BURNSIDE

45 Grenoble Drive Transportation Study Toronto, ON

David Investments Inc.

45 Grenoble Drive Transportation Study
Toronto, ON

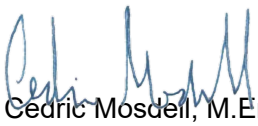
David Investments Inc.

R.J. Burnside & Associates Limited
1465 Pickering Parkway Suite 200
Pickering ON L1V 7G7 CANADA

November 2024
300058194.0000

R.J. Burnside & Associates Limited

Report Prepared By:



Cedric Mosdell, M.Eng., EIT
Transportation Planner
CM:cv

Report Reviewed By:

Dave Angelakis, C.E.T.
Senior Project Manager - Transportation
DWA:cv

Executive Summary

R.J. Burnside & Associates Limited (Burnside) was retained by David Investments Inc. (the Client) to undertake a Transportation Study for a new apartment building at 45 Grenoble Drive in the City of Toronto. There is an existing 217 unit apartment building on site, which will remain. Existing access is provided via two full-movement driveways on Grenoble Drive, which will be retained.

The proposed development will include a total of 622 residential units and a three-level underground garage with 246 parking spaces for residents and 18 parking spaces for visitors. It is also proposed to provide 365 long-term bicycle spaces and 92 short-term bicycle spaces proposed.

The following is a summary of our key findings.

Traffic Operations

Under existing and future conditions, during both the weekday AM and PM peak hours, all study intersections are operating and will operate with excess capacity, with a level of service E or better and queue lengths within their respective storage lengths and link distances, except for the following queues.

- Westbound left-turn queue under future conditions, during both peak hours, at the intersection of Deauville Lane / St. Dennis Drive
- Eastbound left-turn queue under future conditions, during the PM peak hour, at the intersection of Grenoble Drive / Gateway Boulevard / Commercial Driveway
- Northbound through-right turn queue and southbound left-turn queue under future conditions, during the PM peak hour, at the intersection of Don Mills Road / St. Dennis Drive
- Westbound left-turn queue under existing and future conditions, during both peak hours, at the intersection of Don Mills Road / Gateway Boulevard (North Leg)
- Northbound left-turn queue under future conditions, during the AM peak hour, at the intersection of Don Mills Road / Gateway Boulevard / Overlea Boulevard.

These queues are driven by either existing or background growth traffic demand. No improvements will be required and / or will be triggered by the proposed development.

Site Plan Review

The site is well designed to accommodate all modes of travel. Access and circulation analyses utilizing AutoTurn confirms that the site can accommodate all expected design vehicles.

Transportation Demand Management

To further facilitate other modes of travel and reduce vehicle trips and parking demand, there are several TDM measures proposed as follows:

- An information package will be provided to residents, which will include TTC and GO Transit maps and schedules, cycling and trail maps, and information on Smart Commute.
- Transit subsidy of $156 for residents via a preloaded PRESTO pass per unit for first time purchasers and/or renters.
- A bicycle repair station or stations located adjacent to bicycle storage room(s).
- Parking spaces will not be bundled with apartments.
- Significant parking rate reductions for resident parking are recommended.

The combination of these proposed TDM measures and the addition of significant transit improvements in the area are expected to reduce vehicle trips by more than 25%.

Parking Review

North York Zoning By-law 7625

The proposed supply of 246 resident and 18 visitor spaces will result in a deficit of resident and visitor parking spaces based on the requirements of ZBL 7625. However, a review was conducted of City-wide Zoning By-law 569-2013 (ZBL), which is based on extensive, more current parking studies conducted by the City.

Zoning By-law 569-2013

Bicycle Parking

A total of 92 short-term bike spaces will be provided for visitors near the building's entrances and 365 long-term resident bike spaces are planned to be located within the building. The proposed short-term bicycle parking supply will exceed the ZBL requirements, and the long-term bicycle parking supply will meet the ZBL requirements.

Vehicular Parking

Based on the site being located in "Parking Zone B", the minimum visitor parking requirement for an apartment building is two (2) spaces plus 0.05 spaces per unit. This results in a minimum visitor parking requirement of 34 spaces, which is higher than the proposed visitor parking supply.

However, it is our opinion that the subject development area, once fully developed, will be similar to the Yonge-Eglinton Secondary Plan area. The future Don Mills Secondary Plan area will have similar characteristics to the Yonge-Eglinton Secondary Plan area

such as surrounding land uses, higher densities, higher-order transit, increased walkability and cyclist accommodation. Therefore, it is our further opinion that the minimum visitor parking requirement should be based on “Parking Zone A”, which the proposed visitor parking supply of 18 spaces will exceed.

City staff requested that justification be provided for the resident parking supply. It is our opinion that the proposed resident parking supply of 246 spaces (0.40 space / unit) will adequately serve the parking needs of future residents for the following reasons:

- There are many TTC bus routes along Don Mills Road with bus stops located within a 2-minute walk of the site. In addition, there will also be frequent, daily transit service provided via the future ECLRT and Ontario Line.
- The proposed Transportation Demand Management (TDM) measures will further reduce parking demand.
- There have been several similar developments with similar access to transit that have been approved with reduced parking supply variances lower than the proposed parking supply rate.

The number of proposed accessible spaces will meet the minimum requirements of the ZBL based on the proposed parking supply.

Loading

According to the ZBL, one Type G and one Type C loading spaces are required. It is proposed to provide one Type G space, by combining the loading space for refuse pick-up and deliveries. Due to the infrequency in refuse pick-up, deliveries will be scheduled outside of the refuse pick-up times and deliveries and couriers are also expected to be done by smaller trucks or vans, which can utilize the existing and proposed drop-off loops. Therefore, it is our opinion that the proposed Type G space will meet the development’s operational requirements.

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Abbreviations

The following summarizes abbreviations that are utilized within this report:

- AWSC – All way stop controlled
- Burnside – R.J. Burnside & Associates Limited
- City – City of Toronto
- Directions:
  - EB – Eastbound
  - SB – Southbound
  - NB – Northbound
  - WB – Westbound
- ECLRT – Eglinton Crosstown Light Rail Transit
- ITE – Institute of Transportation Engineers
- LOS – level of service
- LUC – Land Use Code
- PHF – Peak Hour Factor
- TOR – Terms of Reference
- Traffic Movements:
  - LT – shared left-through movement
  - LTR – shared left-through-right movement
  - LR – shared left-right movement
  - TR – shared through-right movement
- v/c – volume to capacity ratio

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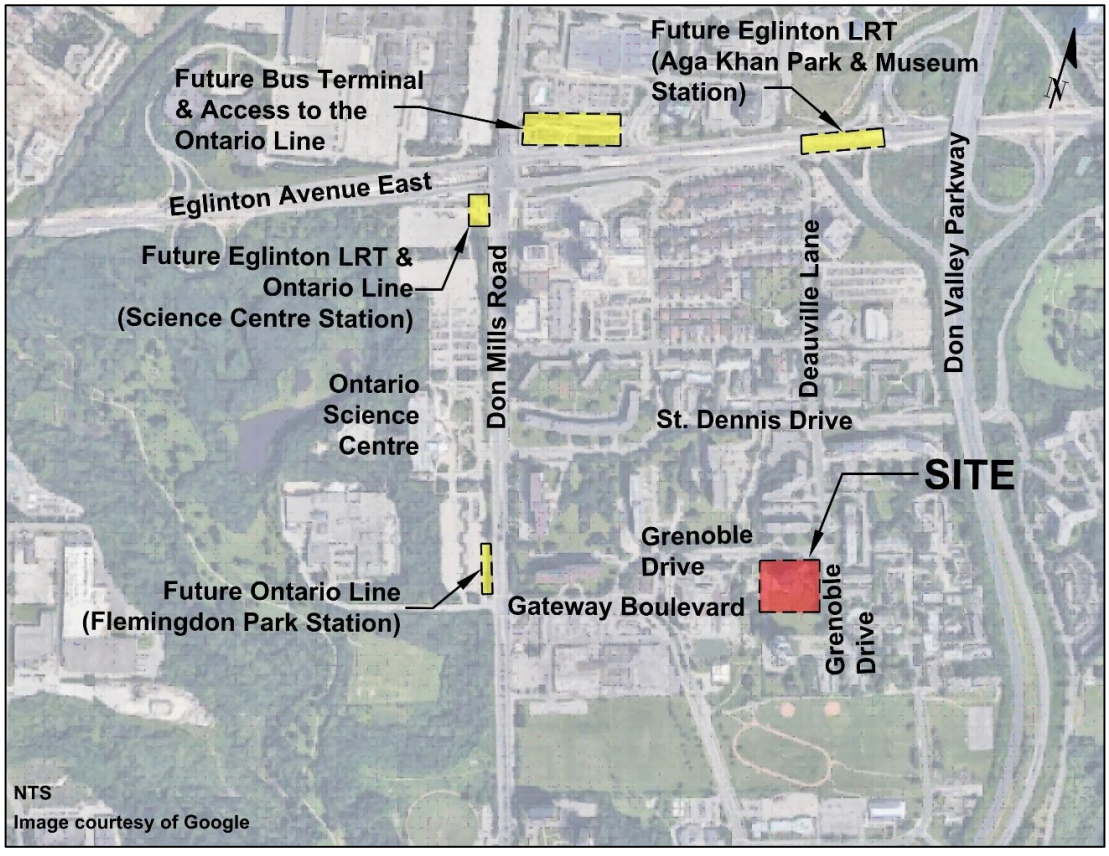
1.0 Introduction

1.1 Background

R.J. Burnside & Associates Limited (Burnside) was retained by David Investments Inc. (the Client) to undertake a Transportation Study for a proposed redevelopment of 45 Grenoble Drive in the City of Toronto.

The site is currently occupied by a 28-storey apartment building with 217 units. It is proposed to retain the existing building and add a new 39-storey apartment building with 405 units. Existing access is provided via two full-movement driveways on Grenoble Drive, which will be retained. The site location is shown in Figure 1.

Figure 1: Site Location



A Zoning By-law Amendment application is required and R.J. Burnside & Associates Limited (Burnside) was retained to undertake a Transportation Study and Parking and Loading Review as part of the application.

1.2 Scope of Work

The scope of work below was confirmed with the City of Toronto (City) prior to conducting this study.

Active Transportation and Transit

- Review existing and future pedestrian, cycling and transit plans
- Provide recommendations on feasible TDM strategies to discourage motor vehicle use

Vehicular Intersection Operations

Analysis Scenarios

- Existing traffic conditions
- 2031 background traffic conditions
- 2031 total traffic conditions (2031 background traffic plus site traffic)

Analysis Time Periods

- Weekday AM Peak Period (7:00 AM to 9:00 AM)
- Weekday PM Peak Period (4:00 PM to 6:00 PM)

Analysis Intersections

- Don Mills Road / St. Dennis Drive
- Don Mills Road / Gateway Boulevard (North Leg)
- Don Mills Road / Gateway Boulevard (South Leg) / Overlea Boulevard
- Deauville Lane / St. Dennis Drive
- Deauville Lane / Grenoble Drive / Gateway Boulevard
- Grenoble Drive / Gateway Boulevard / Flemingdon Park Shopping Centre Driveway
- Grenoble Drive / Site Driveways (2)

Parking and Loading Review

- Review vehicular, accessible, bicycle parking and loading supply

The City's Traffic Impact Study (TIS) guidelines and guidelines for using Synchro 11 were taken into consideration.

1.3 Multimodal Analysis Methodology

1.3.1 Active Transportation and Transit Analysis

The estimated modal split for non-vehicular trips utilizes the 2016 Transportation Tomorrow Survey (TTS) within the local ward (TTS Ward 26). The "Primary Mode of

Travel" attribute from TTS was utilized and the following mode groups were considered in this study.

Mode Group	TTS Mode
Auto	• Auto driver • Auto passenger • Paid rideshare • Taxi passenger • Motorcycle
Transit	• Transit excluding GO rail • GO rail only • Joint GO rail and local transit
Cycle	• Cycle
Walk	• Walk

1.3.2 Vehicular Intersection Analysis

Signalized and stop controlled intersection operations were assessed for intersections in the study area using the software program Synchro 12, which employs methodology from the *Highway Capacity Manual (HCM 2000, HCM 2010 and HCM 6)*, published by the Transportation Research Board National Research Council.

Synchro 12 can analyze both signalized and unsignalized intersections in a road corridor or network taking into account the spacing, interaction, queues and operations between intersections. The analysis utilizes the HCM 2000 methodology for all intersections, except for all-way stop-controlled intersections where HCM 6 methodology is utilized (HCM 2000 methodology does not calculate queue lengths for all-way stop-controlled intersections). The signalized and stop controlled intersection analysis methodology is provided in Appendix A.

HOV Lane Modelling

As stated in the City's Synchro 11 Guidelines, Synchro is not a preferred option for the analysis of High Occupancy Vehicle (HOV) Lanes. As individual lane counts were not conducted, the analysis followed the approach in the City's guidelines and excludes the HOV lane and its traffic volumes in the Synchro analysis. As mentioned in the guidelines, this methodology is considered a conservative approach.

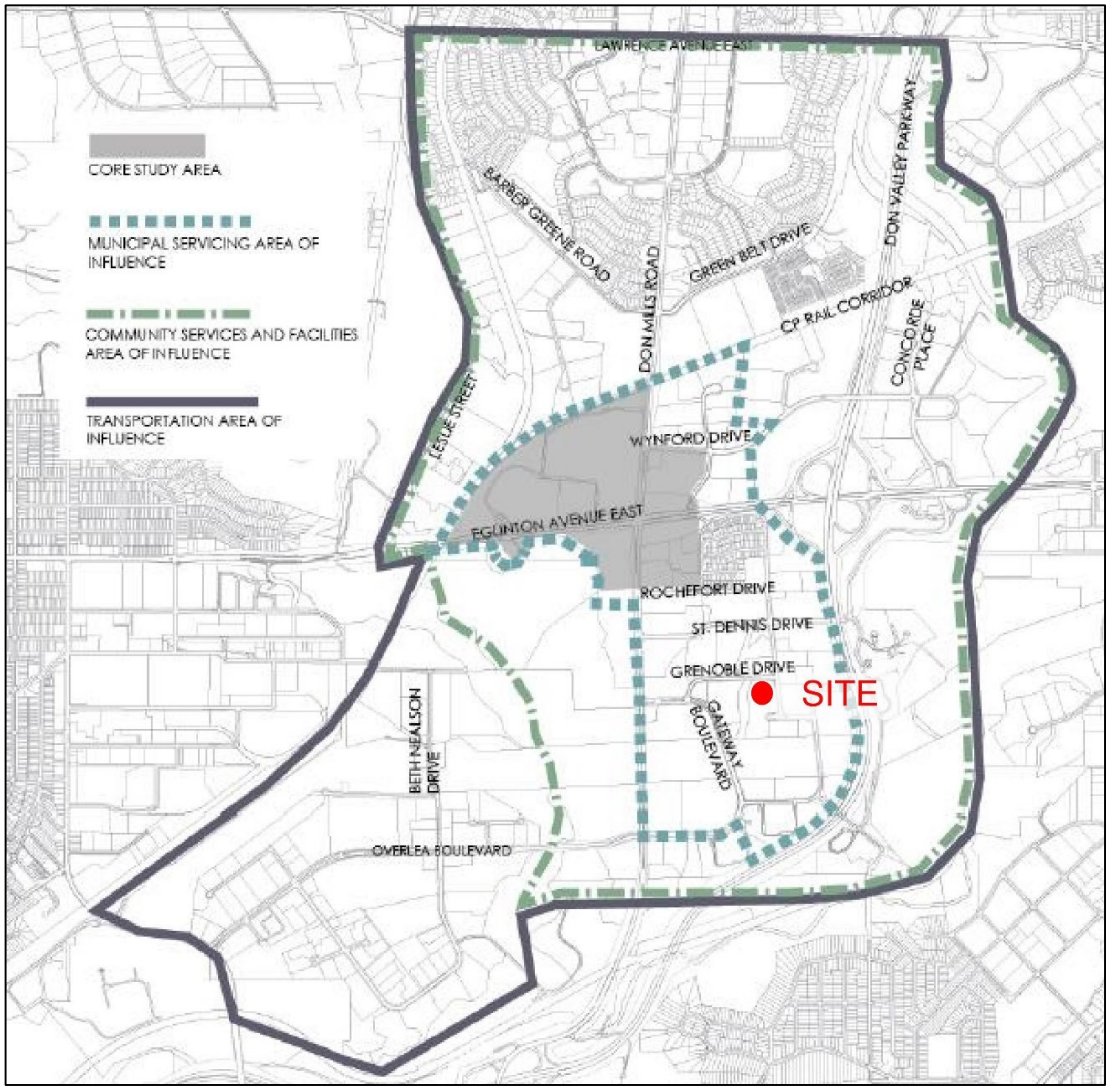
2.0 Existing Conditions

2.1 Site Context

The site is bounded by Grenoble Drive to the north and east, apartment buildings to the south and Grenoble Public School to the west. The broader neighbourhood consists of mid to high-density residential and commercial uses.

Based on the *Don Mills Crossing – Mobility Planning Study* (Don Mills Crossing Study), prepared by Steer Davies Gleave, dated February 2019, the site is within the "transportation area of influence" of the Don Mills Secondary Plan area. The site lies outside of the "core study area" of the Don Mills Crossing Study, which has a radius of approximately 800 m from the Eglinton Avenue East / Don Mills Road intersection. The boundaries from this study are shown in Figure 2. The secondary plan was adopted by City council on April 17, 2019, as an initiative by the City to focus and shape anticipated growth around the intersection of Don Mills Road and Eglinton Avenue East due to the development of future transit infrastructure, including the Eglinton Crosstown Light Rail Transit (the ECLRT), which is nearing completion.

Figure 2: Don Mills Crossing Secondary Plan Study Area

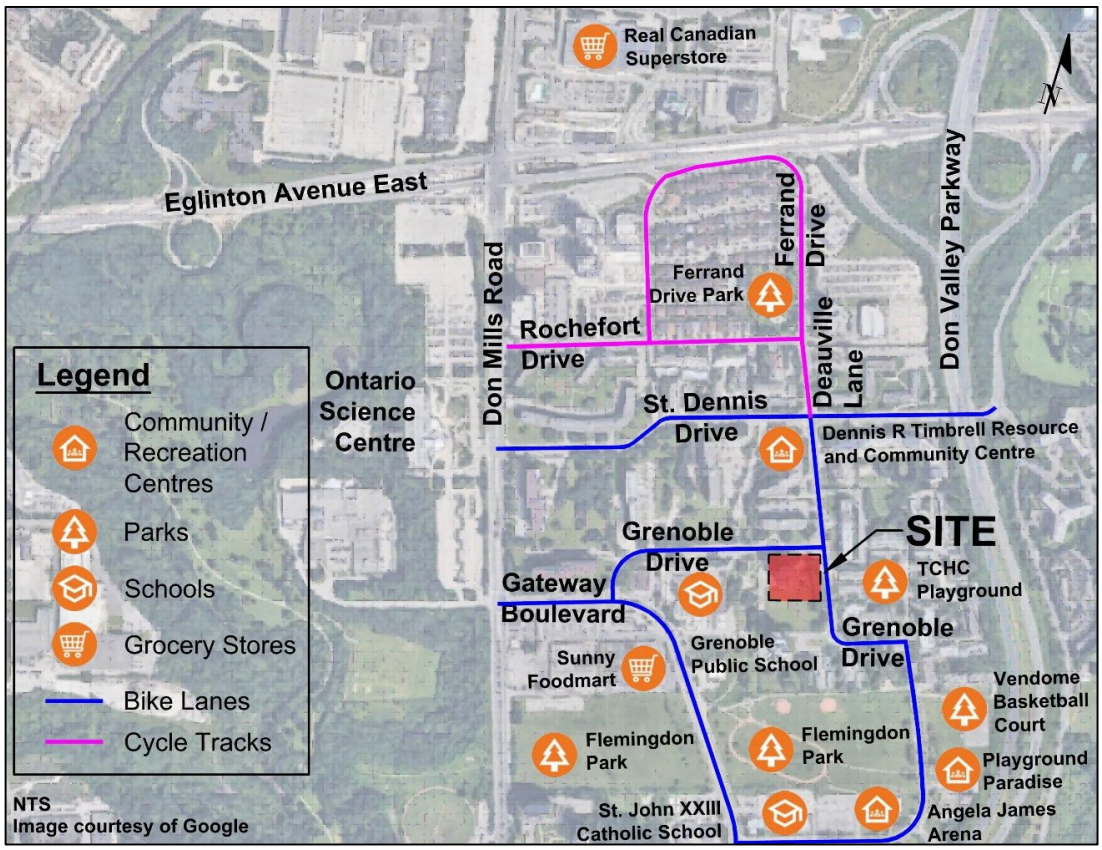


Source: Don Mills Crossing Study

2.2 Existing Road Network

The existing road network is described below and illustrated in Figure 3, including active transportation infrastructure and key pedestrian destinations such as grocery stores, parks, and amenities. All roads are under the jurisdiction of the City. Sidewalks are provided on both sides of all roads.

Figure 3: Existing Cycle Network and Main Pedestrian Destinations



Don Mills Road

Don Mills Road is a north-south major arterial with a 6-lane urban cross-section and a posted speed limit of 50 km/h. Curbside HOV lanes are provided for both directions of traffic. The HOV lanes are restricted to public transit, vehicles with three or more occupants, motorcycles, scooters, taxis, and cyclists during weekday mornings (7:00 AM to 10:00 AM) and weekday afternoons (3:00 PM to 7:00 PM). Parking is prohibited on both sides of the road. Stopping is also prohibited on both sides of the road from 7:00 to 10:00 AM and from 3:00 to 7:00 PM, Monday to Friday.

Overlea Boulevard

Overlea Boulevard is an east-west major arterial with a 4-lane urban cross-section and a posted speed limit of 50 km/h. Curbside HOV lanes are provided for both directions of traffic. The HOV lanes are restricted to public transit, vehicles with three or more occupants, motorcycles, scooters, taxis, and cyclists during weekday mornings (7:00 AM to 10:00 AM) and weekday

afternoons (3:00 PM to 7:00 PM). Stopping is prohibited on both sides of the road.

St. Dennis Drive St. Dennis Drive is an east-west collector road between Don Mills Road and Linkwood Lane. East of the Don Valley Parkway, the roadway becomes a minor arterial. St. Dennis Drive provides access to Eglinton Avenue East, east of the Don Valley Parkway. The roadway has a 2-lane urban cross section, a posted speed limit of 40 km/h and bicycle lanes on both sides. Stopping is prohibited on the south side of the road between Don Mills Road and Deauville Lane and on the north side of the road east of Deauville Lane.

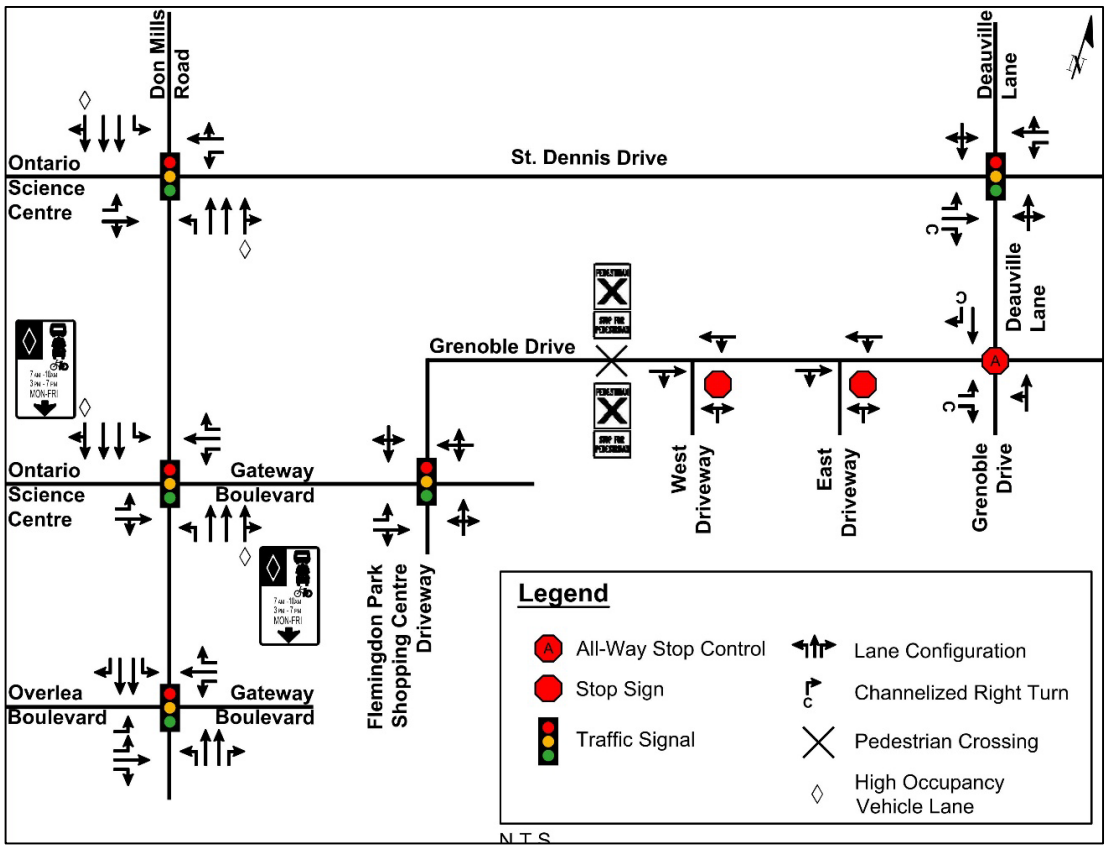
Deauville Lane / Grenoble Drive Deauville Lane is a north-south collector road between St. Dennis Drive and Grenoble Drive. North of St. Dennis Drive, the roadway is classed as a local road. South of Grenoble Drive, Deauville Lane becomes Grenoble Drive and is also classed as a local road. The roadway has a 2-lane urban cross section, a posted speed limit of 40 km/h and bicycle lanes on both sides. Stopping is prohibited on both sides of the road.

Grenoble Drive Grenoble Drive is an east-west collector road with a 2-lane urban cross section, a posted speed limit of 40 km/h and bicycle lanes on both sides. Stopping is prohibited on both sides of the road, except for a short section in front of the school where parking is prohibited. There is a mid-block Level 1 Type A pedestrian crossover in front of the Grenoble Public School Driveway on Grenoble Drive.

Gateway Boulevard Gateway Boulevard is a collector road between Don Mills Road and Grenoble Drive. East of Grenoble, the roadway is classed as a minor arterial. The roadway has a 2-lane urban cross section with a posted speed limit of 40 km/h and bicycle lanes on both sides. Stopping is prohibited on both sides of the road, except for a short section in front of 200 Gateway where pay and display parking is allowed.

The existing vehicle traffic control and lane layout is illustrated in Figure 4.

Figure 4: Existing Vehicle Traffic Control and Lane Layout



2.3 Existing Transit Services

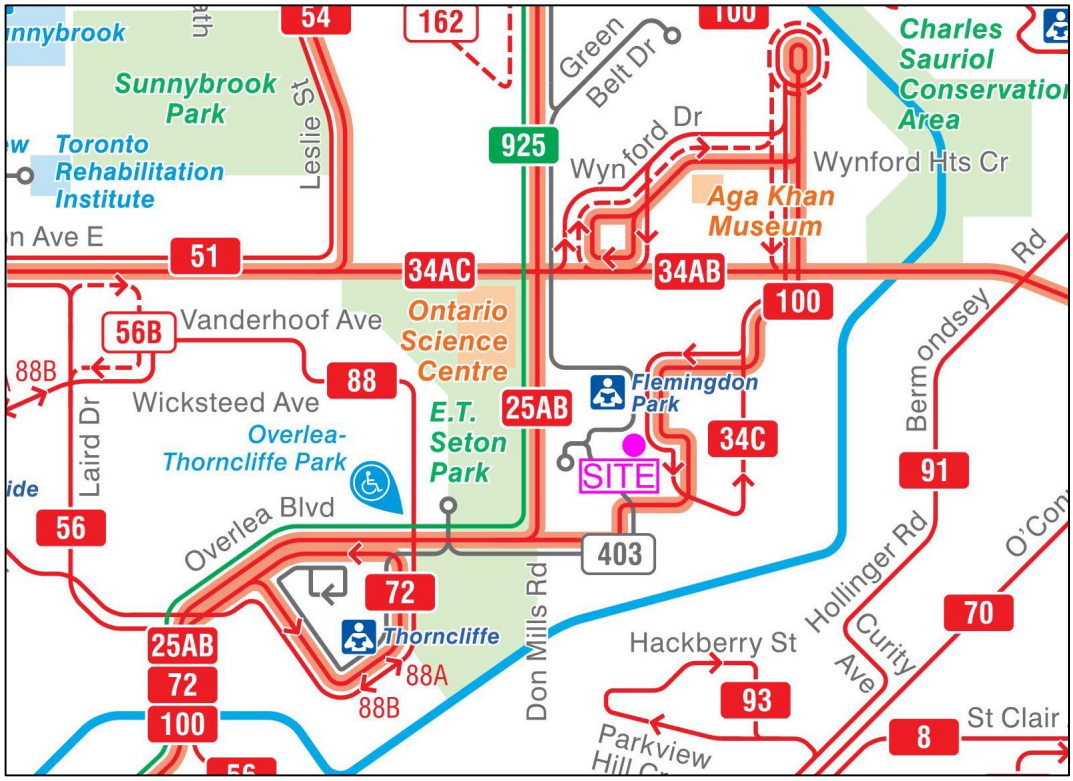
The Toronto Transit Commission (TTC) provides frequent bus service within the vicinity of the site, 7 days a week. Bus stops are currently located on both sides of Deauville Lane, along the site's frontage. Service frequency and hours of operation of bus routes that service the study area are summarized in Table 1 and illustrated in Figure 5.

Table 1: Transit Route Summary

Route	Peak Period Headways [1]	Days and Hours of Operation [2]
25 (Don Mills)	AM: 5-10 mins PM: 5-10 mins	5:45 AM – 1:44 AM, Monday to Friday 5:47 AM – 1:31 AM, Saturday 6:20 AM – 1:34 AM, Sunday
34C (Eglinton East to Flemingdon Park)	AM: 15 mins PM:5-15 mins	5:46 AM – 1:45 AM, Monday to Friday 6:31 AM – 1:46 AM, Saturday 7:48 AM – 1:44 AM, Sunday
100 (Flemingdon Park)	AM: 5-10 mins PM: 5-10 mins	5:17 AM – 1:23 AM, Monday to Friday 6:24 AM – 1:42 AM, Saturday 7:40 AM – 1:20 AM, Sunday
925 (Don Mills Express)	AM: 10 mins PM: 10 mins	5:58 AM – 10:29 PM, Monday to Friday 7:41 AM – 7:36 PM, Saturday 7:45 AM – 7:25 PM, Sunday
325 (Don Mills)	30 mins	1:49 AM – 4:48 AM, Overnight 7 days a week
403 (South Don Mills Community Bus)	75 mins	10:08 AM – 4:15 PM, Monday to Friday

Notes: 1. AM Peak period refers to 6:00 to 9:00 AM and PM Peak period refers to 4:00 to 7:00 PM on weekdays.
2. Hours of operation are approximate and based on route schedules on the TTC website.

Figure 5: Transit Route Map



Source: TTC System Map, March 2024

2.3.1 Transit Pass Ownership

Transit pass ownership trends for residents of the local ward (TTS Ward 26) was determined from 2011 and 2016 TTS results published by the Data Management Group at the University of Toronto Transportation Research Institute. The "Possess a Transit Pass" attribute from TTS was utilized and is summarized in Table 2.

Table 2: TTS Ward 26 Transit Pass Ownership

Ownership	2011 TTS	2016 TTS
Possess a Transit Pass	20%	64%
Does Not Possess a Transit Pass	79%	35%
Unknown	1%	1%
Total	**100%**	**100%**

From 2011 to 2016, transit pass ownership tripled with 64% of residents owning a transit pass by 2016. It is expected that ownership has continued and will continue to increase due to better transit services and future transit improvements, as detailed in Section 3.1.

2.4 Existing Traffic Volumes

Existing traffic counts at all study intersections were obtained for the weekday morning AM peak period (7:00 AM to 9:00 AM) and afternoon PM peak period (4:00 PM to 6:00 PM). The weekday AM and PM peak hours were selected as these are typical peak traffic periods for this type of development. Table 3 summarized the counts used for all study intersections, along with their sources.

Table 3: Traffic Counts Summary

Intersection	Date of Count	Source
Don Mills Road / Gateway Boulevard / Overlea Boulevard	Thursday, January 12, 2023	City
Don Mills Road / Gateway Boulevard (north leg)	Thursday, May 23, 2019	City
Don Mills Road / St. Dennis	Wednesday, May 25, 2022	*155 St. Dennis Drive Transportation Considerations*, dated January 2023
Deauville / St. Dennis	Thursday, June 20, 2024	Accu-Traffic
Deauville / Grenoble	Thursday, June 20, 2024	Accu-Traffic
Gateway / Grenoble / Flemingdon Park Shopping Centre driveway	Tuesday, June 18, 2024	OTI
Grenoble / Site Driveways (2)	Thursday, July 18, 2024	Accu-Traffic

The west leg of both the intersections of Don Mills Road / Gateway Boulevard (north leg) and Don Mills Road / St. Dennis are driveways to the Ontario Science Centre. However, the Ontario Science Centre was permanently closed on June 21, 2024. Therefore, the traffic volumes in and out of the Ontario Science Centre driveways were removed.

As noted in Section 1.3.2, traffic volumes along Don Mills Road within the HOV lanes are to be removed for the operations analysis. To remove these traffic volumes, the HOV lane counts conducted at the intersections of Don Mills Road / Gateway Boulevard and Don Mills Road / St. Dennis Road for the *25 St Dennis Drive Urban Transportation Consideration Report* (25 St. Dennis TIS), prepared by BA Group, dated September 8, 2016, were utilized. The HOV traffic volumes were proportionally removed based on the adjusted through volumes. Table 4 summarizes the counts taken from the 25 St. Dennis TIS and the adjusted HOV volumes based on the balanced through traffic.

Table 4: HOV Traffic Counts and Adjustments

Direction	Through + HOV Volume		HOV Volume	
	AM	PM	AM	PM
Don Mills Road / Gateway Boulevard				
Counts from 25 St. Dennis TIS				
Northbound	1,932	1,881	306	450
Southbound	1,953	1,354	326	178
Adjusted Volumes due to Balancing				
Northbound	1,355	1,420	215	340
Southbound	1,427	1,219	238	160
Don Mills Road / St. Dennis Road				
Counts from 25 St. Dennis TIS				
Northbound	2,007	1,827	306	450
Southbound	2,009	1,495	326	178
Adjusted Volumes due to Balancing				
Northbound	1,273	1,582	194	390
Southbound	1,539	9,55	250	114

In addition, a review of historical traffic counts was conducted between 2001 to 2019 at the study intersections. There were fluctuations in the traffic volumes with some intersections experiencing positive growth of up to 2%, some intersections experiencing minimal growth, and some intersections experiencing -1.7%. Therefore, to account for these fluctuations, a 1% growth rate compounded annually has been assumed at all study intersections for all movements. The historical growth rate analysis has been provided in Appendix B.

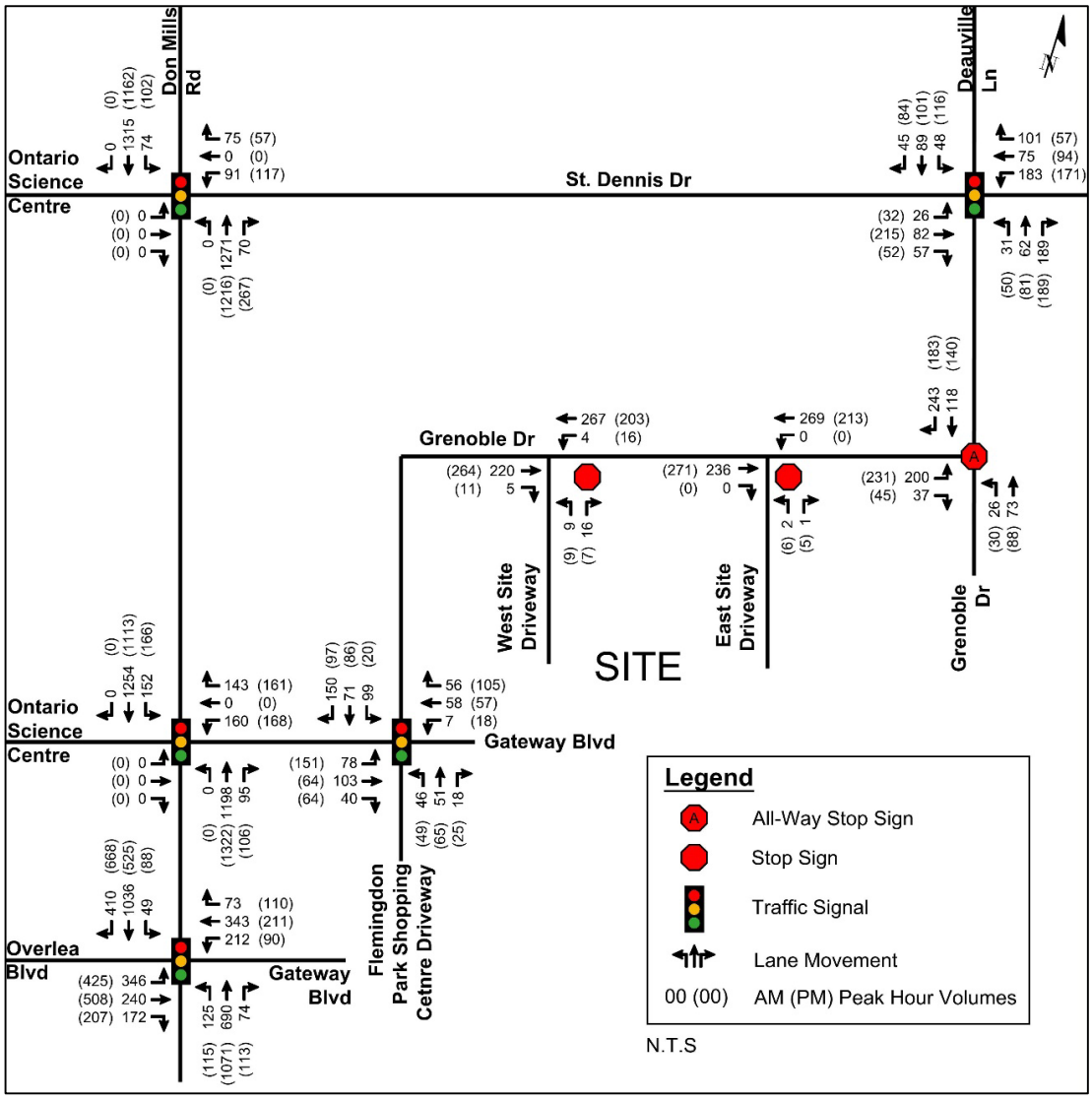
There were also imbalances in traffic volumes along all corridors due to the different dates of the traffic counts. The following corridors were balanced assuming the highest numbers between intersections:

- Don Mills Road between St. Dennis Drive and Gateway Boulevard (north leg).
- The southbound corridor along Don Mills Road between Gateway Boulevard (north leg) and Overlea Boulevard during the PM peak hour.
- Grenoble Drive between the site driveways and Deauville Lane.

The imbalances along the remaining corridors were reviewed and maintained.

The existing 2024 traffic volumes are illustrated in Figure 6. All traffic data is provided in Appendix C.

Figure 6: Existing 2024 Traffic Volumes



A site visit was conducted to confirm existing conditions. Based on field observations, a southbound left-turn advanced phase was observed at the intersection of Don Mills Road / Overlea Boulevard / Gateway Boulevard during the PM peak hours. However, this phase was not shown on the current signal timing plan. Therefore, under existing conditions during the PM peak hour, a permitted + protected southbound left-turn phase was assumed.

3.0 Background Conditions

Future background traffic consists of existing traffic, background growth and traffic from other developments. Background traffic growth and traffic from other developments are discussed below. Future road network and transit improvements within the study horizon year are also discussed. The horizon year of this study is assumed to be 2031 (5-year), based on a buildout in 2026.

3.1 Future Transit

The Don Mills and Eglinton Area is identified as a Gateway Hub in Metrolinx's Mobility Hub guidelines and in their study, *The Big Move,* dated November 2008. This Gateway Hub will include two future rapid transit lines. One of these lines is the Eglinton Crosstown Light Rail Transit (ECLRT) line, which will extend between Weston Road and Kennedy Road, connecting the Mount Dennis community to the Kennedy GO and subway stations, with future headways of 3 minutes during the morning and afternoon weekday peak periods. The closest station to the site will be the Aga Khan Park and Museum Station, which is approximately 690 m (or a 700 m /10-minute walk / 3-minute bike ride) away from the site. Another station within close proximity to the site is the Science Centre Station to be located on the southwest corner of the Don Mills Road / Eglinton Avenue intersection, which will be an approximate 750 m (or a 1.0 km / 14-minute walk / 4-minute bike ride) from the site. In addition, a seven bay TTC bus terminal will be located on the northeast corner of this same intersection. The ECLRT is substantially constructed but its opening date is not currently confirmed. It is expected to be open within the study horizon year of 2031. The bus terminal is now constructed and is in operation.

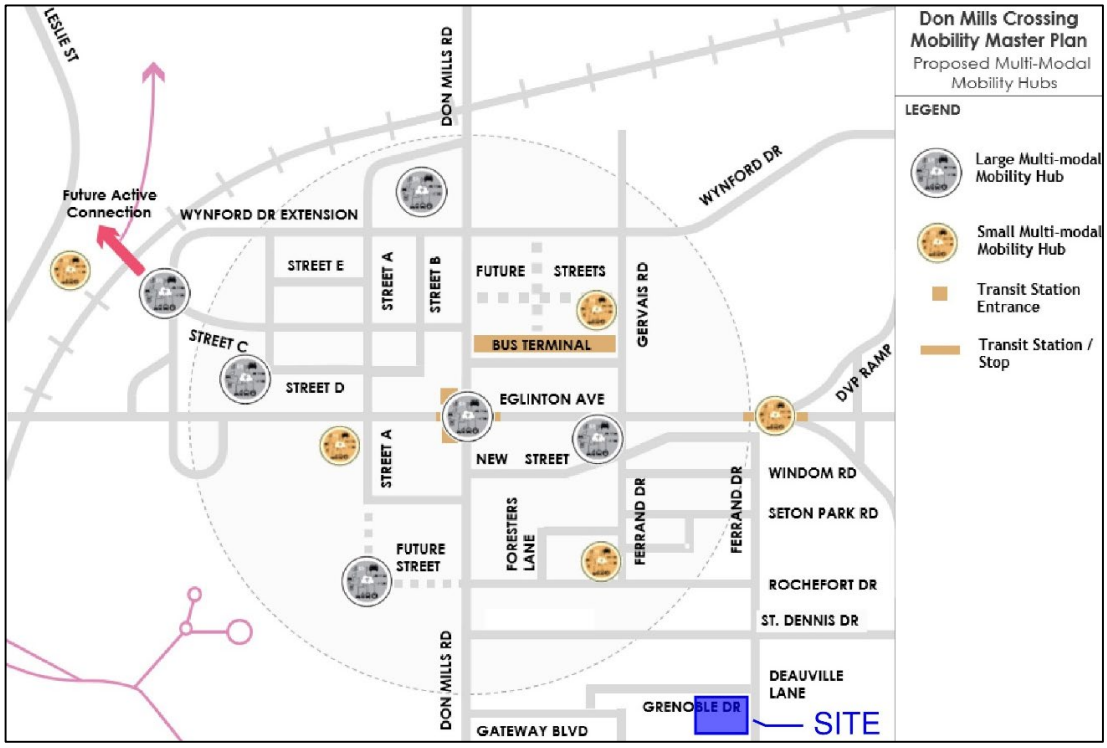
The second line that is planned within the study area is the Ontario subway line, which will provide an alternative route to/from the Downtown core. Within the study area, this route will be located on the west side of Don Mills Road as an elevated line that will connect with the Science Centre Station on the ECLRT line, but the station will be located on the northeast corner of the Don Mills Road / Eglinton Avenue intersection, adjacent to the bus terminal. The next closest station on the Ontario line will be Flemingdon Park Station to the west of the site on Don Mills Road at the north leg of Gateway Boulevard. This will be approximately 450 m (or a 480 m / 7-minute walk / 2-minute bike ride) from the site. Proposed headways will be as low as 1.5 minutes during both peak periods. The expected completion year of this line is 2031.

In addition, the TTC is continuing to look at ways to increase bus headways. All these future transit improvements will continue to increase the ease of use and attractiveness of transit, which will result in the continuing decrease in vehicle use and parking demand.

3.2 Future Active Transportation

Based on the Don Mills Crossing Study, a multi-modal mobility hub is proposed on the northwest corner of the Ferrand Drive / Rochefort Drive intersection, approximately 650 m (a 9-minute walk or a 2-minute bike ride). The multi-modal mobility hub would potentially include bike share, car share, electric charging and ride share spaces. An excerpt from the study is provided in Figure 7.

Figure 7: Exhibit 9-10 from the Don Mills Crossing Study



Overlea Boulevard, between Don Mills Road and Thorncliffe Park Drive, will also be undergoing reconstruction to improve pedestrian and cycling infrastructure. Improvements will include:

- New cycle tracks along Overlea Boulevard from Thorncliffe Park Drive to Don Mills Road.
- Designated waiting areas for cyclists at the Don Mills Road and Thorncliffe Park Drive intersections.
- New multi-use trail along Don Mills Road, from the Don Valley to Overlea Boulevard
- Larger waiting areas for TTC bus stops
- Wider sidewalks along Overlea Boulevard

3.3 Future Road Network

The City is currently redesigning and reconstructing the intersection of Grenoble Drive / Deauville Lane. It is proposed to remove the southbound and eastbound channelized right-turn lanes and convert the space to boulevard and sidewalk space. The southbound and eastbound right-turn lanes will be shared with the southbound through and eastbound left-turn lane, respectively. The project is anticipated to be completed by the end of 2024. Therefore, the future intersection configuration has been assumed under background conditions.

In addition, within the vicinity of the site, the completion of the ECLRT line will result in geometric changes at the intersection of Eglinton Avenue / Don Mills Road. The previously existing HOV lanes along Eglinton Avenue will be removed, but the HOV lanes on Don Mills Road will be retained.

3.4 Background Traffic Growth

As noted above in Section 2.4, a review of historical traffic counts was undertaken at the study intersections, which found fluctuations in traffic growth, which include positive, negative and minimal growth. Therefore, to account for these fluctuations, a 1% growth rate compounded annually has been assumed at all study intersections for all movements. The historical growth rate analysis has been provided in Appendix B.

3.5 Background Developments

Background developments were identified within the proximity of the site based on the City's online development application website and confirmation with the City. The developments are summarized in Table 5. Trips generated from each development were included in background traffic projections. Excerpts of the site traffic figures from traffic studies for each development are provided in Appendix D.

Table 5: Background Development Summary

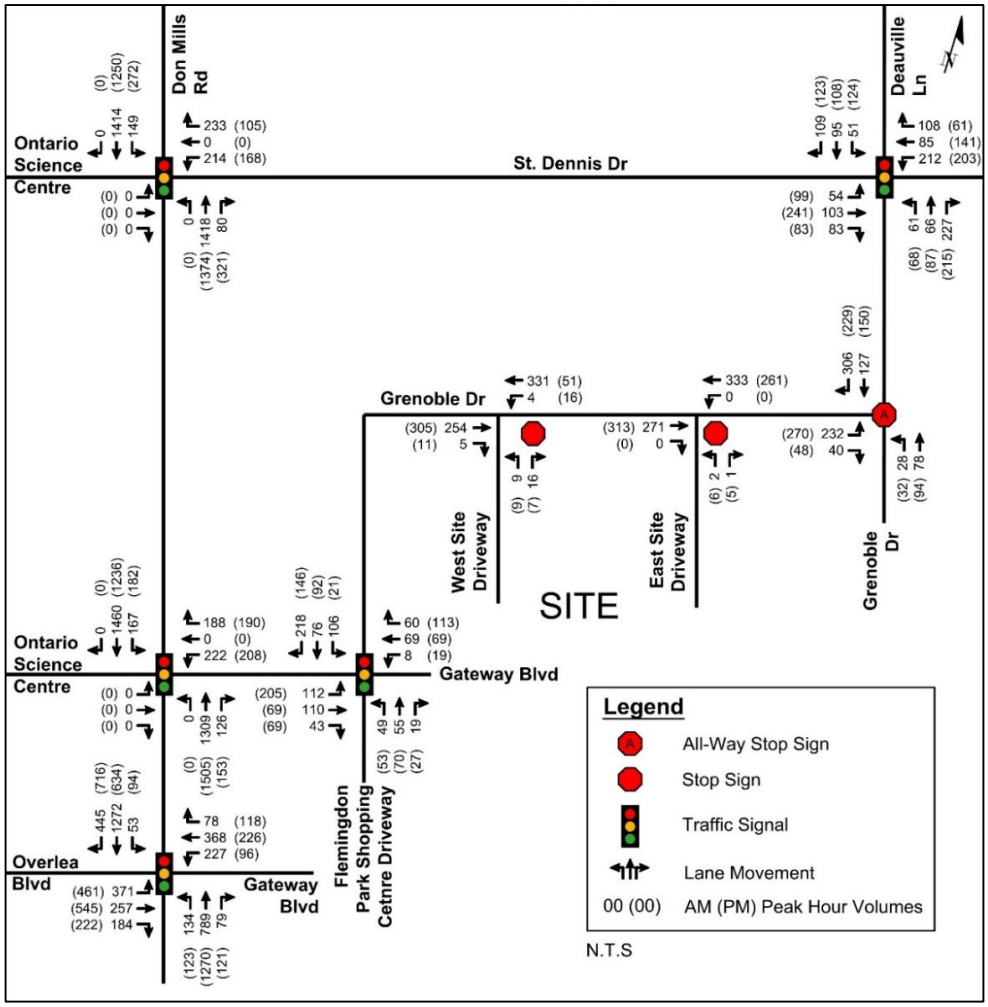
Location	Proposed Use	Source
25 St. Dennis Drive	724 Apartments 625 m^2 Daycare 600 m^2 Retail	*25 St. Dennis Drive Updated Urban Transportation Considerations Report,* dated September 8, 2016
7-11 Rochefort Drive	1,322 Apartments 199 m^2 Café	*7-11 Rochefort Drive Transportation Study,* dated October 2021
7 St. Dennis Drive & 10 Grenoble Drive	2,536 Apartments	*Transportation Update and Response to Comments – Technical Addendum*, dated June 5, 2024
200 Gateway Boulevard	842 Apartments 10 Townhomes 353 m^2 Retail	*200 Gateway Boulevard Transportation Study*, dated September 2022

Location	Proposed Use	Source
48 Grenoble Drive	1,066 Apartments 208 m^2 Retail	*48 Grenoble Drive Response to Transportation Comments*, dated July 13, 2023
789-797 Don Mills Road	2,655 Apartments 32,500 m^2 Office	*Transportation Update and Comment-Response Letter 797 Don Mills Road*, dated June 28, 2023

3.6 Background Traffic Volumes

Background traffic volumes consist of the application of growth per annum (up to the horizon year of 2031) to the existing traffic volumes shown in Figure 6, along with traffic from background developments. The resulting background 2031 traffic volumes are illustrated in Figure 8.

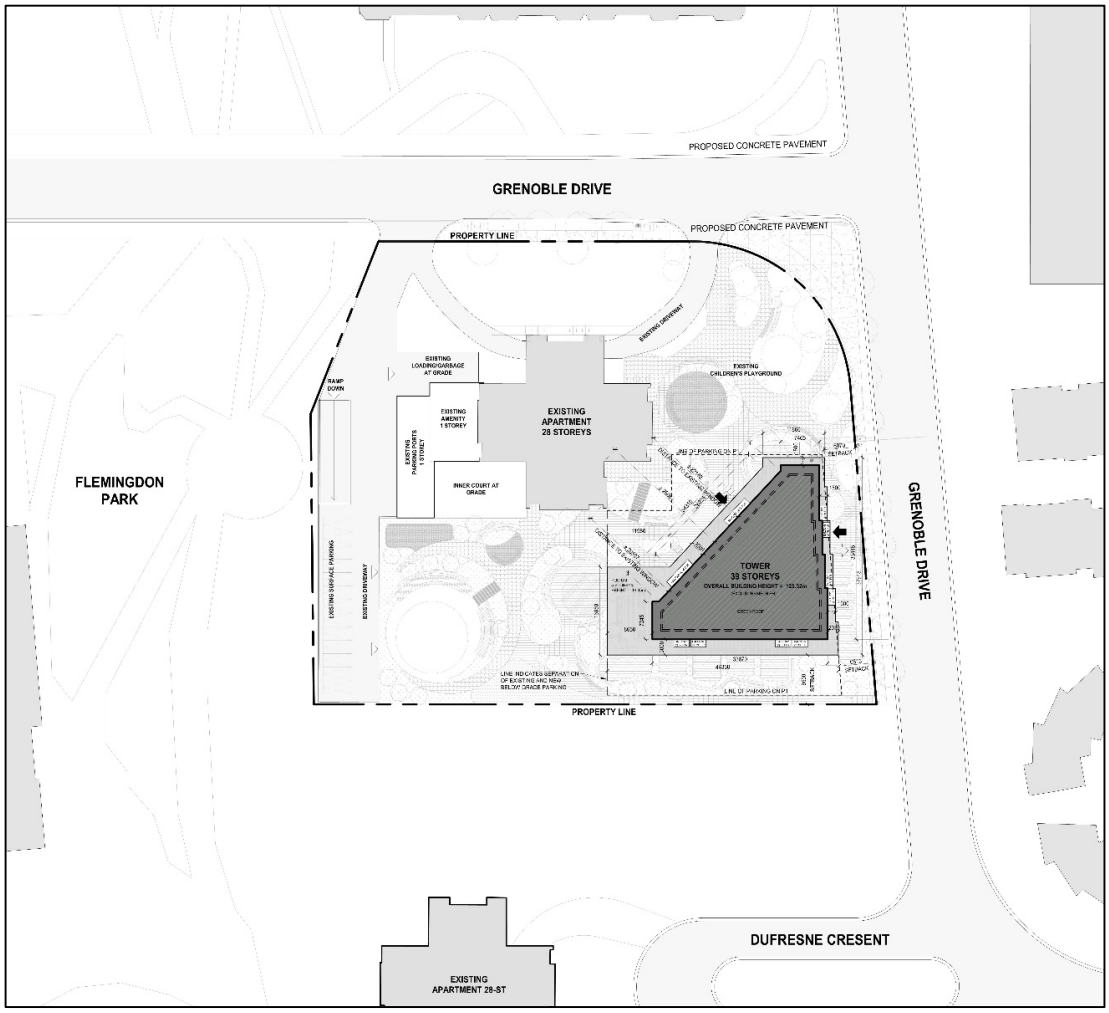
Figure 8: Background 2031 Traffic Volumes



4.0 Proposed Development

The proposed development will retain the existing 217 unit apartment building and add 405 new apartments in one building. Access will be provided via the two existing full-movement driveways on Grenoble Drive. The site plan is shown in Figure 9.

Figure 9: Site Plan



4.1 Trip Generation

Trip generation for the proposed development was based upon the trip rates contained in the Don Mills Crossing Study utilizing the following trips per resident:

- Weekday AM Peak Hour: 0.204 trips
- Weekday PM Peak Hour: 0.152 trips

As these rates did not include an inbound and outbound split, these splits were determined based on information from the publication *Trip Generation Manual, 11th Edition,* published by the Institute of Transportation Engineers. Land use code (LUC) 222 (High-Rise Multifamily Housing) and a general urban / suburban environment was assumed.

Future projected trips were based on the unit number difference between the existing units and the proposed units. This results in 405 net units (622 future units less 217 existing units). These units were then converted to the number of residents based on information from the City's *Housing Occupancy Trends*, 1996 to 2016. For recently built apartment developments, on average there are 1.67 residents / household, which results in a total of 676 residents.

Based on the modal split in the Don Mills Crossing Study, auto driver, transit, pedestrian, and cyclist trips were determined. Auto drivers were converted into vehicular trips by assuming one occupant per vehicle for a more conservative analysis and this also is consistent with vehicular occupancy data from 2016 TTS data for this local ward (Ward 26). The resulting site trip generation is summarized in Table 6. Excerpts of all relevant information are provided in Appendix E.

Table 6: Site Trip Generation

Trip Type		Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	**Out**	**Total**	**In**	**Out**	**Total**
Person Trips (676 Residents)		47	91	138	58	45	103
Travel Mode	Auto – 41%	20	37	57	24	18	42
	Transit – 41%	20	37	57	24	18	42
	Pedestrians – 14%	6	13	19	8	6	14
	Cyclists – 4%	1	4	5	2	3	5
Vehicle Trips		**20**	**37**	**57**	**24**	**18**	**42**

With the availability of existing transit and the future ECLRT and Ontario Line, it is anticipated that the projected addition of 57 and 42 transit riders during the AM and PM peak hours, respectively, can be accommodated by the future transit system. With the availability of the existing and future sidewalk and bike network in the study area, the projected addition of 5 cyclists during both peak hours, and 19 and 14 pedestrians during the AM and PM peak hours, respectively, can be adequately accommodated.

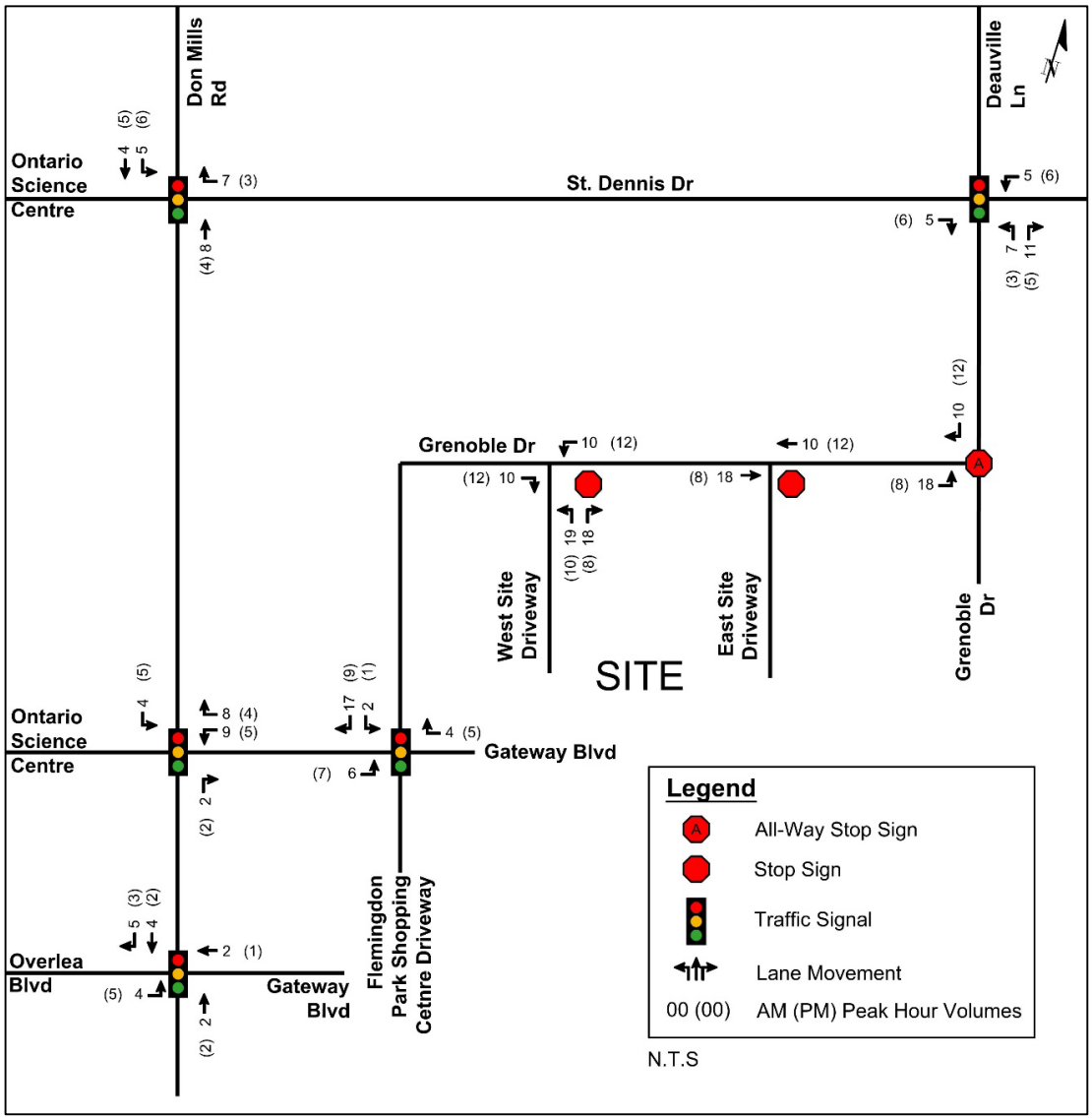
4.2 Vehicle Trip Distribution & Assignment

The trip distribution and assignment of new vehicle trips were based upon existing traffic patterns, the available road network, 2016 Transportation Tomorrow Survey data and findings from the Don Mill Crossing Study. The estimated distribution of site trips on the greater road network is shown in Table 7 and the vehicular trip assignment is illustrated in Figure 10.

Table 7: Vehicle Trip Distribution

To/From	Via	Distribution
North	Don Mills Road	25%
South		10%
East	Eglinton Avenue	30%
West	Eglinton Avenue	15%
	Overlea Boulevard	20%
	Total	**100%**

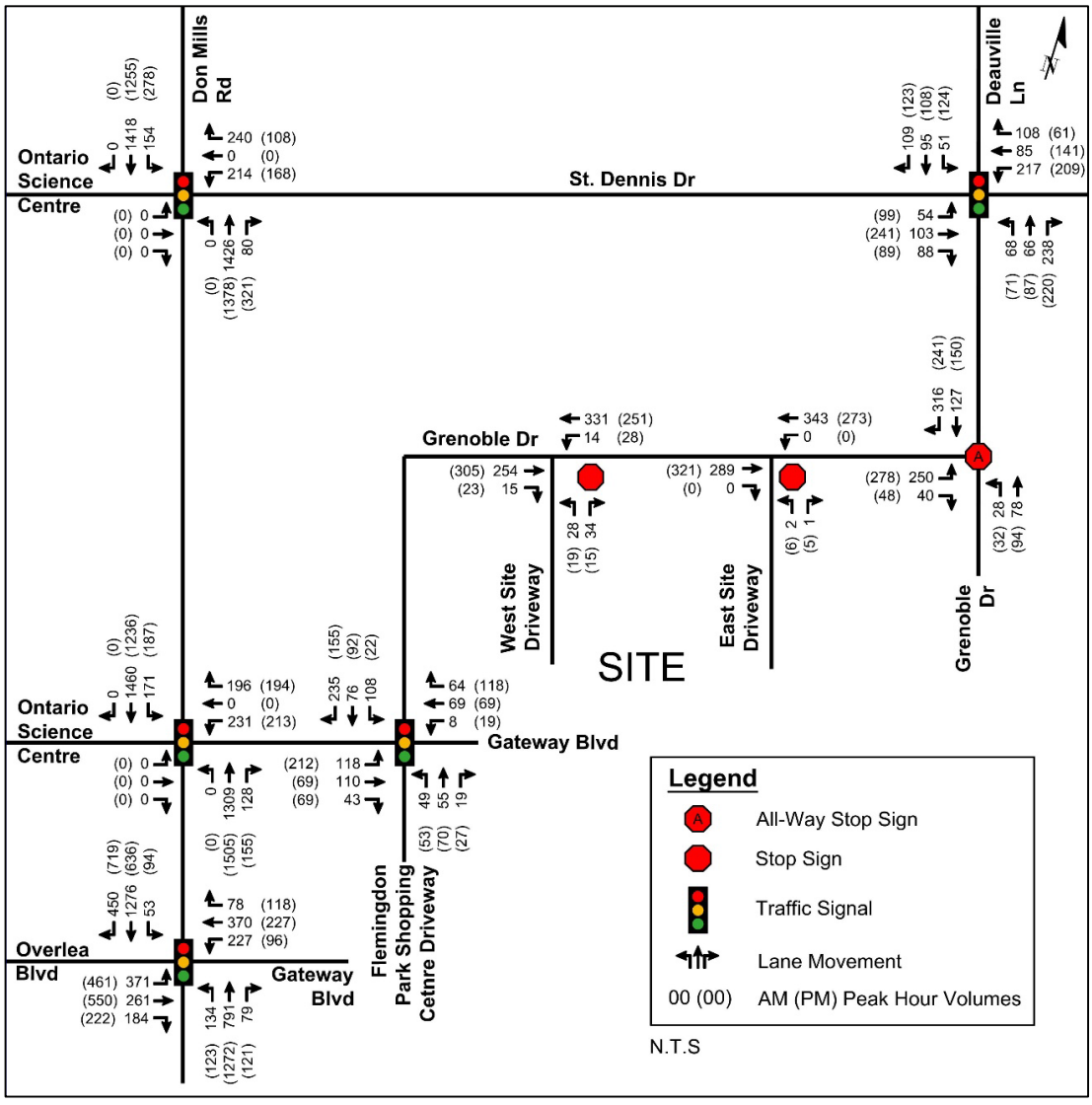
Figure 10: Site Generated Vehicle Traffic



5.0 Total Traffic Conditions

Total traffic volumes consist of background traffic for the horizon year 2031 plus the site traffic illustrated in Figure 10. The resulting 2031 total traffic volumes are shown in Figure 11.

Figure 11: Total 2031 Traffic Volumes



6.0 Traffic Operations

Traffic operations analyses were conducted under existing and future traffic conditions for the weekday AM and PM peak hours at all study intersections. In addition, queueing was reviewed using Synchro's 95th and 50th percentile queues. Note that HCM2000

does not report queues for all-way stop control (AWSC); as a result, HCM6 queue results were reported for the Deauville Lane / Grenoble Drive intersection. A comparison of the existing storage / link distances and projected queues are also included. Detailed Synchro and queue reports are provided in Appendices F through H.

6.1 Deauville Lane / St. Dennis Drive

Existing and future traffic operations at the signalized intersection of Deauville Lane / St. Dennis Drive are summarized in Table 8.

Table 8: Deauville Lane / St. Dennis Drive Signalized Intersection Operations

Movement	Existing Storage / Link Distance (m)	Weekday AM Peak Hour					Weekday PM Peak Hour				
		v/c	LOS	Queue (m)		Delay (s)	v/c	LOS	Queue (m)		Delay (s)
				50th	95th				50th	95th	
Existing Conditions											
Overall	-	0.50	B	-	-	13	0.62	B	-	-	13
EBL	28	0.07	B	2	6	13	0.08	B	3	7	13
EBT	200+	0.15	B	6	13	14	0.38	B	17	30	14
EBR	10	0.04	B	0	1	13	0.04	B	0	0	13
WBL	32	0.59	B	15	31	19	0.60	B	15	31	19
WBTR	200+	0.22	B	6	16	14	0.23	B	8	18	14
NBLTR	188	0.33	A	7	27	10	0.44	B	13	40	12
SBLTR	106	0.24	A	8	25	9	0.47	B	17	46	12
Background 2031 Conditions											
Overall	-	0.66	B	-	-	14	0.74	B	-	-	16
EBL	28	0.15	B	4	10	13	0.25	B	8	16	13
EBT	200+	0.17	B	8	16	13	0.38	B	19	34	14
EBR	10	0.06	B	0	3	13	0.06	B	0	3	12
WBL	32	0.65	B	18	**37**	20	0.67	C	18	**39**	21
WBTR	200+	0.25	B	7	18	14	0.31	B	13	26	13
NBLTR	188	0.50	B	14	45	13	0.58	B	23	54	16
SBLTR	106	0.34	B	12	33	11	0.62	B	27	62	17
Total 2031 Conditions											
Overall	-	0.68	B	-	-	14	0.75	B	-	-	16
EBL	28	0.14	B	4	10	13	0.24	B	8	16	13
EBT	200+	0.17	B	8	16	13	0.37	B	19	34	14
EBR	10	0.07	B	0	4	12	0.07	B	0	4	12
WBL	32	0.65	B	19	**38**	20	0.67	C	19	**42**	21
WBTR	200+	0.25	B	7	18	13	0.30	B	13	26	13
NBLTR	188	0.54	B	17	50	14	0.60	B	25	59	17
SBLTR	106	0.35	B	13	33	11	0.63	B	29	67	18

Under existing and future conditions, during both peak hours, all movements are operating and will operate with excess capacity and a LOS C or better.

Existing and future queues will be contained within their respective storage lengths and link distances, except for the westbound left-turn queue under background conditions

during both peak hours. The queue is projected to exceed its storage length during both peak hours by up to 7 m (approximately one vehicle length) under background conditions. It appears the westbound left-turn queue can utilize the westbound through lane for additional storage. It is noted that under existing conditions, this queue is already utilizing its entire storage length. Site traffic only extends this queue by an additional 1m and 3m during the AM and PM peak hours, respectively. The City should monitor this movement for possible mitigation measures.

6.2 Deauville Lane / Grenoble Drive

Existing and future traffic operations at the all-way stop controlled intersection of Deauville Lane / Grenoble Drive are summarized in Table 9.

Table 9: Deauville Lane / St. Dennis Drive Signalized Intersection Operations

Movement	Existing Storage / Link Distance (m)	Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c	LOS	95th Queue (m)[2]	Delay (s)	v/c	LOS	95th Queue (m)[2]	Delay (s)
Existing Conditions									
EBL	170 [1]	0.423	B	16	14	0.493	C	21	16
EBR	14	0.065	A	2	9	0.081	A	3	9
NBLT	125	0.192	B	6	11	0.233	B	7	11
SBT	188	0.237	B	7	11	0.292	B	10	12
SBR	14	0.393	B	14	11	0.308	B	10	11
Background 2031 Conditions									
EBLR	170 [1]	0.517	B	23	15	0.600	C	31	17
NBLT	125	0.202	B	7	11	0.246	B	8	11
SBTR	188	0.745	C	51	22	0.684	C	42	20
Total 2031 Conditions									
EBLR	170 [1]	0.556	C	26	16	0.617	C	33	18
NBLT	125	0.207	B	7	11	0.249	B	8	11
SBTR	188	0.768	C	57	25	0.709	C	45	22

Notes: 1. Measured to the midblock pedestrian crossing.
2. A vehicle length of 7.6m is assumed in Synchro.

Under existing and future conditions, during both peak hours, all movements are operating and will operate with excess capacity and a LOS C or better. Existing and future queues will be contained within their respective storage lengths and link distances.

6.3 Grenoble Drive / Gateway Boulevard / Commercial Driveway

Existing and future traffic operations at the signalized intersection of Grenoble Drive / Gateway Boulevard / Commercial Driveway are summarized in Table 10.

Table 10: Grenoble / Gateway / Driveway Signalized Intersection Operations

Movement	Existing Storage / Link Distance (m)	Weekday AM Peak Hour					Weekday PM Peak Hour				
		v/c	LOS	Queue (m)		Delay (s)	v/c	LOS	Queue (m)		Delay (s)
				50th	95th				50th	95th	
Existing Conditions											
Overall	-	0.36	B	-	-	17	0.35	B	-	-	17
EBL	48	0.23	B	8	17	18	0.50	C	16	34	24
EBTR	150	0.21	B	11	23	17	0.15	B	6	17	17
WBLTR	200+	0.18	B	6	17	17	0.27	B	7	22	18
NBLTR	30	0.18	B	8	18	13	0.21	B	10	21	14
SBLTR	150 [1]	0.49	B	23	45	18	0.24	B	10	23	14
Background 2031 Conditions											
Overall	-	0.47	B	-	-	19	0.47	B	-	-	20
EBL	48	0.35	B	12	25	20	0.71	C	24	**56**	34
EBTR	150	0.23	B	12	25	18	0.17	B	7	18	17
WBLTR	200+	0.21	B	8	20	18	0.33	B	10	27	19
NBLTR	30	0.20	B	9	19	13	0.23	B	11	22	14
SBLTR	150 [1]	0.61	C	30	60	21	0.31	B	13	28	15
Total 2031 Conditions											
Overall	-	0.50	B	-	-	19	0.49	C	-	-	21
EBL	48	0.37	C	12	26	21	0.74	D	25	**58**	36
EBTR	150	0.23	B	12	25	18	0.17	B	7	18	17
WBLTR	200+	0.22	B	8	20	18	0.34	B	10	27	20
NBLTR	30	0.20	B	9	19	14	0.23	B	11	22	14
SBLTR	150 [1]	0.64	C	32	64	22	0.32	B	13	29	15

Note: 1. Measured to the midblock pedestrian crossing.

Under existing and future conditions, during both peak hours, all movements are operating and will operate with excess capacity and a LOS D or better.

Existing and future queues will be contained within their respective storage lengths and link distances, except for the eastbound left-turn queue under background conditions during the PM peak hour. The queue is projected to exceed its storage length by 8m (approximately one vehicle length) under background conditions. It appears the eastbound left-turn queue can utilize the eastbound through lane for additional storage. Site traffic only extends this queue by an additional 2 m under total conditions. The City should monitor this movement for possible mitigation measures.

6.4 Don Mills Road / St. Dennis Drive

Existing and future traffic operations at the signalized intersection of Don Mills Road / St. Dennis Drive are summarized in Table 11.

Table 11: Don Mills Road / St. Dennis Drive Signalized Intersection Operations

Movement	Existing Storage / Link Distance (m)	Weekday AM Peak Hour					Weekday PM Peak Hour				
		v/c	LOS	Queue (m)		Delay (s)	v/c	LOS	Queue (m)		Delay (s)
				50th	95th				50th	95th	
Existing Conditions											
Overall	-	0.60	B	-	-	11	0.65	B	-	-	14
WBL	100+	0.58	E	24	42	57	0.67	E	36	57	70
WBR	55	0.05	A	0	15	49	0.03	D	0	14	55
NBTR	220	0.58	B	88	126	11	0.65	B	120	169	13
SBL	100	0.28	A	4	9	8	0.47	B	6	13	13
SBTR	200+	0.51	A	57	87	6	0.45	A	56	85	6
Background 2031 Conditions											
Overall	-	0.85	C	-	-	23	0.96	C	-	-	32
WBL	100+	0.83	E	61	99	72	0.79	E	53	81	78
WBR	55	0.43	D	27	55	50	0.07	D	0	18	54
NBTR	220	0.72	B	157	186	20	0.89	C	**244**	**304**	34
SBL	100	0.81	D	16	33	46	0.94	F	73	**137**	91
SBTR	200+	0.60	B	108	129	11	0.50	A	78	104	8
Total 2031 Conditions											
Overall	-	0.88	C	-	-	23	0.97	C	-	-	33
WBL	100+	0.83	E	61	99	72	0.79	E	53	81	78
WBR	55	0.46	D	29	58	49	0.07	D	0	18	54
NBTR	220	0.72	B	159	188	20	0.89	C	**245**	**305**	34
SBL	100	0.84	D	19	59	54	0.96	F	75	**141**	96
SBTR	200+	0.60	B	109	129	11	0.50	A	79	104	8

Under existing conditions, during both peak hours, all movements are operating with excess capacity and a LOS E or better. Existing queues are contained within their respective storage lengths and link distances.

Under future conditions, with optimized timing plans, during both peak hours, all movements will operate with excess capacity and a LOS E of better, except for the southbound left-turn lane during the PM peak hour. This movement is projected to experience higher delay but will operate with excess capacity.

Future queues will be contained within their respective storage lengths and link distances, except for the northbound through-right turn queue and southbound left-turn queue, during the PM peak hour. It is noted that the queues are primarily because of background traffic growth and background development traffic. The northbound through-right turn queue will be 135 m longer under background conditions, compared to existing conditions, and only 1m longer under total conditions, compared to background conditions. The southbound left-turn queue will be 124 m longer under background conditions, compared to existing conditions, and only 4 m longer under total conditions, compared to background conditions.

Therefore, it is recommended that the City monitor the above queues for possible mitigation measures.

6.5 Don Mills Road / Gateway Boulevard (North Leg)

Existing and future traffic operations at the signalized intersection of Don Mills Road / Gateway Boulevard (north leg) are summarized in Table 12.

Table 12: Don Mills / Gateway Blvd. (North Leg) Signalized Intersection Operations

Movement	Existing Storage / Link Distance (m)	Weekday AM Peak Hour					Weekday PM Peak Hour				
		v/c	LOS	Queue (m)		Delay (s)	v/c	LOS	Queue (m)		Delay (s)
				50th	95th				50th	95th	
Existing Conditions											
Overall	-	0.61	B	-	-	15	0.67	B	-	-	17
WBL	62	0.73	E	45	**70**	65	0.74	E	47	**73**	65
WBR	153	0.58	D	39	61	55	0.63	E	44	69	57
NBTR	300+	0.58	B	97	142	13	0.65	B	118	168	15
SBL	93	0.58	B	10	21	13	0.74	C	11	31	27
SBTR	200+	0.50	A	68	107	8	0.45	A	58	89	8
Background 2031 Conditions											
Overall	-	0.72	C	-	-	21	0.83	C	-	-	26
WBL	62	0.84	E	**65**	**103**	75	0.82	E	61	**91**	72
WBR	153	0.63	E	53	79	56	0.67	E	54	81	58
NBTR	300+	0.67	B	141	170	17	0.83	C	205	256	26
SBL	93	0.81	D	15	36	39	0.84	E	38	81	69
SBTR	200+	0.61	A	114	137	11	0.51	A	80	104	9
Total 2031 Conditions											
Overall	-	0.73	C	-	-	22	0.83	C	-	-	27
WBL	62	0.86	E	**69**	**110**	77	0.83	E	62	**95**	73
WBR	153	0.65	E	55	83	56	0.67	E	55	82	58
NBTR	300+	0.68	B	145	170	18	0.83	C	209	257	26
SBL	93	0.84	D	17	38	47	0.86	E	40	84	72
SBTR	200+	0.61	B	118	137	12	0.51	A	82	104	10

Under existing and future conditions, during both peak hours, all movements are operating and will operate with excess capacity and a LOS E or better. Signal timings were optimized under future conditions.

Existing and future queues will be contained within their respective storage lengths and link distances, except for the westbound left-turn queue under existing conditions during both peak hours. The queue is currently exceeding its storage length by 8 m and 11 m during the AM and PM peak hours, respectively. It will continue to exceed its storage length under background conditions. It appears the westbound left-turn queue can utilize the westbound through lane for additional storage. Site traffic only extends this queue by an additional 7 m and 4 m, during the AM and PM peak hours, respectively. The City should monitor these movements for possible mitigation measures.

6.6 Don Mills Road / Gateway Blvd. (South Leg) / Overlea Boulevard

Existing and future traffic operations at the signalized intersection of Don Mills Road / Gateway Boulevard (south leg) / Overlea Boulevard are summarized in Table 13.

Table 13: Don Mills Road / Gateway / Overlea Signalized Intersection Operations

Movement	Existing Storage / Link Distance (m)	Weekday AM Peak Hour					Weekday PM Peak Hour				
		v/c	LOS	Queue (m)		Delay (s)	v/c	LOS	Queue (m)		Delay (s)
				50th	95th				50th	95th	
Existing Conditions											
Overall	-	0.81	D	-	-	37	0.87	D		-	38
EBL	103	0.65	D	43	65	50	0.65	D	46	66	42
EBT	400+	0.37	C	45	65	29	0.83	D	104	144	41
EBR	400+	0.11	C	0	14	26	0.14	C	0	14	24
WBL	100	0.56	C	31	46	34	0.41	C	11	20	31
WBT	200+	0.78	D	82	123	51	0.59	D	44	73	41
WBR	100	0.04	C	0	1	34	0.07	C	0	12	35
NBL	65	0.73	D	18	58	41	0.36	C	15	32	22
NBT	400+	0.47	C	65	105	25	0.98	E	126	209	59
NBR	50	0.04	B	0	6	20	0.07	C	0	12	25
SBL	42	0.23	C	9	24	30	0.47	C	12	26	27
SBT	476	0.90	D	132	220	48	0.48	C	50	78	30
SBR	476	0.40	B	25	59	19	0.62	B	36	83	19
Background 2031 Conditions											
Overall	-	0.90	D	-	-	44	0.92	D		-	43
EBL	103	0.89	E	54	93	76	0.86	E	65	109	65
EBT	400+	0.50	D	61	87	40	0.87	D	139	185	50
EBR	400+	0.16	C	5	22	35	0.20	C	8	25	29
WBL	100	0.57	C	40	59	33	0.61	D	15	25	44
WBT	200+	0.82	E	98	135	57	0.57	D	56	81	46
WBR	100	0.05	D	0	11	37	0.08	D	0	13	40
NBL	65	0.89	E	21	70	**74**	0.43	C	19	37	23
NBT	400+	0.49	C	78	114	25	0.96	E	179	275	56
NBR	50	0.06	B	3	14	19	0.08	C	0	13	25
SBL	42	0.26	C	10	25	30	0.68	D	14	43	43
SBT	476	0.96	E	182	270	56	0.48	C	68	103	31
SBR	476	0.45	B	38	79	20	0.67	C	61	138	22
Total 2031 Conditions											
Overall	-	0.90	D	-	-	45	0.93	D		-	44
EBL	103	0.89	E	54	94	76	0.86	E	65	109	66
EBT	400+	0.51	D	62	88	40	0.87	D	141	187	51
EBR	400+	0.16	C	5	22	35	0.20	C	8	25	29
WBL	100	0.57	C	40	59	33	0.62	D	15	25	44
WBT	200+	0.82	E	99	135	57	0.56	D	56	81	46
WBR	100	0.05	D	0	11	37	0.07	D	0	13	39
NBL	65	0.89	E	22	70	**74**	0.44	C	19	37	24
NBT	400+	0.49	C	78	114	25	0.97	E	181	276	58
NBR	50	0.06	B	3	14	19	0.08	C	0	13	25
SBL	42	0.26	C	10	25	30	0.68	D	14	43	43

Movement	Existing Storage / Link Distance (m)	Weekday AM Peak Hour					Weekday PM Peak Hour				
		v/c	LOS	Queue (m)		Delay (s)	v/c	LOS	Queue (m)		Delay (s)
				50th	95th				50th	95th	
SBT	476	0.97	E	183	273	57	0.48	C	69	103	31
SBR	476	0.46	B	40	81	20	0.67	C	64	141	22

Under existing and future conditions, during both peak hours, all movements are and will operate with excess capacity and a LOS E or better. Signal timing plans were optimized under background and total conditions.

Existing and future queues will be contained with their respective storage lengths and link distances, except for the northbound left-turn queue under background conditions during the AM peak hour. Site traffic does not contribute to this movement. It appears the left-turn queue can utilize the northbound through lane for additional storage.

6.7 Grenoble Drive / East Driveway

Existing and future traffic operations at the northbound stop-controlled intersection of Grenoble Drive / East Driveway are summarized in Table 14.

Table 14: Grenoble Drive / East Driveway Signalized Intersection Operations

Movement	Existing Storage / Link Distance (m)	Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c	LOS	95th Queue (m) [2]	Delay (s)	v/c	LOS	95th Queue (m) [2]	Delay (s)
Existing Conditions									
WBLT	25	0.00	A	0	0	0.00	A	0	0
NBLR	200+	0.01	A	1	12	0.02	A	1	12
Background 2031 Conditions									
WBLT	25	0.00	A	0	0	0.00	A	0	0
NBLR	200+	0.01	A	1	12	0.02	A	1	12
Total 2031 Conditions									
WBLT	25	0.00	A	0	0	0.00	A	0	0
NBLR	200+	0.01	A	1	13	0.02	A	1	13

Under existing and future conditions, all movements during both peak hours, currently and will operate with excess capacity and a LOS A. All existing and future queues are contained and will be contained with their respective storage lengths and link distances.

6.8 Grenoble Drive / West Driveway

Existing and future traffic operations at the northbound stop-controlled intersection of Grenoble Drive / East Driveway are summarized in Table 15.

Table 15: Grenoble Drive / West Driveway Signalized Intersection Operations

Movement	Existing Storage / Link Distance (m)	Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c	LOS	95th Queue (m) [2]	Delay (s)	v/c	LOS	95th Queue (m) [2]	Delay (s)
Existing Conditions									
WBLT	80	0.00	A	0	1	0.01	A	3	0
NBLR	200+	0.04	A	1	11	0.03	B	7	12
Background 2031 Conditions									
WBLT	80	0.00	A	1	1	0.01	A	1	1
NBLR	200+	0.05	A	2	12	0.03	B	1	13
Total 2031 Conditions									
WBLT	80	0.01	A	1	1	0.02	A	1	1
NBLR	200+	0.12	A	4	13	0.07	B	2	13

Under existing and future conditions, all movements during both peak hours, currently and will operate with excess capacity and a LOS B or better. All existing and future queues are contained and will be contained with their respective storage lengths and link distances.

7.0 Site Plan Review

A high-level review was conducted of the proposed site plan for multi-modal circulation, access, and parking garage layout. The site is well-designed to accommodate pedestrians, cyclists, and vehicles. Sidewalks will connect the building entrances to the existing external sidewalk network on both site frontages on Grenoble Drive. Cyclists can access the site via the existing driveways.

An access analysis was conducted for the 3-level underground garage using a PTAC or passenger car design vehicle utilizing AutoTURN. The garage will be able to accommodate the design vehicle at all ramps and on all levels as shown in Appendix I. An access analysis for the proposed refuse pickup / loading space was conducted for City refuse trucks using AutoTURN and is also shown in Appendix I. The analysis confirms that the proposed geometrics will accommodate both types of City refuse trucks, which represents the largest design vehicle that will visit the site.

8.0 Transportation Demand Management Plan

The proposed site plan incorporates design elements to support pedestrians, cyclists, and transit users to discourage the dependency on the single-occupant motor vehicle. This complements the City's overall transportation vision to achieve a greater sustainable transportation system by promoting and encouraging alternative modes of travel including walking, cycling and transit.

As noted in Section 2.3 and 3.1, there are several existing and planned Transportation Demand Management (TDM) measures within the study area including:

- Substantial transit service provided immediately near the site via TTC bus routes, a TTC bus terminal, ECLRT and the future Ontario Line.
- Existing bicycle lanes along St. Dennis Drive, Grenoble Drive and Deauville Lane, south of St. Dennis Drive.
- Planned cycling infrastructure along Deauville Lane, Rochefort Drive, Eglinton Avenue East and Overlea Boulevard.
- Planned multi-modal mobility hub north of the site on the northeast corner of Ferrand Drive / Rochefort Drive. The hub could potentially consist of bike share, car share, electric charging stations and ride share spaces.

To further facilitate other modes of travel, several TDM measures are proposed. These measures are expected to reduce not only vehicular trips but also parking demand. Table 16 summarizes the TDM measures proposed for this development along with associated trip reduction estimates. The trip reduction estimates are based on data from the Town of Oakville, the Region of Waterloo, the Vermont Agency of Transportation, City of Berkeley, California, California Air Pollution Control Officers Association, Delaware Department of Transportation, Oregon Department of Environmental Quality, and the City of Sacramento.

Table 16: Proposed TDM Measure

TDM Item Description	Trip Reduction	Comments
TDM information package	5% to 8%	The information package provided to residents will include TTC and GO transit maps and schedules, cycling and trail maps, and information on Smart Commute.
Transit subsidy	4% to 20%	Transit subsidy for residents via a preloaded PRESTO pass with $156.00 for first time purchasers and renters will be considered
Bicycle repair stations	1%	Located adjacent to bike storage room(s).
Unbundled parking for new residents	2.6% to 13%	Parking spaces will be offered at an additional cost.
Parking supply reduction	Up to 63% [1]	Parking rate reductions for resident parking are recommended.

Note: 1. Calculated based on the previous minimum parking requirements from the ZBL.

The combination of these proposed TDM measures is expected to reduce vehicle trips by more than 25%. TDM data and methodologies referenced in the above plan are provided in Appendix J.

9.0 North York Zoning By-law 7625 Parking Review

It is proposed to provide 264 parking spaces within the surface and garage levels, which include 246 resident and 18 visitor spaces.

The existing site is governed by North York Zoning By-law 0894 Chapter 320 (ZBL 7625). A review of vehicular parking requirements of ZBL 7625 was conducted and is summarized in Table 17. Excerpts from ZBL 7625 are contained in Appendix K.

Table 17: ZBL 7625 Parking Requirements

Proposed Use	ZBL Use	Size (units)	Parking Rate (space per unit)	Required Spaces	Provided Spaces	Surplus/ Deficit
Apartment - Residents	Apartment house dwelling	622	1.50	933	246	-687
Apartment - Visitors			0.25	156	18	-138
			Totals	**1,089**	**264**	**-825**

The proposed supply of 256 residents and 8 visitor spaces will result in a deficit of resident and visitor parking spaces based on the requirements of ZBL 7625.

However, a review was conducted of City-wide Zoning By-law 569-2013 (ZBL), which is based on extensive, more current parking studies conducted by the City.

10.0 Zoning By-law 569-2013 Parking Review

10.1 Bicycle Parking

There are 365 long-term bicycle spaces, and 92 short-term bicycle spaces proposed. The City's Zoning By law 569-2013 (ZBL) was reviewed to determine bicycle parking requirements for short-term and long-term spaces, which are summarized in Table 18, based on Bicycle Zone 1. Applicable excerpts from the ZBL are provided in Appendix K.

Table 18: ZBL Bicycle Parking Requirements

Proposed Use	ZBL Use	Type	Parking Rate	Required Spaces	Provided Spaces	Surplus / Deficit
High-Rise Residential (405 units)	Apartment Building	Short-Term	0.20 space per unit	81	92	+11
		Long-Term	0.90 space per unit	365	365	0

The proposed long-term bicycle parking supply will meet the ZBL requirements, and the short-term bicycle parking supply will exceed the ZBL requirements.

Long-term bicycle parking spaces will be provided for residents in secured rooms in the underground garage. Short-term bicycle parking spaces for visitors will be located at grade and within close proximity to building entrances.

10.2 Vehicular Parking

Based on the site being located in “Parking Zone B”, the minimum visitor parking requirement for an apartment building is two (2) spaces plus 0.05 spaces per unit. This results in a minimum visitor parking requirement of 34 spaces, which is higher than the proposed visitor parking supply.

However, it is our opinion that the subject development area, once fully developed, will be similar to the Yonge-Eglinton Secondary Plan area. The future Don Mills Secondary Plan area will have similar characteristics to the Yonge-Eglinton Secondary Plan area such as surrounding land uses, higher densities, higher-order transit, increased walkability and cyclist accommodation. Table 19 summarizes this comparison.

Table 19: Secondary Plan Comparison

Measure	Don Mills Secondary Plan Area	Yonge-Eglinton Secondary Plan Area
Surrounding Land Use	• Future high density residential uses with ground floor commercial including cafes, retail, and restaurants • High-rise office buildings • 2 grocery stores	• High density residential uses with ground floor commercial including restaurants and retail • High-rise office buildings • Yonge-Eglinton Centre shopping mall • 1 grocery store
Available Transit (including planned future transit)	• 2 TTC regular bus routes with 5-10 mins frequency • 1 TTC express route • 3 TTC nighttime routes • Bus terminal with 7 bus bays • Future ECLRT • Future Ontario Line • Future small multi-modal mobility hub (bike share, car share, electric charging spaces and ride share spaces)	• 3 TTC regular bus routes with 5-10 mins frequency • 3 TTC nighttime routes • Bus terminal with approximately 5 bus bays • Future ECLRT • Subway Line 1
Pedestrian Accommodation	• Sidewalks on both sides of all arterial, collector and local roads	• Sidewalks on both sides of all arterial, collector and local roads
Cyclist Accommodation	• Existing bike lanes on St. Dennis, Deauville Lane, south of St. Dennis and Grenoble Drive • Planned bike lanes on both sides of Deauville Lane, north of St. Dennis, Rochefort, and Eglinton • Planned multi-use trail on the west side of Don Mills	• Existing bike routes on Duplex, Montgomery, and Broadway Avenue • Planned bike lanes on both sides of Eglinton

In addition, the proposed development at 48 Grenoble Drive, was approved with zero resident parking spaces based on By-law 1159-2023.

Therefore, it is our further opinion that the visitor parking supply should be based on "Parking Zone A", which has a minimum visitor parking requirement of 2 spaces plus 0.01 spaces per unit. This results in a minimum visitor parking requirement of 8 spaces. The proposed visitor parking supply of 18 spaces will exceed the ZBL requirement.

The maximum parking limits, according to the ZBL, are summarized in Table 20. Applicable excerpts from the ZBL are provided in Appendix K.

Table 20: ZBL Maximum Vehicle Parking Limits

Proposed Use	ZBL Use	Size (units / m^2)	Parking Spaces			
			Maximum Rate [1]	Maximum Permitted [2]	Supply	Under (-) / Over (+)
One Bedroom and One Bedroom + Den	One Bedroom	290	0.5	145		
Two Bedroom	Two Bedroom	263	0.8	210		
Three Bedroom	Three or more Bedrooms	69	1.0	69		
Residential		**622**	**0.68**	**424**	**246**	**-178**
Visitor			0.11 [3]	66	18	-48
			Totals	**490**	**264**	**-226**

Note: 1. Based on Parking Zone A.
2. The number of spaces was rounded down to the nearest whole number as per the ZBL.
3. Rate of 1 space per unit for the first five units plus 0.1 spaces per unit for the sixth and subsequent units.

The proposed supply of 246 resident and 18 visitor parking spaces will not exceed the ZBL's maximum parking limits. However, despite compliance with City Bylaws, City staff requested that justification for the proposed resident parking supply be provided.

10.2.1 Resident Vehicle Parking Supply

A review was conducted of other developments with similar surrounding land uses and transit access based on submitted applications. In the review we have included examples from the Yonge-Eglinton Secondary Plan since, as mentioned above, the future Don Mills Secondary Plan area will have similar characteristics.

These other developments with similar surrounding land use and transit access are summarized in Table 21.

Table 21: Resident Parking Rates Comparison

Site	Status / Source	Surrounding Land Use	Available Transit	Land Use & Size	Parking Rate (spaces/ unit)
45 Grenoble Dr	**Subject Site**	**Residential**	**TTC Buses + LRT + Subway**	**622 units**	**0.40**
48 Grenoble Dr	By-law 1159-2023	Residential + Retail	TTC Buses + LRT + Subway	1,066 units 208 m^2 retail	0.00
5-914 Broadway and 198 Redpath	By-law 1345-2018 (LPAT)	Residential	TTC Buses + LRT + Subway	350 units	0.18
39-41 Roehampton	By-law 1481-2019 (LPAT)	Residential	TTC Buses + LRT + Subway	440 units	0.20
100, 110-120 Broadway Ave	OMB PL160910 and OMB PL180033	Residential + Retail + Office	TTC Buses + LRT + Subway	1,163 units 100 m^2 retail 606 m^2 office	0.25
89-101 Roehampton	OMB PL160796	Residential + Retail + Office	TTC Buses + LRT + Subway	366 units	0.25
95-99 Broadway and 197 Redpath	By-law 1-2016	Residential	TTC Buses + LRT + Subway	853 units	0.27
18-30 Erskine Ave	By-law 265-2017	Residential + Retail	TTC Buses + LRT	300 units	0.30
183-195 Roehampton + 139-145 Redpath	By-law 1029-2014	Residential + Retail	TTC Buses + LRT	446 units	0.35
2131 Yonge + 32 Hillsdale	By-law 891-2016	Residential + Retail	TTC Buses + LRT	624 units 7,803 m^2 of non-residential	0.36
155 St. Dennis Dr	Under Review	Residential	TTC Buses + LRT	2,170 units 350 m^2 cultural space	0.13
77 Roehampton Ave	Under Review	Residential + Retail	TTC Buses + LRT	624 units	0.14
175 Wynford Dr	Under Review	Residential	TTC Buses + LRT	2,500 units 125 hotel rooms	0.37
25 St. Dennis Dr	Under Review	Residential + Retail	TTC Buses + LRT	849 units 625 m^2 daycare 600 m^2 retail	0.42
1650 Sheppard Ave East	Staff Report	Residential + Retail	Subway + TTC Buses	480 units	0.41

It is our opinion that these proxy sites clearly show a pattern of reduced parking requirements for similar developments with close proximity to higher order transit. Therefore, it is our further opinion that the resident parking supply of 0.40 spaces / unit will meet or exceed future resident parking demand.

10.2.2 Accessible Parking

The ZBL also contains accessible parking space requirements, which are based on "effective" parking spaces. The results of the analysis are summarized in Table 22 and the applicable excerpts are provided in Appendix K.

Table 22: ZBL Effective Parking Requirements

Proposed Use	ZBL Use	Size (units)	Parking Spaces	
			Rate [1]	Effective [2]
1 Bedroom	One Bedroom	290	0.5	145
2 Bedroom	Two Bedroom	263	0.8	210
3 Bedroom	Three or more Bedrooms	69	1.0	69
Resident Requirement		**622**	**0.68**	**424**
Visitor Requirement			**0.10**	**62**
			Total	**486**

Note: 1. Space per unit for residential. Based on Parking Zone A.
2. The number of spaces is rounded down to the nearest whole number as per the ZBL.

The ZBL requires a minimum of 5 accessible parking spaces plus 1 parking space for every 50 effective parking spaces or part thereof in excess of 100 parking spaces, based on an effective parking requirement of more than 100 spaces. Therefore, 13 accessible parking spaces are required for the development, which is the proposed supply. The accessible parking spaces for the existing and proposed building have been split proportionally based on their unit counts and located near elevators and hallways to the buildings.

10.3 Loading

According to the ZBL, an apartment building with 400 or more dwelling units requires one Type G and one Type C loading space. It is proposed to provide one Type G space, by combining the loading space for refuse pick-up and deliveries. It is expected that City refuse pickup will typically occur approximately 1-2 times a week. Due to the infrequency in refuse pick-up, deliveries can be scheduled outside of the refuse pick-up times. Due to the nature of the proposed development uses, deliveries and couriers are also expected to be done by smaller trucks or vans, which can utilize the existing drop-off loop. Therefore, it is our opinion that the proposed Type G space will meet the development's operational requirements.

The applicable excerpts from the ZBL are provided in Appendix K.

11.0 Conclusions

11.1 Traffic Operations

Under existing and future conditions, during both the weekday AM and PM peak hours, all study intersections are operating and will operate with excess capacity, with a level of service E or better and queue lengths within their respective storage lengths and link distances, with a few exceptions as described below.

Deauville Lane / St. Dennis Drive

The westbound left-turn queue under future conditions, during both peak hours, will exceed its existing storage length. The queue is projected to exceed its storage length by up to 7m (approximately one vehicle length). It appears the westbound left-turn queue can utilize the westbound through lane for additional storage. It is noted that under existing conditions, this queue is already utilizing its entire storage length. The City should monitor this movement for possible mitigation measures.

Grenoble Drive / Gateway Boulevard / Commercial Driveway

The eastbound left-turn queue under future conditions, during the PM peak hour, will exceed its existing storage length. The queue is projected to exceed its storage length by 8m (approximately one vehicle length). It appears the eastbound left-turn queue can utilize the eastbound through lane for additional storage. Site traffic only extends this queue by an additional 2 m. The City should monitor this movement for possible mitigation measures.

Don Mills Road / St. Dennis Drive

The northbound through-right turn queue and southbound left-turn queue, during the PM peak hour, under future conditions, will exceed their link distance and storage length, respectively. It is noted that the queues are primarily because of background traffic growth and background development traffic. It is recommended that the City monitor the above queues for possible mitigation measures.

Don Mills Road / Gateway Boulevard (North Leg)

Under existing and future conditions, during both peak hours, the westbound left-turn queue will exceed its storage length. It is noted that the queues are primarily because of background traffic growth and background development traffic. It is recommended that the City monitor this queue for possible mitigation measures.

Don Mills Road / Gateway Boulevard (South Leg) / Overlea Boulevard

The northbound left-turn queue under future conditions, during the AM peak hour, will exceed its storage length. Site traffic does not contribute to this movement. It appears the left-turn queue can utilize the northbound through lane for additional storage.

No improvements will be required and / or will be triggered by the proposed development.

11.2 Site Plan Review

The site is well designed to accommodate all modes of travel. Access and circulation analyses utilizing AutoTurn confirms that the site can accommodate all expected design vehicles.

11.3 Transportation Demand Management (TDM) Plan

Various TDM measures currently exist and are either under construction or are planned that will discourage vehicle use and dependency such as:

- Transit service provided near the site via several TTC bus routes, a TTC bus terminal, the under construction ECLRT and the future Ontario Line.
- Existing bicycle lanes along St. Dennis Drive, Grenoble Drive and Deauville Lane, south of St. Dennis Drive.
- Planned cycling infrastructure along Deauville Lane, Rochefort Drive, Eglinton Avenue East and Overlea Boulevard.
- Planned multi-modal mobility hub just north of the site on the northeast corner of Ferrand Drive / Rochefort Drive. The hub could potentially consist of bike share, car share, electric charging stations and ride share spaces.

To further facilitate other modes of travel, several TDM measures are proposed by the development as follows:

- An information package will be provided to residents, which will include TTC and GO Transit maps and schedules, cycling and trail maps, and information on Smart Commute.
- Transit subsidy for residents via a preloaded PRESTO pass with $156 for first time purchasers and renters.
- A bicycle repair station or stations located adjacent to bicycle storage room(s).
- Parking spaces will not be bundled with apartments.
- Parking rate reductions for resident parking are recommended.

The combination of these proposed TDM measures and the addition of significant transit improvements in the area are expected to reduce vehicle trips by more than 25%.

11.4 Parking and Loading Review

It is proposed to provide 264 parking spaces within the surface and garage levels, which include 246 residents and 18 visitor spaces.

11.4.1 North York Zoning By-law 7625

The proposed supply of residents and visitor spaces will result in a deficit based on the requirements of ZBL 7625. However, a review was conducted of City-wide Zoning By-law 569-2013 (ZBL), which is based on extensive, more current parking studies conducted by the City.

11.4.2 Zoning By-law 569-2013

Bicycle Parking

A total of 365 short-term bike spaces will be provided for visitors near the building's entrances and 92 long-term resident bike spaces are planned to be located within the building. The proposed short-term bicycle parking supply will exceed the ZBL requirements and long-term bicycle parking supply will meet the ZBL requirements.

Vehicular Parking

Based on the site being located in "Parking Zone B", the minimum visitor parking requirement for an apartment building is two (2) spaces plus 0.05 spaces per unit. This results in a minimum visitor parking requirement of 34 spaces, which is higher than the proposed visitor parking supply.

However, it is our opinion that the subject development area, once fully developed, will be similar to the Yonge-Eglinton Secondary Plan area. The future Don Mills Secondary Plan area will have similar characteristics to the Yonge-Eglinton Secondary Plan area such as surrounding land uses, higher densities, higher-order transit, increased walkability and cyclist accommodation.

Therefore, it is our further opinion that the minimum visitor parking requirement should be based on "Parking Zone A", which the proposed visitor parking supply will exceed.

City staff requested that justification be provided for the resident parking supply. It is our opinion that the proposed resident parking supply of 246 spaces (0.40 space / unit) will adequately serve the parking needs of future residents for the following reasons:

- There are many TTC bus routes along Don Mills Road with bus stops located within 2-minute walk of the site. In addition, there will also be frequent, daily transit service provided via the ECLRT and future Ontario Line. The closest ECLRT station will be the Aga Khan and Museum Station, which will be approximately 690 m (or a 700 m /

10-minute walk / 3-minute bike ride) from the site. The closet Ontario line station will be the Flemingdon Park Station, which will be approximately 450 m (or a 480 m / 7-minute walk / 2-minute bike ride) from the site.

- The proposed Transportation Demand Management (TDM) measures summarized in Section 8.0 will further reduce parking demand.
- There have been several similar developments with similar access to transit that have been approved with reduced parking supply variances lower than the proposed parking supply rate.

The number of proposed accessible will meet the minimum requirements of the ZBL.

Loading

According to the ZBL, one Type G and one Type C loading space are required. It is proposed to provide one Type G space, by combining the loading space for refuse pick-up and deliveries. It is expected that City refuse pickup will typically occur approximately 1-2 times a week. Due to the infrequency in refuse pick-up, deliveries will be scheduled outside of the refuse pick-up times. Due to the nature of the proposed development uses, deliveries and couriers are also expected to be done by smaller trucks or vans, which can utilize the existing drop-off loop. Therefore, it is our opinion that the proposed Type G space will meet the development's operational requirements.

BURNSIDE

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Appendix A

Intersection Analysis Methodology

Intersection Analysis Methodology for Motor Vehicles

Signalized intersection analysis considers two separate measures of performance:

- The capacity of all intersection movements, which is based on a volume to capacity ratio that is a measure of the degree of capacity utilized.
- The level of service (LOS) for all intersection movements, which is based on the average control delay per vehicle for the various movements through the intersection and overall. Delay is an indicator of how long a vehicle must wait to complete a movement and is represented by a letter between A and F, with F being the longest delay. The link between LOS and delay (in seconds) for signalized intersections is summarized below.

Level of Service	Control Delay per Vehicle(s)
A	≤10
B	> 10 – 20
C	> 20 – 35
D	> 35 – 55
E	> 55 – 80
F	> 80

Unsignalized intersection analysis considers two separate measures of performance:

- The capacity of the intersection's critical movements, which is based on a volume to capacity ratio.
- The level of service for the critical movements, which is based on the average control delay per vehicle for the various critical movements within the intersection. The link between LOS and delay (in seconds) for unsignalized intersections is summarized below.

Level of Service	Control Delay per Vehicle(s)
A	0 – 10
B	> 10 – 15
C	> 15 – 25
D	> 25 – 35
E	> 35 – 50
F	> 50

The intersection analysis is also consistent with the City's *Guidelines for Using Synchro 11 (Including SimTraffic 11)*, dated January 15, 2021.

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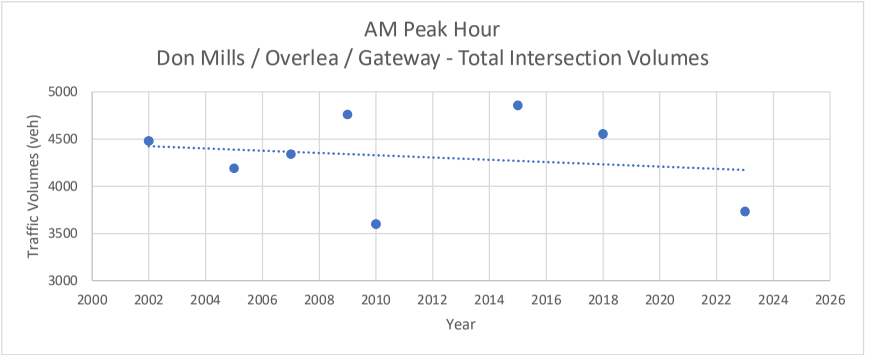
Appendix B

Historical Growth Rate Analysis

Don Mills Road / Overlea Boulevard / Gateway Boulevard

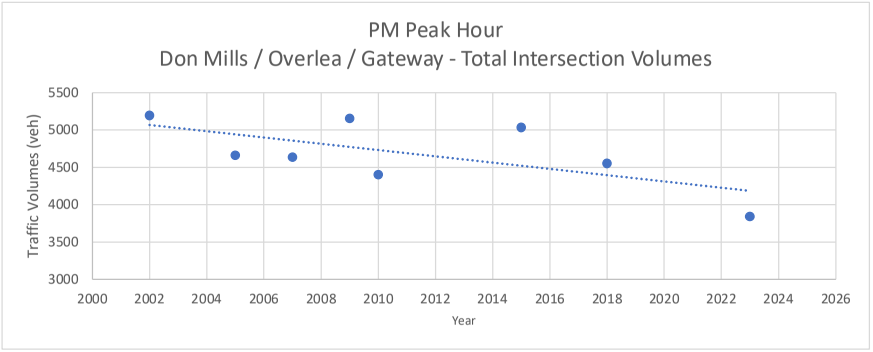
Weekday AM Peak Hour

	Traffic Volume Screenlines				
Count Date	**Don Mills, North of Gateway**	**Don Mills, South of Gateway**	**Gateway**	**Overlea**	**Total Intersection Volumes**
07-Mar-2002	3224	2627	988	2125	4482
21-Mar-2005	2746	2522	884	2232	4192
31-May-2007	3389	3004	734	1557	4342
17-Feb-2009	3301	2963	1138	2118	4760
16-Aug-2010	2721	2317	771	1393	3601
20-May-2015	3685	3127	993	1911	4858
12-Sep-2018	3228	2877	1039	1968	4556
12-Jan-2023	2579	2286	982	1621	3734
Compound Annual Growth	**-0.30%**	**-0.18%**	**0.58%**	**-0.83%**	**-0.28%**



Weekday AM Peak Hour

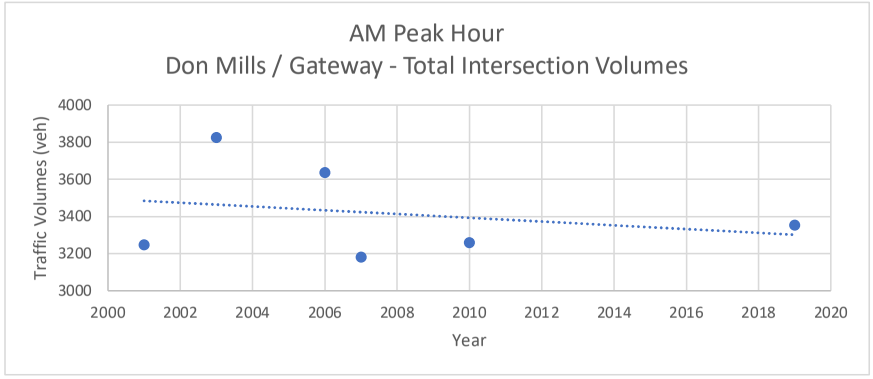
	Traffic Volume Screenlines				
Count Date	**Don Mills, North of Gateway**	**Don Mills, South of Gateway**	**Gateway**	**Overlea**	**Total Intersection Volumes**
07-Mar-2002	3884	3063	1008	2431	5193
21-Mar-2005	3696	2704	801	2123	4662
31-May-2007	3397	2924	1033	1916	4635
17-Feb-2009	3644	3155	1354	2151	5152
16-Aug-2010	3568	2608	903	1725	4402
20-May-2015	3680	2963	1117	2306	5033
12-Sep-2018	3073	2466	1148	2415	4551
12-Jan-2023	2608	1997	1092	1983	3840
Compound Annual Growth	**-1.49%**	**-1.50%**	**0.80%**	**-0.07%**	**-0.90%**



Don Mills Road / Gateway Boulevard

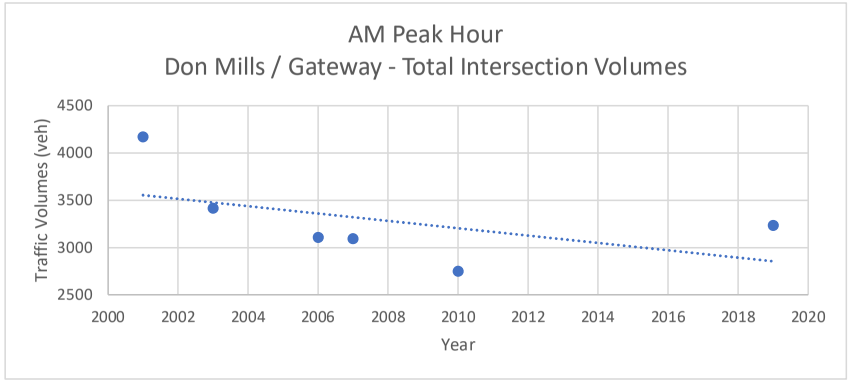
Weekday AM Peak Hour

	Traffic Volume Screenlines			
Count Date	Don Mills, North of Gateway	Don Mills, South of Gateway	Gateway	Total Intersection Volumes
24-May-2001	3074	2802	512	3246
06-Jan-2003	3584	3422	570	3825
06-Mar-2006	3468	3300	469	3636
09-Jan-2007	3026	2872	411	3180
22-Feb-2010	3114	2970	384	3259
23-May-2019	3080	3042	536	3353
Compound Annual Growth	-0.30%	-0.16%	-0.44%	-0.11%



Weekday PM Peak Hour

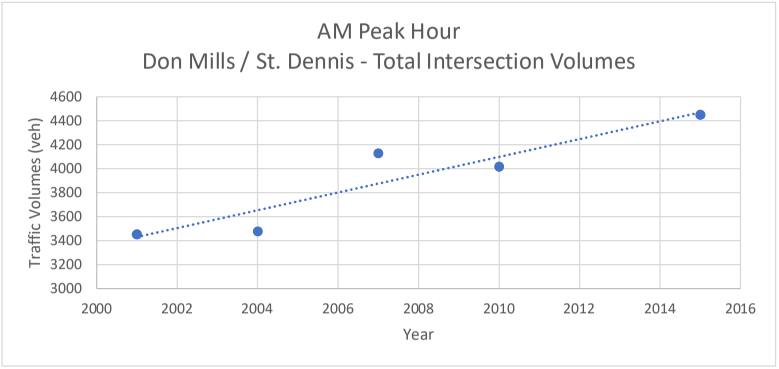
	Traffic Volume Screenlines			
Count Date	Don Mills, North of Gateway	Don Mills, South of Gateway	Gateway	Total Intersection Volumes
24-May-2001	3886	3623	771	4170
06-Jan-2003	3163	2937	656	3414
06-Mar-2006	2912	2749	515	3107
09-Jan-2007	2921	2733	431	3092
22-Feb-2010	2517	2407	479	2748
23-May-2019	2943	2920	561	3235
Compound Annual Growth	-1.21%	-1.68%	-1.37%	-0.96%



Don Mills / St. Dennis

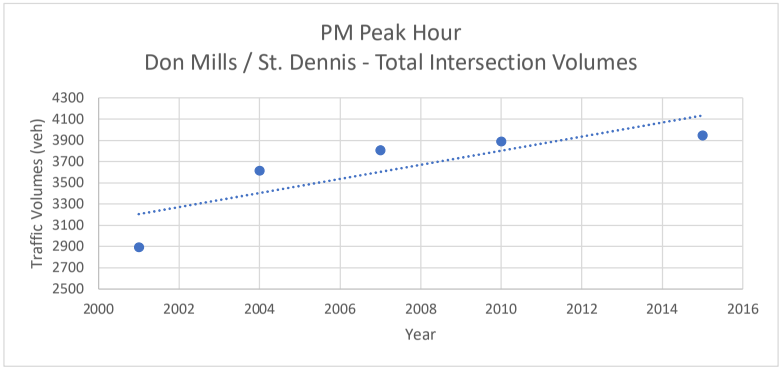
Weekday AM Peak Hour

	Traffic Volume Screenlines			
Count Date	**Don Mills, North of Gateway**	**Don Mills, South of Gateway**	**Gateway**	**Total Intersection Volumes**
09-Apr-2001	3266	3240	348	3453
21-Jan-2004	3318	3268	315	3477
11-Jul-2007	3965	3736	434	4128
21-Oct-2010	3792	3699	441	4018
04-Nov-2015	4242	4222	414	4450
Compound Annual Growth	**1.92%**	**1.97%**	**1.86%**	**1.91%**



Weekday PM Peak Hour

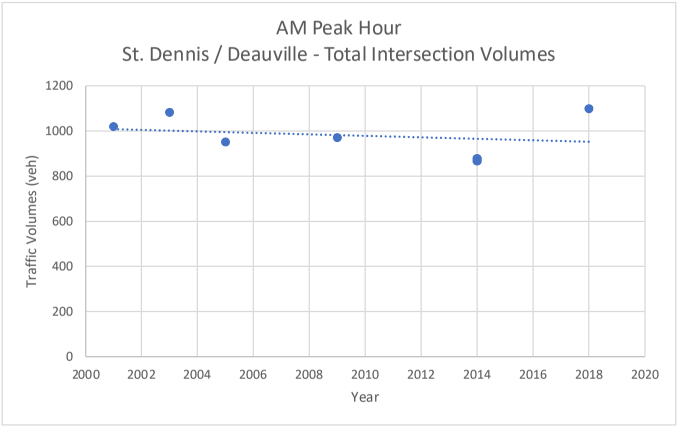
	Traffic Volume Screenlines			
Count Date	**Don Mills, North of Gateway**	**Don Mills, South of Gateway**	**Gateway**	**Total Intersection Volumes**
09-Apr-2001	2705	2617	335	2893
21-Jan-2004	3347	3302	453	3613
11-Jul-2007	3545	3389	405	3807
21-Oct-2010	3565	3448	603	3890
04-Nov-2015	3616	3649	587	3946
Compound Annual Growth	**1.69%**	**1.92%**	**3.98%**	**1.84%**



Deauville Road and St. Dennis Drive

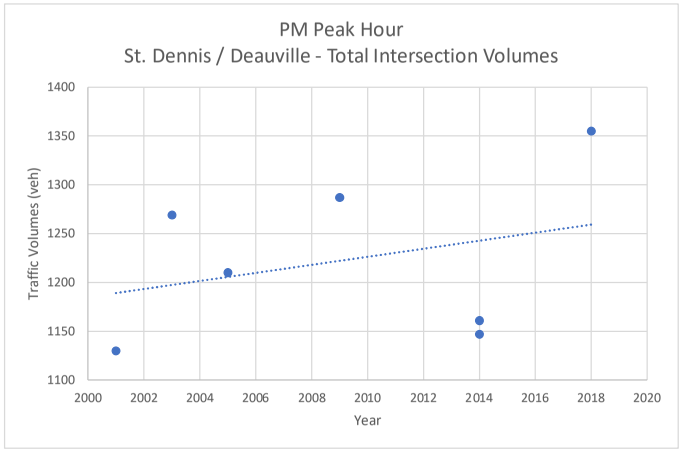
Weekday AM Peak Hour

Count Date		Traffic Volume Screenlines								Total Intersection Volumes
		Deauville, South of St. Dennis		Deauville, North of St. Dennis		St. Dennis, West of Deauville		St. Dennis, East of Deauville		
		NB	SB	NB	SB	EB	WB	EB	WB	
28-May-2001	2001	261	319	286	140	156	153	261	462	1019
22-Sep-2003	2003	213	364	299	189	184	199	220	496	1082
27-Apr-2005	2005	227	263	287	136	173	162	239	415	951
02-Nov-2009	2009	269	212	311	105	193	183	264	403	970
15-Jul-2014	2014	199	204	319	111	121	172	172	436	867
22-Jul-2014	2014	217	223	320	123	124	150	185	414	878
12-Dec-2018	2018	266	327	288	145	140	218	266	548	1099
Compound Annual Growth		**-0.1%**	**-2.5%**	**0.6%**	**-2.4%**	**-3.2%**	**1.3%**	**-1.2%**	**0.6%**	**-0.6%**



Weekday PM Peak Hour

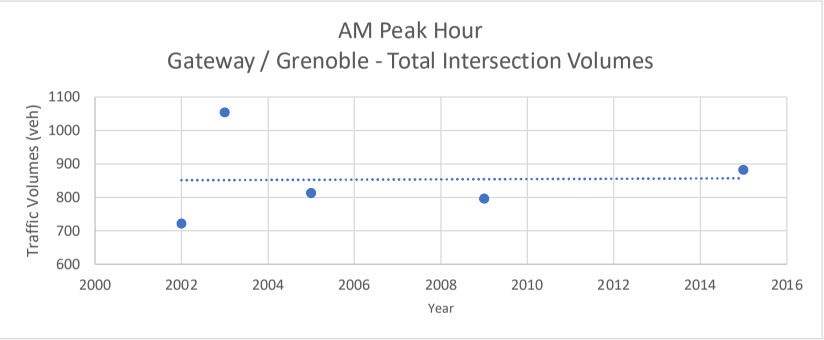
Count Date		Traffic Volume Screenlines								Total Intersection Volumes
		Deauville, South of St. Dennis		Deauville, North of St. Dennis		St. Dennis, West of Deauville		St. Dennis, East of Deauville		
		NB	SB	NB	SB	EB	WB	EB	WB	
28-May-2001	2001	276	237	90	441	160	274	529	253	1130
22-Sep-2003	2003	382	269	127	444	177	368	505	266	1269
27-Apr-2005	2005	267	209	152	499	173	393	456	271	1210
02-Nov-2009	2009	285	278	233	447	278	286	490	277	1287
15-Jul-2014	2014	301	313	169	359	207	237	442	294	1161
22-Jul-2014	2014	310	310	177	364	178	253	407	295	1147
12-Dec-2018	2018	482	277	192	375	160	324	562	338	1355
Compound Annual Growth		**3.2%**	**2.5%**	**5.3%**	**-2.7%**	**0.5%**	**-2.1%**	**-0.4%**	**2.4%**	**0.6%**



Gateway Boulevard and Grenoble Drive

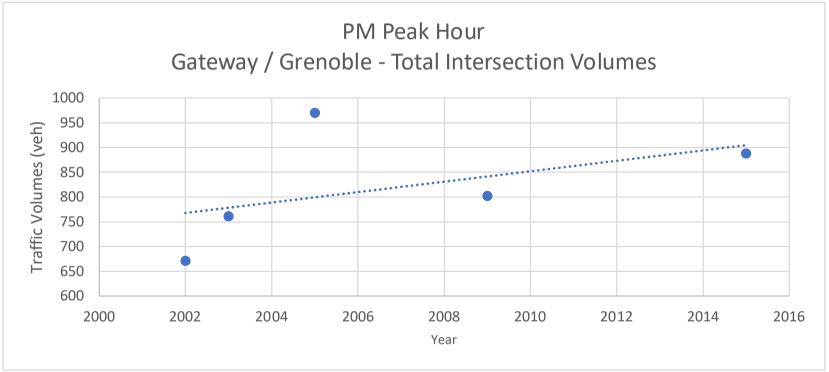
Weekday AM Peak Hour

Count Date		Traffic Volume Screenlines				
		Grenoble Drive		Gateway Boulevard		Total Intersection
		NB	SB	EB	WB	
28-Feb-2002	2002	130	285	76	85	722
20-Nov-2003	2003	180	490	63	152	1054
21-Dec-2005	2005	134	320	65	72	813
23-Nov-2009	2009	124	247	71	94	796
05-Nov-2015	2015	138	272	87	73	882
Compound Annual Growth		**-1.2%**	**-4.0%**	**2.3%**	**-4.1%**	**0.1%**



Weekday PM Peak Hour

Count Date		Traffic Volume Screenlines				
		Grenoble Drive		Gateway Boulevard		Total Intersection
		NB	SB	EB	WB	
28-Feb-2002	2002	167	148	70	43	671
20-Nov-2003	2003	253	139	79	44	761
21-Dec-2005	2005	221	150	94	109	970
23-Nov-2009	2009	193	182	74	81	802
05-Nov-2015	2015	271	190	61	59	888
Compound Annual Growth		**2.5%**	**3.1%**	**-2.3%**	**1.5%**	**1.6%**



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix C

Historical Counts and Signal Timing Plans

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 8:00:00
To: 9:00:00

Municipality: North York
Site #: 2413000001
Intersection: Grenoble Dr & 45 Grenoble Dr Wes
TFR File #: 1
Count date: 18-Jul-24

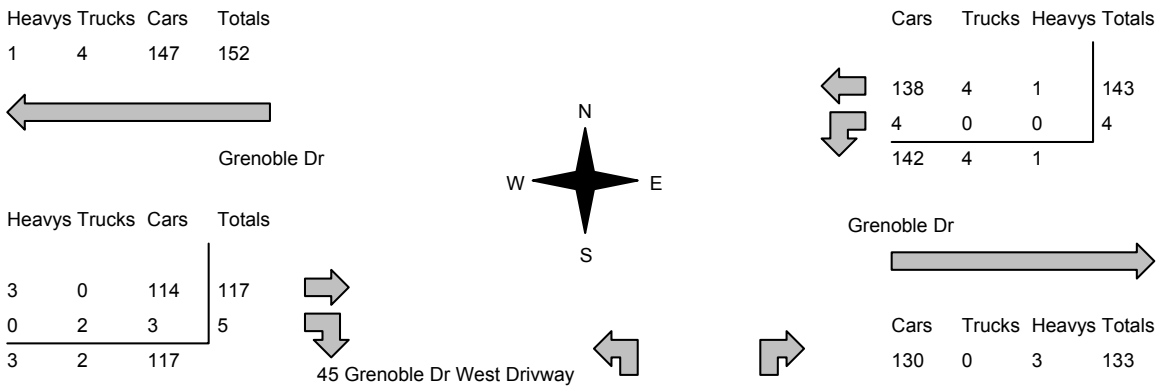
Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Grenoble Dr runs W/E

East Leg Total: 280
East Entering: 147
East Peds: 5
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 5
West Entering: 122
West Leg Total: 274

Cars 7
Trucks 2
Heavys 0
Totals 9

Cars 9 16 25
Trucks 0 0 0
Heavys 0 0 0
Totals 9 16

Peds Cross: ⋈
South Peds: 67
South Entering: 25
South Leg Total: 34

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 16:00:00
To: 17:00:00

Municipality: North York
Site #: 2413000001
Intersection: Grenoble Dr & 45 Grenoble Dr Wes
TFR File #: 1
Count date: 18-Jul-24

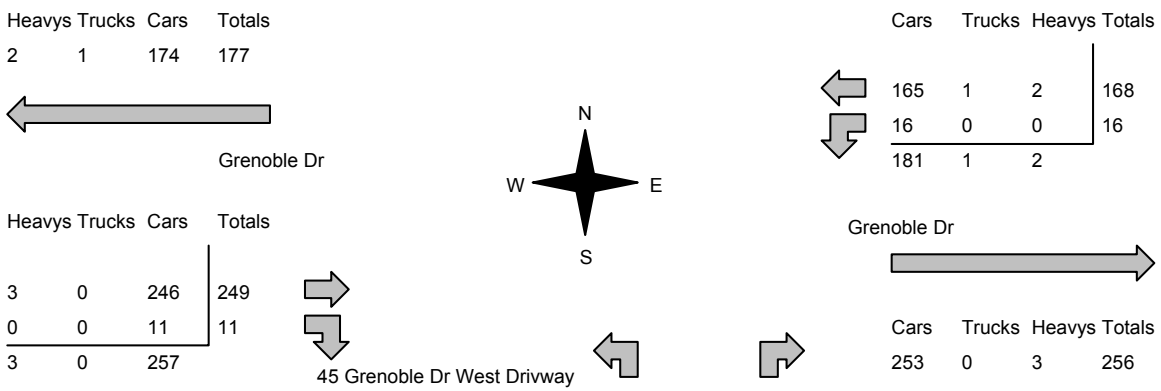
Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Grenoble Dr runs W/E

East Leg Total: 440
East Entering: 184
East Peds: 8
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 12
West Entering: 260
West Leg Total: 437

Cars 27
Trucks 0
Heavys 0
Totals 27

Cars 9 7 16
Trucks 0 0 0
Heavys 0 0 0
Totals 9 7

Peds Cross: ⋈
South Peds: 65
South Entering: 16
South Leg Total: 43

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 8:00:00
To: 9:00:00

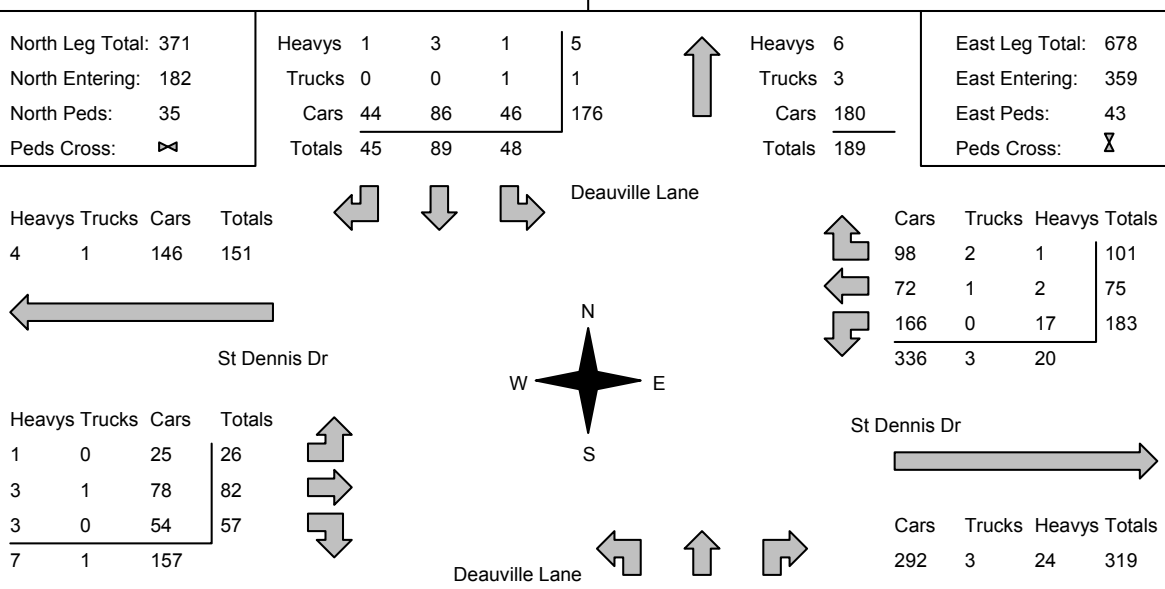
Municipality: Toronto
Site #: 2411500002
Intersection: St Dennis Dr & Deauville Lane
TFR File #: 1
Count date: 20-Jun-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: St Dennis Dr runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 16:45:00
To: 17:45:00

Municipality: Toronto
Site #: 2411500002
Intersection: St Dennis Dr & Deauville Lane
TFR File #: 1
Count date: 20-Jun-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: St Dennis Dr runs W/E

North Leg Total: 471
North Entering: 301
North Peds: 33
Peds Cross: ⋈

Heavys	0	1	1	2
Trucks	0	0	0	0
Cars	84	100	115	299
Totals	84	101	116	

Heavys	0
Trucks	1
Cars	169
Totals	170

East Leg Total: 842
East Entering: 322
East Peds: 48
Peds Cross: ⋈

Heavys	Trucks	Cars	Totals
1	3	224	228

Deauville Lane

Cars	Trucks	Heavys	Totals
57	0	0	57
92	1	1	94
156	0	15	171
305	1	16	

St Dennis Dr

N
W E
S

Heavys	Trucks	Cars	Totals
0	0	32	32
0	3	212	215
2	2	48	52
2	5	292	

St Dennis Dr

Cars	Trucks	Heavys	Totals
501	5	14	520

Deauville Lane

Peds Cross: ⋈
West Peds: 81
West Entering: 299
West Leg Total: 527

Cars	304
Trucks	2
Heavys	18
Totals	324

Cars	48	80	174	302
Trucks	2	1	2	5
Heavys	0	0	13	13
Totals	50	81	189	

Peds Cross: ⋈
South Peds: 72
South Entering: 320
South Leg Total: 644

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 8:00:00
To: 9:00:00

Municipality: North York
Site #: 2413000002
Intersection: Grenoble Dr & 45 Grenoble Dr East
TFR File #: 1
Count date: 18-Jul-24

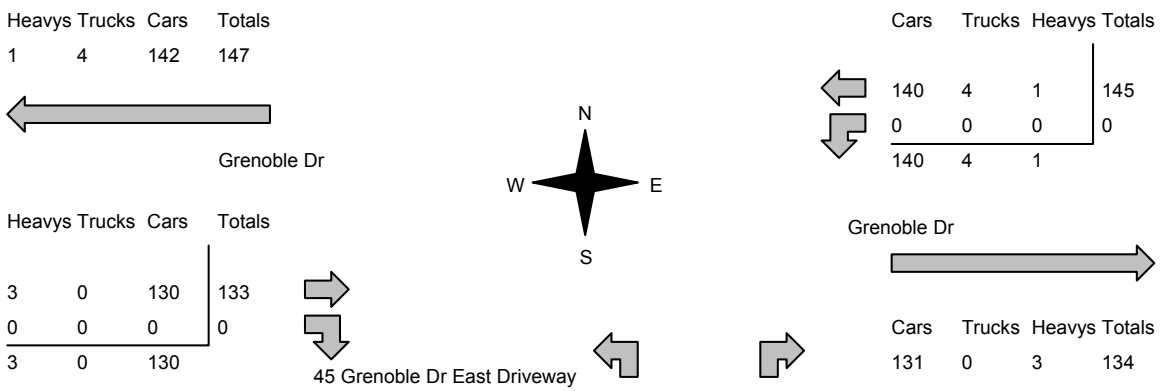
Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Grenoble Dr runs W/E

East Leg Total: 279
East Entering: 145
East Peds: 1
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 4
West Entering: 133
West Leg Total: 280

Cars 0
Trucks 0
Heavys 0
Totals 0

Cars 2 1 3
Trucks 0 0 0
Heavys 0 0 0
Totals 2 1

Peds Cross: ⋈
South Peds: 63
South Entering: 3
South Leg Total: 3

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 16:00:00
To: 17:00:00

Municipality: North York
Site #: 2413000002
Intersection: Grenoble Dr & 45 Grenoble Dr East
TFR File #: 1
Count date: 18-Jul-24

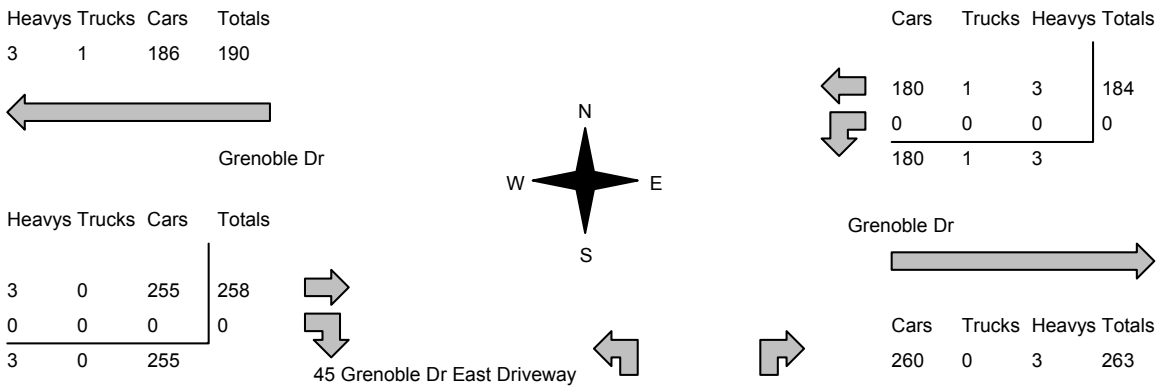
Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Grenoble Dr runs W/E

East Leg Total: 447
East Entering: 184
East Peds: 0
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 2
West Entering: 258
West Leg Total: 448

Cars 0
Trucks 0
Heavys 0
Totals 0

Cars 6 5 11
Trucks 0 0 0
Heavys 0 0 0
Totals 6 5

Peds Cross: ⋈
South Peds: 54
South Entering: 11
South Leg Total: 11

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 8:00:00
To: 9:00:00

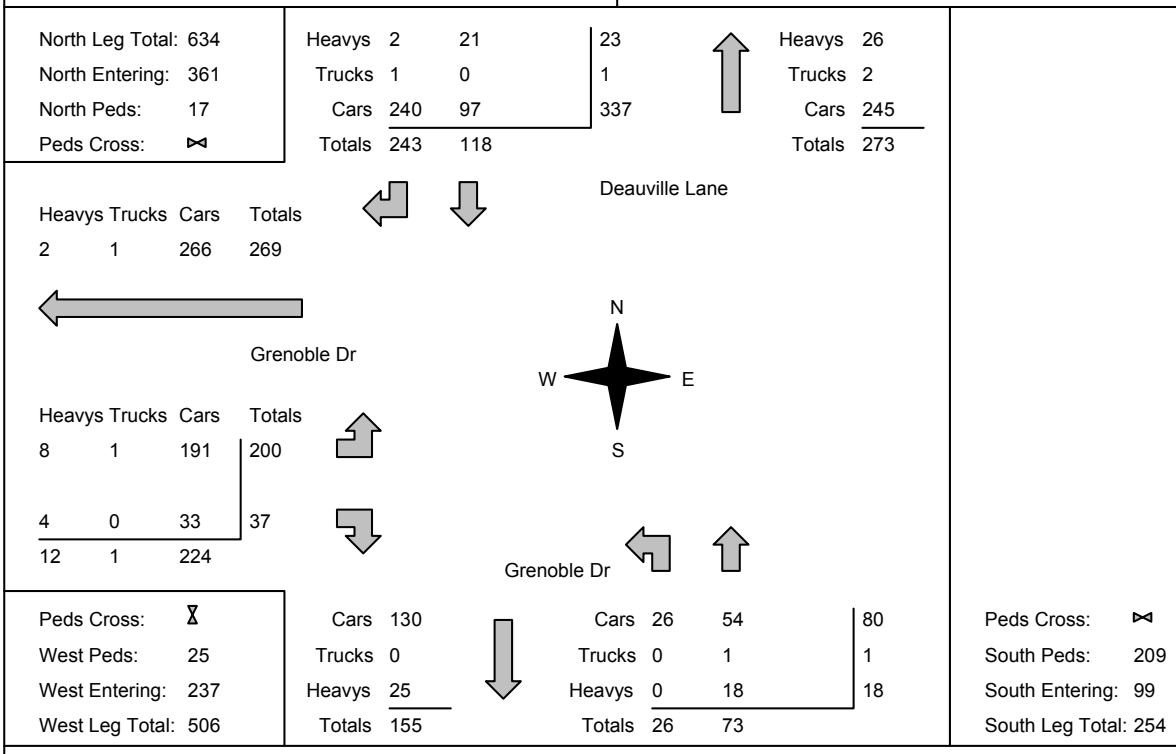
Municipality: Toronto
Site #: 2411500001
Intersection: Deauville Lane & Grenoble Dr
TFR File #: 1
Count date: 20-Jun-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Deauville Lane runs N/S



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 16:45:00
To: 17:45:00

Municipality: Toronto
Site #: 2411500001
Intersection: Deauville Lane & Grenoble Dr
TFR File #: 1
Count date: 20-Jun-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Deauville Lane runs N/S

North Leg Total: 642
North Entering: 323
North Peds: 38
Peds Cross: ⋈

Heavys	2	14	16
Trucks	0	0	0
Cars	181	126	307
Totals	183	140	

Heavys	13
Trucks	4
Cars	302
Totals	319

Deauville Lane

Heavys	Trucks	Cars	Totals
4	0	209	213

Grenoble Dr

Heavys	Trucks	Cars	Totals
2	3	226	231
0	0	45	45
2	3	271	

N
W E
S

Grenoble Dr

Peds Cross: ⧖
West Peds: 46
West Entering: 276
West Leg Total: 489

Cars	171		
Trucks	0		
Heavys	14		
Totals	185		

Cars	28	76	104
Trucks	0	1	1
Heavys	2	11	13
Totals	30	88	

Peds Cross: ⋈
South Peds: 48
South Entering: 118
South Leg Total: 303

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Diagram

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:00:00
To:	09:00:00	To:	09:00:00

Intersection: Gateway Blvd & Grenoble Dr - Commercial Access
Site Code: 2427600005
Count Date: Jun 18, 2024

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Gateway Blvd runs E/W

North Approach

	Out	In	Total
Cars	316	176	492
Trucks	4	9	13
Bicycles	1	1	2
	321	**186**	**507**

Grenoble Dr

Bicycles	1	0	0	0
Trucks	2	1	1	0
Cars	148	70	98	0
Totals	**151**	**71**	**99**	**0**

East Approach

	Out	In	Total
Cars	114	216	330
Trucks	7	4	11
Bicycles	0	2	2
	121	**222**	**343**

Peds: 180

Gateway Blvd

Bicycles	Trucks	Cars	Totals
0	0	0	**0**
1	3	75	**79**
2	3	100	**105**
0	0	40	**40**

Peds: 105

Peds: 62

Gateway Blvd

	Totals	Cars	Trucks	Bicycles
	0	0	0	0
	56	51	5	0
	58	56	2	0
	7	7	0	0

Peds: 36

West Approach

	Out	In	Total
Cars	215	248	463
Trucks	6	6	12
Bicycles	3	1	4
	224	**255**	**479**

Commercial Access

Totals	**46**	**51**	**18**	**0**
Cars	44	50	18	0
Trucks	2	1	0	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	112	117	229
Trucks	3	1	4
Bicycles	0	0	0
	115	**118**	**233**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: Gateway Blvd & Grenoble Dr - Commercial Access
Site Code: 2427600005
Count Date: Jun 18, 2024
Period: 07:00 - 09:00

Peak Hour Data (08:00 - 09:00)

Start Time	North Approach Grenoble Dr						South Approach Commercial Access						East Approach Gateway Blvd						West Approach Gateway Blvd						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
08:00	26	17	32	0	64	75	17	9	5	0	7	31	1	12	7	0	8	20	21	16	11	0	12	48	174
08:15	22	17	46	0	48	85	10	25	4	0	19	39	2	16	22	0	34	40	25	21	11	0	20	57	221
08:30	14	20	38	0	36	72	12	9	3	0	8	24	3	17	6	0	13	26	16	29	9	0	41	54	176
08:45	37	17	35	0	32	89	7	8	6	0	2	21	1	13	21	0	7	35	17	39	9	0	32	65	210
Grand Total	**99**	**71**	**151**	**0**	**180**	**321**	**46**	**51**	**18**	**0**	**36**	**115**	**7**	**58**	**56**	**0**	**62**	**121**	**79**	**105**	**40**	**0**	**105**	**224**	**781**
Approach %	30.8	22.1	47	0		-	40	44.3	15.7	0		-	5.8	47.9	46.3	0		-	35.3	46.9	17.9	0		-	
Totals %	12.7	9.1	19.3	0		41.1	5.9	6.5	2.3	0		14.7	0.9	7.4	7.2	0		15.5	10.1	13.4	5.1	0		28.7	
PHF	**0.67**	**0.89**	**0.82**	**0**		**0.9**	**0.68**	**0.51**	**0.75**	**0**		**0.74**	**0.58**	**0.85**	**0.64**	**0**		**0.76**	**0.79**	**0.67**	**0.91**	**0**		**0.86**	**0.88**
Cars	98	70	148	0		316	44	50	18	0		112	7	56	51	0		114	75	100	40	0		215	757
% Cars	99	98.6	98	0		98.4	95.7	98	100	0		97.4	100	96.6	91.1	0		94.2	94.9	95.2	100	0		96	96.9
Trucks	1	1	2	0		4	2	1	0	0		3	0	2	5	0		7	3	3	0	0		6	20
% Trucks	1	1.4	1.3	0		1.2	4.3	2	0	0		2.6	0	3.4	8.9	0		5.8	3.8	2.9	0	0		2.7	2.6
Bicycles	0	0	1	0		1	0	0	0	0		0	0	0	0	0		0	1	2	0	0		3	4
% Bicycles	0	0	0.7	0		0.3	0	0	0	0		0	0	0	0	0		0	1.3	1.9	0	0		1.3	0.5
Peds					180	-					36	-					62	-					105	-	383
% Peds					47	-					9.4	-					16.2	-					27.4	-	

Peak Hour Diagram

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:00:00
To:	18:00:00	To:	17:00:00

Intersection: Gateway Blvd & Grenoble Dr - Commercial Access
Site Code: 2427600005
Count Date: Jun 18, 2024

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Gateway Blvd runs E/W

North Approach

	Out	In	Total
Cars	197	312	509
Trucks	6	9	15
Bicycles	1	2	3
	204	**323**	**527**

Grenoble Dr

Bicycles	0	1	0	0
Trucks	4	1	1	0
Cars	93	85	19	0
Totals	**97**	**87**	**20**	**0**

East Approach

	Out	In	Total
Cars	173	105	278
Trucks	7	4	11
Bicycles	0	0	0
	180	**109**	**289**

Gateway Blvd

Bicycles	Trucks	Cars	Totals
0	0	0	**0**
0	4	147	**151**
0	2	62	**64**
0	0	64	**64**

Peds: 33
Peds: 111
Peds: 72
Peds: 17

Gateway Blvd

Totals	Cars	Trucks	Bicycles
0	0	0	0
105	100	5	0
57	55	2	0
18	18	0	0

West Approach

	Out	In	Total
Cars	273	197	470
Trucks	6	6	12
Bicycles	0	0	0
	279	**203**	**482**

Commercial Access

Totals	**49**	**67**	**25**	**0**
Cars	49	65	24	0
Trucks	0	0	1	0
Bicycles	0	2	0	0

South Approach

	Out	In	Total
Cars	138	167	305
Trucks	1	1	2
Bicycles	2	1	3
	141	**169**	**310**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: Gateway Blvd & Grenoble Dr - Commercial Access
Site Code: 2427600005
Count Date: Jun 18, 2024
Period: 16:00 - 18:00

Peak Hour Data (16:00 - 17:00)

Start Time	North Approach Grenoble Dr						South Approach Commercial Access						East Approach Gateway Blvd						West Approach Gateway Blvd						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:00	2	22	35	0	13	59	13	20	8	0	8	41	4	20	33	0	20	57	33	19	16	0	30	68	225
16:15	7	23	24	0	5	54	14	14	5	0	2	33	7	14	29	0	14	50	31	12	20	0	29	63	200
16:30	4	21	21	0	10	46	11	16	7	0	3	34	5	12	20	0	16	37	44	23	12	0	30	79	196
16:45	7	21	17	0	5	45	11	17	5	0	4	33	2	11	23	0	22	36	43	10	16	0	22	69	183
Grand Total	**20**	**87**	**97**	**0**	**33**	**204**	**49**	**67**	**25**	**0**	**17**	**141**	**18**	**57**	**105**	**0**	**72**	**180**	**151**	**64**	**64**	**0**	**111**	**279**	**804**
Approach %	9.8	42.6	47.5	0		-	34.8	47.5	17.7	0		-	10	31.7	58.3	0		-	54.1	22.9	22.9	0		-	
Totals %	2.5	10.8	12.1	0		25.4	6.1	8.3	3.1	0		17.5	2.2	7.1	13.1	0		22.4	18.8	8	8	0		34.7	
PHF	**0.71**	**0.95**	**0.69**	**0**		**0.86**	**0.88**	**0.84**	**0.78**	**0**		**0.86**	**0.64**	**0.71**	**0.8**	**0**		**0.79**	**0.86**	**0.7**	**0.8**	**0**		**0.88**	**0.89**
Cars	19	85	93	0		197	49	65	24	0		138	18	55	100	0		173	147	62	64	0		273	781
% Cars	95	97.7	95.9	0		96.6	100	97	96	0		97.9	100	96.5	95.2	0		96.1	97.4	96.9	100	0		97.8	97.1
Trucks	1	1	4	0		6	0	0	1	0		1	0	2	5	0		7	4	2	0	0		6	20
% Trucks	5	1.1	4.1	0		2.9	0	0	4	0		0.7	0	3.5	4.8	0		3.9	2.6	3.1	0	0		2.2	2.5
Bicycles	0	1	0	0		1	0	2	0	0		2	0	0	0	0		0	0	0	0	0		0	3
% Bicycles	0	1.1	0	0		0.5	0	3	0	0		1.4	0	0	0	0		0	0	0	0	0		0	0.4
Peds					33	-					17	-					72	-					111	-	233
% Peds					14.2	-					7.3	-					30.9	-					47.6	-	

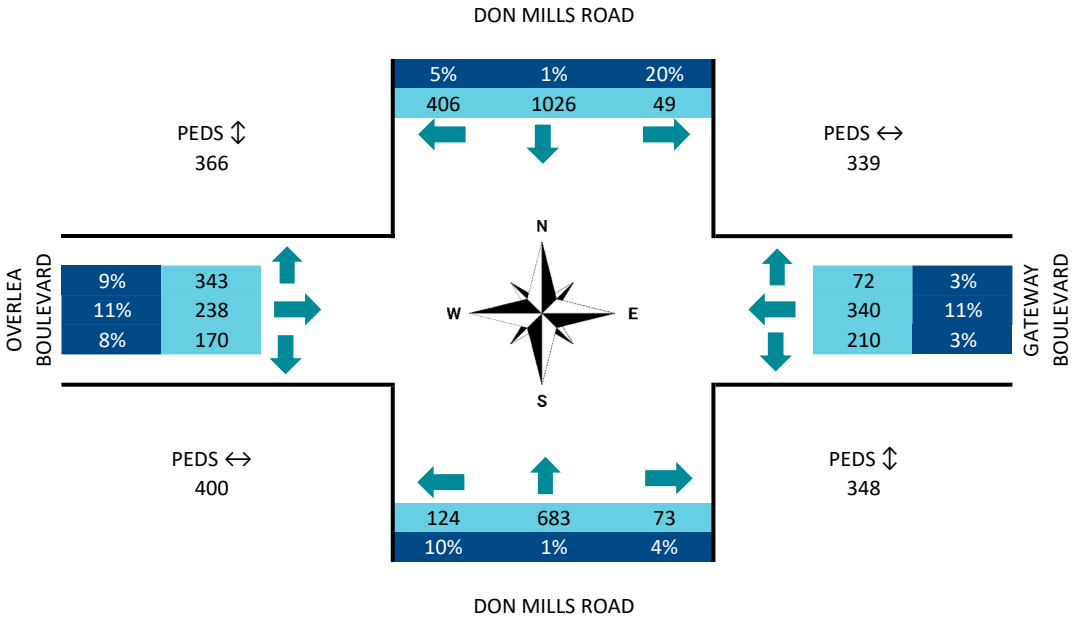
WEEKDAY AM AND PM PEAK HOUR DIAGRAMS

SOURCE	CITY OF TORONTO	**AM PEAK HOUR**		**PM PEAK HOUR**	
INTERSECTION	DON MILLS RD AT GATEWAY BLVD S & OVERLEA BLVD	FROM	08:15	FROM	16:30
COUNT DATE	Thursday, January 12, 2023	TO	09:15	TO	17:30

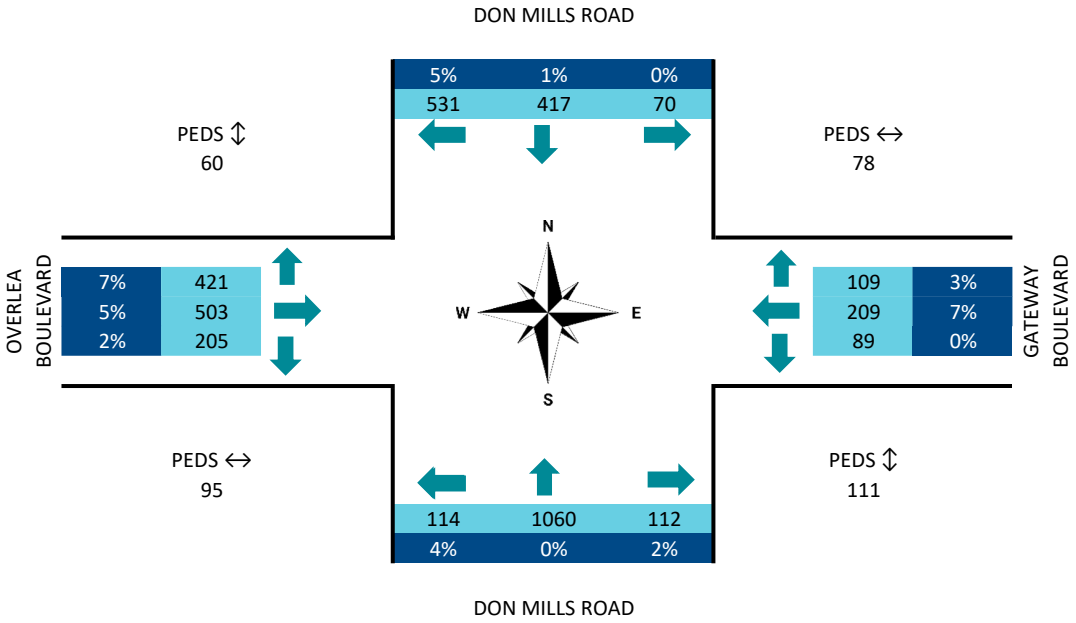
N-S Street DON MILLS ROAD **E-W Street** OVERLEA BOULEVARD

TOTAL VEHICLES | HEAVY VEHICLE %

AM PEAK HOUR



PM PEAK HOUR



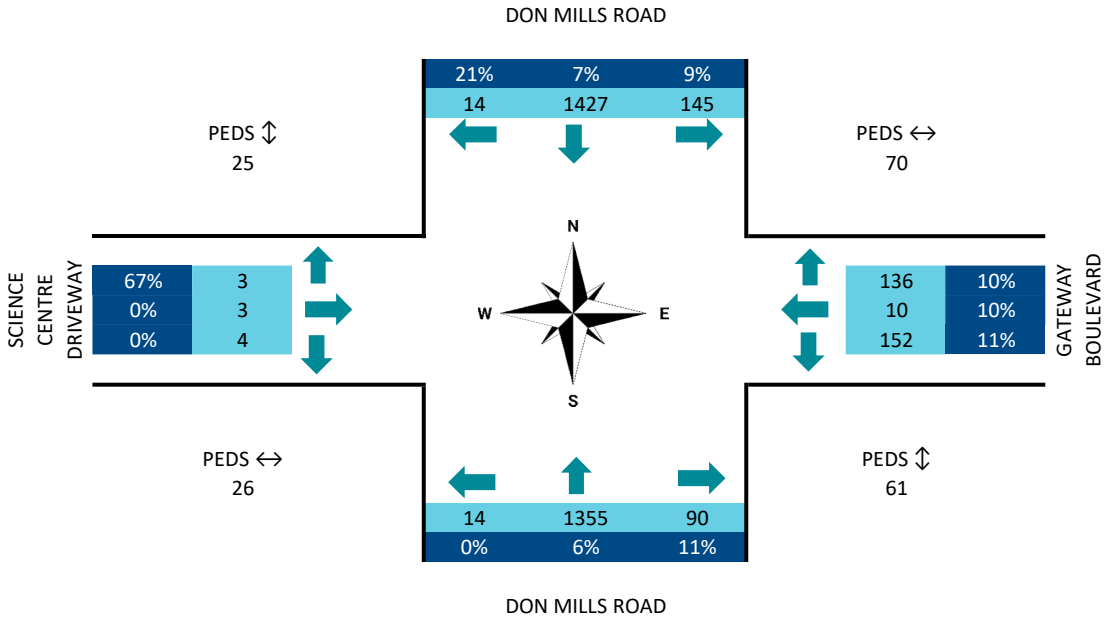
WEEKDAY AM AND PM PEAK HOUR DIAGRAMS

SOURCE	CITY OF TORONTO	**AM PEAK HOUR**		**PM PEAK HOUR**	
INTERSECTION	DON MILLS RD AT GATEWAY N BLVD (PX 1389)	FROM	07:45	FROM	17:00
COUNT DATE	Thursday, May 23, 2019	TO	08:45	TO	18:00

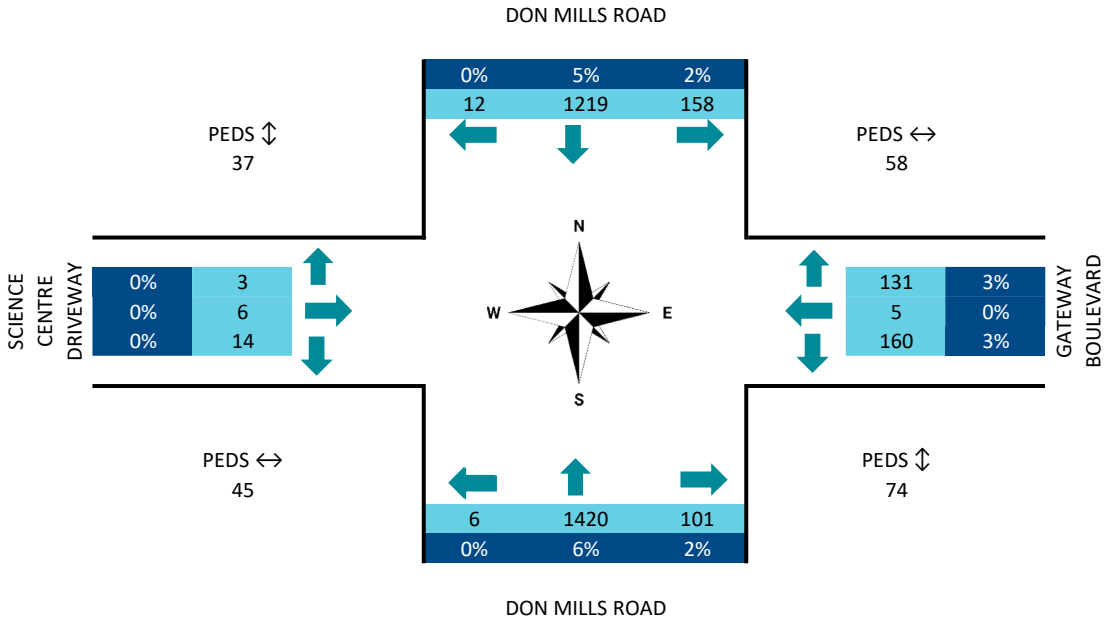
N-S Street DON MILLS ROAD **E-W Street** GATEWAY BOULEVARD

TOTAL VEHICLES | HEAVY VEHICLE %

AM PEAK HOUR



PM PEAK HOUR



Spectrum

Turning Movement Count
Location Name: DON MILLS RD & ST DENNIS DR
Date: Wed, May 25, 2022 Deployment Lead: Tasos Issaakidis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (1 . DON MILLS RD & ST DENNIS DR)

Start Time	N Approach DON MILLS RD						E Approach ST DENNIS DR						S Approach DON MILLS RD						W Approach WEST DRIVEWAY						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:30:00	1	200	12	1	11	214	16	0	24	0	6	40	3	144	0	0	1	147	1	0	0	0	8	1	402	
07:45:00	1	259	9	2	20	271	18	1	23	0	10	42	8	204	1	0	2	213	0	0	0	0	7	0	526	
08:00:00	1	311	11	0	13	323	18	0	21	0	12	39	10	303	1	0	3	314	0	0	0	0	8	0	676	
08:15:00	0	420	25	0	20	445	19	1	26	0	15	46	12	347	2	0	5	361	0	0	1	0	13	1	853	2457
08:30:00	0	441	16	1	3	458	26	0	22	0	21	48	23	346	1	0	5	370	0	0	2	0	4	2	878	2933
08:45:00	4	367	21	2	12	394	11	0	20	0	14	31	15	277	1	0	3	293	1	0	1	0	4	2	720	3127
09:00:00	2	293	19	0	12	314	11	0	8	0	16	19	11	309	0	0	4	320	1	0	0	0	7	1	654	3105
09:15:00	3	314	17	0	13	334	19	1	20	0	17	40	18	211	2	0	3	231	2	0	2	0	7	4	609	2861
BREAK																										
16:00:00	2	264	39	1	13	306	15	0	20	0	12	35	62	393	5	0	14	460	11	3	18	0	28	32	833	
16:15:00	4	247	20	1	14	272	6	0	18	0	19	24	80	392	3	0	4	475	8	2	6	0	11	16	787	
16:30:00	1	218	16	1	7	236	21	1	21	1	13	44	69	404	0	0	2	473	2	1	3	0	5	6	759	
16:45:00	0	226	25	1	13	252	14	0	25	0	24	39	51	393	3	0	10	447	1	0	0	0	10	1	739	3118
17:00:00	1	248	29	2	19	280	17	0	16	0	23	33	41	380	1	0	7	422	0	0	1	0	6	1	736	3021
17:15:00	2	278	27	2	14	309	17	0	31	0	22	48	50	409	1	0	2	460	0	0	3	0	3	3	820	3054
17:30:00	0	285	22	2	20	309	18	0	20	0	36	38	66	404	1	0	3	471	0	0	1	0	9	1	819	3114
17:45:00	2	251	28	0	17	281	12	0	22	0	35	34	33	377	1	0	7	411	0	0	1	0	9	1	727	3102
Grand Total	24	4622	336	16	221	4998	258	4	337	1	295	600	552	5293	23	0	75	5868	27	6	39	0	139	72	**11538**	-
Approach%	0.5%	92.5%	6.7%	0.3%		-	43%	0.7%	56.2%	0.2%		-	9.4%	90.2%	0.4%	0%		-	37.5%	8.3%	54.2%	0%		-	-	-
Totals %	0.2%	40.1%	2.9%	0.1%		43.3%	2.2%	0%	2.9%	0%		5.2%	4.8%	45.9%	0.2%	0%		50.9%	0.2%	0.1%	0.3%	0%		0.6%	-	-
Heavy	3	198	15	0		-	16	0	8	0		-	17	175	1	0		-	1	0	2	0		-	-	-
Heavy %	12.5%	4.3%	4.5%	0%		-	6.2%	0%	2.4%	0%		-	3.1%	3.3%	4.3%	0%		-	3.7%	0%	5.1%	0%		-	-	-
Bicycles	0	13	0	0		-	0	2	1	0		-	3	14	1	0		-	1	1	2	0		-	-	-
Bicycle %	0%	0.3%	0%	0%		-	0%	50%	0.3%	0%		-	0.5%	0.3%	4.3%	0%		-	3.7%	16.7%	5.1%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: DON MILLS RD & ST DENNIS DR
Date: Wed, May 25, 2022 Deployment Lead: Tasos Issaakidis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (15.73 °C)

Start Time	N Approach DON MILLS RD						E Approach ST DENNIS DR						S Approach DON MILLS RD						W Approach WEST DRIVEWAY						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	1	311	11	0	13	323	18	0	21	0	12	39	10	303	1	0	3	314	0	0	0	0	8	0	676
08:15:00	0	420	25	0	20	445	19	1	26	0	15	46	12	347	2	0	5	361	0	0	1	0	13	1	853
08:30:00	0	441	16	1	3	458	26	0	22	0	21	48	23	346	1	0	5	370	0	0	2	0	4	2	878
08:45:00	4	367	21	2	12	394	11	0	20	0	14	31	15	277	1	0	3	293	1	0	1	0	4	2	720
Grand Total	5	1539	73	3	48	1620	74	1	89	0	62	164	60	1273	5	0	16	1338	1	0	4	0	29	5	**3127**
Approach%	0.3%	95%	4.5%	0.2%		-	45.1%	0.6%	54.3%	0%		-	4.5%	95.1%	0.4%	0%		-	20%	0%	80%	0%		-	-
Totals %	0.2%	49.2%	2.3%	0.1%		51.8%	2.4%	0%	2.8%	0%		5.2%	1.9%	40.7%	0.2%	0%		42.8%	0%	0%	0.1%	0%		0.2%	-
PHF	0.31	0.87	0.73	0.38		0.88	0.71	0.25	0.86	0		0.85	0.65	0.92	0.63	0		0.9	0.25	0	0.5	0		0.83	-
Heavy	0	68	3	0		71	2	0	3	0		5	3	51	1	0		55	0	0	1	0		1	-
Heavy %	0%	4.4%	4.1%	0%		4.4%	2.7%	0%	3.4%	0%		3%	5%	4%	20%	0%		4.1%	0%	0%	25%	0%		20%	-
Lights	5	1471	70	3		1549	72	1	86	0		159	57	1222	4	0		1283	1	0	3	0		4	-
Lights %	100%	95.6%	95.9%	100%		95.6%	97.3%	100%	96.6%	0%		97%	95%	96%	80%	0%		95.9%	100%	0%	75%	0%		80%	-
Single-Unit Trucks	0	28	1	0		29	1	0	0	0		1	1	18	1	0		20	0	0	1	0		1	-
Single-Unit Trucks %	0%	1.8%	1.4%	0%		1.8%	1.4%	0%	0%	0%		0.6%	1.7%	1.4%	20%	0%		1.5%	0%	0%	25%	0%		20%	-
Buses	0	33	2	0		35	1	0	3	0		4	2	29	0	0		31	0	0	0	0		0	-
Buses %	0%	2.1%	2.7%	0%		2.2%	1.4%	0%	3.4%	0%		2.4%	3.3%	2.3%	0%	0%		2.3%	0%	0%	0%	0%		0%	-
Articulated Trucks	0	7	0	0		7	0	0	0	0		0	0	4	0	0		4	0	0	0	0		0	-
Articulated Trucks %	0%	0.5%	0%	0%		0.4%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.3%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	47	-	-	-	-	-	60	-	-	-	-	-	16	-	-	-	-	-	26	-	-
Pedestrians%	-	-	-	-	30.2%		-	-	-	-	38.7%		-	-	-	-	10.3%		-	-	-	-	16.8%		-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	3	-	-
Bicycles on Crosswalk%	-	-	-	-	0.6%		-	-	-	-	1.3%		-	-	-	-	0%		-	-	-	-	1.9%		-
Bicycles on Road	0	4	0	0	0	-	0	0	0	0	0	-	1	3	0	0	0	-	0	0	2	0	0	0	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

0.89

Spectrum

Turning Movement Count
Location Name: DON MILLS RD & ST DENNIS DR
Date: Wed, May 25, 2022 Deployment Lead: Tasos Issaakidis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 04:00 PM - 05:00 PM Weather: Overcast Clouds (17.98 °C)

Start Time	N Approach DON MILLS RD						E Approach ST DENNIS DR						S Approach DON MILLS RD						W Approach WEST DRIVEWAY						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:00:00	2	264	39	1	13	306	15	0	20	0	12	35	62	393	5	0	14	460	11	3	18	0	28	32	833
16:15:00	4	247	20	1	14	272	6	0	18	0	19	24	80	392	3	0	4	475	8	2	6	0	11	16	787
16:30:00	1	218	16	1	7	236	21	1	21	1	13	44	69	404	0	0	2	473	2	1	3	0	5	6	759
16:45:00	0	226	25	1	13	252	14	0	25	0	24	39	51	393	3	0	10	447	1	0	0	0	10	1	739
Grand Total	7	955	100	4	47	1066	56	1	84	1	68	142	262	1582	11	0	30	1855	22	6	27	0	54	55	**3118**
Approach%	0.7%	89.6%	9.4%	0.4%		-	39.4%	0.7%	59.2%	0.7%		-	14.1%	85.3%	0.6%	0%		-	40%	10.9%	49.1%	0%		-	-
Totals %	0.2%	30.6%	3.2%	0.1%		34.2%	1.8%	0%	2.7%	0%		4.6%	8.4%	50.7%	0.4%	0%		59.5%	0.7%	0.2%	0.9%	0%		1.8%	-
PHF	0.44	0.9	0.64	1		0.87	0.67	0.25	0.84	0.25		0.81	0.82	0.98	0.55	0		0.98	0.5	0.5	0.38	0		0.43	-
Heavy	0	37	6	0		43	5	0	1	0		6	9	48	0	0		57	0	0	0	0		0	-
Heavy %	0%	3.9%	6%	0%		4%	8.9%	0%	1.2%	0%		4.2%	3.4%	3%	0%	0%		3.1%	0%	0%	0%	0%		0%	-
Lights	7	918	94	4		1023	51	1	83	1		136	253	1534	11	0		1798	22	6	27	0		55	-
Lights %	100%	96.1%	94%	100%		96%	91.1%	100%	98.8%	100%		95.8%	96.6%	97%	100%	0%		96.9%	100%	100%	100%	0%		100%	-
Single-Unit Trucks	0	9	3	0		12	3	0	0	0		3	6	21	0	0		27	0	0	0	0		0	-
Single-Unit Trucks %	0%	0.9%	3%	0%		1.1%	5.4%	0%	0%	0%		2.1%	2.3%	1.3%	0%	0%		1.5%	0%	0%	0%	0%		0%	-
Buses	0	24	3	0		27	2	0	1	0		3	3	24	0	0		27	0	0	0	0		0	-
Buses %	0%	2.5%	3%	0%		2.5%	3.6%	0%	1.2%	0%		2.1%	1.1%	1.5%	0%	0%		1.5%	0%	0%	0%	0%		0%	-
Articulated Trucks	0	4	0	0		4	0	0	0	0		0	0	3	0	0		3	0	0	0	0		0	-
Articulated Trucks %	0%	0.4%	0%	0%		0.4%	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	47	-	-	-	-	-	62	-	-	-	-	-	28	-	-	-	-	-	48	-	-
Pedestrians%	-	-	-	-	23.8%		-	-	-	-	31.2%		-	-	-	-	14.1%		-	-	-	-	24.1%		-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	6	-	-	-	-	-	2	-	-	-	-	-	6	-	-
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	3%		-	-	-	-	1%		-	-	-	-	3%		-
Bicycles on Road	0	3	0	0	0	-	0	1	0	0	0	-	1	4	0	0	0	-	1	1	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

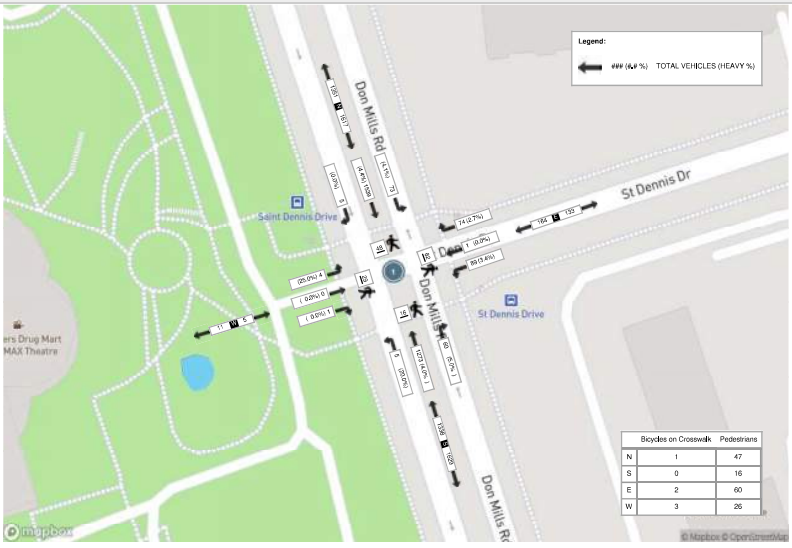
0.94

Spectrum

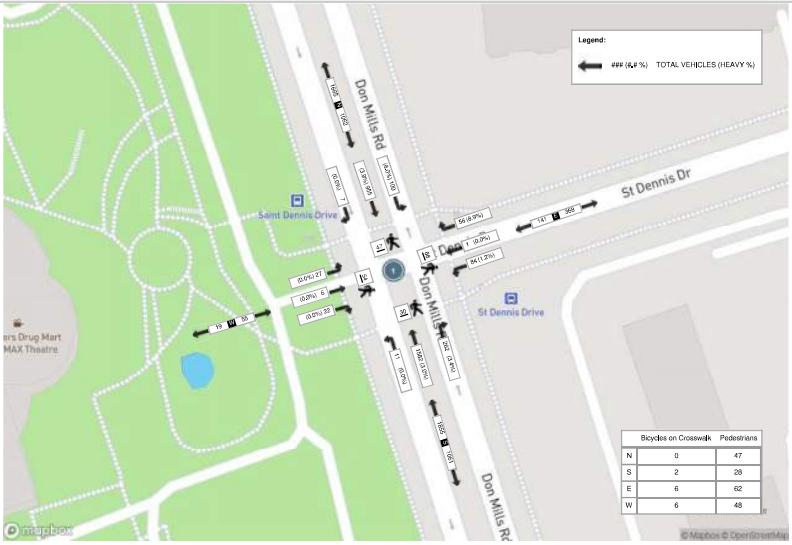
Turning Movement Count
Location Name: DON MILLS RD & ST DENNIS DR
Date: Wed, May 25, 2022 Deployment Lead: Tasos Issaakidis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (15.73 °C)



Peak Hour: 04:00 PM - 05:00 PM Weather: Overcast Clouds (17.98 °C)



Turning Movement Count (5 . EGLINTON AVE & EB ON & OFF RAMPS TO AND FROM ST DENNIS DR)

Start Time	E Approach EGLINTON AVE (EB)					S Approach RAMPS TO AND FROM ST DENNIS DR					W Approach EGLINTON AVE (EB)					Int. Total (15 min)	Int. Total (1 hr)
	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	UTurn W:W	Peds W:	Approach Total		
07:30:00	0	0	0	0	0	52	0	0	2	52	10	160	0	0	170	222	
07:45:00	0	0	0	0	0	47	0	0	1	47	16	177	0	0	193	240	
08:00:00	0	0	0	0	0	68	0	0	1	68	18	214	0	0	232	300	
08:15:00	0	0	0	0	0	72	0	0	1	72	21	190	0	0	211	283	1045
08:30:00	0	0	0	0	0	80	0	0	1	80	32	201	0	0	233	313	1136
08:45:00	0	0	0	0	0	72	0	0	2	72	31	208	0	0	239	311	1207
09:00:00	0	0	0	0	0	66	0	0	1	66	36	246	0	0	282	348	1255
09:15:00	0	0	0	0	0	63	0	0	0	63	17	191	0	0	208	271	1243
BREAK																	
16:00:00	0	0	0	0	0	107	0	0	2	107	14	252	0	0	266	373	
16:15:00	0	0	0	0	0	96	0	0	1	96	12	242	0	0	254	350	
16:30:00	0	0	0	0	0	122	0	0	2	122	10	268	0	0	278	400	
16:45:00	0	0	0	0	0	112	0	0	2	112	11	209	0	0	220	332	1455
17:00:00	0	0	0	0	0	115	0	0	0	115	17	244	0	0	261	376	1458
17:15:00	0	0	0	0	0	108	0	0	3	108	17	231	0	0	248	356	1464
17:30:00	0	0	0	0	0	104	0	0	2	104	27	234	0	0	261	365	1429
17:45:00	0	0	0	0	0	96	0	0	4	96	11	255	0	0	266	362	1459
Grand Total	0	0	0	0	0	1380	0	0	25	1380	300	3522	0	0	3822	**5202**	-
Approach%	0%	0%	0%		-	100%	0%	0%		-	7.8%	92.2%	0%		-	-	-
Totals %	0%	0%	0%		0%	26.5%	0%	0%		26.5%	5.8%	67.7%	0%		73.5%	-	-
Heavy	0	0	0		-	45	0	0		-	6	233	0		-	-	-
Heavy %	0%	0%	0%		-	3.3%	0%	0%		-	2%	6.6%	0%		-	-	-
Bicycles	0	0	0		-	0	0	0		-	1	5	0		-	-	-
Bicycle %	0%	0%	0%		-	0%	0%	0%		-	0.3%	0.1%	0%		-	-	-

CITY OF TORONTO - TRANSPORTATION SERVICES
TRAFFIC SYSTEM OPERATIONS
703 Don Mills Rd, Fifth Floor, Toronto ON M3C 3N3
Telephone: 416-397-5770, Email: signaltimings@toronto.ca

CURRENT SIGNAL TIMING INFORMATION

Location: Don Mills Rd & St Dennis Dr / Ontario Science Centre
TCS/SCN: 621/12911
Our Ref: 2024_0185
Staff: Junaid Aleem / Syed Qasim
Date: August 28, 2024
Controller Type: Econolite ASC/3-2100 / M
Mode of Control: SA2 with PR, LPI & 2-Wire Polara APS
Design Walk Speed: 1.0 m/s (FDW based on full crossing @ 1.2 m/s)
N/S FDW Duration: 17 sec
E/W FDW Duration: 22 sec
Issued To: R.J Burnside & Associates Limited (Cedric Mosdell)

Control Level	TYPICAL					SCOOT				
Plan	OFF	AM	PM	NGHT	WKND	OFF PEAK	AM	PM	NGHT	WKND
Time of Operation	All Other Times	6:30-10:00, M-F	15:00-19:00, M-F	22:00-06:30, Daily	10:00-19:00, Sat & Sun	All Other Times	6:30-10:00, M-F	15:00-19:00, M-F	22:00-06:30, Daily	10:00-19:00, Sat & Sun
Signal Aspect										
North-South Phase										
*SBLA/SBG/NSWK (West Side)	7	7	7	7	7	6-52	7-68	7-83	6-52	6-52
*SBYA/SBG/NSWK (West Side)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
*SBG/NSWK (West Side)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
NSG/NSWK (Both Sides)	40	68	84	36	52	7-53	7-68	7-83	7-53	7-53
NSG/NSWK or NSG/NSFD	17	17	17	17	17	17	17	17	17	17
NSG/NSFD or NSY/NSDW	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
ALLR	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
East-West Phase										
EWWK (LPI)	5	5	5	5	5	5	5	5	5	5
EWG/EWWK or EWG/EWDW	7	7	7	7	7	7-53	7-68	7-83	7-53	7-53
EWG/EWFD or EWG/EWDW	22	22	22	22	22	22	22	22	22	22
EWY/EWDW	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
ALLR	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Cycle Length/Range	116	144	160	112	128	112-128	112-144	112-160	112-128	112-128

NOTE

*SBLA callable 24 hours. Unused time allocated to NSG.

The EW phase is callable by vehicle and / or pedestrian actuations.If a vehicle call is received, the minimum EWG is 7 seconds.If ongoing vehicle demand exists on the stopbar loop, the EWG is capable of providing vehicle extensions up to the maximum.If a pedestrian call is received, the maximum extensions are served. The EWWK & EWFD are only displayed on the pedestrian signal heads if a pedestrian call is received.

EW Leading Pedestrian Interval - EWWK comes up 5 seconds before EW vehicle green.

SCOOT cycle lengths between 32-64 may change by 4 second increments, between 64-128 by 8 second increments and above 128 by 16 second increments.

CITY OF TORONTO - TRANSPORTATION SERVICES
TRAFFIC SYSTEM OPERATIONS
703 Don Mills Rd, Fifth Floor, Toronto ON M3C 3N3
Telephone: 416-397-5770, Email: signaltimings@toronto.ca

CURRENT SIGNAL TIMING INFORMATION

Location:	Don Mills Rd & Gateway Blvd. North / Science Centre Dr
TCS/SCN:	1389/12921
Our Ref:	2024_0185
Staff:	Junaid Aleem / Syed Qasim
Date:	August 28, 2024
Controller Type:	Peek ATC 1000 / TS2 T1
Mode of Control:	SA2-VMG with WRM
Design Walk Speed:	1.0 m/s (FDW based on full crossing @ 1.2 m/s)
N/S FDW Duration:	28 seconds
E/W FDW Duration:	24 seconds
Issued To:	R.J Burnside & Associates Limited (Cedric Mosdell)

Control Level	**TYPICAL**			**SCOOT**		
Plan	**AM**	**PM**	**OFF**	**AM**	**PM**	**OFF**
Time of Operation	06:45-09:30, M-F	15:00-19:00, M-F	All Other Times	06:45-09:30, M-F	15:00-19:00, M-F	All Other Times
Signal Aspect						
North-South Phase						
SBG/SBLA/NSWK (West Side)	6	6	6	6-60	6-60	6-44
SBG/SBYA/NSWK (West Side)	3	3	3	3	3	3
SBG/NSWK (West Side)	1	1	1	1	1	1
NSG/NSWK	62	62	38	8-62	8-62	8-46
NSG/NSFD	28	28	28	28	28	28
NSY/NSDW	4	4	4	4	4	4
ALLR	2	2	2	2	2	2
East-West Phase						
*EWG/EWWK or EWG/EWDW	7	7	7	7	7	7
*EWG/EWFD or EWG/EWDW	24	24	24	24	24	24
EWY/EWDW	4	4	4	4	4	4
ALLR	3	3	3	3	3	3
Cycle Length/Range	144	144	120	112-144	112-144	112-128

NOTE

*The EW phase callable by vehicle and / or pedestrian actuations. If a vehicle call is received, the minimum EWG is 7 seconds. If ongoing vehicle demand exists on the stopbar loop, the EWG is capable of providing vehicle extensions up to a maximum of 31 seconds. If a pedestrian call is received, the minimum EWG is 31 seconds. The EWWK & EWFD are only displayed on the pedestrian signal heads if a pedestrian call is received.

SCOOT cycle lengths between 32-64 may change by 4 second increments, between 64-128 by 8 second increments and above 128, by 16 second increments. SCOOT may change the cycle length by one increment at a time every 150 seconds.

CITY OF TORONTO – TRANSPORTATION SERVICES
TRAFFIC SYSTEMS OPERATIONS – TRAFFIC SIGNALS
703 Don Mills Rd, Fifth Floor, Toronto ON M3C 3N3
Phone: 416-397-5770, Email: signaltimings@toronto.ca

CURRENT SIGNAL TIMING INFORMATION

Location: Don Mills Rd & Overlea Blvd / Gateway Blvd S
TCS/SCN: 620 / 12931
Our Ref: 2024_0185
Staff: Junaid Aleem / Syed Qasim
Date: August 28, 2024
Controller Type: Econolite ASC/3-2100/TS2T1
Mode of Control: SA1 with 2-Wire Polara APS, EBLA TSP, UPS & RLC (SB)
Design Walk Speed: 1.0 m/s
N/S FDW Duration: 25 seconds
E/W FDW Duration: 25 seconds
Issued to: R.J Burnside & Associates Limited (Cedric Mosdell)

Control Level	TYPICAL			SCOOT		
Plan	**OFF PEAK**	**AM PEAK**	**PM PEAK**	**OFF PEAK**	**AM PEAK**	**PM PEAK**
Time of Operation	All Other Times	06:30-10:00, M-F	15:30-19:00, M-F	All Other Times	06:30-10:00, M-F	15:30-19:00, M-F
Signal Aspect						
North-South Phase						
** NBLA/NBG/NSWK (East side only)	7	7	7	7-23	7-23	7-23
**NBYA/NBG/NSWK (East side only)	3	3	3	3	3	3
**NBG/NSWK (East side only)	1	1	1	1	1	1
NSG/NSWK (Both sides)	14	15	9	7-23	7-23	7-23
NSG/NSFD (Both sides)	25	25	25	25	25	25
NSY/NSDW	4	4	4	4	4	4
ALLR	3	3	3	3	3	3
East-West Phase						
* EBLA/SBRA/EBG/EWWK (South side only) or WBLA/WBG/EWWK (North side only) or EWLA/SBRA/EWDW	7	7	7	7-23	7-23	7-23
* EBLA/SBRA/EBG/EWWK (South side only) or EBLA/WBYA/SBRA/EWDW	3	3	3	3	3	3
* EBLA/SBRA/EBG/EWWK (South side only) or EBLA/WBLR/SBRA/EWDW	1	1	1	1	1	1
* EBLA/SBRA/EBG/EWWK (South side only) or EBLA/EBG/SBRA/EWWK (South side only)	18	16	24	21-41	21-41	21-41
* EBLY/EBG/EWWK (South side only) or WBYA/WBG/EWWK (North side only) or EBLY/EBG/EWWK (South side only)	3	3	3	3	3	3
* EBLR/EBG/EWWK (South side only) or WBG/EWWK (North side only) or EBLR/EBG/EWWK (South side only)	3	3	3	3	3	3
EWG/EWWK (Both sides)	20	21	19	8-24	8-24	8-24
EWG/EWFD (Both sides)	25	25	25	25	25	25
EWY/EWDW	4	4	4	4	4	4
ALLR	3	3	3	3	3	3
Cycle Length/Range	144	144	144	128-144	128-144	128-144

NOTES:

*EBLA callable 24 hours daily. Unused time allocated to EWG. EBLA phase is fully protected. WBLA and NBLA phases are protected/permissive.

*WBLA callable 24 hours daily. Unused time allocated to EWG.

**NBLA callable all times. Unused time allocated to NSG.

SCOOT cycle lengths between 32-64 may change by 4 second increments, between 64-128 by 8 second increments and above 128, by 16 second increments.

SCOOT may change the cycle length by one increment at a time every 150 seconds.

LOCATION:	**St Dennis Dr & Deauville Lane**	*DISTRICT:*	**Toronto and East York**
TCS:	**2522 (Formerly TCS#3002)**	*COMPUTER SYSTEM:*	**TransSuite**
MODE/COMMENT:	**SAP with LPI & WRM**	*CONTROLLER/CABINET TYPE:*	**Econolite ASC/3-2100 / TS2T1**
PREPARED BY/DATE:	**Akshay Salwan / August 4, 2020**	*CONFLICT FLASH:*	**Red & Red**
CHECKED BY/ DATE	**Masoud Ramezani / August 6, 2020**	*DESIGN WALK SPEED:*	**1.0 m/s** (FDW based on full crossing at 1.2 m/s)
IMPLEMENTATION DATE:	**August 10, 2020**	*CHANNEL/DROP:*	**4093/2**

N

NEMA Phase		TP1 Patrn 1-3 & Backup Free	OFF All Other Times	AM 06:30-10:00 M-F	PM 15:00-19:00 M-F	NGHT 22:00-06:30 Daily	WKND 10:00-19:00 Sat & Sun	Phase Mode (Fixed/Demanded/Callable)	Remarks
	Local Plan		Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5		
	System Plan		Plan 1	Plan 2	Plan 3	Plan 4	Plan 5		
1	NOT USED	WLK							Pedestrian Minimums: EWWK = 12 secs; EWFD = 16 secs; NSWK = 12 secs; NSFD = 15 secs
		FDW							NS phase is callable by vehicle or pedestrian actuation. If a vehicle and/or pedestrian call is received, the maximum NSG is served. The NSWK & NSFD are displayed on the pedestrian signal heads if a vehicle and/or pedestrian call is received.
		MIN							
		MAX1							
		AMB							
		ALR							
		SPLIT							
2	St Dennis Dr	DLY GRN 5						Fixed	Side Street Passage Time = 3 sec.
		WLK 12							
		WLK MAX 14						Split shown includes 5 sec of EW LPI	Leading Pedestrian Interval - EWWK and NSWK comes up 5 seconds before vehicle
		FDW 16							
		MIN 23							
		MAX1 25							
		AMB 3.0							
		ALR 3.0							
		SPLIT	0	0	0	0	0		
3	NOT USED								
4	Deauville Lane	DLY GRN 5						Callable by stopbar loop and/or pushbutton	
		WLK 12							
		FDW 15							
		MIN 22							
		MAX1 22						Split shown includes 5 sec of NS LPI	
		AMB 3.0							
		ALR 3.2							
		SPLIT	0	0	0	0	0		
5	NOT USED	WLK							
		FDW							
		MIN							
		MAX1							
		AMB							
		ALR							
		SPLIT							
6	St Dennis Dr	DLY GRN 5						Fixed	
		WLK 12							
		WLK MAX 14						Split shown includes 5 sec of EW LPI	
		FDW 16							
		MIN 23							
		MAX1 25							
		AMB 3.0							
		ALR 3.0							
		SPLIT	0	0	0	0	0		
7	NOT USED	WLK							
		FDW							
		MIN							
		MAX1							
		AMB							
		ALR							
		SPLIT							
8	Deauville Lane	DLY GRN 5						Callable by stopbar loop and/or pushbutton	
		WLK 12							
		FDW 15							
		MIN 22							
		MAX1 22						Split shown includes 5 sec of NS LPI	
		AMB 3.0							
		ALR 3.2							
		SPLIT	0	0	0	0	0		
		CL	70 (58-70)	70 (58-70)	70 (58-70)	70 (58-70)	70 (58-70)		
		OF	0	0	0				

NOTES: Picked up on TransSuite on Aug 28, 2013 at 9:22

LOCATION:	**Gateway Blvd & Grenoble Dr (N. Access)/ Private Access**	**ATO / DISTRICT / WARD:**	**Area 1 / Toronto and East York / Ward 16**
PX:	**1974**	**COMPUTER SYSTEM:**	**TransSuite**
MODE/COMMENT:	**FT and LPI**	**CONTROLLER/CABINET TYPE:**	**Econolite ASC/3 1000 / TS2T1**
PREPARED BY/DATE:	***Ranajamil Iftikhar/Ameneh Dialameh/January 18, 2020***	**CONFLICT FLASH:**	**Red & Red**
CHECKED BY/DATE:	**Ranajamil Iftikhar/Ameneh Dialameh/January 18, 2020**	**DESIGN WALK SPEED:**	**1.0 m/s (FDW based on full crossing at 1.2**
IMPLEMENTATION DATE:	**January 28, 2020**	**CHANNEL/DROP:**	**6016/10**
		CONTROLLER FIRMWARE:	**2.47.10**

N

NEMA Phase		OFF All Other Times	AM 06:45-09:30 M-F	PM 15:15-18:45 M-F	Phase Mode (Fixed/Demanded/Callable)	Remarks
	System Plan	1	2	3		
	Local Plan	Pattern 1	Pattern 2	Pattern 3		
1 NOT USED	WLK FDW MIN MAX1 AMB ALR SPLIT					Pedestrian Minimums: EWWK = 7 secs; EWFD = 16 secs NSWK = 12 secs; NSFD = 22 secs NS Leading Pedestrian Interval - NSWK comes up 5 seconds before NS vehicle green.
2 Gateway Blvd	WLK 7 FDW 16 MIN 23 MAX1 23 AMB 3.0 ALR 3.6 SPLIT	30	30	30	Fixed	
3 NOT USED						
4 Private Acc	DLY GRN 5 WLK 12 FDW 22 MIN 29 MAX1 34 AMB 3.0 ALR 2.7 SPLIT	40	40	40	Fixed Split shown includes 5 sec of NS LPI	
5 NOT USED	WLK FDW MIN MAX1 AMB ALR SPLIT					
6 Gateway Blvd	WLK 7 FDW 16 MIN 23 MAX1 23 AMB 3.0 ALR 3.6 SPLIT	30	30	30	Fixed	
7 NOT USED	WLK FDW MIN MAX1 AMB ALR SPLIT					
8 Grenoble Dr (N. Access)	DLY GRN 5 WLK 12 FDW 22 MIN 29 MAX1 34 AMB 3.0 ALR 2.7 SPLIT	40	40	40	Fixed Split shown includes 5 sec of NS LPI	
	CL OF	70 1	70 1	70 1		

NOTES:

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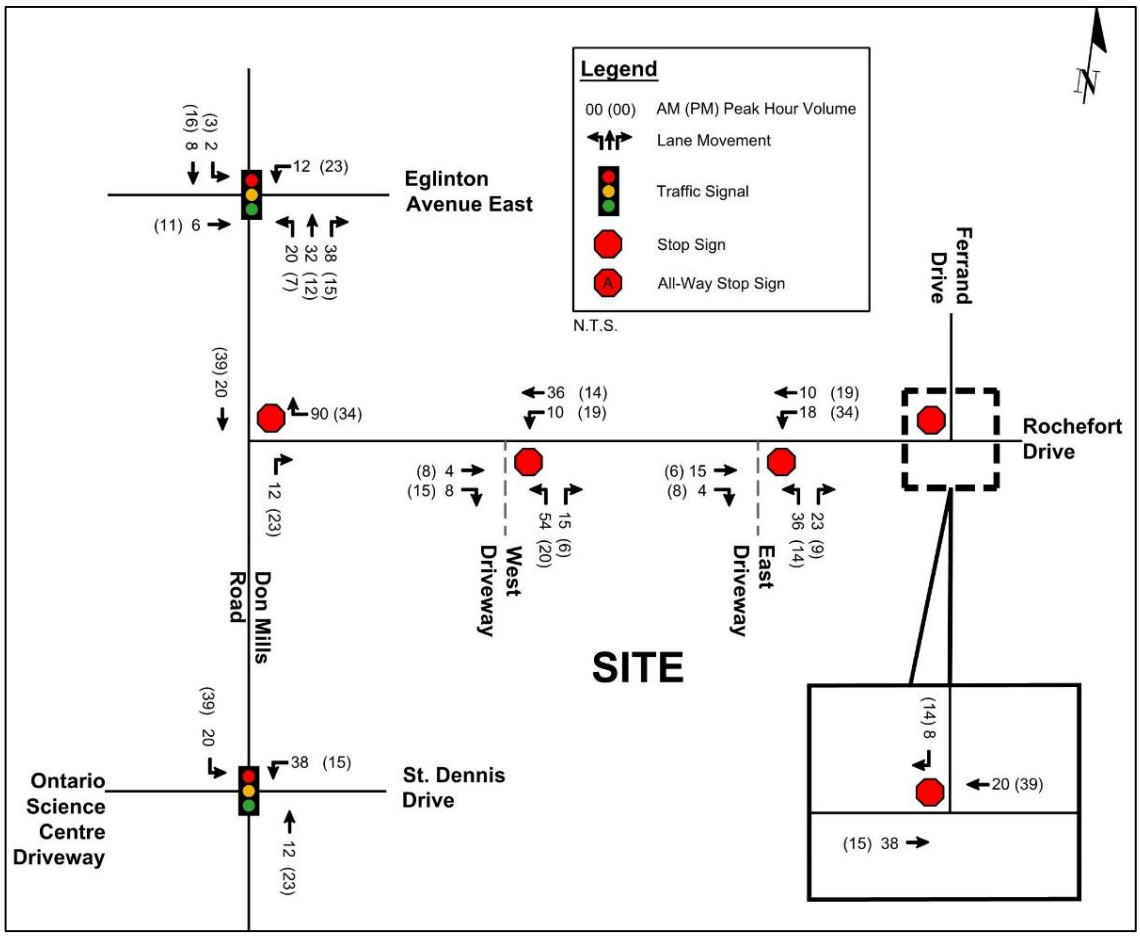
Appendix D

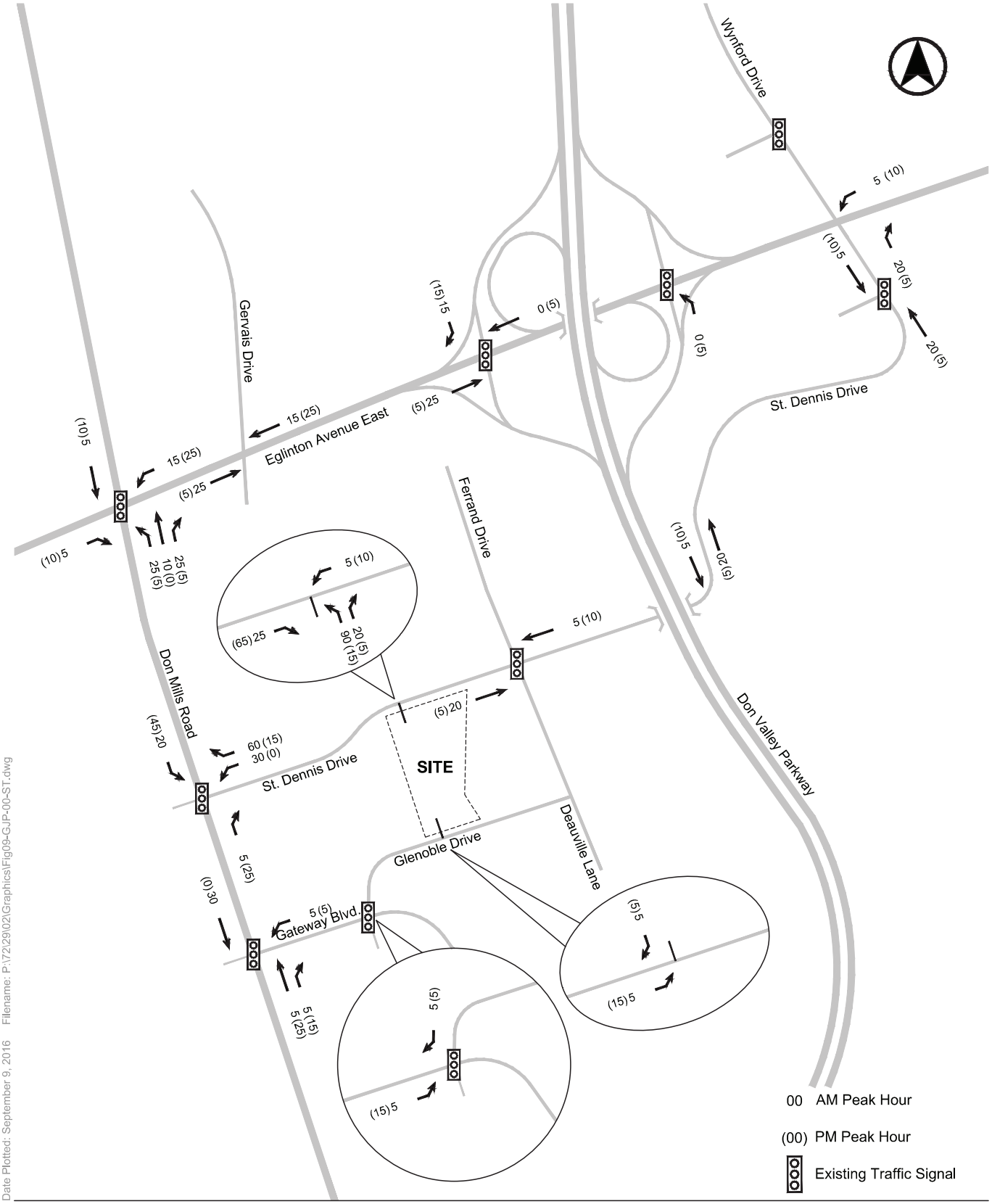
Background Development Traffic

Figure 11: Site Generated Vehicle Traffic



5.0 Total Traffic Conditions

Total traffic volumes consist of background traffic for the horizon year 2027 plus the site traffic illustrated in Figure 11. The resulting 2027 total traffic volumes are shown in Figure 12.



Date Plotted: September 9, 2016 Filename: P:\72\29\02\Graphics\Fig09-GJP-00-ST.dwg

SITE TRAFFIC VOLUMES

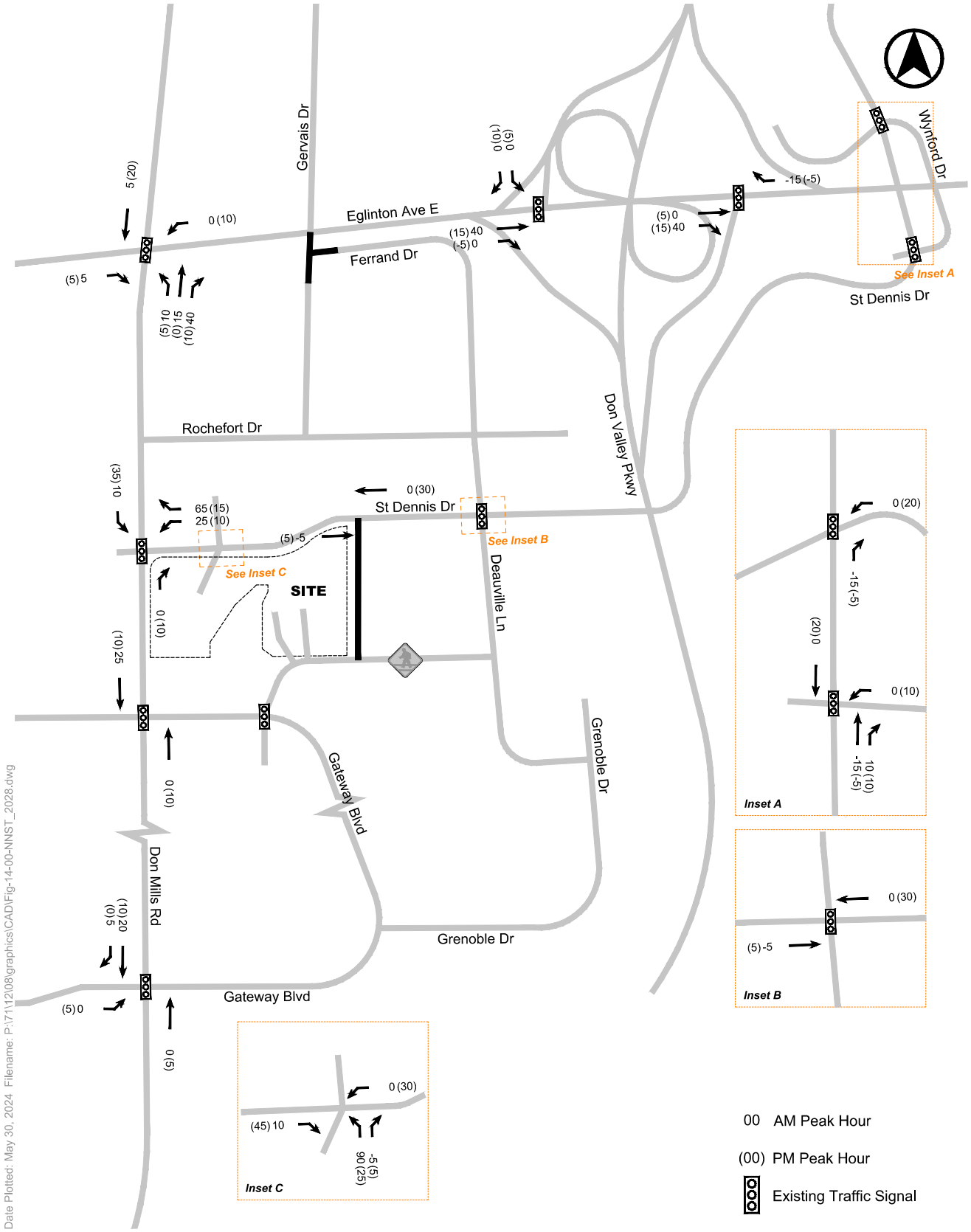
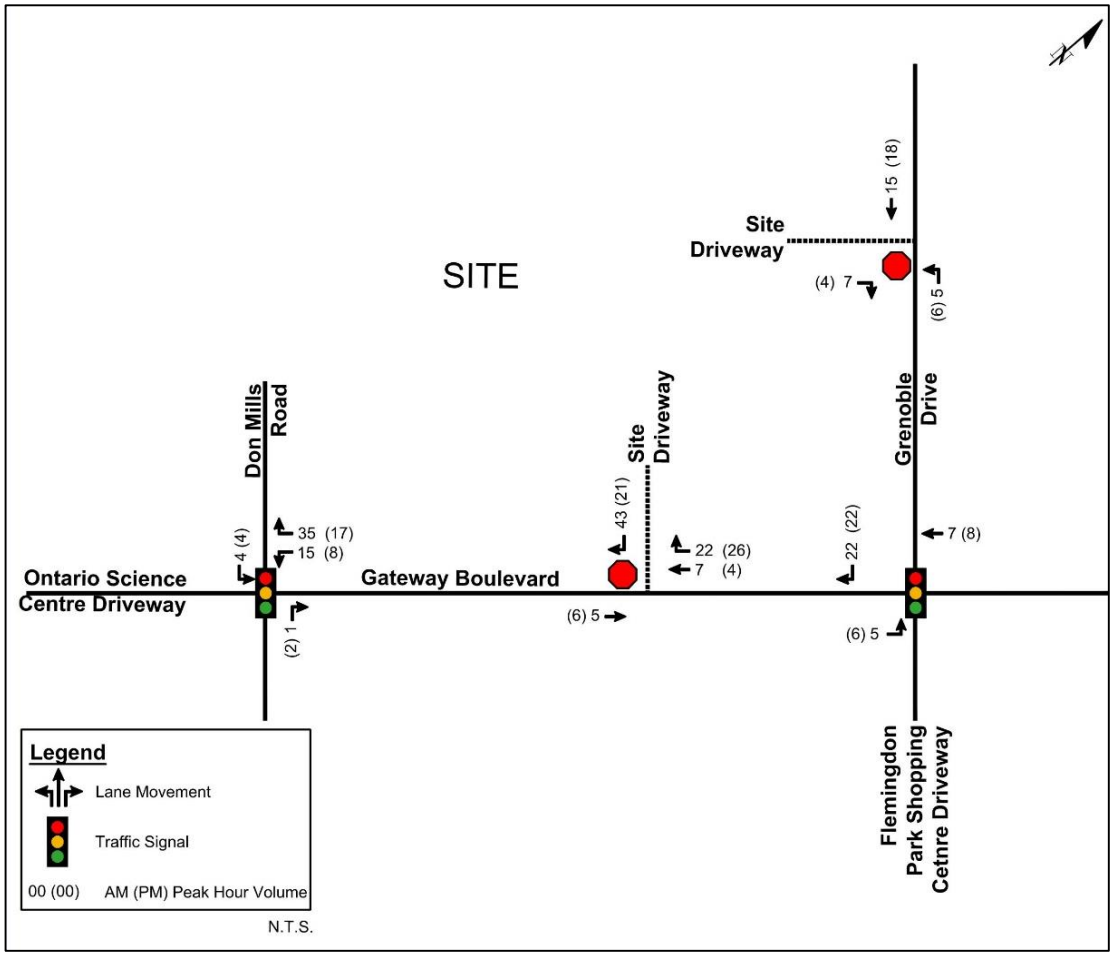


FIGURE 14 NET SITE TRAFFIC VOLUMES - 2028 HORIZON

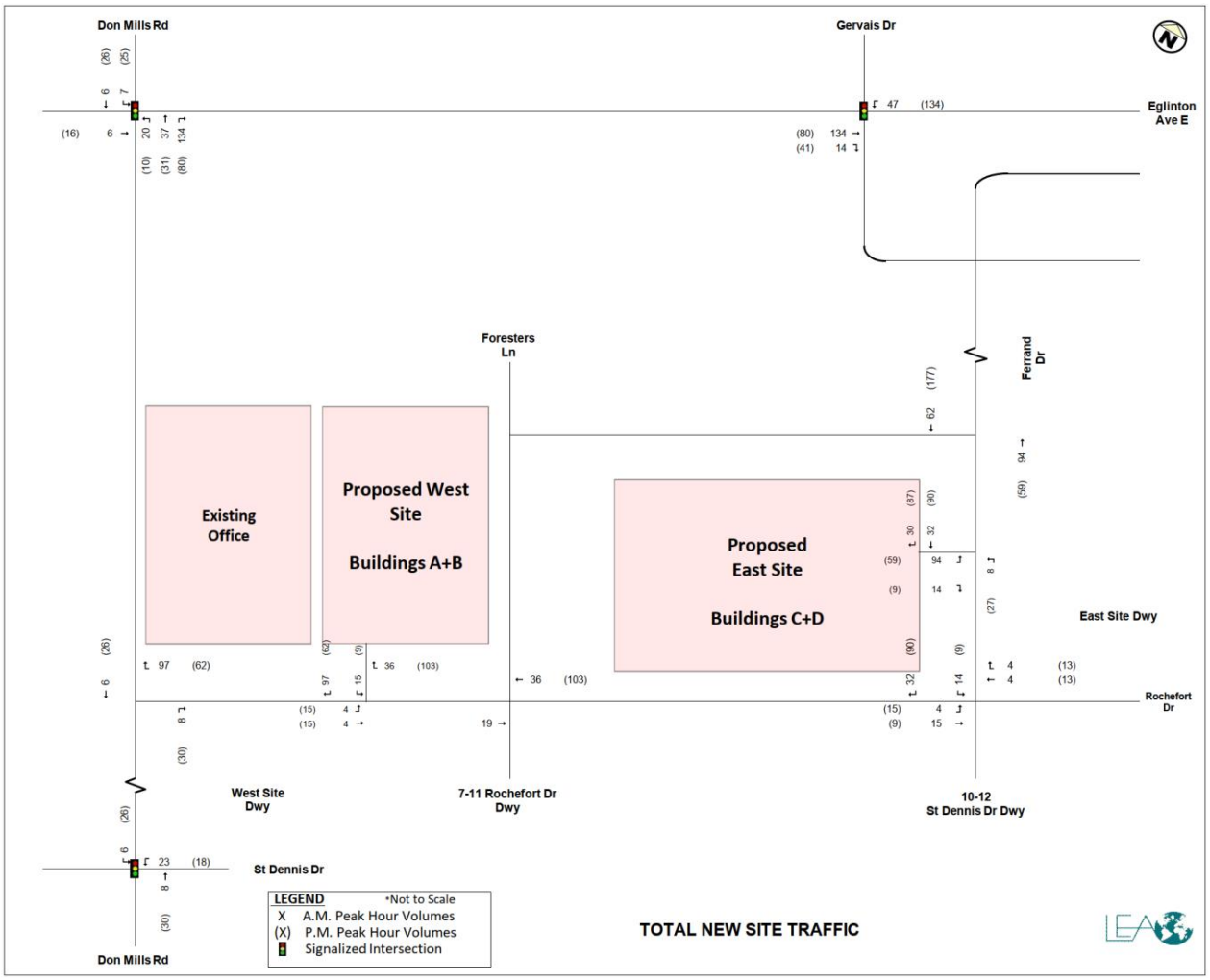
Figure 11: Site Generated Vehicle Traffic



5.0 Total Traffic Conditions

Total traffic volumes consist of background traffic for the horizon year 2029 plus site traffic. The resulting 2029 total traffic volumes are shown in Figure 12.

Figure 3-3: Total New Site-Generated Traffic Volumes



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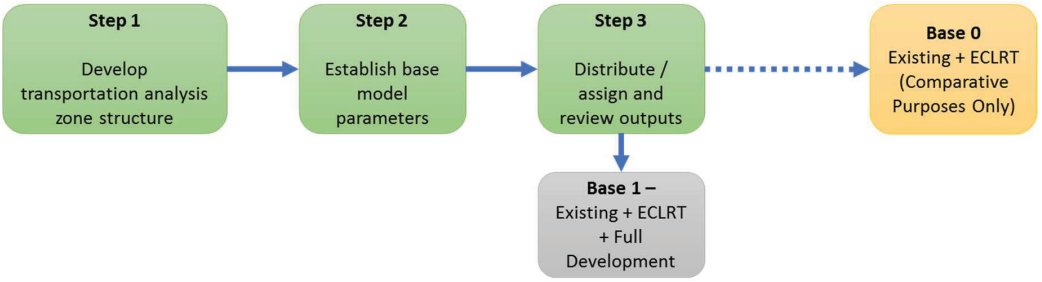
Appendix E

Don Mills Crossing Study Excerpts



1.3 Analysis Process and Multi-Modal Approach

The analysis process followed a similar methodology to a typical 4-step transportation demand model. It includes, 4 basic steps, trip generation, distribution, modal split and trip assignment.

In the localized sub-area context, mode splits would be more based on the development characteristics, including population demographics, facilities available, and directness of travel paths. As a result, modal split behavior would be an input, that could be calculated separately per development block depending on the development layout and characteristics in relation to overall regional characteristics.

Thus, the proposed sub-area analysis follows 3 simple steps as shown in **Exhibit 1-2**.

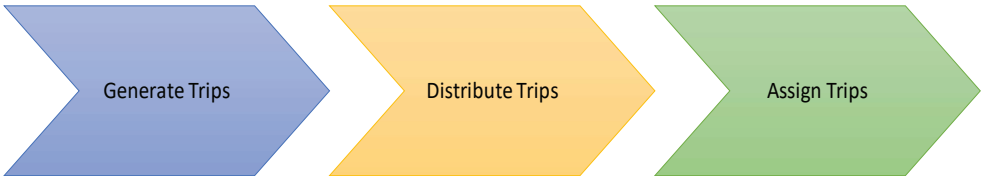


Exhibit 1-2 Analytical Process

1.4 Generate Trips

To remain consistent with other works completed for developments in the area, particularly the Wynford Green Transportation study, the trip generation rates used by their study were reviewed. The first principles approach was considered acceptable in reflecting actual travel demands within the local area and as such, adopted for use in this study.

1.4.1 Residential

Residential trip generation was calculated based on the total number of residents in the TTS zones within the study area, and the total number of trips to and from the zones in AM/PM peak hours. Results and the rate used to develop total trips per resident in the peak hour is shown below. This was used for both existing and future residential developments.

Period	Trips Per Resident
AM Rate	0.204
PM Rate	0.152

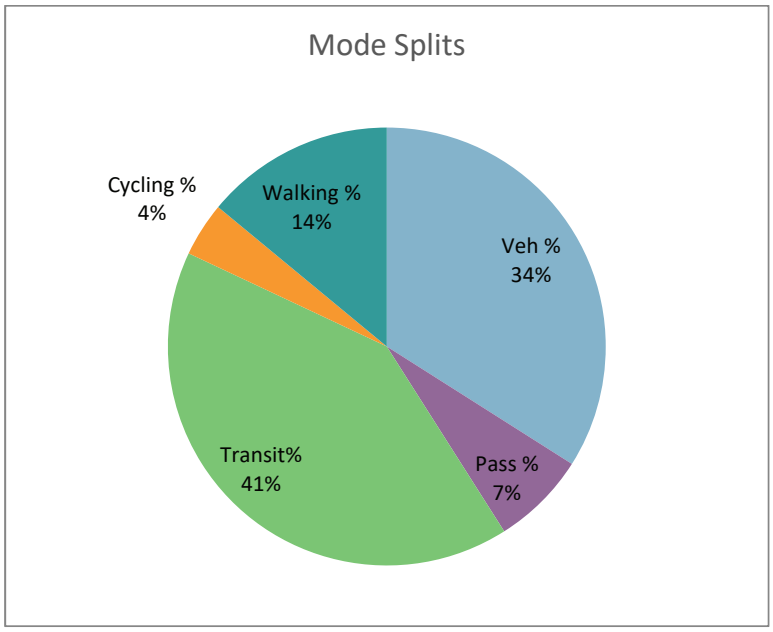


Exhibit 1-3: Eglinton Connects Surveyed Mode Splits

However, given the location of the study area, and nearby attractors and generators, the proposed walking and cycling mode shares are likely different for each development block, as well as for internal short distance trips and longer trips outside of the study area. As such, a comprehensive review of each zone was conducted, and assumptions for the mode split in each block was made based on the following factors:

- Proximity to transit station
- Amenities or proposed amenities to promote active and transit use
- Potential for mode share changes based on travel demand management programs

The proposed mode share for each development block and land-use/purpose is shown in **Attachment 1** to this Appendix. Note that these mode splits show potential scenarios where different mobility strategies are effective in adjusting the development mode shares, however major transit improvements would be required to significantly change it further. Additional testing and calculations of diversions are provided in **Appendix L**.

1.5 Distribute Trips

In a typical demand model, there are four trip origins and destination sets that need to be assessed as shown in **Exhibit 1-4**.

Household size is decreasing less in mid/high-rise units and houses and low-rise units: Households in mid/high-rise apartments declined less (0.16) than in row and townhouses (0.30). Households in houses and low-rise units have declined the least, by 0.10 persons per household. There was no change in the average household size of houses and low-rises between 2011 and 2016 (see Figure 39 on page 35).

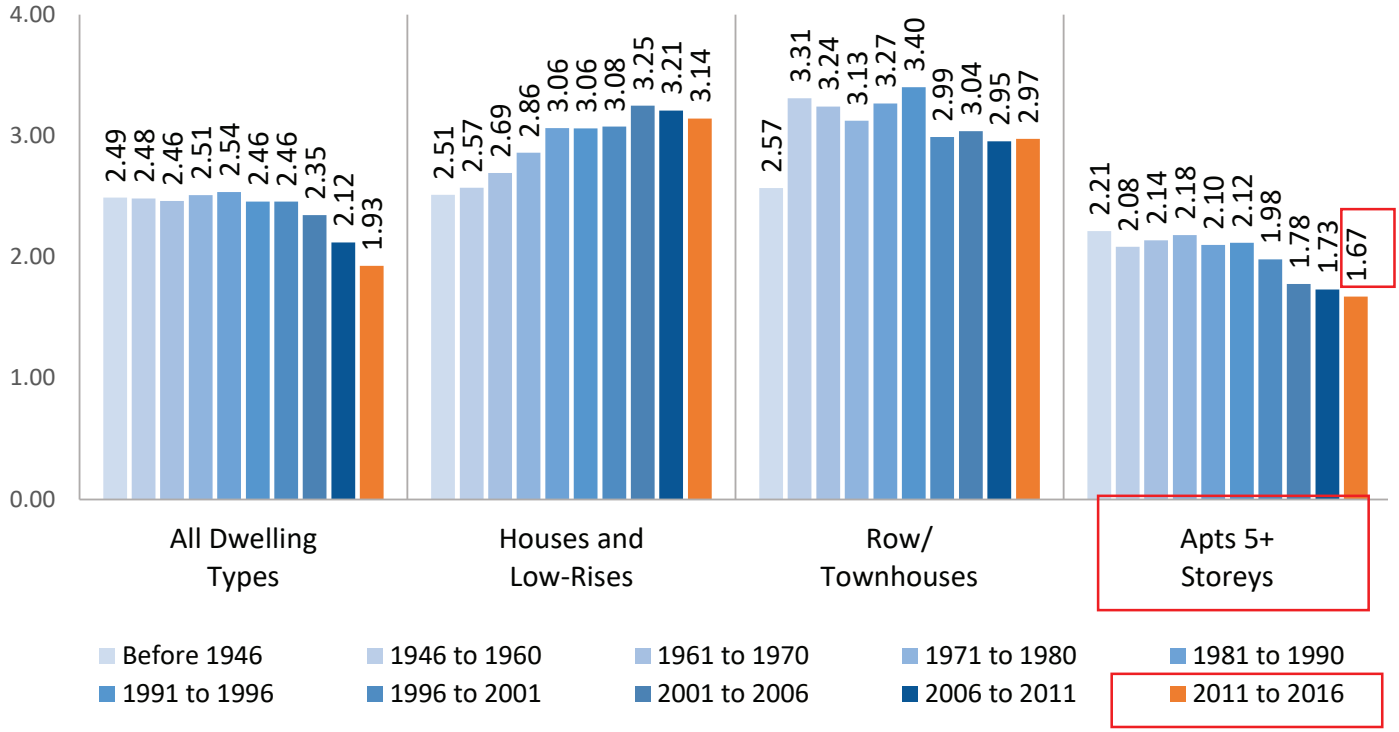
PPH by Period of Construction

The characteristics of those who occupy recently-built units and those who occupy older dwelling units are very different. When a large number of units of a given type are built, any resulting changes in their occupancy rates can have a significant impact on the overall trends. Table 9 in Appendix E: Number of Dwellings by Period of Construction and Dwelling Type shows that large numbers of mid/high-rise units were built between the 1960s and 1980s as well as in recent years, and that large numbers of houses and low-rise units were built between 1946 and 1960. Any trends in PPH for those periods of construction and dwelling types will therefore have a greater impact on the PPH of the city as a whole.

The following sections analyse the average PPH rates by different periods of construction by dwelling type, household type, and number of bedrooms.

More recently-built dwellings have on average smaller household sizes: The decline in average household size is particularly notable in apartments of five or more storeys where the average person per household rate for dwellings constructed between 2011 and 2016 was 1.67 persons (see Figure 40).

Figure 40: Average Number of Persons per Household by Dwelling Type and Period of Construction, 2016



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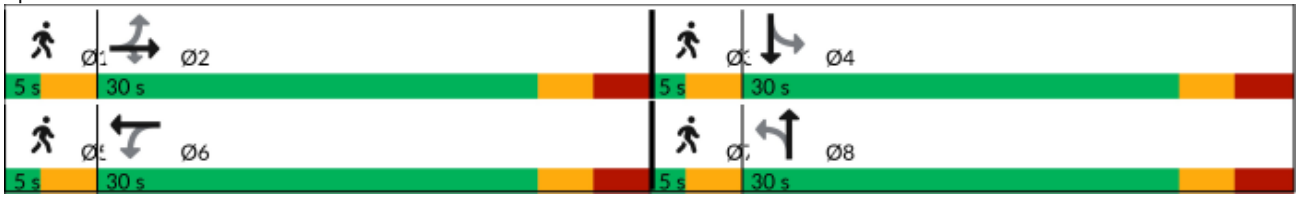
Appendix F

Existing Traffic Operations

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	Ø1	Ø3	Ø5
Lane Configurations												
Traffic Volume (vph)	26	82	57	183	75	31	62	48	89			
Future Volume (vph)	26	82	57	183	75	31	62	48	89			
Lane Group Flow (vph)	28	88	61	197	190	0	303	0	196			
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA			
Protected Phases		2			6		8		4	1	3	5
Permitted Phases	2		2	6		8		4				
Detector Phase	2	2	2	6	6	8	8	4	4			
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	2.0	2.0	2.0
Minimum Split (s)	29.0	29.0	29.0	29.0	29.0	28.2	28.2	28.2	28.2	5.0	5.0	5.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	5.0	5.0	5.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	7%	7%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.2	3.2	3.2	3.2	0.0	0.0	0.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0		-1.0			
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.2		5.2			
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	None	None	None
v/c Ratio	0.07	0.15	0.12	0.61	0.32		0.41		0.26			
Control Delay (s/veh)	11.9	12.5	0.5	23.6	7.5		7.0		9.3			
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay (s/veh)	11.9	12.5	0.5	23.6	7.5		7.0		9.3			
Queue Length 50th (m)	1.8	5.7	0.0	14.9	5.3		6.6		8.0			
Queue Length 95th (m)	5.7	12.7	0.1	30.8	15.7		26.7		24.4			
Internal Link Dist (m)		501.3			138.2		192.3		23.5			
Turn Bay Length (m)	28.0		10.0	32.0								
Base Capacity (vph)	560	898	698	497	837		736		753			
Starvation Cap Reductn	0	0	0	0	0		0		0			
Spillback Cap Reductn	0	0	0	0	0		0		0			
Storage Cap Reductn	0	0	0	0	0		0		0			
Reduced v/c Ratio	0.05	0.10	0.09	0.40	0.23		0.41		0.26			

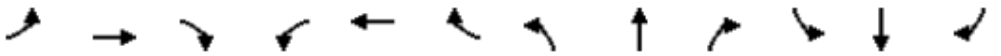
Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 52.3
Natural Cycle: 70
Control Type: Semi Act-Uncoord

Splits and Phases: 1: Deauville Lane & St. Dennis Drive



Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	2.0
Minimum Split (s)	5.0
Total Split (s)	5.0
Total Split (%)	7%
Yellow Time (s)	3.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

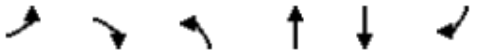
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	82	57	183	75	101	31	62	189	48	89	45
Future Volume (vph)	26	82	57	183	75	101	31	62	189	48	89	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0			5.2			5.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00	0.87	1.00	0.96			0.92			0.98	
Flpb, ped/bikes	0.96	1.00	1.00	0.90	1.00			0.99			0.98	
Frt	1.00	1.00	0.85	1.00	0.91			0.90			0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.98	
Satd. Flow (prot)	1757	1865	1354	1456	1638			1410			1730	
Flt Permitted	0.63	1.00	1.00	0.69	1.00			0.95			0.86	
Satd. Flow (perm)	1180	1865	1354	1073	1638			1354			1508	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	28	88	61	197	81	109	33	67	203	52	96	48
RTOR Reduction (vph)	0	0	42	0	75	0	0	82	0	0	13	0
Lane Group Flow (vph)	28	88	19	197	115	0	0	221	0	0	183	0
Confl. Peds. (#/hr)	43		98	98		43	45		79	79		45
Heavy Vehicles (%)	0%	3%	5%	13%	7%	0%	5%	4%	18%	0%	4%	2%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	15.2	15.2	15.2	15.2	15.2			24.9			24.9	
Effective Green, g (s)	16.2	16.2	16.2	16.2	16.2			25.9			25.9	
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31			0.50			0.50	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0			6.2			6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	365	577	419	332	507			670			746	
v/s Ratio Prot		0.05			0.07							
v/s Ratio Perm	0.02		0.01	c0.18				c0.16			0.12	
v/c Ratio	0.07	0.15	0.04	0.59	0.22			0.33			0.24	
Uniform Delay, d1	12.7	13.0	12.6	15.2	13.4			7.9			7.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.0	0.1	0.0	2.8	0.2			1.3			0.7	
Delay (s)	12.8	13.2	12.6	18.1	13.6			9.2			8.3	
Level of Service	B	B	B	B	B			A			A	
Approach Delay (s/veh)		12.9			15.9			9.2			8.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	52.3	Sum of lost time (s)	16.2
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

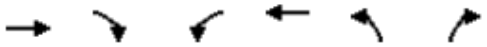
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	200	37	26	73	118	243
Future Volume (vph)	200	37	26	73	118	243
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	238	44	31	87	140	289

Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2
Volume Total (vph)	238	44	118	140	289
Volume Left (vph)	238	0	31	0	0
Volume Right (vph)	0	44	0	0	289
Hadj (s)	0.25	-0.43	0.35	0.53	-0.57
Departure Headway (s)	4.8	3.2	5.1	5.2	3.2
Degree Utilization, x	0.32	0.04	0.17	0.20	0.26
Capacity (veh/h)	713	1121	671	652	1112
Control Delay (s/veh)	10.1	6.3	9.1	9.5	7.3
Approach Delay (s/veh)	9.5		9.1	8.0	
Approach LOS	A		A	A	

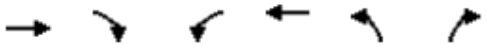
Intersection Summary			
Delay	8.7		
Level of Service	A		
Intersection Capacity Utilization	31.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	236	0	0	269	2	1
Future Volume (Veh/h)	236	0	0	269	2	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	257	0	0	292	2	1
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			257		549	257
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			257		549	257
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1308		497	782

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	257	292	3
Volume Left	0	0	2
Volume Right	0	0	1
cSH	1700	1308	565
Volume to Capacity	0.15	0.00	0.01
Queue Length 95th (m)	0.0	0.0	0.1
Control Delay (s/veh)	0.0	0.0	11.4
Lane LOS			B
Approach Delay (s/veh)	0.0	0.0	11.4
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	24.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	220	5	4	267	9	16
Future Volume (Veh/h)	220	5	4	267	9	16
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	239	5	4	290	10	17
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			244		540	242
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			244		540	242
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	98
cM capacity (veh/h)			1322		502	797

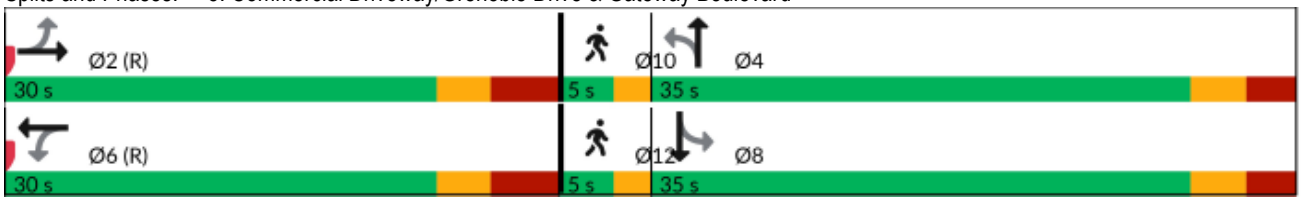
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	244	294	27
Volume Left	0	4	10
Volume Right	5	0	17
cSH	1700	1322	654
Volume to Capacity	0.14	0.00	0.04
Queue Length 95th (m)	0.0	0.1	1.0
Control Delay (s/veh)	0.0	0.1	10.7
Lane LOS		A	B
Approach Delay (s/veh)	0.0	0.1	10.7
Approach LOS			B

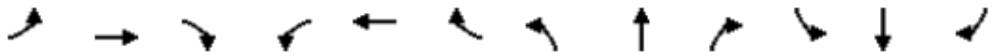
Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization		27.3%	ICU Level of Service A
Analysis Period (min)		15	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø10	Ø12
Lane Configurations										
Traffic Volume (vph)	78	103	7	58	46	51	99	71		
Future Volume (vph)	78	103	7	58	46	51	99	71		
Lane Group Flow (vph)	81	149	0	125	0	120	0	333		
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA		
Protected Phases		2		6		4		8	10	12
Permitted Phases	2		6		4		8			
Detector Phase	2	2	6	6	4	4	8	8		
Switch Phase										
Minimum Initial (s)	23.0	23.0	23.0	23.0	24.0	24.0	24.0	24.0	1.0	1.5
Minimum Split (s)	29.6	29.6	29.6	29.6	34.7	34.7	34.7	34.7	5.0	5.0
Total Split (s)	30.0	30.0	30.0	30.0	35.0	35.0	35.0	35.0	5.0	5.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	50.0%	50.0%	50.0%	50.0%	7%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	3.6	3.6	3.6	3.6	2.7	2.7	2.7	2.7	0.0	0.0
Lost Time Adjust (s)	-1.0	-1.0		-1.0		-1.0		-1.0		
Total Lost Time (s)	5.6	5.6		5.6		4.7		4.7		
Lead/Lag					Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
v/c Ratio	0.23	0.24		0.25		0.19		0.53		
Control Delay (s/veh)	18.6	14.0		10.9		11.6		14.6		
Queue Delay	0.0	0.0		0.0		0.0		0.0		
Total Delay (s/veh)	18.6	14.0		10.9		11.6		14.6		
Queue Length 50th (m)	7.4	10.6		5.9		7.9		22.7		
Queue Length 95th (m)	17.0	22.6		16.6		17.3		45.0		
Internal Link Dist (m)		158.4		25.7		14.9		38.5		
Turn Bay Length (m)	48.0									
Base Capacity (vph)	338	614		498		604		623		
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	0.24	0.24		0.25		0.20		0.53		

Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 1 (1%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Pretimed

Splits and Phases: 5: Commercial Driveway/Grenoble Drive & Gateway Boulevard





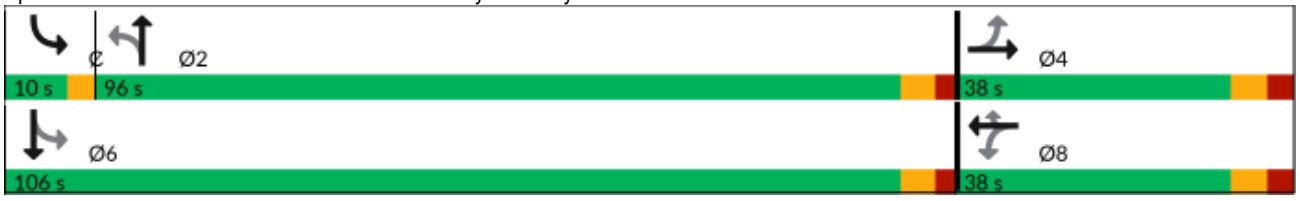
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	103	40	7	58	56	46	51	18	99	71	150
Future Volume (vph)	78	103	40	7	58	56	46	51	18	99	71	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6			5.6			4.7			4.7	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.96			0.85			0.97			0.91	
Flpb, ped/bikes	0.75	1.00			0.99			0.96			0.96	
Frt	1.00	0.95			0.93			0.97			0.93	
Flt Protected	0.95	1.00			0.99			0.98			0.98	
Satd. Flow (prot)	1245	1704			1341			1686			1517	
Flt Permitted	0.74	1.00			0.98			0.79			0.86	
Satd. Flow (perm)	972	1704			1323			1375			1335	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	107	42	7	60	58	48	53	19	103	74	156
RTOR Reduction (vph)	0	20	0	0	38	0	0	10	0	0	45	0
Lane Group Flow (vph)	81	129	0	0	87	0	0	110	0	0	288	0
Confl. Peds. (#/hr)	192		61	61		192	140		98	98		140
Heavy Vehicles (%)	11%	6%	1%	14%	10%	19%	4%	3%	0%	5%	2%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	23.4	23.4			23.4			29.3			29.3	
Effective Green, g (s)	24.4	24.4			24.4			30.3			30.3	
Actuated g/C Ratio	0.35	0.35			0.35			0.43			0.43	
Clearance Time (s)	6.6	6.6			6.6			5.7			5.7	
Lane Grp Cap (vph)	338	593			461			595			577	
v/s Ratio Prot		0.08										
v/s Ratio Perm	c0.08				0.07			0.08			c0.22	
v/c Ratio	0.23	0.21			0.18			0.18			0.49	
Uniform Delay, d1	16.2	16.0			15.9			12.2			14.3	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	1.6	0.8			0.9			0.6			3.0	
Delay (s)	17.8	16.9			16.8			12.9			17.4	
Level of Service	B	B			B			B			B	
Approach Delay (s/veh)		17.2			16.8			12.9			17.4	
Approach LOS		B			B			B			B	

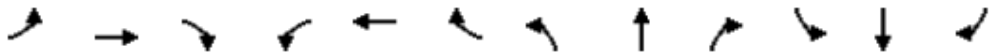
Intersection Summary			
HCM 2000 Control Delay (s/veh)	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø4
Lane Configurations						
Traffic Volume (vph)	160	143	1198	152	1254	
Future Volume (vph)	160	143	1198	152	1254	
Lane Group Flow (vph)	174	155	1405	165	1363	
Turn Type	Perm	Perm	NA	pm+pt	NA	
Protected Phases			2	1	6	4
Permitted Phases	8	8		6		
Detector Phase	8	8	2	1	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	38.0	38.0	96.0	9.5	96.0	38.0
Total Split (s)	38.0	38.0	96.0	10.0	106.0	38.0
Total Split (%)	26.4%	26.4%	66.7%	6.9%	73.6%	26%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	3.0	3.0	2.0	0.0	2.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	6.0	6.0	5.0	2.0	5.0	
Lead/Lag			Lag	Lead		
Lead-Lag Optimize?			Yes	Yes		
Recall Mode	None	None	Max	None	Max	None
v/c Ratio	0.73	0.58	0.58	0.57	0.50	
Control Delay (s/veh)	71.0	60.3	13.4	12.7	8.1	
Queue Delay	0.0	0.0	0.0	0.0	0.3	
Total Delay (s/veh)	71.0	60.3	13.4	12.7	8.5	
Queue Length 50th (m)	44.4	38.4	96.3	9.4	67.4	
Queue Length 95th (m)	69.1	60.4	141.6	20.3	106.2	
Internal Link Dist (m)			491.3		226.5	
Turn Bay Length (m)	35.0	71.0		72.0		
Base Capacity (vph)	339	380	2400	287	2687	
Starvation Cap Reductn	0	0	0	0	665	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.51	0.41	0.59	0.57	0.67	

Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 134.8
Natural Cycle: 145
Control Type: Semi Act-Uncoord

Splits and Phases: 6: Don Mills Road & Driveway/Gateway Boulevard





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	160	0	143	0	1198	95	152	1254	0
Future Volume (vph)	0	0	0	160	0	143	0	1198	95	152	1254	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0		6.0		5.0		2.0	5.0	
Lane Util. Factor				1.00		1.00		0.95		1.00	0.95	
Frt				1.00		0.85		0.98		1.00	1.00	
Flt Protected				0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)				1789		1601		3539		1789	3579	
Flt Permitted				0.75		1.00		1.00		0.13	1.00	
Satd. Flow (perm)				1426		1601		3539		255	3579	
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)	0	0	0	174	0	155	0	1302	103	165	1363	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	0	0	174	0	155	0	1401	0	165	1363	0
Turn Type	Perm			Perm		Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)				21.5		21.5		90.3		100.2	100.2	
Effective Green, g (s)				22.5		22.5		91.3		101.2	101.2	
Actuated g/C Ratio				0.17		0.17		0.68		0.75	0.75	
Clearance Time (s)				7.0		7.0		6.0		3.0	6.0	
Vehicle Extension (s)				3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)				238		267		2398		281	2688	
v/s Ratio Prot								c0.40		c0.03	0.38	
v/s Ratio Perm				c0.12		0.10				0.41		
v/c Ratio				0.73		0.58		0.58		0.58	0.50	
Uniform Delay, d1				53.2		51.7		11.5		9.6	6.7	
Progression Factor				1.00		1.00		1.00		1.00	1.00	
Incremental Delay, d2				10.9		3.1		1.0		3.1	0.6	
Delay (s)				64.2		54.9		12.6		12.8	7.4	
Level of Service				E		D		B		B	A	
Approach Delay (s/veh)		0.0			59.8			12.6			7.9	
Approach LOS		A			E			B			A	

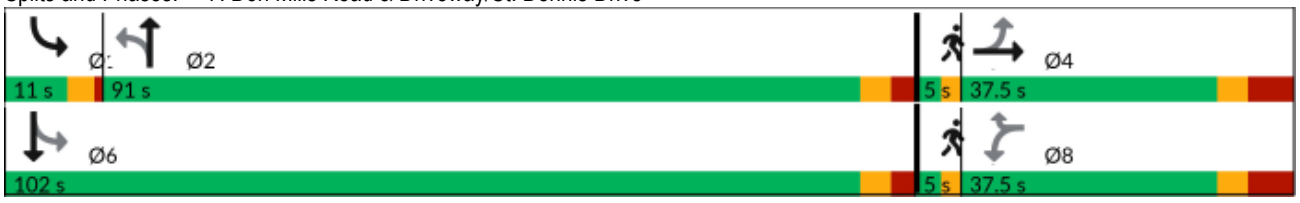
Intersection Summary			
HCM 2000 Control Delay (s/veh)	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	134.7	Sum of lost time (s)	13.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

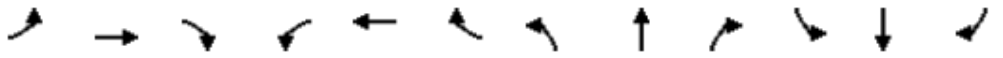
c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø3	Ø4	Ø7
Lane Configurations								
Traffic Volume (vph)	91	75	1271	74	1315			
Future Volume (vph)	91	75	1271	74	1315			
Lane Group Flow (vph)	99	82	1458	80	1429			
Turn Type	Perm	Perm	NA	pm+pt	NA			
Protected Phases			2	1	6	3	4	7
Permitted Phases	8	8		6				
Detector Phase	8	8	2	1	6			
Switch Phase								
Minimum Initial (s)	7.0	7.0	5.0	5.0	5.0	1.0	7.0	1.0
Minimum Split (s)	37.5	37.5	91.0	9.5	91.0	3.0	37.5	3.0
Total Split (s)	37.5	37.5	91.0	11.0	102.0	5.0	37.5	5.0
Total Split (%)	26.0%	26.0%	63.0%	7.6%	70.6%	3%	26%	3%
Yellow Time (s)	3.3	3.3	3.3	3.0	3.3	2.0	3.3	2.0
All-Red Time (s)	5.2	5.2	2.7	1.0	2.7	0.0	5.2	0.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0			
Total Lost Time (s)	7.5	7.5	5.0	3.0	5.0			
Lead/Lag	Lag	Lag	Lag	Lead		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	Max	None	Max	None	None	None
v/c Ratio	0.58	0.31	0.59	0.28	0.51			
Control Delay (s/veh)	65.6	13.2	11.4	5.6	6.1			
Queue Delay	0.0	0.0	0.3	0.0	0.0			
Total Delay (s/veh)	65.6	13.2	11.8	5.6	6.1			
Queue Length 50th (m)	23.3	0.0	87.8	3.4	56.6			
Queue Length 95th (m)	41.4	14.1	125.2	8.2	86.4			
Internal Link Dist (m)			226.5		183.4			
Turn Bay Length (m)		60.0		100.0				
Base Capacity (vph)	343	448	2470	291	2791			
Starvation Cap Reductn	0	0	435	0	0			
Spillback Cap Reductn	0	0	0	0	0			
Storage Cap Reductn	0	0	0	0	0			
Reduced v/c Ratio	0.29	0.18	0.72	0.27	0.51			

Intersection Summary
Cycle Length: 144.5
Actuated Cycle Length: 124.5
Natural Cycle: 145
Control Type: Semi Act-Uncoord

Splits and Phases: 7: Don Mills Road & Driveway/St. Dennis Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	91	0	75	0	1271	70	74	1315	0
Future Volume (vph)	0	0	0	91	0	75	0	1271	70	74	1315	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				7.5		7.5		5.0		3.0	5.0	
Lane Util. Factor				1.00		1.00		0.95		1.00	0.95	
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)				1789		1601		3551		1789	3579	
Flt Permitted				0.75		1.00		1.00		0.12	1.00	
Satd. Flow (perm)				1426		1601		3551		241	3579	
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)	0	0	0	99	0	82	0	1382	76	80	1429	0
RTOR Reduction (vph)	0	0	0	0	0	72	0	2	0	0	0	0
Lane Group Flow (vph)	0	0	0	99	0	10	0	1456	0	80	1429	0
Turn Type	Perm			Perm		Perm	Perm	NA		pm+pt	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)				13.9		13.9		85.6		96.1	96.1	
Effective Green, g (s)				14.9		14.9		86.6		97.1	97.1	
Actuated g/C Ratio				0.12		0.12		0.70		0.78	0.78	
Clearance Time (s)				8.5		8.5		6.0		4.0	6.0	
Vehicle Extension (s)				3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)				170		191		2470		281	2791	
v/s Ratio Prot								c0.41		0.02	c0.40	
v/s Ratio Perm				c0.07		0.01				0.20		
v/c Ratio				0.58		0.05		0.58		0.28	0.51	
Uniform Delay, d1				51.8		48.5		9.7		6.7	5.0	
Progression Factor				1.00		1.00		1.00		1.00	1.00	
Incremental Delay, d2				5.0		0.1		1.0		0.5	0.6	
Delay (s)				56.8		48.6		10.8		7.3	5.6	
Level of Service				E		D		B		A	A	
Approach Delay (s/veh)		0.0			53.1			10.8			5.7	
Approach LOS		A			D			B			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	124.5	Sum of lost time (s)	18.5
Intersection Capacity Utilization	57.4%	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)	346	240	172	212	343	73	125	690	74	49	1036	410
Future Volume (vph)	346	240	172	212	343	73	125	690	74	49	1036	410
Lane Group Flow (vph)	376	261	187	230	373	79	136	750	80	53	1126	446
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4		3	8		5	2			6	7
Permitted Phases			4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	6	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	53.0	53.0	9.5	53.0	53.0	9.5	47.0	47.0	47.0	47.0	11.0
Total Split (s)	33.0	75.0	75.0	11.0	53.0	53.0	11.0	58.0	58.0	47.0	47.0	33.0
Total Split (%)	22.9%	52.1%	52.1%	7.6%	36.8%	36.8%	7.6%	40.3%	40.3%	32.6%	32.6%	22.9%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	3.0
All-Red Time (s)	3.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	6.0	6.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	Max	Max	None
v/c Ratio	0.65	0.37	0.26	0.53	0.79	0.15	0.72	0.47	0.10	0.23	0.90	0.44
Control Delay (s/veh)	53.1	28.6	4.0	27.2	54.8	0.7	45.1	26.8	2.6	35.7	49.8	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	53.1	28.6	4.0	27.2	54.8	0.7	45.1	26.8	2.6	35.7	49.8	8.9
Queue Length 50th (m)	42.6	44.1	0.0	30.7	81.6	0.0	18.0	64.2	0.0	8.7	131.3	24.8
Queue Length 95th (m)	64.5	64.2	13.1	45.5	122.9	0.6	#57.3	104.1	5.9	23.5	#219.3	58.1
Internal Link Dist (m)		158.1			150.9			130.2			491.3	
Turn Bay Length (m)	103.0			100.0		100.0	65.0		50.0	42.0		
Base Capacity (vph)	822	1099	1012	431	749	718	188	1575	763	229	1241	1100
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.24	0.18	0.53	0.50	0.11	0.72	0.48	0.10	0.23	0.91	0.41

Intersection Summary

Cycle Length: 144

Actuated Cycle Length: 119.4

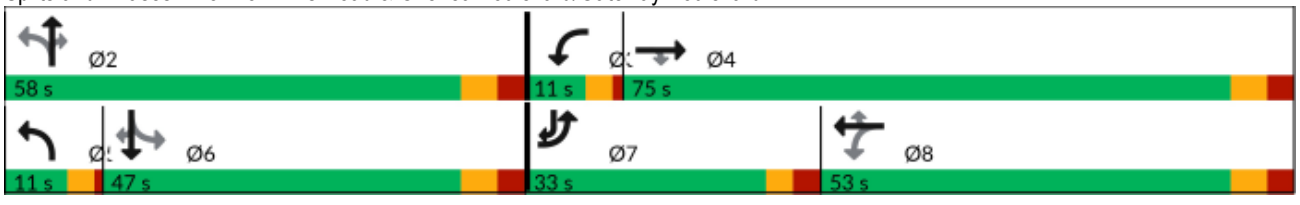
Natural Cycle: 125

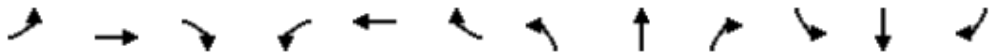
Control Type: Semi Act-Uncoord

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 8: Don Mills Road & Overlea Boulevard/Gateway Boulevard





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	346	240	172	212	343	73	125	690	74	49	1036	410
Future Volume (vph)	346	240	172	212	343	73	125	690	74	49	1036	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	6.0	6.0	5.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3471	1883	1601	1789	1883	1601	1789	3579	1601	1789	3579	1601
Flt Permitted	0.95	1.00	1.00	0.59	1.00	1.00	0.09	1.00	1.00	0.35	1.00	1.00
Satd. Flow (perm)	3471	1883	1601	1126	1883	1601	170	3579	1601	664	3579	1601
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)	376	261	187	230	373	79	136	750	80	53	1126	446
RTOR Reduction (vph)	0	0	119	0	0	59	0	0	45	0	0	113
Lane Group Flow (vph)	376	261	68	230	373	20	136	750	35	53	1126	333
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4		3	8		5	2			6	7
Permitted Phases			4	8		8	2		2	6		6
Actuated Green, G (s)	18.7	42.6	42.6	36.1	29.0	29.0	51.5	51.5	51.5	40.4	40.4	59.1
Effective Green, g (s)	19.7	43.6	43.6	38.1	30.0	30.0	52.5	52.5	52.5	41.4	41.4	61.1
Actuated g/C Ratio	0.17	0.37	0.37	0.32	0.25	0.25	0.44	0.44	0.44	0.35	0.35	0.51
Clearance Time (s)	6.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	573	688	585	404	473	402	184	1576	705	230	1243	820
v/s Ratio Prot	c0.11	0.14		0.04	c0.20		c0.05	0.21			c0.31	0.07
v/s Ratio Perm			0.04	0.14		0.01	0.27		0.02	0.08		0.14
v/c Ratio	0.65	0.37	0.11	0.56	0.78	0.04	0.73	0.47	0.04	0.23	0.90	0.40
Uniform Delay, d1	46.5	27.8	25.0	31.9	41.6	33.7	26.4	23.6	19.0	27.5	37.0	17.8
Progression 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
Incremental Delay, d2	2.7	0.3	0.0	1.8	8.4	0.0	14.3	1.0	0.1	2.3	11.0	0.3
Delay (s)	49.2	28.1	25.1	33.8	50.1	33.8	40.7	24.6	19.2	29.9	48.0	18.2
Level of Service	D	C	C	C	D	C	D	C	B	C	D	B
Approach Delay (s/veh)		37.1			42.7			26.4			39.3	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	36.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	119.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	200	37	26	73	118	243
Future Vol, veh/h	200	37	26	73	118	243
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	3	10	3	23	31	2
Mvmt Flow	238	44	31	87	140	289
Number of Lanes	1	1	0	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	13	10.3	10.7
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	26%	100%	0%	0%	0%
Vol Thru, %	74%	0%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	200	37	118	243
LT Vol	26	200	0	0	0
Through Vol	73	0	0	118	0
RT Vol	0	0	37	0	243
Lane Flow Rate	118	238	44	140	289
Geometry Grp	3b	5	5	5	5
Degree of Util (X)	0.192	0.426	0.066	0.235	0.388
Departure Headway (Hd)	5.856	6.448	5.357	6.032	4.828
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	615	562	672	590	735
Service Time	3.871	4.154	3.063	3.829	2.625
HCM Lane V/C Ratio	0.192	0.423	0.065	0.237	0.393
HCM Control Delay, s/veh	10.3	13.9	8.4	10.7	10.7
HCM Lane LOS	B	B	A	B	B
HCM 95th-tile Q	0.7	2.1	0.2	0.9	1.8

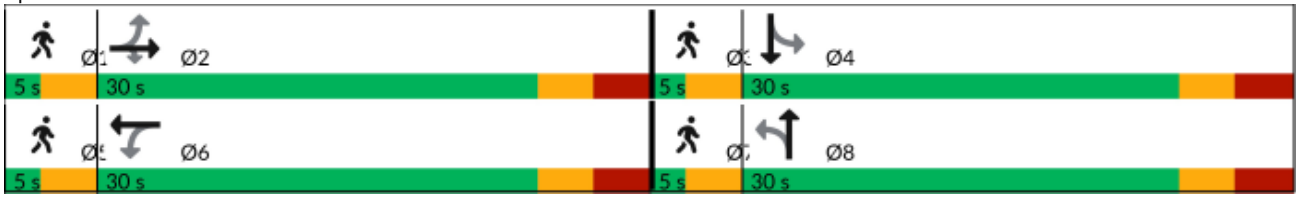
Timings
1: Deauville Lane & St. Dennis Drive

Baseline

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	Ø1	Ø3	Ø5
Lane Configurations												
Traffic Volume (vph)	32	215	52	171	94	50	81	116	101			
Future Volume (vph)	32	215	52	171	94	50	81	116	101			
Lane Group Flow (vph)	34	231	56	184	162	0	344	0	324			
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA			
Protected Phases		2			6		8		4	1	3	5
Permitted Phases	2		2	6		8		4				
Detector Phase	2	2	2	6	6	8	8	4	4			
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	2.0	2.0	2.0
Minimum Split (s)	29.0	29.0	29.0	29.0	29.0	28.2	28.2	28.2	28.2	5.0	5.0	5.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	5.0	5.0	5.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	7%	7%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.2	3.2	3.2	3.2	0.0	0.0	0.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0		-1.0			
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.2		5.2			
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	None	None	None
v/c Ratio	0.08	0.38	0.10	0.62	0.28		0.50		0.49			
Control Delay (s/veh)	11.8	15.0	0.4	24.4	10.2		10.5		13.2			
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay (s/veh)	11.8	15.0	0.4	24.4	10.2		10.5		13.2			
Queue Length 50th (m)	2.2	16.2	0.0	14.1	7.5		12.3		16.6			
Queue Length 95th (m)	6.5	29.6	0.0	30.2	17.5		39.7		45.5			
Internal Link Dist (m)		501.3			138.2		192.3		23.5			
Turn Bay Length (m)	28.0		10.0	32.0								
Base Capacity (vph)	577	904	702	448	841		682		654			
Starvation Cap Reductn	0	0	0	0	0		0		0			
Spillback Cap Reductn	0	0	0	0	0		0		0			
Storage Cap Reductn	0	0	0	0	0		0		0			
Reduced v/c Ratio	0.06	0.26	0.08	0.41	0.19		0.50		0.50			

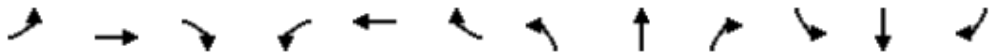
Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 52.2
Natural Cycle: 70
Control Type: Semi Act-Uncoord

Splits and Phases: 1: Deauville Lane & St. Dennis Drive



Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	2.0
Minimum Split (s)	5.0
Total Split (s)	5.0
Total Split (%)	7%
Yellow Time (s)	3.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

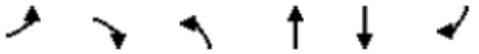
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	215	52	171	94	57	50	81	189	116	101	84
Future Volume (vph)	32	215	52	171	94	57	50	81	189	116	101	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0			5.2			5.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00	0.87	1.00	0.97			0.93			0.97	
Flpb, ped/bikes	0.96	1.00	1.00	0.91	1.00			0.99			0.97	
Frt	1.00	1.00	0.85	1.00	0.94			0.92			0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.98	
Satd. Flow (prot)	1754	1865	1355	1486	1693			1451			1708	
Flt Permitted	0.65	1.00	1.00	0.60	1.00			0.90			0.76	
Satd. Flow (perm)	1208	1865	1355	950	1693			1323			1339	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	34	231	56	184	101	61	54	87	203	125	109	90
RTOR Reduction (vph)	0	0	38	0	33	0	0	59	0	0	16	0
Lane Group Flow (vph)	34	231	18	184	129	0	0	285	0	0	308	0
Confl. Peds. (#/hr)	43		98	98		43	45		79	79		45
Heavy Vehicles (%)	0%	3%	5%	13%	7%	0%	5%	4%	18%	0%	4%	2%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	15.7	15.7	15.7	15.7	15.7			24.1			24.1	
Effective Green, g (s)	16.7	16.7	16.7	16.7	16.7			25.1			25.1	
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32			0.48			0.48	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0			6.2			6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	387	598	435	305	543			638			646	
v/s Ratio Prot		0.12			0.08							
v/s Ratio Perm	0.03		0.01	c0.19				0.22			c0.23	
v/c Ratio	0.08	0.38	0.04	0.60	0.23			0.44			0.47	
Uniform Delay, d1	12.3	13.6	12.1	14.8	12.9			8.8			9.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.0	0.4	0.0	3.3	0.2			2.2			2.5	
Delay (s)	12.4	14.0	12.1	18.2	13.2			11.1			11.5	
Level of Service	B	B	B	B	B			B			B	
Approach Delay (s/veh)		13.5			15.8			11.1			11.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	52.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

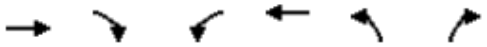
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	231	45	30	88	140	183
Future Volume (vph)	231	45	30	88	140	183
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	275	54	36	105	167	218

Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2
Volume Total (vph)	275	54	141	167	218
Volume Left (vph)	275	0	36	0	0
Volume Right (vph)	0	54	0	0	218
Hadj (s)	0.25	-0.43	0.36	0.53	-0.57
Departure Headway (s)	5.0	3.2	5.2	5.4	3.2
Degree Utilization, x	0.38	0.05	0.21	0.25	0.19
Capacity (veh/h)	690	1121	647	632	1121
Control Delay (s/veh)	11.0	6.4	9.6	10.2	7.0
Approach Delay (s/veh)	10.3		9.6	8.3	
Approach LOS	B		A	A	

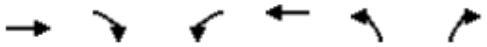
Intersection Summary			
Delay	9.3		
Level of Service	A		
Intersection Capacity Utilization	38.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	271	0	0	213	6	5
Future Volume (Veh/h)	271	0	0	213	6	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	295	0	0	232	7	5
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			295		527	295
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			295		527	295
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			1266		512	744

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	295	232	12
Volume Left	0	0	7
Volume Right	0	0	5
cSH	1700	1266	588
Volume to Capacity	0.17	0.00	0.02
Queue Length 95th (m)	0.0	0.0	0.5
Control Delay (s/veh)	0.0	0.0	11.2
Lane LOS			B
Approach Delay (s/veh)	0.0	0.0	11.2
Approach LOS			B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	24.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	264	11	16	203	9	7
Future Volume (Veh/h)	264	11	16	203	9	7
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	287	12	17	221	10	8
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			299		548	293
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			299		548	293
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		98	99
cM capacity (veh/h)			1262		491	746

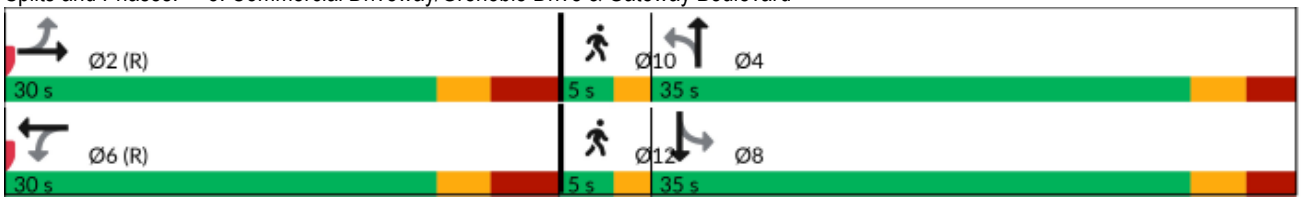
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	299	238	18
Volume Left	0	17	10
Volume Right	12	0	8
cSH	1700	1262	579
Volume to Capacity	0.18	0.01	0.03
Queue Length 95th (m)	0.0	0.3	0.7
Control Delay (s/veh)	0.0	0.7	11.4
Lane LOS		A	B
Approach Delay (s/veh)	0.0	0.7	11.4
Approach LOS			B

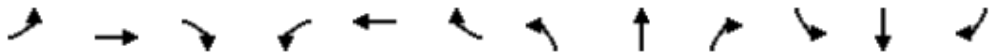
Intersection Summary			
Average Delay		0.7	
Intersection Capacity Utilization		33.9%	ICU Level of Service
Analysis Period (min)		15	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø10	Ø12
Lane Configurations										
Traffic Volume (vph)	151	64	18	57	49	65	20	86		
Future Volume (vph)	151	64	18	57	49	65	20	86		
Lane Group Flow (vph)	157	134	0	187	0	145	0	212		
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA		
Protected Phases		2		6		4		8	10	12
Permitted Phases	2		6		4		8			
Detector Phase	2	2	6	6	4	4	8	8		
Switch Phase										
Minimum Initial (s)	23.0	23.0	23.0	23.0	24.0	24.0	24.0	24.0	1.0	1.5
Minimum Split (s)	29.6	29.6	29.6	29.6	34.7	34.7	34.7	34.7	5.0	5.0
Total Split (s)	30.0	30.0	30.0	30.0	35.0	35.0	35.0	35.0	5.0	5.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	50.0%	50.0%	50.0%	50.0%	7%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	3.6	3.6	3.6	3.6	2.7	2.7	2.7	2.7	0.0	0.0
Lost Time Adjust (s)	-1.0	-1.0		-1.0		-1.0		-1.0		
Total Lost Time (s)	5.6	5.6		5.6		4.7		4.7		
Lead/Lag					Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
v/c Ratio	0.50	0.22		0.38		0.22		0.29		
Control Delay (s/veh)	25.1	9.8		10.3		11.8		9.0		
Queue Delay	0.0	0.0		0.0		0.0		0.0		
Total Delay (s/veh)	25.1	9.8		10.3		11.8		9.0		
Queue Length 50th (m)	16.0	5.9		7.0		9.8		10.0		
Queue Length 95th (m)	33.3	16.6		21.2		20.3		22.9		
Internal Link Dist (m)		158.4		25.7		14.9		38.5		
Turn Bay Length (m)	48.0									
Base Capacity (vph)	309	609		490		638		708		
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	0.51	0.22		0.38		0.23		0.30		

Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 1 (1%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Pretimed

Splits and Phases: 5: Commercial Driveway/Grenoble Drive & Gateway Boulevard





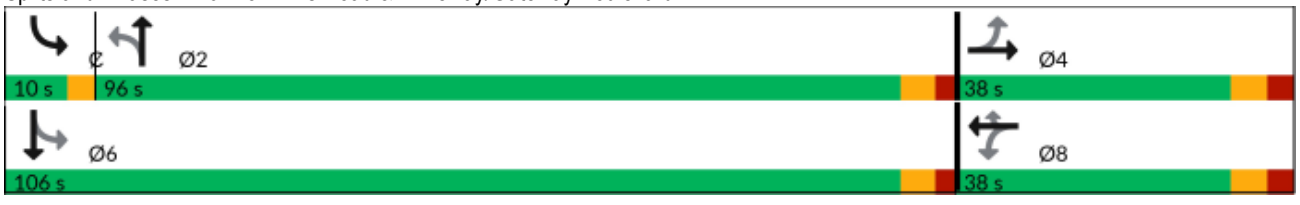
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	64	64	18	57	105	49	65	25	20	86	97
Future Volume (vph)	151	64	64	18	57	105	49	65	25	20	86	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6			5.6			4.7			4.7	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.94			0.82			0.97			0.91	
Flpb, ped/bikes	0.78	1.00			0.99			0.95			0.99	
Frt	1.00	0.92			0.92			0.97			0.93	
Flt Protected	0.95	1.00			0.99			0.98			0.99	
Satd. Flow (prot)	1296	1622			1241			1675			1572	
Flt Permitted	0.65	1.00			0.96			0.84			0.96	
Satd. Flow (perm)	887	1622			1204			1448			1529	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	157	67	67	19	59	109	51	68	26	21	90	101
RTOR Reduction (vph)	0	44	0	0	71	0	0	11	0	0	47	0
Lane Group Flow (vph)	157	90	0	0	116	0	0	134	0	0	165	0
Confl. Peds. (#/hr)	192		61	61		192	140		98	98		140
Heavy Vehicles (%)	11%	6%	1%	14%	10%	19%	4%	3%	0%	5%	2%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	23.4	23.4			23.4			29.3			29.3	
Effective Green, g (s)	24.4	24.4			24.4			30.3			30.3	
Actuated g/C Ratio	0.35	0.35			0.35			0.43			0.43	
Clearance Time (s)	6.6	6.6			6.6			5.7			5.7	
Lane Grp Cap (vph)	309	565			419			626			661	
v/s Ratio Prot		0.06										
v/s Ratio Perm	c0.18				0.10			0.09			c0.11	
v/c Ratio	0.50	0.15			0.27			0.21			0.24	
Uniform Delay, d1	18.0	15.7			16.4			12.4			12.6	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	5.8	0.6			1.6			0.7			0.9	
Delay (s)	23.9	16.3			18.0			13.1			13.5	
Level of Service	C	B			B			B			B	
Approach Delay (s/veh)		20.4			18.0			13.1			13.5	
Approach LOS		C			B			B			B	

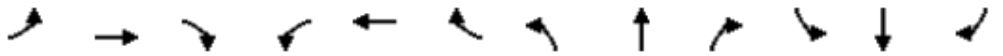
Intersection Summary			
HCM 2000 Control Delay (s/veh)	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø4
Lane Configurations						
Traffic Volume (vph)	168	161	1322	166	1113	
Future Volume (vph)	168	161	1322	166	1113	
Lane Group Flow (vph)	183	175	1552	180	1210	
Turn Type	Perm	Perm	NA	pm+pt	NA	
Protected Phases			2	1	6	4
Permitted Phases	8	8		6		
Detector Phase	8	8	2	1	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	38.0	38.0	96.0	9.5	96.0	38.0
Total Split (s)	38.0	38.0	96.0	10.0	106.0	38.0
Total Split (%)	26.4%	26.4%	66.7%	6.9%	73.6%	26%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	3.0	3.0	2.0	0.0	2.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	6.0	6.0	5.0	2.0	5.0	
Lead/Lag			Lag	Lead		
Lead-Lag Optimize?			Yes	Yes		
Recall Mode	None	None	Max	None	Max	None
v/c Ratio	0.75	0.63	0.65	0.73	0.45	
Control Delay (s/veh)	72.0	62.8	15.1	27.8	7.7	
Queue Delay	0.0	0.0	0.0	0.0	0.2	
Total Delay (s/veh)	72.0	62.8	15.1	27.8	8.0	
Queue Length 50th (m)	47.0	44.0	117.4	10.8	58.0	
Queue Length 95th (m)	72.8	68.2	167.5	#30.9	88.7	
Internal Link Dist (m)			491.3		226.5	
Turn Bay Length (m)	35.0	71.0		72.0		
Base Capacity (vph)	337	379	2385	246	2673	
Starvation Cap Reductn	0	0	0	0	709	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.54	0.46	0.65	0.73	0.62	

Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 135.5
Natural Cycle: 145
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Don Mills Road & Driveway/Gateway Boulevard





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	168	0	161	0	1322	106	166	1113	0
Future Volume (vph)	0	0	0	168	0	161	0	1322	106	166	1113	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0		6.0		5.0		2.0	5.0	
Lane Util. Factor				1.00		1.00		0.95		1.00	0.95	
Frt				1.00		0.85		0.98		1.00	1.00	
Flt Protected				0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)				1789		1601		3539		1789	3579	
Flt Permitted				0.75		1.00		1.00		0.10	1.00	
Satd. Flow (perm)				1426		1601		3539		197	3579	
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)	0	0	0	183	0	175	0	1437	115	180	1210	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	0	0	183	0	175	0	1548	0	180	1210	0
Turn Type	Perm			Perm		Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)				22.3		22.3		90.2		100.2	100.2	
Effective Green, g (s)				23.3		23.3		91.2		101.2	101.2	
Actuated g/C Ratio				0.17		0.17		0.67		0.75	0.75	
Clearance Time (s)				7.0		7.0		6.0		3.0	6.0	
Vehicle Extension (s)				3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)				245		275		2381		241	2673	
v/s Ratio Prot								c0.44		c0.04	0.34	
v/s Ratio Perm				c0.13		0.11				0.51		
v/c Ratio				0.74		0.63		0.65		0.74	0.45	
Uniform Delay, d1				53.2		52.1		12.8		14.8	6.5	
Progression Factor				1.00		1.00		1.00		1.00	1.00	
Incremental Delay, d2				11.7		4.7		1.3		11.8	0.5	
Delay (s)				65.0		56.9		14.2		26.7	7.1	
Level of Service				E		E		B		C	A	
Approach Delay (s/veh)		0.0			61.0			14.2			9.6	
Approach LOS		A			E			B			A	

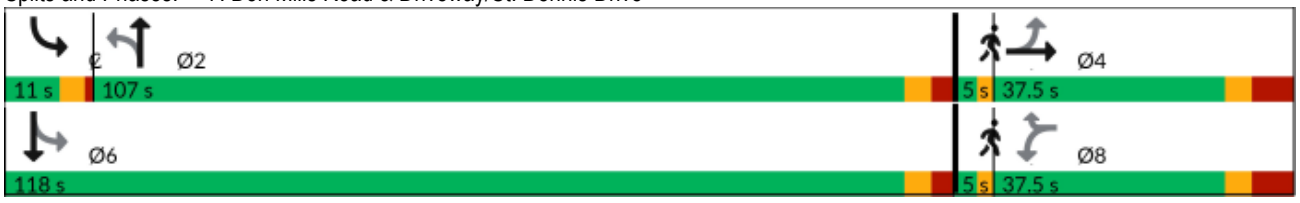
Intersection Summary			
HCM 2000 Control Delay (s/veh)	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	135.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		

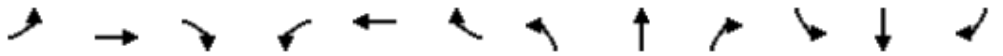
c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø3	Ø4	Ø7
Lane Configurations								
Traffic Volume (vph)	117	57	1216	102	1162			
Future Volume (vph)	117	57	1216	102	1162			
Lane Group Flow (vph)	127	62	1612	111	1263			
Turn Type	Perm	Perm	NA	pm+pt	NA			
Protected Phases			2	1	6	3	4	7
Permitted Phases	8	8		6				
Detector Phase	8	8	2	1	6			
Switch Phase								
Minimum Initial (s)	7.0	7.0	5.0	5.0	5.0	1.0	7.0	1.0
Minimum Split (s)	37.5	37.5	107.0	9.5	107.0	3.0	37.5	3.0
Total Split (s)	37.5	37.5	107.0	11.0	118.0	5.0	37.5	5.0
Total Split (%)	23.4%	23.4%	66.7%	6.9%	73.5%	3%	23%	3%
Yellow Time (s)	3.3	3.3	3.3	3.0	3.3	2.0	3.3	2.0
All-Red Time (s)	5.2	5.2	2.7	1.0	2.7	0.0	5.2	0.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0			
Total Lost Time (s)	7.5	7.5	5.0	3.0	5.0			
Lead/Lag	Lag	Lag	Lag	Lead		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	Max	None	Max	None	None	None
v/c Ratio	0.67	0.23	0.65	0.46	0.45			
Control Delay (s/veh)	77.6	14.1	13.4	10.2	6.3			
Queue Delay	0.0	0.0	0.8	0.0	0.0			
Total Delay (s/veh)	77.6	14.1	14.3	10.2	6.3			
Queue Length 50th (m)	35.2	0.0	119.3	5.9	55.6			
Queue Length 95th (m)	57.0	13.3	168.2	13.0	84.5			
Internal Link Dist (m)			226.5		183.4			
Turn Bay Length (m)		60.0		100.0				
Base Capacity (vph)	295	381	2471	241	2797			
Starvation Cap Reductn	0	0	511	0	0			
Spillback Cap Reductn	0	0	0	0	0			
Storage Cap Reductn	0	0	0	0	0			
Reduced v/c Ratio	0.43	0.16	0.82	0.46	0.45			

Intersection Summary
Cycle Length: 160.5
Actuated Cycle Length: 144.8
Natural Cycle: 160
Control Type: Semi Act-Uncoord

Splits and Phases: 7: Don Mills Road & Driveway/St. Dennis Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	117	0	57	0	1216	267	102	1162	0
Future Volume (vph)	0	0	0	117	0	57	0	1216	267	102	1162	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				7.5		7.5		5.0		3.0	5.0	
Lane Util. Factor				1.00		1.00		0.95		1.00	0.95	
Frt				1.00		0.85		0.97		1.00	1.00	
Flt Protected				0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)				1789		1601		3482		1789	3579	
Flt Permitted				0.75		1.00		1.00		0.10	1.00	
Satd. Flow (perm)				1426		1601		3482		192	3579	
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)	0	0	0	127	0	62	0	1322	290	111	1263	0
RTOR Reduction (vph)	0	0	0	0	0	54	0	9	0	0	0	0
Lane Group Flow (vph)	0	0	0	127	0	8	0	1603	0	111	1263	0
Turn Type	Perm			Perm		Perm	Perm	NA		pm+pt	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)				18.1		18.1		101.4		112.2	112.2	
Effective Green, g (s)				19.1		19.1		102.4		113.2	113.2	
Actuated g/C Ratio				0.13		0.13		0.71		0.78	0.78	
Clearance Time (s)				8.5		8.5		6.0		4.0	6.0	
Vehicle Extension (s)				3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)				188		211		2462		236	2797	
v/s Ratio Prot								c0.46		0.03	c0.35	
v/s Ratio Perm				c0.09		0.01				0.34		
v/c Ratio				0.67		0.03		0.65		0.47	0.45	
Uniform Delay, d1				59.8		54.8		11.5		10.8	5.3	
Progression Factor				1.00		1.00		1.00		1.00	1.00	
Incremental Delay, d2				9.2		0.0		1.3		1.4	0.5	
Delay (s)				69.1		54.9		12.8		12.3	5.8	
Level of Service				E		D		B		B	A	
Approach Delay (s/veh)		0.0			64.4			12.8			6.3	
Approach LOS		A			E			B			A	

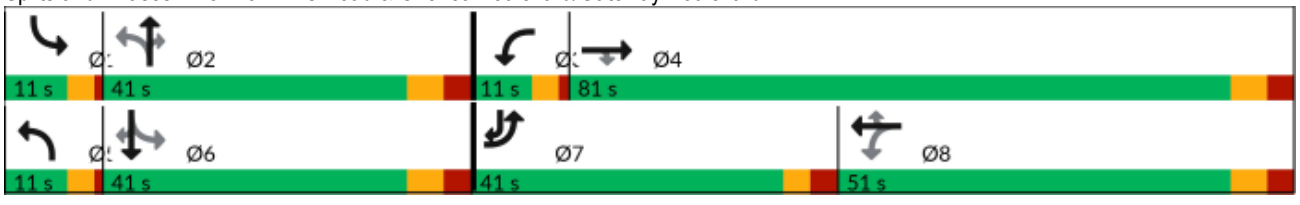
Intersection Summary			
HCM 2000 Control Delay (s/veh)	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	144.8	Sum of lost time (s)	18.5
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

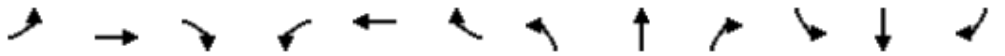
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	425	508	207	90	211	110	115	1071	113	88	525	668
Future Volume (vph)	425	508	207	90	211	110	115	1071	113	88	525	668
Lane Group Flow (vph)	462	552	225	98	229	120	125	1164	123	96	571	726
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	41.0	51.0	51.0	9.5	51.0	51.0	9.5	41.0	41.0	9.5	41.0	41.0
Total Split (s)	41.0	81.0	81.0	11.0	51.0	51.0	11.0	41.0	41.0	11.0	41.0	41.0
Total Split (%)	28.5%	56.3%	56.3%	7.6%	35.4%	35.4%	7.6%	28.5%	28.5%	7.6%	28.5%	28.5%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	3.0
All-Red Time (s)	3.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	None
v/c Ratio	0.65	0.83	0.31	0.38	0.59	0.27	0.34	0.98	0.19	0.45	0.48	0.65
Control Delay (s/veh)	44.3	43.3	4.0	21.8	46.0	6.3	21.9	59.7	5.0	26.2	31.7	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.3	43.3	4.0	21.8	46.0	6.3	21.9	59.7	5.0	26.2	31.7	8.9
Queue Length 50th (m)	45.6	103.9	0.0	10.7	43.4	0.0	14.6	125.6	0.0	11.1	49.4	35.6
Queue Length 95th (m)	66.0	144.0	14.0	19.2	72.6	11.3	31.8	#208.5	11.4	25.4	77.9	82.2
Internal Link Dist (m)		158.1			150.9			130.2			491.3	
Turn Bay Length (m)	103.0			100.0		100.0	65.0		50.0	42.0		
Base Capacity (vph)	1176	1329	1196	255	797	756	359	1182	620	211	1179	1274
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.42	0.19	0.38	0.29	0.16	0.35	0.98	0.20	0.45	0.48	0.57

Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 107
Natural Cycle: 145
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Don Mills Road & Overlea Boulevard/Gateway Boulevard





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	425	508	207	90	211	110	115	1071	113	88	525	668
Future Volume (vph)	425	508	207	90	211	110	115	1071	113	88	525	668
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	5.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3471	1883	1601	1789	1883	1601	1789	3579	1601	1789	3579	1601
Flt Permitted	0.95	1.00	1.00	0.27	1.00	1.00	0.33	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	3471	1883	1601	517	1883	1601	627	3579	1601	214	3579	1601
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)	462	552	225	98	229	120	125	1164	123	96	571	726
RTOR Reduction (vph)	0	0	146	0	0	95	0	0	82	0	0	194
Lane Group Flow (vph)	462	552	79	98	229	25	125	1164	41	96	571	532
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4	8		8	2		2	6		6
Actuated Green, G (s)	20.7	36.7	36.7	27.8	20.9	20.9	41.3	34.3	34.3	41.1	34.2	54.9
Effective Green, g (s)	21.7	37.7	37.7	29.8	21.9	21.9	43.3	35.3	35.3	43.1	35.2	56.9
Actuated g/C Ratio	0.20	0.35	0.35	0.28	0.21	0.21	0.41	0.33	0.33	0.40	0.33	0.53
Clearance Time (s)	6.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	705	664	565	238	386	328	341	1182	529	202	1179	852
v/s Ratio Prot	c0.13	c0.29		0.03	0.12		0.03	c0.33		c0.03	0.16	0.13
v/s Ratio Perm			0.05	0.08		0.02	0.12		0.03	0.16		0.21
v/c Ratio	0.65	0.83	0.14	0.41	0.59	0.07	0.36	0.98	0.07	0.47	0.48	0.62
Uniform Delay, d1	39.1	31.6	23.5	29.7	38.4	34.2	20.6	35.4	24.5	24.7	28.5	17.4
Progression 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
Incremental Delay, d2	2.2	8.7	0.1	1.1	2.4	0.0	0.6	22.7	0.2	1.7	1.4	1.4
Delay (s)	41.3	40.3	23.6	30.9	40.8	34.3	21.3	58.2	24.8	26.5	29.9	18.8
Level of Service	D	D	C	C	D	C	C	E	C	C	C	B
Approach Delay (s/veh)		37.6			36.9			52.0			23.9	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	37.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	106.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	231	45	30	88	140	183
Future Vol, veh/h	231	45	30	88	140	183
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	3	10	3	23	31	2
Mvmt Flow	275	54	36	105	167	218
Number of Lanes	1	1	0	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	14.2	10.8	10.8
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	25%	100%	0%	0%	0%
Vol Thru, %	75%	0%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	118	231	45	140	183
LT Vol	30	231	0	0	0
Through Vol	88	0	0	140	0
RT Vol	0	0	45	0	183
Lane Flow Rate	140	275	54	167	218
Geometry Grp	3b	5	5	5	5
Degree of Util (X)	0.233	0.493	0.08	0.293	0.31
Departure Headway (Hd)	5.971	6.454	5.363	6.322	5.115
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	601	558	669	572	708
Service Time	4.002	4.183	3.091	4.022	2.815
HCM Lane V/C Ratio	0.233	0.493	0.081	0.292	0.308
HCM Control Delay, s/veh	10.8	15.3	8.6	11.6	10.1
HCM Lane LOS	B	C	A	B	B
HCM 95th-tile Q	0.9	2.7	0.3	1.2	1.3

BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

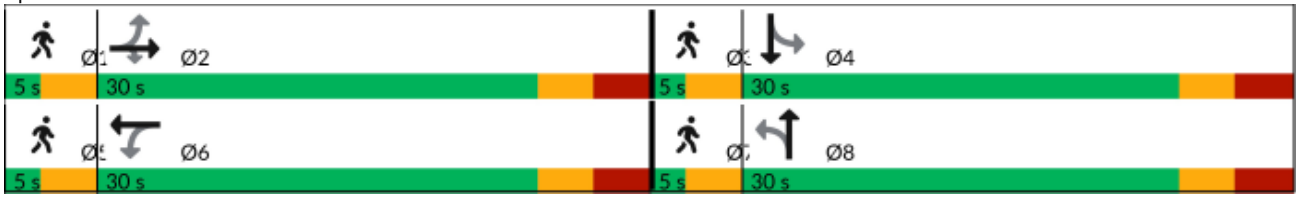
Appendix G

Background 2031 Traffic Operations

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	Ø1	Ø3	Ø5
Lane Configurations												
Traffic Volume (vph)	54	103	83	212	85	61	66	51	95			
Future Volume (vph)	54	103	83	212	85	61	66	51	95			
Lane Group Flow (vph)	58	111	89	228	207	0	381	0	274			
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA			
Protected Phases		2			6		8		4	1	3	5
Permitted Phases	2		2	6		8		4				
Detector Phase	2	2	2	6	6	8	8	4	4			
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	2.0	2.0	2.0
Minimum Split (s)	29.0	29.0	29.0	29.0	29.0	28.2	28.2	28.2	28.2	5.0	5.0	5.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	5.0	5.0	5.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	7%	7%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.2	3.2	3.2	3.2	0.0	0.0	0.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0		-1.0			
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.2		5.2			
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	None	None	None
v/c Ratio	0.15	0.17	0.16	0.67	0.34		0.56		0.37			
Control Delay (s/veh)	12.6	12.4	1.6	25.7	8.2		11.4		10.1			
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay (s/veh)	12.6	12.4	1.6	25.7	8.2		11.4		10.1			
Queue Length 50th (m)	3.7	7.2	0.0	18.0	6.9		13.6		11.6			
Queue Length 95th (m)	9.8	15.4	2.9	36.9	18.0		44.6		32.3			
Internal Link Dist (m)		501.3			138.2		192.3		23.5			
Turn Bay Length (m)	28.0		10.0	32.0								
Base Capacity (vph)	547	889	693	484	829		670		722			
Starvation Cap Reductn	0	0	0	0	0		0		0			
Spillback Cap Reductn	0	0	0	0	0		0		0			
Storage Cap Reductn	0	0	0	0	0		0		0			
Reduced v/c Ratio	0.11	0.12	0.13	0.47	0.25		0.57		0.38			

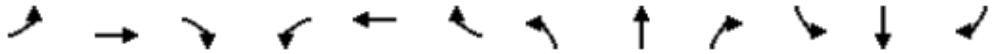
Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 53
Natural Cycle: 70
Control Type: Semi Act-Uncoord

Splits and Phases: 1: Deauville Lane & St. Dennis Drive



Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	2.0
Minimum Split (s)	5.0
Total Split (s)	5.0
Total Split (%)	7%
Yellow Time (s)	3.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

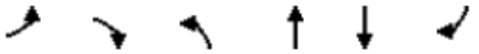
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	103	83	212	85	108	61	66	227	51	95	109
Future Volume (vph)	54	103	83	212	85	108	61	66	227	51	95	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0			5.2			5.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00	0.86	1.00	0.96			0.92			0.96	
Flpb, ped/bikes	0.96	1.00	1.00	0.90	1.00			0.99			0.98	
Frt	1.00	1.00	0.85	1.00	0.91			0.91			0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1757	1865	1352	1459	1642			1418			1679	
Flt Permitted	0.62	1.00	1.00	0.68	1.00			0.89			0.86	
Satd. Flow (perm)	1162	1865	1352	1053	1642			1287			1475	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	58	111	89	228	91	116	66	71	244	55	102	117
RTOR Reduction (vph)	0	0	59	0	68	0	0	75	0	0	31	0
Lane Group Flow (vph)	58	111	30	228	139	0	0	306	0	0	243	0
Confl. Peds. (#/hr)	43		98	98		43	45		79	79		45
Heavy Vehicles (%)	0%	3%	5%	13%	7%	0%	5%	4%	18%	0%	4%	2%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	16.6	16.6	16.6	16.6	16.6			24.1			24.1	
Effective Green, g (s)	17.6	17.6	17.6	17.6	17.6			25.1			25.1	
Actuated g/C Ratio	0.33	0.33	0.33	0.33	0.33			0.47			0.47	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0			6.2			6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	386	620	449	350	546			610			699	
v/s Ratio Prot		0.06			0.08							
v/s Ratio Perm	0.05		0.02	c0.22				c0.24			0.16	
v/c Ratio	0.15	0.17	0.06	0.65	0.25			0.50			0.34	
Uniform Delay, d1	12.3	12.5	12.0	15.0	12.8			9.5			8.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	0.1	0.0	4.3	0.2			2.9			1.3	
Delay (s)	12.5	12.6	12.1	19.3	13.1			12.5			10.1	
Level of Service	B	B	B	B	B			B			B	
Approach Delay (s/veh)		12.4			16.3			12.5			10.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	52.9	Sum of lost time (s)	16.2
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

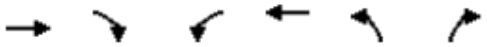
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	232	40	28	78	127	306
Future Volume (vph)	232	40	28	78	127	306
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	276	48	33	93	151	364

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	324	126	515
Volume Left (vph)	276	33	0
Volume Right (vph)	48	0	364
Hadj (s)	0.15	0.35	-0.25
Departure Headway (s)	5.7	6.0	4.9
Degree Utilization, x	0.51	0.21	0.70
Capacity (veh/h)	595	556	717
Control Delay (s/veh)	14.5	10.6	18.3
Approach Delay (s/veh)	14.5	10.6	18.3
Approach LOS	B	B	C

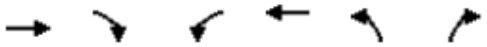
Intersection Summary			
Delay	16.0		
Level of Service	C		
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	271	0	0	333	2	1
Future Volume (Veh/h)	271	0	0	333	2	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	295	0	0	362	2	1
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			295		657	295
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			295		657	295
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1266		430	744

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	295	362	3
Volume Left	0	0	2
Volume Right	0	0	1
cSH	1700	1266	500
Volume to Capacity	0.17	0.00	0.01
Queue Length 95th (m)	0.0	0.0	0.1
Control Delay (s/veh)	0.0	0.0	12.2
Lane LOS			B
Approach Delay (s/veh)	0.0	0.0	12.2
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	27.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	254	5	4	331	9	16
Future Volume (Veh/h)	254	5	4	331	9	16
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	276	5	4	360	10	17
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			281		647	279
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			281		647	279
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	98
cM capacity (veh/h)			1282		434	760

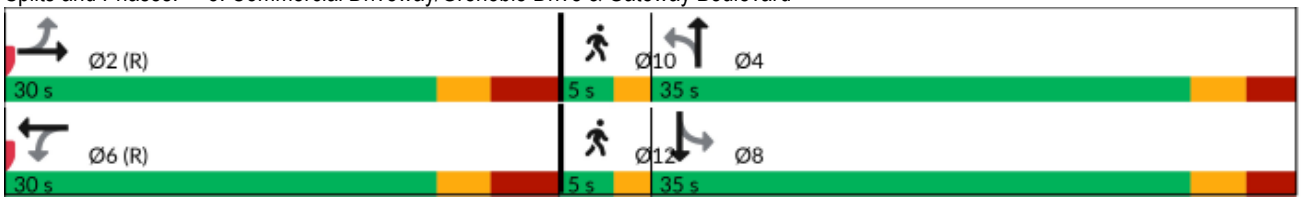
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	281	364	27
Volume Left	0	4	10
Volume Right	5	0	17
cSH	1700	1282	595
Volume to Capacity	0.17	0.00	0.05
Queue Length 95th (m)	0.0	0.1	1.1
Control Delay (s/veh)	0.0	0.1	11.3
Lane LOS		A	B
Approach Delay (s/veh)	0.0	0.1	11.3
Approach LOS			B

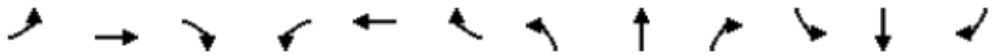
Intersection Summary			
Average Delay		0.5	
Intersection Capacity Utilization		30.6%	ICU Level of Service
Analysis Period (min)		15	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø10	Ø12
Lane Configurations										
Traffic Volume (vph)	112	110	8	69	49	55	106	76		
Future Volume (vph)	112	110	8	69	49	55	106	76		
Lane Group Flow (vph)	117	160	0	143	0	128	0	416		
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA		
Protected Phases		2		6		4		8	10	12
Permitted Phases	2		6		4		8			
Detector Phase	2	2	6	6	4	4	8	8		
Switch Phase										
Minimum Initial (s)	23.0	23.0	23.0	23.0	24.0	24.0	24.0	24.0	1.0	1.5
Minimum Split (s)	29.6	29.6	29.6	29.6	34.7	34.7	34.7	34.7	5.0	5.0
Total Split (s)	30.0	30.0	30.0	30.0	35.0	35.0	35.0	35.0	5.0	5.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	50.0%	50.0%	50.0%	50.0%	7%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	3.6	3.6	3.6	3.6	2.7	2.7	2.7	2.7	0.0	0.0
Lost Time Adjust (s)	-1.0	-1.0		-1.0		-1.0		-1.0		
Total Lost Time (s)	5.6	5.6		5.6		4.7		4.7		
Lead/Lag					Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
v/c Ratio	0.35	0.26		0.28		0.21		0.65		
Control Delay (s/veh)	20.8	14.4		11.5		11.8		17.2		
Queue Delay	0.0	0.0		0.0		0.0		0.0		
Total Delay (s/veh)	20.8	14.4		11.5		11.8		17.2		
Queue Length 50th (m)	11.2	11.7		7.2		8.6		29.9		
Queue Length 95th (m)	24.1	24.2		19.1		18.5		59.6		
Internal Link Dist (m)		158.4		25.7		14.9		38.5		
Turn Bay Length (m)	48.0									
Base Capacity (vph)	329	614		507		600		635		
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	0.36	0.26		0.28		0.21		0.66		

Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 1 (1%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Pretimed

Splits and Phases: 5: Commercial Driveway/Grenoble Drive & Gateway Boulevard





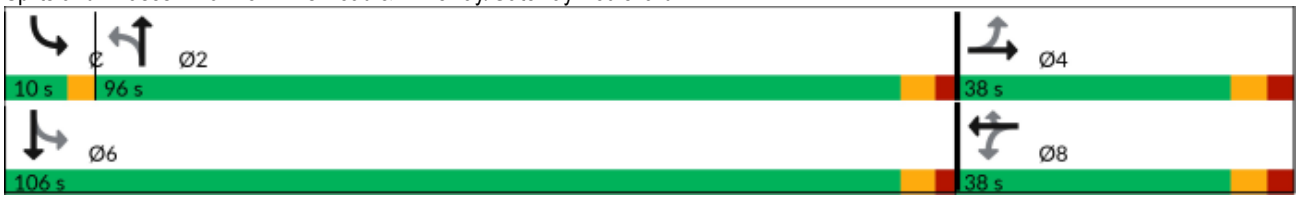
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	110	43	8	69	60	49	55	19	106	76	218
Future Volume (vph)	112	110	43	8	69	60	49	55	19	106	76	218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6			5.6			4.7			4.7	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.96			0.86			0.97			0.89	
Flpb, ped/bikes	0.76	1.00			0.99			0.96			0.97	
Frt	1.00	0.95			0.94			0.97			0.92	
Flt Protected	0.95	1.00			0.99			0.98			0.98	
Satd. Flow (prot)	1261	1704			1359			1697			1488	
Flt Permitted	0.71	1.00			0.98			0.78			0.87	
Satd. Flow (perm)	947	1704			1340			1363			1326	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	117	115	45	8	72	62	51	57	20	110	79	227
RTOR Reduction (vph)	0	20	0	0	40	0	0	10	0	0	62	0
Lane Group Flow (vph)	117	140	0	0	103	0	0	118	0	0	354	0
Confl. Peds. (#/hr)	192		61	61		192	140		98	98		140
Heavy Vehicles (%)	11%	6%	1%	14%	10%	19%	4%	3%	0%	5%	2%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	23.4	23.4			23.4			29.3			29.3	
Effective Green, g (s)	24.4	24.4			24.4			30.3			30.3	
Actuated g/C Ratio	0.35	0.35			0.35			0.43			0.43	
Clearance Time (s)	6.6	6.6			6.6			5.7			5.7	
Lane Grp Cap (vph)	330	593			467			589			573	
v/s Ratio Prot		0.08										
v/s Ratio Perm	c0.12				0.08			0.09			c0.27	
v/c Ratio	0.35	0.23			0.21			0.20			0.61	
Uniform Delay, d1	16.9	16.1			16.0			12.3			15.3	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	2.9	0.9			1.0			0.7			4.9	
Delay (s)	19.9	17.1			17.1			13.0			20.3	
Level of Service	B	B			B			B			C	
Approach Delay (s/veh)		18.2			17.1			13.0			20.3	
Approach LOS		B			B			B			C	

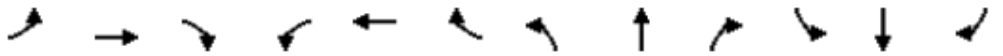
Intersection Summary			
HCM 2000 Control Delay (s/veh)	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø4
Lane Configurations						
Traffic Volume (vph)	222	188	1309	167	1460	
Future Volume (vph)	222	188	1309	167	1460	
Lane Group Flow (vph)	241	204	1560	182	1587	
Turn Type	Perm	Perm	NA	pm+pt	NA	
Protected Phases			2	1	6	4
Permitted Phases	8	8		6		
Detector Phase	8	8	2	1	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	38.0	38.0	96.0	9.5	96.0	38.0
Total Split (s)	38.0	38.0	96.0	10.0	106.0	38.0
Total Split (%)	26.4%	26.4%	66.7%	6.9%	73.6%	26%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	3.0	3.0	2.0	0.0	2.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	6.0	6.0	5.0	2.0	5.0	
Lead/Lag			Lag	Lead		
Lead-Lag Optimize?			Yes	Yes		
Recall Mode	None	None	Max	None	Max	None
v/c Ratio	0.84	0.63	0.67	0.80	0.61	
Control Delay (s/veh)	79.8	61.0	17.5	39.1	11.4	
Queue Delay	0.0	0.0	0.0	0.0	0.6	
Total Delay (s/veh)	79.8	61.0	17.5	39.1	12.1	
Queue Length 50th (m)	64.9	52.3	140.5	14.2	113.3	
Queue Length 95th (m)	#102.6	78.9	169.1	#35.6	136.8	
Internal Link Dist (m)			491.3		226.5	
Turn Bay Length (m)	35.0	71.0		72.0		
Base Capacity (vph)	325	366	2301	226	2583	
Starvation Cap Reductn	0	0	0	0	569	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.74	0.56	0.68	0.81	0.79	

Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 140.1
Natural Cycle: 145
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Don Mills Road & Driveway/Gateway Boulevard





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	222	0	188	0	1309	126	167	1460	0
Future Volume (vph)	0	0	0	222	0	188	0	1309	126	167	1460	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0		6.0		5.0		2.0	5.0	
Lane Util. Factor				1.00		1.00		0.95		1.00	0.95	
Frt				1.00		0.85		0.98		1.00	1.00	
Flt Protected				0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)				1789		1601		3531		1789	3579	
Flt Permitted				0.75		1.00		1.00		0.09	1.00	
Satd. Flow (perm)				1426		1601		3531		182	3579	
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)	0	0	0	241	0	204	0	1423	137	182	1587	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	0	0	241	0	204	0	1555	0	182	1587	0
Turn Type	Perm			Perm		Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)				27.0		27.0		90.1		100.1	100.1	
Effective Green, g (s)				28.0		28.0		91.1		101.1	101.1	
Actuated g/C Ratio				0.20		0.20		0.65		0.72	0.72	
Clearance Time (s)				7.0		7.0		6.0		3.0	6.0	
Vehicle Extension (s)				3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)				284		319		2296		223	2582	
v/s Ratio Prot								c0.44		c0.05	0.44	
v/s Ratio Perm				c0.17		0.13				0.54		
v/c Ratio				0.84		0.63		0.67		0.81	0.61	
Uniform Delay, d1				54.0		51.4		15.3		18.8	9.7	
Progression Factor				1.00		1.00		1.00		1.00	1.00	
Incremental Delay, d2				20.3		4.1		1.6		20.0	1.1	
Delay (s)				74.3		55.5		16.9		38.8	10.8	
Level of Service				E		E		B		D	B	
Approach Delay (s/veh)		0.0			65.7			16.9			13.7	
Approach LOS		A			E			B			B	

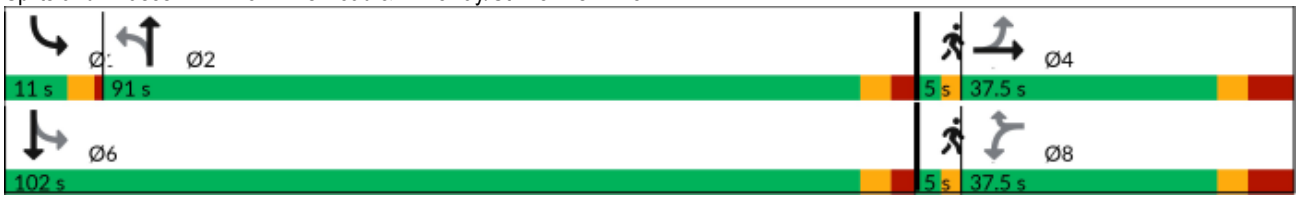
Intersection Summary			
HCM 2000 Control Delay (s/veh)	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	140.1	Sum of lost time (s)	13.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

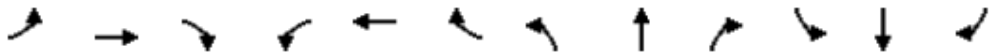
c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø3	Ø4	Ø7
Lane Configurations								
Traffic Volume (vph)	214	233	1418	149	1414			
Future Volume (vph)	214	233	1418	149	1414			
Lane Group Flow (vph)	233	253	1628	162	1537			
Turn Type	Perm	Perm	NA	pm+pt	NA			
Protected Phases			2	1	6	3	4	7
Permitted Phases	8	8		6				
Detector Phase	8	8	2	1	6			
Switch Phase								
Minimum Initial (s)	7.0	7.0	5.0	5.0	5.0	1.0	7.0	1.0
Minimum Split (s)	37.5	37.5	91.0	9.5	91.0	3.0	37.5	3.0
Total Split (s)	37.5	37.5	91.0	11.0	102.0	5.0	37.5	5.0
Total Split (%)	26.0%	26.0%	63.0%	7.6%	70.6%	3%	26%	3%
Yellow Time (s)	3.3	3.3	3.3	3.0	3.3	2.0	3.3	2.0
All-Red Time (s)	5.2	5.2	2.7	1.0	2.7	0.0	5.2	0.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0			
Total Lost Time (s)	7.5	7.5	5.0	3.0	5.0			
Lead/Lag	Lag	Lag	Lag	Lead		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	Max	None	Max	None	None	None
v/c Ratio	0.83	0.58	0.72	0.79	0.60			
Control Delay (s/veh)	77.6	26.6	19.8	44.7	11.5			
Queue Delay	0.0	0.0	1.1	0.0	0.0			
Total Delay (s/veh)	77.6	26.6	21.0	44.7	11.5			
Queue Length 50th (m)	60.8	26.1	156.6	16.0	108.0			
Queue Length 95th (m)	#98.3	54.3	185.4	#32.6	128.4			
Internal Link Dist (m)			226.5		183.4			
Turn Bay Length (m)		60.0		100.0				
Base Capacity (vph)	314	465	2244	203	2549			
Starvation Cap Reductn	0	0	357	0	0			
Spillback Cap Reductn	0	0	0	0	0			
Storage Cap Reductn	0	0	0	0	0			
Reduced v/c Ratio	0.74	0.54	0.86	0.80	0.60			

Intersection Summary
Cycle Length: 144.5
Actuated Cycle Length: 136.3
Natural Cycle: 145
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Don Mills Road & Driveway/St. Dennis Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	214	0	233	0	1418	80	149	1414	0
Future Volume (vph)	0	0	0	214	0	233	0	1418	80	149	1414	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				7.5		7.5		5.0		3.0	5.0	
Lane Util. Factor				1.00		1.00		0.95		1.00	0.95	
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)				1789		1601		3550		1789	3579	
Flt Permitted				0.75		1.00		1.00		0.07	1.00	
Satd. Flow (perm)				1426		1601		3550		146	3579	
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)	0	0	0	233	0	253	0	1541	87	162	1537	0
RTOR Reduction (vph)	0	0	0	0	0	116	0	3	0	0	0	0
Lane Group Flow (vph)	0	0	0	233	0	137	0	1625	0	162	1537	0
Turn Type	Perm			Perm		Perm	Perm	NA		pm+pt	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)				25.7		25.7		85.1		96.1	96.1	
Effective Green, g (s)				26.7		26.7		86.1		97.1	97.1	
Actuated g/C Ratio				0.20		0.20		0.63		0.71	0.71	
Clearance Time (s)				8.5		8.5		6.0		4.0	6.0	
Vehicle Extension (s)				3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)				279		313		2242		200	2549	
v/s Ratio Prot								0.46		c0.05	0.43	
v/s Ratio Perm				c0.16		0.09				c0.53		
v/c Ratio				0.83		0.43		0.72		0.81	0.60	
Uniform Delay, d1				52.6		48.2		17.0		24.6	9.8	
Progression Factor				1.00		1.00		1.00		1.00	1.00	
Incremental Delay, d2				18.9		0.9		2.0		21.3	1.0	
Delay (s)				71.6		49.1		19.1		45.9	10.9	
Level of Service				E		D		B		D	B	
Approach Delay (s/veh)		0.0			59.9			19.1			14.2	
Approach LOS		A			E			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	136.3	Sum of lost time (s)	18.5
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

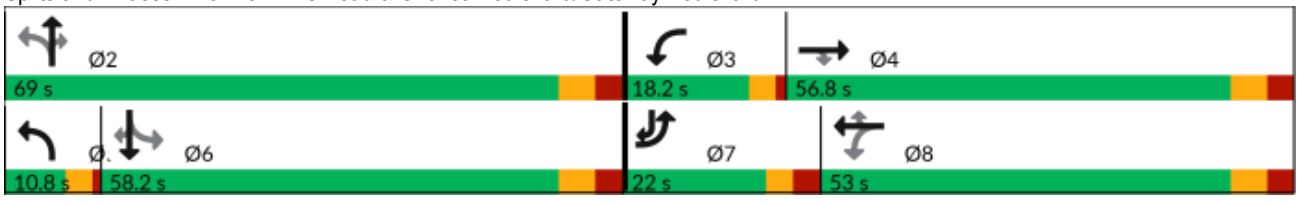
c Critical Lane Group

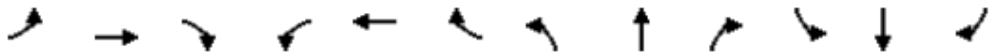
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	371	257	184	227	368	78	134	789	79	53	1272	445
Future Volume (vph)	371	257	184	227	368	78	134	789	79	53	1272	445
Lane Group Flow (vph)	403	279	200	247	400	85	146	858	86	58	1383	484
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4		3	8		5	2			6	7
Permitted Phases			4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	6	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	53.0	53.0	9.5	53.0	53.0	9.5	47.0	47.0	47.0	47.0	11.0
Total Split (s)	22.0	56.8	56.8	18.2	53.0	53.0	10.8	69.0	69.0	58.2	58.2	22.0
Total Split (%)	15.3%	39.4%	39.4%	12.6%	36.8%	36.8%	7.5%	47.9%	47.9%	40.4%	40.4%	15.3%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	3.0
All-Red Time (s)	3.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	6.0	6.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	Max	Max	None
v/c Ratio	0.89	0.51	0.33	0.54	0.82	0.17	0.87	0.49	0.10	0.26	0.96	0.48
Control Delay (s/veh)	79.5	41.9	8.4	28.1	60.2	6.7	69.7	25.4	8.0	33.2	56.4	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	79.5	41.9	8.4	28.1	60.2	6.7	69.7	25.4	8.0	33.2	56.4	11.4
Queue Length 50th (m)	53.4	60.4	4.7	40.0	97.6	0.0	21.0	77.2	2.9	9.9	181.4	37.9
Queue Length 95th (m)	#92.8	86.2	21.7	58.1	134.1	10.7	#69.3	113.2	13.6	24.5	#269.8	78.6
Internal Link Dist (m)		158.1			150.9			130.2			491.3	
Turn Bay Length (m)	103.0			100.0		100.0	65.0		50.0	42.0		
Base Capacity (vph)	451	731	729	458	677	633	167	1724	804	220	1429	1008
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.38	0.27	0.54	0.59	0.13	0.87	0.50	0.11	0.26	0.97	0.48

Intersection Summary

Cycle Length: 144
Actuated Cycle Length: 131.2
Natural Cycle: 145
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Don Mills Road & Overlea Boulevard/Gateway Boulevard





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	371	257	184	227	368	78	134	789	79	53	1272	445
Future Volume (vph)	371	257	184	227	368	78	134	789	79	53	1272	445
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	6.0	6.0	5.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3471	1883	1601	1789	1883	1601	1789	3579	1601	1789	3579	1601
Flt Permitted	0.95	1.00	1.00	0.47	1.00	1.00	0.07	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)	3471	1883	1601	890	1883	1601	136	3579	1601	551	3579	1601
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)	403	279	200	247	400	85	146	858	86	58	1383	484
RTOR Reduction (vph)	0	0	124	0	0	63	0	0	33	0	0	97
Lane Group Flow (vph)	403	279	76	247	400	22	146	858	53	58	1383	387
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4		3	8		5	2			6	7
Permitted Phases			4	8		8	2		2	6		6
Actuated Green, G (s)	16.1	37.2	37.2	46.5	32.8	32.8	62.2	62.2	62.2	51.4	51.4	67.5
Effective Green, g (s)	17.1	38.2	38.2	48.5	33.8	33.8	63.2	63.2	63.2	52.4	52.4	69.5
Actuated g/C Ratio	0.13	0.29	0.29	0.37	0.26	0.26	0.48	0.48	0.48	0.40	0.40	0.53
Clearance Time (s)	6.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	452	548	466	430	485	412	163	1725	771	220	1430	848
v/s Ratio Prot	c0.12	c0.15		0.06	c0.21		c0.05	0.24			c0.39	0.06
v/s Ratio Perm			0.05	0.15		0.01	0.38		0.03	0.11		0.18
v/c Ratio	0.89	0.50	0.16	0.57	0.82	0.05	0.89	0.49	0.06	0.26	0.96	0.45
Uniform Delay, d1	56.0	38.6	34.5	30.4	45.8	36.6	32.0	23.1	18.1	26.4	38.5	19.0
Progression 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
Incremental Delay, d2	19.3	0.7	0.1	1.8	10.9	0.0	41.4	1.0	0.1	2.9	17.1	0.3
Delay (s)	75.4	39.3	34.7	32.2	56.7	36.6	73.5	24.1	18.3	29.3	55.6	19.4
Level of Service	E	D	C	C	E	D	E	C	B	C	E	B
Approach Delay (s/veh)		54.7			46.1			30.3			45.7	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	43.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	131.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	90.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	18
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	232	40	28	78	127	306
Future Vol, veh/h	232	40	28	78	127	306
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	3	10	3	23	31	2
Mvmt Flow	276	48	33	93	151	364
Number of Lanes	1	0	0	1	1	0

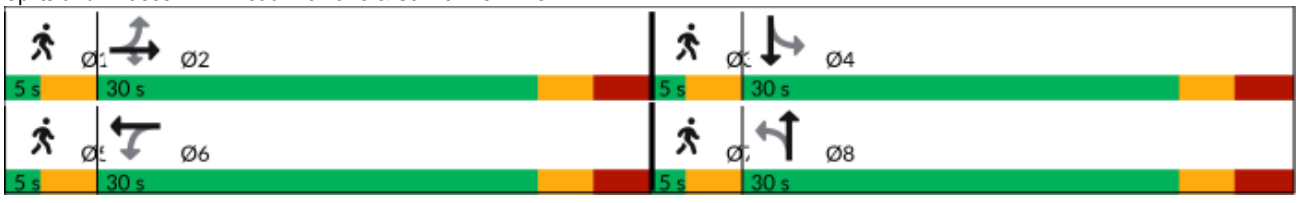
Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	14.8	10.3	21.9
HCM LOS	B	B	C

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	26%	85%	0%
Vol Thru, %	74%	0%	29%
Vol Right, %	0%	15%	71%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	106	272	433
LT Vol	28	232	0
Through Vol	78	0	127
RT Vol	0	40	306
Lane Flow Rate	126	324	515
Geometry Grp	1	1	1
Degree of Util (X)	0.202	0.517	0.745
Departure Headway (Hd)	5.763	5.744	5.204
Convergence, Y/N	Yes	Yes	Yes
Cap	622	628	696
Service Time	3.81	3.782	3.237
HCM Lane V/C Ratio	0.203	0.516	0.74
HCM Control Delay, s/veh	10.3	14.8	21.9
HCM Lane LOS	B	B	C
HCM 95th-tile Q	0.8	3	6.7

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	Ø1	Ø3	Ø5
Lane Configurations												
Traffic Volume (vph)	99	241	83	203	141	68	87	124	108			
Future Volume (vph)	99	241	83	203	141	68	87	124	108			
Lane Group Flow (vph)	106	259	89	218	218	0	398	0	381			
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA			
Protected Phases		2			6		8		4	1	3	5
Permitted Phases	2		2	6		8		4				
Detector Phase	2	2	2	6	6	8	8	4	4			
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	2.0	2.0	2.0
Minimum Split (s)	29.0	29.0	29.0	29.0	29.0	28.2	28.2	28.2	28.2	5.0	5.0	5.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	5.0	5.0	5.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	7%	7%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.2	3.2	3.2	3.2	0.0	0.0	0.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0		-1.0			
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.2		5.2			
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	None	None	None
v/c Ratio	0.25	0.38	0.15	0.68	0.33		0.63		0.64			
Control Delay (s/veh)	13.5	14.3	1.5	26.7	11.7		15.3		18.2			
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay (s/veh)	13.5	14.3	1.5	26.7	11.7		15.3		18.2			
Queue Length 50th (m)	7.2	18.5	0.0	17.7	12.6		22.2		27.0			
Queue Length 95th (m)	16.0	33.1	2.9	38.3	25.2		#53.5		#61.8			
Internal Link Dist (m)		501.3			138.2		192.3		23.5			
Turn Bay Length (m)	28.0		10.0	32.0								
Base Capacity (vph)	517	847	667	398	793		626		595			
Starvation Cap Reductn	0	0	0	0	0		0		0			
Spillback Cap Reductn	0	0	0	0	0		0		0			
Storage Cap Reductn	0	0	0	0	0		0		0			
Reduced v/c Ratio	0.21	0.31	0.13	0.55	0.27		0.64		0.64			

Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 55.5
Natural Cycle: 70
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Deauville Lane & St. Dennis Drive



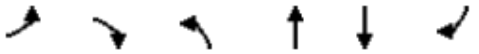
Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	2.0
Minimum Split (s)	5.0
Total Split (s)	5.0
Total Split (%)	7%
Yellow Time (s)	3.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	241	83	203	141	61	68	87	215	124	108	123
Future Volume (vph)	99	241	83	203	141	61	68	87	215	124	108	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0			5.2			5.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00	0.86	1.00	0.97			0.93			0.97	
Flpb, ped/bikes	0.96	1.00	1.00	0.91	1.00			0.99			0.98	
Frt	1.00	1.00	0.85	1.00	0.95			0.92			0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.98	
Satd. Flow (prot)	1755	1865	1344	1485	1711			1448			1690	
Flt Permitted	0.62	1.00	1.00	0.57	1.00			0.87			0.74	
Satd. Flow (perm)	1149	1865	1344	894	1711			1277			1279	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	106	259	89	218	152	66	73	94	231	133	116	132
RTOR Reduction (vph)	0	0	57	0	22	0	0	60	0	0	23	0
Lane Group Flow (vph)	106	259	32	218	196	0	0	338	0	0	358	0
Confl. Peds. (#/hr)	43		98	98		43	45		79	79		45
Heavy Vehicles (%)	0%	3%	5%	13%	7%	0%	5%	4%	18%	0%	4%	2%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	19.2	19.2	19.2	19.2	19.2			24.0			24.0	
Effective Green, g (s)	20.2	20.2	20.2	20.2	20.2			25.0			25.0	
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.36			0.45			0.45	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0			6.2			6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	418	680	490	325	623			576			577	
v/s Ratio Prot		0.14			0.11							
v/s Ratio Perm	0.09		0.02	c0.24				0.26			c0.28	
v/c Ratio	0.25	0.38	0.06	0.67	0.31			0.58			0.62	
Uniform Delay, d1	12.3	12.9	11.4	14.8	12.6			11.3			11.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.3	0.3	0.0	5.3	0.2			4.3			4.9	
Delay (s)	12.6	13.3	11.5	20.1	12.9			15.6			16.5	
Level of Service	B	B	B	C	B			B			B	
Approach Delay (s/veh)		12.8			16.5			15.6			16.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	55.4	Sum of lost time (s)	16.2
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

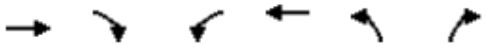
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	270	48	32	94	150	229
Future Volume (vph)	270	48	32	94	150	229
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	321	57	38	112	179	273

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	378	150	452
Volume Left (vph)	321	38	0
Volume Right (vph)	57	0	273
Hadj (s)	0.15	0.36	-0.13
Departure Headway (s)	5.7	6.1	5.2
Degree Utilization, x	0.60	0.26	0.65
Capacity (veh/h)	594	533	668
Control Delay (s/veh)	16.7	11.2	17.5
Approach Delay (s/veh)	16.7	11.2	17.5
Approach LOS	C	B	C

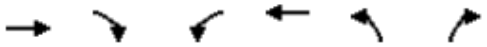
Intersection Summary			
Delay	16.2		
Level of Service	C		
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	313	0	0	261	6	5
Future Volume (Veh/h)	313	0	0	261	6	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	340	0	0	284	7	5
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			340		624	340
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			340		624	340
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	99
cM capacity (veh/h)			1219		449	702

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	340	284	12
Volume Left	0	0	7
Volume Right	0	0	5
cSH	1700	1219	529
Volume to Capacity	0.20	0.00	0.02
Queue Length 95th (m)	0.0	0.0	0.5
Control Delay (s/veh)	0.0	0.0	12.0
Lane LOS			B
Approach Delay (s/veh)	0.0	0.0	12.0
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	305	11	16	251	9	7
Future Volume (Veh/h)	305	11	16	251	9	7
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	332	12	17	273	10	8
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			344		645	338
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			344		645	338
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		98	99
cM capacity (veh/h)			1215		431	704

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	344	290	18
Volume Left	0	17	10
Volume Right	12	0	8
cSH	1700	1215	520
Volume to Capacity	0.20	0.01	0.03
Queue Length 95th (m)	0.0	0.3	0.8
Control Delay (s/veh)	0.0	0.6	12.2
Lane LOS		A	B
Approach Delay (s/veh)	0.0	0.6	12.2
Approach LOS			B

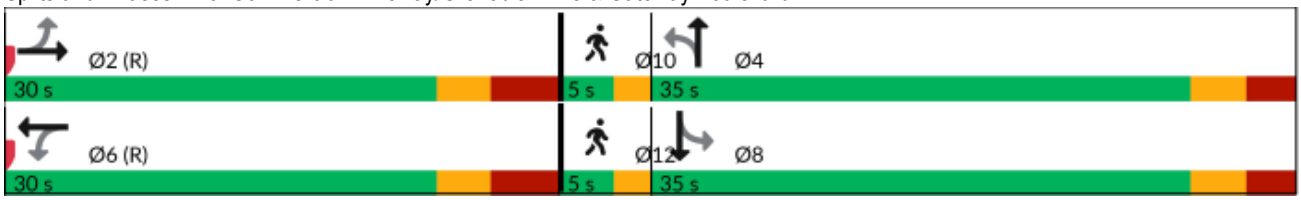
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		

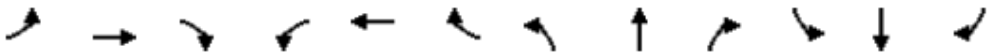
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø10	Ø12
Lane Configurations										
Traffic Volume (vph)	205	69	19	69	53	70	21	92		
Future Volume (vph)	205	69	19	69	53	70	21	92		
Lane Group Flow (vph)	214	144	0	210	0	156	0	270		
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA		
Protected Phases		2		6		4		8	10	12
Permitted Phases	2		6		4		8			
Detector Phase	2	2	6	6	4	4	8	8		
Switch Phase										
Minimum Initial (s)	23.0	23.0	23.0	23.0	24.0	24.0	24.0	24.0	1.0	1.5
Minimum Split (s)	29.6	29.6	29.6	29.6	34.7	34.7	34.7	34.7	5.0	5.0
Total Split (s)	30.0	30.0	30.0	30.0	35.0	35.0	35.0	35.0	5.0	5.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	50.0%	50.0%	50.0%	50.0%	7%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	3.6	3.6	3.6	3.6	2.7	2.7	2.7	2.7	0.0	0.0
Lost Time Adjust (s)	-1.0	-1.0		-1.0		-1.0		-1.0		
Total Lost Time (s)	5.6	5.6		5.6		4.7		4.7		
Lead/Lag					Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
v/c Ratio	0.71	0.23		0.42		0.24		0.37		
Control Delay (s/veh)	36.3	9.8		12.2		12.2		9.1		
Queue Delay	0.0	0.0		0.0		0.0		0.0		
Total Delay (s/veh)	36.3	9.8		12.2		12.2		9.1		
Queue Length 50th (m)	23.8	6.3		10.0		10.7		12.1		
Queue Length 95th (m)	#55.4	17.4		26.4		22.0		27.8		
Internal Link Dist (m)		158.4		25.7		14.9		38.5		
Turn Bay Length (m)	48.0									
Base Capacity (vph)	298	612		491		626		712		
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	0.72	0.24		0.43		0.25		0.38		

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 1 (1%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Pretimed
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Commercial Driveway/Grenoble Drive & Gateway Boulevard





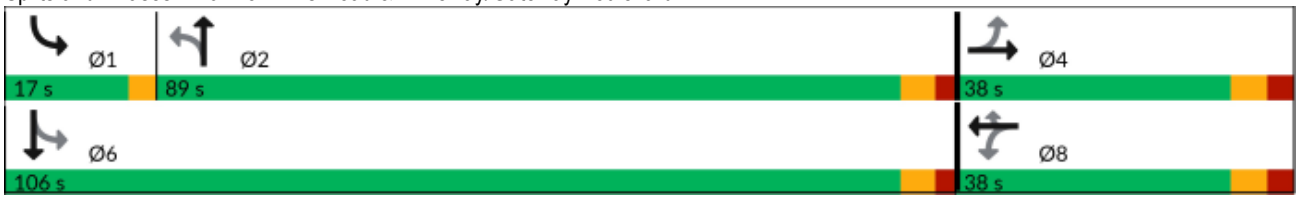
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	69	69	19	69	113	53	70	27	21	92	146
Future Volume (vph)	205	69	69	19	69	113	53	70	27	21	92	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6			5.6			4.7			4.7	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.94			0.82			0.97			0.89	
Flpb, ped/bikes	0.79	1.00			0.99			0.96			0.99	
Frt	1.00	0.92			0.92			0.97			0.92	
Flt Protected	0.95	1.00			0.99			0.98			0.99	
Satd. Flow (prot)	1313	1622			1258			1682			1528	
Flt Permitted	0.62	1.00			0.96			0.82			0.97	
Satd. Flow (perm)	857	1622			1221			1419			1492	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	214	72	72	20	72	118	55	73	28	22	96	152
RTOR Reduction (vph)	0	47	0	0	66	0	0	11	0	0	66	0
Lane Group Flow (vph)	214	97	0	0	144	0	0	145	0	0	204	0
Confl. Peds. (#/hr)	192		61	61		192	140		98	98		140
Heavy Vehicles (%)	11%	6%	1%	14%	10%	19%	4%	3%	0%	5%	2%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	23.4	23.4			23.4			29.3			29.3	
Effective Green, g (s)	24.4	24.4			24.4			30.3			30.3	
Actuated g/C Ratio	0.35	0.35			0.35			0.43			0.43	
Clearance Time (s)	6.6	6.6			6.6			5.7			5.7	
Lane Grp Cap (vph)	298	565			425			614			645	
v/s Ratio Prot		0.06										
v/s Ratio Perm	c0.25				0.12			0.10			c0.14	
v/c Ratio	0.71	0.17			0.33			0.23			0.31	
Uniform Delay, d1	19.8	15.7			16.8			12.5			13.0	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	13.8	0.6			2.1			0.9			1.2	
Delay (s)	33.6	16.4			19.0			13.4			14.3	
Level of Service	C	B			B			B			B	
Approach Delay (s/veh)		26.7			19.0			13.4			14.3	
Approach LOS		C			B			B			B	

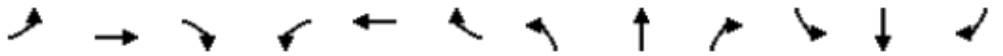
Intersection Summary			
HCM 2000 Control Delay (s/veh)	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø4
Lane Configurations						
Traffic Volume (vph)	208	190	1505	182	1236	
Future Volume (vph)	208	190	1505	182	1236	
Lane Group Flow (vph)	226	207	1802	198	1343	
Turn Type	Perm	Perm	NA	pm+pt	NA	
Protected Phases			2	1	6	4
Permitted Phases	8	8		6		
Detector Phase	8	8	2	1	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	38.0	38.0	89.0	9.5	89.0	38.0
Total Split (s)	38.0	38.0	89.0	17.0	106.0	38.0
Total Split (%)	26.4%	26.4%	61.8%	11.8%	73.6%	26%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	3.0	3.0	2.0	0.0	2.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	6.0	6.0	5.0	2.0	5.0	
Lead/Lag			Lag	Lead		
Lead-Lag Optimize?			Yes	Yes		
Recall Mode	None	None	Max	None	Max	None
v/c Ratio	0.82	0.67	0.83	0.83	0.51	
Control Delay (s/veh)	77.6	63.2	26.6	65.3	9.5	
Queue Delay	0.0	0.0	0.0	0.0	0.3	
Total Delay (s/veh)	77.6	63.2	26.6	65.3	9.9	
Queue Length 50th (m)	60.1	53.2	204.7	37.8	79.7	
Queue Length 95th (m)	90.5	80.3	255.4	#80.4	103.8	
Internal Link Dist (m)			491.3		226.5	
Turn Bay Length (m)	35.0	71.0		72.0		
Base Capacity (vph)	328	369	2166	249	2605	
Starvation Cap Reductn	0	0	0	0	651	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.69	0.56	0.83	0.80	0.69	

Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 138.9
Natural Cycle: 140
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Don Mills Road & Driveway/Gateway Boulevard





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	208	0	190	0	1505	153	182	1236	0
Future Volume (vph)	0	0	0	208	0	190	0	1505	153	182	1236	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0		6.0		5.0		2.0	5.0	
Lane Util. Factor				1.00		1.00		0.95		1.00	0.95	
Frt				1.00		0.85		0.98		1.00	1.00	
Flt Protected				0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)				1789		1601		3529		1789	3579	
Flt Permitted				0.75		1.00		1.00		0.04	1.00	
Satd. Flow (perm)				1426		1601		3529		86	3579	
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)	0	0	0	226	0	207	0	1636	166	198	1343	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	0	0	226	0	207	0	1797	0	198	1343	0
Turn Type	Perm			Perm		Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)				25.8		25.8		84.1		100.1	100.1	
Effective Green, g (s)				26.8		26.8		85.1		101.1	101.1	
Actuated g/C Ratio				0.19		0.19		0.61		0.73	0.73	
Clearance Time (s)				7.0		7.0		6.0		3.0	6.0	
Vehicle Extension (s)				3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)				275		308		2162		234	2605	
v/s Ratio Prot								c0.51		c0.09	0.38	
v/s Ratio Perm				c0.16		0.13				0.53		
v/c Ratio				0.82		0.67		0.83		0.84	0.51	
Uniform Delay, d1				53.7		51.9		21.2		45.0	8.2	
Progression Factor				1.00		1.00		1.00		1.00	1.00	
Incremental Delay, d2				17.6		5.6		3.8		23.4	0.7	
Delay (s)				71.3		57.6		25.1		68.5	8.9	
Level of Service				E		E		C		E	A	
Approach Delay (s/veh)		0.0			64.8			25.1			16.6	
Approach LOS		A			E			C			B	

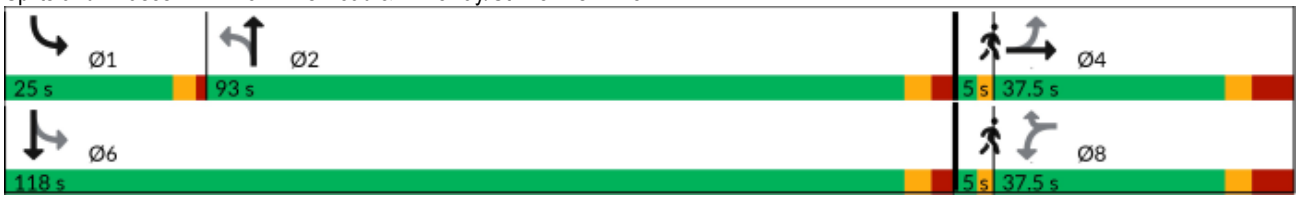
Intersection Summary			
HCM 2000 Control Delay (s/veh)	26.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	138.9	Sum of lost time (s)	13.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		

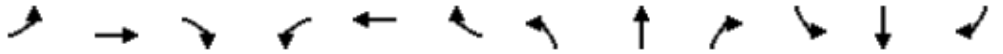
c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø3	Ø4	Ø7
Lane Configurations								
Traffic Volume (vph)	168	105	1374	272	1250			
Future Volume (vph)	168	105	1374	272	1250			
Lane Group Flow (vph)	183	114	1842	296	1359			
Turn Type	Perm	Perm	NA	pm+pt	NA			
Protected Phases			2	1	6	3	4	7
Permitted Phases	8	8		6				
Detector Phase	8	8	2	1	6			
Switch Phase								
Minimum Initial (s)	7.0	7.0	5.0	5.0	5.0	1.0	7.0	1.0
Minimum Split (s)	37.5	37.5	93.0	9.5	107.0	3.0	37.5	3.0
Total Split (s)	37.5	37.5	93.0	25.0	118.0	5.0	37.5	5.0
Total Split (%)	23.4%	23.4%	57.9%	15.6%	73.5%	3%	23%	3%
Yellow Time (s)	3.3	3.3	3.3	3.0	3.3	2.0	3.3	2.0
All-Red Time (s)	5.2	5.2	2.7	1.0	2.7	0.0	5.2	0.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0			
Total Lost Time (s)	7.5	7.5	5.0	3.0	5.0			
Lead/Lag	Lag	Lag	Lag	Lead		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	Max	None	Max	None	None	None
v/c Ratio	0.78	0.32	0.89	0.94	0.50			
Control Delay (s/veh)	83.9	11.0	34.3	85.4	8.5			
Queue Delay	0.0	0.0	22.4	0.0	0.0			
Total Delay (s/veh)	83.9	11.0	56.8	85.4	8.5			
Queue Length 50th (m)	53.0	0.0	243.5	72.5	77.8			
Queue Length 95th (m)	80.6	17.1	303.5	#136.5	103.1			
Internal Link Dist (m)			226.5		183.4			
Turn Bay Length (m)		60.0		100.0				
Base Capacity (vph)	285	411	2053	313	2698			
Starvation Cap Reductn	0	0	285	0	0			
Spillback Cap Reductn	0	0	0	0	0			
Storage Cap Reductn	0	0	0	0	0			
Reduced v/c Ratio	0.64	0.28	1.04	0.95	0.50			

Intersection Summary
Cycle Length: 160.5
Actuated Cycle Length: 150.1
Natural Cycle: 150
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Don Mills Road & Driveway/St. Dennis Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	168	0	105	0	1374	321	272	1250	0
Future Volume (vph)	0	0	0	168	0	105	0	1374	321	272	1250	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				7.5		7.5		5.0		3.0	5.0	
Lane Util. Factor				1.00		1.00		0.95		1.00	0.95	
Frt				1.00		0.85		0.97		1.00	1.00	
Flt Protected				0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)				1789		1601		3477		1789	3579	
Flt Permitted				0.75		1.00		1.00		0.04	1.00	
Satd. Flow (perm)				1426		1601		3477		83	3579	
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)	0	0	0	183	0	114	0	1493	349	296	1359	0
RTOR Reduction (vph)	0	0	0	0	0	95	0	12	0	0	0	0
Lane Group Flow (vph)	0	0	0	183	0	19	0	1830	0	296	1359	0
Turn Type	Perm			Perm		Perm	Perm	NA		pm+pt	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)				23.4		23.4		87.1		112.1	112.1	
Effective Green, g (s)				24.4		24.4		88.1		113.1	113.1	
Actuated g/C Ratio				0.16		0.16		0.59		0.75	0.75	
Clearance Time (s)				8.5		8.5		6.0		4.0	6.0	
Vehicle Extension (s)				3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)				231		260		2042		312	2698	
v/s Ratio Prot								0.53		c0.14	0.38	
v/s Ratio Perm				c0.13		0.01				c0.58		
v/c Ratio				0.79		0.07		0.89		0.94	0.50	
Uniform Delay, d1				60.3		53.2		26.9		53.5	7.3	
Progression Factor				1.00		1.00		1.00		1.00	1.00	
Incremental Delay, d2				16.7		0.1		6.6		37.0	0.6	
Delay (s)				77.1		53.3		33.6		90.5	7.9	
Level of Service				E		D		C		F	A	
Approach Delay (s/veh)		0.0			67.9			33.6			22.7	
Approach LOS		A			E			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		

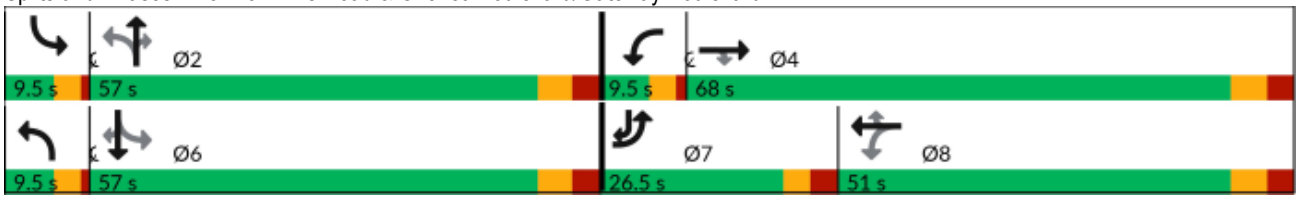
c Critical Lane Group

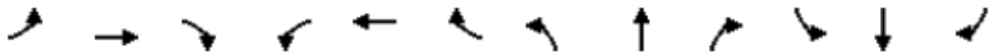
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	461	545	222	96	226	118	123	1270	121	94	634	716
Future Volume (vph)	461	545	222	96	226	118	123	1270	121	94	634	716
Lane Group Flow (vph)	501	592	241	104	246	128	134	1380	132	102	689	778
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.5	51.0	51.0	9.5	51.0	51.0	9.5	41.0	41.0	9.5	41.0	26.5
Total Split (s)	26.5	68.0	68.0	9.5	51.0	51.0	9.5	57.0	57.0	9.5	57.0	26.5
Total Split (%)	18.4%	47.2%	47.2%	6.6%	35.4%	35.4%	6.6%	39.6%	39.6%	6.6%	39.6%	18.4%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	3.0
All-Red Time (s)	3.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	None
v/c Ratio	0.86	0.87	0.34	0.58	0.57	0.27	0.42	0.97	0.18	0.67	0.48	0.68
Control Delay (s/veh)	68.9	52.5	7.6	36.0	48.7	6.4	25.2	56.8	5.0	43.6	31.9	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	68.9	52.5	7.6	36.0	48.7	6.4	25.2	56.8	5.0	43.6	31.9	12.5
Queue Length 50th (m)	64.4	138.7	7.8	14.8	55.6	0.0	18.1	179.0	0.0	13.5	68.0	60.8
Queue Length 95th (m)	#109.0	184.2	24.8	25.0	80.9	12.9	36.7	#274.8	12.9	#42.1	102.1	137.9
Internal Link Dist (m)		158.1			150.9			130.2			491.3	
Turn Bay Length (m)	103.0			100.0		100.0	65.0		50.0	42.0		
Base Capacity (vph)	581	909	873	177	660	649	318	1422	718	152	1422	1131
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.65	0.28	0.59	0.37	0.20	0.42	0.97	0.18	0.67	0.48	0.69

Intersection Summary

Cycle Length: 144
Actuated Cycle Length: 129.2
Natural Cycle: 150
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Don Mills Road & Overlea Boulevard/Gateway Boulevard





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	461	545	222	96	226	118	123	1270	121	94	634	716
Future Volume (vph)	461	545	222	96	226	118	123	1270	121	94	634	716
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	5.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3471	1883	1601	1789	1883	1601	1789	3579	1601	1789	3579	1601
Flt Permitted	0.95	1.00	1.00	0.18	1.00	1.00	0.28	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	3471	1883	1601	345	1883	1601	540	3579	1601	147	3579	1601
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)	501	592	241	104	246	128	134	1380	132	102	689	778
RTOR Reduction (vph)	0	0	124	0	0	99	0	0	79	0	0	170
Lane Group Flow (vph)	501	592	117	104	246	29	134	1380	53	102	689	608
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4	8		8	2		2	6		6
Actuated Green, G (s)	20.6	45.6	45.6	34.0	28.5	28.5	55.8	50.3	50.3	55.8	50.3	70.9
Effective Green, g (s)	21.6	46.6	46.6	36.0	29.5	29.5	57.8	51.3	51.3	57.8	51.3	72.9
Actuated g/C Ratio	0.17	0.36	0.36	0.28	0.23	0.23	0.45	0.40	0.40	0.45	0.40	0.57
Clearance Time (s)	6.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	581	680	578	169	430	366	305	1424	637	148	1424	905
v/s Ratio Prot	c0.14	c0.31		0.03	0.13		0.02	c0.39		c0.03	0.19	0.11
v/s Ratio Perm			0.07	0.14		0.02	0.17		0.03	0.27		0.27
v/c Ratio	0.86	0.87	0.20	0.61	0.57	0.08	0.43	0.96	0.08	0.68	0.48	0.67
Uniform Delay, d1	52.2	38.3	28.3	36.8	44.0	39.0	22.0	38.0	24.1	29.7	28.9	19.6
Progression 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
Incremental Delay, d2	12.5	11.7	0.1	6.5	1.8	0.0	1.0	17.5	0.2	12.5	1.1	1.9
Delay (s)	64.7	50.0	28.5	43.3	45.9	39.1	23.0	55.5	24.4	42.3	30.1	21.5
Level of Service	E	D	C	D	D	D	C	E	C	D	C	C
Approach Delay (s/veh)		51.6			43.5			50.4			26.6	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	42.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	128.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	91.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	17.3
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	270	48	32	94	150	229
Future Vol, veh/h	270	48	32	94	150	229
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	3	10	3	23	31	2
Mvmt Flow	321	57	38	112	179	273
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	16.9	10.8	19.7
HCM LOS	C	B	C

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	25%	85%	0%
Vol Thru, %	75%	0%	40%
Vol Right, %	0%	15%	60%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	126	318	379
LT Vol	32	270	0
Through Vol	94	0	150
RT Vol	0	48	229
Lane Flow Rate	150	379	451
Geometry Grp	1	1	1
Degree of Util (X)	0.245	0.599	0.686
Departure Headway (Hd)	5.877	5.693	5.473
Convergence, Y/N	Yes	Yes	Yes
Cap	609	632	659
Service Time	3.932	3.736	3.515
HCM Lane V/C Ratio	0.246	0.6	0.684
HCM Control Delay, s/veh	10.8	16.9	19.7
HCM Lane LOS	B	C	C
HCM 95th-tile Q	1	4	5.4

BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

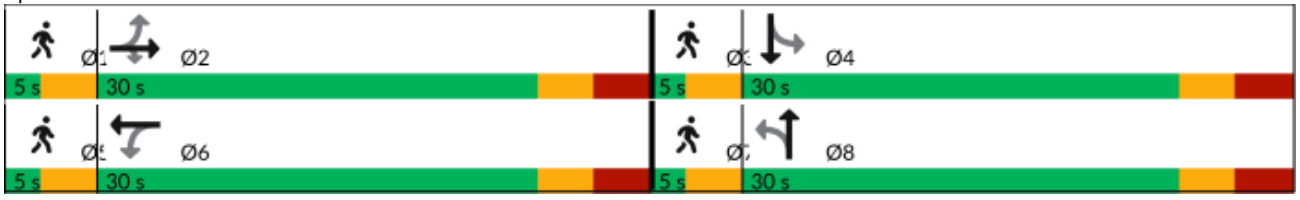
Appendix H

Total 2031 Traffic Operations

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	Ø1	Ø3	Ø5
Lane Configurations												
Traffic Volume (vph)	54	103	88	217	85	68	66	51	95			
Future Volume (vph)	54	103	88	217	85	68	66	51	95			
Lane Group Flow (vph)	58	111	95	233	207	0	400	0	274			
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA			
Protected Phases		2			6		8		4	1	3	5
Permitted Phases	2		2	6		8		4				
Detector Phase	2	2	2	6	6	8	8	4	4			
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	2.0	2.0	2.0
Minimum Split (s)	29.0	29.0	29.0	29.0	29.0	28.2	28.2	28.2	28.2	5.0	5.0	5.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	5.0	5.0	5.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	7%	7%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.2	3.2	3.2	3.2	0.0	0.0	0.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0		-1.0			
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.2		5.2			
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	None	None	None
v/c Ratio	0.14	0.17	0.17	0.67	0.33		0.60		0.38			
Control Delay (s/veh)	12.4	12.3	1.8	25.5	8.1		12.6		10.4			
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay (s/veh)	12.4	12.3	1.8	25.5	8.1		12.6		10.4			
Queue Length 50th (m)	3.7	7.2	0.0	18.5	6.9		16.1		12.5			
Queue Length 95th (m)	9.8	15.4	3.4	37.8	18.0		49.1		32.3			
Internal Link Dist (m)		501.3			138.2		192.3		23.5			
Turn Bay Length (m)	28.0		10.0	32.0								
Base Capacity (vph)	541	880	687	479	822		660		712			
Starvation Cap Reductn	0	0	0	0	0		0		0			
Spillback Cap Reductn	0	0	0	0	0		0		0			
Storage Cap Reductn	0	0	0	0	0		0		0			
Reduced v/c Ratio	0.11	0.13	0.14	0.49	0.25		0.61		0.38			

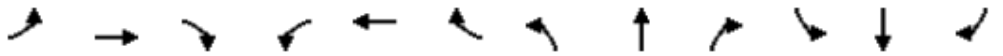
Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 53.5
Natural Cycle: 70
Control Type: Semi Act-Uncoord

Splits and Phases: 1: Deauville Lane & St. Dennis Drive



Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	2.0
Minimum Split (s)	5.0
Total Split (s)	5.0
Total Split (%)	7%
Yellow Time (s)	3.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

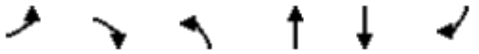
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	103	88	217	85	108	68	66	238	51	95	109
Future Volume (vph)	54	103	88	217	85	108	68	66	238	51	95	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0			5.2			5.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00	0.86	1.00	0.96			0.92			0.96	
Flpb, ped/bikes	0.96	1.00	1.00	0.90	1.00			0.99			0.99	
Frt	1.00	1.00	0.85	1.00	0.91			0.91			0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1757	1865	1351	1458	1641			1416			1680	
Flt Permitted	0.62	1.00	1.00	0.68	1.00			0.89			0.86	
Satd. Flow (perm)	1162	1865	1351	1052	1641			1275			1467	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	58	111	95	233	91	116	73	71	256	55	102	117
RTOR Reduction (vph)	0	0	63	0	67	0	0	75	0	0	31	0
Lane Group Flow (vph)	58	111	32	233	140	0	0	325	0	0	243	0
Confl. Peds. (#/hr)	43		98	98		43	45		79	79		45
Heavy Vehicles (%)	0%	3%	5%	13%	7%	0%	5%	4%	18%	0%	4%	2%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	17.1	17.1	17.1	17.1	17.1			24.0			24.0	
Effective Green, g (s)	18.1	18.1	18.1	18.1	18.1			25.0			25.0	
Actuated g/C Ratio	0.34	0.34	0.34	0.34	0.34			0.47			0.47	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0			6.2			6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	394	633	458	357	557			598			688	
v/s Ratio Prot		0.06			0.09							
v/s Ratio Perm	0.05		0.02	c0.22				c0.25			0.17	
v/c Ratio	0.14	0.17	0.07	0.65	0.25			0.54			0.35	
Uniform Delay, d1	12.2	12.3	11.9	14.9	12.7			10.0			9.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	0.1	0.0	4.2	0.2			3.5			1.4	
Delay (s)	12.4	12.4	11.9	19.1	12.9			13.5			10.4	
Level of Service	B	B	B	B	B			B			B	
Approach Delay (s/veh)		12.2			16.2			13.5			10.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	53.3	Sum of lost time (s)	16.2
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

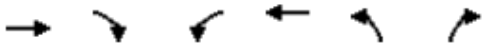
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	250	40	28	78	127	316
Future Volume (vph)	250	40	28	78	127	316
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	298	48	33	93	151	376

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	346	126	527
Volume Left (vph)	298	33	0
Volume Right (vph)	48	0	376
Hadj (s)	0.16	0.35	-0.25
Departure Headway (s)	5.8	6.1	5.0
Degree Utilization, x	0.55	0.21	0.72
Capacity (veh/h)	582	543	707
Control Delay (s/veh)	15.6	10.8	19.8
Approach Delay (s/veh)	15.6	10.8	19.8
Approach LOS	C	B	C

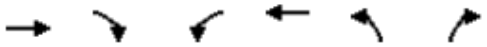
Intersection Summary			
Delay	17.2		
Level of Service	C		
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	289	0	0	343	2	1
Future Volume (Veh/h)	289	0	0	343	2	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	314	0	0	373	2	1
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			314		687	314
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			314		687	314
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1246		413	726

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	314	373	3
Volume Left	0	0	2
Volume Right	0	0	1
cSH	1700	1246	482
Volume to Capacity	0.18	0.00	0.01
Queue Length 95th (m)	0.0	0.0	0.1
Control Delay (s/veh)	0.0	0.0	12.5
Lane LOS			B
Approach Delay (s/veh)	0.0	0.0	12.5
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	28.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	254	15	14	331	28	34
Future Volume (Veh/h)	254	15	14	331	28	34
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	276	16	15	360	30	37
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			292		674	284
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			292		674	284
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		93	95
cM capacity (veh/h)			1270		415	755

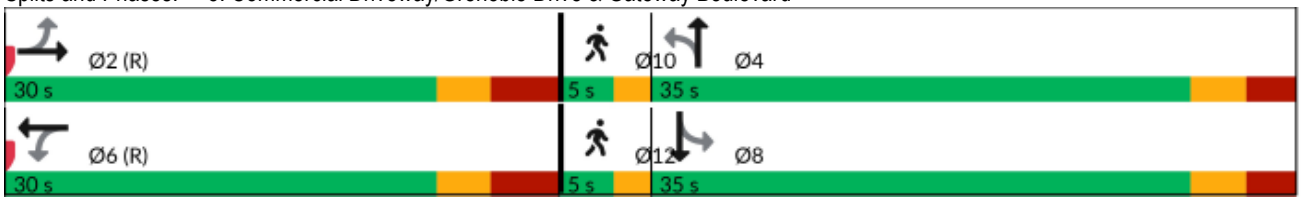
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	292	375	67
Volume Left	0	15	30
Volume Right	16	0	37
cSH	1700	1270	552
Volume to Capacity	0.17	0.01	0.12
Queue Length 95th (m)	0.0	0.3	3.1
Control Delay (s/veh)	0.0	0.4	12.4
Lane LOS		A	B
Approach Delay (s/veh)	0.0	0.4	12.4
Approach LOS			B

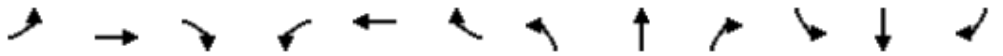
Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	39.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø10	Ø12
Lane Configurations										
Traffic Volume (vph)	118	110	8	69	49	55	108	76		
Future Volume (vph)	118	110	8	69	49	55	108	76		
Lane Group Flow (vph)	123	160	0	147	0	128	0	437		
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA		
Protected Phases		2		6		4		8	10	12
Permitted Phases	2		6		4		8			
Detector Phase	2	2	6	6	4	4	8	8		
Switch Phase										
Minimum Initial (s)	23.0	23.0	23.0	23.0	24.0	24.0	24.0	24.0	1.0	1.5
Minimum Split (s)	29.6	29.6	29.6	29.6	34.7	34.7	34.7	34.7	5.0	5.0
Total Split (s)	30.0	30.0	30.0	30.0	35.0	35.0	35.0	35.0	5.0	5.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	50.0%	50.0%	50.0%	50.0%	7%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	3.6	3.6	3.6	3.6	2.7	2.7	2.7	2.7	0.0	0.0
Lost Time Adjust (s)	-1.0	-1.0		-1.0		-1.0		-1.0		
Total Lost Time (s)	5.6	5.6		5.6		4.7		4.7		
Lead/Lag					Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
v/c Ratio	0.37	0.26		0.29		0.21		0.68		
Control Delay (s/veh)	21.2	14.4		11.3		11.8		18.1		
Queue Delay	0.0	0.0		0.0		0.0		0.0		
Total Delay (s/veh)	21.2	14.4		11.3		11.8		18.1		
Queue Length 50th (m)	11.8	11.7		7.2		8.6		31.9		
Queue Length 95th (m)	25.3	24.2		19.3		18.5		64.0		
Internal Link Dist (m)		158.4		25.7		14.9		38.5		
Turn Bay Length (m)	48.0									
Base Capacity (vph)	328	614		506		598		638		
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	0.38	0.26		0.29		0.21		0.68		

Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 1 (1%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Pretimed

Splits and Phases: 5: Commercial Driveway/Grenoble Drive & Gateway Boulevard





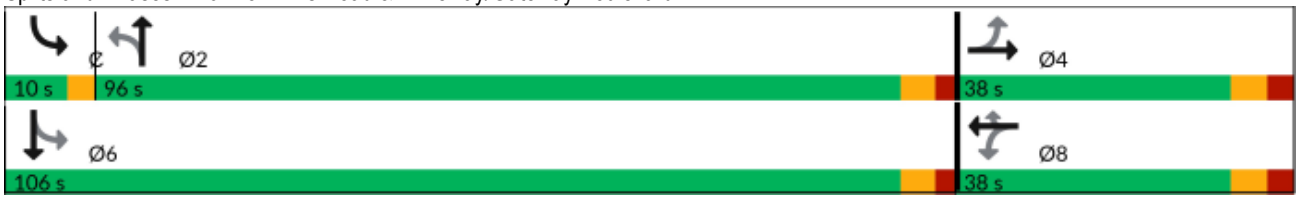
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	110	43	8	69	64	49	55	19	108	76	235
Future Volume (vph)	118	110	43	8	69	64	49	55	19	108	76	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6			5.6			4.7			4.7	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.96			0.86			0.97			0.89	
Flpb, ped/bikes	0.76	1.00			0.99			0.96			0.97	
Frt	1.00	0.95			0.93			0.97			0.92	
Flt Protected	0.95	1.00			0.99			0.98			0.98	
Satd. Flow (prot)	1264	1704			1348			1699			1482	
Flt Permitted	0.70	1.00			0.98			0.78			0.88	
Satd. Flow (perm)	941	1704			1329			1360			1322	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	123	115	45	8	72	67	51	57	20	112	79	245
RTOR Reduction (vph)	0	20	0	0	43	0	0	10	0	0	66	0
Lane Group Flow (vph)	123	140	0	0	104	0	0	118	0	0	371	0
Confl. Peds. (#/hr)	192		61	61		192	140		98	98		140
Heavy Vehicles (%)	11%	6%	1%	14%	10%	19%	4%	3%	0%	5%	2%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	23.4	23.4			23.4			29.3			29.3	
Effective Green, g (s)	24.4	24.4			24.4			30.3			30.3	
Actuated g/C Ratio	0.35	0.35			0.35			0.43			0.43	
Clearance Time (s)	6.6	6.6			6.6			5.7			5.7	
Lane Grp Cap (vph)	328	593			463			588			572	
v/s Ratio Prot		0.08										
v/s Ratio Perm	c0.13				0.08			0.09			c0.28	
v/c Ratio	0.37	0.23			0.22			0.20			0.64	
Uniform Delay, d1	17.0	16.1			16.1			12.3			15.6	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	3.2	0.9			1.1			0.7			5.6	
Delay (s)	20.3	17.1			17.2			13.1			21.2	
Level of Service	C	B			B			B			C	
Approach Delay (s/veh)		18.5			17.2			13.1			21.2	
Approach LOS		B			B			B			C	

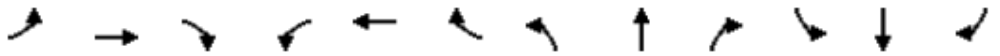
Intersection Summary			
HCM 2000 Control Delay (s/veh)	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø4
Lane Configurations						
Traffic Volume (vph)	231	196	1309	171	1460	
Future Volume (vph)	231	196	1309	171	1460	
Lane Group Flow (vph)	251	213	1562	186	1587	
Turn Type	Perm	Perm	NA	pm+pt	NA	
Protected Phases			2	1	6	4
Permitted Phases	8	8		6		
Detector Phase	8	8	2	1	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	38.0	38.0	96.0	9.5	96.0	38.0
Total Split (s)	38.0	38.0	96.0	10.0	106.0	38.0
Total Split (%)	26.4%	26.4%	66.7%	6.9%	73.6%	26%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	3.0	3.0	2.0	0.0	2.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	6.0	6.0	5.0	2.0	5.0	
Lead/Lag			Lag	Lead		
Lead-Lag Optimize?			Yes	Yes		
Recall Mode	None	None	Max	None	Max	None
v/c Ratio	0.86	0.65	0.68	0.83	0.61	
Control Delay (s/veh)	81.4	61.4	17.9	44.1	11.8	
Queue Delay	0.0	0.0	0.0	0.0	0.6	
Total Delay (s/veh)	81.4	61.4	17.9	44.1	12.4	
Queue Length 50th (m)	68.2	55.0	144.8	16.5	117.3	
Queue Length 95th (m)	#109.1	82.6	169.2	#37.7	136.8	
Internal Link Dist (m)			491.3		226.5	
Turn Bay Length (m)	35.0	71.0		72.0		
Base Capacity (vph)	324	363	2288	223	2568	
Starvation Cap Reductn	0	0	0	0	565	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.77	0.59	0.68	0.83	0.79	

Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 140.9
Natural Cycle: 145
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Don Mills Road & Driveway/Gateway Boulevard





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	231	0	196	0	1309	128	171	1460	0
Future Volume (vph)	0	0	0	231	0	196	0	1309	128	171	1460	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0		6.0		5.0		2.0	5.0	
Lane Util. Factor				1.00		1.00		0.95		1.00	0.95	
Frt				1.00		0.85		0.98		1.00	1.00	
Flt Protected				0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)				1789		1601		3531		1789	3579	
Flt Permitted				0.75		1.00		1.00		0.09	1.00	
Satd. Flow (perm)				1426		1601		3531		179	3579	
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)	0	0	0	251	0	213	0	1423	139	186	1587	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	0	0	251	0	213	0	1557	0	186	1587	0
Turn Type	Perm			Perm		Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)				27.8		27.8		90.1		100.1	100.1	
Effective Green, g (s)				28.8		28.8		91.1		101.1	101.1	
Actuated g/C Ratio				0.20		0.20		0.65		0.72	0.72	
Clearance Time (s)				7.0		7.0		6.0		3.0	6.0	
Vehicle Extension (s)				3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)				291		327		2282		219	2568	
v/s Ratio Prot								c0.44		c0.05	0.44	
v/s Ratio Perm				c0.18		0.13				0.56		
v/c Ratio				0.86		0.65		0.68		0.84	0.61	
Uniform Delay, d1				54.1		51.4		15.7		20.9	10.0	
Progression Factor				1.00		1.00		1.00		1.00	1.00	
Incremental Delay, d2				22.1		4.5		1.6		25.1	1.1	
Delay (s)				76.3		56.0		17.4		46.1	11.2	
Level of Service				E		E		B		D	B	
Approach Delay (s/veh)		0.0			67.0			17.4			14.8	
Approach LOS		A			E			B			B	

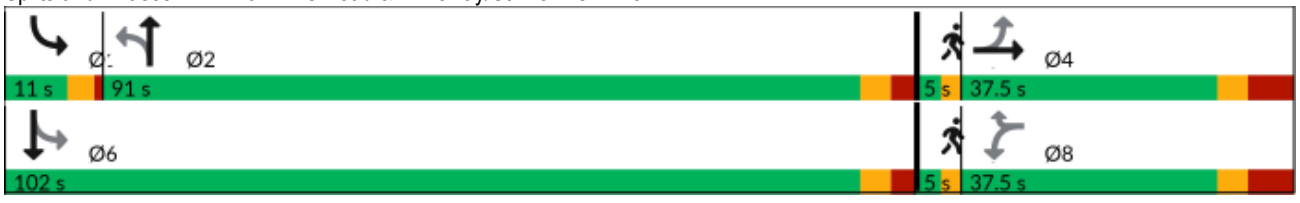
Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	140.9	Sum of lost time (s)	13.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

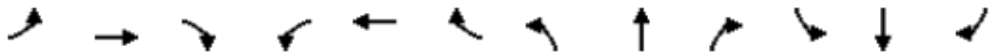
c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø3	Ø4	Ø7
Lane Configurations								
Traffic Volume (vph)	214	240	1426	154	1418			
Future Volume (vph)	214	240	1426	154	1418			
Lane Group Flow (vph)	233	261	1637	167	1541			
Turn Type	Perm	Perm	NA	pm+pt	NA			
Protected Phases			2	1	6	3	4	7
Permitted Phases	8	8		6				
Detector Phase	8	8	2	1	6			
Switch Phase								
Minimum Initial (s)	7.0	7.0	5.0	5.0	5.0	1.0	7.0	1.0
Minimum Split (s)	37.5	37.5	91.0	9.5	91.0	3.0	37.5	3.0
Total Split (s)	37.5	37.5	91.0	11.0	102.0	5.0	37.5	5.0
Total Split (%)	26.0%	26.0%	63.0%	7.6%	70.6%	3%	26%	3%
Yellow Time (s)	3.3	3.3	3.3	3.0	3.3	2.0	3.3	2.0
All-Red Time (s)	5.2	5.2	2.7	1.0	2.7	0.0	5.2	0.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0			
Total Lost Time (s)	7.5	7.5	5.0	3.0	5.0			
Lead/Lag	Lag	Lag	Lag	Lead		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	Max	None	Max	None	None	None
v/c Ratio	0.83	0.60	0.72	0.83	0.60			
Control Delay (s/veh)	77.6	28.0	20.0	51.1	11.5			
Queue Delay	0.0	0.0	1.1	0.0	0.0			
Total Delay (s/veh)	77.6	28.0	21.1	51.1	11.5			
Queue Length 50th (m)	60.8	28.4	158.3	18.3	108.6			
Queue Length 95th (m)	#98.3	57.2	187.1	#58.9	128.8			
Internal Link Dist (m)			226.5		183.4			
Turn Bay Length (m)		60.0		100.0				
Base Capacity (vph)	314	465	2244	200	2549			
Starvation Cap Reductn	0	0	356	0	0			
Spillback Cap Reductn	0	0	0	0	0			
Storage Cap Reductn	0	0	0	0	0			
Reduced v/c Ratio	0.74	0.56	0.87	0.84	0.60			

Intersection Summary
Cycle Length: 144.5
Actuated Cycle Length: 136.3
Natural Cycle: 145
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Don Mills Road & Driveway/St. Dennis Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	214	0	240	0	1426	80	154	1418	0
Future Volume (vph)	0	0	0	214	0	240	0	1426	80	154	1418	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				7.5		7.5		5.0		3.0	5.0	
Lane Util. Factor				1.00		1.00		0.95		1.00	0.95	
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)				1789		1601		3550		1789	3579	
Flt Permitted				0.75		1.00		1.00		0.07	1.00	
Satd. Flow (perm)				1426		1601		3550		143	3579	
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)	0	0	0	233	0	261	0	1550	87	167	1541	0
RTOR Reduction (vph)	0	0	0	0	0	116	0	3	0	0	0	0
Lane Group Flow (vph)	0	0	0	233	0	145	0	1634	0	167	1541	0
Turn Type	Perm			Perm		Perm	Perm	NA		pm+pt	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)				25.7		25.7		85.1		96.1	96.1	
Effective Green, g (s)				26.7		26.7		86.1		97.1	97.1	
Actuated g/C Ratio				0.20		0.20		0.63		0.71	0.71	
Clearance Time (s)				8.5		8.5		6.0		4.0	6.0	
Vehicle Extension (s)				3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)				279		313		2242		198	2549	
v/s Ratio Prot								0.46		c0.05	0.43	
v/s Ratio Perm				c0.16		0.09				c0.55		
v/c Ratio				0.83		0.46		0.72		0.84	0.60	
Uniform Delay, d1				52.6		48.4		17.1		26.7	9.9	
Progression Factor				1.00		1.00		1.00		1.00	1.00	
Incremental Delay, d2				18.9		1.0		2.1		26.4	1.0	
Delay (s)				71.6		49.5		19.2		53.2	10.9	
Level of Service				E		D		B		D	B	
Approach Delay (s/veh)		0.0			59.9			19.2			15.1	
Approach LOS		A			E			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	136.3	Sum of lost time (s)	18.5
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

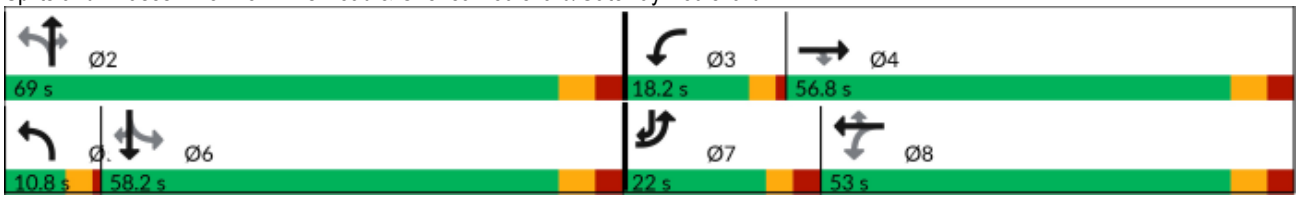
c Critical Lane Group

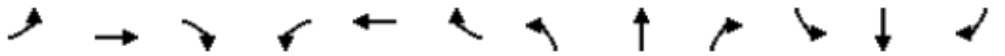
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	371	261	184	227	370	78	134	791	79	53	1276	450
Future Volume (vph)	371	261	184	227	370	78	134	791	79	53	1276	450
Lane Group Flow (vph)	403	284	200	247	402	85	146	860	86	58	1387	489
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4		3	8		5	2			6	7
Permitted Phases			4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	6	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	53.0	53.0	9.5	53.0	53.0	9.5	47.0	47.0	47.0	47.0	11.0
Total Split (s)	22.0	56.8	56.8	18.2	53.0	53.0	10.8	69.0	69.0	58.2	58.2	22.0
Total Split (%)	15.3%	39.4%	39.4%	12.6%	36.8%	36.8%	7.5%	47.9%	47.9%	40.4%	40.4%	15.3%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	3.0
All-Red Time (s)	3.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	6.0	6.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	Max	Max	None
v/c Ratio	0.89	0.51	0.33	0.55	0.82	0.17	0.87	0.49	0.10	0.26	0.97	0.48
Control Delay (s/veh)	79.7	42.0	8.5	28.1	60.3	6.6	69.9	25.5	8.0	33.5	57.3	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	79.7	42.0	8.5	28.1	60.3	6.6	69.9	25.5	8.0	33.5	57.3	11.7
Queue Length 50th (m)	53.4	61.5	4.9	40.0	98.2	0.0	21.1	77.6	2.9	9.9	182.5	39.2
Queue Length 95th (m)	#93.1	88.0	21.9	58.1	134.4	10.7	#69.6	114.0	13.7	24.6	#272.1	80.9
Internal Link Dist (m)		158.1			150.9			130.2			491.3	
Turn Bay Length (m)	103.0			100.0		100.0	65.0		50.0	42.0		
Base Capacity (vph)	450	730	727	454	676	632	167	1722	803	218	1427	1006
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.39	0.28	0.54	0.59	0.13	0.87	0.50	0.11	0.27	0.97	0.49

Intersection Summary

Cycle Length: 144
Actuated Cycle Length: 131.4
Natural Cycle: 145
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Don Mills Road & Overlea Boulevard/Gateway Boulevard





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	371	261	184	227	370	78	134	791	79	53	1276	450
Future Volume (vph)	371	261	184	227	370	78	134	791	79	53	1276	450
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	6.0	6.0	5.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3471	1883	1601	1789	1883	1601	1789	3579	1601	1789	3579	1601
Flt Permitted	0.95	1.00	1.00	0.46	1.00	1.00	0.07	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)	3471	1883	1601	876	1883	1601	136	3579	1601	548	3579	1601
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)	403	284	200	247	402	85	146	860	86	58	1387	489
RTOR Reduction (vph)	0	0	123	0	0	63	0	0	33	0	0	96
Lane Group Flow (vph)	403	284	77	247	402	22	146	860	53	58	1387	393
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4		3	8		5	2			6	7
Permitted Phases			4	8		8	2		2	6		6
Actuated Green, G (s)	16.1	37.4	37.4	46.7	33.0	33.0	62.2	62.2	62.2	51.4	51.4	67.5
Effective Green, g (s)	17.1	38.4	38.4	48.7	34.0	34.0	63.2	63.2	63.2	52.4	52.4	69.5
Actuated g/C Ratio	0.13	0.29	0.29	0.37	0.26	0.26	0.48	0.48	0.48	0.40	0.40	0.53
Clearance Time (s)	6.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	452	550	468	427	487	414	163	1722	770	218	1428	847
v/s Ratio Prot	c0.12	c0.15		0.06	c0.21		c0.05	0.24			c0.39	0.06
v/s Ratio Perm			0.05	0.15		0.01	0.38		0.03	0.11		0.19
v/c Ratio	0.89	0.51	0.16	0.57	0.82	0.05	0.89	0.49	0.06	0.26	0.97	0.46
Uniform Delay, d1	56.1	38.7	34.5	30.3	45.8	36.5	32.1	23.2	18.2	26.5	38.7	19.2
Progression 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
Incremental Delay, d2	19.3	0.8	0.1	1.9	10.9	0.0	41.4	1.0	0.1	2.9	17.8	0.4
Delay (s)	75.5	39.5	34.6	32.2	56.7	36.6	73.6	24.2	18.4	29.4	56.5	19.6
Level of Service	E	D	C	C	E	D	E	C	B	C	E	B
Approach Delay (s/veh)		54.7			46.2			30.4			46.4	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	44.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	131.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	19.5
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	250	40	28	78	127	316
Future Vol, veh/h	250	40	28	78	127	316
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	3	10	3	23	31	2
Mvmt Flow	298	48	33	93	151	376
Number of Lanes	1	0	0	1	1	0

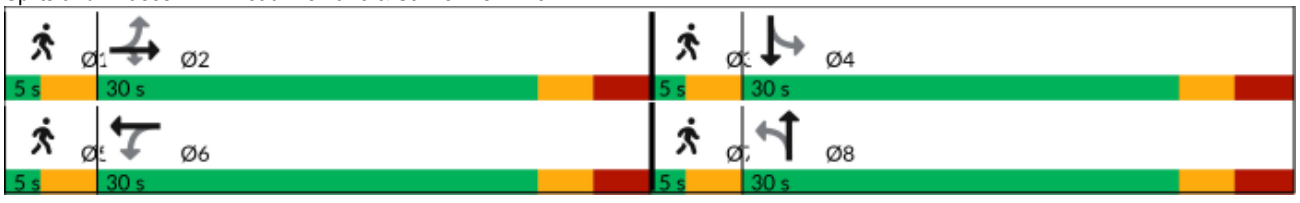
Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	15.9	10.5	24.1
HCM LOS	C	B	C

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	26%	86%	0%
Vol Thru, %	74%	0%	29%
Vol Right, %	0%	14%	71%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	106	290	443
LT Vol	28	250	0
Through Vol	78	0	127
RT Vol	0	40	316
Lane Flow Rate	126	345	527
Geometry Grp	1	1	1
Degree of Util (X)	0.206	0.557	0.774
Departure Headway (Hd)	5.878	5.805	5.282
Convergence, Y/N	Yes	Yes	Yes
Cap	608	621	686
Service Time	3.933	3.848	3.319
HCM Lane V/C Ratio	0.207	0.556	0.768
HCM Control Delay, s/veh	10.5	15.9	24.1
HCM Lane LOS	B	C	C
HCM 95th-tile Q	0.8	3.4	7.4

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	Ø1	Ø3	Ø5
Lane Configurations												
Traffic Volume (vph)	99	241	89	209	141	71	87	124	108			
Future Volume (vph)	99	241	89	209	141	71	87	124	108			
Lane Group Flow (vph)	106	259	96	225	218	0	407	0	381			
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA			
Protected Phases		2			6		8		4	1	3	5
Permitted Phases	2		2	6		8		4				
Detector Phase	2	2	2	6	6	8	8	4	4			
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	2.0	2.0	2.0
Minimum Split (s)	29.0	29.0	29.0	29.0	29.0	28.2	28.2	28.2	28.2	5.0	5.0	5.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	5.0	5.0	5.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	7%	7%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.2	3.2	3.2	3.2	0.0	0.0	0.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0		-1.0			
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.2		5.2			
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	None	None	None
v/c Ratio	0.25	0.37	0.16	0.69	0.33		0.65		0.65			
Control Delay (s/veh)	13.4	14.2	1.7	27.2	11.6		16.2		19.0			
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay (s/veh)	13.4	14.2	1.7	27.2	11.6		16.2		19.0			
Queue Length 50th (m)	7.2	18.5	0.0	18.6	12.6		24.1		28.3			
Queue Length 95th (m)	16.0	33.1	3.6	#41.5	25.2		#58.3		#66.9			
Internal Link Dist (m)		501.3			138.2		192.3		23.5			
Turn Bay Length (m)	28.0		10.0	32.0								
Base Capacity (vph)	511	838	661	394	785		620		583			
Starvation Cap Reductn	0	0	0	0	0		0		0			
Spillback Cap Reductn	0	0	0	0	0		0		0			
Storage Cap Reductn	0	0	0	0	0		0		0			
Reduced v/c Ratio	0.21	0.31	0.15	0.57	0.28		0.66		0.65			

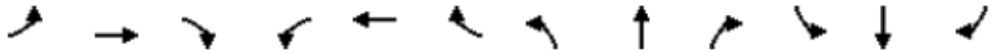
Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 56.1
Natural Cycle: 70
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Deauville Lane & St. Dennis Drive



Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	2.0
Minimum Split (s)	5.0
Total Split (s)	5.0
Total Split (%)	7%
Yellow Time (s)	3.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

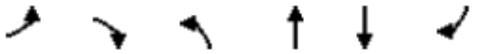
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	241	89	209	141	61	71	87	220	124	108	123
Future Volume (vph)	99	241	89	209	141	61	71	87	220	124	108	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0			5.2			5.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00	0.86	1.00	0.97			0.93			0.97	
Flpb, ped/bikes	0.96	1.00	1.00	0.91	1.00			0.99			0.98	
Frt	1.00	1.00	0.85	1.00	0.95			0.92			0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.98	
Satd. Flow (prot)	1754	1865	1342	1483	1711			1445			1690	
Flt Permitted	0.62	1.00	1.00	0.57	1.00			0.87			0.73	
Satd. Flow (perm)	1149	1865	1342	894	1711			1274			1266	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	106	259	96	225	152	66	76	94	237	133	116	132
RTOR Reduction (vph)	0	0	60	0	22	0	0	61	0	0	23	0
Lane Group Flow (vph)	106	259	36	225	196	0	0	346	0	0	358	0
Confl. Peds. (#/hr)	43		98	98		43	45		79	79		45
Heavy Vehicles (%)	0%	3%	5%	13%	7%	0%	5%	4%	18%	0%	4%	2%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	19.8	19.8	19.8	19.8	19.8			24.0			24.0	
Effective Green, g (s)	20.8	20.8	20.8	20.8	20.8			25.0			25.0	
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.37			0.45			0.45	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0			6.2			6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	426	692	498	332	635			568			565	
v/s Ratio Prot		0.14			0.11							
v/s Ratio Perm	0.09		0.03	c0.25				0.27			c0.28	
v/c Ratio	0.24	0.37	0.07	0.67	0.30			0.60			0.63	
Uniform Delay, d1	12.1	12.8	11.3	14.7	12.4			11.7			11.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.3	0.3	0.0	5.4	0.2			4.7			5.3	
Delay (s)	12.4	13.1	11.4	20.1	12.7			16.5			17.2	
Level of Service	B	B	B	C	B			B			B	
Approach Delay (s/veh)		12.6			16.5			16.5			17.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

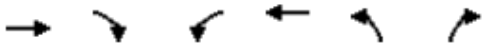
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	278	48	32	94	150	241
Future Volume (vph)	278	48	32	94	150	241
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	331	57	38	112	179	287

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	388	150	466
Volume Left (vph)	331	38	0
Volume Right (vph)	57	0	287
Hadj (s)	0.15	0.36	-0.15
Departure Headway (s)	5.7	6.2	5.2
Degree Utilization, x	0.62	0.26	0.68
Capacity (veh/h)	599	526	665
Control Delay (s/veh)	17.5	11.4	18.5
Approach Delay (s/veh)	17.5	11.4	18.5
Approach LOS	C	B	C

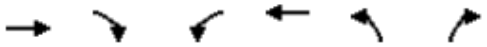
Intersection Summary			
Delay	17.1		
Level of Service	C		
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	321	0	0	273	6	5
Future Volume (Veh/h)	321	0	0	273	6	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	349	0	0	297	7	5
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			349		646	349
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			349		646	349
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	99
cM capacity (veh/h)			1210		436	694

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	349	297	12
Volume Left	0	0	7
Volume Right	0	0	5
cSH	1700	1210	516
Volume to Capacity	0.21	0.00	0.02
Queue Length 95th (m)	0.0	0.0	0.5
Control Delay (s/veh)	0.0	0.0	12.1
Lane LOS			B
Approach Delay (s/veh)	0.0	0.0	12.1
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	26.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	305	23	28	251	19	15
Future Volume (Veh/h)	305	23	28	251	19	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	332	25	30	273	21	16
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			357		678	345
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			357		678	345
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		95	98
cM capacity (veh/h)			1202		408	698

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	357	303	37
Volume Left	0	30	21
Volume Right	25	0	16
cSH	1700	1202	497
Volume to Capacity	0.21	0.02	0.07
Queue Length 95th (m)	0.0	0.6	1.8
Control Delay (s/veh)	0.0	1.0	12.8
Lane LOS		A	B
Approach Delay (s/veh)	0.0	1.0	12.8
Approach LOS			B

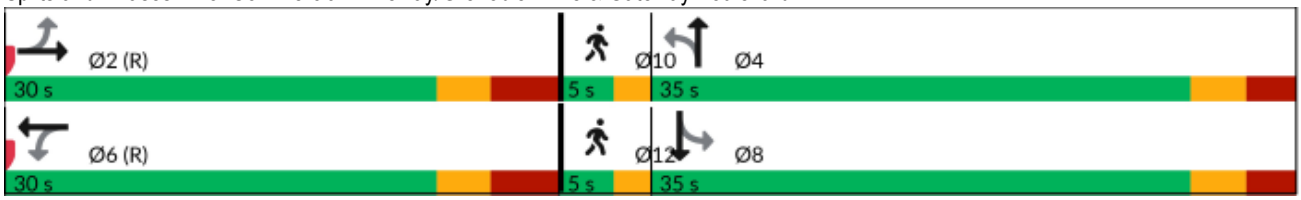
Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		

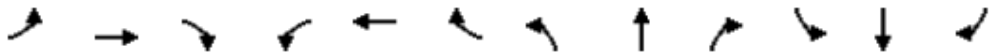
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø10	Ø12
Lane Configurations										
Traffic Volume (vph)	212	69	19	69	53	70	22	92		
Future Volume (vph)	212	69	19	69	53	70	22	92		
Lane Group Flow (vph)	221	144	0	215	0	156	0	280		
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA		
Protected Phases		2		6		4		8	10	12
Permitted Phases	2		6		4		8			
Detector Phase	2	2	6	6	4	4	8	8		
Switch Phase										
Minimum Initial (s)	23.0	23.0	23.0	23.0	24.0	24.0	24.0	24.0	1.0	1.5
Minimum Split (s)	29.6	29.6	29.6	29.6	34.7	34.7	34.7	34.7	5.0	5.0
Total Split (s)	30.0	30.0	30.0	30.0	35.0	35.0	35.0	35.0	5.0	5.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	50.0%	50.0%	50.0%	50.0%	7%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	3.6	3.6	3.6	3.6	2.7	2.7	2.7	2.7	0.0	0.0
Lost Time Adjust (s)	-1.0	-1.0		-1.0		-1.0		-1.0		
Total Lost Time (s)	5.6	5.6		5.6		4.7		4.7		
Lead/Lag					Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
v/c Ratio	0.74	0.23		0.43		0.25		0.39		
Control Delay (s/veh)	38.7	9.8		12.2		12.2		9.2		
Queue Delay	0.0	0.0		0.0		0.0		0.0		
Total Delay (s/veh)	38.7	9.8		12.2		12.2		9.2		
Queue Length 50th (m)	25.0	6.3		10.0		10.7		12.5		
Queue Length 95th (m)	#57.9	17.4		26.7		22.0		28.5		
Internal Link Dist (m)		158.4		25.7		14.9		38.5		
Turn Bay Length (m)	48.0									
Base Capacity (vph)	296	612		492		624		712		
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	0.75	0.24		0.44		0.25		0.39		

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 1 (1%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Pretimed
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Commercial Driveway/Grenoble Drive & Gateway Boulevard





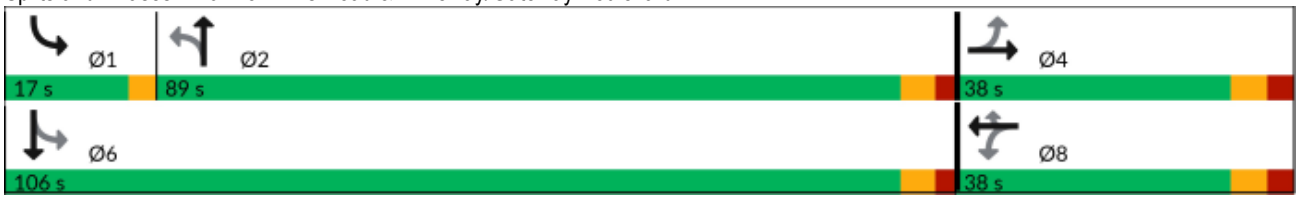
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	69	69	19	69	118	53	70	27	22	92	155
Future Volume (vph)	212	69	69	19	69	118	53	70	27	22	92	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6			5.6			4.7			4.7	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.94			0.82			0.97			0.89	
Flpb, ped/bikes	0.80	1.00			0.99			0.96			0.99	
Frt	1.00	0.92			0.92			0.97			0.92	
Flt Protected	0.95	1.00			0.99			0.98			0.99	
Satd. Flow (prot)	1317	1622			1251			1684			1521	
Flt Permitted	0.61	1.00			0.96			0.82			0.97	
Satd. Flow (perm)	851	1622			1214			1414			1485	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	221	72	72	20	72	123	55	73	28	23	96	161
RTOR Reduction (vph)	0	47	0	0	69	0	0	11	0	0	70	0
Lane Group Flow (vph)	221	97	0	0	146	0	0	145	0	0	210	0
Confl. Peds. (#/hr)	192		61	61		192	140		98	98		140
Heavy Vehicles (%)	11%	6%	1%	14%	10%	19%	4%	3%	0%	5%	2%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	23.4	23.4			23.4			29.3			29.3	
Effective Green, g (s)	24.4	24.4			24.4			30.3			30.3	
Actuated g/C Ratio	0.35	0.35			0.35			0.43			0.43	
Clearance Time (s)	6.6	6.6			6.6			5.7			5.7	
Lane Grp Cap (vph)	296	565			423			612			642	
v/s Ratio Prot		0.06										
v/s Ratio Perm	c0.26				0.12			0.10			c0.14	
v/c Ratio	0.74	0.17			0.34			0.23			0.32	
Uniform Delay, d1	20.0	15.7			16.8			12.5			13.1	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	15.7	0.6			2.2			0.9			1.3	
Delay (s)	35.8	16.4			19.1			13.4			14.4	
Level of Service	D	B			B			B			B	
Approach Delay (s/veh)		28.1			19.1			13.4			14.4	
Approach LOS		C			B			B			B	

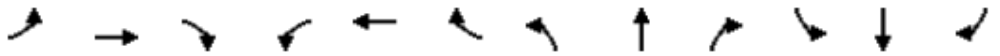
Intersection Summary			
HCM 2000 Control Delay (s/veh)	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø4
Lane Configurations						
Traffic Volume (vph)	213	194	1505	187	1236	
Future Volume (vph)	213	194	1505	187	1236	
Lane Group Flow (vph)	232	211	1804	203	1343	
Turn Type	Perm	Perm	NA	pm+pt	NA	
Protected Phases			2	1	6	4
Permitted Phases	8	8		6		
Detector Phase	8	8	2	1	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	38.0	38.0	89.0	9.5	89.0	38.0
Total Split (s)	38.0	38.0	89.0	17.0	106.0	38.0
Total Split (%)	26.4%	26.4%	61.8%	11.8%	73.6%	26%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	3.0	3.0	2.0	0.0	2.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	6.0	6.0	5.0	2.0	5.0	
Lead/Lag			Lag	Lead		
Lead-Lag Optimize?			Yes	Yes		
Recall Mode	None	None	Max	None	Max	None
v/c Ratio	0.83	0.67	0.83	0.85	0.51	
Control Delay (s/veh)	78.6	63.2	27.1	68.3	9.7	
Queue Delay	0.0	0.0	0.0	0.0	0.3	
Total Delay (s/veh)	78.6	63.2	27.1	68.3	10.1	
Queue Length 50th (m)	62.0	54.4	208.9	39.7	82.0	
Queue Length 95th (m)	#94.3	81.7	256.1	#83.4	103.8	
Internal Link Dist (m)			491.3		226.5	
Turn Bay Length (m)	35.0	71.0		72.0		
Base Capacity (vph)	327	367	2155	248	2597	
Starvation Cap Reductn	0	0	0	0	648	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.71	0.57	0.84	0.82	0.69	

Intersection Summary
Cycle Length: 144
Actuated Cycle Length: 139.4
Natural Cycle: 140
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Don Mills Road & Driveway/Gateway Boulevard





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	213	0	194	0	1505	155	187	1236	0
Future Volume (vph)	0	0	0	213	0	194	0	1505	155	187	1236	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0		6.0		5.0		2.0	5.0	
Lane Util. Factor				1.00		1.00		0.95		1.00	0.95	
Frt				1.00		0.85		0.98		1.00	1.00	
Flt Protected				0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)				1789		1601		3529		1789	3579	
Flt Permitted				0.75		1.00		1.00		0.04	1.00	
Satd. Flow (perm)				1426		1601		3529		87	3579	
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)	0	0	0	232	0	211	0	1636	168	203	1343	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	0	0	232	0	211	0	1799	0	203	1343	0
Turn Type	Perm			Perm		Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)				26.2		26.2		84.0		100.2	100.2	
Effective Green, g (s)				27.2		27.2		85.0		101.2	101.2	
Actuated g/C Ratio				0.20		0.20		0.61		0.73	0.73	
Clearance Time (s)				7.0		7.0		6.0		3.0	6.0	
Vehicle Extension (s)				3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)				278		312		2151		236	2598	
v/s Ratio Prot								c0.51		c0.09	0.38	
v/s Ratio Perm				c0.16		0.13				0.54		
v/c Ratio				0.83		0.67		0.83		0.86	0.51	
Uniform Delay, d1				53.9		52.0		21.6		45.7	8.3	
Progression Factor				1.00		1.00		1.00		1.00	1.00	
Incremental Delay, d2				18.9		5.7		4.0		25.8	0.7	
Delay (s)				72.8		57.7		25.7		71.5	9.1	
Level of Service				E		E		C		E	A	
Approach Delay (s/veh)		0.0			65.6			25.7			17.3	
Approach LOS		A			E			C			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	139.4	Sum of lost time (s)	13.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		

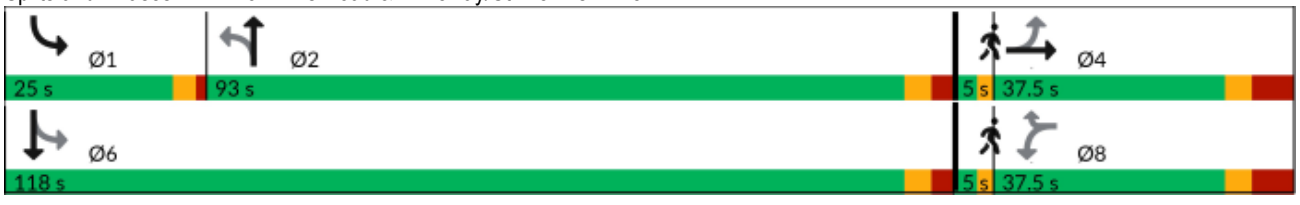
c Critical Lane Group

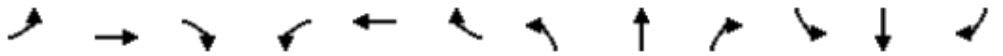
Lane Group	WBL	WBR	NBT	SBL	SBT	Ø3	Ø4	Ø7
Lane Configurations								
Traffic Volume (vph)	168	108	1378	278	1255			
Future Volume (vph)	168	108	1378	278	1255			
Lane Group Flow (vph)	183	117	1847	302	1364			
Turn Type	Perm	Perm	NA	pm+pt	NA			
Protected Phases			2	1	6	3	4	7
Permitted Phases	8	8		6				
Detector Phase	8	8	2	1	6			
Switch Phase								
Minimum Initial (s)	7.0	7.0	5.0	5.0	5.0	1.0	7.0	1.0
Minimum Split (s)	37.5	37.5	93.0	9.5	107.0	3.0	37.5	3.0
Total Split (s)	37.5	37.5	93.0	25.0	118.0	5.0	37.5	5.0
Total Split (%)	23.4%	23.4%	57.9%	15.6%	73.5%	3%	23%	3%
Yellow Time (s)	3.3	3.3	3.3	3.0	3.3	2.0	3.3	2.0
All-Red Time (s)	5.2	5.2	2.7	1.0	2.7	0.0	5.2	0.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0			
Total Lost Time (s)	7.5	7.5	5.0	3.0	5.0			
Lead/Lag	Lag	Lag	Lag	Lead		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	Max	None	Max	None	None	None
v/c Ratio	0.78	0.32	0.89	0.96	0.50			
Control Delay (s/veh)	83.9	10.9	34.5	89.6	8.5			
Queue Delay	0.0	0.0	23.2	0.0	0.0			
Total Delay (s/veh)	83.9	10.9	57.8	89.6	8.5			
Queue Length 50th (m)	53.0	0.0	245.0	74.7	78.2			
Queue Length 95th (m)	80.6	17.4	305.0	#141.0	103.7			
Internal Link Dist (m)			226.5		183.4			
Turn Bay Length (m)		60.0		100.0				
Base Capacity (vph)	285	414	2053	313	2698			
Starvation Cap Reductn	0	0	284	0	0			
Spillback Cap Reductn	0	0	0	0	0			
Storage Cap Reductn	0	0	0	0	0			
Reduced v/c Ratio	0.64	0.28	1.04	0.96	0.51			

Intersection Summary

Cycle Length: 160.5
Actuated Cycle Length: 150.1
Natural Cycle: 150
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Don Mills Road & Driveway/St. Dennis Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	168	0	108	0	1378	321	278	1255	0
Future Volume (vph)	0	0	0	168	0	108	0	1378	321	278	1255	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				7.5		7.5		5.0		3.0	5.0	
Lane Util. Factor				1.00		1.00		0.95		1.00	0.95	
Frt				1.00		0.85		0.97		1.00	1.00	
Flt Protected				0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)				1789		1601		3477		1789	3579	
Flt Permitted				0.75		1.00		1.00		0.04	1.00	
Satd. Flow (perm)				1426		1601		3477		83	3579	
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)	0	0	0	183	0	117	0	1498	349	302	1364	0
RTOR Reduction (vph)	0	0	0	0	0	98	0	12	0	0	0	0
Lane Group Flow (vph)	0	0	0	183	0	19	0	1835	0	302	1364	0
Turn Type	Perm			Perm		Perm	Perm	NA		pm+pt	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)				23.4		23.4		87.1		112.1	112.1	
Effective Green, g (s)				24.4		24.4		88.1		113.1	113.1	
Actuated g/C Ratio				0.16		0.16		0.59		0.75	0.75	
Clearance Time (s)				8.5		8.5		6.0		4.0	6.0	
Vehicle Extension (s)				3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)				231		260		2042		312	2698	
v/s Ratio Prot								0.53		c0.14	0.38	
v/s Ratio Perm				c0.13		0.01				c0.59		
v/c Ratio				0.79		0.07		0.89		0.96	0.50	
Uniform Delay, d1				60.3		53.2		27.0		53.9	7.3	
Progression Factor				1.00		1.00		1.00		1.00	1.00	
Incremental Delay, d2				16.7		0.1		6.8		41.8	0.6	
Delay (s)				77.1		53.3		33.8		95.7	8.0	
Level of Service				E		D		C		F	A	
Approach Delay (s/veh)		0.0			67.8			33.8			23.9	
Approach LOS		A			E			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	32.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

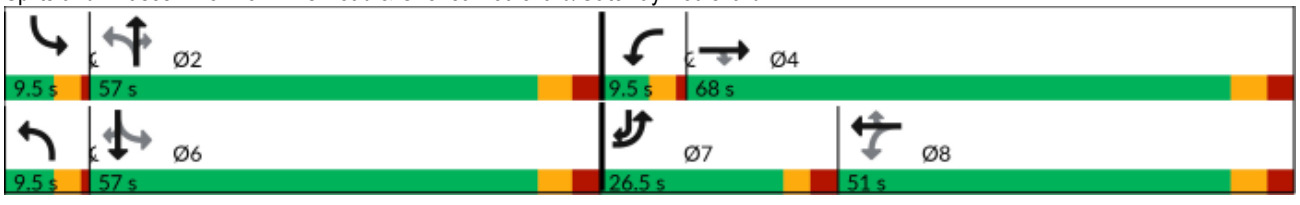
c Critical Lane Group

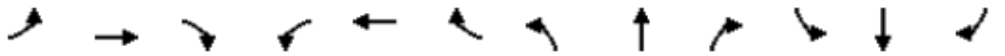
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	461	550	222	96	227	118	123	1272	121	94	636	719
Future Volume (vph)	461	550	222	96	227	118	123	1272	121	94	636	719
Lane Group Flow (vph)	501	598	241	104	247	128	134	1383	132	102	691	782
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.5	51.0	51.0	9.5	51.0	51.0	9.5	41.0	41.0	9.5	41.0	26.5
Total Split (s)	26.5	68.0	68.0	9.5	51.0	51.0	9.5	57.0	57.0	9.5	57.0	26.5
Total Split (%)	18.4%	47.2%	47.2%	6.6%	35.4%	35.4%	6.6%	39.6%	39.6%	6.6%	39.6%	18.4%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	3.0
All-Red Time (s)	3.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	None
v/c Ratio	0.86	0.87	0.34	0.59	0.56	0.27	0.42	0.97	0.18	0.67	0.48	0.69
Control Delay (s/veh)	69.4	52.8	7.7	36.5	48.4	6.3	25.5	58.1	5.1	44.0	32.1	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.4	52.8	7.7	36.5	48.4	6.3	25.5	58.1	5.1	44.0	32.1	12.8
Queue Length 50th (m)	64.7	140.6	8.0	14.8	55.8	0.0	18.3	180.9	0.0	13.6	68.7	63.1
Queue Length 95th (m)	#109.0	186.6	25.0	25.0	80.9	12.9	36.7	#275.7	12.9	#42.1	102.2	140.8
Internal Link Dist (m)		158.1			150.9			130.2			491.3	
Turn Bay Length (m)	103.0			100.0		100.0	65.0		50.0	42.0		
Base Capacity (vph)	579	906	870	175	658	647	314	1417	716	151	1417	1127
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.66	0.28	0.59	0.38	0.20	0.43	0.98	0.18	0.68	0.49	0.69

Intersection Summary

Cycle Length: 144
Actuated Cycle Length: 129.6
Natural Cycle: 150
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Don Mills Road & Overlea Boulevard/Gateway Boulevard





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	461	550	222	96	227	118	123	1272	121	94	636	719
Future Volume (vph)	461	550	222	96	227	118	123	1272	121	94	636	719
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	5.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3471	1883	1601	1789	1883	1601	1789	3579	1601	1789	3579	1601
Flt Permitted	0.95	1.00	1.00	0.17	1.00	1.00	0.28	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	3471	1883	1601	335	1883	1601	536	3579	1601	147	3579	1601
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)	501	598	241	104	247	128	134	1383	132	102	691	782
RTOR Reduction (vph)	0	0	123	0	0	98	0	0	80	0	0	170
Lane Group Flow (vph)	501	598	118	104	247	30	134	1383	52	102	691	612
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4	8		8	2		2	6		6
Actuated Green, G (s)	20.6	46.1	46.1	34.5	29.0	29.0	55.8	50.3	50.3	55.8	50.3	70.9
Effective Green, g (s)	21.6	47.1	47.1	36.5	30.0	30.0	57.8	51.3	51.3	57.8	51.3	72.9
Actuated g/C Ratio	0.17	0.36	0.36	0.28	0.23	0.23	0.45	0.40	0.40	0.45	0.40	0.56
Clearance Time (s)	6.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	579	685	582	167	436	371	302	1418	634	148	1418	901
v/s Ratio Prot	c0.14	c0.32		0.03	0.13		0.02	c0.39		c0.03	0.19	0.11
v/s Ratio Perm			0.07	0.14		0.02	0.18		0.03	0.27		0.27
v/c Ratio	0.86	0.87	0.20	0.62	0.56	0.07	0.44	0.97	0.08	0.68	0.48	0.67
Uniform Delay, d1	52.4	38.3	28.2	36.8	43.9	38.8	22.3	38.4	24.3	30.0	29.2	19.9
Progression 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
Incremental Delay, d2	12.7	11.8	0.1	7.0	1.6	0.0	1.0	18.6	0.2	12.5	1.2	2.0
Delay (s)	65.2	50.2	28.4	43.8	45.6	38.9	23.3	57.1	24.6	42.6	30.4	22.0
Level of Service	E	D	C	D	D	D	C	E	C	D	C	C
Approach Delay (s/veh)		51.9			43.4			51.7			27.0	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	43.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	129.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	91.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	18.3
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	278	48	32	94	150	241
Future Vol, veh/h	278	48	32	94	150	241
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	3	10	3	23	31	2
Mvmt Flow	331	57	38	112	179	287
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	17.7	11	21.1
HCM LOS	C	B	C

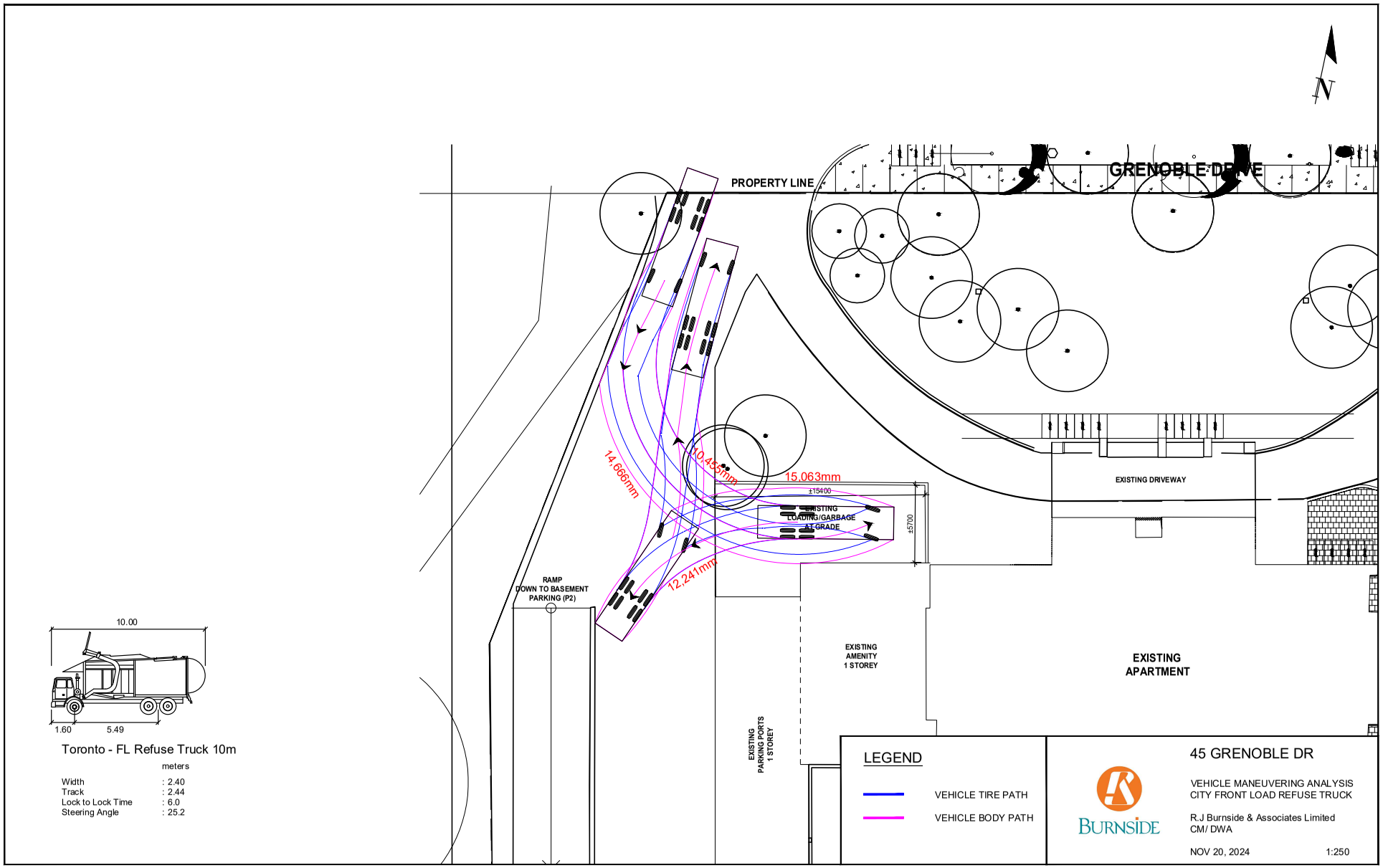
Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	25%	85%	0%
Vol Thru, %	75%	0%	38%
Vol Right, %	0%	15%	62%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	126	326	391
LT Vol	32	278	0
Through Vol	94	0	150
RT Vol	0	48	241
Lane Flow Rate	150	388	465
Geometry Grp	1	1	1
Degree of Util (X)	0.248	0.619	0.712
Departure Headway (Hd)	5.946	5.744	5.508
Convergence, Y/N	Yes	Yes	Yes
Cap	602	629	656
Service Time	4.006	3.789	3.552
HCM Lane V/C Ratio	0.249	0.617	0.709
HCM Control Delay, s/veh	11	17.7	21.1
HCM Lane LOS	B	C	C
HCM 95th-tile Q	1	4.3	5.9

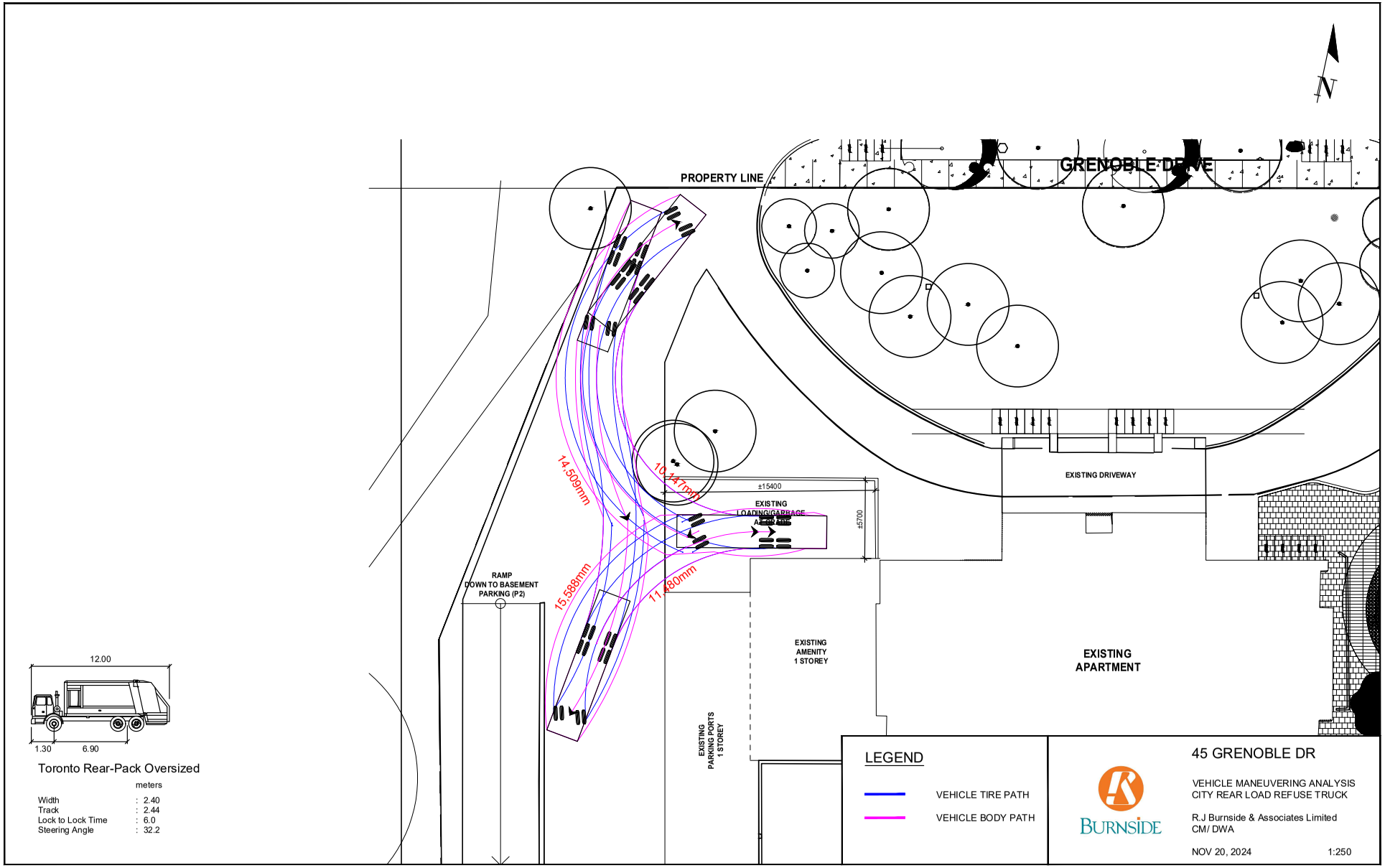
BURNSIDE

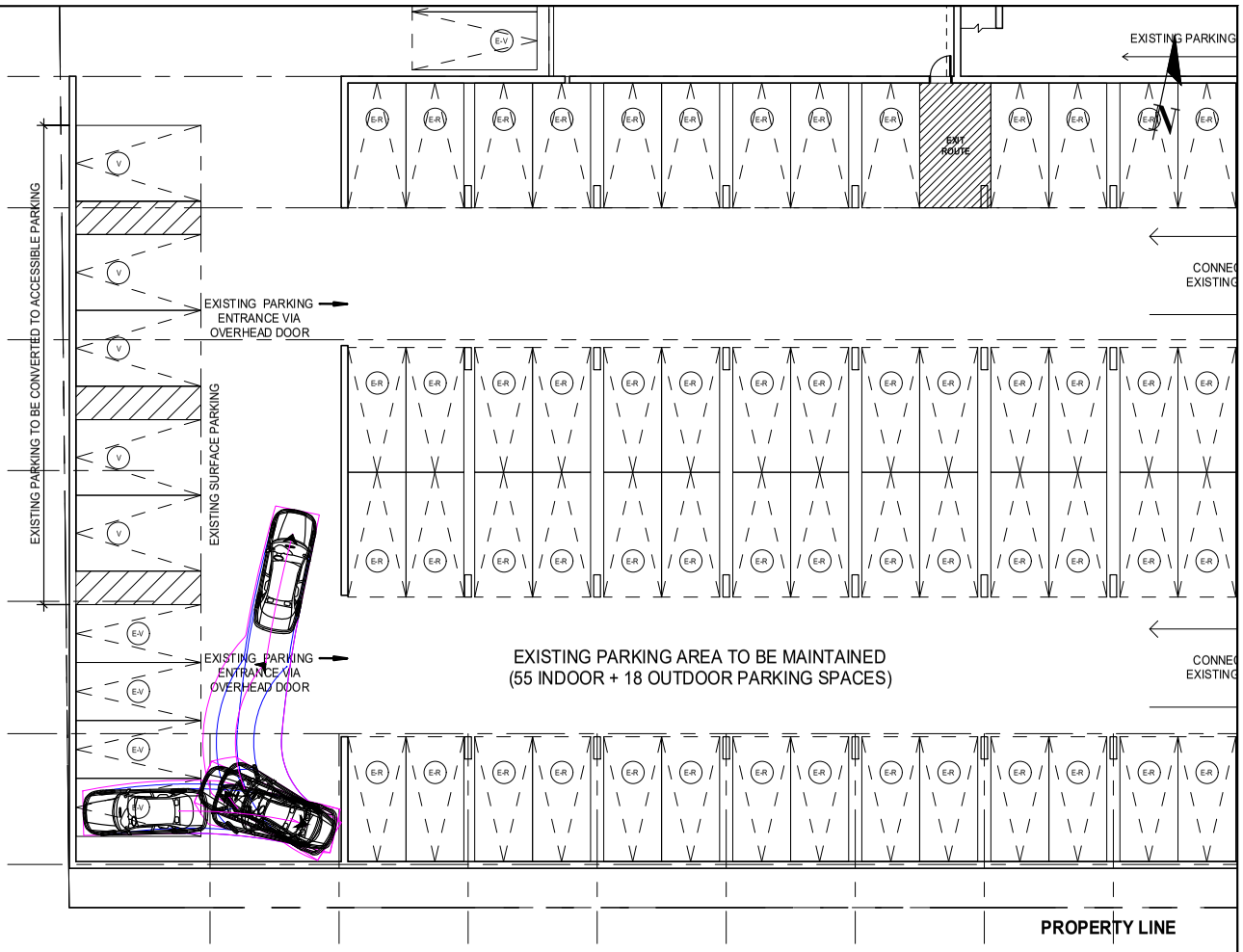
[THE DIFFERENCE IS OUR PEOPLE]

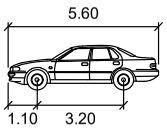
Appendix I

Swept Path Analysis


N
PROPERTY LINE
GRENOBLE DRIVE
EXISTING DRIVEWAY
14,666mm
10,453mm
15,063mm
±15400
EXISTING LOADING/GARBAGE AT GRADE
±5700
12,241mm
RAMP DOWN TO BASEMENT PARKING (P2)
EXISTING AMENITY 1 STOREY
EXISTING APARTMENT
EXISTING PARKING PORTS 1 STOREY
10.00
1.60
5.49
Toronto - FL Refuse Truck 10m
meters
Width : 2.40
Track : 2.44
Lock to Lock Time : 6.0
Steering Angle : 25.2
LEGEND
VEHICLE TIRE PATH
VEHICLE BODY PATH
BURNSIDE
45 GRENOBLE DR
VEHICLE MANEUVERING ANALYSIS
CITY FRONT LOAD REFUSE TRUCK
R.J Burnside & Associates Limited
CM/ DWA
NOV 20, 2024
1:250


N
PROPERTY LINE
GRENOBLE DRIVE
EXISTING DRIVEWAY
±15400
±5700
EXISTING
LOADING/GARAGE
AREA
RAMP
DOWN TO BASEMENT
PARKING (P2)
14,509mm
10,447mm
15,588mm
11,480mm
EXISTING
AMENITY
1 STOREY
EXISTING
APARTMENT
EXISTING
PARKING PORTS
1 STOREY
12.00
1.30
6.90
Toronto Rear-Pack Oversized
meters
Width : 2.40
Track : 2.44
Lock to Lock Time : 6.0
Steering Angle : 32.2
LEGEND
VEHICLE TIRE PATH
VEHICLE BODY PATH
BURNSIDE
45 GRENOBLE DR
VEHICLE MANEUVERING ANALYSIS
CITY REAR LOAD REFUSE TRUCK
R.J Burnside & Associates Limited
CM/ DWA
NOV 20, 2024
1:250





P

	meters
Width	: 2.00
Track	: 2.00
Lock to Lock Time	: 6.0
Steering Angle	: 35.9

LEGEND

VEHICLE TIRE PATH

VEHICLE BODY PATH

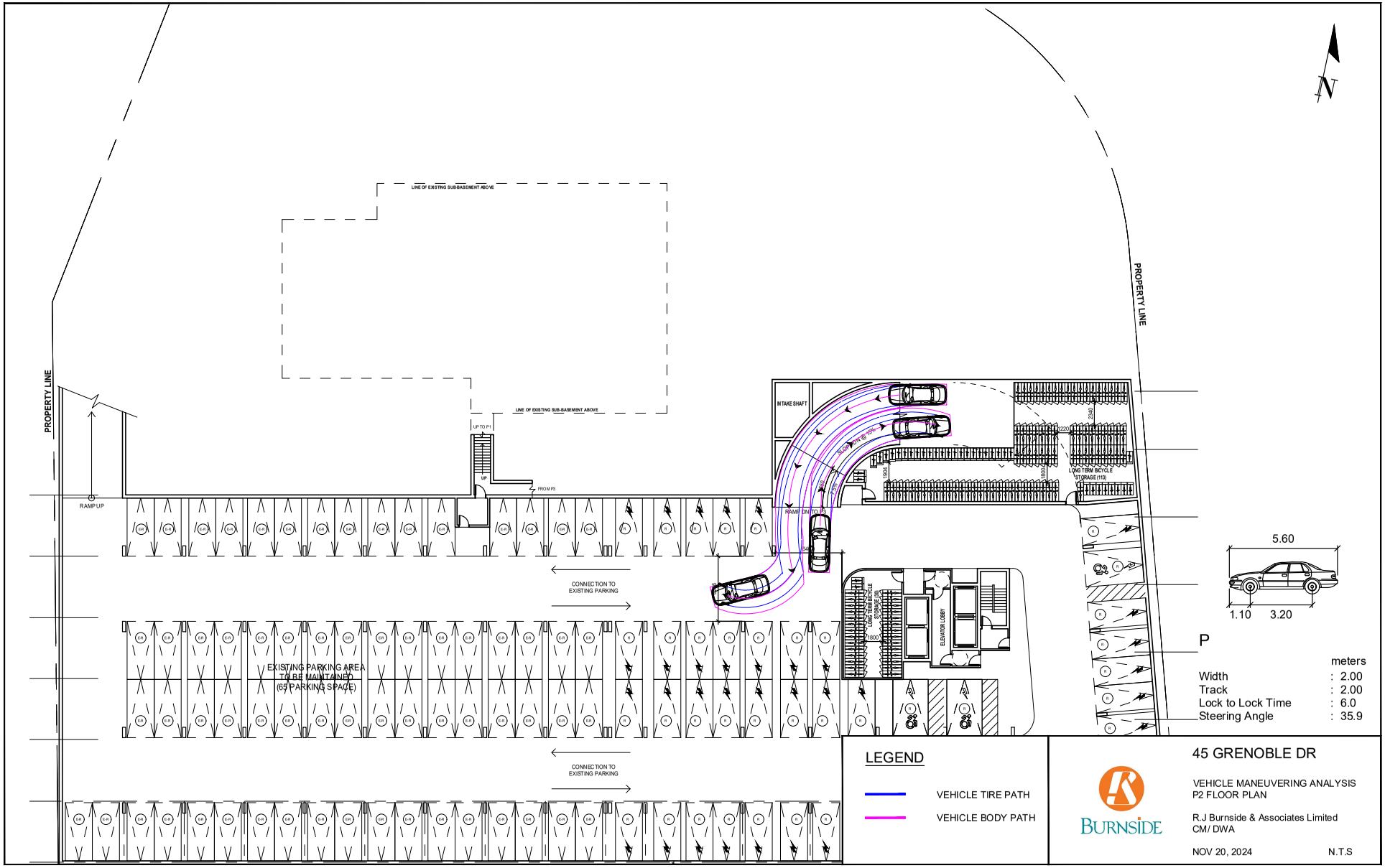
BURNSIDE

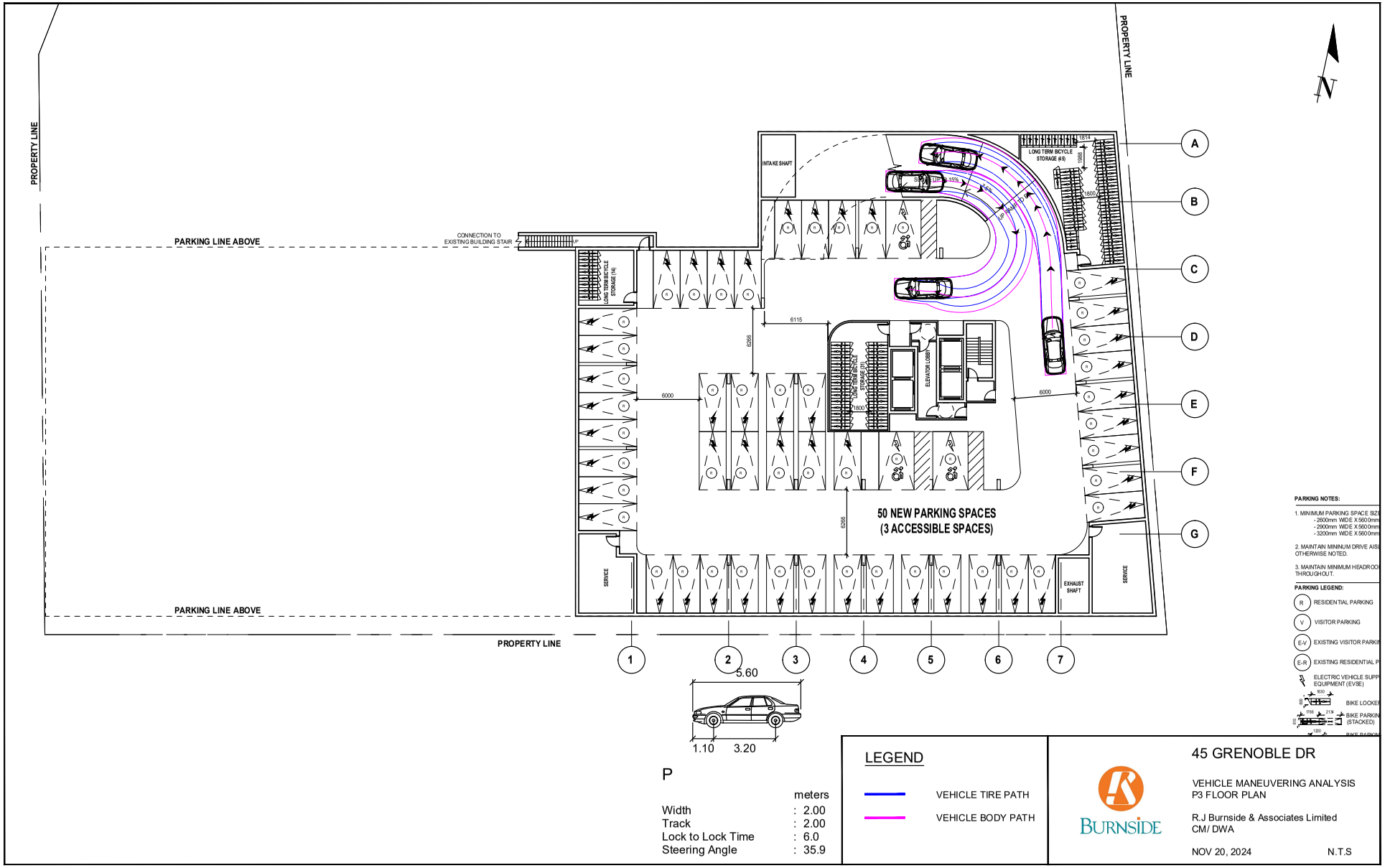
45 GRENOBLE DR

VEHICLE MANEUVERING ANALYSIS
P1 FLOOR PLAN

R.J Burnside & Associates Limited
CM/ DWA

NOV 20, 2024 N.T.S


N
PROPERTY LINE
PROPERTY LINE
LINE OF EXISTING SUB-BASEMENT ABOVE
LINE OF EXISTING SUB-BASEMENT ABOVE
UP TO P1
UP
FROM P3
RAMP UP
RAMP DN TO P3
INTAKE SHAFT
SLOPE 15%
CONNECTION TO EXISTING PARKING
CONNECTION TO EXISTING PARKING
EXISTING PARKING AREA TO BE MAINTAINED (65 PARKING SPACE)
LONG TERM BICYCLE STORAGE (RI)
ELEVATOR LOBBY
LONG TERM BICYCLE STORAGE (113)
5.60
1.10
3.20
P
meters
Width : 2.00
Track : 2.00
Lock to Lock Time : 6.0
Steering Angle : 35.9
LEGEND
VEHICLE TIRE PATH
VEHICLE BODY PATH
BURNSIDE
45 GRENOBLE DR
VEHICLE MANEUVERING ANALYSIS
P2 FLOOR PLAN
R.J Burnside & Associates Limited
CM/ DWA
NOV 20, 2024
N.T.S



P

	meters
Width	: 2.00
Track	: 2.00
Lock to Lock Time	: 6.0
Steering Angle	: 35.9

LEGEND

VEHICLE TIRE PATH

VEHICLE BODY PATH

PARKING NOTES:

1. MINIMUM PARKING SPACE SIZE
- 2600mm WIDE X 5600mm
- 2900mm WIDE X 5600mm
- 3200mm WIDE X 5600mm

2. MAINTAIN MINIMUM DRIVE AISL OTHERWISE NOTED.

3. MAINTAIN MINIMUM HEADROO THROUGHOUT.

PARKING LEGEND:

R RESIDENTIAL PARKING

V VISITOR PARKING

E-V EXISTING VISITOR PARKI

E-R EXISTING RESIDENTIAL P

ELECTRIC VEHICLE SUPP EQUIPMENT (EVSE)

BIKE LOCKE

BIKE PARKIN (STACKED)

BURNSIDE

45 GRENOBLE DR

VEHICLE MANEUVERING ANALYSIS
P3 FLOOR PLAN

R.J Burnside & Associates Limited
CM/ DWA

NOV 20, 2024 N.T.S

Appendix J

Transportation Demand Management Data and Methodologies

TRANSPORTATION DEMAND MANAGEMENT (TDM) GUIDANCE

Vermont Agency of Transportation

Policy, Planning, and Intermodal Development Division

One National Life Drive

Montpelier, VT 05633-5001

802-828-2784

www.aot.state.vt.us

February 2016

Table A.1 Trip or VMT Reductions from the Literature and Other Practice Examples

TDM Measure	Source	Percent Trip or VMT Reduction	Comments
Physical			
Increase local/neighborhood density	CAPCOA	0.8-30%	
Increase location efficiency (CBD or infill site)	CAPCOA	10-65%	
Increase diversity (mixed-use area)	CAPCOA	9-30%	
Improve design of development	CAPCOA	3-21%	
Bus stop/shelter/improvements	DelDOT	0.5-1%	
Transit shelter	Sacramento	2%	
Design site to support transit	DelDOT	1-2%	
Bicycle storage	DelDOT	0.5%	
Bicycle showers and lockers	Sacramento	2-5%	
Bicycle paths	DelDOT	0.5-1%	
All bike facilities	CAPCOA	1-5%	
All bike facilities	ORDEQ	0-10%	
Pedestrian pathways	DelDOT	0.5%	
Pedestrian network improvements	CAPCOA	0-2%	
Parking management (charging, limiting, cash-out)	DelDOT	2-5%	
Limit parking supply	CAPCOA	5-12%	
On-site amenities	DelDOT	0.5-2%	
Operational			
Flextime	Berkeley	<4%	
Compressed work week	CAPCOA	0.1-3.8%	see Exhibit A
Telecommuting	CAPCOA	0.2-5.5%	see Exhibit A
Meeting guidelines to support CP/VP and transit	DelDOT	0.5%	
Preferential parking for carpools and vanpools	DelDOT	0.5-1%	
Preferential parking	Sacramento	5%	10% in CBD
Ridesharing programs	CAPCOA	1-15%	
On-site ridematching	ORDEQ	1-2%	
Guaranteed ride home	Berkeley	<1%	
Guaranteed ride home	ORDEQ	1-3%	
Provide or contribute to shuttle service	DelDOT	1.0-3.5%	
Vanpool or shuttle service	CAPCOA	0.3-13%	
Vanpool or shuttle service	Sacramento	10%	
On-site carsharing	Berkeley	<2%	
On-site carsharing	CAPCOA	0.4-0.7%	
Combined voluntary trip reduction programs	CAPCOA	1.0-6.2%	

TDM Measure	Source	Percent Trip or VMT Reduction	Comments
Operational (continued)			
Combined services	Fairfax	1-10%	1-3% in low transit area, 5-10% in moderate transit area
Combined services	N/N	8.5%	
Financial			
Provide value incentive/disincentive	DelDOT	0.5-2%	
Gifts/awards for alternative mode use	ORDEQ	0-3%	
Parking pricing (office), unbundle parking costs (residential)	Berkeley	5-40%	
Parking pricing ($1-$6 per day)	CAPCOA	0.5-20%	Varies by area type and price (see Exhibit C)
Parking pricing	N/N	20-30%	
Parking pricing	Sacramento	10%	
Parking management program (charging, limiting spaces, cash-out)	DelDOT	2-5%	
Parking cash-out	CAPCOA	0.6-7.7%	Varies by area type (Exhibit D)
Parking cash-out	ORDEQ	2-9%	2-4% low transit, 5-9% med transit
Unbundle parking costs	CAPCOA	2.6-13%	
Subsidized/discounted transit	CAPCOA	0.3-20%	Varies by level of subsidy and location type (Exhibit B)
Combined financial incentives	Fairfax	1-15%	1-5% in low transit area, 5-15% in moderate transit area
Combined financial incentives	N/N	8-18%	
Organizational			
Marketing/information program	DelDOT	1-3%	
Marketing/information program	CAPCOA	0.8-4%	
Join a TMA	DelDOT	2%	
Join a TMA	Sacramento	5-10%	5% for TMA with demonstrated 15% reduction, 10% for TMA with 30% reduction
Coordinate with other employers	DelDOT	1-2%	
Conduct surveys/data collection			
Combined information/support	Fairfax	<3%	<1% in low transit area, 1-3% in moderate transit area
Combined information/support	N/N	1.4%	
Maximum Combined Reductions			
With free parking – moderate transit	Fairfax	10-15%	
With free parking – low transit	Fairfax	3-7%	
With paid parking – moderate transit	Fairfax	15-20%	
With paid parking – low transit	Fairfax	N/A	Unlikely to occur

TDM Program	Description	Primary Agency Responsible	City Implementation mechanism	Recommended Application/Context	% Trip Reduction	Factors	Source
Multi-Modal Infrastructure							
Bicycle sharing services	Bicycles are available to members for short-term rental and can be returned at any bike share station. Bike share may be offered in city neighborhoods, near transit hubs, or at major employment centers.	Cities or private bicycle sharing companies (usually at invitation of a city)		Urban; suburban downtown; transit station	2% to 8%	The impact depends on the larger bike network and bicycling conditions. This research does not state if the shift from automobile trips to bicycle trips is for commute or non-commute trips, nor does the research state at what time of day these trips occur, i.e. peak or non peak trips.	Victoria Transport Policy Institute (2008), Public Bike Systems: Automated Bike Rentals for Short Utilitarian Trips, www.vtpi.org/tdm/tdm126.htm.
Enhanced transit service	Improve transit service to better serve potential riders and shift travel from driving trips.	Transit agencies, funded by cities, counties, TMAs, BIDs, regional agencies		Any	5% to 30%	Impacts depend on the level and quality of improvements. The elasticity of transit use with respect to transit service frequency is about 0.5, which means that a 1.0% increase in service (measured by transit vehicle mileage or operating hours) increases average ridership by 0.5%. Not all persons will be shifting from auto to transit so the relationship is not one to one.	Richard Pratt (2000) Traveler Response to Transportation System Changes, Interim Handbook, TCRP Web Document 12. http://onlinepubs.trb.org/Onlinepubs/tcrp/tcrp_webdoc_12.pdf.
High Occupancy Vehicle/Toll (HOV/HOT) lanes	Implement a system of express lanes for high-occupancy vehicles, transit, and/or people who pay a toll. This provides a time savings to people who commute by modes other than driving alone.	Highway districts, often led by counties or regional agencies		Freeways, any context	2% to 30%	Comsis (1993) and Turnbull, Levinson and Pratt (2006) find that HOV facilities can reduce vehicle trips on a particular roadway by 4-30%. Ewing (1993) estimates that HOV facilities can reduce peak-period vehicle trips on individual facilities by 2-10%, and up to 30% on very congested highways if HOV lanes are separated from general-purpose lanes by a barrier. (Turnbull, Levinson and Pratt, 2006) suggests that HOV highway lanes are most effective at reducing automobile use on congested highways to large employment centers in large urban areas with 25 or more buses per hour during peak periods, where transit provides time savings of at least 5 to 10 minutes per trip.	Comsis Corporation (1993), *Implementing Effective Travel Demand Management Measures: Inventory of Measures and Synthesis of Experience*, USDOT and Institute of Transportation Engineers (www.ite.org); available atwww.bts.gov/ntl/DOCS/474.html. Katherine F. Turnbull, Herbert S. Levinson and Richard H. Pratt (2006), HOV Facilities – Traveler Response to Transportation System Changes, TCRB Report 95, Transportation Research Board (www.trb.org); available at http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_95c2.pdf.
Financial Incentives							
Transit "fare free" zones	Transit agency provides free rides in designated zone.	Transit agencies, can be initiated/funded by cities, transportation management associations (TMAs), Business Districts	Can be implemented directly by transit agency, or another organization can form a funding partnership with the transit agency	Urban or suburban downtowns	Not available	Impact of transit fare-free zones is highly context specific. Some cities have seen very large increases in transit ridership within free-fare zones.	http://www.theatlanticcities.com/jobs-and-economy/2012/10/what-really-happens-when-city-makes-its-transit-system-free/3708/

TDM Program	Description	Organization Responsible	Implementation mechanism	Recommended Contexts	% Trip Reduction	Factors	Source
Compressed work weeks	Employers allow employees to compress their work week by working fewer but longer days. For example, instead of working 5, 8-hour days, an employee may work 4, 10-hour days.	Employers		Any	2% to 10%	The range is large depending on the study examined. Also one study found that telecommuting and compressed work weeks together generate larger trip reductions	Reid Ewing (1993), TDM, Growth Management, and the Other Four Out of Five Trips. Center for Urban Transportation Research (1998), A Market-Based Approach to Cost-Effective Trip Reduction Program Design, http://ntl.bts.gov/lib/3000/3600/3633/cashdoc.pdf. Apogee (1994), Costs and Cost Effectiveness of Transportation Control Measures; A Review and Analysis of the Literature, National Association of Regional Councils, www.narc.org. Amy Ho and Jakki Stewart (1992), "Case Study on Impact of 4/40 Compressed Workweek Program on Trip Reduction," Transportation Research Record 1346, TRB, www.trb.org, pp. 25-32 Genevieve Giuliano (1995), "The Weakening Transportation-Land Use Connection, ACCESS, Vol. 6, University of California Transportation Center, www.uctc.net, Spring 1995, pp. 3-11.
Promotional Activities							
Travel marketing programs	Promote awareness of alternative travel modes through campaigns.	Any organization, public or private		Urban or suburban areas with high quality transit	5% to 8%	There is often a greater increase alternative mode share than reduction in vehicle trips given that some individuals switch between alternative modes or shift from driving alone to ridesharing. One study estimates that marketing increases the effectiveness of other TDM strategies by up to 3% (Shadoff, 1996)	Steven Spears, Marlon G. Boarnet and Susan Handy (2011), Draft Policy Brief on the Impacts of Voluntary Travel Behavior Change Programs Based on a Review of the Empirical Literature, for Research on Impacts of Transportation and Land Use-Related Policies, California Air Resources Board (http://arb.ca.gov/cc/sb375/policies/policies.htm). John Shadoff (1996), Transportation Demand Management; A Guide for Including TDM Strategies in Major Investment Studies and in Planning for Other Transportation Projects, Office of Urban Mobility, WSDOT (www.wsdot.wa.gov/Mobility).
Personalized Travel Planning	Promote awareness of alternative travel modes through personalized travel planning.	Any organization, public or private		Urban or suburban areas with high quality transit	5% to 15%	Effectiveness depends upon the travel options available and the level of investment into personalized marketing. Ongoing investment may be required to maintain effectiveness over time.	Transport Today, Issue 334, pg 10 (2002) http://www.vtpi.org/tdm/tdm23.htm
On-site transportation coordinators	Employers hire dedicated staff member to oversee TDM programs and/or provide one-on-one employee travel education/training.	Employers, housing developments		Any	Not available	The presence of a transportation coordinator can help increase the effectiveness of other TDM programs	
Bike/ped maps, education, and promotion	Maps of safe biking/walking routes, educational classes on safe biking/walking, and promotional activities such as Bike to Work Day; usually provided by public agencies or non-profit organizations.	Any organization, public or private		Any		This strategy has limited impact if implemented alone. Most effective if implemented as part of a comprehensive TDM strategy.	

BURNSIDE

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Appendix K

Zoning By-law Excerpts

accordance with the following provisions:

6A(2) **Parking Requirements**

(a) The owner or occupant of any lot, building or structure used or erected for any of the purposes set forth in this subsection, shall provide and maintain parking spaces on the lot, unless otherwise specified elsewhere in this By-law, in accordance with the following minimum requirements:

USE	MINIMUM REQUIREMENT
accessory office use:	Subject to the minimum requirement for the main use.
adult entertainment parlour:	1 space per 28 m² of gross floor area
agricultural use:	no minimum requirement
apartment hotel:	1 space per 47 m² of bedroom floor area, plus the minimum requirement set out in this section for accessory uses such as a restaurant, tavern, banquet hall, club, assembly hall, fitness centre.
apartment house dwelling:	1.5 spaces per dwelling unit of which .25 spaces per dwelling unit shall be for the use of visitors.
art gallery:	1 space per 28 m² of gross floor area
artist studio:	1 space per 42 m² of gross floor area
assembly hall:	1 space per 28 m² of gross floor area
assembly plant:	1 space per 42 m² of gross floor area up to 2750 m², then 1 space per 190 m² for the gross floor area exceeding 2750 m²
automatic laundry shop:	1 space per 28 m² of gross floor area
bandstand:	no minimum requirement
bank:	1 space per 28 m² of gross floor area
banquet hall:	1 space per 28 m² of gross floor area
banquet hall within an	

Office Consolidation

CITY OF TORONTO - Zoning By-law

BY-LAW NO. 569-2013

Last Updated: September 30, 2022

****

OLT/LPAT/OMB File: PL130592

This office consolidation includes all Ontario Land Tribunal/Local Planning Appeal Tribunal/Ontario Municipal Board (OLT/LPAT/OMB) decisions issued up to the date of consolidation.

Explanatory Note:

The portions of this By-law that are highlighted bright yellow were originally enacted by City Council May 9, 2013 and are under appeal to the OLT/LPAT/OMB and are not in full force and effect.

The portions of this By-law that are shaded dark yellow identify amendments enacted by City Council after May 9, 2013 which are under appeal to the OLT/LPAT/OMB and are not in full force and effect.

The portions of this By-law that are shaded blue identify amendments enacted by City Council after May 9, 2013 which are not in full force and effect.

****

Part 1 of 3

ORIGINALLY ENACTED BY CITY COUNCIL May 9, 2013

The **interior floor area** of that portion of a **building** used exclusively for heating, cooling, ventilation, electrical, fire emergency stairwells, elevator shafts, atriums, utility areas, storage areas in the **basement**, **parking space**, **loading space**, or a **drive aisle** used to access a **parking space** or **loading space**, is not included in the **gross floor area** for the purpose of calculating **parking space** requirements.

(12) Vehicle Access to Building - Non-residential and Apartment Parking Area

If an **apartment building**, **mixed use building** or a **building** with non-residential uses, has an area for parking two or more **vehicles**:

(A) the **vehicle** entrance and exit for a two-way **driveway** into and out of the **building** must have a minimum width of 5.5 metres;

(B) the **vehicle** entrance or exit for a one-way **driveway** into or out of the **building** must have a minimum width of 3.5 metres; and

(C) in (A) and (B) above, the **vehicle** entrance or exit to the **building** must be at least 6.0 metres from the **lot line** abutting the **street**.

(13) Parking Space Access

Other than **stacked parking space** and **tandem parking spaces**, all areas used for **parking spaces** must have **driveway** access to a **street** or **lane** that is direct and unobstructed, excluding a gate, moveable barrier or similar security feature. [By-law: 89-2022]

(14) Electric Vehicle Infrastructure

Parking spaces must be equipped with an **energized outlet**, which is clearly marked and identified for electric **vehicle** charging, in accordance with the following:

(A) all residential **parking spaces** provided for **dwelling units** located in an **apartment building**, **mixed use building**, "multiple **dwelling unit building**", **detached house**, **semi-detached house**, **townhouse**, **duplex**, **triplex**, **fourplex**, or for a **secondary suite** or **laneway suite**, excluding visitor **parking spaces**, must include an **energized outlet** capable of providing **Level 2 charging** or higher to the **parking space**; and

(B) in cases other than those set out in (A) above, 25 percent of the residential and non-residential **parking spaces** in a **building** must include an **energized outlet** capable of providing **Level 2** charging or higher. [By-law: 89-2022]

200.5.10 Parking Rates

200.5.10.1 General

(1) Parking Space Rates

Off **street parking spaces** must be provided for every **building** or **structure** erected or enlarged, in compliance with Table 200.5.10.1 - Parking Space Rates below: [By-law: 89-2022]

Table 200.5.10.1

PARKING SPACE RATES

Land Use Category	Parking Rate
Resident Requirement for a **Dwelling unit** in an: **Apartment Building**, Assisted Housing or a **Mixed Use Building**	**Parking spaces** must be provided: (A) in Parking Zone A (PZA) at a maximum rate of: (i) 0.3 for each bachelor **dwelling unit** up to 45 square metres and 1.0 for each bachelor **dwelling unit** greater than 45 square metres; and (ii) 0.5 for each one bedroom **dwelling unit**; and (iii) 0.8 for each two bedroom **dwelling unit**; and (iv) 1.0 for each three or more bedroom **dwelling unit**; and

	(B) in Parking Zone B (PZB) at a maximum rate of: (i) 0.7 for each bachelor **dwelling unit** up to 45 square metres and 1.0 for each bachelor **dwelling unit** greater than 45 square metres; and (ii) 0.8 for each one bedroom **dwelling unit**; and (iii) 0.9 for each two bedroom **dwelling unit**; and (iv) 1.1 for each three or more bedroom **dwelling unit**; and (C) in all other areas of the City, at a maximum rate of: (i) 0.8 for each bachelor **dwelling unit** up to 45 square metres and 1.0 for each bachelor **dwelling unit** greater than 45 square metres; and (ii) 0.9 for each one bedroom **dwelling unit**; and (iii) 1.0 for each two bedroom **dwelling unit**; and (iv) 1.2 for each three or more bedroom **dwelling unit**.
Resident Requirement for a **Dwelling Unit** in a: **Detached House**, **Semi-detached House**, **Townhouse**, **Duplex**, **Triplex** or **Fourplex**	None
Resident Requirement for a **Dwelling Unit** in a Multiple Dwelling Unit Buildings	**Parking spaces** must be provided at a maximum rate of 1.0 for each **dwelling unit**.
Secondary Suite	None
Visitor Requirement: For a **dwelling unit** in an **Apartment Building**, a **Mixed Use Building**, and/or a Multiple Dwelling Unit Building	Parking spaces must be provided: (A) in Parking Zone A (PZA) at a minimum rate of 2.0 plus 0.01 per **dwelling unit**; (B) in Parking Zone B (PZB) and in all other areas of the City, at a minimum rate of 2.0 plus 0.05 per **dwelling unit**; and (C) at a maximum rate of 1.0 per **dwelling unit** for the first five (5) **dwelling units**; and (D) at a maximum rate of 0.1 per **dwelling unit** for the sixth and subsequent **dwelling units**.
Tier 1: Alternative Housing, **Group Home**, **Hospice Care Home**, **Nursing Home**, **Religious Residence**, **Retirement Home, Respite Care Facility** and **Seniors Community House**	**Parking spaces** must be provided at a maximum rate of 0.5 for each **bed-sitting room** or **dwelling unit**.
Tier 2: Adult Education School, **Animal Shelter**, **Art Gallery**, Clinic (medical), **Community Centre**, Court of Law, **Day Nursery**, **Education Use**, **Hospital**, **Hotel**, **Kennel**, **Laboratory**, Motel, **Museum**, Office (Excluding Medical Office), **Performing Arts Studio**, **Post-Secondary School**, **Private School**, **Production Studio**, **Public School**, **Recreation Use**, **Religious Educational Use**, **Self-Storage Warehouse**, **Software Development and Processing**, **Vehicle Dealership**, **Veterinary Hospital**	Parking spaces must be provided: (A) in Parking Zone A (PZA) at a maximum rate of 0.8 for each 100 square metres of **gross floor area**; (B) in Parking Zone B (PZB) at a maximum rate of 1.0 for each 100 square metres of **gross floor area**; and (C) in all other areas of the City, at a maximum rate of 3.5 for each 100 square metres of **gross floor area**.
Tier 3:	**Parking spaces** must be provided at a maximum rate of 1.5 for each 100 square metres of **gross floor**

Crisis Care Shelter, **Municipal Shelter**, **Residential Care Home**	**area**
Tier 4: **Adult Entertainment**, Ambulance Depot, **Amusement Arcade**, **Artist Studio**, Billiard Hall, Bowling Alley, Bus Station, **Cabaret**, **Cemetery**, **Club**, **Contractor's Establishment**, **Eating Establishment**, **Entertainment Place of Assembly**, **Financial Institution**, Fire Hall, **Funeral Home**, **Gaming Establishment**, Golf Course, Grocery Store, **Industrial Sales and Service**, Industrial Skills Training, Library, **Manufacturing Uses**, **Medical Office**, **Nightclub**, **Park**, **Personal Service Shop**, **Pet Services**, **Place of Assembly**, **Place of Worship**, Police Station, Pool Hall, Railway Service and Repair Yard; Railway Station, **Retail Service**, **Retail Store**, **Service Shop**, **Vehicle Depot**, **Vehicle Fuel Station**, **Vehicle Repair Shop**, **Vehicle Service Shop**, **Visitation Centre**, **Warehouse**, **Wholesaling Use**	Parking spaces must be provided: (A) in Parking Zone A (PZA) at a maximum rate of 3.5 for each 100 square metres of **gross floor area**; (B) in Parking Zone B (PZB) at a maximum rate of 4.0 for each 100 square metres of **gross floor area**; and (C) in all other areas of the City, at a maximum rate of 6.0 for each 100 square metres of **gross floor area**.

[By-law: 89-2022]

(2) Provision of Parking Spaces

Parking spaces provided for each use may not be:

(A) less than the required minimum; or

(B) greater than the permitted maximum.

(3) Parking Space Rate Ancillary Uses

A use that is **ancillary** has the same **parking space** rate as the use to which it is **ancillary**.

(4) Parking Space Permission for Uses with No Parking Requirement

If a use is not required to provide **parking spaces** by Table 200.5.10.1 of this By-law, **parking spaces** may be provided for that use if:

(A) the use is not listed on Table 200.5.10.1; [By-law: 1429-2017]

(B) the **parking spaces** are used by the owner, occupant or visitors to the **premises**; and

(C) the number of **parking spaces** is not:

(i) less than the required minimum for all uses on the **lot** by Table 200.5.10.1; and

(ii) greater than the permitted maximum or all uses on the **lot** by Table 200.5.10.1.

(5) Parking Space Rates - Multiple Uses on a Lot

If there are multiple uses on a **lot**, the respective minimum and maximum **parking space** rates for each use on the **lot** apply, and the total number of required **parking spaces** is the cumulative minimum total for all uses and the total number of permitted **parking spaces** is the cumulative maximum total for all uses. [By-law: 89-2022]

(7) Interpretation of Minimum and Maximum Parking Space Requirement

If Table 200.5.10.1 has a minimum and maximum number of **parking spaces** for a use, the number of **parking spaces** for that use listed on the Table may not:

(A) be less than the required minimum;

(B) exceed the permitted maximum; and

(C) if a minimum is not specified for a use, no **parking spaces** are required. [By-law: 89-2022]

(8) Multiple Dwelling Unit Buildings Parking Rates

(C) effective **parking space** rates in Table 200.15.10.5 do not apply as a substitute for the parking rates in Table 200.5.10.1 – Parking Space Rates; and

(D) the quantity of **vehicle parking spaces** provided for a development may not apply as a substitute for the effective **parking space** requirements in the calculation of required accessible parking, except for circumstances set out in regulation 200.15.10.5(2). [By-law: 89-2022]

(2) Determining Effective Parking Spaces for the Purposes of Accessible Parking

The number of effective **parking spaces** to determine accessible **parking space** requirements is the greater of the number of permitted **parking spaces** provided and the number of **parking spaces** calculated using the rates in Table 200.15.10.5. [By-law: 89-2022]

(3) Calculation of Effective Parking Spaces

Regulations 200.5.1.10(7), (8), (9) and (11) apply for the calculation of effective **parking spaces** and interpretation of the rates in Table 200.15.10.5. [By-law: 89-2022]

Table 200.15.10.5

Parking Space Rates for Effective Parking Spaces

Land Use Category	**Rate for Calculating Effective Parking Spaces**
Resident Requirement for a **Dwelling unit** in an: **Apartment Building**, Assisted Housing or a **Mixed Use Building**	The rate for calculating effective **parking spaces** is: (A) in Parking Zone A (PZA) at a rate of: (i) 0.3 for each bachelor **dwelling unit** up to 45 square metres and 1.0 for each bachelor **dwelling unit** greater than 45 square metres; and (ii) 0.5 for each one bedroom **dwelling unit**; and (iii) 0.8 for each two bedroom **dwelling unit**; and (iv) 1.0 for each three or more bedroom **dwelling unit**; and (B) in Parking Zone B (PZB) at a rate of: (i) 0.7 for each bachelor dwelling unit up to 45 square metres and 1.0 for each bachelor **dwelling unit** greater than 45 square metres; and (ii) 0.8 for each one bedroom **dwelling unit**; and (iii) 0.9 for each two bedroom **dwelling unit**; and (iv) 1.1 for each three or more bedroom **dwelling unit**; and (C) in all other areas of the City, at a rate of: (i) 0.8 for each bachelor **dwelling unit** up to 45 square metres and 1.0 for each bachelor **dwelling unit** greater than 45 square metres; and (ii) 0.9 for each one bedroom **dwelling unit**; and (iii) 1.0 for each two bedroom **dwelling unit**; and (iv) 1.2 for each three or more bedroom **dwelling unit**.

Resident Requirement for a **Dwelling Unit** in a: **Detached House**, Semi-**detached House**, **Townhouse**, **Duplex**, **Triplex** or **Fourplex**	None
Resident Requirement for a **Dwelling Unit** in a Multiple Dwelling Unit Buildings	The rate for calculating effective **parking spaces** is 1.0 for each **dwelling unit**.
Secondary Suite	None
Visitor Requirement for a **dwelling unit** in an **Apartment Building**, a **Mixed Use Building**, and/or a Multiple Dwelling Unit Building	The rate for calculating effective **parking spaces** is 0.1 per **dwelling unit**.
Tier 1: Alternative Housing, **Group Home**, **Hospice Care Home**, **Nursing Home**, **Religious Residence**, **Retirement Home**, **Respite Care Facility** and **Seniors Community House**	The rate for calculating effective **parking spaces** is 0.2 **parking spaces** for each **bed-sitting room** or **dwelling unit**
Tier 2: Adult Education School, **Animal Shelter**, **Art Gallery**, Clinic (medical), **Community Centre**, Court of Law, **Day Nursery**, **Education Use**, **Hospital**, **Hotel**, **Kennel**, **Laboratory**, Motel, **Museum**, Office (Excluding Medical Office), **Performing Arts Studio**, **PostSecondary School**, **Private School**, **Production Studio**, **Public School**, **Recreation Use**, **Religious Educational Use**, **Self-Storage Warehouse**, **Software Development and Processing**, **Vehicle Dealership**, **Veterinary Hospital**	The rate for calculating effective parking spaces is: (A) in Parking Zone A (PZA) and Parking Zone B (PZB), 0.4 **parking spaces** for each 100 square metres of **gross floor area**; and (B) in all other areas of the City, 1.0 **parking spaces** for each 100 square metres of **gross floor area**.
Tier 3: **Crisis Care Shelter**, **Municipal Shelter**, **Residential Care Home**	The rate for calculating effective **parking spaces** is 0.2 **parking spaces** for each 100 square metres of **gross floor area**
Tier 4: **Adult Entertainment**, Ambulance Depot, **Amusement Arcade**, **Artist Studio**, Billiard Hall, Bowling Alley, Bus Station, **Cabaret**, **Cemetery**, **Club**, **Contractor's Establishment**, **Eating Establishment**, **Entertainment Place of Assembly**, **Financial Institution**, Fire Hall, **Funeral Home**, **Gaming Establishment**, Golf Course, Grocery Store, **Industrial Sales and Service**, **Industrial Skills Training**, Library, **Manufacturing Uses**, Medical Office, **Nightclub**, Park, **Personal Service Shop**, **Pet Services**, **Place of Assembly**, **Place of Worship**, Police Station, Pool Hall, Railway Service and Repair Yard; Railway Station, **Retail Service**, **Retail Store**, **Service Shop**, **Vehicle Depot**, **Vehicle Fuel Station**, **Vehicle Repair Shop**, **Vehicle Service Shop**, Visitation Centre, **Warehouse**, **Wholesaling Use**	The rate for calculating effective **parking spaces** is: (A) in Parking Zone A (PZA) and Parking Zone B (PZB), 1.0 **parking spaces** for each 100 square metres of **gross floor area**; and (B) in all other areas of the City, 2.0 **parking spaces** for each 100 square metres of **gross floor area**

[By-law: 89-2022]

200.15.10.10 Parking Rate - Accessible Parking Spaces

(1) Accessible Parking Rates – General

In accordance with Table 200.15.10.5, if the number of **parking spaces** associated with **dwelling units** is 5 or more, or if the number of **parking spaces** associated with uses in Tiers 1, 2, 3, or 4, excluding medical offices and clinics, is 1 or more, clearly identified off **street** accessible **parking spaces** must be provided on the same **lot** as every **building** or **structure** erected or enlarged, as follows:

(A) if the number of effective **parking spaces** is less than 13, a minimum of 1 **parking space** must comply with all regulations for an accessible **parking space** in Section 200.15;

(B) if the number of effective **parking spaces** is 13 to 100, a minimum of 1 **parking space** for every 25 effective **parking spaces** or part thereof must comply with all regulations for an accessible **parking space** in Section 200.15; and

(C) if the number of effective **parking spaces** is more than 100, a minimum of 5 **parking spaces** plus 1 **parking space** for every 50 effective **parking spaces** or part thereof in excess of 100 **parking spaces** must comply with all regulations for an accessible **parking space** in Section 200.15. [By-law: 1048-2022]

(2) Accessible Parking Rates – Medical Offices and Clinics

In accordance with Table 200.15.10.5, if the number of **parking spaces** associated with medical offices and clinics is 1 or more, **parking spaces** which comply with all regulations for an accessible **parking space** in Section 200.15 must be provided, as follows:

(A) the minimum number of accessible **parking spaces** is 10 percent of the number of effective **parking spaces**, rounded up; and

(B) any accessible **parking spaces lawfully existing** on the **lot** must be retained. [By-law: 1048-2022]

200.15.15 Transition: Accessible Parking Spaces

(1) Accessible Parking Spaces

An application submitted before May 26, 2017 that is eligible to proceed under clauses 200.15.15.1 through 200.15.15.3, must provide accessible **parking spaces** in compliance with 200.15.15.4 and 200.15.15.5. [By-law: 579-2017]

200.15.15.1 Transition: Building Permit Applications

(1) Building Permit Applications

Nothing in Articles 200.15.1, 200.15.5 and 200.15.10 will prevent the erection or use of a **building** or **structure** for which an application for a building permit was filed on or prior to May 26, 2017, if the project in question complies, or the building permit application for the project is amended to comply, with the provisions of regulations 200.15.15.4 and 200.15.15.5 below, and all finally approved minor variances. [By-law: 579-2017]

(2) Building Permit Applications

For the purposes of regulation 200.15.15 (1), an "application for a building permit" means an application for a building permit that satisfies the requirements set out in Article I, Building Permits of Chapter 363, Building Construction and Demolition of the City of Toronto Municipal Code. [By-law: 579-2017]

200.15.15.2 Transition: Zoning Certificate Applications

(1) Zoning Certificate Applications

Nothing in Articles 200.15.1, 200.15.5 and 200.15.10 will prevent the erection or use of a **building** or **structure**, in the circumstances set out in regulation 200.15.15.2 (2) for a project for which a request for a zoning certificate was filed on or prior to May 26, 2017. [By-law: 579-2017]

(2) Zoning Certificate Applications

After a zoning certificate has been issued for a project that qualifies under regulation 200.15.15 (1), a building permit for that project may be issued if:

(A) the building permit plans for the project are substantially in compliance with the plans approved with the zoning certificate referred to in regulation 200.15.15(3) and issued pursuant to Section 363-10.1 of Chapter 363, Building Construction and Demolition of the City of Toronto Municipal Code; and

(B) the project in question complies, or the building permit application for the project is amended to comply, with the provisions of regulations 200.15.15.4 and 200.15.15.5 below, and all finally approved minor variances. [By-law: 579-2017]

(3) Zoning Certificate Applications

(i) minimum length of 6.0 metres;
(ii) minimum width of 3.5 metres; and
(iii) minimum vertical clearance of 3.0 metres; and

(D) a Type "G" **loading space** must have a:

(i) minimum length of 13.0 metres;
(ii) minimum width of 4.0 metres; and
(iii) minimum vertical clearance of 6.1 metres.

220.5.10 Loading Space Rates

220.5.10.1 General

(1) Loading Space Requirements

Loading spaces must be provided in compliance with regulations 220.5.10.1(2) to (9).

(2) Loading Space Requirements - Building Containing Dwelling Units

A **building** with **dwelling units** must provide **loading spaces** as follows:

Number of Units	Minimum Number of **Loading Spaces** Required
0 to 30 **dwelling units**	None required
31 to 399 **dwelling units**	1 Type "G"
400 **dwelling units** or more	1 Type "G" and 1 - Type "C"

(3) Loading Space Requirements - Retail Store, Eating Establishment, or Personal Service Shop

A **building** with a **retail store**, **eating establishment**, or **personal service shop** must provide **loading spaces** as follows:

Gross Floor Area	Minimum Number of **Loading Spaces** Required
0 to 499 square metres	None required
500 to 1,999 square metres	1 Type "B"
2,000 to 4,999 square metres	2 Type "B"
5,000 to 9,999 square metres	3 Type "B"
10,000 to 19,999 square metres	1 Type "A" and 3 Type "B"
20,000 to 29,999 square metres	1 Type "A", 3 Type "B" and 1 Type "C"
30,000 square metres or greater	1 Type "A", 3 Type "B" and 1 Type "C"

(4) Loading Space Requirements - Grocery stores/supermarket

A **building** with a grocery stores or supermarket must provide **loading spaces** as follows:

Gross Floor Area	Minimum Number of **Loading Spaces** Required
0 to 499 square metres	None required
500 to 999 square metres	1 Type "B"
1,000 to 1,999 square metres	1 Type "A"
2,000 to 4,999 square metres	1 Type "A" and 1 Type "B"
5,000 to 9,999 square metres	1 Type "A" and 2 Type "B"
10,000 to 19,999 square metres	2 Type "A" and 2 Type "B"
20,000 square metres and greater	2 Type "A" and 3 Type "B"

(5) Loading Space Requirements - Office

	(B) in Bicycle Zone 2 is 3 plus 0.18 **bicycle parking spaces** for each 100 square metres of **interior floor area** used for **post-secondary school** offices and classrooms. [By-law: 559-2014 Under Appeal]	**secondary school** offices and classrooms. [By-law: 559-2014 Under Appeal]
Private School	the minimum number of short-term **bicycle parking spaces** to be provided: (A) in Bicycle Zone 1 is 3 plus 0.1 **bicycle parking spaces** for each 100 square metres of **interior floor area** used for a **public school** or **private school**; and (B) in Bicycle Zone 2 is 3 plus 0.06 **bicycle parking spaces** for each 100 square metres of **interior floor area** used for a **public school** or **private school**.	the minimum number of long-term **bicycle parking spaces** to be provided: (A) in Bicycle Zone 1 is 0.1 for each 100 square metres of **interior floor area** used for a **public school** or **private school**; and (B) in Bicycle Zone 2 is 0.06 for each 100 square metres of **interior floor area** used for a **public school** or **private school**.
Public School	the minimum number of short-term **bicycle parking spaces** to be provided: (A) in Bicycle Zone 1 is 3 plus 0.1 **bicycle parking spaces** for each 100 square metres of **interior floor area** used for a **public school** or **private school**; and (B) in Bicycle Zone 2 is 3 plus 0.06 **bicycle parking spaces** for each 100 square metres of **interior floor area** used for a **public school** or **private school**.	the minimum number of long-term **bicycle parking spaces** to be provided: (A) in Bicycle Zone 1 is 0.1 for each 100 square metres of **interior floor area** used for a **public school** or **private school**; and (B) in Bicycle Zone 2 is 0.06 for each 100 square metres of **interior floor area** used for a **public school** or **private school**.
Retail Store	the minimum number of short-term **bicycle parking spaces** to be provided: (A) in Bicycle Zone 1 is 3 plus 0.3 **bicycle parking spaces** for each 100 square metres of **interior floor area** used for a **retail store**; and (B) in Bicycle Zone 2 is 3 plus 0.25 **bicycle parking spaces** for each 100 square metres of **interior floor area** used for a **retail store**.	the minimum number of long-term **bicycle parking spaces** to be provided: (A) in Bicycle Zone 1 is 0.2 for each 100 square metres of **interior floor area** used for a **retail store;** and (B) in Bicycle Zone 2 is 0.13 for each 100 square metres of **interior floor area** used for a **retail store**.

(3) Use With Interior Floor Area of 2000 Square Metres or Less

Despite the **bicycle parking space** rates set out in regulations 230.5.10.1(1) and 230.5.10.1(5) and (6), if a **bicycle parking space** is required for uses on a **lot**, other than a **dwelling unit**, and the total **interior floor area** of all such uses on the **lot** is 2000 square metres or less, then no **bicycle parking space** is required.

(4) Multiple uses on a lot

If Table 230.5 10.1(1) Bicycle Parking Space Rates, requires a **bicycle parking space** for one or more uses on a **lot**, the total number of **bicycle parking spaces** required is equal to the cumulative total of all **bicycle parking spaces** required for each use on the **lot**.

(5) Bicycle Parking Space Requirements for Dwelling Units

Bicycle parking space requirements for **dwelling units** in an **apartment building** or a **mixed use building** are:

(A) in Bicycle Zone 1, a minimum of 1.1 **bicycle parking spaces** for each **dwelling unit**, allocated as 0.9 "long-term" **bicycle parking space** per **dwelling unit** and 0.2 "short-term" **bicycle parking space** per **dwelling unit**; and [By-law: 839-2022]

(B) in Bicycle Zone 2, a minimum of 0.75 **bicycle parking spaces** for each **dwelling unit**, allocated as 0.68 "long-term" **bicycle parking space** per **dwelling unit** and 0.07 "short-term" **bicycle parking space** per **dwelling unit**.

(6) Interior Floor Area Exclusions for Bicycle Parking Space Calculations

To calculate **bicycle parking space** requirements for other than **dwelling units**, the **interior floor area** of a **building** is reduced by the area in the **building** used for:

(A) parking, loading and bicycle parking below-ground;

(B) required **loading spaces** at the ground level and required **bicycle parking spaces** at or above-ground;

(C) storage rooms, washrooms, electrical, utility, mechanical and ventilation rooms in the **basement**;

(D) shower and change facilities and **bicycle maintenance facilities** required by this By-law for required **bicycle parking spaces**; [By-law: 839-2022]

(E) elevator shafts;

(F) mechanical penthouse; or

(G) exit stairwells in the **building**. [By-law: 1774-2019]

230.5.10.11 Bicycle Parking Rate Exemptions

R.J. Burnside & Associates Limited