Rd	EAST Highway 413	WEST Highway 413	EAST Healey Rd	WEST Healey Rd	TOTAL
PD 1 of Toronto	27	1%		40%				10%	50%				100%
PD 3 of Toronto	52	1%		50%					50%				100%
PD 4 of Toronto	9	0%		50%					50%				100%
PD 7 of Toronto	24	1%		50%		10%			40%				100%
PD 8 of Toronto	54	1%		40%				20%	40%				100%
PD 9 of Toronto	180	5%		40%				40%	20%				100%
PD 10 of Toronto	146	4%		80%					20%				100%
PD 13 of Toronto	21	1%		40%		10%			50%				100%
Richmond Hill	98	3%	20%	40%					40%				100%
Markham	44	1%		80%					20%				100%
Vaughan	508	13%		20%					80%				100%
Caledon	100	3%	30%				40%					30%	100%
Brampton	1743	45%			20%	60%		10%		10%			100%
Mississauga	767	20%		5%		20%		5%		70%			100%
Oakville	19	0%		25%					25%	50%			100%
Burlington	19	0%		15%					25%	60%			100%
Cambridge	55	1%				20%	20%			60%			100%
Shelburne	24	1%	50%				50%						100%
TOTAL TRIPS	3890	100%											

	Route Split Totals										
NORTH The Gore Rd	SOUTH The Gore Rd	EAST Mayfield Rd	WEST Mayfield Rd	NORTH Centreville Creek Rd	SOUTH Centreville Creek Rd	EAST Highway 413	WEST Highway 413	EAST Healey Rd	WEST Healey Rd	TOTAL
0.00%	0.28%	0.00%	0.00%	0.00%	0.07%	0.35%	0.00%	0.00%	0.00%	0.7%
0.00%	0.67%	0.00%	0.00%	0.00%	0.00%	0.67%	0.00%	0.00%	0.00%	1.3%
0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.12%	0.00%	0.00%	0.00%	0.2%
0.00%	0.31%	0.00%	0.06%	0.00%	0.00%	0.25%	0.00%	0.00%	0.00%	0.6%
0.00%	0.56%	0.00%	0.00%	0.00%	0.28%	0.56%	0.00%	0.00%	0.00%	1.4%
0.00%	1.85%	0.00%	0.00%	0.00%	1.85%	0.93%	0.00%	0.00%	0.00%	4.6%
0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.75%	0.00%	0.00%	0.00%	3.8%
0.00%	0.22%	0.00%	0.05%	0.00%	0.00%	0.27%	0.00%	0.00%	0.00%	0.5%
0.50%	1.01%	0.00%	0.00%	0.00%	0.00%	1.01%	0.00%	0.00%	0.00%	2.5%
0.00%	0.90%	0.00%	0.00%	0.00%	0.00%	0.23%	0.00%	0.00%	0.00%	1.1%
0.00%	2.61%	0.00%	0.00%	0.00%	0.00%	10.45%	0.00%	0.00%	0.00%	13.1%
0.77%	0.00%	0.00%	0.00%	1.03%	0.00%	0.00%	0.00%	0.00%	0.77%	2.6%
0.00%	0.00%	8.96%	26.88%	0.00%	4.48%	0.00%	4.48%	0.00%	0.00%	44.8%
0.00%	0.99%	0.00%	3.94%	0.00%	0.99%	0.00%	13.80%	0.00%	0.00%	19.7%
0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.12%	0.24%	0.00%	0.00%	0.5%
0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.12%	0.29%	0.00%	0.00%	0.5%
0.00%	0.00%	0.00%	0.28%	0.28%	0.00%	0.00%	0.85%	0.00%	0.00%	1.4%
0.31%	0.00%	0.00%	0.00%	0.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
1.6%	**12.7%**	**9.0%**	**31.2%**	**1.6%**	**7.7%**	**15.8%**	**19.7%**	**0.0%**	**0.8%**	100.0%
Assumed Split										
1%	**13%**	**9%**	**31%**	**1%**	**8%**	**16%**	**20%**	**0%**	**1%**	**100%**

Mon Jul 22 2024 09:26:16 GMT-0400 (Eastern Daylight Time) - Run Time: 2549ms

Cross Tabulation Query Form - Trip - 2016

Row: Planning district of origin - pd_orig
Column: 2006 GTA zone of household - gta06_hhld

Filters:
Start time of trip - start_time In 1500-1759
and
Trip purpose of destination - purp_dest In H,
and
Primary travel mode of trip - mode_prime In D, M, P, T, U,
and
2006 GTA zone of destination - gta06_dest In 3443, 3442, 3469

Trip 2016
Table:

	3442	3443	3469	sum
PD 1 of Toronto	62	0	17	79
PD 4 of Toronto	0	0	11	11
PD 5 of Toronto	0	32	0	32
PD 7 of Toronto	24	0	0	24
PD 8 of Toronto	72	0	24	96
PD 9 of Toronto	0	77	42	119
PD 10 of Toronto	12	0	92	104
PD 11 of Toronto	0	16	0	16
PD 13 of Toronto	0	0	21	21
Richmond Hill	38	60	0	98
Markham	57	0	33	90
Vaughan	155	80	215	450
Caledon	14	107	11	132
Brampton	584	323	685	1592
Mississauga	281	32	325	638
Oakville	0	11	0	11
Hamilton	0	0	38	38
Cambridge	0	55	0	55

Wildfield

8155-03

Residential Vehicular Site Traffic Distribution (AM Peak Hour)

Inbound (NO 413)

BA Group - COF

2025-05-30

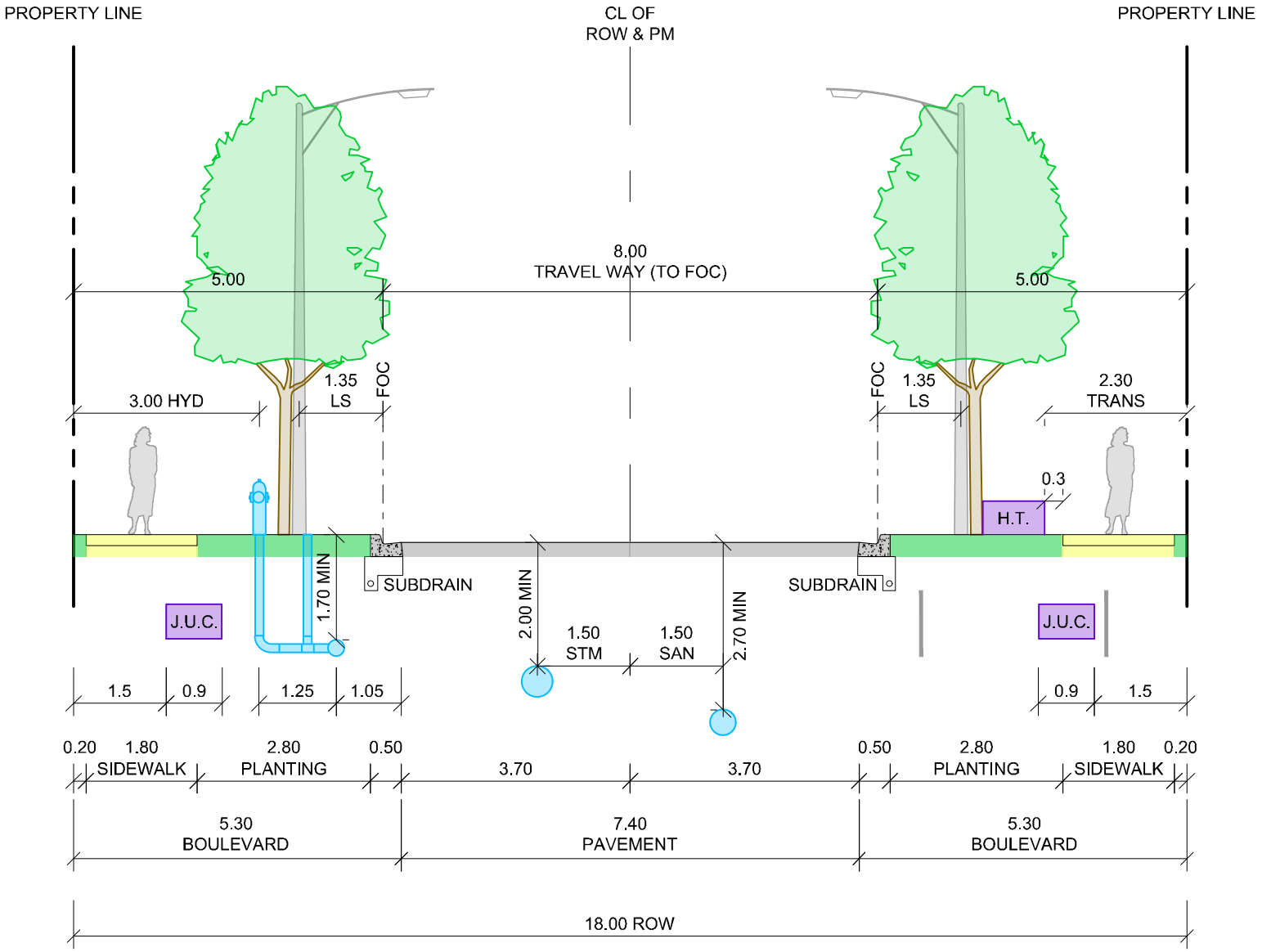
from

			Traffic Volume Allocation										
Zone	Trips	%	NORTH The Gore Rd	SOUTH The Gore Rd	EAST Mayfield Rd	WEST Mayfield Rd	NORTH Centreville Creek Rd	SOUTH Centreville Creek Rd	EAST Highway 413	WEST Highway 413	EAST Healey Rd	WEST Healey Rd	TOTAL
PD 1 of Toronto	79	2%		30%		10%			60%				100%
PD 3 of Toronto	11	0%		20%					80%				100%
PD 4 of Toronto	32	1%		30%		10%			60%				100%
PD 7 of Toronto	24	1%		40%					60%				100%
PD 8 of Toronto	96	3%		40%					60%				100%
PD 9 of Toronto	119	3%		50%					50%				100%
PD 10 of Toronto	104	3%		70%					30%				100%
PD 13 of Toronto	16	0%		30%					70%				100%
Richmond Hill	21	1%		40%					60%				100%
Markham	98	3%		80%					20%				100%
Vaughan	90	2%		30%					70%				100%
Caledon	450	12%	10%		25%		40%					25%	100%
Brampton	132	4%				60%		40%					100%
Mississauga	1592	44%		10%		30%		20%		40%			100%
Oakville	638	18%		5%		30%			5%	60%			100%
Burlington	11	0%		5%		30%			5%	60%			100%
Cambridge	38	1%				10%				80%		10%	100%
Shelburne	55	2%	70%				30%						100%
TOTAL TRIPS	3606	100%											

	Route Split Totals										
NORTH The Gore Rd	SOUTH The Gore Rd	EAST Mayfield Rd	WEST Mayfield Rd	NORTH Centreville Creek Rd	SOUTH Centreville Creek Rd	EAST Highway 413	WEST Highway 413	EAST Healey Rd	WEST Healey Rd	TOTAL
0.00%	0.66%	0.00%	0.22%	0.00%	0.00%	1.31%	0.00%	0.00%	0.00%	2.2%
0.00%	0.06%	0.00%	0.00%	0.00%	0.00%	0.24%	0.00%	0.00%	0.00%	0.3%
0.00%	0.27%	0.00%	0.09%	0.00%	0.00%	0.53%	0.00%	0.00%	0.00%	0.9%
0.00%	0.27%	0.00%	0.00%	0.00%	0.00%	0.40%	0.00%	0.00%	0.00%	0.7%
0.00%	1.06%	0.00%	0.00%	0.00%	0.00%	1.60%	0.00%	0.00%	0.00%	2.7%
0.00%	1.65%	0.00%	0.00%	0.00%	0.00%	1.65%	0.00%	0.00%	0.00%	3.3%
0.00%	2.02%	0.00%	0.00%	0.00%	0.00%	0.87%	0.00%	0.00%	0.00%	2.9%
0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.31%	0.00%	0.00%	0.00%	0.4%
0.00%	0.23%	0.00%	0.00%	0.00%	0.00%	0.35%	0.00%	0.00%	0.00%	0.6%
0.00%	2.17%	0.00%	0.00%	0.00%	0.00%	0.54%	0.00%	0.00%	0.00%	2.7%
0.00%	0.75%	0.00%	0.00%	0.00%	0.00%	1.75%	0.00%	0.00%	0.00%	2.5%
1.25%	0.00%	3.12%	0.00%	4.99%	0.00%	0.00%	0.00%	0.00%	3.12%	12.5%
0.00%	0.00%	0.00%	2.20%	0.00%	1.46%	0.00%	0.00%	0.00%	0.00%	3.7%
0.00%	4.41%	0.00%	13.24%	0.00%	8.83%	0.00%	17.66%	0.00%	0.00%	44.1%
0.00%	0.88%	0.00%	5.31%	0.00%	0.00%	0.88%	10.62%	0.00%	0.00%	17.7%
0.00%	0.02%	0.00%	0.09%	0.00%	0.00%	0.02%	0.18%	0.00%	0.00%	0.3%
0.00%	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.84%	0.00%	0.11%	1.1%
1.07%	0.00%	0.00%	0.00%	0.46%	0.00%	0.00%	0.00%	0.00%	0.00%	1.5%
2.3%	**14.6%**	**3.1%**	**21.3%**	**5.4%**	**10.3%**	**10.5%**	**29.3%**	**0.0%**	**3.2%**	100%
Assumed Split										
2%	**15%**	**3%**	**21%**	**6%**	**10%**	**11%**	**29%**	**0%**	**3%**	**100%**

Appendix F

Cross-sections from Secondary Plan Transportation Study



J.U.C. - JOINT USE UTILITY CORRIDOR
H.T. - HYDRO TRANSFORMER

BA Group

CALEDON CROSS-SECTION

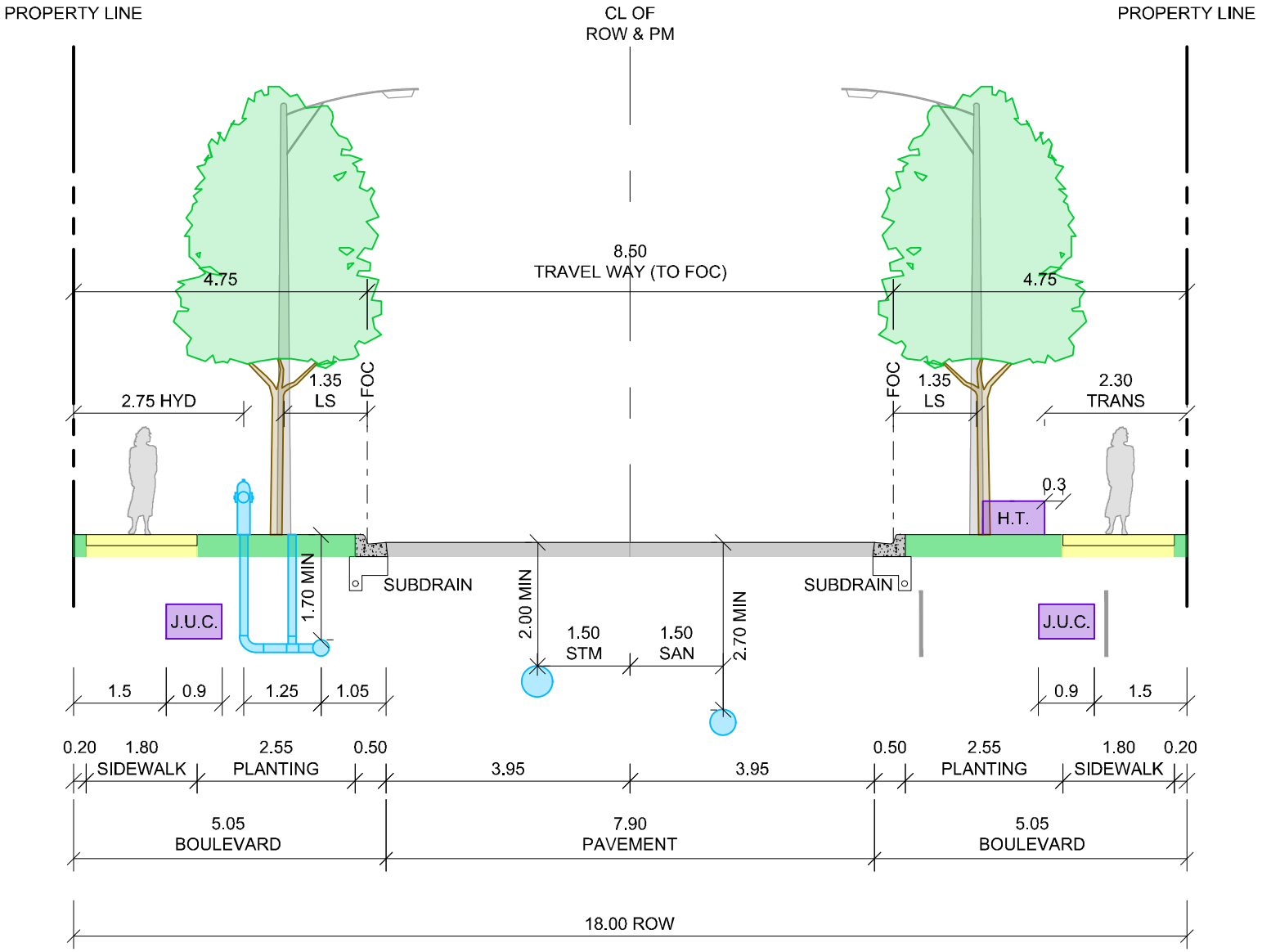
18.0m R.O.W.

Local Road (8.0m Roadway) - Sidewalk on Both Sides

Modified Town of Caledon Standard No. 202

Project:	Caledon
Project No.	8155-03
Date:	March 20, 2024
Revised:	April 15, 2025
Drawing No.	XS-1A

Date Plotted: May 28, 2025 Filename: J:\8155-03\BA\Cross-Sections\2025-05-28\BA-Generic Caledon-XSEC-R07-815503_SCS Based Utilities.dwg



J.U.C. - JOINT USE UTILITY CORRIDOR
H.T. - HYDRO TRANSFORMER

BA Group

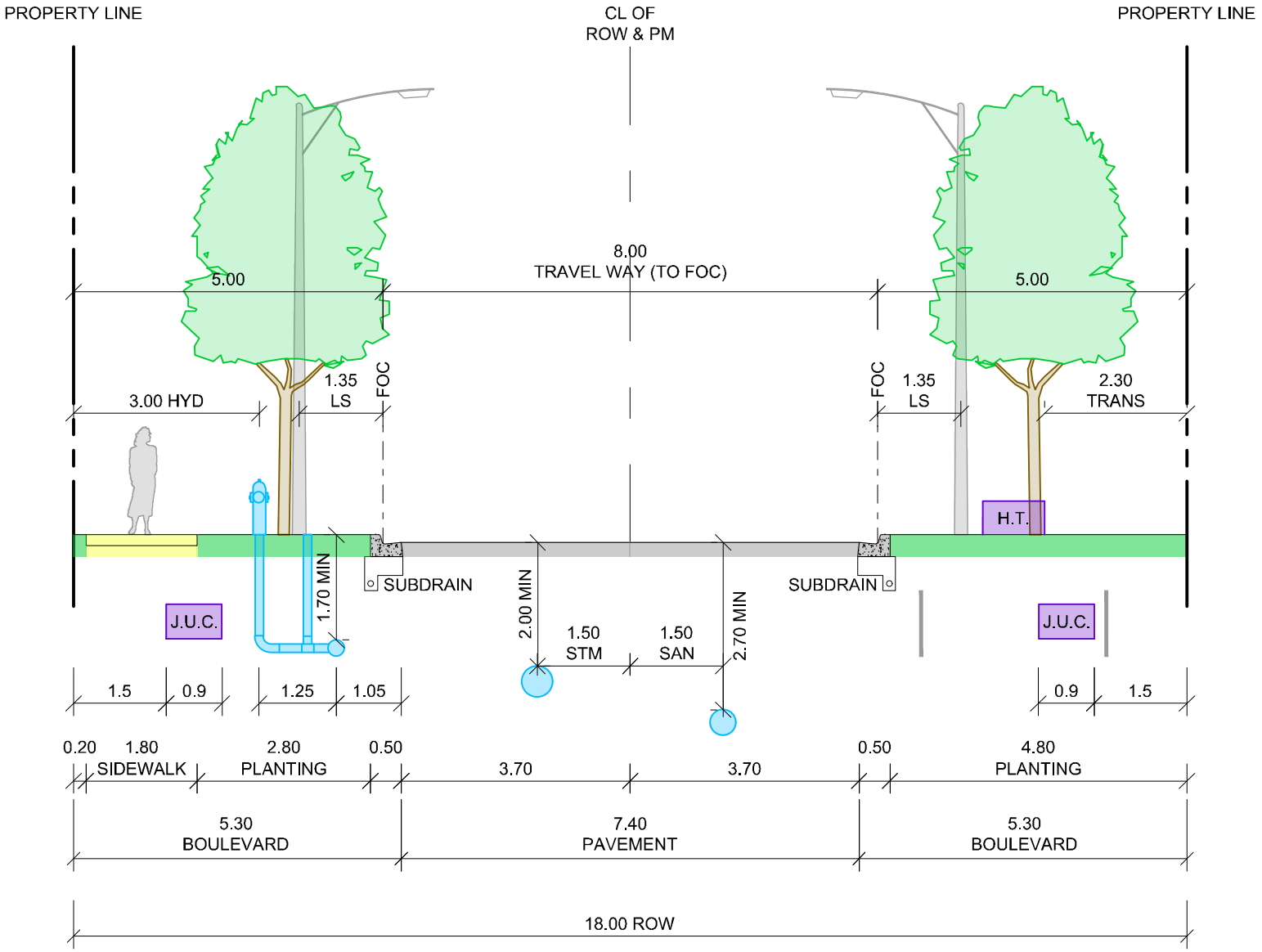
CALEDON CROSS-SECTION

18.0m R.O.W.

Local Road (8.5m Roadway) - Sidewalk on Both Sides

Modified Town of Caledon Standard No. 202

Project:	Caledon
Project No.	8155-03
Date:	March 20, 2024
Revised:	April 15, 2025
Drawing No.	XS-1B



J.U.C. - JOINT USE UTILITY CORRIDOR
H.T. - HYDRO TRANSFORMER

BA Group

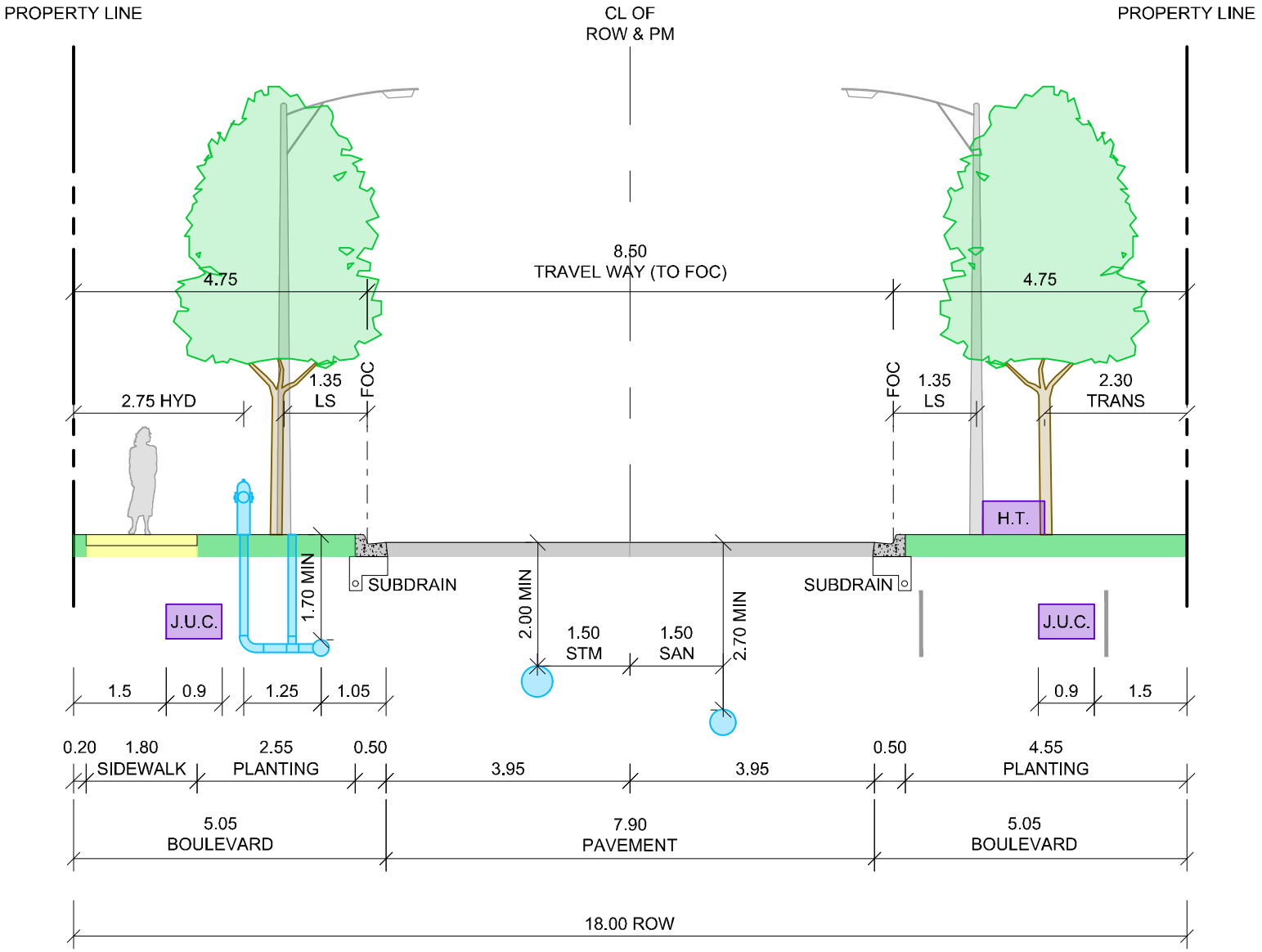
CALEDON CROSS-SECTION

18.0m R.O.W.

Local Road (8.0m Roadway) - Sidewalk on One Side

Modified Town of Caledon Standard No. 202

Project:	Caledon
Project No.	8155-03
Date:	April 15, 2025
Revised:	--
Drawing No.	XS-2A



J.U.C. - JOINT USE UTILITY CORRIDOR
H.T. - HYDRO TRANSFORMER

BA Group

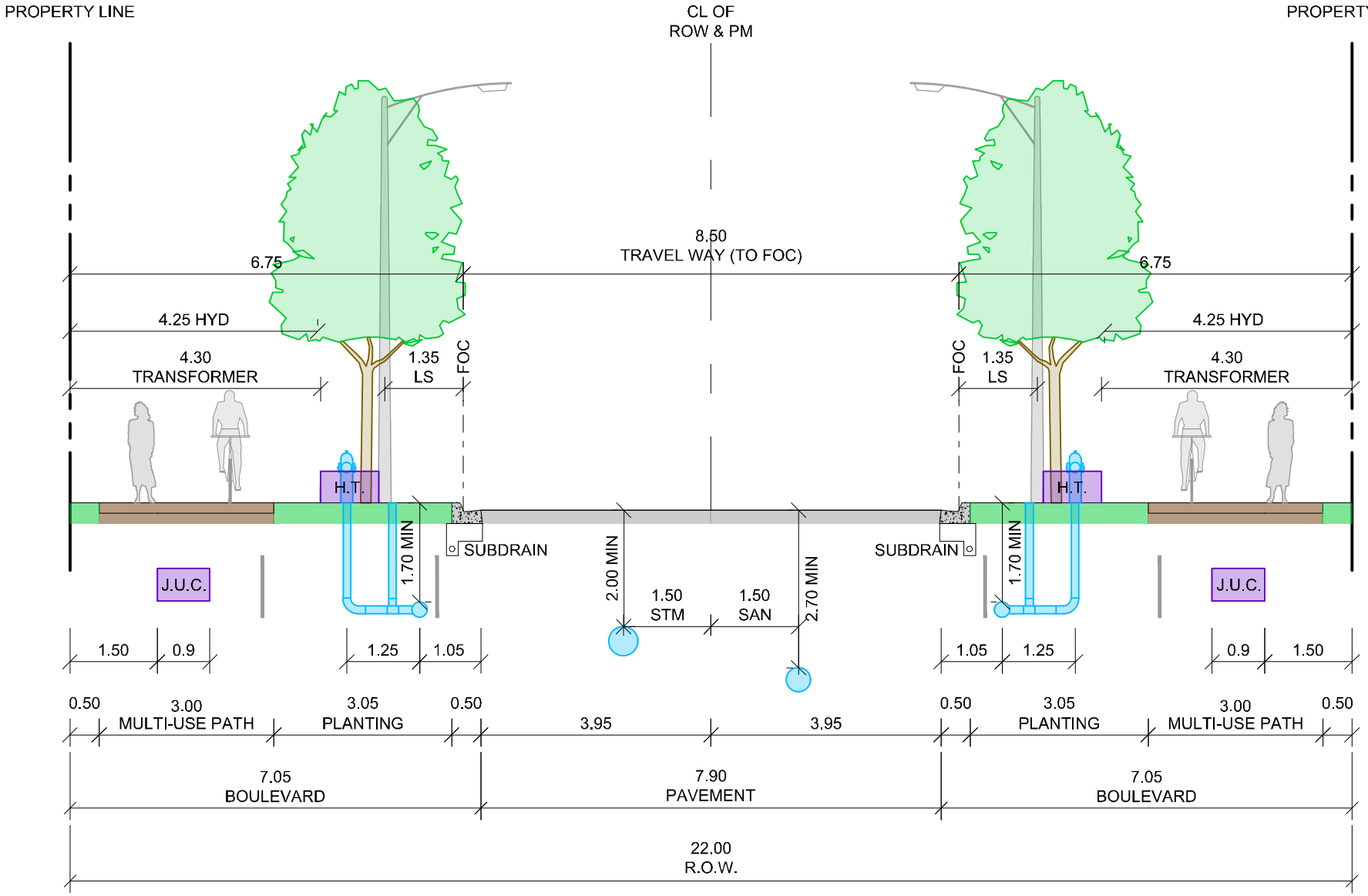
CALEDON CROSS-SECTION

18.0m R.O.W.

Local Road (8.5m Roadway) - Sidewalk on One Side

Modified Town of Caledon Standard No. 202

Project:	Caledon
Project No.	8155-03
Date:	April 15, 2025
Revised:	--
Drawing No.	XS-2B



J.U.C. - JOINT USE UTILITY CORRIDOR
H.T. - HYDRO TRANSFORMER

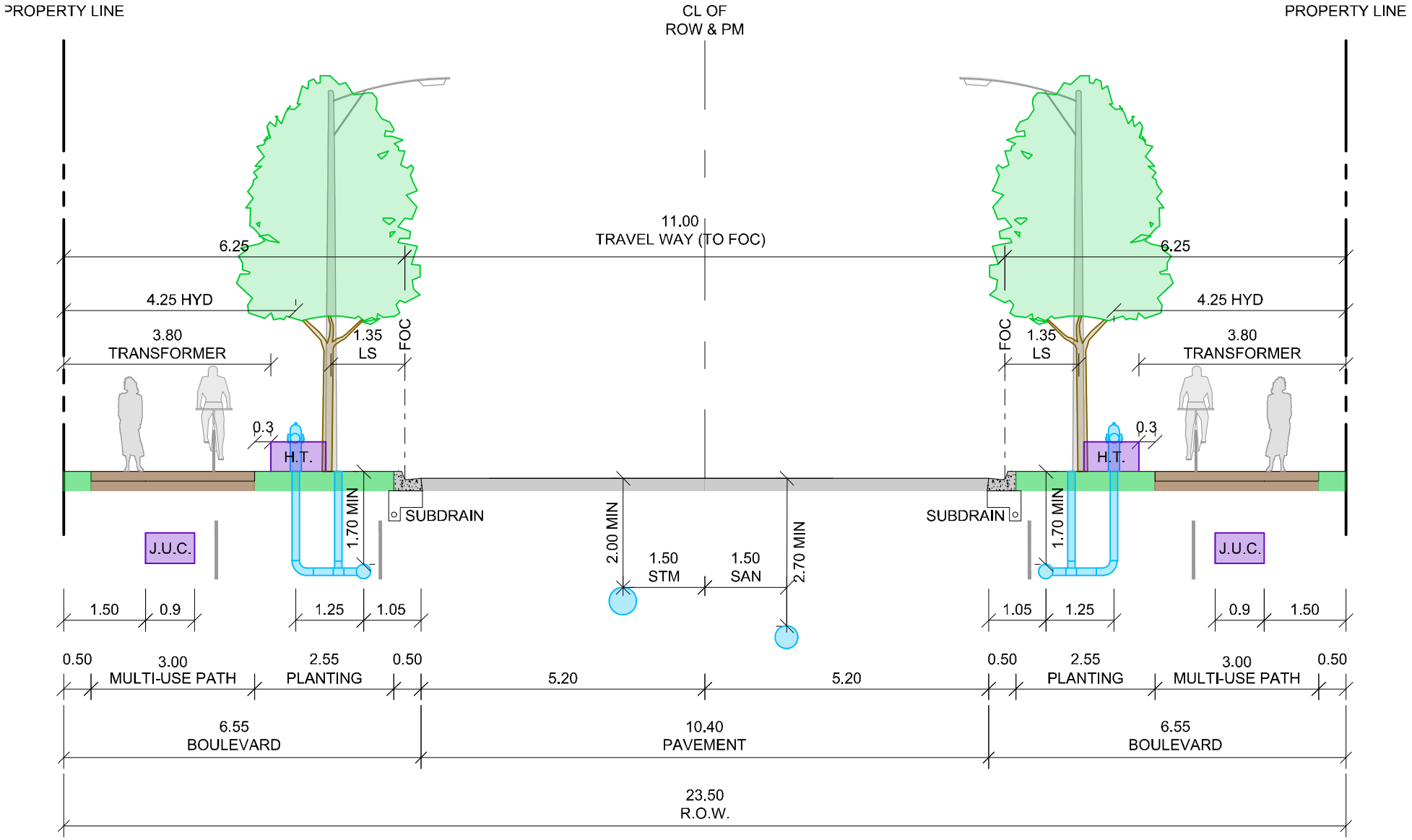
BA Group

CALEDON CROSS-SECTION

22.0m R.O.W.

Residential Collector with Multi-Use Path

Project:	Caledon
Project No.	8155-03
Date:	March 20, 2024
Revised:	May 28, 2025
Drawing No.	XS-3



J.U.C. - JOINT USE UTILITY CORRIDOR
H.T. - HYDRO TRANSFORMER

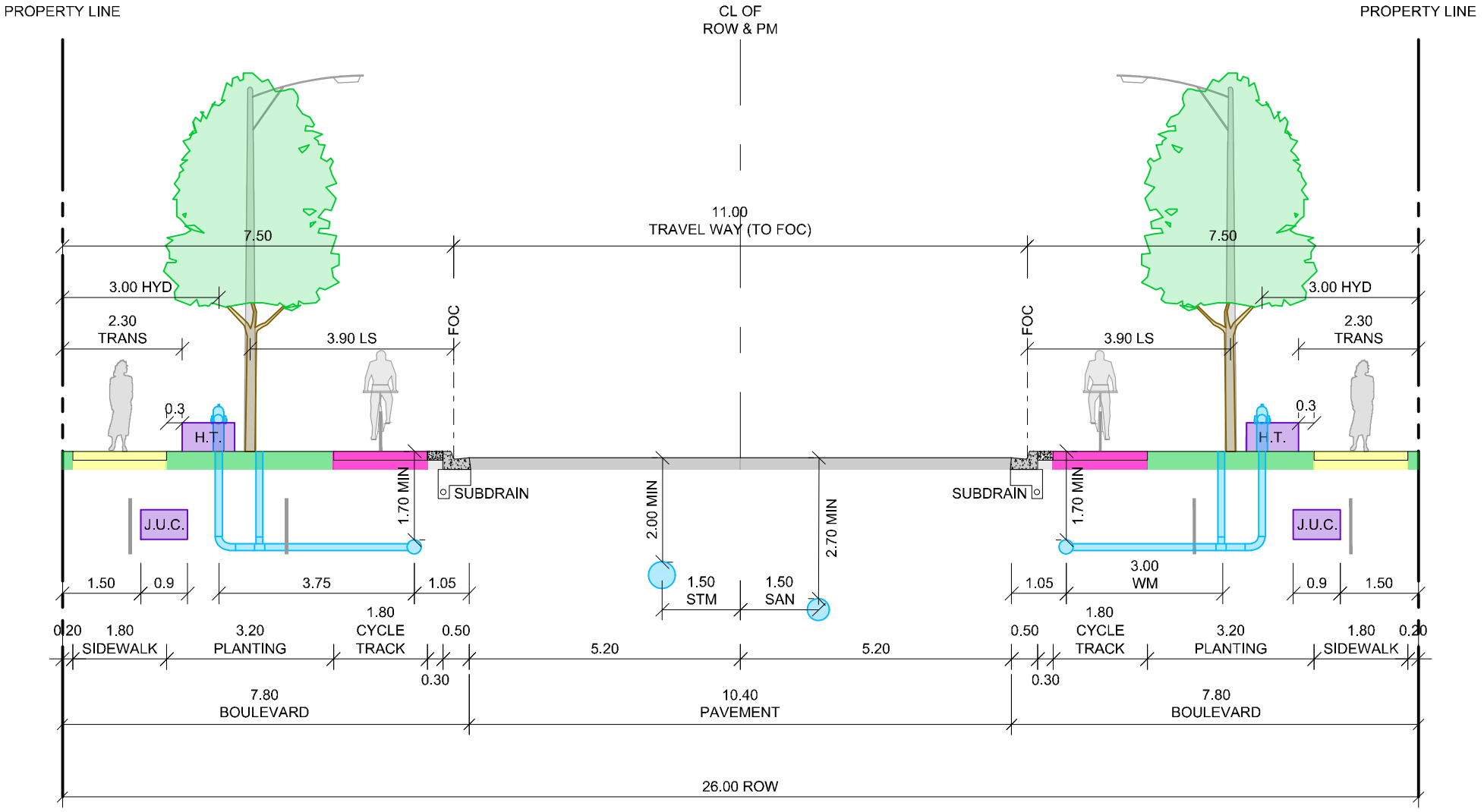
BA Group

CALEDON CROSS-SECTION

23.5m R.O.W.

Residential Collector with Multi-Use Path

Project:	Caledon
Project No.	8155-03
Date:	March 20, 2024
Revised:	May 28, 2025
Drawing No.	XS-4



J.U.C. - JOINT USE UTILITY CORRIDOR
H.T. - HYDRO TRANSFORMER

BA Group

CALEDON CROSS-SECTION

26.0m R.O.W.

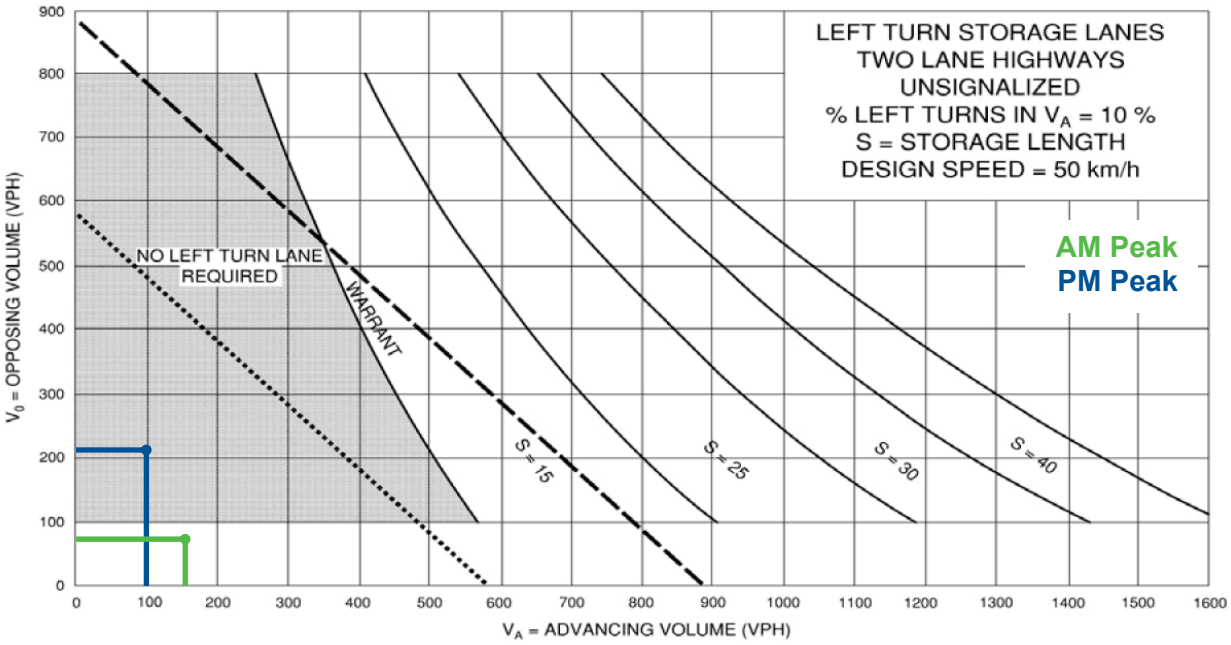
Urban Corridor (Mid-Section)

Project:	Caledon
Project No.	8155-03
Date:	March 20, 2024
Revised:	May 28, 2025
Drawing No.	XS-5

Appendix G

Left-Turn Lane Warrant

Southbound



Centreville Road & Street E
Left-Turn Lane Warrant

Wildfield Village

240562

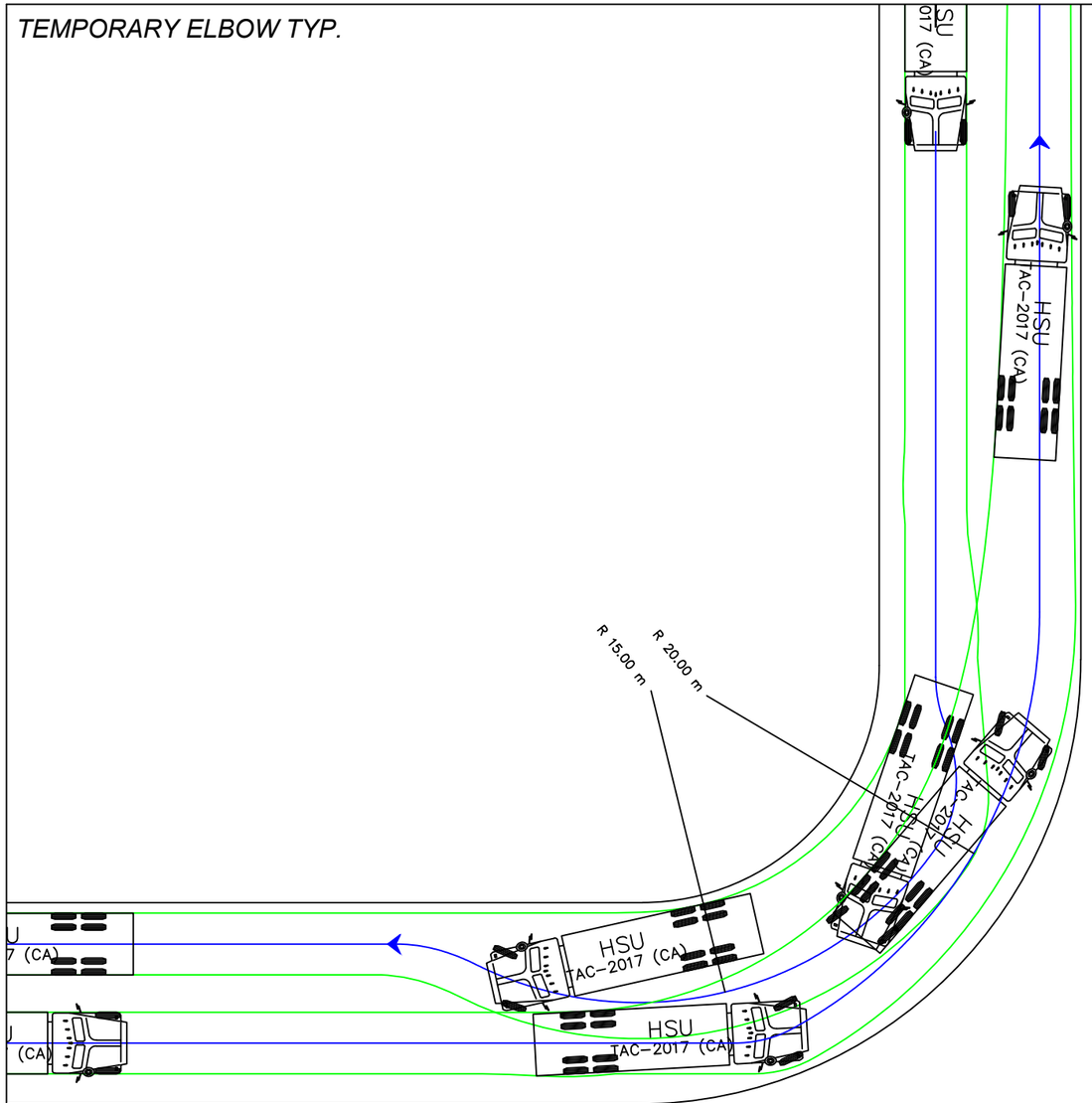
Figure G.1

Appendix H

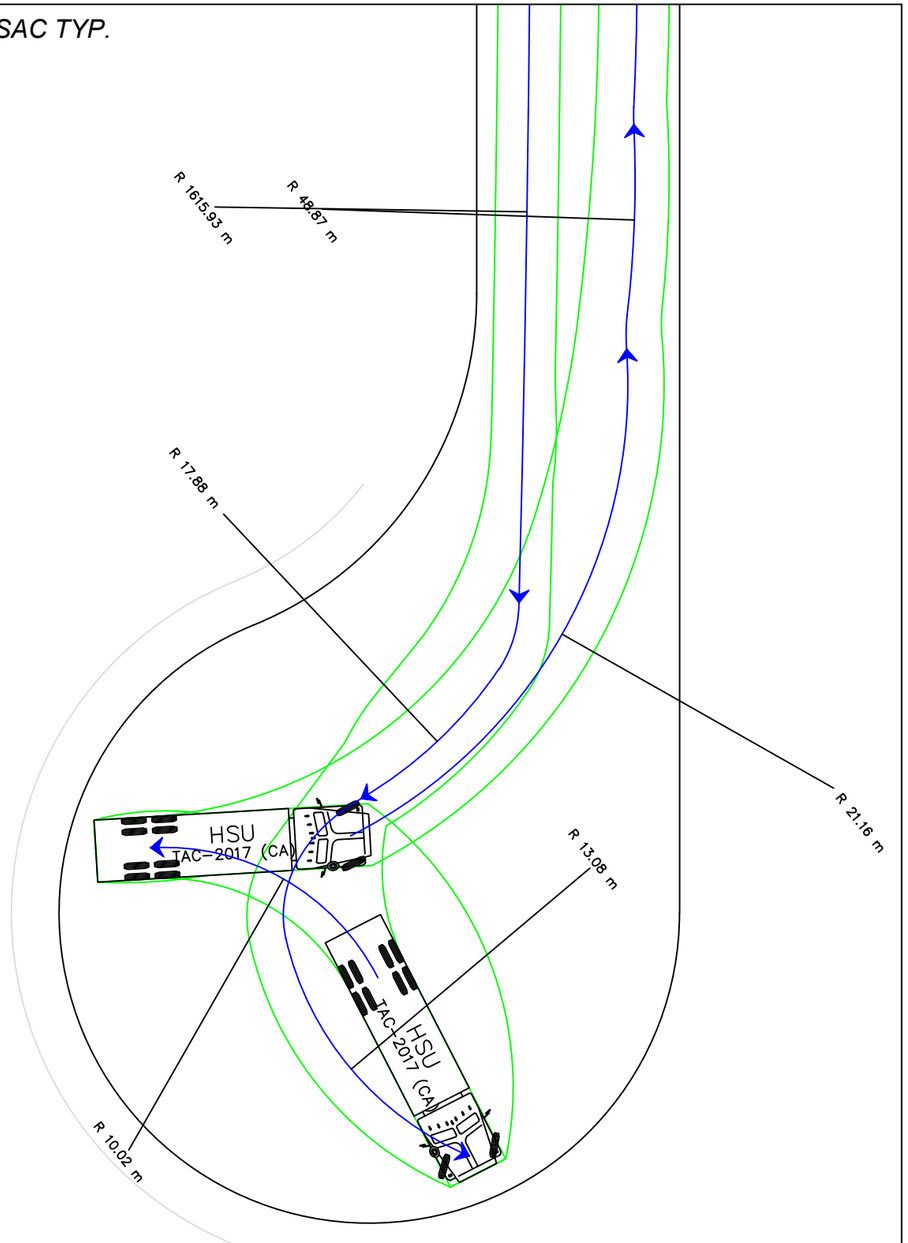
AutoTURN Swept Path Analysis

THIS AUTOTURN SWEPT PATH ANALYSIS HAS BEEN PREPARED USING BASE PLANS PROVIDED BY OTHERS. THE PRACTITIONER HAS NOT INSPECTED THE ACCURACY AND/OR THE COMPLETENESS OF THESE BASE PLANS AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.

TEMPORARY ELBOW TYP.

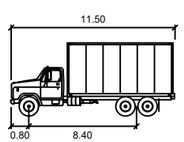


TEMPORARY CUL-DE-SAC TYP.



NO.	DATE	INITIAL	REVISION DETAIL

DESIGN VEHICLE:



HSU

	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

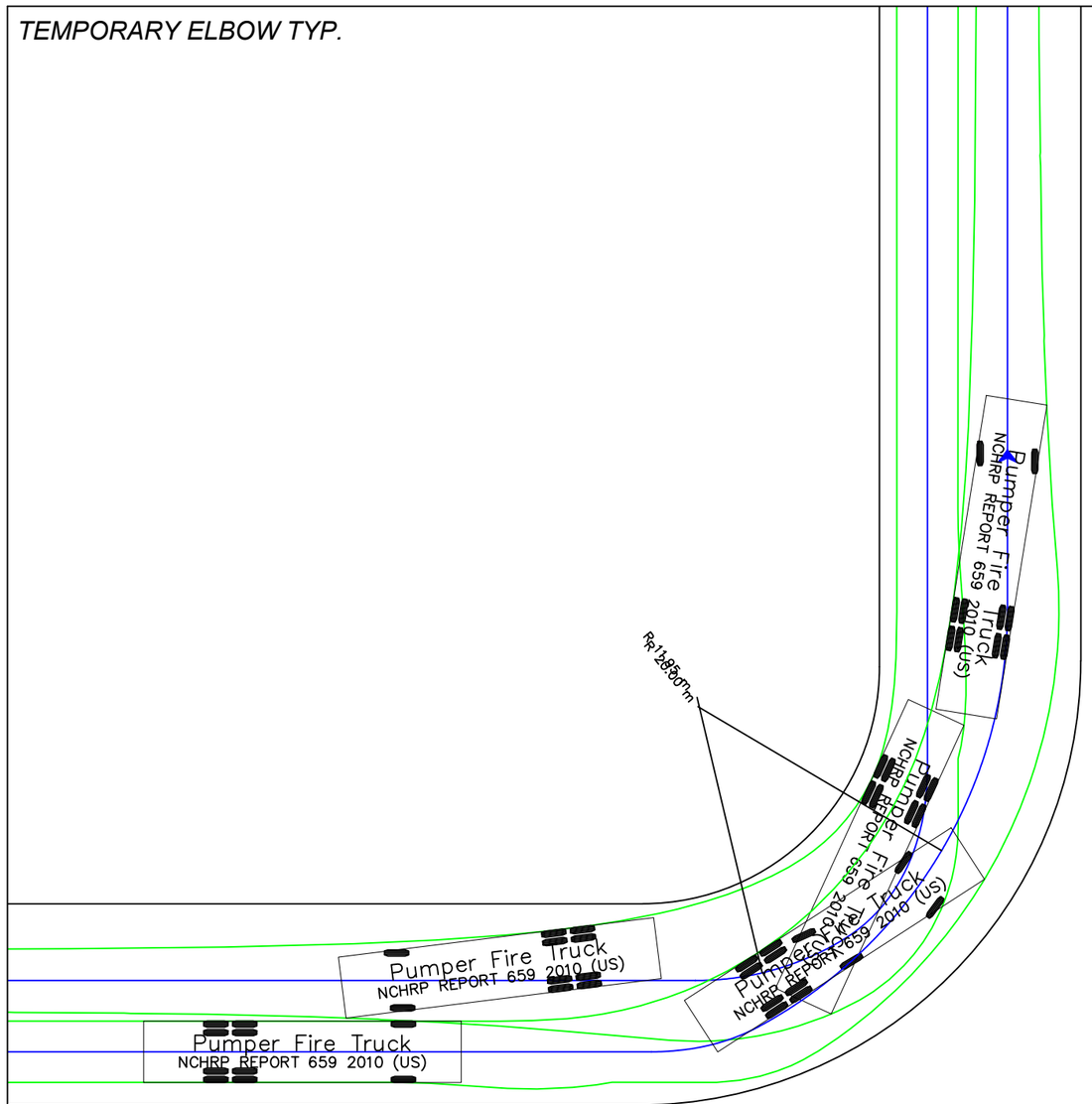
AUTOTURN ASSESSMENT
WILDFIELD VILLAGE
TOWN OF CALEDON

paradigm TRANSPORTATION SOLUTIONS LIMITED

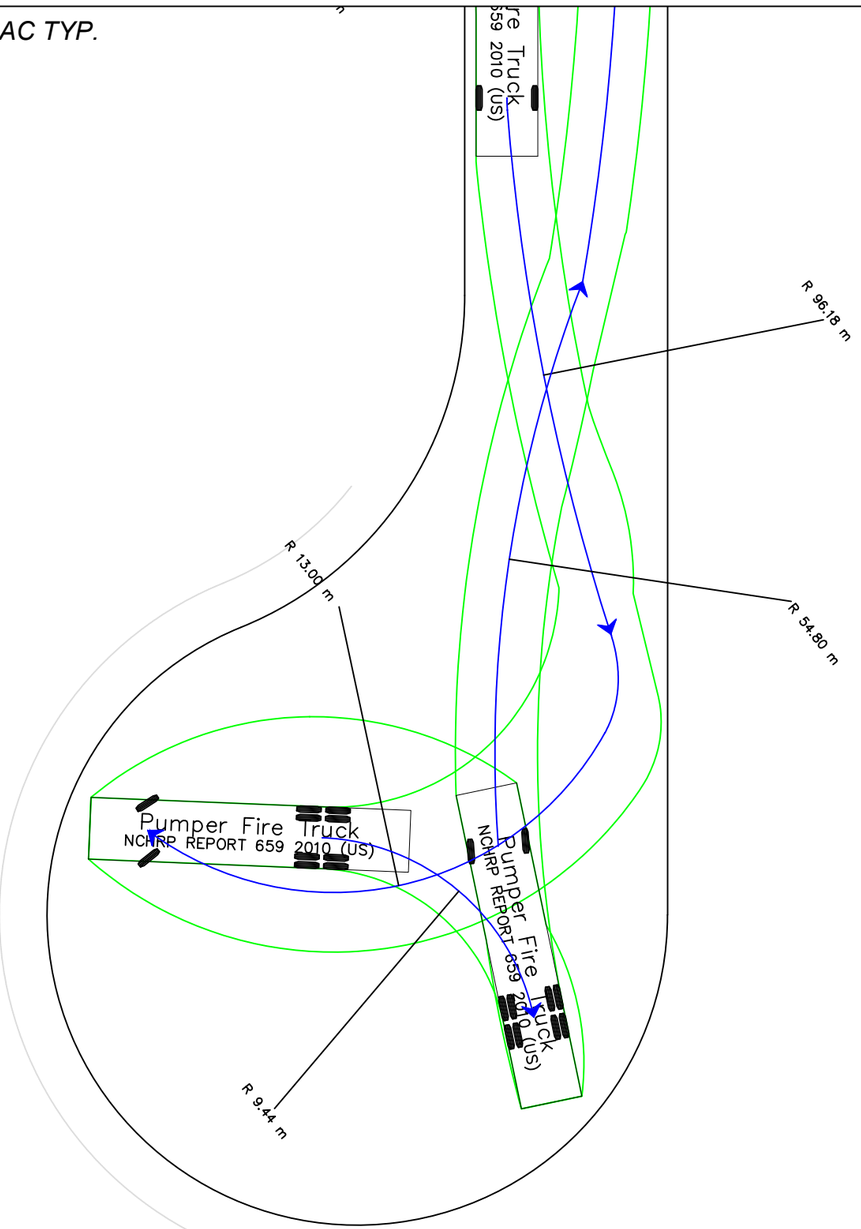
PROJECT NO.: 240562	DATE: AUGUST 2025	SCALE: 1:250	DRAWING NO.: 01
DESIGN: CC	DRAWN: CC	CHECK: TW	

THIS AUTOTURN SWEPT PATH ANALYSIS HAS BEEN PREPARED USING BASE PLANS PROVIDED BY OTHERS. THE PRACTITIONER HAS NOT INSPECTED THE ACCURACY AND/OR THE COMPLETENESS OF THESE BASE PLANS AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.

TEMPORARY ELBOW TYP.

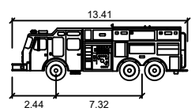


TEMPORARY CUL-DE-SAC TYP.



NO.	DATE	INITIAL	REVISION DETAIL

DESIGN VEHICLE:



Pumper Fire Truck

	meters
Width	: 2.59
Track	: 2.59
Lock to Lock Time	: 6.0
Steering Angle	: 37.8

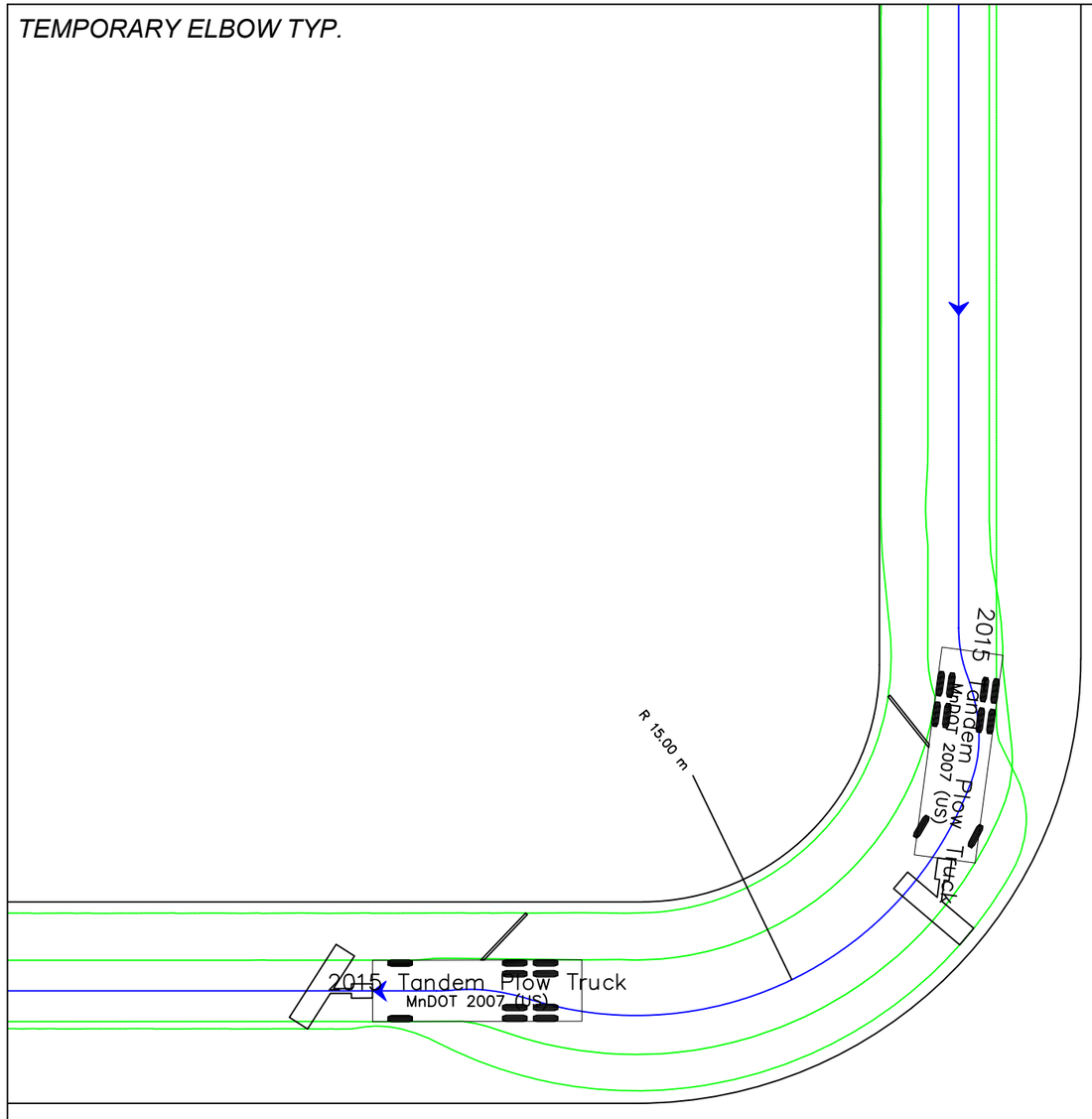
AUTOTURN ASSESSMENT
WILDFIELD VILLAGE
TOWN OF CALEDON

paradigm TRANSPORTATION SOLUTIONS LIMITED

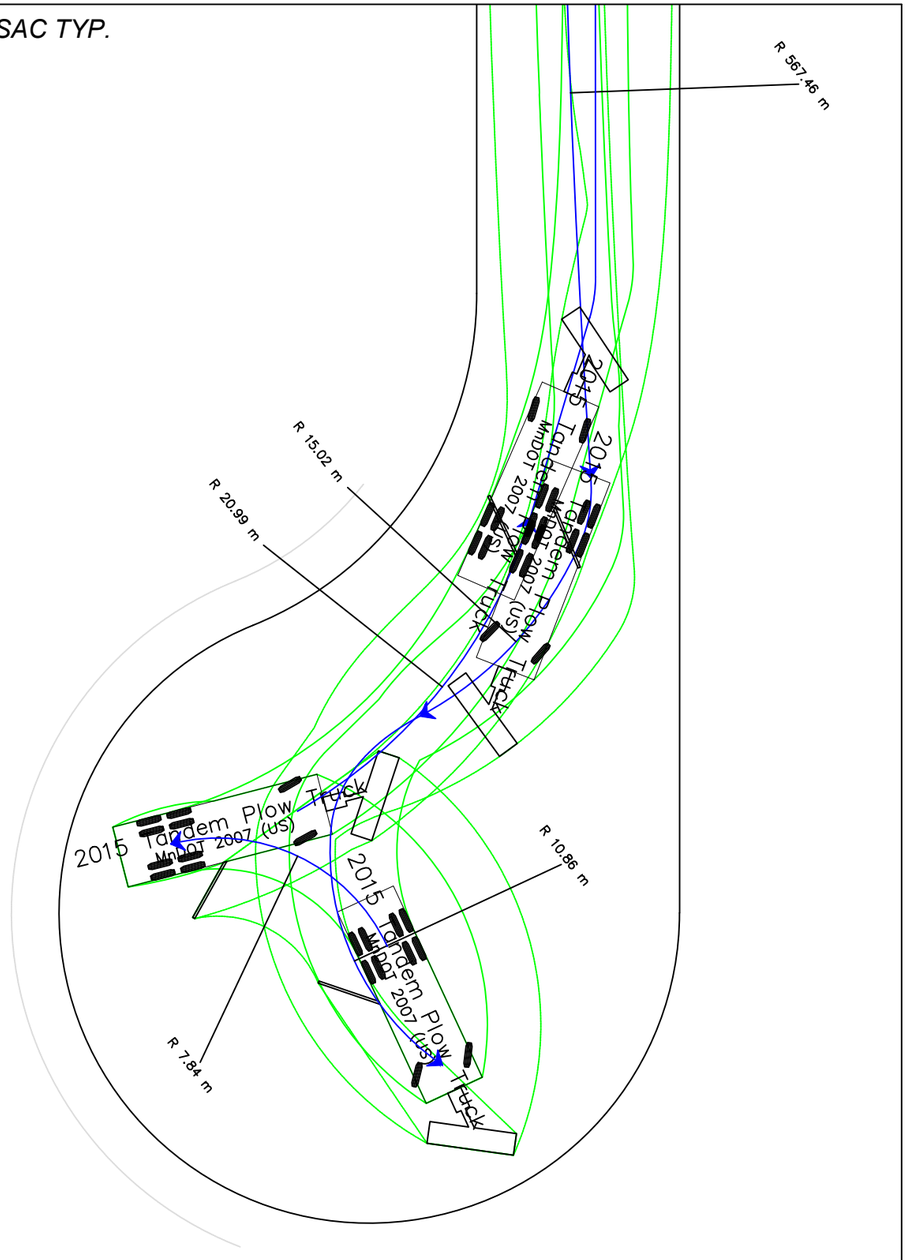
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DESIGN: CC	DRAWN: CC	CHECK: TW	

THIS AUTOTURN SWEPT PATH ANALYSIS HAS BEEN PREPARED USING BASE PLANS PROVIDED BY OTHERS. THE PRACTITIONER HAS NOT INSPECTED THE ACCURACY AND/OR THE COMPLETENESS OF THESE BASE PLANS AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.

TEMPORARY ELBOW TYP.

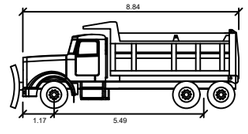


TEMPORARY CUL-DE-SAC TYP.



NO.	DATE	INITIAL	REVISION DETAIL

DESIGN VEHICLE:



2015 Tandem Plow Truck
meters

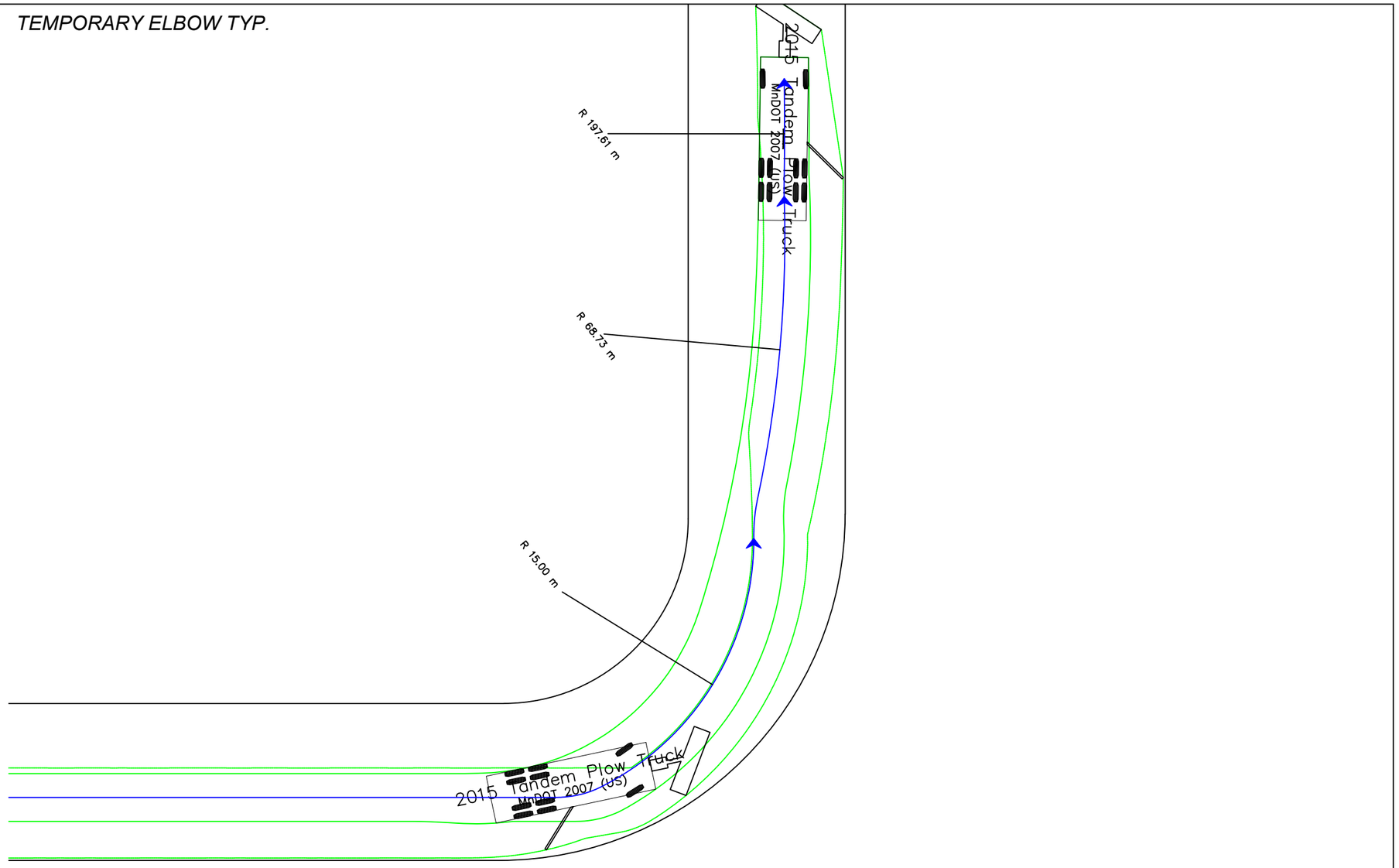
Width	: 2.59	Lock to Lock Time	: 6.0
Track	: 2.59	Steering Angle	: 35.0
		Articulating Angle	: AA

AUTOTURN ASSESSMENT
WILDFIELD VILLAGE
TOWN OF CALEDON

paradigm TRANSPORTATION SOLUTIONS LIMITED

PROJECT NO.: 240562	DATE: AUGUST 2025	SCALE: 1:250	DRAWING NO.: 03
DESIGN: CC	DRAWN: CC	CHECK: TW	

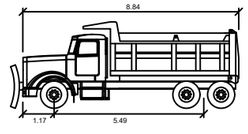
TEMPORARY ELBOW TYP.



THIS AUTOTURN SWEPT PATH ANALYSIS HAS BEEN PREPARED USING BASE PLANS PROVIDED BY OTHERS. THE PRACTITIONER HAS NOT INSPECTED THE ACCURACY AND/OR THE COMPLETENESS OF THESE BASE PLANS AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.

NO.	DATE	INITIAL	REVISION DETAIL

DESIGN VEHICLE:



2015 Tandem Plow Truck
meters

Width	: 2.59	Lock to Lock Time	: 6.0
Track	: 2.59	Steering Angle	: 35.0
		Articulating Angle	: AA

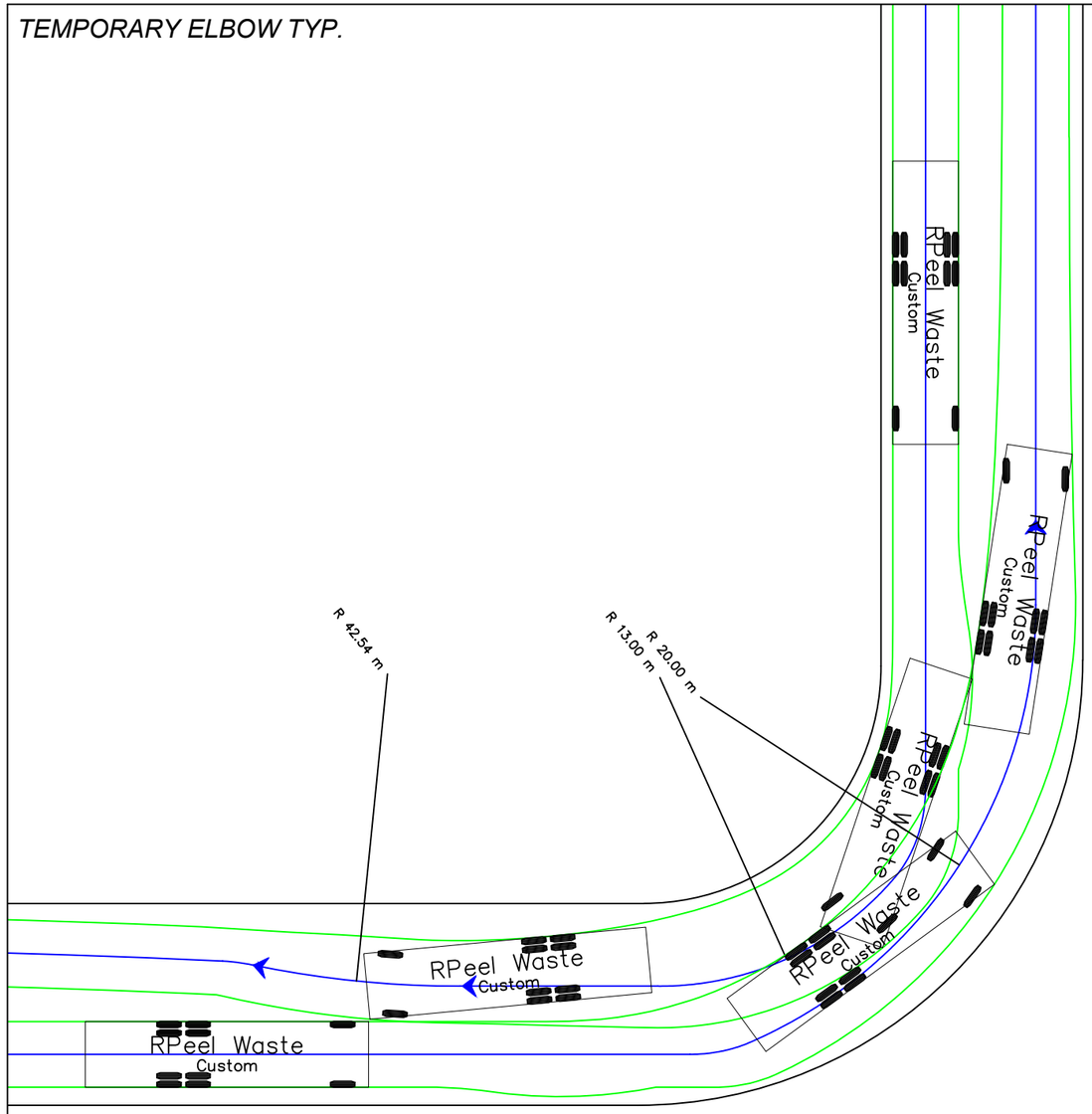
AUTOTURN ASSESSMENT
WILDFIELD VILLAGE
TOWN OF CALEDON

paradigm TRANSPORTATION SOLUTIONS LIMITED

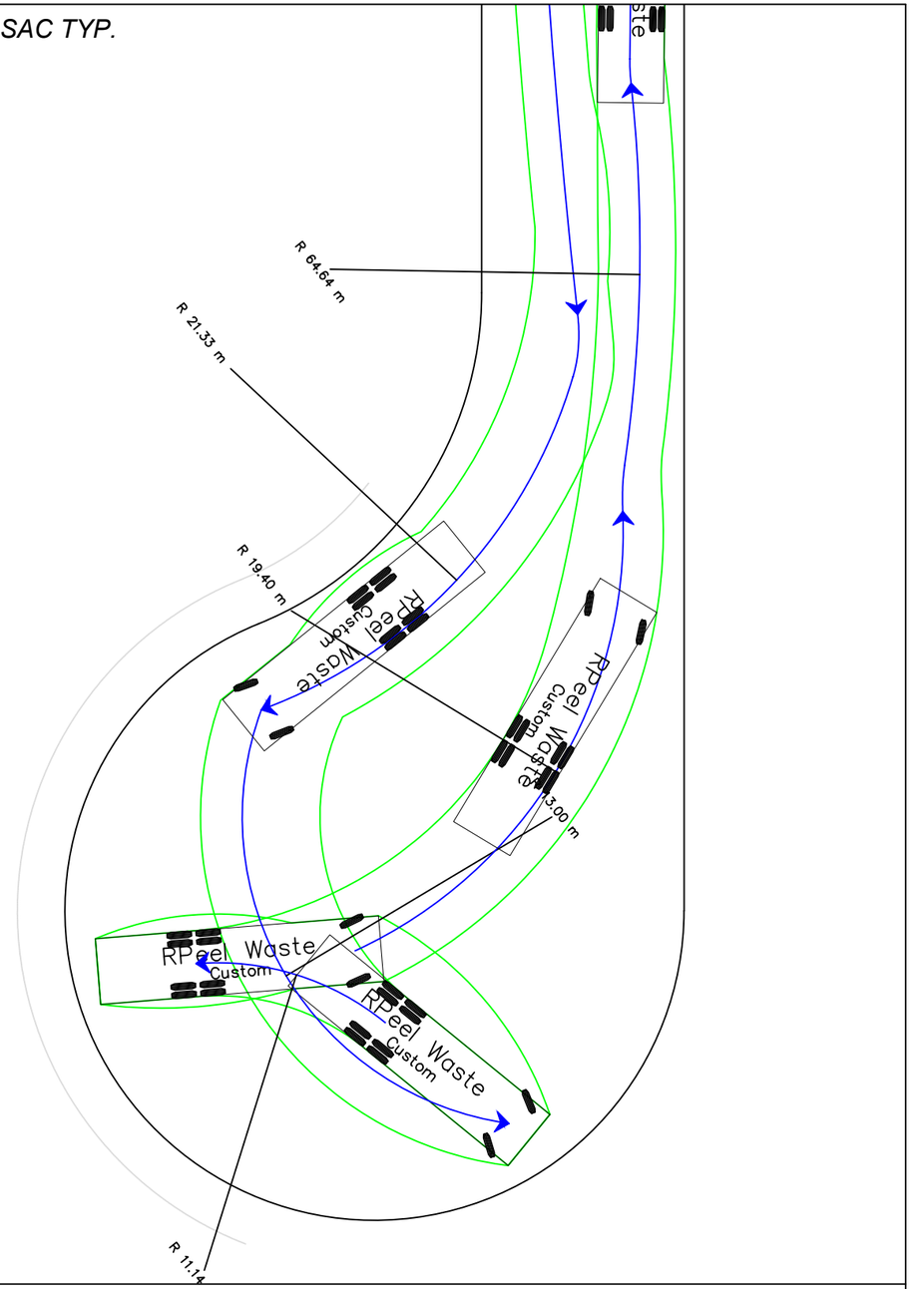
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DESIGN: CC	DRAWN: CC	CHECK: TW	

THIS AUTOTURN SWEPT PATH ANALYSIS HAS BEEN PREPARED USING BASE PLANS PROVIDED BY OTHERS. THE PRACTITIONER HAS NOT INSPECTED THE ACCURACY AND/OR THE COMPLETENESS OF THESE BASE PLANS AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.

TEMPORARY ELBOW TYP.

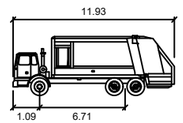


TEMPORARY CUL-DE-SAC TYP.



NO.	DATE	INITIAL	REVISION DETAIL

DESIGN VEHICLE:



RPeel Waste

	meters
Width	: 2.77
Track	: 2.77
Lock to Lock Time	: 6.0
Steering Angle	: 31.1

AUTOTURN ASSESSMENT
WILDFIELD VILLAGE
TOWN OF CALEDON

paradigm TRANSPORTATION SOLUTIONS LIMITED

PROJECT NO.: 240562	DATE: AUGUST 2025	SCALE: 1:250	DRAWING NO.:
DESIGN: CC	DRAWN: CC	CHECK: TW	05